

IBM® 1620

Program Library

1620 Monitor II Listings and Flowcharts (Version 2)

1620-PR-029
1620-PR-030

00020	*****	SYSTEM COMMON							
00030		DORG 402			00402				
00040	DIMENT	DSC 1,0,,	DDA FOR LOADER CALLS.		00402		1		
		0							
00050		DSA 0			00407		5 X	1	
00060		DC 3,0			00407		-0000		
		-00			00410		3		
00070		DSA 0			00415		5 X	1	
00080		DC 6,0*,			00415		-0000		
		-0000*			00421		6		
00090		DSC 1,1,,	DISK SCRATCH AREA DEFINER.		00422		1		
		1							
00100	SRELOC	DC 3,0			00425		3		
		-00							
00110	SFDINT	DSC 1,0,,	SPS, FORTRAN, AND DUP CNTL CARD SOURCE.		00426		1		
		0							
00120	CINIT	DC 1,0,,	LADDR INITIALIZATION INDICATOR.		00427		1		
		-							
00130	LDIRPT	DSC 1,0,,	LOADER ENTRY CODE AND INPUT DEVICE.		00428		1		
		0							
00140	FSPS	DSC 1,0,,	LOAD SUP IND. AND MONITOR CNTL CARD SOUR.		00429		1		
		0							
00150	HIGH	DC 5,0,,	HIGHEST ADDRESS LOADED PLUS ONE.		00434		5		
		-0000							
00160	LADDR	DC 5,0,,	LOADER INPUT BUFFER VECTOR.		00439		5		
		-0000							
00170	IBMMOD	DSC 1,1,,	DRIVE CODE FOR SYSTEM MODULE.		00440		1		
		1							
00180	OLDDA	DSC 15,0*,	TRANSMIT HEADLESS DDA-S HERE FOR OVRLAY.		00441		15		
		00000000000000*							
00190	*****	OVERLAY READ ROUTINE							
00200	HALT	H XX,XX,02,	RESET AND START UPON OVERLAY ERROR.		00456	M8	-0000	00000	
00210	OVRLAY	34 IBMMOD,701,,	SEEK AND READ OVERLAYING PROGRAM.		00468	34	00440	00701	
00220		36 IBMMOD,702,0			00480	L6	00440	00702	
00230	BNI	BI HALT,1900,,	HALT IF IND. 1900.		00492	46	00456	01900	
00240		B IBMMOD+13,,6,	BRANCH TO ITS FIRST LOCATION.		00504	49	0045L	00000	
00250		DORG *-9			00506				
00260		DSA 20			00510		5 X	1	
					00510		-0020		
00270	*****								
00280	*****	MAIN IORT ROUTINE.							
00290	*	ENTRIES ARE IORBC, IOPT, IOSK, AND IOGT.							
00300	*	FILE DESCRIPTOR AND RETURN ADDRESS VECTOR IS IOXX.							
00310	*****								
00320	*****	DRIVE REPOSITION TABLE							
00330	REPOS	DORG BNI+20			00512				
00340		DC 2,0			00513		2		
		-0							
00350		DC 2,0			00515		2		
		-0							
00360		DC 2,0			00517		2		
		-0							

00370		DC 2,0			00519		2		
		-0							
00380	*****	ENTRY SECTION							
00390	IORBC	TFM DIOP+47,1,11,	PUT ENTRY WITH READ BACK CHECK.		00520	15	02067	0000J	
00400	IOPT	TFM DFILE+11,TT1+12,8,	PUT ENTRY.		00532	16	01945	0J768	
00410		B IOGT+12			00544	49	00578	00000	
00420		DORG *-1			00554				
00430	IOSK	SF *,XX,,	SEEK ONLY ENTRY.		00554	32	00554	00000	
00440	IOGT	TFM DFILE+11,TT1,,	GET ENTRY.		00566	16	01945	-1756	
00450		TFM BKPT,X01,,	TURN OFF ANY I/O INDICATORS.		00578	16	00467	-1850	
00460		BI ERROR,1900,11			00590	46	00630	0190-	
00470	ERRET	B BKPT,,16,	WHITHER WANDEREST THOU, WAYFARER.		00602	4R	0046P	00000	
00480		DORG *-4			00609				
00490	INDS	DC 2,06,,	ERROR INDICATOR TABLE.		00610		2		
		-6							
00500		DC 2,07			00612		2		
		-7							
00510		DC 2,16			00614		2		
		J6							
00520		DC 2,17			00616		2		
		J7							
00530		DC 2,36			00618		2		
		L6							
00540		DC 2,37			00620		2		
		L7							
00550		DC 2,38			00622		2		
		L8							
00560		DSC 1,1'			00623		1		
		'							
00561		DSC 1,0			00624		1		
		0							
00562	INDUT	DSA CHECK-12			00629		5 X	1	
					00629		-1256		
00570	*****	ERROR INDICATOR SCANNER ROUTINE.							
00580	ERROR	TF *+21,INDS,7,	INITIALIZE FOR CURRENT INDICATOR.		00630	26	00651	-0610	
00590		BNI *+24,XX,,	TEST IF INDICATOR ON.		00642	47	00666	00000	
00600		SF ERROR+11,,6,	YES -SET FLAG INDICATOR.		00654	32	0064J	00000	
00610		AM ERROR+11,2,10,	ADVANCE ADDRESSING.		00666	11	00641	000-2	
00620		BD ERROR,ERROR+11,11,	TEST IF FINISHED		00678	43	00630	0064J	
00640		TR OLDDA,ECALL,,	YES -SET UP CALL TO THE ERROR ROUTINE.		00690	31	00441	0179J	
00650		B OVRLAY,,,			00702	49	00468	00000	
00660		DORG 716			00716				
00670	*****	CALL LINK AND CALL LOAD ENTRY							
00680	*	SIMULATES AN IOGT ENTRY FOR SPS -CALL- PSUEDO-OP.							
00690	IOCAL	TFM DFILE+11,TT1,,	SET READ INDICATOR.		00716	16	01945	-1756	
00700		TR CNTWD,IOXX,11,	MOVE FILE DESCRIPTOR.		00728	31	02170	0056N	
00710		TFM BKPT,X01+48,,	PUNCH THE TIME CLOCK.		00740	16	00467	-1898	
00720		AM IOXX,9,,	COMPUTE RETURN ADDRESS.		00752	11	00565	-0009	
00730		BNF ERRET-12,CNTWD+7			00764	44	00590	02177	
00740		AM IOXX,4			00776	11	00565	-0004	
00750		B ERRET-12,,,	EXECUTE ANY INDICATOR CHECK.		00788	49	00590	00000	
00760		DORG *-3			00796				
00770	*****	MONITOR CALLER (THROUGH MONITOR RETURN ROUTINE.)							
00780	MONCAL	TR OLDDA,MDDA			00796	31	00441	01779	
00790		BSIA OVRLAY,,,	TURN INDIRECT ON		00808	60	00468	00009	

00810	*****	DISK FILE I/O PREPARATION SECTION			
00820	DIO	TD	DIOP+1,DFILE+11,11,SET LOW ORDER DIGIT OF OP CODE.	00820	25 02021 0194N
00830		TD	**+35,CNTWD,,	00832	25 00867 02170
00840		CF	**+23,DIOP+102,,	00844	33 00867 02122
00850		TD	DIOP+7,ERRET-2	00856	25 02027 00600
00860		BNF	DI01,CNTWD+2,,	00868	44 00972 02172
01030	CHK1	TR	MAPENT,CNTWD+6,11,	00880	31 02144 02170
01040		BD	DI0Y,DIOP+7,,	00892	43 00928 02027
01050		A	MAPENT+3,SRELOC,,	00904	21 02147 00425
01060		TD	MAPENT,SRELOC-3,,	00916	25 02144 00422
01070	DIOY	BNF	DI0Z-12,IOXK,,	00928	44 01116 00554
01080		CF	IOXK,,	00940	33 00554 00000
01090		TFM	SK04,IOXX,711,	00952	16 02143 -056N
01100		B	SEEK	00964	49 01500 00000
01110		DORG	*-3	00972	
00870	DI01	TR	MAPENT,MAPSCT,,	00972	31 02144 01835
00880		A	MAPENT+6,CNTWD+6	00984	21 02150 02176
00890		A	MAPENT+6,CNTWD+6	00996	21 02150 02176
00900		TFM	SK04,DIOX,,	01008	16 02143 -1028
00910		B	SEEK	01020	49 01500 00000
00920		DORG	*-3	01028	
00930	DIOX	TD	DIOP+94,MAPENT+6,,	01028	25 02114 02150
00940		TDM	MAPENT+6,0,11,	01040	15 02150 0000-
00950		TFM	BKPT,X03,,	01052	16 00467 -1084
00960		36	MAPENT,702,,	01064	36 02144 00702
00970		B	ERRET-12,,	01076	49 00590 00000
00980		DORG	*-4	01083	
00990	X03	TR	MAPENT,DIOP+95,11,	01084	31 02144 0211N
01000		BNR	DI0Y,MAPENT,,	01096	45 00928 02144
01010		B	ERROR+60,,	01108	49 00690 00000
01020		DORG	*-3	01116	
01120		BNF	GTEST,DFILE,,	01116	44 01160 01934
01130	DIOZ	TD	DIOP+11,CNTWD+1,,	01128	25 02031 02171
01140		TFM	SK04,DIOP,,	01140	16 02143 -2020
01150		B	SEEK	01152	49 01500 00000
01160		DORG	*-3	01160	
01170	GTEST	CM	MAPENT+13,99999,,	01160	14 02157 R9999
01180		BI	**+24,1200	01172	46 01196 01200
01190		BNF	DI0Z,MAPENT+13,,	01184	44 01128 02157
01200		TR	OLDDA,RCALL,,	01196	31 00441 01807
01210		B	OVRLAY	01208	49 00468 00000
01220		DORG	*-3	01216	
01230	*****	POST DISK I/O HOUSEKEEPING SECTION			
01240	X04	CF	DIOP+98,,	01216	33 02118 00000
01250		BNF	CHK2,DFILE,,	01228	44 01344 01934
01260		TDM	DIOP+47,0,,	01240	15 02067 00000
01270		BNF	IOXX,CNTWD,6,	01252	44 0056N 02170
01280		AM	DRIVE,REPOS-OLDCY,,	01264	11 02169 -161R
01290		TDM	MAPENT+1,0,11,	01276	15 02145 0000-
01300		TF	MAPENT+3,DRIVE,11	01288	26 02147 0216R
01310		CF	MAPENT+2	01300	33 02146 00000
01320		A	MAPENT+3,DRIVE,11	01312	21 02147 0216R
01330		TD	MAPENT,TEMP-5,,	01324	25 02144 02014
01340		B	DI0Y+24	01336	49 00952 00000
01350		DORG	*-3	01344	
01360	CHK2	BNF	CHK3,DIOP+7,,	01344	44 01380 02027

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01370		TF	HIGH,MAPENT+13,,	01356	26 00434 02157
01380		A	HIGH-2,MAPENT+8	01368	21 00432 02152
01390	CHK3	BNF	CHK4,SPSMLP,,	01380	44 01412 00468
01400		TR	OLDDA,SUPRET,,	01392	31 00441 01821
01410		B	OVRLAY	01404	49 00468 00000
01420		DORG	*-3	01412	
01430	CHK4	BNF	X04+24,CNTWD+1,,	01412	44 01240 02171
01440		TF	HALT+6,IOXX,,	01424	26 00462 00565
01450		TFM	IOXX,MAPENT+18,711	01436	16 00565 -216K
01460		BNR	X04+24,MAPENT+14	01448	45 01240 02158
01470		TFM	IOXX,MAPENT+13,711	01460	16 00565 -215P
01480		B	X04+24	01472	49 01240 00000
01490		DORG	*-3	01480	
01500	*****	SEEK ROUTINE	-SEEKS WHEN NECESSARY, COMPUTES PHYSICAL		
01510	*		DRIVE CODE CORRESPONDING TO USER SUPPLIED DRIVE CODE, AND		
01520	*		UPDATES CURRENT I/O CYLINDER POSITION INDICATOR.		
01530	SK01	TD	TEMP-5,MAPENT,,	01480	25 02014 02144
01540		B	SK02	01492	49 01608 00000
01550		DORG	*-3	01500	
01560	SEEK	TFM	TEMP-5,0,10,	01500	16 02014 000-0
01570		TF	TEMP,MAPENT+5	01512	26 02019 02149
01580		CF	TEMP-4	01524	33 02015 00000
01590		A	TEMP,TEMP	01536	21 02019 02019
01600		A	TEMP,TEMP	01548	21 02019 02019
01610		A	TEMP,MAPENT+5	01560	21 02019 02149
01620		BD	SK01,MAPENT,,	01572	43 01480 02144
01630		A	TEMP-5,TEMP-5,,	01584	21 02014 02014
01640		AM	TEMP-5,1,10	01596	11 02014 000-1
01650	SK02	TFM	DRIVE,EQUIV,,	01608	16 02169 -2123
01660		A	DRIVE,TEMP-5	01620	21 02169 02014
01670		TD	MAPENT,DRIVE,11,	01632	25 02144 0216R
01680		BD	**+32,MAPENT,,	01644	43 01676 02144
01690		TFM	BKPT,SK02	01656	16 00467 -1608
01700		B	ERROR+60,,	01668	49 00690 00000
01710		DORG	*-3	01676	
01720		AM	DRIVE,OLDCY-EQUIV,,	01676	11 02169 -0008
01730		SF	TEMP-4,,	01688	32 02015 00000
01740		C	TEMP-3,DRIVE,11	01700	24 02016 0216R
01750	SK03	BI	SK04,1200,6,,	01712	46 0214L 01200
01760		34	MAPENT,701,,	01724	34 02144 00701
01770		TF	DRIVE,TEMP-3,6,	01736	26 0216R 02016
01780		B	SK04,,6,	01748	49 0214L 00000
01790		DORG	*-4	01755	
01800	*****	CONSTANTS AND DDA-S			
01810	TT1	DC	2,16,,	01756	2
01820		J6			
01830		DC	2,36,,	01758	2
01840		L6			
01850		DC	2,56	01760	2
01860		N6			
01870		DC	2,17	01762	2
01880		J7			
01890		DC	2,37	01764	2
01900		L7			
01910		DC	2,57	01766	2
01920		N7			

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01870	DC	2,18	01768	2	
01880	J8				
	DC	2,28	01770	2	
01890	K8				
	DC	2,48	01772	2	
01900	M8				
	DC	2,19	01774	2	
01910	J9				
	DC	2,29	01776	2	
01920	K9				
	DC	2,49	01778	2	
01930	M9				
MDDA	DS	0,++1	01779	0	
01940	DSA	DSA19	01783	5 X 1	
01950	DC	3,3	01783	J9795	
	-03		01786	3	
01960	DC	6,0'	01792	6	
	-0000'				
01970	ECALL	DS	0,++1	01793	0
01980	DSA	DSA10	01797	5 X 1	
01990	DC	3,12	01797	J9749	
	-12		01800	3	
02000	DSA	ERROR	01805	5 X 1	
02010	DSC	1,1'	01805	-0630	
	.		01806	1	
02020	RCALL	DS	0,++1	01807	0
02030	DSA	DSA15	01811	5 X 1	
02040	DSC	1,0	01811	J9783	
	0		01812	1	
02050	DC	2,3	01814	2	
	-3				
02060	DC	6,0'	01820	6	
	-0000'				
02070	SUPRET	DS	0,++1	01821	0
02080	DSA	DSA17	01825	5 X 1	
02090	DC	3,2	01825	J9770	
	-02		01828	3	
02100	DC	6,0'	01834	6	
	-0000'				
02110	MAPSCT	DSC	1,1	01835	1
	1				
02120	DSA	4800	01840	5 X 1	
02130	DSC	3,1	01840	-4800	
	001		01841	3	

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02140	DC	6,0'	01849	6				
	-0000'							
02150	*****	CONTINUATION OF ENTRY SECTION						
02160	X01	TFL	++35,IOXX,11,	MOVE FILE DESCRIPTOR TO CNTWD.	01850	06	01885	0056N
02161		MA	++23,IOXX,11,	COMPLETE MOVE	01862	70	01885	0056N
02170		TR	CNTWD,XX		01874	31	02170	00000
02180		AM	IOXX,1,,	COMPUTE RETURN ADDRESS.	01886	11	00565	-0001
02181		MF	DFILE,DFILE+8,,	MF MOVE FLAG AND CLEAR	01898	71	01934	01942
02190		BNG	DIO,CNTWD+7,,	BRANCH IF DISK I/O. BNG	01910	55	00820	02177
02200		A	DFILE+11,CNTWD+6,,	NO -BUILD NON-DISK I/O INSTRUCTION.	01922	21	01945	02176
02210	DFILE	TF	IOP+10,XX		01934	26	01968	00000
02220		TD	IOP+1,IOP+10		01946	25	01959	01968
02230	*****	I/O SECTION						
02240	IOP	30	CNTWD+4,XX,06,	CONSTRUCTED NON-DISK I/O INSTRUCTION.	01958	L0	0217M	00000
02250		BI	DIOP+60,1900,,	TEST FOR ANY I/O ERROR.	01970	46	02080	01900
02260		TFM	BKPT,X03,,	PUNCH THE TIME CLOCK.	01982	16	00467	-1084
02270		BNR	IOXX,CNTWD+4,0611,	NO -TEST FOR AN INITIAL RECORD MARK.	01994	M5	0056N	0217M
02280		B	ERROR+60,,,	YES -EXECUTE CONTROL CARD TRAP ROUTINE.	02006	49	00690	00000
02290		DORG	--4		02013			
02540	TEMP	DC	7,0,,	SCRATCH FIELD FOR SEEK ROUTINE.	02019		7	
		-000000						
02300	DIOP	30	MAPENT,700,010,	CONSTRUCTED DISK I/O INSTRUCTION.	02020	L0	02144	007-0
02310		BNF	++36,++35,,	IF INDICATED, DO AN RBC.	02032	44	02068	02067
02320		S	++23,DIOP+11		02044	22	02067	02031
02330		36	MAPENT,700,10		02056	36	02144	007-0
02340		BNI	X04,1900,,	PROCEED IF NO ERROR.	02068	47	01216	01900
02350		TFM	BKPT,X04,,	ERROR -PUNCH THE TIME CLOCK.	02080	16	00467	-1216
02360		BNF	ERROR,++26,,	BRANCH TO ERROR SCANNER DR USERS	02092	44	00630	02118
02370		CF	++14,XX,,	ERROR ROUTINE.	02104	33	02118	00000
02380		B	XX		02116	49	00000	00000
02390		DORG	--4		02123			
02400	*****	DRIVE EQUIVALENCE AND POSITION TABLES						
02410	EQUIV	DS	0,++1		02123		0	
02420		DC	2,1		02124		2	
		-1						
02430		DC	2,0		02126		2	
		-0						
02440		DC	2,0		02128		2	
		-0						
02450		DC	2,0		02130		2	
		-0						
02460	DLDCY	DS	0,++1		02131		0	
02470		DC	2,0		02132		2	
		-0						
02480		DC	2,0		02134		2	
		-0						
02490		DC	2,0		02136		2	
		-0						
02500		DC	2,0		02138		2	
		-0						
02510	*****	SYMBOL DEFINITIONS AND WORKING STORAGE						
02530	SK04	DC	5,0,,	SEEK ROUTINE RETURN ADDRESS VECTOR.	02143		5	
		-0000						
02520	MAPENT	DSC	21,0,,	STORAGE FOR WORKING DDA.	02144		21	
		00000000000000000000						
02550	DRIVE	DC	5,0,,	VECTOR TO MODULE TABLES.	02169		5	
		-0000						

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02560	CNTWD	DSC	13,0,,	STORAGE FOR CALLING SEQUENCE RECORD.	02170	13		
			00000000000					
02570	XX	DS	0,0,,	INDICATES USED FIELD OR UNDEFINED SYMBOL	00000	0		
02580	IOXX	DS	0,10SK+11,,	CALL AND RETURN VECTOR.	00565	0		
02590	BKPT	DS	0,HALT+11,,	INDIRECT RETURN BRANCH ADDRESS	00467	0		
02600	YSORG	DS	0,2402,,	OBJECT PROGRAM STANDARD ORIGIN.	02402	0		
02610	YSICAL	DS	0,OVRLAY+7,,	SYSTEM PROGRAM COMMUNICATION DIGIT.	00475	0		
02620	NOMEX	DS	0,HALT+1,,	NON-EXECUTE IND. SET BY SPS, ETC.	00457	0		
02630	SPSMLP	DS	0,OVRLAY,,	SPS SUPERVISOR FLAG WHEN MLP LOAD REQUEST	00468	0		
02640	RMI	DS	0,2210,,	INDIRECT VECTORS TO SET RECORD MARKS	02210	0		
02650	RM2	DS	0,2215,,	FOR THE SPS SUP. AFTER MLP LOAD.	02215	0		
02660	SUPENT	DS	0,2934,,	ENTRY TO THE SPS SUPERVISOR.	02934	0		
02670	CUMM	DS	0,YSORG+400,,	LOCATION OF COMM SECTOR IN MONITOR.	02802	0		
02680	MCCOMM	DS	0,COMM+50,,	MONITOR INDS. IN THIS SECTOR	02852	0		
02690	MCCBUF	DS	0,13000,,	MONITOR CNTL CARD READ BUFFER.	13000	0		
02700	MCYL	DS	0,98,,	MONITOR CYLINDER	00098	0		
02710	DSA00	DS	0,200*MCYL,,	FIRST SECTOR IN MONITOR CYLINDER	19600	0		
02720	DSA01	DS	0,DSA00+35,,	LOADER RETURN ANALYZER STAGE 2	19635	0		
02730	DSA02	DS	0,DSA01+1,,	ARITHMETIC TABLES.	19636	0		
02740	DSA04	DS	0,DSA02+3,,	COMMON AND OVERLAY READ ROUTINE	19639	0		
02750	DSA06	DS	0,DSA04+1,,	MAIN IORT	19640	0		
02760	DSA07	DS	0,DSA06+16,,	RELOCATABLE LOADER CORE SAVE AREA	19656	0		
02770	DSA08	DS	0,DSA07+3,,	MONITOR	19659	0		
02780	DSA09	DS	0,DSA08+85,,	NAMED LOAD ROUTINE STAGE 2	19744	0		
02790	DSA10	DS	0,DSA09+5,,	ERROR ROUTINE STAGE 0	19749	0		
02800	DSA11	DS	0,DSA10+12,,	ERROR ROUTINE STAGE 1	19761	0		
02850	DSA16	DS	0,DSA11+6,,	LOADER CALLER STAGE 2	19767	0		
02860	DSA17	DS	0,DSA16+3,,	SPS SUPERVISOR RETURN ANALYZER	19770	0		
02820	DSA13	DS	0,DSA17+2,,	ERROR ROUTINE STAGE 3	19772	0		
02830	DSA14	DS	0,DSA13+5,,	ERROR ROUTINE STAGE 4	19777	0		
02840	DSA15	DS	0,DSA14+6,,	SPS SUP AND LOADER CALLER STAGE 1	19783	0		
02810	DSA12	DS	0,DSA15+3,,	ERROR ROUTINE STAGE 2	19786	0		
02870	DSA18	DS	0,DSA12+6,,	LOADER RETURN ANALYZER STAGE 1	19792	0		
02880	DSA19	DS	0,DSA18+3,,	MONITOR AND DUP SUP. LOADER SUBR.	19795	0		
02890	DSA20	DS	0,DSA19+3,,	NAMED LOAD ROUTINE STAGE 1	19798	0		
02900	DSA21	DS	0,DSA01-5,,	ERROR ROUTINE STAGE 0 PLUS	19630	0		
02910	DSA39	DS	0,DSA08+4,,	SYSTEM COMMUNICATION SECTOR.	19663	0		
02920	DSA40	DS	0,DSA08+84,,	SYSTEM DDA SECTOR.	19743	0		
02930	DSA50	DS	0,17024,,	SPS SUPERVISOR	17024	0		
02940	DSA51	DS	0,DSA00,,	RELOCATABLE LOADER	19600	0		
02950		DORG	19982,	CONTROL TO WRITE ON DISK.	19982			
02960		DSC	1,1		19982	1		
			1					
02970		DSA	DSA04		19987	5 X	1	
02980		DC	3,20		19987	J9639		
			-20		19990	3		
02990		DC	6,402'		19996	6		
			-0402'					
03000	*****							
03010	*****							
03020	*****							
03030	*****							
03040	***							
03050	*****							

03060	TEST	BNF	NOERR,INDS,7,	TEST IND TABLE	00630	44	00654	-0610
03070		AM	COUNT,01,10,,	UP THE ERROR COUNT	00642	11	01131	000-1
03080	NOERR	AM	TEST+11,02,10,,	MODIFY ERROR TEST	00654	11	00641	000-2
03090		AM	TEST+18,02,10,,	MODIFY ERROR COUNT LOCATION	00666	11	00648	000-2
03100		BD	TEST,TEST+11,11,,	TEST LAST INDICATOR	00678	43	00630	0064J
03120	**			WRITE ERROR COUNT TO DISK				
03130		TD	IBMWRT,IBMDD,,	SET CORRECT MODULE	00690	25	01022	00440
03140	* NO			ERROR COUNT TO DISK IF FULL TRACK				
03160		BNF	WRTCT+12,OLDDA+14,,	WRITE ERROR COUNT NO FLAG	00702	44	00734	00455
03170		B	GDGO		00714	49	00864	00000
03180		DORG	*-3		00722			
03240	WRTCT	34	IBMWRT,701,,	SEEK THE ERROR COUNT	00722	34	01022	00701
03250		38	IBMWRT,702,,	WRITE THE ERROR COUNT	00734	38	01022	00702
03260		BI	BIGTRB,1900		00746	46	00766	01900
03270		B	GDGO		00758	49	00864	00000
03280		DORG	*-3		00766			
03290	BIGTRB	RCTY			00766	34	00000	00102
03300		WATY	MES1,,,	DISK WRITE ERROR MESSAGE	00778	39	00811	00100
03310		H			00790	48	00000	00000
03320		B	WRTCT		00802	49	00722	00000
03330		DORG	*-4		00809			
03340	MES1	DAC	27,BAD DISK WRITE,RESET START'		00811		27 X	2
			BAD DISK WRITE,RESET START'					
03350	***			MESSAGE IF ENTERING IORT ERROR				
03360	GDGO	CM	BKPT,X01,,	TEST IF CALLED AT ENTRY	00864	14	00467	-1850
03370		BE	MESSG		00876	46	00954	01200
03380		CM	BKPT,X01+36		00888	14	00467	-1886
03390		BE	MESSG		00900	46	00954	01200
03400		TR	OLDDA,JOFF,,	NO-CALL IORT ERROR	00912	31	00441	01036
03410		B	OV RLAY+12,,,	ELIMINATE SEEK	00924	49	00480	00000
03420		DORG	*-4		00931			
03430	MES2	DAC	11,ENT ERROR '		00933		11 X	2
			ENT ERROR '					
03440	MESSG	RCTY			00954	34	00000	00102
03450		WATY	MES2,,,	IO IN MESSAGE	00966	39	00933	00100
03460		WNTY	INDS-1,,,	IO INDICATORS	00978	38	00609	00100
03470		RCTY			00990	34	00000	00102
03480		BI	*+12,700		01002	46	01014	00700
03490		B	EEXIT+12		01014	49	01648	00000
03500		DORG	*-3		01022			
03510	IBMWRT	DC	1,1		01022		1	
			J					
03520		DSA	DSA10+5		01027		5 X	1
					01027		J9754	
03530		DC	3,1		01030		3	
			-01					
03540		DSA	ERROR+500		01035		5 X	1
					01035		-1130	
03550	JOFF	DS	0,++1		01036		0	
03560		DSA	DSA21		01040		5 X	1
					01040		J9630	
03570		DC	3,5		01043		3	
			-05					

03580	DSA ERROR			01048	5 X	1	
				01048	-0630		
				01049	1		
03590	DSC 1,'						
03610 *			ROUTINE TO TYPE OUT AND RESTORE THE ERROR COUNTERS TO ZERO				
03620	DORG ERROR+500			01130			
03630 COUNT	DC 2,00,,,	06		01131	2		
	-0						
03640	DC 2,00,,,	07		01133	2		
	-0						
03650	DC 2,00,,,	16		01135	2		
	-0						
03660	DC 2,00,,,	17		01137	2		
	-0						
03670	DC 2,00,,,	36		01139	2		
	-0						
03680	DC 2,00,,,	37		01141	2		
	-0						
03690	DC 3,00',,,,	38		01144	3		
	-0'						
03700	DORG ERROR+524			01154			
03710	RCTY ,,,		CALL IN BY ENTERING	01154	34	00000	00102
03720	WNTY 46,,,		340003200701	01166	38	00046	00100
03730	TR 46,120,,		360003200702	01178	31	00046	00120
03740	38 32,702,,		4900070011975400100046	01190	38	00032	00702
03750	H			01202	48	00000	00000
03760	DORG *-9,		NOW WASN-T THAT NICE	01204			
03770	DC 2,0			01205	2		
	-0						
03780	DC 2,0			01207	2		
	-0						
03790	DC 2,0			01209	2		
	-0						
03800	DC 2,0			01211	2		
	-0						
03810	DC 2,0			01213	2		
	-0						
03820	DC 2,0			01215	2		
	-0						
03830	DC 3,0'			01218	3		
	-0'						
03840 *****			THIS ROUTINE REMAINS IN CORE WITH ALL ERROR ROUTINES				
03850	DORG ERROR+600			01230			
03860 BBUFF	00			01230	00	00000	00000
03870	DSC 8,0'			01242	8		
	0000000'						
03880 SIOXX	DSC 6,0'			01250	6		
	00000'						
03890	TF **24,SETX,,,		ROUTINE TO DETERMINE ERROR INDS.	01256	26	01280	01316
03900 CHECK	TF **33,XX,7			01268	26	01301	-0000
03910	CF *-1,,6			01280	33	0127R	00000
03920	BNI **36,XX			01292	47	01328	00000
03930	SF CHECK+11,INDS,67			01304	32	0127R	-0610
03940 SETX	SF CHECK+12,,,		SIX DIGIT SUPER INITIALIZATION	01316	32	01280	00000
03950	AM CHECK+11,2,10			01328	11	01279	000-2

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03960 CHEK1	CM CHECK+11,INDS+12,8,,,		DISK ERROR TEST IF OVERFLOW	01340	14	01279	0-622
03970	BNI CHECK,1300			01352	47	01268	01300
03980	BNF DTEST,CHECK+12,,,		ON DISK ERROR, DISTINGUISH IF OVERFLOW.	01364	44	00766	01280
03990 CHEK2	BD RETRY,STEPS,,		IF NOT, GO INTO RETRY LOOP.	01376	43	01042	01200
04000 HOLLER	RCTY ,,,		TYPE ERROR MESSAGE.	01388	34	00000	00102
04010	WATY EMSG1			01400	39	01785	00100
04020	SPTY			01412	34	00000	00101
04030 HO1	WNTY SIOXX			01424	38	01250	00100
04040	SPTY			01436	34	00000	00101
04050	NOP HO4			01448	41	01484	00000
04060 HO3	WNTY INDS-1			01460	38	00609	00100
04070	SPTY			01472	34	00000	00101
04080 HO4	H ERROR+8			01484	48	00638	00000
04090	TFM B1-5,B1,711,		INITIALIZE INDIRECT BRANCH.	01496	16	01574	-157R
04100	RNTY BBUFF,,,		READ THE OPERATORS ENTRY.	01508	36	01230	00100
04110	SPTY			01520	34	00000	00101
04120	BI *-24,400,,		IF SSW4, ALLOW REENTRY.	01532	46	01508	00400
04130	SF BBUFF,,,		COMPUTE BRANCH ADDRESS.	01544	32	01230	00000
04140	S B1-5,BBUFF+1			01556	22	01574	01231
04150	B B1,,6,,		PERFORM INDIRECT BRANCH.	01568	49	0157R	00000
04160	DORG *-4			01575			
04170 B1	DSA EEXIT			01579		5 X	1
04180	DSA RETRY			01579		-1636	
				01584		5 X	1
04190	DSA APHASE			01584		-1042	
				01589		5 X	1
04200	DSA AJOB			01589		-1612	
				01594		5 X	1
04210	DSA RETN			01594		-1600	
				01599		5 X	1
04220 AJOB	TDM **23,0,,		SET MONITOR RETURN INDICATOR.	01599		-1680	
04230 APHASE	TDM SYSCAL,4			01600	15	01623	00000
04240	TFM BKPT,MONCAL			01612	15	00475	00004
04250 EEXIT	NOP MAPENT,SAVDDA,,		RESTORE WORKING DDA IF DISK I/O ERROR.	01624	16	00467	-0796
04260	TR OLDDA,ERRB,,		RESTORE MAIN ROUTINE AND RETURN.	01636	41	02144	01175
04270	TFM DLDCY+1,MCYL,10,		RESTORE MONITOR MODULE CYLINDER IND.	01648	31	00441	01815
04280	B OVRLAY+12			01660	16	02132	000R8
04290	DORG *-3			01672	49	00480	00000
04300 RETN	RNTY BBUFF,,,		READ OPERATORS ENTRY.	01680	36	01230	00100
04310	SPTY			01692	34	00000	00101
04320	BI *-24,400,,		ALLOW REENTRY IF SSW4.	01704	46	01680	00400
04330	SF BBUFF,,,		INITIALIZE FOR RETURN.	01716	32	01230	00000
04340	TF BKPT,BBUFF+4			01728	26	00467	01234
04350	TDM DIOP+47,0			01740	15	02067	00000
04360	CF IOSK			01752	33	00554	00000
04370	CF DIOP+98			01764	33	02118	00000
04380	B EEXIT			01776	49	01636	00000
04390	DORG *-3			01784			
04400 EMSG1	DAC 9,DSK ERR ',			01785		9 X	2
	DSK ERR '						

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04410	SIOP	36	MAPENT,702,0		01802	L6	02144	00702
04420	DSC	1,'			01814		1	
04430	ERRB	DS	0,++1		01815		0	
04440	DSA	DSA06+1			01819		5 X	1
04450	DC	3,13			01819		J9641	
		-13			01822		3	
04460	DSA	ERRET			01827		5 X	1
04470	DSC	1,'			01827		-0602	
					01828		1	
04480	DORG	19982,	CONTROL TO WRITE ON DISK.		19982		1	
04490	DSC	1,1			19982		1	
		1						
04500	DSA	DSA10			19987		5 X	1
04510	DC	3,12			19987		J9749	
		-12			19990		3	
04520	DSA	ERROR			19995		5 X	1
04530	DSC	1,'			19995		-0630	
					19996		1	
04540	*****		OVERLAY ERROR ROUTINE STAGE 0 PLUS					
04550	DORG	ERROR			00630			
04560	E0030	TF	SIOXX+4,,IOXX,, MOVE RETURN ADDRESS FOR TYPE-OUT.		00630	26	01254	00565
04570	CM	BKPT,X03,,	THREE POSSIBILITIES FOR THIS.		00642	14	00467	-1084
04580	BNF	E0070,CNTWD+5,,	BRANCH IF DISK I/O.		00654	44	00838	02175
04590	BNI	E0040,1200			00666	47	00736	01200
04600	BNR	E0050,CNTWD+4,11,	TEST IF CNTL CARD TRAP.		00678	45	00806	0217M
04610	TFM	BKPT,IOXX,711,	YES -SET PROPER RETURN POINT.		00690	16	00467	-056N
04620	TR	OLDDA,++19,,	LOAD AND EXECUTE ERROR ROUTINE		00702	31	00441	00721
04630	B	OVRLAY+12,DSA14,,	STAGE 4.		00714	49	00480	19777
04640	DC	3,6			00728		3	
		-06						
04650	DSA	ERROR			00733		5 X	1
04660	DSC	1,'			00733		-0630	
					00734		1	
04670	E0040	CM	BKPT,X04,, TEST IF ERROR AT NON-DISK I/O TIME.		00736	14	00467	-1216
04680	BNI	E0050,1200			00748	47	00806	01200
04690	TFM	BKPT,IOP+24			00760	16	00467	-1982
04700	TR	OLDDA,++19,,	LOAD AND EXECUTE ERROR ROUTINE		00772	31	00441	00791
04710	B	OVRLAY+12,DSA12,,	STAGE 2.		00784	49	00480	19786
04720	DC	3,6			00798		3	
		-06						
04730	DSA	ERROR			00803		5 X	1
04740	DSC	1,'			00803		-0630	
					00804		1	

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04750	E0050	RCTY	,,, IMPOSSIBLE ERROR -MACHINE FAILURE OR		00806	34	00000	00102
04760	WATY	EMSG21,,,	INCORRECT IORT CALLING SEQUENCE.		00818	39	01083	00100
04770	B	APHASE,,,	TERMINATE THE CURRENT PHASE.		00830	49	01612	00000
04780	DORG	--3			00838			
04790	E0070	BI	E0100,1200,, TEST IF AT MAP SECTOR READ TIME.		00838	46	01050	01200
04800	CM	BKPT,X04,,	NO -TEST IF AT DISK I/O TIME.		00850	14	00467	-1216
04810	BNI	E0090,1200			00862	47	00956	01200
04820	TFM	H04+6,ERROR+20,,	YES -INITIALIZE FOR DISK ERROR.		00874	16	01490	-0650
04830	TD	D1OP+12,SIOP+12			00886	25	02032	01814
04840	TR	SIOP,D1OP			00898	31	01802	02020
04850	TDM	D1OP+12,4			00910	15	02032	00004
04860	E0080	TR	OLDDA,++19,, LOAD AND EXECUTE ERROR ROUTINE		00922	31	00441	00941
04870	B	OVRLAY+12,DSA11,,	STAGE 1.		00934	49	00480	19761
04880	DC	3,6			00948		3	
		-06						
04890	DSA	ERROR			00953		5 X	1
04900	DSC	1,'			00953		-0630	
					00954		1	
04910	E0090	CM	BKPT,AB01,, TEST IF ILLEGAL NAME LOAD REQUEST.		00956	14	00467	J0926
04920	BI	E0095,1200			00968	46	01016	01200
04930	CM	BKPT,SK02,,	NO -TEST IF ILLEGAL DRIVE CODE.		00980	14	00467	-1608
04940	BNI	E0050,1200			00992	47	00806	01200
04950	TFM	H04+6,RDVCD,,	YES -SET UP FOR ERROR PROCEDURE.		01004	16	01490	-1002
04960	E0095	TR	OLDDA,++19,, LOAD AND EXECUTE ERROR ROUTINE		01016	31	00441	01035
04970	B	OVRLAY+12,DSA13,,	STAGE 3.		01028	49	00480	19772
04980	DC	3,5			01042		3	
		-05						
04990	DSA	ERROR			01047		5 X	1
05000	DSC	1,'			01047		-0630	
					01048		1	
05010	E0100	BNR	E0080,MAPENT,, TEST IF EMPTY MAP ENTRY CALL.		01050	45	00922	02144
05020	TFM	H04+6,MERR,,	YES -SET UP CALL TO THE ERROR ROUTINE.		01062	16	01490	-0878
05030	B	E0095			01074	49	01016	00000
05040	DORG	--3			01082			
05050	EMSG21	DAC	8,IMP ERR', IMP ERR'		01083		8 X	2
05060	DORG	19982,	CONTROL TO WRITE ON DISK.		19982			
05070	DSC	1,1			19982		1	
		1						
05080	DSA	DSA21			19987		5 X	1
05090	DC	3,5			19987		J9630	
		-05			19990		3	
05100	DSA	ERROR			19995		5 X	1
05110	DSC	1,'			19995		-0630	
					19996		1	
05120	*****		OVERLAY ERROR ROUTINE STAGE 1					
05130	DORG	ERROR			00630			
05140	B	H04+6,,6	BRANCH AS PRESET.		00630	49	0149-	00000

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05150	DORG	+3		00638			
05160	TDM	NIOP+13,9,,	DISABLE ANY READ CHECK.	00638	15	01079	00009
05170	TDM	EEXIT,3,,	INITIALIZE ERROR RETURN.	00650	15	01636	00003
05180	TFM	EEXIT+42,OVRLAY		00662	16	01678	-0468
05190	TR	NIOP,SIOP,,	MOVE THE I/O INSTRUCTION.	00674	31	01066	01802
05200	TDM	NIOP+12,4,,	CLEAR THE RECORD MARK.	00686	15	01078	00004
05210	TR	SAVDDA,MAPENT,,	SAVE THE WORKING DDA.	00698	31	01175	02144
05220	WTEST	BNF	++20,INDS,7,	DETERMINE IF NON-CYLINDER OVERFLOW ERROR.	00710	44	00730 -0610
05230	B	RETRY,,,	NO.	00722	49	01042	00000
05240	DORG	+3		00730			
05250	AM	WTEST+11,2		00730	11	00721	-0002
05260	CM	WTEST+11,INDS+12		00742	14	00721	-0622
05270	BN1	WTEST,1300		00754	47	00710	01300
05280	O TEST	BN1	++24,3800	00766	47	00790	03800
05290	SF	INDS+12		00778	32	00622	00000
05300	BNF	EEXIT,INDS+12		00790	44	01636	00622
05310	CYLOVF	TFM	NEXT,200,,	YES -COMPUTE ADDRESS OF TOP OF NEXT CYL.	00802	16	00969 -0200
05320	TD	++23,MAPENT+3		00814	25	00837	02147
05330	BD	++24,TEETH		00826	43	00850	01211
05340	TFM	NEXT,100		00838	16	00969	-0100
05341	TFM	NEWDDA+13,0		00850	16	01173	-0000
05350	A	NEXT-2,MAPENT+3		00862	21	00967	02147
05360	TF	NEWDDA+5,NEXT,,		00874	26	01165	00969
05370	S	NEXT,MAPENT+5,,	COMPUTE NUMBER OF SECTORS PROCESSED.	00886	22	00969	02149
05380	TF	NEWDDA+11,NEXT		00898	26	01171	00969
05390	S	NEXT,MAPENT+8,,	COMPUTE NUMBER OF SECTORS YET TO PROCESS.	00910	22	00969	02152
05400	BNF	RETRY,NEXT,,	MUST RETRY IF 0 OR LESS.	00922	44	01042	00969
05410	CM	DRIVE,99,610,,	TEST IF DRIVE OVERFLOW.	00934	14	0216R	000R9
05420	BI	DOVFL,1200		00946	46	01134	01200
05430	CF	NEXT,,,	NO -SET NEW SECTOR COUNT.	00958	33	00969	00000
05440	NEXT	DS	0,,	00969		0	
05450	SF	NEXT-2		00970	32	00967	00000
05460	TF	NEWDDA+8,NEXT		00982	26	01168	00969
05470	SF	NEWDDA+9,,,	COMPUTE NEW CORE ADDRESS.	00994	32	01169	00000
05480	A	NEWDDA+13,MAPENT+13		01006	21	01173	02157
05490	AM	DRIVE,1,610,	UPDATE CYLINDER POSITION INDICATOR.	01018	11	0216R	000-1
05500	TR	MAPENT+1,NEWDDA+1,,	MOVE NEW DDA TO WORKING SLOT.	01030	31	02145	01161
05510	RETRY	TD	CHEK2+11,CHEK2+11,11,REDUCE RETRY COUNT.	01042	25	01387	0138P
05520	34	MAPENT,701,,	RESECK.	01054	34	02144	00701
05530	NIOP	30	,,,	01066	30	00000	00000
05540	BNF	++36,DIOP+47,,	I/O INSTRUCTION GETS MOVED HERE.	01078	44	01114	02067
05550	TD	++23,DIOP+47,,	TEST IF ALSO READ BACK CHECK.	01090	25	01113	02067
05560	36	MAPENT,700	YES -GET MODE DIGIT.	01102	36	02144	00700
05570	BN1	EEXIT,1900,,	SEE IF ANY TROUBLE THIS TIME.	01114	47	01636	01900
05580	B	INDOUT,,6,		01126	49	0062R	00000
05590	DORG	+3		01134			
05600	DOVFL	TF	EMSG1+12,EMSG2+4,, INITIALIZE FOR DRIVE OVERFLOW TYPE-OUT.	01134	26	01797	01159
05610	B	HOLLER		01146	49	01388	00000
05620	DORG	+3		01154			
05630	EMSG2	DAC	3,0FL,	01155		3 X	2
	OFL						
05640	NEWDDA	DSC	15,0'	01160		15	
			0000000000000000'				
05650	SAVDDA	DSC	20,0	01175		20	
			00000000000000000000				
05660	STEPS	DSC	10,1234567890,1200,UP, UP, UP AND --WHOOPS.	01200		10	
			1234567890				

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05670	TEETH	DAC	5,++++,1211	01211		5 X	2
			++++				
05680	DORG	19982,,	CONTROL TO WRITE ON DISK	19982			
05690	DSC	1,1		19982		1	
05700	DSA	DSa11		19987		5 X	1
				19987		J9761	
05710	DC	3,6		19990		3	
	-06						
05720	DSA	ERROR		19995		5 X	1
				19995		-0630	
05730	DSC	1,1		19996		1	
05740	*****	OVERLAY ERROR ROUTINE	STAGE 2				
05750	DORG	ERROR		00630			
05760	TFM	CHEK2-6,EEXIT+12,,	INITIALIZE ERROR CHECK EXIT.	00630	16	01370	-1648
05770	TDM	CHEK2+1,1		00642	15	01377	00001
05780	TFM	01+5,IOPA,,	SET RETRY ADDRESS.	00654	16	01584	-1010
05790	TD	IOPA+12,SIOP+12,,	MOVE THE I/O INSTRUCTION.	00666	25	01970	01814
05800	TR	SIOP,IOPA		00678	31	01802	01958
05810	TR	IOPA,IOPA		00690	31	01010	01958
05820	TDM	IOPA+12,4,,	CLEAR THE RECORD MARKS.	00702	15	01970	00004
05830	TDM	IOPA+12,4		00714	15	01022	00004
05840	SF	IOPA+9,,	INITIALIZE FOR DEVICE COMPARISON	00726	32	01967	00000
05850	TDM	IOPA+10,0		00738	15	01968	00000
05860	Z011	CM	IOPA+10,10,10,	DETERMINE IF A TYPE ERROR	00750	14	01968 000J0
05870	BN1	Z01,1200		00762	47	00842	01200
05880	CM	IOPA+1,36,10,	YES -DETERMINE IF A READ.	00774	14	01959	000L6
05890	BI	++36,1200		00786	46	00822	01200
05900	CM	IOPA+1,37,10		00798	14	01959	000L7
05910	BN1	EEXIT+12,1200,,	EXIT IF A WRITE.	00810	47	01648	01200
05920	TF	EMSG1+4,EMSG7+4,,	SET UP ERROR MESSAGE.	00822	26	01789	01083
05930	B	HOLLER		00834	49	01388	00000
05940	DORG	+3		00842			
05950	Z01	CM	IOPA+10,20,10,	TEST IF P/T PUNCH ERROR	00842	14	01968 000K0
05960	BN1	Z02,1200		00854	47	00886	01200
05970	TF	EMSG1+4,EMSG6+4,,	YES -SET UP ERROR MESSAGE.	00866	26	01789	01077
05980	B	HOLLER		00878	49	01388	00000
05990	DORG	+3		00886			
06000	Z02	CM	IOPA+10,30,10,	TEST IF P/T READER ERROR	00886	14	01968 000L0
06010	BN1	Z03,1200		00898	47	00930	01200
06020	TF	EMSG1+4,EMSG5+4,,	YES -SET UP ERROR MESSAGE.	00910	26	01789	01071
06030	B	HOLLER		00922	49	01388	00000
06040	DORG	+3		00930			
06050	Z03	CM	IOPA+10,40,10,	TEST IF CARD PUNCH ERROR	00930	14	01968 000M0
06060	BN1	Z04,1200		00942	47	00986	01200
06070	TF	EMSG1+4,EMSG4+4,,	YES -SET UP ERROR MESSAGE.	00954	26	01789	01065
06080	BNF	HOLLER,INDS+2,,	TEST IF WRITE CHECK.	00966	44	01388	00612
06090	B	IOPA,,,	YES -GIVE FREE RETRY.	00978	49	01010	00000
06100	DORG	+3		00986			
06110	Z04	TF	EMSG1+4,EMSG3+4,,	SET UP ERROR MESSAGE.	00986	26	01789 01059
06120	BNF	HOLLER,INDS,,	TEST IF READ CHECK.	00998	44	01388	00610
06130	IOPA	30	,,,	01010	30	00000	00000
06140	BN1	EEXIT+12,1900,,	EXIT IF NO ERROR.	01022	47	01648	01900

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06150	TFM	CHEK1+11,INDS+8,,	NO -GIVE THE LOOP A WHIRL.	01034	16	01351	-0618
06160	B	CHECK-12		01046	49	01256	00000
06170	DORG	*-3		01054			
06180	EMSG3	DAC 3,CDR,		01055		3 X	2
		CDR					
06190	EMSG4	DAC 3,CDP,		01061		3 X	2
		CDP					
06200	EMSG5	DAC 3,PTR,		01067		3 X	2
		PTR					
06210	EMSG6	DAC 3,PTP,		01073		3 X	2
		PTP					
06220	EMSG7	DAC 3,TYP,		01079		3 X	2
		TYP					
06230	DORG	19982,	CONTROL TO WRITE ON DISK.	19982			
06240	DSC	1,1		19982		1	
		1					
06250	DSA	DSA12		19987		5 X	1
				19987		J9786	
06260	DC	3,6		19990		3	
		-06					
06270	DSA	ERROR		19995		5 X	1
				19995		-0630	
06280	DSC	1,'		19996		1	
06290	*****	ERROR ROUTINE STAGE 3					
06300	*	PROCESSES INVALID DIMS, PROGRAM NAMED LOADS AND DRIVE CODES					
06310	DORG	ERROR		00630			
06320	B	H04+6,,6,	EXECUTE INDIRECT BRANCH.	00630	49	0149-	00000
06330	DORG	*-3		00638			
06340	TFM	B1,RNAM,,	INITIALIZE FOR ILLEGAL NAME CALL.	00638	16	01579	-0718
06350	TF	EMSG1+4,EMSG11+4		00650	26	01789	01089
06360	TDM	H03+1,9		00662	15	01461	00009
06370	TFM	H03+6,AA02A+6		00674	16	01466	-0235
06380	TD	AA02A+18,SIOP+12		00686	25	00247	01814
06390	TFM	B1+5,RDIM		00698	16	01584	-0786
06400	B	HOLLER		00710	49	01388	00000
06410	DORG	*-3		00718			
06420	RNAM	RATY BBUFF+1,,,	READ THE TYPED NAME.	00718	37	01231	00100
06430	SPTY			00730	34	00000	00101
06440	BI	*-24,400,,	ALLOW RE-ENTRY IF SSW4.	00742	46	00718	00400
06450	SF	BBUFF		00754	32	01230	00000
06460	TF	AA02A+16,BBUFF+11		00766	26	00245	01241
06470	B	EEXIT+12		00778	49	01648	00000
06480	DORG	*-3		00786			
06490	RDIM	RNTY BBUFF,,,	READ THE TYPED DIM NUMBER.	00786	36	01230	00100
06500	SPTY			00798	34	00000	00101
06510	BI	*-24,400		00810	46	00786	00400
06520	SF	BBUFF		00822	32	01230	00000
06530	RDIM1	NOP RMAP+20,,,	NOP/BRANCH SWITCH.	00834	41	00982	00000
06540	TF	AA04+7,BBUFF+3		00846	26	00291	01233
06550	TFM	BKPT,AB06+24,,	SET RETURN POINT.	00858	16	00467	J1178
06560	B	EEXIT+12		00870	49	01648	00000
06570	DORG	*-3		00878			
06580	MERR	TF RMAP-2,CNTWD+6		00878	26	00960	02176

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06590	TFM	B1,RMAP		00890	16	01579	-0962
06600	TFM	B1+5,RMAP		00902	16	01584	-0962
06610	TF	EMSG1+4,EMSG10+4		00914	26	01789	01083
06620	TFM	BKPT,DIO+60		00926	16	00467	-0880
06630	TFM	H03+6,RMAP-5		00938	16	01466	-0957
06640	B	HOLLER		00950	49	01388	00000
06650	DORG	*-4		00957			
06660	DC	5,0'		00961		5	
		-000'					
06670	RMAP	TDM RDIM1+1,9		00962	15	00835	00009
06680	B	RDIM		00974	49	00786	00000
06690	DORG	*-3		00982			
06700	TF	CNTWD+6,BBUFF+3		00982	26	02176	01233
06710	B	EEXIT+12,,,	GO TRY AGAIN WITH NEW MAP NUMBER.	00994	49	01648	00000
06720	DORG	*-3		01002			
06730	RDVCD	TFM B1,RDIM,,	INITIALIZE FOR ILLEGAL DRIVE CODE ERROR.	01002	16	01579	-0786
06740	TF	EMSG1+4,EMSG20+4		01014	26	01789	01095
06750	TDM	H03-11,9		01026	15	01449	00009
06760	TF	RDIM1+6,DCDE+18		01038	26	00840	01076
06770	B	RNAM-20		01050	49	00698	00000
06780	DORG	*-3		01058			
06790	DCDE	TD TEMP-5,BBUFF,0		01058	K5	02014	01230
06800	B	EEXIT+12		01070	49	01648	00000
06810	DORG	*-3		01078			
06820	EMSG10	DAC 3,MAP,		01079		3 X	2
		MAP					
06830	EMSG11	DAC 3,NAM,		01085		3 X	2
		NAM					
06840	EMSG20	DAC 3,MOD,		01091		3 X	2
		MOD					
06850	DORG	19982,	CONTROL TO WRITE ON DISK.	19982			
06860	DSC	1,1		19982		1	
		1					
06870	DSA	DSA13		19987		5 X	1
				19987		J9772	
06880	DC	3,5		19990		3	
		-05					
06890	DSA	ERROR		19995		5 X	1
				19995		-0630	
06900	DSC	1,'		19996		1	
06910	*****	ERROR ROUTINE STAGE 4					
06920	*	MONITOR CONTROL CARD TRAP PROCESSOR					
06930	DORG	ERROR		00630			
06940	TD	Y00+8,FSPS		00630	25	00686	00429
06950	TD	Y00+11,IOP+9		00642	25	00689	01967
06960	CF	Y00+8		00654	33	00686	00000
06970	CF	Y00+11		00666	33	00689	00000
06980	Y00	CM ++8,XX,710		00678	14	00686	-00-0
06990	BNE	EEXIT+12		00690	47	01648	01200
07000	MA	JA,CNTWD+4		00702	70	00984	02174
07010	TFM	JR,02,10		00714	16	01141	000-2
07020	CM	IOP+1,37,10		00726	14	01959	000L7
07030	BE	++48		00738	46	00786	01200

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07040	TFM	JR,001,9	00750	16	01141	00-01
07050	CM	IOP+1,36,10	00762	14	01959	00016
07060	BNE	EEXIT+12	00774	47	01648	01200
07070	A	JA,JR	00786	21	00984	01141
07080	MA	CNTWD+4,JA	00798	70	02174	00984
07090	BNR	EEXIT+12,CNTWD+4,11	00810	45	01648	0217M
07100	TDM	DVRLAY+10,1,11	00822	15	00478	0000J
07110	AM	JA,158	00834	11	00984	-0158
07120	MA	CNTWD+4,JA	00846	70	02174	00984
07130	SM	JA,158	00858	12	00984	-0158
07140	TD	CNTWD+4,YO7+11,6	00870	25	0217M	01129
07150	A	JA,JR	00882	21	00984	01141
07160	MA	CNTWD+4,JA	00894	70	02174	00984
07170	BNR	JTEST,CNTWD+4,11	00906	45	01010	0217M
07180	A	JA,JR	00918	21	00984	01141
07190	MA	CNTWD+4,JA	00930	70	02174	00984
07200	BNR	JTEST,CNTWD+4,11	00942	45	01010	0217M
07210	YOIA	TDM	00954	15	00475	00000
07220	TDM	DVRLAY+10,0	00966	15	00478	00000
07230	YIOB	RCTY	00978	34	00000	00102
07240	JA	DC	00984		5	
		-0000				
07250	MATY	MSG13	00990	39	01211	00100
07260	BT	APHASE+12	01002	49	01624	
07270	JTEST	BNF	01010	44	00978	01140
07275	SM	CNTWD+4,1,10	01022	12	02174	000-1
07280	CF	DVRLAY+10	01034	33	00478	00000
07280	TR	ERROR,CNTWD+4,11	01046	31	00630	0217M
07300	TFM	MCCBUF+1,00,210	01058	16	J3001	000-0
07310	AM	8-6,2,10	01070	11	01064	000-2
07320	CM	8-18,MCCBUF+161	01082	14	01064	J3161
07330	BNH	8-36	01094	47	01058	01100
07340	TR	MCCBUF+4,ERRDR	01106	31	13004	00630
07350	YO7	TFM	01118	16	13003	0-000
07360	DC	1,*,*	01129		1	
		*				
07370	DC	1,*,*-2	01127		1	
		*				
07380	YO7A	SF	01130	32	J3000	00000
07390	JR	DC	01141		5	
		-0000				
07400	AM	YO7A+6,1,10	01142	11	01136	000-1
07410	CF	YO7A+6,,6	01154	33	01130	00000
07420	AM	YO7A+6,1,10	01166	11	01136	000-1
07430	CM	YO7A+6,MCCBUF+160	01178	14	01136	J3160
07440	BNH	YO7A	01190	47	01130	01100
07450	BT	YIOB	01202	49	00978	
07460	EMSG13	DAC	01211		8 X	2
		TRP ERR				
07470	DORG	19982,,	19982		1	
07480	DSC	1,1	19982			
		1				
07490	DSA	DSA14	19987		5 X	1
			19987		J9777	
07500	DC	3,6	19990		3	
		-06				

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07510	DSA	ERROR	19995		5 X	1
			19995		-0630	
07520	DSC	1,1	19996		1	
		*				
07530	*****	SPS SUPERVISOR AND RELOCATABLE LOADER CALLER STAGE 1				
07540	DORG	0	00000			
07550	TFM	OLD CY+1,MCYL,10,	00000	16	02132	000R8
07560	BNF	LCA01,OLDDA+6,,	00012	44	00072	00447
07570	TDM	LDINPT,0,11,	00024	15	00428	0000-
07580	TR	DIMENT,MAPENT,,	00036	31	00402	02144
07590	BNF	**+24,CNTWD+7,,	00048	44	00072	02177
07600	TF	HIGH,CNTWD+11,,	00060	26	00434	02181
07610	LCA01	BNF	00072	44	00204	00428
07620	BD	LCA04,LDINPT,,	00084	43	00120	00428
07630	BNF	LCA06,MAPENT+13,,	00096	44	00180	02157
07640	SF	FSPS,,	00108	32	00429	00000
07650	LCA04	BNF	00120	44	00180	00429
07660	LCA02	TFM	00132	16	00565	-0155
07670	B	IOGT,LCA08,7	00144	49	00566	-0237
07680	TFM	IOXX,**+23,,	00156	16	00565	-0179
07690	B	IOGT,LCA09,7	00168	49	00566	-0245
07700	LCA06	BNF	00180	44	00204	00416
07710	TF	DIMENT+13,DIMENT+18,,	00192	26	00415	00420
07720	LCA06A	TR	00204	31	00441	00223
07730	B	DVRLAY+12	00216	49	00480	00000
07740	DORG	8-4	00223			
07750	LCA07	DS	00223		0	
07760	DSA	DSA16	00227		5 X	1
			00227		J9767	
07770	DC	3,3	00230		3	
		-03				
07780	DSA	0	00235		5 X	1
			00235		-0000	
07790	DSC	1,1	00236		1	
		*				
07800	LCA08	DSC	00237		2	
		22				
07810	DSA	LCA03	00243		5 X	1
			00243		-0273	
07820	DSC	1,1	00244		1	
		*				
07830	LCA09	DSC	00245		2	
		2K				
07840	DSA	LCA02A	00251		5 X	1
			00251		-0253	
07850	DSC	1,1	00252		1	
		*				
07860	LCA02A	DSC	00253		1	
		1				
07870	DSA	DSA02	00258		5 X	1

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07880	DC 3,2		00258	J9636	
	-02		00261	3	
07890	DSA 100		00266	5 X	1
			00266	-0100	
07900	DSA SUPENT		00271	5 X	1
			00271	-2934	
07910	DSC 1,1		00272	1	
07920 LCA03	DSC 1,1		00273	1	
	1				
07930	DSA DSA50		00278	5 X	1
			00278	J7024	
07940	DC 3,50		00281	3	
	-50				
07950	DSA SYSORG-2		00286	5 X	1
			00286	-2400	
07960	DSC 1,1		00287	1	
07970	DORG 19982,	CONTROL TO WRITE ON DISK.	19982		
07980	DSC 1,1		19982	1	
	1				
07990	DSA DSA15		19987	5 X	1
			19987	J9783	
08000	DC 3,3		19990	3	
	-03				
08010	DC 6,0'		19996	6	
	-0000'				
08020	*****	RELOCATABLE LOADER CALLER STAGE 2			
08030	DORG 0		00000		
08040	BNF LCB02,LDINPT,,	BRANCH IF TRA CALL.	00000	44	00200 00428
08050	TF CNTWD+6,HALT+6,,	SAVE POSSIBLE RETURN ADDRESS.	00012	26	02176 00462
08060	BD LCB01,LDINPT,,	BRANCH IF NON-DISK LOAD.	00024	43	00092 00428
08070	TDM SK03+1,9,,	DISK -COMPUTE PHYSICAL DRIVE CODE.	00036	15	01713 00009
08080	TFM SK04,++20		00048	16	02143 -0068
08090	B SEEK		00060	49	01500 00000
08100	DORG *-3		00068		
08110	TD DIMENT,MAPENT,,	GIVE DRIVE CODE TO LOADER	00068	25	00402 02144
08120	TF CNTWD+6,IOXX,,	SAVE POSSIBLE RETURN ADDRESS.	00080	26	02176 00565
08130 LCB01	TD DRIVE-5,TEMP-5,,	MOVE THE DERIVED DRIVE CODE.	00092	25	02164 02014
08140	TR CNTWD+13,DRIVE-5,,	SAVE CALLING PARAMETERS.	00104	31	02183 02164
08150	BNF **24,SPSMLP+1,,	WATCH OUT FOR THOSE NON-DISK MAIN-LINE	00116	44	00140 00469
08160	SF FSPS,,	LOADS FOR THE SPS SUPERVISOR.	00128	32	00429 00000
08170	BNF **36,SPSMLP,,	TEST IF SPS MAIN LINE PROGRAM.	00140	44	00176 00468
08180	CF SPSMLP,,	YES -INDICATE RELOCATABLE.	00152	33	00468 00000
08190	SF SPSMLP+1		00164	32	00469 00000
08200	BNF **24,CINIT,,	TEST IF TO INITIALIZE LOADER FIELD.	00176	44	00200 00427
08210	TFM LADDR,0,,	YES.	00188	16	00439 -0000
08220 LCB02	TFM IOXX,++23,,	WRITE UPPER SAVE AREA ON DISK.	00200	16	00565 -0223
08230	B IORCB,LCB08,7		00212	49	00520 -0255
08240	TF HALT+8,CNTWD+18,11,	INITIALIZE CYLINDER POSITION FOR LOADER.	00224	26	00464 02180

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08250	TR OLDDA,LCB10,,	READ AND EXECUTE THE LOADER.	00236	31	00441 00278
08260	B OVRLAY+12		00248	49	00480 00000
08270	DORG *-4		00255		
08280 LCB08	DSC 2,22		00255	2	
	22				
08290	DSA LCB09		00261	5 X	1
			00261	-0263	
08300	DSC 1,1		00262	1	
08310 LCB09	DSC 1,1		00263	1	
	1				
08320	DSA DSA07		00268	5 X	1
			00268	J9656	
08330	DC 3,2		00271	3	
	-02				
08340	DSA ERRET+1500		00276	5 X	1
			00276	-2102	
08350	DSC 1,1		00277	1	
08360 LCB10	DS 0,++1		00278	0	
08370	DSA DSA51		00282	5 X	1
			00282	J9600	
08380	DC 3,9		00285	3	
	-09				
08390	DC 6,502'		00291	6	
	-0502'				
08400	DORG 19982,	CONTROL TO WRITE ON DISK.	19982		
08410	DSC 1,1		19982	1	
	1				
08420	DSA DSA16		19987	5 X	1
			19987	J9767	
08430	DC 3,3		19990	3	
	-03				
08440	DC 6,0'		19996	6	
	-0000'				
08450	*****	RELOCATABLE LOADER RETURN ANALYZER STAGE 1			
08460	DORG 0		00000		
08470	TR OLDDA,LRA05,,	RESTORE IORT AND THE UPPER SAVE AREA	00000	31	00441 00269
08480	B OVRLAY+12,,,	VIA THE OVERLAY READ ROUTINE.	00012	49	00480 00000
08490	DORG *-3		00020		
08490	TFM BNI+18,IBMMOD+13,711,	RESTORE OVRLAY ROUTINE EXIT.	00020	16	00510 -045L
08500	TR OLDDA,LRA06,,	INITIALIZE FOR STAGE 2.	00032	31	00441 00283
08510	TF CNTWD+18,HALT+8,6,	RESTORE LOAD MODULE CYLINDER IND.	00044	26	02180 00464
08520	TFM HALT+11,DIMENT+18,711,	SET STAGE 2 RETURN ADDRESS.	00056	16	00467 -042-
08530	BNF LRA02,LDINPT,,	BRANCH IF TCO EXIT FROM LOADER.	00068	44	00176 00428
08540	TR DRIVE-5,CNTWD+13,,	RESTORE CALLING PARAMETERS.	00080	31	02164 02183
08550	TF IOXX,CNTWD+6		00092	26	00565 02176
08560	TD TEMP-5,DRIVE-5		00104	25	02014 02164
08570	TR MAPENT,DIMENT		00116	31	02144 00402
08580	TFM HALT+11,CHK4,,	SET STAGE 2 INDIRECT RETURN ADDRESS.	00128	16	00467 -1412
08590	BNF **24,OVRLAY+21,,	CHECK FOR NON-EXECUTE OF NON-DISK LOAD.	00140	44	00164 00489

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08600	CF	CNTWD+1,,,	YES -CLEAR THE EXECUTION INDICATOR.	00152	33	02171	00000	
08610	CF	OVRLAY+21		00164	33	00489	00000	
08620	LRA02	TFM	DLDCY+1,MCYL,10,	RESTORE MONITOR MODULE CYLINDER IND.	00176	16	02132	000R8
08630	TFM	HALT+6,8		00188	16	00462	-0008	
08640	BNF	OVRLAY+12,FSPS,,	TEST IF CALLED BY SPS SUPERVISOR.	00200	44	00480	00429	
08650	BNF	OVRLAY+12,SPSMLP+1,,	YES -TEST IF MAIN LINE PROGRAM LOAD.	00212	44	00480	00469	
08660	TFM	HALT+11,DIMENT+18,711,	SET STAGE 2 RETURN ADDRESS.	00224	16	00467	-042-	
08670	TR	OLDDA,++19,,	READ IN SPS SUPERVISOR RETURN	00236	31	00441	00255	
08680	B	OVRLAY+12,DSA17,,	ANALYZER.	00248	49	00480	19770	
08690	DC	3,2		00262		3		
08700	-02							
	DC	6,0'		00268		6		
	-0000'							
08710	LRA05	DS	0,++1	00269		0		
08720	DSA	DSA06		00273		5 X	1	
				00273		J9640		
08730	DC	3,18		00276		3		
	-18							
08740	DSA	502		00281		5 X	1	
				00281		-0502		
08750	DSC	1,1'		00282		1		
	*							
08760	LRA06	DS	0,++1	00283		0		
08770	DSA	DSA01		00287		5 X	1	
				00287		J9635		
08780	DC	3,4		00290		3		
	-04							
08790	DSA	0		00295		5 X	1	
				00295		-0000		
08800	DSC	1,1'		00296		1		
	*							
08810	DDRG	19982,	CONTROL TO WRITE ON DISK.	19982				
08820	DSC	1,1		19982		1		
	1							
08830	DSA	DSA18		19987		5 X	1	
				19987		J9792		
08840	DC	3,3		19990		3		
	-03							
08850	DC	6,0'		19996		6		
	-0000'							
08860	*****	SPS SUPERVISOR RETURN ANALYZER	STAGE 1					
08870	DDRG	0		00000				
08880	CF	FSPS,,,	CLEAR THE SPS SUPERVISOR FLAG.	00000	33	00429	00000	
08890	BD	SRA02,LDINPT,,	BRANCH IF NON-DISK LOAD.	00012	43	00060	00428	
08900	BNF	SRA02,SPSMLP,,	TEST IF RELOCATABLE.	00024	44	00060	00468	
08910	CF	SPSMLP,,,	NO -TURN OFF THE INDICATOR.	00036	33	00468	00000	
08920	TFM	HALT+11,CHK4+12,,	SET STAGE 2 INDIRECT ADDRESSES.	00048	16	00467	-1424	
08930	SRA02	CF	SPSMLP+1,,,	TURN OF MAIN-LINE PROGRAM INDICATOR.	00060	33	00469	00000
08940	SRA01	TFM	HALT+6,8		00072	16	00462	-0008
08950	TFM	DLDCY+1,MCYL,10,	RESTORE MONITOR MODULE CYLINDER IND.	00084	16	02132	000R8	
08960	TFM	GTEST+54,OVRLAY,,	RESTORE BRANCH ADDRESS IN IORT.	00096	16	01214	-0468	

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08970	TD	RMI,INDS+13,6,	SET TWO RECORD MARKS IN THE SPS	00108	25	0221-	00623
08980	TD	RM2,INDS+13,6,	SUBROUTINE WORK AREA.	00120	25	0221N	00623
08990	TR	OLDDA,SRA03,,	READ AND EXECUTE STAGE 2.	00132	31	00441	00152
09000	B	OVRLAY+12		00144	49	00480	00000
09010	DDRG	*-3		00152			
09020	SRA03	DS	0,++1	00152		0	
09030	DSA	DSA01		00156		5 X	1
				00156		J9635	
09040	DC	3,4		00159		3	
	-04						
09050	DC	6,0'		00165		6	
	-0000'						
09060	DDRG	19982,	CONTROL TO WRITE ON DISK.	19982			
09070	DSC	1,1		19982		1	
	1						
09080	DSA	DSA17		19987		5 X	1
				19987		J9770	
09090	DC	3,2		19990		3	
	-02						
09100	DC	6,0'		19996		6	
	-0000'						
09110	*****	SPS SUPERVISOR AND LOADER RETURN ANALYZER	STAGE 2				
09120	DDRG	0		00000			
09130	B	HALT+6,,6,	INDIRECT EXECUTE BRANCH.	00000	49	0046K	00000
09140	DDRG	8		00008			
09150	SF	CINIT,,,	RESTORE LOADER INITIALIZATION IND.	00008	32	00427	00000
09160	BNF	**20,FSPS,,	TEST IF CALLED BY SPS SUPERVISOR.	00020	44	00040	00429
09170	B	IDXX,,6,	YES -RETURN TO IT.	00032	49	0056N	00000
09180	DDRG	*-3		00040			
09190	BD	**20,SYSCAL,,	TEST IF CALLED BY A SYSTEM PROGRAM.	00040	43	00060	00475
09200	B	HALT+11,,6,	NO -RETURN THROUGH PRESET BRANCH.	00052	49	0046P	00000
09210	DDRG	*-3		00060			
09220	TR	OLDDA,++19,,	EXECUTE SYSTEM RETURN ANALYZER.	00060	31	00441	00079
09230	B	OVRLAY+12,DSA19		00072	49	00480	19795
09240	DC	3,3		00086		3	
	-03						
09250	DC	6,0'		00092		6	
	-0000'						
09260	DDRG	19982,	CONTROL TO WRITE ON DISK.	19982			
09270	DSC	1,1		19982		1	
	1						
09280	DSA	DSA01		19987		5 X	1
				19987		J9635	
09290	DC	3,1		19990		3	
	-01						
09300	DC	6,0'		19996		6	
	-0000'						
09310	*****	IORT LOAD PROCESSOR FOR NAMED PROGRAMS	SECTION 1				
09320	DDRG	0		00000			
09330	A	**23,HALT+6,,	MOVE NAME AND POSSIBLE LOAD ADDRESS.	00000	21	00023	00462
09340	A	**35,1,711		00012	21	00047	-000J
09350	A	**47,**23		00024	21	00071	00047
09360	TD	**47,26,7		00036	25	00083	-0026

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09370	TD	*-1,AA04-1,6	00048	25	0004P	00283
09380	TR	AA02A,18,711	00060	31	00229	-001Q
09390	TDM	*-25,XX,6	00072	15	0004P	00000
09400	TF	AA02A+23,HALT+6,, SAVE IORT CALLING PARAMETERS.	00084	26	00252	00462
09410	TR	AA02A+24,CNTWD	00096	31	00253	02170
09420	TFM	IOXX,+23,, SAVE CORE TO BE OVERLAID.	00108	16	00565	-0131
09430	B	IORBC,AA03,7	00120	49	00520	-0261
09440	TFM	IOXX,+23,, READ AND EXECUTE SECTION 2.	00132	16	00565	-0155
09450	B	IOGT,+12,7	00144	49	00566	-0156
09460	DSC	2,-22	00156		2	
	2K					
09470	DSA	**7	00162		5 X	1
			00162		-0164	
09480	DSC	1,'	00163		1	
09490	DSC	1,1	00164		1	
	1					
09500	DSA	DSA09	00169		5 X	1
			00169		J9744	
09510	DC	3,5	00172		3	
	-05					
09520	DSA	AB00	00177		5 X	1
			00177		J0902	
09530	DSC	1,'	00178		1	
09540	DORG	229	00229			
09550	AA02A	DSC 32,0	00229		32	
		00000000000000000000000000000000				
09560	AA03	DSC 2,02	00261		2	
	O2					
09570	DSA	**7	00267		5 X	1
			00267		-0269	
09580	DSC	1,'	00268		1	
09590	DSC	1,1	00269		1	
	1					
09600	DSA	1400	00274		5 X	1
			00274		-1400	
09610	DC	3,10	00277		3	
	-10					
09620	DSA	SYSORG+8500	00282		5 X	1
			00282		J0902	
09630	DSC	1,'	00283		1	
09640	AA04	DSC 8,3200000'	00284		8	
		3200000'				
09650	DSC	5,0'	00292		5	
	0000'					
09660	DORG	19982,, CONTROL TO WRITE ON DISK.	19982			
09670	DSC	1,1	19982		1	
	1					

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09680	DSA	DSA20	19987		5 X	1
			19987		J9798	
09690	DC	3,2	19990		3	
	-02					
09700	DC	6,0'	19996		6	
	-0000'					
09710	*****	MONITOR CALLER SUBROUTINE -ALSO PROCESS ES RETURNS TO THE				
09720	*	DUP SUPERVISOR FROM ITS CALLS TO THE RELOCATABLE LOADER.				
09730	DORG	0	00000			
09740	TFM	OLDY+1,MCYL,10, SET CYLINDER POSITION.	00000	16	02132	000R8
09750	B	MCA03	00012	49	00100	00000
09760	DORG	20	00020			
09770	TFM	HALT+6,M8000,, SET ENTRY TO THE MONITOR.	00020	16	00462	-2902
09780	TFM	BNI+18,IBHMOD+13,711,RESTORE OVRLAY ROUTINE EXIT.	00032	16	00510	-045L
09790	B	MCA01	00044	49	00208	00000
09800	DORG	*-3	00052			
09810	MCA00	BNF MCA06,HALT,, TEST IF MONITOR ALREADY IN CORE.	00052	44	00250	00456
09820	B	M8000,, YES -BRANCH DIRECTLY TO IT.	00064	49	02902	00000
09830	DORG	*-4	00071			
09840	MCA04	DSC 2,2	00071		2	
	O2					
09850	DSA	MCA00A	00077		5 X	1
			00077		-0079	
09860	DSC	1,'	00078		1	
09870	MCA00A	DSC 1,0,, DDA TO SAVE CORE ON 8-TH CYLINDER	00079		1	
	0					
09880	DC	5,1400,, DF DISK SCRATCH AREA	00084		5	
	-1400					
09890	DC	3,177	00087		3	
	J77					
09900	DSA	SYSORG-100	00092		5 X	1
			00092		-2302	
09910	DSC	1,'	00093		1	
09920	DORG	100	00100			
09930	MCA03	BNR **24,SYSCAL,, REPLACE ANY SYSCAL R.M. BY 0.	00100	45	00124	00475
09940	TDM	SYSCAL,0	00112	15	00475	00000
09950	BNF	MCA0L,SYSCAL,, TEST IF DUP CALL.	00124	44	00052	00475
09960	TFM	SYSCAL,5,, YES -SET SYSCAL RETURN CODE.	00136	15	00475	00005
09970	TFM	IOXX,+23,, SAVE CORE FOR THE DUP SUPERVISOR.	00148	16	00565	-0171
09980	B	IORBC,MCA04,7	00160	49	00520	-0071
09990	TFM	IOXX,+23,, LOAD THE DUP SUPERVISOR.	00172	16	00565	-0195
09991	B	IOGT,MCA05,7	00184	49	00566	-0241
10000	TFM	HALT+6,CHK4+12,, SET UP EXIT AFTER RESTORATION OF TABLES.	00196	16	00462	-1424
10010	MCA01	TR OLDDA,**19,, RESTORE ARITH TABLES AND EXECUTE	00208	31	00441	00227
10020	B	DVRLAY,DSA01,, MONITOR OR DUP SUPERVISOR.	00220	49	00468	19635
10030	DC	3,4	00234		3	
	-04					
10040	DC	6,0'	00240		6	
	-0000'					
10050	MCA05	DSC 3,220	00241		3	
	220					

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10060	DC	5,139',		00248	5		
		-139'					
10070	MCA06	TR	OLDDA,**19,,	00250	31	00441	00269
10080		B	OVRLAY+12,DSA06,,,	00262	49	00480	19640
10090		DC	3,109	00276		3	
		J09					
10100	DC	6,502'		00282		6	
		-0502'					
10110	DORG	19982,,	CONTROL TO WRITE ON DISK.	19982			
10120	DSC	1,1		19982		1	
		1					
10130	DSA	DSA19		19987		5 X	1
				19987		J9795	
10140	DC	3,3		19990		3	
		-03					
10150	DC	6,0'		19996		6	
		-0000'					
10160	*****						
10170	*****	MONITOR	-MAIN ROUTINE				
10180	*****						
10190	*****	COMMUNICATION SECTOR	ASSEMBLED PARAMETERS				
10200	DC	19,0',COMM+18,	HEADLESS DDA-S FROM SPS AND FORTRAN.	02820		19	
		-0000000000000000'					
10210	DC	2,8,COMM+41,	STANDARD SPS MANTISSA LENGTH.	02843		2	
		-8					
10220	DC	2,2,COMM+43,	STANDARD SPS SUBROUTINE SET.	02845		2	
		-2					
10230	DSC	1,0,COMM+44,	STANDARD SPS NOISE DIGIT.	02846		1	
		0					
10240	DC	2,8,COMM+46,	STANDARD FORTRAN MANTISSA LENGTH.	02848		2	
		-8					
10250	DC	2,4,COMM+48,	STANDARD FORTRAN FXD. PT. WORD LENGTH.	02850		2	
		-4					
10260	DSC	1,1,COMM+49,	NUMBER OF MODULES IN 1620 SYSTEM.	02851		1	
		1					
10270	DSC	4,0,MCOMM,	MONITOR STATUS INDICATORS.	02852		4	
		0000					
10280	DC	2,1,MCOMM+5		02857		2	
		-1					
10290	DC	2,0,MCOMM+7		02859		2	
		-0					
10300	DC	2,0,MCOMM+9		02861		2	
		-0					
10310	DC	2,0,MCOMM+11		02863		2	
		-0					
10320	DSC	1,0,MCOMM+12,	LE BOEUF SUR LE TOIT.	02864		1	
		0					
10322	DSC	1,5,COMM+73,,	PRINCIPAL INPUT DEVICE CARD	02875		1	
		5					
10321	**	THE PRINCIPAL INPUT DEVICE NUMBER WILL BE 5 FOR CARD SYSTEM					
10322	**	AND 3 FOR PAPER TAPE ON SYSTEM DELIVERY.					
10321	DC	1,1,COMM+76,	OBJECT SYSTEM SIZE	02878		1	
		J					
10330	DC	5,0,COMM+88,	LOWEST ADDRESS LOADED BY LOADER.	02890		5	
		-0000					

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10331	DSC	1,1,COMM+83,	FORTRAN SUBROUTINE SET	02885		1	
		1					
10340	DC	5,0,COMM+93,	CURRENT LOADER RELOCATION INCREMENT.	02895		5	
		-0000					
10350	DC	5,0,COMM+98,	CARD SEQUENCE NUMBER FOR LOADING.	02900		5	
		-0000					
10360	DSC	1,1,COMM+99		02901		1	
		'					
10370	*****	COLD START ENTRY TO THE MONITOR	-CLEAR STORAGE, THEN				
10380	*	THE FOLLOWING INSTRUCTIONS MUST BE LOADED INTO 0.					
10390	*	340003200701					
10400	*	360003200702					
10410	*	4902402X					
10420	*	Y1963611300102					
10430	*						
10440	*	WHERE X IS THE MONITOR CONTROL CARD SOURCE -					
10450	*	=1 TYPEWRITER IF ANY OTHER DIGIT IS SUPPLIED,					
10460	*	=3 P/T READER THE MONITOR WILL ASSUME THE					
10470	*	=5 CARD READER VALUE 1 (TYPEWRITER)					
10480	*						
10490	*	AND WHERE Y IS THE DRIVE CODE FOR THE PHYSICAL MODULE					
10500	*	ON WHICH THE MONITOR NOW RESIDES -					
10510	*	=1 MODULE 0 IF ANY OTHER DIGIT IS SUPPLIED,					
10520	*	=3 MODULE 1 THE MONITOR WILL ASSUME THE					
10530	*	=5 MODULE 2 VALUE 1 (MODULE 0)					
10540	*	=7 MODULE 3					
10550	*						
10560	DORG	SYSORG		02402			
10570	MA000	TD	402,MCR01A,,	02402	25	00402	04485
10580		TR	100,102	02414	31	00100	00102
10590		FDM	402,0	02426	15	00402	00000
10600		TD	**23,31	02438	25	02461	00031
10610		BD	**24,MCD01	02450	43	02474	10690
10620		TDM	31,1	02462	15	00031	00001
10630		TD	MCOMM+3,31	02474	25	02855	00031
10640		CF	32,,	02486	33	00032	00000
10650		TD	**23,32,,	02498	25	02521	00032
10660		BD	**24,MCD04	02510	43	02534	10720
10670		FDM	32,1	02522	15	00032	00001
10680		TD	MCOMM+5,32	02534	25	02857	00032
10690	MA010	FDM	MCOMM+0,,	02546	15	02852	00000
10700		FDM	MCOMM+1,0	02558	15	02853	00000
10710		FDM	MCOMM+2,0	02570	15	02854	00000
10720		FDM	MCOMM+12,4	02582	15	02864	00004
10730		TFM	BNI+18,IBMMOD+13,711	02594	16	00510	-045L
10740		TFM	DLDCY+1,MCYL,10	02606	16	02132	000R8
10750		TF	EQUIV+1,MCOMM+5,,	02618	26	02124	02857
10760		TD	IBMMOD,MCOMM+5,,	02630	25	00440	02857
10770		BTM	UT05,8,,	02642	17	08380	-0008
10780		TR	SPSDDA,UT05-1,11	02654	31	10802	0837R
10790		BTM	UT05,136	02666	17	08380	-0136
10800		TR	FORDDA,UT05-1,11	02678	31	10822	0837R
10810		BTM	UT05,139	02690	17	08380	-0139
10820		TR	DUPDDA,UT05-1,11	02702	31	10842	0837R
10830		BTM	UT05,2	02714	17	08380	-0002
10840		TR	EQUDDA,UT05-1,11	02726	31	10862	0837R

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10850	TFM	IOXX,**23		02738	16	00565	-2761
10860	B	IORBC,MA020,7		02750	49	00520	-2769
10870	B	MB000,,,	PROCEED TO THE INTER-PHASE ENTRY.	02762	49	02902	00000
10880	DORG	**4		02769			
10890	MA020	DSC 2,22		02769		2	
10900	DSA	MA025		02775		5 X	1
				02775		-2777	
10910	DSC	1,1		02776		1	
10920	MA025	DSC 1,1		02777		1	
10930	DSA	DSA40		02782		5 X	1
				02782		J9743	
10940	DC	3,1		02785		3	
10950	DSA	SPSDDA		02790		5 X	1
				02790		J0802	
10960	DSC	1,1		02791		1	
10970	*****	INTER-PHASE ENTRY TO MONITOR.					
10980	DORG	SYSORG+500		02902			
10990	MB000	RCTY ,,,	RESTORE TYPEWRITER CARRIAGE.	02902	34	00000	00102
10991	TD	KREC+2,COMM+76,,	SAVE SYSTEM SIZE	02914	25	09836	02878
10992	TR	OLDCY,MB226-1,,	SET ARM INDICATORS SO SEEK MUST OCCUR	02926	31	02131	04076
10993	BSNX	**12,,,	TURN OFF REGISTERS	02938	60	02950	00000
11000	TF	EQUIV+1,MCOMM+5,,	RESTORE LOGICAL DRIVE 1 MODULE EQUIV.	02950	26	02124	02857
11010	TD	IBMMD,MCOMM+5		02962	25	00440	02857
11020	SF	HALT,,,	INDICATE PRESENCE OF MONITOR.	02974	32	00456	00000
11030	TDM	IOP+37,9,,	DISABLE CONTROL CARD TRAP.	02986	15	01995	00009
11040	BD	MB035,OVRLAY+10,,	TEST FOR ENTRY VIA CNTL CARD TRAP.	02998	43	03192	00478
11050	TDM	MI01,0,,	NO -SET UP TO READ A CNTL CARD.	03010	15	09870	00000
11060	MB010	TD **34,MCOMM+12,,	ONAY EATCHAY.	03022	25	03056	02864
11070	TD	**23,SYSCAL		03034	25	03057	00475
11080	TD	SYSCAL,MC006		03046	25	00475	10740
11090	BD	MB020,SYSCAL,,	TEST IF END OF JOB.	03058	43	03082	00475
11100	BTM	UT07,1,,	YES -GO TO JOB CLOSING ROUTINE.	03070	17	08812	-0001
11110	MB020	TD **23,SYSCAL,,	EXECUTE A COMPUTED BRANCH ON SYSCAL.	03082	25	03105	00475
11120	TD	**23,MC009		03094	25	03117	10770
11130	TF	**30,MC010		03106	26	03136	10781
11131	CF	**17		03118	33	03135	00000
11140	B	MB025,,6		03130	49	0315-	00000
11150	DORG	MB000+244,,	TRICKY, WHAT SAY--.	03146			
11160	MB025	DSA MCR01,MB080,MB100,MB100,MB140		03150		5 X	5
				03150		-4098	
				03155		-3304	
				03160		-3452	
				03165		-3452	
				03170		-3688	
11170	MB030	TDM SYSCAL,0,,	FORCE TERMINATION OF JOB.	03172	15	00475	00000
11180	B	MB010+48		03184	49	03070	00000
11190	DORG	**3		03192			

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11200	MB035	SF NONEX,,,	INHIBIT EXECUTION.	03192	32	00457	00000
11210	TD	**1,OVRLAY+10,,	SAVE RETURN CODE.	03204	25	03203	00478
11220	TDM	OVRLAY+10,0,,	RESTORE MAIN IND.	03216	15	00478	00000
11230	BNF	MB045,MB035+11,,	TEST IF READ NUMERICALLY.	03228	44	03284	03203
11240	MB040	WATY MM30,,,	TYPE RELOAD MESSAGE.	03240	39	10381	00100
11250	RCTY	,,,		03252	34	00000	00102
11260	H	,,,	WAIT FOR OPERATOR.	03264	48	00000	00000
11270	B	MB010-12		03276	49	03010	00000
11280	DORG	**3		03284			
11290	MB045	TDM MI01,1,,	INHIBIT READING A CONTROL CARD.	03284	15	09870	00001
11300	B	MB010		03296	49	03022	00000
11310	DORG	**3		03304			
11320	MB080	BTM UT11,,,	TEST FOR INHIBITED EXECUTION.	03304	17	09648	-0000
11330	TDM	MD02,6,,	SET SYSCAL CODE.	03316	15	09773	00006
11340	TDM	MCOMM+12,6,,	SET DUP INDICATOR.	03328	15	02864	00006
11350	TR	MR02,DUPDDA,,	GET DDA FOR DUP SUPERVISOR.	03340	31	09774	10842
11360	BNR	MB081,MR02,,	TEST IF VALID.	03352	45	03420	09774
11370	TFM	POINT,139,,	NO.	03364	16	09798	-0139
11380	MB080A	WATY MM36,,,	TYPE ERROR MESSAGE.	03376	39	10481	00100
11390	WNTY	POINT-3,,,	IDENTIFY MISSING DIM ENTRY.	03388	38	09795	00100
11400	RCTY	,,,		03400	34	00000	00102
11410	B	UT10F		03412	49	09580	00000
11420	DORG	**3		03420			
11430	MB081	NDP		03420	41	00000	00000
11440	TD	MB225+7,MCR01A,,	NO LOAD ADDRESS.	03432	25	04070	04485
11450	B	MB200,,	GO TO EXECUTE LOAD.	03444	49	03764	00000
11460	DORG	**3		03452			
11470	MB100	BTM UT11,,,	TEST FOR INHIBITED EXECUTION.	03452	17	09648	-0000
11480	BNF	MB145,MCOMM+1,,	TEST IF PHASE BEGAN WITH EXECUTE CARD.	03464	44	03720	02853
11490	BNF	MB110,MCOMM+2,,	YES -TEST IF EXECUTION INHIBITED.	03476	44	03496	02854
11500	B	UT10F,,,	YES.	03488	49	09580	00000
11510	DORG	**3		03496			
11520	MB110	TDM MCOMM+12,4,,	SET EXECUTION INDICATOR.	03496	15	02864	00004
11530	BNF	MB1108,COMM+22,,	TEST IF PROGRAM LOADED TO DISK.	03508	44	03596	02824
11540	BD	MB1108,COMM+22,,	YES -TEST IF IN CORE IMAGE FORMAT.	03520	43	03596	02824
11550	BNF	**20,COMM+39,,	YES -TEST IF A DIM NUMBER SUPPLIED.	03532	44	03552	02841
11560	B	MB1108,,,	WHERE ARE YOU.	03544	49	03596	00000
11570	DORG	**3		03552			
11580	MB110A	BT UT05,COMM+39,,	GO TO GET THE DDA.	03552	27	08380	02841
11590	TR	MR02,UT05-1,11,,	MOVE TO TEMPORARY SLOT.	03564	31	09774	0837R
11600	BNR	MB190,MR02,,	TEST IF VALID.	03576	45	03740	09774
11610	B	MX04+12,,,	NO -TYPE ERROR MESSAGE AND CLOSE JOB.	03588	49	02736	00000
11620	DORG	**3		03596			
11630	MB110B	TR MR02+1,COMM,,	USE DDA IN COMM SECTOR AS LOAD DDA.	03596	31	09775	02802
11640	A	MR02+3,SRELOC,,	CONVERT FROM SCRATCH TO ABSOLUTE	03608	21	09777	00425
11650	TD	MR02,SRELOC-3,,	SECTOR ADDRESS.	03620	25	09774	00422
11660	TFM	MR02+13,99999,,	FORCE THE RELOCATABLE INDICATOR.	03632	16	09787	R9999
11670	BNF	**24,COMM+12,,	TEST IF THE SPS SUPERVISOR REQUIRED.	03644	44	03668	02814
11680	SF	MR02+13,,,	YES -SET FLAG INDICATOR.	03656	32	09787	00000
11690	TFM	HIGH,SYSORG,,	RELOCATABLE PROGRAMS WILL BE LOADED	03668	16	00434	-2402
11700	B	MB195,,,	AT SYSORG.	03680	49	03752	00000
11710	DORG	**3		03688			
11720	MB140	BNF **20,MCOMM+1,,	TERMINATE JOB IF THIS PHASE INVOLVES	03688	44	03708	02853
11730	B	MB030,,,	EXECUTION OF A USER-S PROGRAM.	03700	49	03172	00000
11740	DORG	**3		03708			
11750	BTM	UT11,1,,	TYPE NON EXECUTE MESSAGE.	03708	17	09648	-0001

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11760	MB145	TDM	MCOMM+1,0,,	INDICATE PHASE NOT BEGUN.	03720	15	02853	00000
11770		B	MCR01,,,	GO TO CONTROL CARD READ EXECUTIVE.	03732	49	04098	00000
11780		DORG	*-3		03740			
11790	MB190	TDM	MB225,3,,	FORCE UPDATING OF HIGH INDICATOR.	03740	15	04063	00003
11800	MB195	TDM	MD02,0,,	SET SYSCAL CODE.	03752	15	09773	00000
11810	*****			FINAL LOAD AND EXECUTE OF SYSTEM DR USERS PROGRAM.				
11820	MB200	TF	EQUIV+3,MCOMM+7,,	MOVE REMAINDER OF EQUIV TABLE.	03764	26	02126	02859
11830		TF	EQUIV+5,MCOMM+9		03776	26	02128	02861
11840		TF	EQUIV+7,MCOMM+11		03788	26	02130	02863
11850		TR	REPOS,LREC,,	SET DRIVE REPOSITION TABLE TO ZERO-S.	03800	31	00512	09843
11860		TDM	REPOS+7,0		03812	15	00519	00000
11870		TD	*+7,FSFS,,	MOVE CONTROL CARD SOURCE TO COMMON.	03824	25	03871	00429
11880		TD	FSFS,MCOMM+3		03836	25	00429	02855
11890		BNF	*+24,*+23		03848	44	03872	03871
11900		SF	FSFS		03860	32	00429	00000
11910		SF	LDINPT,,,	FOR GOOD MEASURE.	03872	32	00428	00000
11920		SF	CINIT		03884	32	00427	00000
11930		TR	COMM+84,JREC		03896	31	02886	09818
11940		TFM	IOXX,*+23,,	WRITE COMM SECTOR ON DISK.	03908	16	00565	-3931
11950		B	IORBC,MB220,7		03920	49	00520	-4040
11960		TDM	IOP+37,5,,	RESTORE CNTL CARD TRAP IN IORT.	03932	15	01995	00005
11970		TD	SYSCAL,MD02,,	SET SYSCAL CODE.	03944	25	00475	09773
11980		CF	HALT,,,	REMOVE MONITOR INDICATOR.	03956	33	00456	00000
11990		CF	HALT,,,	REMOVE ANY REMAINING LITTLE GOODIES.	03968	33	00457	00000
12000		BD	MB210,SYSCAL,,	TEST FOR EXECUTION.	03980	43	04016	00475
12010		WATY	MM25,,,	YES -TYPE MESSAGE.	03992	39	10319	00100
12020		RCTY			04004	34	00000	00102
12030	MB210	TFM	IOXX,*+23,,	LOAD AND EXECUTE DESIRED PROGRAM.	04016	16	00565	-4039
12040		B	IOGT,MB225,7		04028	49	00566	-4063
12050	MB220	DSC	2,22		04040			
12060		DSA	MB222		04046		5 X	1
					04046		-4048	
12070		DSC	1,1		04047		1	
12080	MB222	DSC	1,1		04048		1	
12090		DSA	DSA39		04053		5 X	1
					04053		J9663	
12100		DSC	3,1		04054		3	
12110		DSA	COMM		04061		5 X	1
					04061		-2802	
12120		DSC	1,1		04062		1	
12130	MB225	DSC	2,-22		04063		2	
12140		DSA	MR02		04069		5 X	1
					04069		-9774	
12150		DSC	1,1		04070		1	
12160		DSC	5,0*		04071		5	
			0000*					

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12161	MB226	DC	2,-01		04077		2	
		-J						
12162		DC	2,-01		04079		2	
		-J						
12163		DC	2,-01		04081		2	
		-J						
12164		DC	3,-01*		04084		3	
		-J*						
12170	*****			MONITOR CONTROL CARD READ SUPERVISOR ROUTINE.				
12180		TDM	MI01,0,,	TURN OFF ALREADY READ IND.	04086	15	09870	00000
12190	MCR01	TD	MCR02A+11,MCOMM+3,,	DECODE CONTROL CARD INPUT SOURCE.	04098	25	04157	02855
12200		TD	*+23,MCOMM+3		04110	25	04133	02855
12210		TF	MCR06+6,MCD02		04122	26	04971	10700
12220		BD	MCR04,MI01,,	TEST IF CNTL CARD ALREADY READ.	04134	43	04334	09870
12230	MCR02A	BNF	MCR03,MCD01,,	TEST IF TYPEWRITER INPUT.	04146	44	04218	10690
12240		RCTY	...	YES -TYPE ENTER MESSAGE.	04158	34	00000	00102
12250		WATY	MM01		04170	39	09873	00100
12260		BNF	*+24,MI03,,	TEST IF IN JOB CARD SEARCH.	04182	44	04206	09871
12270		WATY	MM26		04194	39	10339	00100
12280		RCTY			04206	34	00000	00102
12290	MCR03	TFM	*+18,MCCBUF,,	CLEAR THE CONTROL CARD BUFFER.	04218	16	04236	J3000
12300		TR	XX,MCR04A+7		04230	31	00000	04481
12310		AM	MCR03+18,4		04242	11	04236	-0004
12320		CM	MCR03+18,MCCBUF+160		04254	14	04236	J3160
12330		BNI	MCR03+12,1300		04266	47	04230	01300
12340		TFM	IOXX,*+23,,	READ A RECORD FROM CONTROL RECORD SOURCE.	04278	16	00565	-4301
12350		B	IOGT,MCR06,7		04290	49	00566	-4965
12360		BNI	*+32,400,,	IF SSW4, ALLOW RE-ENTRY ON TYPEWRITER	04302	47	04334	00400
12370		BNF	*+20,MCR02A+11,11,	INPUT.	04314	44	04334	0415P
12380		B	MCR01-12		04326	49	04086	00000
12390		DORG	*-3		04334			
12400	MCR04	BNF	*+24,MCR02A+11,11,	RESTORE CARRIAGE IF TYPEWRITER INPUT.	04334	44	04358	0415P
12410		RCTY			04346	34	00000	00102
12420		TDM	MI01,1,,	TURN ON CNTL CARD READ INHIBITOR.	04358	15	09870	00001
12430		BNR	MCR01-12,MCCBUF+1,,	READ AGAIN IF NO DOUBLE R.M.	04370	45	04086	13001
12440		BNR	MCR01-12,MCCBUF+3		04382	45	04086	13003
12450		TFM	MF01,4,,	TREAT AS COMMENTS CARD IF ANY R.M.	04394	16	09746	-0004
12460		BTM	UT03,MCCBUF+5,,	IN COLS. 3-6.	04406	17	08068	J3005
12470		BNR	MCR04A,MD01		04418	45	04474	09772
12480		BNR	MCR05A,MCCBUF+5,,	TEST FOR END OF JOB.	04430	45	04658	13005
12490		BNR	MCR05A,MCCBUF+7		04442	45	04658	13007
12500		TDM	MI01,0,,	DISABLE CONTROL CARD READ INHIBITOR.	04454	15	09870	00000
12510		B	MBO30		04466	49	03172	00000
12520		DORG	*-3		04474			
12530	MCR04A	CF	MCCBUF+6,,,	CLEAR FLAGS FOR COLS. 4,5 AND 6.	04474	33	13006	00000
12540		DORG	*-4		04481			
12550		DC	2,0		04482		2	
		-0						
12560		DC	3,0*		04485		3	
		-0*						
12570		CF	MCCBUF+8		04486	33	13008	00000
12580		CF	MCCBUF+10		04498	33	13010	00000
12590		TDM	MD01,0		04510	15	09772	00000
12600	*			DECODE CONTROL CARD TYPE				
12610		C	MCCBUF+11,MM02+6,,	TEST FOR -JOB- CARD.	04522	24	13011	09927
12620		BI	MJ801,1200		04534	46	04974	01200

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12630	C	MCCBUF+11,MM03+6,,	TEST FOR -TYPE- CARD.	04546	24	13011	09935	
12640	BNI	MCR05,1200		04558	47	04602	01200	
12650	TDM	MCOMM+3,1,,	YES -SET INDICATOR.	04570	15	02855	00001	
12660	BTM	UT06,,,	GO TO TYPE-OUT ROUTINE.	04582	17	08524	-0000	
12670	B	MCR01-12,,,	GO TO READ ANOTHER CARD.	04594	49	04086	00000	
12680	DORG	*-3		04602				
12690	MCR05	C	MCCBUF+11,MM04+6,,	TEST FOR -PAUS- CARD.	04602	24	13011	09943
12700	BNI	MCR05A,1200		04614	47	04658	01200	
12710	BTM	UT06,,,	YES -GO TO TYPE-OUT ROUTINE.	04626	17	08524	-0000	
12720	H	,,,	AFTER START, READ ANOTHER CARD.	04638	48	00000	00000	
12730	B	MCR01-12		04650	49	04086	00000	
12740	DORG	*-3		04658				
12750	MCR05A	BD	MCR01-12,MIO3,,	RE-READ IF IN JOB CARD SEARCH.	04658	43	04086	09871
12760	BTM	UT06,,,	GO TO TYPE OUT THE CARD.	04670	17	08524	-0000	
12770	BD	MCR01-12,MDO1,,	READ NEXT CARD IF FORCED COMMENTS CARD.	04682	43	04086	09772	
12780	TR	COMM+22,IREC,,	INITIALIZE SPS AND FORTRAN PROCESSOR	04694	31	02824	09800	
12790	TDM	COMM+39,0,11,,	OUTPUT FIELDS.	04706	15	02841	0000-	
12800	TR	COMM,MREC		04718	31	02802	09851	
12810	TD	SFDINT,MCOMH+3		04730	25	00426	02855	
12820	TR	COMM+74,KREC,,	DISABLE COMM SECTOR INDICATORS FOR	04742	31	02876	09834	
12830	TDM	COMM+82,0,11,,	SPS AND FORTRAN SUBROUTINE LOADERS.	04754	15	02884	0000-	
12840	TFM	HIGH,SYSDRG		04766	16	00434	-2402	
12850	TD	M8225+7,MCR01A		04778	25	04070	04485	
12860	C	MCCBUF+11,MM05+6,,	TEST FOR -SPS- CARD.	04790	24	13011	09951	
12870	BI	MSPO1,1200		04802	46	06228	01200	
12880	C	MCCBUF+11,MM06+6,,	TEST FOR -SPSX- CARD.	04814	24	13011	09959	
12890	BI	MSPO2,1200		04826	46	06248	01200	
12900	C	MCCBUF+11,MM07+6,,	TEST FOR -FOR- CARD.	04838	24	13011	09967	
12910	BI	MFT01,1200		04850	46	06580	01200	
12920	C	MCCBUF+11,MM08+6,,	TEST FOR -FORX- CARD.	04862	24	13011	09975	
12930	BI	MFT02,1200		04874	46	06600	01200	
12940	C	MCCBUF+11,MM09+6,,	TEST FOR -DUP- CARD.	04886	24	13011	09983	
12950	BI	MDP01,1200		04898	46	06836	01200	
12960	C	MCCBUF+11,MM10+6,,	TEST FOR -XEQ- CARD.	04910	24	13011	09991	
12970	BI	MXQ01,1200		04922	46	06940	01200	
12980	C	MCCBUF+11,MM11+6,,	TEST FOR -XEQS- CARD.	04934	24	13011	09999	
12990	BI	MXQ02,1200		04946	46	06972	01200	
13000	B	MCR01-12,MCCBUF+1,7,,	COMMENTS CARD -GO TO READ NEXT ONE.	04958	49	04086	J3001	
13010	MCR06	DS	0,-4	04965			0	
13020	DC	2,XX		04971			2	
	XX							
13030	DGM			04972			1	
13040	MCR01A	DS	0,MCR04A+11	04485			0	
13050	*****		JOB CARD PROCESSOR					
13060	MJB01	BTM	UT07,,,	GO TO JOB CLOSE OUT ROUTINE.	04974	17	08812	-0000
13070	MJB02	BTM	UT06,,,	GO TO CONTROL RECORD TYPE-OUT ROUTINE.	04986	17	08524	-0000
13080	TFM	F0,++23,,,	DECODE COL. 7.	04998	16	09628	-5021	
13090	B	UT10,MJB02A,7		05010	49	09168	-5090	
13100	BNF	MJB03,F4,,	MUST RE-READ IF ANY ERROR.	05022	44	05104	09632	
13110	BNF	MJB30,F1,,	EXIT IF R.M.	05034	44	06180	09629	
13120	BNF	MJB04,MDO1		05046	44	05172	09772	
13130	MJB02X	BD	MJB03B,MCD01,,	PROCEED IF PROPER DIGIT.	05058	43	05160	10690
13140	TFM	F0,MJB03,,	NO -TYPE ERROR MESSAGE.	05070	16	09628	-5104	
13150	B	UTIOE		05082	49	09512	00000	
13160	DORG	*-3		05090				
13170	MJB02A	DSC	4,0100	05090			4	
	O100							

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13180	DC	2,7		05095		2		
	-7							
13190	DC	2,1		05097		2		
	-1							
13200	DSA	MJB02X+11		05102		5	X 1	
13210	DSC	1,'		05102			-5069	
	'			05103		1		
13220	MJB03	RCTY		05104	34	00000	00102	
13230	MJB03A	TDM	MCOMH+3,1,,	CHANGE SOURCE INDICATOR.	05116	15	02855	00001
13240	TDM	MIO3,1,11,,	INDICATE JOB CARD SEARCH.	05128	15	09871	0000J	
13250	TDM	MCOMH,0,,	INDICATE JOB NOT BEGUN.	05140	15	02852	00000	
13260	B	MCR01-12,,,	GO TO CNTL CARD READ SUPERVISOR.	05152	49	04086	00000	
13270	DORG	*-3		05160				
13280	MJB03B	TD	MCOMH+3,MF02,11		05160	25	02855	0975J
13290	MJB04	SF	MJB10,,,	INITIALIZE TO SCAN REMAINDER OF CARD.	05172	32	05280	00000
13300	SF	MJB15		05184	32	05604	00000	
13310	TD	MJB11+11,COMM+49		05196	25	05407	02851	
13320	TD	MJB20+8,COMM+49		05208	25	06064	02851	
13330	TDM	MJB15A+11,1		05220	15	05719	00001	
13340	TFM	MJB13A+6,MCOMH+5		05232	16	05574	-2857	
13350	TFM	MJB17+11,4		05244	16	05971	-0004	
13360	TFM	MJB50A+5,8,10		05256	16	06205	000-8	
13370	TFM	MJB55A+5,12,10		05268	16	06219	000J2	
13380	MJB10	BNF	MJB12A+12,,,'	IGNORE CONTROL CARD FIELD IF SCAN OVER.	05280	44	05524	05280
13390	TFM	F0,++23,,,	DECODE CURRENT DRIVE EQUIV. FIELD.	05292	16	09628	-5315	
13400	B	UT10,MJB50A,7		05304	49	09168	-6200	
13410	TDM	MJB12A+1,1,,	SET ERROR RETURN SWITCH.	05316	15	05513	00001	
13420	BNF	MJB12+20,F4,,	CHECK FOR ANY ERROR.	05328	44	05440	09632	
13430	BNR	++44,MDO1,,	TEST IF CARD FINISHED.	05340	45	05384	09772	
13440	CF	MJB10,,,	YES -NO FURTHER SCAN OF FIELDS.	05352	33	05280	00000	
13450	CF	MJB15		05364	33	05604	00000	
13460	B	MJB12A+12		05376	49	05524	00000	
13470	DORG	*-3		05384				
13480	BNF	MJB12A+12,MDO1,,	IGNORE A BLANK.	05384	44	05524	09772	
13490	MJB11	CM	MF02,XX,610,	NO -CHECK IF WITHIN CORRECT RANGE.	05396	14	0975J	000-0
13500	BNI	MJB13,1300		05408	47	05544	01300	
13510	MJB12	TFM	F0,++20,,	NO -TYPE ERROR MESSAGE.	05420	16	09628	-5440
13520	B	UTIOE		05432	49	09512	00000	
13530	DORG	*-3		05440				
13540	WATY	MM17		05452	39	10065	00100	
13550	RCTY			05452	34	00000	00102	
13560	H	,,,	WAIT FOR OPERATOR.	05464	48	00000	00000	
13570	BNI	MJB03,400,,	IF NO SSW4, SOURCE CHANGES TO TYPEWRITER.	05476	47	05104	00400	
13580	WATY	MM31,,,	INDICATE THAT CONDITION IGNORED.	05488	39	10405	00100	
13590	RCTY			05500	34	00000	00102	
13600	MJB12A	NOP	MJB15A-20,,,	NOP/BRANCH SWITCH.	05512	41	05688	00000
13610	TF	MF02,MJB13A+6,611,,	ALLOW THE OLD EQUIVALENCE TO STAND.	05524	26	0975J	0557M	
13620	B	MJB13A+12		05536	49	05580	00000	
13630	DORG	*-3		05544				
13640	MJB13	A	MF02,MF02,611,,	COMPUTE PHYSICAL DRIVE CODE.	05544	21	0975J	0975J
13650	AM	MF02,1,610		05556	11	0975J	000-1	
13660	MJB13A	TF	XX,MF02,211,,	MOVE TO MCOMH EQUIV TABLE.	05568	26	-0000	0975J
13670	AM	MJB13A+6,EQUIV-MCOMH-4,,	MOVE TO IORT EQUIV TABLE.	05580	11	05574	-073L	
13680	TF	MJB13A+6,MF02,611		05592	26	0557M	0975J	

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13690	MJB15	BNF	MJB15A-20,0,,	TEST IF R.M. ALREADY ENCOUNTERED.	05604	44	05688	05604
13700		TFM	F0,0,23,,	NO -EXTRACT CURRENT PACK NO. FIELD.	05616	16	09628	-5639
13710		B	UT10,MJB55A,7		05628	49	09168	-6214
13720		TDM	MJB12A+1,9,,	SET SWITCH.	05640	15	05513	00009
13730		BNF	MJB12+20,F4,,	CHECK FOR ANY ERROR.	05652	44	05440	09632
13740		BNR	0,24,MD01,,	NO -TEST IF CARD FINISHED.	05664	45	05688	09772
13750		CF	MJB15,,,	YES -NO FURTHER SCAN OF PACK NO. FIELDS.	05676	33	05604	00000
13760		BD	0,20,MJB13A+6,11,	SKIP TO END IF MODULE NOT ATTACHED.	05688	43	05708	0557M
13770		B	MJB20		05700	49	06056	00000
13780		DORG	0-3		05708			
13790	MJB15A	TDM	MJB23,XX,10,	READ TRACK CONTAINING PACK NUMBER.	05708	15	06164	000-0
13800		TFM	IOXX,0,23		05720	16	00565	-5743
13810		B	IDGT,MJB22,7		05732	49	00566	-6156
13820		BNF	MJB17,MJB15,,	IGNORE CHECK IF END OF CARD, OR	05744	44	05960	05604
13830		BNF	MJB17,MD01,,	BLANK FIELD, OR	05756	44	05960	09772
13840		BNF	MJB17,F4,,	IGNORED ERROR IN FIELD.	05768	44	05960	09632
13850		SF	I4005,,,	COMPARE THE PACK NUMBERS.	05780	32	14005	00000
13860		C	14009,MFO2,11		05792	24	14009	0975J
13870		BI	MJB17,1200		05804	46	05960	01200
13880		TD	0,23,MJB23,,	PACK NO. ERROR. -GET MODULE NUMBER.	05816	25	05839	06164
13890		BTM	UT01,XX		05828	17	07988	-0000
13900		TD	MM16+56,UT01-2		05840	25	10057	07986
13910		WATY	MM16		05852	39	10001	00100
13920		TF	MM17+72,MM32+14		05864	26	10137	10455
13930		WATY	MM17		05876	39	10065	00100
13940		TF	MM17+78,MM33+20		05888	26	10143	10477
13950		RCTY			05900	34	00000	00102
13960		H	0,,,	WAIT FOR OPERATOR.	05912	48	00000	00000
13970		BNI	MJB15A,400,,	RE-READ PACK NO. IF SSW4 OFF.	05924	47	05708	00400
13980		WATY	MM31,,,	TYPE CONDITION IGNORED MESSAGE.	05936	39	10405	00100
13990		RCTY			05948	34	00000	00102
14000	MJB17	BTM	UT05,XX,,	READ IN DIM SECTOR FOR THIS LOGICAL	05960	17	08380	-0000
14010		SF	I4000,,,	MODULE AND MOVE SECTOR ADDRESS FOR	05972	32	14000	00000
14020		AM	UT05-1,5,,	THIS PACK TO PROPER DIM ENTRY.	05984	11	08379	-0005
14030		TF	UT05-1,14004,6		05996	26	0837R	14004
14031		AM	UT05-1,1,610,	ADD 1 TO SECTOR ADDRESS.	06008	11	0837R	000-1
14040		TD	MAPENT,TEMP-5,,	WRITE IT BACK OUT ON DISK.	06020	25	02144	02014
14050		TFM	IOXX,0,23		06032	16	00565	-6055
14060		B	I0RBC,MJB21,7		06044	49	00520	-6148
14070	MJB20	SM	0,8,1,710,	EXIT IF ALL MODULES FOR THIS	06056	12	06064	-00-1
14080		BNI	MJB30,1100,,	CONFIGURATION PROCESSED.	06068	47	06180	01100
14090		AM	MJB13A+6,MCOMM-EQUIV+6		06080	11	05574	-0735
14100		AM	MJB15A+11,2,10		06092	11	05719	000-2
14110		AM	MJB17+11,1		06104	11	05971	-0001
14120		AM	MJB50A+5,1,10		06116	11	06205	000-1
14130		AM	MJB55A+5,5,10		06128	11	06219	000-5
14140		B	MJB10,,,	REPEAT FOR NEXT LOGICAL MODULE.	06140	49	05280	00000
14150		DORG	0-3		06148			
14160	MJB21	DSC	2,22		06148		2	
14170		DSA	UT05B		06154		5 X	1
14180		DSC	1,0		06154		-8498	
14190	MJB22	DSC	2,26		06155		1	
			26		06156		2	

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14200		DSA	MJB23		06162		5 X	1
14210		DSC	1,0		06162		-6164	
			0		06163		1	
14220	MJB23	DSC	1,1		06164		1	
14230		DSA	19800		06169		5 X	1
14240		DC	3,20		06169		J9800	
			-20		06172		3	
14250		DSA	14000		06177		5 X	1
14260		DSC	1,0		06177		J4000	
			0		06178		1	
14270	MJB30	TDM	M103,0,,	DISABLE JOB CARD SEARCH.	06180	15	09871	00000
14280		B	MCR01-12,,,	GO READ ANOTHER CNTL CARD.	06192	49	04086	00000
14290		DORG	0-3		06200			
14300	MJB50A	DSC	4,0100		06200		4	
14310		DC	2,0		06205		2	
			-0					
14320		DC	2,1		06207		2	
			-1					
14330		DSC	6,00		06208		6	
			000000					
14340	MJB55A	DSC	4,0100		06214		4	
			0100					
14350		DC	2,0		06219		2	
			-0					
14360		DC	2,5		06221		2	
			-5					
14370		DSC	6,00		06222		6	
			000000					
14380	*****			SPS AND SPSX CNTL CARD PROCESSOR				
14390	MSP01	TDM	MCOMM+1,3,,	SET SPS ENTRY IND.	06228	15	02853	00003
14400		B	0,20		06240	49	06260	00000
14410		DORG	0-3		06248			
14420	MSP02	TDM	MCOMM+1,3,11,	SET SPSX ENTRY IND.	06248	15	02853	0000L
14430		TDM	MCOMM,1,,	INDICATE PHASE BEGUN.	06260	15	02852	00001
14440		TDM	MCOMM+12,5		06272	15	02864	00005
14450		TFM	F0,0,23,,	DECODE COL. 7.	06284	16	09628	-6307
14460		B	UT10,MSPO5A,7		06296	49	09168	-6523
14470		TD	0,23,SFOINT,,	TEST IF LEGITIMATE.	06308	25	06331	00426
14480		BD	0,20,MCD01		06320	43	06340	10690
14490		B	UTIOE,,,	NO -KILL THIS PHASE.	06332	49	09512	00000
14500		DORG	0-3		06340			
14510		BNF	MSPO3,F1		06340	44	06460	09629
14520		BNF	MSPO3,MCOMM+1,,	TEST IF SPSX CARD.	06352	44	06460	02853
14530		TFM	F0,0,23,,	YES -DECODE COLS. 8-9.	06364	16	09628	-6387
14540		B	UT10,MSPO5B,7		06376	49	09168	-6537
14550		BNF	MSPO3,F1		06388	44	06460	09629
14560		TFM	F0,0,23,,	DECODE COL. 10.	06400	16	09628	-6423
14570		B	UT10,MSPO5C,7		06412	49	09168	-6551

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14580	BNF	MSP03,F1		06424	44	06460	09629
14590	TFM	FO,**23,,	DECODE COLS. 11-12.	06436	16	09628	-6459
14600	B	UT10,MSP05D,7		06448	49	09168	-6565
14610	MSP03	TR	MRO2,SPSDDA,,	06460	31	09774	10802
14620	BNR	MSP04,MRO2,,	MOVE DDA FOR SPS ASSEMBLER.	06472	45	06504	09774
14630	TFM	POINT,8,,	TEST IF VALID.	06484	16	09798	-0008
14640	B	MB080A	NO -TERMINATE CURRENT PHASE.	06496	49	03376	00000
14650	DORG	*-3		06504			
14660	MSP04	TDM	MDO2,4,	06504	15	09773	00004
14670	B	MB081+12	SET SYSCAL CODE.	06516	49	03432	00000
14680	DORG	*-4		06523			
14690	MSP05A	DSC	4,0101	06523			4
		0101					
14700	DC	2,7		06528			2
		-7					
14710	DC	2,1		06530			2
		-1					
14720	DSA	SFDINT		06535		5 X	1
				06535		-0426	
14730	DSC	1,1		06536		1	
14740	MSP05B	DSC	4,0101	06537			4
		0101					
14750	DC	2,8		06542			2
		-8					
14760	DC	2,2		06544			2
		-2					
14770	DSA	COMM+81		06549		5 X	1
				06549		-2883	
14780	DSC	1,1		06550		1	
14790	MSP05C	DSC	4,0101	06551			4
		0101					
14800	DC	2,10		06556			2
		JO					
14810	DC	2,1		06558			2
		-1					
14820	DSA	COMM+77		06563		5 X	1
				06563		-2879	
14830	DSC	1,1		06564		1	
14840	MSP05D	DSC	4,0101	06565			4
		0101					
14850	DC	2,11		06570			2
		J1					
14860	DC	2,2		06572			2
		-2					
14870	DSA	COMM+79		06577		5 X	1
				06577		-2881	
14880	DSC	1,1		06578		1	
14890	*****	FOR AND FORX CNTL CARD PROCESSOR.					

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14900	MFT01	TDM	MCOMM+1,4,,	SET FOR ENTRY IND.	06580	15	02853	00004
14910	B	**20			06592	49	06612	00000
14920	DORG	*-3			06600			
14930	MFT02	TDM	MCOMM+1,4,11,	SET FORX ENTRY IND.	06600	15	02853	00000
14940	TDM	MCOMM,1,,	INDICATE PHASE BEGUN.	06612	15	02852	00001	
14950	TDM	MCOMM+12,5		06624	15	02864	00005	
14960	TFM	FO,**23,,	DECODE COL. 7.	06636	16	09628	-6659	
14970	B	UT10,MSP05A,7		06648	49	09168	-6523	
14980	TD	**23,SFDINT,,	TEST IF LEGITIMATE.	06660	25	06683	00426	
14990	BD	**20,MCD01		06672	43	06692	10690	
15000	B	UT10E,,,	NO -KILL THIS PHASE.	06684	49	09512	00000	
15010	DORG	*-3		06692				
15020	BNF	MFT03,F1		06692	44	06764	09629	
15030	TFM	FO,**23,,	DECODE COL. 8.	06704	16	09628	-6727	
15040	B	UT10,MFT05B,7		06716	49	09168	-6808	
15050	BNF	MFT03,F1		06728	44	06764	09629	
15060	TFM	FO,**23,,	DECODE COLS. 9-10.	06740	16	09628	-6763	
15070	B	UT10,MFT05C,7		06752	49	09168	-6822	
15080	MFT03	TR	MRO2,FORDDA,,	MOVE DDA FOR FORTRAN COMPILER.	06764	31	09774	10822
15090	BNR	MSP04,MRO2,,	TEST IF VALID.	06776	45	06504	09774	
15100	TFM	POINT,136		06788	16	09798	-0136	
15110	B	MB080A		06800	49	03376	00000	
15120	DORG	*-3		06808				
15130	MFT05B	DSC	4,0101	06808			4	
		0101						
15140	DC	2,8		06813			2	
		-8						
15150	DC	2,1		06815			2	
		-1						
15160	DSA	COMM+82		06820		5 X	1	
				06820		-2884		
15170	DSC	1,1		06821		1		
15180	MFT05C	DSC	4,0101	06822			4	
		0101						
15190	DC	2,9		06827			2	
		-9						
15200	DC	2,2		06829			2	
		-2						
15210	DSA	COMM+75		06834		5 X	1	
				06834		-2877		
15220	DSC	1,1		06835		1		
15230	*****	DWP CNTL CARD PROCESSOR						
15240	MOP01	TDM	MCOMM+1,2,,	SET PHASE INDICATOR.	06836	15	02853	00002
15250	TDM	MCOMM,1,,	INDICATE PHASE BEGUN.	06848	15	02852	00001	
15260	TDM	MCOMM+12,6,,	SET DUP INDICATOR.	06860	15	02864	00006	
15270	TDM	MDO2,4,,	SET SYSCAL CODE.	06872	15	09773	00004	
15280	TFM	FO,**23,,	DECODE COL. 7.	06884	16	09628	-6907	
15290	B	UT10,MSP05A,7		06896	49	09168	-6523	
15300	TD	**23,SFDINT,,	TEST IF LEGITIMATE.	06908	25	06931	00426	
15310	BD	MB080+24,MCD01		06920	43	03328	10690	
15320	B	UT10E,,,	NO -KILL THIS PHASE.	06932	49	09512	00000	
15330	DORG	*-3		06940				

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15340	*****	XEQ AND XEQS CNTL CARD PROCESSOR					
15350	MXQ01	CF	FSPS,,,	SET XEQ ENTRY INDICATORS.	06940	33	00429 00000
15360		TFM	MXQ03B+11,27,10		06952	16	07187 0007K
15370		B	MXQ02+24		06964	49	06996 00000
15380		DORG	*-3		06972		
15390	MXQ02	SF	FSPS,,,	SET XEQS ENTRY INDICATORS.	06972	32	00429 00000
15400		TFM	MXQ03B+11,34,10		06984	16	07187 000L4
15410		TDM	MCOMM,1,,	INDICATE PHASE BEGUN.	06996	15	02852 00001
15420		TDM	MCOMM+1,1,11		07008	15	02853 0000J
15430		TDM	MCOMM+12,4,,	SET OBJECT PROGRAM INDICATOR.	07020	15	02864 0000A
15440		BNF	*+20,MCOMM+2,,	TEST IF EXECUTION IS INHIBITED	07032	44	07052 0285A
15450		B	UTIOF,,,	YES -TYPE MESSAGE AND FINISH UP JOB.	07044	49	09580 00000
15460		DORG	*-3		07052		
15470		TFM	F0,*+23,,	DETERMINE IF COLS. 7-12 LEGITIMATE.	07052	16	09628 -7075
15480		B	UTIO,MXQ05,7		07064	49	09168 -7843
15490		BD	MXQ07,MD01		07076	43	07448 09772
15500		BNF	MXQ03,MD01		07088	44	07108 09772
15510		B	UTIOE,,,	NO -NAMES MUST BE NON-NUMERIC.	07100	49	09512 00000
15520		DORG	*-3		07108		
15530	MXQ03	TFM	MXQ03A+23,MXQ55,,	INITIALIZE TO DECODE REST OF CARD.	07108	16	07143 -7857
15540	MXQ03A	TFM	F0,*+23,,	PERFORM THE SCAN.	07120	16	09628 -7143
15550		B	UTIO,XX		07132	49	09168 00000
15560		AM	*-1,14		07144	11	07143 -0014
15570		BNR	*+20,MD01,,	TEST FOR R.M.	07156	45	07176 09772
15580		B	MXQ04-24,,,	YES -END OF CARD.	07168	49	07200 00000
15590		DORG	*-3		07176		
15600	MXQ03B	CM	F5,XX		07176	14	09634 -0000
15610		BNI	MXQ03A,1300		07188	47	07120 01300
15620		BD	MXQ12,LDINPT,,	BRANCH IF NON-DISK LOAD INPUT.	07200	43	07704 00428
15630		BNF	MXQ11,COMM+35,,	BRANCH IF PROGRAM NAME SUPPLIED.	07212	44	07672 02837
15640	MXQ04	BNF	MXQ05,COMM+39,,	TEST IF DIM ENTRY PICKED UP.	07224	44	07256 02841
15650		WATY	MM37,,,	NO -TYPE ERROR MESSAGE AND CLOSE JOB.	07236	39	10517 00100
15660		B	UTIOF		07248	49	09580 00000
15670		DORG	*-3		07256		
15680	MXQ05	BT	UT05,COMM+39,,	GO TO PICK UP THE DIM ENTRY.	07256	27	08380 02841
15690		TR	MR02,UT05-1,11,	MOVE FOR LOAD ROUTINE.	07268	31	09774 0837R
15700		BNR	*+20,MR02,,	TEST IF EMPTY.	07280	45	07300 09774
15710		B	MXQ04+12,,,	YES -ERROR.	07292	49	07236 00000
15720		DORG	*-3		07300		
15730		TF	MF01,MR02+13,,	DETERMINE IF RELOCATABLE.	07300	26	09746 09787
15740		CF	MF01		07312	33	09746 00000
15750		CM	MF01,99999		07324	14	09746 R9999
15760		BI	MXQ06A,1200		07336	46	07368 01200
15770	MXQ06	TFM	MXQ06C+6,MB190,,	NO -FORCE UPDATING OF HIGH INDICATOR.	07348	16	07446 -3740
15780		B	MXQ06B		07360	49	07416 00000
15790		DORG	*-3		07368		
15800	MXQ06A	BNF	*+24,COMM+8,,	YES -MOVE IN LOAD ADDRESS IF ANY.	07368	44	07392 02810
15810		TF	MB225+11,COMM+12		07380	26	04074 02814
15820		CF	MB225+11		07392	33	04074 00000
15830		TFM	MXQ06C+6,MB195		07404	16	07446 -3752
15840	MXQ06B	BNF	*+24,COMM+13,,	MOVE IN ENTRY ADDRESS IF SUPPLIED.	07416	44	07440 02815
15850		TF	MR02+18,COMM+17		07428	26	09792 02819
15860	MXQ06C	B	MB195,,,	MB190 OR MB195.	07440	49	03752 00000
15870		DORG	*-3		07448		
15880	MXQ07	CF	MCCBUF+14,,,	CLEAR EXCESS FLAGS IN NAME FIELD.	07448	33	13014 00000
15890		CF	MCCBUF+16		07460	33	13016 00000

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15900		CF	MCCBUF+18		07472	33	13018 00000
15910		CF	MCCBUF+20		07484	33	13020 00000
15920		CF	MCCBUF+22		07496	33	13022 00000
15930	MXQ08	TFM	AB03+30,MXQ09,,	INITIALIZE FOR EQUIVALENCE TABLE SEARCH.	07508	16	11064 -7620
15940		TFM	AB03+50,MXQ10		07520	16	11084 -7640
15950		TFM	AB03+43,MCCBUF+23		07532	16	11077 J3023
15960		TF	COMM+35,MCCBUF+23		07544	26	02837 13023
15970		TD	AB09A,EQUDDA		07556	25	11380 10862
15980		BNR	*+20,EQUDDA		07568	45	07588 10862
15990		B	*+20		07580	49	07600 00000
16000		DORG	*-3		07588		
16010		TF	AB09A+5,EQUDDA+5		07588	26	11385 10867
16020		TFM	MXQ03A+23,MXQ55+14		07600	16	07143 -7871
16030		B	MXQ03A,,,	RETURN TO DECODE REST OF CARD.	07612	49	07120 00000
16040		DORG	*-3		07620		
16050	MXQ09	WATY	MM38,,,	COULD NOT FIND -TYPE ERROR MESSAGE.	07620	39	10553 00100
16060		B	UTIOF,,,	FINISH UP.	07632	49	09580 00000
16070		DORG	*-3		07640		
16080	MXQ10	AM	AB03+11,4,,	MOVE CORRESPONDING DIM NUMBER TO	07640	11	11045 -0004
16090		TF	COMM+39,AB03+11,11,	TO THE COMM SECTOR.	07652	26	02841 1104N
16100		B	MXQ05,,,	GO PICK UP THE DIM ENTRY.	07664	49	07256 00000
16110		DORG	*-3		07672		
16120	MXQ11	BNR	AB02-12,EQUDDA,,	GO TO EQU TABLE SEARCH IF DDA VALID.	07672	45	10986 10862
16130		TFM	POINT,2,,	NO -TYPE ERROR MESSAGE.	07684	16	09798 -0002
16140		B	MB080A		07696	49	03376 00000
16150		DORG	*-3		07704		
16160	MXQ12	TD	*+23,LDINPT,,	TEST FOR LEGITIMACY OF INPUT DEVICE.	07704	25	07727 00428
16170		BD	MXQ13,MCD05		07716	43	07748 10730
16180		TFM	POINT,27,9,	NO -TYPE MESSAGE AND EXIT.	07728	16	09798 00-27
16190		B	UTIOE		07740	49	09512 00000
16200		DORG	*-3		07748		
16210	MXQ13	TR	MR02,MXQ20,,	SET UP TO EXECUTE LOADER CALLER.	07748	31	09774 07828
16220		TD	DIMENT+14,MCR01A		07760	25	00416 04485
16230		BNF	*+24,COMM+13		07772	44	07796 02815
16240		TF	DIMENT+18,COMM+17		07784	26	00420 02819
16250		BNF	*+24,COMM+8		07796	44	07820 02810
16260		TF	HIGH,COMM+12		07808	26	00434 02814
16270		B	MB195		07820	49	03752 00000
16280		DORG	*-3		07828		
16290	MXQ20	DSC	1,1		07828		1
16300		DSA	DSA15		07833		5 x 1
16310		DC	3,3		07833		J9783
		-03			07836		3
16320		DC	6,0'		07842		6
		-0000'					
16330	MXQ50	DSC	4,1001,,	PROGRAM NAME.	07843		4
		1001					
16340		DC	2,7		07848		2
		-7					
16350		DC	2,6		07850		2
		-6					
16360		DSC	6,0'		07851		6
		00000'					

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16370	MXQ55	DSC 0101	4,0101,,	DIM NUMBER.	07857	4	
16380		DC	2,13		07862	2	
16390		J3 DC	2,4		07864	2	
16400		-4 DSA	COMM+39		07869	5 X	1
16410		DSC *	1,0		07869	-2841	
16420		DSC 0101	4,0101,,	LOAD ADDRESS.	07871	4	
16430		DC	2,17		07876	2	
16440		J7 DC	2,5		07878	2	
16450		-5 DSA	COMM+12		07883	5 X	1
16460		DSC *	1,0		07883	-2814	
16470		DSC 0101	4,0101,,	ENTRY ADDRESS.	07885	4	
16480		DC	2,22		07890	2	
16490		K2 DC	2,5		07892	2	
16500		-5 DSA	COMM+17		07897	5 X	1
16510		DSC *	1,0		07897	-2819	
16520		DSC 0101	4,0101,,	INPUT SOURCE.	07899	4	
16530		DC	2,27		07904	2	
16540		K7 DC	2,1		07906	2	
16550		-1 DSA	LDINPT		07911	5 X	1
16560		DSC *	1,0		07911	-0428	
16570		DSC 0101	4,0101,,	SUBROUTINE SET IDENTIFICATION FOR FORTRA	07913	4	
16580		DC	2,28		07918	2	
16590		K8 DC	2,1		07920	2	
16600		-1 DSA	COMM+82		07925	5 X	1
16610		DSC *	1,0		07925	-2884	
16620		DSC 0101	4,0101,,	CONTROL CARD COUNT FOR FORTRAN.	07927	4	

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16630		DC	2,29		07932	2	
16640		K9 DC	2,2		07934	2	
16650		-2 DSA	COMM+75		07939	5 X	1
16660		DSC *	1,0		07939	-2877	
16670		DSC 0101	4,0101,,	SPS SUBROUTINE SET.	07941	4	
16680		DC	2,31		07946	2	
16690		L1 DC	2,2		07948	2	
16700		-2 DSA	COMM+81		07953	5 X	1
16710		DSC *	1,0		07953	-2883	
16720		DSC 0101	4,0101,,	SPS NOISE DIGIT.	07955	4	
16730		DC	2,33		07960	2	
16740		L3 DC	2,1		07962	2	
16750		-1 DSA	COMM+77		07967	5 X	1
16760		DSC *	1,0		07967	-2879	
16770		DSC 0101	4,0101,,	SPS MANTISSA LENGTH.	07969	4	
16780		DC	2,34		07974	2	
16790		L4 DC	2,2		07976	2	
16800		-2 DSA	COMM+79		07981	5 X	1
16810		DSC *	1,0		07981	-2881	
16820	*****			ROUTINE TO MULTIPLY A DIGIT BY FIVE -RESULT IS A FIVE			
16830	*			DIGIT FIELD ADDRESSED AT UT01-1			
16840		DC	5,0,,,	CALLING SEQUENCE	07987	5	
16850	UT01	TFM	*-2,0,8,	TD **23,DIGIT	07988	16	07986 0-000
16860		CF	UT01-1,,7,	BTM UT01,0	08000	33	07987 -0000
16870		TD	*-1,UT01-1		08012	25	08011 07987
16880		A	UT01-1,UT01-1		08024	21	07987 07987
16890		A	UT01-1,UT01-1		08036	21	07987 07987
16900		A	UT01-1,UT01+23		08048	21	07987 08011
16910		BB			08060	42	00000 00000
16920		DDRG	*-9		08062		
16930	*****			ROUTINE TO EXTRACT NUMERICAL STRIP FROM MONITOR CONTROL			
16940	*			CARD READ IN AREA (MONITOR READ IN AREA HAS FLAGS IN EVERY			

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16950 *	DC	EVEN DIGIT POSITION)					
16960	-0000	5,0,,	CALLING SEQUENCE	08066	5		
16970 UT03	TDM	MD01,0,,		08068	15	09772	00000
16980	TFM	MF02,MF03-20,,	TFM MF01,NCHAR	08080	16	09751	-9751
16990	A	MF01,MF01,,	BTM UT03,ADDR	08092	21	09746	09746
17000	A	MF01,UT03-1,,		08104	21	09746	08067
17010 UT03A	TF	UT03B+8,UT03-1,11,	WHERE NCHAR IS THE NUMBER OF CHARS.	08116	26	08186	0806P
17020	BNR	+26,UT03B+8,,	IN THE FIELD,ADDR IS THE ADDRESS OF	08128	45	08154	08186
17030	TDM	MD01,0,,	THE FIELD -AS IT WOULD BE ADDRESSED	08140	15	09772	00000
17040	DORG	*,,	FOR AN ALPHAMERIC IOP (SECOND DIGIT).	08151			
17050	DSC	1,',,		08151		1	
17060	BB	...	UPON RETURN, MD01 CONTAINS MINUS ZERO	08152	42	00000	00000
17070	DORG	*-9,,	IF THE FIELD WAS PURE NUMERIC, PLUS	08154			
17080	AM	MF02,1,,	ZERO IF BLANK, A RECORD MARK IF IT	08154	11	09751	-0001
17090	TD	MF02,UT03B+8,6,	CONTAINED A RECORD MARK, AND PLUS ONE	08166	25	0975J	08186
17100 UT03B	CM	+*8,0,710,,	IF THE FIELD WAS NON-NUMERIC.	08178	14	08186	-00-0
17110	BNI	+*38,1200,,		08190	47	08228	01200
17120	BNF	UT03C,MD01,,	A ONE DIGIT SOURCE FIELD IS ALWAYS TRANS-	08202	44	08264	09772
17130	TDM	MD01,1,,	FERRED INTO A TWO DIGIT OBJECT FIELD.	08214	15	09772	00001
17140	BB	...	SOURCE FIELDS OF MORE THAN ONE DIGIT	08226	42	00000	00000
17150	DORG	*-9,,	RETAIN THEIR ORIGINAL DIGIT COUNT. THE	08228			
17160	CM	UT03B+8,70,10,	LOCATION OF THE OBJECT FIELD IS GIVEN	08228	14	08186	000P0
17170	BNI	UT03B+36,1300,,	BY MF02 (IT WILL BE IN MF03)	08240	47	08214	01300
17180	TDM	MD01,0,11		08252	15	09772	0000-
17190 UT03C	AM	UT03-1,2		08264	11	08067	-0002
17200	C	UT03-1,MF01		08276	24	08067	09746
17210	BNI	UT03A,1300		08288	47	08116	01300
17220	CM	MF02,MF03-19		08300	14	09751	-9752
17230	BNI	+*48,1200		08312	47	08360	01200
17240	TD	MF03-18,MF03-19		08324	25	09753	09752
17250	TDM	MF03-19,0		08336	15	09752	00000
17260	TFM	MF02,MF03-18		08348	16	09751	-9753
17270	SF	MF03-19		08360	32	09752	00000
17280	BB			08372	42	00000	00000
17290	DORG	*-9		08374			
17300 *****		MONITOR SUBROUTINE TO READ A MAP SECTOR INTO 0-99					
17310	DC	5,0		08378		5	
17320 UT05	TR	UT05B,MAPSCT,,	CALLING SEQUENCE	08380	31	08498	01835
17330	A	UT05B+6,UT05-1,,	BTM UT05,DIMNUM	08392	21	08504	08379
17340	A	UT05B+6,UT05-1,,	WHERE DIMNUM IS THE DIM ENTRY	08404	21	08504	08379
17350	TD	UT05A+11,UT05B+6,,	WHICH IS DESIRED IN THIS SECTOR.	08416	25	08487	08504
17360	TDM	UT05B+6,0,11,	UPON RETURN UT05-1 CONTAINS CORE	08428	15	08504	0000-
17370	TFM	IDXX,+23,,	ADDRESS OF THE REQUESTED ENTRY	08440	16	00565	-8463
17380	B	IDGT,UT05A1,7,	(=0,20,40,60,80)	08452	49	00566	-8490
17390	TFM	UT05-1,0		08464	16	08379	-0000
17400 UT05A	TDM	UT05-2,XX		08476	15	08378	00000
17410	BB			08488	42	00000	00000
17420	DORG	*-9		08490			
17430 UT05A1	DSC	2,22		08490		2	
17440	DSA	UT05B		08496		5 X	1
				08496		-8498	

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17450	DSC	1,'		08497		1	
17460 UT05B	DSC	20,0		08498		20	
17470 *****		SUBROUTINE TO TYPE A MONITOR CONTROL CARD.					
17480	DC	5,0		08522		5	
17490 UT06	BNF	+*14,MCR02A+11,11,	RETURN IF INPUT FROM THE TYPEWRITER.	08524	44	08538	0415P
17500	BB			08536	42	00000	00000
17510	DORG	*-9		08538			
17520	RCTY	...	RESTORE TYPEWRITER CARRIAGE.	08538	34	00000	00102
17530	TFM	UT06A+11,MCCBUF+11,,	DETERMINE LAST NON-BLANK COLUMN OF	08550	16	08581	J3011
17540	B	UT06B+12,,,	CARD.	08562	49	08662	00000
17550	DORG	*-3		08570			
17560 UT06A	BD	UT06B,XX		08570	43	08650	00000
17570	AM	UT06A+11,1		08582	11	08581	-0001
17580	BD	UT06B+12,UT06A+11,11		08594	43	08662	0858J
17590	AM	UT06A+11,1		08606	11	08581	-0001
17600	CM	UT06A+11,MCCBUF+160		08618	14	08581	J3160
17610	BNI	UT06A,1300		08630	47	08570	01300
17620	B	UT06C		08642	49	08682	00000
17630	DORG	*-3		08650			
17640 UT06B	AM	UT06A+11,1		08650	11	08581	-0001
17650	TF	UT06D+11,UT06A+11		08662	26	08755	08581
17660	B	UT06B-44		08674	49	08606	00000
17670	DORG	*-3		08682			
17680 UT06C	TD	19998,MCCBUF+1,,	DUMP INITIAL RECORD MARKS.	08682	25	19998	13001
17690	TD	19999,MCCBUF+3		08694	25	19999	13003
17700	DNTY	19998		08706	35	19998	00100
17710	BNR	+*14,MCCBUF+5,,	RETURN IF R.M. IN COL. 3.	08718	45	08732	13005
17720	BB			08730	42	00000	00000
17730	DORG	*-9		08732			
17740	AM	+*23,2,,	SET R.M. AFTER LAST SIGNIFICANT CHAR.	08732	11	08755	-0002
17750 UT06D	TD	UT06E+11,XX		08744	25	08803	00000
17760	TD	=-1,MCR01A,6		08756	25	0875N	04485
17770	WATY	MCCBUF+5,,,	TYPE REMAINDER OF CARD.	08768	39	13005	00100
17780	RCTY			08780	34	00000	00102
17790 UT06E	TDM	UT06D+11,XX,6,	RESTORE DIGIT.	08792	15	0875N	00000
17800	BB			08804	42	00000	00000
17810	DORG	*-9		08806			
17820 *****		JOB CLOSE-OUT SUBROUTINE.					
17830	DC	5,0		08810		5	
17840 UT07	BD	+*14,MCOMM,,	FORGET IT IF WE HAVEN-T DONE ANYTHING.	08812	43	08826	02852
17850	BB			08824	42	00000	00000
17860	DORG	*-9		08826			
17870	BD	+*44,UT07-1,,	TYPE END OF JOB MESSAGE IF FORCED.	08826	43	08870	08811
17880	TD	+*23,MCOMM+3,,	NO -TYPE ONLY IF THE CONTROL CARD	08838	25	08861	02855
17890	BD	+*20,MCD05,,	SOURCE IS NOT THE TYPEWRITER	08850	43	08870	10730
17900	B	+*20		08862	49	08882	00000
17910	DORG	*-3		08870			
17920	WATY	MM21		08870	39	10199	00100
17930	RCTY			08882	34	00000	00102
17940	TD	UT07C,MCOMM+5		08894	25	09152	02857
17950	TDM	UT07A1+11,0		08906	15	09033	00000
17960	B	+*20		08918	49	08938	00000

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17970	DORG	=-3		08926			
17980	UT07A	34	UT07C,701,,	REFRESH THE COMMON REGION AND THE	08926	34	09152 00701
17990	BI		++12,600,,	OVRLAY READ ROUTINE.	08938	46	08950 00600
18000	BI		++12,700		08950	46	08962 00700
18010	BI		++12,1600		08962	46	08974 01600
18020	BI		++12,1700		08974	46	08986 01700
18030	36		UT07C,702		08986	36	09152 00702
18040	BNI		UT07B,1900		08998	47	09090 01900
18050	TD		++23,++23,11,		09010	25	09033 0903L
18060	UT07A1	BD	UT07A,MCD11		09022	43	08926 10790
18070	WATY		MM22,,,	COMPLAIN LOUDLY IF ANY ERROR.	09034	39	10221 00100
18080	WATY		MM23		09046	39	10307 00100
18090	RCTY				09058	34	00000 00102
18100	H		,,,	OPERATOR MUST RESET AND START TO RETRY.	09070	48	00000 00000
18110	B		UT07A		09082	49	08926 00000
18120	DORG		=-3		09090		
18130	UT07B	TDM	MCOMM,0,,	INITIALIZE NECESSARY INDICATORS AND	09090	15	02852 00000
18140	TDM		MCOMM+1,0,,	FIELDS.	09102	15	02853 00000
18150	TDM		MCOMM+2,0		09114	15	02854 00000
18160	TDM		M103,1,11		09126	15	09871 0000J
18170	TD		IBMMOD,MCOMM+5		09138	25	00440 02857
18180	BB		,,,	BOUNCE BACK.	09150	42	00000 00000
18190	DORG		=-9		09152		
18200	UT07C	DSC	1,1		09152		1
18210	I		1		09157		5 X 1
	DSA		DSA04				
					09157		J9639
18220	DC		3,1		09160		3
	-01						
18230	DC		6,402'		09166		6
	-0402'						
18240	*****		SUBROUTINE TO DETERMINE VALIDITY OF A CONTROL CARD FIELD.				
18250	UT10	TF	++23,F0,11,	MOVE CALLING SEQUENCE RECORD.	09168	26	09191 09620
18260	TR		F1,XX		09180	31	09629 00000
18270	AM		F0,1,,	COMPUTE NORMAL RETURN ADDRESS.	09192	11	09628 -0001
18280	TF		POINT,F5,,	INITIALIZE COLUMN TYPE-OUT POINTER.	09204	26	09798 09634
18290	CF		POINT-1		09216	33	09797 00000
18300	SF		F1,,,	INITIALIZE RETURN IND. FLAGS.	09228	32	09629 00000
18310	SF		F4		09240	32	09632 00000
18320	TFM		UT10A+23,MCCBUF-1,,	INITIALIZE CALL TO UT03.	09252	16	09323 J2999
18330	A		UT10A+23,F5		09264	21	09323 09634
18340	A		UT10A+23,F5		09276	21	09323 09634
18350	TD		UT10A+11,F6		09288	25	09311 09636
18360	UT10A	TFM	MFO1,XX,,	EXTRACT NUMERIC STRIP IF ANY.	09300	16	09746 -0000
18370	BTM		UT03,XX		09312	17	08068 -0000
18380	BNR		UT10B,MD01,,	NO -CHECK FOR R.M.	09324	45	09368 09772
18390	CF		F1,,,	YES -SET INDICATOR.	09336	33	09629 00000
18400	BD		UT10E,F1,	GO TO ERROR ROUTINE IF NOT ALLOWED.	09348	43	09512 09629
18410	B		F0,,6		09360	49	09620 00000
18420	DORG		=-3		09368		
18430	UT10B	BD	UT10C,MD01,,	GO TO ALPHA-S TEST IF ALPHAMERIC.	09368	43	09472 09772
18440	BNF		UT10D,MD01,,	GO TO BLANK-S TEST IF BLANK.	09380	44	09492 09772
18450	BNF		F0,F7-4,6,	NUMERIC -EXIT IF NO MOVE DESIRED.	09392	44	09620 09637
18460	CM		F6,1,10,	NUMERIC -MOVE DIGIT OR A FIELD.	09404	14	09636 000-1
18470	BNI		++24,1200		09416	47	09440 01200

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18480	TDM		++13,5		09428	15	09441 00005
18490	TF		F7,MFO2,611		09440	26	0964J 0975J
18500	TDM		=-11,6		09452	15	09441 00006
18510	B		F0,,6		09464	49	0962Q 00000
18520	DORG		=-3		09472		
18530	UT10C	BD	UT10E,F2,,	GO TO ERROR IF ALPHA-S NOT ALLOWED.	09472	43	09512 09630
18540	B		F0,,6		09484	49	0962Q 00000
18550	DORG		=-3		09492		
18560	UT10D	BD	UT10E,F3,,	GO TO ERROR IF BLANK-S NOT ALLOWED.	09492	43	09512 09631
18570	B		F0,,6		09504	49	0962Q 00000
18580	DORG		=-3		09512		
18590	UT10E	WATY	MM39,,	TYPE ERROR MESSAGE.	09512	39	10591 00100
18600	WNTY		POINT-1		09524	38	09797 00100
18610	WATY		MM45		09536	39	10677 00100
18620	BD		UT10F,F4,,	BRANCH IF PHASE TO BE DELETED.	09548	43	09580 09632
18630	CF		F4,,,	SET RETURN IND.	09560	33	09632 00000
18640	B		F0,,6		09572	49	0962Q 00000
18650	DORG		=-3		09580		
18660	UT10F	WATY	MM40,,	TYPE PHASE DELETED MESSAGE	09580	39	10639 00100
18670	RCTY				09592	34	00000 00102
18671	TDM		M101,0,,	TURN OFF ALREADY READ INDICATOR	09604	15	09870 00000
18680	B		M8140,,	WIND-UP.	09616	49	03688 00000
18690	DORG		=-3		09624		
18700	F0	DC	5,0,,	CALL AND RETURN VECTOR.	09628		5
			-0000				
18710	F1	DSC	1,0,,	R.M. ERROR.	09629		1
			0				
18720	F2	DSC	1,0,,	ALPHA ERROR.	09630		1
			0				
18730	F3	DSC	1,0,,	BLANK ERROR.	09631		1
			0				
18740	F4	DSC	1,0,,	END PHASE ON ANY ERROR.	09632		1
			0				
18750	F5	DC	2,0,,	STARTING CARD COL.	09634		2
			-0				
18760	F6	DC	2,0,,	FIELD LENGTH.	09636		2
			-0				
18770	F7	DC	5,0,,	MOVE TO ADDRESS FOR NUMERIC DATA.	09641		5
			-0000				
18780	DSC		1,',		09642		1
			'				
18790	*****		NON EXECUTE TESTER.				
18800	DC		5,0		09647		5
			-0000				
18810	UT11	BD	++24,-1,,	PICK THE ENTRY.	09648	43	09672 09647
18820	BNF		UT11A+12,NONEX,,	TEST IF EXECUTE INHIBITOR IS ON.	09660	44	09740 00457
18830	BNF		++20,MCOMM+2,,	YES -TYPE ONLY IF NOT ALREADY TYPED.	09672	44	09692 02854
18840	B		UT11A		09684	49	09728 00000
18850	DORG		=-3		09692		
18860	WATY		MM19		09692	39	10149 00100
18870	RCTY				09704	34	00000 00102
18880	SF		MCOMM+2,,	TURN ON EXECUTION INHIBITOR.	09716	32	02854 00000
18890	UT11A	CF	NONEX		09728	33	00457 00000
18900	BB				09740	42	00000 00000
18910	DORG		=-9		09742		
18920	*****		MONITOR SCRATCH FIELDS				

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18930 MF01	DC 5,0 -0000	09746	5
18940 MF02	DC 5,0 -0000	09751	5
18950 MF03	DC 20,0 -000000000000000000	09771	20
18960 MD01	DSC 1,0 0	09772	1
18970 MD02	DSC 1,0 0	09773	1
18980 MR02	DSC 20,0',, 000000000000000000'	HOLDS DDA FOR PROGRAM MONITOR IS CALLING. 09774	20
18990 POINT	DC 5,0',, -0000	LOOKY HERE, MA. 09798	5
19000	DSC 1,', '	09799	1
19010 *****	INITIALIZATION RECORDS.		
19020 IREC	DSC 2,0 00	09800	2
19030	DC 12,-0 -0000000000-	09813	12
19040	DC 4,0', -00'	09817	4
19050 JREC	DC 1,0 -	09818	1
19060	DSC 5,-0 0000-	09819	5
19070	DSC 5,-0 0000-	09824	5
19080	DSC 5,0', 0000'	09829	5
19090 KREC	DC 1,0 -	09834	1
19100	DC 2,-0 --	09836	2
19110	DSC 1,-0 -	09837	1
19120	DC 2,-0 --	09839	2
19130	DC 2,-0 --	09841	2
19140	DSC 1,', '	09842	1
19150 LREC	DC 1,0 -	09843	1
19160	DSC 2,-0 0-	09844	2
19170	DSC 2,-0 0-	09846	2
19180	DSC 2,-0 0-	09848	2
19190	DSC 1,', '	09850	1
19200 MREC	DSC 19,0' 000000000000000000'	09851	19
19210 *	THE FOLLOWING INDICATORS ARE NON-ZERO OR FLAGGED IF TRUE.		

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19220 MI01	DSC 1,0',, CNTL CARD READ IND. 0	09870	1
19230 MI03	DSC 1,0',, -JOB- CARD SEARCH IND. 0	09871	1
19240 *****	MONITOR DAC-S		
19250 MM01	DAC 24,ENTER MONITOR CNTL REC.', ENTER MONITOR CNTL REC.'	09873	24 X 2
19260 MM02	DAC 4,JOB , JOB	09921	4 X 2
19270 MM03	DAC 4,TYPE, TYPE	09929	4 X 2
19280 MM04	DAC 4,PAUS, PAUS	09937	4 X 2
19290 MM05	DAC 4,SPS , SPS	09945	4 X 2
19300 MM06	DAC 4,SPSX, SPSX	09953	4 X 2
19310 MM07	DAC 4,FOR , FOR	09961	4 X 2
19320 MM08	DAC 4,FORX, FORX	09969	4 X 2
19330 MM09	DAC 4,DUP , DUP	09977	4 X 2
19340 MM10	DAC 4,XEQ , XEQ	09985	4 X 2
19350 MM11	DAC 4,XEQS, XEQS	09993	4 X 2
19360 MM16	DAC 32,PACK NUMBER ERROR ON MODULE 0. ', PACK NUMBER ERROR ON MODULE 0. '	10001	32 X 2
19370 MM17	DAC 42,SET SSW4 TO IGNORE, OFF TO RE-ENTER CARD.', SET SSW4 TO IGNORE, OFF TO RE-ENTER CARD.'	10065	42 X 2
19380 MM19	DAC 25,EXECUTION IS INHIBITED. ', EXECUTION IS INHIBITED. '	10149	25 X 2
19390 MM21	DAC 11,END OF JOB', END OF JOB'	10199	11 X 2
19400 MM22	DAC 43,CANNOT RESTORE COMMON -RESET AND START TO ', CANNOT RESTORE COMMON -RESET AND START TO '	10221	43 X 2
19410 MM23	DAC 6,RETRY', RETRY'	10307	6 X 2
19420 MM25	DAC 10,EXECUTION', EXECUTION'	10319	10 X 2
19430 MM26	DAC 21, JOB CARD GROUP ONLY', JOB CARD GROUP ONLY'	10339	21 X 2
19440 MM30	DAC 12,MUST RELOAD', MUST RELOAD'	10381	12 X 2
19450 MM31	DAC 18,CONDITION IGNORED', CONDITION IGNORED'	10405	18 X 2
19460 MM32	DAC 8,COMPARE', COMPARE'	10441	8 X 2
19470 MM33	DAC 12,-ENTER CARD', -ENTER CARD'	10457	12 X 2
19480 MM36	DAC 18,SYSTEM DIM ERROR ', SYSTEM DIM ERROR '	10481	18 X 2
19490 MM37	DAC 18,OBJECT DIM ERROR ', OBJECT DIM ERROR '	10517	18 X 2
19500 MM38	DAC 19,OBJECT NAME ERROR ', OBJECT NAME ERROR '	10553	19 X 2

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19510 MM39	DAC 24,ERROR IN FIELD AT COL. ',	10591	24 X	2
19520 MM40	ERROR IN FIELD AT COL. '	10639	19 X	2
19530 MM45	DAC 19,PHASE TERMINATED. ',	10677	3 X	2
19540 *****	DAC 3,, ',			
19550	***** FOLLOWING ARE MONITOR-S QUICK AND DIRTY DIGIT DECODERS.			
19560 MCD01	DORG SYSORG+8288	10690		
19570	DSC 2,-01	10690	2	
19580 MCD02	OJ	10692	8	
19590	DSC 8,01010000	10700	0	
19600	01010000	10701	2	
19610	DS 0,**1	10703	2	
19620 MCD03	DC 2,6	10709	6	
19630 MCD04	-6	10710	10	
19640 MCD05	DC 2,8	10720	10	
19650 MCD06	-8	10730	10	
19660 MCD07	DC 6,100000	10740	10	
19670 MCD08	J00000	10750	10	
19680 MCD09	DSC 10,0010000000	10760	10	
19690 MCD10	0010000000	10770	10	
19700	DSC 10,0101010100	10781	2	
19710	0101010100	10783	2	
19720	DSC 10,0001010000	10785	2	
19730	0001010000	10787	2	
19740 MCD11	DSC 10,0000000000	10789	2	
19750 *****	0000000000	10790	10	
19760	DSC 10,0124444444			
19770 SPSDDA	0124444444	10802		
19780	DSC 10,0443444444	10802	1	
	0443444444			
	DSC 10,1357911111	10807	5 X	1
	1357911111			
	DC 2,-50	10807	-0000	
	N-	10810	3	
	DC 2,-55	10815	5 X	2
	NN			
	DC 2,-60			
	O-			
	DC 2,-65			
	ON			
	DC 2,-70			
	P-			
	DSC 10,1234567890			
	1234567890			
	***** SYSTEM DIM ENTRY SECTOR -THESE DDA-S ARE PICKED UP			
	DORG SYSORG+8400,			
	DSC 1,0,,			
	0			
	DSA 0			
	DC 3,0			
	-00			
	DSA 0,0			

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19810	DSC 1,,	10815	-0000	
	'	10820	-0000	
19820 FORDDA	DSC 1,0,,	10821	1	
	0			
19830	DSA 0	10822	1	
		10827	5 X	1
19840	DC 3,0	10827	-0000	
	-00	10830	3	
19850	DSA 0,0	10835	5 X	2
		10835	-0000	
19860	DSC 1,,	10840	-0000	
	'	10841	1	
19870 DUPDDA	DSC 1,0,,	10842	1	
	0			
19880	DSA 0	10847	5 X	1
		10847	-0000	
19890	DC 3,0	10850	3	
	-00			
19900	DSA 0,0	10855	5 X	2
		10855	-0000	
19910	DSC 1,,	10860	-0000	
	'	10861	1	
19920 EQUDDA	DSC 1,0,,	10862	1	
	0			
19930	DSA 0	10867	5 X	1
		10867	-0000	
19940	DC 3,0	10870	3	
	-00			
19950	DC 6,0'	10876	6	
	-0000'			
19960 *****	IORT LOAD PROCESSOR FOR NAMED PROGRAMS SECTION 2			
19970	DORG SYSORG+8500	10902		
19980 AB00	BNF AB05,AA02A+5,,	10902	44	11134 00234
19990	TF AA04+11,AA02A+4,,	10914	26	00295 00233
20000 AB01	SF AA02A+5,,,	10926	32	00234 00000
20010	TFM IOXX,**23	10938	16	00565 J0961
20020	B IOSK,AB08,7	10950	49	00554 J1363
20030	TF AB09A+5,MAPENT+5	10962	26	11385 02149
20040	ID AB09A,TEMP-5	10974	25	11380 02014
20050	TD AB10+411,AB09,,	10986	25	11807 11379
20060 AB02	TFM IOXX,**23,,	10998	16	00565 J1021
20070	B IOGT,AB08+8,7	11010	49	00566 J1371
20080	TFM AB03+11,AB10+11,,	11022	16	11045 J1407
20090 AB03	BNR **32,XX,,	11034	45	11066 00000
20100	TFM BKPT,AB01	11046	16	00467 J0926
20110	B ERROR+72	11058	49	00702 00000
20120	DORG *-3	11066		

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20130	C	AB03+11,AA02A+16,6,COMPARE CURRENT ENTRY.	11066	24	1104N	00245
20140	BI	AB06,1200,, BRANCH IF FOUND.	11078	46	11154	01200
20150	AM	AB03+11,16,, NO -ADVANCE ADDRESSING.	11090	11	11045	-0016
20160	55	AB03,AB03+11,11, TEST IF 4 SECTORS EXHAUSTED.	11102	55	11034	1104N
20170	AM	AB09A+5,4,, YES -INCREMENT SECTOR ADDRESS.	11114	11	11385	-0004
20180	B	AB02	11126	49	10998	00000
20190	DORG	*-3	11134			
20200	AB05	TF AA02A+16,AA02A+12,,MOVE NAME FOR NO LOAD ADDRESS CASE.	11134	26	00245	00241
20210	B	AB01	11146	49	10926	00000
20220	DORG	*-3	11154			
20230	AB06	AM AB03+11,4,, MOVE FOUND DIM ENTRY.	11154	11	11045	-0004
20240	TF	AA04+6,AB03+11,11	11166	26	00290	1104N
20250	BNF	*+24,AA02A+26,, TEST IF REPOSITIONING DESIRED.	11178	44	11202	00255
20260	SF	AA04,, YES -SET INDICATOR.	11190	32	00284	00000
20270	BD	*+24,AA02A+26,, TEST IF EXECUTION DESIRED.	11202	43	11226	00255
20280	SF	AA04+1,, YES -SET INDICATOR.	11214	32	00285	00000
20290	TR	0,AB07,, OVERLAY SECTION 1 WITH TERMINATION	11226	31	00000	11246
20300	B	0,, ROUTINE.	11238	49	00000	00000
20310	DORG	*-3	11246			
20320	AB07	TFM IOXX,23,, RESTORE CORE.	11246	16	00565	-0023
20330	B	IOGT,AA03,7	11258	49	00566	-0261
20340	TFM	DFILE+11,TT1,, DUMMY UP A GET ENTRY TO IORT.	11270	16	01945	-1756
20350	TF	IOXX,AA02A+23	11282	26	00565	00252
20360	TR	CNTWD,AA04	11294	31	02170	00284
20370	TFM	OLDY+1,MCVL,, SET UP TO RESTORE MPY TABLE AND	11306	16	02132	-0098
20380	TFM	HALT+6,X01+36,, EXECUTE LOAD.	11318	16	00462	-1886
20390	TR	OLDDA,103	11330	31	00441	00103
20400	B	OVRLAY,DSA01,, YOU-RE ON YOUR OWN NOW, BOY.	11342	49	00468	19635
20410	DC	3,3	11356			3
	-03					
20420	DC	6,0'	11362			6
	-0000*					
20430	AB08	DSC 3,220	11363			3
	220					
20440	DC	4,2	11369			4
	-002					
20450	DSC	1,'	11370			1
	'					
20460	DSC	2,22	11371			2
	22					
20470	DSA	AB09A	11377		5 X	1
20471	DSC	1,'	11377		J1380	
	'		11378			1
20480	AB09	DSC 1,0,, GROUP MARK FOR TEST.	11379			1
	0					
20490	AB09A	DSC 1,1	11380			1
	1					
20500	DSA	0	11385		5 X	1
20510	DC	3,4	11385		-0000	
	-04		11388			3
20520	DSA	AB10	11393		5 X	1

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20530	DSC	1,'	11393		J1396	
	'		11394			1
20540	AB10	00 ,,, READ BUFFER FOR FOUR SECTORS.	11396	00	00000	00000
20550	DORG	19982,, CONTROL TO WRITE ON DISK.	19982			
20560	DSC	1,1	19982			1
	1					
20570	DSA	DSA08	19987		5 X	1
20580	DC	3,90	19987		J9659	
	-90		19990			3
20590	DSA	SYSORG	19995		5 X	1
20600	DSC	1,'	19995		-2402	
	'		19996			1
20610	DEND		00000			

APHASE	01612	AB00	10902	DSA21	19630	JR	01141	MCD04	10720
BIGTRB	00766	AB01	10926	DSA39	19663	JTEST	01010	MCD05	10730
CYLOVF	00802	AB02	10998	DSA40	19743	KREC	09834	MCD06	10740
DIMENT	00402	AB03	11034	DSA50	17024	LADDR	00439	MCD07	10750
DUPDDA	10842	AB05	11134	DSA51	19600	LCA01	00072	MCD08	10760
EMSG10	01079	AB06	11154	E0030	00630	LCA02	00132	MCD09	10770
EMSG11	01085	AB07	11246	E0040	00736	LCA03	00273	MCD10	10781
EMSG13	01211	AB08	11363	E0050	00806	LCA04	00120	MCD11	10790
EMSG20	01091	AB09A	11380	E0070	00838	LCA06	00180	MCOMM	02852
EMSG21	01083	AB09	11379	E0080	00922	LCA07	00223	MCR01	04098
EQUDDA	10862	AB10	11396	E0090	00956	LCA08	00237	MCR03	04218
FORDDA	10822	AJOB	01600	E0095	01016	LCA09	00245	MCR04	04334
HOLLER	01388	B1	01579	E0100	01050	LCB01	00092	MCR05	04602
IBHMOD	00440	BBUFF	01230	ECALL	01793	LCB02	00200	MCR06	04965
IBHWRT	01022	BKPT	00467	EEEXIT	01636	LCB08	00255	MCYL	00098
LCA02A	00253	BNI	00492	EMSG1	01785	LCB09	00263	MD01	09772
LCA06A	00204	CHECK	01268	EMSG2	01155	LCB10	00278	MD02	09773
LDBNPT	00428	CHEK1	01340	EMSG3	01055	LRA02	00176	MDDA	01779
MAPENT	02144	CHEK2	01376	EMSG4	01061	LRA05	00269	MDP01	06836
MAPSCT	01835	CHK1	00880	EMSG5	01067	LRA06	00283	MERR	00878
MB080A	03376	CHK2	01344	EMSG6	01073	LREC	09843	MES1	00811
MB110A	03552	CHK3	01380	EMSG7	01079	MA000	02402	MES2	00933
MB110B	03596	CHK4	01412	EQUIV	02123	MA010	02546	MESSG	00954
MCA00A	00079	CINIT	00427	ERRB	01815	MA020	02769	MF01	09746
MCCBUF	13000	CNTWD	02170	ERRT	00602	MA025	02777	MF02	09751
MCR01A	04485	COMM	02802	ERROR	00630	MB000	02902	MF03	09771
MCR02A	04146	COUNT	01131	F0	09628	MB010	03022	MFT01	06580
MCR04A	04474	DCDE	01058	F1	09629	MB020	03082	MFT02	06600
MCR05A	04658	DFILE	01934	F2	09630	MB025	03150	MFT03	06764
MFT05B	06808	DIO1	00972	F3	09631	MB030	03172	MI01	09870
MFT05C	06822	DIOF	02020	F4	09632	MB035	03192	MI03	09871
MJB02A	05090	DIO	00820	F5	09634	MB040	03240	MJB01	04974
MJB02X	05058	DIOX	01028	F6	09636	MB045	03284	MJB02	04986
MJB03A	05116	DIOY	00928	F7	09641	MB080	03304	MJB03	05104
MJB03B	05160	DIOZ	01128	FSPS	00429	MB081	03420	MJB04	05172
MJB12A	05512	DOVFL	01134	GDGO	00864	MB100	03452	MJB10	05280
MJB13A	05568	DRIVE	02169	GTEST	01160	MB110	03496	MJB11	05396
MJB15A	05708	DSA00	19600	H01	01424	MB140	03688	MJB12	05420
MJB50A	06200	DSA01	19635	H03	01460	MB145	03720	MJB13	05544
MJB55A	06214	DSA02	19636	H04	01484	MB190	03740	MJB15	05604
MONCAL	00796	DSA04	19639	HALT	00456	MB195	03752	MJB17	05960
MSP05A	06523	DSA06	19640	HIGH	00434	MB200	03764	MJB20	06056
MSP05B	06537	DSA07	19656	INDS	00610	MB210	04016	MJB21	06148
MSP05C	06551	DSA08	19659	INOUT	00629	MB220	04040	MJB22	06156
MSP05D	06565	DSA09	19744	IOCAL	00716	MB222	04048	MJB23	06164
MXQ03A	07120	DSA10	19749	IOGT	00566	MB225	04063	MJB30	06180
MXQ03B	07176	DSA11	19761	IOPA	01010	MB226	04077	MM01	09873
MXQ06A	07368	DSA12	19786	IOP	01958	MCA00	00052	MM02	09921
MXQ06B	07416	DSA13	19772	IOPB	00532	MCA01	00208	MM03	09929
MXQ06C	07440	DSA14	19777	IORBC	00520	MCA03	00100	MM04	09937
NEWDDA	01160	DSA15	19783	IOSK	00554	MCA04	00071	MM05	09945
OVRLAY	00468	DSA16	19767	IOXX	00565	MCA05	00241	MM06	09953
AA02A	00229	DSA17	19770	IREC	09800	MCA06	00250	MM07	09961
AA02	00120	DSA18	19792	JA	00984	MCD01	10690	MM08	09969
AA03	00261	DSA19	19795	JOFF	01036	MCD02	10700	MM09	09977
AA04	00284	DSA20	19798	JREC	09818	MCD03	10710	MM10	09985

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MM11	09993	MXQ02	06972	RDVCD	01002	UT03B	08178	WTEST	00710
MM16	10001	MXQ03	07108	REPOS	00512	UT03C	08264	X01	01850
MM17	10065	MXQ04	07224	RETN	01680	UT03	08068	X03	01084
MM19	10149	MXQ05	07256	RETRY	01042	UT05A	08476	X04	01216
MM21	10199	MXQ06	07348	RM1	02210	UT05B	08498	XX	00000
MM22	10221	MXQ07	07448	RM2	02215	UT05	08380	Y07A	01130
MM23	10307	MXQ08	07508	RMAP	00962	UT06A	08570	Y10B	00978
MM25	10319	MXQ09	07620	RNAM	00718	UT06B	08650	Y07	01118
MM26	10339	MXQ10	07640	SEEK	01500	UT06C	08682	Y0IA	00954
MM30	10381	MXQ11	07672	SETX	01316	UT06D	08744	Y00	00678
MM31	10405	MXQ12	07704	SIOP	01802	UT06E	08792	Z011	00750
MM32	10441	MXQ13	07748	SIOXX	01250	UT06	08524	Z01	00842
MM33	10457	MXQ20	07828	SK01	01480	UT07A	08926	Z02	00886
MM36	10481	MXQ50	07843	SK02	01608	UT07B	09090	Z03	00930
MM37	10517	MXQ55	07857	SK03	01712	UT07C	09152	Z04	00986
MM38	10553	NEXT	00969	SK04	02143	UT07	08812	SAVDDA	01175
MM39	10591	NIOP	01066	SRA01	00072	UT10A	09300	SFINT	00426
MM40	10639	NOERR	00654	SRA02	00060	UT10B	09368	SPSDDA	10802
MM45	10677	NONEX	00457	SRA03	00152	UT10C	09472	SPSMLP	00468
MR02	09774	OLDCY	02131	STEPS	01200	UT10D	09492	SRELOC	00425
MREC	09851	OLDDA	00441	TEETH	01211	UT10E	09512	SUPENT	02934
MSP01	06228	OTEST	00766	TEMP	02019	UT10F	09580	SUPRET	01821
MSP02	06248	POINT	09798	TEST	00630	UT10	09168	SYSVAL	00475
MSP03	06460	RCALL	01807	TY1	01756	UT11A	09728	SYSORG	02402
MSP04	06504	RDIM1	00834	UT01	07988	UT11	09648	UT05A1	08490
MXQ01	06940	RDIM	00786	UT03A	08116	WRTCT	00722	UT07A1	09022

END OF ONE ASSEMBLY.

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00120	DORG 2500				02500			
00130	* WRITE SEGMENT 1 OF LOADER ON DISK.							
00140	TRY1 34 DCONT1,701				02500	34	02584	00701
00150	38 DCONT1,702				02512	38	02584	00702
00160	BNI RIGHT1,1900				02524	47	02560	01900
00170	H				02536	48	00000	00000
00180	B TRY1				02548	49	02500	00000
00190	RIGHT1 TRA				02560	36	00000	00500
					02572	49	00000	00000
00200	DCONT1 DSC 9,119600009				02584		9	
	119600009							
	DSA CARDIN-10				02597		5 X	1
00220	DORG 502				02597		-0502	
00225	FAKE DC 2,0				00502			
	-0				00503		2	
00230	* DISK INPUT PROGRAM. IF CARD INPUT, BRING IN SEGMENT 2.							
00240	B LOADER				00504	49	01266	00000
00250	DORG *-4				00511			
00260	* INPUT CONTROL FOR DISK INPUT. DDA IS AT CNTL, CYLOV IS LOCATION							
00270	* OF CYLINDER OVERFLOW ROUTINE, LD 3 IS ERROR MESSAGE, OK IS							
00280	* NORMAL EXIT.							
00290	NORM DC 1,7				00511		1	
	P							
00300	DSA CNTL,CYLOV				00516		5 X	2
					00516		-0920	
00310	DC 2,73				00521		-0554	
	P3				00523		2	
00320	DSA OK				00528		5 X	1
					00528		-0630	
00330	DC 1,1				00529		1	
	*							
00340	* SECTOR ADDRESSES AND COUNTS FOR DISK INPUT.							
00350	CNTL1 DC 8,00100200				00537		8	
	-0100200							
00360	CNTL2 DC 8,00200100				00545		8	
	-0200100							
00370	CNT DC 8,00300000				00553		8	
	-0300000							
00380	* CYLINDER OVERFLOW ROUTINE.							
00390	* IF OVERFLOW OCCURRED, UPDATE ARM POSITION CODE FOR IOCS.							
00400	CYLOV AM ARM,1,10				00554	11	00464	000-1
00410	* READ ONE OR TWO SECTORS FROM NEXT CYLINDER, AND CONTINUE.							
00420	TF DIS-1 ,CNTL2				00566	26	00933	00545
00430	AM CNTL+5,1				00578	11	00925	-0001
00440	BD MORE,CNTL+5				00590	43	00610	00925
00450	B DIS				00602	49	00934	00000
00460	DORG *-3				00610			
00470	MORE TF DIS-1 ,CNTL1				00610	26	00933	00537
00480	B CYLOV+24				00622	49	00578	00000
00490	DORG *-3				00630			
00500	* NORMAL EXIT. INCREMENT SECTOR ADDR. BY 3, DECREMENT COUNT BY 3,							

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00510	* GO TO BEGIN PROCESSING INPUT.							
00520	OK TD DK+23,DIS-6				00630	25	00653	00928
00530	AM CNTL+5,XX				00642	11	00925	-0000
00540	SM MAPENT+8,3,9				00654	12	00410	00-03
00550	B FIN				00666	49	01092	00000
00560	DORG *-2				00675			
00590	* CONTROL TO BRING IN SEGMENT 2.							
	DC 1,7				00675		1	
	P							
	DSA CONT2,CYLOV				00680		5 X	2
					00680		-0694	
00610	DC 2,74				00685		-0554	
	P4				00687		2	
00620	DSA CARDIN				00692		5 X	1
					00692		-0512	
00630	* DDA TO BRING IN SEGMENT 2. TRANSMITTED TO OUT BEFORE USAGE.							
00640	DC 1,1				00693		1	
	*							
00650	DC 1,0				00694		1	
	-							
00660	DSA CARDAD				00699		5 X	1
					00699		J9609	
00670	DSC 3,3				00700		3	
	003							
	DSA CARDIN-10				00707		5 X	1
					00707		-0502	
00690	DSC 1,1				00708		1	
	*							
00700	* ADDRESS TO BRANCH TO AFTER DISK READ ERROR.							
00710	DSA DIS				00713		5 X	1
					00713		-0934	
00720	* LOAD ADDRESS FOR INPUT.							
00730	DC 5,0				00718		5	
	-0000							
00740	* FOR DISK INPUT, HAS CHARACTER COUNT REACHED 300...							
00750	CM CHAR1,300				00720	14	00863	-0300
00760	BNE **32				00732	47	00764	01200
00770	* IF SO, GET MORE INPUT.							
00780	TFM C,0				00744	16	00439	-0000
00790	B DISK				00756	49	00864	00000
00800	DORG *-3				00764			
00810	* IF NOT, ARE WE READY FOR A NEW 75-CHARACTER GROUP...							
00820	C CHAR1,C				00764	24	00863	00439
00830	BNE BEGIN				00776	47	01164	01200
00840	B HERE,,7				00788	49	01116	-0000
00850	DORG *-3				00796			
00860	* INPUT CONTROL FOR CARD INPUT. 0 IS INPUT LOCATION, ERR IS ERROR							
00870	* ROUTINE, LD 2 IS ERROR MESSAGE, CEND IS NORMAL EXIT.							
00880	READ DSC 1,0				00796		1	
	0							

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00890	DSA 0,ERR	00801	5 X	2
		00801	-0000	
		00806	-1030	
		00808	2	
00900	DC 2,72			
	P2			
00910	DSA CEND	00813	5 X	1
		00813	-0556	
00920	DC 1,1	00814	1	
00930	* TO BRING IN SEGMENT 2, TRANSMIT INPUT CONTROL AND DDA.			
	OUT TD CONT2,ARM+1	00816	25	00694 00465
00950	TR A,GET	00828	31	01073 00675
	TFM C,0	00840	16	00439 -0000
00970	B DIS+12	00852	49	00946 00000
00980	DORG *-4	00859		
00990	* CHARACTER COUNTER.			
01000	CHAR1 DC 5,0	00863	5	
	-0000			
01010	* DISK INPUT..EXIT WHEN SECTOR COUNT IS ZERO.			
01020	DISK CM MAPENT+8,0,9	00864	14	00410 00-00
01030	BNH SIX	00876	47	02206 01100
01040	* NOT ZERO - TRANSMIT INPUT CONTROL AND 3-SECTOR DDA.			
01050	TR A,NORM	00888	31	01073 00511
01060	TF DIS-1,CNT	00900	26	00933 00553
01070	B DIS,,2	00912	49	-0934 00000
01080	DORG *-3	00920		
01090	* DDA FOR DISK INPUT. VARIABLE COUNT AND CORE ADDRESS TO HANDLE			
01100	* CYLINDER OVERFLOW.			
01110	CNTL DSC 6,0	00920	6	
	000000			
01120	DC 8,0	00933	8	
	-0000000			
01130	* INPUT ROUTINE. SEEK, GET INPUT DEVICE, READ, CHECK FOR ERROR.			
01140	DIS 34 B,701,6	00934	34	01070 00701
01150	TD **21,A	00946	25	00967 01073
01160	RD 36 B,702,6	00958	36	01070 00702
01170	BN1 E-1,1900,6	00970	47	0109- 01900
01180	ANYERR BI **12,0600	00982	46	00994 00600
01190	BI **12,1600	00994	46	01006 01600
01200	BI **12,1700	01006	46	01018 01700
01210	BI CIN,3800,6	01018	46	0108L 03800
01220	* ERROR ROUTINE. WRITE LD X, HALT, REREAD.			
01230	ERR TF STOP+9,D	01030	26	01063 01085
01240	WATY STOP+3	01042	39	01057 00100
01250	STOP H 53440	01054	48	53440 00000
01260	DORG *-4	01061		
01270	DSC 5,0'	01061	5	
	0000'			
01280	BACK B DISKX,,6	01066	49	0071L 00000
01290	DORG *-4	01073		
01300	* INPUT CONTROL. DEVICE CODE, CORE ADDR. FOR INPUT, ERR ROUTINE,			
01310	* ERROR MESSG, NORMAL EXIT.			
01320	A DC 1,0	01073	1	

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01330	B DC 5,0	01078	5	
	-0000			
01340	CIN DC 5,0	01083	5	
	-0000			
01350	D DC 2,0	01085	2	
	-0			
01360	E DC 6,0'	01091	6	
	-0000'			
01370	* BEGIN PROCESSING A 75-CHARACTER GROUP.			
01380	FIN TF CHAR1,C	01092	26	00863 00439
01390	* IF THIS IS FIRST GROUP, COMPUTE RELCON, UNLESS RETURNING FROM TCD.			
01400	RCON BNF TD ,TCD	01104	44	01176 00428
01410	TF RELCON, HIGH	01116	26	00449 00434
01420	SF FIN	01128	32	01092 00000
01460	* SET LOW TO FIRST ADDRESS ON FIRST CARDPLUS RELCON.			
01470	ZERO TF LOW,4	01140	26	00444 00004
	BNR **24 ,MAPENT+14	01152	45	01176 00416
	TF MAPENT+13,LOW	01164	26	00415 00444
01480	* RESET TCD INDICATOR.			
01490	TD SF TCD	01176	32	00428 00000
01520	* TO BRING IN SEGMENT 3, TRANSMIT INPUT CONTROL AND DDA.			
	TD CONT3 ,ARM+1	01188	25	01250 00465
01540	TR A,RPROG	01200	31	01073 01231
01550	TR OUT,CONT3	01212	31	00816 01250
01560	B DIS	01224	49	00934 00000
01570	DORG *-4	01231		
01580	* INPUT CONTROL FOR SEGMENT 3. OUT IS DDA, LD 4 IS ERROR MESSG,			
01590	* RCON IS NORMAL RETURN.			
01600	RPROG DC 1,7	01231	1	
	P			
01610	DSA OUT ,CYLOV	01236	5 X	2
		01236	-0816	
		01241	-0554	
		01243	2	
01620	DC 2,74			
	P4			
01630	DSA START	01248	5 X	1
		01248	-0720	
01640	DC 1,1	01249	1	
	,			
01650	* DDA FOR SEGMENT 3.			
01660	CONT3 DSC 9,019612012	01250	9	
	019612012			
01670	DSA RCON-2	01263	5 X	1
		01263	-1102	
01680	DSC 1,1	01264	1	
	,			
01690	* LOGICAL START OF LOADER. IF INPUT IS FROM CARDS, GET SEGMENT 2.			
	LOADER TD CNTLI ,ITAB	01266	25	01328 00440
	TD ARM+1,ITAB	01278	25	00465 00440
01	TR A,INIT	01290	31	01073 01309
01	B DIS+12	01302	49	00946 00000
01	DORG *-4	01309		
01	INIT DC 1,7	01309	1	
	P			

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01	DSA CNTLI,CYLOV	01314	5 X	2	
		01314			-1328
		01319			-0554
		01321			2
01	DC 2,74				
	P4				
01	DSA TRANS	01326	5 X	1	
		01326			-1342
		01327			1
01	DSC 1, *				
	+				
01	CNTLI DSC 1,0	01328			1
	0				
01	DSA SYSSCT	01333	5 X	1	
		01333			J9663
		01341			8
01	DC 8,100000				
	-0100000				
01	TRANS TR COMM,84	01342	31	00440	00084
01700	BD OUT ,IOMED	01354	43	00816	00428
01710	* IF INPUT FROM DISK, GET FIRST SECTOR ADDR. AND GO TO READ DISK.				
01720	TF CNTL+5,MAPENT+5,, DISK INPUT	01366	26	00925	00407
01725	TD CNTL,MAPENT	01378	25	00920	00402
01730	B DISK	01390	49	00864	00000
01740	DORG *-3	01398			
01750	TCD TRY1	02500			
		02500			
01760	DORG 2500				
01770	* WRITE SEGMENT 2 OF LOADER ON DISK.				
01780	TRY2 34 DCONT2,701	02500	34	02584	00701
01790	38 DCONT2,702	02512	38	02584	00702
01800	BNI RIGHT2,1900	02524	47	02560	01900
01810	H	02536	48	00000	00000
01820	B TRY2	02548	49	02500	00000
01830	RIGHT2 TRA	02560	36	00000	00500
		02572	49	00000	00000
		02584			9
01840	DCONT2 DSC 9,119609003				
	119609003				
	DSA CARDIN-10	02597	5 X	1	
		02597			-0502
01860	DORG 502	00502			
	DC 2,0	00503			2
	-0				
01870	B LOADER	00504	49	01266	00000
01880	DORG *-3	00512			
01890	* CARD INPUT PROGRAM.				
01900	* GET INPUT DEVICE CODE FROM COMM. AREA.				
01910	CARDIN TD READ,IOMED,, CARD OR TAPE INPUT	00512	25	00796	00428
01920	CF READ	00524	33	00796	00000
01930	* TRANSMIT CARD INPUT CONTROL. AND GO TO READ A CARD.				
01940	CARD TR A,READ	00536	31	01073	00796
01950	B DIS+12	00548	49	00946	00000
01960	DORG *-3	00556			
01970	* IF CARD INPUT, CHECK SEQUENCE. IF TAPE, BYPASS THIS.				
01980	CEND CM READ,5,10	00556	14	00796	000-5

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01990	BNE FIN	00568	47	01092	01200
02000	BNF FIN,75,, CHECK CARD SEQUENCE NO.	00580	44	01092	00075
02010	AM SEQ,1	00592	11	00454	-0001
02020	C 79,SEQ	00604	24	00079	00454
02030	BE FIN	00616	46	01092	01200
02040	SM SEQ,1	00628	12	00454	-0001
02050	* IF CARD IS OUT OF SEQUENCE, WRITE LAST SEQ. NO. WHICH WAS CORRECT,				
02060	* AND LD 1. THEN HALT, AND READ ANOTHER CARD.				
02070	WNTY SEQ-4	00640	38	00450	00100
02080	TFM STOP+9,71,10	00652	16	01063	000P1
02090	B ERR+12	00664	49	01042	00000
02100	DORG *	00675			
02110	GET DC 1,7	00675			1
	P				
02120	DSA OUT ,CYLOV	00680	5 X	2	
		00680			-0816
		00685			-0554
		00687			2
02130	DC 2,74				
	P4				
02140	DSA DISK	00692	5 X	1	
		00692			-0864
		00693			1
02150	DC 1, *				
	+				
02160	CONT2 DC 1,0	00694			1
	-				
02170	DSA DISKAD	00699	5 X	1	
		00699			J9600
		00700			3
02180	DSC 3,3				
	003				
	DSA CARDIN-10	00707	5 X	1	
		00707			-0502
		00708			1
02210	* ADDRESS TO BRANCH TO AFTER CARD OR TAPE READ ERROR.				
02220	DISKX DSA DIS+12	00713	5 X	1	
		00713			-0946
		00718			5
02230	REL DC 5,0				
	-0000				
02240	* FOR UNIT RECORD INPUT, HAS CHARACTER COUNT REACHED 75...				
02250	START CH CHAR1,75	00720	14	00863	-0075
02260	FORK BNE *+32	00732	47	00764	01200
02270	* IF SO, READ ANOTHER RECORD.				
02280	TFM C,0	00744	16	00439	-0000
02290	B CARD	00756	49	00536	00000
02300	DORG *-3	00764			
02310	C CHAR1,C	00764	24	00863	00439
02320	TCD TRY2	02500			
		02500			
02330	DORG 2500				
02340	* WRITE SEGMENT 3 OF LOADER ON DISK.				
02350	TRY3 34 DCONT3,701	02500	34	02584	00701

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02360	38	DCONT3,702	02512	38	02584	00702
02370	BN1	RIGHT3,1900	02524	47	02560	01900
02380	H		02536	48	00000	00000
02390	B	TRY3	02548	49	02500	00000
02400	RIGHT3	TRA	02560	36	00000	00500
			02572	49	00000	00000
			02584		9	
02410	DCONT3	DSC 9,119612012				
		119612012				
02420	DSA	RCON-2	02597		5 X	1
02430		DORG RCON	02597		-1102	
02440	*	SEGMENT 3 HANDLES ANALYZING AND LOADING OF INPUT.	01104			
02450	TFM	CNTL-2,DIS+12				
02460	*	INITIALIZE COUNTERS FOR NEW 75-CHARACTER GROUP.	01104	16	00918	-0946
02470	HERE	AM C,75	01116	11	00439	-0075
02480	AM	CHAR1,4	01128	11	00863	-0004
02490	TF	LOC,CHAR1,11	01140	26	01283	0086L
02500	AM	CHAR1,1	01152	11	00863	-0001
02510	BEGIN	BNR NOTRM,CHAR1,11	01164	45	01228	0086L
02520	BNF	NOFLAG,CHAR1,11, RECORD MARK INDICATOR	01176	44	01208	0086L
02530	*	FLAGGED RECORD MARK - START NEW GROUP.				
02540	TF	CHAR1,C	01188	26	00863	00439
02550	B	START	01200	49	00720	00000
02560	DORG	*-3	01208			
02570	*	UNFLAGGED RECORD MARK - GET NEW 5-DIGIT ADDR.				
02580	NOFLAG	AM CHAR1,5	01208	11	00863	-0005
02590	B	HERE+24	01220	49	01140	00000
02600	DORG	*-3	01228			
02610	*	ZERO INDICATOR - READ IN SEGMENT 4.				
02620	NOTRM	BD NOZERO,CHAR1,11	01228	43	01272	0086L
	SEEK	TD CONT1,ARM+1	01240	25	02228	00465
	TR	A,PROG	01252	31	01073	02242
	B	DIS	01264	49	00934	00000
02640	DDRG	*-3	01272			
02650	DDRG	*-3	01272			
02660	NOZERO	TFM REL,LOC,, NON-ZERO INDICATOR	01272	16	00718	-1283
02670	BNF	FLAG,CHAR1,11	01284	44	01316	0086L
02680	*	FLAGGED DIGIT - DO NOT RELOCATE.				
02690	TFM	2024,TWO	01296	16	02024	-1880
02700	B	DD	01308	49	01388	00000
02710	DORG	*-3	01316			
02720	*	UNFLAGGED DIGIT - ADD RELCON.				
02730	FLAG	A REL,RELCON	01316	21	00718	00449
02740	*	IF RELOCATABLE PROGRAM, ADD RELCON TO LOW AND ENTRY ADDRESS.				
02750	BNF	*+8,FIN	01328	44	01376	01092
02760	CF	FIN	01340	33	01092	00000
02770	A	LOW,RELCON	01352	21	00444	00449
02780	A	MAPENT+13,RELCON	01364	21	00415	00449
02790	TFM	2024,FIVE	01376	16	02024	-1696
02800	*	GET LENGTH OF DATA, SAVE ADDR. OF FIRST POSITION OF DATA FIELD.				
02810	DD	TD TEMP,CHAR1,11	01388	25	01489	0086L
02811	CF	TEMP,,, BUCKET FOR TEMP 1	01400	33	01489	00000
02820	AM	CHAR1,2	01412	11	00863	-0002
02830	TF	N,CHAR1,11	01424	26	02057	0086L
02840	TF	M,N	01436	26	02067	02057
02850	AM	CHAR1,1	01448	11	00863	-0001

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02860	TF	TEMP2,CHAR1	01460	26	02145	00863
02870	TF	TEMP1,REL	01472	26	01411	00718
02880	*	BRANCH TO PROPER INDICATOR ROUTINE.				
02890	BR	B 2008,,,	01484	49	02008	00000
02900	DDRG	*-3	01492			
02910	*	THREE INDICATOR - SYMBOLIC ADDRESSES, FLAGGED AND RELOCATED BY SET.				
02920	THREE	TFM SET-1,++21,, THREE INDICATOR	01492	16	02085	-1513
02930	B	SET,0,8	01504	49	02086	0-000
02940	DDRG	*-1	01514			
02950	AM	CHAR1,5	01514	11	00863	-0005
02960	SM	M,5,10	01526	12	02067	000-5
02970	BP	THREE	01538	46	01492	01100
02980	B	STORE	01550	49	01892	00000
02990	DDRG	*-3	01558			
03000	*	FOUR INDICATOR - NUMERIC BLANKS.				
03010	FOUR	TD TEMP1,BLANK,6, FOUR INDICATOR	01558	25	01411	02227
03020	AM	TEMP1,1	01570	11	01411	-0001
03030	SM	M,1,10	01582	12	02067	000-1
03040	BP	FOUR	01594	46	01558	01100
	A	LOC,N	01606	21	01283	02057
	B	START	01618	49	00720	00000
03110	DDRG	*-3	01626			
03120	*	EXAMINE SECOND POSITION OF OP CODE.				
03130	Q	AM CHAR1,1	01626	11	00863	-0001
03140	BNF	DONT,CHAR1,11	01638	44	01672	0086L
03150	*	FLAGGED - RELOCATE Q FIELD.				
03160	TFM	SET-1,++21	01650	16	02085	-1671
03170	B	SET,600,8	01662	49	02086	0-600
03180	DDRG	*-1	01672			
03190	*	MOVE TO NEXT INSTRUCTION.				
03200	DONT	AM CHAR1,11	01672	11	00863	-0011
03210	SM	M,12,10	01684	12	02067	000J2
03220	*	FLAGGED FIVE AND UNFLAGGED ONE INDICATORS - INSTRUCTIONS.				
03230	*	ARE THERE LESS THAN 7 DIGITS LEFT...				
03240	FIVE	CM M,7,10, FIVE INDICATOR	01696	14	02067	000-7
03250	BL	NO	01708	47	01868	01300
03260	*	NO - ARE THERE LESS THAN 12...				
03270	CM	M,12,10	01720	14	02067	000J2
03280	BL	LESS12	01732	47	01834	01300
03290	*	NO - EXAMINE FIRST POSITION OF OP CODE.				
03300	BNF	IF8,CHAR1,11	01744	44	01778	0086L
03310	*	FLAGGED - RELOCATE P FIELD.				
03320	TFM	SET-1,++21	01756	16	02085	-1777
03330	B	SET,200,8	01768	49	02086	0-200
03340	DDRG	*-1	01778			
03350	*	IF FIRST DIGIT OF OP CODE WAS 8, DO NOT EXAMINE SECOND DIGIT.				
03360	IF8	MA FIVE BK+4,CHAR1,11,MOVE DIGIT	01778	70	02016	0086L
03370	CM	FIVE BK+5,80,10, COMPARE FOR 8	01790	14	02017	00000
03390	BNE	Q	01802	47	01626	01200
03400	AM	CHAR1,1	01814	11	00863	-0001
03410	B	DONT	01826	49	01672	00000
03420	DDRG	*-3	01834			
03430	*	LESS THAN 12 DIGITS LEFT - EXAMINE FIRST POSITION OF OP CODE ONLY.				
03440	LESS12	BNF NO,CHAR1,11	01834	44	01868	0086L
03450	*	FLAGGED - RELOCATE P FIELD.				
03460	TFM	SET-1,++21	01846	16	02085	-1867

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03470	B	SET,200,8	01858	49	02086	0-200
03480	DDRG	*-1	01868			
03490	*	RESET CHARACTER COUNTER TO BEGINNING OF DATA FIELD.				
03500	NO	TF CHAR1,TEMP2	01868	26	00863	02145
03510	*	TWO AND FLAGGED ONE INDICATOR - CONSTANTS.				
03520	TWO	A CHAR1,N,, TWO INDICATOR	01880	21	00863	02057
03530	*	SAVE DIGIT AT END OF FIELD.				
03531	STORE	SM CHAR1,1,10	01892	12	00863	000-1
03540	TD	SAVE1,CHAR1,11, GENERAL STORING ROUTINE	01904	25	00968	0086L
03550	*	SET A RECORD MARK THERE.				
03560	A	TEMP1,N	01916	21	01411	02057
03561	SM	TEMP1,1,10	01928	12	01411	000-1
03570	TD	CHAR1,RM,6	01940	25	0086L	02260
03578	*	TRANSMIT DATA TO LOAD ADDRESS.				
03581	TR	REL,TEMP2,611	01952	31	0071Q	0214N
03584	*	REPLACED SAVED DIGITS.				
03587	TD	TEMP1,SAVE1,6	01964	25	0141J	00968
03588	AM	TEMP1,1,10	01976	11	01411	000-1
03589	AM	CHAR1,1,10	01988	11	00863	000-1
03593	*	GO TO UPDATE LOCATION POINTER.				
	PLACE	B FOUR+48 ,XX	02000	49	01606	00000
	P2	DS 0 ,**	02011			0
03594	FIVEBK	NOP ,4, JUST A BUCKET TO COMPARE 8 OP	02012	41	00-00	00000
03600	DDRG	2018	02018			
03610	B	XX	02018	49	00000	00000
03620	DDRG	*-1	02028			
03630	B	TWO	02028	49	01880	00000
03640	DDRG	*-1	02038			
03650	B	THREE	02038	49	01492	00000
03660	DDRG	*-1	02048			
03670	NSTOR	B FOUR	02048	49	01558	00000
03680	DDRG	*-1	02058			
03690	MSTOR	B FIVE	02058	49	01696	00000
03700	DDRG	*-1	02068			
03710	B	SIX	02068	49	02206	00000
03720	DDRG	*-4	02075			
03730	*	ROUTINE TO SET FLAGS AND RELOCATE 5-DIGIT ADDRESSES.				
03731	BUF	DC 5,12345	02079		5	
		J2345				
03740	DC	5,0,, RELOCATING SUBROUTINE	02084		5	
		-0000				
03750	*	COMPUTE BEGINNING AND END OF ADDRESS.				
03760	SET	TF P1,CHAR1	02086	26	02205	00863
03770	A	P1,SET-1,11	02098	21	02205	0208N
03780	TF	P2,P1	02110	26	02011	02205
03790	AM	P2,4	02122	11	02011	-0004
03800	SF	SF P1,6	02134	32	0220N	00000
03810	MA	BUF,P2,11, STRIP ADDRESS	02146	70	02079	0201J
03811	A	BUF,RELCON,, RELOCATE ADDRESS	02158	21	02079	00449
3812	MA	P2,BUF,6, BRING BACK	02170	70	0201J	02079
03880	BB	AM SET-1,1	02182	11	02085	-0001
03890	B	SET-1,,6	02194	49	0208N	00000
03990	*	SIX INDICATOR - END OF DATA TO BE LOADED.				
04000	*	READ IN SEGMENT 4.				
04010	SIX	TFM PROG+17,LEAVE	02206	16	02259	-1548
04020	B	SEEK	02218	49	01240	00000

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04030	DDRG	*-3	02226			
04040	*	STORAGE FOR NUMERIC BLANK - MUST BE PATCHED IN ABSOLUTE DECK.				
04050	BLANK	DC 2,0	02227		2	
		-0				
04060	*	DDA TO READ IN SEGMENT 4.				
04070	CONT1	DSC 9,019624005	02228		9	
		019624005				
04080	DSA	NOZERO	02241		5 X	1
			02241		-1272	
04090	*	INPUT CONTROL FOR SEGMENT 4 - CONT1 IS DDA, LD 4 IS ERROR MESSG.				
04100	*	NOZERO IS NORMAL RETURN.				
04110	PRDG	DC 1,7	02242		1	
		P				
04120	DSA	CONT1,CYLOV	02247		5 X	2
			02247		-2228	
			02252		-0554	
			02254		2	
04130	DC	2,74	02259		5 X	1
	P4					
04140	DSA	NOZERO	02259		5 X	1
			02259		-1272	
04150	RM	DC 1,1	02260		1	
		*				
04160	CARDAD	DS ,19609	19609		0	
04170	DISKAD	DS ,19600	19600		0	
04180	LOC	DS ,NOZERO+11	01283		0	
04190	M	DS ,MSTOR+9	02067		0	
04200	N	DS ,NSTOR+9	02057		0	
04210	P1	DS ,88+23	02205		0	
04230	SAVE1	DS ,RD+10	00968		0	
04240	SAVE2	DS ,RD+7	00965		0	
04250	TEMP	DS ,BR+5	01489		0	
04260	TEMP1	DS ,DO+23	01411		0	
04270	TEMP2	DS ,SF+11	02145		0	
04280	XX	DS 5,0	00000		5	
04290	ARM	DS ,464	00464		0	
04295	COMM	DS ,440	00440		0	
04300	C	DS ,439	00439		0	
04310	HIGH	DS ,434	00434		0	
04320	LOW	DS ,444	00444		0	
04330	LOMED	DS ,428	00428		0	
04340	MAPENT	DS ,402	00402		0	
04350	RELCON	DS ,449	00449		0	
04360	SEQ	DS ,454	00454		0	
04390	TCD	DS ,428	00428		0	
04400	ITAB	DS ,440	00440		0	
	SYSSCT	DS ,19663	19663		0	
04410	TCD	TRY3	02500			
			02500			
04420	DDRG	2500	02500			
04430	*	WRITE SEGMENT 4 OF LOADER ON DISK.				
04440	TRY4	34 DCONT4,701	02500	34	02584	00701
04450		38 DCONT4,702	02512	38	02584	00702
04460	BNI	RIGHT4,1900	02524	47	02560	01900

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04470	H			02536	48	00000	00000
04480	B	TRY4		02548	49	02500	00000
04490	RIGHT4	TRA		02560	36	00000	00500
				02572	49	00000	00000
04500	DCONT4	DSC 9,119624005		02584			9
		119624005					
04510	DSA	NOZERO		02597		5 X	1
				02597			-1272
04520		DORG NOZERO		01272			
04530	*	ZERO INDICATOR - SET TCD INDICATOR.		01272	33	00428	00000
04540		CF TCD		01284	44	01304	0086L
04550		BNF **20,CHAR1,11		01296	49	01368	00000
04560	*	FLAGGED ZERO - DO NOT RELOCATE.		01304			
04570	B	NOT					
04580		DORG *-3					
04590	*	UNFLAGGED ZERO - DO RELOCATE.					
04600	AM	CHAR1,5		01304	11	00863	-0005
04610	BNF	ADD,CHAR1,11		01316	44	01348	0086L
04620	*	INDIRECT ADDRESS - SUBTRACT RELCON.					
04630	S	CHAR1,RELCON,6		01328	22	0086L	00449
04640	B	NOT+12		01340	49	01380	00000
04650		DORG *-3		01348			
04660	*	NOT INDIRECT - ADD RELCON.					
04670	ADD	A CHAR1,RELCON,6		01348	21	0086L	00449
04680	B	**20		01360	49	01380	00000
04690		DORG *-3		01368			
04700	NOT	AM CHAR1,5		01368	11	00863	-0005
04710	*	PUT ADDRESS IN COMM. AREA.					
04720	TF	MAPENT+18,CHAR1,11		01380	26	00420	0086L
04730	*	SAVE LAST SECTOR READ, IF DISK INPUT.					
	BD	EXIT ,IO MED		01392	43	01440	00428
04740	TF	MAPENT+5,CNTL+5		01404	26	00407	00925
04750	SM	MAPENT+5,3		01416	12	00407	-0003
04760	AM	MAPENT+8,3,9		01428	11	00410	00-03
04770	*	WRITE THREE FIELDS ONTO COMMUNICATION SECTOR.					
	EXIT	TD CNTLE,ARM+1		01440	25	01490	00465
01		TR A,EX		01452	31	01073	01471
01		B DIS+12		01464	49	00946	00000
01		DORG *-4		01471			
01	EX	DC 1,7		01471		1	
		P					
01		DSA CNTLE,CYLOV		01476		5 X	2
				01476			-1490
				01481			-0554
				01483			2
01		DC 2,74					
		P4					
01		DSA THRU		01488		5 X	1
				01488			-1504
				01489			1
02		DSC 1,*					
		I					
02	CNTLE	DSC 1,0		01490			1
		O					
02		DSA SYSSCT		01495		5 X	1

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02		DC 8,100000		01495		J9663	
		-0100000		01503		8	
02	THRU	TR 84,COMM		01504	31	00084	00440
02		TDM RD+1,8		01516	15	00959	00008
02		TFM CNTLE-2,NEXT		01528	16	01488	-1650
02		B EXIT		01540	49	01440	00000
02		DORG *-3		01548			
04840	*	SIX INDICATOR -UPDATE LAST LOCATION PLUS ONE INDICATOR.					
	LEAVE	TF HIGH,REL		01548	26	00434	00718
	*	MOVE THE ENTRY ADDRESS.					
	TF	MAPENT+18,MAPENT+13		01560	26	00420	00415
04860	*	IF NON-DISK INPUT, READ ONE MORE RECORD.					
	BD	**20 ,IO MED		01572	43	01592	00428
	B	EXIT		01584	49	01440	00000
	DORG	**4		01591			
	TD	**21 ,IO MED		01592	25	01613	00428
	RNCD			01604	36	00000	00500
04894		TFM SEQ,0		01616	16	00454	-0000
	B	EXIT		01628	49	01440	00000
04910		DORG *-4		01635			
04920	*	DDA FOR IORT-S LOADER RETURN SUBROUTINE.					
04930	CNTL3	DSC 14, 1979200300000'		01635		14	
		1979200300000'					
04931	*	READ AND EXECUTE EXIT SUBROUTINE.					
04932	NEXT	TFM 510,0		01650	16	00510	-0000
		TD COMM,ARM+1		01662	25	00440	00465
		TR COMM+1,CNTL3		01674	31	00441	01635
		B 480		01686	49	00480	00000
04940		TCD TRY4		02500			
04950		DORG 2500		02500			
04960	*	READ IN SEGMENT 1 OF LOADER AND BEGIN EXECUTION.					
04970	TRY5	34 DCONT5,701		02500	34	02584	00701
04980		36 DCONT5,702		02512	36	02584	00702
04990		BN1 RIGHT5,1900		02524	47	02560	01900
05000	H			02536	48	00000	00000
05010	B	TRY5		02548	49	02500	00000
05020	RIGHT5	H		02560	48	00000	00000
05030	B	LOADER		02572	49	01266	00000
05040	DCONT5	DSC 14,01960000900502		02584		14	
		01960000900502					
05050		DEND TRY5		02500			

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ANYERR	00982	BB	02182	DIS	00934	M	02067	SEQ	00454
CARDAD	19609	BEGIN	01164	DONT	01672	MSTOR	02058	SET	02086
CARDIN	00512	BLANK	02227	DO	01388	NEXT	01650	SF	02134
DCONT1	02584	BR	01484	D	01085	NORM	00511	SIX	02206
DCONT2	02584	B	01078	ERR	01030	NO	01868	START	00720
DCONT3	02584	BUF	02079	E	01091	NOTRM	01228	STOP	01054
DCONT4	02584	CARD	00536	EXIT	01440	NOT	01368	STORE	01892
DCONT5	02584	CEND	00556	EX	01471	N	02057	TCO	00428
DISKAD	19600	CHAR1	00863	FAKE	00503	NSTOR	02048	TD	01176
FIVEBK	02012	CIN	01083	FIN	01092	OK	00630	TEMP1	01411
LESS12	01834	CNTL1	00537	FIVE	01696	OUT	00816	TEMP2	02145
LOADER	01266	CNTL2	00545	FLAG	01316	P1	02205	TEMP	01489
MAPENT	00402	CNTL3	01635	FORK	00732	P2	02011	THREE	01492
NOFLAG	01208	CNTLE	01490	FOUR	01558	PLACE	02000	THRU	01504
NOZERO	01272	CNTLI	01328	GET	00675	PROG	02242	TRANS	01342
RELCON	00449	CNTL	00920	HERE	01116	Q	01626	TRY1	02500
RIGHT1	02560	CNT	00553	HIGH	00434	RCON	01104	TRY2	02500
RIGHT2	02560	COMM	00440	IF8	01778	RD	00958	TRY3	02500
RIGHT3	02560	CONT1	02228	INIT	01309	READ	00796	TRY4	02500
RIGHT4	02560	CONT2	00694	IOMED	00428	REL	00718	TRY5	02500
RIGHT5	02560	CONT3	01250	ITAB	00440	RM	02260	TWO	01880
ADD	01348	C	00439	LEAVE	01548	RPROG	01231	XX	00000
ARM	00464	CYLOV	00554	LOC	01283	SAVE1	00968	ZERO	01140
A	01073	DISK	00864	LOW	00444	SAVE2	00965	SYSSCT	19663
BACK	01066	DISKX	00713	MORE	00610	SEEK	01240		

END OF ONE ASSEMBLY.

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00010	DORG	2218	02218		
00020	*	SYMBOL TABLE PARAMETERS			
00030	SPBL	DS	, 40,,	SECTORS PER BLOCK	00040
00040	SMPBL	DS	, 235,,	SYMBOLS PER BLOCK	00235
00050	SYMTBL	DS	, 16003,	HI-ORDER POSITION OF SYMBOL TABLE	16003
00060	LOSYMB	DS	, SYMTBL+SPBL*17-1,	LO-ORDER POSITION OF SYMBOLIC BLOCK	19997
00070	SBFADD	DS	, LOSYMB-SPBL*100+1,	SYMBOLIC BLOCK DISK ADDRESS	15998
00080	LBLIM	DS	, LOSYMB+12,	LO-ORDER BLOCK LIMIT	20009
00090	MAXLIM	DS	, SYMTBL-6,	MAXIMUM LIMIT	15997
00100	*	EMPIRICAL SECTOR ASSIGNMENT PARAMETERS			
00110	IPTSPB	DS	, 1500,	1-PASS TOTAL SECTORS PER SYM. BLOCK	01500
00120	ZPTSPB	DS	, 600,	2-PASS TOTAL SECTORS PER SYM. BLOCK	00600
00130	BPZOK	DS	, 5,	SYMBOLIC BLOCKS PER ZOK CORE	00005
00140	ZPRTIO	DS	, 20000,	2-PASS RATIO--INTERN./FINAL SECTORS	20000
00150	*	INDEX REGISTER LOCATIONS			
00160	KRA1	DS	, 264+1*40+5*1		00309
00170	KRA2	DS	, 264+1*40+5*2		00314
00180	KRA3	DS	, 264+1*40+5*3		00319
00190	KRA5	DS	, 264+1*40+5*5		00329
00200	KRA6	DS	, 264+1*40+5*6		00334
00210	*	SPS DISC ASSIGNMENT PARAMETERS			
00220	A1DAD	DS	, 18600,	CONTROL STATEMENTS, PH.A SUBROUTINS	18600
00230	A1SCT	DS	, 137,		00137
00240	A2DAD	DS	, 18800,	NORMAL PROCESSING--FREQUENT STMTS.	18800
00250	A2SCT	DS	, 58,		00058
00260	A3DAD	DS	, 18861,	TRA, CALL, GET-PUT AND ASSOC DECL	18861
00270	A3SCT	DS	, 22,		00022
00280	A4DAD	DS	, 18883,	DMES, DVLC, DOT, HEAD	18883
00290	A4SCT	DS	, 44,		00044
00300	A5DAD	DS	, 18737,	DEND, TCD, AND SYMBOL TABLE LIST	18737
00310	A5SCT	DS	, 29,		00029
00320	SSTDAD	DS	, 18927,	SYSTEM SYMBOL TABLE	18927
00330	SSTSCT	DS	, 25,		00035
00340	MSTDAD	DS	, SSTDAD+SSTSCT,	MASTER SYMBOL TABLE	18962
00350	MOSDAD	DS	, 19663,	MONITOR COMM SECTOR DISK ADDRESS	19663
00360	B1DAD	DS	, 19180,	PHASE B INITIALIZATION	19180
00370	B1SCT	DS	, 20,		00020
00380	B2DAD	DS	, 19200,	INPUT, BRANCH TABLE, SCAN	19200
00390	B2SCT	DS	, 56,		00056
00400	B3DAD	DS	, 19000,	LINPRT, INSTRN, DC, DSDNB, DAS, DORG	19000
00410	B3SCT	DS	, 63,		00063
00420	B3MAD	DS	, 09700, PHASE B3 MEMORY ADDRESS		09700
00430	B4DAD	DS	, 19063,	RSTR, DAC, ALOW, DMES, DSB, DVLC, DGM	19063
00440	B4SCT	DS	, 56,		00056
00450	B5DAD	DS	, 19122,	DSA, MACRO, DDA, TRA, DEND	19122
00460	B5SCT	DS	, 29,		00029
00470	B6DAD	DS	, 19151,	CALL LINK, LOAD, EXIT	19151
00480	B6SCT	DS	, 29,		00029
00490	DIWDAD	DS	, 04800,	DIM ENTRY FOR EQUIV. TABLE	04800
00500	DIMSCT	DS	, 1,		00001
00510	EODAD	DS	, 0,	EQUIVALENCE TABLE	00000
00520	EOSCT	DS	, 0,		00004
00530	PHCDAD	DS	, 19260		19260
00540	PHCSCT	DS	, 40,		00040
00550	SUBDAD	DS	, 04808,	SPS SUBROUTINE DIM ENTRIES	04808
00560	*	MONITOR COMMUNICATION PARAMETERS			

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00570	MOSCT	DS	,16000,	MONITOR COMM SECTOR MEMORY ADDRESS	16000	0
00580	MODOC	DS	,MOSCT+22,	DISC OUTPUT CODE	16022	0
00590	MOCIOC	DS	,MOSCT+23,	CD-TP OUTP CODE	16023	0
00600	MONAME	DS	,MOSCT+35,	NAME	16035	0
00610	MOIOND	DS	,MOSCT+39,	ID NUMBER	16039	0
00620	MOML	DS	,MOSCT+41,	MANT. LENGTH	16041	0
00630	MOSBND	DS	,MOSCT+43,	SUB. SET	16043	0
00640	MONOIS	DS	,MOSCT+44,	NOISE DIGIT	16044	0
00650	MOEXEC	DS	,426,	EXECUTE CONTROL AND SPS INPUT	00426	0
00660	MOMAD	DS	,415,	MEMORY ADDR	00415	0
00670	SYSCAL	DS	,475,	SYSTEM COMMON ACTION LOCATION	00475	0
00680	NONEX	DS	,457,	NON-EXECUTE FOR JOB ERROR	00457	0
00690	PCK	DS	,2365		02365	0
00700	*					
00710	IORT	DS	,565			00565
00720	IOPT	DS	,532		00532	0
00730	IOGT	DS	,566		00566	0
00740	IORBC	DS	,520		00520	0
00750	IOSK	DS	,554		00554	0
00760	IICAL	DS	,00716		00716	0
00770	MONCAL	DS	,00796		00796	0
00780	IOCSAD	DS	,19783,	ADDR OF THE LOADER-CALLER	19783	0
00790	*					
00800	*					
00810	*					
00820	OUT	DS	1		02218	1
00830	NS	DS	80		02298	80
00840	ZEPD	DS	2		02300	2
00850	DS	DS	81		02381	81
00860	DC	DC	1,'		02382	1
00870	LNTH	DC	5,0		02387	5
00880	DC	DC	1,'		02388	1
00890	AJUST	DC	11,2121212121,,	INSTRUCTION PARITY TABLE	02399	11
00900	THINGS	DC	21,0010203040506070000'		02420	21
00910	COLL	DS	19		02439	19
00920	DS	DS	2		02441	2
00930	NUMB	DC	7,'		02448	7
00940	JSTBL	DC	11,3232323232,,	ALPHA PARITY TABLE	02459	11
00950	EVODD	DC	10,0101010101,,	DMES PARITY TABLE	02469	10
00960	*					
00970	STPCSW	DS	1,,	PROCESSOR CONTROL SWITCHES--FLAGGED 1=ON, UNFLAGGED 0=OFF	02470	1
00980	STYYSW	DS	1,,	PUNCH SYMBOL TABLE	02471	1
00990	STPRSW	DS	1,,	TYPE SYMBOL TABLE	02472	1
01000	TYINSW	DS	1,,	PRINT SYMBOL TABLE	02473	1
01010	CDINSW	DC	1,1,,	BEGIN TYPEWRITER INPUT	02474	1
01020	PTINSW	DS	1,,	BEGIN PAPER TAPE INPUT	02475	1
01030	ERSTSW	DS	1,,	ERROR STOP	02476	1

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01040	2PSSW	DS	1,,	TWO PASS MODE	02477	1
01050	RELSW	DS	1,,	ASSEMBLE RELOCATABLE	02478	1
01060	LSCDSW	DS	1,,	LIST CARD	02479	1
01070	LSTYSW	DS	1,,	LIST TYPEWRITER	02480	1
01080	LSPRSW	DS	1,,	LIST PRINTER	02481	1
01090	PCNUSW	DS	1,,	PUNCH RESEQUENCED SOURCE DECK	02482	1
01100	INTRSW	DS	1,,	INTERRUPT	02483	1
01110	KILSUB	DS	1,,	NO SUBROUTINES	02484	1
01120	DIVCSW	DC	1,1,,	NO SYMBOLIC DIVIDE	02485	1
01130	CTVT	DC	5,0		02490	5
01140	INCODE	DC	2,5		02492	2
01150	OBJCRE	DS	5,,	OBJECT MACHINE SIZE	02497	5
01160	PROCRE	DS	1,,	PROCESSOR MACHINE SIZE	02498	1
01170	PRTLIM	DSA	**-*		02503	5 X 1
01180	HCLIM	DSA	LBLIM		02503	-0000
01190	DC	DC	1,'		02508	5 X 1
01200	STCNT	DC	5,1,,	STATEMENT COUNT	02514	5
01210	HIADD	DC	5,0,,	HIGH ADDRESS	02519	5
01220	L	DS	2,,	LENGTH OF MANTISSA	02521	2
01230	NOISE	DS	1		02522	1
01240	SUBNO	DS	2		02524	2
01250	PICKUP	DS	5		02529	5
01260	DC	DC	1,1		02530	1
01270	ISTAT	DC	30,0'		02560	30
01280	SPSGM	DGM	-00000000000000000000000000000000'		02561	1
01290	INCRM	DS	5		02566	5
01300	DC	DC	1,'		02567	1
01310	TEMPR	DS	5		02572	5
01320	DC	DC	1,'		02573	1
01330	RMRK	DS	3		02576	3
01340	DC	DC	1,'		02577	1
01350	ONEZ	DC	10,1		02587	10
01360	*					
01370	*					
01380	*					
01390	DS	DS	5		02592	5
01400	CFF	TFM	IORT,++23		02594	16 00565 -2617
01410	B	B	IOGT,CFFDEF,7		02606	49 00566 -2625
01420	B7	B7	CFF-1,,6		02618	49 0259L

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01430	CFDFEF	DSC	2,22,,	ABSOLUTE DISK NOT WRONG LENGTH	02625	2		
01440	CFFA	DSA	*--*		02631	5 X	1	
01450		DC	1,'		02631	-0000		
					02632	1		
01460	MURI	DS	1		02633	1		
01470	IOADDR	DC	5,0,,	FILE ADDRESS OF INTERMEDIATE OUTPUT	02638	5		
			-0000					
01480	SYMTAD	DC	5,02600,,	FILE ADDRESS OF SYMBOL TABLE	02643	5		
			-2600					
01490	SBOUT	DC	2,0		02645	2		
			-0					
01500	*							
01510	*			END SPS COMMUNICATION AREA				
01520	*							
01530	TYPIN	DSA	INPUT-10		02650	5 X	1	
01540		DC	3,06'		02650	-2871		
			-6'		02653	3		
01550		DGM	*		02653	1		
01560	TAPIN	DSA	INPUT-10		02658	5 X	1	
01570		DC	3,08'		02658	-2871		
			-8'		02661	3		
01580		DGM	*		02661	1		
01590	CARDIN	DSA	INPUT-10		02666	5 X	1	
01600		DC	3,10'		02666	-2871		
			JO'		02669	3		
01610		DGM	*		02669	1		
01620	SBMAX	DC	2,00		02671	2		
			-0					
01630	SBCNT	DC	2,0		02673	2		
			-0					
01640	ADDCOW	DS	5,PICKUP		02529	5		
01650		DS	1		02674	1		
01660	ALPHA	DC	10,0		02684	10		
			-000000000					
01670	BETA	DC	5,0		02689	5		
			-0000					
01680	DIGITS	DS	3		02692	3		
01690	CLERER	DC	1,0		02693	1		
			-					
01700		DSC	26,0		02694	26		
			00000000000000000000000000000000					
01710		DSC	27,0		02720	27		
			00000000000000000000000000000000					
01720	INSAV	DAS	61		02749	61 X	2	

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01730		DAC	5, ***		02871	5 X	2	
01740	INPUT	DAS	6		02881	6 X	2	
01750		DAS	4		02893	4 X	2	
01760		DAS	66		02901	66 X	2	
01770		DC	1,','*		03031	1		
			'					
01780		DAS	1		03033	1 X	2	
01790	INPUT2	DSS	217		03034	217		
01800	SUBENT	DS	5		03255	5		
01810	DMSV	DS	5		03260	5		
01820	DMSVW	DS	5		03265	5		
01830	PLACE	DS	5		03270	5		
01840	ERRDIG	DS	1		03271	1		
01850		DC	5,0		03276	5		
			-0000					
01860	LIMITS	DC	5,0		03281	5		
			-0000					
01870		DC	1,'		03282	1		
			'					
01880	ADDRS	DS	11		03293	11		
01890		DC	1,'		03294	1		
			'					
01900	ERLAB	DAS	6		03297	6 X	2	
01910		DAC	2,+'*		03309	2 X	2	
			'*					
01920	LOPOUT	DC	10,0		03321	10		
			-000000000					
01930		DAC	2, '		03323	2 X	2	
			'					
01940	LAB	DS	12		03337	12		
01950		DC	1,'		03338	1		
			'					
01960	FLGRM	DC	1,','*	FLAGGED RECORD MARK	03339	1		
			'					
02010	CORM	DAC	22, RE-ENTER STATEMENT.'	RE-ENTER STATEMENT.'	03341	22 X	2	
02020	*							
02021	SMODE	DS	1		03384	1		
02022	DGSV	DS	1		03385	1		
02023		DS	1		03386	1		
02024	TEMP	DS	5		03391	5		
02030	*	READ	INPUT					
02040	*							
02050	PHASEA	TDM	ERRDIG,0		03392	15	03271	00000
02060		BD	READ2, COINSW		03404	43	03600	02474
02070		BD	READ1, PTINSW		03416	43	03568	02475
02080	*							
02090	*	READ	TYPEWRITER					
02100	*							
02110	READ3	RCTY			03428	34	00000	00102
02120		BLXM	*+12,20-142(1)		03440	66	03452	001KK
02130		YFM	INPUT+142(1)		03452	16	030K3	-0000
02140		DAC	1,','*		03463	1 X	2	
			'					
02150		BCXM	*-12,2(1)		03464	64	03452	000-2

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02160	TF	INPUT-2, CLERER+9	03476	26	02879	02702
02170	TF	INPUT+10, CLERER+11	03488	26	02891	02704
02180	TF	INPUT+18, CLERER+7	03500	26	02899	02700
02190	TFM	IORT,**23	03512	16	00565	-3535
02200	B	IOGT,TYPIN-4,7	03524	49	00566	-2646
02210	BNC4	PROSTM	03536	47	03804	00400
02220	WATY	CORM	03548	39	03341	00100
02230	B7	READ3	03560	49	03428	
02240	*					
02250	*	READ PAPER TAPE				
02260	*					
02270	READ1	TFM IORT,**23	03568	16	00565	-3591
02280	B	IOGT,TAPIN-4,7	03580	49	00566	-2654
02290	B7	PROSTM	03592	49	03804	
02300	*					
02310	*	READ STATEMENT FROM CARD				
02320	*					
02330	READ2	TFM IORT,**23	03600	16	00565	-3623
02340	B	IOGT,CARDIN-4,7	03612	49	00566	-2662
02350	BNF	RSCAN,PCNUSW	03624	44	03744	02482
02360	BNR	**24,INPUT-10	03636	45	03660	02871
02370	TFM	INPUT-10,00,10	03648	16	02871	000-0
02380	CM	INPUT-10,14,10	03660	14	02871	000J4
02390	R2BE	BE RSCAN	03672	46	03744	01200
02400	TFM	INPUT-02,70,8	03684	16	02879	0-070
02410	TNF	INPUT-04,STCNT,, PUNCH RESEQ. SOURCE CARD	03696	73	02877	02514
02415	SF	INPUT-11	03708	32	02870	00000
02420	TFM	IORT,**23	03720	16	00565	-3743
02430	B	IOPT,CARDIN-4,7	03732	49	00532	-2662
02440	*					
02450	*	FIND RIGHTMOST CHARACTER OF STATEMENT AND PLACE A				
02460	*	RECORD MARK AFTER IT				
02470	*					
02480	RSCAN	BLXM **12,122(1)	03744	66	03756	001K2
02490	TFM	INPUT+18(1),0200,8 9	03756	16	02899	0-K00
02500	DAC	1,*,*	03767		1 X	2
02510	BD	PROSTM,INPUT+16(1)	03768	43	03804	028R7
02520	BD	PROSTM,INPUT+15(1)	03780	43	03804	028R6
02530	BCX	*-36,RSCAN+21(1)	03792	63	03756	03705
02540	*	CLEAR FOR INTERMEDIATE OUTPUT				
02550	*					
02560	PROSTM B	PROCON	03804	49	10606	00000
02570	BNR	**24, INPUT+20	03816	45	03840	02901
02580	TFM	INPUT+22, 00000	03828	16	02903	-0000
02590	X2	DC 2,2,*-2	03837		2	
02600	-2	DAC 1,*,*	03839		1 X	2
02610	TR	INPUT2, CLERER+46	03840	31	03034	02739
02620	TR	INSAV-1,INPUT+19	03852	31	02748	02900
02630	AM	STCNT,1,10	03864	11	02514	000-1
02640	TDM	LDABSW, 1,11	03876	15	07320	0000J
02650	BD	R3E, 2PSSW	03888	43	03924	02477
02660	TDM	INPUT2+99	03900	15	03133	00000
02670	DC	1,*,*	03911		1	

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02680	TR	INPUT2+8, INPUT-11	03912	31	03042	02870
02690	R3E	AM INKRM, 1,10	03924	11	02566	000-1
02700	BNR	**24,INPUT-10	03936	45	03960	02871
02710	TFM	INPUT-10,00,10	03948	16	02871	000-0
02720	TF	PLACE, ADDCOW	03960	26	03270	02529
02730	CM	ADDCOW,99999	03972	14	02529	R9999
02740	BE	**48	03984	46	04032	01200
02750	C	ADDCOW,HIADD,, HI ADDRESS TO HIADD	03996	24	02529	02519
02760	BNH	**24	04008	47	04032	01100
02770	TF	HIADD,ADDCOW	04020	26	02519	02529
02780	BNR	**20,INPUT	04032	45	04052	02881
02790	B7	ER2	04044	49	04156	
02800	CM	INPUT,14,10	04052	14	02881	000J4
02810	BNE	RLOP1	04064	47	04112	01200
02820	BD	**24,ERRDIG	04076	43	04100	03271
02830	BD	PHASEA, 2PSSW	04088	43	03392	02477
02840	BTM	OUTPUT, PHASEA	04100	17	09570	-3392
02850	*					
02860	*	CHECK FOR RECORD MARK IN LABEL FIELD.				
02870	*					
02880	RLOP1	BLXM **12,-14(1)	04112	66	04124	000JM
02890	BCX	**20,X2(1)	04124	63	04144	038L7
02900	B7	OP	04136	49	04228	
02910	BNR	RLOP1+12,INPUT+12(1)	04144	45	04124	028R3
02920	*	RECORD MARK IN LABEL FIELD.				
02930	ER2	TFM EVALER-1, 20000	04156	16	07041	K0000
02940	DC	1,*,*	04167		1	
02950	BT	EPRINT,EPRINT-1	04168	27	07322	07321
02960	TF	INPUT+10, CLERER+11	04180	26	02891	02704
02970	BD	**24, 2PSSW	04192	43	04216	02477
02980	TR	INPUT2+8, INPUT-11	04204	31	03042	02870
02990	BD	ERCOR, ERSTSW	04216	43	07178	02476
03000	OP	C CLERER+11,INPUT+10	04228	24	02704	02891
03010	BE	**36	04240	46	04276	01200
03020	TF	ERLAB+10,INPUT+10	04252	26	03307	02891
03030	TFM	INKRM,0	04264	16	02566	-0000
03040	*					
03050	*	PROCESS OP CODE				
03060	*					
03070	*	CHECK FOR RECORD MARK IN OP CODE.				
03080	BLXM	**12,-10(1)	04276	66	04288	000J-
03090	BCX	**20,X2(1)	04288	63	04308	038L7
03100	B7	OP1	04300	49	04364	
03110	BNR	*-20,INPUT+20(1)	04308	45	04288	029-1
03120	TF	INPUT+18, CLERER+7	04320	26	02899	02700
03130	BD	**24, 2PSSW	04332	43	04356	02477
03140	TR	INPUT2+8, INPUT-11	04344	31	03042	02870
03150	B7	ER3	04356	49	04680	
03160	*	TEST FOR ABSOLUTE OP CODE				
03170	OP1	TD **46,INPUT+11	04364	25	04410	02892
03180	TD	**35,INPUT+13	04376	25	04411	02894
03190	CM	**23,77,10	04388	14	04411	000P7
03200	BNE	ALFOP	04400	47	04472	01200
03210	C	CLERER+3,INPUT+18	04412	24	02696	02899
03220	BNE	ALFOP	04424	47	04472	01200

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03230	TD	INPUT2, INPUT+12	04436	25	03034	02893
03240	TD	INPUT2+1, INPUT+14	04448	25	03035	02895
03250	BTM	INSTRN, DOINST+24	04460	17	10132	J0320
03260	*	SCAN OPCODE TABLE				
03270	ALFOP	BLXM ++12,8(1)	04472	66	04484	000-8
03280		BLXM ++12,15(2)	04484	66	04496	00-15
03290	BD	++44,INPUT+9(1)	04496	43	04540	028R0
03300	BXM	++12,-5(2)	04508	62	04520	00-0N
03310	BCXM	--24,-2(1)	04520	64	04496	000-K
03320	B7	ER3	04532	49	04680	
03330	TF	XRA3,OPLNTB(2)	04540	26	00319	04023
03340	MA	ALFLP+11,OPLCTB(2)	04552	70	04587	04043
03350	MA	ALFLP+35,OPINTB(2)	04564	70	04611	04063
03360	ALFLP	C INPUT+10(1),--*(3)	04576	24	028R1	00--0
03370	BE	OK	04588	46	04740	01200
03380	BCXM	--24,--*(3)	04600	64	04576	00--0
03390	B7	ER3	04612	49	04680	
03400	*	LOCATIONS OF SECTIONS OF OP-CODE TABLE				
03410	OPLNTB	DSA A-AENDX-5,B-BENDX-7,C-CENDX-9,D-DENDX-11	04623		5 X	4
			04623		-005-	
			04628		-0330	
			04633		-071J	
			04638		-121-	
03420	OPLCTB	DSA AENDX+5-3,BENDX+7-3,CENDX+9-3,DENDX+11-3	04643		5 X	4
			04643		J3590	
			04648		J3928	
			04653		J4641	
			04658		J5853	
03430	OPINTB	DSA 5, 7, 9, 11	04663		5 X	4
			04663		-0005	
			04668		-0007	
			04673		-0009	
			04678		-0011	
03440	*	INVALID OP CODE				
03450	ER3	TFM EVALER-1,30000	04680	16	07041	L0000
03460		DC 1,,'*	04691		1	
			04692	27	07322	07321
03470	BT	EPRINT,EPRINT-1	04704	43	07178	02476
03480	BD	ERCOR, ERSTSW	04716	16	03035	00-41
03490	TFM	INPUT2+1, 041, 9	04728	17	10132	-8390
03500	BTM	INSTRN,LDLBL				
03510	*					
03520	*	USING THE LAST DIGIT OF THE OPCODE ENTRY GOODB IS				
03530	*	MODIFIED TO BRANCH TO THE CORRECT ENTRY IN BTBL				
03540	*					
03550	OK	BXM ++12,3(3)	04740	62	04752	00--3
03560	TF	ZEPO+30,ALFLP+11,11	04752	26	02330	0458P
03570	TD	XRA5-1,ZEPO+30	04764	25	00328	02330
03580	MF	XRA5,XRA5-1	04776	71	00329	00328
03590	SF	ZEPO+27	04788	32	02327	00000
03600	B7	BTBL+6(5),,6	04800	49	0M80M	
03610	B	SAVRST,,, -7	04808	49	05116	00000
03620	DORG	*-1	04818			

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03630	B	RDWB,,, -6	04818	49	05068	00000
03640	DORG	*-1	04828			
03650	B	DECL,,, -5	04828	49	04976	00000
03660	DORG	*-1	04838			
03670	B	BOMK,,, -4	04838	49	05032	00000
03680	DORG	*-1	04848			
03690	B	MCCALL,,, -3	04848	49	11196	00000
03700	DORG	*-1	04858			
03710	B	ADC,,, -2	04858	49	05020	00000
03720	DORG	*-1	04868			
03730	B	MACRO,,, -1	04868	49	11304	00000
03740	DORG	*-1	04878			
03750	BTBL	B INSTR,,, 0	04878	49	04996	00000
03760	DORG	*-1	04888			
03770	B	SIOC,,, +1	04888	49	05104	00000
03780	DORG	*-1	04898			
03790	B	DISK,,, +2	04898	49	05080	00000
03800	DORG	*-1	04908			
03810	B	RDW,,, +3	04908	49	05056	00000
03820	DORG	*-1	04918			
03830	B	K,,, +4	04918	49	05092	00000
03840	DORG	*-1	04928			
03850	B	DSDNB,,, +5	04928	49	12284	00000
03860	DORG	*-1	04938			
03870	B	BI,,, +6	04938	49	05044	00000
03880	DORG	*-1	04948			
03890	B	BNI,,, +7	04948	49	05044	00000
03900	DORG	*-1	04958			
03910	B	DENDC,,, +8	04958	49	12728	00000
03920	DORG	*-1	04968			
03930	B	BSIN,,, +9	04968	49	05008	00000
03940	DORG	*-3	04976			
03950	DECL	TD XRA6-1,ZEPO+29	04976	25	00333	02329
03960	B7	BTBL2(6),,6	04988	49	0MQR	
03970	DORG	BTBL-50-3,,, INTERWEAVE SUB-VECTOR WITH VECTOR	04825			
03980	BTBL2	DSA DC	04829		5 X	1
			04829		J2768	
03990	DS	5,,, 0	04834		5	
04000	DSA	DORG	04839		5 X	1
			04839		J2552	
04010	DS	5,,, +1	04844		5	
04020	DSA	DAC	04849		5 X	1
			04849		J1488	
04030	DS	5,,, +2	04854		5	
04040	DSA	DSA	04859		5 X	1
			04859		J3276	
04050	DS	5,,, +3	04864		5	
04060	DSA	DAS	04869		5 X	1
			04869		J1408	
04070	DS	5,,, +4	04874		5	
04080	DSA	HEADER	04879		5 X	1

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04090	DS	5,,,	+5						04879	J2676			
04100	DSA	DSB							04884	5			
									04889	5 X	1		
04110	DS	5,,,	+6						04889	J2048			
04120	DSA	DGM							04894	5			
									04899	5 X	1		
04130	DS	5,,,	+7						04899	J1236			
04140	DSA	DMESCL							04904	5			
									04909	5 X	1		
04150	DS	5,,,	+8						04909	J1156			
04160	DDRG	DECL+20							04914	5			
04170	INST	BTM	INSTRN,DOINSTR						04996				
04180	BSIN	BTM	INSTRN,DOBS						04996	17	10132	J0296	
04190	ADC	BTM	INSTRN,DOADC						05008	17	10132	J0404	
04200	BDMK	BTM	INSTRN,DOBDMK						05020	17	10132	J0448	
04210	BI	BTM	INSTRN,DOBI						05032	17	10132	J0528	
04220	BNI	DS	,BI						05044	17	10132	J0596	
04230	RDW	BTM	INSTRN,DORDW						05044	0			
04240	RDWB	BTM	INSTRN,DORDWB						05056	17	10132	J0664	
04250	DISK	BTM	INSTRN,DODISK						05068	17	10132	J0732	
04260	K	BTM	INSTRN,DOK						05080	17	10132	J1076	
04270	SIOC	BTM	INSTRN,DOSIOC						05092	17	10132	J0752	
04280	SAVRST	BTM	INSTRN,DOSVRS						05104	17	10132	J0832	
04290	*								05116	17	10132	J0996	
04300	*												
04310	*												
04320	*												
04330	*												
04340	DS	5											
04350	TRSCAN	TR	INPUT+19,INPUT+21,,	ELIMINATE LEADING ,					05132		5		
04360	BT	SCAN,TRSCAN-1							05134	31	02900	02902	
04370	DS	5							05146	27	05164	05133	
04380	SCAN	TFM	OPER,10,10						05162	5			
04390	TFM	XFLAG,00,10							05164	16	06532	000J0	
04400	TF	DIVSW,CLERER+5,,	CLEAR SWITCHES						05176	16	06986	000-0	
04410	TDM	BSW,1,11							05188	26	07318	02698	
04420	TF	ADDRS,CLERER+9							05200	15	07319	0000J	
04430	SCAN2	TD	ALPHA, LNTH+1,,	RECORD MARK--ALPHA EMPTY					05212	26	03293	02702	
04440	BD	++44,INPUT+19							05224	25	02684	02388	
04450	BD	++32,INPUT+20							05236	43	05280	02900	
04460	TR	INPUT+19,INPUT+21							05248	31	05280	02901	
04470	B7	--36							05260	43	02900	02902	
04480	BNR	SCAN1-24,INPUT+20							05272	49	05236		
04485	BD	FERRR,LPNSW							05280	45	05464	02901	
04490	SCANA	SF	ADDRS-4						05292	43	06988	07317	
04500	CM	RCTR, 00,10							05304	32	03289	00000	
04510	BE	SREL+12							05316	14	07314	000-0	
04520	CM	RCTR, 01,10							05328	46	05456	01200	
04530	BNE	++24							05340	14	07314	000-1	
04540	BNF	SREL, ADDR							05352	47	05376	01200	
04550	CM	RCTR, -01,10							05364	44	05444	03293	
04560	BNF	++24, ADDR							05376	14	07314	000-J	
									05388	44	05412	03293	

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04570	BE	SREL							05400	46	05444	01200	
04580	TFM	EVALER-2,71770,,	RELOCATION ERROR						05412	16	07040	P1770	
04590	BT	EPRINT,EPRINT-1							05424	27	07322	07321	
04600	B7	EV1							05436	49	07078		
04610	SREL	TDM	RLOCSW,1,11						05444	15	07316	0000J	
04620	B7	TOBB							05456	49	07102		
04630	CM	INPUT+20,23,10							05464	14	02901	000K3	
04640	BE	SCANA-12							05476	46	05292	01200	
04650	SCAN1	CM	INPUT+20,10,10						05488	14	02901	000J0	
04660	BNE	++44							05500	47	05544	01200	
04670	TFM	OPER,10,10							05512	16	06532	000J0	
04680	TR	INPUT+19,INPUT+21							05524	31	02900	02902	
04690	EVALOP	B7	EVALAD						05536	49	05960		
04700	CM	INPUT+20,20,10							05544	14	02901	000K0	
04710	BNE	EVALAD							05556	47	05960	01200	
04720	TFM	OPER,20,10							05568	16	06532	000K0	
04730	B7	SCAN1+36							05580	49	05524		
04740	DIGALF	BNR	++20, ALPHA						05588	45	05608	02684	
04750	B7	MOVE							05600	49	05676		
04760	BD	DIVIDE, DIVSW							05608	43	05708	07318	
04770	M	ALPHA,BETA							05620	23	02684	02689	
04780	SF	90							05632	32	00090	00000	
04790	TF	ALPHA,99							05644	26	02684	00099	
04800	MDRET	BD	SREL-32,RSYMSW						05656	43	05412	07315	
04810	B7	MOVE+12							05668	49	05688		
04820	MOVE	TF	ALPHA,BETA						05676	26	02684	02689	
04830	TDM	DIVSW,0							05688	15	07318	00000	
04840	B7	GET-1,,6							05700	49	0653P		
04850	DIVIDE	CM	BETA,0						05708	14	02689	-0000	
04860	BE	MDRET							05720	46	05656	01200	
04870	LD	99,ALPHA							05732	28	00099	02684	
04880	D	89,BETA							05744	29	00089	02689	
04890	SF	85							05756	32	00085	00000	
04900	TF	ALPHA,94							05768	26	02684	00094	
04910	B7	MDRET							05780	49	05656		
04920	TDM	DIVSW,1,11							05788	15	07318	0000J	
04930	INTERM	BD	SREL-32,RSYMSW						05800	43	05412	07315	
04940	B7	SCAN1+36							05812	49	05524		
04950	TDM	LPNSW,1,11							05820	15	07317	0000J	
04960	TR	INPUT+19,INPUT+21							05832	31	02900	02902	
04970	BLOP	CM	OPER,,10						05844	14	06532	000-0	
04980	BE	SCAN2							05856	46	05224	01200	
04990	TD	++13,OPER-1							05868	25	05881	06531	
05000	ADDSUB	20	ADDRS,ALPHA						05880	20	03293	02684	
05010	TF	ALPHA,CLERER+9							05892	26	02684	02702	
05020	TFM	OPER,,10							05904	16	06532	000-0	
05030	BNF	++36,RSYMSW							05916	44	05952	07315	
05040	TD	++13, ADDSUB+1							05928	25	05941	05881	
05050	AM	RCTR, 1,10							05940	11	07314	000-1	
05060	B7	SCAN2							05952	49	05224		
05070	EVALAD	SF	HED-2						05960	32	10119	00000	
05090	TDM	BSW,0							05972	15	07319	00000	
05100	TFM	LABL,1,10							05984	16	06075	000-1	
05110	TFM	DOL,,10							05996	16	06073	000-0	
05120	TR	COLL-18,THINGS-20							06008	31	02421	02400	
05130	B7	BCMSPC							06020	49	06144		

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05140 *	CM	CHECK FOR SPECIAL CHARACTER					
05150 COMSPC	CM	INPUT+20,70,10	06028	14	02901	000P0	
05160	BL	SPEC	06040	47	06176	01300	
05170	TF	COLL,INPUT+20	06052	26	02439	02901	
05180	CF	COLL-1	06064	33	02438	00000	
05190 LABL	DS	,*	06075		0		
05200 DOL	DS	,*-2	06073		0		
05210	AM	DOL,1,10	06076	11	06073	000-1	
05220	TR	COLL-17,COLL-15	06088	31	02422	02424	
05230	CM	COLL-17,7,10	06100	14	02422	000-7	
05240 *		SYMBOL IN OPERAND CONTAINS MORE THAN SIX CHARACTERS					
05250 *		OR NUMBER IN OPERAND HAS MORE THAN FIVE DIGITS					
05260	BNE	*+20	06112	47	06132	01200	
05270 ERLNTH	B7	ER5	06124	49	07740		
05280	TR	INPUT+19,INPUT+21	06132	31	02900	02902	
05290 *		CHECK TO SEE IF OPERAND IS PRESENT					
05300 BCMSPC	TFM	GET-1,BLOP	06144	16	06537	-5844	
05310	BNR	COMSPC,INPUT+20	06156	45	06028	02901	
05320	B7	GET	06168	49	06538		
05330 *		CHECK FOR + OR -					
05340 SPEC	BD	S1,INPUT+20	06176	43	06208	02901	
05350 *		CHECK FOR BLANK					
05360	BD	GET,INPUT+19	06188	43	06538	02900	
05370	B7	BCMSPC-12	06200	49	06132		
05380 *		CHECK FOR COMMA					
05390 S1	CM	INPUT+20,23,10	06208	14	02901	000K3	
05400	BE	GET	06220	46	06538	01200	
05410 *		CHECK FOR SLASH					
05420	BNF	*+48,DIVCSW	06232	44	06280	02485	
05430	CM	INPUT+20,21,10	06244	14	02901	000K1	
05440	BNE	*+24	06256	47	06280	01200	
05450	BTM	GET,INTERM-12	06268	17	06538	-5788	
05460 *		CHECK FOR ASTERISK					
05470	CM	INPUT+20,14,10	06280	14	02901	000J4	
05480	BE	ASTER	06292	46	06846	01200	
05490 *		CHECK FOR DOLLAR SIGN					
05500	CM	INPUT+20,13,10	06304	14	02901	000J3	
05510	BE	DOLLAR	06316	46	06408	01200	
05520 *		CHECK FOR LEFT PAREN					
05530	CM	INPUT+20,24,10	06328	14	02901	000K4	
05540	BNE	*+24	06340	47	06364	01200	
05550	BTM	GET,BLOP-24	06352	17	06538	-5820	
05560 *		CHECK FOR RIGHT PAREN					
05570	CM	INPUT+20,04,10	06364	14	02901	000-4	
05580	BE	RTPN	06376	46	06882	01200	
05590 LDCHAR	TDM	LABL	06388	15	06075	00000	
05600	B7	COMSPC+24	06400	49	06052		
05610 DOLLAR	CF	DOLLAR	06408	33	06408	00000	
05620	BD	*+32,DOL	06420	43	06452	06073	
05630	TFM	COLL,,10	06432	16	02439	000-0	
05640	B7	*+44	06444	49	06488		
05650	CM	DOL,1,10	06452	14	06073	000-1	
05660	BNE	LDCHAR	06464	47	06388	01200	
05670	SF	COLL-3	06476	32	02436	00000	
05680	CF	HED-2	06488	33	10119	00000	
05690	TDM	LABL	06500	15	06075	00000	

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05700	BD	BCMSPC-12,DOL	06512	43	06132	06073	
05710	B7	BCMSPC-56	06524	49	06088		
05720 *							
05730 *		CLOSED ROUTINE TO EVALUATE COLLECTED SYMBOL OR INTEGER					
05740 *							
05750 OPER	DC	2,0	06532		2		
	-0						
05760	DS	5	06537		5		
05770 GET	TDM	RSYMSW,0	06538	15	07315	00000	
05775	BD	FERRR,LPNSW	06550	43	06988	07317	
05780	C	*+23,COLL-2	06562	24	06585	02437	
05790	BE	GETAST,14,10	06574	46	06758	012J4	
05800	BD	TRNUMB, LABL	06586	43	06802	06075	
05810	CM	COLL-17, 05,10	06598	14	02422	000-5	
05820	BH	6CHAR	06610	46	06714	01100	
05830	BE	5CHAR	06622	46	06682	01200	
05840	TDM	COLL,0	06634	15	02439	00000	
05850	TR	COLL-17, COLL-15	06646	31	02422	02424	
05860	CM	COLL-17, 05,10	06658	14	02422	000-5	
05870	BNE	*-36	06670	47	06634	01200	
05880 5CHAR	BNF	LBADD-24, HED-2	06682	44	07556	10119	
05890	TF	COLL-12, HED	06694	26	02427	10121	
05900	B7	LBADD	06706	49	07580		
05910 6CHAR	BNF	LBADD, HED-2	06714	44	07580	10119	
05920	SF	COLL-13	06726	32	02426	00000	
05930	SF	COLL-2	06738	32	02437	00000	
05940	B7	LBADD	06750	49	07580		
05950 GETAST	TF	BETA,ADDCOW	06758	26	02689	02529	
05960	BNF	DIGALF,RELSW	06770	44	05588	02478	
05970	TDM	RSYMSW,1,11	06782	15	07315	0000J	
05980	B7	DIGALF	06794	49	05588		
05990 TRNUMB	CM	COLL-14,6060	06802	14	02425	-6060	
06000	BH	ER5	06814	46	07740	01100	
06010	TNS	COLL-2,BETA	06826	72	02437	02689	
06020	B7	DIGALF	06838	49	05588		
06030 ASTER	CM	DOL,0,10	06846	14	06073	000-0	
06040	BE	LDCHAR	06858	46	06388	01200	
06050	BTM	GET,INTERM	06870	17	06538	-5800	
06060 RTPN	BNF	FERRR,LPNSW,,	06882	44	06988	07317	FORMAT ERROR
06070	C	*+23,COLL-2	06894	24	06917	02437	
06080	BH	*+36,70,10	06906	46	06942	011P0	
06090	C	*+23,COLL-2	06918	24	06941	02437	
06095	BNL	*+48,77,10	06930	46	06978	013P7	
06100	TFM	EVALER-2,75000	06942	16	07040	P5000	
06110	BT	EPRINT,EPRINT-1,,	06954	27	07322	07321	ILLEGAL INDEX SPECIFIED
06120	BD	ERCOR,ERSTSW	06966	43	07178	02476	
06130	B7	SCANA	06978	49	05304		
06140 XFLAG	DC	2,0	06986		2		
	-0						
06150 FERRR	TFM	EVALER-2,75000,,	06988	16	07040	P5000	FORMAT ERROR
06160	BT	EPRINT,EPRINT-1,,	07000	27	07322	07321	ILLEGAL JI
06170	B7	EVI	07012	49	07078		
06180 *							
06190 *		EVALER IS THE ERROR ROUTINE					
06200 *							
06210	DAS	5	07021		5 X	2	

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06220	BNR	59007		07030	45	59007	00000
06230	DC	1,*,*		07041		1	
06240	EVALER	BT	EPRINT,EPRINT-1	07042	27	07322	07321
06250		SPTY		07054	34	00000	00101
06260		WATY	COLL-12	07066	39	02427	00100
06270	EV1	BD	ERCOR, ERSTW	07078	43	07178	02476
06280	CHKND	TFM	ADDRS	07090	16	03293	-0000
06290	TOBB	CF	SCAN-1	07102	33	05163	00000
06300		BNR	**+20, INPUT+20	07114	45	07134	02901
06310		B7	SCAN-1,,6	07126	49	0516L	
06320		CM	INPUT+20,23,10	07134	14	02901	000K3
06330		BE	SCAN-1,,6	07146	46	0516L	01200
06340		TR	INPUT+19, INPUT+21	07158	31	02900	02902
06350		B7	TOBB+12	07170	49	07114	
06360	ERCOR	WATY	CORM,,,	07178	39	03341	00100
06370		RC TY		07190	34	00000	00102
06380		TR	INPUT+19, INSAV-1	07202	31	02900	02748
06390		WATY	INPUT-10	07214	39	02871	00100
06400		TF	ADDCOM, PLACE	07226	26	02529	03270
06410		TDM	ERRDIG, 1,11	07238	15	03271	0000J
06420		SM	INKRM,1,10	07250	12	02566	000-1
06430		SM	STCNT,1,10	07262	12	02514	000-1
06440		TFM	CFFA, NCDCF1	07274	16	02631	-7298
06450		BTM	CFF, READ3	07286	17	02594	-3428
06460	NCDCF1	DDA	,0,A2DAD,A2SCT,INSTRN	07298		14	
			OJ8800-58J0132				
06470	DC	1, *		07312		1	
06480	RCTR	DS	2,,	07314		2	
06490	RSYMSW	DS	1,,	07315		1	
06500	RLOCSW	DS	1,,	07316		1	
06510	LPNSW	DS	1	07317		1	
06520	DIVSW	DS	1	07318		1	
06530	BSW	DS	1,,	07319		1	
06540	LDABSW	DS	1,,	07320		1	
06550	*						
06560	*		EPRINT PRINTS THE ERROR MESSAGE AND REFERENCE TO				
06570	*		INDICATE THE STATEMENT IN ERROR				
06580	*						
06590	EPRINT	RCTY		07322	34	00000	00102
06600		TF	LOPOUT, INPUT-2	07334	26	03321	02879
06610		WATY	LOPOUT-8	07346	39	03313	00100
06620		WATY	ERLAB	07358	39	03297	00100
06630		WNTY	INKRM-3	07370	38	02563	00100
06640		WATY	EVALER-21	07382	39	07021	00100
06650		BD	**+24, ERSTW	07394	43	07418	02476
06660		SF	NONEX,,,	07406	32	00457	00000
06670		BB2		07418	42		
06680	*						
06690	*		TEST IF SIZE OF OBJECT CORE HAS BEEN EXCEEDED.				
06700	*		LINKAGE - BTM CTEST,**+12 (RETURN ADDRESS IF ERROR).				
06710	*						
06720		DS	6	07425		6	
06730	CTEST	CM	ADDCOM,99999	07426	14	02529	R9999
06740		BE	ER1-2	07438	46	07486	01200

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06750	C	ADDCOM,0BJCRE		07450	24	02529	02497
06760	BI	ER1,1300		07462	46	07488	01300
06770	CT1	TDM	CT1+10,00	07474	15	07484	00000
06780		BB2		07486	42		
06790	ER1	BD	**+2,CT1+10	07488	43	07486	07484
06800		TFM	EVALER-1,10000	07500	16	07041	J0000
06810		DC	1,*,*	07511		1	
06820		BT	EPRINT,EPRINT-1	07512	27	07322	07321
06830		TDM	CT1+10,01	07524	15	07484	00001
06840		SF	NONEX	07536	32	00457	00000
06850		B7	CTEST-1,,6	07548	49	0742N	
06860	*						
06870	*		THE SYMBOL TABLE IS SEARCHED FOR EQUIVALENCE				
06880	*						
06890		TDM	COLL, 0	07556	15	02439	00000
06900		TR	COLL-17, COLL-15	07568	31	02422	02424
06910	LBADD	BNF	LB2, SCAN-1	07580	44	07600	05163
06920		B7	DIGALF	07592	49	05588	
06930	LB2	TF	BSENT, COLL-2	07600	26	08389	02437
06940		BT	BS, BS-1	07612	27	08096	08095
06950		BNF	NIC, EQSW	07624	44	07716	08335
06960		AM	BSBF-1,5,10	07636	11	08359	000-5
06970		TF	BETA, BSBF-1, 11	07648	26	02689	0835R
06980	LADDR	BNF	**+48, RELSW	07660	44	07708	02478
06990		BNF	**+36, BETA	07672	44	07708	02689
07000		TDM	RSYMSW,1,11	07684	15	07315	0000J
07010		CF	BETA	07696	33	02689	00000
07020		B7	DIGALF	07708	49	05588	
07030	NIC	CM	SBOUT, 00,10	07716	14	02645	000-0
07040		BNE	**+24	07728	47	07752	01200
07050	ER5	BTM	EVALER, 50000	07740	17	07042	N0000
07060		DC	1,*,*	07751		1	
07070		CM	BSBF-1, LBLIM	07752	14	08359	K0009
07080		BNL	**+24	07764	46	07740	01300
07090		TD	DGSV, LOSYMB+1	07776	25	03385	19998
07100		TD	LOSYMB+1, SPSGM	07788	25	19998	02561
07110	*	WRITE	DISK-WLRC--SAVE CORE SYMBOLS				
07120		TFM	IORT,**+23	07800	16	00565	-7823
07130		B	IORBC,SDEF1,7	07812	49	00520	J0023
07140		TF	B2DCF+5, B1DCF+5	07824	26	10077	10061
07150		TF	SBCNT, SBOUT	07836	26	02673	02645
07160		TFM	LIMITS-5, MAXLIM	07848	16	03276	J5997
07170		TFM	LIMITS, LBLIM	07860	16	03281	K0009
07180	RDBLK	AM	B2DCF+5, SPBL	07872	11	10077	-0040
07190	*	READ	DISK-WLRC--READ SYMBOL BLOCK				
07200		TFM	IORT,**+23	07884	16	00565	-7907
07210		B	IOGT,SDEF2,7	07896	49	00566	J0031
07220		BT	BS, BS-1	07908	27	08096	08095
07230		BD	LBFND, EQSW	07920	43	08016	08335
07240		SM	SBCNT, 1,10	07932	12	02673	000-1
07250		BP	RDBLK	07944	46	07872	01100
07260	*	READ	DISK-WLRC--RESTORE CORE-ER5				
07270		TFM	IORT,**+23	07956	16	00565	-7979
07280		B	IOGT,SDEF1,7	07968	49	00566	J0023

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07290	TD	LOSMB+1, DGSV	07980	25	19998	03385
07300	TR	LIMITS-9, PRTLIM-4	07992	31	03272	02499
07310	BTM	EVALER, 50000	08004	17	07042	N0000
07320	DC	1,,*	08015		1	
07330	LBFND	AM	08016	11	08359	000-5
07340	TF	BETA,BSBF-1,11	08028	26	02689	0835R
07350	* READ	DISK-WLRC--RESTORE CORE				
07360	TFM	IORT,**23	08040	16	00565	-8063
07370	B	IORT,SDEF1,7	08052	49	00566	J0023
07380	TD	LOSMB+1, DGSV	08064	25	19998	03385
07390	TR	LIMITS-9, PRTLIM-4	08076	31	03272	02499
07400	BT	LADDR,**2	08088	49	-7660	
07410	* BINARY	SYMBOL TABLE SEARCH SUBROUTINE				
07420	BS	TR	08096	31	08367	03272
07430	BSCYC	TF	08108	26	08360	02698
07440	A	BSBF, CLERER+5	08120	21	08360	08376
07450	A	BSBF, LIM-5	08132	21	08360	08371
07460	TF	BSAV, BSBF	08144	26	08366	08360
07470	A	BSBF, BSBF	08156	21	08360	08360
07480	A	BSBF, BSBF	08168	21	08360	08360
07490	A	BSBF, BSAV	08180	21	08360	08366
07500	BD	**24, BSBF	08192	43	08216	08360
07510	AM	BSBF-1, 8,10	08204	11	08359	000-8
07520	SM	BSBF-1, 8,10	08216	12	08359	000-8
07530	C	BSBF-1, LIM-5	08228	24	08359	08371
07540	BNE	**26	08240	47	08266	01200
07550	TDM	EQSW, 0	08252	15	08335	00000
07560	BB2		08264	42		
07570	C	BSENT, BSBF-1,11	08266	24	08389	0835R
07580	BNE	BSNEQ	08278	47	08304	01200
07590	TDM	EQSW, 1,11	08290	15	08335	0000J
07600	BB2		08302	42		
07610	BSNEQ	BH	08304	46	08336	01100
07620	TF	LIM, BSBF-1	08316	26	08376	08359
07630	BT	BSCYC	08328	49	08108	
07640	BSHI	TF	08336	26	08371	08359
07650	BT	BSCYC	08348	49	08108	
07660	EQSW	DS	08355		0	
07670	BSBF	DC	08360		6	
		-00000				
07680	BSAV	DC	08366		6	
		-00000				
07690	LIM	DC	08376		10	
		-000000000				
07700	DC	1,,*	08377		1	
07710	BSENT	DS	08389		12	
07720	* ROUTINE	TO LOAD LABELS INTO SYMBOL TABLE				
07730	*					
07740	*					
07750	LDLBL	C	08390	24	02704	02891
07760	BNE	**24	08402	47	08426	01200
07770	BTM	OUTPUT, PHASEA	08414	17	09570	-3392
07780	TDM	TSPEC, 1	08426	15	10124	00001
07790	BLXM	**12,12(1),,	08438	66	08450	000J2
		CHECK LABEL				

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07800	BD	LBC2,INPUT-2(1)	08450	43	08486	028P9
07810	BD	LBC2,INPUT-3(1),,	08462	43	08486	028P8
07820	BCKM	*-24,-2(1)	08474	64	08450	000-K
07830	LBC2	C	08486	24	08509	028P9
07840	BE	LBC3,03,10	08498	46	08606	012-3
07850	BD	**36, DIVCSW,,	08510	43	08546	02485
07860	C	**23,INPUT-2(1),,	08522	24	08545	028P9
07870	BE	LBC3,21,10,	08534	46	08606	012K1
07880	C	**23,INPUT-2(1)	08546	24	08569	028P9
07890	BH	ER28,33,10,	08558	46	09382	011L3
07900	C	**23,INPUT-2(1)	08570	24	08593	028P9
07910	BL	**24,69,10	08582	47	08606	01309
07920	TDM	TSPEC,0	08594	15	10124	00000
07930	LBC3	BCKM	08606	64	08486	000-K
07940	BD	ER28, TSPEC	08618	43	09382	10124
07950	TF	BSENT, INPUT+10	08630	26	08389	02891
07960	SF	BSENT	08642	32	08389	00000
07970	BD	**60, INPUT+10	08654	43	08714	02891
07980	BD	**48, INPUT+9	08666	43	08714	02890
07990	TF	BSENT, INPUT+8	08678	26	08389	02889
08000	CF	BSENT-9	08690	33	08380	00000
08010	TF	BSENT-10, HED	08702	26	08379	10121
08020	BT	BS, BS-1	08714	27	08096	08095
08030	BD	ER4A, EQSW	08726	43	09478	08335
08040	CM	BSBF-1, LBLIM	08738	14	08359	K0009
08050	BNL	LDSOK	08750	46	09026	01300
08060	CM	SROUT, 00,10	08762	14	02645	000-0
08070	BE	LDSOK	08774	46	09026	01200
08080	TD	DGSV, LOSMB+1	08786	25	03385	19998
08090	TD	LOSMB+1, SPSGM	08798	25	19998	02561
08100	* IOCS	CALL-WRITE DISK WLRC				
08110	TFM	IORT,**23	08810	16	00565	-8833
08120	B	IORT,SDEF1,7	08822	49	00520	J0023
08130	TFM	LIMITS, LBLIM	08834	16	03281	K0009
08140	TFM	LIMITS-5, MAXLIM,,	08846	16	03276	J5997
08150	TF	SBCNT, SROUT	08858	26	02673	02645
08160	TF	BZDCF+5, B1DCF+5	08870	26	10077	10061
08170	TF	LDSR+11, BSBF-1	08882	26	09025	08359
08180	LDDSCY	AM	08894	11	10077	000M0
08190	* READ	DISK-WLRC				
08200	TFM	IORT,**23	08906	16	00565	-8929
08210	B	IORT,SDEF2,7	08918	49	00566	J0031
08220	BT	BS, BS-1	08930	27	08096	08095
08230	BD	ER4, EQSW	08942	43	09430	08335
08240	SM	SBCNT, 1,10	08954	12	02673	000-1
08250	BNZ	LDDSCY	08966	47	08894	01200
08260	* IOCS	CALL-READ DISK WLRC				
08270	TFM	IORT,**23	08978	16	00565	-9001
08280	B	IORT,SDEF1,7	08990	49	00566	J0023
08290	TD	LOSMB+1, DGSV	09002	25	19998	03385
08300	LDSR	TFM	09014	16	08359	-0000
08310	LDSOK	SM	09026	12	02503	000J7
08320	CM	PRTLIM, MAXLIM	09038	14	02503	J5997
08330	BL	TABFUL	09050	47	09230	01300
08340	TR	LIMITS-9, PRTLIM-4	09062	31	03272	02499
08350	BLX	**12,BSBF-1(1),,	09074	65	09086	083N9
		SHIFT SYMBOLS LEFT				

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08360	TD	DGSV,6(1),,	TO MAKE HOLE FOR	09086	25	03385	000-6
08370	TDM	6(1),,,	NEW ENTRY	09098	15	000-6	00000
08380	DC	1,,'*		09109		1	
08390	BLX	**12,PRTLIM(2)		09110	65	09122	02N03
08400	TR	99972(2),99989(2),,		09122	31	99R72	99R89
08410	TF	B5BF-1, BSENT, 6		09134	26	0835R	08389
08420	BNF	**48,RELSW		09146	44	09194	02478
08430	SF	ADDRS		09158	32	03293	00000
08440	BD	**24,LDABSW		09170	43	09194	07320
08450	CF	ADDRS		09182	33	03293	00000
08460	TF	5(1),ADDRS,,	INSERT SYMBOLIC EQUIV	09194	26	000-5	03293
08470	TD	6(1),DGSV		09206	25	000-6	03385
08480	BTM	OUTPUT, PHASEA		09218	17	09570	-3392
08490	TABFUL AM	B2DCF+5, SPBL,10		09230	11	10077	000M0
08500	C	SBOUT, SBMAX		09242	24	02645	02671
08510	BNL	ER19		09254	46	09498	01300
08520	AM	SBOUT, 1,10		09266	11	02645	000-1
08530	TD	DGSV, LOSYMB+1		09278	25	03385	19998
08540	TD	LOSYMB+1, SPSGM		09290	25	19998	02561
08550	* IOCS	CALL-WRITE DISK WLRC					
08560	TFM	IORT,**23		09302	16	00565	-9325
08570	B	IORBC,SDEF2,7		09314	49	00520	J0031
08580	TD	LOSYMB+1, DGSV		09326	25	19998	03385
08590	TFM	PRTLIM, LBLIM-17		09338	16	02503	J9992
08600	TF	LOSYMB, CLERER+52		09350	26	19997	02745
08610	TFM	B5BF-1,LBLIM-17		09362	16	08359	J9992
08620	B7	LDSOK		09374	49	09026	
08630	ER2B TFM	EVALER-1, 20000		09382	16	07041	K0000
08640	DC	1,,'*		09393		1	
08650	BT	EPRINT, EPRINT-1		09394	27	07322	07321
08660	BD	ERCOR, ERSTSW		09406	43	07178	02476
08670	BTM	OUTPUT, PHASEA		09418	17	09570	-3392
08680	* READ	DISK-WLRC					
08690	ER4 TFM	IORT,**23		09430	16	00565	-9453
08700	B	IORT,SDEF1,7		09442	49	00566	J0023
08710	TR	LIMITS-9, PRTLIM-4		09454	31	03272	02499
08720	TD	LOSYMB+1, DGSV		09466	25	19998	03385
08730	ER4A TFM	EVALER-1, 40000		09478	16	07041	M0000
08740	DC	1,,'*		09489		1	
08750	B7	ER2B+12		09490	49	09394	
08760	ER19 TFM	EVALER-1, 17900		09498	16	07041	J7900
08770	DC	1,,'*		09509		1	
08780	TDM	ASTSW,1,11		09510	15	10125	0000J
08790	NOP	OUTPUT,PHASEA		09522	41	09570	03392
08800	BT	EPRINT,EPRINT-1		09534	27	07322	07321
08810	TFM	**23,17,10,	CHANGE NDP TO BTM	09546	16	09523	000J7
08820	B7	**36		09558	49	09522	
08830	*						
08840	*	OUTPUT ROUTINE					
08850	*						
08860	DS	5		09569		5	
08870	OUTPUT TF	DT2DCF+5,OUTDCF+5		09570	26	10109	10093

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08880	S	DT2DCF+5, SYMTAD		09582	22	10109	02643
08890	CM	DT2DCF+5,-2,10		09594	14	10109	000-K
08900	BH	ER20,,	INTER SECTOR OVERFLOW	09606	46	09956	01100
08910	BD	2PASS, 2PSSW		09618	43	09766	02477
08920	BNR	2SECT, INPUT2+99		09630	45	09710	03133
08930	TD	INPUT2+99, SPSGM		09642	25	03133	02561
08940	TDM	OUTDCF+8, 1		09654	15	10096	00001
08950	* WRITE	DISK-NO WLRC					
08960	TFM	IORT,**23		09666	16	00565	-9689
08970	B	IORBC,OUTDF1,7		09678	49	00520	J0039
08980	AM	OUTDCF+5, 1		09690	11	10093	-0001
08990	B7	OUTPUT-1,,6,,	RETURN	09702	49	0956R	
09000	ZSECT TDM	OUTDCF+8, 2		09710	15	10096	00002
09010	* IOCS	CALL-WRITE DISK-NO WLRC					
09020	TFM	IORT,**23		09722	16	00565	-9745
09030	B	IORBC,OUTDF1,7		09734	49	00520	J0039
09040	ZS AM	OUTDCF+5, 2		09746	11	10093	-0002
09050	B7	OUTPUT-1,,6		09758	49	0956R	
09060	2PASS CM	2PTR+6,INPUT2+208		09766	14	09832	-3242
09070	BL	**24		09778	47	09802	01300
09080	BTM	2PSOUT,**12		09790	17	09862	-9802
09090	TR	2PBUF,INPUT2		09802	31	09946	03034
09100	TD	2PBUF+7,ERRDIG		09814	25	09953	03271
09110	2PTR TR	INPUT2+8,2PBUF,2		09826	31	-3042	09946
09120	AM	2PTR+6,8,10		09838	11	09832	000-8
09130	B7	OUTPUT-1,,6		09850	49	0956R	
09140	DS	5		09861		5	
09150	2PSOUT TF	DT2DCF+5, OUTDCF+5		09862	26	10109	10093
09160	AM	OUTDCF+5,2,10		09874	11	10093	000-2
09170	TD	INPUT2+208, SPSGM		09886	25	03242	02561
09180	* IOCS	CALL-WRITE DISK WITH WLRC					
09190	TFM	IORT,**23		09898	16	00565	-9921
09200	B	IORBC,OUTDF2,7		09910	49	00520	J0047
09210	TFM	2PTR+6,INPUT2+8		09922	16	09832	-3042
09220	2PRE B	2PSOUT-1,,6		09934	49	0986J	00000
09230	2PBUF DSC	9,0'		09946		9	
09240	ER20	NDP OUTPUT-1,,6		09956	41	0956R	00000
09250	TDM	ASTSW,1,11		09968	15	10125	0000J
09260	TFM	EVALER-1,27000		09980	16	07041	K7000
09270	DC	1,,'*		09991		1	
09280	BT	EPRINT,EPRINT-1		09992	27	07322	07321
09290	TFM	ER20+1,49,10		10004	16	09957	000M9
09300	B7	OUTPUT-1,,6		10016	49	0956R	
09310	SDEF1 DSC	2,00,,	PLUS DISK WITH WRONG LENGTH	10023		2	
09320	DS	BIDCF		10029		5 X	1
09330	DC	1,,'		10029		J0056	
09340	SDEF2 DSC	2,00,,	PLUS DISK WITH WRONG LENGTH	10031		2	
09350	DS	B2DCF		10037		5 X	1

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09360	DC	1,*		10037	J0072	
				10038	1	
09370	OUTDF1	DSC 2,02,,	PLUS DISK NOT WRONG LENGTH	10039	2	
		02				
09380	DSA	OUTDCF		10045	5 X	1
				10045	J0088	
09390	DC	1,*		10046	1	
09400	OUTDF2	DSC 2,00,,	PLUS DISK WITH WRONG LENGTH	10047	2	
		00				
09410	DSA	DTZDCF		10053	5 X	1
				10053	J0104	
09420	DC	1,*		10054	1	
09430	B1DCF	DDA ,0,*--*,SPBL,SBFADD		10056	14	
		0-0000-40J5998				
09440	DC	1,*		10070	1	
				10072	14	
09450	B2DCF	DDA ,0,*--*,SPBL,SBFADD		10086	1	
		0-0000-40J5998				
09460	DC	1,*		10088	14	
09470	OUTDCF	DDA ,0,*--*,1,INPUT2		10102	1	
		0-0000-01-3034				
09480	DC	1,*		10104	14	
09490	DTZDCF	DDA ,0,*--*,2,INPUT2+8		10118	1	
		0-0000-02-3042				
09500	DC	1,*		10119	1	
				10121	2	
09510	DS	1		10123	2	
09520	HED	DC 2,0		10124	1	
		-0		10125	1	
09530	CNTR	DS 2				
09540	TSPEC	DS 1				
09550	ASTSW	DS 1				
09560	*					
09570	*	PHASE A1--INITIALIZATION				
09580	*					
09590	START	TFM IORT,++23		10126	16	00565 J0149
09600	B	IOGT,MCADF,7		10138	49	00566 J4162
09610	TDM	MOCTOC,0		10150	15	16023 00000
09620	TDM	MDDOC,0		10162	15	16022 00000
09630	TF	MONAME,CLERER+11		10174	26	16035 02704
09640	TF	MOIDNO,CLERER+3		10186	26	16039 02696
09650	TFM	MOMAD,99999		10198	16	00415 R9999
09660	TFM	INKRM,99999		10210	16	02566 R9999
09670	TFM	ADDCOW,2401		10222	16	02529 -2401
09680	TF	L,MOML		10234	26	02521 16041
09690	TD	NOISE,MONOIS		10246	25	02522 16044
09700	TF	SUBNO,MOSBNO		10258	26	02524 16043
09710	START2	TDM 0,0		10270	15	00000 00000
09720	TR	19999,CLERER+52		10282	31	19999 02745

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09730	BNR	++44,0		10294	45	10338 00000
09740	TDM	PROCRE,2,11		10306	15	02498 0000K
09750	TFM	HCLIM,LBLIM		10318	16	02508 K0009
09760	B7	AIC1		10330	49	10418
09770	TR	39999,CLERER+52		10338	31	39999 02745
09780	BNR	++44,		10350	45	10394 00000
09790	TDM	PROCRE,4,11		10362	15	02498 0000M
09800	TFM	HCLIM,LBLIM+1176*17		10374	16	02508 M0001
09810	B7	AIC1		10386	49	10418
09820	TDM	PROCRE,6,11		10394	15	02498 00000
09830	TFM	HCLIM,LBLIM+2*1176*17		10406	16	02508 N9993
09840	AIC1	TD QBJCRE-4,PROCRE		10418	25	02493 02498
09850	TF	PRTLIM, HCLIM		10430	26	02503 02508
09860	SM	PRTLIM, 17,10		10442	12	02503 000J7
09870	TR	LIMITS-9, PRTLIM-4		10454	31	03272 02499
09880	TF	++30,OBJCRE		10466	26	10496 02497
09890	SM	++10,1,10		10478	12	10496 000-1
09900	TF	--*,CLERER+52		10490	26	00000 02745
09910	BSBA	++12		10502	60	10514 00001
09920	BLXM	++12,0(6),,,	CLEAR VECTOR REGISTERS	10514	66	10526 0-0-0
09930	BLXM	++12,0(5),,,		10526	66	10538 0-0-0
09940	TD	INCODE,MOEXEC		10538	25	02492 00426
09950	CF	INCODE		10550	33	02492 00000
09960	CM	INCODE,03,10		10562	14	02492 000-3
09970	ST2L	BL C15P		10574	47	12006 01300
09980	BE	C14P		10586	46	11950 01200
09990	B7	C13P		10598	49	11894
10000	PROCON	BNR ++24,INPUT-10		10606	45	10630 02871
10010	TFM	INPUT-10,00,10		10618	16	02871 000-0
10020	BLXM	++12,-9-153(1)		10630	66	10642 0010K
10030	CF	INPUT+153(1)		10642	33	03014 00000
10040	BCXM	--12,2(1)		10654	64	10642 000-2
10050	CM	INPUT-10,14,10		10666	14	02871 000J4
10060	BNE	CALLA2		10678	47	12490 01200
10070	BD	++36,TYINSW		10690	43	10726 02473
10080	RCTY			10702	34	00000 00102
10090	WATY	INPUT-10,,,	TYPE CONTROL STATEMENT	10714	39	02871 00100
10100	BLXM	++12,0(1)		10726	66	10738 000-0
10110	SLP	BXM ++12,2(1),,,	COMPRESS BLANKS	10738	62	10750 000-2
10120	BNR	++20,INPUT-10(1)		10750	45	10770 028P1
10130	B7	SLP		10762	49	10814
10140	C	CLERER+1,INPUT-10(1)		10770	24	02694 028P1
10150	BNE	SLP		10782	47	10738 01200
10160	TR	INPUT-11(1),INPUT-9(1)		10794	31	028P0 028P2
10170	B7	SLP+12		10806	49	10750
10180	SLPX	BLXM ++12,BOAT-EOAT-5(3)		10814	66	10826 00JMN
10190	TFM	SLC+11,MESTAB		10826	16	10897 J3353
10200	A	SLC+11,BOLT-BOAT+EOAT+5(3)		10838	21	10897 11JJ2
10210	C	XRA1,BOLT-BOAT+EOAT+5(3)		10850	24	00309 11JJ2
10220	TF	XRA2,BOLT-BOAT+EOAT+5(3)		10862	26	00314 11JJ2
10230	BL	++36		10874	47	10910 01300
10240	SLC	C INPUT-12(2),--		10886	24	02669 00000
10250	BE	MATCH		10898	46	10956 01200
10260	BCXM	SLP+24,5(3)		10910	64	10838 00--5
10270	WATY	IDMES		10922	39	10943 00100
10280	B7	PHASEA		10934	49	03392

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10290	IDMES	DAC 07, (ID)'	10943	7 X	2
10300	MATCH	B7 EOAT+5(3),,6	10956	49	11KNP
10310	BOLT	DSA 22,28,30,22,20,40,32,22,10,32	10967	5 X	10
			10967	-0022	
			10972	-0028	
			10977	-0030	
			10982	-0022	
			10987	-0020	
			10992	-0040	
			10997	-0032	
			11002	-0022	
			11007	-0010	
			11012	-0032	
10320	DSA	34,34,20,30,40,42,18,30,24,30	11017	5 X	10
			11017	-0034	
			11022	-0034	
			11027	-0020	
			11032	-0030	
			11037	-0040	
			11042	-0042	
			11047	-0018	
			11052	-0030	
			11057	-0024	
			11062	-0030	
10330	DSA	32,36,24,28,10,18,10,54,34	11067	5 X	9
			11067	-0032	
			11072	-0036	
			11077	-0024	
			11082	-0028	
			11087	-0010	
			11092	-0018	
			11097	-0010	
			11102	-0054	
			11107	-0034	
10340	BOAT	DSA C1P,C2P,C3P,C4P,C5P,C6P,C7P,C8P,C9P,C10P	11112	5 X	10
			11112	J1254	
			11117	J1334	
			11122	J1454	
			11127	J1634	
			11132	J1654	
			11137	J1674	
			11142	J1694	
			11147	J1714	
			11152	J1734	
			11157	J1814	
10350	DSA	C11P,C11AP,C12P,C13P,C14P,C15P,C16P,C17P,C17AP	11162	5 X	9
			11162	J1834	
			11167	J1854	
			11172	J1874	
			11177	J1894	

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			11182	J1950	
			11187	J2006	
			11192	J2050	
			11197	J2070	
			11202	J2090	
10360	DSA	C18P,C19P,C20P,C21P,C22P,C23P,C24P,C25P,C26P	11207	5 X	9
			11207	J2110	
			11212	J2154	
			11217	J2174	
			11222	J2314	
			11227	J2334	
			11232	J2354	
			11237	J2410	
			11242	J2430	
			11247	J2450	
10370	EOAT	DSA C27P	11252	5 X	1
			11252	J2470	
10380	C1P	TFM OBJCRE,0,, OBJECT CORE N	11254	16	02497 -0000
10390	TD	OBJCRE-4, INPUT-10+2*11	11266	25	02493 02893
10400	SF	OBJCRE-4	11278	32	02493 00000
10410	CM	OBJCRE,20000	11290	14	02497 K0000
10420	BNL	**24	11302	46	11326 01300
10430	TFM	OBJCRE,20000	11314	16	02497 K0000
10440	B7	PHASEA	11326	49	03392
10450	C2P	BNR **20, INPUT-10+2*15,, SUBROUTINE NUMBER NN	11334	45	11354 02901
10460	B7	C2P1	11346	49	11378
10470	C	C70, INPUT-10+2*15	11354	24	14161 02901
10480	BNH	C2P2	11366	47	11410 01100
10490	C2P1	TFM SUBNO,00,10	11378	16	02524 000-0
10500	TD	SUBNO, INPUT-10+2*14	11390	25	02524 02899
10510	B7	PHASEA	11402	49	03392
10520	C2P2	TD SUBNO, INPUT-10+2*15	11410	25	02524 02901
10530	TD	SUBNO-1, INPUT-10+2*14	11422	25	02523 02899
10540	SF	SUBNO-1	11434	32	02523 00000
10550	B7	PHASEA	11446	49	03392
10560	C3P	BNR **20, INPUT-10+2*16,, MANTISSA LENGTH NN	11454	45	11474 02903
10570	B7	C3P1	11466	49	11498
10580	C	C70, INPUT-10+2*16	11474	24	14161 02903
10590	BNH	C3P2	11486	47	11530 01100
10600	C3P1	TFM L,00,10	11498	16	02521 000-0
10610	TD	L, INPUT-10+2*15	11510	25	02521 02901
10620	B7	C3P3	11522	49	11566
10630	C3P2	TD L, INPUT-10+2*16	11530	25	02521 02903
10640	TD	L-1, INPUT-10+2*15	11542	25	02520 02901
10650	SF	L-1	11554	32	02520 00000
10660	C3P3	CM L,2,10	11566	14	02521 000-2
10670	BL	**36	11578	47	11614 01300
10680	CM	L,45,10	11590	14	02521 000M5
10690	BNH	**24	11602	47	11626 01100
10700	TF	L,MDML	11614	26	02521 16041
10710	B7	PHASEA	11626	49	03392
10720	C4P	TD NOISE, INPUT-10+2*11,, NOISE DIGIT N	11634	25	02522 02893
10730	B7	PHASEA	11646	49	03392
10740	C5P	TDM ERSTSW,1,11, ERROR STOP	11654	15	02476 0000J

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10750	B7	PHASEA		11666	49	03392	
10760	C6P	TDM	RELSW,1,11,	ASSEMBLE RELOCATABLE	11674	15	02478 0000J
10770	B7	PHASEA		11686	49	03392	
10780	C7P	TDM	MOCTOC,1,11,	OUTPUT PAPER TAPE	11694	15	16023 0000J
10790	B7	PHASEA		11706	49	03392	
10800	C8P	TDM	MOCTOC,0,11,	OUTPUT CARD	11714	15	16023 0000-
10810	B7	PHASEA		11726	49	03392	
10820	C9P	TD	CTVT ,INPUT+8,,	CTVT NNNNN	11734	25	02490 02889
10830	TD	CTVT-1,INPUT+6		11746	25	02489 02887	
10840	TD	CTVT-2,INPUT+4		11758	25	02488 02885	
10850	TD	CTVT-3,INPUT+2		11770	25	02487 02883	
10860	TD	CTVT-4,INPUT		11782	25	02486 02881	
10870	SF	CTVT-4,		11794	32	02486 00000	
10880	B7	PHASEA		11806	49	03392	
10890	C10P	TDM	STTYSW,1,11,,	TYPE SYMBOL TABLE	11814	15	02471 0000J
10900	B7	PHASEA		11826	49	03392	
10910	C11P	TDM	STPCSW,1,11,	PUNCH SYMBOL TABLE	11834	15	02470 0000J
10920	B7	PHASEA		11846	49	03392	
10930	C11AP	TDM	STPRSW,1,11,	PRINT SYMBOL TABLE	11854	15	02472 0000J
10940	B7	PHASEA		11866	49	03392	
10950	C12P	TDM	INTRSW,1,11,	INTERRUPT XXX	11874	15	02483 0000J
10960	B7	PHASEA		11886	49	03392	
10970	C13P	TDM	CDINSW,1,11,	BEGIN CARD INPUT	11894	15	02474 0000J
10980	TDM	PTINSW,0		11906	15	02475 00000	
10990	TDM	TYINSW,0		11918	15	02473 00000	
11000	TDM	INCODE,5		11930	15	02492 00005	
11010	B7	PHASEA		11942	49	03392	
11020	C14P	TDM	PTINSW,1,11,	BEGIN PAPER TAPE INPUT	11950	15	02475 0000J
11030	TDM	TYINSW,0		11962	15	02473 00000	
11040	TDM	CDINSW,0		11974	15	02474 00000	
11050	TDM	INCODE,3		11986	15	02492 00003	
11060	B7	PHASEA		11998	49	03392	
11070	C15P	TDM	TYINSW,1,11,	BEGIN TYPEWRITER INPUT	12006	15	02473 0000J
11080	TDM	CDINSW,0		12018	15	02474 00000	
11090	TDM	PTINSW,0		12030	15	02475 00000	
11100	B7	PHASEA		12042	49	03392	
11110	C16P	TDM	LSCDSW,1,11,	LIST CARD	12050	15	02479 0000J
11120	B7	PHASEA		12062	49	03392	
11130	C17P	TDM	LSTYSW,1,11,	LIST TYPEWRITER	12070	15	02480 0000J
11140	B7	PHASEA		12082	49	03392	
11150	C17AP	TDM	LSPRSW,1,11,	LIST PRINTER	12090	15	02481 0000J
11160	B7	PHASEA		12102	49	03392	
11170	C18P	BNF	PHASEA,ISTAT-30,,	STORE CORE IMAGE	12110	44	03392 02530
11180	TD	ISTAT-30, FLGRM		12122	25	02530 03339	
11190	TDM	MODOC,0,11,		12134	15	16022 0000-	
11200	B7	PHASEA		12146	49	03392	
11210	C19P	TDM	MODOC,1,11,	STORE RELOADABLE	12154	15	16022 0000J
11220	B7	PHASEA		12166	49	03392	
11230	C20P	BD	PHASEA,SSTSW,,,	SYSTEM SYMBOL TABLE	12174	43	03392 12313
11240	TF	SSTDGF+13,HCLIM		12186	26	12311 02508	
11250	C20P2	SM	SSTDGF+13,SSTSTCT=100+11		12198	12	12311 -3511
11260	TFM	IORT,++23		12210	16	00565 J2233	
11270	B	IOGT,SSTDF,7		12222	49	00566 J2289	
11280	BLX	++12,SSTDGF+13(1)		12234	65	12246 123J1	
11290	S	PRTLIM,4(1)		12246	22	02503 000-4	
11300	TR	LIMITS-9,PRTLIM-4		12258	31	03272 02499	

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11310	TDM	SSTSW,1,11		12270	15	12313 0000J	
11320	C20P4	B7	PHASEA	12282	49	03392	
11330	SSTDF	DSC	2,22,,	ABSOLUTE DISK NOT WRONG LENGTH	12289		2
		22					
11340	C20P3	DSA	SSTDGF	12295		5 x	1
				12295		J2298	
11350	DC	1,0		12296			1
11360	SSTDGF	DDA	0,SSTDAD,SSTSTCT,+-	12298			14
		0J8927-35-0000					
11370	DC	1,0		12312			1
11380	SSTSW	DS	1	12313			1
11390	C21P	TDM	2PSSW,1,11,	TWO PASS MODE	12314	15	02477 0000J
11400	B7	PHASEA		12326	49	03392	
11410	C22P	TDM	KILSUB,1,11,	NO SUBROUTINES	12334	15	02484 0000J
11420	B7	PHASEA		12346	49	03392	
11430	C23P	TR	INPUT-10(1),CLERER+1,,	NAME AAAAAA	12354	31	028P1 02694
11440	SF	INPUT-10+2*5-1		12366	32	02880 00000	
11450	TF	MONAME,INPUT-10+2*5+2*5		12378	26	16035 02891	
11460	CF	INPUT-10+2*5-1		12390	33	02880 00000	
11470	B7	PHASEA		12402	49	03392	
11480	C24P	TNS	INPUT-10+2*12,MOIDNO,,	ID NUMBER NNNN	12410	72	02895 16039
11490	B7	PHASEA		12422	49	03392	
11500	C25P	CF	ISTAT-30,,,	LIBR	12430	33	02530 00000
11510	B7	PHASEA		12442	49	03392	
11520	C26P	TDM	PCNUSW,1,11,	PUNCH RESEQUENCED SOURCE DECK	12450	15	02482 0000J
11530	B7	PHASEA		12462	49	03392	
11540	C27P	TDM	DIVCSW,0,,	NO SYMBOLIC DIVIDE	12470	15	02485 00000
11550	B7	PHASEA		12482	49	03392	
11560	CALLA2	SF	INPUT-1		12490	32	02880 00000
11570	SF	INPUT+11		12502	32	02892 00000	
11580	BLXM	++12,19-153(1)		12514	66	12526 001LM	
11590	SF	INPUT+153(1)		12526	32	030L4 00000	
11600	BCXM	+-12,2(1)		12538	64	12526 000-2	
11610	TFM	IORT,++23		12550	16	00565 J2573	
11620	B	IORBC,MCADF,7		12562	49	00520 J4162	
11630	BNF	++24,TYINSW		12574	44	12598 02473	
11640	TDM	2PSSW,0		12586	15	02477 00000	
11650	*						
11660	*						
11670	*						
			DISK STORAGE SCRATCH SECTOR ASSIGNMENT				
11680	TFM	IORT,++23		12598	16	00565 J2621	
11690	B	IOGT,DIM,7		12610	49	00566 J3330	
11700	TF	CYLAV,MOSCT+8+20		12622	26	14187 16028	
11705	BD	++24,TYINSW		12634	43	12658 02473	
11710	RCTY			12646	34	00000 00102	
11720	TF	SCTAV-2,CYLAV,,	OBTAIN AVAIL CYL. FROM MONITOR	12658	26	14190 14187	
11730	A	SCTAV,SCTAV		12670	21	14192 14192	
11740	BD	SAS2P,2PSSW		12682	43	12902 02477	
11750	TFM	SASC+11,1PTSPB+SPBL		12694	16	12777 -1540	
11760	CM	HCLIM,LBLIM+1176*17		12706	14	02508 M0001	
11770	BL	++48		12718	47	12766 01300	
11780	BE	++24		12730	46	12754 01200	
11790	AM	SASC+11,RP20K*1PTSPB-BP20K*SPBL		12742	11	12777 -7300	

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11800	A	SASC+11,+-1	12754	21	12777	12753
11810	SASC	CM SCTAV,+-*	12766	14	14192	-0000
11820	BL	SASX1	12778	47	12870	01300
11830	AM	STSAV,2*SPBL	12790	11	14197	-0080
11840	SAS1	AM SBMAX,1,10	12802	11	02671	000-1
11850	AM	SASC+11,1PTSPB	12814	11	12777	-1500
11860	C	SCTAV,SASC+11	12826	24	14192	12777
11870	BL	SASX1	12838	47	12870	01300
11880	AM	STSAV,SPBL	12850	11	14197	-0040
11890	B7	SAS1	12862	49	12802	
11900	SASX1	TF INTSAV,SCTAV	12870	26	14202	14192
11910	S	INTSAV,STSAV	12882	22	14202	14197
11920	B7	TYPASS	12894	49	13174	
11930	SAS2P	TFM SASC2+11,2PTSPB*SPBL	12902	16	12985	-0640
11940	CM	HCLIM,LBLIM+1176*17	12914	14	02508	M0001
11950	BL	**48	12926	47	12974	01300
11960	BE	**24	12938	46	12962	01200
11970	AM	SASC2+11,BP20K*2PTSPB-BP20K*SPBL	12950	11	12985	-2800
11980	A	SASC2+11,+-1	12962	21	12985	12961
11990	SASC2	CM SCTAV,+-*	12974	14	14192	-0000
12000	BL	SASX2	12986	47	13078	01300
12010	AM	STSAV,2*SPBL	12998	11	14197	-0080
12020	SAS2	AM SBMAX,1,10	13010	11	02671	000-1
12030	AM	SASC+11,2PTSPB	13022	11	12777	-0600
12040	C	SCTAV,SASC+11	13034	24	14192	12777
12050	BL	SASX2	13046	47	13078	01300
12060	AM	STSAV,SPBL	13058	11	14197	-0040
12070	B7	SAS2	13070	49	13010	
12080	SASX2	TF INTSAV,SCTAV	13078	26	14202	14192
12090	S	INTSAV,STSAV	13090	22	14202	14197
12100	MM	INTSAV,2PRATIO	13102	13	14202	K0000
12110	SF	90	13114	32	00090	00000
12120	TF	INTSAV,94	13126	26	14202	00094
12130	TD	**23,INTSAV	13138	25	13161	14202
12140	TD	**23,AJUST	13150	25	13173	02399
12150	AM	INTSAV,10	13162	11	14202	000-0
12160	TYPASS	TF SYMTAD,SCTAV	13174	26	02643	14192
12170	S	SYMTAD,STSAV	13186	22	02643	14197
12180	TF	IOADDR,SYMTAD	13198	26	02638	02643
12190	S	IOADDR,INTSAV	13210	22	02638	14202
12200	TF	B1DCF+5,SYMTAD	13222	26	10061	02643
12210	TF	B2DCF+5,SYMTAD	13234	26	10077	02643
12220	TF	OUTDCF+5,IOADDR	13246	26	10093	02638
12230	BNF	**24,RELSM	13258	44	13282	02478
12240	TFM	ADDCON,99999	13270	16	02529	R9999
12250	TFM	R2BE+1,41,10,	13282	16	03673	000M1
12260	TFM	PROSTM+1,41,10,,	13294	16	03805	000M1
12270	TFM	CFFA,NCDCF1	13306	16	02631	-7298
12280	BYM	CFF,PROSTM	13318	17	02594	-3804
12290	DIM	DSC 2,22	13330		2	
12300	DSA	DIMDCF	13336		5 X	1
			13336		J3338	
12310	DC	1,1	13337		1	

CHANGE BE TO NOP
CHANGE B TO NOP

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12320	DIMDCF	DDA ,0,DIMDAD,1,MOSCT	13338		14	
		0-4800-01J6000				
12330	DC	1,1	13352		1	
12340	MESTAB	DS ,**1	13353		0	
12350	C1	DAC 11,*OBJECTCORE	13355		11 X	2
		*OBJECTCORE				
12360	C2	DAC 14,*SUBROUTINESET	13377		14 X	2
		*SUBROUTINESET				
12370	C3	DAC 15,*MANTISSALENGTH	13405		15 X	2
		*MANTISSALENGTH				
12380	C4	DAC 11,*NOISEDIGIT	13435		11 X	2
		*NOISEDIGIT				
12390	C5	DAC 10,*ERRORSTOP	13457		10 X	2
		*ERRORSTOP				
12400	C6	DAC 20,*ASSEMBLERELOCATABLE	13477		20 X	2
		*ASSEMBLERELOCATABLE				
12410	C7	DAC 16,*OUTPUTPAPERTAPE	13517		16 X	2
		*OUTPUTPAPERTAPE				
12420	C8	DAC 11,*OUTPUTCARD	13549		11 X	2
		*OUTPUTCARD				
12430	C9	DAC 05,*CTVT	13571		5 X	2
		*CTVT				
12440	C10	DAC 16,*TYPESYMBOLTABLE	13581		16 X	2
		*TYPESYMBOLTABLE				
12450	C11	DAC 17,*PUNCHSYMBOLTABLE	13613		17 X	2
		*PUNCHSYMBOLTABLE				
12460	C11A	DAC 17,*PRINTSYMBOLTABLE	13647		17 X	2
		*PRINTSYMBOLTABLE				
12470	C12	DAC 10,*INTERRUPT	13681		10 X	2
		*INTERRUPT				
12480	C13	DAC 15,*BEGINCARDINPUT	13701		15 X	2
		*BEGINCARDINPUT				
12490	C14	DAC 20,*BEGINPAPERTAPEINPUT	13731		20 X	2
		*BEGINPAPERTAPEINPUT				
12500	C15	DAC 21,*BEGINTYPEWRITERINPUT	13771		21 X	2
		*BEGINTYPEWRITERINPUT				
12510	C16	DAC 09,*LISTCARD	13813		9 X	2
		*LISTCARD				
12520	C17	DAC 15,*LISTTYPEWRITER	13831		15 X	2
		*LISTTYPEWRITER				
12530	C17A	DAC 12,*LISTPRINTER	13861		12 X	2
		*LISTPRINTER				
12540	C18	DAC 15,*STORECOREIMAGE	13885		15 X	2
		*STORECOREIMAGE				
12550	C19	DAC 16,*STORERELOADABLE	13915		16 X	2
		*STORERELOADABLE				
12560	C20	DAC 18,*SYSTEMSYMBOLTABLE	13947		18 X	2
		*SYSTEMSYMBOLTABLE				
12570	C21	DAC 12,*TWOASSMODE	13983		12 X	2
		*TWOASSMODE				
12580	C22	DAC 14,*NOSUBROUTINES	14007		14 X	2
		*NOSUBROUTINES				
12590	C23	DAC 05,*NAME	14035		5 X	2
		*NAME				
12600	C24	DAC 09,*IDNUMBER	14045		9 X	2
		*IDNUMBER				

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12610	C25	DAC	05,*LIBR	14063	5	X	2
12620	C26	DAC	27,*PUNCHRESEQUENCEDSOURCEDECK	14073	27	X	2
12630	C27	DAC	17,*NOSYMBOLICDIVIDE	14127	17	X	2
12640	C70	DC	2,70	14161	2		
12650	MCADCF	DSC	2,22	14162	2		
12660		DSA	MCADCF	14168	5	X	1
12670		DC	1,1	14168	J4170		
12680	MCADCF	DDA	0,MOSDAD,1,MOSCT	14170	14		
12690		DC	1,1	14184	1		
12700	CYLA	DC	3,20	14187	3		
12710	SCTAV	DC	5,0	14192	5		
12720	STSAV	DC	5,0	14197	5		
12730	INTSAV	DC	5,0	14202	5		
12740		DC	1,1	14203	1		
12750	FLA1	SF	FLGRM	14204	32	03339	00000
12760		34	AIDCF,00701	14216	34	14264	00701
12770		38	AIDCF,00702	14228	38	14264	00702
12780		TRA		14240	36	00000	00500
12790	AIDCF	DDA	0,AIDAD,AISCT,ZEPO	14252	49	00000	00000
12800		DC	1,1	14264	14		
12810		TCD	FLA1	14278	1		
12820		DORG	START	14204			
12830		DS	5	10126			
12840	INSTRN	TD	**23,ADDCOW	10130	5		
12850		TD	**23,AJUST	10132	25	10155	02529
12860		AM	ADDCOW,,10	10144	25	10167	02399
12870		BTM	SCAN,**12,7 11	10156	11	02529	000-0
12880		BTM	TRSCAN,**12,7 11	10168	17	05164	J018-
12890		C	INPUT+18,BMK+6	10180	17	05134	J019K
12900		BE	**36	10192	24	02899	10403
12910		C	INPUT+18,BBT+6	10204	46	10240	01200
12920		BNE	**24	10216	24	02899	10395
12930		BTM	TRSCAN,**12,7 11	10228	47	10252	01200
12940		TF	ADDRS,ADDCOW	10240	17	05134	J025K
12950		AM	ADDCOW,11,10	10252	26	03293	02529
12960		BTM	CTEST,**12	10264	11	02529	000J1
12970		B7	INSTRN-1,,6	10276	17	07426	J0288
				10288	49	1013J	

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12980	DOINST	TF	INPUT2+1, ZEPO+29	10296	26	03035	02329
12990		C	INPUT+14, XB7-3	10308	24	02895	13620
13000		BNE	**24	10320	47	10344	01200
13010		SM	ADDCOW, 5,10	10332	12	02529	000-5
13020		C	INPUT+16, XBB2-3	10344	24	02897	14146
13030		BNE	**24	10356	47	10380	01200
13040		SM	ADDCOW,10,10	10368	12	02529	000J0
13050		B7	LDLBL	10380	49	08390	
13060	BBT	DAC	4,BBT ,,,	10389		4	X 2
13070	BMK	DAC	4,BMK ,,,	10397		4	X 2
13080	DOBS	TFM	INPUT2+1,060,9	10404	16	03035	00-60
13090		TD	INPUT2+6,ZEPO+28	10416	25	03040	02328
13100		SF	INPUT2+6	10428	32	03040	00000
13110		B7	LDLBL	10440	49	08390	
13120	DOADC	TF	INPUT2+2, ZEPO+29	10448	26	03036	02329
13130		SF	INPUT2+2	10460	32	03036	00000
13140		TDM	INPUT2,8	10472	15	03034	00008
13150		CM	INPUT+12, 59,10,	10484	14	02893	000N9
13160		BNE	**24	10496	47	10520	01200
13170		SF	INPUT2+1	10508	32	03035	00000
13180		B7	LDLBL	10520	49	08390	
13190	DOBOMK	TDM	INPUT2,4	10528	15	03034	00004
13200		TD	INPUT2+1, ZEPO+28	10540	25	03035	02328
13210		TD	INPUT2+6, ZEPO+29	10552	25	03040	02329
13220		SF	INPUT2+6	10564	32	03040	00000
13230		TFM	INPUT2+4,00,10 11	10576	16	03038	000--
13240		B7	LDLBL	10588	49	08390	
13250	DOBI	TDM	INPUT2, 4	10596	15	03034	00004
13260		TD	INPUT2+1, ZEPO+30	10608	25	03035	02330
13270		SF	ZEPO+28	10620	32	02328	00000
13280		TF	INPUT2+4,ZEPO+29	10632	26	03038	02329
13290		SF	INPUT2+4	10644	32	03038	00000
13300		B7	LDLBL	10656	49	08390	
13310	DORDW	TDM	INPUT2+3,0,11	10664	15	03037	0000-
13320		TD	INPUT2+1, ZEPO+28	10676	25	03035	02328
13330		TDM	INPUT2, 3	10688	15	03034	00003
13340		TD	INPUT2+4,ZEPO+29	10700	25	03038	02329
13350		SF	INPUT2+4	10712	32	03038	00000
13360		B7	LDLBL	10724	49	08390	
13370	DORDWB	TDM	INPUT2+3,3,11	10732	15	03037	0000L
13380		B7	DORDW+12	10744	49	10676	
13390	DOK	TFM	INPUT2+1, 034,9	10752	16	03035	00-34
13400		TD	INPUT2+6, ZEPO+29	10764	25	03040	02329
13410		SF	INPUT2+6	10776	32	03040	00000
13420		TD	INPUT2+4, ZEPO+28	10788	25	03038	02328
13430		SF	INPUT2+4	10800	32	03038	00000
13440		TDM	INPUT2+3, 0,11	10812	15	03037	0000-
13450		B7	LDLBL	10824	49	08390	
13460	DOSIOC	SF	ZEPO+22	10832	32	02322	00000
13470		TFM	INPUT2+1, 046,9	10844	16	03035	00-46
13480		CM	ZEPO+23,43,10	10856	14	02323	000M3
13490		BE	**72	10868	46	10940	01200
13500		CM	ZEPO+25,4243,8	10880	14	02325	0M243
13510		BE	**36	10892	46	10928	01200

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13520	CM	ZEPO+23,42,10	10904	14	02323	000M2
13530	BE	**+24	10916	46	10940	01200
13540	TDM	INPUT2+1, 7	10928	15	03035	00007
13550	TFM	INPUT2+4,60,1011	10940	16	03038	0000-
13560	SF	ZEPO+28	10952	32	02328	00000
13570	TF	INPUT2+6,ZEPO+29	10964	26	03040	02329
13580	SF	INPUT2+6	10976	32	03040	00000
13590	B7	LDL8L	10988	49	08390	
13600	DOSVRS	AM ADDCOW,12	10996	11	02529	-0012
13610	TFM	INPUT2+1, 02,10	11008	16	03035	000-2
13620	BD	**+36,ZEPO+29	11020	43	11056	02329
13630	AM	ADDCOW,12	11032	11	02529	-0012
13640	TDM	INPUT2+1,1	11044	15	03035	00001
13650	BTM	CTEST, **+12	11056	17	07426	J1068
13660	B7	LDL8L	11068	49	08390	
13670	DODISK	TDM INPUT2,3	11076	15	03034	00003
13680	TD	INPUT2+1, ZEPO+28	11088	25	03035	02328
13690	TDM	INPUT2+4, 7,11	11100	15	03038	0000P
13700	TDM	INPUT2+3, 0,11	11112	15	03037	0000-
13710	TD	INPUT2+6, ZEPO+29	11124	25	03040	02329
13720	SF	INPUT2+6	11136	32	03040	00000
13730	B7	LDL8L	11148	49	08390	
13740	DMESCL	TFM CFFA,FF10CF	11156	16	02631	J1180
13750	BTM	CFF,DECL2	11168	17	02594	J0132
13760	FF1DCF	DDA ,0,A4DAD,A4SCT,INSTRN	11180		14	
		OJ8883-44J0132				
13770	DC	1, '	11194		1	
		'				
13780	MCCALL	TFM CFFA,A3DCF	11196	16	02631	J1220
13790	BTM	CFF,MACRO2	11208	17	02594	J0132
13800	A3DCF	DDA ,0,A3DAD,A3SCT,INSTRN	11220		14	
		OJ8861-22J0132				
13810	DC	1, '	11234		1	
		'				
13820	DGM	TDM INPUT2, 5	11236	15	03034	00005
13830	BTM	SCAN,**+12	11248	17	05164	J1260
13840	BNF	DAC3-32,BSW	11260	44	11972	07319
13850	AM	ADDCOW, 1	11272	11	02529	-0001
13860	TF	ADDRS, ADDCOW	11284	26	03293	02529
13870	B7	DAC3-32	11296	49	11972	
13880	MACRO	TD **+23,ADDCOW	11304	25	11327	02529
13890	TD	**+23,AJUST	11316	25	11339	02399
13900	AM	ADDCOW,,10	11328	11	02529	000-0
13910	SF	ZEPO+28	11340	32	02328	00000
13920	TF	INPUT2+6, ZEPO+29	11352	26	03040	02329
13930	*					
13940	*	SET ONE TO INDICATE SUBROUTINE IS REQUIRED				
13950	*					
13960	TFM	**+30,ISTAT-30	11364	16	11394	-2530
13970	A	**+18,ZEPO+29	11376	21	11394	02329
13980	TDM	**-, 1	11388	15	00000	00001
13990	B7	DSA,,TO DSA ROUTINE TO COUNT NUMBER OF OPERANDS	11400	49	13276	
14000	*	EVALUATE LENGTH OF DAS				
14010	*					
14020	DAS	BTM SCAN,**+12	11408	17	05164	J1420
14030	TF	LNTH,ADDRS	11420	26	02387	03293

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14040	TF	TEMPR,LNTH	11432	26	02572	02387
14050	A	TEMPR,TEMPR	11444	21	02572	02572
14060	TDM	INPUT2, 2	11456	15	03034	00002
14070	TD	INPUT2+6, ZEPO+29	11468	25	03040	02329
14080	B7	DAC3	11480	49	12004	
14090	*					
14100	*	EVALUATE LENGTH OF DAC				
14110	*					
14120	DAC	TDM INPUT2, 0	11488	15	03034	00000
14130	TFM	STCHAR+11, 00,10	11500	16	11791	000-0
14140	DAC	1,','*	11511		1 X	2
		'				
14150	BTM	SCAN,**+12	11512	17	05164	J1524
14160	TF	LNTH,ADDRS	11524	26	02387	03293
14170	CM	LNTH,51	11536	14	02387	-0051
14180	BN	**+80	11548	47	11628	01300
14190	TFM	EVALER-1, 80000,, ER 8, LENGTH TOO BIG	11560	16	07041	Q0000
14200	DC	1,','*	11571		1	
		'				
14210	TFM	LNTH, 00050	11572	16	02387	-0050
14220	TFM	TEMPR, 100	11584	16	02572	-0100
14230	DACER	BT EPRINT, EPRINT-1	11596	27	07322	07321
14240	BD	ERCOR, ERSTW	11608	43	07178	02476
14250	B7	DACR	11620	49	11828	
14260	A	ADDRS,ADDRS	11628	21	03293	03293
14270	TF	TEMPR,ADDRS	11640	26	02572	03293
14280	BNR	**+20,INPUT+20	11652	45	11672	02901
14290	B7	ER9DAC	11664	49	11684	
14300	BNR	**+32, INPUT+22	11672	45	11704	02903
14310	ER9DAC	TFM EVALER-1, 90000,, CONSTANT NOT SPECIFIED	11684	16	07041	R0000
14320	DC	1,','*	11695		1	
		'				
14330	B7	DACER	11696	49	11596	
14340	CHVALD	BLX **+12,TEMPR(1)	11704	65	11716	025P2
14350	BNR	**+32,INPUT+20(1)	11716	45	11748	029-1
14360	E10DAC	TFM EVALER-1, 17000,, MIS-COUNT OF CONSTANT LENGTH	11728	16	07041	J7000
14370	DC	1,','*	11739		1	
		'				
14380	B7	DACER	11740	49	11596	
14390	BNR	**+20,INPUT+22(1)	11748	45	11768	029-3
14400	B7	**+32	11760	49	11792	
14410	CM	INPUT+22(1),23,10	11768	14	029-3	000K3
14420	STCHAR	BNE E10DAC	11780	47	11728	01200
14430	TD	STCHAR+11,INPUT+22(1)	11792	25	11791	029-3
14440	TFM	INPUT+22(1)	11804	16	029-3	-0000
14450	DAC	1,','*	11815		1 X	2
		'				
14460	TR	INPUT+21,INPUT+23(1)	11816	31	02902	029-4
14470	DACR	TF INPUT2+6, ZEPO+29	11828	26	03040	02329
14480	TD	INPUT2+4, LNTH	11840	25	03038	02387
14490	TD	INPUT2+3, LNTH-1	11852	25	03037	02386
14500	BNR	DAC3,STCHAR+11	11864	45	12004	11791
14510	*	ADDRESS ASSIGNED BY PROCESSOR				
14520	*					
14530	NOSINE	TD **+23,ADDCOW	11876	25	11899	02529
14540	TD	**+23,JSTHL	11888	25	11911	02459

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14550	AM	ADDCOW,10	11900	11	02529	000-0
14560	TF	ADDRS,ADDCOW	11912	26	03293	02529
14570	A	ADDCOW,TEMPR	11924	21	02529	02572
14580	SM	ADDCOW,2,10	11936	12	02529	000-2
14590	BD	**24,ZEPO+28	11948	43	11972	02328
14600	TF	ADDRS,ADDCOW	11960	26	03293	02529
14610	BTM	CTEST, **12	11972	17	07426	J1984
14620	TDM	INPUT2+1, 0,11	11984	15	03035	0000-
14630	B7	L0L0L	11996	49	08390	
14640	DAC3	BTM TRSCAN,**12	12004	17	05134	J2016
14650	BD	N0SINE,BSW	12016	43	11876	07319
14660	TD	LDABSW,RLOCSW	12028	25	07320	07316
14670	B7	DAC3-32	12040	49	11972	
14680	*					
14690	*	EVALUATE LENGTH OF DSB				
14700	*					
14710	DSB	TDM INPUT2,4	12048	15	03034	00004
14720	TDM	INPUT2+6, 1	12060	15	03040	00001
14730	TFM	EVALER-1, 70000	12072	16	07041	P0000
14740	DC	1,*,*	12083		1	
14750	BTM	SCAN,**12	12084	17	05164	J2096
14760	TF	LNTH, ADDR	12096	26	02387	03293
14770	BTM	TRSCAN,**12	12108	17	05134	J2120
14780	TF	TEMPR, ADDR	12120	26	02572	03293
14790	BNF	**48, BSW	12132	44	12180	07319
14800	BT	EPRINT, EPRINT-1	12144	27	07322	07321
14810	BD	ERCOR, ERSTSW	12156	43	07178	02476
14820	TFM	TEMPR, 00001	12168	16	02572	-0001
14830	BTM	TRSCAN,**12	12180	17	05134	J2192
14840	TD	LDABSW,RLOCSW	12192	25	07320	07316
14850	BNF	DAC3-32, BSW	12204	44	11972	07319
14860	TDM	LDABSW,1,11	12216	15	07320	0000J
14870	TF	ADDRS, ADCOW	12228	26	03293	02529
14880	A	ADDRS, LNTH	12240	21	03293	02387
14890	M	LNTH, TEMPR	12252	23	02387	02572
14900	A	ADDCOW, 99	12264	21	02529	00099
14910	B7	DAC3-32	12276	49	11972	
14920	*					
14930	*	EVALUATE LENGTH OF DS OR DNB				
14940	*					
14950	DS0NB	BTM SCAN,**12	12284	17	05164	J2296
14960	TD	INPUT2+6, ZEPO+29	12296	25	03040	02329
14970	TD	INPUT2+5, ZEPO+28	12308	25	03039	02328
14980	TF	LNTH,ADDR	12320	26	02387	03293
14990	TDM	INPUT2, 4,11	12332	15	03034	0000M
15000	BD	**84, ZEPO+29	12344	43	12428	02329
15010	CM	LNTH,99	12356	14	02387	-0099
15020	BNP	**60	12368	47	12428	01100
15030	TFM	EVALER-1, 80000	12380	16	07041	Q0000
15040	DC	1,*,*	12391		1	
15050	BT	EPRINT, EPRINT-1	12392	27	07322	07321
15060	BD	ERCOR, ERSTSW	12404	43	07178	02476
15070	TFM	LNTH, 00099	12416	16	02387	-0099
15080	NASS	BTM TRSCAN,**12	12428	17	05134	J2440

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15090	TD	LDABSW, RLOCSW	12440	25	07320	07316
15100	BNF	DAC3-32, BSW	12452	44	11972	07319
15110	*					
15120	*	ADDRESS ASSIGNED BY PROCESSOR				
15130	*					
15140	DNB2	TF ADDR, ADCOW	12464	26	03293	02529
15150	TDM	LDABSW,1,11	12476	15	07320	0000J
15160	A	ADDCOW,LNTH	12488	21	02529	02387
15170	BD	DSS,ZEPO+28	12500	43	12532	02328
15180	A	ADDRS,LNTH	12512	21	03293	02387
15190	B7	DAC3-32	12524	49	11972	
15200	DSS	AM ADDR,1,10	12532	11	03293	000-1
15210	B7	DAC3-32	12544	49	11972	
15220	DORG	BTM SCAN,**12	12552	17	05164	J2564
15230	BNF	**84,RELSW	12564	44	12648	02478
15240	BD	**72,RLOCSW	12576	43	12648	07316
15250	TFM	EVALER-2,71770,,	12588	16	07040	P1770
15260	BT	EPRINT,EPRINT-1,,	12600	27	07322	07321
15270	BD	ERCOR,ERSTSW	12612	43	07178	02476
15280	TFM	INPUT2+1,06,10,	12624	16	03035	000-6
15290	BTM	OUTPUT,PHASEA	12636	17	09570	-3392
15300	TF	ADDCOW,ADDRS	12648	26	02529	03293
15310	BTM	CTEST, **12	12660	17	07426	J2672
15320	*					
15330	*	SET ADDRESS COUNTER TO NEW VALUE				
15340	*					
15350	SM	ADDCOW,1,10	12672	12	02529	000-1
15360	TDM	INPUT2,1,11	12684	15	03034	0000J
15370	BNF	**24,ADDCOW	12696	44	12720	02529
15380	TFM	ADDCOW,99999	12708	16	02529	R9999
15390	B7	DAC3-20	12720	49	11984	
15400	DENDC	TFM CFFA,CA5DCF	12728	16	02631	J2752
15410	BTM	CFF,DEND	12740	17	02594	J0796
15420	CA5DCF	DDA ,0,A5DAD,A5SCT,INSTRN	12752		14	
15430	DC	OJ8737-29J0132				
15440	*	DEFINE CONSTANT AND DEFINE SPECIAL CONSTANT				
15450	*					
15460	DC	TDM INPUT2, 2,11	12768	15	03034	0000K
15470	TD	DC-1,ZEPO+28	12780	25	12767	02328
15480	TF	INPUT2+6, ZEPO+29	12792	26	03040	02329
15490	BTM	SCAN,**12	12804	17	05164	J2816
15500	TF	LNTH,ADDRS	12816	26	02387	03293
15510	CCON	TFM TEMPR, -00001	12828	16	02572	-000J
15520	AM	TEMPR,1	12840	11	02572	-0001
15530	TR	INPUT+19, INPUT+21	12852	31	02900	02902
15540	BNR	CCN2-36,INPUT+20	12864	45	12944	02901
15550	CM	TEMPR,0	12876	14	02572	-0000
15560	BNE	CCN2	12888	47	12980	01200
15570	TFM	EVALER-1, 90000	12900	16	07041	R0000
15580	DC	1,*,*	12911		1	
15590	BT	EPRINT, EPRINT-1	12912	27	07322	07321
15600	BD	ERCOR, ERSTSW	12924	43	07178	02476
15610	B7	CCN2	12936	49	12980	

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15620	CM	INPUT+20, 23,10	12944	14	02901	000K3
15630	BH	CCON+12	12956	46	12840	01100
15640	BL	CCON+24	12968	47	12852	01300
15650	CCN2	C	12980	24	02572	02387
15660	BNP	**+60	12992	47	13052	01100
15670	TFM	EVALER-1, 17000	13004	16	07041	J7000
15680	DC	1,*,*	13015		1	
15690	BT	EPRINT,EPRINT-1	13016	27	07322	07321
15700	BD	ERCOR, ERSTSW	13028	43	07178	02476
15710	DCRN	TF LNTH, TEMPR	13040	26	02387	02572
15720	CM	LNTH,51	13052	14	02387	-0051
15730	BN	**+72	13064	47	13136	01300
15740	TFM	EVALER-1, 80000	13076	16	07041	00000
15750	DC	1,*,*	13087		1	
15760	BT	EPRINT, EPRINT-1,, ER 8 LENGTH TOO BIG	13088	27	07322	07321
15770	BD	ERCOR, ERSTSW	13100	43	07178	02476
15780	TFM	LNTH, 00050	13112	16	02387	-0050
15790	TFM	TEMPR, 50	13124	16	02572	-0050
15800	BTM	TRSCAN,**+12	13136	17	05134	J3148
15810	TD	LDABSW,RLOCSW	13148	25	07320	07316
15820	BNF	CCN3, BSW	13160	44	13244	07319
15830	TDM	LDABSW,1,11	13172	15	07320	0000J
15840	TF	ADDRS, ADDCOW,, MACHINE ASSIGNS ADDRESS	13184	26	03293	02529
15850	AM	ADDRS,1	13196	11	03293	-0001
15860	A	ADDCOW, LNTH	13208	21	02529	02387
15870	BD	**+24, DC-1	13220	43	13244	12767
15880	TF	ADDRS, ADDCOW	13232	26	03293	02529
15890	CCN3	SF TEMPR-1	13244	32	02571	00000
15900	TF	INPUT2+4, TEMPR	13256	26	03038	02572
15910	B7	DAC3-32	13268	49	11972	
15920	DSA	TFM LNTH, 00000	13276	16	02387	-0000
15930	B7	DSA1	13288	49	13308	
15940	TR	INPUT+19, INPUT+21	13296	31	02900	02902
15950	DSA1	BTM SCAN,**+12,7 11	13308	17	05164	J332-
15960	AM	LNTH, 5,10	13320	11	02387	000-5
15970	BNR	**+36, INPUT+20	13332	45	13296	02901
15980	DSA2	CM LNTH, 0050	13344	14	02387	-0050
15990	BH	ERDSA	13356	46	13484	01100
16000	TF	ADDRS, ADDCOW	13368	26	03293	02529
16010	AM	ADDRS, 5, 10	13380	11	03293	000-5
16020	A	ADDCOW, LNTH	13392	21	02529	02387
16030	TDM	INPUT2, 1	13404	15	03034	00001
16040	BNF	DAC3-32, ZEPD+28	13416	44	11972	02328
16050	AM	ADDCOW, 19,10	13428	11	02529	000J9
16060	SM	ADDRS, 5	13440	12	03293	-0005
16070	TDM	INPUT2, 0,11	13452	15	03034	0000-
16080	BTM	CTEST, **+12	13464	17	07426	J3476
16090	B	LDLBL	13476	49	08390	00000
16100	DDRG	**+3	13484			
16110	ERDSA	TFM EVALER-1,60000	13484	16	07041	00000
16120	DC	1,*,*	13495		1	
16130	BT	EPRINT,EPRINT-1	13496	27	07322	07321
16140	BD	ERCOR, ERSTSW	13508	43	07178	02476

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16150	TFM	LNTH, 00050	13520	16	02387	-0050
16160	B7	DSA2+24	13532	49	13368	
16170	*					
16180	*	OPERATION CODE TABLE				
16190	*					
16200	A	DC 5,41210,, ADD	A	13543	5	
		M1210				
16210		DC 5,62220,, SUBTRACT	S	13548	5	
		Q2220				
16220		DC 5,54230,, MULTIPLY	M	13553	5	
		N4230				
16230		DC 5,44290,, DIVIDE	D	13558	5	
		M4290				
16240		DC 5,43240,, COMPARE	C	13563	5	
		M3240				
16250		DC 5,42490,, BRANCH	B	13568	5	
		M2490				
16260		DC 5,52340,, CONTROL	K	13573	5	
		N2340				
16270		DC 5,48480,, HALT	H	13578	5	
		M8480				
16280		DC 5,60000,, DUMMY OP CODE		13583	5	
		Q0000				
16290	AENDX	DC 5,60000,, DUMMY OP CODE		13588	5	
		Q0000				
16300	B	DC 7,4154110,, ADD IMMEDIATE	AM	13595	7	
		M154110				
16310		DC 7,6254120,, SUBTRACT IMMEDIATE	SM	13602	7	
		Q254120				
16320		DC 7,4267610,, BRANCH AND MODIFY INDEX	BX	13609	7	
		M267610				
16330		DC 7,5454130,, MULTIPLY IMMEDIATE	MM	13616	7	
		N454130				
16340	XB7	DC 7,4277490,, 7-CHAR. BRANCH	B7	13623	7	
		M277490				
16350		DC 7,4354140,, COMPARE IMMEDIATE	CM	13630	7	
		M354140				
16360		DC 7,6344250,, TRANSMIT DIGIT	TD	13637	7	
		Q344250				
16370		DC 7,6346260,, TRANSMIT FIELD	TF	13644	7	
		Q346260				
16380		DC 7,6359310,, TRANSMIT RECORD	TR	13651	7	
		Q359310				
16390		DC 7,4263270,, BRANCH AND TRANSMIT	BT	13658	7	
		M263270				
16400		DC 7,4242420,, BRANCH BACK	BB	13665	7	
		M242420				
16410		DC 7,6246320,, SET FLAG	SF	13672	7	
		Q246320				
16420		DC 7,4346330,, CLEAR FLAG	CF	13679	7	
		M346330				
16430		DC 7,5446710,, MOVE FLAG	MF	13686	7	
		N446710				
16440		DC 7,5441700,, MOVE ADDRESS	MA	13693	7	
		N441700				
16450		DC 7,4244430,, BRANCH DIGIT	BD	13700	7	
		M244430				

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16460	DC 7,4262600,,	BRANCH AND SELECT	BS	13707	7
	M262600				
16470	DC 7,4249460,,	BRANCH INDICATOR	BI	13714	7
	M249460				
16480	DC 7,4253137,,	BRANCH LOW	BL	13721	7
	M253137				
16490	DC 7,4255137,,	BRANCH NEGATIVE	BN	13728	7
	M255137				
16500	DC 7,4248116,,	BRANCH HIGH	BH	13735	7
	M248116				
16510	DC 7,4257116,,	BRANCH POSITIVE	BP	13742	7
	M257116				
16520	DC 7,4245126,,	BRANCH EQUAL	BE	13749	7
	M245126				
16530	DC 7,4269126,,	BRANCH ZERO	BZ	13756	7
	M269126				
16540	DC 7,4265146,,	BRANCH OVERFLOW	BV	13763	7
	M265146				
16550	DC 7,4241196,,	BRANCH ANY DATA CHECK	BA	13770	7
	M241196				
16560	DC 7,-4256704,,	BRANCH OUT, LOAD IR3	BO	13777	7
	M256704				
16570 XDS	DC 7,4462015,,	DEFINE SYMBOL	DS	13784	7
	M462015				
16580	DC 7,-4443005,,	DEFINE CONSTANT	DC	13791	7
	M443005				
16590	DC 7,-4641031,,	FLOATING ADD SUB.	FA	13798	7
	M641031				
16600	DC 7,-4662021,,	FLOATING SUBTRACT SUB.	FS	13805	7
	M662021				
16610	DC 7,-4654041,,	FLOATING MULTIPLY SUB.	FM	13812	7
	M654041				
16620	DC 7,-4644051,,	FLOATING DIVIDE SUB.	FD	13819	7
	M644051				
16630	DC 7,5344280,,	LOAD DIVIDEND	LD	13826	7
	N344280				
16640	DC 7,4454190,,	DIVIDE IMMEDIATE	DM	13833	7
	M454190				
16650	DC 7,-6241412,,	SELECT ADDRESS	SA	13840	7
	O241412				
16660	DC 7,-5452614,,	MASK INTERRUPTS	MK	13847	7
	N452614				
16670	DC 7,6252412,,	SEEK	SK	13854	7
	O252412				
16680	DC 7,5955360,,	READ NUMERICALLY	RN	13861	7
	N955360				
16690	DC 7,5941370,,	READ ALPHAMERICALLY	RA	13868	7
	N941370				
16700	DC 7,4455350,,	DUMP NUMERICALLY	DN	13875	7
	M455350				
16710	DC 7,6655380,,	WRITE NUMERICALLY	WN	13882	7
	O655380				
16720	DC 7,6641390,,	WRITE ALPHAMERICALLY	WA	13889	7
	O641390				
16730	DC 7,-4444263,,	DEFINE DISK	DD	13896	7
	M444263				

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16740	DC 7,6060000,,	DUMMY OP CODE		13903	7
	O060000				
16750	DC 7,6060000,,	DUMMY OP CODE		13910	7
	O060000				
16760	DC 7,6060000,,	DUMMY OP CODE		13917	7
	O060000				
16770 BENDX	DC 7,6060000,,	DUMMY OP CODE		13924	7
	O060000				
16780 C	DC 9,634654160,,	TRANSMIT FIELD IMMEDIATE	TFM	13933	9
	O34654160				
16790	DC 9,634454150,,	TRANSMIT DIGIT IMMEDIATE	TDM	13942	9
	O34454150				
16800	DC 9,425546440,,	BRANCH NO FLAG	BNF	13951	9
	M25546440				
16810	DC 9,425559450,,	BRANCH NO RECORD MARK	BNR	13960	9
	M25559450				
16820	DC 9,425549470,,	BRANCH NO INDICATOR	BNI	13969	9
	M25549470				
16830	DC 9,425548117,,	BRANCH NOT HIGH	BNH	13978	9
	M25548117				
16840	DC 9,425557117,,	BRANCH NOT POSITIVE	BNP	13987	9
	M25557117				
16850	DC 9,425545127,,	BRANCH NOT EQUAL	BNE	13996	9
	M25545127				
16860	DC 9,425569127,,	BRANCH NOT ZERO	BNZ	14005	9
	M25569127				
16870	DC 9,425553136,,	BRANCH NOT LOW	BNL	14014	9
	M25553136				
16880	DC 9,425555136,,	BRANCH NOT NEGATIVE	BNN	14023	9
	M25555136				
16890	DC 9,424367630,,	BRANCH COND. AND MODIFY XR	BCX	14032	9
	M24367630				
16900	DC 9,426754620,,	BRANCH AND MODIFY INDEX IMM.	BXM	14041	9
	M26754620				
16910	DC 9,425367650,,	BRANCH AND LOAD XR	BLX	14050	9
	M25367650				
16920	DC 9,426267670,,	BRANCH AND STORE XR	BSX	14059	9
	M26267670				
16930	DC 9,426765156,,	BRANCH EXPONENT CHECK	BXV	14068	9
	M26765156				
16940	DC 9,425565147,,	BRANCH NO OVERFLOW	BNV	14077	9
	M25565147				
16950	DC 9,425541197,,	BRANCH NOT ANY DATA CHECK	BNA	14086	9
	M25541197				
16960	DC 9,425343096,,	BRANCH LAST CARD	BLC	14095	9
	M25343096				
16970	DC 9,424371016,,	BRANCH CONSOLE SWITCH 1 ON	BC1	14104	9
	M24371016				
16980	DC 9,424372026,,	BRANCH CONSOLE SWITCH 2 ON	BC2	14113	9
	M24372026				
16990	DC 9,424373036,,	BRANCH CONSOLE SWITCH 3 ON	BC3	14122	9
	M24373036				
17000	DC 9,424374046,,	BRANCH CONSOLE SWITCH 4 ON	BC4	14131	9
	M24374046				
17010	DC 9,426354170,,	BRANCH AND TRANSMIT IMM.	BTM	14140	9
	M26354170				

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17020	XBB2	DC 9,424272420,,	2-CHAR. BRANCH BACK	BB2	14149	9
		M24272420				
17030		DC 9,-645452604,,	UNMASK INTERRUPTS	UMK	14158	9
		Q4545260M				
17040		DC 9,555657410,,	NO OPERATION	NOP	14167	9
		N55657410				
17050		DC 9,-444965011,,	DIVIDE SUB.	DIV	14176	9
		M4496501J				
17060		DC 9,-464567111,,	FLOATING NATURAL EXP. SUB.	FEX	14185	9
		M6456711J				
17070		DC 9,-465355131,,	FLOATING NATURAL LOG. SUB.	FLN	14194	9
		M6535513J				
17080		DC 9,-635941003,,	TRANSFER TO LOAD	TRA	14203	9
		O3594100L				
17090	XDSS	DC 9,446262115,,	DEFINE SPECIAL SYMBOL	DSS	14212	9
		M46262115				
17100		DC 9,-446243105,,	DEFINE SPECIAL CONSTANT	DSC	14221	9
		M4624310N				
17110	XDAS	DC 9,-444162145,,	DEFINE ALPHA SYMBOL	DAS	14230	9
		M4416214N				
17120		DC 9,-444143125,,	DEFINE ALPHA CONSTANT	DAC	14239	9
		M4414312N				
17130		DC 9,-446241035,,	DEFINE SYMBOLIC ADDRESS	DSA	14248	9
		M4624103N				
17140		DC 9,-446242065,,	DEFINE SYMBOLIC BLOCK	DSB	14257	9
		M4624206N				
17150		DC 9,445542005,,	DEFINE NUMERIC BLANK	DNB	14266	9
		M45542005				
17160		DC 9,-444754075,,	DEFINE GROUP MARK	DGM	14275	9
		M44754075				
17170		DC 9,425547550,,	BRANCH NO GROUP MARK	BNG	14284	9
		M25547550				
17180		DC 9,634344018,,	TRANSFER TO PROCESS	TCD	14293	9
		O34344018				
17190		DC 9,425659401,,	BRANCH OUTPUT RECORD MARK	BOR	14302	9
		M25659401				
17200		DC 9,425945411,,	BRANCH END OF RECORD	BRE	14311	9
		M25945411				
17210		DC 9,425443421,,	BRANCH MODE SHIFT	BMC	14320	9
		M25443421				
17220		DC 9,424959441,,	BRANCH READ INPUT READY	BIR	14329	9
		M24959441				
17230		DC 9,424342461,,	BRANCH SIOC CHANNEL BUSY	BCB	14338	9
		M24342461				
17240		DC 9,624156840,,	SELECT ADDRESS AND OPERATE	SAO	14347	9
		O24156840				
17250		DC 9,596355662,,	READ DISK TRACK NUM. W/O GP. MK.	RTN	14356	9
		N96355662				
17260		DC 9,594455622,,	READ DISK WITHOUT GROUP MARK	RDN	14365	9
		N94455622				
17270		DC 9,666355862,,	WRITE DISK TRACK NUM. W/O GP. MK.	WTN	14374	9
		O66355862				
17280		DC 9,664455822,,	WRITE DISK WITHOUT GROUP MARK	WDN	14383	9
		O64455822				
17290		DC 9,436355672,,	CHECK DISK TRACK NUM. W/O GP. MK.	CTN	14392	9
		M36355672				

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17300		DC 9,434455632,,	CHECK DISK WITHOUT GROUP MARK	CDN	14401	9
		M34455632				
17310		DC 9,634653060,,	TRANSMIT FLOATING	TFL	14410	9
		O34653060				
17320		DC 9,466253050,,	FLOATING SHIFT LEFT	FSL	14419	9
		M66253050				
17330		DC 9,466259080,,	FLOATING SHIFT RIGHT	FSR	14428	9
		M66259080				
17340		DC 9,635562720,,	TRANSMIT NUMERIC STRIP	TNS	14437	9
		O35562720				
17350		DC 9,635546730,,	TRANSMIT NUMERIC FILL	TNF	14446	9
		O35546730				
17360		DC 9,565946920,,	OR TO FIELD	ORF	14455	9
		N65946920				
17370		DC 9,566344960,,	OCTAL TO DECIMAL CONV.	OTD	14464	9
		N66344960				
17380		DC 9,446356970,,	DECIMAL TO OCTAL CONV.	DTO	14473	9
		M46356970				
17390	BBTX	DC 9,424263900,,	BRANCH ON BIT	BBT	14482	9
		M24263900				
17400	BMKX	DC 9,425452910,,	BRANCH ON MASK	BMK	14491	9
		M25452910				
17410		DC 9,-445663285,,	DEFINE OCTAL TABLE	DOT	14500	9
		M4566328N				
17420		DC 9,-444441073,,	DEFINE DISK ADDRESS	DDA	14509	9
		M4444107L				
17430		DC 9,534454180,,	LOAD DIVIDEND IMMEDIATE	LDM	14518	9
		N34454180				
17440		DC 9,-474563013,,	IOCS READ	GET	14527	9
		M7456301L				
17450		DC 9,-576463023,,	IOCS WRITE	PUT	14536	9
		N7646302L				
17460		DC 9,-446355053,,	DEFINE TYPEWRITER NUMERIC	DTN	14545	9
		M4635505L				
17470		DC 9,-444355253,,	DEFINE CARD NUMERIC	DCN	14554	9
		M4435525L				
17480		DC 9,-446341353,,	DEFINE TYPEWRITER ALPHA	DTA	14563	9
		M4634135L				
17490		DC 9,-444341553,,	DEFINE CARD ALPHA	DCA	14572	9
		M4434155L				
17500		DC 9,-444466063,,	DEFINE DISK WITH WLRC	DDW	14581	9
		M4446606L				
17510		DC 9,426341200,,	BRANCH AND TRANSMIT ADDRESS	BTA	14590	9
		M26341200				
17520		DC 9,606060000,,	DUMMY OP CODE		14599	9
		O06060000				
17530		DC 9,606060000,,	DUMMY OP CODE		14608	9
		O06060000				
17540		DC 9,606060000,,	DUMMY OP CODE		14617	9
		O06060000				
17550		DC 9,606060000,,	DUMMY OP CODE		14626	9
		O06060000				
17560	CENDX	DC 9,606060000,,	DUMMY OP CODE		14635	9
		O06060000				
17570	D	DC 11,42554371017,,	BRANCH CONSOLE SWITCH 1 OFF	BNC1	14646	11
		M2554371017				

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17580	DC 11,42554372027,, M2554372027	BRANCH CONSOLE SWITCH 2 OFF	BNC2	14657	11
17590	DC 11,42554373037,, M2554373037	BRANCH CONSOLE SWITCH 3 OFF	BNC3	14668	11
17600	DC 11,42554374047,, M2554374047	BRANCH CONSOLE SWITCH 4 OFF	BNC4	14679	11
17610	DC 11,42555343097,, M2555343097	BRANCH NOT LAST CARD	BNLC	14690	11
17620	DC 11,42556765157,, M2556765157	BRANCH NOT EXPONENT CHECK	BNXV	14701	11
17630	DC 11,63595554300,, O3595554300	TRANSMIT RECORD NO RECORD MARK	TRNM	14712	11
17640	DC 11,42436754640,, M2436754640	BRANCH COND. MODIFY XR IMMED.	BCXM	14723	11
17650	DC 11,42536754660,, M2536754660	BRANCH AND LOAD XR IMMEDIATE	BLXM	14734	11
17660	DC 11,42424162316,, M2424162316	BRANCH BAND A SELECTED	BBAS	14745	11
17670	DC 11,42424262326,, M2424262326	BRANCH BAND B SELECTED	BBBS	14756	11
17680	DC 11,42554262306,, M2554262306	BRANCH NEITHER BAND SELECTED	BNBS	14767	11
17690	DC 11,42419562317,, M2419562317	BRANCH BAND A NOT SELECTED	BANS	14778	11
17700	DC 11,42425562327,, M2425562327	BRANCH BAND B NOT SELECTED	BBNS	14789	11
17710	DC 11,42454262307,, M2454262307	BRANCH EITHER BAND SELECTED	BEBS	14800	11
17720	DC 11,42624241109,, M2624241109	BRANCH AND SELECT BAND A	BSBA	14811	11
17730	DC 11,42624242209,, M2624242209	BRANCH AND SELECT BAND B	BSBB	14822	11
17740	DC 11,42624941909,, M2624941909	BRANCH AND SELECT INDIRECT ADDR	BSIA	14833	11
17750	DC 11,42625549809,, M2625549809	BRANCH AND SELECT NO IND ADDR	BSNI	14844	11
17760	DC 11,42625567009,, M2625567009	BRANCH AND SELECT NO INDEX	BSNX	14855	11
17770	DC 11,59556368613,, N9556368613	READ NUMERIC TYPEWRITER	RNTY	14866	11
17780	DC 11,5955763633,, N955763633	READ NUMERIC PAPER TAPE	RNPT	14877	11
17790	DC 11,66556368813,, O6556368813	WRITE NUMERIC TYPEWRITER	WNTY	14888	11
17800	DC 11,6655763823,, O655763823	WRITE NUMERIC PAPER TAPE	WNPT	14899	11
17810	DC 11,44556368513,, M4556368513	DUMP NUMERIC TYPEWRITER	DNTY	14910	11
17820	DC 11,4455763523,, M455763523	DUMP NUMERIC PAPER TAPE	DNPT	14921	11
17830	DC 11,59416368713,, N9416368713	READ ALPHA TYPEWRITER	RATY	14932	11
17840	DC 11,59415763733,, N9415763733	READ ALPHA PAPER TAPE	RAPT	14943	11
17850	DC 11,66416368913,, O6416368913	WRITE ALPHA TYPEWRITER	WATY	14954	11

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17860	DC 11,66415763923,, O6415763923	WRITE ALPHA PAPER TAPE	WAPT	14965	11
17870	DC 11,66414344943,, O6414344943	WRITE ALPHA CARD	WACD	14976	11
17880	DC 11,59414344753,, N9414344753	READ ALPHA CARD	RACD	14987	11
17890	DC 11,44554344543,, M4554344543	DUMP NUMERIC CARD	DNCD	14998	11
17900	DC 11,66554344843,, O6554344843	WRITE NUMERIC CARD	WNCD	15009	11
17910	DC 11,59554344653,, N9554344653	READ NUMERIC CARD	RNCD	15020	11
17920	DC 11,63426368184,, O3426368184	TABULATE TYPEWRITER	TBTY	15031	11
17930	DC 11,59436368124,, N9436368124	RETURN CARRAIGE TYPEWRITER	RCTY	15042	11
17940	DC 11,49676368144,, M9676368144	INDEX TYPEWRITER	IXTY	15053	11
17950	DC 11,62576368114,, O2576368114	SPACE TYPEWRITER	SPTY	15064	11
17960	DC 11,42526368134,, M2526368134	BACKSPACE TYPEWRITER	BKTY	15075	11
17970	DC 11,59634755642,, N9634755642	READ DISK TRACK NUM. W/GP. MK.	RTGN	15086	11
17980	DC 11,59444755602,, N9444755602	READ DISK WITH GROUP MARK	RDGN	15097	11
17990	DC 11,66634755842,, O6634755842	WRITE DISK TRACK NUM. W/GP. MK.	WTGN	15108	11
18000	DC 11,66444755802,, O6444755802	WRITE DISK WITH GROUP MARK	WDGN	15119	11
18010	DC 11,43634755652,, M3634755652	CHECK DISK TRACK NUM. W/GP. MK.	CTGN	15130	11
18020	DC 11,43444755612,, M3444755612	CHECK DISK WITH GROUP MARK	CDGN	15141	11
18030	DC 11,-42556344714,, M256344714	BRANCH OUT, LOAD IRI	BOLD	15152	11
18040	DC 11,-46625859061,, M6625859061	FLOATING SQUARE ROOT SUB.	FSQR	15163	11
18050	DC 11,-46435662071,, M6435662071	FLOATING COSINE SUB.	FCOS	15174	11
18060	DC 11,-46624955081,, M6624955081	FLOATING SINE SUB.	FSIN	15185	11
18070	DC 11,-46416355091,, M6416355091	FLOATING ARCTANGENT SUB.	FATN	15196	11
18080	DC 11,-46456763101,, M6456763101	FLOATING EXP. BASE 10 SUB.	FEXT	15207	11
18090	DC 11,-46535647121,, M6535647121	FLOATING LOG. BASE 10 SUB.	FLOG	15218	11
18100	DC 11,-46625962141,, M6625962141	FLOATING SHIFT RIGHT SUB.	FSRS	15229	11
18110	DC 11,-46625362151,, M6625362151	FLOATING SHIFT LEFT SUB.	FSLS	15240	11
18120	DC 11,-63465362161,, O3465362161	TRANSMIT FLOATING SUB.	TFLS	15251	11
18130	DC 11,46414444010,, M6414444010	FLOATING ADD	FADD	15262	11

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18140	DC	11,46626442020,,	FLOATING SUBTRACT	FSUB	15273	11
		M6626442020				
18150	DC	11,46546453030,,	FLOATING MULTIPLY	FMUL	15284	11
		M6546453030				
18160	DC	11,46444965090,,	FLOATING DIVIDE	FDIV	15295	11
		M6444965090				
18170	DC	11,42634653070,,	BRANCH AND TRANSMIT FLOATING	BTFL	15306	11
		M2634653070				
18180	DC	11,62535955860,,	SELECT READ NUMERICALLY	SLRN	15317	11
		O2535955860				
18190	DC	11,-42634662171,,	BR. AND TRANS. FLOAT. SUB.	BTFS	15328	11
		M263466217J				
18200	DC	11,-44624143025,,	DEFINE SPECIAL ALPHA CONSTANT	DSAC	15339	11
		M462414302N				
18210	DC	11,-44565947015,,	DEFINE ORIGIN	DORG	15350	11
		M456594701N				
18220	XHEAD	DC 11,-48454144385,,	HEAD	HEAD	15361	11
		M845414438N				
18230	DC	11,-62416545007,,	SAVE PRODUCT AREA	SAVE	15372	11
		O241654500P				
18240	DC	11,-59626359017,,	RESTORE PRODUCT AREA	RSTR	15383	11
		N962635901P				
18250	DC	11,42555659401,,	BRANCH NO OUTPUT RECORD MARK	BNOR	15394	11
		M2555659401				
18260	DC	11,42555945411,,	BRANCH NO END OF RECORD	BNRE	15405	11
		M2555945411				
18270	DC	11,42555443421,,	BRANCH NO MODE SHIFT	BNMC	15416	11
		M2555443421				
18280	DC	11,42554959441,,	BRANCH NO READ INPUT READY	BNIR	15427	11
		M2554959441				
18290	DC	11,42435542461,,	BRANCH SIOC CHANNEL NOT BUSY	BCNB	15438	11
		M2435542461				
18300	DC	11,-62534144662,,	SELECT ADC AND INCREMENT	SLAD	15449	11
		O253414466K				
18310	DC	11,-59554943652,,	READ NUMERIC INPUT CHANNEL	RNIC	15460	11
		N955494365K				
18320	DC	11,-62414356422,,	SELECT ADDRESS AND CONTACT OPER.	SACO	15471	11
		O241435642K				
18330	DC	11,-62415662432,,	SEL. ADDRS.AND PROVIDE OUTPUT SIG.	SAOS	15482	11
		O241566243K				
18340	DC	11,-62536341612,,	SELECT TAS	SLTA	15493	11
		O253634161K				
18350	DC	11,-62534159622,,	SELECT ADC REGISTER	SLAR	15504	11
		O253415962K				
18360	DC	11,-62536343642,,	SELECT REAL-TIME CLOCK	SLTC	15515	11
		O253634364K				
18370	DC	11,-62534342672,,	SELECT CONTACT BLOCK	SLCB	15526	11
		O253434267K				
18380	DC	11,-62535445682,,	SELECT MANUAL ENTRY SWITCHES	SLME	15537	11
		O253544568K				
18390	DC	11,-62534943652,,	SELECT INPUT CHANNEL	SLIC	15548	11
		O253494365K				
18400	DC	11,-59414943752,,	READ ALPHA INPUT CHANNEL	RAIC	15559	11
		N941494375K				
18410	DC	11,-66555643852,,	WRITE NUMERIC OUTPUT CHANNEL	WNOC	15570	11
		O655564385K				

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18420	DC	11,-66415643952,,	WRITE ALPHA OUTPUT CHANNEL	WAOC	15581	11
		O641564395K				
18430	DC	11,-59425763736,,	READ BINARY PAPER TAPE	RBPT	15592	11
		N9425763730				
18440	DC	11,-66425763926,,	WRITE BINARY PAPER TAPE	WBPT	15603	11
		O6425763920				
18450	DC	11,43575346940,,	COMPLEMENT OCTAL FIELD	CPLF	15614	11
		M3575346940				
18460	DC	11,41554446930,,	AND TO FIELD	ANDF	15625	11
		M1554446930				
18470	DC	11,45565946950,,	EXCLUSIVE OR TO FIELD	EORF	15636	11
		M5565946950				
18480	DC	11,-43415353033,,	CALL IOCS OR EXEC PKG. ROUTINE	CALL	15647	11
		M341535303L				
18490	DC	11,-62454552043,,	IOCS SEEK DISK	SEEK	15658	11
		O245455204L				
18500	DC	11,-44576341453,,	DEFINE PAPER TAPE ALPHA	DPTA	15669	11
		M457634145L				
18510	DC	11,-44576355153,,	DEFINE PAPER TAPE NUMERIC	DPTN	15680	11
		M457635515L				
18520	DC	11,-44655343185,,	DEFINE VARIABLE LENGTH CONSTANT	DVLC	15691	11
		M465534318N				
18530	DC	11,-44544562085,,	DEFINE MESSAGE	DMES	15702	11
		M454456208N				
18540	DC	11,44455544008,,	DEFINE END	DEND	15713	11
		M4455544008				
18550	DC	11,42634154100,,	BRANCH AND TRANSMIT ADDR. IMMED.	BTAM	15724	11
		M2634154100				
18560	DC	11,60606060606,,	DUMMY OP CODE		15735	11
		O0606060606				
18570	DC	11,60606060606,,	DUMMY OP CODE		15746	11
		O0606060606				
18580	DC	11,60606060606,,	DUMMY OP CODE		15757	11
		O0606060606				
18590	DC	11,60606060606,,	DUMMY OP CODE		15768	11
		O0606060606				
18600	DC	11,60606060606,,	DUMMY OP CODE		15779	11
		O0606060606				
18610	DC	11,60606060606,,	DUMMY OP CODE		15790	11
		O0606060606				
18620	DC	11,60606060606,,	DUMMY OP CODE		15801	11
		O0606060606				
18630	DC	11,60606060606,,	DUMMY OP CODE		15812	11
		O0606060606				
18640	DC	11,60606060606,,	DUMMY OP CODE		15823	11
		O0606060606				
18650	DC	11,60606060606,,	DUMMY OP CODE		15834	11
		O0606060606				
18660	DENDX	DC 11,60606060606,,	DUMMY OP CODE		15845	11
		O0606060606				
18670	FILE	34 FDCF, 00701		15846	34	15894 00701
18680		38 FDCF, 00702		15858	38	15894 00702
18690		TRA		15870	36	00000 00500
				15882	49	00000 00000
18700	FDCF	DDA ,0,A2DAD,A2SCT,INSTRN		15894		14
		OJ8800-58J0132				

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18710	TCD	FILE				15846		
18720	DORG	INSTRN				10132		
18730	MACRO2	TFM	GOODB3+6,BTBL3			10132	16	10174 J0180
18740	TD		GOODB3+11,ZEPO+29			10144	25	10179 02329
18750	A		GOODB3+5,GOODB3+11			10156	21	10173 10179
18760	GOODB3	B	*--,,10			10168	49	00000 000-0
18770	BTBL3	B	TRA,,, 0			10180	49	10258 00000
18780	DDRG		*-1			10190		
18790	B	IOGET,,, +1				10190	49	10338 00000
18800	DDRG		*-1			10200		
18810	B	PUT,,, +2				10200	49	10386 00000
18820	DDRG		*-1			10210		
18830	B	PCALL,,, +3				10210	49	11074 00000
18840	DDRG		*-1			10220		
18850	B	SEEK,,, +4				10220	49	10362 00000
18860	DDRG		*-1			10230		
18870	B	DCARD,,, +5				10230	49	10674 00000
18880	DDRG		*-1			10240		
18890	B	DDWDD,,, +6				10240	49	10862 00000
18900	DDRG		*-1			10250		
18910	B	DDA,,, +7				10250	49	11826 00000
18920	DDRG		*-3			10258		
18930	*	TRANSFER INSTRUCTION ROUTINE						
18940	TRA	TD	**23,ADDCOW			10258	25	10281 02529
18950	TD		**23,AJUST			10270	25	10293 02399
18960	AM		ADDCOW,,10			10282	11	02529 000-0
18970	TF		ADDRS,ADDCOW			10294	26	03293 02529
18980	AM		ADDCOW,41			10306	11	02529 -0041
18990	TFM		INPUT2+1,50, 10 11			10318	16	03035 000N-
19000	B7		MEXIT			10330	49	10622
19010	IOGET	TFM	INPUT2+6,IOGT			10338	16	03040 -0566
19020	BTM		SCAN,PUTSRJ,7 11			10350	17	05164 J055-
19030	SEEK	TFM	INPUT2+6,IOSK			10362	16	03040 -0554
19040	BTM		SCAN,PUTSRJ,7 11			10374	17	05164 J055-
19050	PUT	TFM	INPUT2+6,IOPT			10386	16	03040 -0532
19060	BTM		SCAN,**12,7 11			10398	17	05164 J041-
19070	BTM		MACSHF,PUTSRJ			10410	17	11536 J0550
19080	CM		INPUT+20,59,10			10422	14	02901 000N9
19090	BNE		PUTSRJ			10434	47	10550 01200
19100	BTM		MACSHF,PUTSRJ			10446	17	11536 J0550
19110	CM		INPUT+20,42,10			10458	14	02901 000M2
19120	BNE		PUTSRJ			10470	47	10550 01200
19130	BTM		MACSHF,PUTSRJ			10482	17	11536 J0550
19140	CM		INPUT+20,43,10			10494	14	02901 000M3
19150	BNE		PUTSRJ			10506	47	10550 01200
19160	BTM		MACSHF,**20			10518	17	11536 J0538
19170	B7		PUTSRJ			10530	49	10550
19180	TFM		INPUT2+6,IOBRC			10538	16	03040 -0520
19190	PUTSRJ	TD	**23,ADDCOW			10550	25	10573 02529
19200	TD		**23,AJUST			10562	25	10585 02399
19210	AM		ADDCOW,,10			10574	11	02529 000-0
19220	TF		ADDRS,ADDCOW			10586	26	03293 02529
19230	AM		ADDCOW,23,10			10598	11	02529 000K3
19240	TFM		INPUT2+1,07,10			10610	16	03035 000-7
19250	MEXIT	BTM	CTEST,**12			10622	17	07426 J0634

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19260	TFM		CFFA,NCDCF2			10634	16	02631 J0658
19270	BTM		CFF,LDLBLE			10646	17	02594 -8390
19280	NCDCF2	DDA	,0,A2DAD,A3SCT,INSTRN			10658		14
			QJ8800-22J0132					
19290	DC		1,'			10672		1
			'					
19300	DCARD	TD	INPUT2+6,ZEPO+28			10674	25	03040 02328
19310	TDM		INPUT2+5, 0,11			10686	15	03039 0000-
19320	A		INPUT2+6, INPUT2+6			10698	21	03040 03040
19330	TFM		INPUT2+1,05,10			10710	16	03035 000-5
19340	BTM		SCAN,**12			10722	17	05164 J0734
19350	TD		DCARD+19,BSW			10734	25	10693 07319
19360	TD		LDABSW,RLOCSW			10746	25	07320 07316
19370	TF		TEMPR,ADDRS			10758	26	02572 03293
19380	BTM		TRSCAN,**12,7 11			10770	17	05134 J078K
19390	TF		ADDRS, TEMPR			10782	26	03293 02572
19400	BNF		MEXIT, DCARD+19			10794	44	10622 10693
19410	TDM		LDABSW,1,11			10806	15	07320 0000J
19420	AM		ADDCOW,1,10			10818	11	02529 000-1
19430	TF		ADDRS,ADDCOW			10830	26	03293 02529
19440	AM		ADDCOW,7,10			10842	11	02529 000-7
19450	B7		MEXIT			10854	49	10622
19460	DDWDD	TDM	INPUT2+5,0,11			10862	15	03039 0000-
19470	TD		INPUT2+6,ZEPO+28			10874	25	03040 02328
19480	TFM		INPUT2+1,05,10			10886	16	03035 000-5
19490	BTM		SCAN,**12			10898	17	05164 J0910
19500	TD		DCARD+19,BSW			10910	25	10693 07319
19510	TD		LDABSW,RLOCSW			10922	25	07320 07316
19520	TF		TEMPR,ADDRS			10934	26	02572 03293
19530	BTM		TRSCAN,**12,7 11			10946	17	05134 J0950
19540	BTM		TRSCAN,**12,7 11			10958	17	05134 J097-
19550	TF		ADDRS,TEMPR			10970	26	03293 02572
19560	BNF		MEXIT,DCARD+19			10982	44	10622 10693
19570	TDM		LDABSW,1,11			10994	15	07320 0000J
19580	AM		ADDCOW,1,10			11006	11	02529 000-1
19590	TF		ADDRS,ADDCOW			11018	26	03293 02529
19600	AM		ADDCOW,12,10			11030	11	02529 000J2
19610	BNF		**24,BSW			11042	44	11066 07319
19620	SM		ADDCOW,5,10			11054	12	02529 000-5
19630	B7		MEXIT			11066	49	10622
19640	PCALL	TR	COLL-18,THINGS-20			11074	31	02421 02400
19650	BNR		**20,INPUT+20			11086	45	11106 02901
19660	B7		PCALL1			11098	49	11234
19670	CM		INPUT+20,23,10			11106	14	02901 000K3
19680	BE		PCALL1			11118	46	11234 01200
19690	CM		INPUT+20,00,10			11130	14	02901 000-0
19700	BE		PCTR			11142	46	11214 01200
19710	TF		COLL,INPUT+20			11154	26	02439 02901
19720	CF		COLL-1			11166	33	02438 00000
19730	TR		COLL-17,COLL-15			11178	31	02422 02424
19740	CM		COLL-17,7,10			11190	14	02422 000-7
19750	BE		ER22			11202	46	11406 01200
19760	PCTR	TR	INPUT+19,INPUT+21			11214	31	02900 02902
19770	B7		PCALL+12			11226	49	11086
19780	PCALL1	CM	COLL-17,06,10			11234	14	02422 000-6
19790	BE		**44			11246	46	11290 01200

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19800	TDM	COLL,0	11258	15	02439	00000
19810	TR	COLL-17,COLL-15	11270	31	02422	02424
19820	B7	PCALL1	11282	49	11234	
19830	SF	COLL-13	11290	32	02426	00000
19840	TFM	PCC+11,CLTBL+10-18	11302	16	11361	J1471
19850	PCLP1	AM PCC+11,18,10	11314	11	11361	000J8
19860	CM	PCC+11,CLTBL+10+3+18	11326	14	11361	J1543
19870	BNL	ER22	11338	46	11406	01300
19880	PCC	C COLL-2,-**	11350	24	02437	00000
19890	BNE	PCLP1	11362	47	11314	01200
19900	AM	PCC+11,5,10	11374	11	11361	000-5
19910	SF	PCC+11	11386	32	11361	00000
19920	B7	PCC+11,,6	11398	49	1136J	
19930	ER22	TFM EVALER-1,27200	11406	16	07041	K7200
19940	DC	1,,*	11417		1	
19950	BT	EPRINT,EPRINT-1	11418	27	07322	07321
19960	BD	ERCOR, ERSTSW	11430	43	07178	02476
19970	TFM	INPUT2+4,06000	11442	16	03038	-6000
19980	TFM	CFFA,NCDCF2	11454	16	02631	J0658
19990	BTM	CFF,SNDFCO	11466	17	02594	-8414
20000	CLTBL	DAC 6,LINK ***	11479		6 X	2
	LINK					
20010	DSA	CLLINK	11494		5 X	1
20020	DAC	6,LOAD ***	11494		J1618	
	LOAD		11497		6 X	2
20030	DSA	CLLOAD	11512		5 X	1
20040	DAC	6,EXIT ***	11512		J1618	
	EXIT		11515		6 X	2
20050	DSA	CALLEX	11530		5 X	1
20060	DS	5	11530		J1746	
20070	MACSHF	TR INPUT+19,INPUT+21	11535		5	
20080	BNR	**20,INPUT+20	11536	31	02900	02902
20090	B7	MACSHF-1,,6	11548	45	11568	02901
20100	CM	INPUT+20,23,10	11560	49	1153N	
20110	BE	MACSHF-1,,6	11568	14	02901	000K3
20120	C	CLERER+1,INPUT+20	11580	46	1153N	01200
20130	BE	MACSHF	11592	24	02694	02901
20140	BB 2		11604	46	11536	01200
20150	CLLINK	DS **1	11616	42		
20160	CLLOAD	TD **23,ADDCOW	11618		0	
20170	TD	**23,AJUST	11618	25	11641	02529
20180	AM	ADDCOW,,10	11630	25	11653	02399
20185	BTM	TRSCAN,**12,7 11	11642	11	02529	000-0
20190	BTM	TRSCAN,**12,7 11	11654	17	05134	J1660
20200	TF	ADDRS,ADDCOW	11666	17	05134	J1670
20210	AM	ADDCOW,31,10	11678	26	03293	02529
20220	BNF	**24,BSW	11690	11	02529	000L1
20230	SM	ADDCOW,5,10	11702	44	11726	07319
20240	TFM	INPUT2+1,05,10	11714	12	02529	000-5
			11726	16	03035	000-5

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20250	B7	MEXIT	11738	49	10622	
20260	CALLEX	TD **23,ADDCOW	11746	25	11769	02529
20270	TD	**23,AJUST	11758	25	11781	02399
20280	AM	ADDCOW,00,10	11770	11	02529	000-0
20290	TF	ADDRS,ADDCOW	11782	26	03293	02529
20300	TFM	INPUT2+1,04,10	11794	16	03035	000-4
20310	AM	ADDCOW,6,10	11806	11	02529	000-6
20320	B7	MEXIT	11818	49	10622	
20330	DDA	BTM SCAN,**12	11826	17	05164	J1838
20340	SF	DDA	11838	32	11826	00000
20350	BD	**36,BSW	11850	43	11886	07319
20360	TD	LDABSW,RLDCSW	11862	25	07320	07316
20370	CF	DDA	11874	33	11826	00000
20380	TF	DDA+23,ADDRS	11886	26	11849	03293
20390	BTM	TRSCAN,**12,7 11	11898	17	05134	J191-
20400	BTM	TRSCAN,**12,7 11	11910	17	05134	J192K
20410	BTM	TRSCAN,**12,7 11	11922	17	05134	J193M
20420	BTM	TRSCAN,**12,7 11	11934	17	05134	J1940
20430	TFM	INPUT2+1,060,9 11	11946	16	03035	00-6-
20440	TF	ADDRS,DDA+23	11958	26	03293	11849
20450	BNF	DDAX,DDA	11970	44	12042	11826
20460	TD	**23,ADDCOW	11982	25	12005	02529
20470	TD	**23,AJUST	11994	25	12017	02399
20480	AM	ADDCOW,00,10	12006	11	02529	000-0
20490	TF	ADDRS,ADDCOW	12018	26	03293	02529
20500	AM	ADDCOW,13,10	12030	11	02529	000J3
20510	DDAX	TFM CFFA,NCDCF2	12042	16	02631	J0658
20520	B7	MEXIT	12054	49	10622	
20530	C62S	DC 2,62	12062		2	
20540	C66W	DC 2,66	12064		2	
20550	C41A	DC 2,41	12066		2	
20560	FM	34 FMDCF,00701	12068	34	12116	00701
20570	38	FMDCF,00702	12080	38	12116	00702
20580	TRA		12092	36	00000	00500
			12104	49	00000	00000
20590	FMDCF	DDA ,0,A3DAD,A3SCT,INSTRN	12116		14	
		OJ8861-22J0132				
20600	TCD	FM	12068			
20610	*					
20620	*	DEFINE MESSAGE				
20630	*					
20640	DORG	INSTRN	10132			
20650	DECL2	TD XRA6-1,ZEPO+28	10132	25	00333	02328
20660	B7	DECTAB(6)	10144	49	1-J52	
20670	DECTAB	B DMES,,, +0	10152	49	10530	00000
20680	DORG	B *-1	10162			
20690	B	DVLC,,, +1	10162	49	11876	00000
20700	DORG	B *-1	10172			
20710	B	DOT,,, +2	10172	49	12312	00000
20720	DORG	B *-1	10182			
20730	B	HEADER,,,+3	10182	49	12676	00000
20740	DORG	B *-3	10190			

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20750	* ANALYZE	CONTROL CHARACTER, SUBROUTINE ANAL					
20760	ANAL	CM	INPUT+24,4,10, 1ST CHECK IF RIGHT PAREN IS PRESENT	10190	14	02905	000-4
20770		BNE	ANAL1+12,,, NO LEFT PAREN, ERROR	10202	47	10262	01200
20780		TF	ANAL1+11,INPUT+22,,MOVE CHARACTER TO ANOTHER LOCATION	10214	26	10261	02903
20790		TR	INPUT+19,INPUT+23,, POSITION INPUT RECORD	10226	31	02900	02904
20800		CM	ANAL1+11,44,10,IS IT A D	10238	14	10261	000M4
20810	ANAL1	BNE	ANAL2,,10, NOT A D, MAY BE GOOD	10250	47	10342	012-0
20820		TFM	EVALER-1,17400,,IT IS A D, ERROR	10262	16	07041	J7400
20830		DC	1,,'*	10273		1	
20840		CF	ANAL,,, RESET STRAY PAREN SWITCH	10274	33	10190	00000
20850		BT	EPRINT,EPRINT-1,, PRINT ERROR MESSAGE	10286	27	07322	07321
20860		BD	ERCOR, ERSTSW	10298	43	07178	02476
20870	ANL14	CM	DTR-1,DMESC,, BRANCH TO READ NEXT CHAR	10310	14	11691	J0850
20880		BE	DMSB1,,, SCANNING FOR ALPHA MODE	10322	46	10806	01200
20890		B	DMSNUM	10334	49	10910	00000
20900		DORG	=-3	10342			
20910	ANAL2	CM	ANAL1+11,41,10, CHECK TO SEE IF CHARACTER LFE BETWEEN A+F	10342	14	10261	000M1
20920		BL	ANAL1+12,,, NO IF BRANCH FROM HERE	10354	47	10262	01300
20930		CM	ANAL1+11,47,10, MAY BE CHECK FURTHER	10366	14	10261	000M7
20940		BL	ANL14,,, OKAY	10378	47	10310	01300
20950		CM	ANAL1+11,54,10, CHECK REST OF CHARACTERS SERIALY	10390	14	10261	000M4
20960		BNE	ANAL3,,, NOT A MODE CHANGE	10402	47	10446	01200
20970		CM	DTR-1,DMESC,, MODE CHANGE SET UP BRANCH	10414	14	11691	J0850
20980		BE	DMSNUM,,, CHANGING FROM ALPHA TO NUMERIC	10426	46	10910	01200
20990		B	DMS2,,, CHANGING FROM NUMERIC TO ALFA	10438	49	11086	00000
21000		DORG	=-3	10446			
21010	ANAL3	CM	ANAL1+11,57,10, CHK FOR P	10446	14	10261	000N7
21020		BE	ANL14,,, LEAVE SUBROUTINE	10458	46	10310	01200
21030		CM	ANAL1+11,52,10, CHECK FOR R,S,,T	10470	14	10261	000N2
21040		BL	ANAL1+12,,, ERROR IF BRANCH	10482	47	10262	01300
21050		CM	ANAL1+11,63,10,	10494	14	10261	000O3
21060		BH	ANAL1+12,,, ERROR IF BRANCH	10506	46	10262	01100
21070		B	ANL14,,, OKAY, R,S, OR T	10518	49	10310	00000
21080	ANAL4	DS	ANAL1+12	10262		0	
21090	* PHASE	A	DMES PROCESSOR				
21100	DMES	BTM	SCAN,++12	10530	17	05164	J0542
21110		TF	DIGITS,CLERER+2,, CLEAR DIGIT COUNT	10542	26	02692	02695
21120		TFM	DTR-1,DMESC,, SET SWITCH TO HANDLE POSSIBLE ERROR	10554	16	11691	J0850
21130		BNR	++2,,INPUT+20,,CHECK IF BREAKER A RM	10566	45	10590	02901
21140		B	DMSRM,,, BREAKER A RM, ERROR, INSERT NUM END MESSAGE	10578	49	11302	00000
21150		TDM	SMODE,,, INITIALIZE STARTING MODE SWITCH	10590	15	03384	00000
21160		BNF	DMS1, BSW,, PROGRAMMER SPECIFIES ADDRESS	10602	44	10626	07319
21170		TF	ADDRS,ADDCOW,, NO, MOVE LOCATION COUNTER INTO ADDRESS LOC	10614	26	03293	02529
21180	DMES1	TFM	MODE1+6,DMSMNI,,, INITIALIZE BRANCH IN SUBROUTINE MODE	10626	16	11632	J0874
21190		BTM	MODE,++12,, FIND MODE	10638	17	11578	J0650
21200		CM	INPUT+20,41,10, SEE IF ALPHA MODE	10650	14	02901	000M1
21210		BE	DMSALF,,, STARTING MODE ALPHA IF BRANCH.	10662	46	10710	01200
21220		TFM	EVALER-1,17300,,ILLEGAL STARTING MODE CHARACTER,	10674	16	07041	J7300
21230		DC	1,,'*	10685		1	
21240		BT	EPRINT,EPRINT-1,,PRINT ERROR MESSAGE	10686	27	07322	07321
21250		BD	ERCOR, ERSTSW	10698	43	07178	02476
21260	DMSALF	BNF	DMESA,BSW,, SEE OF PROGRAMMER SPEC ADDRESS	10710	44	10782	07319
21270		TD	++23,ADDCOW,, NO, ADJUST ADDRESS + LOC COUNTER	10722	25	10745	02529
21280		TD	++23,JSTBL	10734	25	10757	02459

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21290	AM	ADDCOW,,10		10746	11	02529	000-0
21300	TF	ADDRS,ADDCOW,, SET ADDRESS OF MESSAGE TO 2ND DIGIT		10758	26	03293	02529
21310	SM	ADDCOW,2,10, SET LOC. COUNTER TO LOC BEFORE MESSAGE		10770	12	02529	000-2
21320	DMESA	TFM	MODE1+6,DMSB1,,, SET-UP BRANCH INST IN SUBROUTINE MODE	10782	16	11632	J0806
21330		BTM	MODE,MODE,,SEARCH FOR COMMA	10794	17	11578	J1578
21340	DMSB1	BTM	DTR,DMESC,, SCAN MESSAGE OPERAND	10806	17	11692	J0850
21350		AM	DIGITS,4,10, LEFT PAREN FOUND, UPDATE DIGIT COUNT BY 4	10818	11	02692	000-4
21360		BNF	ANAL,ANAL,, STRAY PAREN NOT FOUND IF BRANCH	10830	44	10190	10190
21370		B	ANAL4	10842	49	10262	00000
21380		DORG	=-3	10850			
21390	DMESC	AM	DIGITS,2,10, UPDATE DIGIT COUNT BY 2	10850	11	02692	000-2
21400		B	DMSB1	10862	49	10806	00000
21410	DMSMNI	TDM	SMODE,1,10, SET SWITCH FOR ALPHA STARTING MODE	10874	15	03384	000-1
21420		BNF	DMSNUM,BSW,, CHECK IF PROG SPECIFIED ADDRESS	10886	44	10910	07319
21430		AM	ADDRS,1,10, PROCESSOR ASSIGNED, INCREASE ADDRESS	10898	11	03293	000-1
21440	DMSNUM	BTM	DTR,DMES11,,SCAN MESSAGE OPERAND	10910	17	11692	J0966
21450		BNF	DIGITS,2,10, LEFT PAREN FOUND	10922	11	02692	000-2
21460		B	ANAL,ANAL,, STRAY PAREN NOT FOUND IF BRANCH	10934	44	10190	10190
21470		B	ANAL4	10946	49	10262	00000
21480		DORG	=-3	10954			
21490		DC	1,,'*	10953		1	
21500		BT	EPRINT, EPRINT-1	10954	27	07322	07321
21510	DMES11	CM	INPUT+20,79,,CHECK TO SEE IF CHAR NUMERIC	10966	14	02901	-0079
21520		BH	DMSER2,,, NOT NUMERIC, ERROR	10978	46	11512	01100
21530		CM	INPUT+20,69,10	10990	14	02901	000O9
21540		BH	DMS12,,,NUMERIC IF BRANCH	11002	46	11062	01100
21550		CM	INPUT+20,50,10, CHECK IF -0THRU-9	11014	14	02901	000N0
21560		BL	DMSER2,,, NON-NUMERIC IF BRANCH	11026	47	11512	01300
21570		CM	INPUT+20,59,10	11038	14	02901	000N9
21580		BH	DMSER2,,, NOT NUMERIC IF BRANCH	11050	46	11512	01100
21590	DMS12	AM	DIGITS,1,10, UPDATE DIGIT COUNT BY ONE	11062	11	02692	000-1
21600		B	DMSNUM	11074	49	10910	00000
21610	* CHECK TO	SEE IF ALPHA WILL START IN EVEN LOCATION					
21620	* LOCATION	DMSV CONTAINS LOC OF LAST DIGIT STORED,					
21630	DMES2	TF	DMSV,DIGITS,, INITIALIZE IT WITH DIGIT COUNT.	11086	26	03260	02692
21640		BNF	DMES21, BSW,, SEE OF PROGRAMMER SPEC ADDRESS	11098	44	11134	07319
21650		A	DMSV,ADDCOW,, NO, ADD LOC COUNTER	11110	21	03260	02529
21660		B	DMES22	11122	49	11182	00000
21670	DMES21	A	DMSV,ADDRS,, ADD PROG SPEC ADDRESS	11134	21	03260	03293
21680		SM	DMSV,1,10, ADJUST FOR NUMERIC STARTING MODE	11146	12	03260	000-1
21690		BD	++24,SMODE,, CHECK STARTING MODE	11158	43	11182	03384
21700		SM	DMSV,1,10, ADJUST FOR ALPHA STARTING MODE	11170	12	03260	000-1
21710	DMES22	TD	++23,DMSV	11182	25	11205	03260
21720		TD	DMSEND-1,EVODD,,	11194	25	11277	02469
21730		BD	DMSB1,DMSEND-1,,WILL START IN EVEN	11206	43	10806	11277
21740		TFM	EVALER-1,17600,, ODD ERROR, PRINT ERROR MESSAGE	11218	16	07041	J7600
21750		DC	1,,'*	11229		1	
21760		BT	EPRINT,EPRINT-1	11230	27	07322	07321
21770		BD	ERCOR, ERSTSW	11242	43	07178	02476
21780		AM	DIGITS,1,10,ALLOW FOR -	11254	11	02692	000-1
21790		B	DMSB1	11266	49	10806	00000
21800	DMSEND	CM	DIGITS,,9, SEE IF NO DIGITS ACCUMULATED	11278	14	02692	000-0
21810		BH	++36,, NO ZERO, OKAY	11290	46	11326	01100
21820	DMSRM	AM	DIGITS,100,9	11302	11	02692	00J00

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21830	B	DMSER1,,,	ERROR IF BRANCH, NO DIGITS	11314	49	11462	00000	
21840	TFM	INPUT2+1, 070,9	11	11326	16	03035	00-7-	
21850	TF	INPUT2+6, DIGITS		11338	26	03040	02692	
21860	BNF	**24, BSW		11350	44	11374	07319	
21870	A	ADDCOW,DIGITS,,	UPDATE LOCATION COUNTER BY MESSAGE SIZE	11362	21	02529	02692	
21880	DECLRN	BTM	CTEST,**12	11374	17	07426	J1386	
21890	TFM	CFFA,NCDCF		11386	16	02631	J1410	
21900	BTM	CFF,LDL8L		11398	17	02594	-8390	
21910	NCDCF	DDA	,0,A2DAD,A4SCT,INSTRN	11410		14		
21920	DC	1,*,*		11424		1		
21930	TFM	DIGITS,100,9,	SET DIGIT COUNT TO 100	11426	16	02692	00J00	
21940	TFM	EVALER-1,80000,,	ER 8 MESSAGE, DMES TOO LONG	11438	16	07041	00000	
21950	DC	1,*,*		11449		1		
21960	B	**24		11450	49	11474	00000	
21970	DMSER1	TFM	EVALER-1,90000,,	ER9 MESSAGE, NO DMES OPERAND	11462	16	07041	R0000
21980	DC	1,*,*,*	PRINT ERROR MESSAGE	11473		1		
21990	BT	EPRINT,EPRINT-1		11474	27	07322	07321	
22000	BD	ERCOR, ERSTSW		11486	43	07178	02476	
22010	B	DMSRM+24,,,	CONTINUE	11498	49	11326	00000	
22020	NMOAL	DC	2,0	11511		2		
22030	DMSER2	TFM	EVALER-1,17500,,	ALPHA IN NUMERIC FIELD	11512	16	07041	J7500
22040	DC	1,*,*,*		11523		1		
22050	BT	EPRINT,EPRINT-1,,	PRINT ERROR MESSAGE	11524	27	07322	07321	
22060	BD	ERCOR, ERSTSW		11536	43	07178	02476	
22070	AM	DIGITS,2,10,	UPDATE DIGIT COUNT BY 2 FOR END OF MESS	11548	11	02692	000-2	
22080	B	DMSNUM		11560	49	10910	00000	
22090	DC	5,0		11576		5		
22100	MODE	TR	INPUT+19,INPUT+21,,	MOVE INPUT RECORD LEFT 1 CHAR	11578	31	02900	02902
22110	BNR	**24,INPUT+20,,,	NOT BLANK, CHECK FOR RM	11590	45	11614	02901	
22120	B	DMSRM,,,		11602	49	11302	00000	
22130	CM	INPUT+20,23,10,	SEARCH FIELD, CHECK FOR COMMA	11614	14	02901	000K3	
22140	MODE1	BE	,,, COMMA FOUND, BRANCH	11626	46	00000	01200	
22150	CM	INPUT+20,,10,	COMMA NOT FOUND, CHECK FOR BLANK	11638	14	02901	000-0	
22160	BE	MODE,,,	BLANK, CHECK NEXT CHARACTER	11650	46	11578	01200	
22170	TF	**18,MODE-1,,,	ALPHA CHAR IN FIELD, RETURN, OR CHECK	11662	26	11680	11577	
22180	B	,,,	NEXT CHAR. ACCORDING TO BRANCH	11674	49	00000	00000	
22190	*	SUBROUTINE	TO SHIFT ONE CHARACTER TO THE LEFT IN INPUT BUFFER					
22200	DS	5		11690		5		
22210	DTR	TR	INPUT+19,INPUT+21,,	MOVE OPERAND LEFT 1 CHAR + SEARCH	11692	31	02900	02902
22220	CM	DIGITS,100,9,	CHECK DIGIT COUNT	11704	14	02692	00J00	
22230	BH	DMSER1-36,,,	BRANCH TO ERROR ROUTINE	11716	46	11426	01100	
22240	BNR	**20,INPUT+20,,	FOR RM	11728	45	11748	02901	
22250	B	DMSENDD,,,	RECORD MARK FOUND, SCAN FINISHED	11740	49	11278	00000	
22260	DORG	*-3		11748				
22270	CM	INPUT+20,4,10,	CHECK FOR STRAY RT PAREN	11748	14	02901	000-4	
22280	BNE	**56,,,	NOT A STRAY PAREN IF BRANCH	11760	47	11816	01200	
22290	SF	ANAL,,,	SET SWITCH FOR STRAY PAREN FOUND	11772	32	10190	00000	
22300	CM	DTR-1,DMESC		11784	14	11691	J0850	
22310	BE	DMSB1+12		11796	46	10818	01200	

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22320	B	DMSNUM+12,,,	NUM	11808	49	10922	00000
22330	DORG	*-3		11816			
22340	CM	INPUT+20,24,10,	CHK FOR LEFT PAREN	11816	14	02901	000K4
22350	BNE	**24,,,	NOT A LEFT PAREN	11828	47	11852	01200
22360	BB	,,,	, LEFT PAREN FOUND	11840	42	00000	00000
22370	TF	**18,DTR-1,,	NOT A I,	11852	26	11870	11691
22380	B	,,,	RETURN	11864	49	00000	00000
22390	*						
22400	*						
22410	*	DEFINE VARIABLE LENGTH ADDRESS CONSTANT					
22420	*						
22430	DVLC	BTM	SCAN,**12	11876	17	05164	J1888
22440	TD	LDABSW,RLOCSW		11888	25	07320	07316
22450	TF	DVADB+11, ADDR5		11900	26	12251	03293
22460	CF	DVSW1		11912	33	11948	00000
22470	BNF	DVLC2, BSW		11924	44	11960	07319
22480	TDM	LDABSW,1,11		11936	15	07320	0000J
22490	DVASGN	SF	DVSW1	11948	32	11948	00000
22500	DVLC2	BTM	TRSCAN,**12	11960	17	05134	J1972
22510	TF	DVCKL, ADDR5		11972	26	11959	03293
22520	BNF	DVLP, DVSW1		11984	44	12056	11948
22530	TF	DVADB+11, ADDCOW,,	ADDR IS RT.-MOST POS OF 1ST CON.	11996	26	12251	02529
22540	AM	DVADB+11, 50		12008	11	12251	-0050
22550	SM	ADDR5, 50		12020	12	03293	-0050
22560	BNN	**24		12032	46	12056	01300
22570	A	DVADB+11, ADDR5		12044	21	12251	03293
22580	DVLP	BNR	**48, INPUT+20	12056	45	12104	02901
22590	TFM	EVALER-1, 90000,,	ER 9, CONSTANT NOT SPECIFIED	12068	16	07041	R0000
22600	DC	1,*,*		12079		1	
22610	BT	EPRINT, EPRINT-1		12080	27	07322	07321
22620	BD	ERCOR, ERSTSW		12092	43	07178	02476
22630	BTM	TRSCAN,**12,7	11	12104	17	05134	J2110
22640	BNR	**20, INPUT+20		12116	45	12136	02901
22650	B7	DVEND		12128	49	12168	
22660	BTM	TRSCAN,**12		12136	17	05134	J2148
22670	A	DVCKL, ADDR5		12148	21	11959	03293
22680	B7	DVLP		12160	49	12056	
22690	DVEND	CM	DVCKL, 00050	12168	14	11959	-0050
22700	BNP	**60		12180	47	12240	01100
22710	TFM	EVALER-1, 80000,,	ER8, TOTAL LENGTH TOO BIG	12192	16	07041	00000
22720	DC	1,*,*		12203		1	
22730	BT	EPRINT, EPRINT-1		12204	27	07322	07321
22740	BD	ERCOR, ERSTSW		12216	43	07178	02476
22750	TFM	DVCKL, 50		12228	16	11959	-0050
22760	DVADB	TFM	ADDR5, 00000	12240	16	03293	-0000
22770	BNF	**24, DVSW1		12252	44	12276	11948
22780	A	ADDCOW, DVCKL		12264	21	02529	11959
22790	TDM	INPUT2, 8		12276	15	03034	00008
22800	TFM	CFFA,NCDCF		12288	16	02631	J1410
22810	BTM	CFF,DAC3-32		12300	17	02594	J1972
22820	DVCKL	DS	, DVASGN+11	11959		0	
22830	DVSW1	DS	, DVASGN	11948		0	
22840	*						
22850	*	DEFINE OCTAL TABLE					

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22860 *									
22870 DOT	BTM	SCAN,++12,,	POWER NUMBER	12312	17	05164	J2324		
22880	BLX	++12,ADDRS(3)		12324	65	12336	03KR3		
22890	CM	XRA3,13,10		12336	14	00319	000J3		
22900	BNH	DOT1		12348	47	12408	01100		
22901	TFM	EVALER-2,78000		12360	16	07040	P8000		
22902	BT	EPRINT,EPRINT-1		12372	27	07322	07321		
22903	BD	ERCOR,ERSTSW		12384	43	07178	02476		
22910 DOT1	BLXM	++12,13(3)	ASSIGNED ADDR	12396	66	12408	00-J3		
22920	BTM	TRSCAN,++12,,		12408	17	05134	J2420		
22930	TD	LDABS,RLDCSW		12420	25	07320	07316		
22940	BLXM	++12,-2(1),,	SET TERM LENGTH	12432	66	12444	000-K		
22950	TFM	OUT+ 102,010,9,	SET TERM 1	12444	16	02320	00-10		
22960	DC	1,*,*		12455		1			
22970	BLXM	++12,-1(2),,	SET LENGTH	12456	66	12468	00-0J		
22980	CM	XRA3,0		12468	14	00319	-0000		
22990	BE	DTEX		12480	46	12584	01200		
23000 DTLOOP	HM	OUT+102(2),08,10		12492	13	02L20	000-8		
23010	BX	++12,XRA1(2),,	INCREMENT LENGTH	12504	61	12516	00L09		
23020	BD	++20,99(1)		12516	43	12536	000R9		
23030	B7	++20		12528	49	12548			
23040	BXM	++12,-1(1)		12536	62	12548	000-J		
23050	SF	100(1)		12548	32	001-0	00000		
23060	TF	OUT+102(2),99		12560	26	02L20	00099		
23070	BCXM	DTLOOP,-1(3)		12572	64	12492	00--J		
23080 DTEX	BX	++12,XRA1(2),,	FINAL LNTH INCR	12584	61	12596	00L09		
23090	MA	LNTH,XRA2		12596	70	02387	00314		
23100	BNF	++48,BSW		12608	44	12656	07319		
23110	A	ADDCOW,LNTH		12620	21	02529	02387		
23120	TF	ADDRS,ADDCOW		12632	26	03293	02529		
23130	TDM	LDABS,1,11		12644	15	07320	0000J		
23140	TFM	INPUT2+1,090,9 11		12656	16	03035	00-9-		
23150	B7	DECLRN		12668	49	11374			
23160 *		HEADER ROUTINE							
23170 *									
23180 HEADER	TFM	MED,,10		12676	16	10121	000-0		
23190	TDM	HEADER+7		12688	15	12683	00000		
23200	BNR	COMA,INPUT+20		12700	45	12760	02901		
23210	TFM	INPUT2+1, 030,9 11		12712	16	03035	00-3-		
23220	TF	INPUT2+6, MED		12724	26	03040	10121		
23230	TFM	CFFA,NCDCF		12736	16	02631	J1410		
23240	BTM	CFF,SNCTCD		12748	17	02594	-8414		
23250 COMA	CM	INPUT+20,23,10		12760	14	02901	000K3		
23260	BE	HEADER+36		12772	46	12712	01200		
23270 *		HEADER OPERAND GREATER THAN ONE CHARACTER							
23280	BD	ER12,HEADER+7		12784	43	12920	12683		
23290	CM	INPUT+20,,10		12796	14	02901	000-0		
23300	BE	++60		12808	46	12868	01200		
23310	CM	INPUT+20,40,10		12820	14	02901	000M0		
23320 *		SPECIAL CHARACTER USED AS HEADER							
23330	BL	ER11		12832	47	12888	01300		
23340	TF	MED,INPUT+20		12844	26	10121	02901		
23350	TDM	HEADER+7,1		12856	15	12683	00001		
23360	TR	INPUT+19,INPUT+21		12868	31	02900	02902		
23370	B7	HEADER+24		12880	49	12700			

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23380 ER11	TFM	EVALER-1,17100		12888	16	07041	J7100		
23390	DC	1,*,*		12899		1			
23400	TFM	MED,,10		12900	16	10121	000-0		
23410	B7	++20		12912	49	12932			
23420 ER12	TFM	EVALER-1,17200		12920	16	07041	J7200		
23430	DC	1,*,*		12931		1			
23440	BT	EPRINT,EPRINT-1		12932	27	07322	07321		
23450	BD	ERCOR, ERSTSW		12944	43	07178	02476		
23460	B7	HEADER+36		12956	49	12712			
23470 F2	34	F2DCF,00701		12964	34	13072	00701		
23480	38	F2DCF,00702		12976	38	13072	00702		
23490	TR	OUTAR-1, CLERER+3,2		12988	31	J0132	02696		
23770 *									
23500	AM	--12+6,50,10		13000	11	12994	000N0		
23510	SM	++23,1,10		13012	12	13035	000-1		
23520	CM	CLERER+1, 34,10		13024	14	02694	000L4		
23530	BL	--48		13036	47	12988	01300		
23540	TRA			13048	36	00000	00500		
				13060	49	00000	00000		
23550 F2DCF	DDA	,0,A4DAD,A4SCT,INSTRN		13072		14			
23560	OJ8883-44J0132	TCD F2		12964					
23570 *									
23580 *		SYMBOL TABLE OUTPUT PHASE							
23590 *									
23600	DDRG	INSTRN		10132					
23610 OUTAR	DAS	80		10133		80 X	2		
23620	DAC	1,*,*		10293		1 X	2		
23630 STIT1	DAS	32		10295		32 X	2		
23640	DAC	12,SYMBOL TABLE		10359		12 X	2		
		SYMBOL TABLE							
23650	DAS	36		10383		36 X	2		
23660 STIT2	DAS	32		10455		32 X	2		
23670	DAC	09, BLOCK 01		10519		9 X	2		
		BLOCK 01							
23680	DAS	39		10537		39 X	2		
23690 OUTCL	DAS	80		10615		80 X	2		
23700	DAC	1,*,*		10775		1 X	2		
23710 ALZR	DAC	5,00000		10777		5 X	2		
		00000							
23720	DAS	1		10787		1 X	2		
23730 NADD	DS	5		10792		5			
23740 LNCT	DS	2		10794		2			
23750 *									
23760 *		EVALUATE ADDRESS OF DEND							
23780 DEND	TFM	INPUT2+1,30,10 11		10796	16	03035	000L-		
23790	BTM	SCAN,++12,7 11		10808	17	05164	J082-		
23800	TD	INPUT2+6, ZEP0+29		10820	25	03040	02329		
23810	TD	INPUT2+5, ZEP0+28		10832	25	03039	02328		
23820	BD	++24,ZEP0+29,,	CHECK FOR TCD	10844	43	10868	02329		
23830	BTM	OUTPUT, CSTAT		10856	17	09570	J0892		

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23840	TFM	CFFA,NDCDF1	10868	16	02631	-7298	
23850	BTM	CFF,SNDTCD	10880	17	02594	-8414	
23860	CSTAT	BNF	**24,2PSSW	10892	44	10916	02477
23870	BTM	2PSOUT, **12	10904	17	09862	J0916	
23880	CM	SBOU, 00,10	10916	14	02645	000-0	
23890	BE	CALLA3	10928	46	11000	01200	
23900	TD	DGSV, LOSYMB+1	10940	25	03385	19998	
23910	TD	LOSYMB+1, SPSGM	10952	25	19998	02561	
23920	*	WRITE DISK-WLRC-OUTPUT PARTIAL BLOCK					
23930	TFM	IORT,**23	10964	16	00565	J0987	
23940	B	IORBC,SDEF1,7	10976	49	00520	J0023	
23950	TD	LOSYMB+1, DGSV	10988	25	19998	03385	
23960	CALLA3	RCTY	11000	34	00000	00102	
23970	A3STRY	TFM	A3BD+11,ISTAT-1	11012	16	11035	-2559
23980	A3BD	BD	**44,-**	11024	43	11068	00000
23990	TDM	A3BD+11,,6	11036	15	1103N	00000	
24000	DC	1,,**	11047		1		
24010	SM	A3BD+11,1,10	11048	12	11035	000-1	
24020	B7	A3BD	11060	49	11024		
24030	TD	**23,HIADD	11068	25	11091	02519	
24040	TD	**23,AJUST	11080	25	11103	02399	
24050	AM	HIADD,00,10	11092	11	02519	000-0	
24060	TD	**23,PICKUP	11104	25	11127	02529	
24070	TD	**23,AJUST	11116	25	11139	02399	
24080	AM	PICKUP,,10	11128	11	02529	000-0	
24090	BNF	**20,ISTAT-30	11140	44	11160	02530	
24100	B7	**20	11152	49	11172		
24110	TF	MOMAD,HIADD	11160	26	00415	02519	
24120	MACRIN	BNF	**68,KILSUB	11172	44	11240	02484
24130	CM	A3BD+11,ISTAT-30	11184	14	11035	-2530	
24140	BNH	**44	11196	47	11240	01100	
24150	TD	A3BD+11,A3BD+23,6	11208	25	1103N	11047	
24160	SM	A3BD+11,1,10	11220	12	11035	000-1	
24170	B7	--48	11232	49	11184		
24180	BD	ASTOP,ASTSW	11240	43	12588	10125	
24190	BNF	**84,2PSSW	11252	44	11336	02477	
24200	BNF	**36,PTINSW	11264	44	11300	02475	
24210	RCTY		11276	34	00000	00102	
24220	WATY	PT2MES	11288	39	12633	00100	
24230	BNF	**36,CDINSW	11300	44	11336	02474	
24240	RCTY		11312	34	00000	00102	
24250	WATY	CD2MES	11324	39	12711	00100	
24260	BD	STBEGN,STPCSW	11336	43	11360	02470	
24270	BNF	CALLB1,STTYSW	11348	44	12408	02471	
24280	STBEGN	BNF	ST1,STPCSW	11360	44	11396	02470
24290	WACD	STIT1,,, PUNCH TITLE	11372	39	10295	00400	
24300	WACD	OUTCL	11384	39	10615	00400	
24310	ST1	BNF	ST2,STTYSW	11396	44	11480	02471
24320	TFM	STIT1+2**44,,,	11408	16	10383	-0000	
24330	DAC	1,,**	11419		1 X	2	
24340	RCTY		11420	34	00000	00102	
24350	RCTY		11432	34	00000	00102	
24360	WATY	STIT1	11444	39	10295	00100	
24370	RCTY		11456	34	00000	00102	

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24380	RCTY		11468	34	00000	00102	
24390	ST2	CM	SBOU,00,10	11480	14	02645	000-0
24400	BE	OSYMB-20,,,	11492	46	11920	01200	
24410	TFM	SBCNT,00,10,	11504	16	02673	000-0	
24420	TF	B2DCF+5,B1DCF+5	11516	26	10077	10061	
24430	STLOOP	AM	SBCNT,1,10	11528	11	02673	000-1
24440	TD	STIT2+40*2,SBCNT	11540	25	10535	02673	
24450	TD	STIT2+39*2,SBCNT-1	11552	25	10533	02672	
24460	BNF	ST3,STPCSW	11564	44	11624	02470	
24470	WACD	OUTCL	11576	39	10615	00400	
24480	WACD	OUTCL	11588	39	10615	00400	
24490	WACD	STIT2	11600	39	10455	00400	
24500	WACD	OUTCL	11612	39	10615	00400	
24510	ST3	BNF	CRLD,STTYSW	11624	44	11720	02471
24520	RCTY		11636	34	00000	00102	
24530	RCTY		11648	34	00000	00102	
24540	TFM	STIT2+41*2	11660	16	10537	-0000	
24550	DAC	1,,**	11671		1 X	2	
24560	WATY	STIT2	11672	39	10455	00100	
24570	RCTY		11684	34	00000	00102	
24580	RCTY		11696	34	00000	00102	
24590	TFM	STIT2+41*2,00,10	11708	16	10537	000-0	
24600	CRLD	AM	B2DCF+5,SPBL	11720	11	10077	-0040
24610	C	SBCNT,SBOU	11732	24	02673	02645	
24620	BH	FLOAD	11744	46	11848	01100	
24630	TD	DGSV, LOSYMB+1	11756	25	03385	19998	
24640	TD	LOSYMB+1, SPSGM	11768	25	19998	02561	
24650	*	READ DISK-WLRC-READ SYMBOL BLOCK					
24660	TFM	IORT,**23	11780	16	00565	J1803	
24670	B	IOCT,SDEF2,7	11792	49	00566	J0031	
24680	TFM	LIMITS,LBLIM	11804	16	03281	K0009	
24690	TFM	LIMITS-5,MAXLIM	11816	16	03276	J5997	
24700	TD	LOSYMB+1,DGSV	11828	25	19998	03385	
24710	B7	OSYMB-20	11840	49	11920		
24720	FLOAD	TD	DGSV, LOSYMB+1	11848	25	03385	19998
24730	TD	LOSYMB+1, SPSGM	11860	25	19998	02561	
24740	*	READ DISK-WLRC-PARTIAL BLOCK					
24750	TFM	IORT,**23	11872	16	00565	J1895	
24760	B	IOCT,SDEF1,7	11884	49	00566	J0023	
24770	TR	LIMITS-9,PRTLIM-4	11896	31	03272	02499	
24780	TD	LOSYMB+1,DGSV	11908	25	19998	03385	
24790	AM	LIMITS-5,17,10	11920	11	03276	000J7	
24800	B7	ST5	11932	49	12336		
24810	OSYMB	TR	OUTAR-1,OUTCL-1	11940	31	10132	10614
24820	TFM	LNCT,05,10	11952	16	10794	000-5	
24830	TFM	STLP+6,OUTAR+5*2	11964	16	11982	J0143	
24840	STLP	TF	**-,LIMITS-5,11	11976	26	00000	03270
24850	AM	STLP+6,14,10	11988	11	11982	000J4	
24860	AM	LIMITS-5,5,10	12000	11	03276	000-5	
24870	TF	NADD,LIMITS-5,11	12012	26	10792	03270	
24880	TD	ALZR+8,NADD	12024	25	10785	10792	
24890	TD	ALZR+6,NADD-1	12036	25	10783	10791	
24900	TD	ALZR+4,NADD-2	12048	25	10781	10790	
24910	TD	ALZR+2,NADD-3	12060	25	10779	10789	
24920	TD	ALZR+0,NADD-4	12072	25	10777	10788	

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24930	TFM	ALZR+10,00,10	12084	16	10787	000-0
24940	BNF	**48,NADD	12096	44	12144	10792
24950	TFM	ALZR+10,59,10	12108	16	10787	000N9
24960	BD	**24,RELSW	12120	43	12144	02478
24970	TFM	ALZR+10,20,10	12132	16	10787	000K0
24980	CF	ALZR+9	12144	33	10786	00000
24990	CF	ALZR+8	12156	33	10785	00000
25000	CF	ALZR	12168	33	10777	00000
25010	TF	STLP+6,ALZR+10,6	12180	26	1198K	10787
25020	AM	STLP+6,18,10	12192	11	11982	000J8
25030	AM	LIMITS-5,12,10	12204	11	03276	000J2
25040	C	LIMITS-5,LIMITS	12216	24	03276	03281
25050	BNL	**36	12228	46	12264	01300
25060	SM	LNCT,1,10	12240	12	10794	000-1
25070	BP	STLP	12252	46	11976	01100
25080	BNF	ST4,STPCSW	12264	44	12300	02470
25090	TFM	IORI,**23	12276	16	00565	J2299
25100	B	IORI,OUTAD-4,7	12288	49	00532	J2624
25110	ST4	BNF ST5,STIYSW	12300	44	12336	02471
25120	WATY	OUTAR	12312	39	10133	00100
25130	RCTY		12324	34	00000	00102
25140	ST5	C LIMITS-5,LIMITS	12336	24	03276	03281
25150	BL	OSYMB	12348	47	11940	01300
25160	CM	SBOUT,00,10	12360	14	02645	000-0
25170	BE	CALLB1	12372	46	12408	01200
25180	C	SBCNT,SBOUT	12384	24	02673	02645
25190	BNH	STLOOR	12396	47	11528	01100
25200	CALLB1	BNF **60,2PSSW	12408	44	12468	02477
25210	BNF	**48,PTINSW	12420	44	12468	02475
25220	WATY	2STMES	12432	39	12775	00100
25230	RCTY		12444	34	00000	00102
25240	H		12456	48	00000	00000
25250	BNF	**96,STPCSW	12468	44	12564	02470
25260	BNF	**84,LSCDSW	12480	44	12564	02479
25270	WACD	OUTCL	12492	39	10615	00400
25280	WACD	OUTCL	12504	39	10615	00400
25290	WACD	OUTCL	12516	39	10615	00400
25300	NOP	OUTCL,,,CHNGE TO WACD TO PUNCH 1 MORE BLNK LN AFTR SYM TABLE	12528	41	10615	00000
25310	NOP	OUTCL,,,CHNGE TO WACD TO PUNCH 1 MORE BLNK LN AFTR SYM TABLE	12540	41	10615	00000
25320	NOP	OUTCL,,,CHNGE TO WACD TO PUNCH 1 MORE BLNK LN AFTR SYM TABLE	12552	41	10615	00000
25330	TFM	CFFA,CRIIDCF	12564	16	02631	J2898
25340	BTM	CFF,4158	12576	17	02594	-4158
25350	ASTOP	RCTY	12588	34	00000	00102
25360	WATY	ASMS	12600	39	12823	00100
25370	B	MONCAL,,, CALL EXIT	12612	49	00796	00000
25380	OUTAD	OSA OUTAR	12628		5 X	1
					12628	J0133
25390	DC	3,10'	12631		3	
25400	DGM	*	12631		1	
25410	PT2MES	DAC 39,RETHREAD SOURCE PAPER TAPE FOR PASS 2.'	12633		39 X	2
		RETHREAD SOURCE PAPER TAPE FOR PASS 2.'				
25420	CD2MES	DAC 32,RELOAD SOURCE CARDS FOR PASS 2.'	12711		32 X	2
		RELOAD SOURCE CARDS FOR PASS 2.'				

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25430	2STMES	DAC 24,PRESS START WHEN READY.'	12775		24 X	2
		PRESS START WHEN READY.'				
25440	ASMS	DAC 38,DISC AREA TOO SMALL. ASSEMBLY DELETED'	12823		38 X	2
		DISC AREA TOO SMALL. ASSEMBLY DELETED'				
25450	CB1DCF	DDA ,0,B1DAD,B1SCT,SBOUT+1	12898		14	
		OJ9180-20-2646				
25460	DC	1,'	12912		1	
		'				
25470	F3	34 A5DCF,00701	12914	34	12962	00701
25480		38 A5DCF,00702	12926	38	12962	00702
25490	TRA		12938	36	00000	00500
			12950	49	00000	00000
25500	A5DCF	DDA ,0,A5DAD,A5SCT,INSTRN	12962		14	
		OJ8737-29J0132				
25510	TCD	F3	12914			
25520	DEND	START	10126			

1PTSPB 01500 ERRDIG 03271 PCALL1 11234 ASTOP 12588 C15 13771
2PRATIO 20000 ERSTDW 02476 PCNUSW 02482 ASTSW 10125 C16P 12050
2PSOUT 09862 EVALAD 05960 PHASEA 03392 BIDAD 19180 C16 13813
2PTSPB 00600 EVALER 07042 PHCDAD 19260 B1DCF 10056 C17A 12090
2STMES 12775 EVALOP 05536 PHCSCD 00040 B1SCT 00020 C17A 13861
A3STRT 11012 FF1DCF 11180 P1CKUP 02529 B2DAD 19200 C17P 12070
ADDCOW 02529 GETAST 06758 PROCON 10606 B2DCF 10072 C17 13831
ADDSUB 05880 GOODB3 10168 PROCRE 02498 B2SCT 00056 C18P 12110
8CMSPC 06144 HEADER 12676 PROSTM 03804 B3DAD 19000 C18 13885
CASDFC 12752 INCODE 02492 PRTLIM 02503 B3MAD 09700 C19P 12154
CALLA2 12490 INPUT2 03034 PT2MES 12633 B3SCT 00063 C19 13915
CALLA3 11000 INSTRN 10132 PTINSW 02475 B4DAD 19063 C1P 11254
CALLB1 12408 INTERM 05800 PUTSRJ 10550 B4SCT 00056 C1 13355
CALLEX 11746 INTRSW 02483 RLCCSW 07316 B5DAD 19122 C20P2 12198
CARDIN 02666 INTSAV 14202 RSYMSW 07315 B5SCT 00029 C20P3 12295
CB1DCF 12898 IOADDR 02638 2PASS 09766 B6DAD 19151 C20P4 12282
CD2MES 12711 IOCSAD 19783 2PBUF 09946 B6SCT 00029 C20P 12174
CDINSW 02474 KILSUB 02484 2PRE 09934 BBT 10389 C20 13947
CFDFEF 02625 LDABSW 07320 2PSSW 02477 BBTX 14482 C21P 12314
CHVALD 11704 LDCHAR 06388 2PTR 09826 BENDX 13924 C21 13983
CLERER 02693 LODSCY 08894 2SECT 09710 BETA 02689 C22P 12334
CLLINK 11618 LIMITS 03281 2S 09746 BI 05044 C22 14007
CLLOAD 11618 LPOOUT 03321 5CHAR 06682 BLOP 05844 C23P 12354
COMSPC 06028 LOSYMB 19997 6CHAR 06714 BMK 10397 C23 14035
DECLRN 11374 LSCDSW 02479 A1C1 10418 BMKX 14491 C24P 12410
DECTAB 10152 LSPRSW 02481 A1DAD 18600 BNI 05044 C24 14045
DIGALF 05588 LSTYSW 02480 A1DCF 14264 BOAT 11112 C25P 12430
DIGITS 02692 MACRIN 11172 A1SCT 00137 BOLT 10967 C25 14063
DIMDAD 04800 MACRO2 10132 A2DAD 18800 BOMK 05032 C26P 12450
DIMDCF 13338 MACSHF 11536 A2SCT 00058 BP2OK 00005 C26 14073
DIMSCT 00001 MAXLIM 15997 A3BD 11024 B 13595 C27P 12470
DIVCSW 02485 MCADEF 14170 A3DAD 18861 BSAV 08366 C27 14127
DIVIDE 05708 MCADEF 14162 A3DCF 11220 BSBF 08360 C2P1 11378
DMES11 10966 MCCALL 11196 A3SCT 00022 BSCYC 08108 C2P2 11410
DMES21 11134 MESTAB 13353 A4DAD 18883 BSENT 08389 C2P 11334
DMES22 11182 MOCTOC 16023 A4SCT 00044 BSHI 08336 C2 13377
DMESCL 11156 MOEXEC 00426 A5DAD 18737 BSIN 05008 C3P1 11498
DMSALF 10710 MOIDNO 16039 A5DCF 12962 BSNEQ 08304 C3P2 11530
DMSEND 11278 MONAME 16035 A5SCT 00029 BS 08096 C3P3 11566
DMSER1 11462 MONCAL 00796 ADC 05020 BSW 07319 C3P 11454
DMSER2 11512 MONOIS 16044 ADDR3 03293 BTBL2 04829 C3 13405
DMSMN1 10874 MOSBNO 16043 AENDX 13588 BTBL3 10180 C41A 12066
DMSNUM 10910 MOSDAD 19663 AJUST 02399 BTBL 04878 C4P 11634
DOBOMK 10528 MSTDAD 18962 ALFLP 04576 C10P 11814 C4 13435
DDDISK 11076 NCDCF1 07298 ALFOP 04472 C10 13581 C5P 11654
DDINST 10296 NCDCF2 10658 ALPHA 02684 C11AP 11854 C5 13457
DDLAR 06408 NOSINE 11876 ALZR 10777 C11A 13647 C62S 12062
DORDWB 10732 OBJCRE 02497 ANAL1 10250 C11P 11834 C66W 12064
DOSIOC 10832 OPINTB 04663 ANAL2 10342 C11 13613 C6P 11674
DOSVRS 10996 OPLCTB 04643 ANAL3 10446 C12P 11874 C6 13477
DTLOOP 12492 OPLNTB 04623 ANAL4 10262 C12 13681 C70 14161
DVASGN 11948 OT2DCF 10104 ANAL 10190 C13P 11894 C7P 11694
E1ODAC 11728 OUTDCF 10088 ANL14 10310 C13 13701 C7 13517
EPRINT 07322 OUTDF1 10039 A 13543 C14P 11950 C8P 11714
ER9DAC 11684 OUTDF2 10047 ASMS 12823 C14 13731 C8 13549
ERLNTH 06124 OUTPUT 09570 ASTER 06846 C15P 12006 C9P 11734

C9 13571 DDL 06073 HIADD 02519 DPER 06532 SREL 05444
CGN2 12980 DOROW 10664 IDMES 10943 DP 04228 SSTD 12289
CGN3 13244 DORG 12552 INKRM 02566 OSYMB 11940 SSTS 12313
CCON 12828 DOT1 12408 INPUT 02881 OUTAD 12628 STI 11396
CENOX 14635 DOT 12312 INSAV 02749 OUTAR 10133 ST2L 10574
CFFA 02631 D 14646 INST 04996 OUTCL 10615 ST2 11480
CFF 02594 DSA1 13308 IOCAL 00716 OUT 02218 ST3 11624
CHKND 07090 DSA2 13344 IOGET 10338 PCALL 11074 ST4 12300
CLTBL 11479 DSA 13276 IOGT 00566 PCC 11350 ST5 12336
CNTR 10123 DSB 12048 IOPT 00532 PCK 02365 START 10126
COLL 02439 DSDNB 12284 IORBC 00520 PCLP1 11314 STCNT 02514
COMA 12760 DSS 12532 IORT 00565 PCTR 11214 STIF1 10295
CORM 03341 DTEX 12584 IOSK 00554 PLACE 03270 STIT2 10455
CRLD 11720 DTR 11692 ISTAT 02560 PUT 10386 STLP 11976
C 13933 DVADB 12240 JSTBL 02459 RZBE 03672 STSAV 14197
CSTAT 10892 DVACK 11959 K 05092 R3E 03924 SUBNO 02524
CTI 07474 DVEND 12168 LABEL 06075 RCTR 07314 TAPIN 02658
CTEST 07426 DVLC2 11960 LAB 03337 RDBLK 07872 TEMPR 02572
CTVT 02490 DVLC 11876 LADDR 07660 RDWB 05068 TEMP 03391
CVLAV 14187 DVLP 12056 LB2 07600 RDW 05056 TOBB 07102
DAC3 12004 DVSW1 11948 LBADD 07580 READ1 03568 TRA 10258
DACER 11596 EDAT 11252 LBC3 08606 READ2 03600 TSPEC 10124
DACR 11828 EQDAD 00000 LBCK2 08486 READ3 03428 TYPIN 02650
DAC 11488 EQSCT 00004 LBFNO 08016 RELSW 02478 X2 03837
DAS 11408 EQSW 08335 LBLIM 20009 RLOP1 04112 XB7 13623
DCARD 10674 ER11 12888 LDLBL 08390 RMRK 02576 XBB2 14149
DCRN 13040 ER12 12920 LDSOK 09026 RSCAN 03744 XDAS 14230
DC 12768 ER19 09498 LDRS 09014 RTPN 06882 XDS 13784
DDA 11826 ER1 07488 LIM 08376 S1 06208 XDS5 14212
DDAX 12042 ER20 09956 LNCT 10794 SAS1 12802 XFLAG 06986
DDWDD 10862 ER22 11406 LNTH 02387 SAS2P 12902 XHEAD 15361
DECL2 10132 ER2B 09382 LPNSW 07317 SAS2 13010 XRA1 00309
DECL 04976 ER2 04156 L 02521 SAS2 12974 XRA2 00314
DENDC 12728 ER3 04680 MACRO 11304 SAS2 12766 XRA3 00319
DEND 10796 ER4A 09478 MATCH 10956 SASX1 12870 XRA5 00329
DENDX 15845 ER4 09430 MDRET 05656 SASX2 13078 XRA6 00334
DGM 11236 ER5 07740 MEXIT 10622 SBCNT 02673 ZEPO 02300
DGSV 03385 ERCOR 07178 MODE1 11626 SBMAX 02671 SAVRST 05116
DIM 13330 ERDSA 13484 MODE 11578 SBOUT 02645 SBFADD 15998
DISK 05080 ERLAB 03297 MODOC 16022 SCAN1 05488 SNTDC 08414
DIVSW 07318 EV1 07078 MOMAD 00415 SCAN2 05224 SSTAD 18927
DMES1 10626 EVODD 02469 MOML 16041 SCANA 05304 SSTDCF 12298
DMES2 11086 F2DC 13072 MOSCT 16000 SCAN 05164 STSCT 00035
DMESA 10782 F2 12964 MOVE 05676 SCTAV 14192 START2 10270
DMESC 10850 F3 12914 MURI 02633 SDEF1 10023 STBEGN 11360
DMES 10530 FDCF 15894 NADD 10792 SDEF2 10031 STCHAR 11780
DMS12 11062 FERRR 06988 NASS 12428 SEEK 10362 STLOOP 11528
DMSB1 10806 FILE 15846 NCDCF 11410 SIOC 05104 STPCS 02470
DMSRM 11302 FLA1 14204 NIC 07716 SLC 10886 STPRSW 02472
MSV 03260 FLGRM 03339 NMDAL 11511 SLP 10738 STTYSW 02471
MMSV 03265 FLOAD 11848 NOISE 02522 SLPX 10814 SUBDAD 04808
DNB2 12464 FMDC 12116 NONEX 00457 SMODE 03384 SUBENT 03255
DDADC 10448 FM 12068 NUMB 02448 SMPBL 00235 SYMTAD 02643
DOBI 10596 GET 06538 OK 04740 SPBL 00040 SYMTBL 16003
DOBS 10404 HCLIM 02508 ONEZ 02587 SPEC 06176 SYSCAL 00475
DOK 10752 HED 10121 OPI 04364 SPSGM 02561 TABFUL 09230

THINGS 02420 TRNUMB 06802 TRSCAN 05134 TYINSW 02473 TYPASS 13174
 END OF ONE ASSEMBLY.

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25540	DORG 2218		02218	
25550	*	SYMBOL TABLE PARAMETERS		
25560	SPBL DS	, 40,,	SECTORS PER BLOCK	00040 0
25570	SMPBL DS	, 235,,	SYMBOLS PER BLOCK	00235 0
25580	SYMTBL DS	, 16003,	HI-ORDER POSITION OF SYMBOL TABLE	16003 0
25590	LOSymb DS	, SYMTBL+SMPBL*17-1,	LO-ORDER POSITION OF SYMBOLIC BLOCK	19997 0
25600	SBFADD DS	, LOSymb-SPBL*100+1,	SYMBOLIC BLOCK DISK ADDRESS	15998 0
25610	LBLIM DS	, LOSymb+12,	LO-ORDER BLOCK LIMIT	20009 0
25620	MAXLIM DS	, SYMTBL-6,	MAXIMUM LIMIT	15997 0
25630	*	EMPIRICAL SECTOR ASSIGNMENT PARAMETERS		
25640	1PTSPB DS	,1500,	1-PASS TOTAL SECTORS PER SYM. BLOCK	01500 0
25650	2PTSPB DS	,600,	2-PASS TOTAL SECTORS PER SYM. BLOCK	00600 0
25660	BP20K DS	,5,	SYMBOLIC BLOCKS PER 20K CORE	00005 0
25670	2PRATIO DS	,20000,	2-PASS RATIO--INTERM./FINAL SECTORS	20000 0
25680	*	INDEX REGISTER LOCATIONS		
25690	XRA1 DS	,264+1*40+5*1		00309 0
25700	XRA2 DS	,264+1*40+5*2		00314 0
25710	XRA3 DS	,264+1*40+5*3		00319 0
25720	XRA5 DS	,264+1*40+5*5		00329 0
25730	XRA6 DS	,264+1*40+5*6		00334 0
25740	*	SPS DISC ASSIGNMENT PARAMETERS		
25750	A1DAD DS	,18600,	CONTROL STATEMENTS, PH.A SUBROUTINS	18600 0
25760	A1SCT DS	,137		00137 0
25770	A2DAD DS	,18800,	NORMAL PROCESSING--FREQUENT STMTS.	18800 0
25780	A2SCT DS	,58		00058 0
25790	A3DAD DS	,18861,	TRA, CALL, GET-PUT AND ASSOC DECL	18861 0
25800	A3SCT DS	,22		00022 0
25810	A4DAD DS	,18883,	DMES,DVLC,DOT,HEAD	18883 0
25820	A4SCT DS	,44		00044 0
25830	A5DAD DS	,18737,	DEND, TCD, AND SYMBOL TABLE LIST	18737 0
25840	A5SCT DS	,29		00029 0
25850	SSTDAD DS	,18927,	SYSTEM SYMBOL TABLE	18927 0
25860	SSTSCT DS	,35		00035 0
25870	MSTDAD DS	,SSTDAD+SSTSCT,	MASTER SYMBOL TABLE	18962 0
25880	MOSDAD DS	,19663,	MONITOR COMM SECTOR DISK ADDRESS	19663 0
25890	B1DAD DS	,19180,	PHASE B INITIALIZATION	19180 0
25900	B1SCT DS	,20		00020 0
25910	B2DAD DS	,19200,	INPUT, BRANCH TABLE, SCAN	19200 0
25920	B2SCT DS	,56		00056 0
25930	B3DAD DS	,19000,	LINPRT, INSTRN,DC,DSDNB,DAS,DORG	19000 0
25940	B3SCT DS	,63		00063 0
25950	B3MAD DS	,09700,PHASE B3 MEMORY ADDRESS		09700 0
25960	B4DAD DS	,19063,	RSTR,DAC,ALOW,DMES,DSB,DVLC,DGM	19063 0
25970	B4SCT DS	,56		00056 0
25980	B5DAD DS	,19122,	DSA ,MACRO,DDA,TRA,DEND	19122 0
25990	B5SCT DS	,29		00029 0
26000	B6DAD DS	,19151,	CALL LINK,LOAD,EXIT	19151 0
26010	B6SCT DS	,29		00029 0
26020	D1MDAD DS	,04800,	DIM ENTRY FOR EQUIV. TABLE	04800 0
26030	D1MSCT DS	,1		00001 0
26040	EQDAD DS	,0,	EQUIVALENCE TABLE	00000 0
26050	EQSCT DS	,4		00004 0
26060	PHCDAD DS	,19260		19260 0
26070	PHCSCT DS	,40		00040 0
26080	SUBDAD DS	,04808,	SPS SUBROUTINE DIM ENTRIES	04808 0
26090	*	MONITOR COMMUNICATION PARAMETERS		

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26100	MSCT	DS	,16000,	MONITOR COMM SECTOR MEMORY ADDRESS	16000	0
26110	MODDC	DS	,MSCT+22,	DISC OUTPUT CODE	16022	0
26120	MOCTDC	DS	,MSCT+23,	CD-TP OUTPT CODE	16023	0
26130	MONAME	DS	,MSCT+35,	NAME	16035	0
26140	MOIDNO	DS	,MSCT+39,	ID NUMBER	16039	0
26150	MOML	DS	,MSCT+41,	MANT. LENGTH	16041	0
26160	MOSBNO	DS	,MSCT+43,	SUB. SET	16043	0
26170	MONOIS	DS	,MSCT+44,	NOISE DIGIT	16044	0
26180	MOEXEC	DS	,426,	EXECUTE CONTROL AND SPS INPUT	00426	0
26190	MOHAD	DS	,415,	MEMORY ADDR	00415	0
26200	SYSCAL	DS	,475,	SYSTEM COMMON ACTION LOCATION	00475	0
26210	NONEX	DS	,457,	NON-EXECUTE FOR JOB ERROR	00457	0
26220	PCK	DS	,2365		02365	0
26230	*			IORT ENTRIES		
26240	IORT	DS	,565		00565	0
26250	IORT	DS	,532		00532	0
26260	IOGT	DS	,566		00566	0
26270	IORBC	DS	,520		00520	0
26280	IOSK	DS	,554		00554	0
26290	IOCAL	DS	,00716		00716	0
26300	MONCAL	DS	,00796		00796	0
26310	IOCSAD	DS	,19783,	ADDR OF THE LOADER-CALLER	19783	0
26320	*					
26330	*			SPS COMMUNICATION AREA		
26340	*					
26350	OUT	DS	1		02218	1
26360		DS	80		02298	80
26370	ZEPD	DS	2		02300	2
26380		DS	81		02381	81
26390	DC		1,'		02382	1
26400	LNTH	DC	5,0		02387	5
			-0000			
26410	DC		1,'		02388	1
26420	AJUST	DC	11,2121212121,,	INSTRUCTION PARITY TABLE	02399	11
			-2121212121			
26430	THINGS	DC	21,0010203040506070000'		02420	21
			-0010203040506070000'			
26440	COLL	DS	19		02439	19
26450		DS	2		02441	2
26460	NUMB	DC	7,'		02448	7
			-00000'			
26470	JSTBL	DC	11,3232323232,,	ALPHA PARITY TABLE	02459	11
			-3232323232			
26480	EVODD	DC	10,0101010101,,	DMES PARITY TABLE	02469	10
			-101010101			
26490	*			PROCESSOR CONTROL SWITCHES--FLAGGED 1=ON, UNFLAGGED 0=OFF		
26500	STPCSW	DS	1,,	PUNCH SYMBOL TABLE	02470	1
26510	STYYSW	DS	1,,	TYPE SYMBOL TABLE	02471	1
26520	STPRSW	DS	1,,	PRINT SYMBOL TABLE	02472	1
26530	TYINSW	DS	1,,	BEGIN TYPEWRITER INPUT	02473	1
26540	CDINSW	DC	1,1,,	BEGIN CARD INPUT	02474	1
			J			
26550	PTINSW	DS	1,,	BEGIN PAPER TAPE INPUT	02475	1
26560	ERSTSW	DS	1,,	ERROR STOP	02476	1

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26570	2PSSW	DS	1,,	TWO PASS MODE	02477	1
26580	RELSW	DS	1,,	ASSEMBLE RELOCATABLE	02478	1
26590	LSCDSW	DS	1,,	LIST CARD	02479	1
26600	LSTYSW	DS	1,,	LIST TYPEWRITER	02480	1
26610	LSPRSW	DS	1,,	LIST PRINTER	02481	1
26620	PCNUSW	DS	1,,	PUNCH RESEQUENCED SOURCE-DECK	02482	1
26630	INTRSW	DS	1,,	INTERRUPT	02483	1
26640	KILSUB	DS	1,,	NO SUBROUTINES	02484	1
26650	DIVCSW	DC	1,1,,	NO SYMBOLIC DIVIDE	02485	1
			J			
26660	CTVT	DC	5,0		02490	5
			-0000			
26670	INCODE	DC	2,5		02492	2
			-5			
26680	OBJCRE	DS	5,,	OBJECT MACHINE SIZE	02497	5
26690	PROCRE	DS	1,,	PROCESSOR MACHINE SIZE	02498	1
26700	PRTLIM	DSA	*-*		02503	5 X 1
26710	HCLIM	DSA	LBLIM		02503	-0000
					02508	5 X 1
26720	DC		1,'		02508	K0009
					02509	1
26730	STCNT	DC	5,1,,	STATEMENT COUNT	02514	5
			-0001			
26740	HIADD	DC	5,0,,	HIGH ADDRESS	02519	5
			-0000			
26750	L	DS	2,,	LENGTH OF MANTISSA	02521	2
26760	NOISE	DS	1		02522	1
26770	SUBNO	DS	2		02524	2
26780	PICKUP	DS	5		02529	5
26790	DC		1,1		02530	1
			J			
26800	ISTAT	DC	30,0'		02560	30
			-00000000000000000000000000000000'			
26810	SPSGM	DGM			02561	1
26820	INCRM	DS	5		02566	5
26830	DC		1,'		02567	1
26840	TEMPR	DS	5		02572	5
26850	DC		1,'		02573	1
26860	RMRK	DS	3		02576	3
26870	DC		1,'		02577	1
26880	ONEZ	DC	10,1		02587	10
			-000000001			
26890	*					
26900	*			IOCS CALL-LOAD PROCESSOR SECTION-NO WLRC		
26910	*					
26920	DS		5		02592	5
26930	CFF	TFM	IORT,++23		02594	16 00565 -2617
26940	B		IOGT,CFFDEF,7		02606	49 00566 -2625
26950	B7		CFF-1,,6		02618	49 0259L
26960	CFFDEF	DSC	2,22,,	ABSOLUTE DISK NOT WRONG LENGTH	02625	2
			22			

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26970	CFFA	DSA	**	02631	5 X	1
26980		DC	1,	02631	-0000	
				02632	1	
26990	MURI	DS	1	02633	1	
27000	IOADDR	DC	5,0,,FILE ADDRESS OF INTERMEDIATE OUTPUT	02638	5	
			-0000			
27010	SYMTAD	DC	5,02600,,FILE ADDRESS OF SYMBOL TABLE	02643	5	
			-2600			
27020	SBOUT	DC	2,0	02645	2	
			-0			
27030	*					
27040	*		END SPS COMMUNICATION AREA			
27050	*					
27060	TYPIN	DSA	INPUT-10	02650	5 X	1
				02650	-2775	
27070		DC	3,06'	02653	3	
			-6'			
27080		DGM	*	02653	1	

27090	TAPIN	DSA	INPUT-10	02658	5 X	1
				02658	-2775	
27100		DC	3,08'	02661	3	
			-8'			
27110		DGM	*	02661	1	

27120	CARDIN	DSA	INPUT-10	02666	5 X	1
				02666	-2775	
27130		DC	3,10'	02669	3	
			JO'			
27140		DGM	*	02669	1	

27150	SBMAX	DC	2,10	02671	2	
			JO			
27160	ADDCOW	DS	5	02676	5	
27170	ALPHA	DC	10,0	02686	10	
			-0000000000			
27180	BETA	DC	5,0	02691	5	
			-0000			
27190	NOPREC	DC	15,410000000000'	02706	15	
			-04100000000000'			
27200	TEMP	DS	5	02711	5	
27210	CLERER	DC	1,0	02712	1	
			-			
27220		DSC	26,0	02713	26	
			0000000000000000000000000000000000			
27230		DSC	27,'	02739	27	
			0000000000000000000000000000000000'			
27240		DS	8	02773	8	
27250		DAC	5, ,	02775	5 X	2
27260	INPUT	DAC	6, ,	02785	6 X	2

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27270		DC	8,0	02803	8	
			-0000000			
27280		00	,,0246810	02804	-0	-0-0- 0-0-0
27290		00	,,0246810	02816	-0	-0-0- 0-0-0
27300		00	,,0246810	02828	-0	-0-0- 0-0-0
27310		00	,,0246810	02840	-0	-0-0- 0-0-0
27320		00	,,0246810	02852	-0	-0-0- 0-0-0
27330		00	,,0246810	02864	-0	-0-0- 0-0-0
27340		00	,,0246810	02876	-0	-0-0- 0-0-0
27350		00	,,0246810	02888	-0	-0-0- 0-0-0
27360		00	,,0246810	02900	-0	-0-0- 0-0-0
27370		00	,,0246810	02912	-0	-0-0- 0-0-0
27380		00	,,0246810	02924	-0	-0-0- 0-0-0
27390		00	,,0246810	02936	-0	-0-0- 0-0-0
27400		00	,,0246810	02948	-0	-0-0- 0-0-0
27410		00	,,0246810	02960	-0	-0-0- 0-0-0
27420		DC	2,0	02973	2	
			-0			
27430		DC	2,0	02975	2	
			-0			
27440	PACK	DSS	300	02976	300	
27450		DAS	1	03277	1 X	2
27460	INPUT2	DAS	1	03279	1 X	2
27470		DSC	50,0	03280	50	
			00			
27480		DSC	50,0	03330	50	
			00			
27490		DSC	50,0	03380	50	
			00			
27500		DSC	50,'	03430	50	
			00'			
27510	ADDRS	DS	11	03490	11	
27520		DC	1,'	03491	1	
			*			
27530	LINK	TFM	PCK+10,19,17	03492	10	02375 -0019
27540		B	PCK ,,26	03504	49	-236N 00000
27550		DC	1,'	03516	1	
			*			
27560	DUMP1	DS	LINK+14	03506	0	
27570		DS	1	03517	1	
27580	DEFIN2	DSC	2,00	03518	2	
			00			
27590		DSA	SUBIN	03524	5 X	1
				03524	-3534	
27600		DC	1,'	03525	1	
			*			
27610	DEFIN	DSC	2,02	03526	2	
			02			
27620		DSA	SUBIN	03532	5 X	1
				03532	-3534	
27630		DC	1,'	03533	1	
			*			
27640	SUBIN	DDA	0,--,2,--	03534	14	
			0-0000-02-0000			

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27650	DC	1, *	03548	1	
27660	DEFOUT	DSC 2,02	03549	2	
27670	DSA	SUBOUT	03555	5 X	1
27680	DC	1, *	03555	-3558	
			03556	1	
27690	SUBOUT	DDA ,0,+-,3,PACK	03558	14	
		0-0000-03-2976			
27700	DC	1, *	03572	1	
27710	DEFSM	DSC 2,00	03573	2	
27720	DSA	SUBSM	03579	5 X	1
27730	DC	1, *	03579	-3582	
			03580	1	
27740	SUBSM	DDA ,0,+-,SPBL,SBFADD	03582	14	
		0-0000-40J5998			
27750	DC	1, *	03596	1	
27760	MURIEL	DS 1	03597	1	
27770	INTBUF	DSC 9,00000000'	03598	9	
		00000000'			
27780	DSS	191	03607	191	
27790	DC	1, *	03798	1	
27800	ERLAB	DAS 6	03801	6 X	2
27810	DAC	2,+'	03813	2 X	2
		+'			
27820	LOPOUT	DC 12,0	03827	12	
		-0000000000			
27830	DC	4, *	03831	4	
		-00'			
27840	LIMITSP	DS ,HCLIM	02508	0	
27850	LIM	DC 10,0	03841	10	
		-000000000			
27860	DC	1, *	03842	1	
27870	LIMSV	DS 10	03852	10	
27880	DC	1, *	03853	1	
27890	BLX	DS ,SBOU	02645	0	
27900	HED	DS 3	03856	3	
27910	DMESW	DS 1	03857	1	
27920	TTYS	DC 5,75	03862	5	
		-0075			
27930	IC	DC 2,0	03864	2	
		-0			
27940	FRSTAD	DS 5	03869	5	
27950	STKLEN	DS 5	03874	5	
27960	LSTAD	DS 5	03879	5	
27970	FLGRM	DC 1, *	03880	1	

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27980	PACKAD	DSA PACK,PACK+75,PACK+150,PACK+225	03885	5 X	4
			03885	-2976	
			03890	-3051	
			03895	-3126	
			03900	-3201	
27990	DC	1, *	03901	1	
28000	PKMOD	DSS 26	03902	26	
28010	DC	6,0	03933	6	
		-00000			
28020	ISTTCD	DS 5	03938	5	
28030	DC	1, *	03939	1	
28040	SFA	DS 8	03947	8	
28050	DC	1,0	03948	1	
28060	BLKADS	DSS 30	03949	30	
28070	DSA	SYMTBL-6	03983	5 X	1
28080	LIMITSF	DSA SYMTBL+17*SMPBL+11	03983	J5997	
			03988	5 X	1
28090	DC	1, *	03988	K0009	
			03989	1	
28100	BLKCTR	DS 2	03991	2	
28110	DMPDIG	DC 5,0	03996	5	
		-0000			
28120	ABBA	DC 5,0	04001	5	
		-0000			
28130	FRSTMT	DSC 1,0	04002	1	
28140	KLRLSW	DS 1	04003	1	
28150	X	DS 5	04008	5	
28160	CAROLN	DS 1	04009	1	
28170	VACANT	DSS 140	04010	140	
28200	COPDEF	DSA INPUT2	04154	5 X	1
28210	DC	3,10'	04154	-3279	
		JO'	04157	3	
28220	DGM	*	04157	1	
28230	INITI	TF ERLAB+10,CLERER+11	04158	26	03811 02723
28240	TFM	HED,,10	04170	16	03856 000-0
28250	TFM	SUBOUT+5,0	04182	16	03563 -0000
28260	TFM	INKRM,99999	04194	16	02566 R9999
28270	TFM	SUBIN+13,INTBUF	04206	16	03547 -3598
28280	TF	SUBIN+5,IOADDR	04218	26	03539 02638
28290	SM	SUBIN+5,2,10	04230	12	03539 000-2
28300	TFM	ADDCOW,2401	04242	16	02676 -2401
28310	BNF	**24,RELSW	04254	44	04278 02478
28320	TFM	ADDCOW,99999	04266	16	02676 R9999
28330	TD	DMPDIG-4,PROCRE	04278	25	03992 02498
28340	SM	DMPDIG,1,10	04290	12	03996 000-1

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28350	SF	FLGRM							
28360	BNR	**48, ISTAT-29	04302	32	03880	00000			
28370	TR	PKMOD,PACKAD-4	04314	45	04362	02531			
28380	TFM	7TY5,75	04326	31	03902	03881			
28390	B	**48	04338	16	03862	-0075			
28400	TR	PKMOD,PACKAD+1	04350	49	04398	00000			
28410	AM	PKMOD+4,25	04362	31	03902	03886			
28420	TFM	7TY5,50	04374	11	03906	-0025			
28430	TR	LIM-9,LIMFSP-9	04386	16	03862	-0050			
28440	TF	SUBSM+5,SYMTAD	04398	31	03832	02499			
28450	TF	SFA,SYMTAD	04410	26	03587	02643			
28460	TF	ABBA,PKMOD+4	04422	26	03947	02643			
28470	TD	INTBUF+200,SPSGM	04434	26	04001	03906			
28480	*	CALL PHASE B2	04446	25	03798	02561			
28490	TFM	CFFA,DCFB2							
28500	BTM	CF,PHASEB-12	04458	16	02631	-4482			
28510	DCFB2	DDA,0,B2DAD,B2SCT,PHASEB-12	04470	17	02594	-4158			
28520	DC	0J9200-56-4158	04482		14				
		1,1							
			04496		1				
28530	*	LOAD PHASE B1 TO THE FILE							
28540	F1	34 SUBO,701							
28550	38	SUBO,702	04498	34	04546	00701			
28560	TRA		04510	38	04546	00702			
			04522	36	00000	00500			
28570	SUBO	DDA,0,B1DAD,B1SCT,SBOU+1	04534	49	00000	00000			
		0J9180-20-2646	04546		14				
28580	TCO	F1							
			04498						
28590	DORG	INITI							
28600	BTM	GEET,**12,,CALL PHASE B3	04158						
28610	PHASEB	BD 2PASS,2PSSW	04158	17	09664	-4170			
28620	BD	R2,R2SW	04170	43	04362	02477			
28630	TFM	SUBIN+13,INPUT-19	04182	43	04318	04361			
28640	AM	SUBIN+5,2,10	04194	16	03547	-2766			
28650	*	READ SOURCE STATEMENT FROM THE FILE	04206	11	03539	000-2			
28660	TFM	IORT,**23							
28670	B	IOGT,DEFIN,7	04218	16	00565	-4241			
28680	TR	INTBUF,INPUT-19	04230	49	00566	-3526			
28690	BNG	G01,INPUT+80,,CHK.FOR FILE GRP.MRK	04242	31	03598	02766			
28700	BNG	**32,INPUT+180	04254	55	04502	02865			
28710	TDM	R2SW,1,11	04266	55	04298	02965			
28720	B7	G01	04278	15	04361	0000J			
28730	SM	SUBIN+5,1,10	04290	49	04502				
28740	B7	G01	04298	12	03539	000-1			
28750	R2	TR INPUT-11,INPUT-11+100,, PROCESS 20ND SHORT SYMT	04310	49	04502				
28760	TR	INTBUF,INPUT-19+100,, DIRECTLY. NO DISK ACCESS.	04318	31	02774	02874			
28770	TDM	R2SW,0	04330	31	03598	02866			
28780	B7	G01	04342	15	04361	00000			
28790	R2SW	DC 1,0	04354	49	04502				
			04361		1				
28800	2PASS	BNF SECRD,PTINSW,, CHK FOR CARD OR TAPE INPUT							
28810	*	ACCEPT TAPE INPUT	04362	44	04406	02475			
28820	TFM	IORT,**23							
28830	B	IOGT,TAPIN-4,7	04374	16	00565	-4397			
28840	B7	FORWD	04386	49	00566	-2654			
			04398	49	04430				

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28850	*	ACCEPT CARD INPUT							
28860	SECRD	TFM IORT,**23	04406	16	00565	-4429			
28870	B	IOGT,CARDIN-4,7	04418	49	00566	-2662			
28880	FORWD	BNR **24,INPUT-10	04430	45	04454	02775			
28890	TFM	INPUT-10,0,10	04442	16	02775	000-0			
28900	CM	INPUT-10,14,10	04454	14	02775	000J4			
28910	BE	2PASS	04466	46	04362	01200			
28920	TDM	**11,1	04478	15	04467	00001			
28930	BT	RSCAN,RSCAN-1	04490	27	05860	05859			
28940	G01	AM INKRM,1,10	04502	11	02566	000-1			
28950	BT	CLOUT,CLOUT-1	04514	27	08556	08555			
28960	TDM	KLRLSW,1,11	04526	15	04003	0000J			
28970	TR	INPUT2-1,INPUT-11	04538	31	03278	02774			
28980	BNF	**24,LSTYSW	04550	44	04574	02480			
28990	RCTY		04562	34	00000	00102			
29000	*								
29010	*	CHECK FOR COMMENT STATEMENT							
29020	*								
29030	CASTER	BNR **20,INPUT	04574	45	04594	02785			
29040	B7	CHKIO	04586	49	04710				
29050	CM	INPUT,14,10	04594	14	02785	000J4			
29060	BNE	CHKIO	04606	47	04710	01200			
29070	BNF	**24,LSTYSW	04618	44	04642	02480			
29080	WATY	INPUT-10,,,TYPE COMMENTS STATEMENT	04630	39	02775	00100			
29090	BNF	PHASEB,LSCDSW	04642	44	04170	02479			
29100	BT	REVSCN,REVSCN-1	04654	27	05922	05921			
29110	*	PUNCH COMMENTS CARD							
29120	PCHCOM	BNF PHASEB,LSCDSW	04666	44	04170	02479			
29130	TFM	IORT,**23	04678	16	00565	-4701			
29140	B	IDPT,COPDEF-4,7	04690	49	00532	-4150			
29150	B7	PHASEB	04702	49	04170				
29160	CHKIO	TFM RLOP+11,INPUT-2	04710	16	04769	-2783			
29170	AM	RLOP+11,2,10	04722	11	04769	000-2			
29180	CM	RLOP+11,INPUT+12	04734	14	04769	-2797			
29190	BE	RLOP+24	04746	46	04782	01200			
29200	RLOP	BNR **36,**	04758	45	04722	00000			
29210	TF	INPUT+10,CLERER+11	04770	26	02795	02723			
29220	C	CLERER+11,INPUT+10	04782	24	02723	02795			
29230	BE	**36	04794	46	04830	01200			
29240	TF	ERLAB+10,INPUT+10	04806	26	03811	02795			
29250	TFM	INKRM,0	04818	16	02566	-0000			
29260	TFM	RMOP+11,INPUT+10	04830	16	04889	-2795			
29270	AM	RMOP+11,2,10	04842	11	04889	000-2			
29280	CM	RMOP+11,INPUT+20	04854	14	04889	-2805			
29290	BE	RMOP+24	04866	46	04902	01200			
29300	RMOP	BNR **36,**	04878	45	04842	00000			
29310	TF	INPUT+18,CLERER+7	04890	26	02803	02719			
29320	BNF	NAST,2PSSW	04902	44	05170	02477			
29330	BNF	**32,INTBUF+7	04914	44	04946	03605			
29340	TDM	INTBUF+7,0	04926	15	03605	00000			
29350	B7	**20	04938	49	04958				
29360	TR	INTBUF,INTBUF+8	04946	31	03598	03606			
29370	BNR	PULLIO,INTBUF	04958	45	05018	03598			
29380	TFM	SUBIN+13,INTBUF	04970	16	03547	-3598			
29390	AM	SUBIN+05,2,10	04982	11	03539	000-2			
29400	*	READ INTERMEDIATE OUTPUT FROM FILE							

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29410	TFM	IORT,**23	04994	16	00565	-5017
29420	B	IOGT,DEFIN2,7	05006	49	00566	-3518
29430	PULLIO	BNF NAST,INTBUF+7	05018	44	05170	03605
29440	TFM	EVALER-2,67670	05030	16	08014	07670
29450	BT	EPRINT,EPRINT-1	05042	27	08452	08451
29460	ERRXX	WATY MESS2	05054	39	08421	00100
29470	RCTY		05066	34	00000	00102
29480	BT	FWOCSN,FWOCSN-1	05078	27	05972	05971
29490	TFM	IORT,**23	05090	16	00565	-5113
29500	B	IOGT,TYPIN-4,7	05102	49	00566	-2646
29510	BC4	ERRXX	05114	46	05054	00400
29520	CM	INPUT,14,10	05126	14	02785	000J4
29530	BNE	**24	05138	47	05162	01200
29540	TDM	INTBUF+7,0	05150	15	03605	00000
29550	B7	CASTER-48	05162	49	04526	
29560	*					
29570	*	TYPE OUT SOURCE STATEMENT				
29580	*					
29590	NAST	TF LPOUT, INPUT-2	05170	26	03827	02783
29600	TR	INPUT2-1, LPOUT-9	05182	31	03278	03818
29610	TF	LPOUT, INPUT+10	05194	26	03827	02795
29620	TR	INPUT2+11, LPOUT-11	05206	31	03290	03816
29630	TF	LPOUT, INPUT+18	05218	26	03827	02803
29640	TR	INPUT2+25, LPOUT-7	05230	31	03304	03820
29650	TR	INPUT2+35, INPUT+19	05242	31	03314	02804
29660	TR	VACANT,INPUT+19	05254	31	04010	02804
29670	TDM	DMESW	05266	15	03857	00000
29680	BNF	**24, LSTYSW	05278	44	05302	02480
29690	WATY	INPUT2,,,	05290	39	03279	00100
29700	MARK1	TF PLACE,ADDCOW	05302	26	09487	02676
29710	BNR	**24,INPUT+20	05314	45	05338	02805
29720	TFM	INPUT+22,,10	05326	16	02807	000-0
29730	DC	1,*,*	05337			1
	*					
29740	BT	REVSCN,REVSCN-1	05338	27	05922	05921
29750	BNF	**60,LSTYSW	05350	44	05410	02480
29760	CM	REVSCN+35,INPUT2+108	05362	14	05957	-3387
29770	BL	**24	05374	47	05398	01300
29780	RCTY		05386	34	00000	00102
29790	TBTY		05398	34	00000	00108
29800	CM	REVSCN+35, INPUT2+2+59	05410	14	05957	-3397
29810	BNH	TLU	05422	47	05482	01100
29820	BNF	TLU, LSCDSW	05434	44	05482	02479
29830	TFM	IORT,**23	05446	16	00565	-5469
29840	B	IOPT,COPDEF-4,7	05458	49	00532	-4150
29850	BT	CLOUT, CLOUT-1	05470	27	08556	08555
29860	TLU	BNF **32,INTBUF+1	05482	44	05514	03599
29870	BD	INSTRN,INTBUF+1	05494	43	13094	03599
29880	B7	TBL1	05506	49	05664	
29890	BNF	INSTRN,INTBUF	05514	44	13094	03598
29900	BD	INSTRN,INTBUF	05526	43	13094	03598
29910	TBL2	TFM GOODB+6,BTBL2	05538	16	05580	-5586
29920	TD	GOODB+11,INTBUF+1	05550	25	05585	03599
29930	A	GOODB+5,GOODB+11	05562	21	05579	05585
29940	GOODB2	B **,10	05574	49	00000	000-0
29950	BTBL2	B MACRO,,, 0	05586	49	15526	00000

TYPE SOURCE STMT.

29960	DORG	**1	05596			
29970	B	SAVE,,, +1	05596	49	15610	00000
29980	DORG	**1	05606			
29990	B	RSTR,,, +2	05606	49	15598	00000
30000	DORG	**1	05616			
30010	B	PCHCOM-12,,,+3	05616	49	04654	00000
30020	DORG	**1	05626			
30030	B	CALLEX,,,+4	05626	49	15502	00000
30040	DORG	**1	05636			
30050	B	MAC2,,,+5	05636	49	15658	00000
30060	DORG	**1	05646			
30070	B	PCHCOM-12,,,+6	05646	49	04654	00000
30080	DORG	**1	05656			
30090	B	LINKSF,,,+7	05656	49	15490	00000
30100	DORG	**3	05664			
30110	TBL1	TFM GOODB+6,BTBL	05664	16	05706	-5762
30120	TD	GOODB+11,INTBUF	05676	25	05711	03598
30130	A	GOODB+5,GOODB+11	05688	21	05705	05711
30140	GOODB	B **,10	05700	49	00000	000-0
30150	B	TRA,,, -5	05712	49	15514	00000
30160	DORG	**1	05722			
30170	B	DSDNB,,, -4	05722	49	14002	00000
30180	DORG	**1	05732			
30190	B	DEND,,, -3	05732	49	15550	00000
30200	DORG	**1	05742			
30210	B	DC,,, -2	05742	49	14546	00000
30220	DORG	**1	05752			
30230	B	DORG,,, -1	05752	49	14406	00000
30240	DORG	**1	05762			
30250	BTBL	B DAC,,, 0	05762	49	15646	00000
30260	DORG	**1	05772			
30270	B	DSA,,, +1	05772	49	15538	00000
30280	DORG	**1	05782			
30290	B	DAS,,, +2	05782	49	14210	00000
30300	DORG	**1	05792			
30310	B	HEAD,,, +3	05792	49	06046	00000
30320	DORG	**1	05802			
30330	B	DSB,,, +4	05802	49	15478	00000
30340	DORG	**1	05812			
30350	B	DGM,,, +5	05812	49	15574	00000
30360	DORG	**1	05822			
30370	B	DDA,,, +6	05822	49	15562	00000
30380	DORG	**1	05832			
30390	B	DMES,,, +7	05832	49	15622	00000
30400	DORG	**1	05842			
30410	B	DVLC,,, +8	05842	49	15586	00000
30420	DORG	**1	05852			
30430	B	DOTCL,,, +9	05852	49	15634	00000
30440	DORG	**3	05860			
30450	KSCAN	BLXM **12,122(1)	05860	66	05872	001K2
30460	TFM	INPUT+18(1),0200,8 9	05872	16	028-3	0-K00
30470	DAC	1,*,*	05883		1 X	2
	*					
30480	BD	RSCAN1,INPUT+16(1)	05884	43	05920	028-1
30490	BD	RSCAN1,INPUT+15(1)	05896	43	05920	028-0
30500	BCX	**36,RSCAN+21(1)	05908	63	05872	058Q1

30510	RSCAN1	BB2			05920	42		
30520	REVSCN	TFM	++35, INPUT2+160		05922	16	05957	-3439
30530	SM		++23, 2, 10		05934	12	05957	000-2
30540	BNR		--12, --*		05946	45	05934	00000
30550	TFM		+1, 0, 610		05958	16	0595P	000-0
30560	BB2				05970	42		
30570	FWDSCN	TF	INPUT-2, CLERER+9		05972	26	02783	02721
30580	TF		INPUT+10, CLERER+11		05984	26	02795	02723
30590	TF		INPUT+18, CLERER+7		05996	26	02803	02719
30600	BLXM		++12, -122(1)		06008	66	06020	001KK
30610	TFM		INPUT+142(1), 0200, 8		06020	16	029K7	0-200
30620	DAC		1, *, *		06031		1 X	2
30630	BCX		--12, --3(1)		06032	63	06020	060K9
30640	BB2				06044	42		
30650	*							
30660	*		HEADER ROUTINE					
30670	*							
30680	HEAD	TF	HED, INTBUF+6		06046	26	03856	03604
30690	TFM		ADDRS		06058	16	03490	-0000
30700	B7		ECLAT1		06070	49	14466	
30710	*							
30720	*		THE FOLLOWING CLOSED SUBROUTINE EVALUATES					
30730	*		THE STATEMENT OPERAND					
30740	*							
30750	DS		5		06081		5	
30760	TRSCAN	TR	INPUT+19, INPUT+21,,	ELIMINATE LEADING ,	06082	31	02804	02806
30770	BT		SCAN, TRSCAN-1		06094	27	06112	06081
30780	DS		5		06110		5	
30790	SCAN	TFM	OPER, 10, 10		06112	16	09501	000J0
30800	TFM		XFLAG, 00, 10		06124	16	07956	000-0
30810	TF		DIVSW, CLERER+5,,	CLEAR SWITCHES	06136	26	08380	02717
30820	TDM		BSW, 1, 11		06148	15	09502	000J0
30830	TF		ADDRS, CLERER+9		06160	26	03490	02721
30840	SCAN2	TD	ALPHA, LNTH+1,,	RECORD MARK--ALPHA EMPTY	06172	25	02686	02388
30850	BD		++44, INPUT+19		06184	43	06228	02804
30860	BD		++32, INPUT+20		06196	43	06228	02805
30870	TR		INPUT+19, INPUT+21		06208	31	02804	02806
30880	B7		--36		06220	49	06184	
30890	BNR		SCAN1-24, INPUT+20		06228	45	06412	02805
30895	BD		CHKND, LPNSW		06240	43	08100	08379
30900	SCANA	SF	ADDRS-4		06252	32	03486	00000
30910	CM		RCTR, 00, 10		06264	14	08376	000-0
30920	BE		SREL+12		06276	46	06404	01200
30930	CM		RCTR, 01, 10		06288	14	08376	000-1
30940	BNE		++24		06300	47	06324	01200
30950	BNF		SREL, ADDRS		06312	44	06392	03490
30960	CM		RCTR, -01, 10		06324	14	08376	000-J
30970	BNF		++24, ADDRS		06336	44	06360	03490
30980	BE		SREL		06348	46	06392	01200
30990	TFM		EVALER-2, 71770,,	RELOCATION ERROR	06360	16	08014	P1770
31000	BT		EPRINT, EPRINT-1		06372	27	08452	08451
31010	B7		EVI		06384	49	08052	
31020	SREL	TDM	RLOCSW, 1, 11		06392	15	08378	0000J
31030	B7		TOBB		06404	49	08112	
31040	CM		INPUT+20, 23, 10		06412	14	02805	000K3

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31050	BE		SCANA-12		06424	46	06240	01200
31060	SCAN1	CM	INPUT+20, 10, 10		06436	14	02805	000J0
31070	BNE		++44		06448	47	06492	01200
31080	TFM		OPER, 10, 10		06460	16	09501	000J0
31090	TR		INPUT+19, INPUT+21		06472	31	02804	02806
31100	EVALOP	B7	EVALAD		06484	49	06908	
31110	CM		INPUT+20, 20, 10		06492	14	02805	000K0
31120	BNE		EVALAD		06504	47	06908	01200
31130	TFM		OPER, 20, 10		06516	16	09501	000K0
31140	B7		SCAN1+36		06528	49	06472	
31150	DIGALF	BNR	++20, ALPHA		06536	45	06556	02686
31160	B7		MOVE		06548	49	06624	
31170	BD		DIVIDE, DIVSW		06556	43	06656	08380
31180	M		ALPHA, BETA		06568	23	02686	02691
31190	SF		90		06580	32	00090	00000
31200	TF		ALPHA, 99		06592	26	02686	00099
31210	MDRET	BD	SREL-32, RSYMSW		06604	43	06360	08377
31220	B7		MOVE+12		06616	49	06636	
31230	MOVE	TF	ALPHA, BETA		06624	26	02686	02691
31240	TDM		DIVSW, 0		06636	15	08380	00000
31250	B7		GET-1, 6		06648	49	0749N	
31260	DIVIDE	CM	BETA, 0		06656	14	02691	-0000
31270	BE		MDRET		06668	46	06604	01200
31280	LD		99, ALPHA		06680	28	00099	02686
31290	D		89, BETA		06692	29	00089	02691
31300	SF		85		06704	32	00085	00000
31310	TF		ALPHA, 94		06716	26	02686	00094
31320	B7		MDRET		06728	49	06604	
31330	TDM		DIVSW, 1, 11		06736	15	08380	0000J
31340	INTERM	BD	SREL-32, RSYMSW		06748	43	06360	08377
31350	B7		SCAN1+36		06760	49	06472	
31360	TDM		LPNSW, 1, 11		06768	15	08379	0000J
31370	TR		INPUT+19, INPUT+21		06780	31	02804	02806
31380	BLOP	CM	OPER,, 10		06792	14	09501	000-0
31390	BE		SCAN2		06804	46	06172	01200
31400	TD		++13, OPER-1		06816	25	06829	09500
31410	ADDSUB	20	ADDRS, ALPHA		06828	20	03490	02686
31420	TF		ALPHA, CLERER+9		06840	26	02686	02721
31430	TFM		OPER,, 10		06852	16	09501	000-0
31440	BNF		++36, RSYMSW		06864	44	06900	08377
31450	TD		++13, ADDSUB+1		06876	25	06889	06829
31460	AM		RCTR, 1, 10		06888	11	08376	000-1
31470	B7		SCAN2		06900	49	06172	
31480	EVALAD	SF	HED-2		06908	32	03854	00000
31490	SF		DOLLAR		06920	32	07368	00000
31500	TDM		BSW, 0		06932	15	09502	00000
31510	TFM		LARL, 1, 10		06944	16	07035	000-1
31520	TFM		DOL,, 10		06956	16	07033	000-0
31530	TR		COLL-18, THINGS-20		06968	31	02421	02400
31540	B7		BCMSPC		06980	49	07104	
31550	*		CHECK FOR SPECIAL CHARACTER					
31560	COMSPC	CM	INPUT+20, 70, 10		06988	14	02805	000P0
31570	BL		SPEC		07000	47	07136	01300
31580	TF		COLL, INPUT+20		07012	26	02439	02805
31590	CF		COLL-1		07024	33	02438	00000
31600	LABL	DS	,*		07035		0	

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31610 DOL	DS	*,*-2	07033		0		
31620	AM	DOL,1,10	07036	11	07033	000-1	
31630	TR	COLL-17,COLL-15	07048	31	02422	02424	
31640	CM	COLL-17,7,10	07060	14	02422	000-7	
31650 *		SYMBOL IN OPERAND CONTAINS MORE THAN SIX CHARACTERS					
31660 *		OR NUMBER IN OPERAND HAS MORE THAN FIVE DIGITS					
31670	BNE	*+20	07072	47	07092	01200	
31680 ERLNTH	B7	CHKND	07084	49	08100		
31690	TR	INPUT+19,INPUT+21	07092	31	02804	02806	
31700 *		CHECK TO SEE IF OPERAND IS PRESENT					
31710 BCMSPC	TFM	GET-1,BLOP	07104	16	07495	-6792	
31720	BNR	COMSPC,INPUT+20	07116	45	06988	02805	
31730	B7	GET	07128	49	07496		
31740 *		CHECK FOR + OR -					
31750 SPEC	BD	S1,INPUT+20	07136	43	07168	02805	
31760 *		CHECK FOR BLANK					
31770	BD	GET,INPUT+19	07148	43	07496	02804	
31780	B7	BCMSPC-12	07160	49	07092		
31790 *		CHECK FOR COMMA					
31800 S1	CM	INPUT+20,23,10	07168	14	02805	000K3	
31810	BE	GET	07180	46	07496	01200	
31820 *		CHECK FOR SLASH					
31830	BNF	*+48,DIVCSW	07192	44	07240	02485	
31840	CM	INPUT+20,21,10	07204	14	02805	000K1	
31850	BNE	*+24	07216	47	07240	01200	
31860	BTM	GET,INTERM-12	07228	17	07496	-6736	
31870 *		CHECK FOR ASTERISK					
31880	CM	INPUT+20,14,10	07240	14	02805	000J4	
31890	BE	ASTER	07252	46	07804	01200	
31900 *		CHECK FOR DOLLAR SIGN					
31910	CM	INPUT+20,13,10	07264	14	02805	000J3	
31920	BE	DOLLAR	07276	46	07368	01200	
31930 *		CHECK FOR LEFT PAREN					
31940	CM	INPUT+20,24,10	07288	14	02805	000K4	
31950	BNE	*+24	07300	47	07324	01200	
31960	BTM	GET,BLOP-24	07312	17	07496	-6768	
31970 *		CHECK FOR RIGHT PAREN					
31980	CM	INPUT+20,04,10	07324	14	02805	000-4	
31990	BE	RTPN	07336	46	07840	01200	
32000 LDCHAR	TDM	LABL	07348	15	07035	00000	
32010	B7	COMSPC+24	07360	49	07012		
32020 DOLLAR	CF	DOLLAR	07368	33	07368	00000	
32030	BD	*+32,DOL	07380	43	07412	07033	
32040	TFM	COLL,1,10	07392	16	02439	000-0	
32050	B7	*+44	07404	49	07448		
32060	CM	DOL,1,10	07412	14	07033	000-1	
32070	BNE	LDCHAR	07424	47	07348	01200	
32080	SF	COLL-3	07436	32	02436	00000	
32090	CF	HED-2	07448	33	03854	00000	
32100	TDM	LABL	07460	15	07035	00000	
32110	BD	BCMSPC-12,DOL	07472	43	07092	07033	
32120	B7	BCMSPC-56	07484	49	07048		
32130 *							
32140 *		CLOSED ROUTINE TO EVALUATE COLLECTED SYMBOL OR INTEGER					
32150 *							
32160	DS	5	07495		5		

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32170 GET	TDM	RSYMSW,0	07496	15	08377	00000	
32180	BD	CHKND,LPNSW	07508	43	08100	08379	
32190	C	*+23,COLL-2	07520	24	07543	02437	
32200	BE	GETAST,14,10	07532	46	07716	012J4	
32210	BD	TRNUMB, LABL	07544	43	07760	07035	
32220	CM	COLL-17, 05,10	07556	14	02422	000-5	
32230	BH	6CHAR	07568	46	07672	01100	
32240	BE	5CHAR	07580	46	07640	01200	
32250	TDM	COLL,0	07592	15	02439	00000	
32260	TR	COLL-17, COLL-15	07604	31	02422	02424	
32270	CM	COLL-17, 05,10	07616	14	02422	000-5	
32280	BNE	*-36	07628	47	07592	01200	
32290 5CHAR	BNF	LBADD-24, HED-2	07640	44	08606	03854	
32300	TF	COLL-12, HED	07652	26	02427	03856	
32310	B7	LBADD	07664	49	08630		
32320 6CHAR	BNF	LBADD, HED-2	07672	44	08630	03854	
32330	SF	COLL-13	07684	32	02426	00000	
32340	SF	COLL-2	07696	32	02437	00000	
32350	B7	LBADD	07708	49	08630		
32360 GETAST	TF	BETA,ADDCOW	07716	26	02691	02676	
32370	BNF	DIGALF,RELSW	07728	44	06536	02478	
32380	TDM	RSYMSW,1,11	07740	15	08377	0000J	
32390	B7	DIGALF	07752	49	06536		
32400 TRNUMB	CM	COLL-14,6060	07760	14	02425	-6060	
32410	BH	CHKND	07772	46	08100	01100	
32420	TNS	COLL-2,BETA	07784	72	02437	02691	
32430	B7	DIGALF	07796	49	06536		
32440 ASTER	CM	DOL,0,10	07804	14	07033	000-0	
32450	BE	LDCHAR	07816	46	07348	01200	
32460	BTM	GET,INTERM	07828	17	07496	-6748	
32470 RTPN	BNF	CHKND,LPNSW,,	07840	44	08100	08379	
32480	BNF	SCANA,SCAN-1	07852	44	06252	06111	
32490	TD	XFLAG, COLL-2	07864	25	07956	02437	
32500	MM	XFLAG,003,9	07876	13	07956	00-03	
32510	BLX	*+12,99(1)	07888	65	07900	000R9	
32520	MA	XTAB+3(1),ADDRS	07900	70	07901	03490	
32530	TD	ADDRS-3,XTAB(1)	07912	25	03487	079N8	
32540	TD	ADDRS-2,XTAB+1(1)	07924	25	03488	079N9	
32550	TD	ADDRS-1,XTAB+2(1)	07936	25	03489	07900	
32560	B7	SCANA	07948	49	06252		
32570 XFLAG	DC	2,0	07956		2		
32580 XTAB	00	*,5 7 10 11	07958	00	000-0	-00--	
32590	00	*,0 3 5 6 7 9 10 11	07970	-0	0-0--	-0---	
32600	00	*,	07982	00	00000	00000	
32610 *							
32620 *		EVALER IS THE ERROR ROUTINE					
32630 *							
32640	DAS	5	07995		5 X	2	
32650	BNR	59007	08004	45	59007	00000	
32660	DC	1,*,*	08015		1		
32670 EVALER	BT	EPRINT,EPRINT-1	08016	27	08452	08451	
32680	SPTY		08028	34	00000	00101	
32690	WATY	COLL-12	08040	39	02427	00100	
32700 EV1	BD	CORERS ,ERSTSW	08052	43	08188	02476	

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32710	BNF	CHKND,LSTYSW	08064	44	08100	02480
32720	RCTY		08076	34	00000	00102
32730	TBTY		08088	34	00000	00108
32740	CHKND	TFM	08100	16	03490	-0000
32750	TOBB	CF	08112	33	06111	00000
32760		BNR **20,INPUT+20	08124	45	08144	02805
32770	B7	SCAN=1,,6	08136	49	0611J	
32780	CM	INPUT+20,23,10	08144	14	02805	000K3
32790	BE	SCAN=1,,6	08156	46	0611J	01200
32800	TR	INPUT+19,INPUT+21	08168	31	02804	02806
32810	B7	TOBB+12	08180	49	08124	
32820	CORERS	WATY RNMESS	08188	39	08383	00100
32821	BNF	**+36,R2SW,,	08200	44	08236	04361
32822	TDM	R2SW,0,,	08212	15	04361	00000
32823	SM	SUBIN+5,1,10	08224	12	03539	000-1
32830	TF	ADDCOW,PLACE	08236	26	02676	09487
32840	RCTY		08248	34	00000	00102
32850	TR	INPUT+19,VACANT	08260	31	02804	04010
32860	WATY	INPUT-10	08272	39	02775	00100
32870	OOPS	RCTY	08284	34	00000	00102
32880	BT	FWOCSN+36,FWOCSN+35	08296	27	06008	06007
32890	WATY	INPUT-10	08308	39	02775	00100
32900	*	ACCEPT CORRECTION FROM TYPWRITER				
32910	RATY	INPUT+20	08320	37	02805	00100
32930	BC4	OOPS	08332	46	08284	00400
32940	BTM	GEET,**+12	08344	17	09664	-8356
32950	TDM	INTBUF+7,1,11	08356	15	03605	0000J
32960	B7	G01+12	08368	49	04514	
32970	RCTR	DS 2,,	08376		2	
32980	RSYMSW	DS 1,,	08377		1	
32990	RLOCSW	DS 1,,	08378		1	
33000	LPNSW	DS 1	08379		1	
33010	DIVSW	DS 1	08380		1	
33020	RNMESS	DAC 19, RE-ENTER OPERANDS'	08383		19 X	2
		RE-ENTER OPERANDS'				
33030	MESS2	DAC 16, RE-ENTER STMT'	08421		16 X	2
		RE-ENTER STMT'				
33040	*					
33050	*	EPRINT PRINTS THE ERROR MESSAGE AND REFERENCE TO				
33060	*	INDICATE THE STATEMENT IN ERROR				
33070	*					
33080	EPRINT	RCTY	08452	34	00000	00102
33090	TF	LOPOUT,INPUT-2	08464	26	03827	02783
33100	WATY	LOPOUT-8	08476	39	03819	00100
33110	WATY	ERLAB	08488	39	03801	00100
33120	WNTY	INKRM-3	08500	38	02563	00100
33130	WATY	EVALER-21	08512	39	07995	00100
33140	BD	**+24,ERSTSW	08524	43	08548	02476
33150	SF	NONEX ,,,KILL OBJECT PROG. EXECUTION IF ERROR IS DETECTED	08536	32	00457	00000
33160	BB		08548	42	00000	00000
33170	DORG	*-3	08556			
33180	CLOUT	TR INPUT2-1,CLERER	08556	31	03278	02712
33190	TR	INPUT2+52,CLERER+1	08568	31	03331	02713
33200	TR	INPUT2+104,CLERER+1	08580	31	03383	02713
33210	TR	INPUT2+155,CLERER+27	08592	31	03434	02739
33220	BB2		08604	42		

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33230	*					
33240	*	THE SYMBOL TABLE IS SEARCHED FOR EQUIVALENCE				
33250	*					
33260	TDM	COLL,0	08606	15	02439	00000
33270	TR	COLL-17,COLL-15	08618	31	02422	02424
33280	LBADD	TFM BLKCTR,0,10,INITIALIZE BLOCK COUNTER	08630	16	03991	000-0
33290	C	SFA,SYMTAD ,,,CHK.TO SEE IF THIS IS PARTIAL BLOCK	08642	24	03947	02643
33300	BE	PARTL	08654	46	08710	01200
33310	AM	BLKCTR,1,10	08666	11	03991	000-1
33320	TR	LIM-9,LIMITSF-9	08678	31	03832	03979
33330	TF	LIM,LIMITSP	08690	26	03841	02508
33340	B7	**+20	08702	49	08722	
33350	PARTL	TR LIM-9,LIMITSP-9	08710	31	03832	02499
33360	BT	BSEARCH,BSEARCH-1,,TO BINARY SEARCH ROUTINE TO FIND SYMBOL	08722	27	09206	09205
33370	BD	GOTIT ,EQSW,,WAS SYMROL IN TABLE	08734	43	08830	09433
33380	C	BSBF-1,LIMITSF	08746	24	09457	03988
33390	BNL	GOTIT-24	08758	46	08806	01300
33400	CM	BLX,0,10	08770	14	02645	000-0
33410	BNE	CFIL	08782	47	08922	01200
33420	TF	SFA,SUBSM+5	08794	26	03947	03587
33430	TFM	EVALER-2,75000,,CANNOT FIND SYMBOL IN SYMBOL TABLE	08806	16	08014	P5000
33440	BT	EVALER,EVALER-1	08818	27	08016	08015
33450	GOTIT	TF SFA,SUBSM+5,,SAVE FILE ADR.OF BLOCK WHERE SYMBOL WAS FOUND.	08830	26	03947	03587
33460	AM	BSBF-1 ,5,10, MOVE SYMBOL ADDRESS	08842	11	09457	000-5
33470	TF	BETA,BSBF-1,11, INTO BETA	08854	26	02691	0945P
33480	BNF	**+48, RELSW	08866	44	08914	02478
33490	BNF	**+36, BETA	08878	44	08914	02691
33500	TDM	RSYMSW, 1,11	08890	15	08377	0000J
33510	CF	BETA	08902	33	02691	00000
33520	B7	DIGALF	08914	49	06536	
33530	CFIL	TF **+35,SYMTAD ,,,INITIALIZE SUB-INSTR. TO READ FIRST FILE BLK	08922	26	08957	02643
33540	AM	**+23,SPBL	08934	11	08957	-0040
33550	TFM	SUBSM+5	08946	16	03587	-0000
33560	TR	LIM-9,LIMITSF-9,,INITIALIZE FOR FULL BLOCK	08958	31	03832	03979
33570	C	SUBSM+5,SFA,,CHK.IF THIS BLOCK HAS ALREADY BEEN SEARCHED	08970	24	03587	03947
33580	BE	CMPCNT	08982	46	09090	01200
33590	*	SAVE DIGIT AT LOSYMB+1				
33600	TD	MURI ,LOSYMB+1	08994	25	02633	19998
33610	TD	LOSYMB+1,SPSGM	09006	25	19998	02561
33620	*	READ BLOCK OF SYMBOLS FROM FILE				
33630	TFM	IDRT,**+23	09018	16	00565	-9041
33640	B	IDGT,DEFMS,7	09030	49	00566	-3573
33650	TD	LOSYMB+1,MURI	09042	25	19998	02633
33660	BT	BSEARCH,BSEARCH-1	09054	27	09206	09205
33670	AM	BLKCTR,1,10	09066	11	03991	000-1
33680	BD	GOTIT,EQSW	09078	43	08830	09433
33690	CMPCNT	C BLKCTR,BLX	09090	24	03991	02645
33700	BH	GOTIT-36	09102	46	08794	01100
33710	BL	CFIL+12	09114	47	08934	01300
33720	C	SFA,SYMTAD	09126	24	03947	02643
33730	BE	GOTIT-36	09138	46	08794	01200
33740	TF	SUBSM+5,SYMTAD ,,,MOVE FILE ADR.OF PARTIAL BLOCK TO SUBIN	09150	26	03587	02643
33750	TR	LIM-9,LIMITSP-9	09162	31	03832	02499
33760	TF	LIM,LIMITSF	09174	26	03841	03988
33770	B7	CFIL+48	09186	49	08970	
33780	*	BINARY SYMBOL TABLE SEARCH SUBROUTINE				

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33790	NOP			09194	41	00000	00000
33800	BSERCH	TF	BSBF, CLERER+5	09206	26	09458	02717
33810	A		BSBF, LIM	09218	21	09458	03841
33820	A		BSBF, LIM-5	09230	21	09458	03836
33830	TF		BSAV, BSBF	09242	26	09464	09458
33840	A		BSBF, BSBF	09254	21	09458	09458
33850	A		BSBF, BSBF	09266	21	09458	09458
33860	A		BSBF, BSAV	09278	21	09458	09464
33870	BD		**24, BSBF	09290	43	09314	09458
33880	AM		BSBF-1, 8,10	09302	11	09457	000-8
33890	SM		BSBF-1, 8,10	09314	12	09457	000-8
33900	C		BSBF-1, LIM-5	09326	24	09457	03836
33910	BNE		**26	09338	47	09364	01200
33920	TDM		EQSW, 0	09350	15	09433	00000
33930	BB2			09362	42		
33940	C		COLL-2,BSBF-1,11	09364	24	02437	0945P
33950	BNE		BSNEQ	09376	47	09402	01200
33960	TDM		EQSW, 1,11	09388	15	09433	0000J
33970	BB2			09400	42		
33980	BSNEQ	BH	BSHI	09402	46	09434	01100
33990	TF		LIM, BSBF-1	09414	26	03841	09457
34000	B7		BSERCH	09426	49	09206	
34010	B7		LIM-5, BSBF-1	09434	26	03836	09457
34020	B7		BSERCH	09446	49	09206	
34030	EQSW	DS	, BSHI-1	09433		0	
34040	BSBF	DC	6,0	09458		6	
			-00000				
34050	BSAV	DC	6,0	09464		6	
			-00000				
34060	TEST	DS	5	09469		5	
34070	BB2	DC	6,424272	09475		6	
			M24272				
34080	TYPE	DS	2	09477		2	
34090	TESTAD	DS	5	09482		5	
34100	PLACE	DS	5	09487		5	
34110	SUBENT	DS	5	09492		5	
34120	CNTR	DS	2	09494		2	
34130	FBLEND	DS	5	09499		5	
34140	OPER	DS	2	09501		2	
34150	BSW	DS	1	09502		1	
34160	DSABOX	DSC	11,0'	09503		11	
			0000000000'				
34170	DS		1	09514		1	
34180	NMOAL	DS	1	09515		1	
34190	SMDDE	DS	1	09516		1	
34200	DMSV	DS	5	09521		5	
34210	DIGITS	DS	5	09526		5	
34220	**		INSTRUCTIONS TO BRING IN PHASE B6				
34230	DC		5,12345	09531		5	
			J2345				
34240	GAT	TFM	CFFA,DFADD3	09532	16	02631	-9556
34250	BT		CFF,GAT-1	09544	27	02594	09531
34260	DFADD3	DDA	,0,B6DAD,B6SCT,INSTRN	09556		14	
			OJ915L-29J3094				
34270	DC		1,'	09570		1	
			'				

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34280	**		INSTRUCTIONS TO BRING IN PHASE B5				
34290	DC		5,12345	09575		5	
			J2345				
34300	GIT	TFM	CFFA,DFADD2	09576	16	02631	-9600
34310	BT		CFF,GIT-1	09588	27	02594	09575
34320	DFADD2	DDA	,0,B5DAD,B5SCT,INSTRN	09600		14	
			OJ9122-29J3094				
34330	DC		1,'	09614		1	
			'				
34340	**		INSTRUCTIONS TO BRING IN PHASE B4				
34350	DC		5,12345	09619		5	
			J2345				
34360	GETT	TFM	CFFA,DFADD	09620	16	02631	-9644
34370	BT		CFF,GETT-1	09632	27	02594	09619
34380	DFADD	DDA	,0,B4DAD,B4SCT,LINPRT	09644		14	
			OJ9063-56-9722				
34390	DC		1,'	09658		1	
			'				
34400	**		INSTRUCTIONS TO RESTORE PHASE B3				
34410	DC		5,12345	09663		5	
			J2345				
34420	GEET	TFM	CFFA,DFADD1	09664	16	02631	-9700
34430	TFM		X,PHASEB	09676	16	04008	-4170
34440	BT		CFF,GEET-1	09688	27	02594	09663
34450	DFADD1	DDA	,0,B3DAD,B3SCT,B3MAD	09700		14	
			OJ9000-63-9700				
34460	DC		1,'	09714		1	
			'				
34470	*		TO LOAD PHASE B2 TO THE FILE				
34480	F3	34	SUB3,701	09716	34	09764	00701
34490		38	SUB3,702	09728	38	09764	00702
34500	TRA			09740	36	00000	00500
				09752	49	00000	00000
34510	SUB3	DDA	,0,B2DAD,B2SCT,PHASEB-12	09764		14	
			OJ9200-56-4158				
34520	TC		F3	09716			
34530	DORG		F3	09716			
34540	*		THE ROUTINE WHICH FOLLOWS TAKES CARE OF THE				
34550	*		OUTPUT FOR THE PROCESSOR				
34560	*						
34570	DC		5,00000	09720		5	
			-0000				
34580	*						
34590	*		IF A TYPED LISTING IS TO BE MADE, TYPE ADDRESS				
34600	*						
34610	LINPRT	BNF	**60,LSTYSW	09722	44	09782	02480
34620	CF		ADDRS-4	09734	33	03486	00000
34630	WNTY		ADDRS-4	09746	38	03486	00100
34640	SF		ADDRS-4	09758	32	03486	00000
34650	SPTY			09770	34	00000	00101
34660	CM		LINPRT-1,DOINST	09782	14	09721	J0750
34670	BE		DOINST	09794	46	10750	01200
34680	BNF		LINPRT-1,LSTYSW,6	09806	44	0972J	02480
34690	*						
34700	*		IF A DECLARATIVE, ALSO TYPE LENGTH				

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34710 *									
34720	CF	LNTH-4		09818	33	02383	00000		
34730	WNTY	LNTH-4		09830	38	02383	00100		
34740	SF	LNTH-4		09842	32	02383	00000		
34750 BRNCH	B	LINPR1-1,,6		09854	49	0972J	00000		
34760 DODS	BTM	LSTOUT,*,12	,,PUNCH DS OR DNB LIST DECK CARD	09866	17	12826	-9878		
34770	BD	X,INTBUF*,6		09878	43	0400Q	03604		
34780 *									
34790 *		GENERATE OUTPUT	FOR NUMERIC BLANKS						
34800 *									
34810	AM	ADDRS,1,10		09890	11	03490	000-1		
34820	TF	FRSTAD,ADDRS		09902	26	03869	03490		
34830	S	FRSTAD,LNTH		09914	22	03869	02387		
34840	TFM	TYPE,99,10		09926	16	09477	000R9		
34850	TFM	LNTH2,0		09938	16	10000	-0000		
34860	BTM	RELODG,4,1011		09950	17	11036	000-M		
34870	BTM	STACKR,9,10		09962	17	11288	000-9		
34880	B7	X,,6		09974	49	0400Q			
34890 DOCON	BNF	PCON,LSTYSW		09982	44	10086	02480		
34900	SPTY			09994	34	00000	00101		
34905 LNTH2	DS	5,DOCON+18		10000		5			
34910	BD	DUMP2-12,DUMP1+11		10006	43	10062	03517		
34920	BNR	**20,ZEPO+1		10018	45	10038	02301		
34930	B7	**20		10030	49	10050			
34940	WNTY	ZEPO+1		10038	38	02301	00100		
34950	BNF	DUMP2+12,DUMP1+11		10050	44	10086	03517		
34960	TD	DMPDIG,LNTH+1,6		10062	25	03990	02388		
34970 DUMP2	DNTY	DMPDIG,,6		10074	35	03990	00100		
34980 *									
34990 *		PUNCH THE CONSTANT CARDS							
35000 *									
35010 PCON	BTM	LSTOUT,*,12		10086	17	12826	J0098		
35020	BLX	**12,LNTH(1)		10098	65	10110	02307		
35030	TD	OUT+2(1),LNTH+1		10110	25	022K0	02388		
35040	BTM	RELODG,2,1011		10122	17	11036	000-K		
35050	BD	MESOUT,DMESM		10134	43	10466	03857		
35060 LUCK	BTM	STACKR,9,10		10146	17	11288	000-9		
35070	B7	X,,6		10158	49	0400Q			
35080 PDSA	BTM	CVACT,*,12		10166	17	12758	J0178		
35090	BTM	LSTOUT,*,12		10178	17	12826	J0190		
35100	TR	OUT+2,ZEPO+1		10190	31	02220	02301		
35110	TD	OUT+7,LNTH+1		10202	25	02225	02388		
35120	BNF	**36,LSTYSW		10214	44	10250	02480		
35130	SPTY			10226	34	00000	00101		
35140	WNTY	OUT+2		10238	38	02220	00100		
35150	BTM	RELODG,2,1011		10250	17	11036	000-K		
35160	AM	CHSYM+11,1,10		10262	11	10305	000-1		
35170	BNF	CHSYM,IC		10274	44	10294	03864		
35180	B7	CHSYM+24		10286	49	10318			
35190 CHSYM	BNF	**24,DSABOX-1		10294	44	10318	09502		
35200	BTM	RELODG,3,1011		10306	17	11036	000-L		
35210	BTM	STACKR,9,10		10318	17	11288	000-9		
35220	TFM	LNTH,5		10330	16	02387	-0005		
35230	TR	ZEPO+1,ZEPO+6		10342	31	02301	02306		
35240	BNR	**32,ZEPO+1		10354	45	10386	02301		
35250	TDM	INTBUF,0		10366	15	03598	00000		

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35260	B7	X,,6		10378	49	0400Q			
35270	TF	FRSTAD,LSTAD		10386	26	03869	03879		
35280	AM	LSTAD,9,10		10398	11	03879	000-5		
35290	AM	ADDRS,9,10		10410	11	03490	000-5		
35300 DUDLEY	BNF	**36,LSTYSW		10422	44	10458	02480		
35310	RCTY			10434	34	00000	00102		
35320	TBTY			10446	34	00000	00108		
35330	B7	LINPR1		10458	49	09722			
35340 *		THE FOLLOWING ROUTINE HANDLES OUTPUT FOR DMES							
35350 MESOUT	TD	INPUT2+100,OUT+2,27,MOVE DMES		10466	25	-3379	-2220		
35360	AM	*-6,1,10, DATA		10478	11	10472	000-1		
35370	AM	*-13,1,10, FROM		10490	11	10477	000-1		
35380	SM	LNTH,1,10, OUT+2		10502	12	02387	000-1		
35390	BNN	MESOUT,,, TO INPUT2+100		10514	46	10466	01300		
35400 DOMESS	TR	OUT+2,INPUT2+100		10526	31	02220	03379		
35410	TFM	BANAN+11,INPUT2+99		10538	16	10633	-3378		
35420	SM	MESOUT+6,2,10		10550	12	10472	000-2		
35430	TFM	LNTH,0		10562	16	02387	-0000		
35440	AM	LNTH,1,10		10574	11	02387	000-1		
35450	AM	BANAN+11,1,10		10586	11	10633	000-1		
35460	C	BANAN+11,MESOUT+6		10598	24	10633	10472		
35470	BNL	BANAN+12		10610	46	10634	01300		
35480 BANAN	BNR	*-48		10622	45	10574	00000		
35490	BNR	**24,BANAN+11,11		10634	45	10658	1063L		
35500	TDM	DUMP1+11,0,11		10646	15	03517	0000-		
35510	BTM	STACKR,9,10		10658	17	11288	000-9		
35520	AM	BANAN+11,1,10		10670	11	10633	000-1		
35530	C	BANAN+11,MESOUT+6		10682	24	10633	10472		
35540	BH	X,,6		10694	46	0400Q	01100		
35550	TR	OUT+2,BANAN+11,11		10706	31	02220	1063L		
35560	TF	FRSTAD,LSTAD		10718	26	03869	03879		
35570	SM	BANAN+11,1,10		10730	12	10633	000-1		
35580	B7	DOMESS+36		10742	49	10562			
35590 *									
35600 *		OUTPUT ROUTINE FOR INSTRUCTIONS AND LINKAGES							
35610 *									
35620 DOINST	BTM	LSTOUT,*,12		10750	17	12826	J0762		
35630	SF	ADDRS-4		10762	32	03486	00000		
35640	TF	FRSTAD,ADDRS		10774	26	03869	03490		
35650	BNF	NOTYPE,LSTYSW		10786	44	10930	02480		
35660	TR	OUT,ZEPO		10798	31	02218	02300		
35670	TR	OUT+3,ZEPO+2		10810	31	02221	02302		
35680	TR	OUT+9,ZEPO+7		10822	31	02227	02307		
35690	TD	OUT+2,LNTH+1		10834	25	02220	02388		
35700	TD	OUT+8,LNTH+1		10846	25	02226	02388		
35710	TD	OUT+14,LNTH+1		10858	25	02232	02388		
35720	WNTY	OUT		10870	38	02218	00100		
35730 SPITY	SPTY			10882	34	00000	00101		
35740	WNTY	OUT+3		10894	38	02221	00100		
35750	SPTY			10906	34	00000	00101		
35760	WNTY	OUT+9		10918	38	02227	00100		
35770 NOTYPE	TD	DIVSW,ZEPO+12		10930	25	08380	02312		
35780	TD	ZEPO+12,LNTH+1		10942	25	02312	02388		
35790	TR	OUT+2,ZEPO		10954	31	02220	02300		
35800	TFM	LNTH,12		10966	16	02387	-0012		
35810	BTM	RELODG,1,1011		10978	17	11036	000-J		

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35820	BTM	STACKR,9,10	10990	17	11288	000-9
35830	TD	ZEPO+12,DIVSW	11002	25	02312	08380
35840	BNR	SECINS,ZEPO+12	11014	45	11134	02312
35850	B	X,,6	11026	49	04000	00000
35860	DORG	=-1	11036			
35870	RELODG	TD IC,RELODG-1	11036	25	03864	11035
35880	BNF	**+36,KLRLSW	11048	44	11084	04003
35890	BNF	**+24,RELSW	11060	44	11084	02478
35900	CF	IC	11072	33	03864	00000
35910	BD	**+48,RELSW	11084	43	11132	02478
35920	CM	IC,1,1011	11096	14	03864	000-J
35930	BNE	**+24	11108	47	11132	01200
35940	TDM	IC,2,11	11120	15	03864	0000K
35950	BB2		11132	42		
35960	SECINS	BT CLOUT,CLOUT-1	11134	27	08556	08555
35970	TR	ZEPO,ZEPO+12	11146	31	02300	02312
35980	AM	ADDRS,12	11158	11	03490	-0012
35990	BTM	LSTOUT,**12	11170	17	12826	J1182
36000	TF	FRSTAD,LSTAD	11182	26	03869	03879
36010	BNF	DOINST+36,LSTYSW	11194	44	10786	02480
36020	RCTY		11206	34	00000	00102
36030	DC	1,,*-4	11213		1	
36040	TBTY		11218	34	00000	00108
36050	CF	ADDRS-4	11230	33	03486	00000
36060	WNTY	ADDRS-4	11242	38	03486	00100
36070	SF	ADDRS-4	11254	32	03486	00000
36080	SPTY		11266	34	00000	00101
36090	B	DOINST+36	11278	49	10786	00000
36100	DORG	=-1	11288			
36110	*					
36120	*	THE FOLLOWING ROUTINE ARRANGES THE OBJECT OUTPUT TO THE FILE				
36130	*					
36140	STACKR	TD STNUCD+13,STACKR-1	11288	25	12343	11287
36150	TF	LSTAD,FRSTAD	11300	26	03879	03869
36160	A	LSTAD,LNTH	11312	21	03879	02387
36170	BNF	NEWCAR,FRSTMT,, GO TO NEWCAR IF THIS IS FIRST ENTRY	11324	44	11978	04002
36180	CM	7TY5,75,,CHK. IF CARD IS EMPTY	11336	14	03862	-0075
36190	BE	MODIFI	11348	46	12186	01200
36200	BD	BRSEQ,IC,,CHK.FOR TCD	11360	43	11380	03864
36210	B7	INDADR	11372	49	11810	
36220	BRSEQ	C TESTAD,FRSTAD,,TEST FOR BREAK IN ADDRESS SEQUENCE	11380	24	09482	03869
36230	BNE	REMAIL	11392	47	11854	01200
36240	C	TYPE,IC,,TEST FOR KIND OF STATEMENT	11404	24	09477	03864
36250	BNE	NEWIL	11416	47	11922	01200
36260	TFM	TEST,0	11428	16	09469	-0000
36270	TFM	TRDATA+11,OUT+2	11440	16	11643	-2220
36280	TDM	OUT-7,0	11452	15	02211	00000
36290	FIT	S 7TY5,TEST,, TEST TO SEE IF ADDR.IND,LEN ETC FITS	11464	22	03862	09469
36300	BNP	SETRM,,NO,GO TO SET FLAG REC.MRK	11476	47	12174	01100
36310	S	7TY5,LNTH,,NOW SEE IF DATA FITS	11488	22	03862	02387
36320	BNZ	**+24	11500	47	11522	01200
36330	TFM	7TY5,75	11512	16	03862	-0075
36340	BNL	CHKRM	11524	46	11572	01300
36350	TD	**+22,IC,, NO,TEST	11536	25	11558	03864
36360	CM	**+8,20000,79,FOR	11548	14	11556	K0-00

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36370	BNE	SETRM,, CONSTANT	11560	47	12174	01200
36380	CHKRM	BNR TRDATA,OUT-7	11572	45	11632	02211
36390	TD	TRDATA+6,OUT-7,6	11584	25	11630	02211
36400	AM	ABBA,1,10	11596	11	04001	000-1
36410	TDM	OUT-7,0	11608	15	02211	00000
36420	SM	TEST,1,10	11620	12	09469	000-1
36430	TRDATA	TR ABBA,,6,MOVE DATA (PLUS ADDR.,IND.LEN,ETC) TO OUTPUT BUFFER	11632	31	0400J	00000
36440	BNF	**+20,7TY5	11644	44	11664	03862
36450	B7	SPLIT	11656	49	12418	
36460	A	STKLEN,LNTH,6,UPDATE LENGTH	11664	21	0387M	02387
36470	A	ABBA,TEST	11676	21	04001	09469
36480	A	ABBA,LNTH	11688	21	04001	02387
36490	TF	TESTAD,LSTAD,, STORE ADDR.OF LAST POSN.+1	11700	26	09482	03879
36500	TF	TYPE,IC,,STORE INDIC.CODE.	11712	26	09477	03864
36510	BD	**+36,IC	11724	43	11760	03864
36520	TD	TRDATA+6,FLGRM,6	11736	25	11630	03880
36530	TFM	7TY5,75	11748	16	03862	-0075
36540	TDM	FRSTMT,1,11	11760	15	04002	0000J
36550	BNF	**+24,DUMPI+11,,CK.FOR CONST.WHOSE LAST POSN.IS A REC.MRK.	11772	44	11796	03517
36560	TDM	TYPE-1,1,11,SET INDICATOR THAT CONST.HAS RECORD MARK	11784	15	09476	0000J
36570	TDM	DUMPI+11	11796	15	03517	00000
36580	REETRN	BB2	11808	42		
36590	*	SET UP FOR INDICATOR AND ADDRESS--TCD				
36600	INDADR	TDM HUB1+11,6	11810	15	12045	00006
36610	TDM	HUB1+35,5	11822	15	12069	00005
36620	TFM	HUB2+11,OUT-7	11834	16	12081	-2211
36630	B7	HUB1	11846	49	12034	
36640	*	SET UP FOR REC.MRK.,ADDRESS,INDICATOR AND LENGTH				
36650	REMAIL	TD OUT-7,LNTH+1	11854	25	02211	02388
36660	TDM	HUB1+11,9	11866	15	12045	00009
36670	TDM	HUB1+35,8	11878	15	12069	00008
36680	TFM	HUB2+11,OUT-6	11890	16	12081	-2212
36690	TF	OUT-2,FRSTAD	11902	26	02216	03869
36700	B	HUB	11914	49	12010	00000
36710	DORG	=-3	11922			
36720	*	SET UP FOR NEW INDICATOR AND LENGTH				
36730	NEWIL	TDM TYPE-1,,11,TURN OFF INDICATOR	11922	15	09476	0000-
36740	TDM	HUB1+11,3	11934	15	12045	00003
36750	TDM	HUB1+35,2	11946	15	12069	00002
36760	TFM	HUB2+11,OUT-1	11958	16	12081	-2217
36770	B	HUB	11970	49	12010	00000
36780	DORG	=-3	11978			
36790	*	SET UP FOR NEW 75-DIGIT RECORD- NEW ADDRESS,IND.AND LENGTH.				
36800	NEWCAR	TDM HUB1+11,8	11978	15	12045	00008
36810	TDM	HUB1+35,7	11990	15	12069	00007
36820	B	REMAIL+36	12002	49	11890	00000
36830	DORG	=-3	12010			
36840	HUB	TD OUT-1,IC	12010	25	02217	03864
36850	TFM	OUT+1,0,10	12022	16	02219	000-0
36860	HUB1	TFM TEST	12034	16	09469	-0000
36870	TF	STKLEN,ABBA	12046	26	03874	04001
36880	AM	STKLEN,	12058	11	03874	-0000
36890	HUB2	TFM TRDATA+11,	12070	16	11643	-0000
36900	TD	**+22,IC	12082	25	12104	03864
36910	CM	**+8,40000,79	12094	14	12102	M0-00
36920	BNE	FIT	12106	47	11464	01200

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37880	QFIL	DSA	ZEPD+7,ZEPO+11, INPUT2+2*76-2	13049	5	X	3
				13049	-2307		
				13054	-2311		
				13059	-3429		
				13060	1		
37890		DC	1,'				
37900	ACTFIL	DSA	ZEPO+1,---, INPUT2+2*73-2	13065	5	X	3
				13065	-2301		
				13070	-0000		
				13075	-3423		
				13076	1		
37910		DC	1,'				
37920	LNTHFL	DSA	LNTH-4,LNTH,INPUT2+2*67-2	13081	5	X	3
				13081	-2383		
				13086	-2387		
				13091	-3411		
				13092	1		
37930		DC	1,'				
37940	*						
37950	*						
37960	*						
			ASSEMBLE INSTRUCTION				
37970	INSTRN	TD	++23,ADDCOW	13094	25	13117	02676
37980		TD	++23,AJUST	13106	25	13129	02399
37990		AM	ADDCOW,,10	13118	11	02676	000-0
38000		TFM	LINPRT-1,DOINST	13130	16	09721	J0750
38010		TD	ZEPO,INTBUF	13142	25	02300	03598
38020		TD	ZEPO+1,INTBUF+1	13154	25	02301	03599
38030		BTM	SCAN,++12,7 11	13166	17	06112	J317Q
38040		TR	ZEPO+2,CLERER+43	13178	31	02302	02755
38050		TR	ZEPO+2,ADDRS-4	13190	31	02302	03486
38060		CF	ZEPO+2	13202	33	02302	00000
38070		BNF	++24,RLOCSW	13214	44	13238	08378
38080		SF	ZEPO	13226	32	02300	00000
38090		BTM	TRSCAN,++12,7 11	13238	17	06082	J325-
38100		TR	ZEPO+7,ADDRS-4	13250	31	02307	03486
38110		CF	ZEPO+7	13262	33	02307	00000
38120		BNF	++24,RLOCSW	13274	44	13298	08378
38130		SF	ZEPO+1	13286	32	02301	00000
38140		C	INPUT+18,BMK+6	13298	24	02803	13513
38150		BE	++36	13310	46	13346	01200
38160		C	INPUT+18,BBT+6	13322	24	02803	13505
38170		BNE	++36	13334	47	13370	01200
38180		BTM	TRSCAN,++12	13346	17	06082	J3358
38190		TD	ZEPO+7,ADDRS	13358	25	02307	03490
38200	*		SET THE Q-MODIFIERS				
38210	OPCODE	BLXM	++12,-5(1)	13370	66	13382	000-N
38220		BNF	++36,INTBUF+7(1)	13382	44	13418	036-5
38230		TD	ZEPO+12(1),INTBUF+7(1)	13394	25	023J2	036-5
38240		CF	ZEPO+12(1)	13406	33	023J2	00000
38250		BCXM	OPCODE+12,1(1)	13418	64	13382	000-1
38260	TYPINS	TF	ADDRS,ADDCOW	13430	26	03490	02676
38270		AM	ADDCOW,11	13442	11	02676	-0011
38280		C	INPUT+16,BB2	13454	24	02801	09475

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38290		BNE	CHKB7	13466	47	13514	01200
38300		SM	ADDCOW,10,10	13478	12	02676	000J0
38310		B7	FLAGGR	13490	49	13550	
38320	BBT	DAC	4,BBT ...	13499		4	X 2
		BBT					
38330	BMK	DAC	4,BMK ...	13507		4	X 2
		BMK					
38340	CHKB7	CM	INPUT+14,4277,8	13514	14	02799	0M277
38350		BNE	FLAGGR	13526	47	13550	01200
38360		SM	ADDCOW,5	13538	12	02676	-0005
38370	*						
38380	*		CHECK TO SEE IF THERE IS A FLAG OPERAND				
38390	*						
38400	FLAGGR	TR	INPUT+19,INPUT+21	13550	31	02804	02806
38410		BNR	++20,INPUT+20	13562	45	13582	02805
38420		B7	SEEIM	13574	49	13626	
38430		CM	INPUT+20,23,10	13582	14	02805	000K3
38440		BE	SEEIM	13594	46	13626	01200
38450		BD	MGRUDR,INPUT+19	13606	43	13782	02804
38460		B7	FLAGGR	13618	49	13550	
38470	*						
38480	*		SET FLAG IF IMMEDIATE INSTRUCTION				
38490	*						
38500	SEEIM	TD	++21,INTBUF	13626	25	13647	03598
38510		CM	++9,1,810	13638	14	13647	0-0-1
38520		BNE	LINPRT	13650	47	09722	01200
38530		C	++23,INTBUF+1	13662	24	13685	03599
38540		B1	LINPRT,1215,10	13674	46	09722	012J5
38550		SF	ZEPO+7	13686	32	02307	00000
38560		B7	LINPRT	13698	49	09722	
38570	*						
38580	*		SCAN FLAG OPERAND				
38590	*						
38600	TRANS	TR	INPUT+19,INPUT+21	13706	31	02804	02806
38610		BNR	++20,INPUT+20	13718	45	13738	02805
38620		B7	LINPRT	13730	49	09722	
38630		BD	++20,INPUT+19	13738	43	13758	02804
38640		B7	TRANS	13750	49	13706	
38650		CM	INPUT+20,23,10	13758	14	02805	000K3
38660		BE	LINPRT	13770	46	09722	01200
38670	MGRUDR	CM	INPUT+20,71,10	13782	14	02805	000P1
38680		BNE	ABLE	13794	47	13950	01200
38690		BNR	++20,INPUT+22	13806	45	13826	02807
38700		B7	ABLE	13818	49	13950	
38710		C	ZERONE+9,INPUT+22	13826	24	13991	02807
38720		BNE	BAKR	13838	47	13882	01200
38730		SF	ZEPO+10	13850	32	02310	00000
38740	CHAR	TR	INPUT+19,INPUT+23	13862	31	02804	02808
38750		B7	TRANS+12	13874	49	13718	
38760	BAKR	C	ZERONE+11,INPUT+22	13882	24	13993	02807
38770		BNE	ABLE	13894	47	13950	01200
38780		BNR	++20,INPUT+24	13906	45	13926	02809
38790		B7	ZERONE	13918	49	13982	
38800		C	ZERONE+9,INPUT+24	13926	24	13991	02809
38810		BNE	ZERONE	13938	47	13982	01200
38820	ABLE	TD	++18,INPUT+20	13950	25	13968	02805

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38830	SF	ZEPO	13962	32	02300	00000
38840	B7	TRANS	13974	49	13706	
38850	ZERONE	SF ZEPO+11,7071,810	13982	32	02311	OPOP1
38860	B7	CHAR	13994	49	13862	
38870	CNT	DS 2,CHAR-1	13861		2	
38880	*					
38890	*	EVALUATE LENGTH OF DS OR DNB				
38900	*					
38910	DSDNB	BTM SCAN,++12	14002	17	06112	J4014
38920	TF	LNTH,ADDRES	14014	26	02387	03490
38930	BD	++48,INTBUF+6	14026	43	14074	03604
38940	CM	LNTH,100	14038	14	02387	-0100
38950	BN	++24	14050	47	14074	01300
38960	TFM	LNTH,99	14062	16	02387	-0099
38970	TR	INPUT+19,INPUT+21	14074	31	02804	02806
38980	BTM	SCAN,++12	14086	17	06112	J4098
38990	BD	++32,BSW	14098	43	14130	09502
39000	TD	KLRLSW,RLOCSW	14110	25	04003	08378
39010	B7	PRDS	14122	49	14198	
39020	*					
39030	*	ADDRESS ASSIGNED BY PROCESSOR				
39040	*					
39050	TF	ADDRES,ADDCOM	14130	26	03490	02676
39060	A	ADDCOM,LNTH	14142	21	02676	02387
39070	BD	DSS,INTBUF+5	14154	43	14186	03603
39080	A	ADDRES,LNTH	14166	21	03490	02387
39090	B7	DSS+12	14178	49	14198	
39100	DSS	AM ADDRES,1,10	14186	11	03490	000-1
39110	PRDS	BTM LINPRT,ODDS	14198	17	09722	-9866
39120	*					
39130	*	EVALUATE LENGTH OF DAS				
39140	*					
39150	DAS	BTM SCAN,++12	14210	17	06112	J4222
39160	TF	LNTH,ADDRES	14222	26	02387	03490
39170	A	LNTH,LNTH	14234	21	02387	02387
39180	TF	TEMPR,LNTH	14246	26	02572	02387
39190	BNR	NOADD,INPUT+20	14258	45	14350	02805
39200	*					
39210	*	ADDRESS ASSIGNED BY PROCESSOR				
39220	*					
39230	TD	++23,ADDCOM	14270	25	14293	02676
39240	TD	++23,JSTBL	14282	25	14305	02459
39250	AM	ADDCOM,10	14294	11	02676	000-0
39260	TF	ADDRES,ADDCOM	14306	26	03490	02676
39270	A	ADDCOM,TEMPR	14318	21	02676	02572
39280	SM	ADDCOM,2,10	14330	12	02676	000-2
39290	B7	PRDS	14342	49	14198	
39300	NOADD	TR INPUT+19,INPUT+21	14350	31	02804	02806
39310	BTM	SCAN,++12	14362	17	06112	J4374
39320	BD	DAS+60,BSW	14374	43	14270	09502
39330	TD	KLRLSW,RLOCSW	14386	25	04003	08378
39340	B7	PRDS	14398	49	14198	
39350	*					
39360	*	DEFINE ORIGIN				
39370	*					
39380	DORG	BTM SCAN,++12	14406	17	06112	J4418

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39390	TF	ADDCOM,ADDRES	14418	26	02676 03490
39400	*				
39410	*	SET ADDRESS COUNTER TO NEW VALUE			
39420	*				
39430	SM	ADDCOM,1,10	14430	12	02676 000-1
39440	BNF	++24,ADDCOM	14442	44	14466 02676
39450	TFM	ADDCOM,99999	14454	16	02676 R9999
39460	ECLAT1	CF ADDRES-4	14466	33	03486 00000
39470	BNF	++24,LSTYSW	14478	44	14502 02480
39480	WNTY	ADDRES-4	14490	38	03486 00100
39490	BNF	++36,LSCDSW	14502	44	14538 02479
39500	BTM	FILL,ADRFIL-4	14514	17	12546 J2997
39510	WACD	INPUT2	14526	39	03279 00400
39520	B7	PHASEB	14538	49	04170
39530	*				
39540	*	DEFINE CONSTANT AND DEFINE SPECIAL CONSTANT			
39550	*				
39560	DC	TD DC +23,INTBUF+5	14546	25	14569 03603
39570	CF	CCOMER	14558	33	14698 00000
39580	TFM	SFLAG+11, 00000	14570	16	14897 -0000
39590	BTM	SCAN,++12	14582	17	06112 J4594
39600	TF	LNTH,ADDRES	14594	26	02387 03490
39610	CM	LNTH,51	14606	14	02387 -0051
39620	BL	++24	14618	47	14642 01300
39630	TFM	LNTH,50	14630	16	02387 -0050
39640	TR	ZEPO-1,CLENER	14642	31	02299 02712
39650	TD	ZEPO+51,LNTH+1	14654	25	02351 02388
39660	SF	ZEPO	14666	32	02300 00000
39670	TFM	SFLAG+1, 41,10,	14678	16	14887 000H1
39680	B7	TRREC+12	14690	49	14874
39690	CCOMER	CM INPUT+22,23,10	14698	14	02807 000K3
39700	BE	TRREC+24	14710	46	14886 01200
39710	BH	TRREC-72	14722	46	14790 01100
39720	CM	INPUT+22, 20,10,	14734	14	02807 000K0
39730	BNE	TRREC,++	14746	47	14862 01200
39740	SF	CCOMER	14758	32	14698 00000
39750	TFM	SFLAG+1, 32,10,	14770	16	14887 000L2
39760	B7	TRREC	14782	49	14862
39770	*				
39780	*	COLLECT CONSTANT			
39790	*				
39800	TF	SFLAG+11,INPUT+22	14790	26	14897 02807
39810	TD	ZEPO+51,INPUT+22	14802	25	02351 02807
39820	CM	INPUT+22,60,10	14814	14	02807 00000
39830	BP	++24	14826	46	14850 01100
39840	SF	ZEPO+51	14838	32	02351 00000
39850	TR	ZEPO,ZEPO+1	14850	31	02300 02301
39860	TRREC	TR INPUT+19,INPUT+21	14862	31	02804 02806
39870	BNR	CCOMER,INPUT+22	14874	45	14698 02807
39880	SFLAG	SF ZEPO+50	14886	32	02350 00000
39890	CM	--1,34,10	14898	14	14897 000L4
39900	BNE	++72	14910	47	14982 01200
39910	BNF	++36,ZEPO+50	14922	44	14958 02350
39920	BNF	++24,CCOMER	14934	44	14958 14698
39930	SF	ZEPO+49	14946	32	02349 00000
39940	TD	ZEPO+50,LNTH+1	14958	25	02350 02388

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39950	TDM	DUMPI+11,,11	14970	15	03517	0000-	
39960	SF	ZEPO	14982	32	02300	00000	
39970	C	LNTH,INTBUF+4	14994	24	02387	03602	
39980	BNN	**+24	15006	46	15030	01300	
39990	TF	LNTH,INTBUF+4	15018	26	02387	03602	
40000	TFM	**+35,ZEPO+50	15030	16	15065	-2350	
40010	S	**+23,LNTH	15042	22	15065	02387	
40020	TR	ZEPO	15054	31	02300	00000	
40030	BD	**+24,DC +23	15066	43	15090	14569	
40040	SF	ZEPO+1	15078	32	02301	00000	
40050	BNR	**+24,ZEPO+1	15090	45	15114	02301	
40060	CF	ZEPO+1	15102	33	02301	00000	
40070	BNR	CHECK,INPUT+22	15114	45	15306	02807	
40080	*						
40090	*	ADDRESS ASSIGNED BY PROCESSOR					
40100	*						
40110	GOAHD	TF	ADDRS,ADDCOW	15126	26	03490	02676
40120	A	ADDCOW,LNTH	15138	21	02676	02387	
40130	TF	LSTAD,ADDCOW	15150	26	03879	02676	
40140	AM	LSTAD ,1,10	15162	11	03879	000-1	
40150	BD	DSC,DC +23	15174	43	15210	14569	
40160	A	ADDRS,LNTH	15186	21	03490	02387	
40170	B	DSC+12	15198	49	15222	00000	
40180	DSC	AM	ADDRS,1,10	15210	11	03490	000-1
40190	TR	OUT+2,ZEPO+1	15222	31	02220	02301	
40200	TF	FRSTAD,LSTAD	15234	26	03869	03879	
40210	S	FRSTAD ,LNTH	15246	22	03869	02387	
40220	BNF	**+36,DUMPI+11	15258	44	15294	03517	
40230	BNR	**+24,ZEPO+1	15270	45	15294	02301	
40240	TDM	DUMPI+11,1,11	15282	15	03517	0000J	
40250	PRDCSA	BTM	LINPRT,DOCON	15294	17	09722	-9982
40260	CHECK	TR	INPUT+19,INPUT+23	15306	31	02804	02808
40270	BTM	SCAN,**+12	15318	17	06112	J5330	
40280	BD	GOAHD,BSW	15330	43	15126	09502	
40290	TD	KLRLSW,RLOCSW	15342	25	04003	08378	
40300	*						
40310	*	ADDRESS ASSIGNED BY PROGRAMMER					
40320	*						
40330	TF	LSTAD ,ADDRS	15354	26	03879	03490	
40340	BD	**+32,DC +23	15366	43	15398	14569	
40350	AM	LSTAD ,1,10	15378	11	03879	000-1	
40360	B7	DSC+12	15390	49	15222		
40370	A	LSTAD ,LNTH	15398	21	03879	02387	
40380	B7	DSC+12	15410	49	15222		
40390	**FLIP	BRANCH TABLE					
40400	DODSF	BTM	LINPRT,DODS	15418	17	09722	-9866
40410	DOCONF	BTM	LINPRT,DOCON	15430	17	09722	-9982
40420	PDSAF	BTM	LINPRT,PDSA	15442	17	09722	J0166
40430	PCONF	BTM	LINPRT,PCON	15454	17	09722	J0086
40440	LINP	BTM	LINPRT,DOINST	15466	17	09722	J0750
40450	DSB	BTM	GETT,DSBF	15478	17	09620	-9722
40460	LINKSF	BTM	GETT,LINKS	15490	17	09620	J4692
40470	CALLEX	BTM	GETT,CALEXT	15502	17	09620	J4920
40480	TRA	BTM	GIT,MTRA	15514	17	09576	J4476
40490	MACRO	BTM	GIT,MACROF	15526	17	09576	J3722
40500	DSA	BTM	GIT,DSAF	15538	17	09576	J3406

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40510	DEND	BTM	GIT,DENDF	15550	17	09576	J5136
40520	DDA	BTM	GIT,DDAF	15562	17	09576	J4030
40530	DGM	BTM	GETT,DGMF	15574	17	09620	-9914
40540	DVLC	BTM	GETT,DVLCF	15586	17	09620	J0070
40550	RSTR	BTM	GETT,RSTRF	15598	17	09620	J0686
40560	SAVE	BTM	GETT,SAVEF	15610	17	09620	J0940
40570	DMES	BTM	GETT,DMESF	15622	17	09620	J1602
40580	DOTCL	BTM	GETT,DOT	15634	17	09620	J3288
40590	DAC	BTM	GETT,DACF	15646	17	09620	J3748
40600	MAC2	BTM	GAT,MACR2	15658	17	09532	J3406
40610	*	LOAD PHASE B3 TO THE FILE					
40620	F2	34	SUB2,701	15670	34	15718	00701
40630	WN	WN	SUB2,702	15682	38	15718	00702
40640	TRA			15694	36	00000	00500
				15706	49	00000	00000
40650	SUB2	DDA ,0,B3DAD,B3SCT,B3MAD		15718		14	
		OJ9000-63-9700					
40660	TCD	F2		15670			
40670	DORG	LINPRT		09722			
40680	*						
40690	*	EVALUATE LENGTH OF DSB					
40700	*						
40710	DSBF	BTM	SCAN,**+12	09722	17	06112	-9734
40720	TF	LNTH,ADDRS	09734	26	02387	03490	
40730	TR	INPUT+19,INPUT+21	09746	31	02804	02806	
40740	BTM	SCAN,**+12	09758	17	06112	-9770	
40750	BNF	**+24,BSW	09770	44	09794	09502	
40760	TFM	ADDRS,1	09782	16	03490	-0001	
40770	M	LNTH,ADDRS	09794	23	02387	03490	
40780	SF	95	09806	32	00095	00000	
40790	TR	INPUT+19,INPUT+21	09818	31	02804	02806	
40800	BTM	SCAN,**+12	09830	17	06112	-9842	
40810	BNF	ASINE,BSW	09842	44	09890	09502	
40820	*						
40830	*	ADDRESS ASSIGNED BY PROCESSOR					
40840	*						
40850	A	LNTH,ADDCOW	09854	21	02387	02676	
40860	TF	ADDRS,LNTH	09866	26	03490	02387	
40870	A	ADDCOW,99	09878	21	02676	00099	
40880	*						
40890	*	ADDRESS ASSIGNED BY PROGRAMMER					
40900	*						
40910	ASINE	TF	LNTH,99	09890	26	02387	00099
40920	BTM	GETT,DODSF	09902	17	09664	J5418	
40930	*						
40940	*	DEFINE FILE GROUP MARK					
40950	*						
40960	DGMF	TFM	LNTH,1	09914	16	02387	-0001
40970	BTM	SCAN,**+12	09926	17	06112	-9938	
40980	TD	KLRLSW,RLOCSW	09938	25	04003	08378	
40990	BNF	**+48,BSW	09950	44	09998	09502	
41000	AM	ADDCOW,1	09962	11	02676	-0001	
41010	TF	ADDRS,ADDCOW	09974	26	03490	02676	
41020	TDM	KLRLSW,1,11	09986	15	04003	0000J	
41030	TF	FRSTAD ,ADDRS	09998	26	03869	03490	

41040	TF	LSTAD ,ADDRS	10010	26	03879	03490
41050	AM	LSTAD ,1,710	10022	11	03879	-00-1
41060	TD	OUT+2,SPSGM	10034	25	02220	02561
41070	TDM	DUMPI+11,1,11	10046	15	03517	0000J
41080	BTM	GEET,PCONF	10058	17	09664	J5454
41090	*					
41100	*	DEFINE VARIABLE LENGTH ADDRESS CONSTANT				
41110	*					
41120	DVLCF	BTM SCAN, ++12	10070	17	06112	J0082
41130	TD	KLRLSW,RLOCSW	10082	25	04003	08378
41140	TF	DVADBF+11, ADDR	10094	26	10601	03490
41150	SF	DVSW2	10106	32	10491	00000
41160	CF	DVSW1	10118	33	10490	00000
41170	BNF	++36,BSW	10130	44	10166	09502
41180	DVASGN	SF DVSW1,,	10142	32	10490	00000
41190	TDM	KLRLSW,1,11	10154	15	04003	0000J
41200	TR	INPUT+19, INPUT+21	10166	31	02804	02806
41210	BTM	SCAN, ++12	10178	17	06112	J0190
41220	TF	LNTH, ADDR	10190	26	02387	03490
41230	TR	OUT, CLERER+1	10202	31	02218	02713
41240	TFM	DVTR+6, OUT+2	10214	16	10508	-2220
41250	DVLP	CM LNTH, 00050	10226	14	02387	-0050
41260	BNP	++48	10238	47	10286	01100
41270	SM	LNTH,50,10	10250	12	02387	00000
41280	S	ADDRS, LNTH	10262	22	03490	02387
41290	TFM	LNTH,50	10274	16	02387	-0050
41300	BNF	++8+12, DVSW2	10286	44	10382	10491
41310	BNF	++36, DVSW1	10298	44	10334	10490
41320	TF	DVADBF+11,ADDCOW	10310	26	10601	02676
41330	A	DVADBF+11, LNTH	10322	21	10601	02387
41340	TF	LSTAD , DVADBF+11	10334	26	03879	10601
41350	S	LSTAD , LNTH	10346	22	03879	02387
41360	AM	LSTAD , 1	10358	11	03879	-0001
41370	CF	DVSW2	10370	33	10491	00000
41380	TR	ZEPO, CLERER+2	10382	31	02300	02714
41390	TFM	DVSF+6, ZEPO+51	10394	16	10496	-2351
41400	S	DVSF+6, ADDR	10406	22	10496	03490
41410	TF	DVAD+11, ADDR	10418	26	10525	03490
41420	TR	INPUT+19, INPUT+21	10430	31	02804	02806
41430	BTM	SCAN, ++12	10442	17	06112	J0454
41490	CF	ADDRS-4	10454	33	03486	00000
41500	TF	ZEPO+50, ADDR	10466	26	02350	03490
41510	CF	ZEPO+50-9	10478	33	02341	00000
41520	DVSF	SF 00000,,2	10490	32	-0000	00000
41530	DVTR	TR *-,,DVSF+6,211	10502	31	-0000	10490
41540	DVAD	AM DVTR+6, 00000	10514	11	10508	-0000
41550	BNR	++20, INPUT+20	10526	45	10546	02805
41560	B7	DVADBF	10538	49	10590	
41570	TR	INPUT+19, INPUT+21	10546	31	02804	02806
41580	BTM	SCAN, ++12	10558	17	06112	J0570
41590	A	LNTH, ADDR	10570	21	02387	03490
41600	B7	DVLP	10582	49	10226	
41610	DVADBF	TFM ADDR, 00000	10590	16	03490	-0000
41620	A	LSTAD , LNTH	10602	21	03879	02387
41630	BNF	++24, DVSW1	10614	44	10638	10490
41640	A	ADDCOW, LNTH	10626	21	02676	02387

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41650	TR	ZEPO+1, OUT+2	10638	31	02301	02220
41660	TF	FRSTAD,LSTAD	10650	26	03869	03879
41670	S	FRSTAD, LNTH	10662	22	03869	02387
41680	BTM	GEET,DOCONF	10674	17	09664	J5430
41690	DVSW1	DS , DVSF	10490		0	
41700	DVSW2	DS , DVSF+1	10491		0	
41710	RSTRF	TD ++23,ADDCOW,, ADJUST	10686	25	10709	02676
41720	TD	++23,AJUST,, LOCATION	10698	25	10721	02399
41730	AM	ADDCOW,,10, COUNTER	10710	11	02676	000-0
41740	TF	TEMP,ADDCOW	10722	26	02711	02676
41750	TF	FRSTAD ,ADDCOW	10734	26	03869	02676
41760	AM	ADDCOW,23,, UPDATE LOC COUNTER BY MACRO EXPANSION	10746	11	02676	-0023
41770	TF	LSTAD ,ADDCOW	10758	26	03879	02676
41780	TR	ZEPO,RSIN,, MOVE EXPANSION INTO WORK BUFFER	10770	31	02300	10914
41790	BTM	SCAN,++12,, FIND NUMERIC EQUIV OF 1ST OPERAND	10782	17	06112	J0794
41800	BNF	++24,BSW	10794	44	10818	09502
41810	TFM	ADDRS,80	10806	16	03490	-0080
41820	CF	ADDRS-4,,MOVE 1ST	10818	33	03486	00000
41830	TR	ZEPO+2,ADDRS-4,, OPERAND INTO MACRO EXPANSION.	10830	31	02302	03486
41840	TR	INPUT+19,INPUT+21,, GO AND GET	10842	31	02804	02806
41850	BTM	SCAN,++12,, NUMERIC EQUIVALENT OF NEXT OPERAND	10854	17	06112	J0866
41860	TF	ZEPO+11,ADDRS,, INTO MACRO EXPANSION	10866	26	02311	03490
41870	CF	ZEPO+7	10878	33	02307	00000
41880	TF	ADDRS,TEMP	10890	26	03490	02711
41890	BTM	GEET,LINP	10902	17	09664	J5466
41900	*	MACRO EXPANSION FOLLOWS				
41910	RSIN	TR 0,0	10914	31	00000	00000
41920	TDM	100,0	10926	15	00100	00000
41930	DC	1,,*	10938		1	
41940	SAVEF	TD ++23,ADDCOW,, ADJUST	10940	25	10963	02676
41950	TD	++23,AJUST,, LOCATION	10952	25	10975	02399
41960	AM	ADDCOW,,10, COUNTER	10964	11	02676	000-0
41970	TF	TEMP,ADDCOW	10976	26	02711	02676
41980	TF	FRSTAD ,ADDCOW	10988	26	03869	02676
41990	AM	ADDCOW,35,, UPDATE COUNTER BY MACRO EXPANSION	11000	11	02676	-0035
42000	TF	LSTAD ,ADDCOW	11012	26	03879	02676
42010	TR	ZEPO,SAVIN,, MOVE MACRO EXPANSION INTO WORK BUFFER	11024	31	02300	11180
42020	BTM	SCAN,++12,, FIND NUMERIC EQUIV OF 1ST OPERAND	11036	17	06112	J1048
42030	CF	ADDRS-4,, MOVE 1ST	11048	33	03486	00000
42040	TR	ZEPO+14,ADDRS-4,, OPERAND INTO MACRO EXPANSION	11060	31	02314	03486
42050	TR	INPUT+19,INPUT+21,, GO + GET	11072	31	02804	02806
42060	BTM	SCAN,++12,, NUMERIC EQUIVALENT OF NEXT OPERAND	11084	17	06112	J1096
42070	BNF	++24,BSW	11096	44	11120	09502
42080	TFM	ADDRS,80	11108	16	03490	-0080
42090	TF	ZEPO+23,ADDRS,, OPERAND INTO MACRO EXPANSION	11120	26	02323	03490
42100	CF	ZEPO+19	11132	33	02319	00000
42110	TDM	ZEPO+11,0,, MOVE RECORD MARK IN EXPANSION	11144	15	02311	00000
42120	DC	1,,*	11155		1	
42130	TDM	DUMPI+11,1,11	11156	15	03517	0000J
42140	B	RSIN-24	11168	49	10890	00000
42150	*	MACRO EXPANSION FOLLOWS				
42160	SAVIN	TDM 100,0	11180	15	00100	00000
42170	TR		11192	31	00000	00000
42180	TDM	100	11204	15	00100	00000

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42190	DC	1,*		11216	1		
42200	*						
42200	* SUBROUTINE	TO PROCESS CONTROL CHARACTER PHA					
42210	ANAL	CM INPUT+24,4,10, 1ST CHECK IF RT. PAREN. IS PRESENT		11218	14	02809	000-4
42220		BNE ANAL4,,, NO LEFT PAREN., ERROR		11230	47	11478	01200
42230	TF	ANAL1+11,INPUT+22,, MOVE CHAR TO ANOTHER LOCATION		11242	26	11301	02807
42240	TR	INPUT+19,INPUT+23,, POSITION INPUT RECORD		11254	31	02804	02808
42250	TFM	**23,CCHAR,, BEGIN CHECKING CONTROL CHAR. 1ST INITIALIZE		11266	16	11289	J1600
42260	C	ANAL1+11,,, ADDRESSES. CHECK CHARACTERS		11278	24	11301	00000
42270	ANAL1	BE ANAL2,,10, CHARACTER FOUND		11290	46	11350	012-0
42280	CM	ANAL1-1,CCHAR-24,, SEE IF SEARCH IS FINISHED		11302	14	11289	J1576
42290	BE	ANAL4,,, YES, NO CONTROL CHARACTER FOUND		11314	46	11478	01200
42300	SM	ANAL1-1,3,10, NOT FINISHED, MODIFY ADDRESS		11326	12	11289	000-3
42310	B	ANAL1-12,,, BRANCH BACK TO CONTINUE SEARCH		11338	49	11278	00000
42320	ANAL2	TF ANLIC+11,ANAL1-1,, PREPARE TO MOVE CONTROL CHARACTER		11350	26	11409	11289
42330	AM	DIGITS,1,10, SET ADDRESS TO MOVE		11362	11	09526	000-1
42340	TF	**30,DIGITS,, DIGIT INTO OUTPUT BUFFER		11374	26	11404	09526
42350	SM	**23,2,10, PREPARE TO SET CONTROL CHARACTER IN OUTPUT BUFFER		11386	12	11409	000-2
42360	ANLIC	TD ,,, ,,, INSERT CONTROL DIGIT		11398	25	00000	00000
42370	ANLIC	CM ANAL1+11,54,10,SEE IF ITS A MODE CHANGE		11410	14	11301	000N4
42380	BE	ANAL3		11422	46	11454	01200
42390	ANLIC	BD DMSNUM,NMOAL,, SCANNING FOR NUM MODE		11434	43	12086	09515
42400	B7	DMSB1,,, SCANNING FOR ALPHA MODE		11446	49	11842	
42410	ANAL3	BD DMES2,NMOAL,, CHANGE FROM ALPHA TO NUMERIC		11454	43	12318	09515
42420	B	DMSM1,,, CHANGE FROM NUMERIC TO ALPHA		11466	49	12074	00000
42430	ANAL4	BD ANAL41,NMOAL,, CHECK TO SEE IF ALPHA OR NUMERIC		11478	43	11514	09515
42440	TF	**18,DIGITS,,PREPARE TO CLEAR LOCATION PREVIOUSLY SET WITH 7		11490	26	11508	09526
42450	TDM	,,, CLEAR LOCATION		11502	15	00000	00000
42460	ANAL41	AM DIGITS,1,10, SET IN NEXT LOCATION		11514	11	09526	000-1
42470	TF	**18,DIGITS		11526	26	11544	09526
42480	TDM	,,,		11538	15	00000	00000
42490	DSC	1,*,*		11549			1
42500	CF	ANAL,,, RESET STRAY PAREN SWITCH		11550	33	11218	00000
42510	B	ANLIA		11562	49	11434	00000
42520	DSC	1,1		11574			1
42530	DC	2,57		11576			2
42540	DSC	1,3		11577			1
42550	DC	2,43		11579			2
42560	DSC	1,4		11580			1
42570	DC	2,42		11582			2
42580	DSC	1,5		11583			1
42590	DC	2,41		11585			2
42600	DSC	1,8		11586			1
42610	DC	2,59		11588			2
42620	DSC	1,7		11589			1

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42630	DC	2,62		11591			2
42640	DSC	1,6		11592			1
42650	DC	2,63		11594			2
42660	DSC	1,2		11595			1
42670	DC	2,54		11597			2
42680	DSC	1,9		11598			1
42690	CCHAR	DC 2,46		11600			2
42700	*	PROGRAM TO PROCESS DMES, PHASEB					
42710	DMESF	BTM SCAN,**12,,EVALUATE ADDRESS OPERAND TO FIND NUM. VALUE		11602	17	06112	J1614
42720	TDM	DMESW,1,11,SET SWIYCH TO REPLACE - WITH		11614	15	03857	0000J
42730	TDM	SMODE,,, RESET STARTING MODE SWITCH		11626	15	09516	00000
42740	TR	OUT,CLERER,, CLEAR		11638	31	02218	02712
42750	TR	OUT+50,CLERER+1,, OUTPUT BUFFER		11650	31	02268	02713
42760	TFM	DIGITS,OUT+1,, INITIALIZE		11662	16	09526	-2219
42770	BNR	**24,INPUT+20,, CHECK TO SEE OF BREAKER A RM		11674	45	11698	02805
42780	B	DMSER1		11686	49	12902	00000
42790	TFM	MODE1+6,DMESD,,FIND STARTING MODE		11698	16	13076	J2026
42800	BTM	MODE,**12		11710	17	13022	J1722
42810	BNF	DMESA,BSW,,ALPHA CHAR. IN FIELD, ASSUME ALPHA MODE. CHECK		11722	44	11806	09502
42820	TDM	KRLSLW,1,11		11734	15	04003	0000J
42830	TD	**23,ADDCOM,,TO SEE IF ADDRESS OP PROGRAMMER OR PROCESSOR		11746	25	11769	02676
42840	TD	**23,JSTBL,,ASSIGNED PROCESSOR IF NO BRANCH FROM PREV INST.		11758	25	11781	02459
42850	AM	ADDCOM,10,ADJUST LOCATION COUNTER		11770	11	02676	000-0
42860	TF	ADDRS,ADDCOM,, SET ADDRESS OF MESSAGE TO 2ND DIGIT		11782	26	03490	02676
42870	SM	ADDCOM,2,10, SET LOC COUNTER TO LOC BEFORE MESSAGE		11794	12	02676	000-2
42880	DMESA	TFM MODE1+6,DMESB,, SEARCH FOR COMMA		11806	16	13076	J1830
42890	BTM	MODE,MODE,, ENDING FIELD		11818	17	13022	J3022
42900	DMESB	TDM NMOAL,,, SET SWITCH FOR ALPHA FIELD.		11830	15	09515	00000
42910	DMSB1	BTM OTR,DMESC,, SCAN MESSAGE OPERAND		11842	17	13136	J1946
42920	AM	DIGITS,1,10,		11854	11	09526	000-1
42930	TF	**18,DIGITS,, PREPARE TO MOVE IN 0		11866	26	11884	09526
42940	TR	,DMSB2-2		11878	31	00000	11923
42950	AM	DIGITS,2,10, LEFT PAREN UPDATE DIGIT COUNT BY TWO		11890	11	09526	000-2
42960	TF	**18,DIGITS,, ALLOW FOR CONTROL CHAR IN OUT PUT BUFFER		11902	26	11920	09526
42970	TDM	,,, INSERT EVERYTHING EXCEPT FINAL CONTROL DIGIT		11914	15	00000	00000
42980	DSC	2,*,-2		11923			2
42990	DMSB2	DSC 1,7,*		11925			1
43000	BNF	ANAL,ANAL,, STRAY PAREN NOT FOUND IF BRANCH		11926	44	11218	11218
43010	B	ANAL4,,, STRAY PAREN		11938	49	11478	00000
43020	DDRG	*-3		11946			
43030	DMESC	AM DIGITS,2,10, UPDATE DIGIT COUNT BY 2		11946	11	09526	000-2
43040	TF	**18,DIGITS,, ALLOW FOR CHARACTER IN OUTPUT BUFFER		11958	26	11976	09526
43050	TF	,INPUT+20,, MOVE CHARACTER FROM INPUT TO OUTPUT BUFF		11970	26	00000	02805
43060	SM	*-6,1,10, SET UP ADDRESSES TO CLEAR FLAG		11982	12	11976	000-1
43070	TF	**18,*-18,, + CLEAR		11994	26	12012	11976
43080	CF	,,,		12006	33	00000	00000
43090	B	DMSB1,,, CONTINUE SCAN		12018	49	11842	00000

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43100	DORG	*-3	12026		
43110	DMESD	BNF DMES1,BSW,, IS IT A PROGRAMMER SPECIFIED ADDRESS	12026	44	12062 09502
43120	TF	ADDRS,ADDCOM,, NO, MOVE LOC. COUNTER INTO ADDRESS LOC.	12038	26	03490 02676
43130	AM	ADDRS,1,10	12050	11	03490 000-1
43140	DMES1	TDM SMODE,1,10, SET SWITCH FOR NUM STARTING MODE	12062	15	09516 000-1
43150	DMSNM1	TDM NMOAL,1,10, SET SWITCH FOR NUMERIC MODE	12074	15	09515 000-1
43160	DMSNUM	BTM DTR,DMES11,,SCAN MESSAGE OPERAND	12086	17	13136 J2154
43170	AM	DIGITS,1,10, LEFT PAREN FOUND, UPDATE DIGIT COUNT BY 2	12098	11	09526 000-1
43180	TF	*+18,DIGITS,,ALLOW FOR CONTROL CHAR. IN OUTPUT BUFFER	12110	26	12128 09526
43190	TDM	,,, MOVE TO BUFFER	12122	15	00000 00000
43200	DSC	1,*,*	12133		1
43210	BNF	ANAL,ANAL,, STRAY PAREN NOT FOUND IF BRANCH	12134	44	11218 11218
43220	B	ANAL4,,, STRAY PAREN	12146	49	11478 00000
43230	DORG	*-3	12154		
43240	DMES11	CM INPUT+20,79,10, CHECK TO SEE IF CHAR IS NUMERIC	12154	14	02805 000P9
43250	BH	DMSER2,,, NOT NUMERIC, ERROR	12166	46	12306 01100
43260	CM	INPUT+20,69,10	12178	14	02805 00009
43270	BH	DMS12,,,NUMERIC IF BRANCH	12190	46	12262 01100
43280	CM	INPUT+20,50,10, CHECK IF -OTHRU-9	12202	14	02805 000N0
43290	BL	DMSER2,,, NON-NUMERIC IF BRANCH	12214	47	12306 01300
43300	CM	INPUT+20,59,10	12226	14	02805 000N9
43310	BH	DMSER2,,, NOT NUMERIC IF BRANCH	12238	46	12306 01100
43320	SF	INPUT+20	12250	32	02805 00000
43330	DMES12	AM DIGITS,1,10, UPDATE DIGIT COUNT BY ONE	12262	11	09526 000-1
43340	TF	*+18,DIGITS,, ALLOW FOR DIGIT	12274	26	12292 09526
43350	TD	,INPUT+20,, MOVE DIGIT TO OUT PUT BUFFER	12286	25	00000 02805
43360	B	DMSNUM,,, BRANCH BACK TO CONTINUE SCAN	12298	49	12086 00000
43370	DORG	*-3	12306		
43380	DMSER2	BTM DMSR2,DMSNUM,, PUT END OF MESSAGE IN OUTPUT BUFFER	12306	17	12920 J2086
43390	DMES2	TF *+35,DIGITS,, NUMERIC TO ALFA MODE CHANGE,	12318	26	12353 09526
43400	SM	*+23,OUT+1,, SEE IF ALPHA STARTS IN EVEN LOCATION	12330	12	12353 -2219
43410	TFM	DMSV,, INIT. SAVE LOC WITH DIGIT COUNT	12342	16	09521 -0000
43420	BNF	DMES21,BSW,, SEE IF THERE IS A PROGRAMMER SPEC ADDRESS	12354	44	12386 09502
43430	A	DMSV,ADDCOM,, NO, ADD LOC COUNTER FOR LOC OF LAST DIGIT	12366	21	09521 02676
43440	BT	DMES22	12378	49	12434
43450	DMES21	A DMSV,ADDRS,,ADD PROG ADDRESS FOR LOC OF LAST DIGIT	12386	21	09521 03490
43460	SM	DMSV,1,10, ADJUST FOR NUMERIC STARTING MODE	12398	12	09521 000-1
43470	BD	*+24,SMODE,, CHECK STARTING MODE	12410	43	12434 09516
43480	SM	DMSV,1,10, ADJUST FOR ALPHA STARTING MODE	12422	12	09521 000-1
43490	DMES22	TD *+23,DMSV,, SEE IF CHAR WILL START IN EVEN LOC	12434	25	12457 09521
43500	TD	EVODD+1,EVODD	12446	25	02470 02469
43510	BD	DMES8,EVODD+1,, WILL START IN EVEN LOCATION	12458	43	11830 02470
43520	AM	DIGITS,1,10, INSERT	12470	11	09526 000-1
43530	TF	*+18,DIGITS,,	12482	26	12500 09526
43540	TDM	,,11	12494	15	00000 0000-
43550	B	DMES8	12506	49	11830 00000
43560	DORG	*+1	12518		
43570	DC	2,-0,*-3	12514		2
43580	DC	3,2',*	12517		3
43590	DMER1N	TDM OUT+100,, PUT IN NUMERIC	12518	15	02318 00000
43600	DC	1,*,*	12529		1
43610	TDM	OUT+101,,, END OF MESSAGE	12530	15	02319 00000

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43620	DC	1,*,*	12541		1
43630	B	DMERIC	12542	49	12602 00000
43640	DMER1A	TFM OUT+101,,8, CLEAR LAST FOUR DIGITS FOR END OF MESSAGE	12594	16	02319 0-000
43650	CF	OUT+98	12566	33	02316 00000
43660	TDM	OUT+99,,,MOVE RM FOR	12578	15	02317 00000
43670	DC	1,*,*	12589		-1
43680	TDM	OUT+101	12590	15	02319 00000
43690	DC	1,*,*	12601		1
43700	DMERIC	TFM DIGITS,100,, SET DIGIT COUNTER TO 100	12602	16	09526 -0100
43710	B	*+96	12614	49	12710 00000
43720	DMSEND	CM DIGITS,OUT+1,, CHECK IF OPERAND PRESENT	12626	14	09526 -2219
43730	BNE	*+60,,, ERROR IF NO MESSAGE OPERAND PRESENT	12638	47	12698 01200
43740	BD	DMSER1,SMODE,, CHECK MODE	12650	43	12902 09516
43750	TFM	OUT+5,,, MOVE IN ALPHA END OF MESSAGE	12662	16	02223 -0000
43760	DC	2,*,*-2	12671		2
43770	DSC	2,*,*-1	12672		2
43780	CF	OUT+2	12674	33	02220 00000
43790	TFM	DIGITS,OUT+101	12686	16	09526 -2319
43800	SM	DIGITS,OUT+1,, SUBTRACT STARTING LOCATION OF O/P BUFFER	12698	12	09526 -2219
43810	TF	LSTAD ,DIGITS,,MOVE DIGIT COUNT FOR OUTPUT	12710	26	03879 09526
43820	AM	LSTAD ,1,10, ADD 1 FOR RT LOC +1	12722	11	03879 000-1
43830	BNF	DMEND1,BSW,, CHECK FOR PROGRAMMER SPECIFIED ADDRESS	12734	44	12782 09502
43840	A	LSTAD ,ADDCOM,,FORM RT LOC+1	12746	21	03879 02676
43850	A	ADDCOM,DIGITS,, UPDATE LOC COUNTER TO LAST DIGIT OF CONSTANT	12758	21	02676 09526
43860	B	DMEND2	12770	49	12830 00000
43870	DMEND1	A LSTAD ,ADDRS,, INITIALIZE LEFT MOST WITH PROG SPEC ADDRESS	12782	21	03879 03490
43880	SH	LSTAD ,1,10, ADJUST FOR NUMERIC STARTING MODE	12794	12	03879 000-1
43890	BD	*+24,SMODE,, CHECK IF STARTING MODE ALPHA	12806	43	12830 09516
43900	SM	LSTAD ,1,10, UES, ADJUST FOR ALPHA STARTING MODE	12818	12	03879 000-1
43910	DMEND2	TF FRSTAD ,LSTAD ,, FORM LEFT MOST	12830	26	03869 03879
43920	S	FRSTAD ,DIGITS,, ADDRESS	12842	22	03869 09526
43930	TF	LNTH,DIGITS,, INITIALIZE LENGTH LOC	12854	26	02387 09526
43940	NOP	MESOUT+6,INPUT2+5	12866	41	10472 03284
43950	NOP	MESOUT+11,OUT+2	12878	41	10477 02220
43960	BTM	CEET,PCONF	12890	17	09664 J5454
43970	DMSER1	BTM DMSR2,DMSEND+60,,, PUT END OF MESSAGE IN OUTPUT BUFFER	12902	17	12920 J2686
43980	DS	5	12918		5
43990	DMSR2	AM DIGITS,1,10	12920	11	09526 000-1
44000	TF	*+18,DIGITS	12932	26	12950 09526
44010	TDM	,,, INSERT	12944	15	00000 00000
44020	DC	1,*,*	12955		1
44030	AM	DIGITS,1,10	12956	11	09526 000-1
44040	TF	*+18,DIGITS	12968	26	12986 09526
44050	TDM	,,, INSERT	12980	15	00000 00000
44060	DC	1,*,*	12991		1
44070	TF	*+18,DMSR2-1	12992	26	13010 12919
44080	B	5	13004	49	00000 00000
44090	DC	3,-0',*	13015		3

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44100	DC	5,0		13020	5		
44110	MODE	TR	INPUT+19,INPUT+21,,	MOVE INPUT RECORD LEFT 1 CHAR	13022	31	02804 02806
44120		BNR	**24,INPUT+20,,	NOT BLANK, CHECK FOR RM	13034	45	13058 02805
44130		B	DMSVEND+36		13046	49	12662 00000
44140		CM	INPUT+20,23,10,	SEARCH FIELD, CHECK FOR COMMA	13058	14	02805 000K3
44150	MODEL	BE	,,,	COMMA FOUND, BRANCH	13070	46	00000 01200
44160		CM	INPUT+20,,10,	COMMA NOT FOUND, CHECK FOR BLANK	13082	14	02805 000-0
44170		BE	MODE,,,	BLANK, CHECK NEXT CHARACTER	13094	46	13022 01200
44180		TF	**18,MODE-1,,,	ALPHA CHAR IN FIELD, RETURN, OR CHECK	13106	26	13124 13021
44190		B	,,,	NEXT CHAR. ACCORDING TO BRANCH	13118	49	00000 00000
44200	* SUBROUTINE TO SHIFT ONE CHARACTER TO THE LEFT IN INPUT BUFFER						
44210	DS	5			13134	5	
44220	DTR	TR	INPUT+19,INPUT+21,,	MOVE OPERAND LEFT 1 CHAR + SEARCH	13136	31	02804 02806
44230		TF	DMSV,DIGITS,,	CHECK NUMBER OF DIGITS	13148	26	09521 09526
44240		SM	DMSV,OUT+1		13160	12	09521 -2219
44310		CM	INPUT+20,4,10,	CHECK FOR STRAY RT PAREN	13172	14	02805 000-4
44320		BNE	**44,,,	NOT A STRAY PAREN IF BRANCH	13184	47	13228 01200
44330		SF	ANAL,,,	SET SWITCH FOR STRAY PAREN FOUND	13196	32	11218 00000
44340		BD	DMSNUM+12,NMOAL,,	SCANNING IN NUMERIC MODE IF BRANCH	13208	43	12098 09515
44350		B7	DMSB1+12,,,	SCANNING IN ALPHA MODE	13220	49	11854
44360		CM	INPUT+20,24,10,	CHK FOR LEFT PAREN	13228	14	02805 000K4
44370		BNE	**24,,,	NOT A LEFT PAREN	13240	47	13264 01200
44380		BB	,,,	LEFT PAREN FOUND	13252	42	00000 00000
44390		TF	**18,DTR-1,,	NOT A I, ,OR ERROR	13264	26	13282 13135
44400		B	,,,	RETURN	13276	49	00000 00000
44410	* DEFINE OCTAL TABLE						
44420	* DEFINE OCTAL TABLE						
44430	* DEFINE OCTAL TABLE						
44440	DOT	BTM	SCAN,**12,,	POWER NUMBER	13288	17	06112 J3300
44450		BLX	**12,ADDRS(3)		13300	65	13312 03MR0
44460		CM	XRA3,13,10		13312	14	00319 000J3
44470		BNH	DOT1		13324	47	13348 01100
44480		BLXM	**12,13(3)		13336	66	13348 00-J3
44490	DOT1	BTM	TRSCAN,**12,,	ASSIGNED ADDR	13348	17	06082 J3360
44500		TD	KLRLSW,RLOCSW		13360	25	04003 08378
44510		BLXM	**12,-2(1),,	SET TERM LENGTH	13372	66	13384 000-K
44520		TFM	OUT+ 102,010,9,	SET TERM 1	13384	16	02320 00-10
44530		DC	1,*,*		13396	1	
44540		BLXM	**12,-1(2),,	SET LENGTH	13396	66	13408 00-0J
44550		CM	XRA3,0		13408	14	00319 -0000
44560		BE	DTEX		13420	46	13524 01200
44570	DTLOOP	MM	OUT+102(2),08,10		13432	13	02120 000-8
44580		BX	**12,XRA1(2),,	INCREMENT LENGTH	13444	61	13456 00L09
44590		BD	**20,99(1)		13456	43	13476 000R9
44600		B7	**20		13468	49	13488
44610		BXM	**12,-1(1)		13476	62	13488 000-J
44620		SF	100(1)		13488	32	001-0 00000
44630		TF	OUT+102(2),99		13500	26	02120 00099
44640		BCXM	DTLOOP,-1(3)		13512	64	13432 00--J
44650	DTEX	BX	**12,XRA1(2),,	FINAL LNTH INCR	13524	61	13536 00L09
44660		TR	OUT+2,OUT+103(2)		13536	31	02220 02L21
44670		MA	LNTH,XRA2		13548	70	02387 00314
44680		BNF	**48,BSW		13560	44	13608 09502
44690		A	ADDCOW,LNTH		13572	21	02676 02387

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44250	CM	DMSV,100,9,	CHECK DIGIT COUNT	13584	14	09521 00J00	
44260	BNH	**36,,,	LESS THAN 100, OKAY, ERROR IF NO BRANCH	13596	47	13632 01100	
44270	BD	DMERIN,NMOAL,,	TEST SWITCH FOR NUM OR ALPHA, NUM IF BR	13608	43	12518 09515	
44280	B	DMER1A,,,	ALPHA IF BRANCH FRM HERE	13620	49	12554 00000	
44290	BNR	**20,INPUT+20,,	FOR RM	13632	45	13652 02805	
44300	B7	DMSVEND		13644	49	12626	
44700	TF	ADDRS,ADDCOW		13652	26	03490 02676	
44710	TDM	KLRLSW,1,11		13664	15	04003 000J3	
44720	TF	LSTAD,ADDRS		13676	26	03879 03490	
44730	AM	LSTAD,1,10		13688	11	03879 000-1	
44740	TF	FRSTAD,LSTAD		13700	26	03869 03879	
44750	S	FRSTAD,LNTH		13712	22	03869 02387	
44760	TDM	DUMP1+11,1,11		13724	15	03517 0000J	
44770	BTM	GEET,PCONF		13736	17	09664 J5454	
44780	* EVALUATE LENGTH OF DAC						
44790	* EVALUATE LENGTH OF DAC						
44800	* EVALUATE LENGTH OF DAC						
44810	DACF	BTM	SCAN,**12	13748	17	06112 J3760	
44820		CM	ADDRS,51	13760	14	03490 -0051	
44830		BNN	ERDAC	13772	46	14428 01300	
44840		A:	ADDRS,ADDRS	13784	21	03490 03490	
44850		TF	TEMPR,ADDRS	13796	26	02572 03490	
44860		BNR	**20,INPUT+20	13808	45	13828 02805	
44870		B7	**20	13820	49	13840	
44880		BNR	DAC2,INPUT+22	13828	45	13888 02807	
44890		CM	ADDRS,0	13840	14	03490 -0000	
44900		BH	ERDAC1	13852	46	14576 01100	
44910		TFM	INPUT+22	13864	16	02807 -0000	
44920		DAC	1,*,*	13876		1 X 2	
44930		TFM	INPUT+20,23,10	13876	16	02805 000K3	
44940	DAC2	BLX	**12,TEMPR(1)	13888	65	13900 025P2	
44950		BNR	**20,INPUT+20(1)	13900	45	13920 028-5	
44960		B7	ERDAC+12	13912	49	14440	
44970		BNR	**20,INPUT+22(1)	13920	45	13940 028-7	
44980		B7	**32	13932	49	13964	
44990		CM	INPUT+22(1),23,10	13940	14	028-7 000K3	
45000	STCHAR	BNE	ERDAC+12	13952	47	14440 01200	
45010		TD	STCHAR+11,INPUT+22(1)	13964	25	13963 028-7	
45020		TFM	INPUT+22(1)	13976	16	028-7 -0000	
45030		DAC	1,*,*	13987		1 X 2	
45040		CM	INPUT+20(1),34,10,	CHECK FOR *	13988	14	028-5 000L4
45050		BNE	STCHAL	14000	47	14036 01200	
45060		TDM	DUMP1+11,0,11	14012	15	03517 0000-	
45070		TFM	INPUT+20(1)	14024	16	028-5 -0000	
45080		DAC	1,*,*	14035		1 X 2	
45090	STCHAL	TR	OUT+2,INPUT+21	14036	31	02220 02806	
45100		TR	INPUT+19,INPUT+23(1)	14048	31	02804 028-8	
45101		CM	TEMPR,0	14060	14	02572 -0000	
45102		BNH	**36	14072	47	14108 01100	
45110		CF	OUT+2(1)	14084	33	022K0 00000	
45120		BCXM	=-12,-2(1)	14096	64	14084 000-K	
45130		BNR	DAC3,STCHAR+11	14108	45	14236 13963	
45140	* ADDRESS ASSIGNED BY PROCESSOR						

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45150 *									
45160 NOSINE	TD	++23,ADDCOW		14120	25	14143	02676		
45170	TD	++23,JSTBL		14132	25	14155	02459		
45180	AM	ADDCOW,,10		14144	11	02676	000-0		
45190	TF	ADDRS,ADDCOW		14156	26	03490	02676		
45200	A	ADDCOW,TEMPR		14168	21	02676	02572		
45210	SM	ADDCOW,2,10		14180	12	02676	000-2		
45220	TF	LNTH,ADDCOW		14192	26	02387	02676		
45230	BD	++24,INTBUF+5		14204	43	14228	03603		
45240	TF	ADDRS,ADDCOW		14216	26	03490	02676		
45250	BTM	DAC4		14228	49	14284			
45260 DAC3	BTM	SCAN,++12		14236	17	06112	J4248		
45270	BD	NOSINE,8SW		14248	43	14120	09502		
45280	TD	KLRLSW,RLOCSW		14260	25	04003	08378		
45290	TF	LNTH,ADDRS		14272	26	02387	03490		
45300 DAC4	TF	FRSTAD ,ADDRS		14284	26	03869	03490		
45310	SM	FRSTAD ,1		14296	12	03869	-0001		
45320	TF	LSTAD,FRSTAD		14308	26	03879	03869		
45330	A	LSTAD ,TEMPR		14320	21	03879	02572		
45340	BD	++72,INTBUF+5		14332	43	14404	03603		
45350	TF	LSTAD ,ADDRS		14344	26	03879	03490		
45360	AM	LSTAD ,1		14356	11	03879	-0001		
45370	TF	FRSTAD,LSTAD		14368	26	03869	03879		
45380	S	FRSTAD ,TEMPR		14380	22	03869	02572		
45390	TF	ADDRS,LNTH		14392	26	03490	02387		
45400	TF	LNTH,TEMPR		14404	26	02387	02572		
45410	BTM	GEET,PCONF		14416	17	09664	J5454		
45420 ERDAC	TFM	TEMPR,100		14428	16	02572	-0100		
45421	BNF	++36,R2SW,,	FORCE DISK ACCESS	14440	44	14476	04361		
45422	TDM	R2SW,0,,	TO NEXT STATEMENT	14452	15	04361	00000		
45423	SM	SUBIN+5,1,10		14464	12	03539	000-1		
45424	BLXM	++12,-120(1),,	CLEAR TRAILING TRASH	14476	66	14488	001K-		
45425	BNR	++20,INPUT+20+120(1),,	TO BLANKS FOR L GT CONST	14488	45	14508	029K5		
45426	BT	++20		14500	49	14520			
45427	BCXM	--20,2(1)		14508	64	14488	000-2		
45428	TFM	INPUT+20+120(1),00,10		14520	16	029K5	000-0		
45429	BCXM	--12,2(1)		14532	64	14520	000-2		
45430	BLX	++12,TEMPR(1)		14544	65	14556	025P2		
45440	TFM	INPUT+22(1)		14556	16	028-7	-0000		
45450	DAC	1,,'*		14567		1 X	2		
45485	BT	DAC2		14568	49	13888			
45490 ERDAC1	BLX	++12,TEMPR(1)		14576	65	14588	025P2		
45491	BNF	++36,R2SW,,	FORCE DISK ACCESS	14588	44	14624	04361		
45492	TDM	R2SW,0,,	TO NEXT STATEMENT	14600	15	04361	00000		
45493	SM	SUBIN+5,1,10		14612	12	03539	000-1		
45500	TFM	INPUT+22(1)		14624	16	028-7	-0000		
45510	DAC	1,,'*		14635		1 X	2		
45520	TFM	INPUT+20(1),70,10,	FORCE ALPHA	14636	16	028-5	000P0		
45530	BCXM	--12,-2(1),,	ZEROS	14648	64	14636	000-K		
45540	BT	DAC2		14660	49	13888			
45550 MID	DSC	2,-16		14667		2			
45560	IO								
45560	DSA	IORT ,00023		14673		5 X	2		

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45570	DSC	2,49		14673		-0565			
45570	49			14678		-0023			
45580	DSA	-- ,00000		14679		2			
45590	DSC	1,'		14685		5 X	2		
45600 ** GET PUT	LINKAGE GENERATION			14685		-0000			
45610 LINKS	TD	++23,ADDCOW,,	ADJUST ADDCOW	14690		-0000			
45620	TD	++23,AJUST		14691		1			
45630	AM	ADDCOW,,10,		14692	25	14715	02676		
45640	A	MID +11,ADDCOW,,	RETURN ADDRESS	14704	25	14727	02399		
45650	TF	MID +18,INTBUF+6,,	SET UP BR TO IORT	14716	11	02676	000-0		
45660	BTM	SCAN,++12,7 11		14728	21	14678	02676		
45670	TR	MID+19,ADDRS-4		14740	26	14685	03604		
45680	BNF	++24,RLOCSW		14752	17	06112	J476M		
45690	SF	MID +13		14764	31	14686	03486		
45700	TF	FRSTAD,ADDCOW		14776	44	14800	08378		
45710	TF	LSTAD,ADDCOW		14788	32	14680	00000		
45720	AM	LSTAD,24,10,	SET TO TOTAL LENGTH	14800	26	03869	02676		
45730	AM	ADDCOW,23,10,	UP ADDCOW TOTAL LENGTH	14812	26	03879	02676		
45740	CF	MID +2		14824	11	03879	000K4		
45750	CF	MID +14		14836	11	02676	000K3		
45760	TR	ZEPD,MID		14848	33	14669	00000		
45770	TF	ADDRS,FRSTAD		14860	33	14681	00000		
45780	TFM	X,PHASEB		14872	31	02300	14667		
45790	BTM	GEET,LINP		14884	26	03490	03869		
45800 ** GET PUT	LINKAGE GENERATION END			14896	16	04008	-4170		
45810 CALEXT	TD	++23,ADDCOW		14908	17	09664	J5466		
45820	TD	++23,AJUST		14920	25	14943	02676		
45830	AM	ADDCOW,,10		14932	25	14955	02399		
45840	TFM	MID +18,MONCAL,,	BRANCH TO MONCALL IN IORT	14944	11	02676	000-0		
45850	CF	MID +14		14956	16	14685	-0796		
45860	CF	MID+19		14968	33	14681	00000		
45870	TR	ZEPD,MID +12,,	BRANCH INSTRUCTION	14980	33	14686	00000		
45880	YF	ADDRS,ADDCOW		14992	31	02300	14679		
45890	AM	ADDCOW,06,10,	BT	15004	26	03490	02676		
45900	BTM	GEET,LINP		15016	11	02676	000-6		
45910 *		LOAD PHASE B4 TO THE FILE		15028	17	09664	J5466		
45920 F4	34	SUB4,701		15040	34	15088	00701		
45930	38	SUB4,702		15052	38	15088	00702		
45940	TRA			15064	36	00000	00500		
45950 SUB4	DDA	,0,B4DAD,B4SCT,LINPRT		15076	49	00000	00000		
45960	TCD	F4		15088		14			
45970	DORG	INSTRN		15094					
45980 RCTAB	BNF	++36,LSTYSW		13094	44	13130	02480		
45990	RCTY			13106	34	00000	00102		
46000	TBTY			13118	34	00000	00108		
46010	BB			13130	42	00000	00000		
46020	DORG	--9		13132					

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46030	DC	5,12345	13136	5	
46040	LINKC	J2345	13138	16	09721 -9982
46050	BT	LINPRT-1,DOCON	13150	27	13282 13137
46060	DS	5	13166	5	
46070	LINKCR	BT RCTAB,RCTAB-1	13168	27	13094 13093
46080	BT	LINKC,LINKCR-1	13180	27	13138 13167
46090	DS	5	13196	5	
46100	LINKD	TFM LINPRT-1,PDSA	13198	16	09721 J0166
46105	TFM	CHSYN+11,DSABOX-1	13210	16	10305 -9502
46110	TFM	LNTH,5	13222	16	02387 -0005
46120	BT	LINKER,LINKD-1	13234	27	13282 13197
46130	DS	5	13250	5	
46140	LINKDR	BT RCTAB,RCTAB-1	13252	27	13094 13093
46150	BT	LINKD,LINKDR-1	13264	27	13198 13251
46160	DS	5	13280	5	
46170	LINKER	TR ZEPO+1,OUT+2	13282	31	02301 02220
46180	TF	FRSTAD,LSTAD	13294	26	03869 03879
46190	A	LSTAD,LNTH	13306	21	03879 02387
46200	TF	ADDRS,FRSTAD	13318	26	03490 03869
46210	TF	X,LINKER-1	13330	26	04008 13281
46220	BTM	CVACT,LINPRT	13342	17	12758 -9722
46230	MIOCS	DSC 2,-16	13354	2	
46240	DSA	IORT ,00023	13360	5	X 2
			13360		-0565
			13365		-0023
			13366		2
46250	DSC	2,49			
		49			
46260	DSA	IOGT ,00000	13372	5	X 2
			13372		-0566
			13377		-0000
			13378		1
46270	DSC	1,'			
		'			
46280	MBUK1	DSA 01234	13383	5	X 1
			13383		-1234
46290	DSC	1,'	13384	1	
		'			
46300	MBUK2	DSA 01234	13389	5	X 1
			13389		-1234
			13390		1
46310	DSC	1,'			
		'			
46320	MBUK3	DSC 2,12	13391	2	
		12			
46330	MRM	DSC 1,'	13393	1	
		'			
46340	MDIGIT	DSC 1,1	13394	1	
		1			
46350	OP3SW	DC 1,0	13395	1	
		-			
46360	ADDBKT	DC 5,12345	13400	5	
		J2345			

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46370	SVADD	DC 2,12	13402	2	
		J2			
46380	M2DIG	DC 2,12	13404	2	
		J2			
46390	MACR2	CF DP3SW	13406	33	13395 00000
46400	C	**23,INPUT+14	13418	24	13441 02799
46410	BI	REG,01244,10,	13430	46	13834 012M4
46420	C	**23,INPUT+16	13442	24	13465 02801
46430	BI	CAL,01253,10,	13454	46	14564 012N3
46440	C	**23,INPUT+12	13466	24	13489 02797
46450	BNI	LINKS,01244,10,	13478	47	14692 012M4
46460	** CARD TAPE	TYPE DEFINERS			
46470	BTM	SCAN,**12	13490	17	06112 J3502
46480	BD	NOOPP,BSW	13502	43	13558 09502
46490	TD	KLRLSW,RLOCSW	13514	25	04003 08378
46500	TFM	SVADD,00,10	13526	16	13402 000-0
46510	TF	ADDBKT,ADDRS,,	13538	26	13400 03490
46520	BT	GO	13550	49	13594
46530	NOOPP	TF ADDBKT,ADDCOM	13558	26	13400 02676
46540	TFM	SVADD,08,10	13570	16	13402 000-8
46550	AM	ADDBKT,01,10	13582	11	13400 000-1
46560	GO	BTM TRSCAN,**12,7 11	13594	17	06082 J3600
46570	TR	MBUK1-4,ADDRS-4	13606	31	13379 03486
46580	TR	OUT+2,MBUK1-4	13618	31	02220 13379
46590	TF	LSTAD,ADDBKT	13630	26	03879 13400
46600	TFM	LNTH,00005	13642	16	02387 -0005
46610	TD	DSABOX,RLOCSW	13654	25	09503 08378
46620	TDM	INTBUF,1	13666	15	03598 00001
46630	TR	ZEPO+1,OUT+2	13678	31	02301 02220
46640	BTM	LINKD,**12	13690	17	13198 J3702
46650	SF	INTBUF+5,,,	13702	32	03603 00000
46660	YF	MBUK3+1,INTBUF+6	13714	26	13392 03604
46670	TR	OUT+2,MBUK3	13726	31	02220 13391
46680	TFM	LNTH,00003,	13738	16	02387 -0003
46690	TDM	DUMP1+11,0,11,	13750	15	03517 0000-
46700	TD	LNTH+1,SPSGM	13762	25	02388 02561
46710	TD	OUT+4,SPSGM	13774	25	02222 02561
46720	A	ADDCOM,SVADD	13786	21	02676 13402
46730	BTM	LINKCR,**12	13798	17	13168 J3810
46740	TDM	LNTH+1	13810	15	02388 00000
46750	DC	1,','	13821	1	
		'			
46760	BTM	GEET,PHASEB	13822	17	09664 -4170
46770	** END OF CARD TAPE	TYPE DEFINERS			
46780	** DISK FILE	DECLARATIVES NOT CALLS			
46790	REG	BTM SCAN,**12	13834	17	06112 J3846
46800	TD	DP3SW,BSW	13846	25	13395 09502
46810	BD	NOTOP,BSW	13858	43	13914 09502
46820	TD	KLRLSW,RLOCSW	13870	25	04003 08378
46830	TFM	SVADD,00,10	13882	16	13402 000-0
46840	TF	ADDBKT,ADDRS,,	13894	26	13400 03490
46850	B	GONOW	13906	49	13950 00000
46860			13913		
46870	NOTOP	DORG -4	13914	26	13400 02676
46880	TFM	SVADD,08,10	13926	16	13402 000-8
46890	AM	ADDBKT,01,10	13938	11	13400 000-1

46900	GONOW	TR	INPUT+19,INPUT+21		13950	31	02804	02806
46910		SF	INTBUF+5		13962	32	03603	00000
46920		TF	MBUK3+1,INTBUF+6,,	CODE WM FLAG W	13974	26	13392	03604
46930		BTM	SCAN,++12,7 11		13986	17	06112	J399Q
46940		TR	MBUK1-4,ADDRS-4		13998	31	13379	03486
46950		TD	MDIGIT,RLOCSW		14010	25	13394	08378
46960		BTM	TRSCAN,++12		14022	17	06082	J4034
46970		BNF	++36,OP3SW		14034	44	14070	13395
46980		BD	++24,BSW		14046	43	14070	09502
46990		AM	SVADD ,05,10,	UP ADDCOW FOR 3 OPERANDS	14058	11	13402	000-5
47000		TD	OP3SW,BSW,,	SET LONG LINK SWITCH	14070	25	13395	09502
47010		TR	MBUK2-4,ADDRS-4		14082	31	13385	03486
47020	**	TEST FOR	ARM REPOSITION					
47030		TR	INPUT+19,INPUT+21		14094	31	02804	02806
47040		BTM	LSTCAR,++12,,	PICK UP 3RD OPERAND	14106	17	15404	J4118
47050		TF	M2DIG,LCHAR		14118	26	13404	15537
47060		TR	INPUT+19,INPUT+21		14130	31	02804	02806
47070	**	TEST FOR	ABSOLUTE SECTOR ADDRESS					
47080		BTM	LSTCAR,++12,,	PICK UP 4TH OPERAND	14142	17	15404	J4154
47090		C	++23,LCHAR		14154	24	14177	15537
47100		BNI	++24,01241,10,	TEST FOR A ABSOLUTE	14166	47	14190	012M1
47110		TDM	MBUK3+2,11		14178	15	13391	0000K
47120		C	++23,M2DIG		14190	24	14213	13404
47130		BI	EN,01259,10		14202	46	14226	012N9
47140		CF	MBUK3		14214	33	13391	00000
47150	EN	TR	OUT+2,MBUK3,,	FIRST OPERAND TO LIST	14226	31	02220	13391
47160		TF	LSTAD,ADDBKT		14238	26	03879	13400
47170		AM	ADDBKT,02,10		14250	11	13400	000-2
47180		TFM	LNTH,02		14262	16	02387	-0002
47190		BTM	LINKC,++12		14274	17	13138	J4286
47200		TR	OUT+2,MBUK1-4,,	SECOND OPERAND TO LIST	14286	31	02220	13379
47210		TFM	LNTH,05		14298	16	02387	-0005
47220		TD	DSABOX,MDIGIT		14310	25	09503	13394
47230		TDM	INTBUF,1		14322	15	03598	00001
47240		BTM	LINKDR,++12		14334	17	13252	J4346
47250		BD	NOT3,OP3SW		14346	43	14406	13395
47260		TR	OUT+2,MBUK2-4,,	THIRD OPERAND TO LIST	14358	31	02220	13385
47270		TDM	INTBUF,1		14370	15	03598	00001
47280		TD	DSABOX,RLOCSW		14382	25	09503	08378
47290		BTM	LINKDR,++12		14394	17	13252	J4406
47300	NOT3	TR	OUT+2,MRM,,	RECORD MARK	14406	31	02220	13393
47310		TFM	LNTH,01		14418	16	02387	-0001
47320		TDM	DUMP1+11,1,11		14430	15	03517	0000J
47330		A	ADDCOW,SVADD		14442	21	02676	13402
47340		BTM	LINKCR,++12		14454	17	13168	J4466
47350		BTM	GEET,PHASEB		14466	17	09664	-4170
47360	**	END OF	DISK DEFINERS					
47370	**	GENERATE	CALL LINK AND LOAD					
47380	RM	DC	1,'		14478		1	
47390	FLDATA	DSS	400,RM-400		14078		400	
47400	****	ERROR	2ND OPERAND CALL NG					
47410		DC	5,12345		14483		5	
47420	ER	TFM	EVALER-2,71780		14484	16	08014	P1780
47430		BT	EPRINT,EPRINT-1		14496	27	08452	08451

47440		BD	CORERS,ERSTSW		14508	43	08188	02476
47450		BNF	++36,LSTYSW		14520	44	14556	02480
47460		RCTY			14532	34	00000	00102
47470		TBTY			14544	34	00000	00108
47480		B	ER-1,,6		14556	49	1448L	00000
47490		DORG	*-4		14563			
47500	CAL	TD	++23,ADDCOW,,	ADJUST ADDCOW	14564	25	14587	02676
47510		TD	++23,AJUST		14576	25	14599	02399
47520		AM	ADDCOW,,10		14588	11	02676	000-0
47530		TF	MIOCS+11,ADDCOW,,	RETURN ADDRESS	14600	26	13365	02676
47540		AM	MIOCS+11,19,10,	ADJUST ADDRESS	14612	11	13365	000J9
47550		TFM	MIOCS+18,IOCAL,,	SET UP BR TO IOR	14624	16	13372	-0716
47560		BTM	LSTCAR,++12		14636	17	15404	J4648
47570		TFM	MBUK3+1,32,10,	CODE FOR READ NO WLR	14648	16	13392	000L2
47580		C	++23,LCHAR		14660	24	14683	15537
47590		BI	++24,01244,10,	TEST FOR D IN LOAD	14672	46	14696	012M4
47600		SF	MBUK3+1,,,	EXECUTE	14684	32	13392	00000
47610		TR	INPUT+19,INPUT+21,,	SLIDE COMMA	14696	31	02804	02806
47620		BTM	PCALL,++12		14708	17	15544	J4720
47630		BNF	FOUND+12,ALPHSW,,	NO ALPHA INPUT	14720	44	14990	15883
47640	**	READ THE	DIM ENTRY FOR EQUIV TABLE					
47650		TFM	IORT,++23		14732	16	00565	J4755
47660		B	IOGT,DEFDIM,7		14744	49	00566	J4763
47670		B7	CONTU		14756	49	14786	
47680	DEFDIM	DSC	2,22		14763		2	
47690		DSA	DFADD6		14769		5 X	1
47700	DFADD6	DDA	,0,EQDAD,EQDAD,FLDATA		14770		J4770	
47710		DC	1,'		14770		14	
47720	CONTU	TF	DFADD4+5,FLDATA+45,,	EXTRACT EQUIV FILE ADDR	14786	26	14855	14123
47730		TD	DFADD4,FLDATA+40,,	EXTRACT EQUIV FILEMODULE	14798	25	14850	14118
47740	**	READ THE	EQUIV TABLE FOR LOOK UP					
47750	RDEQIV	TFM	IORT,++23		14810	16	00565	J4833
47760		B	IOGT,DEFEQ,7		14822	49	00566	J4841
47770		B7	GOON		14834	49	14866	
47780	DEFEQ	DSC	2,22		14841		2	
47790		DSA	DFADD4		14847		5 X	1
47800		DC	1,'		14847		J4850	
47810	DFADD4	DDA	,0,EQDAD,EQDAD,FLDATA		14850		14	
47820		DC	1,'		14864		1	
47830	GOON	BNR	++44,FLDATA+11,,	TEST END OF TABLE	14866	45	14910	14089
47840		TFM	IDENT-2,00000,,	ZERO OUT EQUIV BUCKET	14878	16	15888	-0000
47850		BTM	ER,++12,,	OPERAND NOT FOUND	14890	17	14484	J4902
47860		B	FOUND+12		14902	49	14990	00000
47870		DORG	*-4		14909			
47880		C	FLDATA+11,COLL-2		14910	24	14089	02437

47890	BE	FOUND		14922	46	14978	01200
47900	TR	FLDATA,FLDATA+16		14934	31	14078	14094
47910	BNR	GOON,FLDATA,,	TEST END OF BLOCK	14946	45	14866	14078
47920	AM	DFADD4+5,04,10,,	NEXT BLOCK	14958	11	14855	000-4
47930	B7	RDEQIV		14970	49	14810	
47940	FOUND	TF IDENT-2,FLDATA+15,,	LOAD EQUIV NUM	14978	26	15888	14093
47950	SF	IDENT-5		14990	32	15885	00000
47960	TF	MBUK1,IDENT-2		15002	26	13383	15888
47970	CF	MBUK1-4		15014	33	13379	00000
47980	BTM	TRSCAN,++12		15026	17	06082	J5038
47990	TR	MBUK2-4,ADDRS-4		15038	31	13385	03486
48000	**	START TO OUTPUT					
48010	TF	FRSTAD,ADDCOW		15050	26	03869	02676
48020	TF	ADDRS,ADDCOW		15062	26	03490	02676
48030	TF	LSTAD,ADDCOW		15074	26	03879	02676
48040	AM	LSTAD,24,10,	SET TO TOTAL LENGTH	15086	11	03879	000K4
48050	AM	ADDCOW,19,10		15098	11	02676	000J9
48060	CF	MIOCS+2		15110	33	13356	00000
48070	CF	MIOCS+14		15122	33	13368	00000
48080	CF	MIOCS+19		15134	33	13373	00000
48090	TR	ZEPD,MIOCS		15146	31	02300	13354
48100	TFM	X,++24		15158	16	04008	J5182
48110	BTM	LINPRT,DOINST		15170	17	09722	J0750
48120	**	OUT PUT CONSTANTS					
48130	TF	LSTAD,ADDCOW		15182	26	03879	02676
48140	AM	ADDCOW,07,10		15194	11	02676	000-7
48150	TFM	LNTH,07		15206	16	02387	-0007
48160	TR	OUT+2,MBUK3		15218	31	02220	13391
48170	TR	OUT+4,MBUK1-4		15230	31	02222	13379
48180	BTM	L INKCR,++12		15242	17	13168	J5254
48190	BD	NO3,BSW,,	TEST 3RD OPERAND	15254	43	15338	09502
48200	TR	OUT+2,MBUK2-4,,	OUTPUT 3RD OPERAND	15266	31	02220	13385
48210	TD	DSABOX,RLOCSW		15278	25	09503	08378
48220	TDM	INTBUF,1		15290	15	03598	00001
48230	AM	ADDCOW,05,10		15302	11	02676	000-5
48240	TFM	LNTH,05		15314	16	02387	-0005
48250	BTM	L INKDR,++12		15326	17	13252	J5338
48260	NO3	TR OUT+2,MRM		15338	31	02220	13393
48270	TDM	DUMPI+11,1,11		15350	15	03517	0000J
48280	TFM	LNTH,01		15362	16	02387	-0001
48290	BTM	L INKCR,++12		15374	17	13168	J5386
48300	BTM	GEET,PHASEB		15386	17	09664	-4170
48310	DC	5,12345		15402			5
	J2345						
48320	LSTCAR	TFM LCHAR,0,10,	BLANK THE ONE CHAR BUCKET	15404	16	15537	000-0
48330	BNR	++20,INPUT+20		15416	45	15436	02805
48340	B7	NOCAR		15428	49	15516	
48350	C	++23,INPUT+20,,	TEST BLANK	15436	24	15459	02805
48360	BI	++48,01200,10,		15448	46	15496	012-0
48370	C	++23,INPUT+20,,	TEST COMMA	15460	24	15483	02805
48380	BI	NOCAR,01223,10,		15472	46	15516	012K3
48390	TF	LCHAR,INPUT+20,,	SAVE LAST CHARACTER	15484	26	15537	02805
48400	TR	INPUT+19,INPUT+21		15496	31	02804	02806
48410	B7	LSTCAR+12		15508	49	15416	
48420	NOCAR	TF ++18,LSTCAR-1		15516	26	15534	15403
48430	B	00000		15528	49	00000	00000

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48440	DORG	*-3		15536			
48450	LCHAR	DC 2,12,,	LAST CHARACTER IN OPERAND	15537		2	
	J2						
48460	DC	5,12345		15542		5	
	J2345						
48470	PCALL	TR COLL-18,THINGS-20		15544	31	02421	02400
48480	TR	ALPHSW,ZEROS,,	CLEAR BUCKET AND SWITCH OFF	15556	31	15883	15891
48490	BNR	++20,INPUT+20,,	RM	15568	45	15588	02805
48500	B7	PCALL1		15580	49	15808	
48510	CM	INPUT+20,23,10,	COMMA	15588	14	02805	000K3
48520	BE	PCALL1		15600	46	15808	01200
48530	CM	INPUT+20,00,10		15612	14	02805	000-0
48540	BE	PCTR		15624	46	15788	01200
48550	TF	COLL,INPUT+20		15636	26	02439	02805
48560	CF	COLL-1		15648	33	02438	00000
48570	TR	COLL-17,COLL-15		15660	31	02422	02424
48580	TD	IDENT-1,INPUT+20		15672	25	15889	02805
48590	TR	IDENT-6,IDENT-5		15684	31	15884	15885
48600	CM	INPUT+20,69,10,	TEST FOR ALPHA	15696	14	02805	00009
48610	BH	++24		15708	46	15732	01100
48620	TDM	ALPHSW,1,11,	SET ALPHA SW ON	15720	15	15883	0000J
48630	CM	COLL-17,7,10		15732	14	02422	000-7
48640	BNE	PCTR		15744	47	15788	01200
48650	TR	ALPHSW,ZEROS		15756	31	15883	15891
48660	BTM	ER,++12		15768	17	14484	J5780
48670	B7	ZILCH		15780	49	15876	
48680	PCTR	TR INPUT+19,INPUT+21		15788	31	02804	02806
48690	B	PCALL+24		15800	49	15568	00000
48700	DORG	*-3		15808			
48710	PCALL1	CM COLL-17,06,10		15808	14	02422	000-6
48720	BE	++44		15820	46	15864	01200
48730	TDM	COLL,0		15832	15	02439	00000
48740	TR	COLL-17,COLL-15		15844	31	02422	02424
48750	B7	PCALL1		15856	49	15808	
48760	SF	COLL-13		15864	32	02426	00000
48770	ZILCH	B PCALL-1,,6		15876	49	15544	00000
48780	DORG	*-4		15883			
48790	ALPHSW	DC 1,0		15883		1	
	-						
48800	IDENT	DC 7,000000'		15890		7	
	-00000'						
48810	ZEROS	DSC 8,0000000'		15891		8	
	0000000'						
48820	*	TO LOAD PHASE B6 TO THE DISK FILE					
48830	F6	34 SUB6,701		15900	34	15948	00701
48840		38 SUB6,702		15912	38	15948	00702
48850	TRA			15924	36	00000	00500
				15936	49	00000	00000
48860	SUB6	DDA ,0,86DAD,86SCT, INSTRN		15948		14	
	OJ9151-29J3094						
48870	TCO	F6		15900			
48880	DORG	MACR2		13406			
48890	DSAF	TFM TRDSA+6,ZEPO-4		13406	16	13572	-2296
48900	TR	DSABOX,CLERER+43		13418	31	09503	02755
48910	TFM	RLDSA+8,DSABOX-1		13430	16	13504	-9502

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48920	B7	**20	13442	49	13462		
48930	TR	INPUT+19,INPUT+21	13450	31	02804	02806	
48940	*						
48950	*	COLLECT OPERANDS					
48960	*						
48970	GOEVAL	BTM SCAN,++12,7 11	13462	17	06112	J347M	
48980	AM	TRDSA+6,5,10	13474	11	13572	000-5	
48990	AM	RLDSA+6,1,10	13486	11	13504	000-1	
49000	RLDSA	TD ,RLOCSW	13498	25	00000	08378	
49010	CM	TRDSA+6,ZEPO+51	13510	14	13572	-2351	
49020	BL	TRDSA	13522	47	13566	01300	
49030	TFM	TRDSA+6,ZEPO+46	13534	16	13572	-2346	
49040	TFM	RLDSA+6,DSABOX+9	13546	16	13504	-9512	
49050	B7	TRDSA+12	13558	49	13578		
49060	TRDSA	TR ZEPO,ADDRS-4	13566	31	02300	03486	
49070	BNR	GOEVAL-12,INPUT+20	13578	45	13450	02805	
49080	BNF	MAC1,INTBUF+1	13590	44	13778	03599	
49090	TFM	LNTH,5	13602	16	02387	-0005	
49100	AM	ADDCOW,5,10	13614	11	02676	000-5	
49110	TF	ADDRS,ADDCOW	13626	26	03490	02676	
49120	SM	ADDCOW,ZEPO+1	13638	12	02676	-2301	
49130	A	ADDCOW,TRDSA+6	13650	21	02676	13572	
49140	TF	FRSTAD,ADDRS	13662	26	03869	03490	
49150	SM	FRSTAD,4	13674	12	03869	-0004	
49160	TF	LSTAD,FRSTAD	13686	26	03879	03869	
49170	AM	LSTAD,5	13698	11	03879	-0005	
49180	KATHY	BTM GEET,PDSAF	13710	17	09664	J5442	
49190	*						
49200	*	SUBROUTINE LINKAGE FOR FUNCTIONAL MACROS AND ARITHMETIC MACR					
49210	*						
49220	MACROF	TD **23,ADDCOW	13722	25	13745	02676	
49230	TD	**23,AJUST	13734	25	13757	02399	
49240	AM	ADDCOW,10	13746	11	02676	000-0	
49250	TF	SPQFLD+11,INTBUF+6	13758	26	13897	03604	
49260	B7	DSAF,,,TO DSA ROUTINE TO PICK UP OPERANDS	13770	49	13406		
49270	*						
49280	*	ASSEMBLE LINKAGE					
49290	*						
49300	MAC1	TR OUT+2,ZEPO+1	13778	31	02220	02301	
49310	TF	ADDRS,ADDCOW	13790	26	03490	02676	
49315	SM	ADDCOW,ZEPO-23	13802	12	02676	-2277	
49320	A	ADDCOW,TRDSA+6	13814	21	02676	13572	
49330	TR	ZEPO,LINK	13826	31	02300	03492	
49340	A	ZEPO+11,ADDRS	13838	21	02311	03490	
49350	MM	SPQFLD+11,5,1011	13850	13	13897	000-N	
49360	TR	ZEPO+25,OUT+2	13862	31	02325	02220	
49370	S	ZEPO+18,99	13874	22	02318	00099	
49380	CF	ZEPO+14	13886	33	02314	00000	
49390	TFM	X,++24	13898	16	04008	J3922	
49400	BTM	LINPR,DOINST	13910	17	09722	J0750	
49410	TR	OUT+2,ZEPO+25	13922	31	02220	02325	
49420	AM	ADDRS,7,10	13934	11	03490	000-7	
49430	TF	LSTAD,ADDRS	13946	26	03879	03490	
49440	BTM	LINKDR,++12	13958	17	13252	J3970	
49450	TFM	LNTH,1	13970	16	02387	-0001	
49460	TD	OUT+2,LNTH+1,,MOVE REC.MRK. TO OUT+2	13982	25	02220	02388	

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49480	TDM	DUMP1+11,1,11	13994	15	03517	0000J	
49490	BTM	LINKCR,++12	14006	17	13168	J4018	
49500	BTM	GEET,PHASEB	14018	17	09664	-4170	
49510	*						
49520	*	DEFINE DISK ADDRESS					
49530	*						
49540	DDAF	BTM SCAN,++12	14030	17	06112	J4042	
49550	TD	MURIEL,BSW	14042	25	03597	09502	
49560	BD	DDASGN,BSW	14054	43	14098	09502	
49570	TD	KLRLSW,RLOCSW	14066	25	04003	08378	
49580	TF	LSTAD,ADDRS	14078	26	03879	03490	
49590	B7	DDA2	14090	49	14146		
49600	DDASGN	TF LSTAD,ADDCOW	14098	26	03879	02676	
49610	TD	**23,LSTAD	14110	25	14133	03879	
49620	TD	**23,AJUST	14122	25	14145	02399	
49630	AM	LSTAD,00,10	14134	11	03879	000-0	
49640	DDA2	TR INPUT+19,INPUT+21	14146	31	02804	02806	
49650	BTM	SCAN,++12	14158	17	06112	J4170	
49660	TD	DAX-5,ADDRS	14170	25	14458	03490	
49670	TR	INPUT+19,INPUT+21	14182	31	02804	02806	
49680	BTM	SCAN,++12	14194	17	06112	J4206	
49690	TF	DAX,ADDRS	14206	26	14463	03490	
49700	TR	INPUT+19,INPUT+21	14218	31	02804	02806	
49710	BTM	SCAN,++12	14230	17	06112	J4242	
49720	SF	ADDRS-2	14242	32	03488	00000	
49730	TF	SCTX,ADDRS	14254	26	14467	03490	
49740	TR	INPUT+19,INPUT+21	14266	31	02804	02806	
49750	BTM	SCAN,++12	14278	17	06112	J4290	
49760	TF	MAX,ADDRS	14290	26	14473	03490	
49770	TR	OUT+2, DAX-5	14302	31	02220	14458	
49780	TFM	LNTH,6	14314	16	02387	-0006	
49790	BTM	LINKC,++12	14326	17	13138	J4338	
49800	TR	OUT+2,SCTX-2	14338	31	02220	14465	
49810	TFM	LNTH,3	14350	16	02387	-0003	
49820	BTM	LINKCR,++12	14362	17	13168	J4374	
49830	TR	OUT+2,MAX-6	14374	31	02220	14465	
49840	TD	DSABOX,RLOCSW	14386	25	09503	08378	
49850	BTM	LINKDR,++12	14398	17	13252	J4410	
49860	BNF	**36,MURIEL	14410	44	14446	03597	
49870	TF	ADDCOW,LSTAD	14422	26	02676	03879	
49880	SM	ADDCOW,1	14434	12	02676	-0001	
49890	BTM	GEET,PHASEB	14446	17	09664	-4170	
49900	DAX	DS 6	14463		6		
49910	DC	1,1	14464		1		
49920	SCTX	DS 3	14467		3		
49930	DC	1,1	14468		1		
49940	MAX	DS 5	14473		5		
49950	DC	1,1	14474		1		
49960	**	TRANSFER TO RETURN ADDRESS ROUTINE					
49970	MTRA	TD **23,ADDCOW,, ADJUST ADDCOW	14476	25	14499	02676	
49980	TD	**23,AJUST	14488	25	14511	02399	
49990	AM	ADDCOW,10	14500	11	02676	000-0	
50000	TFM	NIDCS+11,00019	14512	16	13365	-0019	

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50010	A	MIOCS+11,ADDCOW,,	RETURN ADDRESS	14524	21	13365	02676
50020	TFM	MIOCS+18,IOCAL,,	IOR GETS ENTRY	14536	16	13372	-0716
50030	TF	FRSTAD,ADDCOW		14548	26	03869	02676
50040	TF	LSTAD,ADDCOW		14560	26	03879	02676
50050	AM	LSTAD,24,10,	SET TO TOTAL LENGTH	14572	11	03879	000K4
50060	CF	MIOCS+2		14584	33	13356	00000
50070	CF	MIOCS+14		14596	33	13368	00000
50080	CF	MIOCS+19		14608	33	13373	00000
50090	TD	ZEPD,MIOCS		14620	31	02300	13354
50100	TF	ADDRS,FRSTAD		14632	26	03490	03869
50110	TFM	X,++24		14644	16	04008	J4668
50120	BTM	LINPRT,DOINST		14656	17	09722	J0750
50130	** GENERATE	DISK DEFINERS					
50140	TFM	MBUK3+1,22,1011,	MODE CODE	14668	16	13392	000K6
50150	CF	MBUK3		14680	33	13391	00000
50160	TR	OUT+2,MBUK3		14692	31	02220	13391
50170	AM	ADDCOW,19,10,	MOVE ADDCOW TO END OF LINK	14704	11	02676	000J9
50180	TF	LSTAD,ADDCOW		14716	26	03879	02676
50190	AM	ADDCOW,02,10		14728	11	02676	000-2
50200	TFM	LNTH,02		14740	16	02387	-0002
50210	BTM	LINKCR,++12		14752	17	13168	J4764
50220	TF	MBUK1,ADDCOW,,	ADDRESS OF DDA	14764	26	13383	02676
50230	AM	MBUK1,06,10		14776	11	13383	000-6
50240	TR	OUT+2,MBUK1-4		14788	31	02220	13379
50250	AM	ADDCOW,05,10		14800	11	02676	000-5
50260	TFM	LNTH,05		14812	16	02387	-0005
50270	TD	DSABOX,RELSW		14824	25	09503	02478
50280	TDM	INTBUF,1		14836	15	03598	00001
50290	BTM	LINKDR,++12		14848	17	13252	J4860
50300	TR	OUT+2,MRM,,	RECORD MARK	14860	31	02220	13393
50310	AM	ADDCOW,01,10		14872	11	02676	000-1
50320	TFM	LNTH,01		14884	16	02387	-0001
50330	TDM	DUMPI+11,1,11,	PRINT RM	14896	15	03517	0000J
50340	BTM	LINKCR,++12		14908	17	13168	J4920
50350	** GENERATE	DDA					
50360	TDM	OUT+2,1,,	DISK ADDRESS	14920	15	02220	00001
50370	TFM	MBUK1,IOCSAD		14932	16	13383	J9783
50380	TR	OUT+3,MBUK1-4		14944	31	02221	13379
50390	AM	ADDCOW,06,10		14956	11	02676	000-6
50400	TFM	LNTH,06		14968	16	02387	-0006
50410	BTM	LINKCR,++12		14980	17	13168	J4992
50420	TFM	MBUK1,003,9,	SECTOR COUNT	14992	16	13383	00-03
50430	TR	OUT+2,MBUK1-2		15004	31	02220	13381
50440	AM	ADDCOW,03,10		15016	11	02676	000-3
50450	TFM	LNTH,03		15028	16	02387	-0003
50460	BTM	LINKCR,++12		15040	17	13168	J5052
50470	TFM	MBUK1,0,,	CORE ADDRESS	15052	16	13383	-0000
50480	TR	OUT+2,MBUK1-4		15064	31	02220	13379
50490	AM	ADDCOW,05,10		15076	11	02676	000-5
50500	TFM	LNTH,06		15088	16	02387	-0006
50510	TDM	DUMPI+11,0,11		15100	15	03517	0000-
50520	BTM	LINKCR,++12		15112	17	13168	J5124
50530	BTM	GEET,PHASEB		15124	17	09664	-4170
50540	*						
50550	*	EVALUATE ADDRESS OF DEND					
50560	*						

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50570	DENDF	BTM	SCAN,++12	15136	17	06112	J5148
50580		CF	ADDRS-4	15148	33	03486	00000
50590		BNF	++24,LSTYSW	15160	44	15184	02480
50600		WNTY	ADDRS-4	15172	38	03486	00100
50610		BNF	++36,LSCDSW	15184	44	15220	02479
50620		BTM	FILL,ADRFIL-4	15196	17	12546	J2997
50630		WACD	INPUT2	15208	39	03279	00400
50640		SF	ADDRS-4	15220	32	03486	00000
50650		BD	DOTCD,INTBUF+6,,CHECK FOR TCD	15232	43	15484	03604
50660		TFM	TESTAD	15244	16	09482	-0000
50670		TF	FRSTAD,HIADD	15256	26	03869	02519
50680		TFM	LNTH	15268	16	02387	-0000
50690		TD	OUT+2,LNTH+1,,RK.MRK.	15280	25	02220	02388
50700		BTM	RELODG,6,1011	15292	17	11036	000-0
50710		BTM	STACKR,9,10	15304	17	11288	000-9
50720		TDM	STNUCD+13,2	15316	15	12343	00002
50730		BT	MODIFI,MODIFI-1	15328	27	12186	12185
50740		TR	TRDATA+6,NINES-5,6	15340	31	11630	15471
50750		TFM	410,999,9	15352	16	00410	00R99
50760		TR	416,ADDRS-4	15364	31	00416	03486
50770	*		WRITE FINAL 3 SECTORS TO FILE				
50780	FINIS	TFM	IORT,++23	15376	16	00565	J5399
50790		B	IORBC,DEFOUT,7	15388	49	00520	-3549
50800	*		END OF PHASE B ,CALL IN PHASE C				
50805		TDM	PICKUP+1,1,11	15400	15	02530	0000J
50810		TFM	CFFA,PHAZEC	15412	16	02631	J5436
50820		BTM	CFF,PHASEC	15424	17	02594	J0000
50830	PHAZEC	DDA	,0,PHCDAD,PHCSCT,PHASEC	15436		14	
50840		DC	1,,	15450		1	
50850	SIMPLE	TDM	TRDATA+6,6,6,11	15452	15	11630	00000
50860		B7	FINIS-48	15464	49	15328	
50870	NINES	DC	6,999999	15476		6	
50880	OHSIX	DC	6,6	15482		6	
50890		DC	1,,	15483		1	
50900	DOTCD	BTM	RELODG,0,1011	15484	17	11036	000--
50910		TFM	LNTH	15496	16	02387	-0000
50920		TD	OUT-7,IC	15508	25	02211	03864
50930		TR	OUT-6,ADDRS-4	15520	31	02212	03486
50940		BTM	GEET,LUCK	15532	17	09664	J0146
50950	*		TO LOAD PHASE B5 TO THE FILE				
50960	F5	34	SUB5,701	15544	34	15592	00701
50970		38	SUB5,702	15556	38	15592	00702
50980		TRA		15568	36	00000	00500
				15580	49	00000	00000
50990	SUB5	DDA	,0,85DAD,85SCT,INSTRN	15592		14	
51000		DC	F5	15544			
51010	PHASEC	DDRG	10000	10000			
51020		TFM	IORT ,++23	10000	16	00565	J0023
51030		B	IOGT ,JMB ,7	10012	49	00566	J1594

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51040	BNR	DO	,ISTAT-29	..	BR IF SUBRS REQD	10024	45	10044	02531
51050	B7	SIZE				10036	49	10340	
51060	DO	SF	415	,	INDICATE SUBRS REQD	10044	32	00415	00000
51070	TF	BUF+5	,BUF+105	..	STORE FIRST ADR	10056	26	12186	12286
51080	TF	BUF+80	,BUF+5			10068	26	12261	12186
51090	SM	BUF+5	,100	,9,	CONVERT TO 1 SECTOR BEFORE	10080	12	12186	00400
51100	TDM	BUF+6	,2			10092	15	12187	00002
51110	BNF	**24	,BUF+106	..	RELOCATABLE	10104	44	10128	12287
51120	TDM	BUF+6	,2	..	NON RELOCATABLE	10116	15	12187	0000K
51130	TF	BUF+14	,FRSTCD	..	MOVE SPS ID CODE AND LENGTH	10128	26	12195	11593
51140	*****	TO CARD 1	COLS 6-14						
51150	TD	BUF+81	,BUF+6	..	CONSTANT IND FOR SECOND CARD	10140	25	12262	12187
51160	TR	BUF+82	,SECCD-3	..	LOADS SECOND CARD COLS7-25	10152	31	12263	11567
51170	TD	BUF+85	,R MARK	..	INSERTS RECORD MARK	10164	25	12266	00421
51180	*****	WRITE SECTOR 1 AND 2	AFTER SECTOR 1 IS UPDATED						
51190	TD	BUF+24	,RELSW	..	-1 IF RELOCATABLE OBJ PGM	10176	25	12205	02478
51200	TR	BUF+25	,COMDAT+09	..	MOVE COMMON DATA	10188	31	12206	02510
51210	TF	BUF +75	,I STAT			10200	26	12256	02560
51220	TFM	IORT	,**23			10212	16	00565	J0235
51230	B	IORBC	,JMB	,7		10224	49	00520	J1594
51240	*****	RD DIM ENTRIES FOR SUBR	INCL PICK						
51250	RDDIM	TFM	IORT	,**23		10236	16	00565	J0259
51260	B	IOGT	,JMB2	,7		10248	49	00566	J1602
51270	CKSET	CM	ISTAT-36	,02		10260	14	02524	-0002
51280	BL	CK DIM		..	BR IF FIXED L SPECIFIED	10272	47	11356	01300
51290	TFM	MAP	,614+WA			10284	16	11299	J2795
51300	BE	CK DIM		..	BR IF VARIABLE L SPECIFIED	10296	46	11356	01200
51310	TFM	MAP	,14+WA			10308	16	11299	J2195
51320	B7	CK DIM				10320	49	11356	
51330	BNR	CALC	,ISTAT-29	,7,	BR IF LAST REQ SUB NOT PROCESSED	10328	45	11156	-2531
51340	IND	DS	,*	..	ISTAT POINTER	10339		0	
51350	SIZE	TFM	IORT	,**23	..	10340	16	00565	J0363
51360	B	IOGT	,CSDDDA	,7	SYS COMM SEC TO ZERO	10352	49	00566	J1610
51370	*****	PUNCH BLANK RECORDS	AFTER LIST DECK						
51380	BNF	HIPICK	,LSCDSW			10364	44	10460	02479
51390	TR	CLERER+54	,CLERER			10376	31	02766	02712
51400	TDM	CLERER+53	,0			10388	15	02765	00000
51410	TR	CLERER+108	,CLERER			10400	31	02820	02712
51420	TDM	CLERER+107				10412	15	02819	00000
51430	WACD	CLERER+2				10424	39	02714	00400
51440	WACD	CLERER+2				10436	39	02714	00400
51450	WACD	CLERER+2				10448	39	02714	00400
51460	*****	PLACE HIGHEST ADDRESS	USED IN PICKUP						
51470	HIPICK	C	HIADD	,PICKUP		10460	24	02519	02529
51480	BNH	**24				10472	47	10496	01100
51490	TF	PICKUP	,HIADD			10484	26	02529	02519
51500	*****	5 CYLINDER CHECK							
51510	CM	SUBOUT+5	,1000			10496	14	03563	-1000
51520	BNH	AOK				10508	47	10696	01100
51530	BD	**20	,22+PHASEC			10520	43	10540	10022
51540	B7	AOK				10532	49	10696	
51550	CF	22+PHASEC				10540	33	10022	00000
51560	TDM	23+PHASEC	,0	,11		10552	15	10023	0000-
51570	TD	**20	,73+PHASEC			10564	25	10584	10073
51580	CM	**8	,05	,710		10576	14	10584	-00-5
51590	BE	**24				10588	46	10612	01200

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51600	TDM	23+PHASEC	,1			10600	15	10023	0000J
51610	RCTY					10612	34	00000	00102
51620	WATY	BARF				10624	39	11995	00100
51630	RCTY					10636	34	00000	00102
51640	WATY	BARF2				10648	39	12081	00100
51650	H					10660	48	00000	00000
51660	BNC4	AOK				10672	47	10696	00400
51670	TDM	DUP-1	,2	..	INHIBIT DUP CALL	10684	15	11111	00002
51680	AOK	SM	STCNT	,1	,10	10696	12	02514	000-1
51690	TR	O+PHASEC	,403			10708	31	10000	00403
51700	BD	ALL-12	,SKIP			10720	43	10840	11510
51710	S	OBJCRE	,PICKUP			10732	22	02497	02529
51720	RCTY					10744	34	00000	00102
51730	TD	PICKUP+1	,R MARK			10756	25	02530	00421
51740	BNL	**72		..	BR IF OBJCRE IS NOT EXCEEDED	10768	46	10840	01300
51750	WATY	OVER				10780	39	11759	00100
51760	TD	OBJCRE+1	,PICKUP+1			10792	25	02498	02530
51770	CF	OBJCRE				10804	33	02497	00000
51780	CF	OBJCRE-4				10816	33	02493	00000
51790	WNTY	OBJCRE-4				10828	38	02493	00100
51800	RCTY					10840	34	00000	00102
51810	ALL	WATY	END			10852	39	11621	00100
51820	BD	**60	,SKIP			10864	43	10924	11510
51830	CF	PICKUP-4				10876	33	02525	00000
51840	RCTY					10888	34	00000	00102
51850	WNTY	PICKUP-4				10900	38	02525	00100
51860	WATY	CORE				10912	39	11655	00100
51870	BNF	**24	,RELSW			10924	44	10948	02478
51880	WATY	RELCRE				10936	39	11705	00100
51890	RCTY					10948	34	00000	00102
51900	TF	ADDRS	,STCNT			10960	26	03490	02514
51910	CF	ADDRS-4				10972	33	03486	00000
51920	WNTY	ADDRS-4				10984	38	03486	00100
51930	WATY	STPM				10996	39	11951	00100
51940	RCTY					11008	34	00000	00102
51950	BV	**12				11020	46	11032	01400
51960	TFM	IORT	,**23			11032	16	00565	J1055
51970	B	IORBC	,CSDDDA	,7		11044	49	00520	J1610
51980	RCTY			..	FOLLOWING MACRO TERMINATES PHASE C	11056	34	00000	00102
51990	BNF	**20	,22+PHASEC	..	BR IF DISK OUTPUT NOT REQD	11068	44	11088	10022
52000	B7	DUP-12				11080	49	11100	
52010	BNF	CALC-20	,23+PHASEC	..	BR IF OTHER OUTPUT NOT REQD	11088	44	11136	10023
52020	TDM	SYSCAL	,1			11100	15	00475	00001
52030	DUP	NOP		..	RESERVED FOR READING CARD TO ZERO	11112	41	00000	00000
52040	B	MONCAL				11124	49	00796	00000
52050	TDM	SYSCAL	,2	..	INHIBIT DUP CALL	11136	15	00475	00002
52060	B7	DUP				11148	49	11112	
52070	CALC	TFM	CKMAP+54	,USED		11156	16	11446	J1276
52080	BD	USED	,IND	,11,	BR IF THIS SUBR USED	11168	43	11276	1033R
52090	AM	IND	,01	,10,	ADJ ISTAT POINTER FOR NEXT ENTRY	11180	11	10339	000-1
52100	AM	CKMAP+42	,01	,10		11192	11	11434	000-1
52110	SM	NE	,01	,10,	ADJ NO OF ENTRIES FOR SUBR	11204	12	11236	000-1
52120	BH	IND-11		..	BR IF MORE ENTRIES OF SUBR AVAIL	11216	46	10328	01100
52130	AM	MAP	,20	,710,	OBTAIN NO OF ENTRIES OF NEXT SUBR	11228	11	11299	-00K0
52140	NE	DS	,2	,*3	NO OF ENTRIES LEFT FOR DIM ENTRY	11236		2	
52150	TD	NE	,MAP	,11		11240	25	11236	1129R

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52160	BD	IND-11	,NE	,,	RETURN TO CHECK ISTAT	11252	43	10328	11236
52170	B	NE-8				11264	49	11228	00000
52180	USED	SM	MAP	,5	OBTAIN SUBR LENGTH ADD TO TOTAL L	11276	12	11299	000-5
52190	A	PICKUP	,WA+1214	,7		11288	21	02529	J3395
52200	MAP	DS		,,	POINTER FOR SUBROUTINE DIM ENTRY	11299			0
52210	AM	MAP	,25	,10,	ADV SUBR PNTR FOR NEXT SUBR	11300	11	11299	000K5
52220	A	IND	,NE	,,	ADV ISTAT PNTR FOR BAL OF SUBR ENTS	11312	21	10339	11236
52230	A	CKMAP+42	,NE	,,		11324	21	11434	11236
52240	B	NE+4		,,	BR TO SET NE FOR NEXT SUBROUTINE	11336	49	11240	00000
52250	DDRG		,,-4			11343			
52260	*****	SKIP BLANK	DIM ENTRIES						
52270	AM	MAP	,20			11344	11	11299	-0020
52280	CKDIM	TF	,+35	,MAP		11356	26	11391	11299
52290	AM		,+23	,6		11368	11	11391	-0006
52300	BNR	CK DIM-12				11380	45	11344	00000
52310	CKMAP	TF	,+42	,MAP	,,	11392	26	11434	11299
52320	AM		,+30	,4	INSURE PROPER DIM ENTRIES	11404	11	11434	-0004
52330	CF		,+21	,ISTAT-36		11416	26	11437	02524
52340	CM			,00	INIT AT 01 FOR SOFT DIV	11428	14	00000	-0000
52350	BE	USED+12		,,	BR IF ENTRY OK	11440	46	11288	01200
52360	TFM	DELETE+30	,FAULT	,,	CHANGE DELETE MESSAGE	11452	16	11494	J1895
52370	DELETE	RCTY				11464	34	00000	00102
52380	SF	NONEX		,,	PREVENTS EXECUTION	11476	32	00457	00000
52390	WATY	OTHER				11488	39	11823	00100
52400	TDM	SKIP	,,-01			11500	15	11510	0000J
52410	SKIP	DS	1	,,-1	SKIP OUTPUT REFERRG TO CORE IF-1	11510			1
52420	B7	SIZE				11512	49	10340	
52430	*	FOR SUBROUTINE DIM ENTRIES							
52440	DDAJB	DDA	,1	,SUBDAD,19,WA+1		11520		14	
52450		DC	1	,,		11534		1	
52460	*	FOR READING 2 SECTORS AND WRT SECTOR 1							
52470	DDAJB	DDA	,1	,,-2,BUF+1		11536		14	
52480		DC	1	,,		11550		1	
52490	CSDDA	DDA	,1	,MOSDAD,1,0+PHASEC		11552		14	
52500		DC	1	,,		11566		1	
52510	SECCD	DC	4	,100	CONSTANT FOR SECOND CARD	11570		4	
52520		DC	6	,,-3002		11576		6	
52530		DC	9	,6012345*		11585		9	
52540	FRSTCD	DC	8	,67514842	CONSTANT FOR FIRST CARD	11593		8	
52550	RMARK	DS		,421		00421		0	
52560	COMDAT	DS		,ISTAT-59	HI ORDER POSITION OF COMMON DATA	02501		0	
52570	CDIM	DS		,ISTAT-30		02530		0	
52580	JHB	DSC	2	,02		11594		2	
52590	DSA	DDAJB				11600		5 X	1

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52600	DC	1	,,			11600		J1536	
52610	JHB2	DSC	2	,22		11601		1	
52620	DSA	DDAJB				11602		2	
52630	DC	1	,,			11608		5 X	1
52640	CSDDA	DSC	2	,22		11608		J1520	
52650	DSA	CSDDA				11609		1	
52660	DC	1	,,			11610		2	
52670	DS	1				11616		5 X	1
52680	END	DAC	17	,END OF ASSEMBLY.*		11616		J1552	
52690	CORE	DAC	25	,CORE POSITIONS REQUIRED*		11617		1	
52700	RELCRE	DAC	27	,PLUS RELOCATION INCREMENT*		11618		1	
52710	OVER	DAC	32	,EXCEEDED SPECIFIED CAPACITY BY *		11621		17 X	2
52720	OTHER	DAC	36	,SUBROUTINES OTHER THAN PGM DIV USED*		11621		25 X	2
52730	FAULT	DAC	28	,NO DIM ENTRY FOR SUBROUTINE*		11655		27 X	2
52740	STPM	DAC	22	,STATEMENTS PROCESSED*		11705		32 X	2
52750	BARF	DAC	43	,MORE THAN 5 CYLINDERS OF RELOADABLE OUTPUT*		11759		36 X	2
52760	BARF2	DAC	50	,SW4 ON TO DUMP OUTPUT, OFF TO CONTINUE, NO OUTPUT*		11823		28 X	2
52770	DS	1				11895		22 X	2
52780	BUF	DSS	1900			11951		22 X	2
52790	WA	DS		,BUF	WORK AREA FOR SUBROUTINE MAP	11995		43 X	2
52800	DDRG	WA				12081		50 X	2
52810	CLOAD	34	SUBC	,701		12180		1	
52820		38	SUB C	,702		12181		1900	
52830	TRA					12181		0	
52840	SUBC	DDA	,0	,PHCDAD,PHCSCT,PHASEC		12181			
52850		DC	1	,,		12182	34	12230	00701
52860	DEND INITI					12194	38	12230	00702
						12206	36	00000	00500
						12218	49	00000	00000
						12230		14	
						12182			
						04158			

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1PTSPB	01500	DMSEND	12626	LSCDSW	02479	5CHAR	07640	BSAV	09464
1STFCD	03938	DMSER1	12902	LSPRSW	02481	6CHAR	07672	BSBF	09458
2PRTIO	20000	DMSER2	12306	LSTCAR	15404	7TY5	03862	BSHI	09434
2PTSPB	00600	DMSNM1	12074	LSTCGN	12930	AIDAD	18600	BSNEQ	09402
ACTFIL	13065	DMSNUM	12086	LSTOUT	12826	A1SCT	00137	BSW	09502
ADDBKT	13400	DOCONF	15430	LSTYOW	02480	A2DAD	18800	BTBL2	05586
ADDCOV	02676	DOINST	10750	MACROF	13722	A2SCT	00058	BTBL	05762
ADDSUB	06828	DOLLAR	07368	MAXLIM	15997	A3DAD	18861	BUF	12181
ADRFIL	13001	DOMESS	10526	MDIGIT	13394	A3SCT	00022	CALC	11156
ALPHSW	15883	DSABOX	09503	MESOUT	10466	A4DAD	18883	CAL	14564
ANAL41	11514	DTLOOP	13432	MGRUDR	13782	A4SCT	00044	CCHAR	11600
BCMSPC	07104	DUDLEY	10422	MOCTOC	16023	A5DAD	18737	CDIM	02530
BLKADS	03949	DVAOBF	10590	MODIFI	12186	A5SCT	00029	CFFA	02631
BLKCTR	03991	DVASGN	10142	MOEXEC	00426	ABBA	04001	CFE	02594
BSECH	09206	ECLAT1	14466	MOIDNO	16039	ABLE	13950	CFIL	08922
CALEXT	14920	EPRINT	08452	MONAME	16035	ADDRS	03490	CHAR	13862
CALLEX	15502	ERDAC1	14576	MONCAL	00796	AJUST	02399	CHECK	15306
CARDIN	02666	ERLNTH	07084	MONOIS	16044	ALL	10852	CHKB7	13514
CAROLN	04009	ERSTSW	02476	MOSBND	16043	ALPHA	02686	CHKIO	04710
CASTER	04574	ERVALD	06908	MOSDAD	19663	ANAL1	11290	CHKND	08100
CCOMER	14698	EVALER	08016	MSTAD	18962	ANAL2	11350	CHKRM	11572
CDINSW	02474	EVALOP	06484	MURIEL	03597	ANAL3	11454	CHSYM	10294
CFDEF	02625	FCHBUF	12819	NEWCAR	11978	ANAL4	11478	CKDIM	11356
CLERER	02712	FILBUF	12802	NOPREC	02706	ANAL	11218	CKMAP	11392
CMPCNT	09090	FLAGGR	13550	NOSINE	14120	ANLIA	11434	CKSET	10260
COMDAT	02501	FLDATA	14078	NDTYPE	10930	ANLIB	11410	CLOAD	12182
COMSPC	06988	FRSTAD	03869	OBJCR	02497	ANLIC	11398	CLOUT	08556
COPDEF	04154	FRSTCD	11593	OPCODE	13370	ADK	10696	CNTR	09494
CORERS	08188	FRSTMT	04002	OVRLAP	12510	ASINE	09890	CNT	13861
CSDDA	11610	FWDSCN	05972	PACKAD	03885	ASTER	07804	COLL	02439
DDALJB	11536	GETAST	07716	PCALL1	15808	BIDAD	19180	CONTU	14786
DDASGN	14098	GOEVAL	13462	PCMGOM	04666	B1SCT	00020	CORE	11655
DEFDIM	14763	GOODB2	05574	PCNUSW	02482	B2DAD	19200	CSDDA	11552
DEFIN2	03518	HIPICK	10460	PHASEB	04170	B2SCT	00056	CTVT	02490
DEFOUT	03549	INCDEF	02492	PHASEC	10000	B3DAD	19000	CVACT	12758
DELETE	11464	INDADR	11810	PHAZEC	15436	B3MAD	09700	DAC2	13888
DFADD1	09700	INPUT2	03279	PHCDAD	19260	B3SCT	00063	DAC3	14236
DFADD2	09600	INSTRN	13094	PHCSCT	00040	B4DAD	19063	DAC4	14284
DFADD3	09556	INTBUF	03598	PICKUP	02529	B4SCT	00056	DACF	13748
DFADD4	14850	INTERM	06748	PRDCSA	15294	B5DAD	19122	DAC	15646
DFADD6	14770	INTRSW	02483	PROCR	02498	B5SCT	00029	DAS	14210
DIGALF	06536	TOADDR	02638	PRTLIM	02503	B6DAD	19151	DAX	14463
DIGITS	09526	IOCSAD	19783	PTINSW	02475	B6SCT	00029	DCF82	04482
DIMDAD	04800	KILSUB	02484	PULLIO	05018	BAKR	13882	DC	14546
DIMSCT	00001	KLRLSW	04003	RDEQIV	14810	BANAN	10622	DDA2	14146
DIVCSW	02485	LDOCHAR	07348	RETRN	11808	BARF2	12081	DDAF	14030
DIVIDE	06656	LIMTSP	03988	RELRCR	11705	BARF	11995	DDAJB	11520
DMEND1	12782	LIMTSP	02508	RELODG	11036	BB2	09475	DDA	15562
DMEND2	12830	LINKCR	13168	REMAIL	11854	BBT	13499	DEFEQ	14841
DMER1A	12554	LINKDR	13252	REVSCN	05922	BETA	02691	DEFIN	03526
DMER1C	12602	LINKER	13282	RLOCSW	08378	BLOP	06792	DEFSW	05373
DMER1N	12518	LINXSF	15490	RNMESS	08383	BLX	02645	DENDF	13166
DMES11	12154	LINPRT	09722	RSCAN1	05920	BNK	13507	DEND	15550
DMES21	12386	LINTHFL	13081	RSYNSW	08377	BP20K	00005	DFADD	09644
DMES22	12434	LOPOUT	03827	2PASS	04362	BRNCH	09854	DGMF	09914
DMPDIG	03996	LOSMB	19997	2PSSW	02477	BRSEQ	11380	DGM	15574

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DIVSW	08380	F1	04498	LINKC	13138	OTHER	11823	SPBL	00040
DMES1	12062	F2	15670	LINKD	13198	OUT	02218	SPEC	07136
DMES2	12318	F3	09716	LINKE	03492	OVER	11799	SPLIT	10882
DMESA	11806	F4	15040	LINKS	14692	PACK	02976	SPLIT	12418
DMESB	11830	F5	15544	LINP	15466	PARTL	08710	SPSGM	02561
DMESC	11946	F6	15900	LINTH2	10000	PCALL	15544	SREL	06392
DMESD	12026	FAULT	11895	LINTH	02387	PCK	02365	STCNT	02514
DMESF	11602	FILL	12546	LPNWS	08379	PCONF	15454	STPM	11951
DMES	15622	FINIS	15376	L	02521	PCON	10086	SUBO	04546
DMESW	03857	FIT	11464	LSTAD	03879	PCTR	15788	SUB2	15718
DMS12	12262	FLGRM	03880	LUCK	10146	PDSAF	15442	SUB3	09764
DMSB1	11842	FORWD	04430	M2DIG	13404	PDSA	10166	SUB4	15088
DMSB2	11925	FOUND	14978	MAC1	13778	PFIL	13033	SUB5	15592
DMSR2	12920	GAT	09532	MAC2	15658	PKMOD	03902	SUB6	15948
DMSV	09521	GEET	09664	MACR2	13406	PLACE	09487	SUBC	12230
DOCON	09982	GET	07496	MACRO	15526	PRDS	14198	SUBIN	03534
DOBSF	15418	GETT	09620	MAP	11299	PUNCH	12994	SUBNO	02524
DOBS	09866	GIT	09576	MARR1	05302	QFIL	13049	SUBSW	03582
DDL	07033	GD1	04502	MAX	14473	R2	04318	SVADD	13402
DORG	14406	GOAHD	15126	MBUK1	13383	R2SW	04361	TAPIN	02658
DO	10044	GOCL	12978	MBUK2	13389	RCTAB	13094	TBL1	05664
DOT1	13348	GONDW	13950	MBUK3	13391	RCTR	08376	TBL2	05538
DOTCD	15484	GOODB	05700	MDRET	06604	RDDIM	10236	TEMP	02572
DOTCL	15634	GOON	14866	MESS2	08421	REG	13834	TEMP	02711
DOT	13288	GO	13594	MIGCS	13354	RELSW	02478	TEST	09469
DSAF	13606	GOTIT	08830	MIO	14667	RLDSA	13498	TU	05482
OSA	15538	HCLIM	02508	MODE1	13070	RLOP	04758	TOBB	08112
OSBF	09722	HEAD	06046	MODE	13022	RMARK	00421	TRANS	13706
OSB	15478	HED	03856	MODOC	16022	RMP	04878	TRA	15514
OSS	15210	HIADD	02519	MODAD	00415	RMRK	02576	TRDSA	13566
OSDNB	14002	HUB1	12034	MODL	16041	RM	14478	TRREC	14862
OSS	14186	HUB2	12070	MOSCT	16000	RSCAN	05860	TYPE	09477
OTEX	13524	HUB	12010	MOVE	06624	RSIN	10914	TYPIN	02650
OTR	13136	IC	03864	MRA	13393	RSTRF	10686	USED	11276
DUMPL	03506	IDENT	15890	MTRA	14476	RSTR	15598	WA	12181
DUMPL2	10074	IND	10339	MURI	02633	RTPN	07840	XFLAG	07956
DUP	11112	INITI	04158	NAST	05170	SI	07168	XRA1	00309
DVAD	10514	INKRM	02566	NE	11236	SAVEF	10940	XRA2	00314
DVLCF	10070	INPUT	02785	NEWTL	11922	SAVE	15610	XRA3	00319
DVLC	15586	IOCAL	00716	NINES	15476	SAVIN	11180	XRA5	00329
DVLP	10226	IOGT	00566	NMOAL	09315	SBWX	02671	XRA6	00334
DVSF	10490	IOPT	00532	NO3	15338	SBOUT	02645	X	04008
DVSW1	10490	IORBC	00520	NOADD	14350	SCAN1	06436	XTAB	07958
DVSW2	10491	IORT	00565	NOCAR	15516	SCAN2	06172	ZEP0	02900
DVTR	10502	IOSK	00554	NOISE	02522	SCAN	06252	ZEROS	15891
END	11621	ISTAT	02560	NONEX	00457	SCAN	06112	ZILCH	15876
EN	14226	JHB2	11602	NOOPP	13558	SCTX	14467	SFADD	15998
EQDAD	00000	JHB	11594	NOT3	14406	SECCD	11570	SECI	11134
EQSCT	00004	JSTBL	02459	NOTOP	13914	SECRD	04406	SEFRN	12174
EQSW	09433	KATHY	13710	NUMB	02448	SEEM	13626	SIMPLE	15452
ERDAC	14428	LABL	07035	ONSTX	15482	SFA	03947	SQFLD	13886
ERLAB	03801	LBADD	08630	ONEZ	02587	SFLAG	14886	SSTAD	18927
ERRXX	05054	LBLIM	20009	OPPS	08284	SIZE	10340	SSTST	00035
ER	14484	LCHAR	19537	OP3SW	13395	SKIP	11510	STACKR	11288
EV1	08052	LIM	03841	OPER	09901	SNODE	09516	STCH1	14036
EVODD	02469	LIMSV	03852	OPFIL	13017	SNPBL	00235	STCHAR	13952

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STKLEN 03874	SUBDAD 04808	SYSCAL 00475	TRNUMB 07760	ZERONE 13982
STNUCD 12330	SUBENT 09492	TBLEND 09499	TRSCAN 06082	
STPCSW 02470	SUBOUT 03558	TESTAD 09482	TYINSW 02473	
STPRSW 02472	SYMTAD 02643	THINGS 02420	TYPINS 13430	
STTYSW 02471	SYMTBL 16003	TRODATA 11632	VACANT 04010	

END OF ONE ASSEMBLY.

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SPS IID SUBROUTINE SUPERVISOR II

PAGE 1

X	DS	,0	..	UNMODIFIED ZERO	00000	0	
XX	DS	,0			00000	0	
00020	COMMON	DS	1	,401	00401	1	
00030	RMARK	DS		,421	00421	0	
00040	RELINC	DS		,434	00434	0	
00050	SYSCAL	DS		,475	00475	0	
00060	IORBC	DS		,520	00520	0	
	IORSK	DS		,554	00554	0	
00070	IORT	DS		,565	00565	0	
00080	IOGT	DS		,566	00566	0	
00090	IOCAL	DS		,716	00716	0	
00100	MONCAL	DS		,796	00796	0	
00110	BASE	DS		,1600	01600	0	
00120	PCK	DSB	5	,7	02365	5 X	7
00130	PLUSL	DS	2	,PCK+33	02398	2	
00140	FOREQ	DS		,7280	07280	0	
00150	SUBVEC	DSB	5	,30	02215	5 X	30
00160	MDD	DSS	12000	,8000	08000	12000	
00170	BUF	DS		,MOD-1	07999	0	
00180	SSL0C	DS		,17024	17024	0	
00190	DDRG		2402		02402		
00200	XEQ	TFM	IORT	,**23	02402	16	00565 -2425
00210	B	IOGT	,DDDAP	,7	02414	49	00566 -2608
00220	A	DDAP+5	,SECLST	,7	02426	21	02598 -2644
00230	AM	*-1	,3		02438	11	02437 -0003
00240	TD	DDDAP+7	,DDDAP+12		02450	25	02615 -0480
00260	TFM	1214	,480		02462	16	01214 -0480
	SM	**9	,1	,810	02474	12	02483 0-0-1
	DS		,*-2		02483	0	
	BH	XEQ			02486	46	02402 01100
00280	TFM	439	,75		02498	16	00439 -0075
00290	SF	468			02510	32	00468 00000
00300	TF	434	,RESTOR+12		02522	26	00434 02633
00310	CF	427			02534	33	00427 00000
00320	TFM	XEQ+23	,DDDAR		02546	16	02425 -2585
00330	EXIT	B7	XEQ		02558	49	02402
00350	DDAR	DSS	20		02565	20	
0360	DDAR	DSC	2	,--22	02585	2	
00370	DSA	DDAR			02591	5 X	1
					02591		-2565
00380	DC	1	,'		02592	1	
00390	DDAP	DSC	1	,0	02593	1	
							RD SUBRS REQD FROM SCRATCH
00400	DSA	BASE			02598	5 X	1
							-1600
00410	DC	3	,999		02601	3	
00420	DSA	99999			02606	5 X	1
							R9999
00430	DC	1	,'		02606	1	
					02607		

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00440	DDAP	DSC 2	,02	02608	2
00450		DSA DDAP	,0	02614	5 X 2
				02614	-2593
				02619	-0000
00460		DC 1	,'	02620	1
00470	RESTOR	DSS 20	,, FOR INFO LOST DURING LOADG OF SUBRS	02621	20
		DAC 1,0		02643	1 X 2
		0			
00490	SECLST	DORG --1	, EVENIZES SECLST LABEL FOR SHORT OBJ PGMS	02642	
		DSB 3	,30 ,, LIST OF SEC LNTH FOR REQD PROGRAMS	02644	3 X 30
00510	DDASC	DC 1	,0	02732	1
00520		DC 5	,19663	02737	5
		J9663			
00530		DC 3	,1	02740	3
		-01			
00540		DSA WA3		02745	5 X 1
				02745	-7300
				02746	1
00550		DC 1	,'		
00560	DDASC	DSC 2	,22 ,, FOR SYS COMM SEC	02747	2
		Z2			
00570		DSA DDASC		02753	5 X 1
				02753	-2732
				02754	1
00580		DC 1	,'		
00590	*****DC	15	,0,, SIMULATE ODA ,0,0,001,MA		
00600	DDA	DSC 1	,0 ,, RD OBJECT SECT 1	02755	1
		0			
00610		DC 5	,0	02760	5
		-0000			
00620		DC 3	,1	02763	3
		-01			
00630		DSA WA		02768	5 X 1
				02768	-7400
				02769	1
00640		DC 1	,'		
00650	DDA2	DSC 1	,0 ,, RD DIM	02770	1
		0			
00660		DC 5	,4808	02775	5
		-4808			
00670		DC 3	,6	02778	3
		-06			
00680		DSA WA2		02783	5 X 1
				02783	-2934
				02784	1
00690		DC 1	,'		
00700	DDAW	DC 1	,0 ,, WRT SUBR ON DISK	02785	1

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SPS IID		SUBROUTINE SUPERVISOR II		PAGE	3
00710		DSA BASE		02790	5 X 1
00720		DC 3	,0	02790	-1600
		-00		02793	3
00730		DSA MOD		02798	5 X 1
				02798	-8000
				02799	1
00740		DC 1	,'		
00750	DDARS	DS 20	,DDA ,, RD SUBR FOR MODIFICATION	02755	20
00760	DDDA	DSC 2	,22	02800	2
		Z2			
00770		DSA DDA		02806	5 X 1
				02806	-2755
				02807	1
00780		DC 1	,'		
00790	DDDA2	DSC -2	,22	02808	2
		Z2			
00800		DSA DDA2		02814	5 X 1
				02814	-2770
				02815	1
00810		DC 1	,'		
00820	DDARS	DSC 2	,22	02816	2
		Z2			
00830		DSA DDARS		02822	5 X 1
				02822	-2755
				02823	1
00840		DC 1	,'		
00850	DDDAW	DSC 2	,02	02824	2
		02			
00860		DSA DDAW		02830	5 X 1
				02830	-2785
				02831	1
00870		DC 1	,'		
00880	NDDDA	DSA WA		02836	5 X 1
				02836	-7400
				02839	3
00890		DC 3	,04'		
		-4			
00895	GM	DGM	.....	02839	1
00900	*****		USED IN XEQ PORTION OF PGM WHEN NON DISK INPUT		
00910	NODISK	SF 469		02840	32 00469 00000
		TR 416	,RESTOR	02852	31 00416 02621
00920		TR 428	,RESTOR+6	02864	31 00428 02627
00930		TFM XEQ+23	,DDAR	02876	16 02425 -2585
00940		B7 XEQ		02888	49 02402
00950		DC 1	,'	02895	1
00970		DC 1	,'		
00980	NODDA	DSC 1	,1	02896	1
		1			
00990		DC 5	,19783 ,, SUPER+LOADER CALLER STAGE 1	02901	5
		J9783			

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01000	DC	3	,3		02904	3	
	-03						
01010	DC	6	,0'		02910	6	
	-0000'						
01020	WA2	DDRG	2934	,600 CHAR	02934		
01030	SUPER	TR	DDAR	,402	02934	31	02565 00402
01040		TR	FOREQ	,402	02946	31	02780 00402
01050		TF	DDA+5	,407	02958	26	02760 00407
01055		TD	DDA	,402	02970	25	02755 00402
01060		TR	RESTOR	,416	02982	31	02621 00416
01070		TFM	IORT	,+23	02994	16	00565 -3017
01080		B	IOGT	,DDDASC	03006	49	00566 -2747
01090		TD	IOD	,428	03018	25	03038 00428
01100		CM	IOD	,03	03030	14	03038 -00-L
01110	IOD	DS	,+3		03038		0
01120		BH	RDRFRST	,	03042	46	03126 01100
01130		BD	FOR EX	,WA3+75	03054	43	03390 07375
01140		BD	FOR EX	,WA3+74	03066	43	03390 07374
01150		TDM	DSKSW	,-1	03078	15	05620 0000J
01170		TFM	RDRFRST+23	,NDDDA-4	03090	16	03149 -2832
01180		BL	RD FRST	,	03102	47	03126 01300
01190		TDM	NDDDA+2	,2	03114	15	02838 00002
01220	RDRFRST	TFM	IORT	,+23	03126	16	00565 -3149
01230		B	IOGT	,DDDA	03138	49	00566 -2800
01260	*****			SAVE CARD SEQ NO IF NON DISK INPUT (NDI)			
01270		BNF	CAP	,DSKSW	03150	44	03210 05620
01280		SF	WA+75		03162	32	07475 00000
01290		TF	WA3+98	,WA+79	03174	26	07398 07479
01300		TFM	IORT	,+23	03186	16	00565 -3209
01310		B	IORBC	,DDDASC	03198	49	00520 -2747
01320	*****			CALC SIZE OF OBJECT CORE. HIGHEST ADR AVAIL IN CAP+18			
01330	CAP	AM	CAP+15	,20	03210	11	03225 000K0
01340		DC	2	,+3	03218		2
	-1						
01350		TR	01999	,+5	03222	31	-J999 03217
01360		BNR	CAP	,0	03234	45	03210 00000
01370		TF	REDUCE+11	,CAP+18	03246	26	05645 03228
	*****			INSURE NO REC MKS AND TEST FOR SPS PGM			
		BSBA	+12		03258	60	03270 00001
		BLXM	+12	,14 (3)	03270	66	03282 00-J4
		BNR	+24	,NAF-1 (3)	03282	45	03306 07LR9
		BTM	DELETE	,XEQS	03294	17	04002 -6943
		BCKM	-24	,-1 (3)	03306	64	03282 00-J
01380		C	SPSTST	,NAF+13	03318	24	06464 07413
01390		BE	RD CTL	,	03330	46	03502 01200
01400		SF	SPSTST-5	,	03342	32	06459 00000
01410		C	SPSTST	,NAF+5	03354	24	06464 07405
01420		BE	COR IM	,	03366	46	03430 01200
		BSNX	FOREX	,	03378	60	03390 00000
01430	FOREX	CF	429	,	03390	33	00429 00000
01440		TFM	IORT	,+19	03402	16	00565 -3421
01450		B	ILOCAL	,22001	03414	49	00716 2K0-1
01460		DSC	3	,38'	03426		3
		38'					
	*			MAKE ADJUSTMENTS REQD FOR CORE IMAGE PGM			
01461	CORIM	TR	WA2	,WA	03430	31	02934 07400

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01462		TF	WA+70	,RMS	03442	26	07470 06456
01463		TR	WA+8	,WA2	03454	31	07408 02934
01464		AM	DDAR+5	,1	03466	11	02570 000-1
01465		SM	DDAR+8	,1	03478	12	02573 000-1
01466		AM	DDAR+11	,1	03490	11	02576 000-1
01467	RDCTL	BNF	+24	,NAF+23	03502	44	03526 07423
01468		A	PICKUP	,REL INC	03514	21	07443 00434
01470	*****			SAVE AREA 428-440, CLR FLAG ON 429 FOR NON DISK INPUT			
01480		TD	441	,421	03526	25	00441 00421
01490		TR	RESTOR+6	,428	03538	31	02627 00428
01500		CF	RESTOR+7	,	03550	33	02628 00000
01510		BNF	NOISY	,77+WA3	03562	44	03606 07377
01520	PARAM	BNF	HANTL	,79+WA3	03574	44	03626 07379
01530		BNF	SUBSET	,81+WA3	03586	44	03670 07381
01540		B7	CKSET	,	03598	49	03682
01560	NOISY	TD	WA+36	,77+WA3	03606	25	07436 07377
01570		B7	PARAM	,	03618	49	03574
01590	HANTL	TD	WA+35	,79+WA3	03626	25	07435 07379
01600		TD	WA+34	,78+WA3	03638	25	07434 07378
01610		SF	WA+34	,	03650	32	07434 00000
01620		B7	PARAM+12	,	03662	49	03586
01640	SUBSET	TD	WA+38	,81+WA3	03670	25	07438 07381
01650	*****			SET SECTOR ADR FOR REQD SUBR SET			
01660	*****			03 APP = 4808 ,02 VL = 4814 ,01 FXL = 4820			
01740	CKSET	CM	WA+38	,02	03682	14	07438 000-2
01750		BH	RD DIM	,	03694	46	03786 01100
01760		TFM	DDA2+5	,4814	03706	16	02775 -4814
01770		BE	RD DIM	,	03718	46	03786 01200
01772		CM	WA+35	,08	03730	14	07435 000-8
01774		BE	+32	,	03742	46	03774 01200
01776		TFM	WA+38	,02	03754	16	07438 000-2
01780		B7	RD DIM	,	03766	49	03786
01800		AM	DDA2+5	,6	03774	11	02775 -0006
01810	RDDIM	TFM	IORT	,+23	03786	16	00565 -3809
01820		B	IOGT	,DDDA2	03798	49	00566 -2808
01830	*****			INSIST THAT HANTISSA LENGTH MEET SPECIFICATIONS			
01840		CM	WA+35	,02	03810	14	07435 000-2
01850		BH	+24	,	03822	46	03846 01100
01860		TFM	WA+35	,02	03834	16	07435 000-2
01870		CM	WA+35	,45	03846	14	07435 000M5
01880		BL	+24	,	03858	47	03882 01300
01890		TFM	WA+35	,45	03870	16	07435 000M5
		TD	PCK+34	,WA+38	03882	25	02399 07438
01900		TD	PCK+36	,WA+36	03894	25	02401 07436
01910		TF	PCK+33	,L	03906	26	02398 07435
02000		BNR	DELETE	,WA2+19	03918	45	04002 02953
02005		TR	WA2+600	,WA2	03930	31	03534 02934
02010	SETCOD	CM	WA2 +15	,01	03942	14	02949 000-1
02020		TFM	SUBVEC-5	,-33	03954	16	02210 -003L
02030		BE	FVLAPP	,	03966	46	04250 01200
02040		BH	VL APP	,	03978	46	04082 01100
02090		B	DELETE	,BD SET M	03990	49	04002 -6787
02100	DELETE	RCTY		,	04002	34	00000 00102
02110		WATY	DELETE-1	,	04014	39	0400J 00100
02120		RCTY		,	04026	34	00000 00102
02130		WATY	DELTED	,	04038	39	06741 00100

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02140	RCTY				04050	34	00000	00102
02150	TDM	SYSCAL	,4		04062	15	00475	00004
02160	B7	MONCAL			04074	49	00796	
02180	*****	CREATE ADD VECTOR FOR ADJUSTMENT OF P AND Q OPERANDS						
02190	VLAFF	TFM	SUBVEC- 5,-147	**	IND LOC OF RM AT END OF ALPHA	04082	16	02210
02200	SM	FVLAFF+35,98			04094	12	04285	-0098
02210	A	LOC 115 ,L	**	INSERT +L	04106	21	06315	07435
02220	A	LOC115+50,L			04118	21	06365	07435
02230	S	LOC115+10,L	**	INSERT -L	04130	22	06325	07435
02240	AM	LOC115+10,99999			04142	11	06325	R9999
02250	AM	LOC115+10,1			04154	11	06325	-0001
02260	TF	LOC115+60,LOC115+10			04166	26	06375	06325
02270	A	L ,L	**	INSERT +2L	04178	21	07435	07435
02280	A	LOC115+20,L			04190	21	06335	07435
02290	A	LOC115+70,L			04202	21	06385	07435
02300	TF	LOC115+30,LOC115+10,,		INSERT -2L	04214	26	06345	06325
02310	A	LOC115+30,LOC115+30			04226	21	06345	06345
02320	TF	LOC115+80,LOC115+30			04238	26	06395	06345
02330	FVLAFF	S	**35 ,PICKUP		04250	22	04285	07443
02340	BNH	**24			04262	47	04286	01100
02350	AM	PICKUP ,SECLST-12,,		MOVES PICK IF OBJ PGM SHORT	04274	11	07443	-2632
02370	TF	DDAP+11 ,PICKUP			04286	26	02619	07443
02380	TF	SUB NO-2 ,WA*38	**	STORE SET NO	04298	26	04535	07438
02390	B7	RD SUB			04310	49	04490	
02410	FINAL	BNR	CK SUB ,ISTAT-30 ,7,	BR IF ANOTHER SUBR REQD	04318	45	04338	-7444
02420	IND	DS	,*	ISTAT PNTR	04329		0	
02430	B7	CAP CK			04330	49	05538	
02450	CKSUB	BD	RD SUB ,IND ,11,	BR IF SUBR IS USED	04338	43	04490	0432R
02460	AM	IND	,1 ,10		04350	11	04329	000-1
02470	AM	SUB NO	,1 ,10		04362	11	04537	000-1
02475	AM	DIM	,10 ,610		04374	11	04459	000J0
02480	AM	SV+5	,5 **	ADJ TO SUBR DSA FOR ENTRY POINTS	04386	11	05397	-0005
02490	STPSV	SM	SV ,5 ,10,	ADJ SUBVEC POINTER	04398	12	05392	000-5
02500	SM	NE	,1 ,10		04410	12	04418	000-1
02510	NE	DC	2 ,01 ,*-3,	NO OF ISTAT ENT TO CK FOR SUBR	04418		2	
-1								
02520	BH	CK SUB			04422	46	04338	01100
02530	ADJDIM	AM	DIM ,20 ,10,	ADJ FOR NE OF NEXT DIM ENTRY	04434	11	04457	000K0
02540	TD	NE	,WA2+18 ,7,	STORE NE	04446	25	04418	-2952
02550	DIM	DS	,*	POINTER FOR NE IN DIM ENTRIES	04457		0	
02560	TFM	SV+5 ,MOD+7			04458	16	05397	-8007
02570	BD	FINAL ,NE			04470	43	04318	04418
02580	B7	ADJ DIM	**	SKIP BLANK DIM ENTRY	04482	49	04434	
02600	RDSUB	TF	RD SUB+35,DIM		04490	26	04525	04457
02610	SM	RD SUB+35,18			04502	12	04525	-0018
02620	TR	DDARS ,	**	MOVE DIM ENTRY TO DDA FOR RDG SUBR	04514	31	02755	00000
02660	CM	DDARS+17 ,	**	CK SUBR NO	04526	14	02772	-0000
02670	SUBNO	DS	4 **	SET NO AND SUBR NO	04537		4	
02680	BNE	DELETE			04538	47	04002	01200
02690	AM	LOC115+40, ,	**	ADD CORES USED BY PREVIOUS SUBR	04550	11	06355	-0000
02700	PICKAD	DS	,*	NOW HAS CORE REQD BY LAST SUBR	04561		0	
02710	A	LOC115+50,PICKAD	**	INSERT PICK +L	04562	21	06365	04561
02720	A	LOC115+60,PICKAD	**	INSERT PICK -L	04574	21	06375	04561
02730	A	LOC115+70,PICKAD	**	INSERT PICK +2L	04586	21	06385	04561
02740	A	LOC115+80,PICKAD	**	INSERT PICK -2L	04598	21	06395	04561
02750	TF	PKUP ,DDARS+13	**	STORE CORES USED BY SUBR	04610	26	05505	02768

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02760	*****	SET PICKAD TO TENS COMPLEMENT OF CORES USED BY THIS SUBR			04622	26	04561	02768
02770	TF	PICKAD ,DDARS+13			04634	32	04561	00000
02780	SF	PICKAD			04645		2	
03370	LNG	DS	2 **	NO OF UNPROCESSED DIGITS OF INSTRN	04646	11	04561	R9999
02790	AM	PICKAD ,99999			04658	11	04561	-0001
02800	AM	PICKAD ,1		PUT WORK AREA CORE ADR INTO DDARS	04670	16	02768	-8000
02810	SUBRD	TFM	DDARS+13 ,MOD **	READ IN SUBROUTINES	04682	16	00565	-4705
02820	TFM	IORT ,**23	**		04694	49	00566	-2816
02830	B	IORT ,DDARS	,7		04706	16	00565	-4729
	TFM	IORT ,**23	**		04718	49	00554	-2824
	B	IORSK ,DDDAW	,7		04730	15	04887	00001
02840	TDM	INST+1	,1 **	DISABLE MODIFCTN	04742	15	08005	0000K
02850	TDM	MOD+5	,2 **	ASHCAN DSA OF EACH SUBR	04754	66	04766	00004
02860	MODIFY	BLXM ,**12 ,BUF+5 (4),	**	SET TO FIRST INDICATOR DIGIT -1	04766	26	00319	00324
02870	NEWCD	TF	319 ,324 **	SET PNTR TO FIRST IND ON NEW CARD-1	04778	45	04826	00--1
02900	NXTIND	BNR	NOT RM ,1 (3),	CK IND CODE FOR RM	04790	44	04814	00--1
02920	BNF	RM	,1 (3),	BR IF BREAK IN SEQUENCE	04802	61	04766	00226
02950	BX	NEW CD ,7FIVE (4),	**	BR IF NEW CARD REQUIRED	04814	61	04778	05K8K
02950	RM	BX	NXT IND ,SIX (3),	ADJ FOR NEXT IND DIGIT				
02980	*****	BR TO ROUTINE TO PROCESS DATA PER INDICATOR DIGIT						
03010	NOTRM	TF	LNG ,3 (3)		04826	26	04645	00--3
	THREE	DS	,NOT RM+11		04837		0	
03020	BLX	**12 ,LNG (1),	**	PUT LENGTH IN IX 1	04838	65	04850	046M5
02990	TD	**29 ,1 (3),	**	INSERT IND CODE	04850	25	04879	00--1
	CF	**17 ,7	**		04862	33	04879	-0000
	SAVE	DS	,*	TEMP STOR FOR MODFD P+Q FIELDS	04874		0	
03000	BX	LOC115+5 ,THREE (3),6,	**	BR AS INDICATED *STEP IX3 TO LENGTH	04874	61	0632-	04QL7
03040	INST	NOP	ADJ ,X (2),	BR IF ELIG FOR MOD (BNR ADJ ,CTLPT	04886	41	04910	00-00
03060	CONST	BX	NXT IND ,309 (3),	ADJ IX3 TO NEXT IND DIGIT	04898	61	04778	00L-9
03070	ADJ	BD	P FLD ,X (2),	BR IF MODFG P FLD	04910	43	04934	00-00
03080	BX	ADJ Q ,ONE (2),	**	STEP CTL PNT TO Q FLD	04922	61	04994	05J69
03110	PFLD	MA	SAVE ,7 (3),	MOD P FLD AS REQD	04934	70	04873	00--7
03120	TD	**22 ,X (2)	**		04946	25	04968	00-00
03130	A	SAVE ,LOC115+40			04958	21	04873	06355
03140	MA	7 (3),SAVE			04970	70	00--7	04873
03080	BX	ADJ Q ,ONE (2),	**	STEP CTL PNT TO Q FLD	04982	61	04994	05J69
03190	ADJQ	BD	Q FLD ,X (2),	BR IF MODFG Q FLD	04994	43	05018	00-00
03105	BX	Q ND ,ONE (2),	**	STEP CTL PNT TO NEXT P FLD	05006	61	05078	05J69
03090	QFLD	MA	SAVE ,12 (3),	MOD Q FLD AS REQD	05018	70	04873	00-J2
03100	TD	**22 ,X (2)	**		05030	25	05052	00-00
03101	A	SAVE ,LOC115+40			05042	21	04873	06355
03140	MA	12 (3),SAVE			05054	70	00-J2	04873
03150	BX	**12 ,ONE (2),	**	STEP CTL PNT TO NEXT P FLD	05066	61	05078	05J69
03192	QND	BXM	**12 ,12 (3),	STEP PNTR TO Q11 OF THIS INST	05078	62	05090	00-J2
03194	BCXM	INST	,12 (1),	STEP DOWN LNG AVAIL BY 12	05090	64	04886	000JK
03196	B7	NXT IND			05102	49	04778	
03210	PCONST	BNF	CONST ,99998 (3),	BR IF RELOCATABLE	05110	44	04898	99RR8
03220	CM	99995 (3),3	,9		05122	14	99RR5	00-03
03230	BNE	CONST			05134	47	04898	01200
03240	PSUEDO	TF	CTLAR+59 ,RMS		05146	26	06524	06456
03250	TR	TCP	,1 (3),	MOVE PS CON ONLY	05158	31	06525	00--1
	ONE	DS	,PSUEDO+23		05169		0	
03260	TFM	99997 (3),X	**	SET ADR TO ZERO	05170	16	99RR7	-0000
03270	PBOTH	A	319 ,X (3),	ADJ IX 3 BY L OF PSUEDO	05182	21	00319	00--0
03280	BNR	2ND PC	,1 (3),	BR IF COL 75 OR CONTD	05194	45	05254	00--1
03290	PLOAD	TR	CTLAR ,TCP	LOAD COMPLETE PS CON TO CTL AREA	05206	31	06465	06525

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03300	TDM	INST+1	,5	05218	15 04887 00005
SIX	DC	2 ,06	,PLOAD +22	05228	2
	-6				
7FIVE	DC	2 ,75	,PLOAD +20	05226	2
	P5				
03305	CF	CTLAR		05230	33 06465 00000
03310	BLXM	NXT IND	,CTLAR (2),, INIT IX2 + BR	05242	66 04778 06M65
03320	2NDPC	BNF	P NOT C ,6 (3),, BR IF PS CON COMP ON LAST CARD	05254	44 05302 00--6
03330	TR	TCP	(1),TCP+8 (1),, CLOSE PS CON	05266	31 065K5 065L3
03340	TFM	5	(3),X ,, SET SECOND ADR TO ZERO	05278	16 00--5 -0000
03345	BXM	*+24	,8 (3),, STEP IX3	05290	62 05314 00--8
03360	PNOTC	TD	TCP (1),RMS-60 ,, INSERT RM AT END OF PS CON IN TCP	05302	25 065K5 06396
03370	BX	*+12	,7FIVE (4) ,,	05314	61 05326 0N226
03380	BLX	P LOAD	,324 (3) ,,	05326	65 05206 00LK4
03810	*****	FORM INFO	REQD TO COMPLETE LOADING OF SUBROUTINE		
03820	*****	ADJ ENTRY	POINTS IN SUBVEC AS IND BY DSA AT START OF SUBR.		
03830	FORM	A	IND ,NE ,, ADJ IND FOR ALL ENTRY POINTS	05338	21 04329 04418
03840	A	SUB NO	,NE ,, ADJ SUBR NO.FOR ALL ENTRIES	05350	21 04537 04418
03850	FILSV	AM	FIL SV+35,5 ,10	05362	11 05397 000-5
03860	TF	SV	,PICKUP ,6	05374	26 0539K 07443
03870	A	PCK	,MOD+7 ,2	05386	21 -2365 08007
03880	SV	DS	5 ,*-5 ,, CONTAINS ADR OF SUBR IN SUBVEC	05392	5
03890	SM	SV	5 ,10,, ADJ SUB VECTOR ADR	05398	12 05392 000-5
03900	SM	NE	,1 ,10,, REDUCE NO OF ENTRIES	05410	12 04418 000-1
03910	BH	FIL SV		05422	46 05362 01100
03920	TF	SCT	,DDARS+8 ,6,, RECORD SEC REQD FOR SUBR	05434	26 0545P 02763
03930	TF	DDAW+8	,SECLST ,7,, ENTER SEC-CNT FOR WRT SUBR TO SCRTC	05446	26 02793 -2644
03940	SCT	DS	5 ,5 ,, SECTOR COUNT FOR WHOLE SUBROUTINE	05457	5
03950	TFM	IORT	,**23 ,, WRITE MOD SUBR ON SCRATCH	05458	16 00565 -5481
03960	B	IORBC	,DDAW ,7	05470	49 00520 -2824
03970	A	DDAW+5	,DDAW+8 ,, INCREASE DISK ADR BY NO SEC	05482	21 02790 02793
03980	AM	PICKUP	, ,, INCREASE CORE ADR BY SUBR LENGTH	05494	11 07443 -0000
03990	PKUP	DS	5 ,* ,, TEMP STORE PROG TOTAL CORES	05505	5
04000	AM	SCT	,3 ,10,, ADJ FOR NEXT SUBR	05506	11 05457 000-3
	AM	W	,1	05518	11 02483 -0001
	B7	ADJ DIM		05530	49 04434
04050	CAPCK	A	SUBVEC-5,PCK ,, RM FOR ALPHA	05538	21 02210 02365
04060	TF	SUBVEC	,PCK ,, RM FOR BETA	05550	26 02215 02365
04070	SM	SUBVEC	,1	05562	12 02215 -0001
04080	*****	MAKE REQD	ADJ TO READ OBJECT PROGRAM		
04120	CF	DDAR+13		05574	33 02578 00000
04130	DISKCK	BNF	**+48 ,DSKSW ,, BR IF DISK PGM	05586	44 05634 05620
04140	TR	EXIT-48	,NO DISK	05598	31 02510 02840
04150	SF	DDAR+1		05610	32 02586 00000
04160	DSKSW	DS	1 ,*-1 ,, SW HAS -1 WHEN NON DISK INPUT(INDI)	05620	1
04160	TR	DDAR	,NODDA	05622	31 02565 02896
04170	REDUCE	SM	PICKUP ,CAP+18 ,, RDC KR UZ FM KR AVL8	05634	12 07443 -3228
04175	BV	*+12		05646	46 05658 01400
04176	BSNX	*+12		05658	60 05670 00000
04180	BNH	XEQ		05670	47 02402 01100
04190	TNF	SIZE+60	,PICKUP ,, MOVE NO OF CORE TO SIZE MESSAGE	05682	73 06715 07443
04240	BTM	DELETE	,SIZE	05694	17 04002 -6655
04270	*****	BELOW IS	DUAL PURPOSE VECTOR. EVEN ADR FIELDS ARE ADR OF		
04280	*****	ROUTINES	THAT ARE USED FOR DECODING INDICATOR CODE		
04290	*****	ODD ADR	FIELDS ARE SUBR ADJ FOR THE P AND Q OPERANDS OF INST		
04300	DORG	6296		06296	

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04310	DSA	RM-12	,INST	06300	5 X 3
				06300	-4802
				06305	-0000
				06310	-4886
04320	LOC115	DSA	0,PCONST ,0 ,CONST ,0,NXTIND,0,NYET , 0,FORM	06315	5 X 10
				06315	-0000
				06320	-5110
				06325	-0000
				06330	-4898
				06335	-0000
				06340	-4778
				06345	-0000
				06350	-6918
				06355	-0000
				06360	-5338
04330	DSA	0 ,NYET,0 ,NYET,0 ,NYET,0		06365	5 X 7
				06365	-0000
				06370	-6918
				06375	-0000
				06380	-6918
				06385	-0000
				06390	-6918
				06395	-0000
				06396	1
04340	DC	1	,*		
04350	RMS	DS	60 ,, 60 RECORD MARKS	06456	60
04360	SPSTST	DC	8 ,67514842	06464	8
		07514842			
04370	CTLAR	DS5	188 ,, USED FOR SUBR CONTROL CONSTANT	06465	188
04430	ICP	DS	,CTLAR+60 ,, TEMP STOR FOR PSUEDD CONSTANT	06525	0
04460	SIZE	DAC	43,CORE CAPACITY EXCEEDED BY 0000 LOCATIONS.*	06655	43 X 2
			CORE CAPACITY EXCEEDED BY 0000 LOCATIONS.*		
04470	DELTED	DAC	23,PROGRAM IS TERMINATED.*	06741	23 X 2
			PROGRAM IS TERMINATED.*		
04480	BDSETH	DAC	35,SUBR NOT LOCATED IN SUBROUTINE MAP*	06787	35 X 2
			SUBR NOT LOCATED IN SUBROUTINE MAP*		
04490	NYMES	DAC	31,IMPROPER IND CODE IN SUBR 0000*	06857	31 X 2
			IMPROPER IND CODE IN SUBR 0000*		
04500	NYET	TNF	NYMES+58 ,SUB NO	06918	73 06915 04537
04530	XEQS	BTM	DELETE ,NYMES	06930	17 04002 -6857
		DAC	25,IMPROPER CONTROL RECORD.*	06943	25 X 2
			IMPROPER CONTROL RECORD.*		
04540	DORG	FOREQ		07280	
04550	LDRMKS	AM	**+18 ,1	07280	11 07298 -0001
04560	TD	RMS-59	,RMS-60 ,2	07292	25 -6397 06396
04570	CM	*-6	,RMS	07304	14 07298 -6456
04580	BL	LDRMKS		07316	47 07280 01300
04590	SF	RMS-60		07328	32 06396 00000
04600	34	DDAL	,701 ,, LOAD SUBR SUPER ON DISK	07340	34 07388 00701
04610	38	DDAL	,702	07352	38 07388 00702
04620	TRA			07364	36 00000 00500
				07376	49 00000 00000
04630	DDAL	DDA	,1,SSLOC,51,XEQ-2	07388	14
			1J7024-51-2400		

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04670	TCD	LDRMKS+12		07292	
04680	DORG	FOREQ		07280	
04690	DS	20		07299	20
04700	WA3	DSS 100	:: SYSTEM COMMUNICATION SECTOR	07300	100
04710	WAF	DSS 100	:: FIRST SKTR OF OBJ PGM (IND RECORD)	07400	100
04720	WA	DS	:WAF	07400	0
04730	L	DS	:WA+35 , ADR OF SPEC MANT LENGTH	07435	0
04740	PICKUP	DS	:WA+43	07443	0
04750	ISTAT	DS	:WA+74	07474	0
04760	DEND	SUPER		02934	

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ADJDIM 04434	ADJQ 04994	DSKSW 05620	NOISY 03606	SSLOC 17024
BDSETM 06787	ADJ 04910	EXIT 02558	NOTRM 04826	STPSV 04398
COMMON 00401	BASE 01600	FILSV 05362	NYET 06918	SUBNO 04537
DDDARS 02816	BUF 07999	FINAL 04318	NYMES 06857	SUBRD 04670
DDDASC 02747	CAPCK 05538	FOREQ 07280	ONE 05169	SUPER 02934
DELETE 04002	CAP 03210	FOREX 03390	PARAM 03574	SV 05392
DELTED 06741	CKSET 03682	FORM 05338	PBOTH 05182	TCP 06525
DISKCK 05586	CKSUB 04338	GM 02839	PCK 02365	THREE 04837
FVLAFF 04250	CONST 04898	IND 04329	PFLD 04934	VLAFP 04082
LDRMKS 07280	CORIM 03430	INST 04886	PKUP 05505	WA2 02934
LOC115 06315	CTLAR 06465	LOCAL 00716	PLOAD 05206	WA3 07300
MODIFY 04754	DDA2 02770	IOD 03038	PLUSL 02398	WAF 07400
MONCAL 00796	DDAL 07388	IOGT 00566	PNOTC 05302	WA 07400
NODISK 02840	DDAP 02593	IORBC 00520	QFLD 05018	W 02483
NXTIND 04778	DDAR 02565	IORT 00565	QND 05078	XEQ 02402
PCONST 05110	DDARS 02755	IOSK 00554	RDCTL 03502	XEQS 06943
PICKAD 04561	DDA 02755	ISTAT 07474	RDDIM 03786	X 00000
PICKUP 07443	DDASC 02732	LNG 04645	RDSUB 04490	XX 00000
PSUEDO 05146	DDAW 02785	L 07435	RMARK 00421	SECLST 02644
RDFRST 03126	DDA2 02808	MANTL 03626	RM 04814	SETCOD 03942
REDUCE 05634	DDDAP 02608	MOD 08000	RMS 06456	SPSTST 06464
RELINC 00434	DDDAR 02585	NODDA 02836	SAVE 04873	SUBSET 03670
RESTOR 02621	DDDA 02800	NE 04418	SCT 05457	SUBVEC 02215
2NDPC 05254	DDDAH 02824	NEWCD 04766	SIX 05228	SYSCAL 00475
7FIVE 05226	DIM 04457	NODDA 02896	SIZE 06655	

END OF ONE ASSEMBLY.

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00010* SPSLIB---THE SPS II-D MODIFICATION PROGRAM

SYMBOL TABLE

UNDSYM 13443	TYINSW 02473	START2 10270	SSTSCT 00035	SSTDCE 12308
SSTDAD 18927	PTINSW 02475	PRTLIM 02503	PROSTM 03804	PROCON 11036
PHASEA 03392	OUTPUT 09570	OPLNTB 04623	OPLCTB 04643	OPINTB 04663
NOTINM 13413	MODSPAC 13090	MSTDAD 18962	MODSPS 12636	LOPOUT 03321
LIMITS 03281	INSTRN 10132	EVALER 07042	ER5DET 13110	ENTCNT 12294
ENDCIP 13038	C2OECT 12120	CLERER 02693	CDINSW 02474	BLDLBL 12780
ALRINM 13339	ADDRS 03293	ALFLP 04576	ALFOP 04472	ALRIN 13070
AIDCF 13206	AZDAD 18800	AZDIS 00034	AZSCT 00058	BER4 12796
BER5 12786	BOP 12772	BPHA 12764	BST2 12804	COLL 02439
C1 11509	C1P 11644	C1P2 11680	C13P 13142	C14P 13186
C15P 13230	C2 11535	C2P 11816	C2P2 11852	C20EM 12233
C3 11561	C3P 12324	C4 11609	C4END 12152	C4P 11920
C4P02 12016	C4P1 11944	C5 11623	C5P 12332	C5P2 12520
C5P3 12380	ER3 04680	ER4A 09478	GTOP 12452	HCLIM 02508
INPUT 02881	LDLBL 08390	LIBST 11000	NOSPM 13375	NOTIN 13018
OK 04740	OPSAV 13336	OPTAB 13273	OPTB 13282	PHA1 13297
RDCK 12848	SBNR 11140	SCAN 05164	SLP 11128	SLPX 11260
SST 12300	STR 11232	ST2C 12812	STZL 10574	XC 12580
XC1 12628	XRA3 00319	ZEPD 02300	60S 13328	

00020 SSTDAD DS	,18927	18927 00000
00030 MSTDAD DS	,18962	18962 00000
00040 SSTSCT DS	,35	00035 00000
00050 AZDAD DS	,18800	18800 00000
00060 AZSCT DS	,58	00058 00000
00070 AZDIS DS	,34	00034 00000
00080 XRA3 DS	,264+1*40+5*3	00319 00000
00090 ZEPD DS	,02300	02300 00000
00100 COLL DS	,02439	02439 00000
00110 TYINSW DS	,02473	02473 00000
00120 CDINSW DS	,02474	02474 00000
00130 PTINSW DS	,02475	02475 00000
00140 PRTLIM DS	,02503	02503 00000
00150 HCLIM DS	,02508	02508 00000
00160 CLERER DS	,02693	02693 00000
00170 INPUT DS	,02881	02881 00000
00180 LIMITS DS	,03281	03281 00000
00190 ADDRS DS	,03293	03293 00000
00200 LOPOUT DS	,03321	03321 00000
00210 PHASEA DS	,03392	03392 00000
00220 PROSTM DS	,03804	03804 00000
00230 ALFOP DS	,04472	04472 00000
00240 ALFLP DS	,04576	04576 00000
00250 OPLNTB DS	,04623	04623 00000
00260 OPLCTB DS	,04643	04643 00000

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00270 OPINTB DS	,04663	04663 00000
00280 ER3 DS	,04680	04680 00000
00290 OK DS	,04740	04740 00000
00300 SCAN DS	,05164	05164 00000
00310 EVALER DS	,07042	07042 00000
00320 LDLBL DS	,08390	08390 00000
00330 ER4A DS	,09478	09478 00000
00340 OUTPUT DS	,09570	09570 00000
00350 INSTRN DS	,10132	10132 00000
00360 START2 DS	,10270	10270 00000
00370 STZL DS	,10574	10574 00000
00380 DORG	11000	11000
00390 LIBST GET	PHA1	11000 10 00565 J1023
		11012 49 00566 J3297
00400 BTM	MODSPS,PROCON	11024 17 12636 J1036
00410 PROCON BTM	RDCK,**20	11036 17 12848 J1056
00420 B7	PHASEA	11048 49 03392 00000
00430 TFM	**30,INPUT-11	11056 16 11086 -2870
00440 AM	**18,2,10	11068 11 11086 000-2
00450 CF	**	11080 33 00000 00000
00460 CM	**6,INPUT+151	11092 14 11086 -3032
00470 BL	**36	11104 47 11068 01300
00480 TFM	SBNR+11,INPUT-10,, COMPRESS BLANKS	11116 16 11151 -2871
00490 SLP AM	SBNR+11,2,10	11128 11 11151 000-2
00500 SBNR BNR	**20,**	11140 45 11160 00000
00510 B7	SLPX	11152 49 11260 00000
00520 C	CLERER+1,SBNR+11,11	11160 24 02694 1115J
00530 BNE	SLP	11172 47 11128 01200
00540 TF	STR+11,SBNR+11	11184 26 11243 11151
00550 TF	STR+6,SBNR+11	11196 26 11238 11151
00560 SM	STR+6,1,10	11208 12 11238 000-1
00570 AM	STR+11,1,10	11220 11 11243 000-1
00580 STR TR	**-,**	11232 31 00000 00000
00590 B7	SBNR	11244 49 11140 00000
00600 B7	SBNR	11252 49 11140 00000
00610 SLPX CM	SBNR+11,INPUT-10+2*13	11260 14 11151 -2897
00620 BL	**36	11272 47 11308 01300
00630 C	INPUT-10+2*12,C1+2*12	11284 24 02895 11533
00640 BE	C1P	11296 46 11644 01200
00650 CM	SBNR+11,INPUT-10+2*13	11308 14 11151 -2897
00660 BL	**36	11320 47 11356 01300
00670 C	INPUT-10+2*12,C2+2*12	11332 24 02895 11559
00680 BE	C2P	11344 46 11816 01200
00690 CM	SBNR+11,INPUT-10+2*24	11356 14 11151 -2919
00700 BL	**36	11368 47 11404 01300
00710 C	INPUT-10+2*23,C3+2*23	11380 24 02917 11607
00720 BE	C4P	11392 46 11920 01200
00730 CM	SBNR+11,INPUT-10+2*07	11404 14 11151 -2885
00740 BL	**36	11416 47 11452 01300
00750 C	INPUT-10+2*06,C4+2*06	11428 24 02883 11621
00760 BE	C3P	11440 46 12324 01200
00770 CM	SBNR+11,INPUT-10+2*11	11452 14 11151 -2893
00780 BL	**36	11464 47 11500 01300

00790	C	INPUT-10+2*10,C5+2*10	11476	24	02891	11643
00800	BE	C5P	11488	46	12332	01700
00810	B7	PHASEA	11500	49	03392	00000
00820	C1	DAC 13,*DEFINEOPCODE	11509		00026	
00830	C2	DAC 13,*DELETEOPCODE	11535		00026	
00840	C3	DAC 24,*DEFINESYSTEMSYMBOLTABLE	11561		00048	
00850	C4	DAC 07,*ENDLIB	11609		00014	
00860	C5	DAC 11,*LISTOPCODE	11623		00022	
00870	C1P	GET OPTAB,,, DEFINE OP CODE	11644	10	00565	J1667
			11656	49	00566	J3273
00880	BTM	MODSPS,**12	11668	17	12636	J1680
00890	C1P2	BTM RDCK,ENDC1P	11680	17	12848	J3038
00900	BTM	ALFOP,**20	11692	17	04472	J1712
00910	B7	ALRIN	11704	49	13070	00000
00920	TF	OPSAV,ALFLP+6,11	11712	26	13336	0458K
00930	TF	ALFLP+6,60S,6	11724	26	0458K	13328
00940	SF	INPUT+11	11736	32	02892	00000
00950	BTM	ALFOP,NOSAPAC	11748	17	04472	J3090
00960	BTM	SCAN,**12,7 11	11760	17	05164	J177K
00970	TF	ZEPO+30,ADDRS	11772	26	02330	03293
00980	TF	ZEPO+27,OPSAV	11784	26	02327	13336
00990	TF	ALFLP+11,ZEPO+30,6	11796	26	0458P	02330
01000	B7	PHASEA	11808	49	03392	00000
01010	C2P	GET OPTAB,,, DELETE OP CODE	11816	10	00565	J1839
			11828	49	00566	J3273
01020	BTM	MODSPS,**12	11840	17	12636	J1852
01030	C2P2	BTM RDCK,ENDC1P	11852	17	12848	J3038
01040	BTM	ALFOP,NOTIN	11864	17	04472	J3018
01050	TF	INPUT+18,60S	11876	26	02899	13328
01060	TF	ZEPO+27,ALFLP+6,11	11888	26	02327	0458K
01070	TF	ALFLP+11,ZEPO+30,6	11900	26	0458P	02330
01080	B7	PHASEA	11912	49	03392	00000
01090	C4P	TFM SSTDCF+5,MSTDAD,,, DEFINE SYSTEM SYMBOL TABLE	11920	16	12313	J8962
			11932	17	12636	J1944
01100	BTM	MODSPS,**12	11944	26	12321	02508.
01110	C4P1	TF SSTDCF+13,HCLIM	11956	12	12321	-3511
01120	SM	SSTDCF+13,SSTSCT*100+11	11968	10	00565	J1991
01130	GET	SST	11980	49	00566	J2300
			11992	26	12027	12321
01140	TF	C4P02+11,SSTDCF+13	12004	11	12027	000-4
01150	AM	C4P02+11,4,10	12016	22	02503	00000
01160	C4P02	S PRTLIM,-**	12028	31	03272	02499
01170	TR	LIMITS-9,PRTLIM-4	12040	16	03391	J2052
01180	TFM	PHASEA-1,**12	12052	17	12848	J2152
01190	BTM	RDCK,C4END	12064	11	12294	000-1
01200	AM	ENTCNT,1,10	12076	14	12294	00J50
01210	CM	ENTCNT,150,9	12088	46	12120	01100
01220	BH	C2OECT	12100	17	05164	J2112
01230	BTM	SCAN,**12	12112	49	08390	00000
01240	B7	LDLBL	12120	34	00000	00102
01250	C2OECT	RCTY	12132	39	12233	00100
01260	WATY	C2OEM	12144	49	00796	00000
01270	CALL	EXIT				

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01280	C4END	TF C4P02+11,HCLIM,6	12152	26	1202P	02508
01290	S	C4P02+11,PRTLIM,6	12164	22	1202P	02503
01300	SM	C4P02+11,17,6 10	12176	12	1202P	000J7
01310	TFM	SSTDCF+5,SSTDAD	12188	16	12313	J8927
01320	PUT	SST,RBC	12200	10	00565	J2223
			12212	49	00520	J2300
			12224	49	11056	00000
01330	B7	PROCON+20	12233		00060	
01340	C2OEM	DAC 30,LIMIT OF 150 SYMBOLS EXCEEDEDa	12294		00003	
01350	ENTCNT	DC 3,0	12299		00005	
01360	DS	5	12300		00002 22	
01370	SST	DD ,SSTDCF,,,A	12302		00005 J2308	
			12307		00001 a	
01380	SSTDCF	DDA ,0,SSTDAD,SSTSCT,**	12308		00006 0J8927	
			12314		00003 -35	
			12317		00005 -0000	
			12322		00001	
01390	DC	1,a	12324	49	00796	00000
01400	C3P	CALL EXIT	12332	10	00565	J2355
01410	C5P	GET OPTAB,,, LIST OP CODE	12344	49	00566	J3273
			12356	26	03321	02702
01420	TF	LOPOUT,CLERER+9	12368	26	12589	02694
01430	TF	XC+9,CLERER+1	12380	66	12392	0-0K-
01440	C5P3	BLXM **12,-20*5a	12392	26	00319	0M6M3
01450	TF	XRA3,OPLN+20*5a	12404	26	12635	0M603
01460	TF	MODSPS-1,3,10	12416	11	12635	000-3
01470	AM	MODSPS-1,3,10	12428	70	12463	12635
01480	MA	GTOP+11,MODSPS-1	12440	70	12487	0M603
01490	MA	GTOP+35,OPINTB+20*5a	12452	26	02330	00-0
01500	GTOP	TF ZEPO+30,**3a	12464	27	12520	12519
01510	BT	C5P2,C5P2-1	12476	64	12452	00-0
01520	BCXM	**24,**3a	12488	64	12392	0-0-5
01530	BCXM	C5P3+12,5*5a	12500	16	03391	J1036
01540	TFM	PHASEA-1,PROCON	12512	49	03392	00000
01550	B7	PHASEA	12520	26	03319	02327
01560	C5P2	TF LOPOUT-2,ZEPO+27	12532	24	13322	03519
01570	C	60S-6,LOPOUT-2	12544	46	12628	01200
01580	BE	XCL	12556	43	12580	12589
01590	BD	**24,**24+9	12568	34	00000	00102
01600	RCTY		12580	11	12589	0-0-2
01610	XC	AM **9,2,8 10	12592	39	03313	00100
01620	WATY	LOPOUT-8	12604	38	02328	00100
01630	WNTY	ZEPO+28	12616	34	00000	00101
01640	SPTY		12628	42	00000	00000
01650	XC1	BB2	12634		00005	
01660	DS	5				
01670	MODSPS	TF PROSTM+6,8PHA+6,, CONVERT INPUT ROUTINE	12636	26	03810	12770
			12648	16	04765	000M2
01680	TFM	OK+25,42,10,, CONVERT OP CODE	12660	26	04686	12778
01690	TF	ER3+6,BOP+6,, LOOK-UP ROUTINE				
01700	TF	OUTPUT+6,BLDBL+6,, CONVERT LDLBL ROUTINE				
			12672	26	09576	12786
			12684	26	09484	12802
01710	TF	ER4A+6,BER4+6	12696	26	07048	12794
01720	TF	EVALER+6,BER5+6,, CONVERT EVALAD				

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01730	TF	PHASEA-1,MODSPS-1	12708	26	03391	12635
01740	TF	ST2L+6,BST2+6	12720	26	10580	12810
01750	TDM	ZEPO+31	12732	15	02331	00000
01760	DC	1,@,*	12743	00001		
01770	TFM	ALFOP+60+6,NOTIN	12744	16	04538	J3018
01780	B7	START2	12756	49	10270	00000
01790	BPHA	B7 PHASEA-1,,0 6	12764	M9	0339J	00000
01800	BOP	B7 ALFOP-1,,0 6	12772	M9	0447J	00000
01810	BLDLBL	B7 PHASEA,,0	12780	M9	03392	00000
01820	BER5	B7 ER5DET,,0	12788	M9	13110	00000
01830	BER4	B7 ALRIN,,0	12796	M9	13070	00000
01840	BST2	B7 ST2C,,0	12804	M9	12812	00000
01850	ST2C	BL C15P	12812	47	13230	01300
01860	BE	C14P	12824	46	13186	01200
01870	B7	C13P	12836	49	13142	00000
01880	DS	5	12847	00005		
01890	RDCK	BNR **24,INPUT-10	12848	45	12872	02871
01900	TFM	INPUT-10,00,10	12860	16	02871	000-0
01910	BD	**36,TYINSW	12872	43	12908	02473
01920	RCTY		12884	34	00000	00102
01930	WATY	INPUT-10	12896	39	02871	00100
01940	CM	INPUT-10,14,10	12908	14	02871	000J4
01950	BE	RDCK-01,,6	12920	46	1284P	01200
01960	SF	INPUT-1	12932	32	02880	00000
01970	SF	INPUT+11	12944	32	02892	00000
01980	TFM	**30,INPUT+17	12956	16	12986	-2898
01990	AM	**18,2,10	12968	11	12986	000-2
02000	SF	**	12980	32	00000	00000
02010	CM	**6,INPUT+151	12992	14	12986	-3032
02020	BL	**36	13004	47	12968	01300
02030	BB2		13016	42	00000	00000
02040	NOTIN	WATY NOTINM	13018	39	13413	00100
02050	B7	PHASEA	13030	49	03392	00000
02060	ENDC1P	PUT OPTAB,RBC	13038	10	00565	J3061
			13050	49	00520	J3273
02070	B7	PROCON+20	13062	49	11056	00000
02080	ALRIN	WATY ALRINM	13070	39	13339	00100
02090	B7	PHASEA	13082	49	03392	00000
02100	NOSPAC	WATY NOSPM	13090	39	13375	00100
02110	B7	PHASEA	13102	49	03392	00000
02120	ER5DET	WATY UNDSYM	13110	39	13443	00100
02130	WATY	COLL-12	13122	39	02427	00100
02140	B7	PHASEA	13134	49	03392	00000
02150	C13P	TDM CDINSW,1,11	13142	15	02474	0000J
02160	TDM	PTINSW,0	13154	15	02475	00000
02170	TDM	TYINSW,0	13166	15	02473	00000
02180	B7	PHASEA	13178	49	03392	00000
02190	C14P	TDM PTINSW,1,11	13186	15	02475	0000J
02200	TDM	CDINSW,0	13198	15	02474	00000
02210	TDM	TYINSW,0	13210	15	02473	00000
02220	B7	PHASEA	13222	49	03392	00000
02230	C15P	TDM TYINSW,1,11	13230	15	02473	0000J
02240	TDM	CDINSW,0	13242	15	02474	00000

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02250	TDM	PTINSW,0	13254	15	02475	00000
02260	B7	PHASEA	13266	49	03392	00000
02270	OPTAB	DD ,OPTB,,,A	13273	00002	22	
			13275	00005	J3282	
			13280	00001	a	
02280	OPTB	DDA ,0,A2DAD+A2DIS,A2SCT-A2DIS,INSTRN+100*A2DIS	13282	00006	0J8834	
			13288	00003	-24	
			13291	00005	J3532	
02290	DC	1,@	13296	00001		
02300	PHA1	DD ,A1DCF,,,A	13297	00002	22	
			13299	00005	J3306	
			13304	00001	a	
02310	A1DCF	DDA ,1,18600,87,2300	13306	00006	1J8600	
			13312	00003	-87	
			13315	00005	-2300	
02320	DC	1,@	13320	00001		
02330	60S	DC 8,60606060	13328	00008		
02340	OPSAV	DC 8,0	13336	00008		
02350	ALRINM	DAC 18, ALREADY DEFINEDa	13339	00036		
02360	NOSPM	DAC 19, NO ROOM IN TABLEa	13375	00038		
02370	NOTINM	DAC 15, NOT IN TABLEa	13413	00030		
02380	UNDSYM	DAC 20, UNDEFINED SYMBOL a	13443	00040		
02390	DEND	LIBST	11000			

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00010          PROGRAM DIVIDE
00020
00030          DSA DIVW1          00004 00005 -0000
00040          DORG EDGAR          00000
00050 DIVW1 TR PCK+11 ,PCK+10 ,11, MOVES DIV OPERANDS INTO PCK AREA
00060
00070          AM PCK+10 ,21 ,,, CALC RETURN ADR 00000 31 02376 0237N
00080          LD PCK+25 ,PCK+15 ,611 00012 11 02375 -0021
00090          D PCK+30 ,PCK+20 ,611 00024 28 0239- 0238-
00100          B7 PCK+10 , ,6 00036 29 0239N 0238N
00110          DEND 01011          00048 49 0237N 00000
                                01011
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00010*          FLOATING ADD AND SUBTRACT ROUTINES
00020
00030          DSA FS1      ,FA1              00004 00005 -0000
00040
00050          DORG EDGAR
00060 FS1      TFM PCK+5      ,FA1+20      ,17      00000 10 02370 -0040
00070          B7 PCK+6
00080 FA1      TFM PCK+5      ,ASC0M      ,17      00012 49 0236N 00000
00090          B7 PCK
00100          DC 46,0550005050 00055500 005550 555005050050 5050505005,350 00020 10 02370 -0084
00110
00120          BNF ASCOM-12 ,BETA-2      ,0,      CHANGE SIGN AND ADD 00032 49 0236N 00000
00130
00140          CF BETA-2
00150          B7 ASCOM
00160          SF BETA-2
00170 ASCOM    TFL ALPHA      ,PCK+15      ,11,      MOVE A OPERAND 00032 49 0236N 00000
00180          TDM ADD+1      ,1      ,0
00190          TFM ADD+11     ,BETA-2      ,07
00200          C ALPHA      ,BETA
00210          BE ADD      ,0,      CHARACTERISTICS EQUAL
00220
00230          BH **36      ,      ,,      ALPHA LARGER THAN BETA 00132 M6 00288 01200
00240
00250          TR ALPHA-9,BETA-9,,SWITCH OPERANDS 00132 M6 00288 01200
00260          TFL BETA      ,PCK+15      ,11
00270          S BETA      ,ALPHA      ,,      SCALE 00144 M6 00180 01100
00280          BV STORE-12
00290          A ADD+11     ,BETA      ,0
00300          BNF **24      ,BETA-2      ,0
00310          TDM ADD+1      ,2      ,0
00320          CM BETA      ,7      ,1011,CHECK DIFF IN CHARACTERISTICS 00156 LJ 00057 00089
00330
00340          BL STORE-12
00350          TDM BETA-10    ,0      ,11
00360          CF BETA-9
00370 ADD      A ALPHA-2
00380          TD 99      ,ALPHA-2      ,,      STORE SIGN 00168 -6 00098 0238-
00390          BNV NORM
00400          DC 36      ,505055 5050505050 5505555050 0050505550 ,340 00180 KK 00098 00066
00410
00420          AM ALPHA      ,1      ,10
00430          BV OVFL-24    ,      ,,      BR IF CHAR OVERFLOW 00192 M6 00184 01400
00440
00450          TF ALPHA-2     ,ALPHA-3      ,,      ADJUST MANTISSA 00204 KJ 00299 00098
00460          TDM ALPHA-9   ,1      ,11
00470          CF ALPHA-8
00480          B7 SIGN
00490 NORM    BZ ZRES      ,      ,,      BR IF ZERO 00216 MM 00240 00096
00500          CF ALPHA-2   ,      ,,      NORMALIZE 00228 J5 00289 00002
00510          TF BETA      ,ALPHA
00520          BD **68      ,ALPHA-9      ,0
00530          TR ALPHA-9   ,ALPHA-8
00240 J4 00098 000-P
00252 M7 00184 01300
00264 J5 00088 0000-
00276 L3 00089 00000
00288 K1 00064 00000
00300 2N 00099 00064
00312 M7 00392 01400
00340 00036
00324 J1 00066 000-1
00336 M6 00220 01400
00348 KD 00064 00063
00360 J5 00057 0000J
00372 L3 00058 00000
00384 M9 00172 00000
00392 M6 00324 01200
00404 L3 00064 00000
00416 KD 00098 00066
00428 ML 00496 00057
00440 LJ 00057 00058

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00540          TD ALPHA-2     ,NOS DIG 00452 K5 00064 02401
00550          SM BETA      ,1      ,10 00464 J2 00098 000-1
00560          BNV *-48      ,      ,0 00476 M7 00428 01400
00570          B7 UNFL-24
00580          SF ALPHA-9
00590          TF ALPHA      ,BETA 00488 M9 00288 00000
00600          B7 SIGN 00496 L2 00057 00000
00610          DEND 01022 00508 KD 00066 00098
00520 M9 00172 00000
01022

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00010          FLOATING MULTIPLY
00020 DSA FM1          00004 00005 -0000
00030 DORG EDGAR      00000
00040 FM1 TFM PCK+5 ,**20 ,17 00000 10 02370 -0020
00050 B7 PCK , ,6, BR TO PICK AND RETURN
00060          00012 49 0236N 00000
00070 DC 40 ,5055500050 0050005050 5500555005 5055505005 ,350
00080          00350 00040
00090 TFL ALPHA ,PCK+15 ,11 00020 -6 00066 0238-
01000 M ALPHA-2 ,BETA-2 , , MUL MANTISSAS 00032 KL 00064 00096
01100 BZ ZRES          00044 M6 00324 01200
01200 BD **56 ,84 ,0 00056 M3 00112 00084
01300 TFM SAVE ,01 ,1011,CORRECTION FOR 15 DIGIT PRODUCT
01400          00068 J6 00077 000-J
01500 SF 85          00080 32 00085 00000
01600 TF ALPHA-2 ,92 00092 K6 00064 00092
01700 B7 **32 , ,0 00104 M9 00136 00000
01800 TFM SAVE ,00 ,10, INDICATE 16 DIGIT PRODUCT
01900          00112 J6- 00077 000-0
02000 TF ALPHA-2 ,91 00124 K6 00064 00091
02100 A ALPHA ,BETA , , ADD CHARACTERISTICS
02200          00136 KJ 00066 00098
02300 BV **36          00148 M6 00184 01400
02400 A ALPHA ,SAVE , , ADJUST CHARACTERISTIC
02500          00160 KJ 00066 00077
02600 BNV SIGN          00172 M7 00172 01400
02700 BNF **20 ,ALPHA , , BR IF POSITIVE CHARACTERISTIC
02800          00184 MM 00204 00066
02900 B7 UNFL-24          00196 M9 00288 00000
03000 A ALPHA ,SAVE , , ADJUST CHARACTERISTIC
03100          00204 KJ 00066 00077
03200 BNN OVFL-24          00216 M6 00220 01300
03300 TFM ALPHA ,99 ,10 00228 J6 00066 000R9
03400 TFL PCK+15 ,ALPHA ,6 00240 00 0238- 00066
03500 B7 PCK+10,,6 00252 49 0237N 00000
03600 DEND 01041 01041
    
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00010          FLOATING DIVIDE
00020
00030 DSA FD1          00004 00005 -0000
00040 DORG EDGAR      00000
00050 FD1 TFM PCK+5 ,**20 ,17 00000 10 02370 -0020
00060 B7 PCK , ,6, BR TO PICK AND RETURN
00070          00012 49 0236N 00000
00080 DC 30 ,50 050005 505050 05 0500005000 5050,350
00090          00350 00030
01000 TFL ALPHA ,PCK+15 ,11 00020 -6 00066 0238-
01100 BD MANT ,BETA-9 ,0, CK FOR ZERO DIVISOR
01200          00032 ML 00100 00089
01300 TDM 401 ,0 ,11, SET ERROR CODE 00044 15 00401 0000-
01400 BD MANT-24 ,ALPHA-9 ,0, CK FOR ZERO DIVIDEND
01500          00056 ML 00076 00057
01600 B7 STORE          00068 M9 00196 00000
01700 AM ALPHA ,99 , , SIMULATE HARDWARE ZERO DIVIDE
01800          00076 J1 00066 -0099
01900 BV STORE          00088 M6 00196 01400
02000 MANT LD 91 ,ALPHA-2 , , DIVIDE MANTISSAS 00100 2Q 00091 00064
02100 D 91 ,BETA-2 00112 2R 00091 00096
02200 TD 99,91,,SAVE SIGN 00124 25 00099 00091
02300 BD CHAR-24 ,83 ,0 00136 M3 00204 00083
02400 BZ ZRES          00148 M6 00324 01200
02500 SF 84 , , , MANT OF A SMALLER THAN MANT OF B
02600          00160 32 00084 00000
02700 TF ALPHA-2 ,91 00172 K6 00064 00091
02800 TFM SAVE ,00 ,10 00184 J6 00077 000-0
02900 B7 CHAR ,5050550055 5050555550 5550 ,350 00196 M9 00228 00000
03000 DC 24 ,5050550055 5050555550 5550 ,350 00350 00024
03100 TFM ALPHA-2 ,90 00204 K6 00064 00090
03200 S ALPHA,BETA ,01 ,10 00216 J6 00077 000-1
03300 CHAR BV **44 , ,0, BR IF DIFF GREATER THAN 99
03400          00240 M6 00284 01400
03500 A ALPHA,SAVE , , , BR IF STILL LESS
03600 BNV SIGN , , , THAN 100
03700          00264 M7 00172 01400
03800 B7 OVFL-24 ,ALPHA , , OVFL IF EXP PLUS OR UNFLAGGED ZERO
03900 BNF OVFL-24 ,ALPHA , , 00276 M9 00220 00000
04000          00284 MM 00220 00066
04100 A ALPHA,SAVE , , , 00294 KJ 00066 00077
04200 BNH UNFL-24 ,AZERO 00308 M7 00288 01100
04300 TF ALPHA ,AZERO 00320 K0 00066 00364
04400 B7 SIGN , , , 00332 M9 00172 00000
04500 DEND 01051 01051
    
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00010*          FLOATING SQUARE ROOT ROUTINE
00020
00030          DSA FSQR1          00004 00005 -0000
00040          DDRG EDGAR          00000
00050 FSQR1    TFM PCK+5      ,**20      ,17      00000 10 02370 -0020
00060          B7 PCK          ,          ,6,      BR TO PICK AND RETURN
00070          00012 49 0236N 00000
00080          DC 42 ,05 505005 50000000 0000000500 0500550000 000005, 346
00090          00346 00042
00100          BD **20      ,BETA-9      ,0,      BR NON ZERO ARG 00020 ML 00040 00089
00110          B7 ZRES          ,          ,:      BR ZERO ARG 00032 M9 00324 00000
00120          MM BETA          ,50      ,10      00040 J3 00098 000N0
00130          BNF **36      ,BETA-2      ,0,      BR IF POSITIVE ARG
00140          00052 MM 00088 00096
00150          CF BETA-2          00064 L3 00096 00000
00160          TDM 401          ,0          00076 15 00401 00000
00170          BD SQ3          ,98      ,0,      BR IF CHAR ODD 00088 M3 00424 00098
00180          TFM SQ2+42      ,89      ,:      00100 J6 00154 -0089
00190 SQ2      MF 97          ,99      ,:      SET SIGN OF CHAR 00112 71 00097 00099
00200          TF SQEX+35      ,97      ,:      STORE RESULTANT CHARACTERISTIC
00210          00124 K6 00403 00097
00220          LDM 79          ,00      ,10,      CLEAR WORKING AREA
00230          00136 18 00079 000-0
00240          TF          ,BETA-2      ,:      MOVE MANTISSA INTO 89 OR 90
00250          00148 20 00000 00096
00260          TFM LSQ+18      ,81      ,:      MANTISSA ADR 00160 J6 00234 -0081
00270          TFM LSQ+23      ,BETA-10  ,07,      RESULT ADR 00172 J0 00239 -0088
00280          TFM LSQM-6      ,81      ,:      00184 J6 00318 -0081
00290          TF BETA-2      ,ONEZ-4      ,:      SET RESULT EQUAL 1000 00000
00300          00196 K0 00096 00385
00310          B7 LSQM          00208 M9 00324 00000
00320 LSQ      AM LSQ+23      ,2          ,0610,RESULT + 2 00216 J1 0023R 000-2
00330          S          ,          ,:      MANTISSA MINUS RESULT
00340          00228 22 00000 00000
00350          BNN LSQ          ,          ,0,      00240 M6 00216 01300
00360          CM LSQ+23      ,BETA-02  ,07      00252 JM 00239 -0096
00370          BNL SQEX          ,          ,0,      EXIT IF TERMINAL RESULT ADR REACHED
00380          00264 M6 00368 01300
00390          A LSQ+18      ,LSQ+23      ,01611,      RESTORE LAST SUBTRACTION
00400          00276 KJ 0023M 0023R
00410          CF LSQ+18      ,          ,06,      00288 L3 0023M 00000
00420          AM LSQM-6      ,01          ,010,      MOVE FLAG RIGHT ONE.
00430          00300 J1 00318 000-1
00440          SF          00312 32 00000 00000
00450 LSQM      AM LSQ+18      ,02          ,010,      MANTISSA ADR + 2 00324 J1 00234 000-2
00460          AM LSQ+23      ,01          ,010,      RESULT ADR + 1 00336 J1 00239 000-1
00470          SM LSQ+23      ,09          ,0610,      RESULT + 9 00348 J2 0023R 000-9
00480          B7 LSQ+12          00360 M9 00228 00000
00490          DC 16 ,5000000000 005050 ,350 00350 00016
00500 SQEX      MM BETA-2      ,50          ,10,      EXIT 00368 J3 00096 000N0
00510          SF 90          00380 32 00090 00000
00520          TFM 99          ,XX          00392 16 00099 -0000
00530          TFL PCK+15      ,99          ,6,      STORE MANTISSA RESULT

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00540          00404 06 0238- 00099
00550          B7 PCK+10      ,          ,6,      RETURN TO MAINLINE PROGRAM
00560          00416 49 0237N 00000
00570 SQ3      AM 99          ,50          ,10,      CALC RESULT WHEN GIVEN CHAR ODD
00580          00424 11 00099 000N0
00590          TDM BETA-10      ,0          ,11,      LENGTHEN MANTISSA
00600          00436 J5 00088 0000-
00610          CF BETA-9          00448 L3 00089 00000
00620          TFM SQ2+42      ,90          00460 J6 00154 -0090
00630          B7 SQ2          00472 M9 00112 00000
00640          DEND 01061          01061

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00010*      FLOATING SINE AND COSINE ROUTINES
00020*      TRANSFORMATION OF HASTINGS APPROX FOR SINPIX/2
00030
00040      DSA FCOS1 ,FSIN1      00004 00005 -0000
00050      00009 00005 -0032
00060      DORG EDGAR      00000
00070 FCOS1 TDM BNP+1,9,0      00000 J5 00333 00009
00080      TDM FSIN1+68 ,3 ,0      00012 J5 00100 00003
00090      B7 FSIN1+2+,0      00024 M9 00056 00000
00100 FSIN1 TDM BNP+1,1,0      00032 J5 00333 00001
00110      TDM FSIN1+68 ,4 ,0      00044 J5 00100 00004
00120      TFM PCK+5 ,**+20 ,17      00056 10 02370 -0076
00130      B7 PCK , ,6      00068 49 0236N 00000
00140      DC 44 ,5000550500 50000050 5005500500 000050,350
00150      00350 00044
00160      CM BETA,03,1011      00076 J4 00098 000-1
00170      BH **+4,,0      00088 M6 00132 01100
00180      TR BETA-9,FLDNE-9      00100 LJ 00089 00471
00190      TFL PCK+15 ,BETA ,6      00112 OD 0238- 00098
00200      B7 PCK+10 , ,6      00124 49 0237N 00000
00210      CM BETA,08,10      00132 J4 00098 000-8
00220      BNH **+32,,0      00144 M7 00176 01100
00230      TDM 401,0,11      00156 15 00401 0000-
00240      B7 ZRES      00168 M9 00324 00000
00250      CM BETA,02,10      00176 J4 00098 000-2
00260      BNH **+24,,0      00188 M7 00212 01100
00270      TDM 401,0      00200 15 00401 00000
00280      M RTWUPI,BETA-2,0, REDUCE      00212 KL 00771 00096
00290      CF 83      00224 33 00083 00000
00300      AM BETA,91,10      00236 J1 00098 000R1
00310      TF BNP-1,BETA,0      00248 KO 00331 00098
00320      SM BETA,8,10      00260 J2 00098 000-8
00330      TF **+30 ,BETA      00272 KO 00302 00098
00340      CF **+17      00284 L3 00301 00000
00350      SF **-      00296 32 00000 00000
00360      CF **+22      00308 L3 00330 00000
00370      TF ALPHA-1      00320 K6 00065 00000
00380 BNP B **+36,,0      00332 M9 00368 00000
00390      BNF RTWUPI-27,99,0      00344 M4 00744 00099
00400      DC 34 ,5050505050 0055500055 5050005500 0050 ,336
00410      00336 00034
00420      A ALPHA-1,CONA,1      00356 KJ 00065 00780
00430      SF ALPHA-1      00368 L2 00065 00000
00440      A ALPHA-1,CONB,1      00380 KJ 00065 00789
00450      CF ALPHA-1      00392 L3 00065 00000
00460      S ALPHA-1,CONA,1      00404 KK 00065 00780
00470      BV **+12,,0      00416 M6 00428 01400
00480      C ALPHA-2,AZERO-2      00428 KM 00064 00362
00490      BE ZRES      00440 M6 00324 01200
00500      TFM **+9,4,010      00452 J6 00461 000-4
00510 TEMP DS **-2      00461 00000
00520      M ALPHA-1,ALPHA-1      00464 KL 00065 00065
00530      TF SAVE,90      00476 K6 00077 00090

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00540      TF ALPHA-10,CONC,1      00488 KO 00056 00799
00550      TFM **+47 ,CONC+10      00500 JO 00547 -0809
00560 MUL M SAVE ,ALPHA-10      00512 KL 00077 00056
00570      MF 90 ,99      00524 71 00090 00099
00580      A 90      00536 21 00090 00000
00590      TF ALPHA-10,90      00548 K6 00056 00090
00600      AM **-13,10,010      00560 J1 00547 000JO
00610      SM TEMP ,1 ,10      00572 J2 00461 000-1
00620      BNZ MUL      00584 M7 00512 01200
00630      DC 28 ,5055055050 0555505000 50555050 ,328      00328 00028
00640      SF ALPHA-18      00596 L2 00048 00000
00650      M ALPHA-1,ALPHA-10      00608 KL 00065 00056
00660      TD 92,ALPHA+1,, NORM      00620 2N 00092 00067
00670      TR ALPHA-9,82      00632 L1 00057 00082
00680      TFM BETA-10,01,10      00644 J6 00088 000-1
00690      BD **+56,ALPHA-9,0      00656 ML 00712 00057
00700      TR ALPHA-9,ALPHA-8      00668 LJ 00057 00058
00710      SM BETA-10,1,10      00680 J2 00088 000-1
00720      TD ALPHA ,NOS DIG      00692 K5 00066 02401
00730      B7 **-48,,0      00704 M9 00656 00000
00740      SF ALPHA-9      00712 L2 00057 00000
00750      TF ALPHA,BETA-10      00724 KO 00066 00088
00760      B7 SIGN      00736 M9 00172 00000
00770      SF ALPHA-1      00744 L2 00065 00000
00780      B7 BNP+24,,0      00756 M9 00356 00000
00790 RTWUPI DC 9,159154943      00771 00009
00800 CONA DC 9,250000000      00780 00009
00810 CONB DC 9,500000000      00789 00009
00820 CONC DC 10,3971067150      00799 00010
00830      DC 10,-7657497509      00809 00010
00840      DC 10,8160223158      00819 00010
00850      DC 10,-4134167750      00829 00010
00860      DC 10,0628318527      00839 00010
00870      DEND 01072      01072

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00010          FLOATING ARC TANGENT
00020
00030          DSA FATN1          00004 00005 -0000
00040          DORG EDGAR          00000
00050 FATN1 TFM PCK+5          ,**20 ,1          00000 10 02370 00020
00060          B7 PCK          , ,6, BR TO PICK AND RETURN
00070          DC 46,05 505005000005 5000000505505050505005005050,350 00012 49 0236N 00000
00080          BD RETURN+8 ,BETA-9 , , CK FOR ZERO MANTISSA 00350 00046
00090          RETURN B7 ZRES          00020 ML 00040 00089
00100          CM BETA , -3 ,10, IS NUMBER TOO SMALL 00032 M9 00324 00000
00110          TFL PCK+15 ,BETA ,6 , 00040 J4 00098 000-L
00120          BL PCK+10 , ,6, YES 00052 00 0238- 00098
00130          TFM TEST+11 , ,07, NO 00064 47 0237N 01300
00140          MF TEST+9 ,Z ,0, STORE SIGN OF MANTISSA 00076 J6 00183 -0000
00150          CM BETA ,0 ,10, IS CHAR POSITIVE 00100 J4 00098 000-0
00160          BH C PLUS , ,0, YES 00112 M6 00716 01100
00170          BE ZERO C , ,0, EQUAL ZERO YES 00124 M6 00220 01200
00180          TFM TEST 3+11,Z ,07, NO CHAR IS NEGATIVE 00136 J0 00195 -0096
00190          A TEST 3+11,BETA ,0, 00148 KJ 00195 00098
00200          TFM BETA-10 ,0 ,10 00160 J6 00088 000-0
00210          TEST CF Z-7          00172 L3 00089 00000
00220          TEST3 TF Z          00184 K6 00096 00000
00230          TDM Z-7 , -10          00196 J5 00089 0001-
00240          CF Z-6          00208 L3 00090 00000
00250          ZEROC CM Z-6 ,29 ,10, 00220 J4 00090 000K9
00260          BL ARET+36 , ,0 00232 M7 00352 01300
00270          MM Z ,6 ,10, LARGER THAN POINT 29 00244 J3 00096 000-6
00280          TDM 90 , -1          00256 15 00090 0000J
00290          S Z ,SIX ,1, 00268 KK 00096 00971
00300          TF SAVE ,98          00280 K6 00077 00098
00310          DC 38,05050050005550050055505055000000555055 ,350
00320          LD 91 ,Z , , HARDWARE DIVIDE 00350 00038
00330          D 92 ,SAVE          00292 2Q 00091 00096
00340          TDM TEST 2+19,99          00304 2R 00092 00077
00350          ARET TF Z ,90 , , EIGHT DIGITS 00316 K5 00575 00099
00360          SF TEST+11 , ,0, 00328 K6 00096 00090

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00540          M Z ,Z          00340 L2 00183 00000
00550          TF SAVE ,91 , , EIGHT DIGITS 00352 KL 00096 00096
00560          TFM LOOPA+11 ,LCN3-1 ,0 7, NINE DIGITS 00364 K6 00077 00091
00570          TFM **9 ,4 ,010, 00376 JD 00423 -0428
00580          M LCN2-1 ,SAVE          00388 J6 00397 000-4
00590          LOOPA TF FAC          00400 KL 00418 00077
00600          S FAC ,91          00412 K6 00066 00000
00610          M FAC ,SAVE , , SEVENTEEN DIGIT PRODUCT 00424 K2 00066 00091
00620          AM LOOPA+11 ,10 ,010 00436 KL 00066 00077
00630          SM LOOPA-15 ,1 ,010, 00448 J1 00423 000J0
00640          BNZ LOOP A , ,0, 00460 J2 00397 000-1
00650          TF FAC ,ONE Z-3          00472 M7 00412 01200
00660          S FAC ,91          00484 K0 00066 00386
00670          M FAC ,Z          00496 K2 00066 00091
00680          BNF TEST 2 ,TEST+11 ,01, BR IF X WAS LESS THAN ,29 00508 KL 00066 00096
00690          MF 91 ,TEST2+19          00520 MM 00556 00183
00700          A 91 ,A CON 1 ,1, 00532 7J 00091 00575
00710          TEST2 BNF **36 ,TEST+10 ,01, BR IF CHAR NOT 1, 2, 3, 4 00544 2J 00091 00943
00720          SF 91          00556 MM 00592 00182
00730          A 91 ,A CON 2 ,1, 00568 32 00091 00000
00740          DC 46, 50050050000000050505005500055050500505005050 ,350 00580 2J 00091 00953
00750          TFM FAC ,01 ,10, 00350 00046
00760          TD 92 ,BETA+1          00592 J6 00066 000-1
00770          LOOP2 BD TEST 1-24,82 ,0, NORMALIZATION 00604 2N 00092 00099
00780          SM FAC ,1 ,10, 00616 M3 00672 00082
00790          TR 82 ,83          00628 J2 00066 000-1
00800          TD 91 ,NOS DIG          00640 31 00082 00083
00810          B7 LOOP 2 , ,0, 00652 25 00091 02401
00820          SF 82          00664 M9 00616 00000
00830          TF FAC-2 ,89          00672 32 00082 00000
00840          TEST1 MF FAC-2 ,TEST+9 ,1, TERMINATE SUBROUTINE CALCULATION 00684 K6 00064 00089
00850          B7 STORE          00696 PJ 00064 00181
00860          00708 M9 00196 00000

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01070 CPLUS TF 91 ,C ZERO-1 ,, CHAR POSITIVE 00716 20 00091 00469
01080 CM BETA ,8 ,10, 00728 J4 00098 000-8
01090 BH TEST 2+24, ,0, BR IF CHAR GREATER THAN EIGHT ,
01100
01110 TF FAC-2 ,C ZERO-3 ,, ADJUST POSITION OF 1 IN NUMERATOR 00740 M6 00580 01100
01120
01130 TFM **30 ,FAC-10 ,07, 00752 KD 00064 00467
01140
01150 A **18 ,BETA ,0 00764 JO 00794 -0056
01160 TDM ,1 00776 KJ 00794 00098
01170
01180 SF FAC-9 00788 15 00000 00001
01190
01200 LD 90 ,FAC-2 ,, HARDWARE DIVIDE 00800 L2 00057 00000
01210 D 90 ,Z ,0, 00812 2Q 00090 00064
01220 BD SET VAL ,82 ,0, BR IF X EQUALS ONE 00824 2R 00090 00096
01230
01240 CM BETA ,4 ,10 00836 M3 00916 00082
01250 BH TEST2+12 , ,0, BR IF CHAR EQUAL 5, 6, 7, 8 00848 J4 00098 000-4
01260
01270 DC 10,5000500050,350 00860 M6 00568 01100
01280 TF Z ,90 ,, ELIMINATE LEADING ZERO 00350 00010
01290
01300 SF TEST+10 , ,0, 00872 K6 00096 00090
01310
01320 SF Z-7 00884 L2 00182 00000
01330
01340 B7 ZERO C , ,0, 00896 L2 00089 00000
01350
01360 SETVAL TFL FAC ,ACON 3 ,, SET TO VALUE FOR X EQUAL ONE 00908 M9 00220 00000
01370
01380 B7 TEST 1 00916 -0 00066 00963
01390 ACON1 DC 9 , 540 419 500 00928 M9 00696 00000
01400
01410 ACON2 DC 10 ,1 570 796 327,,ARC TAN OF PI OVER TWO 00943 00009
01420
01430 DC 8 , 78 539 816,,ARC TAN OF PI OVER FOUR 00953 00010
01440
01450 ACON3 DC 2 ,00 00961 00008
01460 SIX DC 8 ,600000000 00963 00002
01470
01480 Z DS ,BETA-2 00971 00008
01490 DEND 01091 00096 00000
01091

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00010 FLOATING EXPONENTIAL
00020+ HASTINGS APPROXIMATION
00030
00040 DSA FEXT1 ,FEX1 00004 00005 -0000
00050 00009 00005 -0020
00060 DORG EDGAR 00000
00070 DC 38 ,0500050000 0505005000 5550000000 00050005 ,350
00080 00350 00038
00090 FEXT1 TFM NOT Z+30 ,ONE Z-2 ,07 00000 JO 00114 -0387
00100 B7 FEX1+12 00012 M9 00032 00000
00110 FEX1 TFM NOTZ+30 ,LOG E ,07 00020 JO 00114 -0399
00120 TFM PCK+5 ,**20 ,17 00032 10 02370 -0052
00130 B7 PCK , ,6, BR TO PCK AND RETURN
00140 00044 49 0236N 00000
00150 BD NOT Z ,D-9 ,0, ZERO CHECK
00160 00052 ML 00084 00089
00170 TFL PCK+15 ,FLONE ,6 00064 00 0238- 00480
00180 B7 PCK+10 , ,6 00076 49 0237N 00000
00190 NOTZ CM D , -8 ,10,
00200 00084 J4 00098 000-0
00210 BNH FEX1+44 00096 M7 00064 01100
00220 M LOGE ,D-2 00108 KL 00399 00096
00230 CM D ,3 ,10,
00240 00120 J4 00098 000-3
00250 BL **36 , ,0, MUST CALC
00260 00132 M7 00168 01300
00270 BNE E ROUT , ,0, OVER OR UNDER
00280 00144 M7 00604 01200
00290 BD E ROUT ,82 ,0, HI ORDER NOT ZERO
00300 00156 M3 00604 00082
00310 CF 82
00320 00168 33 00082 00000
00330 TF 81 ,C ZERO-2 00180 20 00081 00468
00340 TFM **30 ,80 ,, POSITION FLAG 00192 J6 00222 -0080
00350 A **18 ,D ,0 00204 KJ 00222 00098
00360 SF
00370 00216 32 00000 00000
00380 AM **6 ,01 ,010, SET CHAR EQUAL 00228 J1 00222 000-1
00390 AM **18 ,01 ,0610,CHAR PLUS ONE 00240 J1 0022K 000-1
00400 BV E ROUT , ,0, OVER OR UNDERFLOW
00410 00252 M6 00604 01400
00420 AM **42 ,09 ,010, MOVE MANT AND CHAR
00430 00264 J1 00222 000-9
00440 DC 38 ,5050005500 5055500000 00505500 5505050050 ,340
00450 00340 00038
00460 TF FAC+9 ,**54 ,11 00276 KD 00075 0022K
00470 SF FAC+1 00288 L2 00067 00000
00480 TFM LOOPE+11 ,EXCN1 ,017, INIT CALC LOOP 00300 JO 00347 -0633
00490 TF FAC-2 ,C ZERO 00312 KD 00064 00470
00500 TFM LOOPE-3 ,7 ,010, COUNT 00324 J6 00333 000-7
00510 A FAC-2 00336 K1 00064 00000
00520 M FAC-2 ,FAC+9 00348 KL 00064 00075
00530 TF FAC-2 ,90

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00540					00360 K6 00064 00090
00550	AM	LOOPE+11 ,11	,010,	ADJUST LOOP VALVES	
00560					00372 J1 00347 000J1
00570	SM	LOOPE-3 ,1	,010,		00384 J2 00333 000-1
00580	BNZ	LOOP E ,1	,0		00396 M7 00336 01201
00590	AM	FAC-11 ,10	,10,	ADD ONE	
00600					00408 J1 00055 000J0
00610	M	FAC-3 ,FAC-3			
00620					00420 KL 00063 00063
00630	SF	81			
00640					00432 32 00081 00000
00650	TD	FAC+1 ,BETA+1			00444 KN 00067 00099
00660*		CHECK FOR NEGATIVE X			
00670	BNF	XIT ,D-2			00456 MM 00572 00096
00680	C	88 ,ONEZ-5			00468 2M 00088 00384
00690	BNE	**32 ,	,0		00480 M7 00512 01200
00700	SM	FAC ,1	,10		00492 J2 00066 000-1
00710	B7	ADJ			00504 M9 00548 00000
00720	DC	20 ,500505 50 5005000055 50,350			00350 00020
00730	TF	SAVE ,89			00512 K6 00077 00089
00740	LD	90 ,ONE Z-3 ,,	HARDWARE DIVIDE		00524 2Q 00090 00386
00750	D	90 ,SAVE			00536 2R 00090 00077
00760	ADJ	SF FAC ,			00548 L2 00066 00000
00770	AM	FAC ,01 ,10			00560 J1 00066 000-1
00780	XIT	TF 90 ,FAC			00572 20 00090 00066
00790	TFL	PCK+15 ,90 ,6			00584 06 0238- 00090
00800	B7	PCK+10 ,	,6		00596 49 0237N 00000
00810	EROUT	BNF OVFL,D-2 ,			00604 MM 00244 00096
00820	B7	UNFL			00616 M9 00312 00000
00830	EXCN1	DC 11 , 9326 427,,			
00840					00633 00011
00850	DC	11 , 2 5549 180,,			
00860					00644 00011
00870	DC	11 , 17 4211 199,,			
00880					00655 00011
00890	DC	11 , 72 9517 367,,			
00900					00666 00011
00910	DC	11 , 254 3935 748,,			
00920					00677 00011
00930	DC	11 , 662 7308 843,,			
00940					00688 00011
00950	DC	11 ,1151 2927 760,,			
00960					00699 00011
00970	D	DS ,BETA			00098 00000
00980	DEND	01102			01102

00010				FLOATING LOG	
00020					
00030	DSA	FLOG1 ,FLN1			00004 00005 -0000
00040					00009 00005 -0020
00050	DORG	EDGAR			00000
00060	FLOG1	TDM MULM-11 ,9 ,0			00000 J5 00501 00009
00070	B7	FLN1+12 , ,0			00012 M9 00032 00000
00080*****		RELOCATABLE SPS FLOATING LN			
00090	FLN1	TDM MULM-11 ,1 ,0			00020 J5 00501 00001
00100	TFM	PCK+5 ,**20 ,17			00032 10 02370 -0052
00110	B7	PCK , ,6			00044 49 0236N 00000
00120	DC	40,5005000000 0550000050 5000550000 555050550 ,350			00350 00040
00130					00052 L3 00089 00000
00140	CF	B-7			
00150	BD	**44 ,B-7 ,,	BR IF MANT NOT ZERO		00064 ML 00108 00089
00160					00076 00 0238- 00855
00170	TFL	PCK+15 ,NNINES+2 ,6			00088 15 00401 0000-
00180	TDM	401,0,11			00100 49 0237N 00000
00190	B7	PCK+10 , ,6			
00200	BNF	Eval PN ,B ,0,	BR IF MANT IS POSITIVE		00108 MM 00144 00096
00210					00120 L3 00096 00000
00220	CF	B			00132 15 00401 00000
00230	TDM	401,0			
00240*****		EVALUATE X EQUAL PN SO THAT X IS GREATER THAN			
00250*****		ONE HALF AND P EQUALS 1, 2,4, 8			
00260	EvalPN	TFM LOOPL+107,CONST ,017,			00144 J0 00487 -0801
00270	TDM	B-8 ,1 ,11,	SET X EQUAL X PLUS ONE		00156 J5 00088 0000J
00280					00168 J4 00089 000J5
00290	CM	B-7 ,15 ,10			00180 M6 00224 01300
00300	BNL	**44 , ,0,	BR MODIFIED X MORE THAN 3 HALVES		
00310					
00320	A	B ,B ,,	SET X EQUAL X PLUS X		00192 KJ 00096 00096
00330					00204 J1 00487 -0011
00340	AM	LOOPL+107,11 ,07,	STEP LN P FOR P EQUAL P+P		00216 M9 00156 00000
00350					
00360	B7	*-60 , ,0			
00370	TF	FAC-2 ,B			00224 KO 00064 00096
00380					
00390	S	FAC-2 ,LCN5-1 ,,	SET NUMERATOR EQUAL X-1		00236 KK 00064 00448
00400					00248 2Q 00089 00064
00410	LD	89 ,FAC-2 ,,	HARDWARE DIVIDE		00260 2R 00089 00096
00420	D	89 ,B			00272 K6 00096 00090
00430	TF	B ,90			
00440	DC	46,5050555055 5505005055 5000000055 0550500005 050505,350			00350 00046
00450					00284 L2 00096 00000
00460	SF	B			00296 L2 00087 00000
00470	SF	B-9			00308 KL 00096 00096
00480	M	B ,B ,,	Z TIMES Z		00320 K6 00077 00089
00490	TF	SAVE ,89			00332 KJ 00096 00096
00500	A	B ,B ,,	Z PLUS Z		00344 KO 00056 00449
00510	TF	FAC ,CZERO-1			00356 J0 00391 -0409
00520	TFM	LOOP L+11,LCN1 ,07			
00530	TFM	**9 ,6 ,010			00368 J6 00377 000-6

		FLOATING SHIFT LEFT			
00010					
00020					
00030	DSA	FSLS		00004	00005 -0000
00040	DDRG	EDGAR		00000	
00050	FSL	TRNM	PCK+11 ,PCK+10 ,11	00000	30 02376 0237N
00060	DC	08	,50000505 ,350	00350	00008
00070	TF	ALPHA	,PCK+20 ,11	00012	K6 00066 0238N
00080	AM	PCK+10	,11 ,10	00024	11 02375 000J1
00090	MF	MK+2	,ALPHA	00036	PJ 00134 00066
00100	TFM	BKSC+35	,ALPHA	00048	JO 00107 -0066
00110	TFM	MK+11	,BLNK+1	00060	JO 00143 -0233
00120	BKSC	SM	BKSC+35 ,1 ,10	00072	J2 00107 000-1
00130	SM	MK+11	,1 ,10	00084	J2 00143 000-1
00140	BNF	BKSC	,XX	00096	M4 00072 00000
00150	TD	PCK+20	,BLNK ,6	00108	2N 0238N 00232
00160	SM	MK+11	,1 ,10	00120	J2 00143 000-1
00170	MK	TRNM	PCK+15 ,XX ,6	00132	30 0238- 00000
00180	BD	MK-12	,PCK+20 ,11	00144	M3 00120 0238N
00190	TRNM	PCK+15	,BKSC+35 ,611	00156	3- 0238- 0010P
00200	MF	PCK+20	,MK+2 ,6	00168	7J 0238N 00134
00210	B7	PCK+10	, ,6	00180	49 0237N 00000
00220	BLNK	DC	46 ,0@	00232	00046
00230	DEND	DC	01151	01151	

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		TRANSMIT FIELD FLOATING ROUTINE			
00010*					
00020					
00030	DSA	TFLS		00004	00005 -0000
00040	DDRG	EDGAR		00000	
00050	TFL	TRNM	**14 ,PCK+10 ,11	00000	L0 00014 0237N
00060	TFL	XX	,XX	00012	06 00000 00000
00070	AM	PCK+10	,11 ,10	00024	11 02375 000J1
00080	B7	PCK+10	, ,6	00036	49 0237N 00000
00090	DEND	DC	01161	01161	

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00010*          FLOATING BRANCH AND TRANSMIT ROUTINE
00020
00030          DSA BTFS1          00004 00005 -0000
00040          DORG EDGAR          00000
00050 BTFS1 TRNM MOV+2 ,PCK+10 ,11, STORE A+B OPERANDS
00060          00000 L0 00038 0237N
00070          AM PCK+10 ,11 ,10          00012 11 02375 000J1
00080          TF ND+6 ,PCK+10          00024 K6 00054 02375
00090 MOV      BTFL XX ,XX , , MOVE EXP AND BR 00036 07 00000 00000
00100 ND       B7 XX , , , , , , , , , , 00048 49 00000 00000
00110          DEND 01171          01171
    
```

00010* VARIABLE LENGTH SET 02 SPSIID SUBROUTINES MONITOR II

SYMBOL TABLE

```

NOSDIG 02401  ALPHA 00050R  BETA 00196R  CLR 00734R  EDGAR 00000R
LN10 00591R  LGGE 00543R  NINE 00636R  ONEZ 00449R  OVFL 00266R
P 00000      PCK 02365    PICK 00198R  PIOV2 00496R  SAVE 00100R
UNFL 00334R  XX 00000     ZRES 00346R
    
```

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** SPSII D SUBROUTINES - VARIABLE LENGTH JHB 31 JUL 1963
02040***** FOR OPERANDS A AND B ONLY
01080***** PCK AREA MAY BE USED AS A WORK AREA IF SUBR NOT USED. IF
01090***** SUBROUTINES REQUIRED, THEN THE AREA IS USED AS FOLLOWS
***** 2398 MANTISSA LENGTH SOURCE, SUBROUTINE SUPERVISOR
01100***** 02401 NOISE DIGIT. SOURCE, SUBROUTINE SUPERVISOR
01110***** PCK ADR OF PICK. SOURCE, SUBROUTINE SUPERVISOR
01120***** PCK+5 ADR OF RETURN TO SUBR. SOURCE, SUBROUTINE
01130***** PCK+10 ADR OF RETURN TO MAINLINE. SOURCE, PRIMARY LINKAGE
01140***** PCK+15 ADR OF A OPERAND CHARACTERISTIC. SOURCE, PICK
01150***** PCK+20 ADR OF B OPERAND CHARACTERISTIC. SOURCE, PICK
01160***** PCK+25 ADR OF A OPERAND MANTISSA. SOURCE, PICK
01170***** PCK+30 ADR OF B OPERAND MANTISSA. SOURCE, PICK
01180***** PCK+31 RESERVED FOR POSSIBLE RECORD MARK
01200***** PCK-5 THRU PCK-89 SUBVEC FOR THE 17 FURNISHED SUBROUTINES
02010* ADRS ARE SUPPLIED BY THE SUBROUTINE SUPERVISOR
02020***** PCK-90 DOWN TO END OF IORT MAY BE USED IF NO ADDED SUBROUTS
          DSA PICK 00004 00005 -0198
          DS ,*-4 00000 00000
          DORG EDGAR 00000
02100 ALPHA DS 51 ,0, INDICATES FIELD IS MODIFIED BY PGM 00050 00051
          XX DS ,ALPHA-ALPHA,, ABS ZERO IND OPER REFERENCES PICK 00000 00000
02110 P DS ,ALPHA-ALPHA,, ABS ZERO IND OPER REFERENCES PICK 00000 00000
02130 SAVE DS .50 00100 00050
02140 BETA DS .96 00196 00096
          DS 1 00197 00001
02160 PICK TD 401 ,BETA+1-P ,1, RESET ERROR INDICATOR 00198 2N 00401 00197
02170 TR PCK+11 ,PCK+10 ,11, MOVE OPERANDS FROM MAINLINE 00210 31 02376 0237N
03000 AM PCK+10 ,11 ,10, CALC RETURN ADR 00222 11 02375 000J1
03130 TFL BETA ,PCK+20 ,11, MOVE B TO BETA 00234 -6 00196 0238N
03150 BV PCK+5 , ,6, RETURN TO SUBROUTINE 00246 46 0237- 01400
          B7 PCK+5 , ,6, 00258 49 0237- 00000
          DC 16 ,0010011000000020 ,350 00350 00016
04030 OVFL TDM 401 ,-1 00266 15 00401 0000J
    
```


05100***** FLOATING POINT ADD,SUBTRACT,MULTIPLY AND DIVIDE. VARIABLE L

SYMBOL TABLE

NOSDIG 02401	BRANCH 00088R	ADD 00320R	ADJ 00448R	ALPHA 00050R
BETA 00196R	CHGE 00916R	CLR 00734R	EDGAR 00000R	EXIT 00496R
FA3 00020R	FD3 00756R	FIX 00652R	FM3 00572R	FS3 00000R
INADD 00140R	LN10 00591R	LOGE 00543R	MOVE 00736R	MOVED 00896R
NINE 00636R	NORM 00368R	ONEZ 00449R	OVFL 00266R	P 00000
PCK 02365	PICK 00198R	PIOV2 00496R	SAVE 00100R	SIGN 00508R
STORE 00532R	UNFL 00334R	XX 00000	ZCK 00936R	ZRES 00346R

05130	FS3	DSA	FS3	,FA3	,FM3	,FD3	00004	00005	-0000	
							00009	00005	-0020	
							00014	00005	-0572	
							00019	00005	-0756	
							00000			
							00000	JD	00094	-0096
							00012	M9	00032	00000
							00020	JD	00094	-0140
							00032	I0	02370	-0052
							00044	49	0236N	00000
							5500	510005	,346	
							00346	00040		
							00052	-6	00050	0238-
							00064	J5	00048	0000-
							00076	J5	00194	0000-
							00088	49	00000	00000
							00096	MM	00128	00194
							00108	L3	00194	00000
							00120	M9	00140	00000
							00128	L2	00194	00000
							00140	J5	00321	00001
							00152	JD	00331	-0194
							00164	KM	00050	00196
							00176	M6	00224	01100
							00188	M6	00320	01200
							00200	LJ	00049	00195
							00212	-6	00196	0238-
							00224	KK	00196	00050
							00236	M6	00520	01400

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07030	CM	BETA-P	, -99	, 10,	, +L	00248	J4	00196	000RR
07040	BL	STORE-12-P,		,,	BR IF CHAR DIFF GREATER THAN L	00260	M7	00520	01300
07050	A	ADD+11	,BETA-P	, 0,	SHIFT BY CHAR DIFF	00272	KJ	00331	00196
07060	DC	50,0500705005	0050077077	5550500055	70705005005005550,350	00350	00050		
07070	BNF	++24	,BETA-2-P	, 0		00284	MM	00308	00194
07080	TDM	ADD+1	, 2	, 0,	CHANGE TO SUB IF NEG	00296	J5	00321	00002
07090	CF	BETA-1-P	,	,,	-L, CLEAR HI ORDER FLAG	00308	L3	00195	00000
07100	ADD	A	ALPHA-2-P			00320	K1	00048	00000
07110	MF	99	,ALPHA-2-P,,		STORE SIGN	00332	7J	00099	00048
07120	BV	ADJ	,	, 0		00344	M6	00448	01400
07140	BZ	ZRES	-P,	,,	BR IF ZERO SUM	00356	M6	00346	01200
07150	NORM	BD	EXIT	,ALPHA-1-P,0,	-L BR IF NORMALIZATN COMPLTE	00368	ML	00496	00049
07160	SF	ALPHA	-P,	,,	-L	00380	L2	00050	00000
07170	TR	ALPHA-1-P,	ALPHA-P,,		-L,-L	00392	LJ	00049	00050
07180	TF	ALPHA	-P,ALPHA-1-P			00404	KD	00050	00049
07190	TD	ALPHA-2-P,	NOS DIG	,,	ENTER NOISE DIGIT	00416	K5	00048	02401
07200	SM	ALPHA	-P,1	, 10		00428	J2	00050	000-1
08010	B7	NORM	,	, 0		00440	M9	00368	00000
08030	ADJ	TF	ALPHA-2-P,	ALPHA-3-P,,	SHIFT RIGHT ONE POSITION	00448	KD	00048	00047
08040	CF	ALPHA	-P,	,,	-L, CLEAR EXTRA FLAG	00460	L3	00050	00000
08050	TDM	ALPHA-1-P,-1		,,	-L, INSERT HI ORDER ONE WITH FLAG	00472	J5	00049	0000J
08060	AM	ALPHA	-P,01	, 10,	ADJUST CHAR	00484	J1	00050	000-1
08069	*****	STORE	ALPHA AND AFFIX SIGN						
08070	EXIT	BV	STORE+20			00496	M6	00552	01400
08071	SIGN	MF	ALPHA-2	, 99		00508	P1	00048	00099
08073	AM	ALPHA-2	, 00	, 10		00520	J1	00048	000-0
08075	STORE	TFL	PCK+15	,ALPHA	, 6	00532	00	0238-	00050
08077	B7	PCK+10	,	, 6		00544	49	0237N	00000
08080	BNF	OVFL	-P,ALPHA	-P		00552	MM	00266	00050
08090	B7	UNFL	-P			00564	M9	00334	00000
08110	FM3	TFM	BRANCH+6	,++32	,017	00572	JD	00094	-0604
08130	TFM	FIX+25	,012	,09		00584	J6	00677	00-12
08140	B7	FD3+24				00596	M9	00780	00000
08160	DC	48	,5550040250	0050500040	5552000000	02080	0252500020450,	348	
						00348	00048		
08170	M	ALPHA-2-P,	BETA-2 -P,,		MUL MANTISSAS	00604	KL	00048	00194
08180	BZ	ZRES	-P,	,,	BR IF ZERO PRODUCT	00616	M6	00346	01200
08190	BD	MOVE-12	,100	, 0,	-2L BR IF NORM NOT REQ	00628	M3	00724	00100
08200	TFM	MOVE+11	,100	,,	-L	00640	J6	00747	-0100

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09010 FIX SM BETA -P,01 ,10, ADJUST CHAR BY ONE
09020 BNV **36 , ,0 00652 J2 00196 000-1
09030 SM ALPHA -P,01 ,10 00664 M7 00700 01400
09040 TFM BETA -P,-99 ,10 00676 J2 00050 000-1
09050 BD CHGE ,FIX+23 ,01 00688 J6 00196 000RR
09060 SF 101 , , -2L 00700 ML 00916 00675
09070 A ALPHA -P,BETA -P , , 00712 32 00101 00000
09080 MOVE TF ALPHA-2-P,99 , , -L 00724 KJ 00050 00196
09090 B7 EXIT , ,0 00736 K6 00048 00099
09110 FD3 TFM BRANCH+6 ,**56 ,017 00748 M9 00496 00000
09120 TFM FIX+25 ,111 ,09 00756 JO 00094 -0812
09130 TFM MOVE+11 ,099 , , -L 00768 J6 00677 00J11
09140 TF 85 ,CLR-106-P, ,2L 00780 J6 00747 -0099
09150 B7 FA3+12 , , 00792 20 00085 00628
09170 LD 99 ,ALPHA-2-P, , -L 00804 M9 00032 00000
09180 D 99 ,BETA-2 -P, , -L 00812 2Q 00099 00048
09190 BV ZCK , ,0 00824 2R 00099 00194
09200 TD 99 ,99 , , -L 00836 M6 00936 01400
10010 BD FIX ,99 ,0, , -2L 00848 25 00099 00099
10020 BZ ZRES -P , , 00860 M3 00652 00099
10030 DC 8 ,40550002 ,314 00872 M6 00346 01200
10040 SF 100 , , -2L 00314 00008
10050 MOVED S ALPHA -P,BETA -P , , 00884 32 00100 00000
10060 B7 MOVE , ,0 00896 KK 00050 00196
10080 CHGE TFM MOVE+11 ,98 , , -L 00908 M9 00736 00000
10090 B7 MOVED , , 00916 J6 00747 -0098
10110 ZCK TDM 401 ,0 ,11, SET ERROR INDICATOR
AM PCK+15 ,99 ,6, SIMULATE HARDWARE DIV AND FORCE OVE
BV PCK+10 , ,6 00936 15 00401 0000-
DEND 02024 00948 11 0238- 00099
00960 46 0237N 01400
02024
    
```

10130***** FLOATING POINT SQUARE ROOT. VARIABLE LENGTH

SYMBOL TABLE

```

NOSDIG 02401 ALPHA 00050R BETA 00196R CLR 00734R EDGAR 00000R
FSQR3 00000R LN10 00591R LOGE 00543R LSQ 00216R LSQM 00324R
NINE 00636R ONEZ 00449R OVFL 00266R P 00000 PCK 02365
PICK 00198R P10VZ 00496R SAVE 00100R SQEX 00424R SQ2 00112R
SQ3 00368R UNFL 00334R XX 00000 ZRES 00346R

10160 FSQR3 DSA FSQR3 00004 00005 -0000
DORG EDGAR 00000
TFM PCK+5 ,**20 ,17 00000 10 02370 -0020
10170 B7 PCK , ,6, BR TO PICK AND RETURN
DC 42 ,075050 0550000002 00000805 040000540000000005,350
10190 BD **20 ,BETA-1 -P,0, , -L 00012 49 0236N 00000
10200 B7 ZRES -P, , , BR IF RESULT ZERO
11020 MM BETA -P,50 ,10, DIV CHAR BY 2
11030 BNF **36 ,BETA-2 -P,0, BR FOR POSITIVE ARG
11040 CF BETA-2 -P 00052 MM 00088 00194
11050 TDM 401 ,0 , , SET NEG ARG INDICATOR
11060 BD SQ3 ,98 ,0, BR IF CHAR ODD
11070 TFM SQ2+42 ,97 , , -L MOVE MANTISSA ADR
11090 SQ2 MF 97 ,99 , , 00100 J6 00154 -0097
TF SQEX+47 ,97 , , STORE RESULT CHAR
11110 TF 99 ,CLR-92-P , ,2L 00124 K6 00471 00097
11120 TF ,BETA-2 -P, , , MOVE MANT INTO 97/98 MINUS L
11130 TFM LSQ+18 ,97 , , -2L INITIAL MANT ADR HI ORDER
11140 TF LSQ+23 ,SQ3+18 ,01, INITIAL RESULT ADR
11150 TF LSQM-6 ,LSQ+18 , , INITIAL MANT ADR
11160 TF BETA-2 -P,ONEZ-48-P, , +L SET RESULT TO ONE. L+1 DIGITS
11170 B7 LSQM , ,0, 00184 KO 00318 00234
11200 LSQ AM LSQ+23 ,2 ,0610, ADD 2 TO RESULT 00196 KO 00194 00401
2010 S , , , SUB RESULT FROM MANTISSA 00208 M9 00324 00000
00216 J1 0023R 000-2
    
```

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12020 BNN LSQ , ,0, CONTINUE UNTIL MANT IS NEG
12030 CM LSQ+23 ,BETA-2 -P,07 00228 22 00000 00000
12040 BNL SQEX , ,0, 00240 M6 00216 01300
BR IF TERMINAL RESULT ADR 00252 JM 00239 -0194
12050 A LSQ+18 ,LSQ+23 ,01611, RESTORE LAST SUB 00264 M6 00424 01300
12060 CF LSQ+18 , ,06, 00276 KJ 0023M 0023R
12070 AM LSQM-6 ,01 ,010, REDUCE MANT FIELD LENGTH ONE 00288 L3 0023M 00000
12080 SF , , ,0300 J1 00318 000-1
12090 LSQM AM LSQ+18 ,02 ,010, STEP MANTISSA ADR,HI ORDER,+2 00312 32 00000 00000
12100 AM LSQ+23 ,01 ,010, STEP RESULT ADR +1 00324 J1 00234 000-2
12110 SM LSQ+23 ,09 ,0610, STEP RESULT -9 00336 J1 00239 000-1
12120 B7 LSQ+12 , ,0, CONT LOOP WITH NEXT 2 DIGITS 00348 J2 0023R 000-9
11190 DC 16 ,70700200065020,316 ADD .5 TO CHAR/2 00360 M9 00228 00000
12140 SQ3 AM 99 ,50 ,10, 00316 00016
12150 TDM BETA-2 -P,0 ,211, -L, LENGTHEN MANT FOR ODD CHAR 00368 11 00099 000N0
12160 CF BETA-1 -P, , , -L, 00380 J5 -0194 0000-
12170 TFM SQ2+42 ,98 , , -L MOVE MANT ADR 00392 L3 00195 00000
12180 B7 SQ2 , , BR TO STORE CHAR + INIT LOOP 00404 J6 00154 -0098
12200 SQEX TF 80 ,CLR-100-P, , +L 00416 M9 00112 00000
13010 MM BETA-2 -P,50 ,10, RESULT/2 00424 20 00080 00634
13020 SF 98 , , -L, DEFINE FIELD 00436 J3 00194 000N0
TFM 99 , , INSERTS CHAR 00448 32 00098 00000
TFL PCK+15 ,99 ,6, STORE RESULT 00460 16 00099 -0000
13040 B7 PCK+10 , ,6, RETURN TO MAINLINE 00472 06 0238- 00099
DEND 02061 00484 49 0237N 00000
02061
    
```

FLOATING SIN-COSINE

SYMBOL TABLE

```

NOSDIG 02401 AAB 00910R AB 00914R ALPHA 00050R BETA 00196R
BRD 00208R CLF 00088R CLR 00734R DONE 00588R EDGAR 00000R
FCOS3 00000R FSN3 00032R H3+ 01011R LN10 00591R LOGE 00543R
NINE 00636R ONEZ 00449R OVER 00400R OVFL 00266R P 00000
PCK 02365 PI 00962R PICK 00198R PIOV2 00496R PLACE 00716R
POZCH 00760R SAVE 00100R SUM 00472R TWOPI 01009R UNFL 00334R
XX 00000 ZRES 00346R
    
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13100 FCOS3 DSA FCOS3 ,FSIN3 00004 00005 -0000
DORG EDGAR 00009 00005 -0032
00000
13110 TFM PCK+5 ,CLF ,17 00000 J6 00099 00-10
13120 B7 PCK , ,6, GO TO PICK AND RETURN 00012 10 02370 -0088
13140 FSN3 TFM CLF+11 ,,-011 ,09, INIT FOR POSITIVE SIN 00024 49 0236N 00000
13150 TFM PCK+5 ,++20 ,17 00032 J6 00099 00-1J
13160 B7 PCK , ,6, GO TO PICK AND RETURN 00044 10 02370 -0064
13180 DC 46 ,0500507056 5000510007 0507005651 0070510000 505608,348
00348 00046
13190 BNF ++36 ,BETA-2 -P 00064 MM 00100 00194
13200 TDM CLF+10 ,0 ,0, ADJUST FOR NEG SIN 00076 J5 00098 00000
14010 CLF CF BETA-2 -P 00088 L3 00194 00000
14020 CF BETA-1 -P, , , -L 00100 L3 00195 00000
14030 TF SAVE -P,CLR-94-P , , +L MOVE L+2 ZEROS TO SAVE 00112 KD 00100 00640
14040 CM BETA -P,00 ,10 00124 J4 00196 000-0
14050 BNL POZCH , ,0, BR IF POSITIVE OR ZERO CHAR 00136 M6 00760 01300
14060 CM BETA -P,00 ,1011, +L 00148 J4 00196 000--
14070 BL BRD , ,0, BR IF CHAR LESS THAN -L 00160 M7 00208 01300
14080 TFM ++30 ,SAVE -P,07, , -L CHAR BETWEEN 0 AND -L 00172 J0 00202 -0100
14090 S ++18 ,BETA -P,0 00184 KK 00202 00196
14100 TR ,BETA-1 -P, , -L 00196 3J 00000 00195
14110 BRD BD ++24 ,CLF+11 ,01, BR IF SIN ROUTINE 00208 ML 00232 00099
14120 A SAVE-P ,PIOV2-45-P, , +LCONVERT TO SIN 00220 KJ 00100 00451
14130 S SAVE -P,TWOPI-45 ,1, +L 00232 KK 00100 00964
    
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14140 BH *-12 , ,0, SUB 2 PI FROM MANT UNTIL NEG
14150 SF SAVE-1 -P, ,, -L 00244 M6 00232 01100
14160 A SAVE -P,PI-45 ,, ,+L 00256 L2 00099 00000
14170 BN **36 , ,0 00268 KJ 00100 00917
14180 SM CLF+10 ,01 ,010 00280 M7 00316 01300
14190 SF SAVE -P 00292 J2 00098 000-1
14200 A SAVE -P,PIOV2-45-P,, ,+L 00304 L2 00100 00000
15010 TF 80 ,CLR-106-P,, ,2L 00316 KJ 00100 00451
15020 DC 48,5552705600 0002202000 5055000000 0008550000 00560050 ,348
00348 00048
15030 M SAVE -P,SAVE -P 00340 KL 00100 00100
15040 TF SAVE -P,98 ,, , -L 00352 K6 00100 00098
15050 SF SAVE-1 -P, ,, -L 00364 L2 00099 00000
15060 TF BETA -P,ONEZ-47-P,, ,+LSET BETA EQUAL 1 PLUS L+1 ZERO
00376 KJ 00196 00402
00388 LJ 00907 01010
15070 TR AAB-3 ,H34-1 ,01
15080 OVER TDM SUM+1 ,2 ,011, SET FOR SUBTRACTION
00400 J5 00473 0000K
15090 TF 99 ,98 ,, , -L 00412 26 00099 00098
15100 TFM 97 ,0000 ,8, -L 00424 16 00097 0-000
15110 D 98 ,AB ,, -L 00436 2R 00098 00914
15120 BZ DONE , ,0, BR IF QUOTIENT ZERO
00448 M6 00588 01200
00460 K6 00050 00095
15130 TF ALPHA -P,95 00472 KK 00196 00050
15140 SUM S BETA -P,ALPHA -P 00484 J1 00910 000-2
15150 AM AAB ,2 ,010 00496 J1 00908 000-2
15160 AM AAB-2 ,2 ,010
15170 M AAB ,AAB-2 ,01, 4DIGIT PRODUCT
00508 KL 00910 00908
00520 K6 00914 00099
15180 TF AB ,99 ,0 00532 2D 00080 00628
15190 TF 80 ,CLR-106-P,, ,2L 00544 KL 00100 00050
15200 M SAVE -P,ALPHA -P 00556 MM 00400 00473
16010 BNF OVER ,SUM+1 ,01 00568 J5 00473 00001
16020 TDM SUM+1 ,1 ,0, SET TO ADD 00580 M9 00412 00000
16030 B7 OVER+L2 , ,0 00588 KM 00195 00639
16050 DONE C BETA-1 -P,CLR-95-P ,, ,+L BR IF L+1 ZEROS
00600 M6 00820 01200
00612 J6 00100 000-1
16070 TFM SAVE -P,01 ,10 5000500051 0000505000 05057005,350
16080 DC 48,0750775070 0000505505 00350 00048
00624 ML 00692 00195
16090 BD PLACE-24 ,BETA-1 -P,0, , -LBR IF NORMALIZATION NOT REQ
00636 J2 00100 000-1
16100 SM SAVE -P,01 ,10 00648 LJ 00195 00196
16110 TR BETA-1 -P,BETA -P,, , -L, -L ENTER NOISE DIGIT
00660 K5 00195 02401
00672 L2 00195 00000
16120 TD BETA-1 -P,NOS DIG ,, , -L 00684 M9 00624 00000
00692 ML 00716 00098
16130 SF BETA-1 -P, ,, -L 00704 L2 00194 00000
16140 B7 *-60 00716 KO 00196 00100
16160 BD PLACE ,CLF+10 ,01
16170 SF BETA-2 -P
PLACE TF BETA -P,SAVE -P,, STORE CHAR

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TFL PCK+15 ,BETA -P,6, STORE RESULT
00728 0D 0238- 00196
16200 TD ALPHA+1-P,H34+7 ,1, RESTORE RM 00740 KN 00051 01018
17010 B7 PCK+10 , ,6, RETURN TO MAINLINE PROGRAM
00752 49 0237N 00000
17030 PDZCH CM BETA -P,03 ,10, 00760 J4 00196 000-3
17040 BL **80 , ,0, BR IF CHAR SMALLER THAN 03
00772 M7 00852 01300
17050 CM BETA -P,00 ,10, ,+L 00784 J4 00196 000-0
17060 BNH **44 , ,0, BR IF CHAR LESS OR EQUAL L
00796 M7 00840 01100
17070 TDM 401 ,0 ,11, CHAR TOO LARGE
00808 15 00401 0000-
17080 TD ALPHA+1-P,H34+7 ,, RESTORE RM 00820 KN 00051 01018
17100 B7 ZRES 00832 M9 00346 00000
17120 TDM 401 ,0 00840 15 00401 00000
17130 TFM **42 ,SAVE-1 -P,07, 'ADJ TO SUB TWO PI FROM MANT
00852 JD 00894 -0099
17140 S **30 ,BETA -P,0, UNTIL REDUCED TO NEG NUMBER
00864 KK 00894 00196
17150 TDM BETA-2 -P,0 ,11, -L 00876 J5 00194 0000-
17160 TF ,BETA-2 -P 00888 2D 00000 00194
17170 B BRD , ,0 00900 M9 00208 00000
17180 DORG *-4 00907
17190 AAB DS 4 00910 00004
17200 AB DS 4 00914 00004
18010 DS 1 00915 00001
18020 PI DC 47 ,31415926535897932384626433832795028841971693993
00962 00047
18030 TWOPI DC 47 ,62831853071795864769252867665590057683943387987
01009 00047
18040 H34 BC 2 ,01 01011 00002
18050 DC 2 ,02 01013 00002
18060 DC 5 ,00020 01018 00005
DEND 02072 02072

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18070***** FLOATING ARC TANGENT VARIABLE LENGTH

SYMBOL TABLE

NOSDIG 02401	ALPH 00196R	ALPHA 00050R	ATN1 00424R	BETA 00196R
CLR 00734R	EDGAR 00000R	EOD 01040R	FATN3 00000R	LN10 00591R
LOGE 00543R	NINE 00636R	ONEZ 00449R	OVFL 00266R	P 00000
PCHAR 00836R	PCK 02365	PICK 00198R	PIOV2 00496R	PIOV4 01326R
SAVE 00100R	SIX 01235R	TAN6 01281R	TEST 00064R	TEST1 00792R
TEST2 00652R	UNFL 00334R	XX 00000	ZRES 00346R	

	DSA	FATN3			00004	00005	-0000	
	DORG	EDGAR			00000			
18090	FATN3	TFM	PCK+5	,**20	,17			
18100	B7	PCK		,	,6,		BR TO PICK AND RETURN	
						00012	49 0236N 00000	
18130	DC	50	,0700055050	0000510005	0576705070	7000065020	51500825,350	
						00350	00050	
18120	TFM	TEST+11		,	,08,		SET INDICATORS	
						00020	J6 00075 0-000	
18140	BD	**20	,BETA-1	-P,0,	, -L	00032	ML 00052 00195	
	B7	TEST1+24				00044	M9 00816 00000	
18170	TD	TEST+9	,BETA-2	-P,0,			SAVE MANT SIGN	
						00052	KN 00073 00194	
18180	TEST	CF	BETA-2	-P		00064	L3 00194 00000	
18190	CM	BETA	-P,		,10	00076	J4 00196 000-0	
18200	BH	PCHAR		,	,0,		BR IF CHAR POSITIVE	
						00088	M6 00836 01100	
19010	BE	ALPH		,	,0,		BR IF CHAR ZERO	
						00100	M6 00196 01200	
19020	CM	BETA	-P,-99999		,10,	+L	00112	J4 00196 999RR
19030	BL	EOD		,	,0,		BR IF CHAR LESS THAN -8L-18	
						00124	M7 01040 01300	
19040	TFM	ALPH-1	,BETA-2	-P,07		00136	JD 00195 -0194	
19050	A	ALPH-1	,BETA	-P,0		00148	KJ 00195 00196	
19060	TF	BETA-2	-P,CLR-96-P	,,	, -L,+L		CLEAR AREA LEFT OF BETA	
						00160	KD 00194 00638	
19070	CF	BETA-1	-P,		,,	-L	EXPAND BETA BY REMOVING FLAG	
						00172	L3 00195 00000	
19080	TF	BETA-2	-P,		,,		ADJUST BETA FIELD FOR CHAR	
						00184	K6 00194 00000	
19090	ALPH	SF	BETA-1	-P,		-L	CONTRACT BETA BY RESETTING FLAG	
						00196	L2 00195 00000	
19100	CM	BETA	-P,29		,10,	-L	00208	J4 00196 000K9
19110	BL	ATN1-72		,	,0,		BR IF MANT LESS THAN .29	
						00220	M7 00352 01300	
19120	TF	79	,CLR-100-P,	,,	, +L		00232	20 00079 00634
19130	MM	BETA-2	-P,6		,10,	6*MANT	IN 99	
						00244	J3 00194 000-6	

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19140	TDM	98	, -1	,,	, -L	1+6*MANT	IN 99
						00256	15 00098 0000J
19150	S	BETA-2	-P,SIX-45	,1,		+L	MANT-.6 L DIGITS
						00268	KK 00194 01190
19160	TF	ALPHA	-P,99	,,		10+6*MANT	MOVED TO ALPHA.L+2D6
						00280	K6 00050 00099
19170	TF	99	,CLR-94-P	,,	,2L	2L+2	ZEROS
						00292	20 00099 00640
19180	LD	98	,BETA-2	-P,,	, -L,	L	DIGITS
						00304	2Q 00098 00194
19190	DC	48	,2552000855	5256030106	2020055008	5552000000	56550855,348
						00348	00048
19200	D	100	,ALPHA	-P,,	, -L,	L+2	DIGITS
						00316	2R 00100 00050
20010	TF	BETA-2	-P,97	,,	, -L	MANT IS	XMANT-.65/10+6*MANT
						00328	K6 00194 00097
20020	SF	TEST+11		,0,		IND	THIS CALC MADE
						00340	L2 00075 00000
20030	TF	80	,CLR-106-P,	,,	,2L	ZEROS	
						00352	20 00080 00628
20040	M	BETA-2	-P,BETA-2	-P,,		SQUARE	MANT
						00364	KL 00194 00194
20050	TF	SAVE	-P,99	,,	, -L	SAVE IS	MANT*MANT.L DIGITS
						00376	K6 00100 00099
20060	TF	ALPHA	-P,CLR-95	-P,,	, +L	INIT	ALPHA TO 00 L+1 ZEROS
						00388	KD 00050 00639
20070	TFM	ATN1+35	,99999	,10,	,2L	00400	J6 00459 99999
20080	TFM	ATN1-3	,99999	,10,	,+L	00412	J6 00421 99999
20090	ATN1	TF	99	,CLR-92-P	,,	,+L	L+4 ZEROS
						00424	20 00099 00642
20100	TFM	98	,10	,10,	, -L	00436	16 00098 000J0
20110	DM	98		,,	, -L	00448	19 00098 -0000
20120	S	96	,ALPHA	-P		00460	2K 00096 00050
20130	TF	ALPHA	-P,96	,,		L+1	DIGITS
						00472	K6 00050 00096
20140	TF	80	,CLR-106-P,	,,	,2L	00484	20 00080 00628
20150	M	ALPHA	-P,SAVE	-P,,		2L+1	DIGITS
						00496	KL 00050 00100
20160	TF	ALPHA	-P,99	,,	, -L	L+1	DIGITS
						00508	K6 00050 00099
20170	SM	ATN1+35	,2	,010		00520	J2 00459 000-2
20180	SM	ATN1-3	,1	,010		00532	J2 00421 000-1
20190	BNZ	ATN1		,0,		BR	IF LESS THAN L-1 PASSES
						00544	M7 00424 01200
20200	TF	SAVE	-P,ONEZ-47-P,	,,	, +L	L+2	DIGITS
						00556	KD 00100 00402
21010	S	SAVE	-P,ALPHA	-P,,		ONE	MINUS SUM OF XCOEF*MANT**2
						00568	KK 00100 00050
21020	TF	80	,CLR-106-P,	,,	,2L	00580	20 00080 00628
21030	M	SAVE	-P,BETA-2	-P,,		2L+2	DIGIT PRODUCT
						00592	KL 00100 00194
21040	DC	48	,0000202100	2026502504	5044200040	5200500500	00084025,348
						00348	00048
21050	BNF	TEST2	,TEST+11	,01		00604	MM 00652 00075
21060	BNN	TEST2-12		,0		00616	M6 00640 01300

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21070 SF 99 , , -L 00628 32 00099 00000
21080 A 99 ,TAN6-45 ,1, -L,+L L+1 DIGITS 00640 2J 00099 01236
TEST2 BNF **36 ,TEST+10 ,01 00652 MM 00688 00074
21100 SF 99 , , -L 00664 32 00099 00000
21110 A 99 ,PIOV2-45-P,, -L,+L L+2 DIGITS
21120 TFM BETA -P,1 ,10 00676 2J 00099 00451
21130 TD 100 ,BETA+1 -P,, -L INSERT RM AT 100-L 00688 J6 00196 000-1
BD TEST1-24 ,98 , , -2L BR IF NORMALIZATION NOT REQD 00700 2N 00100 00197
21150 SM BETA -P,1 ,10 00712 M3 00768 00098
21160 TR 98 ,99 , , -2L,-2L 00724 J2 00196 000-1
21170 TD 99 ,NOS DIG , , -L INSEAT NOISE DIGIT 00736 31 00098 00099
21180 B7 *-48 , , 0 00748 25 00099 02401
21200 SF 98 , , -2L 00760 M9 00712 00000
TF BETA-2 -P,97 , , -L 00768 32 00098 00000
22030 TEST1 BNF **24 ,TEST+9 ,01 00780 K6 00194 00097
SF BETA-2 -P , , 00792 MM 00816 00073
TFL PCK+15 ,BETA -P,6 00804 L2 00194 00000
22050 B7 PCK+10 , , 6 00816 00 0238- 00196
22070 PCHAR TOM TEST+10 , -1 ,0, INDICATE POSITIVE CHAR 00828 49 0237N 00000
TF 99 ,CLR-95-P , , +2L 00836 J5 00074 0000J
22080 TDM 100 , -1 , , -2L DIVIDEND EQUALS .1 00848 20 00099 00639
22100 D 99 ,BETA-2 -P,, -L, DIVISOR IS MANT 00860 15 00100 0000J
22110 DC 44 ,0440525000 5250000050 0050510000 555670 70510005,348
00348 00044
22120 BD **56 ,99 ,0, -2L BR IF MANT IS 100000... 00884 M3 00940 00099
22130 SF 100 , , , -2L REDUCE TO L DIGITS 00896 32 00100 00000
22140 TF BETA-2 -P,99 , , -L 00908 K6 00194 00099
22150 SM BETA -P,1 ,10, REDUCE CHAR BY 1 00920 J2 00196 000-1
22160 B7 **32 , , 0, THESE 3 00932 M9 00964 00000
22180 TF BETA-2 -P,98 , , -L INSTRUCTIONS GO 00940 K6 00194 00098
WITH BD ABOVE
22190 SM BETA -P,2 ,10, 00952 J2 00196 000-2
22200 BL **44 , , 0, BR IF OPERAND IS ONE 00964 M7 01008 01300
23010 BE ALPH , , 0, BR IF CHAR REDUCED TO ZERO 00976 M6 00196 01200
23020 SF BETA -P, , , CHAR STILL POSITIVE,MAKE NEG 00988 L2 00196 00000
23030 B7 TEST+48 01000 M9 00112 00000
TFM BETA -P, ,10, STORE CHAR 01008 J6 00196 000-0
TF BETA-2 -P,PIOV4-45 , , +L 01020 K0 00194 01281

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23070 B7 TEST1 01032 M9 00792 00000
EOD BNF TEST1 ,TEST+10 , , BR IF RESULT MORE THAN Piov2 01040 MM 00792 00074
23130 TF ALPHA -P,BETA-2 -P 01052 K0 00050 00194
23140 TF BETA-2 -P,PIOV2-46-P,, ,+L L+2 DIGITS
23150 CF ALPHA-1-P, , , -L 01064 K0 00194 00450
23160 TOM ALPHA -P, ,11, -L 01076 L3 00049 00000
23170 CM BETA -P, 00 ,1011, ,+L 01088 J5 00050 000-
23180 BNH **48 , , 0 01100 J4 00196 000-
23190 TFM **35 ,ALPHA -P,07 ,0 01112 M7 01160 01100
DC 10 ,0550555000 ,350 01124 J0 01159 -0050
24010 A **23 ,BETA -P,0 00350 00010
24020 S BETA-2 -P 01136 KJ 01159 00196
TFM BETA-2 -P,BETA-3 -P 01148 K2 00194 00000
01160 K0 00194 00193
24050 B TEST1 -P,01 ,10 01172 J6 00196 000-1
24060 DORG **4 , , 0 01184 M9 00792 00000
24070 SIX DC 45 ,6000000000000000000000000000000000000000000000000000000 01191
01235 00045
24080 TAN6 DC 46 ,5404195002705841554435783646085999101351482514 01281 00046
24090 Piov4 DC 45 ,785398163397448309615660845819875721049292349 01326 00045
DEND 02091 02091

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24100***** FLOATING EXPONENTIAL VARIABLE LENGTH

SYMBOL TABLE

NOSDIG	02401	GOBACK	01028R	ALPHA	00050R	BETA	00196R	CALC	00468R
CLR	00734R	EDGAR	00000R	E12	00436R	FACT	00740R	FEXT3	00020R
FEX3	00000R	GORD	00608R	LN10	00591R	LOGE	00543R	NINE	00636R
ONEZ	00449R	OVFL	00266R	P	00000	PCK	02365	PICK	00198R
PIOV2	00496R	RECIP	00888R	SAVE	00100R	SETUP	00144R	TEN34	01093R
UNFL	00334R	XX	00000	ZRES	00346R				

	DSA	FEXT3	,FEX3					00004	00005	-0020
		DORG	EDGAR					00009	00005	-0000
24110	FEX3	TDM	SETUP+1	,1	,0,	ALLOW	MUL	BY	LOG	E FOR EXP
								00000	J5	00145 00001
24120		B7	FEXT3+12	,	,0			00012	M9	00032 00000
24140	FEXT3	TDM	SETUP+1	,9	,0,	PREVENT	MUL	BY	LOG	E FOR EXT
								00020	J5	00145 00009
24150		TFM	PCK+5	,**20	,17			00032	10	02370 -0052
24160		B7	PCK	,	,6,	BR TO	PICK	AND	RETURN	
								00044	49	0236N 00000
24180		DC	46,0056070005	5020250008	5604504052	005251	0050	000050	,348	
								00348	00046	
		TFM	GOBACK-1	,01	,10			00052	J6	01027 000-1
24200		TF	ALPHA-2-P,ONEZ-45-P,,	,,	,+L	ONE.	L+4	DIGIT	MANTISSA	
								00064	KD	00048 00404
25010		BD	**20	,BETA-1	-P,0,	,-L		00076	ML	00096 00195
25020		B7	GOBACK-12,	,	,,	BR	IF	MANT	ZERO	
								00088	M9	01016 00000
25040		TD	RECIP-1	,BETA-2	-P,0,	NON	ZERO	MANTISSA		
								00096	KN	00887 00194
25050		CF	BETA-2	-P	,,			00108	L3	00194 00000
25060		TFM	101	,	,,	-L		00120	16	00101 -0000
25070		TF	97	,BETA-2	-P,,	-L		L+4	DIGITS	IN 101-L
								00132	20	00097 00194
25080	SETUP	B	**92	,	,0,	MUL	BY	LOG	E IF EXP	
								00144	M9	00236 00000
25100		TF	80	,CLR-106-P,,	,2L			00156	20	00080 00628
25110		M	BETA-2	-P,LOGE-45-P,,	,+L			2L+2	DIGIT	PRODUCT
								00168	KL	00194 00498
25120		BD	**56	,98	,0,	,-2L		BR	IF	ORDER NOT ZERO
								00180	M3	00236 00098
25130		SM	BETA	-P,1	,10			00192	J2	00196 000-1
25140		SF	99	,	,,	-2L,		00204	32	00099 00000
25150		TF	BETA-2	-P,102	,,	,-L		MOVE	L+4	DIGITS
								00216	K6	00194 00102
25160		B7	**20	,	,0			00228	M9	00248 00000
25180		TF	BETA-2	-P,101	,,	,-L		MOVE	L+4	DIGITS

								00236	K6	00194 00101
25190		CM	BETA	-P,-00	,1011	,+L		00248	J4	00196 000--
25200		BNH	GOBACK-12,	,	,0,	BR	IF	CHAR	LESS	THAN -L
								00260	M7	01016 01100
26010		CM	BETA	-P,	,10,			00272	J4	00196 000-0
26020		BE	CALC	,	,0,	BR	IF	CHAR	ZERO	
								00284	M6	00468 01200
26030		BL	CALC+68	,	,0,	BR	IF	CHAR	BETWEEN	-L AND ZERO
								00296	M7	00536 01300
26040		CM	BETA	-P,2	,10			00308	J4	00196 000-2
26050		BH	E12	,	,0,	BR	IF	CHAR	LARGER	THAN 2
								00320	M6	00436 01100
26070		BL	***44	,	,0,	BR	IF	CHAR	BETWEEN	0 AND +2
								00332	M7	00376 01300
26060		DC	46, 07770070	7007770050	5090007000	7000000505	76705070,	348		
								00348	00046	
		A	GOBACK-1	,BETA-4	-P,,	,-L		CHAR	EQUALS	P2
								00344	KJ	01027 00192
26090		TR	BETA-5	-P,BETA-3	-P,,	-L,-L		SHIFT	LEFT	2 POSITIONS
								00356	LJ	00191 00193
26100		B7	E12-12	,	,,			00368	M9	00424 00000
26120		TDM	BETA-6	-P,	,11,	-L		CHAR	EQUALS	+1
								00376	J5	00190 0000-
26130		CF	BETA-5	-P,	,,	-L		00388	L3	00191 00000
		A	GOBACK-1	,BETA-5	-P,,	,-L		00400	KJ	01027 00191
26150		TR	BETA-5	-P,BETA-4	-P,,	-L,-L		SHIFT	LEFT	1 POSITION
								00412	LJ	00191 00192
26160		BNV	**32	,	,0,	BR	IF	ADJ	CHAR	DOES NOT OVFLOW
								00424	M7	00456 01400
26170	E12	BNF	OVFL	-P,RECIP-1	,1,	BR	IF	MANT	POSITIVE	
								00436	MM	00266 00887
26180		B7	UNFL	-P	,,			00448	M9	00334 00000
26200		SF	BETA-5	-P,	,,	-2L		00456	L2	00191 00000
27010	CALC	TFM	**9	,	,0810,	INIT	SIZE	IND		
								00468	J6	00477 0-0-0
27020		CM	BETA-4	-P,34	,10,	-L		00480	J4	00192 000L4
27030		BL	GORD	,	,0,	BR	IF	BETA	LESS	THAN .34 +CHAR
								00492	M7	00608 01300
27040		SM	BETA-4	-P,34	,10,	-L		ADJ	BETA	BY -.34
								00504	J2	00192 000L4
27050		AM	CALC+9	,1	,010,	STEP	SIZE	IND		
								00516	J1	00477 000-1
27060		B7	CALC+12	,	,0,	CONTINUE	REDUCTION	OF	BETA	
								00528	M9	00480 00000
27080		TFM	**59	,BETA-4	-P,07,	PROCESS	IF	CHAR	NEG	
								00536	JD	00595 -0192
27090		A	**47	,BETA	-P,0,			00548	KJ	00595 00196
27100		TF	BETA-6	-P,CLR-96-P,,	,,	-L,+L		L+4	DIGIT	FIELD
								00560	KD	00190 00638
27110		CF	BETA-5	-P,	,,	-L		00572	L3	00191 00000
27120		TF	BETA-4	-P,	,,			SHIFT	RIGHT	W R T CHAR SIZE
								00584	K6	00192 00000
27130		SF	BETA-5	-P,	,,	-L		00596	L2	00191 00000

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27140      DC 44,0856405252 0055085502 2020005000 000000851 4052      ,348
          00348 00044
27150 GORD  TF 80      ,CLR-106-P,,      ,2L      00608 20 00080 00628
          M  BETA-4 -P, LN10-46-P,,      ,+L      2L+4 DIGIT PRODUCT
          00620 KL 00192 00545
27170      SF 97      ,      ,,      -2L      00632 32 00097 00000
27180      TF SAVE -P,99      ,,      ,-L      L+4 DIGIT FIELDS
          00644 K6 00100 00099
27190      TF BETA-2 -P,99      ,,      ,-L      00656 K6 00194 00099
27200      TFM FACT+11 ,2      ,010      00668 J6 00751 000-2
28010      A  ALPHA-2-P,SAVE -P      -P      00680 KJ 00048 00100
28020      TF 80      ,CLR-106-P,,      ,2L      00692 20 00080 00628
28030      M  SAVE -P,BETA-2 -P,,      ,2L+8 DIGIT PRODUCT
          00704 KL 00100 00194
28040      TF 99      ,96      ,,      ,-L      L+6 DIGIT DIVIDEND
          00716 26 00099 00096
28050      TFM 96      ,      ,10,      -L      00728 16 00096 000-0
28060 FACT  DM 97      ,      ,,      -L      2 DIGIT DIVISOR. L+4 QUOTIENT
          00740 19 00097 -0000
28070      BZ FACT+56 ,      ,0,      BR WHEN TERM REDUCES TO ZERO
          00752 M6 00796 01200
28080      TF SAVE -P,97      ,,      L+4 DIGIT FIELD
          00764 K6 00100 00097
28090      AM FACT+11 ,1      ,010      00776 J1 00751 000-1
28100      B7 FACT-60 ,      ,0,      CALC NEXT TERM
          00788 M9 00680 00000
28120      CM CALC+9 ,      ,010      00796 J4 00477 000-0
28130      BE RECIP ,      ,0,      BR IF FURTHER ADJ NOT REQUIRED
          00808 M6 00888 01200
28140      TF 80      ,CLR-106-P,,      ,2LADJUST FOR REDUCTNS BY .34
          00820 20 00080 00628
28150      M  ALPHA-4-P,TEN34-45 ,1      ,+L 2L+4 DIGIT PRODUCT
          00832 KL 00046 01048
28160      SF 97      ,      ,,      -2L 2L+3 DIGITS 00844 32 00097 00000
28170      TF ALPHA-4-P,98      ,,      ,-L      L+2 DIGITS
          00856 K6 00046 00098
28180      SM CALC+9 ,1      ,010,      REDUCE INDICATOR
          00868 J2 00477 000-1
28190      B7 *-84 ,      ,0      00880 M9 00796 00000
29010      DC 26, 0000084025 0000000200 005005      ,350 00350 00026
29020 RECIP BNF GOBACK-12,RECIP-1 ,01,      BR IF MANT WAS POSITIVE
          00888 MM 01016 00887
          SF GOBACK-1 ,      ,,      MAKE CHAR NEGATIVE
          00900 L2 01027 00000
29040      TF 99      ,CLR-94-P,,      ,2LCALC RECIPROCAL IF NEG MANT
          00912 20 00099 00640
29050      TFM 99      ,10      ,10,      -2L, 2L+2 DIGIT DIVIDEND
          00924 16 00099 000J0
29060      D 100      ,ALPHA-4-P,,      -L, L+2 DIGIT DIVISOR
          00936 2R 00100 00046
29070      BV GOBACK-24,      ,0,      BR IF ORIG OPER 1 OR 1/LOGE
          00948 M6 01004 01400
          AM GOBACK-1 ,01      ,10      00960 J1 01027 000-1
    
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          TF **23      ,GOBACK-1 ,6      00972 KD 0099N 01027
          TFL PCK+15 ,99      ,6,      ,-L STORE RESULT
          00984 06 0238- 00099
29100      B7 PCK+10 ,      ,6,      RETURN TO MAINLINE
          00996 49 0237N 00000
29101      AM GOBACK-1,2,10      01004 J1 01027 000-2
          TFM ALPHA-4-P      01016 J6 00046 -0000
          GOBACK TFL PCK+15 ,ALPHA-4-P,6,      STORE RESULT
          01028 00 0238- 00046
          B7 PCK+10 ,      ,6,      RETURN TO MAINLINE
          01040 49 0237N 00000
29150 TEN34 DC 47      ,21877616239495525622261149163841873167118056246
          DEND 02102      01093 00047
          02102
    
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29160***** FLOATING POINT LOG AND LN. VARIABLE LENGTH

SYMBOL TABLE

NOSDIG	02401	ALPHA	00050R	BETA	00196R	CLR	00734R	CORN	00596R
COUN	00368R	CZERO	00959R	EDGAR	00000R	FLN3	00020R	FLOG3	00000R
GOAL	00832R	LN10	00591R	LOGE	00543R	NINE	00636R	NLG	00876R
ONEZ	00449R	OVFL	00266R	P	00000	PCK	02365	PICK	00198R
PIOV2	00496R	PLUS	00680R	SAVE	00100R	UNFL	00334R	XX	00000
ZRES	00346R								

	DSA	FLOG3	,FLN3					00004	00005	-0000	
								00009	00005	-0020	
								00000			
29190	FLOG3	DORG	EDGAR					00000	J5	00597	00001
		TDM	CORN+1	,1	,0,	SET FOR COMMON	LOG	00012	M9	00032	00000
29200		B7	**+20	,	,0			00020	J5	00597	00009
30020	FLN3	TDM	CORN+1	,9	,0,	SET FOR NATURAL	LOG	00032	10	02370	-0052
30030		TFM	PCK+5	,**+20	,17			00044	49	0236N	00000
30040		B7	PCK	,	,6,	BR TO PICK AND	RETURN				
29180		DC	28	,0700	6050	0500500105	7070700055	00350	00028		
		BD	**+44	,BETA-1	-P,,	,-L	BR IF NON	ZERO	ARG		
30060		TDM	401	,0	,11,	SET IND FOR	LOG OR LN	OF	ZERO.		
		SF	NINE-45-P,	,	,,	PL	SET UP TO	STROE	NEG	NINES	
		B7	OVFL+12-P,	,	,,	BR TO STORE	AND	RTN	TO	MAINLIN	
30110		BNF	**+36	,BETA-2	-P,0,	BR IF MANT	POSITIVE				
30120		TDM	401	,0	,,	SET IND FOR	NEGATIVE				
30130		CF	BETA-2	-P,	,,	MAKE	POSITIVE				
30140		TFM	CORN-25	,CZERO-45	,017,	+L	INITIALIZE				
30150		TF	GOAL-13	,BETA	-P,0,	SAVE	CHAR	00144	K0	00819	00196
30160		CF	BETA-1	-P,	,,	-L,	EXPAND	FIELD	TO	L+1	DIGITS
30170		TDM	BETA-2	-P,1	,11,	-L,	ADD	1.0			
30180		CM	BETA-1	-P,15	,10,	-L,					
30190		BNL	**+44	,	,0,	BR IF MOD	MANT	NOT	LESS	1.5	
30200		A	BETA-2	-P,BETA-2	-P,,	DOUBLE	MANT.	L+1	DIGITS		
31010		AM	CORN-25	,48	,010,	ADJ	FOR	NEXT	CONSTANT		

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31020		B7	**+60	,	,0			00216	J1	00571	000M8
31070		DC	42,56705508252552085552550103			5106202050		00228	M9	00168	00000
								085552,	350		
								00350	00042		
31040		TF	ALPHA	-P,ONEZ-48-P,,	,,	+L	L+1	DIGITS			
31050		TDM	ALPHA	-P,2	,11,	-L,	CONVERT	TO	TWOZ		
31060		S	ALPHA	-P,BETA-2	-P,,		2.0	MINUS	MDD	MANT	*2.0-Z
31080		TF	99	,CLR-93-P	,,	,2L					
31090		LD	97	,ALPHA	-P,,	-L,					
31100		D	98	,BETA-2	-P,,	-L,	*2.0-Z	=Z	/Z	EQUALS	Y
31110		TF	BETA	-P,98	,,	,-L	L+2	DIGITS			
31120		TF	80	,CLR-106-P,,	,,	,2L					
31130		M	BETA	-P,BETA	-P,,		2L+4	DIGITS			
31140		TF	SAVE	-P,97	,,	,-L	Y**2	L+2	DIGITS		
31150		A	BETA	-P,BETA	-P,,		DOUBLE	Y			
31160	COUN	TFM	**+9	,99999	,010,	,+L	INITIALIZE	COUNT	TO	L-1	TERMS
31170		TFM	COUN+71	,99999	,010,	,2L					
31180		TF	ALPHA	-P,CZERO-46	,,	,+L	L+2	DIGITS.	ZERO	ALPHA	
31190		TF	99	,CLR-92-P	,,	,+L					
31200		TFM	98	,10	,10,	-L,	OBTAIN	RECIPROCAL	TERM		
32010		DM	98	,	,,	-L,					
32020		A	ALPHA	-P,97	,,		L+2	DIGITS	TO	PREV	TOTAL
32030		TF	80	,CLR-106-P,,	,,	,2L	PRODUCT	OF	Y**2	AND	TOTAL
32040		M	ALPHA	-P,SAVE	-P,,		PREVIOUSLY	CALC	TERMS		
32050		TF	ALPHA	-P,97	,,	,-L	L+2	DIGITS	STORED	TOTAL	
32060		SM	COUN+71	,2	,010,		REDUCE	DIVISOR			
32070		SM	COUN+9	,1	,010,		REDUCE	NO	OF	UNCALC	TERMS
32090		BNZ	COUN+36	,	,0,		BR IF	L-1	TERMS	NOT	CALC
320		DC	46,	08552550	5052000865	5250066005	5050605000	07770050,350			
32100		TF	80	,CLR-106-P,,	,,	,2L					
32110		M	ALPHA	-P,BETA	-P,,		2Y	*	SUM	OF	L-1
32120		A	97	,BETA	-P,,	-L	ADD	2Y	TO	ABOVE	PRODUCT.
32130		TF	BETA	-P,	,,		SET	WITH	PROPER	CONSTANT	L+3

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32140 SF BETA -P 00560 K6 00196 00000
32150 S BETA -P,97 ,, -L SUB ACCUM TOTAL FROM CONSTANT
00572 L2 00196 00000
00584 K2 00196 00097
32160 CORN B NLG , ,0, BR IF FINDING NATURAL LOG
00596 M9 00876 00000
32170 TF 80 ,CLR-106-P,, ,2L 00608 20 00080 00628
32180 M LOGE-45-P,BETA -P,, +L, 00620 KL 00498 00196
32190 TF BETA -P,97 ,, -L L+3 DIGITS 00632 K6 00196 00097
32200 SF BETA -P 00644 L2 00196 00000
33010 TF 80 ,CLR-100-P,, +L 00656 20 00080 00634
33020 M ONEZ-46-P,GOAL-13 ,1, +L, ORIG CHAR * ONE. L+5 DIGITS
00668 KL 00403 00819
33030 PLUS A 99 ,BETA -P 00680 2J 00099 00196
33040 TF BETA -P,99 ,, PREPARE FOR NORMALIZATION
00692 K6 00196 00099
33050 CF BETA -P 00704 L3 00196 00000
C CLR-92 -P,98 ,, +L 00716 K4 00642 00098
33060 BE ZRES -P, ,, BR IF L+5 ZEROS 00728 M6 00346 01200
TFM GOAL-1 ,03 ,10, SET CHAR EQUAL 3
00740 J6 00831 000-3
33080 BD GOAL-24 ,BETA-4 -P,0, -L BR IF HI ORDER DIGIT NON-ZERO
00752 ML 00808 00192
33090 TR BETA-4 -P,BETA-3 -P,, -L,-L 00764 LJ 00192 00193
SM GOAL-1 ,01 ,10, REDUCE CHAR 00776 J2 00831 000-1
33110 TD BETA -P,NOS DIG ,, INSERT NOISE DIGIT
00788 K5 00196 02401
33120 B7 *-48 , ,0, CONTINUE NORMALIZATION
00800 M9 00752 00000
DC 16 ,7050005005000660 ,350 00350 00016
33150 SF BETA-4 -P, ,, -L, SET FIELD DEFINITION
00808 L2 00192 00000
GOAL TFM BETA-3 00820 J6 00193 -0000
BNF **24 ,99 ,, AFFIX SIGN AND RTN TO MAINLINE
00832 M4 00856 00099
SF BETA-5 -P 00844 L2 00191 00000
TFL PCK+15 ,BETA-3 -P,6 00856 00 0238- 00193
B7 PCK+10 , ,6 00868 49 0237N 00000
33190 NLG TF 80 ,CLR-100-P,, +L CONVERSION FOR LN
00876 20 00080 00634
33200 M LN10-45-P,GOAL-13 ,, +L, L+5 DIGITS 00888 KL 00546 00819
34010 B PLUS , ,0, RETURN TO COMMON SECTION
00900 M9 00680 00000
34030 CZERO DC 48 ,0 00959 00048
37090 DC 48,-69314718055994530941723212145817656807550013436
01007 00048
37100 DC 48,-138629436111989061883446424291635313615100026872
01055 00048
37110 DC 48,-207944154167983592825169636437452970422650040308
01103 00048
DEND 02122 02122

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FLOATING SHIFT RIGHT

SYMBOL TABLE

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NOSDIG 02401 JOHNNY 00140R ALPHA 00050R BETA 00196R CLR 00734R
EDGAR 00000R FRS1 00000R LN10 00591R LOGE 00543R NINE 00636R
ONEZ 00449R OVFL 00266R P 00000 PATTY 00060R PCK 02365
PICK 00198R PIOV2 00496R SAVE 00100R UNFL 00334R XX 00000
ZRES 00346R

DSA FRS1 00004 00005 -0000
DORG EDGAR 00000
34030 FRS1 TRNM PCK+11 ,PCK+10 ,11 00000 30 02376 0237N
34040 AM PCK+10 ,11 ,10 00012 11 02375 000J1
34055 DC 4 ,5050 ,350 00350 00004
34060 TF ALPHA ,PCK+20 ,11 00024 K6 00050 0238N
34070 MF ALPHA ,PCK+15 ,11 00036 P1 00050 0238-
34070 S PCK+15 ,PCK+15 ,611, ZERO ALPHA FIELD 00048 22 0238- 0238-
34020 PATTY TFM PCK+25 00060 16 02390 -0000
34072 BNF JOHNNY ,PCK+20 00072 M4 00140 02385
34074 CF PCK+20 00084 33 02385 00000
34075 MA PCK+25 ,PCK+20 ,11 00096 70 02390 0238N
34076 TFL PCK+20 ,PCK+20 ,11 00108 06 02385 0238N
TD PCK+16 ,PCK+21 00120 25 02381 02386
34078 B7 PATTY+12 00132 M9 00072 00000
34079 JOHNNY MA PCK+25 ,PCK+20 00140 70 02390 02385
34080 SM PCK+25 ,1 ,10 00152 12 02390 000-1
34090 MA PCK+20 ,PCK+25 ,11 00164 70 02385 02390
34094 BNF *-24 ,PCK+20 ,11 00176 M4 00152 0238N
34100 CF PCK+20 , ,6, REMOVE FLAG FROM B OPERAND
00188 33 0238N 00000
DC 2 ,05 ,350 00350 00002
TF PCK+15 ,ALPHA ,6 00200 20 0238- 00050
34150 B7 PCK+10 , ,6, RETURN TO MAINLINE PROGRAM
00212 49 0237N 00000
DEND 02141 02141

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FLOATING SHIFT LEFT

SYMBOL TABLE

NOSDIG 02401	ALPHA 00050R	BETA 00196R	BKSC 00072R	BLNK 00232R
CLR 00734R	EDGAR 00000R	FSL 00000R	LN10 00591R	LOGE 00543R
MK 00132R	NINE 00636R	ONEZ 00449R	OVFL 00266R	P 00000
PCK 02365	PICK 00198R	PIOV2 00496R	SAVE 00100R	UNFL 00334R
XX 00000	ZRES 00346R			

40010 FLS	DSA FLS				00004 00005 -0000
	DORG EDGAR				00000
	TRNM PCK+11	,PCK+10	,11		00000 30 02376 0237N
40015	DC 08	,50000505		,350	00350 00008
40020	TF ALPHA	,PCK+20	,11		00012 K6 00050 0238N
40030	AM PCK+10	,11	,10		00024 11 02375 000J1
40040	MF MK+2	,ALPHA			00036 PJ 00134 00050
40050	TFM BKSC+35	,ALPHA			00048 JO 00107 -0050
40070	TFM MK+11	,BLNK+1			00060 JO 00143 -0233
40080 BKSC	SM BKSC+35	,1	,10		00072 J2 00107 000-1
40090	SM MK+11	,1	,10		00084 J2 00143 000-1
40100	BNF BKSC	,XX			00096 M4 00072 00000
40110	TD PCK+20	,BLNK	,6		00108 2N 0238N 00232
40120	SM MK+11	,1	,10		00120 J2 00143 000-1
40130 MK	TRNM PCK+15	,XX	,6		00132 30 0238- 00000
40140	BD MK-12	,PCK+20	,11		00144 M3 00120 0238N
40150	TRNM PCK+15	,BKSC+35	,611		00156 3- 0238- 0010P
40160	MF PCK+20	,MK+2	,6		00168 7J 0238N 00134
40170	B7 PCK+10	,	,6		00180 49 0237N 00000
40180 BLNK	DC 46	,00			00232 00046
	DEND 02151				02151

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36150* TRANSMIT FIELD FLOATING ROUTINE

SYMBOL TABLE

NOSDIG 02401	ALPHA 00050R	BETA 00196R	CLR 00734R	EDGAR 00000R
LN10 00591R	LOGE 00543R	NINE 00636R	ONEZ 00449R	OVFL 00266R
P 00000	PCK 02365	PICK 00198R	PIOV2 00496R	SAVE 00100R
TFLS 00000R	UNFL 00334R	XX 00000	ZRES 00346R	

40110	DSA TFLS				00004 00005 -0000
	DORG EDGAR				00000
40120 TFLS	TRNM **14	,PCK+10	,11		00000 L0 00014 0237N
40130	TFL XX	,XX			00012 06 00000 00000
40140	AM PCK+10	,11	,10		00024 11 02375 000J1
40150	B7 PCK+10	,	,6		00036 49 0237N 00000
	DEND 02161				02161

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37020* FLOATING BRANCH AND TRANSMIT ROUTINE

SYMBOL TABLE

NOSDIG 02401	ALPHA 00050R	BETA 00196R	BTF51 00000R	CLR 00734R
EDGAR 00000R	LN10 00591R	LOGE 00543R	MOV 00036R	ND 00048R
NINE 00636R	ONEZ 00449R	OVFL 00266R	P 00000	PCK 02365
PICK 00198R	PIOV2 00496R	SAVE 00100R	UNFL 00334R	XX 00000
ZRES 00346R				

36020	BTF51	DSA	BTF51						00004	00005	-0000
		DORG	EDGAR						00000		
		TRNM	MOV+2	,PCK+10	,11,	STORE	A+B	OPERANDS			
		AM	PCK+10	,11	,10				00000	L0	00038 0237N
		TF	ND+6	,PCK+10					00012	11	02375 000J1
36090	MOV	BTF51	XX	,XX	,,	MOVE	EXP	AND	BR	00024	K6 00054 02375
36100	ND	B7	XX	,					00036	07	00000 00000
		DEND	02171						00048	49	00000 00000
									02171		

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* AUTO FLOATING PT SET 03.SPSIID SUBROUTINES MONITOR II

SYMBOL TABLE

NOSDIG 02401	ALPHA 00050R	BETA 00196R	CLR 00710R	EDGAR 00000R
LN10 00567R	LOGE 00519R	NINE 00612R	ONEZ 00425R	OVFL 00266R
P 00000	PCK 02365	PICK 00198R	PIOV2 00472R	SAVE 00100R
UNFL 00322R	XX 00000	ZRES 00334R		

02040***** FOR OPERANDS A AND B ONLY
 01080***** PCK AREA MAY BE USED AS A WORK AREA IF SUBR NOT USED. IF
 01090***** SUBROUTINES REQUIRED, THEN THE AREA IS USED AS FOLLOWS
 ***** 2398 MANTISSA LENGTH SOURCE, SUBROUTINE SUPERVISOR
 01100***** 02401 NOISE DIGIT. SOURCE, SUBROUTINE SUPERVISOR
 01110***** PCK ADR OF PICK. SOURCE, SUBROUTINE SUPERVISOR
 01120***** PCK+5 ADR OF RETURN TO SUBR. SOURCE, SUBROUTINE
 01130***** PCK+10 ADR OF RETURN TO MAINLINE. SOURCE, PRIMARY LINKAGE
 01140***** PCK+15 ADR OF A OPERAND CHARACTERISTIC. SOURCE, PICK
 01150***** PCK+20 ADR OF B OPERAND CHARACTERISTIC. SOURCE, PICK
 01160***** PCK+25 ADR OF A OPERAND MANTISSA. SOURCE, PICK
 01170***** PCK+30 ADR OF B OPERAND MANTISSA. SOURCE, PICK
 01180***** PCK+31 RESERVED FOR POSSIBLE RECORD MARK
 01200***** PCK-5 THRU PCK-89 SUBVEC FOR THE 17 FURNISHED SUBROUTINES
 02010* ADRS ARE SUPPLIED BY THE SUBROUTINE SUPERVISOR
 02020***** PCK-90 DOWN TO END OF IORT MAY BE USED IF NO ADDED SUBROUTS
 DSA PICK 00004 00005 -0198
 EDGAR DS ,+4 00000 00000
 DORG EDGAR 00000
 02100 ALPHA DS 51 00050 00051
 02110 P DS ,ALPHA-ALPHA,, ABS ZERO IND OPER REFERENCES PICK
 00000 00000
 XX DS ,0, INDICATES FIELD IS MODIFIED BY PGM
 00000 00000
 02130 SAVE DS .50 00100 00050
 02140 BETA DS 96 00196 00096
 DS 1 00197 00001
 02160 PICK TR 401 ,BETA+1-P ,1, RESET ERROR INDICATOR
 00198 2N 00401 00197
 02170 TD PCK+11 ,PCK+10 ,11, MOVE OPERANDS FROM MAINLINE
 00210 31 02376 0237N
 03000 AM PCK+10 ,11 ,10, CALC RETURN ADR 00222 11 02375 000J1
 03130 TFL BETA ,PCK+20 ,11, MOVE B TO BETA
 00234 -6 00196 0238N
 03150 BV PCK+5 , ,6, RETURN TO SUBROUTINE
 00246 46 0237- 01400
 00258 49 0237- 00000
 DC 14 ,00100110000020 ,350 00350 00014
 04030 OVFL TDM 401 , -1 00266 15 00401 0000J
 SF NINE-44 , , +L 00278 L2 00568 00000

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FLOATING ARITHMETICS

SYMBOL TABLE

ZRODIV	00196R	NOSDIG	02401	ALPHA	00050R	BETA	00196R	CLR	00710R
EDGAR	00000R	FA3	00020R	FD3	00060R	FLOP	00116R	FM3	00040R
FS3	00000R	LN10	00567R	LOGE	00519R	MOVE	00072R	NINE	00612R
ONEZ	00425R	OVFL	00266R	P	00000	PCK	02365	PICK	00198R
PIOV2	00472R	SAVE	00100R	UNFL	00322R	UNFLO	00176R	XX	00000
ZRES	00334R								

	DSA	FS3	,FA3	,FM3	,FD3	00004	00005	-0000
						00009	00005	-0020
						00014	00005	-0040
						00019	00005	-0060
						00000		
FS3	DORG	EDGAR				00000	J5	00117 00002
	TDM	FLOP+1	,2			00012	M9	00084 00000
	B7	MOVE+12				00020	J5	00117 00001
FA3	TDM	FLOP+1	,1			00032	M9	00084 00000
	B7	MOVE+12				00040	J5	00117 00003
FM3	TDM	FLOP+1	,3			00052	M9	00072 00000
	B7	MOVE				00350	00004	
	DC	4,0005,350				00060	J5	00117 00009
FD3	TDM	FLOP+1	,9			00072	20	00079 00693
MOVE	TF	79	,CL	R-17		00084	10	02370 -0104
	TFM	PCK+5	,FLOP-12			00096	49	0236N 00000
	B7	PCK	,	,6		00104	M6	00116 01500
	BXV	++12				00116	01	0238- 0238N
FLOP	FADD	PCK+15	,PCK+20	,611		00128	M6	00196 01400
	BV	ZRODIV				00140	47	0237N 01500
	BNXV	PCK+10	,	,6		00152	15	00401 0000J
	TDM	401	,-	,1		00164	44	0237N 0238-
	BNF	PCK+10	,PCK+15	,611		00176	33	00401 0-0-0
UNFLO	CF	401	,0000	,810		00188	49	0237N 00000
	B7	PCK+10	,	,6		00196	15	00401 0000-
ZRODIV	TDM	401	,0	,11		00208	0J	0238- 00187
	FADD	PCK+15	,UNFLO+11	,6		00220	47	0237N 01200
	BNZ	PCK+10	,	,6		00232	16	0238- 000RR
	TFM	PCK+15	,99	,61011		00244	49	0237N 00000
	B7	PCK+10	,	,6		03024		
DEND		03024						

FLOATING SQUARE ROOT

SYMBOL TABLE

NOSDIG	02401	ALPHA	00050R	BETA	00196R	CLR	00710R	EDGAR	00000R
FSQR3	00000R	LN10	00567R	LOGE	00519R	LSQ	00216R	LSQM	00324R
NINE	00612R	ONEZ	00425R	OVFL	00266R	P	00000	PCK	02365
PICK	00198R	PIOV2	00472R	SAVE	00100R	SQEX	00424R	SQ2	00112R
SQ3	00368R	UNFL	00322R	XX	00000	ZRES	00334R		

	DSA	FSQR3				00004	00005	-0000
	DORG	EDGAR				00000		
10160	FSQR3	TFM	PCK+5	,+20	,17	00000	10	02370 -0020
10170		B7	PCK	,	,6	00012	49	0236N 00000
						00000	0805	04000056000000005,350
10150		DC	42	,075050	0550000002	00350	00042	
10190		BD	++20	,BETA-1	-P,0,	00020	ML	00040 00195
10200		B7	ZRES	-P,	,,	00032	M9	00334 00000
						00040	J3	00196 000N0
11020		MM	BETA	-P,50	,10,	00052	MM	00088 00194
						00064	L3	00194 00000
11040		CF	BETA-2	-P	,,	00076	15	00401 00000
11050		TDM	401	,0	,,	00088	M3	00368 00098
11060		BD	SQ3	,98	,0,	00100	J6	00154 -0097
11070		TFM	SQ2+42	,97	,,	00112	71	00097 00099
11090	SQ2	MF	97	,99	,,	00124	K6	00471 00097
		TF	SQEX+47	,97	,,	00136	20	00099 00618
						00148	20	00000 00194
11110		TF	99	,CLR-92-P	,,	00160	J6	00234 -0097
11120		TF		,BETA-2	-P,,	00172	K0	00239 00386
						00184	K0	00318 00234
11130		TFM	LSQ+18	,97	,,	00196	K0	00194 00377
						00208	M9	00324 00000
11140		TF	LSQ+23	,SQ3+18	,01,	00216	J1	0023R 000-2
11150		TF	LSQM-6	,LSQ+18	,,			
11160		TF	BETA-2	-P,ONEZ-48-P,,	,,			
11170		B7	LSQM	,	,0,			
11200	LSQ	AM	LSQ+23	,2	,0610,			
12010		S		,	,,			

12020	BNN	LSQ	,	,0,	CONTINUE UNTIL MANT IS NEG	00228 22 00000 00000
12030	CM	LSQ+23	,BETA-2	-P,07		00240 M6 00216 01300
12040	BNL	SQEX	,	,0,	BR IF TERMINAL RESULT ADR	00252 JM 00239 -0194
12050	A	LSQ+18	,LSQ+23	,01611,	RESTORE LAST SUB	00264 M6 00424 01300
12060	CF	LSQ+18	,	,06		00276 KJ 0023M 0023R
12070	AM	LSQM-6	,01	,010,	REDUCE MANT FIELD LENGTH ONE	00288 L3 0023M 00000
12080	SF	LSQ+18	,02	,010,	STEP MANTISSA ADR,HI	00300 J1 00318 000-1
12090	LSQM	AM	LSQ+18	,02	ORDER,+2	00312 32 00000 00000
12100	AM	LSQ+23	,01	,010,	STEP RESULT ADR +1	00324 J1 00234 000-2
12110	SM	LSQ+23	,09	,0610,	STEP RESULT -9	00336 J1 00239 000-1
12120	B7	LSQ+12	,	,0,	CONT LOOP WITH NEXT 2 DIGITS	00348 J2 0023R 000-9
11190	DC	16	,70700200065020,316			00360 M9 00228 00000
12140	SQ3	AM	99	,50	ADD .5 TO CHAR/2	00316 00016
12150	TDM	BETA-2	-P,0	,211,-L,	LENGTHEN MANT FOR ODD CHAR	00368 11 00099 000N0
12160	CF	BETA-1	-P,	,,	-L,	00380 J5 -0194 0000-
12170	TFM	SQ2+42	,98	,,	,L	00392 L3 00195 00000
12180	B7	SQ2	,	,,	BR TO STORE CHAR + INIT LOOP	00404 J6 00154 -0098
12200	SQEX	TF	80	,CLR-100-P,,	,+L	00416 M9 00112 00000
13010	MM	BETA-2	-P,50	,10,	RESULT/2	00424 20 00080 00610
13020	SF	98	,	,,	DEFINE FIELD	00436 J3 00194 000N0
	TFM	99	,	,,	INSERTS CHAR	00448 32 00098 00000
	TFL	PCK+15	,99	,6,	STORE RESULT	00460 16 00099 -0000
13040	B7	PCK+10	,	,6,	RETURN TO MAINLINE	00472 06 0238- 00099
	DEND	03061				00484 49 0237N 00000
						03061

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FLOATING SIN-COSINE

SYMBOL TABLE

NOSDIG	02401	AAB	00910R	AB	00914R	ALPHA	00050R	BETA	00196R
BRD	00208R	CLF	00088R	CLR	00710R	DONE	00588R	EDGAR	00000R
FCOS3	00000R	FSIN3	00032R	H34	01011R	LN10	00567R	LOGE	00519R
NINE	00612R	ONEZ	00425R	OVER	00400R	OVFL	00266R	P	00000
PCK	02365	PI	00962R	PICK	00198R	PIOV2	00472R	PLACE	00716R
POZCH	00760R	SAVE	00100R	SUM	00472R	TWOPI	01009R	UNFL	00322R
XX	00000	ZRES	00334R						

13100	FCOS3	DSA	FCOS3	,FSIN3		00004	00005	-0000
		DORG	EDGAR			00009	00005	-0032
		TFM	CLF+11	,010	,09,	00000		00000
13110	TFM	PCK+5	,CLF	,17		00000	J6	00099 00-10
13120	B7	PCK	,	,6,		00012	10	02370 -0088
13140	FSIN3	TFM	CLF+11	,-011	,09,	00024	49	0236N 00000
13150	TFM	PCK+5	,**20	,17		00032	J6	00099 00-1J
13160	B7	PCK	,	,6,		00044	10	02370 -0064
13180	DC	46	,0500507056	5000510007	0507005651	0070510000	505608,348	
13190	BNF	**36	,BETA-2	-P		00076	J5	00098 00000
13200	TDM	CLF+10	,0	,0,		00088	L3	00194 00000
						00100	L3	00195 00000
14010	CLF	CF	BETA-2	-P		00112	K0	00100 00616
14020	CF	BETA-1	-P,	,,	-L	00124	J4	00196 000-0
14030	TF	SAVE	-P,CLR-94-P	,,	,+L	00136	M6	00760 01300
						00148	J4	00196 000--
14040	CM	BETA	-P,00	,10	,+L	00160	M7	00208 01300
14050	BNL	POZCH	,0	,0,		00172	JO	00202 -0100
						00184	KK	00202 00196
14060	CM	BETA	-P,00	,1011,	,+L	00196	3J	00000 00195
14070	BL	BRD	,	,0,		00208	ML	00232 00099
						00220	KJ	00100 00427
14080	TFM	**30	,SAVE	-P,07,	,-L	00232	KK	00100 00964
14090	S	**18	,BETA	-P,0				
14100	TR		,BETA-1	-P,,	,-L			
14110	BRD	BD	**24	,CLF+11	,01,			
14120	A	SAVE-P	,PIOV2-45-P,,		,+L			
14130	S	SAVE	-P,TWOPI-45	,1,	,+L			

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14140 BH *-12 , ,0, SUB 2 PI FROM MANT UNTIL NEG
14150 SF SAVE-1 -P, ,, -L 00244 M6 00232 01100
14160 A SAVE -P,PI-45 ,, ,+L 00256 L2 00099 00000
14170 BN **36 , ,0 00268 KJ 00100 00917
14180 SM CLF+10 ,01 ,010 00280 M7 00316 01300
14190 SF SAVE -P 00292 J2 00098 000-1
14200 A SAVE -P,PIQV2-45-P,, ,+L 00304 L2 00100 00000
15010 TF 80 ,CLR-106-P,, ,2L 00316 KJ 00100 00427
15020 DC 48,5552705600 0002202000 5055000000 0008550000 00560050 ,348
00348 00048
15030 M SAVE -P,SAVE -P 00340 KL 00100 00100
15040 TF SAVE -P,98 ,, , -L 00352 K6 00100 00098
15050 SF SAVE-1 -P, ,, -L 00364 L2 00099 00000
15060 TF BETA -P,ONEZ-47-P,, ,+LSET BETA EQUAL 1 PLUS L+1 ZERO
00376 KO 00196 00378
15070 TRM AAB-3 ,H34-1 ,01 00388 LJ 00907 01010
15080 OVER TDM SUM+1 ,2 ,011, SET FOR SUBTRACTION
00400 J5 00473 0000K
15090 TF 99 ,98 ,, , -L 00412 Z6 00099 00098
15100 TFM 97 ,0000 ,8, -L 00424 L6 00097 0-000
15110 D 98 ,AB ,, -L 00436 ZR 00098 00914
15120 BZ DONE , ,0, BR IF QUOTIENT ZERO
00448 M6 00588 01200
15130 TF ALPHA -P,95 00460 K6 00050 00095
15140 SUM S BETA -P,ALPHA -P 00472 KK 00196 00050
15150 AM AAB ,2 ,010 00484 JI 00910 000-2
15160 AM AAB-2 ,2 ,010 00496 JI 00908 000-2
15170 M AAB ,AAB-2 ,01, 4DIGIT PRODUCT
00508 KL 00910 00908
15180 TF AB ,99 ,0 00520 K6 00914 00099
15190 TF 80 ,CLR-106-P,, ,2L 00532 Z0 00080 00604
15200 M SAVE -P,ALPHA -P 00544 KL 00100 00050
16010 BNF OVER ,SUM+1 ,01 00556 MM 00400 00473
16020 TDM SUM+1 ,1 ,0, SET TO ADD 00568 J5 00473 00001
16030 B7 OVER+12 , ,0, 00580 M9 00412 00000
16050 DONE C BETA-1 -P,CLR-95-P,, ,+L 00588 KM 00195 00615
16060 BE POZCH+60 , ,0, BR IF L+1 ZEROS
00600 M6 00820 01200
16070 TFM SAVE -P,01 ,10 00612 J6 00100 000-1
16080 DC 48,0750775070 0000505505 5000500051 0000505000 05057005,350
00350 00048
16090 BD PLACE-24 ,BETA-1 -P,0, , -LBR IF NORMALIZATION NOT REQ
00624 ML 00692 00195
16100 SM SAVE -P,01 ,10 00636 J2 00100 000-1
16110 TR BETA-1 -P,BETA -P,, , -L, -L 00648 LJ 00195 00196
16120 TD BETA-1 -P,NOS DIG ,, ENTER NOISE DIGIT
00660 K5 00195 02401
16130 SF BETA-1 -P, ,, -L 00672 L2 00195 00000
16140 B7 *-60 00684 M9 00624 00000
16160 BD PLACE ,CLF+10 ,01 00692 ML 00716 00098
16170 SF BETA-2 -P 00704 L2 00194 00000
PLACE TF BETA -P,SAVE -P,, STORE CHAR 00716 KO 00196 00100

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TFL PCK+15 ,BETA -P,6, STORE RESULT
00728 00 0238- 00196
16200 TD ALPHA+1-P,H34+7 ,1, RESTORE RM 00740 KN 00051 01018
17010 B7 PCK+10 , ,6, RETURN TO MAINLINE PROGRAM
00752 49 0237N 00000
17030 POZCH CM BETA -P,03 ,10 00760 J4 00196 000-3
17040 BL **80 , ,0, BR IF CHAR SMALLER THAN 03
00772 M7 00852 01300
17050 CM BETA -P,00 ,10, ,+L 00784 J4 00196 000-0
17060 BNH **44 , ,0, BR IF CHAR LESS OR EQUAL L
00796 M7 00840 01100
17070 TDM 401 ,0 ,11, CHAR TOO LARGE
00808 15 00401 0000-
17080 TD ALPHA+1-P,H34+7 ,, RESTORE RM 00820 KN 00051 01018
17100 B7 ZRES 00832 M9 00334 00000
17120 TDM 401 ,0 00840 15 00401 00000
17130 TFM **42 ,SAVE-1 -P,07, ADJ TO SUB TWO PI FROM MANT
00852 JO 00894 -0099
17140 S **30 ,BETA -P,0, UNTIL REDUCED TO NEG NUMBER
00864 KK 00894 00196
17150 TDM BETA-2 -P,0 ,11, -L 00876 J5 00194 0000-
17160 TF ,BETA-2 -P 00888 Z0 00000 00194
17170 B BRD , ,0 00900 M9 00208 00000
17180 DORG **4 00907
17190 AAB DS 4 00910 00004
17200 AB DS 4 00914 00004
18010 DS 1 00915 00001
18020 PI DC 47 ,31415926535897932384626433832795028841971693993
00962 00047
18030 TWOPI DC 47 ,62831853071795864769252867665590057683943387987
01009 00047
18040 H34 DC 2 ,01 01011 00002
18050 DC 2 ,02 01013 00002
18060 DC 5 ,00020 01018 00005
DEND 03072 03072

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FLOATING ARC TANGENT

SYMBOL TABLE

NOSDIG	02401	ALPH	00196R	ALPHA	00050R	ATN1	00424R	BETA	00196R
CLR	00710R	EDGAR	00000R	EOD	01040R	FATN3	00000R	LN10	00567R
LOGE	00519R	NINE	00612R	ONEZ	00425R	OVFL	00266R	P	00000
PCHAR	00836R	PCK	02365	PICK	00198R	PIOV2	00472R	PIOV4	01326R
SAVE	00100R	SIX	01235R	TAN6	01281R	TEST	00064R	TEST1	00792R
TEST2	00652R	UNFL	00322R	XX	00000	ZRES	00334R		

18090	FATN3	DSA	FATN3					00004	00005	-0000
18100		DORG	EDGAR					00000		
		TFM	PCK+5	,**20	,17			00000	10	02370 -0020
		B7	PCK	,	,6,					BR TO PICK AND RETURN
18130		DC	50	,0700055050	0000510005	0576705070	7000065020	51500825,350		
18120		TFM	TEST+11	,	,08,			00012	49	0236N 00000
18140		BD	**20	,BETA-1	-P,0,	,-L		00020	J6	00075 0-000
18170		B7	TEST1+24					00032	ML	00052 00195
		TD	TEST+9	,BETA-2	-P,0,			00044	M9	00816 00000
18180	TEST	CF	BETA-2	-P				00052	KN	00073 00194
18190		CM	BETA	-P,	,10			00064	L3	00194 00000
18200		BH	PCHAR	,	,0,			00076	J4	00196 000-0
19010		BE	ALPH	,	,0,			00088	M6	00836 01100
19020		CM	BETA	-P,-99999	,10,	+L		00100	M6	00196 01200
19030		BL	EOD	,	,0,			00112	J4	00196 999RR
19040		TFM	ALPH-1	,BETA-2	-P,07			00124	M7	01040 01300
19050		A	ALPH-1	,BETA	-P,0			00136	JD	00195 -0194
19060		TF	BETA-2	-P,CLR-96-P	,,	-L,+L		00148	KJ	00195 00196
19070		CF	BETA-1	-P,	,,	-L		00160	KO	00194 00614
19080		TF	BETA-2	-P,	,,			00172	L3	00195 00000
19090	ALPH	SF	BETA-1	-P,	,,	-L		00184	K6	00194 00000
19100		CM	BETA	-P,29	,10,	-L		00196	L2	00195 00000
19110		BL	ATN1-72	,	,0,			00208	J4	00196 000K9
19120		TF	79	,CLR-100-P,	,,	+L		00220	M7	00352 01300
19130		MM	BETA-2	-P,6	,10,			00232	ZD	00079 00610
								00244	J3	00194 000-6

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19140	TDM	98		,-1	,,	-L		1+6*MANT	IN 99	
19150	S	BETA-2	-P,SIX-45	,1,		+L		MANT-.6	L DIGITS	
19160	TF	ALPHA	-P,99	,,				10+6*MANT	MOVED TO ALPHA.L+2DG	
19170	TF	99	,CLR-94-P	,,		,2L		2L+2	ZEROS	
19180	LD	98	,BETA-2	-P,,		-L,		L DIGITS	1	
19190	DC	48	,2552000855	5256030106	2020055008	5552000000	56550855,348			
19200	D	100	,ALPHA	-P,,		-L,		L+2 DIGITS	00316	2R 00100 00050
20010	TF	BETA-2	-P,97	,,		-L		MANT IS MANT-.6+MANT		
20020	SF	TEST+11	,	,0,				IND THIS CALC	MADE	
20030	TF	80	,CLR-106-P,	,,		,2L		ZEROS		
20040	M	BETA-2	-P,BETA-2	-P,,				SQUARE MANT	00364	KL 00194 00194
20050	TF	SAVE	-P,99	,,		-L		SAVE IS MANT+MANT.L	DIGITS	
20060	TF	ALPHA	-P,CLR-95	-P,,		+L		INIT ALPHA TO 00	L+1	ZEROS
20070	TFM	ATN1+35	,99999	,10,		,2L				
20080	TFM	ATN1-3	,99999	,10,		+L				
20090	ATN1	TF	99	,CLR-92-P	,,	+L		L+4	ZEROS	
20100	TFM	98	,10	,10,		-L				
20110	DM	98	,	,,		-L				
20120	S	96	,ALPHA	-P						
20130	TF	ALPHA	-P,96	,,				L+1	DIGITS	
20140	TF	80	,CLR-106-P,	,,		,2L				
20150	M	ALPHA	-P,SAVE	-P,,				2L+1	DIGITS	
20160	TF	ALPHA	-P,99	,,		-L		L+1	DIGITS	
20170	SM	ATN1+35	,2	,010						
20180	SM	ATN1-3	,1	,010						
20190	BNZ	ATN1	,	,0,				BR IF LESS THAN	L-1	PASSES
20200	TF	SAVE	-P,ONEZ-47-P,	,,		+L		L+2	DIGITS	
21010	S	SAVE	-P,ALPHA	-P,,				ONE MINUS SUM OF%COEF*MANT**2		
21020	TF	80	,CLR-106-P,	,,		,2L				
21030	M	SAVE	-P,BETA-2	-P,,				2L+2	DIGIT PRODUCT	
21040	DC	48	,0000202100	2026502504	5044200040	5200500500	00084025,348			
21050	BNF	TEST2	,TEST+11	,01				00348	00048	
21060	BNN	TEST2-12	,	,0				00604	MM	00652 00075
								00616	M6	00640 01300

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FLOATING EXPONENTIAL

SYMBOL TABLE

NOSDIG	02401	GOBACK	01028R	ALPHA	00050R	BETA	00196R	CALC	00468R
CLR	00710R	EDGAR	00000R	E12	00436R	FACT	00740R	FEXT3	00020R
FEX3	00000R	GORD	00608R	LN10	00567R	LOGE	00519R	NINE	00612R
ONEZ	00425R	OVFL	00266R	P	00000	PCK	02365	PICK	00198R
PIOV2	00472R	RECIP	00888R	SAVE	00100R	SETUP	00144R	TEN34	01093R
UNFL	00322R	XX	00000	ZRES	00334R				

	DSA	FEXT3	,FEX3					00004	00005	-0020		
								00009	00005	-0000		
								00000				
24110	FEX3	DORG	EDGAR					00000	J5	00145	00001	
		TDM	SETUP+1	,1	,0,	ALLOW	MUL	BY	LOG	E	FOR	EXP
24120		B7	FEXT3+12	,	,0			00012	M9	00032	00000	
24140	FEXT3	TDM	SETUP+1	,9	,0,	PREVENT	MUL	BY	LOG	E	FOR	EXT
24150		TFM	PCK+5	,**20	,17			00020	J5	00145	00009	
24160		B7	PCK	,	,6,	BR	TO	PICK	AND	RETURN		
24180		DC	46,0056070005	5020250008	5604504052	0052510050	000050	,348				
								00348	00046			
		TFM	GOBACK-1	,01	,10			00052	J6	01027	000-1	
24200		TF	ALPHA-2-P,DNEZ-45-P,	,	,+L	DNE.	L+4	DIGIT	MANTISSA			
25010		BD	**20	,BETA-1	-P,0,	,+L		00064	KD	00048	00380	
25020		B7	GOBACK-12,	,	,+L	BR	IF	MANT	ZERO			
								00088	M9	01016	00000	
25040		TD	RECIP-1	,BETA-2	-P,0,	NON	ZERO	MANTISSA				
25050		CF	BETA-2	-P				00096	KN	00887	00194	
25060		TFM	101	,	,+L			00108	L3	00194	00000	
25070		TF	97	,BETA-2	-P,	-L		00120	16	00101	-0000	
								00132	20	00097	00194	
25080	SETUP	B	**92	,	,0,	MUL	BY	LOG	E	IF	EXP	
25100		TF	80	,CLR-106-P,	,+2L			00144	M9	00236	00000	
25110		M	BETA-2	-P,LOGE-45-P,	,+L			00156	20	00080	00604	
								2L+2	DIGIT	PRODUCT		
25120		BD	**56	,98	,0,	-2L		00168	KL	00194	00474	
								BR	IF	HIDORDER	NOT	ZERO
25130		SM	BETA	-P,1	,10			00180	M3	00236	00098	
25140		SF	99	,	,+L			00192	J2	00196	000-1	
25150		TF	BETA-2	-P,102	,+L	MOVE	L+4	DIGITS				
								00216	K6	00194	00102	
25160		B7	**20	,	,0			00228	M9	00248	00000	
25180		TF	BETA-2	-P,101	,+L	MOVE	L+4	DIGITS				

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25190	CM	BETA	-P,-00	,1011	,+L			00236	K6	00194	00101	
25200	BNH	GOBACK-12,	,	,0,	BR	IF	CHAR	LESS	THAN	-L		
26010	CM	BETA	-P,	,10,				00260	M7	01016	01100	
26020	BE	CALC	,	,0,	BR	IF	CHAR	ZERO				
								00272	J4	00196	000-0	
26030	BL	CALC+68	,	,0,	BR	IF	CHAR	BETWEEN	-L	AND	ZERO	
								00296	M7	00536	01300	
26040	CM	BETA	-P,2	,10				00308	J4	00196	000-2	
26050	BH	E12	,	,0,	BR	IF	CHAR	LARGER	THAN	2		
26070	BL	**44	,	,0,	BR	IF	CHAR	BETWEEN	0	AND	+2	
26060	DC	46, 07770070	7007770050	5090007000	7000000505	76705070,	348	00348	00046			
		A	GOBACK-1	,BETA-4	-P,	-L	CHAR	EQUALS	P2			
26090	TR	BETA-5	-P,BETA-3	-P,	-L,-L	SHIFT	LEFT	2	POSITIONS			
26100	B7	E12-12	,	,11,	-L	CHAR	EQUALS	+1				
26120	TDM	BETA-6	-P,	,11,	-L	CHAR	EQUALS	+1				
								00376	J5	00190	0000-	
26130	CF	BETA-5	-P,	,+L				00388	L3	00191	00000	
	A	GOBACK-1	,BETA-5	-P,	-L			00400	KJ	01027	00191	
26150	TR	BETA-5	-P,BETA-4	-P,	-L,-L	SHIFT	LEFT	1	POSITION			
								00412	LJ	00191	00192	
26160	BNV	**32	,	,0,	BR	IF	ADJ	CHAR	DOES	NOT	OVFLOW	
								00424	M7	00456	01400	
26170	E12	BNF	OVFL	-P,RECIP-1	,1,	BR	IF	MANT	POSITIVE			
								00436	MM	00266	00887	
26180	B7	UNFL	-P	,	,+L			00448	M9	00322	00000	
26200	SF	BETA-5	-P,	,+L				00456	L2	00191	00000	
27010	CALC	TFM	**9	,	,0810,	INIT	SIZE	IND				
								00468	J6	00477	0-0-0	
27020	CM	BETA-4	-P,34	,10,	-L	BR	IF	BETA	LESS	THAN	.34	+CHAR
27030	BL	GORD	,	,0,				00492	M7	00608	01300	
27040	SM	BETA-4	-P,34	,10,	-L	ADJ	BETA	BY	-.34			
								00504	J2	00192	000L4	
27050	AM	CALC+9	,1	,010,		STEP	SIZE	IND				
								00516	J1	00477	000-1	
27060	B7	CALC+12	,	,0,		CONTINUE	REDUCTION	OF	BETA			
								00528	M9	00480	00000	
27080	TFM	**59	,BETA-4	-P,07,		PROCESS	IF	CHAR	NEG			
								00536	J0	00595	-0192	
27090	A	**47	,BETA	-P,0				00548	KJ	00595	00196	
27100	TF	BETA-6	-P,CLR-96-P,	,+L		L+4	DIGIT	FIELD				
								00560	KD	00190	00614	
27110	CF	BETA-5	-P,	,+L				00572	L3	00191	00000	
27120	TF	BETA-4	-P,	,+L		SHIFT	RIGHT	W	R	T	CHAR	SIZE
								00584	K6	00192	00000	
27130	SF	BETA-5	-P,	,+L				00596	L2	00191	00000	

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27140 DC 44,0856405252 0055085502 2020005000 0000000851 4052 ,348
 27150 GORD TF 80 ,CLR-106-P,, ,2L 00348 00044 00608 20 00080 00604
 27160 M BETA-4 -P, LN10-46-P,, ,+L 2L+4 DIGIT PRODUCT 00620 KL 00192 00521
 27170 SF 97 , , -2L 00632 32 00097 00000
 27180 TF SAVE -P,99 , , , -L L+4 DIGIT FIELDS
 27190 TF BETA-2 -P,99 , , , -L 00644 K6 00100 00099
 27200 TFM FACT+11 ,2 , ,010 00656 K6 00194 00099
 28010 A ALPHA-2-P,SAVE -P 00668 J6 00751 000-2
 28020 TF 80 ,CLR-106-P,, ,2L 00680 KJ 00048 00100
 28030 M SAVE -P,BETA-2 -P,, ,2L+8 DIGIT PRODUCT 00692 20 00080 00604
 28040 TF 99 ,96 , , , -L L+6 DIGIT DIVIDEND 00704 KL 00100 00194
 28050 TFM 96 , , ,10, -L 00716 26 00099 00096
 28060 FACT DM 97 , , , -L 2 DIGIT DIVISOR. L+4 QUOTIENT 00728 16 00096 000-0
 28070 BZ FACT+56 , , ,0, BR WHEN TERM REDUCES TO ZERO 00740 19 00097 -0000
 28080 TF SAVE -P,97 , , , L+4 DIGIT FIELD 00752 M6 00796 01200
 28090 AM FACT+11 ,1 , ,010 00764 K6 00100 00097
 28100 B7 FACT-60 , , ,0, CALC NEXT TERM 00776 J1 00751 000-1
 28120 CM CALC+9 , , ,010 00788 M9 00680 00000
 28130 BE RECIP , , ,0, BR IF FURTHER ADJ NOT REQUIRED 00796 J4 00477 000-0
 28140 TF 80 ,CLR-106-P,, ,2LADJUST FOR REDUCTNS BY .34 00808 M6 00888 01200
 28150 M ALPHA-4-P,TEN34-45 ,1 ,L 2L+4 DIGIT PRODUCT 00820 20 00080 00604
 28160 SF 97 , , , -2L 2L+3 DIGITS 00832 KL 00046 01048
 28170 TF ALPHA-4-P,98 , , , -L L+2 DIGITS 00844 32 00097 00000
 28180 SM CALC+9 ,1 , ,010, REDUCE INDICATOR 00856 K6 00046 00098
 28190 B7 *-84 , , ,0 00868 J2 00477 000-1
 29010 DC 26, 0000084025 0000000200 005005 ,350 00880 M9 00796 00000
 29020 RECIP BNF GOBACK-12,RECIP-1 ,01, BR IF MANT WAS POSITIVE 00900 L2 01027 00000
 SF GOBACK-1 , , , MAKE CHAR NEGATIVE 00912 20 00099 00616
 29040 TF 99 ,CLR-94-P , , ,2L+2 DIGIT DIVIDEND 00924 16 00099 000J0
 29050 TFM 99 ,10 , ,10, -2L, 2L+2 DIGIT DIVIDEND 00936 2R 00100 00046
 29060 D 100 ,ALPHA-4-P,, , -L, L+2 DIGIT DIVISOR 00948 M6 01004 01400
 29070 BV GOBACK-24, , ,0, BR IF ORIG OPER 1 OR 1/LOGE 00960 J1 01027 000-1
 AM GOBACK-1 ,01 , ,10

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TF **23 ,GOBACK-1 ,6 00972 KO 0099N 01027
 TFL PCK+15 ,99 ,6, , -L STORE RESULT 00984 O6 0238- 00099
 29100 B7 PCK+10 , , ,6, RETURN TO MAINLINE 00996 49 0237N 00000
 29101 AM GOBACK-1,2,10 01004 J1 01027 000-2
 TFM ALPHA-4-P 01016 J6 00046 -0000
 GOBACK TFL PCK+15 ,ALPHA-4-P,6, STORE RESULT 01028 00 0238- 00046
 B7 PCK+10 , , ,6, RETURN TO MAINLINE 01040 49 0237N 00000
 29150 TEN34 DC 47 ,21877616239495525622261149163841873167118056246
 DEND 03102 01093 00047 03102

FLOATING LOG

SYMBOL TABLE

NOSDIG 02401	ALPHA 00050R	BETA 00196R	CLR 00710R	CORN 00596R
COUN 00368R	CZERO 00959R	EDGAR 00000R	FLN3 00020R	FLOG3 00000R
GOAL 00832R	LN10 00567R	LDGE 00519R	NINE 00612R	NLG 00876R
ONEZ 00425R	OVFL 00266R	P 00000	PCK 02365	PICK 00198R
PIGV2 00472R	PLUS 00680R	SAVE 00100R	UNFL 00322R	XX 00000
ZRES 00334R				

29190	FLOG3	DSA FLOG3 ,FLN3			00004 00005 -0000
					00009 00005 -0020
					00000
		DORG EDGAR			00000 J5 00597 00001
29200	B7	**20 ,	,0		00012 M9 00032 00000
30020	FLN3	TDM CORN+1 ,9	,0	SET FOR NATURAL LOG	
					00020 J5 00597 00009
30030	TFM	PCK+5 ,**20	,17		00032 10 02370 -0052
30040	B7	PCK ,	,6	BR TO PICK AND RETURN	
					00044 49 0236N 00000
29180	DC	28 ,0700 6050 0500500105 7070700055			,350
					00350 00028
		BD **44 ,BETA-1 -P,,	, -L	BR IF NON ZERO ARG	
					00052 ML 00096 00195
30060	TDM	401 ,0	,11	SET IND FOR LOG OR LN OF ZERO.	
					00064 15 00401 0000-
		SF NINE-45-P,	,,	PL SET UP TO STROE NEG NINES	
					00076 L2 00567 00000
		B7 OVFL+12-P,	,,	BR TO STORE AND RTN TO MAINLIN	
					00088 M9 00278 00000
30110	BNF	**36 ,BETA-2 -P,0,		BR IF MANT POSITIVE	
					00096 MM 00132 00194
30120	TDM	401 ,0	,,	SET IND FOR NEGATIVE	
					00108 15 00401 00000
30130	CF	BETA-2 -P,	,,	MAKE POSITIVE	
					00120 L3 00194 00000
30140	TFM	CORN-25 ,CZERO-45 ,017,	+L	INITIALIZE	00132 JO 00571 -0914
30150	TF	GOAL-13 ,BETA -P,0,		SAVE CHAR	00144 KO 00819 00196
30160	CF	BETA-1 -P,	,,	EXPAND FIELD TO L+1 DIGITS	
					00156 L3 00195 00000
30170	TDM	BETA-2 -P,1	,11	-L, ADD 1.0	00168 J5 00194 0000J
30180	CM	BETA-1 -P,15	,10	-L,	00180 J4 00195 0000J5
30190	BNL	**44 ,	,0	BR IF MOD MANT NOT LESS 1.5	
					00192 M6 00236 01300
30200	A	BETA-2 -P,BETA-2 -P,,		DOUBLE MANT. L+1 DIGITS	
					00204 KJ 00194 00194
31010	AM	CORN-25 ,48	,010	ADJ FOR NEXT CONSTANT	

31020	B7	**60 ,	,0		00216 J1 00571 000M8
31070	DC	42,56705508252552085552550103 5106202050			00228 M9 00168 00000
					00350 00042
31040	TF	ALPHA -P,ONEZ-48-P,,	,+L	L+1 DIGITS	
					00236 KO 00050 00377
31050	TDM	ALPHA -P,2	,11	-L, CONVERT TO TWOZ	
					00248 J5 00050 0000K
31060	S	ALPHA -P,BETA-2 -P,,		2.0 MINUS MOD MANT %2.0-Z#	
					00260 KK 00050 00194
31080	TF	99 ,CLR-93-P ,,	,2L		00272 20 00099 00617
31090	LD	97 ,ALPHA -P,,	-L,		00284 20 00097 00050
31100	D	98 ,BETA-2 -P,,	-L,	%2.0-Z#Z EQUALS Y	
					00296 2R 00098 00194
31110	TF	BETA -P,98	,,	-L L+2 DIGITS	
					00308 K6 00196 00098
31120	TF	80 ,CLR-106-P,,	,2L		00320 20 00080 00604
31130	M	BETA -P,BETA -P,,		2L+4 DIGITS	
					00332 KL 00196 00196
31140	TF	SAVE -P,97	,,	-L Y**2 L+2 DIGITS	
					00344 K6 00100 00097
31150	A	BETA -P,BETA -P,,		DOUBLE Y	00356 KJ 00196 00196
31160	COUN	TFM **9 ,99999 ,010,	,+L	INITIALIZE COUNT TO L-1 TERMS	
					00368 J6 00377 999R9
31170	TFM	COUN+71 ,99999 ,010,	,2L		00380 J6 00439 999R9
31180	TF	ALPHA -P,CZERO-46 ,,	,+L	L+2 DIGITS. ZERO ALPHA	
					00392 KO 00050 00913
31190	TF	99 ,CLR-92-P ,,	,+L		00404 20 00099 00618
31200	TFM	98 ,10 ,10,	-L,	OBTAIN RECIPROCAL TERM	
					00416 16 00098 000J0
32010	DM	98 ,	,,	-L,	00428 19 00098 -0000
32020	A	ALPHA -P,97	,,	L+2 DIGITS TO PREV TOTAL	
					00440 K1 00050 00097
32030	TF	80 ,CLR-106-P,,	,2L	PRODUCT OF Y**2 AND TOTAL OF	
					00452 20 00080 00604
32040	M	ALPHA -P,SAVE -P,,		PREVIOUSLY CALC TERMS	
					00464 KL 00050 00100
32050	TF	ALPHA -P,97	,,	-L L+2 DIGITS STORED TOTAL	
					00476 K6 00050 00097
32060	SM	COUN+71 ,2	,010	REDUCE DIVISOR	
					00488 J2 00439 000-2
32070	SM	COUN+9 ,1	,010	REDUCE NO OF UNCALC TERMS	
					00500 J2 00377 000-1
32090	BNZ	COUN+36 ,	,0	BR IF L-1 TERMS NOT CALC	
					00512 M7 00404 01200
320	DC	46, 08552550 5052000865 5250066005 5050605000 07770050,350			
					00350 00046
32100	TF	80 ,CLR-106-P,,	,2L		00524 20 00080 00604
32110	M	ALPHA -P,BETA -P,,		2Y * SUM OF L-1 TERMS	
					00536 KL 00050 00196
32120	A	97 ,BETA -P,,	-L	ADD 2Y TO ABOVE PRODUCT. L+2	
					00548 2J 00097 00196
32130	TF	BETA -P,	,,	SET WITH PROPER CONSTANT L+3	

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32140 SF BETA -P 00560 K6 00196 00000
32150 S BETA -P,97 ,, , -L SUB ACCUM TOTAL FROM CONSTANT
00572 L2 00196 00000
00584 K2 00196 00097

32160 CORN B NLG , ,0, BR IF FINDING NATURAL LOG
00596 M9 00876 00000

32170 TF 80 ,CLR-106-P,, ,2L 00608 20 00080 00604
32180 M LOGE-45-P,BETA -P,, +L, 00620 KL 00474 00196
32190 TF BETA -P,97 ,, , -L L+3 DIGITS 00632 K6 00196 00097
32200 SF BETA -P 00644 L2 00196 00000
33010 TF 80 ,CLR-100-P,, ,+L 00656 20 00080 00610
33020 M ONEZ-46-P,GOAL-13 ,1, +L, ORIG CHAR * ONE. L+5 DIGITS
00668 KL 00379 00819
00680 2J 00099 00196

33030 PLUS A 99 ,BETA -P 00692 K6 00196 00099
33040 TF BETA -P,99 ,, PREPARE FOR NORMALIZATION
00704 L3 00196 00000

33050 CF BETA -P 00716 K4 00618 00098
C CLR-92 -P,98 ,, ,+L
33060 BE ZRES -P, ,, BR IF L+5 ZEROS 00728 M6 00334 01200
TFM GOAL-1 ,03 ,10, SET CHAR EQUAL 3
00740 J6 00831 000-3

33080 BD GOAL-24 ,BETA-4 -P,0, , -L BR IF HI ORDER DIGIT NON-ZERO
00752 ML 00808 00192
33090 TR BETA-4 -P,BETA-3 -P,, -L,-L 00764 LJ 00192 00193
SM GOAL-1 ,01 ,10, REDUCE CHAR 00776 J2 00831 000-1
33110 TD BETA -P,NOS DIG ,, INSERT NOISE DIGIT
00788 K5 00196 02401

33120 B7 *-48 , ,0, CONTINUE NORMALIZATION
00800 M9 00752 00000
DC 16 ,7050005005000660 ,350 00350 00016
33150 SF BETA-4 -P, ,, -L, SET FIELD DEFINITION
00808 L2 00192 00000
00820 J6 00193 -0000

GOAL TFM BETA-3 00832 M4 00856 00099
BNF **24 ,99 ,, AFFIX SIGN AND RTN TO MAINLINE
00844 L2 00191 00000
SF BETA-5 -P 00856 00 0238- 00193
TFL PCK+15 ,BETA-3 -P,6 00868 49 0237N 00000
B7 PCK+10 , ,6
33190 NLG TF 80 ,CLR-100-P,, ,+L CONVERSION FOR LN
00876 20 00080 00610

33200 M LN10-45-P,GOAL-13 ,, +L, L+5 DIGITS 00888 KL 00522 00819
34010 B PLUS , ,0, RETURN TO COMMON SECTION
00900 M9 00680 00000

34030 CZERD DC 48 ,0 00959 00048
37090 DC 48,-69314718055994530941723212145817656807550013436
01007 00048

37100 DC 48,-138629436111989061883446424291635313615100026872
01055 00048

37110 DC 48,-207944154167983592825169636437452970422650040308
01103 00048

DEND 03122 03122
    
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FLOATING DATA TRANSMISSION ROUTINES

SYMBOL TABLE

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NOSDIG 0240I ALPHA 00050R BETA 00196R BTFS 00096R CLR 00710R
EDGAR 00000R FLOAT 00052R FSLS 00020R FSRS 00000R LN10 00567R
LOGE 00519R NINE 00612R ONEZ 00425R OVFL 00266R P 00000
PCK 02365 PICK 00198R P10V2 00472R SAVE 00100R TFLS 00040R
UNFL 00322R XX 00000 ZRES 00334R
    
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DSA FSRS ,FSLS ,TFLS ,BTFS 00004 00005 -0000
00009 00005 -0020
00014 00005 -0040
00019 00005 -0096
00000

FSRS DORG EDGAR 00000 J5 00077 00008
TDM FLOAT+25 ,8 00012 M9 00052 00000
B7 FLOAT
FSLS TDM FLOAT+25 ,5 00020 J5 00077 00005
B7 FLOAT
TFLS TDM FLOAT+25 ,6 00032 M9 00052 00000
FLOAT TR PCK+11 ,PCK+10 ,11 00040 J5 00077 00006
AM PCK+10 ,11 00052 31 02376 0237N
FSR PCK+15 ,PCK+20 ,611 00064 11 02375 -0011
B7 PCK+10 , ,6, RETURN TO MAINLINE 00076 08 0238- 0238N

BTFS TR PCK+11,PCK+10,11 00088 49 0237N 00000
AM PCK+10,11 00096 31 02376 0237N
TF **30,PCK+10 00108 11 02375 -0011
BTFL PCK+15,PCK+20,611 00120 K6 00150 02375
B7 00132 07 0238- 0238N
DEND 03144 00144 49 00000 00000
03144
    
```


00010	*****	1620 FORTRAN II-D	PHASE 1-A				
00020		DORG	02218		02218		
00030		DC	5	,-100	02222		5
				-010-			
00040		DSC	1	,2	02223		1
				2			
00050		DC	2	,67	02225		2
				07			
00060		DC	6	,987898	02231		6
				R87898			
00070	N1	DC	2	,0	02233		2
				-0			
00080	N2	DC	5	,0	02238		5
				-0000			
00090	W	DC	2	,0	02240		2
				-0			
00100	RECLG	DC	3	,000	02243		3
				-00			
00110	SAVSYM	DS	12	,RECLG	02243		12
00120	LENGTH	DS	5		02248		5
00130	FLNG	DS	2		02250		2
00140	KLNG	DS	2		02252		2
00150	PROGST	DC	5	,00000	02257		5
				-0000			
00160	COMADD	DC	5	,19999	02262		5
				J9999			
00170	USEDFS	DSC	30	,0	02263		30
				00000000000000000000000000000000			
00180	SUBFCT	DC	1	,0	02293		1
				-			
00190	PUSTSN	DSC	1	,0	02294		1
				0			
00200	WW	DS	2		02296		2
00210	FP2	DS	2		02298		2
00220	TEND	DS	5		02303		5
00230	LSTAD	DS	5		02308		5
00240	P2PTR	DS	5		02313		5
00250	FCYEND	DS	5		02318		5
00260		DS	5		02323		5
00270	FMON	TF		++42,FMON-1,,	02324	26	02366 02323
00280	TFM			IORT,++23	02336	16	00565 -2359
00290	B			IOGT,,7	02348	49	00566 -0000
00300	B			GO TO EXECUTE CALLED ROUTINE	02360	49	00000 00000
00310	DORG			++4	02367		
00320	JAY	DSC	1	,2	02367		1
				2			
00330	NXLOC	DC	5	,15999	02372		5
				J5999			
00340	STBL	DS	5		02377		5
00350	COMST	DS	5		02382		5
00360	DISKSW	DSC	1,0		02383		1
				0			
00370	MULDEF	DC	1,0		02384		1
				-			
00380	INTOP1	DSC	1,0		02385		1
				0			

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00390		DC	5,00600		02390		5
				-0600			
00400		DC	3,002		02393		3
				-02			
00410		DSA	CARD		02398		5 X 1
00420		DC	1,'		02398	J4936	
					02399		1
00430	CALLP2	TFM	FMON+35,BLK8		02400	16	02359 -2461
00440	BTM		FMON,CALLP2		02412	17	02324 -2400
00450	INDIV	DS	1		02424		1
00460	*		INDIV = 0 FOR CARDS, 1 FOR TYPEWRITER,				
00470	*		FLAGGED 3 FOR PAPER TAPE				
00480	JUMP	DS	5		02429		5
00490	ENTLN	DS		,RECLG+5	02248		0
00500	AFTBL	DS		,14935	14935		0
00510	CHI	DAS	430	,15139	15139		430 X 2
00520	CHIS	DS		,CHI+700	15839		0
00530	CHIEND	DS		,CHI+860	15999		0
00540	CARD	DS		,CHI-203	14936		0
00550	IOCAL	DS		,716	00716		0
00560	IOGT	DS		,566	00566		0
00570	IORBC	DS		,520	00520		0
00580	IOPT	DS		,532	00532		0
00590	IOSK	DS		,554	00554		0
00600	ERRET	DS		,602	00602		0
00610	IORT	DS		,565	00565		0
00620	MONCAL	DS		,796	00796		0
00630	E86440	TFM	FMON+35,,BLK7		02430	16	02359 -0000
00640	BTM		FMON,E86440		02442	17	02324 -2430
00650	BLK8	DS	,E86440+31		02461		0
00660	PRSCAN	TFM	FMON+35,PHBDAT		02454	16	02359 -2478
00670	BTM		FMON,PRSCAN	,, CALL IN PHASE B	02466	17	02324 -2454
00680	PHBDAT	DSC	2,22		02478		2
				22			
00690		DSA	PHBDDA		02484		5 X 1
00700		DC	1,'		02484	-2486	
					02485		1
00710	PHBDDA	DSC	1,0		02486		1
00720		DC	5,17200		02491		5
				J7200			
00730		DC	3,082		02494		3
				-82			
00740		DSA	E86440		02499		5 X 1
00750		DC	1,'		02499	-2430	
					02500		1
00760	N11	BV	++12		02502	46	02514 01400
00770		BSIA	++12		02514	60	02526 00009
00780		BSBA	++12		02526	60	02538 00001
00790		TDM	475	,2 ,, SYSCAL	02538	15	00475 00002

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00800	SF	457	,	NON - EXECUTE SET	02550	32	00457	00000
00810	MOVE	TFM	IORT	,++23	02562	16	00565	-2585
00820	B	IOGT	,ABDEF	,7	02574	49	00566	-6006
00830	TFM	IORT	,++23		02586	16	00565	-2609
00840	B	IOPT	,WCDEF	,7	02598	49	00532	-6029
00850	AM	ABDDA+5	,100	,9	02610	11	06019	00J00
00860	AM	WCDDA+5	,100	,9	02622	11	06042	00J00
00870	CM	WCDDA+5	,200	,7	02634	14	06042	-0200
00880	BNH	MOVE			02646	47	02562	01100
00890	MOVEJ	TFM	IORT	,++23	02658	16	00565	-2681
00900	B	IOGT	,ABJDEF	,7	02670	49	00566	-6052
00910	TFM	IORT	,++23		02682	16	00565	-2705
00920	B	IOPT	,WCJDEF	,7	02694	49	00532	-6075
00930	TFM	ABJDDA+8	,100	,9	02706	16	06068	00J00
00940	TFM	WCJDDA+8	,100	,9	02718	16	06091	00J00
00950	AM	ABJDDA+5	,124	,9	02730	11	06065	00J24
00960	AM	WCJDDA+5	,124	,9	02742	11	06088	00J24
00970	CM	WCJDDA+5	,1600	,7	02754	14	06088	-1600
00980	BE	MOVEJ			02766	46	02658	01200
00990	SM	ABJDDA+5	,24	,10	02778	12	06065	000K4
01000	SM	WCJDDA+5	,24	,10	02790	12	06088	000K4
01010	CM	WCJDDA+5	,1700	,7	02802	14	06088	-1700
01020	BE	MOVEJ			02814	46	02658	01200
01030	TDM	O0000	,0		02826	15	00000	00000
01040	AM	,+18	,20000	,7	02838	11	02856	K0000
01050	TR	1	,ALPHRM-1	,26	02850	31	-000J	05669
01060	BNR	,-24	,0		02862	45	02838	00000
01070	TF	STBL	,,-18		02874	26	02377	02856
01080	TF	INDDA+13	,STBL		02886	26	05692	02377
01090	SM	INDDA+13	,999	,9	02898	12	05692	00R99
01100	TFM	IORT	,++23		02910	16	00565	-2933
01110	B	IOGT	,INDATA	,7	02922	49	00566	-5671
01120	SM	INDDA+10	,1	,10	02934	12	05689	000-1
01130	C	INDDA+13	,NXLOC		02946	24	05692	02372
01140	BNL	,-48			02958	46	02910	01300
01150	TDM	BUFSCS+100	,,-		02970	15	06318	00000
01160	GRMK	DGM	*		02981		1	
01170	TD	BUFEQT+800	,GRMK		02982	25	07120	02981
01180	TD	BUFDIM+100	,GRMK		02994	25	07222	02981
01190	TF	T111	,STBL		03006	26	03221	02377
01200	TF	FCTEND	,STBL		03018	26	02318	02377
01210	TFM	IORT	,++23		03030	16	00565	-3053
01220	B	IOGT	,DIMDAT	,7	03042	49	00566	-5694
01230	TF	DIMDDA+5	,BUFDIM+45	,,	03054	26	05707	07167
01240	TD	DIMDDA	,BUFDIM+40		03066	25	05702	07162
01250	TFM	DIMDDA+8	,008	,9	03078	16	05710	00-08
01260	TFM	DIMDDA+13	,BUFEQT		03090	16	05715	-6320
01270	TFM	IORT	,++23		03102	16	00565	-3125
01280	B	IOGT	,DIMDAT	,7	03114	49	00566	-5694
01290	N114	AM	,+18	,16	03126	11	03144	000J6
01300	C	BUFEQT-5	,12NINE	,2	03138	24	-6315	05995
01310	BE	RDONE	,,	YES	03150	46	03534	01200
01320	TF	,+30	,N114+18	,,	03162	26	03192	03144
01330	AM	,+18	,04	,10	03174	11	03192	000-4
01340	SM	DUMMY	,09	,10	03186	12	99999	000-9
01350	MM	,-6	,05	,610	03198	13	0319K	000-5

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01360	SF	95			03210	32	00095	00000
01370	T111	DS	5	,	03221		5	
01380	AM	99	,ENTLN-5	,	03222	11	00099	-2243
01390	TF	T111	,99	,6	03234	26	0322J	00099
01400	SM	T111	,5	,10	03246	12	03221	000-5
01410	TF	T112	,N114+18	,,	03258	26	03353	03144
01420	SM	T112	,12	,10	03270	12	03353	000J2
01430	LOOP41	AM	T112	,02	03282	11	03353	000-2
01440	C	T112	,N114+18		03294	24	03353	03144
01450	BH	N1142			03306	46	03390	01100
01460	TF	T113	,T112		03318	26	03377	03353
01470	SM	T113	,01	,10	03330	12	03377	000-1
01480	SF	T113	,,	,6	03342	32	0337P	00000
01490	T112	DS	5	,,	03353		5	
01500	CM	T112	,00	,610	03354	14	0335L	000-0
01510	CF	T113	,,	,6	03366	33	0337P	00000
01520	T113	DS	5	,,	03377		5	
01530	BNE	LOOP41			03378	47	03282	01200
01540	N1142	SM	T112	,02	03390	12	03353	000-2
01550	TF	T113	,N114+18		03402	26	03377	03144
01560	SM	T113	,11	,10	03414	12	03377	000J1
01570	SF	T113	,,	,6	03426	32	0337P	00000
01580	T114	DS	5	,,	03437		5	
01590	TF	T114	,T112		03438	26	03437	03353
01600	S	T114	,T113		03450	22	03437	03377
01610	AM	T114	,01	,10	03462	11	03437	000-1
01620	A	NXLOC	,T114		03474	21	02372	03437
01630	TF	NXLOC	,T112	,611	03486	26	0237K	0335L
01640	TF	T111	,NXLOC	,6	03498	26	0322J	02372
01650	SM	T111	,05	,10	03510	12	03221	000-5
01660	TF	FCTEND	,T111		03522	26	02318	03221
01670	RDONE	CM	N114+18	,BUFEQT+795	03534	14	03144	-7115
01680	BL	N114			03546	47	03126	01300
01690	SM	FCTEND	,05	,10	03558	12	02318	000-5
01700	SM	,+18	,02	,10	03570	12	03588	000-2
01710	TFM	CHIEND	,00	,210	03582	16	J5999	000-0
01720	CM	,-6	,CHI		03594	14	03588	J5139
01730	BNL	,-36			03606	46	03570	01300
01740	TF	CHIEND	,ALPHRM		03618	26	15999	05670
01750	TD	INPUTD	,426	,,	03630	25	05997	00426
01760	CF	INPUTD			03642	33	05997	00000
01770	CM	INPUTD	,01	,10	03654	14	05997	000-1
01780	BE	IPTY			03666	46	03766	01200
01790	CM	INPUTD	,03	,10	03678	14	05997	000-3
01800	BE	IPPT			03690	46	03734	01200
01810	TDM	INDIV	,0	,,	03702	15	02424	00000
01820	TFM	N21KEY-1	,10	,10	03714	16	06004	000J0
01830	B	N12			03726	49	03790	00000
01840	DORG	,-4			03733			
01850	IPPT	TDM	INDIV	,3	03734	15	02424	0000L
01860	TFM	N21KEY-1	,08	,10	03746	16	06004	000-8
01870	B	N12			03758	49	03790	00000
01880	DORG	,-4			03765			
01890	IPTY	TDM	INDIV	,1	03766	15	02424	00001
01900	TFM	N21KEY-1	,06	,10	03778	16	06004	000-6
01910	N12	TFM	IORT	,++23	03790	16	00565	-3813

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01920	B	IOGT	,SCSDAT	,7,	GET SYSTEM COMMUNICATION SECTOR	03802	49	00566	-5717
01930	TD	COMADD-4	,BUFSCS+76,,		MOVE OBJECT TIME MACHINE SIZE	03814	25	02258	06294
01940	TF	COMST	,COMADD			03826	26	02382	02262
01950	TR	BUFSCS		,, SET UP DIM IN SYS COMM SECTOR	03838	31	06218	05741	
01960	TR	00402	,INIT-1	,, SET UP DIM IN SYS COMM AREA	03850	31	00402	05740	
01970	TF	FLNG	,BUFSCS+46,,		MOVE F	03862	26	02250	06264
01980	TF	KLNG	,BUFSCS+48,,		MOVE K	03874	26	02252	06266
01990	N21	CM	INPUTD	,01		03886	14	05997	000-1
02000		BNE	+24			03898	47	03922	01200
02010		RCTY				03910	34	00000	00102
02020	TFM	IORT	,+23	,, READ AN INPUT RECORD	03922	16	00565	-3945	
02030	B	IOGT	,N21KEY-7	,7, USING IORT.	03934	49	00566	-5998	
02040	CM	INPUTD	,01	,10		03946	14	05997	000-1
02050		BNE	+24			03958	47	03982	01200
02060	BC4	N21+24		,, ALLOWS GOOF SWITCH	03970	46	03910	00400	
02070	BNR	+20	,CHI			03982	45	04002	15139
02080	BT	MONCAL				03994	49	00796	
02090	CM	CHI	,14	,10, IS THIS A CONTROL STATEMENT	04002	14	15139	000J4	
02100	BNE	CALLP1		,, NO, CALL IN PASS 1	04014	47	04250	01200	
02110	CF	CHI+3			04026	33	15142	00000	
02120	CF	CHI+5			04038	33	15144	00000	
02130	CF	CHI+7			04050	33	15146	00000	
02140	CF	CHI+9		,, YES	04062	33	15148	00000	
02150	C	CHI+10	,PSTSN+8	,, IS THIS A PSTSN STATEMENT	04074	24	15149	05773	
02160	BE	WASS		,, YES	04086	46	04646	01200	
02170	C	CHI+10	,POBJP+8	,, NO, IS THIS A POBJP ST.	04098	24	15149	05783	
02180	BE	WA0BJP		,, YES	04110	46	04794	01200	
02190	C	CHI+10	,LDISK+8	,, NO, IS THIS A LDISK ST.	04122	24	15149	05793	
02200	BE	WADK		,, YES	04134	46	04950	01200	
02210	C	CHI+10	,FANDK+8	,, NO, IS THIS A FANDK ST.	04146	24	15149	05803	
02220	BE	FKTEST		,, YES	04158	46	05270	01200	
02230	RCTY			,, NO, INVALID CTL. ST.	04170	34	00000	00102	
02240	TF	CHI+32	,ALPHRM		04182	26	15171	05670	
02250	WATY	CHI			04194	39	15139	00100	
02260	RCTY				04206	34	00000	00102	
02270	WATY	ERMES1		,, ERROR, INVALID CONTROL STATEMENT	04218	39	05805	00100	
02280	H				04230	48	00000	00000	
02290	B	N21		,, BR. TO READ NEXT STATEMENT	04242	49	03886	00000	
02300		DORG	+4		04249				
02310	CALLP1	SF	CHI+3		04250	32	15142	00000	
02320	SF	CHI+5			04262	32	15144	00000	
02330	SF	CHI+7			04274	32	15146	00000	
02340	SF	CHI+9			04286	32	15148	00000	
02350	BD	+448	,INDIV	,, CARD INPUT	04298	43	04346	02424	
02360	TF	CHI+160	,ALPHRM	,, YES, MOVE INPUT RECORD	04310	26	15299	05670	
02370	TR	CHI5-1	,CHI-1	,, TO CHI5	04322	31	15838	15138	
02380	TFM	CHI+160	,00	,10, ERASE RECORD MARK	04334	16	15299	000-0	
02390	TF	FP2	,FLNG		04346	26	02298	02250	
02400	AM	FP2	,02	,10, CALCULATE F PLUS TWO	04358	11	02298	000-2	
02410	TF	W	,KLNG		04370	26	02240	02252	
02420	C	FP2	,KLNG		04382	24	02298	02252	
02430	BNH	+24			04394	47	04418	01100	
02440	TF	W	,FP2	,, CALCULATE W, WORD SIZE FOR DISK IO	04406	26	02240	02298	
02450	TF	W	,W		04418	26	02296	02240	
02460	TFM	IORT	,+23		04430	16	00565	-4453	
02470	B	IOPT	,SCSDAT	,7, PUT SYSTEM COMMUNICATION SECTOR	04442	49	00532	-5717	

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02480	CM	STBL	,39999		04454	14	02377	L9999
02490	BNL	+32			04466	46	04498	01300
02500	TFM	LSTAD	,19190		04478	16	02308	J9190
02510	B7	SETPT			04490	49	04542	
02520	BNE	+32			04498	47	04530	01200
02530	TFM	LSTAD	,34990		04510	16	02308	L4990
02540	B7	SETPT			04522	49	04542	
02550	TFM	LSTAD	,54990		04530	16	02308	N4990
02560	SETPT	TF	P2PTR	,STBL	04542	26	02313	02377
02570	SM	P2PTR	,09	,10	04554	12	02313	000-9
02580	TF	JUMP	,LSTAD		04566	26	02429	02308
02590	TDM	FCTEND	,+*	,6	04578	15	02310	00000
02600	GMI	DGM	*		04589		1	
02610	TF	+30	,JUMP		04590	26	04620	02429
02620	AM	+18	,4	,10	04602	11	04620	000-4
02630	SF	+*			04614	32	00000	00000
02640	BV	+12			04626	46	04638	01400
02650	B	PRSCAN			04638	49	02454	00000
02660	DORG	+4			04645			
02670	WASS	TF	CHI+14	,ALPHRM	04646	26	15153	05670
02680	RCTY				04658	34	00000	00102
02690	WATY	CHI			04670	39	15139	00100
02700	CM	CHI+12	,72	,10, IS DEVICE CODE PAPER TAPE	04682	14	15151	000P2
02710	BE	WASS2		,, YES	04694	46	04774	01200
02720	CM	CHI+12	,74	,10, NO, IS DEVICE CODE CARDS	04706	14	15151	000P4
02730	BE	WASS2		,, YES	04718	46	04774	01200
02740	WREM3	RCTY		,, ERROR, INVALID OUTPUT DEVICE CODE	04730	34	00000	00102
02750	WATY	ERMES3			04742	39	05921	00100
02760	H				04754	48	00000	00000
02770	B	N21		,, BR. TO READ NEXT STATEMENT	04766	49	03886	00000
02780		DORG	+4		04773			
02790	WASS2	TD	PUSSTN	,CHI+12	04774	25	02294	15151
02800	B	N21			04786	49	03886	00000
02810		DORG	+4		04793			
02820	WA0BJP	TDM	JAY	,1	04794	15	02367	00001
02830	TF	CHI+14	,ALPHRM		04806	26	15153	05670
02840	RCTY				04818	34	00000	00102
02850	WATY	CHI			04830	39	15139	00100
02860	CM	CHI+12	,72	,10, IS DEVICE CODE PAPER TAPE	04842	14	15151	000P2
02870	BNE	+32		,, NO	04854	47	04886	01200
02880	TDM	BUFSCS+23,1		,11, YES	04866	15	06241	0000J
02890	B	N21			04878	49	03886	00000
02900		DORG	+4		04885			
02910	CM	CHI+12	,74	,10, IS DEVICE CODE CARDS	04886	14	15151	000P4
02920	BNE	+32		,, NO	04898	47	04930	01200
02930	TDM	BUFSCS+23,0		,11, YES	04910	15	06241	0000-
02940	B	N21			04922	49	03886	00000
02950		DORG	+4		04929			
02960	TDM	BUFSCS+23,0		,11	04930	15	06241	0000-
02970	B7	WREM3			04942	49	04730	
03020	WADK	TDM	BUFSCS+22,1	,11, SET UP TO LOAD OBJECT PROG. ON DK.	04950	15	06240	0000J
03030	TDM	JAY	,1	,, DUP ACTION REQUIRED	04962	15	02367	00001
03040	TF	CHI+32	,ALPHRM		04974	26	15171	05670
03050	RCTY				04986	34	00000	00102
03060	WATY	CHI			04998	39	15139	00100
03070	BNR	+24	,CHI+12	,7, ELIMINATE RECORD MARKS	05010	45	05034	J5151

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03080	TFM	*-1	,00	,610	05022	16	0502J	000-0
03090	AM	*-13	,2	,10	05034	11	05021	000-2
03100	CM	*-25	,CHI+30		05046	14	05021	J5169
03110	BNH	*-48			05058	47	05010	01100
03120	CF	CHI+13			05070	33	15152	00000
03130	CF	CHI+15			05082	33	15154	00000
03140	CF	CHI+17			05094	33	15156	00000
03150	CF	CHI+19			05106	33	15158	00000
03160	CF	CHI+21			05118	33	15160	00000
03170	TF	BUFSCS+35,CHI+22			05130	26	06253	15161
03180	SF	CHI+13			05142	32	15152	00000
03190	SF	CHI+15			05154	32	15154	00000
03200	SF	CHI+17			05166	32	15156	00000
03210	SF	CHI+19			05178	32	15158	00000
03220	SF	CHI+21			05190	32	15160	00000
03230	TD	BUFSCS+36,CHI+24			05202	25	06254	15163
03240	TD	BUFSCS+37,CHI+26			05214	25	06255	15165
03250	TD	BUFSCS+38,CHI+28			05226	25	06256	15167
03260	TD	BUFSCS+39,CHI+30			05238	25	06257	15169
03270	SF	BUFSCS+36			05250	32	06254	00000
03280	B	N21			05262	49	03886	00000
03290	DORG	*-4			05269			
03300	FKTEST	TF	CHI+20	,ALPHRM	05270	26	15159	05670
03310	RCTY				05282	34	00000	00102
03320	WATY	CHI			05294	39	15139	00100
03330	TD	FWORK-1	,CHI+11		05306	25	05760	15150
03340	TD	FWORK	,CHI+13		05318	25	05761	15152
03350	CF	FWORK			05330	33	05761	00000
03360	CM	FWORK	,77	,10, IS F NUMERIC	05342	14	05761	000P7
03370	BNE	N31	,	,, NO, ERROR	05354	47	05626	01200
03380	TD	FWORK-1	,CHI+12	,, YES, LOAD F	05366	25	05760	15151
03390	SF	FWORK-1			05378	32	05760	00000
03400	TD	FWORK	,CHI+14		05390	25	05761	15153
03410	CM	FWORK	,02	,10, F IN RANGE	05402	14	05761	000-2
03420	BL	N31	,	,, NO, ERROR	05414	47	05626	01300
03430	CM	FWORK	,28	,10	05426	14	05761	000K8
03440	BH	N31	,	,, NO, ERROR	05438	46	05626	01100
03450	TF	FLNG	,FWORK	,, YES, MOVE F TO FORTRAN COM. AREA	05450	26	02250	05761
03460	TD	KWORK-1	,CHI+15		05462	25	05762	15154
03470	TD	KWORK	,CHI+17		05474	25	05763	15156
03480	CF	KWORK			05486	33	05763	00000
03490	CM	KWORK	,77	,10, IS K NUMERIC	05498	14	05763	000P7
03500	BNE	N31	,	,, NO, ERROR	05510	47	05626	01200
03510	TD	KWORK-1	,CHI+16	,, YES, LOAD K	05522	25	05762	15155
03520	SF	KWORK-1			05534	32	05762	00000
03530	TD	KWORK	,CHI+18		05546	25	05763	15157
03540	CM	KWORK	,04	,10, K IN RANGE	05558	14	05763	000-4
03550	BL	N31	,	,, NO, ERROR	05570	47	05626	01300
03560	CM	KWORK	,10	,10	05582	14	05763	000J0
03570	BH	N31	,	,, NO, ERROR	05594	46	05626	01100
03580	TF	KLNG	,KWORK	,, YES, MOVE K TO FORTRAN COM. AREA	05606	26	02252	05763
03590	B	N21	,	,, BR. TO READ NEXT STATEMENT	05618	49	03886	00000
03600	DORG	*-4			05625			
03610	N31	RCTY	,	,, ERROR, F OR K OUTSIDE RANGE	05626	34	00000	00102
03620	WATY	ERNES2			05638	39	05865	00100
03630	H				05650	48	00000	00000

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03640	B	N21	,	,, BR. TO READ NEXT STATEMENT	05662	49	03886	00000
03650	DORG	*-4			05669			
03660	ALPHRM	DC	2	,0'	05670		2	
03670	INDATA	DSC	2	,22	05671		2	
03680	DSA	INDDA			05677		5 X	1
03690	DC	1	,'		05677		-5679	
03700	INDDA	DSC	1	,0	05678		1	
03710	DC	5	,17330		05684		5	
03720	DC	3	,010		05687		3	
03730	DS	5			05692		5	
03740	DC	1	,'		05693		1	
03750	DIMDAT	DSC	2	,20	05694		2	
03760	DSA	DIMDDA			05700		5 X	1
03770	DC	1	,'		05700		-5702	
03780	DIMDDA	DSC	1	,0	05701		1	
03790	DC	5	,04800		05702		1	
03800	DC	3	,001		05707		5	
03810	DSA	BUFDIM			05710		3	
03820	DC	1	,'		05715		5 X	1
03830	SCSDAT	DSC	2	,20	05715		-7122	
03840	DSA	SCSDDA			05716		1	
03850	DC	1	,'		05717		2	
03860	SCSDDA	DSC	1	,0	05723		5 X	1
03870	DC	5	,19663		05723		-5725	
03880	DC	3	,001		05724		1	
03890	DSA	BUFSCS			05725		1	
03900	DC	1	,'		05730		5	
					05733		3	
					05738		5 X	1
					05738		-6218	
					05739		1	

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03910	DSC 1	,1	05740	1
	1			
03920	DC 5	,00000	05745	5
	-0000			
03930	INIT DS	,*-4	05741	0
03940	DC 3	,999	05748	3
	R99			
03950	DC 5	,-99999	05753	5
	R999R			
03960	DC 6	,00000*	05759	6
	-0000*			
03970	FWORK DS	2	05761	2
03980	KWORK DS	2	05763	2
03990	PSTSN DAC	5,PSTSN	05765	5 X 2
	PSTSN			
04000	POBJP DAC	5,POBJP	05775	5 X 2
	POBJP			
04010	LDISK DAC	5,LDISK	05785	5 X 2
	LDISK			
04020	FANDK DAC	5,FANDK	05795	5 X 2
	FANDK			
04030	ERMES1 DAC	30,ERROR, INVALID CONTROL RECORD*	05805	30 X 2
	ERROR, INVALID CONTROL RECORD*			
04040	ERMES2 DAC	28,ERROR, F OR K OUTSIDE RANGE*	05865	28 X 2
	ERROR, F OR K OUTSIDE RANGE*			
04050	ERMES3 DAC	32,ERROR, INVALID OUTPUT UNIT CODE*	05921	32 X 2
	ERROR, INVALID OUTPUT UNIT CODE*			
04060	12NINE DC	12	05995	12
	R999999999999	,999999999999		
04070	INPUTD DC	2	05997	2
	-0	,00		
04080	DSA CHI		06002	5 X 1
			06002	J5139
04090	DC 2	,00	06004	2
	-0			
04100	NZIKEY DGM		06005	1
04110	ABDEF DSC	2	06006	2
	22	,22		
04120	DSA ABDDA		06012	5 X 1
			06012	-6014
04130	DC 1	,*	06013	1
	'			
04140	ABDDA DSC	1	06014	1
	0	,0		
04150	DC 5	,17400	06019	5
	J7400			
04160	DC 3	,100	06022	3
	J00			
04170	DC 6	,06218*	06028	6
	-6218*			
04180	WCDEF DSC	2	06029	2
	02	,02		
04190	DSA WCDDA		06035	5 X 1

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04200	DC 1	,*	06035	-6037
	'		06036	1
04210	WCDDA DSC	1	06037	1
	0	,0		
04220	DC 5	,00000	06042	5
	-0000			
04230	DC 3	,100	06045	3
	J00			
04240	DC 6	,06218*	06051	6
	-6218*			
04250	ABJDEF DSC	2	06052	2
	22	,22		
04260	DSA ABJDDA		06058	5 X 1
			06058	-6060
04270	DC 1	,*	06059	1
	'			
04280	ABJDDA DSC	1	06060	1
	0	,0		
04290	DC 5	,17876	06065	5
	J7876			
04300	DC 3	,124	06068	3
	J24			
04310	DC 6	,06218*	06074	6
	-6218*			
04320	WCJDEF DSC	2	06075	2
	02	,02		
04330	DSA WCJDDA		06081	5 X 1
			06081	-6083
04340	DC 1	,*	06082	1
	'			
04350	WCJDDA DSC	1	06083	1
	0	,0		
04360	DC 5	,01476	06088	5
	-1476			
04370	DC 3	,124	06091	3
	J24			
04380	DC 6	,06218*	06097	6
	-6218*			
04390	DDRG	06218	06218	100
04400	BUFSCS DSS	100	06319	2
04410	DS 2		06320	800
04420	BUFEQT DSS	800	07121	2
04430	DS 2		07122	100
04440	BUFDIM DSS	100	07223	2
04450	DS 2		99999	0
04460	DUMHY DS	,99999	16000	
04470	DDRG	16000	16000	1
04480	PHADDA DSC	1,0	16005	5
	0			
04490	DC 5,17290		16008	3
	J7290			
04500	DC 3,050			
	-50			

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04510	DC	5,02218			16013	5		
		-2218						
04520	DC	1	,	'	16014	1		
04530	DC	1	,	'	16015	1		
04540	DC	1	,	'	16016	1		
04550	DC	1	,	'	16017	1		
04560	DC	1	,	'	16018	1		
04570	DSC	4	,	'0000	16019	4		
		0000						
04580	RECMKS	DC	1	,	16023	1		
04590	LDPHA	SF	RECMKS-9		16024	32	16014	00000
04600	TFM	**+18	,BUFSCS+999		16036	16	16054	-7217
04610	TF	DUMMY	,RECMKS	,,	16048	26	999999	16023
04620	SM	*-6	,10	,10	16060	12	16054	000J0
04630	CM	*-18	,BUFSCS-1		16072	14	16054	-6217
04640	BNE	*-36			16084	47	16048	01200
04650	TDM	GRMK	,*-*		16096	15	02981	00000
04660	GM	DGM	*		16107	1		
04670	TD	NZ1KEY	,GM		16108	25	06005	16107
04680	TD	GM1	,GM		16120	25	04589	16107
04690	K	PHADDA,701			16132	34	16000	00701
04700	WN	PHADDA,702			16144	38	16000	00702
04710	TRA				16156	36	00000	00500
					16168	49	00000	00000
04720	TCD	LDPHA			16024			
04730	DEND				00000			

SET SYMBOL TABLE TO RECORD MARKS

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12NINE	05995	LENGTH	02248	FANDK	05795	LDISK	05785	T113	03377
ABJDDA	06060	LOOP+1	03282	FLNG	02250	LDPHA	16024	T114	03437
ABJDEF	06052	HONCAL	00796	FMON	02324	LSTAD	02308	TEND	02303
ALPHRM	05670	HULDEF	02384	FP2	02298	MOVEJ	02658	WADK	04950
BUFDIR	07122	NZ1KEY	06005	FWORK	05761	MOVE	02562	WASS2	04774
BUFEQT	06320	PHADDA	16000	GM1	04589	N1142	03390	WASS	04646
BUFSCS	06218	PHBDAT	02478	GM	16107	N114	03126	WCDDA	06037
CALLP1	04250	PHBDAT	02486	GRMK	02981	N11	02502	WCDEF	06029
CALLP2	02400	PROGST	02257	INDDA	05679	N12	03790	WREM3	04730
CHIEND	15999	PRSCAN	02454	INDIV	02424	N1	02233	W	02240
COMADD	02262	PUSTSN	02294	INIT	05741	N21	03886	WW	02296
DINDAT	05694	RECMKS	16023	IOCAL	00716	N2	02238	SAVSYH	02243
DINDDA	05702	ABDDA	06014	IOGT	00566	N31	05626	SCSDAT	05717
DISKSW	02383	ABDEF	06006	IOPT	00532	NXLOC	02372	SCSDA	05725
EB4440	02430	AFTBL	14935	IORBC	00520	P2PTR	02313	SUBFCT	02293
ERMES1	05805	BLK8	02461	IORT	00565	POBJP	05775	USEDFS	02263
ERMES2	05865	CARD	14936	IOSK	00554	PSTSN	05765	WADJJP	04794
ERMES3	05921	CHI5	15839	IPPT	03734	RDONE	03534	WCJDDA	06083
FKTEND	02318	CHI	15139	IPTY	03766	RECLG	02243	WCJDEF	06075
FKTEST	05270	COMST	02382	JAY	02367	SETPT	04542		
INDATA	05671	DUMMY	99999	JUMP	02429	STBL	02377		
INPUTD	05997	ENTLN	02248	KLNG	02252	T111	03221		
INTOP1	02385	ERRET	00602	KWORK	05763	T112	03353		

END OF ONE ASSEMBLY.

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00010	*****	1620 FORTRAN II-D	PHASE 1-B				
00020		DORG	02218			02218	
00030		DC	5	, -100		02222	5
				-010-			
00040		DC	1	, 2		02223	1
				K			
00050		DC	2	, 67		02225	2
				07			
00060		DC	6	, 987898		02231	6
				R87898			
00070	N1	DC	2	, 0		02233	2
				-0			
00080	N2	DC	5	, 0		02238	5
				-0000			
00090	W	DC	2	, 0		02240	2
				-0			
00100	RECLG	DC	3	, 000		02243	3
				-00			
00110	SAVSYS	DS	12	, RECLG		02243	12
00120	LENGTH	DS	5			02248	5
00130	FLNG	DS	2			02250	2
00140	KLNG	DS	2			02252	2
00150	PRDGS	DC	5	, 00000		02257	5
				-0000			
00160	COMADD	DS	5			02262	5
00170	USEDFS	DSC	30	, 0		02263	30
				00000000000000000000000000000000			
00180	SUBFCT	DC	1	, 0		02293	1
				-			
00190	PUSTSN	DS	1			02294	1
00200	HW	DS	2			02296	2
00210	FP2	DS	2			02298	2
00220	TEND	DS	5			02303	5
				DGM TEND-3		02300	1
00230	LSTAD	DS	5			02308	5
00240	P2PTR	DS	5			02313	5
00250	FCTEND	DS	5			02318	5
00260		DS	5			02323	5
00270	FMON	TF		***2,FMON-1,,	SETUP ROUTINE ENTRY	02324	26 02366 02323
00280	TFM			IORI, **23		02336	16 00565 -2359
00290				IOGT, **7		02348	49 00566 -0000
00300				***	GO TO EXECUTE CALLED ROUTINE	02360	49 00000 00000
00310	DORG			**4		02367	
00320	JAY	DS	1			02367	1
00330	NXLOC	DS	5			02372	5
00340	STBL	DS	5			02377	5
00350	COMST	DS	5			02382	5
00360	DISKSW	DC	1,0			02383	1
				-			
00370	MULDEF	DC	1,0			02384	1
				-			
00380	INTOP1	DSC	1,0			02385	1
				0			
00390		DC	5,00600			02390	5
				-0600			
00400		DC	3,002			02393	3
				-02			

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00410	DSA	CARD				02398	5 X 1
00420	DC	1, ' ,				02398	J4936
						02399	1
00430	CALLP2	TFM	FMON+35, BLK8			02400	16 02359 -2461
00440	BTM	FMON, CALLP2				02412	17 02324 -2400
00450	INDIV	DS	1			02424	1
00460	*		INDIV = 0 FOR CARDS, 1 FOR TYPEWRITER,				
00470	*		FLAGGED 3 FOR PAPER TAPE				
00480	JUMP	DS	5			02429	5
00490	ENTLOG	DS	, RECLG+5			02248	0
00500	AFTBL	DS	, 14935			14935	0
00510	CHI	DAS	430, 15139			15139	430 X 2
00520	CHIS	DS	, CHI+700			15839	0
00530	CARD	DS	, CHI-203			14936	0
00540	IDCAL	DS	, 716			00716	0
00550	IOGT	DS	, 566			00566	0
00560	IORBC	DS	, 520			00520	0
00570	IOPT	DS	, 532			00532	0
00580	IOSK	DS	, 554			00554	0
00590	ERRET	DS	, 602			00602	0
00600	IORI	DS	, 565			00565	0
00610	MONCAL	DS	, 796			00796	0
00620	E86440	TFM	FMON+35, BLK7			02430	16 02359 -9752
00630	BTM	FMON	, E86440			02442	17 02324 -2430
00640	BLK8	DS	, E86440+31			02441	0
00650	PRSCAN	BD	**20, INDIV			02454	43 02474 02424
00660	B7	PRSCN2				02466	49 02546
00670	BNF	PRSCN2, INDIV				02474	44 02546 02424
00680	B7	PRSCN1				02486	49 02510
00690	SSCSW	DC	2, 00			02494	2
00700	DORG	CALLP2+100				02500	
00710	SYTBST	DSC	10, 0101010101			02500	10
			0101010101				
00720	PRSCN1	TFM	BA+1, 41, 10			02510	16 02683 000M1
00730	TFM	BA+37, 41, 10				02522	16 02719 000M1
00740	TFM	URDATA+2, 08, 10				02534	16 09781 000-8
00750	PRSCN2	S	FXORFL-5, KLNG			02546	22 06304 02252
00760	A	PLUS+47, FLNG				02558	21 06769 02250
00770	BD	BA+48, INDIV				02570	43 02730 02424
00780	B	**20				02582	49 02602 00000
00790	DORG	**3				02590	
00800	BEGIN	BTM	PUT, 132, 8			02590	17 08944 0-132
00810	BEGINA	TFM	PARCNT, 0, 9			02602	16 03288 00-00
00820	TF	SUBSW, ZER13+2				02614	26 09912 09897
00830	TFM	SSCSW, 00, 10				02626	16 02494 000-0
00840	BD	BA, INDIV				02638	43 02682 02424
00850	TDM	CHIS+144				02650	15 15983 00000
00860	DC	1, ' , *				02661	1
00870	TR	CHI-1, CHIS-1				02662	31 15138 15838
00880	B	READ1+24				02674	49 02870 00000
00890	DORG	**4				02681	
00900	BA	RCTY				02682	34 00000 00102

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00910	ESNO	DS	,*-5		02688	0	
00920		DC	1,*,*-4		02689	1	
00930		TFM	IORT,**+23		02694	16	00565 -2717
00940		B	IOGT,URDATA-4,7,	READ STATEMENTS FROM TYPEWRITER	02706	49	00566 -9775
00950		BC4	*-36,,,	ALLOWS GOOF SWITCH	02718	46	02682 00400
00960		BNC1	**+36		02730	47	02766 00100
00970		RCTY			02742	34	00000 00102
00980	BLOC	DS	,*-5		02748		0
00990		WATY	CHI		02754	39	15139 00100
01000		CM	CHI,43,10,	TEST FOR COMMENT	02766	14	15139 000M3
01010		BNE	LEADBL		02778	47	03058 01200
01020		CM	CHI+2,0,10,		02790	14	15141 000-0
01030		BNE	LEADBL		02802	47	03058 01200
01040		CM	CHI+4,0,10,		02814	14	15143 000-0
01050		BE	BEGINA		02826	46	02602 01200
01060		B	LEADBL		02838	49	03058 00000
01070		DORG	*-3		02846		
01080	READ1	TFM	IORT,**+23		02846	16	00565 -2869
01090		B	IOGT,CDDATA-4,7,	READ FIRST CARD	02858	49	00566 -9783
01100		TFM	**+35,CHI +144		02870	16	02905 J5283
01110		SM	**+23,2,10		02882	12	02905 000-2
01120		TF	CKEND		02894	26	03276 00000
01130	CKRM	BD	**+56,CKEND,,	SCAN BACK TO PLACE RECORD MARK	02906	43	02962 03276
01140		BD	**+44,CKEND-1		02918	43	02962 03275
01150		CM	CKRM-1,CHI		02930	14	02905 J5139
01160		BH	CKRM-24,,,	CHECK FOR BLANK CARD	02942	46	02882 01100
01170		B	READ1,,,		02954	49	02846 00000
01180		DORG	*-3		02962		
01190		AM	CKRM-1 ,2		02962	11	02905 -0002
01200		TDM	CKRM-1 ,6		02974	15	02900 00000
01210		DC	1,*,*		02985		1
01220		BNC1	**+36		02986	47	03022 00100
01230		RCTY			02998	34	00000 00102
01240	ESNOPL	DC	4,0,*-5		03004		4
01250		-000					
01250		DC	1,*,*-4		03005		1
01260		WATY	CHI		03010	39	15139 00100
01270		CM	CHI,43,10		03022	14	15139 000M3
01280		BE	READ1		03034	46	02846 01200
01290		TDM	CHI+9,0,11		03046	15	15148 0000-
01300	LEADBL	BD	**+32,CHI		03058	43	03090 15139
01310		TR	CHI-1,CHI+1		03070	31	15138 15140
01320		B	*-24		03082	49	03058 00000
01330		DORG	*-3		03090		
01340		AM	ESNOPL,1,10		03090	11	03004 000-1
01350		CM	CHI,69,10		03102	14	15139 00009
01360		BNH	CSPVA-12,,,	BRANCH IF NO STATEMENT NUMBER	03114	47	03558 01100
01370		SF	OUTSW		03126	32	06896 00000
01380	TRIND	DS	,*		03137		0
01390		BTM	CSTNO,**+12,,	OUTPUT STATEMENT NUMBER	03138	17	05302 -3150
01400		BTM	PUT, 134,8,COLON		03150	17	08944 0-134
01410		TF	ESNO,SYM		03162	26	02688 09879
01420		TFM	ESNOPL,0,8		03174	16	03004 0-000

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01430		TDM	NOIND,1,11		03186	15	03195 0000J
01440	NOIND	DS	,*-2		03195		0
01450		BD	STNER,9(1),,	TEST IF STATEMENT NO. WAS USED BEFORE	03198	43	03346 000-9
01460		TDM	9(1),1,,	SET INDICATOR THAT STATE. NO. APPEARED	03210	15	000-9 00001
01470	INSW	DS	,*-2		03219		0
01480		BD	**+20,7(1),,	TEST IF STATEMENT NO. WAS DO REFERENCE	03222	43	03242 000-7
01490		BT	LEADZ-12		03234	49	03290
01500		BTM	PUT, 140,8,DUMMY		03242	17	08944 0-140
01510		MF	**+23,7(1)		03254	71	03277 000-7
01520		TDM	7(1),0		03266	15	000-7 00000
01530	CKEND	DS	,*-1		03276		0
01540		TDM	DOTRAN,1		03278	15	09899 00001
01550	PARCNT	DC	3,0,*-1		03288		3
01560		BD	FORM,8(1),,	TEST FOR FORMAT NUMBER	03290	43	03446 000-8
01570	LEADZ	CM	CHI,0,10,		03302	14	15139 000-0
01580		BNE	STNER+20		03314	47	03366 01200
01590		TR	CHI-1,CHI+1		03326	31	15138 15140
01600		B	*-36		03338	49	03302 00000
01610		DORG	*-3		03346		
01620	STNER	TFM	SPGS+11,076,9		03346	16	09225 00-76
01630		B	SPERR+12,,,	STATEMENT NO. PREVIOUSLY USED	03358	49	09142 00000
01640		DORG	*-3		03366		
01650		CM	CHI,46,10		03366	14	15139 000M6
01660		BNE	CSPVA		03378	47	03570 01200
01670		BTM	COLNAM,6,10		03390	17	04560 000-6
01680		C	SYM,FMTCST		03402	24	09879 09829
01690		BV	CSPVA		03414	46	03570 01400
01700		BE	FORMAT		03426	46	10392 01200
01710		B	CSPVA		03438	49	03570 00000
01720		DORG	*-3		03446		
01730	FORM	CM	CHI,00,10,	SHIFT OFF BLANKS	03446	14	15139 000-0
01740		BNE	**+32		03458	47	03490 01200
01750		TR	CHI-1,CHI+1		03470	31	15138 15140
01760		B	*-36		03482	49	03446 00000
01770		DORG	*-3		03490		
01780		BTM	COLNAM,6,10		03490	17	04560 000-6
01790		C	SYM,FMTCST,,	MUST BE FORMANT STATEMENT	03502	24	09879 09829
01800		BV	**+24		03514	46	03538 01400
01810		BE	FORMAT		03526	46	10392 01200
01820		TFM	SPGS+11,277,9		03538	16	09225 00K77
01830		B	SPERR+12,,,	ELSE ERROR 27	03550	49	09142 00000
01840		DORG	*-3		03558		
01850		TDM	NOIND,		03558	15	03195 00000
01860	CSPVA	TFM	**+35,CHI,		03570	16	03605 J5139
01870		AM	**+23,2,10		03582	11	03605 000-2
01880		BNR	**+44		03594	45	03638 00000
01890		TFM	CSPVA+35,37,610		03606	16	0360N 000L7
01900		TR	CSPVA+35,AVOID,6,	AVOID = FLAG3,7,FLAG0,RECMARK	03618	31	0360N 05922
01910		B	DECODE		03630	49	03730 00000
01920		DORG	*-3		03638		
01930		CM	CSPVA+35,0,610		03638	14	0360N 000-0
01940		BNE	CSPVA+12		03650	47	03582 01200
01950		TF	**+54,CSPVA+35		03662	26	03716 03605
01960		TF	**+47,**+42		03674	26	03721 03716
01970		AM	**+35,1,10		03686	11	03721 000-1

01980	SM	**18,1,10		03698	12	03716	000-1
01990	TR	***	ELIMINATE BLANKS	03710	31	00000	00000
02000	B	CSPVA+24		03722	49	03594	00000
02010	DORG	*-3		03730			
02020	DECODE	TFM	**35,CHI-2	03730	16	03765	J5137
02030	AM	**23,2,10		03742	11	03765	000-2
02040	BNR	**20		03754	45	03774	00000
02050	B	**80		03766	49	03846	00000
02060	DORG	*-3		03774			
02070	CM	DECODE+35,40,610		03774	14	0376N	000M0
02080	BH	DECODE+12		03788	46	03742	01100
02090	CM	DECODE+35,33,610		03798	14	0376N	000L3
02100	BNE	**56		03810	47	03866	01200
02110	CM	PARCNT,0,10		03822	14	03288	000-0
02120	BE	DECODA		03834	46	03954	01200
02130	TFM	PARCNT,0,9		03846	16	03288	00-00
02140	B	NONARI		03858	49	04066	00000
02150	DORG	*-3		03866			
02160	CM	DECODE+35,24,610		03866	14	0376N	000K4
02170	BNE	**32		03878	47	03910	01200
02180	AM	PARCNT,1,10		03890	11	03288	000-1
02190	B	DECODE+12		03902	49	03742	00000
02200	DORG	*-3		03910			
02210	CM	DECODE+35,4,610		03910	14	0376N	000-4
02220	BNE	DECODE+12		03922	47	03742	01200
02230	SM	PARCNT,1,10		03934	12	03288	000-1
02240	B	DECODE+12		03946	49	03742	00000
02250	DORG	*-3		03954			
02260	DECODA	AM	DECODE+35,2,10	03954	11	03765	000-2
02270	BNR	**20,DECODE+35,11		03966	45	03986	0376N
02280	B	CKCTAR		03978	49	04034	00000
02290	DORG	*-3		03986			
02300	CM	DECODE+35,23,610		03986	14	0376N	000K3
02310	BE	DDO		03998	46	10416	01200
02320	CM	DECODE+35,24,610		04010	14	0376N	000K4
02330	BNE	DECODA		04022	47	03954	01200
02340	CKCTAR	BD	ASCAN,INDIV	04034	43	10440	02424
02350	BTM	CKCNTU,0,10		04046	17	04740	000-0
02360	B	ASCAN		04058	49	10440	00000
02370	DORG	*-3		04066			
02380	NONARI	BLXM	**12,TBST-TBEND(2)	04066	66	04078	00K31
02390	CF	CHI+1		04078	33	15140	00000
02400	TEMP	DS	5,*	04089		5	
02410	CF	CHI+3		04090	33	15142	00000
02420	TEMPS	DS	5,*	04101		5	
02430	C	CHI+4,ENDCT+4		04102	24	15143	09839
02440	BE	END		04114	46	09466	01200
02450	BD	**24,INDIV		04126	43	04150	02424
02460	BTM	CKCNTU,0,10		04138	17	04740	000-0
02470	L1	C	TBEND(2),CHI+4	04150	24	04L25	15143
02480	BE	L2		04162	46	04210	01200
02490	BCXM	L1,-11(2)		04174	64	04150	00-1J
02500	TR	CHI-1,CHI+5		04186	31	15138	15144
02510	ERR01	BTM	ERROR,071,9	04198	17	09230	00-71
02520	XRA2	DS	,314	00314		0	
02530	L2	CM	XRA2,TBCM-TBEND	04210	14	00314	-0077

02540	BNH	**72		04222	47	04294	01100
02550	TDM	STSN,0,,	SET SINGLE STATEMENT SWITCH OFF	04234	15	05531	00000
02560	BNF	**48,TRIND		04246	44	04294	03137
02570	TDM	TRIND,0		04258	15	03137	00000
02580	BD	**24,NOIND		04270	43	04294	03195
02590	BTM	ERROR2,572,9,	MISSING STATEMENT NUMBER AFTER TRANSFER	04282	17	09386	00N72
02600	BXM	**12,-5(2)		04294	62	04306	00-00
02610	TR	CHI-1,CHI+5		04306	31	15138	15144
02620	B7	TBEND(2),,6		04318	49	04L2N	
02630	TBEND	DC	1,*,	04325		1	
02640	DSA	NONARA		04330		5 X	1
02650	DC	6,466455,,	FUNCTION	04330		J0224	
	M66455			04336		6	
02660	DSA	NONARA		04341		5 X	1
02670	DC	6,626442,,	SUBROUTINE	04341		J0224	
	O26442			04347		6	
02680	DSA	NONARA		04352		5 X	1
02690	DC	6,444546,,	DEFINE	04352		J0224	
	M44546			04358		6	
02700	DSA	NONARA		04363		5 X	1
02710	DC	6,455864,,	EQUIVALENCE	04363		J0224	
	M55864			04369		6	
02720	DSA	COMMON		04374		5 X	1
02730	DC	6,435654,,	COMMON	04374		J0272	
	M35654			04380		6	
02740	DSA	DIM		04385		5 X	1
02750	DC	6,444954,,	DIMENSION	04385		J0248	
	M44954			04391		6	
02760	DSA	RETURN		04396		5 X	1
02770	TBCM	DC	6,594563,,	RETURN		J0368	
	N94563			04402		6	
02780	DSA	NONARA		04407		5 X	1
02790	DC	6,626356,,	STOP	04407		J0224	
	O26356			04413		6	
02800	DSA	NONARA		04418		5 X	1
02810	DC	6,574164,,	PAUSE	04418		J0224	
	N74164			04424		6	

02820	DSA DKIO		04429	5 X 1
02830	DC 6,464955,, FIND M64955		04429 04435	J0488 6
02840	DSA DKIO		04440	5 X 1
02850	DC 6,464563,, FETCH M64563		04440 04446	J0488 6
02860	DSA DKIO		04451	5 X 1
02870	DC 6,594543,, RECORD N94543		04451 04457	J0488 6
02880	DSA IOUT		04462	5 X 1
02890	DC 6,414343,, ACCEPT M14343		04462 04468	J0200 6
02900	DSA IOUT		04473	5 X 1
02910	DC 6,576455,, PUNCH N76455		04473 04479	J0200 6
02920	DSA IOUT		04484	5 X 1
02930	DC 6,636857,, TYPE O36857		04484 04490	J0200 6
02940	DSA IOUT		04495	5 X 1
02950	DC 6,575949,, PRINT N75949		04495 04501	J0200 6
02960	DSA IOUT		04506	5 X 1
02970	DC 6,594541,, READ N94541		04506 04512	J0200 6
02980	DSA NONARA		04517	5 X 1
02990	DC 6,435655,, CONTINUE M35655		04517 04523	J0224 6
03000	DSA CALL		04528	5 X 1
03010	DC 6,434153,, CALL M34153		04528 04534	J0344 6
03020	DSA GOTO		04539	5 X 1
03030	DC 6,475663,, GOTO M75663		04539 04545	J0320 6
03040	DSA IF		04550	5 X 1

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03050	TBST DC 6,494624,, IF1 M94624		04550 04556	J0296 6
03060	DS 2		04558	2
03070	COLNAM TFM **42,SYH-26,, TFM **35,CHI	COLLECT NAMES TO DETERMINE TYPE OF STNNT	04560 04572	16 04602 -9853 16 04607 J5139
03080	AM **18,2,10		04584	11 04602 000-2
03090	TF ,CHI,7		04596	26 00000 J5139
03100	AM *-1,2,10		04608	11 04607 000-2
03110	BNR **20,*-13,11		04620	45 04640 0460P
03120	B *-32		04632	49 04664 00000
03130	DORG *-3		04640	
03140	SM COLNAM-1,1,10		04640	12 04559 000-1
03150	BNZ COLNAM+24		04652	47 04584 01200
03160	TFM **30,SYH-25		04664	16 04694 -9854
03170	AM **18,2,10		04676	11 04694 000-2
03180	CF		04688	33 00000 00000
03190	DS 5 ,*		04699	5
03200	OUTSCE C *-6,COLNAM+42		04700	24 04694 04602
03210	BNH *-36		04712	47 04676 01100
03220	TF SYH,COLNAM+42,11		04724	26 09879 0460K
03230	BB		04736	42 00000 00000
03240	DORG *-9		04738	
03250	**** CHECK FOR CONTINUATION CARDS ****			
03260	DS 2		04739	2
03270	CKCNTU TFM IORT,**23		04740	16 00565 -4763
03280	B IOGT,C5DATA-4,7		04752	49 00566 -9791
03290	BD CKCN1,CHI5+10		04764	43 04826 15849
03300	TFM CCND,0,10		04776	16 05052 000-0
03310	CM CHI5,43,10		04788	14 15839 000M3
03320	BE **24		04800	46 04824 01200
03330	TDM CHI5+9, 0,11		04812	15 15848 0000-
03340	BB		04824	42 00000 00000
03350	DORG *-10		04825	
03360	CKCN1 CM CCND,04,10, TEST FOR MORE THAN 4 CONTINUATION CARDS		04826	14 05052 000-4
03370	BNE **68		04838	47 04906 01200
03380	CM CHI5,43,10		04850	14 15839 000M3
03390	BE **44		04862	46 04906 01200
03400	TFM CCND,0,10		04874	16 05052 000-0
03410	TFM SPGS+11,273,9		04886	16 09225 00K73
03420	B SPERR+12		04898	49 09142 00000
03430	DORG *-3		04906	
03440	TFM **47,CHI5+144		04906	16 04953 J5983
03450	BD CKCN2+68,FMSH		04918	43 05022 09902
03460	SM **23,2,10		04930	12 04953' 000-2
03470	TF CKEND		04942	26 03276 00000
03480	BD **56,CKEND		04954	43 05010 03276
03490	BD **44,CKEND-1		04966	43 05010 03275
03500	CM CKCN2-1,CHI5+12		04978	14 04953 J5851
03510	BH CKCN2-24		04990	46 04930 01100
03520	B CKCNTU		05002	49 04740 00000
03530	DORG *-3		05010	
03540	AM CKCN2-1 ,2,10		05010	11 04953 000-2
03550	TDM CKCN2-1 ,,6		05022	15 04951 00000
03560	DC 1,*,*		05033	1
03570				

03580	BNC1	++36		05034	47	05070	00100
03590	RCTY			05046	34	00000	00102
03600	CCNO	DC 2,0,+-5		05052		2	
	-0						
03610	WATY	CHI5		05058	39	15839	00100
03620	CM	CHI5,43,10,		05070	14	15839	000M3
03630	BE	KCKNTU		05082	46	04740	01200
03640	AM	CCNO,1,10		05094	11	05052	000-1
03650	BD	KCKN4,FMSW		05106	43	05242	09902
03660	TFM	++35,CHI5+10		05118	16	05153	J5849
03670	AM	++23,2,10		05130	11	05153	000-2
03680	KCKN3	BNR ++44,		05142	45	05186	00000
03690	TFM	CSPVA+35,37,610		05154	16	0360N	000L7
03700	TR	CSPVA+35,AVOID,6		05166	31	0360N	05922
03710	B	KCKNTU		05178	49	04740	00000
03720	DORG	*-3		05186			
03730	CM	KCKN3+11,0,610	CHECK FOR BLANKS AND MOVE NON BLANK	05186	14	05151	000-0
03740	BE	KCKN3-12,,,	TO SCAN AREA	05198	46	05130	01200
03750	TF	CSPVA+35,KCKN3+11,611		05210	26	0360N	05151
03760	AM	CSPVA+35,2,10		05222	11	03605	000-2
03770	B	KCKN3-12		05234	49	05130	00000
03780	DORG	*-3		05242			
03790	KCKN4	TF ++30,CSPVA+35		05242	26	05272	03605
03800	SM	++18,1,10		05254	12	05272	000-1
03810	TR	,CHI5+11		05266	31	00000	15850
03820	AM	CSPVA+35,132,9		05278	11	03605	00J32
03830	B	KCKNTU		05290	49	04740	00000
03840	*****	THE FOLLOWING IS USED TO COLLECT STATEMENT NUMBERS *****					
03850	CSTNO	TF CSORN-1,+-1,,	SET UP RETURN ADDRESS	05302	26	05593	05301
03860	BD	++32,CHI		05314	43	05346	15139
03870	TR	CHI-1,CHI+1,,	SHIFT OFF LEADING ZEROS	05326	31	15138	15140
03880	B	+-24		05338	49	05314	00000
03890	DORG	*-3		05346			
03900	TFM	SYM-14,0000,8		05346	16	09865	0-000
03910	TFM	CSTNO1+6,SYM-14		05358	16	05412	-9865
03920	CM	CHI,69,10		05370	14	15139	00009
03930	BNH	CSTNO1+104		05382	47	05510	01100
03940	AM	++18,1,10		05394	11	05412	000-1
03950	CSTNO1	TD ,CHI		05406	25	00000	15139
03960	TR	CHI-1,CHI+1		05418	31	15138	15140
03970	BNR	++20,CHI+2		05430	45	05450	15141
03980	B	++32		05442	49	05474	00000
03990	DORG	*-3		05450			
04000	CM	CHI,69,10		05450	14	15139	00009
04010	BH	CSTNO1-12		05462	46	05394	01100
04020	CM	CSTNO1+6,SYM-10		05474	14	05412	-9869
04030	BNH	++24		05486	47	05510	01100
04040	BTM	ERROR2,576,9,	STATEMENT NO GREATER THAN 4 DIGITS	05498	17	09386	00N76
04050	TF	SYM,CSTNO1+6,11		05510	26	09879	0541K
04060	SF	SYM-3		05522	32	09876	00000
04070	RTSW	DS 1 ,+-4		05529		1	
04080	ERSW	DS 1 ,+-3		05530		1	
04090	STSN	DC 1 ,1,+-2		05531		1	
	J						
04100	STC	DC 2 ,00,*		05533		2	
	-0						

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04110	BD	CSTNO-1,DIMSW,6,	EXIT IF IN DIMENSION STATEMENT	05534	43	0530J	09904
04120	TDM	FXORFL,2		05546	15	06309	00002
04130	TDM	VARSW,1,,	EXIT TO LOOK UP STATEMENT NUMBER	05558	15	07563	00001
04140	TDM	STNOSW,1		05570	15	09903	00001
04150	B	SMTLU		05582	49	06864	00000
04160	CSORN	BD ++24,EQUWS		05594	43	05618	09908
04170	TFM	SCHI,CHI,,	INITIALIZE IF NOT IN EQUIVALENCE	05606	16	05905	J5139
04180	TDM	FXORFL,0,,	INITIALIZE FIX OR FLOAT SWITCH	05618	15	06309	00000
04190	CM	SCHI,3,610,		05630	14	0590N	000-3
04200	BE	NUMBER		05642	46	06006	01200
04210	CM	SCHI,69,610,		05654	14	0590N	00009
04220	BH	NUMBER		05666	46	06006	01100
04230	CM	SCHI,48,610,	TEST FOR FIX VAR	05678	14	0590N	000M8
04240	BNH	CS		05690	47	05738	01100
04250	CM	SCHI,55,610		05702	14	0590N	000N5
04260	BH	CS		05714	46	05738	01100
04270	TDM	FXORFL,2,,	SET FXORFL TO FIX VAR	05726	15	06309	00002
04280	CS	TFM SMLNG,0,10,	INITIALIZE SYMBOL LENGTH COUNT	05738	16	05821	000-0
04290	TFM	SALT+6,SYM-12		05750	16	05804	-9867
04300	TFM	SALT+18,SYM-13		05762	16	05816	-9866
04310	AM	SALT+6,2,10		05774	11	05804	000-2
04320	AM	SALT+18,2,10		05786	11	05816	000-2
04330	SALT	TF ,SCHI,11,		05798	26	00000	0590N
04340	CF			05810	33	00000	00000
04350	SMLNG	DS ,*		05821		0	
04360	AM	SMLNG,2,10		05822	11	05821	000-2
04370	AM	SCHI,2,10		05834	11	05905	000-2
04380	CM	SCHI,40,610		05846	14	0590N	000M0
04390	BNH	++56		05858	47	05914	01100
04400	CM	SMLNG,12,10		05870	14	05821	000J2
04410	BL	SALT-24		05882	47	05774	01300
04420	SF	SYM-11		05894	32	09868	00000
04430	SCHI	DS ,*		05905		0	
04440	B	SC2		05906	49	05994	00000
04450	DORG	*-3		05914			
04460	SF	SYM-11		05914	32	09868	00000
04470	AVOID	DC 2,37,+-3		05922		2	
	L7						
04480	DC	2,*,-1		05924		2	
	-1						
04490	TF	SYM,SALT+6,11,		05926	26	09879	0580M
04500	TDM	VARSW,0		05938	15	07563	00000
04510	BD	SMTLU,EQUWS,,	TEST TO SEE IF	05950	43	06864	09908
04520	SM	SCHI,1,10,	SYMBOL IS TO BE	05962	12	05905	000-1
04530	TR	CHI-1,SCHI,11,	SHIFTED OFF	05974	31	15138	0590N
04540	B	SMTLU		05986	49	06864	00000
04550	DORG	*-3		05994			
04560	SC2	BTM ERROR,78,9	NAME GREATER THAN 6 CHARACTERS	05994	17	09230	00-78
04570	NUMBER	TDM VARSW,1,,	SET VARIABLE SW. TO INDICATE LITERAL	06006	15	07563	00001
04580	TF	SYM,ZERSYM+1		06018	26	09879	06844
04590	TFM	NUMB1+6,SYM-29		06030	16	06164	-9850
04600	CM	CHI,70, 10,	TEST FOR LEADING ZEROS	06042	14	15139	000P0
04610	BNE	++32		06054	47	06086	01200
04620	TR	CHI-1,CHI+1		06066	31	15138	15140
04630	B	+-36		06078	49	06042	00000
04640	DORG	*-3		06086			

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04650	NUMB	CM	CHI,3,10		06086	14	15139	000-3
04660		BE	FLNUMB		06098	46	06318	01200
04670		CM	CHI,69,10		06110	14	15139	00009
04680		BNH	FXNUMB		06122	47	06214	01100
04690		CM	NUMB1+6,SYM+1		06134	14	06164	-9880
04700		BNL	++24		06146	46	06170	01300
04710	NUMB1	TD	,CHI,,	COLLECT MANTISSA	06158	25	00000	15139
04720		TR	CHI-1,CHI+1		06170	31	15138	15140
04730		AM	NUMB1+6,1,10		06182	11	06164	000-1
04740	NUMB5	AM	SYM-30,1,10		06194	11	09849	000-1
04750		B	NUMB		06206	49	06086	00000
04760		DORG	-3		06214			
04770	FXNUMB	TDM	FXORFL,2,,	SET FIX OR FLOAT SW TO FIX CONST	06214	15	06309	00002
04780		SM	SYM-30,1,10		06226	12	09849	000-1
04790		C	KLNG,SYM-30,,	TEST IF FIX NUMBER EXCEEDS K	06238	24	02252	09849
04800		BNL	++24		06250	46	06274	01300
04810	BTM	ERROR	,177,9,	FIXED POINT NUMBER GREATER THAN K	06262	17	09230	00477
04820		TF	SYM-30,TENZ		06274	26	09849	09891
04830		TF	SYM+1,NUMB1+6,11,	RIGHT JUSTIFY VALUE	06286	26	09880	0616M
04840		SF	SYM+1,,2		06298	32	-9880	00000
04850	MODE	DC	2,0,-2		06307		2	
			-0					
04860	FXORFL	DC	2,0,*		06309		2	
			-0					
04870		B	SMTLU		06310	49	06864	00000
04880		DORG	-3		06318			
04890	FLNUMB	TFM	VARBR+6,NUMB3		06318	16	06408	-6366
04900		CM	SYM-30,1,10		06330	14	09849	000-1
04910		BE	++24		06342	46	06366	01200
04920		TFM	VARBR+6,NUMB2+12		06354	16	06408	-6474
04930	NUMB3	SM	SYM-30,1,10		06366	12	09849	000-1
04940		TR	CHI-1,CHI+1		06378	31	15138	15140
04950		CM	CHI,70,10		06390	14	15139	000P0
04960	VARBR	BE	,,,	BRANCH BACK TO SHIFT OFF LEADING ZEROS	06402	46	00000	01200
04970		BNH	CMPAR		06414	47	06494	01100
04980		TFM	VARBR+6,NUMB2+12		06426	16	06408	-6474
04990		CM	NUMB1+6,SYM+1		06438	14	06164	-9880
05000		BNL	++24		06450	46	06474	01300
05010	NUMB2	TD	NUMB1+6,CHI,6,	COLLECT NUMBER	06462	25	0616M	15139
05020		AM	NUMB1+6,1,10		06474	11	06164	000-1
05030		B	NUMB3+12		06486	49	06378	00000
05040		DORG	-3		06494			
05050	CMPAR	CM	CHI,45,10,	TEST FOR E TYPE	06494	14	15139	000M5
05060		BNE	PLUS+12		06506	47	06734	01200
05070		TFM	PLUS+11,0,10		06518	16	06733	000-0
05080		TDM	PLUS+1,1		06530	15	06723	00001
05090		CM	CHI+2,20,10		06542	14	15141	000K0
05100		BL	++36		06554	47	06590	01300
05110		BNE	++36		06566	47	06602	01200
05120		TDM	PLUS+1,2		06578	15	06723	00002
05130		TR	CHI-1,CHI+1		06590	31	15138	15140
05140		CM	CHI+2,69,10		06602	14	15141	00009
05150		BH	++24		06614	46	06638	01100
05160	EXCESS	BTM	ERROR,178,9,	INVALID EXPONENT	06626	17	09230	00478
05170		TD	PLUS+11,CHI+2		06638	25	06733	15141
05180		TR	CHI-1,CHI+3		06650	31	15138	15142

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05190		CM	CHI,69,10		06662	14	15139	00009
05200		BNH	PLUS		06674	47	06722	01100
05210		S	PLUS+10,PLUS+11		06686	22	06732	06733
05220		TD	PLUS+11,CHI		06698	25	06733	15139
05230		TR	CHI-1,CHI+1		06710	31	15138	15140
05240	PLUS	AM	SYM-30,,7		06722	11	09849	-0000
05250		TF	SYM,SYM-30		06734	26	09879	09849
05260		SF	SYM-29		06746	32	09850	00000
05270		TF	SYM-2,SYM-30,7		06758	26	09877	-9849
05280		BV	EXCESS		06770	46	06626	01400
05290		BD	SMTLU,SYM-29		06782	43	06864	09850
05300		TFM	SYM,99,1011		06794	16	09879	000RR
05310		B	SMTLU		06806	49	06864	00000
05320		DORG	-3		06814			
05330	ZERSYM	DC	30,0		06843		30	
			-00000000000000000000000000000000					
05340		DC	3,010,ZERSYM-28		06815		3	
			-10					
05350	TBLFUL	BTM	ERROR2,74,9,		06844	17	09386	00-74
05360		B	MONCAL,,,	ABORT JOB CAN NOT GO ON	06856	49	00796	00000
05370		DORG	-3		06864			
05380	*****		SYMBOL TABLE LOOK UP *****					
05390								
05400	SMTLU	BLX	++12,P2PTR(1)		06864	65	06876	023J3
05410	XRA1	DS	,309		00309		0	
05420		CF	DMVAR		06876	33	08132	00000
05430		BT	SMLDOP+12		06888	49	06908	
05440	SMLOOP	BXM	++12,-10(1)		06896	62	06908	000J-
05450	OUTSW	DS	,SMLOOP		06896		0	
05460		BNR	JOE,4(1)		06908	45	07164	000-4
05470		BNG	FUL1,4(1),,	GROUP MARK AT FCTEND	06920	55	06968	000-4
05480		TD	++23,SYM		06932	25	06955	09879
05490		BD	SMLDOP,SYTBST		06944	43	06896	02500
05500		BLX	SMLDOP,LSTAD(1)		06956	65	06896	023-8
05510	FUL1	BNF	FUTEST,4(1),,	FLAG AT SEPARATION POINT	06968	44	06992	000-4
05520		BLX	SMLDOP,JUMP(1),,	JUMP AROUND	06980	65	06896	024K9
05530	FUTEST	C	XRA1,LSTAD		06992	24	00309	02308
05540		BH	FUL2		07004	46	07076	01100
05550		BSX	++12,++35(1)		07016	67	07028	070M1
05560		SM	++23,46,10		07028	12	07051	000M6
05570		BNR	TBLFUL,-*		07040	45	06844	00000
05580		BNF	ADVAR,JOE		07052	44	08132	07164
05590		BSX	ADVAR,JUMP(1),,	UPDATE JUMP AROUND POINT	07064	67	08132	024K9
05600	FUL2	BSX	++12,++35(1)		07076	67	07088	071J1
05610		SM	++23,6,10		07088	12	07111	000-6
05620		BNF	ADVAR,-*,,	IS UPPER HALF FULL	07100	44	08132	00000
05630		CF	JOE		07112	33	07164	00000
05640	SAVEGM	DS	5,*		07123		5	
05650		BD	++20,DIMSW		07124	43	07144	09904
05660		BT	ADVAR		07136	49	08132	
05670		SF	4(1)		07144	32	000-4	00000
05680		BT	FUL1+12		07156	49	06980	
05690	JOE	BD	LITERL,VARSW,0,	BRANCH IF SYMBOL IS A CONSTANT	07164	M3	07688	07563
05700		BNF	++20,3(1),,	FLAG AT 3 POS. IMPLIES CONSTANT	07176	44	07196	000-3
05710		B	SMLOOP		07188	49	06896	00000
05720		DORG	-3		07196			

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05730	C	-4(1),SYM		07196	24	000-M	09879
05740	BV	SMLOOP		07208	46	06896	01400
05750	BNE	SMLOOP		07220	47	06896	01200
05760	TDM	INSW,1,,	SET DIGIT IN INSW IF VARIABLE FOUND	07232	15	03219	00001
05770	C	XRA1,FCSTEND,,	TEST IF SYMBOL WAS LIBRARY FUNCTION	07244	24	00309	02318
05780	BH	FCSTEST,,		07256	46	08744	01100
05790	BD	CSORN-1,DIMSW,6,	RETURN IF IN DIMENSION STATEMENT	07268	43	0559L	09904
05800	BD	*+32,EQUWS		07280	43	07312	09908
05810	CM	CHI,24,10		07292	14	15139	000K4
05820	B	*+32		07304	49	07336	00000
05830	DORG	*-3		07312			
05840	BNF	CSORN-1,EQUWS,6		07312	44	0559L	09908
05850	CM	SCHI,24,610		07324	14	0590N	000K4
05860	BNR	*+20,6(1),,	TEST FOR SUBPROGRAM	07336	45	07356	000-6
05870	B	FCST		07348	49	07912	00000
05880	DORG	*-3		07356			
05890	BE	DIMERR+12		07356	46	07460	01200
05900	BD	*+20,6(1),,	TEST FOR DIM VARIABLE	07368	43	07388	000-6
05910	B	LUXIT		07380	49	07504	00000
05920	DORG	*-4		07387			
05930	BD	LUXIT,IOSW,,	DIM VAR USED W/O DIM IN I/O STATEMENT	07388	43	07504	09911
05940	BD	DELAY,SSCSW		07400	43	07668	02494
05950	BD	LUXIT ,CALLSW,,	DIM VAR USED W/O DIM IN CALL	07412	43	07504	09909
05960	BD	COME,COMSW,,	SAME FOR COMMON	07424	43	11944	09910
05970	BD	LUXIT-12,EQUWS		07436	43	07492	09908
05980	DIMERR	BTM	ERROR,73,9,	07448	17	09230	00-73
05990	BD	COMER2,COMSW	DIMENSIONED VAR USED WITH OUT SUBSCRIPT	07460	43	09442	09910
06000	BD	*+20,6(1),,	TEST FOR DIM VARIABLE	07472	43	07492	000-6
06010	B	DIMERR		07484	49	07448	00000
06020	DORG	*-3		07492			
06030	SF	DMVAR,,	SET DIMENSION VARIABLE SWITCH	07492	32	08132	00000
06040	*****	EXIT FROM TABLE LOOK UP	*****				
06050	LUXIT	BNF	CSORN-1,OUTSW,6,	07504	44	0559L	06896
06060	CF	OUTSW	EXIT IF OUTSW NOT SET	07516	33	06896	00000
06070	BT	PUT,XRA1-1		07528	27	08944	00308
06080	BNF	*+44,DMVAR		07540	44	07584	08132
06090	CF	DMVAR		07552	33	08132	00000
06100	VARSW	DS	*	07563		0	
06110	TF	OUTSCE,CSORN-1		07564	26	04699	05593
06120	B	OUTSC		07576	49	10464	00000
06130	DORG	*-3		07584			
06140	BNF	*+32 ,FNTSW,,	TEST IF SYMBOL WAS A FUNCTION NAME	07584	44	07616	09900
06150	BTM	PUT,0154,8,	ARITH STATEMENT CALL	07596	17	08944	0-154
06160	B	CSORN-1,,6		07608	49	0559L	00000
06170	DORG	*-3		07616			
06180	BD	*+20,FNTSW,,	DIGIT AND NO FLAG IMPLIES SUBPROGRAM	07616	43	07636	09900
06190	B	CSORN-1,,6		07628	49	0559L	00000
06200	DORG	*-3		07636			
06210	BD	AERR1,OMM,,	STATEMENT FUNCTION PREV DEFINED	07636	43	09430	09907
06220	BTM	PUT,0153,8,	FUNCTION OPERATOR CALL	07648	17	08944	0-153
06230	B	CSORN-1,,6		07660	49	0559L	00000
06240	DORG	*-3		07668			
06250	DELAY	SF	SSCSW	07668	32	02494	00000
06260	B7	LUXIT		07680	49	07504	
06270	*****	SEARCH SYMBOL TABLE FOR CONSTANTS	*****				
06280	LITERL	BNF	SMLOOP,3(1),,	07688	44	06896	000-3

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06290	CF	3(1)		07700	33	000-3	00000
06300	BD	LUSTNO,STNOSW,,	BRANCH IF LOOKING-UP STATEMENT NUMBER	07712	43	08068	09903
06310	BD	FXLIT,FXORFL,,	BR IF SEARCHING FOR FIXED CONST	07724	43	07992	06309
06320	BD	EXLIT ,5(1)		07736	43	07820	000-5
06330	LITF	C	-4(1),SYM,,	07748	24	000-M	09879
06340	BNE	EXLIT		07760	47	07820	01200
06350	SM	4(1),2,10		07772	12	000-4	000-2
06360	C	-4(1),SYM-2,,	COMPARE MANTISSA	07784	24	000-M	09877
06370	BE	*+44		07796	46	07840	01200
06380	AM	4(1),2,10		07808	11	000-4	000-2
06390	EXLIT	SF	3(1)	07820	32	000-3	00000
06400	B	SMLOOP		07832	49	06896	00000
06410	DORG	*-3		07840			
06420	AM	4(1),2,10		07840	11	000-4	000-2
06430	SF	3(1)		07852	32	000-3	00000
06440	TDM	INSW,1		07864	15	03219	00001
06450	E37061	CM	CHI,24,10	07876	14	15139	000K4
06460	BNE	LUXIT		07888	47	07504	01200
06470	BTM	ERROR,378,9		07900	17	09230	00L78
06480	*****	TEST FOR SINGLE STATEMENT FUNCTION OR FUNCTION SUBROUTINE	*****				
06490	FCST	BE	*+36	07912	46	07948	01200
06500	BD	*+24,CALLSW		07924	43	07948	09909
06510	ERR09	BTM	ERROR,079,9,	07936	17	09230	00-79
06520	TDM	FNTSW,1,,	INCORRECT USE OF SUBPROGRAM NAME	07948	15	09900	00001
06530	BNF	LUXIT,6(1)	FUNCTION SUBROUTINE	07960	44	07504	000-6
06540	SF	FNTSW,,		07972	32	09900	00000
06550	B	LUXIT		07984	49	07504	00000
06560	DORG	*-3		07992			
06570	FXLIT	BD	*+20,5(1),,	07992	43	08012	000-5
06580	B	EXLIT	DIGIT INDICATES FIXED VARIABLE	08004	49	07820	00000
06590	DORG	*-3		08012			
06600	BNF	EXLIT,5(1),,	TEST FOR STATEMENT NUMBER	08012	44	07820	000-5
06610	C	-4(1),SYM		08024	24	000-M	09879
06620	SF	3(1)		08036	32	000-3	00000
06630	BNE	SMLOOP		08048	47	06896	01200
06640	B	E37061		08060	49	07876	00000
06650	DORG	*-3		08068			
06660	*****	ENTER WHEN LOOKING UP STATEMENT NUMBERS	*****				
06670	LUSTNO	BNF	*+20,5(1),,	08068	44	08088	000-5
06680	B7	EXLIT	NO FLAG IMPLIES STATEMENT NUMBER	08080	49	07820	
06690	C	-4(1),SYM		08088	24	000-M	09879
06700	BNE	EXLIT		08100	47	07820	01200
06710	TDM	STNOSW,0		08112	15	09903	00000
06720	B7	E37061-24,,,	BRANCH TO SET INSW AND GOTO LUXIT	08124	49	07852	
06730	*****	ENTRY TO ADD A NEW VARIABLE TO SYMBOL TABLE	*****				
06740	ADVAV	TDM	INSW,0	08132	15	03219	00000
06750	DMVAR	DS	,ADVAV	08132		0	
06760	TDM	9(1),0,,	ELIMINATE RECORD MARK	08144	15	000-9	00000
06770	TD	5(1),FXORFL		08156	25	000-5	06309
06780	SF	5(1)		08168	32	000-5	00000
06790	BD	ADLIT,VARSW,,	BRANCH TO ADD CONSTANT	08180	43	08540	07563
06800	A	NXLOC,SMLNG,,	MOD SYMBOL STORAGE BY NUMBER OF CHAR	08192	21	02372	05821
06810	TF	NXLOC,SYM,6,	MOVE SYMBOL INTO SYM STORAGE	08204	26	0237K	09879
06820	ADVLOP	TF	4(1),NXLOC,,	08216	26	000-4	02372
06830	BD	ADVAV1,DIMSW,,	TEST IF IN DIMENSION STATEMENT	08228	43	08248	09904
06840	B	ADVAV2		08240	49	08260	00000

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06850	DORG	*-3			08248			
06860	ADVAR1	TF	99994(1),NXLOC,,	PLACE DOUBLE ENTRY FOR DIMENSION VAR	08248	26	999R4	02372
06870	ADVAR2	BD	ADSUBP,SUBSW,,	TEST IF IN SUBROUTINE STATEMENT	08260	43	08480	09912
06880	BD		CSORN-1,DIMSW,6,	GOTO COLLECT DIMENSIONS IF IN DIM	08272	43	0559L	09904
06890	SETIND	BNF	*+24,COMSW,,	TEST IF IN COMMON	08284	44	08308	09910
06900	SF		6(1),,,	SET FLAG ON INDICATOR IF COMMON VARIABLE	08296	32	000-6	00000
06910	SUBTST	BD	*+32,EQUWS,,		08308	43	08340	09908
06920	CM		CHI,24,10		08320	14	15139	000K4
06930	B		*+20		08332	49	08352	00000
06940	DORG	*-3			08340			
06950	CM		SCHI,24,610		08340	14	0590N	000K4
06960	BNE		LUXIT		08352	47	07504	01200
06970	BD		SUBTR,EQUWS,,		08364	43	08456	09908
06980	PAJSP	BD	LUXIT,SUBSW,,	DO NOT SET INDICATOR IF IN DECLARATION	08376	43	07504	09912
06990	BD		COMER2,COMSW		08388	43	09442	09910
07000	TDM		FNTSW,1,,	SET SWITCH FOR FUNCTION NAME (A)	08400	15	09900	00001
07010	TDM		6(1),*-*		08412	15	000-6	00000
07020	DC		1,*,*		08423		1	
07030	BD		LUXIT,EQUWS		08424	43	07504	09908
07040	BD		ASC21,OMH		08436	43	13510	09907
07050	B		LUXIT,		08448	49	07504	00000
07060	DORG	*-3			08456			
07070	SUBTR	BNF	PAJSP,EQUWS		08456	44	08376	09908
07080	BTM		ERROR,170,9,	DIM VAR IN EQUIV W/O PREVIOUS DIMENSIONS	08468	17	09230	00J70
07090	*****		ENTRY TO PLACE VARIABLE IN SUBROUTINE DEFINITION IN TABLE					
07100	*****		THESE VARIABLE ARE PLACED IN TWICE BECAUSE OF POSSIBLE					
07110	**		DIMENSIONING LATER					
07120	ADSUBP	BNF	ADSUB2,SUBSW		08480	44	08516	09912
07130	CF		SUBSW		08492	33	09912	00000
07140	ADSAVE	DS	,*		08503		0	
07150	BXM		SETIND,10(1)		08504	62	08284	000J0
07160	ADSUB2	SF	SUBSW		08516	32	09912	00000
07170	BXM		ADVLOP,-10(1),,	BRANCH TO PLACE SYMBOL IN SECOND TIME	08528	62	08216	000J-
07180	*****		ENTRY TO PLACE CONSTANTS IN TABLE *****					
07190	ADLIT	BD	ADSTN,STNOSW,,	BRANCH TO ADD STATEMENT NUMBER	08540	43	08676	09903
07200	BD		ADXLIT,FXORFL,,	BRANCH TO ADD FIX CONST	08552	43	08644	06309
07210	A		NXLOC,FLNG		08564	21	02372	02250
07220	TF		NXLOC,SYM-2,6,	MOVE IN FLOATING MANTISSA	08576	26	0237K	09877
07230	AM		NXLOC,2,10		08588	11	02372	000-2
07240	TF		4(1),NXLOC,,	SET SYM ADDRESS INTO TABLE	08600	26	000-4	02372
07250	ADLIT1	TF	NXLOC,SYM,6,	MOVE CHARACTERISTIC OR FIX CONST	08612	26	0237K	09879
07260	SF		3(1)		08624	32	000-3	00000
07270	B		E37061		08636	49	07876	00000
07280	DORG	*-3			08644			
07290	ADXLIT	A	NXLOC,KLNG		08644	21	02372	02252
07300	TF		4(1),NXLOC,,	SET SYM ADDRESS INTO TABLE	08656	26	000-4	02372
07310	B		ADLIT1		08668	49	08612	00000
07320	DORG	*-3			08676			
07330	*****		ENTER TO ADD STATEMENT NUMBER *****					
07340	ADSTN	AM	NXLOC,4,10		08676	11	02372	000-4
07350	TF		4(1),NXLOC,,	MOVE STAMNT NO. ADDRESS TO TABLE	08688	26	000-4	02372
07360	CF		5(1),,,	CLEAR FLAG FOR STATEMENT NUMBER	08700	33	000-5	00000
07370	TDM		STNOSW,0		08712	15	09903	00000
07380	B7		ADLIT1		08724	49	08612	
07390	BTM		ERROR,374,9,	ILLEGAL USE OF FUNCTION NAME	08732	17	09230	00L74

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07400	FCTEST	BD	*-12,COMSW,,	TEST FOR FUNCTION NAME IN COMMON	08744	43	08732	09910
07410	BD		JWG,EQUWS		08756	43	08920	09908
07420	BD		*-36,DIMSW,,	1	08768	43	08732	09904
07430	BD		*-48,IOSW,		08780	43	08732	09911
07440	BD		FCTEST-12,OMH		08792	43	08732	09907
07450	CM		CHI,24,10		08804	14	15139	000K4
07460	BNE		FCTEST-12		08816	47	08732	01200
07470	TF		TEMP,9(1),,	MOVE IN LIBRARY FUNCTION ADDRESS	08828	26	04089	000-9
07480	SM		TEMP,ENTLOG-5		08840	12	04089	-2243
07490	MM		TEMP,2,10		08852	13	04089	000-2
07500	SF		97		08864	32	00097	00000
07510	REF	DS	,*		08875		0	
07520	TFM		*+30,USEDIFS-1		08876	16	08906	-2262
07530	A		*+18,98		08888	21	08906	00098
07540	TDM		1,1,10,	SET INDICATOR FOR FUNCTION USED	08900	15	00000	000-1
07550	B		LUXIT		08912	49	07504	00000
07560	DORG	*-4			08919			
07570	JWG	BNF	CSORN-1,EQUWS,6		08920	44	0559L	09908
07580	B		FCTEST-12,,7,	FUNCT NAME IN EQUIV	08932	49	08732	-0000
07590	PUT	BD	EXIT,ERSW		08944	43	09114	05530
07600	CF		PUT-4		08956	33	08940	00000
07610	TF		PUTOUT,PUT-1		08968	26	09272	08943
07620	E94270	TR	CARD,PUTOUT-4,2		08980	31	J4936	09268
07630	AM		*-6,05,10		08992	11	08986	000-5
07640	CM		*-18,CARD+200		09004	14	08986	J5136
07650	BE		*+14		09016	46	09030	01200
07660	BB				09028	42	00000	00000
07670	DORG	*-9			09030			
07680	TFM		IORT,*+23		09030	16	00565	-9053
07690	B		IOPT,INTOP,7		09042	49	00532	-9121
07700	AM		INTOP1+5,2,10		09054	11	02390	000-2
07710	B		*+36,00200,,	C977 ST ON SW 2	09066	49	09102	00200
07720	RCTY		CARD		09078	34	00000	00102
07730	WNTY		CARD		09090	38	14936	00100
07740	TFM		E94270+6,CARD		09102	16	08986	J4936
07750	EXIT	BB	E86440		09114	42	02430	00000
07760	DORG	*-4			09121			
07770	INTOP	DSC	2,02		09121		2	
07780	OSA		INTOP1		09127		5 X	1
07790	DC		1,*		09127		-2385	
07800	SPERR	TFM	SPGS+11,071,9		09128		1	
07810	BD		SPGS,INDIV		09130	16	09225	00-71
07820	TFM		IORT,*+23		09142	43	09214	02424
07830	B		IOGT,C5DATA-4,7,	CHECK FOR CONTINUATION CARDS	09154	16	00565	-9177
07840	CM		CHI5,43,10		09166	49	00566	-9791
07850	BE		*+24		09178	14	15839	000M3
07860	BD		SPERR+24,CHI5+10		09190	46	09214	01200
07870	SPGS	BTM	ERROR,071,9		09202	43	09154	15849
07880	DS		4		09214	17	09230	00-71
07890	ERROR	TDM	ERSW,1		09229		4	
07900	TDM		E94620+1,9		09230	15	05530	00001
07910	TF		ERMES+14,ERROR-1		09242	15	09375	00009
					09254	26	09815	09229

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07920	RCTY			09266	34	00000	00102
07930	PUTOUT DS	,*-5		09272		0	
07940	DC	1,*,*-4		09273		1	
07950	BC1	**+84		09278	46	09362	00100
07960	WNTY	ESNO-3		09290	38	02685	00100
07970	SPTY			09302	34	00000	00101
07980	WATY	PLUSS		09314	39	09831	00100
07990	SPTY			09326	34	00000	00101
08000	WNTY	ESNOPL-3		09338	38	03001	00100
08010	SPTY			09350	34	00000	00101
08020	WATY	ERMES		09362	39	09801	00100
08030	E94620 B	BEGINA		09374	49	02602	00000
08040	ERROR2 TDM	E94620+1,2		09386	15	09375	00002
08050	TDM	JAY,4		09398	15	02367	00004
08060	TF	ERMES+14,ERROR2-1		09410	26	09815	09385
08070	B	ERROR+36		09422	49	09266	00000
08080	DORG	*-3		09430			
08090	AERR1 BTM	ERROR,376,9		09430	17	09230	00L76
08100	COMER BTM	ERROR,372,9,	INCORRECT COMMON STATEMENT	09442	17	09230	00L72
08110	COMER2 DS	,COMER		09442		0	
08120	CALLER BTM	ERROR,279,9,	INCORRECT CALL NAME OR LIST	09454	17	09230	00K79
08130	END	BD **20,SUBFCT		09456	43	09486	02293
08140	B	**32		09478	49	09510	00000
08150	DORG	*-3		09486			
08160	BD	**24,RTSW		09486	43	09510	05529
08170	BTM	ERROR2,578,9		09498	17	09386	00N78
08180	BV	**12		09510	46	09522	01400
08190	BD	MONCAL ,ERSH,,	SKIP STORAGE ALLOCATION IF PROG HAD ERR	09522	43	00796	05530
08200	BTM	PUT, 141,B,END		09534	17	08944	0-141
08210	BTM	PUT, 140,B,DUMMY		09546	17	08944	0-140
08220	BTM	PUT, 132,B,SEMI COLON		09558	17	08944	0-132
08230	CM	E94270+6,CARD		09570	14	08986	J4936
08240	BE	E86440,,,	EXIT TO STORAGE ALLOCATION	09582	46	02430	01200
08250	TDM	EXIT+1,9		09594	15	09115	00009
08260	B	E94270+50		09606	49	09030	00000
08270	DORG	*-3		09614			
08280	BLK1 DSC	2,02		09614		2	
	O2						
08290	DSA	BLK1A		09620		5 X	1
				09620		-9622	
08300	DC	1,'		09621		1	
08310	BLK1A DSC	1,0		09622		1	
	O						
08320	RECMK DS	,BLK1A-1		09621		0	
08330	DC	5,00200		09627		5	
		-0200					
08340	DC	3 ,043		09630		3	
		-43					
08350	DSA	IOUT		09635		5 X	1
				09635		J0200	
08360	DC	1,'		09636		1	

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08370	BLK2 DSC	2,02		09637		2	
	O2						
08380	DSA	BLK2A		09643		5 X	1
				09643		-9645	
08390	DC	1,'		09644		1	
08400	BLK2A DSC	1,0		09645		1	
	O						
08410	DC	5,00000		09650		5	
		-0000					
08420	DC	3,046		09653		3	
		-46					
08430	DSA	IOUT		09658		5 X	1
				09658		J0200	
08440	DC	1,'		09659		1	
08450	BLK3 DSC	2,02		09660		2	
	O2						
08460	DSA	BLK3A		09666		5 X	1
				09666		-9668	
08470	DC	1,'		09667		1	
08480	BLK3A DSC	1,0		09668		1	
	O						
08490	DC	5,00050		09673		5	
		-0050					
08500	DC	3,046		09676		3	
		-46					
08510	DSA	IOUT		09681		5 X	1
				09681		J0200	
08520	DC	1,'		09682		1	
08530	BLK4 DSC	2,02		09683		2	
	O2						
08540	DSA	BLK4A		09689		5 X	1
				09689		-9691	
08550	DC	1,'		09690		1	
08560	BLK4A DSC	1,0		09691		1	
	O						
08570	DC	5,00100		09696		5	
		-0100					
08580	DC	3,046		09699		3	
		-46					
08590	DSA	IOUT		09704		5 X	1
				09704		J0200	
08600	DC	1,'		09705		1	
08610	BLK5 DSC	2,02		09706		2	
	O2						

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08620	DSA	BLK5A		09712	5 X 1
				09712	-9714
08630	DC	1,'		09713	1
08640	BLK5A	DSC	1,0	09714	1
		0			
08650	DC	5,00250		09719	5
		-0250			
08660	DC	3,046		09722	3
		-46			
08670	DSA	10UT		09727	5 X 1
				09727	J0200
08680	DC	1,'		09728	1
08690	BLK6	DSC	2,02	09729	2
		02			
08700	DSA	BLK6A		09735	5 X 1
				09735	-9737
08710	DC	1,'		09736	1
08720	BLK6A	DSC	1,0	09737	1
		0			
08730	DC	5,00150		09742	5
		-0150			
08740	DC	3,046		09745	3
		-46			
08750	DSA	10UT		09750	5 X 1
				09750	J0200
08760	DC	1,'		09751	1
08770	BLK7	DSC	2,22	09752	2
		22			
08780	DSA	BLK7A		09758	5 X 1
				09758	-9760
08790	DC	1,'		09759	1
08800	BLK7A	DSC	1,0	09760	1
		0			
08810	DC	5,17700		09765	5
		J7700			
08820	DC	3,100		09768	3
		J00			
08830	DSA	E86440		09773	5 X 1
				09773	-2430
08840	DC	1,'		09774	1
08850	URDATA	DSA	CHI	09779	5 X 1
				09779	J5139
08860	DC	2,06		09781	2
		-6			

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08870	GM1	DGM		09782	1
08880	CDDATA	DSA	CHI	09787	5 X 1
				09787	J5139
08890	DC	2,10		09789	2
		JO			
08900	GM2	DGM		09790	1
08910	C5DATA	DSA	CHI5	09795	5 X 1
				09795	J5839
08920	DC	2,10		09797	2
		JO			
08930	GM3	DGM		09798	1
08940	ERMES	DAC	9,ERROR 00'	09801	9 X 2
			ERROR 00'		
08950	FMTCS	DC	12,465659544163	09829	12
			M65659544163		
08960	PLUSS	DAC	2,+'	09831	2 X 2
		++			
08970	ENDCT	DAC	3,END	09835	3 X 2
		END			
08980	SYM	DS	40	09879	40
08990		DS	2	09881	2
09000		DC	16,0	09897	16
		-00000000000000			
09010	ZER13	DS	,#-2	09895	0
09020	TENZ	DS	,#-6	09891	0
09030	SINGST	DC	1,0	09898	1
		-			
09040	DOTRAN	DSC	1,0	09899	1
		0			
09050	FNTSW	DSC	1,0	09900	1
		0			
09060	FNTSWI	DSC	1,0	09901	1
		0			
09070	FMSW	DSC	1,0	09902	1
		0			
09080	STNOSW	DSC	1,0	09903	1
		0			
09090	DIMSW	DSC	1,0	09904	1
		0			
09100	IFSW	DSC	1,0	09905	1
		0			
09110	CGTO	DSC	1,0	09906	1
		0			
09120	OMM	DSC	1,0	09907	1
		0			
09130	EQUSSW	DSC	1,0	09908	1
		0			
09140	CALLSW	DSC	1,0	09909	1
		0			
09150	CONSW	DSC	1,0	09910	1
		0			
09160	IOSW	DSC	1,0	09911	1
		0			
09170	SUBSW	DSC	1,0	09912	1
		0			

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09180	DORG	10200	10200			
09190	IOUT	TFM FMON+35,BLK4	10200	16	02359	-9683
09200	BTM	FMON,IOUT	10212	17	02324	J0200
09210	NONARA	TFM FMON+35,BLK2	10224	16	02359	-9637
09220	BTM	FMON,NONARA	10236	17	02324	J0224
09230	DIM	TFM FMON+35,BLK1	10248	16	02359	-9614
09240	BTM	FMON,DIM	10260	17	02324	J0248
09250	COMMON	TFM FMON+35,BLK1	10272	16	02359	-9614
09260	BTM	FMON,COMMON	10284	17	02324	J0272
09270	IF	TFM FMON+35,BLK6	10296	16	02359	-9729
09280	BTM	FMON,IF	10308	17	02324	J0296
09290	GOTO	TFM FMON+35,BLK6	10320	16	02359	-9729
09300	BTM	FMON,GOTO	10332	17	02324	J0320
09310	CALL	TFM FMON+35,BLK6	10344	16	02359	-9729
09320	BTM	FMON,CALL	10356	17	02324	J0344
09330	RETURN	TFM FMON+35,BLK6	10368	16	02359	-9729
09340	BTM	FMON,RETURN	10380	17	02324	J0368
09350	FORMAT	TFM FMON+35,BLK1	10392	16	02359	-9614
09360	BTM	FMON,FORMAT	10404	17	02324	J0392
09370	DOO	TFM FMON+35,BLK4	10416	16	02359	-9683
09380	BTM	FMON,DOO	10428	17	02324	J0416
09390	ASCAN	TFM FMON+35,BLK3	10440	16	02359	-9660
09400	BTM	FMON,ASCAN	10452	17	02324	J0440
09410	OUTSC	TFM FMON+35,BLK3	10464	16	02359	-9660
09420	BTM	FMON,OUTSC	10476	17	02324	J0464
09430	DKIO	TFM FMON+35,BLK5	10488	16	02359	-9706
09440	BTM	FMON,DKIO	10500	17	02324	J0488
09450	DORG	16000	16000			
09460	PHBDAT	DSC 2,22	16000		2	
		22				
09470	DSA	PHBDDA	16006		5 X	1
			16006		J6008	
09480	DC	1,1	16007		1	
09490	PHBDDA	DSC 1,0	16008		1	
		0				
09500	DC	5,17200	16013		5	
		J7200				
09510	DC	3 ,082	16016		3	
		-82				
09520	DSA	E86440	16021		5 X	1
			16021		-2430	
09530	DC	1,1	16022		1	
09540	LDPHB	TD GM1 ,GM	16024	25	09782	02300
09560	TD	GM2 ,GM	16036	25	09790	02300
09570	TD	GM3 ,GM	16048	25	09798	02300
09580	TFM	IORT ,,+23	16060	16	00565	J6083
09590	B	IOPT,PHBDAT,7	16072	49	00532	J6000
09600	TRA		16084	36	00000	00500
			16096	49	00000	00000
09610	TCD	LDPHB	16024			
09620 *	OUT OF CORE BLOCK 1 CONTAINS THE FOLLOWING					

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09630 *	DIMENSION					
09640 *	COMMON					
09650 *	FORMAT					
09660	DORG	IOUT	10200			
09670	TFM	FMON+35,BLK4	10200	16	02359	-9683
09680	BTM	FMON,IOUT	10212	17	02324	J0200
09690	TFM	FMON+35,BLK2	10224	16	02359	-9637
09700	BTM	FMON,NONARA	10236	17	02324	J0224
09710	CF	STSN	10248	33	05531	00000
09720	B	DIMEN	10260	49	10512	00000
09730	CF	STSN	10272	33	05531	00000
09740	B	COMMON	10284	49	11552	00000
09750	TFM	FMON+35,BLK6	10296	16	02359	-9729
09760	BTM	FMON,IF	10308	17	02324	J0296
09770	TFM	FMON+35,BLK6	10320	16	02359	-9729
09780	BTM	FMON,GOTO	10332	17	02324	J0320
09790	TFM	FMON+35,BLK6	10344	16	02359	-9729
09800	BTM	FMON,CALL	10356	17	02324	J0344
09810	TFM	FMON+35,BLK6	10368	16	02359	-9729
09820	BTM	FMON,RETURN	10380	17	02324	J0368
09830	CF	FREQSW	10392	33	14134	00000
09840	B	FORMAT	10404	49	12130	00000
09850	TFM	FMON+35,BLK4	10416	16	02359	-9683
09860	BTM	FMON,DOO	10428	17	02324	J0416
09870	TFM	FMON+35,BLK3,,	10440	16	02359	-9660
09880	BTM	FMON,ASCAN	10452	17	02324	J0440
09890	TFM	FMON+35,BLK3,,	10464	16	02359	-9660
09900	BTM	FMON,OUTSC	10476	17	02324	J0464
09910	TFM	FMON+35,BLK5	10488	16	02359	-9706
09920	BTM	FMON,DKIO	10500	17	02324	J0488
09930	*****	ENTRY TO DECOMPOSE DIMENSION STATEMENT	*****			
09940	DIMEN	BTM COLNAM,6,10	10512	17	04560	000-6
09950	C	SYM,ENSIION+10	10524	24	09879	11551
09960	BV	ERRO1	10536	46	04198	01400
09970	BNE	ERRO1	10548	47	04198	01200
09980	TR	CHI-1,CHI+11	10560	31	15138	15150
09990	TDM	DIMSW,1	10572	15	09904	00001
10000	BNR	++36,CHI+2	10584	45	10620	15141
10010	DIM1	BTM ERROR,072,9,	10596	17	09230	00-72
10020	BTM	ERROR,270,9	10608	17	09230	00K70
10030	CM	CHI,40,10	10620	14	15139	000M0
10040	BNH	--24	10632	47	10608	01100
10050	CM	CHI,69,10	10644	14	15139	00009
10060	BH	DIM1+12	10656	46	10608	01100
10070	BTM	CSORN,++12	10668	17	05594	J0680
10080	SETDM	BD DIM2,INSW,,	10680	43	11472	03219
10090	TDM	6(1),1,,	10692	15	000-6	00001
10100	TF	ADSAVE,4(11)	10704	26	08503	000-4
10110	TFM	99999(11),00001	10716	16	9999R	-0001
10120	CM	CHI,24,10	10728	14	15139	000K4
10130	BNE	DIM1	10740	47	10596	01200
10140	SF	DIM1	10752	32	10596	00000
10150	SF	SETDM	10764	32	10680	00000
10160	SD	TR CHI-1,CHI+1,,	10776	31	15138	15140
10170	CM	CHI,69,10,	10788	14	15139	00009
10180	BNH	SETDM2+24	10800	47	10848	01100

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10190	BTM	CSTNO,++12					
10200	SETDM2	CM	SYM,0,10	10812	17	05302	J0824
10210	BNE	++24		10824	14	09879	000-0
10220	BTM	ERROR,179,9		10836	47	10860	01200
10230	AM	ADSAVE,5,10		10848	17	09230	00J79
10240	TDM	SYM-4,0,11		10860	11	08503	000-5
10250	CF	SYM-3		10872	15	09875	0000-
10260	TF	ADSAVE,SYM,6		10884	33	09876	00000
10270	AM	NXLOC,5,10		10896	26	0850L	09879
10280	TF	TEMP,SYM		10908	11	02372	000-5
10290	CM	CHI,04,10		10920	26	04089	09879
10300	BE	MOVDIM		10932	14	15139	000-4
10310	CM	CHI,23,10		10944	46	11104	01200
10320	BNE	DIM1		10956	14	15139	000K3
10330	BNF	GENDIM,DIM1,,	TEST FOR SECOND DIMENSION	10968	47	10596	01200
10340	TDM	6(1),2		10980	44	11060	10596
10350	SETDM3	M	99999(1),TEMP	10992	15	000-6	00002
10360	SF	95		11004	23	9999R	04089
10370	TF	99999(1),99		11016	32	00095	00000
10380	CF	DIM1		11028	26	9999R	00099
10390	B	SD		11040	33	10596	00000
10400	DORG	*-3		11052	49	10776	00000
10410	GENDIM	BNF	SETDM2+24,SETDM,,	11060			
10420	TDM	6(1),3	TEST FOR THIRD DIMENSION	11060	44	10848	10680
10430	CF	SETDM		11072	15	000-6	00003
10440	B	SETDM3		11084	33	10680	00000
10450	DORG	*-3		11096	49	11004	00000
10460	MOVDIM	M	99999(1),TEMP	11104	23	9999R	04089
10470	SF	95		11116	32	00095	00000
10480	TF	99999(1),99		11128	26	9999R	00099
10490	TR	CHI-1,CHI+1		11140	31	15138	15140
10500	TD	DIMTP,6(1)		11152	25	11173	000-6
10510	CM	DIMTP,0002,810		11164	14	11173	0-0-2
10520	DIMTP	DS	*-2	11173	0		
10530	BH	SETDM4,,,	3 DIMENSIONS	11176	46	11264	01100
10540	BE	++32,,,	2 DIMENSIONS	11188	46	11220	01200
10550	TFM	ADSAVE,1,67,	1 DIMENSION	11200	16	0850L	-0001
10560	B	SETDM5+12		11212	49	11384	00000
10570	DORG	*-4		11219			
10580	TF	TEMP,ADSAVE		11220	26	04089	08503
10590	SM	TEMP,5,10		11232	12	04089	000-5
10600	TF	ADSAVE,TEMP,611		11244	26	0850L	0408R
10610	B	SETDM5		11256	49	11372	00000
10620	DORG	*-4		11263			
10630	SETDM4	TF	TEMP,ADSAVE	11264	26	04089	08503
10640	SM	ADSAVE,5,10		11276	12	08503	000-5
10650	SM	TEMP,10,10		11288	12	04089	000J0
10660	M	TEMP,ADSAVE,611		11300	23	0408R	0850L
10670	SF	95		11312	32	00095	00000
10680	TF	NXLOC,99,6		11324	26	0237K	00099
10690	TF	ADSAVE,TEMP,611		11336	26	0850L	0408R
10700	TF	TEMP,NXLOC,611		11348	26	0408R	0237K
10710	A	TEMP,ADSAVE,611		11360	21	0408R	0850L
10720	SETDM5	AM	TEMP,1,610	11372	11	0408R	000-1
10730	AM	NXLOC,05,10		11384	11	02372	000-5
10740	TF	NXLOC,99999(1),6		11396	26	0237K	9999R

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10750	BNR	++20,CHI+2		11408	45	11428	15141
10760	B	BEGINA		11420	49	02602	00000
10770	DORG	*-3		11428			
10780	CM	CHI,23,10		11428	14	15139	000K3
10790	BNE	DIM1		11440	47	10596	01200
10800	TR	CHI-1,CHI+1		11452	31	15138	15140
10810	B	DIM1+24		11464	49	10620	00000
10820	DORG	*-3		11472	45	11528	000-7
10830	DIM2	BNR	DIM3,7(1),,	11472	21	02372	05821
10840	A	NXLOC,SMLNG,,	TEST IF DIM VAR WAS PLACED IN TABLE BY SUBROUTINE OR FUNCTION STATEMENT	11484	26	0237K	09879
10850	TF	NXLOC,SYM,6		11496	26	000-4	02372
10860	TF	4(1),NXLOC,,	PUT SYM IN NEW SPOT IN NAME TABLE	11508	49	10692	00000
10870	B	SETDM+12		11520			
10880	DORG	*-3		11528			
10890	DIM3	BTM	ERROR,271,9	11528	17	09230	00K71
10900	ENSI0N	DAC	6,ENSI0N	11541		6 X	2
		ENSI0N					
10910	*****	DECODE COMMON STATEMENTS	*****				
10920	COMMEN	BTM	COLNAM,3,10	11552	17	04560	000-3
10930	C	SYM,MON++		11564	24	09879	12129
10940	BV	ERRO1		11576	46	04198	01400
10950	BNE	ERRO1		11588	47	04198	01200
10960	TR	CHI-1,CHI+5		11600	31	15138	15144
10970	TDM	COMSH,1,11		11612	15	09910	0000J
10980	CM	CHI,40,10		11624	14	15139	000M0
10990	BNH	COMER		11636	47	09442	01100
11000	CM	CHI,69,10		11648	14	15139	00009
11010	BH	COMER		11660	46	09442	01100
11020	BTM	CSORN,++12		11672	17	05594	J1684
11030	CM	CHI,24,10		11684	14	15139	000K4
11040	BE	COMER		11696	46	09442	01200
11050	BD	COMIN,INSH,,	BRANCH IF VARIABLE WAS PREVIOUSLY USED	11708	43	11852	03219
11060	*****	IF VARIABLE WAS NOT DEFINED THEN IT MUST BE SIMPLE VARIABLE					
11070	COMA	AM	NXLOC,5,10	11720	11	02372	000-5
11080	TF	NXLOC,COMADD,6,	MOVE OBJ TIME COMMON ADDRESS TO SYM AREA	11732	26	0237K	02262
11090	BD	++32,FXORFL		11744	43	11776	06309
11100	S	COMADD,FP2,,	ADJ COMMON ADDRESS FOR FLOAT VARIABLE	11756	22	02262	02298
11110	B	++20		11768	49	11788	00000
11120	DORG	*-3		11776			
11130	S	COMADD,KLNG,,	ADJ COMMON ADDRESS FOR FIX VARIABLE	11776	22	02262	02252
11140	COMAB	BNR	++20,CHI+2	11788	45	11808	15141
11150	B	BEGINA		11800	49	02602	00000
11160	DORG	*-3		11808			
11170	CM	CHI,23,10,	TEST FOR MORE LIST ELEMENTS	11808	14	15139	000K3
11180	BNE	COMER		11820	47	09442	01200
11190	TR	CHI-1,CHI+1		11832	31	15138	15140
11200	B	COMMEN+72		11844	49	11624	00000
11210	DORG	*-3		11852			
11220	*****	COME HERE IF SIMPLE VARIABLE WAS IN TABLE	*****				
11230	COMIN	BNF	++24,6(1)	11852	44	11876	000-6
11240	BTM	ERROR,373,9,	VARIABLE WAS PREVIOUSLY PLACED IN COMMON	11864	17	09230	00L73
11250	BNF	*-12,5(1),,	WAS IT PREVIOUSLY EQUIVALENCED	11876	44	11864	000-5
11260	SF	6(1)		11888	32	000-6	00000
11270	COMINA	A	NXLOC,SMLNG	11900	21	02372	05821
11280	TF	4(1),NXLOC,,	MOVE NEW SYMBOL ADDRESS INTO TABLE	11912	26	000-4	02372
11290	TF	NXLOC,SYM,6		11924	26	0237K	09879

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11300	B	COMA,,,	BRANCH TO PLACE COMMON ADDRESS IN TABLE	11936	49	11720	00000
11310	DORG	=-3		11944			
11320	*****	RETURN FROM SYM TABLE	LOOK UP WHEN VARIABLE WAS DIMENSIONED				
11330	BNF	**20,6(1)		11944	44	11964	000-6
11340	B	COMIN+12,,,	VARIABLE PREVIOUSLY PLACED IN COMMON	11956	49	11864	00000
11350	DORG	=-3		11964			
11360	BNF	COMIN+12,5(1),,	TEST IF VAR WAS PREVIOUSLY EQUIVALENCED	11964	44	11864	000-5
11370	SF	6(1)		11976	32	000-6	00000
11380	COMC	BD	**32,FXORFL	11988	43	12020	06309
11390	TF	COMM+11,FP2 ,,	SET UP TO MULTIPLY NUMBER	12000	26	12043	02298
11400	B	COMM		12012	49	12032	00000
11410	DORG	=-3		12020			
11420	TF	**23,KLNG		12020	26	12043	02252
11430	COMM	MM	99999(1),=-,,	12032	13	999R9	-0000
11440	SF	95		12044	32	00095	00000
11450	S	COMADD,99,,	UPDATA COMMON ADDRESS	12056	22	02262	00099
11460	BN	COMER3		12068	47	12112	01300
11470	TF	99999(1),COMADD		12080	26	999R9	02262
11480	A	99999(1),COMM+11		12092	21	999R9	12043
11490	B	COMAB,,,	THIS ADDRESS IS THE LOW ORDER DIGIT OF	12104	49	11788	00000
11500	DORG	=-4,,,	FIRST ELEMENT.	12111			
11510	COMER3	BTM	ERROR,474,9,	12112	17	09230	00M74
11520	MON	DAC	3,MON	12125		3 X	2
		MON					
11530	****	UNIT RECORD FORMAT OUTPUT	****				
11540	FOMAT	BD	**32,INSH	12130	43	12162	03219
11550	TDM	8(1),1		12142	15	000-8	00001
11560	B	FOMAT1		12154	49	12194	00000
11570	DORG	=-3		12162			
11580	BD	FOMAT1,8(1)		12162	43	12194	000-8
11590	TFM	SPGS+11,277,9		12174	16	09225	00K77
11600	B	\$PERR+12,,,	ERROR 27	12186	49	09142	00000
11610	DORG	=-3		12194			
11620	FOMAT1	TFM	CSPVA+35,CHI-2	12194	16	03605	J5137
11630	AM	CSPVA+35,2,10		12206	11	03605	000-2
11640	BNR	=-12,CSPVA+35,11,	SCAN AHEAD FOR RECORD MARK	12218	45	12206	0360N
11650	BD	FORM99,INDIV		12230	43	12334	02424
11660	AM	CKRM-1,CHI+146,711		12242	11	02905	J528N
11670	AM	CKRM-1,2,10		12254	11	02905	000-2
11680	BE	**44		12266	46	12310	01200
11690	TFM	CSPVA+35,0,610		12278	16	0360N	000-0
11700	AM	CSPVA+35,2,10		12290	11	03605	000-2
11710	B	=-48		12302	49	12254	00000
11720	DORG	=-3		12310			
11730	TDM	FMSW,1		12310	15	09902	00001
11740	BTM	CKCNTU,0,10		12322	17	04740	000-0
11750	FORM99	TFM	CSPVA+35,37,610	12334	16	0360N	000L7
11760	TR	CSPVA+35,AVOID,6		12346	31	0360N	05922
11770	TR	CHI-1,CHI+11		12358	31	15138	15150
11780	CM	CHI,0,10		12370	14	15139	000-0
11790	BNE	**32		12382	47	12414	01200
11800	TR	CHI-1,CHI+1		12394	31	15138	15140
11810	B	=-36		12406	49	12370	00000
11820	DORG	=-3		12414			
11830	CM	CHI,24,10		12414	14	15139	000K4
11840	BE	**24		12426	46	12450	01200

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11850	BTM	ERROR,375,9,	LEFT PAREN DOES NOT FOLLOW FORMAT	12438	17	09230	00L75
11860	BTM	PUT, 128,8,FORMAT		12450	17	08944	0-128
11870	BTM	PUT, 124,8,LEFT PAREN		12462	17	08944	0-124
11880	AM	PARCNT,1,10		12474	11	03288	000-1
11890	TFM	WIDTH,87,8,	INITIALIZE WIDTH CHECK	12486	16	14205	0-087
11900	FORM1	TR	CHI-1,CHI+1	12498	31	15138	15140
11910	CM	CHI,0,10		12510	14	15139	000-0
11920	BE	=-24		12522	46	12498	01200
11930	CM	CHI,41,10,		12534	14	15139	000M1
11940	BH	FORM2		12546	46	12838	01100
11950	BL	SLASH		12558	47	12602	01300
11960	BTM	PUT, 144,8,A TYPE		12570	17	08944	0-144
11970	TDM	IATYPE,1		12582	15	14141	00001
11980	B	FORM3		12594	49	13010	00000
11990	DORG	=-3		12602			
12000	SLASH	CM	CHI,21,10,	12602	14	15139	000K1
12010	BE	FORM7	TEST FOR SLASH	12614	46	13626	01200
12020	CM	CHI,24,10,		12626	14	15139	000K4
12030	BE	FORM4		12638	46	13862	01200
12040	CM	CHI,20,10,	TEST FOR SCALE FACTOR	12650	14	15139	000K0
12050	BE	FORMER+12		12662	46	12710	01200
12060	CM	CHI,10,10		12674	14	15139	000J0
12070	BE	**24,,,	INVALID FORMAT SPECIFICATION	12686	46	12710	01200
12080	FORMER	BTM	ERROR,375,9,	12698	17	09230	00L75
12090	TR	CHI-1,CHI+1		12710	31	15138	15140
12100	CM	CHI,0,10		12722	14	15139	000-0
12110	BE	=-24		12734	46	12710	01200
12120	CM	CHI,69,10,	SHIFT OF SCALE FACTOR	12746	14	15139	000D9
12130	BH	=-48		12758	46	12710	01100
12140	CM	CHI,57,10,	TEST FOR P	12770	14	15139	000N7
12150	BNE	FORMER		12782	47	12698	01200
12160	PTYPE	TR	CHI-1,CHI+1	12794	31	15138	15140
12170	CM	CHI,0,10		12806	14	15139	000-0
12180	BNE	FTYPE		12818	47	12918	01200
12190	B	=-36		12830	49	12794	00000
12200	DORG	=-3		12838			
12210	FORM2	CM	CHI,69,10	12838	14	15139	00009
12220	BH	FORM8		12850	46	13734	01100
12230	CM	CHI,49,10,	TEST FOR I TYPE	12862	14	15139	000M9
12240	BNE	**44		12874	47	12918	01200
12250	BTM	PUT, 149,8,I TYPE		12886	17	08944	0-149
12260	TDM	IATYPE,1		12898	15	14141	00001
12270	B	FORM3		12910	49	13010	00000
12280	DORG	=-3		12918			
12290	FTYPE	CM	CHI,46,10,	12918	14	15139	000M6
12300	BNE	**32		12930	47	12962	01200
12310	BTM	PUT, 146,8,F TYPE		12942	17	08944	0-146
12320	B	FORM3-12		12954	49	12998	00000
12330	DORG	=-3		12962			
12340	ETYPE	CM	CHI,45,10,	12962	14	15139	000M5
12350	BNE	FORMER	TEST FOR E TYPE	12974	47	12698	01200
12360	BTM	PUT, 145,8,E TYPE		12986	17	08944	0-145
12370	TDM	IATYPE,0		12998	15	14141	00000
12380	FORM3	TR	CHI-1,CHI+1	13010	31	15138	15140
12390	CM	CHI,0,10		13022	14	15139	000-0
12400	BE	=-24		13034	46	13010	01200

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12410	CM	CHI,69,10		13046	14	15139	00009
12420	BNH	FORMER		13058	47	12698	01100
12430	TDM	DIMSW,1,,	SET SWITCH TO RETURN FROM LSTNO	13070	15	09904	00001
12440	BTM	CSTNO,**12,,	COLLECT NUMBER	13082	17	05302	J3094
12450	CM	SYM,0,10		13094	14	09879	000-0
12460	BE	FORMER		13106	46	12698	01200
12470	BT	PUT,SYM,,	OUTPUT W	13118	27	08944	09879
12480	BNF	**60,FREQSW,,	TEST IF SPEC WAS MULT SPECIFICATION	13130	44	13190	14134
12490	CF	FREQSW		13142	33	14134	00000
12500	M	SYM,SETFRQ+11		13154	23	09879	14145
12510	SF	96		13166	32	00096	00000
12520	TF	SYM,99		13178	26	09879	00099
12530	BTM	WIDCK,0,10		13190	17	14216	000-0
12540	BD	FORM5,IATYPE,,	TEST IF IN I OR A TYPE	13202	43	13378	14141
12550	CM	CHI,0,10		13214	14	15139	000-0
12560	BNE	**32		13226	47	13258	01200
12570	TR	CHI-1,CHI+1		13238	31	15138	15140
12580	B	**36		13250	49	13214	00000
12590	DORG	**3		13258			
12600	CM	CHI,3,10		13258	14	15139	000-3
12610	BNE	FORMER		13270	47	12698	01200
12620	BTM	PUT, 103,8,		13282	17	08944	0-103
12630	TR	CHI-1,CHI+1		13294	31	15138	15140
12640	CM	CHI,0,10		13306	14	15139	000-0
12650	BE	**24		13318	46	13294	01200
12660	CM	CHI,69,10		13330	14	15139	00009
12670	BNH	FORMER		13342	47	12698	01100
12680	BTM	CSTNO,**12		13354	17	05302	J3366
12690	BT	PUT,SYM		13366	27	08944	09879
12700	FORM5	CM	CHI,0,10	13378	14	15139	000-0
12710	BNE	**32		13390	47	13422	01200
12720	TR	CHI-1,CHI+1		13402	31	15138	15140
12730	B	FORM5		13414	49	13378	00000
12740	DORG	**3		13422			
12750	FORM51	CM	CHI,4,10,	13422	14	15139	000-4
12760	BNE	FCMA		13434	47	13558	01200
12770	BTM	PUT, 104,8,RIGHT PAREN		13446	17	08944	0-104
12780	TR	CHI-1,CHI+1		13458	31	15138	15140
12790	SM	PARCNT,1,10		13470	12	03288	000-1
12800	BNZ	FORM5		13482	47	13378	01200
12810	CM	CHI,0,10		13494	14	15139	000-0
12820	BE	**32		13506	46	13538	01200
12830	BNR	FORMER,CHI+2		13518	45	12698	15141
12840	B	BEGIN		13530	49	02590	00000
12850	DORG	**3		13538			
12860	TR	CHI-1,CHI+1		13538	31	15138	15140
12870	B	**56		13550	49	13494	00000
12880	DORG	**3		13558			
12890	FCMA	CM	CHI,23,10	13558	14	15139	000K3
12900	BNE	**32		13570	47	13602	01200
12910	BTM	PUT, 123,8,COMMA		13582	17	08944	0-123
12920	B	FORM1		13594	49	12498	00000
12930	DORG	**3		13602			
12940	CM	CHI,21,10		13602	14	15139	000K1
12950	BNE	FORM1+36		13614	47	12534	01200
12960	FORM7	BTM	PUT, 121,8,DIVIDE	13626	17	08944	0-121

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12970	TFM	WIDTH,87,8,		13638	16	14205	0-087
12980	TR	CHI-1,CHI+1		13650	31	15138	15140
12990	CM	CHI,0,10		13662	14	15139	000-0
13000	BE	**24		13674	46	13650	01200
13010	CM	CHI,24,10		13686	14	15139	000K4
13020	BE	FORM4		13698	46	13862	01200
13030	CM	CHI,69,10		13710	14	15139	00009
13040	BNH	FORM51		13722	47	13422	01100
13050	FORM8	TDM	DIMSW,1	13734	15	09904	00001
13060	BTM	CSTNO,**12		13746	17	05302	J3758
13070	CM	CHI,0,10		13758	14	15139	000-0
13080	BNE	**32		13770	47	13802	01200
13090	TR	CHI-1,CHI+1		13782	31	15138	15140
13100	B	**36		13794	49	13758	00000
13110	DORG	**3		13802			
13120	CM	CHI,57,10,	TEST FOR SCALE FACTOR	13802	14	15139	000N7
13130	BE	PTYPE		13814	46	12794	01200
13140	CM	CHI,24,10		13826	14	15139	000K4
13150	BNE	FORMX		13838	47	13894	01200
13160	BT	PUT,SYM		13850	27	08944	09879
13170	FORM4	AM	PARCNT,1,10	13862	11	03288	000-1
13180	BTM	PUT, 124,8,LEFT PAREN		13874	17	08944	0-124
13190	B	FORM1		13886	49	12498	00000
13200	DORG	**3		13894			
13210	FORMX	CM	CHI,67,10,	13894	14	15139	00007
13220	BNE	HOLL	TEST FOR X SPECIFICATION	13906	47	13962	01200
13230	BTM	WIDCK,0,10		13918	17	14216	000-0
13240	BT	PUT,SYM		13930	27	08944	09879
13250	BTM	PUT, 147,8,X TYPE		13942	17	08944	0-147
13260	B	FORM5+24		13954	49	13402	00000
13270	DORG	**3		13962			
13280	HOLL	CM	CHI,48,10,	13962	14	15139	000N8
13290	BNE	SETFRQ		13974	47	14134	01200
13300	BTM	WIDCK,0,10		13986	17	14216	000-0
13310	BT	PUT,SYM		13998	27	08944	09879
13320	BTM	PUT, 148,8,H TYPE		14010	17	08944	0-148
13330	HOLL1	TR	CHI-1,CHI+1	14022	31	15138	15140
13340	BNR	**20,CHI+2		14034	45	14054	15141
13350	B	FORMER		14046	49	12698	00000
13360	DORG	**3		14054			
13370	TF	**35,CHI		14054	26	14089	15139
13380	CF	**22		14066	33	14088	00000
13390	BTM	PUT, ,8,OUTPUT HOLL		14078	17	08944	0-000
13400	SM	SYM,1,10		14090	12	09879	000-1
13410	BNZ	HOLL1		14102	47	14022	01200
13420	BNR	FORM5+24,CHI+2		14114	45	13402	15141
13430	B	FORMER		14126	49	12698	00000
13440	DORG	**3		14134			
13450	SETFRQ	SF	FREQSW	14134	32	14134	00000
13460	FREQSW	DS	,SETFRQ	14134			
13470	IATYPE	DS	,*-4	14141			
13480	BT	PUT,SYM		14146	27	08944	09879
13490	TF	SETFRQ+11,SYM		14158	26	14145	09879
13500	CM	CHI,24,10,		14170	14	15139	000K4
13510	BNE	FORM1+36		14182	47	12534	01200
13520	CF	FREQSW		14194	33	14134	00000

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13530	WIDTH	DS	,*	14205	0		
13540		B	FORM4	14206	49	13862	00000
13550		DORG	=-3	14214			
13560		DS	2,	14215		2	
13570	WIDCK	S	WIDTH,SYM	14216	22	14205	09879
13580		BN	FORMER	14228	47	12698	01300
13590		BB	=-9	14240	42	00000	00000
13600		DORG	=-9	14242			
13610		DORG	16000	16000			
13620	WBLK1	DSC	2,22	16000		2	
			22				
13630		DSA	DEF1	16006		5 X	1
				16006		J6008	
13640		DC	1,'	16007		1	
13650	DEF1	DSC	1,0	16008		1	
			0				
13660		DC	5,17600	16013		5	
			J7600				
13670		DC	3,043	16016		3	
			-43				
13680		DSA	IOUT	16021		5 X	1
				16021		J0200	
13690		DC	1,'	16022		1	
13700	WRBLK1	TFM	IORT,++23	16024	16	00565	J6047
13710		B	IOPT,WBLK1,7	16036	49	00532	J6000
13720		TRA		16048	36	00000	00500
				16060	49	00000	00000
13730		TCD	WRBLK1	16024			

13740 * OUT OF CORE BLOCK 2 CONTAINS THE FOLLOWING
 13750 * EQUIVALENCE
 13760 * SUBROUTINE
 13770 * FUNCTION
 13780 * CONTINUE
 13790 * PAUSE
 13800 * STOP
 13810 * DEFINE
 13820 DORG IOUT
 13830 TFM FMON+35,BLK4,, IOUT
 13840 BTM FMON,IOUT
 13850 CM CHI,57,10, CHECK FOR P IN STOP
 13860 B NNARAA
 13870 TFM FMON+35,BLK1,, DIM
 13880 BTM FMON,DIM
 13890 TFM FMON+35,BLK1,, COMMON
 13900 BTM FMON,COMMON
 13910 TFM FMON+35,BLK6,, IF
 13920 BTM FMON,IF
 13930 TFM FMON+35,BLK6,, GOTO
 13940 BTM FMON,GOTO
 13950 TFM FMON+35,BLK6,, CALL
 13960 BTM FMON,CALL

13970		TFM	FMON+35,BLK6,,	RETURN	10368	16	02359	-9729
13980		BTM	FMON,RETURN		10380	17	02324	J0368
13990		TFM	FMON+35,BLK1,,	FORMAT	10392	16	02359	-9614
14000		BTM	FMON,FORMAT		10404	17	02324	J0392
14010		TFM	FMON+35,BLK4,,	DOO	10416	16	02359	-9683
14020		BTM	FMON,DOO		10428	17	02324	J0416
14030		TFM	FMON+35,BLK3,,	ASCAN	10440	16	02359	-9660
14040		BTM	FMON,ASCAN		10452	17	02324	J0440
14050		TFM	FMON+35,BLK3,,	OUTSC	10464	16	02359	-9660
14060		BTM	FMON,OUTSC		10476	17	02324	J0464
14070		TFM	FMON+35,BLK5,,	DKIO	10488	16	02359	-9706
14080		BTM	FMON,DKIO		10500	17	02324	J0488
14090	NNARAA	BE	STOPEN		10512	46	14006	01200
14100		BTM	COLNAN,2,10		10524	17	04560	000-2
14110		CM	SYM,6245,8		10536	14	09879	00245
14120		BV	ERR01		10548	46	04198	01400
14130		BE	PAUSEN		10560	46	13838	01200
14140		BTM	COLNAN,5,10		10572	17	04560	000-5
14150		C	SYM,TINUE+8		10584	24	09879	13837
14160		BV	ERR01		10596	46	04198	01400
14170		BE	CONTEN		10608	46	13772	01200
14180		C	SYM,CTION+8		10620	24	09879	13771
14190		BE	FUNCTA		10632	46	13706	01200
14200		BTM	COLNAN,7,10		10644	17	04560	000-7
14210		C	SYM,ROUTN+12		10656	24	09879	13637
14220		BV	ERR01		10668	46	04198	01400
14230		BE	SUBPA		10680	46	13004	01200
14240		C	SYM,DEFCT+12		10692	24	09879	14467
14250		BE	DEFINE		10704	46	14038	01200
14260	*****		ENTER TO DECOMPOSE EQUIVALENCE STATEMENTS	*****				
14270	EQUIVN	BTM	COLNAN,8,10		10716	17	04560	000-8
14280		C	SYM,IVALEN+14		10728	24	09879	13003
14290		BV	ERR01		10740	46	04198	01400
14300		BNE	ERR01		10752	47	04198	01200
14310		TR	CHI-1,CHI+15		10764	31	15138	15154
14320		CF	STSN		10776	33	05531	00000
14330	EQR	TDM	EQUWS,1,11,	SET SWITCH INDICATING EQUIV STATEMENT	10788	15	09908	0000J
14340		TDM	PR,,,	INITIALIZE PR	10800	15	12509	00000
14350		DC	1,','		10811		1	
14360		CM	CHI,24,10		10812	14	15139	000K4
14370		BE	++24,		10824	46	10848	01200
14380		BTM	ERROR,72,9,		10836	17	09230	00-72
14390		TFM	SCHI,CHI		10848	16	05905	J5139
14400	EQ1	AM	SCHI,2,10		10860	11	05905	000-2
14410		CM	SCHI,40,610		10872	14	0590N	000M0
14420		BH	++24		10884	46	10908	01100
14430		BTM	ERROR,170,9,	INVALID VAR	10896	17	09230	00J70
14440		CM	SCHI,69,610		10908	14	0590N	00009
14450		BH	++-24		10920	46	10896	01100
14460		BTM	CSORN,++12,,	GO TO COLLECT NAME	10932	17	0594J	J0944
14470		BD	++32,INSW,,	TEST IF SYM PREVIOUSLY DEFINED	10944	43	10976	03219
14480	E83230	AM	NXLOC,5,10,	IF SYM NOT PREV DEFINED, SAVE ROOM FOR	10956	11	02372	000-5
14490		B	EQ21,,,	OFFSET VALUE	10968	49	11076	00000
14500		DORG	=-3		10976			
14510		BD	EQ21,6(1),,	TEST FOR DIM VAR	10976	43	11076	000-6

14520	BNF	EQ21,5(1),,	TEST IF SYM WAS PREVIOUSLY EQUIV	10988	44	11076	000-5
14530	BNF	**20,6(1),,	TEST IF VAR WAS IN COMMON	11000	44	11020	000-6
14540	B	EQ21		11012	49	11076	00000
14550	DORG	*-3		11020			
14560	A	NXLOC,SMLNG		11020	21	02372	05821
14570	TF	NXLOC,SYM,6,	MOVE SYM NAME INTO TABLE	11032	26	0237K	09879
14580	TF	4(1),NXLOC,,	MOVE NEW SYM ADD INTO TABLE	11044	26	000-4	02372
14590	B	E83230		11056	49	10956	00000
14600	DORG	*-3		11064			
14610	BTM	ERROR,171,9,	INVALID NAME USED IN FUNCTION	11064	17	09230	00J71
14620	EQ21	BD	TEST FOR FUNCTION NAME IN EQUIVALENCE	11076	43	11064	09900
14630	BNR	**20,7(1),,	TEST FOR DUMMY PARAMETERS OF SUBPROGRAM	11088	45	11108	000-7
14640	B	EQ21-12		11100	49	11064	00000
14650	DORG	*-3		11108			
14660	BNR	**20,8(1),,	TEST FOR SUBPROGRAM NAME IN SUBPROGRAM	11108	45	11128	000-8
14670	B	EQ21-12		11120	49	11064	00000
14680	DORG	*-3		11128			
14690	BNR	**20,PR,,	TEST FOR FIRST NAME ON LIST	11128	45	11148	12509
14700	B	EQ7		11140	49	11732	00000
14710	DORG	*-3		11148			
14720	C	MODE,FXORFL,,	TEST FOR MIXED EQUIV	11148	24	06307	06309
14730	BE	**48		11160	46	11208	01200
14740	C	FP2,KLNG,,	TEST FOR K EQUAL TO F+2 IN MIXED EQUIV	11172	24	02298	02252
14750	BE	**24		11184	46	11208	01200
14760	BTM	ERROR,172,9,		11196	17	09230	00J72
14770	BNF	EQ22,5(1),,	TEST IF SYM HAD BEEN PREVIOUSLY EQUIV	11208	44	12144	000-5
14780	BNF	**56,6(1),,	BRANCH IF SYM IS NOT IN COMMON	11220	44	11276	000-6
14790	BNF	**24,PR,,	TEST IF PREVIOUS SYM WAS IN COMMON	11232	44	11256	12509
14800	BTM	ERROR,173,9,	ILLEGAL EQUIVALENCE	11244	17	09230	00J73
14810	BNF	*-12,PR-1,,	TEST IF PREV SYM WAS EQUIV	11256	44	11244	12508
14820	B	EQ7		11268	49	11732	00000
14830	DORG	*-3		11276			
14840	EQ24	BNF	TEST FOR DIM VAR, BRANCH IF NOT	11276	44	11676	08132
14850	CM	SCHI,24,610		11288	14	0590N	000K4
14860	BNE	EQBR+8		11300	47	11560	01200
14870	AM	SCHI,2,10		11312	11	05905	000-2
14880	TFM	EQBR+6,EQBR+20		11324	16	11558	J1572
14890	CM	SCHI,69,610		11336	14	0590N	00009
14900	BH	**24		11348	46	11372	01100
14910	BTM	ERROR,75,9,	INCORRECT SUBSCRIPTING	11360	17	09230	00-75
14920	TFM	SYM-3,0,7		11372	16	09876	-0000
14930	TFM	**30,SYM-4		11384	16	11414	-9875
14940	AM	**18,1,10		11396	11	11414	000-1
14950	EQ23	TD	COLLECT INDEX	11408	25	00000	0590N
14960	AM	SCHI,2,10		11420	11	05905	000-2
14970	CM	SCHI,69,610		11432	14	0590N	00009
14980	BNH	**48		11444	47	11492	01100
14990	CM	EQ23+6,SYM		11456	14	11414	-9879
15000	BNE	EQ23-12		11468	47	11396	01200
15010	BTM	ERROR,75,9		11480	17	09230	00-75
15020	TF	SYM,EQ23+6,11,		11492	26	09879	1141M
15030	SF	SYM-4		11504	32	09875	00000
15040	SAVE1	DS		11515		0	
15050	CM	SCHI,4,610,	TEST FOR RIGHT PAREN	11516	14	0590N	000-4
15060	BNE	*-48		11528	47	11480	01200
15070	AM	SCHI,2,10		11540	11	05905	000-2

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15080	EQBR	B	**20	11552	49	11572	00000
15090	DORG	*-3		11560			
15100	TFM	SYM,1,		11560	16	09879	-0001
15110	BD	EQ4,PR,,	TEST IF PREVIOUS SYM WAS DIM VAR	11572	43	11676	12509
15120	BNF	**20,PR		11584	44	11604	12509
15130	B	EQ4		11596	49	11676	00000
15140	DORG	*-3		11604			
15150	BNF	EQ4,PR-1,,	TEST IF PREVIOUS SYM WAS EQUIV	11604	44	11676	12508
15160	BSX	**12,REF(1)		11616	67	11628	088P5
15170	AM	REF,4,10		11628	11	08875	000-4
15180	TD	PR,6(1)		11640	25	12509	000-6
15190	TD	PR-1,5(1),,	SAVE INDICATORS	11652	25	12508	000-5
15200	TF	TEMP,SYM,,	SAVE OFFSET	11664	26	04089	09879
15210	EQ4	CM	END OF LIST	11676	14	0590N	000-4
15220	BE	EQLLOOP,,		11688	46	12176	01200
15230	CM	SCHI,23,610		11700	14	0590N	000K3
15240	BE	EQ1		11712	46	10860	01200
15250	B	EQ1-24		11724	49	10836	00000
15260	DORG	*-3		11732			
15270	EQ7	TD	SET FIX OR FLOAT	11732	25	06307	000-5
15280	CF	MODE		11744	33	06307	00000
15290	SAVE3	DS		11755		0	
15300	BSX	**12,REF(1)		11756	67	11768	088P5
15310	AM	REF,4,10		11768	11	08875	000-4
15320	TD	PR,6(1)		11780	25	12509	000-6
15330	TD	PR-1,5(1),,		11792	25	12508	000-5
15340	BD	**32 ,PR,,	TEST FOR DIM VAR	11804	43	11836	12509
15350	TFM	TEMP,1		11816	16	04089	-0001
15360	B	E84130		11828	49	11928	00000
15370	DORG	*-3		11836			
15380	CM	SCHI,24,610		11836	14	0590N	000K4
15390	BNE	*-32		11848	47	11816	01200
15400	AM	SCHI,2,10		11860	11	05905	000-2
15410	CM	SCHI,69,610		11872	14	0590N	00009
15420	BNH	EQ23-48		11884	47	11360	01100
15430	YFM	EQBR+6,**20		11896	16	11558	J1916
15440	B	EQ23-36,,,	GO TO COLLECT SUBSCRIPTING	11908	49	11372	00000
15450	DORG	*-3		11916			
15460	TF	TEMP,SYM		11916	26	04089	09879
15470	E84130	BNF	TEST IF VAR PREVIOUSLY EQUIVALENCE	11928	44	11948	000-5
15480	B	EQ4		11940	49	11676	00000
15490	DORG	*-3		11948			
15500	E84180	CM	TEST IF PREVIOUSLY EQUIV SYM WAS BASE	11948	14	000-9	00-00
15510	BE	EQ4		11960	46	11676	01200
15520	BD	E84330,6(1),,	TEST FOR DIM VAR	11972	43	12124	000-6
15530	TF	**35,4(1)		11984	26	12019	000-4
15540	AM	**23,5,10		11996	11	12019	000-5
15550	A	TEMP,,	GENERATE OFFSET TO PREVIOUS BASE	12008	21	04089	00000
15560	E84240	TF	GENERATE ADDRESS OF BASE	12020	26	08503	02377
15570	S	ADSAVE-1,9(1),,		12032	22	08502	000-9
15580	AM	ADSAVE-1,1,10		12044	11	08502	000-1
15590	TF	REF,ADSAVE		12056	26	08875	08503
15600	SM	ADSAVE,04,10		12068	12	08503	000-4
15610	TD	PR-1,ADSAVE,11,	SAVE FIX OR FLOAT	12080	25	12508	0850L
15620	AM	ADSAVE,1,10		12092	11	08503	000-1
15630	TD	PR,ADSAVE,11,	SAVE DIM INDICATOR	12104	25	12509	0850L

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15640	B	EQ4		12116	49	11676	00000
15650	DORG	=-3		12124			
15660	E84330	A	TEMP,99999(1),,	GENERATE NEW OFFSET	12124	21	04089 999R9
15670	B7	E84240		12136	49	12020	
15680	EQ22	BNF	EQ24-32,PR-1,,	ENTER FROM E83500, BR TO ERROR IF PREV	12144	44	11244 12508
15690	BNF	B	EQ7,PR,,	SYM WAS EQUIVALENCED OR IN COMMON	12156	44	11732 12509
15700	B	E824-32		12168	49	11244	00000
15710	DORG	=-3		12176			
15720	EQL00P	TFM	SCHI,CHI,,	ENTER HERE AFTER EQUIV STATEMENT HAS	12176	16	05905 J5139
15730	TF	EBASE,STBL		12188	26	12235	02377
15740	S	EBASE,REF		12200	22	12235	08875
15750	AM	EBASE-1,1,10		12212	11	12234	000-1
15760	SF	EBASE-3		12224	32	12232	00000
15770	EBASE	DS	,*	12235			
15780	AM	SCHI,2,10,		12236	11	05905	000-2
15790	BTM	CSORN,**+12,		12248	17	05594	J2260
15800	BNF	E84804,5(1),,		12260	44	12908	000-5
15810	BSX	**+12,TEMP2(1),,		12272	67	12284	124J5
15820	AM	TEMP2,4,10		12284	11	12415	000-4
15830	C	TEMP2,REF,,		12296	24	12415	08875
15840	BE	E84695		12308	46	12544	01200
15850	BD	E84560,6(1),,	TEST FOR DIM VAR	12320	43	12424	000-6
15860	TF	ADSAVE,4(1)		12332	26	08503	000-4
15870	AM	ADSAVE,5,10		12344	11	08503	000-5
15880	TFM	ADSAVE,1,6711,		12356	16	0850L	-000J
15890	A	ADSAVE,TEMP,6,	PLACE OFF SET INTO TABLE	12368	21	0850L	04089
15900	TF	9(1),EBASE-1		12380	26	000-9	12234
15910	BNF	E84710,PR		12392	44	12736	12509
15920	SF	6(1)		12404	32	000-6	00000
15930	TEMP2	DS	5,*	12415			
15940	B	E84710		12416	49	12736	00000
15950	DORG	=-3		12424			
15960	E84560	CM	SCHI,24,610	12424	14	0590N	000K4
15970	BE	**+32		12436	46	12468	01200
15980	TFM	SYM,1,711		12448	16	09879	-000J
15990	B	**+52		12460	49	12512	00000
16000	DORG	=-3		12468			
16010	AM	SCHI,2,10		12468	11	05905	000-2
16020	TFM	EQBR+6,**+20		12480	16	11558	J2500
16030	B	EQ23-36		12492	49	11372	00000
16040	DORG	=-3		12500			
16050	SF	SYM		12500	32	09879	00000
16060	PR	DS	,*-2	12509			
16070	A	SYM,TEMP,,	GEN OFFSET	12512	21	09879	04089
16080	TF	99999(1),SYM,,	MOVE OFFSET INTO TABLE	12524	26	999R9	09879
16090	B7	E84560-44		12536	49	12380	
16100	E84695	BNF	**+20,6(1)	12544	44	12564	000-6
16110	B	HERE		12556	49	12620	00000
16120	DORG	=-3		12564			
16130	BD	HERE,6(1)		12564	43	12620	000-6
16140	TF	ADSAVE,4(1)		12576	26	08503	000-4
16150	AM	ADSAVE,5,10		12588	11	08503	000-5
16160	TF	ADSAVE,TEMP,6		12600	26	0850L	04089
16170	B7	E84710-12		12612	49	12724	
16180	HERE	CM	SCHI,24,610	12620	14	0590N	000K4
16190	BNE	**+60		12632	47	12692	01200

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16200	AM	SCHI,2,10		12644	11	05905	000-2
16210	CM	SCHI,4,610		12656	14	0590N	000-4
16220	BNE	=-24		12668	47	12644	01200
16230	AM	SCHI,2,10		12680	11	05905	000-2
16240	BNF	**+20,6(1)		12692	44	12712	000-6
16250	B7	E84710-12		12704	49	12724	
16260	TF	99999(1),TEMP		12712	26	999R9	04089
16270	TFM	9(1),000,9		12724	16	000-9	00-00
16280	E84710	CF	5(1),,,	CLEAR FLAG INDICATING EQUIV VARIABLE	12736	33	000-5 00000
16290	SAVE2	DS	,*	0			
16300	CM	SCHI,4,610		12748	14	0590N	000-4
16310	BNE	EQL00P+60		12760	47	12236	01200
16320	AM	SCHI,2,10		12772	11	05905	000-2
16330	CM	SCHI,23,610		12784	14	0590N	000K3
16340	BNE	**+56		12796	47	12852	01200
16350	TF	**+35,SCHI		12808	26	12843	05905
16360	AM	**+23,1,10		12820	11	12843	000-1
16370	TR	CHI-1		12832	31	15138	00000
16380	B	EQR		12844	49	10788	00000
16390	DORG	=-3		12852			
16400	TF	**+35,SCHI		12852	26	12887	05905
16410	AM	**+23,2,10		12864	11	12887	000-2
16420	BNR	**+20		12876	45	12896	00000
16430	B	BEGINA		12888	49	02602	00000
16440	DORG	=-3		12896			
16450	BTM	ERROR,72,9,		12896	17	09230	00-72
16460	E84804	CM	SCHI,24,610	12908	14	0590N	000K4
16470	BNE	E84710		12920	47	12736	01200
16480	AM	SCHI,2,10		12932	11	05905	000-2
16490	CM	SCHI,4,610		12944	14	0590N	000-4
16500	BNE	=-24		12956	47	12932	01200
16510	AM	SCHI,2,10		12968	11	05905	000-2
16520	B	E84710		12980	49	12736	00000
16530	DORG	=-3		12988			
16540	IValEN	DAC	B,IValENCE	12989		8 X	2
16550	*****	OUTPUT SUBROUTINE DECLARATION STATEMENT	*****				
16560	SUBPA	TFM	SUBPUT+11,0135,8	13004	16	13171	0-135
16570	TR	CHI-1,CHI+13		13016	31	15138	15152
16580	BD	**+36,SUBFCT		13028	43	13064	02293
16590	TDM	SUBFCT,1		13040	15	02293	00001
16600	BD	**+24,STSN		13052	43	13076	05531
16610	BTM	ERROR,370,9		13064	17	09230	00L70
16620	BNF	=-12,STSN		13076	44	13064	05531
16630	SUBPF	TDM	SUBSW,1	13088	15	09912	00001
16640	CM	CHI,40,10		13100	14	15139	000M0
16650	BH	**+24		13112	46	13136	01100
16660	SUBP1	BTM	ERROR,270,9,	13124	17	09230	00K70
16670	CM	CHI,69,10	SUB DECLARATION ERROR	13136	14	15139	00009
16680	BH	=-24		13148	46	13124	01100
16690	SUBPUT	BTM	PUT,0135,8,	13160	17	08944	0-135
16700	TF	**+35,FCTEND	OUTPUT SUBROUTINE SYMBOL	13172	26	13207	02318
16710	SM	**+23,10,10		13184	12	13207	000J0
16720	BNR	**+20,-*		13196	45	13216	00000
16730	B7	MVGM		13208	49	13272	
16740	TF	SAVEGM,*-9		13216	26	07123	13207

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16750	SM	SAVEGM,30,10	13228	12	07123	000L0
16760	TD	SAVEGM,GMI,6	13240	25	0712L	09782
16770	TFM	FCTEND,00000,67	13252	16	0231Q	-0000
16780	B7	MVGM+12	13264	49	13284	
16790	MVGM	BTM MVGM20,FCTEND,711	13272	17	13644	-231Q
16800	SF	OUTSW	13284	32	06896	00000
16810	BTM	CSORN,**+12	13296	17	05594	J3308
16820	TDM	8(1),**	13308	15	000-8	00000
16830	DC	1,*,*	13319		1	
16840	TF	SAVSYM,SYM	13320	26	02243	09879
16850	BNR	**+36,CHI+2	13332	45	13368	15141
16860	BNF	BEGIN,SUBFCT	13344	44	02590	02293
16870	BTM	ERROR,371,9	13356	17	09230	00L71
16880	CM	CHI,24,10	13368	14	15139	000K4
16890	BE	**+24	13380	46	13404	01200
16900	BTM	ERROR,371,9	13392	17	09230	00L71
16910	BTM	PUT, 124,8,LEFT PAREN	13404	17	08944	0-124
16920	TR	CHI-1,CHI+1	13416	31	15138	15140
16930	SUBP2	CM CHI,40,10	13428	14	15139	000M0
16940	BNH	SUBP2-36	13440	47	13392	01100
16950	CM	CHI,69,10	13452	14	15139	00009
16960	BH	SUBP2-36,,	13464	46	13392	01100
16970	BTM	MVGM20,SAVEGM,711	13476	17	13644	-712L
16980	SF	OUTSW,	13488	32	06896	00000
16990	BTM	CSORN,**+12,,	13500	17	05594	J3512
17000	BD	SUBP2-36,INSW,,	13512	43	13392	03219
17010	TDM	7(1),**	13524	15	000-7	00000
17020	DC	1,*,*	13535		1	
17030	CM	CHI,23,10	13536	14	15139	000K3
17040	BNE	**+32	13548	47	13580	01200
17050	BTM	PUT, 123,8,COMMA	13560	17	08944	0-123
17060	B	SUBP2-12	13572	49	13416	00000
17070	DORG	*-3	13580			
17080	CM	CHI,4,10	13580	14	15139	000-4
17090	BNE	SUBP2-36	13592	47	13392	01200
17100	BTM	PUT, 104,8,RIGHT PAREN	13604	17	08944	0-104
17110	B	BEGIN	13616	49	02590	00000
17120	DORG	*-3	13624			
17130	ROUTN	DAC 7,ROUTINE	13625		7 X	2
17140	**	SUBROUTINE MOVES GR. MARK 20 POSITIONS LOWER IN SYS. TABLE				
17150	DS	5	13642		5	
17160	MVGM20	TD MVGM20-1,RECMK,6	13644	25	1364L	09621
17170	CF	MVGM20-1	13656	33	13643	00000
17180	TF	SAVEGM,MVGM20-1,11	13668	26	07123	1364L
17190	SM	SAVEGM,20,10	13680	12	07123	000K0
17200	TD	SAVEGM,GMI,6	13692	25	0712L	09782
17210	BB2		13704	42		
17220	*****	OUTPUT FUNCTION DECLARATION STATEMENTS *****				
17230	FUNCTA	TR CHI-1,CHI+9	13706	31	15138	15148
17240	TFM	SUBPUT+11,136,8	13718	16	13171	0-136
17250	BD	SUBPF-24,SUBFCT	13730	43	13064	02293
17260	TDM	SUBFCT,1,11	13742	15	02293	0000J
17270	B	SUBPF-36	13754	49	13052	00000

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17280	DORG	*-3	13762			
17290	CTION	DAC 5,CTION	13763		5 X	2
17300	*****	OUTPUT CONTINUE STATEMENT *****				
17310	CONTEN	BD **+24,NOIND	13772	43	13796	03195
17320	BTM	ERROR2,574,9, UNNUMBERED CONTINUE STATEMENT	13784	17	09386	00N74
17330	BTM	PUT, 127,8,CONTINUE	13796	17	08944	0-127
17340	BTM	PUT, 140,8,DUMMY	13808	17	08944	0-140
17350	B	BEGIN	13820	49	02590	00000
17360	DORG	*-3	13828			
17370	TINUE	DAC 5,TINUE	13829		5 X	2
17380	****	OUTPUT PAUSE STATEMENT ****				
17390	PAUSEN	TR CHI-1,CHI+3	13838	31	15138	15142
17400	BTM	PUT, 126,8,PAUSE	13850	17	08944	0-126
17410	BTM	PUT, 140,8,DUMMY	13862	17	08944	0-140
17420	BNR	**+20,CHI+2	13874	45	13894	15141
17430	B	BEGIN	13886	49	02590	00000
17440	DORG	*-3	13894			
17450	PAUS	CM CHI,69,10	13894	14	15139	00009
17460	BH	**+32	13906	46	13938	01100
17470	BTM	ERROR2,573,9, CHARACTER AFTER PAUSE NOT NUMERIC	13918	17	09386	00N73
17480	B	BEGIN	13930	49	02590	00000
17490	DORG	*-3	13938			
17500	BTM	PUT, 140,8,DUMMY	13938	17	08944	0-140
17510	TD	**+23,CHI	13950	25	13973	15139
17520	BTM	PUT,0,8	13962	17	08944	0-000
17530	TR	CHI-1,CHI+1	13974	31	15138	15140
17540	BNR	**+36,CHI+2	13986	45	13950	15141
17550	B	BEGIN	13998	49	02590	00000
17560	DORG	*-3	14006			
17570	****	OUTPUT STOP STATEMENT ****				
17580	STOPEN	TR CHI-1,CHI+1	14006	31	15138	15140
17590	BTM	PUT, 125,8,STOP	14018	17	08944	0-125
17600	B	PAUSEN+24	14030	49	13862	00000
17610	DORG	*-4	14037			
17620	****	OUTPUT DEFINE STATEMENT ****				
17630	DEFINE	TR CHI-1,CHI+13,, SHIFT OFF INEDISK	14038	31	15138	15152
17640	CF	STSN	14050	33	05531	00000
17650	BD	ERR60+12,SUBFCT	14062	43	14480	02293
17660	BD	ERR60+12,MULDEF	14074	43	14480	02384
17670	TDM	MULDEF,1	14086	15	02384	00001
17680	CM	CHI,24,10, CHECK FOR LEFT PAREN	14098	14	15139	000K4
17690	BNE	ERR44	14110	47	14468	01200
17700	TR	CHI-1,CHI+1,, SHIFT OFF LEFT PAREN	14122	31	15138	15140
17710	CM	CHI,69,10	14134	14	15139	00009
17720	BNH	ERR44	14146	47	14468	01100
17730	BTM	CLDGT,03,10, COLLECT N1	14158	17	14526	000-3
17740	SF	SYM-1	14170	32	09878	00000
17750	CM	SYM,50,10	14182	14	09879	00000
17760	BH	ERR44,, N1 GREATER THAN 50	14194	46	14468	01100
17770	TF	N1,SYM	14206	26	02233	09879
17780	CM	CHI,23,10	14218	14	15139	000K3
17790	BNE	ERR44	14230	47	14468	01200
17800	TR	CHI-1,CHI+1	14242	31	15138	15140
17810	M	W,N1	14254	23	02240	02233

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17820	CM	99,0100,8		14266	14	00099	0-100
17830	TDM	RECLG,2		14278	15	02243	00002
17840	BH	**24		14290	46	14314	01100
17850	TDM	RECLG,1		14302	15	02243	00001
17860	CM	99,0200,8		14314	14	00099	0-200
17870	BH	ERR44,,	EXCEEDS TWO SECTORS	14326	46	14468	01100
17880	CM	CHI,69,10		14338	14	15139	00009
17890	BNH	ERR44		14350	47	14468	01100
17900	BTM	CLDGT,06,10,	COLLECT N2	14362	17	14526	000-6
17910	SF	SYM-4		14374	32	09875	00000
17920	TF	N2,SYM		14386	26	02238	09879
17930	CM	SYM,20000		14398	14	09879	K0000
17940	BH	ERR44		14410	46	14468	01100
17950	CM	CHI,04,10		14422	14	15139	000-4
17960	BNE	ERR44		14434	47	14468	01200
17970	B	BEGINA		14446	49	02602	00000
17980	DORG	*-3		14454			
17990	DEFCT	DAC 7,INEDISK		14455		7 X	2
		INEDISK					
18000	ERR60	TFM RECLG,000,9		14468	16	02243	00-00
18010	TD	**35,JAY		14480	25	14515	02367
18020	BTM	ERROR2,670,9		14492	17	09386	00070
18030	TDM	JAY,*-*		14504	15	02367	00000
18040	B	BEGINA		14516	49	02602	00000
18050	DORG	*-4		14523			
18060	ERR44	DS ,ERR60		14468		0	
18070	***	COLLECT DIGITS SUBROUTINE	***				
18080	*		*				
18090	*	BTM CLDGT,XX,10, XX = NO. OF DIGITS TO COLLECT + 1	*				
18100	*		*				
18110	DS	2		14524		2	
18120	CLDGT	BD **32,CHI		14526	43	14558	15139
18130	TR	CHI-1,CHI+1		14538	31	15138	15140
18140	B	*-24		14550	49	14526	00000
18150	DORG	*-3		14558			
18160	TFM	SYM-12,0		14558	16	09867	-0000
18170	TFM	CLDGT2+6,SYM-12		14570	16	14648	-9867
18180	CLDGT1	SM CLDGT-1,1,10		14582	12	14525	000-1
18190	BZ	XCLDGT		14594	46	14686	01200
18200	CM	CHI,69,10		14606	14	15139	00009
18210	BNH	XCLDGT		14618	47	14686	01100
18220	AM	**18,1,10		14630	11	14648	000-1
18230	CLDGT2	TD ,CHI		14642	25	00000	15139
18240	TR	CHI-1,CHI+1		14654	31	15138	15140
18250	BNR	CLDGT1,CHI+2		14666	45	14582	15141
18260	B	ERR44		14678	49	14468	00000
18270	DORG	*-3		14686			
18280	XCLDGT	TF SYM,CLDGT2+6,11		14686	26	09879	1464Q
18290	BB			14698	42	00000	00000
18300	DORG	*-9		14700			
18310	*	DEND					
18320	DORG	16000		16000			
18330	WBLK2	DSC 2,22		16000		2	
		22					
18340	DSA	DEF2		16006		5 X	1

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18350	DC	1,'		16006		J6008	
		'		16007		1	
18360	DEF2	DSC 1,0		16008		1	
		0					
18370	DC	5,17400		16013		5	
		J7400					
18380	DC	3,046		16016		3	
		-46					
18390	DSA	IOUT		16021		5 X	1
18400	DC	1,'		16021		J0200	
		'		16022		1	
18410	WRBLK2	TFM IOPT,**23		16024	16	00565	J6047
18420	B	IOPT,WBLK2,7		16036	49	00532	J6000
18430	TRA			16048	36	00000	00500
				16060	49	00000	00000
18440	TCD	WRBLK2		16024			
18450	*	OUT OF CORE BLOCK 3 CONTAINS THE FOLLOWING					
18460	*	OUTSC					
18470	*	ASCAN					
18480	DORG	IOUT		10200			
18490	TFM	FMON+35,BLK4,, IOUT		10200	16	02359	-9683
18500	BTM	FMON,IOUT		10212	17	02324	J0200
18510	TFM	FMON+35,BLK2		10224	16	02359	-9637
18520	BTM	FMON,NONARA		10236	17	02324	J0224
18530	TFM	FMON+35,BLK1,, DIM		10248	16	02359	-9614
18540	BTM	FMON,DIM		10260	17	02324	J0248
18550	TFM	FMON+35,BLK1,, COMMON		10272	16	02359	-9614
18560	BTM	FMON,COMMON		10284	17	02324	J0272
18570	TFM	FMON+35,BLK6,, IF		10296	16	02359	-9729
18580	BTM	FMON,IF		10308	17	02324	J0296
18590	TFM	FMON+35,BLK6,, GOTO		10320	16	02359	-9729
18600	BTM	FMON,GOTO		10332	17	02324	J0320
18610	TFM	FMON+35,BLK6,, CALL		10344	16	02359	-9729
18620	BTM	FMON,CALL		10356	17	02324	J0344
18630	TFM	FMON+35,BLK6,, RETURN		10368	16	02359	-9729
18640	BTM	FMON,RETURN		10380	17	02324	J0368
18650	TFM	FMON+35,BLK1,, FORMAT		10392	16	02359	-9614
18660	BTM	FMON,FORMAT		10404	17	02324	J0392
18670	TFM	FMON+35,BLK4,, DO STMT		10416	16	02359	-9683
18680	BTM	FMON,DOO		10428	17	02324	J0416
18690	BNF	ASCIA ,TRIND,, ASCAN		10440	44	12026	03137
18700	B	ASCAN1		10452	49	11990	00000
18710	BD	SC1 ,SINGST,, OUTSC		10464	43	10860	09898
18720	B	OUTSC1		10476	49	10512	00000
18730	TFM	FMON+35,BLK5,, DKIO		10488	16	02359	-9706
18740	BTM	FMON,DKIO		10500	17	02324	J0488
18750	****	OUTPUT SUBSCRIPTING CODE					
18760	OUTSC1	TF TEMP,4(1)		10512	26	04089	000-4
18770	TD	DIMNO,6(1)		10524	25	10653	000-6
18780	CF	DIMNO		10536	33	10653	00000
18790	DIMNOT	DS 2,*-2		10545		2	
18800	TF	DIMNOT,DIMNO		10548	26	10545	10653

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18810	CF	SC22	10560	33	10608	00000
18820	TR	AA1-3,MASK,,	10572	31	11852	11921
18830	BLXM	**12,4(2)	10584	66	10596	00-04
18840	BLXM	SC22+24,12(3)	10596	66	10632	00-J2
18850	SC22	BXM **12,4(2)	10608	62	10620	00-04
18860	BXM	**12,12(3)	10620	62	10632	00-J2
18870	TR	CHI-1,CHI+1	10632	31	15138	15140
18880	SM	DIMNO,0001,810	10644	12	10653	0-0-1
18890	DIMNO	DS 2,-2	10653		2	
18900	CM	CHI,69,10	10656	14	15139	00009
18910	BNH	ALFAT	10668	47	10952	01100
18920	TDM	DIMSW,1	10680	15	09904	00001
18930	BTM	CSTNO,**12	10692	17	05302	J0704
18940	TDM	DIMSW,0	10704	15	09904	00000
18950	CM	CHI,14,10	10716	14	15139	000J4
18960	BE	SC3	10728	46	10904	01200
18970	SC4	TDM DIMSW,0	10740	15	09904	00000
18980	TF	A2-4(2),SYM	10752	26	11063	09879
18990	BNF	**36,SC22	10764	44	10800	10608
19000	CF	SC22	10776	33	10608	00000
19010	SF	A2-4(2)	10788	32	11063	00000
19020	SC5	CM CHI,23,10	10800	14	15139	000K3
19030	BE	SC22	10812	46	10608	01200
19040	CM	CHI,4,10	10824	14	15139	000-4
19050	BE	**36	10836	46	10872	01200
19060	BTM	ERROR,75,9	10848	17	09230	00-75
19070	SC1	BTM ERROR,272,9	10860	17	09230	00K72
19080	TR	CHI-1,CHI+1	10872	31	15138	15140
19090	BD	SC1-12,DIMNO	10884	43	10848	10653
19100	B	SC9	10896	49	11152	00000
19110	DORG	-3	10904			
19120	SC3	TF AA1-4(2),SYM	10904	26	11051	09879
19130	TR	CHI-1,CHI+1	10916	31	15138	15140
19140	CM	CHI,69,10	10928	14	15139	00009
19150	BH	SC1-12	10940	46	10848	01100
19160	ALFAT	CM CHI,40,10	10952	14	15139	000M0
19170	BNH	SC1-12	10964	47	10848	01100
19180	BTM	CSORN,**12	10976	17	05594	J0988
19190	BD	**20,FXDRFL	10988	43	11008	06309
19200	B	SC1-12,,	11000	49	10848	00000
19210	DORG	-4	11007			
19215	BD	SC1-12,6(1),,	11008	43	10848	000-6
19220	TF	I-12(3),XRA1-1	11020	26	110P5	00308
19230	CM	CHI,10,10	11032	14	15139	000J0
19240	BE	**48	11044	46	11092	01200
19250	CM	CHI,20,10	11056	14	15139	000K0
19260	BNE	SC5	11068	47	10800	01200
19270	SF	SC22	11080	32	10608	00000
19280	PI	DS 5, *	11091		5	
19290	TR	CHI-1,CHI+1	11092	31	15138	15140
19300	CM	CHI,69,10	11104	14	15139	00009
19310	BNH	SC1-12	11116	47	10848	01100
19320	TDM	DIMSW,1	11128	15	09904	00001
19330	BTM	CSTNO,SC4	11140	17	05302	J0740
19340	SC9	TFM MOVEIT+6,D1-12	11152	16	11218	J1871
19350	CALC	MM DIMNOT,05,10	11164	13	10545	000-5

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19360	A	TEMP,99	11176	21	04089	00099
19370	MM	DIMNOT,12,10	11188	13	10545	000J2
19380	A	MOVEIT+6,99	11200	21	11218	00099
19390	MOVEIT	A ,TEMP,11	11212	21	00000	0408R
19400	SM	DIMNOT,1,10	11224	12	10545	000-1
19410	BZ	**44	11236	46	11280	01200
19420	SM	TEMP,05,10	11248	12	04089	000-5
19430	SM	MOVEIT+6,12,10	11260	12	11218	000J2
19440	B	MOVEIT	11272	49	11212	00000
19450	DORG	-4	11279			
19460	S	D4,D1	11280	22	11919	11883
19470	M	D3,C2	11292	23	11907	11875
19480	SF	92	11304	32	00092	00000
19490	A	D4,99	11316	21	11919	00099
19500	M	D2,B2	11328	23	11895	11871
19510	SF	92	11340	32	00092	00000
19520	A	D4,99	11352	21	11919	00099
19530	A	D4,A2	11364	21	11919	11867
19540	M	D3,C1	11376	23	11907	11863
19550	SF	92	11388	32	00092	00000
19560	TF	D3,99	11400	26	11907	00099
19570	M	D2,B1	11412	23	11895	11859
19580	SF	92	11424	32	00092	00000
19590	TF	D2,99	11436	26	11895	00099
19600	MM	AA1,0001,8	11448	13	11855	0-001
19610	TF	D1,99	11460	26	11883	00099
19620	TFM	PI,1-12	11472	16	11091	J1875
19630	MV1	AM PI,9,10	11484	11	11091	000-9
19640	BNR	**20,PI,11	11496	45	11516	1109J
19650	B	CONT,,	11508	49	11652	00000
19660	DORG	-3	11516			
19670	AM	PI,3,10	11516	11	11091	000-3
19680	CM	PI,0,68	11528	14	1109J	0-000
19690	BE	MV2	11540	46	11572	01200
19700	AM	DIMNOT,01,10	11552	11	10545	000-1
19710	B	MV1	11564	49	11484	00000
19720	DORG	-3	11572			
19730	MV2	TF MV3+6,PI,,	11572	26	11626	11091
19740	TF	MV3+11,PI	11584	26	11631	11091
19750	AM	MV3+11,1,10	11596	11	11631	000-1
19760	SM	MV3+6,11,10	11608	12	11626	000J1
19770	MV3	TR 0,0	11620	31	00000	00000
19780	SM	PI,03,10	11632	12	11091	000-3
19790	B	MV1+12	11644	49	11496	00000
19800	DORG	-3	11652			
19810	**	S0 = 148 LITERAL SUBSCRIPT, S1 = 149 ONE SUBSCRIPT				
19820	**	S2 = 150 TWO SUBSCRIPTS, S3 = 151 THREE SUBSCRIPTS				
19830	CONT	TFM L4+11,0148,8,	11652	16	11687	0-148
19840	A	L4+11,DIMNOT	11664	21	11687	10545
19850	L4	BTM PUT,0	11676	17	08944	-0000
19860	CM	L4+11,0148,8	11688	14	11687	0-148
19870	BE	**24	11700	46	11724	01200
19880	SF	CALLP2	11712	32	02400	00000
19890	BTM	PUT,124,8	11724	17	08944	0-124
19900	BTM	PUT,140,8	11736	17	08944	0-140
19910	L5	BNR L6,D1-7	11748	45	11784	11876

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19920	BTM	PUT,104,8	11760	17	08944	0-104
19930	BLXM	OUTSCE,2213(1),67, RETURN	11772	66	0469R	-22J3
19940	L6	SF	11784	32	11876	00000
19950	TDM	PUT-5,8,11	11796	15	08939	00000
19960	BT	PUT,D1-4	11808	27	08944	11879
19970	TDM	PUT-5,0,11	11820	15	08939	0000-
19980	TR	D1-7,D1-3	11832	31	11876	11880
19990	B	L5	11844	49	11748	00000
20000	DORG	*-3	11852			
20010	AA1	DS 4	11855		4	
20020	B1	DS 4	11859		4	
20030	C1	DS 4	11863		4	
20040	A2	DS 4	11867		4	
20050	B2	DS 4	11871		4	
20060	C2	DS 4	11875		4	
20070	D1	DS 8	11883		8	
20080	I	DS 4	11887		4	
20090	D2	DS 8	11895		8	
20100	J	DS 4	11899		4	
20110	D3	DS 8	11907		8	
20120	K	DS 4	11911		4	
20130	D4	DS 8	11919		8	
20140	DS	1	11920		1	
20150	DC	4,0001	11924		4	
	-001					
20160	MASK	DS *,-3	11921		0	
20170	DC	4,1	11928		4	
	-001					
20180	DC	4,1	11932		4	
	-001					
20190	DC	4,0	11936		4	
	-000					
20200	DC	4,0	11940		4	
	-000					
20210	DC	4,0	11944		4	
	-000					
20220	DC	8,0	11952		8	
	-0000000					
20230	DC	4,0	11956		4	
	-000					
20240	DC	8,0	11964		8	
	-0000000					
20250	DC	4,0	11968		4	
	-000					
20260	DC	8,0	11976		8	
	-0000000					
20270	DC	4,0	11980		4	
	-000					
20280	DC	8,0	11988		8	
	-0000000					
20290	DC	1,1	11989		1	
	'					
20300	****	ASCAN CODE				
20310	ASCAN1	CF TRIND	11990	33	03137	00000
20320	BD	**24,NOIND	12002	43	12026	03195
20330	BTM	ERROR2,572,9,	12014	17	09386	00N72

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20340	ASC1A	TDM DMH ,1	12026	15	09907	00001
20350	CM	CHI,40,10	12038	14	15139	000M0
20360	BNH	AERR	12050	47	12146	01100
20370	CM	CHI,70,10	12062	14	15139	000P0
20380	BNL	AERR	12074	46	12146	01300
20390	ASC1B	SF OUTSW	12086	32	06896	00000
20400	BTM	CSORN,**12	12098	17	05594	J2110
20410	TDM	STSN	12110	15	05531	00000
20420	CM	CHI,33,10	12122	14	15139	000L3
20430	BE	**24	12134	46	12158	01200
20440	AERR	BTM ERROR,376,9	12146	17	09230	00L76
20450	CM	CHI+2,40,10	12158	14	15141	000M0
20460	BNH	ASC22-12	12170	47	12310	01100
20470	CM	CHI+2,70,10	12182	14	15141	000P0
20480	BNL	ASC22-12	12194	46	12310	01300
20490	TDM	EQU5W,1	12206	15	09908	00001
20500	TFM	SCHI,CHI+2	12218	16	05905	J5141
20510	BTM	CSORN,**12	12230	17	05594	J2242
20520	TDM	EQU5W,0	12242	15	09908	00000
20530	CM	SCHI,33,610	12254	14	05900	000L3
20540	BNE	ASC22-12	12266	47	12310	01200
20550	BTM	PUT,0133,8,	12278	17	08944	0-133
20560	TR	CHI-1,CHI+1,,	12290	31	15138	15140
20570	B7	ASC18	12302	49	12086	
20580	TDM	DMH,0	12310	15	09907	00000
20590	ASC22	BTM PUT, 133,8,EQUAL	12322	17	08944	0-133
20600	IFSC	TFM NOPARM,01,10	12334	16	14552	000-1
20610	TFM	ASC14+18,FLIST-9	12346	16	14124	J4549
20620	ARGSC	TFM SSCSW,00,10	12358	16	02494	000-0
20630	IFSCAN	TR CHI-1,CHI+1	12370	31	15138	15140
20640	BNR	**24,CHI+2	12382	45	12406	15141
20650	ER38	BTM ERROR,378,9,	12394	17	09230	00L78
20660	ASC12	CM CHI,20,10	12406	14	15139	000K0
20670	BNE	**32	12418	47	12450	01200
20680	BTM	PUT, 129,8,UNARY MINUS	12430	17	08944	0-129
20690	B7	**32	12442	49	12474	
20700	CM	CHI,10,10	12450	14	15139	000J0
20710	BNE	ASC4	12462	47	12498	01200
20720	ARG1	TFM SSCSW,5,10	12474	16	02494	000-5
20730	TR	CHI-1,CHI+1	12486	31	15138	15140
20740	ASC4	CM CHI,24,10	12498	14	15139	000K4
20750	BNE	ARG2	12510	47	12598	01200
20760	ASC23	BD ASC54,FNTSW1	12522	43	12578	09901
20770	AM	PARCNT, 1,10	12534	11	03288	000-1
20780	TFM	SSCSW,5,10	12546	16	02494	000-5
20790	BTM	PUT, 124,8,LEFT PAREN	12558	17	08944	0-124
20800	B	IFSCAN	12570	49	12370	00000
20810	DORG	*-3	12578			
20820	ASC54	AM TPARCT,1,10	12578	11	14550	000-1
20830	B	ASC23+24	12590	49	12546	00000
20840	DORG	*-3	12598			
20850	ARG2	BNF **20,NOPARM	12598	44	12618	14552
20860	B7	**20	12610	49	12630	
20870	TFM	SSCSW,5,10	12618	16	02494	000-5
20880	CM	CHI,40,10	12630	14	15139	000M0
20890	BH	ARG3	12642	46	12702	01100

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20900	CM	CHI,3,10		12654	14	15139	000-3
20910	BNE	IFSCAN+24		12666	47	12394	01200
20920	ASC6	CM	CHI+2,69,10	12678	14	15141	00009
20930	BNH	IFSCAN+24		12690	47	12394	01100
20940	ARG3	AM	SSCSW,5,10	12702	11	02494	000-5
20950	ASC3	SF	OUTSW	12714	32	06896	00000
20960	BTM	CSORN,**12		12726	17	05594	J2738
20970	BD	FNCS,FNTSW,,	BRANCH IF SYMBOL WAS FUNCTION NAME	12738	43	14086	09900
20980	ASC7	BNR	ASC1,CHI+2	12750	45	12830	15141
20990	BD	ER40,FNTSW1		12762	43	14486	09901
21000	CM	PARCNT,0,10		12774	14	03288	000-0
21010	BNE	ER39		12786	47	12818	01200
21020	BD	MODAFT,SINGST		12798	43	14006	09898
21030	B7	BEGIN		12810	49	02590	
21040	ER39	BTM	ERROR,379,9,	12818	17	09230	00L79
21050	ASC1	CM	CHI,30,10	12830	14	15139	000L0
21060	BL	**24		12842	47	12866	01300
21070	BTM	ERROR,378,9,	INVALID OPERATOR	12854	17	09230	00L78
21080	CM	CHI,24,10		12866	14	15139	000K4
21090	BE	ASC23		12878	46	12522	01200
21100	CM	CHI,10,10		12890	14	15139	000J0
21110	BNE	**32		12902	47	12934	01200
21120	BTM	PUT, 110,8,ADD		12914	17	08944	0-110
21130	B	ASC24		12926	49	13114	00000
21140	DORG	*-3		12934			
21150	CM	CHI,20,10		12934	14	15139	000K0
21160	BNE	**32		12946	47	12978	01200
21170	BTM	PUT, 120,8,SUBTRACT		12958	17	08944	0-120
21180	B	ASC24		12970	49	13114	00000
21190	DORG	*-3		12978			
21200	CM	CHI,21,10		12978	14	15139	000K1
21210	BNE	**32		12990	47	13022	01200
21220	BTM	PUT, 121,8,DIVIDE		13002	17	08944	0-121
21230	B	ASC24		13014	49	13114	00000
21240	DORG	*-3		13022			
21250	CM	CHI,14,10		13022	14	15139	000J4
21260	BNE	ASC25		13034	47	13134	01200
21270	CM	CHI+2,14,10		13046	14	15141	000J4
21280	BNE	ASC24-12		13058	47	13102	01200
21290	BTM	PUT, 115,8,EXPONENTIAL		13070	17	08944	0-115
21300	TR	CHI-1,CHI+1		13082	31	15138	15140
21310	B	**20		13094	49	13114	00000
21320	DORG	*-3		13102			
21330	BTM	PUT, 114,8,MULTIPLY		13102	17	08944	0-114
21340	ASC24	BNF	ARG1,SSCSW	13114	44	12474	02494
21350	B7	DIMERR		13126	49	07488	
21360	ASC25	CM	CHI,4,10	13134	14	15139	000-4
21370	BE	**48		13146	46	13194	01200
21380	BD	FNCS1,FNTSW1		13158	43	14266	09901
21390	BD	CALL2,CALLSM		13170	43	13446	09909
21400	BTM	ERROR,378,9,	INVALID OPERATOR	13182	17	09230	00L78
21410	BTM	PUT, 104,8,RIGHT PAREN		13194	17	08944	0-104
21420	BD	**32, FNTSW1		13206	43	13238	09901
21430	SM	PARCNT, 1,10		13218	12	03288	000-1
21440	B	**20		13230	49	13250	00000
21450	DORG	*-3		13238			

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21460	SM	TPARCT, 1,10		13238	12	14550	000-1	
21470	TR	CHI-1,CHI+1		13250	31	15138	15140	
21480	BN	ASC1-12		13262	47	12818	01300	
21490	BNH	**48		13274	47	13322	01100	
21500	CM	CHI,24,10		13286	14	15139	000K4	
21510	BNE	ASC7		13298	47	12750	01200	
21520	BTM	ERROR,378,9		13310	17	09230	00L78	
21530	BD	**60,FNTSW1		13322	43	13382	09901	
21540	CM	PARCNT,0,10		13334	14	03288	000-0	
21550	BNE	**36		13346	47	13382	01200	
21560	BD	OUTS12,IFSW		13358	43	13426	09905	
21570	BD	CALL3,CALLSM		13370	43	13490	09909	
21580	CM	CHI,24,10		13382	14	15139	000K4	
21590	BE	ER38		13394	46	12394	01200	
21600	BD	FNCS2,FNTSW1		13406	43	14354	09901	
21610	B	ASC7		13418	49	12750	00000	
21620	DORG	*-3		13426				
21630	OUTS12	TFM	IF+23,OUTSN+12	13426	16	10319	J3636	
21640	B	IF		13438	49	10296	00000	
21650	DORG	*-4		13445				
21660	CALL2	CM	CHI,23,10,	13446	14	15139	000K3	
21670	BNE	CALLER	TEST FOR MORE ARGUMENTS	13458	47	09454	01200	
21680	BTM	PUT,0123,8,	OUTPUT COMMA	13470	17	08944	0-123	
21690	B7	ARGSC-12		13482	49	12346		
21700	CALL3	BNR	CALLER,CHI+2	13490	45	09454	15141	
21710	B7	BEGIN		13502	49	02590		
21720	*****	ENTER HERE TO OUTPUT SINGLE STATEMENT FUNCTIONS	*****					
21730	*****		*****					
21740	ASC21	BD	**24,STSN	13510	43	13534	05531	
21750	BTM	ERROR,377,9,	SINGLE STATEMENT PRECEDED BY OTHER STMT	13522	17	09230	00L77	
21760	CF	STSN		13534	33	05531	00000	
21770	SF	6(1),...	FLAGGED RECORD MARK FOR ARI. ST. FUNCT.	13546	32	000-6	00000	
21780	TDM	OMM,0		13558	15	09907	00000	
21790	BSX	**12,TEMP5(1),...	SAVE SYMBOL ADDRESS TO MOVE IN NO.OF PAR	13570	67	13582	041-1	
21800	BTM	PUT, 137,8,ARITH	STATEMENT FUNCTION	13582	17	08944	0-137	
21810	BT	PUT,TEMP5-1,,	OUTPUT STMT NAME	13594	27	08944	04100	
21820	TFM	PCNT,0,10,	INITIAL PARAMETER COUNT	13606	16	13749	000-0	
21830	TFM	SETAFT+6,AFTBL+5		13618	16	13852	J4940	
21840	BTM	PUT, 124,8,LEFT PAREN		13630	17	08944	0-124	
21850	TR	CHI-1,CHI+1		13642	31	15138	15140	
21860	BNR	**24,CHI+2		13654	45	13678	15141	
21870	ASC26	BTM	ERROR,376,9,	INCOMPLETE STATEMENT FUNCTION	13666	17	09230	00L76
21880	CM	CHI,40,10		13678	14	15139	000M0	
21890	BNH	*-24		13690	47	13666	01100	
21900	TDM	FNTSW,0		13702	15	09900	00000	
21910	CM	CHI,69,10		13714	14	15139	00009	
21920	BH	ASC26		13726	46	13666	01100	
21930	SF	OUTSW		13738	32	06896	00000	
21940	PCNT	DC	2,00,*	13749			2	
21950	BTM	CSORN,**12		13750	17	05594	J3762	
21960	BD	ASC26,INSM		13762	43	13666	03219	
21970	AM	PCNT,1,10		13774	11	13749	000-1	
21980	TFM	SYM+2,14,10		13786	16	09881	000J4	
21990	CF	SYM+1		13798	33	09880	00000	
22000	AM	NXLOC,2,10		13810	11	02372	000-2	

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22010	TF	NXLOC,SYM+2,6	13822	26	0237K	09881
22020	SM	**18,5,10	13834	12	13852	000-5
22030	SETAFT	TF AFTBL*5,XRAL,2	13846	26	J4940	00309
22040	AM	**6,4,610	13858	11	1385K	000-4
22050	CM	CHI,04,10	13870	14	15139	000-4
22060	BE	**56	13882	46	13938	01200
22070	CM	CHI,23,10	13894	14	15139	000K3
22080	BNE	ASC26	13906	47	13666	01200
22090	BTM	PUT, 123,8,COMMA	13918	17	08944	0-123
22100	B	ASC26-24	13930	49	13642	00000
22110	DORG	**3	13938			
22120	BTM	PUT, 104,8,RIGHT PAREN	13938	17	08944	0-104
22130	TR	CHI-1,CHI+1	13950	31	15138	15140
22140	AM	TEMPS,8,10	13962	11	04101	000-8
22150	TF	TEMPS,PCNT,6	13974	26	0410J	13749
22160	TDM	SINGST,1,11, SET SINGLE STAMT SWITCH, SWITCH TESTED	13986	15	08989	0000J
22170	B	AERR-24,,, IN PUTTING OUT SUBSCRIBTING	13998	49	12122	00000
22180	DORG	**3	14006			
22190	MODAFT	TFM **35,AFTBL+5	14006	16	14041	J4940
22200	SM	**23,5,10	14018	12	14041	000-5
22210	TF	**18,**	14030	26	14048	00000
22220	AM	**-,2,10	14042	11	00000	000-2
22230	C	**13,SETAFT+6	14054	24	14041	13852
22240	BH	**48	14066	46	14018	01100
22250	B7	BEGIN	14078	49	02590	
22260	*****	ENTER TO OUTPUT SINGLE STATEMENT FUNCTION CALL AND *****				
22270	*****	FUNCTION SUBPROGRAM CALL *****				
22280	FNCS	BD ASC14,FNTSW1	14086	43	14106	09901
22290	B7	ASC8	14098	49	14130	
22300	*****	ENTER HERE TO SHIFT PARAMETER LIST DOWN FOR NESTED CALLS ***				
22310	ASC14	AM **18,5,10	14106	11	14124	000-5
22320	TR	FLIST-9,TPARCT-1,2	14118	31	J4549	14549
22330	ASC8	BNF ASC11,FNTSW,,, NO FLAG INDICATE FUNCTION SUBPROGRAM	14130	44	14162	09900
22340	TF	NOPARM,8(1),, MOVE NO. OF PARAMETERS TO COUNTER	14142	26	14552	000-8
22350	B7	ASC15	14154	49	14174	
22360	ASC11	TFM NOPARM,00,1011	14162	16	14552	000--
22370	ASC15	CM CHI,24,10	14174	14	15139	000K4
22380	BE	**24	14186	46	14210	01200
22390	BTM	ERROR,079,9, FUNCT NAME NOT FOLLOWED BY LPAREN	14198	17	09230	00-79
22400	BTM	PUT, 124,8,LEFT PAREN	14210	17	08944	0-124
22410	TFM	TPARCT,1,10, SET UP TEMPORARY PAREN COUNT	14222	16	14550	000-1
22420	TDM	FNTSW,0	14234	15	09900	00000
22430	TDM	FNTSW1,1	14246	15	09901	00001
22440	B7	ARGSC	14258	49	12358	
22450	FNCS1	CM CHI,23,10	14266	14	15139	000K3
22460	BNE	ER38	14278	47	12394	01200
22470	ASC30	BTM PUT, 123,8,COMMA	14290	17	08944	0-123
22480	BNF	**20,NOPARM	14302	44	14322	14552
22490	B7	ARGSC	14314	49	12358	
22500	SM	NOPARM,1,10	14322	12	14552	000-1
22510	BNP	ER40	14334	47	14486	01100
22520	B7	ARGSC	14346	49	12358	
22530	FNCS2	BNF **20,NOPARM	14354	44	14374	14552
22540	B7	ASC31	14366	49	14398	
22550	SM	NOPARM,1,10	14374	12	14552	000-1
22560	BNZ	ER40	14386	47	14486	01200

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22570	ASC31	CM ASC14+18,FLIST-9,, TEST IF NEST LIST IS EMPTY	14398	14	14124	J4549
22580	BNE	ASC31A	14410	47	14454	01200
22590	TDM	FNTSW1,0	14422	15	09901	00000
22600	TFM	SSCSW,00,10	14434	16	02494	000-0
22610	B	ASC7	14446	49	12750	00000
22620	DORG	**3	14454			
22630	ASC31A	TR TPARCT-1,ASC14+18,11	14454	31	14549	1412M
22640	SM	ASC14+18,5,10	14466	12	14124	000-5
22650	B7	ASC7	14478	49	12750	
22660	ASCER	BTM ERROR,470,9, INVALID FUNCTION PARAMETER LIST	14486	17	09230	00M70
22670	ER40	DS *ASCER	14486			
22680	IFASEN	TFM ASC14+18,FLIST-9	14498	16	14124	J4549
22690	TFM	SSCSW,00,10	14510	16	02494	000-0
22700	B	IFSCAN+12	14522	49	12382	00000
22710	DORG	**4	14529			
22720	CLASEN	TFM NOPARM,01,1011	14530	16	14552	000-J
22730	B	ARGSC-12	14542	49	12346	00000
22740	DORG	**4	14549			
22750	TPARCT	DS 2	14550			
22760	NOPARM	DS 2	14552			
22770	DC	1,'	14553			
22780	FLIST	DSB 5,20	14558		5 X	20
22790	DORG	16000	16000			
22800	WBLK3	DSC 2,22	16000		2	
22810	DSA	DEF3	16006		5 X	1
22820	DC	1,'	16006		J6008	
22830	DEF3	DSC 1,0	16008		1	
22840	DC	5,17450	16013		5	
22850	DC	3,046	16016		3	
22860	DSA	IOUT	16021		5 X	1
22870	DC	1,'	16021		J0200	
22880	WRBLK3	TFM IORT,**23	16024	16	00565	J6047
22890	B	IOPT,WBLK3,7	16036	49	00532	J6000
22900	TRA		16048	36	00000	00500
22910	TCD	WRBLK3	16060	49	00000	00000
22920	*	OUT OF CORE BLOCK 4 CONTAINS THE FOLLOWING				
22930	*	OUTSC				
22940	*	DO				
22950	*	IO OTHER THAN DISK				
22960	DORG	IOUT	10200			
22970	CM	CHI,44,10, IOUT, NONDISK I/O	10200	14	15139	000M4
22980	B	IOUTEN	10212	49	13240	00000
22990	TFM	FMON+35,BLK2	10224	16	02359	-9637

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23000	BTM	FMON, NONARA		10236	17	02324	J0224
23010	TFM	FMON+35, BLK1,,	DIM	10248	16	02359	-9614
23020	BTM	FMON, DIM		10260	17	02324	J0248
23030	TFM	FMON+35, BLK1,,	COMMON	10272	16	02359	-9614
23040	BTM	FMON, COMMON		10284	17	02324	J0272
23050	TFM	FMON+35, BLK6,,	IF STMT	10296	16	02359	-9729
23060	BTM	FMON, IF		10308	17	02324	J0296
23070	TFM	FMON+35, BLK6,,	GOTO	10320	16	02359	-9729
23080	BTM	FMON, GOTO		10332	17	02324	J0320
23090	TFM	FMON+35, BLK6,,	CALL	10344	16	02359	-9729
23100	BTM	FMON, CALL		10356	17	02324	J0344
23110	TFM	FMON+35, BLK6,,	RETURN	10368	16	02359	-9729
23120	BTM	FMON, RETURN		10380	17	02324	J0368
23130	TFM	FMON+35, BLK1,,	FORMAT	10392	16	02359	-9614
23140	BTM	FMON, FORMAT		10404	17	02324	J0392
23150	BNF	DOLOOP+36, TRIND,,	DO STATEMENT	10416	44	12026	03137
23160	B	DOLOOP		10428	49	11990	00000
23170	TFM	FMON+35, BLK3,,	ASCAN	10440	16	02359	-9640
23180	BTM	FMON, ASCAN		10452	17	02324	J0440
23190	BD	SCI, SINGST,,	OUTSC	10464	43	10860	09898
23200	B	OUTSC1		10476	49	10512	00000
23210	TFM	FMON+35, BLK5,,	DISK INPUT/OUTPUT	10488	16	02359	-9706
23220	BTM	FMON, DK10		10500	17	02324	J0488
23230	**	OUTSC CODE IS HERE					
23240		DORG ASCAN1		11990			
23250	*****	OUTPUT DO STATEMENTS	*****				
23260	DOLOOP	TDM TRIND,0		11990	15	03137	00000
23270	BD	**24, NOIND		12002	43	12026	03195
23280	BTM	ERROR2, 572, 9		12014	17	09386	00N72
23290	CM	CHI, 44, 10		12026	14	15139	000M4
23300	BNE	SPERR		12038	47	09130	01200
23310	CM	CHI+2, 56, 10		12050	14	15141	000N6
23320	BNE	SPERR		12062	47	09130	01200
23330	BD	**24, INDIV		12074	43	12098	02424
23340	BTM	KCNTU, 0, 10		12086	17	04740	000-0
23350	TDM	STSN, 0		12098	15	05531	00000
23360	TR	CHI-1, CHI+3		12110	31	15138	15142
23370	DO	CM CHI, 69, 10		12122	14	15139	00009
23380	BH	**24		12134	46	12158	01100
23390	ER25	BTM ERROR, 275, 9,	INCORRECT DO STATEMENT	12146	17	09230	00K75
23400	BTM	PUT, 108, 8, DO		12158	17	08944	0-108
23410	SF	OUTSW		12170	32	06896	00000
23420	BTM	CSTNO, **12		12182	17	05302	J2194
23430	BD	ER24, 9(11),,	IS DO REF. ST. NO. IN TABLE	12194	43	12338	000-9
23440	BD	DOC, 7(11)		12206	43	12242	000-7
23450	MF	**23, 7(11)		12218	71	12241	000-7
23460	TDM	7(11), 1,,	SET BY DO, IF NOT SET DO REF IN TABLE	12230	15	000-7	00001
23470	DOC	CM CHI, 40, 10		12242	14	15139	000M0
23480	BNH	ER25		12254	47	12146	01100
23490	CM	CHI, 69, 10		12266	14	15139	00009
23500	BH	ER25		12278	46	12146	01100
23510	BTM	CSORN, **12,,	COLLECT DO INDEX SYMBOL	12290	17	05594	J2302
23520	BT	PUT, XRA1-1		12302	27	08944	00308
23530	BD	DOC1, FXORFL		12314	43	12350	06309
23540	BTM	ERROR, 275, 9,	FLOATING POINT VARIABLE FOR INDEX	12326	17	09230	00K75
23550	ER24	BTM ERROR, 274, 9,	DO REFERENCING ILLEGAL STATEMENT NUMBER	12338	17	09230	00K74

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23560	DOC1	CM CHI, 33, 10,	TEST FOR EQUAL SIGN NEXT	12350	14	15139	000L3
23570	BNE	ER25		12362	47	12146	01200
23580	BTM	PUT, 133, 8, EQUAL		12374	17	08944	0-133
23590	TR	CHI-1, CHI+1		12386	31	15138	15140
23600	CF	DOA, ,,	INITIALIZE SWITCHES	12398	33	12434	00000
23610	CF	DOB		12410	33	12586	00000
23620	CF	DOC		12422	33	12242	00000
23630	DOA	CM CHI, 40, 10		12434	14	15139	000M0
23640	BNH	ER25, ,,	TEST FOR UNSIGNED VALUES	12446	47	12146	01100
23650	CM	CHI, 69, 10		12458	14	15139	00009
23660	BNH	**24, ,,		12470	47	12494	01100
23670	SF	DOA		12482	32	12434	00000
23680	SF	OUTSW		12494	32	06896	00000
23690	BTM	CSORN, **12,,	COLLECT AND OUTPUT FIRST INDEX	12506	17	05594	J2518
23700	BD	**20, FXORFL		12518	43	12538	06309
23710	BT	ER25		12530	49	12146	
23720	BNF	DOB, DOA		12538	44	12586	12434
23730	TF	DOTEST, SYM		12550	26	13239	09879
23740	CM	SYM, 0, 10,	TEST IF FIRST INDEX WAS ZERO	12562	14	09879	000-0
23750	BE	ER25		12574	46	12146	01200
23760	DOB	CM CHI, 23, 10		12586	14	15139	000K3
23770	BNE	ER25		12598	47	12146	01200
23780	BTM	PUT, 123, 8, COMMA		12610	17	08944	0-123
23790	TR	CHI-1, CHI+1		12622	31	15138	15140
23800	CM	CHI, 40, 10		12634	14	15139	000M0
23810	BNH	ER25		12646	47	12146	01100
23820	CM	CHI, 69, 10		12658	14	15139	00009
23830	BNH	**24		12670	47	12694	01100
23840	SF	DOB		12682	32	12586	00000
23850	BTM	CSORN, **12		12694	17	05594	J2706
23860	BT	PUT, XRA1-1		12706	27	08944	00308
23870	BD	**20, FXORFL		12718	43	12738	06309
23880	BT	ER25		12730	49	12146	
23890	BNF	**36, DOB		12738	44	12774	12586
23900	CM	SYM, 0, 10		12750	14	09879	000-0
23910	BE	ER25		12762	46	12146	01200
23920	BNR	DOE, CHI+2		12774	45	12854	15141
23930	BNF	**48, DOB		12786	44	12834	12586
23940	BNF	**36, DOA		12798	44	12834	12434
23950	C	SYM, DOTEST,,	TEST IF SECOND INDEX IS GREATER OR	12810	24	09879	13239
23960	BL	ER25, ,,	EQUAL TO THE FIRST IF BOTH ARE CONSTANTS	12822	47	12146	01300
23970	BD	ER25, IOSW,,	I/O CANNOT END HERE	12834	43	12146	09911
23980	B	BEGIN		12846	49	02590	00000
23990	DORG	**3		12854			
24000	DOE	CM CHI, 23, 10		12854	14	15139	000K3
24010	BE	**32		12866	46	12898	01200
24020	BD	IOF, IOSW,,	RETURN TO I/O SCAN	12878	43	14336	09911
24030	BT	ER25		12890	49	12146	
24040	BTM	PUT, 123, 8, COMMA		12898	17	08944	0-123
24050	TR	CHI-1, CHI+1		12910	31	15138	15140
24060	CM	CHI, 20, 10		12922	14	15139	000K0
24070	BNE	DOE1		12934	47	12982	01200
24080	SF	DOC		12946	32	12242	00000
24090	BTM	PUT, 120, 8,	MINUS	12958	17	08944	0-120
24100	TR	CHI-1, CHI+1		12970	31	15138	15140
24110	DOE1	BNF DOE2, DOA		12982	44	13062	12434

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24120	BNF	DOE2,DOE		12994	44	13062	12586	
24130	C	SYM,DOE2		13006	24	09879	13239	
24140	BNF	**32,DOC		13018	44	13050	12242	
24150	BH	ER25		13030	46	12146	01100	
24160	B7	DOE2		13042	49	13062		
24170	BL	ER25		13050	47	12146	01300	
24180	DOE2	CM	CHI,40,10	13062	14	15139	000M0	
24190	BNH	ER25		13074	47	12146	01100	
24200	SF	OUTSW		13086	32	06896	00000	
24210	BTM	CSORN,**12		13098	17	05594	J3110	
24220	CM	XRA1,2213		13110	14	03009	-2213	
24230	BE	ER25,,,	SUBSCRIPTED VARIABLE IN DO	13122	46	12146	01200	
24240	BD	**20,FXORFL		13134	43	13154	06309	
24250	B7	ER25		13146	49	12146		
24260	CM	SYM,0,10		13154	14	09879	000-0	
24270	BE	ER25		13166	46	12146	01200	
24280	DOEE	BD	IDF,IOSW,,	13178	43	14336	09911	
24290	BNR	**20,CHI+2	RETURN TO I/O SCAN	13190	45	13210	15141	
24300	B	BEGIN		13202	49	02590	00000	
24310	DORG	*-3		13210				
24320	BTM	ERROR2,573,9		13210	17	09386	00N73	
24330	B	BEGIN		13222	49	02590	00000	
24340	DORG	*-3		13230				
24350	DOTEST	DS	10	13239		10		
24360	****	ENTER HERE TO DECOMPOSE I/O STATEMENTS OTHER THAN DISK ****						
24370	IOUTEN	BNE	**44	13240	47	13284	01200	
24380	TFM	IOUT1+11,112,8,	OUTPUT READ SYMBOL	13252	16	13635	0-112	
24390	TR	CHI-1,CHI+1		13264	31	15138	15140	
24400	B	IOUT1		13276	49	13624	00000	
24410	DORG	*-3		13284				
24420	CM	CHI,55,10		13284	14	15139	000N5	
24430	BNE	IOUT2		13296	47	13376	01200	
24440	CM	CHI+2,63,10		13308	14	15141	00003	
24450	BE	**24		13320	46	13344	01200	
24460	IOUTER	BTM	ERROR,71,9	13332	17	09230	00-71	
24470	TFM	IOUT1+11,111,8,	OUTPUT PRINT SYMBOL	13344	16	13635	0-111	
24480	TR	CHI-1,CHI+3		13356	31	15138	15142	
24490	B	IOUT1		13368	49	13624	00000	
24500	DORG	*-3		13376				
24510	IOUT2	CM	CHI,45,10	13376	14	15139	000M5	
24520	BNE	IOUT3		13388	47	13456	01200	
24530	TR	CHI-1,CHI+1,,	SHIFT OFF E	13400	31	15138	15140	
24540	CM	CHI,69,10		13412	14	15139	00009	
24550	BNH	IOUT3		13424	47	13456	01100	
24560	TFM	IOUT1+11,0113,8,	OUTPUT TYPE SYMBOL	13436	16	13635	0-113	
24570	B	IOUT1		13448	49	13624	00000	
24580	DORG	*-3		13456				
24590	IOUT3	BTM	COLNAM,2,10	13456	17	04560	000-2	
24600	CM	SYM,4348,8		13468	14	09879	0M348	
24610	BV	IOUTER		13480	46	13332	01400	
24620	BNE	IOUT4		13492	47	13644	01200	
24630	TFM	IOUT1+11,118,8,	OUTPUT PUNCH SYMBOL	13504	16	13635	0-118	
24640	IOUT5	TR	CHI-1,CHI+3	13516	31	15138	15142	
24650	CM	CHI,63,10		13528	14	15139	00003	
24660	BNE	IOUT1		13540	47	13624	01200	
24670	BTM	COLNAM,4,10		13552	17	04560	000-4	

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24680	C	SYM,TPCST		13564	24	09879	13707	
24690	BV	IOUTER		13576	46	13332	01400	
24700	BNE	IOUTER		13588	47	13332	01200	
24710	TR	CHI-1,CHI+7		13600	31	15138	15146	
24720	AM	IOUT1+11,1,10		13612	11	13635	000-1	
24730	IOUT1	BTM	PUT,,,	13624	17	08944	-0000	
24740	B	INDUT		13636	49	13708	00000	
24750	DORG	*-3		13644				
24760	IOUT4	CM	SYM,5763,8	13644	14	09879	0N763	
24770	BV	IOUTER		13656	46	13332	01400	
24780	BNE	IOUTER		13668	47	13332	01200	
24790	TFM	IOUT1+11,0116,8,	OUTPUT ACCEPT SYMBOL	13680	16	13635	0-116	
24800	B	IOUT5		13692	49	13516	00000	
24810	DORG	*-3		13700				
24820	TPCST	DC	8,63415745,,	13707		8		
24830	*****	OUTPUT INPUT-OUTPUT LISTS *****						
24840	INDUT	CM	CHI,69,10	13708	14	15139	00009	
24850	BH	**24		13720	46	13744	01100	
24860	BTM	ERROR,276,9,	STATEMENT NUMBER MISSING	13732	17	09230	00K76	
24870	SF	OUTSW		13744	32	06896	00000	
24880	TDM	IOSW,1		13756	15	09911	00001	
24890	BTM	CSTNO,**12		13768	17	05302	J3780	
24900	BD	**32,INSW		13780	43	13812	03219	
24910	TDM	8(1),1,,	SET DIGIT FOR FORMAT STATEMENT NUMBER	13792	15	000-8	00001	
24920	B	**32		13804	49	13836	00000	
24930	DORG	*-3		13812				
24940	BD	**24,8(1),,	TEST IF STAMNT NUMBER CORRESPONDS TO FMT	13812	43	13836	000-8	
24950	BTM	ERROR,277,9,	I/O STATEMENT NO. NOT A FORMAT NUMBER	13824	17	09230	00K77	
24960	IOA	BNR	**20,CHI+2	13836	45	13856	15141	
24970	B	BEGIN		13848	49	02590	00000	
24980	DORG	*-3		13856				
24990	CM	CHI,23,10		13856	14	15139	000K3	
25000	BE	**24		13868	46	13892	01200	
25010	IOLER	BTM	ERROR,278,9,	13880	17	09230	00K78	
25020	BTM	PUT, 123,8,COMMA	MISSING COMMA OR INVALID LIST ELEMENT	13892	17	08944	0-123	
25030	TR	CHI-1,CHI+1		13904	31	15138	15140	
25040	CM	CHI,40,10		13916	14	15139	000M0	
25050	BNH	IOB		13928	47	13988	01100	
25060	CM	CHI,69,10		13940	14	15139	00009	
25070	BH	IOLER		13952	46	13880	01100	
25080	SF	OUTSW		13964	32	06896	00000	
25090	BTM	CSORN,IOA		13976	17	05594	J3836	
25100	IOB	TFM	ILOOP,0,10	13988	16	14155	000-0	
25110	CM	CHI,24,10		14000	14	15139	000K4	
25120	BNE	IOLER		14012	47	13880	01200	
25130	AM	PARCNT,1,10		14024	11	03288	000-1	
25140	BTM	PUT, 124,8,LEFT PAREN		14036	17	08944	0-124	
25150	TR	CHI-1,CHI+1		14048	31	15138	15140	
25160	AM	ILOOP,1,10		14060	11	14155	000-1	
25170	CM	CHI,24,10		14072	14	15139	000K4	
25180	BE	IOG		14084	46	14520	01200	
25190	IOD	CM	CHI,40,10	14096	14	15139	000M0	
25200	BNH	IOB+12		14108	47	14000	01100	
25210	CM	CHI,69,10		14120	14	15139	00009	
25220	BH	IOLER		14132	46	13880	01100	

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25230	SF	OUTSW	14144	32	06896	00000
25240	IOLOOP	DC 2,0,*	14155		2	
		-0				
25250	BTM	CSORN,**12,,	14156	17	05594	J4168
25260	BNR	**20,6(11)	14168	45	14188	000-6
25270	B7	IOLER,,,	14180	49	13880	
25280	CM	CHI,23,10	14188	14	15139	000K3
25290	BNE	IOE	14200	47	14256	01200
25300	BTM	PUT, 123,8,COMMA	14212	17	08944	0-123
25310	SF	IOSW	14224	32	09911	00000
25320	TR	CHI-1,CHI+1	14236	31	15138	15140
25330	B	IOD	14248	49	14096	00000
25340	DDRG	*-3	14256			
25350	IOE	BNF IOLER,IOSW	14256	44	13880	09911
25360	CF	IOSW	14268	33	09911	00000
25370	CM	CHI,33,10	14280	14	15139	000L3
25380	BNE	IOB+12	14292	47	14000	01200
25390	BTM	PUT, 133,8,EQUAL	14304	17	08944	0-133
25400	BD	DOA-48,FXORFL,,	14316	43	12386	06309
25410	B	IOLER	14328	49	13880	00000
25420	DDRG	*-3	14336			
25430	*****	RETURN HERE FROM DO CODEING	*****			
25440	IOF	CM CHI,4,10	14336	14	15139	000-4
25450	BNE	IOLER	14348	47	13880	01200
25460	BTM	PUT, 104,8,RIGHT PAREN	14360	17	08944	0-104
25470	TR	CHI-1,CHI+1	14372	31	15138	15140
25480	SM	PARCNT,1,10	14384	12	03288	000-1
25490	BN	IOLER	14396	47	13880	01300
25500	SM	IOLOOP,1,10	14408	12	14155	000-1
25510	BNZ	**+32	14420	47	14452	01200
25520	BNR	IOLER-24,CHI+2	14432	45	13856	15141
25530	B	BEGIN	14444	49	02590	00000
25540	DDRG	*-3	14452			
25550	CM	CHI,23,10	14452	14	15139	000K3
25560	BNE	IOLER	14464	47	13880	01200
25570	BTM	PUT, 123,8,COMMA	14476	17	08944	0-123
25580	TR	CHI-1,CHI+1	14488	31	15138	15140
25590	SF	IOSW	14500	32	09911	00000
25600	B	IOD	14512	49	14096	00000
25610	DDRG	*-3	14520			
25620	IOG	BTM PUT, 124,8,LEFT PAREN	14520	17	08944	0-124
25630	AM	PARCNT,1,10	14532	11	03288	000-1
25640	TR	CHI-1,CHI+1	14544	31	15138	15140
25650	AM	IOLOOP,1,10	14556	11	14155	000-1
25660	CM	CHI,24,10	14568	14	15139	000K4
25670	BNE	IOD	14580	47	14096	01200
25680	BTM	PUT, 124,8,LEFT PAREN	14592	17	08944	0-124
25690	AM	PARCNT,1,10	14604	11	03288	000-1
25700	TR	CHI-1,CHI+1	14616	31	15138	15140
25710	AM	IOLOOP,1,10	14628	11	14155	000-1
25720	B	IOD	14640	49	14096	00000
25730	DDRG	*-3	14648			
25740	DDRG	16000	16000			
25750	WBLK4	DSC 2,22	16000		2	
		22				
25760	DSA	DEF4	16006		5 X	1

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25770	DC	1,1	16006		J6008	
		1	16007		1	
25780	DEF4	DSC 1,0	16008		1	
		0				
25790	DC	5,17500	16013		5	
		J7500				
25800	DC	3,046	16016		3	
		-46				
25810	DSA	IOUT	16021		5 X	1
25820	DC	1,1	16021		J0200	
		1	16022		1	
25830	WRBLK4	TFM IORT,**23	16024	16	00565	J6047
25840	B	IOPT,WBLK4,7	16036	49	00532	J6000
25850	TRA		16048	36	00000	00500
			16060	49	00000	00000
25860	TCD	WRBLK4	16024			
25870 *		OUT OF CORE BLOCK 5 CONTAINS THE FOLLOWING				
25880 *		OUTSC				
25890 *		DD				
25900 *		DKIO				
25910	DDRG	IOUT	10200			
25920	TFM	FMON+35,BLK4,, IOUT	10200	16	02359	-9683
25930	BTM	FMON,IOUT	10212	17	02324	J0200
25940	TFM	FMON+35,BLK2	10224	16	02359	-9637
25950	BTM	FMON,NONARA	10236	17	02324	J0224
25960	TFM	FMON+35,BLK1,, DIM	10248	16	02359	-9614
25970	BTM	FMON,DIM	10260	17	02324	J0248
25980	TFM	FMON+35,BLK1,, COMMON	10272	16	02359	-9614
25990	BTM	FMON,COMMON	10284	17	02324	J0272
26000	TFM	FMON+35,BLK6,, IF STMT	10296	16	02359	-9729
26010	BTM	FMON,IF	10308	17	02324	J0296
26020	TFM	FMON+35,BLK6,, GOTO	10320	16	02359	-9729
26030	BTM	FMON,GOTO	10332	17	02324	J0320
26040	TFM	FMON+35,BLK6,, CALL	10344	16	02359	-9729
26050	BTM	FMON,CALL	10356	17	02324	J0344
26060	TFM	FMON+35,BLK6,, RETURN	10368	16	02359	-9729
26070	BTM	FMON,RETURN	10380	17	02324	J0368
26080	TFM	FMON+35,BLK1,, FORMAT	10392	16	02359	-9614
26090	BTM	FMON,FORMAT	10404	17	02324	J0392
26100	BNF	DOLOOP+36,TRIND,, DO STATEMENT	10416	44	12026	03137
26110	B	DOLOOP	10428	49	11990	00000
26120	TFM	FMON+35,BLK3,, ASCAN	10440	16	02359	-9660
26130	BTM	FMON,ASCAN	10452	17	02324	J0440
26140	BD	SCI,SINGST,, OUTSC	10464	43	10860	09898
26150	B	OUTSCI	10476	49	10512	00000
26160	TDM	USEDFS+5,1,, DISK I/O	10488	15	02268	00001
26170	B	DKIOEN	10500	49	13240	00000
26180 **		OUTSC CODE IS HERE				
26190	DDRG	ASCAN1	11990			
26200 **		OUTPUT DO STATEMENT CODE IS HERE				
26210 **		THE FOLLOWING INSTRUCTIONS CHANGE DD STATEMENT CODE				
26220	DDRG	DOE+24	12878			

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26230	BD	DKF,IOSW,,	RETURN TO I/O SCAN	12878	43 14444 09911
26240	DORG	DOEE		13178	
26250	BD	DKF,IOSW,,	RETURN TO I/O SCAN	13178	43 14444 09911
26260	****	ENTER HERE TO DECODE	DISK I/O STATEMENTS	***	
26270	DORG	IOUTEN		13240	
26280	DKI0EN	SF DKIO,,,	FLAG FOR FETCH AND RECORD	13240	32 10488 00000
26290	CM	CHI,43,10		13252	14 15139 000M3
26300	BNE	DKIO1		13264	47 13332 01200
26310	TFM	DKPUT+11,0142,8,	FETCH SYMBOL	13276	16 13603 0-142
26320	CM	CHI+2,48,10,	CHECK FOR H	13288	14 15141 000M8
26330	BNE	ERR01		13300	47 04198 01200
26340	TR	CHI-1,CHI+3,,	SHIFT OFF TWO CHARACTERS	13312	31 15138 15142
26350	B	DKLIST		13324	49 13472 00000
26360	DORG	*-3		13332	
26370	DKIO1	CM CHI,44,10		13332	14 15139 000M4
26380	BNE	DKIO2		13344	47 13400 01200
26390	CF	DKIO,,,	NO FLAG FOR FIND	13356	33 10488 00000
26400	TFM	DKPUT+11,0144,8,	FIND SYMBOL	13368	16 13603 0-144
26410	TR	CHI-1,CHI+1,,	SHIFT OFF ONE CHARACTER	13380	31 15138 15140
26420	B	DKLIST		13392	49 13472 00000
26430	DORG	*-3		13400	
26440	DKIO2	BTM COLNAM,03,10		13400	17 04560 000-3
26450	C	SYN,ORDCT+4		13412	24 09879 14725
26460	BV	ERR01		13424	46 04198 01400
26470	BNE	ERR01		13436	47 04198 01200
26480	TR	CHI-1,CHI+5,,	SHIFT OFF THREE CHARACTERS	13448	31 15138 15144
26490	TFM	DKPUT+11,0146,8,	RECORD SYMBOL	13460	16 13603 0-146
26500	DKLIST	TDM DISKSW,1,11,	SET SW TO INDICATE DISK I/O	13472	15 02383 0000J
26510	CM	CHI,24,10,	CHECK FOR LEFT PAREN	13484	14 15139 000K4
26520	BNE	DKER		13496	47 13820 01200
26530	TDM	IOSW,1		13508	15 09911 00001
26540	TR	CHI-1,CHI+1,,	SHIFT OFF LEFT PAREN	13520	31 15138 15140
26550	CM	CHI,69,10		13532	14 15139 00009
26560	BL	*+24		13544	47 13568 01300
26570	AM	DKPUT+11,1,10	ADD ONE FOR LITERAL	13556	11 13603 000-1
26580	CM	CHI,40,10		13568	14 15139 000M0
26590	BL	DKER		13580	47 13820 01300
26600	DKPUT	BTM PUT,,	OUTPUT DISK I/O SYMBOL	13592	17 08944 -0000
26610	BTM	PUT,0124,8,	OUTPUT LEFT PAREN	13604	17 08944 0-124
26620	SF	OUTSM		13616	32 06896 00000
26630	BTM	CSORN,**12		13628	17 05594 J3640
26640	BD	*+20,FXORFL		13640	43 13660 06309
26650	B	DKER		13652	49 13820 00000
26660	DORG	*-4		13659	
26670	CM	CHI,04,10,	CHECK FOR RT PAREN	13660	14 15139 000-4
26680	BNE	DKER		13672	47 13820 01200
26690	BTM	PUT,0104,8,	OUTPUT RT PAREN	13684	17 08944 0-104
26700	BNF	BEGIN,DKIO,,	BRANCH TO BEGIN IF FIND STMT	13696	44 02590 10488
26710	BTM	PUT,0123,8,	OUTPUT COMMA	13708	17 08944 0-123
26720	TR	CHI-1,CHI+1,,	SHIFT OFF RT PAREN	13720	31 15138 15140
26730	DKL	BNR **24,CHI+2		13732	45 13756 15141
26740	BTM	ERR0R,+72,9,	DISK I/O STMTS MUST HAVE LISTS	13744	17 09230 00M72
26750	TR	DKSW1-1,SWSET-4,,	INIT SWITCHES	13756	31 14351 14726
26760	B	DKB		13768	49 13856 00000
26770	DORG	*-3		13776	
26780	DKA	BNR **20,CHI+2		13776	45 13796 15141

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26790	B	BEGIN		13788	49 02590 00000
26800	DORG	*-3		13796	
26810	CM	CHI,23,10		13796	14 15139 000K3
26820	BE	*+24		13808	46 13832 01200
26830	DKER	BTM ERR0R,+71,9		13820	17 09230 00M71
26840	BTM	PUT,0123,8,	OUTPUT COMMA	13832	17 08944 0-123
26850	TR	CHI-1,CHI+1,,	SHIFT OFF ONE CHARACTER	13844	31 15138 15140
26860	DKB	CM CHI,40,10		13856	14 15139 000M0
26870	BNH	DKC		13868	47 14048 01100
26880	CM	CHI,69,10		13880	14 15139 00009
26890	BH	DKER,,,	LITERAL ITEM ON LIST	13892	46 13820 01100
26900	SF	OUTSM		13904	32 06896 00000
26910	BTM	CSORN,**12		13916	17 05594 J3928
26920	BD	*+32,6(1),,	DIGIT IMPLIES AN ARRAY NAME	13928	43 13960 000-6
26930	TDM	DKSW2,2		13940	15 14354 00002
26940	B	*+20		13952	49 13972 00000
26950	DORG	*-3		13960	
26960	TDM	DKSW2,1		13960	15 14354 00001
26970	BD	*+20,DKSW1		13972	43 13992 14352
26980	B	DKB1+12		13984	49 14028 00000
26990	DORG	*-6		13991	
27000	C	DKSW1,DKSW2		13992	24 14352 14354
27010	BE	DKA		14004	46 13776 01200
27020	DKB1	BTM ERR0R,+73,9,	ARRAYS AND SIMPLE VARIABLES ON SAME I/O	14016	17 09230 00M73
27030	TD	DKSW1,DKSW2		14028	25 14352 14354
27040	B	DKA		14040	49 13776 00000
27050	DORG	*-3		14048	
27060	+	THE FOLLOWING HANDLES IMPLIED DO LOOPS IN LISTS			
27070	DKC	TFM DKLOOP,0,10		14048	16 14215 000-0
27080	CM	CHI,24,10		14060	14 15139 000K4
27090	BNE	DKER		14072	47 13820 01200
27100	AM	PARCNT,1,10		14084	11 03288 000-1
27110	BTM	PUT,0124,8,	OUTPUT LEFT PAREN	14096	17 08944 0-124
27120	TR	CHI-1,CHI+1,,	SHIFT OFF ONE CHARACTER	14108	31 15138 15140
27130	AM	DKLOOP,1,10		14120	11 14215 000-1
27140	CM	CHI,24,10		14132	14 15139 000K4
27150	BE	DKC		14144	46 14592 01200
27160	DKD	CM CHI,40,10		14156	14 15139 000M0
27170	BNH	DKC+12		14168	47 14060 01100
27180	CM	CHI,69,10		14180	14 15139 00009
27190	BH	DKER		14192	46 13820 01100
27200	SF	OUTSM		14204	32 06896 00000
27210	DKLOOP	DC 2,0,*		14215	2
27220	BTM	CSORN,**12		14216	17 05594 J4228
27230	BNR	*+20,6(1)		14228	45 14248 000-6
27240	B	DKER,,,	FUNCTION NAME	14240	49 13820 00000
27250	DORG	*-3		14248	
27260	BD	*+36,DKSW1		14248	43 14284 14352
27270	C	DKSW1,DKSW2		14260	24 14352 14354
27280	BNE	DKB1		14272	47 14016 01200
27290	TD	DKSW1,DKSW2		14284	25 14352 14354
27300	DKD1	CM CHI,23,10		14296	14 15139 000K3
27310	BNE	DKE		14308	47 14364 01200
27320	BTM	PUT,0123,8,	OUTPUT COMMA	14320	17 08944 0-123
27330	TR	CHI-1,CHI+1		14332	31 15138 15140

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27340	SF	DKE		14344	32	14364	00000
27350	DKSW1	DS	2,-3	14352		2	
27360	DKSW2	DS	2,-1	14354		2	
27370	B	DKD		14356	49	14156	00000
27380	DORG	*-3		14364			
27390	DKE	BNF	DKER,DKE	14364	44	13820	14364
27400	CF	DKE		14376	33	14364	00000
27410	CM	CHI,33,10		14388	14	15139	000L3
27420	BNE	DKC+12		14400	47	14060	01200
27430	BTM	PUT,0133,8,	OUTPUT EQUAL SYMBOL	14412	17	08944	0-133
27440	BD	DOA-48,FXDRFL,,	GO TO DO CODING FOR IMPLIED DO LOOP	14424	43	12386	06309
27450	B	DKER		14436	49	13820	00000
27460	DORG	*-3		14444			
27470	*	RETURN HERE FROM DO CODING					
27480	DKF	CM	CHI,04,10	14444	14	15139	000-4
27490	BNE	DKER		14456	47	13820	01200
27500	BTM	PUT,0104,8,	OUTPUT RT PAREN	14468	17	08944	0-104
27510	TR	CHI-1,CHI+1		14480	31	15138	15140
27520	SM	PARCNT,1,10		14492	12	03288	000-1
27530	BN	DKER		14504	47	13820	01300
27540	SM	DKLOOP,1,10		14516	12	14215	000-1
27550	BNZ	**32		14528	47	14560	01200
27560	BNR	DKER-24,CHI+2		14540	45	13796	15141
27570	B	BEGIN		14552	49	02590	00000
27580	DORG	*-3		14560			
27590	CM	CHI,23,10		14560	14	15139	000K3
27600	BNE	DKER		14572	47	13820	01200
27610	B	DKD1		14584	49	14296	00000
27620	DORG	*-3		14592			
27630	DKG	BTM	PUT,0124,8,	14592	17	08944	0-124
27640	AM	PARCNT,1,10	OUTPUT LEFT PAREN	14604	11	03288	000-1
27650	TR	CHI-1,CHI+1		14616	31	15138	15140
27660	AM	DKLOOP,1,10		14628	11	14215	000-1
27670	CM	CHI,24,10		14640	14	15139	000K4
27680	BNE	DKD		14652	47	14156	01200
27690	BTM	PUT,0124,8,	OUTPUT LEFT PAREN	14664	17	08944	0-124
27700	AM	PARCNT,1,10		14676	11	03288	000-1
27710	TR	CHI-1,CHI+1		14688	31	15138	15140
27720	AM	DKLOOP,1,10		14700	11	14215	000-1
27730	B	DKD		14712	49	14156	00000
27740	DORG	*-3		14720			
27750	ORDCT	DAC	3,ORD	14721		3 X	2
	ORD						
27760	DC	2,00		14727		2	
	-0						
27770	SWSET	DC	3,00'	14730		3	
	-0'						
27780	DORG	16000		16000			
27790	WBLK5	DSC	2,22	16000		2	
	22						
27800	DSA	DEF5		16006		5 X	1
				16006		J6008	
27810	DC	1,.'		16007		1	
	'						
27820	DEF5	DSC	1,0	16008		1	
	0						

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27830	DC	5,17650		16013		5	
	J7650						
27840	DC	3,046		16016		3	
	-46						
27850	DSA	IOUT		16021		5 X	1
				16021		J0200	
27860	DC	1,.'		16022		1	
	'						
27870	WRBLK5	TFM	IORT,**23	16024	16	00565	J6047
27880	B	IOPT,WBLK5,7		16036	49	00532	J6000
27890	TRA			16048	36	00000	00500
				16060	49	00000	00000
27900	TCD	WRBLK5		16024			
27910	*	OUT OF CORE BLOCK 6	CONTAINS THE FOLLOWING				
27920	*	OUTSC					
27930	*	CALL					
27940	*	RETURN					
27950	*	IF					
27960	*	IF OVERFLOW					
27970	*	IF EXPONENT CHECK					
27980	*	IF SENSE SWITCH					
27990	*	GOTO					
28000	DORG	IOUT		10200			
28010	TFM	FMON+35,BLK4,,	IOUT	10200	16	02359	-9683
28020	BTM	FMON,IOUT		10212	17	02324	J0200
28030	TFM	FMON+35,BLK2		10224	16	02359	-9637
28040	BTM	FMON,NONARA		10236	17	02324	J0224
28050	TFM	FMON+35,BLK1,,	DIM	10248	16	02359	-9614
28060	BTM	FMON,DIM		10260	17	02324	J0248
28070	TFM	FMON+35,BLK1,,	COMMON	10272	16	02359	-9614
28080	BTM	FMON,COMMON		10284	17	02324	J0272
28090	AM	PARCNT,01,10,	IF	10296	11	03288	000-1
28100	B	IF1		10308	49	13028	00000
28110	CM	CHI,56,10,	GOTO	10320	14	15139	000N6
28120	B	GOTOEN		10332	49	14084	00000
28130	CM	CHI,53,10,	CALL	10344	14	15139	000N3
28140	B	CALLN		10356	49	11990	00000
28150	BTM	COLNAM,03,10,	RETURN	10368	17	04560	000-3
28160	B	RETRN		10380	49	12910	00000
28170	TFM	FMON+35,BLK1,,	FORMAT	10392	16	02359	-9614
28180	BTM	FMON,FORMAT		10404	17	02324	J0392
28190	TFM	FMON+35,BLK4,,	DDD	10416	16	02359	-9683
28200	BTM	FMON,DDD		10428	17	02324	J0416
28210	TFM	FMON+35,BLK3,,	ASCAN	10440	16	02359	-9660
28220	BTM	FMON,ASCAN		10452	17	02324	J0440
28230	BD	SCI,SINGST,,	OUTSC	10464	43	10860	09898
28240	B	OUTSC1		10476	49	10512	00000
28250	TFM	FMON+35,BLK5,,	DISK INPUT/OUTPUT	10488	16	02359	-9706
28260	BTM	FMON,DKID		10500	17	02324	J0488
28270	**	OUTSC CODE IS HERE					
28280	DORG	ASCAN1		11990			
28290	***	ENTER HERE TO DECOMPOSE CALL STATEMENT	***				
28300	CALLN	BNE	ERR01	11990	47	04198	01200
28310	TR	CHI-1,CHI+1		12002	31	15138	15140

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28320	BTM	COLNAM,04,10	12014	17	04560	000-4
28330	C	SYM,EXITCT+6	12026	24	09879	12873
28340	BV	++48	12038	46	12086	01400
28350	BE	EXITCD	12050	46	12406	01200
28360	C	SYM,LINKCT+6	12062	24	09879	12881
28370	BE	LINKCD	12074	46	12462	01200
28380	TDM	CALLSW,1	12086	15	09909	00001
28390	BTM	PUT, 138,8,CALL	12098	17	08944	0-138
28400	CM	CHI,40,10	12110	14	15139	000M0
28410	BNH	CALLER	12122	47	09454	01100
28420	CM	CHI,69,10	12134	14	15139	00009
28430	BH	CALLER	12146	46	09454	01100
28440	SF	OUTSW	12158	32	06896	00000
28450	BTM	CSORN,++12	12170	17	05594	J2182
28460	BNR	CALLB,CHI+2	12182	45	12258	15141
28470	BD	CALLA,INSM	12194	43	12238	03219
28480	BTM	PUT,0153,8, FUNCTION OPERATOR CALL	12206	17	08944	0-153
28490	TDM	6(1),*-*	12218	15	000-6	00000
28500	DC	1,*,*	12229		1	
28510	B	BEGIN	12230	49	02590	00000
28520	DORG	*-3	12238			
28530	CALLA	BNR ERROR,6(1)	12238	45	07936	000-6
28540	B	BEGIN	12250	49	02590	00000
28550	DORG	*-3	12258			
28560	CALLB	BD **24,FNTSW	12258	43	12282	09900
28570	BTM	ERROR,279,9, SYM PREVIOUSLY USED NOT AS CALL NAME	12270	17	09230	00K79
28580	BNF	**20,FNTSW	12282	44	12302	09900
28590	B	*-24,, TRYING TO CALL SINGLE STATMNT FUNCT	12294	49	12270	00000
28600	DORG	*-3	12302			
28610	TDM	FNTSW,0	12302	15	09900	00000
28620	CM	CHI,24,10	12314	14	15139	000K4
28630	BNE	CALLER	12326	47	09454	01200
28640	BTM	PUT, 124,8,LEFT PAREN	12338	17	08944	0-124
28650	AM	PARCNT,1,10	12350	11	03288	000-1
28660	CM	CHI+2,4,10, TEST FOR NO FUNCTION ARGUEMENTS	12362	14	15141	000-4
28670	BE	CALLER	12374	46	09454	01200
28680	TFM	ASCAN+23,CLASEN	12386	16	10463	J4530
28690	B	ASCAN,, GO TO ARITHMETIC SCAN	12398	49	10440	00000
28700	DORG	*-3	12406			
28710	EXITCD	BNR CALLER-48,CHI+10	12406	45	09406	15149
28720	TDM	TRIND,1,11	12418	15	03137	0000J
28730	BTM	PUT,0131,8, CALL EXIT SYMBOL	12430	17	08944	0-131
28740	BTM	PUT,0140,8, DUMMY	12442	17	08944	0-140
28750	B	BEGIN	12454	49	02590	00000
28760	DORG	*-3	12462			
28770	LINKCD	CM CHI+8,24,10	12462	14	15147	000K4
28780	BE	**32	12474	46	12506	01200
28790	BNR	CALLER-48,CHI+8	12486	45	09406	15147
28800	B	ERR01	12498	49	04198	00000
28810	DORG	*-3	12506			
28820	TDM	TRIND,1,11	12506	15	03137	0000J
28830	BTM	PUT,0152,8, CALL LINK SYMBOL	12518	17	08944	0-152
28840	BTM	PUT,0140,8	12530	17	08944	0-140
28850	BTM	PUT,0140,8	12542	17	08944	0-140
28860	TR	CHI-1,CHI+9	12554	31	15138	15148

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28870	CM	CHI,40,10	12566	14	15139	000M0
28880	BNH	CALLER	12578	47	09454	01100
28890	CM	CHI,69,10	12590	14	15139	00009
28900	BH	CALLER	12602	46	09454	01100
28910	TR	OUTAR,MASKLK	12614	31	12882	12896
28920	TF	OUTAR+1,CHI	12626	26	12883	15139
28930	TR	CHI-1,CHI+1	12638	31	15138	15140
28940	TFM	LKCD3+6,OUTAR+3	12650	16	12712	J2885
28950	LKCD1	CM CHI,40,10	12662	14	15139	000M0
28960	BNH	LKCD4	12674	47	12750	01100
28970	BNR	LKCD3,LKCD3+6,11	12686	45	12706	1271K
28980	B	ERR01	12698	49	04198	00000
28990	DORG	*-3	12706			
29000	LKCD3	TF ,CHI,	12706	26	00000	15139
29010	TR	CHI-1,CHI+1	12718	31	15138	15140
29020	AM	LKCD3+6,02,10	12730	11	12712	000-2
29030	B	LKCD1	12742	49	12662	00000
29040	DORG	*-3	12750			
29050	LKCD4	CM CHI,04,10	12750	14	15139	000-4
29060	BNE	ERR01	12762	47	04198	01200
29070	BNR	ERR01,CHI+4	12774	45	04198	15143
29080	CF	OUTAR+2	12786	33	12884	00000
29090	CF	OUTAR+6	12798	33	12888	00000
29100	CF	OUTAR+10	12810	33	12892	00000
29110	BT	PUT,OUTAR+3	12822	27	08944	12885
29120	BT	PUT,OUTAR+7	12834	27	08944	12889
29130	BT	PUT,OUTAR+11	12846	27	08944	12893
29140	B	BEGIN	12858	49	02590	00000
29150	DORG	*-3	12866			
29160	EXITCT	DAC 4,EXIT	12867		4 X	2
		EXIT				
29170	LINKCT	DAC 4,LINK	12875		4 X	2
		LINK				
29180	OUTAR	DSS 14	12882		14	
29190	DC	4,0	12899		4	
		-000				
29200	MASKLK	DS ,*-3	12896		0	
29210	DC	4,0	12903		4	
		-000				
29220	DC	4,0	12907		4	
		-000				
29230	DC	2,0'	12909		2	
		-1				
29240	***	ENTER HERE TO OUTPUT RETURN STATEMENT	***			
29250	RETRN	C SYM,URNCT+4	12910	24	09879	13027
29260	BNE	ERR01	12922	47	04198	01200
29270	BD	**44,SUBFCT	12934	43	12978	02293
29280	BTM	ERROR2,577,9	12946	17	09386	00N77
29290	BD	BEGIN,NOIND	12958	43	02590	03195
29300	B	BEGINA	12970	49	02602	00000
29310	DORG	*-3	12978			
29320	BTM	PUT, 139,8,RETURN	12978	17	08944	0-139
29330	BTM	PUT, 140,8,DUMMY	12990	17	08944	0-140
29340	TDM	RTSW,1	13002	15	05529	00001
29350	B	BEGIN	13014	49	02590	00000
29360	DORG	*-3	13022			

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29370	URNCT	DAC	3,URN		13023	3	X	2
29380	*****	OUTPUT IF CODING	*****					
29390	*****		*****					
29400	IF1	TDM	TRIND,1,11,	SET TRANSFER INDICATOR ON	13028	15	03137	0000J
29410		BTM	PUT, 107,8,IF SYMBOL		13040	17	08944	0-107
29420		BTM	PUT, 124,8,LEFT PAREN SYMBOL		13052	17	08944	0-124
29430		BD	**20,DOTRAN,,	TEST IF DO LOOP ENDING WITH TRANSFER	13064	43	13084	09899
29440		B	**20		13076	49	13096	00000
29450		DORG	=-3		13084			
29460		BTM	ERROR2,571,9		13084	17	09386	00N71
29470		TDM	IFSW,1,,	SET SWITCH TO INDICAT IF STATEMENT	13096	15	09905	00001
29480		TFM	STC,3,10		13108	16	05533	000-3
29490		CM	CHI,04,10,	TEST FOR VACEOUS PARENS	13120	14	15139	000-4
29500		BE	ERR02		13132	46	14264	01200
29510	*	IFSS	CODE					
29520		BTM	COLNAM,8,10		13144	17	04560	000-8
29530		C	SYM,OVFL+14		13156	24	09879	14291
29540		BNV	**32		13168	47	13200	01400
29550	GOIFAS	TFM	ASCAN+23,IFASEN	GO TO SCAN EXPRESSION	13180	16	10463	J4498
29560		B7	ASCAN,,		13192	49	10440	
29570		BNE	**44		13200	47	13244	01200
29580		TR	CHI-1,CHI+15,,	SHIFT OFF 8 CHARACTERS	13212	31	15138	15154
29590		TFM	SYM,0014,8,	INDICATOR 14 - OVERFLOW	13224	16	09879	0-014
29600		B7	IFPUT		13236	49	13540	
29610		C	SYM,EXPON+14		13244	24	09879	14307
29620		BNE	IFSS		13256	47	13360	01200
29630		TR	CHI-1,CHI+15,,	SHIFT OFF 8 CHARACTERS	13268	31	15138	15154
29640		BTM	COLNAM,5,10		13280	17	04560	000-5
29650		C	SYM,CHECKC+8		13292	24	09879	14317
29660		BV	ERR01		13304	46	04198	01400
29670		BNE	ERR01		13316	47	04198	01200
29680		TR	CHI-1,CHI+9,,	SHIFT OFF 5 CHARACTERS	13328	31	15138	15148
29690		TFM	SYM,0015,8,	INDICATOR 15 - EXPONENT CHECK	13340	16	09879	0-015
29700		B7	IFPUT		13352	49	13540	
29710	IFSS	C	SYM,SENSW+14		13360	24	09879	14333
29720		BNE	GOIFAS		13372	47	13180	01200
29730		TR	CHI-1,CHI+15,,	SHIFT OFF 8 CHARACTERS	13384	31	15138	15154
29740		BTM	COLNAM,3,10		13396	17	04560	000-3
29750		C	SYM,TCHC+4		13408	24	09879	14339
29760		BV	ERR01		13420	46	04198	01400
29770		BNE	ERR01		13432	47	04198	01200
29780		TR	CHI-1,CHI+5,,	SHIFT OFF 3 CHARACTERS	13444	31	15138	15144
29790		CM	CHI,70,10		13456	14	15139	000P0
29800		BH	**24		13468	46	13492	01100
29810		BTM	ERROR,174,9,	SWITCH NUMBER IN ERROR	13480	17	09230	00J74
29820		TDM	DIMSW,1		13492	15	09904	00001
29830		BTM	CSTND,**12,		13504	17	05302	J3516
29840		TDM	DIMSW,0		13516	15	09904	00000
29850		SF	SYM-3		13528	32	09876	00000
29860	IFPUT	BTM	PUT,0130,8,	SENSE SWITCH SYMBOL	13540	17	08944	0-130
29870		BT	PUT,SYM,,	PUT OUT SWITCH NUMBER	13552	27	08944	09879
29880		CM	CHI,4,10,	LOOK FOR RIGHT PAREN	13564	14	15139	000-4
29890		BNE	ERR02		13576	47	14264	01200
29900		SM	PARCNT,1,10		13588	12	03288	000-1
29910		BTM	PUT, 104,8,RIGHT PAREN SYMBOL		13600	17	08944	0-104

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29920		TFM	STC,2,10,	SET UP TO OUTPUT TWO STATEMENT NUMBERS	13612	16	05533	000-2
29930	OUTSN	TR	CHI-1,CHI+1		13624	31	15138	15140
29940		SF	OUTSN		13636	32	06896	00000
29950		CM	CHI,69,10		13648	14	15139	00009
29960		BH	**24		13660	46	13684	01100
29970		BTM	ERROR,175,9,	INCORRECT STATEMENT NUMBER	13672	17	09230	00J75
29980		BTM	CSTND,**12,,	COLLECT AND OUTPUT STATEMENT NUMBER	13684	17	05302	J3696
29990		BD	**20,INSW		13696	43	13716	03219
30000		B7	**20		13708	49	13728	
30010		BD	OUTSNE-12,8(11)		13716	43	13796	000-8
30020		SF	7(11)		13728	32	000-7	00000
30030		BD	OUTSN2,CGTO,,	BRANCH IF IN COMPUTED GO TO	13740	43	13872	09906
30040		SM	STC,1,10		13752	12	05533	000-1
30050		BH	OUTSNE+20		13764	46	13828	01100
30060		BNR	**32,CHI+2		13776	45	13808	15141
30070		B	BEGIN		13788	49	02590	00000
30080		DORG	=-3		13796			
30090		BTM	ERROR,077,9,	CONTROL TRANSFERED TO FORMAT	13796	17	09230	00-77
30100	OUTSNE	BTM	ERROR2,573,9,	INCORRECT NUMBER OF STATEMENT NUMBERS	13808	17	09386	00N73
30110		B	BEGIN		13820	49	02590	00000
30120		DORG	=-3		13828			
30130		CM	CHI,23,10		13828	14	15139	000K3
30140		BNE	OUTSN+48		13840	47	13672	01200
30150		BNR	OUTSN,CHI+4		13852	45	13624	15143
30160		B	OUTSN+48		13864	49	13672	00000
30170		DORG	=-3		13872			
30180	OUTSN2	CM	CHI,4,10		13872	14	15139	000-4
30190		BNE	OUTSNE+20		13884	47	13828	01200
30200		SM	PARCNT,1,10		13896	12	03288	000-1
30210		TR	CHI-1,CHI+1		13908	31	15138	15140
30220		BTM	PUT,104,8		13920	17	08944	0-104
30230		BNR	**24,CHI+2		13932	45	13956	15141
30240	OUTSN3	BTM	ERROR,176,9,	INDEX OF COMP. GO TO MISSING OR INVALID	13944	17	09230	00J76
30250		CM	CHI,23,10		13956	14	15139	000K3
30260		BNE	=-24		13968	47	13944	01200
30270		TR	CHI-1,CHI+1		13980	31	15138	15140
30280		CM	CHI,49,10,	TEST FOR FIXED POINT VAR	13992	14	15139	000M9
30290		BL	OUTSN3		14004	47	13944	01300
30300		CM	CHI,55,10		14016	14	15139	000N5
30310		BH	OUTSN3		14028	46	13944	01100
30320		BTM	CSORN,**12		14040	17	05594	J4052
30330		BD	OUTSN3,6(11)		14052	43	13944	000-6
30340		BT	PUT,XRA1-1		14064	27	08944	00308
30350		B	OUTSNE-32		14076	49	13776	00000
30360		DORG	=-3		14084			
30370	***	ENTER HERE TO OUTPUT GO TO STATEMENT	***					
30380	GOTDEN	BNE	ERR01		14084	47	04198	01200
30390		TDM	TRIND,1,11,	SET TRANS INDICATOR	14096	15	03137	0000J
30400		BD	**20,DOTRAN		14108	43	14128	09899
30410		B	**20		14120	49	14140	00000
30420		DORG	=-3		14128			
30430		BTM	ERROR2,571,9		14128	17	09386	00N71
30440		TR	CHI-1,CHI+1		14140	31	15138	15140
30450		CM	CHI,24,10,	TEST FOR COMPUTED GO TO	14152	14	15139	000K4
30460		BE	COMPUT		14164	46	14208	01200
30470		TFM	STC,1,10		14176	16	05533	000-1

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30480	BTM	PUT,	105,8,GO TO SYMBOL	14188	17	08944	0-105	
30490	B	OUTSN+12,,,	BRANCH TO OUTPUT STATEMENT NUMBER	14200	49	13636	00000	
30500	DDRG	=-3		14208				
30510	COMPUT	BTM	PUT,	106,8,COMPUTED GO TO SYMBOL	14208	17	08944	0-106
30520	BTM	PUT,	124,8,LEFT PAREN SYMBOL	14220	17	08944	0-124	
30530	AM	PARCNT,1,10		14232	11	03288	000-1	
30540	TDM	CGTO,1		14244	15	09906	00001	
30550	B	OUTSN,,,	BRANCH TO OUTPUT STATEMENT NUMBERS	14256	49	13624	00000	
30560	DDRG	=-3		14264				
30570	ERROR2	BTM	ERRDR,72,9	14264	17	09230	00-72	
30580	OVFL	DAC	8,OVERFLOW	14277		8 X	2	
			OVERFLOW					
30590	EXPON	DAC	8,EXPONENT	14293		8 X	2	
			EXPONENT					
30600	CHECKC	DAC	5,CHECK	14309		5 X	2	
			CHECK					
30610	SENSW	DAC	8,SENSESWI	14319		8 X	2	
			SENSESWI					
30620	TCHC	DAC	3,TCH	14335		3 X	2	
			TCH					
30630	DDRG	16000		16000				
30640	WBLK6	DSC	2,22	16000		2		
			22					
30650	DSA	DEF6		16006		5 X	1	
				16006		J6008		
30660	DC	1,1		16007		1		
30670	DEF6	DSC	1,0	16008		1		
			0					
30680	DC	5,17550		16013		5		
			J7550					
30690	DC	3,046		16016		3		
			-46					
30700	DSA	IOUT		16021		5 X	1	
				16021		J0200		
30710	DC	1,1		16022		1		
30720	WRBLK6	TFM	IORT,++23	16024	16	00565	J6047	
30730	B	IOPT,WBLK6,7		16036	49	00532	J6000	
30740	TRA			16048	36	00000	00500	
				16060	49	00000	00000	
30750	TCD	WRBLK6		16024				
30760	DEND			00000				

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ADLIT1	08612	E94270	08980	OUTSC1	10512	BEGIN	02590	D4	11919
ADSAVE	08503	E94620	09374	OUTSCE	04699	BLK1A	09622	DEF1	16008
ADSUB2	08516	ENSDIN	11541	OUTSN2	13872	BLK1	09614	DEF2	16008
ADSUBP	08480	ENTLOG	02248	OUTSN3	13944	BLK2A	09645	DEF3	16008
ADVARI	08248	EQLQOP	12176	OUTSNE	13808	BLK2	09637	DEF4	16008
ADVARI2	08260	EQUIVN	10716	PARCNT	03288	BLK3A	09668	DEF5	16008
ADVLOP	08216	ERRDR2	09386	PAUSEN	13838	BLK3	09660	DEF6	16008
ADXLIT	08644	ESNOPL	03004	PHBDAT	16000	BLK4A	09691	DEFCT	14455
ASC31A	14454	EXCESS	06626	PHBDDA	16008	BLK4	09683	DELAY	07668
ASCANI	11990	EXITCD	12406	PROGST	02257	BLK5A	09714	DIM1	10596
BEGINA	02602	EXITCT	12867	PRSCAN	02454	BLK5	09706	DIM2	11472
CSDATA	09795	FCTEND	02318	PRSCN1	02510	BLK6A	09737	DIM3	11528
CALLEN	11990	FCTEST	08744	PRSCN2	02546	BLK6	09729	DIMEN	10512
CALLER	09454	FLNUMB	06318	PUSTSN	02294	BLK7A	09760	DIMNO	10653
CALLP2	02400	FMTCS1	09829	PUTOUT	09272	BLK7	09752	DIM	10248
CALLSW	09909	FNTSW1	09901	RETURN	10368	BLK8	02461	DIMSW	09904
CDATA	09787	FOMAT1	12194	A2	11867	BLOC	02748	DIMTP	11173
CHECKC	14309	FORM51	13422	AA1	11855	C1	11863	DKA	13776
CKCNTU	04740	FORM99	12334	ADLIT	08540	C2	11875	DKB1	14016
CKCTAR	04034	FORMAT	10392	ADSTM	08676	CALC	11164	DKB	13856
CLASEN	14530	FORMER	12698	ADVARI	08132	CALL2	13446	DKC	14048
CLDGT1	14582	FREQSW	14134	AEERR1	09430	CALL3	13490	DKD1	14296
CLDGT2	14642	FUNCTA	13706	AERR	12146	CALLA	12238	DKD	14156
COLNAM	04560	FUTEST	06992	AFTBL	14935	CALL8	12258	DKER	13820
COMADD	02262	FXNUMB	06214	ALFAT	10952	CALL	10344	DKE	14364
COMER2	09442	FXORFL	06309	ARG1	12474	CARD	14936	DKF	14444
COMER3	12112	GENDIM	11060	ARG2	12598	CCNO	05052	DKG	14592
COMINA	11900	GOIFAS	13180	ARG3	12702	CGTO	09906	DKIO1	13332
COMMEN	11552	GOTOEN	14084	ARGSC	12358	CHI5	15839	DKIO2	13400
COMMON	10272	IATYPE	14141	ASC11	14162	CHI	15139	DKIO	10488
COMPUT	14208	IFASEN	14498	ASC12	12406	CKCN1	04826	DKL	13732
CONTEN	13772	IFSCAN	12370	ASC14	14106	CKCN2	04954	DKPUT	13592
CSTND1	05406	INTOP1	02385	ASC15	14174	CKCN3	05142	DKSW1	14352
DECODA	03954	ILODOP	14155	ASC1A	12026	CKCN4	05242	DKSW2	14354
DECODE	03730	IOUTEN	13240	ASC1B	12086	CKEND	03276	DMVAR	08132
DEFINE	14038	IOUTER	13332	ASCL	12830	CKRM	02906	DOA	12434
DIMERH	07448	IVALEN	12989	ASC21	13510	CLDGT	14526	DOB	12586
DIMNOT	10545	LEADBL	03058	ASC22	12322	CMPAR	06494	DOC1	12350
DISKSW	02383	LENGTH	02248	ASC23	12522	COMAB	11788	DOC	12242
DKIDEN	13240	LINKCD	12462	ASC24	13114	COMA	11720	DOE1	12982
DKLIST	13472	LINKCT	12875	ASC25	13134	COMC	11988	DOE2	13062
DKLOOP	14215	LITERL	07688	ASC26	13666	COMER	09442	DOEE	13178
DDLOP	11990	LUSTNO	08068	ASC30	14290	COME	11944	DOE	12854
DDTEST	13239	MASKLK	12896	ASC31	14398	COMIN	11852	DOO	10416
DDTRAN	09899	MODAFT	14006	ASC3	12714	COMM	12032	DO	12122
E37061	07876	MONCAL	00796	ASC4	12498	COMST	02382	EBASE	12235
E83230	10956	MOVDIR	11104	ASC54	12578	COMSW	09910	ENDCT	09835
E84130	11928	MOVEIT	11212	ASC6	12678	CONT	11652	END	09466
E84180	11948	MULDEF	02384	ASC7	12750	CSORN	05594	EQ1	10860
E84240	12020	HVGH20	13644	ASC8	14130	CSPVA	03570	EQ21	11076
E84330	12124	NNARAA	10512	ASCAN	10440	CS	05738	EQ22	12144
E84560	12424	NNARAA	10224	ASCER	14486	CSTND	05302	EQ23	11408
E84695	12544	NNARI	04066	AVOID	05922	CTION	13763	EQ24	11276
E84710	12736	NNPARM	14552	B1	11859	D1	11883	EQ4	11676
E84804	12908	NUMBER	06006	B2	11871	D2	11895	EQ7	11732
E86440	02430	OUTS12	13426	BA	02682	D3	11907	EQBR	11552

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EOR	10788	GM2	09790	L4	11676	REF	08875	TPCST	13707
EQU5W	09908	GM3	09798	L5	11748	RETRN	12910	TRIND	03137
ER24	12338	GM	02300	L6	11784	ROUTN	13625	URACT	13023
ER25	12146	GOTO	10320	LDPHB	16024	RTSW	05529	VARBR	06402
ER38	12394	HERE	12620	LEADZ	03302	SALT	05798	VARSW	07563
ER39	12818	HOLLI	14022	LITF	07748	SAVE1	11515	WBLK1	16000
ER40	14486	HOLL	13962	LKCD1	12662	SAVE2	12747	WBLK2	16000
ERMES	09801	IF1	13028	LKCD3	12706	SAVE3	11755	WBLK3	16000
ERR01	04198	IFPUT	13540	LKCD4	12750	SC1	10860	WBLK4	16000
ERR02	14264	IF	10296	LSTAD	02308	SC22	10608	WBLK5	16000
ERR09	07936	IFSC	12334	LUXIT	07504	SC2	05994	WBLK6	16000
ERR44	14468	IFSS	13360	MASK	11921	SC3	10904	WIDCK	14216
ERR60	14468	IFSW	09905	MODE	06307	SC4	10740	WIDTH	14205
ERRET	00602	INDIV	02424	MON	12125	SC5	10800	W	02240
ERRDR	09230	INOUT	13708	MV1	11484	SC9	11152	HW	02296
ERSW	05530	INSM	03219	MV2	11572	SCHI	05905	KRA1	00309
ESND	02688	INTOP	09121	MV3	11620	SD	10776	KRA2	00314
ETYPE	12962	IDA	13836	MVGM	13272	SENSW	14319	ZERL3	09895
EXIT	09114	IDB	13988	N1	02233	SETDM	10680	SAVEGM	07123
EXLIT	07820	IDCAL	00716	N2	02238	SLASH	12602	SAVSYM	02243
EXPON	14293	IDD	14096	NOIND	03195	SMLNG	05821	SETAFT	13846
FCMA	13558	IDE	14256	NUMB1	06158	SMTLU	06864	SETDM2	10824
FCST	07912	IDF	14336	NUMB2	06462	SPERR	09130	SETDM3	11004
FLIST	14558	IDG	14520	NUMB3	06366	SPGS	09214	SETDM4	11264
FLNG	02250	IDGT	00566	NUMB5	06194	SSCSW	02494	SETDM5	11372
FMON	02324	IDLER	13880	NUMB	06086	STBL	02377	SETFRQ	14134
FMSW	09902	IDPT	00532	NXLOC	02372	STC	05533	SETIND	08284
FNCS1	14266	IDRBC	00520	OMM	09907	STNER	03346	SINGST	09898
FNCS2	14354	IORT	00565	ORDCT	14721	STSN	05531	SMLDOP	06896
FNCS	14086	IOSK	00554	OUTAR	12882	SUBP1	13124	STNOSW	09903
FNTSW	09900	IOSW	09911	OUTSC	10464	SUBP2	13428	STOPEN	14006
FOMAT	12130	IOUT1	13624	OUTSN	13624	SUBPA	13004	SUBFCT	02293
FORM1	12498	IOUT2	13376	OUTSW	06896	SUBPF	13088	SUBPUT	03160
FORM2	12838	IOUT3	13456	OVFL	14277	SUBSW	09912	SUBTST	08308
FORM3	13010	IOUT4	13644	P2PTR	02313	SUBTR	08456	SYTBS	02500
FORM4	13862	IOUT5	13516	PAJSP	08376	SWSSET	14730	TBLFUL	06844
FORM5	13378	IOUT	10200	PAUS	13894	SYM	09879	TPARCT	14550
FORM7	13626	I	11887	PCNT	13749	TBCM	04402	URDATA	09779
FORM8	13734	JAY	02367	PI	11091	TBEND	04325	USEDFS	02263
FORM	03446	JOE	07164	PLUS	06722	TBST	04556	WRBLK1	16024
FORMX	13894	J	11899	PLUSS	09031	TCHC	14335	WRBLK2	16024
FP2	02298	JUMP	02429	PR	12509	TEMP2	12415	WRBLK3	16024
FTYPE	12918	JWG	08920	PTYPE	12794	TEMP5	04101	WRBLK4	16024
FUL1	06968	KLNG	02252	PUT	08944	TEMP	04089	WRBLK5	16024
FUL2	07076	K	11911	READ1	02846	TEND	02303	WRBLK6	16024
GXLIT	07992	L1	04150	RECLG	02243	TENZ	09891	XCLDGT	14686
GHI	09782	L2	04210	RECMK	09621	TINUE	13829	ZERSYM	06843

END OF ONE ASSEMBLY.

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00010	*****	1620 FORTRAN II-D	PHASE 1-C	STORAGE ALLOCATION					
00020		DORG	02218			02218			
00030		DC	5	,-100		02222		5	
		-010-							
00040		DC	1	,+2		02223		1	
		K							
00050		DC	2	,+67		02225		2	
		DT							
00060		DC	6	,+987898		02231		6	
		R87898							
00070	N1	DC	2	,+0		02233		2	
		-0							
00080	N2	DC	5	,+0		02238		5	
		-0000							
00090	W	DC	2	,+0		02240		2	
		-0							
00100	RECLG	DC	3	,+000		02243		3	
		-00							
00110	SAVSYM	DS	12	,+RECLG		02243		12	
00120	LENGTH	DS	5			02248		5	
00130	FLNG	DS	2			02250		2	
00140	KLNG	DS	2			02252		2	
00150	PROGST	DC	5	,+00000		02257		5	
		-0000							
00160	COMADD	DS	5			02262		5	
00170	USEDFS	DSC	30	,+0		02263		30	
		00000000000000000000000000000000							
00180	SUBFCT	DC	1	,+0		02293		1	
		-							
00190	PUSTSN	DS	1			02294		1	
00200	***	PUSTSN = 2 FOR PAPER TAPE							
00210	***	PUSTSN = 4 FOR CARDS							
00220	WW	DS	2			02296		2	
00230	FP2	DS	2			02298		2	
00240	TEND	DS	5			02303		5	
00250	LSTAD	DS	5			02308		5	
00260	P2PTR	DS	5			02313		5	
00270	FCSTEND	DS	5			02318		5	
00280		DS	5			02323		5	
00290	FMON	TF	++42,FMON-1,,	SETUP ROUTINE ENTRY		02324	26	02366	02323
00300		TFM	IORT,++23			02336	16	00565	-2359
00310		B	IDGT,,7			02348	49	00566	-0000
00320		B	***	GO TO EXECUTE CALLED ROUTINE		02360	49	00000	00000
00330		DORG	**-4			02367			
00340	JAY	DS	1			02367		1	
00350	NXLOC	DS	5			02372		5	
00360	STBL	DS	5			02377		5	
00370	COMST	DS	5			02382		5	
00380	DISKSW	DC	1,0			02383		1	
		-							
00390	MULDEF	DC	1,0			02384		1	
		-							
00400	INTOP1	DSC	1,0			02385		1	
		0							
00410		DC	5,00600			02390		5	
		-0600							

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1620 MONITOR II VERSION 2 FORTRAN II-D PHASE 1-C				PAGE	2
00420	DC	3,002		02393	3
00430	DSA	CARD		02398	5 X 1
00440	DC	1,		02398	-3350
				02399	1
00450	CALLP2	TFM	FMON+35, BLK8	02400	16 02359 -2461
00460	BTM		FMON,CALLP2	02412	17 02324 -2400
00470	INDIV	DS	1	02424	1
00480	*		INDIV = 0 FOR CARDS, 1 FOR TYPEWRITER,		
00490	*		FLAGGED 3 FOR PAPER TAPE		
00500	JUMP	DS	5	02429	5
00510	ENTLOG	DS	,USEDIFS+4	02267	0
00520	AFTBL	DS	,14935	14935	0
00530	CHI	DA	430,15139	15139	430 X 2
00540	CHIS	DS	,CHI+700	15839	0
00550	IOCAL	DS	,716	00716	0
00560	IOGT	DS	,566	00566	0
00570	IORBC	DS	,520	00520	0
00580	IOPT	DS	,532	00532	0
00590	IOSK	DS	,554	00554	0
00600	ERRET	DS	,602	00602	0
00610	IORT	DS	,565	00565	0
00620	MONCAL	DS	,796	00796	0
00630	E86440	SF	K1+4	02430	32 11311 00000
00640	BT		OUTADD,PROGST,, INIT OUTPUT ROUTINE	02442	27 10706 02257
00650	B		AROUND	02454	49 02484 00000
00660	DORG		#-4	02461	
00670	BLK8	DSC	2,22	02461	2
			22		
00680	DSA	BLK8A		02467	5 X 1
00690	DC	1,		02467	-2469
				02468	1
00700	BLK8A	DSC	1,0	02469	1
00710	DC	5,17800		02474	5
		J7800			
00720	DC	3,136		02477	3
		J36			
00730	DSA	CALLP2		02482	5 X 1
00740	DC	1,		02482	-2400
				02483	1
00750	AROUND	TDM	SYM+1,--	02484	15 03476 00000
00760	DC	1,,		02495	1
00770	SF	SYM+1,,	FLAGGED TERMINAL RM TO INDICATE CARD END	02496	32 03476 00000
00780	SM	PROGST,01,10		02508	12 02257 000-1
00790	TF	LOC,PROGST		02520	26 03482 02257
00800	TD	PTRA+2,PUSTSN		02532	25 11942 02294
00810	AM	PTRA+2,06,10		02544	11 11942 000-6
00820	****		DETERMINE TABLE END (TEND)		

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1620 MONITOR II VERSION 2 FORTRAN II-D PHASE 1-C				PAGE	3
00830	BLX	**12,LSTAD(3)		02556	65 02568 02L-8
00840	BXM	**12,-10(3)		02568	62 02580 00-J-
00850	BNR	*-12,4(3)		02580	45 02568 00--4
00860	BSX	**12,TEND(3)		02592	67 02604 02L-3
00870	AM	TEND,5,10		02604	11 02303 000-5
00880	BSNX	**12		02616	60 02628 00000
00890	TFM	SMADD,0,		02628	16 03435 -0000
00900	S	SMADD,STBL		02640	22 03435 02377
00910	AM	SMADD,5,10		02652	11 03435 000-5
00920	TF	SMCNT,STBL		02664	26 03440 02377
00930	SM	SMCNT,6,10		02676	12 03440 000-6
00940	TF	MODAD,STBL		02688	26 03445 02377
00950	SM	MODAD,4,10		02700	12 03445 000-4
00960	E86601	SM	SMCNT,10,10	02712	12 03440 000J0
00970	SM	MODAD,10,10		02724	12 03445 000J0
00980	AM	SMADD,10,10		02736	11 03435 000J0
00990	C	MODAD,TEND,,	TEST FOR END OF TABLE	02748	24 03445 02303
01000	BE	E87210		02760	46 03720 01200
01010	BNF	E86601,SMCNT,11,	TEST FOR LITERAL	02772	44 02712 0344-
01020	BNF	STMTNO,MODAD,11,	TEST FOR STMT. NO	02784	44 03532 0344N
01030	CF	SMCNT,,6		02796	33 0344- 00000
01040	CF	MODAD,,6		02808	33 0344N 00000
01050	TF	SYM,SMADD,11		02820	26 03475 0343N
01060	CF	SMADD		02832	33 03435 00000
01070	BD	E86801-48,MODAD,11,	BRANCH IF FIXED	02844	43 02936 0344N
01080	SM	SMADD,2,610		02856	12 0343N 000-2
01090	TF	**23,SMADD,11		02868	26 02891 0343N
01100	TF	SYM-2		02880	26 03473 00000
01110	A	LOC,FP2		02892	21 03482 02298
01120	TF	SMADD,LOC,6		02904	26 0343N 03482
01130	TF	E86801+11,FP2		02916	26 02995 02298
01140	B	E86801-12		02928	49 02972 00000
01150	DORG	**3		02936	
01160	A	LOC,KLNG		02948	21 03482 02252
01170	TF	SMADD,LOC,6		02960	26 0343N 03482
01180	TF	E86801+11,KLNG		02972	16 02995 02252
01190	TFM	E86820+6,SYM+1		02984	12 03050 -3476
01200	E86801	SM	E86820+6,,, FP2 OR KLNG	02996	47 03056 -0000
01210	BNCL	**60		02996	47 03056 00100
01220	RC TY			03008	34 00000 00102
01230	ABASE	DS	,,-5	03014	0
01240	WNTY	LOC-4		03020	38 03478 00100
01250	SPT Y			03032	34 00000 00101
01260	WDLN	DS	,,-5	03038	0
01270	E86820	WNTY		03044	38 00000 00100
01280	AM	SMADD,5,10		03056	11 03435 000-5
01290	TDM	SMADD,,6		03068	15 0343N 00000
01300	DC	1,,		03079	1
01310	SM	SMADD,5,10		03080	12 03435 000-5
01320	SF	SMADD		03092	32 03435 00000
01330	TF	OUTLIT+21,E86820+6		03104	26 03149 03050
01340	BD	LL1,PUSTSN		03116	43 03158 02294
01350	OUTLIT	BTM	OUTK,++16	03128	17 10128 -3144
01360	DSA	E86801+11,E86820+6		03144	5 X 2

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01370	B	E86601			03144	-2995		
01380	DORG	*-3			03149	-3050		
01390	LL1	TR	CARD,CARD-81,,	INIT FOR PUNCHING CARDS/PAPERTAPE	03150	49	02712	00000
01400	TF	CARD+4,LOC			03158			
01410	CF	SYM+1			03158	31	03350	03269
01420	TR	CARD+6,E86820+6,11			03170	26	03354	03482
01430	SF	SYM+1			03182	33	03476	00000
01440	TD	PTCD+2,PUSTSN			03194	31	03356	0305-
01450	TFM	IORT,**23			03206	32	03476	00000
01460	B	IOPT,PTCD-4,7			03218	25	03267	02294
01470	B	OUTLIT			03230	16	00565	-3253
01480	DORG	*-4			03242	49	00532	-3261
01490	PTCD	DSA	CARD		03254	49	03128	00000
					03261			
					03265		5 X	1
01500	DC	2	,00		03265	-3350		
	-0				03267	2		
01510	GM1	DGM			03268	1		
01520	DNB	50			03318	50		
01530	DNB	30			03348	30		
01540	DC	1,'			03349	1		
	*							
01550	CARD	DSS	81		03350	81		
01560	SMADD	DS	5		03435	5		
01570	SMCNT	DS	5		03440	5		
01580	MODAD	DS	5		03445	5		
01590	SYM	DS	30		03475	30		
01600	DS	2			03477	2		
01610	LOC	DS	5		03482	5		
01620	DC	1,'			03483	1		
	*							
01630	TEMP	DS	5		03488	5		
01640	TEMP2	DS	5		03493	5		
01650	TEMP3	DS	5		03498	5		
01660	TEMP5	DS	5		03503	5		
01670	SAVE1	DS	5		03508	5		
01680	SAVE2	DS	5		03513	5		
01690	SAVE3	DS	5		03518	5		
01700	ADSAVE	DS	5		03523	5		
01710	EBASE	DS	5		03528	5		
01720	MODE	DC	2,0		03530	2		
	-0							
01730	STMTND	TF	SYM,SMADD,11		03532	26	03475	0343N
01740	CF	SMADD,,			03544	33	03435	00000
01750	AM	MODAD,2,10			03556	11	03445	000-2
01760	MF	**35,MODAD,11,	FLAG INDICATES STATEMENT NUMBER REFER-		03568	71	03603	0344N
01770	SM	MODAD,2,10,	ENCED		03580	12	03445	000-2
01780	TFM	SMADD,,6			03592	16	0343N	00000
01790	DC	5,0000',*			03603	5		
	-000'							
01800	TF	**35,SMADD			03604	26	03639	03435
01810	AM	**23,5,10			03616	11	03639	000-5
01820	STMTN1	BD	STMNT2,0,		03628	43	03676	00000
01830	RCTY				03640	34	00000	00102

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01840	WNTY	SYM-3			03652	38	03472	00100
01850	BTM	ERROR2,579,9			03664	17	11318	00N79
01860	STMTN2	TF	STMTN1+11,SYM+1,6,	TABLE STMT NO. AND REC MARK	03676	26	0363R	03476
01870	SF	STMTN1+11,,6,	SET FLAG OVER R/M FOR PASS 2		03688	32	0363R	00000
01880	SF	SMADD			03700	32	03435	00000
01890	B	E86601			03712	49	02712	00000
01900	DORG	*-3			03720			
01910	E87210	TFM	SYM+2,,10,		03720	16	03477	000-0
01920	DC	1,*,*			03731	1		
	*							
01930	BD	E92210,SUBFCT,,	TEST IF IN SUBPROGRAM COMPILATION		03732	43	07836	02293
01940	TF	TBASE,FACTEND			03744	26	07655	02318
01950	B	BUFDM,,,	GO TO OUTPUT BUFFER		03756	49	09928	00000
01960	DORG	*-4			03763			
01970	TF	SMADD,TBASE			03764	26	03435	07655
01980	AM	SMADD,1,10			03776	11	03435	000-1
01990	E87270	TF	SMCNT,TBASE		03788	26	03440	07655
02000	AM	SMCNT,5,10			03800	11	03440	000-5
02010	TF	MODAD,TBASE			03812	26	03445	07655
02020	AM	MODAD,2,10			03824	11	03445	000-2
02030	B	E87310+36			03836	49	03880	00000
02040	DORG	*-3			03844			
02050	E87310	SM	SMADD,10,10		03844	12	03435	000J0
02060	SM	MODAD,10,10			03856	12	03445	000J0
02070	SM	SMCNT,10,10			03868	12	03440	000J0
02080	TF	SYM,ZER13-1			03880	26	03475	11925
02090	C	SMADD,TEND,,	TEST FOR END OF TABLE		03892	24	03435	02303
02100	BE	E93010			03904	46	08842	01200
02110	BNR	E87420,SMCNT,11,	TEST FOR CONST OR VARIABLE ASSIGNED		03916	45	04048	0344-
02120	SM	SMADD,01,10			03928	12	03435	000-1
02130	BNR	**32,SMADD,11			03940	45	03972	0343N
02140	AM	SMADD,1,10			03952	11	03435	000-1
02150	B	E87310			03964	49	03844	00000
02160	DORG	*-3			03972			
02170	AM	SMADD,1,10			03972	11	03435	000-1
02180	BD	**20,MODAD,11,			03984	43	04004	0344N
02190	B	E87310			03996	49	03844	00000
02200	DORG	*-3			04004			
02210	SM	SMADD,10,10			04004	12	03435	000J0
02220	SM	SMCNT,10,10			04016	12	03440	000J0
02230	SM	MODAD,10,10			04028	12	03445	000J0
02240	B	E87310			04040	49	03844	00000
02250	DORG	*-3			04048			
02260	E87420	BNR	**20,MODAD,11,	TEST OF FUNCT OR SUB CALL NAME	04048	45	04068	0344N
02270	B	E87310,			04060	49	03844	00000
02280	DORG	*-3			04068			
02290	BNF	E89820,MODAD,11,	BRANCH IF NOT IN COMMON		04068	44	05944	0344N
02300	BD	E87670,MODAD,11,	BRANCH IF COMMON VAR IS ARRAY		04080	43	04280	0344N
02310	BNF	E89660,SMADD,11,	BRANCH IF COMMON VAR WAS EQUIV		04092	44	05840	0343N
02320	CF	SMADD,,6,			04104	33	0343N	00000
02330	TF	WDLN,KLNG			04116	26	03038	02252
02340	BD	**24,SMADD,11			04128	43	04152	0343N
02350	TF	WDLN,FP2			04140	26	03038	02298
02360	E87490	SM	MODAD,2,10		04152	12	03445	000-2
02370	TF	**23,MODAD,11			04164	26	04187	0344N
02380	TF	SYM			04176	26	03475	00000

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02390	AM	*-1,5,10		04188	11	04187	000-5
02400	TF	MODAD,*-13,611		04200	26	0344N	0418P
02410	TF	TEMP,*-25,11		04212	26	03488	0418P
02420	AM	MODAD,2,10		04224	11	03445	000-2
02430	TDM	SMCNT,6		04236	15	0344-	00000
02440	DC	1,*,*		04247		1	
02450	BTM	PGPRT,**12,,	TYPE AND OR PUNCH	04248	17	11380	-4260
02460	DC	1,0		04260		1	
02470	DSA	TEMP-4		04265		5 X	1
				04265		-3484	
02480	DSA	SYM-11		04270		5 X	1
				04270		-3464	
02490	B	E89740		04272	49	05884	00000
02500	DORG	*-3		04280			
02510	BNF	E88420,SMADD,11,	BRANCH IF COMMON ARRAY WAS EQUIV	04280	44	04636	0343N
02520	CF	SMADD,6		04292	33	0343N	00000
02530	TD	MODE,MODAD,11,	SAVE NUMBER OF DIM INDICIES	04304	25	03530	0344N
02540	CF	MODE		04316	33	03530	00000
02550	SM	MODAD,2,10		04328	12	03445	000-2
02560	TF	ADSAVE,MODAD,11,		04340	26	03523	0344N
02570	TF	SYM,ADSAVE,11,	MOVE VAR NAME TO SYM	04352	26	03475	0352L
02580	SM	SMCNT,10,10		04364	12	03440	000J0
02590	TF	TEMP,SMCNT,11,	SAVE COMMON ADDRESS	04376	26	03488	0344-
02600	TF	MODAD,SMCNT,611,	SET ENTRY TO COMMON	04388	26	0344N	0344-
02610	AM	MODE,1,10,	SAVE DIMENSION INDICES	04400	11	03530	000-1
02620	MM	MODE,5,10		04412	13	03530	000-5
02630	A	ADSAVE,99		04424	21	03523	00099
02640	TF	SMCNT,ADSAVE,611,	PICK UP NO OF ELEMENTS	04436	26	0344-	0352L
02650	BD	**32,SMADD,11		04448	43	04480	0343N
02660	TF	WDLN,FP2		04460	26	03038	02298
02670	B	**20		04472	49	04492	00000
02680	DORG	*-3		04480			
02690	TF	WDLN,KLNG		04480	26	03038	02252
02700	M	SMCNT,WDLN,6		04492	23	0344-	03038
02710	SF	95		04504	32	00095	00000
02720	S	99,WDLN,,	CALC TOTAL ARRAY VOLUME	04516	22	00099	03038
02730	TF	TEMP2,99		04528	26	03493	00099
02740	A	TEMP2,TEMP,,	TEMP2 CONTAINS LAST ELEMENT OF ARRAY	04540	21	03493	03488
02750	SM	MODAD,8,10		04552	12	03445	000-8
02760	AM	SMADD,4,10		04564	11	03435	000-4
02770	TDM	SMADD,6		04576	15	0343N	00000
02780	DC	1,*,*		04587		1	
02790	SM	SMADD,14,10		04588	12	03435	000J4
02800	BTM	PGPRT,**12		04600	17	11380	-4612
02810	DC	1,1		04612		1	
02820	DSA	TEMP-4		04617		5 X	1
				04617		-3484	
02830	DSA	SYM-11		04622		5 X	1

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				04622		-3464	
02840	DSA	TEMP2-4		04627		5 X	1
				04627		-3489	
02850	B	E89740		04628	49	05884	00000
02860	DORG	*-3		04636			
02870	*****	ENTER FOR COMMON ARRAYS WHICH WERE EQUIVALENCED					
02880	E88420	CM SMCNT,0,69		04636	14	0344-	00-00
02890	BNE	E90620,,,	BRANCH IF NOT BASE	04648	47	06380	01200
02900	SF	E89660+1		04660	32	05841	00000
02910	B	E87670+24		04672	49	04304	00000
02920	DORG	*-3		04680			
02930	E88470	TF EBASE,SMADD,,	ENTER HERE AFTER ASSIGNING BASE VARIABLE	04680	26	03528	03435
02940	CF	E87670		04692	33	04280	00000
02950	BNF	**44,E89660		04704	44	04748	05840
02960	CF	E89660		04716	33	05840	00000
02970	SM	EBASE,10,10		04728	12	03528	000J0
02980	B	**20		04740	49	04760	00000
02990	DORG	*-3		04748			
03000	SM	EBASE,1,10		04748	12	03528	000-1
03010	SF	EBASE		04760	32	03528	00000
03020	A	EBASE,STBL		04772	21	03528	02377
03030	SF	EBASE-3,,,	GEN TABLE NUMBER	04784	32	03525	00000
03040	TF	SAVE1,SMADD		04796	26	03508	03435
03050	TF	SAVE2,SMCNT		04808	26	03513	03440
03060	TF	SAVE3,MODAD		04820	26	03518	03445
03070	BNF	**40,E89660+1		04832	44	04892	05841
03080	CF	E89660+1		04844	33	05841	00000
03090	SM	SAVE1,10,10		04856	12	03508	000J0
03100	SM	SAVE2,10,10		04868	12	03513	000J0
03110	SM	SAVE3,10,10		04880	12	03518	000J0
03120	E88540	SM SMCNT,10,10		04892	12	03440	000J0
03130	SM	SMADD,10,10		04904	12	03435	000J0
03140	SM	MODAD,10,10		04916	12	03445	000J0
03150	C	SMADD,TEND		04928	24	03435	02303
03160	BE	E89610		04940	46	05772	01200
03170	BNR	**20,MODAD,11,	BRANCH IF NOT SUBR OR FUNCT NAME	04952	45	04972	0344N
03180	B	E88540		04964	49	04892	00000
03190	DORG	*-3		04972			
03200	BNR	E88660,SMCNT,11,	BRANCH IF NO STORAGE ALLOCATION DONE	04972	45	05068	0344-
03210	BNF	E88600,SMCNT,11,	BRANCH IF NOT STATEMENT NUMBER	04984	44	05004	0344-
03220	B	E88540		04996	49	04892	00000
03230	DORG	*-4		05003			
03240	E88600	BD **20,MODAD,11		05004	43	05024	0344N
03250	B	E88540		05016	49	04892	00000
03260	DORG	*-3		05024			
03270	SM	SMADD,10,10		05024	12	03435	000J0
03280	SM	SMCNT,10,10		05036	12	03440	000J0
03290	SM	MODAD,10,10		05048	12	03445	000J0
03300	B	E88540		05060	49	04892	00000
03310	DORG	*-3		05068			
03320	E88660	BNF **20,SMADD,11,	SEARCH FOR EQUIV. VARIABLE	05068	44	05088	0343N
03330	B	E88600		05080	49	05004	00000
03340	DORG	*-3		05088			
03350	C	EBASE-1,SMCNT,11,	IS EQUIV VAR EQUIV TO PRESENT BASE	05088	24	03527	0344-
03360	BNE	E88600		05100	47	05004	01200

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03370	E88710	SM	SMADD,1,10		05112	12	03435	000-1
03380		TF	ADSAVE,SMADD,11,	SAVE SYMBOL ADDRESS	05124	26	03523	0343N
03390		TF	SYM,ZER13-1		05136	26	03475	11925
03400		TF	SYM,ADSAVE,11,	MOVE SYM NAME TO SYM	05148	26	03475	0352L
03410		BD	E88900,MODAD,11,	TEST IF VAR WAS DIMENSIONED	05160	43	05344	0344N
03420		AM	ADSAVE,5,10,		05172	11	03523	000-5
03430		CM	ADSAVE,0,67,	TEST FOR ZERO OFF SET	05184	14	0352L	-0000
03440		BNE	**32		05196	47	05228	01200
03450		TF	TEMP3,TEMP		05208	26	03498	03488
03460		B	**56,		05220	49	05276	00000
03470		DORG	**3		05228			
03480		M	ADSAVE,WDLN,6,		05228	23	0352L	03038
03490		SF	95		05240	32	00095	00000
03500		A	99,TEMP		05252	21	00099	03488
03510		TF	TEMP3,99		05264	26	03498	00099
03520		TF	SMADD,TEMP3,6,	MOVE OBJ TIME ADDRESS TO TABLE	05276	26	0343N	03498
03530		AM	SMADD,1,10		05288	11	03435	000-1
03540		TDM	SMCNT,,6,		05300	15	0344-	00000
03550		DC	1,,*		05311		1	
03560		BTM	PGPRT,**12		05312	17	11380	-5324
03570		DC	1,0		05324		1	
03580		DSA	TEMP3-4,SYM-11		05329		5 X	2
					05329		-3494	
					05334		-3464	
03590		B	E89600		05336	49	05752	00000
03600		DORG	**3		05344			
03610	E88900	SM	SMCNT,10,10,	ENTER FROM E88730	05344	12	03440	000J0
03620		CM	SMCNT,0,67,	TEST FOR ZERO OFF SET	05356	14	0344-	-0000
03630		BNE	**32		05368	47	05400	01200
03640		TF	99,TEMP		05380	26	00099	03488
03650		B	**44		05392	49	05436	00000
03660		DORG	**3		05400			
03670		M	SMCNT,WDLN,6		05400	23	0344-	03038
03680		SF	95		05412	32	00095	00000
03690	TEMP4	DS	**		05423		0	
03700		A	99,TEMP,,	GEN ADD OF FIRST ELEMENT OF ARRAY	05424	21	00099	03488
03710		TF	TEMP3,99,,	AND MOVE TO TEMP3	05436	26	03498	00099
03720		TD	MODE,MODAD,11,		05448	25	03530	0344N
03730		CF	MODE		05460	33	03530	00000
03740	E89010	TF	TEMP5,TEMP3,,	TEMP5 CONTAINS BASE ADDRESS	05472	26	03503	03498
03750		AM	MODE,1,10		05484	11	03530	000-1
03760		MM	MODE,5,10		05496	13	03530	000-5
03770		A	ADSAVE,99		05508	21	03523	00099
03780		TF	SMCNT,ADSAVE,611		05520	26	0344-	0352L
03790		M	SMCNT,WDLN,6		05532	23	0344-	03038
03800		SF	95		05544	32	00095	00000
03810		S	99,WDLN		05556	22	00099	03038
03820		A	TEMP5,99,,	TEMP5 CONTAINS ADDRESS OF LAST ELEMENT	05568	21	03503	00099
03830		BNF	**48,TELSM,,	BRANCH IF IN COMMON	05580	44	05628	07204
03840		C	LOC,TEMP5		05592	24	03482	03503
03850		BH	**24		05604	46	05628	01100
03860		TF	LOC,TEMP5		05616	26	03482	03503
03870		C	TEMP5,COMST		05628	24	03503	02382

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03880		BNH	**24		05640	47	05664	01100
03890		BTM	ERROR2,575,9,	COMMON VAR. OVERLAPS MEMORY	05652	17	11318	00N75
03900		TF	SMADD,TEMP3,6		05664	26	0343N	03498
03910		AM	SMADD,5,10		05676	11	03435	000-5
03920		TDM	SMADD,,6		05688	15	0343N	00000
03930		DC	1,,*		05699		1	
03940		SM	SMADD,14,10		05700	12	03435	000J4
03950		SM	MODAD,10,10		05712	12	03445	000J0
03960		BTM	PGPRT,**12		05724	17	11380	-5736
03970		DC	1,1		05736		1	
03980		DSA	TEMP3-4		05741		5 X	1
					05741		-3494	
03990		DSA	SYM-11		05746		5 X	1
					05746		-3464	
04000		DSA	TEMP5-4		05751		5 X	1
					05751		-3499	
04010	E89600	BNF	E88540,EQRET		05752	44	04892	07376
04020		B	E92010		05764	49	07756	00000
04030		DORG	**3		05772			
04040	E89610	TF	SMADD,SAVE1,,	RESTORE ADDRESS AND CONTINUE SCAN TO	05772	26	03435	03508
04050		TF	SMCNT,SAVE2,,	OUTPUT VAR STORAGE	05784	26	03440	03513
04060		TF	MODAD,SAVE3,,		05796	26	03445	03518
04070		BNF	E87310+36,TELSM,,		05808	44	03880	07204
04080		CF	TELSM		05820	33	07204	00000
04090		B	E87310+36		05832	49	03880	00000
04100		DORG	**3		05840			
04110	E89660	CM	SMCNT,0,69,	ENTER FROM E87470 WHEN SIMPLE VAR WAS	05840	14	0344-	00-00
04120		BNE	E90620,,,	IN COMMON AND EQUIVALENCED	05852	47	06380	01200
04130		SF	E89660		05864	32	05840	00000
04140		B	E87490-36		05876	49	04116	00000
04150		DORG	**3		05884			
04160	E89740	BNF	**20,OUTCE,,	FLAG SET AT 91210 WHEN EQUIV VAR WAS	05884	44	05904	07060
04170		B	E91250,,,	FOUND BEFORE COMMON IN TABLE	05896	49	07092	00000
04180		DORG	**3		05904			
04190		BNF	**20,E89660+1		05904	44	05924	05841
04200		B	E88470		05916	49	04680	00000
04210		DORG	**3		05924			
04220		BNF	E87310,E89660		05924	44	03844	05840
04230		B	E88470		05936	49	04680	00000
04240		DORG	**3		05944			
04250	*****		ENTER FROM 87450 TO OUTPUT VARIABLES NOT IN COMMON					
04260	E89820	BNF	E90620,SMADD,11,	BRANCH IF VARIABLE WAS EQUIVALENCED	05944	44	06380	0343N
04270		CF	SMADD,,6,		05956	33	0343N	00000
04280		TF	WDLN,KLNG		05968	26	03038	02252
04290		BD	**24,SMADD,11		05980	43	06004	0343N
04300		TF	WDLN,FP2		05992	26	03038	02298
04310		A	LOC,WDLN		06004	21	03482	03038
04320		TF	TEMP,LOC		06016	26	03488	03482
04330		SM	SMADD,1,10		06028	12	03435	000-1
04340		TF	**23,SMADD,11,		06040	26	06063	0343N
04350	E89930	TF	SYM,,	MOVE SYM NAME	06052	26	03475	00000

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04360	TF	SMADD,LOC,6,	MOVE OBJ TIME ADDRESS TO TABLE	06064	26 0343N 03482
04370	BD	E90010,MODAD,11,	BRANCH IF VARIABLE IS AN ARRAY	06076	43 06144 0344N
04380	AM	SMADD,1,10		06088	11 03435 000-1
04390	TDM	SMCNT,,6		06100	15 0344- 00000
04400	DC	1,1,*		06111	1
04410	BTM	PGPRT,++12		06112	17 11380 -6124
04420	DC	1,0		06124	1
04430	DSA	TEMP-4		06129	5 X 1
04440	DSA	SYM-11		06129	-3484
				06134	5 X 1
04450	B	E90580		06134	-3464
04460	DORG	*-3		06136	49 06340 00000
04470	E90010 SM	SMADD,5,10,	POINT TO NO OF ELEMENTS	06144	12 03435 000-5
04480	TD	MODE,MODAD,11,	SAVE DIMENSION INDICES	06156	25 03530 0344N
04490	AM	MODE,01,10		06168	11 03530 000-1
04500	MM	MODE,05,10		06180	13 03530 000-5
04510	A	E89930+11,99		06192	21 06063 00099
04520	TF	SMADD,E89930+11,611		06204	26 0343N 0606L
04530	M	SMADD,WDLN,6		06216	23 0343N 03038
04540	SF	95		06228	32 00095 00000
04550	S	99,WDLN		06240	22 00099 03038
04560	A	LOC,99,,	LOC UPDATED TO END OF ARRAY	06252	21 03482 00099
04570	TDM	SMCNT,,6		06264	15 0344- 00000
04580	DC	1,1,*		06275	1
04590	SM	SMADD,4,10		06276	12 03435 000-4
04600	SM	MODAD,10,10		06288	12 03445 000J0
04610	SM	SMCNT,10,10		06300	12 03440 000J0
04620	BTM	PGPRT,++12		06312	17 11380 -6324
04630	DC	1,1		06324	1
04640	DSA	TEMP-4		06329	5 X 1
04650	DSA	SYM-11		06329	-3484
				06334	5 X 1
04660	DSA	LOC-4		06334	-3464
				06339	5 X 1
04670	E90580 BNF	**20,TELSW		06339	-3478
04680	B	E91730		06340	44 06360 07204
04690	DORG	*-3		06352	49 07480 00000
04700	BNF	E87310,EQRET		06360	
04710	B	E91810		06360	44 03844 07376
04720	DORG	*-3		06372	49 07524 00000
04730	*****	ENTER FROM E89820 TO ASSIGN EQUIV VARIABLES NOT IN COMMON		06380	
04740	E90620 TF	SAVE1,SMADD,,	SAVE ADDRESSES THEN SCAN TABLE TO	06380	26 03508 03435
04750	TF	SAVE2,SMCNT,,	FIND ALL VARIABLES EQUIVALENCED TO THIS	06392	26 03513 03440
04760	TF	SAVE3,MODAD,,	BASE, THE VARIABLE WITH THE LARGEST	06404	26 03518 03445
04770	TF	ADSAVE,SMADD,,	NEGATIVE OFF-SET, IF ANY, WILL THEN BE	06416	26 03523 03435

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04780	CM	SMCNT,0,69,	ASSIGNED STORAGE FIRST ELSE BASE VAR	06428	14 0344- 00-00
04790	BNE	E91120,,,	WILL BE ASSIGNED FIRST	06440	47 06952 01200
04800	TF	SAVE4,SMADD		06452	26 06523 03435
04810	TF	EBASE,SMADD,,	SAVE REF NUMBER	06464	26 03528 03435
04820	SM	EBASE-1,1,10		06476	12 03527 000-1
04830	SF	EBASE		06488	32 03528 00000
04840	A	EBASE,STBL		06500	21 03528 02377
04850	SF	EBASE-3		06512	32 03525 00000
04860	SAVE4 DS	,*		06523	0
04870	TFM	TEMP,0,		06524	16 03488 -0000
04880	BD	E90850,MODAD,11,	TEST FOR DIM	06536	43 06680 0344N
04890	E90750 SM	SMADD,10,10		06548	12 03435 000J0
04900	SM	SMCNT,10,10		06560	12 03440 000J0
04910	SM	MODAD,10,10		06572	12 03445 000J0
04920	C	SMADD,TEND		06584	24 03435 02303
04930	BE	E91410		06596	46 07204 01200
04940	BNR	**20,MODAD,11,	SUBR OR FUNCTION NAME	06608	45 06628 0344N
04950	B	E90750		06620	49 06548 00000
04960	DORG	*-3		06628	
04970	BNR	E90900,SMCNT,11,	HAS STORAGE BEEN ALLOCATED	06628	45 06724 0344-
04980	BNF	**20,SMCNT,11,	BRANCH IF NOT STATEMENT NUMBER	06640	44 06660 0344-
04990	B	E90750		06652	49 06548 00000
05000	DORG	*-4		06659	
05010	BD	**20,MODAD,11		06660	43 06680 0344N
05020	B	E90750		06672	49 06548 00000
05030	DORG	*-3		06680	
05040	E90850 SM	SMCNT,10,10		06680	12 03440 000J0
05050	SM	SMADD,10,10		06692	12 03435 000J0
05060	SM	MODAD,10,10		06704	12 03445 000J0
05070	B	E90750		06716	49 06548 00000
05080	DORG	*-3		06724	
05090	E90900 BNF	**20,SMADD,11,	LOOK FOR EQUIV VARIABLE	06724	44 06744 0343N
05100	B	E90850-20		06736	49 06660 00000
05110	DORG	*-3		06744	
05120	C	SMCNT,EBASE-1,6,	TEST FOR EQUIVALENCE TO BASE VARIABLE	06744	24 0344- 03527
05130	BNE	E90850-20		06756	47 06660 01200
05140	BD	E91050,MODAD,11,	TEST FOR DIMENSION	06768	43 06884 0344N
05150	SM	SMADD,1,10		06780	12 03435 000-1
05160	TF	ABASE,SMADD,11,		06792	26 03014 0343N
05170	AM	ABASE,5,10		06804	11 03014 000-5
05180	AM	SMADD,1,10		06816	11 03435 000-1
05190	C	ABASE,TEMP,6,	FIND NEG OFF-SET	06828	24 0301M 03488
05200	BNL	E90750		06840	46 06548 01300
05210	TF	TEMP,ABASE,11,	SAVE NEW OFF-SET	06852	26 03488 0301M
05220	TF	SAVE4,SMADD,,	SAVE TABLE ADDRESS OF NEW VARIABLE	06864	26 06523 03435
05230	B	E90750		06876	49 06548 00000
05240	DORG	*-3		06884	
05250	E91050 SM	SMCNT,10,10		06884	12 03440 000J0
05260	C	SMCNT,TEMP,6,	TEST OFF-SET	06896	24 0344- 03488
05270	BNL	E90850+12		06908	46 06692 01300
05280	TF	TEMP,SMCNT,11,	MOVE IN NEW OFF SET	06920	26 03488 0344-
05290	TF	SAVE4,SMADD		06932	26 06523 03435
05300	B	E90850+12		06944	49 06692 00000
05310	DORG	*-3		06952	
05320	E91120 TF	ADSAVE,STBL		06952	26 03523 02377
05330	S	ADSAVE-1,SMCNT,11,	GEN ADDRESS OF BASE	06964	22 03522 0344-

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05340	AM	ADSAVE,07,10		06976	11	03523	000-7	
05350	BNF	E91320,ADSAVE,11,	TEST IF BASE IS IN COMMON, BRANCH NO	06988	44	07160	0352L	
05360	TF	MODAD,ADSAVE		07000	26	03445	03523	
05370	TF	SMADD,ADSAVE		07012	26	03435	03523	
05380	SM	SMADD,1,10		07024	12	03435	000-1	
05390	TF	SMCNT,ADSAVE		07036	26	03440	03523	
05400	AM	SMCNT,3,10		07048	11	03440	000-3	
05410	OUTCE	DS	,**1	07060			0	
05420	DF	OUTCE		07060	32	07060	00000	
05430	SB	E87670+12,MODAD,11,	RETURN TO OUTPUT COMMON ARRAY	07072	43	04292	0344N	
05440	B	E87490-48,,,	RETURN TO OUTPUT SIMPLE COMMON VARIABLE	07084	49	04104	00000	
05450	DORG	*-3		07092				
05460	E91250	CF	OUTCE,,,	ENTER FROM E89750	07092	33	07060	00000
05470	TF	SMADD,SAVE1		07104	26	03435	03508	
05480	TF	SMCNT,SAVE2		07116	26	03440	03513	
05490	TF	MODAD,SAVE3		07128	26	03445	03518	
05500	TF	EBASE-1,SMCNT,11,	SET UP BASE NUMBER TO SEARCH FOR	07140	26	03527	0344-	
05510	B	E88540+36,,,	THE REMAINING EQUIV VARIABLES	07152	49	04928	00000	
05520	DORG	*-3		07160				
05530	E91320	SM	ADSAVE,1,10,	ENTER FROM E91150	07160	12	03523	000-1
05540	TFM	TEMP,0,,		07172	16	03488	-0000	
05550	TF	EBASE-1,SMCNT,11,	SET UP BASE NUMBER	07184	26	03527	0344-	
05560	B	E90900+44		07196	49	06768	00000	
05570	DORG	*-3		07204				
05580	E91410	CM	TEMP,0,,	ENTER FROM E90790 AFTER SEARCHING TABLE	07204	14	03488	-0000
05590	BL	E91610,,,	FOR ALL EQUIV VARIABLES, IF TEMP IS LESS	07216	47	07376	01300	
05600	SF	TELSW,,,	IF NOT NEGATIVE	07228	32	07204	00000	
05610	C	ADSAVE,SAVE1,,	THAN ZERO, THEN THE BASE ELEMENT IS	07240	24	03523	03508	
05620	BNE	**56,,,	NOT ASSIGNED FIRST	07252	47	07308	01200	
05630	TF	SMADD,SAVE1		07264	26	03435	03508	
05640	TF	SMCNT,SAVE2		07276	26	03440	03513	
05650	TF	MODAD,SAVE3		07288	26	03445	03518	
05660	B	E89820+12		07300	49	05956	00000	
05670	DORG	*-3		07308				
05680	TF	SMADD,ADSAVE		07308	26	03435	03523	
05690	TF	SMCNT,ADSAVE		07320	26	03440	03523	
05700	AM	SMCNT,4		07332	11	03440	-0004	
05710	TF	MODAD,ADSAVE		07344	26	03445	03523	
05720	AM	MODAD,1,10		07356	11	03445	000-1	
05730	B	E89820+12		07368	49	05956	00000	
05740	DORG	*-3		07376				
05750	TELSW	DS	,E91410		07204		0	
05760	E91610	TF	SAVOFS,TEMP,,	ENTER FROM E91420 ,SAVE OFF-SET VALUE	07376	26	07827	03488
05770	TF	SMADD,SAVE4,,		07388	26	03435	06523	
05780	TF	SMCNT,SAVE4		07400	26	03440	06523	
05790	AM	SMCNT,4,10		07412	11	03440	000-4	
05800	TF	MODAD,SAVE4		07424	26	03445	06523	
05810	AM	MODAD,1,10		07436	11	03445	000-1	
05820	SF	EQRET		07448	32	07376	00000	
05830	SAVAD	DS	,*	07459			0	
05840	TF	SAVAD,ADSAVE,,	SAVE ADDRESS OF BASE ELEMENT	07460	26	07459	03523	
05850	EQRET	DS	,E91610		07376		0	
05860	B	E89820+12,,,	BRANCH TO OUTPUT SYM WITH NEG OFF-SET	07472	49	05956	00000	
05870	DORG	*-3		07480				
05880	E91730	TF	SMADD,SAVE1,,	ENTER FROM E90600	07480	26	03435	03508
05890	TF	SMCNT,SAVE2,,	RESTORE TABLE ADDRESSES AND BRANCH TO	07492	26	03440	03513	

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05900	TF	MODAD,SAVE3,,	ASSIGN EQUIVALENT ADDRESSES	07504	26	03445	03518	
05910	B	E88540+36		07516	49	04928	00000	
05920	DORG	*-3		07524				
05930	E91810	TF	SMADD,SAVAD,,	ENTER FROM E90603	07524	26	03435	07459
05940	TF	SMCNT,SAVAD		07536	26	03440	07459	
05950	AM	SMCNT,4,10		07548	11	03440	000-4	
05960	TF	MODAD,SAVAD		07560	26	03445	07459	
05970	AM	MODAD,1,10		07572	11	03445	000-1	
05980	TF	EBASE,SAVAD		07584	26	03528	07459	
05990	SM	EBASE-1,1,10		07596	12	03527	000-1	
06000	SF	EBASE		07608	32	03528	00000	
06010	A	EBASE,STBL		07620	21	03528	02377	
06020	SF	EBASE-3		07632	32	03525	00000	
06030	CF	SAVOFS		07644	33	07827	00000	
06040	TBASE	DS	,*	07655			0	
06050	BD	**68 ,MODAD,11,	TEST IF DIM VAR	07656	43	07724	0344N	
06060	SM	SAVAD,1,10		07668	12	07459	000-1	
06070	TF	**30,SAVAD,11		07680	26	07710	0745R	
06080	AM	**18,5,10		07692	11	07710	000-5	
06090	TF	,SAVOFS,,	PLACE OFFSET INTO SYM AREA	07704	26	00000	07827	
06100	B	E88710,,,		07716	49	05112	00000	
06110	DORG	*-3		07724				
06120	SM	SAVAD,6,10		07724	12	07459	000-6	
06130	TF	SAVAD,SAVOFS,6,	PLACE OFFSET INTO TABLE	07736	26	0745R	07827	
06140	B	E88710,,,		07748	49	05112	00000	
06150	DORG	*-3		07756				
06160	E92010	TF	TEMP,TEMP3,,	ENTER FROM E89601	07756	26	03488	03498
06170	CF	EQRET		07768	33	07376	00000	
06180	TF	SMADD,SAVE1		07780	26	03435	03508	
06190	TF	SMCNT,SAVE2		07792	26	03440	03513	
06200	TF	MODAD,SAVE3		07804	26	03445	03518	
06210	SF	TELSW		07816	32	07204	00000	
06220	SAVOFS	DS	,*	07827			0	
06230	B	E88540+36		07828	49	04928	00000	
06240	DORG	*-3		07836				
06250	E92210	TF	SUBADD,FCTEND,,	ENTER FROM E87240 TO OUTPUT SUBPROGRAM	07836	26	08011	02318
06260	AM	SUBADD,14,10		07848	11	08011	000J4	
06270	SM	SUBADD,10,10		07860	12	08011	000J0	
06280	BNR	*-12,SUBADD,11		07872	45	07860	0801J	
06290	SM	SUBADD,1,10		07884	12	08011	000-1	
06300	TFM	E92440-23,41,10		07896	16	08157	000M1	
06310	TF	SMADD,SUBADD		07908	26	03435	08011	
06320	SM	SMADD,3,10		07920	12	03435	000-3	
06330	TF	MODAD,SUBADD		07932	26	03445	08011	
06340	SM	MODAD,2,10		07944	12	03445	000-2	
06350	E92290	BD	**32 ,MODAD,11,	TEST FOR FIX OR FLOAT	07956	43	07988	0344N
06360	A	LOC,FP2		07968	21	03482	02298	
06370	B	**20		07980	49	08000	00000	
06380	DORG	*-3		07988				
06390	A	LOC,KLNG		07988	21	03482	02252	
06400	E92305	CF	MODAD,,6		08000	33	0344N	00000
06410	SUBADD	DS	,*	08011			0	
06420	TF	SYM,ZER13-1		08012	26	03475	11925	
06430	TF	**23,SMADD,11		08024	26	08047	0343N	
06440	TF	SYM,,,	MOVE NAME TO SYM	08036	26	03475	00000	
06450	TF	SMADD,LOC,6,	MOVE OBJ TIME ADDRESS TO TABLE	08048	26	0343N	03482	

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06460	SM	SUBADD,8,10		08060	12	08011	000-8
06470	TD	SUBADD,RECMK,6,	STORAGE HAS BEEN ALLOCATED	08072	25	0801J	09784
06480	AM	SUBADD,8,10		08084	11	08011	000-8
06490	E92385	AM	SUBADD,2,10	08096	11	08011	000-2
06500	TD	SUBADD,RECMK,6,	STORAGE HAS BEEN ALLOCATED	08108	25	0801J	09784
06510	SM	SUBADD,2,10		08120	12	08011	000-2
06520	E92390	BTM	PGPRT,++12	08132	17	11380	-8144
06530	DC	1,0		08144		1	
06540	DSA	LOC-4		08149		5 X	1
06550	DSA	SYM-11		08149		-3478	
				08154		5 X	1
06560	SF	SMADD,,6		08154		-3464	
06570	TFM	*-1,32,10		08156	32	0343N	00000
06580	E92440	NOP	E92455	08168	16	08157	000L2
06590	TF	SUBADD,FC,TEND		08180	41	08252	00000
06600	AM	SUBADD,3,10		08192	26	08011	02318
06610	TF	SMADD,FC,TEND		08204	11	08011	000-3
06620	TF	MODAD,FC,TEND		08216	26	03435	02318
06630	AM	MODAD,1,10		08228	26	03445	02318
06640	E92455	SM	SUBADD,10,10	08240	11	03445	000-1
06650	SM	SMADD,10,10		08252	12	08011	000J0
06660	SM	MODAD,10,10		08264	12	03435	000J0
06670	C	MODAD,TEND		08276	12	03445	000J0
06680	E92470	BE	E92860,,,	08288	24	03445	02303
06690	BNR	E92455,SUBADD,11	TEST FOR END OF TABLE	08300	46	08616	01200
06700	TDM	E92440+1,9		08312	45	08252	0801J
06710	SM	SUBADD,1,10		08324	15	08181	00009
06720	CF	SUBADD,,6		08336	12	08011	000-1
06730	TF	++30,SUBADD		08348	33	0801J	00000
06740	SM	++18,1,10		08360	26	08390	08011
06750	CF			08372	12	08390	000-1
06760	BD	E92570,SUBADD,11,	TEST FOR DIM VAR	08384	33	00000	00000
06770	AM	SUBADD,1,10,	FLAG INDICATES FUNCTION SUBPROGRAM IN	08396	43	08440	0801J
06780	AM	LOC,5,10		08408	11	08011	000-1
06790	B7	E92305		08420	11	03482	000-5
06800	E92570	AM	LOC,5,10	08432	49	08000	
06810	CF	MODAD,,6		08440	11	03482	000-5
06820	TF	SYM,ZER13-1		08452	33	0344N	00000
06830	TF	ADSAVE,SMADD,11,		08464	26	03475	11925
06840	TF	SYM,ADSAVE,11,		08476	26	03523	0343N
06850	TF	SMADD,LOC,6,		08488	26	03475	0352L
06860	SF	SMADD,,6		08500	26	0343N	03482
06870	TD	MODE,SUBADD,11,	SAVE NUMBER OF DIMENSIONS	08512	32	0343N	00000
06880	SM	SUBADD,7,10		08524	25	03530	0801J
06890	MM	MODE,5,10		08536	12	08011	000-7
06900	AM	99,5,10		08548	13	03530	000-5
06910	A	ADSAVE,99		08560	11	00099	000-5
06920	TF	SUBADD,ADSAVE,611		08572	21	03523	00099
06930	AM	SUBADD,8,10		08584	26	0801J	0352L
06940	B7	E92385		08596	11	08011	000-8
06950	E92860	TF	TBASE,FC,TEND,,	08608	49	08096	
06960	AM	LOC,01,10,	ENTER FROM E92470 FOR RECORD MARK	08616	26	07655	02318
				08628	11	03482	000-1

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06970	AM	CADD,11,10		08640	11	11291	000J1
06980	C	CEND,CADD		08652	24	11296	11291
06990	BNH	EMP		08664	47	08778	01100
07000	SM	CADD,11,10		08676	12	11291	000J1
07010	CF	CADD,,6		08688	33	1129J	00000
07020	AM	CADD,01,10		08700	11	11291	000-1
07030	GLP	BT	OUTADD,LOC	08712	27	10706	03482
07040	BTM	OUTK,++16		08724	17	10128	-8740
07050	DSA	CST1,LOC+1		08740		5 X	2
07060	SF	LOC+1		08740		-9801	
07070	TD	CADD,LOC+1,6		08745		-3483	
07080	B	MSP		08746	32	03483	00000
07090	DORG	*-4		08758	25	1129J	03483
07100	EMP	SM	CADD,09,10	08770	49	08798	00000
07110	B	GLP		08777			
07120	DORG	*-4		08778	12	11291	000-9
07130	MSP	MM	LOC,05,10	08790	49	08712	00000
07140	BD	BUFDM,99		08797			
07150	AM	LOC,01,10		08798	13	03482	000-5
07160	B	BUFDM,,,	GO TO OUTPUT BUFFER	08810	43	09928	00099
07170	DORG	*-3		08822	11	03482	000-1
07180	*****	ENTER HERE FROM E87530 AFTER ALL STORAGE ALLOCATION IS		08834	49	09928	00000
07190	*****	COMPLETE		08842			
07200	E93010	TF	DKADD,INTOP1+5	08842	26	10968	02390
07210	AM	TEND,9,10,	ESPECIALLY FOR JAY	08854	11	02303	000-9
07220	TF	SMADD,TBASE		08866	26	03435	07655
07230	TF	SMCNT,TBASE		08878	26	03440	07655
07240	AM	SMADD,2		08890	11	03435	-0002
07250	AM	SMCNT,5		08902	11	03440	-0005
07260	B	++32		08914	49	08946	00000
07270	DORG	*-3		08922			
07280	E93060	SM	SMADD,10,10	08922	12	03435	000J0
07290	SM	SMCNT,10,10		08934	12	03440	000J0
07300	C	SMCNT,TEND,		08946	24	03440	02303
07310	BL	E93610		08958	47	09328	01300
07320	BNR	E93200,SMCNT,11,		08970	45	08990	0344-
07330	B	E93060		08982	49	08922	00000
07340	DORG	*-3		08990			
07350	E93200	BNR	E93060,SMADD,11,	08990	45	08922	0343N
07360	BNF	++32,SMADD,11		09002	44	09034	0343N
07370	TDM	SMADD,0,6		09014	15	0343N	00000
07380	B	E93060		09026	49	08922	00000
07390	DORG	*-3		09034			
07400	TDM	SMADD,0,6,	CLEAR RECORD MARK	09034	15	0343N	00000
07410	SM	SMADD,2,10		09046	12	03435	000-2
07420	E93330	AM	LOC,5,10	09058	11	03482	000-5
07430	TF	SSYMWK,ZER13-1		09070	26	09542	11925
07440	TF	++23,SMADD,11		09082	26	09105	0343N
07450	TF	SSYMWK,,,	MOVE FUNCTION NAME	09094	26	09542	00000
07460	BWP	SF	SSYMWK-11	09106	32	09531	00000
07470	CM	SSYMWK-10,00,10		09118	14	09532	000-0
07480	BNE	WGP		09130	47	09186	01200
07490	TR	SSYMWK-11,SSYMWK-9		09142	31	09531	09533

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07500	TFM	SSYMWK,00,10		09154	16	09542	000-0
07510	CF	SSYMWK-1		09166	33	09541	00000
07520	B	BWP		09178	49	09106	00000
07530	DORG	*-4		09185			
07540	WGP	TF	CARD+11,SSYMWK	09186	26	03361	09542
07550	TF		CARD+16,LOC	09198	26	03366	03482
07560	TF		CARD+18,ALPHRM	09210	26	03368	09326
07570	TF		SMADD,LOC,6,	09222	26	0343N	03482
07580	BTM		OUTK,++16	09234	17	10128	-9250
07590	DSA		CST17,CARD	09250		5 X	2
				09250		-9324	
				09255		-3350	
07600	AM		SMADD,2,10,	09256	11	03435	000-2
07610	TF		SYM,ZER13-1	09268	26	03475	11925
07620	TF		SYM,E93330+47,11,	09280	26	03475	0910N
07630	BTM		PGPRT,++12	09292	17	11380	-9304
07640	DC		1,0	09304		1	
07650	DSA		LOC-4	09309		5 X	1
				09309		-3478	
07660	DSA		SYM-11	09314		5 X	1
				09314		-3464	
07670	B		E93060	09316	49	08922	00000
07680	DORG		*-4	09323			
07690	CST17	DC	2,18	09324		2	
		J8					
07700	ALPHRM	DC	2,0*	09326		2	
		-1					
07710	E93610	BD	++20,SUBFCT	09328	43	09348	02293
07720	B		ERNEST	09340	49	09544	00000
07730	DORG		*-3	09348			
07740	TFM		IORT,++23	09348	16	00565	-9371
07750	B		IOGT,COMSEC,7	09360	49	00566	-9802
07760	TF		SSYMWK,ZER13-1	09372	26	09542	11925
07770	TF		SSYMWK,SAVSYM	09384	26	09542	02243
07780	LTJUST	SF	SSYMWK-11	09396	32	09531	00000
07790	CM		SSYMWK-10,00,10	09408	14	09532	000-0
07800	BNE		MVNAME	09420	47	09476	01200
07810	TR		SSYMWK-11,SSYMWK-9	09432	31	09531	09533
07820	TFM		SSYMWK,00,10	09444	16	09542	000-0
07830	CF		SSYMWK-1	09456	33	09541	00000
07840	B		LTJUST	09468	49	09396	00000
07850	DORG		*-4	09475			
07860	MVNAME	TF	COMNAM,SSYMWK	09476	26	09861	09542
07870	TF		SAVSYM,SSYMWK	09488	26	02243	09542
07880	TFM		IORT,++23	09500	16	00565	-9523
07890	B		IOPT,COMSEC,7	09512	49	00532	-9802
07900	B		HU	09524	49	09580	00000
07910	DORG		*-4	09531			
07920	SSYMWK	DC	12,0	09542		12	
			-00000000000				
07930	DC		1,0	09543		1	

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07940	ERNEST	BNF	HU,DISKSW	09544	44	09580	02383
07950	BD		HU,MULDEF	09556	43	09580	02384
07960	BTM		ERROR2,670,9	09568	17	11318	00070
07970	HU	BTM	OUTK,++16	09580	17	10128	-9596
07980	DSA		CST1,ALPHRM	09596		5 X	2
				09596		-9801	
				09601		-9326	
07990	TDM		CADD,6,6,	09602	15	1129J	00006
08000	TFM		IORT,++23	09614	16	00565	-9637
08010	B		IOPT,DKDATA,7	09626	49	00532	J0978
08020	AM		DKADD,3,10	09638	11	10968	000-3
08030	TD		DISK,DKDATA+7	09650	25	10986	10985
08040	TFM		IORT,++23	09662	16	00565	-9685
08050	B		IOPT,DKDATA,7,	09674	49	00532	J0978
08060	TF		PROGST,LOC	09686	26	02257	03482
08070	BV		++12	09698	46	09710	01400
08080	BSBA		++12	09710	60	09722	00001
08090	TFM		CALLP2-1,00600,7,	09722	16	02399	-0600
08100	TFM		CALLP2-6,00000,7,	09734	16	02394	-0000
08110	BNF		CALLP2,CALLP2	09746	44	02400	02400
08120	TFM		FMON+35,PHA1D	09758	16	02359	-9777
08130	B7		CALLP2+12	09770	49	02412	
08140	PHA1D	DSC	2,22	09777		2	
		22					
08150	DSA		PHA1DA	09783		5 X	1
				09783		-9785	
08160	DC		1,0	09784		1	
08170	PHA1DA	DSC	1,0	09785		1	
		0					
08180	RECMK	DS	,PHA1DA-1	09784		0	
08190	DC		5,15930	09790		5	
		J5930					
08200	DC		3,070	09793		3	
		-70					
08210	DSA		CALLP2	09798		5 X	1
				09798		-2400	
08220	DC		1,0	09799		1	
08230	CST1	DC	2,01	09801		2	
		-1					
08240	COMSEC	DSC	2,20	09802		2	
		20					
08250	DSA		COMSC	09808		5 X	1
				09808		-9810	
08260	DC		1,0	09809		1	
08270	COMSC	DSC	1,0	09810		1	
		0					
08280	DC		5,19663	09815		5	
		J9663					
08290	DC		3,001	09818		3	
		-01					

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08300	DSA	COMAR			09823	5	X	1
					09823		-9826	
08310	DC	L, *			09824		1	
08320	BILLY	DAS	1		09827	1	X	2
08330	COMAR	DS	,BILLY-1		09826		0	
08340	DSS	48			09828		48	
08350	DSS	50			09876		50	
08360	GM2	DGM			09926		1	
08370	COMNAM	DS	,COMAR+35		09861		0	
08380	* OUTPUT	BUFFER-SET UP POINTER AND LAST DISK						
08390	*	ADDRESS FOR PASS2						
08400	BUFDUM	TF	LSTAD,DKADD		09928	26	02308	10968
08410	CM	CADD,	DISK+8		09940	14	11291	J0994
08420	BNE	BFDUM1			09952	47	09984	01200
08430	TFM	P2PTR,0			09964	16	02313	-0000
08440	B	BFDUM2			09976	49	10080	00000
08450	DDRG	*-3			09984			
08460	BFDUM1	TF	P2PTR,CEND		09984	26	02313	11296
08470	SM	P2PTR,DISK			09996	12	02313	J0986
08480	CM	P2PTR,300			10008	14	02313	-0300
08490	BNE	*+36			10020	47	10056	01200
08500	TFM	P2PTR,0			10032	16	02313	0000
08510	AM	LSTAD,03,10			10044	11	02308	-000-3
08520	TFM	IOPT,*+23			10056	16	00565	J0079
08530	B	IOPT,DKDATA,7			10068	49	00532	J0978
08540	BFDUM2	TFM	CADD,DISK		10080	16	11291	J0986
08550	TFM	CEND,DISK+75			10092	16	11296	J1061
08560	BTM	OUTADD,00001			10104	17	10706	-0001
08570	B	E87270-24			10116	49	03764	00000
08580	DDRG	*-4			10123			
08590	*	OUTPUT CONSTANT ROUTINE						
08600	*							
08610	*	BTM OUTK,*+16						
08620	*	DSA LENGTH,HIGH-ORDER						
08630	*							
08640	DS	5			10127		5	
08650	OUTK	TF	WK1, CADD		10128	26	11316	11291
08660	TF	WK2, OUTK-1,11,	LENGTH		10140	26	10211	1012P
08670	TF	WK2, WK2,11,	MOVE IN LENGTH		10152	26	10211	1021J
08680	AM	OUTK-1, 5,10			10164	11	10127	000-5
08690	TF	WK3, OUTK-1,11,	CONSTANT ADDRESS		10176	26	10295	1012P
08700	AM	OUTK-1, 1,10			10188	11	10127	000-1
08710	AM	WK1, *-*			10200	11	11316	-0000
08720	WK2	DS	,*		10211		0	
08730	C	LADD, CADD			10212	24	11301	11291
08740	BE	OUTK2			10224	46	10576	01200
08750	C	CEND,CADD			10236	24	11296	11291
08760	BE	ITNC			10248	46	10436	01200
08770	*	TEST FOR SPACE FOR ENTIRE CONSTANT						
08780	C	WK1, CEND			10260	24	11316	11296
08790	BH	TD			10272	46	10328	01100
08800	OUTK1	TR	CADD,*-0,6		10284	31	1129J	00000
08810	WK3	DS	,*		10295		0	
08820	A	CLGTH, WK2,6,	INCREMENT LENGTH		10296	21	11300	10211

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08830	A	CADD,WK2			10308	21	11291	10211
08840	B	OUTK-1,6,			10320	49	1012P	00000
08850	DDRG	*-3			10328			
08860	*	TRANSMIT DIGIT BY DIGIT						
08870	TD	CADD, WK3,611,			10328	25	1129J	1029N
08880	AM	CLGTH, 1,610,			10340	11	11300	000-1
08890	AM	CADD, 1,10,			10352	11	11291	000-1
08900	AM	WK3, 1,10,			10364	11	10295	000-1
08910	SM	WK2,1,10			10376	12	10211	000-1
08920	*	TEST FOR LAST CARD						
08930	C	CADD, LADD			10388	24	11291	11301
08940	BE	OUTK2			10400	46	10576	01200
08950	C	CADD, CEND			10412	24	11291	11296
08960	BNE	TD			10424	47	10328	01200
08970	*	INCREMENT TO NEXT CARD						
08980	ITNC	TF	CADD, CEND		10436	26	11291	11296
08990	AM	CADD, 4,10			10448	11	11291	000-4
09000	TR	CADD, K1,6			10460	31	1129J	11307
09010	TF	*+35, CLGTH			10472	26	10507	11306
09020	SM	*+23, 3,10			10484	12	10507	000-3
09030	TF	CADD, *-0,6			10496	26	1129J	00000
09040	A	CADD, CLGTH,611,			10508	21	1129J	11300
09050	TF	CLGTH, CADD			10520	26	11306	11291
09060	AM	CLGTH, 3,10			10532	11	11306	000-3
09070	AM	CADD, 4,10			10544	11	11291	000-4
09080	AM	CEND, 75,10			10556	11	11296	000P5
09090	B	OUTK1			10568	49	10284	00000
09100	DDRG	*-3			10576			
09110	*	OUTPUT THREE SECTORS						
09120	OUTK2	TFM	RETURN+6,OUTK3		10576	16	10962	J0596
09130	B	CKL1+12			10588	49	10896	00000
09140	DDRG	*-3			10596			
09150	OUTK3	AM	CADD, 4,10		10596	11	11291	000-4
09160	TR	CADD, K1,6			10608	31	1129J	11307
09170	SM	CLGTH, 3,10			10620	12	11306	000-3
09180	TF	CADD, CLGTH,611			10632	26	1129J	11300
09190	AM	CLGTH, 3,10			10644	11	11306	000-3
09200	A	CADD, CLGTH,611			10656	21	1129J	11300
09210	TFM	CLGTH, DISK+7			10668	16	11306	J0993
09220	TFM	CADD,DISK+8			10680	16	11291	J0994
09230	B	OUTK1			10692	49	10284	00000
09240	DDRG	*-3			10700			
09250	*	CONSTANT OUTPUT ROUTINE FOR PASS 1						
09260	*							
09270	*	BTM OUTADD, NEW ADDRESS						
09280	DS	5			10704		5	
09290	OUTADD	AM	CADD, 9,10		10706	11	11291	000-9
09300	C	CEND, CADD			10718	24	11296	11291
09310	BNH	CKLCD			10730	47	10816	01100
09320	SM	CADD, 5,10			10742	12	11291	000-5
09330	OUT	TR	CADD, K1,6,	CONSTANT	10754	31	1129J	11307
09340	TF	CADD, OUTADD-1,6,	NEW ADDRESS		10766	26	1129J	10705
09350	AM	CADD, 4,10			10778	11	11291	000-4
09360	TF	CLGTH,CADD			10790	26	11306	11291
09370	SM	CLGTH,01,10			10802	12	11306	000-1
09380	BB				10814	42	00000	00000

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IOZERO	11923	E90750	06548	PROGST	02257	FP2	02298	PTCD	03265
ADSAVE	03523	E90850	06680	PUSTSN	02294	GLP	08712	PTRA	11940
ALPHRM	09326	E90900	06724	RACARD	11776	GM1	03268	RECLG	02243
AROUND	02484	E91050	06884	RAMASK	11954	GM2	09926	RECHK	09784
BFDUM1	09984	E91120	06952	RETURN	10956	GM3	11943	SAVAD	07459
BFDUM2	10080	E91250	07092	ABASE	03014	GM	16035	SAVE1	03508
BUFDUM	09928	E91320	07160	AFTBL	14935	HU	09580	SAVE2	03513
CALLP2	02400	E91410	07204	BILLY	09827	INDIV	02424	SAVE3	03518
COMADD	02262	E91610	07376	BLK7A	16008	IOCAL	00716	SAVE4	06523
COMNAM	09861	E91730	07480	BLK7	16000	IOGT	00566	SMADD	03435
COMSEC	09802	E91810	07524	BLK8A	02469	IOPT	00532	SMCNT	03440
DISKSW	02383	E92010	07756	BLK8	02461	IORBC	00520	STBL	02377
DKDATA	10978	E92210	07836	BWP	09106	IOSK	00554	SYM	03475
E86440	02430	E92290	07956	CADD	11291	ITNC	10436	TBASE	07655
E86601	02712	E92305	08000	CARD	03350	JAY	02367	TD	10328
E86801	02984	E92385	08096	CEND	11296	JUMP	02429	TELSW	07204
E86820	03044	E92390	08132	CHIF5	15839	K1	11307	TEMP2	03493
E87210	03720	E92440	08180	CHI	15139	KLNG	02252	TEMP3	03498
E87270	03788	E92455	08252	CKL1	10884	LADD	11301	TEMP4	05423
E87310	03844	E92470	08300	CKLCD	10816	LDPHC	16024	TEMP5	03503
E87420	04048	E92570	08440	CKL	10864	LL1	03158	TEMP	03488
E87490	04152	E92860	08616	CLGTH	11306	LOC	03482	TEND	02303
E87670	04280	E93010	08842	COMAR	09826	LSTAD	02308	WDLN	03038
E88420	04636	E93060	08922	COMSC	09810	MODAD	03445	WGP	09186
E88470	04680	E93200	08990	COMST	02382	MODE	03530	WK1	11316
E88540	04892	E93330	09058	CST17	09324	MSP	08798	WK2	10211
E88600	05004	E93610	09328	CST1	09801	N1	02233	WK3	10295
E88660	05068	ENTLGG	02267	DISK	10986	N2	02238	W	02240
E88710	05112	ERNEST	09544	DKADD	10968	NXLOC	02372	WW	02296
E88900	05344	ERROR2	11318	EBASE	03528	OUTCE	07060	ZER13	11927
E89010	05472	FCTEND	02318	EMP	08778	OUTDK	10963	SAVDFS	07826
E89600	05752	INTOP1	02385	EQRET	07376	OUTK1	10284	SAVSVM	02243
E89610	05772	LENGTH	02248	ERMES	11357	OUTK2	10576	SSYMK	09542
E89660	05840	LTJUST	09396	ERRET	00602	OUTK3	10596	STMNT1	03628
E89740	05884	MONCAL	00796	FAF1	11428	OUT	10754	STMNT2	03676
E89820	05944	MULDEF	02384	FAF2	11560	P2PTR	02313	STMTNO	03532
E89930	06052	MVNAME	09476	FAF3	11648	PGPRT	11380	SUBADD	08011
E90010	06144	OUTADD	10706	FAF4	11696	PHAID	09777	SUBFCT	02293
E90580	06340	OUTLIT	03128	FLNG	02250			USEDFS	02263
E90620	06380	PHALDA	09785	FMON	02324				

END OF ONE ASSEMBLY.

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MONITOR 2 OPTIMIZER PHASE 2-A									
00010	*****								
00020	IDRT	DS	,565			00565		0	
00030	IOGT	DS	,566			00566		0	
00040	IOPT	DS	,532			00532		0	
00050	DORG		2218			02218			
00060	HEADER	DSS	14			02218		14	
00070	N1	DS	2			02233		2	
00080	N2	DS	5			02238		5	
00090	W	DS	2			02240		2	
00100	RECLG	DS	3			02243		3	
00110	LENGTH	DS	5			02248		5	
00120	F	DS	2			02250		2	
00130	K	DS	2			02252		2	
00140	BEGAD	DS	5			02257		5	
00150	LOCDM	DS	5			02262		5	
00160	UFSTR	DSS	30			02263		30	
00170	FCTSW	DS	1			02293		1	
00180	PUSTSN	DS	1			02294		1	
00190	WW	DS	2			02296		2	
00200	FP2	DS	2			02298		2	
00210	TBASE	DS	5			02303		5	
00220	LSTAD	DS	5			02308		5	
00230	P2PTR	DS	5			02313		5	
00240	FCTEND	DS	5			02318		5	
00250	DS	5				02323		5	
00260	FMON	TF	++2,FMON-1			02324	26	02366	02323
00270	TFM	IORT	++23			02336	16	00565	-2359
00280	B	IOGT	,,7			02348	49	00566	-0000
00290	B					02360	49	00000	00000
00300	DORG	--4				02367			
00310	JAY	DS	1			02367		1	
00320	DS	17				02384		17	
00330	XRADD	DS	5			02389		5	
00340	LXRRAD	DS	5			02394		5	
00350	FILEST	DS	5			02399		5	
00360	INIT	TFM	FILEST,600			02400	16	02399	-0600
00370	BS	++12,1				02412	60	02424	00001
00380	BLXM	++12,0(5)				02424	66	02436	0-0-0
00390	BLXM	++12,0(6)				02436	66	02448	0--00
00400	BLXM	++12,ADDSTR(2)				02448	66	02460	05J57
00410	TDM	BGNST+1				02460	15	16000	00000
00420	DC	1,,*				02471		1	
00430	INITA	BTM	GETX,SX,,	GET FIRST TWO SYMBOLS		02472	17	08382	-5054
00440	BTM	GETX,SX,,				02484	17	08382	-5061
00450	CM	SX,104,9				02496	14	05054	00J04
00460	BL	++36				02508	47	02544	01300
00470	CM	SX,152,9				02520	14	05054	00J52
00480	BNH	ANALIZ,,		GO TO ANALYZE IF SX IS OPERATOR		02532	47	02672	01100
00490	CM	SY,134,9				02544	14	05061	00J34
00500	BE	CDCLN,,		GO TO COLON CODE IF STATEMENTS NO.		02556	66	03020	01200
00510	BLXM	++12,CODEL(3),,		SET CODEL FOR ARITH. STATEMENTS		02568	66	02580	03JL6
00520	INITB	BLXM	++12,5(7)			02580	66	02592	0--5
00530	BTM	ADSL,SX				02592	17	08688	-5054
00540	BTM	ADSL,SX				02604	17	08688	-5061
00550	L1	BTM	GETX,SL			02616	17	08382	-5067

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00560	BTM	ADSL,SL,,	FILL STRING WITH COMPLETE STATEMENT	02628	17	08688	-5067
00570	CM	SL,132		02640	14	05067	-0132
00580	BNE	L1		02652	47	02616	01200
00590	B7	013),,,	GO TO CODE SET IN XR 3	02664	49	00--0	
00600	ANALIZ	BLX	++12,SX(11)	02672	65	02684	050N4
00610	TD	ZER2,DIGSTR(1)		02684	25	05104	050-3
00620	MM	ZER2,5,10		02696	13	05104	000-5
00630	MA	++18,99		02708	70	02726	00099
00640	B7	99(21),,6		02720	49	00-9R	
00650	IFA	BLXM	INITB,CODEIF(3),, SET PROPER CODE IN XR 3 AND GO TO	02728	66	02580	03KJ6
00660	CALLA	BLXM	INITB,CDALL(3),, PLACE COMPLETE STATEMENT ON STRING	02740	66	02580	03QJ2
00670	QUTA	BLXM	INITB,COOUT(3)	02752	66	02580	04LQ2
00680	ENDA	BLXM	INITB,CDEND(3)	02764	66	02580	03RQ0
00690	INA	TDM	INPSW,1,11	02776	15	05106	000J0
00700		BLXM	INITB,COOUT(3)	02788	66	02580	04LQ2
00710	CODEDO	BTM	CLISTS,PASS2	02800	17	08222	-2940
00720	DSKIO	BTM	GETX,SN	02812	17	08382	-5073
00730	TR	BVLIST(6),SN-3		02824	31	0QP59	05070
00740	BXM	++12,4(6)		02836	62	02848	0--04
00750	BTM	MRBVL,++12		02848	17	08066	-2860
00760	BLXM	++12,COOUT(3)		02860	66	02872	04LQ2
00770	BLXM	++12,5(7)		02872	66	02884	0--5
00780	BTM	ADSL,SX		02884	17	08688	-5054
00790	BTM	ADSL,SY		02896	17	08688	-5061
00800	BTM	ADSL,SN		02908	17	08688	-5073
00810	B7	L1		02920	49	02616	
00820	SUBPF	TDM	SUBPSW,1,11	02928	15	05107	0000J
00830	PASS2	BTM	PUT,SX	02940	17	05212	-5054
00840	BTM	PUT,SY		02952	17	05212	-5061
00850	PASS2A	BTM	GETX,SX,, PUT COMPLETE STATEMENT TO OUTPUT BUFFER	02964	17	08382	-5054
00860	BTM	PUT,SX		02976	17	05212	-5054
00870	CM	SX,132,9		02988	14	05054	00J32
00880	BNE	PASS2A		03000	47	02964	01200
00890	B7	INITA-12		03012	49	02460	
00900	CDCLN	TF	SBASE-1,SX	03020	26	05094	05054
00910	BNF	++24,SBASE,11		03032	44	03056	0509N
00920	BTM	CLISTS,++12,, CLEAR LISTS FOR REFERENCED STATE. NO.		03044	17	08222	-3056
00930	BTM	PUT,SX		03056	17	05212	-5054
00940	BTM	PUT,SY		03068	17	05212	-5061
00950	BTM	GETX,SX		03080	17	08382	-5054
00960	CM	SX,140,9		03092	14	05054	00J40
00970	BNE	INITA+12		03104	47	02484	01200
00980	BTM	PUT,SX		03116	17	05212	-5054
00990	B7	INITA		03128	49	02472	
01000	*****	CODEL	SCANS ARITHMETIC STATEMENTS, IF STATEMENTS, AND IS				
01010	*****		ALSO USED BY THE CALL STATEMENT ROUTINE				
01020	CODE1	CM	SY,133,8	03136	14	05061	0-133
01030	BNE	CODEIF		03148	47	03216	01200
01040	TF	MBASE-1,SX		03160	26	05100	05054
01050	BD	++20,MBASE,11		03172	43	03192	0510J
01060	B7	CODEIF		03184	49	03216	
01070	CDIA	TR	BVLIST(6),SX-3	03192	31	0QP59	05051
01080	BXM	++12,4(6)		03204	62	03216	0--04
01090	CODEIF	TDM	FFOPSW,0,, LEFT OF THE EQUAL SIGN ON BVLIST	03216	15	05102	00000
01100	BLXM	++12,15(7)		03228	66	03240	0--J5
01110	CDIC	TF	SX,BGNST(7)	03240	26	05054	INRR9

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01120	CM	SX,132,9		03252	14	05054	00J32
01130	BE	CD1B		03264	46	03368	01200
01140	BXM	++12,5(7)		03276	62	03288	0--5
01150	CM	SX,153,9		03288	14	05054	00J53
01160	BE	++36		03300	46	03336	01200
01170	CM	SX,154,9		03312	14	05054	00J54
01180	BNE	CD1C		03324	47	03240	01200
01190	*****		THE ADSBLV ROUTINE IS ENTERED WITH XR7 POINTING AT THE LEFT				
01200	*****		PAREN FOLLOWING THE FOP OPERATOR. ANY FIXED POINT, NON-				
01210	*****		SUBSCRIPTED NAME APPEARING BEFORE THE CLOSING RIGHT PAREN				
01220	*****		WILL BE PLACED ON THE BOUND VARIABLE LIST. UPON EXIT, XR7 WI				
01230	*****		BE POINTING AT THE SYMBOL FOLLOWING THE RIGHT PAREN.				
01240	BTM	ADSBVL,++12		03336	17	07460	-3348
01250	TDM	FFOPSW,1,11		03348	15	05102	0000J
01260	B7	CD1C		03360	49	03240	
01270	CD1B	BNF	++24,FFOPSW	03368	44	03392	05102
01280	*****		THE PURGCM ROUTINE EXAMINES EACH ENTRY ON THE BOUND VARIABLE				
01290	*****		TABLE. FOR EACH VARIABLE THAT IS IN COMMON STORAGE, THE				
01300	*****		ENTRY AND ITS RELATED SUBSCRIPT TABLE ENTRY ARE CLEARED.				
01310	BTM	PURGCM,++12		03380	17	07856	-3392
01320	CD1D	BLXM	++12,5(7)	03392	66	03404	0--5
01330	TF	SX,BGNST(7)		03404	26	05054	INRR9
01340	CM	SX,132,9,	OUTPUT ALL SYMBOLS UNTIL A SUBSCRIPT IS	03416	14	05054	00J32
01350	BE	CD1E,,	FOUND. THEN GO TO SEOPT	03428	46	03768	01200
01360	BXM	++12,5(7)		03440	62	03452	0--5
01370	TF	SV,BGNST(7)		03452	26	05061	INRR9
01380	CM	SV,149,9		03464	14	05061	00J49
01390	BL	CD1E1		03476	47	03748	01300
01400	CM	SV,153,9		03488	14	05061	00J53
01410	BE	PASKIP		03500	46	03572	01200
01420	CM	SV,154		03512	14	05061	-0154
01430	BE	PASKIP		03524	46	03572	01200
01440	CM	SV,151,9		03536	14	05061	00J51
01450	BH	CD1E1		03548	46	03748	01100
01460	*****		THE SEOPT ROUTINE WILL CHECK FOR POSSIBLE OPTIMIZATION OF				
01470	*****		SUBSCRIPT EXPRESSIONS. UPON ENTERING SEOPT, XR7 IS POINTING				
01480	*****		AT THE SOP, SX CONTAINS THE SUBSCRIPTED VARIABLE NAME, AND				
01490	*****		SY CONTAINS THE SOP. UPON LEAVING SEOPT, XR7 WILL BE POINTIN				
01500	*****		AT THE SYMBOL FOLLOWING THE RIGHT PAREN. SEOPT WILL OUTPUT				
01510	*****		ALL NECESSARY SYMBOLS FROM THE SUBSCRIPTED NAME TO THE RIGHT				
01520	*****		PAREN INCLUSIVE.				
01530	BTM	SEOPT,CD1D+12		03560	17	05716	-3404
01540	PASKIP	BTM	PUT,SX	03572	17	05212	-5054
01550	BTM	PUT,SY		03584	17	05212	-5061
01560	TFM	PCNT,,10		03596	16	08351	000-0
01570	BXM	++12,5(7)		03608	62	03620	0--5
01580	TF	SX,BGNST(7)		03620	26	05054	INRR9
01590	BTM	PUT,SX		03632	17	05212	-5054
01600	CM	SX,124,9		03644	14	05054	00J24
01610	BNE	++32		03656	47	03688	01200
01620	AM	PCNT,1,10		03668	11	08351	000-1
01630	B7	PASKIP+36		03680	49	03608	
01640	CM	SX,104,9		03688	14	05054	00J04
01650	BNE	PASKIP+36		03700	47	03608	01200
01660	SM	PCNT,1,10		03712	12	08351	000-1
01670	BNZ	PASKIP+36		03724	47	03608	01200

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01680	BXM	CDID+12,5(7)		03736	62	03404	0---5
01690	CDIE1	BTM	PUT,SX	03748	17	05212	-5054
01700	B7	CDID+12		03760	49	03404	
01710	CDIE	BTM	PUT,SX	03768	17	05212	-5054
01720	*****	THE MRBVLIT ROUTINE WILL CHECK TO SEE IF THERE ARE ANY					
01730	*****	ENTRIES ON THE BOUND VARIABLE LIST. IF THERE ARE, EACH ONE					
01740	*****	WILL BE MATCHED AGAINST EACH ENTRY IN THE BOUND VARIABLE					
01750	*****	TABLE. WHEN A MATCH IS FOUND, THE BV AND ITS SETAB ENTRIES					
01760	*****	WILL BE CLEARED.					
01770	BNR	**20,BVLIST-1(6)		03780	45	03800	0QP58
01780	B7	INITA		03792	49	02472	
01790	BTM	MRBVLIT,INITA		03800	17	08066	-2472
01800	CDCALL	BLXM	**12,15(7)	03812	66	03824	0--J5
01810	TF	SL,BGNST(7)		03824	26	05067	INRR9
01820	BXM	**12,5(7)		03836	62	03848	0---5
01830	TF	SN,BGNST(7)		03848	26	05073	INRR9
01840	CM	SN,132,9		03860	14	05073	00J32
01850	BNE	CDCL2		03872	47	03944	01200
01860	BTM	PUT,SX		03884	17	05212	-5054
01870	BTM	PUT,SY		03896	17	05212	-5061
01880	BTM	PUT,SL		03908	17	05212	-5067
01890	BTM	PUT,SN		03920	17	05212	-5073
01900	BTM	PURGCM,INITA		03932	17	07856	-2472
01910	CDCL2	BTM	PURGCM,**12,,	03944	17	07856	-3956
01920	CDCL3	BLXM	**12,20(7)	03956	66	03968	0--K0
01930	BTM	ADSBVL,CDIO,,	CHECK ARGUMENTS FOR BVLIST	03968	17	07460	-3392
01940	CDEND	BNF	CDND1,SUBPSW,,	03980	44	04100	05107
01950	TFM	SAVIX,8,10	IF IN A SUBPROGRAM, ADJUST ADCOW FOR	03992	16	05206	000-8
01960	S	SAVIX,LOIR		04004	22	05206	05204
01970	MM	SAVIX,5,10		04016	13	05206	000-5
01980	AM	99,1,10		04028	11	00099	000-1
01990	TF	LOXRAD,BEGAD,,	LOXRAD CONTAINS ADD. FOR SUBPROGRAM TR	04040	26	02394	02257
02000	AM	LOXRAD,1,10		04052	11	02394	000-1
02010	A	BEGAD,99		04064	21	02257	00099
02020	TFM	XRADD,381		04076	16	02389	-0381
02030	S	XRADD,99		04088	22	02389	00099
02040	CDND1	BTM	PUT,SX	04100	17	05212	-5054
02050	BTM	PUT,SY		04112	17	05212	-5061
02060	BTM	PUT,SL		04124	17	05212	-5067
02070	CM	PUTI+6,CARD		04136	14	05230	-5396
02080	BE	CDNDXT		04148	46	04180	01200
02090	TDM	PEXIT+1,9,,	GO TO OUTPUT FINAL BUFFER OF SYMBOLS	04160	15	05359	00009
02100	B7	PUT2		04172	49	05274	
02110	CDNDXT	TF	CLLBLK,GTBLKB,,	04180	26	04341	08469
02120	TF	PUTXZ,INTDP2	OUTPUT ANY CALL RECORDS	04192	26	05701	05378
02130	TFM	IORT,**23		04204	16	00565	-4227
02140	B	IOGT,CALBLK,7		04216	49	00566	-4328
02150	BNR	**20,CARD		04228	45	04248	05396
02160	B7	NEXTPH		04240	49	04304	
02170	TFM	IORT,**23		04248	16	00565	-4271
02180	B	IOPT,PUTXX,7		04260	49	00532	-4351
02190	AM	CLLBLK,3,10		04272	11	04341	000-3
02200	AM	PUTXZ,3,10		04284	11	05701	000-3
02210	B7	CDNDXT+24		04296	49	04204	
02220	NEXTPH	TFM	FMON+35,CDND2,,	04304	16	02359	-4359
02230	BTM	FMON,INIT	CALL IN NEXT PHASE	04316	17	02324	-2400

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02240	CALBLK	DSC	2,2	04328		2	
		O2					
02250	DSA	CALLBK		04334		5 X	1
				04334		-4336	
				04335		1	
02260	DC	1,'		04336		1	
				04337			
02270	CALLBK	DSC	1,0	04336		1	
		O					
02280	CLLBLK	DC	5,0	04341		5	
		-0000					
02290	DC	3,3		04344		3	
		-03					
02300	DSA	CARD		04349		5 X	1
				04349		-5396	
				04350		1	
02310	DC	1,'		04351		2	
				04352			
02320	PUTXX	DSC	2,2	04357		5 X	1
		O2					
02330	DSA	PUTXY		04357		-5696	
				04358		1	
02340	DC	1,'		04359		2	
				04360			
02350	CDND2	DSC	2,22	04365		5 X	1
		22					
02360	DSA	CDND3		04365		-4367	
				04366		1	
02370	DC	1,'		04367		1	
				04368			
02380	CDND3	DSC	1,0	04372		5	
		O					
02390	DC	5,17800		04375		3	
		J7800					
02400	DC	3,136		04380		5 X	1
		J36					
02410	DSA	INIT		04380		-2400	
				04381		1	
02420	DC	1,'		04382	66	04394	0--J5
				04394	26	05067	INRR9
02430	CDOUT	BLXM	**12,15(7)	04406	14	05067	00J32
02440	TF	SL,BGNST(7)		04418	46	04678	01200
02450	CM	SL,132,9		04430	14	05067	00J33
02460	BE	CDOUT1		04442	47	04666	01200
02470	CM	SL,133,9		04454	67	04466	0QLD6
02480	BNE	CDOUT2		04466	16	05079	-0001
02490	67	**12,STORIR(7),,	BSX	04478	62	04490	0---N
02500	TFM	PRCNT,1		04490	26	05067	INRR9
02510	CDOUT3	BXM	**12,5(7),11	04502	14	05067	00J24
02520	TF	SL,BGNST(7)		04514	47	04546	01200
02530	CM	SL,124,9		04526	12	05079	000-1
02540	BNE	**32					
02550	SM	PRCNT,1,10					

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02560	B7	++68		04538	49	04606	
02570	CM	SL,199,9		04546	14	05067	00J99
02580	BE	*-32		04558	46	04526	01200
02590	CM	SL,104,9		04570	14	05067	00J04
02600	BNE	*+24		04582	47	04606	01200
02610	AM	PRCNT,1,10		04594	11	05079	000-1
02620	CM	PRCNT,0		04606	14	05079	-0000
02630	BNE	CDOUT3		04618	47	04478	01200
02640	TF	BGNST(7),DOLLP		04630	26	1NRR9	05084
02650	BLX	++12,STORIR(7)		04642	65	04654	0QL06
02660	BXM	CDOUT+12,25(7)		04654	62	04394	0--K5
02670	CDOUT2	BXM CDOUT+12,5(7)		04666	62	04394	0---5
02680	CDOUT1	BLXM ++12,5(7)		04678	66	04690	0---5
02690	TF	SX,BGNST(7)		04690	26	05054	1NRR9
02700	CDOUT6	CM SX,199,9		04702	14	05054	00J99
02710	BH	CDOUT4		04714	46	04854	01100
02720	BL	CDOUT5		04726	47	04762	01300
02730	BTM	CLISTS,++12,,	WHEN DOLLP FOUND, CLEAR LISTS AND TABLES	04738	17	08222	-4750
02740	TFM	SX,124		04750	16	05054	-0124
02750	CDOUT5	BTM PUT,SX,,	OUTPUT OPERATOR	04762	17	05212	-5054
02760	BXM	++12,5(7)		04774	62	04786	0---5
02770	CDOUT8	TF SX,BGNST(7)		04786	26	05054	1NRR9
02780	CDOUTA	CM SX,132,9		04798	14	05054	00J32
02790	BNE	CDOUT6		04810	47	04702	01200
02800	YDM	INPSW,0		04822	15	05106	00000
02810	BTM	PUT,SX		04834	17	05212	-5054
02820	B7	INITA		04846	49	02472	
02830	CDOUT4	BXM ++12,5(7)		04854	62	04866	0---5
02840	TF	SY,BGNST(7)		04866	26	05061	1NRR9
02850	CM	SY,149,9		04878	14	05061	00J49
02860	BL	CDOUT7		04890	47	04938	01300
02870	CM	SY,151,9		04902	14	05061	00J51
02880	BH	CDOUT7		04914	46	04938	01100
02890	BTM	'SEOPT,CDOUT8,,	OPTIMIZE SUBSCRIPT EXPRESSION	04926	17	05716	-4786
02900	CDOUT7	BNF CDOUT9,INPSW		04938	44	05018	05106
02910	TF	MBASE-1,SX		04950	26	05100	05054
02920	BD	++20,MBASE,11		04962	43	04982	0510J
02930	B7	CDOUT9		04974	49	05018	
02940	TR	BVLIST(6),SX-3		04982	31	00P59	05051
02950	BXM	++12,4(6)		04994	62	05006	0--04
02960	BTM	MRBVL,++12		05006	17	08066	-5018
02970	CDOUT9	BTM PUT,SX		05018	17	05212	-5054
02980	TF	SX,SY		05030	26	05054	05061
02990	B7	CDOUTA		05042	49	04798	
03000	SX	DS 6		05054		6	
03010	DC	1,'		05055		1	
03020	SY	DS 6		05061		6	
03030	SL	DS 6		05067		6	
03040	SN	DS 6		05073		6	
03050	DC	1,'		05074		1	
03060	PRCNT	DS 5		05079		5	
03070	DOLLP	DC 5,199		05084		5	
		-0199					
03080	LPAREN	DC 5,104		05089		5	
		-0104					

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03090	SBASE	DC 6,4		05095		6	
		-00004					
03100	MBASE	DC 6,5		05101		6	
		-00005					
03110	FFOPSW	DSC 1,0		05102		1	
		0					
03120	ZER2	DC 2,0		05104		2	
		-0					
03130	CALLSW	DSC 1,0		05105		1	
		0					
03140	INPSW	DSC 1,0		05106		1	
		0					
03150	SUBPSW	DSC 1,0		05107		1	
		0					
03160	DIGSTR	DS **,-104		05003		0	
03170	DSC	50,11230054500445500000111101100066181094475750000100		05108		50	
		11230054500445500000111101100066181094475750000100					
03180	ADDSTR	DS **		05157		0	
03190	DSA	PASS2		05162		5 X 1	
				05162		-2940	
03200	DSA	IFA		05167		5 X 1	
				05167		-2728	
03210	DSA	CODEDO		05172		5 X 1	
				05172		-2800	
03220	DSA	INA		05177		5 X 1	
				05177		-2776	
03230	DSA	OUTA		05182		5 X 1	
				05182		-2752	
03240	DSA	SUBPF		05187		5 X 1	
				05187		-2928	
03250	DSA	DSKID		05192		5 X 1	
				05192		-2812	
03260	DSA	CALLA		05197		5 X 1	
				05197		-2740	
03270	DSA	ENDA		05202		5 X 1	
				05202		-2764	
03280	BGNST	DS 1,15999		15999		1	
03290	LOIR	DC 2,8		05204		2	
		-8					
03300	SAVIX	DS 2		05206		2	
03310	DS	5		05211		5	
03320	PUT	TF PUTOUT,PUT-1,11		05212	26	05392	0521J
03330	PUT1	TR CARD,PUTOUT-4,2		05224	31	-5396	05388
03340	AM	*-6,5,10		05236	11	05230	000-5
03350	CM	*-18,CARD+200		05248	14	05230	-5596
03360	BE	++14		05260	46	05274	01200
03370	BB2			05272	42		

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03380	PUT2	TFM	IORT,++23	05274	16	00565	-5297
03390		B	IOPT,INTOP,7	05286	49	00532	-5365
03400		AM	INTOP1+5,2,10	05298	11	05378	000-2
03410		B	++36,00200,, C9T7 ST ON SW2	05310	49	05346	00200
03420		RCTY		05322	34	00000	00102
03430		WNTY	CARD	05334	38	05396	00100
03440		TFM	PUT1+6,CARD	05346	16	05230	-5396
03450	PEXIT	BB	CONDXT	05358	42	04180	00000
03460		DORG	=-4	05365			
03470	INTOP	DSC	2,2	05365			2
		O2					
03480		DSA	INTOP1	05371		5 X	1
				05371		-5373	
03490		DC	1,1	05372		1	
03500	INTOP1	DSC	1,0	05373		1	
		O					
03510	INTOP2	DC	5,600	05378		5	
		-0600					
03520		DC	3,2	05381		3	
		-02					
03530		DSA	CARD	05386		5 X	1
03540		DC	1,1	05386		-5396	
				05387		1	
03550	PUTOUT	DS	5	05392		5	
03560		DC	1,1	05393		1	
03570		DS	1	05395		1 X	2
03580	CARD	DSS	300	05396		300	
03590	PUTXY	DSC	1,0	05696		1	
		O					
03600	PUTXZ	DC	5,0	05701		5	
		-0000					
03610		DC	3,3	05704		3	
		-03					
03620		DSA	CARD	05709		5 X	1
03630		DC	1,1	05709		-5396	
				05710		1	
03640	*****						
03650	*****						
03660	*****						
03670	*****	SEOPT					
03680	*****						
03690	*****						
03700		DS	5	05715		5	
03710	SEOPT	TR	SEBUF-4,ISE,, 47 ZEROS	05716	31	06872	07064
03720		TFM	SEE1+42,SEBUF-3	05728	16	05854	-6873
03730		CM	SY,150,9, CHECK SUBSCRIPT OPERATOR	05740	14	05061	00J50
03740		BNL	++24,,, BRANCH NOT SINGLE	05752	46	05776	01300
03750		BLXM	SEE1,5,,, SINGLE OPERATOR	05764	66	05812	00005
03760		BH	SEE1-12,,, BRANCH TRIPLE	05776	46	05800	01100

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03770		BLXM	SEE1,8,,, DOUBLE OPERATOR	05788	66	05812	00008
03780		BLXM	SEE1,11,,, TRIPLE OPERATOR	05800	66	05812	00011
03790	SEE1	67	++12,XRSTOR(7),, BSX	05812	67	05824	OP-N5
03800		BXM	++12,15(7),, SKIP DUMMY	05824	62	05836	0--J5
03810		TF	TBUF-1,BGNST(7),, GET EXPRESSION	05836	26	07062	1NRR9
03820		TRNM	SEBUF-3,TBUF-4	05848	30	06873	07059
03830		AM	=-6,4,10	05860	11	05854	000-4
03840		BXM	++12,5(7)	05872	62	05884	0---5
03850		BCXM	SEE1+24,1,11, REDUCE REGISTER BY ONE	05884	64	05836	0000J
03860	CKCOM	BNF	CLFLAG,FFOPSW	05896	44	06028	05102
03870		TFM	++23,SEBUF+8	05908	16	05931	-6884
03880		MA	WKAREA,77777	05920	70	06871	77777
03890		CM	WKAREA,,8	05932	14	06871	0-000
03900		BZ	CLFLAG	05944	46	06028	01200
03910		TF	++22,WKAREA	05956	26	05978	06871
03920		C	LOCOM,4	05968	24	02262	00004
03930		BL	PUTTOT	05980	47	06664	01300
03940		AM	CKCOM+35,12,10	05992	11	05931	000J2
03950		CM	CKCOM+35,SEBUF+44	06004	14	05931	-6920
03960		BNE	CKCOM+24	06016	47	05920	01200
03970	CLFLAG	BNF	++36,SEBUF+4	06028	44	06064	06880
03980		CF	SEBUF+4	06040	33	06880	00000
03990		TDM	SEBUF-3 ,9	06052	15	06873	00009
04000		BNF	++36,SEBUF+16	06064	44	06100	06892
04010		CF	SEBUF+16	06076	33	06892	00000
04020		TDM	SEBUF+9 ,9	06088	15	06885	00009
04030		BNF	++36,SEBUF+28	06100	44	06136	06904
04040		CF	SEBUF+28	06112	33	06904	00000
04050		TDM	SEBUF+21,9	06124	15	06897	00009
04060		BNF	++36,SEBUF+40	06136	44	06172	06916
04070		CF	SEBUF+40	06148	33	06916	00000
04080		TDM	SEBUF+33,9	06160	15	06909	00009
04090	CKFIX	TF	MBASE-1,5X	06172	26	05100	05054
04100		BD	++32,MBASE,11	06184	43	06216	0510J
04110		TF	SEBUF+42,FP2	06196	26	06918	02298
04120		B7	++20	06208	49	06228	
04130		TF	SEBUF+42,K	06216	26	06918	02252
04140		CF	SEBUF+41	06228	33	06917	00000
04150		CM	LOIR,8,10	06240	14	05204	000-8
04160		BNE	++24	06252	47	06276	01200
04170		BLXM	POTAB,336(4),, GO PLACE ON TABLE	06264	66	06356	0-336
04180	COMPSE	MM	LOIR,48,10	06276	13	05204	000M8
04190		BLX	++12,99(4)	06288	65	06300	0-099
04200		C	SEBUF+42,SETAB-2(4),,CHECK IF ON TABLE	06300	24	06918	OP116
04210		BE	DNTAB,,, YES	06312	46	06788	01200
04220		BNR	++20,SETAB(4),, CHECK TOP OF TABLE	06324	45	06344	OP118
04230		B7	I,AVAIL,,, GO SEE IF IR AVAILABLE	06336	49	06836	
04240		BXM	=-4,,48(4)	06344	62	06300	0-048
04250	POTAB	TFM	INITI+11,SEBUF+8	06356	16	06439	-6884
04260		TR	SETAB-47(4),SEBUF-3,,, PLACE ON S.E. TABLE	06368	31	0P071	06873
04270		SF	SETAB-47(4)	06380	32	0P071	00000
04280		TD	IRUSE,SETAB-48(4)	06392	25	07057	0P070
04290		TD	SX-4,SETAB-48(4)	06404	25	05050	0P070
04300		SF	SX-4	06416	32	05050	00000
04310	INITI	MA	BVLD-1,SEBUF+8	06428	70	07116	06884
04320		CM	BVLD-1,,10, CHECK DONE	06440	14	07116	000-0

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05210	CM	SX,149,9	07636	14	05054	00J49
05220	BL	ADSBVL+12,,, NOT SUBSCRIPT OP	07648	47	07472	01300
05230	BNE	*+24,,, NOT SINGLE	07660	47	07684	01200
05240	BTM	CNTPE,45,10, SKIP 9 SYMBOLS	07672	17	07746	000M5
05250	CM	SX,151,9	07684	14	05054	00J51
05260	BH	ADSBVL+12,,, NOT SUBSCRIPT OP	07696	46	07472	01100
05270	BL	*+24,,, MUST BE DOUBLE	07708	47	07732	01300
05280	BTM	CNTPE,75,10, SKIP 15 SYMBOLS	07720	17	07746	000P5
05290	BTM	CNTPE,60,10, SKIP 12 SYMBOLS	07732	17	07746	00000
05300	DS	2	07745		2	
05310	CNTPE	BX ADSBVL+24,=-1(7)	07746	61	07484	0PPM5
05320	MBNAME	TF MBASE-1,SX	07758	26	05100	05054
05330	BD	*+20,MBASE,11, FIXED	07770	43	07790	0510J
05340	B7	ADSBVL+12,,,	07782	49	07472	
05350	TF	ABASE-1,SX	07790	26	08360	05054
05360	BD	ADSBVL+12,ABASE,11, ARRAY	07802	43	07472	0836J
05370	TF	TBUF-1,SX	07814	26	07062	05054
05380	TR	BVLIST(6),TBUF-4,, PUT ON LIST	07826	31	0QP59	07059
05390	BXM	ADSBVL+12,4(6)	07838	62	07472	0--04
05400	DS	5	07854		5	
05410	PURGCM	67 *+12,STORIR(5),, BSK	07856	67	07868	0Q306
05420	CM	STORIR	07868	14	08366	-0000
05430	BE	PURGCM-1,,6	07880	46	0785N	01200
05440	BNR	*+24,BVTAB+11(5)	07892	45	07916	0PON1
05450	BTM	GOPURG,-12	07904	17	07946	-7892
05460	BCXM	*-24,6(5)	07916	64	07892	0-0-6
05470	BLX	PURGCM-1,STORIR(5),6, EXIT PURGCM	07928	65	0785N	0Q306
05480	*****					
05490	DS	5	07944		5	
05500	GOPURG	TD MD,BVTAB+6(5)	07946	25	08353	0P0M6
05510	TF	BVTAB+11(5),BVTAB+5(5)	07958	26	0PON1	0P0M5
05520	TD	MDC,BVTAB+6(5)	07970	25	08355	0P0M6
05530	AM	STORIR,6,10	07982	11	08366	000-6
05540	C	MD,MDC	07994	24	08353	08355
05550	BE	GOPURG+12	08006	46	07958	01200
05560	MM	MD,48,10	08018	13	08353	000M8
05570	BLX	*+12,99(4)	08030	65	08042	0-099
05580	TRNM	SETAB-47(4),ISE	08042	30	0P071	07064
05590	B7	GOPURG-1,,6	08054	49	0794N	
05600	*****					
05610	DS	5	08065		5	
05620	MRBVL	67 *+12,STORIR(5),, BSK	08066	67	08078	0Q306
05630	CM	STORIR	08078	14	08366	-0000
05640	BNE	*+24	08090	47	08114	01200
05650	BLXM	MRBVL-1,0(6),6	08102	66	0806N	0--00
05660	MA	CMPRA,BVLIST-1(6)	08114	70	08371	0QP58
05670	MA	CMPRB,BVTAB+10(5)	08126	70	08376	0PON0
05680	C	CMPRA,CMPRB	08138	24	08371	08376
05690	BNE	*+24	08150	47	08174	01200
05700	BTM	GOPURG,MRBVL+48	08162	17	07946	-8114
05710	BCXM	MRBVL+60,6(5)	08174	64	08126	0-0-6
05720	BLX	*+12,STORIR(5)	08186	65	08198	0Q306
05730	BCXM	MRBVL+48,4(6),11	08198	64	08114	0--0M
05740	B7	MRBVL-1,,6, EXIT MRBVL	08210	49	0806N	
05750	*****					
05760	DS	5	08221		5	

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05770	CLISTS	CM LOIR,8,10	08222	14	05204	000-8
05780	BNL	CLTAB	08234	46	08326	01300
05790	MM	LOIR,48,10	08246	13	05204	000M8
05800	BLX	*+12,99(4)	08258	65	08270	0-099
05810	TRNM	SETAB-47(4),ISE	08270	30	0P071	07064
05820	BNR	*+20,SETAB(4)	08282	45	08302	0P118
05830	B7	*+20	08294	49	08314	
05840	BXM	*-32,48(4)	08302	62	08270	0-048
05850	TFM	LOIR,8,10	08314	16	05204	000-8
05860	CLTAB	BLXM *+12,0(5)	08326	66	08338	0-0-0
05870	BLXM	CLISTS-1,0(6),6	08338	66	0822J	0--00
05880	*					
05890	PCNT	DS 2	08351		2	
05900	MD	DC 2,0	08353		2	
		-0				
05910	MDC	DC 2,0	08355		2	
		-0				
05920	ABASE	DC 6,6	08361		6	
		-00006				
05930	STORIR	DS 5	08366		5	
05940	DC	1,0	08367		1	
		-				
05950	CMPRA	DC 4,0	08371		4	
		-000				
05960	DC	1,0	08372		1	
		-				
05970	CMPRB	DC 4,0	08376		4	
		-000				
05980	*					
05990	*****	GETX FORTRAN ROUTINE *****				
06000	DS	5	08381		5	
06010	GETX	BNR GETSY,INPUT	08382	45	08430	08482
06020	TFM	IOGT ,**23	08394	16	05065	-8417
06030	B	IOGT ,GETBLK ,7	08406	49	05066	-8456
06040	AM	GTBLKB ,2	08418	11	08469	000-2
06050	GETSY	TF GETX-1,INPUT+4,6, GET NEXT SYMBOL	08430	26	0838J	08486
06060	TR	INPUT,INPUT+5,, SLIDE DOWN	08442	31	08482	08487
06070	BB		08454	42	00000	00000
06080	DDRG	*-9	08456			
06090	GETBLK	DSC 2,2	08456		2	
		02				
06100	DSA	GTBLKA	08462		5 x	1
06110	DC	1, *	08462		-8464	
		'	08463		1	
06120	GTBLKA	DSC 1,0	08464		1	
		0				
06130	GTBLKB	DC 5,600	08469		5	
		-0600				
06140	DC	3,2	08472		3	
		-02				
06150	DSA	INPUT	08477		5 x	1
06160	DC	1, *	08477		-8482	
		'	08478		1	

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06170	DAS	1	08481	1	X	2
06180	INPUT	DC 1,'	08482	1		
		*				
06190	DS	199	08681	199		
06200	DC	1,'	08682	1		
		*				
06210	DS	5	08687	5		
06220	ADSL	TF BGNST(7),*-1,11	08688	26	INRR9	0868P
06230	TDM	BGNST+1(7),0	08700	15	10--0	00000
06240	DC	1,'*	08711	1		
		*				
06250	BXM	**+12,5(7)	08712	62	08724	0---5
06260	BB2		08724	42		
06270	DS	5	08730	5		
06280	RMNS	TF RMNS-1,BGNST(7),6	08732	26	0873J	INRR9
06290	TR	BGNST-4(7),BGNST+1(7)	08744	31	INRR5	10--0
06300	BB2		08756	42		
06310	DC	1,'	08758	1		
		*				
06320	BVLIST	DS 1	08759	1		
06330	DORG	16002	16002			
06340	BLKOPT	DSC 1,0	16002	1		
		0				
06350	DC	5,15930	16007	5		
		J5930				
06360	DC	3,070	16010	3		
		-70				
06370	DC	5,2400	16015	5		
		-2400				
06380	STFILE	34 BLKOPT,701	16016	34	16002	00701
06390		38 BLKOPT,702	16028	38	16002	00702
06400	TRA		16040	36	00000	00500
			16052	49	00000	00000
06410	TCO	STFILE	16016			
06420	DEND		00000			

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ADDSTR	05157	GOPURG	07946	CDIE	03768	INPUT	08482	PUTXZ	05701
ADSBVL	07460	GTBLKA	08464	COCL2	03944	INTOP	05365	RECLG	02243
ANALIZ	02672	GTBLKB	08469	COCL3	03956	IOGT	00566	RMNS	08732
BLKOPT	16002	HEADER	02218	COCLN	03020	IOPT	00532	SAVIX	05206
BVLIST	08759	IAVAIL	06836	COEND	03980	IORT	00565	SBASE	05095
CALBLK	04328	INTOP1	05373	COND1	04100	IRUSE	07057	SEBUF	06876
CALLBK	04336	INTOP2	05378	COND2	04359	ISE	07064	SEE1	05812
CALLSW	05105	LENGTH	02248	COND3	04367	JAY	02367	SEOPT	05716
CCALL	03812	LQXRAD	02394	COOUT	04382	K	02252	SETAB	07118
CONDXT	04180	LPAREN	05089	CKCOM	05896	LI	02616	SL	05067
COOUT1	04678	MBNAME	07758	CKFIX	06172	LOCOM	02262	SN	05073
COOUT2	04666	MRBVL	08066	CLTAB	08326	LOIR	05204	SUBPF	02928
COOUT3	04478	NEXTPH	04304	CMFRA	08371	LSTAD	02308	SKOP	07600
COOUT4	04854	PASKIP	03572	CMPRB	08376	MBASE	05101	SX	05054
COOUT5	04762	PASS2A	02964	CNTPE	07746	MDC	08355	SY	05061
COOUT6	04702	PURGCM	07856	CODE1	03136	MD	08353	TBASE	02303
COOUT7	04938	PUSTSN	02294	DOLLP	05084	N1	02233	TBUF	07063
COOUT8	04786	PUTOUT	05392	DSKIO	02812	N2	02238	UFSTR	02263
CDJUT9	05318	PUTTOT	06654	ENDA	02764	JNTA3	06788	W	02240
CDJUTA	04798	ABASE	33351	FCTS#	02293	JJTA	02752	HW	02335
CKLDIR	06528	ADSL	38589	FMON	02324	JJTSE	06780	KRADD	02339
CLFLAC	06328	BE3AD	32257	FP2	02298	P2PTA	02313	ZER2	05104
CLISTS	08222	BGNST	15999	F	02250	PASS2	02940	STFILE	16013
CLL3LK	04361	BVLD	37117	GETSY	08430	PCNT	08351	STORIR	08356
CDDEDJ	02800	BVTA8	37040	SETX	08382	PEKIT	05358	SUBPSW	05107
CDDEIF	03216	CALLA	02740	IFA	02728	PJTAB	06356	KKAREA	06871
CDMPSE	06276	CARD	35396	INA	02776	PCNT	05079	KRCMP	07050
DIGSTR	05303	CDIA	33132	INITI	06428	PJT1	05224	KRSTR	07055
FCFEND	02318	CDIB	33368	INITA	02472	PJT2	05274		
FFPSW	05102	CDIC	33240	INITB	02580	PUT	05212		
FILEST	02399	CDID	33332	INIT	02400	PUTXX	04351		
GET3LK	08456	CDIEI	33749	INPS#	05106	PUTKY	05696		

END OF ONE ASSEMBLY.

00010	*****	FORTRAN II-D	PHASE 2-B					
00020	IJPT	DS	,532			00532	0	
00030	IJRT	DS	,565			00565	0	
00040	IJGT	DS	,566			00566	0	
00050	MJCAL	DS	,796			00796	0	
00060	IJCAL	DS	,716			00716	0	
00070	SYSCAL	DS	,475			00475	0	
00080	DJRG	DS	2218			02218		
00090	HEAJER	DSS	14			02218	14	
00100	NI	DS	2			02233	2	
00110	V2	DS	5			02238	5	
00120	M	DS	2			02240	2	
00130	RECLG	DS	3			02243	3	
00140	LENGTH	DS	5			02248	5	
00150	F	DS	2			02250	2	
00160	K	DS	2			02252	2	
00170	BEGAD	DS	5			02257	5	
00180	LJCCM	DS	5			02262	5	
00190	UFSTR	DSS	30			02263	30	
00200	FCTSW	DS	1			02293	1	
00210	PJSTN	DS	1			02294	1	
00220	MM	DS	2			02296	2	
00230	F2	DS	2			02298	2	
00240	TBASE	DS	5			02303	5	
00250	LSTAD	DS	5			02308	5	
00260	P2PTR	DS	5			02313	5	
00270	FCTEND	DS	5			02318	5	
00280		DS	5			02323	5	
00290	FMCN	TF	**42	,FMCN-1		02324	26	02366 02323
00300	TFM	IJRT	,**23			02336	16	00565 -2359
00310	B	IJGT		,7		02348	49	00566 -0000
00320	B					02360	49	00000 00000
00330	DJRG	**4				02367		
00340	JAY	DS	1			02367	1	
00350	SR	DS	00005,,S1,,			02372	5	
00360	SK	DS	00005,,SK,,			02377	5	
00370	JP	DS	00002,,JP,,			02379	2	
00380	SY	DS	00005,,SY,,			02384	5	
00390	KRAD	DS	5			02389	5	
00400	LJXRAD	DS	5			02394	5	
00410	FILEST	DS	5			02399	5	
00420	PASSII	TF	LNG	,MM		02400	26	09327 02296
00430	TF	3TBK3		,PASSII-1		02412	26	04931 02399
00440	MM	F		,2		02424	13	02250 000-2
00450	GM	DGM	**3			02432	1	
00460	A	CLZR	,99			02436	21	08714 00099
00470	TF	ADCCW,BEGAD				02448	26	05969 02257
00480	AM	ADCCW,1,10				02460	11	05969 000-1
00481	CF	ADCCW				02472	33	05969 00000
00490	*	SET ADDRESS IN ADCCW TO EVEN						
00500	BFM	ADJUST,ADCCW				02484	17	04444 -5959
00510	TF	BEGAD,ADCCW				02496	26	02257 05969
00520	*	INITIALIZE						
00530	JAG	TF	PJTXZ	,LSTAD		02508	26	07665 02308
00540	TFM	IJRT	,**23			02520	16	00565 -2543
00550	B	IJGT	,PUTXX	,7		02532	49	00566 -7652

00560	A	NEXT	,P2PTR			02544	21	07706 02313
00570	TF	PRE3UF	,NEXT			02556	26	09015 07706
00571	TF	**18	,PRE3UF			02568	26	02586 08015
00572	TRM	3JF1	,INPJ1+124			02580	30	07710 09514
00573	AM	**6	,75			02592	11	02586 000P5
00574	CM	**18	,BUF4+75		,10	02604	14	02586 -8010
00575	BL	**36				02616	47	02580 01300
00580	SM	NEXT	,1		,10	02628	12	07706 000-1
00590	CLEAR	BJ	CJ12B,CJ5W			02640	43	10314 08993
00591	AM	SCVT	,1		,10	02652	11	09361 000-1
00600	*	SET JP STRING RECORD CONSTANTS						
00610	TFM	BGNST+1	,0			02664	15	16000 00000
00620	DC	L**4				02675		1
00630	TF	SHAREA	,N130B9			02676	26	08997 09034
00640	BLXM	**12	,5(7)			02688	66	02700 0---5
00650	LI	BTM	GETX	,SX		02700	17	04844 -2377
00660	BTM	AJSL	,SX			02712	17	04946 -2377
00670	CM	SK	,132		,9	02724	14	02377 00J32
00680	BNE	LI				02736	47	02700 01200
00681	BNC1	LIJ				02748	47	02820 00100
00682	BNC4	LIJ				02760	47	02820 00400
00683	CM	BGNST+10	,134		,9	02772	14	16009 00J34
00684	BE	LIJ				02784	46	02820 01200
00685	RCTY					02796	34	00000 00102
00686	WNTY	ADCCW-4				02808	38	05965 00100
00690	LIJ	BLXM	**12	,5(7)		02820	66	02832 0---5
00700	BT	3TSC1	,3TSC1-1			02832	27	05840 05839
00720	L2	TF	LV	,BGNST(7)		02844	26	09239 14R49
00730	CM	LV	,152		,8	02856	14	09239 0-152
00740	B4	L3				02868	46	02916 01100
00750	TF	RV	,BGNST+10(7)			02880	26	09251 10--9
00760	BTM	FORCE	,0		,10	02892	17	04166 000-0
00770	BKM	O(6)	,O(5)			02904	62	0--00 0--00
00780	L3	BKM	L2	,5(7)		02916	62	02844 0---5
00790	EXIT	CM	KR7	,5	,10	02928	14	00339 000-5
00800	BE	L2				02940	46	02844 01200
00810	BKM	L2	,-5(7)			02952	62	02844 0---V
00820	*****	JJTPJT	STATEMENT NUMBER ADDRESSES					
00830	CODE5	BKM	**12	,-5(7)		02964	62	02976 0---N
00840	BTM	RHNS	,T3			02976	17	04990 -9343
00850	TR	BGNST-4(7)	,BGNST+1(7)			02988	31	14R35 10--0
00860	CM	BGNST(7)	,140		,9	03000	14	14R49 00J40
00870	BNE	CXFMT				03012	47	03048 01200
00880	TFM	CJ5W	,1			03024	15	08993 00001
00890	TR	BGNST-4(7)	,BGNST+1(7)			03036	31	14R35 10--0
00900	CXFMT	CM	BGNST(7)	,128	,9	03048	14	14R49 00J28
00910	BNE	SETFCT				03060	47	03136 01200
00920	BTM	PJTX	,**15			03072	17	06030 -3088
00930	DSA	3,BLANK,BLANK				03088		5 X 3
						03088		-5974
						03093		-9026
						03098		-9026
00940	TF	SXF	,ADCCW			03100	26	09257 05969
00950	SM	SXF	,10	,10		03112	12	09257 000J0

00960	SM	ADDDW	,6	,10	03124	12	05969	030-6
00970	SETFCT	BLX	**12	,T3+1(6)	03136	65	03148	03144
00980	BVR	SETVMT	,4(5)		03148	45	03300	0--04
00990	TF	4(5)	,ADDDW		03160	26	0--04	05969
01000	TFV	EM+6	,8(5)		03172	73	09371	0--08
01010	TFM	SCVT	,0	,8	03184	16	09361	0--00
01020	3VCL	VDTYP			03196	47	03256	00100
01030	3CTV				03208	34	00000	00102
01040	WVTY	ADDDW-4			03220	38	05965	03130
01050	3PTV				03232	34	00000	00101
01060	WVTY	5(6)			03244	38	0--05	00100
01070	VDTYP	TCM	9(6)	,1	03256	15	0--09	00030
01080	CM	B3VST(7)	,128	,9	03268	14	14449	03128
01090	BE	CODE17			03280	46	10242	01200
01100	B7	L2			03292	49	02844	
01110	SETVMT	TF	40002	,4(5)	03300	26	03387	0--04
01120	CF	40002			03312	33	03387	00300
01130	SM	40002	,4	,10	03324	12	03387	000-4
01140	BFM	PJTA	**15		03336	17	07522	-3352
01150	DSA	40002,ADDDW			03352		5 X	2

01160	B7	SETFCT+24			03352		-3387	
01170	CODE0	B7	EXIT		03357		-5969	
01180	40000	DS	5		03358	49	03160	
01190	40001	DS	5		03366	49	02928	
01200	40002	DS	5		03377		5	
01210	40003	DS	5		03382		5	
01220	40004	DS	5		03387		5	
01230	40005	DS	5		03392		5	
01240	40006	DS	5		03397		5	
01250	40007	DS	5		03402		5	
01260	40008	DS	5		03407		5	
01270	40009	DS	5		03412		5	
01280	40010	DS	5		03417		5	
01290	40011	DS	5		03422		5	
01300	40012	DS	5		03427		5	
01310	*****	FORTRAN ADJUST PROCEDURE	*****		03432		5	
01320	DS	5			03437		5	
01330	ADJUST	TC	**23,-1,11		03442		5	
01340	B3	33OUT,210			03444	25	03467	0344L
01350	AM	ADJUST-1,1,610			03456	43	03480	00210
01360	BBOJT	B32			03468	11	0344L	000-1
01380	*****	FORTRAN DP SEARCH ROUTINE	*****		03480	42		
01390	DS	5			03486		5	
01400	DPSR	TFM	JPT1	,DBASE	03488	16	03547	-2472
01410	A	JPT1-1	,DPSR-1	,11	03500	21	03546	0348P
01420	B3	**24,FX,,		IS IT FIXED OR FLOATING VARIABLE	03512	43	03536	03552
01430	SM	JPT1,5,10,		FLOATING, ADJUST TABLE ADDRESS	03524	12	03547	000-5
01440	TF	DPSR-1	,	,6	03536	26	0348P	00000
01450	JPT1	DS	,*		03547		0	
01460	BV	**12			03548	46	03560	01400
01470	B32				03560	42		
01480	FX	DS	1		03562		1	
01490	DBASE	DS	**10-1100		02472		0	

01500	DS	3			03565		3	
01510	FLAD	DC	2,1		03567		2	
		-1						
01520	DS	3			03570		3	
01530	FXAD	DC	2,21		03572		2	
		K1						
01540	REP4	DC	5,-03798		03577		5	
		-3793						
01550	PRINT	DC	5,-03793		03582		5	
		-379L						
01560	TRACE	DC	5,-03803		03587		5	
		-380L						
01570	READ	DC	5,04286		03592		5	
		-4286						
01580	DJREF	DC	00005,17300,,DJREF,		03597		5	
		J7300						
01590	TYPE	DC	5,04166		03602		5	
		-4166						
01600	DS	3			03605		3	
01610	FLMUL	DC	2,3		03607		2	
		-3						
01620	FKMUL	DC	5,03902		03612		5	
		-3902						
01630	FLEXP	DC	5,04118		03617		5	
		-4118						
01640	FXEXP	DC	5,04094		03622		5	
		-4094						
01650	DJMAX	DC	5,17300		03627		5	
		J7300						
01660	ACCEPT	DC	5,04238		03632		5	
		-4238						
01670	SUB2	DC	5,-02258		03637		5	
		-2253						
01680	ACCTAP	DC	5,04262		03642		5	
		-4262						
01690	SUB3	DC	5,-02263		03647		5	
		-226L						
01700	PJNCH	DC	5,04214		03652		5	
		-4214						
01710	DJBASE	DC	00005,17300,,DJBASE,		03657		5	
		J7300						
01720	PJNTAP	DC	5,04190		03662		5	
		-4190						
01730	DS	3			03665		3	
01740	FLSUB	DC	2,2		03667		2	
		-2						
01750	DS	3			03670		3	
01760	FXSUB	DC	2,22		03672		2	
		K2						
01770	DS	3			03675		3	
01780	FLDVD	DC	2,9		03677		2	
		-9						
01790	FXDVD	DC	5,03926		03682		5	
		-3926						
01800	FLRDV	DC	5,04046		03687		5	
		-4046						

01810	FXRDV	DC	5,03950		03692	5	
			-3950				
01820	FXTDFL	DC	5,03998		03697	5	
			-3998				
01830	FLTJFX	DC	5,03854		03702	5	
			-3854				
01840	RFLSUB	DC	5,04022		03707	5	
			-4022				
01850	RFXSUB	DC	5,03878		03712	5	
			-3878				
01860	RSNFL	DC	5,03974		03717	5	
			-3974				
01870	RSNFX	DC	5,03974		03722	5	
			-3974				
01880	LD	DC	5,-03808		03727	5	
			-3808				
01890	SWCFX	DC	5,-03813		03732	5	
			-3813				
01900	SWF	DC	5,-02288		03737	5	
			-2288				
01910	SWFFX	DC	5,-2268		03742	5	
			-2268				
01920	ATYPE	DC	5,04406		03747	5	
			-4406				
01930	SLASH	DC	5,-03818		03752	5	
			-3818				
01940	REP	DC	5,-03823		03757	5	
			-3823				
01950	ITYPE	DC	5,04310		03762	5	
			-4310				
01960	FITYPE	DC	5,04430		03767	5	
			-4430				
01970	ETYPE	DC	5,04454		03772	5	
			-4454				
01980	REDJ	DC	5,-03828		03777	5	
			-3828				
01990	HITYPE	DC	5,04478		03782	5	
			-4478				
02000	XITYPE	DC	5,-03833		03787	5	
			-3833				
02010	ASTJP	DC	5,02395		03792	5	
			-2395				
02020	FACAD	DC	5,02492		03797	5	
			-2492				
02030	IDEND	DC	5,-03838		03802	5	
			-3838				
02040	IXI	DC	5,04070		03807	5	
			-4070				
02050	PAR	DC	5,03843		03812	5	
			-3843				
02060	MAT	DC	5,-03848		03817	5	
			-3848				
02070	BGNST	DS	1,15999		15999	1	
02080	*****	FORTRAN SYMBOL TABLE SEARCH ROUTINE	*****				
02090	DS	5			03822	5	
02100	SRFCT	TF	SRSY,8-1,11, MOVE IN PARAMETERS		03824	26	03883 0382L

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02110	AM	SRFCT-1,5,10			03836	11	03823 000-5
02120	TF	SRGT,SRFCT-1,11			03848	26	03946 0382L
02130	AM	SRFCT-1,1,10			03860	11	03823 000-1
02140	TF	SBASE-1			03872	26	04159 00000
02150	SRSY	DS	*		03883	0	
02160	BLX	**12,SBASE(6)			03884	65	03896 0MJ60
02170	BNR	SRNX,SBASE,11			03896	45	03940 0416-
02180	TFM	SRGT,0,67			03908	16	03940 -0000
02190	TDM	RMSW,1,11			03920	15	04418 0000J
02200	DPX	DS	**1		03930	0	
02210	PFPWSW	DS	**3		03928	0	
02220	B	SRFCT-1,,6			03932	49	0382L 00000
02230	DJRG	**3			03940	0	
02240	SRNX	TF	SBASE,11, MOVE OBJECT ADDRESS OF SYMBOL TO GT		03940	26	00000 0416-
02250	SRGT	DS	**5		03946	0	
02260	TDM	FPSW	,0		03952	15	09347 00000
02270	BNF	**68,SRGT,11			03964	44	04032 03940
02280	BD	**36,SKIPSW			03976	43	04012 09349
02290	CF	SRGT,,6			03988	33	03940 00000
02300	DMSW	DS	**1		03998	0	
02310	COMSW	DS	**1		03999	0	
02320	TDM	FPSW,1,11			04000	15	09347 0000J
02330	TFL	DPX,P27			04012	06	03930 04078
02340	B	**20			04024	49	04044 00000
02350	DJRG	**3			04032	0	
02360	TFL	DPX,P17			04032	06	03930 04102
02370	TD	FXORFL,1(6),, SET FIX OR FLOAT			04044	25	04162 0--01
02380	TD	DMSW,2(6),, SET DIMENSION SWITCH			04056	25	03998 0--02
02390	TDM	COMSW ,01270 ,789			04068	15	03999 -JK70
02400	P27	DS	**1		04078	0	
02410	BNF	**24,DMSW			04080	44	04104 03998
02420	TDM	COMSW,00171,79, SET COMMON SWITCH			04092	15	03999 -0J71
02430	P17	DS	**1		04102	0	
02440	BD	**20,DMSW,, IS IT DIMENSIONED			04104	43	04124 03998
02450	B7	SRFFL,, NO, EXIT			04116	49	04136
02460	TF	P1,99995(6),, SET I MAX			04124	26	09338 9RR95
02470	SRFFL	CF	FXORFL		04136	33	04162 00000
02480	B	SRFCT-1,,6, EXIT			04148	49	0382L 00000
02490	SBASE	DSC	1,4		04160	1	
			4				
02500	FXORFL	DC	2,0		04162	2	
			-0				
02510	*****	FORTRAN FORCE PROCEDURE	*****				
02520	DS	2			04164	2	
02530	FJRCE	CM	LV,104,9		04166	14	09239 00J04
02540	BL	FJRCEB+24			04178	47	04298 01300
02550	CM	RV,104,9			04190	14	09251 00J04
02560	BL	FJRCEB+24			04202	47	04298 01300
02570	BLX	**12,LV+1(5)			04214	65	04226 0R2M0
02580	BLX	**12,RV+1(6)			04226	65	04238 0RK52
02590	MA	FCODE,FBASE(5)			04238	70	04321 0L3J0
02600	CM	RV,141,9			04250	14	09251 00J41
02610	BH	FORCC			04262	46	04330 01100
02620	FJRCEB	C	FBASE-7(5),FBASE(6)		04274	24	0L3-3 0LL10
02630	BNH	**24			04286	47	04310 01100
02640	MA	FCODE,L33			04298	70	04321 04328

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02650	BLXM	**12,0(6)		04310	66	04322	0--00
02660	FCDDE	DS	,*	04321		0	
02670		882		04322	42		
02680	L33	DSA	L3	04328		5 X	1
				04328		-2916	
02690	FJRCC	CM	FBASE-7(5),0,10	04330	14	0L3-3	000-0
02700		87	FORCEB+12	04342	49	04286	
02710	FBASE	DS	,**2-1040	03310		0	
02720		DC	2,1,,	04350		2	
		-1					
02730		DC	2,50	04352		2	
		NO					
02740		DSA	L3	04357		5 X	1
				04357		-2916	
02750	RFLAG	DC	1,0	04358		1	
		-					
02760		DC	2,60,,	04360		2	
		00					
02770		DC	2,59	04362		2	
		N9					
02780		DSA	CODE6	04367		5 X	1
				04367		J0074	
02790	RXFLAG	DC	1,0	04368		1	
		-					
02800		DC	2,0,,	04370		2	
		-0					
02810		DC	2,0	04372		2	
		-0					
02820		DSA	CODE9	04377		5 X	1
				04377		J0146	
02830	FTSW	DSC	1,0	04378		1	
		0					
02840		DC	2,2,,	04380		2	
		-2					
02850		DC	2,0	04382		2	
		-0					
02860		DSA	CODE7	04387		5 X	1
				04387		J0098	
02870	CALLX	DC	1,0	04388		1	
		-					
02880		DC	2,0,,	04390		2	
		-0					
02890		DC	2,0	04392		2	
		-0					
02900		DSA	CODE12	04397		5 X	1
				04397		J0170	
02910	FFRSW	DS	1	04398		1	
02920		DC	2,0,,	04400		2	
		-0					
02930		DC	2,0	04402		2	
		-0					

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02940		DSA	CODE0	04407		5 X	1
				04407		-3366	
02950	SUBPSW	DS	1	04408		1	
02960		DC	2,10,,	04410		2	
		JO					
02970		DC	2,10	04412		2	
		JO					
02980		DSA	CODE1	04417		5 X	1
				04417		J0002	
02990	RMSW	DSC	1,0	04418		1	
		0					
03000		DC	2,0,,	04420		2	
		-0					
03010		DC	2,0	04422		2	
		-0					
03020		DSA	CODE14	04427		5 X	1
				04427		J0194	
03030	FLAGSW	DS	1	04428		1	
03040		DC	2,0,,	04430		2	
		-0					
03050		DC	2,0	04432		2	
		-0					
03060		DSA	CODE14	04437		5 X	1
				04437		J0194	
03070	CKSW	DS	1	04438		1	
03080		DC	2,0,,	04440		2	
		-0					
03090		DC	2,0	04442		2	
		-0					
03100		DSA	CODE14	04447		5 X	1
				04447		J0194	
03110		DC	1,0	04448		1	
		-					
03120		DC	2,5,,	04450		2	
		-5					
03130		DC	2,5	04452		2	
		-5					
03140		DSA	CODE1	04457		5 X	1
				04457		J0002	
03150		DC	1,0	04458		1	
		-					
03160		DC	2,5,,	04460		2	
		-5					
03170		DC	2,4	04462		2	
		-4					
03180		DSA	CODE1	04467		5 X	1
				04467		J0002	
03190		DC	1,0	04468		1	
		-					

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03200	DC -0	2,0,,	ACCEPT	04470	2
03210	DC -0	2,0		04472	2
03220	DSA	CODE14		04477	5 X 1
				04477	J0194
03230	DC -	1,0		04478	1
03240	DC -0	2,0,,	ACCEPT TAPE	04480	2
03250	DC -0	2,0		04482	2
03260	DSA	CODE14		04487	5 X 1
				04487	J0194
03270	DC -	1,0		04488	1
03280	DC -0	2,0,,	PUNCH	04490	2
03290	DC -0	2,0		04492	2
03300	DSA	CODE14		04497	5 X 1
				04497	J0194
03310	DC -	1,0		04498	1
03320	DC -0	2,0,,	PUNCH TAPE	04500	2
03330	DC -0	2,0		04502	2
03340	DSA	CODE14		04507	5 X 1
				04507	J0194
03350	DC -	1,0		04508	1
03360	DC JO	2,10,,	MINUS	04510	2
03370	DC JO	2,10		04512	2
03380	DSA	CODE1		04517	5 X 1
				04517	J0002
03390	DC -	1,0		04518	1
03400	DC -5	2,5,,	DIVIDE	04520	2
03410	DC -5	2,5		04522	2
03420	DSA	CODE1		04527	5 X 1
				04527	J0002
03430	DC -	1,0		04528	1
03440	DC -0	2,0,,	RDVD	04530	2

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03450	DC -0	2,0		04532	2
03460	DSA	CODE0		04537	5 X 1
				04537	-3366
03470	DC -	1,0		04538	1
03480	DC M9	2,49,,	CMA	04540	2
03490	DC M8	2,48		04542	2
03500	DSA	CODE8		04547	5 X 1
				04547	J0122
03510	DC -	1,0		04548	1
03520	DC M9	2,49,,	LPAREN	04550	2
03530	DC -1	2,1		04552	2
03540	DSA	CODE3		04557	5 X 1
				04557	J0026
03550	DC -	1,0		04558	1
03560	DC 00	2,60,,	STOP	04560	2
03570	DC N9	2,59		04562	2
03580	DSA	CODE6		04567	5 X 1
				04567	J0074
03590	DC -	1,0		04568	1
03600	DC 00	2,60,,	PAUSE	04570	2
03610	DC N9	2,59		04572	2
03620	DSA	CODE6		04577	5 X 1
				04577	J0074
03630	DC -	1,0		04578	1
03640	DC 00	2,60,,	CONTINUE	04580	2
03650	DC N9	2,59		04582	2
03660	DSA	CODE6		04587	5 X 1
				04587	J0074
03670	DC -	1,0		04588	1
03680	DC 00	2,60,,	FORMAT	04590	2
03690	DC N9	2,59		04592	2

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03700	DSA	CODE17		04597	5 X 1
				04597	J0242
03710	DC	1,0		04598	1
	-				
03720	DC	2,5,,	UNMNS	04600	2
	-5				
03730	DC	2,0		04602	2
	-0				
03740	DSA	CODE4		04607	5 X 1
				04607	J0050
03750	DC	1,0		04608	1
	-				
03760	DC	2,0,,	SENSE SWITCH	04610	2
	-0				
03770	DC	2,2		04612	2
	-2				
03780	DSA	CODE0		04617	5 X 1
				04617	-3366
03790	DC	1,0		04618	1
	-				
03800	DC	2,0,,	CALL EXIT	04620	2
	-0				
03810	DC	2,0		04622	2
	-0				
03820	DSA	CDCALL		04627	5 X 1
				04627	J0410
03830	DC	1,0		04628	1
	-				
03840	DC	2,60,,	SC	04630	2
	00				
03850	DC	2,60		04632	2
	00				
03860	DSA	CODE0		04637	5 X 1
				04637	-3366
03870	DC	1,0		04638	1
	-				
03880	DC	2,60,,	EQUAL	04640	2
	00				
03890	DC	2,59		04642	2
	N9				
03900	DSA	CODE1		04647	5 X 1
				04647	J0002
03910	DC	1,0		04648	1
	-				
03920	DC	2,0,,	COLON	04650	2
	-0				
03930	DC	2,0		04652	2
	-0				
03940	DSA	CODE5		04657	5 X 1

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				04657	-2964
				04658	1
03950	DC	1,0			
	-				
03960	DC	2,0,,	SUBP	04660	2
	-0				
03970	DC	2,0		04662	2
	-0				
03980	DSA	FCT1		04667	5 X 1
				04667	J0338
03990	DC	1,0		04668	1
	-				
04000	DC	2,0,,	SUBF	04670	2
	-0				
04010	DC	2,0		04672	2
	-0				
04020	DSA	FCT1		04677	5 X 1
				04677	J0338
04030	DC	1,0		04678	1
	-				
04040	DC	2,0,,	DEF	04680	2
	-0				
04050	DC	2,0		04682	2
	-0				
04060	DSA	FCT1		04687	5 X 1
				04687	J0338
04070	DC	1,0		04688	1
	-				
04080	DC	2,0,,	CALL	04690	2
	-0				
04090	DC	2,0		04692	2
	-0				
04100	DSA	CODE15		04697	5 X 1
				04697	J0218
04110	DC	1,0		04698	1
	-				
04120	DC	2,0,,	RETURN	04700	2
	-0				
04130	DC	2,0		04702	2
	-0				
04140	DSA	FCTRT		04707	5 X 1
				04707	J0362
04150	DC	1,0		04708	1
	-				
04160	DC	2,0,,	DUMMY	04710	2
	-0				
04170	DC	2,60		04712	2
	00				
04180	DSA	CODE0		04717	5 X 1
				04717	-3366
04190	DC	1,0		04718	1
	-				

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04200	DC	2,0,,	END	04720	2	
04210	-0	2,0		04722	2	
04220	DSA	CODE6		04727	5 X	1
04230	DC	1,0		04727	J0074	
	-			04728	1	
04240	DC	2,1,,	FETCHV	04730	2	
04250	-1	2,0		04732	2	
04260	DC	2,0		04737	5 X	1
	-0			04737	J0194	
04270	DC	1,0		04738	1	
04280	DC	2,1,,	FETCHL	04740	2	
04290	-1	2,0		04742	2	
04300	DC	2,0		04747	5 X	1
	-0			04747	J0194	
04310	DC	1,0		04748	1	
04320	DC	2,1,,	FINDV	04750	2	
04330	-1	2,0		04752	2	
04340	DC	2,0		04757	5 X	1
	-0			04757	J0194	
04350	DC	1,0		04758	1	
04360	DC	2,1,,	FINDL	04760	2	
04370	-1	2,0		04762	2	
04380	DC	2,0		04767	5 X	1
	-0			04767	J0194	
04390	DC	1,0		04768	1	
04400	DC	2,1,,	RECORDV	04770	2	
04410	-1	2,0		04772	2	
04420	DC	2,0		04777	5 X	1
	-0			04777	J0194	
04430	DC	1,0		04778	1	
04440	DC	2,1,,	RECORDL	04780	2	
	-1					

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04450	DC	2,0		04782	2	
04460	-0			04787	5 X	1
04460	DSA	CODE14		04787	J0194	
04470	DC	1,0		04788	1	
04480	DC	2,0,,	S0	04790	2	
04490	-0	2,0		04792	2	
04500	DC	2,0		04797	5 X	1
	-0			04797	J0290	
04510	DC	1,0		04798	1	
04520	DC	2,0,,	S1	04800	2	
04530	-0	2,0		04802	2	
04540	DC	2,0		04807	5 X	1
	-0			04807	J0266	
04550	DC	1,0		04808	1	
04560	DC	2,0,,	S2	04810	2	
04570	-0	2,0		04812	2	
04580	DC	2,0		04817	5 X	1
	-0			04817	J0266	
04590	DC	1,0		04818	1	
04600	DC	2,0,,	S3	04820	2	
04610	-0	2,0		04822	2	
04620	DC	2,0		04827	5 X	1
	-0			04827	J0266	
04630	DC	1,0		04828	1	
04640	DC	2,0,,	CALL LINK	04830	2	
04650	-0	2,0		04832	2	
04660	DC	2,0		04837	5 X	1
	-0			04837	J0410	
04670	DSA	CODESS		04837	J0410	
04670	*****	GETX FORTRAN ROUTINE	*****	04842	5	
04680	DS	5		04844	45	04892 09390
04690	GETX	BNR GETSY,INPUT		04856	16	00565 -4879
04700	TFM	IDRT ,**23		04868	49	00566 -4918
04710	B	IDGT ,GETBLK	,7	04880	11	04931 000-2
04720	AM	GTBLKB ,2	,10			

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04730	GETSY	TF	GETX-1,INPUT+4,6,	GET NEXT SYMBOL	04892	26	0484L	09394
04740		TR	INPUT,INPUT+5,,	SLIDE DOWN	04904	31	09390	09395
04750		BB2			04916	42		
04760	GETBLK	DSC	2,2		04918		2	
		O2						
04770		DSA	GTBLKA		04924		5 X	1
04780		DC	1,'		04924		-4926	
					04925		1	
04790	GTBLKA	DSC	1,0		04926		1	
		O						
04800	GTBLKB	DC	5,600		04931		5	
		-0600						
04810		DC	3,2		04934		3	
		-02						
04820		DSA	INPUT		04939		5 X	1
04830		DC	1,'		04939		-9390	
					04940		1	
04840	*****		FORTRAN II ADSL AND RMNS ROUTINES					
04850		DS	5		04945		5	
04860	ADSL	TF	BGNST(7),=-1,11		04946	26	INRR9	0494N
04870		TDM	BGNST+1(7),0		04958	15	10--0	00000
04880		DC	1,'**		04969		1	
04890		BXM	**12,5(7)		04970	62	04982	0---5
04900		BB2			04982	42		
04910		DS	5		04988		5	
04920	RMNS	TF	RMNS-1,BGNST(7),6		04990	26	0498R	INRR9
04930		TF	BGNST-4(7),BGNST+1(7)		05002	31	INRR5	10--0
04940		BB2			05014	42		
04950	*****		FORTRAN GENERATE TEMPORARY STORAGE ROUTINE *****					
04960		DS	5		05020		5	
04970	GMRP	BLXM	**12,0(15)		05022	66	05034	0-0-0
04980		TDM	GTSBSW,0		05034	15	06023	00000
04990		BXM	**12,5(5)		05046	62	05058	0-0-5
05000		CM	BGNST(5),101,9		05058	14	IN9R9	00J01
05010		BNE	GMRP+24		05070	47	05046	01200
05020		CM	TMAX,,9,	HAVE ANY TEMPS BEEN GENERATED	05082	14	05964	00-00
05030		BE	GNONE		05094	46	05190	01200
05040	GYES	BLX	**12,TBASE(6)		05106	65	05118	OKL03
05050		TFM	GCNT,0,9		05118	16	05177	00-00
05060		BXM	**12,-10(6)		05130	62	05142	0--1-
05070		BNF	GFREE,3(6)		05142	44	05606	0--03
05080	GTPT	AM	GCNT,1,10		05154	11	05177	000-1
05090		CM	TMAX		05166	14	05964	-0000
05100		DS	,*		05177		0	
05110		BNE	GYES+24		05178	47	05130	01200
05120	GNONE	AM	TMAX,1,10		05190	11	05964	000-1
05130		BD	FULLCK-24,GTSBSW		05202	43	05390	06023
05140		TF	GCOM,ADCOM,,	MOVE ADCOM TO GCOM	05214	26	05831	05969
05150		AM	GCOM,19,10,	ADD 19 FOR LENGTH OF INSTS	05226	11	05831	000J9
05160		A	GCOM,LNG		05238	21	05831	09327
05170		TF	TCOM,GCOM,,	SAVE CONSTANT ADDRESS	05250	26	05961	05831

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05180		TDM	SS1,1		05262	15	06633	00001
05190		BTM	PUTX,**16,,	OUTPUT STORE FAC INST	05274	17	06030	-5290
05200		DSA	TFL,GCOM,FACAD		05290		5 X	3
					05290		-9021	
					05295		-5831	
					05300		-3797	
05210		MM	GCOM,5,10,	IS GCOM ODD OR EVEN	05302	13	05831	000-5
05220		BD	GADD1,99		05314	43	05586	00099
05230		AM	GCOM,2,10,	ADD 2 TO GCOM	05326	11	05831	000-2
05240	GPUT	TDM	SS1,1		05338	15	06633	00001
05250		BTM	PUTX,**16		05350	17	06030	-5366
05260		DSA	B,GCOM,BLANK		05366		5 X	3
					05366		-5974	
					05371		-5831	
					05376		-9026	
05270		TF	ADCOM,GCOM,,	RESERVE SPACE FOR NEW TEMP	05378	26	05969	05831
05280		TF	GBASE,TBASE,,	MOVE IN NEXT AVAILABLE TABLE ADDRESS	05390	26	09324	02303
05290		S	GBASE-1,TMAX		05402	22	09323	05964
05300	FULLCK	C	GBASE,DOMAX		05414	24	09324	03627
05310		BNL	GPUTA		05426	46	05470	01300
05320		BTM	ERRT,FULNES		05438	17	08736	-9143
05330	MNCLOV	BV	**12		05450	46	05462	01400
05340		B7	MNCAL		05462	49	00796	
05350	GPUTA	TF	GBASE,TCOM,6		05470	26	0932M	05961
05360		BLX	**12,GBASE(6)		05482	65	05494	ORL24
05370	GFLAG	TFM	4(6),10,10		05494	16	0--04	000J0
05380		TD	1(6),FLAGSW		05506	25	0--01	04428
05390		BD	GTFIN,GTSBSW		05518	43	15106	06023
05400		TDM	FSW,0		05530	15	08986	00000
05410	GTJW	67	**12,GBASE(6)		05542	67	05554	ORL24
05420		CF	GBASE-4		05554	33	09320	00000
05430		TF	BGNST(5),GBASE-1		05566	26	IN9R9	09323
05440		B7	GMRP-1,,6		05578	49	0502J	
05450	GADD1	AM	GCOM,1,10,	ADD 1 TO GCOM	05586	11	05831	000-1
05460		B7	GPUT		05598	49	05338	
05470	GFREE	BD	GTST,4(6)		05606	43	05630	0--04
05480		BNF	NGFRE,GTSBSW		05618	44	05650	06023
05490	GTST	BD	GFLAG,GTSBSW		05630	43	05494	06023
05500		B7	GTPT		05642	49	05154	
05510	NGFRE	TF	TCOM,0(6)		05650	26	05961	0--00
05520		TDM	SS1,1		05662	15	06633	00001
05530		BTM	PUTX,**16,,	OUTPUT STORE FAC INST	05674	17	06030	-5690
05540		DSA	TFL,TCOM,FACAD		05690		5 X	3
					05690		-9021	
					05695		-5961	
					05700		-3797	
05550		B	GFLAG		05702	49	05494	00000
05560	GI	DS	5,*		05713		5	
05570		DC	5,10000		05718		5	
			J0000					
05580	GTCL	SF	GTCL-4		05720	32	05716	00000
05590		CM	GTCL-1,101,8		05732	14	05719	0-101
05600		BE	**36		05744	46	05780	01200

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05610	C	TBASE-1,GTCL-1			05756	24	02302	05719
05620	BH	GTFLCL			05768	46	05808	01100
05630	BB				05780	42	00000	00000
05640	DDRG	**9			05782			
05650	GCLEAR	TF	**17,GTCL-1		05782	26	05799	05719
05660	TDM	7			05794	15	00007	00000
05670	BB	,,0			05806	M2	00000	00000
05680	DDRG	**9			05808			
05690	GTFLCL	TF	**17,GTCL-1		05808	26	05825	05719
05700	CF	4			05820	33	00004	00000
05710	GCDW	DS	5,,		05831		5	
05720	B7	GCLEAR			05832	49	05782	
05730	GTSCCL	TF	GBASE,TBASE		05840	26	09324	02303
05740	S	GBASE-1,TMAX			05852	22	09323	05964
05750	AM	GBASE,3,10			05864	11	09324	000-3
05760	C	GBASE,TBASE			05876	24	09324	02303
05770	BNH	**14			05888	47	05902	01100
05780	BB2				05900	42		
05790	TDM	GBASE,,6			05902	15	0932M	00000
05800	SM	GBASE,3,10			05914	12	09324	000-3
05810	CF	GBASE,,6			05926	33	0932M	00000
05820	AM	GBASE,13,10			05938	11	09324	000J3
05830	B	GTSCCL+36			05950	49	05876	00000
05840	TCOW	DS	,*		05961		0	
05850	TMAX	DC	3,0		05964		3	
		-00						
05860	ADCOM	DC	5,0		05969		5	
		-0000						
05870	DC	1,1			05970		1	
		*						
05880	BTM	DC	2,17		05972		2	
		J7						
05890	B	DC	2,49		05974		2	
		M9						
05900	D1	DS	5		05979		5	
05910	D1	DS	5		05984		5	
05920	D2	DS	5		05989		5	
05930	DJ	DS	5		05994		5	
05940	D3	DS	5		05999		5	
05950	DK	DS	5		06004		5	
05960	D4	DC	5,0		06009		5	
		-0000						
05970	T1	DS	5		06014		5	
05980	L	DS	3		06017		3	
05990	LD1	DC	5,0		06022		5	
		-0000						
06000	GTSRSH	DSC	1,0		06023		1	
		0						
06010	*****	DISC OUTPUT ROUTINES FOR OBJECT PROGRAM						
06020	DS	5			06028		5	
06030	PUTX	TF	PUT1 ,PUTX-1 ,11		06030	26	08020	0602R
06040	AM	PUTX-1 ,5 ,10			06042	11	06029	000-5
06050	TF	PUT2 ,PUTX-1 ,11			06054	26	08025	0602R
06060	AM	PUTX-1 ,5 ,10			06066	11	06029	000-5
06070	TR	TYPET ,TYPEX			06078	31	07675	08031
06080	PUTXA	TF	PUT3 ,PUTX-1 ,11		06090	26	08030	0602R

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06090	AM	PUTX-1 ,2 ,10			06102	11	06029	000-2
06100	PUTXB	C	CODET ,LSTYPE		06114	24	07688	07694
06110	BNE	PUTDIF			06126	47	06854	01200
06120	C	SAVCOM ,ADCOM			06138	24	06657	05969
06130	BNE	OUTSEQ			06150	47	06994	01200
06140	C	BAL ,SLNG			06162	24	07696	07677
06150	BL	PUTNXT			06174	47	07154	01300
06160	PUTEST	BD	PUTINS ,CODET		06186	43	06206	07688
06170	B7	PUTCAD			06198	49	06686	
06180	*****	PLACE INSTRUCTIONS IN OUTPUT BUFFER						
06190	PUTINS	BLX	**12 ,NEXT(3)		06206	65	06218	07P-6
06200	TF	2(3) ,PUT1 ,11			06218	26	00--2	0802-
06210	C	LOCOM ,PUT3 ,11			06230	24	02262	0803-
06220	BNH	**24			06242	47	06266	01100
06230	BD	FLG2 ,SS2			06254	43	06626	06634
06240	PUTXC	C	LOCOM ,PUT2 ,11		06266	24	02262	0802M
06250	BNH	**24			06278	47	06302	01100
06260	BD	**24 ,SS1			06290	43	06314	06633
06270	CF	1(3)			06302	33	00--1	00000
06280	PUTGT	DS	**		06313		0	
06290	MM	SSXR1 ,-, ,10			06314	13	08092	000-M
06300	BXM	**12 ,7(3)			06326	62	06338	00--7
06310	BT	XRFIL ,PUT2			06338	27	06506	08025
06320	HERE	BD	FLG3 ,SS3		06350	43	06646	06635
06330	PUTXD	MM	SSXR2 ,-, ,10		06362	13	08094	000-M
06340	BXM	**12 ,5(3)			06374	62	06386	00--5
06350	BT	XRFIL ,PUT3			06386	27	06506	08030
06360	HEREZ	BD	FLG4 ,SS4		06398	43	06666	06636
06370	PUTXE	TFM	SS4 ,0 ,8		06410	16	06636	0-000
06380	SM	BAL ,12 ,10			06422	12	07696	000J2
06390	AM	NEXT ,12 ,10			06434	11	07706	000J2
06400	PUTXF	A	ADCOM ,SLNG		06446	21	05969	07677
06410	TF	SAVCOM ,ADCOM			06458	26	06657	05969
06420	A	LANGAD ,SLNG			06470	21	0770J	07677
06430	TFL	SSXR2 ,FLG4+11			06482	06	08094	06677
06440	B	PUTX-1 , ,6			06494	49	0602R	00000
06450	XRFIL	BLX	**12 ,99(1)		06506	65	06518	000R9
06460	CM	99 ,0 ,10			06518	14	00099	000-0
06470	BE	XRFIL2			06530	46	06580	01200
06480	TFL	99999(3) ,XRBASE(11)			06542	06	99RR9	0657R
06490	MA	0(3) ,XRFIL-1 ,11			06554	70	00--0	0650N
06500	NF	0(3) ,XRFIL-1 ,11			06566	71	00--0	0650N
06510	BB2				06578	42		
06520	XRFIL2	TF	0(3) ,XRFIL-1 ,11		06580	26	00--0	0650N
06530	BB2				06592	42		
06540	DC	4,0			06597		4	
		-000						
06550	DC	4,-0			06601		4	
		-00-						
06560	XRBASE	DS	**4		06597		0	
06570	OO	**0246789			06602	-0	-0-0-	---00
06580	OO	**013456891011			06614	--	0----	0----
06590	FLG2	SF	2(3)		06626	32	00--2	00000
06600	SS1	DS	**4		06633		0	
06610	SS2	DS	**3		06634		0	
06620	SS3	DS	**2		06635		0	

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06630	SS4	DS	,*-1			06636		0
06640	SS1L	DS	,*			06637		0
06650	B7	PUTXC				06638	49	06266
06660	FLG3	SF	0(3)	,99999	,7	06646	32	00--0
06670	SAVCOW	DS	,*			06657		0
06680	B7	PUTXD				06658	49	06362
06690	FLG4	SF	0(3)	,0	,810	06666	32	00--0
06700	B7	PUTXE				06678	49	06410
06710	*****		PLACE DSA ADDRESSES IN OUTPUT BUFFER					
06720	PUTCAD	A	NEXT	,SLNG		06686	21	07706
06730	S	BAL		,SLNG		06698	22	07696
06740	MM	SSXR2		,-4	,10	06710	13	08094
06750	BLX	**12		,NEXT(3)		06722	65	06734
06760	BD	**32		,SSXR2		06734	43	06766
06770	TF	0(3)		,PUT3	,11	06746	26	00--0
06780	B7	PUTQ				06758	49	06814
06790	BLX	**12		,99(2)		06766	65	06778
06800	TFL	99999(3)		,XRBASE(2)		06778	06	99RR9
06810	MA	0(3)		,PUT3	,11	06790	70	00--0
06820	MF	0(3)		,PUT3	,11	06802	71	00--0
06830	PUTQ	BD	**20	,CODET-3		06814	43	06834
06840	B7	PUTXF				06826	49	06446
06850	TFM	SAVCOW		,99999		06834	16	06657
06860	B7	PUTXF+24				06846	49	06470
06870	*****		THIS TYPE NOT EQUAL TO LAST					
06880	PUTDIF	TF	LSTYPE	,CODET		06854	26	07694
06890	C	SAVCOW		,ADCOM		06866	24	06657
06900	BNE	OUTSEQ				06878	47	06994
06910	C	BAL		,SSLNG		06890	24	07696
06920	BL	PUTNXT				06902	47	07154
06930	PUTXG	AM	NEXT	,1	,10	06914	11	07706
06940	TD	NEXT		,TYPET	,6	06926	25	07700
06950	AM	NEXT		,2	,10	06938	11	07706
06960	TFM	NEXT		,0	,610	06950	16	07700
06970	TF	LNGAD		,NEXT		06962	26	07701
06980	SM	BAL		,3	,10	06974	12	07696
06990	B7	PUTEST				06986	49	06186
07000	*****		OUT OF SEQUENCE					
07010	OUTSEQ	C	BAL	,SQLNG		06994	24	07696
07020	BL	PUTNXT				07006	47	07154
07030	CM	BAL		,75	,10	07018	14	07696
07040	BE	PUTXH				07030	46	07078
07050	AM	NEXT		,1	,10	07042	11	07706
07060	SM	BAL		,1	,10	07054	12	07696
07070	TDM	NEXT		,	,6	07066	15	07700
07080	DC	1,*,*				07077		1
07090	PUTXH	AM	NEXT	,5	,10	07078	11	07706
07100	SM	BAL		,5	,10	07090	12	07696
07110	BD	PUTTA		,CODET-3		07102	43	07134
07120	PUTXJ	TF	NEXT	,ADCOM	,6	07114	26	07700
07130	B7	PUTXG				07126	49	06914
07140	PUTTA	TF	NEXT	,PUT2	,611	07134	26	07700
07150	B7	PUTXG				07146	49	06914
07160	*****		NEXT CARD BUFFER TO BE USED					
07170	PUTNXT	AM	NEXT	,1	,10	07154	11	07706

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07180	TD	NEXT		,FLGRM	,6	07166	25	07700
07190	CM	PREBUF		,BUF4		07178	14	08015
07200	BE	PUTPCH				07190	46	07258
07210	AM	PREBUF		,75	,10	07202	11	08015
07220	TF	NEXT		,PREBUF		07214	26	07706
07230	SM	NEXT		,1	,10	07226	12	07706
07240	PUTXI	TFM	BAL	,75	,10	07238	16	07696
07250	B7	PUTXH				07250	49	07078
07260	*****		OUTPUT BUFFER LOAD TO DISC					
07270	PUTPCH	TDM	BUF4+75			07258	15	08010
07280	DGM	*				07269		1
07290	TFM	IORT		,**23		07270	16	00565
07300	B	IOPT		,PUTXX	,7	07282	49	00532
07310	AM	PUTXZ		,3	,10	07294	11	07665
07320	TFM	PREBUF		,BUF1		07306	16	08015
07330	TFM	NEXT		,BUF1-1		07318	16	07706
07340	TFM	**18		,BUF4+75		07330	16	07348
07350	TF	BUF4+75		,N13089		07342	26	08010
07360	SM	**6		,12	,10	07354	12	07348
07370	CM	**18		,BUF1		07366	14	07348
07380	BH	**36				07378	46	07342
07390	B	PUTXI				07390	49	07238
07400	PUTC	TF	**23	,*-1	,11	07402	26	07425
07410	CF	**11				07414	33	07425
07420	C	**1		,LOCOM	,6	07426	24	0742N
07430	BH	PUTCA				07438	46	07498
07440	TR	TYPET		,TYPECR		07450	31	07675
07450	PUTCB	TF	PUTX-1	,PUTC-1		07462	26	06029
07460	B	PUTXA				07474	49	06090
07470	PUTD	TF	PUTC-1,PUTD-1			07486	26	07401
07480	PUTCA	TR	TYPET	,TYPECN		07498	31	07675
07490	B	PUTCB				07510	49	07462
07500	PUTA	TF	PUT2	,PUTA-1	,11	07522	26	08025
07510	AM	PUTA-1		,5	,10	07534	11	07521
07520	TF	PUT3		,PUTA-1	,11	07546	26	08030
07530	AM	PUTA-1		,1	,10	07558	11	07521
07540	TF	PUTX-1		,PUTA-1		07570	26	06029
07550	TR	TYPET		,TYPEA		07582	31	07675
07560	B	OUTSEQ				07594	49	06994
07570	PUTRM	TR	TYPET,TYPEPM			07606	31	07675
07580	TF	PUTX-1,PUTRM-1				07618	26	06029
07590	B7	PUTXA				07630	49	06090
07600	TYPEPM	DSC	1,2			07637		1
07610	DC	2,2				07639		2
07620	DC	2,5				07641		2
07630	DC	2,10				07643		2
07640	DC	2,11				07645		2
07650	DC	5,100				07650		5
07660	DC	1,*				07651		1

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07670	PUTXX	DSC	2,2	07652	2	
07680		DSA	PUTXY	07658	5 X	1
07690		DC	1,1	07658	-7660	
07700	PUTXY	DSC	1,0	07659	1	
07710	PUTXZ	DC	5,0	07660	1	
07720		DC	3,3	07665	5	
07730		DSA	BUF1	07668	3	
07740	FLGRM	DC	1,1	07673	5 X	1
07750	TYPET	DS	1	07673	-7710	
07760	SLNG	DS	2	07674	1	
07770	SSLNG	DS	2	07675	1	
07780	NLNG	DS	2	07677	2	
07790	SQLNG	DS	2	07679	2	
07800	CODET	DS	5	07681	2	
07810		DS	1	07683	2	
07820	LSTYPE	DC	5,0	07688	5	
07830	BAL	DC	2,75	07689	1	
07840	LNGAD	DS	5	07694	5	
07850	NEXT	DSA	BUF1	07696	2	
07860		DAS	1	07701	5	
07870	BUF1	DSC	50,0	07706	5 X	1
07880		DSC	25,0	07706	-7710	
07890	BUF2	DSC	50,0	07709	1 X	2
07900		DSC	25,0	07710	50	
07910	BUF3	DSC	50,0	07760	25	
07920		DSC	25,0	07785	50	
07930	BUF4	DSC	50,0	07835	25	
07940		DSC	25,0	07860	50	
07950	PREBUF	DGM		07910	25	
07960		DSA	BUF1	07935	50	
07970	PUT1	DS	5	07985	25	
07980	PUT2	DS	5	08010	1	
				08015	5 X	1
				08015	-7710	
				08020	5	
				08025	5	

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07990	PUT3	DS	5	08030	5	
08000	TYPEX	DSC	1,1	08031	1	
08010		DC	2,12	08033	2	
08020		J2		08035	2	
08030		DC	2,15	08037	2	
08040		J5		08039	2	
08050		DC	2,20	08044	5	
08060		K0		08045	1	
08070	TYPECR	DC	2,21	08046	1	
08080		K1		08048	2	
08090		DC	5,1	08050	2	
08100		-0001		08052	2	
08110		DC	1,1	08054	2	
08120		J3		08059	5	
08130		DC	1,3	08060	1	
08140	TYPECN	DSC	1,2	08061	1	
08150		DC	2,5	08063	2	
08160		-5		08065	2	
08170		DC	2,8	08067	2	
08180		-8		08069	2	
08190		DC	2,13	08074	5	
08200		J3		08075	1	
08210	TYPEA	DC	2,14	08076	1	
08220		J4		08078	2	
08230		DC	2,14	08080	2	
08240		J4		08082	2	
08250		DC	5,100	08084	2	
08260		-0100		08089	5	
08270		DC	1,1	08090	1	
		J4				
		DC	5,1000			
		-1000				
		DC	1,1			

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08280	SSXR1	DC	2,0		08092	2
		-0				
08290	SSXR2	DC	2,0		08094	2
		-0				
08300		DS	5		08099	5
08310	CANDS	TF	CANDSA	,*-1	08100	26 08166 0809R
		BTM	RMNS	,DX	08112	17 04990 -8297
08320		BTM	RMNS	,DY	08124	17 04990 -8302
08330		SF	DX		08136	32 08297 00000
08340		TD	DY-4	,DX	08148	25 08298 08297
08350		TF		,DY	08160	26 00000 08302
08360		DS		,*-5	08166	0
08370	CANDSA	AM	CANDS-1	,5	08172	11 08099 000-5
08380		BTM	RMNS	,DX	08184	17 04990 -8297
08390		CM	DX	,104	08196	14 08297 0-104
08400		BNE	**32		08208	47 08240 01200
08410		AM	CANDS-1	,1	08220	11 08099 000-1
08420	CANDRT	B	CANDS-1	,	08232	49 0809R 00000
08430		DJRG	**3		08240	
08440		BTM	SRFCT	,**16	08240	17 03824 -8256
08450		DSA	DX,DX		08256	5 X 2
08460						
					08256	-8297
					08261	-8297
08470		TF	**18	,CANDS-1	08262	26 08280 0809R
08480		TF		,DX	08274	26 00000 08297
08490		B	CANDRT		08286	49 08220 00000
08500	DX	DS	,*		08297	0
08510	DY	DS	5		08302	5
08520	EXSUB	BD	EXXR	,SBASE-5	08304	43 08550 04155
08530		BNF	**24	,SSIL	08316	44 08340 06637
08540		BTM	EXCLR	,**12	08328	17 08442 -8340
08550		CM	O(2)	,27	08340	14 00-0-000K7
08560		BE	EXRT		08352	46 08388 01200
08570		BNF	**24	,PFPSW	08364	44 08388 03928
08580		TDM	SS4	,1	08376	15 06636 00001
08590	EXRT	TDM	SS2	,1	08388	15 06634 00001
08600		TDM	SSIL	,0	08400	15 06637 00000
08610		BSX	**12	,**23(2)	08412	67 08424 08M35
08620		BTM	PUTX	,*-*	08424	17 06030 -0000
08630		DS	5		08440	5
08640	EXCLR	CM	F	,10	08442	14 02250 000J0
08650		BNH	EXCLR-1	,	08454	47 0844J 01100
08660		CM	O(2)	,3	08466	14 00-0-000-3
08670		BE	EXZER		08478	46 08514 01200
08680		CM	O(2)	,9	08490	14 00-0-000-9
08690		BNE	EXCLR-1	,	08502	47 0844J 01200
08700	EXZER	BTM	PUTX	,**16	08514	17 06030 -8530
08710		DSA	TF,SVN9,CLZR		08530	5 X 3
					08530	-9007
					08535	-8709
					08540	-8714
08720		B7	EXCLR-1	,	08542	49 0844J
08730	EXXR	BNF	**24	,SSIL	08550	44 08574 06637
08740		BTM	EXCLR	,**12	08562	17 08442 -8574

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08750		BNF	EXJX	,PFPSW	08574	44 08662 03928
08760		TF	XR99	,ADCSW	08586	26 08729 05969
08770		AM	XR99	,23	08598	11 08729 000K3
08780		TF	XR98	,10(2)	08610	26 08724 00-1-
08790		TFM	SS2	,11	08622	16 06634 000J1
08800		BTM	PUTX	,**16	08634	17 06030 -8650
08810		DSA	MA,XR99,XR98		08650	5 X 3
					08650	-9017
					08655	-8729
					08660	-8724
08820	EXJX	BD	**24	,SSIL	08662	43 08686 06637
08830		TFM	DPX	,10	08674	16 03930 000J0
08840	EXJ	TD	SSXR2	,SBASE-5	08686	25 08094 04155
08850		B7	EXRT		08698	49 08388
08860	SVN9	DC	5,79		08709	5
			-0079			
08870	CLZR	DC	5,02667		08714	5
			-2667			
08880	XR97	DS	5		08719	5
08890	XR98	DS	5		08724	5
08900	XR99	DS	5		08729	5
08910		DS	5		08734	5
08920	ERRT	RCTY			08736	34 00000 00102
08930		TNF	EM2+6	,SCNT	08748	73 09385 09361
08940		WATY	EM1		08760	39 09365 00100
08950		WATY	ERRT-1	,	08772	39 0873N 00100
08960		BB2			08784	42
08970		DAS	1		08787	1 X 2
08980	BLK1	DSC	2,02		08788	2
		O2				
08990		DSA	BLK1A		08794	5 X 1
					08794	-8796
09000		DC	1,1		08795	1
09010	BLK1A	DSC	1,0		08796	1
		O				
09020		DC	5,01476		08801	5
			-1476			
09030		DC	3,41		08804	3
			-41			
09040		DSA	CODE1-2		08809	5 X 1
					08809	J0000
09050		DC	1,1		08810	1
09060		DS	1		08811	1
09070	BLK2	DSC	2,02		08812	2
		O2				
09080		DSA	BLK2A		08818	5 X 1
					08818	-8820
09090		DC	1,1		08819	1
09100	BLK2A	DSC	1,0		08820	1
		O				

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09110	DC	5,01536	08825	5	
	-1536				
09120	DC	3,60	08828	3	
	-60				
09130	DSA	CODE1-2	08833	5 X	1
09140	DC	1, *	08833	J0000	
	*		08834	1	
09150	DS	1	08835	1	
09160 BLK3	DSC	2,02	08836	2	
	O2				
09170	DSA	BLK3A	08842	5 X	1
09180	DC	1, *	08842	-8844	
	*		08843	1	
09190 BLK3A	DSC	1,0	08844	1	
	0				
09200	DC	5,01600	08849	5	
	-1600				
09210	DC	3,41	08852	3	
	-41				
09220	DSA	CODE1-2	08857	5 X	1
09230	DC	1, *	08857	J0000	
	*		08858	1	
09240	DS	1	08859	1	
09250 BLK4	DSC	2,02	08860	2	
	O2				
09260	DSA	BLK4A	08866	5 X	1
09270	DC	1, *	08866	-8868	
	*		08867	1	
09280 BLK4A	DSC	1,0	08868	1	
	0				
09290	DC	5,01641	08873	5	
	-1641				
09300	DC	3,41	08876	3	
	-41				
09310	DSA	CODE1-2	08881	5 X	1
09320	DC	1, *	08881	J0000	
	*		08882	1	
09330	DS	1	08883	1	
09340 BLK5	DSC	2,02	08884	2	
	O2				
09350	DSA	BLK5A	08890	5 X	1
09360	DC	1, *	08890	-8892	
	*		08891	1	
09370 BLK5A	DSC	1,0	08892	1	
	0				

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09380	DC	5,01517	08897	5	
	-1517				
09390	DC	3,019	08900	3	
	-19				
09400	DSA	SUBCDS-2	08905	5 X	1
09410	DC	1, *	08905	J4100	
	*		08906	1	
09420	DS	1	08907	1	
09430 BLK6	DSC	2,02	08908	2	
	O2				
09440	DSA	BLK6A	08914	5 X	1
09450	DC	1, *	08914	-8916	
	*		08915	1	
09460 BLK6A	DSC	1,0	08916	1	
	0				
09470	DC	5,01682	08921	5	
	-1682				
09480	DC	3,019	08924	3	
	-19				
09490	DSA	SUBCDS-2	08929	5 X	1
09500	DC	1, *	08929	J4100	
	*		08930	1	
09510	DS	1	08931	1	
09520 BLK7	DSC	2,02	08932	2	
	O2				
09530	DSA	BLK7A	08938	5 X	1
09540	DC	1, *	08938	-8940	
	*		08939	1	
09550 BLK7A	DSC	1,0	08940	1	
	0				
09560	DC	5,01701	08945	5	
	-1701				
09570	DC	3,019	08948	3	
	-19				
09580	DSA	SUBCDS-2	08953	5 X	1
09590	DC	1, *	08953	J4100	
	*		08954	1	
09600	DS	1	08955	1	
09610 BLK8	DSC	2,02	08956	2	
	O2				
09620	DSA	BLK8A	08962	5 X	1
09630	DC	1, *	08962	-8964	
	*		08963	1	
09640 BLK8A	DSC	1,0	08964	1	
	0				

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1620 MONITOR II VERSION 2 FORTRAN II-D PHASE 2-B				PAGE	27
09650	DC	5,01720	08969	5	
	-1720				
09660	DC	3,019	08972	3	
	-19				
09670	DSA	SUBCDS-2	08977	5 X	1
09680	DC	1, *	08977	J4100	
			08978	1	
09690	CKCDW	DC 5,0	08983	5	
	-0000				
09700	DC	1, *	08984	1	
09710	SSSW	DS 00001,,SSSW,,	08985	1	
09720	FSW	DS 00001,,FSW,,	08986	1	
09730	I01	DS 00001,,I01,,	08987	1	
09740	I02	DS 00001,,I02,,	08988	1	
09750	I03	DS 00001,,I03,,	08989	1	
09760	STEMP1	DS 00001,,STEMP1,,	08990	1	
09770	STEMP2	DS 00001,,STEMP2,,	08991	1	
09780	CALLSW	DS 00001,,CALLSW,,	08992	1	
09790	DOSW	DSC 1,0	08993	1	
	0				
09800	DS	00001,,EXIND,,	08994	1	
09810	SUBSW	DS 00001,,SUBSW,,	08995	1	
09820	REGSW	DS 1	08996	1	
09830	RSW	DS 1	08997	1	
09840	SWAREA	DS ,*	08997	0	
09850	EXIND	DC 2,0	08999	2	
	-0				
09860	TFM	DC 00002,16,,TFM,	09001	2	
	J6				
09870	SF	DC 00002,32,,SF,	09003	2	
	L2				
09880	CF	DC 00002,33,,CF	09005	2	
	L3				
09890	TF	DC 00002,26,,TF,	09007	2	
	K6				
09900	AM	DC 00002,11,,AM,	09009	2	
	J1				
09910	MM	DC 00002,13,,MM,	09011	2	
	J3				
09920	H	DC 00002,48,,H,	09013	2	
	M8				
09930	BLX	DC 2,65	09015	2	
	O5				
09940	MA	DC 2,70	09017	2	
	PO				
09950	TR	DC 2,31	09019	2	
	L1				
09960	TFL	DC 2,6	09021	2	
	-6				
09970	N13089	DC 00013,0	09034	13	
	-000000000000				
09980	ZER0	DS ,*-11	09023	0	
09990	ZER06	DS ,*-7	09027	0	

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1620 MONITOR II VERSION 2 FORTRAN II-D PHASE 2-B				PAGE	28
10000	ZER04	DS ,*-9	09025	0	
10010	ZER05	DS ,*-8	09026	0	
10020	BLANK	DS ,*-8	09026	0	
10030	DC	1, *	09035	1	
10040	I2NR	DS ,*-2	09033	0	
10050	N13092	DC 5,00099,,	09040	5	
	-0099				
10060	SUB	DC 00002,22,,SUB,	09042	2	
	K2				
10070	N13133	DC 5,00095,,	09047	5	
	-0095				
10080	MOD	DC 2,0	09049	2	
	-0				
10090	MPY	DC 00002,23	09051	2	
	K3				
10100	BT	DC 00002,27,,BT,	09053	2	
	K7				
10110	RCTY	DC 00002,34,,RCTY,	09055	2	
	L4				
10120	WATY	DC 00002,39,,WATY,	09057	2	
	L9				
10130	GLND	DC 00004,000,,GLND,	09061	4	
	-000				
10140	ADD	DC 00002,21,,ADD,	09063	2	
	K1				
10150	SM	DC 00002,12,,SM,	09065	2	
	J2				
10160	RVSN	DC 3,125	09068	3	
	J25				
10170	RMOD	DC 3,123	09071	3	
	J23				
10180	MODMES	DAC 13, MIXED MODE*	09073	13 X	2
		MIXED MODE*			
10190	DOMES	DAC 22, IMPROPER DO NESTING*	09099	22 X	2
		IMPROPER DO NESTING*			
10200	FULMES	DAC 20, SYMBOL TABLE FULL*	09143	20 X	2
		SYMBOL TABLE FULL*			
10210	DOA	DC 00005,109,,DOA,	09186	5	
	-0109				
10220	MNS5	DC 00002,-05,,MNS5,	09188	2	
	-N				
10230	N13063	DC 5,00100,,	09193	5	
	-0100				
10240	N13062	DC 5,00102,,	09198	5	
	-0102				
10250	FAC	DC 00005,101,,FAC,	09203	5	
	-0101				
10260	FIVE	DC 2,5	09205	2	
	-5				
10270	RTNAME	DS 00005,,RTNAME,,	09210	5	
10280	ST	DS 00005,,ST,,	09215	5	
10290	I	DS 00004,,I,,	09219	4	
10300	J	DS 00005,,J,,	09224	5	
10310	P	DS 00005,,P,,	09229	5	
10320	Q	DS 00005,,Q,,	09234	5	

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11080	H				10302	48	00000	00000
11090	CD12B	B	SUB12B		10314	49	14174	00000
11100	H				10326	48	00000	00000
11110	FCT1	TFM	FMON+35	,BLK4	10338	16	02359	-8860
11120		BTM	FMON	,FCT1	10350	17	02324	J0338
11130	FCTRT	TFM	FMON+35	,BLK2	10362	16	02359	-8812
11140		BTM	FMON	,FCTRT	10374	17	02324	J0362
11150	EOJ	TFM	FMON+35	,BLK4	10386	16	02359	-8860
11160		BTM	FMON	,EOJ	10398	17	02324	J0386
11170	CDCALL	TFM	FMON+35	,BLK3	10410	16	02359	-8836
11180		BTM	FMON	,CDCALL	10422	17	02324	J0410
11190	*****		THE FOLLOWING CODES ARITHMETIC OPERATORS					
11200	CODE1P	BTM	RMNS	,SL	10434	17	04990	-9282
11210		BTM	RMNS	,LV	10446	17	04990	-9239
11220		TF	SR	,BGNST(7)	10458	26	02372	INRR9
11230		CM	LV,	133,8,EQUAL	10470	14	09239	0-133
11240		BE	CODE1C		10482	46	11034	01200
11250		CM	LV,	115,8,EXPONENTIAL	10494	14	09239	0-115
11260		BE	CODE1D		10506	46	12004	01200
11270	*****		CODE ADD, SUBTRACT, MULTIPLY, DIVIDE					
11280		CM	SL,	101,8,FAC	10518	14	09282	0-101
11290		BNE	N60007		10530	47	10804	01200
11300		TD	MOD	,FLAGSW	10542	25	09049	04428
11310	CODE1A	BTM	SRFCT	,**16	10554	17	03824	J0570
11320		DSA	SR		10570		5 X	1
					10570		-2372	
11330		DSA	J		10575		5 X	1
					10575		-9224	
11340	*		TEST FOR MIXED MODE					
11350		C	MOD	,FXORFL	10576	24	09049	04162
11360		BE	**36		10588	46	10624	01200
11370		BTM	ERRT	,MODMES	10600	17	08736	-9073
11380		TDM	ERSWT	,1	10612	15	09351	00001
11390		TD	FX	,FXORFL	10624	25	03562	04162
11400	*****		FX IS USED BY OPSR ROUTINE					
11410		BTM	OPSR	,LV	10636	17	03488	-9239
11420		CM	LV	,22	10648	14	09239	000K2
11430		BH	PUTR		10660	46	10708	01100
11440		TDM	SSIL	,1	10672	15	06637	0000J
11450		TF	DPX	,LV	10684	26	03930	09239
11460		TF	LV	,FACAD	10696	26	09239	03797
11470	PUTR	BLXM	EXSUB	,**16(2)	10708	66	08304	10P24
11480		DSA	OPX		10724		5 X	1
					10724		-3930	
11490		DSA	LV		10729		5 X	1
					10729		-9239	
11500		DSA	J		10734		5 X	1
					10734		-9224	
11510	CODE1H	TD	FLAGSW	,FXORFL	10736	25	04428	04162
11520		TF	BGNST(7)	,FAC	10748	26	INRR9	09203
11530		TDM	FSW	,1	10760	15	08986	0000J

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11540		BT	GTCL	,SL	10772	27	05720	09282
11550		BT	GTCL	,SR	10784	27	05720	02372
11560		B	EXIT		10796	49	02928	00000
11570		DDRG	*-3		10804			
11580	N60007	CM	SR,	101,8,FAC	10804	14	02372	0-101
11590		BNE	N60009		10816	47	10848	01200
11600		TF	SR	,SL	10828	26	02372	09282
11610		B	CODE1B		10840	49	10942	00000
11620		DDRG	*-3		10848			
11630	N60009	BNF	N60010	,FSW	10848	44	10872	08986
11640		BTM	GMRP	,**12	10860	17	05022	J0872
11650	N60010	BTM	SRFCT	,**16	10872	17	03824	J0888
11660		DSA	SL		10888		5 X	1
					10888		-9282	
11670		DSA	N40001		10893		5 X	1
					10893		-3382	
11680		BLXM	EXSUB	,**16(2)	10894	66	08304	10R10
11690		DSA	TFL		10910		5 X	1
					10910		-9021	
11700		DSA	FACAD		10915		5 X	1
					10915		-3797	
11710		DSA	N40001		10920		5 X	1
					10920		-3382	
11720		TD	MOD	,FXORFL	10922	25	09049	04162
11730		B	CODE1A		10934	49	10554	00000
11740		DDRG	*-3		10942			
11750	*****		ENTRY IF RIGHT SYMBOL IS FAC, THEN IF OPERATOR IS DIVIDE					
11760	*****		SET UP REVERSE DIVIDE					
11770	CODE1B	TD	MOD	,FLAGSW	10942	25	09049	04428
11780		CM	LV,	120,8,SUBTRACT	10954	14	09239	0-120
11790		BNE	**24		10966	47	10990	01200
11800		TFM	LV,	124,8,LEFT PAREN	10978	16	09239	0-124
11810		CM	LV,	121,8,DIVIDE	10990	14	09239	0-121
11820		BNE	CODE1A		11002	47	10554	01200
11830		TFM	LV,	122,8,	11014	16	09239	0-122
11840		B	CODE1A		11026	49	10554	00000
11850		DDRG	*-3		11034			
11860	*****		ENTRY IF OPERATOR IS AN EQUAL SIGN					
11870	CODE1C	BD	CD1QZP	,FTSW	11034	43	11080	04378
11880	SLC	BTM	SRFCT	,**16	11046	17	03824	J1062
11890		DSA	SL		11062		5 X	1
					11062		-9282	
11900		DSA	SX		11067		5 X	1
					11067		-2377	
11910		TD	EXIND	,FXORFL	11068	25	08999	04162
11920	CD1QZP	BNF	CODE1E	,RSW	11080	44	11104	08997
11930		TD	EXIND	,FLAG	11092	25	08999	04358
11940	*****		FXORFL IS SET BY SRFCT					
11950	CODE1E	BNF	N60013	,FSW	11104	44	11916	08986

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11960	TD	FXORFL	,FLAGSW	11116	25	04162	04428	
11970	CD123	C	FXORFL	,EXIND	11128	24	04162	08999
11980	BE	CODE1X		11140	46	11276	01200	
11990	*****	OUTPUT5	FIX TO FLOAT OR FLOAT TO FIX INSTRUCTIONS					
12000	TF	N40001	,RMOD	11152	26	03382	09071	
12010	TD	FX	,EXIND	11164	25	03562	08999	
12020	BTM	OPSR	,N40001	11176	17	03488	-3382	
12030	BNF	CD111	,FSW	11188	44	11236	08986	
12040	BTM	PUTX	,**16	11200	17	06030	J1216	
12050	DSA	BTM,N40001,FACAD		11216		5 X	3	
				11216		-5972		
				11221		-3382		
				11226		-3797		
				11228	49	11276		
				11236	15	08986	0000J	
				11248	66	08304	11K64	
				11264		5 X	3	
				11264		-3930		
				11269		-3382		
				11274		-3387		
				11276	43	12368	04378	
				11288	47	11434	00200	
				11300	43	11340	08986	
				11312	66	08304	11L28	
				11328		5 X	3	
				11328		-9021		
				11333		-3797		
				11338		-3387		
				11340	17	03824	J1356	
				11356		5 X	2	
				11356		-9282		
				11361		-2377		
				11362	44	11678	08997	
				11374	15	06634	00001	
				11386	15	08997	00000	
				11398	17	06030	J1414	
				11414		5 X	3	
				11414		-9053		
				11419		-3587		
				11424		-2377		
				11426	49	11800	00000	
				11434				
				11434	44	11466	08986	
				11446	44	11714	08997	
				11458	49	11630		
				11466	17	03824	J1482	
				11482		5 X	2	
				11482		-9282		

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12320	BD	CD1PPF	,PFPSW	11487		-2377	
12330	TD	SSXR1	,SBASE-5	11488	43	11946	03928
12340	BTM	SRFCT	,**16	11500	25	08092	04155
12350	DSA	SR,N40002		11512	17	03824	J1528
				11528		5 X	2
				11528		-2372	
				11533		-3387	
				11534	43	11946	03928
				11546	25	08094	04155
				11558	44	11582	08997
				11570	15	06635	00001
				11582	16	06634	000J1
				11594	17	06030	J1610
				11610		5 X	3
				11610		-9021	
				11615		-2377	
				11620		-3387	
				11622	49	11800	
				11630	16	06635	00J01
				11642	17	06030	J1658
				11658		5 X	3
				11658		-9021	
				11663		-2377	
				11668		-3797	
				11670	49	11800	00000
				11678			
				11678	66	08304	11094
				11694		5 X	3
				11694		-3930	
				11699		-3587	
				11704		-2377	
				11706	49	11800	00000
				11714			
				11714	17	03824	J1730
				11730		5 X	2
				11730		-9282	
				11735		-2377	
				11736	44	11884	03928
				11748	43	11820	04155
				11760	16	06635	00J01
				11772	17	06030	J1788
				11788		5 X	1
				11788		-9021	
				11793		5 X	1
				11793		-2377	
				11798		5 X	1

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12640 TCLEAR BNR EXIT ,BGNST+11
12650      B7 CLEAR
12660 N6X   TFM SS2 ,11 ,10
12670      TF N40005 ,ADCDW
12680      AM N40005 ,18 ,10
12690      BTM PUTX ,**16
12700      DSA MA,N40005,SX

12710 N8X   TD  S$XR1 ,SBASE-5
12720      TDM SS1 ,1
12730      B7 N7X
12740 N60013 BTM SRFCT ,**16
12750      DSA SR

12760      DSA N40002

12770      B7 CD123
12780 CD1PFP BTM SRFCT ,**16
12790      DSA SR,N40002

12800      BLXM EXSUB ,**16(2)
12810      DSA TFL,FACAD,N40002

12820      B7 CD555+12
12830 *     ENTRY OPERATOR IS EXPONENTIAL
12840 CODE1D CM SL, 101,B,FAC
12850      BNE N60015
12860 CODE1G BTM SRFCT ,**16
12870      DSA SR,J

12880      BD **20 ,FLAGSW
12890      B7 N60016
12900      TD **23 ,FLAGSW
12910      CM FXORFL ,10
12920      BE **36
12930      BTM ERRT ,MODMES
12940      TDM ERSWT ,1
12950 N60017 BLXM EXSUB ,**16(2)
12960      DSA DPX

12970      DSA IXI
    
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11798      -3797
11800 45 02928 16010
11812 49 02640
11820 16 06634 00011
11832 26 03402 05969
11844 11 03402 000J8
11856 17 06030 J1872
11872      5 X 3

11872      -9017
11877      -3402
11882      -2377
11884 25 08092 04155
11896 15 06633 00001
11908 49 11772
11916 17 03824 J1932
11932      5 X 1

11932      -2372
11937      5 X 1

11937      -3387
11938 49 11128
11946 17 03824 J1962
11962      5 X 2

11962      -2372
11967      -3387
11968 66 08304 11R84
11984      5 X 3

11984      -9021
11989      -3797
11994      -3387
11996 49 11446

12004 14 09282 0-101
12016 47 12262 01200
12028 17 03824 J2044
12044      5 X 2

12044      -2372
12049      -9224
12050 43 12070 04428
12062 49 12166
12070 25 12093 04428
12082 14 04162 000-0
12094 46 12130 01200
12106 17 08736 -9073
12118 15 09351 00001
12130 66 08304 12J46
12146      5 X 1

12146      -3930
12151      5 X 1
    
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12980      DSA J

12990 N60016 B7 CODE1H+12
13000      TD FX ,FXORFL
13010      BD **24 ,FX
13020      TFM UFSTR+1 ,11 ,10
13030      BTM DPSR ,LV
13040      BLXM EXSUB ,**16(2)
13050      DSA DPX

13060      DSA LV

13070      DSA J

13080      TDM FXORFL ,0
13090      B CODE1H
13100      DORG **3
13110 N60015 BNF N60018 ,FSW
13120      BTM GNRP ,**12
13130      TF SR ,BGNST(7)
13140 N60018 BTM SRFCT ,**16
13150      DSA SL

13160      DSA J

13170      TD FLAGSW ,FXORFL
13180      BLXM EXSUB ,**16(2)
13190      DSA TFL

13200      DSA FACAD

13210      DSA J

13220      B7 CODE1G
13230 FCT1E TDM FTSM ,0
13240      BD FCT1EA ,FSW
13250      BLXM EXSUB ,**16(2)
13260      DSA TFL,FACAD,N40002

13270 FCT1EA TFM SS3 ,101 ,9
13280      SM T1 ,1 ,10
13290      BTM PUTX ,**16
13300      DSA B
    
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12151      -3807
12156      5 X 1

12156      -9224
12158 49 10748
12166 25 03562 04162
12178 43 12202 03562
12190 16 02264 000J1
12202 17 03488 -9239
12214 66 08304 12K30
12230      5 X 1

12230      -3930
12235      5 X 1

12235      -9239
12240      5 X 1

12240      -9224
12242 15 04162 00000
12254 49 10736 00000
12262
12262 44 12298 08986
12274 17 05022 J2286
12286 26 02372 1NRR9
12298 17 03824 J2314
12314      5 X 1

12314      -9282
12319      5 X 1

12319      -9224
12320 25 04428 04162
12332 66 08304 12L48
12348      5 X 1

12348      -9021
12353      5 X 1

12353      -3797
12358      5 X 1

12358      -9224
12360 49 12028
12368 15 04378 00000
12380 43 12420 08986
12392 66 08304 12M08
12408      5 X 3

12408      -9021
12413      -3797
12418      -3387
12420 16 06635 00J01
12432 12 06014 000-1
12444 17 06030 J2460
12460      5 X 1
    
```

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13310	DSA	T1				12460	-5974		
						12465	5 X	1	
13320	DSA	BLANK				12465	-6014		
						12470	5 X	1	
13330	SM	ADCOV	,4	,10		12470	-9026		
13340	BTM	PUTA	,**16			12472	12	05969	000-4
13350	DSA	SXF,ADCOV				12484	17	07522	J2500
						12500	5 X	2	
						12500	-9257		
						12505	-5969		
13360	S	TBASE-1, TMAX				12506	22	02302	05964
13370	TFM	TMAX,	0,9			12518	16	05964	00-00
13380	B	CLEAR				12530	49	02640	00000
13390	DDRG	=-3				12538			
13400	*****	OUTPUT FUNCTION LINKAGE OR REMOVE PARENTHESIS							
13410	CODE3P	TF SL	,BGNST(7)			12538	26	09282	INRR9
13420	CM	SL,	101,8,FAC			12550	14	09282	0-101
13430	BL	N60020				12562	47	12610	01300
13440	CM	SL,	154,8,ARITH STATEMENT CALL			12574	14	09282	0-154
13450	BH	N60020				12586	46	12610	01100
13460	BXM	CODE3B	,5(7)			12598	62	12916	0---5
13470	N60020	BTM	RMNS	,SL		12610	17	04990	-9282
13480	TR	BGNST-4(7)		,BGNST+1(7)		12622	31	INRR5	10--0
13490	BTM	RMNS		,SR		12634	17	04990	-2372
13500	TF	N40002		,TBASE		12646	26	03387	02303
13510	SF	SL-3				12658	32	09279	00000
13520	TF	N40002-1		,SL		12670	26	03386	09282
13530	TDM	N40002		,9		12682	15	03387	00009
13540	TF	N40002		,N40002	,11	12694	26	03387	0338P
13550	SF	N40002				12706	32	03387	00000
13560	CM	SR	,101	,9		12718	14	02372	00J01
13570	BE	N60021				12730	46	12808	01200
13580	BNF	N60022		,FSW		12742	44	12766	08986
13590	BTM	GMRP	,**12			12754	17	05022	J2766
13600	N60022	BTM	SRFCT	,**16		12766	17	03824	J2782
13610	DSA	SR				12782	5 X	1	
13620	DSA	SR				12782	-2372		
						12787	5 X	1	
13630	TD	FLAGSW	,FXORFL			12787	-2372		
13640	B	CODE3A				12788	25	04428	04162
13650	DDRG	=-3				12800	49	12856	00000
13660	N60021	TF	SR	,FACAD		12808	26	02372	03797
13670	TFM	OPX	,17	,10		12820	16	03930	000J7
13680	TDM	SBASE-5	,0			12832	15	04155	00000
13690	BTM	PUTX	,CODE3A+16			12844	17	06030	J2872
13700	*****	OUTPUT LIBRARY FUNCTION LINKAGE							
13710	CODE3A	BLXM	EXSUB	,**16(2)		12856	66	08304	12072
13720	DSA	OPX				12872	5 X	1	
						12872	-3930		

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13730	DSA	N40002				12877	5 X	1	
13740	DSA	SR				12877	-3387		
						12882	5 X	1	
						12882	-2372		
13750	TF	BGNST(7)	,FAC			12884	26	INRR9	09203
13760	TDM	FSW	,1	,11		12896	15	08986	0000J
13770	B	EXIT				12908	49	02928	00000
13780	DDRG	=-3				12916			
13790	CODE3B	CM	SL,	154,8,ARITH STATEMENT CALL		12916	14	09282	0-154
13800	BE	CODE3C				12928	46	13020	01200
13810	CM	SL,	153,8,FUNCTION CALL			12940	14	09282	0-153
13820	BE	CODE3C				12952	46	13020	01200
13830	N60023	CM	SL,	107,8,IF		12964	14	09282	0-107
13840	BE	CODE7				12976	46	10098	01200
13850	TR	BGNST-4(7)		,BGNST+1(7)		12988	31	INRR5	10--0
13860	BT	BGNST+1(7)		,BGNST+6(7)		13000	31	10--0	10--5
13870	B7	EXIT				13012	49	02928	
13880	*	ARITH STATEMENT CALL OR FUNCTION CALL OPERATOR							
13890	CODE3C	BXM	**12	,-10(7)		13020	62	13032	0--J-
13900	CODE3Y	BTM	RMNS	,SL		13032	17	04990	-9282
13910	BTM	RMNS		,LV		13044	17	04990	-9239
13920	TR	BGNST-4(7)		,BGNST+1(7)		13056	31	INRR5	10--0
13930	BNF	N60026		,FSW		13068	44	13092	08986
13940	BTM	GMRP	,**12			13080	17	05022	J3092
13950	N60026	CM	LV,	154,8,ARITH STATEMENT CALL		13092	14	09239	0-154
13960	BE	N60027				13104	46	13128	01200
13970	TDM	SS3	,1			13116	15	06635	00001
13980	N60027	TFM	SS2	,11	,10	13128	16	06634	000J1
13990	BTM	SRFCT	,**16			13140	17	03824	J3156
14000	DSA	SL				13156	5 X	1	
						13156	-9282		
14010	DSA	N40001				13161	5 X	1	
						13161	-3382		
14020	TF	N40003	,ADCOV			13162	26	03392	05969
14030	AM	N40003	,11	,10		13174	11	03392	000J1
14040	TD	FLAGSW	,FXORFL			13186	25	04428	04162
14050	BTM	PUTX	,**16			13198	17	06030	J3214
14060	DSA	BTM				13214	5 X	1	
						13214	-5972		
14070	DSA	N40001				13219	5 X	1	
						13219	-3382		
14080	DSA	N40003				13224	5 X	1	
						13224	-3392		
14090	BD	CODE3Z	,CALLX			13226	43	13426	04388
14100	CODE3D	BTM	RMNS	,SL		13238	17	04990	-9282
14110	TF	SR	,BGNST(7)			13250	26	02372	INRR9
14120	BTM	SRFCT	,**16			13262	17	03824	J3278
14130	DSA	SL				13278	5 X	1	

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14140	DSA	SL			13278	-9282		
					13283	5 X	1	
14150	BNF	++24	,FPSW		13283	-9282		
14160	SF	SL			13284	44	13308	09347
14170	BTM	PUTC	,++16		13296	32	09282	00000
14180	DSA	SL			13308	17	07402	J3324
					13324	5 X	1	
14190	CODE3E	CM	SR,	104,8,RIGHT PAREN	13324	-9282		
14200	BE	N60032			13326	14	02372	0-104
14210	TR	BGNST-4(7)	,BGNST+1(7)		13338	46	13370	01200
14220	B	CODE3D			13350	31	1NRR5	10--0
14230	DORG	-3			13362	49	13238	00000
14240	N60032	BTM	ADJUST	,ADCOM	13370	17	03444	-5969
14250	CODE3X	BD	CET	,CALLSW	13382	43	13446	08992
14260	TF	BGNST(7)		,FAC	13394	26	1NRR9	09203
14270	TDM	FSW	,1	,11	13406	15	08986	0000J
14280	B	EXIT			13418	49	02928	00000
14290	DORG	-3			13426			
14300	CODE3Z	TDM	CALLX	,0	13426	15	04388	00000
14310	B	CLEAR			13438	49	02640	00000
14320	DORG	-3			13446			
14330	CET	BXM	++12	,5(7)	13446	62	13458	0---5
14340	CM	BGNST(7)	,132	,9	13458	14	1NRR9	00J32
14350	BE	CLEAR			13470	46	02640	01200
14360	BXM	CODE3X+12	,-5(7)		13482	62	13394	0---N
14370	*****	OUTPUT REVERSE	SIGN INSTRUCTIONS FOR UNARY MINUS					
14380	CODE4P	TF	SR	,BGNST(7)	13494	26	02372	1NRR9
14390	TF	LV	,RVSX		13506	26	09239	09068
14400	BTM	OPSR	,LV		13518	17	03488	-9239
14410	CM	SR	,101	,8	13530	14	02372	0-101
14420	BNE	N60034			13542	47	13638	01200
14430	TD	FX	,FLAGSW		13554	25	03562	04428
14440	BTM	PUTX	,++16		13566	17	06030	J3582
14450	DSA	BTM,LV,FACAD			13582	5 X	3	
					13582	-5972		
					13587	-9239		
					13592	-3797		
14460	B7	EXIT			13594	49	02928	
14470	CODE4A	BLXM	EXSUB	,++16(2)	13602	66	08304	13018
14471	DSA	OPX,LV,N40003			13618	5 X	3	
					13618	-3930		
					13623	-9239		
					13628	-3392		
14480	B7	EXIT			13630	49	02928	
14490	N60034	BNF	N60035	,FSW	13638	44	13662	08986
14500	BTM	GMRP	,++12		13650	17	05022	J3662
14510	N60035	BTM	SRFCT	,++16	13662	17	03824	J3678
14520	DSA	SR			13678	5 X	1	
					13678	-2372		
14530	DSA	N40003			13683	5 X	1	

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14580	TDM	FSW	,1	,11	13683	-3392		
14590	TD	FLAGSW	,FXORFL		13684	15	08986	0000J
14600	TF	BGNST(7)	,FAC		13696	25	04428	04162
14610	TD	FX	,FXORFL		13708	26	1NRR9	09203
14620	B7	CODE4A			13720	25	03562	04162
14630	CODE8P	CM	BGNST(7)	,124	13732	49	13602	
14640	BNE	CODE8			13740	14	1NRR9	00J24
14650	B7	CODE3			13752	47	10122	01200
14660	CD15P	TR	BGNST-4(7)	,BGNST+1(7)	13764	49	10026	
14670	CM	BGNST+10(7)	,132	,9	13772	31	1NRR5	10--0
14680	BNE	EXIT			13784	14	10--9	00J32
14690	TDM	CALLX	,1		13796	47	02928	01200
14700	B7	CODE3Y			13808	15	04388	00001
14710	DORG	14100			13820	49	13032	
14720	*****	TERTIARY LINKAGE BLOCK 5			14100			
14730	DC	2,5			14101	2		
14740	SUBCDS	BTM	RMNS	,SR	14102	17	04990	-2372
14750	B	COSSP			14114	49	14198	00000
14760	SUBCAB	TFM	FMON+35	,BLK6	14126	16	02359	-8908
14770	BTM	FMON	,SUBCAB		14138	17	02324	J4126
14780	SUBC12	TFM	FMON+35	,BLK7	14150	16	02359	-8932
14790	BTM	FMON	,SUBC12		14162	17	02324	J4150
14800	SUB12B	TFM	FMON+35	,BLK8	14174	16	02359	-8956
14810	BTM	FMON	,SUB12B		14186	17	02324	J4174
14820	COSSP	TR	BGNST-4(7)	,BGNST+6(7)	14198	31	1NRR5	10--5
14830	TF	SX	,BGNST-5(7)		14210	26	02377	1NRR4
14840	TD	XRSW	,SX-4		14222	25	09241	02373
14850	BTM	SRFCT	,++16		14234	17	03824	J4250
14860	DSA	SX,SX			14250	5 X	2	
					14250	-2377		
					14255	-2377		
14861	TD	SPFPSW	,FPSW		14256	25	09357	09347
14870	TD	SPCOM	,COMSW		14268	25	15691	03999
14880	TDM	SKIPSW	,1		14280	15	09349	00001
14890	TD	RXFLAG	,FXORFL		14292	25	04368	04162
14900	BTM	CANDS	,++16		14304	17	08100	J4320
14910	DSA	D1,DI			14320	5 X	2	
					14320	-5979		
					14325	-5984		
14920	TDM	SS2	,1		14326	15	06634	00001
14930	CM	SR	,150	,8	14338	14	02372	0-150
14940	BL	XX1			14350	47	15204	01300
14950	BE	XX2			14362	46	14432	01200
14960	XX3	BXM	++12	,30(7)	14374	62	14386	0--L0
14970	TF	N40006	,SUB3		14386	26	03407	03647
14980	BTM	CANDS	,++16		14398	17	08100	J4414
14990	DSA	D4,SY			14414	5 X	2	
					14414	-6009		
					14419	-2384		
15000	BXM	XX4	,-30(7)		14420	62	14490	0--L-
15010	XX2	BXM	++12	,15(7)	14432	62	14444	0--J5

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15020	TF	N40006	,SUB2		14444	26	03407	03637
15030	BTM	CANDS	,**16		14456	17	08100	J4472
15040	DSA	D4,SY			14472		5 X	2
					14472			-6009
					14477			-2384
15050	BXM	XX4	, -15(7)		14478	62	14490	0--JN
15060	TF	N40005	,ADCOV		14490	26	03402	05969
15070	AM	N40005	,12	.10	14502	11	03402	000J2
15080	BD	**20	,RXFLAG		14514	43	14534	04368
15090	B7	**20			14526	49	14546	
15100	SF	N40005			14534	32	03402	00000
15110	BTM	PUTX	,**16		14546	17	06030	J4562
15120	DSA	BTM,N40006,N40005			14562		5 X	3
					14562			-5972
					14567			-3407
					14572			-3402
15130	TD	SSXR2	,XRSW		14574	25	08094	09241
15140	BNF	**24	,SPFPSW		14586	44	14610	09357
15150	SF	SX			14598	32	02377	00000
15160	BTM	PUTC	,**16		14610	17	07402	J4626
15170	DSA	SX			14626		5 X	1
					14626			-2377
15180	BTM	PUTD	,**16		14628	17	07486	J4644
15190	DSA	D4			14644		5 X	1
					14644			-6009
15200	BTM	PUTD	,**16		14646	17	07486	J4662
15210	DSA	D1			14662		5 X	1
					14662			-5979
15220	BTM	PUTC	,**16		14664	17	07402	J4680
15230	DSA	D1			14680		5 X	1
					14680			-5984
15240	TDM	UFSTR+3	,1		14682	15	02266	00001
15250	CM	SR	,150	.8	14694	14	02372	0-150
15260	BNH	XX5			14706	47	14776	01100
15270	BTM	CANDS	,**16		14718	17	08100	J4734
15280	DSA	D2,DJ			14734		5 X	2
					14734			-5989
					14739			-5994
15290	BTM	PUTD	,**16		14740	17	07486	J4756
15300	DSA	D2			14756		5 X	1
					14756			-5989
15310	BTM	PUTC	,**16		14758	17	07402	J4774
15320	DSA	DJ			14774		5 X	1
					14774			-5994
15330	BTM	CANDS	,**16		14776	17	08100	J4792
15340	DSA	D3,DK			14792		5 X	2

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					14792			-5999
					14797			-6004
15350	BTM	PUTD	,**16		14798	17	07486	J4814
15360	DSA	D3			14814		5 X	1
					14814			-5999
15370	BTM	PUTC	,**16		14816	17	07402	J4832
15380	DSA	DK			14832		5 X	1
					14832			-6004
15390	BTM	PUTRM	,**16		14834	17	07606	J4850
15400	DSA	ZRM			14850		5 X	1
					14850			J5690
15410	TDM	SKIPSW	,0		14852	15	09349	00000
15420	BXM	**12	, -5(7)		14864	62	14876	0---N
15430	BNF	QZP	,ID1		14876	44	14908	08987
15440	TR	BGNST-4(7)	,BGNST+1(7)		14888	31	1NRR5	10--0
15450	B7	CD14B			14900	49	11552	
15460	QZP	CM	BGNST+5(7)	.9	14908	14	10--4	00J33
15470	BNE	CDSIT			14920	47	15028	01200
15480	BD	L2	,XRSW		14932	43	02844	09241
15490	TD	RFLAG	,RXFLAG		14944	25	04358	04368
15500	TDM	RSW	,1	.11	14956	15	08997	0000J
15510	BTM	PUTX	,**16		14968	17	06030	J4984
15520	DSA	TF,FACAD,N13092			14984		5 X	3
					14984			-9007
					14989			-3797
					14994			-9040
15530	TF	BGNST(7)	,FAC		14996	26	1NRR9	09203
15540	BTM	GMRP	,**12		15008	17	05022	J5020
15550	B7	L2			15020	49	02844	
15560	BD	EXIT	,XRSW		15028	43	02928	09241
15570	BNF	**24	,FSW		15040	44	15064	08986
15580	BTM	GMRP	,**12		15052	17	05022	J5064
15590	BD	**24	,CALLSW		15064	43	15088	08992
15600	TDM	SS4	,1		15076	15	06636	00001
15610	BTM	PUTX	,**16		15088	17	06030	J5104
15620	DSA	TFL,FACAD,N13092			15104		5 X	3
					15104			-9021
					15109			-3797
					15114			-9040
15630	TF	BGNST(7)	,FAC	.11	15116	26	1NRR9	09203
15640	TDM	FSW	,1		15128	15	08986	0000J
15650	TD	FLAGSW	,RXFLAG		15140	25	04428	04368
15660	BD	**20	,CALLSW		15152	43	15172	08992
15670	B7	EXIT			15164	49	02928	
15680	BTM	GMRP	,**12		15172	17	05022	J5184
15690	SF	O(6)			15184	32	0--00	00000
15700	B7	EXIT			15196	49	02928	
15710	BTM	CANDS	,**16		15204	17	08100	J5220
15720	DSA	D4,SY			15220		5 X	2
					15220			-6009

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15730	TDM	SS2	,0			15225	-2384	
15740	BD	**32	,RXFLAG			15226	15	06634 00000
15750	TF	L	,FPZ			15238	43	15270 04368
15760	B7	CDS1S				15250	26	06017 02298
15770	TF	L	,K			15262	49	15282
15780	CDS1S	TF	LD1			15270	26	06017 02252
15790	CM	D1	,L			15282	26	06022 06017
15800	BE	**48	,1			15294	14	05979 -0001
15810	M	D1	,LD1			15306	46	15354 01200
15820	SF	96				15318	23	05979 06022
15830	TF	LD1	,99			15330	32	00096 00000
15840	CM	LD1	,10	,10		15342	26	06022 00099
15850	BE	JGPP				15354	14	06022 00010
15860	TDM	SS1	,1			15366	46	15816 01200
15870	BTM	PUTX	,**16			15378	15	06633 00001
15880	DSA	MM,DI,LD1				15390	17	06030 J5406
						15406		5 X 3
						15406		-9011
						15411		-5984
						15416		-6022
15890	JP1	M	D4	,L		15418	23	06009 06017
15900	MA	D4	,99			15430	70	06009 00099
15910	BD	CDS1Z	,XRSW			15442	43	15526 09241
15920	BD	CDS1Z	,SPFPSW			15454	43	15526 09357
15930	A	D4	,SX			15466	21	06009 02377
15940	TF	SY	,D4			15478	26	02384 06009
15950	BL	D4LNEG				15490	47	15796 01300
15960	BD	**24	,SPCOM			15502	43	15526 15691
15970	TDM	SS2	,1			15514	15	06634 00001
15980	CDS1Z	BTM	PUTX	,**16		15526	17	06030 J5542
15990	DSA	AM,N13092,D4				15542		5 X 3
						15542		-9009
						15547		-9040
						15552		-6009
16000	BD	CDS1XR	,XRSW			15554	43	15712 09241
16010	BD	FPNXR	,SPFPSW			15566	43	15692 09357
16020	BMF	CDS1J	,SY			15578	44	15654 02384
16030	TFM	OPZ	,11	,10		15590	16	09346 000J1
16040	BD	**24	,SPCOM			15602	43	15626 15691
16050	TDM	SS2	,1			15614	15	06634 00001
16060	CDS1N	BTM	PUTX	,**16		15626	17	06030 J5642
16070	DSA	OPZ,N13092,SX				15642		5 X 3
						15642		-9346
						15647		-9040
						15652		-2377
16080	CDS1J	BTM	PUTX	,**16		15654	17	06030 J5670
16090	DSA	SF,N13133,BLANK				15670		5 X 3
						15670		-9003
						15675		-9047
						15680		-9026
16100	B7	CDS1V+18				15682	49	14852
16110	ZRM	DC	2,1			15690		2

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16120	SPCOM	DS	1			15691		1
16130	FPNXR	TFM	OPZ	,21	,1011	15692	16	09346 000KJ
16140	B7	CDS1N				15704	49	15626
16150	CDS1XR	TF	N40005	,ADCCW		15712	26	03402 05969
16160	AM	N40005	,12	,10		15724	11	03402 000J2
16170	TD	SSXR2	,XRSW			15736	25	08094 09241
16180	TDM	SS1	,1			15748	15	06633 00001
16190	BTM	PUTX	,**16			15760	17	06030 J5776
16200	DSA	BLX,N40005,N13092				15776		5 X 3
						15776		-9015
						15781		-3402
						15786		-9040
16210	B7	CDS1V+18				15788	49	14852
16220	D4LNEG	S	D4	,SX		15796	22	06009 02377
16230	B7	CDS1Z				15808	49	15526
16240	JGPP	TDM	SS2	,1		15816	15	06634 00001
16250	BTM	PUTX	,**16			15828	17	06030 J5844
16260	DSA	LDVD,N0098,DI				15844		5 X 3
						15844		J5864
						15849		J5869
						15854		-5984
16270	B7	JP1				15856	49	15418
16280	LDVD	DC	2,28			15864		2
		K8						
16290	N0098	DC	5,98			15869		5
		-D098						
16300	DORG	16002				16002		
16310	X00X	DSC	14,01780013602400			16002		14
		01780013602400						
16320	XYYX	TD	PUTPCH+11,6M			16016	25	07269 02432
16330	TD	PREBUF-5,6M				16028	25	08010 02432
16340	SF	FLGRM				16040	32	07674 00000
16350	34	X00X,701				16052	34	16002 00701
16360	38	X00X,702				16064	38	16002 00702
16370	FRA					16076	36	00000 00500
						16088	49	00000 00000
16380	TCD	XYYX				16016		
						10000		
16390	DORG	10000				10000		
16400	*****	SECONDARY LINKAGE FOR BLOCK 2						
16410	DC	2,2				10001		2
		-2						
16420	XODE1	TFM	FMON+35	,BLK1		10002	16	02359 -8788
16430	BTM	FMON		,CODE1		10014	17	02324 J0002
16440	XODE3	TFM	FMON+35	,BLK1		10026	16	02359 -8788
16450	BTM	FMON		,CODE3		10038	17	02324 J0026
16460	XODE4	TFM	FMON+35	,BLK1		10050	16	02359 -8788
16470	BTM	FMON		,CODE4		10062	17	02324 J0050
16480	XODE6	BTM	RMNS	,LV		10074	17	04990 -9239
16490	B	CODE6P				10086	49	10434 00000
16500	XODE7	CM	RV	,130	,8	10098	14	09251 0-130
16510	B	CODE7P				10110	49	11240 00000
16520	XODE8	TFM	FMON+35	,BLK1		10122	16	02359 -8788
16530	BTM	FMON		,CODE8		10134	17	02324 J0122

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16540	XUDE9	BXM	CODE9P	,5(7)	10146	62	12070	0--5
16550		H			10158	48	00000	00000
16560	XUDE12	TFM	FMON+35	,BLK1	10170	16	02359	-8788
16570		BTM	FMON	,CODE12	10182	17	02324	J0170
16580	XUDE14	TFM	FMON+35	,BLK3	10194	16	02359	-8836
16590		BTM	FMON	,CODE14	10206	17	02324	J0194
16600	XUDE15	TFM	FMON+35	,BLK1	10218	16	02359	-8788
16610		BTM	FMON	,CODE15	10230	17	02324	J0218
16620	XUDE17	TR	BGNST-4(7)	,BGNST+6(7)	10242	31	1NRR5	10--5
16630		B	CD17P		10254	49	12626	00000
16640	XUDESS	TFM	FMON+35	,BLK1	10266	16	02359	-8788
16650		BTM	FMON	,CODESS	10278	17	02324	J0266
16660	XOSSAB	TFM	FMON+35	,BLK1	10290	16	02359	-8788
16670		BTM	FMON	,CDSSAB	10302	17	02324	J0290
16680	XD12B	TFM	FMON+35	,BLK1	10314	16	02359	-8788
16690		BTM	FMON	,CD12B	10326	17	02324	J0314
16700	XCT1	TFM	FMON+35	,BLK4	10338	16	02359	-8860
16710		BTM	FMON	,FCT1	10350	17	02324	J0338
16720	XCTRT	BD	N60182	,SUBPSW	10362	43	14260	04408
16730		B	FCTRTP		10374	49	14198	00000
16740	XDJ	TFM	FMON+35	,BLK4	10386	16	02359	-8860
16750		BTM	FMON	,E0J	10398	17	02324	J0386
16760	XDCALL	TFM	FMON+35	,BLK3	10410	16	02359	-8836
16770		BTM	FMON	,CDCALL	10422	17	02324	J0410
16780	*****		OUTPUTS CODING FOR GO TO, STOP, PAUSE, AND END					
16790	CODE6P	BTM	RMNS	,SR	10434	17	04990	-2372
16800		BTM	RMNS	,SX	10446	17	04990	-2377
16810	*****		CODE GO TO					
16820		CM	LV,	105,8,GO TO	10458	14	09239	0-105
16830		BNE	N60041		10470	47	10622	01200
16840		TDM	SKIPSW	,I	10482	15	09349	00001
16850		BTM	SRFCT	,**16	10494	17	03824	J0510
16860		DSA	SR		10510		5 X	1
					10510			-2372
16870		DSA	SK		10515		5 X	1
					10515			J0809
16880		TDM	SKIPSW	,0	10516	15	09349	00000
16890		BNE	CODE6B	,RMSW	10528	44	10562	04418
16900		BTM	INSET	,**16	10540	17	11094	J0556
16910		DSA	SR,ADCOV		10556		5 X	2
					10556			-2372
16920	CODE6B	TDM	SS1	,I	10561			-5969
16930		BTM	PUTX	,**16	10562	15	06633	00001
16940		DSA	B		10574	17	06030	J0590
					10590		5 X	1
					10590			-5974
16950		DSA	SK		10595		5 X	1
					10595			J0809
16960		DSA	BLANK		10600		5 X	1
					10600			-9026

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16970		SM	ADCOV	,4	10602	12	05969	000-4
16980	CODE6A	B7	CLEAR		10614	49	02640	
16990	N60041	CM	LV,	127,8,CONTINUE	10622	14	09239	0-127
17000		BE	CLEAR		10634	46	02640	01200
17010		CM	SX,	132,8,SEMI COLON	10646	14	02377	0-132
17020		BNE	N60043		10658	47	10690	01200
17030		TFM	J	,0	10670	16	09224	-0000
17040		BT	N60044		10682	49	10810	
17050	N60043	TFM	J	,0	10690	16	09224	-0000
17060		TFM	**54	,J-4	10702	16	10756	-9220
17070		BTM	RMNS	,SX	10714	17	04990	-2377
17080		CM	SX,	132,8,SEMI COLON	10726	14	02377	0-132
17090		BE	N60044-12		10738	46	10798	01200
17100		TD	J-4	,SX	10750	25	09220	02377
17110		AM	**6	,I	10762	11	10756	000-1
17120		CM	**18	,J+1	10774	14	10756	-9225
17130		BL	N60043+24		10786	47	10714	01300
17140		SF	J-4		10798	32	09220	00000
17150	SK	DS	,*		10809		0	
17160	*****		CODE PAUSE					
17170	N60044	CM	LV,	126,8,PAUSE	10810	14	09239	0-126
17180		BNE	N60045		10822	47	10870	01200
17190		BTM	PUTX	,**16	10834	17	06030	J0850
17200		DSA	H		10850		5 X	1
					10850			-9013
17210		DSA	J		10855		5 X	1
					10855			-9224
17220		DSA	BLANK		10860		5 X	1
					10860			-9026
17230		B7	CLEAR		10862	49	02640	
17240	*****		CODE STOP					
17250	N60045	CM	LV,	125,8,STOP	10870	14	09239	0-125
17260		BNE	N60046		10882	47	11026	01200
17270		BTM	PUTX	,**16	10894	17	06030	J0910
17280		DSA	RCTY		10910		5 X	1
					10910			-9055
17290		DSA	BLANK		10915		5 X	1
					10915			-9026
17300		DSA	N13062		10920		5 X	1
					10920			-9198
17310		BTM	PUTX	,**16	10922	17	06030	J0938
17320		DSA	WATY		10938		5 X	1
					10938			-9057
17330		DSA	ASTOP		10943		5 X	1
					10943			-3792
17340		DSA	N13063		10948		5 X	1
					10948			-9193

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17350	BTM	PUTX	,**16		10950	17 06030 J0966	
17360	DSA	H			10966	5 X 1	
					10966	-9013	
17370	DSA	J			10971	5 X 1	
					10971	-9224	
17380	DSA	BLANK			10976	5 X 1	
					10976	-9026	
17390	BTM	PUTX	,**16		10978	17 06030 J0994	
17400	DSA	B			10994	5 X 1	
					10994	-5974	
17410	DSA	N00796			10999	5 X 1	
					10999	-9356	
17420	DSA	BLANK			11004	5 X 1	
					11004	-9026	
17430	SM	ADCOV	,4	,10	11006	12 05969 000-4	
17440	B7	CLEAR			11018	49 02640	
17450	*****	CODE END					
17460	N60046	BTM	PUTX	,**16	11026	17 06030 J1042	
17470	DSA	H			11042	5 X 1	
					11042	-9013	
17480	DSA	BLANK			11047	5 X 1	
					11047	-9026	
17490	DSA	BLANK			11052	5 X 1	
					11052	-9026	
17500	BTM	PUTX	,**16		11054	17 06030 J1070	
17510	DSA	B			11070	5 X 1	
					11070	-5974	
17520	DSA	N00796			11075	5 X 1	
					11075	-9356	
17530	DSA	BLANK			11080	5 X 1	
					11080	-9026	
17540	B	EOJ			11082	49 10386 00000	
17550	INSET	TF	INSETA	,*-1	,11	11094	26 11153 1109L
17560	AM	INSET-1		,5	,10	11106	11 11093 000-5
17570	TF	INSETB	,INSET-1		,11	11118	26 11177 1109L
17580	AM	INSET-1		,1	,10	11130	11 11093 000-1
17590	TF	SETAD-1				11142	26 11238 00000
17600	INSETA	DS	,*			11153	0
17610	TDM	SETAD	,4			11154	15 11239 00004
17620	TF	SADCOV				11166	26 11213 00000
17630	INSETB	DS	,*			11177	0
17640	AM	SADCOV	,6	,10		11178	11 11213 000-6
17650	TF	SETAD	,SADCOV	,6		11190	26 1123R 11213
17660	SF	SETAD	,	,6		11202	32 1123R 00000

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17670	SADCOV	DS	,*		11213	0
17680	TDM	RMSW	,0		11214	15 04418 00000
17690	B	INSET-1	,	,6	11226	49 1109L 00000
17700	DORG	*-3			11234	
17710	SETAD	DC	,6,4		11239	6
17720	*****	OUTPUT IF CODING				
17730	CODE7P	BE	CODE7B		11240	46 11950 01200
17740	TF	SL	,BGNST+5(7)		11252	26 09282 10--4
17750	CM	SL	,101	,8	11264	14 09282 0-101
17760	BE	N60048			11276	46 11350 01200
17770	BTM	SRFCT	,**16		11288	17 03824 J1304
17780	DSA	SL			11304	5 X 1
					11304	-9282
17790	DSA	N40003			11309	5 X 1
					11309	-3392
17800	BLXM	EXSUB	,**16(2)		11310	66 08304 11L26
17810	DSA	TFL			11326	5 X 1
					11326	-9021
17820	DSA	FACAD			11331	5 X 1
					11331	-3797
17830	DSA	N40003			11336	5 X 1
					11336	-3392
17840	TD	FLAGSW	,FXDRFL		11338	25 04428 04162
17850	N60048	BNC3	**40		11350	47 11390 00300
17860	BTM	PUTX	,**16		11362	17 06030 J1378
17870	DSA	BTM			11378	5 X 1
					11378	-5972
17880	DSA	TRACE			11383	5 X 1
					11383	-3587
17890	DSA	FACAD			11388	5 X 1
					11388	-3797
17900	*****	OUTPUT FIXED VARIABLE IF TEST				
17910	BD	**20	,FLAGSW		11390	43 11410 04428
17920	B	N60049			11402	49 11722 00000
17930	DORG	*-3			11410	
17940	BXM	**12	,10(7)		11410	62 11422 0--JO
17950	BTM	PUTX	,**16		11422	17 06030 J1438
17960	DSA	CM,FACAD,ZERO4			11438	5 X 3
					11438	-9293
					11443	-3797
					11448	-9025
17970	TDM	SKIPSW	,1		11450	15 09349 00001
17980	BTM	GSBI	,**12		11462	17 11618 J1474
17990	BTM	PUTX	,**16		11474	17 06030 J1490
18000	DSA	BL,N40003,N01300			11490	5 X 3

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18010	BTM	GSBI	,**12			11490	-9295		
18020	BTM	PUTX	,**16			11495	-3392		
18030	DSA	BE,N40003,N01200				11500	-9300		
						11502	17	11618	J1514
						11514	17	06030	J1530
						11530		5 X	3
						11530	-9302		
						11535	-3392		
						11540	-9307		
18040	CODE7C	BTM	GSBI	,**12		11542	17	11618	J1554
18050	BTM	PUTX	,**16			11554	17	06030	J1570
18060	DSA	B,N40003,ZER05				11570		5 X	3
						11570	-5974		
						11575	-3392		
						11580	-9026		
18070	TDM	SKIPSW	,0			11582	15	09349	00000
18080	SM	ADCOV	,4	,10		11594	12	05969	000-4
18090	B	CLEAR				11606	49	02640	00000
18100	GSBI	BXM	**12	,5(7)		11618	62	11630	0---5
18110	TF	SK	,BGNST(7)			11630	26	10809	INRR9
18120	BTM	SRFCT	,**16			11642	17	03824	J1658
18130	DSA	SK,N40003				11658		5 X	2
						11658	J0809		
						11663	-3392		
18140	BNF	**34	,RMSW			11664	44	11698	04418
18150	BTM	INSET	,**16			11676	17	11094	J1692
18160	DSA	SK,ADCOV				11692		5 X	2
						11692	J0809		
						11697	-5969		
18170	TDM	SS1	,1			11698	15	06633	00001
18180	B	GSBI-1		,6		11710	49	11618	00000
18190	N60049	TF	N40001	,ADCOV		11722	26	03382	05969
18200	AM	N40001	,20	,10		11734	11	03382	00000
18210	TF	N40004	,FACAD			11746	26	03397	03797
18220	S	N40004	,FP2			11758	22	03397	02298
18230	AM	N40004	,1	,10		11770	11	03397	000-1
18240	TDM	SS1	,1			11782	15	06633	00001
18250	BTM	PUTX	,**16			11794	17	06030	J1810
18260	DSA	BD,N40001,N40004				11810		5 X	3
						11810	-9309		
						11815	-3382		
						11820	-3397		
18270	BXM	**12	,15(7)			11822	62	11834	0--J5
18280	TDM	SKIPSW	,1			11834	15	09349	00001
18290	BTM	GSBI	,**12			11846	17	11618	J1858
18300	BTM	PUTX	,**16			11858	17	06030	J1874
18310	DSA	B,N40003,ZER05				11874		5 X	3
						11874	-5974		
						11879	-3392		
						11884	-9026		

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18320	SM	ADCOV	,4	,10		11886	12	05969	000-4
18330	BTM	GSBI	,**12			11898	17	11618	J1910
18340	BTM	PUTX	,**16			11910	17	06030	J1926
18350	DSA	BNF,N40003,FACM2				11926		5 X	3
						11926	-9311		
						11931	-3392		
						11936	-9316		
18360	BXM	CODE7C	,-15(7)			11938	62	11542	0--JN
18370	CODE7B	BXM	**12	,15(7)		11950	62	11962	0--J5
18380	TF	INDREC-2	,BGNST(7)			11962	26	12061	INRR9
18390	SF	INDREC-4				11974	32	12059	00000
18400	TDM	SKIPSW	,1			11986	15	09349	00001
18410	BXM	**12	,5(7)			11998	62	12010	0---5
18420	BTM	GSBI	,**12			12010	17	11618	J2022
18430	BTM	PUTX	,**16			12022	17	06030	J2038
18440	DSA	BI,N40003,INDREC				12038		5 X	3
						12038	-9318		
						12043	-3392		
						12048	J2063		
18450	B7	CODE7C				12050	49	11542	
18460	INDREC	DC	7,0			12063		7	
			-000000						
18470	CGCOW	DS	5			12068		5	
18480	*****	OUTPUT	COMPUTED	GO TO					
18490	CODE9P	CM	BGNST(7)	,104	,9	12070	14	INRR9	00J04
18500	BNE	CODE9				12082	47	10146	01200
18510	TF	SL	,BGNST+5(7)			12094	26	09282	10--4
18520	TDM	SS1	,1			12106	15	06633	00001
18530	TDM	SKIPSW	,1			12118	15	09349	00001
18540	BTM	SRFCT	,**16			12130	17	03824	J2146
18550	DSA	SL				12146		5 X	1
						12146	-9282		
18560	DSA	N40004				12151		5 X	1
						12151	-3397		
18570	BTM	PUTX	,**16			12152	17	06030	J2168
18580	DSA	MM				12168		5 X	1
						12168	-9011		
18590	DSA	N40004				12173		5 X	1
						12173	-3397		
18600	DSA	MNS5				12178		5 X	1
						12178	-9188		
18610	TDM	SS2	,1			12180	15	06634	00001
18620	TF	N40001	,ADCOV			12192	26	03382	05969
18630	AM	N40001	,18	,10		12204	11	03382	00008
18640	BTM	PUTX	,**16			12216	17	06030	J2232
18650	DSA	SM				12232		5 X	1
						12232	-9065		
18660	DSA	N13092				12237		5 X	1

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18670	DSA	N40001			12237	-904C		
					12242	5 X	1	
18680	TDM	SS3	,1		12242	-3382		
18690	TF	SK	,BGNST+15		12244	15	06635	00001
18700	BTM	SRFCT	,**16		12256	26	10809	16014
18710	DSA	SK			12268	17	03824	J2284
					12284	5 X	1	
18720	DSA	N40004			12284	J0809		
					12289	5 X	1	
18730	TDM	SKIPSW	,0		12289	-3397		
18740	BNF	CODE9B	,RMSW		12290	15	09345	00000
18750	TF	CGCOW	,ADCCOW		12302	44	1236C	04418
18760	AM	CGCOW	,5	,10	12314	26	12068	05969
18770	BTM	INSET	,**16		12326	11	12068	C00-5
18780	DSA	SK,CGCOW			12338	17	11094	J2354
					12354	5 X	2	
18790	CODE9B	TDM	SS2	,1	12354	J0809		
18800	BTM	PUTX	,**16		12359	J2068		
18810	DSA	B			12360	15	06634	00001
					12372	17	06030	J2388
					12388	5 X	1	
18820	DSA	N13092			12388	-5974		
					12393	5 X	1	
18830	DSA	N40004			12393	-904C		
					12398	5 X	1	
18840	BLXM	**12	,20(7)		12398	-3397		
18850	CM	BGNST(7)	,104	,9	12400	66	12412	C---K0
18860	BE	CLEAR			12412	14	1NRR9	00J04
18870	CODE9A	TF	SL	,BGNST(7)	12424	46	0264C	01200
18880	CM	SL	,104	,8	12436	26	09282	1NRR9
18890	BE	N60072			12448	14	09282	C-104
18900	TDM	SKIPSW	,1		12460	46	12606	01200
18910	BTM	SRFCT	,**16		12472	15	09349	00001
18920	DSA	SL,N40001			12484	17	03824	J2500
					12500	5 X	2	
18930	TDM	SKIPSW	,0		12500	-9282		
18940	BNF	CODE9C	,RMSW		12505	-3382		
18950	TF	CGCOW	,ADCCOW		12506	15	09349	00000
18960	SM	CGCOW	,2	,10	12518	44	12576	04418
18970	BTM	INSET	,**16		12530	26	12068	05969
18980	DSA	SL,CGCOW			12542	12	12068	C00-2
					12554	17	11094	J2570
					12570	5 X	2	
18990	CODE9C	BTM	PUTC	,**16	12570	-9282		
19000	DSA	N40001			12575	J2068		
					12576	17	07402	J2592
					12592	5 X	1	

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19010	BXM	CODE9A	,5(7)		12592	-3382		
19020	N60072	BTM	ADJUST	,ADCCOW	12594	62	12436	0---5
19030	B7	CLEAR			12606	17	03444	-5969
19040	*****	OUTPUTS FORMAT SPECIFICATIONS			12618	49	0264C	
19050	CD17P	TF	REP3	,ADCCOW	12626	26	13673	05969
19060	AM	ADCCOW	,1	,10	12638	11	05965	C00-1
19070	CD17A	BTM	RMNS	,SX17	12650	17	04990	J2829
19080	CM	SX17,	101,8,IS IT AN OPERATOR		12662	14	12829	0-101
19090	BNL	CD17B,,,	YES, BRANCH		12674	46	13082	01300
19100	BTM	RMNS	,SY17		12686	17	0499C	J3569
19110	CM	SY17,	147,8,IS IT XTYPE		12698	14	13569	0-147
19120	BE	CD17C			12710	46	1283C	01200
19130	CM	SY17,	148,8,IS IT HTYPE		12722	14	13569	0-148
19140	BE	CD17D			12734	46	1289C	01200
19150	CM	SY17,	124,8,IS IT LEFT PAREN		12746	14	13569	0-124
19160	BE	CD17E			12758	46	1301C	01200
19170	TF	FREQ1,SX17,,	OTHER OPERATOR, SAVE FREQ		12770	26	12925	12829
19180	TF	REPL,ADCCOW,,	SAVE ADDRESS OF NEXT SPEC		12782	26	12885	05969
19190	AM	REPL,4,10			12794	11	12889	000-4
19200	TF	SX17,SY17			12806	26	12829	13569
19210	B	CD17B			12818	49	13082	00000
19220	SX17	DS	,*		12829	0		
19230	CD17C	BTM	PUT17,XTYPE,,	PUT XTYPE AND LENGTH	12830	17	13810	-3787
19240	MM	SX17,2,10			12842	13	12829	000-2
19250	SF	97			12854	32	00097	00000
19260	BT	PUT17C,99			12866	27	13846	00099
19270	B	CD17A			12878	49	12650	00000
19280	REPL	DS	,*		12889	C		
19290	CD17D	BTM	PUT17,HTYPE,,	PUT HTYPE, LENGTH AND CONSTANTS	12890	17	1381C	-3782
19300	MM	SX17,2,10			12902	13	12829	000-2
19310	SF	97,,9			12914	32	00097	00-00
19320	FREQ1	DS	,*		12925	0		
19330	BT	PUT17C,99			12926	27	13846	00099
19340	CD17F	BTM	RMNS	,SY17	12938	17	04990	J3569
19350	BT	PUT17B,SY17			12950	27	13894	13569
19360	SM	SX17,1,10			12962	12	12829	000-1
19370	CM	SX17,0,9			12974	14	12829	00-00
19380	BH	CD17F			12986	46	12938	01100
19390	B	CD17A			12998	49	12650	00000
19400	REP2	DS	,*		13009	C		
19410	CD17E	TF	REP3,ADCCOW,,	SAVE FREQUENCY ADDRESS	13010	26	13673	05969
19420	SM	REP3,1,10			13022	12	13673	000-1
19430	TF	REP2,ADCCOW			13034	26	13009	05969
19440	AM	REP2,4,10			13046	11	13009	000-4
19450	TF	FREQ2,SX17			13058	26	13081	12829
19460	B	CD17A,,9			13070	49	1265C	00-00
19470	FREQ2	DS	,*		13081	0		
19480	CD17B	CM	SX17,	104,8,RIGHT PAREN	13082	14	12829	C-104
19490	BE	CD17G			13094	46	1359C	01200
19500	CM	SX17,	145,8,E TYPE		13106	14	12829	0-145
19510	BE	CD17H			13118	46	1357C	01200
19520	CM	SX17,	121,8,SLASH		13130	14	12829	C-121
19530	BE	CD17I			13142	46	1330C	01200
19540	CM	SX17,	144,8,A TYPE		13154	14	12829	0-144
19550	BE	CD17J			13166	46	1332C	01200

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19560	CM	SX17,	149,8,I	TYPE	13178	14	12829	C-149
19570	BE	CD17K			13190	46	13466	C1200
19580	CM	SX17,	146,8,F	TYPE	13202	14	12829	C-146
19590	BE	CD17L			13214	46	13486	C1200
19600	CM	SX17,	132,8,SEMI	COLON	13226	14	12829	C-132
19610	BE	CD17SC			13238	46	13674	C1200
19620	CM	SX17,	124,8,LEFT	PAREN	13250	14	12829	C-124
19630	BNE	CD17A,,,		CMA	13262	47	12650	C1200
19640	CD17M	TF	REP3,ADDCW,,	SAVE REPEAT ADDRESS	13274	26	13673	05969
19650	SM	REP3,1,10			13286	12	13673	C00-1
19660	B	CD17A			13298	49	12650	C0000
19670	DORG	*-3			13306			
19680	CD17I	BTM	PUT17,SLASH		13306	17	13810	-3752
19690	B	CD17A			13318	49	12650	C0000
19700	DORG	*-3			13326			
19710	CD17J	BTM	PUT17,ATYPE		13326	17	13810	-3747
19720	BTM	RMNS	,SX17		13338	17	04990	J2829
19730	MM	SX17,2,10			13350	13	12829	006-2
19740	SF	97			13362	32	00097	C0000
19750	BT	PUT17C,99			13374	27	13846	C0099
19760	CD17N	CM	FREQ1,0,9,	PUT FREQ RETURN ADDRESS	13386	14	12925	00-00
19770	BE	CD17A			13398	46	12650	C1200
19780	BTM	PUT17,REP			13410	17	13810	-3757
19790	CD117	BT	PUT17I,REP1		13422	27	13758	12889
19800	BT	PUT17B,FREQ1			13434	27	13894	12925
19810	TFM	FREQ1,0,9			13446	16	12925	C0-CC
19820	B	CD17A			13458	49	12650	C0000
19830	DORG	*-3			13466			
19840	CD17K	BTM	PUT17,ITYPE		13466	17	13810	-3762
19850	B	CD17J+12			13478	49	13338	C0000
19860	DORG	*-3			13486			
19870	CD17L	BTM	PUT17,FTYPE		13486	17	13810	-3767
19880	BTM	RMNS	,SX17		13498	17	04990	J2829
19890	BT	PUT17C,SX17			13510	27	13846	12829
19900	TR	BGNST-4(7)	,BGNST+1(7)		13522	31	11111	10--0
19910	BTM	RMNS	,SX17		13534	17	04990	J2829
19920	BT	PUT17B,SX17			13546	27	13894	12829
19930	B	CD17N			13558	49	13386	C0000
19940	SY17	DS	,*		13569			C
19950	CD17H	BTM	PUT17,ETYPE		13570	17	13810	-3772
19960	B	CD17L+12			13582	49	13498	C0000
19970	DORG	*-3			13590			
19980	CD17G	CM	FREQ2,0,9,	PUT FREQ RETURN ADDRESS	13590	14	13081	C0-00
19990	BE	CD17A			13602	46	12650	C1200
20000	TF	FREQ1,FREQ2			13614	26	12925	13081
20010	TF	REP1,REP2			13626	26	12889	13009
20020	TFM	FREQ2,0,9			13638	16	13081	C0-00
20030	BTM	PUT17, REPA			13650	17	13810	-3577
20040	B	CD117			13662	49	13422	C0000
20050	REP3	DS	,*		13673			C
20060	CD17SC	BTM	PUT17,REDO		13674	17	13810	-3777
20070	BT	PUT17I,REP3			13686	27	13758	13673
20080	CD17XX	BTM	ADJUST,ADDCW,,	ADJUST ADCOW TO EVEN ADDRESS	13698	17	03444	-5969
20090	TF	N40002,SXF			13710	26	03387	C9257
20100	BTM	PUTA	,**16		13722	17	07522	J3738
20110	DSA	SXF,ADDCW			13738		5 X	2

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20120	B	CLEAR			13738			-9257
20130	DORG	*-3			13743			-5969
20140	DS	5			13744	49	02640	C0000
20150	PUT17I	TR	TYPET	,TYPECR	13752			5
20160	TFM	PUT3		,PUT17I-1	13756			5
20170	TFM	PUTX-1		,**20	13758	31	07675	08046
20180	B7	PUTXB			13770	16	08030	J3757
20190	BB2				13782	16	06029	J3802
20200	DS	5			13794	49	06114	
20210	PUT17	TR	TYPET	,TYPECN	13802	42		5
20220	TF	PUT3		,PUT17-1	13808			5
20230	B	PUT17I+24			13810	31	07675	C8061
20240	DS	,*			13822	26	08030	13809
20250	PUT17C	TR	TYPET	,TYPEK3	13834	49	13782	C0000
20260	SF	PUT17C-3			13845			0
20270	TFM	PUT3		,PUT17C-1	13846	31	07675	13952
20280	B	PUT17I+24			13858	32	13843	C0000
20290	DS	,*			13870	16	08030	J3845
20300	PUT17B	TR	TYPET	,TYPEK2	13882	49	13782	C0000
20310	SF	PUT17B-2			13893			0
20320	TFM	PUT3		,PUT17B-1	13894	31	07675	13937
20330	B7	PUT17I+24			13906	32	13892	C0000
20340	TYPEK2	DSC	1,2		13918	16	08030	J3893
20350	DC	2,2			13930	49	13782	
20360	DC	2,5			13937			1
20370	DC	2,10			13939			2
20380	DC	2,11			13941			2
20390	DC	5,10000			13943			2
20400	DC	1,1			13945			2
20410	TYPEK3	DSC	1,2		13950			5
20420	DC	2,3			13951			1
20430	DC	2,6			13952			1
20440	DC	2,11			13954			2
20450	DC	2,12			13956			2
20460	DC	5,10000			13958			2
20470	DC	1,1			13960			2
20480	DORG	14100			13965			5
20490	DC	2,2			13966			1
20500	WURBCDS	TFM	FMON+35	,BLK5	14100			
					14101			2
					14102	16	02359	-8884

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20510	BTM	FMON	,SUBCDS			14114	17	02324	J4102
20520	WUBCAB	TFM	FMON+35	,BLK6		14126	16	02359	-8908
20530	BTM	FMON	,SUBCAB			14138	17	02324	J4126
20540	WUBC12	TFM	FMON+35	,BLK7		14150	16	02359	-8932
20550	BTM	FMON	,SUBC12			14162	17	02324	J4150
20560	WUB12B	TFM	FMON+35	,BLK8		14174	16	02359	-8956
20570	BTM	FMON	,SUB12B			14186	17	02324	J4174
20580	*****		OUTPUT RETURN						
20590	FCRTP	TDM	SS2	,1		14198	15	06634	C0001
20600	BTM	SRFCT		,**16		14210	17	03824	J4226
20610	DSA	RTNAME				14226		5 X	1
						14226		-9210	
20620	DSA	N40011				14231		5 X	1
						14231		-3432	
20630	BTM	PUTX		,**16		14232	17	06030	J4248
20640	DSA	TFL				14248		5 X	1
						14248		-9021	
20650	DSA	FACAD				14253		5 X	1
						14253		-3797	
20660	DSA	N40011				14258		5 X	1
						14258		-3432	
20670	N60182	CM	LOXRAD	,0		14260	14	02394	-0000
20680	BE	N61A				14272	46	14324	01200
20690	TDM	SS2		,1		14284	15	06634	C0001
20700	BTM	PUTX		,**16		14296	17	06030	J4312
20710	DSA	TR,XRADD,LOXRAD				14312		5 X	3
						14312		-9019	
						14317		-2389	
						14322		-2394	
20720	N61A	TFM	SS3	,101	,9	14324	16	06635	COJ01
20730	TF	N40012	,RTAD			14336	26	03437	C9246
20740	SM	N40012	,1		,10	14348	12	03437	COO-1
20750	BTM	PUTX		,**16		14360	17	06030	J4376
20760	DSA	B				14376		5 X	1
						14376		-5974	
20770	DSA	N40012				14381		5 X	1
						14381		-3437	
20780	DSA	BLANK				14386		5 X	1
						14386		-9026	
20790	B7	CLEAR				14388	49	02640	
20800	DORG	16002				16002			
20810	XBLK2	DSC	14,01793606010000			16002		14	
			01793606010000						
20820	XZZX	34	XBLK2,701			16016	34	16002	C0701
20830	38	XBLK2,702				16028	38	16002	C0702
20840	TRA					16040	36	00000	00500
						16052	49	00000	C0000

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20850	TCD	XZZX				16016			
20860	DORG	10000				10000			
20870	*****		SECONDARY LINKAGE FOR BLOCK 3						
20880	DC	2,3				10001		2	
						10001			
20890	YODE1	TFM	FMON+35	,BLK1		10002	16	02359	-8788
20900	BTM	FMON	,CODE1			10014	17	02324	J0002
20910	YODE3	TFM	FMON+35	,BLK1		10026	16	02359	-8788
20920	BTM	FMON	,CODE3			10038	17	02324	J0026
20930	YODE4	TFM	FMON+35	,BLK1		10050	16	02359	-8788
20940	BTM	FMON	,CODE4			10062	17	02324	J0050
20950	YODE6	TFM	FMON+35	,BLK2		10074	16	02359	-8812
20960	BTM	FMON	,CODE6			10086	17	02324	J0074
20970	YODE7	TFM	FMON+35	,BLK2		10098	16	02359	-8812
20980	BTM	FMON	,CODE7			10110	17	02324	J0098
20990	YODE8	TFM	FMON+35	,BLK1		10122	16	02359	-8788
21000	BTM	FMON	,CODE8			10134	17	02324	J0122
21010	YODE9	TFM	FMON+35	,BLK2		10146	16	02359	-8812
21020	BTM	FMON	,CODE9			10158	17	02324	J0146
21030	YODE12	B	SUBC12			10170	49	14150	00000
21040	H					10182	48	00000	C0000
21050	YODE14	TDM	FX	,1		10194	15	03562	C0001
21060	B	CD14P				10206	49	10434	C0000
21070	YODE15	TFM	FMON+35	,BLK1		10218	16	02359	-8788
21080	BTM	FMON	,CODE15			10230	17	02324	J0218
21090	YODE17	TFM	FMON+35	,BLK2		10242	16	02359	-8812
21100	BTM	FMON	,CODE17			10254	17	02324	J0242
21110	YODESS	B	SUBCDS			10266	49	14102	00000
21120	H					10278	48	00000	C0000
21130	YDSSAB	B	SUBCAB			10290	49	14126	00000
21140	H					10302	48	00000	00000
21150	YD12B	B	SUB12B			10314	49	14174	00000
21160	H					10326	48	00000	00000
21170	YCT1	TFM	FMON+35	,BLK4		10338	16	02359	-8860
21180	BTM	FMON	,FCT1			10350	17	02324	J0338
21190	YCTRT	TFM	FMON+35	,BLK2		10362	16	02359	-8812
21200	BTM	FMON	,FCTRT			10374	17	02324	J0362
21210	YDJ	TFM	FMON+35	,BLK4		10386	16	02359	-8860
21220	BTM	FMON	,ECJ			10398	17	02324	J0386
21230	YDCALL	CM	LV	,131	,8	10410	14	09239	C-131
21240	B	CDCALP				10422	49	12632	C0000
21250	*****		OUTPUT IO STATEMENT						
21260	CD14P	TDM	FFRSW	,0		10434	15	04398	00000
21270	TR	BGNST-4(7)		,BGNST+1(7)		10446	31	1NRR5	IG-0
21280	TF	SL		,BGNST(7)		10458	26	09282	1NRR9
21290	CM	LV	,142		,8	10470	14	09239	C-142
21300	BL	CD14JG				10482	47	10952	01300
21310	CM	LV	,147		,8	10494	14	09239	C-147
21320	BH	CD14JG				10506	46	10952	C1100
21330	TDM	FFRSW		,1		10518	15	04398	C0001
21340	TFM	IONO		,127	,9	10530	16	10649	00J27
21350	CM	LV	,142		,8	10542	14	09239	C-142
21360	BE	CD14FV				10554	46	10682	01200
21370	CM	LV	,143		,8	10566	14	09239	C-143
21380	BE	CD14FL				10578	46	10766	01200

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21390	CM	LV	,146	,8	10590	14	09239	C-146
21400	BE	CD14RV			10602	46	10872	01200
21410	CM	LV	,147	,8	10614	14	09239	C-147
21420	BE	CD14RL			10626	46	10892	01200
21430	SF	FFRSW			10638	32	04398	C0000
21440	IOND	DS	,*		10649			C
21450	CM	LV	,144	,8	10650	14	09239	0-144
21460	BE	CD14SV			10662	46	10912	01200
21470	B7	CD14SL			10674	49	10932	
21480	CD14FV	TF	LV	,FETCH	10682	26	09239	12631
21490	CM	SL	,101	,8	10694	14	09282	C-101
21500	BNE	CD14JW			10706	47	10976	01200
21510	BTM	PUTX	,**16		10718	17	0603C	J0734
21520	DSA	BT,LV,N13092			10734		5 X	3
					10734		-9053	
					10739		-9239	
					10744		-9040	
21530	TR	BGNST-4(7)	,BGNST+1(7)		10746	31	1NRR5	10--0
21540	B7	CD14A			10758	49	11202	
21550	CD14FL	TF	LV	,FETCH	10766	26	09239	12631
21560	BTM	SRFCT	,**16		10778	17	03824	J0794
21570	DSA	SL,N40004			10794		5 X	2
					10794		-9282	
					10799		-3397	
21580	TDM	SS2	,1		10800	15	06634	C0001
21590	BTM	PUTX	,**16		10812	17	0603C	J0828
21600	DSA	TFL,FACAD,N40004			10828		5 X	3
					10828		-9021	
					10833		-3797	
					10838		-3397	
21610	TF	BGNST(7)	,FAC		10840	26	1NRR9	09203
21620	BTM	GMRP	,**12		10852	17	05022	J0864
21630	B7	CD14FV+12			10864	49	10694	
21640	CD14RV	TF	LV	,RECORD	10872	26	09239	12626
21650	B7	CD14FV+12			10884	49	10694	
21660	CD14RL	TF	LV	,RECORD	10892	26	09239	12626
21670	B7	CD14FL+12			10904	49	10778	
21680	CD14SV	TF	LV	,FIND	10912	26	09239	12621
21690	B7	CD14FV+12			10924	49	10694	
21700	CD14SL	TF	LV	,FIND	10932	26	09239	12621
21710	B7	CD14FL+12			10944	49	10778	
21720	CD14JG	TFM	IOND	,126	10952	16	10649	00J26
21730	BTM	OPSR	,LV	,9	10964	17	03488	-9239
21740	CD14JW	BTM	RMNS	,SL	10976	17	04990	-9282
21750	TDM	SS2	,1		10988	15	06634	C0001
21760	*****	OUTPUT INSTRUCTION FOR IO DEVICE						
21770	BTM	SRFCT	,**16		11000	17	03824	J1016
21780	DSA	SL			11016		5 X	1
					11016		-9282	
21790	DSA	N40004			11021		5 X	1
					11021		-3397	

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21800	BD	CD14FR	,FFRSW		11022	43	11078	C4398
21810	BD	CD14RM	,RMSW		11034	43	11114	C4418
21820	BMR	CD14NR	,5(6)		11046	45	11162	C--05
21830	TFM	OPY	,27	,10	11058	16	12606	000K7
21840	B7	CD14NR+12			11070	49	11174	
21850	CD14FR	BLXM	EXSUB	,**16(2)	11078	66	08304	11-94
21860	DSA	OPX,LV,N40004			11094		5 X	3
					11094		-3930	
					11099		-9239	
					11104		-3397	
21870	B7	CD14A			11106	49	11202	
21880	CD14RM	TF	N40001	,ADCOV	11114	26	03382	05969
21890	AM	N40001	,11	,10	11126	11	03382	000J1
21900	TF	SBASE	,N40001	,6	11138	26	0416-	03382
21910	TDM	RMSW	,0		11150	15	04418	C0000
21920	CD14NR	TFM	OPY	,17	11162	16	12606	000J7
21930	BTM	PUTX	,**16	,10	11174	17	0603C	J1190
21940	DSA	OPY,LV,N40004			11190		5 X	3
					11190		J2606	
					11195		-9239	
					11200		-3397	
21950	CD14A	TDM	IO1	,0	11202	15	08987	C0000
21960	BNF	**+20	,FFRSW		11214	44	11234	04398
21970	B7	CLEAR			11226	49	02640	
21980	BTM	RMNS	,SL		11234	17	04990	-9282
21990	CM	SL,	132,8,SEMI COLON		11246	14	09282	0-132
22000	BE	CD14EN			11258	46	12184	01200
22010	TF	SL	,BGNST(7)		11270	26	09282	1NRR9
22020	CM	SL,	109,8,DOA		11282	14	09282	0-109
22030	BE	CDDDA			11294	46	12108	01200
22040	CM	SL,	124,8,LEFT PAREN		11306	14	09282	C-124
22050	BE	CODEPA			11318	46	11764	01200
22060	BTM	SRFCT	,**16		11330	17	03824	J1346
22070	DSA	SL			11346		5 X	1
					11346		-9282	
22080	DSA	SR			11351		5 X	1
					11351		-2372	
22090	BD	CODARR	,DMSW		11352	43	11460	C3998
22100	*****	OUTPUT SIMPLE VARIABLE						
22110	SIMVAR	TDM	SS2	,1	11364	15	06634	C0001
22120	TF	IONDA	,IOND		11376	26	12599	10649
22130	TD	FX	,FXORFL		11388	25	03562	C4162
22140	BTM	OPSR	,ICNOA		11400	17	03488	J2599
22150	CD96	BLXM	EXSUB	,**16(2)	11412	66	08304	11W28
22160	DSA	OPX			11428		5 X	1
					11428		-3930	
22170	DSA	IONDA			11433		5 X	1
					11433		J2599	
22180	DSA	SR			11438		5 X	1

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22190	CD14C	TR	BGNST-4(7)	,BGNST+1(7)	11438	-2372		
22200	B7	CD14A			11440	31	INRR5	10--0
22210	*****		OUTPUT DIMENSION VARIABLES IN IO STATEMENTS		11452	49	11202	
22220	CODARR	TF	LV	,BGNST+5(7)	11460	26	09239	10--4
22230		CM	LV	,148	11472	14	09239	C-148
22240		BL	CODMAT		11484	47	12276	C1300
22250		BXM	**12	,5(7)	11496	62	11508	C---5
22260		TDM	IO1	,1	11508	15	08987	0000J
22270		CM	LV	,148	11520	14	09239	C-148
22280		BE	COSSAB		11532	46	10290	C1200
22290		B7	CODESS		11544	49	10266	
22300	CD14B	TDM	IO1	,0	11552	15	08987	00000
22310		TD	FX	,RXFLAG	11564	25	03562	C4368
22320		YF	IONOA	,IONO	11576	26	12595	10649
22330		BTM	OPSR	,IONOA	11588	17	03488	J2599
22340	CD94	BD	CD941	,XRSW	11600	43	11648	C9241
22350		BTM	PUTX	,**16	11612	17	06030	J1628
22360		DSA	BT		11628	5	X	1
					11628		-9053	
22370		DSA	IONOA		11633	5	X	1
					11633		J2599	
22380		DSA	N13092		11638	5	X	1
					11638		-9040	
22390		B7	CD14A		11640	49	11202	
22400	CD941	BD	**32	,SPFPSW	11648	43	11680	09357
22410		TFM	OPX	,17	11660	16	03930	C00J7
22420		B7	**20		11672	49	11692	
22430		TFM	OPX	,27	11680	16	03930	000K7
22431		TD	PFPSW	,SPFPSW	11692	25	03928	09357
22440		TDM	SS2	,1	11704	15	06634	C0001
22450		TD	SBASE-5	,XRSW	11716	25	04155	C9241
22460		BLXP	EXSUB	,**16(2)	11728	66	08304	11P44
22470		DSA	OPX,IONOA,SX		11744	5	X	3
					11744		-3930	
					11749		J2599	
					11754		-2377	
					11756	49	11202	
22480		B7	CD14A		11764	16	11891	COO-1
22490	CODEPA	TFM	PARCNT,1,10		11776	62	11788	C---5
22500	CD14NA	BXM	**12	,5(7)	11788	26	09282	INRR9
22510		TF	SL	,BGNST(7)	11800	14	09282	C-104
22520		CM	SL,104,8		11812	47	11844	C1200
22530		BNE	**32		11824	12	11891	000-1
22540		SM	PARCNT,1,10		11836	49	11776	CO000
22550		B	CD14NA		11844			
22560		DORG	*-3		11844	14	09282	C-124
22570		CM	SL,124,8		11856	47	11892	01200
22580		BNE	**36		11868	11	11891	000-1
22590		AM	PARCNT,1,10		11880	49	11776	CO000
22600		B	CD14NA		11891	2		
22610	PARCNT	DS	2,*		11891	14	09282	0-133
22620		CM	SL,133,8					

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22630		BNE	CD14NA		11904	47	11776	C1200
22640		CM	PARCNT,1,10		11916	14	11891	000-1
22650		BH	CD14NA		11928	46	11776	01100
22660		AM	GLND,1,10		11940	11	09061	COO-1
22670		TF	T2,GLND		11952	26	09267	C9061
22680		TDM	IO1,1		11964	15	08987	00001
22690		BXM	CODE12	,-15(7)	11976	62	10170	C--JN
22700	CD14E	TDM	IO1,0		11988	15	08987	CO000
22710		BXM	**12	,10(7)	12000	62	12012	C--JO
22720		TR	BGNST-4(7)	,BGNST+6(7)	12012	31	INRR5	10--5
22730		TF	BGNST(7)	,DOA	12024	26	INRR9	09186
22740		BXM	**12	,5(7)	12036	62	12048	C---5
22750		TR	BGNST-4(7)	,BGNST+1(7)	12048	31	INRR5	10--0
22760	CD14NC	TR	BGNST-4(7)	,BGNST+1(7)	12060	31	INRR5	10--0
22770		CM	BGNST(7)	,104	12072	14	INRR9	00J04
22780		BNE	CD14NC		12084	47	12060	C1200
22790		BLXM	CD14A	,5(7)	12096	66	11202	C---5
22800	CODDA	TDM	IO1	,1	12108	15	08987	00001
22810		TF	T2	,GLND	12120	26	09267	C9061
22820		B7	CD12B		12132	49	10314	
22830	CD14M	SM	GLND	,1	12140	12	09061	COO-1
22840		TDM	IO1	,0	12152	15	08987	00000
22850		TR	BGNST-4(7)	,BGNST+6(7)	12164	31	INRR5	10--5
22860		B7	CD14A		12176	49	11202	
22870	CD14EN	BD	CD14ND	,FFRSW	12184	43	12244	C4398
22880		TF	N40004	,IOEND	12196	26	03397	03802
22890		BTM	PUTX	,**16	12208	17	06030	J2224
22900		DSA	BTM		12224	5	X	1
					12224		-5972	
22910		DSA	N40004		12229	5	X	1
					12229		-3397	
22920		DSA	ZERO		12234	5	X	1
					12234		-9023	
22930		B7	CLEAR		12236	49	02640	
22940	CD14ND	TF	N40004	,DIOEND	12244	26	03397	12611
22950		TDM	FFRSW	,0	12256	15	04398	CO000
22960		B7	CD14EN+24		12268	49	12208	
22970	*****		OUTPUT CODING FOR COMPLETE MATRICES IN IO STATEMENTS					
22980	CODMAT	BD	SIMVAR	,SBASE-5	12276	43	11364	04155
22990		BTM	PUTX	,**16	12288	17	06030	J2304
23000		DSA	TFM		12304	5	X	1
					12304		-9001	
23010		DSA	PAR		12309	5	X	1
					12309		-3812	
23020		DSA	P1		12314	5	X	1
					12314		-9338	
23030		BD	**20	,FXORFL	12316	43	12336	C4162
23040		B7	CM99		12328	49	12420	
23050		BNF	CM98	,FPSW	12336	44	12396	C9347
23060		TDM	SS1	,1	12348	15	06633	CO001

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23070	BTM	PUTX	,**16	12360	17 06030 J2376
23080	DSA	SF,SR,BLANK		12376	5 X 3
				12376	-9003
				12381	-2372
				12386	-9026
23090	B7	**20		12388	49 12408
23100 CM98	TDM	SS4	,1	12396	15 06636 00001
23110	BD	**24	,COMSW	12408	43 12432 C3999
23120 CM99	TDM	SS2	,1	12420	15 06634 C0001
23130	BD	CM96	,FFRSW	12432	43 12576 C4398
23140	TF	N40004	,MAT	12444	26 03397 03817
23150	BTM	PUTX	,**16	12456	17 06030 J2472
23160	DSA	DPX,N40004,SR		12472	5 X 3
				12472	-3930
				12477	-3397
				12482	-2372
23170	BD	**20	,FXDRFL	12484	43 12504 04162
23180	B7	CM97		12496	49 12556
23190	BNF	CM97	,FPSW	12504	44 12556 C9347
23200	TDM	SS1	,1	12516	15 06633 C0001
23210	BTM	PUTX	,**16	12528	17 06030 J2544
23220	DSA	CF,SR,BLANK		12544	5 X 3
				12544	-9005
				12549	-2372
				12554	-9026
23230 CM97	TR	BGNST-4(7)	,BGNST+1(7)	12556	31 INRR5 10--0
23240	B7	CD14A		12568	49 11202
23250 CM96	TF	N40004	,DRAY	12576	26 03397 12616
23260	B7	CM99+36		12588	49 12456
23270 LONCA	DS	5		12599	5
23280 LVP	DS	5		12604	5
23290 OPY	DS	2		12606	2
23300 DIDEND	DC	5,-02298		12611	5
		-229Q			
23310 DRAY	DC	5,-02293		12616	5
		-229L			
23320 FIND	DC	5,-02273		12621	5
		-227L			
23330 RECORD	DC	5,-02278		12626	5
		-227Q			
23340 FETCH	DC	5,-02283		12631	5
		-228L			
23350	*****	CALL EXIT AND CALL LINK ROUTINES			
23360 CDCALP	BE	CDXIT		12632	46 13152 01200
23370 CDLINK	BXM	**12	,15(7)	12644	62 12656 0--J5
23380	BTM	RMNS	,SL	12656	17 0499C -9282
23390	BTM	RMNS	,SX	12668	17 0499C -2377
23400	BTM	RMNS	,NAME	12680	17 0499C J3151
23410	TF	NAME-4	,SX	12692	26 13147 02377
23420	SF	SL-3		12704	32 09279 C0000
23430 CDLGT	DS	,*		12715	C
23440	TF	NAME-8	,SL	12716	26 13143 09282
23450	TF	CDLGT	,ADCOV	12728	26 12715 05969

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1620 MONITOR II VERSION 2 FORTRAN II-D PHASE 2-B				PAGE	62
23460	TDM	SS2	,1	12740	15 06634 00001
23470	AM	CDLGT	,50	12752	11 12715 00000
23480	BTM	PUTX	,**16	12764	17 06030 J2780
23490	DSA	TFM,N07495,CDLGT		12780	5 X 3
				12780	-9001
				12785	J3117
				12790	J2715
23500	TF	CDLGT	,ADCOV	12792	26 12715 05969
23510	TDM	SS2	,1	12804	15 06634 C0001
23520	AM	CDLGT	,19	12816	11 12715 000J9
23530	BTM	PUTX	,**16	12828	17 06030 J2844
23540	DSA	TFM,N00565,CDLGT		12844	5 X 3
				12844	-9001
				12849	J3122
				12854	J2715
23550	BTM	PUTX	,**16	12856	17 06030 J2872
23560	DSA	B,N00716,N2THO		12872	5 X 3
				12872	-5974
				12877	J3127
				12882	J3132
23570	SM	ADCOV	,4	12884	12 05969 000-4
23580	BT	PUTX2	,NM22	12896	27 12956 13134
23590	BT	PUTX17	,N147RM	12908	27 13008 13139
23600	BT	PUTX12	,NAME	12920	27 13052 13151
23610	AM	ADCOV	,1	12932	11 05969 000-1
23620	B	CLEAR		12944	49 02640 00000
23630	DS	,*		12955	C
23640	PUTX2	TR	TYPET	12956	31 07675 13083
23650	TFM	PUT3	,PUTX2-1	12968	16 0803C J2955
23660	TFM	PUTX-1	,**20	12980	16 06029 J3000
23670	B7	PUTXB		12992	49 06114
23680	BB2			13000	42
23690	DS	5		13006	5
23700	PUTX17	TR	TYPET	13008	31 07675 08061
23710	TFM	PUT3	,PUTX17-1	13020	16 0803C J3007
23720	B	PUTX2+24		13032	49 1298C 00000
23730	DS	7		13050	7
23740	PUTX12	TR	TYPET	13052	31 07675 13098
23750	TFM	PUT3	,PUTX12-1	13064	16 0803C J3051
23760	B7	PUTX2+24		13076	49 1298C
23770	TYPET2	DSC	1,2	13083	1
		2			
23780	DC	2,2		13085	2
		-2			
23790	DC	2,5		13087	2
		-5			
23800	DC	2,10		13089	2
		JO			
23810	DC	2,11		13091	2
		J1			
23820	DC	5,10000		13096	5
		JO000			
23830	DC	1,1		13097	1

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23840	TYPE12	DSC	1,2			13098		1	
		2							
23850		DC	2,12			13100		2	
		J2							
23860		DC	2,15			13102		2	
		J5							
23870		DC	2,20			13104		2	
		K0							
23880		DC	2,21			13106		2	
		K1							
23890		DC	5,10000			13111		5	
		J0000							
23900		DC	1,'			13112		1	
		*							
23910	N07495	DC	5,7495			13117		5	
		-7495							
23920	N00565	DSA	IORT			13122		5 X	1
23930	N00716	DSA	IOCAL			13122		-0565	
						13127		5 X	1
23940	N2TH0	DC	5,20000			13127		-0716	
		K0000				13132		5	
23950	NM22	DC	2,20			13134		2	
		K0							
23960	N147RM	DC	5,147'			13139		5	
		-147'							
23970	NAME	DS	12			13151		12	
23980	CDXIT	BTM	PUTX	,**16		13152	17	06030	J3168
23990	DSA	B,N00796,BLANK				13168		5 X	3
						13168		-5974	
						13173		-9356	
						13178		-9026	
						13180	12	05969	C00-4
						13192	49	02640	
24000	SM	ADCOV	,4	,10		16002			
24010	B7	CLEAR				16002		14	
24020	DORG	16002							
24030	XBLK3	DSC	14,01800004110000			16016	34	16002	00701
		01800004110000				16028	38	16002	00702
24040	XWX	34	XBLK3,701			16040	36	000CC	CC500
24050		38	XBLK3,702			16052	49	000CC	CC000
24060	TRA					16016			
24070	ICD	XWX							
24080	DORG	10000				10000			
24090	*****	SECONDARY LINKAGE FOR BLOCK 4							
24100	DC	2,4				10001		2	
		-4							
24110	ZODE1	TFM	FMON+35	,BLK1		10002	16	02359	-8788
24120	BTM	FMON		,CODE1		10014	17	02324	J0002
24130	ZODE3	TFM	FMON+35	,BLK1		10026	16	02359	-8788
24140	BTM	FMON		,CCDE3		10038	17	02324	J0026
24150	ZODE4	TFM	FMON+35	,BLK1		10050	16	02359	-8788
24160	BTM	FMON		,CCDE4		10062	17	02324	J0050

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24170	ZODE6	TFM	FMON+35	,BLK2		10074	16	02359	-8812
24180	BTM	FMON		,CODE6		10086	17	02324	J0074
24190	ZODE7	TFM	FMON+35	,BLK2		10098	16	02359	-8812
24200	BTM	FMON		,CODE7		10110	17	02324	J0098
24210	ZODE8	TFM	FMON+35	,BLK1		10122	16	02359	-8788
24220	BTM	FMON		,CODE8		10134	17	02324	J0122
24230	ZODE9	TFM	FMON+35	,BLK2		10146	16	02359	-8812
24240	BTM	FMON		,CCDE9		10158	17	02324	J0146
24250	ZODE12	TFM	FMON+35	,BLK1		10170	16	02359	-8788
24260	BTM	FMON		,CODE12		10182	17	02324	J0170
24270	ZODE14	TFM	FMON+35	,BLK3		10194	16	02359	-8836
24280	BTM	FMON		,CODE14		10206	17	02324	J0194
24290	ZODE15	TFM	FMON+35	,BLK1		10218	16	02359	-8788
24300	BTM	FMON		,CODE15		10230	17	02324	J0218
24310	ZODE17	TFM	FMON+35	,BLK2		10242	16	02359	-8812
24320	BTM	FMON		,CODE17		10254	17	02324	J0242
24330	ZODESS	TFM	FMON+35	,BLK1		10266	16	02359	-8788
24340	BTM	FMON		,CODESS		10278	17	02324	J0266
24350	ZDSSAB	TFM	FMON+35	,BLK1		10290	16	02359	-8788
24360	BTM	FMON		,CDSSAB		10302	17	02324	J0290
24370	ZD12B	TFM	FMON+35	,BLK1		10314	16	02359	-8788
24380	BTM	FMON		,CD12B		10326	17	02324	J0314
24390	ZCT1	BTM	RMNS	,LV		10338	17	04990	-9239
24400	B	FCTIP				10350	49	10434	00000
24410	ZCTRT	TFM	FMON+35	,BLK2		10362	16	02359	-8812
24420	BTM	FMON		,FCTRT		10374	17	02324	J0362
24430	Z0J	SM	ADCOV	,5	,10	10386	12	05969	000-5
24440	B	EOJP				10398	49	12008	C0000
24450	ZDCALL	TFM	FMON+35	,BLK3		10410	16	02359	-8836
24460	BTM	FMON		,CCCALL		10422	17	02324	J0410
24470	FCT1P	BTM	RMNS	,SL		10434	17	04990	-9282
24480	CM	LV	,136	,8	,SUBF	10446	14	09239	0-136
24490	BE	**36				10458	46	10494	C1200
24500	CM	LV	,135	,8	,SUBP	10470	14	09239	0-135
24510	BNE	FCT11				10482	47	10582	C1200
24520	AM	ADCOV	,6	,10		10494	11	05969	C00-6
24530	TF	RTAD	,ADCOV			10506	26	09246	C5969
24540	CM	LV	,136	,8	,SUBF	10518	14	09239	0-136
24550	BNE	**32				10530	47	10562	C1200
24560	TF	RTNAME	,SL			10542	26	09210	09282
24570	B7	FCT1G				10554	49	10748	
24580	TDM	SUBPSW	,1			10562	15	04408	00001
24590	B7	FCT1G				10574	49	10748	
24600	FCT11	TDM	FTSW	,1	,11	10582	15	04378	C00J
24610	BTM	SRFCT	,**16			10594	17	03824	J0610
24620	DSA	SL,N40012				10610		5 X	2
						10610		-9282	
						10615		-3437	
24630	TD	RFLAG	,FXORFL			10616	25	04358	04162
24640	IDM	RSW	,-1			10628	15	08997	C000J
24650	BTM	PUTX	,**16			10640	17	06030	J0656
24660	DSA	B,BLANK,BLANK				10656		5 X	3
						10656		-5974	
						10661		-9026	

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24670	TF	SXF	,ADCOV		10666	-9026	
24680	SM	SXF	,10	,10	10668	26	09257 05969
24690	TFM	ADTEMP	,4		10680	12	09257 000J0
24700	TF	ADTEMP-1	,SL		10692	16	09277 -0004
24710	TF	ADTEMP	,ADCOV	,6	10704	26	09276 09282
24720	BXM	**12	,5(7)		10716	26	0927P C5969
24730	B7	FCT1G1			10728	62	1074C C---5
24740	FCT1G	BTM	RMNS	,SL	10740	49	10760
24750	FCT1G1	TF	T1	,ADCOV	10748	17	04990 -9282
24760	TFM	RV	,0	,9	10760	26	06014 05969
24770	TF	LV	,ADCOV		10772	16	09251 C0-00
24780	SM	LV	,1	,10	10784	26	09239 05969
24790	CM	SL	,132	,8	10796	12	09239 000-1
24800	BE	FCT1C		,SC	10808	14	09282 C-132
24810	FCT1A	BTM	RMNS	,SL	10820	46	11418 C120C
24820	BTM	RMNS	,SR		10832	17	04990 -9282
24830	BNF	FCT12	,FTSW		10844	17	04990 -2372
24840	*****	ARITHMETIC STATEMENT FUNCTION IN MAIN LINE			10856	44	11558 C4378
24850	TDM	SARGSW	,0		10868	15	13366 00000
24860	TF	SX	,LV		10880	26	02377 09239
24870	FCT1H	TDM	SS1	,1	10892	15	06633 C0001
24880	BTM	PUTX	,**16		10904	17	0603C J0920
24890	DSA	AM, LV, FIVE			10920		5 X 3
					10920		-9009
					10925		-9239
					10930		-9205
24900	TDM	SS4	,1		10932	15	06636 C0001
24910	BD	**20	,FTSW		10944	43	10964 C2293
24920	B7	FCT13			10956	49	11204
24930	TFM	SS2	,11	,10	10964	16	06634 000J1
24940	TF	SUBCOV	,ADCOV		10976	26	13371 05969
24950	AM	SUBCOV	,35	,10	10988	11	13371 C00L5
24960	BTM	PUTX	,**16		11000	17	0603C J1016
24970	DSA	TF, SUBCOV, LV			11016		5 X 3
					11016		-9007
					11021		J3371
					11026		-9239
24980	TF	BCOV	,ADCOV		11028	26	13376 C5969
24990	AM	BCOV	,36	,10	11040	11	13376 C00L6
25000	TFM	SS2	,11	,10	11052	16	06634 000J1
25010	BTM	PUTX	,**16		11064	17	06030 J1080
25020	DSA	BNF, BCOV, SUBCOV			11080		5 X 3
					11080		-9311
					11085		J3376
					11090		J3371
25030	TDM	SS1	,1		11092	15	06633 C0001
25040	BTM	PUTX	,**16		11104	17	0603C J1120
25050	DSA	CF, SUBCOV, BLANK			11120		5 X 3
					11120		-9005
					11125		J3371
					11130		-9026

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25060	TFM	SS4	,1101	,8	11132	16	06636 C1101
25070	BTM	PUTX	,**16		11144	17	06030 J1160
25080	DSA	TF, SUBCOV, SUBCOV			11160		5 X 3
					11160		-9007
					11165		J3371
					11170		J3371
25090	BNF	**20	,SARGSW		11172	44	11192 13366
25100	B7	FCT1J			11184	49	1176C
25110	TF	SX	,SUBCOV		11192	26	02377 13371
25120	FCT13	TFM	SS2	,11	11204	16	06634 C00J1
25130	BTM	SRFCT	,**16	,10	11216	17	03824 J1232
25140	DSA	SL, N40012			11232		5 X 2
					11232		-9282
					11237		-3437
25150	TF	JOE	,ADCOV		11238	26	11557 05969
25160	AM	JOE	,23	,10	11250	11	11557 000K3
25170	TFM	SS2	,11	,10	11262	16	06634 C00J1
25180	BTM	PUTX	,**16		11274	17	0603C J1290
25190	DSA	MA, JOE, SX			11290		5 X 3
					11290		-9017
					11295		J1557
					11300		-2377
25200	TFM	SS2	,11	,10	11302	16	06634 C00J1
25210	BTM	PUTX	,**16		11314	17	0603C J1330
25220	DSA	TFL, N40012, SX			11330		5 X 3
					11330		-9021
					11335		-3437
					11340		-2377
25230	FCT1F	CM	SR	,104	11342	14	02372 0-104
25240	BE	FCT1B		,8	11354	46	11386 C120C
25250	AM	RV	,5	,10	11366	11	09251 C00-5
25260	B7	FCT1A			11378	49	10832
25270	FCT1B	BD	FCT1C	,RV	11386	43	11418 09251
25280	FCT1K	TFM	SR	,2	11398	16	02372 C00-2
25290	B7	FCT1D			11410	49	11430
25300	FCT1C	TFM	SR	,1	11418	16	02372 000-1
25310	FCT1D	TDM	SS1	,1	11430	15	06633 00001
25320	BTM	PUTX	,**16		11442	17	06030 J1458
25330	DSA	AM, LV, SR			11458		5 X 3
					11458		-9009
					11463		-9239
					11468		-2372
25340	BD	EXIT	,FTSW		11470	43	02928 C4378
25350	CM	LOXRAD	,0		11482	14	02394 -0000
25360	BE	CLEAR			11494	46	02640 C120C
25370	TDM	SS1	,1		11506	15	06633 C0001
25380	BTM	PUTX	,**16		11518	17	0603C J1534
25390	DSA	TR, LOXRAD, XRADD			11534		5 X 3
					11534		-9019
					11539		-2394

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25400	B7	CLEAR			11544	-2389	
25410	JOE	DS	5		11546	49	0264C
25420	FCTL2	BTM	SRFCT	,**16	11557		5
25430	DSA	SL,N40011			11558	17	03824 J1574
					11574		5 X 2
					11574		-9282
					11579		-3432
25440	CM	SR	,104	,8	11580	14	02372 C-104
25450	BNE	**32			11592	47	11624 C1200
25460	TDM	SARGSW	,1	,11	11604	15	13366 0000J
25470	B7	FCT1H			11616	49	10892
25480	TFM	SS2	,11	,10	11624	16	06634 C00J1
25490	TF	N40012	,ACCOM		11636	26	03437 05969
25500	AM	N40012	,90	,10	11648	11	03437 000R0
25510	SM	N40011	,4	,10	11660	12	03432 000-4
25520	BTM	PUTX	,**16		11672	17	06030 J1688
25530	DSA	TFM,N40012,N40011			11688		5 X 3
					11688		-9001
					11693		-3437
					11698		-3432
25540	TDM	SS1	,1		11700	15	06633 00001
25550	BTM	PUTX	,**16		11712	17	06030 J1728
25560	DSA	AM,N40012,FOUR			11728		5 X 3
					11728		-9009
					11733		-3437
					11738		J3382
25570	TDM	SARGSW	,0	,11	11740	15	13366 0000-
25580	B7	FCT1H			11752	49	10892
25590	FCTLJ	TFM	SS2	,11	11760	16	06634 000J1
25600	BTM	PUTX	,**16	,10	11772	17	06030 J1788
25610	DSA	TF,N40011,SUBCOM			11788		5 X 3
					11788		-9007
					11793		-3432
					11798		J3371
25620	BD	FCT1K	,SARGSW		11800	43	11398 13366
25630	TDM	SS1	,1		11812	15	06633 C0001
25640	TF	N40011	,ACCOM		11824	26	03432 05969
25650	SM	N40011	,6	,10	11836	12	03432 000-6
25660	BTM	PUTX	,**16		11848	17	06030 J1864
25670	DSA	AM,N40011,ONE2			11864		5 X 3
					11864		-9009
					11869		-3432
					11874		J3380
25680	TFM	SS4	,1101	,8	11876	16	06636 CJ101
25690	TF	N40012	,LV		11888	26	03437 C9239
25700	AM	N40012	,13	,10	11900	11	03437 000J3
25710	BTM	PUTX	,**16		11912	17	06030 J1928
25720	DSA	BNR,N40012,N40011			11928		5 X 3
					11928		J3378
					11933		-3437

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25730	FCTL1	AM	RV	,5	,10	11938	-3432
25740		BXM	**12	,5(7)		11940	11 09251 C00-5
25750		BTM	RMNS	,SR		11952	62 11964 C---5
25760		CM	SR	,104	,8	11964	17 04590 -2372
25770		BNE	FCTL1			11976	14 02372 C-104
25780		B7	FCT1B			11988	47 11940 C1200
25790	*****		END OF JOB ROUTINE			12000	49 11386
25800	EOJP	CM	BAL	,0	,10	12008	14 07696 C00-0
25810		BNH	**36			12020	47 12056 C1100
25820	EOJJ	AM	NEXT	,1	,10	12032	11 07706 C00-1
25830		TD	NEXT	,FLGRM	,6	12044	25 07700 07674
25840		CM	PREBUF	,BUF4		12056	14 08015 -7935
25850		BE	EOJG			12068	46 12136 C1200
25860		AM	PREBUF	,75	,10	12080	11 08015 C00P5
25870		TF	NEXT	,PREBUF		12092	26 07706 C8015
25880		AM	NEXT	,4	,10	12104	11 07706 C00-4
25890		TFM	NEXT	,0	,67	12116	16 07700 -0000
25900		B7	EOJJ			12128	49 12032
25910	EOJG	TF	CLLBLK	,GTBLK8		12136	26 13356 04931
25920		TFM	LNG	,67	,10	12148	16 09327 00007
25930		TD	BUF4+75	,PUTPCH+11		12160	25 08010 C7269
25940		TFM	IORT	,**23		12172	16 00565 J2195
25950		B	IOPT	,PUTXX	,7	12184	49 00532 -7652
25960		AM	PUTXZ	,3	,10	12196	11 07665 C00-3
25970		TFM	PREBUF	,BUF1		12208	16 08015 -7710
25980		CM	LNG	,67	,10	12220	14 09327 C0007
25990		BNE	EOJW+24			12232	47 12388 01200
26000		TFM	IORT	,**23		12244	16 00565 J2267
26010		B	IOGT	,CALBLK	,7	12256	49 00566 J3343
26020		AM	CLLBLK	,3	,10	12268	11 13356 C00-3
26030	EOJWG	AM	PREBUF	,4	,10	12280	11 08015 C00-4
26040		A	PREBUF	,ACCOM	,6	12292	21 0801N 05969
26050		AM	PREBUF	,3	,10	12304	11 08015 C00-3
26060		TF	LNG	,PREBUF	,11	12316	26 09327 0801N
26070		AM	PREBUF	,68	,10	12328	11 08015 00008
26080		CM	PREBUF	,BUF4+75		12340	14 08015 -8010
26090		BE	EOJG+24			12352	46 12160 C1200
26100	EOJW	CM	LNG	,67	,10	12364	14 09327 C0007
26110		BE	EOJWG			12376	46 12280 01200
26120		AM	PREBUF	,74	,10	12388	11 08015 C00P4
26130		TF	PREBUF	,S1X9Z	,6	12400	26 0801N 13222
26140		TFM	IORT	,**23		12412	16 00565 J2435
26150		B	IOPT	,PUTXX	,7	12424	49 00532 -7652
26160		BD	EOJSTN	,PUSTSN		12436	43 12772 02294
26170	EOJEND	AM	ACCOM	,1	,10	12448	11 05969 C00-1
26180		TF	LENGTH	,ACCOM		12460	26 02248 05969
26190		TR	FCTSW	,GRBAGE		12472	31 02293 13294
26200		TF	SCNT	,LOCOM		12484	26 09361 02262
26210		MM	LOCOM	,5	,10	12496	13 02262 C00-5
26220		BD	**20	,99		12508	43 12528 C0099
26230		B7	**20			12520	49 12540
26240		SM	LOCOM	,1	,10	12528	12 02262 C00-1
26250		TFM	IORT	,**23		12540	16 00565 J2563
26260		B	IOPT	,SECTO	,7	12552	49 00532 J3320
26270		TD	**21	,JAY		12564	25 12585 02367

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27090	BNR	DC	2,45			13378		2	
27100	CNE2	DC	2,1			13380		2	
27110	FOUR	DC	2,4			13382		2	
27120	ENDMES	DAC	19,END OF COMPILE			13385		19 X	2
27130		DORG	16002			16002			
27140	XBLK4	DSC	14,01804104110000			16002		14	
27150	XVVX	TD	SECTD-1,GM			16016	25	13319	02432
27160		34	XBLK4,701			16028	34	16002	00701
27170		38	XBLK4,702			16040	38	16002	00702
27180		TRA				16052	36	00000	00500
27190		TCD	XVVX			16064	49	00000	00000
27200		DORG	14100			14100			
27210	*****		TERTIARY LINKAGE BLOCK 6						
27220		DC	2,6			14101		2	
27230	XUBCDS	TFM	FMON+35	,BLK5		14102	16	02359	-8884
27240		BTM	FMON	,SUBCDS		14114	17	02324	J4102
27250	XUBCAB	TR	BGNST-4(7)	,BGNST+11(7)		14126	31	1NRR5	10-J0
27260		B	SCABP			14138	49	14198	00000
27270	XUBCL2	TFM	FMON+35	,BLK7		14150	16	02359	-8932
27280		BTM	FMON	,SUBCL2		14162	17	02324	J4150
27290	XUB12B	TFM	FMON+35	,BLK8		14174	16	02359	-8956
27300		BTM	FMON	,SUB12B		14186	17	02324	J4174
27310	SCABP	TF	SX	,BGNST-5(7)		14198	26	02377	1NRR4
27320		BTM	SRFCT	,+16		14210	17	03824	J4226
27330		DSA	SX,SX			14226		5 X	2
27340		TDM	SKIPSW	,I		14226		-2377	
27350		TD	RXFLAG	,FXORFL		14231		-2377	
27360	CDABZ	BD	+32	,FXORFL		14232	15	09349	00001
27370		TF	L	,FP2		14244	25	04368	C4162
27380		B7	CDABW			14256	43	14288	C4162
27390		TF	L	,K		14268	26	06017	02298
27400	CDABW	BTM	CANDS	,+16		14280	49	14300	
27410		DSA	D4,SX			14288	26	06017	C2252
						14300	17	08100	J4316
						14316		5 X	2
						14316		-6009	
						14321		-2384	
27420		CF	D4			14322	33	06009	00000
27430		M	D4	,L		14334	23	06009	06017
27440		MA	D4	,99		14346	70	06009	C0099
27450	CDSAB1	BD	CDSAB7	,IC1		14358	43	14406	08987
27460		BNF	CDSABX	,FSPW		14370	44	14766	09347
27470		BNF	CDSAB7+12	,FSW		14382	44	14418	08986
27480		BTM	GMRP	,+12		14394	17	05022	J4406
27490	CDSAB7	BNF	CDSABX	,FSPW		14406	44	14766	C9347
27500		TDM	SSI	,I		14418	15	06633	00001

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27510		TF	N40005	,ADCOV		14430	26	03402	05969
27520		AM	N40005	,35	,10	14442	11	03402	00UL5
27530		BTM	PUTX	,+16		14454	17	06030	J4470
27540		DSA	TFM,N40005,D4			14470		5 X	3
						14470		-9001	
						14475		-3402	
						14480		-6009	
27550		B7	CDSAB8			14482	49	14658	
27560	CDSAB5	TD	FX	,RXFLAG		14490	25	03562	04368
27570		TF	N40005	,ICND		14502	26	03402	10649
27580		BTM	OPSR	,N40005		14514	17	03488	-3402
27590	CDSAB4	TFM	OPX	,17	,10	14526	16	03930	C00J7
27600	CDSAB3	BXM	+12	,-5(7)		14538	62	14550	C---N
27610		CM	BGNST+5(7)	,133	,9	14550	14	10--4	C0J33
27620		BE	CDABU			14562	46	14910	C1200
27630		BTM	PUTX	,+16		14574	17	06030	J4590
27640		DSA	OPX,N40005,D4			14590		5 X	3
						14590		-3930	
						14595		-3402	
						14600		-6009	
27650		BNF	CDABP	,IO1		14602	44	14994	08987
27660		TDM	SKIPSW	,0		14614	15	09349	C0000
27670		TR	BGNST-4(7)	,BGNST+11(7)		14626	31	1NRR5	10--0
27680		TDM	IO1	,0		14638	15	08987	00000
27690		B7	CD14A			14650	49	11202	
27700	CDSAB8	TFM	SS2	,11	,10	14658	16	06634	C00J1
27710		BTM	PUTX	,+16		14670	17	06030	J4686
27720		DSA	ADD,N40005,SX			14686		5 X	3
						14686		-9063	
						14691		-3402	
						14696		-2377	
27730		BD	FPCL	,CALLSW		14698	43	14878	C8992
27740		TF	D4	,BLANK		14710	26	06009	C9026
27750		BD	CDSAB5	,IC1		14722	43	14450	C8987
27760		TF	N40005	,FACAD		14734	26	03402	03797
27770		TFM	OPX	,6	,10	14746	16	03930	C00-6
27780		B7	CDSAB3			14758	49	14538	
27790	CDSABX	A	D4	,SX		14766	21	06009	C2377
27800		BD	CDSABZ	,IC1		14778	43	14858	08987
27810		BXM	+12	,-5(7)		14790	62	14802	C---N
27820		TF	XRS5	,XR7		14802	26	00329	C0339
27830		TF	TCOW	,D4		14814	26	05961	C6009
27840		TDM	GTSRSW	,I	,11	14826	15	06023	C000J
27850		TFM	GMRP-1	,CDABXT		14838	16	05021	J5086
27860		B7	GYES-24			14850	49	05082	
27870	CDSABZ	TDM	SS2	,I		14858	15	06634	C0001
27880		B7	CDSAB5			14870	49	14490	
27890	FPCL	TF	N40005	,FACAD		14878	26	03402	C3797
27900		TFM	OPX	,16	,10	14890	16	03930	C00J6
27910		B7	CDSAB3			14902	49	14538	
27920	CDABU	TDM	RSW	,I	,11	14910	15	08997	C000J
27930		TD	RFLAG	,RXFLAG		14922	25	04358	C4368
27940		BTM	PUTX	,+16		14934	17	06030	J4950

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27950	DSA	TFM,FACAD,D4			14950		5	X	3
					14950	-9001			
					14955	-3797			
					14960	-6005			
27960	TF	BGNST(7)	,FAC		14962	26	INRR5		C9203
27970	BTM	GNRP	,**12		14974	17	05022		J4986
27980	B7	CDABXT			14986	49	15086		
27990	CDABP	TF	BGNST(7)	,FAC	14994	26	INRR5		C9203
28000	TDM	FSW	,I	,11	15006	15	08986		C000J
28010	TD	FLAGSW	,RXFLAG		15018	25	04428		C4368
28020	BNF	CDABXT	,FPSW		15030	44	15086		C9347
28030	BD	**20	,CALLSW		15042	43	15062		C8992
28040	B7	CDABXT			15054	49	15086		
28050	BTM	GNRP	,**12		15062	17	05022		J5074
28060	SF	O(16)			15074	32	0--00		C0000
28070	CDABXT	TDM	SKIPSW	,0	15086	15	09349		C0000
28080	B7	EXIT			15098	49	02928		
28090	GTFIN	TD	I(16)	,RXFLAG	15106	25	0--01		04368
28100	TDM	I(16)	,I		15118	15	0--04		C0001
28110	TF	O(16)	,TCOW		15130	26	0--0C		C5961
28120	B7	GTJW			15142	49	05542		
28130	DORG	16002			16002				
28140	XBLK6	DSC	14,01808201914100		16002		14		
			01808201914100						
28150	XUUX	34	XBLK6,701		16016	34	16002		C0701
28160	38	XBLK6,702			16028	38	16002		00702
28170	TRA				16040	36	0000C		CC500
					16052	49	0000C		C0000
28180	TCD	XUUX			16016				
28190	DORG	14100			14100				
28200	*****	TERTIARY LINKAGE BLOCK 7							
28210	DC	2,7			14101		2		
	-7								
28220	YUBCDS	TFM	FMON+35	,BLK5	14102	16	C2359		-8884
28230	BTM	FMON	,SUBCDS		14114	17	02324		J4102
28240	YUBCAB	TFM	FMON+35	,BLK6	14126	16	02359		-8908
28250	BTM	FMON	,SUBCAB		14138	17	02324		J4126
28260	YUBC12	TF	XR5	,XR7	14150	26	00329		C0339
28270	B	CD12P			14162	49	14198		C0000
28280	YUB12B	TFM	FMON+35	,BLK8	14174	16	C2359		-8956
28290	BTM	FMON	,SUB12B		14186	17	02324		J4174
28300	*****	OUTPUT INITIALIZING INSTRUCTION FOR DO CODING AND PLACE							
28310	*****	INDICIES ON DO LIST							
28320	CD12P	BXM	**12	,5(5)	14198	62	1421C		C-0-5
28330	BD	CD12C	,I01		14210	43	14246		08987
28340	TF	T2	,BGNST(5)		14222	26	09267		1N9R9
28350	SF	T2-3			14234	32	09264		C0000
28360	CD12C	AM	DORF	,21	14246	11	03597		C0001
28370	C	DORF	,GBASE	,10	14258	24	03597		09324
28380	BNH	CD12E			14270	47	14342		0110C
28390	BTM	ERRT	,DFLMS		14282	17	08736		J4315
28400	BV	**12			14294	46	14306		01400
28410	BT	MONCAL			14306	49	00796		
28420	DFLMS	DAC	14,DO TABLE FULL'		14315		14	X	2
			DO TABLE FULL'						

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28430	CD12E	TF	DOMAX	,DORF	14342	26	03627		03597
28440	AM	DOMAX	,21	,10	14354	11	03627		C00K1
28450	TF	DORF	,T2	,6	14366	26	0359P		09267
28460	BXM	**12	,5(5)		14378	62	14390		0-0-5
28470	TF	SL	,BGNST(5)		14390	26	09282		1N9R9
28480	SF	SL-3			14402	32	09275		C0000
28490	BLX	**12	,DORF(4)		14414	65	14426		CL597
28500	TF	9(14)	,SL		14426	26	0-009		09282
28510	BXM	**12	,10(5)		14438	62	14450		0-0J0
28520	TF	SR	,BGNST(5)		14450	26	02372		1N9R9
28530	TFM	SS2	,I1	,10	14462	16	06634		C00J1
28540	TDM	SKIPSW	,I		14474	15	09349		00001
28550	BTM	SRFCT	,**16		14486	17	03824		J4502
28560	DSA	SL			14502		5	X	1
					14502		-9282		
28570	DSA	N40001			14507		5	X	1
					14507		-3382		
28580	BTM	SRFCT	,**16		14508	17	03824		J4524
28590	DSA	SR			14524		5	X	1
					14524		-2372		
28600	DSA	N40003			14529		5	X	1
					14529		-3392		
28610	BTM	PUTX	,**16		14530	17	0603C		J4546
28620	DSA	TF			14546		5	X	1
					14546		-9007		
28630	DSA	N40001			14551		5	X	1
					14551		-3382		
28640	DSA	N40003			14556		5	X	1
					14556		-3392		
28650	TDM	SKIPSW	,0		14558	15	09349		C0000
28660	TF	5(14)	,ADCCW		14570	26	0-005		05969
28670	BXM	**12	,10(5)		14582	62	14594		0-0J0
28680	TF	N40001	,BGNST(5)		14594	26	03382		1N9R9
28690	SF	N40001-3			14606	32	03379		C0000
28700	TF	13(14)	,N40001		14618	26	0-013		C3382
28710	BXM	**12	,5(5)		14630	62	14642		0-0-5
28720	TF	SL	,BGNST(5)		14642	26	09282		1N9R9
28730	CM	SL,	132,8,SEMI COLON		14654	14	09282		C-132
28740	BE	N60084			14666	46	14702		01200
28750	CM	SL,	104,8,RIGHT PAREN		14678	14	09282		0-104
28760	BNE	N60085			14690	47	14734		01200
28770	N60084	TF	17(14)	,ZERO4	14702	26	0-017		C9025
28780	BD	CD14E	,IC1		14714	43	11988		C8987
28790	CD12A	B	CLEAR		14726	49	02640		00000
28800	DORG	-3			14734				
28810	N60085	BXM	**12	,5(5)	14734	62	14746		C-0-5
28820	TF	N40003	,BGNST(5)		14746	26	03392		1N9R9
28830	CM	N40003	,L20	,9	14758	14	03392		00J20
28840	BNE	**48			14770	47	14818		01200

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28850	TR	BGNST-4(5)	,BGNST+1(5)	14782	31	IN9R5	100-0	
28860	TF	N40003	,BGNST(5)	14794	26	03392	IN9R9	
28870	SF	N40003		14806	32	03392	C0000	
28880	SF	N40003-3		14818	32	03389	C0000	
28890	TF	17(4)	,N40003	14830	26	0-017	03392	
28900	B	CD12A-12		14842	49	14714	00000	
28910	DDRG	*-3		14850				
28920	DDRG	16002		16002				
28930	XBLK7	DSC	14,01810101914100	16002		14		
			01810101914100					
28940	XTTX	34	XBLK7,701	16016	34	16002	C0701	
28950		38	XBLK7,702	16028	38	16002	C0702	
28960	TRA			16040	36	00000	00500	
				16052	49	00000	C0000	
28970	TCD	XTTX		16016				
28980	DDRG	14100		14100				
28990	*****	TERTIARY LINKAGE BLOCK 8						
29000	DC	2,8		14101		2		
	-8							
29010	ZUBCDS	TFM	FMON+35	,BLK5	14102	16	02359 -8884	
29020	BTM	FMON		,SUBCDS	14114	17	02324 J4102	
29030	ZUBCAB	TFM	FMON+35	,BLK6	14126	16	02359 -8908	
29040	BTM	FMON		,SUBCAB	14138	17	02324 J4126	
29050	ZUBC12	TFM	FMON+35	,BLK7	14150	16	02359 -8932	
29060	BTM	FMON		,SUBC12	14162	17	02324 J4150	
29070	ZUB12B	BD	CD12BP+24	,I01	14174	43	14222 C8987	
29080	B	CD12BP			14186	49	14198 00000	
29090	*****	THE FOLLOWING OUTPUTS THE TEST AT THE END OF A DO LOOP						
29100	CD12BP	TF	T2	,T3	14198	26	09267 C9343	
29110	TDM	DOSW		,0	14210	15	08993 C0000	
29120	TF	DOTEMP		,D0REF	14222	26	14947 03597	
29130	TDM	CKSW		,1	14234	15	04438 00001	
29140	TDM	SKIPSW		,1	14246	15	09349 00001	
29150	CD12Y	C	T2	,D0REF	,11	24	09267 0359P	
29160	BNE	CD12X			14270	47	14488 C1200	
29170	CD12D	BLX	*+12	,D0REF(4)	14282	65	14294 0L597	
29180	TF	SL	,17(4)		14294	26	09282 0-017	
29190	MF	FGBIT		,SL	14306	71	14325 C9282	
29200	CM	SL			14318	14	09282 0-000	
29210	FGBIT	DS	,*-4		14325		0	
29220	TDM	SKIPSW		,1	14330	15	09349 00001	
29230	TFM	N40005	,1100		14342	16	03402 -1100	
29240	BE	N60092			14354	46	14568 C1200	
29250	BNF	CD12AA	,FGBIT		14366	44	14422 14325	
29260	TFM	OPZ	,22	,10	14378	16	09346 C00K2	
29270	TFM	OPW	,46	,10	14390	16	14922 000M6	
29280	TFM	N40005	,1300		14402	16	03402 -1300	
29290	B7	CD12BB			14414	49	14446	
29300	CD12AA	TFM	OPZ	,21	,10	14422	16	09346 000K1
29310	TFM	OPW	,47	,10	14434	16	14922 C00M7	
29320	CD12BB	BTM	SRFCT	,**16	14446	17	03824 J4662	
29330	DSA	SL			14462		5 X 1	
					14462		-9282	
29340	DSA	N40001			14467		5 X 1	

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29350	TDM	SS2	,1	14467		-3382		
29360	B	N60095		14468	15	06634	00001	
29370	DDRG	*-3		14480	49	14604	C0000	
29380	CD12X	TDM	CKSW	,0	14488			
29390	BTM	ERRT	,DOMES	14488	15	04438	C0000	
29400	TDM	ERSWT	,1	14500	17	08736	-9099	
29410	SM	D0REF	,21	,10	14512	15	09351 00001	
29420	CM	D0REF	,D0BASE		14524	12	03597 C00K1	
29430	BL	EXITA			14536	14	03597 -3657	
29440	B	CD12Y			14548	47	14912 01300	
29450	DDRG	*-3			14560	49	14258 C0000	
29460	N60092	TFM	OPZ	,11	,10	14568	16	09346 C00J1
29470	TFM	OPW	,47	,10	14580	16	14922 000M7	
29480	TFM	N40001	,1	,10	14592	16	03382 C00-1	
29490	N60095	TF	SL	,9(4)	14604	26	09282 C-009	
29500	BTM	SRFCT	,**16		14616	17	03824 J4632	
29510	DSA	SL			14632		5 X 1	
					14632		-9282	
29520	DSA	N40004			14637		5 X 1	
					14637		-3397	
29530	TDM	SS1	,1	14638	15	06633	C0001	
29540	BTM	PUTX	,**16	14650	17	06030	J4666	
29550	DSA	OPZ,N40004,N40001		14666		5 X	3	
					14666		-9346	
					14671		-3397	
					14676		-3382	
29560	TF	SL	,13(4)	14678	26	09282	C-013	
29570	BTM	SRFCT	,**16	14690	17	03824	J4706	
29580	DSA	SL		14706		5 X	1	
					14706		-9282	
29590	DSA	N40001		14711		5 X	1	
					14711		-3382	
29600	TFM	SS2	,11	,10	14712	16	06634 C00J1	
29610	BTM	PUTX	,**16	14724	17	06030	J4740	
29620	DSA	C,N40004,N40001		14740		5 X	3	
					14740		-9291	
					14745		-3397	
					14750		-3382	
29630	TF	N40004	,5(4)	14752	26	03397	C-005	
29640	TDM	SS1	,1	14764	15	06633	C0001	
29650	BTM	PUTX	,**16	14776	17	06030	J4792	
29660	DSA	OPW,N40004,N40005		14792		5 X	3	
					14792		J4922	
					14797		-3397	
					14802		-3402	
29670	SM	D0REF	,21	,10	14804	12	03597 C00K1	
29680	C	D0REF	,DCBASE		14816	24	03597 C3657	
29690	BE	N60107			14828	46	14888 C1200	

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29700	TF	N40003	,DCREF		14840	26	C3392	C3597
29710	AM	N40003	,Z1	,LC	14852	11	C3392	CCOK1
29720	C	D0REF	,N40003	,611	14864	24	0359P	0339K
29730	BE	CD1ZD			14876	46	14282	012CC
29740	N6C1C7	BD	**24	,CKSW	14888	43	14912	C4438
29750	TF	D0REF	,DCTEMP		14900	26	C3557	14947
29760	EXITA	TDM	SKIPSW	,0	14912	15	09349	00000
29770	OPW	DS	,*-1		14922			0
29780	BD	CD14M	,IC1		14924	43	1214C	08987
29790	B7	CLEAR			14936	49	0264C	
29800	D0TEMP	DS	5		14947			5
29810		DORG	16002		16002			
29820	XBLK8	DSC	14,01812001914100		16002		14	
			01812001914100					
29830	XSSX	34	XBLK8,701		16016	34	16002	00701
29840		38	XBLK8,702		16028	38	16002	C0702
29850	TRA				16040	36	0000C	C0500
					16052	49	0000C	00000
29860	TCD	XSSX			16016			
29870	DEND	PASSII			02400			

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ACCEPT	03632	CODE1E	11104	GTBLKA	04926	N60027	13128	BI	09318
ACCTAP	03642	CODE1G	12028	GTBLKB	04931	N60032	13370	BLANK	09026
ADJUST	03444	CODE1H	10736	GTFCLC	05808	N60034	13638	BLK1A	08796
ADTEMP	09277	CODE1P	10434	GTSBSW	06023	N60035	13662	BLK1	08788
CALBLK	13343	CODE1X	11276	HEADER	02218	N60041	10622	BLK2A	08820
CALLBK	13351	CODE3A	12856	INDREC	12063	N60043	10690	BLK2	08812
CALLSW	08992	CODE3B	12916	INSETA	11153	N60044	10810	BLK3A	08844
CANDRT	08220	CODE3C	13020	INSETB	11177	N60045	10870	BLK3	08836
CANDSA	08166	CODE3D	13238	J40004	09262	N60046	11026	BLK4A	08868
CD12AA	14422	CODE3E	13326	LCOMAD	13121	N60048	11350	BLK4	08860
CD12BB	14446	CODE3P	12538	LENGTH	02248	N60049	11722	BLK5A	08892
CD12BP	14198	CODE3X	13382	LOXRAD	02394	N60072	126C6	BLK5	08884
CD14EN	12184	CODE3Y	13032	LSTYPE	07694	N60084	14702	BLK6A	08916
CD14FL	10766	CODE3Z	13426	MNCLOV	05450	N60085	14734	BLK6	08908
CD14FR	11078	CODE4A	13602	MODMES	09073	N60092	14568	BLK7A	08940
CD14FV	10682	CODE4P	13494	MONCAL	00796	N60095	14604	BLK7	08932
CD14JG	10952	CODE6A	10614	N00565	13122	N60107	14888	BLK8A	08964
CD14JW	10976	CODE6B	10562	N00716	13127	N60182	14260	BLK8	08956
CD14NA	11776	CODE6P	10434	N00796	09356	NINERM	13153	BL	09295
CD14NC	12060	CODE7B	11950	N01100	09287	OUTSEQ	06994	BLX	09015
CD14ND	12244	CODE7C	11542	N01200	09307	PARCNT	11891	BNF	09311
CD14NR	11162	CODE7P	11240	N01300	09300	PASSII	02400	BNH	09289
CD14RL	10892	CODE8P	13740	N07495	13117	PREBUF	08015	BNR	13378
CD14RM	11114	CODE9A	12436	N13062	09198	PUNTAP	03662	B	05974
CD14RV	10872	CODE9B	12360	N13063	09193	PUSTSN	02294	BTM	05972
CD14SL	10932	CODE9C	12576	N13089	09034	PUT17B	13894	BT	09053
CD14SV	10912	CODE9P	12070	N13092	09040	PUT17C	13846	BUF1	07710
CD175C	13674	CODEPA	11764	N13133	09047	PUT17I	13758	BUF2	07785
CD17XX	13698	CODESS	10266	N147RM	13139	PUTCAD	06686	BUF3	07860
CD1PPP	11946	COMAT	12276	N40000	03377	PUTDIF	06854	BUF4	07935
CD1QZP	11080	COMXSW	09350	N40001	03382	PUTEST	06186	CALLX	04388
CDABXT	15086	D4LNEG	15796	N40002	03387	PUTINS	06206	CANDS	08100
CDCCALL	10410	DIOEND	12611	N40003	03392	PUTNXT	07154	CD111	11236
CDCCALP	12632	D0BASE	03657	N40004	03397	PUTPCH	07258	CD117	13422
CDLINK	12644	D0TEMP	14947	N40005	03402	PUTX12	13052	CD123	11128
CD51XR	15712	ENDMES	13385	N40006	03407	PUTX17	13008	CD12A	14726
CD5AB1	14358	EOJEND	12448	N40007	03412	RECORD	12626	CD12B	10314
CD5AB3	14538	EOJRTI	12984	N40008	03417	RFLSUB	03707	CD12C	14246
CD5AB4	14526	EOJSTN	12772	N40009	03422	RFXSUB	03712	CD12D	14282
CD5AB5	14490	EOPETE	12852	N40010	03427	RTNAME	09210	CD12E	14342
CD5AB7	14406	EOTONY	12828	N40011	03432	RXFLAG	04368	CD12P	14198
CD5AB8	14658	FCTIEA	12420	N40012	03437	ADDCOW	05969	CD12X	14498
CD5ABX	14766	FCTI61	10760	N60007	10804	ADD	09063	CD12Y	14258
CD5ABZ	14858	FCFEND	02318	N60009	10848	ADSL	04946	CD14A	11202
CDSSAB	10290	FCFTRP	14198	N60010	10872	AM	09009	CD14B	11552
CDSSS3	14718	FILEST	02399	N60013	11916	ANS	09272	CD14C	11440
CLLBLK	13356	FLAGSW	04428	N60014	11678	ARRNDT	12752	CD14E	11988
CDARR	11460	FLTOFX	03702	N60015	12262	ASTOP	03792	CD14M	12140
CODE12	10170	FORCEB	04274	N60016	12166	ATYPE	03747	CD14P	10434
CODE14	10194	FULLCK	05414	N60017	12130	BAL	07696	CD15P	13772
CODE15	10218	FULMES	09143	N60018	12298	BBOUT	03480	CD17A	12650
CODE17	10242	FXDRFL	04162	N60020	12610	BCOW	13376	CD17B	13082
CODE1A	10554	FXT0FL	03697	N60021	12808	BD	09309	CD17C	12830
CODE1B	10942	GCLFAR	05782	N60022	12766	BEGAD	02257	CD17D	12890
CODE1C	11034	GETBLK	04918	N60023	12964	BE	09302	CD17E	13010
CODE1D	12004	GRBAGE	13294	N60026	13092	BGNST	15999	CD17F	12938

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CC17G 13590	C 09291	FCT1H 10892	GNONE 05190	MM 09011
CD17H 13570	CSW 13146	FCT1J 11760	GMRP 05022	MNS5 09188
CD17I 13306	D1 05979	FCT1K 11398	GPUTA 05470	MDD 09049
CD17J 13326	D2 05989	FCT1L 11940	GPUT 05338	MPY 09051
CD17K 13466	D3 05999	FCT1P 10434	GSBI 11618	N0098 15869
CD17L 13486	D4 06009	FCT1 10338	GTCL 05720	N1 02233
CD17M 13274	DFLMS 14315	FCTRT 10362	GTFIN 15106	N2 02238
CD17N 13386	DI 05984	FCTSW 02293	GTJW 05542	N2THO 13132
CD17P 12626	DJ 05994	FETCH 12631	GTPT 05154	N61A 14324
CD222 11340	DK 06004	FFRSW 04398	GTSQL 05840	N6X 11820
CD333 11630	DMSW 03998	FBGIT 14325	GTST 05630	N7X 11772
CD444 11714	DCA 09186	FIND 12621	GYES 05106	N8X 11884
CD555 11434	DOMAX 03627	FIVE 09205	HERE2 06398	NAME 13151
CD666 11466	DOMES 09099	FLAD 03567	HERE 06350	NEXT 07706
CD941 11648	DOREF 03597	FLOVD 03677	H 09013	NGFRE 05650
CD94 11600	DOSW 08993	FLEXP 03617	HTYPE 03782	NLNG 07681
CD96 11412	DRAY 12616	FLG2 06626	INPUT 09390	NM22 13134
CDABP 14994	DX 08297	FLG3 06646	INSET 11094	NOTYP 03256
CDABU 14910	DY 08302	FLG4 06666	IO1 08987	OBASE 02472
CDABW 14300	EM1 09365	FLGRM 07674	IO2 08988	ONE2 13380
CDABZ 14256	EM2 09379	FLMUL 03607	IO3 08989	OP 02379
CDLGT 12715	ECJG 12136	FLRDV 03687	IOCAL 00716	OPSR 03488
CDPCH 13072	ECJ 12032	FLSUB 03667	IOEND 03802	OPT1 03547
CDS1J 15654	ECJP 12008	FMCN 02324	IOGT 00566	OPW 14922
CDS1N 15626	ECJ 10386	FORCC 04330	IONDA 12599	OPX 03930
CDS1S 15282	ECJWG 12280	FORCE 04166	IONO 10649	OPY 12606
CDS1T 15028	ECJW 12364	FOUR 13382	IORT 00532	OPZ 09346
CDS1V 14834	ERODD 13052	FP2 02298	IORT 00565	P17 04102
CDS1Z 15526	ERRT 08736	FPCL 14878	IO 03727	P1 09338
CDSSP 14198	ERSWT 09351	FPNXR 15692	I 09219	P27 04078
CDXIT 13152	ETYPE 03772	FPSP 09347	ITYPE 03762	P2PTR 02313
CE 13446	EXCLR 08442	FPSWX 09348	IXI 03807	PAR 03812
CET 09005	EXIND 08999	FREQ1 12925	JAY 02367	PFPSW 03928
CKGOW 12068	EXITA 14912	FREQ2 13081	JGPP 15816	PRINT 03582
CKGOW 08983	EXIT 02928	F 02250	JOE 11557	P 09229
CKFMT 03048	EXJ 08686	FSW 08986	JP1 15418	PUNCH 03652
CKSW 04438	EXJX 08662	FTSW 04378	J 09224	PUT17 13810
CLEAR 02640	EXRT 08388	FTYPE 03767	JWG 02508	PUT1 08020
CLZR 08714	EXSUB 08304	FXAD 03572	K 02252	PUT2 08025
CM96 12576	EXXR 08550	FXDVO 03682	L1J 02820	PUT3 08030
CM97 12556	EXZER 08514	FXEXP 03622	L1 02700	PUTA 07522
CM98 12396	FACAD 03797	FXMUL 03612	L2 02844	PUTCA 07498
CM99 12420	FACM2 09316	FXRDV 03692	L33 04328	PUTCB 07462
CM 09293	FAC 09203	FX 03562	L3 02916	PUTC 07402
CODE0 03366	FBASE 03310	FXSUB 03672	LD1 06022	PUTD 07486
CODE1 10002	FCDL 04321	GADD1 05586	LDVD 15864	PUTGT 06313
CODE3 10026	FCT11 10582	GBASE 09324	LH1 12636	PUTG 06814
CODE4 10050	FCT12 11558	GCNT 05177	LNGAD 07701	PUTRM 07606
CODE5 02964	FCT13 11204	GCOM 05831	LNG 09327	PUTR 10708
CODE6 10074	FCT1A 10832	GETSY 04892	LOCOM 02262	PUTTA 07134
CODE7 10098	FCT1B 11386	GETX 04844	L 06017	PUTX2 12956
CODE8 10122	FCT1C 11418	GFLAG 05494	LSTAD 02308	PUTXA 06090
CODE9 10146	FCT1D 11430	GFREE 05606	LVP 12604	PUTXB 06114
CODET 07688	FCT1E 12368	GI 05713	LV 09239	PUTXC 06266
CODDA 12108	FCT1F 11342	GLNO 09061	MA 09017	PUTXD 06362
COMSW 03999	FCT1G 10748	GM 02432	MAT 03817	PUTXE 06410

PUTXF 06446	SQLNG 07683	UFSTR 02263	YODE1 10002	TYPECN 08061
PUTXG 06914	SRFCT 03824	WATY 09057	YODE3 10026	TYPECR 08046
PUTXH 07078	SRGT 03946	W 02240	YODE4 10050	TYPEK2 13937
PUTXI 07238	SRNX 03940	WM 02296	YODE6 10074	TYPEK3 13952
PUTXJ 07114	SR 02372	X00X 16002	YODE7 10098	TYPEM2 13083
PUTX 06030	SRSY 03883	XBLK2 16002	YODE8 10122	TYPEPM 07637
PUTXX 07652	SS1 06633	XBLK3 16002	YODE9 10146	USEDRC 13105
PUTXY 07660	SS2 06634	XBLK4 16002	YOJ 10386	WUB12B 14174
PUTXZ 07665	SS3 06635	XBLK6 16002	ZCT1 10338	WUBC12 14150
Q 09234	SS4 06636	XBLK7 16002	ZCRT 10362	WUBCAB 14126
QZP 14908	SSIL 06637	XBLK8 16002	ZD12B 10314	WUBCDS 14102
RCTY 09055	SSLNG 07679	XCT1 10338	ZER04 09025	XDCALL 10410
READ 03592	SSSW 08985	XCRT 10362	ZER05 09026	XDSSAB 10290
RECLG 02243	SSXR1 08092	XD12B 10314	ZER06 09027	XCODE12 10170
REDD 03777	SSXR2 08094	XODE1 10002	ZERO 09023	XCODE14 10194
REGSW 08996	ST 09215	XODE3 10026	ZODE1 10002	XCODE15 10218
REP1 12889	SUB2 03637	XODE4 10050	ZODE3 10026	XCODE17 10242
REP2 13009	SUB3 03647	XODE6 10074	ZODE4 10050	XODESS 10266
REP3 13673	SUB 09042	XODE7 10098	ZODE6 10074	XRBASE 06597
REP4 03577	SUBSW 08995	XODE8 10122	ZODE7 10098	XRFIL2 06580
REP 03757	SVN9 08709	XODE9 10146	ZODE8 10122	XUB12B 14174
RFLAG 04358	SWCFX 03732	XOJ 10386	ZODE9 10146	XUBC12 14150
RMNS 04990	SWFFX 03742	XR5 00329	ZOJ 10386	XUBCAB 14126
RMOD 09071	SWF 03737	XR7 00339	ZRM 15690	XUBCDS 14102
RMSW 04418	SX17 12829	XR97 08719	SADCOM 11213	YDCALL 10410
RSNFL 03717	SXF 09257	XR98 08724	SARGSW 13366	YDSSAB 10290
RSNFX 03722	SX 02377	XR99 08729	SAVCOM 06657	YODE12 10170
RSW 08997	SY17 13569	XRA0D 02389	SETFCT 03136	YODE14 10194
RTAD 09246	SY 02384	XRFIL 06506	SETNMT 03300	YODE15 10218
RV 09251	T1 06014	XR5W 09241	SIMVAR 11364	YODE17 10242
RVSAN 09068	T2 09267	XSSX 16016	SKIPSW 09349	YODESS 10266
SBASE 04160	T3 09343	XTTX 16016	SPFPSW 09357	YUB12B 14174
SCABP 14198	TBASE 02303	XTYPE 03787	SRCFFL 04136	YUBC12 14150
SCNT 09361	TCOW 05961	XUUX 16016	STEMP1 08990	YUBCAB 14126
SECTO 13320	TFL 09021	XVXX 16016	STEMP2 08991	YUBCDS 14102
SECTY 13328	TFM 09001	XWXX 16016	SUB12B 14174	ZDCALL 10410
SETAD 11239	TF 09007	XX1 15204	SUBC12 14150	ZDSSAB 10290
SF 09003	THAX 05964	XX2 14432	SUBCAB 14126	ZODE12 10170
SIX9Z 13222	TRACE 03587	XX3 14374	SUBCDS 14102	ZODE14 10194
SK 10809	TR 09019	XX4 14490	SUBCOM 13371	ZODE15 10218
SLASH 03752	TSW 13147	XX5 14776	SUBPSW 04408	ZODE17 10242
SLC 11046	TYPEA 08076	XXYX 16016	SVYNB 13223	ZODESS 10266
SLNG 07677	TYPE 03602	XZZX 16016	SWAREA 08997	ZUB12B 14174
SL 09282	TYPEP 07675	YCT1 10338	SYSCAL 00475	ZUBC12 14150
SM 09065	TYPEX 08031	YCTRT 10362	TCLEAR 11800	ZUBCAB 14126
SPCOM 15691	TZNR 09033	YD12B 10314	TYPE12 13098	ZUBCDS 14102

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01675	DSA	WATY	03793	5 X	1
01680	DSA	REP3	03793 03798	-4166 5 X	1
01690	DSA	TRACE	03798 03803	-6920 5 X	1
01700	DSA	SWC	03803 03808	-2884 5 X	1
01710	DSA	SWCFX	03808 03813	-5972 5 X	1
01720	DSA	SLASH	03813 03818	-3168 5 X	1
01730	DSA	REP	03818 03823	-6482 5 X	1
01740	DSA	REDD	03823 03828	-6816 5 X	1
01750	DSA	XTYPE	03828 03833	-6708 5 X	1
01760	DSA	COMPLT	03833 03838	-7048 5 X	1
01770	PAR	DSA 0	03838 03843	-6688 5 X	1
01780	DSA	MATRIX	03843 03848	-CCCC 5 X	1
01790	*****	1620 FORTRAN II-D SUBROUTINES - INITIAL SECONDARY LINKAGE	03848	-6324	
01800	DORG	START	03851		
01810	DS	1	03851	1	
01820	DC	2 ,00	03853	2	
01830	BLXM	FMON ,*(0)	03854	66 07228	03854
01840	00	00100 , ,0	03866	-0 00100	C0000
01850	BLXM	FMON ,*(0)	03878	66 07228	C3878
01860	00	00100 , ,0	03890	-0 00100	C0000
01870	BLXM	FMON ,*(0)	03902	66 07228	C3902
01880	00	00100 , ,0	03914	-0 00100	C0000
01890	BLXM	FMON ,*(0)	03926	66 07228	C3926
01900	00	00100 , ,0	03938	-0 00100	C0000
01910	BLXM	FMON ,*(0)	03950	66 07228	C3950
01920	00	00100 , ,0	03962	-0 00100	C0000
01930	BLXM	FMON ,*(0)	03974	66 07228	C3974
01940	00	00100 , ,0	03986	-0 00100	C0000
01950	BLXM	FMON ,*(0)	03998	66 07228	C3998
01960	00	00100 , ,0	04010	-0 00100	C0000
01970	BLXM	FMON ,*(0)	04022	66 07228	C4022

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1620 MONITOR II VERSION 2 FORTRAN II-D SUBROUTINES SET 3				PAGE	6
01980	00	00100 , ,0	04034	-0 00100	C0000
01990	BLXM	FMON ,*(0)	04046	66 07228	C4046
02000	00	00100 , ,0	04058	-0 00100	C0000
02010	BLXM	FMON ,*(0)	04070	66 07228	C4070
02020	00	00100 , ,0	04082	-0 00100	C0000
02030	BLXM	FMON ,*(0)	04094	66 07228	C4094
02040	00	00100 , ,0	04106	-0 00100	C0000
02050	BLXM	FMON ,*(0)	04118	66 07228	C4118
02060	00	00100 , ,0	04130	-0 00100	C0000
02070	B	CLOBB	04142	49 07174	C0000
02080	B	CLOTT	04154	49 07154	C0000
02090	BLXM	FMON ,*(0)	04166	66 07228	C4166
02100	00	00200 , ,0	04178	-0 00200	C0000
02110	BLXM	FMON ,*(0)	04190	66 07228	C4190
02120	00	00200 , ,0	04202	-0 00200	C0000
02130	BLXM	FMON ,*(0)	04214	66 07228	C4214
02140	00	00200 , ,0	04226	-0 00200	C0000
02150	BLXM	FMON ,*(0)	04238	66 07228	C4238
02160	00	00200 , ,0	04250	-0 00200	C0000
02170	BLXM	FMON ,*(0)	04262	66 07228	C4262
02180	00	00200 , ,0	04274	-0 00200	C0000
02190	BLXM	FMON ,*(0)	04286	66 07228	C4286
02200	00	00200 , ,0	04298	-0 00200	C0000
02210	BLXM	FMON ,*(0)	04310	66 07228	C4310
02220	00	00300 , ,0	04322	-0 00300	C0000
02230	BLXM	FMON ,*(0)	04334	66 07228	C4334
02240	00	00400 , ,0	04346	-0 00400	C0000
02250	BLXM	FMON ,*(0)	04358	66 07228	C4358
02260	00	00700 , ,0	04370	-0 00700	C0000
02270	BLXM	FMON ,*(0)	04382	66 07228	C4382
02280	00	00800 , ,0	04394	-0 00800	C0000
02290	BLXM	FMON ,*(0)	04406	66 07228	C4406
02300	00	00700 , ,0	04418	-0 00700	C0000
02310	BLXM	FMON ,*(0)	04430	66 07228	C4430
02320	00	00500 , ,0	04442	-0 00500	C0000
02330	BLXM	FMON ,*(0)	04454	66 07228	C4454
02340	00	00500 , ,0	04466	-0 00500	C0000
02350	BLXM	FMON ,*(0)	04478	66 07228	C4478
02360	00	00500 , ,0	04490	-0 00500	C0000
02370	*****	MODIFICATIONS MADE BEFORE START OF EXECUTION			
02380	TD	00380 ,RECMK	04502	25 00380	C2403
02390	BSBB	**12	04514	60 04526	C0002
02400	BLXM	**12 ,PIOV2-CNEZ+32(4)	04526	66 04538	0-256
02410	A	**23 ,F	04538	21 04561	C2219
02420	TF	ONEZ-34(4),CNEZ-62(4)	04550	26 01268	CL240
02430	BCXM	**12 ,,-00032(4)	04562	64 04550	0-03K
02440	BLXM	**12 ,TWO-LN1+31(4)	04574	66 04586	0-186
02450	A	**23 ,F	04586	21 04609	C2219
02460	TF	LN1-31(4),LN1-59(4)	04598	26 01526	CL498
02470	BCXM	**12 ,,-00031(4)	04610	64 04598	0-03J
02480	TFM	00324 ,00000	04622	16 00324	-0000
02490	S	00324 ,F	04634	22 00324	C2219
02500	TF	00334 ,00324	04646	26 00334	C0324
02510	S	00334 ,F	04658	22 00334	C2219
02520	TDM	WJRS ,0	04670	15 03018	C0000
02530	CM	F ,09 ,10	04682	14 02219	C00-9

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02540	BNL	**24			04694	46	04718	01300
02550	TDM	WJRS	,5		04706	15	03018	00005
02560	S	**18	,F		04718	22	04736	02219
02570	SF	9SCPF+1		,2	04730	32	-3235	00000
02580	S	**18	,K		04742	22	04760	02221
02590	SF	FX9+1		,2	04754	32	-3251	00000
02600	S	**18	,K		04766	22	04784	02221
02610	SF	FXZ+1		,2	04778	32	-3261	00000
02620	S	**18	,K		04790	22	04808	02221
02630	SF	FX1+1		,2	04802	32	-3271	00000
02640	S	FXH	,K		04814	22	02772	02221
02650	S	99MK	,K		04826	22	02772	02221
02660	S	100MK	,K		04838	22	02782	02221
02670	A	IMSAPF	,F		04850	21	02787	02219
02680	S	FNH	,F		04862	22	02792	02219
02690	A	FLZALP	,F		04874	21	02797	02219
02700	A	FLZ	,F		04886	21	02802	02219
02710	TF	99	,F		04898	26	00099	02219
02720	A	99	,F		04910	21	00099	02219
02730	S	GM2F	,99		04922	22	03043	00099
02740	S	GM1M2F	,99		04934	22	02914	00099
02750	A	ZEROM	,99		04946	21	02859	00099
02760	S	**18	,F		04958	22	04976	02219
02770	SF	FLZER-1		,2	04970	32	-3741	00000
02780	A	FM1	,F		04982	21	02969	02219
02790	A	FP2	,F		04994	21	03052	02219
02800	S	MF	,F		05006	22	03054	02219
02810	MM	F	,05	,10,	05018	13	02219	000-5
02820	BD	ODDSET	,99		05030	43	05086	00099
02830	MM	K	,05	,10,	05042	13	02221	000-5
02840	BD	ODDSET	,99		05054	43	05086	00099
02850	TDM	FKODD	,1		05066	15	02967	00001
02860	B	ODDSET+12			05078	49	05098	00000
02870	DORG	*-4			05085			
02880	ODDSET	TDM	FKODD	,0	05086	15	02967	00000
02890	BNF	**36	,ENTLN-4		05098	44	05134	02244
02900	A	LNENT	,ENTLN		05110	21	02807	02248
02910	A	EXPENT	,ENTEXP		05122	21	02812	02253
02920	BV	**12			05134	46	05146	01400
02930	BXV	**12			05146	46	05158	01500
02940	BD	SHORT	,07499		05158	43	05226	07499
02950	TFM	IORT	,**23		05170	16	00565	-5193
02960	B	IDGT	,DALONG	,7	05182	49	00566	-5194
02970	DALONG	DSC	2	,-22	05194			2
02980	DSC	1	,0		05196			1
02990	DC	4	,0146		05200			4
03000	DC	1	,'		05201			1
03010	DAFMON	DSC	2	,22	05202			2
03020	DSA	DDFMON			05208		5 x	1
					05208			-5210

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03030	DC	1	,'		05209			1
03040	DDFMON	DSC	1	,0	05210			1
03050	DC	5	,16835		05215			5
03060	DC	3	,004		05218			3
03070	DSA	7100			05223		5 x	1
03080	DC	1	,'		05223		-7100	1
03090	SHORT	TFM	IORT	,**23	05226	16	00565	-5249
03100	B	IDGT	,DAFMON	,7	05238	49	00566	-5202
03110	B	PROGST	,'	,6	05250	49	02220	00000
03120	DORG	*-4			05257			
03130	DORG	06000			06000			
03140	34	B1	,00701		06000	34	06044	00701
03150	38	B1	,00702		06012	38	06044	00702
03160	36	B1	,00703		06024	36	06044	00703
03170	B	**22			06036	49	06058	00000
03180	DORG	*-3			06044			
03190	B1	DSC	9	,016800035	06044			9
03200	DSA	STOP-1			06057		5 x	1
03210	TRA				06057		-2394	
03220	TCD	06000			06058	36	00000	00500
					06070	49	00000	00000
					06000			
03230	*****	1620 FORTRAN II-D	ARITHMETIC BLOCK					
03240	*****	1620 FORTRAN II-D	ARITHMETIC BLOCK - SECONDARY LINKAGE					
03250	DORG	START			03851			
03260	DS	3			03853		3	
03270	FIX	FAC	,FIX-1	,11	03854	06	02492	0385L
03280	B	FIX1			03866	49	04502	00000
03290	FXSR	BNF	FXSR1+20	,FAC	03878	44	04714	02492
03300	B	FXSR1			03890	49	04694	00000
03310	FXM	M	FAC	,FXM-1	03902	23	02492	0390J
03320	B	FXM1			03914	49	04740	00000
03330	FXD	LD	99	,FAC	03926	28	00099	02492
03340	B	FXD1			03938	49	04802	00000
03350	FXDR	TFM	FXD-1	,FAC	03950	16	03925	-2492
03360	B	FXDR1			03962	49	04944	00000
03370	RSGN	TFM	FAC	,RSGN-1	03974	06	02492	0397L
03380	B	RSGN1			03986	49	04964	00000
03390	FLCAT	TFM	FAC	,FLCAT-1	03998	06	02492	0399P
03400	B	FLOAT1			04010	49	05056	00000
03410	FSBR	BNF	FSBR1+26	,FAC-2	04022	44	05314	02490
03420	B	FSBR1			04034	49	05288	00000
03430	FDVR	TFM	SAVE	,FAC	04046	06	02565	02492
03440	B	FDVR1			04058	49	05334	00000
03450	FIX1	TFM	IMSA	,FIX1-1	04070	26	02575	0406R
03460	B	FIX11			04082	49	05384	00000

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03470	FAXI	TF	IMSA	,FAXI-1	,11,	IMSA = 1	04094	26	02575	C409L
03480		B	FAXI1				04106	49	05758	C0000
03490	FAXB	TFL	SAVE-40	,FAXB-1	,11,	LOAD B	04118	06	02525	C411P
03500		B	FAXB1				04130	49	06192	00000
03510	SET	TFL	FAC	,00344	,11		04142	06	02492	C034M
03520		B	SET1				04154	49	06664	C0000
03530	BLXM	FMON	,*(0)				04166	66	07228	C4166
03540		00	00200		,0		04178	-0	00200	00000
03550	BLXM	FMON	,*(0)				04190	66	07228	C4190
03560		00	00200		,0		04202	-0	00200	00000
03570	BLXM	FMON	,*(0)				04214	66	07228	C4214
03580		00	00200		,0		04226	-0	00200	00000
03590	BLXM	FMON	,*(0)				04238	66	07228	C4238
03600		00	00200		,0		04250	-0	00200	00000
03610	BLXM	FMON	,*(0)				04262	66	07228	C4262
03620		00	00200		,0		04274	-0	00200	00000
03630	BLXM	FMON	,*(0)				04286	66	07228	C4286
03640		00	00200		,0		04298	-0	00200	C0000
03650	BLXM	FMON	,*(0)				04310	66	07228	C4310
03660		00	00300		,0		04322	-0	00300	00000
03670	BLXM	FMON	,*(0)				04334	66	07228	C4334
03680		00	00400		,0		04346	-0	00400	C0000
03690	BLXM	FMON	,*(0)				04358	66	07228	C4358
03700		00	00700		,0		04370	-0	00700	00000
03710	BLXM	FMON	,*(0)				04382	66	07228	C4382
03720		00	00800		,0		04394	-0	00800	C0000
03730	BLXM	FMON	,*(0)				04406	66	07228	C4406
03740		00	00700		,0		04418	-0	00700	C0000
03750	BLXM	FMON	,*(0)				04430	66	07228	C4430
03760		00	00500		,0		04442	-0	00500	00000
03770	BLXM	FMON	,*(0)				04454	66	07228	C4454
03780		00	00500		,0		04466	-0	00500	C0000
03790	BLXM	FMON	,*(0)				04478	66	07228	C4478
03800		00	00500		,0		04490	-0	00500	C0000
03810	*****		1620 FORTRAN II-D			ARITHMETIC BLOCK - SUBROUTINES				
03820	FIX1	CM	FAC	,00	,10		04502	14	02492	000-0
03825		BP	**32				04514	46	04546	C1100
03830		B	FAC	,FXZ	,,	NO	04526	26	02492	C3260
03840		B	FIXEND				04538	49	03068	00000
03850		DORG	=-3				04546			
03860		MF	MU-1	,FAC-2	,,	STORE SIGN	04546	71	03019	C2490
03870		C	FAC	,K	,,	IS CHAR GREATER THAN K	04558	24	02492	02221
03880		BNH	**44		,,	NO	04570	47	04614	01100
03890		TDM	FXERR+25	,1	,,	YES, SET ERR TYPE	04582	15	03009	C0001
03900		TFM	E1	,572	,9,	SET ER E2, OVFL IN FIX	04594	16	02615	C0N72
03910		B	FXNINE+12,		,,	FAC = FX9	04606	49	04924	C0000
03920		DORG	=-3				04614			
03930		TF	BETA	,ZERO-51	,,	CLEAR ADD AREA	04614	26	02603	02716
03940		TF	IMSA	,FXZ	,,		04626	26	02575	03260
03950		TF	**30	,IMSAPP	,,	ALIGN DECIMAL POINTS	04638	26	04668	02787
03960		S	**18	,FAC	,,		04650	22	04668	02492
03970		A	DUMMY	,FAC-2	,,		04662	21	99999	02490
03980		TF	FAC	,IMSA	,,		04674	26	02492	02575
03990		B	MU		,,		04686	49	03020	00000
04000		DORG	=-4				04693			
04010	FXSR1	CF	FAC				04694	33	02492	00000

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04020		B7	**20				04706	49	04726	
04030		SF	FAC				04714	32	02492	00000
04040		A	FAC	,FXSR-1	,11		04726	21	02492	C387P
04050		BB2					04738	42		
04060	FXM1	SF	100MK	,,	,6		04740	32	0278K	00000
04070		TF	FAC	,99			04752	26	02492	00099
04080		CM	99MK	,00	,610		04764	14	0277P	C00-0
04090		BE	**24				04776	46	04800	C1200
04100		AM	**8	,00000	,79		04788	11	04796	-0-00
04110		BB2					04800	42		
04120	FXD1	SF	FXD1+82				04802	32	04884	C0000
04130		BNV	**24				04814	47	04838	C1400
04140		CF	FXD1+82				04826	33	04884	00000
04150		D	100MK	,FXD-1	,611		04838	29	0278K	0392N
04160		BV	**38				04850	46	04888	C1400
04170		TF	FAC	,99MK	,11		04862	26	02492	C277P
04180		AM	**8	,00000	,79		04874	11	04882	-0-00
04190		BB2					04886	42		
04200		A	FXD1+80	,FXD1+83	,,		04888	21	04882	C4885
04210		TFM	E1	,571	,9,	ER E1, ZERO DIVISION	04900	16	02615	C0N71
04220	FXNINE	TFM	FXERR+30	,FIXEND-12,,	,,	SET UP ERROR EXIT	04912	16	03014	-3056
04230		TF	FAC	,FX9	,,	FAC = FX9	04924	26	02492	03250
04240		B	FXERR				04936	49	02984	00000
04250		DORG	=-4				04943			
04260	FXDR1	LD	99	,FXDR-1	,11		04944	28	00099	0394R
04270		B7	FXD1				04956	49	04802	
04280	RSGN1	BNF	**52	,FAC-1	,,		04964	44	05016	02491
04285		BNF	**26	,FAC-2	,,		04976	44	05002	02490
04290		CF	FAC-2				04988	33	02490	00000
04300		BB					05000	42	00000	C0000
04310		DORG	=-9				05002			
04320		SF	FAC-2				05002	32	02490	00000
04330		BB					05014	42	00000	00000
04340		DORG	=-9				05016			
04350		BNF	**26	,FAC	,,	FIXED POINT NUMBER	05016	44	05042	02492
04360		CF	FAC				05028	33	02492	00000
04370		BB					05040	42	00000	00000
04380		DORG	=-9				05042			
04390		SF	FAC				05042	32	02492	00000
04400		BB					05054	42	00000	00000
04410		DORG	=-9				05056			
04420	FLOAT1	CM	FAC	,00	,10		05056	14	02492	C00-0
04425		BE	ZERFAC				05068	46	02836	C1200
04430		MF	99	,FAC	,,	STORE SIGN	05080	71	00099	C2492
04440		TR	BETA-9	,FXH	,11		05092	31	02594	0277K
04450		TF	FAC-2	,FLZALP	,11,	CLEAR FAC	05104	26	02490	0279P
04460		TF	SAVE	,K	,,	CHAR = K	05116	26	02565	02221
04470		TFM	**23	,BETA-9	,,		05128	16	05151	-2594
04480		BD	**44	,DUMMY	,,	FIND HI ORDER DIGIT	05140	43	05184	99999
04490		SM	SAVE	,1	,10,	ADJUST CHAR	05152	12	02565	000-1
04500		AM	**13	,1	,,		05164	11	05151	-0001
04510		B	**36				05176	49	05140	00000
04520		DORG	=-3				05184			
04530		TR	FNH	,*-33	,611		05184	31	0279K	0515J
04540		TF	**35	,FNH	,,	FIND AND CLEAR RECORD MARK	05196	26	05231	02792
04550		AM	**23	,1	,,		05208	11	05231	-0001

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05680	B7	ERXV+24			06408	49	C3144	
05690	DORG	06808-12*12			06664			
05700	SET1	CF	00344		06664	33	00344	C0000
05710		BXM	**12	,13(0)	06676	62	06688	CC013
05720		TFM	00309	,00000	06688	16	0C309	-0000
05730		TFM	00314	,00000	06700	16	00314	-0000
05740		CF	MU-1		06712	33	03015	C0000
05750		SF	RESET+34		06724	32	06842	C0000
05760		BNV	**24		06736	47	0676C	C1400
05770		CF	RESET+34		06748	33	06842	C0000
05780		TFL	QZF	,QZ1	06760	06	06903	C6899
05790		BNXV	**24		06772	47	06796	C1500
05800		TFL	QZF	,QZ2	06784	06	06903	C6899
05810		BSBA	00344		06796	60	00344	C0001
05820	RESET	BV	**12		06808	46	06820	C1400
05830		BNXV	**12		06820	47	06832	C1500
05840		AM	**8	,00000	06832	11	0684C	-0-00
05850		FMUL	QZF	,QZ2	06844	03	06903	C6899
05860		BNF	**24	,MU-1	06856	44	06880	C3019
05870		SF	FAC-2		06868	32	0249C	C0000
05880		BSBB	00304		06880	6C	00304	00002
05890		DC	2 , 01		06893		2	
		-1						
05900	QZ1	DC	2 , 01		06895		2	
		-1						
05910		DC	2 , 90		06897		2	
		RO						
05920	QZ2	DC	2 , 90		06899		2	
		RO						
05930	QZF	DS	4		06903		4	
05940		DORG	08000		08000			
05950		34	A1	,00701	08000	34	08068	CG701
05960		38	A1	,00702	08012	38	08068	CG702
05970		36	A1	,00703	08024	36	08068	CG703
05980		TD	15999	,400	08036	25	15999	CC400
05990		TR	START+3	,12000	08048	31	03854	12000
06000		B	**22		08060	49	08082	00000
06010		DORG	**3		08068			
06020	A1	OSC	9	,019400033	08068		9	
06030		DSA	FIX		08081		5 X	1
					08081		-3854	
06040		TRA			08082	36	00000	CG500
					08094	49	00000	C0000
06050		TCD	08000		08000			
06060	*****	1620 FORTRAN II-D	FORMAT					
06070	*****	1620 FORTRAN II-D	FORMAT - SECONDARY LINKAGE					
06080		DORG	START		03851			
06090		DS	3		03853		3	
06100		BLXM	FMON	,*(0)	03854	66	07228	C3854
06110		OO	00100	,0	03866	-0	00100	C0000
06130		OO	00100	,0	03878	-0	00100	C0000
06120		BLXM	FMON	,*(0)	03890	66	07228	C3890
06140		BLXM	FMON	,*(0)	03902	66	07228	C3902

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06150		OO	00100	,0	03914	-0	00100	C0000
06160		BLXM	FMON	,*(0)	03926	66	07228	C3926
06170		OO	00100	,0	03938	-0	00100	C0000
06180		BLXM	FMON	,*(0)	03950	66	07228	C3950
06190		OO	00100	,0	03962	-0	00100	C0000
06200		BLXM	FMON	,*(0)	03974	66	07228	C3974
06210		OO	00100	,0	03986	-0	00100	C0000
06220		TFL	FAC	,FLOAT-1	03998	06	02492	C399P
06230		B	IFLOAT		04010	49	05006	C0000
06240		BLXM	FMON	,*(0)	04022	66	07228	C4022
06250		OO	00100	,0	04034	-0	00100	C0000
06260		BLXM	FMON	,*(0)	04046	66	07228	C4046
06270		OO	00100	,0	04058	-0	00100	C0000
06280		BLXM	FMON	,*(0)	04070	66	07228	C4070
06290		OO	00100	,0	04082	-0	00100	C0000
06300		BLXM	FMON	,*(0)	04094	66	07228	C4094
06310		OO	00100	,0	04106	-0	00100	C0000
06320		BLXM	FMON	,*(0)	04118	66	07228	C4118
06330		OO	00100	,0	04130	-0	00100	C0000
06340		B	CLOBB		04142	49	07174	C0000
06350		B	CLOTT		04154	49	07154	C0000
06360	*****		WRITE ALPHAMERIC					
06370	WATY	TF	SWF	,WATY-1	04166	26	05851	04165
06380		B	WATY1		04178	49	05488	C0000
06390	WAPT	TF	SWF	,WAPT-1	04190	26	05851	C4189
06400		B	WAPT1		04202	49	05508	C0000
06410	WACD	TF	SWF	,WACD-1	04214	26	05851	04213
06420		B	WACD1		04226	49	05528	C0000
06430	*****		READ ALPHAMERIC					
06440	RATY	TF	SWF	,RATY-1	04238	26	05851	C4237
06450		B	RATY1		04250	49	05852	C0000
06460	RAPT	TF	SWF	,RAPT-1	04262	26	05851	C4261
06470		B	RAPT1		04274	49	05872	C0000
06480	RACD	TF	SWF	,RACD-1	04286	26	05851	04285
06490		B	RACD1	,8	04298	49	05892	C-000
06500	ITYPE	AM	SWF	,3	04310	11	05851	-0003
06510		B	ITYPE1	,8	04322	49	04502	C-000
06520		BLXM	FMON	,*(0)	04334	66	07228	C4334
06530		OO	00400	,0	04346	-0	00400	C0000
06540		BLXM	FMON	,*(0)	04358	66	07228	C4358
06550		OO	00700	,0	04370	-0	00700	C0000
06560		BLXM	FMON	,*(0)	04382	66	07228	C4382
06570		OO	00800	,0	04394	-0	00800	C0000
06580		BLXM	FMON	,*(0)	04406	66	07228	C4406
06590		OO	00700	,0	04418	-0	00700	C0000
06600		BLXM	FMON	,*(0)	04430	66	07228	C4430
06610		OO	00500	,0	04442	-0	00500	C0000
06620		BLXM	FMON	,*(0)	04454	66	07228	C4454
06630		OO	00500	,0	04466	-0	00500	C0000
06640		BLXM	FMON	,*(0)	04478	66	07228	C4478
06650		OO	00500	,0	04490	-0	00500	C0000
06660	*****	1620 FORTRAN II-D	I FORMAT - SUBROUTINES					
06670	****		MACRO FOR I TYPE READ AND WRITE					
06680	ITYPE1	TF	WIDTH2	,SWF	04502	26	05946	0585J
06690		A	LAST	,WIDTH2	04514	21	05726	05946
06700		C	LAST	,MAX2	04526	24	05726	06027

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0671C	BH	ER F9			04538	46	07004	01100	
06720	TF	INPLUS	,LAST		04550	26	05935	05726	
06730	TFM	IR DIG+6	,FAC		04562	16	04812	-2492	
06740	TFM	SWC ADJ	,WRITE I		04574	16	06034	-4334	
06750	BD	SWL	,RNEFSW		04586	43	05924	05943	
06760	TF	TERM	,FP1MK		04598	26	06775	02772	
06770	TF	FAC	,FXZ		04610	26	02492	03260	
06780	TFM	SWC ADJ	,READI		04622	16	06034	-4914	
06790	*****	CHAR BY CHAR IS MOVED INTO FAC,RIGHT JUSTIFIED,UNTIL SIGN							
06800	*****	GR W CHAR ARE EXAMINED.							
06810	*****	ERROR F7 WILL OCCUR IF MORE THAN K CHAR ARE AVAIL TO READ							
06820	IREAD	SM	WIDTH2	,2					
06830		BL	SWL		04634	12	05946	000-2	
06840		SM	INPLUS	,2	04646	47	05924	01300	
06850		BNR	**20	,INPLUS	.11	04658	12	05935	-0002
06860		B7	ERRF7I		04670	45	04690	0593N	
06870		CM	INPLUS	,70	.610	04682	49	04882	
06880		BH	IR DIG		04690	14	0593A	000P0	
06890		BE	IR BLNK		04702	46	04806	01100	
06900		CM	INPLUS	,00	.610	04714	46	04842	01200
06910		BE	IR BLNK		04726	14	0593N	000-0	
06920		CM	INPLUS	,20	.610	04738	46	04842	01200
06930		BE	I MINUS		04750	14	0593N	000K0	
06940		CM	INPLUS	,10	.610	04762	46	04862	01200
06950		BE	SWL		04774	14	0593N	000J0	
06960		B	ERR F7I		04786	46	05924	01200	
06970		DORG	**4		04798	49	04882	00000	
06980	IRDIG	TD		,INPLUS	.11	04805			
06990		C	**6	,TERM		04806	25	00000	0593N
07000		BL	ERR F7 I		04818	24	04812	06775	
07010	IRBLNK	SM	IR DIG+6	,1	04830	47	04882	01300	
07020		B	I READ		04842	12	04812	-0001	
07030		DORG	**4		04854	49	04634	00000	
07040	IMINUS	SF	FAC		04861				
07050		B	SWL		04862	32	02492	00000	
07060		DORG	**4		04874	49	05924	00000	
07070	ERRF7I	TF	FAC	,FXZ	,,	04881			
07080		TFM	EI	,677	,911,	04882	26	02492	03260
07090		B	SWL		04894	16	02615	0007P	
07100		DORG	**4		04906	49	05924	00000	
07110	READI	SF	FP1MK		04913				
07120		TF	FLT END	,ICON2+6		04914	32	0277K	00000
07130		BNF	I FLOAT	,LOC	04926	26	03118	05244	
07140		CF	LOC		04938	44	05006	05971	
07150	READIF	TFL	LOC	,FAC	.6	04950	33	05971	00000
07160	ERF7	BNF	BSWF-12	,EI	,,	04962	06	0597J	02492
07170		CF	EI		04974	44	05804	02615	
07180		B	ERCOM2		04986	33	02615	00000	
07190		DORG	**4		04998	49	07080	00000	
07200	I FLOAT	CM	FAC	,00	.10	05005			
07205		BE	ZERFAC		05006	14	02492	000-0	
07210		MF	99	,FAC	,,	05018	46	02836	01200
07220		TR	BETA-9	,FXH	.11	05030	71	00099	02492
07230		TF	FAC-2	,FLZALP	.11,	05042	31	02594	0277K
07240		TF	SAVE	,K	,,	05054	26	02490	0279P
07250		TFM	**23	,BETA-9	,,	05066	26	02565	02221
					05078	16	05101	-2594	

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07260	BD	**44		,,	FIND HI ORD DIGIT	05090	43	05134	00000
07270	SM	SAVE	,01	,10,	ADJUST CHAR	05102	12	02565	000-1
07280	AM	**13	,01			05114	11	05101	-0001
07290	B	**36				05126	49	05090	00000
07300		DORG	**3			05134			
07310	TR	FNH	**33	.611		05134	31	0279K	0510J
07320	TF	**35	,FNH	,,	FIND AND CLEAR RECORD MARK	05146	26	05181	02792
07330	AM	**23	,01			05158	11	05181	-0001
07340	BNR	**12				05170	45	05158	00000
07350	TDM	**1	,0	.6		05182	15	0518J	00000
07360	TD	FAC+1	,RECMK	,,	REPLACE RECORD MARK	05194	25	02493	02403
07370	TF	BETA	,ZERO-74	,,	CLEAR BETA	05206	26	02603	02693
07380	INCR60	SF	FNH	,.6		05218	32	0279K	00000
07390		B7	FINISH	,.6		05230	49	0311J	
07400	ICCN2	B	READ IF	,.1		05238	4R	04962	00000
07410		DORG	**4			05245			
07420	*****	1620 FORTRAN II-D	FORMAT - SUBROUTINES						
07430		DORG	START+1637			05488			
07440	WATY1	TFM	MAX	,0687	.8	05488	16	05914	C-687
07450		B	WRTALP			05500	49	05540	00000
07460		DORG	**3			05508			
07470	WAPT1	TFM	MAX	,0887	.8	05508	16	05914	0-887
07480		B	WRTALP			05520	49	05540	00000
07490		DORG	**3			05528			
07500	WACD1	TFM	MAX	,1080	.8	05528	16	05914	CJ080
07510	WRTALP	IDM	RNEFSW	,1	,,	05540	15	05943	00001
07520	RWA	TF	DATINH+2	,MAX-2	,,	05552	26	06049	05912
07530		SF	MAX-1			05564	32	05913	00000
07540	REPSW	DS	2	**3		05572			
07550	MATSW	DS	1	**2	,,	05573			
07560	REPSW3	DS	2	**	,,	05575			
07570		TFM	**1	,00000	.711	05576	16	05575	-000-
07580		TDM	SWL+1	,2		05588	15	05925	00002
07590	LOCD	DS	2	**1	,,	05598			
07600	LOCD2	DS	2	**3	,,	05596			
07610		TFM	MESERR+8	,679	.9	05600	16	02615	00079
07620		TFM	MAX2	,INH		05612	16	06027	-6053
07630		A	MAX2	,MAX		05624	21	06027	05914
07640		A	MAX 2	,MAX		05636	21	06027	05914
07650	*****				CONTINUATION OF RWA. ALSO USED AFTER EACH OUTPUT				
07660	*****				RECORD NOT TERMINATED BY COMPT MACRO				
07670		TFM	LAST	,INH		05648	16	05726	-6053
07680	RWA2	TDM	COMPSW	**1		05660	15	05668	0000J
07690	COMPSW	DS	**3	**1	PROHIBITS,0 REQUIRES OUTPUT	05668			
07700		TR	INH-1	,STZERG+1		05672	31	06052	06230
07710		TR	INH+86	,STZERG		05684	31	06139	06229
07720		CM	MAX-2	,06	.10	05696	14	05912	000-6
07730	WIDTH	DS	3	**2	,,	05705			
07740		BNE	**24		NO. OF EFF. DIGITS IN FIELD	05708	47	05732	01200
07750		RCTY				05720	34	00000	00102
07760	LAST	DS	5	**5	,,	05726			
07770		BD	BSWF	,RNEFSW		05732	43	05816	05943
07780	RADDIT	TFM	IOGT	**23		05744	16	00565	-5767
07790		B	IOGT	,DATINH-4	.7	05756	49	00566	-6043
07800		CM	MAX-2	,06	.10	05768	14	05912	000-6
07810		BNE	**24		,,	05780	47	05804	01200
					ALLWS GCDF SWITCH FOR RATY				

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07820	BC4	*-72			05792	46	05720	00400
07830	TDM	FLT END-5,2			05804	15	03113	00002
07840	*****		CONTROLS POSITION IN FORMAT SPECS					
07850	BSWF	AM SWF	,5		05816	11	05851	-0005
07860	TF	*+18	,SWF	,11	05828	26	05846	C585J
07870	B	SWF	,6,	BR TO ADR INDICATED BY FORMAT SPEC.	05840	49	0585J	C0000
07880	SWF	DS	,*		05851		5	
07890	RATY1	TFM MAX	,0687	,8	05852	16	05914	0-687
07900	B	RDALP			05864	49	05904	C0000
07910	DORG	*-3			05872			
07920	RAPT1	TFM MAX	,0887	,8	05872	16	05914	0-887
07930	B	RDALP			05884	49	05904	C0000
07940	DORG	*-3			05892			
07950	RACD1	TFM MAX	,1080	,8	05892	16	05914	CJ080
07960	RDALP	TDM RWEFSW	,0		05904	15	05943	C0000
07970	MAX	DS	4	,*-1	05914		4	
07980	B	RWA			05916	49	05552	C0000
07990	DORG	*-4			05923			
08000	*****		SWL IS A TRINARY SWITCH USED TO BRANCH TO THE PROPER SOURCE					
08010	*****		TO OBTAIN THE LOCATION THAT GOES WITH THE FORMAT MACRO					
08020	*****		BEING PERFORMED					
08030	*****		BB FOR OBJECT PROGRAM					
08040	*****		NOP FOR RECC CONTROL					
08050	*****		B FOR MATRIX CONTROL					
08050	SWL	NOP	MATRIX 2		05924	41	06408	C0000
08060	INPLUS	DS	5	,*	05935		5	
08070	TDM	SWL+1	,9	,*	05936	15	05925	C0009
08080	RWEFSW	DS	1	,*-4	05943		1	
08090	WIDTH2	DS	3	,*-1	05946		3	
08100	BD	SWC+12	,MATSW		05948	43	05984	C5573
08110	NOP				05960	41	00000	C0000
08120	DPG	DS	5	,*-5	05966		5	
08130	LOC	DS	5	,*	05971		5	
08140	*****		AFTER LOC ADR OBTAINED BR TO PROPER MACRO					
08150	SWC	TDM SWL+1	,2		05972	15	05925	C0002
08160	BD	*+20	,RWEFSW	,*	05984	43	06004	05943
08170	B	SWC ADJ	,6		05996	49	0603M	C0000
08180	DORG	*-4			06003			
08190	TDM	COMPSW	,0	,*	06004	15	05668	C0000
08200	CF	LOC			06016	33	05971	C0000
08210	MAX2	DS	5	,*	06027		5	
08220	B				06028	49	00000	C0000
08230	SWCADJ	DS	,*-5	,*	06034		C	
08240	DORG	*-4			06035			
08250	DATDUC	DSA	DUDH		06039		5 X	1
					06039		-2607	
08260	DC	2,0			06041		2	
08270	DGM				06042		1	
08280	DATINH	DSA	INH		06047		5 X	1
					06047		-6053	
08290	DC	2,0			06049		2	
08300	DGM				06050		1	
08310	DC	1	,0		06051		1	

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08320	ENDFOR	DAC	1,0		06053		1 X	2
08330	INH	DS		,ENDFOR	06053		C	
08340	DS	174			06227		174	
08350	IN	DS	176	,INH+174	06227		176	
08360	STZERC	DC	2	,00	06229		2	
08370	00			,0246810	06230	-0	-0-0-	0-0-0
08380	00			,0246810	06242	-0	-0-0-	0-0-0
08390	00			,0246810	06254	-0	-0-0-	0-0-0
08400	00			,0246810	06266	-0	-0-0-	0-0-0
08410	00			,0246810	06278	-0	-0-0-	0-0-0
08420	00			,0246810	06290	-0	-0-0-	0-0-0
08430	00			,0246810	06302	-0	-0-0-	0-0-0
08440	DC	2	,00		06315		2	
08450	FLZERS	DC	2	,0'	06317		2	
08460	DS	5			06322		5	
08470	MATRIX	TDM	MATSW	,1	06324	15	05573	C0001
08480	TDM	SWL+1	,9	,*	06336	15	05925	C0009
08490	TF	LOCADJ	,FP2		06348	26	06380	C3052
08500	BNF	MATRIX2-12,MATRIX-1			06360	44	06396	06323
08510	TFM	LOCADJ	,00	,10	06372	16	06380	000-C
08520	LOCADJ	DS	2	,*-3	06380		2	
08530	S	LOCADJ	,K		06384	22	06380	02221
08540	S	MATRIX-1,LOCADJ			06396	22	06323	06380
08550	MATRIX2	A	MATRIX-1,LOCADJ	,*	06408	21	06323	06380
08560	TF	LOC	,MATRIX-1	,*	06420	26	05971	06323
08570	SM	PAR	,1	,10	06432	12	03843	000-1
08580	BNE	*+24			06444	47	06468	01200
08590	TDM	MATSW	,0		06456	15	05573	C0000
08600	BNL	SWC+12			06468	46	05984	C1300
08610	BB				06480	42	00000	C0000
08620	DORG	*-9			06482			
08630	*****		MACRO FOR AN I/O CARRIAGE RETURN DURING A FORMAT STATEMENT					
08640	SLASH	TDM	COMEND+1	,9	06482	15	06647	C0009
08650	BD	SLASH2	,RWEFSW	,*	06494	43	06514	05943
08660	B	COMEND			06506	49	06646	C0000
08670	DORG	*-4			06513			
08680	SLASH2	BD	IOCR	,COMP SW	06514	43	06654	C5668
08690	CM	DATINH+2	,06	,10	06526	14	06049	C00-6
08700	BH	WRITE		,*	06538	46	06622	01100
08710	TF	LAST	,FLZERS	,6	06550	26	05720	06317
08720	SM	LAST	,02	,10,	06562	12	05720	C00-2
08730	CM	LAST	,00	,610	06574	14	05720	C00-0
08740	BE	*-36			06586	46	06550	01200
08750	CM	LAST	,INH		06598	14	05726	-6053
08760	BL	COM END			06610	47	06646	C1300
08770	WRITE	TFM	IOPT	,*+23	06622	16	00565	-6645
08780	B	IOPT	,DATINH-4	,7	06634	49	00532	-6043
08790	COMEND	B	RWA2-12		06646	49	05648	C0000
08800	DORG	*-4			06653			
08810	IOCR	CM	MAX-2	,08	06654	14	05912	C00-8
08820	CKW	DS	3	,*-2	06663		3	
08830	BNL	WRITE			06666	46	06622	C1300

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08840      B  COMEND
08850      DORG *-4
08860 ***** MACRO TERMINATING I/O CONTROL
08870      DS 3
08880 COMPLT TDM COMEND+1 ,2
08890 CHAR2 DS 3 ,*-1 , TWICE MODIFIED CHARACTERISTIC
08900      B  SLASH+12
08910      DORG *-4
08920 REDD  BD  REDD A+24,MAT SW
08930      TD  REDD A+23 ,COMPSW
08940      TFM SWC ADJ ,REDD A ,, MACRO PERMITS REDDING BACK TO (
08950      B  SWL
08960      DORG *-4
08970 REDDA  TDM SWL+1 ,1 ,, RETURN FROM SWL IF MORE DATA
08980      TDM COMPSW ,, VCID REDD USING SWC EFFECT ON COMPSW
08990 TERM  DS 5 ,* , REFERENCE ADR IN I/O RECORD
09000      AM SWF
09010      TF SWF ,SWF ,11
09020      B  SLASH
09030      DORG *-4
09040      B7 *
09050 ***** MACRO TO REPEAT FORMAT SPECS A SPECIFIC NO OF TIMES
09060 ***** SUB FROM REP SW, INITIALLY SET TO ZERO
09070 ***** IF REPSW NEG , SET TOREPS REOD AND REPEAT FORMAT
09080 ***** IF REPSW ZERO, LAST FORMAT REPETITION IS COMPLETE
09090 ***** IF REPSW PLUS, STEP DOWN AND REPEAT FORMAT SPEC
09100 REP  AM SWF ,7
09110      SM REP SW ,1 ,10, CONTRCL REPETITION OF FIELDS
09120      BH REP 2
09130      BE BSWF
09140      A  REP SW ,SWF ,11
09150      BNH BSWF
09160 REP2  SM SWF ,2
09170      TF SWF ,SWF ,11
09180      B  SWF-23
09190      DORG *-4
09200 REP3  SF REPSW3-1
09210 WA  DS 5 ,* , WORKING AREA ADR REF TO FAC OR GAM
09220      AM SWF ,7 ,10
09230      SM REPSW 3 ,1 ,10
09240      BH REP 2
09250      BE BSWF
09260      A  REPSW 3 ,SWF ,11
09270      B  REP 2-12
09280 DPT  DS 5 ,* , TEMP LOC OF DEC PT IN OUTPUT RD
09290 ERF9  TFM SWC ADJ ,ER COM 2 ,, MACRO FOR ERROR F9 WHEN WRITING
09300      TF LAST ,MAX 2
09310      TFM EI ,679 ,9
09320      B  SWL
09330      DORG *-4
09340 XTYPE AM SWF ,3 ,, MACRO FOR SKIPPING FIELDS
09350      A  LAST ,SWF ,11
09360      B  BSWF
09370      DORG *-4
09380 ERCOM2 RCTY
09390 WA2  DS ,*-5 , WORKING AREA ADR REF TO FAC OR GAM
    
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09400      WATY DUDH
09410      RCTY
09420 CHAR  DS 5 ,*-5 , MODIFIED CHARACTERISTIC
09430      TR EI+1 ,FLZERS-1 ,, RESTORES RECORD MARK
09440      BSBB BSWF-12
09450 DPTM2 DS 5 ,*+5 , TEMP ADR OF DEC PT IN I/O REC, -2
09460      DS 5
09470      DORG 08000
09480      38 A3 ,00702
09490      36 A3 ,00703
09500      B  *+22
09510      DORG *-3
09520 A3  DSC 9 ,019433033
09530      DSA FIX
09540      TRA
09550      TCD 08000
09560 ***** 1620 FORTRAN II-D I WA FORMAT
09570 ***** 1620 FORTRAN II-D I WA FORMAT - SECONDARY LINKAGE
09580      DORG START
09590      DS 3
09600      TFL FAC ,FIX-1 ,11
09610      B  IFIX
09620      BLXM FMON ,*(0)
09630      OO 00100 ,0
09640      BLXM FMON ,*(0)
09650      OO 00100 ,0
09660      BLXM FMON ,*(0)
09670      OO 00100 ,0
09680      BLXM FMON ,*(0)
09690      OO 00100 ,0
09700      BLXM FMON ,*(0)
09710      OO 00100 ,0
09720      BLXM FMON ,*(0)
09730      OO 00100 ,0
09740      BLXM FMON ,*(0)
09750      OO 00100 ,0
09760      BLXM FMON ,*(0)
09770      OO 00100 ,0
09780      BLXM FMON ,*(0)
09790      OO 00100 ,0
09800      BLXM FMON ,*(0)
09810      OO 00100 ,0
09820      BLXM FMON ,*(0)
09830      OO 00100 ,0
09840      B  CLOBB
09850      B  CLOTT
09860 ***** WRITE ALPHAMERIC
09870      TF SWF ,WATY-1
09880      B  WATY1
09890      TF SWF ,WAPT-1
09900      B  WAPT1
    
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09910	TF	SWF	,WACD-1	04214	26	05851	C4213
09920	B	WACD1		04226	49	05528	CC000
09930	****		READ ALPHAMERIC				
09940	TF	SWF	,RATY-1	04238	26	05851	04237
09950	B	RATY1		04250	49	05852	C0000
09960	TF	SWF	,RAPT-1	04262	26	05851	04261
09970	B	RAPT1		04274	49	05872	C0000
09980	TF	SWF	,RACD-1	04286	26	05851	04285
09990	B	RACD1	,,8	04298	49	05892	G-000
10000	BLXM	FMON	,*(0)	04310	66	07228	C4310
10010	OO	0030C	,,0	04322	-0	0030C	C0000
10020	WRITEI	TFM	WA ,GAM+2	04334	16	06931	-2557
10030	B	WRIT11		04346	49	04502	C0000
10040	BLXM	FMON	,*(0)	04358	66	07228	04358
10050	OO	00700	,,0	04370	-0	0070C	C0000
10060	BLXM	FMON	,*(0)	04382	66	07228	04382
10070	OO	00800	,,0	04394	-0	0080C	C0000
10080	BLXM	FMON	,*(0)	04406	66	07228	04406
10090	OO	00700	,,0	04418	-0	0070C	C0000
10100	BLXM	FMON	,*(0)	04430	66	07228	04430
10110	OO	00500	,,0	04442	-0	0050C	C0000
10120	BLXM	FMON	,*(0)	04454	66	07228	04454
10130	OO	00500	,,0	04466	-0	0050C	C0000
10140	BLXM	FMON	,*(0)	04478	66	07228	04478
10150	OO	00500	,,0	04490	-0	00500	CC000
10160	*****		1620 FORTRAN II-D I WA FORMAT - SUBROUTINES				
10170	*****		RETURN FROM SWL VIA SWC IF WRITING I TYPE				
10180	*****		VALUE PUT IN FAC IN I FORM, EXPANDED TO ALPHA IN				
10190	*****		GAMMA RIGHT TO LEFT. HO CONTAINS ADR OF HIGH ORDER				
10200	*****		DIGIT IN GAM. AFTER VALUE IN GAM IS SIGNED, CHECKED				
10210	*****		FOR WIDTH, MOVE TO OUTPUT RECORD.				
10220	*****		ERFBI RESULTS IF VALUE TOO LARGE FOR FORMAT SPECS.				
10230	WRIT11	TFM	WAZ ,FAC+1	04502	16	07086	-2493
10240	TFL	FAC	,,LOC ,11	04514	06	02492	C597J
10250	BNF	WRT12+12	,FAC-1	04526	44	0457C	02491
10260	TF	FIXEND+6	,ICON3+6	04538	26	03074	C5208
10270	B	IFIX		04550	49	04998	C0000
10280	DDRG	*-4		04557			
10290	WRT12	TDM	FIXEND+1 ,2	04558	15	03069	00002
10300	TR	GAM-19	,MASK I-1	04570	31	02536	05210
10310	TFM	HO	,GAM+1	04582	16	04673	-2556
10320	WRTI	SM	WA 2 ,1	04594	12	07086	-0001
10330	SM	WA	,,2	04606	12	06931	-0002
10340	TD	WA	,WA 2 ,611	04618	25	0693J	0708C
10350	BD	I DIG	,WA 2 ,11	04630	43	0465C	07080
10360	B	I DIG+12		04642	49	04662	C0000
10370	DDRG	*-4		04649			
10380	IDIG	TF	HO ,WA	04650	26	04673	06931
10390	CF	GAM	,, PREVENTS PREMATURE TERM. FOR NEG ARG	04662	33	02555	C0000
10400	HO	DS	,, ADR OF HI ORDER NON ZERO DIGIT	04673	5		
10410	BNF	WRTI	,WA ,11	04674	44	04594	0693J
10420	CM	HO	,GAM+1	04686	14	04673	-2556
10430	BNE	WRT SGN		04698	47	0473C	01200
10440	TFM	LAST	,7000 ,68	04710	16	0572C	CP000
10450	B	BSWF		04722	49	05816	00000
10460	DDRG	*-4		04729			

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10470	WRTSGN	BNF	WRT I3 ,FAC	04730	44	04766	02492
10480	SM	HO	,,2	04742	12	04673	-0002
10490	TFM	HO	,,20 ,610	04754	16	04671	CC000
10500	WRT13	SM	HO ,1	04766	12	04673	-0001
10510	TFM	OUT	,GAM	04778	16	04837	-2555
10520	S	OUT	,HC	04790	22	04837	04673
10530	C	OUT	,WIDTH 2	04802	24	04837	05946
10540	BH	ER F8 I		04814	46	04894	01100
10550	SF	OUT		04826	32	04837	00000
10560	OUT	DS	,, HI ORDER WKG ADR IN I/O RECORD, I TYPE	04837	5		
10570	A	OUT	,LAST	04838	21	04837	05726
10580	SM	OUT	,,2	04850	12	04837	-0002
10590	TR	OUT	,HO ,611	04862	31	0483P	0467L
10600	TFM	LAST	,,00 ,610	04874	16	0572C	000-0
10610	B	BSWF		04886	49	05816	CC000
10620	DDRG	*-4		04893			
10630	ERFBI	TR	DUD H+11 ,FLZERS-67	04894	31	02618	06250
10640	TR	DUD H+11	,HO ,11	04906	31	02618	C467L
10650	CM	DATINH+2	,,08 ,10	04918	14	06045	C00-8
10660	TFM	E1+2	,67800 ,, SETS ERROR F8 AND ERASES REC MARK	04930	16	02617	C7800
10670	BL	ER COM 2		04942	47	0708C	01300
10680	TF	DATDUD+2	,DATINH+2	04954	26	06041	06049
10690	TFM	IORT	,+23	04966	16	05065	-4989
10700	B	IOPT	,DATDUD-4 ,7	04978	49	00532	-6035
10710	B	ER COM 2		04990	49	0708C	00000
10720	DDRG	*-4		04997			
10730	IFIX	CM	FAC ,00 ,10	04998	14	C2492	CC0-0
10735	BP	+32		05010	46	C5042	C1100
10740	TF	FAC	,FXZ ,, NO	05022	26	C2492	03260
10750	B	FIXEND		05034	49	C3068	C0000
10760	DDRG	*-3		05042			
10770	MF	MU-1	,FAC-2 ,, STORE SIGN	05042	71	03019	02490
10780	C	FAC	,K ,, IS CHAR GREATER THAN K	05054	24	C2492	02221
10790	BNH	+56		05066	47	05122	C1100
10800	TDM	FXERR+25	,1 ,, SET ERR TYPE	05078	15	03009	C0001
10810	TFM	E1	,572 ,9, SET ER E2, CVFL IN FIX	05090	16	02615	00N72
10820	TF	FAC	,FX9 ,, YES, FAC = FX9	05102	26	C2492	03250
10830	B	FXERR		05114	49	C2984	C0000
10840	DDRG	*-3		05122			
10850	TF	BETA	,ZERD-51 ,, CLEAR ADD AREA	05122	26	C2603	02716
10860	TF	IMSA	,FXZ	05134	26	C2575	03260
10870	TF	+30	,IMSAPP ,, ALIGN DECIMAL POINTS	05146	26	05176	C2787
10880	S	+18	,FAC	05158	22	05176	C2492
10890	A	DUMMY	,FAC-2	05170	21	99999	02490
10900	TF	FAC	,IMSA	05182	26	C2492	C2575
10910	B	MU		05194	49	0302C	C0000
10920	DDRG	*-4		05201			
10930	ICCN3	B	WRT I2 ,,1	05202	4R	04558	C0000
10940	DDRG	*-4		05209			
10950	MASKI	DAC	11,0000000000'	05211		11 X	2
			0000000000'				
10960	DDRG	0800C		08000			
10970	38	A5	,00702	08000	38	08032	00702
10980	36	A5	,00703	08012	36	08032	C0703
10990	B	+22		08024	49	08046	C0000
11000	DDRG	*-3		08032			

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11010	A5	DSC	9	,019466016		08032		9	
11020		DSA	FIX			08045		5 X	1
11030		TRA				08045		-3854	
						08046	36	0000	00500
						08058	49	0000	00000
11040		TCD	08000			08000			
11050	*****			1620 FORTRAN II-D EF-HTYPE	FORMAT				
11060	*****			1620 FORTRAN II-D EF-HTYPE	FORMAT - SECONDARY LINKAGE				
11070		DORG	START			03851			
11080		DS	3			03853		3	
11090		BLXM	FMON	,*(0)		03854	66	07228	03854
11100		00	00100	,	,0	03866	-0	00100	00000
11110		BLXM	FMON	,*(0)		03878	66	07228	03878
11120		00	00100	,	,0	03890	-0	00100	00000
11130		BLXM	FMON	,*(0)		03902	66	07228	03902
11140		00	00100	,	,0	03914	-0	00100	00000
11150		BLXM	FMON	,*(0)		03926	66	07228	03926
11160		00	00100	,	,0	03938	-0	00100	00000
11170		BLXM	FMON	,*(0)		03950	66	07228	03950
11180		00	00100	,	,0	03962	-0	00100	00000
11190		BLXM	FMON	,*(0)		03974	66	07228	03974
11200		00	00100	,	,0	03986	-0	00100	00000
11210		BLXM	FMON	,*(0)		03998	66	07228	03998
11220		00	00100	,	,0	04010	-0	00100	00000
11230		BLXM	FMON	,*(0)		04022	66	07228	04022
11240		00	00100	,	,0	04034	-0	00100	00000
11250		BLXM	FMON	,*(0)		04046	66	07228	04046
11260		00	00100	,	,0	04058	-0	00100	00000
11270		BLXM	FMON	,*(0)		04070	66	07228	04070
11280		00	00100	,	,0	04082	-0	00100	00000
11290		BLXM	FMON	,*(0)		04094	66	07228	04094
11300		00	00100	,	,0	04106	-0	00100	00000
11310		BLXM	FMON	,*(0)		04118	66	07228	04118
11320		00	00100	,	,0	04130	-0	00100	00000
11330		B	CLOBB		,0	04142	49	07174	00000
11340		B	CLOTT			04154	49	07154	00000
11350	****			WRITE ALPHAMERIC					
11360		TF	SWF	,WATY-1		04166	26	05851	04165
11370		B	WATY1			04178	49	05488	00000
11380		TF	SWF	,WAPT-1		04190	26	05851	04189
11390		B	WAPT1			04202	49	05508	00000
11400		TF	SWF	,WACD-1		04214	26	05851	04213
11410		B	WACD1			04226	49	05528	00000
11420	****			READ ALPHAMERIC					
11430		TF	SWF	,RATY-1		04238	26	05851	04237
11440		B	RATY1			04250	49	05852	00000
11450		TF	SWF	,RAPT-1		04262	26	05851	04261
11460		B	RAPT1			04274	49	05872	00000
11470	EF2SW	DS	5			04285		5	
11480		TF	SWF	,RACD-1		04286	26	05851	04285
11490		B	RACD1		,8	04298	49	05892	0-000
11500		BLXM	FMON	,*(0)		04310	66	07228	04310
11510		00	00300	,	,0	04322	-0	00300	00000

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11520		BLXM	FMON	,*(0)		04334	66	07228	04334
11530		00	00400	,	,0	04346	-0	00400	00000
11540		BLXM	FMON	,*(0)		04358	66	07228	04358
11550		00	00700	,	,0	04370	-0	00700	00000
11560		BLXM	FMON	,*(0)		04382	66	07228	04382
11570		00	00800	,	,0	04394	-0	00800	00000
11580		BLXM	FMON	,*(0)		04406	66	07228	04406
11590		00	00700	,	,0	04418	-0	00700	00000
11600	****			MACRO FOR F TYPE READ AND WRITE					
11610	FTYPE	CF	RWEFSW			04430	33	05943	00000
11620		B	EF COM		,8	04442	49	04526	C-000
11630	****			MACRO FOR E TYPE READ AND WRITE					
11640	ETYPE	SF	RWEFSW			04454	32	05943	00000
11650		B	EFCOM		,8	04466	49	04526	C-000
11660	HTYPE	AM	SWF		,3	04478	11	05851	-0003
11670		B	HTYPE1		,8	04490	49	05150	0-000
11680	****			1620 FORTRAN II-D EF-HTYPE	FORMAT - SUBROUTINES				
11690	GZAQQ	BLXM	FMON	,*(0)		04502	66	07228	04502
11700		00	00600	,	,0	04514	-0	00600	00000
11710	EFCOM	AM	SWF		,3	04526	11	05851	-0003
11720		TF	WIDTH	,SWF	,11	04538	26	05705	0585J
11730		AM	SWF		,2	04550	11	05851	-0002
11740		TF	LOC 0	,SWF	,11	04562	26	05998	0585J
11750		TF	INPLUS	,LAST		04574	26	05935	05726
11760		TF	WIDTH 2	,WIDTH		04586	26	05946	05705
11770		A	WIDTH 2	,WIDTH		04598	21	05946	05705
11780		A	LAST	,WIDTH2		04610	21	05726	05946
11790		C	LAST	,MAX 2		04622	24	05726	06027
11800		BH	ER F9			04634	46	07004	01100
11810		TF	TERM	,LAST		04646	26	06775	05726
11820		SM	TERM	,2		04658	12	06775	-0002
11830		TF	CHAR	,WIDTH		04670	26	07110	05705
11840		TF	WA	,FNH		04682	26	06931	02792
11850		TDH	97		,0	04694	15	00097	00000
11860		TFM	99		,00	04706	16	00099	000-0
11870		BD	EF WRT	,RWEFSW		04718	43	04986	05943
11880		TF	FAC	,FLZALP	,11	04730	26	02492	0279P
11890		TFM	SWCADJ	,READ EF		04742	16	06034	-4358
11900	RDFCH	BNR	*+32	,INPLUS	,11	04754	45	04786	0593N
11910		TFM	EF2SW	,ERRF7E		04766	16	04285	-5250
11920		B7	BEF2SW			04778	49	05390	
11930		CM	INPLUS	,00	,610,	04786	14	0593N	000-0
11940		BNE	FCH NB			04798	47	04878	01200
11950		SM	CHAR	,1	,10	04810	12	07110	000-1
11960		AM	INPLUS	,2		04822	11	05935	-0002
11970		C	INPLUS	,LAST		04834	24	05935	05726
11980		BL	RD FCH			04846	47	04754	01300
11990		TFM	EF2SW	,EFEND+12		04858	16	04285	-5138
12000		B	BEF2SW			04870	49	05390	00000
12010		DORG	*-4			04877			
12020	FCHNB	CM	INPLUS	,20	,610,	04878	14	0593N	000K0
12030		BNE	*+32			04890	47	04922	01200
12040		TFM	EF2SW	,EF MIN		04902	16	04285	-4534
12050		B	BEF2SW			04914	49	05390	00000
12060		DORG	*-4			04921			
12070		CM	INPLUS	,10	,610	04922	14	0593N	000J0

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13140	DORG	*-4			04941			
13150	LOGDIG	BNF	EF DIG	,98	04942	44	05042	00098
13160		SM	CHAR	,1	04954	12	0711C	C00-1
13170		B	EF TERM		04966	49	05102	00000
13180	DORG	*-4			04973			
13190	EFDEC	BD	ERRF7 E	,97	04974	43	0525C	C0097
13200		TFM	LOC D	,00	04986	16	05598	C00-0
13210		TFM	EFTERM+18,EF PLUS		04998	16	05120	-4546
13220		IDM	97	,-1	05010	15	00097	C000J
13230		SM	CHAR	,1	05022	12	0711C	C00-1
13240		B	EF TERM		05034	49	05102	C0000
13250	DORG	*-4			05041			
13260	EFDIG	CF	98		05042	33	00098	C000C
13270		CM	WA	,FAC-1	05054	14	06931	-2491
13280		BNL	*+36		05066	46	05102	01300
13290		TD	WA	,INPLUS	05078	25	0693J	0593N
13300		AM	WA	,1	05090	11	06931	-0001
13310	EFTERM	C	INPLUS	,TERM	05102	24	05935	06775
13320		BL	EFTYPE		05114	47	04558	01300
13330	EFEND	BNF	EFEND2	,FNH	05126	44	05158	0279K
13340		TFM	FAC	,99	05138	16	02492	000RR
13350		B	SWL		05150	49	05924	00000
13360	DORG	*-3			05158			
13370	EFEND2	S	CHAR	,LOC D	05158	22	07110	05598
13380		BD	ERR F7E	,CHAR-2	05170	43	0525C	C7108
13390		SF	CHAR-1		05182	32	07109	C0000
13400		TF	FAC	,CHAR	05194	26	02492	07110
13410		SF	FNH	,6	05206	32	0279K	00000
13420		BNF	SWL	,99	05218	44	05924	00099
13430		SF	FAC-2		05230	32	C249C	C0000
13440		B	SWL		05242	49	05924	C0000
13450	DORG	*-4			05249			
13460	ERRF7E	TF	FAC	,FLZALP	05250	26	02492	C279P
13470		TDM	EI	,7	05262	15	02615	C000P
13480		B	EFEND		05274	49	05126	C0000
13490	DORG	*-4			05281			
13500	DORG	0800C			08000			
13510		38	A7	,00702	08000	38	08032	C0702
13520		36	A7	,00703	08012	36	08032	00703
13530		B	*+22		08024	49	08046	00000
13540	DORG	*-3			08032			
13550	A7	DSC	9	,019499009	08032		9	
			019499009					
13560	DSA	FTYPE			08045		5 X	1
13570	TRA				08045		-443C	
					08046	36	0C00C	C0500
13580	TCD	08000			08058	49	00000	C000C
					08000			
13590	*****		1620 FORTRAN II-D RAEF-ATYPE FORMAT					
13600	*****		1620 FORTRAN II-D RAEF-ATYPE FORMAT - SECONDARY LINKAGE					
13610	DORG	START			03851			
13620	DS	3			03853		3	
13630	TFL	FAC	,FIX-1	,11	03854	06	02492	C385L
13640	B	EFFIX			03866	49	04590	C0000

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13650	BLXM	FMON	,*(0)		03878	66	07228	C3878
13660	00	00100		,0	03890	-0	00100	00000
13670	BLXM	FMON	,*(0)		03902	66	07228	C3902
13680	00	00100		,0	03914	-0	00100	C0000
13690	BLXM	FMON	,*(0)		03926	66	07228	C3926
13700	00	00100		,0	03938	-0	00100	00000
13710	BLXM	FMON	,*(0)		03950	66	07228	C3950
13720	00	00100		,0	03962	-0	00100	00000
13730	BLXM	FMON	,*(0)		03974	66	07228	C3974
13740	00	00100		,0	03986	-0	00100	00000
13750	BLXM	FMON	,*(0)		03998	66	07228	C3998
13760	00	00100		,0	04010	-0	00100	C0000
13770	BLXM	FMON	,*(0)		04022	66	07228	C4022
13780	00	00100		,0	04034	-0	00100	00000
13790	BLXM	FMON	,*(0)		04046	66	07228	C4046
13800	00	00100		,0	04058	-0	00100	C0000
13810	BLXM	FMON	,*(0)		04070	66	07228	C4070
13820	00	00100		,0	04082	-0	00100	00000
13830	BLXM	FMON	,*(0)		04094	66	07228	C4094
13840	00	00100		,0	04106	-0	00100	C0000
13850	BLXM	FMON	,*(0)		04118	66	07228	C4118
13860	00	00100		,0	04130	-0	00100	C0000
13870	B	CLOBB			04142	49	07174	C0000
13880	B	CLOTT			04154	49	07154	C0000
13890	****		WRITE ALPHAMERIC					
13900	TF	SWF	,WATY-1		04166	26	05851	C4165
13910	B	WATY1			04178	49	05488	00000
13920	TF	SWF	,WAPT-1		04190	26	05851	C4189
13930	B	WAPT1			04202	49	05508	00000
13940	TF	SWF	,WACD-1		04214	26	05851	C4213
13950	B	WACD1			04226	49	05528	C0000
13960	****		READ ALPHAMERIC					
13970	TF	SWF	,RATY-1		04238	26	05851	C4237
13980	B	RATY1			04250	49	05852	00000
13990	TF	SWF	,RAPT-1		04262	26	05851	C4261
14000	B	RAPT1			04274	49	05872	00000
14010	TF	SWF	,RACD-1		04286	26	05851	C4285
14020	B	RACD1	,8		04298	49	05892	0-000
14030	BLXM	FMON	,*(0)		04310	66	07228	C4310
14040	00	00300		,0	04322	-0	00300	C0000
14050	BLXM	FMON	,*(0)		04334	66	07228	C4334
14060	00	00400		,0	04346	-0	00400	C0000
14070	READEF	BNF	EFRD2+12	,LOC	04358	44	04546	C5971
14080	B	EFRD1			04370	49	04502	C0000
14090	BLXM	FMON	,*(0)		04382	66	07228	C4382
14100	00	00800		,0	04394	-0	00800	C0000
14110	ATYPE	AM	SWF	,00003	04406	11	05851	-0003
14120	B	ATYPE1			04418	49	048C2	C0000
14130	BLXM	FMON	,*(0)		04430	66	07228	C4430
14140	00	00500		,0	04442	-0	00500	C0000
14150	BLXM	FMON	,*(0)		04454	66	07228	C4454
14160	00	00500		,0	04466	-0	C050C	C0000
14170	BLXM	FMON	,*(0)		04478	66	07228	C4478
14180	00	00500		,0	04490	-0	00500	C0000
14190	*****		1620 FORTRAN II-D RAEF-ATYPE FCRMAT - SUBROUTINES					
14200	EFRD1	CF	LOC		04502	33	05971	C0000

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14210	TF	FIXEND+6	,I	CON 5+6	04514	26	03074	C4800
14220	B	EFFIX			04526	49	0459C	C0000
14230	DORG	#-4			04533			
14240	EFRD2	TDM	FIXEND+1	,2	04534	15	C3C69	C00C2
14250	TFL	LOC	,FAC	,6	04546	06	0597J	C2492
14260	ERF7S	BNF	BSWF-12	,EI	04558	44	05804	02615
14270	CF	EI		,,	04570	33	02615	00000
14280	B	ERCOM2			04582	49	07C8C	00000
14290	DORG	#-4			04589			
14300	EFFIX	CM	FAC	,00	04590	14	C2492	C00-0
14305	BP	**32			04602	46	04634	01100
14310	TF	FAC	,FXZ	,,	04614	26	C2492	C326C
14320	B	FIXEND			04626	49	03068	C0000
14330	DORG	#-3			04634			
14340	MF	MU-1	,FAC-2	,,	04634	71	03019	02490
14350	C	FAC	,K	,,	04646	24	02492	02221
14360	BNH	**56			04658	47	04714	C1100
14370	TDM	FXERR+25	,1	,,	04670	15	C3009	C0001
14380	TFM	EI	,572	,9,	04682	16	02615	00N72
14390	TF	FAC	,FX9	,,	04694	26	C2492	C3250
14400	B	FXERR			04706	49	02984	C0000
14410	DORG	#-3			04714			
14420	TF	BETA	,ZERO-51	,,	04714	26	02603	02716
14430	TF	IMSA	,FXZ	,,	04726	26	02575	03260
14440	TF	**30	,IMSAPP	,,	04738	26	04768	C2787
14450	S	**18	,FAC	,,	04750	22	04768	C2492
14460	A	DUMMY	,FAC-2	,,	04762	21	99999	02490
14470	TF	FAC	,IMSA	,,	04774	26	02492	C2575
14480	B	MU			04786	49	0302C	C0000
14490	DDRG	#-4			04793			
14500	ICONS	B	EFRD 2	,	04794	4R	04534	C0000
14510	DORG	#-4			04801			
14520	*****		MACRO FOR A TYPE READ AND WRITE					
14530	ATYPE1	TF	WIDTH2	,SWF	04802	26	05946	0585J
14540		TF	INPLUS	,LAST	04814	26	05935	05726
14550	A	LAST	,WIDTH2	,6	04826	21	05726	05946
14560	C	LAST	,MAX2	,6	04838	24	05726	06027
14570	BH	ERF9			04850	46	07004	01100
14580	TF	TERM	,LAST	,6	04862	26	06775	05726
14590	SM	TERM	,00002	,6	04874	12	06775	-0002
14600	TFM	SWCADJ	,READA	,6	04886	16	06034	-4906
14610	B7	SWL			04898	49	05924	
14620	READA	MA	XQZ+11	,LOC	04906	70	05001	05971
14630	BD	WRITEA	,RMEFSW	,6	04918	43	0517C	C5943
14640	CF	INPLUS		,6	04930	33	0593N	C0000
14650	AM	INPLUS	,01	,10	04942	11	05935	000-1
14660	C	INPLUS	,TERM	,6	04954	24	05935	06775
14670	BL	#-36			04966	47	0493C	C1300
14680	BNF	RDAFL	,LOC	,7	04978	44	05102	05971
14690	XQZ	CF	LOC	,6	04990	33	05971	-0000
14700	TF	LOC	,FXZ	,6	05002	26	0597J	C3260
14710	S	WIDTH2	,K	,6	05014	22	05946	02221
14720	RDA	BH	ERF7A	,6	05026	46	05082	01100
14730	A	XQZ+11	,WIDTH2	,6	05038	21	05001	05946
14740	MA	LOC	,XQZ+11	,6	05050	70	05971	05001
14750	TF	LOC	,TERM	,611	05062	26	0597J	C677N

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14760	B7	ERF7S			05074	49	04558	
14770	ERF7A	TDM	EI	,7	05082	15	02615	C000P
14780	B7	ERF7S		,11	05094	49	04558	
14790	RDAFL	TFM	LOC	,00	05102	16	0597J	C00-0
14800	SM	XQZ+11	,00002	,611	05114	12	05001	-0002
14810	MA	LOC	,XQZ+11	,611	05126	70	05971	C5001
14820	TF	LOC	,FLZ	,611	05138	26	0597J	C280K
14830	S	WIDTH2	,F	,611	05150	22	05946	C2219
14840	B7	RDA			05162	49	05026	
14850	WRITEA	TF	FAC	,LOC	05170	26	02492	0597J
14860	BNF	WAFX	,FAC-1	,11	05182	44	05294	C2491
14870	SM	XQZ+11	,00002	,11	05194	12	05001	-0002
14880	S	WIDTH2	,F	,11	05206	22	05946	C2219
14890	WRTA	BH	WRTA2	,11	05218	46	05274	C1100
14900	A	XQZ+11	,WIDTH2	,11	05230	21	05001	05946
14910	MA	LOC	,XQZ+11	,11	05242	70	05971	05001
14920	TF	TERM	,LOC	,611	05254	26	0677N	0597J
14930	B7	BSWF		,11	05266	49	05816	
14940	WRTA2	SM	WIDTH2	,02	05274	12	05946	C00-2
14950	B7	WRTA		,10	05286	49	05218	
14960	WAFX	S	WIDTH2	,K	05294	22	05946	02221
14970	B7	WRTA		,10	05306	49	05218	
14980	DDRG	08000			08000			
14990	38	A8	,00702		08000	38	08032	00702
15000	36	A8	,00703		08012	36	08032	00703
15010	B	**22			08024	49	08046	C0000
15020	DDRG	#-3			08032			
15030	A8	DSC	9	,019508016	08032		9	
15040	OSA	FIX			08045		5 X	1
15050	TRA				08045		-3854	
					08046	36	00000	00500
15060	TCO	08000			08058	49	00000	C0000
					08000			
15070	*****	1620 FORTRAN II-D	EFMW FORMAT					
15080	*****	1620 FORTRAN II-D	EFMW FORMAT - SECONDARY LINKAGE					
15090	DDRG	START			03851			
15100	DS	3			03853		3	
15110	BLXM	FMON	,*(0)	,0	03854	66	07228	C3854
15120	OO	00100	,	,0	03866	-0	00100	C0000
15130	BLXM	FMON	,*(0)	,0	03878	66	07228	C3878
15140	OO	00100	,	,0	03890	-0	00100	C0000
15150	BLXM	FMON	,*(0)	,0	03902	66	07228	C3902
15160	OO	00100	,	,0	03914	-0	00100	C0000
15170	BLXM	FMON	,*(0)	,0	03926	66	07228	C3926
15180	OO	00100	,	,0	03938	-0	00100	C0000
15190	BLXM	FMON	,*(0)	,0	03950	66	07228	C3950
15200	OO	00100	,	,0	03962	-0	00100	C0000
15210	BLXM	FMON	,*(0)	,0	03974	66	07228	C3974
15220	OO	00100	,	,0	03986	-0	00100	C0000
15230	BLXM	FMON	,*(0)	,0	03998	66	07228	C3998
15240	OO	00100	,	,0	04010	-0	00100	C0000
15250	BLXM	FMON	,*(0)	,0	04022	66	07228	C4022
15260	OO	00100	,	,0	04034	-0	00100	C0000

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15270	BLXM	FMON	,*(O)		04046	66	07228	C4046
15280	OO	00100	,	,0	04058	-0	00100	00000
15290	BLXM	FMON	,*(O)		04070	66	07228	04070
15300	OO	00100	,	,0	04082	-0	00100	00000
15310	BLXM	FMON	,*(O)		04094	66	07228	04094
15320	OO	00100	,	,0	04106	-0	00100	00000
15330	BLXM	FMON	,*(O)		04118	66	07228	C4118
15340	OO	00100	,	,0	04130	-0	00100	00000
15350	B	CLO88	,		04142	49	07174	C0000
15360	B	CLOTT	,		04154	49	07154	00000
15370	****		WRITE ALPHAMERIC					
15380	TF	SWF	,WATY-1		04166	26	05851	04165
15390	B	WATY1	,		04178	49	05488	C0000
15400	TF	SWF	,WAPT-1		04190	26	05851	04189
15410	B	WAPT1	,		04202	49	05508	C0000
15420	TF	SWF	,WACD-1		04214	26	05851	C4213
15430	B	WACD1	,		04226	49	05528	C0000
15440	****		READ ALPHAMERIC					
15450	TF	SWF	,RATY-1		04238	26	05851	04237
15460	B	RATY1	,		04250	49	05852	C0000
15470	TF	SWF	,RAPT-1		04262	26	05851	C4261
15480	B	RAPT1	,		04274	49	05872	C0000
15490	TF	SWF	,RACD-1		04286	26	05851	04285
15500	B	RACD1	,	,8	04298	49	05892	C-000
15510	BLXM	FMON	,*(O)		04310	66	07228	04310
15520	OO	00300	,	,0	04322	-0	00300	00000
15530	BLXM	FMON	,*(O)		04334	66	07228	C4334
15540	OO	00400	,	,0	04346	-0	00400	00000
15550	BLXM	FMON	,*(O)		04358	66	07228	04358
15560	OO	00700	,	,0	04370	-0	00700	00000
15570	EFMW	TF	FLTEND	,ICON6+6	04382	26	03118	C5352
15580	B	EFMW1	,		04394	49	04526	C0000
15590	REFSW	DS	,		04405			C
15600	BLXM	FMON	,*(O)		04406	66	07228	C4406
15610	OO	00700	,	,0	04418	-0	00700	C0000
15620	BLXM	FMON	,*(O)		04430	66	07228	C4430
15630	OO	00500	,	,0	04442	-0	00500	00000
15640	BLXM	FMON	,*(O)		04454	66	07228	C4454
15650	OO	00500	,	,0	04466	-0	00500	C0000
15660	BLXM	FMON	,*(O)		04478	66	07228	C4478
15670	OO	00500	,	,0	04490	-0	00500	00000
15680	MEDOB	BLXM	FMON	,*(O)	04502	66	07228	04502
15690	OO	00900	,	,0	04514	-0	00900	C0000
15700	*****	1620 FORTRAN II-D	EFMW FORMAT - SUBROUTINES					
15710	*****		E AND F TYPE MANTISSA WRITING,FLOAT ARG IF REQ.					
15720	*****		COMPUTE DEC PT IN GAM AND OUTPUT RECORO. MOVE					
15730	*****		MANTISSA DIGIT BY DIGIT, RIGHT TO LEFT, FROM FAC					
15740	*****		TO GAM. INSERT SIGN, CHECK WIDTH, AND ZERO.					
15750	*****		BR TO WRT F FOR F TYPE CONTINUATION					
15760	EFMW1	TFL	FAC	,LOC	04526	06	02492	0597J
15770	BNF	EFLOAT	,FAC-1	,11	04538	44	05094	02491
15780	EFALPH	TFM	FLTEND-4	,20	04550	16	03114	0000K
15790	TF	DPT	,TERM	,10	04562	26	07003	06775
15800	S	DPT	,LOC D 2		04574	22	07003	0595E
15810	TFM	DPG	,GAM		04586	16	05966	-2555
15820	S	DPG	,LOC D 2		04598	22	05966	0595E

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15830	TF	DPTM2	,DPT		04610	26	07144	C7003
15840	SM	DPTM2	,2		04622	12	07144	-0002
15850	EFALP	SM	WA 2	,1	04634	12	07086	-0001
15860	TD	WA	,WA2	,611	04646	25	0693J	C7080
15870	CF	WA	,	,6	04658	33	0693J	00000
15880	SM	WA	,2		04670	12	06931	-0002
15890	C	WA2	,FNH		04682	24	07086	02792
15900	BH	EF ALP	,		04694	46	04634	01100
15910	TFM	WA	,00	,610	04706	16	0693J	C00-0
15920	BNF	EF CHKS	,FAC-2		04718	44	04742	C2490
15930	TFM	WA	,20	,610	04730	16	0693J	0000K
15940	EFCHKS	TFM	CKW	,000	04742	16	06663	C0-00
15950	A	CKW	,LOCD	,9	04754	21	06663	C5598
15960	A	CKW	,FAC		04766	21	06663	02492
15970	TF	CHAR	,CKW		04778	26	07110	06663
15980	S	CHAR	,F		04790	22	07110	02219
15990	C	WIDTH	,LOC D		04802	24	05705	C5598
16000	BNL	***32			04814	46	04846	01300
16010	ERF8ES	TFM	REFSW	,ERF8E	04826	16	04405	-5126
16020	B	BREFSW	,		04838	49	05326	00000
16030	DDRG	*-4			04845			
16040	CM	FAC	,-70	,10	04846	14	02492	000P-
16043	BNF	***20	,RWEFSW		04858	44	04878	05943
16046	B7	***20			04870	49	04890	
16050	BL	***24			04878	47	04902	01300
16060	BD	***36	,FNH	,11	04890	43	04926	0279K
16070	TDM	FLTEND-4	,-1		04902	15	03114	0000J
16080	TFM	CHAR	,-099	,9	04914	16	07110	00-9R
16090	BNF	WRTFS	,RWEFSW		04926	44	05074	C5943
16100	*****		WRITE E TYPE. ASSEMBLE EXP IN GAM USING A MASK,					
16110	*****		THE CHAR AND SIGN. MOVE LEFT GAM AND RIGHT GAM TO					
16120	*****		OUTPUT. THEN GO TO INSERT DECIMAL POINT					
16130	WRITE	S	WIDTH	,F	04938	22	05705	C2219
16140	BL	***32	,		04950	47	04982	01300
16150	WRT2S	TFM	REFSW	,WRT2	04962	16	04405	-4522
16160	B	BREFSW	,		04974	49	05326	00000
16170	DDRG	*-4			04981			
16180	BD	***36	,FLTEND-4		04982	43	05018	03114
16190	S	CHAR	,WIDTH		04994	22	07110	05705
16200	BD	ERF8ES	,CHAR-2		05006	43	04826	07108
16210	TFM	***47	,GAM		05018	16	05065	-2555
16220	A	***35	,WIDTH		05030	21	05065	C5705
16230	A	***23	,WIDTH		05042	21	05065	C5705
16240	TF	GAM	,		05054	26	02555	C0000
16250	B	WRT2S	,		05066	49	04962	C0000
16260	DDRG	*-4			05073			
16270	WRTFS	TFM	REFSW	,WRTF	05074	16	04405	-4626
16280	B	BREFSW	,		05086	49	05326	00000
16290	DDRG	*-4			05093			
16300	EFLOAT	AM	FAC	,00	05094	11	02492	000-0
16310	BZ	ZERFAC	,YES	,10,	05106	46	02836	01200
16320	MF	99	,FAC	,,	05118	71	00099	C2492
16330	TR	BETA-9	,FXH	,11	05130	31	02594	C277K
16340	TF	FAC-2	,FLZALP	,11,	05142	26	02490	C279P
16350	TF	SAVE	,K	,,	05154	26	02565	C2221
16360	TFM	***23	,BETA-9	,,	05166	16	05185	-2594

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16370	BD	**44	,DUMMY	,,	FIND HI ORD DIGIT	05178	43	05222	99999
16380	SM	SAVE	,01	,10,	ADJUST CHAR	05190	12	02565	000-1
16390	AM	*-13	,01			05202	11	05185	-C001
16400	B	*-36				05214	49	05178	CC000
16410	DORG	*-3				05222			
16420	TR	FNH	,*-33	,611		05222	31	0279K	0518R
16430	TF	**35	,FNH	,,	FIND AND CLEAR RECORD MARK	05234	26	05269	C2792
16440	AM	**23	,01			05246	11	05269	-0001
16450	BNR	*-12	,DUMMY			05258	45	05246	99999
16460	TDM	*-1	,0	,6		05270	15	0526R	00000
16470	TD	FAC+1	,RECMK	,,	REPLACE RECCRD MARK	05282	25	02493	C2403
16480	TF	BETA	,ZERO-74	,,	CLEAR BETA	05294	26	02603	02693
16490	ENOR6C	SF	FNH	,		05306	32	0279K	00000
16500	B7	FINISH	,	,6		05318	49	0311J	
16510	BREFSW	TFM	MBASE+5	,HTYPE+24		05326	16	07423	-4502
16520	B7	MEDOB	,			05338	49	04502	
16530	ICON6	B	EF ALPH	,	,1	05346	4R	04550	00000
16540	DORG	*-4				05353			
16550	DORG	08000				08000			
16560	38	A9	,00702			08000	38	08032	00702
16570	36	A9	,00703			08012	36	08032	00703
16580	B	**22				08024	49	08046	00000
16590	DORG	*-3				08032			
16600	A9	DSC	9	,019524017		08032		9	
16610	DSA	FIX				08045		5 X	1
16620	TRA					08045		-3854	
16630	TCD	08000				08046	36	00000	00500
						08058	49	00000	00000
						08000			
16640	*****	1620 FORTRAN II-D	WRTE-F FORMAT						
16650	*****	1620 FORTRAN II-D	WRTE-F FORMAT - SUBROUTINES						
16660	DORG	HTYPE+24				04502			
16670	TFM	MBASE+5	,FIX			04502	16	07423	-3854
16680	B	REFSW	,	,6		04514	49	04400	00000
16690	WA3	5	,REFSW	,	TEMP STORE FOR ZERO INSERT ADDRESS	04405		5	
16700	DORG	*-4				04521			
16710	WRTE2	TR	GAM+1	,MASK		04522	31	02556	05325
16720	BD	ERF8E	,CHAR-2			04534	43	05126	07108
16730	TD	GAM+8	,CHAR			04546	25	02563	07110
16740	TD	GAM+6	,CHAR-1			04558	25	04561	07109
16750	BNF	**24	,CHAR			04570	44	04594	07110
16760	TDM	GAM+3	,2			04582	15	02558	00002
16770	TF	TERM	,GAM+2	,6		04594	26	0677A	02557
16780	TR	DPT	,DPG	,611		04606	31	0700L	05960
16790	B	WEF DEC				04618	49	05094	00000
16800	DORG	*-4				04625			
16810	*****		3 CASES FOR WRITING F TYPE,CHAR IS EXP-LOCD-F						
16820	*****		CHAR IS NEG, EXP IS NEG						
16830	*****		CHAR IS NEG, EXP IS POSITIVE (WRTFPE)						
16840	*****		CHAR IS POSITIVE (WRTFPC)						
16850	WRTE	TR	GAM+1	,MASK EP+7		04626	31	02556	C5333
16860	BD	F ZERO	,FLTEND-4			04638	43	04874	C3114
16870	BD	ER F8 E	,CHAR-2			04650	43	05126	07108

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16880	CM	CKW	,000	,9		04662	14	06663	C0-00	
16890	BNH	F ZERO				04674	47	04874	C1100	
16900	C	CKW	,WIDTH			04686	24	06663	C5705	
16910	BH	ER F8 E				04698	46	05126	C1100	
16920	TF	CHAR 2	,CHAR			04710	26	06698	07110	
16930	A	CHAR 2	,CHAR			04722	21	06698	07110	
16940	BNF	WRTFPC	,CHAR			04734	44	04950	07110	
16950	TFM	**35	,GAM			04746	16	04781	-2555	
16960	A	**23	,GAM 2			04758	21	04781	06698	
16970	TF	GAM	,2			04770	26	02555	00000	
16980	BNF	WRTFPE	,FAC			04782	44	04918	C2492	
16990	TF	LAST	,GAM+2	,6		04794	26	05720	C2557	
17000	TF	DPTM2	,GM2F	,611,	SET SIGN LEFT OF DEC PT	04806	26	0714M	C304L	
17010	TF	WA3	,DPT			04818	26	04405	07003	
17020	FNCNEZ	AM	WA3	,,	INSERT ZERO FROM DEC PT TO	04830	11	04405	-0002	
17030	BD	WEF DEC	,WA3	,11,	FIRST NON ZERO DIGIT ON RIGHT	04842	43	05094	C440N	
17040	TFM	WA3	,70	,610		04854	16	0440N	C00P0	
17050	B	FNCNEZ				04866	49	04830	00000	
17060	DORG	*-4				04873				
17070	FZERO	TFM	DPTM2	,70	,610,	F TYPE OUTPUT EQUALS ZERO	04874	16	0714M	C00P0
17080	TF	CHAR 2	,LOCD 2			04886	26	06698	C5596	
17090	TDM	CHAR-2	,0	,11		04898	15	07108	0000-	
17100	B	CLR70S-12				04910	49	05046	00000	
17110	DORG	*-4				04917				
17120	WRTFPE	TF	DPTM2	,DPG	,611	04918	26	0714M	05960	
17130	TR	DPT	,DPG	,611		04930	31	0700L	05960	
17140	B	WEF DEC				04942	49	05094	00000	
17150	DORG	*-4				04949				
17160	WRTFPC	TF	**30	,TERM		04950	26	04980	06775	
17170	S	**18	,CHAR 2			04962	22	04980	06698	
17180	TF	**24	,GAM+2			04974	26	00000	C2557	
17190	TF	CLR70S+30	,TERM			04986	26	05088	C6775	
17200	C	CHAR	,LOCD			04998	24	07110	05598	
17210	BNL	CLR 70S				05010	46	05058	01300	
17220	A	DPG	,CHAR 2			05022	21	05966	06698	
17230	TR	DPT	,DPG	,611		05034	31	0700L	05960	
17240	TF	CLR70S+30	,LAST			05046	26	05088	05726	
17250	CLR70S	TFM	**35	,MASK F1		05058	16	05093	-5337	
17260	A	**23	,CHAR 2			05070	21	05093	06698	
17270	TF	TERM	,	,6		05082	26	0677A	00000	
17280	WEFDEC	TFM	DPT	,03	,610	05094	16	0700L	000-3	
17290	TFM	LAST	,00	,610		05106	16	05720	000-0	
17300	B	BSWF				05118	49	05816	00000	
17310	DORG	*-4				05125				
17320	ERF8E	TR	DUD H+21	,FLZERS-57		05126	31	02628	C6260	
17330	TR	GAM+1	,MASK	,,	MOVES E+00 ALPHAMERICALLY	05138	31	02556	05325	
17340	TD	GAM+8	,FAC			05150	25	02563	02492	
17350	TD	GAM+6	,FAC-1			05162	25	02561	C2491	
17360	TFM	GAM+3	,451	,9		05174	16	02558	00M51	
17370	BNF	**24	,FAC			05186	44	05210	02492	
17380	TDM	GAM+3	,2			05198	15	02558	C0002	
17390	TR	DUD H+13	,GM1M2F	,11		05210	31	02620	C291M	
17400	TF	DUD H+12	,DUD H+14			05222	26	02619	02621	
17410	TFM	DUD H+14	,03	,10		05234	16	02621	000-3	
17420	CM	DATINH+2	,08	,10		05246	14	06049	000-8	
17430	TFM	EI+2	,67800	,,	SETS ERROR F 8 ERASES REC MARK	05258	16	02617	07800	

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1819C	TCD	06000	06070	49	COCC	00000
			06000			
18200	QSTZS	H	06082	48	00CC	C0000
18210	DEND	QSTZS	06082			

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ALSFC1	06372	FNCNEZ	04830	DPG	05966	FNH	02792	LOGE	03366
ATAN.6	03430	FXNINE	04912	DPTM2	07144	FP1MK	02772	MASKF	05411
ATYPE1	04802	GMIM2F	02914	DPT	07003	FP2	03052	MASKI	05211
BEF2SW	05390	HRDMRT	05330	DUH	02607	F	02219	MASK	05325
BREFSW	05326	HTYPE1	05150	DUD	02687	FSBR1	05288	MATSW	05573
CLRT05	05058	IFLOAT	05006	DUMMY	99999	FSBR	04022	MAX2	06027
COMADD	02231	IMINUS	04862	EEXP2	04738	FTYPE	04430	MAX	05914
COMEND	06646	IMSAPP	02787	EEXPM	04866	FX1	03270	MBASE	07418
COMPLT	06688	INOR60	05218	EEXP	04878	FX9	03250	MDATA	07402
COMP5W	05668	INPLUS	05935	EF2SW	04285	FXD1	04802	MEDCB	04502
DAFMON	05202	IRBLNK	04842	EFALP	04634	FXDR1	04944	MF	03054
DALONG	05194	ITYPE1	04502	EFDCM	04526	FXDR	03950	MU	03020
DATDUD	06039	LDGDIG	04942	EFDEC	04974	FXD	03926	N1	02233
DATINH	06047	LOCADJ	06380	EFDIG	05042	FXERR	02984	N2	02238
DDFMON	05210	MASKEP	05326	EFEND	05126	FXH	02772	NCDIV	06048
DIODDA	02821	MASKF1	05337	EFFIX	04590	FXM1	04740	ONEZ	03302
DKBUFF	02404	MATRIX	06324	EFMIN	04534	FXM	03902	OUT	04837
DKDATA	02813	MATRIX2	06408	EFMW1	04526	FXSR1	04694	OVFLC	05844
EEXP22	04786	MESERR	02607	EFMW	04382	FXSR	03878	PAR	03843
EEXPAD	04922	MONCAL	00796	EFRD1	04502	FXZ	03260	PIOV2	03526
EFALPH	04550	NORM60	05268	EFRD2	04534	FZERO	04874	PI	03462
EFCHK5	04742	ODDSET	05086	EFRRT	04986	GAM	02555	PSI	05502
EFEND2	05158	ODDREV	05550	EI	02615	GM2F	03043	QQQ	07210
EFLOAT	05094	ONEFAC	05782	ENDD	03076	GZAQQ	04502	QSTS1	06304
EFPLUS	04546	OVFLOW	02960	ENTLN	02248	HO	04673	QSTS	06296
EFTERM	05102	PROGST	02226	ERFTA	05082	HTYPE	04478	QSTZS	06082
EFTYPE	04558	RADDOIT	05744	ERF7	04974	ICON2	05238	QZ1	06895
ENDFOR	06053	READEP	04358	ERF7S	04558	ICON3	05202	QZ2	06899
ENOR60	05306	READIF	04962	ERF8E	05126	ICON5	04794	QZF	06903
ENTABS	02323	REPSW3	05575	ERFBI	04894	ICON6	05346	RACD1	05892
ENTATN	02313	RWFSW	05943	ERF9	07004	IDIG	04650	RACD	04286
ENTCOS	02303	100MK	02782	ERRT	00602	IFIX	04998	RAPT1	05872
ENTDED	02298	99MK	02777	ERROR	02984	IMSA	02575	RAPT	04262
ENTDRR	02293	9SCPF	03238	ERXV	03120	INH	06053	RATY1	05852
ENTEXP	02253	A10	08032	ERXVS	06132	IN	06227	RATY	04238
ENTFET	02283	A1	08068	ETYPE	04454	IOCAL	00716	RDAFL	05102
ENTFID	02273	A3	08032	EXP	04687	IOCR	06654	RDALP	05904
ENTREC	02278	A5	08032	FAC	02492	IOGT	00566	RDA	05226
ENTSC2	02258	A6	08032	FAXB1	06192	IOPT	00532	RDFCH	04754
ENTSC3	02263	A7	08032	FAXB	04118	IORBC	00520	READA	04906
ENTSDX	02268	A8	08032	FAX11	05758	IOST	00565	READI	04914
ENTSIN	02308	A9	08032	FAXI	04094	IOSK	00554	RECI	05980
ENTSQT	02318	ALSFC	06364	FCHNB	04878	IRDIG	04806	RECLG	02243
ENTSWD	02288	ATYPE	04406	FDR1	05334	IREAD	04634	RECMK	02403
ERC0M2	07080	AXJ	05920	FDRV	04046	ITYPE	04310	REDCA	06752
ERFBES	04826	B1	06044	FIL	07429	K	02221	REDC	06708
ERRF7E	05250	B2	06044	FIX1	04502	LAST	05726	REFSW	04405
ERRF7I	04882	BAS	07324	FIX11	05384	LN10	03681	REP2	06888
EXPENT	02812	BETA	02603	FIXI	04070	LN1	03557	REP3	06920
FINBIN	02915	BSWF	05816	FIX	03854	LN2	03588	REP	06816
FINISH	03111	CHAR2	06698	FKDD	02967	LN4	03619	REPSW	05572
FIXEND	03068	CHAR	07110	FLOAT	03998	LN8	03650	RESET	06808
FLOAT1	05056	CKW	06663	FLZER	03742	LNENT	02807	RSGN1	04964
FLTEND	03118	CLOBB	07174	FLZ	02802	LOCD2	05596	RSGN	03974
FLZALP	02797	CLOTT	07154	F#1	02969	LOCD	05598	RWA2	05660
FLZERS	06317	D10	00820	FMON	07228	LOC	05971	RWA	05552

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SAVE 02565	TEN34 03334	WAPT 04190	WRTI2 04558	WIDTH2 05946
SET1 06664	TERM 06775	WA 06931	WRTI3 04766	WRITEA 05170
SHORT 04142	TRACE 02884	WATY1 05488	WRTI 04594	WRITE1 04334
SLASH 05226	TRFX 02946	WATY 04166	W 0224C	WRTI1 04502
SLIP 06482	TWOPI 03398	WIDTH 05705	XQTZ 04990	WRTALP 05540
START 07401	TWO 03712	WJRS 03018	XTYPE 07048	WRT2S 04962
STOP 03851	UNFLC 02860	WRITE 06622	ZEROM 02859	WRTFPC 04950
STP 02395	WA2 07086	WRTA2 05274	ZERO 02767	WRTFPE 04918
SWCFX 03168	WA3 04405	WRTA 05218	SIXTEN 03494	WRTSGN 04730
SWC 05972	WACD1 05528	WRT2 04522	SLASH2 06514	ZERFAC 02836
SWF 05851	WACD 04214	WRT 04938	STZERO 06229	
SWL 05924	WAFX 05294	WRTF 04626	SWCADJ 06034	
TAFE 02535	WAPT1 05508	WRTFS 05074	WEFDEC 05094	

END OF ONE ASSEMBLY.

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00010 *****	1620 FORTRAN II-D	SUBROUTINES WITH FLOATING POINT HARDWARE		
00020 *****	IORT ENTRY POINTS	AND CONTANTS		
00030 IORBC DS		,520	00520	C
00040 IOPT DS		,532	00532	C
00050 IDSK DS		,554	00554	C
00060 IOGT DS		,566	00566	C
00070 ERRET DS		,602	00602	C
00080 IORT DS		,565	00565	C
00090 ILOCAL DS		,716	00716	C
00100 MONCAL DS		,796	00796	C
00110 DIO DS		,820	00820	C
00120 *****	1620 FORTRAN II-D	IN CORE AREAS		
00130 ***	COMMUNICATION AREA			
00140	DORG 2218		02218	
00150 F DS	2,,	FLOATING POINT WORD LENGTH	02219	2
00160 K DS	2,,	FIXED POINT WORD LENGTH	02221	2
00170 PRGST DS	5,,	STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00180 COMADD DS	5,,	STARTING ADDRESS OF COMMON AREA	02231	5
00190 N1 DS	2,,	NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00200 N2 DS	5,,	NUMBER OF LOGICAL RECORDS	02238	5
00210 W DS	2,,	WORD LENGTH	02240	2
00220 RECLG DS	3,,	RECORD LENGTH	02243	3
00230 ENTLN DS	5,,	ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00240 ENTEXP DS	5,,	ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00250 ENTSC2 DS	5,,	ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00260 ENTSC3 DS	5,,	ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00270 ENTSDX DS	5,,	ENTRY ADDRESS TO SWITCH D FIXED SUBROUTINE	02268	5
00280 ENTFID DS	5,,	ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00290 ENTREC DS	5,,	ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00300 ENTRET DS	5,,	ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00310 ENTSHC DS	5,,	ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00320 ENTDNR DS	5,,	ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00330 ENTDED DS	5,,	ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00340 ENTDCOS DS	5,,	ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00350 ENTSDS DS	5,,	ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00360 ENTATN DS	5,,	ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00370 ENTSTOT DS	5,,	ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00380 ENTABS DS	5,,	ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00390 DS	70,,	RESERVED FOR ENTRIES TO ADDEC SUBROUTINES	02393	70
00400 *****	COMMON WORKING AREAS			
00410 STOP DAC	5,STOP		02395	5 X 2
00420 RECHK DS		,STOP+B	02403	C
00430 DKBUFF DSS	29		02404	29
00440 FAC DS	60		02492	60
00450 DC	1	,	02493	1
00460 SAVE DS	72		02565	72
00470 BETA DS	38		02603	38
00480 DGM			02604	1
00490 GAM DS		,SAVE-10	02555	C
00500 TAFE DS		,SAVE -30	02535	C
00510 IMSA DS		,BETA -28	02575	C
00520 MESERR DAC	6,ER E		02607	6 X 2
ER E				
00530 DUDH DS		,MESERR	02607	0

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1620 MONITCR II VERSION 2 FORTRAN II-D			SUBROUTINES SET 4	PAGE	4
01360	FXZ	DC 10 -000000000	,0000000000	03260	10
01370	FX1	DC 10 -000000001	,0000000001	03270	10
01380	*****	CONSTANTS FOR RELOCATABLE SUBROUTINES			
01390		DC 30,	10000000000000000000000000000000	03300	30
01400	ONEZ	DC 2, 01 -1		03302	2
01410		DC 30,	218776162394955256222611491638 K18776162394955256222611491638	03332	30
01420	TEN34	DC 2, 01 -1		03334	2
01430		DC 30,	434294481903251827651128918917 M34294481903251827651128918917	03364	30
01440	LOGE	DC 2, 00 -0		03366	2
01450		DC 30,	628318530717958647692528676656 Q28318530717958647692528676656	03396	30
01460	TWOPI	DC 2, 01 -1		03398	2
01470		DC 30,	540419500270584155443578364610 N40419500270584155443578364610	03428	30
01480	ATAN.6	DC 2, 00 -0		03430	2
01490		DC 30,	314159265358979323846264338328 L14159265358979323846264338328	03460	30
01500	PI	DC 2, 01 -1		03462	2
01510		DC 30,	60000000000000000000000000000000 O0000000000000000000000000000000	03492	30
01520	SIXTEN	DC 2, 00 -0		03494	2
01530		DC 30,	157079632679489661923132169164 J57079632679489661923132169164	03524	30
01540	PICV2	DC 2, 01 -1		03526	2
01550	LN1	DC 31,	00000000000000000000000000000000 -00000000000000000000000000000000	03557	31
01560	LN2	DC 31,	693147180559945309417232121458 -693147180559945309417232121458	03588	31
01570	LN4	DC 31,	1386294361119890618834464242916 J386294361119890618834464242916	03619	31
01580	LN8	DC 31,	2079441541679835928251696364375 K079441541679835928251696364375	03650	31
01590	LN10	DC 31,	2302585092994045684017991454684 K302585092994045684017991454684	03681	31
01600	TWO	DC 31,	20000000000000000000000000000000 K00000000000000000000000000000000	03712	31
01610		DC 28 -00000000000000000000000000000000	,0 , -99	03740	28
01620	FLZER	DC 2 RR		03742	2
01650	DUMMY	DS	,99999	99999	C
01660	START	DS	,03851	03851	C
01670		DORG	3789	03789	

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1620 MONITOR II VERSION 2 FORTRAN II-D			SUBROUTINES SET 4	PAGE	5
01675	DSA	WATY		03793	5 X 1
01680	DSA	REP3		03793 03798	-4166 5 X 1
01690	DSA	TRACE		03798 03803	-6920 5 X 1
01700	DSA	SWC		03803 03808	-2884 5 X 1
01710	DSA	SWCFX		03808 03813	-5572 5 X 1
01720	DSA	SLASH		03813 03818	-3168 5 X 1
01730	DSA	REP		03818 03823	-6482 5 X 1
01740	DSA	REDO		03823 03828	-6816 5 X 1
01750	DSA	XTYPE		03828 03833	-6708 5 X 1
01760	DSA	COMPLT		03833 03838	-7048 5 X 1
01770	PAR	DSA	0	03838 03843	-6688 5 X 1
01780	DSA	MATRIX		03843 03848	-0000 5 X 1
01790	*****	1620 FORTRAN II-D ALL SUBR IN CORE		03848	-6324
01800	*****	1620 FORTRAN II-D ALL SUBR IN CORE - SECONDARY LINKAGE			
01810		DORG	START	03851	
01820		DS	3	03853	3
01830	FIX	TFL	FAC ,FIX-1 ,11	03854	06 C2492 C385L
01840		B	FIX1	03866	49 10604 C00C0
01850	FXSR	BNF	FXSR1+20 ,FAC ,, CHANGE SIGN ON FAC	03878	44 10816 C2492
01860		B	FXSR1	03890	49 10796 C00C0
01870	FXM	M	FAC ,FXM-1 ,11	03902	23 C2492 C390J
01880		B	FXM1	03914	49 10842 C00C0
01890	FXD	LD	99 ,FAC ,, FAC = FAC/J	03926	28 00099 C2492
01900		B	FXD1	03938	49 10904 C00C0
01910	FXDR	TFM	FXD-1 ,FAC ,, FAC = J/FAC	03950	16 C3925 -2492
01920		B	FXDR1	03962	49 11046 C00C0
01930	RSGN	TFL	FAC ,RSGN-1 ,11	03974	06 C2492 C397L
01940		B	RSGN1	03986	49 11066 C00C0
01950	FLCAT	TFL	FAC ,FLOAT-1 ,11	03998	06 C2492 C399P
01960		B	FLOAT1	04010	49 11158 C00C0
01970	FSBR	BNF	FSBR1+26 ,FAC-2 ,, CHANGE SIGN ON FAC	04022	44 11416 C2490
01980		B	FSBR1	04034	49 1139C C0000

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01990	FDVR	TFL	SAVE	,FAC		04046	06	02565	C2492
02000		B	FDVR1			04058	49	11436	C0000
02010	FIXI	TF	IMSA	,FIXI-1	,11, IMSA = I	04070	26	02575	C406R
02020		B	FIXI1			04082	49	11492	C0000
02030	FAXI	TF	IMSA	,FAXI-1	,11, IMSA = I	04094	26	02575	C409L
02040		B	FAXI1			04106	49	11866	C0000
02050	FAXB	TFL	SAVE-40	,FAXB-1	,11, LCAD B	04118	06	02525	C411P
02060		B	FAXB1			04130	49	12300	C0000
02070	SET	TFL	FAC	,0C344	,11	04142	06	02492	C034M
02080		B	SET1			04154	49	12524	C0000
02090	****			WRITE ALPHAMERIC					
02100	WATY	TF	SWF	,WATY-1		04166	26	05851	C4165
02110		B	WATY1			04178	49	05488	C0000
02120	WAPT	TF	SWF	,WAPT-1		04190	26	05851	C4189
02130		B	WAPT1			04202	49	05508	C0000
02140	WACD	TF	SWF	,WACD-1		04214	26	05851	C4213
02150		B	WACD1			04226	49	05528	C0000
02160	****			READ ALPHAMERIC					
02170	RATY	TF	SWF	,RATY-1		04238	26	05851	C4237
02180		B	RATY1			04250	49	05852	C0000
02190	RAPT	TF	SWF	,RAPT-1		04262	26	05851	C4261
02200		B	RAPT1			04274	49	05872	C0000
02210	RACD	TF	SWF	,RACD-1		04286	26	05851	C4285
02220		B	RACD1	,	,8	04298	49	05892	C-000
02230	LTYPE	AM	SWF	,3		04310	11	05851	-0003
02240		B	LTYPE1	,	,8	04322	49	09668	C-000
02250	WRITEI	TFM	WA	,GAM+2		04334	16	06931	-2557
02260		B	WRITEI1	,	,8	04346	49	10180	C-000
02270	READEF	BNF	EF RD2+12,LOC			04358	44	08732	C5971
02280		B	EF RD1	,	,8	04370	49	08688	C-000
02290	EFMW	TF	FLTEND	,ICON6+6		04382	26	03118	C5384
02300		B	EFMW1	,	,8	04394	49	09160	C-000
02310	ATYPE	AM	SWF	,3		04406	11	05851	-0003
02320		B	ATYPE1	,	,8	04418	49	05402	C-000
02330	****			MACRO FOR F TYPE READ AND WRITE					
02340	FTYPE	CF	RNEFSW	,	,8	04430	33	05943	C0000
02350		B	FTYPE1	,	,8	04442	49	07140	C-000
02360	****			MACRO FOR E TYPE READ AND WRITE					
02370	ETYPE	SF	RNEFSW	,	,8	04454	32	05943	C0000
02380	WA3	DS	5	,*	, TEMP STORE FOR ZERO INSERT ADDRESS	04465	5		
02390		B	WA3	,*	,8	04466	49	07140	C-000
02400	HTYPE	AM	SWF	,3		04478	11	05851	-0003
02410		B	HTYPE1	,		04490	49	08448	C0000
02420	*****			1620 FORTRAN II-D ALL SUBR IN CCRE - SUBROUTINES					
02430	WRTE2	TR	GAM+1	,MASK		04502	31	02556	C5305
02440		BD	ERFBE	,CHAR-2		04514	43	05106	C7108
02450		TD	GAM+8	,CHAR		04526	25	02563	C7110
02460		TD	GAM+6	,CHAR-1		04538	25	02561	C7109
02470		BNF	+24	,CHAR		04550	44	04574	C7110
02480		TDM	GAM+3	,2		04562	15	02558	C0002
02490		TF	TERM	,GAM+2	,6	04574	26	0677N	C2557
02500		TR	DPT	,DPG	,611	04586	31	0700L	C5960
02510		B	WRTE2			04598	49	05074	C0000
02520		DORG	-4			04605			
02530	*****			3 CASES FOR WRITING F TYPE,CHAR IS EXP-LOCD-F					
02540	*****			CHAR IS NEG, EXP IS NEG					

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02550	*****			CHAR IS NEG, EXP IS POSITIVE (WRTFPE)					
02560	*****			CHAR IS POSITIVE (WRTFPC)					
02570	WRTF	TR	GAM+1	,MASK	EP+7	04606	31	02556	C5313
02580		BD	F ZERO	,FLTEND-4		04618	43	04854	C3114
02590		BD	ER F8 E	,CHAR-2		04630	43	05106	C7108
02600		CM	CKW	,000	,9	04642	14	06663	C0-00
02610		BNH	F ZERO			04654	47	04854	C1100
02620		C	CKW	,WIDTH		04666	24	06663	C5705
02630		BH	ER F8 E			04678	46	05106	C1100
02640		TF	CHAR 2	,CHAR		04690	26	06698	C7110
02650		A	CHAR 2	,CHAR		04702	21	06698	C7110
02660		BNF	WRTFPC	,CHAR		04714	44	04930	C7110
02670		TFM	+35	,GAM		04726	16	04761	-2555
02680		A	+23	,CHAR 2		04738	21	04761	C6698
02690		TF	GAM			04750	26	02555	C0000
02700		BNF	WRTFPE	,FAC		04762	44	04898	C2492
02710		TF	LAST	,GAM+2	,6	04774	26	05720	C2557
02720		TF	DPTM2	,GM2F	,611, SET SIGN LEFT OF DEC PT	04786	26	0821R	C304L
02730		TF	WA3	,DPT		04798	26	04465	C7003
02740	FNCNEZ	AM	WA3	,*	, INSERT ZERO FROM DEC PT TO	04810	11	04465	-0002
02750		BD	WEF DEC	,WA3	,11, FIRST NON ZERO DIGIT ON RIGHT	04822	43	05074	C446N
02760		TFM	WA3	,70	,610	04834	16	0446A	C00P0
02770		B	FNCNEZ			04846	49	04810	C0000
02780		DORG	-4			04853			
02790	FZERO	TFM	DPTM2	,70	,610, F TYPE OUTPUT EQUALS ZERO	04854	16	0821R	C00P0
02800		TF	CHAR 2	,LOCD 2		04866	26	06698	C5596
02810		TDM	CHAR-2	,0	,11	04878	15	07108	C000-
02820		B	CLR70S-12			04890	49	05026	C0000
02830		DORG	-4			04897			
02840	WRTFPE	TF	DPTM2	,DPG	,611	04898	26	0821R	C5960
02850		TR	DPT	,DPG	,611	04910	31	0700L	C5960
02860		B	WEF DEC			04922	49	05074	C0000
02870		DORG	-4			04929			
02880	WRTFPC	TF	+30	,TERM		04930	26	04960	C6775
02890		S	+18	,CHAR 2		04942	22	04960	C6698
02900		TF		,GAM+2		04954	26	00000	C2557
02910		TF	CLR70S+30,TERM			04966	26	05068	C6775
02920		C	CHAR	,LOCD		04978	24	07110	C5598
02930		BNL	CLR 70S			04990	46	05038	C1300
02940		A	DPG	,CHAR 2		05002	21	05966	C6698
02950		TR	DPT	,DPG	,611	05014	31	0700L	C5960
02960		TF	CLR70S+30,LAST			05026	26	05068	C5726
02970	CLR70S	TFM	+35	,MASK F		05038	16	05073	-5317
02980		A	+23	,CHAR 2		05050	21	05073	C6698
02990		TF	TERM	,	,6	05062	26	0677N	C0000
03000	WEFDEC	TFM	DPT	,03	,610	05074	16	0700L	C00-3
03010		TFM	LAST	,00	,610	05086	16	05720	C00-0
03020		B	BSWF			05098	49	05816	C0000
03030		DORG	-4			05105			
03040	ERFBE	TR	DUD H+21,FLZERS-57			05106	31	02628	C6260
03050		TR	GAM+1	,MASK	, MOVES E+00 ALPHAMERICALLY	05118	31	02556	C5305
03060		TD	GAM+8	,FAC		05130	25	02563	C2492
03070		TD	GAM+6	,FAC-1		05142	25	02561	C2491
03080		TFM	GAM+3	,451	,9	05154	16	02558	C0M51
03090		BNF	+24	,FAC		05166	44	05190	C2492
03100		TDM	GAM+3	,2		05178	15	02558	C0002

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04210	DORG	#-4			06035			
04220	DATDUC	DSA	DUDH		06039		5 X	1
04230	DC	2,00			06C39		-26C7	
	-0				06041		2	
04240	DGM				06042		1	
04250	DATINH	DSA	INH		06047		5 X	1
04260	DC	2,00			06047		-6053	
	-0				06049		2	
04270	DGM				06050		1	
04280	DC	1	,0		06051		1	
04290	ENDFOR	DAC	1,0		06053		1 X	2
	0							
04300	INH	DS		,ENDFOR	06053		C	
04310	DS	174			06227		174	
04320	IN	DS	176	,INH+174	06227		176	
04330	STZERO	DC	2	,00	06229		2	
	-0							
04340	00			,0246810	06230	-0	-0-C-	C-0-0
04350	00			,0246810	06242	-0	-0-C-	C-0-0
04360	00			,0246810	06254	-0	-0-0-	0-0-0
04370	00			,0246810	06266	-0	-0-0-	C-0-0
04380	00			,0246810	06278	-0	-0-0-	C-0-0
04390	00			,0246810	06290	-0	-0-0-	C-0-0
04400	00			,0246810	06302	-0	-0-0-	C-0-0
04410	DC	2	,00		06315		2	
	-0							
04420	FLZERS	DC	2	,0*	06317		2	
	-*							
04430	DS	5			06322		5	
04440	MATRIX	TDM	MATSW	,1	06324	15	05573	CC001
04450	TDM	SWL+1	,9	,,	06336	15	05925	00009
04460	TF	LOCADJ	,FP2		06348	26	06380	C3052
04470	BNF	MATRIX-12,MATRIX-1			06360	44	06396	06323
04480	TFM	LOCADJ	,00	,10	06372	16	06380	CC0-0
04490	LOCADJ	DS	2	,*-3	06380		2	
04500	S	LOCADJ	,K	,,	06384	22	06380	C2221
04510	S	MATRIX-1	,LOCADJ		06396	22	06323	06380
04520	MATRIX2	A	MATRIX-1	,LOCADJ	06408	21	06323	06380
04530	TF	LOC	,MATRIX-1	,,	06420	26	05671	06323
04540	SM	PAR	,1	,10	06432	12	03843	CC0-1
04550	BNE	+*24			06444	47	06468	C1200
04560	TDM	MATSW	,0		06456	15	05573	CC000
04570	BNL	SWC+L2			06468	46	05984	01300
04580	BB				06480	42	00000	CC000
04590	DORG	*-9			06482			
04600	*****	MACRO FOR AN I/O CARRIAGE RETURN DURING A FORMAT STATEMENT						
04610	SLASH	TDM	COMEND+1	,9	06482	15	06647	00009
04620	BD	SLASH2	,RWEFSW	,,	06494	43	06514	05943
04630	B	COMEND			06506	49	06646	CC000
04640	DORG	*-4			06513			
04650	SLASH2	BD	IOCR	,COMP SW	06514	43	06654	05668

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04660	CM	DATINH+2	,06	,10	06526	14	06049	CC0-6
04670	BH	WRITE		,,	06538	46	06622	C1100
04680	TF	LAST	,FLZERS	,6	06550	26	05720	06317
04690	SM	LAST	,02	,10,	06562	12	05726	CC0-2
04700	CM	LAST	,00	,610	06574	14	05720	CC0-0
04710	BE	*-36			06586	46	06550	C1200
04720	CM	LAST	,INH		06598	14	05726	-6053
04730	BL	COM END			06610	47	06646	C1300
04740	WRITE	TFM	IOPT	,**23	06622	16	05565	-6645
04750	B	IOPT	,DATINH-4	,7	06634	49	05532	-6043
04760	COMEND	B	RWA2-12		06646	49	05648	CC000
04770	DORG	*-4			06653			
04780	IOCR	CM	MAX-2	,08	06654	14	05912	CC0-8
04790	CKW	DS	3	,*-2	06663		3	
04800	BNL	WRITE			06666	46	06622	C1300
04810	B	COMEND			06678	49	06646	CC000
04820	DORG	*-4			06685			
04830	*****	MACRO TERMINATING I/O CONTROL						
04840	DS	3			06687		3	
04850	COMPLT	TDM	COMEND+1	,2	06688	15	06647	CC002
04860	CHAR2	DS	3	,*-1	06698		3	
04870	B7	SLASH+12			06700	49	06494	
04880	REDD	BD	REDD A+24,MAT SW		06708	43	06776	05573
04890	TD	REDDA+23	,COMP SW		06720	25	06775	05688
04900	TFM	SWC ADJ	,REDD A	,,	06732	16	06034	-6752
04910	B	SWL			06744	49	05924	00000
04920	DORG	*-4			06751			
04930	REDDA	TDM	SWL+1	,1	06752	15	05925	CC001
04940	TDM	COMP SW		,,	06764	15	05668	00000
04950	TERM	DS	5	,*	06775		5	
04960	AM	SWF	,5		06776	11	05851	-0005
04970	TF	SWF	,SWF	,11	06788	26	05851	0585J
04980	B	SLASH			06800	49	06482	00000
04990	DORG	*-4			06807			
05000	RESET	B7	RESET1		06808	49	12668	
05010	*****	MACRO TO REPEAT FORMAT SPECS A SPECIFIC NO OF TIMES						
05020	*****	SUB FROM REP SW, INITIALLY SET TO ZERO						
05030	*****	IF REPSW NEG, SET TO REPS REQD AND REPEAT FORMAT						
05040	*****	IF REPSW ZERO, LAST FORMAT REPETITION IS COMPLETE						
05050	*****	IF REPSW PLUS, STEP DOWN AND REPEAT FORMAT SPEC						
05060	REP	AM	SWF	,7	06816	11	05851	-0007
05070	SM	REP SW	,1	,10,	06828	12	05572	CC0-1
05080	BH	REP 2			06840	46	06888	C1100
05090	BE	BSWF			06852	46	05816	C1200
05100	A	REP SW	,SWF	,11	06864	21	05572	0585J
05110	BNH	BSWF			06876	47	05816	01100
05120	REP2	SM	SWF	,2	06888	12	05851	-0002
05130	TF	SWF	,SWF	,11	06900	26	05851	0585J
05140	B	SWF-23			06912	49	05828	00000
05150	DORG	*-4			06919			
05160	REP3	SF	REPSW3-1		06920	32	05574	CC000
05170	WA	DS	5	,*	06931		5	
05180	AM	SWF	,7	,10	06932	11	05851	000-7
05190	SM	REPSW 3	,1	,10	06944	12	05575	CC0-1
05200	BH	REP 2			06956	46	06888	C1100
05210	BE	BSWF			06968	46	05816	C1200

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05220	A	REPSW 3	,SWF	,11	06980	21	05575	C585J	
05230	B	REP 2-12			06992	49	06876	CC000	
05240	DPT	DS	5	**	07003		5		
05250	ERF9	TFM SWC ADJ	,ER CCM 2	**	07004	16	06034	-7080	
05260	TF	LAST	,MAX 2		07016	26	05726	C6027	
05270	TFM	EI	,679	,9	07028	16	02615	C0079	
05280	B	SWL			07040	49	05924	CC000	
05290	DORG	*-4			07047				
05300	XTYPE	AM SWF	,3	**	07048	11	05851	-C003	
05310	A	LAST	,SWF	,11	07060	21	05726	C585J	
05320	B	BSWF			07072	49	05816	C0000	
05330	DORG	*-4			07079				
05340	ERCOM2	RCTY			07080	34	0000C	00102	
05350	WA2	DS	5	**	07086		5		
05360	WATY	DUDH			07092	39	02607	00100	
05370	RCTY				07104	34	0000C	00102	
05380	CHAR	DS	5	**	07110		5		
05390	TR	EI+1	,FLZERS-1	**	07116	31	02616	06316	
05400	BSBB	BSWF-12			07128	60	05804	C0002	
05410	AM	SWF	,3		07140	11	05851	-0003	
05420	TF	WIDTH	,SWF	,11	07152	26	05705	C585J	
05430	AM	SWF	,2		07164	11	05851	-0002	
05440	TF	LOC D	,SWF	,11	07176	26	05598	C585J	
05450	TF	INPLUS	,LAST		07188	26	05935	05726	
05460	TF	WIDTH 2	,WIDTH		07200	26	05946	05705	
05470	A	WIDTH 2	,WIDTH		07212	21	05946	05705	
05480	A	LAST	,WIDTH2		07224	21	05726	05946	
05490	C	LAST	,MAX 2		07236	24	05726	06027	
05500	BH	ER F9			07248	46	07004	C1100	
05510	TF	TERM	,LAST		07260	26	06775	05726	
05520	SM	TERM	,2		07272	12	06775	-0002	
05530	TF	CHAR	,WIDTH		07284	26	0711C	05705	
05540	TF	WA	,FNH		07296	26	06931	02792	
05550	TDM	97	,0		07308	15	00097	CC000	
05560	TFM	99	,00	,10	07320	16	00099	CC0-0	
05570	BD	EF WRT	,RNEFSW		07332	43	07536	C5943	
05580	TF	FAC	,FLZALP	,11	07344	26	02492	0279P	
05590	TFM	EFTERM+18	,EF TYPE		07356	16	08286	-7724	
05600	TFM	SWCADJ	,READ EF		07368	16	06034	-4358	
05610	RDFCH	BNR	**+20	,INPLUS	,11	07380	45	0740C	0593N
05620	B7	ERRF7E			07392	49	08416		
05630	CM	INPLUS	,00	,610,	07400	14	0593N	CC0-0	
05640	BNE	FCH NB			07412	47	0748C	01200	
05650	SM	CHAR	,1	,10	07424	12	0711C	CC0-1	
05660	AM	INPLUS	,2		07436	11	05935	-0002	
05670	C	INPLUS	,LAST		07448	24	05935	05726	
05680	BL	RD FCH			07460	47	0738C	01300	
05690	B	EFEND+12			07472	49	08304	0000C	
05700	DORG	*-4			07479				
05710	FCHNB	CM	INPLUS	,20	,610,	07480	14	0593N	CC0K0
05720	BE	EF MIN			07492	46	0770C	01200	
05730	CM	INPLUS	,10	,610	07504	14	0593N	CC0J0	
05740	BE	EF PLUS			07516	46	07712	C1200	
05750	B	EFTYPE+36			07528	49	0776C	00000	
05760	DORG	*-4			07535				
05770	EFWRT	C	LOC D	,F	07536	24	0559P	02219	

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05780	BNH	**+24			07548	47	07572	01100	
05790	TF	LOC D	,F		07560	26	05598	02219	
05800	TF	LOC D	,LOC D		07572	26	05596	C5598	
05810	A	LOC D	,LOC D		07584	21	05596	C5598	
05820	TR	GAM-59	,MASK F-1		07596	31	02496	05316	
05830	TFM	WA	,GAM		07608	16	06931	-2555	
05840	TFM	WA2	,FAC-1		07620	16	07086	-2491	
05850	TFM	SWCADJ	,EFMW	,10	07632	16	06034	-4382	
05860	SM	WIDTH	,2		07644	12	05705	000-2	
05870	BNF	SWL	,RNEFSW		07656	44	05924	C5943	
05880	SM	TERM	,8		07668	12	06775	-0008	
05890	SM	WIDTH	,4	,10	07680	12	05705	000-4	
05900	B	SWL			07692	49	05924	00000	
05910	DORG	*-4			07699				
05920	EFMIN	SF	99		07700	32	00095	CC000	
05930	EFPLUS	SM	CHAR	,1	,10	07712	12	0711C	000-1
05940	EFTYPE	AM	INPLUS	,2		07724	11	05935	-0002
05950	CM	INPLUS	,00	,610	07736	14	0593N	CC0-0	
05960	BE	LDG DIG			07748	46	08108	C1200	
05970	CM	INPLUS	,70	,610	07760	14	0593N	000P0	
05980	BH	EF DIG			07772	46	08208	C1100	
05990	BE	LDG DIG			07784	46	08108	C1200	
06000	CM	INPLUS	,03	,610	07796	14	0553N	000-3	
06010	BE	EF DEC			07808	46	0814C	C1200	
06020	BNF	ERRF7 E	,RNEFSW		07820	44	08416	05943	
06030	TFM	EXP	,000	,9	07832	16	07853	00-00	
06040	TDM	E EXPAD+1	,1		07844	15	08089	CC001	
06050	EXP	DS	3	**	07853		3		
06060	CM	INPLUS	,45	,610	07856	14	0593N	000M5	
06070	BE	E EXP			07868	46	08044	C1200	
06080	CM	INPLUS	,40	,610	07880	14	0593N	CC0M0	
06090	BNL	ERRF7E			07892	46	08416	C1300	
06100	EEXP2	CM	INPLUS	,20	,610	07904	14	0593N	000K0
06110	BE	E EXP M			07916	46	08032	C1200	
06120	CM	INPLUS	,10	,610	07928	14	0593N	CC0J0	
06130	BE	E EXP			07940	46	08044	C1200	
06140	EEXP22	BD	**+24	,97	07952	43	07976	00097	
06150	SM	CHAR	,1	,9	07964	12	0711C	00-01	
06160	C	INPLUS	,TERM		07976	24	05935	06775	
06170	BNL	EEXPAD-12			07988	46	08076	C1300	
06180	TD	EXP-1	,INPLUS	,11	08000	25	07852	0593N	
06190	AM	INPLUS	,2		08012	11	05935	-0002	
06200	B	EEXP22+12			08024	49	07964	CC000	
06210	DORG	*-4			08031				
06220	EEXPM	TDM	E EXPAD+1	,2	08032	15	08089	000C2	
06230	EEXP	AM	INPLUS	,2	08044	11	05935	-0002	
06240	SM	CHAR	,1	,10	08056	12	0711C	CC0-1	
06250	B	E EXP 2			08068	49	07904	00000	
06260	DORG	*-4			08075				
06270	TD	EXP	,INPLUS	,11	08076	25	07853	0593N	
06280	EEXPAD	A	CHAR	,EXP	08088	21	0711C	07853	
06290	B	EF END			08100	49	08292	00000	
06300	DORG	*-4			08107				
06310	LDGDIG	BNF	EF DIG	,98	08108	44	08208	CC098	
06320	SM	CHAR	,1	,10	08120	12	0711C	CC0-1	
06330	B	EF TERM			08132	49	08268	00000	

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06340	DORG	==4			08139			
06350	EFDEC	BD	ERRF7 E	,97	08140	43	08416	00097
06360	TFM	LOC D		,00	08152	16	05598	000-0
06370	TFM	EFTERM+18	,EF PLUS		08164	16	08286	-7712
06380	TDM	97		, -1	08176	15	00097	CC00J
06390	SM	CHAR		,1	08188	12	0711C	000-1
06400	B	EF TERM			08200	49	08268	00000
06410	DORG	==4			08207			
06420	EFDIG	CF	98		08208	33	00098	C0000
06430	CPTM2	DS	5	,*	08219		5	-2491
06440	CM	WA		,FAC-1	08220	14	06931	-2491
06450	BNL	==36		,*	08232	46	08268	C1300
06460	TD	WA		,INPLUS	08244	25	0693J	C593N
06470	AM	WA		,1	08256	11	06931	-0001
06480	EFTERM	C	INPLUS	,TERM	08268	24	05935	06775
06490	BL	EFTYPE			08280	47	07724	C1300
06500	EFEND	BNF	EFEND2	,FNH	08292	44	08324	0279K
06510	TFM	FAC		,99	08304	16	02492	C00RR
06520	B	SWL			08316	49	05924	C0000
06530	DORG	==3			08324			
06540	EFEND2	S	CHAR	,LOC D	08324	22	0711C	05598
06550	BD	ERR F7E		,CHAR-2	08336	43	08416	C7108
06560	SF	CHAR-1			08348	32	07109	C0000
06570	TF	FAC		,CHAR	08360	26	02492	C7110
06580	SF	FNH		,*	08372	32	0279K	00000
06590	BNF	SWL		,99	08384	44	05924	00099
06600	SF	FAC-2			08396	32	02490	C0000
06610	B	SWL			08408	49	05924	C0000
06620	DORG	==4			08415			
06630	ERRF7E	TF	FAC	,FLZALP	08416	26	02492	0279P
06640	TDM	EI		,7	08428	15	02615	C000P
06650	B	EFEND			08440	49	08292	C0000
06660	DORG	==4			08447			
06670	****			MACRO FOR HOLLERITH TYPE READ AND WRITE				
06680	HTYPE1	BSBA	==12		08448	60	08460	C0001
06690	TFM	00314		,00000	08460	16	00314	-C000
06700	A	00314		,-SWF	08472	21	00314	0585J
06710	BLXM	==12		,00000(1)	08484	66	08496	000-0
06720	AM	SWF		,00002	08496	11	05851	-0002
06730	MA	HRDWRT+6		,LAST	08508	70	08634	05726
06740	MA	HRDWRT+11		,SWF	08520	70	08639	05851
06750	BD	==36		,RWEFSW	08532	43	08568	05943
06760	MA	HRDWRT+6		,SWF	08544	70	08634	05851
06770	MA	HRDWRT+11		,LAST	08556	70	08635	05726
06780	SM	SWF		,00002	08568	12	05851	-0002
06790	A	SWF		,00314	08580	21	05851	00314
06800	A	LAST		,00314	08592	21	05726	00314
06810	C	LAST		,MAX2	08604	24	05726	C6027
06820	BH	ER COM2			08616	46	0708C	01100
06830	HRDWRT	TF	DUMMY(1)	,DUMMY(1)	08628	26	999R9	999R9
06840	BXM	==12		,00002(1)	08640	62	08652	000-2
06850	BCXM	==24		,-00002(2)	08652	64	08628	C0-0K
06860	TDM	COMPSW		,0	08664	15	05668	C0000
06870	BSBB	BSWF			08676	60	05816	00002
06880	EFRD1	CF	LOC		08688	33	05971	C0000
06890	TF	FIXEND+6		,I CON 5+6	08700	26	03074	05392

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06900	B	FIX1			08712	49	10604	C0000
06910	DORG	==4			08719			
06920	EFRD2	TDM	FIXEND+1	,2	08720	15	03069	C0002
06930	TFL	LOC		,FAC	08732	06	0597J	02492
06940	B	ER F7			08744	49	10140	C0000
06950	DORG	==4			08751			
06960	*****			MACRO FOR A TYPE READ AND WRITE				
06970	READA	MA	XQTZ+11	,LOC	08752	70	08847	05971
06980	BD	WRITEA		,RWEFSW	08764	43	09016	05943
06990	CF	INPLUS		,*	08776	33	0593N	C0000
07000	AM	INPLUS		,01	08788	11	05935	000-1
07010	C	INPLUS		,TERM	08800	24	05935	06775
07020	BL	==36			08812	47	08776	01300
07030	BNF	RDAFL		,LOC	08824	44	08948	C5971
07040	XQTZ	CF	LOC	,*	08836	33	05971	-0000
07050	TF	LOC		,FXZ	08848	26	0597J	03260
07060	S	WIDTH2		,K	08860	22	05946	02221
07070	RDA	BH	ERF7A		08872	46	08928	01100
07080	A	XQTZ+11		,WIDTH2	08884	21	08847	05946
07090	MA	LOC		,XQTZ+11	08896	70	05971	08847
07100	TF	LOC		,TERM	08908	26	0597J	C677N
07110	B7	ERF7			08920	49	1014C	
07120	ERF7A	TDM	EI	,7	08928	15	02615	C000P
07130	B7	ERF7			08940	49	10140	
07140	RDAFL	TFM	LOC	,00	08948	16	0597J	000-0
07150	SM	XQTZ+11		,00002	08960	12	08847	-0002
07160	MA	LOC		,XQTZ+11	08972	70	05971	08847
07170	TF	LOC		,FLZ	08984	26	0597J	0280K
07180	S	WIDTH2		,F	08996	22	05946	02219
07190	B7	RDA			09008	49	08872	
07200	WRITEA	TF	FAC	,LOC	09016	26	02492	0597J
07210	BNF	WAFX		,FAC-1	09028	44	0914C	02491
07220	SM	XQTZ+11		,00002	09040	12	08847	-0002
07230	S	WIDTH2		,F	09052	22	05946	C2219
07240	WRTA	BH	WRTA2		09064	46	0912C	01100
07250	A	XQTZ+11		,WIDTH2	09076	21	08847	05946
07260	MA	LOC		,XQTZ+11	09088	70	05971	08847
07270	TF	TERM		,LOC	09100	26	0677N	C597J
07280	B7	BSWF			09112	49	05816	
07290	WRTA2	SM	WIDTH2	,02	09120	12	05946	000-2
07300	B7	WRTA			09132	49	09064	
07310	WAFX	S	WIDTH2	,K	09140	22	05946	C2221
07320	B7	WRTA			09152	49	09064	
07330	*****			E AND F TYPE MANTISSA WRITING,FLOAT ARG IF REQ.				
07340	*****			COMPUTE DEC PT IN GAM AND OUTPUT RECORD. MOVE				
07350	*****			MANTISSA DIGIT BY DIGIT, RIGHT TO LEFT, FROM FAC				
07360	*****			TO GAM. INSERT SIGN, CHECK WIDTH, AND ZERO.				
07370	*****			BR TO WRT F FOR F TYPE CONTINUATION				
07380	EFMW1	TFL	FAC	,LOC	09160	06	02492	0597J
07390	BNF	FLOAT1		,FAC-1	09172	44	11158	C2491
07400	EALPH	TDM	FLTEND-5	,2	09184	15	03113	00002
07410	TF	DPT		,TERM	09196	26	07003	06775
07420	S	DPT		,LOC D 2	09208	22	07003	05966
07430	TFM	DPG		,GAM	09220	16	05966	-2555
07440	S	DPG		,LOC D 2	09232	22	05966	05966
07450	TF	DPTM2		,DPT	09244	26	08219	07003

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07460	SM	DPTH2	,2		09256	12	08215	-0002
07470	EFALP	WA 2	,1		09268	12	07086	-00C1
07480	TD	WA	,WA2	,611	09280	25	0693J	C708C
07490	CF	WA	,	,6	09292	33	0693J	C0000
07500	SM	WA	,2		09304	12	06931	-0002
07510	C	WA2	,FNH		09316	24	07086	C2792
07520	BH	EF ALP			09328	46	09266	C1100
07530	TFM	WA	,00	,610	09340	16	0693J	C00-0
07540	BNF	EF CHKS	,FAC-2		09352	44	09376	C2490
07550	TFM	WA	,20	,610	09364	16	0693J	C00K0
07560	EFCHKS	TFM	CKW	,000	09376	16	06663	CC-00
07570	A	CKW	,LOCD		09388	21	06663	C5598
07580	A	CKW	,FAC		09400	21	06663	02492
07590	TF	CHAR	,CKW		09412	26	0711C	06663
07600	S	CHAR	,F		09424	22	0711C	02219
07610	C	WIDTH	,LOC D		09436	24	05705	05598
07620	BL	ER F8 E			09448	47	05106	01300
07630	CM	FAC	, -70	,10,	09460	14	02492	000P-
07633	BNF	**20	,RWEFSW		09472	44	09492	C5943
07636	B7	**20			09484	49	09504	
07640	BL	**24			09492	47	09516	01300
07650	BD	**36	,FNH	,11	09504	43	09540	0279K
07660	TDM	FLTEND-4	, -1		09516	15	03114	0000J
07670	TFM	CHAR	, -099	,9	09528	16	0711C	00-9R
07680	BNF	WRTE	,RWEFSW		09540	44	04606	05943
07690	*****		WRITE E TYPE. ASSEMBLE EXP IN GAM USING A MASK,					
07700	*****		THE CHAR AND SIGN. MOVE LEFT GAM AND RIGHT GAM TO					
07710	*****		OUTPUT. THEN GO TO INSERT DECIMAL POINT					
07720	WRITE	S	WIDTH	,F	09552	22	05705	02219
07730	BNL	WRT E2	,	,, BR IF F NOT LARGER THAN EFF WIDTH	09564	46	04502	01300
07740	BD	**36	,FLTEND-4		09576	43	09612	03114
07750	S	CHAR	,WIDTH		09588	22	0711C	05705
07760	BD	ERF8E	,CHAR-2		09600	43	05106	07108
07770	TFM	**47	,GAM		09612	16	09659	-2555
07780	A	**35	,WIDTH		09624	21	09659	C5705
07790	A	**23	,WIDTH		09636	21	09659	05705
07800	TF	GAM			09648	26	02555	00000
07810	B	WRTE2			09660	49	04502	00000
07820	DORG	**4			09667			
07830	*****		MACRO FOR I TYPE READ AND WRITE					
07840	ITYPE1	TF	WIDTH2	,SWF	09668	26	05946	0585J
07850	A	LAST	,WIDTH2		09680	21	05726	05946
07860	C	LAST	,MAX2		09692	24	05726	06027
07870	BH	ER F9			09704	46	07004	01100
07880	TF	INPLUS	,LAST		09716	26	05935	05726
07890	TFM	IR DIG+6	,FAC		09728	16	09978	-2492
07900	TFM	SWC ADJ	,WRITE I		09740	16	06034	-4334
07910	BD	SWL	,RWEFSW		09752	43	05924	05943
07920	TF	TERM	,FPIMK		09764	26	06775	02772
07930	TF	FAC	,FXZ		09776	26	02492	03260
07940	TFM	SWC ADJ	,READI		09788	16	06034	J0080
07950	*****		CHAR BY CHAR IS MOVED INTO FAC,RIGHT JUSTIFIED,UNTIL SIGN					
07960	*****		OR W CHAR ARE EXAMINED.					
07970	*****		ERROR F7 WILL OCCUR IF MORE THAN K CHAR ARE AVAIL TO READ					
07980	IREAD	SM	WIDTH2	,2	09800	12	05946	C00-2
07990	BL	SWL		,10	09812	47	05924	C1300

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08000	SM	INPLUS	,2		09824	12	05935	-0002
08010	BNR	**20	,INPLUS	,11	09836	45	09856	0593N
08020	B7	ERRF7I			09848	49	10048	
08030	CM	INPLUS	,70	,610	09856	14	0593N	C00PC
08040	BH	IR DIG			09868	46	09972	C1100
08050	BE	IR BLNK			09880	46	10008	C1200
08060	CM	INPLUS	,00	,610	09892	14	0593N	C00-0
08070	BE	IR BLNK			09904	46	10008	C1200
08080	CM	INPLUS	,20	,610	09916	14	0593N	CC0K0
08090	BE	I MINUS			09928	46	10028	C1200
08100	CM	INPLUS	,10	,610	09940	14	0593N	C00JO
08110	BE	SWL			09952	46	05924	C1200
08120	B	ERR F7I			09964	49	10048	C0000
08130	DORG	**4			09971			
08140	IRDIG	TD	,INPLUS	,11	09972	25	00000	0593N
08150	C	**6	,TERM		09984	24	09978	06775
08160	BL	ERR F7 I			09996	47	10048	C1300
08170	IRBLNK	SM	IR DIG+6	,1	10008	12	09978	-0001
08180	B	I READ			10020	49	09800	00000
08190	DORG	**4			10027			
08200	IMINUS	SF	FAC		10028	32	02492	C0000
08210	B	SWL			10040	49	05924	C0000
08220	DORG	**4			10047			
08230	ERRF7I	TF	FAC	,FXZ	10048	26	02492	C3260
08240	TFM	EI	,677	,911, SET ERRCR F7 INDICATION	10060	16	02615	0007P
08250	B	SWL			10072	49	05924	C0000
08260	DORG	**4			10079			
08270	READI	SF	FPIMK	,	10080	32	0277K	C0000
08280	TF	FLT END	,ICON 2+6		10092	26	03118	10178
08290	BNF	FLOAT1	,LOC		10104	44	11158	05971
08300	CF	LOC			10116	33	05971	C0000
08310	READIF	TFL	LOC	,FAC	10128	06	0597J	02492
08320	ERF7	BNF	BSWF-12	,EI	10140	44	05804	C2615
08330	CF	EI		,, ERASE ERROR F7 INDICATION	10152	33	02615	00000
08340	B	ER COM 2			10164	49	07080	C0000
08350	DORG	**4			10171			
08360	ICON2	B	READ IF	,	10172	4R	10128	C0000
08370	DORG	**4			10179			
08380	*****		RETURN FROM SWL VIA SWC IF WRITING I TYPE					
08390	*****		VALUE PUT IN FAC IN I FORM,EXPANDED TO ALPHA IN					
08400	*****		GAMMA RIGHT TO LEFT. HO CONTAINS ADR OF HIGH ORDER					
08410	*****		DIGIT IN GAM. AFTER VALUE IN GAM IS SIGNED,CHECKED					
08420	*****		FOR WIDTH, MOVE TO OUTPUT RECORD.					
08430	*****		ERFBI RESULTS IF VALUE TOO LARGE FOR FORMAT SPECS.					
08440	WRIT11	TFM	WA2	,FAC+1	10180	16	07086	-2493
08450	TFL	FAC	,LOC	,11	10192	06	02492	0597J
08460	BNF	WRT12+12	,FAC-1		10204	44	10248	02491
08470	TF	FIXEND+6	,ICON3+6		10216	26	03074	05400
08480	B	FIX1			10228	49	10604	C0000
08490	DORG	**4			10235			
08500	WRT12	TDM	FIXEND+1	,2	10236	15	03069	00002
08510	TR	GAM-19	,MASK 1		10248	31	02536	05356
08520	TFM	HO	,GAM+1		10260	16	10351	-2556
08530	WRT1	SM	WA 2	,1	10272	12	07086	-0001
08540	SM	WA	,2		10284	12	06931	-0002
08550	TD	WA	,WA 2	,611	10296	25	0693J	07080

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08560	BD	I DIG	,WA 2	,11	10308	43	10328	0708C
08570	B	I DIG+12			10320	49	1034C	CC000
08580	DORG	#-4			10327			
08590	IDIG	TF HO	,WA		10328	26	10351	06931
08600	CF	GAM	,	,,	10340	33	02559	CC00C
08610	HO	DS 5	,*	,,	10351		5	
08620	BNF	WRTI	,WA	,11	10352	44	10272	0693J
08630	CM	HO	,GAM+1		10364	14	10351	-2556
08640	BNE	WRT SGN			10376	47	10408	C120C
08650	TFM	LAST	,7000	,68	10388	16	0572C	0P000
08660	B	BSWF			10400	49	05816	CC00C
08670	DORG	#-4			10407			
08680	WRTSGN	BNF WRT I3	,FAC		10408	44	10444	02492
08690	SM	HO	,2		10420	12	10351	-0002
08700	TFM	HO	,20	,610	10432	16	1035J	000K0
08710	WRT I3	SM HO	,1		10444	12	10351	-0001
08720	TFM	OUT	,GAM		10456	16	10515	-2555
08730	S	OUT	,HO		10468	22	10515	10351
08740	C	OUT	,WIDTH 2		10480	24	10515	05946
08750	BH	ER F8 I			10492	46	10572	01100
08760	SF	OUT			10504	32	10515	0000C
08770	OUT	DS 5	,*	, HI ORDER MKG ADR IN I/O RECORD, I TYPE	10515		5	
08780	A	OUT	,LAST		10516	21	10515	05726
08790	SM	OUT	,2		10528	12	10515	-0002
08800	TR	OUT	,HO	,611	10540	31	1051N	1035J
08810	TFM	LAST	,00	,610	10552	16	0572C	CC0-0
08820	B	BSWF			10564	49	05816	0000C
08830	DORG	#-4			10571			
08840	ERFBI	TR DUD	H+11,FLZERS-67		10572	31	02618	06250
08850	TR	DUD	H+11,HO	,11	10584	31	02618	1035J
08860	B	ERCOM			10596	49	05226	00000
08870	DORG	#-4			10603			
08880	*****	1620 FORTRAN II-D	ARITHMETIC SUBROUTINES					
08890	FIX1	CM FAC	,00	,10	10604	14	02492	CC0-0
08895	BP	#+32			10616	46	10648	C1100
08900	TF	FAC	,FXZ	,,	10628	26	02492	03260
08910	B	FIXEND		,,	10640	49	03068	CC000
08920	DORG	#-3			10648			
08930	MF	MU-1	,FAC-2	,,	10648	71	03019	02490
08940	C	FAC	,K	,,	10660	24	02492	02221
08950	BNH	#+44		,,	10672	47	10716	C1100
08960	TFM	FXERR+25	,1	,,	10684	15	03009	CC001
08970	TFM	EI	,572	,9,	10696	16	02615	00N72
08980	B	FXNINE+12,		,,	10708	49	11026	00000
08990	DORG	#-3			10716			
09000	TF	BETA	,ZERO-51	,,	10716	26	02603	02716
09010	TF	IMSA	,FXZ		10728	26	02575	03260
09020	TF	#+30	,IMSAPP	,,	10740	26	10770	02787
09030	S	#+18	,FAC		10752	22	1077C	02492
09040	A	DUMMY	,FAC-2		10764	21	99999	02490
09050	TF	FAC	,IMSA		10776	26	02492	02575
09060	B	MU			10788	49	0302C	0000C
09070	DORG	#-4			10795			
09080	FXSR1	CF	FAC		10796	33	02492	CC000
09090	B	#+20			10808	49	10828	CC000
09100	DORG	#-3			10816			

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09110	SF	FAC			10816	32	02492	CC000
09120	A	FAC	,FXSR-1	,11	10828	21	02492	0387P
09130	BB				10840	42	0000C	CC000
09140	DORG	#-9			10842			
09150	FXM1	SF 100MK	,	,6	10842	32	0278K	CC000
09160	TF	FAC	,99		10854	26	02492	00099
09170	CM	99MK	,00	,610	10866	14	0277P	CC0-0
09180	BE	#+24			10878	46	1092C	C1200
09190	AM	#+8	,00000	,79,	10890	11	10898	-C-00
09200	BB				10902	42	0000C	00000
09210	DORG	#-9			10904			
09220	FXD1	SF FXD1+82			10904	32	10986	00000
09230	BNV	#+24			10916	47	1094C	01400
09240	CF	FXD1+82			10928	33	10986	CC000
09250	D	100MK	,FXD-1	,611	10940	29	0278K	0392N
09260	BV	#+38			10952	46	1099C	01400
09270	TF	FAC	,99MK	,11	10964	26	02492	0277P
09280	AM	#+8	,00000	,79,	10976	11	10984	-0-00
09290	BB				10988	42	0000C	CC000
09300	DORG	#-9			10990			
09310	A	FXD1+80	,FXD1+83		10990	21	10984	10987
09320	TFM	EI	,571	,9,	11002	16	02615	00N71
09330	FXNINE	TFM FXERR+30	,FIXEND-12,,	,,	11014	16	03014	-3056
09340	TF	FAC	,FX9	,,	11026	26	02492	03250
09350	B	FXERR			11038	49	02984	00000
09360	DORG	#-4			11045			
09370	FXDR1	LD 99	,FXDR-1	,11	11046	28	00099	0394R
09380	B	FXD1			11058	49	10904	CC000
09390	DORG	#-4			11065			
09400	RSGN1	BNF #+52	,FAC-1		11066	44	11118	02491
09405	BNF	#+26	,FAC-2		11078	44	11104	02490
09410	CF	FAC-2			11090	33	0249C	CC000
09420	BB				11102	42	00000	00000
09430	DORG	#-9			11104			
09440	SF	FAC-2			11104	32	0249C	CC000
09450	BB				11116	42	0000C	CC000
09460	DORG	#-9			11118			
09470	BNF	#+26	,FAC	,,	11118	44	11144	02492
09480	CF	FAC			11130	33	02492	CC000
09490	BB				11142	42	0000C	CC000
09500	DORG	#-9			11144			
09510	SF	FAC			11144	32	02492	CC000
09520	BB				11156	42	00000	CC000
09530	DORG	#-9			11158			
09540	FLOAT1	CM FAC	,00	,10	11158	14	02492	000-0
09545	BE	ZERFAC			11170	46	02836	0120C
09550	MF	99	,FAC	,,	11182	71	00099	02492
09560	TR	BETA-9	,FXH	,11	11194	31	02594	0277K
09570	TF	FAC-2	,FLZALP	,11,	11206	26	02490	0279P
09580	TF	SAVE	,K	,,	11218	26	02565	02221
09590	TFM	#+23	,BETA-9		11230	16	11253	-2594
09600	BD	#+44	,DUMMY	,,	11242	43	11286	99999
09610	SM	SAVE	,1	,10,	11254	12	02565	000-1
09620	AM	#-13	,1		11266	11	11253	-0001
09630	B	#-36			11278	49	11242	00000
09640	DORG	#-3			11286			

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09650	TR	FNH	,*-33	,611		11286	31	0279K	1125L
09660	TF	**+35	,FNH	,,	FIND ANC CLEAR RECCRD MARK	11298	26	11333	0279Z
09670	AM	**+23	,1	,,		11310	11	11333	-0001
09680	BNR	*-12	,DUMMY	,,		11322	45	11310	99999
09690	TDM	*-1	,0	,6		11334	15	11331	C000C
09700	TD	FAC+1	,RECMK	,,	REPLACE RECCRD MARK	11346	25	02493	02403
09710	TF	BETA	,ZERO-74	,,	CLEAR BETA	11358	26	02603	02693
09720	NORM6C	SF	FNH	,		11370	32	0279K	C0000
09730	B7	FINISH	,	,6		11382	49	0311J	
09740	FSBR1	CF	FAC-2	,,		11390	33	0249C	00000
09750		FADD	FAC	,FSBR-1	,11, SET UP ADD	11402	01	0249Z	0402J
09760	BB					11414	42	00000	C0000
09770	DORG	*-9				11416			
09780	SF	FAC-2				11416	32	0249C	00000
09790	B	FSBR1+12				11428	49	1140Z	00000
09800	DORG	*-4				11435			
09810	FDVRI	TFL	FAC	,FDVR-1	,11	11436	06	0249Z	0404N
09820	BD	**+24	,WJRS	,,		11448	43	1147Z	03018
09830	TF	79	,ZEROM	,11		11460	26	00079	0285R
09840	FDIV	FAC	,SAVE	,,		11472	09	0249Z	02565
09850	BB					11484	42	0000C	C0000
09860	DORG	*-4				11491			
09870	FIX11	AM	IMSA	,00	,10, IS I = ZERO	11492	11	02575	000-0
09880		BNZ	**+26	,,	NO, CONTINUE	11504	47	11530	01200
09890	TF	FAC	,FX1	,,	YES, J+I = ONE	11516	26	0245Z	03270
09900	BB					11528	42	0000C	00000
09910	DORG	*-9				11530			
09920	AM	FAC	,00	,10, IS J = ZERC		11530	11	0249Z	C00-0
09930	BNZ	**+44	,,	,,	NO, CONTINUE	11542	47	11586	01200
09940	BNF	*-26	,IMSA	,,	YES, THEN IS I POSITIVE	11554	44	11528	02575
09950	TFM	EI	,771	,9,	NC, ER G1, 0 TO MINUS I POWER	11566	16	02615	00P71
09960	B	FXNINE				11578	49	11014	C0000
09970	DORG	*-3				11586			
09980	TDM	ODDREV+1	,1	,,		11586	15	11655	C0001
09990	MF	MU-1	,FAC	,,	SAVE SIGN FROM J	11598	71	03019	0249Z
10000	PSI	TD	**+21	,IMSA	,,	11610	25	11631	02575
10010	MM	**+9	,0005	,810		11622	13	11631	C-0-5
10020	BD	**+24	,99	,,	IS I EVEN	11634	43	11658	C0099
10030	CF	MU-1	,,	,,	YES, SET SIGN POSITIVE	11646	33	03019	C0000
10040	ODDREV	NOP	AXJ	,,		11658	41	12028	C0000
10050	C	FAC	,FX1	,,		11670	24	0249Z	C3270
10060	BE	MU	,,	,,	J = + CR - CNE	11682	46	0302C	01200
10070	BNF	**+44	,IMSA	,,	IS I POSITIVE	11694	44	11738	02575
10080	TFM	EI	,772	,9,	NC, ERR G2, J TO MINUS I POWER	11706	16	02615	00P72
10090	TF	FAC	,FXZ	,,	FAC = FXZ	11718	26	0249Z	C3260
10100	B7	ERXV+24				11730	49	03144	
10110	TF	BETA	,FAC	,,	STORE J	11738	26	02603	0249Z
10120	SM	IMSA	,01	,10,		11750	12	02575	C00-1
10130	BZ	MU	,,	,,		11762	46	0302C	01200
10140	M	FAC	,BETA	,,		11774	23	0249Z	02603
10150	SF	100MK	,,	,6		11786	32	0278K	C000C
10160	TF	FAC	,99	,,		11798	26	0249Z	C0099
10170	AM	99MK	,00	,610, TEST OVFL		11810	11	0277P	C00-0
10180	BZ	*-72				11822	46	11750	01200
10190	TFM	EI	,773	,9,	ERR G3, OVFL IN FIX1	11834	16	02615	00P73
10200	TDM	FXERR+25	,1	,,	SET UP SIGN	11846	15	C3005	C0001

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10210	B	FXNINE				11858	49	11014	C0000
10220	DORG	*-4				11865			
10230	FAX11	AM	IMSA	,00	,10	11866	11	02575	C00-0
10240		BNZ	**+38	,,	NO, CONTINUE	11878	47	11916	01200
10250	ONEFAC	TFM	FAC	,01	,10, YES	11890	16	0249Z	C00-1
10260	TF	FAC-2	,ONEZ-4	,,	FAC = 1.	11902	26	0249C	03298
10270	BB					11914	42	0000C	C0000
10280	DORG	*-9				11916			
10290	BD	**+68	,FNH	,11,	IS A ZERO	11916	43	11984	0279K
10300	BNF	*-14	,IMSA	,,	YES, IS I NEGATIVE	11928	44	11914	02575
10310	TFM	EI	,774	,9,	YES, ER G4, ZERO TO MINUS I	11940	16	02615	00P74
10320	OVFLO	TF	FAC-2	,9SCPF	,,	11952	26	0249C	03238
10330	TFM	FAC	,99	,10		11964	16	0249Z	00099
10340	B7	ERXV				11976	49	0312C	
10350	BLXM	SET+12	,*-1(0)	,,		11984	66	04154	11983
10360	MF	MU-1	,FAC-2	,,		11996	71	03019	02490
10370	TDM	ODDREV+1	,9	,,		12008	15	11655	00009
10380	B	PSI				12020	49	1161C	C0000
10390	DORG	*-4				12027			
10400	AXJ	FSL	FAC-3(4)	,FAC-2	,,	12028	05	0K489	02490
10410	TFM	EI	,775	,9,	SET UP ERR G5 CODE	12040	16	02615	00P75
10420	BNF	NO DIV	,IMSA	,,		12052	44	12156	02575
10430	CF	IMSA				12064	33	02575	C0000
10440	BD	**+24	,WJRS	,,		12076	43	12100	03018
10450	RECIP	TF	79	,ZEROM	,11, CLEAR MULTIPLY AREA	12088	26	00079	0285R
10460	TFL	SAVE	,FAC	,,		12100	06	02565	0249Z
10470	TFL	FAC	,ONEZ	,,		12112	06	0249Z	0330Z
10480	FDIV	FAC	,SAVE	,,		12124	09	0249Z	02565
10490	BNXV	NODIV				12136	47	12156	01500
10500	B7	ERXVS				12148	49	1224C	
10510	NODIV	TFL	GAM	,FAC	,,	12156	06	02555	0249Z
10520	SM	IMSA	,01	,10		12168	12	02575	000-1
10530	BE	**+84				12180	46	12264	01200
10540	BD	**+24	,WJRS	,,		12192	43	12216	03018
10550	TF	79	,ZEROM	,11, CLEAR MULTIPLY AREA		12204	26	00075	0285R
10560	FMUL	FAC	,GAM	,,		12216	03	0249Z	02555
10570	BNXV	NODIV+12				12228	47	12168	01500
10580	ERXVS	TF	FAC-2	,FAC-4	,,	12240	26	0249C	02488
10590	BLXM	RESET	,ERXV(0)	,,		12252	66	06808	03120
10600	TF	FAC-2	,FAC-4	,,		12264	26	02490	02488
10610	MF	FAC-2	,MU-1	,,		12276	71	02490	03019
10620	BLXM	RESET	,FIXEND(0)	,,		12288	66	06808	03068
10630	FAXB1	AM	SAVE-42	,00	,10, IS B ZERC	12300	11	02523	000-0
10640	BZ	ONEFAC	,,	,,	YES	12312	46	11890	01200
10650	BD	**+44	,FNH	,11,	NO, IS A ZERO	12324	43	12368	0279K
10660	BNF	FINISH+1	,SAVE-42	,,	NO, IS B NEGATIVE	12336	44	0311Z	02523
10670	TFM	EI	,777	,9,	YES, ER G7, ZERC TO MINUS B	12348	16	02615	00P77
10680	B	OVFLO				12360	49	1195Z	00000
10690	DORG	*-3				12368			
10700	MF	FAXB1	,FAC-2	,,		12368	71	1230C	02490
10710	TF	FIXEND+6	,QSTS+6	,,		12380	26	03074	12410
10720	BLX	SET+12	,LNENT(C)	,,	FIND LN(A)	12392	65	04154	02807
10730	QSTS	B7	QSTS1	,,		12404	M9	1241Z	
10740	QSTS1	BD	**+24	,WJRS	,,	12412	43	12436	03018
10750	TF	79	,ZEROM	,11		12424	26	00079	0285R
10760	FMUL	FAC	,SAVE-40	,,		12436	03	0249Z	02525

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10770	TF	FIXEND+6	,ALSFQ+6	12448	26	C3074	12478
10780	BLX	SET+12	,EXPENT(0),,	12460	65	04154	02812
10790	ALSFQ	B7	ALSFQ1	12472	M9	1248C	
10800	ALSFQ1	TDM	FIXEND+1	12480	15	03065	C0002
10810	BNF	FINISH+1	,FAXB1	12492	44	C3112	12300
10820	TFM	EI	,676	12504	16	02615	00076
10830	B7	ERXV+24		12516	49	03144	
10840	SET1	CF	00344	12524	33	00344	C0000
10850	BXM	**+12	,13(0)	12536	62	12548	C0013
10860	TFM	00309	,00000	12548	16	00309	-0000
10870	TFM	00314	,00000	12560	16	00314	-0000
10880	CF	MU-1		12572	33	C3015	C0000
10890	SF	RESET1+34		12584	32	12702	C0000
10900	BNV	**+24		12596	47	12620	01400
10910	CF	RESET1+34		12608	33	12702	C0000
10920	TFL	QZF	,QZ1	12620	06	12763	12755
10930	BNXV	**+24		12632	47	12656	C1500
10940	TFL	QZF	,QZ2	12644	06	12763	12759
10950	BSBA	00344	,	12656	60	00344	C0001
10960	RESET1	BV	**+12	12668	46	1268C	C1400
10970	BNXV	**+12		12680	47	12692	01500
10980	AM	**+8	,00000	12692	11	12700	-0-00
10990	FMUL	QZF	,QZ2	12704	03	12763	12759
11000	BNF	**+24	,MU-1	12716	44	1274C	C3019
11010	SF	FAC-2		12728	32	0249C	C0000
11020	BSBB	00304	,	12740	60	00304	C0002
11030	DC	2, 01		12753		2	
11040	QZ1	DC	2, 01	12755		2	
11050	DC	2, 90		12757		2	
11060	QZ2	DC	2, 90	12759		2	
11070	QZF	DS	4	12763		4	
11080	ENDOV	SM	TERM	12764	12	06775	-0002
11090	TFM	SHCADJ	,READA	12776	16	06034	-8752
11100	B7	SWL		12788	49	05924	
11110	DORG	15000		15000			
11120	34	B3	,00701	15000	34	15044	C0701
11130	38	B3	,00702	15012	38	15044	C0702
11140	36	B3	,00703	15024	36	15044	C0703
11150	B	**+22		15036	49	15058	C0000
11160	DORG	*-3		15044			
11170	B3	OSC	9	15044		9	
11180	DSA	START+3	016840091	15057		5 X	1
11190	TRA			15057		-3854	
11200	TCD	15000		15058	36	0000C	C0500
11210	GIGS	H		15070	49	0000C	C0000
11220	DEND	GIGS		15000			
				15082	48	0000C	C0000
				15082			

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ALSFQ1	12480	IRBLNK	10008	ENTLN	02248	ICON2	10172	RAPT	04262
ATAN.6	03430	ITYPE1	09668	ERCOM	05226	ICON3	05394	RATY1	05852
ATYPE1	05402	LOGDIG	08108	ERF7A	08928	ICON5	05398	RATY	04238
CLR70S	05038	LOCADJ	06380	ERF7	10140	ICON6	05378	RDAFL	08948
COMACD	02231	MASKEP	05306	ERF8E	05106	IDIG	10328	RDALP	05904
COMEND	06646	MATRIX	06324	ERF8I	10572	IMSA	02575	RDA	08872
COMPLT	06688	MATRIX2	06408	ERF9	07004	INH	06053	RDFCH	07380
COMPSW	05668	MESERR	02607	ERRET	00602	IN	06227	READA	08752
DATAUD	06039	MNCAL	00796	ERRGR	02984	IOCAL	00716	READ1	10080
DATINH	06047	NORM60	11370	ERXV	03120	IOCR	06654	RECIP	12088
DIODCA	02821	ODCREV	11658	ERXVS	12240	IOGT	00566	RECLG	02243
DKBUFF	02404	ONEFAC	11890	ETYPE	04454	IOPT	00532	RECMK	02403
DKDATA	02813	OVFLOW	02960	EXP	07853	IORBC	00520	REDCA	06752
EEXP22	07952	PROGST	02226	FAC	02492	IORT	00565	REDD	06708
EEXPAD	08088	RADOIT	05744	FAXB1	12300	IOSK	00554	REP2	06888
EFALPH	09184	REDEF	04358	FAXB	04118	IRDIG	09972	REP3	06920
EFCHKS	09376	READIF	10128	FAXI1	11866	IREAD	09800	REP	06816
EFGND2	08324	REPSW3	05575	FAXI	04094	ITYPE	04310	REPSW	05572
EFPLUS	07712	RESET1	12668	FCMNB	07480	K	02221	RESET	06808
EFTERM	08268	RWEFSW	05943	FDVRI	11436	LAST	05726	RSGN1	11066
EFTYPE	07724	100MK	02782	FDVR	04046	LN10	03681	RSNG	03974
ENDFOR	06053	99MK	02777	FIX1	10604	LN1	03557	RWA2	05660
ENTABS	02323	9SCPF	03238	FIXI1	11492	LN2	03588	RWA	05552
ENTATN	02313	ALSFQ	12472	FIXI	04070	LN4	03619	SAVE	02565
ENTCOS	02303	ATYPE	04406	FIX	03854	LN8	03650	SET1	12524
ENTDED	02298	AXJ	12028	FKODD	02967	LNENT	02807	SET	04142
ENTDRR	02293	B3	15044	FLOAT	03998	LOCD2	05596	SLASH	06482
ENTEXP	02253	BETA	02603	FLZER	03742	LOCD	05598	START	03851
ENTFET	02283	BSWF	05816	FLZ	02802	LOC	05971	STOP	02395
ENTFID	02273	CHAR2	06698	FM1	02969	LOGE	03366	SWCFX	03168
ENTREC	02278	CHAR	07110	FNH	02792	MASKF	05317	SWC	05972
ENTSC2	02258	CKN	06663	FPMK	02772	MASKI	05356	SWF	05851
ENTSC3	02263	DIO	00820	FP2	03052	MASK	05305	SWL	05924
ENTSDX	02268	DPG	05966	F	02219	MATSW	05573	TAFE	02535
ENTSIN	02308	DPTM2	08219	FSBR1	11390	MAX2	06027	TEN34	03334
ENTSGT	02318	DPT	07003	FSBR	04022	MAX	05914	TERM	06775
ENTSWD	02288	DUDH	02607	FTYPE	04430	MF	03054	TRACE	02884
ERCOM2	07080	DUD	02687	FX1	03270	MU	03020	TRFX	02946
ERRF7E	08416	DUMMY	99999	FX9	03250	N1	02233	TWOPI	03398
ERRF7I	10048	EEXP2	07904	FXD1	10904	N2	02238	TWO	03712
EXPENT	02812	EEXPM	08032	FXDR1	11046	NODIV	12156	UNFLO	02860
FINDIN	02915	EEXP	08044	FXDR	03950	ONEZ	03302	WA2	07086
FINISH	03111	EFALP	09268	FXD	03926	OUT	10515	WA3	04465
FIXEND	03068	EFCOP	07140	FXERR	02984	OVFLO	11952	WACD1	05298
FLOAT1	11158	EFDCE	08140	FXH	02772	PAR	03843	WACD	04214
FLEND	03118	EFDIG	08208	FXM1	10842	PICV2	03526	WAFX	09140
FLZALP	02797	EFEND	08292	FXM	03902	PI	03462	WAPT1	05508
FLZERS	06317	EFMIN	07700	FXSR1	10796	PSI	11610	WAPT	04190
FNCNEZ	04810	EFMW1	09160	FXSR	03878	QSTS1	12412	WA	06931
FXLINE	11014	EFMW	04382	FXZ	03260	QSTS	12404	WATY1	05488
GMLM2F	02914	EFRD1	08688	FZERO	04854	QZ1	12755	WATY	04166
HRDWRT	08628	EFRD2	08720	GAM	02555	QZ2	12759	WIDTH	05705
HYYPE1	08448	EFWRT	07536	GIGS	15082	QZF	12763	WJRS	03018
IMINUS	10028	EI	02615	GM2F	03043	RACD1	05892	WRITE	06622
IMSAPP	02787	ENDD	03076	HO	10351	RACD	04286	WRTA2	09120
INPLUS	05935	ENDOV	12764	HTYPE	04478	RAPT1	05872	WRTA	09064

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WRTE2 04502	WRTI 10272	ZERO 02767	WEFDEC 05074	WRTALP 05540
WRTF 09552	W 02240	SIXTEN 03494	WIDTH2 05946	WRTFPC 04930
WRTF 04606	XQTZ 08836	SLASH2 06514	WRITEA 09016	WRTFPE 04898
WRTI2 10236	XTYPE 07048	STZERO 06229	WRITEI 04334	WRTSGN 10408
WRTI3 10444	ZEROM 02859	SWCADJ 06034	WRITL 10180	ZERFAC 02836

END OF ONE ASSEMBLY.

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00010 *****	1620 FORTRAN II-D	SUBROUTINES WITH FLOATING POINT HARDWARE		
00020 *****	IORT	ENTRY POINTS AND CONSTANTS		
00030 IORBC DS		,520	00520	C
00040 IOPT DS		,532	00532	C
00050 IOSK DS		,554	00554	C
00060 IOGT DS		,566	00566	C
00070 ERRET DS		,602	00602	C
00080 IORT DS		,565	00565	C
00090 IOCAL DS		,716	00716	C
00100 MONCAL DS		,796	00796	C
00110 *****	1620 FORTRAN II-D	IN CORE AREAS		
00120 ***	COMMUNICATION AREA			
00130	ORGC	2218		
00140 F DS	2,,	FLOATING POINT WORD LENGTH	02218	2
00150 K DS	2,,	FIXED POINT WORD LENGTH	02221	2
00160 PROGST DS	5,,	STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00170 COMADD DS	5,,	STARTING ADDRESS OF COMMON AREA	02231	5
00180 N1 DS	2,,	NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00190 N2 DS	5,,	NUMBER OF LOGICAL RECORDS	02238	5
00200 W DS	2,,	WORD LENGTH	02240	2
00210 RECLG DS	3,,	RECORD LENGTH	02243	3
00220 ENTLN DS	5,,	ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00230 ENTXP DS	5,,	ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00240 ENTSC2 DS	5,,	ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00250 ENTSC3 DS	5,,	ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00260 ENTSDX DS	5,,	ENTRY ADDRESS TO SWITCH D FIXED SUBROUTINE	02268	5
00270 ENTFID DS	5,,	ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00280 ENTREC DS	5,,	ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00290 ENTRET DS	5,,	ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00300 ENTSDW DS	5,,	ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00310 ENTDRR DS	5,,	ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00320 ENTDOD DS	5,,	ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00330 ENTCOS DS	5,,	ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00340 ENTSIN DS	5,,	ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00350 ENTATN DS	5,,	ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00360 ENTSTQ DS	5,,	ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00370 ENTABS DS	5,,	ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00380	DS	70,,RESERVED FOR ENTRIES TO ADDED SUBROUTINES	02393	70
00390 *****	COMMON WORKING AREAS			
00400 STOP DAC	5,,STOP		02395	5 X 2
	STOP*			
00410 RECMK DS		,STOP+8	02403	C
00420 FINDIN DS	1		02404	1
00430	DS	5	02409	5
00440 SWCFX TD	-SWCM1	,SWCFX-1	02410	25 C32CM 02409
00450 TFL	-SWCM2	,SWCFX-2	02422	06 C32CR 02408
00460 SF	-SWCM1	,00000	02434	32 C32OM C0000
00470 99MK DC	5	,00099 ,*	02445	5
		-0099		
00480	B7	-3808	02446	49 C38CC
00490 FAC DS	40		02492	40
00500	DC	1	02493	1
		,		
00510 ONEFAC TFL	FAC	,FLONE	02494	06 C2492 03153
00520 RTN BSBB	**12		02506	60 C2518 C0002
00530	BB2		02518	42

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01330	EXPENT	DC	5	, -1		03183	5	
01340	MAX	DS	5			03188	5	
01350		DORG	03200			03200		
01360	SWCM1	DSA	SWC-1			03204	5 X	1
						03204	-6645	
01370	SWCM2	DSA	SWC-2			03209	5 X	1
						03209	-6644	
01380	WATY1	TFL	MAX	,TY1		03210	06	C3188 C3245
01390		TDM	TYPE	,0		03222	15	03423 C0000
01400		B	WRTALP	,06173 ,79		03234	49	03294 -6J73
01410	TY1	DS		,*		03245		0
01420	WAPT1	TFL	MAX	,PT1		03246	06	03188 C3269
01430		B	WRTALP-12	,08173 ,79		03258	49	03282 -8J73
01440	PT1	DS		,*		03269		C
01450	WACD1	TFL	MAX	,CD1		03270	06-	03188 C3403
01460	*	.....	WRT ALP...	PREP TO CALL WRT SECT IF NOT IN CORE				
01470		TDM	TYPE	, -5	**	03282	15	03423 C000N
01480	WRTALP	BD	RWA	,HTYPE+23	**	03294	43	06682 04501
01490		TRNM	RDDA1	,WDSA	**	03306	30	03333 03360
01500		B7	RDALP+24	,00000		03318	49	03472
01510	RDDA	DSC	2	, -02		03325		2
01520		OK						
		DSA	RDDA1			03331	5 X	1
						03331	-3333	
01530		DC	1	,*		03332		1
01540	RDDA1	DSC	1	,1		03333		1
01550		DC	5	,00000		03338		5
01560		DC	3	,027		03341		3
01570		DC	5	,03800		03346		5
01580		DSA	RWA			03351	5 X	1
						03351	-6682	
01590		DC	1	,*		03352		1
01600	RWEFSW	DS		,RDDA1		03333		C
01610	RDSA	DSC	1	,0		03353		1
01620		DC	6	,00051*		03359		6
01630	WDSA	DSC	1	,1		03360		1
01640		DC	6	,00088*		03366		6
01650	RATY1	TFL	MAX	,TY1		03368	06	03188 C3245
01660		TDM	TYPE	,0	**	03380	15	03423 C0000
01670		B	RDALP	,10159 ,79		03392	49	03448 J0J59
01680	CD1	DS		,*		03403		C

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01690	RAPT1	TFL	MAX	,PT1		03404	06	03188 C3269
01700		B7	RDALP-12			03416	49	03436
01710	TYPE	DS	1			03423		1
01720	RACD1	TFL	MAX	,CD1		03424	06	03188 C3403
01730		TDM	TYPE	, -5	**	03436	15	03423 C000N
01740	*	.....	RD ALP...	PREP TO CALL RD SECT IF REQD AND RD IN I/O				
01750	*	.....	GO TO RD	WRT ALPHA (RWA)				
01760	RDALP	BD	RWA	,HTYPE+22		03448	43	06682 04500
01770		TRNM	RDDA1	,RDSA	**	03460	30	03333 C3353
01780		TFM	IORT	,+23	**	03472	16	00565 -3495
01790		B	IOGT	,RDDA	,7	03484	49	00566 -3325
01800	CLOBB	TFM	QQQ+6	,SET		03496	16	C3558 -4142
01810		B7	CLOTT+12			03508	49	03528
01820	CLOTT	TFM	QQQ+6	,SET+12		03516	16	C3558 -4154
01830		TFM	QQQ+11	,00344		03528	26	C3563 C0344
01840		BLXM	FMCN	,0(0) (0)		03540	66	03564 03552
01850	QQQ	BLXM	F-*	,0(0)		03552	66	00000 C0000
01860	FMCN	TD	-00344	,RECHK		03564	25	0034M C2403
01870	AM	00344	, -5			03576	11	00344 -000N
01880	TR	SLIP	, -00344			03588	31	00000 0034M
01890	TFM	IORT	,+23			03600	16	00565 -3623
01900	B	IOGT	,DARITH	,7		03612	49	00566 -3667
01910	TRNM	-00344	,SLIP			03624	30	0034M C0000
01920	AM	00344	,5			03636	11	00344 -0005
01930	TDM	QQQ	,6			03648	15	03552 C0006
01940	B7	-00344				03660	49	0034M
01950	SLIP	DSS	6	,00000		00000		6
01960	DARITH	DSC	2	,02		03667		2
01970		OSA	ARITH			03673	5 X	1
						03673	-3675	
01980		DC	1	,*		03674		1
01990	ARITH	DSC	1	,0		03675		1
02000		DC	5	,00125		03680		5
02010		DC	3	,027		03683		3
02020		DC	5	,03800		03688		5
02030		DC	1	,*		03689		1
02040	DUMMY	DS		,99999		99999		C
02050	XX	DS		,DUMMY		99999		C
02060	START	DS		,03851		03851		0
02070		DORG	3789			03789		
02080		OSA	WATY			03793	5 X	1
						03793	-4166	
02090		OSA	REP3			03798	5 X	1
						03798	-6978	
02100		OSA	TRACE			03803	5 X	1

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02110	DSA	SWC		03803	-3004		
				03808	5 X	1	
02120	DSA	SWCFX		03808	-6646		
				03813	5 X	1	
02130	DSA	SLASH		03813	-241C		
				03818	5 X	1	
02140	DSA	REP		03818	-6384		
				03823	5 X	1	
02150	DSA	REDO		03823	-6882		
				03828	5 X	1	
02160	DSA	XTYPE		03828	-629C		
				03833	5 X	1	
02170	DSA	COMPLT		03833	-6846		
				03838	5 X	1	
02180	PAR	DSA	0	03838	-636C		
				03843	5 X	1	
02190	DSA	MATRIX		03843	-0000		
				03848	5 X	1	
				03848	-6444		
02200	*****	INITIAL SECONDARY LINKAGES					
02210	DORG	START		03851			
02220	DS	3		03853	3		
02230	BLXM	FMON	,*(0)	03854	66	03854	03854
02240	NOP			03866	41	00000	00000
02250	BLXM	FMON	,*(0)	03878	66	03864	03878
02260	NOP			03890	41	00000	00000
02270	BLXM	FMON	,*(0)	03902	66	03864	03902
02280	NOP			03914	41	00000	00000
02290	BLXM	FMON	,*(0)	03926	66	03864	03926
02300	NOP			03938	41	00000	00000
02310	BLXM	FMON	,*(0)	03950	66	03864	03950
02320	NOP			03962	41	00000	00000
02330	BLXM	FMON	,*(0)	03974	66	03864	03974
02340	NOP			03986	41	00000	00000
02350	BLXM	FMON	,*(0)	03998	66	03864	03998
02360	NOP			04010	41	00000	00000
02370	BLXM	FMON	,*(0)	04022	66	03864	04022
02380	NOP			04034	41	00000	00000
02390	BLXM	FMON	,*(0)	04046	66	03864	04046
02400	NOP			04058	41	00000	00000
02410	BLXM	FMON	,*(0)	04070	66	03864	04070
02420	NOP			04082	41	00000	00000
02430	BLXM	FMON	,*(0)	04094	66	03864	04094
02440	NOP			04106	41	00000	00000
02450	BLXM	FMON	,*(0)	04118	66	03864	04118
02460	NOP			04130	41	00000	00000
02470	B	CLOBB		04142	49	03496	00000

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02480	B	CLOTT		04154	49	03516	00000
02490	TF	00309	,*-1	04166	26	00309	04165
02500	B	WATY1		04178	49	03210	00000
02510	TF	00309	,*-1	04190	26	00309	04189
02520	B	WAPT1		04202	49	03246	00000
02530	TF	00309	,*-1	04214	26	00309	04213
02540	B	WACD1		04226	49	03270	00000
02550	TF	00309	,*-1	04238	26	00309	04237
02560	B	RATY1		04250	49	03368	00000
02570	TF	00309	,*-1	04262	26	00309	04261
02580	B	RAPT1		04274	49	03404	00000
02590	TF	00309	,*-1	04286	26	00309	04285
02600	B	RACD1		04298	49	03424	00000
02610	H			04310	48	00000	00000
02620	B	*-12		04322	49	04310	00000
02630	H			04334	48	00000	00000
02640	B	*-12		04346	49	04334	00000
02650	H			04358	48	00000	00000
02660	B	*-12		04370	49	04358	00000
02670	H			04382	48	00000	00000
02680	B	*-12		04394	49	04382	00000
02690	H			04406	48	00000	00000
02700	B	*-12		04418	49	04406	00000
02710	H			04430	48	00000	00000
02720	B	*-12		04442	49	04430	00000
02730	H			04454	48	00000	00000
02740	B	*-12		04466	49	04454	00000
02750	H			04478	48	00000	00000
02760	B	*-12		04490	49	04478	00000
02770	S	99MK	,K	04502	22	02445	02221
02780	S	100MK	,K	04514	22	03034	02221
02790	S	FXH	,K	04526	22	03072	02221
02800	TF	MK	,K	04538	26	03173	02221
02810	SF	MK		04550	32	03173	00000
02820	S	*+18	,K	04562	22	04580	02221
02830	SF	FX9+1		04574	32	-309C	00000
02840	S	*+18	,K	04586	22	04604	02221
02850	SF	FX2+1		04598	32	-3100	00000
02860	S	*+18	,K	04610	22	04628	02221
02870	SF	FX1+1		04622	32	-311C	00000
02880	S	M2KM1	,K	04634	22	02942	02221
02890	S	M2KM1	,K	04646	22	02942	02221
02900	S	M KPL	,K	04658	22	03168	02221
02910	TF	RECHK-2	,SCONS	04670	26	02401	04909
02920	TD	00380	,RECHK	04682	25	00380	02403
02930	SF	FAC+1		04694	32	02493	00000
02940	BSBB	*+12		04706	60	04718	00002
02950	HM	F	,05	04718	13	02215	000-5
02960	BD	ODDSET	,99	04730	43	04786	00099
02970	HM	K	,05	04742	13	02221	000-5
02980	BD	ODDSET	,99	04754	43	04786	00099
02990	TDM	FKODD	,1	04766	15	02987	00001
03000	BT	ODDSET+12		04778	49	04798	
03010	ODDSET	TDM	FKODD	04786	15	02987	00000
03020	BNF	*+36	,ENTLN-4	04798	44	04834	02244
03030	A	LNENT	,ENTLN	04810	21	03178	02248

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03040	A	EXPENT	,ENTEXP	04822	21	C3183	02253
03050	BV	**12		04834	46	04846	C1400
03060	BXV	**12		04846	46	04858	C1500
03070	BD	-PROGST	,7499	04858	43	02220	07499
03080	TFM	IORT	,**23	04870	16	00565	-4893
03090	B	IOGT	,DALONG ,7	04882	49	00566	-4894
03100	DALONG	DSC	2	04894			2
		2K					
03110	DSC	1	,0	04896			1
		0					
03120	DC	4	,0202	04900			4
		-202					
03130	DC	1	,'	04901			1
		'					
03140	SCCNS	DC	8	04909			8
		02635657	,62635657				
03150	DORG	6290		06290			
03160	REDO	BD	REDOA+12 ,MATSW	06290	43	C6338	C6638
03170	TDM	SWC+13	,1	06302	15	C6559	C0001
03180	BLXM	SWL	,REDOA (6)	06314	66	C6586	CCL26
03190	REDOA	TDM	SWL+13 ,1	06326	15	C6599	C0001
03200	LOCADJ	DS	,*-1	06336			C
03210	TF	00309	,2 (1)	06338	26	C0309	C00-2
03220	B7	SLASH+12		06350	49	C6396	
03230	DS	2		06358			2
03240	COMPLT	BSBA	**12	06360	60	C6372	C0001
03250	BLXM	SLASH+24	,RTN (6)	06372	66	C6408	CKN06
03260	SLASH	BXM	**12 ,3 (1),, ADJ IX 1 FORMAT PNTR	06384	62	C6396	C00-L
03270	BLXM	**12	,RWA3 (6)	06396	66	C6408	C0P18
03280	TDM	SWC+13	,3	06408	15	C6655	C0003
03290	BD	SLASH 2	,RHEFSW	06420	43	C6022	C3333
03300	B	0 (6)		06432	49	C-00	C0000
03310	MATRIX	TDM	MATSW ,1	06444	15	C6638	C0001
03320	TDM	SWL+13	,9	06456	15	C6599	C0009
03330	TFM	LOCADJ	,10 ,10	06468	16	C6336	C00J0
03340	BNF	**24	,MATRIX-1	06480	44	C6504	C6443
03350	TF	LOCADJ	,MKS	06492	26	C6336	C3173
03360	B7	MATRIX2+12		06504	49	C6524	
03370	MATRIX2	A	MATRIX-1 ,LOCADJ	06512	21	C6443	C6336
03380	TF	LOC	,MATRIX-1	06524	26	C6645	C6443
03390	SM	PAR	,01 ,10	06536	12	C3843	C00-1
03400	BNE	**24		06548	47	C6572	C1200
03410	TDM	MATSW	,0	06560	15	C6638	C0000
03420	BNL	SWC+12		06572	46	C6658	C1300
03430	BB2			06584	42		
03440	SWL	BSBB	**12	06586	60	C6596	C0002
03450	BB	MATRIX2		06598	42	C6512	C0000
03460	TDM	SWL+13	,9	06610	15	C6599	C00C9
03470	BD	SWC+12	,MATSW	06622	43	C6658	C6638
03480	NOP		,LOC	06634	41	C0000	C6645
03490	REPSW	DS	,*-8	06637			C
03500	MATSW	DS	,*-7	06638			C
03510	REPSW3	DS	,*-5	06640			C
03520	LOC	DS	,*	06645			C
03530	SWC	TDM	SWL+13 ,2	06646	15	C6599	C0002
03540	BD	JHB	,RHEFSW	06658	43	04922	C3333

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03550	BSBA	-00334		06670	60	0033M	C0001
03560	* RWA	...ST DFNR CODE,RESET .REPSW..MATSW..REPSW3.				
03570	*	.....	SET SWL TO BB TO OBJ PGM. INIT ERROR TO F9				
03580	RWA	TF	DATINH+2 ,MAX-3	06682	26	07075	03185
03590	TFM	REPSW3	,00000	06694	16	C6640	-0000
03600	TDM	SWL+13	,2	06706	15	C6599	C0002
03610	*	..... RWA3	... LD IX A2 WITH -.MAX.-1 AND ST IN .IX2HLD.				
03620	RWA3	TFM	00314 ,99997	06718	16	C0314	R9997
03630	S	00314	,MAX	06730	22	C0314	03188
03640	TF	IX2HLD	,00314	06742	26	C6796	C0314
03650	*	..... RWA2	... RESET .CCMP SW. INIT I/O REC TO ALPHA BLANKS				
03660	*	..... RCTY	IF WATY,SKIP .RA DO IT. IF WRTG				
03670	RWA2	TR	INH-1 ,STZERD-1	06754	31	02520	02770
03680	TR	INH+86	,STZERD	06766	31	02607	02771
03690	BD	**24	,TYPE	06778	43	C6802	C3423
03700	RCTY	00000		06790	34	00000	C0102
03710	IX2HLD	DS	,*-5	06796			0
03720	BSBA	**12		06802	60	C6814	C0001
03730	BD	BSWF	,RHEFSW	06814	43	C6834	C3333
03740	B7	RADDIT		06826	49	06026	
03750	*	..... BSWF	... FORMAT CONTROL, BR TO FORMAT SPEC IA, SET IX 1				
03760	*	.....	TO PNT AT WIDTH SPEC IN FORMAT STATEMENT				
03770	BSWF	BXM	-5 (1),8 (1)	06834	62	000-N	C00-8
03780	XTYPE	MA	**23 ,309	06846	70	C6869	C0309
03790	BCX	BSWF	,*-8 (2)	06858	63	C6834	00-00
03800	BLXM	BSWF	,99998 (2)	06870	66	C6834	99R98
03810	REP	BLXM	**12 ,REPSW (7)	06882	66	C6894	CGOL7
03820	SM	0	(7),01 ,10	06894	12	C-00	C00-1
03830	BH	REP2		06906	46	C6954	01100
03840	BE	REPEX		06918	46	07002	C1200
03850	A	0	(7),4 (1)	06930	21	C-00	C00-4
03860	BNH	REPEX		06942	47	07002	C1100
03870	REP2	TF	00309 ,2 (1)	06954	26	00309	C00-2
03880	BXM	BSWF	,*-5 (1)	06966	62	C6834	C00-N
03890	REP3	SF	REPSW3-1	06978	32	C6639	C0000
03900	BLXM	REP+12	,REPSW3(7)	06990	66	C6894	C00M4
03910	REPEX	BXM	BSWF ,4 (1)	07002	62	C6834	000-4
03920	ERCOM2	RCTY		07014	34	00000	C0102
03930	WATY	DUDH		07026	39	02699	C0100
03940	RCTY			07038	34	00000	C0102
03950	TD	EI+2	,RECMK	07050	25	02709	02403
03960	B7	BSWF		07062	49	C6834	
03970	DATINH	DSA	IN(2)	07073		5 X	1
				07073		-2097	
03980	DC	2	,00	07075		2	
		-0					
03990	DGM			07076		1	
04000	CATDUD	DSA	DUDH	07081		5 X	1
				07081		-2699	
04010	DC	2	,00	07083		2	
		-0					
04020	DGM			07084		1	
04030	FLCAT2	BSBA	**12	07086	60	07098	C0001
04040	BLX	**12	,MK (5),, SET IX 5 TO -K	07098	65	07110	OLIP3

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04050	CF	FAC+1(5)		07110	33	OK4R3	C0000
04060	CF	FAC-4		07122	33	C2488	C0000
04070	MF	MU-1	,FAC	07134	71	C2967	C2492
04080	BD	**+32	,FAC+1 (5),, HI ORDER DIG	07146	43	07178	CK4R3
04090	BCXM	**12	, 1 (5),, STEP IX5 BY 1	07158	64	07146	C-0-1
04100	B7	ZERFAC		07170	49	ZER884	
04110	BD	FLT3	,328 ,, SKIP IF HI ORDER DIGIT NOT ZERO	07178	43	07214	00328
04120	SF	FAC (5),1	,7	07190	32	OK4R2	-0001
04130	FSL	FAC-10	,FAC	07202	05	02482	C2492
04140	FLT3	MF	328 ,, EXP IS NEG IX5 VALUE	07214	71	00328	C0329
04150	TF	FAC	,329	07226	26	02492	C0329
04160	SF	FAC-9		07238	32	02483	C0000
04170	MF	FAC-2	,MU-1 ,, RESTORE CRIG SIGN	07250	71	C2490	C2967
04180	B7	FLTEND	, ,6	07262	49	C2960	
04190	FIX1	TFM	FAC-20 ,000 ,9	07270	16	C2472	00-00
04200	MF	MU-1	,FAC-2	07282	71	C2967	C2490
04210	TF	FAC-22	,FAC-2	07294	26	C247C	C2490
04220	CM	FAC	,00 ,10	07306	14	C2492	000-0
04230	BH	**+32		07318	46	07350	01100
04240	TF	FAC	,FXZ	07330	26	C2492	C3099
04250	B7	FIXEND		07342	49	C296C	
04260	C	FAC	,K	07350	24	C2492	
04270	BNH	**+56		07362	47	07418	C1100
04280	TFM	E1	,572 ,9	07374	16	02707	00N72
04290	FXNINE	TF	FAC ,FX9	07386	26	C2492	C3089
04300	MF	FAC	,MU-1	07398	71	C2492	C2967
04310	B7	ERROR		07410	49	C2936	
04320	TFM	**59	,FAC-30	07418	16	07477	-2462
04330	A	**+47	,FAC	07430	21	07477	C2492
04340	TDM	FAC-30	,0 ,11	07442	15	C2462	000-0
04350	TF	FAC	,FXZ	07454	26	C2492	C3099
04360	A	FAC	,**	07466	21	C2492	C0000
04370	XSGN	MF	FAC ,MU-1	07478	71	C2492	C2967
04380	B7	FIXEND		07490	49	C296C	
04390	DORG	8000		08000			08000
04400	AS1	34	A1 ,701	08000	34	08036	C0701
04410		38	A1 ,702	08012	38	08036	C0702
04420		49	**+26	08024	49	0805C	C0000
04430	A1	DSC	14 ,01560005102398	08036		14	
			01560005102398				
04440	TRA			08050	36	C000C	C0500
				08062	49	C0000	C0000
04450	TCO	AS1		08000			
04460	*****	SECONDARY LINKAGES WITH WRITE BLOCK IN CORE					
04470	DORG	START		03851			
04480	DS	3		03853		3	
04490	TFL	FAC	,FIX-1 ,11	03854	06	C2492	0385L
04500	B	FIX1		03866	49	0727C	C0000
04510	BLXM	FMON	,*(C)	03878	66	03564	03878
04520	NOP			03890	41	C0000	C0000
04530	BLXM	FMON	,*(O)	03902	66	03564	C3902
04540	NOP			03914	41	C0000	C0000
04550	BLXM	FMON	,*(O)	03926	66	03564	C3926
04560	NOP			03938	41	C0000	C0000
04570	BLXM	FMON	,*(O)	03950	66	03564	C3950

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04580	NOP			03962	41	C0000	C0000
04590	BLXM	FMON	,*(O)	03974	66	03564	C3974
04600	NOP		,10000	03986	41	C0000	L0000
04610	TFL	FAC	,*-1 ,11	03998	06	C2492	0399P
04620	B	FLOAT2		04010	49	07086	C0000
04630	BLXM	FMON	,*(O)	04022	66	03564	C4022
04640	NOP			04034	41	C0000	C0000
04650	BLXM	FMON	,*(O)	04046	66	03564	04046
04660	NOP			04058	41	C0000	C0000
04670	BLXM	FMON	,*(O)	04070	66	03564	C4070
04680	NOP			04082	41	C0000	C0000
04690	BLXM	FMON	,*(O)	04094	66	03564	04094
04700	NOP			04106	41	C0000	C0000
04710	BLXM	FMON	,*(O)	04118	66	03564	C4118
04720	NOP			04130	41	C0000	C0000
04730	B	CLOBB		04142	49	03496	C0000
04740	B	CLOTT		04154	49	03516	C0000
04750	WATY	TF	00309 ,*-1	04166	26	00309	04165
04760	B	WATY1		04178	49	0321C	C0000
04770	WAPT	TF	00309 ,*-1	04190	26	00309	04189
04780	B	WAPT1		04202	49	03246	C0000
04790	WACD	TF	00309 ,*-1	04214	26	00309	04213
04800	B	WACD1		04226	49	03270	C0000
04810	TF	00309	,*-1	04238	26	00309	04237
04820	B	RATY1		04250	49	03368	C0000
04830	TF	00309	,*-1	04262	26	00309	C4261
04840	B	RAPT1		04274	49	C3404	C0000
04850	TF	00309	,*-1	04286	26	00309	04285
04860	B	RACD1		04298	49	03424	C0000
04870	ITYPE	BLX	**12 ,MKP1 (5),, SET I5 TO -K +1	04310	65	04322	0L108
04880	BLXM	SWL	,WRT I (6)	04322	66	06586	0MN14
04890	WRITEA	BLXM	ERF9-12 ,**12 (6),, BR TO CHECK RECORD LENGTH	04334	66	04982	0ML46
04900	BNF	WA FX	,FAC-1	04346	44	04418	C2491
04910	TF	FAC	,FAC-2 ,, SHIFT IF FL NO.	04358	26	C2492	C2490
04920	BXM	WRT A	,-8 (4)	04370	62	04490	C-000
04930	WRTACK	TF	IN-2 (2),FAC (4)	04382	26	02095	OK492
04940	B	BSWF		04394	49	06834	C0000
04950	ATYPE	BLXM	SWL ,WRITEA(6)	04406	66	06586	0ML34
04960	WAFX	BX	WRT A ,MK (4)	04418	61	04490	0L173
04970	FTYPE	CF	RWEFSW	04430	33	03333	C0000
04980	BLXM	SWL	,WEFCOM(6)	04442	66	06586	CN-18
04990	ETYPE	SF	RWEFSW	04454	32	03333	C0000
05000	BLXM	SWL	,WEFCOM(6)	04466	66	06586	CN-18
05010	HTYPE	BLXM	JHB+36 ,WHTYPE(6)	04478	66	04958	0MQ14
05020	WRTA	BNH	WRTA CK ,01	04490	47	04382	01101
05030	BXM	WRT A	,-2 (4)	04502	62	04490	C-00K
05040	*	WRITE I TYPE FROM FAC TO I/O REC					
05050	WRTI	BNF	WRT I2+12,FAC-1 ,, FIXED NUMBER	04514	44	04558	02491
05060	TFM	FIXEND+6	,WRT I2	04526	16	02966	-4546
05070	B7	FIX 1		04538	49	0727C	
05080	WRTI2	TFM	FIXEND+6 ,RTN	04546	16	02966	-2506
05090	BLXM	ERF9-12	,**12 (6),, BR TO CHECK RECORD LENGTH	04558	66	04982	0MN70
05100	MF	MU-1	,FAC	04570	71	C2967	C2492
05110	TR	DUD-29	,FLZERS-29,, CLEARS DUD AREA	04582	31	0271C	02830
05120	BD	WRTSGN-12	,FAC (5),, HI ORD DIG LOC (IX 5 = -K+1)	04594	43	04618	CK4R2
05130	BCXM	**12	,1 (5),, DECRE MICRO ZERO	04606	64	04594	0-0-1

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05140	SF	FAC-1 (5),	..	DEFINE HICRD DIGIT	04618	32	0K4R1	00000		
05150	WRISGN	BX	++12 ,329 (5),	DOUBLE IX 5	04630	61	04642	0-3K9		
05160	TNF	GAM-2	,FAC		04642	73	02737	02492		
05170	BNF	WICK-12	,MU-1		04654	44	0471C	02967		
05180	TFM	GAM-4 (5),20	,10		04666	16	0K7L5	000K0		
05190	BXM	WICK	,-2 (5),	ALLOW FOR SIGN	04678	62	04722	0-0-K		
05200	WIEEXIT	TF	IN-2 (2),GAM-2	..	04690	26	02095	02737		
05210	B7	BSWF			04702	49	06834			
05220	SF	GAM-3 (5),	..	DEFINE HI ORD DIGIT FOR PLUS VALUE	04710	32	0K7L6	00000		
05230	WICK	BCX	WI EXIT ,329 (4),	WIDTH SPEC OK W*2+IX5 MORE THAN 1	04722	63	04690	0-329		
05240	TR	GAM-29	,GAM-3 (5),	SHIFT ERROR VALUE LEFT	04734	31	0271C	0K7L6		
05250	ERF8	TFM	EI+2 ,67800	..	04746	16	02709	07800		
05260	ERCOM	BNF	ERCOM2 ,TYPE		04758	44	07014	03423		
05270	TF	DAT DUD+2,DAT INH+2,.	..	INSERT I/O DEVICE CODE	04770	26	07083	07075		
05280	TFM	IORT	,++23	..	04782	16	00565	-4805		
05290	B	IOPT	,DAT DUD-4,7		04794	49	00532	-7077		
05300	B7	ER COM 2			04806	49	07014			
05310	*	WRITE H TYPE FROM FORMAT TO I/O RECORD								
05320	*	..... W H TYPE.. IX BD A IS SEL,IX 1 POINTS AT WIDTH SPEC,IX 2							
05330	*	..... IS AVAIL CHAR IN I/O REC. CALC ST ADR OF H DATA AND MOVE							
05340	*	..... H DATA TO TO I/O REC							
05350	WHTYPE	BLX	++12 ,309(3)	..	IX3 = IX1	04814	65	04826	COL-9	
05360	BX	++12	,WIDTH (1)			04826	61	04838	C4801	
05370	BLXM	ERF9-12	,++12 (6),	..	BR TO CHECK RECORD LENGTH	04838	66	04982	0M050	
05380	SM	314	,*-*			04850	12	00314	-0000	
05390	WIDTH	DS	,*			04861		C		
05400	TD	WH+23	,1 (1),	..	STORE LAST DIGIT	04862	25	04909	000-1	
05410	TD	1	(1),RECMK			04874	25	000-1	C2403	
05420	WH	TRNM	IN-1 (2),1 (3),	..	MOVE DIGITS	04886	30	02096	00-1	
05430	TDM	1	(1),XX			04898	15	000-1	99999	
05440	BX	BSWF	,WIDTH (2)			04910	61	06834	C4061	
05450	*									
05460	*	COMMON ROUTINE. WRT H,A,I,E AND F TYPES								
05470	JHB	CF	LOC			04922	33	06645	00000	
05480	TFL	FAC	,LOC	,11,	MOVE FIELD FROM PGM TO FAC	04934	06	02492	0664N	
05490	BSBA	++12				04946	60	04958	00001	
05500	TF	WIDTH	,309	,11,	STORE WIDTH	04958	26	04861	0030R	
05510	BLX	+-*	(6),WIDTH (4),	..	SET WIDTH IN IX4	04970	65	0-00	0M861	
05520	*	CK H,A AND I TYPES FOR ER F9. W FOR E AND F IS ONLY NUMERIC								
05530	BCX	+-*	(6),324 (2),	..	ADV I/C REC PNTR.CK A AND I TYPES	04982	63	0-00	00L24	
05540	ERF9	TFM	EI	,679	,9,	SET ER F9 IND	04994	16	02707	00079
05550	BLXM	ER COM2	,99999 (2),	..	SET IX 2 TO PREVENT FURTHER OUTPUT	05006	66	07014	99R99	
05560	*									
05570	*	WRITE E AND F TYPE FROM FAC TO GAM (IN ALPHA)								
05580	*	MAKE CKS FOR OVERSIZE REC AND OVERSIZE FIELD (ERF9 AND ERF8)								
05590	WFCOM	BXM	++12	,2 (1),	..	ADV FORMAT PNTR FOR E AND F TYPES	05018	62	05030	000-2
05600	BXM	ERF9-12	,12 (6),	..	CK FOR ER F9. RTN IF NONE	05030	62	04982	C--12	
05610	TFM	FLTEND	,++24			05042	16	02966	-5066	
05620	BNF	FLOAT+12,FAC-1				05054	44	07098	02491	
05630	TFM	FLTEND	,RTN			05066	16	02966	-2506	
05640	*	MOVE DATA TO DUD FOR OUTPUT IN E14.8 FORMAT								
05650	BD	++24	,FAC-9	..	CHECK FOR LOUSY ZEROS	05078	43	05102	02483	
05660	TFM	FAC	,-99	,10		05090	16	02492	000RR	
05670	MF	MU-1	,FAC-2	..	SAVE MANT SIGN	05102	71	02967	02490	
05680	TR	DUD-29	,W MASK-1			05114	31	0271C	06126	
05690	TFM	WCK	,00000			05126	16	05209	-0000	

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05700	A	WCK	,FAC			05138	21	05205	02492	
05710	BLXM	++12	,MOVMAN(0)			05150	66	05162	05218	
05720	MOVEXP	BNL	++24	,	..	ZERO EXP IS GIVEN POSITIVE SIGN	05162	46	05186	01300
05730	TDM	DUD-7	,2			05174	15	02732	00002	
05740	TD	DUD-4	,WCK-1			05186	25	02735	C5208	
05750	TDM	DUD-2	,+-*			05198	15	02737	00000	
05760	WCK	DS	,*	..	LOCD-8+EXPONENT	05209		C		
05770	B7	-304				05210	49	0030R		
05780	MOVMAN	TNF	DUD-10	,FAC-2		05218	73	02725	02490	
05790	BNF	++24	,MU-1			05230	44	05254	02967	
05800	TDM	DUD-29	,2			05242	15	0271C	00002	
05810	*	LIMIT POSITIONS RT OF DEC TO 8								
05820	TF	LOCD	,0(1)	..	MOV DEC PT SPEC TO IX 3	05254	26	05397	000-0	
05830	CM	LOCD	,8	..		05266	14	05397	000-8	
05840	BNH	++24				05278	47	05302	01100	
05850	TFM	LOCD	,8	..		05290	16	05397	000-8	
05860	SF	LOCD				05302	32	05397	00000	
05870	SM	W CK	,8	..	EXP-8	05314	12	05205	000-8	
05880	S	W CK	,LOC D	..	LOCD-8 + EXPONENT	05326	22	05209	05397	
05890	TFM	FAC-10	,00	..	EXPAND SIZE OF FAC	05338	16	02482	000--	
05900	BLX	++12	,LOCD (3),	..	IX 3 WILL BE -LOCD	05350	65	05362	C5LR7	
05910	BX	++12	,319 (4),	..	REDUCE W BY DPT SPEC (W-LOCD)	05362	61	05374	0-319	
05920	BLX	++12	,314 (6),	..	NEXT AVAIL CHAR ADR IN I/O REG	05374	65	05386	0-L14	
05930	AM	LOC D	,+-*	..	CONVERT TO 2 LOCD	05386	11	05397	-0000	
05940	LOCD	DS	,*	..	LOCATION OF DEC PT.FLAGS SEL IX3	05397		C		
05950	SF	GAM-29	,FAC-9			05398	32	0271C	02483	
05960	BNF	WRT F	,RNEFSW	..	F TYPE	05410	44	05610	03333	
05970	***	MACRO TO SET UP E TYPE,WRITE AND ERROR CHECK								
05980	*	...CK WIDTH SPECS								
05990	BCXM	++20	,-5 (4)			05422	64	05442	0-00N	
06000	B7	ER COM-12				05434	49	04746		
06010	*	.....SET UP IX REGS FOR PROCESSG MANT FROM FAC TO I/O REG (IN)							
06020	WRT	BLX	++12	,WIDTH (5),	..	PUT WIDTH IN IX 5	05442	65	05454	0M801
06030	BCXM	++24	,-14 (5),	..	IX 5 = WIDTH -14	05454	64	05478	0-0JM	
06040	BLX	++36	,WIDTH (4)			05466	65	05502	0M861	
06050	BLXM	++12	,14 (4)			05478	66	05490	0-014	
06060	BLXM	++12	,+-*	(5)		05490	66	05502	0-0-0	
06070	*	..... IX 4 CONTROLS P3SITION OF SIGN							
06080	*	..... IX 5 CONTROLS RT POSITION OF FAC							
06090	BX	++12	,324 (4),	..	DOUBLE WIDTH	05502	61	05514	0-324	
06100	SF	324				05514	32	00324	00000	
06110	BX	++12	,314 (4),	..	IX 4 = IX 2- I WIDTH	05526	61	05538	C-314	
06120	*	...PROCESS EXP FROM FAC TO I/O REG (IN)								
06130	S	W CK	,329	..	ADD 14-WIDTH TO CHAR	05538	22	05205	00329	
06140	BD	W ZER CK	,W CK-2	..	EXP LESS THAN -99	05550	43	05574	05207	
06150	BLXM	MOVEXP	,WZERCK+12,.	..	GO TO SET EXP IN GAM AND RETURN	05562	66	05162	05586	
06160	WZERCK	BD	ER COM-12,FAC-9	..	NON ZERO	05574	43	04746	02483	
06170	TRNM	IN-9 (2),GAM-9				05586	30	02088	02730	
06180	*	..... IX 6 MODFS IN REFS							
06190	BXM	FILL R	,-8 (6),	..	EXP SPACE COMPENSATION IN IX6 (IN)	05598	62	05778	0--0Q	
06200	*	..... MACRO TO SET UP F TYPE,WRITE AND ERROR CHECK							
06210	WRTF	S	324	,FAC		05610	22	00324	02492	
06220	SM	324	,1	..	MUST BE ROOM FOR 1 CHAR AT LEAST	05622	12	00324	000-1	
06230	BNH	ER COM-12,		..	WIDTH SPECS INSUFFICIENT	05634	47	04746	01100	
06240	AM	FAC	,1	..		05646	11	02492	000-1	
06250	BLX	++12	,WCK (5),	..	IX 5 MODFS FAC REFS.LOCD-8+EXP.CHAR	05658	65	0567C	0N2-9	

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06260	CM	W CK	, -8	, 10	05670	14	05209	000-0
06270	BNH	W F ZERO			05682	47	05966	G1100
06280 *	SPLIT INTO 3 CASES	FOR WRT F TYPE	ZERO OUTPUT				
06290 *	....	IX5 PLUS	REQ ZERO FILL FROM RIGHT (IXP)					
06300 *	....	IX5 NEG, NON ZERC	EXP NEG, REQS ZERO FILL FROM LEFT (IXNEN)					
06310 *	....	IX5 NEG, NON ZERC	EXP NOT NEG, NC ZERO FILL REQD (FILL R)					
06320	BNF	IXP			05694	44	05882	C5209
06330	BNF	FILL R			05706	44	05778	02492
06340 *	.....	EXPAND	FAC WITH ZEROS ON LEFT					
06350	IXNEN	TF	FAC-10	, ZERO-10	05718	26	02482	02747
06360	TFM	**+30		, FAC-11	05730	16	0576C	-2481
06370	A	**+18		, FAC	05742	21	0576C	02492
06380	MF	**+*		, FAC-9	05754	71	0000C	02483
06390	TFM	FAC		, 01	05766	16	02492	C00-1
06400 *	....	FILL	RIGHT SIDE OF I/O REC	FIELD WITH MANTISSA				
06410	FILLR	TNF	IN-2 (6)	, FAC-2 (5)	05778	73	0K095	0K4R0
06420	TDM	IN-3	(6)	, 7	05790	15	0K094	00007
06430	BX	**+12		, 319 (5)	05802	61	05814	C-3J9
06440	BX	FILL L		, LOCD (6)	05814	61	05826	0NL97
06450 *	....	FILL	LEFT SIDE AS REQD.					
06460	FILLL	TNF	IN-2 (6)	, FAC-1 (5)	05826	73	0K095	0K4R1
06470	WEDEC	TFM	IN-2 (6)	, 3	05838	16	0K095	C00-3
06480	BNF	WF SIGN		, RNEFSW	05850	44	05918	C3333
06490	WSIGN	TF	IN (4)	, GAM-28	05862	26	0K697	02711
06500	B7	BSWF			05874	49	06834	
06510	IXP	SF	329		05882	32	00325	C0000
06520	FSL	FAC-10(5)		, FAC-2	05894	05	0K4Q2	02490
06530	BLXM	FILL R		, 99999 (5)	05906	66	05778	9R9R9
06540	WFSIGN	BLX	**+12		05918	65	05930	0-334
06550	S	324		, FAC	05930	22	00324	C2492
06560	S	324		, FAC	05942	22	00324	C2492
06570	BXM	W SIGN		, -2 (4)	05954	62	05862	0-00K
06580	WFZERO	CF	319		05966	33	00319	00000
06590	TNF	IN-2 (2)		, ZERO-16(3)	05978	73	02095	C2PM1
06600	BX	**+12		, LOCD (6)	05990	61	06002	0NL97
06610	TFM	IN-2 (6)		, 3	06002	16	0K095	000-3
06620	B7	BSWF			06014	49	06834	
06630	SLASH2	BD	WRITE		06022	43	06082	C3423
06640	BXM	**+12		, -2 (2)	06034	62	06046	00-0K
06650	CM	IN (2)		, 00	06046	14	02097	000-0
06660	BE	SLASH2+12			06058	46	06034	C1200
06670	TF	IN+4 (2)		, FLZERS	06070	26	C2PC1	C2859
06680	WRITE	BLX	**+12		06082	65	06C94	C6P96
06690	TFM	IORT		, +23	06094	16	00565	-6117
06700	B	IOPT		, DATINH-4	06106	49	00532	-7069
06710	B7	**+*	(6)		06118	49	0-000	
06720	HMASK	DAC	2	, .	06127		2 X	2
06730	DAC	8,00000000		, MASK FOR EF WRT. ALPHA ZERO SOURCE	06131		8 X	2
06740	EMASK	DAC	5,E+00*		06147		5 X	2
06750	DORG	8000			08000			
06760	AS3	34	A3	, 701	08000	34	08036	C07C1
06770		38	A3	, 702	08012	38	C8C36	C0702
06780		49	**+26		08024	49	0805C	C0000

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06790	A3	DSC	14	, 01568803703800	08036		14	
06800		TRA			08050	36	0000C	00500
06810		TCD	AS3		08062	49	0000C	00000
06820	*****	SECONDARY LINKAGES WITH READ BLOCK IN CORE						
06830	DORG	START			03851			
06840	DS	3			03853		3	
06850	TF	FAC		, FIX-1	03854	26	02492	0385L
06860	B	FIX1			03866	49	0727C	C0000
06870	BLXM	FMON		, *(0)	03878	66	03564	03878
06880	NOP				03890	41	0000C	C0000
06890	BLXM	FMON		, *(0)	03902	66	03564	03902
06900	NOP				03914	41	0000C	00000
06910	BLXM	FMON		, *(0)	03926	66	03564	03926
06920	NOP				03938	41	0000C	00000
06930	BLXM	FMON		, *(0)	03950	66	03564	03950
06940	NOP				03962	41	0000C	00000
06950	BLXM	FMON		, *(0)	03974	66	03564	03974
06960	NOP				03986	41	0000C	00000
06970	TFL	FAC		, *-1	03998	06	02492	0399P
06980	B	FLOAT2			04010	49	07086	C0000
06990	BLXM	FMON		, *(0)	04022	66	03564	04022
07000	NOP				04034	41	0000C	00000
07010	BLXM	FMON		, *(0)	04046	66	03564	04046
07020	NOP				04058	41	0000C	00000
07030	BLXM	FMON		, *(0)	04070	66	03564	04070
07040	NOP				04082	41	0000C	00000
07050	BLXM	FMON		, *(0)	04094	66	03564	04094
07060	NOP				04106	41	0000C	00000
07070	BLXM	FMON		, *(0)	04118	66	03564	04118
07080	NOP				04130	41	0000C	00000
07090	B	CLOBB			04142	49	03496	00000
07100	B	CLOTT			04154	49	03516	C0000
07110	TF	00309		, *-1	04166	26	00305	04165
07120	B	WATY1			04178	49	03210	00000
07130	TF	00309		, *-1	04190	26	00309	04189
07140	B	WAPT1			04202	49	03246	C0000
07150	TF	00309		, *-1	04214	26	00305	04213
07160	B	WACD1			04226	49	03270	00000
07170	RATY	TF	00309	, *-1	04238	26	00309	04237
07180	B	RATY1			04250	49	03368	C0000
07190	RAPT	TF	00309	, *-1	04262	26	00305	04261
07200	B	RAPT1			04274	49	03404	00000
07210	RACD	TF	00309	, *-1	04286	26	00309	04285
07220	B	RACD1			04298	49	03424	00000
07230	TFM	RDCS		, 00	04310	16	05195	000-0
07240	BLXM	SWL		, RITYPE(6)	04322	66	06586	0N-22
07250	H				04334	48	0000C	00000
07260	B	**+12			04346	49	04334	0000C
07270	H				04358	48	0000C	00000
07280	B	**+12			04370	49	04358	00000
07290	H				04382	48	0000C	00000
07300	B	**+12			04394	49	04382	00000
07310	TFM	RDSQP		, FAC	04406	16	04864	-2492

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07320	BLXM	SWL	,READA(6)	04418	66	06586	CM054
07330	TF	00324	,C(1)	04430	26	00324	CC0-0
07340	BLXM	SWL	,RFTYPE(6)	04442	66	06586	OMR74
07350	TF	00324	,O(1)	04454	26	00324	CC0-0
07360	BLXM	SWL	,RETYPE(6)	04466	66	06586	CMR42
07370	TFM	RHTYPE+35	,IN-1	04478	16	04557	-2696
07380	B	RHTYPE	,LO	04490	49	04522	00010
07390	RDERF7	TFM	EI	,677	,9	04502	16 02707 00077
07400	B7	ERCOM2		04514	49	07014	
07410	RHTYPE	A	,+35	,O(1)		04522	21 04557
07420	SF	,+21		04534	32	04555	00000
07430	TD	,+47	,*-*	04546	25	04593	00000
07440	TD	,-1	,RECMK	04558	25	04559	02403
07450	TRNM	1(1)	,IN-1(2)	04570	30	000-1	02096
07460	TDM	,-25	,O	04582	15	04559	00000
07470	TF	,+35	,-00309	04594	26	04629	CC30R
07480	A	00309	,-00309	04606	21	00305	CC30R
07490	BCXM	BSWF	,O(2)	04618	64	06834	00-00
07500	TFM	EI	,679	04630	16	02707	00079
07510	RERCOM	BLXM	ERCOM2	,99998(2)		04642	66 07014 99R98
07520	READA	A	RDSQP	,O(1)		04654	21 04864
07530	BNF	,+48	,LOC	04666	44	04714	06645
07540	TF	FAC	,ZERO10	04678	26	02492	02767
07550	S	RDSQP	,K	04690	22	04864	02221
07560	BLXM	,+48	,FAC(5)	04702	66	04750	0K482
07570	SM	RDSQP	,LO	04714	12	04864	000J0
07580	TFL	FAC	,RDZERO	04726	06	02492	02769
07590	BLXM	,+12	,FAC-2(5)	04738	66	04750	0K480
07600	TF	00324	,O(1)	04750	26	00324	000-0
07610	READA1	BCXM	READA2	,2(2)		04762	64 04786
07620	BLXM	RDGIVE	,RERCOM-12(0)	04774	66	04882	04630
07630	READA2	CF	IN-1(2)	,+2	,10	04786	33 02096
07640	BCX	READA1	,READA2+11(4)	04798	63	04762	0M797
07650	SF	IN-1(2)		04810	32	02096	00000
07660	C	RDSQP	,00329	04822	24	04864	00329
07670	BNH	,+24		04834	47	04858	C1100
07680	BLXM	RDGIVE	,RDERF7(0)	04846	66	04882	04502
07690	TF	,-*	,IN-2(2)	04858	26	00000	02095
07700	RDSQP	DS	,+5	04864			C
07710	BLXM	RDGIVE	,BSWF(0)	04870	66	04882	06834
07720	RDGIVE	BSBB	,+12	04882	60	04894	00002
07730	MF	RDGIVE	,LCC	04894	71	04882	06645
07740	TFL	LOC	,FAC	04906	06	0664N	02492
07750	MF	LOC	,RDGIVE	04918	71	06645	04882
07760	BSBA	-00304		04930	60	0030M	00001
07770	RETYPE	TFM	RDSDIG	,05000		04942	16 05381
07780	TFM	CHAR	,00	04954	16	04963	000-0
07790	CHAR	DS	,*-2	04963			C
07800	B7	RFTYPE+12		04966	49	04986	
07810	RFTYPE	TFM	RDSDIG	,55000		04974	16 05381
07820	TF	00324	,O(1)	04986	26	00324	000-0
07830	TF	RDCS	,2(1)	04998	26	05195	000-2
07840	BXM	RDCOM	,2(1)	05010	62	05058	000-2
07850	RITYPE	TFM	RDSDIG	,55500		05022	16 05381
07860	MM	O(1)	,05	05034	13	000-0	000-5
07870	BLX	,+12	,98(4)	05046	65	05058	C-098

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07880	RDCOM	BLXM	,+12	,FAC-11(5)	05058	66	05070	0K401
07890	TFL	FAC	,RDZERO	05070	06	02492	02769	
07900	CF	RDCOM		05082	33	05058	00000	
07910	TFM	CNTS	,0010	05094	16	05103	000J0	
07920	CNTS	DS	,*-2	05103			0	
07930	TFM	RDADJ-6	,READCC	05106	16	05756	-5118	
07940	BNR	RDCOM1	,IN(2)	05118	45	05138	02097	
07950	B7	RDCOM3		05130	49	05306		
07960	RDCOM1	CM	IN(2)	05138	14	02097	000-0	
07970	BE	ROBLNK		05150	46	05638	C1200	
07980	CM	IN(2)	,70	05162	14	02097	000P0	
07990	BNL	RDDIG		05174	46	05626	01300	
08000	CM	IN(2)	,0010	05186	14	02097	000J0	
08010	RDCS	DS	,*-2	05195			C	
08020	BE	RDPLUS		05198	46	05382	01200	
08030	CM	IN(2)	,+20	05210	14	02097	000K0	
08040	BE	RDPLUS		05222	46	05370	C1200	
08050	BD	RDCOM2	,RDSDEC	05234	43	05270	05379	
08060	CM	IN(2)	,03	05246	14	02097	000-3	
08070	BE	RDDCC		05258	46	05338	C1200	
08080	RDCOM2	BD	RDCOM3	,RDSEY	05270	43	05306	05377
08090	CM	IN(2)	,45	05282	14	02097	000M5	
08100	BE	RDE		05294	46	05438	C1200	
08110	RDCOM3	TFL	FAC	,RDZERO	05306	06	02492	02769
08120	TDM	RSERR	,0	05318	15	05378	0000-	
08130	B7	RDADJ		05330	49	05762		
08140	RDDCC	TDM	RDSDEC	,-5	05338	15	05379	0000N
08150	TFM	RDCS	,00	05350	16	05195	000-0	
08160	B7	RDADJ		05362	49	05762		
08170	RDPLUS	SF	RDCOM	05370	32	05058	CC000	
08180	RDSDIG	DS	,*	05381			C	
08190	RDSGN	DS	,*-1	05380			C	
08200	RDSDEC	DS	,*-2	05379			C	
08210	RSERR	DS	,*-3	05378			C	
08220	RDSEY	DS	,*-4	05377			C	
08230	RDPLUS	BD	RDPL1	,RDSGN	05382	43	05426	05380
08240	MF	RDPLUS	,RDCOM	05394	71	05370	05058	
08250	TDM	RDSGN	,-5	05406	15	05380	0000N	
08260	B7	RDADJ		05418	49	05762		
08270	RDPL1	BD	RDCOM3	,RDSEY	05426	43	05306	05377
08280	RDE	TFM	RDADJ-6	,RETY1	05438	16	05756	-5458
08290	B7	RDADJ		05450	49	05762		
08300	RETY1	CM	IN(2)	,+20	,10	05458	14 02097	
08310	BNE	,+24		05470	47	05494	01200	
08320	SF	RDCOM		05482	32	05058	00000	
08330	CM	00324	,01	05494	14	00324	000-1	
08340	BE	RETY2		05506	46	05538	C1200	
08350	TD	CHAR-1	,IN(2)	05518	25	04962	02097	
08360	B7	RDADJ		05530	49	05762		
08370	RETY2	TD	CHAR	,IN(2)	05538	25	04963	02097
08380	SF	CHAR-1		05550	32	04962	00000	
08390	MF	CHAR	,RDCOM	05562	71	04963	05058	
08400	A	FAC	,CHAR	05574	21	02492	04963	
08410	B7	RDADJ		05586	49	05762		
08420	RDECK	BNF	RDADJ	,RDSDEC	05594	44	05762	05379
08430	SM	FAC	,01	05606	12	02492	000-1	

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08440	B7	RDADJ		05618	49	05762	
08450	RDDIG	BD	RDBLNK+12,IN(2)	05626	43	05650	02097
08460	RDBLNK	BNF	RDECK ,RDSDIG	05638	44	05594	C5381
08470	AM	CNTS	,-01 ,10	05650	11	05103	C00-J
08480	BL	**48		05662	47	05710	C1300
08490	TD	Q(5)	,IN(2)	05674	25	0-0-C	02097
08500	BXM	**12	,1(5)	05686	62	05698	0-0-1
08510	TDM	RDSDIG	,-5	05698	15	05381	C000N
08520	BNF	**20	,RDSDEC	05710	44	05730	C5379
08530	B7	RDADJ		05722	49	05762	
08540	AM	FAC	,01 ,10	05730	11	02492	000-1
08550	B7	READJ		05742	49	05762	
08560	BD	READCO	,RDSERR	05750	43	05118	05378
08570	RDADJ	BCX	RDADJ1 ,2(2)	05762	64	05806	00-02
08580	TFL	FAC	,RDZERC	05774	06	02492	C2769
08590	TDM	RDSERR	,0	05786	15	05378	C0000
08600	B7	RDADJ1+24		05798	49	05830	
08610	RDADJ1	BCX	RDADJ-12 ,RDBLNK+23(4)	05806	63	05750	0N661
08620	S	FAC	,RDC5	05818	22	02492	C5195
08630	TFM	FIXEND+6	,RDFIX3-12	05830	16	02966	-5954
08640	SF	FAC-11		05842	32	02481	00000
08650	TF	FAC-20	,FAC-2	05854	26	02472	02490
08660	BNF	RDFLT	,LOC	05866	44	05898	C6645
08670	MF	MU-1	,RDMNUS	05878	71	02967	C5370
08680	B7	FIX1+36		05890	49	07306	
08690	RDFLT	BD	**32 ,FAC-11	05898	43	05930	02481
08700	TFL	FAC	,FLZER	05910	06	02492	03131
08710	B7	**32		05922	49	05954	
08720	TF	FAC-2	,FAC-4	05930	26	02490	C2488
08730	MF	FAC-2	,RDMNUS	05942	71	02490	05370
08740	TFM	FIXEND+6	,RTN	05954	16	02966	-2506
08750	RDFIX3	BD	**48 ,RDSERR	05966	43	06014	C5378
08760	BNF	**24	,RDSERR	05978	44	06002	C5378
08770	BLXM	RDGIVE	,RDERF7(0)	05990	66	04882	04502
08780	BLXM	RDGIVE	,RERCOM-12(0)	06002	66	04882	04630
08790	BLXM	RDGIVE	,BSWF(0)	06014	66	04882	C6834
08800	*	*****	RA DO IT.. RD TO I/O REC FROM SELECTED INPUT				
08810	RADDIT	TFM	IGRT ,**23	06026	16	00565	-6049
08820	B	IOGT	,DATINH-4 ,7	06038	49	00566	-7069
08830	BD	**24	,TYPE	06050	43	06074	C3423
08840	BC4	RWA2+36		06062	46	06790	C0400
08850	B7	BSWF		06074	49	06834	
08860	DORG	0000		08000			
08870	AS2	34	A2 ,701	08000	34	08036	C0701
08880		38	A2 ,702	08012	38	08036	C0702
08890		49	**26	08024	49	08050	C0000
08900	A2	DSC	14 ,01565103703800	08036		14	
08910			01565103703800				
	TRA			08050	36	C0000	00500
				08062	49	00000	C0000
08920	TCD	AS2		08000			
08930	*****		SECONDARY LINKAGES WITH ARITHMETIC BLOCK IN CORE				
08940	DORG	START		03851			
08950	DS	3		03853		3	
08960	FIX	TFL	FAC ,FIX-1 ,11	03854	06	02492	C385L

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08970	B	FIX1		03866	49	07270	C0000
08980	FXSR	BNF	FXSR1+20 ,FAC	03878	44	04686	C2492
08990	B	FXSR1		03890	49	04666	C0000
09000	FXM	M	FAC ,FXM-1 ,11	03902	23	02492	C390J
09010	B	FXM1		03914	49	04718	C0000
09020	FXD	LD	99 ,FAC	03926	28	00099	C2492
09030	B	FXD1		03938	49	04790	C0000
09040	FXDR	LD	99 ,FXDR-1 ,11	03950	28	00099	C394R
09050	B	FXD1+12		03962	49	04802	C0000
09060	RSGN	TFL	FAC ,RSGN-1 ,11	03974	06	02492	C397L
09070	B	RSGN1		03986	49	04574	C0000
09080	FLOAT	TFL	FAC ,*-1 ,11	03998	06	02492	C399P
09090	B	FLOAT2		04010	49	07086	C0000
09100	FSBR	BNF	FSBR1+26 ,FAC-2	04022	44	04528	C2490
09110	B	FSBR1		04034	49	04502	C0000
09120	FDVR	TFL	IN ,FAC	04046	06	02697	C2492
09130	B	FDVR1		04058	49	04548	C0000
09140	FIX1	TF	00344 ,FIX1-1 ,11	04070	26	00344	C406R
09150	B	FIX11		04082	49	04886	C0000
09160	FAX1	TF	00339 ,FAX1-1 ,11	04094	26	00339	C409L
09170	B	FAX11		04106	49	05206	C0000
09180	FAXB	TFL	IN ,FAXB-1 ,11	04118	06	02697	C411P
09190	B	FAXB1		04130	49	05522	C0000
09200	SET	TFL	FAC ,00344 ,11	04142	06	02492	C034M
09210	B	SET1		04154	49	05718	C0000
09220	TF	00309	,-*-1	04166	26	00309	04165
09230	B	WATY1		04178	49	03210	C0000
09240	TF	00309	,-*-1	04190	26	00309	04189
09250	B	WAPT1		04202	49	03246	C0000
09260	TF	00309	,-*-1	04214	26	00309	C4213
09270	B	WACD1		04226	49	03270	C0000
09280	TF	00309	,-*-1	04238	26	00309	04237
09290	B	RATY1		04250	49	03368	C0000
09300	TF	00309	,-*-1	04262	26	00309	04261
09310	B	RAPT1		04274	49	03404	C0000
09320	TF	00309	,-*-1	04286	26	00309	04285
09330	B	RACD1		04298	49	03424	C0000
09340	H			04310	48	00000	C0000
09350	B	**12		04322	49	04310	C0000
09360	H			04334	48	00000	C0000
09370	B	**12		04346	49	04334	C0000
09380	H			04358	48	00000	C0000
09390	B	**12		04370	49	04358	C0000
09400	H			04382	48	00000	C0000
09410	B	**12		04394	49	04382	C0000
09420	H			04406	48	00000	C0000
09430	B	**12		04418	49	04406	C0000
09440	H			04430	48	00000	C0000
09450	B	**12		04442	49	04430	C0000
09460	H			04454	48	00000	C0000
09470	B	**12		04466	49	04454	C0000
09480	H			04478	48	00000	C0000
09490	B	**12		04490	49	04478	C0000
09500	FSBR1	CF	FAC-2	04502	33	02490	C0000
09510	FADD	FAC	,FSBR-1 ,11	04514	01	02492	0402J
09520	BB2			04526	42		

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0953C	SF	FAC-2		04528	32	0249C	00000
09540	B7	FSBRI+12		04540	49	04514	
09550	FDVRI	TFL FAC	,FDVRI-1 ,11	04548	06	02492	0404N
09560	FDIV	FAC	,IN	04560	09	02492	02697
09570	BB2			04572	42		
09580	RSGN1	BNF	**+52 ,FAC-1	04574	44	04626	C2491
09590		BNF	**+26 ,FAC-2	04586	44	04612	02490
09600	CF	FAC-2		04598	33	0249C	00000
0961C	BB2			04610	42		
09620	SF	FAC-2		04612	32	0249C	0000C
09630	BB2			04624	42		
09640	BNF	**+26	,FAC	04626	44	04652	C2492
09650	CF	FAC		04638	33	02492	00000
09660	BB2			04650	42		
09670	SF	FAC		04652	32	02492	0000C
09680	BB2			04664	42		
09690	FXSRI	CF	FAC	04666	33	02492	00000
09700	B7	**+20		04678	49	04698	
09710	SF	FAC		04686	32	02492	00000
09720	A	FAC	,FXSRI-1 ,11	04698	21	02492	0387P
09730	B7	RTN		04710	49	02506	
09740	FXM1	SF	100MK , , ,6	04718	32	0303P	00000
09750	TF	FAC	,99	04730	26	02492	00099
09760	CM	99MK	,00 ,610	04742	14	0244N	000-0
09770	BE	FXMEND		04754	46	04778	C1200
09780	AM	**+8	,00000 ,79	04766	11	04774	-0-00
09790	FXMEND	B	RTN	04778	49	02506	00000
09800	FXD1	TF	FAC ,FXD-1 ,11	04790	26	02492	0392N
09810	BLXM	SET+12	,*-1(0)	04802	66	04154	C4801
09820	D	100MK	,FAC ,6	04814	29	0303P	02492
09830	BV	**+36		04826	46	04862	C1400
09840	TF	FAC	,99MK ,11	04838	26	02492	0244N
09850	BLXM	RESET	,RTN(0)	04850	66	05862	02506
09860	TFM	EI	,571 ,9	04862	16	02707	00N71
09870	BLXM	RESET	,FXNINE(0)	04874	66	05862	07386
09880	FIX11	CM	00344 ,00 ,10	04886	14	00344	000-0
09890	BE	FIX1+12		04898	46	07282	C1200
09900	CM	FAC	,00 ,10	04910	14	02492	000-0
09910	BNE	**+44		04922	47	04966	C1200
09920	BNF	RTN	,00344	04934	44	02506	00344
09930	TFM	EI	,771 ,9	04946	16	02707	00P71
09940	B7	FXNINE		04958	49	07386	
09950	TDM	000REV+1	,1	04966	15	05035	00001
09960	MF	MU-1	,FAC	04978	71	02967	02492
09970	PSI	TD	**+21 ,00344	04990	25	05011	00344
09980	MM	**+9	,0005 ,810	05002	13	05011	0-0-5
09990	BD	**+24	,99	05014	43	05038	00099
10000	CF	MU-1		05026	33	02967	00000
10010	000REV	NOP	AXJ	05038	41	05330	00000
10020	BNF	**+44	,00344	05050	44	05094	00344
10030	TFM	EI	,772 ,9	05062	16	02707	00P72
10040	FXZERO	TF	FAC ,FXZ	05074	26	02492	03099
10050	B7	ERROR		05086	49	02936	
10060	TF	IN	,FAC	05094	26	02697	02492
10070	TFM	FXMEND+6	,FXERI	05106	16	04784	-5186
10080	TFM	FXMEND-18	,FXMULT	05118	16	0476C	-5130

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10090	FXMULT	M	FAC ,IN	05130	23	02492	02697
10100	BCXM	FXM1	,-1(0)	05142	64	04718	0000J
10110	TFM	FXMEND+6	,RTN	05154	16	04784	-2506
10120	TFM	FXMEND-18	,FXMEND	05166	16	0476C	-4778
10130	B7	RTN		05178	49	02506	
10140	FXERI	TFM	EI ,773 ,9	05186	16	02707	00P73
10150	B7	FXNINE		05198	49	07386	
10160	FAX11	CM	00339 ,00 ,10	05206	14	00339	000-0
10170	BE	0NEFAC		05218	46	02494	C1200
10180	BD	**+44	,FAC-9	05230	43	05274	02483
10190	BNF	ZERFAC	,00339	05242	44	02884	00339
10200	TFM	EI	,774 ,9	05254	16	02707	00P74
10210	B7	INFFAC		05266	49	02924	
10220	BLXM	SET+12	,*-1(0)	05274	66	04154	05273
10230	MF	MU-1	,FAC-2	05286	71	02967	02490
10240	TDM	000REV+1	,9	05298	15	05035	00009
10250	TD	PSI+21	,339	05310	25	05011	00339
10260	B7	PSI+12		05322	49	05002	
10270	AXJ	FSL	FAC-11 ,FAC-2	05330	05	02481	02490
10280	TFM	EI	,775 ,9	05342	16	02707	00P75
10290	BNF	NODIV	,00339	05354	44	05426	00339
10300	CF	00339		05366	33	00339	00000
10310	TFL	IN	,FAC	05378	06	02697	02492
10320	TFL	FAC	,ONEZ	05390	06	02492	03121
10330	FDIV	FAC	,IN	05402	09	02492	02697
10340	BXV	INFFAC		05414	46	02924	01500
10350	NODIV	TFL	IN ,FAC	05426	06	02697	02492
10360	BCXM	**+36	,-1(7)	05438	64	05474	0---J
10370	TF	FAC-2	,FAC-4	05450	26	0249C	02488
10380	BLXM	RESET	,RTN(0)	05462	66	05862	02506
10390	FMUL	FAC	,IN	05474	03	02492	02697
10400	BNXV	NODIV+12		05486	47	05438	01500
10410	TF	FAC-3	,FAC-5	05498	26	02489	02487
10420	BLXM	RESET	,ERXV	05510	66	05862	02968
10430	FAXB1	BD	**+20 ,IN-9	05522	43	05542	02688
10440	B7	0NEFAC		05534	49	02494	
10450	BD	**+44	,FAC-9	05542	43	05586	02483
10460	BNF	ZERFAC	,IN-2	05554	44	02884	02695
10470	TFM	EI	,777 ,9	05566	16	02707	00P77
10480	B7	INFFAC		05578	49	02924	
10490	MF	FAXB1	,FAC-2	05586	71	05522	02490
10500	TF	FLTEND	,QSTS+6	05598	26	02966	05628
10510	BLX	SET+12	,LNENT(0)	05610	65	04154	03178
10520	QSTS	B7	QSTS1 , ,0	05622	M9	0563C	
10530	QSTS1	FMUL	FAC ,IN	05630	03	02492	02697
10540	TF	FLTEND	,QSTS2+6	05642	26	02966	05672
10550	BLX	SET+12	,EXPENT(0)	05654	65	04154	03183
10560	QSTS2	B7	ALSQ1 , ,0	05666	M9	05674	
10570	ALSQ1	TFM	FLTEND ,RTN	05674	16	02966	-2506
10580	BNF	RTN	,FAXB1	05686	44	02506	05522
10590	TFM	EI	,676 ,9	05698	16	02707	00G76
10600	B7	ERROR		05710	49	02936	
10610	SET1	CF	00344	05718	33	00344	00000
10620	BXM	**+12	,13(0)	05730	62	05742	00013
10630	TFM	00309	,00000	05742	16	00309	-0000
10640	TFM	00314	,00000	05754	16	00314	-0000

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1620 MONITOR II VERSION 2 FORTRAN II-D SUBROUTINES SET 5						PAGE	22
10650	CF	MU-1	,0101	,810	05766	33	02967 0-1-1
10660	DS		,*-2		05775		C
10670	DS		,*		05777		C
10680	SF	RESET+34	,9090	,810	05778	32	05896 0R0R0
10690	DS		,*-2		05787		C
10700	DS		,*		05789		C
10710	BNV	**24			05790	47	05814 C1400
10720	CF	RESET+34			05802	33	05896 00000
10730	DS	4	,*		05813		4
10740	TFL	QZF	,QZ1		05814	06	05813 C5777
10750	BNXV	**24			05826	47	05850 C1500
10760	TFL	QZF	,QZ2		05838	06	05813 05789
10770	BSBA	00344	,	,6	05850	60	00344 C0001
10780	RESET	BV	**12		05862	46	05874 C1400
10790	BNXV	**12			05874	47	05886 C1500
10800	AM	**8	,00000	,79	05886	11	05894 -C-C0
10810	FMUL	QZF	,QZ2		05898	03	05813 05789
10820	BNF	**24	,MU-1		05910	44	05934 02967
10830	SF	FAC-2			05922	32	0249C 00000
10840	BSBB	00304	,	,6	05934	60	C030M C0002
10850	***	CONSTANTS	REQUIRED FOR FEXP				
10860	T	DC 11	,12785175598	,, E00 . ADJ FOR -.05	05956		11
10870	AEX	DC 10	,2540195232	,,E01	05966		10
10880	BEX	DC 10	,2831555956		05976		10
10890	CEX	DC 12	,128117013714		05988		12
10900	DEX	DC 12	,239814182594		06000		12
10910	DEES	DC 10	,1122018454		06010		10
10920		DC 10	,1412537545		06020		10
10930		DC 10	,1778279410		06030		10
10940		DC 10	,2238721139		06040		10
10950		DC 10	,2818382931		06050		10
10960		DC 10	,35481 33892		06060		10
10970		DC 10	,44668 35922		06070		10
10980		DC 10	,5623413252		06080		10
10990		DC 10	,70794 57844		06090		10
11000		DC 10	,89125 09381		06100		10
11010	ONE	DC 12	,100000000000		06112		12
11020	*	CONSTANTS	REQUIRED FOR FLN				
11030	CONST	DC 12	,0346 5735 9028	,,0.3	06124		12
			-34657359C28				

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1620 MONITOR II VERSION 2 FORTRAN II-D SUBROUTINES SET 5						PAGE	23
11040	DC	12	,1039 7207 7084	,,1.0	06136		12
			J03972077084				
11050	DC	12	,1732 8679 5138	,,1.7	06148		12
			J73286795138				
11060	DC	12	,2426 0151 3194	,,2.7	06160		12
			K42601513194				
11070	LN10	DC 12	,2302 5850 9299	,,2.3	06172		12
			K30258509299				
11080	RSQR2	DC 8	,7071 0678	,, .7	06180		8
			P0710678				
11090	C7	DC 9	,3009 9259 4		06189		9
			L00992594				
11100	C5	DC 7	,3996 585		06196		7
			L996585				
11110	C3	DC 9	,6666 6947 6		06205		9
			O66669476				
11120	**	CONSTANTS	FOR ARC TAN				
11130	DC	10	,-3333295775		06215		10
			L333329577N				
11140	AT	DC 2	,00		06217		2
			-0				
11150	DC	10	,19964 10398		06227		10
			J996410398				
11160	BT	DC 2	,00		06229		2
			-0				
11170	DC	10	,-1317798930		06239		10
			J31779893-				
11180	CT	DC 2	,00		06241		2
			-0				
11190	*****	RANGE ONE	Z=.24 TO .79...PI/7 ,COT(),CSC()*CSC()				
11200	DC	10	,44879 89505		06251		10
			M487989505				
11210	AK	DC 2	,00	,, ALPHA (1)	06253		2
			-0				
11220	DC	10	,20765 21397		06263		10
			K076521397				
11230	BK	DC 2	,01	,, BETA(1)	06265		2
			-1				
11240	DC	10	,53119 41110		06275		10
			N311941110				
11250	GK	DC 2	,01	,, GAMMA (1)	06277		2
			-1				
11260	*****	RANGE TWO	Z=.80 TO 2.076...2PI/7 ,COT(),CSC()*CSC()				
11270	DC	10	,89759 79010		06287		10
			Q975979010				
11280	DC	2	,00		06289		2
			-0				
11290	DC	10	, 79747 33889		06299		10
			P974733889				
11300	DC	2	,00		06301		2
			-0				
11310	DC	10	,16359 63806		06311		10
			J635963806				
11320	DC	2	,01		06313		2
			-1				
11330	*****	RANGE THREE	Z=2.077-INFIN ...3PI/7 ,COT(),CSC()*CSC()				

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11340	DC 10	,13463 96852		06323	1C	
	J346396852					
11350	DC 2	,01 ,,	ALPHA (3)	06325	2	
	-1					
11360	DC 10	,22824 34744		06335	1C	
	K282434744					
11370	DC 2	,00 ,,	BETA (3)	06337	2	
	-0					
11380	DC 10	,10520 95084		06347	1C	
	J052095084					
11390	DC 2	,01		06349	2	
	-1					
11400	DC 10	,000000000,,	A ZERO	06359	1C	
	-000000000					
11410	DC 2	, -99 ,,	ALPHA (0)	06361	2	
	RR					
11420	DC 8	,15707963		06369	8	
	J5707963					
11430	PIOV2	DC 2	,1	06371	2	
	-1					
11440	*	CONSTANTS FOR SIN COS				
11450	ASC	DC 10	, -1463026834,,	E+1	06381	1C
	J46302683M					
11460	BSC	DC 10	, 4031377410,,	E+0	06391	1C
	M031377410					
11470	CSC	DC 10	, 9717805809,,	E+0	06401	1C
	R717805809					
11480	DSC	DC 10	, -2337364992,,	E+0	06411	1C
	K33736499K					
11490	ESC	DC 10	, 3976072207,,	E+2	06421	1C
	L976072207					
11500	PT25	DC 10	,2500000000		06431	1C
	K500000000					
11510	R2PI	DC 10	,15915 49413		06441	1C
	J591549413					
11520	PT75	DC 10	,7500000000		06451	1C
	P500000000					
11530		DORG 8000		08000		
11540	AS4	34 A4	,701	08000 34	08036 00701	
11550		38 A4	,702	08012 38	08036 00702	
11560		49 *+26		08024 49	08050 00000	
11570	A4	DSC 14	,01572503703800	08036	14	
	01572503703800					
11580		TRA		08050 36	00000 00500	
				08062 49	00000 00000	
11590		TCD AS4		08000		
11600	QSTZS	H		08074 48	00000 00000	
11610		DEND QSTZS		08074		

COMADD	02231	RDFIX3	05966	DEES	06010	INH	02521	RDDA1	03333
COMPLT	06360	RDGIVE	04882	DEX	06000	IN	02697	RDDA	03325
DALONG	04894	RDNMUS	05370	OSC	06411	IOCAL	00716	RDEEC	05338
DARITH	03667	RDPLUS	05382	DUOH	02699	IOGT	00566	RDDIG	05626
DATDUD	07081	RDSDEC	05379	DUD	02739	IOPT	00532	RDECK	05594
DATINH	07073	RDSDIG	05381	DUMMY	99999	IQRBC	00520	RDE	05438
DIODDA	02868	RDSERR	05378	EI	02707	IORT	00565	RDLT	05898
DKDATA	02860	RDSSETY	05377	EMASK	06147	IOSK	00554	RDLPL	05426
ENDFCR	02521	RDSGNO	05380	ENTLN	02248	ITYPE	04310	ROSA	03353
ENTABS	02323	RDZERO	02769	ERCOM	04758	IXNEN	05718	ROSQP	04664
ENTATN	02313	READA1	04762	ERF8	04746	IXP	05882	READA	04654
ENTCOS	02303	READA2	04786	ERF9	04994	JHB	04922	RECLG	02243
ENTDED	02298	READCO	05118	ERRET	00602	K	02221	RECMK	02403
ENTDRR	02293	REPSW3	06640	ERRGR	02936	LN10	06172	REDDA	06326
ENTEXP	02253	RERCOM	04642	ERXV	02968	LNENT	03178	REDD	06290
ENTFID	02273	RETYPE	04942	ESC	06421	LOCD	05397	REP2	06954
ENTREC	02278	RFTYPE	04974	ETYPE	04454	LOC	06645	REP3	06978
ENTSC2	02258	RHTYPE	04522	FAC	02492	LOGE	03143	REPEX	07002
ENTSC3	02263	RITYPE	05022	FAXB1	05522	M2KM1	02942	REP	06882
ENTSDX	02268	RWFSW	03333	FAXB	04118	M2KP1	02989	REPSW	06637
ENTSIN	02308	100MK	03034	FAXI1	05206	MATSW	06638	RESET	05862
ENTSQT	02318	99MK	02445	FAXI	04094	MAX	03188	RETY1	05458
ENTSWD	02288	A1	08036	FDVRI	04548	MKP1	03168	RETY2	05538
ENTW02	07014	A2	08036	FDVR	04046	MK	03173	RSGN1	04574
EXPENT	03183	A3	08036	FILL	05826	MKS	03173	RSGN	03974
FIXDIN	02404	A4	08036	FILLR	05778	MU	02968	RSQR2	06180
FIXEND	02960	AEX	05966	FIX1	07270	N1	02233	RTN	02506
FLOAT2	07086	AK	06253	FIX11	04886	N2	02238	RWA2	06754
FLTEND	02966	ALSQ1	05674	FIXI	04070	NODIV	05426	RWA3	06718
FLZERS	02859	ARITH	03675	FIX	03854	ONE	06112	RWA	06682
FXMEND	04778	AS1	08000	FKODD	02987	ONEZ	03121	SAVE	02592
FXMULT	05130	AS2	08000	FLOAT	03998	PAR	03843	SCONS	04909
FXNINE	07386	AS3	08000	FLOWE	03153	PIOV2	06371	SET1	05718
FXZERO	05074	AS4	08000	FLT3	07214	PSI	04990	SET	04142
INFFAC	02924	ASC	06381	FLZER	03131	PT1	03269	SLASH	06384
IX2HLD	06796	AT	06217	FMON	03564	PT25	06431	SLIP	00000
LOCADJ	06336	ATYPE	04406	F	02219	PT75	06451	START	03851
MATRIX	06444	AXJ	05330	FSBR1	04502	QQ	03552	STOP	02395
MATRIX2	06512	BETA	02630	FSBR	04022	QSTS1	05630	SWCFX	02410
MESERR	02699	BEX	05976	FTYPE	04430	QSTS2	05666	SWCM1	03204
MNCAL	00796	BK	06265	FX1	03109	QSTS	05622	SWCM2	03209
MOVEXP	05162	BSC	06391	FX9	03089	QSTZS	08074	SWC	06646
MOVMAN	05218	BSWF	06834	FXD1	04790	QZ1	05777	SWL	06586
ODDSET	04786	BT	06229	FXDR	03950	QZ2	05789	TRACE	03004
ODDREV	05038	C3	06205	FXD	03926	QZF	05813	TRFX	03066
OVFLOW	02924	C5	06196	FXER1	05186	R2PI	06441	T	05956
PROGST	02226	C7	06189	FXH	03072	RACD1	03424	TY1	03245
RADDIT	06026	CD1	03403	FXM1	04718	RACD	04286	TYPE	03423
RADADJ1	05806	CEX	05988	FXM	03902	RAPT1	03404	UNFLO	02904
RDBLNK	05638	CHAR	04963	FXSR1	04666	RAPT	04262	WACD1	03270
RDCOM1	05138	CLOBB	03496	FXSR	03878	RATY1	03368	WACD	04214
RDCOM2	05270	CLOTT	03516	FXZ	03099	RATY	04238	WAFX	04418
RDCOM3	05306	CNTS	05103	GAM	02739	RDADJ	05762	WAPT1	03246
RDERF7	04502	CONST	06124	GK	06277	RDALP	03448	WAPT	04190
		CSC	06401	HTYPE	04478	RDCOM	05058	WATY1	03210
		CT	06241	INF	03163	RDCS	05195	WATY	04166

WCK	05209	WRITE	06082	WSIGN	05862	WEFCOM	05018	WRTALP	03294
WDSA	03360	WRTA	04490	XSGN	07478	WFSIGN	05918	WRTSGN	04630
WEDEC	05838	WRTE	05442	XTYPE	06846	WFZERO	05966	WZERCK	05574
WH	04886	WRTF	05610	XX	99999	WHTYPE	04814	ZERFAC	02884
WICK	04722	WRTI2	04546	ZERO	02757	WIEXIT	04690	ZERO10	02767
WIDTH	04861	WRTI	04514	SLASH2	06022	WRITEA	04334		
WMASK	06127	W	02240	STZERO	02771	WRTACK	04382		

END OF ONE ASSEMBLY.

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00010	*****	1620 FORTRAN II-D	SUBROUTINES WITH FLOATING POINT HARDWARE						
00020	*****	IORT ENTRY POINTS AND CONSTANTS							
00030	IORBC	DS	,520		00520		C		
00040	IOPT	DS	,532		00532		C		
00050	IOSK	DS	,554		00554		O		
00060	IOLT	DS	,566		00566		C		
00070	ERRET	DS	,602		00602		C		
00080	IORT	DS	,565		00565		C		
00090	ILOCAL	DS	,716		00716		C		
00100	MONCAL	DS	,796		00796		C		
00110	*****	1620 FORTRAN II-D	IN CORE AREAS						
00120	***	COMMUNICATION AREA							
00130	DORG		2218		02218				
00140	F	DS	2,, FLOATING POINT WORD LENGTH		02219		2		
00150	K	DS	2,, FIXED POINT WORD LENGTH		02221		2		
00160	PROGST	DS	5,, STARTING ADDRESS OF MAINLINE PROGRAM		02226		5		
00170	COMADD	DS	5,, STARTING ADDRESS OF COMMON AREA		02231		5		
00180	N1	DS	2,, NUMBER OF WORDS IN LOGICAL RECORD		02233		2		
00190	N2	DS	5,, NUMBER OF LOGICAL RECORDS		02238		5		
00200	W	DS	2,, WORD LENGTH		02240		2		
00210	RECLG	DS	3,, RECORD LENGTH		02243		3		
00220	ENTLN	DS	5,, ENTRY ADDRESS TO LOG SUBROUTINE		02248		5		
00230	ENTEXP	DS	5,, ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE		02253		5		
00240	ENTSC2	DS	5,, ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE		02258		5		
00250	ENTSC3	DS	5,, ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE		02263		5		
00260	ENTSDX	DS	5,, ENTRY ADDRESS TO SWITCH D FIXED SUBROUTINE		02268		5		
00270	ENTFID	DS	5,, ENTRY ADDRESS TO FIND SUBROUTINE		02273		5		
00280	ENTREC	DS	5,, ENTRY ADDRESS TO RECORD SUBROUTINE		02278		5		
00290	ENTFET	DS	5,, ENTRY ADDRESS TO FETCH SUBROUTINE		02283		5		
00300	ENTSWD	DS	5,, ENTRY ADDRESS TO SWITCH D SUBROUTINE		02288		5		
00310	ENTDRR	DS	5,, ENTRY ADDRESS TO ARRAY SUBROUTINE		02293		5		
00320	ENTDEC	DS	5,, ENTRY ADDRESS TO DISK END SUBROUTINE		02298		5		
00330	ENTCOS	DS	5,, ENTRY ADDRESS TO COSINE SUBROUTINE		02303		5		
00340	ENTSIN	DS	5,, ENTRY ADDRESS TO SINE SUBROUTINE		02308		5		
00350	ENTATN	DS	5,, ENTRY ADDRESS TO ARCTANGENT SUBROUTINE		02313		5		
00360	ENTSQT	DS	5,, ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE		02318		5		
00370	ENTABS	DS	5,, ENTRY ADDRESS TO ABSOLUTE SUBROUTINE		02323		5		
00380		DS	70,,RESERVED FOR ENTRIES TO ADDED SUBROUTINES		02393		7C		
00390	*****	COMMON WORKING AREAS							
00400	STOP	DAC	5,STOP		02395		5 X 2		
		STOP*							
00410	RECHK	DS	,STOP*8		02403		C		
00420	FINDIN	DS	1		02404		1		
00430		DS	5		02409		5		
00440	SWCFX	TD	-SWCM1 ,SWCFX-1		02410	25	0320M	C2409	
00450	TFL		-SWCM2 ,SWCFX-2		02422	06	0320R	02408	
00460	SF		-SWCM1 ,00000		02434	32	0320M	00000	
00470	99MK	DC	5 ,00099 ,*		02445		5		
			-0099						
00480	B7		-3808		02446	49	0380Q		
00490	FAC	DS	40		02492		40		
00500		DC	1 ,'		02493		1		
00510	ONEFAC	TFL	FAC ,FLONE		02494	06	02492	03153	
00520	R7N	BSB	**12		02506	60	02518	00002	
00530		BB2			02518	42			

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0133C	EXPENT	DC	5	, -1		03183	5		
			-000J						
0134C	MAX	DS	5			03188	5		
01350		DORG	03200			03200			
0136C	SWCM1	DSA	SWC-1			03204	5 X	1	
						03204	-6807		
01370	SWCM2	DSA	SWC-2			03209	5 X	1	
						03209	-6806		
01380	WATY1	TFL	MAX	,TY1		03210	06	03188	03245
01390		TDM	TYPE	,0		03222	15	03369	00000
01400		B	WRTALP	,06173	,79	03234	49	03294	-6J73
01410	TY1	DS		,*		03245		C	
01420	WAPT1	TFL	MAX	,PT1		03246	06	03188	03269
01430		B	WRTALP-12	,08173	,79	03258	49	03282	-8J73
01440	PT1	DS		,*		03269		C	
01450	WACD1	TFL	MAX	,CD1		03270	06	03188	03349
01460	*	*****	WRT ALP	PREP TO CALL	WRT SECT IF NOT IN CORE				
01470		TDM	TYPE	, -5	,,	03282	15	03369	0000N
01480	WRTALP	TDM	RWEFSW	,1	,,	03294	15	03304	00001
01490	RWEFSW	DS		,*-1		03304		C	
01500		B7	RWA			03306	49	06844	
01510	RATY1	TFL	MAX	,TY1		03314	06	03188	03245
01520		TDM	TYPE	,0	,,	03326	15	03369	00000
01530		B	RDALP	,10159	,79	03338	49	03394	J0J59
01540	CD1	DS		,*		03349		C	
01550	RAPT1	TFL	MAX	,PT1		03350	06	03188	03269
01560		B7	RDALP-12			03362	49	03382	
01570	TYPE	DS	1			03369		1	
01580	RACD1	TFL	MAX	,CD1		03370	06	03188	03349
01590		TDM	TYPE	, -5	,,	03382	15	03369	0000N
01600	RDALP	TDM	RWEFSW	,0	,,	03394	15	03304	00000
01610		B7	RWA			03406	49	06844	
01620	DUMMY	DS		,99999		99999		C	
01630	XX	DS		,DUMMY		99999		C	
01640	START	DS		,03851		03851		C	
01650		DORG	3789			03789			
01660		DSA	WATY			03793	5 X	1	
						03793	-4166		
01670		DSA	REP3			03798	5 X	1	
						03798	-714C		
01680		DSA	TRACE			03803	5 X	1	
						03803	-3004		
01690		DSA	SWC			03808	5 X	1	
						03808	-6808		
01700		DSA	SWCFX			03813	5 X	1	
						03813	-241C		
01710		DSA	SLASH			03818	5 X	1	
						03818	-6546		

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01720		DSA	REP			03823	5 X	1	
						03823	-7044		
01730		DSA	REDD			03828	5 X	1	
						03828	-6452		
01740		DSA	XTYPE			03833	5 X	1	
						03833	-7008		
01750		DSA	COMPLT			03838	5 X	1	
						03838	-6522		
01760	PAR	DSA	0			03843	5 X	1	
						03843	-0000		
01770		DSA	MATRIX			03848	5 X	1	
						03848	-6606		
01780	*****		SECONDARY LINKAGES						
01790		DORG	START			03851			
01800		DS	3			03853		3	
01810	FIX	TFL	FAC	,FIX-1	,11	03854	06	02492	C385L
0182C		B	FIX1			03866	49	C7432	00000
01830	FXSR	BNF	FXSR1+20	,FAC		03878	44	04686	02492
01840		B	FXSR1			03890	49	04666	00000
01850	FXM	M	FAC	,FXM-1	,11	03902	23	02492	C390J
01860		B	FXM1			03914	49	04718	00000
01870	FXD	LD	99	,FAC		03926	28	00099	02492
01880		B	FXD1			03938	49	04790	00000
01890	FXDR	LD	99	,FXDR-1	,11	03950	28	00099	C394R
01900		B	FXD1+12			03962	49	04802	00000
01910	RSGN	TFL	FAC	,RSGN-1	,11	03974	06	02492	0397L
01920		B	RSGN1			03986	49	04574	00000
01930	FLOAT	TFL	FAC	,*-1	,11	03998	06	02492	0399P
01940		B	FLOAT2			04010	49	07248	00000
01950	FSBR	BNF	FSBR1+26	,FAC-2		04022	44	04528	02490
01960		B	FSBR1			04034	49	04502	00000
01970	FDVR	TFL	IN	,FAC		04046	06	C2697	02492
01980		B	FDVR1			04058	49	04548	00000
01990	FIXI	TF	00344	,FIXI-1	,11	04070	26	00344	0406R
02000		B	FIXI1			04082	49	04886	00000
02010	FAXI	TF	00339	,FAXI-1	,11	04094	26	00339	C409L
02020		B	FAXI1			04106	49	C5206	00000
02030	FAXB	TFL	IN	,FAXB-1	,11	04118	06	C2697	0411P
02040		B	FAXB1			04130	49	05522	00000
02050	SET	TFL	FAC	,00344	,11	04142	06	02492	0034M
02060		B	SET1			04154	49	05718	00000
02070	WATY	TF	00309	,*-1		04166	26	00309	04165
02080		B	WATY1			04178	49	0321C	00000
02090	WAPT	TF	00309	,*-1		04190	26	00309	04189
02100		B	WAPT1			04202	49	03246	00000
02110	WACD	TF	00309	,*-1		04214	26	00309	04213
02120		B	WACD1			04226	49	0327C	00000
02130	RATY	TF	00309	,*-1		04238	26	00309	04237
02140		B	RATY1			04250	49	C3314	00000
02150	RAPT	TF	00309	,*-1		04262	26	00309	04261

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02160	B	RAPT1			04274	49	03350	C0000
02170	RACD	TF	00309	,*-1	04286	26	00309	04285
02180	B	RACD1			04298	49	03370	C0000
02190	ITYPE	BD	WRTI-24	,RNEFSW	04310	43	0778C	03304
02200	B	RITYPE-12			04322	49	10086	C0000
02210	H				04334	48	00000	00000
02220	B	*-12			04346	49	04334	C0000
02230	H				04358	48	00000	C0000
02240	B	*-12			04370	49	04358	C0000
02250	H				04382	48	00000	C0000
02260	B	*-12			04394	49	04382	C0000
02270	ATYPE	BD	WRITEA-12	,RNEFSW	04406	43	0766C	03304
02280	B	READA-12			04418	49	0967C	00000
02290	FTYPE	BD	WEFCOM-24	,RNEFSW	04430	43	08344	03304
02300	B	RFTYPE-12			04442	49	10026	C0000
02310	ETYPE	BD	WEFCOM-48	,RNEFSW	04454	43	0832C	03304
02320	B	RETYPE-12			04466	49	09982	C0000
02330	HTYPE	BD	WHTYPE-12	,RNEFSW	04478	43	08104	03304
02340	B	RHTYPE-12			04490	49	09526	C0000
02350	FSBR1	CF	FAC-2		04502	33	0249C	C0000
02360	FADD	FAC		,FSBR-1 ,11	04514	01	02492	0402J
02370	BB2				04526	42		
02380	SF	FAC-2			04528	32	0249C	C0000
02390	B7	FSBR1+12			04540	49	04514	
02400	FDVR1	TFL	FAC	,FDVR-1 ,11	04548	06	02492	0404N
02410	FDIV	FAC		,IN	04560	09	02492	02697
02420	BB2				04572	42		
02430	RSGN1	BNF	**52	,FAC-1	04574	44	04626	02491
02440	BNF	**26		,FAC-2	04586	44	04612	02490
02450	CF	FAC-2			04598	33	0249C	00000
02460	BB2				04610	42		
02470	SF	FAC-2			04612	32	0249C	C0000
02480	BB2				04624	42		
02490	BNF	**26		,FAC	04626	44	04652	02492
02500	CF	FAC			04638	33	02492	C0000
02510	BB2				04650	42		
02520	SF	FAC			04652	32	02492	00000
02530	BB2				04664	42		
02540	FXSR1	CF	FAC		04666	33	02492	C0000
02550	B7	**20			04678	49	04698	
02560	SF	FAC			04686	32	02492	C0000
02570	A	FAC		,FXSR-1 ,11	04698	21	02492	C387P
02580	B7	RTN			04710	49	02506	
02590	FXM1	SF	100MK		04718	32	0303M	00000
02600	TF	FAC		,99	04730	26	02492	00099
02610	CM	99MK		,00 ,610	04742	14	0244A	000-C
02620	BE	FXMEND			04754	46	0477E	C1200
02630	AM	**8		,00000 ,79	04766	11	04774	-0-00
02640	FXMEND	B	RTN		04778	49	02506	00000
02650	FXD1	TF	FAC	,FXD-1 ,11	04790	26	02492	0392N
02660	BLXM	SET+12		,*-1(0)	04802	66	04154	C48C1
02670	D	100MK		,FAC ,6	04814	29	0303M	02492
02680	BV	**36			04826	46	04862	01400
02690	TF	FAC		,99MK ,11	04838	26	02492	0244N
02700	BLXM	RESET		,RTN(0)	04850	66	05862	02506
02710	TFM	EI		,571 ,9	04862	16	027C7	00N71

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02720	BLXM	RESET		,FXNINE(0)	04874	66	05862	C7548
02730	FIX11	CM	00344	,00 ,10	04886	14	00344	CC0-C
02740	BE	FIX1+12			04898	46	07444	01200
02750	CM	FAC		,00 ,10	04910	14	02492	CC0-C
02760	BNE	**44			04922	47	04966	C1200
02770	BNF	RTN		,00344	04934	44	025C6	C0344
02780	TFM	EI		,771 ,9	04946	16	02707	00P71
02790	B7	FXNINE			04958	49	07548	
02800	TDM	ODDREV+1		,1	04966	15	05039	CC001
02810	MF	MU-1		,FAC	04978	71	02967	02492
02820	PSI	TD	**21	,00344	04990	25	05011	00344
02830	MM	**9		,0005 ,810	05002	13	05011	C-0-5
02840	BD	**24		,99	05014	43	05038	C0099
02850	CF	MU-1			05026	33	02967	00000
02860	ODDREV	NOP	AXJ		05038	41	0533C	00000
02870	BNF	**44		,00344	05050	44	05094	C0344
02880	TFM	EI		,772 ,9	05062	16	02707	00P72
02890	FXZERO	TF	FAC	,FXZ	05074	26	02492	03099
02900	B7	ERROR			05086	49	02936	
02910	TF	IN		,FAC	05094	26	02697	02492
02920	TFM	FXMEND+6		,FXERI	05106	16	04784	-5186
02930	TFM	FXMEND-18		,FXMULT	05118	16	0476C	-5130
02940	FXMULT	M	FAC	,IN	05130	23	02492	02697
02950	BCXM	FXM1		,*-1(0)	05142	64	04718	0000J
02960	TFM	FXMEND+6		,RTN	05154	16	04784	-2506
02970	TFM	FXMEND-18		,FXMEND	05166	16	0476C	-4778
02980	B7	RTN			05178	49	02506	
02990	FXERI	TFM	EI	,773 ,9	05186	16	02707	00P73
03000	B7	FXNINE			05198	49	07548	
03010	FAX11	CM	00339	,00 ,10	05206	14	00339	CC0-0
03020	BE	ONEFAC			05218	46	02494	01200
03030	BD	**44		,FAC-9	05230	43	05274	02483
03040	BNF	ZERFAC		,00339	05242	44	02884	00339
03050	TFM	EI		,774 ,9	05254	16	02707	00P74
03060	B7	INFFAC			05266	49	02924	
03070	BLXM	SET+12		,*-1(0)	05274	66	04154	05273
03080	MF	MU-1		,FAC-2	05286	71	02967	02490
03090	TDM	ODDREV+1		,9	05298	15	05039	00009
03100	TD	PSI+21		,339	05310	25	05011	00339
03110	B7	PSI+12			05322	49	05002	
03120	AXJ	FSL	FAC-11	,FAC-2	05330	05	02481	02490
03130	TFM	EI		,775 ,9	05342	16	02707	00P75
03140	BNF	NODIV		,00339	05354	44	05426	00339
03150	CF	00339			05366	33	00339	C0000
03160	TFL	IN		,FAC	05378	06	02697	02492
03170	TFL	FAC		,ONEZ	05390	06	02492	C3121
03180	FDIV	FAC		,IN	05402	09	02492	02697
03190	BXV	INFFAC			05414	46	02924	01500
03200	NODIV	TFL	IN	,FAC	05426	06	02697	02492
03210	BCXM	**36		,*-1(7)	05438	64	05474	0---J
03220	TF	FAC-2		,FAC-4	05450	26	0249C	02488
03230	BLXM	RESET		,RTN(0)	05462	66	05862	02506
03240	FMUL	FAC		,IN	05474	03	02492	02697
03250	BNXV	NODIV+12			05486	47	05438	01500
03260	TF	FAC-3		,FAC-5	05498	26	02489	02487
03270	BLXM	RESET		,ERXV	05510	66	05862	02968

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03280	FAXB1	BD	**+20	,IN-9	05522	43	05542	02688
03290		B7	ONEFAC		05534	49	02494	
03300		BD	**+44	,FAC-9	05542	43	05586	02483
03310		BNF	ZERFAC	,IN-2	05554	44	02884	02695
03320		TFM	EI	,777	05566	16	02707	00P77
03330		B7	INFFAC		05578	49	02924	
03340		MF	FAXB1	,FAC-2	05586	71	05522	02490
03350		TF	FLTEND	,QSTS+6	05598	26	02966	05628
03360		BLX	SET+12	,LNENT(0)	05610	65	04154	03178
03370	QSTS	B7	QSTS1	,	05622	M9	0563C	
03380	QSTS1	FMUL	FAC	,IN	05630	03	02492	02697
03390		TF	FLTEND	,QSTS2+6	05642	26	02966	05672
03400		BLX	SET+12	,EXPENT(0)	05654	65	04154	03183
03410	QSTS2	B7	ALSQ1	,	05666	M9	05674	
03420	ALSQ1	TFM	FLTEND	,RTN	05674	16	02966	-2506
03430		BNF	RTN	,FAXB1	05686	44	02506	05522
03440		TFM	EI	,676	05698	16	02707	00076
03450		B7	ERROR		05710	49	02936	
03460	SET1	CF	00344		05718	33	00344	00000
03470		BXM	**+12	,13(0)	05730	62	05742	00013
03480		TFM	00309	,00000	05742	16	00309	-0000
03490		TFM	00314	,00000	05754	16	00314	-0000
03500		CF	MU-1	,0101	05766	33	02967	C-1-1
03510		DS		,*-2	05775		0	
03520	QZ1	DS		,*-2	05777		0	
03530		SF	RESET+34	,9090	05778	32	05896	GRORO
03540		DS		,*-2	05787		C	
03550	QZ2	DS		,*	05789		C	
03560		BNV	**+24		05790	47	05814	01400
03570		CF	RESET+34		05802	33	05896	00000
03580	QZF	DS	4	,*	05813		4	
03590		TFL	QZF	,QZ1	05814	06	05813	05777
03600		BNXV	**+24		05826	47	05850	01500
03610		TFL	QZF	,QZ2	05838	06	05813	05789
03620		BSBA	00344	,	05850	60	00344	00001
03630	RESET	BV	**+12	,*	05862	46	05874	01400
03640		BNXV	**+12		05874	47	05886	01500
03650		AM	**+8	,00000	05886	11	05894	-0-00
03660		FMUL	QZF	,QZ2	05898	03	05813	05789
03670		BNF	**+24	,MU-1	05910	44	05934	02967
03680		SF	FAC-2		05922	32	02490	00000
03690		BSBB	00304	,	05934	60	00304	00002
03700	***		CONSTANTS REQUIRED FOR FEXP					
03710	T	DC	11	,12785175598 **, E00 . ACJ FOR -.05	05956		11	
03720	AEX	DC	10	,2540195232 **,E01	05966		10	
03730	BEX	DC	10	,2831555956	05976		10	
03740	CEx	DC	12	,128117013714	05988		12	
03750	DEX	DC	12	,239814182594	06000		12	
03760	DEES	DC	10	,1122018454	06010		10	
03770		DC	10	,1412537545	06020		10	

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03780		DC	10	,1778279410	06030		10	
03790		DC	10	,2238721139	06040		10	
03800		DC	10	,2818382931	06050		10	
03810		DC	10	,35481 33892	06060		10	
03820		DC	10	,44668 35922	06070		10	
03830		DC	10	,5623413252	06080		10	
03840		DC	10	,70794 57844	06090		10	
03850		DC	10	,89125 09381	06100		10	
03860	CNE	DC	12	,10000000000	06112		12	
03870	*		CONSTANTS REQUIRED FOR FLN					
03880	CONST	DC	12	,0346 5735 9028 **,0.3	06124		12	
03890		DC	12	,1039 7207 7084 **,1.0	06136		12	
03900		DC	12	,1732 8679 5138 **,1.7	06148		12	
03910		DC	12	,2426 0151 3194 **,2.7	06160		12	
03920	LN10	DC	12	,2302 5850 9299,**2.3	06172		12	
03930	RSQR2	DC	8	,7071 0678 **, .7	06180		8	
03940	C7	DC	9	,3009 9259 4	06189		9	
03950	C5	DC	7	,3996 585	06196		7	
03960	C3	DC	9	,6666 6547 6	06205		9	
03970	**		CONSTANTS FOR ARC TAN					
03980		DC	10	,-333295775	06215		10	
03990	AT	DC	2	,00	06217		2	
04000		DC	10	,19964 10398	06227		10	
04010	HT	DC	2	,00	06229		2	
04020		DC	10	,-1317798930	06239		10	
04030	CT	DC	2	,00	06241		2	
04040	*****		RANGE ONE Z= .24 TC .79...PI/7 ,CCT(),CSC()=CSC()					
04050		DC	10	,44879 89505	06251		10	
04060	AK	DC	2	,00 **, ALPHA (1)	06253		2	
04070		DC	10	,20765 21397	06263		10	

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04080 BK	DC 2	,01	,,	BETA(1)	06265	2
	-1					
04090	DC 10	,53119 41110			06275	1C
	N311941110					
04100 GK	DC 2	,01	,,	GAMMA (1)	06277	2
	-1					
04110 *****	RANGE TWO Z= .80 T02.076...2PI/7 ,CCT(),CSC()					
04120	DC 10	,89759 79010			06287	1C
	Q975979010					
04130	DC 2	,00			06289	2
	-0					
04140	DC 10	, 79747 33889			06299	1C
	P974733889					
04150	DC 2	,00			06301	2
	-0					
04160	DC 10	,16359 63806			06311	1C
	J635963806					
04170	DC 2	,01			06313	2
	-1					
04180 *****	RANGE THREE Z=2.077-INFIN ...3PI/7 ,CCT(),CSC()					
04190	DC 10	,13463 96852			06323	1C
	J346396852					
04200	DC 2	,01	,,	ALPHA (3)	06325	2
	-1					
04210	DC 10	,22824 34744			06335	1C
	K282434744					
04220	DC 2	,00	,,	BETA (3)	06337	2
	-0					
04230	DC 10	,10520 95084			06347	1C
	J052095084					
04240	DC 2	,01			06349	2
	-1					
04250	DC 10	,0000000000,,		A ZERC	06359	1C
	-000000000					
04260	DC 2	, -99	,,	ALPHA (C)	06361	2
	RR					
04270	DC 8	,15707963			06369	8
	J5707963					
04280 PICV2	DC 2	,1			06371	2
	-1					
04290 *	CONSTANTS FOR SIN COS					
04300 ASC	DC 10	, -1463026834,,		E+1	06381	1C
	J463026834					
04310 BSC	DC 10	, 4031377410,,		E+0	06391	1C
	M031377410					
04320 CSC	DC 10	, 9717805809,,		E+0	06401	1C
	R717805809					
04330 DSC	DC 10	, -2337364992,,		E+0	06411	1C
	K337364992					
04340 ESC	DC 10	, 3976072207,,		E+2	06421	1C
	L976072207					
04350 PT25	DC 10	,2500000000			06431	1C
	K500000000					
04360 R2PI	DC 10	,15915 49413			06441	1C
	J591549413					
04370 PT75	DC 10	,7500000000			06451	1C
	P500000000					

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04380 REDO	BD REDO+12	,MATSW			06452	43	C65CC	C6800
04390	TDM SWC+13	,1			06464	15	C6821	C0001
04400	BLXM SWL	,REDOA (6)			06476	66	C6748	CGM88
04410 REDO	TDM SWL+13	,1			06488	15	C6761	C0001
04420 LOCADJ	DS	,*-1			06498			C
04430	TF 00309	,2 (1)			06500	26	003C9	C00-2
04440	B7 SLASH+12				06512	49	C6558	
04450	DS 2				06520			2
04460 COMPLT	BSBA **12				06522	60	C6534	C0001
04470	BLXM SLASH+24	,RTN (6)			06534	66	C6570	OKN06
04480 SLASH	BXM **12	, -3 (1),,		ADJ IX 1 FORMAT PNTR	06546	62	C6558	CCO-L
04490	BLXM **12	,RWA3 (6)			06558	66	C6570	CCQ8C
04500	TDM SWC+13	,3			06570	15	C6821	C0003
04510	BD SLASH 2	,RWEFSW			06582	43	09372	C3304
04520	B 0	(6)			06594	49	0--0C	C000C
04530 MATRIX	TDM MATSW	,1			06606	15	C680C	C0001
04540	TDM SWL+13	,9			06618	15	C6761	C0009
04550	TFM LOCADJ	,10		,10	06630	16	C6498	000J0
04560	BNF **24	,MATRIX-1			06642	44	C6666	C6605
04570	TF LOCADJ	,MKS			06654	26	C6498	C3173
04580	B7 MATRIX+12				06666	49	C6686	
04590 MATRIX2	A MATRIX-1	,LOCADJ			06674	21	C6605	C6498
04600	TF LOC	,MATRIX-1			06686	26	C68C7	C6605
04610	SM PAR	,01		,10	06698	12	C3843	C00-1
04620	BNE **24				06710	47	C6734	C1200
04630	TDM MATSW	,0			06722	15	C6800	0000C
04640	BNL SWC+12				06734	46	C682C	C1300
04650	BB2				06746	42		
04660 SWL	BSBB **12				06748	60	C676C	C0002
04670	BB MATRIX2				06760	42	C6674	C0000
04680	TDM SWL+13	,9			06772	15	C6761	C0009
04690	BD SWC+12	,MATSW			06784	43	C682C	C6800
04700	NOP	,LOC			06796	41	C000C	C6807
04710 REPSW	DS	,*-8			06799			C
04720 MATSW	DS	,*-7			06800			C
04730 REPSW3	DS	,*-5			06802			C
04740 LOC	DS	,*			06807			C
04750 SWC	TDM SWL+13	,2			06808	15	C6761	C0002
04760	BD JHB	,RWEFSW			06820	43	08224	C3304
04770	BSBA -00334				06832	60	0033M	C0001
04780 *	RWA	...ST DFINR CODE,RESET .REPSW..MATSW..REPSW3.						
04790 *	SET SWL TO BB TO OBJ PGM. INIT ERROR TO F9							
04800 RWA	TF DATINH+2	,MAX-3			06844	26	07237	03185
04810	TFM REPSW3	,00000			06856	16	C6802	-0000
04820	TDM SWL+13	,2			06868	15	C6761	C0002
04830 *	RWA3	... LD IX A2 WITH -.MAX.-1 AND ST IN .IX2HLD.						
04840 RWA3	TFM 00314	,99997			06880	16	00314	R9997
04850	S 00314	,MAX			06892	22	C0314	C3188
04860	TF IX2HLD	,00314			06904	26	C6958	00314
04870 *	RWA2	... RESET .CCMPSW. INIT I/O REC TO ALPHA BLANKS						
04880 *	RCTY IF MATY,SKIP .RA DO IT. IF WRTG							
04890 RWA2	TR INH-1	,STZERC-1			06916	31	C252C	02770
04900	TR INH+86	,STZERC			06928	31	C2607	02771
04910	BD **24	,TYPE			06940	43	C6964	C3369
04920	RCTY 0000C				06952	34	C000C	CC102
04930 IX2HLD	DS	,*-5			06958			C

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04940	BSBA	**12			06964	60	06976	C00C1
04950	BD	BSWF		,RWEFSW	06976	43	06956	C3304
04960	B7	RADOIT			06988	49	11114	
04970	*	.....	BSWF	... FORMAT CONTROL, BR TO FORMAT SPEC IA, SET IX 1				
04980	*	.....	TO PNT	AT WIDTH SPEC IN FORMAT STATEMENT				
04990	BSWF	BXM	-5	(1),8 (1)	06996	62	000-N	C00-8
05000	XTYPE	MA	**23	,309	07008	70	07031	00309
05010		BCX	BSWF	,** (2)	07020	63	06996	CC-CC
05020		BLXM	BSWF	,99998 (2)	07032	66	06996	99R98
05030	REP	BLXM	**12	,REPSW (7)	07044	66	07056	CCPR9
05040		SM	0	(7),01 ,10	07056	12	0---0	C00-1
05050		BH	REP2		07068	46	07116	01100
05060		BE	REPEX		07080	46	07164	C1200
05070		A	0	(7),4 (1)	07092	21	0---C	000-4
05080		BNH	REPEX		07104	47	07164	01100
05090	REP2	TF	00309	,2 (1)	07116	26	00309	CCO-2
05100		BXM	BSWF	, -5 (1)	07128	62	06996	CCO-N
05110	REP3	SF	REPSW3-1		07140	32	06801	C0000
05120		BLXM	REP+12	,REPSW3(7)	07152	66	07056	00Q-2
05130	REPEX	BXM	BSWF	,4 (1)	07164	62	06996	CCO-4
05140	ERCOM2	RCTY			07176	34	0000C	CC102
05150		WATY	DUDH		07188	39	C2699	CC10C
05160		RCTY			07200	34	0000C	CC102
05170		TD	EI+2	,RECMK	07212	25	02709	C2403
05180		B7	BSWF		07224	49	06996	
05190	DATINH	DSA	IN(2)		07235		5 X	1
					07235		-2097	
05200	DC	2		,00	07237		2	
	-0							
05210	DGM				07238		1	
05220	DATODC	DSA	DUDH		07243		5 X	1
					07243		-2699	
05230	DC	2		,00	07245		2	
	-0							
05240	DGM				07246		1	
05250	FLCAT2	BSBA	**12		07248	60	0726C	C0001
05260		BLX	**12	,MK (5),, SET IX 5 TO -K	07260	65	07272	011P3
05270		CF	FAC+1(5)		07272	33	0K4R3	C0000
05280		CF	FAC-4		07284	33	02488	C0000
05290		MF	MU-1	,FAC	07296	71	C2967	C2492
05300	BD	**32	,FAC+1 (5),,	HI ORDER DIG	07308	43	07340	0K4R3
05310	BCXM	-12	,1 (5),,	STEP IX5 BY 1	07320	64	07308	C-0-1
05320	B7	ZERFAC			07332	49	C2884	
05330	BD	FLT3	,328	,, SKIP IF HI ORDER DIGIT NOT ZERO	07340	43	07376	C0328
05340	SF	FAC	(5),1	,7	07352	32	0K4R2	-0001
05350	FSL	FAC-10	,FAC		07364	05	02482	C2492
05360	FLT3	MF	328	,329 ,, EXP IS NEG IX5 VALUE	07376	71	00328	C0329
05370	TF	FAC	,329		07388	26	C2492	C0329
05380	SF	FAC-9			07400	32	02483	C000C
05390	MF	FAC-2	,MU-1	,, RESTORE ORIG SIGN	07412	71	C248C	C2967
05400	B7	FLTEND	,	,6	07424	49	C296C	
05410	FIX1	TFM	FAC-20	,000 ,9	07432	16	C2472	CC-00
05420	MF	MU-1	,FAC-2		07444	71	02967	C2490
05430	TF	FAC-22	,FAC-2		07456	26	0247C	C2490

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05440	CM	FAC	,00	,10	07468	14	02492	000-0
05450	BH	**32			07480	46	07512	01100
05460	TF	FAC	,FXZ		07492	26	02452	C3099
05470	B7	FIXEND			07504	49	C296C	
05480	C	FAC	,K		07512	24	02492	02221
05490	BNH	**56			07524	47	0758C	01100
05500	TFM	EI	,572	,9	07536	16	02707	00N72
05510	FXNINE	TF	FAC	,FX9	07548	26	02492	03089
05520	MF	FAC	,MU-1		07560	71	C2492	02967
05530	B7	ERROR			07572	49	02936	
05540	TFM	**59	,FAC-30		07580	16	07639	-2462
05550	A	**47	,FAC		07592	21	07639	02492
05560	ADM	FAC-30	,0	,11	07604	15	02462	0000-
05570	TF	FAC	,FXZ		07616	26	02492	03099
05580	A	FAC	,**		07628	21	02492	C0000
05590	XSGN	MF	FAC	,MU-1	07640	71	02492	C2967
05600	B7	FIXEND			07652	49	02960	
05610	BLXM	SWL	,WRITEA(6)		07660	66	06748	0P072
05620	WRITEA	BLXM	ERF9-12	,**12 (6),, BR TO CHECK RECORD LENGTH	07672	66	08284	0P084
05630	BNF	WA	FX	,FAC-1	07684	44	07744	02491
05640	TF	FAC	,FAC-2	,, SHIFT IF FL NO.	07696	26	02492	02490
05650	BXM	WRT A	-8	(4)	07708	62	07756	0-000
05660	WRTACK	TF	IN-2 (2),FAC	(4)	07720	26	02095	0K492
05670	B	BSWF			07732	49	06996	00000
05680	WAFX	BX	WRT A	,MK (4)	07744	61	07756	01173
05690	WRTA	BNH	WRTA CK	,01	07756	47	0772C	01101
05700	BXM	WRT A	-2	(4)	07768	62	07756	C-00K
05710	*	WRITE I	TYPE FROM FAC TO I/O REC					
05720	BLX	**12	,MKP1 (5),,	SET I5 TO -K +1	07780	65	07792	01108
05730	BLXM	SWL	,WRT I (6)		07792	66	06748	CPQ04
05740	WRTI	BNF	WRT I2+12,FAC-1	,, FIXED NUMBER	07804	44	07848	C2491
05750	TFM	FIXEND+6	,WRT I2		07816	16	02966	-7836
05760	B7	FIX 1			07828	49	07432	
05770	WRTI2	TFM	FIXEND+6	,RTN	07836	16	02966	-2506
05780	BLXM	ERF9-12	,**12 (6),,	BR TO CHECK RECORD LENGTH	07848	66	08284	CPQ60
05790	MF	MU-1	,FAC		07860	71	02967	02492
05800	TR	DUD-29	,FLZERS-29,,	CLEAR DUD AREA	07872	31	02710	02830
05810	BD	WRTSGN-12,FAC	(5),,	HI ORD DIG LOC (IX 5 = -K+1)	07884	43	07908	0K4R2
05820	BCXM	**12	,1 (5),,	DECRE HICRD ZERO	07896	64	07884	0-0-1
05830	SF	FAC-1 (5),	,,	DEFINE HICRD DIGIT	07908	32	0K4R1	00000
05840	WRTSGN	BX	**12	,329 (5),, DOUBLE IX 5	07920	61	07932	0-3K9
05850	TNF	GAM-2	,FAC		07932	73	02737	02492
05860	BNF	WICK-12	,MU-1		07944	44	0800C	02967
05870	TFM	GAM-4 (5),20	,10		07956	16	0K7L5	000K0
05880	BXM	WICK	-2 (5),,	ALLOW FOR SIGN	07968	62	08012	C-0-K
05890	WIEEXIT	TF	IN-2 (2),GAM-2	,, MOVE DATA TO I/O RECORD	07980	26	02095	02737
05900	B7	BSWF			07992	49	06996	
05910	SF	GAM-3 (5),	,,	DEFINE HI ORD DIGIT FOR PLUS VALUE	08000	32	0K7L6	00000
05920	WICK	BCX	WI EXIT	,329 (4),, WIDTH SPEC OK W*2+IX5 MORE THAN 1	08012	63	07980	0-329
05930	TR	GAM-29	,GAM-3 (5),,	SHIFT ERROR VALUE LEFT	08024	31	02710	0K7L6
05940	ERF8	TFM	EI+2	,67800 ,, SET ERF8, ERASE RM	08036	16	02709	07800
05950	ERCOM	BNF	ERCOM2	,TYPE	08048	44	07176	03369
05960	TF	DAT DUD+2,DAT INH+2,,		INSERT I/O DEVICE CODE	08060	26	07245	07237
05970	TFM	IORT	**23	,, CUTPUT ERR INFO	08072	16	00565	-8095
05980	B	IOPT	,DAT DUD-4,7		08084	49	00532	-7239
05990	B7	ER COM 2			08096	49	07176	

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06000 *      WRITE H TYPE FROM FORMAT TO I/O RECCRD
06010 *      ..... W H TYPE.. IX BC A IS SEL,IX 1 POINTS AT WIDTH SPEC,IX 2
06020 *      ..... IS AVAIL CHAR IN I/O REG. CALC ST ADR OF H DATA AND MCVG
06030 *      ..... H DATA TO TC I/O REC
06040 *      BLXM JHB+36 ,WHTYPE(6)
06050 WHTYPE BLX **12 ,309(3) ,, IX3 = IX1
06060 *      BX **12 ,WIDTH (1)
06070 *      BLXM ERF9-12 ,**12 (6),, BR TO CHECK RECORD LENGTH
06080 *      SM 314 ,**
06090 *      WIDTH DS **
06100 *      TD WH+23 ,1 (1),, STCRE LAST DIGIT
06110 *      TD 1 (1),RECGM
06120 *      TRNM IN-1 (2),1 (3),, MOVE DIGITS
06130 *      TDM 1 (1),XX
06140 *      BX BSWF ,WIDTH (2)
06150 *
06160 *      COMMON ROUTINE. WRT H,A,I,E AND F TYPES
06170 JHB CF LOC
06180 *      TFL FAC ,LOC ,11, MOVE FIELD FROM PGM TO FAC
06190 *      BSBA **12
06200 *      TF WIDTH ,309 ,11, STORE WIDTH
06210 *      BLX ** (6),WIDTH (4),, SET WIDTH IN IX4
06220 *      CK H,A AND I TYPES FOR ER F9. W FOR E AND F IS ONLY NUMERIC
06230 *      BCX ** (6),324 (2),, ADV I/O REC PNTR. CK A AND I TYPES
06240 ERF9 TFM EI ,679 ,9, SET ER F9 IND
06250 *      BLXM ER COM2 ,99999 (2),, SET IX 2 TO PREVENT FURTHER OUTPUT
06260 *
06270 *      WRITE E AND F TYPE FROM FAC TO GAM (IN ALPHA)
06280 *      MAKE CKS FOR OVERSIZE REC AND OVERSIZE FIELD (ERF9 AND ERF8)
06290 *      SF RWEFSW
06300 *      BLXM SWL ,WEFCOM(6)
06310 *      CF RWEFSW
06320 *      BLXM SWL ,WEFCOM(6)
06330 WEFCOM BXM **12 ,2 (1),, ADV FORMAT PNTR FOR E AND F TYPES
06340 *      BXM ERF9-12 ,12 (6),, CK FOR ER F9. RTN IF NONE
06350 *      TFM FLTEND ,**24
06360 *      BNF FLOAT2+12 ,FAC-1
06370 *      TFM FLTEND ,RTN
06380 *      MOVE DATA TO DUD FOR OUTPUT IN E14.8 FORMAT
06390 *      BD **24 ,FAC-9 ,, CHECK FOR LCUSY ZEROS
06400 *      TFM FAC ,**99 ,10
06410 *      MF MU-1 ,FAC-2 ,, SAVE MANT SIGN
06420 *      TR DUD-29 ,W MASK-1
06430 *      TFM MCK ,00000
06440 *      A MCK ,FAC
06450 *      BLXM **12 ,MOVMAN(0)
06460 MOVEXP BNL **24 ,, ZERC EXP IS GIVEN POSITIVE SIGN
06470 *      TDM DUD-7 ,2
06480 *      TD DUD-4 ,MCK-1
06490 *      TDM DUD-2 ,**
06500 WCK DS ** , LOCD-8+EXPONENT
06510 *      B7 -304
06520 MOVMAN TFM DUD-10 ,FAC-2
06530 *      BNF **24 ,MU-1
06540 *      TDM DUD-29 ,2
06550 *      LIMIT POSITIONS RT OF DEC TO 8

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06560 *      TF LOCD ,0(1) ,, MOV DEC PT SPEC TO IX 3
06570 *      CM LOCD ,8 ,10
06580 *      BNH **24
06590 *      TFM LOCD ,8 ,10
06600 *      SF LOCD
06610 *      SM W CK ,8 ,10, EXP-8
06620 *      S W CK ,LOC D ,, LOCD-8 + EXPONENT
06630 *      TFM FAC-10 ,00 ,1011,EXPAND SIZE OF FAC
06640 *      BLX **12 ,LOCD (3),, IX 3 WILL BE -LOCD
06650 *      BX **12 ,319 (4),, REDUCE W BY DPT SPEC (W-LOCD)
06660 *      BLX **12 ,314 (6),, NEXT AVAIL CHAR ADR IN I/O REG
06670 *      AM LOC D ,** , CONVERT TO 2 LOCD
06680 LOCD DS ** , LOCATICN OF DEC PT. FLAGS SEL IX3
06690 *      SF GAM-29 ,FAC-9
06700 *      BNF WRT F ,RWEFSW ,, F TYPE
06710 *      MACRO TO SET UP E TYPE,WRITE AND ERROR CHECK
06720 *      ...CK WIDTH SPECS
06730 *      BCXM **20 ,**5 (4)
06740 *      B7 ER COM-12
06750 *      ...SET UP IX REGS FOR PROCSG MANT FROM FAC TO I/O REG (IN)
06760 WRTE BLX **12 ,WIDTH (5),, PUT WIDTH IN IX 5
06770 *      BCXM **24 ,**14 (5),, IX 5 = WIDTH -14
06780 *      BLX **36 ,WIDTH (4)
06790 *      BLXM **12 ,14 (4)
06800 *      BLXM **12 ,0(5)
06810 *      ..... IX 4 CONTROLS POSITION OF SIGN
06820 *      ..... IX 5 CONTROLS RT POSITION OF FAC
06830 *      BX **12 ,324 (4),, DOUBLE WIDTH
06840 *      SF 324
06850 *      BX **12 ,314 (4),, IX 4 = IX 2- I WIDTH
06860 *      ...PROCESS EXP FROM FAC TO I/O REG (IN)
06870 *      S W CK ,329 ,, ADD 14-WIDTH TO CHAR
06880 *      BD W ZER CK ,W CK-2 ,, EXP LESS THAN -99
06890 *      BLXM MOVEXP ,WZERCK+12,, GO TO SET EXP IN GAM AND RETURN
06900 WZERCK BD ER COM-12 ,FAC-9 ,, NON ZERO
06910 *      TRNM IN-9 (2),GAM-9
06920 *      .... IX 6 MODFS IN REFS
06930 *      BXM FILL R ,**8 (6),, EXP SPACE COMPENSATION IN IX6 (IN)
06940 *      ... MACRO TO SET UP F TYPE,WRITE AND ERROR CHECK
06950 WRTE S 324 ,FAC
06960 *      SM 324 ,1 ,10, MUST BE RCOM FOR 1 CHAR AT LEAST
06970 *      BNH ER COM-12, ,, WIDTH SPECS INSUFFICIENT
06980 *      AM FAC ,1 ,10
06990 *      BLX **12 ,MCK (5),, IX 5 MODFS FAC REFS. LOCD-8+EXP.CHAR
07000 *      CM W CK ,**8 ,10
07010 *      BNH W F ZERO , ,, ZERO OUTPUT
07020 *      .... SPLIT INTO 3 CASES FOR WRT F TYPE
07030 *      .... IX5 PLUS .REQ ZERO FILL FROM RIGHT (IXP)
07040 *      .... IX5 NEG, NON ZERC. EXP NEG. REQS ZERO FILL FROM LEFT (IXNEN)
07050 *      .... IX5 NEG, NON ZERC. EXP NOT NEG. NC ZERO FILL REQD (FILL R)
07060 *      BNF IXP ,MCK
07070 *      BNF FILL R ,FAC
07080 *      ..... EXPAND FAC WITH ZEROS ON LEFT
07090 IXNEN TF FAC-10 ,ZERO-1C
07100 *      TFM **30 ,FAC-11
07110 *      A **18 ,FAC

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07120	MF	**	,FAC-9	09104	71	00C0C	02483
07130	TFM	FAC	,01	09116	16	C2492	000-1
07140	*	FILL RIGHT SIDE OF I/O REC FIELD WITH MANTISSA				
07150	FILLR	TNF	IN-2 (6),FAC-2 (5)	09128	73	0K095	0K4R0
07160	TDM	IN-3	(6),7	09140	15	0K094	00007
07170	BX	**12	,319 (5),, IX5- LOCC	09152	61	C9164	C-3J9
07180	BX	FILL L	,LOCC (6),, IX6-2 LOCC	09164	61	C9176	0CP47
07190	*	....	FILL LEFT SIDE AS REQD.				
07200	FILLL	TNF	IN-2 (6),FAC-1 (5)	09176	73	0K095	0K4R1
07210	WEDEC	TFM	IN-2 (6),3	09188	16	0K095	000-3
07220	BNF	WF SIGN	,RWEFSW	09200	44	09268	C3304
07230	WSIGN	TF	IN (4),GAM-28	09212	26	0K697	02711
07240	B7	BSWF		09224	49	06996	
07250	IXP	SF	329	09232	32	00329	00000
07260	FSL	FAC-10(5),FAC-2		09244	05	0K402	02490
07270	BLXM	FILL R	,99999 (5),	09256	66	C9128	9R9R9
07280	WFSIGN	BLX	**12 ,334 (4)	09268	65	09280	0-334
07290	S	324	,FAC	09280	22	00324	C2492
07300	S	324	,FAC	09292	22	00324	C2492
07310	BXM	W SIGN	, -2 (4),	09304	62	09212	C-00K
07320	WFZERO	CF	319	09316	33	00319	00000
07330	TNF	IN-2 (2),ZERO-16(3)		09328	73	02095	C2PM1
07340	BX	**12	,LOCC (6)	09340	61	C9352	0CP47
07350	TFM	IN-2 (6),3	,10	09352	16	0K095	000-3
07360	B7	BSWF		09364	49	06996	
07370	SLASH2	BD	WRITE ,TYPE	09372	43	09432	03369
07380	BXM	**12	, -2 (2)	09384	62	09396	00-0K
07390	CM	IN	(2),00	09396	14	C2097	000-0
07400	BE	SLASH2+12		09408	46	C9384	01200
07410	TF	IN+4	(2),FLZERS	09420	26	C2PC1	02859
07420	WRITE	BLX	**12 ,IX2HLC(2)	09432	65	C9444	06R5R
07430	TFM	IDRT	,**23	09444	16	00565	-9467
07440	B	IDPT	,DATINH-4 ,7	09456	49	00532	-7231
07450	B7	**	(6)	09468	49	0-00	
07460	WMASK	DAC	2, .	09477		2 X	2
07470	DAC	8,00000000,,		09481		8 X	2
		00000000					
		00000000					
07480	EMASK	DAC	5,E+CO*	09497		5 X	2
		E+00*					
07490	RDERF7	TFM	EI ,677	09506	16	02707	00077
07500	B7	ERCOM2		09518	49	07176	
07510	TFM	RHTYPE+35,IN-1		09526	16	09573	-2696
07520	RHTYPE	A	**35 ,0(1)	09538	21	09573	000-0
07530	SF	**21		09550	32	09571	00000
07540	TD	**47	,**	09562	25	09605	00000
07550	TD	**1	,RECMK	09574	25	09571	C2403
07560	TRNM	1(1)	,IN-1(2)	09586	30	000-1	02096
07570	TDM	**25	,0	09598	15	09571	00000
07580	TF	**35	,-00309	09610	26	09645	0030R
07590	A	00309	,-00309	09622	21	00305	0030R
07600	BCXM	BSWF	,0(2)	09634	64	06996	00-00
07610	TFM	EI	,679	09646	16	C2707	00079
07620	RERCOM	BLXM	ERCOM2 ,99998(2)	09658	66	07176	99R9R
07630	BLXM	SWL	,READA(6)	09670	66	06748	0RC82
07640	READA	TFM	RDSQP ,FAC	09682	16	09904	-2492

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07650	A	RDSQP	,0(1)	09694	21	09904	000-0
07660	BNF	**48	,LOC	09706	44	C9754	06807
07670	TF	FAC	,ZER010	09718	26	C2492	C2767
07680	S	RDSQP	,K	09730	22	09904	02221
07690	BLXM	**48	,FAC(5)	09742	66	0979C	0K4R2
07700	SM	RDSQP	,10	09754	12	09904	000J0
07710	TFL	FAC	,RDZERC	09766	06	02492	C2769
07720	BLXM	**12	,FAC-2(5)	09778	66	0979C	0K4R0
07730	TF	00324	,0(1)	09790	26	00324	000-0
07740	READA1	BCXM	READA2 ,2(2)	09802	64	09826	00-02
07750	BLXM	RDGIVE	,RERCOM-12(0)	09814	66	09922	09646
07760	READA2	CF	IN-1(2) , -2	09826	33	02096	000-K
07770	BCX	READA1	,READA2+11(4)	09838	63	0982C	0R837
07780	SF	IN-1(2)		09850	32	02096	00000
07790	C	RDSQP	,00329	09862	24	09904	00329
07800	BNH	**24		09874	47	09898	C1100
07810	BLXM	RDGIVE	,RDERF7(0)	09886	66	09922	09506
07820	TF	**	,IN-2(2)	09898	26	00000	02095
07830	RDSQP	DS	, -5	09904		C	
07840	BLXM	RDGIVE	,BSWF(0)	09910	66	09922	06996
07850	RDGIVE	BSBB	**12	09922	60	09934	00002
07860	MF	RDGIVE	,LOC	09934	71	09922	06807
07870	TFL	LOC	,FAC	09946	06	0680P	C2492
07880	MF	LOC	,RDGIVE	09958	71	06807	C9922
07890	BSBA	-00304		09970	60	0030P	00001
07900	BLXM	SWL	,RETYPE(6)	09982	66	06748	0RR94
07910	RETYPE	TFM	RDSDIG ,05000	09994	16	10469	-500C
07920	TFM	CHAR	,00	10006	16	10015	000-0
07930	CHAR	DS	, -2	10015		C	
07940	B7	RFTYPE+12		10018	49	1005C	
07950	BLXM	SWL	,RFTYPE(6)	10026	66	06748	1--38
07960	RFTYPE	TFM	RDSDIG ,55000	10038	16	10469	N5000
07970	TF	00324	,0(1)	10050	26	00324	000-0
07980	TF	RDCS	,2(1)	10062	26	10283	000-2
07990	BXM	RDCOM	,2(1)	10074	62	10146	000-2
08000	BLXM	SWL	,RITYPE(6)	10086	66	06748	1--98
08010	RITYPE	TFM	RDSDIG ,55500	10098	16	10469	N5500
08020	TFM	RDCS	,00	10110	16	10283	000-0
08030	MM	0(1)	,05	10122	13	000-0	000-5
08040	BLX	**12	,98(4)	10134	65	10146	C-098
08050	RDCOM	BLXM	**12 ,FAC-11(5)	10146	66	0158	0K4Q1
08060	TFL	FAC	,RDZERC	10158	06	02492	02769
08070	CF	RDCOM		10170	33	10146	00000
08080	TFM	CNTS	,0010	10182	16	10191	000J0
08090	CNTS	DS	, -2	10191		C	
08100	TFM	ROADJ-6	,READCC	10194	16	10844	J0206
08110	READCC	BNR	RDCOM1 ,IN(2)	10206	45	10226	C2097
08120	B7	RDCOM3		10218	49	10394	
08130	RDCOM1	CM	IN(2) ,00	10226	14	C2097	000-0
08140	BE	RDBLNK		10238	46	10726	01200
08150	CM	IN(2)	,70	10250	14	02097	000P0
08160	BNL	RDDIG		10262	46	10714	01300
08170	CM	IN(2)	,0010	10274	14	C2097	000J0
08180	RDCS	DS	, -2	10283		C	
08190	BE	RDPLUS		10286	46	1047C	01200
08200	CM	IN(2)	,20	10298	14	02097	000K0

570

08210	BE	RDMNUS		10310	46	10458	C1200	
08220	BD	RDCOM2	,RDSDEC	10322	43	10358	10467	
08230	CM	IN(2)	,03	10334	14	02097	000-3	
08240	BE	RDDEC		10346	46	10426	01200	
08250	RDCOM2	BD	RDCOM3	,RDSEY	10358	43	10394	10465
08260	CM	IN(2)	,45	10370	14	02097	C00M5	
08270	BE	RDE		10382	46	10526	C1200	
08280	KCCOM3	TFL	FAC	,RDZERO	10394	06	02492	02769
08290	TDM	RDSERR	,0	10406	15	10466	C000-	
08300	B7	ROADJ		10418	49	1085C		
08310	RDDEC	TDM	RDSDEC	, -5	10426	15	10467	0000N
08320	TFM	RDCS	,00	10438	16	10283	000-0	
08330	B7	ROADJ		10450	49	1085C		
08340	RDMNUS	SF	RDCOM		10458	32	10146	C0000
08350	RDSDIG	DS		**	10469		C	
08360	RDSGN	DS		,*-1	10468		C	
08370	RDSDEC	DS		,*-2	10467		C	
08380	RDSERR	DS		,*-3	10466		C	
08390	RDSEY	DS		,*-4	10465		C	
08400	RDPLUS	BD	RDPL1	,RDSGN	10470	43	10514	10468
08410	MF	RDMNUS	,RDCOM		10482	71	10458	10146
08420	TDM	RDSGN	, -5	10494	15	10468	C000N	
08430	B7	ROADJ		10506	49	1085C		
08440	RDPL1	BD	RDCOM3	,RDSEY	10514	43	10394	10465
08450	RDE	TFM	RDADJ-6	,RETY1	10526	16	10844	J0546
08460	B7	ROADJ		10538	49	1085C		
08470	RETY1	CM	IN(2)	,20	10546	14	02097	C00K0
08480	BNE	**24		10558	47	10582	C1200	
08490	SF	RDCOM		10570	32	10146	C0000	
08500	CM	00324	,01	10582	14	00324	C00-1	
08510	BE	RETY2		10594	46	10626	01200	
08520	TD	CHAR-1	,IN(2)	10606	25	10014	02097	
08530	B7	ROADJ		10618	49	1085C		
08540	RETY2	TD	CHAR	,IN(2)	10626	25	10015	C2097
08550	SF	CHAR-1		10638	32	10014	00000	
08560	MF	CHAR	,RDCOM	10650	71	10015	10146	
08570	A	FAC	,CHAR	10662	21	02492	10015	
08580	B7	ROADJ		10674	49	1085C		
08590	RDECK	BNF	RDADJ	,RDSDEC	10682	44	1085C	10467
08600	SM	FAC	,01	10694	12	02492	C00-1	
08610	B7	ROADJ		10706	49	1085C		
08620	RDCIG	BD	RDPLNK+12	,IN(2)	10714	43	10738	02097
08630	RDPLNK	BNF	RDECK	,RDSDIG	10726	44	10682	10469
08640	AM	CNTS	, -01	10738	11	10191	000-J	
08650	BL	**48		10750	47	10758	C1300	
08660	TD	O(5)	,IN(2)	10762	25	0-0-C	02097	
08670	BXM	**12	,1(5)	10774	62	10786	0-0-1	
08680	TDM	RDSDIG	, -5	10786	15	10469	C000N	
08690	BNF	**20	,RDSDEC	10798	44	10818	10467	
08700	B7	ROADJ		10810	49	1085C		
08710	AM	FAC	,01	10818	11	02492	000-1	
08720	B7	ROADJ		10830	49	1085C		
08730	BD	READCO	,RDSERR	10838	43	10206	10466	
08740	RDADJ	BCX	RDADJ1	,2(2)	10850	64	10894	00-02
08750	TFL	FAC	,RDZERO	10862	06	02492	02769	
08760	TDM	RDSERR	,0	10874	15	10466	C000C	

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08770	B7	RDADJ1+24		10886	49	10918		
08780	RDADJ1	BCX	RDADJ-12	,RDPLNK+23(4)	10894	63	10838	1-749
08790	S	FAC	,RDCS	10906	22	02492	10283	
08800	TFM	FIXEND+6	,RDFIX3-12	10918	16	02966	J1042	
08810	SF	FAC-11		10930	32	02481	00000	
08820	TF	FAC-20	,FAC-2	10942	26	02472	C2490	
08830	BNF	RDFLT	,LOC	10954	44	10986	C6807	
08840	MF	MU-1	,RDMNUS	10966	71	02967	10458	
08850	B7	FIX1+36		10978	49	07468		
08860	RDFLT	BD	**32	,FAC-11	10986	43	11018	C2481
08870	TFL	FAC	,FLZER	10998	06	02492	C3131	
08880	B7	**32		11010	49	11042		
08890	TF	FAC-2	,FAC-4	11018	26	02490	02488	
08900	MF	FAC-2	,RDMNUS	11030	71	02490	10458	
08910	TFM	FIXEND+6	,RTN	11042	16	02966	-2506	
08920	RDFIX3	BD	**48	,RDSERR	11054	43	11102	10466
08930	BNF	**24	,RDSERR	11066	44	11090	10466	
08940	BLXM	RDGIVE	,RDERF7(0)	11078	66	09922	C9506	
08950	BLXM	RDGIVE	,RERCOM(0)	11090	66	09922	C9658	
08960	BLXM	RDGIVE	,BSWF(0)	11102	66	09922	C6996	
08970	*	.....	RA DO IT.. RD TC I/O REC FROM SELECTED INPUT				
08980	RADDIT	TFM	IORT	,**23	11114	16	00565	J1137
08990	B	IOGT	,DATINH-4	,7	11126	49	00566	-7231
09000	BD	**24	,TYPE		11138	43	11162	03369
09010	BC4	RMA2+36		11150	46	06952	00400	
09020	B7	BSWF		11162	49	06996		
09030	DORG	15000		15000				
09040	AS4	34	A4	,701	15000	34	15036	00701
09050	38	A4	,702	15012	38	15036	00702	
09060	49	**26		15024	49	1505C	C0000	
09070	A4	DSC	14	,015800C8003200	15036	14		
09080	TRA	01580008003200		15050	36	0000C	00500	
				15062	49	0000C	C0000	
09090	TCD	AS4		15000				
09100	QSTZS	H		15074	48	00000	00000	
09110	DEND	QSTZS		15074				

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COMACC	02231	RDPLUS	10470	ERRET	0C602	LN10	06172	REPEX	07164
COMPLT	06522	RDSDEC	10467	ERRQR	02936	LNENT	03178	REP	07044
DATUUD	07243	RDSDIG	10469	ERXV	02968	LOCD	08747	REPSW	06799
DATINH	07235	RDSERR	10466	ESC	06421	LOC	06807	RESET	05862
DIODCA	02868	RDSEY	10465	ETYPE	04454	LOGE	03143	RETY1	10546
DKDATA	02860	RDSSGN	10468	FAC	02492	M2KM1	02942	RETY2	10626
ENDFOR	02521	RDZERC	02769	FAXB1	05522	M2KP1	02989	RSNG1	04574
ENTABS	02323	READA1	09802	FAXB	04118	MATSW	06800	RSNG	03974
ENTATN	02313	READA2	09826	FAXI1	05206	MAX	03188	RSQR2	06180
ENTCCS	02303	READCC	10206	FAXI	04094	MKP1	03168	RTN	02506
ENTDED	02298	REPSW3	06802	FDVRI	04548	MK	03173	RWA2	06916
ENTDRR	02293	RERCOM	09658	FDVR	04046	MKS	03173	RWA3	06880
ENTEXP	02253	RETYPE	09994	FILL	09176	MU	02968	RWA	06844
ENTFET	02283	RFTYPE	10038	FILLR	09128	N1	02233	SAVE	02592
ENTFFD	02273	RHTYPE	09538	FIX1	07432	N2	02238	SET1	05718
ENTREC	02278	RITYPE	10098	FIX11	04886	NODIV	05426	SET	04142
ENTSC2	02258	RWEFSW	03304	FIXI	04070	ONE	06112	SLASH	06546
ENTSC3	02263	100MK	03034	FIX	03854	CNEZ	03121	START	03851
ENTSDX	02268	99MK	02445	FKODD	02987	PAR	03843	STOP	02395
ENTSIN	02308	A4	15036	FLOAT	03998	PIOV2	06371	SWCFX	02410
ENTSOT	02318	AEX	05966	FLONE	03153	PSI	04990	SWCM1	03204
ENTSND	02288	AK	06253	FLT3	07376	PT1	03269	SWCM2	03209
ERCOM2	07176	ALSQ1	05674	FLZER	03131	PT25	06431	SWC	06808
EXPENT	03183	AS4	15000	F	02219	PT75	06451	SWL	06748
FINDIN	02404	ASC	06381	FSBR1	04502	QSTS1	05630	TRACE	03004
FIXEND	02960	AT	06217	FSBR	04022	QSTS2	05666	TRFX	03066
FLOAT2	07248	ATYPE	04406	FTYPE	04430	QSTS	05622	T	05956
FLTEND	02966	AXJ	05330	FX1	03109	QSTZ5	15074	TY1	03245
FLZERS	02859	BETA	02630	FX9	03089	QZ1	05777	TYPE	03369
FXMEND	04778	BEX	05976	FXD1	04790	QZ2	05789	UNFLO	02504
FXMULT	05130	BK	06265	FXDR	03950	QZF	05813	WACD1	03270
FXNINE	07548	BSC	06391	FXD	03926	R2P1	06441	WACD	04214
FAZERO	05074	BSWF	06996	FXERI	05186	RACD1	03370	WAFX	07744
INFFAC	02924	BT	06229	FXH	03072	RACD	04286	WAPT1	03246
IX2HLD	06958	C3	06205	FXM1	04718	RAPT1	03350	WAPT	04190
LOCADJ	06498	C5	06196	FXM	03902	RAPT	04262	WATY1	03210
MATRIX	06606	C7	06189	FXSR1	04666	RATY1	03314	WATY	04166
MATRX2	06674	CD1	03349	FXSR	03878	RATY	04238	WCK	08559
MESERR	02699	CEX	05988	FXZ	03099	RDADJ	10850	WEDEC	09188
MONCAL	00796	CHAR	10015	GAM	02739	RDALP	03394	WH	08188
MOVEXP	08512	CHT5	10191	GK	06277	RDCDM	10146	WICK	08012
MVCMAN	08568	CONST	06124	HTYPE	04478	RDCS	10283	WIDTH	08163
ODOREV	05038	CSC	04401	INF	03163	RDEEC	10426	WMASK	09477
ONEFAC	02494	CT	06241	INH	02521	RDDIG	10714	WRITE	09432
OVFLOW	02924	DEES	06010	IN	02697	RDECK	10682	WRTA	07756
PROGST	02226	DEX	06000	ICCAL	00716	RDE	10526	WRTF	08792
RADBIT	11114	DSC	06411	ICGT	00566	RDFLT	10986	WRTF	08960
RADJ11	10894	DUDH	02699	IOPT	00532	RDPL1	10514	WRTI2	07836
RDBLNK	10726	DUD	02739	ICRBC	00520	RDSQP	09904	WRTI	07804
RDCOM1	10226	DUMMY	99999	IORT	00565	READA	09682	W	02240
RDCOM2	10358	E1	02707	IOSK	00554	RECLG	02243	WSIGN	09212
RDCOM3	10394	EMASK	09497	ITYPE	04310	RECMK	02403	XSGN	07640
RDERF7	09506	ENTLN	02248	IXNEN	09068	REDOA	06488	XTYPE	07008
RDFIX3	11054	ERCOM	08048	IXP	09232	RECO	06452	XX	99999
ROGIVE	09922	ERF8	08036	JHB	08224	REP2	07116	ZERO	02757
ROMNUS	10458	ERF9	08296	K	02221	REP3	07140	SLASH2	09372

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STZERO	02771	WFZERO	09316	WRITEA	07672	WRTSGN	07920	ZERO10	02767
WEFCOM	08368	WHTYPE	08116	WRTACK	07720	WZERCK	08924		
WFSIGN	09268	WIEEXIT	07980	WRTALP	03294	ZERFAC	02884		

END OF ONE ASSEMBLY.

00010	*****	1620 MCNITOR II VERSICN 2 FORTRAK II-D LOADER BLOCK 1			
00020		DORG 2426	02426		
00030	NAMBUF	DC 16,0	02441	16	
		-0000000000000000			
00040		DC 2,1	02443	2	
		-,			
00050	CVRLAP	DS 1	02444	1	
00060	FLGRMK	DS 1	02445	1	
00070	ADDCW	DS 5	02450	5	
00080	EQADDR	DS 5	02455	5	
00090	SCADDR	DS 5	02460	5	
00100	IOIND	DS 1	02461	1	
00110	MLIND	DS 1	02462	1	
00120	EXTINC	DS 1	02463	1	
00130	SECT	DS 3	02466	3	
00140	ZROTST	DS 1	02467	1	
00150	ADDSVE	DS 5	02472	5	
00160		DC 1,1	02473	1	
		.			
00170	LDDDA	DDA ,1,0,0, SUBTBL	02474	14	
		1-0000-00-2522			
00180		DC 1,1	02488	1	
		.			
00190	SVEDDA	DDA ,1,0,21,0	02490	14	
		1-0000-21-0000			
00200		DC 1,1	02504	1	
		.			
00210	INCDDA	DDA ,1,0,10, SUBTBL	02506	14	
		1-0000-10-2522			
00220		DC 1,1	02520	1	
		.			
00230		DS 1	02521	1	
00240	SUBTBL	DSS 1000	02522	10CC	
00250		DC 12,1	03533	12	
		-0000000000			
00260		DORG 7280	07280		
00270	DDAR	DSS 20	07280	2C	
00280	COMSEC	DSS 100,, SYSTEM COMMUNICATION SECTOR	07300	10C	
00290	INRK	DSS 100,, READ IN AREA FOR INDICATOR RECORD	07400	10C	
00300	SBPTBL	DS ,INRK	07400	C	
00310		.			
00320		.			
00330		.			
00340		.			
00350		.			
00360	IORT	DS ,565	00565	C	
00370	IOGT	DS ,566	00566	C	
00380	IOPT	DS ,532	00532	C	
00390	MONCAL	DS ,796	00796	C	
00400	TFM	IORT, **23,, GET BLOCK 2	07500	16	00565 -7523
00410	B	IOGT, FOR, 7	07512	49	00566 JC276
00420	MLINIT	TFM TDIS+6, MTBL+11,, INITIALIZE MAINLINE TABLE	07524	16	07542 JC697
00430	TDIS	TDM	07536	15	00000 C0000
00440		DC 1,1,1	07547	1	
		.			
00450	AM	TDIS+6,20,10	07548	11	07542 C0000

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00460	M*SIZE	CM TDIS+6, MTBL+20*51+11	07560	14	07542 J1717
00470	BL	TDIS	07572	47	07536 C1300
00480	TD	SUBSET+11, COMSEC+82,, INITIALIZE ADDRESS COUNTER	07584	25	07675 C7382
00490	CM	SUBSET+11,4,10	07596	14	07675 C00-4
00500	BNH	**36	07608	47	07644 C110C
00510	BTM	EPRINT, 78,8	07620	17	10204 C-078
00520	TD	SUBSET+11, COMSEC+83	07632	25	07675 C7383
00530	BD	**20, SUBSET+11	07644	43	07664 C7675
00540	B	*-24	07656	49	07632 C000C
00550	DORG	*-3	07664		
00560	SUBSET	AM **35,,10	07664	11	07695 C00-0
00570	TDM	IOIND	07676	15	C2461 00000
00580	BD	TWO, ONETWO	07688	43	07732 13032
00590	ONE	TFM ADDCOW, 7499	07700	16	02450 -7499
00600	TDM	IOIND, 1	07712	15	02461 C0001
00610	B	**20	07724	49	07744 00000
00620	DORG	*-3	07732		
00630	TWO	TFM ADDCOW, 12999	07732	16	02450 J2999
00640	LODPRC	TF ADDSVE, ADDCOW	07744	26	02472 C2450
00650	AM	ADDSVE, 1,10	07756	11	02472 C00-1
00660	TF	FLOD+19, ADDCOW	07768	26	12847 C2450
00670	START	TF CCCNT, COMSEC+75,, GET CONTROL CARD COUNT	07780	26	10508 C7375
00680	GETDIM	TFM IORT, **23,, GET FIRST SECTOR OF DIM	07792	16	00565 -7815
00690	B	IOGT, MAP, 7	07804	49	00566 J2765
00700	TFM	FLOD+18,0	07816	16	12846 -0000
00710	A	FLOD+16, CCIN+27	07828	21	12844 10550
00720	A	FLOD+16, CCIN+27	07840	21	12844 10550
00730	TF	FLOD+36, ADDCOW	07852	26	12864 C2450
00740	SM	FLOD+18, 21, 10	07864	12	12846 C00K1
00750	TF	FLSDDA+5, FLOD+18	07876	26	12941 12846
00760	SM	FLSDDA+5, 1, 10	07888	12	12941 C00-1
00770	TF	SUBDDA+5, FLSDDA+5	07900	26	12755 12941
00780	TF	FLOD+7, FLSDDA+5	07912	26	12835 12941
00790	TF	FLOD+23, CCIN+44	07924	26	12851 10567
00800	TF	FLOD+26, CCIN+47	07936	26	12854 10570
00810	TF	SVEDDA+5, FLOD+18	07948	26	02495 12846
00820	TFM	SCADDR, 0	07960	16	02460 -0000
00830	TF	SECT, FLOD+26	07972	26	02466 12854
00840	TF	EQADDR, FLOD+23	07984	26	02455 12851
00850	TD	FLOD+99, IOIND	07996	25	12927 02461
00860	TFM	EPRINT+49, 39, 10	08008	16	10253 C00L9
00870	TD	FLGRMK, FLOD+99	08020	25	02445 12927
00880	CM	CCCNT,, 10, ANY CONTROL CARDS PRESENT	08032	14	10508 C00-0
00890	BE	XEQON,, BRANCH IF NONE TO READ INDICATOR RECORD	08044	46	09648 01200
00900	SBINIT	TFM SDIS+6, STBL+11,, INITIALIZE SUBPROGRAM TABLE	08056	16	08074 J1717
00910	SDIS	TDM	08068	15	00000 C0000
00920		DC 1,1,1	08079	1	
		.			
00930	AM	SDIS+6,5,10	08080	11	08074 C00-5
00940	TFM	SDIS+6,,67	08092	16	08074 -0000
00950	AM	SDIS+6,15,10	08104	11	08074 C00J5
00960	S*SIZE	CM SDIS+6, STBL+20*51+11	08116	14	08074 J2737
00970	BL	SDIS	08128	47	08068 C1300
00980	TFM	SUBCOW	08140	16	12995 -0000
00990	TR	CCIN-1, INTCC,, INITIALIZE CONTRL READ IN AREA	08152	31	10522 10300
01000	RDAGN	TFM TFCC+11, INDV-1	08164	16	08211 J0509

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01010	TD	AMI+11,429,, GET INPUT DEVICE	08176	25	08195	C0429
01020	AM	IFCC+11,,10	08188	11	08211	000-0
01030	TF	NEXC+2	08200	26	12732	C0000
01040	TFM	IORT,**23,, GET CONTROL RECORD	08212	16	00565	-8235
01050	B	IDGT,NEXC-4,7	08224	49	00566	J2726
01060	CM	NEXC+2,6,10, IS IT A TYPED ENTRY	08236	14	12732	000-6
01070	BNE	**24	08248	47	08272	C1200
01080	BC4	RDAG-12	08260	46	08152	C0400
01090	TFM	**23,CCIN+16C	08272	16	08295	J0683
01100	SETRM	BNR SETRM1	08284	45	08340	00000
01110	SM	*-1,2,10	08296	12	08295	C00-2
01120	CM	SETRM+11,CCIN	08308	14	08295	J0523
01130	BE	RDLOC+12	08320	46	0846C	C1200
01140	B	SETRM	08332	49	08284	00000
01150	DORG	*-3	08340			
01160	SETRM1	CM SETRM+11,,610	08340	14	0829A	C00-0
01170	BE	SETRM+12	08352	46	08296	C1200
01180	AM	SETRM+11,2,10	08364	11	08295	000-2
01190	TDM	SETRM+11,,6	08376	15	0829A	C0000
01200	DC	1,,*	08387		1	
01210	RCTY	IORT,**23	08388	34	00000	00102
01220	TFM	IDPT,TYPE-4,7	08400	16	00565	-8423
01230	B	IDPT,TYPE-4,7	08412	49	00532	J2734
01240	RCTY		08424	34	00000	00102
01250	TDM	SETRM+11,,6	08436	15	0829N	C0000
01260	RDLOC	BNR **32,CCIN	08448	45	0848C	10523
01270	BTM	EPRINT,71,8	08460	17	10204	C-071
01280	B	MONCAL	08472	49	00796	00000
01290	DORG	*-3	08480			
01300	CM	CCIN+14,,10, IS IT A CONTROL CARD	08480	14	10523	000J4
01310	BNE	RDLOC+12	08492	47	0846C	C1200
01320	RMCHK	TFM **23,CCIN+2,, CHECK FOR RECORD MARK IN LOCAL NAME	08504	16	08527	J0525
01330	BNR	**20	08516	45	08536	C0000
01340	B	RDLOC+12	08528	49	0846C	C0000
01350	DORG	*-3	08536			
01360	AM	RMCHK+23,2,10	08536	11	08527	000-2
01370	CM	RMCHK+23,CCIN+12	08548	14	08527	J0535
01380	BNE	RMCHK+12	08560	47	08516	C1200
01390	C	CCIN+10,LOCAL+8,, IS IT A LOCAL RECORD	08572	24	10533	10473
01400	BE	COLNAM,, BRANCH IF LOCAL	08584	46	08604	C1200
01410	B	RDLOC+12	08596	49	0846C	C0000
01420	DORG	*-3	08604			
01430	*****	COLLECT AND STORE MAINLINE AND SUBPROGRAM NAMES				
01440	COLNAM	BD **24,CONT,, CONTINUE CARD TEST --BRANCH IF ON--	08604	43	08628	10274
01450	TDM	MLIND,1,, TURN CN MAINLINE INDICATOR	08616	15	02462	C00C1
01460	TFM	CONT,00100	08628	16	10274	-0100
01470	TR	NAMBUF-13,INTCC1-10,, INITIALIZE COLLECT AREA	08640	31	02428	10446
01480	RCMKCK	BNR BLNKCK,CCIN+12,,TEST FOR RECORD MARK IN NAME	08652	45	08684	10535
01490	BTM	EPRINT,72,8	08664	17	10204	C-072
01500	B	MONCAL	08676	49	00796	C0000
01510	DORG	*-3	08684			
01520	BLNKCK	CM CCIN+12,,10, TEST FOR BLANK	08684	14	10535	000-0
01530	BE	END	08696	46	09932	C1200
01540	CM	CCIN+12,23,10, TEST FOR COMMA	08708	14	10535	C00K3
01550	BNE	SPCHAR	08720	47	08752	C1200

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01560	TDM	COMIND,1,, TURN ON COMMA INDICATOR	08732	15	10273	C0001
01570	B	ENTER	08744	49	0888C	C0000
01580	DORG	*-3	08752			
01590	SPCHAR	CM CCIN+12,40,10, TEST FOR SPECIAL CHARACTER	08752	14	10535	C00M0
01600	BL	RCMKCK+12	08764	47	08664	C1300
01610	TF	NAMBUF,CCIN+12,, MOVE CHARACTER INTO COLLECT AREA	08776	26	02441	10535
01620	CM	NAMBUF,69,10, TEST FOR ALPHA CHARACTER	08788	14	02441	00009
01630	BH	**24	08800	46	08824	C1100
01640	TDM	ALFIND,0,, TURN CN ALPHA INDICATOR	08812	15	10272	C0000
01650	CF	NAMBUF-1	08824	33	02440	00000
01660	TR	NAMBUF-15,NAMBUF-13,, SHIFT COLLECT AREA	08836	31	02426	02428
01670	TR	CCIN+10,CCIN+12,, SHIFT INPUT AREA	08848	31	10533	10535
01680	B	RCMKCK	08860	49	08652	C0000
01690	DORG	*-3	08868			
01700	TR	NAMBUF-15,NAMBUF-13,, SHIFT COLLECT AREA	08868	31	02426	02428
01710	ENTER	CM NAMBUF-2,,10	08880	14	02439	C00-0
01720	BNE	LABFUL	08892	47	08948	C1200
01730	BD	**20,MLIND	08904	43	08924	02462
01740	B	RCMKCK+12	08916	49	08664	00000
01750	DORG	*-3	08924			
01760	*****	INSERT \$ IF BLANK MAINLINE NAME				
01770	TFM	NAMBUF-2,13,10	08924	16	02439	C00J3
01780	TDM	ALFIND	08936	15	10272	C0000
01790	LABFUL	TDM NAMBUF,, SET TRAILING BLANK	08948	15	02441	C0000
01800	CF	NAMBUF-1	08960	33	02440	C0000
01810	CM	NAMBUF-12,,10, TEST FOR LEADING BLANKS	08972	14	02429	000-0
01820	BE	ENTER-12	08984	46	08868	C1200
01830	CM	NAMBUF-14,,10, TEST FOR MAX LENGTH OF SIX CHARACTERS	08996	14	02427	C00-0
01840	BNE	RCMKCK+12	09008	47	08664	C1200
01850	BD	RCMKCK+12,ALFIND,, TEST FOR ALL NUMERIC ENTRY	09020	43	08664	10272
01860	SF	NAMBUF-13	09032	32	02428	00000
01870	BD	MLSCH,MLIND,, TEST FOR TYPE OF ENTRY	09044	43	09088	C2462
01880	SUBSCH	TFM SEARCH+11,STBL+11,, INITIALIZE FOR SUBPROGRAM TABLE SEARCH	09056	16	09123	J1717
01890	TFM	TBLSZE+11,STBL+51*20+11	09068	16	09199	J2737
01900	B	SEARCH	09080	49	09112	00000
01910	DORG	*-3	09088			
01920	MLSCH	TFM SEARCH+11,MTBL+11	09088	16	09123	J0697
01930	TFM	TBLSZE+11,MTBL+51*20+11	09100	16	09199	J1717
01940	SEARCH	BNR **20,, TEST FOR AVAILABLE ENTRY	09112	45	09132	00000
01950	B	LOAD	09124	49	09232	C0000
01960	DORG	*-3	09132			
01970	C	SEARCH+11,NAMBUF-2,6, TEST FOR MULTIPLE ENTRY	09132	24	0912L	02439
01980	BNE	**32	09144	47	09176	C1200
01990	BTM	EPRINT,73,8	09156	17	10204	C-073
02000	B	MONCAL	09168	49	00796	C0000
02010	DORG	*-3	09176			
02020	AM	SEARCH+11,20,10	09176	11	09123	00000
02030	TBLSZE	CM SEARCH+11,, TEST FOR FULL TABLE	09188	14	09123	-0000
02040	BNE	SEARCH	09200	47	09112	C1200
02050	BTM	EPRINT,74,8	09212	17	10204	C-074
02060	B	MONCAL	09224	49	00796	C0000
02070	DORG	*-3	09232			
02080	LOAD	TF SEARCH+11,NAMBUF-2,6	09232	26	0912L	02439
02090	BD	MAIN,MLIND	09244	43	09876	C2462
02100	AM	SUBCOW,20,10	09256	11	12995	C0000
02110	AM	SEARCH+11,8,10	09268	11	09123	000-8

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02120	TDM	SEARCH+11,1,6, LOAD DIGIT TO INDICATE FLIPPED SUBPROGRAM	09280	15	0912L	00001
02130	LOAD1	BD RNDSD-36,BLKIND	09292	43	09372	10271
02140	BD	**36,CCIN+13	09304	43	0934C	10536
02150	BD	**24,CCIN+14	09316	43	0934C	10537
02160	B	**24	09328	49	09352	00000
02170	TDM	COMIND	09340	15	10273	0000C
02180	TR	CCIN+10,CCIN+12	09352	31	10533	10535
02190	B	RCMKCK-12	09364	49	0864C	0000C
02200	DORG	**3	09372			
02210	SM	CCCNT,1,10, DECREMENT CARD COUNT BY CNE	09372	12	10508	C00-1
02220	AM	SUBCOW-1,2,10	09384	11	12994	C00-2
02230	BD	ROUND,SUBCOW-1	09396	43	09836	12994
02240	RNDSD	S SUBDDA+5,SUBCOW-2	09408	22	12755	12993
02250	TF	SUBDDA+9,SUBCOW-2	09420	26	12758	12993
02260	TFM	IORT,**23,, LOAD SUBPROGRAM TABLE IN SCRATCH AREA	09432	16	00565	-9455
02270	B	IOPT,SUB,7	09444	49	00532	J2742
02280	TF	MLCOW,SUBDDA+8,6	09456	26	1300-	12758
02290	AM	MLCOW,5,10	09468	11	13000	C00-5
02300	TF	MLCOW,SUBDDA+5,6	09480	26	1300-	12755
02310	CM	CCCNT,,10	09492	14	10508	C00-0
02320	BNE	SBINIT	09504	47	08056	0120C
02330	AM	MAINCT,20,10	09516	11	10506	C00K0
02340	BD	ROUND1,MAINCT-1	09528	43	09856	10505
02350	RNDSD1	S SUBDDA+5,MAINCT-2	09540	22	12755	10504
02360	TF	SUBDDA+8,MAINCT-2	09552	26	12758	10504
02370	TFM	SUBDDA+13,MTBL	09564	16	12763	J0686
02380	TFM	IORT,**23,, LOAD MAINLINE TABLE	09576	16	00565	-9599
02390	B	IOPT,SUB,7	09588	49	00532	J2742
02400	TF	FLOD+2,MAINCT-2	09600	26	12830	10504
02410	TF	FLOD+7,SUBDDA+5,, STORE DISK LOAD ADDRESS OF MAINLINE TABLE	09612	26	12835	12755
02420	TF	LDDA+5,FLOD+7	09624	26	02479	12835
02430	TF	LDDA+8,FLOD+2	09636	26	02482	12830
02440	XEQON	TF COMSEC+71,FLSDDA+5	09648	26	07371	12941
02450	TF	FLOD+31,FLOD+7	09660	26	12859	12835
02460	SM	FLOD+31,10,10	09672	12	12855	000J0
02470	TF	INCDDA+5,FLOD+31	09684	26	02511	12859
02480	TFM	**18,SUBTBL+11	09696	16	09714	-2533
02490	TDM		09708	15	0000C	C0000
02500	DC	1,,'*	09719			1
02510	AM	**6,20,10	09720	11	09714	C00K0
02520	CM	**18,SUBTBL+1031	09732	14	09714	-3553
02530	BNE	**36	09744	47	09708	C1200
02540	TFM	IORT,**23,, STORE IN-CORE TABLE	09756	16	00565	-9779
02550	B	IOPT,INC,7	09768	49	00532	J2975
02560	TFM	IORT,**23,, STORE COMMUNICATION SECTOR	09780	16	00565	-9803
02570	B	IOPT,COM,7	09792	49	00532	J2951
02580	TFM	IORT,**23	09804	16	00565	-9827
02590	B	IOPT,FLS,7	09816	49	00532	J2928
02600	B	XEQON1	09828	49	10012	C0000
02610	DORG	**3	09836			
02620	ROUND	AM SUBCOW-2,1,10	09836	11	12993	C00-1
02630	B	RNDSD	09848	49	09408	C000C
02640	DORG	**3	09856			
02650	ROUND1	AM MAINCT-2,1,10, ROUND TO NEXT HIGHER SECTOR	09856	11	10504	C00-1
02660	B	RNDSD1	09868	49	09540	C0000

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02670	DORG	**3	09876			
02680	MAIN	TDM MLIND,, TURN OFF MAINLINE INDICATOR	09876	15	02462	00000
02690	AM	MAINCT,20,10	09888	11	10506	C00K0
02700	TF	MLCOW,SEARCH+11	09900	26	1300C	C9123
02710	AM	MLCOW,3,10	09912	11	1300C	C00-3
02720	B	LOAD1	09924	49	09292	00000
02730	DORG	**3	09932			
02740	END	BD **32,COMIND	09932	43	09964	10273
02750	TDM	BLKIND,1,, TURN ON BLANK INDICATOR	09944	15	10271	C0001
02760	B	ENTER	09956	49	0888C	00000
02770	DORG	**3	09964			
02780	TDM	CONT,1	09964	15	10274	00001
02790	SM	CCCNT,1,10	09976	12	10508	C00-1
02800	BE	RDLOC+12	09988	46	08460	01200
02810	B	TFCC	10000	49	0820C	C0000
02820	XEQON1	TDM DDAR+14	10012	15	07294	C0000
02830	DC	1,,'*	10023			1
02840	TDM	EXTIND	10024	15	02463	00000
02850	TF	SVEDDA+13,FLOD+18	10036	26	02503	12846
02860	TR	NAMBUF-11,LDMN-1	10048	31	02430	13022
02870	CM	COMSEC+25,,10	10060	14	07325	000-0
02880	BNE	**56	10072	47	10128	C1200
02890	TFM	COMSEC+25,13,10	10084	16	07325	000J3
02900	CF	COMSEC+35	10096	33	07335	00000
02910	BD	XEQON2,428	10108	43	10160	00428
02920	B	3540,,6	10120	49	0354-	C0000
02930	DORG	**3	10128			
02940	TF	NAMBUF,COMSEC+35	10128	26	02441	07335
02950	BD	XEQON2,428	10140	43	10160	00428
02960	B	3540,,6	10152	49	0354-	C0000
02970	DORG	**3	10160			
02980	XEQON2	TDM EXTIND,1	10160	15	02463	00001
02990	CM	COMSEC+75,,10	10172	14	07375	000-0
03000	BE	3540,,6	10184	46	0354-	C1200
03010	B	3545,,6	10196	49	0354N	C0000
03020	DORG	**3	10204			
03030	*****	ERROR MESSAGE SUBROUTINE				
03040	EPRINT	TF ERMES+16,EPRINT-1	10204	26	13015	10203
03050	RCTY		10216	34	0000C	C0102
03060	WATY	ERMES	10228	39	13003	00100
03070	RCTY		10240	34	00000	C0102
03080	NOP	JOBOUT,100	10252	41	10475	C0100
03090	BB		10264	42	0000C	C0000
03100	CONT	DS **1, CONTINUE INDICATOR	10274			C
03110	COMIND	DS **2, COMMA INDICATOR	10273			C
03120	ALFIND	DS **3, ALPHA INDICATOR	10272			C
03130	BLKIND	DS **4, BLANK INDICATOR	10271			C
03140	FOR	DSC 2,22	10276			2
03150	FORDDA	DSA FORDDA	10282			5 X 1
03160	DC	1,,'*	10282			J0284
			10283			1
03170	FORDDA	DDA ,1,16057,45,2424 1J6057-45-2424	10284			14

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0318C	DC	1,1		10298	1	
0319C	INTCC	00	,,02	10300	-0	-000C 0C00C
03200	00	,,0246810		10312	-0	-0-0- C-0-0
03210	00	,,0246810		10324	-0	-0-0- C-0-0
03220	00	,,0246810		10336	-0	-0-0- 0-0-0
03230	00	,,0246810		10348	-0	-0-0- 0-0-0
03240	00	,,0246810		10360	-0	-0-0- 0-0-0
03250	00	,,0246810		10372	-0	-0-C- C-0-0
03260	00	,,0246810		10384	-0	-0-0- 0-0-0
03270	00	,,0246810		10396	-0	-0-0- 0-0-0
03280	00	,,0246810		10408	-0	-0-C- 0-0-0
0329C	00	,,0246810		10420	-0	-0-C- 0-0-0
03300	00	,,0246810		10432	-0	-0-C- 0-0-0
03310	00	,,0246810		10444	-0	-0-0- 0-0-0
03320	INTCC1	00	,,0246810	10456	-0	-0-C- 0-0-0
03330	DORG	**4		10463		
0334C	DC	1,1		10463	1	
03350	LOCAL	DAC	5,LOCAL	10465	5 X	2
03360	JOBOUT	DAC	14,JOB ABANDONED*	10475	14 X	2
03370	MAINCT	DC	5,0	10506	5	
03380	CCCNT	DS	2,, CONTROL CARD COUNT	10508	2	
03390	INDV	DC	2,6,, TYPE IN LOCAL INFORMATION	10510	2	
03400	DC	2,8,,	READ LOCAL INFORMATION FROM PAPER TAPE	10512	2	
03410	DC	2,10,,	READ LOCAL INFORMATION FROM CARDS	10514	2	
03420	DC	1,1		10515	1	
03430	CKSTL	DS	5	10520	5	
03440	CCIN	DAS	82,, READ IN AREA FOR LOCAL CARDS	10523	82 X	2
03450	MTBL	DSS	1020,,MAINLINE NAME TABLE	10686	102C	
03460	STBL	DSS	1020,,SUBPROGRAM NAME TABLE	11706	102C	
03470	NEXC	DSA	CCIN	12730	5 X	1
03480	DC	2,10		12730	J0523	
03490	JO	DGM		12732	2	
03500	TYPE	DSA	CCIN	12733	1	
03510	DC	2,6		12738	5 X	1
03520	DC	-6		12738	J0523	
03530	SUB	DSC	2,02	12740	2	
03540	DSA	SUBDDA		12741	1	
03550	DC	1,1		12742	2	
				12748	5 X	1
				12748	J2750	
				12749	1	

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03560	SUBDDA	DDA	,1,0,0,STBL	12750	14	
03570	DC	1,1		12764	1	
03580	MAP	DSC	2,22	12765	2	
03590	DSA	MAPDDA		12771	5 X	1
03600	DC	1,1		12771	J2774	
03610	MAPDDA	DDA	,1,4800,1,CCIN-1	12772	1	
03620	DC	1,1		12774	14	
03630	LDMAIN	DAC	19,LOAD MAINLINE PROG*	12788	1	
03640	*****		LOAD MAINLINE PROG*	12791	19 X	2
03650	*		FORTRAN LOADER INFORMATION SECTOR			
03660	*		0-2 CONTAINS SECTOR COUNT OF MAINLINE TABLE			
03670	*		3-7 CONTAINS DISK ADDRESS OF MAINLINE TABLE			
03680	*		9-13 CONTAINS DISK ADDRESS OF SCRATCH AREA			
03690	*		14-18 CONTAINS DISK ADDRESS OF COMMON RESERVE AREA			
03700	*		19-23 CONTAINS DISK ADDRESS OF EQUIVALENCE TABLE			
03710	*		24-26 CONTAINS SECTOR COUNT OF EQUIVALENCE TABLE			
03720	*		27-31 CONTAINS ADDRESS OF IN-CORE SUBPROGRAM TABLE			
03730	*		32-36 CONTAINS INITIAL LOADING ADDRESS			
03740	FLCD	DSS	100	12828	10C	
03750	FLS	DSC	2,02	12928	2	
03760	DSA	FLSDDA		12934	5 X	1
03770	DC	1,1		12934	J2936	
03780	FLSDDA	DDA	,1,0,1,FLDD	12935	1	
03790	DC	1,1		12936	14	
03800	COM	DSC	2,22	12950	1	
03810	DSA	COMDDA		12951	2	
03820	DC	1,1		12957	5 X	1
03830	COMDDA	DDA	,1,19663,1,COMSEC	12957	J2960	
03840	DC	1,1		12958	1	
03850	INC	DSC	2,02	12960	14	
03860	DSA	INCDDA		12974	1	
03870	DC	1,1		12975	2	
				12981	5 X	1
				12981	-2506	
				12982	1	

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03880 SVE	DSC 2,22,, LINKAGE TO SAVE COMMON AREA	12983	2	
03890	DSA SVEDDA	12989	5 X	1
03900	DC 1,1	12989	-249C	
	*	12990	1	
03910 SUBCOW	DC 5,0	12995	5	
	-0000			
03920 MLCOW	DC 5,0	13000	5	
	-0000			
03930 ERMESS	DAC 10,ERROR L *	13003	10 X	2
	ERROR L *			
03940 LDMN	DAC 5,MAIN*	13023	5 X	2
	MAIN*			
03950 ONETWO	DSC 5,00101	13032	5	
	00101			
03960 *	BLOCK LOADER			
03970	DDRG 5000	05000		
03980 BEGIN	TD TYPE-5,19999	05000	25	12733 19999
03990	TD SUB-1,19999	05012	25	12741 19999
04000	SK LOADER	05024	34	0506C 00701
04010	WDN LOADER	05036	38	0506C 00702
04020	H	05048	48	0000C 0000C
04030 LOADER	DDA ,1,16000,57,7500	05060		14
	1J6000-57-7500			
04040	DGM 19999	19999		1
04050	TCD BEGIN	05000		
04060	DEND	00000		

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ADDCOW 02450	LDMAIN 12791	END 09932	MLIND 02462	TWO 07732
ADDSVE 02472	LOADER 05060	ENTER 08880	MLSCH 09088	TYPE 12738
ALFIND 10272	LODPRO 07744	FLOD 12828	MSIZE 07560	XEQON 09648
BLKIND 10271	MAINCT 10506	FLS 12928	MTBL 10686	SBINIT 08056
BLNKCK 08684	MAPDDA 12774	FOR 10276	NEXC 12730	SBPTBL 07400
COLNAM 08604	MLINIT 07524	INC 12975	ONE 07700	SCADDR 02460
COMDDA 12960	MNCAL 00796	INDV 10510	RDAGN 08164	SEARCH 09112
COMIND 10273	NAMBUF 02441	INRK 07400	RDLOC 08448	SETRM1 08340
COMSEC 07300	ONETWO 13032	INTCC 10300	RMCHK 08504	SPCHAR 08752
EPRINT 10204	OVRLAP 02444	ICGT 00566	RNDED 09408	SUBCOW 12995
EQADDR 02455	RCMKCK 08652	ICIND 02461	ROUND 09836	SUBDDA 12750
ERMESS 13003	RNDED1 09540	ICPT 00532	SDIS 08068	SUBSCH 09056
EXTIND 02463	ROUND1 09856	ICRT 00565	SECT 02466	SUBSET 07664
FLGRMK 02445	AMI 08188	LDDA 02474	SETRM 08284	SUBTBL 02522
FLSDDA 12936	BEGIN 05000	LDMN 13023	SSIZE 08116	SVEDDA 02490
FORDDA 10284	CCNT 10508	LCAD1 09292	START 07780	TBLSZ 09188
GETDIM 07792	CCIN 10523	LCAD 09232	STBL 11706	XEQON1 10012
INCDDA 02506	CKSTL 10520	LOCAL 10465	SUB 12742	XEQON2 10160
INTCC1 10456	COM 12951	MAIN 09876	SVE 12983	ZROTST 02467
JOBOUT 10475	CONT 10274	MAP 12765	TDIS 07536	
LABFUL 08948	DDAR 07280	MLCOW 13000	TFCC 08200	

END OF ONE ASSEMBLY.

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00010	*****	1620 MCNITOR II VERSICN 2 FORTRAN II-D LCAOER BLOCK 2		
00020	IOPT DS	,532	00532	G
00030	IOGT DS	,566	00566	G
00040	ICRT DS	,565	00565	C
00050	MONCAL DS	,796	00796	C
00060	***	COMMUNICATION AREA		
00070	DORG	2218	02218	
00080	F DS	2,, FLOATING POINT WCRD LENGTH	02219	2
00090	K DS	2,, FIXED POINT WORD LENGTH	02221	2
00100	PRCGST DS	5,, STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00110	COMADC DS	5,, STARTING ADDRESS OF COMMON AREA	02231	5
00120	N1 DS	2,, NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00130	N2 DS	5,, NUMBER OF LOGICAL RECORDS	02238	5
00140	W DS	2,, WORD LENGTH	02240	2
00150	RECLG DS	3,, RECORD LENGTH	02243	3
00160	ENTLN DS	5,, ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00170	ENTEXP DS	5,, ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00180	ENTSC2 DS	5,, ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00190	ENTSC3 DS	5,, ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00200	ENTSDX DS	5,, ENTRY ADDRESS TO FIXED SWITCH D SUBROUTINE	02268	5
00210	ENTFID DS	5,, ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00220	ENTREC DS	5,, ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00230	ENTFET DS	5,, ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00240	ENTSWD DS	5,, ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00250	ENTDOR DS	5,, ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00260	ENTDED DS	5,, ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00270	ENTCOS DS	5,, ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00280	ENTSIN DS	5,, ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00290	ENTATN DS	5,, ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00300	ENTSQT DS	5,, ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00310	ENTABS DS	5,, ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00320	DS	70,, RESERVED FOR ENTRIES TO ACCED SUBROUTINES	02393	70
00330	LIBSUB DSS	30,, LIBRARY SUBROUTINE INDICATORS	02394	30
00340	DC	1,,	02424	1
00350	DORG	2426	02426	
00360	NAMBUF DC	16,0	02441	16
		-00000000000000		
00370	DC	2,,	02443	2
		-		
00380	OVLAP DC	1,0	02444	1
		-		
00390	FLGRM DS	1	02445	1
00400	ADDCOM DS	5	02450	5
00410	EQADDR DS	5	02455	5
00420	SCADDR DC	5,0	02460	5
		-0000		
00430	IOIND DC	1,0	02461	1
		-		
00440	MLIND DC	1,0	02462	1
		-		
00450	EXTIND DS	1	02463	1
00460	SECT DS	3	02466	3
00470	ZROTST DC	1,0	02467	1
		-		
00480	ADDSVE DS	5	02472	5

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00490	DC	1,,	02473	1
		-		
00500	LDCDA DDA	,1,0,0,SUBTBL	02474	14
		1-0000-00-2522		
00510	DC	1,,	02488	1
		-		
00520	SVEDDA DDA	,1,0,21,0	02490	14
		1-0000-21-0000		
00530	DC	1,,	02504	1
		-		
00540	INCDDA DDA	,1,0,10,SUBTBL	02506	14
		1-0000-10-2522		
00550	DC	1,,	02520	1
		-		
00560	NODATA DSC	1,1	02521	1
		1		
00570	SUBTBL DSS	1000	02522	1000
00580	DC	12,,	03533	12
		-0000000000		
00590	*****	ENTRY FROM CALL LINK STATEMENT		
00600	JAYENT NOP	TSTVLD,CDORTP	03534	41 04390 05696
00610	BSNX	**12	03546	60 03558 00000
00620	TFM	IOPT,**23	03558	16 00565 -3581
00630	B	IOGT,COM,7	03570	49 00566 -6091
00640	TFM	CDTPLD+13,25,10	03582	16 05231 000K5
00650	TF	DMEDDA+5,COMSEC+71	03594	26 06081 07371
00660	TF	NAMBUF,7495,11	03606	26 02441 0749N
00670	TF	COMSEC+35,NAMBUF	03618	26 07335 02441
00680	TFM	IOPT,**23,, GET FLOD SECTOR	03630	16 00565 -3653
00690	B	IOGT,DME,7	03642	49 00566 -6068
00700	TF	SVEDDA+5,INRK+18	03654	26 02495 07418
00710	TDM	DME,2	03666	15 06068 00002
00720	TF	ADDCOW,INRK+36	03678	26 02450 07436
00730	CM	ADDCOW,7499	03690	14 02450 -7499
00740	BNE	**24	03702	47 03726 01200
00750	TDM	SCADDR,1	03714	15 02460 00001
00760	TF	ADDSVE,ADDCOW	03726	26 02472 02450
00770	AM	ADDSVE,1,10	03738	11 02472 000-1
00780	TF	LDDDA+5,INRK+7	03750	26 02479 07407
00790	TF	LDDDA+8,INRK+2	03762	26 02482 07426
00800	TF	SECT,INRK+26	03774	26 02466 07426
00810	TF	EQADDR,INRK+23	03786	26 02455 07431
00820	TF	INCDDA+5,INRK+31	03798	26 02511 07431
00830	TFM	**18,SUBTBL+11	03810	16 03828 -2533
00840	TDM		03822	15 00000 00000
00850	DC	1,,	03833	1
		-		
00860	AM	**6,20,10	03834	11 03828 000K0
00870	CM	**18,SUBTBL+1031	03846	14 03828 -3553
00880	BNE	**36	03858	47 03822 01200
00890	TFM	IOPT,**23,, STCRE IN-CORE TABLE	03870	16 00565 -3893
00900	B	IOPT,INC,7	03882	49 00532 -6139
00910	TDM	LNKIND,1	03894	15 03904 00001
00920	LNKIND DS	**1	03904	C
00930	TD	IOIND,INRK+99	03906	25 02461 07499
00940	TDM	EXTIND,1	03918	15 02463 00001

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00950	*****	EQUIVALENCE TABLE SEARCH					
00960	EQSRCH	TF	EQUDDA+5, EQADDR	03930	26	C6161	C2455
00970		TFM	INRK+48, SECT	03942	16	C7448	-2466
00980		TFM	IORT, **23,, READ IN FOUR SECTORS CF EQUIV. TABLE	03954	16	C0565	-3977
00990		B	IOGT, EQU, 7	03966	49	C0566	-6147
01000	COMPER	TFM	COMP+11, SUBTBL+11,, SEARCH EQUIV. TABLE	03978	16	C4021	-2533
01010		BNR	**20, COMP+11, 11	03990	45	0401C	0402J
01020		B	NXTRD+24	04002	49	04094	C0000
01030		DORG	**3	04010			
01040	COMP	C	NAMBUF	04010	24	02441	C0000
01050		BE	FOUND	04022	46	04138	C1200
01060		AM	COMP+11, 16, 10, INCREMENT TO NEXT NAME	04034	11	C4021	C00J6
01070		CM	COMP+11, SUBTBL+411,, TEST FOR END OF TABLE	04046	14	04021	-2933
01080		BNE	COMPER+12	04058	47	C399C	01200
01090	NXTRD	CM	INRK+48, 0, 9,, TEST FOR END OF EQUIV. TABLE	04070	14	07448	C0-00
01100		BH	**20	04082	46	04102	01100
01110		B	CDORTP	04094	49	05696	C0000
01120		DORG	**3	04102			
01130		SM	INRK+48, 4, 10, DECREMENT SECTOR COUNT	04102	12	07448	C00-4
01140		AM	EQUDDA+5, 4, 10	04114	11	C6161	000-4
01150		B	COMPER-24	04126	49	03954	C0000
01160	FOUND	AM	COMP+11, 4, 10, INCREMENT TO GET DIM NUMBER	04138	11	C4021	C00-4
01170		TFM	DIMDDA+5, 4800	04150	16	C6205	-4800
01180		S	DIMDDA+6, COMP+11, 11	04162	22	C6206	C402J
01190		S	DIMDDA+6, COMP+11, 11	04174	22	06206	0402J
01200		TDM	DIMDDA+6,, 11	04186	15	06206	C000-
01210	*****		READ IN DIM SECTOR				
01220	FOUND1	TFM	IORT, **23	04198	16	C0565	-4221
01230		B	IOGT, DIM, 7	04210	49	C0566	-6192
01240		TD	SECCT, COMP+11, 11	04222	25	C6283	C402J
01250		CM	SECCT, 5, 10	04234	14	C6283	C00-5
01260		BL	**24	04246	47	C4270	01300
01270		SM	SECCT, 5, 10, CALCULATE DIM ENTRY ADDRESS	04258	12	C6283	C00-5
01280		MM	SECCT, 20, 9	04270	13	C6283	C0-20
01290		AM	99, INRK	04282	11	C0095	-7400
01300		TR	DIMSVE, 99, 11	04294	31	C6242	0009R
01310		TD	DMEDDA, DIMSVE	04306	25	06076	C6242
01320		TF	DMEDDA+5, DIMSVE+5	04318	26	C6081	C6247
01330		TR	DDAR, DMEDDA,, MOVE SECTOR DDA TO PROGRAM CDA AREA	04330	31	0728C	C6076
01340		TFM	IORT, **23,, READ IN INDICATOR RECORD	04342	16	C0565	-4365
01350		B	IOGT, DME, 7	04354	49	C0566	-6068
01360		TF	DDAR+8, DIMSVE+8,, MOVE SECTOR COUNT	04366	26	07288	C6250
01370	*****		INDICATOR RECORD CHECK				
01380		TDM	EXTIND, 0	04378	15	02463	00000
01390	TSTVLD	C	INRK+13, INDCON,, CHECK FOR VALID INDICATOR RECORD	04390	24	07413	C6267
01400		BE	RELFRM	04402	46	C5382	C1200
01410		C	INRK+5, INDCON,, CHECK FOR VALIDITY IN CORE IMAGE	04414	24	07405	C6267
01420		BE	**32	04426	46	0445E	01200
01430		BTM	EPRINT, 75, 8	04438	17	0547E	C-075
01440		B	MONCAL	04450	49	00756	C0000
01450		DORG	**3	04458			
01460		BTM	FLSBT, 0, 10	04458	17	05542	000-0
01470		TF	DDAR+13, ADDSVE	04470	26	07293	02472
01480		TDM	INDR+7,, CCNVERT DEFINER TO CORE IMAGE	04482	15	06186	C0000
01490		DC	1, **, *	04493		1	

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01500		AM	DDAR+5, 1, 10, INCREMENT DISK ADDRESS BY ONE	04494	11	07285	C00-1
01510		SM	DDAR+8, 1, 10, DECREMENT SECTOR COUNT BY ONE	04506	12	07288	C00-1
01520	*****		INITIALIZE FORTRAN COMMUNICATION AREA				
01530	COMLD	TF	N1, INRK+7	04518	26	02233	07407
01540		TF	N2, INRK+12	04530	26	C2238	07412
01550		TF	W, INRK+14	04542	26	0224C	07414
01560		TF	RECLG, INRK+17	04554	26	C2243	07417
01570		BD	LNK, LNKind	04566	43	0461C	C3904
01580		TF	F, INRK+24	04578	26	02215	07424
01590		TF	K, INRK+26	04590	26	02221	07426
01600		B	ML	04602	49	04678	C0000
01610		DORG	**3	04610			
01620	LNK	C	INRK+24, F	04610	24	07424	02219
01630		BNE	**36	04622	47	04658	01200
01640		C	INRK+26, K	04634	24	07426	02221
01650		BE	ML	04646	46	04678	C1200
01660		BTM	EPRINT, 76, 8	04658	17	05478	C-076
01670		B	MONCAL	04670	49	00796	00000
01680		DORG	**3	04678			
01690	ML	TF	PRGST, INRK+31	04678	26	02226	07431
01700		A	PRGST, ADDSVE	04690	21	02226	02472
01710		TF	COMADD, INRK+36	04702	26	C2231	07436
01720		TF	SVEDDA+13, COMADD	04714	26	C2503	C2231
01730		TF	MLGTH, INRK+22	04726	26	C6272	07422
01740	*****		INITIALIZE LIBRARY SUBROUTINE INDICATORS				
01750		SF	INRK+37	04738	32	07437	00000
01760		TF	LIBSUB+29, INRK+66	04750	26	02423	07466
01770	*****		SAVE COMMON AREA				
01780		TDM	*	04762	15	0000C	C0000
01790	GPMK	DGM	*	04773		1	
01800		TFM	IORT, **23,, PUT 21 SECTORS OF COMMON AREA IN SCRATCH	04774	16	C0565	-4797
01810		B	IORT, SVE, 7	04786	49	C0532	-6171
01820	CLEAR	TR	7500, ZEROS, 2	04798	31	-7500	06408
01830		AM	CLEAR+6, 500, 9	04810	11	04804	00N00
01840		C	CLEAR+6, COMADD	04822	24	04804	02231
01850		BL	CLEAR	04834	47	04798	C1300
01860	TRYSZE	TF	ADDSVE, ADDCOW	04846	26	02472	02450
01870		AM	ADDSVE, 1, 10	04858	11	02472	000-1
01880		A	ADDCOW, INRK+22	04870	21	0245C	07422
01890		TDM	INRK+23	04882	15	07423	00000
01900		DC	1, **, *	04893		1	
01910		C	ADDCOW, COMADD	04894	24	0245C	02231
01920		BH	ERML	04906	46	05616	C1100
01930	SIZEOK	BD	**24, OVRLAP	04918	43	04942	02444
01940		BNCL	RDRPRG	04930	47	05026	00100
01950		RCTY		04942	34	0000C	C0102
01960		WATY	NAMBUF-10,, TYPE OUT NAME	04954	39	02431	00100
01970		SPTY		04966	34	C000C	00101
01980		WNTY	ADDSVE-4	04978	38	02468	C0100
01990		SPTY		04990	34	C0000	C0101
02000		WNTY	INRK+18,, TYPE OUT LENGTH	05002	38	07418	00100
02010		WATY	LOED	05014	39	06291	C0100
02020	*****		LOAD PROGRAMS ROUTINE				
02030	RDRPRG	BD	CDTPLD, EXTIND,, BRANCH IF PROGRAM IN CARD OR TAPE	05026	43	05218	C2463
02040	SCHLD	TFM	IORT, **23,, GET PROGRAM FROM DISK	05038	16	C0565	-5061

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02050	B	IOGT,INDR,7	05050	49	00566	-6179
02060	*	TEST FOR SUBPROGRAM CALLS				
02070	CALL2	TF **35,ADDCOM	05062	26	05097	C2450
02080	AM	**23,1,10	05074	11	05097	000-1
02090	BNR	CALL3	05086	45	05154	C0000
02100	*	TEST FOR LIBRARY SUBROUTINE CALLS				
02110	BD	CALL4,LIBSUB	05098	43	05178	C2394
02120	CM	**1,LIRSUB+29	05110	14	05109	-2423
02130	BE	CALL6	05122	46	05198	C1200
02140	AM	**25,1,10	05134	11	05105	C00-1
02150	B	**48	05146	49	05098	C0000
02160	DORG	**3	05154			
02170	CALL3	TFM IORT,**23	05154	16	00565	-5177
02180	B	IOGT,BL3,7	05166	49	00566	-6308
02190	CALL4	TFM CALL3+23,BL4	05178	16	05177	-6316
02200	B	CALL3	05190	49	05154	C0000
02210	DORG	**3	05198			
02220	CALL6	TFM CALL3+23,BL6	05198	16	05177	-6324
02230	B	CALL3	05210	49	05154	C0000
02240	DORG	**3	05218			
02250	*****	ROUTINE TO LOAD PROGRAM FROM CARD OR TAPE				
02260	CDTPLC	TDM 416	05218	15	00416	C0000
02270	DC	1,*,*	05229		1	
02280	NOP	428,COMSEC+73	05230	41	00428	C7373
02290	SF	428	05242	32	00428	C0000
02300	CF	429	05254	33	00429	C0000
02310	TF	434,ADDSVE	05266	26	00434	C2472
02320	SF	489	05278	32	00489	C0000
02330	TF	COMSEC+98,INRK+79	05290	26	C7398	C7479
02340	TFM	IORT,**23,, PUT BACK COMMUNICATION SECTOR	05302	16	00565	-5325
02350	B	IOPT,COM,7	05314	49	00532	-6091
02360	TFM	IORT,**23,, GET PROGRAM	05326	16	00565	-5349
02370	B	IOGT,EXT,7	05338	49	00566	-6115
02380	TDM	EXTIND	05350	15	02463	C0000
02390	TDM	NODATA,0	05362	15	02521	C0000
02400	B	CALL2	05374	49	05062	C0000
02410	DORG	**3	05382			
02420	RELFRM	TDM INRK+80	05382	15	07480	C0000
02430	DC	1,*,*	05393		1	
02440	TR	INRK,INRK+8,, MCVE INDICATOR RECCRD TO CONFCRM TO CARD IMAGE	05394	31	07400	C7408
02450	CF	427	05406	33	00427	C0000
02460	TFM	439,75	05418	16	00439	-0075
02470	TFM	DDAR+13,99999	05430	16	C7293	R9999
02480	BTM	FLSBT,0,10	05442	17	05542	C00-0
02490	TF	INDR+11,ADDSVE	05454	26	06190	C2472
02500	B	COMLD	05466	49	04518	C0000
02510	*****	ERROR MESSAGE SUBROUTINE				
02520	EPRINT	TF ERMES+16,EPRINT-1	05478	26	06233	05477
02530	RCTY		05490	34	00000	C0102
02540	WATY	ERMES	05502	39	06217	C0100
02550	RCTY		05514	34	00000	C0102
02560	WATY	JOBOUT	05526	39	06041	C0100
02570	BB		05538	42	00000	C0000
02580	DORG	**9	05540			

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02590	DS	2	05541		2	
02600	FLSBT	CM INRK+24,8,10	05542	14	07424	C00-8
02610	BNE	**60	05554	47	05614	C1200
02620	SF	IOIND	05566	32	02461	C0000
02630	BD	**36,IOIND	05578	43	05614	C2461
02640	TFM	ADDCOM,11199	05590	16	02450	J1199
02650	TFM	ADDSVE,11200	05602	16	02472	J1200
02660	BB2		05614	42		
02670	*****	MAINLINE OVERLAP ROUTINE				
02680	ERML	RCTY	05616	34	00000	C0102
02690	WATY	NAMBUF-10	05628	39	02431	C0100
02700	WNTY	INRK+18	05640	38	07418	C0100
02710	WATY	OVRMES	05652	39	06023	C0100
02720	RCTY		05664	34	00000	C0102
02730	WATY	JOBOUT	05676	39	C6041	C0100
02740	B	MONCAL	05688	49	00796	C0000
02750	DORG	**3	05696			
02760	CDORTP	RCTY	05696	34	00000	C0102
02770	RELADD	DS **5	05702		C	
02780	WATY	LDMES	05708	39	06009	C0100
02790	WATY	NAMBUF-10	05720	39	02431	C0100
02800	*****	LOAD CARD OR TAPE STORED PROGRAMS				
02810	TD	CDTP+2,COMSEC+73	05732	25	C6280	C7373
02820	SM	CDTP+2,1,10	05744	12	C6280	C00-1
02830	READ	TFM IORT,**23,, GET INDICATOR RECCRD	05756	16	00565	-5779
02840	B	IOGT,CDTP-4,7	05768	49	00566	-6274
02850	TFM	**23,INRK	05780	16	05803	-7400
02860	RMCHK	BNR **20	05792	45	05812	C0000
02870	B	READ	05804	49	05756	C0000
02880	DORG	**3	05812			
02890	AM	RMCHK+11,1,10	05812	11	05803	C00-1
02900	CM	RMCHK+11,INRK+80	05824	14	05803	-7480
02910	BNE	RMCHK	05836	47	05792	C1200
02920	SF	INRK+1	05848	32	07401	C0000
02930	CF	INRK+2	05860	33	07402	C0000
02940	CF	INRK+3	05872	33	07403	C0000
02950	CF	INRK+4	05884	33	07404	C0000
02960	CM	INRK+4,4131,8	05896	14	07404	0M131
02970	BNE	HEADER	05908	47	05964	C1200
02980	RCTY		05920	34	00000	C0102
02990	TFM	IORT,**23	05932	16	00565	-5955
03000	B	IOPT,TYPE-4,7	05944	49	00532	-6387
03010	B	CDORTP	05956	49	05696	C0000
03020	DORG	**3	05964			
03030	HEADER	C INRK+13,INDCON	05964	24	07413	06267
03040	BNE	READ	05976	47	05756	C1200
03050	BNF	READ,INRK+16	05988	44	05756	07416
03060	B	TSTVLD	06000	49	04390	C0000
03070	DORG	**3	06008			
03080	LDMES	DAC 7,LOAD	06009		7 X	2
		LOAD				
03090	OVRMES	DAC 9, OVERLAP	06023		9 X	2
		OVERLAP				
03100	JOBOUT	DAC 14, JCB ABANDONED	06041		14 X	2
		JOB ABANDONED				
03110	DME	DSC 2,02	06068		2	
		02				

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03120	DSA	DMEDDA	06074	5 X	1
03130	DC	1,'	06074	-6076	
	'		06075	1	
03140	DMEDDA	DDA ,1,0,1,INRK 1-0000-01-7400	06076	14	
03150	DC	1,'	06090	1	
	'				
03160	COM	DSC 2,22	06091	2	
03170	DSA	COMDDA	06097	5 X	1
			06097	-6100	
03180	DC	1,'	06098	1	
	'				
03190	COMDDA	DDA ,1,19663,1,COMSEC 1J9663-01-7300	06100	14	
03200	DC	1,'	06114	1	
	'				
03210	EXT	DSC 2,-22	06115	2	
	2K				
03220	DSA	EXTDDA	06121	5 X	1
			06121	-6124	
03230	DC	1,'	06122	1	
	'				
03240	EXTDDA	DDA ,1,19783,3,0 1J9783-03-0000	06124	14	
03250	DC	1,'	06138	1	
	'				
03260	INC	DSC 2,02	06139	2	
	02				
03270	DSA	INCDDA	06145	5 X	1
			06145	-2506	
03280	DC	1,'	06146	1	
	'				
03290	EQU	DSC 2,22	06147	2	
	22				
03300	DSA	EQUDDA	06153	5 X	1
			06153	-6156	
03310	DC	1,'	06154	1	
	'				
03320	EQUDDA	DDA ,1,0,4,SUBTBL 1-0000-04-2522	06156	14	
03330	DC	1,'	06170	1	
	'				
03340	SVE	DSC 2,02	06171	2	
	02				
03350	DSA	SVEDDA	06177	5 X	1
			06177	-2490	
03360	DC	1,'	06178	1	
	'				

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03370	INDR	DSC 2,22	06179	2	
	22				
03380	DSA	DDAR,0	06185	5 X	2
			06185	-7280	
			06190	-CCCC	
			06191	1	
03390	DC	1,'			
	'				
03400	DIM	DSC 2,22	06192	2	
	22				
03410	DSA	DIMDDA	06198	5 X	1
			06198	-6200	
03420	DC	1,'	06199	1	
	'				
03430	DIMDDA	DDA ,1,4800,1,INRK 1-4800-01-7400	06200	14	
03440	DC	1,'	06214	1	
	'				
03450	ERMESS	DAC 10,ERROR L ERROR L	06217	10 X	2
03460	ZERONE	DC 6,10C001 J00001	06241	6	
03470	DIMSVE	DSS 20,, RESERVES CURRENT DIM ENTRY	06242	20	
03480	INDCON	DC 6,987898,, INDICATOR RECORD CONSTANT R87898	06267	6	
03490	MLLGTB	DS 5,, LENGTH OF MAINLINE PROGRAM	06272	5	
03500	CDINP	DS 1	06273	1	
03510	CDTP	DSA INRK	06278	5 X	1
			06278	-7400	
03520	DC	2,0	06280	2	
	-0				
03530	DGM		06281	1	
03540	SECCT	DC 2,0	06283	2	
	-0				
03550	ONETWC	DSC 5,00101 00101	06284	5	
03560	LOED	DAC 9, LOADED* LOADED*	06291	9 X	2
03570	BL3	DSC 2,-22	06308	2	
	2K				
03580	DSA	BL3DDA	06314	5 X	1
			06314	-6332	
03590	DC	1,'	06315	1	
	'				
03600	BL4	DSC 2,-22	06316	2	
	2K				
03610	DSA	BL4DDA	06322	5 X	1
			06322	-6352	
03620	DC	1,'	06323	1	
	'				
03630	BL6	DSC 2,-22	06324	2	
	2K				

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ADDCOW 02450	ENTSC3 02263	NAMBUF 02441	DDAR 07280	ML 04678
ADDSVE 02472	ENTSDX 02268	NCDATA 02521	DIM 06192	N1 02233
BL3DDA 06332	ENTSIN 02308	CVNETC 06284	DME 06068	N2 02238
BL4DDA 06352	ENTSQT 02318	CYRLAP 02444	ENTLN 02248	NXTRD 04670
BL6DDA 06372	ENTSMO 02288	CYRMES 06023	EQU 06147	READ 05756
CDORTP 05696	EPRINT 05478	PROGST 02226	ERML 05616	RECLG 02243
CDTPLD 05218	EQADDR 02455	RDPRG 05026	EXT 06115	RMCHK 05792
CMADD 02231	EQSRCH 03930	RELADD 05702	FLSBT 05542	SCHLD 05038
CMCDA 06100	EQDDA 06156	RELFM 05382	FOUND 04138	SECT 06283
COMPER 03978	ERMESS 06217	BEGIN 08000	F 02219	SECT 02466
COMSEC 07300	EXTDDA 06124	BL3 06308	GPMK 04773	SVE 06171
DIMDDA 06200	EXTIND 02463	BL4 06316	INC 06139	TYPE 06391
DIMSVE 06242	FLGRMK 02445	BL6 06324	INCR 06179	W 02240
DMEDDA 06076	FOUND1 04198	CALL2 05062	INRR 07400	ZERCS 06408
ENTABS 02323	HEADER 05964	CALL3 05154	IOGT 00566	SCADDR 02460
ENTATN 02313	INCDDA 02506	CALL4 05178	IOIND 02461	SIZECK 04918
ENTCCS 02303	INDCON 06267	CALL6 05198	IOPT 00532	SUBTBL 02522
ENTDED 02298	JAYENT 03534	CDINP 06273	IORT 00565	SVEDDA 02490
ENTDRR 02293	JOBOUT 06041	CDTP 06278	K 02221	TRYSZE 04866
ENTEXP 02253	LIBSUB 02394	CLEAR 04798	LCCDA 02474	TSTVLD 04390
ENTFET 02283	LNKIND 03904	COMLD 04518	LDED 06291	ZERONE 06241
ENTFID 02273	LOADER 08072	COMP 04010	LDMES 06009	ZROTST 02467
ENTREC 02278	MLLGTH 06272	COM 06091	LNK 04610	
ENTSC2 02258	MONCAL 00796	DATA 06397	MLIND 02462	

END OF ONE ASSEMBLY.

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00010 *****	1620 MONITOR II VERSION 2 FORTRAN II-D LOADER BLOCK 3		
00020 IOPT DS	,532	00532	C
00030 IOGT DS	,566	00566	C
00040 IORT DS	,565	00565	C
00050 MONCAL DS	,796	00796	C
00060 ***	COMMUNICATION AREA		
00070	DORG 2218	02218	
00080 F DS	2,, FLOATING POINT WORD LENGTH	02219	2
00090 K DS	2,, FIXED POINT WORD LENGTH	02221	2
00100 PROGST DS	5,, STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00110 COMADD DS	5,, STARTING ADDRESS OF COMMON AREA	02231	5
00120 N1 DS	2,, NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00130 N2 DS	5,, NUMBER OF LOGICAL RECORDS	02238	5
00140 W DS	2,, WORD LENGTH	02240	2
00150 RECLG DS	3,, RECORD LENGTH	02243	3
00160 ENTLN DS	5,, ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00170 ENTEXP DS	5,, ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00180 ENTSC2 DS	5,, ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00190 ENTSC3 DS	5,, ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00200 ENTSDX DS	5,, ENTRY ADDRESS TO FIXED SWITCH D SUBROUTINE	02268	5
00210 ENTFID DS	5,, ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00220 ENTRREC DS	5,, ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00230 ENTFET DS	5,, ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00240 ENTSDO DS	5,, ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00250 ENDRR DS	5,, ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00260 ENTDED DS	5,, ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00270 ENTCOS DS	5,, ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00280 ENTSIN DS	5,, ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00290 ENTATN DS	5,, ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00300 ENTSQT DS	5,, ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00310 ENTABS DS	5,, ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00320 DS	70,, RESERVED FOR ENTRIES TO ADDED SUBROUTINES	02393	70
00330 LIBSUB DSS	30,, LIBRARY SUBROUTINE INDICATORS	02394	30
00340 DC	1,,	02424	1
00350 *****	MAINLINE TABLE SEARCH		
00360 DORG	2426	02426	
00370 NAMBUF DC	16,0	02441	16
	-0000000000000000		
00380 DC	2,,	02443	2
	-		
00390 OVRLAP DS	1	02444	1
00400 FLGRMK DS	1	02445	1
00410 ADDCOW DS	5	02450	5
00420 EQADDR DS	5	02455	5
00430 SCADDR DS	5	02460	5
00440 IOIND DS	1	02461	1
00450 MLIND DS	1	02462	1
00460 EXTIND DS	1	02463	1
00470 SECT DS	3	02466	3
00480 ZROTST DS	1	02467	1
00490 ADDSVE DS	5	02472	5
00500 DC	1,,	02473	1
	.		
00510 LCCDA DDA	,1,0,0,SUBTBL	02474	14
	1-0000-00-2522		

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00520	DC	1,'	02488	1	
00530	SVEDDA	DDA ,1,0,21,0	02490	14	
		1-0000-21-0000			
00540	DC	1,'	02504	1	
00550	DATA	DC 1,C	02505	1	
00560	INCDDA	DDA ,1,0,10,SUBTBL	02506	14	
		1-0000-10-2522			
00570	DC	1,'	02520	1	
00580	NODATA	DS 1	02521	1	
00590	SUBTBL	DSS 1000	02522	1000	
00600	DC	12,'	03533	12	
		-0000000000'			
00610	RMTBL	CM COMSEC+75,,10, BRANCH IF NO LOCAL CARDS	03534	14	07375 C00-0
00620	BE	LODINC	03546	46	05062 C1200
00630	TFM	IORT,++23	03558	16	00565 -3581
00640	B	IOGT,LD,7	03570	49	00566 -7217
00650	TFM	++23,SUBTBL+11	03582	16	03605 -2533
00660	SRCH	BNR ++32,,, TEST FOR END OF TABLE	03594	45	03626 00000
00670	TDM	TBLIND,1	03606	15	03615 00001
00680	TBLIND	DS ,*-2	03615		0
00690	B	LODINC	03618	49	05062 C0000
00700	DORG	=-3	03626		
00710	C	COMSEC+35,SRCH+11,11, COMPARE NAMES	03626	24	07335 0360N
00720	BE	TBLD	03638	46	04894 C1200
00730	AM	SRCH+11,20,10, INCREMENT TO NEXT ENTRY	03650	11	03605 C0000
00740	B	SRCH	03662	49	03594 C0000
00750	EQRCH	TF EQUDDA+5,EQADDR	03674	26	06991 02455
00760	TF	INRK+48,SECT	03686	26	07448 02466
00770	TFM	IORT,++23,, READ IN FOUR SECTORS OF EQUIV. TABLE	03698	16	00565 -3721
00780	B	IOGT,EQU,7	03710	49	00566 -6977
00790	COMPER	TFM COMP+11,SUBTBL+11,, SEARCH EQUIV. TABLE	03722	16	03765 -2533
00800	BNR	++20,COMP+11,11	03734	45	03754 0376N
00810	B	EQRCH-1,,6	03746	49	0367L C0000
00820	DORG	=-3	03754		
00830	COMP	C NAMBUF	03754	24	02441 00000
00840	BE	FOUND	03766	46	03874 C1200
00850	AM	COMP+11,16,10, INCREMENT TO NEXT NAME	03778	11	03765 000J6
00860	CM	COMP+11,SUBTBL+411,, TEST FOR END OF TABLE	03790	14	03765 -2933
00870	BNE	COMPER+12	03802	47	03734 01200
00880	NXTRD	CM INRK+48,0,9, TEST FOR END OF EQUIV. TABLE	03814	14	07448 C0-00
00890	BE	EQRCH-1,,6	03826	46	0367L C1200
00900	SM	INRK+48,4,10, DECREMENT SECTOR COUNT	03838	12	07448 000-4
00910	AM	EQUDDA+5,4,10	03850	11	06991 000-4
00920	B	COMPER-24	03862	49	03658 C0000
00930	FOUND	AM COMP+11,4,10, INCREMENT TO GET DIM NUMBER	03874	11	03765 000-4
00940	TFM	DIMDDA+5,4800	03886	16	07051 -4800
00950	S	DIMDDA+6,COMP+11,11	03898	22	07052 0376N
00960	S	DIMDDA+6,COMP+11,11	03910	22	07052 0376N
00970	TD	SECT,DIMDDA+6	03922	25	06549 07052
00980	*****	READ IN DIM SECTOR			
00990	TDM	DIMDDA+6,,11	03934	15	07052 0000-
01000	BTM	INCGET,++12	03946	17	06810 -3958

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01010	SF	ENDTST+11,,6, SET -LOADED- INDICATOR	03958	32	0564N 00000
01020	BTM	INCPUT,++12	03970	17	06774 -3982
01030	FOUND1	TFM IORT,++23	03982	16	00565 -4005
01040	B	IOGT,DIM,7	03994	49	00566 -7038
01050	TD	++22,SECT	04006	25	04028 06549
01060	TR	DIMSVE,INRK	04018	31	07082 07400
01070	TD	DMEDDA,DIMSVE	04030	25	06962 07082
01080	TF	DMEDDA+5,DIMSVE+5	04042	26	06967 07087
01090	TR	DDAR,DMEDDA,, MOVE SECTOR ODA TO PROGRAM DCA AREA	04054	31	07280 06962
01100	TFM	IORT,++23,, READ IN INDICATOR RECORD	04066	16	00565 -4089
01110	B	IOGT,DME,7	04078	49	00566 -6954
01120	TF	DDAR+8,DIMSVE+8,, MOVE SECTOR COUNT	04090	26	07288 07090
01130	*****	INDICATOR RECORD CHECK			
01140	TSTVLD	C INRK+13,INDCON,, CHECK FOR VALID INDICATOR RECORD	04102	24	07413 04169
01150	BE	RELFRM	04114	46	06514 01200
01160	C	INRK+5,INDCON,, CHECK FOR VALIDITY IN CORE IMAGE	04126	24	07405 04169
01170	BE	++56	04138	46	04194 01200
01180	BTM	EPRINT,75,8	04150	17	06846 0-075
01190	RCTY		04162	34	00000 00102
01200	INDCON	DC 6,987898,-*4	04169		6
		R87898			
01210	WATY	JOBOUT	04174	39	06927 00100
01220	B	MONCAL	04186	49	00796 00000
01230	DORG	=-3	04194		
01240	TFM	DDAR+13,1	04194	16	07293 -0001
01250	A	DDAR+13,ADDCOW	04206	21	07293 02450
01260	TDM	INDR+7,,, CONVERT DEFINER TO CORE IMAGE	04218	15	07032 00000
01270	DC	1,'*	04229		1
01280	AM	DDAR+5,1,10, INCREMENT DISK ADDRESS BY ONE	04230	11	07285 000-1
01290	SM	DDAR+8,1,10, DECREMENT SECTOR COUNT BY ONE	04242	12	07288 C00-1
01300	B	SUBPRO-24	04254	49	06574 C0000
01310	DORG	=-3	04262		
01320	TRYSZE	TF ADDSVE,ADDCOW	04262	26	02472 02450
01330	AM	ADDSVE,1,10	04274	11	02472 C00-1
01340	A	SPROST,ADDSVE	04286	21	06156 02472
01350	A	ADDCOW,INRK+22	04298	21	02450 07422
01360	TDM	INRK+23	04310	15	07423 00000
01370	DC	1,'*	04321		1
01380	C	ADDCOW,COMADD	04322	24	02450 02231
01390	BL	SIZEOK	04334	47	06126 C1300
01400	S	ADDCOW,INRK+22	04346	22	02450 07422
01410	*****	OVERLAP INDICATION			
01420	TDM	OVRLAP,1,, TURN ON OVERLAP INDICATOR	04358	15	02444 00001
01430	RCTY		04370	34	00000 00102
01440	ONETWO	DSC 5,00101,-*9	04372		5
		00101			
01450	WATY	NAMBUF-10,,, TYPE PROGRAM NAME	04382	39	02431 C0100
01460	WNTY	INRK+18,,, TYPE LENGTH	04394	38	07418 C0100
01470	WATY	DVRMES,,, TYPE CVERLAP	04406	39	06909 00100
01480	BD	++20,EXTIND,, BRANCH IF PROGRAM ON CARDS OR TAPE	04418	43	04438 02463
01490	B	COMP+24,,, BRANCH TO GET NEXT NAME	04430	49	03778 C0000
01500	DORG	=-3	04438		
01510	**	ROUTINE TO READ INDICATOR RECORD FROM CARDS OR TAPE			
01520	*****	LOAD CARD OR TAPE STORED PROGRAMS			

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01530	H			04438	48	CCCC	0000
01540	DORG	*-7		04442			
01550	INC	DSC	2,02	04442		2	
		O2					
01560	DSA	INCDDA		04448		5 x	1
				04448		-2506	
01570	DC	1,1		04449		1	
01580	PHASEC	BTM	INCGET,**12	04450	17	06810	-4462
01590		TD	CDTP+2,COMSEC+73	04462	25	C7108	C7373
01600		SM	CDTP+2,1,10	04474	12	07108	COO-1
01610	READ	TFM	IORT,**23,, GET INDICATOR RECCRD	04486	16	00565	-4509
01620		B	IOGT,CDTP-4,7	04498	49	00566	-7102
01630		TDM	EXTIND,1	04510	15	02463	000C1
01640		TFM	**35,SUBTBL-9	04522	16	04557	-2513
01650	GONXT	AM	ENTST+11,20,10	04534	11	04557	COOKO
01660	ENTST	BNR	**20,,, TEST FOR END OF TABLE	04546	45	04566	00000
01670		B	READ	04558	49	04486	CO0CC
01680		DORG	*-3	04566			
01690		TFM	**23,INRK	04566	16	04589	-7400
01700	RMCHK	BNR	**20	04578	45	04598	00000
01710		B	READ	04590	49	04486	CO0CC
01720		DORG	*-3	04598			
01730		AM	RMCHK+11,1,10	04598	11	04589	COO-1
01740		CM	RMCHK+11,INRK+80	04610	14	04589	-7480
01750		BNE	RMCHK	04622	47	04578	C12CC
01760		SF	INRK+1	04634	32	074C1	CO000
01770		CF	INRK+2	04646	33	07402	CO000
01780		CF	INRK+3	04658	33	07403	00000
01790		CF	INRK+4	04670	33	07404	CO000
01800		CM	INRK+4,4131,8	04682	14	07404	CM131
01810		BNE	HEADER	04694	47	04738	C1200
01820		RCTY		04706	34	00000	00102
01830		WATY	DATA1	04718	39	07227	CO100
01840		B	PHASED	04730	49	05918	CO000
01850		DORG	*-3	04738			
01860	HEADER	C	INRK+13,INDCON,, TEST FOR INDICATOR RECORC	04738	24	07413	04169
01870		BNE	READ	04750	47	04486	C12CC
01880		BNF	**20,INRK+16	04762	44	04782	C7416
01890		B	READ	04774	49	04486	CO0CC
01900		DORG	*-3	04782			
01910		C	INRK+25,ENTST+11,11, COMPARE NAMES	04782	24	07425	C455P
01920		BNE	GONXT	04794	47	04534	C12CC
01930		TF	NAMBUF,ENTST+11,11	04806	26	02441	0455P
01940		AM	ENTST+11,6,10	04818	11	04557	COO-6
01950		BNF	**32,ENTST+11,11	04830	44	04862	C455P
01960		AM	ENTST+11,14,10	04842	11	04557	CO0J4
01970		B	ENTST	04854	49	04546	CO000
01980		DORG	*-3	04862			
01990		SF	ENTST+11,,6, SET -LOADED- INDICATOR	04862	32	0455P	CO000
02000		BTM	INCPUT,**12	04874	17	06774	-4886
02010		B	RELFRM	04886	49	06514	CO000
02020		DORG	*-3	04894			
02030	*****		FLIP SUBPROGRAM TABLE SEARCH				
02040	TBLLD	AM	SRCH+11,3,10	04894	11	03605	COO-3

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02050	TF	FLPDDA+8,SRCH+11,11		04906	26	07018	C360N
02060	AM	SRCH+11,5,10		04918	11	03605	COO-5
02070	TF	FLPDDA+5,SRCH+11,11		04930	26	07015	0360N
02080	TFM	IORT,**23		04942	16	00565	-4965
02090	B	IOGT,FLP,7		04954	49	00566	-70C1
02100	SF	COMPAR		04966	32	05014	CO000
02110	TFM	COMPAR+11,SUBTBL+11,, INITIALIZE POINTER		04978	16	05025	-2533
02120	TF	COMPRE+11,ADDCOW		04990	26	05105	02450
02130	AM	COMPRE+11,1,10		05002	11	05105	COO-1
02140	COMPAR	BNR	COMPRE	05014	45	05094	CO000
02150	BNF	COMPRE,COMPAR		05026	44	05094	05014
02160	TFM	IORT,**23		05038	16	00565	-5061
02170	B	IOPT,FLP,7		05050	49	00532	-7001
02180	*****		IN-CORE SUBPROGRAM TABLE SEARCH AND LOAD				
02190	LOCINC	BTM	INCGET,**12	05062	17	06810	-5074
02200	CF	COMPAR		05074	33	05014	CO000
02210	B	COMPAR-36		05086	49	04978	CO000
02220	DORG	*-3		05094			
02230	COMPRE	BNR	SERCH	05094	45	05114	CO000
02240	B	SERCH3		05106	49	05546	CO000
02250	DORG	*-3		05114			
02260	SERCH	BD	**32,COMPRE+11,11	05114	43	05146	C510N
02270	AM	COMPRE+11,18,10		05126	11	05105	000J8
02280	B	COMPRE		05138	49	05094	CO000
02290	DORG	*-3		05146			
02300	AM	COMPRE+11,11,10		05146	11	05105	COOJ1
02310	BNF	SERCH2,COMPAR		05158	44	05398	05014
02320	C	COMPAR+11,COMPRE+11,611, CHECK FOR SAME NAME		05170	24	0502N	0510N
02330	BE	SERCH1		05182	46	05214	01200
02340	AM	COMPRE+11,7,10		05194	11	05105	COO-7
02350	B	COMPRE		05206	49	05094	00000
02360	DORG	*-3		05214			
02370	SERCH1	SM	COMPRE+11,11,10	05214	12	05105	000J1
02380	TDM	COMPRE+11,0,6		05226	15	0510N	CO000
02390	AM	COMPAR+11,5,10		05238	11	05025	000-5
02400	AM	COMPRE+11,16,10		05250	11	05105	CO0J6
02410	A	COMPRE+11,ADDSVE,6		05262	21	0510N	C2472
02420	BNF	**56,COMPAR		05274	44	05330	05014
02430	CM	COMPAR+11,,67		05286	14	0502N	-0000
02440	BNE	**32		05298	47	05330	01200
02450	TF	COMPAR+11,COMPRE+11,611, MOVE ADDRESS IN		05310	26	0502N	0510N
02460	B	SERCH2-20		05322	49	05378	00000
02470	DORG	*-3		05330			
02480	*****		ROUTINE TO PLACE INDIRECT ENTRY ADDRESSES INTO SUBPROGRAMS				
02490	TF	**35,COMPAR+11,11		05330	26	05365	C502N
02500	TF	**18,COMPRE+11,11		05342	26	05360	0510N
02510	TFM	,,, MOVE ADDRESS INTO PROGRAM		05354	16	00000	-0000
02520	SF	*-6,,6		05366	32	0536-	CO000
02530	AM	COMPAR+11,15,10		05378	11	05025	COOJ5
02540	B	COMPAR-24		05390	49	04990	00000
02550	DORG	*-3		05398			
02560	*****		ROUTINE TO LOAD ENTRIES IN IN-CORE SUBPROGRAM TABLE				
02570	SERCH2	CM	COMPAR+11,SUBTBL+1011	05398	14	05025	-3533
02580	BNE	**32		05410	47	05442	01200
02590	BTM	EPRINT,79,8		05422	17	06846	0-079
02600	B	MVADD+24		05434	49	05514	CO000

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02610	DORG	*-3		05442			
02620	BNR	SERCH+56,COMP+11,11		05442	45	05170	0502N
02630	TF	COMP+11,CCMPRE+11,611		05454	26	0502N	0510N
02640	AM	COMP+11,5,10		05466	11	05025	000-5
02650	AM	COMP+11,5,10		05478	11	05105	000-5
02660	MVADD	TF COMP+11,CCMPRE+11,611		05490	26	0502N	0510N
02670	A	COMP+11,ADDSVE,6		05502	21	0502N	02472
02680	AM	COMP+11,15,10		05514	11	05025	000J5
02690	AM	COMP+11,2,10		05526	11	05105	000-2
02700	B	COMP		05538	49	05014	00000
02710	DORG	*-3		05546			
02720	SERCH3	BNR **44,COMP+11,11		05546	45	05590	0502N
02730	TDM	COMP+11,,6		05558	15	0510N	00000
02740	BTM	INCPUT,**12		05570	17	06774	-5582
02750	B	PHASEB		05582	49	05610	00000
02760	DORG	*-3		05590			
02770	AM	COMP+11,20,10		05590	11	05025	000K0
02780	B	COMP-24		05602	49	04990	00000
02790	DORG	*-3		05610			
02800	*****	LOAD DISK-STORED SUBPROGRAMS					
02810	PHASEB	BTM INCGET,**12		05610	17	06810	-5622
02820	TFM	**23,SUBTBL+11		05622	16	05645	-2533
02830	ENCTST	BNR **44,,, TEST FOR END OF TABLE		05634	45	05678	00000
02840	CM	PROCCW,,9		05646	14	05820	00-00
02850	BNE	PHASEC		05658	47	04450	01200
02860	B	CALL3		05670	49	05978	00000
02870	DORG	*-3		05678			
02880	TF	NAMBUF,ENDTST+11,11		05678	26	02441	0564N
02890	AM	ENDTST+11,6,10		05690	11	05645	000-6
02900	BNF	INC13-60,ENDTST+11,11		05702	44	05734	0564N
02910	AM	ENDTST+11,14,10		05714	11	05645	000J4
02920	B	ENDTST		05726	49	05634	00000
02930	DORG	*-3		05734			
02940	BTM	INCPUT,**12		05734	17	06774	-5746
02950	BTM	EQRCH,**12,, SEARCH EQUIVALENCE TABLE		05746	17	03674	-5758
02960	*****	RETURN IF ENTRY NOT FOUND IN EQUIV. TABLE					
02970	AM	ENDTST+11,1,10		05758	11	05645	000-1
02980	BTM	INCGET,**12		05770	17	06810	-5782
02990	BNF	**32,ENDTST+11,11		05782	44	05814	0564N
03000	INC13	AM ENDTST+11,13,10		05794	11	05645	000J3
03010	B	ENDTST		05806	49	05634	00000
03020	DORG	*-3		05814			
03030	*****	TYPE -LOAD NAME-					
03040	RCTY			05814	34	00000	00102
03050	PROCCW	DC 3,0,**-5		05820		3	
		-00					
03060	WATY	LDNES		05826	39	07125	00100
03070	WATY	NAMBUF-10		05838	39	02431	00100
03080	BTM	INCGET,**12		05850	17	06810	-5862
03090	SF	ENDTST+11,6, SET -TYPED- INDICATOR		05862	32	0564N	00000
03100	AM	PROCCW,1,10		05874	11	05820	000-1
03110	BTM	INCPUT,**12		05886	17	06774	-5898
03120	TDM	NODATA,0		05898	15	02521	00000
03130	B	INC13		05910	49	05794	00000
03140	DORG	*-3		05918			
03150	*****	CHECK AND TYPE OUT NAMES OF UNLOADED SUBPROGRAMS					

03160	PHASED	TDM DATA,1		05918	15	02505	00001
03170	TFM	**35,SUBTBL+11		05930	16	05965	-2533
03180	TDM	MORE		05942	15	06067	00000
03190	BNR	**48		05954	45	06002	00000
03200	BD	PHASEC-12,MORE		05966	43	04438	06067
03210	CALL3	TFM IORT,**23		05978	16	05665	-6001
03220	B	IOGT,8L3,7		05990	49	00566	-7142
03230	TF	NAMBUF,PHASED+47,11		06002	26	02441	0596N
03240	AM	PHASED+47,6,10		06014	11	05965	000-6
03250	BNF	**32,PHASED+47,11		06026	44	06058	0596N
03260	AM	PHASED+47,14,10		06038	11	05965	000J4
03270	B	PHASED+36		06050	49	05954	00000
03280	DORG	*-3		06058			
03290	TDM	MORE,1		06058	15	06067	00001
03300	MORE	DS **-2		06067		0	
03310	RCTY			06070	34	00000	00102
03320	TDM	DATA,0		06082	15	02505	00000
03330	WATY	LDNES		06094	39	07129	00100
03340	WATY	NAMBUF-10		06106	39	02431	00100
03350	B	**80		06118	49	06038	00000
03360	DORG	*-3		06126			
03370	SIZEDK	BD **24,OVRLAP		06126	43	06150	02444
03380	BNCI	**96		06138	47	06234	00100
03390	RCTY			06150	34	00000	00102
03400	SPRST	DS **-5		06156		0	
03410	WATY	NAMBUF-10,,, TYPE OUT NAME		06162	39	02431	00100
03420	SPTY			06174	34	00000	00101
03430	WNTY	ADDSVE-4		06186	38	02468	00100
03440	SPTY			06198	34	00000	00101
03450	SPRST	DS **-5		06204		0	
03460	WNTY	INRK+18,,, TYPE OUT LENGTH		06210	38	07418	00100
03470	WATY	LDED		06222	39	07111	00100
03480	*****	LOAD PROGRAMS ROUTINE					
03490	TF	INDR+11,ADDSVE		06234	26	07036	02472
03500	BD	**24,EXTIND		06246	43	06270	02463
03510	TF	ENTST+11,ENDTST+11		06258	26	04557	05645
03520	SM	ENTST+11,1,10		06270	12	04557	000-1
03530	TF	**18,ENTST+11,11		06282	26	06300	0455P
03540	TF	ENTST+11,SPRST,6		06294	26	0455P	06156
03550	RDPROG	BD CDTPLD,EXTIND,, BRANCH IF PROGRAM IN CARD OR TAPE		06306	43	06350	02463
03560	SCHLD	TFM IORT,**23,, GET PROGRAM FROM DISK		06318	16	00565	-6341
03570	B	IOGT,INDR,7		06330	49	00566	-7025
03580	B	RMTBL		06342	49	03534	00000
03590	DORG	*-3		06350			
03600	*****	ROUTINE TO LOAD PROGRAM FROM CARD OR TAPE					
03610	CDTPLD	TDM 416		06350	15	00416	00000
03620	DC	1,*,*		06361		1	
03630	TD	428,COMSEC+73		06362	25	00428	07373
03640	SF	428		06374	32	00428	00000
03650	MLLGH	DS **		06385		0	
03660	CF	429		06386	33	00425	00000
03670	TF	434,ADDSVE		06398	26	00434	02472
03680	SF	489		06410	32	00489	00000
03690	TF	COMSEC+98,INRK+79		06422	26	07398	07479
03700	TFM	IORT,**23,, PUT BACK COMMUNICATION SECTOR		06434	16	00565	-6457

03710	B	IOPT,COM,7	06446	49	00532	-7193
03720	TFM	IORT,++23,, GET PRGCRAM	06458	16	00565	-6481
03730	B	IOGT,EXT,7	06470	49	00566	-7170
03740	SM	PROCDM,1,10	06482	12	05820	000-1
03750	TDM	EXTIND	06494	15	02463	00000
03760	B	RMTBL	06506	49	03534	00000
03770	DORG	*-3	06514			
03780	RELFRM	TDM INRK+80	06514	15	07480	00000
03790	DC	1,*,*	06525			1
03800	TR	INRK,INRK+8,, MOVE INDICATOR RECCRD TO CONFRM TO CARD IMAGE	06526	31	07400	C7408
03810	CF	427	06538	33	00427	00000
03820	SECCT	DC 2,0,*,	06549			2
		-0				
03830	TFM	439,75	06550	16	00439	-0075
03840	TFM	DDAR+13,99999	06562	16	07293	R9999
03850	TF	SPROST,INRK+31	06574	26	06156	C7431
03860	AM	SPROST,6,10	06586	11	06156	C00-6
03870	SUBPRO	C INRK+24,F,, TEST FOR EQUAL F	06598	24	07424	C2219
03880	BNE	*+36	06610	47	06646	01200
03890	C	INRK+26,K,, TEST FOR EQUAL K	06622	24	07426	C2221
03900	BE	*+24	06634	46	06658	C1200
03910	BTM	EPRINT,76,8	06646	17	06846	C-076
03920	TFM	MOVE+11,INRK+37,, UPDATE SUBROUTINE TABLE	06658	16	06725	-7437
03930	TFM	MOVE+6,LIBSUB	06670	16	06720	-2394
03940	CF	MOVE+7	06682	33	06721	C0000
03950	SUBDIG	BD MOVE,MOVE+11,11	06694	43	06714	C672N
03960	B	MOVE+12	06706	49	06726	C0000
03970	DORG	*-3	06714			
03980	MOVE	TD	06714	25	00000	C0000
03990	A	MOVE+11,ZERONE	06726	21	06725	06865
04000	CM	MOVE+6,LIBSUB+30	06738	14	06720	-2424
04010	BE	TRYSE	06750	46	04262	C1200
04020	B	SUBDIG	06762	49	06694	C0000
04030	INCPUT	TFM IORT,++23	06774	16	00565	-6797
04040	B	IOPT,INC,7	06786	49	00532	-4442
04050	B	INCPUT-1,,6	06798	49	0677L	C0000
04060	INCGET	TFM IORT,++23	06810	16	00565	-6833
04070	B	IOGT,INC,7	06822	49	00566	-4442
04080	B	INCGET-1,,6	06834	49	0680R	00000
04090	*****	ERROR MESSAGE SUBROUTINE				
04100	EPRINT	TF ERMES+16,EPRINT-1	06846	26	07079	06845
04110	RCTY		06858	34	00000	00102
04120	ZERONE	DC 6,100001,*-4	06865			6
		J00001				
04130	WATY	NAMBUF-10	06870	39	02431	C0100
04140	WATY	ERMES	06882	39	07063	00100
04150	TDM	SVEDDA-L,1	06894	15	02489	C0001
04160	BB		06906	42	00000	C0000
04170	DORG	*-9	06908			
04180	OVRMES	DAC 9, OVERLAP*	06909			9 X 2
		OVERLAP*				
04190	JOBOUT	DAC 14, JOB ABANDONED*	06927			14 X 2
		JOB ABANDONED*				
04200	DME	DSC 2,22	06954			2
		22				

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04210	DSA	DMEDDA	06960			5 X 1
			06960			-6962
04220	DC	1,'	06961			1
04230	DMEDDA	DDA ,1,0,1,INRK	06962			14
		1-0000-01-7400				
04240	DC	1,'	06976			1
04250	EQU	DSC 2,22	06977			2
		22				
04260	DSA	EQUDDA	06983			5 X 1
			06983			-6986
04270	DC	1,'	06984			1
04280	EQUDDA	DDA ,1,0,4,SUBTBL	06986			14
		1-0000-04-2522				
04290	DC	1,'	07000			1
04300	FLP	DSC 2,22	07001			2
		22				
04310	DSA	FLPDDA	07007			5 X 1
			07007			-7010
04320	DC	1,'	07008			1
04330	FLPDDA	DDA ,1,0,0,SUBTBL	07010			14
		1-0000-00-2522				
04340	DC	1,'	07024			1
04350	INCR	DSC 2,22	07025			2
		22				
04360	DSA	DDAR,0	07031			5 X 2
			07031			-7280
04370	DC	1,'	07036			-0000
			07037			1
04380	DIM	DSC 2,22	07038			2
		22				
04390	DSA	DIMDDA	07044			5 X 1
			07044			-7046
04400	DC	1,'	07045			1
04410	DIMDDA	DDA ,1,4800,1,INRK	07046			14
		1-4800-01-7400				
04420	DC	1,'	07060			1
04430	ERMES	DAC 10,ERRCR L	07063			10 X 2
		ERRCR L				
04440	DIMSVE	DSS 20,, RESERVES CURRENT DIM ENTRY	07082			20
04450	CDTP	DSA INRK	07106			5 X 1
			07106			-7400

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04460	DC	2,0	07108	2	
04470	DGM	-0	07109	1	
04480	LDED	DAC 9, LOADED*	07111	9 X	2
		LOADED*			
04490	LDMES	DAC 7,LOAD	07129	7 X	2
		LOAD			
04500	BL3	DSC 2,-22	07142	2	
		2K			
04510	DSA	BL3DDA	07148	5 X	1
			07148	-715C	
04520	DC	1, *	07149	1	
		*			
04530	BL3DDA	DDA ,1,16940,26,3534	07150	14	
		1J6940-26-3534			
04540	DC	6,3556*	07169	6	
		-3556*			
04550	EXT	DSC 2,-22	07170	2	
		2K			
04560	DSA	EXTDDA	07176	5 X	1
			07176	-7178	
04570	DC	1, *	07177	1	
		*			
04580	EXTDDA	DDA ,1,19783,3,0	07178	14	
		1J9783-03-0000			
04590	DC	1, *	07192	1	
		*			
04600	COM	DSC 2,22	07193	2	
		22			
04610	DSA	COMDDA	07199	5 X	1
			07199	-7202	
04620	DC	1, *	07200	1	
		*			
04630	COMDCA	DDA ,1,19663,1,COMSEC	07202	14	
		1J9663-01-7300			
04640	DC	1, *	07216	1	
		*			
04650	LD	DSC 2,22	07217	2	
		22			
04660	DSA	LDDDA	07223	5 X	1
			07223	-2474	
04670	DC	1, *	07224	1	
		*			
04680	DATAL	DAC 6, *DATA*	07227	6 X	2
		DATA			
04690	DORG	7280	07280		
04700	DDAR	DSS 20	07280	2C	
04710	COMSEC	DSS 100,, SYSTEM COMMUNICATION SECTOR	07300	10C	
04720	INRK	DSS 100,, READ IN AREA FOR INDICATOR RECORD	07400	10C	
04730	*	BLOCK LOADER			
04740	DORG	8000	08000		
04750	BEGIN	TD CDTF+3,19999	08000	25	07109 19999

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04760	SK	LOADER	08012	34	08048	C0701
04770	WDN	LOADER	08024	38	08048	C0702
04780	H		08036	48	0000C	C0000
04790	LOADER	DDA ,1,16102,38,3480	08048		14	
		1J6102-38-3480				
04800	DGM	19999	19999		1	
04810	TCD	BEGIN	08000			
04820	DEND		00000			

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ADDCOW	02450	ENTSIN	02308	ONETWC	04372	FOUND	03874	RMTBL	03534
ADDSVE	02472	ENTSQT	02318	CVRLAP	02444	F	02219	SCHLD	06318
BL3DDA	07150	ENTSWC	02288	CVRMES	06909	GONXT	04534	SECCT	06549
CCTPLD	06350	EPRINT	06846	PHASEB	05610	INCL3	05794	SECT	02466
COMADD	02231	EQADDR	02455	PHASEC	04450	INC	04442	SERCH	05114
COMDDA	07202	EQSRCH	03674	PHASED	05918	INDR	07025	SPRST	06204
CCMPAR	05014	EQUDDA	06986	PRCCCW	05820	INRK	07400	SRCH	03594
CCMPER	03722	ERMESS	07063	PROGST	02226	IOGT	00566	TBLLD	04894
CCMPRE	05094	EXTDDA	07178	RDPROG	06306	IOIND	02461	w	02240
CCMSEC	07300	EXTIND	02463	RELFRM	06514	IOPT	00532	SCADDR	02460
DIMDDA	07046	FLGRMK	02445	BEGIN	08000	IORT	00565	SERCH1	05214
DIMSVE	07082	FLPDDA	07010	BL3	07142	K	02221	SERCH2	05398
DMEDDA	06962	FOUND1	03982	CALL3	05978	LDDA	02474	SERCH3	05546
ENDTST	05634	HEADER	04738	COTP	07106	LDED	07111	SIZEOK	06126
ENTABS	02323	INCDDA	02506	CCMP	03754	LDMES	07129	SPROST	06156
ENTATN	02313	INCGET	06810	COM	07193	LD	07217	SUBDIG	06694
ENTCOS	02303	INCPUT	06774	DATA1	07227	MLIND	02462	SUBPRC	06598
ENTDED	02298	INDCCN	04169	DATA	02505	MORE	06067	SUBTBL	02522
ENTDRR	02293	JOBOUT	06927	DDAR	07280	MOVE	06714	SVEDDA	02490
ENTEXP	02253	LIBSUB	02394	DTM	07038	MVADD	05490	TBLIND	03615
ENTFET	02283	LOADER	08048	DME	06954	N1	02233	TRYSZE	04262
ENTFID	02273	LDINC	05062	ENTLN	02248	N2	02238	TSTVLD	04102
ENTREC	02278	MLLGH	06385	ENTST	04546	NXTRD	03814	ZERONE	06865
ENTSC2	02258	MONCAL	00796	EQU	06977	READ	04486	ZROTST	02467
ENTSC3	02263	NAMBUF	02441	EXT	07170	RECLG	02243		
ENTSDX	02268	NDDATA	02521	FLP	07001	RMCHK	04578		

END OF ONE ASSEMBLY.

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00010	*****	1620 MONITOR II VERSION 2 FORTRAN II-D LOADER BLOCK 4							
00020	N1	DS	,2233			02233		C	
00030	N2	DS	,2238			02238		C	
00040	W	DS	,2240			02240		C	
00050	RECLG	DS	,2243			02243		C	
00060	IORT	DS	,565			00565		C	
00070	IOGT	DS	,566			00566		C	
00080	IOPT	DS	,532			00532		C	
00090	LIBSUB	DS	,2394			02394		C	
00100	COMADD	DS	,2231			02231		C	
00110	MONCAL	DS	,796			00796		C	
00120	DDRG		2426			02426			
00130	NAMBUF	DC	16,0			02441		16	
			-00000000000000						
00140		DC	2,'			02443		2	
			-'						
00150	OVRLAP	DS	1			02444		1	
00160	FLGRMK	DS	1			02445		1	
00170	ADDCOW	DS	5			02450		5	
00180	EQADDR	DS	5			02455		5	
00190	SCADDR	DS	5			02460		5	
00200	IOIND	DS	1			02461		1	
00210	MLIND	DS	1			02462		1	
00220	EXTIND	DS	1			02463		1	
00230	SECT	DS	3			02466		3	
00240	ZROTST	DS	1			02467		1	
00250	ADDSVE	DS	5			02472		5	
00260		DC	1,'			02473		1	
			'						
00270	LDDA	DDA	,1,0,0,0			02474		14	
			1-0000-00-0000						
00280		DC	1,'			02488		1	
			'						
00290	SVEDDA	DDA	,1,0,21,0			02490		14	
			1-0000-21-0000						
00300		DC	1,'			02504		1	
			'						
00310	DATA	DS	1			02505		1	
00320	INCDDA	DDA	,1,0,0,0			02506		14	
			1-0000-00-0000						
00330		DC	1,'			02520		1	
			'						
00340	NDDATA	DS	1			02521		1	
00350	SUBTBL	DSS	1000			02522		1000	
00360		DC	12,'			03533		12	
			-0000000000'						
00370	LNKADD	DS	5			03538		5	
00380	FLPDDA	DDA	,1,0,0,SUBTBL			03540		14	
			1-0000-C0-2522						
00390		DC	1,'			03554		1	
			'						
00400	*****	LIBRARY SUBROUTINE LOADER ROUTINE							
00410	LBSUBA	CF	PTRS+1			03556	33	05628	00000
00420		CF	PTRS+6			03568	33	05633	00000
00430		BNF	+24,IOIND			03580	44	03604	02461
00440		TFM	LIBDDA+5,4834			03592	16	05613	-4834

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00450	TFM	IORT,**23,,	GET SUBROUTINE DIM ENTRIES (6 SECTORS)	03604	16	00565	-3627
00460	B	IOGT,LIB,7		03616	49	00566	-5595
00470	BD	**56,PTRS,11,	BRANCH IF SUBROUTINE FOUND	03628	43	03684	C562P
00480	S	PTRS+10,PTRCON,,	DECREMENT POINTERS TO NEXT ENTRY	03640	22	05637	05649
00490	CM	PTRS,LIBSUB-1		03652	14	05627	-2393
00500	BE	RMTBL		03664	46	04588	C1200
00510	B	*-48		03676	49	03628	C0000
00520	DORG	*-3		03684			
00530	CM	PTRS,LIBSUB+5		03684	14	05627	-2399
00540	BL	**48		03696	47	03744	C1300
00550	CM	PTRS,LIBSUB+7		03708	14	05627	-2401
00560	BH	**24		03720	46	03744	01100
00570	TDM	ZROTST,1		03732	15	02467	CC001
00580	BNR	**44,PTRS+10,11		03744	45	03788	C563P
00590	AM	EMPTY,1,710		03756	11	03764	-00-1
00600	EMPTY	DS	*-3	03764			
00610	S	PTRS+10,PTRCON,,	DECREMENT POINTERS TO NEXT ENTRY	03768	22	05637	05649
00620	B	*-36		03780	49	03744	C0000
00630	DORG	*-3		03788			
00640	AM	PTRS+10,8,10		03788	11	05637	000-8
00650	TF	LIBDDA+8,PTRS+10,11		03800	26	05616	C563P
00660	AM	PTRS+10,5,10		03812	11	05637	COO-5
00670	TF	ADDSVE,ADDCCW		03824	26	02472	02450
00680	AM	ADDSVE,1,10		03836	11	02472	000-1
00690	A	ADDCCW,PTRS+10,11,	INCREMENT ADDRESS COUNTER BY LENGTH	03848	21	02450	C563P
00700	AM	PTRS+10,5,10		03860	11	05637	COO-5
00710	TF	DIMCT,PTRS+10,11		03872	26	04118	0563P
00720	C	EMPTY, DIMCT		03884	24	03764	04118
00730	BNL	SUBMIS		03896	46	05798	C1300
00740	TFM	EMPTY,0,10		03908	16	03764	COO-0
00750	A	PTRS, DIMCT		03920	21	05627	04118
00760	DIMLD	SM	PTRS,1,10	03932	12	05627	COO-1
00770	SM	DIMCT,1,10		03944	12	04118	COO-1
00780	TDM	PTRS,1,6		03956	15	0562P	CO001
00790	CM	DIMCT,1,6		03968	14	04118	-CO000
00800	BNE	DIMLD		03980	47	03932	G1200
00810	SM	PTRS+10,5,10		03992	12	05637	COO-5
00820	C	ADDCCW,COMADD		04004	24	02450	C2231
00830	BL	**24		04016	47	04040	C1300
00840	TDM	OVRLAP,1		04028	15	02444	CO001
00850	TF	SUBBUF+6,PTRS,,	CALCULATE SUBROUTINE NUMBER	04040	26	04094	C5627
00860	SM	SUBBUF+6,LIBSUB-1		04052	12	04094	-2393
00870	BD	**24,OVRLAP		04064	43	04088	02444
00880	BNCL	LBSUB1		04076	47	04260	CC100
00890	SUBBUF	RCTY		04088	34	00000	CO102
00900	DC	1,*,*-4		04095			
00910	WNTY	SUBBUF+5,,,	TYPE OUT SUBROUTINE NUMBER	04100	38	04093	CO100
00920	SPTY			04112	34	00000	CO101
00930	DIMCT	DS	*-5	04118			
00940	BD	**24,OVRLAP		04124	43	04148	02444
00950	WNTY	ADDSVE-4		04136	38	02468	CO100
00960	TF	SUBBUF+6,PTRS+10,11,	MOVE ADDRESS INTO BUFFER	04148	26	04094	C563P
00970	SPTY			04160	34	00000	CO101
00980	WNTY	SUBBUF+2,,,	TYPE OUT LENGTH OF SUBROUTINE	04172	38	04090	CO100
00990	BD	**32,OVRLAP		04184	43	04216	02444

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01000	WATY	LOED		04196	39	05665	CO100
01010	B	LBSUB1		04208	49	04260	CO000
01020	DORG	*-3		04216			
01030	WATY	OVRMES		04216	39	05651	CC100
01040	S	ADDCCW, PTRS+10,11,	RESET ADDRESS COUNTER	04228	22	02450	C563P
01050	SM	PTRS+10,13,10,	CORRECT DIM POINTER	04240	12	05637	CO0J3
01060	B	LBSUBA+60,,,	BRANCH TO CHECK NEXT ENTRY	04252	49	03616	CO000
01070	DORG	*-3		04260			
01080	LBSUB1	SM	PTRS+10,5,10,	04260	12	05637	000-5
01090	TF	LIBDDA+8, PTRS+10,11,	MOVE IN SECTOR COUNT	04272	26	05616	C563P
01100	SM	PTRS+10,3,10,	DECREMENT DIM TO DISK ADDRESS	04284	12	05637	COO-3
01110	TF	LIBDDA+5, PTRS+10,11,	TRANSFER DISK ADDRESS	04296	26	05613	C563P
01120	TF	DMEDDA+5, LIBDDA+5,,	SET UP ONE SECTOR DDA	04308	26	05699	05613
01130	SM	PTRS+10,5,10,	DECREMENT TO DISK DRIVE CODE	04320	12	05637	COO-5
01140	TD	LIBDDA, PTRS+10,11,	TRANSFER DRIVE CCDE	04332	25	05608	C563P
01150	TD	DMEDDA, LIBDDA		04344	25	05694	05608
01160	TFM	IORT,**23,,	GET ONE SECTOR OF SUBROUTINE	04356	16	00565	-4379
01170	B	IOGT,DME,7		04368	49	00566	-5686
01180	TFM	**23, INRK+8		04380	16	04403	-7408
01190	LBSUB2	BNR	RELOC	04392	45	04544	CO000
01200	TF	99, PTRS+5		04404	26	00099	05632
01210	A	99, INRK+7		04416	21	00099	07407
01220	TD	**35, 99, 11,	SAVE DIGIT TO BE OVERLAYED	04428	25	04463	CO09R
01230	TR	PTRS+5, INRK+8, 6,	LOAD ENTRY ADDRESS	04440	31	0563K	07408
01240	TDM	99,, 6,	RESTORE DIGIT	04452	15	0009R	00000
01250	TF	LIB+11, ADDSVE		04464	26	05606	02472
01260	TFM	LIBDDA+13, 99999		04476	16	05621	R9999
01270	CF	427		04488	33	00427	00000
01280	TFM	439		04500	16	00439	-0000
01290	TFM	IORT,**23,,	LOAD SUBROUTINES	04512	16	00565	-4535
01300	B	IOGT, LIB, 7		04524	49	00566	-5595
01310	B	LBSUBA+84		04536	49	03640	CO000
01320	DORG	*-3		04544			
01330	*****	RELOCATE ENTRY ADDRESSES					
01340	RELOC	AM	LBSUB2+11, 4, 10	04544	11	04403	COO-4
01350	A	LBSUB2+11, ADDSVE, 6,	RELOCATE ADDRESS	04556	21	0440L	02472
01360	AM	LBSUB2+11, 1, 10		04568	11	04403	000-1
01370	B	LBSUB2		04580	49	04392	CO000
01380	DORG	*-3		04588			
01390	RMTBL	CM	COMSEC+75,, 10,	04588	14	07375	COO-0
01400	BNE	**48		04600	47	04648	01200
01410	CALL6	TF	INRK+4, INCDDA+5	04612	26	07404	C2511
01420	TFM	IORT,**23		04624	16	00565	-4647
01430	B	IOGT, BL6, 7		04636	49	00566	-5548
01440	BD	CALL6, OVRLAP		04648	43	04612	02444
01450	TFM	IORT,**23		04660	16	00565	-4683
01460	B	IOGT, LD, 7		04672	49	00566	-5587
01470	TFM	**23, SUBTBL+11		04684	16	04707	-2533
01480	SRCH	BNR	**20,,,	04696	45	04716	CO000
01490	B	CALL6		04708	49	04612	CO000
01500	DORG	*-3		04716			
01510	C	COMSEC+35, SRCH+11, 11		04716	24	07335	0470P
01520	BE	TBLLD		04728	46	04760	01200
01530	AM	SRCH+11, 20, 10,	INCREMENT TO NEXT ENTRY	04740	11	04707	COOKO
01540	B	SRCH		04752	49	04696	CO000
01550	DORG	*-3		04760			

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01560	TBLD	AM	SRCH+11,3,10	04760	11	04707	C00-3
01570		TF	FLPDDA+8,SRCH+11,11	04772	26	03548	C470P
01580		AM	SRCH+11,5,10	04784	11	04707	000-5
01590		TF	FLPDDA+5,SRCH+11,11	04796	26	03545	C470P
01600		TFM	IORT,+23	04808	16	00565	-4831
01610		B	IOGT,FLP,7	04820	49	00566	-5740
01620	Y	AM	X+11,6,10	04832	11	04879	000-6
01630		DC	1,,-2	04841		1	
01640		TR	X+11,Y+7,6	04844	31	0487R	C4839
01650		AM	X+11,14,10	04856	11	04879	000J4
01660	X	BNR	Y,SUBTBL+11,7	04868	45	04832	-2533
01670		TFM	IORT,+23	04880	16	00565	-4903
01680		B	IOPT,FLP,7	04892	49	00532	-5760
01690		TF	FLPPRO+11,ADDCOW	04904	26	05779	02450
01700		AM	FLPPRO+11,1,10	04916	11	05775	C00-1
01710		TF	STADD,FLPPRO+11	04928	26	05742	C5779
01720		A	ADDCOW,FLPCOW	04940	21	0245C	C5210
01730		TF	LNKADD,ADDCOW	04952	26	03538	C2450
01740		AM	LNKADD,24,10	04964	11	03538	C00K4
01750		C	ADDCOW,COMADD	04976	24	0245C	02231
01760		BH	FLPOVR	04988	46	0552C	C1100
01770		CF	427	05000	33	00427	C000C
01780		TFM	439,0	05012	16	00435	-0000
01790		TFM	IORT,+23	05024	16	00565	-5047
01800		B	IOGT,FLPPRO,7	05036	49	00566	-5768
01810	FLIP	TF	FLPLNK+11,FLPPRO+11	05048	26	05720	05779
01820		AM	FLPLNK+11,4,10	05060	11	05720	C00-4
01830		TF	FLPLNK+11,ADDCOW,6	05072	26	0572-	C2450
01840		AM	FLPLNK+11,1,61C	05084	11	0572-	000-1
01850		AM	FLPLNK+11,6,10	05096	11	05720	C00-6
01860	SIZECK	BNR	CALL5+24,SUBTBL+11	05108	45	05344	02533
01870		TF	ADDSVE,ADDCOW	05120	26	02472	C2450
01880		AM	FLPPRO+11,4,10	05132	11	05779	000-4
01890		AM	ADDSVE,3,10	05144	11	02472	C00-3
01900		TF	FLPPRO+11,ADDSVE,6	05156	26	0577R	02472
01910		AM	ADDCOW,2,10	05168	11	0245C	C00-2
01920		BD	+24,OVRLAP	05180	43	05204	02444
01930		BNC1	CALL5	05192	47	05320	00100
01940		RCY		05204	34	0000C	C0102
01950	FLPCOW	DC	5,300,-5	05210		5	
			-0300				
01960		DC	1,,-4	05211		1	
01970		WATY	FLPMES	05216	39	05745	C0100
01980		BD	+24,OVRLAP	05228	43	05252	02444
01990		WNTY	STADD-4	05240	38	05738	00100
02000		SPTY		05252	34	0000C	C0101
02010		WNTY	FLPCOW-4	05264	38	05206	00100
02020		BD	+32,OVRLAP	05276	43	05308	02444
02030		WATY	LDEL	05288	39	05669	00100
02040		B	CALL5	05300	49	0532C	C0000
02050		DORG	+3	05308			
02060		WATY	OVRMES	05308	39	05651	C0100
02070	CALL5	TFM	IORT,+23	05320	16	00565	-5343
02080		B	IOGT,BL5,7	05332	49	00566	-5540

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02090		TF	SECLNK+6,ADDCOW	05344	26	05398	02450
02100		AM	SECLNK+6,2,10	05356	11	05398	C00-2
02110		AM	ADDCOW,19,10	05368	11	02450	C00J9
02120		TF	FLPLNK+16,ADDCOW	05380	26	05725	02450
02130	SECLNK	TR	,FLPLNK	05392	31	0000C	05709
02140		AM	SIZEOK+11,5,10	05404	11	05115	C00-5
02150		AM	SECLNK+6,5,10	05416	11	05398	C00-5
02160		TF	+18,SIZEOK+11,11	05428	26	05446	0511R
02170		TF	,SECLNK+6	05440	26	0000C	05398
02180		AM	SIZEOK+11,15,10	05452	11	05115	000J5
02190		AM	ADDCOW,11,10	05464	11	0245C	000J1
02200		AM	FLPCOW,30,10	05476	11	05210	000L0
02210		C	ADDCOW,COMADD	05488	24	02450	02231
02220		BH	FLPOVR	05500	46	0552C	C1100
02230		B	SIZEOK	05512	49	05108	C0000
02240		DORG	+3	05520	15	02444	00001
02250	FLPOVR	TDM	OVRLAP,1	05532	49	05048	C0000
02260		B	FLIP	05540			
02270		DORG	+3	05540		2	
02280	BL5	DSC	2,-22				
		2K					
02290		DSA	BL5DDA	05546		5 X	1
				05546		-5556	
				05547		1	
02300		DC	1,,'				
02310	BL6	DSC	2,-22	05548		2	
		2K					
02320		DSA	BL6DDA	05554		5 X	1
				05554		-5572	
				05555		1	
02340	BL5DDA	DDA	,1,16140,37,3556	05556		14	
		1J6140	-37-3556				
02350		DC	1,,'	05570		1	
02360	BL6DDA	DDA	,1,16177,16,2522	05572		14	
		1J6177	-16-2522				
02370		DC	1,,'	05586		1	
02380	DIMTBL	DS	,SUBTBL+599	03121		C	
02390	DIMTB	DS	,SUBTBL	02522		C	
02400	LD	DSC	2,02	05587		2	
		OZ					
02410		DSA	LDDDA	05593		5 X	1
				05593		-2474	
				05594		1	
02420		DC	1,,'				
02430	LIB	DSC	2,22	05595		2	
		22					
02440		DSA	LIBDDA,0	05601		5 X	2
				05601		-5608	
				05606		-0000	

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02450	DC	1,'	05607	1		
02460	DC	1,',LIB+7	05602	1		
02470	LIBDCA	DDA ,1,4802,6,DIMTB 1-4802-06-2522	05608	14		
02480	DC	1,'	05622	1		
02490	PTRS	DSA LIBSUB+29,LIBSUB-5,DIMTBL-19	05627	5 X	3	
			05627	-2423		
			05632	-2389		
			05637	-3102		
			05649	12		
02500	PTRCON	DC 12,010000500020 -10000500020	05651	9 X	2	
02510	OVRMES	DAC 9, OVERLAP OVERLAP	05669	9 X	2	
02520	LOED	DAC 9, LOADED LOADED	05686	2		
02530	CME	DSC 2,22	05692	5 X	1	
02540		DSA DMEDDA	05692	-5694		
			05693	1		
02550	DC	1,'	05694	14		
02560	DMEDDA	DDA ,1,0,1,INRK 1-0000-01-7400	05708	1		
02570	DC	1,'	05709	5		
02580	FLPLNK	DSC 5,0 0000	05714	17	00000	-0000
02590	BT*		05726	1		
02600	DSC	1,1	05731	5		
02610	DC	5,0 -0000	05737	6		
02620	DC	6,' -0000*	05742	5		
02630	STADD	DS 5	05743	1		
02640	DC	1,',	05745	8 X	2	
02650	FLPMES	DAC 8,FLIPER FLIPER	05760	2		
02660	FLP	DSC 2,02 02	05766	5 X	1	
02670	DSA	FLPDDA	05766	-3540		
			05767	1		
02680	DC	1,'	05768	2		
02690	FLPPRC	DSC 2,22	05774	5 X	2	
02700	DSA	FLDDA,0	05774	-5782		

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02710	DC	1,'	05779	-0000		
			05780	1		
02720	FLDDA	DDA ,1,16195,999,99999 1J6195R99R9999	05782	14		
02730	DC	1,'	05796	1		
02740	SUBMIS	TF SUBBUF+6,PTRS	05798	26	04094	05627
02750	SM	SUBBUF+6,LIBSUB-2	05810	12	04094	-2392
02760	RCTY		05822	34	00000	00102
02770	WATY	NOENT	05834	39	05891	00100
02780	WNTY	SUBBUF+5	05846	38	04093	00100
02790	RCTY		05858	34	00000	00102
02800	WATY	JOBOUT	05870	39	05941	00100
02810	B	MONCAL	05882	49	00796	00000
02820	DORG	*-4	05889			
02830	NOENT	DAC 25,NO ENTRY FOR SUBROUTINE NO ENTRY FOR SUBROUTINE	05891	25 X	2	
02840	JOBOUT	DAC 14,JOB ABANDONED JOB ABANDONED	05941	14 X	2	
02850	DORG	7280	07280			
02860	DDAR	DSS 20	07280	20		
02870	COMSEC	DSS 100,, SYSTEM COMMUNICATION SECTOR	07300	100		
02880	INRK	DSS 100,, READ IN AREA FOR INDICATOR RECORD	07400	100		
02890	*	BLOCK LOADER	08000			
02900	DORG	8000	08000	34	08036	00701
02910	BEGIN	SK LOADER	08012	38	08036	00702
02920	WDN	LOADER	08024	48	00000	00000
02930	H		08036	14		
02940	LOADER	DDA ,1,16940,26,3534 1J6940-26-3534	08000			
02950	TCD	BEGIN				
02960	DEND		00000			

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ADCCW	C2450	FLPOVR	05520	PTRCCN	05649	IOGT	00566	SECT	02466
ACDSVE	02472	FLPPRC	05768	BEGIN	08000	IOIND	02461	SRCH	04696
BL5DDA	05556	INCDDA	02506	BL5	05540	IOPT	00532	STADD	05742
BL6DDA	05572	JCBOUT	05941	BL6	05548	IORT	00565	TBLLD	04760
CCMADD	02231	LBSUB1	04260	CALL5	05320	LDDDA	02474	W	02240
CCMSEC	07300	LBSUB2	04392	CALL6	04612	LDED	05669	X	04868
DIMTRL	03121	LBSUBA	03556	DATA	02505	LD	05587	Y	04832
DMEDDA	05694	LIBDDA	05608	DDAR	07280	LIB	05595	SCADDR	02460
EMPTYS	03764	LIBSUB	02394	DIMCT	04118	MLIND	02462	SECLNK	05392
EQADDR	02455	LNKADD	03538	DIMLD	03932	N1	02233	SIZECK	05108
EXTIND	02463	LCADER	08036	DIMTB	02522	N2	02238	SUBBUF	04088
FLGRMK	02445	MNCAL	00796	DME	05686	NGENT	05891	SUBMIS	05798
FLPCOW	05210	NAMBUF	02441	FLDDA	05782	PTRS	05627	SUBTBL	02522
FLPDDA	03540	NDDATA	02521	FLIP	05048	RECLG	02243	SVEDDA	02490
FLPLNK	05709	OVRLAP	02444	FLP	05760	RELOC	04544	ZRCTST	02467
FLPMES	05745	OVRMES	05651	INRK	07400	RMTBL	04588		

END CF ONE ASSEMBLY.

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00010	*****	1620 MONITOR II VERSION 2 FORTRAN II-D LOADER BLOCK 5			
00020	IOPT	DS	,532	00532	C
00030	IOGT	DS	,566	00566	C
00040	IORT	DS	,565	00565	C
00050	MNCAL	DS	,796	00796	C
00060	***	COMMUNICATION AREA			
00070	DORG	2218		02218	
00080	F	DS	2,, FLOATING POINT WORD LENGTH	02219	2
00090	K	DS	2,, FIXED POINT WORD LENGTH	02221	2
00100	PROGST	DS	5,, STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00110	COMADD	DS	5,, STARTING ADDRESS OF COMMON AREA	02231	5
00120	N1	DS	2,, NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00130	N2	DS	5,, NUMBER OF LOGICAL RECORDS	02238	5
00140	W	DS	2,, WORD LENGTH	02240	2
00150	RECLG	DS	3,, RECORD LENGTH	02243	3
00160	ENTLN	DS	5,, ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00170	ENTEXP	DS	5,, ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00180	ENTSC2	DS	5,, ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00190	ENTSC3	DS	5,, ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00200	ENTSCX	DS	5,, ENTRY ADDRESS TO FIXED SWITCH D SUBROUTINE	02268	5
00210	ENTFID	DS	5,, ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00220	ENTREC	DS	5,, ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00230	ENTFET	DS	5,, ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00240	ENTSWC	DS	5,, ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00250	ENTDRR	DS	5,, ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00260	ENTDED	DS	5,, ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00270	ENTCOS	DS	5,, ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00280	ENTSIN	DS	5,, ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00290	ENTATN	DS	5,, ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00300	ENTSQT	DS	5,, ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00310	ENTABS	DS	5,, ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00320	DS	70,,	RESERVED FOR ENTRIES TO ADDED SUBROUTINES	02393	70
00330	LIBSUB	DSS	30,,LIBRARY SUBROUTINE INDICATORS	02394	30
00340	DC	1,,		02424	1
00350	*****	MAINLINE TABLE SEARCH			
00360	DORG	2426		02426	
00370	NAMBUF	DC	16,0	02441	16
00380	DC	2,,	-0000000000000000	02443	2
00390	OVRLAP	DS	1	02444	1
00400	FLGRMK	DS	1	02445	1
00410	ADCCW	DS	5	02450	5
00420	EQADDR	DS	5	02455	5
00430	SCADDR	DS	5	02460	5
00440	IOIND	DS	1	02461	1
00450	MLIND	DS	1	02462	1
00460	EXTIND	DS	1	02463	1
00470	SECT	DS	3	02466	3
00480	ZRCTST	DS	1	02467	1
00490	ADDSVE	DS	5	02472	5
00500	DC	1,,		02473	1
00510	LDDA	DDA	,1,0,C,SUBTBL 1-0000-00-2522	02474	14

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00520	DC	1,'	02488	1	
00530	SVEDDA	DDA ,1,C,21,0 1-CC00-21-0000	02490	14	
00540	DC	1,'	02504	1	
00550	DATA	DC 1,C	02505	1	
00560	INCDDA	DDA ,1,0,10,SUBTBL 1-0000-10-2522	02506	14	
00570	DC	1,'	02520	1	
00580	NODATA	DS 1	02521	1	
00590	SUBTBL	DSS 1000	02522	1000	
00600	DC	12,'	03533	12	
00610	LNKADD	DS 5	03538	5	
00620	FLPDDA	DDA ,1,0,0,SUBTBL 1-0000-00-2522	03540	14	
00630	DC	1,'	03554	1	
00640	*****	LOAD DISK-STORED SUBPRGRAMS			
00650	AM	SPRST,218	03556	11	04983 -0218
00660	TF	SCHDDA+5,INCDDA+5	03568	26	06829 02511
00670	TF	SCHDDA+13,ADDSSVE	03580	26	06837 02472
00680	PHASEB	BTM FLPGET,++12	03592	17	06648 -3604
00690	TF	LNKPTR,LNKADD	03604	26	04947 03538
00700	TFM	++23,SUBTBL+11	03616	16	06339 -2533
00710	ENDTST	BNR ++44,,, TEST FOR END OF TABLE	03628	45	03672 C0000
00720	CM	PROCCW,,9	03640	14	03822 CC-00
00730	BNE	PHASEC	03652	47	04752 01200
00740	B	CALL6	03664	49	06428 C0000
00750	DORG	*-3	03672		
00760	TF	NAMBUF,ENDTST+11,11	03672	26	02441 C363R
00770	AM	ENDTST+11,6,10	03684	11	03635 C00-6
00780	BNF	INC13-56,ENDTST+11,11, TEST FOR -LOADED- INDICATOR	03696	44	03740 C363R
00790	AM	ENDTST+11,14,10	03708	11	03635 C00J4
00800	AM	LNKPTR,30,10	03720	11	04947 C00L0
00810	B	ENDTST	03732	49	03628 00000
00820	DORG	*-3	03740		
00830	BTM	FLPPUT,++12	03740	17	06612 -3752
00840	B	EQSRCH	03752	49	03932 C0000
00850	DORG	*-3	03760		
00860	*****	RETURN IF ENTRY NOT FOUND IN EQUIV. TABLE			
00870	AM	ENDTST+11,1,10	03760	11	03639 C00-1
00880	BTM	FLPGET,++12	03772	17	06648 -3784
00890	BNF	++32,ENDTST+11,11	03784	44	03816 0363R
00900	INC13	AM ENDTST+11,13,10	03796	11	03639 C00J3
00910	B	ENDTST	03808	49	03628 C0000
00920	DORG	*-3	03816		
00930	*****	TYPE -LOAD NAME-			
00940	RCTY		03816	34	00000 00102
00950	PROCCW	DC 3,0,*-5	03822		3
00960	WATY	LDMES	03828	39	06997 00100
00970	WATY	NAMBUF-10	03840	39	02431 00100

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00980	BTM	FLPGET,++12	03852	17	06648 -3864
00990	SF	ENDTST+11,,6, SET -TYPED- INDICATOR	03864	32	0363R 00000
01000	AM	PROCCW,1,10	03876	11	03822 C00-1
01010	AM	LNKPTR,30,10	03888	11	04947 C00L0
01020	BTM	FLPPUT,++12	03900	17	06612 -3912
01030	TDM	NODATA,0	03912	15	02521 C0000
01040	B	INC13	03924	49	03796 C0000
01050	DORG	*-3	03932		
01060	EQSRCH	TF EQUDDA+5,EQADDR	03932	26	06877 02455
01070	TF	INRK+48,SECT	03944	26	07448 02466
01080	TFM	IORT,++23,, READ IN FOUR SECTORS OF EQUIV. TABLE	03956	16	00565 -3979
01090	B	IOGT,EQU,7	03968	49	00566 -8663
01100	COMPER	TFM COMP+11,SUBTBL+11,, SEARCH EQUIV. TABLE	03980	16	04023 -2533
01110	BNR	++20,COMP+11,11	03992	45	04012 0402L
01120	B	NXTRD+24	04004	49	04096 C0000
01130	DORG	*-3	04012		
01140	COMP	C NAMBUF	04012	24	02441 00000
01150	BE	FOUND	04024	46	04140 01200
01160	AM	COMP+11,16,10, INCREMENT TO NEXT NAME	04036	11	04023 C00J6
01170	CM	COMP+11,SUBTBL+411,, TEST FOR END OF TABLE	04048	14	04023 -2933
01180	BNE	COMPER+12	04060	47	03992 01200
01190	NXTRD	CM INRK+48,0,9, TEST FOR END OF EQUIV. TABLE	04072	14	07448 00-00
01200	BH	++20	04084	46	04104 01100
01210	B	INC13-36	04096	49	03760 C0000
01220	DORG	*-3	04104		
01230	SM	INRK+48,4,10, DECREMENT SECTOR COUNT	04104	12	07448 C00-4
01240	AM	EQUDDA+5,4,10	04116	11	06877 C00-4
01250	B	COMPER-24	04128	49	03956 C0000
01260	FOUND	AM COMP+11,4,10, INCREMENT TO GET DIM NUMBER	04140	11	04023 000-4
01270	TFM	DIMDDA+5,4800	04152	16	06913 -4800
01280	S	DIMDDA+6,COMP+11,11	04164	22	06914 0402L
01290	S	DIMDDA+6,COMP+11,11	04176	22	06914 0402L
01300	TDM	DIMDDA+6,,11	04188	15	06914 0000-
01310	*****	READ IN DIM SECTOR			
01320	TD	SECT,COMP+11,11, SAVE UNIT POSITION OF DIM NO.	04200	25	05475 C402L
01330	BTM	FLPGET,++12	04212	17	06648 -4224
01340	SF	ENDTST+11,,6, SET -LOADED- INDICATOR	04224	32	0363R 00000
01350	BTM	FLPPUT,++12	04236	17	06612 -4248
01360	FOUND1	TFM IORT,++23	04248	16	00565 -4271
01370	B	IOGT,DIM,7	04260	49	00566 -6900
01380	CM	SECT,5,10	04272	14	05475 000-5
01390	BL	++24	04284	47	04308 C1300
01400	SM	SECT,5,10, CALCULATE DIM ENTRY ADDRESS	04296	12	05475 C00-5
01410	MM	SECT,20,9	04308	13	05475 00-20
01420	AM	99,INRK	04320	11	00099 -7400R
01430	TR	DIMSVE,99,11	04332	31	06950 C009R
01440	TD	DMEDDA,DIMSVE	04344	25	06848 C6950
01450	TF	DMEDDA+5,DIMSVE+5	04356	26	06853 06955
01460	TR	DDAR,DMEDDA,, MOVE SECTOR DDA TO PROGRAM DDA AREA	04368	31	07280 06848
01470	TFM	IORT,++23,, READ IN INDICATOR RECORD	04380	16	00565 -4403
01480	B	IOGT,DME,7	04392	49	00566 -6839
01490	TF	DDAR+8,DIMSVE+8,, MOVE SECTOR COUNT	04404	26	07288 06958
01500	*****	INDICATOR RECORD CHECK			
01510	TSTVLD	C INRK+13,INDCCN,, CHECK FOR VALID INDICATOR RECORD	04416	24	07413 06703
01520	BE	RELFRM	04428	46	05604 C1200
01530	C	INRK+5,INDCCN,, CHECK FOR VALIDITY IN CORE IMAGE	04440	24	07405 06703

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01540	BE	**+56	04452	46	04508	C1200
01550	BTM	EPRINT,75,8	04464	17	C6884	C-075
01560	RCTY		04476	34	C0000	C0102
01570	WATY	JOBOUT	04488	39	C7011	C0100
01580	B	MONCAL	04500	49	00796	C0000
01590	DORG	**+3	04508			
01600	TF	DDAR+13,ADDSVE	04508	26	07293	C2472
01610	TDM	INDR+7,,, CCNVERT DEFINER TO CORE IMAGE	04520	15	06894	C0000
01620	DC	1,','	04531		1	
01630	AM	DDAR+5,1,10, INCREMENT DISK ADDRESS BY ONE	04532	11	07285	C00-1
01640	SM	DDAR+8,1,10, DECREMENT SECTOR CCUNT BY ONE	04544	12	07288	C00-1
01650	B	SUBPRG-24	04556	49	05676	C0000
01660	DORG	**+3	04564			
01670	TRYSZE	A SPROST,ADDSVE	04564	21	04971	C2472
01680	A	ADDCOW,INRK+22	04576	21	02450	C7422
01690	TF	ADDR,ADDCOW	04588	26	04959	C2450
01700	S	ADDCOW,INRK+22	04600	22	02450	C7422
01710	TDM	INRK+23	04612	15	07423	C0000
01720	DC	1,','	04623		1	
01730	C	ADDR,COMADD	04624	24	04955	C2231
01740	BL	SIZEOK	04636	47	05240	C1300
01750	*****	OVERLAP INDICATION				
01760	TDM	OVRLAP,1,, TURN ON OVERLAP INDICATOR	04648	15	02444	C0001
01770	RCTY		04660	34	C0000	C0102
01780	WATY	NAMBUF-10,,, TYPE PROGRAM NAME	04672	39	02431	C0100
01790	WNTY	INRK+18,,, TYPE LENGTH	04684	38	07418	C0100
01800	WATY	OVRMES,,, TYPE OVERLAP	04696	39	06747	C0100
01810	CLAP	AM LNKPTR,30,10	04708	11	04947	C0010
01820	BD	**+20,EXTIND,, BRANCH IF PROGRAM ON CARDS OR TAPE	04720	43	04740	C2463
01830	B	COMP+24,,, BRANCH TO GET NEXT NAME	04732	49	04036	C0000
01840	DORG	**+3	04740			
01850	**	ROUTINE TO READ INDICATOR RECORD FROM CARDS OR TAPE				
01860	H		04740	48	C0000	C0000
01870	DORG	**+7	04744			
01880	INC	DSC 2,02	04744		2	
01890	OSA	INCDDA	04750		5 X	1
			04750		-2506	
01900	DC	1,','	04751		1	
01910	PHASEC	BTM FLPGET,**+12	04752	17	06648	-4764
01920	TD	CDTP+2,COMSEC+73	04764	25	06976	07373
01930	SM	CDTP+2,1,10	04776	12	06976	C00-1
01940	READ	TFM IORT,**+23,, GET INDICATOR RECORD	04788	16	00565	-4811
01950	B	IOGT,CDTP-4,7	04800	49	00566	-6970
01960	TDM	EXTIND,1	04812	15	02463	C0001
01970	TF	LNKPTR,LNKADD	04824	26	04947	03538
01980	TFM	**+23,SUBTBL+11	04836	16	04859	-2533
01990	ENTST	BNR **+20,,, TEST FOR END OF TABLE	04848	45	04868	C0000
02000	B	READ	04860	49	04788	C0000
02010	DORG	**+3	04868			
02020	TFM	**+23,INRK	04868	16	04891	-7400
02030	RMCHK	BNR **+20	04880	45	04900	C0000

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02040	B	READ	04892	49	04788	C0000
02050	DORG	**+3	04900			
02060	AM	RMCHK+11,1,10	04900	11	04891	C00-1
02070	CM	RMCHK+11,INRK+80	04912	14	04891	-7480
02080	BNE	RMCHK	04924	47	04880	C1200
02090	SF	INRK+1	04936	32	07401	C0000
02100	LNKPTR	DS ,*	04947		C	
02110	CF	INRK+2	04948	33	07402	C0000
02120	ADDR	DS ,*	04959		C	
02130	CF	INRK+3	04960	33	07403	C0000
02140	SPROST	DS ,*	04971		C	
02150	CF	INRK+4	04972	33	07404	C0000
02160	SPRST	DS ,*	04983		C	
02170	CM	INRK+4,4131,8	04984	14	07404	CM131
02180	BNE	HEADER	04996	47	05052	C1200
02190	RCTY		05008	34	C0000	C0102
02200	TFM	IORT,**+23	05020	16	00565	-5043
02210	B	IOPT,TYPE-4,7	05032	49	00532	-7125
02220	B	PHASED	05044	49	06368	C0000
02230	DORG	**+3	05052			
02240	HEADER	C INRK+13,INDCON,, TEST FOR INDICATOR RECORD	05052	24	07413	C6703
02250	BNE	READ	05064	47	04788	C1200
02260	BNF	**+20,INRK+16	05076	44	05096	C7416
02270	B	READ	05088	49	04788	C0000
02280	DORG	**+3	05096			
02290	C	INRK+25,ENTST+11,11, COMPARE NAMES	05096	24	07425	C485R
02300	BNE	GONXT	05108	47	05208	C1200
02310	TF	NAMBUF,ENTST+11,11	05120	26	02441	C485R
02320	AM	ENTST+11,6,10	05132	11	04859	C00-6
02330	BNF	**+32,ENTST+11,11	05144	44	05176	C485R
02340	AM	ENTST+11,14,10	05156	11	04859	C00J4
02350	B	GONXT+12	05168	49	05220	C0000
02360	DORG	**+3	05176			
02370	SF	ENTST+11,,6, SET -LOADED- INDICATOR	05176	32	0485R	C0000
02380	BTM	FLPPUT,**+12	05188	17	06612	-5200
02390	B	RELFRM	05200	49	05604	C0000
02400	DORG	**+3	05208			
02410	GONXT	AM ENTST+11,20,10	05208	11	04859	C00K0
02420	AM	LNKPTR,30,10	05220	11	04947	C00L0
02430	B	ENTST	05232	49	04848	C0000
02440	DORG	**+3	05240			
02450	SIZEOK	TF **+18,ADDSVE	05240	26	05258	C2472
02460	TR	,ZEROS	05252	31	C0000	06764
02470	AM	**+6,50,10	05264	11	05258	C00N0
02480	C	SIZEOK+18,SPROST	05276	24	05258	C4971
02490	BL	**+36	05288	47	05252	C1300
02500	BD	**+24,OVRLAP	05300	43	05324	C2444
02510	BNC1	**+84	05312	47	05396	C0100
02520	RCTY		05324	34	C0000	C0102
02530	WATY	NAMBUF-10,,, TYPE OUT NAME	05336	39	02431	C0100
02540	WNTY	ADDSVE-4	05348	38	02468	C0100
02550	SPTY		05360	34	C0000	C0101
02560	WNTY	INRK+18,,, TYPE CUT LENGTH	05372	38	07418	C0100
02570	WATY	LDED	05384	39	06975	C0100
02580	*****	LOAD PROGRAMS ROUTINE				
02590	RDPRG	BD CDTPLD,EXTIND,, BRANCH IF PROGRAM IN CARD OR TAPE	05396	43	05440	C2463

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02600	SCHLD	TFM	IORT,**23,,	GET PROGRAM FROM DISK	05408	16	00565	-5431
02610		B	IOGT,INDR,7		05420	49	00566	-6887
02620		B	LODINC		05432	49	05884	C0000
02630			DORG	*-3	05440			
02640	*****			ROUTINE TO LOAD PROGRAM FROM CARD CR TAPE				
02650	CDTPLD	TDM	416		05440	15	00416	00000
02660		DC	1,*,*		05451		1	
02670		TD	428,COMSEC+73		05452	25	00428	C7373
02680		SF	428		05464	32	00428	C0000
02690	SECC	DC	2,0,*		05475		2	
			-D					
02700		CF	429		05476	33	00429	00000
02710		TF	434,ADDSVE		05488	26	00434	02472
02720		SF	489		05500	32	00489	C0000
02730		TF	COMSEC+98,INRK+79		05512	26	07398	C7479
02740		TFM	IORT,**23,,	PUT BACK COMMUNICATION SECTOR	05524	16	00565	-5547
02750		B	IOPT,COM,7		05536	49	00532	-7093
02760		TFM	IORT,**23,,	GET PROGRAM	05548	16	00565	-5571
02770		B	IOGT,EXT,7		05560	49	00566	-7061
02780		SM	PROCCW,1,10		05572	12	03822	000-1
02790		TDM	EXTIND		05584	15	02463	C0000
02800		B	LODINC		05596	49	05884	C0000
02810			DORG	*-3	05604			
02820	RELFRM	TDM	INRK+80		05604	15	07480	00000
02830		DC	1,*,*		05615		1	
02840		TR	INRK,INRK+8,,	MOVE INDICATOR RECORD TO CONFORM TO CARD IMAGE	05616	31	07400	C7408
02850		CF	427		05628	33	00427	00000
02860	MLLGH	DS	*,*		05639		0	
02870		TFM	439,75		05640	16	00439	-0075
02880		TFM	DDAR+13,999999		05652	16	07293	R9999
02890		TF	INDR+11,ADDSVE		05664	26	06898	02472
02900		TF	SPROST,INRK+31		05676	26	04971	C7431
02910		AM	SPROST,5,10		05688	11	04971	CC0-5
02920	SUBPRC	C	INRK+24,F,,	TEST FOR EQUAL F	05700	24	07424	C2219
02930		BNE	**36		05712	47	05748	01200
02940		C	INRK+26,K,,	TEST FOR EQUAL K	05724	24	07426	C2221
02950		BE	**24		05736	46	05760	C1200
02960		BTM	EPRINT,76,8		05748	17	06684	C-076
02970	*****			TEST FOR NEW SUBROUTINES CALLED FROM FLIPPED SUBPROGRAM				
02980	FLIP	TFM	CCSUB+11,INRK+37		05760	16	05795	-7437
02990		TFM	LBSUB+11,LIBSUB		05772	16	05863	-2394
03000	CCSUB	BD	LBSUB		05784	43	05852	C0000
03010		AM	*-1,1,10		05796	11	05795	000-1
03020		AM	LBSUB+11,1,10		05808	11	05863	000-1
03030		CM	LBSUB+11,LIBSUB+30		05820	14	05863	-2424
03040		BNE	CCSUB		05832	47	05784	C1200
03050		B	TRYSZE		05844	49	04564	00000
03060			DORG	*-3	05852			
03070	LBSUB	BD	CCSUB+12		05852	43	05796	C0000
03080		BTM	EPRINT,77,8		05864	17	06684	C-077
03090		B	CCSUB+12		05876	49	05796	00000
03100			DORG	*-3	05884			
03110	*****			IN-CORE SUBPROGRAM TABLE SEARCH AND LOAD				
03120	LOCINC	TFM	IORT,**23		05884	16	00565	-5907

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03130		B	IOGT,INC,7		05896	49	00566	-4744
03140		TF	COMPRE+11,ACDR		05908	26	05955	C4959
03150		AM	COMPRE+11,1,10		05920	11	05955	000-1
03160		TFM	COMPAR+11,SUBTBL+11,,	INITIALIZE POINTER	05932	16	05975	-2533
03170	COMPRE	BNR	SERCH		05944	45	06008	C0000
03180		B	SCHPRO		05956	49	06180	C0000
03190			DORG	*-3	05964			
03200	COMPAR	BNR	COMPRE		05964	45	05944	00000
03210		BTM	EPRINT,7170,8		05976	17	06684	CP170
03220		AM	COMPRE+11,18,10		05988	11	05955	000J8
03230		B	COMPRE-12		06000	49	05932	00000
03240			DORG	*-3	06008			
03250	SERCH	AM	COMPRE+11,11,10		06008	11	05955	000J1
03260		C	COMPAR+11,COMPRE+11,611,	CHECK FOR SAME NAME	06020	24	0597N	C595N
03270		BE	SERCH1		06032	46	06076	C1200
03280		AM	COMPAR+11,20,10		06044	11	05975	000K0
03290		SM	COMPRE+11,11,10		06056	12	05955	000J1
03300		B	COMPAR		06068	49	05964	00000
03310			DORG	*-3	06076			
03320	SERCH1	AM	COMPRE+11,5,10		06076	11	05955	000-5
03330		AM	COMPAR+11,5,10		06088	11	05975	000-5
03340	*****			ROUTINE TO PLACE INDIRECT ENTRY ADDRESSES INTO SUBPROGRAMS				
03350		A	COMPRE+11,ADDSVE,6		06100	21	0595N	02472
03360		TF	**35,COMPAR+11,11		06112	26	06147	0597N
03370		TF	**18,COMPRE+11,11		06124	26	06142	0595N
03380		TFM	***	MOVE ADDRESS INTO PROGRAM	06136	16	00000	-0000
03390		SF	*-6,,6		06148	32	0614K	00000
03400		AM	COMPRE+11,2,10		06160	11	05955	000-2
03410		B	COMPRE-12		06172	49	05932	00000
03420			DORG	*-3	06180			
03430	SCHPRO	TF	**30,ADDR		06180	26	06210	04959
03440		AM	**18,1,10		06192	11	06210	000-1
03450	SETGM	TDM			06204	15	00000	00000
03460		DGM	*		06215		1	
03470	ROUND	AM	INRK+20,1,10		06216	11	07420	000-1
03480	MVESCT	TF	SCHDDA+8,INRK+20		06228	26	06832	C7420
03490		S	SCHDDA+5,SCHDDA+8		06240	22	06829	C6832
03500		C	SCHDDA+5,SPRST		06252	24	06829	C4983
03510		BL	ERL		06264	47	06588	C1300
03520		TFM	IORT,**23		06276	16	00565	-6299
03530		B	IOPT,SCH,7		06288	49	00532	-6815
03540		TDM	SETGM+6,0,6		06300	15	0621-	00000
03550		TF	LNKPTR,SCHDDA+5,6		06312	26	0494P	06829
03560		AM	LNKPTR,5,10		06324	11	0494P	000-5
03570		TF	LNKPTR,SPROST,6		06336	26	0494P	04971
03580		AM	LNKPTR,25,10		06348	11	0494P	000K5
03590		B	PHASEB		06360	49	03592	00000
03600			DORG	*-3	06368			
03610	*****			CHECK AND TYPE OUT NAMES OF UNLOADED SUBPROGRAMS				
03620	PHASED	TDM	DATA,1		06368	15	02505	00001
03630		TFM	**35,SUBTBL+11		06380	16	06415	-2533
03640		TDM	MORE		06392	15	06529	C0000
03650		BNR	**60		06404	45	06464	00000
03660		BD	PHASEC-12,MORE		06416	43	07420	06529
03670	CALL6	TF	INRK+4,SCHDDA+5		06428	26	07404	06829
03680		TFM	IORT,**23		06440	16	00565	-6463

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04380	DC	1,*		07045	1
04390	BL6DDA	DDA ,1,16177,16,2522		07046	14
04400	DC	1,*		07060	1
04410	EXT	DSC 2,-22		07061	2
04420	DSA	EXTDDA		07067	5 X 1
04430	DC	1,*		07067	-7070
04440	EXTDDA	DDA ,1,19783,3,0		07070	14
04450	DC	1,*		07084	1
04460	FLP	DSC 2,02		07085	2
04470	DSA	FLPDDA		07091	5 X 1
04480	DC	1,*		07091	-3540
04490	COM	DSC 2,22		07092	1
04500	DSA	COMDDA		07093	2
04510	DC	1,*		07099	5 X 1
04520	COMDDA	DDA ,1,19663,1,COMSEC		07099	-7102
04530	DC	1,*		07100	1
04540	LD	DSC 2,22		07102	14
04550	DSA	LDDA		07116	1
04560	DC	1,*		07117	2
04570	TYPE	DSA DATA		07123	5 X 1
04580	DC	2,6		07123	-2474
04590	DGM	-6		07124	1
04600	DATA1	DAC 6,*DATA*		07129	5 X 1
04610	DDRG	7280		07129	-7135
04620	DDAR	DSS 20		07131	2
04630	COMSEC	DSS 100,, SYSTEM COMMUNICATION SECTOR		07132	1
04640	INRK	DSS 100,, READ IN AREA FOR INDICATOR RECORD		07135	6 X 2
04650	*	BLOCK LOADER		07280	
04660	DDRG	8000		07280	2C
				07300	1CC
				07400	100
				08C00	

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04670	BEGIN	TD SETGM+11,19999		08000	25 06215 19999
04680	TD	CDTP+3,19999		08012	25 06977 19999
04690	TD	TYPE+3,19999		08024	25 07132 19999
04700	SK	LOADER		08036	34 08072 00701
04710	WDN	LOADER		08048	38 08072 C07C2
04720	H			08060	48 C00CC C0000
04730	LOADER	DDA ,1,16140,37,3556		08072	14
04740	DGM	19999		19999	1
04750	TCD	BEGIN		08C00	
04760	DEND			00C00	

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ADDCOW	C245C	ENTSQT	02318	NODATA	02521	EXT	07061	RECLG	02243
ADDSVE	02472	ENTSWD	02288	OVRLAP	02444	FLIP	0576C	RMCHK	04880
RL6DDA	07046	EPRINT	06684	CVRMES	06747	FLP	07085	ROUND	06216
CCTPLD	0544C	EQADDR	02455	PHASEB	03592	FOUND	0414C	SCHLD	05408
COMADD	02231	EQRCH	03932	PHASEC	04752	F	02219	SCH	06815
CCMDDA	07102	EQDDA	06872	PHASED	06368	GONXT	05208	SECCT	05475
CCMPAR	05964	ERMES	06925	PRCCGW	03822	INC13	03796	SECT	02466
CCMPER	0398C	EXTDDA	07C70	PRCGST	02226	INC	04744	SERCH	06C08
CCMPRE	05944	EXTIND	02463	RDPRG	05396	INDR	06887	SETGM	06204
CCMSEC	07300	FLGRMK	02445	RELFRM	05604	INRK	07400	SPRST	04983
DIMDDA	06908	FLPDDA	03540	ADDR	04959	IOGT	00566	TYPE	07129
DIMSVE	06950	FLPGET	06648	BEGIN	08000	IOIND	02461	W	02240
DMEDDA	06848	FLPPUT	06612	BL6	07038	IOPT	00532	ZERGS	06764
ENDTST	03628	FOUND1	04248	CALL6	06428	IORT	00565	SCADDR	02460
ENTABS	02323	HEADER	05052	CCSUB	05784	K	02221	SCHDDA	06824
ENTATN	02313	INCDDA	02506	COTP	06974	LBSUB	05852	SCHPRO	06180
ENTCOS	02303	INDCON	06703	COMP	04012	LDDA	02474	SERCH1	06676
ENTDED	02298	JOBOUT	07011	COM	07093	LDED	06979	SIZEOK	05240
ENTDRR	02293	LIBSUB	02394	DATA1	07135	LDMS	06997	SPROST	04971
ENTEXP	02253	LNKADD	03538	DATA	02505	LD	07117	SUBPRO	05700
ENTFET	02283	LNKPTR	04947	DDAR	07280	MLIND	02462	SUBTRL	02522
ENTFID	02273	LOADER	08072	DIM	06900	MORE	06529	SVEDDA	02490
ENTREC	02278	LODINC	05884	DME	06839	N1	02233	TRYSZE	04564
ENTSC2	02258	MLLGH	05639	ENTLN	02248	N2	02238	TSTVLD	04416
ENTSC3	02263	MONCAL	00796	ENTST	04848	NXTRD	04072	ZERCNE	06949
ENTSDX	02268	MVESCT	06228	EQU	06863	OLAP	04708	ZRCTST	02467
ENTSIN	02308	NAMBUF	02441	ERL	06588	READ	04788		

END OF ONE ASSEMBLY.

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00010	*****	1620 MONITOR II VERSION 2 FORTRAN II-D LOADER BLOCK 6			
00020	IOPT	DS	.532	00532	0
00030	IOGT	DS	.566	00566	0
00040	IORT	DS	.565	00565	0
00050	MONCAL	DS	.796	00796	0
00060	DIO	DS	.820	00820	0
00070	ERRET	DS	.602	00602	0
00080	INDS	DS	.610	00610	0
00090	ERROR	DS	.630	00630	0
00100	***	COMMUNICATION AREA			
00110	DORG	2218		02218	
00120	F	DS	2,, FLOATING POINT WORD LENGTH	02219	2
00130	K	DS	2,, FIXED POINT WORD LENGTH	02221	2
00140	PROGST	DS	5,, STARTING ADDRESS OF MAINLINE PROGRAM	02226	5
00150	COMADD	DS	5,, STARTING ADDRESS OF COMMON AREA	02231	5
00160	N1	DS	2,, NUMBER OF WORDS IN LOGICAL RECORD	02233	2
00170	N2	DS	5,, NUMBER OF LOGICAL RECORDS	02238	5
00180	W	DS	2,, WORD LENGTH	02240	2
00190	RECLG	DS	3,, RECORD LENGTH	02243	3
00200	ENTLN	DS	5,, ENTRY ADDRESS TO LOG SUBROUTINE	02248	5
00210	ENTEXP	DS	5,, ENTRY ADDRESS TO EXPONENTIAL SUBROUTINE	02253	5
00220	ENTSC2	DS	5,, ENTRY ADDRESS TO DOUBLE SUBSCRIPT SUBROUTINE	02258	5
00230	ENTSC3	DS	5,, ENTRY ADDRESS TO TRIPLE SUBSCRIPT SUBROUTINE	02263	5
00240	ENTSDX	DS	5,, ENTRY ADDRESS TO FIXED SWITCH D SUBROUTINE	02268	5
00250	ENTFID	DS	5,, ENTRY ADDRESS TO FIND SUBROUTINE	02273	5
00260	ENTREC	DS	5,, ENTRY ADDRESS TO RECORD SUBROUTINE	02278	5
00270	ENTFET	DS	5,, ENTRY ADDRESS TO FETCH SUBROUTINE	02283	5
00280	ENTSWC	DS	5,, ENTRY ADDRESS TO SWITCH D SUBROUTINE	02288	5
00290	ENTDRR	DS	5,, ENTRY ADDRESS TO ARRAY SUBROUTINE	02293	5
00300	ENTDED	DS	5,, ENTRY ADDRESS TO DISK END SUBROUTINE	02298	5
00310	ENTCOS	DS	5,, ENTRY ADDRESS TO COSINE SUBROUTINE	02303	5
00320	ENTSIN	DS	5,, ENTRY ADDRESS TO SINE SUBROUTINE	02308	5
00330	ENTATN	DS	5,, ENTRY ADDRESS TO ARCTANGENT SUBROUTINE	02313	5
00340	ENTSQT	DS	5,, ENTRY ADDRESS TO SQUARE ROOT SUBROUTINE	02318	5
00350	ENTABS	DS	5,, ENTRY ADDRESS TO ABSOLUTE SUBROUTINE	02323	5
00360	DS		70,, RESERVED FOR ENTRIES TO ADDED SUBROUTINES	02393	70
00370	LIBSUB	DSS	30,, LIBRARY SUBROUTINE INDICATORS	02394	30
00380	DC		1,,	02424	1
00390	*****	MAINLINE TABLE SEARCH			
00400	DORG	2426		02426	
00410	NAMBUF	DC	16,0	02441	16
			-0000000000000000		
00420	DC		2,,	02443	2
			-		
00430	OVRLAP	DS	1	02444	1
00440	FLGRMK	DS	1	02445	1
00450	ADDCOW	DS	5	02450	5
00460	EQADDR	DS	5	02455	5
00470	SCADDR	DS	5	02460	5
00480	IOIND	DS	1	02461	1
00490	MLIND	DS	1	02462	1
00500	EXTIND	DS	1	02463	1
00510	SECT	DS	3	02466	3
00520	ZRCTST	DS	1	02467	1
00530	ADDSVE	DS	5	02472	5

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00540	DC	1,*		02473	1		
00550	LDCDA	DDA	+1,0,0,0	02474	14		
		1-0000-00-0000					
00560	DC	1,*		02488	1		
00570	SVEDDA	DDA	+1,0,21,0	02490	14		
		1-0000-21-0000					
00580	DC	1,*		02504	1		
00590	DATA	DC	1,C	02505	1		
00600	INCDDA	DDA	+1,0,10,0	02506	14		
		1-0000-10-0000					
00610	DC	1,*		02520	1		
00620	NODATA	DS	1	02521	1		
00630	*****	ROUTINE TO LOAD ARITH AND I/O PACKAGE					
00640	ARITH	TFM	DIG+35,ENT,67	02522	16	0085N	-3754
00650		BD	INHIB,OVRLAP	02534	43	03798	C2444
00660		BD	INHIB,SVEDDA-1	02546	43	03798	C2489
00670		TFM	IORT,++23	02558	16	00565	-2581
00680		B	IOGT,SVE,7	02570	49	00566	-3922
00690		BD	NITST,ZROTST	02582	43	03474	C2467
00700		B	LDFIX2	02594	49	03310	CC000
00710		DORG	*-3	02602			
00720	SET1	TFM	RECLG,1,9	02602	16	C2243	00-01
00730	N2TST	M	N2,RECLG	02614	23	C2238	C2243
00740		SF	95	02626	32	00095	CC000
00750		CM	99,19999	02638	14	00095	J9999
00760		BH	N1TST+24	02650	46	C3498	C1100
00770		CM	99,00001	02662	14	00099	-0001
00780		BL	N1TST+24	02674	47	03498	C130C
00790		B	LDFIX2	02686	49	C331C	CC000
00800		DORG	*-3	02694			
00810	LDFIX	BD	LDFIX1,DATA	02694	43	02726	02505
00820		BD	LDFIX1,NODATA	02706	43	02726	02521
00830		B	READ-24	02718	49	03078	CC000
00840		DORG	*-3	02726			
00850	LDFIX1	BD	++44,IOIND	02726	43	02770	02461
00860		BNF	GETFIX,IOIND	02738	44	02586	02461
00870		TFM	IO-2,200,8	02750	16	C304C	C-200
00880		B	GETFIX	02762	49	02986	00000
00890		DORG	*-3	02770			
00900		TFM	DDAR+5,19400	02770	16	07285	J9400
00910		BNF	++36,IOIND	02782	44	02818	C2461
00920		TFM	DDAR+5,15600	02794	16	07285	J5600
00930		TFM	IO-2,200,8	02806	16	0304C	C-200
00940		BD	GETFIX,SCADDR	02818	43	02986	C2460
00950		TDM	DDAR,1	02830	15	0728C	00001
00960		TDM	DDAR+14	02842	15	07294	00000
00970		DC	1,*,*	02853			
00980	XFER	TFM	DDAR+8,40,9	02854	16	07288	CC-40
00990		TFM	DDAR+13,3280	02866	16	07293	-3280
01000		TDM	INDR+7	02878	15	03072	CC000

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01010	DC	1,*,*		02889	1		
01020	CYLCTR	DC	2,5,*-1	02888	2		
01030		TFM	IORT,++23	02890	16	00565	-2913
01040		B	IOGT,INDR,7	02902	49	00566	-3065
01050		TFM	IORT,++23	02914	16	00565	-2937
01060		B	IOPT,IO,7	02926	49	00532	-3042
01070		AM	DDAR+5,40,10	02938	11	07285	000M0
01080		AM	IODDA+5,40,10	02950	11	03055	000M0
01090		SM	CYLCTR,1,10	02962	12	02888	C00-1
01100		BNE	CYLCTR+2	02974	47	0289C	01200
01110	GETFIX	TD	7499,IOIND	02986	25	07499	02461
01120		RCTY		02998	34	00000	C0102
01130		TFM	IORT,++23,, GET FIXED AREA	03010	16	00565	-3033
01140		B	IOGT,++12,7	03022	49	00566	-3034
01150		DSC	2,-22	03034			
01160		2K					
01170		DSC	1,0	03036			
01180		DC	5,144*	03041			
		-144*					
01180	IO	DSC	2,02	03042			
		02					
01190		DSA	IODDA	03048		5 X	1
01200		DC	1,*	03048		-305C	
		*		03049		1	
01210	IODDA	DDA	+1,0,40,3280	03050		14	
		1-0000-40-3280					
01220		DC	1,*	03064		1	
01230	INDR	DSC	2,22	03065		2	
		22					
01240		DSA	DDAR,0	03071		5 X	2
				03071		-728C	
				03076		-000C	
				03077		1	
01250		DC	1,*	03078	25	03944	C7373
01260		TD	CDTP+2,COMSEC+73	03090	12	C3944	C00-1
01270		SM	CDTP+2,1,10	03102	16	00565	-3125
01280	READ	TFM	IORT,++23	03114	49	00566	-3938
01290		B	IOGT,CDTP-4,7	03126	16	03149	-7400
01300		TFM	++23,INRK	03138	45	03158	C0000
01310	RMCHK	BNR	++20	03150	49	03102	00000
01320		B	READ	03158			
01330		DORG	*-3	03158			
01340		AM	RMCHK+11,1,10	03170	14	03149	-7480
01350		CM	RMCHK+11,INRK+80	03182	47	03138	01200
01360		BNE	RMCHK	03194	32	07401	C0000
01370		SF	INRK+1	03206	33	07402	C0000
01380		CF	INRK+2	03218	33	07403	C0000
01390		CF	INRK+3	03230	33	07404	C0000
01400		CF	INRK+4				

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01410	CM	INRK+4,4131,8	03242	14	07404	CM131
01420	BNE	READ	03254	47	03102	01200
01430	RCTY		03266	34	00000	00102
01440	TFM	IOPT,++23	03278	16	00565	-3301
01450	B	IOPT,TYPE2-4,7	03290	49	00532	-3954
01460	B	LDFIX1	03302	49	02726	00000
01470	DORG	*-3	03310			
01480	LDFIX2	M N2,RECLG	03310	23	02238	02243
01490	SF	95	03322	32	00095	00000
01500	AM	99,218,9	03334	11	00099	00K18
01510	C	INRK+4,99	03346	24	07404	00099
01520	BH	LDFIX	03358	46	02694	01100
01530	SM	INRK+4,218	03370	12	07404	-0218
01540	LD	99,INRK+4	03382	28	00099	07404
01550	D	95,RECLG	03394	29	00095	02243
01560	TF	N2,96	03406	26	02238	00096
01570	TF	ADDSVE,96	03418	26	02472	00096
01580	RCTY		03430	34	00000	00102
01590	WATY	MAXN2	03442	39	03887	00100
01600	WNTY	ADDSVE-4	03454	38	02468	00100
01610	B	LDFIX	03466	49	02694	00000
01620	DORG	*-3	03474			
01630	NITST	BD NIN2OK,N1	03474	43	03662	02233
01640	BD	NIN2CK,N1-1	03486	43	03662	02232
01650	RCTY		03498	34	00000	00102
01660	TFM	IOPT,++23	03510	16	00565	-3533
01670	B	IOPT,TYPE-4,7	03522	49	00532	-3930
01680	RCTY		03534	34	00000	00102
01690	TFM	IOPT,++23	03546	16	00565	-3569
01700	B	IOGT,TYPE1-4,7	03558	49	00566	-3946
01710	BC4	NITST+24	03570	46	03498	00000
01720	SF	INRK+10	03582	32	07410	00000
01730	SF	INRK+12	03594	32	07412	00000
01740	TF	N1,INRK+11	03606	26	02233	07411
01750	TF	N2,INRK+16	03618	26	02238	07416
01760	CM	N2	03630	14	02238	-0000
01770	BNE	NITST	03642	47	03474	01200
01780	B	NITST+24	03654	49	03498	00000
01790	DORG	*-3	03662			
01800	NIN2CK	M W,N1	03662	23	02240	02233
01810	SF	96	03674	32	00096	00000
01820	CM	99,101,8	03686	14	00099	0-101
01830	BL	SET1	03698	47	02602	01300
01840	CM	99,200,8	03710	14	00095	0-200
01850	BH	NITST+24	03722	46	03498	01100
01860	TFM	RECLG,2,9	03734	16	02243	00-02
01870	B	N2TST	03746	49	02614	00000
01880	DORG	*-3	03754			
01890	ENT	BI **12,3700	03754	46	03766	03700
01900	BNI	ERRET,1900	03766	47	00602	01900
01910	TDM	INDS+10,6	03778	15	00620	00006
01920	B	ERROR	03790	49	00630	00000
01930	DORG	*-3	03798			
01940	INHIB	RCTY	03798	34	00000	00102
01950	WATY	JOBOUT	03810	39	03831	00100
01960	B	MONCAL	03822	49	00796	00000

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01970	DORG	*-3	03830			
01980	JOBOUT	DAC 20,EXECUTION INHIBITED'	03831		20 X	2
		EXECUTION INHIBITED'				
01990	ERD1	DAC 8,ER D1 '	03871		8 X	2
		ER D1 '				
02000	MAXN2	DAC 18,MAX N2 ALLOWABLE '	03887		18 X	2
		MAX N2 ALLOWABLE '				
02010	SVE	DSC 2,00	03922		2	
		00				
02020	DSA	SVEDDA	03928		5 X	1
02030	DC	1,0	03928		-2490	
			03929		1	
02040	TYPE	DSA ERD1	03934		5 X	1
02050	DC	2,6	03934		-3871	
		-6	03936		2	
02060	DGM		03937		1	
02070	CDTP	DSA INRK	03942		5 X	1
02080	DC	2,0	03942		-7400	
		-0	03944		2	
02090	DGM		03945		1	
02100	TYPE1	DSA INRK+10	03950		5 X	1
02110	DC	2,0	03950		-7410	
		-0	03952		2	
02120	DGM		03953		1	
02130	TYPE2	DSA DATA	03958		5 X	1
02140	DC	2,6	03958		-3963	
		-6	03960		2	
02150	DGM		03961		1	
02160	DATA1	DAC 6,*DATA'	03963		6 X	2
		*DATA'				
02170	DORG	7280	07280			
02180	DDAR	DSS 20	07280		20	
02190	CONSEC	DSS 100	07300		100	
02200	INRK	DSS 100	07400		100	
02210	*	BLOCK LOADER				
02220	DORG	8000	08000			
02230	BEGIN	TD TYPE+3,19999	08000	25	03937	19999
02240	TD	CDIP+3,19999	08012	25	03945	19999
02250	TD	TYPE1+3,19999	08024	25	03953	19999
02260	TD	TYPE2+3,19999	08036	25	03961	19999
02270	SK	LOADER	08048	34	08084	00701
02280	WDN	LOADER	08060	38	08084	00702
02290	H		08072	48	00000	00000
02300	LOADER	DDA ,1,16177,16,2522	08084		14	
		1J6177-16-2522				
02310	DGM	19999	19999		1	

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02320	TCD BEGIN	08000
02330	DEND	00000

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ADDCW	02450	ENTSIN	02308	OVRLAP	02444	INHIB	03798	READ	03102
ADDSVE	02472	ENTSQT	02318	PROGST	02226	INRK	07400	RECLG	02243
COMADD	02231	ENTSWD	02288	ARITH	02522	IOCCA	03050	RMCHK	03138
COMSEC	07300	EQADDR	02455	BEGIN	08000	IOGT	00566	SECT	02466
CYLCTR	02888	EXTIND	02463	CDTP	03942	IOIND	02461	SET1	02602
ENTABS	02323	FLGRMK	02445	DATA1	03963	IOPT	00532	SVE	03922
ENTATN	02313	GETFIX	02986	DATA	02505	IORT	00565	TYPE1	03950
ENTCOS	02303	INCDDA	02506	DDAR	07280	IO	03042	TYPE2	03958
ENTDED	02298	JOBOUT	03831	DIC	00820	K	02221	TYPE	03934
ENTDRR	02293	LDFIX1	02726	ENTLN	02248	LCCDA	02474	W	02240
ENTEXP	02253	LDFIX2	03310	ENT	03754	LDFIX	02694	XFER	02854
ENTFET	02283	LIBSUB	02394	ERD1	03871	MAXN2	03887	SCADDR	02460
ENTFID	02273	LOADER	08084	ERRR	00602	MLIND	02462	SVEDDA	02490
ENTREC	02278	MONCAL	00796	ERROR	00630	N1	02233	ZROTST	02467
ENTSC2	02258	NIN2OK	03662	F	02219	NITST	03474		
ENTSC3	02263	NAMBUF	02441	INDR	03065	N2	02238		
ENTSDX	02268	NCDATA	02521	INDS	00610	N2TST	02614		

END OF ONE ASSEMBLY.

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SYMBOL TABLE

STCORE	00004R	CHECK	01268	DIO	00820	EEXIT	01636	ERRF	00602
ERRDR	00630	EXIT	00190R	FLIP	00010R	INDS	00610	INDUT	00629
IOGT	00566	IORT	00565	LABEL	00293R	MYER	00198R	MYER2	00242R
SMI	00154R	SWK	00278R	WK	00277R				

00010	STCORE	DS	5	00004	00005
00020		DS	5	00009	00005
00030	FLIP	TR	SWK,*-1,11	00010	LJ 00278 0000R
00040		C	SWK+5,WK	00022	KM 00283 00277
00050		TF	EXIT+6,SWK+10	00034	KO 00196 00288
00060		BE	SMI	00046	M6 00154 01200
00070		TFM	SWK+8,999,9	00058	J6 00286 00R99
00080		TF	SWK+13,STCORE	00070	KO 00291 00004
00090		TFM	DIO+35,MYER,67	00082	LO 0085N -0198
00100		TF	WK,SWK+5	00094	KO 00277 00283
00110		TDM	SWK+14	00106	J5 00292 00000
00120		DC	1,0,*	00117	00001
00130		TFM	IORT,**23	00118	LO 00565 -0141
00140		B	IOGT,LABEL,7	00130	4R 00566 -0293
00150		TFM	INDUT,CHECK-12	00142	16 00629 -1256
00160	SMI	SM	FLIP-1,13	00154	J2 00009 -0013
00170		TF	**30,FLIP-1,611	00166	KO 00190 0000R
00180		AM	**18,1,10	00178	J1 00196 000-1
00190	EXIT	B		00190	49 00000 00000
00200		DORG	**3	00198	00198
00210	MYER	BI	**12,3700	00198	M6 00210 03700
00220		BNI	ERRF,1900	00210	47 00602 01900
00230		TFM	INDUT,MYER2	00222	LO 00629 -0242
00240		B7	ERROR	00234	49 00630 00000
00250	MYER2	BI	**12,3700	00242	M6 00254 03700
00260		BI	CHECK-12,1900	00254	46 01256 01900
00270		B7	EEXIT	00266	49 01636 00000
00280	WK	DC	5,99999	00277	00005
00290	SWK	DSS	15	00278	00015
00300	LABEL	DSC	2,00	00293	00002
00310		DSA	SWK	00299	00005 -0278
00320		DC	1,0	00300	00001
00330	INDS	DS	,610	00610	00000
00340	ERRET	DS	,602	00602	00000
00350	IORT	DS	,565	00565	00000
00360	IOGT	DS	,566	00566	00000
00370	INDUT	DS	,629	00629	00000
00380	ERROR	DS	,630	00630	00000
00390	DIO	DS	,820	00820	00000
00400	CHECK	DS	,1268	01268	00000
00410	EEXIT	DS	,1636	01636	00000
00420		DEND		00000	

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00010***** 1620 FORTRAN II-D RELOCATABLE LN ROUTINE
00020***** METHOD
00030***** X#MANTISSA OF ARGUMENT
00040***** Y#EXPONENT OF ARGUMENT
00050***** A#X1-X0/X1+X0
00060***** LN#ARG#2#A#X1+X0**20/3+X0**40/5+.....0+Y*LN#10#
00070 DSA FLN 00004 00005 -0006
00080 FLN BLXM SET ,*-1#0# ,11 00006 60 04142 0000N
00090*
00100* FAC # 0. AND ER F2 IF FAC # 0.
00110*
00120 BD **36 ,FAC-1#4# 00018 M3 00054 0K491
00130 TFM EI ,671 ,9 00030 16 02615 00071
00140 BLXM RESET ,UNFLO#0# 00042 66 06808 02860
00150*
00160* STORE SIGN
00170*
00180 MF FLN ,FAC-2 00054 P1 00006 02490
00190*
00200* INITIALIZE
00210*
00220 BLXM **12 ,LN1#2# 00066 06 00078 03N57
00230 TF ALT+11 ,FAC 00078 K6 00389 02492
00240*
00250* REDURE ARGUMENT 1. MORE THAN ARGUMENT MORE THAN .5
00260*
00270 CM FAC#4# ,50 ,10 00090 14 0K492 000N0
00280 BNL COM BTA 00102 M6 00138 01300
00290 A FAC-2 ,FAC-2 00114 21 02490 02490
00300 BXM *-36 ,31#2# 00126 02 00090 00-31
00310*
00320* COMPUTE BETA # X1 - FAC#X1 + FAC#
00330*
00340 COMBTA CF FAC-1#4# 00138 33 0K491 00000
00350 TDM FAC-2#4# , -1 00150 15 0K490 0000J
00360 TF BETA ,TWO-2 00162 26 02603 03710
00370 S BETA ,FAC-2 00174 22 02603 02490
00380 BD **24 ,WJRS 00186 M3 00210 03018
00390 TF 79 , -ZEROM 00198 26 00079 0285R
00400 LD 97#4# ,BETA 00210 28 0-097 02603
00410 D 98#4# ,FAC-2 00222 29 0-098 02490
00420 TF BETA ,98#4# 00234 26 02603 0-098
00430*
00440* COMPUTE SAVE # BETA * BETA ,%FAC-36# # SAVE
00450*
00460 BD **24 ,WJRS 00246 M3 00270 03018
00470 TF 79 , -ZEROM 00258 26 00079 0285R
00480 M BETA ,BETA 00270 23 02603 02603
00490 TF SAVE ,97#4# 00282 26 02565 0-097
00500*
00510* COMPUTE BETA # 2 * BETA
00520*
00530 A BETA ,BETA 00294 21 02603 02603
    
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00540*
00550*      INITIALIZE FOR LOOP
00560*
00570      TFM 00309 ,03 ,10      00306 16 00309 000-3
00580      TF  FAC-1 ,ONE-2      00318 26 02491 03300
00590      TDM FAC ,0           00330 15 02492 00000
00600      TF  FAC-36 ,SAVE      00342 26 02456 02565
00610*
00620*      LOOP TO EVALUATE SERIES
00630*
00640 LOOP TF 99 ,SAVE          00354 26 00099 02565
00650      TFM 97%4 ,0200 ,810  00366 16 0-097 0-2-0
00660 ALT CF 98%4 ,0309        00378 33 0-098 00000
00670      D 98%4 ,00309        00390 29 0-098 00309
00680      BE GO ON              00402 M6 00486 01200
00690      A FAC ,97            00414 21 02492 00097
00700      BD **24 ,WJRS         00426 M3 00450 03018
00710      TF 79 ,ZEROM         00438 26 00079 0285R
00720      M  FAC-36 ,SAVE      00450 23 02456 02565
00730      TF  SAVE ,97%4       00462 26 02565 0-097
00740      BX LOOP ,LOOP+21%1   00474 OJ 00354 003P5
00750*
00760*      COMPUTE FAC # FAC * BETA - CONSTANT
00770*
00780 GOON BD **24 ,WJR S       00486 M3 00510 03018
00790      TF 79 ,ZEROM         00498 26 00079 0285R
00800      M  BETA ,FAC          00510 23 02603 02492
00810      TF  FAC ,97%4       00522 26 02492 0-097
00820      A  FAC ,00000%2     00534 21 02492 00-00
00830      SF FAC              00546 32 02492 00000
00840      TF 79 ,ZERO-67      00558 26 00079 02700
00850      M  LN10 ,ALT+11     00570 2L 03681 00389
00860      A 99 ,FAC           00582 21 00099 02492
00870      CM 97 ,00 ,10      00594 14 00097 000-0
00880      BNE **24            00606 M7 00630 01200
00890      BLXM RESET ,ZERFAC%0 00618 66 06808 02836
00900*
00910*      NORMALIZE
00920*
00930      TD 00100 ,RECMK      00630 25 00100 02403
00940      TFM FAC ,03 ,10     00642 16 02492 000-3
00950      MF 00100 ,00099     00654 71 00100 00099
00960      BD **56 ,95%4       00666 M3 00722 0-095
00970      SM FAC ,01 ,10     00678 12 02492 000-1
00980      TRNM 95%4 ,96%4     00690 30 0-095 0-096
00990      TDM 99 ,0           00702 15 00099 00000
01000      BT *-48            00714 M9 00666 00000
01010      SF 95%4           00722 32 0-095 00000
01020      TF  FAC-2 ,94       00734 26 02490 00094
01030      MF  FAC-2 ,00100    00746 71 02490 00100
01040      TDM 00100 ,0        00758 15 00100 00000
01050      BLXM RESET ,**12%0  00770 60 06808 00782
01060      BNF FIXEND ,FLN     00782 4M 03068 00006

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01070*
01080*      PRINT ER F3
01090*
01100      TFM EI ,673 ,9      00794 16 02615 00073
01110      B7 ERXV+24         00806 49 03144 00000
01120      DEND 1              00001

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00010***** 1620 FORTRAN II-D RELOCATABLE EXPONENTIAL ROUTINE
00020***** METHOD
00030***** A#DECIMAL PORTION OF X*LOG%E#
00040***** C#WHOLE NUMBER PORTION OF X*LOG%E#
00050***** B#A*LN%10#
00060***** FEXP%X#1+B+B**2/2+B**3/6+...+B**N-1#/%N-1#FACTORIAL#*10**C
00070 DSA FEXP 00004 00005 -0006
00080 FEXP BLXM SET ,*-1%# ,11 00006 60 04142 0000N
00090*
00100* FAC # 1. IF ARGUMENT # 0.
00110*
00120 BD **48 ,FAC-1%# 00018 M3 00066 0K491
00130 ONEFAC TF FAC-2 ,ONE-4 00030 26 02490 03298
00140 TFM FAC ,01 ,10 00042 16 02492 000-1
00150 BLXM RESET ,FIXEND%# 00054 66 06808 03068
00160*
00170* STORE SIGN
00180*
00190 MF FEXP ,FAC-2 00066 P1 00006 02490
00200*
00210* BETA # FAC * LOG%E#
00220*
00230 BD **24 ,WJRS 00078 M3 00102 03018
00240 TF 79 ,ZEROM 00090 26 00079 0285R
00250 FSL FAC-3%# ,FAC-2 00102 05 0K489 02490
00260 TFL BETA ,LOGE 00114 06 02603 03366
00270 FMUL BETA ,FAC 00126 03 02603 02492
00280*
00290* FAC # 1. IF ARGUMENT * LOG%E# IS LESS THAN 10**%-F#
00300*
00310 C BETA ,MF 00138 24 02603 03054
00320 BNH ONE FAC 00150 M7 00030 01100
00330*
00340* OVERFLOW OR UNDERFLOW IF EXPONENT GREATER THAN TWO
00350*
00360 CM BETA ,03 ,10 00162 14 02603 000-3
00370 BNL ERRORS 00174 M6 00922 01300
00380*
00390* INITIALIZE
00400*
00410 TFM CHAR ,001 ,9, CHAR # 001 00186 J6 00051 00-01
00420 BLXM **12 ,00001%# , , LOAD IX3 WITH 00001 00198 06 00210 00--1
00430*
00440* GET FAC EQUAL TO MANTISSA AND CHAR EQUAL TO EXPONENT + 1
00450*
00460 TF FAC ,LN1-1 00210 26 02492 03556
00470 MA GOB ,CON98 00222 P- 00533 00281
00480 BD **36 ,GOB 00234 ML 00270 0053L
00490 SF 99 00246 32 00099 00000
00500 FSL -GOB ,99 00258 -5 0053L 00099
00510 QZ1 CF -GOB ,00000 00270 L3 0053L 00000
00520 A GOB ,BETA 00282 K1 00533 02603

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00530 AM GOB ,01 ,10 00294 J1 00533 000-1
00540 MA CNT ,GOB 00306 P- 00485 00533
00550 TDM 95%# ,0 ,11 00318 15 0--95 0000-
00560 A FAC ,CNT 00330 2J 02492 0048N
00570 CM BETA ,00 ,10 00342 14 02603 000-0
00580 BNH GO ON 00354 M7 00390 01100
00590 SM GOB ,02 ,10 00366 J2 00533 000-2
00600 A CHAR ,GOB 00378 KJ 00051 0053L
00610*
00620* REDUCE ARGUMENT 0. LESS THAN ARGUMENT LESS THAN .34
00630* AND CARRY COUNT IN IX3
00640*
00650 GOON CM FAC%# ,34 ,10 00390 14 0K492 000L4
00660 BL PRE LOP 00402 M7 00438 01300
00670 SM FAC%# ,34 ,10 00414 12 0K492 000L4
00680 BXM GOON ,00001%# 00426 02 00390 00--1
00690*
00700* INITIALIZE FOR LOOP
00710*
00720 PRELOP BD **24 ,WJRS 00438 M3 00462 03018
00730 TF 79 ,ZEROM 00450 26 00079 0285R
00740 M FAC ,LN10-1 00462 23 02492 03680
00750 QZ2 SF 97%# ,0%# 00474 32 0--97 0-000
00760 TF SAVE ,98%# 00486 26 02565 0-098
00770 TF FAC ,98%# 00498 26 02492 0-098
00780 TDM FAC -2%# ,1 00510 15 0K490 0000J
00790 QZ3 CF FAC -1%# ,0%# 00522 33 0K491 0--00
00800 TF BETA ,98%# 00534 26 02603 0-098
00810 TFM 00309 ,02 ,10 00546 16 00309 000-2
00820 BT LOOP+12 00558 M9 00578 00000
00830*
00840* LOOP TO EVALUATE SERIES
00850*
00860 LOOP A FAC ,SAVE 00566 21 02492 02565
00870 BD **24 ,WJRS 00578 M3 00602 03018
00880 TF 79 ,ZEROM 00590 26 00079 0285R
00890 M SAVE ,BETA 00602 23 02565 02603
00900 TF 99 ,97%# 00614 26 00099 0-097
00910 TFM 97%# ,00 ,10 00626 16 0-097 000-0
00920 CF 98%# 00638 33 0-098 00000
00930 D 98%# ,00309 00650 29 0-098 00309
00940 BE RE SIZE 00662 M6 00698 01200
00950 TF SAVE ,97 00674 26 02565 00097
00960 BX LOOP ,ONEFAC+23%# 00686 0J 00566 000N3
00970*
00980* FLOAT FAC
00990*
01000 RESIZE BD ERRORS ,CHAR-2 00698 ML 00922 00049
01010 TDM FAC ,0 ,11 00710 15 02492 0000-
01020 FSL FAC-3%# ,FAC-1 00722 05 0K489 02491
01030 SF CHAR-1 00734 L2 00050 00000
01040 TF FAC ,CHAR 00746 2D 02492 00051
01050*

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01060*      COMPUTE RECIPROCAL IF REQUIRED
01070*
01080 CKEXP BCXM EXPAND , -00001830
01090      BNF RETURN , FEXP
01100      TFL BETA , FAC
01110      TFL FAC , ONE
01120      BD **24 , WJRS
01130      TF 79 , -ZEROM
01140      FDIV FAC , BETA
01150      BXV ERRORS
01160*
01170*      SET UP TO RETURN
01180*
01190 RETURN FSR FAC-2 , FAC-4
01200      BLXM RESET , FIXEND300
01210*
01220*      EXPAND FAC * 10**2.340 # FAC
01230*
01240 EXPAND BD **24 , WJRS
01250      TF 79 , -ZEROM
01260      FMUL FAC , TEN34
01270      B7 CK EXP
01280*
01290*      EXIT TO CORRECT ERROR
01300*
01310 ERRORS TFM EI , 674 , 9
01320      BLXM RESET , **12300
01330      TFM ERROR+30 , FIXEND-12
01340      BNF OVFLOW , FEXP
01350      B7 UNFLO
01360*
01370*      SYMBOLS
01380*
01390 CHAR DS 3 , ONE FAC + 21
01400 GOB DS , QZ3+11
01410 CON98 DC 5 , 00096 , QZ1+11
01420 CNT DS , QZ2+11
01430      DEND 1
00758 04 00878 00--J
00770 MM 00854 00006
00782 06 02603 02492
00794 06 02492 03302
00806 M3 00830 03018
00818 26 00079 0285R
00830 09 02492 02603
00842 M6 00922 01500
00854 08 02490 02488
00866 66 06808 03068
00878 M3 00902 03018
00890 26 00079 0285R
00902 03 02492 03334
00914 M9 00758 00000
00922 16 02615 00074
00934 60 06808 00946
00946 16 03014 -3056
00958 4M 02960 00006
00970 49 02860 00000
00051 00003
00533 00000
00281 00005
00485 00000
00001
    
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00010***** FORTRAN II-D RELOCATABLE-SUBSCRIBING ROUTINE
00020***** FOR TWO OR THREE DIMENSIONAL SUBSCRIBED VARIABLES
00030***** LINKAGE BTM ENTRYX,**12 WHERE X# 2 OR 3
00040***** DSA BASE,D4,D1,I,D2,J,D3,K,OR/M
00050***** IF Q ADDRESS IS FLAGGED BASE IS FIXED
00060***** IF BASE IS FLAGGED ARRAY IS FORMAL PARAMETER
00070***** IF D1 IS FLAGGED - I/O
00080***** INDEX REGISTER FLAGS ARE ON BASE
00090      DSA ENTRY2,ENTRY3
00004 00005 -0006
00009 00005 -0042
00005
00100      DORG *-4
00110 ENTRY2 TFM BRINST+6 ,L2 , ,
00120      TFM EXIT-1 ,32 ,10
00130      B COM
00140 ENTRY3 TFM BRINST+6 ,L3
00150      TFM EXIT-1 ,42 ,10
00160      TF ENTRY2-1 ,ENTRY3-1
00170 COM MF COM ,ENTRY2-1
00180      TF X+11 ,FP2
00190      BNF **24 ,COM
00200      TF X+11 ,KK
00210      TR WKAREA ,ENTRY2-1 ,11
00220      MF Y+11 ,BASE
00230      BNF **36 ,D1
00240      MF X+11 ,COM
00250      CF D1
00260      TFM ANS ,00000
00270      TF ZOT+6 ,BRINST +6
00280 BRINST B7 *
00290 L3 M D3 ,K ,11
00300      B7 COLECT
00310 L2 M D2 ,J ,11
00320      B7 COLECT
00330      M D1 ,I ,11
00340      B7 COLECT
00350      A ANS ,D4
00360 X MM ANS ,00 ,10
00370      MF Y ,99
00380      MA YX+11 ,BASE
00390      TD BASE ,RECMK
00400      TR **31 ,BASE-4
00410      MA **23 ,99
00420      BLXM **12 , ,7
00430 Y A 99 ,YX+11
00440      MF 99 ,Y
00450 YX SF 95 , ,7
00460      AM ENTRY2-1 ,00 ,10
00470 EXIT B7 ENTRY2-1 , ,6
00480 COLECT MA **23 ,000099
00490      AM ANS ,000000
00500      AM **18 ,00020
00510 ZOT B7 *
00520 ANS DS ,ENTRY3-1
00006 J0 00216 -0238
00018 J6 00421 000L2
00030 M9 00078 00000
00042 J0 00216 -0218
00054 J6 00421 000M2
00066 K0 00005 00041
00078 PJ 00078 00005
00090 K6 00301 03052
00102 MM 00126 00078
00114 K6 00301 02221
00126 J3 00000 0000N
00138 P1 00385 00004
00150 M4 00186 00014
00162 PJ 00301 00078
00174 J3 00014 00000
00186 J6 00041 -0000
00198 K0 00472 00216
00210 M9 00210 00000
00218 J3 00034 0003R
00230 M9 00430 00000
00238 J3 00024 0002R
00250 M9 00430 00000
00258 J3 00014 0001R
00270 M9 00430 00000
00278 K1 00041 00009
00290 J3 00041 000-0
00302 P1 00374 00099
00314 P0 00409 00004
00326 J5 00004 02403
00338 L1 00369 00000
00350 P0 00373 00099
00362 00 00374 -0362
00374 J2 00099 00409
00386 J7 00099 00374
00398 J3 00095 -0398
00410 J1 00005 000-0
00422 M9 0000N 00000
00430 P0 00453 00099
00442 J1 00041 -0000
00454 J1 00472 -0020
00466 M9 00466 00000
00041 00000
    
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00530	KK	DS	,02221	02221	00000
00540	WKAREA	DSS	,00000	00000	00042
00550	BASE	DS	,WKAREA+4	00004	00000
00560	D4	DS	,WKAREA+9	00009	00000
00570	D1	DS	,WKAREA+14	00014	00000
00580	I	DS	,WKAREA+19	00019	00000
00590	D2	DS	,WKAREA+24	00024	00000
00600	J	DS	,WKAREA+29	00029	00000
00610	D3	DS	,WKAREA+34	00034	00000
00620	K	DS	,WKAREA+39	00039	00000
00630		DEND	2	00002	

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00010*	FORTRAN II-D DK IO VARIABLE				
00020*					
00030	ADR	DSA	SWDFX,FIND,RECORD,FETCH,SWD,DRAY,DIOEND	00004	00005 -0058
				00009	00005 -0282
				00014	00005 -0616
				00019	00005 -0580
				00024	00005 -0498
				00029	00005 -0222
				00034	00005 -0552
				00000	
00040	DORG	ADR-4		01636	00000
00050	EEXIT	DS	,1636	01268	00000
00060	CHECK	DS	,1268	00629	00000
00070	INOUT	DS	,629	00716	00000
00080	IOCAL	DS	,716	00520	00000
00090	IORBC	DS	,520	00565	00000
00100	IORT	DS	,565	00820	00000
00110	DIO	DS	,820	00554	00000
00120	IOSK	DS	,554	00610	00000
00130	INDS	DS	,610	00602	00000
00140	ERRET	DS	,602	00630	00000
00150	IOERR	DS	,630	00566	00000
00160	IOGT	DS	,566	00532	00000
00170	IOPT	DS	,532	02492	00000
00180	FAC	DS	,2492	02821	00000
00190	DIODDA	DS	,2821	02915	00000
00200	FINDIN	DS	,2915	03052	00000
00210	FP2	DS	,3052	02967	00000
00220	FKQDD	DS	,2967	03843	00000
00230	PAR	DS	,3843	02984	00000
00240	ERROR	DS	,2984	02615	00000
00250	EI	DS	,2615	03068	00000
00260	FIXEND	DS	,3068	03118	00000
00270	FLTEND	DS	,3118	03998	00000
00280	FLOAT	DS	,3998	02813	00000
00290	DKDATA	DS	,2813	03854	00000
00300	FIX	DS	,3854	02243	00000
00310	RECLG	DS	,2243	02240	00000
00320	W	DS	,2240	02238	00000
00330	N2	DS	,2238	02233	00000
00340	N1	DS	,2233	02221	00000
00350	K	DS	,2221	02219	00000
00360	F	DS	,2219	07376	00000
00370	CORSIZ	DS	,7376		
00380*					
00390	NOWLC	DSC	2,02	00000	00002
00400	DSA	DIODDA		00006	00005 -2821
00410	DC		1,@	00007	00001
00420	OUT	BV	*+12	00008	M6 00020 01400
00430	A	BE2+20	,BE2+20	00020	KJ 00434 00437
00440	BB2			00032	42 00000 00000
00450	AITEST	TDM	FINDIN ,1 ,11, SET FIND INDICATOR OFF	00034	15 02915 0000J
00460	B	FIND+12		00046	M9 00294 00000

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00470 SWDFX TD SWD-1 ,SWDFX-1 00058 KN 00497 00057
00480 TFL SWD-2 ,SWDFX-2 00070 -0 00496 00056
00490 SF SWD-1 00082 L2 00497 00000
00500 B7 SWD 00094 M9 00498 00000
00510 FECH TD FIND-1 ,FETCH-1 00102 KN 00281 00579
00520 TFL FIND-2 ,FETCH-2 00114 -0 00280 00578
00530 B7 FETCH+12 00126 M9 00592 00000
00540 RECD TD FIND-1 ,RECORD-1 00134 KN 00281 00615
00550 TFL FIND-2 ,RECORD-2 00146 -0 00280 00614
00560 B7 RECORD+12 00158 M9 00628 00000
00570 MYER BI *+12,3700,, TURN OFF WLRC IND 00166 M6 00178 03700
00580 BI CHECK-12,1900,, LET IORT HANDLE DISK OVERFLOW 00178 46 01256 01900
00590 B7 EXIT,,,WLRC WAS ONLY ERROR 00190 49 01636 00000
00600 TF N1TEMP,N1 00198 K6 00401 02233
00610 TOBB B DRAY1,,0 00210 M9 01196 00000
00620 DRAY TDM TOBB+1,9,, SET TOBB TO BRANCH 00222 J5 00211 00009
00630 BD EVEN,FKODD,, TEST FOR EVEN ADDRESS 00234 M3 00818 02967
00640 BD AGAIN,DDABLK+1,, BRANCH IF BUFFER PROG IN CORE 00246 ML 00964 00530
00650 TFM DSABLK+5,AGAIN 00258 J0 00547 -0964
00660 B SWD+12 00270 M9 00510 00000
00670 FIND TDM FINDIN,0,, SET FIND INDICATOR ON . 00282 15 02915 00000
00680 SF BE2+22 00294 L2 00436 00000
00690 BNV **24 00306 M7 00330 01400
00700 CF BE2+22 00318 L3 00436 00000
00710 BD SET1 ,FINDIN 00330 M3 00652 02915
00720 TFM RETD2+6,SET1,, BRANCH TO COMPUTE ADDRESS AND TESTI 00342 J0 00408 -0652

00730* N2 ERROR ROUTINE %I GRT N2#
00740 N2CK CM FIND-1 ,00 ,610, IS I ZERO OR NEG 00354 J4 0028J 000-0
00750 BNH BE2 00366 M7 00414 01100
00760 C FIND-1,N2,6, COMPARE I AND N2 00378 K4 0028J 02238
00770 BH BE2 00390 M6 00414 01100
00780 RETD2 B *** 00402 49 00000 00000
00790 BUFFAR DS ,* 00413 00000
00800 BE2 BV **12 00414 M6 00426 01400
00810 AM **8 ,00000 ,79 00426 J1 00434 -0-00
00820 TFM EI ,472 ,9 00438 16 02615 00M72
00830 TF N1TEMP,N1 00450 K6 00401 02233
00840 BD ERROR,DDABLK,,BR IF CK MADE FROM EVEN ARRAY PROGRAM 00462 4L 02984 00529
00850 TFM DSAOTR+5,ERROR 00474 J6 00705 -2984
00860 B SETRMK 00486 M9 00656 00000
00870*
00880***** SWD SUBROUTINE
00890 SWDA TDM SWD+900,0 00498 J5 01398 00000
00900 TFM *-11,41,10 00510 J6 00499 000M1

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00910 B SWD1 00522 M9 00708 00000
00920 DORG *-3 00530
00930* SET UP LINKAGE FOR FLOAT
00940 FETCHS TF FLTEND,ICON8+5 00530 20 03118 01194
00950 B FLOAT 00542 49 03998 00000
00960 DORG *-4 00549
00970 DORG **4 00552
00980 IOEND TFM DSAOTR+5,DIOEND 00552 J0 00705 -0552
00990 BD SETRMK,FRIND,, BRANCH IF FETCH 00564 ML 00656 00421
01000 C N1TEMP,N1 00576 K4 00401 02233
01010 BE SETRMK,,, BRANCH IF BUFFER EMPTY 00588 M6 00656 01200
01020 TFM RETD2+6,**20 00600 J0 00408 -0620
01030 B7 N2CK 00612 M9 00354 00000
01040 TFM IORT,**23,, WRITE BUFFER TO FILE 00620 10 00565 -0643
01050 B IOPT ,DKDATA,7 00632 49 00532 -2813
01060 AM FIND-1,1,610 00644 J1 0028J 000-1
01070 SETRMK TD SWD+900,DKBUFF+200 00656 KN 01398 01462
01080 TFM IORT,IORF2+11 00668 10 00565 -0743
01090 B IOGT 00680 49 00566 00000
01100 DORG *-4 00687
01110 DDB DSC 1,1 00687 00001
01120 DSA 200 00692 00005 -0200
01130 DC 3,9 00695 00003
01140 DSAOTR DSA SWD,DIOEND 00700 00005 -0498
00705 00005 -0552
00706 00001
01150 DC 1,@ 00708 K1 00413 02240
01160 SWD1 A BUFFAR,W,, INCREMENT BUFFER ARROW 00720 ML 00984 00421
01170 BD FETCH1,FRIND,, BRANCH IF FETCH
01180** RECORD
01190 IOREF2 CF SWD-1,DATB,7, CLEAR FLAG ON ADDRESS OF DATA 00732 LL 00497 -1253
01200 SM N1TEMP,1,10 , DECREMENT WORD COUNT 00744 J2 00401 000-1
00756 -0 0041L 0049P
01210 TFL BUFFAR,SWD-1,611 00768 J4 00401 000-0
01220 CK CM N1TEMP,0,10, CHECK FOR FULL BUFFER 00780 M7 00210 01200
00792 ML 00198 00421
00804 J6 00854 -0532
00816 J0 00408 -0836
00828 M9 00354 00000
00835
01230 BNZ TOBB 00836 10 00565 -0859
01240 BD TOBB-12,FRIND,, BR IF FETCH 00848 49 00000 -2813
01250 TFM LINKB+18,IOPT 00860 J0 00413 -1461
01260 CKI TFM RETD2+6,LINKB 00872 K2 00411 02243
01270 B N2CK 00884 MM 00908 00421
01280 DORG *-4 00896 K1 00413 02240
01290 LINKB TFM IORT,**23,, CALL CORRECT IORT ROUTINE 00908 J1 0028J 000-1
00836 10 00565 -0859
01300 B ,DKDATA,7 00848 49 00000 -2813
01310 TFM BUFFAR,DKBUFF+199,, INITIALIZE BUFFER ARROW 00860 J0 00413 -1461
01320 S BUFFAR-2,RECLG 00872 K2 00411 02243
01330 BNF **24,FRIND 00884 MM 00908 00421
01340 A BUFFAR,W 00896 K1 00413 02240
01350 ADDTOI AM FIND-1,1,610, INCREMENT I 00908 J1 0028J 000-1

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			INCREMENT	SECTOR	ADDRESS
01360	A	DIODDA+5,DIODDA+8,,		00920 21	02826 02829
01370	BD	FETCH2,FRIND		00932 ML	01028 00421
01380	B	TOBB-12		00944 M9	00198 00000
01390	DORG	*-4			00951
01400	A	DRAY-1,FP2		00952 K1	00221 03052
01410	AGAIN	TF SWD-1,DRAY-1		00964 K0	00497 00221
01420	B	SWD		00976 M9	00498 00000
01430	DORG	*-4			00983
01440	FETCH1	C NITEMP,N1		00984 K4	00401 02233
01450	BNE	FETCH2,,,	BRANCH IF	00996 M7	01028 01200
					01008 J6 00854 -0566
01460	TFM	LINKB+18,IOGT		01020 M9	00816 00000
01470	B	CKI			01027
01480	DORG	*-4			01028 J2 00401 000-1
01490	FETCH2	SM NITEMP,1,10			
01500*		SEND THE WORD TO FAC		01040 00	02492 0041L
01510	TFL	FAC,BUFFAR,11		01052 M6	01064 01400
01520	BI	**12,1400			
01530*		TEST FOR FLOATING ADDRESS AT SWD-1		01064 MM	01158 00497
01540	BNF	FETCH3,SWD-1			
01550*		IT IS A FIXED ADDRESS		01076 L3	00497 00000
01560	CF	SWD-1			
01570*		TEST FOR FLOATING WORD IN FAC		01088 M4	01170 02491
01580	BNF	FETCH4,FAC-1			
01590*		THE WORD IS FLOATING SET UP LINKAGE FOR FIX		01100 20	03074 01125
01600	TF	FIXEND+6,ICON7+6		01112 49	03854 00000
01610	B	FIX			01119
01620	DORG	*-4			01119 00001
01630	ICON7	DC 1,4			01120 00001
01640	DSC	1,9			01125 00005 -1126
01650	DSA	RETFLT		01126 15	03069 00002
01660	RETFLT	TDM FIXEND+1,2		01138 15	03113 00002
01670	TDM	FLTEND-5,2			
01680*		BRANCH TO STORE NUMBER		01150 M9	01170 00000
01690	CKLD	B FETCH4			01157
01700	DORG	*-4			
01710	FETCH3	BNF FETCH5,FAC-1,,	BRANCH IF	01158 M4	00530 02491
01720*		STORE THE WORD IN MEMORY		01170 -6	0049P 02492
01730	FETCH4	TFL SWD-1,FAC,6			
01740*		CHECK FOR EMPTY BUFFER		01182 M9	00768 00000
01750	B	CK			01189
01760	DORG	*-4			01189 00001
01770	ICON8	DC 1,9			01194 00005 -1126
01780	DSA	RETFLT			
01790	DRAY1	SM PAR,1,10,,	DECREMENT		WORD COUNT
				01196 12	03843 000-1
01800	BNZ	**14		01208 M7	01222 01200
01810	BB			01220 42	00000 00000
01820	DORG	*-9			01222
01830	BNF	AGAIN-12,DRAY-1		01222 MM	00952 00221
01840	S	DRAY-1,K		01234 K2	00221 02221

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01850	B	AGAIN		01246 M9	00964 00000
01860	DORG	*-4			01253
01870	DATB	DSC 2,-00			01253 00002
01880	DSA	DDB		01259 00005	-0687
01890	DC	1,2			01260 00001
01900	DKBUFF	DS ,DATB+9			01262 00000
01910*					
01920*					
01930*		WRITE 2ND BLOCK			
01940*					
01950	LD1RD	DSC 2,00		01261 00002	
01960	DSA	DIM1		01267 00005	-1269
01970	DC	1,2			01268 00001
01980	DIM1	DSC 1,1			01269 00001
01990	DSA	209		01274 00005	-0209
02000	DC	3,9			01277 00003
02010	DSA	SWD		01282 00005	-0498
02020	DC	1,2			01283 00001
02030	STLD1	CF ICON7+2		01284 L3	01121 00000
02040	DGM	DATB+9+200			01462 00001
02050	CF	ICON8+1		01296 L3	01190 00000
02060	TFM	IORT,HERE+11		01308 10	00565 -1343
02070	TD	SWD+900,DKBUFF+200		01320 KN	01398 01462
02080	HERE	B IOPT,LD1RD,7		01332 4R	00532 -1261
02090	TRA			01344 10	00565 -1363
				01356 49	00716 00000
					01363 00002 2K
				01365 00005	-1371
				01370 00001	2
				01371 00006	1J9783
				01377 00003	-03
				01380 00006	-00002
					01284
02100	TCD	STLD1			
02110*					
02120*		BLOCK 1 OF FETCH FIND RECORD			
02130	DORG	SWDA		00498	
02140	SWD	TFM DSABLK+5,SWD		00498 J0	00547 -0498
02150	TFM	IORT,IREF+11		00510 10	00565 -0853
02160	B	IOGT		00522 49	00566 00000
02170	DORG	*-4			00529
02180	DDABLK	DSC 1,1		00529 00001	
02190	DSA	209		00534 00005	-0209
02200	DC	3,9			00537 00003
02210	DSABLK	DSA SWD,SWD		00542 00005	-0498
				00547 00005	-0498
02220	DC	1,2			00548 00001
02230	DORG	IOEND			00552
02240	DIOEND	B OUT		00552 M9	00008 00000
02250	BB			00564 42	00000 00000
02260	DORG	*-9			00566
02270	DAT1	DSC 2,-00		00566 00002	
02280	DSA	DDABLK		00572 00005	-0529
02290	DC	1,2			00573 00001

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02300	DS	5		00578	00005	
02310	FETCH	B	FECH	00580	M9 00102 00000	
02320	TDM	FRIND,1,11,	SET FETCH-RECORD INDICATOR TO FETCH	00592	J5 00421 0000J	
02330	B	AITEST,,,	BRANCH TO SET FIND INDICATOR OFF ,	00604	M9 00034 00000	
02340*			COMPUTE ADDRESS , TEST 1 , AND TEST			
02350*			FOR DEFINE STATEMENT			
02360	RECORD	B	RECD	00616	M9 00134 00000	
02370	TDM	FRIND,0,,	SET FETCH-RECORD INDICATOR TO RECD	00628	J5 00421 00000	
02380	B	AITEST		00640	M9 00034 00000	
02390	SET1	TFM	DIODDA+5,218,,	SET SECTOR ADDRESS IN DDA	00652	16 02826 -0218
02400	M	FIND-1,RECLG,6,	COMPUTE ADDRESS OF FILE RECORD	00664	K3 0028J 02243	
02410	A	DIODDA+5,99		00676	21 02826 00099	
02420	BD	**44,FINDIN,,	BRANCH IF NOT FIND	00688	M3 00732 02915	
02430	SSEK	TFM	IORT,**23	00700	10 00565 -0723	
02440	B	IOSK,DKDATA,7,	TRANSFER TO IORT TO SEEK	00712	49 00554 -2813	
02450	B	DIQEND		00724	M9 00552 00000	
02460	DORG	**3		00732		
02470	TFM	BUFFAR,DKBUFF+199,,	INITIALIZE BUFFER ARROW	00732	JO 00413 -1461	
02480	S	BUFFAR-2,RECLG		00744	K2 00411 02243	
02490	TF	NITEMP,N1,,		00756	K6 00401 02233	
02500	TF	DIODDA+8,RECLG,,	STORE RECORD LENGTH IN DDA	00768	26 02829 02243	
02510	TFM	DIODDA+13,DKBUFF+200,,	STORE ADDRESS OF BUFFER	00780	10 02834 -1462	
02520	S	DIODDA+11,RECLG,,	SUB LENGTH OF RECORD TO GET FIRST COR	00792	22 02832 02243	
02530	OVER	TDM	TOBB+1,2,,	INITIALIZE BRANCH BACK	00804	J5 00211 00002
02540	BB			00816	42 00000 00000	
02550	DORG	**9		00818		
02560	EVEN	TF	TEMPA,FP2,,	STORE FLOATING LENGTH IN TEMPA	00818	K6 00377 03052
02570	BNF	**36,DRAY-1,,	BRANCH IF FLOATING ARRAY	00830	MM 00866 00221	
02580	IREF	CF	DRAY-1,DAT1,7	00842	LL 00221 -0566	
02590	TF	TEMPA,K,,	STORE FIXED LENGTH IN TEMPA	00854	K6 00377 02221	
02600	TF	DIODDA+13,DRAY-1,,	STORE ADDRESS OF FIRST ELEMENT	00866	20 02834 00221	
02610	AM	DIODDA+13,1		00878	11 02834 -0001	
02620	S	DIODDA+13,TEMPA,,	HIGH ORDER POSITION OF ARRAY	00890	2K 02834 00377	
02630	TF	EVEN1+11,DIODDA+13		00902	K6 01149 02834	
02640	M	TEMPA,PAR		00914	K3 00377 03843	
02650	SF	95		00926	32 00095 00000	
02660	A	EVEN1+11,99		00938	K1 01149 00099	

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02670	CARRY	CM	EVEN1+11,0	00950	J4 01149 -0000	
02680	BNE	**24		00962	M7 00986 01200	
02690	TFM	EVEN1+11,0		00974	J6 01149 -0000	
02700*			EVALUATE AND STORE LOW ORDER			
02710*			POSITION + 1 OF ARRAY			
02720*			EVALUATE SECTOR COUNT			
02730	AM	97,1 ,9, ADD ONE FOR GROUP MARK		00986	11 00097 00-01	
02740	TD	**23,RECLG		00998	K5 01021 02243	
02750	BDI2	BD	OVER3,251,, BRANCH IF RECLG IS 1	01010	M3 01058 00251	
02760	TD	**23,97		01022	K5 01045 00097	
02770	BD	**24,210,, BRANCH IF EVEN NUMB OF SECTORS		01034	M3 01058 00210	
02780	AM	97,1,10		01046	11 00097 000-1	
02790	OVER3	TF	DIODDA+8,97,, SET UP SECTOR COUNT	01058	26 02829 00097	
02800	BD	OVER2,BDI2+11,11		01070	ML 01094 0102J	
02810	MM	DIODDA+8,50,10		01082	13 02829 000N0	
02820	OVER2	A	FIND-1,97,6, ADD NUMBER OF RECORDS TO I	01094	K1 0028J 00097	
02830	SM	FIND-1,1,610		01106	J2 0028J 000-1	
02840	TFM	RET02+6,**20		01118	JO 00408 -1138	
02850	B	N2CK		01130	M9 00354 00000	
02860	DORG	**4		01137		
02870	EVEN1	TD	EVEN2+11	01138	K5 01221 00000	
02880	BD	FETCH8,FRIND,,	BRANCH IF FETCH	01150	ML 01248 00421	
02890*		RECORD				
02900	TD	EVEN1+11,DKBUFF+200,6,	SET GROUP MARK AT END OF ARRAY	01162	KN 0114R 01462	
02910*			WRITE ARRAY ONTO FILE			
02920	TFM	IORT,**23		01174	10 00565 -1197	
02930	B	IORBC,NOWLC ,7		01186	4R 00520 -0000	
02940	TDM	FLTEND-5,2		01198	15 03113 00002	
02950	EVEN2	TDM	EVEN1+11,,6,	RESTORE DIGIT	01210	J5 0114R 00000
02960	AM	FIND-1,1,610		01222	J1 0028J 000-1	
02970	A	DIODDA+5,DIODDA+8,,	INCREMENT SECTOR ADDRESS	01234	21 02826 02829	
02980	BB			01246	42 00000 00000	
02990	DORG	**9		01248		
03000	FETCH8	TFM	DIO+35,YTURN,67, INSERT ADDRESS FOR ERROR ENTRY	01248	10 0085N -1354	
03010	TFM	IORT,**23,,	READ ARRAY FROM FILE	01260	10 00565 -1283	
03020	B	IOGT,DKDATA,7		01272	49 00566 -2813	
03030	TFM	INOUT,CHECK-12,,RESTORE SPECIAL IORT ERROR EXIT		01284	16 00629 -1256	
03040*			TEST FOR NO GROUP MARK			
03050	BNG	**20,EVEN1+11,11		01296	NN 01316 0114R	
03060	B	EVEN2		01308	M9 01210 00000	
03070	DORG	**4		01315		
03080	TF	FLTEND,EVENSP+6		01316	20 03118 01353	
03090	TFM	EI,473,9		01328	16 02615 00M73	
03100	B	ERROR		01340	49 02984 00000	
03110	DORG	**4		01347		

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03120 EVENSP DC 1,4 01347 00001
03130 DSC 1,9 01348 00001
03140 DSA EVEN2-12 01353 00005 -1198
03150 YTURN B1 **12,3700,, TURN OFF WLRC IND 01354 M6 01366 03700
03160 BNI ERRET,1900,, GO ON IF NO OTHER ERROR 01366 47 00602 01900
03170 TFM INOUT,MYER,, SET UP SECOND IORT ERROR EXIT 01378 10 00629 -0166
03180 B IOERR,,, LET IORT CHECK ANY OTHER ERRORS 01390 49 00630 00000
03190 DORG *-4 01397
03200 DORG SWD+906 01404
03210 TEMPA DS 2,N2CK+23 00377 00002
03220 NITEMP DS 2,RETD2-1 00401 00002
03230 FRIND DS 1,BE2+7 00421 00001
03240* WRITE FIRST BLOCK
03250*
03260 DIM2 DSC 1,1 01404 00001
03270 DSA 200 01409 00005 -0200
03280 DC 3,9 01412 00003
03290 DSA SWD 01417 00005 -0498
03300 DC 1,2 01418 00001
03310 LD2ND DSC 2,00 01419 00002
03320 DSA DIM2 01425 00005 -1404
03330 DC 1,2 01426 00001
03340 STLD2 TD CARRY+7,CORSIZ 01428 K5 00957 07376
03350 AM CARRY+8,10,10 01440 J1 00958 000J0
03360 GM CF EVENSP+2 01452 L3 01349 00000
03370 DGM DKBUFF+200 01462 00001
03380 DGM SWD+900 01398 00001
03390 TFM IORT,NIO+11 01464 10 00565 -1487
03400 NIO B IOPT,LD2ND,7 01476 4R 00532 -1419
03410 TRA 01488 10 00565 -1507
01500 49 00716 00000
01507 00002 2K
01509 00005 -1515
01514 00001 @
01515 00006 1J9783
01521 00003 -03
01524 00006 -0000@
01428
00007

03420 TCD STLD2
03430 DEND 7
    
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00010***** 1620 FORTRAN II-D RELOCATABLE SINE AND COSINE ROUTINES
00020***** METHOD
00030***** COSXX#SINXPIOV2-X#
00040***** SINXX#EITHER
00050***** 1-XX**2#2+XX**4#24-XX**6#720
00060***** OR
00070***** X-XX**3#6+XX**5#120-XX**7#5040
00080 DSA FCOS,FSIN 00004 00005 -0006
00009 00005 -0042
00005
00090 DORG *-4
00100 FCOS BLXM SET ,*-1X# ,11 00006 6D 04142 0000N
00110*
00120* SET COSINE INDICATOR
00130*
00140 TFM IND ,00005 ,711 00018 J6 00233 -000N
00150 B FSIN+24 00030 M9 00066 00000
00160 FSIN BLXM SET ,*-1X# ,11 00042 6D 04142 0004J
00170*
00180* SET SINE INDICATOR
00190*
00200 TFM IND ,00000 00054 J6 00233 -0000
00210*
00220* SHIFT TO F+2 POSITIONS
00230*
00240 SHIFT FSL FAC-3X# ,FAC-2 00066 05 0K489 02490
00250*
00260* SPECIAL CASE IF X IS LESS THAN 10**X-F# OR GREATER THAN 10**F
00270*
00280 C FAC ,MF 00078 24 02492 03054
00290 BNH CKRAN 00090 M7 01114 01100
00300 C FAC ,F 00102 24 02492 02219
00310 BL CKRED 00114 M7 00174 01300
00320 TFM EI ,671 ,9 00126 16 02615 00071
00330 TFL FAC ,FLZER 00138 06 02492 03742
00340 BLXM RESET ,ERXV+24X# 00150 66 06808 03144
00350 ZERARG BLXM RESET ,ZERFACX# 00162 66 06808 02836
00360*
00370* DOES ARGUMENT REQUIRE REDUCTION
00380*
00390 CKRED CM FAC ,00 ,10 00174 14 02492 000-0
00400 BH RED 00186 M6 00314 01100
00410*
00420* NO ARGUMENT REDUCTION IS REQUIRED
00430*
00440 NORED CF NORED ,00 00198 L3 00198 00000
00450 BNL **36 00210 M6 00246 01300
00460 SF NORED ,00000 00222 L2 00198 00000
00470 IND DS ,* 00233 00000
00480 TFM NORED+11 ,FM1 00234 K6 00209 02969
00490 TFM ADD+11 ,96 00246 J6 01033 -0096
00500 TF 00314 ,FAC 00258 26 00314 02492
00510 BD COS ,IND 00270 ML 00650 00233
00520*
    
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00530* INITIALIZE FOR SINE SERIES
00540 SIN TF BETA ,FAC-2 00282 26 02603 02490
00550 TFM 00309 ,02 ,10 00294 16 00309 000-2
00560 B7 SET UP 00306 M9 00686 00000
00570*
00580* REDUCE ARGUMENT TO ONE CIRCLE
00590*
00600 RED BNF **44 ,IND 00314 MM 00358 00233
00610 FADD FAC ,PIOV2 00326 01 02492 03526
00620 TDM IND ,0 00338 J5 00233 00000
00630 B7 CKRED 00350 M9 00174 00000
00640 S 00309 ,FAC 00358 22 00309 02492
00650 BD **24 ,WJRS 00370 M3 00394 03018
00660 TF 79 ,ZEROM 00382 26 00079 0285R
00670 LD 100*1□ ,FAC-2 00394 28 001-0 02490
00680 D 99*1□ ,TWDPI-2 00406 29 000R9 03396
00690 BNF **24 ,99 00418 M4 00442 00099
00700 A 99 ,TWDPI-2 00430 21 00099 03396
00710*
00720* REDUCE ARGUMENT TO -1 LESS THAN X LESS THAN +1
00730*
00740 SF 99 00442 32 00099 00000
00750 A 99 ,PI-2 00454 21 00099 03460
00760 MF MU-1 ,99 00466 71 03019 00099
00770 PLACE BD MORE ,98*4□ 00478 M3 00606 0-098
00780 SF 99*4□ 00490 32 0-099 00000
00790 TF FAC-2 ,100 00502 26 02490 00100
00800 TFM FAC ,00 ,10 00514 16 02492 000-0
00810*
00820* NORMALIZE FAC
00830*
00840 NORM BD CK RED ,FAC-3*4□ 00526 M3 00174 0K489
00850 CM FAC-2 ,00 ,10 00538 14 02490 000-0
00860 BE ZERARG 00550 M6 00162 01200
00870 SF FAC-2*4□ 00562 32 0K490 00000
00880 FSL FAC-3*4□ ,FAC-2 00574 05 0K489 02490
00890 SM FAC ,01 ,10 00586 12 02492 000-1
00900 B7 NORM 00598 M9 00526 00000
00910*
00920* MORE REDUCTION IS REQUIRED
00930*
00940 MORE S 99 ,PIOV2-2 00606 22 00099 03524
00950 CF 99 00618 33 00099 00000
00960 AM IND ,05 ,10 00630 J1 00233 000-5
00970 B7 PLACE 00642 M9 00478 00000
00980*
00990* INITIALIZE FOR COSINE SERIES
01000*
01010 CDS TF BETA ,9SCPF+2 00650 26 02603 03240
01020 TFM FAC ,00 ,10 00662 16 02492 000-0
01030 TFM 00309 ,01 ,10 00674 16 00309 000-1
01040*
01050* SET UP TO EVALUATE SERIES

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01060*
01070 SETUP TF SAVE ,BETA 00686 26 02565 02603
01080 BD **24 ,WJRS 00698 M3 00722 03018
01090 TF 79 ,ZEROM 00710 26 00079 0285R
01100 M FAC-2 ,FAC-2 00722 23 02490 02490
01110 TF FAC-2 ,97*4□ 00734 26 02490 0-097
01120 SF FAC-2 00746 32 02490 00000
01130 A 00314 ,00314 00758 21 00314 00314
01140*
01150* LOOP TO EVALUATE THE SERIES
01160*
01170 LOOP BD **24 ,WJRS 00770 M3 00794 03018
01180 TF 79 ,ZEROM 00782 26 00079 0285R
01190 M SAVE ,FAC-2 00794 23 02565 02490
01200 TF SAVE ,97*4□ 00806 26 02565 0-097
01210 MF SAVE ,99 00818 71 02565 00099
01220 M 00309 ,00309 00830 23 00309 00309
01230 A 99 ,00309 00842 21 00099 00309
01240 TF 79 ,ZERO-66 00854 26 00079 02701
01250 SF 97 00866 32 00097 00000
01260 TF **35 ,99 00878 K6 00913 00099
01270 LD 99 ,SAVE 00890 28 00099 02565
01280 DM 98*4□ ,*- 00902 19 0-098 -0000
01290 TF SAVE ,96 00914 26 02565 00096
01300 BE END 00926 M6 01046 01200
01310 BNF ADD ,NORED 00938 MM 01022 00198
01320 A NO RED+11,00314 00950 K1 00209 00314
01330 BL END 00962 M7 01046 01300
01340 A ADD+11 ,00314 00974 K1 01033 00314
01350 CM **47 ,00 ,610 00986 J4 0103L 000-0
01360 BE END 00998 M6 01046 01200
01370 MF **23 ,96 ,6 01010 P1 0103L 00096
01380 ADD A BETA ,96 01022 21 02603 00096
01390 BX LOOP ,SIN+23*1□ 01034 OJ 00770 003-5
01400*
01410* EXIT FROM LOOP
01420*
01430 END TF FAC-2 ,BETA 01046 26 02490 02603
01440 TFM NDRM+6 ,**20 01058 J0 00532 -1078
01450 B7 NORM 01070 M9 00526 00000
01460 TFM NDRM+6 ,CK RED 01078 J0 00532 -0174
01470*
01480* RESIZE ANSER AND EXIT
01490*
01500 RESIZE FSR FAC-2 ,FAC-4 01090 08 02490 02488
01510 BLXM RESET ,FIXEND*0□ 01102 66 06808 03068
01520*
01530* COS*0.#1.
01540*
01550 CKRAN BD **20 ,IND 01114 ML 01134 00233
01560 B7 RESIZE 01126 M9 01090 00000
01570 TFL FAC ,ONE 01134 06 02492 03302
01580 B7 RESIZE 01146 M9 01090 00000

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00010*****      1620 FORTRAN II-D RELOCATABLE ARCTANGENT ROUTINE
00020*****      METHOD
00030*****      A#X AND B#0 IF ARG IS LESS THAN .29
00040*****      A##X-.6#/%1+.6*X# AND B#ATN%.6# IF ARG IS NOT UNDER .29
00050*****      ATN%X#A*%1-A**2/3+A**4/5-....A**%2*N-1#/%2N-1#B
00060      DSA  FATN          00004 00005 -0006
00070 FATN  BLXM SET      ,*-1%# ,11          00006 60 04142 0000N
00080*
00090*      ATAN%X# # X IF X IS LESS THAN 10**%-F#
00100*
00110      BD  **24      ,FAC-1%4#          00018 M3 00042 0K491
00120      BLXM RESET ,ZERFAC%#          00030 66 06808 02836
00130      C    FAC      ,MF          00042 24 02492 03054
00140      BNH  EXITS          00054 M7 00926 01100
00150*
00160*      STORE SIGN AND RESET PROGRAM INDICATORS
00170*
00180      MF  MU-1      ,FAC-2          00066 71 03019 02490
00190      TFM Q+11     ,000          00078 J6 00197 -0000
00200*
00210*      EXPAND FAC TO F+2 POSITIONS
00220*
00230      FSL  FAC-3%4# ,FAC-2          00090 05 0K489 02490
00240*
00250*      IS RECIPROCAL REQUIRED
00260*
00270      CM  FAC      ,00      ,10          00102 14 02492 000-0
00280      BNH GO ON
00290      TFL  BETA     ,ONE          00114 M7 00198 01100
00300      BD  **24      ,WJRS          00126 06 02603 03302
00310      TF  79      ,ZEROM          00138 M3 00162 03018
00320      FDIV BETA     ,FAC          00150 26 00079 0285R
00330      TFL  FAC      ,BETA          00162 09 02603 02492
00340 Q      SF  RECIND ,00000          00174 06 02492 02603
00350 RECIND DS      ,*          00186 L2 00197 00000
00360 .29IND DS      ,*-1          00197 00000
00370*
00380*      SAVE # FAC  OR SAVE # %FAC - .6#/%1 + .6*FAC#
00390*
00400 GOON  TFL  SAVE     ,FAC          00198 06 02565 02492
00410      CM  SAVE     ,00      ,10          00210 14 02565 000-0
00415      BH  WOW
00420      BNE NEXT
00430      CM  FAC-2%4# ,29      ,10          00222 M6 00270 01100
00440      BL  NEXT
00450 WOW   SF  .29IND    ,02      ,10          00234 M7 00378 01200
00460      FSUB SAVE     ,SIXTEN          00246 14 0K490 000K9
00470      BD  **24      ,WJRS          00258 M7 00378 01300
00480      TF  79      ,ZEROM          00270 L2 00196 000-2
00490      FMUL FAC      ,SIXTEN          00282 02 02565 03494
00500      FADD FAC      ,ONE          00294 M3 00318 03018
00510      BD  **24      ,WJRS          00306 26 00079 0285R
00520      TF  79      ,ZEROM          00318 03 02492 03494
          00330 01 02492 03302
          00342 M3 00366 03018
          00354 26 00079 0285R

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00530      FDIV SAVE      ,FAC                00366 09 02565 02492
00540*
00550*      INITIALIZE FOR LOOP
00560*
00570 NEXT  TFL  FAC      ,SAVE                00378 06 02492 02565
00580      BD   **24      ,WJRS                00390 M3 00414 03018
00590      TF   79        ,ZEROM              00402 26 00079 0285R
00600      M   FAC-2      ,FAC-2              00414 23 02490 02490
00610      TF   BETA      ,97%4▯            00426 26 02603 0-097
00620      SF   BETA
00630      TFM  00309     ,03                 ,10    00438 32 02603 00000
00640      CF   ADD
00650      CM   FAC      ,00                 ,10    00450 16 00309 000-3
00660      BNL  **36      ,00                 00462 L3 00750 00000
00670 QST   SF   ADD      ,00000             00474 14 02492 000-0
00680      TF   QST+11    ,FM1                00486 M6 00522 01300
00690      TFM  ADD+11    ,00097             00498 L2 00750 00000
00700      TF   QST-1     ,FAC                00510 K6 00509 02969
00710      A   QST-1     ,FAC                00522 J6 00761 -0097
00720*
00730*      LOOP TO EVALUATE SERIES
00740*
00750 LOOP  BD   **24      ,WJRS                00558 M3 00582 03018
00760      TF   79        ,ZEROM              00570 26 00079 0285R
00770      M   SAVE-2     ,BETA                00582 23 02563 02603
00780      TF   SAVE-2     ,97%4▯            00594 26 02563 0-097
00790      MF   SAVE-2     ,99                 00606 71 02563 00099
00800      TF   79        ,ZERO-68           00618 26 00079 02699
00810      LD   99        ,SAVE-2            00630 28 00099 02563
00820 DIV   D   98%4▯     ,00309             00642 29 0-098 00309
00830      BE   ZOP
00840      BNF  ADD      ,ADD                 00654 M6 00774 01200
00850      A   QST+11     ,QST-1             00666 MM 00750 00750
00860      BL   ZOP
00870      A   ADD+11     ,QST-1             00678 KJ 00509 00497
00880      CM   **47      ,00                 ,610    00690 M7 00774 01300
00890      BE   ZOP
00900      MF   **23      ,97                 ,6     00702 KJ 00761 00497
00910 ADD   A   FAC-2     ,00097             00714 J4 0076J 000-0
00920      BX   LOOP      ,W0W+11%1▯        00726 M6 00774 01200
00930*
00940*      SET UP FOR EXIT
00950*
00960 ZOP   CM   FAC-2     ,00                 ,10    00738 P1 0076J 00097
00970      BE   EXIT
00980      BD   EXIT      ,FAC-3%4▯          00750 21 02490 00097
00990      SF   FAC-2%4▯  ,FAC-2             00762 DJ 00558 002Q1
01000      FSL  FAC-3%4▯  ,FAC-2
01010      SM   FAC      ,01                 ,10    00774 14 02490 000-0
01020      B7   ZOP
01030*
01040*      PREPARE TO EXIT
01050*

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01060 EXIT  BNF  **24      ,.29IND           00854 MM 00878 00196
01070      FADD FAC      ,ATAN.6            00866 01 02492 03430
01080      BNF  **36      ,RECIND           00878 MM 00914 00197
01090      SF   FAC-2
01100      FADD FAC      ,PIOV2             00890 32 02490 00000
01110*
01120*      RESIZE TO F DIGITS
01130*
01140      FSR  FAC-2     ,FAC-4             00914 08 02490 02488
01150 EXITS BLXM RESET   ,FIXEND%0▯        00926 66 06808 03068
01160      DEND 1
00001

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00010***** 1620 FORTRAN II-D RELOCATABLE SQUARE ROOT ROUTINE
00020***** METHOD
00030***** THE SQUARE ROOT IS TAKEN USING THE ODD INTEGER METHOD
00040 DSA SQRT 00004 00005 -0006
00050 SQRT BLXM SET ,SQRT-1%0,11 00006 60 04142 0000N
00060*
00070* IS ARGUMENT ZERO
00080*
00090 BD **24 ,FAC-1%4 00018 M3 00042 0K491
00100 BLXM RESET ,ZERFAC%0 00030 66 06808 02836
00110*
00120* STORE SIGN AND COMPUTE EXP/2
00130*
00140 MF SQRT ,FAC-2 00042 P1 00006 02490
00150 MM FAC ,50 ,10 00054 13 02492 000N0
00160 BD SQ3 ,98 00066 M3 00422 00098
00170*
00180* SAVE EXPONENT
00190*
00200 SQ2 MF 97 ,99 00078 71 00097 00099
00210 TF FAC ,97 00090 26 02492 00097
00220 A 00309 ,00324 00102 21 00309 00324
00230*
00240* PLACE ARGUMENT IN FIXED PRODUCT AREA
00250*
00260 BD **24 ,WJRS 00114 M3 00138 03018
00270 TF 79 ,ZEROM 00126 26 00079 0285R
00280 LD 97%1, ,FAC-2 00138 28 000R7 02490
00290*
00300* SET UP FOR LOOP
00310*
00320 TF GAM ,ONE-2 00150 26 02555 03300
00330 TFM GAM%4, ,01 ,10 00162 16 0K555 000-1
00340 TF 00309 ,00324 ,10 00174 26 00309 00324
00350 SM 00309 ,01 ,10 00186 12 00309 000-1
00360 TF 00314 ,00334 00198 26 00314 00334
00370 B7 LOOP+12 00210 M9 00230 00000
00380*
00390* LOOP
00400*
00410 LOOP AM GAM+1%1, ,02 ,10 00218 11 025N6 000-2
00420 S 99%2, ,GAM+1%1, ,10 00230 22 00-99 025N6
00430 BNN LOOP 00242 M6 00218 01300
00440 BCXM ADJ IX ,00001%1, 00254 04 00374 000-1
00450*
00460* PREPARE TO EXIT
00470*
00480 EXIT TF 79 ,ZEROM 00266 26 00079 0285R
00490 MM GAM-1 ,50 ,10 00278 13 02554 000N0
00500 SF 98%4, 00290 32 0-098 00000
00510 AM 98 ,05 ,10 00302 11 00098 000-5
00520 TF FAC-2 ,97 00314 26 02490 00097
00530*

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00540* WAS THERE AN ERROR
00550*
00560 BNF GOUT ,SQRT 00326 MM 00362 00006
00570 TFM EI ,676 ,9 00338 16 02615 00076
00580 BLXM RESET ,ERXV+24%0 00350 66 06808 03144
00590 GOUT BLXM RESET ,FIXEND%0 00362 66 06808 03068
00600*
00610* ADJUST INDEX
00620*
00630 ADJIX A 99%2, ,GAM%1, 00374 21 00-99 025N5
00640 CF 99%2, 00386 33 00-99 00000
00650 SM GAM+1%1, ,09 ,10 00398 12 025N6 000-9
00660 BXM LOOP+12 ,00002%2, 00410 02 00230 00-02
00670*
00680* ADJUST FOR ODD EXPONENT
00690*
00700 SQ3 AM 99 ,50 ,10 00422 11 00099 000N0
00710 TDM FAC-2%4, ,0 ,11 00434 15 0K490 0000-
00720 CF FAC-1%4, 00446 33 0K491 00000
00730 BXM SQ2 ,00001%1, 00458 02 00078 000-1
00740 DEND 1 00001

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00010***** 1620 FORTRAN II-D RELOCATABLE ABSOLUTE VALUE ROUTINE
00020 DSA ABS 00004 00005 -0006
00030 ABS TFL FAC ,ABS-1 ,111 00006 00 02492 0000N
00040 BNF **26 ,FAC-1 ,0 00018 M4 00044 02491
00050 CF FAC-2 , , , FLOATING POINT NUMBER
00030 33 02490 00000
00060 BB 00042 42 00000 00000
00070 DDRG *-9 00044
00080 CF FAC , , , FIXED POINT NUMBER
00044 33 02492 00000
00090 BB2 00056 42 00000 00000
00100 FAC DS ,02492 02492 00000
00110 DEND 1 00001

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00010* 1620 FORTRAN IID,MON II, FL PT,RELOC,FX L NATURAL LOG
00020 DSA FLN 00004 00005 -0006
00030 FLN BLXM SET ,FLN-1 %0,,11 00006 60 04142 0000N
00040 BD NOT Z ,FAC-9 , , BR IF ARG IS NOT ZERO
00018 M3 00066 02483
00050 TFM EI ,672 ,9 00030 16 02707 00072
00060 SF 99 00042 32 00099 00000
00070 BLXM RESET ,OVFLOW%0,, SET TO NEG NINES 00054 66 05862 02924
00080 NOTZ TFM EXIT+11 ,FIXEND %0,, SET UP NORMAL EXIT
00066 J6 00649 -2960
00090 BNF EVALPN ,FAC-2 , , BR IF ARG POSITIVE
00078 M4 00126 02490
00100 TFM EI ,673 ,9 00090 16 02707 00073
00110 CF FAC-2 00102 33 02490 00000
00120 TFM EXIT+11 ,ERROR , , SET UP ERROR EXIT
00114 J6 00649 -2936
00130*
00140** IF N IS ARG, FIND X EQUAL PN SO THAT X IS GREATER THAN
00150** ONE HALF AND P EQUALS 1,2,4,8.
00160 EVALPN CM FAC-8 ,50 ,10 00126 14 02484 000N0
00170 BNL EVALEX , , , BR IF MOD VAL OF X IS IN RANGE
00138 M6 00174 01300
00180 A FAC-2 ,FAC-2 , , MOD X EQUAL X PLUS X
00150 21 02490 02490
00190 BXM EVALPN ,12 %2,, ADJ FOR NEXT VALUE
00162 02 00126 00-12
00200*
00210** CALC I=LN TEN
00220 EVALEX M FAC ,LN10 00174 23 02492 06172
00230 TF SAV3 ,99 , , 14DIG 00186 26 02562 00099
00240 S SAV3 ,CONST %2,, 12 00198 22 02562 06J24
00250*
00260** EXPAND TO NINE DIGIT FIELD AND CALC Z EQUAL X-RSQR2/X+RSQR2
00270 TF BETA ,FAC-2 , , 9 .5 TO .9 00210 26 02630 02490
00280 TDM BETA-8 00222 15 02622 00000
00290 MF BETA-8 ,BETA-7 00234 71 02622 02623
00300 S FAC-2 ,R SQR 2 , , 8 -.2 TO .3 00246 22 02490 06180
00310 A BETA ,R SQR 2 , , 9 1.2 TO 1.7 00258 21 02630 06180
00320 LD 89 ,FAC-2 00270 28 00089 02490
00330 D 90 ,BETA 00282 29 00090 02630
00340 TF BETA ,90 , , 10 -.16TO .17 IS Z
00294 26 02630 00090
00350 MF BETA ,99 , , RETAIN SIGN OF Z 00306 71 02630 00099
00360 M BETA ,BETA 00318 23 02630 02630
00370 TF SAVE ,89 , , 10 .00 TO.029 IS Z SQRD
00330 26 02592 00089
00380*
00390** SUM SERIES USING HORNERS METHOD.
00400 M SAVE ,C7 , , C7*Z SQRD 19 00342 23 02592 06189
00410 A 87 ,C5 , , 00354 21 00087 06196
00420 TF FAC-2 ,90 , , 10 .4 00366 26 02490 00090
00430 M SAVE ,FAC-2 , , C5+C7*ZSQRD * ZSQRD
00378 23 02592 02490

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00440      A      88      ,C3
00450      TF     FAC-2   ,89      ,, 10 ,SAVE C3+C5*Z**2+C7*Z**4
                                00390 21 00088 06205
                                00402 26 02490 00089
00460      M      FAC-2   ,SAVE
00470      TDM    79      ,-2      ,,  ADD C1
                                00414 23 02490 02592
00480      CF      80
                                00426 15 00079 0000K
00490      TF     FAC-2   ,88      ,, 10 ,SAVE C1+C3*Z**2+C5*ZX4+C7*Z**6
                                00438 33 00080 00000
                                00450 26 02490 00088
00500      M      FAC-2   ,BETA    ,,  MUL BY Z OBTAINING F%Z
                                00462 23 02490 02630
00510      TFM    79      ,      ,10, EXPAND TO XXX.XX259Z5
                                00474 16 00079 000-0
                                00486 33 00080 00000
00520      CF      80
                                00498 71 00091 00099
00530      MF     91      ,99      ,,  MOVE SIGM
                                00510 21 00091 02562
00540      A      91      ,SAV3
00550*     BLXM   **12     ,99989 %1, ,  PREP FOR NORMALIZATN
                                00522 06 00534 999Q9
00560      MF     MU-1    ,91
                                00534 71 02967 00091
00570      BD     NOT ZER ,89      %1,
                                00546 M3 00590 000Q9
00580      BCXM  **12     ,1      %1, ,  BR IF RESULT NOT
                                00558 04 00546 000-1
00590      TFL    FAC     ,FL ZER
                                00570 06 02492 03131
00600      B7     EXIT
                                00582 M9 00638 00000
00610
00620*     NDTZER SF      89      %1,
00630      TFM    FAC     ,92      ,10, CALC EXPONENT
                                00590 32 000Q9 00000
00640      S      FAC     ,309
                                00602 16 02492 000R2
00650      TF     FAC-2   ,96      %1,
                                00614 22 02492 00309
00660      BLXM  RESET   ,XX      %0,
                                00626 26 02490 000R6
00670      EXIT  BLXM  RESET   ,XX      %0,
                                00638 66 05862 99999
00680      DEND  1
                                00001

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00010*     1620 FORTRAN IID,MON II, FL PT,RELOC, FX L NATURAL EXP
00020      DSA FEXP
00030 FEXP BLXM SET      ,*-1 %0,11, LD FAC.CK OV,EXV, SEL BAND A,
                                00004 00005 -0006
                                00006 60 04142 0000N
00040      BD     RANGE   ,FAC-9   ,,  ZERO CHECK
                                00018 M3 00102 02483
00050      TFL    FAC     ,FLONE
                                00030 06 02492 03153
00060      BLXM  RESET   ,FIXEND%0
                                00042 66 05862 02960
00070 EL2  TFM     EI      ,674    ,9,  ERR F4 OVFL IN EXP
                                00054 16 02707 00074
                                00066 MM 00090 00645
00080      BNF    OVFLQX  ,EXIT+7
                                00078 66 05862 02904
00090      BLXM  RESET   ,UNFLO %0
                                00090 66 05862 02924
00100 OVFLQX BLXM RESET ,INFFAC%0
00110 RANGE MF     EXIT+7 ,FAC-2   ,,  STORE SIGN
                                00102 P1 00645 02490
00120      FSL    FAC-11  ,FAC-2   ,,  XPND TO 10 DIGIT MANT
                                00114 05 02481 02490
00130      FMUL   FAC     ,LOG E    ,,  10 DIGIT RESULT IN FAC-2
                                00126 03 02492 03143
                                00138 14 02492 000-P
00140      CM     FAC     ,-7      ,10
00150      BL     FEXP+24 ,      ,,  ASSUME RESULT IS ZERO
                                00150 M7 00030 01300
                                00162 14 02492 000-3
00160 NONZ  CM     FAC     ,3      ,10
00170      BNL    EI2     ,      ,,  TOO LARGE FOR EXP
                                00174 M6 00054 01300
00180      BX     **12     ,FAC     %1, ,  ADJ IX 1 BU MOD EXP
                                00186 01 00198 024R2
00190      TF     FAC-2   ,13 ZERO
                                00198 26 02490 02752
00200      BNF    **24     ,81      ,,  NO LDG ZERO IN RESULT
                                00210 M4 00234 00081
                                00222 01 00234 031N3
00210      BX     **12     ,FLONE %1,
                                00234 21 02490 000R0
00220      A      FAC-2   ,90      %1,
00230      TF     FAC     ,FAC-13  ,,  ENTER EXPONENT
                                00246 26 02492 02479
00240 PORM  BNF    CALC-24 ,EXIT+7  ,,  MANTISSA WAS POSITIVE
                                00258 MM 00350 00645
00250**     ADJ FOR CASE OF ORIG ARGUMENT NEGATIVE
00260      SF     FAC-12
                                00270 32 02480 00000
00270      SF     FAC
                                00282 32 02492 00000
00280      TF     BETA    ,ONE
                                00294 26 02630 06112
00290      S      BETA    ,FAC-2
                                00306 22 02630 02490
00300      SF     BETA-10
                                00318 32 02620 00000
00310      TF     FAC-2   ,BETA
                                00330 26 02490 02630
00320      B7     CALC
                                00342 M9 00374 00000
00330      AM     FAC     ,1      ,10, ADJ AND CK FINAL CHAR
                                00350 11 02492 000-1
00340      BV     EI2     ,      ,,  CHAR MORE THAN 99
                                00362 M6 00054 01400
00350*
00360*     CALCULATE Z EITHER NEG OR POSITIVE
00370*     DIS DIGIT IN FAC-12, F IS FIELD FAC-11 THRU FAC-2.
00380 CALC  SF     FAC-11
                                00374 32 02481 00000
00390      TD     313     ,FAC-12  ,,  MOVE DIGIT THAT SELECT CONSTANT
                                00386 25 00313 02480
00400*
00410**     EVALUATE F%Z BY Y#Z+T ,W#Y**2 ,V%W%W+A+0+0%ZY+C

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00420** WHERE F%Z EQUALS EXV-D. T,A,B,C,D,AND E ARE CONSTANTS
00430 TF BETA ,T 00398 26 02630 05956
00440 A BETA ,FAC-2 ,, 11 ,,18 TO .23 VALUE OF Y#T+Z
00450 M BETA-1 ,BETA-1 ,, 20 .03 TO .05 VALUE OF W
00460 TF V ,A ,, 10 2.54 00422 23 02629 02629
00470 A V ,88 ,, 10 2.57 TO 2.62 W+A 00434 26 02562 05966
00480 TF FAC-2 ,89 ,, 10 00446 21 02562 00088
00490 M FAC-2 ,V ,, 20 .07 TO .13 00458 26 02490 00089
00500 TF V ,B ,, 10 2.8 00470 23 02490 02562
00510 A V ,89 00482 26 02562 05976
00520 TF FAC-2 ,C 00494 21 02562 00089
00530 A FAC-2 ,BETA ,, 12 1.46 TO 1.51 Y+C 00506 26 02490 05988
00540 M FAC-4 ,V ,, 20 04.3 TO 04.4 00518 21 02490 02630
00550 S 92 ,D ,, 13 01.9 TO 02.0 00530 23 02488 02562
00560 SF 81 , ,, 12 1.9 TO 2.0 00542 22 00092 06000
00570 TF BETA ,92 ,, 12 00554 32 00081 00000
00580 MM BETA ,54 ,10, 14 0.9 TO 1.1 00566 26 02630 00092
00590 TF BETA ,95 ,, 10 00578 13 02630 000N4
00600* 00590 26 02630 00095
00610 SELECT M BETA ,DEES %Z,, MUL BY APPROPO FACTOR 00602 23 02630 06-10
00620 SF 81 00614 32 00081 00000
00630 TF FAC-2 ,88 ,, 8 00626 26 02490 00088
00640 EXIT BLXM RESET ,FIXEND%,, RESTORE DV,EXV. SEL BAND B. EXIT 00638 66 05862 02960

00650*
00660*** CONSTANTS REQUIRED FOR FEXP
00670 V DS 10 ,SAV3 02562 00010
00680 A DS ,AEX 05966 00000
00690 B DS ,BEX 05976 00000
00700 C DS ,CEX 05988 00000
00710 D DS ,DEX 06000 00000
00720 13ZERO DS ,ZERO-18+13 02752 00000
00730 DEND 1 00001

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00010***** FORTRAN II-D RELOCATABLE-SUBSCRIBING ROUTINE %FIXED%
00020***** FOR TWO OR THREE DIMENSIONAL SUBSCRIBED VARIABLES
00030***** LINKAGE BTM ENTRYX,++12 WHERE X# 2 OR 3
00040***** DSA BASE,D4,D1,I,D2,J,D3,K,OR/M
00050***** IF Q ADDRESS IS FLAGGED BASE IS FIXED
00060***** IF BASE IS FLAGGED ARRAY IS FORMAL PARAMETER
00070***** IF D1 IS FLAGGED - I/O
00080***** INDEX REGISTER FLAGS ARE ON BASE
00090 DSA ENTRY2,ENTRY3 00004 00005 -0006
00100 DORG *-4 00009 00005 -0042
00110 ENTRY2 TFM BRINST+6 ,L2 ,, 00006 J0 00216 -0238
00120 TFM EXIT-1 ,32 ,10 00018 J6 00421 000L2
00130 B COM 00030 M9 00078 00000
00140 ENTRY3 TFM BRINST+6 ,L3 00042 J0 00216 -0218
00150 TFM EXIT-1 ,42 ,10 00054 J6 00421 000M2
00160 TF ENTRY2-1 ,ENTRY3-1 00066 K0 00005 00041
00170 COM MF COM ,ENTRY2-1 00078 PJ 00078 00005
00180 TFM X+11 ,10 ,10 00090 J6 00301 000J0
00190 BNF **24 ,COM 00102 MM 00126 00078
00200 TF X+11 ,KK 00114 K6 00301 02221
00210 TR WKAREA ,ENTRY2-1 ,11 00126 J3 00000 0000N
00220 MF Y+11 ,BASE 00138 P1 00385 00004
00230 BNF **36 ,D1 00150 M4 00186 00014
00240 MF X+11 ,COM 00162 PJ 00301 00078
00250 CF D1 00174 J3 00014 00000
00260 TFM ANS ,00000 00186 J6 00041 -0000
00270 TF ZOT+6 ,BRINST +6 00198 KD 00472 00216
00280 BRINST B7 * 00210 M9 00210 00000
00290 L3 M D3 ,K ,11 00218 23 00034 0003R
00300 B7 COLECT 00230 M9 00430 00000
00310 L2 M D2 ,J ,11 00238 23 00024 0002R
00320 B7 COLECT 00250 M9 00430 00000
00330 M D1 ,I ,11 00258 23 00014 0001R
00340 B7 COLECT 00270 M9 00430 00000
00350 A ANS ,D4 00278 K1 00041 00009
00360 X MM ANS ,00 ,10 00290 J3 00041 000-0
00370 MF Y ,99 00302 P1 00374 00099
00380 MA YX+11 ,BASE 00314 P0 00409 00004
00390 TD BASE ,RECMK 00326 25 00004 02403
00400 TR **31 ,BASE-4 00338 L1 00369 00000
00410 MA **23 ,99 00350 P0 00373 00099
00420 BLXM **12 ,* ,7 00362 00 00374 -0362
00430 Y A 99 ,YX+11 00374 2J 00099 00409
00440 MF 99 ,Y ,7 00386 7J 00099 00374
00450 YX SF 95 ,* ,7 00398 3K 00095 -0398
00460 AM ENTRY2-1 ,00 ,10 00410 J1 00005 000-0
00470 EXIT B7 ENTRY2-1 ,6 00422 M9 00000 00000
00480 COLECT MA **23 ,00099 00430 P0 00453 00099
00490 AM ANS ,00000 00442 J1 00041 -0000
00500 AM **18 ,00020 00454 J1 00472 -0020
00510 ZOT B7 * 00466 M9 00466 00000
00520 ANS DS ,ENTRY3-1 00041 00000

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00530	KK	DS	,02221	02221	00000
00540	WKAREA	DSS 42	,00000	00000	00042
00550	BASE	DS	,WKAREA+4	00004	00000
00560	D4	DS	,WKAREA+9	00009	00000
00570	D1	DS	,WKAREA+14	00014	00000
00580	I	DS	,WKAREA+19	00019	00000
00590	D2	DS	,WKAREA+24	00024	00000
00600	J	DS	,WKAREA+29	00029	00000
00610	D3	DS	,WKAREA+34	00034	00000
00620	K	DS	,WKAREA+39	00039	00000
00630	RECMK	DS	,02403	02403	00000
00640		DEND 2		00002	

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00010*	FORTRAN II-D DK IO FIXED				
00020*					
00030	ADR	DSA	SWDFX,FIND,RECORD,FETCH,SWD,DRAY,DIOEND	00004	00005 -0058
				00009	00005 -0282
				00014	00005 -0616
				00019	00005 -0580
				00024	00005 -0498
				00029	00005 -0222
				00034	00005 -0552
00040	DORG	ADR-4		00000	
00050	EEXIT	DS	,1636	01636	00000
00060	CHECK	DS	,1268	01268	00000
00070	INOUT	DS	,629	00629	00000
00080	IOCAL	DS	,716	00716	00000
00090	IORBC	DS	,520	00520	00000
00100	IORT	DS	,565	00565	00000
00110	DIO	DS	,820	00820	00000
00120	IOSK	DS	,554	00554	00000
00130	INDS	DS	,610	00610	00000
00140	ERRET	DS	,602	00602	00000
00150	IDERR	DS	,630	00630	00000
00160	IOGT	DS	,566	00566	00000
00170	IOPT	DS	,532	00532	00000
00180	FAC	DS	,2492	02492	00000
00190	DIODDA	DS	,2868	02868	00000
00200	FINDIN	DS	,2404	02404	00000
00210	FKODD	DS	,2987	02987	00000
00220	PAR	DS	,3843	03843	00000
00230	ERROR	DS	,2936	02936	00000
00240	EI	DS	,2615	02615	00000
00250	RTN	DS	,2506	02506	00000
00260	FIXEND	DS	,2960	02960	00000
00270	FLTEND	DS	,2966	02966	00000
00280	FLOAT	DS	,3998	03998	00000
00290	DKDATA	DS	,2860	02860	00000
00300	FIX	DS	,3854	03854	00000
00310	RECLG	DS	,2243	02243	00000
00320	W	DS	,2240	02240	00000
00330	N2	DS	,2238	02238	00000
00340	N1	DS	,2233	02233	00000
00350	K	DS	,2221	02221	00000
00360	F	DS	,2219	02219	00000
00370	CORSIZ	DS	,7376	07376	00000
00380*					
00390	NOWLC	DSC	2,02	00000	00002
00400	DSA	DIODDA		00006	00005 -2868
00410	DC		1,2	00007	00001
00420	OUT	BV	**12	00008	M6 00020 01400
00430	A	BE2+20	,BE2+23	00020	KJ 00434 00437
00440	BB2			00032	42 00000 00000
00450	AITEST	TDM	FINDIN ,1 ,11, SET FIND INDICATOR OFF	00034	15 02404 0000J
00460	B	FIND+12		00046	M9 00294 00000

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00470	SWDFX	TD	SWD-1	,SWDFX-1	00058	KN	00497	00057
00480		TFL	SWD-2	,SWDFX-2	00070	-0	00496	00056
00490		SF	SWD-1		00082	L2	00497	00000
00500		B7	SWD		00094	M9	00498	00000
00510	FECH	TD	FIND-1	,FETCH-1	00102	KN	00281	00579
00520		TFL	FIND-2	,FETCH-2	00114	-0	00280	00578
00530		B7	FETCH+12		00126	M9	00592	00000
00540	RECD	TD	FIND-1	,RECORD-1	00134	KN	00281	00615
00550		TFL	FIND-2	,RECORD-2	00146	-0	00280	00614
00560		B7	RECORD+12		00158	M9	00628	00000
00570	MYER	BI	**12,3700,,	TURN OFF WLRC IND	00166	M6	00178	03700
00580		B1	CHECK-12,1900,,	LET IORT HANDLE DISK OVERFLOW	00178	46	01256	01900
00590		B7	EEXIT,,	WLRC WAS ONLY ERROR	00190	49	01636	00000
00600		TF	N1TEMP,N1		00198	K6	00401	02233
00610	TOBB	B	DRAY1,,0		00210	M9	01196	00000
00620	DRAY	TDM	TOBB+1,9,,	SET TOBB TO BRANCH	00222	J5	00211	00009
00630		BD	EVEN,FKODD,,	TEST FOR EVEN ADDRESS	00234	M3	00818	02987
00640		BD	AGAIN,DDABLK+1,,	BRANCH IF BUFFER PROG IN CORE	00246	ML	00964	00530
00650		TFM	DSABLK+5,AGAIN		00258	JO	00547	-0964
00660		B	SWD+12		00270	M9	00510	00000
00670	FIND	TDM	FINDIN,0,,	SET FIND INDICATOR ON	00282	15	02404	00000
00680		SF	BE2+22		00294	L2	00436	00000
00690		BNV	**24		00306	M7	00330	01400
00700		CF	BE2+22		00318	L3	00436	00000
00710		BD	SET1	,FINDIN	00330	M3	00652	02404
00720		TFM	RETD2+6,SET1,,	BRANCH TO COMPUTE ADDRESS AND TESTI	00342	JO	00408	-0652
00730*	N2		ERROR ROUTINE	%I GRT N2B				
00740	N2CK	CM	FIND-1	,00 ,610, IS I ZERO OR NEG	00354	J4	0028J	000-0
00750		BNH	BE2		00366	M7	00414	01100
00760		C	FIND-1,N2,6,	COMPARE I AND N2	00378	K4	0028J	02238
00770		BH	BE2		00390	M6	00414	01100
00780	RETD2	B	**		00402	49	00000	00000
00790	BUFFAR	DS	,*		00413	00000		
00800	BE2	BV	**12		00414	M6	00426	01400
00810		AM	**8 ,00000 ,79		00426	J1	00434	-0-00
00820		TFM	EI ,472 ,9		00438	16	02615	00M72
00830		TF	N1TEMP,N1		00450	K6	00401	02233
00840		BD	ERROR,DDABLK,,BR IF CK MADE FROM EVEN ARRAY PROGRAM		00462	4L	02936	00529
00850		TFM	DSAOTR+5,ERROR		00474	J6	00705	-2936
00860		B	SETRMK		00486	M9	00656	00000
00870*								
00880*****			SWD SUBROUTINE					
00890	SWDA	TDM	SWD+900,0		00498	J5	01398	00000
00900		TFM	**11,41,10		00510	J6	00499	000M1

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00910		B	SWD1		00522	M9	00708	00000
00920		DORG	*-3		00530			
00930*			SET UP LINKAGE FOR FLOAT					
00940	FETCH5	TF	FLTEND,ICONB+5		00530	20	02966	01194
00950		B	FLOAT		00542	49	03998	00000
00960		DORG	*-4		00549			
00970		DORG	**4		00552			
00980	IOEND	TFM	DSAOTR+5,DI0END		00552	JO	00705	-0552
00990		BD	SETRMK,FRIND,,	BRANCH IF FETCH	00564	ML	00656	00421
01000		C	N1TEMP,N1		00576	K4	00401	02233
01010		BE	SETRMK,,	BRANCH IF BUFFER EMPTY	00588	M6	00656	01200
01020		TFM	RETD2+6,**20		00600	JO	00408	-0620
01030		B7	N2CK		00612	M9	00354	00000
01040		TFM	IORT,**23,,	WRITE BUFFER TO FILE	00620	10	00565	-0643
01050		B	IOPT ,DKDATA,7		00632	49	00532	-2860
01060		AM	FIND-1,1,610		00644	J1	0028J	000-1
01070	SETRMK	TD	SWD+900,DKBUFF+200		00656	KN	01398	01462
01080		TFM	IORT,IOREF2+11		00668	10	00565	-0743
01090		B	IOGT		00680	49	00566	00000
01100		DORG	*-4		00687			
01110	DSB	DSC	1,1		00687	00001		
01120		DSA	200		00692	00005	-0200	
01130		DC	3,9		00695	00003		
01140	DSAOTR	DSA	SWD,DI0END		00700	00005	-0498	
01150		DC	1,2		00705	00005	-0552	
01160	SWD1	A	BUFFAR,W,,	INCREMENT BUFFER ARROW	00706	00001		
01170		BD	FETCH1,FRIND,,	BRANCH IF FETCH	00708	K1	00413	02240
01180**			RECORD		00720	ML	00984	00421
01190	IOREF2	CF	SWD-1,DATB,7,	CLEAR FLAG ON ADDRESS OF DATA	00732	LL	00497	-1253
01200		SM	N1TEMP,1,10 ,	DECREMENT WORD COUNT	00744	J2	00401	000-1
01210		TFL	BUFFAR,SWD-1,611		00756	-0	0041L	0049P
01220	CK	CM	N1TEMP,0,10,	CHECK FOR FULL BUFFER	00768	J4	00401	000-0
01230		BNZ	TOBB		00780	M7	00210	01200
01240		BD	TOBB-12,FRIND,,	BR IF FETCH	00792	ML	00198	00421
01250		TFM	LINKB+18,IOPT		00804	J6	00854	-0532
01260	CKI	TFM	RETD2+6,LINKB		00816	JO	00408	-0836
01270		B	N2CK		00828	M9	00354	00000
01280		DORG	*-4		00835			
01290	LINKB	TFM	IORT,**23,,	CALL CORRECT IORT ROUTINE	00836	10	00565	-0859
01300		B	,DKDATA,7		00848	49	00000	-2860
01310		TFM	BUFFAR,DKBUFF+199,,	INITIALIZE BUFFER ARROW	00860	JO	00413	-1461
01320		S	BUFFAR-2,RECLG		00872	K2	00411	02243
01330		BNF	**24,FRIND		00884	MM	00908	00421
01340		A	BUFFAR,W		00896	K1	00413	02240
01350	ADDTOI	AM	FIND-1,1,610,	INCREMENT I	00908	J1	0028J	000-1

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			INCREMENT	SECTOR	ADDRESS
01360	A	DIODDA+5,DIODDA+8,,		00920	21 02873 02876
01370	BD	FETCH2,FRIND		00932	ML 01028 00421
01380	B	TOBB-12		00944	M9 00198 00000
01390	DORG	*-4		00951	
01400	AM	DRAY-1,10,10		00952	J1 00221 000J0
01410	AGAIN	TF SWD-1,DRAY-1		00964	K0 00497 00221
01420	B	SWD		00976	M9 00498 00000
01430	DORG	*-4		00983	
01440	FETCH1	C NITEMP,N1		00984	K4 00401 02233
01450	BNE	FETCH2,,,	BRANCH IF	00996	M7 01028 01200
				01008	J6 00854 -0566
01460	TFM	LINKB+18,IOGT		01020	M9 00816 00000
01470	B	CKI		01027	
01480	DORG	*-4		01028	J2 00401 000-1
01490	FETCH2	SM NITEMP,1,10			
01500*		SEND THE WORD TO FAC			
01510	TFL	FAC,BUFFAR,11		01040	00 02492 0041L
01520	BI	**12,1400		01052	M6 01064 01400
01530*		TEST FOR FLOATING ADDRESS AT SWD-1			
01540	BNF	FETCH3,SWD-1		01064	MM 01158 00497
01550*		IT IS A FIXED ADDRESS			
01560	CF	SWD-1		01076	L3 00497 00000
01570*		TEST FOR FLOATING WORD IN FAC			
01580	BNF	FETCH4,FAC-1		01088	M4 01170 02491
01590*		THE WORD IS FLOATING SET UP LINKAGE FOR FIX			
01600	TF	FIXEND+6,ICON7+6		01100	20 02966 01125
01610	B	FIX		01112	49 03854 00000
01620	DORG	*-4		01119	
01630	ICON7	DC 1,4		01119	00001
01640	DSC	1,9		01120	00001
01650	DSA	RETFLT		01125	00005 -1126
01660	RETFLT	TFM FLTEND ,RTN		01126	16 02966 -2506
01670	NOP			01138	41 00000 00000
01680*		BRANCH TO STORE NUMBER			
01690	CKLD	B FETCH4		01150	M9 01170 00000
01700	DORG	*-4		01157	
01710	FETCH3	BNF FETCH5,FAC-1,,	BRANCH IF FIXED	01158	M4 00530 02491
01720*		STORE THE WORD IN MEMORY			
01730	FETCH4	TFL SWD-1,FAC,6		01170	-6 0049P 02492
01740*		CHECK FOR EMPTY BUFFER			
01750	B	CK		01182	M9 00768 00000
01760	DORG	*-4		01189	
01770	ICON8	DC 1,9		01189	00001
01780	DSA	RETFLT		01194	00005 -1126
01790	DRAY1	SM PAR,1,10,,	DECREMENT WORD COUNT	01196	12 03843 000-1
				01208	M7 01222 01200
01800	BNZ	**14		01220	42 00000 00000
01810	BB			01222	
01820	DORG	*-9		01222	
01830	BNF	AGAIN-12,DRAY-1		01222	MM 00952 00221
01840	S	DRAY-1,K		01234	K2 00221 02221

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01850	B	AGAIN		01246	M9 00964 00000
01860	DORG	*-4		01253	
01870	DATB	DSC 2,-00		01253	00002
01880	DSA	DDB		01259	00005 -0687
01890	DC	1,@		01260	00001
01900	DKBUFF	DS ,DATB+9		01262	00000
01910*					
01920*					
01930*		WRITE 2ND BLOCK			
01940*					
01950	LD1RD	DSC 2,00		01261	00002
01960	DSA	DIM1		01267	00005 -1269
01970	DC	1,@		01268	00001
01980	DIM1	DSC 1,1		01269	00001
01990	DSA	209		01274	00005 -0209
02000	DC	3,9		01277	00003
02010	DSA	SWD		01282	00005 -0498
02020	DC	1,@		01283	00001
02030	STL01	CF ICON7+2		01284	L3 01121 00000
02040	DGM	DATB+9+200		01462	00001
02050	CF	ICON8+1		01296	L3 01190 00000
02060	TFM	IORT,HERE+11		01308	10 00565 -1343
02070	TD	SWD+900,DKBUFF+200		01320	KN 01398 01462
02080	HERE	B IOPT,LD1RD,7		01332	4R 00532 -1261
02090	TRA			01344	10 00565 -1363
				01356	49 00716 00000
				01363	00002 2K
				01365	00005 -1371
				01370	00001 @
				01371	00006 1J9783
				01377	00003 -03
				01380	00006 -0000@
				01284	
02100	TCD	STL01			
02110*					
02120*		BLOCK 1 OF FETCH FIND RECORD			
02130	DORG	SWDA		00498	
02140	SWD	TFM DSABLK+5,SWD		00498	J0 00547 -0498
02150	TFM	IORT,IORF+11		00510	10 00565 -0853
02160	B	IOGT		00522	49 00566 00000
02170	DORG	*-4		00529	
02180	DDABLK	DSC 1,1		00529	00001
02190	DSA	209		00534	00005 -0209
02200	DC	3,9		00537	00003
02210	DSABLK	DSA SWD,SWD		00542	00005 -0498
				00547	00005 -0498
				00548	00001
02220	DC	1,@		00552	
02230	DORG	IOEND		00552	M9 00008 00000
02240	DIOEND	B OUT		00564	42 00000 00000
02250	BB			00566	
02260	DORG	*-9		00566	00002
02270	DAT1	DSC 2,-00		00572	00005 -0529
02280	DSA	DDABLK		00573	00001
02290	DC	1,@			

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02300	DS	5		00578	00005
02310	FETCH	B	FECH	00580	M9 00102 00000
02320	TDM	FRIND,1,11,,	SET FETCH-RECORD INDICATOR TO	FETCH	
				00592	J5 00421 0000J
02330	B	AITEST,,,	BRANCH TO SET FIND INDICATOR OFF,		
				00604	M9 00034 00000
02340*			COMPUTE ADDRESS, TEST I, AND TEST		
02350*			FOR DEFINE STATEMENT.		
02360	RECORD	B	RECD	00616	M9 00134 00000
02370	TDM	FRIND,0,,	SET FETCH-RECORD INDICATOR TO	RECD	
				00628	J5 00421 00000
02380	B	AITEST		00640	M9 00034 00000
02390	SET1	TFM	DIODDA+5,218,,	SET SECTOR ADDRESS IN	DDA
				00652	16 02873 -0218
02400	M	FIND-1,RECLG,6,	COMPUTE ADDRESS OF FILE	RECORD	
				00664	K3 0028J 02243
02410	A	DIODDA+5,99		00676	21 02873 00099
02420	BD	**44,FINDIN,,	BRANCH IF NOT FIND		
02430	SSEEK	TFM	IORT,**23	00688	M3 00732 02404
02440	B	IOSK,DKDATA,7,	TRANSFER TO IORT TO	SEEK	
				00712	49 00554 -2860
02450	B	DIQEND		00724	M9 00552 00000
02460	DORG	**3		00732	
02470	TFM	BUFFAR,DKBUFF+199,,	INITIALIZE BUFFER	ARROW	
				00732	JO 00413 -1461
02480	S	BUFFAR-2,RECLG		00744	K2 00411 02243
02490	TF	NITEMP,N1,,		00756	K6 00401 02233
02500	TF	DIODDA+8,RECLG,,	STORE RECORD LENGTH IN	DDA	
				00768	26 02876 02243
02510	TFM	DIODDA+13,DKBUFF+200,,	STORE ADDRESS OF	BUFFER	
				00780	10 02881 -1462
02520	S	DIODDA+11,RECLG,,	SUB LENGTH OF RECORD TO	GET FIRST CDR	
				00792	22 02879 02243
02530	OVER	TDM	TOBB+1,2,,	INITIALIZE BRANCH	BACK
				00804	J5 00211 00002
02540	BB			00816	42 00000 00000
02550	DORG	**9		00818	
02560	EVEN	TFM	TEMPA,10,10,	STORE FLOATING LENGTH IN	TEMPA
				00818	J6 00377 000J0
02570	BNF	**36,DRAY-1,,	BRANCH IF FLOATING	ARRAY	
				00830	MM 00866 00221
02580	IOREF	CF	DRAY-1,DAT1,7		
02590	TF	TEMPA,K,,	STORE FIXED LENGTH IN	TEMPA	
				00842	LL 00221 -0566
02600	TF	DIODDA+13,DRAY-1,,	STORE ADDRESS OF FIRST	ELEMENT	
				00854	K6 00377 02221
02610	AM	DIODDA+13,1		00866	20 02881 00221
02620	S	DIODDA+13,TEMPA,,	HIGH ORDER POSITION OF	ARRAY	
				00878	11 02881 -0001
02630	TF	EVEN1+11,DIODDA+13		00890	2K 02881 00377
02640	M	TEMPA,PAR		00902	K6 01149 02881
02650	SF	95		00914	K3 00377 03843
02660	A	EVEN1+11,99		00926	32 00095 00000
				00938	K1 01149 00099

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02670	CARRY	CM	EVEN1+11,0	00950	J4 01149 -0000
02680	BNE	**24		00962	M7 00986 01200
02690	TFM	EVEN1+11,0		00974	J6 01149 -0000
02700*			EVALUATE AND STORE LOW	ORDER	
02710*			POSITION + 1 OF	ARRAY	
02720*			EVALUATE SECTOR	COUNT	
02730	AM	97,1 ,9, ADD ONE FOR	GROUP MARK	00986	11 00097 00-01
02740	TD	**23,RECLG		00998	K5 01021 02243
02750	BDI2	BD	OVER3,251,, BRANCH IF	RECLG IS 1	
02760	TD	**23,97		01010	M3 01058 00251
02770	BD	**24,210,, BRANCH IF	EVEN NUMB OF SECTORS	01022	K5 01045 00097
				01034	M3 01058 00210
02780	AM	97,1,10		01046	11 00097 000-1
02790	OVER3	TF	DIODDA+8,97,, SET UP	SECTOR COUNT	
02800	BD	OVER2,BDI2+11,11		01058	26 02876 00097
02810	MM	DIODDA+8,50,10		01070	ML 01094 0102J
02820	OVER2	A	FIND-1,97,6, ADD	NUMBER OF RECORDS TO I	
02830	SM	FIND-1,1,610		01082	13 02876 000N0
02840	TFM	RETD2+6,**20		01094	K1 0028J 00097
02850	B	N2CK		01106	J2 0028J 000-1
02860	DORG	**4		01118	JO 00408 -1138
02870	EVEN1	TD	EVEN2+11	01130	M9 00354 00000
02880	BD	FETCH8,FRIND,,	BRANCH IF	FETCH	
				01137	
				01138	K5 01221 00000
02890*	RECORD			01150	ML 01248 00421
02900	TD	EVEN1+11,DKBUFF+200,6,	SET GROUP MARK AT	END OF ARRAY	
				01162	KN 0114R 01462
02910*			WRITE ARRAY ONTO	FILE	
02920	TFM	IORT,**23		01174	10 00565 -1197
02930	B	IORBC,NOWLC ,7		01186	4R 00520 -0000
02940	TFM	FLTEND ,RTN		01198	16 02966 -2506
02950	EVEN2	TDM	EVEN1+11,,6,	RESTORE DIGIT	
				01210	J5 0114R 00000
02960	AM	FIND-1,1,610		01222	J1 0028J 000-1
02970	A	DIODDA+5,DIODDA+8,,	INCREMENT SECTOR	ADDRESS	
				01234	21 02873 02876
02980	BB			01246	42 00000 00000
02990	DORG	**9		01248	
03000	FETCH8	TFM	DIO+35,YTURN,67, INSERT	ADDRESS FOR ERROR ENTRY	
				01248	10 0085N -1354
03010	TFM	IORT,**23,,	READ ARRAY FROM	FILE	
				01260	10 00565 -1283
03020	B	IOGT,DKDATA,7		01272	49 00566 -2860
03030	TFM	INOUT,CHECK-12,,RESTORE	SPECIAL IORT ERROR	EXIT	
				01284	16 00629 -1256
03040*			TEST FOR NO	GROUP MARK	
03050	BNG	**20,EVEN1+11,11		01296	NN 01316 0114R
03060	B	EVEN2		01308	M9 01210 00000
03070	DORG	**4		01315	
03080	TF	FLTEND,EVENSP+6		01316	20 02966 01353
03090	TFM	EI,473,9		01328	16 02615 00M73
03100	B	ERROR		01340	49 02936 00000
03110	DORG	**4		01347	

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03120	EVENS	DC	1,4		01347	00001
03130		DSC	1,9		01348	00001
03140		DSA	EVEN2-12		01353	00005 -1198
03150	YTURN	B1	**+12,3700,,	TURN OFF WLRC IND	01354	M6 01366 03700
03160		BNI	ERRET,1900,,	GD ON IF NO OTHER ERROR	01366	47 00602 01900
03170		TFM	INOUT,MYER,,	SET UP SECOND IORT ERROR EXIT		
					01378	10 00629 -0166
03180		B	IOERR,,	LET IORT CHECK ANY OTHER ERRORS	01390	49 00630 00000
03190		DORG	*-4		01397	
03200		DORG	SND+906		01404	
03210	TEMPA	DS	2,N2CK+23		00377	00002
03220	NITEMP	DS	2,RETD2-1		00401	00002
03230	FRIND	DS	1,BE2+7		00421	00001
03240*			WRITE FIRST BLOCK			
03250*						
03260	DIM2	DSC	1,1		01404	00001
03270		DSA	200		01409	00005 -0200
03280		DC	3,9		01412	00003
03290		DSA	SND		01417	00005 -0498
03300		DC	1,@		01418	00001
03310	LD2ND	DSC	2,00		01419	00002
03320		DSA	DIM2		01425	00005 -1404
03330		DC	1,@		01426	00001
03340	STLD2	TD	CARRY+7,CORSIZ		01428	K5 00957 07376
03350		AM	CARRY+8,10,10		01440	J1 00958 000J0
03360	GM	CF	EVENS+2		01452	L3 01349 00000
03370		DGM	DKBUFF+200		01462	00001
03380		DGM	SND+900		01398	00001
03390		TFM	IORT,NIO+11		01464	10 00565 -1487
03400	NIO	B	IOPT,LD2ND,7		01476	4R 00532 -1419
03410		TRA			01488	10 00565 -1507
					01500	49 00716 00000
					01507	00002 2K
					01509	00005 -1515
					01514	00001 @
					01515	00006 1J9783
					01521	00003 -03
					01524	00006 -0000@
03420	TCD	STLD2			01428	
03430	DEND	7			00007	

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00010*			1620 FORTRAN IID,MON II ,FL PT ,RELOC ,FX L		SINE-COSINE	
00020		DSA	FCOS ,FSIN		00004	00005 -0006
					00009	00005 -0042
					00005	
00030		DDRG	*-4			
00040	FCOS	BLXM	SET ,FCOS-1%0@,11,	ARG TO FAC. SAVE	OV,EXV. SEL IX B A	
					00006	60 04142 0000N
00050		TFM	SW+1 , -66 ,10,	SET SW # COS	00018	J6 00247 00000
00060		B	SICD		00030	M9 00078 00000
00070	FSIN	BLXM	SET ,FSIN-1%0@,11,	ARG TO FAC. SAVE	OV,EXV. SEL IX B A	
					00042	60 04142 0004J
00080		MF	MU-1 ,FAC-2		00054	71 02967 02490
00090		TFM	SW+1 ,41 ,10,	SET SW #SIN	00066	J6 00247 000M1
00100*						
00110	SICO	CM	FAC , -4 ,10		00078	14 02492 000-M
00120		BNL	TRY MAX , ,	NOT TOO SMALL	00090	M6 00138 01300
00130		BNF	**24 ,SW+1 ,	SIN	00102	MM 00126 00247
00140		TFL	FAC ,FLONE ,		00114	06 02492 03153
00150		BLXM	RESET ,FIXEND%0@		00126	66 05862 02960
00160	TRYMAX	CM	FAC ,7 ,10		00138	14 02492 000-7
00170		BL	MUL		00150	M7 00186 01300
00180		TFM	EI ,670 ,9		00162	16 02707 00070
00190		BLXM	RESET ,UNFLD %0@,,	EXIT FOR CHAR MORE THAN 6	00174	66 05862 02904
00200*						
00210**			DIVIDE ARG BY 2 PI			
00220	MUL	M	RZPI ,FAC-2		00186	23 06441 02490
00230*						
00240***			SEPARATE FRACTIONAL PORTION OF ARG AND PLACE IN GAM,10 DIGIT			
00250		TF	GAM ,ZERO-8 ,	INIT TO ZEROS	00198	26 02739 02749
00260		BX	**12 ,FAC %1@ ,		00210	01 00222 024R2
00270		SF	82 %1@ ,	SET H1 ORDER FLAG ON TENTHS POSIT	00222	32 000Q2 00000
00280		A	GAM ,91 %1@,,	POSITION FRACTIONAL PART	00234	21 02739 000R1
00290	SW	BLXM	CK SIZE ,99991 %1@,,	NOP IF SIN,RESET	IX 1 IF COS	
					00246	06 00294 999R1
00300	SINCON	S	GAM ,PT25		00258	22 02739 06431
00310		CF	GAM		00270	33 02739 00000
00320		BLXM	CK SIZE ,99991 %1@		00282	06 00294 999R1
00330*						
00340	CKSIZE	CM	GAM-8 ,50 ,10		00294	14 02731 000N0
00350		BNL	EVAL H-24,,	F GREATER THAN .5		
					00306	M6 00362 01300
00360		TF	FAC-2 ,PT25 ,	.25	00318	26 02490 06431
00370		S	FAC-2 ,GAM ,	.25-F	00330	22 02490 02739
00380		TF	GAM ,FAC-2 ,	STORE Z IN GAMMA	00342	26 02739 02490
00390		B7	EVAL H		00354	M9 00386 00000
00400		S	GAM ,PT75 ,	F-.75	00362	22 02739 06451
00410		TF	FAC-2 ,GAM		00374	26 02490 02739
00420*						
00430**			10 DIGIT FIELD Z STORED IN GAM AND FAC-2.ABS V LESS THAN .25			

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00440 EVALH M FAC-2 ,FAC-2 ,, Z*Z- .06 00386 23 02490 02490
00450 TF FAC-2 ,89 ,, X#Z*Z .06 00398 26 02490 00089
00460 TF BETA ,A ,, -1.46 00410 26 02630 06381
00470 A BETA ,88 ,, A+X -1.4 00422 21 02630 00088
00480 M BETA ,FAC-2 ,, X%A+X#Y--.084 00434 23 02630 02490
00490 MF 90 ,99 ,, 00446 71 00090 00099
00500 TF SAV3 ,C ,, C +.97 00458 26 02562 06401
00510 A SAV3 ,90 ,, Y+C .89 00470 21 02562 00090
00520 A FAC-2 ,90 ,, Y+X -.024 00482 21 02490 00090
00530 A FAC-2 ,B ,, Y+X+B +.37 00494 21 02490 06391
00540 M SAV3 ,FAC-2 ,, W +.30 00506 23 02562 02490
00550 A 89 ,D ,, W+D +.10 00518 21 00089 06411
00560 TF FAC-2 ,89 ,, W+D 00530 26 02490 00089
00570 M FAC-2 ,E 00542 23 02490 06421
00580 SF 81 00554 32 00081 00000
00590 TF FAC-2 ,90 ,, E*W+D# +4.0 00566 26 02490 00090
00600 M FAC-2 ,GAM ,, +1.0 00578 23 02490 02739
00610*
00620** WIND UP THIS FUNCTION
00630 NORM TFM FAC ,92 ,10, INIT EXP FOR IX ADJ 00590 16 02492 000R2
00640 BD SIGN ,89 %10,, NORMALIZED 00602 M3 00646 000Q9
00650 BCXM *-12 ,1 %10,, ADJ ADR REF TO MANTISSA 00614 04 00602 000-1
00660 TFL FAC ,FLZ ,, EXIT IF RESULT ZERO 00626 06 02492 03131
00670 B7 EXIT 00638 M9 00730 00000
00680*
00690 SIGN SF 89 %10 00646 32 000Q9 00000
00700 S FAC ,309 ,, ADJ EXP 00658 22 02492 00309
00710 TF FAC-2 ,96 %10,, MOVE MANT 00670 26 02490 000R6
00720 BNF EXIT ,99 ,, MU-1 CONTROLS SIGN 00682 M4 00730 00099
00730 BNF EXIT-12 ,MU-1 ,, 99 CONTROLS SIGN 00694 M4 00718 02967
00740 CF 99 00706 33 00099 00000
00750 MF MU-1 ,99 00718 71 02967 00099
00760 EXIT BLXM RESET ,FIXEND 00730 66 05862 02960
00770* CONSTANTS FOR SIN COS
00780 FLZ DS ,FLZER 03131 00000
00790 A DS ,ASC 06381 00000
00800 B DS ,BSC 06391 00000
00810 C DS ,CSC 06401 00000
00820 D DS ,DSC 06411 00000
00830 E DS ,ESC 06421 00000
00840 DEND 2 00002

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00010* 1620 FORTRAN IID,MON II, FL PT, RELOC, FX L ARC TANGENT
00020 DSA FATN 00004 00005 -0006
00030 FATN BLXM SET ,*-1 %00,11, SAVE OV,EXV. LD FAC. SEL IX BAND A 00006 60 04142 0000N
00040 BD NON Z ,FAC-9 ,, NON ZERO 00018 M3 00042 02483
00050 BLXM RESET ,ZERFAC%00,, RESULT ZERO, RESTORE OV,EXV.IX BD B 00030 66 05862 02884
00060 NONZ MF MU-1 ,FAC-2 ,, STORE SIGN 00042 71 02967 02490
00070 FSL FAC-11 ,FAC-2 ,, EXPAND TO 10 DIGIT MANT 00054 05 02481 02490
00080* ... SPLIT INTO FOUR INTERVALS, ZERO THRU THREE
00090 CM FAC ,00 ,10 00066 14 02492 000-0
00100 BL K , , NEGATIVE EXP 00078 M7 00378 01300
00110 BH K 23 , , POSITIVE EXP 00090 M6 00434 01100
00120 CM FAC-10 ,23 ,10, ZERO EXP 00102 14 02482 000K3
00130 BNH K , , LESS THAN .24 00114 M7 00378 01100
00140 CM FAC-10 ,80 ,10 00126 14 02482 000Q0
00150 BNL K2 , , MORE THAN .79 00138 M6 00366 01300
00160*
00170** CALCULATE Z# BK-GK/%FAC+BK#
00180 CALC FADD FAC ,BK %10 00150 01 02492 06205
00190 TFL BETA ,GK %10 00162 06 02630 062P7
00200 FDIV BETA ,FAC 00174 09 02630 02492
00210 TFL FAC ,BK %10 00186 06 02492 06205
00220 FSUB FAC ,BETA 00198 02 02492 02630
00230 EVALCK TFL BETA ,FAC 00210 06 02630 02492
00240*
00250**** EVALUATE F OF Z # Z - A*Z**3 + B*Z**5 - C*Z**7
00260 EVAL FMUL BETA ,BETA 00222 03 02630 02630
00270 TFL BETA-12 ,BETA ,, Z**2 00234 06 02618 02630
00280 FMUL BETA ,C 00246 03 02630 06241
00290 FADD BETA ,B ,, B+C*Z**2 00258 01 02630 06229
00300 FMUL BETA ,BETA-12 00270 03 02630 02618
00310 FADD BETA ,A ,, A+B*Z**2+C*Z**4 00282 01 02630 06217
00320 FMUL BETA ,BETA-12 00294 03 02630 02618
00330 FADD BETA ,ONEZ 00306 01 02630 03121
00340 FMUL FAC ,BETA ,, F%Z# 00318 03 02492 02630
00350 FADD FAC ,AK %10,, AK + F%Z# 00330 01 02492 062N3
00360*
00370 EXIT TF FAC-2 ,FAC-4 ,, CONVERT TO 8 DIG FIELD 00342 26 02490 02488
00380 BLXM RESET ,FIXEND%00 00354 66 05862 02960
00390*
00400 K2 BLXM CALC ,36 %10,, .80 TO 2.076 00366 06 00150 000L6
00410 K CM FAC ,4 ,10 00378 14 02492 000-M
00420 BNH EXIT , , ARG TOO SMALL 00390 M7 00342 01100
00430 BLXM EVAL CK ,108 %10,, 0.0 TO .23 00402 06 00210 001-8
00440*
00450 MAXVAL TFL FAC ,PIOV2 00414 06 02492 06371
00460 B7 EXIT+12 00426 M9 00354 00000
00470*
00480** INITIALIZE FOR POSITIVE EXP
00490 K23 CM FAC ,1 ,10 00434 14 02492 000-1

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00500 BE **36 , , EXP EQUAL 0.1 00446 M6 00482 01200
00510 CM FAC ,08 ,10 00458 14 02492 000-B
00520 BNL MAX VAL , , ARG TOO LARGE 00470 M6 00414 01300
00530 CM FAC-8 ,2076 ,8 00482 14 02484 OK076
00540 BNH K2 , , MANT LESS THAN 2.077 00494 M7 00366 01100
00550 K3 BLXM CALC ,72 %10,, 2.077 TO INFIN 00506 06 00150 000P2
00560** CONSTANTS FOR ARC TAN
00570 A DS ,AT 06217 00000
00580 B DS ,BT 06229 00000
00590 C DS ,CT 06241 00000
00600 DEND 1 00001
    
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00010* 1620 FORTRAN IID,MON II ,FL PT ,RELOC ,FX L SQUARE ROOT
00020 DSA SQRT 00004 00005 -0006
00030 SQRT BLXM SET ,SQRT-1%0,,11 00006 60 04142 00000
00040 BD **24 ,FAC-9 , NOT ZERO ARG 00018 M3 00042 02483
00050 BLXM RESET ,ZERFAC%0,, ZERD ARG 00030 66 05862 02884
00060 MM FAC ,50 ,10, EXP/2 IN LOC 96 AND 97,SIGN IN 99
00070 MF EXIT+7 ,FAC-2 , REMOVE AND STORE SIGN OF ARG 00042 13 02492 000N0
00080 BD SQ3 ,98 , EXP ODD 00054 P1 00193 02490
00090 SQ2 MF 97 ,99 , SAVE EXP SIGN 00066 M3 00318 00098
00100 TF FAC ,97 , EXP OF RESULT 00078 71 00097 00099
00110 LD 97-L %20,FAC-2 , CLR FPA AND MOVE ADJ ARG 00090 26 02492 00097
00120 TF GAM-2 ,PT1 , INIT RESULT MANT 00102 28 00-89 02490
00130 BLXM LOOP+12 ,L %20 , 00114 20 02737 00374
00140 LOOP AM GAM-1 %20,02 , 00126 06 00150 00-00
00150 S 91-L %10,GAM-1 %20 , 00138 11 02P38 000-2
00160 BNN LOOP 00150 22 000Q3 02P38
00170 BCXM ADJ IX ,1 %20 , 00162 M6 00138 01300
00180* 00174 04 00270 00-01
00190 EXIT MM GAM-2 ,50 ,10 00186 13 02737 000N0
00200 SF 98-L 00198 32 00090 00000
00210 TF FAC-2 ,105-L 00210 26 02490 00097
00220 BNF GOUT ,EXIT+7 , NOT NEG ORIG MANT 00222 MM 00258 00193
00230 TFM EI ,676 ,9, SET ERROR IND 00234 16 02707 00076
00240 BLXM RESET ,ERROR %0,, ARG WAS NEG,EXIT 00246 66 05862 02936
00250 GOUT BLXM RESET ,FIXEND%0,, NORMAL EXIT 00258 66 05862 02960
00260*
00270 ADJIX A 91-L %10,GAM-2 %20,, RESTORE TO PLUS VALUE 00270 21 000Q3 02P37
00280 CF 91-L %10, , CF REQD IF RESULT IS ZERO 00282 33 000Q3 00000
00290 SM GAM-1 %20,9 ,10 00294 12 02P38 000-9
00300 BXM LOOP+12 ,2 %10 , 00306 02 00150 000-2
00310*
00320** SET UP FOR ODD EXP EVALUATION
00330 SQ3 AM 99 ,50 ,10 00318 11 00099 000N0
00340 TDM FAC-2-L , ,11, EXPAND FIELD 00330 15 02482 0000-
00350 CF FAC-1-L 00342 33 02483 00000
00360 BXM SQ2 ,1 %20,, ADJ POSIT IN FPA 00354 02 00078 00-01
00370*
00380 PT1 DC 9 ,010000000 00374 00009
00390 DEND 1 00001
    
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00010***** 1620 FORTRAN II-D RELOCATABLE ABSOLUTE VALUE ROUTINE #FIXE
00020 DSA ABS 00004 00005 -0006
00030 ABS TFL FAC ,ABS-1 ,111 00006 00 02492 0000N
00040 BNF **26 ,FAC-1 ,0 00018 M4 00044 02491
00050 CF FAC-2 , , FLOATING POINT NUMBER
00060 BB 00030 33 02490 00000
00070 DORG #-9 00042 42 00000 00000
00080 CF FAC , , FIXED POINT NUMBER
00044 33 02492 00000
00090 BB2 00056 42 00000 00000
00100 FAC DS ,02492 02492 00000
00110 DEND 1 00001
    
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1620 MONITOR 11 DUP ROUTINE SELECTION ROUTINE PAGE 1
00010 *** READ/WRITE FOR CORE IMAGE LOAD
00020 DORG 02202 02202
00030 IOCAL DS ,716 00716 0
00031 REPLAC DSC 1,0 02202 1
00040 RDWR DSA RD1 02207 5 X 1
00050 TFM IORT,**23,, PUT CORE IMAGE PROGRAM 02207 -5059
00060 B IOPT,WR,7 02208 16 00565 -2231
00070 TFM IORT,SL1,7 02220 49 00532 -2251
00080 B7 IOCAL 02232 16 00565 -2274
00090 WR DSC 2,02 02244 49 00716
00100 DSA WR2 02251 2
00110 DSC 1, 02257 5 X 1
00120 WR2 DSC 1,0 02257 -2259
00130 DC 5,0 02258 1
00140 DC 3,0 02259 1
00150 DC 5,0 02264 5
00160 DSC 1, 02267 3
00170 SL1 DSC 2,-22 02272 5
00180 DSA SL2 02273 1
00190 DSC 1, 02274 2
00200 SL2 DSC 1,1 02274 2
00210 DC 5,18554 02280 5 X 1
00220 DC 3,041 02280 -2282
00230 DC 5,2402 02281 1
00240 DSA SOLDON 02287 5
00250 DSC 1, 02290 3
00260 COR 34 COR2,00701 02295 5
00270 38 COR2,00702 02300 5 X 1
00280 TRA 02300 -5106
00290 COR2 DDA ,1,18260,1,REPLAC 02301 1
00300 TCD COR 02302 34 02350 00701
02314 38 02350 00702
02326 36 00000 00500
02338 49 00000 00000
02350 14
    
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1620 DISK UTILITY PROGRAM SELECTION ROUTINE				
00380	****			
00390		DORG 2402	02402	
00400	SELEC	TFM IORT,++23	02402	16 00565 -2425
00410		B IOGT,DDA,7	02414	49 00566 -2434
00420		B 00000	02426	49 00000 00000
00430		DORG =-3	02434	
00440	DDA	DSC 2,22	02434	2
		22		
00450		DSA DCF	02440	5 X 1
00460		DSC 1,1	02440	-2442
			02441	1
00470	DCF	DSC 1,1	02442	1
		1		
00480		DC 5,0	02447	5
		-0000		
00490		DC 3,0	02450	3
		-00		
00500		DC 5,0	02455	5
		-0000		
00510		DSC 1,1	02456	1
00520	SELECT	TFM HOLD2,0,10	02458	16 05907 000-0
00530		TFM IORT,++23	02470	16 00565 -2493
00540		B IOGT,DDA1,7	02482	49 00566 -5908
00550		TFM MCS+98,0,7	02494	16 17876 -0000
00560		TFM IORT,++23	02506	16 00565 -2529
00570		B IOGT,DDA1,7	02518	49 00532 -5908
00580		TD HOLD2,MCS+49	02530	25 05907 17827
00590		TFM IORT,++23	02542	16 00565 -2565
00600		B IOGT,DDA1,7	02554	49 00566 -6399
00610	LIS	TFM DIM+13,READ,27	02566	16 J7993 -9778
00620		SH HOLD2,1,10	02578	12 05907 000-1
00630		TFM IORT,++23	02590	16 00565 -2613
00640		B IOGT,LIS1,7	02602	49 00566 -6422
00650		TFM BFLG+11,READ+100	02614	16 02649 -9878
00660	CT	TFM CNT1,002,29	02626	16 -6432 00-02
00670	BFLG	BNF ++20,READ+100,7	02638	44 02658 -9878
00680		B7 NEXT	02650	49 02706
00690		AM CT+6,1,610	02658	11 0263K 000-1
00700		AM BFLG+11,100,9	02670	11 02649 00J00
00710		CM BFLG+11,READ+8000	02682	14 02649 J7778
00720		BL BFLG	02694	47 02638 01300
00730	NEXT	CM HOLD2,0,10	02706	14 05907 000-0
00740		BE DN	02718	46 02774 01200
00750		AM CT+6,3,10	02730	11 02632 000-3
00760		AM LIS+6,20,10	02742	11 02572 000K0
00770		AM LIST1+6,20,10	02754	11 06428 000K0
00780		B7 LIS	02766	49 02566
00790	DN	TFM IORT,++23	02774	16 00565 -2797
00800		B IOGT,SPLSUB,7	02786	49 00566 -6443
00810		TF SPLPK0+8,CNT1	02798	26 12653 06432
00820		TF SPLPK1+8,CNT1+3	02810	26 12676 06435
00830		TF SPLPK2+8,CNT1+6	02822	26 12699 06438

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00840		TF SPLPK3+8,CNT1+9	02834	26 12722 06441
00850	COMPAR	C CNT1,CNT1+3	02846	24 06432 06435
00860		BH ++32	02858	46 02890 01100
00870		TR CNT1-2,CNT1+1	02870	31 06430 06433
00880		B7 ++20	02882	49 02902
00890		TR CNT1+1,CNT1+4	02890	31 06433 06436
00900		BNR COMPAR,CNT1+1	02902	45 02846 06433
00910		TF THROWS+8,CNT1	02914	26 12745 06432
00920		TF CORSIZ,CNT1	02926	26 12483 06432
00930		TFM IORT,++23	02938	16 00565 -2961
00940		B IOPT,SPLSUB,7	02950	49 00532 -6443
00950		BTM CLRIN,++12	02962	17 05246 -2974
00960		TD HOLD2,SYSCAL	02974	25 05907 00475
00970		CM HOLD2,4,10	02986	14 05907 000-4
00980		BE CONTC	02998	46 03596 01200
00990		CM HOLD2,6,10	03010	14 05907 000-6
01000		BNE NOCOMP	03022	47 04692 01200
01010		BNF DMP,MCS+22	03034	44 03378 17800
01020		CM MCS+39,0,8	03046	14 17817 0-000
01030		BE CALLD	03058	46 03118 01200
01040		TF NEWDIM,MCS+39	03070	26 05934 17817
01050		TFM DIMMER-8,MAP	03082	16 05340 -5935
01060		BTM DIMMER,++12	03094	17 05346 -3106
01070		BNR CALRPL,MAP	03106	45 03246 05935
01080	CALLD	TFM IORT,++23,,	03118	16 00565 -3141
01090		B IOGT,DDA2,7	03130	49 00566 -3434
01100		TDM REPLAC,0,10	03142	15 02202 000-0
01110	CALCOM	TFM IORT,++23,,	03154	16 00565 -3177
01120		B IOGT,COM2,7	03166	49 00566 -3480
01130		TFM IORT,++23	03178	16 00565 -3201
01140		B IOGT,DDA4,7	03190	49 00566 -3457
01150		TFM SELEC+30,05800	03202	16 02432 -5800
01160		TR DDA,DDA5,,	03214	31 02434 03503
01170		TR DCF,DCF5,,	03226	31 02442 03511
01180		B SELEC	03238	49 02402 00000
01190		DORG =-3	03246	
01200	CALRPL	BNF ++32,MAP+19	03246	44 03278 05954
01210		TFM DIMERR+22,7578,8	03258	16 06341 0P578
01220		B UP1	03270	49 05826 00000
01230		DORG =-3	03278	
01240		C MCS+35,ZERO12	03278	24 17813 06390
01250		BE ++24	03290	46 03314 01200
01260		BTM EQUIV,++12	03302	17 05538 -3314
01270		TFM IORT,++23,,	03314	16 00565 -3337
01280		B IOGT,DDA3,7	03326	49 00566 -3526
01290		TDM REPLAC,1	03338	15 02202 00001
01300		B CALCOM	03350	49 03154 00000
01310		DORG =-3	03358	
01320	SELERR	TFM DIMERR+22,7579,8	03358	16 06341 0P579
01330		B UP1	03370	49 05826 00000
01340		DORG =-3	03378	
01350	DMP	BNF MONCAL,MCS+23	03378	44 00796 17801
01360		TR DDA,DDA6,,	03390	31 02434 05955
01370		TR DCF,DCF6	03402	31 02442 05963
01380		TFM SELEC+30,02500	03414	16 02432 -2500
01390		B SELEC	03426	49 02402 00000

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01400	DORG #-3		03434	
01410 DDA2	DSC 2,22		03434	2
	22			
01420	DSA DCF2		03440	5 X 1
01430	DSC 1,1		03440	-3442
	'		03441	1
01440 DCF2	DSC 1,1,,	DLOAD	03442	1
	1			
01450	DC 5,18369		03447	5
	J8369			
01460	DC 3,027		03450	3
	-27			
01470	DC 5,05800		03455	5
	-5800			
01480	DSC 1,1		03456	1
	'			
01490 DDA4	DSC 2,22		03457	2
	22			
01500	DSA DCF4		03463	5 X 1
01510	DSC 1,1		03463	-3465
	'		03464	1
01520 DCF4	DSC 1,1,,	COMMON	03465	1
	1			
01530	DC 5,18480		03470	5
	J8480			
01540	DC 3,031		03473	3
	-31			
01550	DC 5,08600		03478	5
	-8600			
01560	DSC 1,1		03479	1
	'			
01570 COM2	DSC 2,22		03480	2
	22			
01580	DSA COM22		03486	5 X 1
01590	DSC 1,1		03486	-3488
	'		03487	1
01600 COM22	DSC 1,1		03488	1
	1			
01610	DC 5,18512		03493	5
	J8512			
01620	DC 3,030		03496	3
	-30			
01630	DC 5,10600		03501	5
	J0600			
01640	DSC 1,1		03502	1
	'			
01650 DDA5	DSC 2,22		03503	2
	22			
01660	DSA DCF5		03509	5 X 1

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01670	DSC 1,1		03509	-3511
	'		03510	1
01680 DCF5	DSC 1,1,,	SP LIST SUBROUTINES	03511	1
	1			
01690	DC 5,18298		03516	5
	J8298			
01700	DC 3,033		03519	3
	-33			
01710	DC 5,02458		03524	5
	-2458			
01720	DSC 1,1		03525	1
	'			
01730 DDA3	DSC 2,22		03526	2
	22			
01740	DSA DCF3		03532	5 X 1
01750	DSC 1,1		03532	-3534
	'		03533	1
01760 DCF3	DSC 1,1,,	DREPL	03534	1
	1			
01770	DC 5,18400		03539	5
	J8400			
01780	DC 3,028		03542	3
	-28			
01790	DC 5,05800		03547	5
	-5800			
01800	DSC 1,1		03548	1
	'			
01810 DDAP6	DSC 2,22		03549	2
	22			
01820	DSA DCFP6		03555	5 X 1
01830	DSC 1,1		03555	-3557
	'		03556	1
01840 DCFP6	DSC 1,1		03557	1
	1			
01850	DC 5,18247		03562	5
	J8247			
01860	DC 3,013		03565	3
	-13			
01870	DC 5,05800		03570	5
	-5800			
01880	DSC 1,1		03571	1
	'			
01890 EQUDDA	DSC 2,22		03572	2
	22			
01900	DSA EQUDCF		03578	5 X 1
01910	DSC 1,1		03578	-3580
	'		03579	1
01920 EQUDCF	DSC 1,1		03580	1
	1			

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01930	DC	5,18278	03585	5			
	J8278						
01940	DC	3,020	03588	3			
	-20						
01950	DC	5,08600	03593	5			
	-8600						
01960	DSC	1,1	03594	1			
	*						
01970	CONTC	TFM	CARDIO+2,0,10	03596	16	06397	000-0
01980	TD	CARDIO+2,426	03608	25	06397	00426	
01990	CF	CARDIO+2	03620	33	06397	00000	
02000	AM	CARDIO+2,5,10	03632	11	06397	000-5	
02010	CM	CARDIO+2,06,10	03644	14	06397	000-6	
02020	BNE	**+60	03656	47	03716	01200	
02030	RCTY		03668	34	00000	00102	
02040	TFM	IORT,**+23	03680	16	00565	-3703	
02050	B	IOPT,ENTMES-4,7	03692	49	00532	-6236	
02060	RCTY		03704	34	00000	00102	
02070	TFM	IORT,**+23	03716	16	00565	-3739	
02080	B	IOGT,CARDIO-4,7	03728	49	00566	-6391	
02090	CM	CARDIO+2,06,10	03740	14	06397	000-6	
02100	BNE	**+24	03752	47	03776	01200	
02110	BC4	CONTC+72	03764	46	03668	00400	
02120	TFM	**+23,INPUT+159	03776	16	03799	J3772	
02130	BDTEST	BD	**+32,INPUT	03788	43	03820	13613
02140	SM	*-1,2,10	03800	12	03799	000-2	
02150	B	**+24	03812	49	03788	00000	
02160	DORG	**+3	03820				
02170	AM	BDTEST+11,3,10	03820	11	03799	000-3	
02180	CM	BDTEST+11,INPUT+10	03832	14	03799	J3623	
02190	BH	**+32	03844	46	03876	01100	
02200	TDM	INPUT+12,,,	03856	15	13625	00000	
02210	DSC	1,1,*	03867				
	*						
02220	B	**+20	03868	49	03888	00000	
02230	DORG	**+3	03876				
02240	TDM	BDTEST+11,,6	03876	15	0379R	00000	
02250	DSC	1,1,*	03887				
	*						
02260	CM	CARDIO+2,06,10	03888	14	06397	000-6	
02270	BE	**+72	03900	46	03972	01200	
02280	TFM	CARDIO+2,06,10	03912	16	06397	000-6	
02290	RCTY		03924	34	00000	00102	
02300	TFM	IORT,**+23	03936	16	00565	-3959	
02310	B	IOPT,CARDIO-4,7	03948	49	00532	-6391	
02320	RCTY		03960	34	00000	00102	
02330	CM	BDTEST+11,INPUT+10	03972	14	03799	J3623	
02340	BH	**+32	03984	46	04016	01100	
02350	TDM	INPUT+12,0	03996	15	13625	00000	
02360	B	**+20	04008	49	04028	00000	
02370	DORG	**+3	04016				
02380	TDM	BDTEST+11,0,6	04016	15	0379R	00000	
02390	TDM	MCS+23,0,10	04028	15	17801	000-0	
02400	SF	INPUT-1	04040	32	13612	00000	
02410	C	INPUT+10,WRAD	04052	24	13623	05989	
02420	BNE	**+56	04064	47	04120	01200	

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02430	TR	DDA,DDAP1	04076	31	02434	05990	
02440	TR	DCF,DCFP1	04088	31	02442	05998	
02450	TFM	SELEC+30,02502	04100	16	02432	-2502	
02460	B	SELEC	04112	49	02402	00000	
02470	DORG	**+3	04120				
02480	C	INPUT+10,ALTR	04120	24	13623	06024	
02490	BNE	**+56	04132	47	04188	01200	
02500	TR	DDA,DDAP2	04144	31	02434	06025	
02510	TR	DCF,DCFP2	04156	31	02442	06033	
02520	TFM	SELEC+30,3000	04168	16	02432	-3000	
02530	B	SELEC	04180	49	02402	00000	
02540	DORG	**+3	04188				
02550	C	INPUT+10,DUMP	04188	24	13623	06059	
02560	BE	DMP+12	04200	46	03390	01200	
02570	C	INPUT+10,LOAD	04212	24	13623	06071	
02580	BE	CALLD	04224	46	03118	01200	
02590	C	INPUT+10,REPL	04236	24	13623	06083	
02600	BE	CALRPL+68	04248	46	03314	01200	
02610	C	INPUT+10,COPY	04260	24	13623	06095	
02620	BNE	**+56	04272	47	04328	01200	
02630	TR	DDA,DDAP5	04284	31	02434	06096	
02640	TR	DCF,DCFP5	04296	31	02442	06104	
02650	TFM	SELEC+30,02700	04308	16	02432	-2700	
02660	B	SELEC	04320	49	02402	00000	
02670	DORG	**+3	04328				
02680	C	INPUT+10,DELET	04328	24	13623	06130	
02690	BNE	**+92	04340	47	04432	01200	
02700	TFM	IORT,**+23	04352	16	00565	-4375	
02710	B	IOGT,DDAP6,7	04364	49	00566	-3549	
02720	TFM	IORT,**+23	04376	16	00565	-4399	
02730	B	IOGT,EQUDDA,7	04388	49	00566	-3572	
02740	TFM	IORT,**+23	04400	16	00565	-4423	
02750	B	IOGT,COM2,7	04412	49	00566	-3480	
02760	B	CALCOM+48	04424	49	03202	00000	
02770	DORG	**+3	04432				
02780	C	INPUT+10,FINE	04432	24	13623	06142	
02790	BNE	**+56	04444	47	04500	01200	
02800	TR	DDA,DDAP7	04456	31	02434	06143	
02810	TR	DCF,DCFP7	04468	31	02442	06151	
02820	TFM	SELEC+30,05000	04480	16	02432	-5000	
02830	B	SELEC	04492	49	02402	00000	
02840	DORG	**+3	04500				
02850	C	INPUT+10,LABL	04500	24	13623	06177	
02860	BNE	**+56	04512	47	04568	01200	
02870	TR	DDA,DDAP8	04524	31	02434	06178	
02880	TR	DCF,DCFP8	04536	31	02442	06186	
02890	TFM	SELEC+30,02502	04548	16	02432	-2502	
02900	B	SELEC	04560	49	02402	00000	
02910	DORG	**+3	04568				
02920	C	INPUT+10,FLIB	04568	24	13623	06212	
02930	BNE	**+56	04580	47	04636	01200	
02940	TR	DDA,DDAP9	04592	31	02434	06213	
02950	TR	DCF,DCFP9	04604	31	02442	06221	
02960	TFM	SELEC+30,03040	04616	16	02432	-3040	
02970	B	SELEC	04628	49	02402	00000	
02980	DORG	**+3	04636				

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02990	RCTY		04636	34	00000	00102
03000	TFM	IORT,++23	04648	16	00565	-4671
03010	B	IOPT,ERCD-4,7	04660	49	00532	-6286
03020	H		04672	48	00000	00000
03030	B	MONCAL	04684	49	00796	00000
03040	DORG	*-3	04692			
03050	NOCOMP	CM HOLD2,5,10	04692	14	05907	000-5
03060	BNE	NOCOMP-56	04704	47	04636	01200
03070	RTURNL	BNF MONCAL,428,,	04716	44	00796	00428
03080	TD	UP1+14,REPLAC	04728	25	05840	02202
03090	TFM	IORT,++23,,	04740	16	00565	-4763
03100	B	IOGT,SEC2,7	04752	49	00566	-5082
03110	TD	REPLAC,UP1+14	04764	25	02202	05840
03120	TFM	HOLD2,0,10	04776	16	05907	000-0
03130	TD	HOLD2,MCS+88	04788	25	05907	17866
03140	MM	HOLD2,5,10	04800	13	05907	000-5
03150	BD	**20,99	04812	43	04832	00099
03160	B	**20	04824	49	04844	00000
03170	DORG	*-3	04832			
03180	SM	MCS+88,1,10	04832	12	17866	000-1
03190	TF	HOLD5,434,,	04844	26	05897	00434
03200	S	HOLD5,MCS+88	04856	22	05897	17866
03210	BD	**32,HOLD5	04868	43	04900	05897
03220	BD	**20,HOLD5-1	04880	43	04900	05896
03230	B	**20	04892	49	04912	00000
03240	DORG	*-3	04900			
03250	AM	HOLD5-2,1,10	04900	11	05895	000-1
03260	TF	WR2+8,HOLD5-2	04912	26	02267	05895
03270	CM	MCS+88,02302	04924	14	17866	-2302
03280	BNL	**56	04936	46	04992	01300
03290	TFM	DIMERR+22,7179,8	04948	16	06341	09179
03300	RCTY		04960	34	00000	00102
03310	WATY	DIMERR	04972	39	06319	00100
03320	B	NOCOMP-20	04984	49	04672	00000
03330	DORG	*-3	04992			
03340	TF	WR2+13,MCS+88	04992	26	02272	17866
03350	BNF	**24,MCS+12	05004	44	05028	17790
03360	SF	WR2+13	05016	32	02272	00000
03370	TFM	WR2+5,00800	05028	16	02264	-0800
03380	TFM	IORT,RDWR	05040	16	00565	-2207
03390	B7	IOGT	05052	49	00566	
03400	RD1	DSC 2,02	05059			2
	O2					
03410	DSA	RD2	05065		5 X	1
			05065		-5067	
			05066		1	
03420	DSC	1,*				
			05067		1	
03430	RD2	DSC 1,1				
			05072		5	
03440	DC	5,01400				
			05075		3	
03450	DC	3,177				
			05080		5	
03460	DC	5,02302				

03470	DSC	1,*	05081		1	
			05082		2	
03480	SEC2	DSC 2,22	05088		5 X	1
03490	DSA	SEC22	05088		-5090	
			05089		1	
03500	DSC	1,*	05090		1	
			05095		5	
03510	SEC22	DSC 1,1	05098		3	
			05103		5	
03520	DC	5,18260	05104		1	
			05106	17	05246	-5118
03530	DC	3,1	05118	16	00565	-5141
			05130	49	00566	-5908
03540	DC	5,02202	05142	26	13687	06390
			05154	44	05174	17800
03550	DSC	1,*	05166	49	05198	00000
			05174			
03560	SOLDON	BTM CLRIN,++12	05174	16	00565	-5197
03570	TFM	IORT,++23	05186	49	00566	-5313
03580	B	IOGT,DDAL,7	05198	16	13709	000M4
03590	TF	INPUT+74,ZEROL2	05210	16	13711	000M9
03600	BNF	**20,MCS+22	05222	43	03314	02202
03610	B	**32	05234	49	03118	00000
03620	DORG	*-3	05246	16	05264	J3612
03630	TFM	IORT,++23	05258	15	13612	00000
03640	B	IOGT,CCD,7	05270	11	05264	000-1
03650	TFM	INPUT+96,44,10	05282	14	05264	J3774
03660	TFM	INPUT+98,49,10	05294	47	05258	01300
03670	BD	CALRPL+68,REPLAC	05306	49	0524N	
03680	B	CALLD	05313		2	
03690	CLRIN	TFM **18,INPUT-1	05319		5 X	1
03700	TDM	INPUT-1,0	05319		-5321	
03710	AM	*-6,1,10	05320		1	
03720	CM	*-18,INPUT+161	05321		1	
03730	BL	*-36	05326		5	
03740	B7	CLRIN-1,,6	05329		3	
03750	CCD	DSC 2,02	05334		5 X	1
	O2		05334		J3612	
03760	DSA	CCD2	05335		1	
03770	DSC	1,*				
03780	CCD2	DSC 1,1				
03790	DC	5,01798				
03800	DC	3,2				
03810	DSA	INPUT-1				
03820	DSC	1,*				

03840	DC	5,0		05340	5		
		-0000					
03850	DC	5,0		05345	5		
		-0000					
03860	DIMMER	CM	NEWDIM,4994	05346	14	05934	-4994
03870	BH	SELERR		05358	46	03358	01100
03880	TF	HOLD6,ZER06		05370	26	06349	06355
03890	TF	HOLD6,NEWDIM		05382	26	06349	05934
03900	A	HOLD6,HOLD6		05394	21	06349	06349
03910	CF	HOLD6-3		05406	33	06346	00000
03920	SF	HOLD6-4		05418	32	06345	00000
03930	AM	HOLD6,48000,7		05430	11	06349	M8000
03940	TF	DMREAD+5,HOLD6-1		05442	26	06369	06348
03950	TFM	IORT,++23		05454	16	00565	-5477
03960	B	IOGT,DDREAD,7		05466	49	00566	-6356
03970	TFM	TREC+11,READIN		05478	16	05525	-6468
03980	TD	++23,HOLD6		05490	25	05513	06349
03990	AM	TREC+10,0,10		05502	11	05524	000-0
04000	TREC	TR	DIMMER-6,,6	05514	31	0534-	00000
04010	B	DIMMER-1,,6		05526	49	0534N	00000
04020	EQUIV	TFM	NEWDIM,0002,8	05538	16	05934	0-002
04030	TFM	DIMMER-6,MAP		05550	16	05340	-5935
04040	BTM	DIMMER,++12		05562	17	05346	-5574
04050	TFM	MAP+8,4,9		05574	16	05943	00-04
04060	TFM	MAP+13,READIN		05586	16	05948	-6468
04070	TDM	MAP+14,,		05598	15	05949	00000
04080	DSC	1,,*		05609			1
04090	TFM	IORT,++23		05610	16	00565	-5633
04100	B	IOGT,MAPDDA,7		05622	49	00566	-5898
04110	TFM	++47,READIN+11		05634	16	05681	-6479
04120	CM	BNR+11,READIN+411		05646	14	05681	-6879
04130	BE	RD		05658	46	05746	01200
04140	BNR	BNR	++32,READIN+11	05670	45	05702	06479
04150	TFM	DIMERR+22,7577,8		05682	16	06341	0P577
04160	B	UP1		05694	49	05826	00000
04170	DORG	-3		05702			
04180	C	MCS+35,BNR+11,11		05702	24	17813	0568J
04190	BE	ERREPL		05714	46	05766	01200
04200	AM	BNR+11,16,10		05726	11	05681	000J6
04210	B	BNR-24		05738	49	05646	00000
04220	DORG	-3		05746			
04230	RD	AM	MAP+5,4,10	05746	11	05940	000-4
04240	B	BNR-60		05758	49	05610	00000
04250	DORG	-3		05766			
04260	ERREPL	AM	BNR+11,4,10	05766	11	05681	000-4
04270	C	MCS+39,BNR+11,11		05778	24	17817	0568J
04280	BE	EQUIV-1,,6		05790	46	0553P	01200
04290	TFM	DIMERR+22,7576,8		05802	16	06341	0P576
04300	TF	MCS+35,ZERD12		05814	26	17813	06390
04310	UP1	TFM	MCS+39,0,8	05826	16	17817	0-000
04320	RCTY			05838	34	00000	00102
04330	WATY	DIMERR		05850	39	06319	00100
04340	TFM	IORT,++23		05862	16	00565	-5885
04350	B	IOPT,DDA1,7		05874	49	00532	-5908
04360	B	CALLD		05886	49	03118	00000

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04370	HOLD5	DC	5,0,*	05897	5		
			-0000				
04380	IORT	DS	,565	00565	0		
04390	IOPT	DS	,532	00532	0		
04400	MAPDDA	DSC	2,22	05898	2		
			22				
04410	DSA	MAP		05904	5 X	1	
04420	DSC	1,'		05904		-5935	
				05905		1	
04430	IOGT	DS	,566	00566	0		
04440	HOLD2	DC	2,0	05907	2		
			-0				
04450	SYSCAL	DS	,475	00475	0		
04460	DDA1	DSC	2,22	05908	2		
			22				
04470	DSA	DCF1		05914	5 X	1	
04480	DSC	1,'		05914		-5916	
				05915		1	
04490	DCF1	DSC	1,1,,	05916	1		
			1				
04500	DC	5,19663		05921	5		
		J9663					
04510	DC	3,001		05924	3		
		-01					
04520	DSA	MCS		05929	5 X	1	
04530	DSC	1,'		05929		J7778	
				05930		1	
04540	MCS	DS	,17778	17778	0		
04550	NEWDIM	DC	4,0	05934	4		
			-000				
04560	MAP	DSC	20,0	05935	20		
			00000000000000000000				
04570	MONCAL	DS	,796	00796	0		
04580	INPUT	DAS	81,13613	13613	81 X	2	
04590	DDA6	DSC	2,22	05955	2		
			22				
04600	DSA	DCF6		05961	5 X	1	
04610	DSC	1,'		05961		-5963	
				05962		1	
04620	DCF6	DSC	1,1,,	05963	1		
			1				
04630	DC	5,18430		05968	5		
		J8430					
04640	DC	3,050		05971	3		
		-50					
04650	DSC	5,02500		05972	5		
		02500					
04660	DSC	1,'		05977	1		

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04670 WRAD	DC 12,144466594144	05989	12
	J44466594144		
04680 DDAP1	DSC 2,22	05990	2
	22		
04690	DSA DCFP1	05996	5 X 1
04700	DSC 1,1	05996	-5998
		05997	1
04710 DCFP1	DSC 1,1	05998	1
	1		
04720	DC 5,18220	06003	5
	J8220		
04730	DC 3,027	06006	3
	-27		
04740	DSC 5,02502	06007	5
	02502		
04750	DSC 1,1	06012	1
04760 ALTR	DC 12,144441536359	06024	12
	J44441536359		
04770 DDAP2	DSC 2,22	06025	2
	22		
04780	DSA DCFP2	06031	5 X 1
04790	DSC 1,1	06031	-6033
		06032	1
04800 DCFP2	DSC 1,1	06033	1
	1		
04810	DC 5,19300	06038	5
	J9300		
04820	DC 3,038	06041	3
	-38		
04830	DSC 5,03000	06042	5
	03000		
04840	DSC 1,1	06047	1
04850 DUMP	DC 12,144444645457	06059	12
	J44444645457		
04860 LOAD	DC 12,144453564144	06071	12
	J44453564144		
04870 REPL	DC 12,144459455753	06083	12
	J44459455753		
04880 COPY	DC 12,144443565768	06095	12
	J44443565768		
04890 DDAP5	DSC 2,22	06096	2
	22		
04900	DSA DCFP5	06102	5 X 1
04910	DSC 1,1	06102	-6104
		06103	1
04920 DCFP5	DSC 1,1	06104	1
	1		
04930	DC 5,19363	06109	5
	J9363		

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04940	DC 3,037	06112	3
	-37		
04950	DC 5,02700	06117	5
	-2700		
04960	DSC 1,1	06118	1
04970 DELET	DC 12,144445534563	06130	12
	J44445534563		
04980 FINE	DC 12,144446495545	06142	12
	J44446495545		
04990 DDAP7	DSC 2,22	06143	2
	22		
05000	DSA DCFP7	06149	5 X 1
05010	DSC 1,1	06149	-6151
		06150	1
05020 DCFP7	DSC 1,1	06151	1
	1		
05030	DC 5,18139	06156	5
	J8139		
05040	DC 3,038	06159	3
	-38		
05050	DSC 5,05000	06160	5
	05000		
05060	DSC 1,1	06165	1
05070 LABL	DC 12,144453414253	06177	12
	J44453414253		
05080 DDAP8	DSC 2,22	06178	2
	22		
05090	DSA DCFP8	06184	5 X 1
05100	DSC 1,1	06184	-6186
		06185	1
05110 DCFP8	DSC 1,1	06186	1
	1		
05120	DC 5,18200	06191	5
	J8200		
05130	DC 3,020	06194	3
	-20		
05140	DSC 5,02502	06195	5
	02502		
05150	DSC 1,1	06200	1
05160 FL18	DC 12,144446534942	06212	12
	J44446534942		
05170 DDAP9	DSC 2,22	06213	2
	22		
05180	DSA DCFP9	06219	5 X 1
05190	DSC 1,1	06219	-6221
		06220	1
05200 DCFP9	DSC 1,1	06221	1
	1		

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05760	DC	5,12458	06464	5
	J2458			
05770	DSC	1,'	06465	1
	'			
05780	DAC	1,0	06467	1 X 2
	0			
05790	READIN	DSS 400	06468	400
05800	SEL	TFM IORT,**23	06868	16 00565 -6891
05810	B	IOPT,SEL1,7	06880	49 00532 -6916
05820	TRA		06892	36 00000 00500
			06904	49 00000 00000
			06916	2
05830	SEL1	DSC 2,22		
	22			
05840	DSA	SEL2	06922	5 X 1
05850	DC	1,'	06922	-6924
	'		06923	1
05860	SEL2	DSC 1,1	06924	1
	1			
05870	DC	5,18554	06929	5
	J8554			
05880	DC	3,041	06932	3
	-41			
05890	DC	5,02402	06937	5
	-2402			
05900	DC	1,'	06938	1
	'			
05910	TCD	SEL	06868	
05920	DEND		00000	

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BDTEST	03788	CALLD	03118	DDA1	05908	FINE	06142	SEL1	06916
CALCOM	03154	CCD2	05321	DDA2	03434	FLIB	06212	SEL2	06924
CALRPL	03246	CCD	05313	DDA3	03526	HOLD2	05907	SELEC	02402
CARDIO	06395	CLRIN	05246	DDA4	03457	HOLD5	05897	SEL	06868
COMPAR	02846	CNT1	06432	DDA5	03503	HOLD6	06349	SL1	02274
CONFCO	03596	COM22	03488	DDA6	05955	INPUT	13613	SL2	02282
CORSIZ	12483	COM2	03480	DDAP1	05990	IOCAL	00716	TREC	05514
DDREAD	06356	COPY	06095	DDAP2	06025	IOGT	00566	UP1	05826
DIMERR	06319	COR2	02350	DDAP5	06096	IOPT	00532	WR2	02259
DIMMER	05346	COR	02302	DDAP6	03549	IORT	00565	WRAD	05989
DMREAD	06364	CT	02626	DDAP7	06143	LABL	06177	WR	02251
ENTMES	06240	DCF1	05916	DDAP8	06178	LIS	02566	ZERO6	06355
EQUODCF	03580	DCF2	03442	DDAP9	06213	LIST1	06422	SELECT	02458
EQUDDA	03572	DCF3	03534	DDA	02434	LOAD	06071	SELERR	03358
ERREPL	05766	DCF4	03465	DELET	06130	MAP	05935	SOLDON	05106
MAPDDA	05898	DCF5	03511	DIM1	06399	MCS	17778	SPLPK0	12645
NONCAL	00796	DCF6	05963	DIM2	06407	NEXT	02706	SPLPK1	12668
NEWDIM	05934	DCFP1	05998	DIM4	17980	RD1	05059	SPLPK2	12691
NOCOMP	04492	DCFP2	06033	DMP	03378	RD2	05067	SPLPK3	12714
READIN	06468	DCFP5	06104	DN	02774	RD	05746	SPLSUB	06443
REPLAC	02202	DCFP6	03557	DUMP	06059	RDWR	02207	SUBSPL	06451
RTURNL	04716	DCFP7	06151	ENTER	06245	READ	09778	SYSICAL	00475
ALTR	06024	DCFP8	06186	EQUIV	05538	REPL	06083	THROWS	12737
BFLG	02638	DCFP9	06221	ERCD	06290	SEC22	05090	ZERO12	06390
BNR	05670	DCF	02442	ERRCD	06295	SEC2	05082		

END OF ONE ASSEMBLY.

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00010	DORG	2502	02502			
00020	DWRAD	SF CARD+31	02502	32	13644	00000
00030	SF	CARD+33	02514	32	13646	00000
00040	TFM	CNT,0,10	02526	16	05132	000-0
00050	CM	CARD+32,57,10	02538	14	13645	000N7
00060	BNE	ZS	02550	47	02582	01200
00070	SF	RDONLY	02562	32	05135	00000
00080	B	**20	02574	49	02594	00000
00090	DORG	*-3	02582			
00100	ZS	CF RDONLY	02582	33	05135	00000
00110	CM	CARD+34,69,10	02594	14	13647	00009
00120	BNE	NOZ	02606	47	02638	01200
00130	SF	ZERO	02618	32	05138	00000
00140	B	**20	02630	49	02650	00000
00150	DORG	*-3	02638			
00160	NOZ	CF ZERO	02638	33	05138	00000
00170	TFM	AN+6,NUMBER	02650	16	02680	-5091
00180	TFM	AN+11,CARD+12	02662	16	02685	J3625
00190	AN	TD NUMER,CARD+12	02674	25	05091	13625
00200	AM	AN+6,1,10	02686	11	02680	000-1
00210	AM	AN+11,2,10	02698	11	02685	000-2
00220	CM	AN+6,NUMBER+26	02710	14	02680	-5117
00230	BNE	AN	02722	47	02674	01200
00240	SF	NUMER	02734	32	05091	00000
00250	SF	NUMER+14	02746	32	05105	00000
00260	SF	NUMER+20	02758	32	05111	00000
00270	TFM	SETFLG+11,CARD+11	02770	16	04555	J3624
00280	TFM	COMFLG+11,CARD+23	02782	16	04615	J3636
00290	BTM	SETFLG,**12	02794	17	04544	-2806
00300	TFM	SETFLG+11,CARD+39	02806	16	04555	J3652
00310	TFM	COMFLG+11,CARD+63	02818	16	04615	J3676
00320	BTM	SETFLG,**12	02830	17	04544	-2842
00330	TF	HOLDS,ENDAD	02842	26	05123	05116
00340	S	HOLDS,STARTA	02854	22	05123	05110
00350	BL	ERADDR	02866	47	04482	01300
00360	INIT	RCTY	02878	34	00000	00102
00370	SF	BUTTON	02890	32	00455	00000
00380	SF	ADDRS-4	02902	32	05092	00000
00390	SF	STARTA-4	02914	32	05106	00000
00400	SF	ENDAD-4	02926	32	05112	00000
00410	RCTY		02938	34	00000	00102
00420	WATY	MES1	02950	39	04767	00100
00430	BNF	**32,ZERO	02962	44	02994	05138
00440	WATY	MES3	02974	39	04799	00100
00450	B	**20	02986	49	03006	00000
00460	DORG	*-3	02994			
00470	WATY	MES2	02994	39	04789	00100
00480	RCTY		03006	34	00000	00102
00490	WATY	MES4	03018	39	04809	00100
00500	RCTY		03030	34	00000	00102
00510	TDM	ADDRS+1,...	03042	15	05097	00000
00520	DSC	1,*,*	03053		1	
00530	TDM	ENDAD+1,...	03054	15	05117	00000
00540	DSC	1,*,*	03065		1	

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00550	TF	HOLDA,ENDAD+1	03066	26	05130	05117
00560	TD	HOLDA-6,ENDAD-5	03078	25	05124	05111
00570	TDM	STARTA+1,...	03090	15	05111	00000
00580	DSC	1,*,*	03101		1	
00590	WNTY	ADDRS-5	03102	38	05091	00100
00600	SPTY		03114	34	00000	00101
00610	WNTY	STARTA-5	03126	38	05105	00100
00620	SPTY		03138	34	00000	00101
00630	WNTY	HOLDA-6	03150	38	05124	00100
00640	TF	ENDAD+1,HOLDA	03162	26	05117	05130
00650	RCTY		03174	34	00000	00102
00660	BTM	KYMESS,**12	03186	17	04662	-3198
00670	RCTY		03198	34	00000	00102
00680	TDM	INIT+2,0	03210	15	02880	00000
00690	TF	NEW+11,STARTA	03222	26	03645	05110
00700	SM	NEW+11,1,10	03234	12	03645	000-1
00710	SEEKTR	TF DCF+5,ADDRS	03246	26	04981	05096
00720	TD	DCF,ADDRS-5	03258	25	04976	05091
00730	CF	DCF	03270	33	04976	00000
00740	TFM	HOLD2,0,10	03282	16	05118	000-0
00750	TD	HOLD2,ADDRS-1	03294	25	05118	05095
00760	MM	HOLD2,5,10	03306	13	05118	000-5
00770	BD	**20,99	03318	43	03338	00099
00780	B	**20	03330	49	03350	00000
00790	DORG	*-3	03338			
00800	SM	HOLD2,1,10	03338	12	05118	000-1
00810	TD	DCF+4,HOLD2	03350	25	04980	05118
00820	TDM	DCF+5,0	03362	15	04981	00000
00830	TFM	DCF+13,TRACK	03374	16	04989	J3776
00840	TF	WORKAD,ADDRS	03386	26	05145	05096
00850	RDTRAK	TFM DID+35,TEST,67	03398	16	0085N	-4006
00860	TFM	IORT,**23	03410	16	00565	-3433
00870	B	IOGT,DATA,7	03422	49	00566	-5153
00880	BD	PUTNEW,INIT+2	03434	43	03586	02880
00890	TF	TEMPY,ADDRS	03446	26	05152	05096
00900	TD	**23,TEMPY-1	03458	25	03481	05151
00910	TD	**23,AJUST	03470	25	03493	04529
00920	SM	TEMPY-1,0,10	03482	12	05151	000-0
00930	TDM	TEMPY,0	03494	15	05152	00000
00940	S	WORKAD,TEMPY	03506	22	05145	05152
00950	MM	WORKAD,105,9	03518	13	05145	00J05
00960	SF	95	03530	32	00095	00000
00970	AM	99,TRACK-101	03542	11	00099	J3675
00980	TF	NEW+6,99	03554	26	03640	00099
00990	TDM	INIT+2,1	03566	15	02880	00001
01000	B	PUTNEW+12	03578	49	03598	00000
01010	DORG	*-3	03586			
01020	PUTNEW	TFM NEW+6,TRACK-101	03586	16	03640	J3675
01030	AM	NEW+11,1,10	03598	11	03645	000-1
01040	CF	NEW+11	03610	33	03645	00000
01050	AM	NEW+6,105,9	03622	11	03640	00J05
01060	NEW	TFM	03634	16	00000	-0000
01070	BNF	**20,RDONLY	03646	44	03666	05135
01080	B	CKZERO	03658	49	03702	00000
01090	DORG	*-3	03666			

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1620 MONITOR 11 DUP ROUTINE *DWRAD				PAGE 3		
01100	TF	**30,NEW+6	03666	26	03696	03640
01110	SM	**18,4,10	03678	12	03696	000-4
01120	CF		03690	33	00000	00000
01130	CKZERO	BNF CKEND,ZERO	03702	44	03786	05138
01140	TF	**30,NEW+6	03714	26	03744	03640
01150	AM	**18,1,10	03726	11	03744	000-1
01160	TR	,HUN	03738	31	00000	04991
01170	TF	**30,-6	03750	26	03780	03744
01180	AM	**18,99,10	03762	11	03780	000R9
01190	TDM		03774	15	00000	00000
01200	CKEND	C NEW+11,ENDAD	03786	24	03645	05116
01210	BNE	**92	03798	47	03890	01200
01220	TFM	DIO+35,TEST,67	03810	16	0085N	-4006
01230	TDM	WAGAIN,0	03822	15	04435	00000
01240	TFM	IORT,**23	03834	16	00565	-3857
01250	B	IOPT,DATA,7	03846	49	00532	-5153
01260	BD	WTNOFD,THRU	03858	43	04098	04433
01270	BD	**60,WAGAIN	03870	43	03810	04435
01280	B	EXIT2	03882	49	04426	00000
01290	DORG	**3	03890			
01300	CM	NEW+6,TRACK+1999	03890	14	03640	J5775
01310	BNE	PUTNEW+12	03902	47	03598	01200
01320	RITEBK	TFM DIO+35,TEST,67	03914	16	0085N	-4006
01330	TDM	WAGAIN,0	03926	15	04435	00000
01340	TFM	IORT,**23	03938	16	00565	-3961
01350	B	IOPT,DATA,7	03950	49	00532	-5153
01360	BD	WTNOFD,THRU	03962	43	04098	04433
01370	BD	**60,WAGAIN	03974	43	03914	04435
01380	AM	ADDRS-1,02,10	03986	11	05095	000-2
01390	B	SEEKTR	03998	49	03246	00000
01400	DORG	**3	04006			
01410	TEST	BI **12,3600	04006	46	04018	03600
01420	BI	ERROR,1900	04018	46	00626	01900
01430	AM	DCF+5,1,10	04030	11	04981	000-1
01440	TDM	THRU,0	04042	15	04433	00000
01450	AM	CNT,1,10	04054	11	05132	000-1
01460	CM	CNT,20,10	04066	14	05132	000K0
01470	BL	EXIT-12	04078	47	04406	01300
01480	B	EXIT-24	04090	49	04394	00000
01490	DORG	**3	04098			
01500	WTNOFD	SM DCF+5,1,10	04098	12	04981	000-1
01510	TD	NOFIND+12,DCF	04110	25	04885	04976
01520	TD	NOFIND+14,DCF+1	04122	25	04887	04977
01530	TD	NOFIND+16,DCF+2	04134	25	04889	04978
01540	TD	NOFIND+18,DCF+3	04146	25	04891	04979
01550	TD	NOFIND+20,DCF+4	04158	25	04893	04980
01560	TD	NOFIND+22,DCF+5	04170	25	04895	04981
01570	RCTY		04182	34	00000	00102
01580	TFM	IORT,**23	04194	16	00565	-4217
01590	B	IOPT,NOF-4,7	04206	49	00532	-5177
01600	TFM	IORT,**23	04218	16	00565	-4241
01610	B	IOGT,DATA,7	04230	49	00566	-5153
01620	RCTY		04242	34	00000	00102
01630	TFM	TRK,TRACK	04254	16	05173	J3776
01640	TFM	**18,TRACK+5	04266	16	04284	J3781
01650	TDM	TRACK+5,,2,	04278	15	J3781	00000

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1620 MONITOR 11 DUP ROUTINE *DWRAD				PAGE 4		
01660	DSC	1,*,*	04289		1	
01670	TFM	IORT,**23	04290	16	00565	-4313
01680	B	IOPT,TRK-4,7	04302	49	00532	-5169
01690	SPTY		04314	34	00000	00101
01700	AM	**42,105,9	04326	11	04284	00J05
01710	AM	TRK,105,9	04338	11	05173	00J05
01720	CM	TRK,TRACK+2100	04350	14	05173	J5876
01730	BNE	**84	04362	47	04278	01200
01740	H		04374	48	00000	00000
01750	B	EXIT2+12	04386	49	04438	00000
01760	DORG	**3	04394			
01770	TDM	THRU,1	04394	15	04433	00001
01780	TDM	WAGAIN,1	04406	15	04435	00001
01790	EXIT	B ERRET	04418	49	00602	00000
01800	DORG	**3	04426			
01810	EXIT2	TDM SYSCAL,3	04426	15	00475	00003
01820	CF	BUTTON	04438	33	00455	00000
01830	BTM	KYMESS,**12	04450	17	04662	-4462
01840	BV	**12	04462	46	04474	01400
01850	B	MONGAL	04474	49	00796	00000
01860	DORG	**3	04482			
01870	ERADDR	TFM DIMERR+22,7177,8	04482	16	04869	0P177
01880	RCTY		04494	34	00000	00102
01890	WATY	DIMERR	04506	39	04847	00100
01900	H		04518	48	00000	00000
01910	B	EXIT2+12	04530	49	04438	00000
01920	DORG	**3	04538			
01930	DC	5,0	04542		5	
01940	SETFLG	SF **11,CARD+11,6	04544	32	0455N	13624
01950	AM	SETFLG+11,1,10	04556	11	04555	000-1
01960	CM	SETFLG+11,70,610	04568	14	0455N	000P0
01970	BL	ER1	04580	47	04636	01300
01980	AM	SETFLG+11,1,10	04592	11	04555	000-1
01990	COMFLG	CM SETFLG+11,CARD+23	04604	14	04555	J3636
02000	BL	SETFLG	04616	47	04544	01300
02010	B	SETFLG-1,,6	04628	49	0454L	00000
02020	DORG	**3	04636			
02030	ER1	TFM DIMERR+22,0071,8	04636	16	04869	0-071
02040	B	ERADDR+12	04648	49	04494	00000
02050	DORG	**3	04656			
02060	DC	5,0	04660		5	
02070	KYMESS	BNF **32,BUTTON	04662	44	04694	00455
02080	TFM	KEYMES+24,5500,8	04674	16	04923	0N500
02090	B	**20	04686	49	04706	00000
02100	DORG	**3	04694			
02110	TFM	KEYMES+24,4646,8	04694	16	04923	0M646
02120	RCTY		04706	34	00000	00102
02130	TFM	IORT,**23	04718	16	00565	-4741
02140	B	IOPT,MESS-4,7	04730	49	00532	-5161
02150	H		04742	48	00000	00000
02160	B	KYMESS-1,,6	04754	49	0466J	00000
02170	AJUST	DC 10,0101010101,ERADDR+47	04529		10	
		-101010101				

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02180	MES1	DAC	11,WRITE AND	04767	11 X	2
02190	MES2	DAC	5,SAVE	04789	5 X	2
02200	MES3	DAC	5,ZERO	04799	5 X	2
02210	MES4	DAC	19,SEEK START STOP	04809	19 X	2
02220	DIMERR	DAC	13,DUP*ERRROR 00	04847	13 X	2
02230	NOFIND	DAC	13,ER SK 000000	04873	13 X	2
02240	KEYMES	DAC	39,DUP* TURN OFF WRITE ADDRESS KEY, START	04899	39 X	2
02250	TRACK	DSS	2100,13776	13776	2100	
02260	DCF	DSC	1,0	04976	1	
02270		DC	5,0	04981	5	
02280		DC	3,020	04984	3	
02290		DSA	TRACK	04989	5 X	1
02300		DSC	1,0	04989	J3776	
02310	HUN	DSC	50,0	04991	50	
02320		DSC	50,0	05041	50	
02330	CARD	DAS	81,13613	13613	81 X	2
02340	INPUT	DS	,CARD	13613	0	
02350	NUMER	DSS	26	05091	26	
02360	HOLD2	DC	2,0	05118	2	
02370	HOLD5	DC	5,0	05123	5	
02380	HOLDA	DC	7,0	05130	7	
02390	CNT	DC	2,0	05132	2	
02400	RDDNLY	DC	3,0	05135	3	
02410	ZERO	DC	3,0	05138	3	
02420	WORKAD	DC	7,0	05145	7	
02430	TEMPY	DC	7,0	05152	7	
02440	ADDRS	DS	,NUMER+5	05096	0	
02450	STARTA	DS	,NUMER+19	05110	0	
02460	ENDAD	DS	,NUMER+25	05116	0	
02470	BUTTON	DSC	1,0,455	00455	1	
02480	DDAA	DSC	2,26	05153	2	

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02490		DSA	DCF	05159	5 X	1
02500		DC	1,0	05159	-4976	
02510	DATA	DS	,DDAA	05153	0	
02520	THRU	DSC	1,0,EXIT2+7	04433	1	
02530	WAGAIN	DSC	1,0,EXIT2+9	04435	1	
02540	IORT	DS	,565	00565	0	
02550	IOSK	DS	,554	00554	0	
02560	IOGT	DS	,566	00566	0	
02590	DID	DS	,820	00820	0	
02580	ERRET	DS	,602	00602	0	
02570	ERROR	DS	,626	00626	0	
02600	IOPT	DS	,532	00532	0	
02610	IORBC	DS	,520	00520	0	
02620	MONCAL	DS	,796	00796	0	
02630	MESS	DSA	KEYMES	05165	5 X	1
02640		DC	3,06	05165	-4899	
02650	TRK	DSA	TRACK	05168	1	
02660		DC	3,00	05173	J3776	
02670	NOF	DSA	NOFIND	05176	3	
02680		DC	3,06	05176	1	
02690	SYSCAL	DS	,475	05181	5 X	1
02700	WRAD	TFM	IORT,++23	05181	-4873	
02710		B	IOPT,WRAD1,7	05184	3	
02720		TRA		05184	1	
02730	WRAD1	DSC	2,22	00475	0	
02740		DSA	WRAD2	05186	16	00565 -5209
02750		DC	1,0	05198	49	00532 -5234
02760	WRAD2	DSC	1,1	05210	36	00000 00500
02770		DC	5,18220	05222	49	00000 00000
02780		DC	3,027	05234	2	
02790		DC	5,02502	05240	5 X	1
		DC	-27	05240	-5242	
		DC	-2502	05241	1	
		DC	1	05242	1	
		DC	5,18220	05247	5	
		DC	3,027	05250	3	
		DC	5,02502	05255	5	

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02800	DC	1,*		05256	1
02810	TCD	WRAD		05186	
02820	DEND	DWRAD		02502	

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1620 MONITOR 11 DUP ROUTINE *DWRAD				PAGE	8				
BUTTON	00455	AJUST	04529	EXIT2	04426	MES2	04789	WRAD2	05242
CKZERO	03702	AN	02674	EXIT	04418	MES3	04799	WRAD	05186
COMFLG	04604	CARD	13613	HOLD2	05118	MES4	04809	ZERO	05138
DIMERR	04847	CKEND	03786	HOLD5	05123	MES5	05165	ZS	02582
ERADDR	04482	CNT	05132	HOLDA	05130	NEW	03634	SEEKTR	03246
KEYMES	04899	DATA	05153	HUN	04991	NOF	05181	SETFLG	04544
KYMES	04662	DCF	04976	INIT	02878	NOZ	02638	STARTA	05110
MONCAL	00796	DDAA	05153	INPUT	13613	NUMER	05091	SYSCAL	00475
NOFIND	04873	DIO	00820	IOGT	00566	TEMPY	05152	WAGAIN	04435
PUTNEW	03586	DWRAD	02502	IOPT	00532	TEST	04006	WORKAD	05145
RDNLY	05135	ENDAD	05116	IORBC	00520	THRU	04433	WTNOFD	04098
RDTRAK	03398	ERI	04636	IORT	00565	TRACK	13776		
RITEBK	03914	ERRET	00602	IOSK	00554	TRK	05173		
ADDRS	05096	ERROR	00626	MES1	04767	WRAD1	05234		

END OF ONE ASSEMBLY.

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00010	DDRG	3000	03000			
00020	IOGT	DS ,566	00566	0		
00030	IDRT	DS ,565	00565	0		
00040	IOPT	DS ,532	00532	0		
00050	DDAST	DS ,19800	19800	0		
00060	TFM	6,SNEEZY	03000	16	00006	-3268
00070	TFM	1,49,10	03012	16	00001	000M9
00080	B	FUR2	03024	49	03048	00000
00090	DDRG	*-3	03032			
00100	BOTCH	DC 5,0	03036	5		
		-0000				
00110	COUNT	DC 2,0	03038	2		
		-0				
00120	P	DS ,6	00006	0		
00130	Q	DS ,11	00011	0		
00140	L	DS ,12	00012	0		
00150	FILL	DS ,99999	99999	0		
00160	TEMP	DS 3	03041	3		
00170	SAVADD	DS 5	03046	5		
00180	FUR2	RCTY	03048	34	00000	00102
00190	SF	**+21	03060	32	03081	00000
00200	TFM	SECTAD+2,	03072	16	05484	-0000
00210	DC	1,',*-2	03081	1		
		,				
00220	DC	1,',*-1	03082	1		
		,				
00230	DC	1,',*	03083	1		
		,				
00240	WATY	ADMES	03084	39	05439	00100
00250	RCTY		03096	34	00000	00102
00260	A100	TFM IORT,**+23	03108	16	00565	-3131
00270	B	IOGT,BRC1-4,7	03120	49	00566	-6678
00280	BC4	A100-L	03132	46	03096	00400
00290	BNR	PRODL,SECTAD+1	03144	45	03220	05483
00300	BNR	PRODL,SECTAD+2	03156	45	03220	05484
00310	BNR	A200,SECTAD-5	03168	45	03422	05477
00320	TDM	475,3	03180	15	00475	00003
00330	49	796	03192	49	00796	00000
00340	DDRG	*-3	03200			
00350	BNR	**+20,SECTAD	03200	45	03220	05482
00360	B	PRODL	03212	49	03220	00000
00370	DDRG	*-3	03220			
00380	PRODL	RCTY	03220	34	00000	00102
00390	WATY	BADTYP	03232	39	03301	00100
00400	RCTY		03244	34	00000	00102
00410	48	,,,FOR AIR	03256	48	00000	00000
00420	SNEEZY	TFM IORT,**+23	03268	16	00565	-3291
00430	B	IOGT,TRWADR,7	03280	49	00566	-3398
00440	B	03000	03292	49	03000	00000
00450	DDRG	*-3	03300			
00460	BADTYP	DAC 49,SECTOR ADDRESS ILLEGAL, START TO RE-ENTER *DALTR*	03301	49	X	2
		SECTOR ADDRESS ILLEGAL, START TO RE-ENTER *DALTR*				
00470	TRWADR	DSC 2,22	03398	2		
		22				
00480	DSA	SKUNK	03404	5	X	1

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			03404	-3406		
00490	DC	1,'	03405	1		
		,				
00500	SKUNK	DSC 1,0	03406	1		
		0				
00510	DC	5,19300	03411	5		
		J9300				
00520	DC	3,050	03414	3		
		-50				
00530	DC	5,03000	03419	5		
		-3000				
00540	DC	1,'	03420	1		
		,				
00550	A200	RCTY	03422	34	00000	00102
00560	BNF	**+20,SECTAD	03434	44	03454	05482
00570	B	PRODL	03446	49	03220	00000
00580	DDRG	*-3	03454			
00590	BNF	**+20,SECTAD-1	03454	44	03474	05481
00600	B	PRODL	03466	49	03220	00000
00610	DDRG	*-3	03474			
00620	BNF	**+20,SECTAD-2	03474	44	03494	05480
00630	B	PRODL	03486	49	03220	00000
00640	DDRG	*-3	03494			
00650	BNF	**+20,SECTAD-3	03494	44	03514	05479
00660	B	PRODL	03506	49	03220	00000
00670	DDRG	*-3	03514			
00680	BNF	**+20,SECTAD-4	03514	44	03534	05478
00690	B	PRODL	03526	49	03220	00000
00700	DDRG	*-3	03534			
00710	BNF	**+20,SECTAD-5	03534	44	03554	05477
00720	B	PRODL	03546	49	03220	00000
00730	DDRG	*-3	03554			
00740	TF	A110+L+5,SECTAD	03554	26	03607	05482
00750	TFM	A110+L+13,SECTR1	03566	16	03615	-5504
00760	SF	A110+13	03578	32	03603	00000
00770	A110	B A110PL,,, NO DDORG	03590	49	03618	00000
00780	DSC	6,0	03602	6		
		000000				
00790	DC	3,001	03610	3		
		-01				
00800	DC	5,0	03615	5		
		-0000				
00810	DC	1,'	03616	1		
		,				
00820	A110PL	TFM IORT,**+23	03618	16	00565	-3641
00830	B	IOGT,BRC2,7	03630	49	00566	-6686
00840	RCTY		03642	34	00000	00102
00850	WATY	FRSTHF	03654	39	06287	00100
00860	TFM	LOOP9+P,**+2*L	03666	16	05432	-3690
00870	BTM	LOOP,SECTR1-11	03678	17	05246	-5493
00880	WATY	ORIG	03690	39	06307	00100
00890	RCTY		03702	34	00000	00102
00900	WATY	SECHF	03714	39	06327	00100
00910	TFM	LOOP9+P,**+2*L	03726	16	05432	-3750
00920	BTM	LOOP,SECTR1+39	03738	17	05246	-5543
00930	WATY	ORIG	03750	39	06307	00100

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00940	TRWFIX	RCTY	03762	34	00000	00102
00950		RCTY	03774	34	00000	00102
00960		WATY	03786	39	05607	00100
00970		RCTY	03798	34	00000	00102
00980		TFM	03810	16	05626	-0000
00990		DC	03821		5	
		-0000				
01000	A130	TFM	03822	16	00565	-3845
01010		B	03834	49	00566	-6694
01020		BC4	03846	46	03774	00400
01030		BNR	03858	45	06346	05627
01040		BNR	03870	45	06346	05628
01050		BNR	03882	45	03902	05625
01060		B	03894	49	05126	00000
01070		DDRG	03902			
01080		BNF	03902	44	03922	05626
01090		B	03914	49	06346	00000
01100		DDRG	03922			
01110		BNF	03922	44	03942	05625
01120		B	03934	49	06346	00000
01130		DDRG	03942			
01140		SF	03942	32	05625	00000
01150		CM	03954	14	05626	000J0
01160		BH	03966	46	06346	01100
01170		SM	03978	12	05626	00-01
01180		TFM	03990	16	05293	-5503
01190		A	04002	21	05292	05626
01200		TF	04014	26	03046	05293
01210		RCTY	04026	34	00000	00102
01220		TFM	04038	16	03038	000-4
01230		TFM	04050	16	05432	-4074
01240		BT	04062	27	05282	05281
01250		TFM	04074	16	04133	-5503
01260		TFM	04086	16	04128	-6183
01270		AM	04098	11	04128	000-1
01280		AM	04110	11	04133	000-1
01290	TRDIG	TD	04122	25	00000	00000
01300		CM	04134	14	04133	-5604
01310		BNE	04146	47	04098	01200
01320		SPTY	04158	34	00000	00101
01330		WATY	04170	39	05453	00100
01340		RCTY	04182	34	00000	00102
01350		TR	04194	31	05630	05849
01360	A140	TFM	04206	16	00565	-4229
01370		B	04218	49	00566	-6702
01380		BC4	04230	46	04206	00400
01390	*					
01400	*	TO PLACE AN INDICATION AFTER LAST CHARACTER ENTERED FROM THE				
01410		TYPEWRITER				
01420	SCAN	TFM	04242	16	04277	-5849
01430		SM	04254	12	04277	000-2
01440		TF	04266	26	03041	00000
01450		BD	04278	43	04370	03041
01460		BD	04290	43	04370	03040
01470		CM	04302	14	04277	-5631
01480		BNE	04314	47	04254	01200
01490		RCTY	04326	34	00000	00102

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01490		WATY	04338	39	06069	00100
01500		RCTY	04350	34	00000	00102
01510		B	04362	49	04206	00000
01520		DDRG	04370			
01530	SCAN1	TF	04370	26	03036	04277
01540		SM	04382	12	03036	-5629
01550		MM	04394	13	03036	000-5
01560		A	04406	21	00097	05626
01570		SF	04418	32	00096	00000
01580		CM	04430	14	00099	0J000
01590		BH	04442	46	06524	01100
01600		TF	04454	26	04484	04277
01610		AM	04466	11	04484	000-2
01620		TFM	04478	16	00000	000R9
01630	HEART	TFM	04490	16	04549	-5629
01640		TF	04502	26	04788	03046
01650		AM	04514	11	04788	000-1
01660		AM	04526	11	04549	000-2
01670		TF	04538	26	03041	00000
01680		BNR	04550	45	04570	03041
01690		B	04562	49	04782	00000
01700		DDRG	04570			
01710		CM	04570	14	03041	000R9
01720		BE	04582	46	04866	01200
01730		CM	04594	14	03041	000-0
01740		BE	04606	46	04526	01200
01750		CM	04618	14	03041	000L4
01760		BNE	04630	47	04662	01200
01770		TDM	04642	15	03041	00000
01780		DNB	04653		1	
01790		B	04654	49	04782	00000
01800		DDRG	04662			
01810		CM	04662	14	03041	000K0
01820		BE	04674	46	04770	01200
01830		CM	04686	14	03041	00007
01840		BE	04698	46	04514	01200
01850		CM	04710	14	03041	000M7
01860		BE	04722	46	04834	01200
01870		CM	04734	14	03041	00006
01880		BE	04746	46	04802	01200
01890		BH	04758	46	04782	01100
01900		SF	04770	32	03041	00000
01910	MOVE	TD	04782	25	00000	03041
01920		B	04794	49	04514	00000
01930		DDRG	04802			
01940	FLRM	TDM	04802	15	03041	00000
01950		DC	04813		1	
01960		SF	04814	32	03041	00000
01970		B	04826	49	04782	00000
01980		DDRG	04834			
01990	FLGM	TDM	04834	15	03041	00000
02010		DGM	04845		1	
02020		SF	04846	32	03041	00000
02030		B	04858	49	04782	00000
		DDRG	04866			

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02900 ORIG	DAC 10, ORIGINAL*	06307	10 X	2
	ORIGINAL*			
02910 SECHF	DAC 10,2ND.HALF *	06327	10 X	2
	2ND.HALF *			
02920 PROD2	RCTY	06346	34	00000 00102
02930	WATY UGQOFD	06358	39	06427 00100
02940	RCTY	06370	34	00000 00102
02950	48 ***	06382	48	00000 00000
02960	TFM IORT,**23	06394	16	00565 -6417
02970	B IOGT,TRWADR,7	06406	49	00566 -3398
02980	B 03000	06418	49	03000 00000
02990	DORG *-3	06426		
03000 UGQOFD	DAC 49,SECTION NUMBER ILLEGAL, START TO RE-ENTER *DALTR*	06427	49 X	2
	SECTION NUMBER ILLEGAL, START TO RE-ENTER *DALTR*			
03010 PROD3	RCTY	06524	34	00000 00102
03020	WATY PROD31	06536	39	06605 00100
03030	RCTY	06548	34	00000 00102
03040	48 *** RE-ENTER *DALTR	06560	48	00000 00000
03050	TFM IORT,**23	06572	16	00565 -6595
03060	B IOGT,TRWADR,7	06584	49	00566 -3398
03070	B 03000	06596	49	03000 00000
03080	DORG *-3	06604		
03090 PROD31	DAC 37,TYPE-IN EXCEEDS SECTOR LENGTH, START*	06605	37 X	2
	TYPE-IN EXCEEDS SECTOR LENGTH, START*			
03100 BRC1	DSA SECTAD-5	06682	5 X	1
		06682		-5477
03110	DC 3,00*	06685		3
	-0*			
	DGM ***,*****	06685		1
03120 BRC2	DSC 2,22	06686		2
	22			
03130	DSA A110+L	06692	5 X	1
		06692		-3602
03140	DC 1,*	06693		1
	*			
03150 BRC3	DSA SECTON-1	06698	5 X	1
		06698		-5625
03160	DC 3,00*	06701		3
	-0*			
	DGM ***,*****	06701		1
03170 BRC4	DSA AREA+1	06706	5 X	1
		06706		-5631
03180	DC 3,06*	06709		3
	-6*			
	DGM ***,*****	06709		1
03190 TABC	TFM IORT,**23	06710	16	00565 -6733
03200	B IOPT,TABA,7	06722	49	00532 -6758
03210	TRA	06734	36	00000 00500
		06746	49	00000 00000
03220 TABA	DSC 2,22	06758		2
	22			
03230	DSA TABB	06764	5 X	1

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03240	DC 1,*	06764		-6766
	*	06765		1
03250 TABB	DSC 1,1	06766		1
	1			
03260	DC 5,19300	06771		5
	J9300			
03270	DC 3,038	06774		3
	-38			
03280	DC 6,03000*	06780		6
	-3000*			
03290	TCD TABC	06710		
03300	DEND 0	00000		

ALLOPL 03618	AREA 05630	HALT 05210	PROD3 06524	SAVADD 03046
ADRMES 05439	BOTCH 03036	HEART 04490	P 00006	SECMES 05607
BADTYP 03301	BRC1 06682	IOGT 00566	Q 00011	SECTAD 05482
COREND 04866	BRC2 06686	IOPT 00532	SCAN1 04370	SECTON 05626
CORRTD 06163	BRC3 06698	IORT 00565	SCAN 04242	SECTR1 05504
FRSTHG 06287	BRC4 06706	LOOP2 05282	SECHF 06327	SECTR2 06184
NUTHNG 06069	CLEAR 05849	LOOP9 05426	SFLAG 06068	SNEEZY 03268
PROD31 06605	COUNT 03038	LOOP 05246	SKUNK 03406	SUBINS 05489
A100 03108	DDAST 19800	L 00012	TABA 06758	TRWADR 03398
A110 03590	FILL 99999	MESX 05453	TABB 06766	TRWFIX 03762
A120 05366	FLGM 04834	MOVE 04782	TABC 06710	UGDOFD 06427
A130 03822	FLRM 04802	ORIG 06307	TEMP 03041	WRFILE 05126
A140 04206	FLSEC 06137	PROD1 03220	TRDIG 04122	
A200 03422	FUR2 03048	PROD2 06346	TR 05330	

END OF ONE ASSEMBLY.

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00010 ***** DISK UTILITY PROGRAM FOR 1620 *DLABL
00020 *****
00030 *****
00040
00050 DLABL DORG 2502 02502
00060 SF INPUT+21,,10 02502 32 13634 000-0
00070 CM INPUT+22,0,10 02514 14 13635 000-0
00080 BE ERR1 02526 46 03906 01200
00090 CM INPUT+22,73,10 02538 14 13635 000P3
00100 BH ERR10 02550 46 03926 01100
00110 CM INPUT+22,70,10 02562 14 13635 000P0
00120 BL ERR10 02574 47 03926 01300
00130 SF INPUT+11 02586 32 13624 00000
00140 C INPUT+20,ZERO10 02598 24 13633 04309
00150 BE ERR1 02610 46 03906 01200
00160 TD PACK-1,INPUT+18 02622 25 04314 13633
00170 TD PACK-2,INPUT+16 02634 25 04313 13631
00180 TD PACK-3,INPUT+14 02646 25 04312 13629
00190 TD PACK-4,INPUT+12 02658 25 04311 13627
00200 SF PACK-4 02670 25 04310 13625
00210 CM PACK,0 02682 32 04310 00000
00220 BE ERR10 02694 14 04314 -0000
00230 TFM SETFLG+11,INPUT+11 02706 46 03926 01200
00240 SETFLG SF **11,INPUT+11,6 02718 16 02741 J3624
00250 AM SETFLG+11,1,10 02730 32 0274J 13624
00260 CM SETFLG+11,70,610 02742 11 02741 000-1
00270 BL ERR10 02754 14 0274J 000P0
00280 AM SETFLG+11,1,10 02766 47 03926 01300
00290 CM SETFLG+11,INPUT+21 02778 11 02741 000-1
00300 BL SETFLG 02790 14 02741 J3634
00310 TD MOD,INPUT+22 02802 47 02730 01300
00320 TD **+7,INPUT+22 02814 25 02513 13635
00330 A **+35,**+35 02826 25 02873 13635
00340 AM **+23,1,10 02838 21 02873 02873
00350 TDM INPUT+22,0,8 02850 11 02873 000-1
00360 TFM ADDR,RDAREA+71,, DETERMINE ADDRESS 02862 15 13635 0-000
00370 TDM DDAL2+1,0,11 02874 16 04364 J3847
00380 TDM DDAL2,0 02886 15 04286 0000-
00390 TFM IORT,**+23 02898 15 04285 00000
00400 B IOGT,DDAL1,7 02910 16 00565 -2933
00401 TF DDAL8+8,RDAREA+88 02922 49 00566 -4277
00410 TD **+22,INPUT+22 02934 26 04270 13864
00420 AM ADDR,0,9 02946 25 02968 13635
00430 TD DDAL2+1,ADDRS,11 02958 11 04364 00-00
00440 TD DDAL4+1,ADDRS,11 02970 25 04286 0436M
00450 TD DDAL6+1,ADDRS,11 02982 25 04217 0436M
00460 TD DDAL8+1,ADDRS,11 02994 25 04240 0436M
00470 TD DDAL2,INPUT+22 03006 25 04263 0436M
00480 SM DDAL2+5,10000,7 03018 25 04285 13635
00490 TFM IORT,**+23 03030 12 04290 J0000
00500 B IOGT,DDAL1,7 03042 16 00565 -3065
00510 TFM TEST48+11,RDAREA+61 03054 49 00566 -4277
00520 BNF RSPT,RDAREA+61 03066 16 03101 J3837
00530 TEST48 BNR **+20,RDAREA+61 03078 44 03190 13837
00540 B RSPT 03090 45 03110 13837
00550 DORG *-3 03102 49 03190 00000
    
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00560	AM	TEST48+11,1,10	03110	11	03101	000-1
00570	CM	TEST48+11, RDAREA+65,7	03122	14	03101	J3841
00580	BH	++32	03134	46	03166	01100
00590	BNF	TEST48, TEST48+11,11	03146	44	03090	0310J
00600	B	RSPT	03158	49	03190	00000
00610	DORG	=-3	03166			
00620	CM	RDAREA+65,04800,7	03166	14	13841	-4800
00630	BE	LAB	03178	46	03634	01200
00640	*****					
00650	*	REINITIALIZE SEQUENTIAL PROGRAM TABLE				
00660	*****					
00670	RSPT	TD DDAL8, INPUT+22	03190	25	04262	13635
00680	TFM	SEV+11,7000,8	03202	16	03261	0P000
00690	TF	SEV+23,=-1	03214	26	03273	03213
00700	TFM	IORT,++23	03226	16	00565	-3249
00710	B	IOGT, DDAL7,7	03238	49	00566	-4254
00720	SEV	TFM RDAREA-1997,7000,8	03250	16	11779	0P000
00730	CM	SEV+11,7000,8	03262	14	03261	0P000
00740	BE	++48	03274	46	03322	01200
00750	SM	SEV+6,3,10	03286	12	03256	000-3
00760	CF	SEV+6,,6	03298	33	03250	00000
00770	AM	SEV+6,3,10	03310	11	03256	000-3
00780	AM	SEV+6,4,10	03322	11	03256	000-4
00790	TFM	SEV+6,9200,68	03334	16	03250	0R200
00800	SM	SEV+6,3,10	03346	12	03256	000-3
00810	CF	SEV+6,,6	03358	33	03250	00000
00820	AM	SEV+6,7,10	03370	11	03256	000-7
00830	AM	SEV+11,1,10	03382	11	03261	000-1
00840	CM	SEV+11,7099,8	03394	14	03261	0P099
00850	BL	SEV	03406	47	03250	01300
00860	AM	SEV+6,24,10	03418	11	03256	000K4
00870	TF	SEV+6, LSTENT+3,6	03430	26	03250	04343
00880	SM	SEV+6,4,10	03442	12	03256	000-4
00890	A	SEV+6,MOD,6	03454	21	03250	02513
00900	SM	SEV+6,4,10	03466	12	03256	000-4
00910	A	SEV+6,MOD,6	03478	21	03250	02513
00920	SM	SEV+6,8,10	03490	12	03256	000-8
00930	A	SEV+6,MOD,6	03502	21	03250	02513
00940	SM	SEV+6,4,10	03514	12	03256	000-4
00950	A	SEV+6,MOD,6	03526	21	03250	02513
00960	SM	SEV+6,7,10	03538	12	03256	000-7
00970	CF	SEV+6,,6	03550	33	03250	00000
00971	TFM	RDAREA-1180,00,21011	03562	16	J2596	000--
00972	AM	=-6,2,10	03574	11	03568	000-2
00973	CM	=-18, RDAREA+6000	03586	14	03568	J9776
00974	BL	=-36	03598	47	03562	01300
00980	TFM	IORT,++23	03610	16	00565	-3633
00990	B	IOPT, DDAL7,7	03622	49	00532	-4254
01000	****					
01010	****	LABEL DISK PACK				
01020	****					
01030	LAB	TD DDAL4, DDAL2	03634	25	04216	04285
01040	SF	BUTTON	03646	32	00455	00000
01050	BTM	KYMESS,++12	03658	17	04000	-3670
01060	TFM	IORT,++23	03670	16	00565	-3693
01070	B	IOGT, DDAL3,7	03682	49	00566	-4208

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01080	SF	RDAREA	03694	32	13776	00000
01090	TF	RDAREA+9,PACK	03706	26	13785	04314
01091	TFM	RDAREA+99,79,10	03718	16	13875	000P9
01092	TFM	RDAREA+104,19663,7	03730	16	13880	J9663
01100	TFM	IORT,++23	03742	16	00565	-3765
01110	B	IOPT, DDAL3,7	03754	49	00532	-4208
01120	TD	DDAL6, DDAL2	03766	25	04239	04285
01130	TFM	IORT,++23	03778	16	00565	-3801
01140	B	IOGT, DDAL5,7	03790	49	00566	-4231
01150	TFM	RDAREA+1999,00199,7	03802	16	15775	-0199
01160	CF	RDAREA+1995	03814	33	15771	00000
01170	TF	RDAREA+2034,PACK	03826	26	15810	04314
01180	TFM	IORT,++23	03838	16	00565	-3861
01190	B	IOPT, DDAL5,7	03850	49	00532	-4231
01200	CF	BUTTON	03862	33	00455	00000
01210	BTM	KYMESS,++12	03874	17	04000	-3886
01220	TDM	SYSCAL,3	03886	15	00475	00003
01230	B	MONCAL	03898	49	00796	00000
01240	DORG	=-3	03906			
01250	ERR1	TFM DIMERR+22,0071,8	03906	16	04205	0-071
01260	B	ERR10+12	03918	49	03938	00000
01270	DORG	=-3	03926			
01280	ERR10	TFM DIMERR+22,7170,8	03926	16	04205	0P170
01290	RCTY		03938	34	00000	00102
01300	TFM	IORT,++23	03950	16	00565	-3973
01310	B	IOPT,ERRMES-4,7	03962	49	00532	-4344
01320	H		03974	48	00000	00000
01330	B	ERR1-20	03986	49	03886	00000
01340	DORG	=-3	03994			
01350	DC	5,0	03998		5	
	-0000					
01360	KYMESS	BNF ++32,BUTTON	04000	44	04032	00455
01370	TFM	KEYMES+24,5500,8	04012	16	04129	0N500
01380	B	++20	04024	49	04044	00000
01390	DORG	=-3	04032			
01400	TFM	KEYMES+24,4646,8	04032	16	04129	0M646
01410	RCTY		04044	34	00000	00102
01420	TFM	IORT,++23	04056	16	00565	-4079
01430	B	IOPT,MESS-4,7	04068	49	00532	-4352
01440	H		04080	48	00000	00000
01450	B	KYMESS-1,,6	04092	49	03998	00000
01460	RDAREA	DSS 2100,13776	13776		2100	
01470	KEYMES	DAC 39,DUP* TURN OFF WRITE ADDRESS KEY, START'	04105		39 X	2
	DUP*	TURN OFF WRITE ADDRESS KEY, START'				
01480	DIMERR	DAC 13,DUP*ERROR 00'	04183		13 X	2
	DUP*	ERROR 00'				
01490	DDAL3	DSC 2,26	04208		2	
		26				
01500	DSA	DDAL4	04214		5 X	1
01510	DSC	1,1'	04214		-4216	
			04215		1	
01520	DDAL4	DSC 1,0	04216		1	
		0				
01530	DC	5,19800	04221		5	
		J9800				

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1620 MONITOR 11 DUP ROUTINE *DLABL				PAGE	4
01540	DC	3,020	04224	3	
	-20				
01550	DSA	RDAREA	04229	5 X	1
			04229	J3776	
01560	DSC	1,'	04230	1	
			04231	2	
01570	DDAL5	DSC 2,26			
	26		04237	5 X	1
01580	DSA	DDAL6			
			04237	-4239	
01590	DSC	1,'	04238	1	
			04239	1	
01600	DDAL6	DSC 1,0			
	0		04244	5	
01610	DC	5,19980			
	J9980		04247	3	
01620	DC	3,020			
	-20		04252	5 X	1
01630	DSA	RDAREA			
			04252	J3776	
01640	DSC	1,'	04253	1	
			04254	2	
01650	DDAL7	DSC 2,22			
	22		04260	5 X	1
01660	DSA	DDAL8			
			04260	-4262	
01670	DSC	1,'	04261	1	
			04262	1	
01680	DDAL8	DSC 1,0			
	0		04267	5	
01690	DC	5,19801			
	J9801		04270	3	
01700	DC	3,010			
	-10		04275	5 X	1
01710	DSA	RDAREA-2000			
			04275	J1776	
01720	DSC	1,'	04276	1	
			04277	2	
01730	DDAL1	DSC 2,22			
	22		04283	5 X	1
01740	DSA	DDAL2			
			04283	-4285	
01750	DSC	1,'	04284	1	
			04285	1	
01760	DDAL2	DSC 1,0			
	0		04290	5	
01770	DC	5,04800			
	-4800		04293	3	
01780	DC	3,002			
	-02				

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1620 MONITOR 11 DUP ROUTINE *DLABL				PAGE	5
01790	DSA	RDAREA	04298	5 X	1
			04298	J3776	
01800	DSC	1,'	04299	1	
			00565	0	
01810	IORT	DS ,565	00566	0	
01820	IOGT	DS ,566	13613	81 X	2
01830	INPUT	DAS 81,13613	04309	10	
01840	ZERO10	DC 10,0			
		-000000000	04314	5	
01850	PACK	DC 5,0			
		-0000	04315	1	
01860	MONPK	DSC 1,0			
	0		00796	0	
01870	MONCAL	DS ,796	00455	1	
01880	BUTTON	DSC 1,0,455			
	0		00532	0	
01890	IOPT	DS ,532	04340	25	
01900	LSTENT	DC 25,709901580004909901660162'			
		P09901580004909901660162'	04341	3	
01910	DSC	3,000			
	000		04348	5 X	1
01920	ERRMES	DSA DIMERR			
			04348	-4183	
01930	DC	3,06'	04351	3	
	-6'		04351	1	
01940	MESS	DGM *,,,*	04356	5 X	1
	DSA	KEYMES	04356	-4105	
			04359	3	
01950	DC	3,06'			
	-6'		04359	1	
01960	ADDRS	DGM *,,,*	04364	5 X	1
	DSA	RDAREA+71	04364	J3847	
			02513	0	
01970	MOD	DS ,DLABL+11	00475	0	
01980	SYSCAL	DS ,475	04366	16 00565	-4389
01990	LABL	TFM IORT,**23	04378	49 00532	-4414
02000		8 IOPT,LABL1,7	04390	36 00000	00500
02010	TRA		04402	49 00000	00000
			04414	2	
02020	LABL1	DSC 2,22			
	22		04420	5 X	1
02030	DSA	LABL2			
			04420	-4422	
02040	DC	1,'	04421	1	
			04422	1	
02050	LABL2	DSC 1,1			
	1		04427	5	
02060	DC	5,18200			
	J8200		04430	3	
02070	DC	3,020			
	-20				

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1620 MONITOR 11 DUP ROUTINE *DLABL				PAGE	6
02080	DC	5,02502		04435	5
		-2502			
02090	DC	1, *		04436	1
		.			
02100	TCD	LABL		04366	
02110	DEND	02502		02502	

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1620 MONITOR 11 DUP ROUTINE *DLABL				PAGE		7			
BUTTON	00455	ADDRS	04364	DDAL8	04262	LABL1	04414	RSPT	03190
DIMERR	04183	DDAL1	04277	DLABL	02502	LABL2	04422	SEV	03250
ERRMES	04348	DDAL2	04285	ERR10	03926	LABL	04366	SETFLG	02730
KEYMES	04105	DDAL3	04208	ERR1	03906	LAB	03634	SYSCAL	00475
KYMESS	04000	DDAL4	04216	INPUT	13613	MESS	04356	TEST48	03090
LSTENT	04340	DDAL5	04231	IOGT	00566	MOD	02513	ZER010	04309
MONCAL	00796	DDAL6	04239	IOPT	00532	MONPK	04315		
RDAREA	13776	DDAL7	04254	IORT	00565	PACK	04314		

END OF ONE ASSEMBLY.

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00010 *	DUP ROUTINE	DFLIB							
00020	DORG	3000			03000				
00030	IORT	DS	,565		00565		0		
00040	MONCAL	DS	,796		00796		0		
00050	IOGT	DS	,566		00566		0		
00060	IOPT	DS	,532		00532		0		
00070	D4800	DSC	2,22		03000		2		
00080	DSA	DIMDDA			03006		5 X	1	
00090	DC	1,'			03006		-3008		
					03007		1		
00100	DIMDDA	DSC	1,1		03008		1		
00110	DSA	4800			03013		5 X	1	
00120	DC	3,1			03013		-4800		
	-01				03016		3		
00130	DSA	DSEC			03021		5 X	1	
00140	DC	1,'			03021		-9900		
					03022		1		
00150	DEQU	DSC	2,22		03023		2		
00160	DSA	EQUIV			03029		5 X	1	
00170	DC	1,'			03029		-9940		
					03030		1		
00180	LIBEF	DSC	2,22		03031		2		
00190	DSA	DSEC			03037		5 X	1	
00200	DC	1,'			03037		-9900		
					03038		1		
00210 *									
00220	INEQU	DS	,10000		10000		0		
00230	DSEC	DS	,9900		09900		0		
00240	CC	DS	,13613		13613		0		
00250	DFLIB	SF	CC+25,,, SET FLAG ON NUMBER		03040	32	13638	00000	
00260	SF	CC+11,,, SET FLAG ON NAME			03052	32	13624	00000	
00270	BD	ERTEN,CC+23			03064	43	03740	13636	
00280	BD	ERTEN,CC+24			03076	43	03740	13637	
00290	BD	++20,CC+25			03088	43	03108	13638	
00300	B7	ERTEN			03100	49	03740		
00310	BD	++20,CC+27			03108	43	03128	13640	
00320	B7	ERTEN			03120	49	03740		
00330	TFM	BM+11,CC-2			03128	16	03187	J3611	
00340	AM	AM	BM+11,1		03140	11	03187	-0001	
00350	CM	AM+11,CC+29,7			03152	14	03187	J3642	
00360	BE	RMOK			03164	46	03196	01200	
00370	BM	BNR	AM,0*0		03176	45	03140	00000	

00380	B7	ERTEN			03188	49	03740		
00390 *									
00400	RMOK	BTM	CKZRO,00,10		03196	17	03552	000-0	
00410	TFM	IORT,++23,,	READ EQU TABLE DIM		03208	16	00565	-3231	
00420	B	IOGT,D4800,7			03220	49	00566	-3000	
00430	TF	CNT,EQUIV+8,,	SAVE NUMB SECTORS IN DIM		03232	26	03051	09948	
00440	TFM	EQUIV+13,INEQU			03244	16	09953	J0000	
00450	TFM	EQUIV+8,8,9,	SET NUM SECTOR TO 8		03256	16	09948	00-08	
00460	TR	DSEC,EQUIV			03268	31	09900	09940	
00470	SM	CNT,8,9			03280	12	03051	00-08	
00480	RDEQU	TFM	IORT,++23,, READ EIGHT SECTORS OF TABLE		03292	16	00565	-3315	
00490	B	IOGT,DEQU,7			03304	49	00566	-3023	
00500	TFM	COMP+11,INEQU-5			03316	16	03395	-9995	
00510	ADEQU	AM	COMP+11,16		03328	11	03395	-0016	
00520	BNR	++20	,COMP+11,11		03340	45	03360	0339N	
00530	B7	OKALL			03352	49	04162		
00540	CM	COMP+11,INEQU+800			03360	14	03395	J0800	
00550	BH	TESTL			03372	46	03506	01100	
00560	COMP+11	C	CC+22,0*0		03384	24	13635	00000	
00570	BNE	ADEQU			03396	47	03328	01200	
00580	RCTY				03408	34	00000	00102	
00590	TFM	STERR+24,7571,8			03420	16	03501	0P571	
00600	WATY	STERR			03432	39	03477	00100	
00610	NAMER	TDM	CC+24,0		03444	15	13637	00000	
00620	DC	1,'*			03455		1		
00630	WATY	CC+12			03456	39	13625	00100	
00640	B7	EXITE			03468	49	03636		
00650	STERR	DAC	15,DUP* ERROR 51 *		03477		15 X	2	
	DUP*	ERROR 51							
00660	TESTL	CM	CNT,0,9		03506	14	03051	00-00	
00670	EQUIV	DS	,DSEC+40		09940		0		
00680	BNH	OKALL			03518	47	04162	01100	
00690	A	EQUIV+5,EQUIV+8			03530	21	09945	09948	
00700	B7	RDEQU-12			03542	49	03280		
00710	CNT	DS	,DFLIB+11		03051		0		
00720	DS	2			03550		2		
00730	CKZRO	C	CC+22,ZERD,, TEST FOR INVALID OPERAND OR OPERAND MISSING		03552	24	13635	03794	
00740	BE	ERONE			03564	46	03600	01200	
00750	C	CC+28,ZERD-8			03576	24	13641	03786	
00760	BNE	OVERR			03588	47	03656	01200	
00770	ERONE	RCTY			03600	34	00000	00102	
00780	TFM	STERR+24,0071,8			03612	16	03501	0-071	
00790	WATY	STERR			03624	39	03477	00100	
00800	SYSCAL	DS	,475		00475		0		
00810	EXITE	H			03636	48	00000	00000	
00820	B7	MONCAL			03648	49	00796		
00830	OVERR	TD	DIG,CC+25		03656	25	03688	13638	
00840	CF	DIG			03668	33	03688	00000	
00850	CM	DIG,7,710			03680	14	03688	-00-7	
00860	BNE	ERTEN			03692	47	03740	01200	
00870	TD	DIG,CC+27			03704	25	03688	13640	
00880	CM	DIG,7,10			03716	14	03688	000-7	
00890	BE	OVTFN			03728	46	03796	01200	
00900	ERTEN	RCTY			03740	34	00000	00102	
00910	TFM	STERR+24,7170,8			03752	16	03501	0P170	

00920	WATY STERR	03764	39	03477	00100
00930	B7 EXITE	03776	49	03636	
00940	DIG DS ,OVERR+32	03688		0	
00950	ZERD DC 12,0	03794		12	
	-0000000000				
00960	* MORE VALID OPERAND CHECKS				
00970	OVTEM TFM SFVAL+6 , CC+11	03796	16	03838	J3624
00980	TFM CVAL , CC+12	03808	16	03843	J3625
00990	TDM SFVAL+13,9	03820	15	03845	00009
01000	SFVAL SF 0+0	03832	32	00000	00000
01010	CVAL DS ,SFVAL+11	03843		0	
01020	49 CK1ST	03844	49	03984	00000
01030	CKSP CM CVAL , 41,610	03856	14	0384L	000M1
01040	BL ERTEN	03868	47	03740	01300
01050	AM CVAL ,2	03880	11	03843	-0002
01060	CF SFVAL+6,,6	03892	33	03830	00000
01070	AM SFVAL+6,2,10	03904	11	03838	000-2
01080	SF SFVAL+6,,6	03916	32	03830	00000
01090	CM CVAL ,00,610	03928	14	0384L	000-0
01100	BE CKBLK	03940	46	04052	01200
01110	CM CVAL ,CC+22	03952	14	03843	J3635
01120	BNN RNGECK	03964	46	04088	01300
01130	B7 SFVAL	03976	49	03832	
01140	CK1ST TDM SFVAL+13,1	03984	15	03845	00001
01150	CM CVAL,79,610	03996	14	0384L	000P9
01160	BH ERTEN	04008	46	03740	01100
01170	CM CVAL ,70,610	04020	14	0384L	000P0
01180	BL CKSP	04032	47	03856	01300
01190	B7 ERTEN	04044	49	03740	
01200	*				
01210	CKBLK C CC+22,ZERD	04052	24	13635	03794
01220	BI **12,1400	04064	46	04076	01400
01230	BNE ERTEN	04076	47	03740	01200
01240	*				
01250	* CHECK RANGE OF DIM NUMB				
01260	RNGECK CF SFVAL+6,,6	04088	33	03830	00000
01270	CM CC+28,7170,8	04100	14	13641	0P170
01280	BL ERTEN	04112	47	03740	01300
01290	CM CC+28,7379,8	04124	14	13641	0P379
01300	BH ERTEN	04136	46	03740	01100
01310	SF CC+11	04148	32	13624	00000
01320	BB2	04160	42		
01330	* END OF VALIDITY CHECKS				
01340	OKALL TFM IORT,**23	04162	16	00565	-4185
01350	B IOGT,LIBEF,7, RD LIBRARY NAMES	04174	49	00566	-3031
01360	CO DS ,RNGECK	04088		0	
01370	TFM CO+11,INEQU-5	04186	16	04099	-9995
01380	AZ EQU AM CO+11,16	04198	11	04099	-0016
01390	C CO+11,NINES,67	04210	24	0409R	-4312
01400	BE PUT	04222	46	04314	01200
01410	CM CO+11,INEQU+779	04234	14	04099	J0779
01420	BNH AZ EQU	04246	47	04198	01100
01430	RCTY	04258	34	00000	00102
01440	TFM STERR+24,7574,8	04270	16	03501	0P574
01450	WATY STERR	04282	39	03477	00100
01460	B7 NAMER	04294	49	03444	

01470	NINES DC 12,999999999999	04312		12	
	R999999999999				
01480	PUT TF CO+11,CC+22,6	04314	26	0409R	13635
01490	AM CO+11,4	04326	11	04099	-0004
01500	TFM CO+11,0,68	04338	16	0409R	0-000
01510	TD CO+11,CC+28,6	04350	25	0409R	13641
01520	SM CO+11,1	04362	12	04099	-0001
01530	TD CO+11,CC+26,6	04374	25	0409R	13639
01540	TFM IORT,**23	04386	16	00565	-4409
01550	B IOPT,LIBEF,7, WR LIBRARY NAMES	04398	49	00532	-3031
01560	* WRITE CONFIRM MESSAGE				
01570	RCTY	04410	34	00000	00102
01580	WATY PLACE	04422	39	04575	00100
01590	SM CO+11,1	04434	12	04099	-0001
01600	TDM CO+11,0,6	04446	15	0409R	00000
01610	DC 1,,*	04457		1	
01620	SM CO+11,12	04458	12	04099	-0012
01630	WATY CO+11,,6	04470	39	0409R	00100
01640	AM CO+11,12	04482	11	04099	-0012
01650	TFM CO+11,0,610	04494	16	0409R	000-0
01660	AM CO+11,3	04506	11	04099	-0003
01670	TDM CO+11,0,6	04518	15	0409R	00000
01680	DC 1,,*	04529		1	
01690	SM CO+11,4	04530	12	04099	-0004
01700	WNTY CO+11,,6	04542	38	0409R	00100
01710	TDM SYSCAL,3	04554	15	00475	00003
01720	B7 EXITE+12	04566	49	03648	
01730	PLACE DAC 26,FORTRAN LIB NAME ENTERED *	04575		26 X	2
	FORTRAN LIB NAME ENTERED *				
01740	*				
01750	DEND	00000			

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DIMDDA	03008	CKBLK	04052	DFLIB	03040	IOPT	00532	PUT	04314
MONCAL	00796	CKSP	03856	DIG	03688	IORT	00565	RDEQU	03292
RNGECK	04088	CKZRD	03552	DSEC	09900	LIBEF	03031	RMOK	03196
AZ EQU	04198	CNT	03051	EQUIV	09940	NAMER	03444	SFVAL	03832
ADEQU	03328	COMP	03384	ERONE	03600	NINES	04312	STERR	03477
AM	03140	CO	04088	ERTEN	03740	OKALL	04162	TESTL	03506
BM	03176	CVAL	03843	EXITE	03636	OVERR	03656	ZERD	03794
CC	13613	D4800	03000	INEQU	10000	QVTEN	03796	SYSVAL	00475
CK1ST	03984	DEQU	03023	IOGT	00566	PLACE	04575		

END OF ONE ASSEMBLY.

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00010	DORG	2700				02700			
00020	DC	2,-11,6301				06301	2		
	JJ								
00030	DC	2,-33,6303				06303	2		
	LL								
00040	DC	2,-55,6305				06305	2		
	NN								
00050	DC	2,-77,6307				06307	2		
	PP								
00060	DC	2,-99,6309				06309	2		
	RR								
00070	POINT	DS	,6300			06300	0		
00080	LASTND	DC	5,9,6314			06314	5		
	-0009								
00090	NUMSEC	DC	3,100,6317			06317	3		
	J00								
00100	*	DCOPY	DUP ROUTINE						
00110	INEQU	DS	,10000			10000	0		
00120	CC	DS	,13613, ALPHA INPUT FOR CONTROL STATEMENT			13613	0		
00130	IOPT	DS	,532			00532	0		
00140	IOGT	DS	,566			00566	0		
00150	IORT	DS	,565			00565	0		
00160	IORBC	DS	,520			00520	0		
00170	MONCAL	DS	,796			00796	0		
00180	SYSVAL	DS	,475			00475	0		
00190	*	CK FOR RK MK IN CONTROL RECORD							
00200	DCOPY	TFM	TRM+11,CC-2			02700	16	02759	J3611
00210	BAKT	AM	TRM+11,2			02712	11	02759	-0002
00220	CM	TRM+11,CC+51*2				02724	14	02759	J3715
00230	BH	GOONT				02736	46	02780	01100
00240	TRM	BNR	BAKT,0*0			02748	45	02712	00000
00250	TFM	STERR+24,7170,8				02760	16	03633	OP170
00260	B7	ERONE+12				02772	49	03552	
00270	*								
00280	*								
00290	GOONT	BD	*+20,CC+73,, BR IF TO SECTOR GIVEN			02780	43	02800	13686
00300		B7	ERONE,,, OPERAND MISSING			02792	49	03540	
00310	SF	CC+99,,, SET UP AND CHECK FOR FILE PROTECTION DESIRED				02800	32	13712	00000
00320	CM	CC+100,57,10				02812	14	13713	00007
00330	BNE	*+24				02824	47	02848	01200
00340	SF	STCHG+1,,, SET IND IF FILE PROTECTION DESIRED				02836	32	02861	00000
00350	BD	SFSECL,CC+61,,BR IF SECTOR LIMITS GIVEN				02848	43	03176	13674
00360	*	ROUTINE TO CONVERT ALPHA TO NUMERIC							
00370	STCHG	TFM	STI+6,CC+23			02860	16	02890	J3636
00380		TFM	STI+11,CC+24			02872	16	02895	J3637
00390	STI	TD	CC+23,CC+24			02884	25	13636	13637
00400	AM	STI+6,1				02896	11	02890	-0001
00410	*	CK FOR NON-NUMERIC SECTOR ADDRESS							
00420	CM	STI+11,CC+40				02908	14	02895	J3653
00430	BL	ON				02920	47	03036	01300
00440	SM	STI+11,1				02932	12	02895	-0001
00450	TD	*+35,STI+11,11				02944	25	02979	0289N
00460	AM	STI+11,1				02956	11	02895	-0001
00470	CM	*+8,07000,710				02968	14	02976	-70-0
00480	BE	ON				02980	46	03036	01200
00490	CM	*-13,0,10				02992	14	02979	000-0

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00500	BE	DN		03004	46	03036	01200
00510	TFM	STERR+24,7175,8		03016	16	03633	0P175
00520	B7	ERONE+12		03028	49	03552	
00530	DN	AM	ST1+11,2	03036	11	02895	-0002
00540	CM	ST1+11,CC+76		03048	14	02895	J3689
00550	BL	ST1		03060	47	02884	01300
00560	BTM	BAK,CKLIM+11,,	GET SYSTEM DIMS	03072	17	03268	-3207
00570	MM	DCOPY+68,5,10		03084	13	02768	000-5
00580	TF	LASTNO,99,,	PUT LARGEST LEGAL DIM NUMB+1 IN LASTNO	03096	26	06314	00099
00590	*	SAVE SCRATCH AREA DIM					
00600	COPY	DS	,DCOPY	02700		0	
00610	TR	COPY+100,COPY+20		03108	31	02800	02720
00620	TDM	COPY+110,0		03120	15	02810	00000
00630	TDM	COPY+109,0		03132	15	02809	00000
00640	A	COPY+108,COPY+108		03144	21	02808	02808
00650	LENSC	DS	,COPY+110	02810		0	
00660	LENSC	DS	,COPY+110	02810		0	
00670	*						
00680	BNF	GOAGIN,STCHG+13,,	BR IF NO SECTOR LIMITS	03156	44	03452	02873
00690	B7	CKLIM,,,	LIMITS GIVEN - GO CHECK LIMITS	03168	49	03196	
00700	SFSECL	SF	STCHG+13,,, PRESERVE INDICATION THAT SECTOR LIMITS GIVEN	03176	32	02873	00000
00710	DIMNO	DS	,CC+26	13639		0	
00720	B7	STCHG		03188	49	02860	
00730	CKLIM	SF	CC+31,2,8, CHECK FOR VALID LIMITS Q HAS NUM EQU DIM	03196	32	13644	0-002
00740	SF	CC+37		03208	32	13650	00000
00750	C	CC+36,CC+42		03220	24	13649	13655
00760	BNH	GOON		03232	47	03968	01100
00770	TFM	STERR+24,7177,8,	END ADDRESS GREATER THAN BEGINNING ADDRESS	03244	16	03633	0P177
00780	B7	ERONE+12		03256	49	03552	
00790	*	GET DIM ROUTINE - ENTER USING BTM BAK,DIMADR					
00800	*	GET DIM ROUTINE - UPON EXIT DIM IS IN ADDR AT RMCK+11					
00810	DS	5		03267		5	
00820	BAK	C	=-1, LASTNO,6, CK FOR DIM IN RANGE	03268	24	0326P	06314
00830	BL	+32,,,	BR IF DIM OK	03280	47	03312	01300
00840	TFM	STERR+24,0076,8,	DIM TOO LARGE	03292	16	03633	0-076
00850	B7	ERONE+12,		03304	49	03552	
00860	TFM	CALC1,4800,,	CALCULATE THE FROM ADDRESS DIM ADDRESS	03312	16	03642	-4800
00870	TDM	CALC1+1,0		03324	15	03643	00000
00880	A	CALC1+1,BAK-1,11		03336	21	03643	0326P
00890	A	CALC1+1,BAK-1,11		03348	21	03643	0326P
00900	TF	DDADIM,CALC1,,	PUT SECTOR ADDRESS IN DDA	03360	26	03657	03642
00910	TFM	IORT,++23		03372	16	00565	-3395
00920	B	IORT,DEF1,7,	GET DIM	03384	49	00566	-3644
00930	TD	+22,CALC1+1		03396	25	03418	03643
00940	RMCK	BNR	BBDIM,RDDIM,7,BR IF DIM IS OK	03408	45	03440	-2700
00950	TFM	STERR+24,0074,8,	ERROR-DIM NOT IN USE	03420	16	03633	0-074
00960	B7	ERONE+12		03432	49	03552	
00970	BBDIM	BB		03440	42	00000	00000
00980	*						
00990	GOAGIN	SF	DIMNO-3	03452	32	13636	00000
01000	CM	CC+26,0,8		03464	14	13639	0-000
01010	BNE	BTMD		03476	47	03496	01200
01020	B7	EQUOTLU,,,	GO GET DIM NUMBER	03488	49	03676	
01030	BTMD	TFM	DDADIM+8,DCOPY-100,, ALTER THE LINKAGE TO RD DIMS	03496	16	03665	-2600
01040	TFM	RMCK+11,DCOPY-100,,	ALTER THE DIM GET ROUTINE	03508	16	03419	-2600
01050	BTM	BAK,DIMNO,,	GET DIM	03520	17	03268	J3639

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01060	B7	DKGOON		03532	49	04084	
01070	*						
01080	ERONE	TFM	STERR+24,0071,8, ERROR-TO SECTOR NOT GIVEN	03540	16	03633	0-071
01090	RCTY	WATY	STERR	03552	34	00000	00102
01100	EXIT	H		03564	39	03609	00100
01110	DKEXIT	B1	+12,1400	03576	48	00000	00000
01120	B7	MONCAL,,,	ONLY EXIT FROM ROUTINE	03588	46	03600	01400
01130	STERR	DAC	15,DUP* ERROR XX *	03600	49	00796	
01140	DUP*	ERROR XX *		03609		15	X 2
01150	*						
01160	CALC1	DC	5,0	03642		5	
		-0000					
01170	DC	1		03643		1	
01180	DEF1	DSC	2,22	03644		2	
01190	DSA	DDADIM-5		03650		5	X 1
				03650		-3652	
01200	DC	1,1		03651		1	
01210	DSC	1,1		03652		1	
01220	RDDIM	DS	,DCOPY	02700		0	
01230	DDADIM	DC	5,0	03657		5	
		-0000					
01240	DC	3,1		03660		3	
		-01					
01250	DSA	RDDIM		03665		5	X 1
				03665		-2700	
01260	DC	1,1		03666		1	
01270	*						
01280	DEQU	DSC	2,22	03667		2	
		22					
01290	DSA	DCOPY+40		03673		5	X 1
				03673		-2740	
01300	DC	1,1		03674		1	
01310	*						
01320	*	TLU EQUIVALENCE TABLE					
01330	EQUOTLU	BD	+20,CC+11	03676	43	03696	13624
01340	B7	ERONE,,,	ERROR - ESSENTIAL OPERAND BLANK	03688	49	03540	
01350	CNT	DS	,ERONE+18	03558		0	
01360	TF	CNT,DCOPY+48,,	SAVE NUM SECTORS IN EQU TABLE	03696	26	03558	02748
01370	TFM	DCOPY+53,INEQU,7,	FILL IN CORE ADDRESS	03708	16	02753	J0000
01380	TFM	DCOPY+48,16,9,	SET NUM SECTORS TO 16	03720	16	02748	00-16
01390	SF	CC+11		03732	32	13624	00000
01400	SM	CNT,16,9		03744	12	03558	00-16
01410	RDEQU	TFM	IORT,++23,, RD 16 SECTORS EQ TAB	03756	16	00565	-3779
01420	B	IORT,DEQU,7		03768	49	00566	-3667
01430	TFM	COMP+11,INEQU-5		03780	16	03859	-9995
01440	ADEQU	AM	COMP+11,16	03792	11	03859	-0016
01450	BNR	+20,COMP+11,11		03804	45	03824	0385R

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1620 MONITOR 11 DUP ROUTINE *DCOPY			PAGE		4
01460	B7	ERR20,,, ERROR - NAME NOT IN EQU TAB	03816	49	03948
01470	CM	COMP+11,INEQU+1600	03824	14	03859 J1600
01480	BH	TESTL,,, BR IF END OF 16 SECTORS	03836	46	03904 01100
01490	*				
01500	COMP	C CC+22,0+0	03848	24	13635 00000
01510	BNE	ADEQU,,, BR NOT FOUND, TRY AGAIN	03860	47	03792 01200
01520	FOUND	AM COMP+11,4	03872	11	03859 -0004
01530	TF	DIMNO,COMP+11,11, NAME FOUND - MOVE NUMBER	03884	26	13639 0385R
01540	B7	BTMD,,, TAKE SAME PATH AS IF DIM NUM GIVEN	03896	49	03496
01550	*				
01560	TESTL	CM CNT,0,9	03904	14	03558 00-00
01570	BNH	ERR20,,, ERROR - NAME NOT IN EQ TAB	03916	47	03948 01100
01580	A	DCOPY+45,DCOPY+48	03928	21	02745 02748
01590	B7	RDEQU-12	03940	49	03744
01600	ERR20	TFM STERR+24,7270 ,8, NOT IN EQ TAB	03948	16	03633 0P270
01610	B7	ERONE+12	03960	49	03552
01620	*				
01630	*				
01640	GOON	S CC+42,CC+36,, CHANGE SECTOR LIMITS TO SECTOR COUNT	03968	22	13655 13649
01650	AM	CC+42,1	03980	11	13655 -0001
01660	TF	SAVSCT,CC+42,, SAVE THE SECTOR COUNT	03992	26	04312 13655
01670	SF	CC+40	04004	32	13653 00000
01680	TF	CC+39,CC+42	04016	26	13652 13655
01690	BAK3	CF CC+31,,, MOVE	04028	33	13644 00000
01700	SF	CC+32,,, FLAG	04040	32	13645 00000
01710	TDM	CC+40,0	04052	15	13653 00000
01720	DC	1,,'*	04063		1
01730	TR	RDDIM,CC+31	04064	31	02700 13644
01740	B7	LOK	04076	49	04120
01750	OKGOON	TR RDDIM,RMCK+11,11, MOVE FROM DIM	04084	31	02700 0341R
01760	TF	SAVSCT, RDDIM+8,,SAVE SECTOR COUNT	04096	26	04312 02708
01770	CF	SAVSCT-2	04108	33	04310 00000
01780	SAV2	DS ,*	04119		0
01790	LOK	TFM RDDIM+13,INEQU	04120	16	02713 J0000
01800	*	THE NUMB SECTORS NEEDED IS IN SAVSCT			
01810	*				
01820	SF	CC+44	04132	32	13657 00000
01830	TF	RDDIM+60+5,CC+48,, MOVE THE	04144	26	02765 13661
01840	TD	RDDIM+60,CC+43 ,, TO SECTOR	04156	25	02760 13656
01850	TDM	RDDIM+14,0	04168	15	02714 00000
01860	DC	1,,'*	04179		1
01870	TR	RDDIM+60+6,RDDIM+6,,PUT SECTOR COUNT + CORE ADDR IN TO DDA	04180	31	02766 02706
01880	*	GET SP LIST			
01890	TD	DDASPL,RDDIM+60,, GET CORRECT MODULE AND	04192	25	04327 02760
01900	TD	**35 ,RDDIM+61,, ADDRESS SCHEME FOR SP LIST	04204	25	04239 02761
01910	CF	**23	04216	33	04239 00000
01920	TD	DDASPL+1,POINT	04228	25	04328 06300
01930	TFM	IORT,**23 ,, READ THE	04240	16	00565 -4263
01940	B	IOGT,DEFSPL,7, SP LIST	04252	49	00566 -4319
01950	*	SEARCH FOR CYLINDER			
01960	CYLCMP	MM RDDIM+65,5	04264	13	02765 -0005
01970	TFM	94,70,10, SET UP THE SP LIST CYL ENTRY	04276	16	00094 000P0
01980	TF	CYLCMP+3,96	04288	26	04267 00096
01990	*	CYLINDER DESIRED IS AT CYLCMP+3 IN 70XX FORMAT			

1620 MONITOR 11 DUP ROUTINE *DCOPY			PAGE		5
02000	B7	CKSPL	04300	49	04342
02010	SAVSCT	DC 6,0	04312		6
		-00000			
02020	SAVCPY	DC 6,0	04318		6
		-00000			
02030	DEFSPL	DSC 2,22	04319		2
		22			
02040	DSA	DDASPL	04325		5 X 1
02050	DC	1,,'	04325		-4327
			04326		1
02060	DDASPL	DS 1	04327		1
02070	DSA	19801	04332		5 X 1
02080	DC	3,100	04332		J9801
	J00		04335		3
02090	DSA	INEQU	04340		5 X 1
02100	DC	1,,'	04340		J0000
			04341		1
02110	*	LOOK FOR CYLINDER ENTRY OF TO CYLINDER			
02120	CKSPL	SF INEQU ,,2	04342	32	J0000 00000
02130	AM	CKSPL+6,4	04354	11	04348 -0004
02140	AM	CKSPL+42,4	04366	11	04384 -0004
02150	C	INEQU-1,CYLCMP+3,2	04378	24	-9999 04267
02160	BNE	CKSPL	04390	47	04342 01200
02170	*	SP POINTER IN CKSPL+42 HAS ADDR OF CYL ENTRY FOR THE			
02180	*	CYLINDER CONTAINING THE TO SECTOR			
02190	TF	WK1,CKSPL+42,11, MOVE THE 70XX	04402	26	04556 0438M
02200	TDM	WK1-2,0,11, MAKE FIELD OXX	04414	15	04554 0000-
02210	A	WK1,WK1,, FIVE DIGIT SECTOR ADDR OF CYL IS AT WK2	04426	21	04556 04556
02220	*	WK2 CONTAINS THE 5 DIGIT SECTOR ADDRESS OF THE TO CYL			
02230	*	RDDIM+65 CONTAINS THE 5 DIGIT TO SECTOR ADDRESS			
02240	*	CKSPL+42 CONTAINS THE ADDRESS OR THE TO CYL ENTRY IN SP LIST			
02250	*				
02260	LAB	SF CKSPL+6,,6	04438	32	04340 00000
02270	AM	CKSPL+6,4	04450	11	04348 -0004
02280	AM	CKSPL+42,4	04462	11	04384 -0004
02290	CM	CKSPL+42,9000,68	04474	14	0438M 0R000
02300	BH	AVLENT	04486	46	04560 01100
02310	CM	CKSPL+42,7000,68	04498	14	0438M 0P000
02320	BH	ERUNA	04510	46	04648 01100
02330	CM	CKSPL+42,0001,68	04522	14	0438M 0-001
02340	BE	SCRENT	04534	46	04668 01200
02350	B7	DIMENT	04546	49	04728
02360	WK1	DC 4,0	04556		4
		-000			
02370	DSC	1,0	04557		1
	0				
02380	WK2	DSC 1,0	04558		1
	0				
02390	*	SAVSCT CONTAINS THE SECTOR COUNT TO BE COPIED			
02400	*	SENSC CONTAINS THE SECTOR COUNT OF SCRATCH AREA			

02410 *									
02420	AVLENT	TF	WKA,CKSPL+42,11		04560	26	06227	0438M	
02430	SF		WKA-2		04572	32	06225	00000	
02440	A		WK2,WKA,, ADD THE AVAIL SECTORS TO START OF CYLINDER		04584	21	04558	06227	
02450	OUTF1	C	WK2,RDDIM+65		04596	24	04558	02765	
02460	BH		**20		04608	46	04628	01100	
02470	B7		LAB		04620	49	04438		
02480	OUTF	SM	WK2,1		04628	12	04558	-0001	
02490	B7		FOUND5		04640	49	04808		
02500	ERUNA	TFM	STERR+24,0078,8		04648	16	03633	0-078	
02510	B7		ERONE+12		04660	49	03552		
02520	SCRENT	TF	WK2,COPY+25		04668	26	04558	02725	
02530	A		WK2,LENSC		04680	21	04558	02810	
02540	CF		STCHG+1		04692	33	02861	00000	
02550	TFM		STERR+24,7176,8		04704	16	03633	0P176	
02560	B		OUTF		04716	49	04628	00000	
02570 *									
02580 *									
02590	DIMENT	TF	WKA,CKSPL+42,11		04728	26	06227	0438M	
02600	BTM		BAK,WKA		04740	17	03268	-6227	
02610	TR		WKDIM, RMCK+11,11		04752	31	06228	0341R	
02620	A		WK2,WKDIM+8,, ADD SECTOR COUNT TO BEGIN OF CYL		04764	21	04558	06236	
02630	C		WK2,RDDIM+65		04776	24	04558	02765	
02640	BH		ERUNA		04788	46	04648	01100	
02650	B7		LAB		04800	49	04438		
02660 *									
02670 *			WHEN FOUND5 IS ENTERED WK2 CONTAINS ADDR OF LAST SECT AVAIL						
02680	FOUND5	TF	WKHICP,RDDIM+65		04808	26	06223	02765	
02690	A		WKHICP,RDDIM+68,, ADD SECTOR COUNT TO THE TO SECTOR ADDR		04820	21	06223	02768	
02700	SM		WKHICP,1,, OBTAIN THE LAST SECTOR TO BE COPIED		04832	12	06223	-0001	
02710	CKIT	C	WK2,WKHICP		04844	24	04558	06223	
02720	BNL		COPYIT		04856	46	05064	01300	
02730	CM		CKSPL+42,0001,68		04868	14	0438M	0-001	
02740	BE		ERONE+12		04880	46	03552	01200	
02750 *									
02760	LABZ	AM	CKSPL+42,1,10		04892	11	04384	000-1	
02770	SF		CKSPL+42,,6		04904	32	0438M	00000	
02780	AM		CKSPL+6,4		04916	11	04348	-0004	
02790	AM		CKSPL+42,3		04928	11	04384	-0003	
02800	CM		CKSPL+42,9000,68		04940	14	0438M	0R000	
02810	BH		AVL		04952	46	04996	01100	
02820	CM		CKSPL+42,7000,68		04964	14	0438M	0P000	
02830	BH		LABZ		04976	46	04892	01100	
02840	B7		ERUNA		04988	49	04648		
02850	AVL	TF	WKA,CKSPL+42,11		04996	26	06227	0438M	
02860	SF		WKA-2		05008	32	06225	00000	
02870	A		WK2,WKA		05020	21	04558	06227	
02880	C		WK2,WKHICP,, WKHICP IS LAST SECTOR TO BE COPIED		05032	24	04558	06223	
02890	BH		COPYIT		05044	46	05064	01100	
02900	B7		LABZ		05056	49	04892		
02910 *									
02920 *			COPY SUBROUTINE						
02930	COPYIT	TF	SAVCPY,SAVSCT,, SAVE THE NUM OF SECTORS		05064	26	04318	04312	
02940	TFM		RDDIM+33,INEQU		05076	16	02733	J0000	
02950	TF		RDDIM+25,RDDIM+65		05088	26	02725	02765	
02960	TD		RDDIM+20,RDDIM+60		05100	25	02720	02760	

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02970	SAVRD	DS	,FOUND5		04808		0		
02980	SAVWR	DS	,RDEQU		03756		0		
02990	TR		SAVRD,RDDIM		05112	31	04808	02700	
03000	TR		SAVWR,RDDIM+20		05124	31	03756	02720	
03010	REPEAT	S	SAVCPY,NUMSEC		05136	22	04318	06317	
03020	CHGP	BL	ADJUST		05148	47	05192	01300	
03030	TF		RDDIM+8,NUMSEC		05160	26	02708	06317	
03040	TF		RDDIM+28,NUMSEC		05172	26	02728	06317	
03050	B7		RDWR		05184	49	05252		
03060	ADJUST	A	SAVCPY,NUMSEC		05192	21	04318	06317	
03070	SF		SAVCPY-2		05204	32	04316	00000	
03080	TF		RDDIM+8,SAVCPY		05216	26	02708	04318	
03090	TF		RDDIM+28,SAVCPY		05228	26	02728	04318	
03100	S		SAVCPY,SAVCPY		05240	22	04318	04318	
03110	RDWR	TFM	IORT,**23		05252	16	00565	-5275	
03120	B		IORT,DEFIN,7, READ IN NUMSEC - OR LAST REMAINDER RECORD		05264	49	00566	-5379	
03130	BD		SETFPR,CHGP+7,, BR WHILE FLIP PROTECTION IS OCCURRING		05276	43	06036	05155	
03140	WRDSKF	TFM	IORT,**23		05288	16	00565	-5311	
03150	B		IORT,DEFOUT,7, WRITE COPY		05300	49	00532	-5387	
03160	A		RDDIM+5,RDDIM+8		05312	21	02705	02708	
03170	A		RDDIM+25,RDDIM+28		05324	21	02725	02728	
03180	CFINS	CF	SAVCPY-2		05336	33	04316	00000	
03190	CM		SAVCPY,0,, IS RD-WR FINISHED		05348	14	04318	-0000	
03200	BNZ		REPEAT		05360	47	05136	01200	
03210 *			TRANSFER OF DATA IS COMPLETE						
03220	B7		LCOPY-12		05372	49	05396		
03230	DEFIN	DSC	2,22		05379		2		
03240	DSA		RDDIM		05385		5 X	1	
03250	DC		1,*		05385		-2700		
03260	DEFOUT	DSC	2,22		05387		2		
03270	DSA		RDDIM+20		05393		5 X	1	
03280	DC		1,*		05393		-2720		
03290 *			CHECK FOR FILE PROTECTION DESIRED						
03300	BNF		**20,STCHG+1		05396	44	05416	02861	
03310	LCOPY	B7	FILPRO		05408	49	05714		
03320 *			END ROUTINE						
03330	ENDC	TFM	SAVRD+6,0		05416	15	04814	00000	
03340	DC		1,*,*		05427		1		
03350	TFM		SAVWR+6,0		05428	15	03762	00000	
03360	DC		1,*,*		05439		1		
03370	TFM		SAVSCT+1		05440	15	04313	00000	
03380	DC		1,*,*		05451		1		
03390	RCTY				05452	34	00000	00102	
03400	WNTY		SAVSCT-4		05464	38	04308	00100	
03410	WATY		FINMES		05476	39	05605	00100	

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03420	BNF	**+36,STCHG+1	05488	44	05524	02861
03430	WNTY	SAVRD+5	05500	38	05743	00100
03440	B	**+24	05512	49	05536	00000
03450	WNTY	SAVRD	05524	38	04808	00100
03460	WATY	FINMS2	05536	39	05665	00100
03470	WNTY	SAVWR	05548	38	03756	00100
03480	BNF	**+24,STCHG+1	05560	44	05584	02861
03490	WATY	FL	05572	39	05675	00100
03500	TDM	SYSCAL,3	05584	15	00475	00003
03510	B7	DKEXIT	05596	49	03588	
03520	*					
03530	FINMES	DAC 30, SECTORS OF DATA COPIED FROM ' SECTORS OF DATA COPIED FROM '	05605		30 X	2
03540	FINMS2	DAC 5, TO ' TO '	05665		5 X	2
03550	FL	DAC 20, AND FILE PROTECTED' AND FILE PROTECTED' FILE PROTECTION ROUTINE	05675		20 X	2
03560	*					
03570	FILPRO	RCTY	05714	34	00000	00102
03580	WATY	KEYMES	05726	39	05915	00100
03590	SAVRD	H 0,0,7	05738	48	00000	-0000
03600	DC	1,*,*	05749		1	
03610	TFM	KEYMES+24,4646,8	05750	16	05939	0M646
03620	TDM	DEFIN+1,6	05762	15	05380	00006
03630	TDM	DEFOUT+1,6	05774	15	05388	00006
03640	TDM	CHGP+7,1,, SET IND FOR FILE PROTECTION BRANCH	05786	15	05155	00001
03650	TF	CFINS+11,DUM1+11	05798	26	05347	05913
03660	TF	CFINS+18,DUM+6	05810	26	05354	05900
03670	TR	RDDIM,SAVWR	05822	31	02700	03756
03680	TR	RDDIM+20,SAVWR	05834	31	02720	03756
03690	TFM	RDDIM+8,20,9	05846	16	02708	00-20
03700	TFM	RDDIM+28,20,9	05858	16	02728	00-20
03710	TF	SAVRD+10,SAVRD+5	05870	26	05748	04813
03720	TD	SAVRD+5,SAVRD	05882	25	05743	04808
03730	DUM	B7 RDWR,,0	05894	M9	05252	
03740	DUM1	BD ENDMES,SETX+10,0	05902	M3	05992	06210
03750	*					
03760	KEYMES	DAC 39,DUP* TURN ON WRITE ADDRESS KEY, START' DUP* TURN ON WRITE ADDRESS KEY, START'	05915		39 X	2
03770	*					
03780	ENDMES	RCTY	05992	34	00000	00102
03790	WATY	KEYMES	06004	39	05915	00100
03800	H		06016	48	00000	00000
03810	B7	ENDC	06028	49	05416	
03820	*					
03830	*	SELECT AND FILE PROTECT THE SECTORS COPIED				
03840	SETFPR	TFM SFFL+11,INEQU,7	06036	16	06083	J0000
03850	AM	SFFL+11,4	06048	11	06083	-0004
03860	CFH	TFM FLAG+1,41,10	06060	16	06145	000M1
03870	SFFL	C SAVWR+5,INEQU,7	06072	24	03761	J0000
03880	BH	FLAG-12	06084	46	06132	01100
03890	PNT	DS ,SFFL+11	06083		0	
03900	C	WKHICP,PNT,11	06096	24	06223	0608L
03910	BL	SETX	06108	47	06200	01300
03920	TFM	FLAG+1,32,10	06120	16	06145	000L2

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03930	SM	PNT,4	06132	12	06083	-0004
03940	FLAG	SF PNT,,6, THIS IS THE SET OR CLEAR FLAG INSTRUCTION	06144	32	0608L	00000
03950	AM	PNT,105	06156	11	06083	-0105
03960	CM	PNT,105+20+INEQU	06168	14	06083	J2100
03970	BNH	SETFPR+12	06180	47	06048	01100
03980	B7	WRDSKF	06192	49	05288	
03990	*					
04000	SETX	TDM SETX+10,9	06200	15	06210	00009
04010	B7	WRDSKF	06212	49	05288	
04020	WKHICP	DS 5	06223		5	
04030	WKA	DS 4	06227		4	
04040	WKDIM	DSS 20	06228		20	
04050	DEND		00000			

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ADJUST 05192	OKGOON 04084	DEF1 03644	LAB 04438	ST1 02884
AVLENT 04560	REPEAT 05136	DEFIN 05379	LABZ 04892	STCHG 02860
COPYIT 05064	ADEQU 03792	DEQU 03667	LCOPY 05408	STERR 03609
CYLCMP 04264	AVL 04996	DIMNO 13639	LENC5 02810	TESTL 03904
DDADIM 03657	BAK3 04028	DUM1 05902	LENSC 02810	TRM 02748
DDASPL 04327	BAK 03268	DUM 05894	LOK 04120	WK1 04556
DEFOUT 05387	BAKT 02712	ENDC 05416	ON 03036	WK2 04558
DEFSPL 04319	BRDIM 03440	ERONE 03540	OUTF1 04596	WKA 06227
DIMENT 04728	BTMD 03496	ERR20 03948	OUTF 04628	WKDIM 06228
ENDMES 05992	CALC1 03642	ERRUN 04648	PNT 06083	SAVCPY 04318
EQUATL 03676	CC 13613	EXIT 03576	POINT 06300	SAVSCT 04312
FILPRO 05714	CFH 06060	FLAG 06144	RDDIM 02700	SCRENT 04668
FINMES 05605	CFINS 05336	FL 05675	RDEQU 03756	SETFPR 06036
FINMS2 05665	CHGP 05148	FOUND 03872	RDWR 05252	SFSECL 03176
FOUND5 04808	CKIT 04844	GOON 03968	RMCK 03408	SYSCAL 00475
GOAGIN 03452	CKLIM 03196	GOONT 02780	SAV2 04119	WKHICP 06223
KEYMES 05915	CKSPL 04342	INEQU 10000	SAVRD 04808	WRDSKF 05288
LASTND 06314	CNT 03558	IOGT 00566	SAVRD 05738	
MONCAL 00796	COMP 03848	IOPT 00532	SAVWR 03756	
NUMSEC 06317	COPY 02700	IORBC 00520	SETX 06200	
OKEEXIT 03588	DCOPY 02700	IORT 00565	SFFL 06072	

END OF ONE ASSEMBLY.

00010 ***				
00020 ***				
00030 ***	SUBROUTINES-DIMMER,GETR,GETL,INSERT,REMOVE,FIND			
00040 ***				
00050 ***				
00060	DORG 2458	02458		
00070 IOPT	DS ,532	00532	0	
00080 IOGT	DS ,566	00566	0	
00090 IORT	DS ,565	00565	0	
00100 KING	DSC 2,02,, DDA TO FLIP CORE WHEN MOVING PROGRAMS	02458	2	
	O2			
00110	DSA QUEEN	02464	5 X	1
00120	DC 1,1	02464	-2466	
		02465	1	
00130 QUEEN	DSC 1,1	02466	1	
	1			
00140	DC 5,02000	02471	5	
	-2000			
00150	DC 3,140	02474	3	
	J40			
00160	DC 6,05800*	02480	6	
	-5800*			
00170 CORSIZ	DC 3,080,, THE CURRENT SIZE OF THE SPL	02483	3	
	-80			
00180 DIMERR	DAC 14,DUP*ERROR 00	02485	14 X	2
	DUP*ERROR 00			
00190	TFM DIMERR+22,0071,8	02512	16	02507 0-071
00200 ERRD	RCTY	02524	34	00000 00102
00210	WATY DIMERR	02536	39	02485 00100
00220	H	02548	48	00000 00000
00230	B MONCAL	02560	49	00796 00000
00240	DORG *-3	02568		
00250 DMDDA	DSC 2,22,,DDA USED BY DIMMER TO READ IN ONE SECTOR	02568	2	
	22			
00260	DSA DMREAD	02574	5 X	1
00270	DSC 1,1	02574	-2576	
		02575	1	
00280 DMREAD	DSC 1,0	02576	1	
	0			
00290	DC 5,0	02581	5	
	-0000			
00300	DC 3,1	02584	3	
	-01			
00310	DC 5,19900	02589	5	
	J9900			
00320	DSC 1,1	02590	1	
00330 RMDDA	DSC 2,22,,DDA USED BY THE MOVER TO MOVE PROGRAMS	02591	2	
	22			
00340	DSA RDMOVE	02597	5 X	1
		02597	-2599	

00350	DSC 1,'	02598	1
00360	RDMOVE DSC 1,0	02599	1
	0		
00370	DC 5,0	02604	5
	-0000		
00380	DC 3,140	02607	3
	J40		
00390	DC 5,05800	02612	5
	-5800		
00400	DSC 1,'	02613	1
	'		
00410	WRMDDA DSC 2,22,, DDA USED BY THE MOVER TO TRANSFER PROGRAMS	02614	2
	22		
00420	DSA WRMMOVE	02620	5 X 1
		02620	-2622
00430	DSC 1,'	02621	1
	'		
00440	WRMOVE DSC 1,0	02622	1
	0		
00450	DC 5,0	02627	5
	-0000		
00460	DC 3,140	02630	3
	J40		
00470	DC 5,05800	02635	5
	-5800		
00480	DSC 1,'	02636	1
	'		
00490	PKODDA DSC 2,22,, DDA FOR HANDLING THE SPL ON MODULE ZERO	02637	2
	22		
00500	DSA SPLPK0	02643	5 X 1
		02643	-2645
00510	DSC 1,'	02644	1
	'		
00520	SPLPK0 DSC 1,1	02645	1
	1		
00530	DC 5,19801	02650	5
	J9801		
00540	DC 3,080	02653	3
	-80		
00550	DC 5,05800	02658	5
	-5800		
00560	DSC 1,'	02659	1
	'		
00570	PK1DDA DSC 2,22,, DDA FOR HANDLING THE SPL ON MODULE ONE	02660	2
	22		
00580	DSA SPLPK1	02666	5 X 1
		02666	-2668
00590	DSC 1,'	02667	1
	'		
00600	SPLPK1 DSC 1,3	02668	1
	3		
00610	DC 5,39801	02673	5
	L9801		

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00620	DC 3,080	02676	3
	-80		
00630	DC 5,05800	02681	5
	-5800		
00640	DSC 1,'	02682	1
	'		
00650	PK2DDA DSC 2,22,, DDA FOR HANDLING THE SPL ON MODULE TWO	02683	2
	22		
00660	DSA SPLPK2	02689	5 X 1
		02689	-2691
00670	DSC 1,'	02690	1
	'		
00680	SPLPK2 DSC 1,5	02691	1
	5		
00690	DC 5,59801	02696	5
	N9801		
00700	DC 3,080	02699	3
	-80		
00710	DC 5,05800	02704	5
	-5800		
00720	DSC 1,'	02705	1
	'		
00730	PK3DDA DSC 2,22,, DDA FOR HANDLING THE SPL ON MODULE THREE	02706	2
	22		
00740	DSA SPLPK3	02712	5 X 1
		02712	-2714
00750	DSC 1,'	02713	1
	'		
00760	SPLPK3 DSC 1,7	02714	1
	7		
00770	DC 5,79801	02719	5
	P9801		
00780	DC 3,080	02722	3
	-80		
00790	DC 5,05800	02727	5
	-5800		
00800	DSC 1,'	02728	1
	'		
00810	THRDDA DSC 2,22,, DDA TO EXCHANGE CORE WHEN USING THE SPL	02729	2
	22		
00820	DSA THROWS	02735	5 X 1
		02735	-2737
00830	DSC 1,'	02736	1
	'		
00840	THROWS DSC 1,1	02737	1
	1		
00850	DC 5,19881	02742	5
	J9881		
00860	DC 3,080	02745	3
	-80		
00870	DC 5,05800	02750	5
	-5800		
00880	DSC 1,'	02751	1
	'		

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00890	BAVAIL	DC	3,0,,	ACCUMULATES AVAILABLE BLANK SECTORS FOUND IN MOVE	02754	3
		-00				
00900	CALC2	DC	5,0		02759	5
		-0000				
00910	GOLDEN	DC	1,0,,	LISTER-4	02760	1
		-				
00920	LISTER	DC	4,0,,	HOLDS PRESENT SPL POSITION	02764	4
		-000				
00930	N48000	DC	6,048000,,	FIRST SECTOR OF DIM MAP	02770	6
		-48000				
00940		DC	1,0,,	PACK CONTINUED	02771	1
		-				
00950	PACK	DC	1,0,,	PACK NUM FOR SPLIST	02772	1
		-				
00960		DC	1,0		02773	1
		-				
00970	CALC3	DC	6,0		02779	6
		-00000				
00980	CALC4	DC	4,0,,	CALCULATION AREA	02783	4
		-000				
00990		DC	1,0,,	SET UP THE OVERRIDE CODE FOR COMPARISON	02784	1
		-				
01000	LISTES	DC	6,0,,	DESIRED SECTOR ADDRESS FIND	02790	6
		-00000				
01010	LISTET	DC	4,0,,	NUMBER TO BE INSERTED SPL INSERT	02794	4
		-000				
01020	HEX	DSC	1,0		02795	1
		0				
01030	CONST1	DC	6,0,,	WORK AREAS	02801	6
		-00000				
01040	CONST2	DC	6,0,,		02807	6
		-00000				
01050	QCARRY	DC	6,0,,	WHERE TO LOAD NEXT MOVED SECTORS	02813	6
		-00000				
01060	QHOLD	DC	6,0		02819	6
		-00000				
01070	CONST5	DC	6,0		02825	6
		-00000				
01080	CONST6	DC	6,0		02831	6
		-00000				
01090	CONST7	DC	6,0		02837	6
		-00000				
01100	RACKET	DC	4,0		02841	4
		-000				
01110	STEAL	DC	4,0		02845	4
		-000				
01120	CALC7	DC	3,0		02848	3
		-00				
01130	FAKSEV	DC	4,0,,	HAS SEVEN FROM LISTER	02852	4
		-000				
01140	COMMON	DC	1,0		02853	1
		-				
01150	NOMMON	DC	2,0		02855	2
		-0				
01160	NOSECA	DC	1,0		02856	1
		-				

01170	MOVESA	DC	6,0,,	FOR SECTOR ADDRESS	02862	6
		-00000				
01180	MOVESC	DC	3,0,,	FOR SECTOR COUNT	02865	3
		-00				
01190	CONST8	DC	5,0		02870	5
		-0000				
01200	***					
01210	***	SUBROUTINE-GETR				
01220	***	SUBROUTINE FOR SHIFTING ONE TO RIGHT IN THE SPL				
01230	***					
01240	GETR	TDM	NOMMON,1,,	INITIALIZE TO SAVE CORE FOR EXCHANGE OF SPL	02872	15
		TF	94,PACK		02884	26
					00094	02772
01260		TFM	IORI,**23		02896	16
		B	IOPT,THRDDA,7		02908	49
		B	REDSPL		04702	00000
01270		DORG	*-3		02928	
01280					02928	26
01290	GETRTR	TF	CALC2,SPLCOR,,	LEFT PRESENT SPL C.A.	02759	03151
		AM	SPLCOR,04,10,	LEFT END NEW ENTRY	02940	11
		SF	SPLCOR,,6,	NEW FLAG	03151	000-4
01300	NEWDIM	DC	4,0,,	DESIRED DIM ENTRY	02952	32
		-000			0315J	00000
					02963	4
01340		AM	CALC2,07,10,	RIGHT END OF NEW ENTRY	02964	11
		TF	LISTER,CALC2,11		02759	000-7
01350		B	WHYNOT		02976	26
		DORG	*-3		02764	0275R
01360					02988	49
01370					03388	00000
01380	***				02996	
01390	***	SUBROUTINE-GETL				
01400	***	SUBROUTINE FOR SHIFTING ONE TO LEFT IN SPL				
01410	***					
01420	GETL	TDM	NOMMON,2,		02996	15
		B	CLIPPP		02855	00002
01430		DORG	*-3		03008	49
					02884	00000
01440	GETLTR	TF	CALC2,SPLCOR		03016	
		SM	SPLCOR,04,10,	LEFT END OF NEW ENTRY	03016	26
		SF	SPLCOR,,6,		02759	03151
01450		SM	CALC2,01,10,	RIGHT END NEW ENTRY	03028	12
		TF	LISTER,CALC2,11		03151	000-4
01460		B	WHYNOT		03040	32
		DORG	*-3		0315J	00000
01470					03052	12
01480					02759	000-1
01490					03064	26
01500					02764	0275R
01510					03076	49
01520	***				03388	00000
01530	***	SUBROUTINE-REMOVE			03084	15
01540	***	REMOVES THE PRESENT ENTRY IN LISTER AND CLOSES THE LIST			03096	49
01550	***				03104	
01560	REMOVE	TDM	NOMMON,3,,		03104	26
		B	CLIPPP		02759	03151
01570		DORG	*-3		03116	11
					02759	000-4
01580	REMOVR	TF	CALC2,SPLCOR		03128	31
		AM	CALC2,04,10,		0315J	0275R
01590		TR	SPLCOR,CALC2,611,	CLOSES HOLE	03140	32
		SF	SPLCOR,,6		0315J	00000
01600		DC	5,0,,	DIM ADDRESS SPL	03151	5
		-0000				
01640		SM	CALC2,01,10		03152	12
		TF	LISTER,CALC2,11		02759	000-1
01650		CF	SPLCOR,,6		03164	26
		DC	5,0,,	CYLINDER SPL	02764	0275R
01660					03176	33
01670					0315J	00000
		-0000			03187	5

01680	STOMP	CM	PACK,00,1011, PACK ZERO	03188	14	02772	000--
01690		BE	WRTSPO	03200	46	03268	01200
01700		CM	PACK,01,1011,PACK ONE	03212	14	02772	000-J
01710		BE	WRTSP1	03224	46	03300	01200
01720		CM	PACK,02,1011, PACK TWO	03236	14	02772	000-K
01730		BE	WRTSP2	03248	46	03324	01200
01740		B	WRTSP3,,, PACK THREE	03260	49	03364	00000
01750		DORG	=-3	03268			
01760	**		ROUTINE FOR RETURNING APPROPRIATE SPL TO DISK				
01770	WRTSPO	TFM	IORT,++23	03268	16	00565	-3291
01780		B	IOPT,PKODDA,7	03280	49	00532	-2637
01790		B	WHYNOT	03292	49	03388	00000
01800		DORG	=-3	03300			
01810	WRTSP1	TFM	IORT,++23	03300	16	00565	-3323
01820		B	IOPT,PK1DDA,7	03312	49	00532	-2660
01830		B	WHYNOT	03324	49	03388	00000
01840		DORG	=-3	03332			
01850	WRTSP2	TFM	IORT,++23	03332	16	00565	-3355
01860		B	IOPT,PK2DDA,7	03344	49	00532	-2683
01870		B	WHYNOT	03356	49	03388	00000
01880		DORG	=-3	03364			
01890	WRTSP3	TFM	IORT,++23	03364	16	00565	-3387
01900		B	IOPT,PK3DDA,7	03376	49	00532	-2706
01910	WHYNOT	TFM	IORT,++23,,,RESTORES CORE BEFORE RETURNING TO MAINLINE	03388	16	00565	-3411
01920	***						
01930	***		SUBROUTINE-INSERT				
01940	***		INSERTS TO THE LEFT OF THE PRESENT ENTRY AND OPENS LIST				
01950		B	IOGT,THRDDA,7	03400	49	00566	-2729
01960		BB		03412	42	00000	00000
01970		DORG	=-9	03414			
01980	INSERT	TDM	NOMMON,4,,	03414	15	02855	00004
01990		B	CLIPPP	03426	49	02884	00000
02000		DORG	=-3	03434			
02010	INSETR	SF	SPLCOR,,6	03434	32	0315J	00000
02020	FOUND	DC	5,0,,,FIND SECTOR TOTAL	03445		5	
			-0000				
02030	**		ROUTINE TO SEE IF LIST IS ALREADY FULL				
02040		TFM	++35,05800,7	03446	16	03481	-5800
02050		AM	++23,04,10	03458	11	03481	000-4
02060	TIPSY	BNR	+-12,99999,,,FINDS RECORD MARK AT END OF LIST	03470	45	03458	99999
02070		TF	CONST2,TIPSY+11	03482	26	02807	03481
02080		AM	CONST2,04,10	03494	11	02807	000-4
02090		TF	CNST3,CNST2	03506	26	03578	02807
02100		SM	CNST3,05800,7	03518	12	03578	-5800
02110		C	CNST3-2,CORSIZ,,,COMPARES PRESENT SIZE TO DEFINED LIMIT	03530	24	03576	02483
02120		BL	NERR	03542	47	03580	01300
02130		TFM	DIMERR+22,7178,8	03554	16	02507	0P178
02140		B	ERRD	03566	49	02524	00000
02150		DORG	=-3	03574			
02160	CNST3	DC	5,0	03578		5	
			-0000				
02170	NERR	TF	CONST2,TIPSY+11,611,OPENS THE LIST	03580	26	0280P	0348J
02180		TF	CALC2,SPLCOR	03592	26	02759	03151
02190		AM	CALC2,03,10	03604	11	02759	000-3
02200		TF	CALC2,LISTET,6, INSERTS THE ENTRY FROM LISTET	03616	26	0275R	02794
02210		CF	SPLCOR,,6,	03628	33	0315J	00000

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02220	DRESTR	DC	5,19880,,,	03639		5	
			J9880				
02230		AM	SPLCOR,4,10,	03640	11	03151	000-4
02240		CF	SPLCOR,,6	03652	33	0315J	00000
02250		B	STOMP,,,	03664	49	03188	00000
02260		DORG	=-3	03672			
02270	***						
02280	***		THE DIMMER SUBROUTINE FOR BRINGING IN A DIM ENTRY				
02290	***		SPECIFIED IN -NEWDIM- TO BEGIN AT CORE POSITION 19880				
02300	***						
02310	DIMMER	C	NEWDIM,MAXDIM	03672	24	02963	03849
02320		BNH	++32	03684	47	03716	01100
02330		TFM	DIMERR+22,0076,8	03696	16	02507	0-076
02340		B7	ERRD	03708	49	02524	
02350		TF	CALC2,NEWDIM	03716	26	02759	02963
02360		A	CALC2,CALC2	03728	21	02759	02759
02370		TF	CALC3,N48000	03740	26	02779	02770
02380		A	CALC3,CALC2,,,NEW DIM SECTOR ADDRESS	03752	21	02779	02759
02390		TF	DMREAD+13,DRESTR	03764	26	02589	03639
02400		TD	++23,CALC3	03776	25	03799	02779
02410		SM	DMREAD+12,0,10,ADJUST DIM READER S A	03788	12	02588	000-0
02420		TF	DMREAD+5,CALC3-1	03800	26	02581	02778
02430		TFM	IORT,++23	03812	16	00565	-3835
02440		B	IOGT,DMDDA,7	03824	49	00566	-2568
02450		BB		03836	42	00000	00000
02460		DORG	=-9	03838			
02470	***						
02480	***		THE FIND SUBROUTINE FOR LOCATING A POINT ON A PARTICULAR				
02490	***		SPL FROM AN ADDRESS GIVEN IN -LISTES-				
02500	***						
02510	FIND	SF	LISTES-5,,8	03838	32	02785	0-000
02520		CF	LISTES-4	03850	33	02786	00000
02530		TF	19885,LISTES,,ACCEPTS SECTOR ARGUMENT	03862	26	19885	02790
02540		BT	SPLIST,SPLIST-1,,FINDSTART OF CYLINDER	03874	27	04330	04329
02550		TDM	NOMMON,5	03886	15	02855	00005
02560		B	CLIPPP	03898	49	02884	00000
02570		DORG	=-3	03906			
02580	FINDTR	TF	CALC2-1,NEWDIM	03906	26	02758	02963
02590		TDM	CALC2-4,,11,FLAG ZERO	03918	15	02755	000-0
02600		HM	CALC2-1,02,10,FIND SECTOR	03930	13	02758	000-2
02610		TFM	ADRSPL,7, ZERO THE FIELD	03942	16	04520	-0000
02620		SF	97,,,PICK UP COUNT	03954	32	00097	00000
02630		TF	ADRSPL-2,99,, MOVE SECTOR CYL ADDRESS	03966	26	04518	00099
02640		TD	ADRSPL-4,,LISTES-4	03978	25	04516	02786
02650		SF	ADRSPL-4	03990	32	04516	00000
02660	TRYAGN	TF	CALC2,SPLCOR,, LEFT PRESENT SPL C.A.	04002	26	02759	03151
02670		AM	SPLCOR,04,10, LEFT END NEW ENTRY	04014	11	03151	000-4
02680		SF	SPLCOR,,6,NEW FLAG	04026	32	0315J	00000
02690		AM	CALC2,07,10,RIGHT END OF NEW ENTRY	04038	11	02759	000-7
02700		TF	LISTER,CALC2,11	04050	26	02764	0275R
02710		TD	CALC4,SPLCOR,11,	04062	25	02783	0315J
02720		CM	CALC4,09,1011, BLANK SECTORS	04074	14	02783	000-R
02730		BE	ADDBLK	04086	46	04286	01200
02740		TF	NEWDIM,LISTER	04098	26	02963	02764
02750		BT	DIMMER,DIMMER-1	04110	27	03672	03671
02760		C	19885,ADRSPL,,DOES THIS PROGRAM BEGIN ON THIS CYLINDER	04122	24	19885	04520

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02770	BNL	**48	04134	46	04182	01300
02780	S	19885,ADRSPL	04146	22	19885	04520
02790	SF	19883	04158	32	19883	00000
02800	A	19888,19885	04170	21	19888	19885
02810	A	ADRSPL,19888,, ADD SECTOR TOTAL,ADJUSTED IF NECESSARY	04182	21	04520	19888
02820	PLUSSR	SF LISTER-4	04194	32	02786	00000
02830	C	ADRSPL,LISTER,,HAS THE CORRECT ENTRY BEEN REACHED	04206	24	04520	02790
02840	CF	LISTER-4	04218	33	02786	00000
02850	BNH	TRYAGN	04230	47	04002	01100
02860	TF	FOUND,ADRSPL	04242	26	03445	04520
02870	RLGONE	TFM IORT,**23	04254	16	00565	-4277
02880	B	IOGT,THRDDA,7	04266	49	00566	-2729
02890	B	**2, EXIT TO BE FILLED	04278	49	-4278	00000
02900	DDRG	**3	04286			04286
02910	ADDBLK	SF LISTER-2	04286	32	02762	00000
02920	A	ADRSPL,LISTER,,ADD IN THE COUNT FOR BLANK SECTORS	04298	21	04520	02764
02930	CF	LISTER-2	04310	33	02762	00000
02940	B	PLUSSR	04322	49	04194	00000
02950	DDRG	**3	04330			04330
02960	NEVER	DC 2,0,ADDBLK+11	04297			2
		-0				
02970	CLEVER	DC 1,0,ADDBLK+35	04321			1
		-				
02980	***	ROUTINE FOR BRINGING IN THE PROPER LIST AND				
02990	***	SCANNING TO THE CORRECT CYLINDER ENTRY				
03000	SPLIST	TFM IORT,**23	04330	16	00565	-4353
03010	B	IOPT,THRDDA,7	04342	49	00532	-2729
03020	TDM	19880,,11,FLAG ZERO	04354	15	19880	0000-
03030	MM	19885,05,10	04366	13	19885	000-5
03040	CF	COMMON	04378	33	02853	00000
03050	SF	94,,DESIRED CYLINDER	04390	32	00094	00000
03060	SF	93	04402	32	00093	00000
03070	TD	STARDT+10,95,,SET-UP SEARCH FOR THE CORRECT CYLINDER	04414	25	05032	00095
03080	TD	STARDT+11,96	04426	25	05033	00096
03090	MM	LISTER-5,50000,7,USE OVERRIDE CODE TO DETERMINE MODULE	04438	13	02785	N0000
03100	SF	94	04450	32	00094	00000
03110	B	RDSPL	04462	49	04594	00000
03120	DDRG	**3	04470			04470
03130	SPLINI	BNF **20,COMMON	04470	44	04490	02853
03140	B	GETBAK	04482	49	05170	00000
03150	DDRG	**3	04490			04490
03160	TDM	CALC4-1,0,11,SET-UP CALC4	04490	15	02782	0000-
03170	TFM	ADRSPL,05800	04502	16	04520	-5800
03180	LPSRDA	NOP ,,, HOLDS COUNT POSITION FOR SPL LIST	04514	41	00000	00000
03190	TD	CALC4,ADRSPL ,11, PREPARE TO COMPARE	04526	25	02783	0452-
03200	CF	CALC4	04538	33	02783	00000
03210	CM	CALC4,7,10	04550	14	02783	000-7
03220	BE	COMCYL	04562	46	04986	01200
03230	SPLADD	AM ADRSPL ,04,10,,NEXT ENTRY	04574	11	04520	000-4
03240	B	ADRSPL+6	04586	49	04526	00000
03250	DDRG	**3	04594			04594
03260	RDSPL	TF KEVE,94	04594	26	05009	00094
03270	TF	NEVER,LISTER-4,,CORRECT TENTHOUSANDS POSITION	04606	26	04297	02786
03280	TDM	NEVER-1,,11	04618	15	04296	0000-
03290	MM	NEVER,05,10	04630	13	04297	000-5
03300	BD	**24,99	04642	43	04666	00099

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03310	AM	NEVER,1,10	04654	11	04297	000-1
03320	TD	CLEVER,NEVER	04666	25	04321	04297
03330	SF	CLEVER	04678	32	04321	00000
03340	***	ROUTINE TO READ IN CORRECT SPL				
03350	TF	94,KEVE	04690	26	00094	05009
03360	REDSPL	CM 94,0,1011, PACK ZERO	04702	14	00094	000--
03370	TF	PACK,94,,SAVE PACK NUM	04714	26	02772	00094
03380	BE	REDSPO	04726	46	04810	01200
03390	CM	94,1,1011, PACK ONE	04738	14	00094	000-J
03400	BE	REDSPL	04750	46	04854	01200
03410	CM	94,2,1011, PACK TWO	04762	14	00094	000-K
03420	BE	REDSPL	04774	46	04898	01200
03430	CM	94,3,1011, PACK THREE	04786	14	00094	000-L
03440	BE	REDSPL	04798	46	04942	01200
03450	REDSPO	TD SPLPK0+1,CLEVER	04810	25	02646	04321
03460	TFM	IORT,**23	04822	16	00565	-4845
03470	B	IOGT,PKODDA,7	04834	49	00566	-2637
03480	B	SPLINI	04846	49	04470	00000
03490	DDRG	**3	04854			04854
03500	REDSPL	TD SPLPK1+1,CLEVER	04854	25	02669	04321
03510	TFM	IORT,**23	04866	16	00565	-4889
03520	B	IOGT,PK1DDA,7	04878	49	00566	-2660
03530	B	SPLINI	04890	49	04470	00000
03540	DDRG	**3	04898			04898
03550	REDSPL	TD SPLPK2+1,CLEVER	04898	25	02692	04321
03560	TFM	IORT,**23	04910	16	00565	-4933
03570	B	IOGT,PK2DDA,7	04922	49	00566	-2683
03580	B	SPLINI	04934	49	04470	00000
03590	DDRG	**3	04942			04942
03600	REDSPL	TD SPLPK3+1,CLEVER	04942	25	02715	04321
03610	TFM	IORT,**23	04954	16	00565	-4977
03620	B	IOGT,PK3DDA,7	04966	49	00566	-2706
03630	B	SPLINI	04978	49	04470	00000
03640	DDRG	**3	04986			04986
03650	COMCYL	TF SPLCYL,ADRSPL ,,CYLCORE POSITION	04986	26	03187	04520
03660	SF	ADRSPL,,6	04998	32	0452-	00000
03670	KEVE	DS ,COMCYL+23	05009			0
03680	AM	SPLCYL,03,10	05010	11	03187	000-3
03690	STARDT	CM SPLCYL,7000,68,IS THIS THE RIGHT CYLINDER	05022	14	0318P	0P000
03700	BE	SPLCYL	05034	46	05066	01200
03710	CF	ADRSPL,,6	05046	33	0452-	00000
03720	B	SPLADD	05058	49	04574	00000
03730	DDRG	**3	05066			05066
03740	SPLCYL	TF SPLCOR,SPLCYL,,FIND DIM NUM LOCATION	05066	26	03151	03187
03750	SM	SPLCYL,03,10,BACK TO HIGH ORDER POSITION	05078	12	03187	000-3
03760	SF	SPLCYL,,6	05090	32	0318P	00000
03770	TF	NEWDIM,SPLCOR, 11,CYLINDER DESIRED	05102	26	02963	0315J
03780	TF	LISTER,SPLCOR,11,	05114	26	02764	0315J
03790	TF	SPLCOR,SPLCYL	05126	26	03151	03187
03800	TF	SPLCYL,ADRSPL	05138	26	03187	04520
03810	SF	COMMON	05150	32	02853	00000
03820	B	WHYNOT	05162	49	03388	00000
03830	DDRG	**3	05170			05170
03840	***	LINKAGE TO RETURN TO PROPER SUBROUTINE AFTER SAVING CORE				
03850	GETBAK	CM NOMMON,01,10	05170	14	02855	000-1
03860	BE	GETRTR	05182	46	02928	01200

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03870	CM	NOMMON,02,10	05194	14	02855	000-2
03880	BE	GETLTR	05206	46	03016	01200
03890	CM	NOMMON,03,10	05218	14	02855	000-3
03900	BE	REMOIR	05230	46	03104	01200
03910	CM	NOMMON,04,10	05242	14	02855	000-4
03920	BE	INSETR	05254	46	03434	01200
03930	B	FINDTR	05266	49	03906	00000
03940	DORG	*-3	05274			
03950	ADRSPL	DS ,LPSRDA+6	04520		0	
03960	**	PORTION OF THE MOVER SUBROUTINE WHICH MOVES THE DATA				
03970	COMPFR	TFM IORT,++23	05274	16	00565	-5297
03980	B	IOPT,KING,7,SAVE THE INFORMATION IN CORE	05286	49	00532	-2458
03990	CM	CALC7,140,9,REGULAR READ	05298	14	02848	00J40
04000	BL	SPCRED	05310	47	05462	01300
04010	SM	RDMOVE+5,140,9	05322	12	02604	00J40
04020	SM	WRMOVE+5,140,9	05334	12	02627	00J40
04030	WHIPIT	TFM IORT,++23	05346	16	00565	-5369
04040	B	IOGT,RDMDDA,7	05358	49	00566	-2591
04050	TFM	IORT,++23	05370	16	00565	-5393
04060	B	IOPT,WRMDDA,7	05382	49	00532	-2614
04070	SM	CALC7,140,9	05394	12	02848	00J40
04080	CM	CALC7,140,9	05406	14	02848	00J40
04090	BNH	SPCRED	05418	47	05462	01100
04100	SM	WRMOVE+5,140,9,ADJUST COUNT AND DDA AFTER TRANSFERING 140 SE	05430	12	02627	00J40
04110	SM	RDMOVE+5,140,9	05442	12	02604	00J40
04120	B	WHIPIT	05454	49	05346	00000
04130	DORG	*-3	05462			
04140	SPCRED	TF RDMOVE+8,CALC7,,TRANSFER LAST PORTION OF PROGRAM	05462	26	02607	02848
04150	TF	WRMOVE+8,CALC7	05474	26	02630	02848
04160	S	WRMOVE+5,CALC7	05486	22	02627	02848
04170	S	RDMOVE+5,CALC7	05498	22	02604	02848
04180	TFM	IORT,++23	05510	16	00565	-5533
04190	B	IOGT,RDMDDA,7	05522	49	00566	-2591
04200	TFM	IORT,++23	05534	16	00565	-5557
04210	B	IOPT,WRMDDA,7	05546	49	00532	-2614
04220	TFM	WRMOVE+8,140,9, RESTORE CONSTANTS TO 140	05558	16	02630	00J40
04230	TFM	WRMOVE+8,140,9	05570	16	02607	00J40
04240	TF	MPT,19885,, SAVE ADDRESS OF LAST PROGRAMS ORIGINAL SECTOR A	05582	26	08636	19885
04250	TF	19885,WRMOVE+5,,CORRECT SECTOR ADDRESS IN DIM ENTRY	05594	26	19885	02627
04260	TFM	IORT,++23	05606	16	00565	-5629
04270	B	IOPT,DMDDA,7	05618	49	00532	-2568
04280	TFM	IORT,++23	05630	16	00565	-5653
04290	B	IOGT,KING,7	05642	49	00566	-2458
04300	B	MARVEL	05654	49	10884	00000
04310	DORG	*-3	05662			
04320	ERR	BNF *+68,FORT,,CHECK FOR ERROR 60 IN DLOAD	05662	44	05730	13114
04330	TFM	DIMERR+22,7670,8	05674	16	02507	0670
04340	RCTY		05686	34	00000	00102
04350	WATY	DIMERR	05698	39	02485	00100
04360	BNF	ERRD+24,DUMP	05710	44	02548	13426
04370	B	PATCH3	05722	49	14956	00000
04380	DORG	*-3	05730			
04390	TFM	DIMERR+22,0078,8	05730	16	02507	0-078
04400	B	ERRD	05742	49	02524	00000
04410	DORG	*-3	05750			
04420	NINESC	DC 4,9000	05753		4	
	R000					

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04430	CONST3	DC 6,0	05759		6	
		-00000				
04440	SPLFL	TFM IORT,++23,, LINKAGE FOR THROWING SACRED SIX TO DISK WHEN LOA	05760	16	00565	-5783
04450	B	IOPT,SPLR2,7	05772	49	00532	-5823
04460	TRA		05784	36	00000	00500
			05796	49	00000	00000
04470	SPLR1	DSC 1,1	05808		1	
		1				
04480	DC	5,18298	05813		5	
		J8298				
04490	DC	3,033	05816		3	
		-33				
04500	DC	5,02458	05821		5	
		-2458				
04510	DSC	1,'	05822		1	
		'				
04520	SPLR2	DSC 2,22	05823		2	
		22				
04530	DSA	SPLR1	05829		5 X	1
04540	DSC	1,'	05829		-5808	
		'	05830		1	
04550	TCD	SPLFL	05760			
04560	DORG	8500	08500			
04570	MOVFL	TFM IORT,++23,, LINKAGE FOR THROWING MOVER TO DISK WHEN LOADING	08500	16	00565	-8523
04580	B	IOPT,MOVFL1,7	08512	49	00532	-8548
04590	TRA		08524	36	00000	00500
			08536	49	00000	00000
04600	MOVFL1	DSC 2,22	08548		2	
		22				
04610	DSA	MOVFL2	08554		5 X	1
04620	DSC	1,'	08554		-8556	
		'	08555		1	
04630	MOVFL2	DSC 1,1	08556		1	
		1				
04640	DC	5,18331	08561		5	
		J8331				
04650	DC	3,038	08564		3	
		-38				
04660	DC	5,08600	08569		5	
		-8600				
04670	DSC	1,'	08570		1	
		'				
04680	***					
04690	***					
04700	***	THE MOVER SUBROUTINE FOR PREPARING A PLACE TO PUT A PROGRAM GIVE				
04710	***	A STARTING SECTOR ADDRESS -MOVESA- AND A SECTOR COUNT -MOVESC-				
04720	***					
04730	***					
04740	DORG	8600	08600			
04750	SFSUCE	SF SUCESS	08600	32	13118	00000
04760	TF	MOVESC,SFSUCE+11,, RESTORE MOVE SECTOR COUNT.	08612	26	02865	08611

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04770	EXITMR	B	*,*,TO BE TFM BY CALLING PROGRAM	08624	49	08624	00000
04780	DORG	*-3		08632			
04790	MPT	DC	5,0	08636		5	
		-0000					
04800	PRE7	TFM	IORT,++23	08638	16	00565	-8661
04810	B	IOGT,NOMA,7,	LINKAGE FOR BRINGING IN THE SECOND HALF OF MOV	08650	49	00566	-8670
04820	B	PRE7A		08662	49	09000	00000
04830	DORG	*-3		08670			
04840	NOMA	DSC	2,22	08670		2	
		22					
04850	DSA	NOMB		08676		5 X	1
04860	DC	1,'		08676		-8678	
				08677		1	
04870	NOMB	DSC	1,1	08678		1	
		1					
04880	DC	5,17106		08683		5	
		J7106					
04890	DC	3,022		08686		3	
		-22					
04900	DC	6,09000'		08692		6	
		-9000'					
04910	TRWCAR	DSC	2,22,, DDA FOR MOVING DATA	08693		2	
		22					
04920	DSA	MOVCAR		08699		5 X	1
04930	DC	1,'		08699		-8701	
				08700		1	
04940	MOVCAR	DSC	1,0	08701		1	
		0					
04950	DC	5,0		08706		5	
		-0000					
04960	DC	3,060		08709		3	
		-60					
04970	DC	5,13776		08714		5	
		J3776					
04980	DC	1,'		08715		1	
04990	TRWBUS	DSC	2,22,, DDA FOR MOVING DATA	08716		2	
		22					
05000	DSA	MOVBUS		08722		5 X	1
05010	DC	1,'		08722		-8724	
				08723		1	
05020	MOVBUS	DSC	1,0	08724		1	
		0					
05030	DC	5,0		08729		5	
		-0000					
05040	DC	3,060		08732		3	
		-60					
05050	DC	5,13776		08737		5	
		J3776					
05060	DC	1,'		08738		1	

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05070	TRWA	DSC	2,22,, DDA FOR MOVINGDATA	08739		2	
		22					
05080	DSA	LOPEZA		08745		5 X	1
05090	DC	1,'		08745		-8747	
				08746		1	
05100	LOPEZA	DSC	1,0	08747		1	
		0					
05110	DC	5,0		08752		5	
		-0000					
05120	DC	3,060		08755		3	
		-60					
05130	DC	5,13776		08760		5	
		J3776					
05140	DC	1,'		08761		1	
05150	TRWB	DSC	2,22,, DDA FOR MOVING DATA	08762		2	
		22					
05160	DSA	LOPEZB		08768		5 X	1
05170	DC	1,'		08768		-8770	
				08769		1	
05180	LOPEZB	DSC	1,0	08770		1	
		0					
05190	DC	5,0		08775		5	
		-0000					
05200	DC	3,060		08778		3	
		-60					
05210	DC	5,13776		08783		5	
		J3776					
05220	DC	1,'		08784		1	
05230	MONITR	DS	,796	00796		0	
05240	KEY5	DSC	1,0	08785		1	
		0					
05250	CALC6	DC	5,0	08790		5	
		-0000					
05260	CALC5	DC	6,0	08796		6	
		-00000					
05270	ZEROES	DC	10,0	08806		10	
		-0000000000					
05280	CURREN	DC	3,0	08809		3	
		-00					
05290	LIMIT	DC	3,099	08812		3	
		-99					
05300	KEY1	DSC	1,0	08813		1	
		0					
05310	DIMHLD	DC	9,0	08822		9	
		-000000000					
05320	DIMENT	DS	,19880, CONTROL FIELD FOR NOWDIM	19880		0	
05330	MOVER	SF	MOVESA-5	08824	32	02857	00000
05340	CF	MOVESA-4		08836	33	02858	00000
05350	TF	SFSUCE+11,MOVESC,,	STORE MOVE SECTOR COUNT.	08848	26	08611	02865
05360	TF	LISTES,MOVESA,,	FIND POINT IN LIST WHERE PROGRAM IS TO BEGI	08860	26	02790	02862

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05370	TFM	RLGONE+30,#+20	08872	16	04284	-8892
05380	B	FIND	08884	49	03838	00000
05390	DDRG	*-3	08892			
05400	CM	LISTER-3,09,1011,LOOK FOR BLANK ENTRY	08892	14	02761	000-R
05410	BE	MIDNIT	08904	46	09372	01200
05420	TF	NEWDIM,LISTER,, MOVESA IS IN THE MIDDLE OF A PROGRAM	08916	26	02963	02764
05430	BT	DIMMER,DIMMER-1	08928	27	03672	03671
05440	SF	MOVESA-4	08940	32	02858	00000
05450	TF	CONST5,19885	08952	26	02825	19885
05460	S	CONST5,MOVESA	08964	22	02825	02862
05470	CF	MOVESA-4	08976	33	02858	00000
05480	SF	CONST5-2	08988	32	02823	00000
05490	TF	BAVAIL,CONST5,, ADJUST BLANK AVAIL TO MINUS TO ALLOW FOR DIM	09000	26	02754	02825
05500	BNF	FILTST,19899,, IS THE PROGRAM FILE PROTECTED	09012	44	10204	19899
05510	MSTAKE	CF SUCESS,,ERROR EXIT	09024	33	13118	00000
05520	TF	MOVESC,SFSUCE+11,, RESTORE MOVE SECTOR COUNT.	09036	26	02865	08611
05530	B	EXITMR	09048	49	08624	00000
05540	DDRG	*-3	09056			
05550	DSEVEN	SF LISTES-4	09056	32	02786	00000
05560	S	FOUND,LISTES	09068	22	03445	02790
05570	SF	FOUND-2	09080	32	03443	00000
05580	TF	CONST2, FOUND	09092	26	02807	03445
05590	ACTAJ	C CONST2,MOVESC,, ENOUGH SECTORS AVAILABLE	09104	24	02807	02865
05600	BNL	ACTAG	09116	46	09260	01300
05610	ACTAH	BT GETR,GETR-1,, LOOK FOR MORE ROOM	09128	27	02872	02871
05620	CM	LISTER-3,7,1011	09140	14	02761	000-P
05630	BE	ACTAH	09152	46	09128	01200
05640	CM	LISTER-3,9,1011	09164	14	02761	000-R
05650	BNE	ACTAK	09176	47	09220	01200
05660	SF	LISTER-2	09188	32	02762	00000
05670	A	CONST2,LISTER	09200	21	02807	02764
05680	B	ACTAJ	09212	49	09104	00000
05690	DDRG	*-3	09220			
05700	ACTAK	TF LISTES,MOVESA,, REPOSITION LISTER TO MOVESA	09220	26	02790	02862
05710	TFM	RLGONE+30,#+20	09232	16	04284	-9252
05720	B	FIND	09244	49	03838	00000
05730	DDRG	*-3	09252			
05740	B	BLANKT,,, PROGRAMS MUST BE MOVED	09252	49	10348	00000
05750	DDRG	*-3	09260			
05760	ACTAG	TF LISTES,MOVESA,, REPOSITION FIND TO MOVESA	09260	26	02790	02862
05770	TFM	RLGONE+30,#+20	09272	16	04284	-9292
05780	B	FIND	09284	49	03838	00000
05790	DDRG	*-3	09292			
05800	BT	GETR,GETR-1	09292	27	02872	02871
05810	SF	LISTER-2	09304	32	02762	00000
05820	MM	LISTER,200,9	09316	13	02764	00K00
05830	TF	CONST1,99	09328	26	02801	00099
05840	BT	GETL,GETL-1	09340	27	02996	02995
05850	SF	LISTER-2	09352	32	02762	00000
05860	B	ACTAA	09364	49	09552	00000
05870	DDRG	*-3	09372			
05880	MIDNIT	SF MOVESA-4,,, MOVESA IS AT AN AREA COVERED BY BLANK SECTORS	09372	32	02858	00000
05890	SF	LISTER-2	09384	32	02762	00000
05900	BT	GETR,GETR-1	09396	27	02872	02871
05910	CM	LISTER-3,7,1011	09408	14	02761	000-P
05920	BE	DSEVEN	09420	46	09056	01200

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05930	TF	NEWDIM,LISTER,, POSITION ENDF OF BLANKS FROM THIS DIMS SECTOR	09432	26	02963	02764
05940	BT	DIMMER,DIMMER-1	09444	27	03672	03671
05950	TF	CONST1,19885	09456	26	02801	19885
05960	ZSEVEN	TF CONST6,MOVESA	09468	26	02831	02862
05970	TF	CONST3,CONST1	09480	26	02759	02801
05980	BT	GETL,GETL-1	09492	27	02996	02995
05990	SF	LISTER-2	09504	32	02762	00000
06000	A	CONST6,MOVESC	09516	21	02831	02865
06010	C	CONST6,CONST1,, IS THERE ENOUGH ROOM TO LOAD THE MOVESC	09528	24	02831	02801
06020	BH	BLANKT	09540	46	10348	01100
06030	ACTAA	S CONST1,LISTER,, ENOUGH ROOM HAS BEEN FOUND WITHOUT MOVING PRO	09552	22	02801	02764
06040	TF	CONST2,MOVESA	09564	26	02807	02862
06050	S	CONST2,CONST1	09576	22	02807	02801
06060	SF	CONST2-2	09588	32	02805	00000
06070	TF	*+35,CONST2,, PREPARE THE TRAILING NINES ENTRY	09600	26	09635	02807
06080	CF	*+21	09612	33	09633	00000
06090	TFM	LISTET,9000,8	09624	16	02794	0R000
06100	CM	LISTET,9000,8	09636	14	02794	0R000
06110	BE	*+24	09648	46	09672	01200
06120	BT	INSERT,INSERT-1	09660	27	03414	03413
06130	NONAME	BT REMOVE,REMOVE-1	09672	27	03084	03083
06140	CM	LISTER-3,7,1011	09684	14	02761	000-P
06150	BNE	ACTAD	09696	47	09896	01200
06160	SF	LISTER-2	09708	32	02762	00000
06170	MM	LISTER,200,9	09720	13	02764	00K00
06180	TFM	95,99,10, TO COMPENSATE FOR PACK ADDRESSING	09732	16	00095	000R9
06190	TF	CONST3,99	09744	26	02759	00099
06200	S	99,MOVESA	09756	22	00099	02862
06210	SF	97	09768	32	00097	00000
06220	C	99,MOVESC	09780	24	00099	02865
06230	BNL	ACTAC	09792	46	09968	01300
06240	A	MOVESA,99	09804	21	02862	00099
06250	S	MOVESC,99	09816	22	02865	00099
06260	TF	*+35,99,, PREPARE EIGHTS ENTRY OF MOVESC	09828	26	09863	00099
06270	CF	*+21	09840	33	09861	00000
06280	TFM	LISTET,8999,8	09852	16	02794	0Q999
06290	BT	INSERT,INSERT-1	09864	27	03414	03413
06300	BT	GETR,GETR-1	09876	27	02872	02871
06310	B	NONAME	09888	49	09672	00000
06320	DDRG	*-3	09896			
06330	ACTAD	TF NEWDIM,LISTER,, USE DIM ENTRY TO FIND SECTOR ADDRESS	09896	26	02963	02764
06340	BT	DIMMER,DIMMER-1	09908	27	03672	03671
06350	TF	CONST3,19885	09920	26	02759	19885
06360	TD	CONST3-5,19880	09932	25	05754	19880
06370	CF	CONST3-4	09944	33	05755	00000
06380	SF	CONST3-5	09956	32	05754	00000
06390	ACTAC	TF *+35,MOVESC,, PREPARE AN EIGHTS ENTRY OF MOVESC	09968	26	10003	02865
06400	CF	*+21	09980	33	10001	00000
06410	TFM	LISTET,8000,8	09992	16	02794	0Q000
06420	BT	INSERT,INSERT-1	10004	27	03414	03413
06430	TF	CONST2,MOVESA	10016	26	02807	02862
06440	A	CONST2,MOVESC	10028	21	02807	02865
06450	S	CONST3,CONST2	10040	22	05759	02807
06460	SF	CONST3-2	10052	32	05757	00000
06470	TF	*+35,CONST3,, PREPARE THE LEADING NINES ENTRY	10064	26	10099	05759
06480	CF	*+21	10076	33	10097	00000

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06490	TFM	LISTET,9000,8	10088	16	02794	0R000
06500	CM	LISTET,9000,8	10100	14	02794	0R000
06510	BE	*+24	10112	46	10136	01200
06520	BT	INSERT,INSERT-1	10124	27	03414	03413
06530	REMSIL CF	MOVESA-4,,,POSITION LISTER FOR EXIT	10136	33	02858	00000
06540	BT	GETL,GETL-1	10148	27	02996	02995
06550	CM	LISTER-3,08,1011	10160	14	02761	000-Q
06560	BNE	*-24	10172	47	10148	01200
06570	BT	GETR,GETR-1	10184	27	02872	02871
06580	B	SFSUCE	10196	49	08600	00000
06590	DORG	*-3	10204			
06600	FILTST BNG	GORT,19899,, CHECK FOR FILE PROTECTION	10204	55	10224	19899
06610	B	MSTAKE	10216	49	09024	00000
06620	DORG	*-3	10224			
06630	GORT BT	GETR,GETR-1,, SEARCH FOR MORE BLANK SECTORS	10224	27	02872	02871
06640	CM	LISTER-3,07,1011, CYL REPRESENTED	10236	14	02761	000-P
06650	BE	GORT	10248	46	10224	01200
06660	CM	LISTER-3,09,1011,BLANKS	10260	14	02761	000-R
06670	BE	BAVADD	10272	46	10464	01200
06680	TF	NEWDIM,LISTER	10284	26	02963	02764
06690	BT	DIMMER,DIMMER-1	10296	27	03672	03671
06700	BNG	*+20,19899,, FILE PROTECTED PROGRAM	10308	55	10328	19899
06710	B	FILTST+12	10320	49	10216	00000
06720	DORG	*-3	10328			
06730	BNF	GORT,19899,,IMMOVABLE PROGRAM	10328	44	10224	19899
06740	B	MSTAKE	10340	49	09024	00000
06750	DORG	*-3	10348			
06760	BLANKT SF	LISTES-3	10348	32	02787	00000
06770	TF	CONST5,FOUND	10360	26	02825	03445
06780	S	FOUND,LISTES	10372	22	03445	02790
06790	CF	LISTES-3	10384	33	02787	00000
06800	SF	FOUND-2	10396	32	03443	00000
06810	TF	BAVAIL,FOUND	10408	26	02754	03445
06820	CF	FOUND-2	10420	33	03443	00000
06830	BAVCOM C	MOVESC,BAVAIL,,IS HOLE BIG ENOUGH	10432	24	02865	02754
06840	BNH	MOVNOW	10444	47	10496	01100
06850	B	GORT	10456	49	10224	00000
06860	DORG	*-3	10464			
06870	BAVADD SF	LISTER-2,,, ADD IN COUNT OF BLANK SECTORS FOUND	10464	32	02762	00000
06880	A	BAVAIL,LISTER	10476	21	02754	02764
06890	B	BAVCOM	10488	49	10432	00000
06900	DORG	*-3	10496			
06910	MOVNOW S	BAVAIL,MOVESC,, ADJUST LAST NINES ENTRY FOR FINAL OUTPUT	10496	22	02754	02865
06920	CM	BAVAIL,000,9,	10508	14	02754	00-00
06930	BE	REMBLK	10520	46	10628	01200
06940	SF	LISTER-2	10532	32	02762	00000
06950	TF	*+35,BAVAIL	10544	26	10579	02754
06960	CF	*+21	10556	33	10577	00000
06970	TFM	LISTET,9000,8	10568	16	02794	0R000
06980	BT	INSERT,INSERT-1	10580	27	03414	03413
06990	TFM	WRMOVE+5,,,ZERO FIELD	10592	16	02627	-0000
07000	S	WRMOVE+5,BAVAIL	10604	22	02627	02754
07010	TDM	HEX,,,RECORD MARK	10616	15	02795	00000
07020	DC	1,*,*	10627		1	
07030	REMBLK BT	REMOVE,REMOVE-1,,REMOVE LAST NINES ENTRY IF IT IS A PERFECT	10628	27	03084	03083

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07040	CM	LISTER-3,07,1011	10640	14	02761	000-P
07050	BE	KSEVEN	10652	46	10708	01200
07060	TF	NEWDIM,LISTER,,SET MOVER DDA FROM DIM ENTRY	10664	26	02963	02764
07070	BT	DIMMER,DIMMER-1	10676	27	03672	03671
07080	A	WRMOVE+5,19885	10688	21	02627	19885
07090	B	TOPPRO	10700	49	10812	00000
07100	DORG	*-3	10708			
07110	KSEVEN SF	LISTER-1,,,SET MOVER DDA FROM CYLINDER ENTRY	10708	32	02763	00000
07120	MM	LISTER,200,9	10720	13	02764	00K00
07130	A	WRMOVE+5,99	10732	21	02627	00099
07140	SF	WRMOVE	10744	32	02622	00000
07150	S	WRMOVE+1,NEVER	10756	22	02623	04297
07160	AM	WRMOVE+1,01,10	10768	11	02623	000-1
07170	CF	WRMOVE	10780	33	02622	00000
07180	B	TOPPRO	10792	49	10812	00000
07190	DORG	*-3	10800			
07200	RSEVEN BT	REMOVE,REMOVE-1	10800	27	03084	03083
07210	TOPPRO BNR	*+24,HEX	10812	45	10836	02795
07220	BT	GETL,GETL-1,,ADJUST THE LISTER FOR NO EXACT FIT	10824	27	02996	02995
07230	TF	CONST5,MOVESA	10836	26	02825	02862
07240	A	CONST5,MOVESC	10848	21	02825	02865
07250	SF	CONST5-4,,,SECTOR ADDRES OF LAST SECTOR TO BE MOVED TOWARD	10860	32	02821	00000
07260	TFM	NEWDIM,9999,8	10872	16	02963	0R999
07270	MARVEL BT	GETL,GETL-1	10884	27	02996	02995
07280	C	WRMOVE+5,CONST5,,HAS THE LAST PROGRAM JUST BEEN MOVED	10896	24	02627	02825
07290	BNH	PRE7	10908	47	08638	01100
07300	CM	LISTER-3,6,1011,FLAGGED ABOVE SIX	10920	14	02761	000-0
07310	BH	*+32,,,BOTH NUMBERS ARE MINUS	10932	46	10964	01100
07320	WASH BT	REMOVE,REMOVE-1	10944	27	03084	03083
07330	B	MARVEL	10956	49	10884	00000
07340	DORG	*-3	10964			
07350	C	LISTER,NEWDIM	10964	24	02764	02963
07360	BE	WASH	10976	46	10944	01200
07370	TF	NEWDIM,LISTER,,BEGIN-MOVE PROGRAMS DOWN	10988	26	02963	02764
07380	BT	DIMMER,DIMMER-1	11000	27	03672	03671
07390	TF	CALC7,19888,,SECTOR COUNT	11012	26	02848	19888
07400	TF	CALC3,19885,,INIT READ AND WRITE	11024	26	02779	19885
07410	TD	RDMOVE,19880	11036	25	02599	19880
07420	A	CALC3,CALC7	11048	21	02779	02848
07430	TF	RDMOVE+5,CALC3	11060	26	02604	02779
07440	TD	WRMOVE,RDMOVE	11072	25	02622	02599
07450	B	COMPFR	11084	49	05274	00000
07460	DORG	*-3	11092			
07470	TEC	MOVFL	08500			
07480	DORG	09000	09000			
07490	*** ROUTINE TO COMPLETE THE REMOVAL OF NON-PROGRAM ENTRIES					
07500	PRE7A BT	GETR,GETR-1	09000	27	02872	02871
07510	TF	CONST5,LISTER	09012	26	02825	02764
07520	LOOPSY BT	GETL,GETL-1,, SEARCH TOWARD THE LEFT FOR NEW DIM NUMBER	09024	27	02996	02995
07530	CM	LISTER-3,7,1011	09036	14	02761	000-P
07540	BE	SEVENT	09048	46	09108	01200
07550	CM	LISTER-3,9,1011	09060	14	02761	000-R
07560	BE	NINENT	09072	46	09132	01200
07570	C	LISTER,CONST5	09084	24	02764	02825
07580	BNE	CHOICE	09096	47	09196	01200

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07590	SEVENT	CM	LISTER,7000,8,CHECK FOR SPECIAL CASE OF CYLINDER ZERO	09108	14	02764	0P000
07600		BE	SPECAS	09120	46	09152	01200
07610	NINENT	BT	REMOVE,REMOVE-1	09132	27	03084	03083
07620		B	LOOPTY	09144	49	09024	00000
07630		DORG	=-3	09152			
07640	SPECAS	TFM	19885,,,	09152	16	19885	-0000
07650		BT	REMOVE,REMOVE-1	09164	27	03084	03083
07660		TFM	MAMY+1,+1,10,NOP THE GETR IN THIS SPECIAL CASE	09176	16	09497	000M1
07670		B	MEAT	09188	49	09292	00000
07680		DORG	=-3	09196			
07690	CHOICE	TF	NEWDIM,LISTER	09196	26	02963	02764
07700		BT	DIMMER,DIMMER-1	09208	27	03672	03671
07710		CM	LISTER,0001,8, CHECK FOR WORK REPRESENTED BY CYLINDER COUNT	09220	14	02764	0-001
07720		BNE	**48	09232	47	09280	01200
07730		MM	19888,200,9	09244	13	19888	00K00
07740		SF	95	09256	32	00095	00000
07750		A	19885,99	09268	21	19885	00099
07760		A	19885,19888	09280	21	19885	19888
07770	***	SET-UP	FAKSEV AND RACKET				
07780	MEAT	MM	MOVESA-4,05,10	09292	13	02858	000-5
07790		TDM	MOVESA-4,1,11	09304	15	02858	0000J
07800		BD	**24,99	09316	43	09340	00099
07810		TDM	MOVESA-4,0,11	09328	15	02858	0000-
07820		TD	19881,MOVESA-4	09340	25	19881	02858
07830		TFM	FAKSEV,7000,8	09352	16	02852	0P000
07840		SF	19883	09364	32	19883	00000
07850	DELTA	DC	5,00200,*	09375		5	
		-0200					
07860		TFM	RACKET,,8	09376	16	02841	0-000
07870		TF	RACKET,19885,,ESTABLISH THE NUMBER OF SECTORS USED ON THIS C	09388	26	02841	19885
07880		CF	19883	09400	33	19883	00000
07890		TDM	RACKET-2,1	09412	15	02839	00001
07900		MM	19883,05,10	09424	13	19883	000-5
07910		BD	**24,99	09436	43	09460	00099
07920		TDM	RACKET-2,0	09448	15	02839	00000
07930		TD	FAKSEV,98	09460	25	02852	00098
07940		TD	FAKSEV-1,97	09472	25	02851	00097
07950		S	DELTA,RACKET,, INIT TO 200 MINUS RACKET	09484	22	09375	02841
07960	MAMY	BT	GETR,GETR-1,, SHIFT OFF OF ANCHOR PROGRAM	09496	27	02872	02871
07970		TF	CONST5,MOVESA	09508	26	02825	02862
07980		S	CONST5,19885	09520	22	02825	19885
07990		CM	RACKET,0000,8	09532	14	02841	0-000
08000		BNE	CONCUD	09544	47	09952	01200
08010		TF	LISTET,FAKSEV,, REPLACE THE CYLINDER MARKER	09556	26	02794	02852
08020		BT	INSERT,INSERT-1	09568	27	03414	03413
08030		CM	CONST5,,7,	09580	14	02825	-0000
08040		BE	EIGHTS	09592	46	09984	01200
08050	DELNT5	C	DELTA,CONST5,, IS THERE ENOUGH ROOM FOR REMAINING NINES ENT	09604	24	09375	02825
08060		BL	TAC	09616	47	09812	01300
08070		BH	TIC	09628	46	09744	01100
08080		SF	CONST5-2,,, A PERFECT FIT,INSERT THE NINES ENTRY	09640	32	02823	00000
08090		TF	**35,CONST5	09652	26	09687	02825
08100		CF	**21	09664	33	09685	00000
08110		TFM	LISTET,9000,8	09676	16	02794	0R000
08120		BT	INSERT,INSERT-1	09688	27	03414	03413
08130		AM	FAKSEV,01,10	09700	11	02852	000-1

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08140		TF	LISTET,FAKSEV,, RESTORE THE CYLINDER MARKER	09712	26	02794	02852
08150		BT	INSERT,INSERT-1	09724	27	03414	03413
08160		B	EIGHTS	09736	49	09984	00000
08170		DORG	=-3	09744			
08180	TIC	SF	CONST5-2,,, INSERT THE NINES ENTRY	09744	32	02823	00000
08190		TF	**35,CONST5	09756	26	09791	02825
08200		CF	**21	09768	33	09789	00000
08210		TFM	LISTET,9000,8	09780	16	02794	0R000
08220		BT	INSERT,INSERT-1	09792	27	03414	03413
08230		B	EIGHTS	09804	49	09984	00000
08240		DORG	=-3	09812			
08250	TAC	SF	DELTA-2,, FILL THE REST OF THE CYLINDER WITH NINES ENTRY	09812	32	09373	00000
08260		TF	**35,DELTA	09824	26	09859	09375
08270		CF	**21	09836	33	09857	00000
08280		TFM	LISTET,9000,8	09848	16	02794	0R000
08290		CF	DELTA-2	09860	33	09373	00000
08300		BT	INSERT,INSERT-1	09872	27	03414	03413
08310		S	CONST5,DELTA	09884	22	02825	09375
08320		AM	FAKSEV,01,10	09896	11	02852	000-1
08330		TF	LISTET,FAKSEV,, RESTORE THE CYLINDER MARKER	09908	26	02794	02852
08340		BT	INSERT,INSERT-1	09920	27	03414	03413
08350		TFM	DELTA,00200,7,	09932	16	09375	-0200
08360		B	DELNT5	09944	49	09604	00000
08370		DORG	=-3	09952			
08380	CONCUD	CM	CONST5,00000,7, SECTOR ADDRES FITS ON END OF PREVIOUS PROGR	09952	14	02825	-0000
08390		BE	EIGHTS	09964	46	09984	01200
08400		B	DELNT5	09976	49	09604	00000
08410		DORG	=-3	09984			
08420	EIGHTS	TF	**35,MOVESC,, INSERT AN EIGHTS ENTRY FOR MOVESC	09984	26	10019	02865
08430		CF	**21	09996	33	10017	00000
08440		TFM	LISTET,8000,8	10008	16	02794	0R000
08450		BT	INSERT,INSERT-1	10020	27	03414	03413
08460		BT	GETL,GETL-1	10032	27	02996	02995
08470		SF	MOVESA-3	10044	32	02859	00000
08480		TF	RACKET,MOVESA	10056	26	02841	02862
08490		CF	MOVESA-3	10068	33	02859	00000
08500		SM	RACKET,200,9	10080	12	02841	00K00
08510		BNF	**12,RACKET	10092	44	10080	02841
08520		AM	RACKET,200,9	10104	11	02841	00K00
08530		BT	GETL,GETL-1	10116	27	02996	02995
08540	***	ROUTINE	TO RESTORE THE SPL TO ITS PROPER FORM				
08550	ALLRIT	BT	GETR,GETR-1,, SHIFT TO PICK UP NEXT ENTRY TO ANALYZE	10128	27	02872	02871
08560		CM	LISTER-3,7,1011	10140	14	02761	000-P
08570		BE	BEAUTY	10152	46	10592	01200
08580		CM	LISTER-3,9,1011	10164	14	02761	000-R
08590		BE	ADDRAC	10176	46	10656	01200
08600		CM	LISTER-3,8,1011	10188	14	02761	000-Q
08610		BE	ADDRAC	10200	46	10656	01200
08620		TF	NEWDIM,LISTER,, BRING IN NEW DIM ENTRY TO FIND LENGTH	10212	26	02963	02764
08630		BT	DIMMER,DIMMER-1	10224	27	03672	03671
08640		SF	FAKSEV-1	10236	32	02851	00000
08650		MM	FAKSEV,200,9	10248	13	02852	00K00
08660		SF	94	10260	32	00094	00000
08670		S	95,NEVER	10272	22	00095	04297
08680		AM	95,01,10	10284	11	00095	000-1
08690		CF	FAKSEV-1	10296	33	02851	00000

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08700	C	19885,99,,DOES THIS PROGRAM START ON A CYLINDER PREVIOUS TO	10308	24	19885	00099
08710	BNL	**+48	10320	46	10368	01300
08720	S	19885,99	10332	22	19885	00099
08730	SF	19883	10344	32	19883	00000
08740	A	19888,19885	10356	21	19888	19885
08750	A	RACKET,19888	10368	21	02841	19888
08760	NOISY	CM RACKET,200,9, HAVE 200 SECTORS BEEN ACCOUNTED FOR THIS CYL	10380	14	02841	00K00
08770	BE	EZEST	10392	46	10700	01200
08780	BNH	ALLRIT	10404	47	10128	01100
08790	CM	LISTER-3,8,1011	10416	14	02761	000-0
08800	BNH	TELAST	10428	47	10756	01100
08810	TF	STEAL,LISTER	10440	26	02845	02764
08820	BT	GETR,GETR-1	10452	27	02872	02871
08830	AM	FAKSEV,1,10	10464	11	02852	000-1
08840	TF	LISTET,FAKSEV,, RESTORE SEVENS MARKER	10476	26	02794	02852
08850	BT	INSERT,INSERT-1	10488	27	03414	03413
08860	TF	LISTET,STEAL,, REPEAT THE DIM NUMBER	10500	26	02794	02845
08870	BT	INSERT,INSERT-1	10512	27	03414	03413
08880	RAKES	SM RACKET,200,9,	10524	12	02841	00K00
08890	C	LISTER,FAKSEV	10536	24	02764	02852
08900	BE	**+32	10548	46	10580	01200
08910	BT	GETL,GETL-1	10560	27	02996	02995
08920	B	NOISY	10572	49	10380	00000
08930	DDRG	**+3	10580			
08940	BT	REMOVE,REMOVE-1	10580	27	03084	03083
08950	BEAUTY	S GETL,GETL-1,, POSITION LISTER FOR EXIT	10592	27	02996	02995
08960	CM	LISTER-3,08,1011	10604	14	02761	000-0
08970	BE	**+20	10616	46	10636	01200
08980	B	BEAUTY	10628	49	10592	00000
08990	DDRG	**+3	10636			
09000	BT	GETR,GETR-1	10636	27	02872	02871
09010	B	SFSUCE	10648	49	08600	00000
09020	DDRG	**+3	10656			
09030	ADDRAC	SF LISTER-2,,, ADD THE BLANK OR EIGHTS SECTOR COUNT TO TOTAL	10656	32	02762	00000
09040	A	RACKET,LISTER	10668	21	02841	02764
09050	CF	LISTER-2	10680	33	02762	00000
09060	B	NOISY	10692	49	10380	00000
09070	DDRG	**+3	10700			
09080	EZEST	AM FAKSEV,1,10, INSERT CYL MARKER FOR A PERFECT FIT	10700	11	02852	000-1
09090	TF	LISTET,FAKSEV	10712	26	02794	02852
09100	BT	GETR,GETR-1	10724	27	02872	02871
09110	BT	INSERT,INSERT-1	10736	27	03414	03413
09120	B	RAKES	10748	49	10524	00000
09130	DDRG	**+3	10756			
09140	TELAST	SF LISTER-2	10756	32	02762	00000
09150	S	RACKET,LISTER,, PREPARE THE SIZE OF THE EIGHTS ENTRY	10768	22	02841	02764
09160	CF	LISTER-2	10780	33	02762	00000
09170	TFM	CONST8,200,8	10792	16	02870	0-200
09180	S	CONST8,RACKET	10804	22	02870	02841
09190	SF	CONST8-2	10816	32	02868	00000
09200	S	LISTER,CONST8	10828	22	02764	02870
09210	TF	STEAL,LISTER	10840	26	02845	02764
09220	TF	**+35,CONST8	10852	26	10887	02870
09230	CF	**+21	10864	33	10885	00000
09240	TFM	LISTET,8000,8, INSERT THE EIGHTS ENTRY	10876	16	02794	00K00
09250	BT	REMOVE,REMOVE-1,, REMOVE THE INDICATOR FROM THE LIST	10888	27	03084	03083

09260	BT	INSERT,INSERT-1	10900	27	03414	03413
09270	AM	FAKSEV,1,10	10912	11	02852	000-1
09280	TF	LISTET,FAKSEV	10924	26	02794	02852
09290	BT	INSERT,INSERT-1,, INSERT THE SEVENS MARKER	10936	27	03414	03413
09300	TF	LISTET,STEAL	10948	26	02794	02845
09310	BT	INSERT,INSERT-1,, REPLACE THE REDUCED INDICATOR	10960	27	03414	03413
09320	BT	GETL,GETL-1	10972	27	02996	02995
09330	TF	RACKET,LISTET	10984	26	02841	02794
09340	TDM	RACKET-3,0,11	10996	15	02838	0000-
09350	B	NOISY	11008	49	10380	00000
09360	DDRG	**+3	11016			
09370	***	LINKAGE FOR PLACING THIS LAST PORTION OF MOVER ON DISK				
09380	NOMC	TFM IORT,**+23	11016	16	00565	J1039
09390	B	IOPT,NOMD,7	11028	49	00532	J1064
09400	TRA		11040	36	00000	00500
			11052	49	00000	00000
09410	NOMD	DSC 2,22	11064			2
		22				
09420	DSA	NOME	11070		5 X	1
			11070		J1072	
09430	DC	1,'	11071		1	
		'				
09440	NOME	DSC 1,1	11072		1	
		1				
09450	DC	5,17106	11077		5	
		J7106				
09460	DC	3,022	11080		3	
		-22				
09470	DC	6,09000'	11086		6	
		-9000'				
09480	TCD	NOMC	11016			
09490	DDRG	5600	05600			
09500	DELFL	TFM IORT,**+23	05600	16	00565	-5623
09510	B	IOPT,DELL,7	05612	49	00532	-5648
09520	TRA		05624	36	00000	00500
			05636	49	00000	00000
09530	DEL1	DSC 2,22	05648		2	
		22				
09540	DSA	DEL2	05654		5 X	1
			05654		-5656	
09550	DSC	1,'	05655		1	
		'				
09560	DEL2	DSC 1,1	05656		1	
		1				
09570	DC	5,18247	05661		5	
		J8247				
09580	DC	3,013	05664		3	
		-13				
09590	DC	5,05800	05669		5	
		-5800				
09600	DSC	1,'	05670		1	
		'				
09610	*	DELETE PROGRAM ROUTINE				

09620 *									
09630 *									
09640	DORG	5800		05800					
09650 DELET	SF	DELETE		05800	32	13134	00000		
09660 ***		DETERMINE MAX.NO. OF DIM ENTRIES							
09670	TFM	MAXDIM,9999,8		05812	16	03849	0R999		
09680	TFM	NEWDIM,3,8		05824	16	02963	0-003		
09690	BT	DIMMER,DIMMER-1		05836	27	03672	03671		
09700	BNR	**20,MAP		05848	45	05868	19880		
09710	B	MDNCAL		05860	49	00796	00000		
09720	DORG	**3		05868					
09730	MM	MAP+8,5,10		05888	13	19888	000-5		
09740	SF	96		05880	32	00096	00000		
09750	SM	99,1,10		05892	12	00099	000-1		
09760	TF	MAXDIM,99		05904	26	03849	00099		
09770	SF	INPUT+11		05916	32	13624	00000		
09780	TF	PNAME,INPUT+22		05928	26	13229	13635		
09790	TD	DIMNUM,INPUT+30		05940	25	13190	13643		
09800	TD	DIMNUM-1,INPUT+28		05952	25	13189	13641		
09810	TD	DIMNUM-2,INPUT+26		05964	25	13188	13639		
09820	TD	DIMNUM-3,INPUT+24		05976	25	13187	13637		
09830	SF	DIMNUM-3		05988	32	13187	00000		
09840	CM	DIMNUM,0,8		06000	14	13190	0-000		
09850	BE	OKDEL-24		06012	46	06124	01200		
09860 ***		IS DIM NO. IN RANGE							
09870	C	DIMNUM,MAXDIM		06024	24	13190	03849		
09880	BNH	**32		06036	47	06068	01100		
09890	TFM	DIMERR+22,0076,8		06048	16	02507	0-076		
09900	B	ERRD		06060	49	02524	00000		
09910	DORG	**3		06068					
09920 ***		IS DIM NO. IN USE							
09930	TF	NEWDIM,DIMNUM		06068	26	02963	13190		
09940	BT	DIMMER,DIMMER-1		06080	27	03672	03671		
09950	BNR	OKDEL,MAP		06092	45	06148	19880		
09960	TFM	DIMERR+22,7271,8		06104	16	02507	0P271		
09970	B	ERRD		06116	49	02524	00000		
09980	DORG	**3		06124					
09990	C	PNAME,ZERO12		06124	24	13229	13167		
10000	BE	ERRD-12		06136	46	02512	01200		
10010 OKDEL	BTM	EQUIV,**12		06148	17	08606	-6160		
10020	CM	DIMNUM,0,8		06160	14	13190	0-000		
10030	BNE	**32		06172	47	06204	01200		
10040	TFM	DIMERR+22,7270,8		06184	16	02507	0P270		
10050	B	ERRD		06196	49	02524	00000		
10060	DORG	**3		06204					
10061	TF	NEWDIM,DIMNUM		06204	26	02963	13190		
10062	BT	DIMMER,DIMMER-1		06216	27	03672	03671		
10063	BNR	**20,MAP		06228	45	06248	19880		
10064	B7	EXIT3		06240	49	06936			
10070 *		DELETE ENTRY FROM SP LIST							
10080	BTM	SPLDEL,**12		06248	17	12090	-6260		
10090	TF	NEWDIM,DIMNUM		06260	26	02963	13190		
10100	BT	DIMMER,DIMMER-1		06272	27	03672	03671		
10110	TF	FWRIT+5,MAP+5		06284	26	13272	19885		
10120	TD	FWRIT,MAP		06296	25	13267	19880		
10130	TF	HOLD3,MAP+8		06308	26	13193	19888		

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10140	TF	LOADSC,MAP+8		06320	26	13180	19888		
10150	TFM	FLAG+11,TRACK2		06332	16	06523	J7778		
10160	TF	LOADSA,MAP+5		06344	26	13102	19885		
10170	TD	LOADSA-5,MAP		06356	25	13097	19880		
10180	SF	MAP+4		06368	32	19884	00000		
10190	SM	MAP+5,20,10		06380	12	19885	000K0		
10200	BH	**12		06392	46	06380	01100		
10210	BZ	**48		06404	46	06452	01200		
10220	AM	MAP+5,20,10		06416	11	19885	000K0		
10230	MM	MAP+5,105,9		06428	13	19885	00J05		
10240	A	FLAG+11,99		06440	21	06523	00099		
10250	TF	CLFP+6,FLAG+11		06452	26	06702	06523		
10260	TFM	FWRIT+8,20,9		06464	16	13275	00-20		
10270	TFM	FWRIT+13,TRACK2		06476	16	13280	J7778		
10280	TFM	IORT,**23		06488	16	00565	-6511		
10290	B	IOGT,FPDDA,7		06500	49	00566	J3451		
10300 FLAG	BNF	**20,TRACK2,,	SEARCH FOR FILE PROTECTION	06512	44	06532	17778		
10310	B	CLEAR		06524	49	06624	00000		
10320	DORG	**3		06532					
10330	SM	HOLD3,1,10		06532	12	13193	000-1		
10340	BZ	FPOK		06544	46	06864	01200		
10350	AM	FLAG+11,105,9		06556	11	06523	00J05		
10360	CM	FLAG+11,TRACK2+2100		06568	14	06523	J9878		
10370	BL	FLAG		06580	47	06512	01300		
10380	TFM	FLAG+11,TRACK2		06592	16	06523	J7778		
10390	AM	FWRIT+5,20,10		06604	11	13272	000K0		
10400	B	FLAG-24		06616	49	06488	00000		
10410	DORG	**3		06624					
10420 CLEAR	TF	FWRIT+5,LOADSA		06624	26	13272	13102		
10430	TD	FWRIT,LOADSA-5		06636	25	13267	13097		
10440	SF	BUTTON		06648	32	00455	00000		
10450	BTM	KYMESS,**12		06660	17	11998	-6672		
10460	TFM	IORT,**23		06672	16	00565	-6695		
10470	B	IOGT,FPDDA,7		06684	49	00566	J3451		
10480 CLFP	CF	TRACK2,,	CLEAR FILE PROTECTION	06696	33	17778	00000		
10490	SM	LOADSC,1,10		06708	12	13180	000-1		
10500	BZ	WROK		06720	46	06768	01200		
10510	AM	CLFP+6,105,9		06732	11	06702	00J05		
10520	CM	CLFP+6,TRACK2+2100		06744	14	06702	J9878		
10530	BL	CLFP		06756	47	06696	01300		
10540 WROK	TFM	IORT,**23		06768	16	00565	-6791		
10550	B	IOPT,FPDDA,7		06780	49	00532	J3451		
10560	AM	FWRIT+5,20,10		06792	11	13272	000K0		
10570	TFM	CLFP+6,TRACK2		06804	16	06702	J7778		
10580	CM	LOADSC,0,9		06816	14	13180	00-00		
10590	BNE	CLFP-24		06828	47	06672	01200		
10600	CF	BUTTON		06840	33	00455	00000		
10610	BTM	KYMESS,**12		06852	17	11998	-6864		
10620 FPOK	TF	NEWDIM,DIMNUM		06864	26	02963	13190		
10630	BT	DIMMER,DIMMER-1		06876	27	03672	03671		
10640	TDM	MAP,,,	REMOVE DIM ENTRY	06888	15	19880	00000		
10650	DSC	1,*,*		06899			1		
10660	TF	MAP+19,ZERO19		06900	26	19899	13174		
10670	TFM	IORT,**23		06912	16	00565	-6935		
10680	B	IOPT,DMODA,7		06924	49	00532	-2568		

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10690	EXIT3	TDM	SYSCAL,3	06936	15	00475	00003
10700		B	MONCAL	06948	49	00796	00000
10710		DORG	*-3	06956			
10720		TCD	DELFL	05600			
10730	****						
10740	*****						
10750	*****						
10760		DORG	4400	04400			
10770	LOADFL	TFM	IORT,**23	04400	16	00565	-4423
10780		B	IOPT,LOAD2,7	04412	49	00532	-4463
10790		TRA		04424	36	00000	00500
				04436	49	00000	00000
				04448			1
10800	LOAD1	DSC	1,1				
		1					
10810		DC	5,18369	04453			5
		J8369					
10820		DC	3,027	04456			3
		-27					
10830		DC	5,05800	04461			5
		-5800					
10840		DSC	1,'	04462			1
		'					
10850	LOAD2	DSC	2,22	04463			2
		22					
10860		DSA	LOAD1	04469		5 X	1
10870		DSC	1,'	04469		-4448	
		'		04470		1	
10880		DORG	5800				05800
10890	DLOAD	BTM	SCRAD,**12	05800	17	09298	-5812
10900		TD	MXNDSA-2,MCS+49	05812	25	05833	17827
10910		SF	MXNDSA-2,399,9	05824	32	05833	00199
10920		SM	MXNDSA,100,9	05836	12	05835	00100
10930	MXNDSA	DC	3,399,DLOAD+35	05835			3
		L99					
10940		TFM	HOLD2,0,10	05848	16	13104	000-0
10950		TD	HOLD2,SYSCAL	05860	25	13104	00475
10960	**	IS	CALL FROM CONTROL CARD				
10970		CM	HOLD2,4,10	05872	14	13104	000-4
10980		BNE	SPS	05884	47	07484	01200
10990		TFM	ATN+11,INPUT+32	05896	16	09053	J3645
11000	**	I	CONVERT CONTROL CARD TO NUMERIC				
11010		BTM	ATNR,**12	05908	17	08606	-5920
11020	DC2	SF	HOLD2,0,10	05920	32	13056	00000
11030		SF	HOLD2,0,10	05932	32	13063	00000
11040		SF	HOLD2,0,10	05944	32	13068	00000
11050		SF	HOLD2,0,10	05956	32	13073	00000
11060		BD	**+68,NTEST	05968	43	06036	13132
11070		CM	HOLD2,0,10	05980	14	13072	-0000
11080		BNE	**+24	05992	47	06016	01200
11090		TFM	HOLD2,0,10	06004	16	13072	-2402
11100		TF	MAPMA,HOLD2,0,10	06016	26	13150	13072
11110		B7	**+44	06028	49	06072	
11120		CM	HOLD2,0,10	06036	14	13072	-0000

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11130		BNE	*-32	06048	47	06016	01200
11140		TFM	MAPMA,99999,7	06060	16	13150	R9999
11150		TF	MAPMA,HOLD2,0,10	06072	26	13155	13077
11160		BD	DISKN,PHI,,	06084	43	06340	13130
11170	DC22	SF	INPUT+39	06096	32	13652	00000
11180		C	INPUT+50,ZERO12	06108	24	13663	13167
11190		BE	ERRD-12	06120	46	02512	01200
11200		TF	HOLD6,HOLD2,0,10	06132	26	13215	13061
11210		S	HOLD6,HOLD2,0,10	06144	22	13215	13055
11220		BNL	**+32	06156	46	06188	01300
11230		TFM	DIHERR+22,7177,8	06168	16	02507	0P177
11240		B	ERRD	06180	49	02524	00000
11250		DORG	*-3	06188			06188
11260		C	HOLD2,0,10	06188	24	13055	13203
11270		BL	SCERR	06200	47	12854	01300
11280		C	HOLD2,0,10	06212	24	13061	13209
11290		BH	SCERR	06224	46	12854	01100
11300		TF	LOADSC,HOLD2,0,10	06236	26	13180	13061
11310		S	LOADSC,HOLD2,0,10	06248	22	13180	13055
11320		AM	LOADSC,1,10	06260	11	13180	000-1
11330		TF	SCRACH,HOLD2,0,10	06272	26	13186	13055
11340		SF	LOADSC-2	06284	32	13178	00000
11350		SF	SCRACH-4	06296	32	13182	00000
11360		CF	SCRACH-5	06308	33	13181	00000
11370		BD	MODDK1,RTEST	06320	43	10682	13131
11380		B	MAINB1	06332	49	06364	00000
11390		DORG	*-3	06340			06340
11400	DISKN	BD	MODND1,RTEST	06340	43	10482	13131
11410		BTM	NODISK,**12	06352	17	09866	-6364
11420	MAINB1	BD	**+32,PTEST	06364	43	06396	13133
11430		TDM	MAPRM,,	06376	15	13115	00000
11440		DSC	1,'*	06387			1
		'					
11450		B	**+20	06388	49	06408	00000
11460		DORG	*-3	06396			06396
11470		TD	MAPRM,GPMARK,,	06396	25	13115	13116
11480		SF	INPUT+63	06408	32	13676	00000
11490		C	INPUT+74,ZERO12	06420	24	13687	13167
11500		BE	NOSAC	06432	46	10886	01200
11510		SF	MAPRM,,	06444	32	13115	00000
11520		TF	LOADSA,HOLD2,0,10	06456	26	13102	13067
11530		TD	LOADSA-5,HOLD2,0,10	06468	25	13097	13062
11540		CF	LOADSA-4	06480	33	13098	00000
11550		SF	LOADSA-5	06492	32	13097	00000
11560		C	LOADSA,SCR2	06504	24	13102	13209
11570		BH	SCROK	06516	46	06588	01100
11580		TF	HOLD6,LOADSA	06528	26	13215	13102
11590		A	HOLD6,LOADSC	06540	21	13215	13180
11600		SM	HOLD6,1,10	06552	12	13215	000-1
11610		C	HOLD6,SCR1	06564	24	13215	13203
11620		BNL	SCERR	06576	46	12854	01300
11630	SCROK	SF	INPUT+11	06588	32	13624	00000
11640		SF	LOADSA-4	06600	32	13098	00000
11650		CF	LOADSA-5	06612	33	13097	00000
11660		TF	PNAME,INPUT+22	06624	26	13229	13635
11670		CM	HOLD2,0,10	06636	14	13049	0-000

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11680	BE	FINDON	06648	46	06740	01200
11690	TF	NEWDIM,HOLD6+3	06660	26	02963	13049
11700	BT	DIMMER,DIMMER-1	06672	27	03672	03671
11710	BNR	**20,MAP	06684	45	06704	19880
11720	B	CALLMV	06696	49	07036	00000
11730	DORG	*-3	06704			
11740	RCTY		06704	34	00000	00102
11750	TFM	DIMERR+22,7572,8	06716	16	02507	0P572
11760	WATY	DIMERR	06728	39	02485	00100
11770	FINDON	TFM NEWDIM,204,8,	06740	16	02963	0-204
11780	TF	HOLD6,ZERO6	06752	26	13215	13161
11790	TF	HOLD6,NEWDIM	06764	26	13215	02963
11800	A	HOLD6,HOLD6	06776	21	13215	13215
11810	CF	HOLD6-3	06788	33	13212	00000
11820	AM	HOLD6-1,4800,8	06800	11	13214	0M800
11830	TF	D2READ+5,HOLD6-1	06812	26	13504	13214
11840	TFM	IORT,**23	06824	16	00565	-6847
11850	B	IOGT,DIREAD,7	06836	49	00566	J3491
11860	TFM	TREC+11,TRACK	06848	16	06895	J3776
11870	TD	**23,HOLD6	06860	25	06883	13215
11880	AM	TREC+10,0,10	06872	11	06894	000-0
11890	TREC	BNR **20,TRACK	06884	45	06904	13776
11900	B	CALLMV	06896	49	07036	00000
11910	DORG	*-3	06904			
11920	AM	NEWDIM,1,10	06904	11	02963	000-1
11930	C	NEWDIM,MAXDIM	06916	24	02963	03849
11940	BH	EXITFL	06928	46	06984	01100
11950	AM	TREC+11,20,10	06940	11	06895	000K0
11960	CM	TREC+11,TRACK+2100	06952	14	06895	J5876
11970	BL	TREC	06964	47	06884	01300
11980	B	FINDON+12	06976	49	06752	00000
11990	DORG	*-3	06984			
12000	EXITFL	BNF **32,FORT	06984	44	07016	13114
12010	TFM	DIMERR+22,7671,8	06996	16	02507	0P671
12020	B	ERR+24	07008	49	05686	00000
12030	DORG	*-3	07016			
12040	TFM	DIMERR+22,0079,8	07016	16	02507	0-079
12050	B	ERRD	07028	49	02524	00000
12060	DORG	*-3	07036			
12070	CALLMV	TF DIMNUM,NEWDIM	07036	26	13190	02963
12080	TF	MOVESC,LOADSC	07048	26	02865	13180
12090	TF	MOVESA,LOADSA	07060	26	02862	13102
12100	TD	MOVESA-5,LOADSA-5	07072	25	02857	13097
12110	TFM	IORT,**23	07084	16	00565	-7107
12120	B	IOGT,MOVDDA,7	07096	49	00566	J3244
12130	TFM	EXITMR+6,**20	07108	16	08630	-7128
12140	B	MOVER	07120	49	08824	00000
12150	DORG	*-3	07128			
12160	BNF	ERR,SUCCESS	07128	44	05662	13118
12170	TFM	IORT,**23	07140	16	00565	-7163
12180	B	IOGT,EQUDDA,7	07152	49	00566	J3312
12190	TFM	IORT,**23	07164	16	00565	-7187
12200	B	IOGT,COM2,7	07176	49	00566	J3335
12210	TF	NEWDIM,DIMNUM	07188	26	02963	13190
12220	BT	DIMMER,DIMMER-1	07200	27	03672	03671
12230	BTM	SETMAP,**12	07212	17	10738	-7224

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12240	BTM	WRLAST,**12	07224	17	11842	-7236
12250	BNF	MONCAL,DUMP	07236	44	00796	13426
12260	TD	MCS+23,DUMP	07248	25	17801	13426
12270	TFM	IORT,**23	07260	16	00565	-7283
12280	B	IOGT,DMPDIM,7	07272	49	00566	J3403
12290	DS	*2259	02259			
12300	LOADRE	TFM ATN+11,INPUT+32	07284	16	09053	J3645
12310	SF	LOADRE	07296	32	07284	00000
12320	BTM	ATNR,**12	07308	17	08606	-7320
12330	TFM	INPUT+49,7070,8	07320	16	13662	0P070
12340	A	WR2+3,425	07332	21	02262	00425
12350	TD	WR2,422	07344	25	02259	00422
12360	SF	WR2	07356	32	02259	00000
12370	CF	WR2+1	07368	33	02260	00000
12380	TF	HOLD6+9,WR2+5	07380	26	13055	02264
12390	TF	HOLD6+15,WR2+5	07392	26	13061	02264
12400	A	HOLD6+15,WR2+8	07404	21	13061	02267
12410	SM	HOLD6+15,1,10	07416	12	13061	000-1
12420	TF	HOLD6+26,WR2+13	07428	26	13072	02272
12430	TF	MAPMA,WR2+13	07440	26	13150	02272
12440	BNF	DC2,MCS+22	07452	44	05920	17600
12450	SF	FORT	07464	32	13114	00000
12460	B	NORE1	07476	49	07600	00000
12470	DORG	*-3	07484			
12480	SPS	TFM PHI,0,9,	07484	16	13130	00-00
12490	CM	HOLD2,6,10	07496	14	13104	000-6
12500	BNE	LOADRE	07508	47	07284	01200
12510	TDM	FREDDA,0	07520	15	13467	00000
12520	SF	FORT	07532	32	13114	00000
12530	TF	MAPMA,MCS+12	07544	26	13150	17790
12540	BD	NORE1,MCS+22	07556	43	07600	17800
12550	TFM	SCRACH,0,7	07568	16	13186	-0000
12560	TDM	SCRACH-5,0	07580	15	13181	00000
12570	B	MDDDK1	07592	49	10682	00000
12580	DORG	*-3	07600			
12590	NORE1	TF INPUT+22,MCS+35	07600	26	13635	17813
12600	TF	MAPEA,MCS+17	07612	26	13155	17795
12610	TD	DUMP,MCS+23	07624	25	13426	17801
12620	NEGATE	TDM PTEST,0,,	07636	15	13133	00000
12630	TF	INPUT+74,ZERO12	07648	26	13687	13167
12640	TF	HOLD6+40,ZERO6,,	07660	26	13086	13161
12650	TF	HOLD6+3,MCS+39	07672	26	13049	17817
12660	BNF	**20,LOADRE	07684	44	07704	07284
12670	B	DC22	07696	49	06096	00000
12680	DORG	*-3	07704			
12690	TFM	LOADSC,0,9	07704	16	13180	00-00
12700	TFM	DCFSR+8,3,9	07716	16	13381	00-03
12710	TFM	DCFSR+5,0,7	07728	16	13378	-0000
12720	INIT1	TFM LOOP,4,10	07740	16	13120	000-4
12730	TFM	SCAN1+6,READIN	07752	16	07794	J7778
12740	TFM	IORT,**23	07764	16	00565	-7787
12750	B	IOGT,DDASCR,7	07776	49	00566	J3483
12760	SCAN1	NOP READIN,0	07788	41	17778	00000
12770	TF	BNR+11,SCAN1+6	07800	26	09661	07794
12780	TFM	NODISK-1,MAINB1	07812	16	09865	-6364
12790	BTM	LCTEST,**12	07824	17	09614	-7836

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12800	SM	LOOP,1,10	07836	12	13120	000-1
12810	BD	UPSCA,LOOP	07848	43	07892	13120
12820	AM	LOADSC,3,10	07860	11	13180	000-3
12830	AM	DCFSCR+5,3,10	07872	11	13378	000-3
12840	B	INIT1	07884	49	07740	00000
12850	DORG	=-3	07892			
12860	UPSCA	AM SCAN1+6,75,9	07892	11	07794	00-75
12870	B	SCAN1	07904	49	07788	00000
12880	DORG	=-3	07912			
12890	TCD	LOADFL	04400			
12900	*****					
12910	*****	*DREPL INDEPENDENT ROUTINES				
12920	*****					
12930	DORG	4400	04400			
12940	REPLFL	TFM IORT,**23	04400	16	00565	-4423
12950	B	IOPT,REPL2,7	04412	49	00532	-4463
12960	TRA		04424	36	00000	00500
			04436	49	00000	00000
12970	REPL1	DSC 1,1	04448			1
		1				
12980	DC	5,18400	04453			5
		J8400				
12990	DC	3,028	04456			3
		-28				
13000	DC	5,05800	04461			5
		-5800				
13010	DSC	1,1	04462			1
		'				
13020	REPL2	DSC 2,22	04463			2
		22				
13030	DSA	REPL1	04469			5 X 1
13040	DSC	1,1	04469		-4448	
		'	04470			1
13050	DORG	5800	05800			
13060	DREPL	TFM HOLD2,0,10	05800	16	13104	000-0
13070	BTM	SCRAD,**12	05812	17	09298	-5824
13080	TD	HOLD2,SYSCAL	05824	25	13104	00475
13090	CM	HOLD2,4,10	05836	14	13104	000-4
13100	BNE	RELD	05848	47	08172	01200
13110	SF	INPUT+11	05860	32	13624	00000
13120	TFM	ATN+11,INPUT+24	05872	16	09053	J3637
13130	BTM	ATNR,**12,,	05884	17	08606	-5896
13140	SF	HOLDCD*8	05896	32	13054	00000
13150	SF	HOLDCD*14	05908	32	13060	00000
13160	SF	HOLDCD*26	05920	32	13072	00000
13170	SF	HOLDCD*31	05932	32	13077	00000
13180	TF	PNAME,INPUT+22	05944	26	13229	13635
13190	ISTO	CM HOLDCD*7,0,8,	05956	14	13053	0-000
		ERROR IF NO TO DIM	05968	46	02512	01200
13200	BE	ERRD-12	05980	26	02963	13053
13210	TF	NEWDIM,HOLDCD+7	05992	27	03672	03671
13220	BT	DIMMER,DIMMER-1	06004	45	06036	19880
13230	BNR	**32,MAP	06016	16	02507	0-072
13240	TFM	DIMERR+22,0072,8				

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13250	B	ERRD,,,	06028	49	02524	00000
13260	DORG	=-3	06036			
13270	BNF	**32,MAP+19	06036	44	06068	19899
13280	****	ERROR IF TO DIM IS IMMOVABLE				
13290	TFM	DIMERR+22,0073,8	06048	16	02507	0-073
13300	B	ERRD	06060	49	02524	00000
13310	DORG	=-3	06068			
13320	TF	LOADSA,MAP+5	06068	26	13102	19885
13330	TD	LOADSA-5,MAP	06080	25	13097	19880
13340	**	ENTRY AND CORE ADDRESSES FROM CARD				
13350	TF	MAPEA,HOLDCD+35	06092	26	13155	13081
13360	BD	PATCH2+52,NTEST	06104	43	11634	13132
13370	CM	HOLDCD+30,0,7	06116	14	13076	-0000
13380	BT	PATCH2	06128	49	11582	
13390	PAT2	TFM MAPMA,99999,7	06136	16	13150	R9999
13400	BD	**32,PTEST	06148	43	06180	13133
13410	**	NO FILE PROTECTION				
13420	TDM	MAPRM,,,	06160	15	13115	00000
13430	DSC	1,1,*	06171			1
		'				
13440	B	**20	06172	49	06192	00000
13450	DORG	=-3	06180			
13460	**	FILE PROTECTION				
13470	TD	MAPRM,GPMARK	06180	25	13115	13116
13480	**	PROGRAM IS MOVABLE				
13490	BD	NDISK,PHI	06192	43	06848	13130
13500	**	IS THERE A FROM DIM				
13510	CM	HOLDCD+3,0,8	06204	14	13049	0-000
13520	PATCH4	BNE NTZ	06216	47	06380	01200
13530	**	PROGRAM IS IN WORK AREA				
13540	SF	INPUT+39	06228	32	13652	00000
13550	C	INPUT+50,ZERO12	06240	24	13663	13167
13560	BE	ERRD-12	06252	46	02512	01200
13570	C	HOLDCD+19,SCR2	06264	24	13065	13209
13580	BH	SCERR	06276	46	12854	01100
13590	C	HOLDCD+13,SCR1	06288	24	13059	13203
13600	BL	SCERR	06300	47	12854	01300
13610	**	COMPUTE SECTOR COUNT				
13620	TF	LOADSC,HOLDCD+19	06312	26	13180	13065
13630	S	LOADSC,HOLDCD+13	06324	22	13180	13059
13640	AM	LOADSC,1,10	06336	11	13180	000-1
13650	SF	LOADSC-2	06348	32	13178	00000
13660	TF	SCRACH,HOLDCD+13	06360	26	13186	13059
13670	B	MAINB2	06372	49	06884	00000
13680	DORG	=-3	06380			
13690	NTZ	TF NEWDIM,HOLDCD+3	06380	26	02963	13049
13700	BNF	**20,LOADER	06392	44	06412	11310
13710	B	NTZ-6R	06404	49	06312	00000
13720	DORG	=-3	06412			
13730	BT	DIMMER,DIMMER-1	06412	27	03672	03671
13740	**	ERROR IF FROM DIM NOT IN USE				
13750	BNR	**32,MAP	06424	45	06456	19880
13760	TFM	DIMERR+22,0074,8	06436	16	02507	0-074
13770	B	ERRD	06448	49	02524	00000
13780	DORG	=-3	06456			
13790	**	ERROR IF FROM DIM IS IMMOVABLE				

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13800	BNF	**32,MAP+19	06456	44	06488	19899
13810	TFM	DIMERR+22,0077,8	06468	16	02507	0-077
13820	B	ERRD	06480	49	02524	00000
13830	DORG	*-3	06488			
13840	TF	LOADSC,MAP+8	06488	26	13180	19888
13850	***	PUT FROM DIM PROG. ON SCRATCH				
13860	TDM	FWRDDA,0	06500	15	13459	00000
13870	TFM	FWRIT+5,0,7	06512	16	13272	-0000
13880	TDM	FWRIT,0	06524	15	13267	00000
13890	TFM	FWRIT+13,TRACK	06536	16	13280	J3776
13900	TF	FREAD+5,MAP+5	06548	26	13287	19885
13910	TD	FREAD,MAP	06560	25	13282	19880
13920	TFM	FREAD+13,TRACK	06572	16	13295	J3776
13930	MORERD	CM MAP+8,040,9	06584	14	19888	00-40
13940	BNH	**44	06596	47	06640	01100
13950	SM	MAP+8,040,9	06608	12	19888	00-40
13960	TFM	FREAD+8,040,9	06620	16	13290	00-40
13970	B	**32	06632	49	06664	00000
13980	DORG	*-3	06640			
13990	TF	FREAD+8,MAP+8	06640	26	13290	19888
14000	S	MAP+8,MAP+8	06652	22	19888	19888
14010	TF	FWRIT+8,FREAD+8	06664	26	13275	13290
14020	TFM	IORT,**23	06676	16	00565	-6699
14030	B	IOGT,FREDDA,7	06688	49	00566	J3467
14040	TFM	IORT,**23	06700	16	00565	-6723
14050	B	IOGT,FWRDDA,7	06712	49	00532	J3459
14060	CM	MAP+8,0,9	06724	14	19888	00-00
14070	BE	**44	06736	46	06780	01200
14080	A	FREAD+5,FREAD+8	06748	21	13287	13290
14090	A	FWRIT+5,FREAD+8	06760	21	13272	13290
14100	B	MORERD	06772	49	06584	00000
14110	DORG	*-3	06780			
14120	TDM	FWRDDA,2	06780	15	13459	00002
14130	TFM	SCRACH,0,7	06792	16	13186	-0000
14140	TDM	FREDDA,0	06804	15	13467	00000
14150	**	ENTRY AND CORE ADDRESSES FROM FROM DIM MAP				
14160	CM	HOLDCC+35,0,7	06816	14	13081	-0000
14170	BNE	PATCH1+12	06828	47	12810	01200
14180	B7	PATCH1	06840	49	12798	
14190	NDISK	BD MODND1,RTEST	06848	43	10482	13131
14200	BTM	MODND1,**12	06860	17	09866	-6872
14210	TFM	HOLDCC+3,0,8	06872	16	13049	0-000
14220	MAINB2	BD MODDK1,RTEST	06884	43	10682	13131
14230	TFM	IORT,**23	06896	16	00565	-6919
14240	B	IOGT,COM2,7	06908	49	00566	J3335
14250	CM	HOLDCC+3,0,8	06920	14	13049	0-000
14260	BE	**36	06932	46	06968	01200
14270	***	DELETE FROM DIM FROM S.P.LIST				
14280	TF	DIMNUM,HOLDCC+3	06944	26	13190	13049
14290	BTM	SPLDEL,**12	06956	17	12090	-6968
14300	*	DELETE TO DIM FROM SP LIST				
14310	TF	DIMNUM,HOLDCC+7	06968	26	13190	13053
14320	BTM	SPLDEL,**12	06980	17	12090	-6992
14330	TF	MOVESA,LOADSA	06992	26	02862	13102
14340	TD	MOVESA-5,LOADSA-5	07004	25	02857	13097
14350	TF	MOVESC,LOADSC	07016	26	02865	13180

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14360	TFM	IORT,**23	07028	16	00565	-7051
14370	B	IOGT,MOVDDA,7	07040	49	00566	J3244
14380	TFM	EXITMR+6,**20	07052	16	08630	-7072
14390	B	MOVER	07064	49	08824	00000
14400	DORG	*-3	07072			
14410	BNF	**20,ADK	07072	44	07092	13118
14420	B	UPDIM	07084	49	07312	00000
14430	DORG	*-3	07092			
14440	***	INSERT TO AND FROM DIMS INTO S.P.LIST				
14450	NOSPAC	TF NEWDIM,HOLDCC+7,7	07092	26	02963	J3053
14460	BT	DIMMER,DIMMER-1	07104	27	03672	03671
14470	TF	MOVESC,MAP+8	07116	26	02865	19888
14480	TF	MOVESA,MAP+5	07128	26	02862	19885
14490	TD	MOVESA-5,MAP	07140	25	02857	19880
14500	TFM	EXITMR+6,**20	07152	16	08630	-7172
14510	B	MOVER	07164	49	08824	00000
14520	DORG	*-3	07172			
14530	TF	DIMNUM,NOSPAC+11,11	07172	26	13190	0710L
14540	TFM	IORT,**23	07184	16	00565	-7207
14550	B	IOGT,COM2,7	07196	49	00566	J3335
14560	BTM	SPLINS,**12	07208	17	10606	-7220
14570	CM	NOSPAC+11,HOLDCC+3	07220	14	07103	J3049
14580	BE	ERR	07232	46	05662	01200
14590	CM	HOLDCC+3,0,8	07244	14	13049	0-000
14600	BE	ERR	07256	46	05662	01200
14610	TFM	NOSPAC+11,HOLDCC+3	07268	16	07103	J3049
14620	TFM	IORT,**23	07280	16	00565	-7303
14630	B	IOGT,MOVDDA,7	07292	49	00566	J3244
14640	B	NOSPAC	07304	49	07092	00000
14650	DORG	*-3	07312			
14660	UPDIM	TFM IORT,**23	07312	16	00565	-7335
14670	B	IOGT,EQUDDA,7	07324	49	00566	J3312
14680	TFM	IORT,**23	07336	16	00565	-7359
14690	B	IOGT,COM2,7	07348	49	00566	J3335
14700	***	CLEAR ANY FILE PROTECTION IN TO AND FROM DIM				
14710	SEARFP	TF NEWDIM,HOLDCC+7,7	07360	26	02963	J3053
14720	BT	DIMMER,DIMMER-1	07372	27	03672	03671
14730	TF	FWRIT+5,MAP+5	07384	26	13272	19885
14740	TD	FWRIT,MAP	07396	25	13267	19880
14750	TF	HOLD3,MAP+8	07408	26	13193	19888
14760	TFM	TESTFP+11,TRACK	07420	16	07587	J3776
14770	TF	HOLD5,MAP+5	07432	26	13139	19885
14780	SF	HOLD5-1	07444	32	13138	00000
14790	SM	HOLD5,20,10	07456	12	13139	00000
14800	BH	*-12	07468	46	07456	01100
14810	BZ	**48	07480	46	07528	01200
14820	AM	HOLD5,20,10	07492	11	13139	00000
14830	MM	HOLD5,105,9	07504	13	13139	00J05
14840	A	TESTFP+11,99	07516	21	07587	00099
14850	TFM	FWRIT+8,020,9	07528	16	13275	00-20
14860	TFM	FWRIT+13,TRACK	07540	16	13280	J3776
14870	TFM	IORT,**23	07552	16	00565	-7575
14880	B	IOGT,FPDDA,7	07564	49	00566	J3451
14890	TESTFP	BNF **20,TRACK	07576	44	07596	13776
14900	B	CLRFP	07588	49	07688	00000
14910	DORG	*-3	07596			

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14920	SM	HOLD3,1,10	07596	12	13193	000-1
14930	BZ	NOFLGS	07608	46	07748	01200
14940	AM	TESTFP+11,105,9	07620	11	07587	00J05
14950	CM	TESTFP+11,TRACK+2100	07632	14	07587	J5876
14960	BL	TESTFP	07644	47	07576	01300
14970	AM	FWRIT+5,20,10	07656	11	13272	000K0
14980	TFM	TESTFP+11,TRACK	07668	16	07587	J3776
14990	B	TESTFP-24	07680	49	07552	00000
15000	DORG	--3	07688			
15010	CLRFP	TF HOLD3,MAP+8	07688	26	13193	19888
15020	TF	FWRIT+5,MAP+5	07700	26	13272	19885
15030	TD	FWRIT,MAP	07712	25	13267	19880
15040	TFM	FPSF+1,33,10	07724	16	11643	000L3
15050	BTM	FP,**12	07736	17	11462	-7748
15060	NOFLGS	CM SEARFP+11,HOLD3+3	07748	14	07371	J3049
15070	BE	ALLCLR	07760	46	07816	01200
15080	CM	HOLD3+3,0,8	07772	14	13049	0-000
15090	BE	ALLCLR	07784	46	07816	01200
15100	TFM	SEARFP+11,HOLD3+3	07796	16	07371	J3049
15110	B	SEARFP	07808	49	07360	00000
15120	DORG	--3	07816			
15130	***	REMOVE NAMES				
15140	ALLCLR	C HOLD3+3,HOLD3+7	07816	24	13049	13053
15150	BE	**108	07828	46	07936	01200
15160	CM	HOLD3+3,0,8	07840	14	13049	0-000
15170	BE	**48	07852	46	07900	01200
15180	SF	DELETE	07864	32	13134	00000
15190	TF	DIMNUM,HOLD3+3	07876	26	13190	13049
15200	BTM	EQUIV,**12	07888	17	08606	-7900
15210	SF	DELETE	07900	32	13134	00000
15220	TF	DIMNUM,HOLD3+7	07912	26	13190	13053
15230	BTM	EQUIV,**12	07924	17	08606	-7936
15240	TF	NEWDIM,HOLD3+7	07936	26	02963	13053
15250	BT	DIMMER,DIMMER-1	07948	27	03672	03671
15260	BTM	SETMAP,**12	07960	17	10738	-7972
15270	C	HOLD3+3,HOLD3+7	07972	24	13049	13053
15280	BE	VOILA	07984	46	08112	01200
15290	CM	HOLD3+3,0,8	07996	14	13049	0-000
15300	BE	VOILA	08008	46	08112	01200
15310	*	DELETE FROM DIM REFERENCES				
15320	TF	NEWDIM,HOLD3+3	08020	26	02963	13049
15330	BT	DIMMER,DIMMER-1	08032	27	03672	03671
15340	BNR	**20,MAP	08044	45	08064	19880
15350	B	MONCAL	08056	49	00796	00000
15360	DORG	--3	08064			
15370	TDM	MAP,**	08064	15	19880	00000
15380	DSC	1,,'*	08075		1	
15390	TF	MAP+19,ZERO19	08076	26	19899	13174
15400	TFM	IORT,**23	08088	16	00565	-8111
15410	B	IOPT,DMDDA,7	08100	49	00532	-2568
15420	VOILA	BTM WRLAST,**12	08112	17	11842	-8124
15430	BNF	MONCAL,DUMP	08124	44	00796	13426
15440	TD	MCS+23,DUMP	08136	25	17801	13426
15450	TFM	IORT,**23	08148	16	00565	-8171
15460	B	IOGT,DMPDIM,7	08160	49	00566	J3403

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15470	RELD	TFM PHI,0,10	08172	16	13130	000-0
15480	CM	HOLD2,6,10	08184	14	13104	000-6
15490	BNE	LOADER	08196	47	11310	01200
15500	SF	FORT	08208	32	13114	00000
15510	TD	DUMP,MCS+23	08220	25	13426	17801
15520	TF	PNAME,MCS+35	08232	26	13229	17813
15530	TF	HOLD3+7,MCS+39	08244	26	13053	17817
15540	TFM	SCRACH,0,7	08256	16	13186	-0000
15550	TDM	FREDDA,0	08268	15	13467	00000
15560	BD	**20,MCS+22	08280	43	08300	17800
15570	B	MODDK1	08292	49	10682	00000
15580	DORG	--3	08300			
15590	NORE2	TF HOLD3+30,MCS+12	08300	26	13076	17790
15600	TF	HOLD3+35,MCS+17	08312	26	13081	17795
15610	TFM	LOADSC,0,9	08324	16	13180	00-00
15620	TFM	DCFSCR+8,3,9	08336	16	13381	00-03
15630	TFM	DCFSCR+5,0,7	08348	16	13378	-0000
15640	INIT2	TFM LOOP,4,10	08360	16	13120	000-4
15650	TFM	SCAN2+6,READIN	08372	16	08414	J7778
15660	TFM	IORT,**23	08384	16	00565	-8407
15670	B	IOGT,DDASCR,7	08396	49	00566	J3483
15680	SCAN2	NOP READIN,0	08408	41	17778	00000
15690	TF	BNR+11,SCAN2+6	08420	26	09661	08414
15700	TFM	NODISK-1,RELD2	08432	16	09865	-8532
15710	BTM	LCTEST,**12	08444	17	09614	-8456
15720	SM	LOOP,1,10	08456	12	13120	000-1
15730	BD	UPSCAN,LOOP	08468	43	08512	13120
15740	AM	LOADSC,3,10	08480	11	13180	000-3
15750	AM	DCFSCR+5,3,10	08492	11	13378	000-3
15760	B	INIT2	08504	49	08360	00000
15770	DORG	--3	08512			
15780	UPSCAN	AM SCAN2+6,75,9	08512	11	08414	00-75
15790	B	SCAN2	08524	49	08408	00000
15800	DORG	--3	08532			
15810	RELD2	TFM PATCH4+6,MAINB2	08532	16	06222	-6884
15820	TDM	PATCH4+1,9	08544	15	06217	00009
15830	BT	ISTO	08556	49	05956	
15880	TCD	REPLFL	04400			
15890	****					
15900	*****	COMMON ROUTINES FOR *DLOAD AND *DREPL				
15910	****					
15920	DORG	7200	07200			
15930	COMMFL	TFM IORT,**23	07200	16	00565	-7223
15940	B	IOPT,COMM2,7	07212	49	00532	-7263
15950	TRA		07224	36	00000	00500
15960	COMM1	DSC 1,1	07236	49	00000	00000
15970	DC	5,18480	07248		1	
15970	J8480		07253		5	
15980	DC	3,031	07256		3	
15980	-31					
15990	DC	5,08600	07261		5	
15990	-8600					
16000	DSC	1,,'	07262		1	

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16010	CUMM2	DSC	2,22	07263	2		
16020		DSA	COMM1	07269	5 X	1	
16030		DSC	1,*	07269	-7248		
				07270	1		
16040		DDRG	8100	08100			
16050	EQUFL	TFM	IORT,++23	08100	16	00565	-8123
16060		B	IOPT,EQUI,7	08112	49	00532	-8148
16070		TRA		08124	36	00000	00500
				08136	49	00000	00000
16080	EQUI	DSC	2,22	08148	2		
16090		DSA	EQU2	08154	5 X	1	
16100		DSC	1,*	08154	-8156		
				08155	1		
16110	EQU2	DSC	1,1	08156	1		
16120		DC	5,18278	08161	5		
			J8278				
16130		DC	3,020	08164	3		
			-20				
16140		DC	5,08600	08169	5		
			-8600				
16150		DSC	1,*	08170	1		
16160		DORG	8600	08600			
16170	*						
16180	*		EQUIVALENCE TABLE SUBROUTINE				
16190		DC	5,0	08604	5		
			-0000				
16200	EQUIV	TFM	NEWDIM,0002,8	08606	16	02963	0-002
16210		BT	DIMMER,DIMMER-1	08618	27	03672	03671
16220		BNF	SKNAME,DELETE	08630	44	09690	13134
16230		CM	DIMNUM,0,8,	08642	14	13190	0-000
16240		BE	ANAME	08654	46	10466	01200
16250	LIMITS	CM	DIMNUM,SUBLO,8	08666	14	13190	0-010
16260		BL	B2READ	08678	47	09054	01300
16270		CM	DIMNUM,SUBHI,8	08690	14	13190	0-039
16280		BH	B2READ	08702	46	09054	01100
16290		TFM	CNINE+6,DIMNUM	08714	16	08816	J3190
16300		TFM	CNINE+11,TRACK+15	08726	16	08821	J3791
16310	WITHIN	TFM	HOLD4,0,10	08738	16	13197	000-0
16320		TF	DISKF+5,EQUDIM+5,,	08750	26	13393	19885
16330		TD	DISKF,EQUDIM	08762	25	13388	19880
16340		TFM	IORT,++23	08774	16	00565	-8797
16350		B	IOGT,DDAKF,7	08786	49	00566	J3443
16360		AM	HOLD4,1,10	08798	11	13197	000-1
16370	CNINE	C	...	08810	24	00000	00000
16380		BE	TFLG	08822	46	08878	01200
16390		CM	HOLD4,50,10	08834	14	13197	000N0
16400		BH	WRT2	08846	46	08946	01100
16410		AM	CNINE+11,16,10	08858	11	08821	000J6

START DELETE OPERATION

WITHIN SUBROUTINE DIM LIMITS

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16420		B	CNINE-12	08870	49	08798	00000
16430		DORG	*-3	08878			
16440	TFLG	BNF	NOF,DELETE	08878	44	08986	13134
16450		TFM	CNINE+11,9999,6	08890	16	0882J	09999
16460		SM	CNINE+11,4,10	08902	12	08821	000-4
16470		TF	CNINE+11,NINE12,6	08914	26	0882J	13243
16480		AM	CNINE+11,20,10	08926	11	08821	000K0
16490		B	CNINE-12	08938	49	08798	00000
16500		DORG	*-3	08946			
16510	WRT2	BNF	*+20,DELETE	08946	44	08966	13134
16520		B	WRT	08958	49	09022	00000
16530		DORG	*-3	08966			
16540		TFM	DIMERR+22,7574,8	08966	16	02507	0P574
16550		B	MULT2	08978	49	09974	00000
16560		DORG	*-3	08986			
16570	NOF	TF	CNINE+11,PNAME,6	08986	26	0882J	13229
16580		AM	CNINE+11,4,10	08998	11	08821	000-4
16590		TF	CNINE+11,DIMNUM,6	09010	26	0882J	13190
16600	WRT	TFM	IORT,++23	09022	16	00565	-9045
16610		B	IOPT,DDAKF,7	09034	49	00532	J3443
16620		B	EXIT	09046	49	10530	00000
16630		DORG	*-3	09054			
16640	B2READ	TF	DISKF+5,EQUDIM+5,,	09054	26	13393	19885
16650		AM	DISKF+5,8,10	09066	11	13393	000-8
16660		TD	DISKF,EQUDIM	09078	25	13388	19880
16670	INITSC	TFM	RECD+11,TRACK	09090	16	09185	J3776
16680		TFM	CMPAR+11,TRACK+15	09102	16	09205	J3791
16690		TFM	CLOS+8,20,9	09114	16	13366	00-20
16700		TFM	CLOS+8,20,9	09126	16	13305	00-20
16710		TFM	IORT,++23	09138	16	00565	-9161
16720		B	IOGT,DDAKF,7	09150	49	00566	J3443
16730		AM	*+23,11,10	09162	11	09185	000J1
16740	RECD	BNR	*+20,,,	09174	45	09194	00000
16750		B	EXIT	09186	49	10530	00000
16760		DORG	*-3	09194			
16770	CMPAR	C	DIMNUM,,,	09194	24	13190	00000
16780		BE	CLOSE	09206	46	09294	01200
16790		CM	CMPAR+11,TRACK+1999,,	09218	14	09205	J5775
16800		BE	INCRD	09230	46	09274	01200
16810		AM	RECD+11,16,10	09242	11	09185	000J6
16820		AM	CMPAR+11,16,10	09254	11	09205	000J6
16830		B	RECD	09266	49	09174	00000
16840		DORG	*-3	09274			
16850	INCRD	AM	DISKF+5,20,9	09274	11	13393	00-20
16860		B	INITSC	09286	49	09090	00000
16870		DORG	*-3	09294			
16880	CLOSE	TFM	CLOSUP+2000,,,	09294	15	15776	00000
16890		DSC	1,*,*	09305	1		
16900		TF	TRREC+6,CMPAR+11	09306	26	09420	09205
16910		SM	TRREC+6,15,10	09318	12	09420	000J5
16920		TF	TRREC+11,CMPAR+11	09330	26	09425	09205
16930		AM	TRREC+11,1,10	09342	11	09425	000-1
16940		TFM	CLOS+13,CLOSUP	09354	16	13310	J3776
16950		TFM	CLOS+13,CLOSUP+1984	09366	16	13371	J5760
16960		TF	CLOS+5,DISKF+5	09378	26	13302	13393

TEST FOR LAST ENTRY

NOT WITHIN LIMITS

LOOK FOR DIM NUMBER

TEST FOR END OF 20 SECTORS

ROUTINE TO CLOSE IN LIST

16970	TF	CLOS+5,DISK+5		09390	26	13363	13393
16980	AM	CLOS+5,20,10		09402	11	13363	000K0
16990	TRREC	TR 0,0,,	DELETE ENTRY	09414	31	00000	00000
17000	BNR	DONE,CLOSUP+1984,,	TEST FOR END OF TABLE	09426	45	09542	15760
17010	TFM	IORT,**23		09438	16	00565	-9461
17020	B	IOGT,CLODDA,7		09450	49	00566	J3427
17030	TFM	IORT,**23		09462	16	00565	-9485
17040	B	IOPT,CLWDDA,7		09474	49	00532	J3435
17050	TDM	CLOSUP+3984,,		09486	15	17760	00000
17060	DSC	1,'*,*		09497		1	
17070	TR	CLOSUP,CLOSUP+2000		09498	31	13776	15776
17080	AM	CLOS+5,20,10		09510	11	13363	000K0
17090	AM	CLOS+5,20,10		09522	11	13302	000K0
17100	B	TRREC+12		09534	49	09426	00000
17110	DORG	*-3		09542			
17120	DONE	TF HOLDS,CLOS+5,,	RECORD MARK IS IN LAST TRACK	09542	26	13139	13302
17130	S	HOLDS,EQUDIM+5		09554	22	13139	19885
17140	SF	HOLDS-2		09566	32	13137	00000
17150	C	HOLDS,EQUDIM+8		09578	24	13139	19888
17160	BH	NOTOK		09590	46	09634	01100
17170	TFM	IORT,**23		09602	16	00565	-9625
17180	B	IOPT,CLWDDA,7		09614	49	00532	J3435
17190	B	INITSC		09626	49	09090	00000
17200	DORG	*-3		09634			
17210	NOTOK	SM HOLDS,20,10,	DO NOT WRITE A FULL TRACK	09634	12	13139	000K0
17220	TF	HOLD3,EQUDIM+8		09646	26	13193	19888
17230	S	HOLD3,HOLDS		09658	22	13193	13139
17240	TF	CLOS+8,HOLD3		09670	26	13305	13193
17250	B	NOTOK-32		09682	49	09602	00000
17260	DORG	*-3		09690			
17270	SKNAME	CM DIMNUM,0,8,	NOT A DELETE OPERATION	09690	14	13190	0-000
17280	BE	EXIT		09702	46	10530	01200
17290	TF	DISKF+5,EQUDIM+5		09714	26	13393	19885
17300	TD	DISKF,EQUDIM		09726	25	13388	19880
17310	TFM	DISKF+8,20,9		09738	16	13396	00-20
17320	TFM	DISKF+13,TRACK		09750	16	13401	J3776
17330	SCANN	TFM CNAMES+11,TRACK+11		09762	16	09829	J3787
17340	TFM	IORT,**23		09774	16	00565	-9797
17350	B	IOGT,DDAKF,7		09786	49	00566	J3443
17360	BNR	**20,CNAMES+11,11,	TEST FOR END OF TABLE	09798	45	09818	0982R
17370	B	NOMULT		09810	49	10030	00000
17380	DORG	*-3		09818			
17390	CNAMES	C PNAME,,7,	LOOK FOR MULTIPLE NAME	09818	24	13229	-0000
17400	BE	MULT		09830	46	09906	01200
17410	CM	CNAMES+11,TRACK+1995,7		09842	14	09829	J5771
17420	BE	*+32		09854	46	09886	01200
17430	AM	CNAMES+11,16,10		09866	11	09829	000J6
17440	B	CNAMES-20		09878	49	09798	00000
17450	DORG	*-3		09886			
17460	AM	DISKF+5,20,10		09886	11	13393	000K0
17470	B	SCANN		09898	49	09762	00000
17480	DORG	*-3		09906			
17490	MULT	BNF **20,DELETE,,	IF MULTIPLE NAME	09906	44	09926	13134
17500	B	HOLDIM		09918	49	10498	00000
17510	DORG	*-3		09926			

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17520	AM	CNAMES+11,4,10		09926	11	09829	000-4
17530	C	DIMNUM,CNAMES+11,11		09938	24	13190	0982R
17540	BE	EXIT		09950	46	10530	01200
17550	TFM	DIMERR+22,7571,8		09962	16	02507	0P571
17560	MULT2	RCITY		09974	34	00000	00102
17570	WATY	DIMERR		09986	39	02485	00100
17580	WATY	PNAME-10		09998	39	13219	00100
17590	TF	PNAME,ZERO12		10010	26	13229	13167
17600	B	EXIT		10022	49	10530	00000
17610	DORG	*-3		10030			
17620	NOMULT	BNF **20,DELETE		10030	44	10050	13134
17630	B	EXIT		10042	49	10530	00000
17640	DORG	*-3		10050			
17650	CM	DIMNUM,SUBLO,8,	TEST DIM NUMBER LIMITS	10050	14	13190	0-010
17660	BL	OLIMIT		10062	47	10130	01300
17670	CM	DIMNUM,SUBHI,8		10074	14	13190	0-039
17680	BH	OLIMIT		10086	46	10130	01100
17690	TFM	CNINE+6,NINE12		10098	16	08816	J3243
17700	TFM	CNINE+11,TRACK+11		10110	16	08821	J3787
17710	B	WITHIN		10122	49	08738	00000
17720	DORG	*-3		10130			
17730	OLIMIT	TFM CNT,0,10,	WILL ENTRY EXCEED MAX SC	10130	16	13142	000-0
17740	TFM	**23,TRACK+95		10142	16	10165	J3871
17750	CM	CNAMES+11,TRACK+95		10154	14	09829	J3871
17760	BE	SECT		10166	46	10234	01200
17770	AM	*-13,100,9		10178	11	10165	00J00
17780	AM	CNT,1,10		10190	11	13142	000-1
17790	CM	CNT,20,10		10202	14	13142	000K0
17800	BNE	*-60		10214	47	10154	01200
17810	B	ENTOK		10226	49	10362	00000
17820	DORG	*-3		10234			
17830	SECT	TF HOLDS,DISKF+5		10234	26	13139	13393
17840	A	HOLDS,CNT		10246	21	13139	13142
17850	S	HOLDS,EQUDIM+5		10258	22	13139	19885
17860	SF	HOLDS-2		10270	32	13137	00000
17870	C	HOLDS,EQUDIM+8		10282	24	13139	19888
17880	BL	*+32		10294	47	10326	01300
17890	TFM	DIMERR+22,7573,8		10306	16	02507	0P573
17900	B	MULT2		10318	49	09974	00000
17910	DORG	*-3		10326			
17920	CM	CNAMES+11,TRACK+1995		10326	14	09829	J5771
17930	BNE	ENTOK		10338	47	10362	01200
17940	AM	DISKF+8,1,10		10350	11	13396	000-1
17950	ENTOK	TF CNAMES+11,PNAME,6,	ADD A NEW ENTRY	10362	26	0982R	13229
17960	AM	CNAMES+11,4,10		10374	11	09829	000-4
17970	TF	CNAMES+11,DIMNUM,6		10386	26	0982R	13190
17980	AM	CNAMES+11,12,10		10398	11	09829	000J2
17990	TF	CNAMES+11,ZERO12,6		10410	26	0982R	13167
18000	TDM	CNAMES+11,,6		10422	15	0982R	00000
18010	DSC	1,'*,*		10433		1	
18020	TFM	IORT,**23		10434	16	00565	J0457
18030	B	IOPT,DDAKF,7		10446	49	00532	J3443
18040	B	EXIT		10458	49	10530	00000
18050	DORG	*-3		10466			
18060	ANAME	C PNAME,ZERO12,,	FIND DIM NUMBER TO BE DELETED	10466	24	13229	13167

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18070	BE	EXIT		10478	46	10530	01200
18080	B	SKNAME+24		10490	49	09714	00000
18090	DORG	=-3		10498			
18100	HOLDIM	AM	CNAMES+11,4,10	10498	11	09829	000-4
18110	TF	DIMNUM,CNAMES+11,11		10510	26	13190	0982R
18120	B	LIMITS		10522	49	08666	00000
18130	DORG	=-3		10530			
18140	EXIT	CF	DELETE	10530	33	13134	00000
18150	B	EQUIV-1,,6		10542	49	0860N	00000
18160	DORG	=-3		10550			
18170	TCD	EQUFL		08100			
18180	****	COMMON1					
18190	DORG	8600		08600			
18200	DC	5,0		08604		5	
		-0000					
18210	ATNR	CF	FORT	08606	33	13114	00000
18220	SF	INPUT+95		08618	32	13708	00000
18230	CM	INPUT+96,43,10,	DETERMINE INPUT DEVICE	08630	14	13709	000M3
18240	BNE	+32		08642	47	08674	01200
18250	TFM	PHI,05,10		08654	16	13130	000-5
18260	B	R		08666	49	08754	00000
18270	DORG	=-3		08674			
18280	CM	INPUT+96,57,10		08674	14	13709	000N7
18290	BNE	+32		08686	47	08718	01200
18300	TFM	PHI,03,10		08698	16	13130	000-3
18310	B	R		08710	49	08754	00000
18320	DORG	=-3		08718			
18330	CM	INPUT+96,44,10		08718	14	13709	000M4
18340	BNE	ERRD-12		08730	47	02512	01200
18350	TFM	PHI,0,10		08742	16	13130	000-0
18360	R	SF	INPUT+97	08754	32	13710	00000
18370	SF	INPUT+117,,,	TEST FOR SUBROUTINES	08766	32	13730	00000
18380	CM	INPUT+118,00,10		08778	14	13731	000-0
18390	BE	+24		08790	46	08814	01200
18400	SF	STFLAG		08802	32	13537	00000
18410	CM	INPUT+98,54,10,	TEST FOR RELOCATION	08814	14	13711	000M4
18420	BNE	+32		08826	47	08858	01200
18430	TDM	RTEST,1,,	BRANCH ON DIGIT TO RELOCATE	08838	15	13131	00001
18440	B	R2		08850	49	08950	00000
18450	DORG	=-3		08858			
18460	TDM	RTEST,0		08858	15	13131	00000
18470	CM	INPUT+98,62,10		08870	14	13711	00002
18480	BNE	+32		08882	47	08914	01200
18490	TDM	NTEST,1		08894	15	13132	00001
18500	B	R2		08906	49	08950	00000
18510	DORG	=-3		08914			
18520	TDM	NTEST,0		08914	15	13132	00000
18530	CM	INPUT+98,49,10		08926	14	13711	000M9
18540	BNE	ERRD-12		08938	47	02512	01200
18550	R2	SF	INPUT+99	08950	32	13712	00000
18560	CM	INPUT+100,57,10,	TEST FOR FILE PROTECTION	08962	14	13713	000N7
18570	BNE	+32		08974	47	09006	01200
18580	TDM	PTEST,1,,	BRANCH ON DIGIT TO PROTECT	08986	15	13133	00001
18590	B	+20		08998	49	09018	00000
18600	DORG	=-3		09006			

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18610	TDM	PTEST,0		09006	15	13133	00000	
18620	TFM	+47,INPUT+112,,	CARD FROM	09018	16	09065	J3725	
18630	TFM	ATN+6,HOLD CD		09030	16	09048	J3046	
18640	ATN	TD	HOLD CD,0,7,	ALPHA TO NUMERIC	09042	25	13046	-0000
18650	CM	=-1,0		09054	14	09053	-0000	
18660	BE	EXIT2		09066	46	09110	01200	
18670	AM	ATN+6,01,10		09078	11	09048	000-1	
18680	AM	ATN+11,02,10		09090	11	09053	000-2	
18690	B	ATN		09102	49	09042	00000	
18700	DORG	=-3		09110				
18710	EXIT2	SF	SETFLG+6,INPUT+31		09110	16	09128	J3644
18720	SETFLG	SF	INPUT+31,,,	TEST FOR ALPHA CHARACTERS	09122	32	13644	00000
18730	AM	SETFLG+6,1,10		09134	11	09128	000-1	
18740	CM	SETFLG+6,70,610		09146	14	09120	000P0	
18750	BNL	+36		09158	46	09194	01300	
18760	CM	SETFLG+6,00,610		09170	14	09120	000-0	
18770	BNE	ERRD-12		09182	47	02512	01200	
18780	SM	SETFLG+6,1,10		09194	12	09128	000-1	
18790	CF	SETFLG+6,,6		09206	33	09120	00000	
18800	CM	SETFLG+6,INPUT+93		09218	14	09128	J3706	
18810	BE	+32		09230	46	09262	01200	
18820	AM	SETFLG+6,2,10		09242	11	09128	000-2	
18830	B	SETFLG		09254	49	09122	00000	
18840	DORG	=-3		09262				
18850	SF	HOLD CD,,,	DEFINE CONTROL CARD FIELDS	09262	32	13046	00000	
18860	SF	HOLD CD+4		09274	32	13050	00000	
18870	B	ATNR-1,,6		09286	49	0860N	00000	
18880	**	DETERMINE MAX. NO. OF DIM ENTRIES						
18890	SCRAD	TFM	MAXDIM,9999,8	09298	16	03849	0R999	
18900	TFM	NEWDIM,3,8		09310	16	02963	0-003	
18910	BT	DIMMER,DIMMER-1		09322	27	03672	03671	
18920	BNR	+20,MAP		09334	45	09354	19880	
18930	B	MONCAL		09346	49	00796	00000	
18940	DORG	=-3		09354				
18950	MM	MAP+8,5,10		09354	13	19888	000-5	
18960	SF	96		09366	32	00096	00000	
18970	SM	99,1,10		09378	12	00099	000-1	
18980	TF	MAXDIM,99		09390	26	03849	00099	
18990	TFM	NEWDIM,1,8		09402	16	02963	0-001	
19000	BT	DIMMER,DIMMER-1		09414	27	03672	03671	
19010	BNR	+20,MAP		09426	45	09446	19880	
19020	B	MONCAL		09438	49	00796	00000	
19030	DORG	=-3		09446				
19040	CM	MAP+13,88888,7		09446	14	19893	08888	
19050	BNE	MONCAL		09458	47	00796	01200	
19060	TF	SCR1,MAP+5		09470	26	13203	19885	
19070	TD	SCR1-5,MAP		09482	25	13198	19880	
19080	MM	MAP+8,200,9		09494	13	19888	00K00	
19090	SF	95		09506	32	00095	00000	
19100	A	MAP+5,99		09518	21	19885	00099	
19110	TF	SCR2,MAP+5		09530	26	13209	19885	
19120	TD	SCR2-5,MAP		09542	25	13204	19880	
19130	SF	SCR1-5		09554	32	13198	00000	
19140	SF	SCR2-5		09566	32	13204	00000	
19150	CF	SCR1-4		09578	33	13199	00000	
19160	CF	SCR2-4		09590	33	13205	00000	

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19170	B	SCRAD-1,,6		09602	49	0929P	00000
19180	LCTEST	TFM COUNT,0,10,	LAST RECORD TEST	09614	16	13145	000-0
19190	BV	**12		09626	46	09638	01400
19200	BNF	NOALF,BNR+11,11		09638	44	09854	0966J
19210	BNR	**20,0		09650	45	09670	00000
19220	B	NOALF		09662	49	09854	00000
19230	DORG	*-3		09670			
19240	AM	COUNT,1,10		09670	11	13145	000-1
19250	CM	COUNT,5,10		09682	14	13145	000-5
19260	BE	**32		09694	46	09726	01200
19270	AM	BNR+11,1,10		09706	11	09661	000-1
19280	B	BNR		09718	49	09650	00000
19290	DORG	*-3		09726			
19300	CM	BNR+11,99999,67		09726	14	0966J	R9999
19310	BV	NOALF		09738	46	09854	01400
19320	BNE	NOALF		09750	47	09854	01200
19330	AM	BNR+11,1,10		09762	11	09661	000-1
19340	BNR	NOALF,BNR+11,11		09774	45	09854	0966J
19350	AM	BNR+11,1,10		09786	11	09661	000-1
19360	BD	NOALF,BNR+11,11		09798	43	09854	0966J
19370	AM	COUNT,1,10		09810	11	13145	000-1
19380	CM	COUNT,65,10		09822	14	13145	00005
19390	BNE	*-48		09834	47	09786	01200
19400	B	ALPHAS		09846	49	10266	00000
19410	DORG	*-3		09854			
19420	NOALF	B LCTEST-1,,6		09854	49	0961L	00000
19430	NODISK	TD READ+2,PHI,,	SETUP READ DEVICE	09866	25	13481	13130
19440	SM	READ+2,1,10		09878	12	13481	000-1
19450	TFM	SCRACH,0,7		09890	16	13186	-0000
19460	TDM	FREDDA,0		09902	15	13467	00000
19470	TFM	LOADSC,0,9		09914	16	13180	00-00
19480	TFM	SEQ,1		09926	16	13128	-0001
19490	TFM	DCFSCR+8,003,9		09938	16	13381	00-03
19500	TFM	DCFSCR+5,0,7		09950	16	13378	-0000
19510	TDM	DCFSCR,0		09962	15	13373	00000
19520	INITRD	TFM READ,READIN,,	INIT. READ LOOP	09974	16	13479	J7778
19530	TFM	LOOP,04,10		09986	16	13120	000-4
19540	TFM	COMP+11,READIN+79		09998	16	10117	J7857
19550	TFM	SF+11,READIN+75		10010	16	10105	J7853
19560	READC	TFM IORT,**23		10022	16	00565	J0045
19570	B	IORT,READ-4,7		10034	49	00566	J3475
19580	TF	BNR+11,READ		10046	26	09661	13479
19590	BTM	LCTEST,**12		10058	17	09614	J0070
19600	CM	PHI,05,10		10070	14	13130	000-5
19610	BNE	COMP+60		10082	47	10166	01200
19620	SF	BNF COMP+36,READIN+75		10094	44	10142	17853
19630	COMP	C SEQ,READIN+79,,	CHECK FOR PROPER SEQUENCE	10106	24	13128	17857
19640	BNE	SEQERR		10118	47	10378	01200
19650	AM	SEQ,1,10		10130	11	13128	000-1
19660	AM	SF+11,075,9		10142	11	10105	00-75
19670	AM	COMP+11,075,9		10154	11	10117	00-75
19680	SM	LOOP,1,10		10166	12	13120	000-1
19690	BD	INCR,LOOP		10178	43	10246	13120
19700	TFM	IORT,**23		10190	16	00565	J0213
19710	B	IOPT,DDASCR,7		10202	49	00532	J3483
19720	AM	LOADSC,03,10		10214	11	13180	000-3

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19730	AM	DCFSCR+5,03,10		10226	11	13378	000-3
19740	B	INITRD		10238	49	09974	00000
19750	DORG	*-3		10246			
19760	INCR	AM READ,075,9		10246	11	13479	00-75
19770	B	READC		10258	49	10022	00000
19780	DORG	*-3		10266			
19790	ALPHAS	TFM SCREM,04,9,	COMPUTE SECTORS REMAINING	10266	16	13123	00-04
19800	S	SCREM,LOOP		10278	22	13123	13120
19810	BD	**20,SCREM		10290	43	10310	13123
19820	B	MAINB		10302	49	10370	00000
19830	DORG	*-3		10310			
19840	NOP	SCREM,1,10, CHANGE TO SUBTRACT FOR NEW DUMP		10310	41	13123	000-1
19850	TF	DCFSCR+8,SCREM		10322	26	13381	13123
19860	TFM	IORT,**23		10334	16	00565	J0357
19870	B	IOPT,DDASCR,7		10346	49	00532	J3483
19880	A	LOADSC,SCREM		10358	21	13180	13123
19890	MAINB	B NODISK-1,,6		10370	49	0986N	00000
19900	DORG	*-3		10378			
19910	SEQERR	RCTY		10378	34	00000	00102
19920	TDM	READIN+305,,,		10390	15	18083	00000
19930	DSC	1,*,*		10401		1	
19940	WATY	ERRSEQ		10402	39	12913	00100
19950	TF	READIN+304,COMP+11,11		10414	26	18082	1011P
19960	WNTY	READIN+300		10426	38	18078	00100
19970	H			10438	48	00000	00000
19980	B	READC		10450	49	10022	00000
19990	DORG	*-3		10458			
20000	***		SYSTEM LOADER NON-DISK				
20010	CCD	DSC 2,02		10458		2	
		02					
20020	DSA	CCD2		10464		5 X	1
				10464		J0466	
20030	DSC	1,*		10465		1	
20040	CCD2	DSC 1,1		10466		1	
		1					
20050	DC	5,01798		10471		5	
		-1798					
20060	DC	3,2		10474		3	
		-02					
20070	DSA	INPUT-1		10479		5 X	1
				10479		J3612	
20080	DSC	1,*		10480		1	
20090	MODND1	TDM SYSCAL,1,11		10482	15	00475	0000J
20100	TFM	IORT,**23		10494	16	00565	J0517
20110	B	IOPT,CCD,7		10506	49	00532	J0458
20120	CM	MAPEA,0,7		10518	14	13155	-0000
20130	BE	**32		10530	46	10562	01200
20140	TF	420,MAPEA		10542	26	00420	13155
20150	B	**20		10554	49	10574	00000
20160	DORG	*-3		10562			
20170	TDM	416,,,		10562	15	00416	00000

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20180	DSC	1,',*		10573	1		
20190	TD	428,PHI		10574	25	00428	13130
20200	SF	428		10586	32	00428	00000
20210	TF	434,MAPMA		10598	26	00434	13150
20220	SF	489		10610	32	00489	00000
20230	CF	429		10622	33	00429	00000
20240	TFM	IORT,**23		10634	16	00565	J0657
20250	B	IOGT,SOL,7		10646	49	00566	J0658
20260	SOL	DSC	2,-22	10658	2		
		2K					
20270	DSA	SOL2		10664	5	X	1
				10664		J0666	
20280	DSC	1,'		10665	1		
20290	SOL2	DSC	1,1	10666	1		
20300	DSA	19783		10671	5	X	1
				10671		J9783	
20310	DC	3,3		10674	3		
		-03					
20320	DC	6,0'		10680	6		
		-0000'					
20330	MODDK1	TDM	SVSCAL,1,11	10682	15	00475	0000J
20340	TFM	IORT,**23		10694	16	00565	J0717
20350	B	IOPT,CCD,7		10706	49	00532	J0458
20360	TF	DLDCF+5,SCRACH		10718	26	10876	13186
20370	TD	DLDCF,SCRACH-5		10730	25	10871	13181
20380	SF	DLDCF+1		10742	32	10872	00000
20390	CF	DLDCF		10754	33	10871	00000
20400	TDM	428,0,11		10766	15	00428	0000-
20410	CM	MAPMA,0,7		10778	14	13150	-0000
20420	RE	**32		10790	46	10822	01200
20430	TF	DLD+11,MAPMA		10802	26	10869	13150
20440	B	**20		10814	49	10834	00000
20450	DORG	*-3		10822			
20460	TDM	DLD+7,..		10822	15	10865	00000
20470	DSC	1,',*		10833	1		
20480	TFM	IORT,**23		10834	16	00565	J0857
20490	B	IOGT,DLD,7		10846	49	00566	J0858
20500	DLD	DSC	2,02	10858	2		
		02					
20510	DSA	DLDCF,0		10864	5	X	2
				10864		J0871	
				10869		-0000	
20520	DSC	1,'		10870	1		
20530	DLDCF	DSC	1,0	10871	1		
		0					
20540	DC	5,0		10876	5		
		-0000					
20550	DC	3,999		10879	3		
		R99					

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20560	DC	5,99999		10884	5		
		R9999					
20570	DSC	1,'		10885	1		
20580	NOSAC	TFM	IORT,FINDX,7	10886	16	00565	J0905
20590	87	IOCAL		10898	49	00716	
20600	FINDX	DSC	2,-22	10905	2		
		2K					
20610	DSA	FINDXX		10911	5	X	1
				10911		J0913	
20620	DSC	1,'		10912	1		
20630	FINDXX	DSC	1,1	10913	1		
		1					
20640	DC	5,18542		10918	5		
		J8542					
20650	DC	3,012		10921	3		
		-12					
20660	DSA	NOSA		10926	5	X	1
				10926		J3800	
20670	DSA	NOSA		10931	5	X	1
				10931		J3800	
20680	DSC	1,'		10932	1		
20690	SPD	CM	LISTER-3,7,1011	10934	14	02761	000-P
20700	BNE	HERE		10946	47	11194	01200
20710	SF	LISTER-1		10958	32	02763	00000
20720	MM	LISTER,200,9		10970	13	02764	00K00
20730	TF	LOADSA,99		10982	26	13102	00099
20740	TD	LOADSA-5,PACK		10994	25	13097	02772
20750	CF	LOADSA-5		11006	33	13097	00000
20760	TD	**47,LOADSA-5		11018	25	11065	13097
20770	A	**35,**35		11030	21	11065	11065
20780	AM	**23,1,10		11042	11	11065	000-1
20790	TDM	LOADSA-5,0,10		11054	15	13097	000-0
20800	TFM	IORT,**23		11066	16	00565	J1089
20810	B	IOGT,D3READ,7		11078	49	00566	J1286
20820	TFM	HOLD6-1,READIN+71		11090	16	13214	J7849
20830	TD	**22,LOADSA-5		11102	25	11124	13097
20840	AM	HOLD6-1,0,9		11114	11	13214	00-00
20850	BD	**24,LOADSA-4		11126	43	11150	13098
20860	TFM	**25,12,10		11138	16	11163	000J2
20870	TD	LOADSA-4,HOLD6-1,11		11150	25	13098	1321M
20880	NOP	LOADSA,10000,7		11162	41	13102	J0000
20890	CF	LISTER-1		11174	33	02763	00000
20900	B	SCRKO		11186	49	11254	00000
20910	DORG	*-3		11194			
20920	HERE	TF	NEWDIM,LISTER	11194	26	02963	02764
20930	BT	DIMMER,DIMMER-1		11206	27	03672	03671
20940	A	MAP+5,MAP+8		11218	21	19885	19888
20950	TF	LOADSA,MAP+5		11230	26	13102	19885
20960	TD	LOADSA-5,MAP		11242	25	13097	19880
20970	SCRKO	A	LOADSA,NINESC	11254	21	13102	05753

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20980	S	LOADSA,LOADSC	11266	22	13102	13180
20990	B	SCROK	11278	49	06588	00000
21000	DORG	*-3	11286			
21010	D3READ	DSC 2,22	11286		2	
21020	DSA	D4READ	11292		5 X	1
			11292		J1294	
21030	DSC	1,1	11293		1	
21040	D4READ	DSC 1,1	11294		1	
21050	DC	5,04800	11299		5	
		-4800				
21060	DC	3,2	11302		3	
		-02				
21070	DSA	READIN	11307		5 X	1
			11307		J7778	
21080	DSC	1,1	11308		1	
21090	LOADER	TFM ATN+11,INPUT+24	11310	16	09053	J3637
21100	SF	LOADER	11322	32	11310	00000
21110	BTM	ATNR,**12	11334	17	08606	J1346
21120	TFM	INPUT+49,7070,8	11346	16	13662	0P070
21130	A	WR2+3,425	11358	21	02262	00425
21140	TD	WR2,422	11370	25	02259	00422
21150	SF	WR2	11382	32	02259	00000
21160	CF	WR2+1	11394	33	02260	00000
21170	TF	HOLD*13,WR2+5	11406	26	13059	02264
21180	TF	HOLD*19,WR2+5	11418	26	13065	02264
21190	A	HOLD*19,WR2+8	11430	21	13065	02267
21200	SM	HOLD*19,1,10	11442	12	13065	000-1
21210	TF	HOLD*30,WR2+13	11454	26	13076	02272
21220	YDM	RTEST,0	11466	15	13131	00000
21230	BNF	ISTD-24,MCS+22	11478	44	05932	17800
21240	SF	FORT	11490	32	13114	00000
21250	YDM	PTEST,0	11502	15	13133	00000
21260	TF	HOLD*7,MCS+39	11514	26	13053	17817
21270	TF	PNAME,MCS+35	11526	26	13229	17813
21280	TD	DUMP,MCS+23	11538	25	13426	17801
21290	TF	HOLD*35,MCS+17	11550	26	13081	17795
21300	TFM	HOLD*3,0,8	11562	16	13049	0-000
21310	B	ISTD	11574	49	05956	00000
21320	DORG	*-3	11582			
21330	PATCH2	BE **32	11582	46	11614	01200
21340	TF	MAPMA,HOLD*30	11594	26	13150	13076
21350	B7	PAT2+12	11606	49	06148	
21360	TFM	MAPMA,02402,7	11614	16	13150	-2402
21370	B7	PAT2+12	11626	49	06148	
21380	CM	HOLD*30,0,7	11634	14	13076	-0000
21390	BNE	*-52	11646	47	11594	01200
21400	B7	PAT2	11658	49	06136	
21410	TCD	COMMFL	07200			
21420	DORG	10100	10100			

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21430	COMFL	TFM IORT,**23	10100	16	00565	J0123
21440	B	IOPT,COMFL1,7	10112	49	00532	J0148
21450	TRA		10124	36	00000	00500
			10136	49	00000	00000
21460	COMFL1	DSC 2,22	10148		2	
		22				
21470	DSA	COMFL2	10154		5 X	1
			10154		J0156	
21480	DSC	1,1	10155		1	
21490	COMFL2	DSC 1,1	10156		1	
		1				
21500	DC	5,18512	10161		5	
		J8512				
21510	DC	3,030	10164		3	
		-30				
21520	DC	5,10600	10169		5	
		J0600				
21530	DSC	1,1	10170		1	
21540	DORG	10600	10600			
21550	DC	5,0	10604		5	
		-0000				
21560	SPLINS	TFM HOLD3,0,9	10606	16	13193	00-00
21570	CM	LISTER-3,8,1011	10618	14	02761	000-Q
21580	BNE	LOOK	10630	47	10690	01200
21590	A	HOLD3,LISTER	10642	21	13193	02764
21600	BT	REMOVE,REMOVE-1	10654	27	03084	03083
21610	TF	LISTER,DIMNUM	10666	26	02794	13190
21620	BT	INSERT,INSERT-1	10678	27	03414	03413
21630	LOOK	C HOLD3,MOVESC	10690	24	13193	02865
21640	BE	SPLINS-1,,6	10702	46	10600	01200
21650	BT	GETL,GETL-1	10714	27	02996	02995
21660	B	SPLINS+12	10726	49	10618	00000
21670	SETMAP	TF MAP+5,LOADSA,,	10738	26	19885	13102
		TD MAP,LOADSA-5	10750	25	19880	13097
21680	CF	MAP	10762	33	19880	00000
21700	SF	MAP+1	10774	32	19881	00000
21710	TF	MAP+8,LOADSC	10786	26	19888	13180
21720	BNF	**24,STFLAG	10798	44	10822	13537
21730	SF	MAPMA	10810	32	13150	00000
21740	TF	MAP+13,MAPMA	10822	26	19893	13150
21750	TF	MAP+18,MAPMA	10834	26	19898	13155
21760	TD	MAP+19,MAPMA	10846	25	19899	13115
21770	TF	DIMNUM,NEWDIM	10858	26	13190	02963
21780	TFM	IORT,**23	10870	16	00565	J0893
21790	B	IOPT,DMDDA,7	10882	49	00532	-2568
21800	TFM	IORT,**23	10894	16	00565	J0917
21810	B	IOGT,MCS1,7	10906	49	00566	J3514
21820	TF	MCS+39,DIMNUM	10918	26	17817	13190
21830	TFM	IORT,**23	10930	16	00565	J0953
21840	B	IOPT,MCS1,7	10942	49	00532	J3514
21850	*	INSERT DIMNUM IN SPLIST	10954	17	10606	J0966
21860	BTM	SPLINS,**12	10966	24	13229	13167
21870	C	PNAME,ZERD1,,				

WAS PROGRAM NAME GIVEN

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21880	BE	NONAM		10978	46	11002	01200
21890	BTM	EQUIV,++12,,	PUT NAME IN EQUIVALENCE TABLE	10990	17	08606	J1002
21900	NONAM	TF FREAD+5,SCRACH,,	LOAD PROGRAM TO DISK	11002	26	13287	13186
21910	TD	FREAD,SCRACH-5		11014	25	13282	13181
21920	SF	FREAD+1		11026	32	13283	00000
21930	CF	FREAD		11038	33	13282	00000
21940	TF	FWRIT+5,LOADSA		11050	26	13272	13102
21950	TD	FWRIT,LOADSA-5		11062	25	13267	13097
21960	TFM	FREAD+13,FAREA		11074	16	13295	J3776
21970	TFM	FWRIT+13,FAREA		11086	16	13280	J3776
21980	C	MAXSC,LOADSC		11098	24	13107	13180
21990	BL	ALTER		11110	47	11282	01300
22000	TF	FREAD+8,LOADSC		11122	26	13290	13180
22010	TF	FWRIT+8,LOADSC		11134	26	13275	13180
22020	LSK	TFM IORT,++23		11146	16	00565	J1169
22030	B	IOGT,FREDDA,7		11158	49	00566	J3467
22040	TFM	IORT,++23		11170	16	00565	J1193
22050	B	IOPT,FWRDDA,7		11182	49	00532	J3459
22060	BD	++20,PTEST		11194	43	11214	13133
22070	ENDWRT	B SETMAP-1,,6		11206	49	1073P	00000
22080	DORG	=-3		11214			
22090	TFM	FPSF+1,32,10		11214	16	11643	000L2
22100	TF	HOLD3,LOADSC		11226	26	13193	13180
22110	TF	FWRIT+5,LOADSA		11238	26	13272	13102
22120	TD	FWRIT,LOADSA-5		11250	25	13267	13097
22130	BTM	FP,++12		11262	17	11462	J1274
22140	B	ENDWRT		11274	49	11206	00000
22150	DORG	=-3		11282			
22160	ALTER	TF HOLD3,LOADSC		11282	26	13193	13180
22170	S	HOLD3,MAXSC		11294	22	13193	13107
22180	TF	FREAD+8,MAXSC		11306	26	13290	13107
22190	TF	FWRIT+8,MAXSC		11318	26	13275	13107
22200	TFM	IORT,++23		11330	16	00565	J1353
22210	B	IOGT,FREDDA,7		11342	49	00566	J3467
22220	TFM	IORT,++23		11354	16	00565	J1377
22230	B	IOPT,FWRDDA,7		11366	49	00532	J3459
22240	A	FREAD+5,MAXSC		11378	21	13287	13107
22250	A	FWRIT+5,MAXSC		11390	21	13272	13107
22260	C	MAXSC,HOLD3		11402	24	13107	13193
22270	BL	ALTER+12		11414	47	11294	01300
22280	TF	FREAD+8,HOLD3		11426	26	13290	13193
22290	TF	FWRIT+8,HOLD3		11438	26	13275	13193
22300	B	LSK		11450	49	11146	00000
22310	FP	SF BUTTON,,	FILE PROTECT AND LOAD PROGRAM	11462	32	00455	00000
22320	BTM	KYMESS,++12		11474	17	11998	J1486
22330	TF	HOLD5,FWRIT+5		11486	26	13139	13272
22340	SF	HOLD5-1		11498	32	13138	00000
22350	TFM	FPSF+6,TRACK2		11510	16	11648	J7778
22360	SM	HOLD5,20,10		11522	12	13139	000K0
22370	BH	=-12		11534	46	11522	01100
22380	BZ	++48		11546	46	11594	01200
22390	AM	HOLD5,20,10		11558	11	13139	000K0
22400	MM	HOLD5,105,9		11570	13	13139	00J05
22410	A	FPSF+6,99		11582	21	11648	00099
22420	TFM	FWRIT+8,20,9		11594	16	13275	00-20
22430	TFM	FWRIT+13,TRACK2		11606	16	13280	J7778

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22440	TFM	IORT,++23		11618	16	00565	J1641
22450	B	IOGT,FPDDA,7		11630	49	00566	J3451
22460	FPSF	SF TRACK2		11642	32	17778	00000
22470	SM	HOLD3,1,10		11654	12	13193	000-1
22480	CM	HOLD3,0,9		11666	14	13193	00-00
22490	BE	DONESF		11678	46	11782	01200
22500	AM	FPSF+6,105,9		11690	11	11648	00J05
22510	CM	FPSF+6,TRACK2+2100		11702	14	11648	J9878
22520	BNE	FPSF		11714	47	11642	01200
22530	TFM	IORT,++23		11726	16	00565	J1749
22540	B	IOPT,FPDDA,7		11738	49	00532	J3451
22550	AM	FWRIT+5,20,10		11750	11	13272	000K0
22560	TFM	FPSF+6,TRACK2		11762	16	11648	J7778
22570	B	FPSF-36		11774	49	11606	00000
22580	DORG	=-3		11782			
22590	DONESF	TFM IORT,++23		11782	16	00565	J1805
22600	B	IOPT,FPDDA,7		11794	49	00532	J3451
22610	CF	BUTTON		11806	33	00455	00000
22620	BTM	KYMESS,++12		11818	17	11998	J1830
22630	B	FP-1,,6		11830	49	1146J	00000
22640	WRLAST	TF FINALM+30,PNAME,,	WRITE FINAL MESSAGE	11842	26	12905	13229
22650	TF	NEWDIM,DIMNUM		11854	26	02963	13190
22660	BT	DIMMER,DIMMER-1		11866	27	03672	03671
22670	RCTY			11878	34	00000	00102
22680	WATY	FINALM		11890	39	12875	00100
22690	TD	19999,MAP+19		11902	25	19999	19899
22700	TF	19998,DIMNUM		11914	26	19998	13190
22710	WNTY	19995		11926	38	19995	00100
22720	SPTY			11938	34	00000	00101
22730	WNTY	MAP		11950	38	19880	00100
22740	DNTY	19999		11962	35	19999	00100
22750	TDM	SYSCAL,3		11974	15	00475	00003
22760	B	WRLAST-1,,6		11986	49	1184J	00000
22770	*	ADDRESS KEY MESSAGE SUBROUTINE					
22780	KYMESS	BNF ++32,BUTTON		11998	44	12030	00455
22790	TFM	KEYMES+24,5500,8		12010	16	12991	0N500
22800	B	++20		12022	49	12042	00000
22810	DORG	=-3		12030			
22820	TFM	KEYMES+24,4646,8		12030	16	12991	0M646
22830	RCTY			12042	34	00000	00102
22840	WATY	KEYMES		12054	39	12967	00100
22850	H			12066	48	00000	00000
22860	B	KYMESS-1,,6		12078	49	1199P	00000
22870	***	DELETE DIM NO, FROM S.P. LIST					
22880	SPLDEL	TF NEWDIM,DIMNUM		12090	26	02963	13190
22890	BT	DIMMER,DIMMER-1		12102	27	03672	03671
22900	TF	LISTES,MAP+5		12114	26	02790	19885
22910	TD	LISTES-5,MAP		12126	25	02785	19880
22920	TF	NINESC,MAP+8		12138	26	05753	19888
22930	TF	HOLD5,MAP+5		12150	26	13139	19885
22940	CF	NINESC-2		12162	33	05751	00000
22950	TFM	RLGONE+30,++20		12174	16	04284	J2194
22960	B	FIND		12186	49	03838	00000
22970	DORG	=-3		12194			
22980	REMDL	C LISTER,DIMNUM		12194	24	02764	13190
22990	BNE	SPLDEL-1,,6		12206	47	1208R	01200

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23000	BT	REMOVE,REMOVE-1	12218	27	03084	03083
23010	CM	LISTER-3,7,1011	12230	14	02761	000-P
23020	BE	CYLDEL	12242	46	12462	01200
23030	CM	LISTER-3,9,1011	12254	14	02761	000-R
23040	BE	COMPRS	12266	46	12406	01200
23050	INSD	TF LISTET,NINESC	12278	26	02794	05753
23060	BT	INSERT,INSERT-1	12290	27	03414	03413
23070	BT	GETL,GETL-1	12302	27	02996	02995
23080	BT	GETL,GETL-1	12314	27	02996	02995
23090	CM	LISTER-3,9,1011	12326	14	02761	000-R
23100	BNE	SPLDEL-1,,6	12338	47	1208R	01200
23110	SF	LISTER-2	12350	32	02762	00000
23120	A	NINESC,LISTER	12362	21	05753	02764
23130	CF	LISTER-2	12374	33	02762	00000
23140	BT	REMOVE,REMOVE-1	12386	27	03084	03083
23150	B	COMPRS+36	12398	49	12442	00000
23160	DORG	*-3	12406			
23170	COMPRS	SF LISTER-2	12406	32	02762	00000
23180	A	NINESC,LISTER	12418	21	05753	02764
23190	CF	LISTER-2	12430	33	02762	00000
23200	BT	REMOVE,REMOVE-1	12442	27	03084	03083
23210	B	INSD	12454	49	12278	00000
23220	DORG	*-3	12462			
23230	CYLDEL	BT GETL,GETL-1	12462	27	02996	02995
23240	CM	LISTER-3,7,1011	12474	14	02761	000-P
23250	BNE	NO200	12486	47	12566	01200
23260	BT	GETR,GETR-1	12498	27	02872	02871
23270	TFM	LISTET,9200,8	12510	16	02794	0R200
23280	SM	NINESC,200,9	12522	12	05753	00K00
23290	BT	INSERT,INSERT-1	12534	27	03414	03413
23300	BT	GETR,GETR-1	12546	27	02872	02871
23310	B	REMDL	12558	49	12194	00000
23320	DORG	*-3	12566			
23330	NO200	CM LISTER-3,9,1011	12566	14	02761	000-R
23340	BE	YES9	12578	46	12730	01200
23350	SF	HOLDS-2	12590	32	13137	00000
23360	SM	HOLDS,200,9	12602	12	13139	00K00
23370	BNF	*-12,HOLDS	12614	44	12602	13139
23380	A	NINESC,HOLDS	12626	21	05753	13139
23390	TDM	HOLDS-3,9,11	12638	15	13136	0000R
23400	CF	HOLDS	12650	33	13139	00000
23410	CF	HOLDS-2	12662	33	13137	00000
23420	TF	LISTET,HOLDS	12674	26	02794	13139
23430	BT	GETR,GETR-1	12686	27	02872	02871
23440	BT	INSERT,INSERT-1	12698	27	03414	03413
23450	BT	GETR,GETR-1	12710	27	02872	02871
23460	B	REMDL	12722	49	12194	00000
23470	DORG	*-3	12730			
23480	YES9	SF LISTER-2	12730	32	02762	00000
23490	A	NINESC,LISTER	12742	21	05753	02764
23500	S	HOLDS,LISTER	12754	22	13139	02764
23510	CF	LISTER-2	12766	33	02762	00000
23520	BT	REMOVE,REMOVE-1	12778	27	03084	03083
23530	B	CYLDEL	12790	49	12462	00000
23540	DORG	*-3	12798			
23550	PATCH1	TF MAPEA,MAP+18	12798	26	13155	19898

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23560	CM	HOLDCD+30,0,7	12810	14	13076	-0000
23570	BNE	*+24	12822	47	12846	01200
23580	TF	MAPMA,MAP+13	12834	26	13150	19893
23590	B7	MAINB2	12846	49	06884	
23600	SCERR	TFM DIMERR+22,0075,8	12854	16	02507	0-075
23610	B	ERRD	12866	49	02524	00000
23620	DORG	*-3	12874			
23630	FINALM	DAC 18,DK LOADED	12875		18 X	2
23640	RMARK	DAC 1,0	12911		1 X	2
23650	ERRSEQ	DAC 27,DUP*ERROR55 CARD SEQUENCE	12913		27 X	2
23660	KEYMES	DAC 39,DUP* TURN OFF WRITE ADDRESS KEY, START	12967		39 X	2
23670	DAC	1,0	13045		1 X	2
23680	CLOSUP	DSS 4000,13776	13776		4000	
23690	INPUT	DAS 81,13613	13613		81 X	2
23700	READIN	DS ,17778	17778		0	
23710	CARD	DC 45,0	13090		45	
23720	HOLDCD	DS ,CARD-44	13046		0	
23730	MCS	DS ,17778	17778		0	
23740	THOU	DC 6,100000	13096		6	
23750	LOADSA	DC 6,0	13102		6	
23760	HOLD2	DC 2,0	13104		2	
23770	MAXDIM	DS 0,FIND+11	03849		0	
23780	MAXSC	DC 3,050	13107		3	
23790	MCAS	DC 6,0	13113		6	
23800	FORT	DSC 1,0	13114		1	
23810	MAPRM	DSC 1,0	13115		1	
23820	GPMARK	DGM ,,,*****	13116		1	
23830	FINDIM	DSC 1,0	13117		1	
23840	AOK	DSC 1,0	13118		1	
23850	LOOP	DC 2,0	13120		2	
23860	SCREM	DC 3,0	13123		3	
23870	SEQ	DC 5,0	13128		5	
23880	BUTTON	DS ,455	00455		0	
23890	PHI	DC 2,0	13130		2	
23900	RTEST	DSC 1,0	13131		1	
23910	NTEST	DSC 1,0	13132		1	

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23920 PTEST	DSC 1,0	13133	1
	0		
23930 DELETE	DSC 1,0	13134	1
	0		
23940 HOLDS	DC 5,0	13139	5
	-0000		
23950 CNT	DC 3,0	13142	3
	-00		
23960 COUNT	DC 3,0	13145	3
	-00		
23970 MAPMA	DC 5,0	13150	5
	-0000		
23980 MAPEA	DC 5,0	13155	5
	-0000		
23990 ZERO19	DC 19,0	13174	19
	-000000000000000000		
24000 ZERO6	DC 6,0,ZERO19-13	13161	6
	-00000		
24010 LOADSC	DC 6,0	13180	6
	-00000		
24020 SCRACH	DC 6,0	13186	6
	-00000		
24030 DIMNUM	DC 4,0	13190	4
	-000		
24040 HOLD3	DC 3,0	13193	3
	-00		
24050 HOLD4	DC 4,0	13197	4
	-000		
24060 SCR1	DC 6,0	13203	6
	-00000		
24070 SCR2	DC 6,0	13209	6
	-00000		
24080 HOLD6	DC 6,0	13215	6
	-00000		
24090	DAC 1,0	13217	1 X 2
	0		
24100 PNAME	DC 12,0	13229	12
	-000000000000		
24110	DAC 1,'	13231	1 X 2
	'		
24120 ZERO12	DC 12,0,ZERO19-7	13167	12
	-000000000000		
24130 NINE12	DC 12,99999999999999	13243	12
	R99999999999999		
24140 MOVDDA	DSC 2,22	13244	2
	22		
24150	DSA MOVDCF	13250	5 X 1
24160	DSC 1,'	13250	J3252
	'	13251	1
24170 MOVDCF	DSC 1,1	13252	1
	1		
24180	DC 5,18331	13257	5
	J8331		
24190	DC 3,038	13260	3
	-38		

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24200	DC 5,08600	13265	5
	-8600		
24210	DSC 1,'	13266	1
	'		
24220 FWRIT	DSC 1,1	13267	1
	1		
24230	DC 5,0	13272	5
	-0000		
24240	DC 3,0	13275	3
	-00		
24250	DC 5,0	13280	5
	-0000		
24260	DSC 1,'	13281	1
	'		
24270 FREAD	DSC 1,1	13282	1
	1		
24280	DC 5,0	13287	5
	-0000		
24290	DC 3,0	13290	3
	-00		
24300	DC 5,0	13295	5
	-0000		
24310	DSC 1,'	13296	1
	'		
24320 CLOSW	DSC 1,1	13297	1
	1		
24330	DC 5,0	13302	5
	-0000		
24340	DC 3,0	13305	3
	-00		
24350	DC 5,0	13310	5
	-0000		
24360	DSC 1,'	13311	1
	'		
24370 EQUDDA	DSC 2,22	13312	2
	22		
24380	DSA EQUDCF	13318	5 X 1
24390	DSC 1,'	13318	J3320
	'	13319	1
24400 EQUDCF	DSC 1,1	13320	1
	1		
24410	DC 5,18278	13325	5
	J8278		
24420	DC 3,020	13328	3
	-20		
24430	DC 5,08600	13333	5
	-8600		
24440	DSC 1,'	13334	1
	'		
24450 COM2	DSC 2,22	13335	2
	22		
24460	DSA COM22	13341	5 X 1
		13341	J3343

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24470	DSC	1,1	13342	1
24480	COM22	DSC 1,1	13343	1
24490	DC	5,18512	13348	5
24500	DC	3,020	13351	3
24510	DC	5,10600	13356	5
24520	DSC	1,1	13357	1
24530	CLOSR	DSC 1,1	13358	1
24540	DC	5,0	13363	5
24550	DC	3,0	13366	3
24560	DC	5,0	13371	5
24570	DSC	1,1	13372	1
24580	MAP	DSC 20,0,19880	19880	20
24590	DCFSCR	DSC 1,0	13373	1
24600	DC	5,0	13378	5
24610	DC	3,0	13381	3
24620	DSA	READIN	13386	5 X 1
24630	DSC	1,1	13386	J7778
24640	EQUDIM	DSC 20,0,19880	19880	20
24650	DISKF	DSC 1,0	13388	1
24660	DC	5,0	13393	5
24670	DC	3,020	13396	3
24680	DSA	TRACK	13401	5 X 1
24690	DSC	1,1	13401	J3776
24700	FAREA	DS ,CLOSUP	13776	0
24710	SYSCAL	DS ,475	00475	0
24720	SUBLO	DS ,10	00010	0
24730	SUBHI	DS ,39	00039	0
24740	TRACK	DS ,CLOSUP	13776	0
24750	BASICM	DS ,796	00796	0
24760	MONCAL	DS ,BASICM	00796	0
24770	TRACK3	DS ,CLOSUP	13776	0

24780	DUPCRD	DS ,INPUT	13613	0
24790	SUCCESS	DS ,AOK	13118	0
24800	DMPDIM	DSC 2,-22	13403	2
24810	DSA	DMPDM	13409	5 X 1
24820	DSC	1,1	13409	J3411
24830	DMPDM	DSC 1,1	13410	1
24840	DC	5,18430	13411	5
24850	DC	3,050	13416	3
24860	DC	5,02500	13419	5
24870	DSC	1,1	13424	1
24880	DUMP	DSC 1,0	13425	1
24890	CLODDA	DSC 2,22	13426	1
24900	DSA	CLOSR	13427	2
24910	DSC	1,1	13433	5 X 1
24920	CLWDDA	DSC 2,22	13433	J3358
24930	DSA	CLOSW	13434	1
24940	DSC	1,1	13435	2
24950	DDAKF	DSC 2,22	13441	5 X 1
24960	DSA	DISKF	13441	J3297
24970	DSC	1,1	13442	1
24980	FPDDA	DSC 2,26	13443	2
24990	DSA	FWRIT	13449	5 X 1
25000	DSC	1,1	13449	J3388
25010	FWRDDA	DSC 2,22	13450	1
25020	DSA	FWRIT	13451	2
25030	DSC	1,1	13457	5 X 1
			13457	J3267
			13458	1
			13459	2
			13465	5 X 1
			13465	J3267
			13466	1

25040	FREDDA	DSC	2,22	13467	2		
25050		DSA	FREAD	13473	5 X	1	
25060		DSC	1,1	13473	J3282		
25070	READ	DSA	READIN	13474	1		
25080		DC	3,00	13479	J7778		
25081		-0		13482	3		
25090	DDASCR	DGM	*,*,*****	13482	1		
25100		DSC	2,02	13483	2		
25110		OSA	DCFSCR	13489	5 X	1	
25120	DIREAD	DSC	2,22	13489	J3373		
25130		OSA	D2READ	13490	1		
25140		DSC	1,1	13491	2		
25150	D2READ	DSC	1,1	13497	5 X	1	
25160		DC	5,0	13497	J3499		
25170		-0000		13498	1		
25180		DC	3,021	13499	1		
25190		-21		13504	5		
25200	MCS1	OSA	TRACK	13507	3		
25210		DSC	1,1	13512	5 X	1	
25220		DSC	2,22	13512	J3776		
25230	MCS2	OSA	MCS2	13513	1		
25240		DSC	1,1	13514	2		
25250		DC	5,19663	13520	5 X	1	
25260		J9663		13520	J3522		
25270		DC	3,1	13522	1		
25280		-01		13522	1		
25290		OSA	MCS	13527	5		
25300		DSC	1,1	13530	3		
25310		DSC	1,1	13535	5 X	1	
25320		DSC	1,1	13535	J7778		
25330		DSC	1,1	13536	1		

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25280	STFLAG	DSC	1,0	13537	1		
25290	TRACK2	DSS	2100,17778,,	17778	2100		
25300		TCD	COMFL	10100			
25310	***		FIND AVAILABLE AREA				
25320		DORG	13800	13800			
25330	NOSA	CF	MAPRM,,,	13800	33	13115	00000
25340		SF	HOLDCD+35	13812	32	13081	00000
25350		C	HOLDCD+40,ZERO6	13824	24	13086	13161
25360		BNE	**24	13836	47	13860	01200
25370		TF	HOLDCD+40,MXNOSA	13848	26	13086	05835
25380		SF	HOLDCD+38	13860	32	13084	00000
25390		TF	HILIM,HOLDCD+40	13872	26	13823	13086
25400		TF	LOLIM,HOLDCD+37	13884	26	13955	13083
25410		C	MXNOSA,HILIM	13896	24	05835	13823
25420		BL	ERRCYL	13908	47	14276	01300
25430		C	MXNOSA,LOLIM	13920	24	05835	13955
25440		BL	ERRCYL	13932	47	14276	01300
25450		CF	HILIM-2	13944	33	13821	00000
25460		CF	LOLIM-2	13956	33	13953	00000
25470		SF	HOLDCD+36	13968	32	13082	00000
25480		MM	HOLDCD+37,200,9	13980	13	13083	00K00
25490		SF	95	13992	32	00095	00000
25500		TF	LISTES,99	14004	26	02790	00099
25510		CF	HOLDCD+35	14016	33	13081	00000
25520		TD	**47,HOLDCD+35,,	14028	25	14075	13081
25530		A	**35,**35	14040	21	14075	14075
25540		AM	**23,1,10	14052	11	14075	000-1
25550		TDN	LISTES-5,0,10	14064	15	02785	000-0
25560		TFM	IDRT,**23	14076	16	00565	J4099
25570		B	IOGT,D3READ,7,	14088	49	00566	J1286
25580		TFM	HOLD6-1,READIN+71	14100	16	13214	J7849
25590		TD	**22,LISTES-5	14112	25	14134	02785
25600		AM	HOLD6-1,0,9	14124	11	13214	00-00
25610		BD	**24,LISTES-4	14136	43	14160	02786
25620		TFM	**25,12,10	14148	16	14173	000J2
25630		TD	LISTES-4,HOLD6-1,11	14160	25	02786	1321M
25640		NOP	LISTES,10000,7	14172	41	02790	J0000
25650		TF	NINESC,LOADSC,,	14184	26	05753	13180
25660		TFM	CNTCYL,0,10	14196	16	13979	000-0
25670		CF	NINESC-2	14208	33	05751	00000
25680		CM	NINESC,9200,8	14220	14	05753	0R200
25690		BNH	SMALL	14232	47	14296	01100
25700		SM	NINESC,200,8	14244	12	05753	0-200
25710		AM	CNTCYL,1,10	14256	11	13979	000-1
25720		B	*-48	14268	49	14220	00000
25730		DORG	*-3	14276			
25740	ERRCYL	TFM	DIMERR+22,7274,8	14276	16	02507	0P274
25750		B	ERRD	14288	49	02524	00000
25760		DORG	*-3	14296			
25770	SMALL	CM	CNTCYL,0,10	14296	14	13979	000-0
25780		BE	**36	14308	46	14344	01200
25790		TF	SCOLD,NINESC	14320	26	13967	05753
25800		TFM	NINESC,9200,8	14332	16	05753	0R200
25810		TFM	LGE+23,0,10	14344	16	14831	000-0

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25820	TDM	RLGONE+13,1	14356	15	04267	00001
25830	TDM	WHYNOT+13,1	14368	15	03401	00001
25840	TDM	CLIPPP+25,1	14380	15	02909	00001
25850	TFM	CLIPPP+42,SPLINI	14392	16	02926	-4470
25860	TFM	RLGONE+30,**20	14404	16	04284	J4424
25870	B	FIND	14416	49	03838	00000
25880	DORG	*-3	14424			
25890	RGE	C LISTER,NINESC	14424	24	02764	05753
25900	BNL	LGE	14436	46	14808	01300
25910	CM	LISTER-3,7,1011	14448	14	02761	000-P
25920	BE	**60	14460	46	14520	01200
25930	TFM	LGE+23,0,10	14472	16	14831	000-0
25940	CM	CNTCYL,0,10	14484	14	13979	000-0
25950	BE	**24	14496	46	14520	01200
25960	TFM	NINESC,9200,8	14508	16	05753	0R200
25970	BT	GETR,GETR-1	14520	27	02872	.02871
25980	BNR	**20,LISTER-3	14532	45	14552	02761
25981	B7	**20	14544	49	14564	
25982	BNF	CHIL,LISTER-1	14552	44	14692	02763
25990	AM	LOLIM,100,9	14564	11	13955	00J00
26000	C	LOLIM-2,HILIM-2	14576	24	13953	13821
26010	BH	ERR	14588	46	05662	01100
26020	TDM	WHYNOT+13,9	14600	15	03401	00009
26030	TDM	CLIPPP+25,9	14612	15	02909	00009
26040	TFM	CLIPPP+42,REDSPL	14624	16	02926	-4702
26050	TDM	RLGONE+13,9	14636	15	04267	00009
26060	BT	WHYNOT,WHYNOT-1	14648	27	03388	03387
26070	TFM	HOLDCCD+37,0,9	14660	16	13083	00-00
26080	TD	HOLDCCD+35,LOLIM-2	14672	25	13081	13953
26090	B	NOSA	14684			
26100	DORG	*-3	14692	49	13800	00000
26110	CHIL	CM LISTER-3,7,1011	14692	14	02761	000-P
26120	BNE	RGE	14704	47	14424	01200
26130	TD	**47,HILIM-2	14716	25	14763	13821
26140	TDM	HILIM-2,0	14728	15	13821	00000
26150	C	LISTER,HILIM	14740	24	02764	13823
26160	TDM	HILIM-2,0	14752	15	13821	00000
26170	BNE	RGE	14764	47	14424	01200
26180	C	LOLIM-2,HILIM-2	14776	24	13953	13821
26190	BNE	RGE	14788	47	14424	01200
26200	B	ERR	14800	49	05662	00000
26210	DORG	*-3	14808			
26220	LGE	AM **23,1,10	14808	11	14831	000-1
26230	CM	CNTCYL,0,10	14820	14	13979	000-0
26240	BH	RGE+96	14832	46	14520	01100
26250	BL	**32	14844	47	14876	01300
26260	TF	NINESC,SCOLD	14856	26	05753	13967
26270	B	RGE+96	14868	49	14520	00000
26280	DORG	*-3	14876			
26290	SF	NINESC-2	14876	32	05751	00000
26300	TDM	WHYNOT+13,9	14888	15	03401	00009
26310	BT	GETL,GETL-1	14900	27	02996	02995
26320	TDM	CLIPPP+25,9	14912	15	02909	00009
26330	TFM	CLIPPP+42,REDSPL	14924	16	02926	-4702
26340	TDM	RLGONE+13,9	14936	15	04267	00009
26350	B7	SPD	14948	49	10934	

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26360	HILIM	DC 4,7000,NOSA+23	13823		4	
		P000				
26370	LOLIM	DC 4,7000,NOSA+155	13955		4	
		P000				
26380	SCOLD	DC 4,0,NOSA+167	13967		4	
		-000				
26390	CNTCYL	DC 2,0,NOSA+179	13979		2	
		-0				
26391	PATCH3	TFM IORT,**23	14956	16	00565	J4979
26392	B	IOGT,THRDDA,7	14968	49	00566	-2729
26393	B7	LOADRE-36	14980	49	07248	
26400	FINDFL	TFM IORT,**23	14988	16	00565	J5011
26410	B	IOPT,FINDLF,7	15000	49	00532	J5036
26420	TRA		15012	36	00000	00500
			15024	49	00000	00000
26430	FINDLF	DSC 2,22	15036		2	
		22				
26440	DSA	FINDDA	15042		5 X	1
26450	DSC	1,'	15042		J5044	
		'	15043		1	
26460	FINDDA	DSC 1,1	15044		1	
		1				
26470	DC	5,18542	15049		5	
		J8542				
26480	DC	3,012	15052		3	
		-12				
26490	DC	5,13800	15057		5	
		J3800				
26500	DSC	1,'	15058		1	
		'				
26510	TCD	FINDFL	14988			
26520	IOCAL	DS .716	00716		0	
26530	DEND		00000			

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ADDBLK	04286	DONESF	11782	MARVEL	10884	REMSIL	10136	DLD	10858
ADDRAC	10656	DRESTR	03639	MAXDIM	03849	REPLFL	04400	DLOAD	05800
ADRSPL	04520	DSEVEN	09056	MIDNIT	09372	RLGONE	04254	DMPDA	02568
ALLCLR	07816	DUPCRD	13613	MODK1	10682	RSEVEN	10800	DMPDM	13411
ALLRIT	10128	EIGHTS	09984	MODD1	10482	ACTAA	09552	DONE	09542
ALPHAS	10266	ENDWRT	11206	MONCAL	00796	ACTAC	09968	DREPL	05800
B2READ	09054	EQUDEC	13320	MONITR	00796	ACTAD	09896	DUMP	13426
BASICM	00796	EQUDDA	13312	MORERD	06584	ACTAG	09260	ENTOK	10362
BAVADD	10464	EQUDIM	19880	MOVBUS	08724	ACTAH	09128	EQU1	08148
BAVAIL	02754	ERRCYL	14276	MOVCAF	08701	ACTAJ	09104	EQU2	08156
BAVCOM	10432	ERRSEQ	12913	MOVVDC	13252	ACTAK	09220	EQUFL	08100
BEAUTY	10592	EXITFL	06984	MOVVDA	13244	ALTER	11282	EQUIV	08606
BLANKT	10348	EXITMR	08624	MOVESA	02862	ANAME	10466	ERRD	02524
BUTTON	00455	FAKSEV	02852	MOVESC	02865	ADK	13118	ERR	05662
CALLMV	07036	FILTST	10204	MOVFL1	08548	ATNR	08606	EXIT2	09110
CHOICE	09196	FINALM	12875	MOVFL2	08556	ATN	09042	EXIT3	06936
CLEVER	04321	FINDDA	15044	MOVNDW	10496	BNR	09650	EXIT	10530
CLIPPP	02884	FINDFL	14988	MSTAKE	09024	CALC2	02759	EZEST	10700
CLODDA	13427	FINDIM	13117	MXNOSA	05835	CALC3	02779	FAREA	13776
CLOSUP	13776	FINDLF	15036	N48000	02770	CALC4	02783	FIND	03838
CLWDDA	13435	FINDON	06740	NEGATE	07636	CALC5	08796	FINDX	10905
CNAMES	09818	FINDTR	03906	NEWDM1	02963	CALC6	08790	FLAG	06512
CNTCYL	13979	FINDXX	10913	NINE12	13243	CALC7	02848	FORT	13114
COMCYL	04986	FREDDA	13467	NINENT	09132	CARD	13090	FOUND	03445
COMFL1	10148	FWRDDA	13459	NINESC	05753	CCD2	10466	FPDDA	13451
COMFL2	10156	GETBAK	05170	NODISK	09866	CCD	10458	FPOK	06864
COMMFL	07200	GETLTR	03016	NOFLGS	07748	CHIL	14692	FP	11462
COMMON	02853	GETRTR	02928	NOMMON	02855	CLEAR	06624	FPSF	11642
COMPFR	05274	GOLDEN	02760	NOMULT	10030	CLFP	06696	FREAD	13282
COMPRS	12406	GPMARK	13116	NONAME	09672	CLOSE	09294	FWRIT	13267
CONCUD	09952	HOLDCC	13046	NOSECA	02856	CLOSR	13358	GETL	02996
CONST1	02801	HOLDIM	10498	NOSPAC	07092	CLOSW	13297	GETR	02872
CONST2	02807	INITRD	09974	OLIMIT	10130	CLRFP	07688	GORT	10224
CONST3	05759	INITSC	09090	PATCH1	12798	CMPAR	09194	HERE	11194
CONST5	02825	INSDLE	12278	PATCH2	11582	CNINE	08810	HEX	02795
CONST6	02831	INSERT	03414	PATCH3	14956	CNST3	03578	HILIM	13823
CONST7	02837	INSETR	03434	PATCH4	06216	CNT	13142	HOLD2	13104
CONST8	02870	KEYMES	12967	PK0DDA	02637	COM22	13343	HOLD3	13193
CORSIZ	02483	KSEVEN	10708	PK1DDA	02660	COM2	13335	HOLD4	13197
CURREN	08809	KYMESS	11998	PK2DDA	02683	COMFL	10100	HOLD5	13139
CYLOEL	12462	LCTEST	09614	PK3DDA	02706	COMM1	07248	HOLD6	13215
D1READ	13491	LIMITS	08666	PLUSSR	04194	COMM2	07263	INCRD	09274
D2READ	13499	LISTER	02764	QCARRY	02813	COMP	10106	INCR	10246
D3READ	11286	LISTES	02790	RACKET	02841	COUNT	13145	INIT1	07740
D4READ	11294	LISTET	02794	RDMDA	02591	DC1	09554	INIT2	08360
DCFSR	13373	LOADER	11310	RDMOVE	02599	DC22	06096	INPUT	13613
DDASCR	13483	LOADFL	04400	READIN	17778	DC2	05920	IOCAL	00716
DELETE	13134	LOADRE	07284	REDSPO	04810	DDAKF	13443	IOGT	00566
DELNT5	09604	LOADSA	13102	REDSP1	04854	DELL	05648	IOPT	00532
DIMENT	19880	LOADSC	13180	REDSP2	04898	DEL2	05656	IORT	00565
DIMERR	02485	LODPSY	09024	REDSP3	04942	DELET	05800	ISTO	05956
DIMHLD	08822	LOPEZA	08747	REDSPL	04702	DELFL	05600	KEVE	05009
DIMMER	03672	LOPEZB	08770	REMBLK	10628	DELTA	09375	KEY1	08813
DINUM	13190	LPSRDA	04514	REMDLE	12194	DISKF	13388	KEY5	08785
DMPDIM	13403	MAINB1	06364	REMOFR	03104	DISKN	06340	KING	02458
DMREAD	02576	MAINB2	06884	REMOVE	03084	DLDCF	10871	LGE	14808

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LIMIT	08812	NOMC	11016	R	08754	TRACK	13776	SPLPK0	02645
LOAD1	04448	NOMD	11064	RTEST	13131	TREC	06884	SPLPK1	02668
LOAD2	04463	NOME	11072	SCAN1	07788	TRREC	09414	SPLPK2	02691
LOLIM	13955	NONAM	11002	SCAN2	08408	TRWA	08739	SPLPK3	02714
LOOK	10690	NORE1	07600	SCANN	09762	TRWB	08762	STARDT	05022
LOOP	13120	NORE2	08300	SCERR	12854	UPDIM	07312	STFLAG	13537
LSK	11146	NOSAC	10886	SCOLD	13967	UPSCA	07892	SUCCESS	13118
MAINB	10370	NOSA	13800	SCR1	13203	VOILA	08112	SYSCAL	00475
MAMY	09496	NOTOK	09634	SCR2	13209	WASH	10944	TELAST	10756
MAPEA	13155	NTEST	13132	SCRAD	09298	WR2	02259	TESTFP	02756
MAPMA	13150	NTZ	06380	SCREM	13123	WRDK	06768	THRDDA	02729
MAPRM	13115	OKDEL	06148	SCRKO	11254	WRT2	08946	THROWS	02737
MAP	19880	PACK	02772	SCROK	06588	WRT	09022	TOPPRD	10812
MAXSC	13107	PAT2	06136	SECT	10234	YES9	12730	TRACK2	17778
MCAS	13113	PHI	13130	SEQ	13128	ZER06	13161	TRACK3	13776
MCS1	13514	PNAME	13229	SF	10094	SCRACH	13186	TRNBUS	08716
MCS2	13522	PRE7A	09000	SMALL	14296	SEARFP	07360	TRWACR	08693
MCS	17778	PRE7	08638	SOL2	10666	SEQERR	10378	TRYAGN	04002
MEAT	09292	PTEST	13133	SOL	10658	SETFLG	09122	UPSCAN	08512
MOVER	08824	QHOLD	02819	SPD	10934	SETMAP	10738	WHIPIT	05346
MOVFL	08500	QUEEN	02466	SPLFL	05760	SEVENT	09108	WHYNOT	03388
MPT	08636	R2	08950	SPLR1	05808	SFSUCE	08600	WITHIN	08738
MULT2	09974	RAKES	10524	SPLR2	05823	SKNAME	09690	WRLAST	11842
MULT	09906	RDSPL	04594	SPS	07484	SPCRED	05462	WRMDDA	02614
NDISK	06848	READC	10022	STEAL	02845	SPECAS	09152	WRMOVE	02622
NERR	03580	READ	13479	STOMP	03188	SPLADD	04574	WRTSPO	03268
NEVER	04297	RECD	09174	SUBHI	00039	SPLCOR	03151	WRTSP1	03300
NOZ00	12566	RELD2	08532	SUBLO	00010	SPLCYL	03187	WRTSP2	03332
NDALF	09854	RELD	08172	TAC	09812	SPLDEL	12090	WRTSP3	03364
NDF	08986	REPL1	04448	TFLG	08878	SPLEXT	05066	ZER012	13167
NOISY	10380	REPL2	04463	THOU	13096	SPLINI	04470	ZER019	13174
NOMA	08670	RGE	14424	TIC	09744	SPLINS	10606	ZER0ES	08806
NOMB	08678	RMARK	12911	TIPSY	03470	SPLIST	04330	ZSEVEN	09468

END OF ONE ASSEMBLY.

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00010	DDRG	2500		02500			
00020	DUMP	BNF	DUMPC, MCS+23,,	IS CALL FROM SPS, FORTRAN	02500	44	02604 17801
00030		CF	CONTR-2		02512	33	13611 00000
00040		TR	FILAD, 402		02524	31	05474 00402
00050		TFM	FILAD+5, 0, 9		02536	16	05479 00-00
00060		TF	FILAD+3, 425		02548	26	05477 00425
00061		TD	FILAD, 422		02560	25	05474 00422
00070		TF	SC, FILAD+8		02572	26	13643 05482
00080		BD	PAPST, MCS+23		02584	43	03246 17801
00090		B	CA		02596	49	03190 00000
00100		DDRG	--4		02603		
00110	DUMPC	SF	CONTR-2,,	CALL FROM CONTROL RECORD	02604	32	13611 00000
00120		SF	TYPE-1		02616	32	13646 00000
00130	*			DETERMINE TYPE			
00140		CM	TYPE, 50, 10		02628	14	13647 000N0
00150		BH	LORM		02640	46	02906 01100
00160		CM	TYPE, 45, 10		02652	14	13647 000M5
00170		BE	E		02664	46	02738 01200
00180		CM	TYPE, 49, 10		02676	14	13647 000M9
00190		BE	I		02688	46	02758 01200
00200		CM	TYPE, 41, 10		02700	14	13647 000M1
00210		BE	TYPA		02712	46	06494 01200
00220		B	ERRD-12		02724	49	06080 00000
00230		DDRG	++3		02738		
00240	E	TFM	NUMB, EENT		02738	16	13643 -0002
00250		B	B1		02750	49	03026 00000
00260		DDRG	--4		02757		
00270	I	TFM	NUMB, MENT		02758	16	13643 -0003
00280		B	B1		02770	49	03026 00000
00290		DDRG	--4		02777		
00300	SPL	CM	TYPE, 62, 10		02778	14	13647 00002
00310		BNE	ERRD-12		02790	47	06080 01200
00320		SF	TYPE+1		02802	32	13648 00000
00330		CM	TYPE-2, 73, 10		02814	14	13649 000P3
00340		BH	ERRD-12		02826	46	06080 01100
00350		CM	TYPE+2, 70, 10		02838	14	13649 000P0
00360		BL	ERRD-12		02850	47	06080 01300
00370		TFM	NUMB, SENT		02862	16	13643 -0004
00380		TD	++23, TYPE+2		02874	25	02897 13649
00390		AM	NUMB, 0, 10		02886	11	13643 000-0
00400		B	B1		02898	49	03026 00000
00410		DDRG	--3		02906		
00420	LORM	CM	TYPE, 53, 10		02906	14	13647 000N3
00430		BE	L		02918	46	04634 01200
00440		CM	TYPE, 54, 10		02930	14	13647 000N4
00450		BNE	SPL		02942	47	02778 01200
00460		SF	NUMB-7		02954	32	13636 00000
00470		CM	NUMB, 0, 10		02966	14	13643 000-0
00480		BE	NAME		02978	46	04278 01200
00490		TFM	TD+6, NUMB-1,,	CONV MAP NO TO NUMERIC	02990	16	05196 J3642
00500		TFM	AN-1, ++23		03002	16	05165 -3025
00510		B	AN, NUMB-7, 7		03014	49	05166 J3636
00520	BI	TF	FIND+23, NUMB,,	FIND MAP ENTRY	03026	26	05045 13643
00530		TFM	TR+23, ++23, 711		03038	16	05129 -306J
00540		B	TEMAP, FILAD		03050	49	04974 05474
00550		BNR	CONT, FILAD		03062	45	03094 05474

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00560	*		ERROR MAP NO NOT IN USE		03074	16	06319 0-074
00570		TFM	DIMERR+22, 0074, 8		03086	49	06092 00000
00580		B	ERRD		03094		
00590		DDRG	--3		03094		
00600	CONT	TF	SC, FILAD+8,,	SAVE SC FROM FILAD	03106	26	13643 05482
00610	B2	SF	IOD-1		03106	32	13644 00000
00620		CM	IOD, 57, 10,	OUTPUT DEVICE TEST	03118	14	13645 000M7
00630		BE	PAPST		03130	46	03246 01200
00640		CM	IOD, 63, 10		03142	14	13645 00003
00650		BE	TYPNRT		03154	46	05510 01200
00660		CM	IOD, 43, 10		03166	14	13645 000M3
00670		BNE	ERRD-12		03178	47	06080 01200
00680	CA	CF	OI,,,	OUTPUT DEVICE IS CARDS	03190	33	02647 00000
00690		TFM	SEQUEN, 0		03202	16	02627 -0000
00700		TFM	ENDTES+11, TSXC+35		03214	16	05325 -3621
00710		TFM	RELLT-6, FINISC		03226	16	03560 -7138
00720		B	SETUP		03238	49	03282 00000
00730		DDRG	--4		03245		
00740	PAPST	SF	OI,,,	OUTPUT DEVICE IS PAPER TAPE	03246	32	02647 00000
00750		TFM	ENDTES+11, A10+11		03258	16	05325 -3457
00760		TFM	RELLT-6, FINISP		03270	16	03560 -7194
00770	SETUP	TFM	FILAD+13, SECTOR,,	SET UP MAD OF FILAD	03282	16	05487 J8000
00780		TFM	FILAD+8, 3, 9,	SET UP SECTOR CNT OF FILAD	03294	16	05482 00-03
00790		TDM	FILAD+14,,		03306	15	05488 00000
00800		DSC	1, *, *		03317		1
00810	READ	TFM	IORT, ++23		03318	16	00565 -3341
00820		B	IOGT, FILDDA, 7		03330	49	00566 -5466
00830	*			INITIALIZE ADDRESSES			
00840	INIT	TFM	A10+11, SECTOR		03342	16	03457 J8000
00850		TFM	TSXC+11, SECTOR+79		03354	16	03597 J8079
00860		TFM	TSXC+35, SECTOR		03366	16	03621 J8000
00870	*			SET LOOP COUNTER			
00880	SCTEST	CM	SC, 3, 10		03378	14	13643 000-3
00890		BNL	FOUR		03390	46	03422 01300
00900		TF	LOOP, SC		03402	26	02736 13643
00910		B	FOUR+12		03414	49	03434 00000
00920		DDRG	--4		03421		
00930	FOUR	TFM	LOOP, 4, 10		03422	16	02736 000-4
00940	L1	BNF	TSXC, OI		03434	44	03586 02647
00950	A10	TFM	PAPER+35, XX, 7,	CALL PAPER TAPE	03446	16	03965 -0000
00960		BTM	PAPER, ++12		03458	17	03930 -3470
00970		AM	A10+11, 75, 10		03470	11	03457 000P5
00980	TYPEND	BNF	ENDTES, CONTR-2		03482	44	05314 13611
00990		SM	LOOP, 1, 10		03494	12	02736 000-1
01000		BNE	L1		03506	47	03434 01200
01010	*			LITTLE LOOP FINISHED			
01020		CM	SC, 3, 10		03518	14	13643 000-3
01030		BL	A1		03530	47	03654 01300
01040		SM	SC, 3, 10		03542	12	13643 000-3
01050		BE	XX		03554	46	00000 01200
01060	RELLT	AM	FILAD+5, 3, 10		03566	11	05479 000-3
01070		B	READ		03578	49	03318 00000
01080		DDRG	--4		03585		
01090	*			CALL CARD ROUTINE			
01100	TSXC	TFM	AB1+11, XX		03586	16	04093 -0000

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01110	TFM	PUN,+23,711	03598	16	07254	-362J
01120	B	CARD,SECTOR,7	03610	49	04034	J8000
01130	AM	TSXC+11,75	03622	11	03597	-0075
01140	AM	TSXC+35,75	03634	11	03621	-0075
01150	B	TYPEND	03646	49	03482	00000
01160	DORG	*-4	03653			
01170	A1	CM SC,1,10, REMAINING SC LESS THAN THREE	03654	14	13643	000-1
01180	BNE	A3	03666	47	03814	01200
01190	TF	SECTOR+149,ZERO	03678	26	18149	07288
01200	TF	SECTOR+124,ZERO	03690	26	18124	07288
01210	CF	SECTOR+125	03702	33	18125	00000
01220	CF	SECTOR+100	03714	33	18100	00000
01230	BNF	A2,0I	03726	44	03770	02647
01240	TFM	PAPER+35,SECTOR+75,, SC=1-SPECIAL PAPER TAPE OUTPUT	03738	16	03965	J8075
01250	BTM	PAPER,+12	03750	17	03930	-3762
01260	B	FINISP	03762	49	07194	00000
01270	DORG	*-4	03769			
01280	A2	TFM AB1+11,SECTOR+154,, SC=1 SPECIAL CARD OUTPUT	03770	16	04093	J8154
01290	TFM	PUN,+23,711	03782	16	07254	-380N
01300	B	CARD,SECTOR+75	03794	49	04034	18075
01310	B	FINISC	03806	49	07138	00000
01320	DORG	*-4	03813			
01330	A3	TF SECTOR+224,ZERO	03814	26	18224	07288
01340	CF	SECTOR+200	03826	33	18200	00000
01350	BNF	A4,0I	03838	44	03882	02647
01360	TFM	PAPER+35,SECTOR+150,, SC=2 SPECIAL PAPER TAPE OUTPUT	03850	16	03965	J8150
01370	BTM	PAPER,+12	03862	17	03930	-3874
01380	B	FINISP	03874	49	07194	00000
01390	DORG	*-4	03881			
01400	A4	TFM AB1+11,SECTOR+229,, SC=2 SPECIAL CARD OUTPUT	03882	16	04093	J8229
01410	TFM	PUN,+23,711	03894	16	07254	-391P
01420	B	CARD,SECTOR+150	03906	49	04034	18150
01430	B	FINISC	03918	49	07138	00000
01440	PAPER	TFM TD3+6,19925	03930	16	03960	J9925
01450	CF	TD3+7	03942	33	03961	00000
01460	TD3	TD XX,XX,2	03954	25	-0000	00000
01470	A	TD3+11,COM1	03966	21	03965	07384
01480	CM	TD3+6,20000	03978	14	03960	K0000
01490	BNE	TD3	03990	47	03954	01200
01500	DNPT	19925	04002	35	19925	00200
01510	BTM	ERRDMP,+12	04014	17	06152	-4026
01520	B	PAPER-1,,6	04026	49	0392R	00000
01530	DORG	*-4	04033			
01540	CARD	TF FIN1+18,AB1+11	04034	26	04156	04093
01550	TFM	AB1+6,SAV	04046	16	04088	-2965
01560	TFM	CNT5,5,10	04058	16	02651	000-5
01570	CF	AB1+7	04070	33	04089	00000
01580	AB1	TD SAV,XX,2	04082	25	-2965	00000
01590	SM	CNT5,1,10	04094	12	02651	000-1
01600	BE	FIN1	04106	46	04138	01200
01610	S	AB1+11,COM1	04118	22	04093	07384
01620	B	AB1	04130	49	04082	00000
01630	DORG	*-4	04137			
01640	FIN1	AM SEQUEN,1,10	04138	11	02627	000-1
01650	TF	XX,SEQUEN	04150	26	00000	02627
01660	TFM	IORT,+23	04162	16	00565	-4185

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01670	B	IOPT,PUN-4,7	04174	49	00532	-7250
01680	TD	AB1+11,AB1+6,611	04186	25	0409L	04080
01690	A	AB1+11,COM1	04198	21	04093	07384
01700	AM	CNT5,1,10	04210	11	02651	000-1
01710	CM	CNT5,5,10	04222	14	02651	000-5
01720	BNE	FIN1+48	04234	47	04186	01200
01730	CF	PUN	04246	33	07254	00000
01740	AM	PUN,1,10	04258	11	07254	000-1
01750	B	PUN,,6, BRANCH BACKS	04270	49	0725M	00000
01760	DORG	*-4	04277			
01770	NAME	TF FIND+23,E+11	04278	26	05045	02749
01780	TFM	TR+23,+23,711	04290	16	05129	-431L
01790	B	FIND,FILAD,, OBTAIN EQUIVALENCE TABLE DIM	04302	49	05022	05474
01800	SF	NAM-11	04314	32	13624	00000
01810	C	NAM,ZERO12	04326	24	13635	07275
01820	BE	ERRD-12	04338	46	06080	01200
01830	TFM	FILAD+13,EQUIV	04350	16	05487	J6000
01840	COMPE	CM FILAD+8,40,9	04362	14	05482	00-40
01850	BNH	RD	04374	47	04410	01100
01860	TF	SAV,FILAD+8	04386	26	02965	05482
01870	TFM	FILAD+8,40,9	04398	16	05482	00-40
01880	RD	TFM IORT,+23	04410	16	00565	-4433
01890	B	IOGT,FILDDA,7	04422	49	00566	-5466
01900	TFM	LOOP3+6,EQUIV+11,, SEARCH EQUIVALENCE TABLE	04434	16	04484	J6011
01910	TF	+23,LOOP3+6	04446	26	04469	04484
01920	BNR	LOOP3,XX	04458	45	04478	00000
01930	B	ERNF	04470	49	04582	00000
01940	DORG	*-3	04478			
01950	LOOP3	C XX,NAM	04478	24	00000	13635
01960	BE	FOUND	04490	46	04602	01200
01970	AM	LOOP3+6,16,10	04502	11	04484	000J6
01980	CM	LOOP3+6,EQUIV+4011	04514	14	04484	K0011
01990	BL	LOOP3-32	04526	47	04446	01300
02000	SM	SAV,40,10	04538	12	02965	000M0
02010	TF	FILAD+8,SAV	04550	26	05482	02965
02020	AM	FILAD+5,40,10	04562	11	05479	000M0
02030	B	COMPE	04574	49	04362	00000
02040	DORG	*-4	04581			
02050	*	ERROR - NAME NOT IN EQUIV				
02060	ERNF	TFM DIMERR+22,7270,8	04582	16	06319	0P270
02070	B	ERRD	04594	49	06092	00000
02080	DORG	*-3	04602			
02090	FOUND	AM LOOP3+6,4,10	04602	11	04484	000-4
02100	TF	FIND+23,LOOP3+6,11	04614	26	05045	0448M
02110	B	B1+12,,, FIND MAP ENTRY CORRESPONDING TO	04626	49	03038	00000
02120	*	NAME				
02130	DORG	*-4	04633			
02140	L	TFM TD+6,SA1-1	04634	16	05196	J3662
02150	TFM	STFLG+6,SA1-11	04646	16	04676	J3652
02160	TFM	STFLG+18,SA1-10	04658	16	04688	J3653
02170	STFLG	SF SA1-11	04670	32	13652	00000
02180	CM	SA1-10,70,10	04682	14	13653	000P0
02190	BNL	+32	04694	46	04726	01300
02200	TFM	DIMERR+22,7175,8	04706	16	06319	0P175
02210	B	ERRD	04718	49	06092	00000
02220	DORG	*-3	04726			

02230	CF	STFLG+6,,6	04726	33	04670	00000
02240	AM	STFLG+6,2,10	04738	11	04676	000-2
02250	AM	STFLG+18,2,10	04750	11	04688	000-2
02260	CM	STFLG+6,SA2+1	04762	14	04676	J3676
02270	BL	STFLG	04774	47	04670	01300
02280	TFM	AN-1,++23	04786	16	05165	-4809
02290	B	AN,SA1-11,7	04798	49	05166	J3652
02300	TFM	TD+6,SA2-1	04810	16	05196	J3674
02310	TFM	AN-1,++23	04822	16	05165	-4845
02320	B	AN,SA2-11,7	04834	49	05166	J3664
02330	SF	SA1-4	04846	32	13659	00000
02340	SF	SA2-4	04858	32	13671	00000
02350	CF	SA1-5	04870	33	13658	00000
02360	TD	FILAD,SA1-5	04882	25	05474	13658
02370	BEGS	TF FILAD+5,SA1	04894	26	05479	13663
02380	TF	SC,SA2	04906	26	13643	13675
02390	S	SC,SA1	04918	22	13643	13663
02400	AM	SC,1,10	04930	11	13643	000-1
02410	BH	B2	04942	46	03106	01100
02420	TFM	DIMERR+22,7177,8	04954	16	06319	0P177
02430	B	ERRD	04966	49	06092	00000
02440	DORG	=-4	04973			
02450	TEMAP	CM FIND+23,0,10,	04974	14	05045	000-0
						IS MAP NO. WITHIN LIMITS
02460	BNH	ERMAP	04986	47	05294	01100
02470	CM	FIND+23,4994,8	04998	14	05045	0M994
02480	BH	ERMAP	05010	46	05294	01100
02490	FIND	TFM SAFCF+5,MAPTAB,,	05022	16	05499	-4800
						GIVEN DIM, READ ENTRY TO CORE
02500	AM	SAFCF+6,XX	05034	11	05500	-0000
02510	A	SAFCF+6,FIND+23	05046	21	05500	05045
02520	TD	TR+10,SAFCF+6	05058	25	05116	05500
02530	TDM	SAFCF+6,0	05070	15	05500	00000
02540	TFM	IORT,++23	05082	16	00565	-5105
02550	B	IOGT,SAFDDA,7	05094	49	00566	-5458
02560	TR	++23,SECTOR,6	05106	31	0512R	18000
02570	TDM	FILAD+14,,,	05118	15	05488	00000
02580	DSC	1,*,*	05129		1	
02590	CF	TR+23	05130	33	05129	00000
02600	AM	TR+23,1	05142	11	05129	-0001
02610	B	TR+23,,6	05154	49	0512R	00000
02620	AN	TF TD+11,TD+6,,	05166	26	05201	05196
02630	SM	TD+11,1	05178	12	05201	-0001
02640	TD	TD XX,XX,27	05190	25	-0000	-0000
02650	SM	TD+6,1	05202	12	05196	-0001
02660	SM	TD+11,2	05214	12	05201	-0002
02670	C	TD+11,AN-1,11	05226	24	05201	0516N
02680	BH	TD	05238	46	05190	01100
02690	AM	TD+6,1,10	05250	11	05196	000-1
02700	SF	TD+6,,6	05262	32	05190	00000
02710	AM	AN-1,1,10	05274	11	05165	000-1
02720	B	AN-1,,6	05286	49	0516N	00000
02730	DORG	=-4	05293			
02740	ERMAP	TFM DIMERR+22,0076,8	05294	16	06319	0-076
02750	B	ERRD	05306	49	06092	00000
02760	DORG	=-3	05314			
02770	ENDTES	TF LAST,XX,,	05314	26	02615	00000
						SPS-FORTRAN TERMINAL TEST - 99999

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02780	SM	LAST,75,10	05326	12	02615	000P5
02790	BNF	TYPEND+12, LAST,11	05338	44	03494	0261N
02800	TFM	CNT5,5,10	05350	16	02651	000-5
02810	BNR	BNR IN8, LAST,11	05362	45	05382	0261N
02820	B	TYPEND+12	05374	49	03494	00000
02830	DORG	=-4	05381			
02840	IN8	SM CNT5,1,10	05382	12	02651	000-1
02850	BE	COM	05394	46	05426	01200
02860	AM	LAST,1,10	05406	11	02615	000-1
02870	B	BNR	05418	49	05362	00000
02880	DORG	=-4	05425			
02890	COM	C TRAIL+4, LAST,11	05426	24	07262	0261N
02900	BE	FINISP+36	05438	46	07230	01200
02910	B	TYPEND+12	05450	49	03494	00000
02920	DORG	=-3	05458			
02930	SAFDDA	DSC 2,22	05458		2	
		22				
02940	DSA	SAFCF	05464		5 X	1
02950	DSC	1,*	05464		-5494	
			05465		1	
02960	FILDDA	DSC 2,22	05466		2	
02970	DSA	FILAD	05472		5 X	1
02980	DSC	1,*	05472		-5474	
			05473		1	
02990	SENT	DS ,4	00004		0	
03000	FILAD	DSC 1,0	05474		1	
		0				
03010	DC	5,0	05479		5	
		-0000				
03020	DC	3,0	05482		3	
		-00				
03030	DC	5,0	05487		5	
		-0000				
03040	DSC	6,00000*	05488		6	
		00000*				
03050	SAFCF	DSC 6,0	05494		6	
		000000				
03060	DSC	3,1	05500		3	
		001				
03070	DSA	SECTOR	05507		5 X	1
03080	DC	1,*	05507		J8000	
			05508		1	
03090	TYPWRT	CM TYPE,45,10	05510	14	13647	000M5
03100	BNH	SPECIAL	05522	47	05686	01100
03110	TFM	CDUNT,0,9	05534	16	06078	00-00
03120	TFM	FILAD+9,1,9	05546	16	05482	00-01
03130	TFM	FILAD+13,19900	05558	16	05487	J9900
03140	TFM	IORT,++23	05570	16	00565	-5593
03150	B	IOGT,FILDDA,7	05582	49	00566	-5466

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03160	RCTY		05594	34	00000	00102
03170	DNTY	19900	05606	35	19900	00100
03180	BTM	ERRDMP,**12	05618	17	06152	-5630
03190	AM	FILAD+5,1,10	05630	11	05479	000-1
03200	AM	COUNT,1,10	05642	11	06078	000-1
03210	C	COUNT,SC	05654	24	06078	13643
03220	BL	*-96	05666	47	05570	01300
03230	B	FINISP+36	05678	49	07230	00000
03240	DORG	*-3	05686			
03250	SPECAL	CM TYPE,41,10	05686	14	13647	000M1
03260	BE	TYPA	05698	46	06494	01200
03270	RCTY		05710	34	00000	00102
03280	TFM	FILAD+8,32,9	05722	16	05482	00-32
03290	TFM	FILAD+13,EQUIV	05734	16	05487	J6000
03300	TFM	CNT2,0,9	05746	16	06076	00-00
03310	TFM	TFWRIT+11,EQUIV+11	05758	16	05829	J6011
03330	TFM	TFWRIT+67,EQUIV+15	05770	16	05885	J6015
03340	TFM	IORT,**23	05782	16	00565	-5805
03350	B	IOGT,FILDDA,7	05794	49	00566	-5466
03360	TFM	COUNT,0,10	05806	16	06078	000-0
03370	TFWRIT	TF NAMOUT+10,EQUIV+11	05818	26	06071	16011
03380	BNR	**20,TFWRIT+11,11	05830	45	05850	0582R
03390	B	FINISP+36	05842	49	07230	00000
03400	DORG	*-3	05850			
03410	WATY	NAMOUT	05850	39	06061	00100
03420	SPTY		05862	34	00000	00101
03440	TF	NUMOUT-1,EQUIV+15	05874	26	06058	16015
03450	WNTY	NUMOUT-4	05886	38	06055	00100
03460	SPTY		05898	34	00000	00101
03470	SPTY		05910	34	00000	00101
03480	AM	TFWRIT+11,16,10	05922	11	05829	000J6
03500	AM	TFWRIT+67,16,10	05934	11	05885	000J6
03510	AM	COUNT,1,10	05946	11	06078	000-1
03520	CM	COUNT,5,10	05958	14	06078	000-5
03530	BL	TFWRIT	05970	47	05818	01300
03540	RCTY		05982	34	00000	00102
03550	A	CNT2,COUNT	05994	21	06076	06078
03560	CM	CNT2,200,9	06006	14	06076	00K00
03570	BL	TFWRIT-12	06018	47	05806	01300
03575	AM	FILAD+5,32,10	06030	11	05479	000L2
03580	B	TFWRIT-72	06042	49	05746	00000
03590	NUMOUT	DC 6,00000'	06059		6	
		-0000'				
03600	NAMOUT	DAC 7,000000'	06061		7 X	2
		000000'				
03610	CNT2	DC 3,0	06076		3	
		-00				
03620	COUNT	DC 2,0	06078		2	
		-0				
03630	TFM	DIMERR+22,0071,8	06080	16	06319	0-071
03640	ERRD	RCTY	06092	34	00000	00102
03650	TFM	IORT,**23	06104	16	00565	-6127
03660	B	IOPT,DATAT-4,7	06116	49	00532	-6288
03670	H		06128	48	00000	00000
03680	B	MONCAL	06140	49	00796	00000
03690	ERRDMP	BI **12,3600	06152	46	06164	03600

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03700	BI	**12,3700	06164	46	06176	03700
03710	BI	**12,3800	06176	46	06188	03800
03720	BI	**20,1900	06188	46	06208	01900
03730	B	ERRDMP-1,,6	06200	49	0615J	00000
03740	DORG	*-3	06208			
03750	RCTY		06208	34	00000	00102
03760	WATY	ERDUMP	06220	39	06253	00100
03770	H		06232	48	00000	00000
03780	B	ERRDMP-1,,6	06244	49	0615J	00000
03790	DORG	*-3	06252			
03800	ERDUMP	DAC 18,DUP*ERROR IN DUMP'	06253		18 X	2
		DUP*ERROR IN DUMP'				
03810	DATAT	DSA DIMERR	06292		5 X	1
			06292		-6297	
03820	DC	3,06'	06295		3	
		-6'				
	DGM	*,*,*,*****	06295		1	
03830	DIMERR	DAC 13,DUP*ERROR 00'	06297		13 X	2
		DUP*ERROR 00'				
03840	IORT	DS ,565	00565		0	
03850	IOPT	DS ,532	00532		0	
03860	IOGT	DS ,566	00566		0	
03870	MONCAL	DS ,796	00796		0	
03880	CONTR	DAS 81,13613	13613		81 X	2
03890	DIMMER	TF CALC2,NEWDIM	06322	26	06477	07137
03900	A	CALC2,CALC2	06334	21	06477	06477
03910	TF	CALC3,N48000	06346	26	06472	06492
03920	A	CALC3,CALC2,,NEW DIM SECTOR ADDRESS	06358	21	06472	06477
03930	TF	DMREAD+13,DRESTR	06370	26	06465	06482
03940	TD	**23,CALC3	06382	25	06405	06472
03950	SM	DMREAD+12,0,10,ADJUST DIM READER S A	06394	12	06464	000-0
03960	TF	DMREAD+5,CALC3-1	06406	26	06457	06471
03970	TFM	IORT,**23	06418	16	00565	-6441
03980	B	IOGT,DMDDA,7	06430	49	00566	-6444
03990	BB		06442	42	00000	00000
04000	DORG	*-9	06444			
04010	DMDDA	DSC 2,22	06444		2	
		22				
04020	DSA	DMREAD	06450		5 X	1
			06450		-6452	
04030	DSC	1,'	06451		1	
		'				
04040	DMREAD	DSC 1,0	06452		1	
		0				
04050	DC	5,0	06457		5	
		-0000				
04060	DC	3,1	06460		3	
		-01				
04070	DC	5,19900	06465		5	
		J9900				
04080	DSC	1,'	06466		1	
		'				
04090	CALC3	DC 6,0	06472		6	
		-00000				

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04100	CALC2	DC	5,0	06477	5		
			-0000				
04110	DRESTR	DC	5,19880	06482	5		
			J9880				
04120	TWICE	DC	4,0	06486	4		
			-000				
04130	N48000	DC	6,048000,,FIRST SECTOR OF DIM MAP	06492	6		
			-48000				
04140	TYPA	TFM	NEWDIM,0004,8	06494	16	07137	0-004
04150		TDM	CONTR0+35,,11	06506	15	13648	0000-
04160		A	NEWDIM,CONTR0+36,,	06518	21	07137	13649
04170		BT	DIMMER,DIMMER-1	06530	27	06322	06321
04180		TD	DUMSY,19880	06542	25	07098	19880
04190		TD	DUMSY+1,19881	06554	25	07099	19881
04200		TFM	IORT,++23	06566	16	00565	-6589
04210		B	IOGT,DUMSW,7	06578	49	00566	-7090
04220		TFM	TYPSEC,,,ZERO FIELD	06590	16	07117	-0000
04230		TFM	UPPER,10803	06602	16	07123	J0803
04240		TFM	LOWER,10800	06614	16	07128	J0800
04250		RCTY		06626	34	00000	00102
04260		CF	10700	06638	33	10700	00000
04270		TDM	10705,	06650	15	10705	00000
04280		DC	1,*,*	06661		1	
			,				
04290		WNTY	10700	06662	38	10700	00100
04300		RCTY		06674	34	00000	00102
04310	UREAL	BNR	++32,LOWER,11	06686	45	06718	0712Q
04320		TDM	SYSCAL,3,,	06698	15	00475	00003
04330		B	MONCAL	06710	49	00796	00000
04340		DORG	*-3	06718			
04350		SF	LOWER,,6	06718	32	07120	00000
04360		TF	EXAMIN,UPPER,11	06730	26	07133	0712L
04370		CM	EXAMIN-3,7,1011	06742	14	07130	000-P
04380		BE	FORWAR	06754	46	07058	01200
04390		CM	EXAMIN-3,9,1011	06766	14	07130	000-R
04400		BE	NINIT	06778	46	06914	01200
04410		CM	EXAMIN,0001,8	06790	14	07133	0-001
04420		BE	TONY	06802	46	06894	01200
04430		C	EXAMIN,TWICE	06814	24	07133	06486
04440		BE	FORWAR	06826	46	07058	01200
04450		TF	TWICE,EXAMIN	06838	26	06486	07133
04460		TF	NEWDIM,EXAMIN	06850	26	07137	07133
04470		BT	DIMMER,DIMMER-1	06862	27	06322	06321
04480		A	TYPSEC,19888	06874	21	07117	19888
04490		B	FORWAR	06886	49	07058	00000
04500		DDRG	*-3	06894			
04510	TONY	AM	TYPSEC,200,9	06894	11	07117	00K00
04520		B	FORWAR	06906	49	07058	00000
04530		DDRG	*-3	06914			
04540	NINIT	RCTY		06914	34	00000	00102
04550		CF	TYPSEC-4	06926	33	07113	00000
04560		WNTY	TYPSEC-4	06938	38	07113	00100
04570		SF	TYPSEC-4	06950	32	07113	00000
04580		SF	EXAMIN-2	06962	32	07131	00000
04590		A	TYPSEC,EXAMIN	06974	21	07117	07133
04600		SPTY		06986	34	00000	00101

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04610		SM	TYPSEC,01,10	06998	12	07117	000-1
04620		CF	TYPSEC-4	07010	33	07113	00000
04630		WNTY	TYPSEC-4	07022	38	07113	00100
04640		SF	TYPSEC-4	07034	32	07113	00000
04650		AM	TYPSEC,01,10	07046	11	07117	000-1
04660	FORWAR	AM	UPPER,04,10	07058	11	07123	000-4
04670		AM	LOWER,04,10	07070	11	07128	000-4
04680		B	UREAL	07082	49	06886	00000
04690		DORG	*-3	07090			
04700	DUMSW	DSC	2,22	07090		2	
			22				
04710		DSA	DUMSY	07096		5 X	1
				07096		-7098	
04720		DC	1,*	07097		1	
			,				
04730	DUMSY	DSC	1,1	07098		1	
			1				
04740		DC	5,19800	07103		5	
			J9800				
04750		DC	3,080	07106		3	
			-80				
04760		DC	6,10700*	07112		6	
			J0700*				
04770	TYPSEC	DC	5,0	07117		5	
			-0000				
04780		DC	1,*	07118		1	
			,				
04790	UPPER	DC	5,0	07123		5	
			-0000				
04800	LOWER	DC	5,0	07128		5	
			-0000				
04810		DC	1,0	07129		1	
			-				
04820	EXAMIN	DC	4,0	07133		4	
			-000				
04830	NEWDIM	DC	4,0	07137		4	
			-000				
04840	MAPTAB	DS	0,4800	04800		0	
04850	LAST	DC	5,0,DUMPC+11	02615		5	
			-0000				
04860	SA2	DS	0,CONTR0+62	13675		0	
04870	CNT5	DC	2,0,DUMPC+47	02651		2	
			-0				
04880	FINISC	CF	ZERO-24	07138	33	07264	00000
04890		TFM	AB1+11,TRAIL+79	07150	16	04093	-7337
04900		TFM	PUN,++23,711	07162	16	07254	-718N
04910		B	CARD,TRAIL	07174	49	04034	07258
04920		B	FINISP+36	07186	49	07230	00000
04930		DORG	*-3	07194			
04940	FINISP	CF	ZERO-24	07194	33	07264	00000
04950		TFM	PAPER+35,TRAIL	07206	16	03965	-7258
04960		BTM	PAPER,++12	07218	17	03930	-7230
04970		TDM	SYSCAL,3	07230	15	00475	00003
04980		B	MONCAL	07242	49	00796	00000
04990		DORG	*-3	07250			

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CONTRD	13613	ABL	04082	ERNF	04582	NAM	13635	TONY	06894
DIMERR	06297	AENT	00004	ERRD	06092	NINE	07444	TRAIL	07258
DIMMER	06322	AN	05166	E	02738	NINIT	06914	TR	05106
DMREAD	06452	B1	03026	FILAD	05474	NUMR	13643	TSXC	03586
DRESTR	06482	B2	03106	FINL	04138	OI	02647	TWICE	06486
DUMPCC	02604	BEGS	04894	FIND	05022	PAPER	03930	TYPA	06494
ENDTES	05314	BNR	05362	FOUND	04602	PAPST	03246	TYPE	13647
EQUINO	05482	CALC2	06477	FOUR	03422	PUN	07254	UPPER	07123
ERDUMP	06253	CALC3	06472	IN8	05382	RAIL	07263	UREAL	06686
ERRDMP	06152	CARD	04034	INIT	03342	RD	04410	XX	00000
EXAMIN	07133	CA	03190	IOD	13645	READ	03318	ZERO	07288
FILODA	05466	CNT2	06076	IOGT	00566	RELLT	03566	SAFDDA	05458
FINISC	07138	CNT5	02651	IOPT	00532	RM	02737	SECTEST	03378
FINISP	07194	COMPE	04362	IORT	00565	SA1	13663	SECTOR	18000
FORWAR	07058	COM	05426	I	02758	SA2	13675	SEQUEN	02627
MAPTAB	04800	CON1	07384	JACK	07388	SAFCF	05494	SPECIAL	05686
MONCAL	00796	CONT	03094	L1	03434	SAV	02965	SYSCAL	00475
N48000	06492	COUNT	06078	LAST	02615	SC	13643	TFWRIT	05818
NAMOUT	06061	DATAT	06292	LOOP3	04478	SENT	00004	TYPEND	03482
NEWDIM	07137	DMDDA	06444	LOOP	02736	SETUP	03282	TYPSEC	07117
NUMOUT	06059	DUMP	02500	LORM	02906	SPL	02778	TYPWRT	05510
A10	03446	DUMSW	07090	LOWER	07128	STFLG	04670	ZERD12	07275
A1	03654	DUMSY	07098	L	04634	TD3	03954		
A2	03770	EENT	00002	MCS	17778	TD	05190		
A3	03814	EQUIV	16000	MENT	00003	TEMAP	04974		
A4	03882	ERMAP	05294	NAME	04278	TEN	07436		

END OF ONE ASSEMBLY.

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00010	***								
00020	***								
00030	***	SUBROUTINES- DIMMER,GETR,GETL,REMOVE,INSERT,FIND							
00040	***	THIS VERSION OPERATES WITH THE SPL ALWAYS IN CORE TIL JUST							
00050	***	BEFORE THE RETURN TO THE MONITOR							
00060	***								
00070	***								
00080		DDRG	2458			02458			
00090	IOPT	DS	,532			00532		0	
00100	IOGT	DS	,566			00566		0	
00110	IORT	DS	,565			00565		0	
00120	DIMTR	TF	CALC2,NEWDIM			02458	26	02613	09649
00130	A		CALC2,CALC2			02470	21	02613	02613
00140	TF		CALC3,N48000			02482	26	02608	02624
00150	A		CALC3,CALC2,,NEW DIM SECTOR ADDRESS			02494	21	02608	02613
00160	TF		DMREAD+13,DRESTR			02506	26	02601	02618
00170	TD		++23,CALC3			02518	25	02541	02608
00180	SM		DMREAD+12,0,10,ADJUST DIM READER S A			02530	12	02600	000-0
00190	TF		DMREAD+5,CALC3-1			02542	26	02593	02607
00200	TFM		IORT,++23			02554	16	00565	-2577
00210	B		IOGT,DMDDA,7			02566	49	00566	-2580
00220	BB					02578	42	00000	00000
00230	DDRG		--9			02580			
00240	DMDDA	DSC	2,22,,DDA FOR DIMMER-READS ONE SECTOR			02580		2	
00250	DSA	DMREAD				02586		5 X	1
00260	DSC	1,'				02586		-2588	
00270	DMREAD	DSC	1,0			02588		1	
00280	DC	5,0				02593		5	
00290	DC	3,1				02596		3	
00300	DC	5,19900				02601		5	
00310	DSC	1,'				02602		1	
00320	CALC3	DC	6,0			02608		6	
00330	CALC2	DC	5,0			02613		5	
00340	DRESTR	DC	5,19880,,RESTORES CORE ADDRESS FOR DIM DDA			02618		5	
00350	N48000	DC	6,048000,,FIRST SECTOR OF DIM MAP			02624		6	
00360	CORSIZ	DC	3,080,, THE PRESENT LENGTH OF THE SPL			02627		3	
00370	THRDA	DSC	2,02,, DDA FOR SAVING CORE WHEN MOVING THE EQV. TABLE			02628		2	
00380	DSA	THROWS				02634		5 X	1
00390	DSC	1,'				02634		-2636	
						02635		1	

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1620 MONITOR 11 DUP ROUTINE *DEFIN		PAGE	2
00400	THROWS DSC 1,0	02636	1
	0		
00410	DC 5,02000	02641	5
	-2000		
00420	DC 3,100	02644	3
	J00		
00430	DC 5,09800	02649	5
	-9800		
00440	DSC 1,'	02650	1
	'		
00450	DIMERR DAC 13,DUP=ERROR 00'	02653	13 X 2
	DUP=ERROR 00'		
00460	TFM DIMERR=22,0071,8	02678	16 02675 0-071
00470	ERRD RCTY	02690	34 00000 00102
00480	WATY DIMERR	02702	39 02653 00100
00490	H	02714	48 00000 00000
00500	B 796,,MONCAL	02726	49 00796 00000
00510	DORG #=3	02734	
00520	PKODDA DSC 2,22,, DDA FOR SPL ON MODULE ZERO	02734	2
	22		
00530	DSA SPLPKO	02740	5 X 1
	'		
00540	DSC 1,'	02740	-2742
	'	02741	1
00550	SPLPKO DSC 1,1	02742	1
	1		
00560	DC 5,19801	02747	5
	J9801		
00570	DC 3,100	02750	3
	J00		
00580	DC 5,09800	02755	5
	-9800		
00590	DSC 1,'	02756	1
	'		
00600	PKIDDA DSC 2,22,, DDA FOR SPL ON MODULE ONE	02757	2
	22		
00610	DSA SPLPK1	02763	5 X 1
	'		
00620	DSC 1,'	02763	-2765
	'	02764	1
00630	SPLPK1 DSC 1,3	02765	1
	3		
00640	DC 5,39801	02770	5
	L9801		
00650	DC 3,100	02773	3
	J00		
00660	DC 5,09800	02778	5
	-9800		
00670	DSC 1,'	02779	1
	'		
00680	PK2DDA DSC 2,22,, DDA FOR SPL ON MODULE TWO	02780	2
	22		
00690	DSA SPLPK2	02786	5 X 1

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1620 MONITOR 11 DUP ROUTINE *DEFIN		PAGE	3
00700	DSC 1,'	02786	-2788
	'	02787	1
00710	SPLPK2 DSC 1,5	02788	1
	5		
00720	DC 5,59801	02793	5
	N9801		
00730	DC 3,100	02796	3
	J00		
00740	DC 5,09800	02801	5
	-9800		
00750	DSC 1,'	02802	1
	'		
00760	PK3DDA DSC 2,22,, DDA FOR SPL ON MODULE THREE	02803	2
	22		
00770	DSA SPLPK3	02809	5 X 1
	'		
00780	DSC 1,'	02809	-2811
	'	02810	1
00790	SPLPK3 DSC 1,7	02811	1
	7		
00800	DC 5,79801	02816	5
	P9801		
00810	DC 3,100	02819	3
	J00		
00820	DC 5,09800	02824	5
	-9800		
00830	DSC 1,'	02825	1
	'		
00840	CLEVER DC 2,0	02827	2
	-0		
00850	BAVAIL DC 3,0,,OTAL BLANKS FOUND IN MOVE	02830	3
	-00		
00860	FOUND DC 5,0,,FINDS SECTOR TOTAL	02835	5
	-0000		
00870	ADRSPD DC 5,0 ,, ADDRESS OF THE SPLIST CORE SEARCH POINT	02840	5
	-0000		
00880	SPLCYL DC 5,0,,CYLINDER SPL	02845	5
	-0000		
00890	SPLCOR DC 5,0,,DIM ADDRESS SPL	02850	5
	-0000		
00900	REPACK DC 2,0	02852	2
	-0		
00910	UNPACK DC 2,0	02854	2
	-0		
00920	DC 1,0,,PACK CONTINUED	02855	1
	-		
00930	PACK DC 1,9,,PACK NUM FOR SPLIST	02856	1
	R		
00940	DC 1,'	02857	1
	'		
00950	CALC9 DC 6,0	02863	6
	-00000		
00960	CALC4 DC 4,0,, CALCULATION AREA	02867	4
	-000		

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00970	HEX	DSC	1,0		02868		1
0							
00980	CONST1	DC	6,0,,WORK AREAS		02874		6
			-00000				
00990	CONST2	DC	6,0,,		02880		6
			-00000				
01000	QCARRY	DC	6,0,,WHERE TO LOAD NEXT MOVED SECTORS		02886		6
			-00000				
01010	QHOLD	DC	6,0		02892		6
			-00000				
01020	CONST5	DC	6,0		02898		6
			-00000				
01030	CONST6	DC	6,0		02904		6
			-00000				
01040	CONST7	DC	6,0		02910		6
			-00000				
01050	RACKET	DC	4,0,, ACCUMULATES 200 SECTORS FOR A CYLINDER		02914		4
			-000				
01060	STEAL	DC	4,0		02918		4
			-000				
01070	CALC7	DC	3,0		02921		3
			-00				
01080	FAKSEV	DC	4,0,, HAS SEVEN FROM LISTER		02925		4
			-000				
01090	COMMON	DC	1,0		02926		1
			-				
01100	NOMMON	DC	2,0		02928		2
			-0				
01110	N0SECA	DC	1,0		02929		1
			-				
01120	CONST8	DC	5,0		02934		5
			-0000				
01130	ERRRIT	TFM	DIMERR+22,7179,8		02936	16	02675 0P179
01140		B	ERRD		02948	49	02690 00000
01150		DORG	*-3		02956		
01160	***						
01170	***	SUBROUTINE-GETR	SHIFTS ONE TO RIGHT IN SPL				
01180	***						
01190	GETRTR	TF	CALC2,SPLCOR,, LEFT PRESENT SPL C.A.		02956	26	02613 02850
01200		AM	SPLCOR,04,10, LEFT END NEW ENTRY		02968	11	02850 000-4
01210		SF	SPLCOR,,6,NEW FLAG		02980	32	0285- 00000
01220		AM	CALC2,07,10,RIGHT END OF NEW ENTRY		02992	11	02613 000-7
01230		TF	LISTER,CALC2,11		03004	26	09654 02611
01240		CF	SPLCOR,,6		03016	33	0285- 00000
01250		BB			03028	42	00000 00000
01260		DORG	*-9		03030		
01270	***						
01280	***	SUBROUTINE-GETL	SHIFTS ONE TO LEFT IN THE SPL				
01290	***						
01300	GETLTR	TF	CALC2,SPLCOR		03030	26	02613 02850
01310		SM	SPLCOR,04,10,FELT END OF NEW ENTRY		03042	12	02850 000-4
01320		SF	SPLCOR,,6,		03054	32	0285- 00000
01330		SM	CALC2,01,10,RIGHT END NEW ENTRY		03066	12	02613 000-1
01340		TF	LISTER,CALC2,11		03078	26	09654 02611
01350		CF	SPLCOR,,6		03090	33	0285- 00000
01360		BB			03102	42	00000 00000

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01370		DORG	*-9		03104		
01380	***						
01390	***	SUBROUTINE-REMOVE	REMOVES AN ENTRY FROM SPL				
01400	***						
01410	REMOVR	TF	CALC2,SPLCOR		03104	26	02613 02850
01420		AM	CALC2,04,10,		03116	11	02613 000-4
01430		TR	SPLCOR,CALC2,611,CLOSES HOLE		03128	31	0285- 02611
01440		SF	SPLCOR,,6		03140	32	0285- 00000
01450		SM	CALC2,01,10		03152	12	02613 000-1
01460		TF	LISTER,CALC2,11		03164	26	09654 02611
01470		CF	SPLCOR,,6		03176	33	0285- 00000
01480		BB			03188	42	00000 00000
01490		DORG	*-9		03190		
01500	***						
01510	***	SUBROUTINE-INSERT	INSERTS AN ENTRY IN THE SPL				
01520	***						
01530	INSETR	SF	SPLCOR,,6		03190	32	0285- 00000
01540		TFM	**35,09800,7		03202	16	03237 -9800
01550		AM	**23,04,10		03214	11	03237 000-4
01560	TIPSY	BNR	*-12,99999,, FINDS RECORD MARK IN SPL		03226	45	03214 99999
01570		TF	CONST2,TIPSY+11		03238	26	02880 03237
01580		AM	CONST2,04,10		03250	11	02880 000-4
01590		TF	CONST3,CONST2,,		03262	26	05130 02880
01600		SM	CONST3,09800,7		03274	12	05130 -9800
01610		C	CONST3-2,CORSIZ,, IS THERE ROOM FOR ANOTHER ENTRY		03286	24	05128 02627
01620		BL	NERR		03298	47	03354 01300
01630		RCY			03310	34	00000 00102
01640		WNTY	PACK		03322	38	02856 00100
01650		TFM	DIMERR+22,7178,8, THE SPL IS FULL MESSAGE		03334	16	02675 0P178
01660		B	ERRD		03346	49	02690 00000
01670		DORG	*-3		03354		
01680	NERR	TF	CONST2,TIPSY+11,611, OPENS A HOLE IN THE LIST		03354	26	0288- 0323P
01690		TF	CALC2,SPLCOR		03366	26	02613 02850
01700		AM	CALC2,03,10		03378	11	02613 000-3
01710		TF	CALC2,LISTER,6		03390	26	02611 09665
01720		CF	SPLCOR,,6,		03402	33	0285- 00000
01730		AM	SPLCOR,4,10,		03414	11	02850 000-4
01740		CF	SPLCOR,,6		03426	33	0285- 00000
01750		BB			03438	42	00000 00000
01760		DORG	*-9		03440		
01770	***						
01780	***	SUBROUTINE-FIND	GIVEN A SECTOR ADDRESS THE LISTER				
01790	***	IS INITIALIZED TO COVER THAT ADDRESS					
01800	***						
01810	FINDTR	CF	LISTES-4		03440	33	09657 00000
01820		SF	LISTES-5		03452	32	09656 00000
01830		TF	19885,LISTES,,ACCEPTS SECTOR ARGUMENT		03464	26	19885 09661
01840		B	SPLIST		03476	49	03956 00000
01850		DORG	*-3		03484		
01860	SPLXTR	MM	SPLCOR,200,69, RETURNS WITH CYLINDER IN LISTER		03484	13	0285- 00K00
01870		SF	95		03496	32	00095 00000
01880		TF	ADRSP,99		03508	26	02840 00099
01890		SM	ADRSP,01,10		03520	12	02840 000-1
01900		MM	LISTES-4,05,10		03532	13	09657 000-5
01910		TDM	LISTES-4,1,11		03544	15	09657 0000J
01920		BD	**24,99		03556	43	03580 00099

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01930	TDM	LISTES-4,0,11	03568	15	09657	0000-
01940	SM	SPLCOR,03,10,SET AT HIGH ORDER OF LIST IN CORE	03580	12	02850	000-3
01950	CF	SPLCOR,,6	03592	33	0285-	00000
01960	TRYAGN	TF CALC2,SPLCOR,, LEFT PRESENT SPL C.A.	03604	26	02613	02850
01970	AM	SPLCOR,04,10, LEFT END NEW ENTRY	03616	11	02850	000-4
01980	SF	SPLCOR,,6,NEW FLAG	03628	32	0285-	00000
01990	AM	CALC2,07,10,RIGHT END OF NEW ENTRY	03640	11	02613	000-7
02000	TF	LISTER,CALC2,11	03652	26	09654	0261L
02010	CF	SPLCOR,,6	03664	33	0285-	00000
02020	CM	LISTER-3,9,1011	03676	14	09651	000-R
02030	BE	ADDBLK	03688	46	03912	01200
02040	CM	LISTER,0001,8, IF WORK AREA EXIT	03700	14	09654	0-001
02050	BE	PLUSSR+24	03712	46	03892	01200
02060	TF	NEWDIM,LISTER	03724	26	09649	09654
02070	BT	DIMMER,DIMMER-1	03736	27	09600	09599
02080	TDM	19880,0,11	03748	15	19880	0000-
02090	MM	19881,05,1011	03760	13	19881	000-N
02100	TDM	19881,1,11	03772	15	19881	0000J
02110	BD	**24,99,, MATCH-UP THE TENTHOUSANDS POSITION	03784	43	03808	00099
02120	TDM	19881,0,11	03796	15	19881	0000-
02130	SM	19885,01,10	03808	12	19885	000-1
02140	S	19885,ADRSPL	03820	22	19885	02840
02150	BE	**24	03832	46	03856	01200
02160	A	ADRSPL,19885,,SUBTRACTS THE BACKFLOW	03844	21	02840	19885
02170	A	ADRSPL,19888,,ADD THE SECTOR COUNT TO SECTOR POSITION	03856	21	02840	19888
02180	PLUSSR	C ADRSPL,LISTES	03868	24	02840	09661
02190	BL	TRYAGN	03880	47	03604	01300
02200	TF	FOUND,ADRSPL	03892	26	02835	02840
02210	B	GOONY	03904	49	09638	00000
02220	DORG	**3	03912			
02230	ADDBLK	SF LISTER-2,, ADD THE BLANK SECTOR COUNT	03912	32	09652	00000
02240	***					
02250	***	ROUTINE FOR LOCATING THE CORRECT SPL IN CORE AND				
02260	***	DIRECTING THE LISTER TO THE CORRECT CYLINDER ENTRY				
02270	***					
02280	A	ADRSPL,LISTER	03924	21	02840	09654
02290	CF	LISTER-2	03936	33	09652	00000
02300	B	PLUSSR	03948	49	03868	00000
02310	DORG	**3	03956			
02320	SPLIST	TDM 19880,,11,FLAG ZERO	03956	15	19880	0000-
02330	MM	19885,05,10	03968	13	19885	000-5
02340	SF	94,,DESIRED CYLINDER	03980	32	00094	00000
02350	SF	93	03992	32	00093	00000
02360	TD	STARDT+10,95	04004	25	04174	00095
02370	TD	STARDT+11,96	04016	25	04175	00096
02380	TF	REPACK,94	04028	26	02852	00094
02390	MM	LISTES-5,05,10	04040	13	09656	000-5
02400	BD	**32,99,,SIGNIFICANT OVERRIDE CODE	04052	43	04084	00099
02410	TF	94,REPACK	04064	26	00094	02852
02420	B	REDSPL	04076	49	04220	00000
02430	DORG	**3	04084			
02440	MM	LISTES-5,50000,7, GENERATE PROPER MODULE FROM OVERRIDE CODE	04084	13	09656	N0000
02450	SF	94	04096	32	00094	00000
02460	B	REDSPL	04108	49	04220	00000
02470	DORG	**3	04116			
02480	SPLINI	TFM ADRSPL,09800	04116	16	02840	-9800

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02490	CLUCK	SF ADRSPL,,6	04128	32	0284-	00000
02500	TF	SPLCOR,ADRSPL	04140	26	02850	02840
02510	AM	SPLCOR,03,10	04152	11	02850	000-3
02520	STARDT	CM SPLCOR,7000,68, FIND THE CORRECT CYLINDER ENTRY	04164	14	0285-	0P000
02530	BE	SPLXLT	04176	46	03484	01200
02540	CF	ADRSPL,,6	04188	33	0284-	00000
02550	AM	ADRSPL,04,10	04200	11	02840	000-4
02560	B	CLUCK	04212	49	04128	00000
02570	DORG	**3	04220			
02580	***	ROUTINE TO WRITE BACK LIST ALREADY IN CORE IF NECESSARY				
02590	REDSPL	C 94,PACK	04220	24	00094	02856
02600	BE	SPLINI	04232	46	04116	01200
02610	CM	PACK,09,1011,FIRST TRIP	04244	14	02856	000-R
02620	TF	UNPACK,94	04256	26	02854	00094
02630	BE	SPORT	04268	46	04480	01200
02640	CM	PACK,00,1011, PACK ZERO	04280	14	02856	000--
02650	BE	WRTSPO	04292	46	04360	01200
02660	CM	PACK,01,1011,PACK ONE	04304	14	02856	000-J
02670	BE	WRTSP1	04316	46	04392	01200
02680	CM	PACK,02,1011, PACK TWO	04328	14	02856	000-K
02690	BE	WRTSP2	04340	46	04424	01200
02700	B	WRTSP3,, PACK THREE	04352	49	04456	00000
02710	DORG	**3	04360			
02720	WRTSPO	TFM IORT,**23	04360	16	00565	-4383
02730	B	IORT,PKODDA,7	04372	49	00532	-2734
02740	B	SPORT	04384	49	04480	00000
02750	DORG	**3	04392			
02760	WRTSP1	TFM IORT,**23	04392	16	00565	-4415
02770	B	IORT,PKIDDA,7	04404	49	00532	-2757
02780	B	SPORT	04416	49	04480	00000
02790	DORG	**3	04424			
02800	WRTSP2	TFM IORT,**23	04424	16	00565	-4447
02810	B	IORT,PK2DDA,7	04436	49	00532	-2780
02820	B	SPORT	04448	49	04480	00000
02830	DORG	**3	04456			
02840	WRTSP3	TFM IORT,**23	04456	16	00565	-4479
02850	B	IORT,PK3DDA,7	04468	49	00532	-2803
02860	***	ROUTINE TO BRING IN DESIRED SPL IF NOT ALREADY IN CORE				
02870	SPORT	TF PACK,UNPACK,,SAVE PACK NUM	04480	26	02856	02854
02880	TD	CLEVER,LISTES-4	04492	25	02827	09657
02890	SF	CLEVER	04504	32	02827	00000
02900	MM	LISTES-4,05,10	04516	13	09657	000-5
02910	BD	**24,99	04528	43	04552	00099
02920	SM	CLEVER,01,10	04540	12	02827	000-1
02930	CM	PACK,0,1011, PACK ZERO	04552	14	02856	000--
02940	BE	REDSPO	04564	46	04668	01200
02950	CM	PACK,1,1011, PACK ONE	04576	14	02856	000-J
02960	BE	REDSPI	04588	46	04712	01200
02970	CM	PACK,2,1011, PACK TWO	04600	14	02856	000-K
02980	BE	REDSPI	04612	46	04756	01200
02990	REDSPI	TD SPLPK3+1,CLEVER	04624	25	02812	02827
03000	TFM	IORT,**23	04636	16	00565	-4659
03010	B	IORT,PK3DDA,7	04648	49	00566	-2803
03020	B	SPLINI	04660	49	04116	00000
03030	DORG	**3	04668			
03040	REDSPO	TD SPLPK0+1,CLEVER	04668	25	02743	02827

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03050	TFM	IORT,**23	04680	16	00565	-4703
03060	B	IOGT,PKODDA,7	04692	49	00566	-2734
03070	B	SPLINI	04704	49	04116	00000
03080	DORG	*-3	04712			
03090	REDSP1	TD SPLPK1+1,CLEVER	04712	25	02766	02827
03100	TFM	IORT,**23	04724	16	00565	-4747
03110	B	IOGT,PKIDDA,7	04736	49	00566	-2757
03120	B	SPLINI	04748	49	04116	00000
03130	DORG	*-3	04756			
03140	REDSP2	TD SPLPK2+1,CLEVER	04756	25	02789	02827
03150	TFM	IORT,**23	04768	16	00565	-4791
03160	B	IOGT,PK2DDA,7	04780	49	00566	-2780
03170	B	SPLINI	04792	49	04116	00000
03180	DORG	*-3	04800			
03190	***	ROUTINE TO LOAD THE SACRED SIX TO DISK WHEN LOADING FROM CARDS				
03200	SPLFL	TFM IORT,**23	04800	16	00565	-4823
03210	B	IOPT,SPLR2,7	04812	49	00532	-4863
03220	TRA		04824	36	00000	00500
			04836	49	00000	00000
03230	SPLR1	DSC 1,1	04848			1
		1				
03240	DC	5,19338	04853			5
		J9338				
03250	DC	3,025	04856			3
		-25				
03260	DC	5,02458	04861			5
		-2458				
03270	DSC	1,1	04862			1
		1				
03280	SPLR2	DSC 2,22	04863			2
		22				
03290	DSA	SPLR1	04869			5 X 1
03300	DSC	1,1	04869			-4848
		1	04870			1
03310	TCD	SPLFL	04800			
03320	***					
03330	*	DDDD EEEEE FFFFF III N N EEEEE				
03340	*	D DD E F I NN N E				
03350	*	D D EEEE FFFF I NN N EEEE				
03360	*	D DD E F I NN N E				
03370	*	DDDD EEEEE F III N N EEEEE				
03380	***					
03390	***	THE DEFINE PROGRAM FOR REDEFINING THE SYSTEM PARAMETERS				
03400	***					
03410	DORG	5000	05000			
03420	TDM	13775,00000	05000	15	13775	00000
03430	DC	1,1,*	05011			1
		1				
03440	TR	9336,13612,, TRANSMIT THE DEFINE CONTROL CARD	05012	31	09336	13612
03450	TFM	IORT,**23	05024	16	00565	-5047
03460	B	IOGT,SLIPRY,7, BRING IN THE SECONDARY LINKAGE	05036	49	00566	-5056
03470	B	DFINE	05048	49	05174	00000
03480	DORG	*-3	05056			

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03490	SLIPRY	DSC 2,22,, DDA FOR THE SACRED SIX SECONDARY LINKAGE	05056			2
		22				
03500	DSA	TABC	05062			5 X 1
03510	DC	1,1	05062			-5064
		1	05063			1
03520	TABC	DSC 1,1	05064			1
		1				
03530	DC	5,18197	05069			5
		J8197				
03540	DC	3,003	05072			3
		-03				
03550	DC	6,09500*	05078			6
		-9500*				
03560	TRNSLD	DSC 2,22,, DDA FOR SHIFTING THE EQUIVALENCE LIST	05079			2
		22				
03570	DSA	SLDEQV	05085			5 X 1
03580	DC	1,1	05085			-5087
		1	05086			1
03590	SLDEQV	DSC 1,0	05087			1
		0				
03600	DC	5,0	05092			5
		-0000				
03610	DC	3,060	05095			3
		-60				
03620	DC	5,09800	05100			5
		-9800				
03630	DC	1,1	05101			1
		1				
03640	TRWTL	DSC 2,02,, DDA FOR SHIFTING THE EQUIVALENCE LIST	05102			2
		02				
03650	DSA	TLDEQV	05108			5 X 1
03660	DC	1,1	05108			-5110
		1	05109			1
03670	TLDEQV	DSC 1,0	05110			1
		0				
03680	DC	5,0	05115			5
		-0000				
03690	DC	3,060	05118			3
		-60				
03700	DC	5,09800	05123			5
		-9800				
03710	DC	1,1	05124			1
		1				
03720	CONST3	DC 6,0	05130			6
		-00000				
03730	ZER0ES	DC 10,0	05140			10
		-000000000				
03740	DSC	2,0,,EXTENSION OF ZER0ES	05141			2
		00				
03750	CURREN	DC 3,0	05145			3
		-00				

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03760	LIMIT	DC	3,099	05148	3
			-99		
03770	KEY5	DSC	1,0	05149	1
			0		
03780	DUPCRD	DSS	162,9337	09337	162
03790	SARB	DSC	2,22,, DDA FOR COMMUNICATION SECTOR ON DISK	05150	2
			22		
03800		DSA	SARC	05156	5 X 1
03810		DC	1,1	05156	-5158
				05157	1
03820	SARC	DSC	1,1	05158	1
			1		
03830		DC	5,19639	05163	5
			J9639		
03840		DC	3,001	05166	3
			-01		
03850		DSA	DFINE	05171	5 X 1
03860		DC	1,1	05171	-5174
				05172	1
03870	DFINE	TFM	NEWDIM,0004,8	05174	16 09649 0-004
03880	BT	DIMMER,DIMMER-1		05186	27 09600 09599
03890	TF	CORSIZ,19888		05198	26 02627 19888
03900	TD	CALC9,DUPCRD+22,, STARTING SECTOR FOR WORK AREA		05210	25 02863 09359
03910	TD	CALC9-1,DUPCRD+20		05222	25 02862 09357
03920	TD	CALC9-2,DUPCRD+18		05234	25 02861 09355
03930	TD	CALC9-3,DUPCRD+16		05246	25 02860 09353
03940	TD	CALC9-4,DUPCRD+14		05258	25 02859 09351
03950	TD	CALC9-5,DUPCRD+12		05270	25 02858 09349
03960	SF	CALC9-5		05282	32 02858 00000
03970	SF	DUPCRD+11		05294	32 09348 00000
03980	C	DUPCRD+22,ZEROES+2,, WAS THIS FIELD BLANK		05306	24 09359 05142
03990	BNE	SANDOR		05318	47 05402 01200
04000	TFM	NEWDIM,0001,8		05330	16 09649 0-001
04010	BT	DIMMER,DIMMER-1,, BRING IN WORK AREA DIM		05342	27 09600 09599
04020	TF	CALC9,19885		05354	26 02863 19885
04030	CF	CALC9-4		05366	33 02859 00000
04040	TD	CALC9-5,19880		05378	25 02858 19880
04050	SF	CALC9-5		05390	32 02858 00000
04060	SANDOR	MM	CALC9,05,9,USED FOR CYLINDER NUMBER ALSO	05402	13 02863 00-05
04070	BD	ERROR1,97,, IS START OF SCRATCH AT BEGINNING OF CYLINDER		05414	43 05698 00097
04080	BD	ERROR1,98,,		05426	43 05698 00098
04090	BD	ERROR1,99,,		05438	43 05698 00099
04100	LENSCT	TD	CALC4-1,DUPCRD+30,,NUMBER OF CYLINDERS REQUESTED	05450	25 02866 09367
04110	TD	CALC4-2,DUPCRD+28		05462	25 02865 09365
04120	TD	CALC4-3,DUPCRD+26		05474	25 02864 09363
04130	SF	CALC4-2		05486	32 02865 00000
04140	SF	DUPCRD+25		05498	32 09362 00000
04150	C	DUPCRD+30,ZEROES-4,, WAS THIS FIELD BLANK		05510	24 09367 05136
04160	BNE	ENUFF		05522	47 06026 01200
04170	C	DUPCRD+22,ZEROES+2		05534	24 09359 05142
04180	BE	ESOR		05546	46 06530 01200
04190	TFM	NEWDIM,0001,8		05558	16 09649 0-001

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1620 MONITOR 11 DUP ROUTINE *DEFIN				PAGE	11
04200	BT	DIMMER,DIMMER-1		05570	27 09600 09599
04210	TF	CALC4-1,19888,, SAVE OLD CYLINDER COUNT		05582	26 02866 19888
04220	SF	CALC4-2		05594	32 02865 00000
04230	PKROOM	TF	CURREN,LIMIT	05606	26 05145 05148
04240	SF	CURREN-1		05618	32 05144 00000
04250	SF	95		05630	32 00095 00000
04260	S	CURREN,96,, TO FIND ALLOWABLE CYLINDERS LEFT		05642	22 05145 00096
04270	C	CALC4-1,CURREN		05654	24 02866 05145
04280	BNH	ROMENF		05666	47 05718 01100
04290	TFM	DIMERR+22,7173,8		05678	16 02675 0P173
04300	B	ERRD		05690	49 02690 00000
04310	DORG	*-3		05698	
04320	ERROR1	TFM	DIMERR+22,7172,8	05698	16 02675 0P172
04330	B	ERRD		05710	49 02690 00000
04340	DORG	*-3		05718	
04350	**	WILL	THERE BE ENOUGH ROOM TO MOVE THE WORKING AREA		
04360	ROMENF	TF	LISTES,CALC9	05718	26 09661 02863
04370	TFM	RLGONE+30,,+20		05730	16 09644 -5750
04380	B	FIND		05742	49 09540 00000
04390	DORG	*-3		05750	
04400	TFM	ADRSPL,00,10		05750	16 02840 000-0
04410	SCRASN	CM	LISTER,9200,8, IS THIS AREA AVAILABLE	05762	14 09654 0R200
04420	BE	*+36		05774	46 05810 01200
04430	CM	LISTER,0001,8		05786	14 09654 0-001
04440	BNE	ERR23		05798	47 06282 01200
04450	AM	ADRSPL,01,10		05810	11 02840 000-1
04460	C	ADRSPL,CALC4-1,, HAVE ENOUGH CYLINDERS BEEN FOUND		05822	24 02840 02866
04470	BE	FIXEQV		05834	46 05878 01200
04480	BT	GETR,GETR-1		05846	27 09520 09519
04490	BT	GETR,GETR-1		05858	27 09520 09519
04500	B	SCRASN		05870	49 05762 00000
04510	DORG	*-3		05878	
04520	FIXEQV	TFM	NEWDIM,1,8,SCRATCH ENTRY	05878	16 09649 0-001
04530	BT	DIMMER,DIMMER-1		05890	27 09600 09599
04540	TF	LISTES,19885		05902	26 09661 19885
04550	TD	LISTES-5,19880		05914	25 09656 19880
04560	TFM	RLGONE+30,,+20		05926	16 09644 -5946
04570	B	FIND		05938	49 09540 00000
04580	DORG	*-3		05946	
04590	TFM	LISTET,9200,8		05946	16 09665 0R200
04600	DOC	CM	LISTER,0001,8, IS THERE MORE WORK AREA TO ERASE	05958	14 09654 0-001
04610	BNE	SLEEPY		05970	47 06074 01200
04620	BT	REMOVE,REMOVE-1		05982	27 09560 09559
04630	BT	INSERT,INSERT-1		05994	27 09580 09579
04640	BT	GETR,GETR-1		06006	27 09520 09519
04650	B	DOC		06018	49 05958 00000
04660	DORG	*-3		06026	
04670	ENUFF	CM	CALC4-1,11,10, ARE THERE LESS THAN ELEVEN CYLINDERS DESIRED	06026	14 02866 000J1
04680	BNL	PKROOM		06038	46 05606 01300
04690	TFM	DIMERR+22,7078,8		06050	16 02675 0P078
04700	B	ERRD		06062	49 02690 00000
04710	SLEEPY	TFM	LISTET,0001,8	06074	16 09665 0-001
04720	TF	LISTES,CALC9		06086	26 09661 02863
04730	TFM	RLGONE+30,,+20		06098	16 09644 -6118
04740	B	FIND,, WHERE THE NEW WORK AREA WILL BEGIN		06110	49 09540 00000
04750	DORG	*-3		06118	

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04760	TF	ADRSPL,CALC4-1	06118	26	02840	02866
04770	CM	LISTER,9200,8	06130	14	09654	0R200
04780	BNE	ERR23	06142	47	06282	01200
04790	LUCKY	BT REMOVE,REMOVE-1	06154	27	09560	09559
04800	BT	INSERT,INSERT-1,, STUFF IN THE NEW WORK AREA	06166	27	09580	09579
04810	SM	ADRSPL,01,10	06178	12	02840	000-1
04820	CM	ADRSPL,00,10	06190	14	02840	000-0
04830	BNH	FIXSUP	06202	47	06302	01100
04840	LOUNGE	CM LISTER,9200,8	06214	14	09654	0R200
04850	BE	LUCKY	06226	46	06154	01200
04860	CM	LISTER-3,7,1011	06238	14	09651	000-P
04870	BNE	ERR23	06250	47	06282	01200
04880	BT	GETR,GETR-1	06262	27	09520	09519
04890	B	LOUNGE	06274	49	06214	00000
04900	DORG	*-3	06282			
04910	ERR23	TFM DIMERR+22,7173,8	06282	16	02675	0P173
04920	B	ERRD	06294	49	02690	00000
04930	DORG	*-3	06302			
04940	FIXSUP	TFM IORT,**23,, LET IORT IN ON THE SECRET	06302	16	00565	-6325
04950	B	IOGT,SARB,7	06314	49	00566	-5150
04960	TF	00425,CALC9-2,, WORK AREA CHANGED IN COMMUNICATION AREA	06326	26	00425	02861
04970	SF	00423	06338	32	00423	00000
04980	CF	00422	06350	33	00422	00000
04990	TF	DFINE+23,CALC9-2	06362	26	05197	02861
05000	SF	DFINE+21	06374	32	05195	00000
05010	CF	DFINE+20	06386	33	05194	00000
05020	TFM	IORT,**23	06398	16	00565	-6421
05030	B	IOPT,SARB,7	06410	49	00532	-5150
05040	NUMMOD	TFM NEWDIM,0001,8, LET THE DIM TABLE IN ON OUR SECRET	06422	16	09649	0-001
05050	BT	DIMMER,DIMMER-1	06434	27	09600	09599
05060	TF	19885,CALC9	06446	26	19885	02863
05070	SF	19881	06458	32	19881	00000
05080	CF	19880	06470	33	19880	00000
05090	TF	19888,CALC4-1	06482	26	19888	02866
05100	CF	19887	06494	33	19887	00000
05110	TFM	IORT,**23	06506	16	00565	-6529
05120	B	IOPT,DMDDA,7	06518	49	00532	-2580
05130	SF	DUPCRD+33,,, HOW ARE WE FIXED FOR NUMBER OF MODULES	06530	32	09370	00000
05140	CM	DUPCRD+34,00,10	06542	14	09371	000-0
05150	BE	AAA	06554	46	06660	01200
05160	TD	CURREN-1,DUPCRD+34,, THERE WAS SOMETHING THERE	06566	25	05144	09371
05170	CM	CURREN-1,04,10, IS MODULE NUM 4 OR LESS	06578	14	05144	000-4
05180	BH	**36	06590	46	06626	01100
05190	CM	CURREN-1,01,10	06602	14	05144	000-1
05200	BNL	AAA	06614	46	06660	01300
05210	TFM	DIMERR+22,7171,8	06626	16	02675	0P171
05220	B	ERRD	06638	49	02690	00000
05230	DORG	*-3	06646			
05240	NEWTOT	DC 4,0	06649			4
		-000				
05250	OLDTOT	DC 4,0	06653			4
		-000				
05260	ODIM	DC 3,0	06656			3
		-00				
05270	OEQV	DC 3,0	06659			3
		-00				

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05280	AAA	TD CALC4-1,DUPCRD+42,, BRING IN DIM SECTOR COUNT	06660	25	02866	09379
05290	TD	CALC4-2,DUPCRD+40	06672	25	02865	09377
05300	TD	CALC4-3,DUPCRD+38	06684	25	02864	09375
05310	SF	CALC4-3	06696	32	02864	00000
05320	TD	CALC7,DUPCRD+50,, BRING IN THE EQV TABLE SECTOR COUNT	06708	25	02921	09387
05330	TD	CALC7-1,DUPCRD+48	06720	25	02920	09385
05340	TD	CALC7-2,DUPCRD+46	06732	25	02919	09383
05350	SF	CALC7-2	06744	32	02919	00000
05360	**	BRING IN OLD DIM AND EQV ENTRIES				
05370	TFM	NEWDIM,0002,8	06756	16	09649	0-002
05380	BT	DIMMER,DIMMER-1	06768	27	09600	09599
05390	TF	OEQV,19888	06780	26	06659	19888
05400	TDM	NEWDIM,3	06792	15	09649	00003
05410	BT	DIMMER,DIMMER-1	06804	27	09600	09599
05420	TF	ODIM,19888	06816	26	06656	19888
05430	***	A LITTLE MATHEMATICS TO SEE IF THE DIM PLUS THE EQV				
05440	***	TABLE TOTAL HAS INCREASED OR AT LEAST TRYED				
05450	SF	DUPCRD+45	06828	32	09382	00000
05460	C	DUPCRD+50,ZEROES-4,, SHOULD OLD EQV LENGTH BE USED	06840	24	09387	05136
05470	BNE	**24	06852	47	06876	01200
05480	TF	CALC7,OEQV	06864	26	02921	06659
05490	SF	DUPCRD+37	06876	32	09374	00000
05500	C	DUPCRD+42,ZEROES-4,, SHOULD OLD DIM LENGTH BE USED	06888	24	09379	05136
05510	BNE	**24	06900	47	06924	01200
05520	TF	CALC4-1,ODIM	06912	26	02866	06656
05530	TF	NEWTOT,CALC7	06924	26	06649	02921
05540	CF	NEWTOT-2	06936	33	06647	00000
05550	A	NEWTOT,CALC4-1	06948	21	06649	02866
05560	TF	OLDTOT,ODIM	06960	26	06653	06656
05570	CF	OLDTOT-2	06972	33	06651	00000
05580	A	OLDTOT,OEQV	06984	21	06653	06659
05590	C	OLDTOT,NEWTOT,, IS THE TOTAL LENGTH OF THE TWO TABLES LONGE	06996	24	06653	06649
05600	BNL	CONTIN	07008	46	07236	01300
05610	S	NEWTOT,OLDTOT	07020	22	06649	06653
05620	TFM	LISTES,04800	07032	16	09661	-4800
05630	TDM	LISTES-5,1	07044	15	09656	00001
05640	A	LISTES,OLDTOT	07056	21	09661	06653
05650	TFM	RLGONE+30,**20	07068	16	09644	-7088
05660	B	FIND,,, FIND THE END OF THE OLD EQV TABLE	07080	49	09540	00000
05670	DORG	*-3	07088			
05680	TFM	CONSTS,000,8	07088	16	02898	0-000
05690	SARJ	CM LISTER-3,9,1011	07100	14	09651	000-R
05700	BNE	ERROR8	07112	47	07216	01200
05710	SF	LISTER-2	07124	32	09652	00000
05720	A	CONSTS,LISTER	07136	21	02898	09654
05730	C	CONSTS,NEWTOT,, HAVE ENOUGH BLANK SECTORS BEEN FOUND	07148	24	02898	06649
05740	BNL	CONTIN	07160	46	07236	01300
05750	BT	GETR,GETR-1	07172	27	09520	09519
05760	CM	LISTER-3,7,1011	07184	14	09651	000-P
05770	BE	*-24	07196	46	07172	01200
05780	B	SARJ	07208	49	07100	00000
05790	DORG	*-3	07216			
05800	ERRDR8	TFM DIMERR+22,7078,8, NOT ENOUGH ROOM AT SPECTED LOCATION	07216	16	02675	0P078
05810	B	ERRD	07228	49	02690	00000
05820	DORG	*-3	07236			
05830	CONTIN	SF DUPCRD+37	07236	32	09374	00000

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05840	C	DUPCRD+42,ZERDES-4,, WAS THERE ANEW DIM TABLE LENGTH	07248	24	09379	05136
05850	BE	EQVLEN	07260	46	08400	01200
05860	CM	CALC4-1,035,9	07272	14	02866	00-35
05870	BNL	*+32	07284	46	07316	01300
05880	TFM	DIMERR+22,7078,8	07296	16	02675	0P078
05890	B	ERRD	07308	49	02690	00000
05900	DORG	*-3	07316			
05910	TFM	NEWDIM,0003,8,NEW DIM LENGTH SPECIFIED	07316	16	09649	0-003
05920	BT	DIMMER,DIMMER-1	07328	27	09600	09599
05930	TF	CONST3,19888	07340	26	05130	19888
05940	C	CONST3,CALC4-1	07352	24	05130	02866
05950	BE	EQVLEN	07364	46	08400	01200
05960	TF	19888,CALC4-1,,SET NEW DIM LENGTH	07376	26	19888	02866
05970	TFM	IORT,++23	07388	16	00565	-7411
05980	B	IOPT,DMDDA,7	07400	49	00532	-2580
05990	TFM	TLDEQV+5,01000,7	07412	16	05115	-1000
06000	TFM	NEWDIM,2,8, EQV TABLE	07424	16	09649	0-002
06010	BT	DIMMER,DIMMER-1	07436	27	09600	09599
06020	TF	CALC7,19888	07448	26	02921	19888
06030	TF	CONST2,19888	07460	26	02880	19888
06040	TF	SLDEQV+5,19885	07472	26	05092	19885
06050	TD	SLDEQV,19880	07484	25	05087	19880
06060	TFM	IORT,++23	07496	16	00565	-7519
06070	B	IOPT,THRDDA,7	07508	49	00532	-2628
06080	HERO	TFM IORT,++23,, PREPARE TO SHIFT THE EQUIVALENCE TABLE	07520	16	00565	-7543
06090	B	IOGT,TRWSLD,7	07532	49	00566	-5079
06100	TFM	IORT,++23	07544	16	00565	-7567
06110	B	IOPT,TRWTL,7	07556	49	00532	-5102
06120	AM	SLDEQV+5,60,10	07568	11	05092	00000
06130	AM	TLDEQV+5,60,10	07580	11	05115	00000
06140	SM	CONST2,60,10	07592	12	02880	00000
06150	BNF	HERO, CONST2	07604	44	07520	02880
06160	TDM	TRWSLD,0	07616	15	05079	00000
06170	TDM	TRWTL,2	07628	15	05102	00002
06180	TFM	SLDEQV+5,01000,7	07640	16	05092	-1000
06190	TFM	TLDEQV+5,04800	07652	16	05115	-4800
06200	A	TLDEQV+5,CALC4-1	07664	21	05115	02866
06210	JANITO	CM CALC7,060,9, MAJOR SHIFT OF EQUIVALENCE TABLE	07676	14	02921	00-60
06220	BNH	MELANC	07688	47	07792	01100
06230	TFM	IORT,++23	07700	16	00565	-7723
06240	B	IOGT,TRWSLD,7	07712	49	00566	-5079
06250	TFM	IORT,++23	07724	16	00565	-7747
06260	B	IOPT,TRWTL,7	07736	49	00532	-5102
06270	AM	SLDEQV+5,060,9	07748	11	05092	00-60
06280	AM	TLDEQV+5,060,9	07760	11	05115	00-60
06290	SM	CALC7,060,9	07772	12	02921	00-60
06300	B	JANITO	07784	49	07676	00000
06310	DORG	*-3	07792			
06320	MELANC	TF TLDEQV+8,CALC7,, MINOR SHIFT OF EQUIVALENCE TABLE	07792	26	05118	02921
06330	TFM	IORT,++23	07804	16	00565	-7827
06340	B	IOGT,TRWSLD,7	07816	49	00566	-5079
06350	TFM	IORT,++23	07828	16	00565	-7851
06360	B	IOPT,TRWTL,7	07840	49	00532	-5102
06370	TFM	TLDEQV+8,60,9	07852	16	05118	00-60
06380	TFM	IORT,++23	07864	16	00565	-7887
06390	B	IOGT,THRDDA,7, REFRESH THE CORE FROM DISK	07876	49	00566	-2628

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06400	NURSES	SF KEYS	07888	32	05149	00000
06410	C	CONST3,CALC4-1	07900	24	05130	02866
06420	BNL	EQVLEN	07912	46	08400	01300
06430	TF	CONST5,CALC4-1	07924	26	02898	02866
06440	S	CONST5,CONST3,, NUMBER OF SECTORS ADDED	07936	22	02898	05130
06450	TFM	NEWDIM,0002,8	07948	16	09649	0-002
06460	BT	DIMMER,DIMMER-1	07960	27	09600	09599
06470	TF	SARH+5,19885	07972	26	08189	19885
06480	TD	SARH,19880	07984	25	08184	19880
06490	SARI	TFM IORT,++23	07996	16	00565	-8019
06500	B	IOPT,SARF,7	08008	49	00532	-8176
06510	SM	CONST5,01,10	08020	12	02898	000-1
06520	CM	CONST5,000,9	08032	14	02898	00-00
06530	BE	EQVLEN	08044	46	08400	01200
06540	AM	SARH+5,01,10	08056	11	08189	000-1
06550	B	SARI	08068	49	07996	00000
06560	DORG	*-3	08076			
06570	DUMDIM	DC 1,,',, DUMMY SECTOR FILL	08076			1
06580	DC	1,0	08077			1
06590	DSC	18,0 000000000000000000	08078			18
06600	DC	1,,'	08096			1
06610	DC	1,0	08097			1
06620	DSC	18,0 000000000000000000	08098			18
06630	DC	1,,'	08116			1
06640	DC	1,0	08117			1
06650	DSC	18,0 000000000000000000	08118			18
06660	DC	1,,'	08136			1
06670	DC	1,0	08137			1
06680	DSC	18,0 000000000000000000	08138			18
06690	DC	1,,'	08156			1
06700	DC	1,0	08157			1
06710	DSC	18,0 000000000000000000	08158			18
06720	SARF	DSC 2,22,, DDA FOR FILLING IN BLANK DIM SECTORS	08176			2
06730	DSA	SARH	08182			5 X 1
06740	DC	1,,'	08182			-8184
06750	SARH	DSC 1,1	08183			1
		1	08184			1

06760	DC	5,99999	08189	5	
	R9999				
06770	DC	3,001	08192	3	
	-01				
06780	DSA	DUMDIM	08197	5 X	1
			08197	-8076	
06790	DC	1,*	08198	1	
	*				
06800	DORG	08400	08400		
06810	***	LINKAGE TO CALL IN PHASE TWO AND EXECUTE IT			
06820	EQVLEN	TFM IORT,**23	08400	16	00565 -8423
06830	B	IOGT,SARK,7	08412	49	00566 -8424
06840	SARK	DSC 2,-22	08424		2
	2K				
06850	DSA	SARL	08430	5 X	1
			08430	-8432	
06860	DC	1,*	08431	1	
	*				
06870	SARL	DSC 1,1	08432	1	
	1				
06880	DC	5,18174	08437	5	
	J8174				
06890	DC	3,023	08440	3	
	-23				
06900	DSA	PHASE2	08445	5 X	1
			08445	-5600	
06910	DC	1,*	08446	1	
	*				
06920	***	LINKAGE FOR THROWING PHASE1 TO DISK WHEN LOADING PROGRAM			
06930	DDFIN4	TFM IORT,**23	08448	16	00565 -8471
06940	B	IOPT,DDFIN5,7	08460	49	00532 -8496
06950	TRA		08472	36	00000 00500
			08484	49	00000 00000
06960	DDFIN5	DSC 2,22	08496		2
	22				
06970	DSA	DDFIN6	08502	5 X	1
			08502	-8504	
06980	DC	1,*	08503	1	
	*				
06990	DDFIN6	DSC 1,1	08504	1	
	1				
07000	DC	5,18139	08509	5	
	J8139				
07010	DC	3,038	08512	3	
	-38				
07020	DC	5,05000	08517	5	
	-5000				
07030	DC	1,*	08518	1	
	*				
07040	TCD	DDFIN4	08448		
07050	DORG	05600	05600		

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07060	PHASE2	TD	CALC7,DUPCRD+50,,	READ IN EQV ENTRY DATA	05600	25	02921	09387
07070		TD	CALC7-1,DUPCRD+48		05612	25	02920	09385
07080		TD	CALC7-2,DUPCRD+46		05624	25	02919	09383
07090		SF	CALC7-2		05636	32	02919	00000
07100		SF	DUPCRD+45		05648	32	09382	00000
07110		C	DUPCRD+50,ZEROES-4,,	WAS THERE A EQV TABLE ENTRY	05660	24	09387	05136
07120		BNE	LNGNFF		05672	47	06872	01200
07130		BNF	OUTSYD,KEY5		05684	44	06922	05149
07140	TABA	TFM	NEWDIM,2,8,	EQV ENTRY	05696	16	09649	0-002
07150		BT	DIMMER,DIMMER-1		05708	27	09600	09599
07160		TF	CALC9,19888		05720	26	02863	19888
07170		BNF	BBB,KEY5		05732	44	05804	05149
07180		TFM	CALC3,04800		05744	16	02608	-4800
07190		A	CALC3,CALC4-1		05756	21	02608	02866
07200		TF	19885,CALC3		05768	26	19885	02608
07210		CM	CALC7,000,9		05780	14	02921	00-00
07220		BE	TABB		05792	46	05816	01200
07230	BBB	TF	19888,CALC7,,	SET NEW EQV LENGTH	05804	26	19888	02921
07240	TABB	TFM	IORT,**23		05816	16	00565	-5839
07250		B	IOPT,DMDDA,7		05828	49	00532	-2580
07260	LENLIS	TF	EL,19888		05840	26	05887	19888
07270		CF	EL-2		05852	33	05885	00000
07280	ACCUM	DC	4,0,*		05863			4
		-000						
07290		TF	DL,CALC4-1		05864	26	06715	02866
07300		CF	DL-2		05876	33	06713	00000
07310	EL	DC	4,0,*		05887			4
		-000						
07320	* SET	POINTER TO END OF CYL 23						
07330	LOOPA	TF	LISTES,END23		05888	26	09661	06921
07340	LOOPB	TFM	RLGONE+30,**20		05900	16	09644	-5920
07350		B	FIND		05912	49	09540	00000
07360		DORG	*-3		05920			
07370		TFM	LISTET,9200,8		05920	16	09665	0R200
07380		BT	GETR,GETR-1		05932	27	09520	09519
07390	LOOP1	CM	LISTER-3,7,1011		05944	14	09651	000-P
07400		BE	*-24		05956	46	05932	01200
07410		CM	LISTER,0003,8		05968	14	09654	0-003
07420		BNE	LOOP2		05980	47	06024	01200
07430	LOOP3	BT	REMOVE,REMOVE-1,,	REMOVE DIM TABLE ENTRIES	05992	27	09560	09559
07440		BT	INSERT,INSERT-1		06004	27	09580	09579
07450		B	LOOP1		06016	49	05944	00000
07460		DORG	*-3		06024			
07470	LOOP2	CM	LISTER,0002,8		06024	14	09654	0-002
07480		BE	LOOP5		06036	46	06164	01200
07490		CM	LISTER-3,9,1011		06048	14	09651	000-R
07500		BNE	LOOP4		06060	47	06240	01200
07510		CM	LISTER,9200,8,	HAVE WE ERASED ALL PROGRAMS	06072	14	09654	0R200
07520		BE	SETKEY		06084	46	06456	01200
07530		BT	GETR,GETR-1		06096	27	09520	09519
07540		CM	LISTER-3,7,1011		06108	14	09651	000-P
07550		BNE	LOOP4		06120	47	06240	01200
07560		BT	GETL,GETL-1		06132	27	09500	09499
07570		BT	REMOVE,REMOVE-1		06144	27	09560	09559
07580		B	SETKEY		06156	49	06456	00000
07590		DORG	*-3		06164			

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07600	LOOP5	BT GETL,GETL-1	06164	27 09500 09499
07610		CM LISTER-3,9,1011, IS THIS A NININES INDICATOR	06176	14 09651 000-R
07620		BNE LOOP6	06188	47 06220 01200
07630		BT REMOVE,REMOVE-1	06200	27 09560 09559
07640		B LOOP5	06212	49 06164 00000
07650		DORG *-3	06220	
07660	LOOP6	BT GETR,GETR-1	06220	27 09520 09519
07670		B LOOP3	06232	49 05992 00000
07680		DORG *-3	06240	
07690	LOOP4	TF NEWDIM,LISTER	06240	26 09649 09654
07700		BT DIMMER,DIMMER-1	06252	27 09600 09599
07710		MM 19883,05,10, CALCULATE SIZE OF ODD NINES ENTRY	06264	13 19883 000-5
07720		TDM 19883,1,11	06276	15 19883 0000J
07730		BD **24,99	06288	43 06312 00099
07740		TDM 19883,0,11	06300	15 19883 0000-
07750		TF LOOP7+11,19885	06312	26 06347 19885
07760		CF **21	06324	33 06345 00000
07770	KEY1	DS ,*	06335	0
07780	LOOP7	TFM LISTET,9000,8	06336	16 09665 0R000
07790		BT GETL,GETL-1	06348	27 09500 09499
07800		CM LISTER-3,9,1011	06360	14 09651 000-R
07810		BNE **36	06372	47 06408 01200
07820		BT REMOVE,REMOVE-1,, REMOVE THE NINES RECORD	06384	27 09560 09559
07830		B *-48	06396	49 06348 00000
07840		BT GETR,GETR-1	06408	27 09520 09519
07850		CM LISTET,9000,8	06420	14 09665 0R000
07860		BE **24	06432	46 06456 01200
07870		BT INSERT,INSERT-1	06444	27 09580 09579
07880	SETKEY	SF KEY1	06456	32 06335 00000
07890	NWTOT	DC 5,0,*	06467	5
		-0000		
07900		TF NWTOT,DL	06468	26 06467 06715
07910		A NWTOT,EL	06480	21 06467 05887
07920		TFM LOOP8+11,RETURN,, PREPARE TO REPOSITION THE LISTER THROUGH	06492	16 05911 -6512
07930		B LOOPA	06504	49 05888 00000
07940		DORG *-3	06512	
07950	RETURN	BT GETR,GETR-1	06512	27 09520 09519
07960		CM LISTER-3,7,1011	06524	14 09651 000-P
07970		BE RETURN	06536	46 06512 01200
07980		SF LISTER-2	06548	32 09652 00000
07990		A ACCUM,LISTER,, ACCUMULATE THE NUMBER OF SECTORS FILLED	06560	21 05863 09654
08000		CF LISTER-2	06572	33 09652 00000
08010		BT REMOVE,REMOVE-1	06584	27 09560 09559
08020		BNF ELCHEK,KEY1	06596	44 06756 06335
08030		TFM LISTET,0003,8	06608	16 09665 0-003
08040		BT INSERT,INSERT-1	06620	27 09580 09579
08050		SM DL,200,9	06632	12 06715 00K00
08060		BH RETURN,, RETURN TO FILL IN MORE DIM TABLE ENTRIES	06644	46 06512 01100
08070		BE CLFLAG	06656	46 06736 01200
08080		A EL,DL	06668	21 05887 06715
08090		TFM LISTET,0002,8	06680	16 09665 0-002
08100		BT INSERT,INSERT-1	06692	27 09580 09579
08110		CF KEY1	06704	33 06335 00000
08120	DL	DC 4,0,*	06715	4
		-000		
08130		BNF RETURN,EL	06716	44 06512 05887

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1620 MONITOR 11 DUP ROUTINE *DEFIN			PAGE	19
08140		B COMPEL+24	06728	49 06804 00000
08150		DORG *-3	06736	
08160	CLFLAG	CF KEY1	06736	33 06335 00000
08170		B RETURN	06748	49 06512 00000
08180		DORG *-3	06756	
08190	ELCHEK	TFM LISTET,0002,8, PREPARE TO INSERT THE EQV TABLE ENTRIES	06756	16 09665 0-002
08200		BT INSERT,INSERT-1	06768	27 09580 09579
08210	COMPEL	SM EL,200,9	06780	12 05887 00K00
08220		BH RETURN	06792	46 06512 01100
08230		S ACCUM,NWTOT	06804	22 05863 06467
08240		BE DUTSYD	06816	46 06922 01200
08250		TDM ACCUM-3,9,11	06828	15 05860 0000R
08260		TF LISTET,ACCUM	06840	26 09665 05863
08270		BT INSERT,INSERT-1	06852	27 09580 09579
08280		B DUTSYD	06864	49 06922 00000
08290		DORG *-3	06872	
08300	LNGNFF	CF CALC7,009,9, DOES THE EQUIVALENCE TABLE MEET MINIMUM STANDA	06872	14 02921 00-09
08310		BNL TABA	06884	46 05696 01300
08320		TFM DIMERR+22,7078,8	06896	16 02675 0P078
08330		B ERRD	06908	49 02690 00000
08340		DORG *-3	06916	
08350	END23	DC 6,104799	06921	6
		J04799		
08360	DUTSYD	TFM IDRT,**23,, BRING IN AND EXECUTE PHASE3	06922	16 00565 -6945
08370		B IDGT,TRWAA,7	06934	49 00566 -6946
08380	TRWAA	DSC 2,-22	06946	2
		2K		
08390		DSA TRWBB	06952	5 X 1
			06952	-6954
			06953	1
08400		DC 1,1		
08410	TRWBB	DSC 1,1	06954	1
		1		
08420		DC 5,17084	06959	5
		J7084		
08430		DC 3,022	06962	3
		-22		
08440		DSA PHASE3	06967	5 X 1
			06967	-5200
			06968	1
08450		DC 1,1		
		1		
08460	SARN	TFM IDRT,**23,, TRA-TCD TO THROW PHASE2 TO DISK WHILE LOADING	06970	16 00565 -6993
08470		B IDPT,SARO,7	06982	49 00532 -7018
08480		TRA	06994	36 00000 00500
			07006	49 00000 00000
08490	SARO	DSC 2,22	07018	2
		22		
08500		DSA SARP	07024	5 X 1
			07024	-7026
08510		DC 1,1	07025	1
		1		
08520	SARP	DSC 1,1	07026	1
		1		

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08530	DC	5,18174	07031	5	
08540	DC	3,023	07034	3	
08550	DC	5,05600	07039	5	
08560	DC	1,'	07040	1	
08570	TCD	SARN	06970		
08580	DORG	05200	05200		
08590	PHASE3 TD	PATCH,DUPCRD+58,,LENGTH OF SPL LIST	05200	25	05459 09395
08600	TD	PATCH-1,DUPCRD+56	05212	25	05458 09393
08610	TD	PATCH-2,DUPCRD+54	05224	25	05457 09391
08620	SF	PATCH-2	05236	32	05457 00000
08630	CM	PATCH,000,9	05248	14	05459 00-00
08640	BE	ACTP	05260	46	06280 01200
08650	TFM	LISTES,,,	05272	16	09661 -0000
08660	TDM	LISTES-5,1,,	05284	15	09656 00001
08670	TFM	RLGONE+30,++20	05296	16	09644 -5316
08680	B	FIND,,, BRING IN THE SPL FOR SOME OBSERVATION	05308	49	09540 00000
08690	DORG	*-3	05316		
08700	SF	DUPCRD+33	05316	32	09370 00000
08710	CM	DUPCRD+34,00,10	05328	14	09371 000-0
08720	BNE	*+48	05340	47	05388 01200
08730	TFM	IORT,++23	05352	16	00565 -5375
08740	B	IOGT,LDX,7	05364	49	00566 -6876
08750	TD	DUPCRD+34,CS+49	05376	25	09371 05249
08760	TFM	*+35,09800,7	05388	16	05423 -9800
08770	AM	*+23,04,10	05400	11	05423 000-4
08780	BNR	*-12,99999,, FIND THE END OF THE SPL	05412	45	05400 99999
08790	AM	*-1,04,10	05424	11	05423 000-4
08800	SM	*-13,9800,7	05436	12	05423 -9800
08810	CM	*-27,PATCH	05448	14	05421 -5459
08820	PATCH DC	3,0,*	05459		3
08830	BNH	*+32	05460	47	05492 01100
08840	TFM	DIMERR+22,7178,8, SPL LIST IS REDEFINED LESS THAN NEEDED.	05472	16	02675 0P178
08850	B	ERRD	05484	49	02690 00000
08860	DORG	*-3	05492		
08870	TF	CONST5,PATCH	05492	26	02898 05459
08880	TF	CALC9,PATCH	05504	26	02863 05459
08890	CM	PATCH,80,9	05516	14	05459 00-80
08900	BNH	ACTN	05528	47	05560 01100
08910	TFM	DIMERR+22,7174,8	05540	16	02675 0P174
08920	B	ERRD	05552	49	02690 00000
08930	DORG	*-3	05560		
08940	***	ROUTINE TO UPDATE THE SPL ENTRY FOR ITSELF			
08950	ACTN	TFM LISTES,19801	05560	16	09661 J9801
08960	TDM	LISTES-5,1,11	05572	15	09656 0000J
08970	TDM	DUPCRD+33,,11, FLAG ZERO	05584	15	09370 0000-
08980	TF	CURREN-1,DUPCRD+34	05596	26	05144 09371
08990	TFM	NEWDIM,0004,8	05608	16	09649 0-004
09000	BT	DIMMER,DIMMER-1	05620	27	09600 09599
09010	C	CONST5,19888	05632	24	02898 19888
09020	BE	ACTP	05644	46	06280 01200

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09030	ACTT	TF	CONST6,19888	05656	26	02904 19888
09040		TF	19888,CALC9	05668	26	19888 02863
09050		TFM	IORT,++23	05680	16	00565 -5703
09060		B	IOPT,DMODA,7, CORRECT SPL ENTRY ON DISK	05692	49	00532 -2580
09070		TF	CONST5,CALC9	05704	26	02898 02863
09080		TFM	GOONY+6,++20	05716	16	09644 -5736
09090		B	FIND	05728	49	09540 00000
09100		DORG	*-3	05736		
09110		BT	GETR,GETR-1	05736	27	09520 09519
09120		C	CONST5,CONST6,, IS THE NEW LIST LONGER OR SHORTER	05748	24	02898 02904
09130		BL	ACTQ	05760	47	05864 01300
09140		S	CONST5,CONST6	05772	22	02898 02904
09150		S	LISTER,CONST5	05784	22	09654 02898
09160		TF	LISTER,LISTER	05796	26	09665 09654
09170		BT	REMOVE,REMOVE-1	05808	27	09560 09559
09180		CM	LISTER,9000,8	05820	14	09665 0R000
09190		BE	*+24	05832	46	05856 01200
09200		BT	INSERT,INSERT-1,, PLACE THE CORRECT BLANK SECTOR IN THE LIS	05844	27	09580 09579
09210		B	MODS2	05856	49	06004 00000
09220		DORG	*-3	05864		
09230	ACTQ	S	CONST6,CONST5	05864	22	02904 02898
09240		CM	LISTER-3,7,1011	05876	14	09651 000-P
09250		BNH	ACTR	05888	47	05956 01100
09260		TF	*+35,CONST6	05900	26	05935 02904
09270		CF	*+21	05912	33	05933 00000
09280		TFM	LISTER,9000,8	05924	16	09665 0R000
09290		BT	INSERT,INSERT-1	05936	27	09580 09579
09300		B	MODS2	05948	49	06004 00000
09310		DORG	*-3	05956		
09320	ACTR	A	LISTER,CONST6,, INCREASE THE BLANK SECTOR COUNT	05956	21	09654 02904
09330		TF	LISTER,LISTER	05968	26	09665 09654
09340		BT	REMOVE,REMOVE-1	05980	27	09560 09559
09350		BT	INSERT,INSERT-1	05992	27	09580 09579
09360	MODS2	CM	CURREN-1,01,10	06004	14	05144 000-1
09370		BE	ACTP	06016	46	06280 01200
09380		CM	CURREN-1,02,10	06028	14	05144 000-2
09390		BE	ACT2	06040	46	06212 01200
09400		CM	CURREN-1,03,10	06052	14	05144 000-3
09410		BE	ACT3	06064	46	06144 01200
09420		TFM	NEWDIM,0007,8, SET UP ON MODULE THREE	06076	16	09649 0-007
09430		BT	DIMMER,DIMMER-1	06088	27	09600 09599
09440		TF	LISTES,19885	06100	26	09661 19885
09450		TD	LISTES-5,19880	06112	25	09656 19880
09460		TDM	CURREN-1,3,,	06124	15	05144 00003
09470		B	ACTT	06136	49	05656 00000
09480		DORG	*-3	06144		
09490	ACT3	TFM	NEWDIM,0006,8	06144	16	09649 0-006
09500		BT	DIMMER,DIMMER-1	06156	27	09600 09599
09510		TF	LISTES,19885,, FIND END OF OLD LISTS	06168	26	09661 19885
09520		TD	LISTES-5,19880	06180	25	09656 19880
09530		TDM	CURREN-1,2,,	06192	15	05144 00002
09540		B	ACTT	06204	49	05656 00000
09550		DORG	*-3	06212		
09560	ACT2	TFM	NEWDIM,0005,8	06212	16	09649 0-005
09570		BT	DIMMER,DIMMER-1	06224	27	09600 09599
09580		TF	LISTES,19885	06236	26	09661 19885

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09590	TD	LISTES-5,198R0	06248	25	09656	19880
09600	TDM	CURREN-1,1,,	06260	15	05144	00001
09610	B	ACTT	06272	49	05656	00000
09620	DORG	--3	06280			
09630	ACTP	TFM IORT,++23,, BRING IN THE COMMUNICATION SECTOR	06280	16	00565	-6303
09640	B	IOGT,LDX,7	06292	49	00566	-6876
09650	***	ROUTINE FOR TRANSFERING THE CONTROL CHARACTERS IF PRESENT				
09660	***	TO THE COMMUNICATION SECTOR AND SETTING FLAGS IF NECESSARY				
09670	SF	DUPCRD+71	06304	32	09408	00000
09680	CM	DUPCRD+74,0000,8,	06316	14	09411	0-000
09690	BE	++48	06328	46	06376	01200
09700	TD	CS+40,DUPCRD+72	06340	25	05240	09409
09710	TD	CS+41,DUPCRD+74	06352	25	05241	09411
09720	SF	CS+40	06364	32	05240	00000
09721	SF	DUPCRD+77	06376	32	09414	00000
09722	CM	DUPCRD+80,0000,8	06388	14	09417	0-000
09723	BE	++48	06400	46	06448	01200
09724	TD	CS+42,DUPCRD+78	06412	25	05242	09415
09725	TD	CS+43,DUPCRD+80	06424	25	05243	09417
09726	SF	CS+42	06436	32	05242	00000
09730	SF	DUPCRD+83	06448	32	09420	00000
09740	CM	DUPCRD+84,00,10	06460	14	09421	000-0
09750	BE	++24	06472	46	06496	01200
09760	TD	CS+44,DUPCRD+84	06484	25	05244	09421
09770	SF	DUPCRD+87	06496	32	09424	00000
09780	CM	DUPCRD+90,0000,8	06508	14	09427	0-000
09790	BE	++48	06520	46	06568	01200
09800	TD	CS+45,DUPCRD+88	06532	25	05245	09425
09810	TD	CS+46,DUPCRD+90	06544	25	05246	09427
09820	SF	CS+45	06556	32	05245	00000
09830	SF	DUPCRD+93	06568	32	09430	00000
09840	CM	DUPCRD+96,0000,8	06580	14	09433	0-000
09850	BE	++48	06592	46	06640	01200
09860	TD	CS+47,DUPCRD+94	06604	25	05247	09431
09870	TD	CS+48,DUPCRD+96	06616	25	05248	09433
09880	SF	CS+47	06628	32	05247	00000
09890	SF	DUPCRD+33	06640	32	09370	00000
09900	CM	DUPCRD+34,00,10	06652	14	09371	000-0
09910	BE	++24	06664	46	06688	01200
09920	TD	CS+49,DUPCRD+34	06676	25	05249	09371
09930	SF	DUPCRD+99	06688	32	09436	00000
09940	CM	DUPCRD+100,00,10	06700	14	09437	000-0
09950	BE	++24	06712	46	06736	01200
09960	TD	CS+73,DUPCRD+100	06724	25	05273	09437
09970	SF	DUPCRD+103	06736	32	09440	00000
09980	CM	DUPCRD+104,00,10	06748	14	09441	000-0
09990	BE	++36	06760	46	06796	01200
10000	TD	CS+76,DUPCRD+104	06772	25	05276	09441
10010	SF	CS+76	06784	32	05276	00000
10070	SF	DUPCRD+111	06796	32	09448	00000
10080	CM	DUPCRD+112,00,10	06808	14	09449	000-0
10090	BE	++24	06820	46	06844	01200
10100	TD	CS+83,DUPCRD+112	06832	25	05283	09449
10110	TFM	IORT,++23	06844	16	00565	-6867
10120	B	IOPT,LDX,7,, PLACE THE COMMUNICATION SECTOR BACK ON DISK	06856	49	00532	-6876
10130	B	MONITR	06868	49	06900	00000

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10140	DORG	--3	06876			
10150	LDX	DSC 2,22,, DDA FOR THE COMMUNICATION SECTOR	06876		2	
		22				
10160	DSA	FIELDX	06882		5 X	1
			06882		-6884	
10170	DC	1,1	06883		1	
10180	CS	DSS 100,05200	05200		100	
10190	FIELDX	DSC 1,0	06884		1	
		0				
10200	DC	5,19663	06889		5	
		J9663				
10210	DC	3,001	06892		3	
		-01				
10220	DSA	CS	06897		5 X	1
			06897		-5200	
10230	DC	1,1	06898		1	
10240	***	ROUTINE FOR WRITING BACK THE SPL TO THE PROPER PACK BEFORE				
10250	***	EXITING TO MONITOR				
10260	MONITR	CM PACK,00,1011, PACK ZERO	06900	14	02856	000--
10270	BE	RITSP0	06912	46	07004	01200
10280	CM	PACK,01,1011,PACK ONE	06924	14	02856	000-J
10290	BE	RITSP1	06936	46	07036	01200
10300	CM	PACK,02,1011, PACK TWO	06948	14	02856	000-K
10310	BE	RITSP2	06960	46	07068	01200
10320	CM	PACK,03,1011	06972	14	02856	000-L
10330	BE	RITSP3	06984	46	07100	01200
10340	B	WHYNOT	06996	49	07124	00000
10350	DORG	--3	07004			
10360	RITSP0	TFM IORT,++23	07004	16	00565	-7027
10370	B	IOPT,PKODDA,7	07016	49	00532	-2734
10380	B	WHYNOT	07028	49	07124	00000
10390	DORG	--3	07036			
10400	RITSP1	TFM IORT,++23	07036	16	00565	-7059
10410	B	IOPT,PK1DDA,7	07048	49	00532	-2757
10420	B	WHYNOT	07060	49	07124	00000
10430	DORG	--3	07068			
10440	RITSP2	TFM IORT,++23	07068	16	00565	-7091
10450	B	IOPT,PK2DDA,7	07080	49	00532	-2780
10460	B	WHYNOT	07092	49	07124	00000
10470	DORG	--3	07100			
10480	RITSP3	TFM IORT,++23	07100	16	00565	-7123
10490	B	IOPT,PK3DDA,7	07112	49	00532	-2803
10500	WHYNOT	TDM 475,3	07124	15	00475	00003
10510	B	796,,MONCAL	07136	49	00796	00000
10520	DORG	--3	07144			
10530	DDFIN1	TFM IORT,++23,, LINKAGE FOR THROWING PHASE3 TO DISK	07144	16	00565	-7167
10540	B	IOPT,DDFIN2,7	07156	49	00532	-7192
10550	TRA		07168	36	00000	00500
			07180	49	00000	00000
10560	DDFIN2	DSC 2,22	07192		2	
		22				
10570	DSA	DDFIN3	07198		5 X	1

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10580	DC	1, *		07198	-7200		
				07199	1		
10590	DDFIN3	DSC 1,1		07200	1		
		1					
10600	DC	5,17084		07205	5		
		J7084					
10610	DC	3,022		07208	3		
		-22					
10620	DC	5,05200		07213	5		
		-5200					
10630	DC	1, *		07214	1		
10640	TCD	DDFIN1		07144			
10650	***	SECONDARY LINKAGE FOR THE FIND,GETL,GETR,REMOVE,INSERT					
10660	***	PROGRAMS TO SEE IF THE ROUTINES ARE PRESENTLY IN CORE					
10670	DORG	9500		09500			
10680	GETL	TFM CHEX+6,GETLTR		09500	16	09722	-3030
10690	B	INCORE		09512	49	09668	00000
10700	DORG	*-3		09520			
10710	GETR	TFM CHEX+6,GETRTR		09520	16	09722	-2956
10720	B	INCORE		09532	49	09668	00000
10730	DORG	*-3		09540			
10740	FIND	TFM CHEX+6,FINDTR		09540	16	09722	-3440
10750	B	INCORE		09552	49	09668	00000
10760	DORG	*-3		09560			
10770	REMOVE	TFM CHEX+6,REMOTR		09560	16	09722	-3104
10780	B	INCORE		09572	49	09668	00000
10790	DORG	*-3		09580			
10800	INSERT	TFM CHEX+6,INSETR		09580	16	09722	-3190
10810	B	INCORE		09592	49	09668	00000
10820	DORG	*-3		09600			
10830	DIMMER	TFM CHEX+6,DIMMTR		09600	16	09722	-2458
10840	B	INCORE		09612	49	09668	00000
10850	DORG	*-3		09620			
10860	MOVESA	DC 6,0,,FOR SECTOR ADDRESS		09625	6		
		-00000					
10870	MOVESC	DC 3,0,,FOR SECTOR COUNT		09628	3		
		-00					
10880	EXITMR	B 99999		09630	49	99999	00000
10890	DORG	*-3		09638			
10900	GOODNY	B 99999		09638	49	99999	00000
10910	DORG	*-3		09646			
10920	NEWDIM	DC 4,0		09649	4		
		-000					
10930	DC	1,0,, FOR COMPARING AT LISTER-3		09650	1		
		-					
10940	LISTER	DC 4,0		09654	4		
		-000					
10950	DC	1,0,, TO SET-UP LISTES OVERRIDE CODE		09655	1		
		-					
10960	LISTES	DC 6,0		09661	6		
		-00000					
10970	LISTET	DC 4,0		09665	4		
		-000					

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10980	LAYSPL	DC 1,0		09666	1		
		-					
10990	INCORE	BNF CHEX,LAYSPL,, IS THE ROUTINE ALREADY IN CORE		09668	44	09716	09666
11000	TFM	IDRT,**23		09680	16	00565	-9703
11010	B	IDGT,SPL1,7		09692	49	00566	-9724
11020	CF	LAYSPL		09704	33	09666	00000
11030	CHEX	B 99999		09716	49	99999	00000
11040	DORG	*-3		09724			
11050	RLGONE	DS ,GOODNY-24		09614	0		
11060	SPL1	DSC 2,22,, DDA FOR BRINGING IN THE SACRED SIX		09724	2		
		22					
11070	DSA	SPL2		09730	5 X	1	
11080	DC	1, *		09730	-9732		
				09731	1		
11090	SPL2	DSC 1,1		09732	1		
		1					
11100	DC	5,19338		09737	5		
		J9338					
11110	DC	3,025		09740	3		
		-25					
11120	DC	6,02458*		09746	6		
		-2458*					
11130	GREAT1	TFM IDRT,**23,, TRA-TCD FOR THROWING THE SECONDARY LINKAGE TO D		09748	16	00565	-9771
11140	B	IDPT,GREAT2,7		09760	49	00532	-9796
11150	TRA			09772	36	00000	00500
				09784	49	00000	00000
11160	GREAT2	DSC 2,22		09796	2		
		22					
11170	DSA	GREAT3		09802	5 X	1	
11180	DC	1, *		09802	-9804		
				09803	1		
11190	GREAT3	DSC 1,1		09804	1		
		1					
11200	DC	5,18197		09809	5		
		J8197					
11210	DC	3,003		09812	3		
		-03					
11220	DC	6,09500*		09818	6		
		-9500*					
11230	TCD	GREAT1		09748			
11240	DEND	0		00000			

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ADDBLK	03912	GETRTR	02956	REDS3	04624	GETL	09500	SPL2	09732
ADRSPL	02840	GREAT1	09748	REDSPL	04220	GETR	09520	SPLFL	04800
BAVAIL	02830	GREAT2	09796	REMOTr	03104	GOONY	09638	SPLR1	04848
CLEVER	02827	GREAT3	09804	REMOVE	09560	HERO	07520	SPLR2	04863
CLFLAG	06736	INCORE	09668	REPACK	02852	HEX	02868	SPORT	04480
COMMON	02926	INSERT	09580	RETURN	06512	IOGT	00566	STEAL	02918
COMPEL	06780	INSETR	03190	RITSP0	07004	IOPT	00532	TAB	05696
CONST1	02874	JANITO	07676	RITSP1	07036	IORT	00565	TABR	05816
CONST2	02880	LAYSPL	09666	RITSP2	07068	KEY1	06335	TABC	05064
CONST3	05130	LENLIS	05840	RITSP3	07100	KEY5	05149	TIPSY	03226
CONST5	02898	LENSCT	05450	RLGONE	09614	LDX	06876	TRWAA	06946
CONST6	02904	LISTER	09654	ROMENF	05718	LIMIT	05148	TRWBB	06954
CONST7	02910	LISTES	09661	AAA	06660	LOOP1	05944	SANDOR	05402
CONST8	02934	LISTET	09665	ACCUM	05863	LOOP2	06024	SCRASN	05762
CONTIN	07236	LNGNFF	06872	ACT2	06212	LOOP3	05992	SETKEY	06456
CORSIZ	02627	LOUNGE	06214	ACT3	06144	LOOP4	06240	SLEQV	05087
CURREN	05145	MELANC	07792	ACTN	05560	LOOP5	06164	SLEEPY	06074
DDFIN1	07144	MONITR	06900	ACTP	06280	LOOP6	06220	SLIPRY	05056
DDFIN2	07192	MOVESA	09625	ACTQ	05864	LOOP7	06336	SPLCOR	02850
DDFIN3	07200	MOVESC	09628	ACTR	05956	LOOPA	05888	SPLCYL	02845
DDFIN4	08448	N48000	02624	ACTT	05656	LOOPB	05900	SPLXST	03484
DDFIN5	08496	NEWDIR	09649	BBB	05804	LUCKY	06154	SPLINI	04116
DDFIN6	08504	NWTDI	08649	CALC2	02613	NODS2	06004	SPLIST	03956
DIMERR	02653	NOMMON	02928	CALC3	02608	NERR	03354	SPLPK0	02742
DIMMER	09600	NOSECA	02929	CALC4	02867	NWTDI	06467	SPLPK1	02765
DIMTR	02458	NUMMOD	06422	CALC7	02921	ODIM	06656	SPLPK2	02788
DMREAD	02588	NURSES	07888	CALC9	02863	OEQV	06659	SPLPK3	02811
DRESTR	02618	OLDTOT	06653	CHEX	09716	PACK	02856	STARDT	04164
DUMDIM	08076	OUTSYD	06922	CLUCK	04128	PATCH	05459	THRDDA	02628
DUPCRD	09337	PHASE2	05600	CS	05200	QHOLD	02892	THROWS	02636
ELCHECK	06756	PHASE3	05200	DFINE	05174	SARB	05150	TLOEQV	05110
EQVLEN	08400	PKODDA	02734	DL	06715	SARC	05158	TRWSD	05079
ERRORI	05698	PKIDDA	02757	DMDDA	02580	SARF	08176	TRWTL	05102
ERRORB	07216	PKZDDA	02780	DOC	05958	SARM	08184	TRYAGN	03604
ERRRIT	02936	PK3DDA	02803	EL	05887	SARI	07996	UNPACK	02854
EXITMR	09630	PKRDOM	05606	EN023	06921	SARJ	07100	WHYNOT	07124
FAKSEV	02925	PLUSRR	03868	ENUFF	06026	SARK	08424	WRTSPO	04360
FIELDX	06884	QCARRY	02886	ERR23	06282	SARL	08432	WRTSP1	04392
FINDTR	03440	RACKET	02914	ERRD	02690	SARN	06970	WRTSP2	04424
FIXEQV	05878	REDSPO	04668	ESOR	06530	SARO	07018	WRTSP3	04456
FIXSUP	06302	REDSPL	04712	FIND	09540	SARP	07026	ZEROES	05140
GETLTR	03030	REDSPL2	04756	FOUND	02835	SPLL	09724		

END OF ONE ASSEMBLY.

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MONITOR SYSTEM LOADER

00010	*	THIS PROGRAM WILL LOAD MONITOR I SYSTEM TO DISK							
00020	*	FORMAT FOR CNTR CD IS *LDCNTR NAMEPR SSSSSS EEEEE NN NNS							
00030		DORG	7404			07404			
00040	STAR	TR	3972,NAM-1			07404	31	03972	08866
00050		RACD	3973,,,	RAPT IF PAPER TP	*****	07416	37	03973	00500
00060		TFM	TDI+6,4000			07428	16	07526	-4000
00070		TFM	TDI+11,4003			07440	16	07531	-4003
00080		SF	3972			07452	32	03972	00000
00090		SF	3988			07464	32	03988	00000
00100		BNR	**20,3983			07476	45	07496	03983
00110		B7	ERHI			07488	49	08042	
00120		C	3985,LDCTR+12			07496	24	03985	08041
00130		BNE	ERHI			07508	47	08042	01200
00140	TDI	TD	4000,4003,27			07520	25	-4000	-4003
00150		AM	TDI+6,1			07532	11	07526	-0001
00160		AM	TDI+11,2			07544	11	07531	-0002
00170		CM	TDI+6,4067			07556	14	07526	-4067
00180		BNE	TDI,,,	CONVERT CNTRL CD TO NUMERIC		07568	47	07520	01200
00190	SF1	SF	4001,,,	SET FIELD FLAG ON SECTOR ADDR		07580	32	04001	00000
00200		SF	4008,,,	AND ON SECTOR COUNT		07592	32	04008	00000
00210	TEMPSC	DS	,SF+11			07591			0
00220		SF	4014			07604	32	04014	00000
00230		S	4012,4005			07616	22	04012	04005
00240		BL	ERHI			07628	47	08042	01300
00250		TDM	4006,0,,	PLACE REC MK FOR TR		07640	15	04006	00000
00260		DC	1,*,*			07651			1
00270		TR	DSKOUT,4000			07652	31	09028	04000
00280		AM	4012,1			07664	11	04012	-0001
00290		TF	TOTSEC,4012,,	SAVE TOTAL SECTOR COUNT		07676	26	08511	04012
00300		TFM	TEMPSC,0			07688	16	07591	-0000
00310		SF	4060			07700	32	04060	00000
00320		TF	CM+11,4064			07712	26	07879	04064
00330		TF	CM+9,4016			07724	26	07877	04016
00340		AM	CM+11,1			07736	11	07879	-0001
00350	INITZ	TFM	DSKOUT+8,0,9,	MAKE SECTOR CNT ZERO		07748	16	09036	00-00
00360		TFM	DSKOUT+13,5000			07760	16	09041	-5000
00370		TD	NOP+1,1,,	MAKE WLRC SW INTO NOP		07772	25	09287	00001
00380	*								
00390	*	READ INPUT FOR DISK LOAD							
00400	*								
00410	CDINI	TFM	RC+6,5000			07784	16	07814	-5000
00420		TFM	CM+6,5079			07796	16	07874	-5079
00430	RC	RNCD	5000,,2,	RNPT IF PAPER TAPE INPUT	*****	07808	36	-5000	00500
00440		BI	HALTRD,0600			07820	46	07996	06000
00450		TF	BF+11,CM+6,,	NOP IF P. T.		07832	26	07867	07874
00460		SM	BF+11,4,,	NOP IF P. T.		07844	12	07867	-0004
00470	BF	BNF	CD1, 0,,	NOP IF PAPER TP	*****	07856	44	08466	00000
00480	CM	CM	5079,1,27,	COMPARE CD SEQ NOP IF TP	*****	07868	14	-5079	-0001
00490		BNE	ERSEQ-12,,	NOP IF TP	*****	07880	47	08250	01200
00500		AM	CM+11,1			07892	11	07879	-0001
00510		BD	RDRLE,ERSEQ+10,,	BR TO READ TRAILER		07904	43	08488	08272
00520		CM	RC+6,5000,,	CK FOR FIRST CD OF SET		07916	14	07814	-5000
00530		BE	ADJUST			07928	46	08158	01200
00540		CM	RC+6,5075,,	2ND CD CK		07940	14	07814	-5075
00550		BE	ADJUST			07952	46	08158	01200

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MONITOR SYSTEM LOADER				PAGE	2
00560	CM	RC+6,5150,,3RD CD CK	07964	14	07814 -5150
00570	BE	ADJUST	07976	46	08158 01200
00580	B7	WRDSK,,, 4TH CD WAS READ, WRITE 3 SECTORS	07988	49	09042
00590 *					
00600	HALTRD	WATY **15	07996	39	08011 00100
00610	DAC	6,HRDR*	08009		6 X 2
		HRDR*			
00620	B7	RC	08020	49	07808
00630 *					
00640	LDCTR	DAC 7,*LDCNTR	08029		7 X 2
		*LDCNTR			
00650	ERHI	RCTY	08042	34	00000 00102
00660	WATY	ERHIGH	08054	39	08087 00100
00670	H		08066	48	00000 00000
00680	B7	STAR	08078	49	07404
00690	ERHIGH	DAC 36,CONTROL STATEMENT INVALID, RE-ENTER*	08087		36 X 2
		CONTROL STATEMENT INVALID, RE-ENTER*			
00700	ADJUST	AM DSKOUT+8,1,9, INCREMENTSECTOR COUNT	08158	11	09036 00-01
00710	AM	RC+6,75,, INCREMENT READ-IN POINTER	08170	11	07814 -0075
00720	AM	CM+6,75,, INCREMENT SEQ NUM ADDRESS	08182	11	07874 -0075
00730	AM	TEMPSC,1,, ADD TO COUNT OF SECTORS USED	08194	11	07591 -0001
00740	C	TOTSEC,TEMPSC,, ALL SECTORS PREPARED FOR LOAD	08206	24	08511 07591
00750	BNE	RC,,, READ ANOTHER RECORD	08218	47	07808 01200
00760	TDM	ERSEQ+10,1,, SET TERMINAL INDICATOR	08230	15	08272 00001
00770	B7	RC	08242	49	07808
00780 *					
00790 *		SEQUENCE ERROR ROUTINE			
00800 *					
00810	TFM	SAVMS1+18,RC	08250	16	08352 -7808
00820	ERSEQ	RCTY	08262	34	00000 00102
00830	BD	TRSEQ,ERSEQ+10	08274	43	08354 08272
00840	TF	WOUT+4,CM+6,11, TRANSFER WRONG SEQ NO. FOR PRINTING	08286	26	08464 0787M
00850	WNTY	WOUT	08298	38	08460 00100
00860	WATY	ERR	08310	39	08391 00100
00870	BI	**+12,0700	08322	46	08334 00700
00880	SAVMS1	H	08334	48	00000 00000
00890	B7	RC	08346	49	07808
00900	TRSEQ	WATY TC	08354	39	08375 00100
00910	B7	SAVMS1-12	08366	49	08322
00920	TC	DAC 8,TRAILER ,	08375		8 X 2
		TRAILER			
00930	ERR	DAC 35, CARD SEQ ERROR, CORRECT AND START*	08391		35 X 2
		CARD SEQ ERROR, CORRECT AND START*			
00940	WOUT	DSC 6,00000*	08460		6
		00000*			
00950 *					
00960 *					
00970 *		TRAILER CARD EARLY DETECTION ROUTINE			
00980 *					
00990	CDI	TFM CM+6,0,67, SPECIAL SEQ NUM IF NON-SEQ AND NOT TRAILER	08466	16	0787M -0000
01000	B7	CM	08478	49	07868
01010 *					
01020 *					
01030	SKADR	DC 3,999	08487		3
		R99			
01040 *					

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MONITOR SYSTEM LOADER				PAGE	3
01050 *		LAST CD READ AND CK			
01060 *					
01070	RDTRL	RNCD 5311,,, READ TRAILER RNPT IF PAPER TAPE *****	08488	36	05311 00500
01080	TOTSEC	DS ,RDTRL+23	08511		0
01090	SF	5311	08500	32	05311 00000
01100	TFM	SAVMS1+18,RDTRL	08512	16	08352 -8488
01110	C	5390,CM+11,, NOP IF P. T. *****	08524	24	05390 07879
01120	BNE	ERSEQ,,, NOP IF P. T. *****	08536	47	08262 01200
01130	BD	**+60,5318	08548	43	08608 05318
01140	BD	**+48,5317	08560	43	08608 05317
01150	BNR	**+36,5316	08572	45	08608 05316
01160	CM	5315,99999	08584	14	05315 R9999
01170	BE	WRDSK,,, BR IF TRAILER OK	08596	46	09042 01200
01180 *		ERROR NO TRAILER REC			
01190 *					
01200	ERTR	RCTY	08608	34	00000 00102
01210	WATY	NOTRL	08620	39	08713 00100
01220	RCTY		08632	34	00000 00102
01230	WATY	NOTRL2	08644	39	08807 00100
01240	RCTY		08656	34	00000 00102
01250	BI	**+12,0700	08668	46	08680 00700
01260	TDM	ERSEQ+10,0	08680	15	08272 00000
01270	H		08692	48	00000 00000
01280	B7	ERTR	08704	49	08608
01290	NOTRL	DAC 47,NO TRAILER REC. CORRECT, RE-LOAD COMPLETE DECK*	08713		47 X 2
		NO TRAILER REC. CORRECT, RE-LOAD COMPLETE DECK*			
01300	NOTRL2	DAC 30,WITH CNTR REC, AND BR TO 7404*	08807		30 X 2
		WITH CNTR REC, AND BR TO 7404*			
01310 *					
01320	NAM	DAC 50,	08867		50 X 2
01330	DAC	31,	08967		31 X 2
01340	DSKOUT	DSS 6	09028		6
01350	DC	3,0	09036		3
		-00			
01360	DSA	5000	09041		5 X 1
			09041		-5000
01370 *		WRITE DISK ROUTINE			
01380	WRDSK	C DSKOUT+3,SKADR,, CK FOR SEEK NEEDED	09042	24	09031 08487
01390	BE	**+36	09054	46	09090 01200
01400	SKI	SK DSKOUT	09066	34	09028 00701
01410	TF	SKADR, DSKOUT+3,, SAVE SEEK ADDRESS	09078	26	08487 09031
01420	WDN	DSKOUT	09090	38	09028 00702
01430	CDN	DSKOUT	09102	36	09028 00703
01440	BI	ASC,3800,, BR OVERFLOW	09114	46	09452 03800
01450	BI	TEST,1900,, BR ANY OTHER ERROR	09126	46	09214 01900
01460	BNI	SM2,1900,, BR NO ERRORS	09138	47	09182 01900
01470	H2	H	09150	48	00000 00000
01480	BI	**+12,0700	09162	46	09174 00700
01490	B7	SKI	09174	49	09066
01500	SM2	A DSKOUT+5,DSKOUT+8,,ADD NUMB SECT WRITTEN TO SECTOR ADDR	09182	21	09033 09036
01510	BD	END,ERSEQ+10,, BRANCH IF LAST WRITE	09194	43	09508 08272
01520	B7	INITZ,,, BRANCH IF NOT LAST WRITE	09206	49	07748
01530 *					

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MONITOR SYSTEM LOADER

01540	TEST	BI	++12,0600		09214	46	09226	00600
01550		BI	++12,0700		09226	46	09238	00700
01560		BI	++12,1600		09238	46	09250	01600
01570		BI	++12,1700		09250	46	09262	01700
01580		BI	++12,3600		09262	46	09274	03600
01590		BI	++12,3700		09274	46	09286	03700
01600	*		WRONG LEN REC CK ROUTINE					
01610	NOP	NOP	ONESEC,,, NOP 1ST TIME, BRANCH 2ND TIME		09286	41	09318	00000
01620		TD	NOP+1,9		09298	25	09287	00009
01630		B7	SKI		09310	49	09066	
01640	ONESEC	TDM	NOP+1,1		09318	15	09287	00001
01650		RCTY			09330	34	00000	00102
01660		WATY	DERR		09342	39	09387	00100
01670		BI	++12,0700		09354	46	09366	00700
01680		H			09366	48	00000	00000
01690		B7	SKI		09378	49	09066	
01700	DERR	DAC	33,DISK RD WR ERROR, START TO RETRY'		09387		33 X	2
			DISK RD WR ERROR, START TO RETRY'					
01710	*							
01720	*		OVERFLOW ROUTINE					
01730	ASC	BI	H2,1900,, BR IF OTHER ERROR ALSO		09452	46	09150	01900
01740		AM	DSKOUT+13,100,, INCREMENT CORE WRITE-OUT ADDRESS		09464	11	09041	-0100
01750		AM	DSKOUT+5,1,, INCREMENT SECTOR ADDR		09476	11	09033	-0001
01760		SM	DSKOUT+8,1,9		09488	12	09036	00-01
01770		B7	SKI		09500	49	09066	
01780	*							
01790	*		END ROUTINE					
01800	*							
01810	END	TDM	ERSEQ+10,0		09508	15	08272	00000
01820		TF	LDMESS+10,3999,, GET NAME INTO MESSAGE		09520	26	09717	03999
01830		RCTY			09532	34	00000	00102
01840		WATY	LDMESS		09544	39	09707	00100
01850		BI	++12,0700		09556	46	09568	00700
01860		TDM	4006,0		09568	15	04006	00000
01870		DC	1,,',*		09579		1	
01880		WNTY	4000		09580	38	04000	00100
01890		BI	++12,0700		09592	46	09604	00700
01900		A	4005,TDSEC,, PREPARE FINAL		09604	21	04005	08511
01910		SM	4005,1,, SECTOR TYPEOUT		09616	12	04005	-0001
01920		WATY	LDMES2		09628	39	09697	00100
01930		WNTY	4000		09640	38	04000	00100
01940		BI	++12,0700		09652	46	09664	00700
01950		BC1	++24		09664	46	09688	00100
01960	SAVMES	H			09676	48	00000	00000
01970		B7	STAR		09688	49	07404	
01980	*							
01990	LDMES2	DAC	5, TD '		09697		5 X	2
			TO '					
02000	LDMESS	DAC	20,AAAAAA LOADED FROM '		09707		20 X	2
			AAAAAA LOADED FROM '					
02010		DEND	STAR		07404			

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MONITOR SYSTEM LOADER

ADJUST	08158	BF	07856	ERTR	08608	SF1	07580	WOUT	08460
DSKOUT	09028	CD1	08466	H2	09150	SKADR	08487	WRDSK	09042
ERHIGH	08087	CDINI	07784	INITZ	07748	SKI	09066	SAVMES	09676
HALTRD	07996	CM	07868	LDCTR	08029	SM2	09182	SAVMS1	08334
LDMES2	09697	DERR	09387	NAM	08867	STAR	07404	TEMPSC	07591
LDMESS	09707	END	09508	NOP	09286	TC	08375	TOTSEC	08511
NDTRL2	08807	ERHI	08042	NDTRL	08713	TDI	07520		
ONESEC	09318	ERR	08391	RC	07808	TEST	09214		
ASC	09452	ERSEQ	08262	RDTRL	08488	TRSEQ	08354		

END OF ONE ASSEMBLY.

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##JOB
##SPSX
*LISTTYPEWRITER

*THIS PROGRAM COMPUTES THE AREA UNDER THE CURVE
*SQRT(3X**2)ARCSINX, WHERE X LIES BETWEEN 0 AND 1. THE AREA IS
*COMPUTED BY SIMPSONS RULE
* FOR NUMERICAL INTEGRATION. THE AREA IS EVALUATED USING THREE
* DIFFERENT VALUES FOR DELTAX. THEY ARE 0.100, 0.050, AND 0.025.

START	TF	DELTAX,X,7,TRANSMIT VALUE OF INCREMENT			
	TF	AREA,Z-3	02402	26	04059 04066
	TF	XSUBN,UNIT	02414	26	04088 04096
	TDM	SW3+1,1,,SET SW3 OFF	02426	26	04106 04113
	TDM	SW2+1,1,,SET SW2 OFF	02438	15	03759 00001
	TDM	SW1+1,1,,SET SW1 OFF	02450	15	03567 00001
	TR	ASUBN-9,CONST-9,,TRANSMIT ASUB5 TO ASUB0	02462	15	03435 00001
			02474	31	04114 04175
ASINE	TF	PSIX,ASUBN	02486	26	04245 04123
	M	PSIX,XSUBN	02498	23	04245 04106
	SF	84	02510	32	00084 00000
	BNF	**2*L,99	02522	44	02546 00099
	SF	93	02534	32	00093 00000
	TF	PSIX,93	02546	26	04245 00093
	TR	ASUBN-9,ASUBN+1	02558	31	04114 04124
	A	PSIX,ASUBN	02570	21	04245 04123
	BNR	ASINE,ASUBN+1	02582	45	02498 04124
	BNCL	CONTA	02594	47	02798 00100
	TD	POLY+48,PSIX-9	02606	25	04441 04236
	TD	POLY+52,PSIX-8	02618	25	04445 04237
	TD	POLY+54,PSIX-7	02630	25	04447 04238
	TD	POLY+56,PSIX-6	02642	25	04449 04239
	TD	POLY+58,PSIX-5	02654	25	04451 04240
	TD	POLY+60,PSIX-4	02666	25	04453 04241
	TD	POLY+62,PSIX-3	02678	25	04455 04242
	TD	POLY+64,PSIX-2	02690	25	04457 04243
	TD	POLY+66,PSIX-1	02702	25	04459 04244
	TD	POLY+68,PSIX	02714	25	04461 04245
	TD	POLY+12,XSUBN-6	02726	25	04405 04100
	TD	POLY+16,XSUBN-5	02738	25	04409 04101
	TD	POLY+18,XSUBN-4	02750	25	04411 04102
	TD	POLY+20,XSUBN-3	02762	25	04413 04103
	RCTY	POLY	02774	34	00000 00102
	WATY	RADCND,UNIT	02786	39	04393 00100
CONTA	S	RADCND,XSUBN,,RADICAND = 1-X	02798	26	04253 04113
	TR	RADCND,ZNINES-13,	02810	22	04253 04106
	BNCL	CONTB	02822	31	04253 04268
	TD	ARG+42,RADCND-6	02834	47	02954 00100
	TD	ARG+46,RADCND-5	02846	25	04507 04247
	TD	ARG+48,RADCND-4	02858	25	04511 04248
	TD	ARG+50,RADCND-3	02870	25	04513 04249
			02882	25	04515 04250

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	TD	ARG+52,RADCND-2	02894	25	04517 04251
	TD	ARG+54,RADCND-1	02906	25	04519 04252
	TD	ARG+56,RADCND	02918	25	04521 04253
	RCTY	ARG	02930	34	00000 00102
	WATY	ARG	02942	39	04465 00100
CONTB	TF	NINE,TWO9	02954	26	04293 04305
	TF	ODDINT,ONEONE	02966	26	04319 04333
	B	**2*L	02978	49	03002 00000
ROOT	A	ODDINT-8,TWO	02990	21	04311 04287
	S	RADCND+7,ODDINT	03002	22	04260 04319
	BNN	ROOT	03014	46	02990 01300
	A	RADCND+7,ODDINT	03026	21	04260 04319
	TR	RADCND-7,RADCND-6	03038	31	04246 04247
	SF	RADCND-7	03050	32	04246 00000
	S	ODDINT-8,NINE	03062	22	04311 04293
	TF	NINE,NINE-1	03074	26	04293 04292
	BNF	ROOT+1*L,TWO+1	03086	44	03002 04288
	TF	SQRT,NINES	03098	26	04339 04345
	SF	RADCND+1	03110	32	04254 00000
	S	SQRT,RADCND+6	03122	22	04339 04258
	BNCL	CONTC	03134	47	03242 00100
	TD	GENRT+24,SQRT-5	03146	25	04549 04334
	TD	GENRT+28,SQRT-4	03158	25	04553 04335
	TD	GENRT+30,SQRT-3	03170	25	04555 04336
	TD	GENRT+32,SQRT-2	03182	25	04557 04337
	TD	GENRT+34,SQRT-1	03194	25	04559 04338
	TD	GENRT+36,SQRT	03206	25	04561 04339
	RCTY	GENRT	03218	34	00000 00102
	WATY	GENRT	03230	39	04525 00100
CONTC	M	SQRT,PSIX	03242	23	04339 04245
	SF	85	03254	32	00085 00000
	TF	TEMP1,94	03266	26	04355 00094
	BNCL	SW1	03278	47	03434 00100
	TD	FUNCT+10,TEMP1-9	03290	25	04575 04346
	TD	FUNCT+14,TEMP1-8	03302	25	04579 04347
	TD	FUNCT+16,TEMP1-7	03314	25	04581 04348
	TD	FUNCT+18,TEMP1-6	03326	25	04583 04349
	TD	FUNCT+20,TEMP1-5	03338	25	04585 04350
	TD	FUNCT+22,TEMP1-4	03350	25	04587 04351
	TD	FUNCT+24,TEMP1-3	03362	25	04589 04352
	TD	FUNCT+26,TEMP1-2	03374	25	04591 04353
	TD	FUNCT+28,TEMP1-1	03386	25	04593 04354
	TD	FUNCT+30,TEMP1	03398	25	04595 04355
	RCTY	FUNCT	03410	34	00000 00102
	WATY	FUNCT	03422	39	04565 00100
SW1	B	SW2	03434	49	03566 00000
	M	XSUBN,XSUBN	03446	23	04106 04106
	SF	87	03458	32	00087 00000
	TF	TEMP2,96	03470	26	04365 00096
	MM	TEMP2,3,10	03482	13	04365 00003
	SF	90	03494	32	00090 00000
	TF	RADCND,96	03506	26	04253 00096
	TF	PSIX,CONST+50	03518	26	04245 04234
	S	PSIX,TEMP1	03530	22	04245 04355
	TDM	SW1+1,9	03542	15	03435 00009

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SW2	B	ROOT-14*L	03554	49	02822	00000
	B	ODDVN	03566	49	03674	00000
	A	AREA,TEMP1-4,,FO+FN	03578	21	04088	04351
* INITIALIZATION FOR FSUBODD						
	TF	XSUBN,DELTAX	03590	26	04106	04059
	TFM	MULT+11,4,10	03602	16	03733	00004
	TDM	SW2+1,9	03614	15	03567	00009
	TF	ACCUM,2	03626	26	04376	04099
	TF	TEMP3,DELTAX	03638	26	04383	04059
	A	TEMP3,TEMP3	03650	21	04383	04383
	B	ASINE-3*L	03662	49	02462	00000
ODDVN	A	ACCUM,TEMP1	03674	21	04376	04355
	A	XSUBN,TEMP3	03686	21	04106	04383
	C	XSUBN,NINES	03698	24	04106	04345
	BNH	ASINE-3*L	03710	47	02462	01100
MULT	MM	ACCUM	03722	13	04376	00000
	SF	88	03734	32	00088	00000
	A	AREA,95	03746	21	04088	00095
SW3	B	*+6*L	03758	49	03830	00000
* INITIALIZATION FOR FSUBEVEN						
	TFM	MULT+11,2,10	03770	16	03733	00002
	TF	ACCUM,2	03782	26	04376	04099
	TF	XSUBN,TEMP3	03794	26	04106	04383
	TDM	SW3+1,9	03806	15	03759	00009
	B	ASINE-3*L	03818	49	02462	00000
	M	AREA,DELTAX	03830	23	04088	04059
	SF	88	03842	32	00088	00000
	TF	TEMP1,97	03854	26	04355	00097
	M	TEMP1,THREES	03866	23	04355	04390
	TD	OUTPUT+26,DELTAX-5	03878	25	04625	04054
	TD	OUTPUT+28,DELTAX-4	03890	25	04627	04055
	TD	OUTPUT+30,DELTAX-3	03902	25	04629	04056
	TD	OUTPUT+46,83	03914	25	04645	00083
	TD	OUTPUT+50,84	03926	25	04649	00084
	TD	OUTPUT+52,85	03938	25	04651	00085
	TD	OUTPUT+54,86	03950	25	04653	00086
	TD	OUTPUT+56,87	03962	25	04655	00087
	TD	OUTPUT+58,88	03974	25	04657	00088
	RCTY		03986	34	00000	00102
	WATY	OUTPUT	03998	39	04599	00100
	AM	START+11,7,10	04010	11	02413	00007
	CM	START+11,X+21	04022	14	02413	04087
	BNE	START	04034	47	02402	01200
	CALXIT	CALL EXIT	04046	49	00796	00000
* AREA DEFINITIONS						
DELTAX	DS	7	04059	00007		
X	DC	7,100000	04066	00007	0100000	
	DC	7,50000	04073	00007	0050000	
	DC	7,25000	04080	00007	0025000	
AREA	DS	8	04088	00008		
Z	DC	11,0	04099	00011	00000000000	
XSUBN	DS	7	04106	00007		
UNIT	DC	7,1000000	04113	00007	1000000	
ASUBN	DSB	10,6	04123	00060		
	DS	1	04174	00001		

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CONST	DC	10,-4337769	04184	00010	0004337769	
	DC	10,19349939	04194	00010	0019349939	
	DC	10,-44958884	04204	00010	0044958884	
	DC	10,87876311	04214	00010	0087876311	
	DC	10,-214512362	04224	00010	0214512362	
	DC	11,1570795207@	04235	00011	1570795207+	
L	DS	12	00012	00000		
PSIX	DS	10	04245	00010		
	DS	1	04246	00001		
RADCND	DS	7	04253	00007		
	DS	13	04266	00013		
ZNINES	DC	15,9999999@	04281	00015	0000009999999+	
TWO	DS	6	04287	00006		
NINE	DS	6	04293	00006		
TWO9	DC	12,200000090000	04305	00012	200000090000	
ODDINT	DS	14	04319	00014		
ONEONE	DC	14,10000000000001	04333	00014	10000000000001	
SQRT	DS	6	04339	00006		
NINES	DC	6,9999999	04345	00006	999999	
TEMP1	DS	10	04355	00010		
TEMP2	DS	10	04365	00010		
ACCUM	DS	11	04376	00011		
TEMP3	DS	7	04383	00007		
THREES	DC	7,3333333	04390	00007	3333333	
POLY	DAC	36,FOR X=0.000, POLYNOMIAL=0.000000000@				
ARG	DAC	30,SQUARE ROOT ARGUMENT=0.000000@	04393	00072		
GENRT	DAC	20,SQUARE ROOT=0.00000@	04465	00060		
FUNCT	DAC	17,F(X)=0.000000000@	04525	00040		
OUTPUT	DAC	31,FOR DELTAX=0.000, AREA=0.00000@	04565	00034		
	DEND	START	04599	00062		
			02402			

END OF ASSEMBLY.
04660 CORE POSITIONS REQUIRED
00186 STATEMENTS PROCESSED

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EXECUTION

FOR DELTAX=0.100, AREA=0.68656
 FOR DELTAX=0.050, AREA=0.68241
 FOR DELTAX=0.025, AREA=0.68096
 END OF JOB

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##JOB          MONITOR II FORTRAN II-D SAMPLE PROGRAM
##FORX51

      DIMENSION E(10),F(10),G(10),H(5,5),FUNCT(50),H1(5,5),VALUE(50)
      DIMENSION ARG(10)
      DEFINE DISK (10,200)
      EQUIVALENCE (F,ARG),(VALUE,G,H),(FUNCT,E,H1)
      SCSFCT(X)=SINF(X)**2+COSF(X)**2
20  READ 999,XZERO,XMAX,DELX
50  READ 987,A,B,C,D
      READ 992,(ARG(J),J=1,10)
      READ 991,(VALUE(L),L=1,50)
      READ 991,(FUNCT(L),L=1,50)
      IND=1
      RECORD(IND) ARG,VALUE,FUNCT
      READ 988,((H(M,N),N=1,5),M=1,5)
      RECORD(IND) H
      READ 984,(F(I),I=1,10)
      READ 984,(G(J),J=1,10)
      PRINT 983
200 X=XZERO
30  X1=SINF(X)
      X2=COSF(X)
      X3=SINF(X)/COSF(X)
      X4=EXPF(X)
      X5=EXPF(-X)
      X6=LOGF(X)
      X7=LOGF(X)/2.3058509
      X8=SQRTF(X)
      X9=ATANF(X)
      X10=LOGF(X3)/2.3058509
      PRINT 998,X,X1,X2,X3
      PRINT 998,X,X4,X5
      PRINT 998,X,X6,X7
      PRINT 998,X,X8
      PRINT 998,X,X9,X10
      PRINT 988
40  IF(X-XMAX) 40,51,51
      X=X+DELX
      GO TO 30
51  DO 61 I=1,10,5
      E(I)=SCSFCT(F(I))
      DO 55 J=1,10,5
      F(I)=J
      PRINT 999, F(I)
      K=G(J)
      PRINT 998,E(I)
      PRINT 993,J,G(J),K
55  CONTINUE
61  CONTINUE
      IND=1
      FETCH(IND) ARG,VALUE,FUNCT
      DO 63 J=1,10

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DO 70 L=1,50
  IF(ARG(J)-VALUE(L))70,65,70
65 PRINT 990,ARG(J),FUNCT(L)
70 CONTINUE
65 CONTINUE
  FETCH(IND) H
  DO 130 M=1,2
  DO 80 N=1,3
  H1(M,N)=H(M,N)*1.0E+2
  PRINT 990,H1(M,N)
80 CONTINUE
130 CONTINUE
  PAUSE
  GO TO 20
983 FORMAT(11X 1HX 13X 6HSIN(X) 10X 6HCOS(X) 10X 6HTAN(X) /11X1HX 13X
1 6HEXP(X) 10X 7HEXP(-X)/ 11X 1HX 13X 6HLOG(X) 9X 8HLOG10(X)/ 11X
2 1HX 13X 7HSQRT(X)/ 11X 1HX 13X 7HATAN(X) 7X 13HLOG10(TAN(X))// )
998 FORMAT(4F16.8)
991 FORMAT(10F5.2)
992 FORMAT(F4.2,9F5.2)
993 FORMAT(I3,5X,F10.7,5X,I3)
984 FORMAT(10F4.2)
987 FORMAT(F5.3,1X,F5.3,1X,F5.3,1X,F5.3)
999 FORMAT(3F4.0)
990 FORMAT(2F20.7)
988 FORMAT(10F4.3)
END
00003 0001
00007 0005
00017 2305850901
00021 0003
00031 I000000003
00035 0002
00039 0010
00043 0050
00053 FUNCT 00543
00053 E 00143
00053 H1 00293
00553 VALUE 01043
00553 G 00643
00553 H 00793
01053 F 01143
01053 ARG 01143
01153 X*
01163 XMAX
01173 DELX
01183 A
01193 C
01197 J
01201 L
01205 N
01209 I
01219 X
01229 X1

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01239 X3
01249 X5
01259 X7
01269 X9
01279 XZERO
01289 B
01299 D
01303 IND
01307 M
01317 X2
01327 X4
01337 X6
01347 X8
01357 X10
01361 K
01520 0020
01580 0050
02608 0200
02620 0030
03338 0040
03382 0051
03784 0055
03820 0061
04124 0065
04244 0070
04280 0063
04504 0080
04540 0130
04602 0983
05044 0998
05084 0991
05124 0992
05174 0993
05234 0984
05274 0987
05356 0999
05396 0990
05436 0988
05490 LENGTH
59999 NEXT COMMON
END OF COMPILATION
EXECUTION
MAIN 07500 05490 LOADED
15 I2990 00376 LOADED
14 I3366 00518 LOADED
12 I3884 00742 LOADED
05 I4626 01530 LOADED
03 I6156 00474 LOADED
02 I6630 00650 LOADED
01 I7280 00650 LOADED

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X	SIN(X)	COS(X)	TAN(X)
X	EXP(X)	EXP(-X)	
X	LOG(X)	LOG10(X)	
X	SQRT(X)		
X	ATAN(X)	LOG10(TAN(X))	
.40000000	.38941833	.92106099	.42279320
.40000000	1.49182460	.67032004	
.40000000	-.91629072	-.39737639	
.40000000	.63245553		
.40000000	.38050637	-.37334248	
.50000000	.47942553	.87758256	.54630248
.50000000	1.64872120	.60653065	
.50000000	-.69314717	-.30060363	
.50000000	.70710678		
.50000000	.46364761	-.26219494	
.60000000	.56464246	.82535561	.68413679
.60000000	1.82211870	.54881163	
.60000000	-.51082562	-.22153454	
.60000000	.77459666		
.60000000	.54041950	-.16462356	

1.	.99999998		
1	2.10000000	2	
6.	.99999998		
6	2.60000000	2	
1.	.99999999		
1	2.10000000	2	
6.	.99999999		
6	2.60000000	2	
	5.00000000		5.10000000
	10.00000000		10.10000000
	24.00000000		24.10000000
	11.00000000		11.10000000
	39.00000000		39.10000000
	17.00000000		17.10000000
	44.00000000		44.10000000
	41.00000000		41.10000000
	50.00000000		50.10000000
	1.00000000		1.10000000
	11.00000000		
	22.00000000		
	33.00000000		
	66.00000000		
	77.00000000		
	88.00000000		

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DATA

XZERO,XMAX,DELX

.40 .60 .10

A,B,C,D

1.111 2.222 3.333 4.444

ARG

5.0 10.0 24.0 11.0 39.0 17.0 44.0 41.0 50.0 1.0

VALUE

1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0
11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0
21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0
31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0
41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0 49.0 50.0

FUNCT

1.10 2.10 3.10 4.10 5.10 6.10 7.10 8.10 9.10 10.1
11.1 12.1 13.1 14.1 15.1 16.1 17.1 18.1 19.1 20.1
21.1 22.1 23.1 24.1 25.1 26.1 27.1 28.1 29.1 30.1
31.1 32.1 33.1 34.1 35.1 36.1 37.1 38.1 39.1 40.1
41.1 42.1 43.1 44.1 45.1 46.1 47.1 48.1 49.1 50.1

H

.11 .22 .33 .44 .55 .66 .77 .88 .99 .10
.11 .12 .13 .14 .15 .16 .17 .18 .19 .20
.21 .22 .23 .24 .25

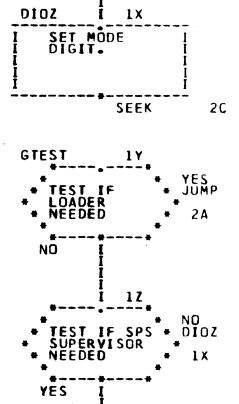
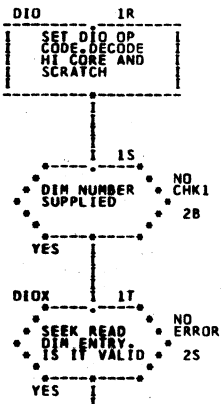
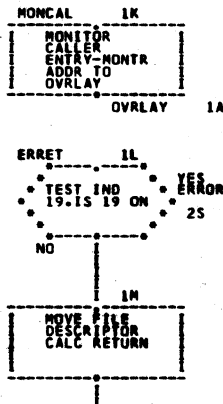
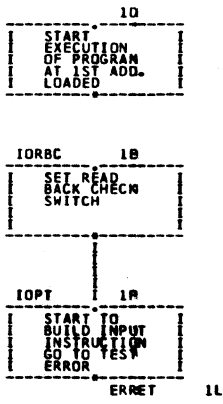
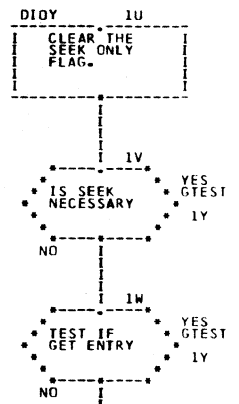
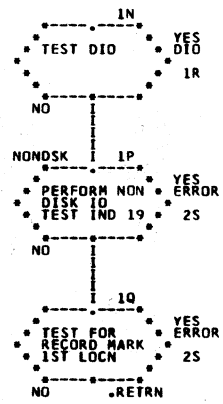
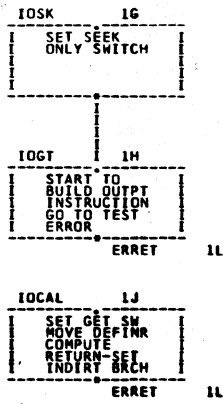
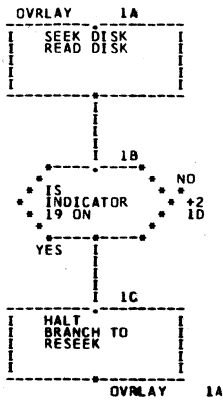
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1.1 2.2 3.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0

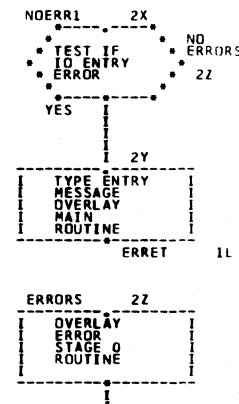
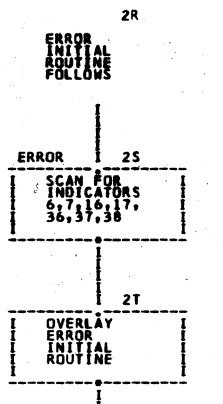
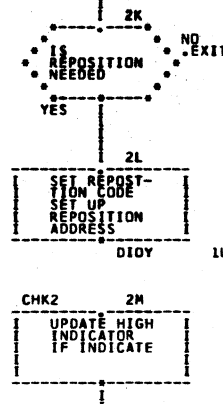
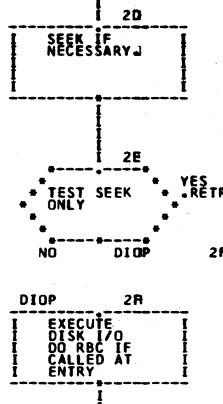
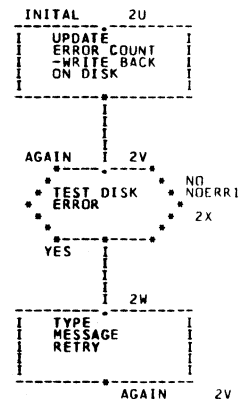
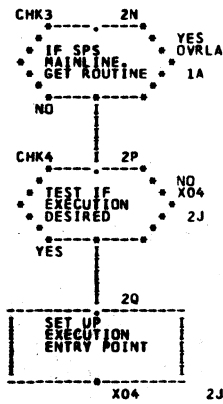
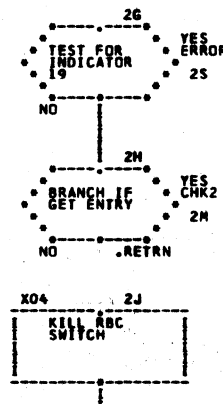
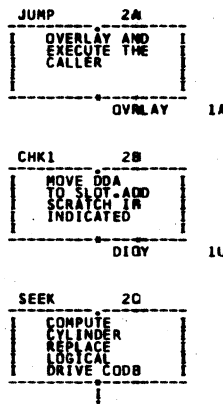
G

2.1 2.2 3.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0

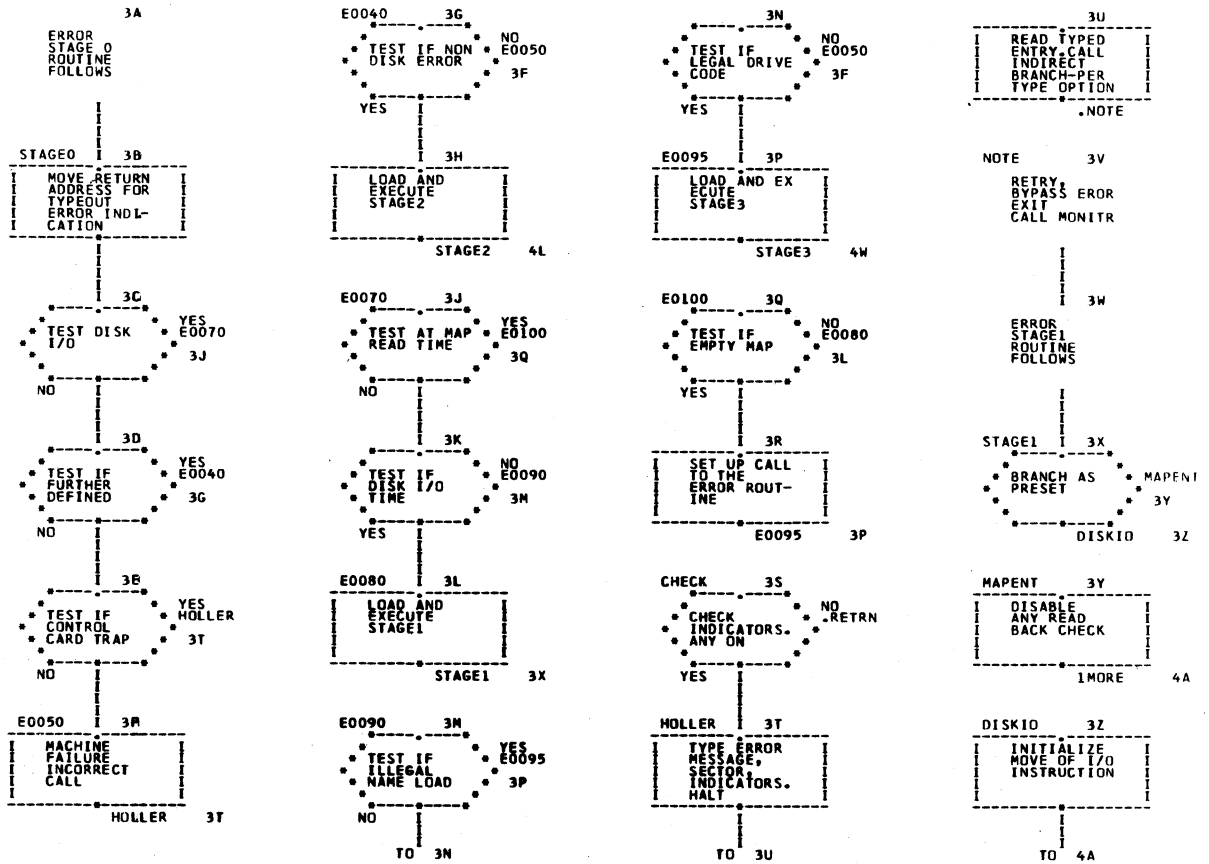
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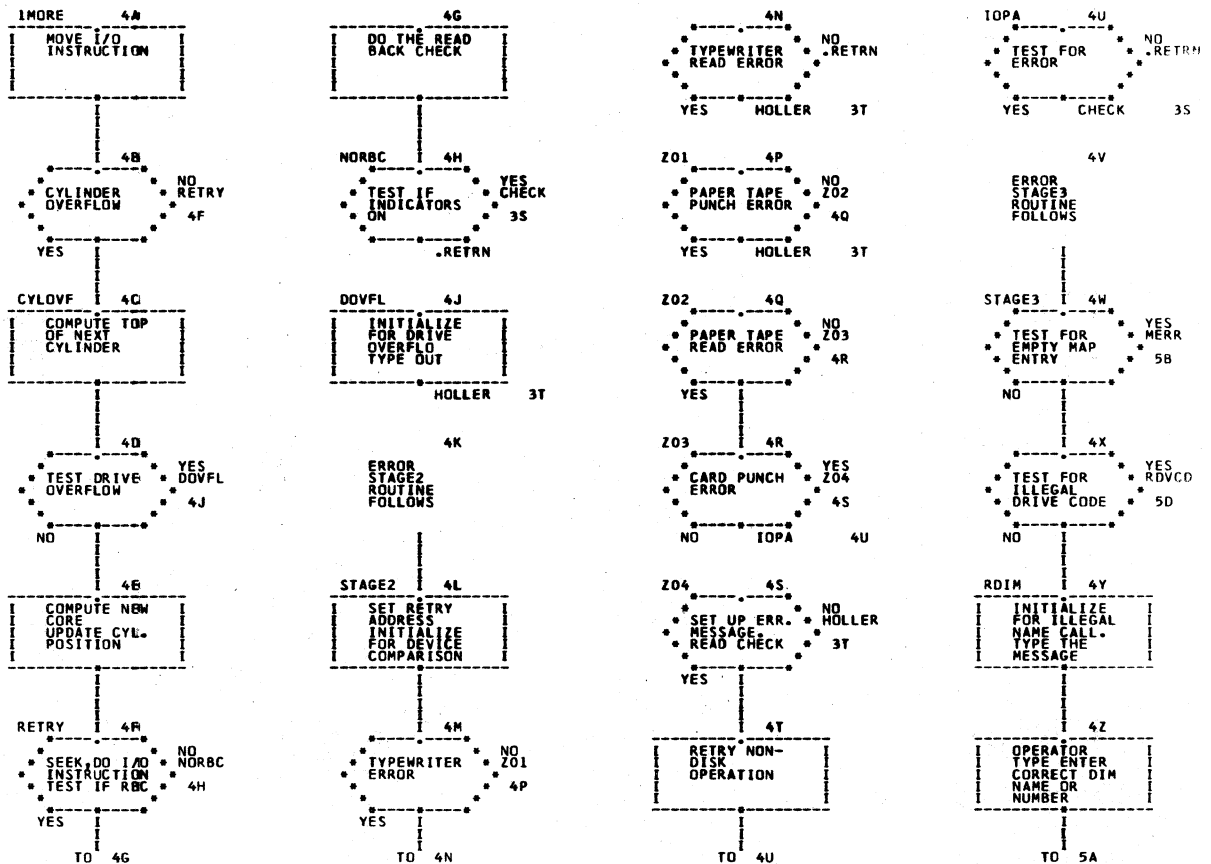
850 A



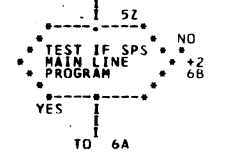
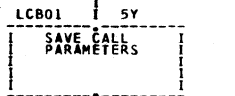
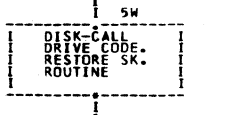
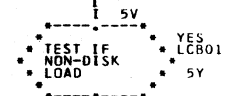
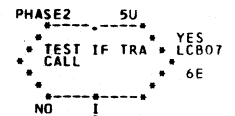
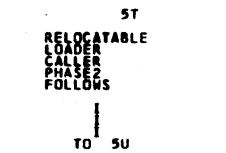
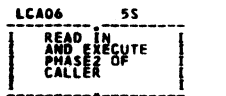
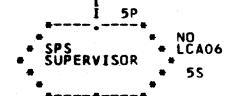
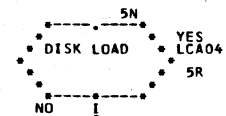
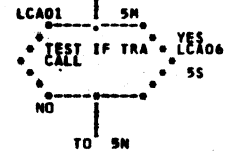
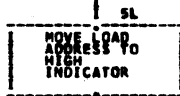
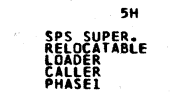
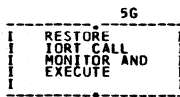
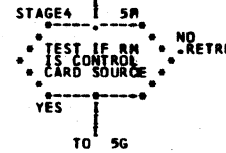
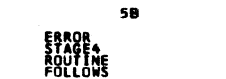
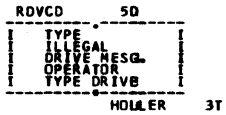
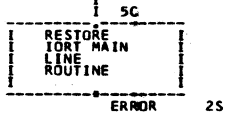
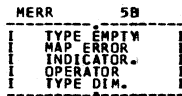
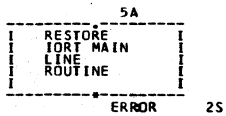
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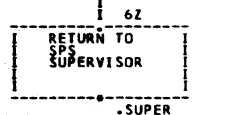
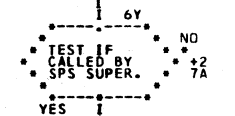
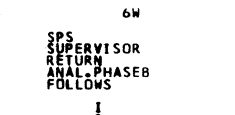
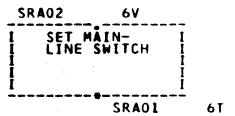
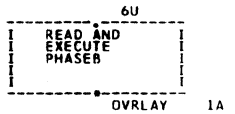
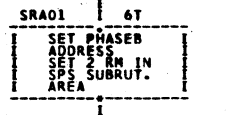
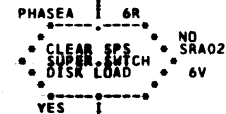
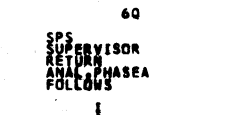
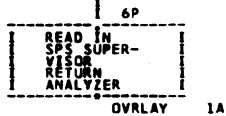
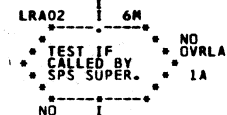
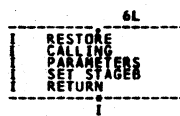
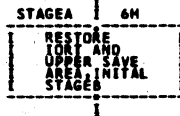
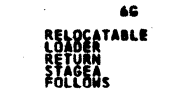
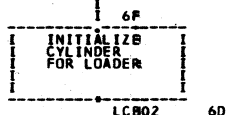
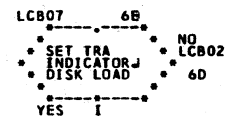
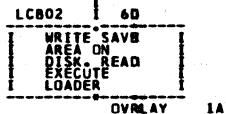
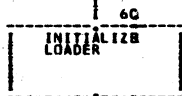
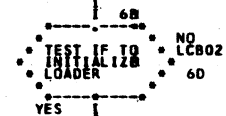
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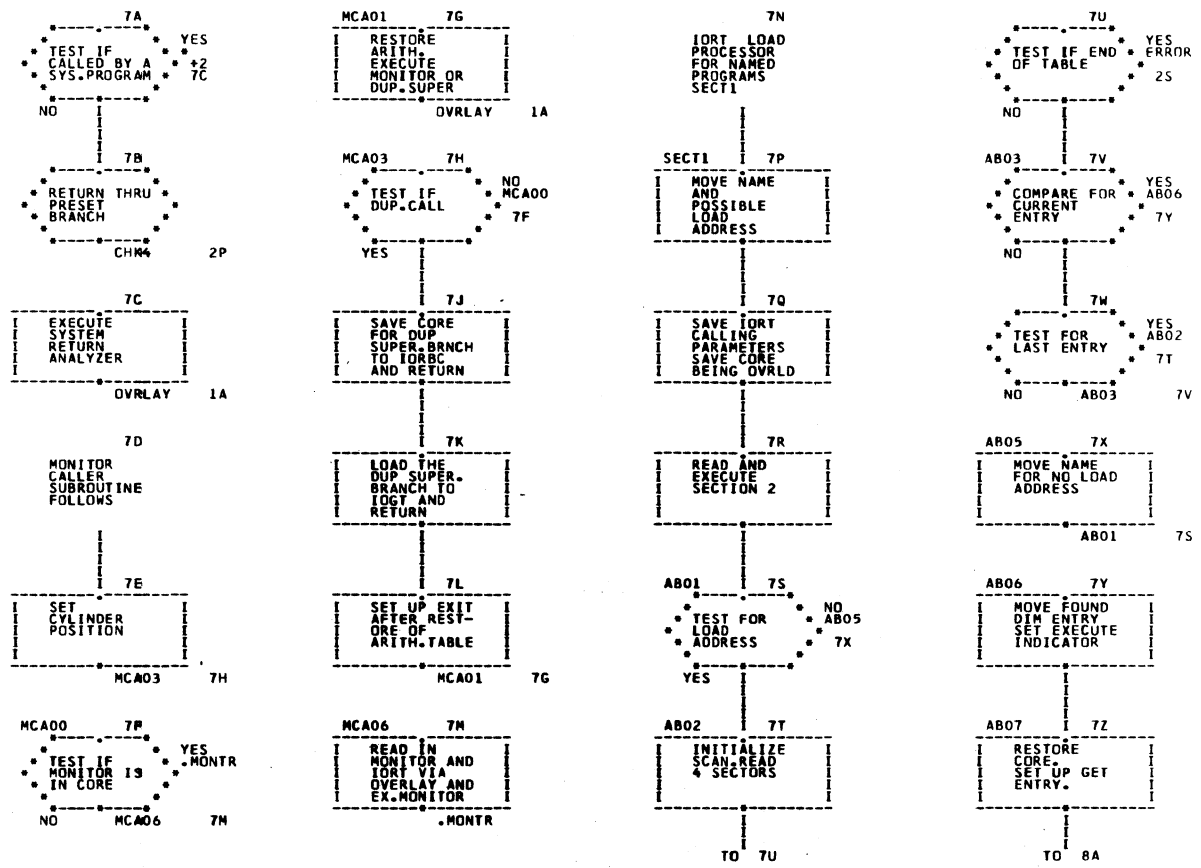
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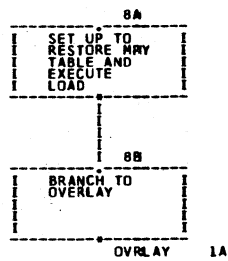
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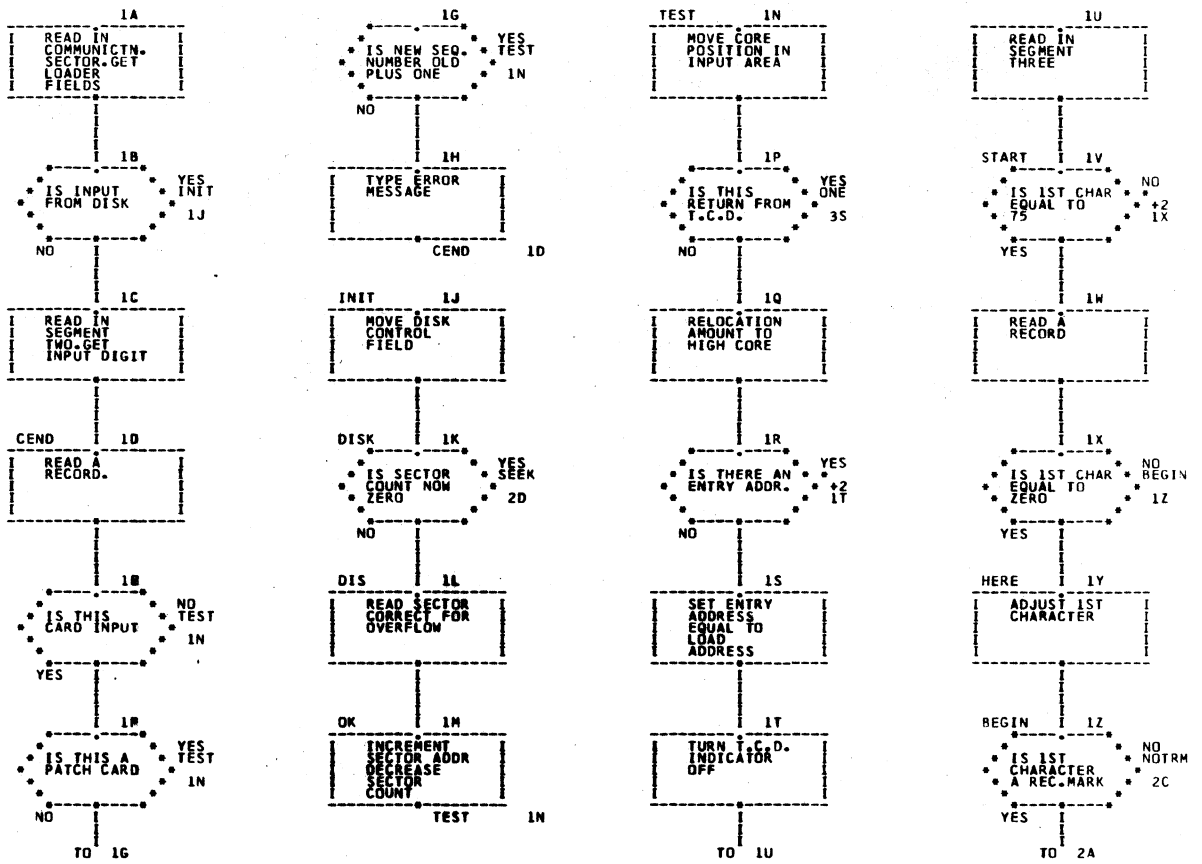
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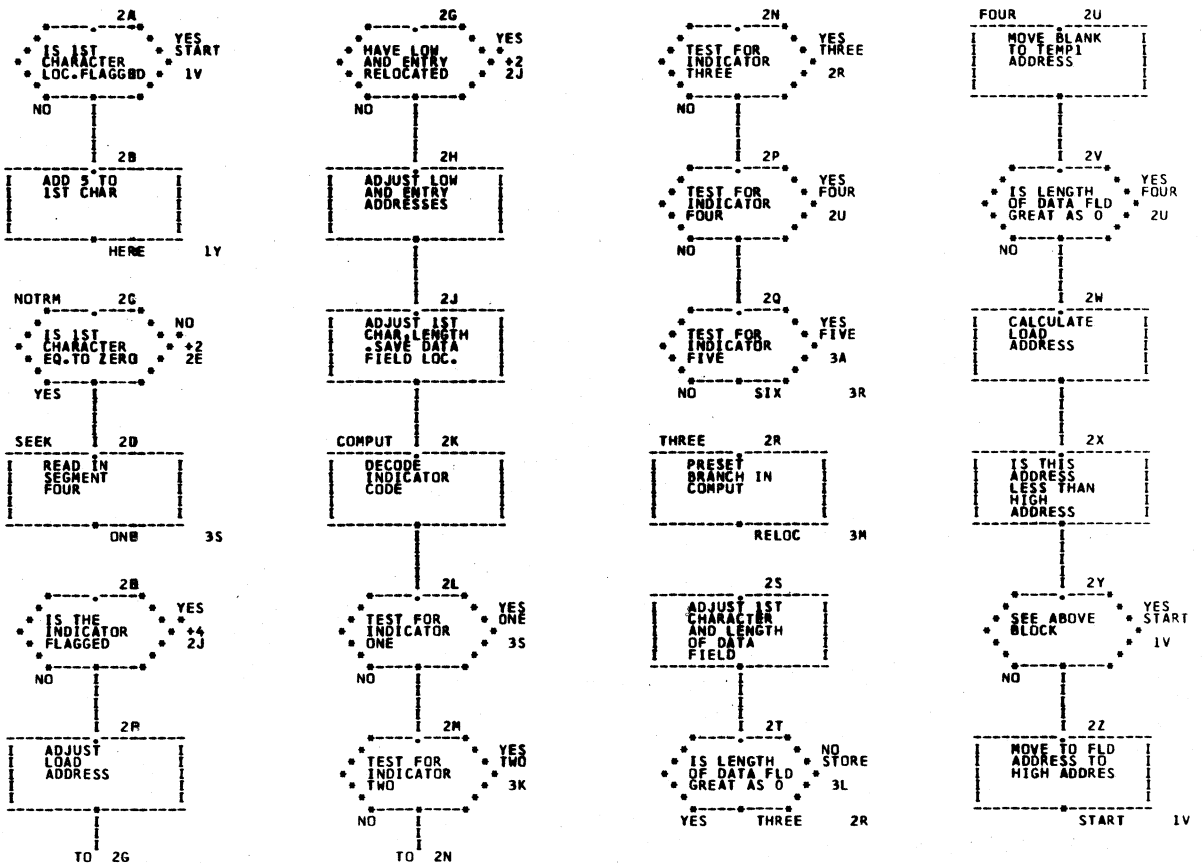
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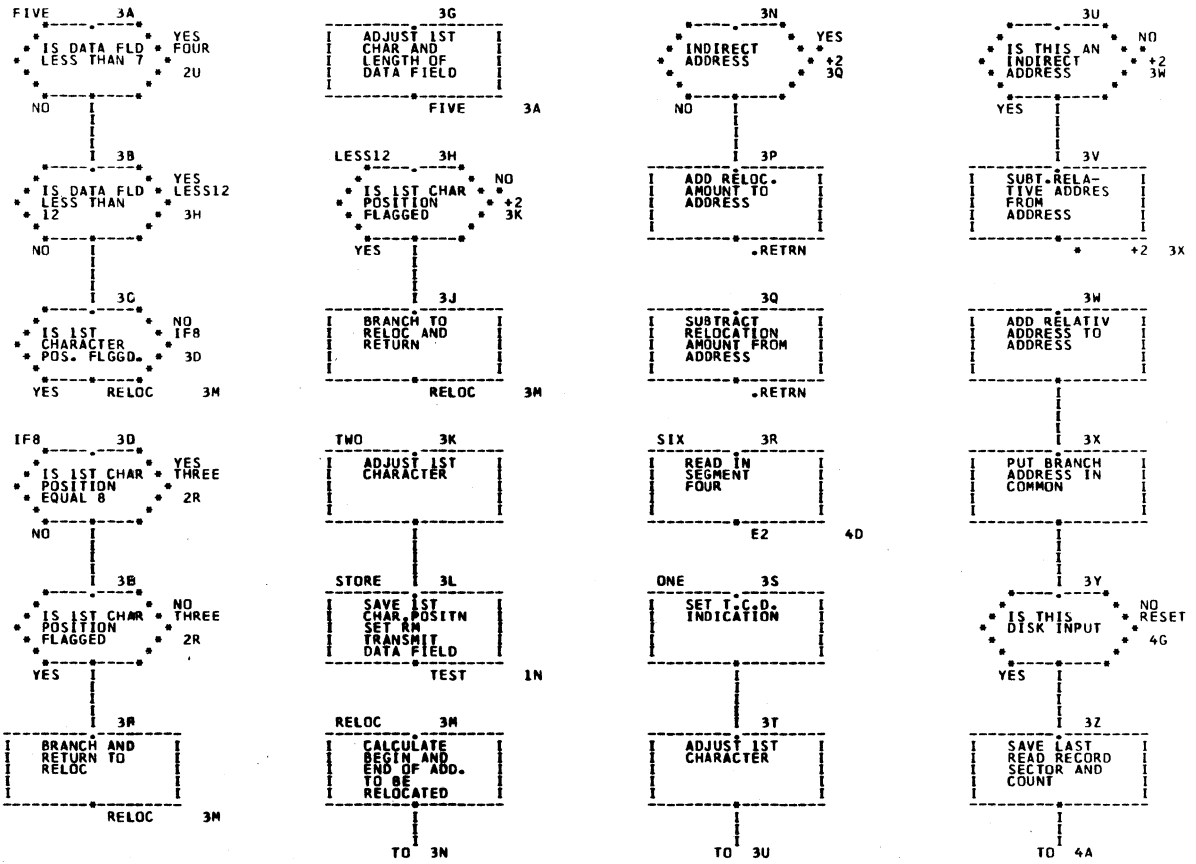
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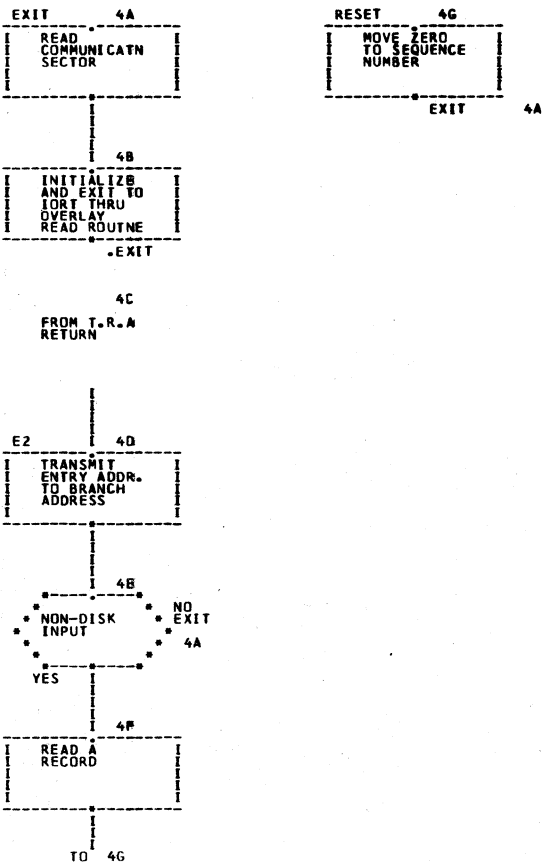
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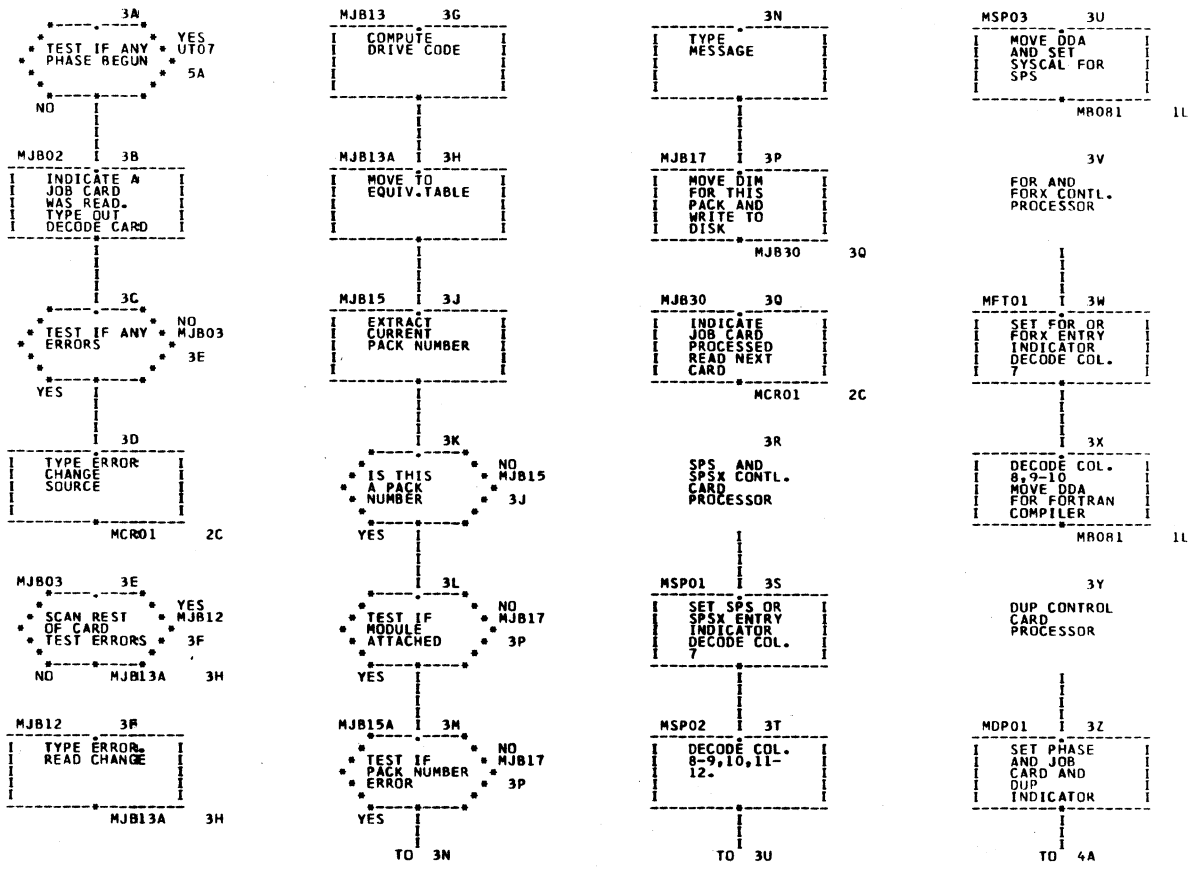
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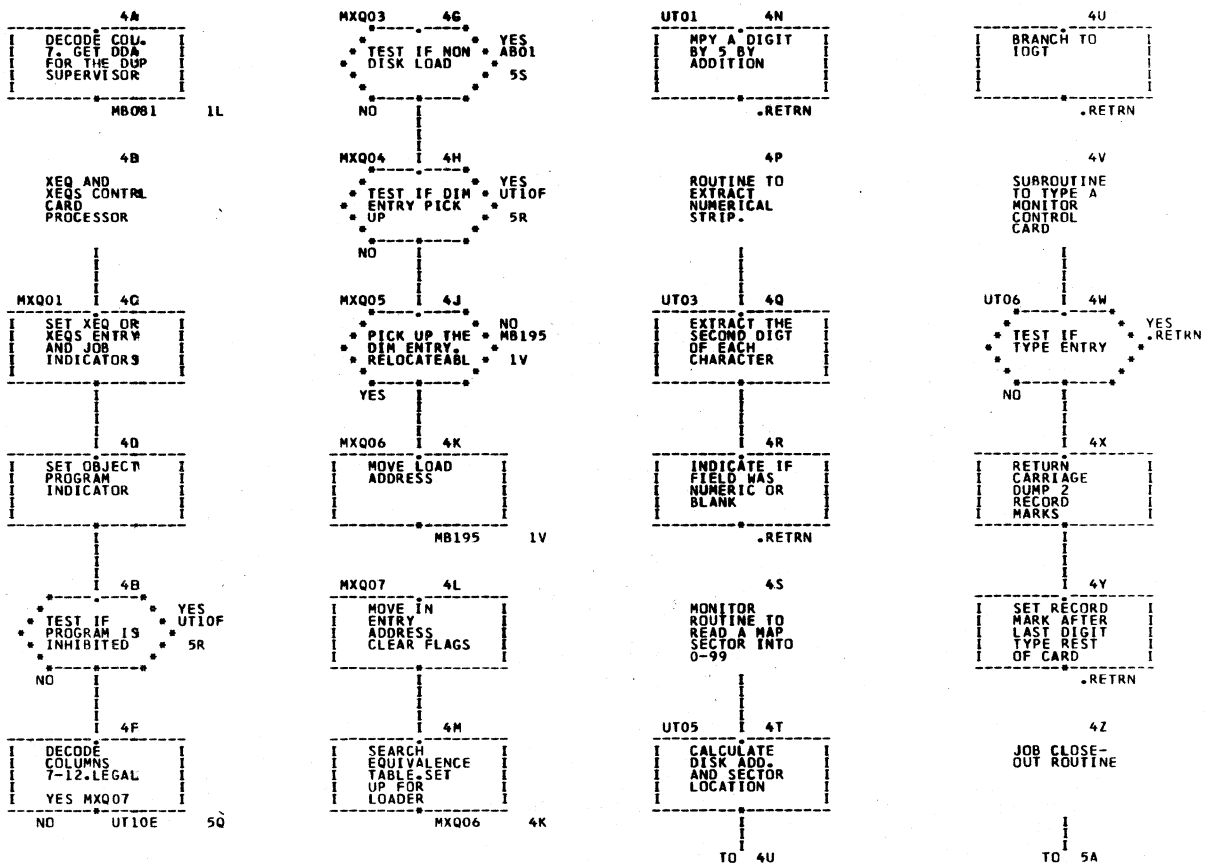
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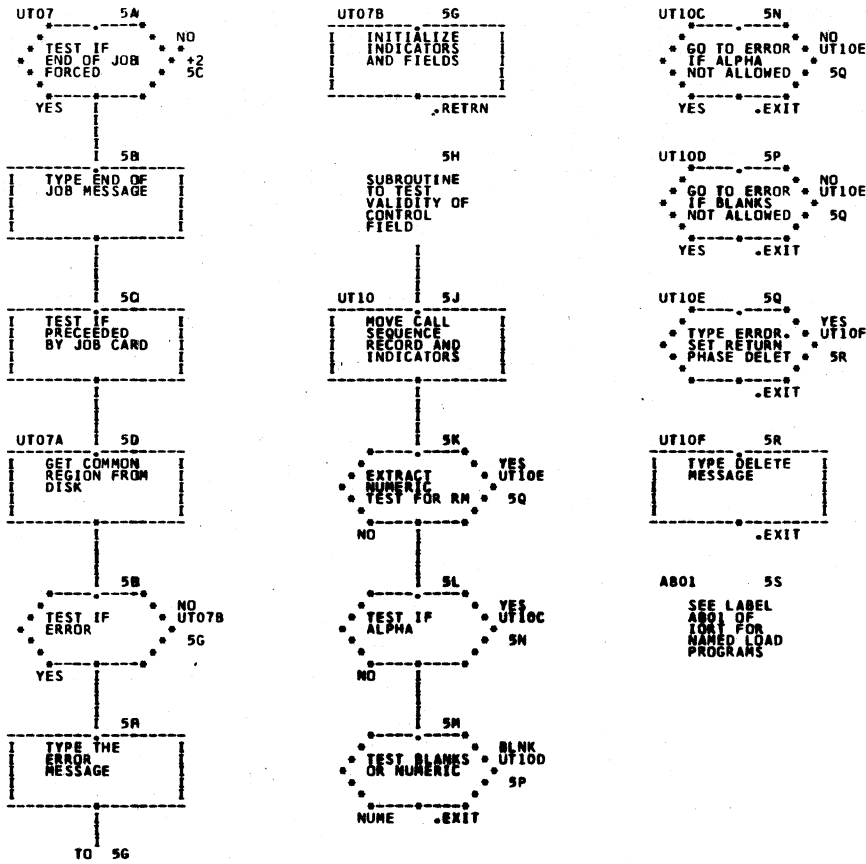
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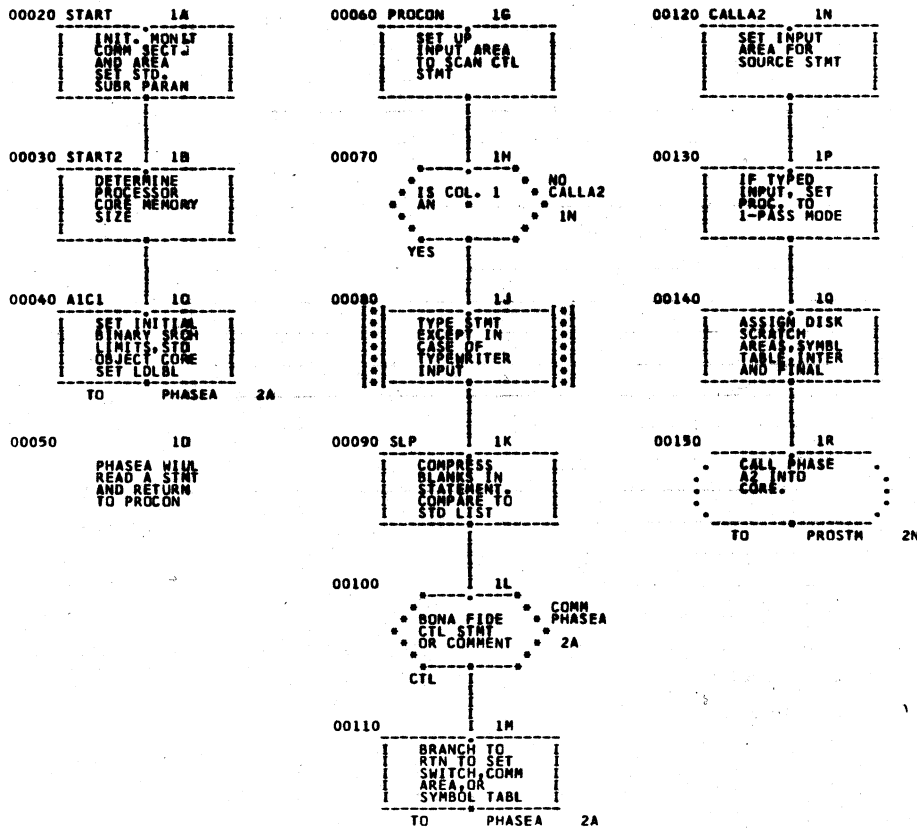


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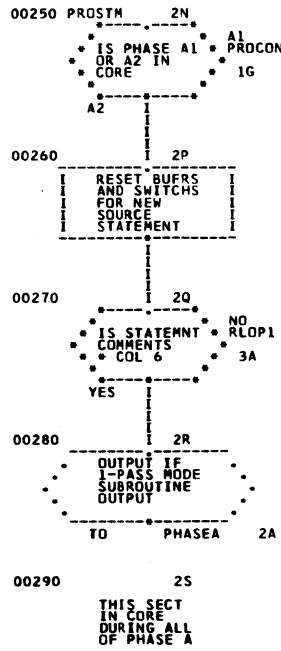
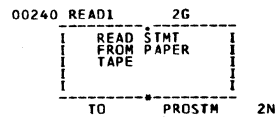
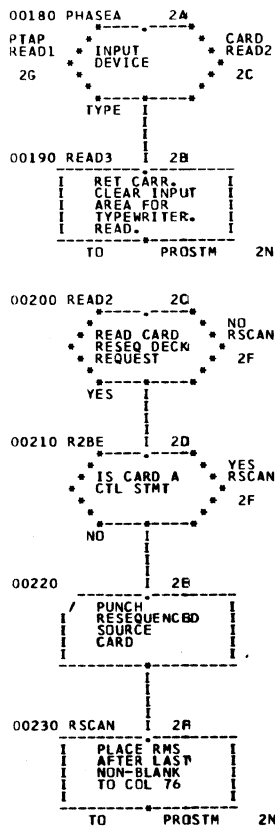


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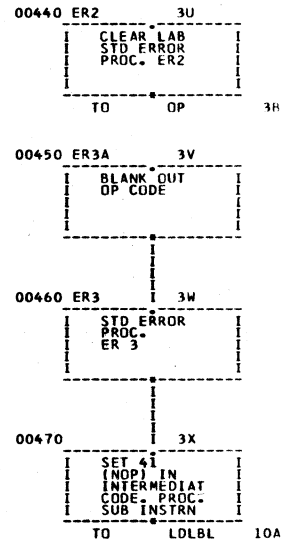
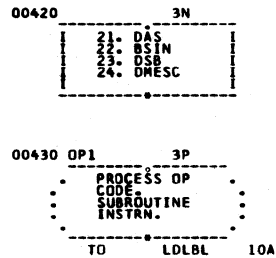
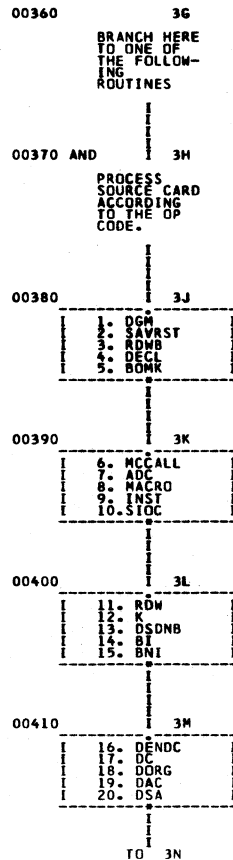
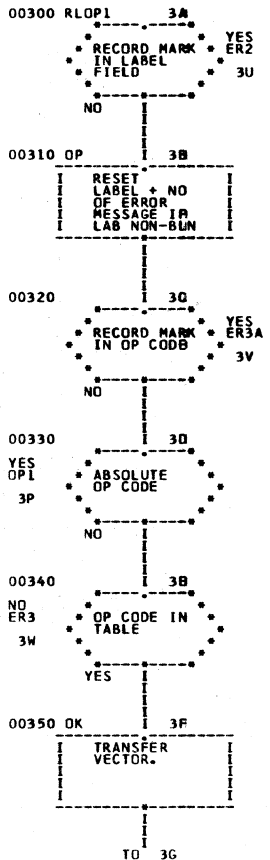
SPS II-D--PHASE A--SECTION A1 TEMPORARY



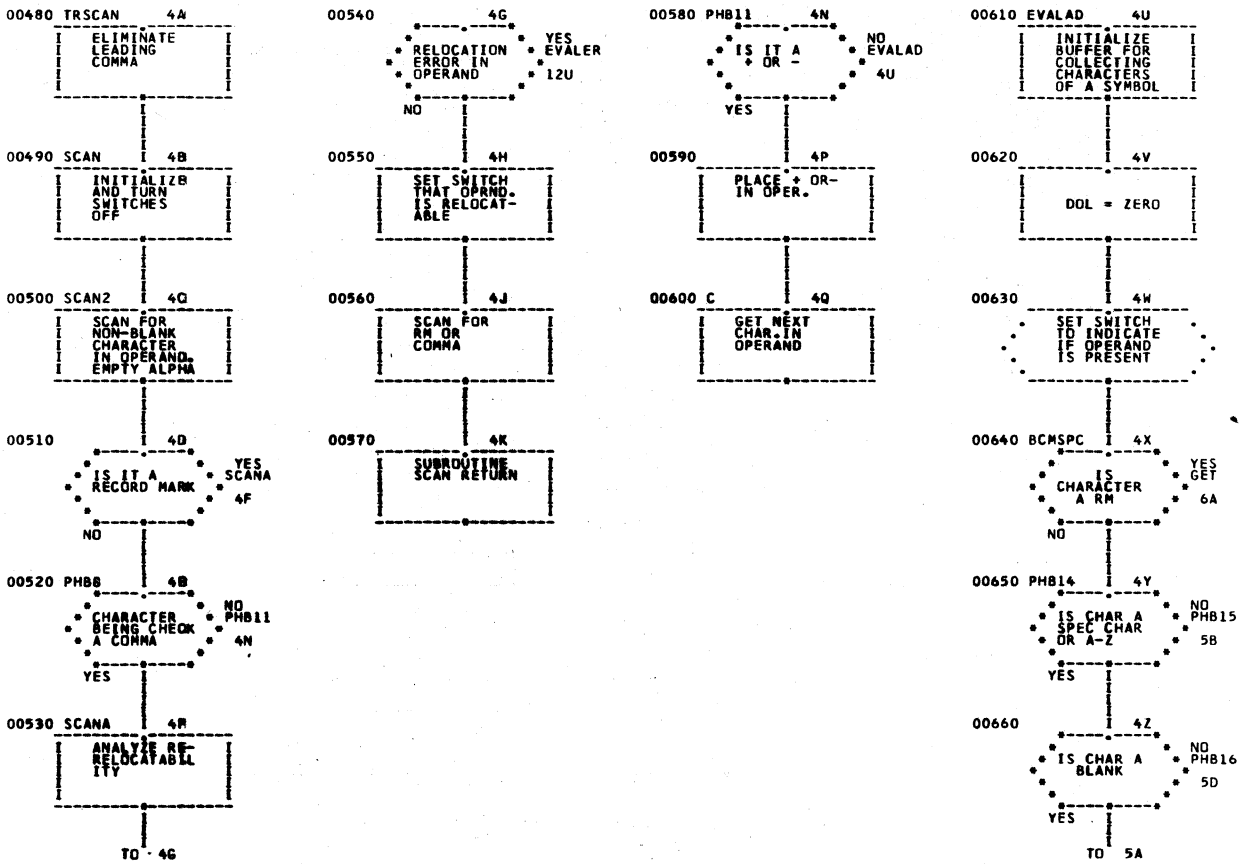
00160 1U
THIS PART IS MASTER INITIALIZE AND CTL STMT PROCESS



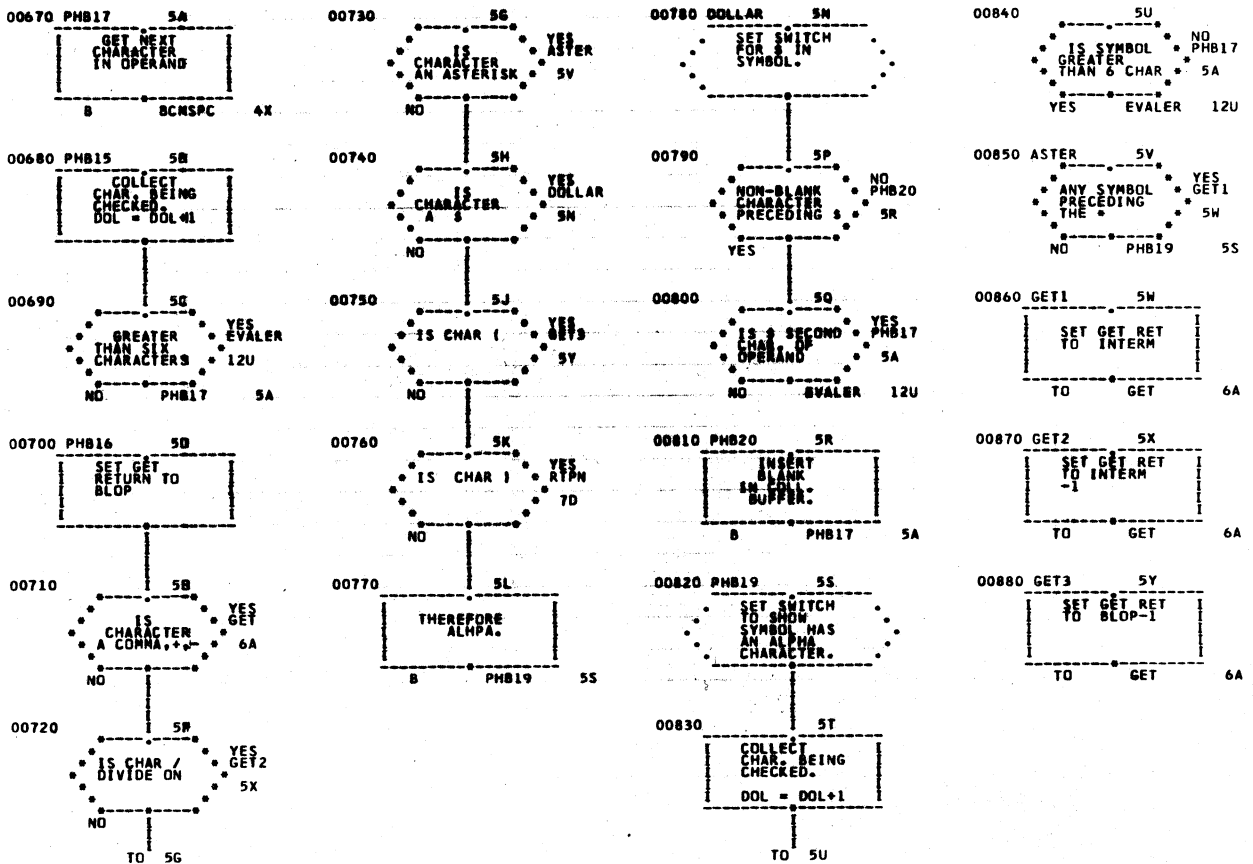
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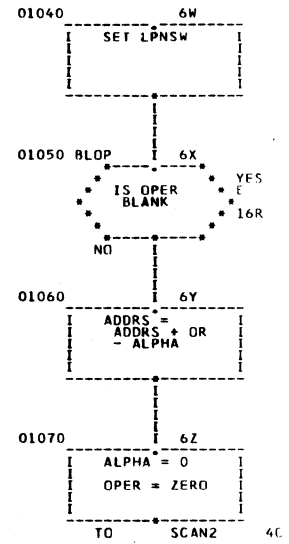
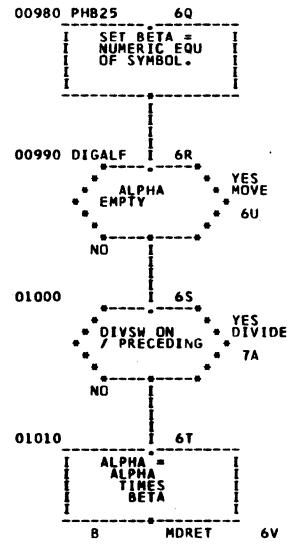
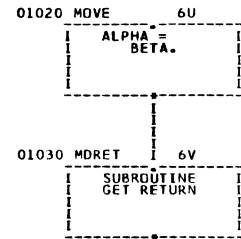
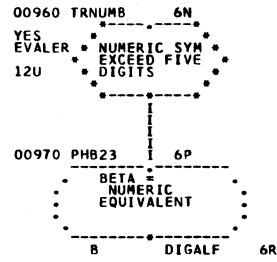
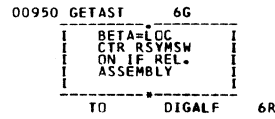
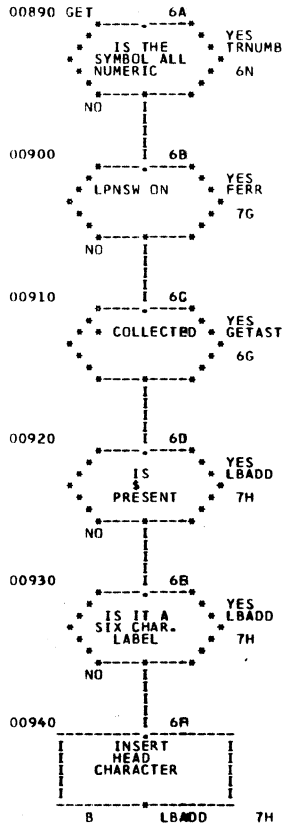
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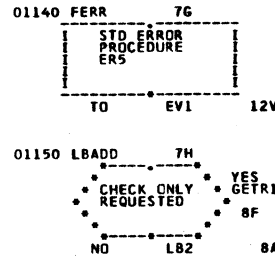
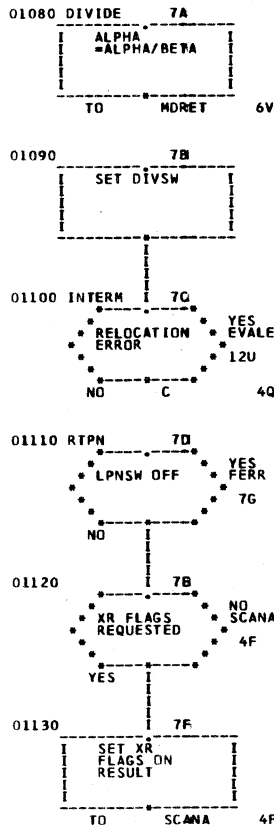
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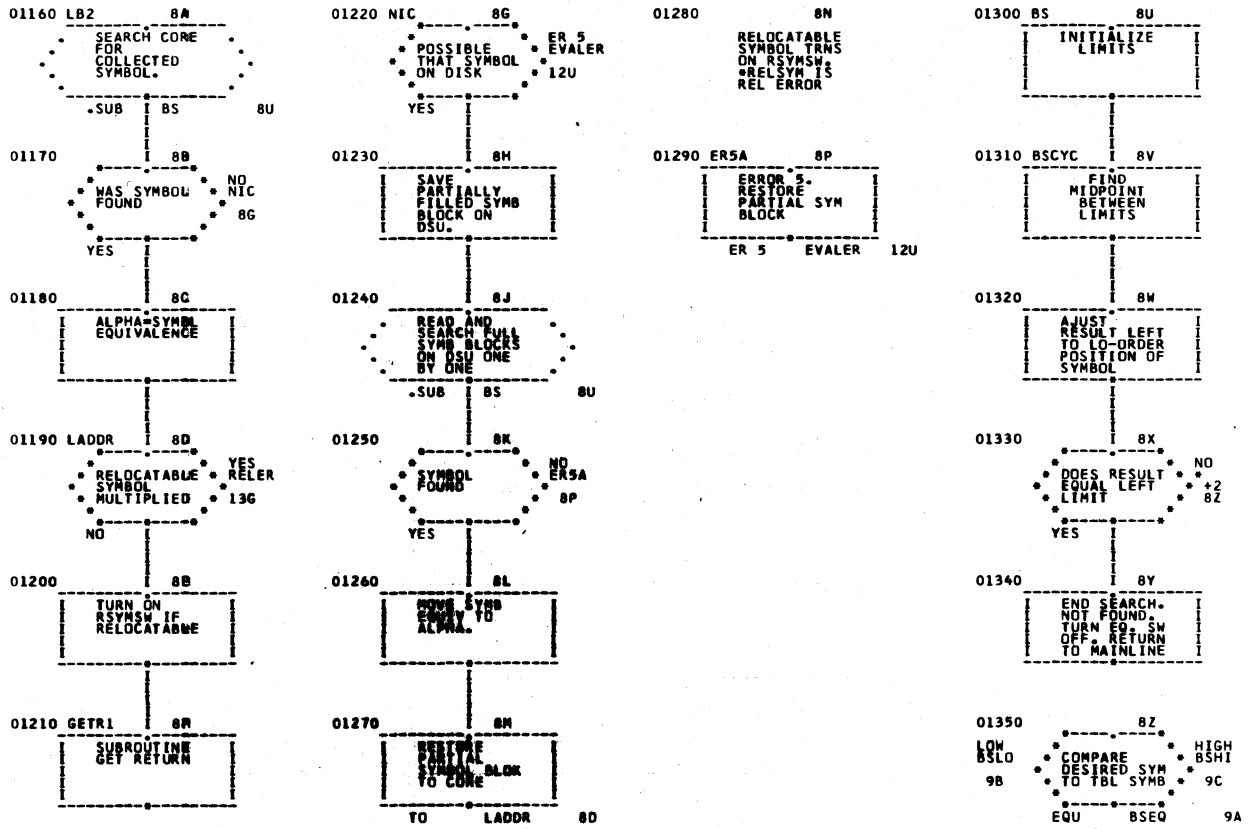
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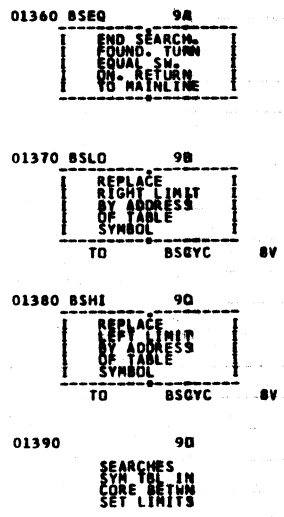
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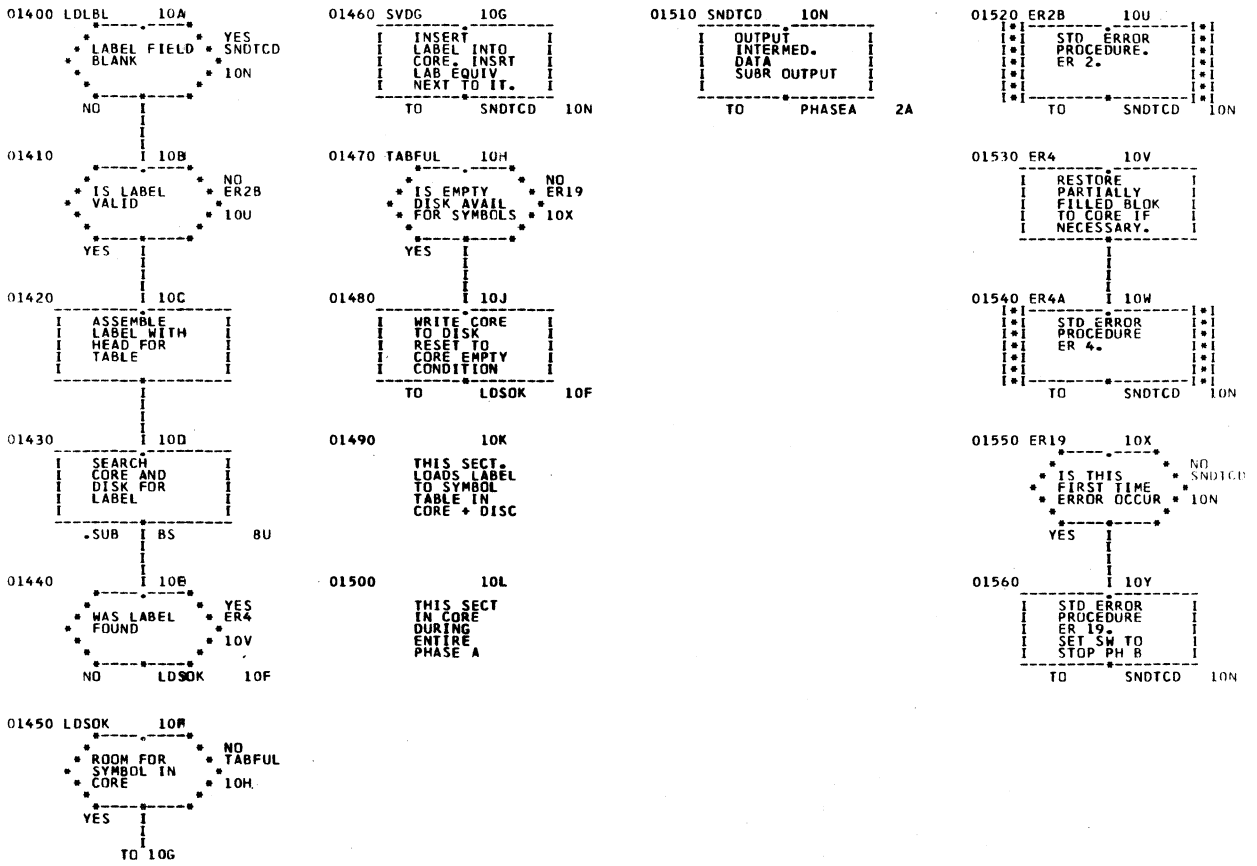
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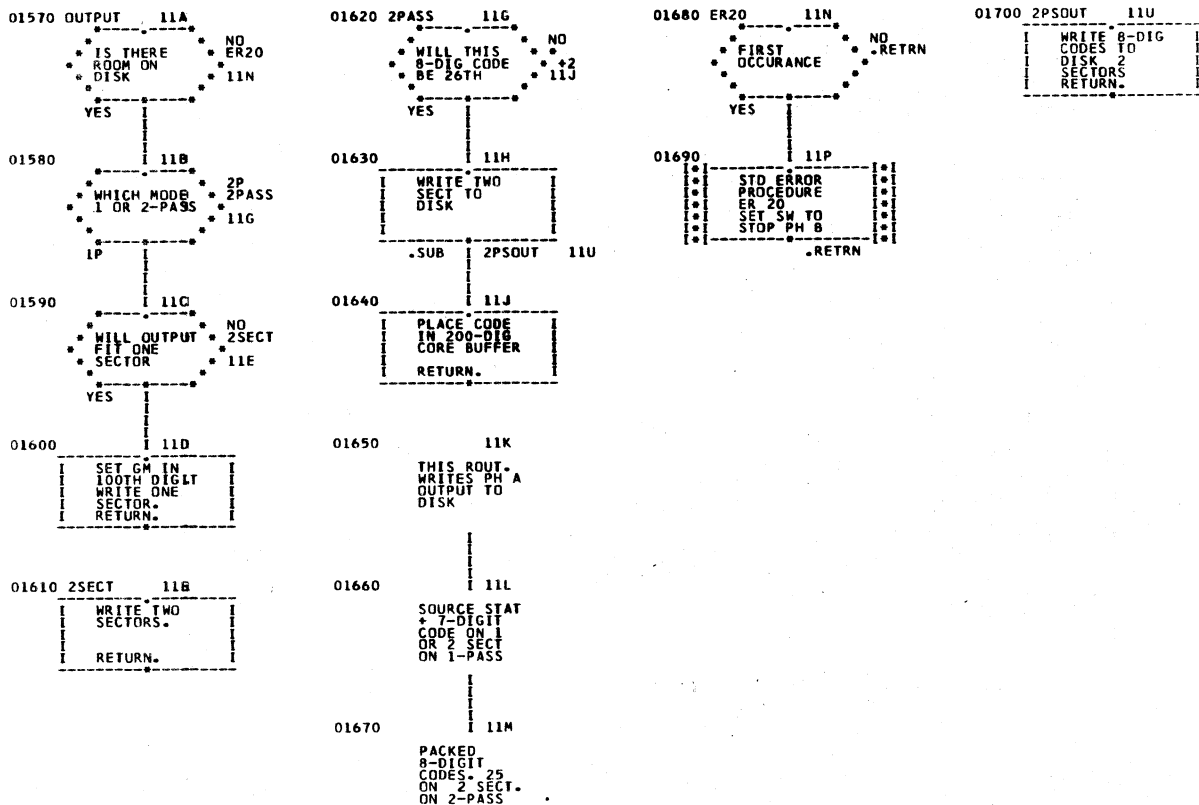
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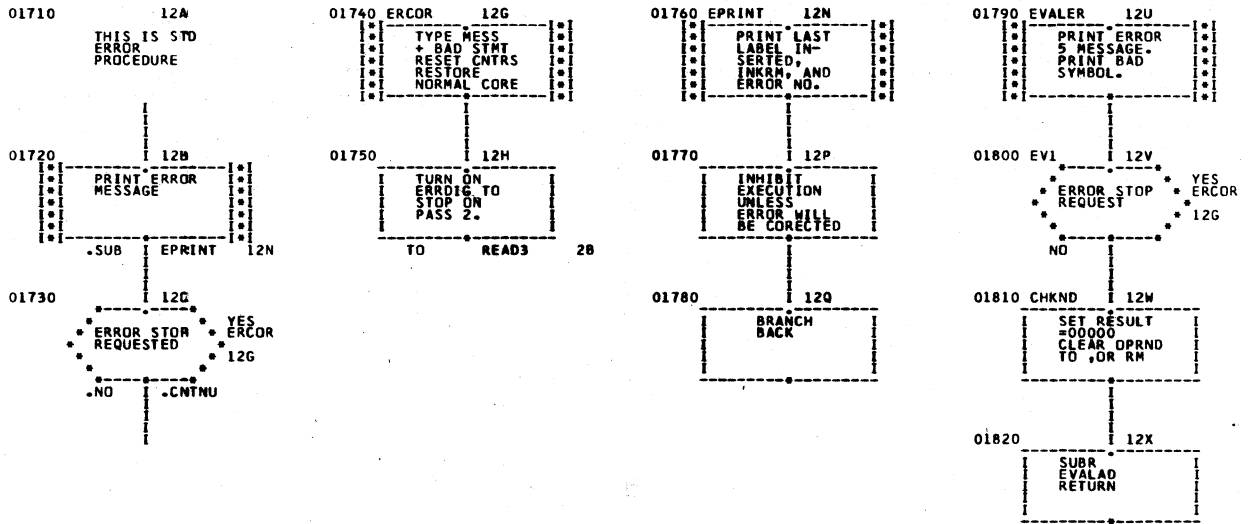
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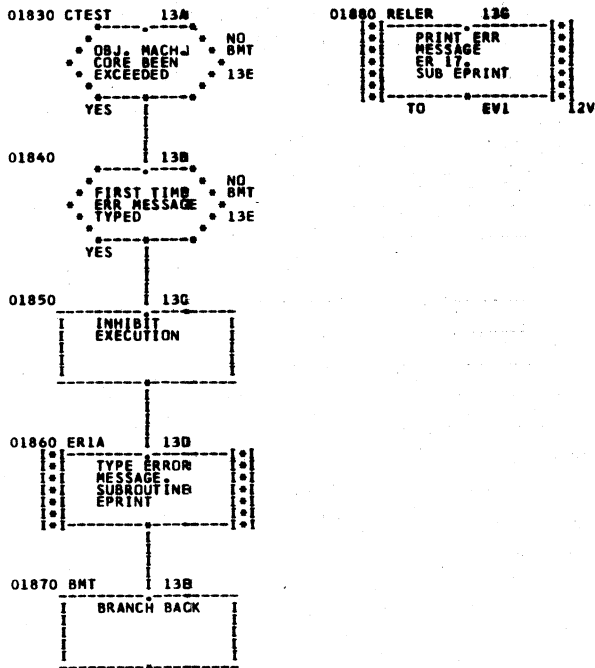
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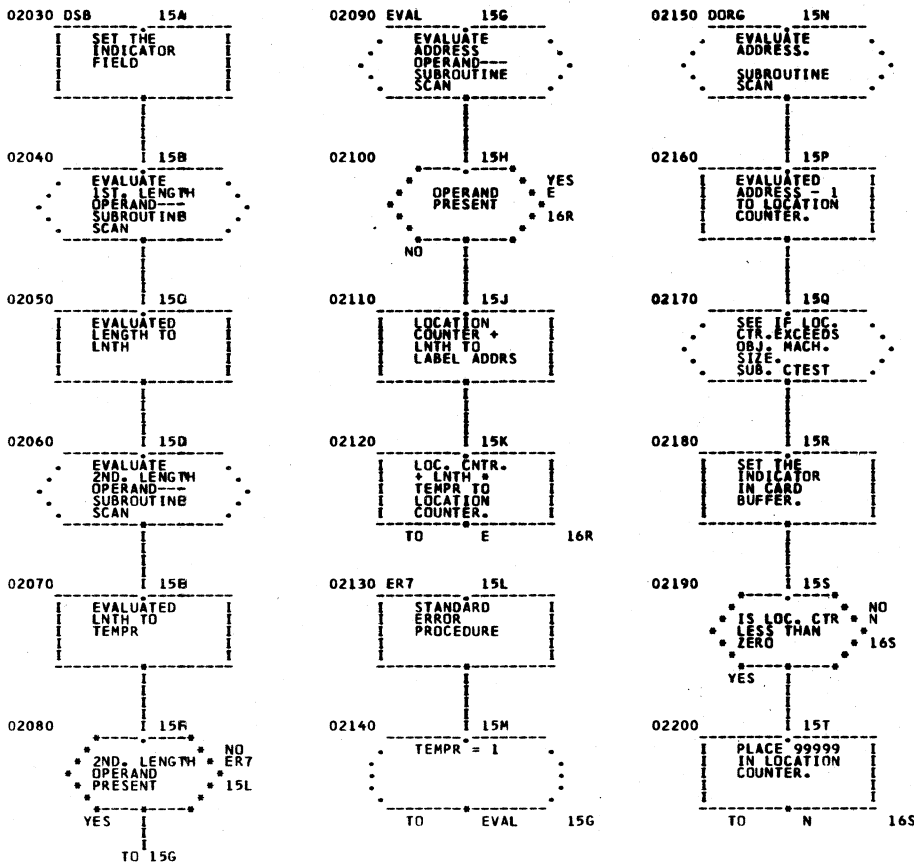
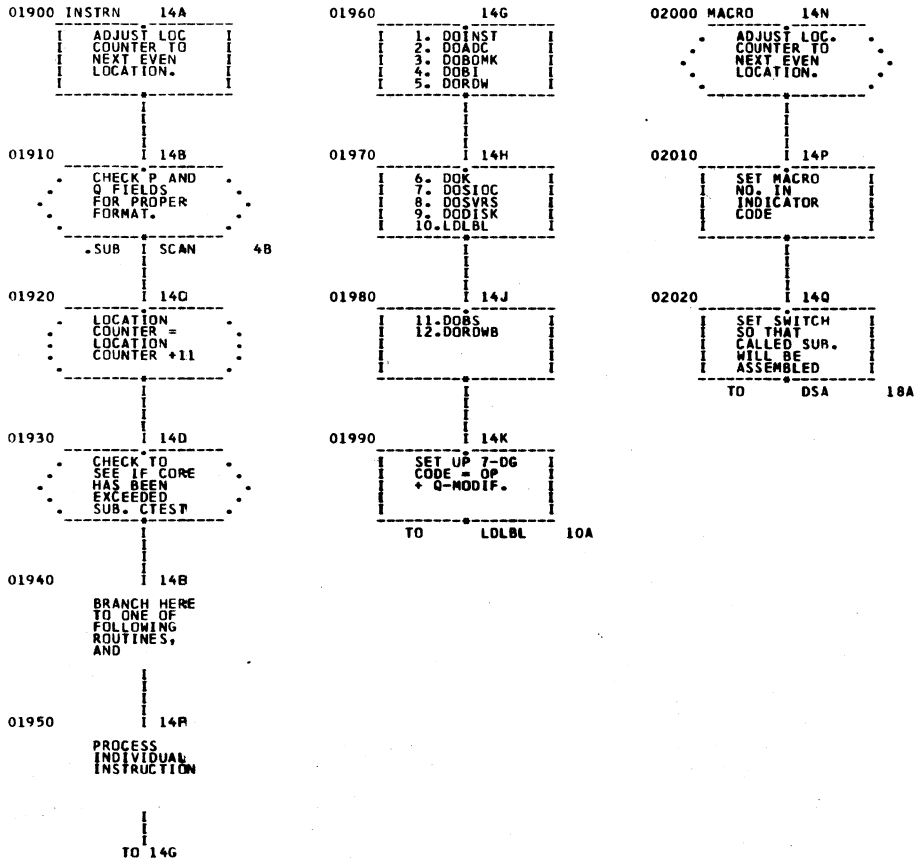
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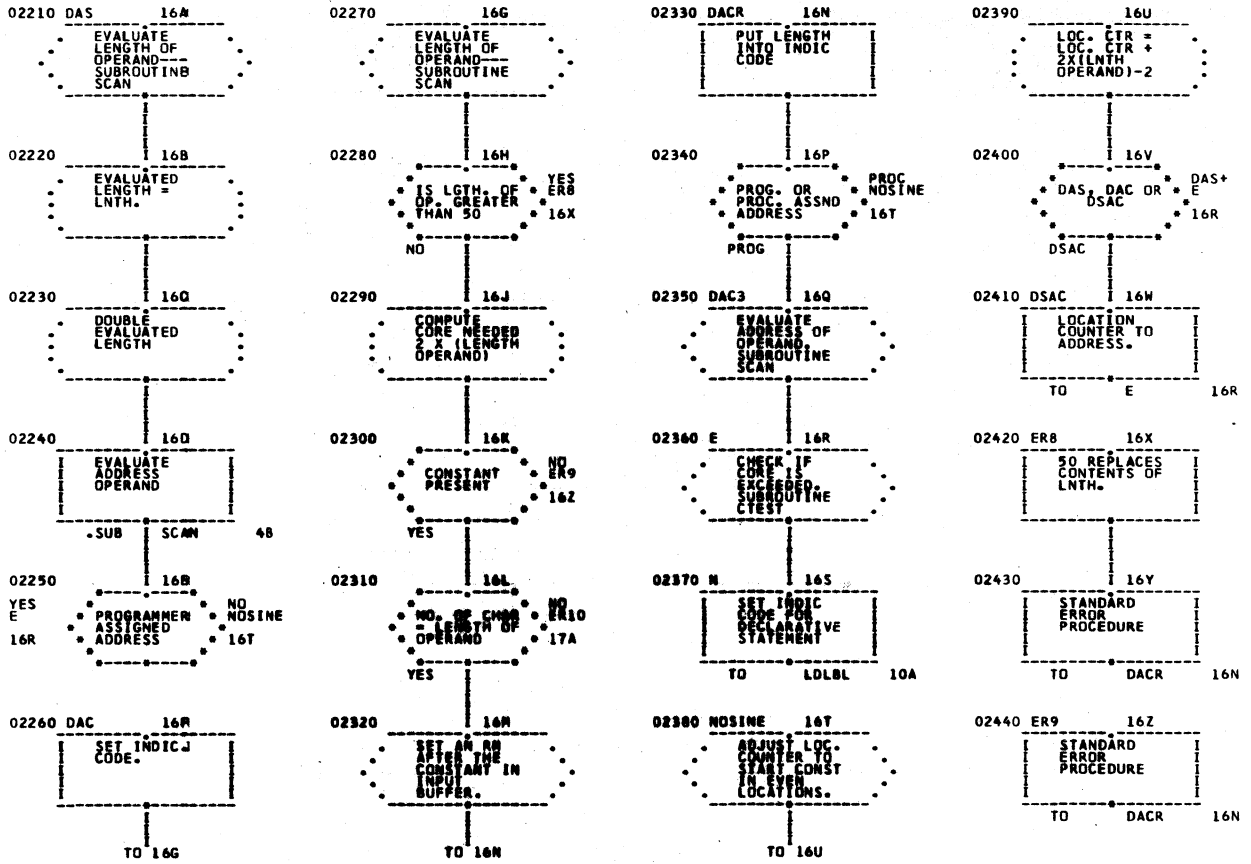


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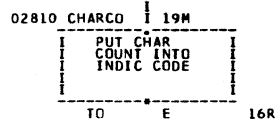
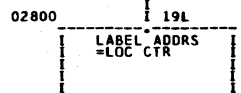
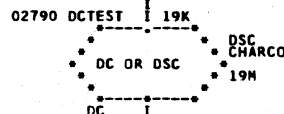
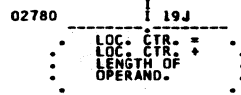
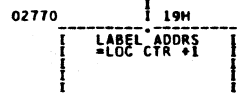
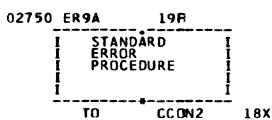
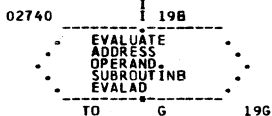
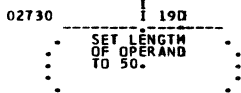
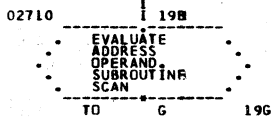
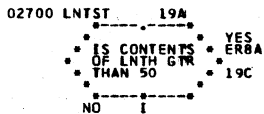
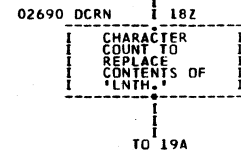
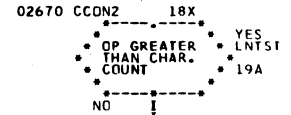
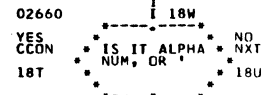
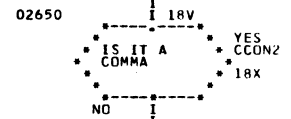
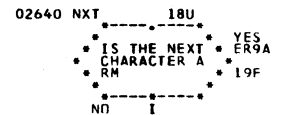
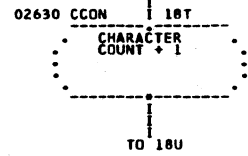
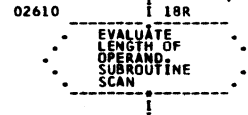
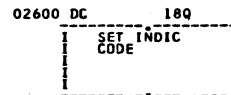
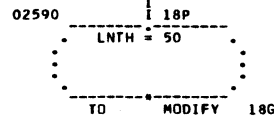
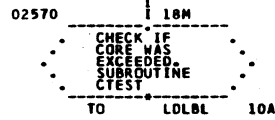
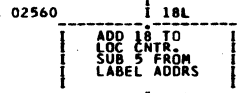
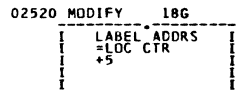
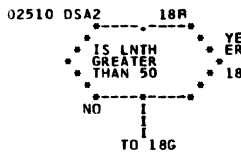
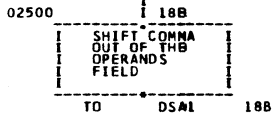
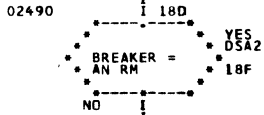
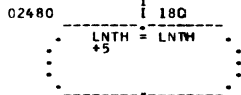
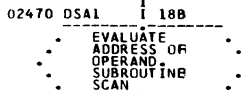
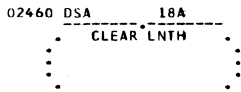
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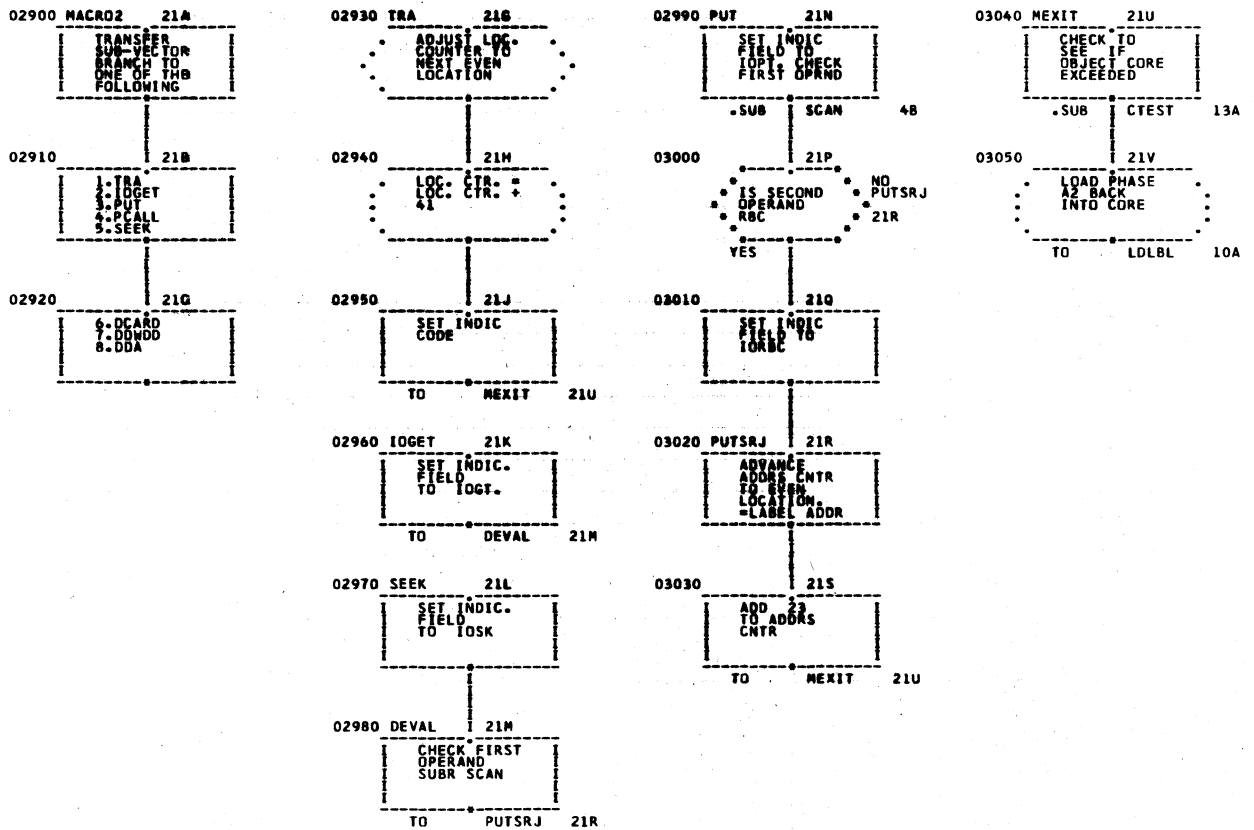
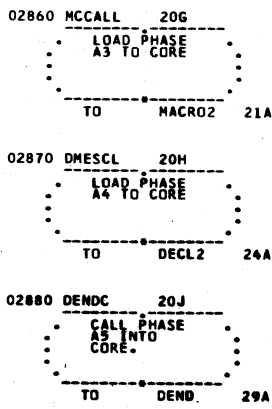
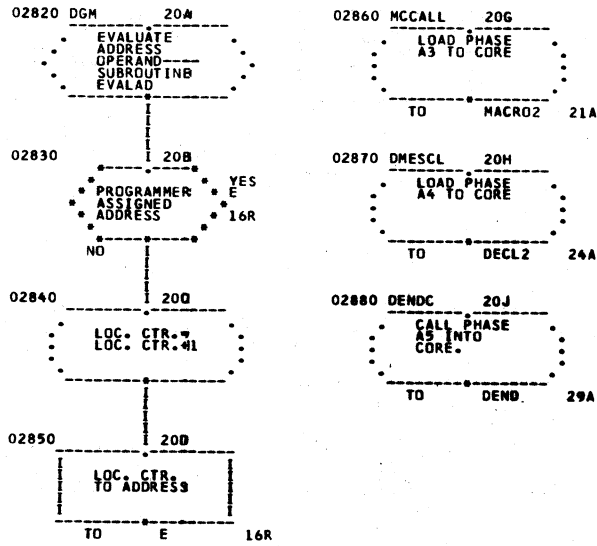
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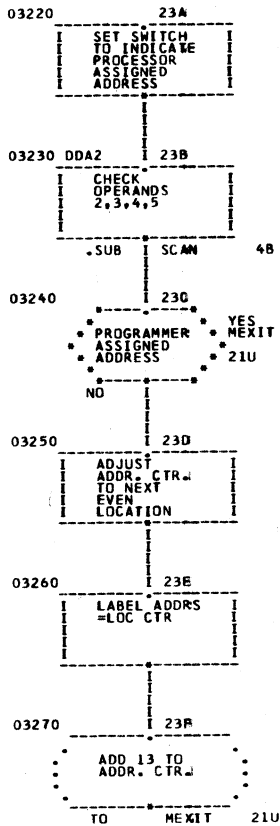
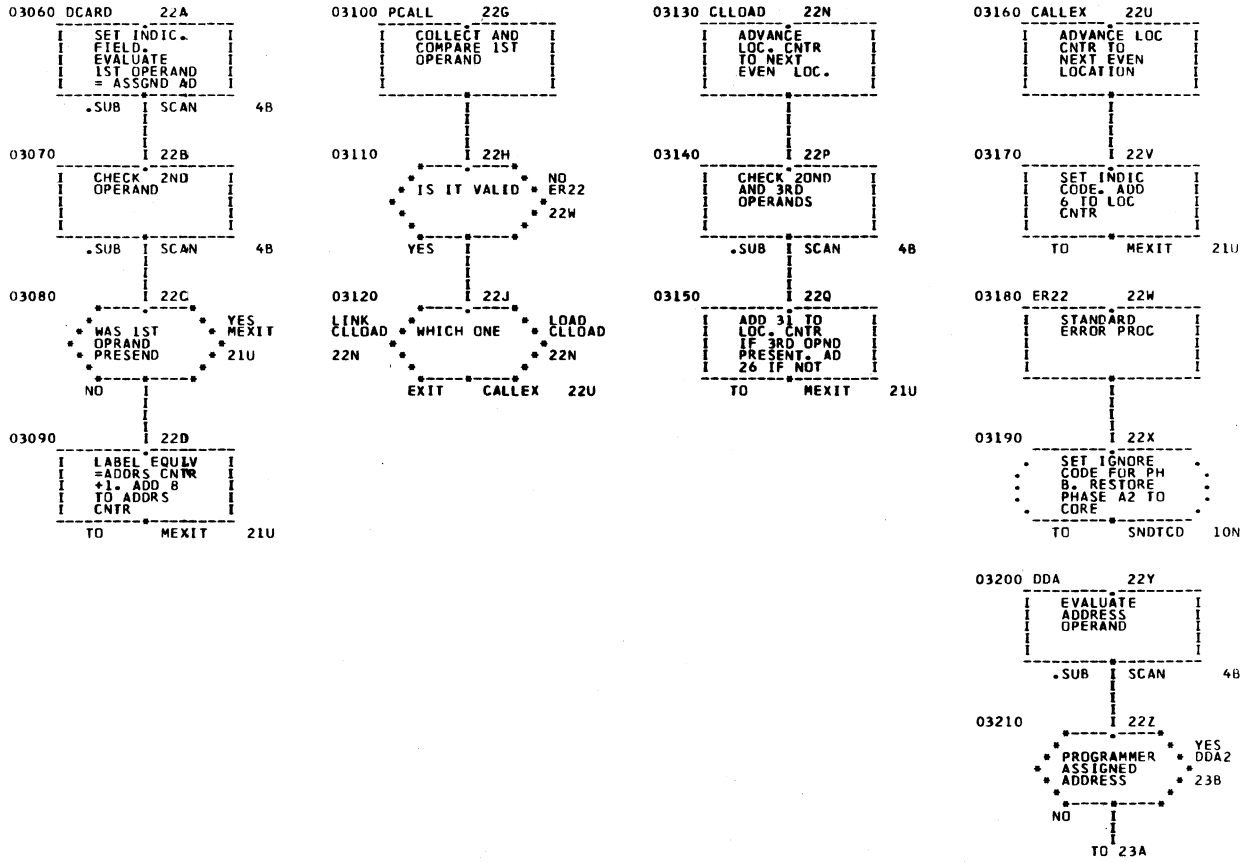
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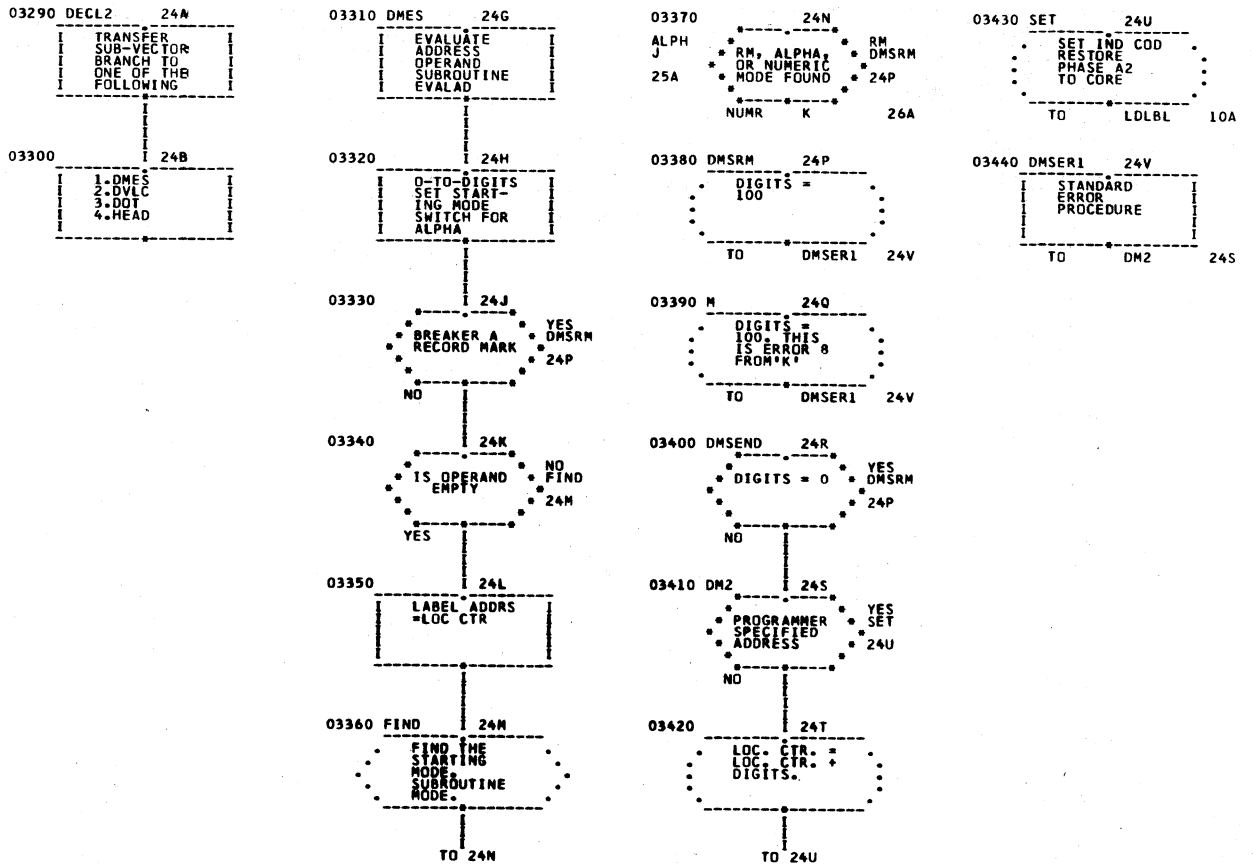
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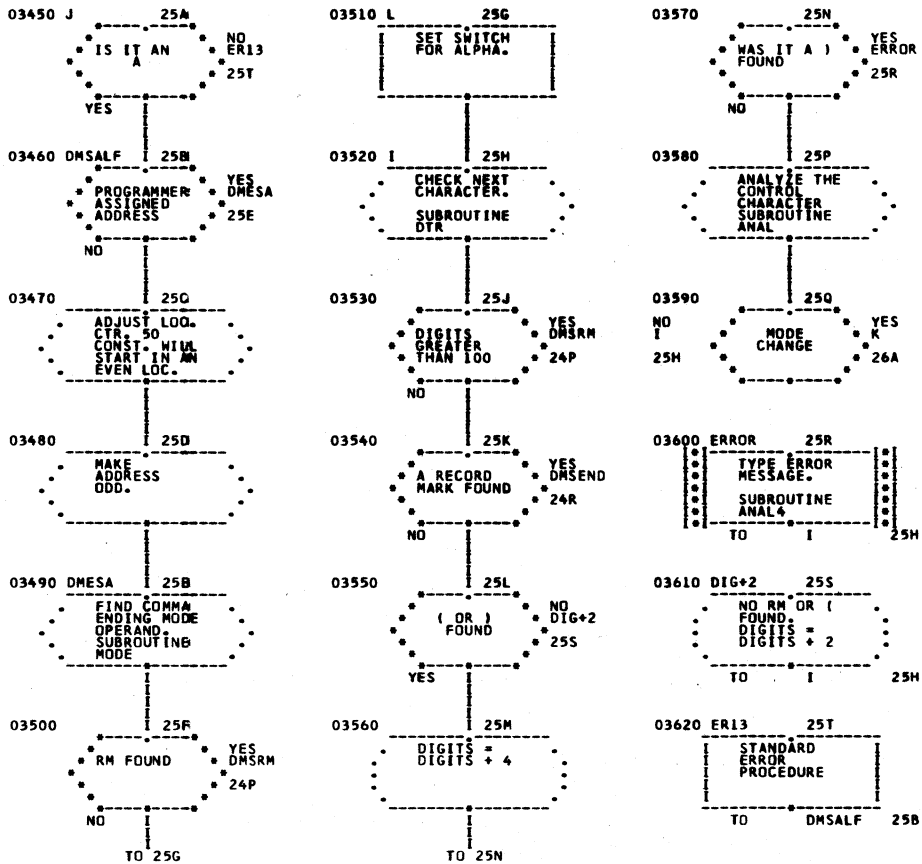


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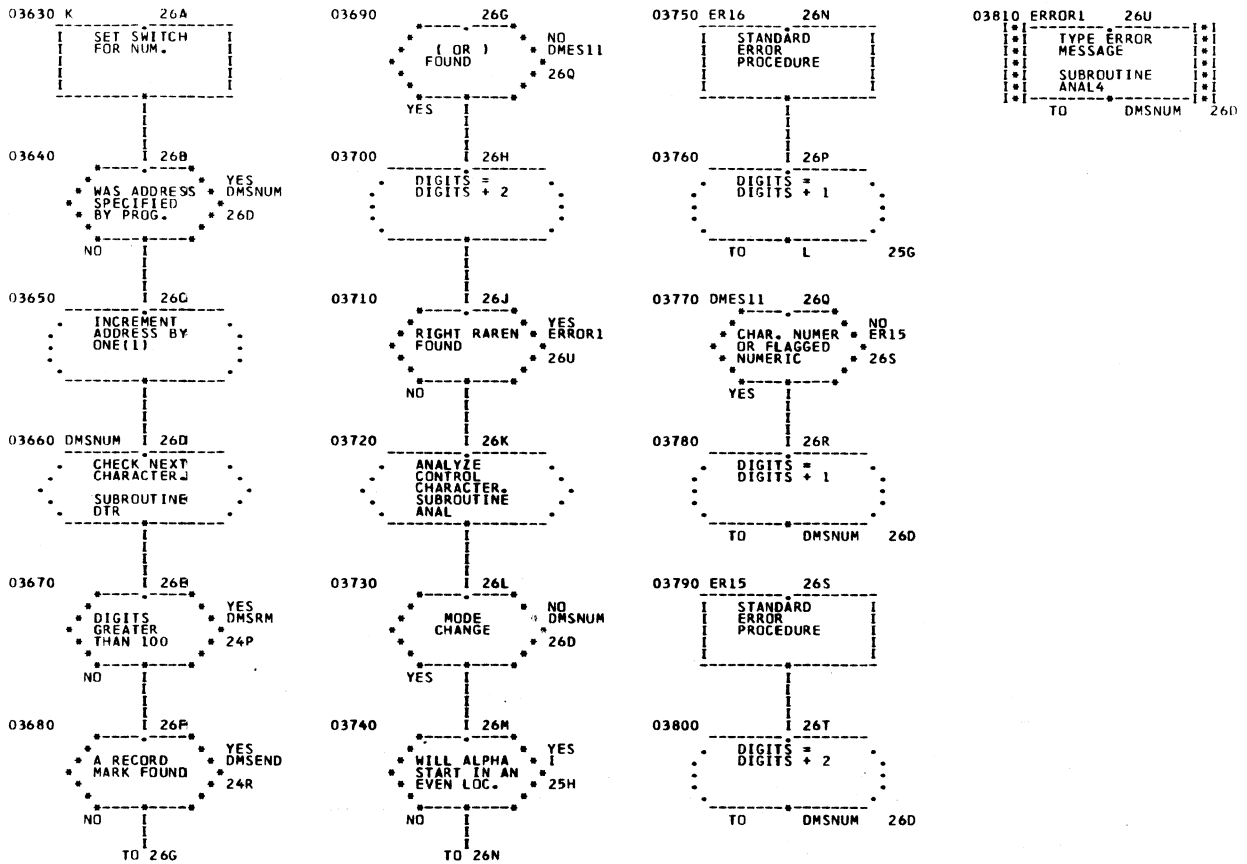
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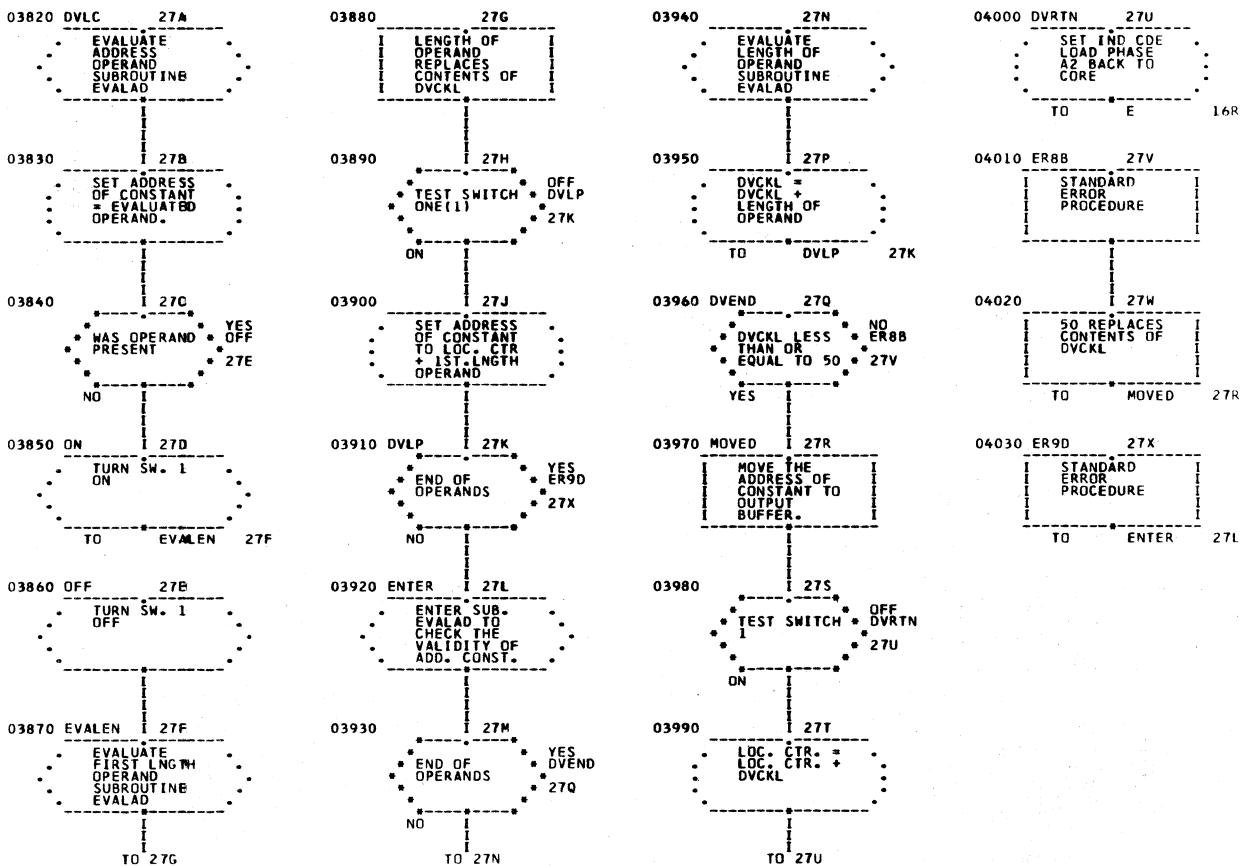
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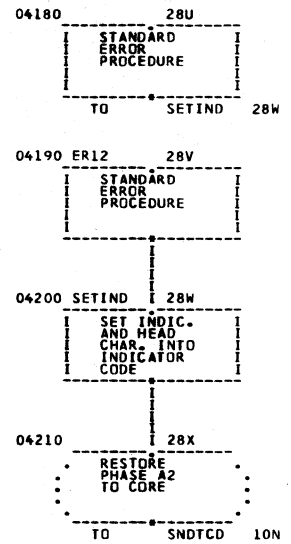
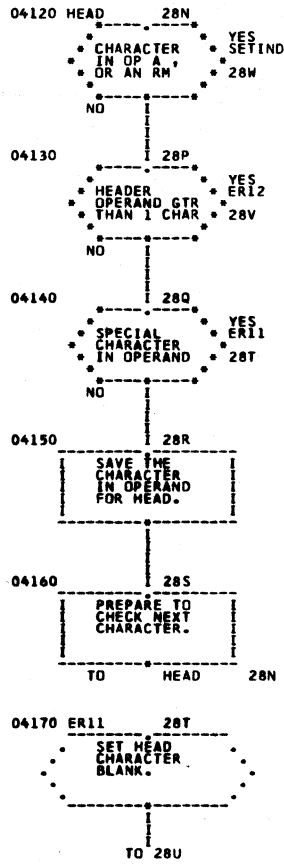
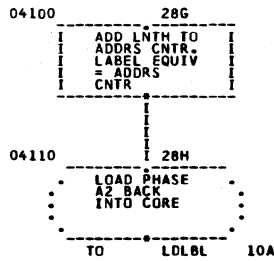
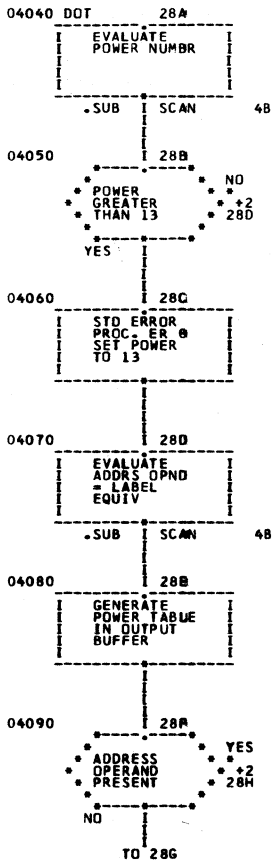
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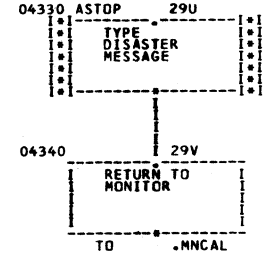
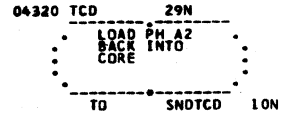
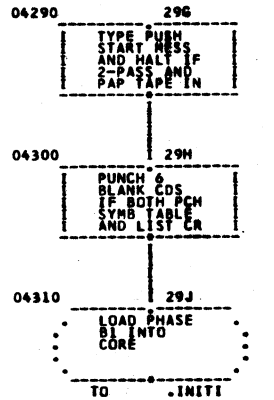
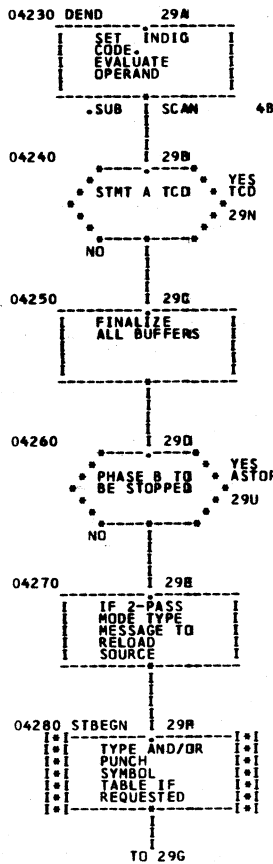
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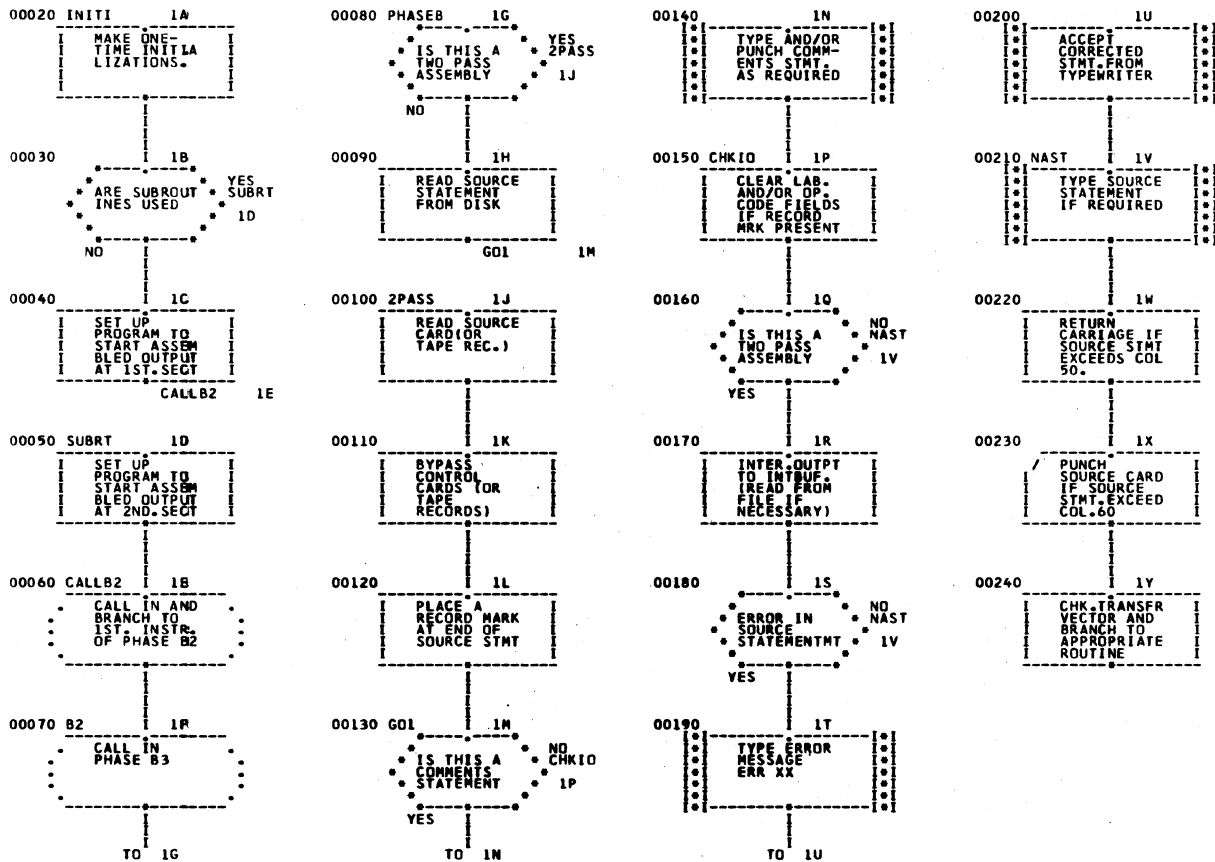
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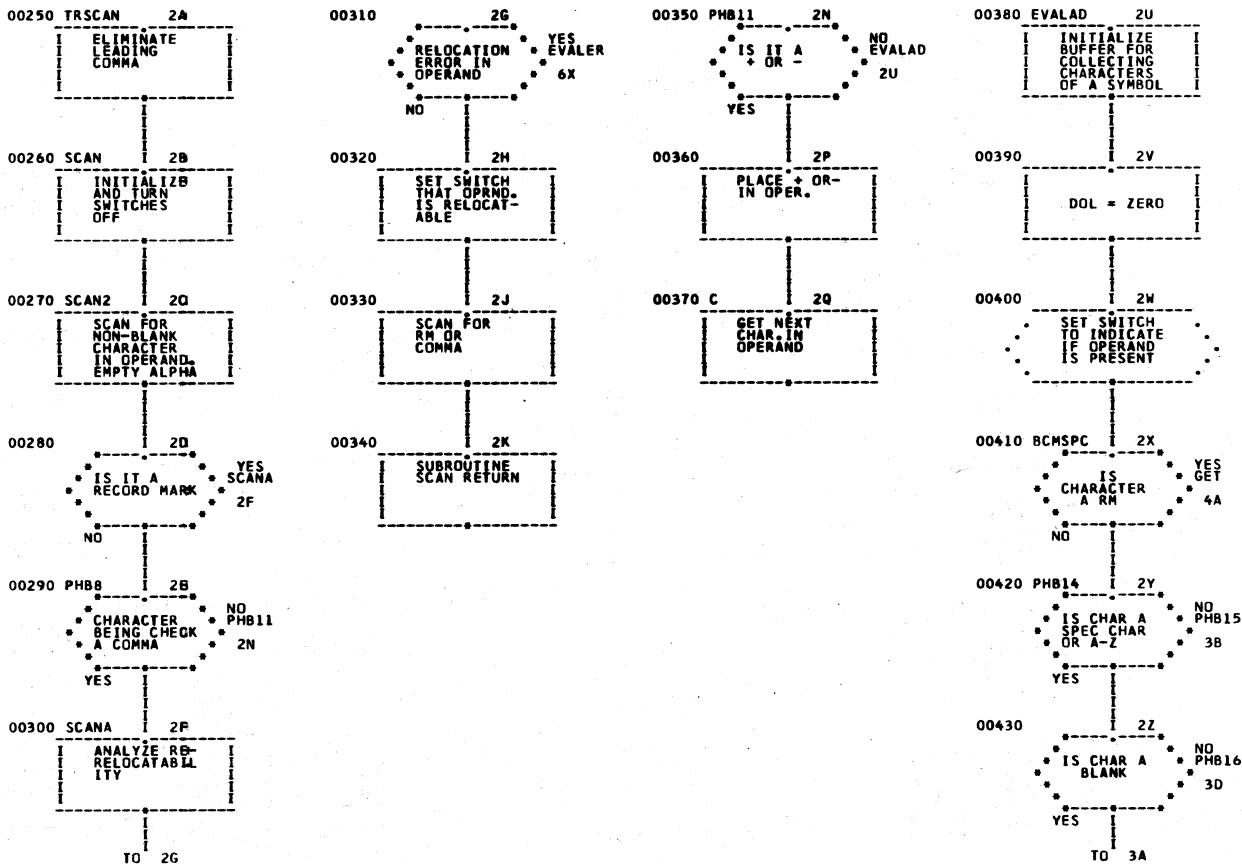
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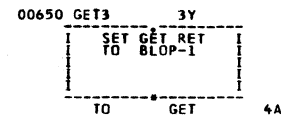
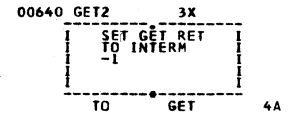
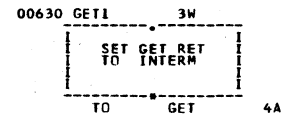
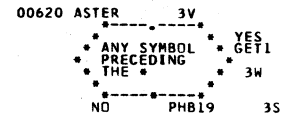
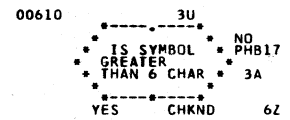
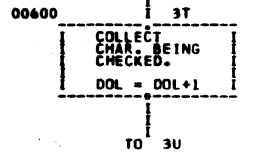
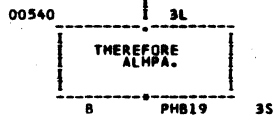
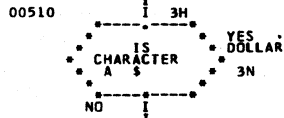
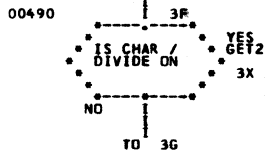
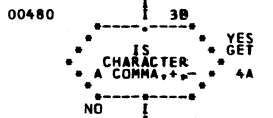
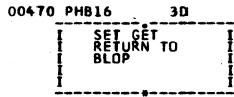
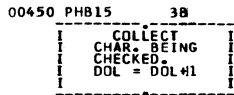
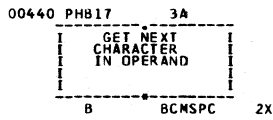
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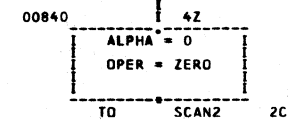
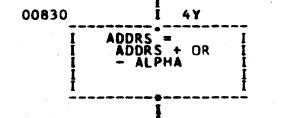
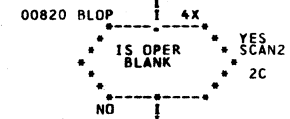
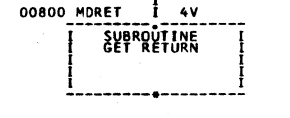
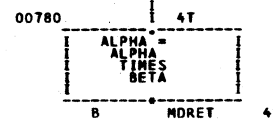
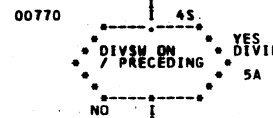
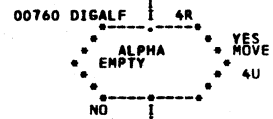
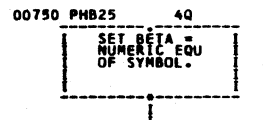
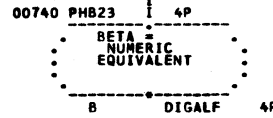
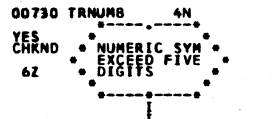
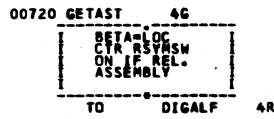
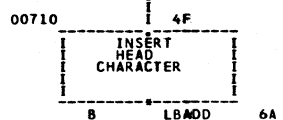
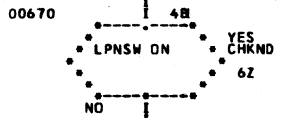
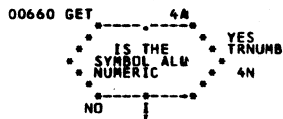
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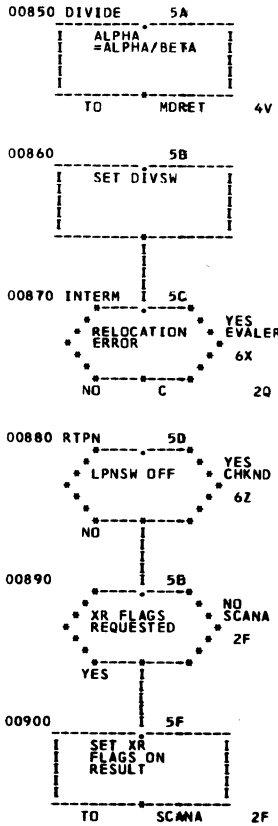
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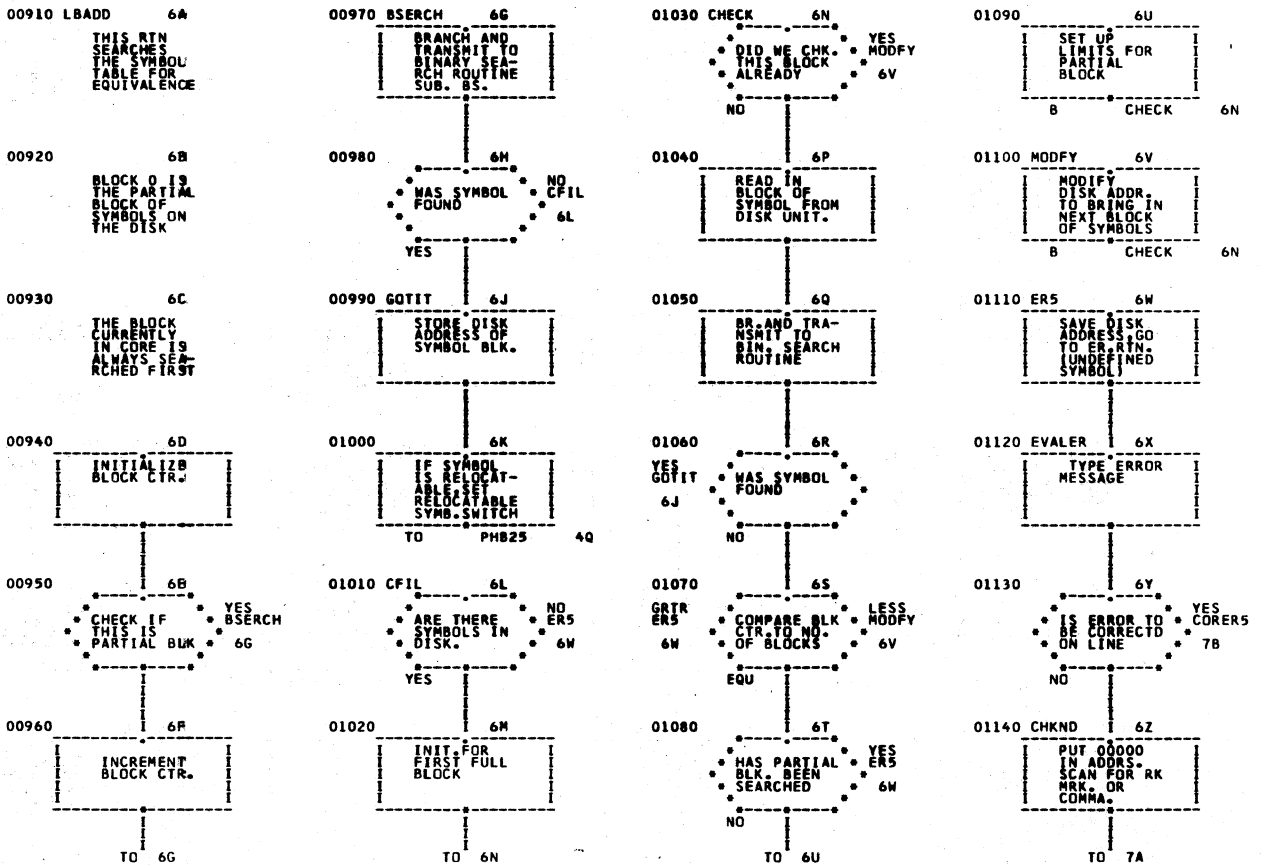
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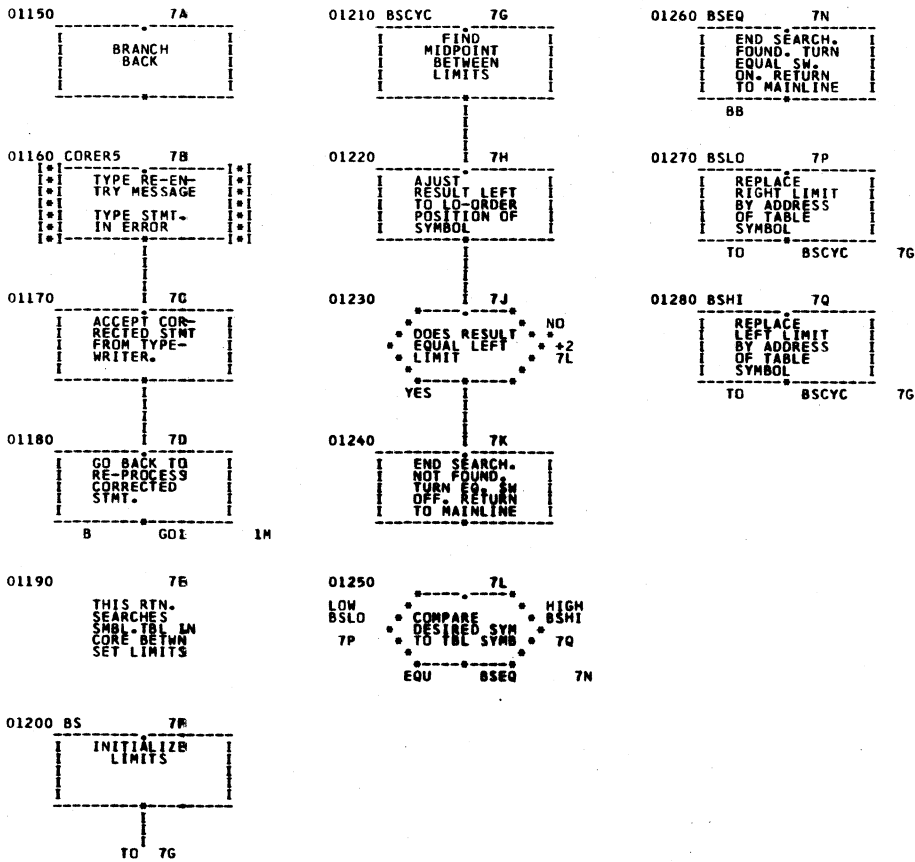
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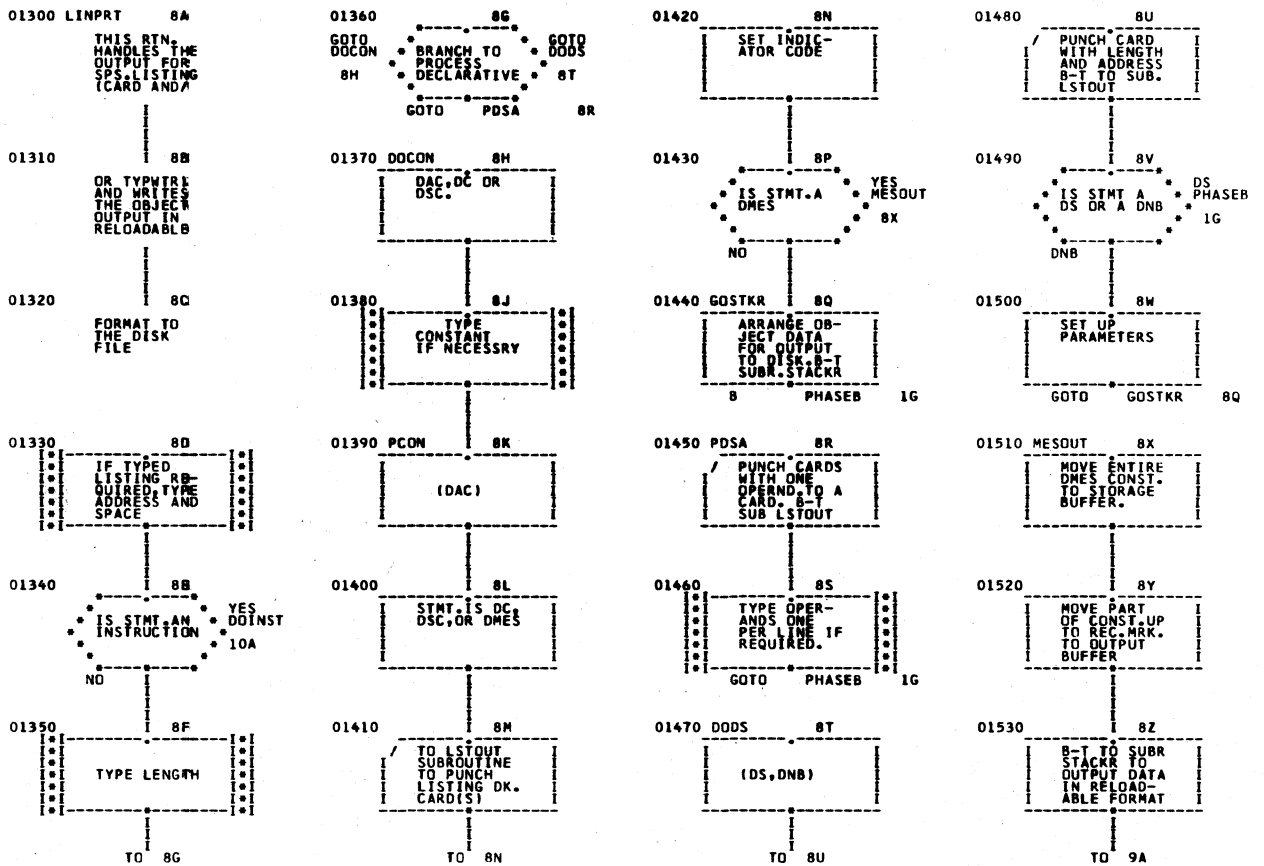
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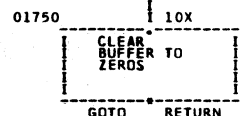
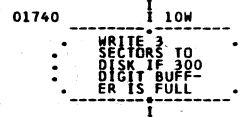
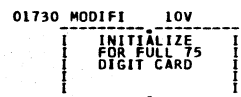
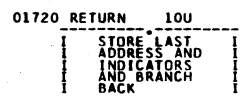
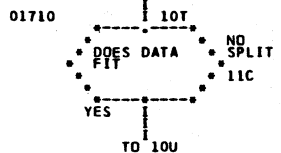
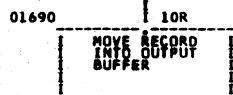
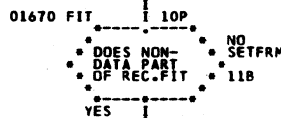
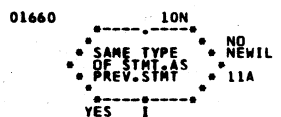
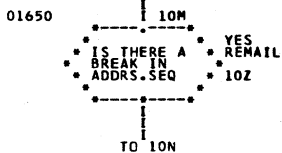
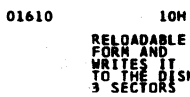
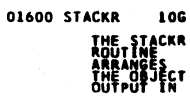
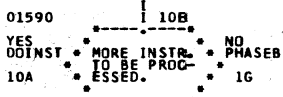
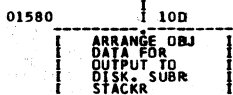
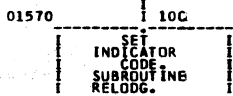
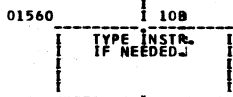
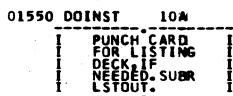
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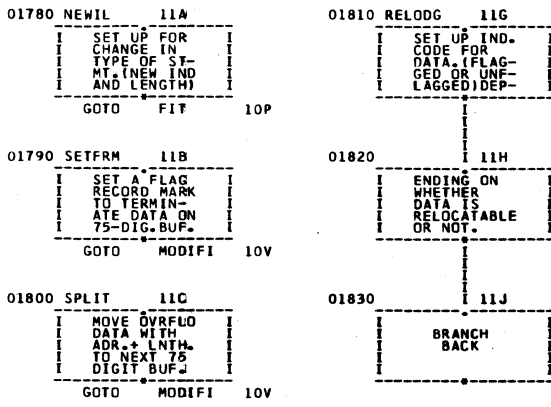
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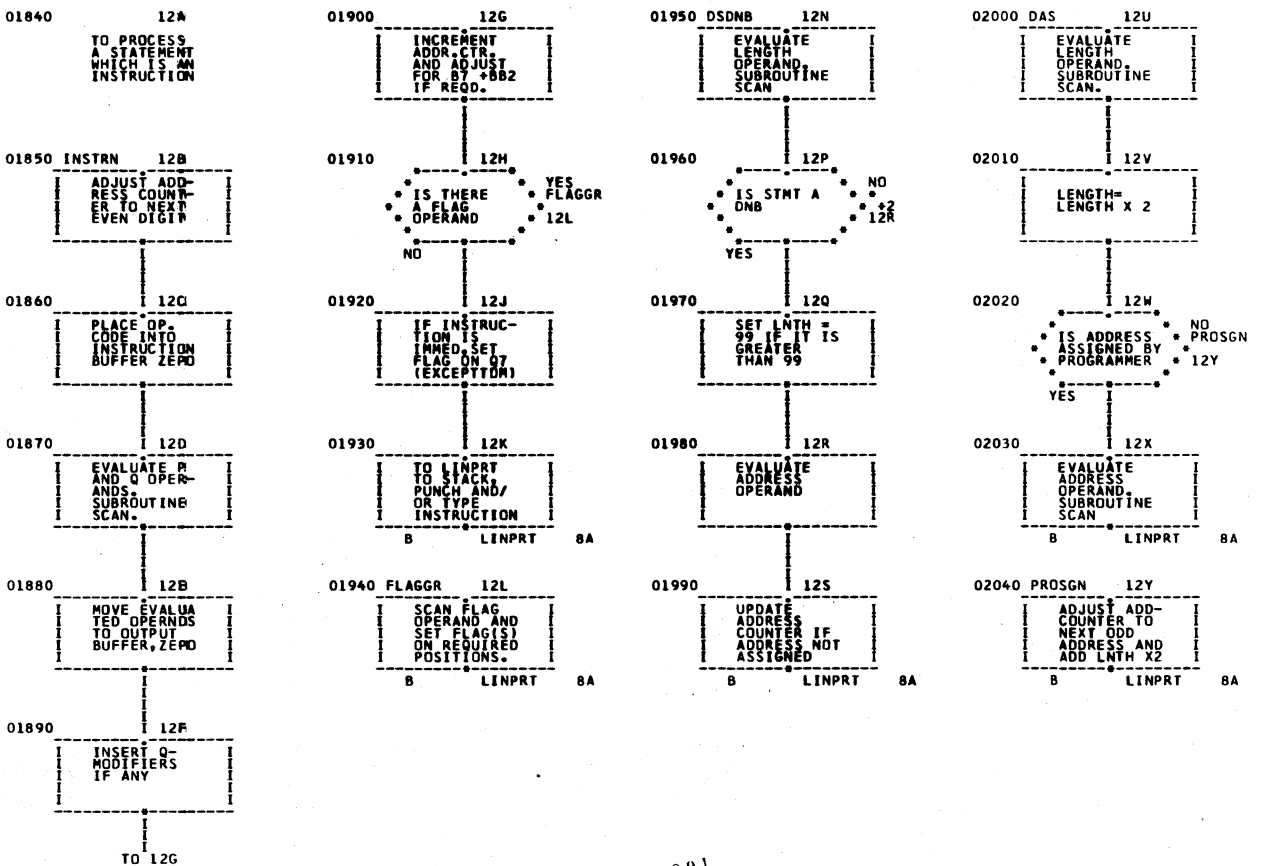
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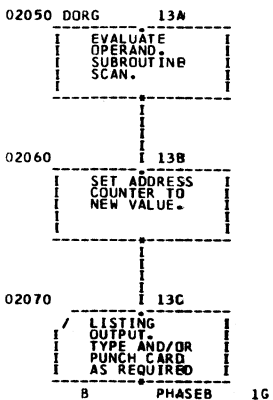
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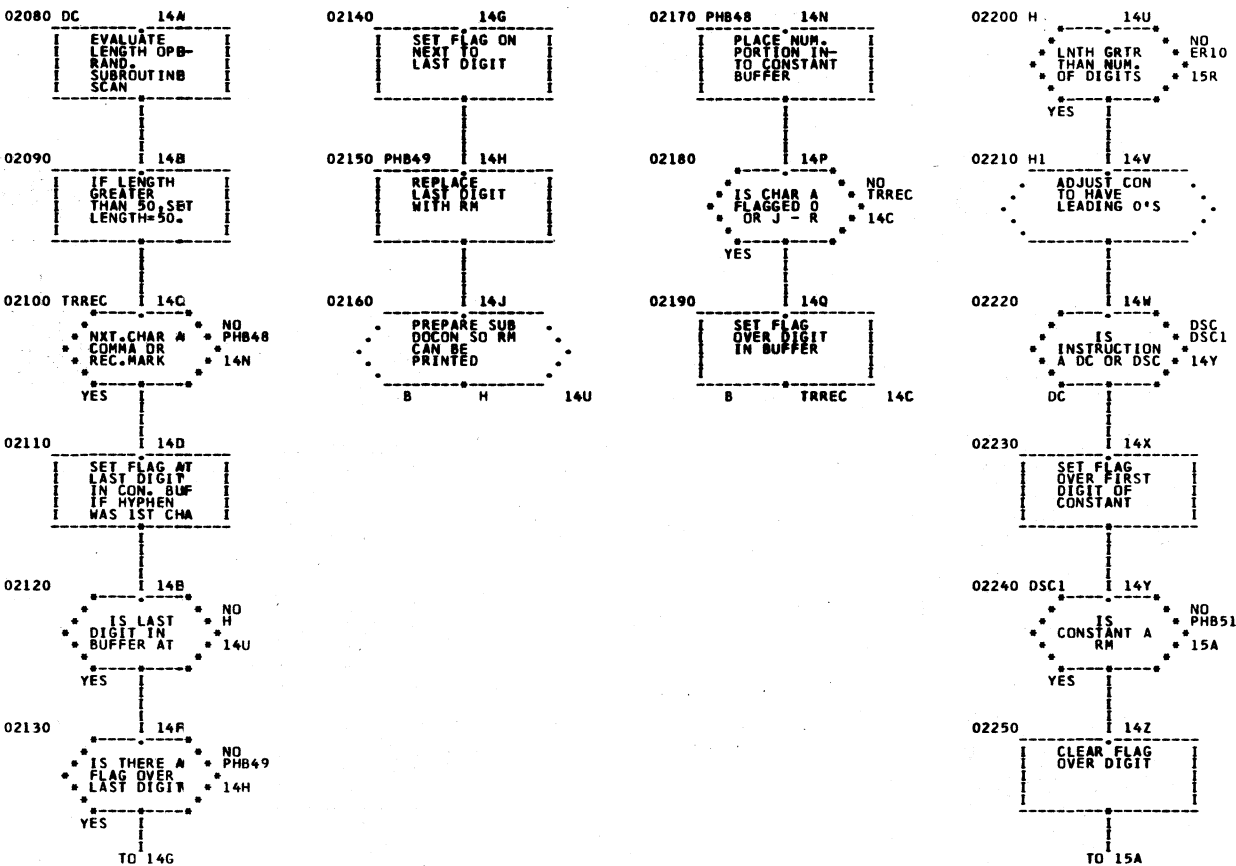
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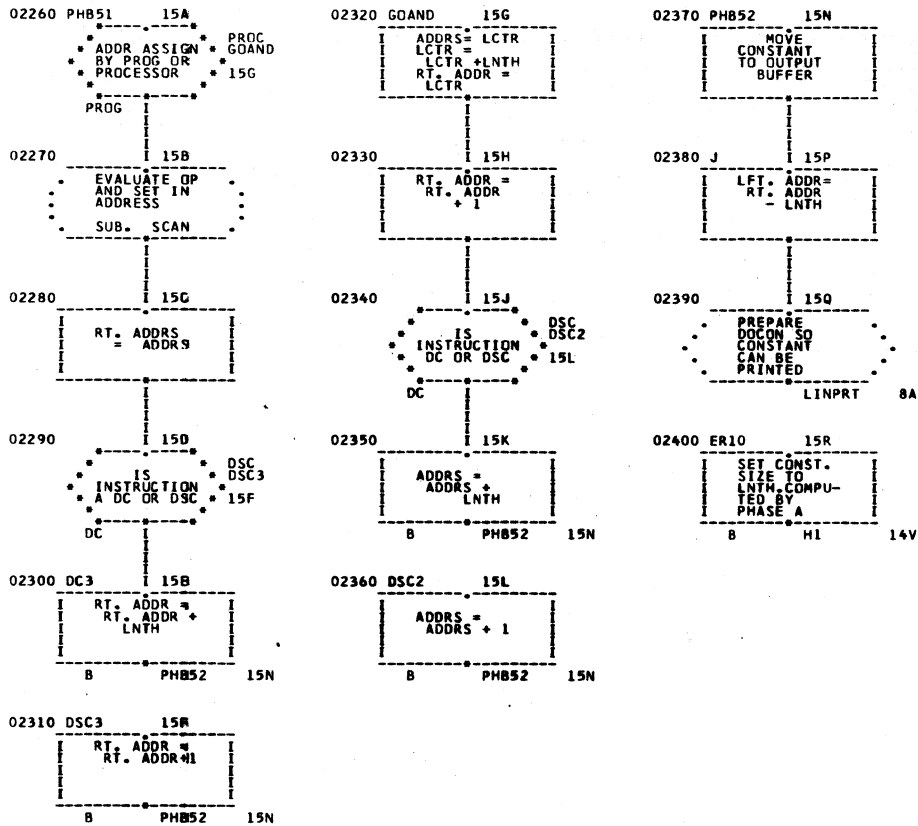
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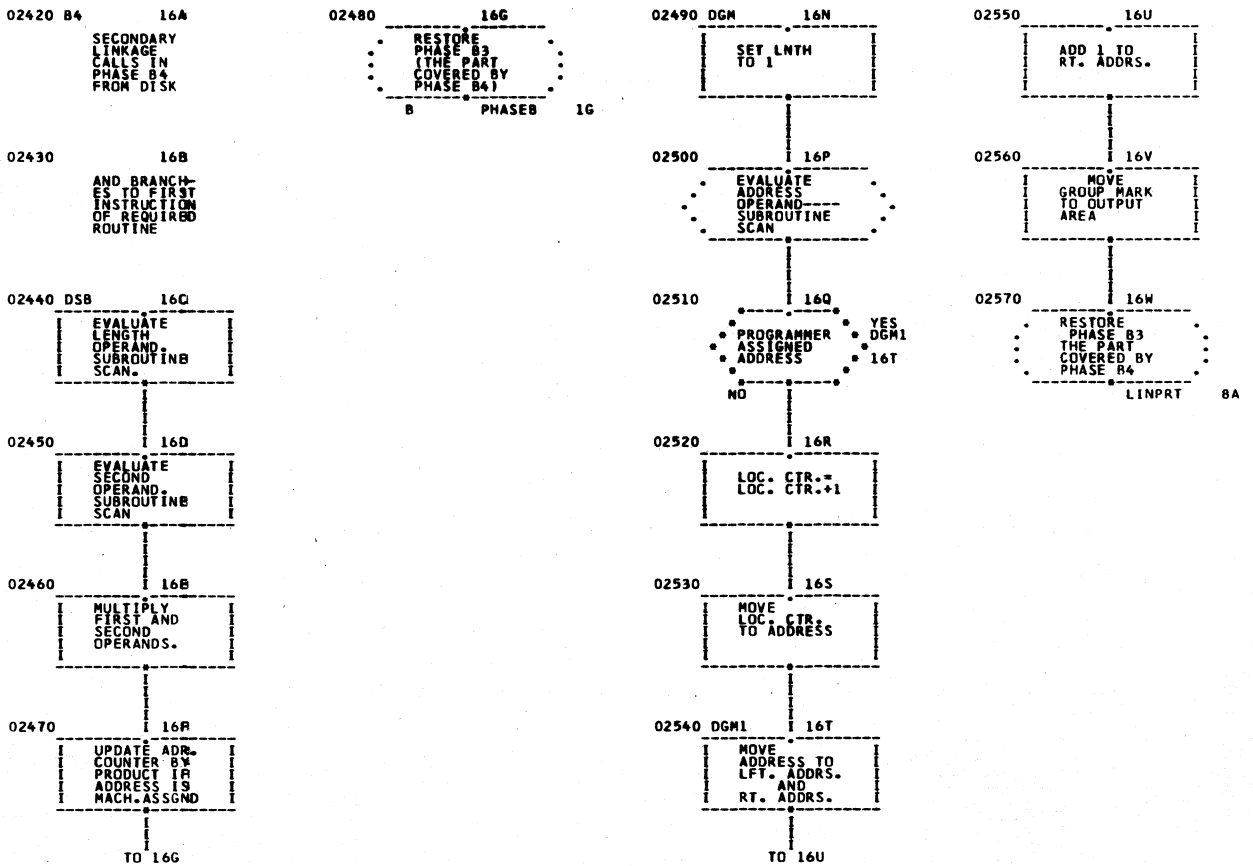
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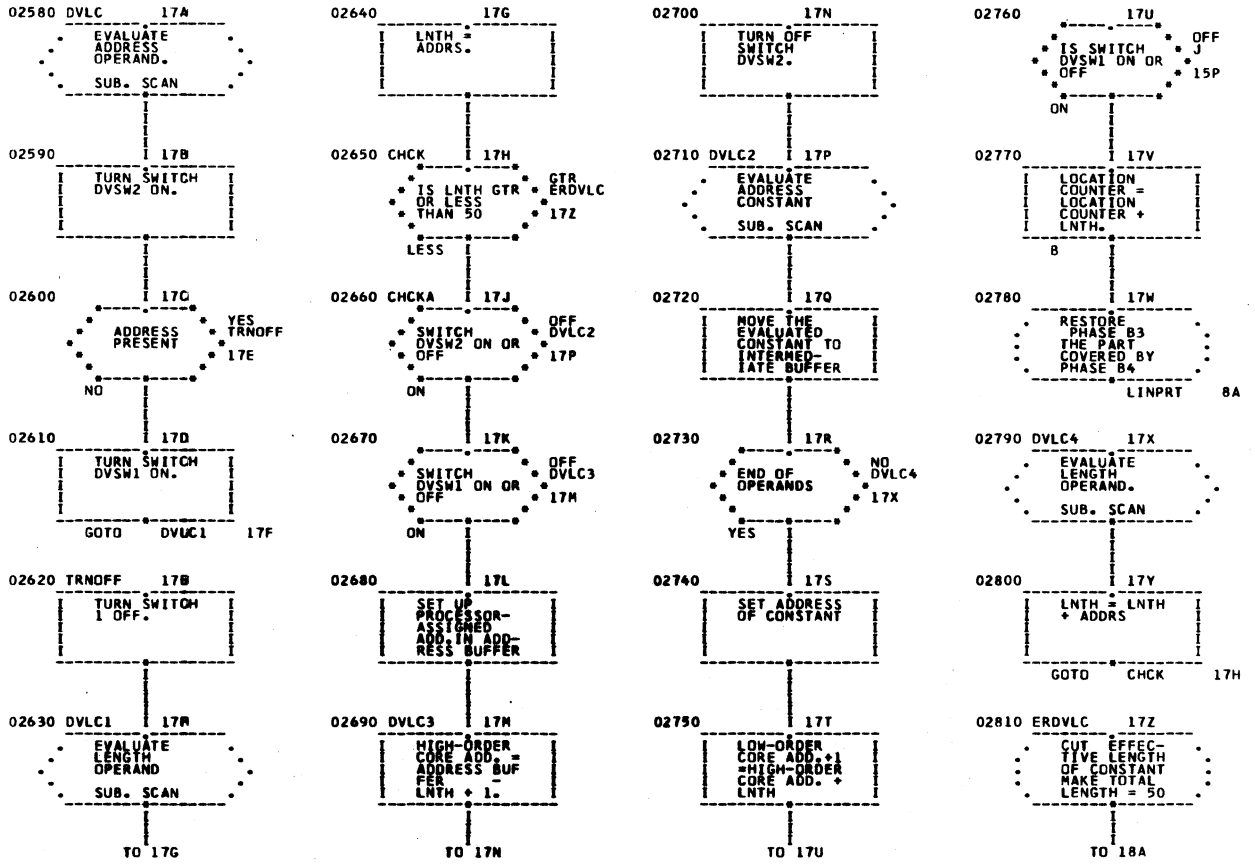
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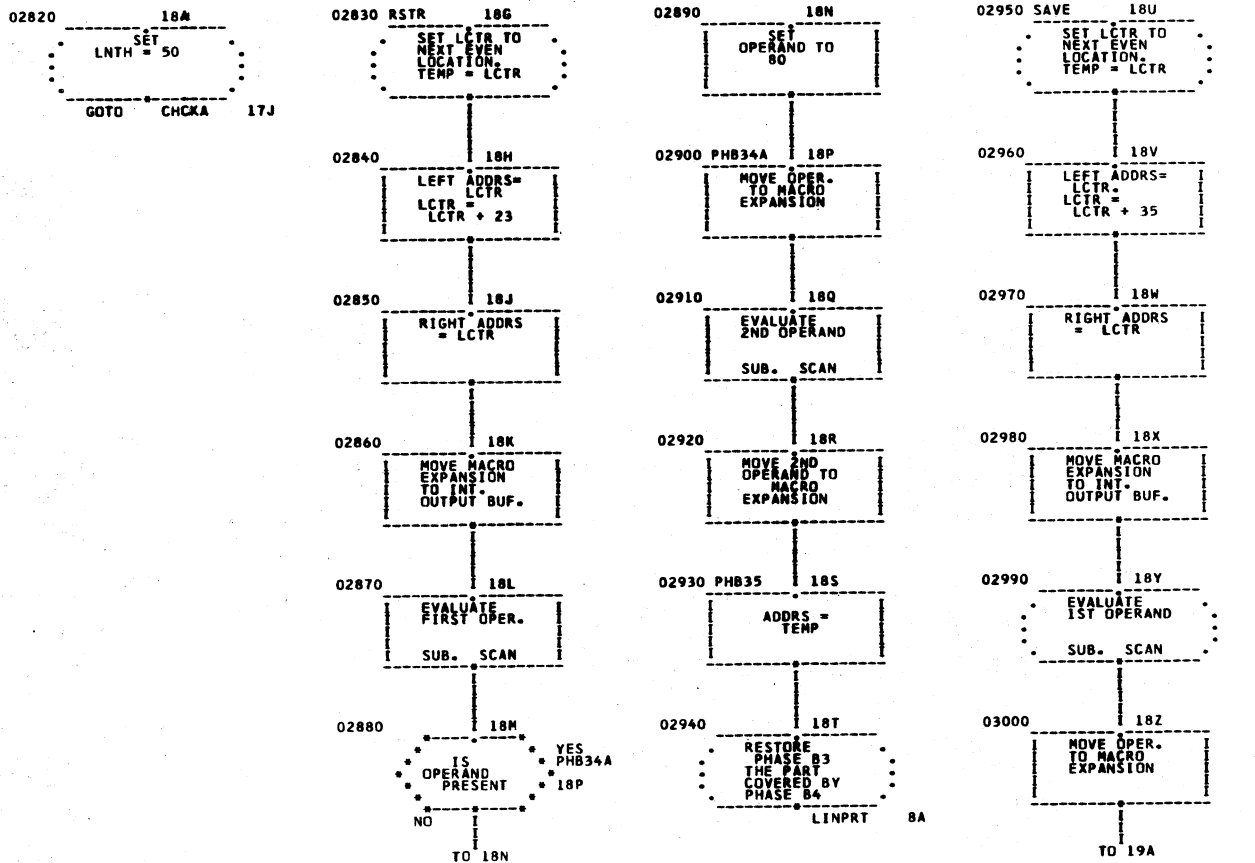
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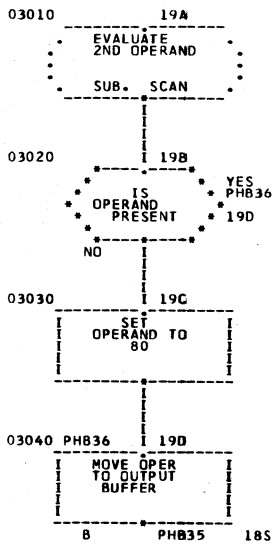
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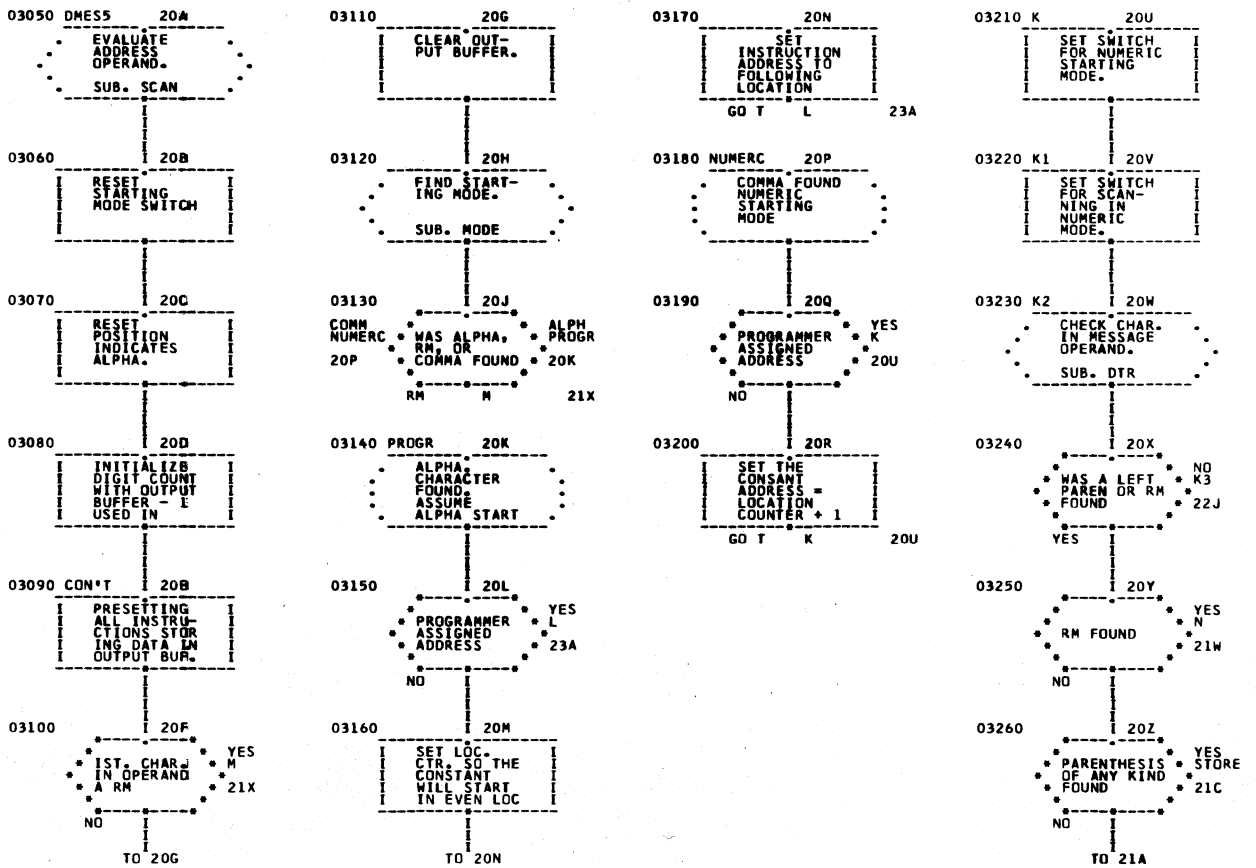
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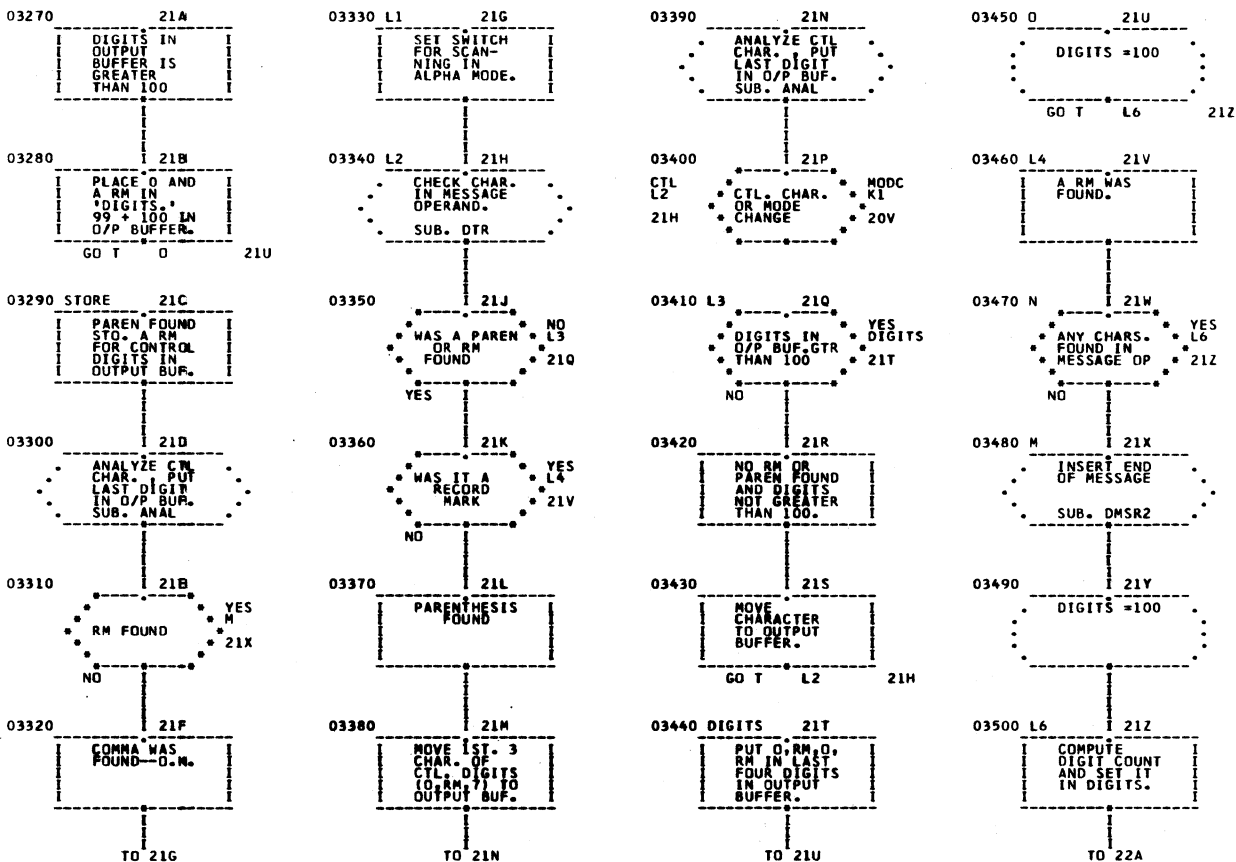
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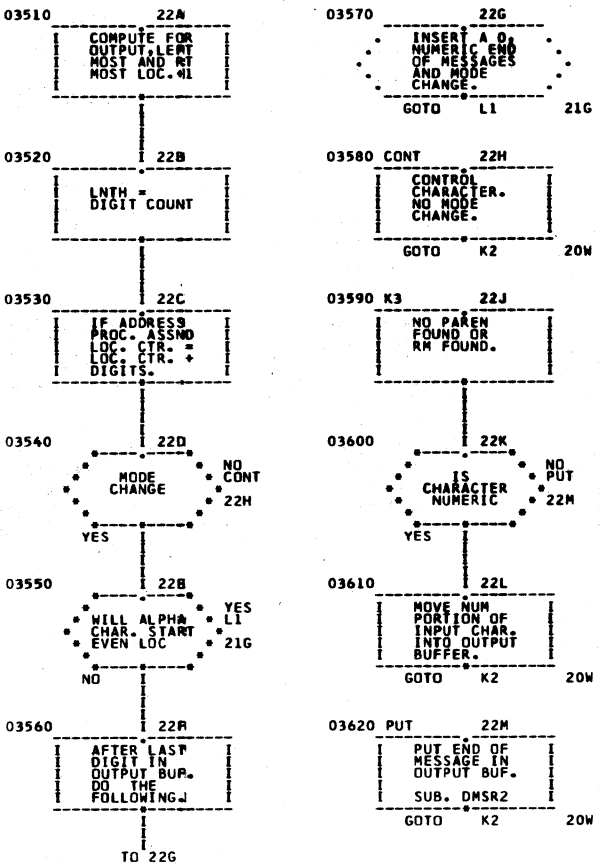
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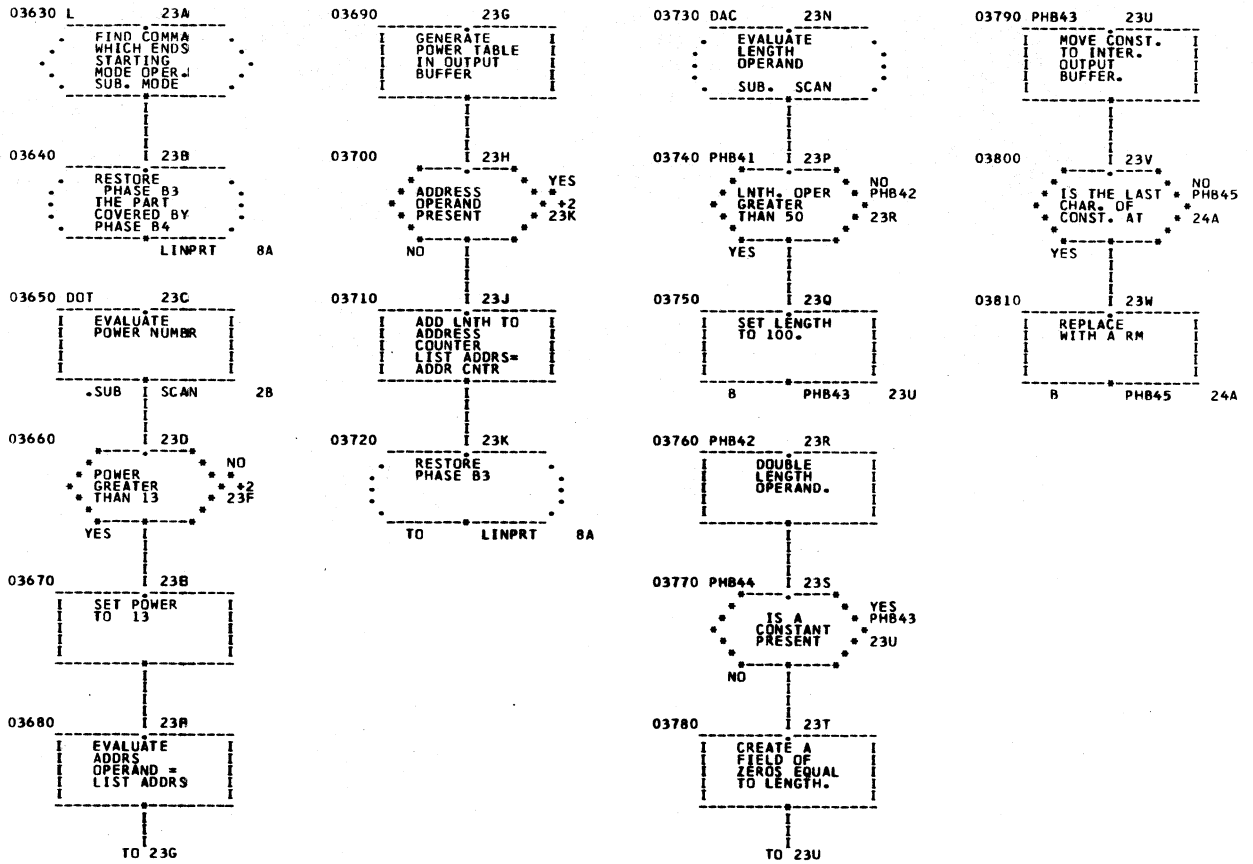
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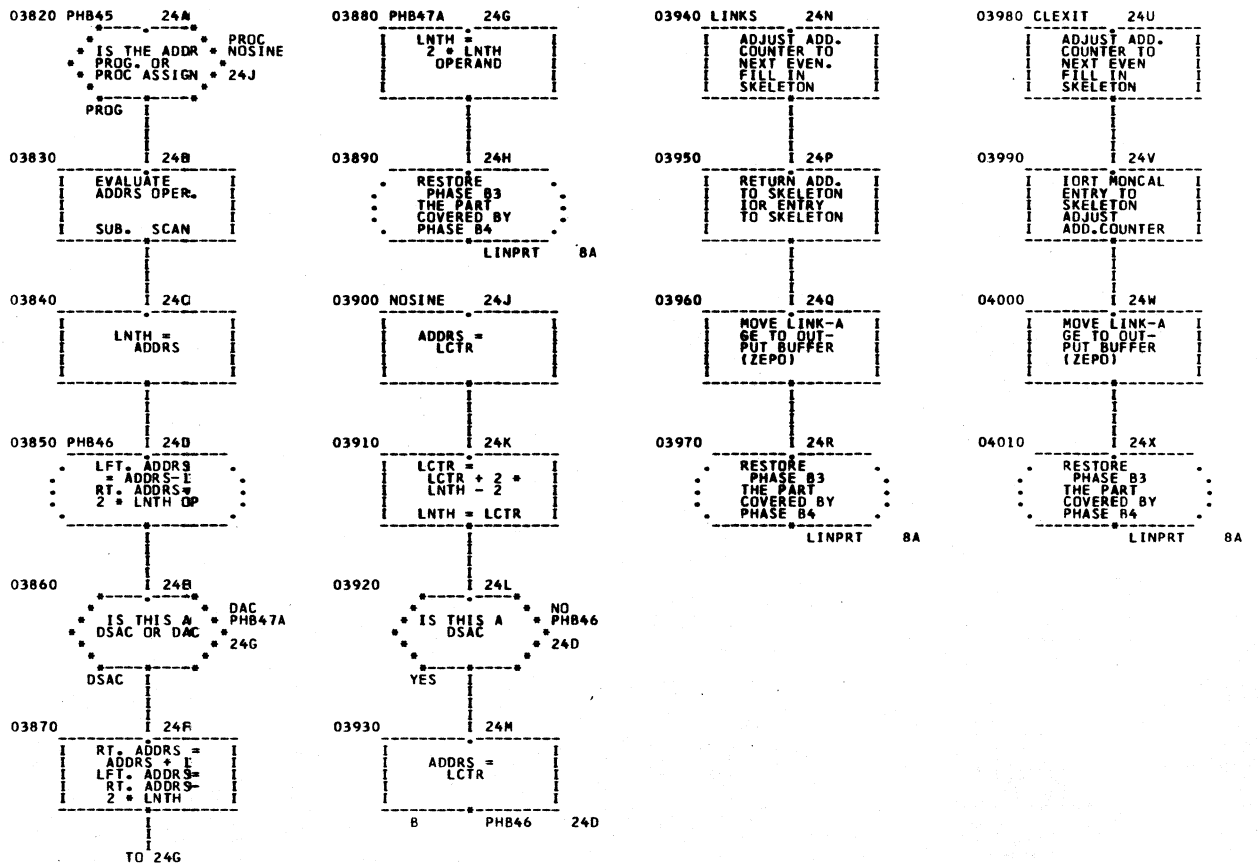
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901



902



903

04030 B6 25A
 SECONDARY LINKAGE CALLS IN PHASE B6 FROM DISK

04090 25G
 RESTORE PHASE B3 THE PART COVERED BY PHASE B6
 LINPRT 8A

04150 NOREP 25N
 TEST 3RD OPER FOR R REPOSITION
 YES EN 25Q

04210 25U
 RESTORE PHASE B3 THE PART COVERED BY PHASE B6
 B PHASEB 1G

04040 25B
 AND BRANCHES TO FIRST INSTRUCTION OF REQUIRED ROUTINE

04100 DISK 25H
 +1 TO ADDR. COUNTER. LOOK UP 1ST OPERAND.

04160 25P
 CLEAR FLAG INDICATOR IN DEFINER

04220 CALL 25V
 ADJUST ADD. COUNTER TO NEXT EVEN. FILL IN SKELETON

04050 START 25Q
 YES DISK 25H
 TEST TYPE OF INPUT DEFINERS
 YES OTHER 25E
 NONE

04110 25J
 MOVE OPERAND TO SKELETON LOOK UP 2ND OPERAND TO SKELETON

04170 EN 25Q
 OUTPUT WM AND CORE OPERANDS TO LINPRT

04230 25W
 RETURN ADD. TO SKELETON FOR ENTRY TO SKELETON

04060 25D
 TEST CALL LINKS
 YES CALL 25V
 NONE

04120 25K
 SET 3 OPER. SWITCH, SAVE ARM REPOSTN OPERAND.

04180 25R
 TEST 3 OPER. SWITCH
 OFF NOT3 25T

04240 25X
 BRANCH TO PCALL TO COLLECT 1ST OPERAND

04070 OTHER 25B
 +1 TO ADDR. COUNTER. LOOK UP OPERAND.

04130 25L
 TEST 4TH OPER FOR A ABSOLUTE
 YES
 NO NOREP 25N

04190 25S
 OUTPUT SECTOR INCREMENT TO LINPRT

04250 25Y
 TEST OPERND FOR ALPHA OR NUMERIC
 NUME FOUND 26C
 ALPH

04080 25R
 FILL IN SKELETON MOVE TO ZERO AND OUT

04140 25M
 SET 1 INDICATOR IN DEFINER

04200 NOT3 25T
 OUTPUT RECORD MARK TO LINPRT.

04260 25Z
 READ THE DIM ENTRY FOR THE EQUIVALENT TABLE

TO 25G

TO 25N

TO 25U

TO 26A

904

04270 26A
 READ THE EQUIVALENT TABLE SCAN EQUIV. TABLE

04330 NO3 26G
 OUTPUT RECORD MARK B-T TO LINPRT

04280 26B
 MOVE EQUIV. NUMBER TO SAVE

04340 26H
 RESTORE PHASE B3 THE PART COVERED BY PHASE B6
 B PHASEB 1G

04290 FOUND 26C
 SCAN FOR 3RD OPERAND

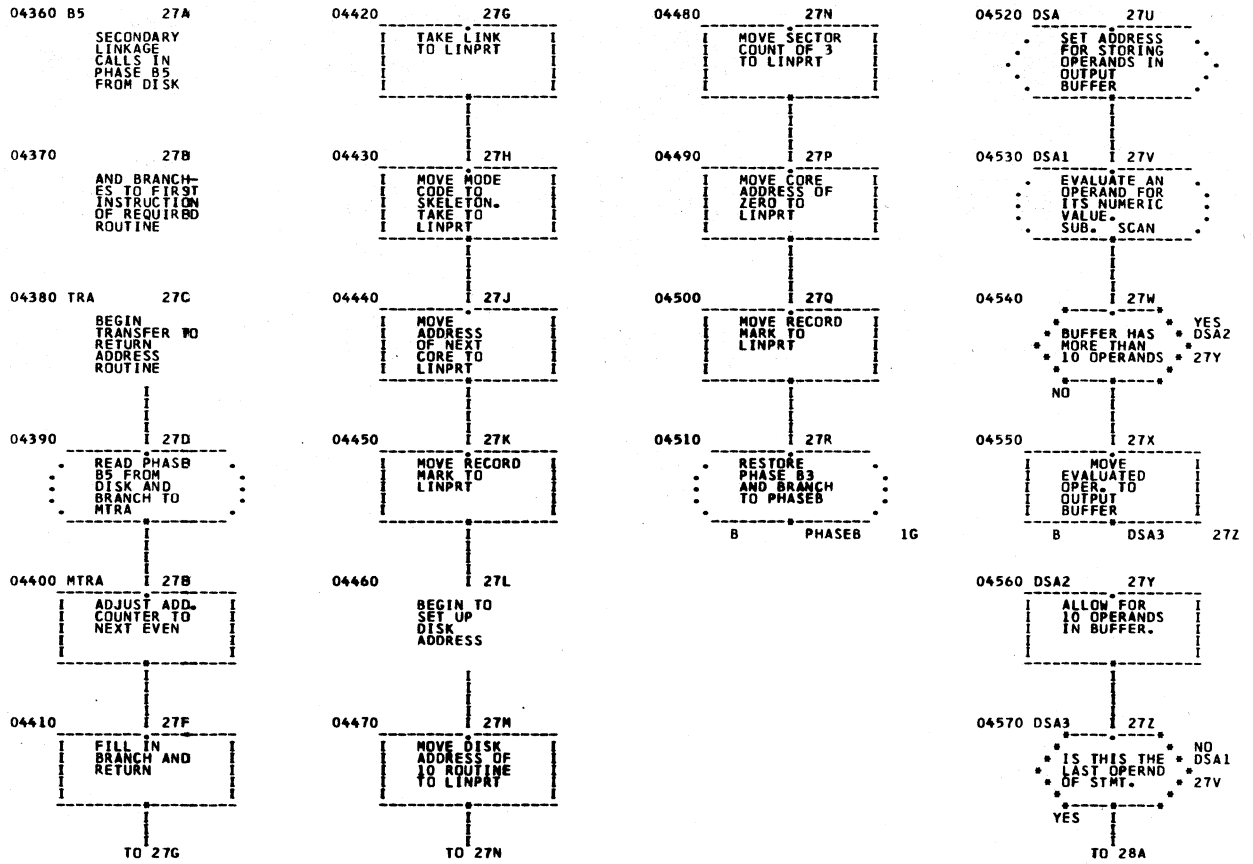
04300 26D
 OUTPUT LINK AND OPERAND #1 #2 TO LINPRT

04310 26B
 TEST FOR 3RD OPERAND
 OFF NO3 26G

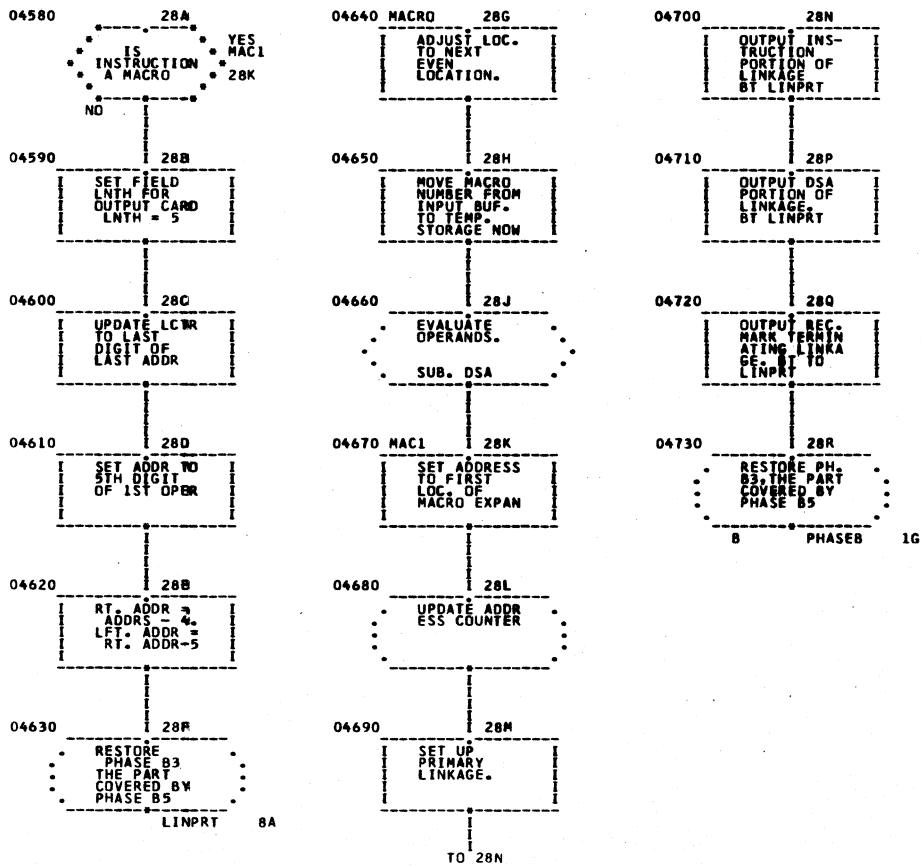
04320 26F
 OUTPUT SECTOR INCREMENT TO LINPRT

TO 26G

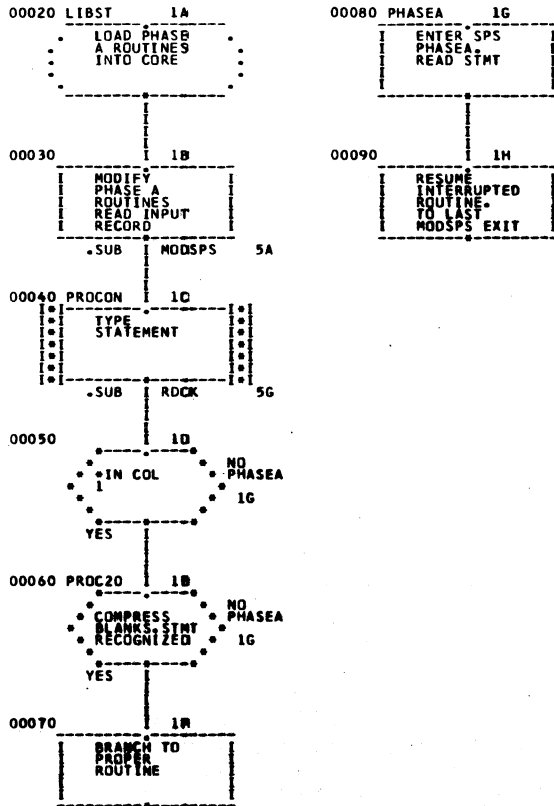
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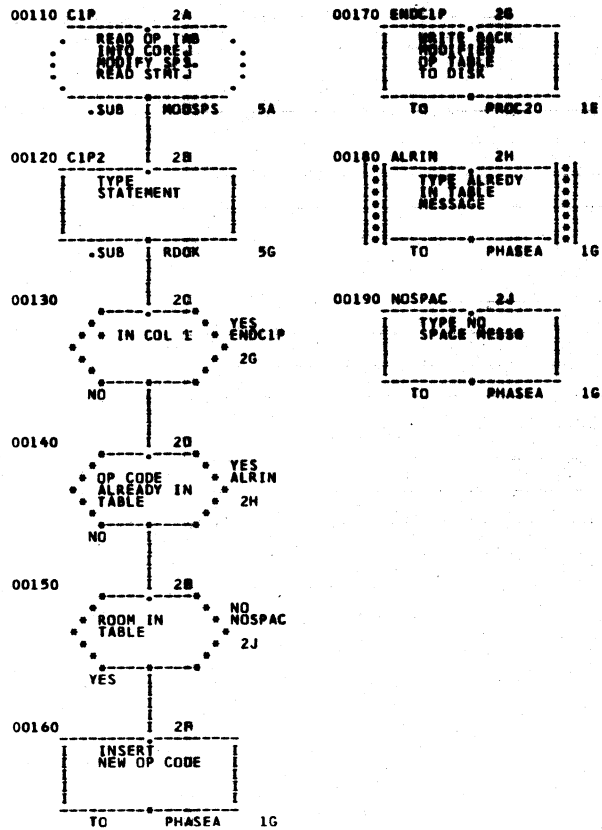
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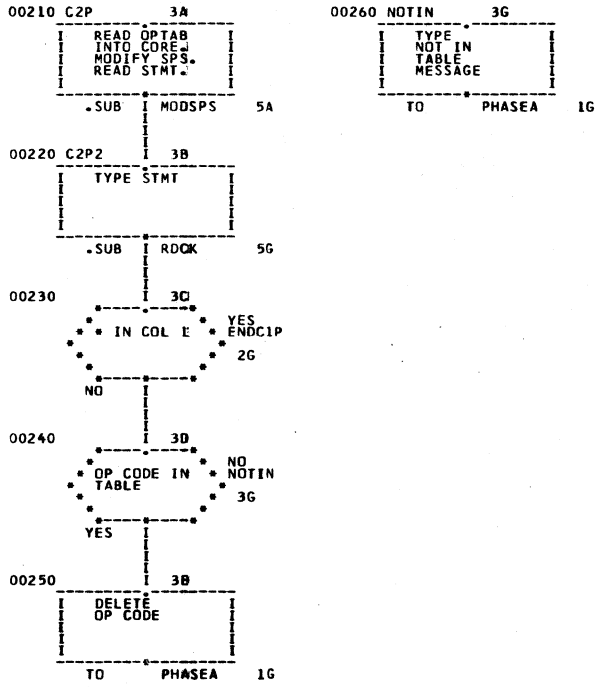
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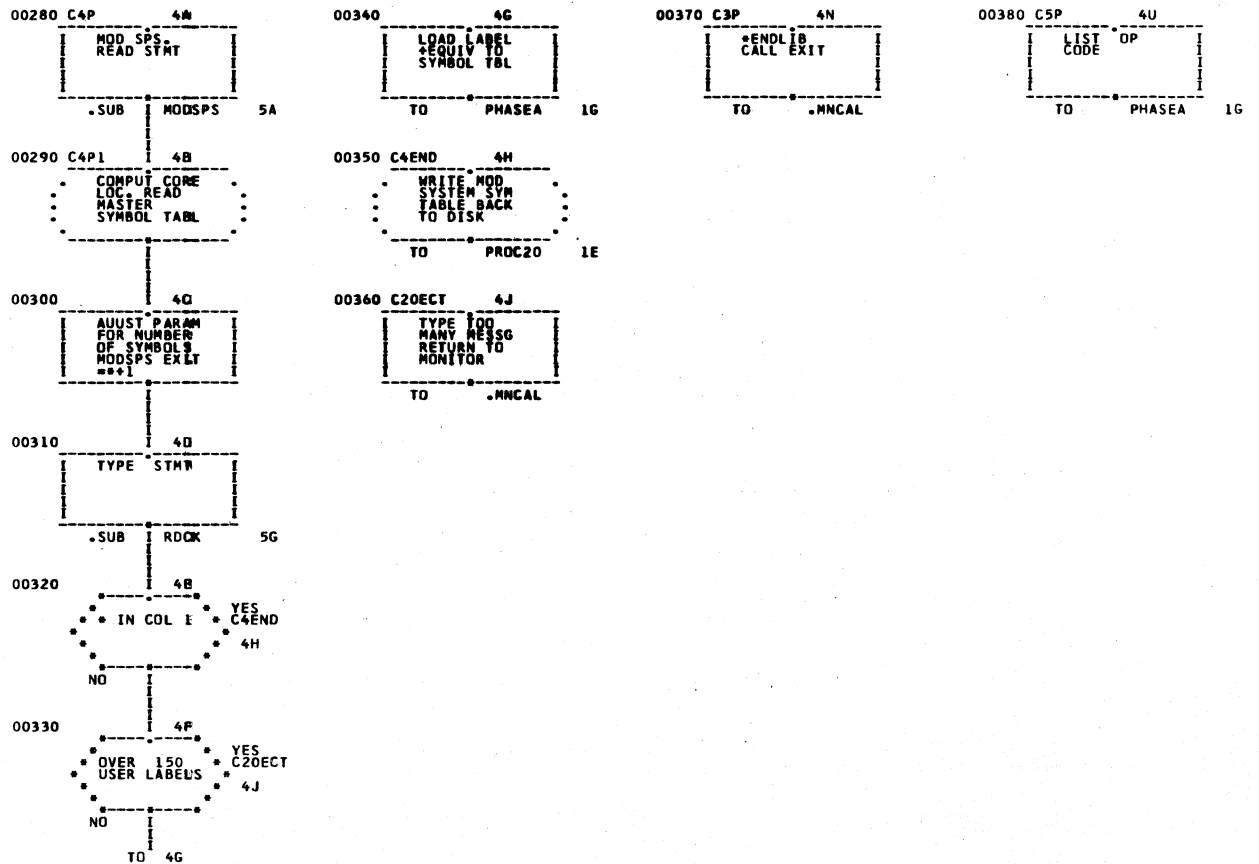
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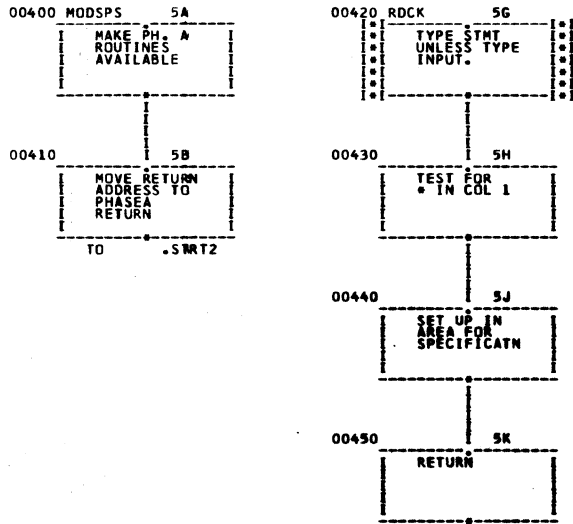
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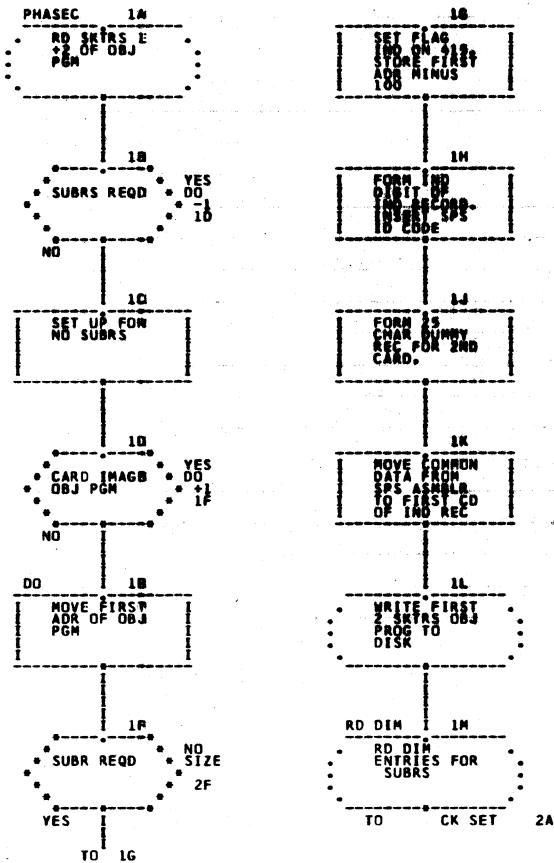
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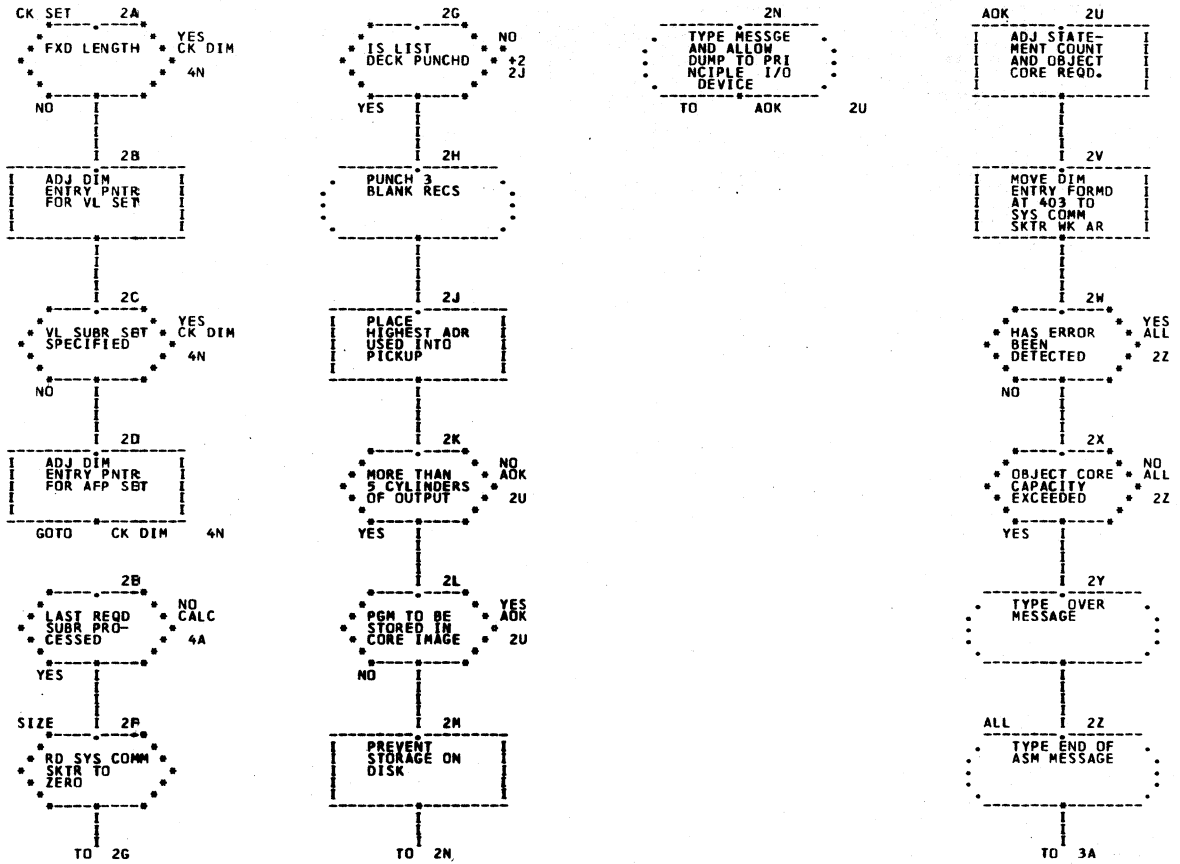
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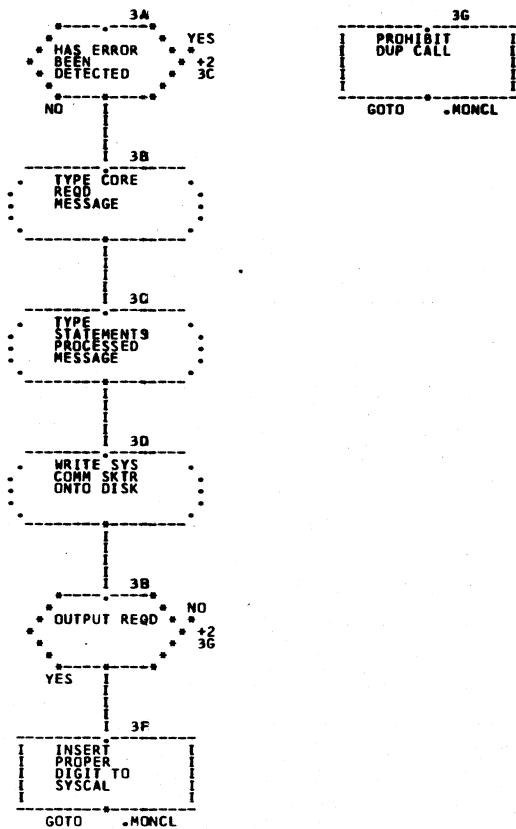
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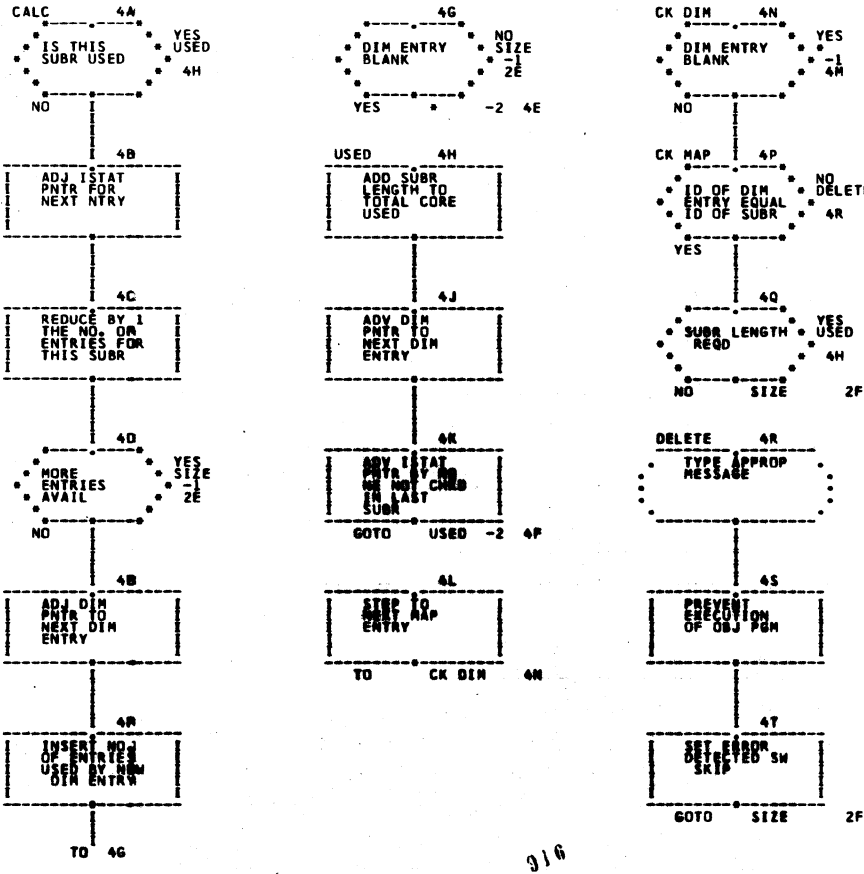
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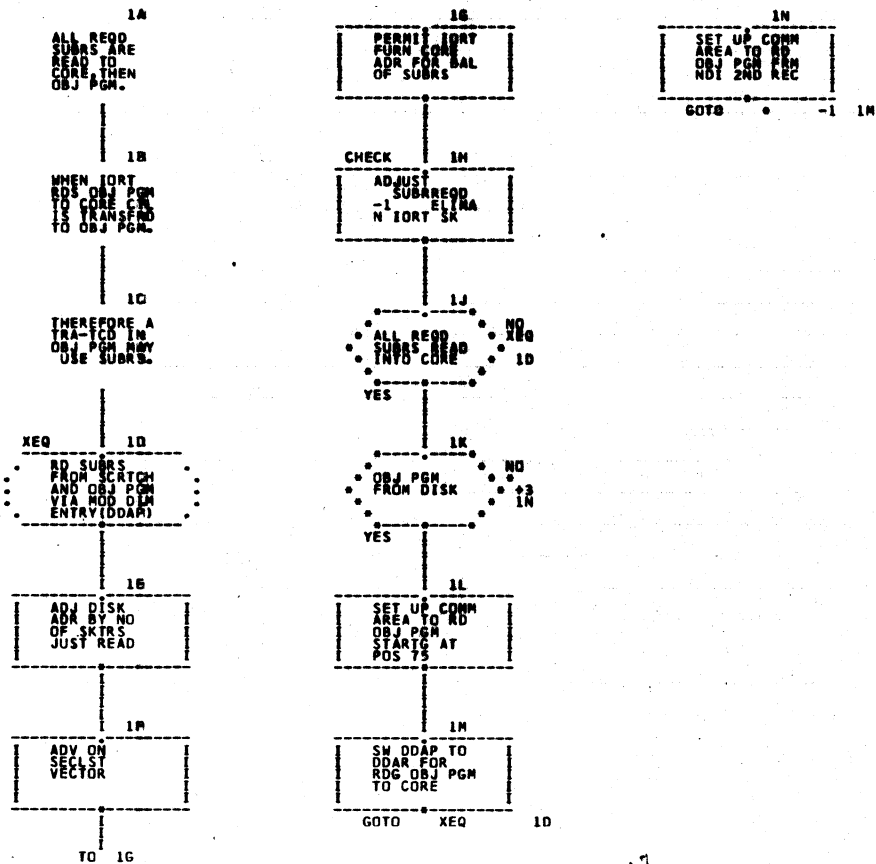
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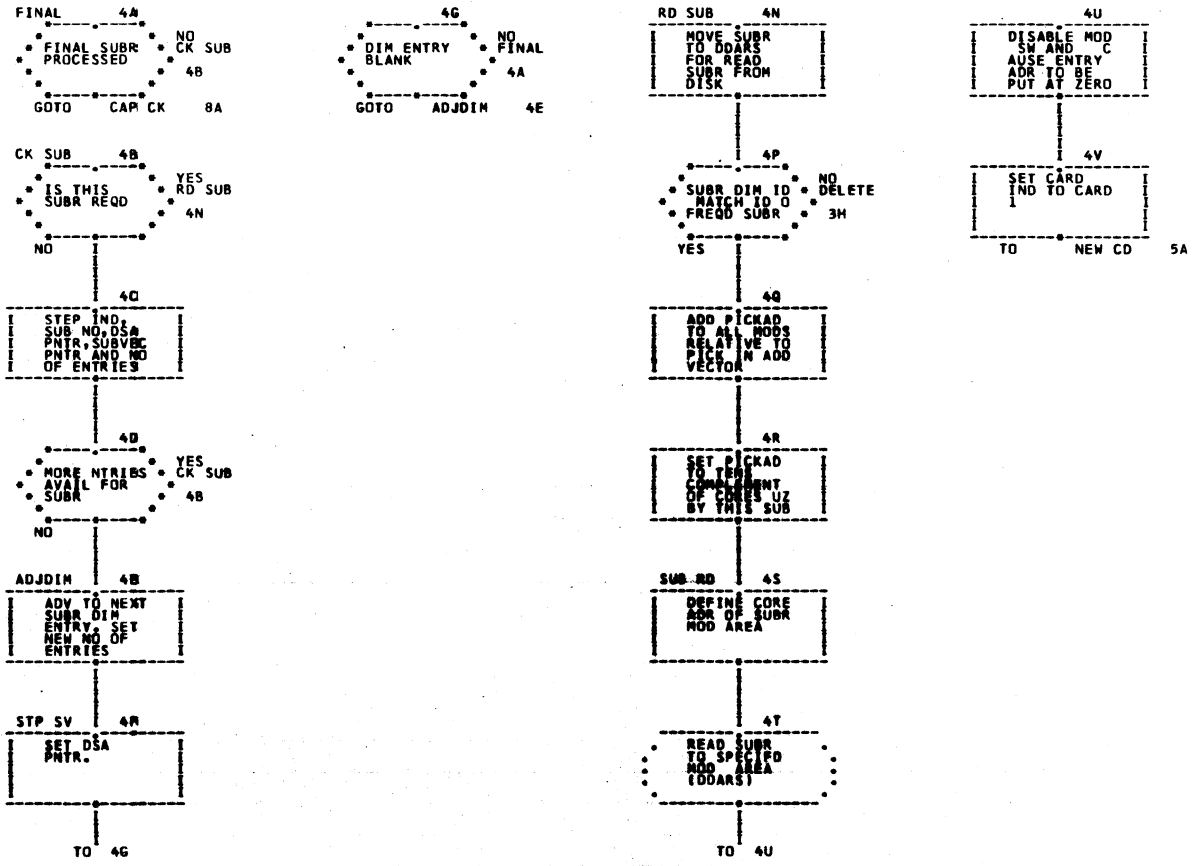
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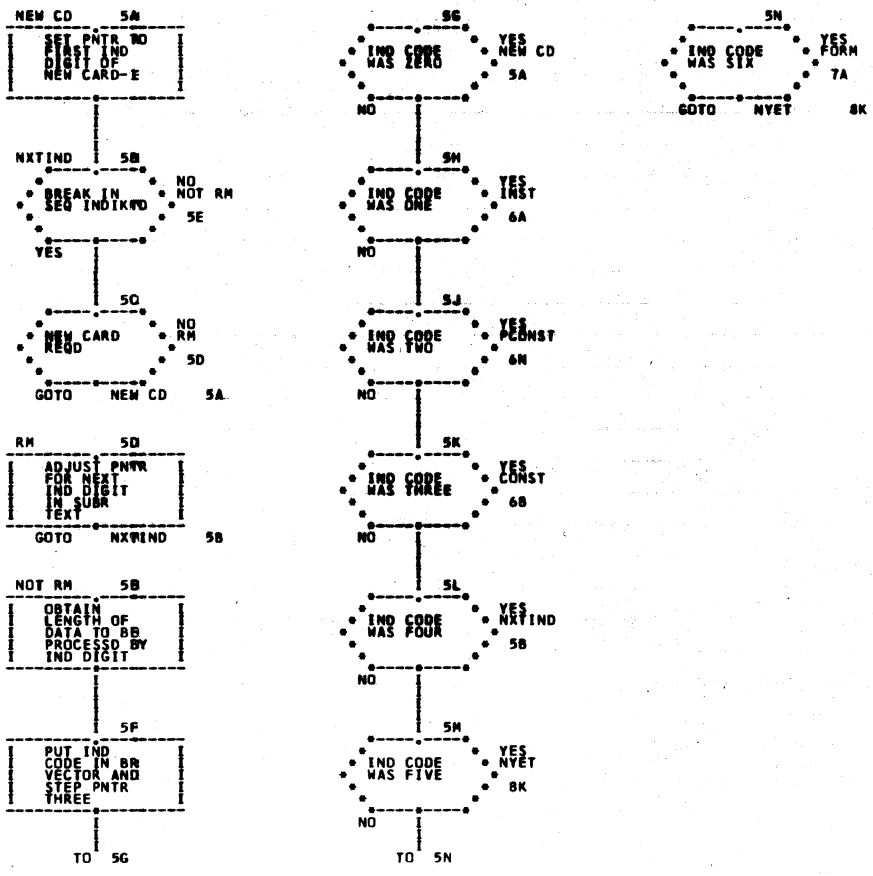
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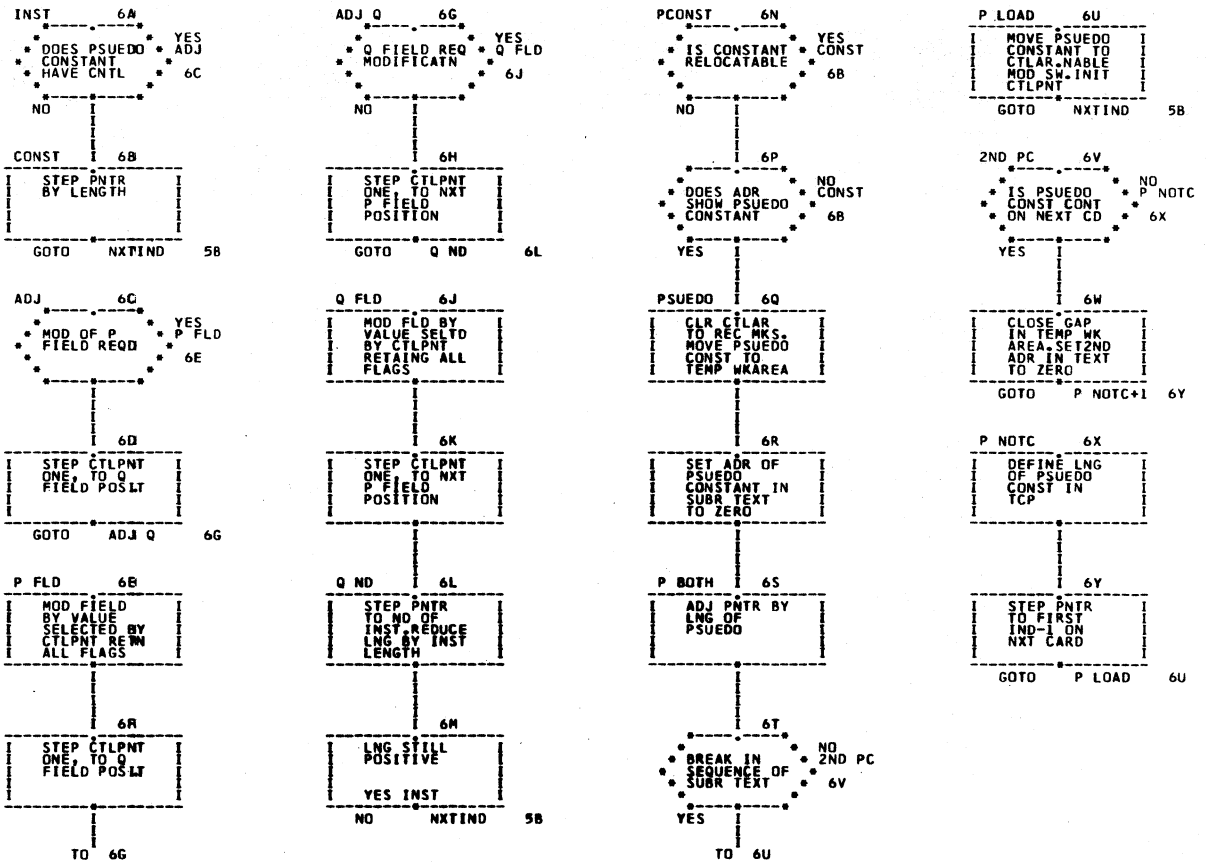
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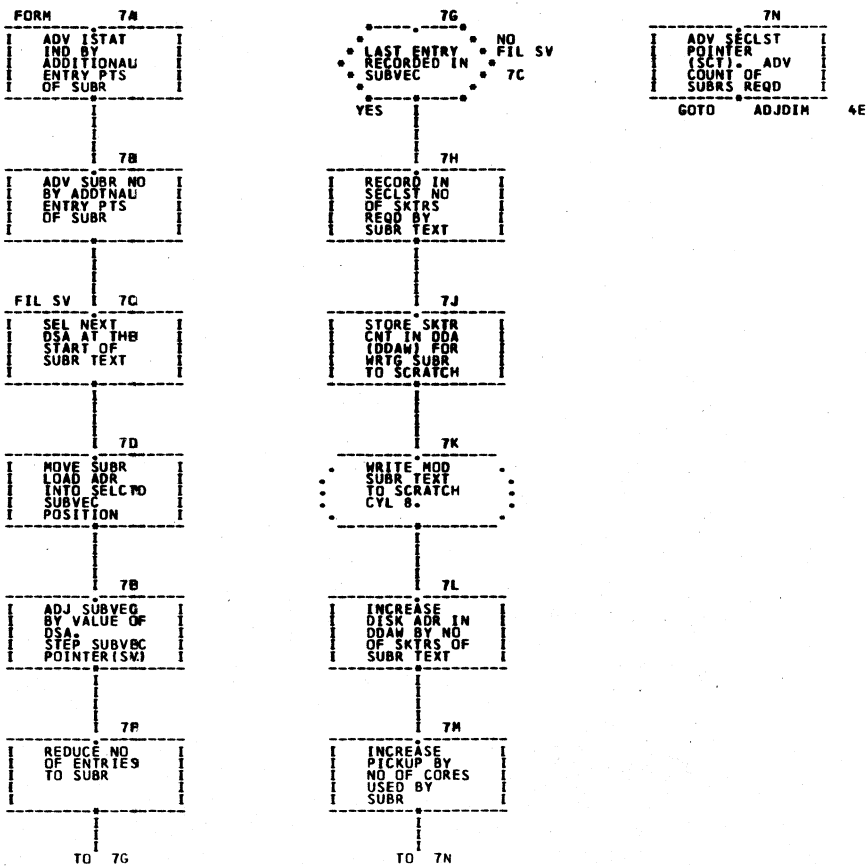
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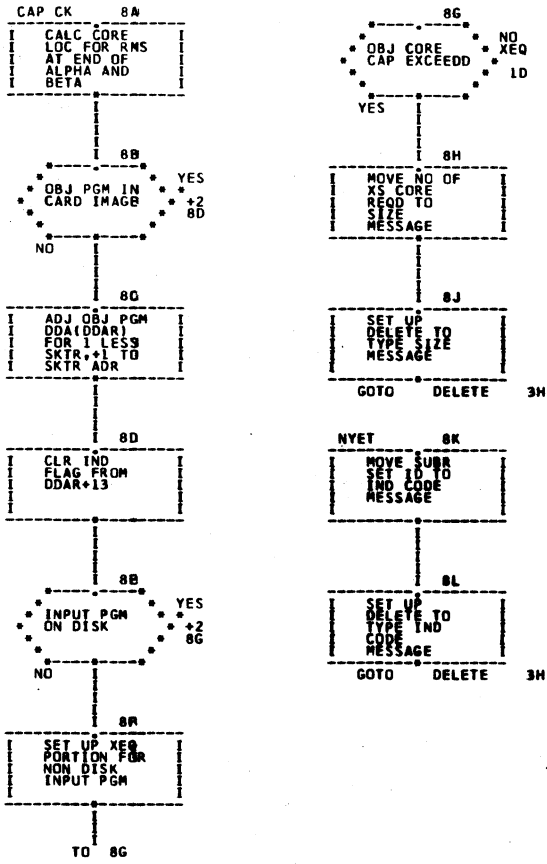
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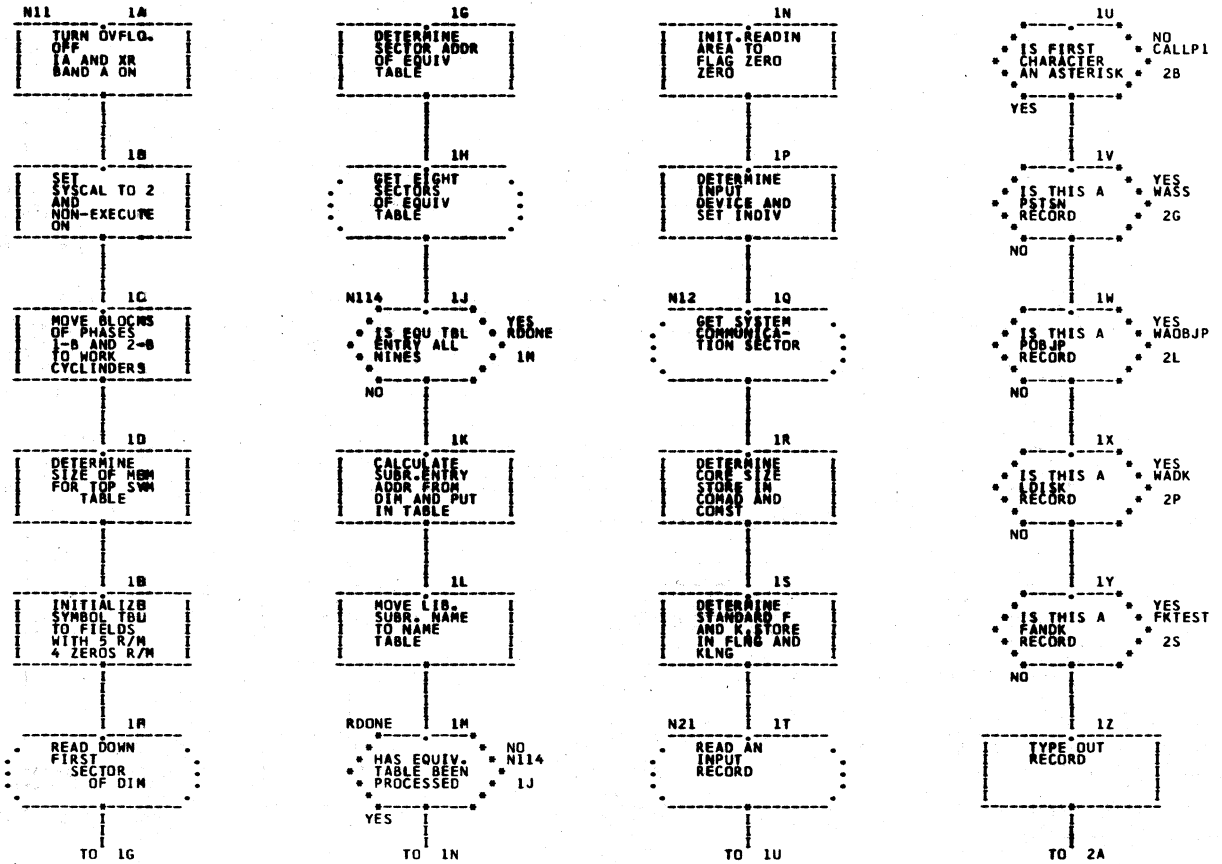
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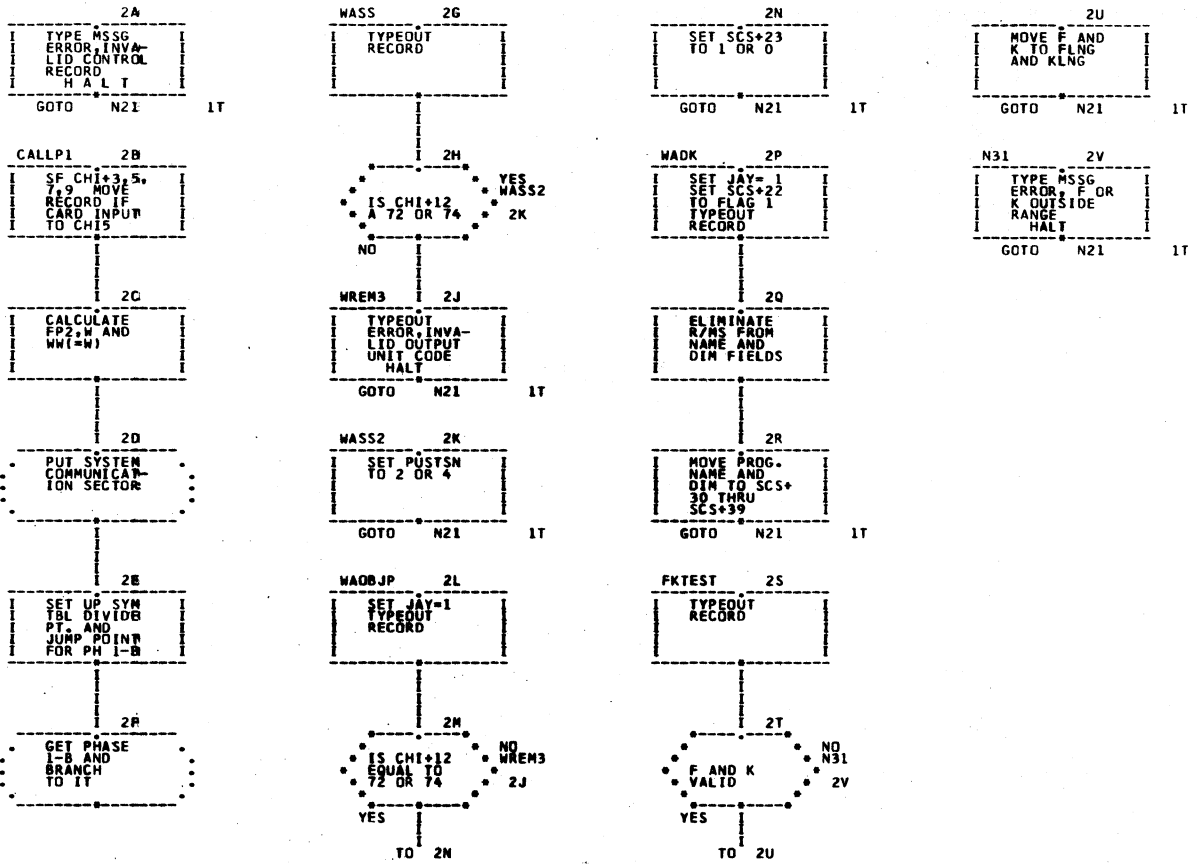
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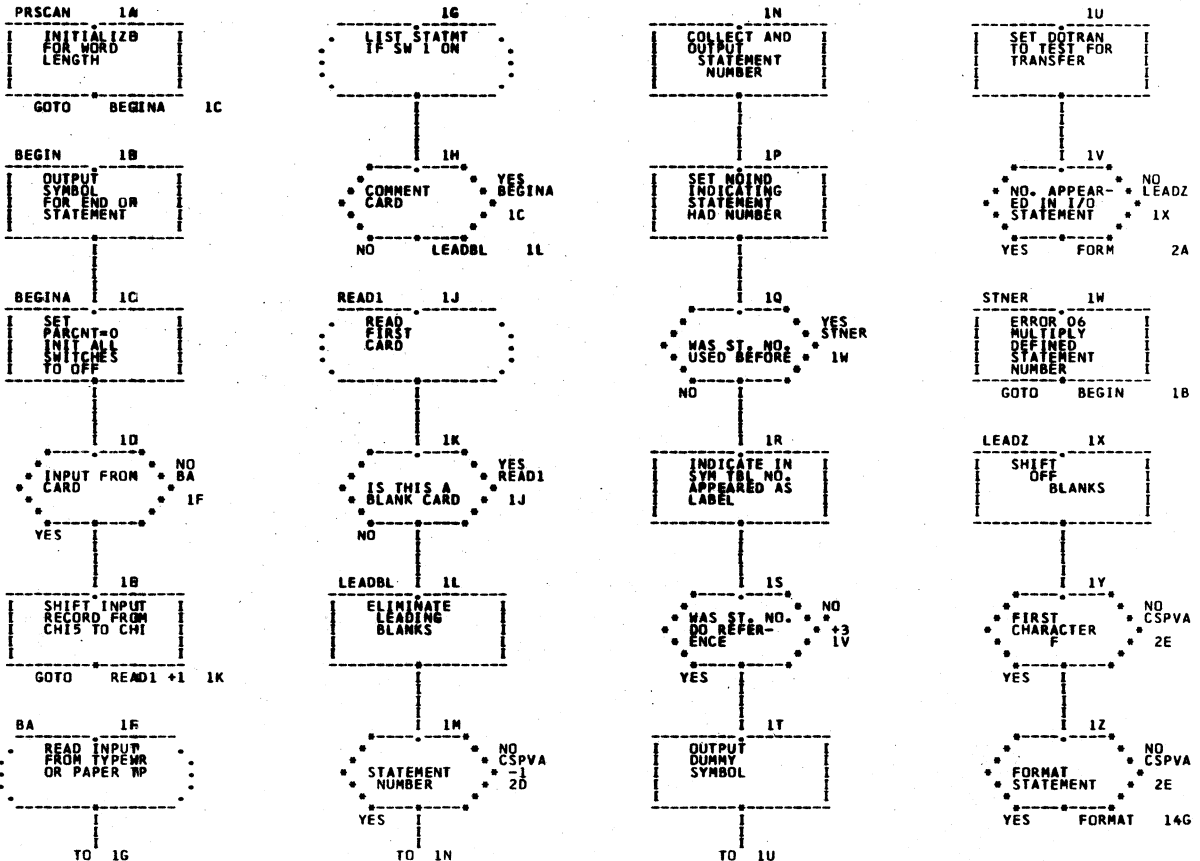
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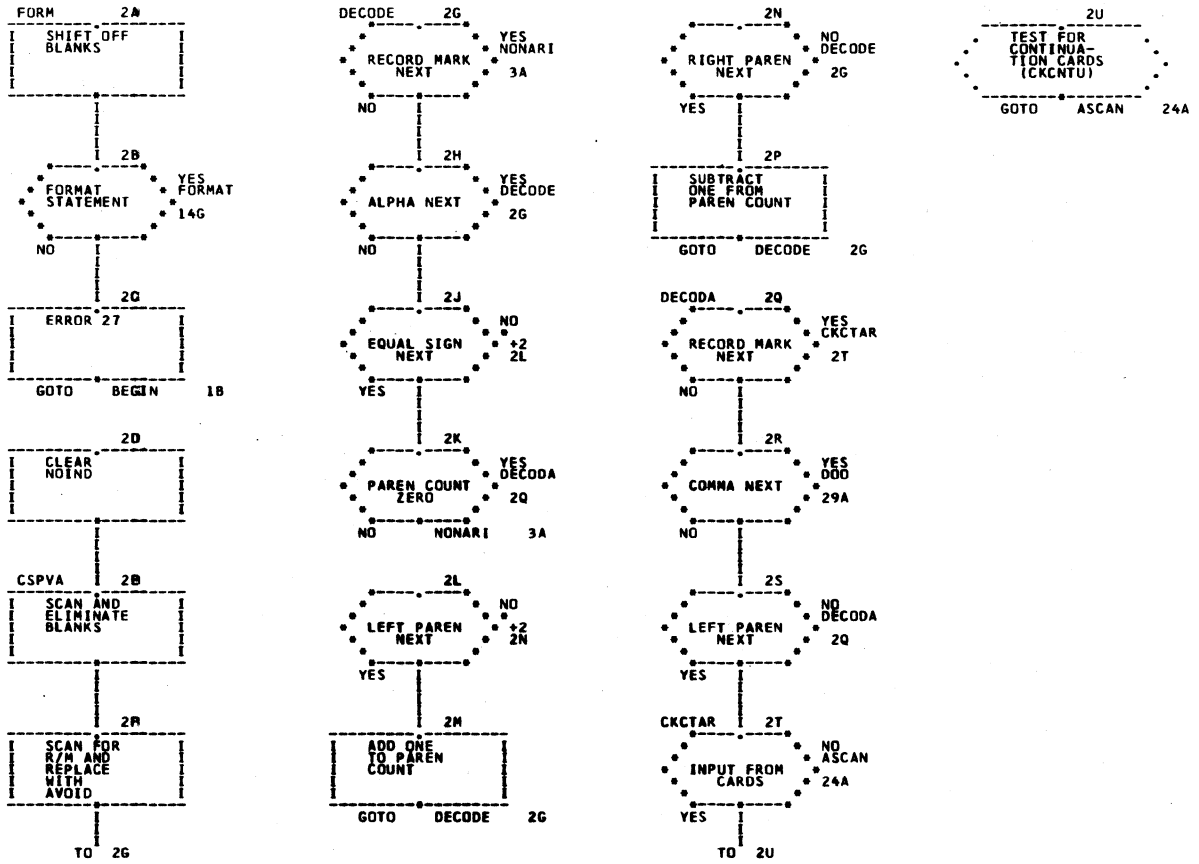
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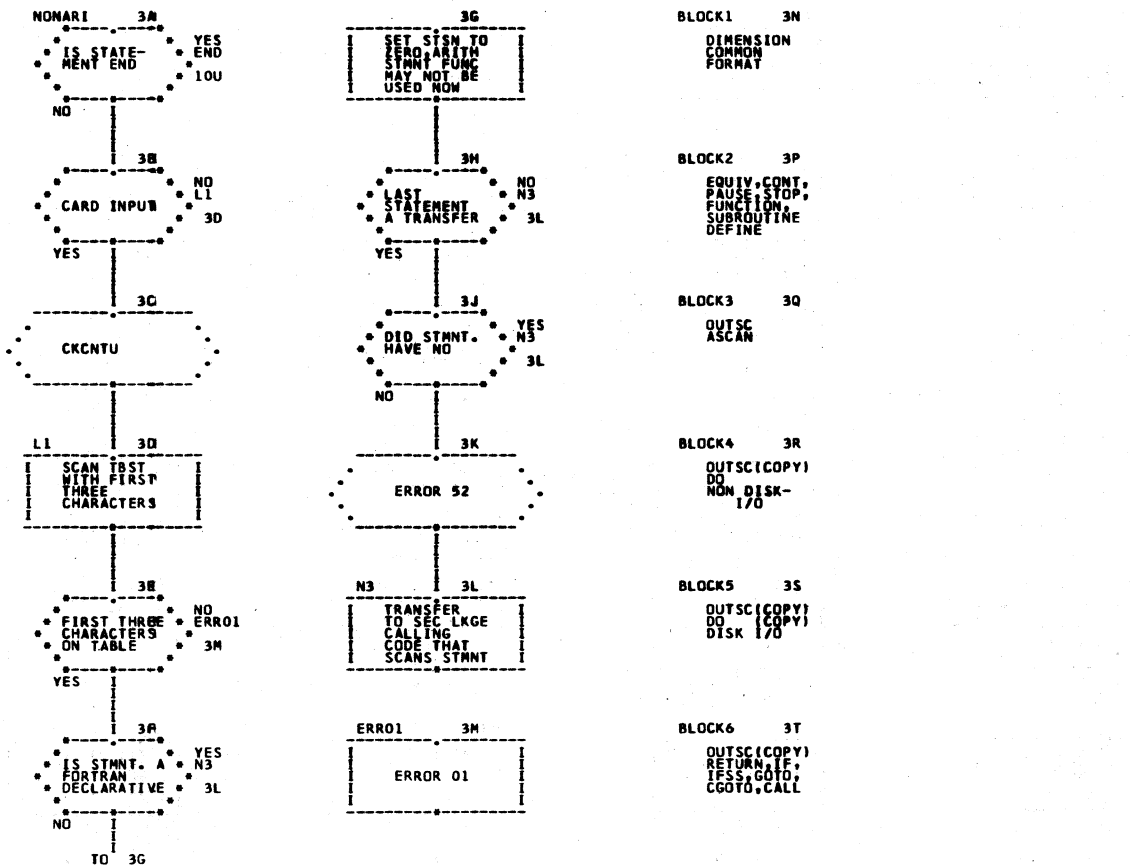
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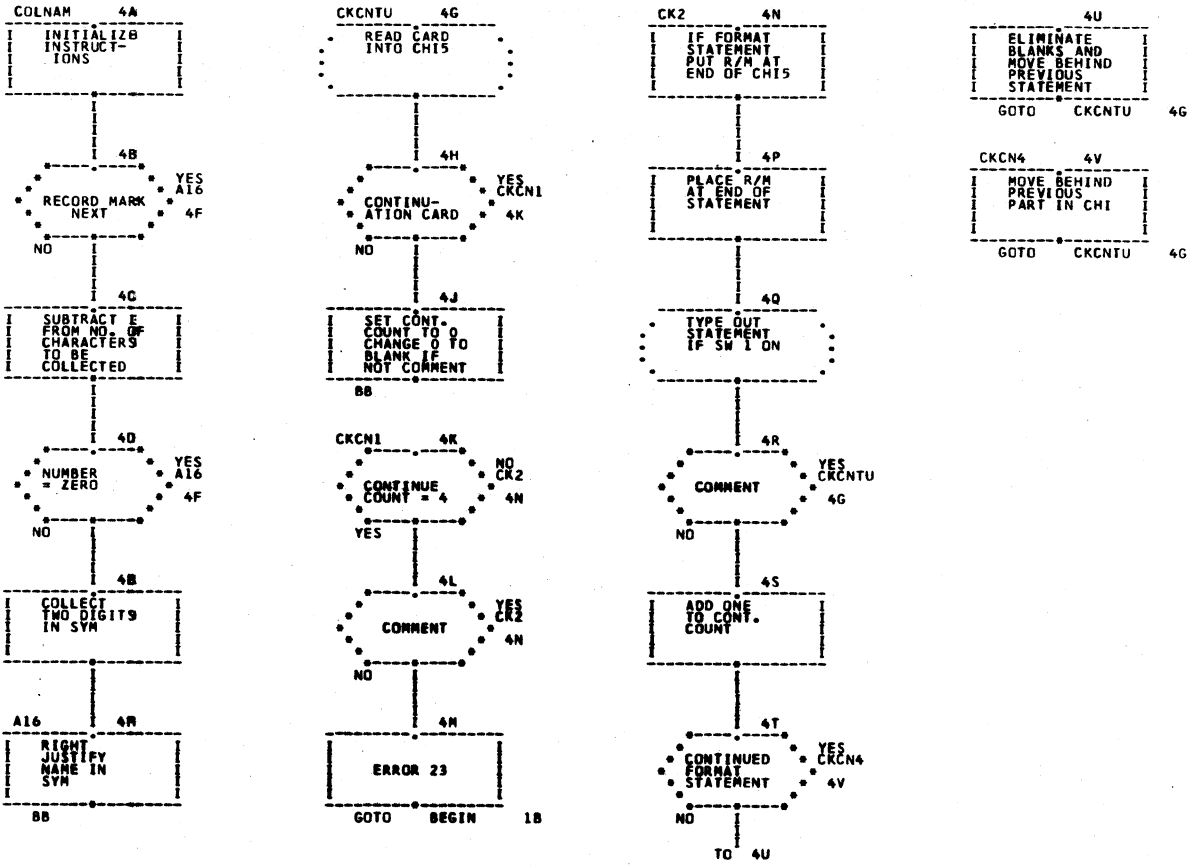
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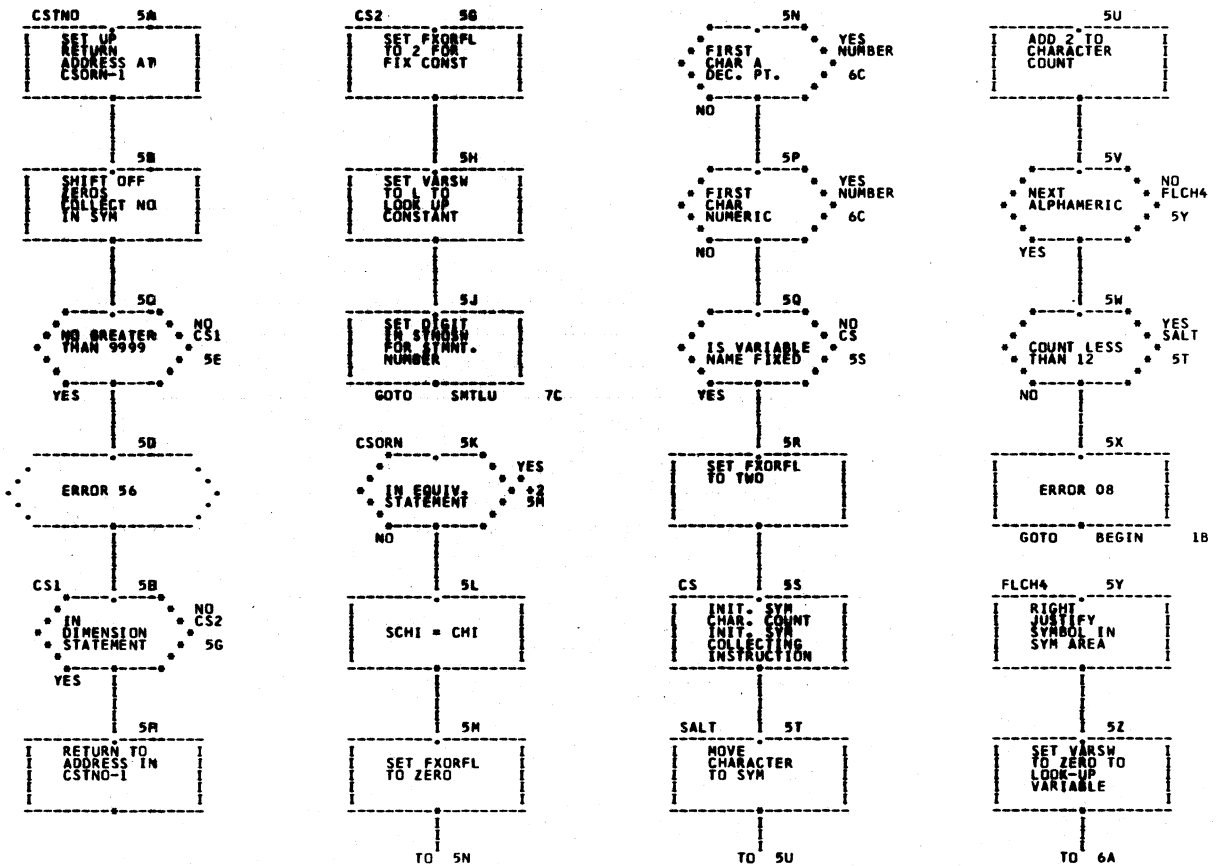
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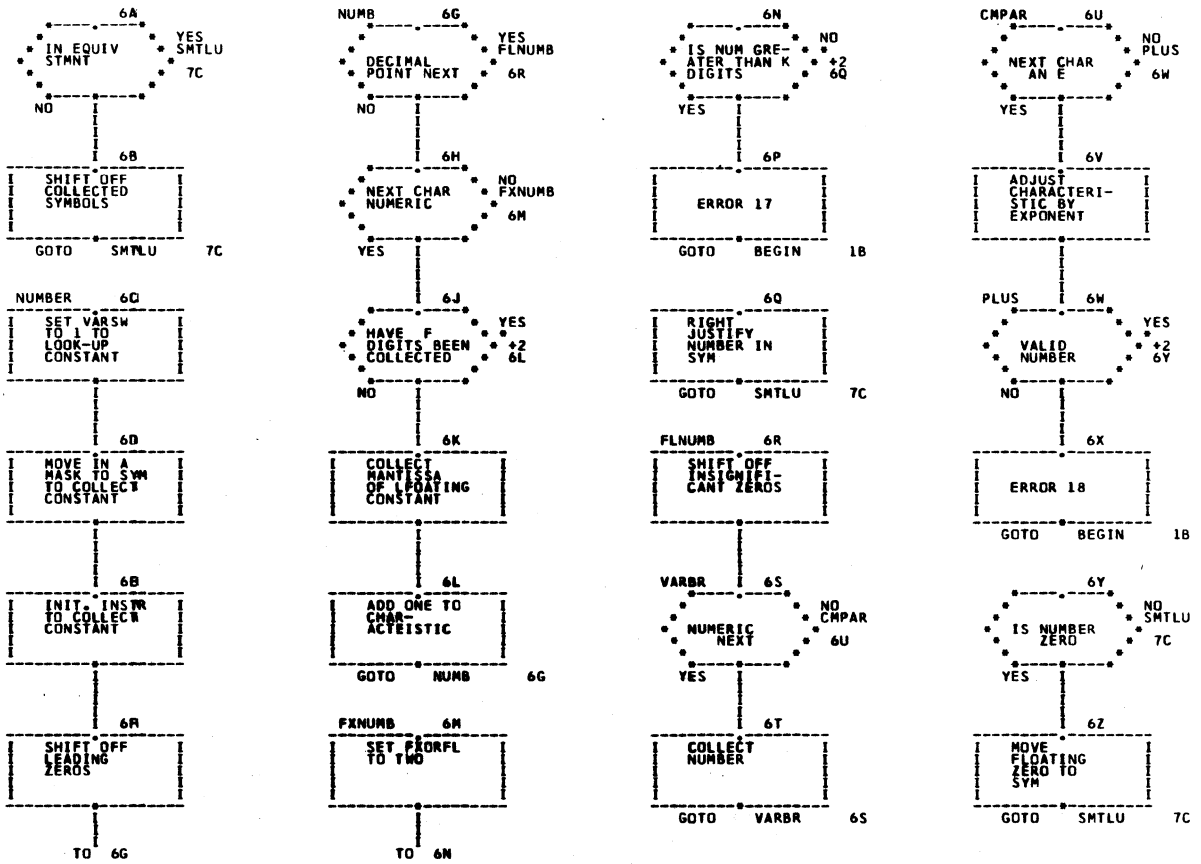
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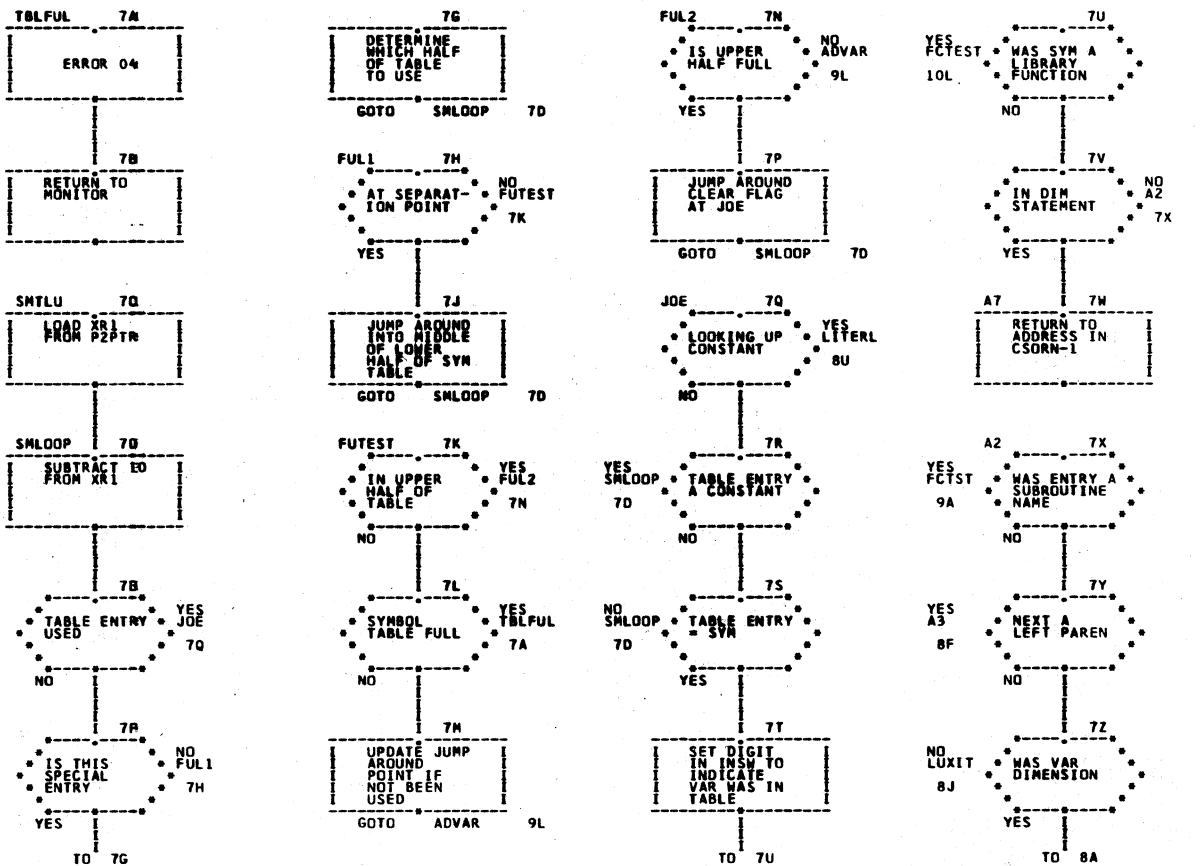
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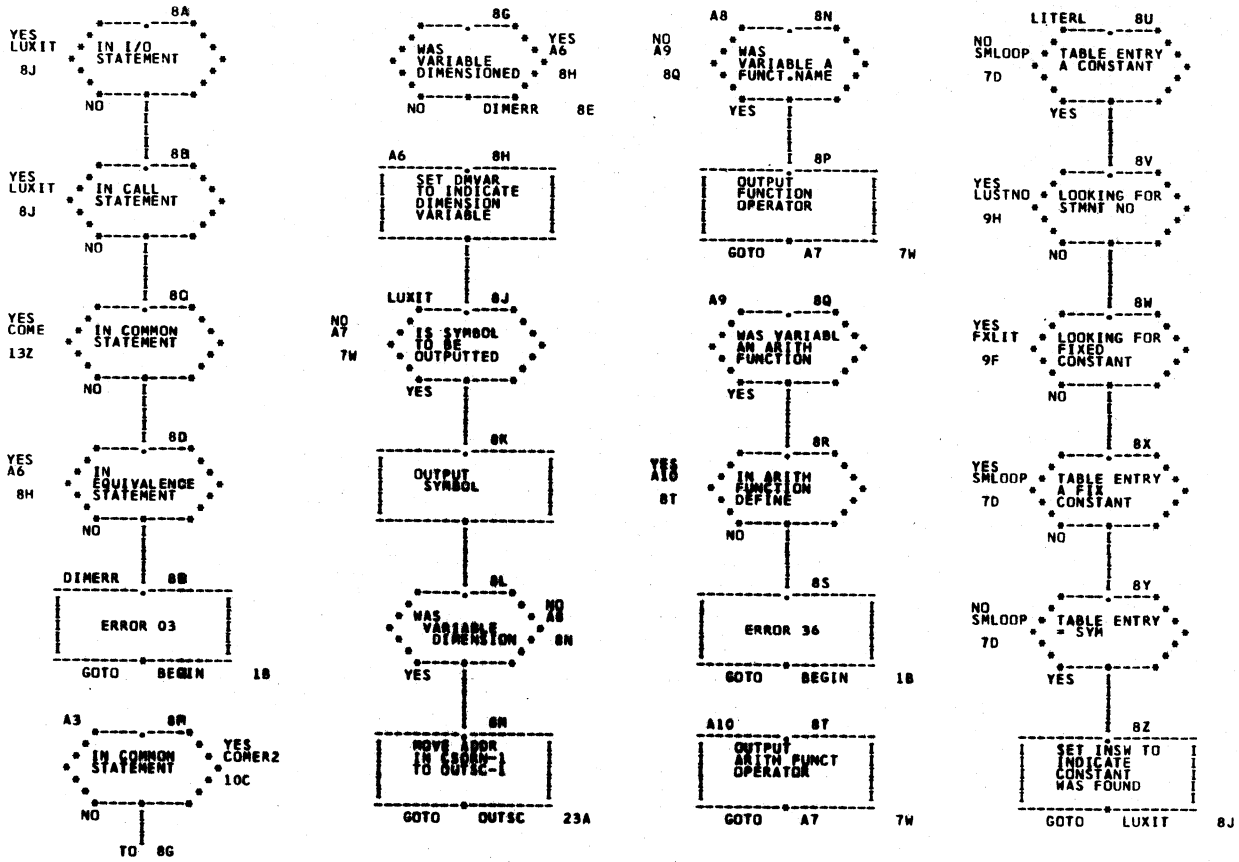
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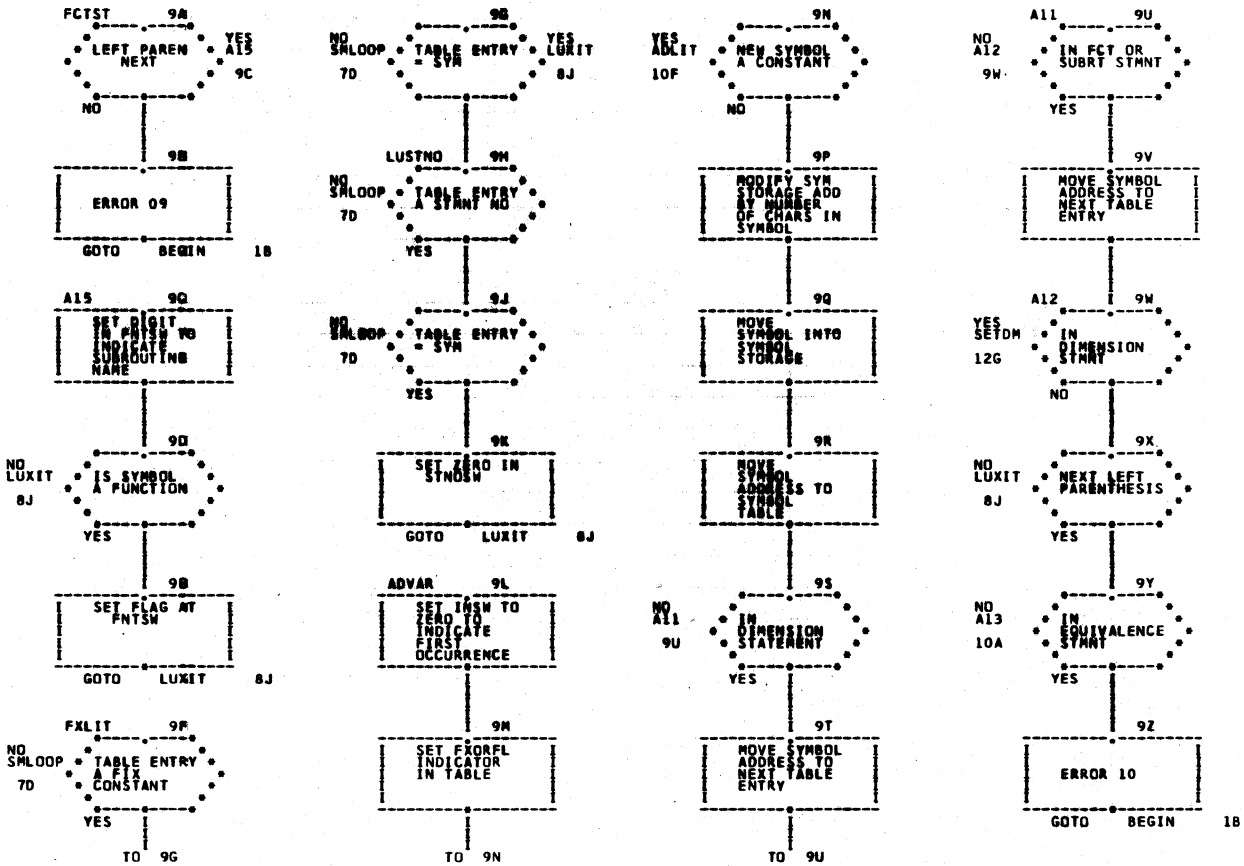
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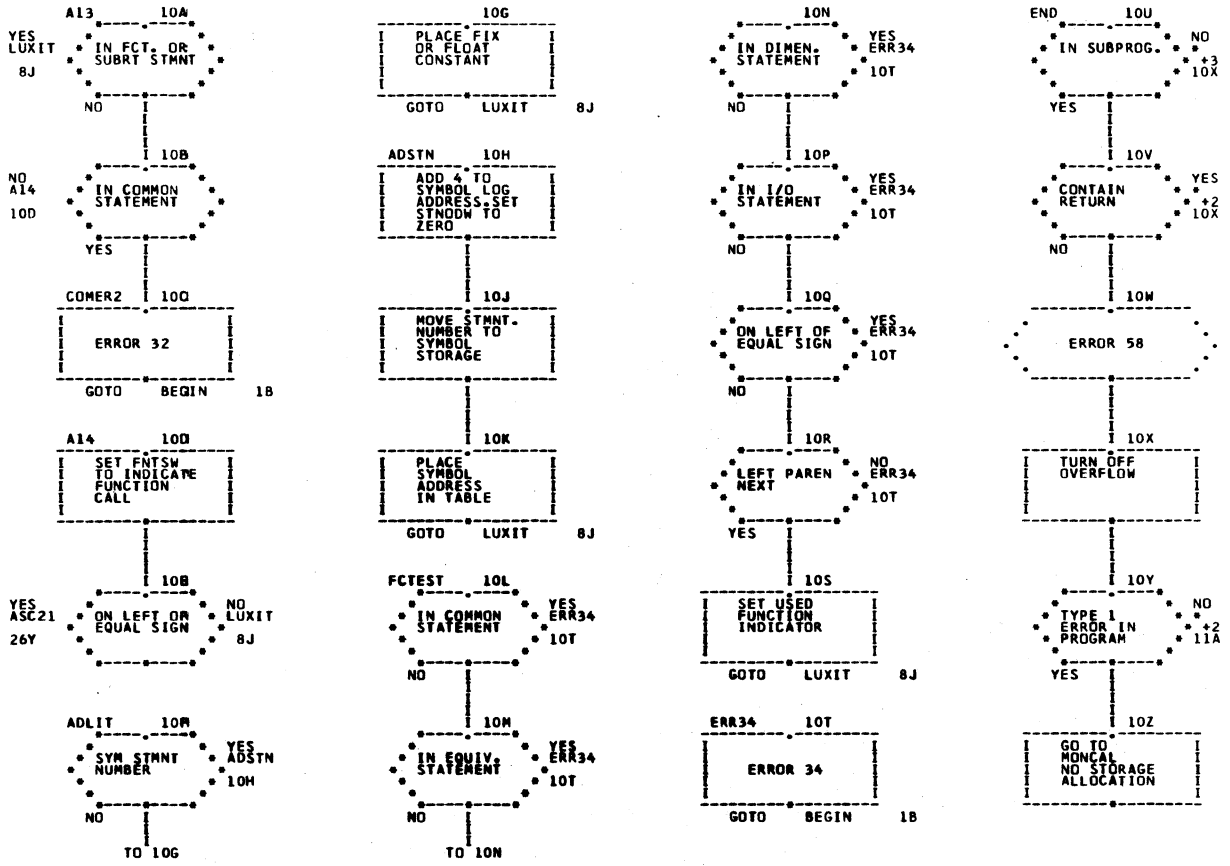
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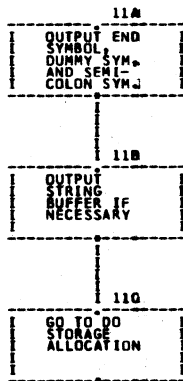
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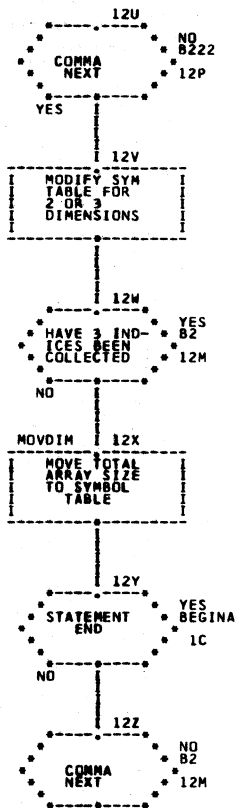
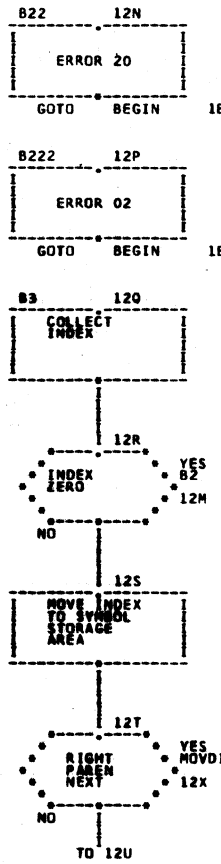
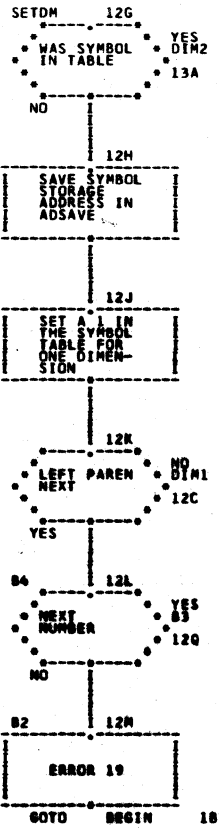
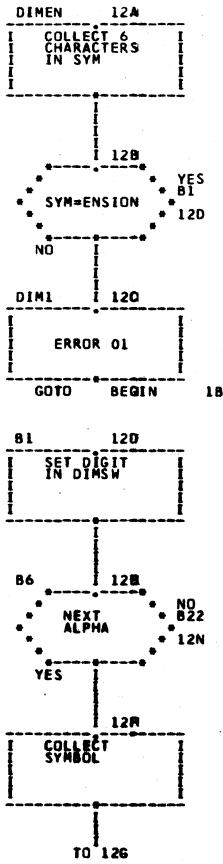
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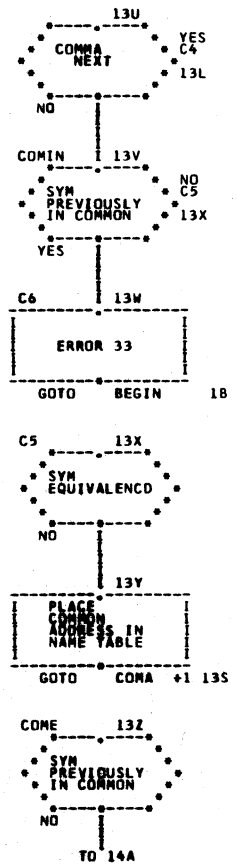
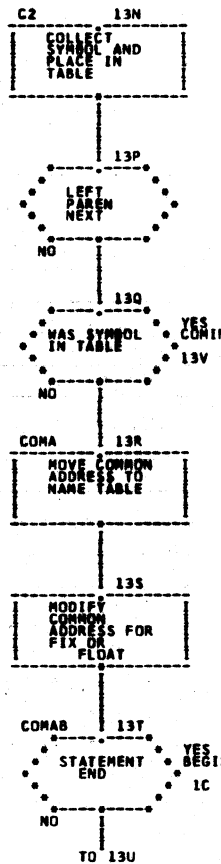
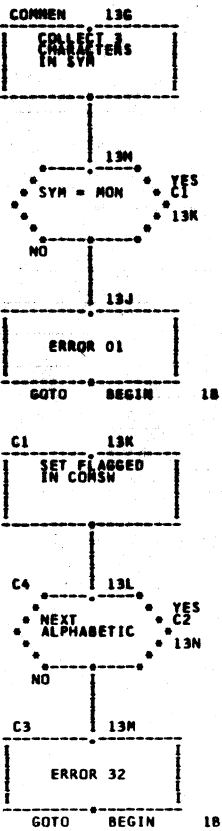
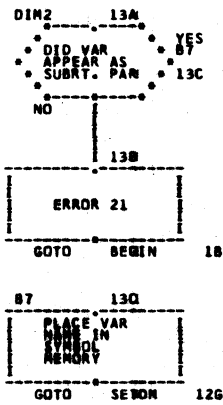
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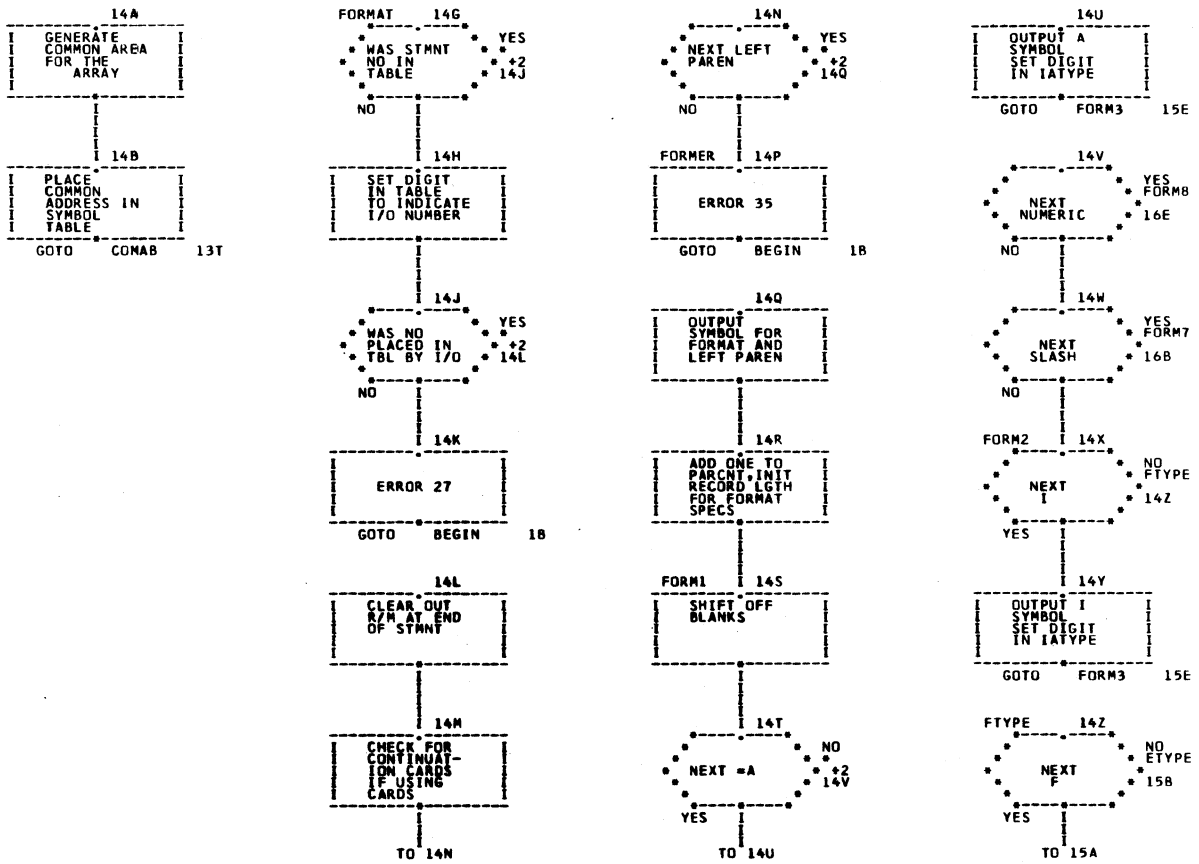
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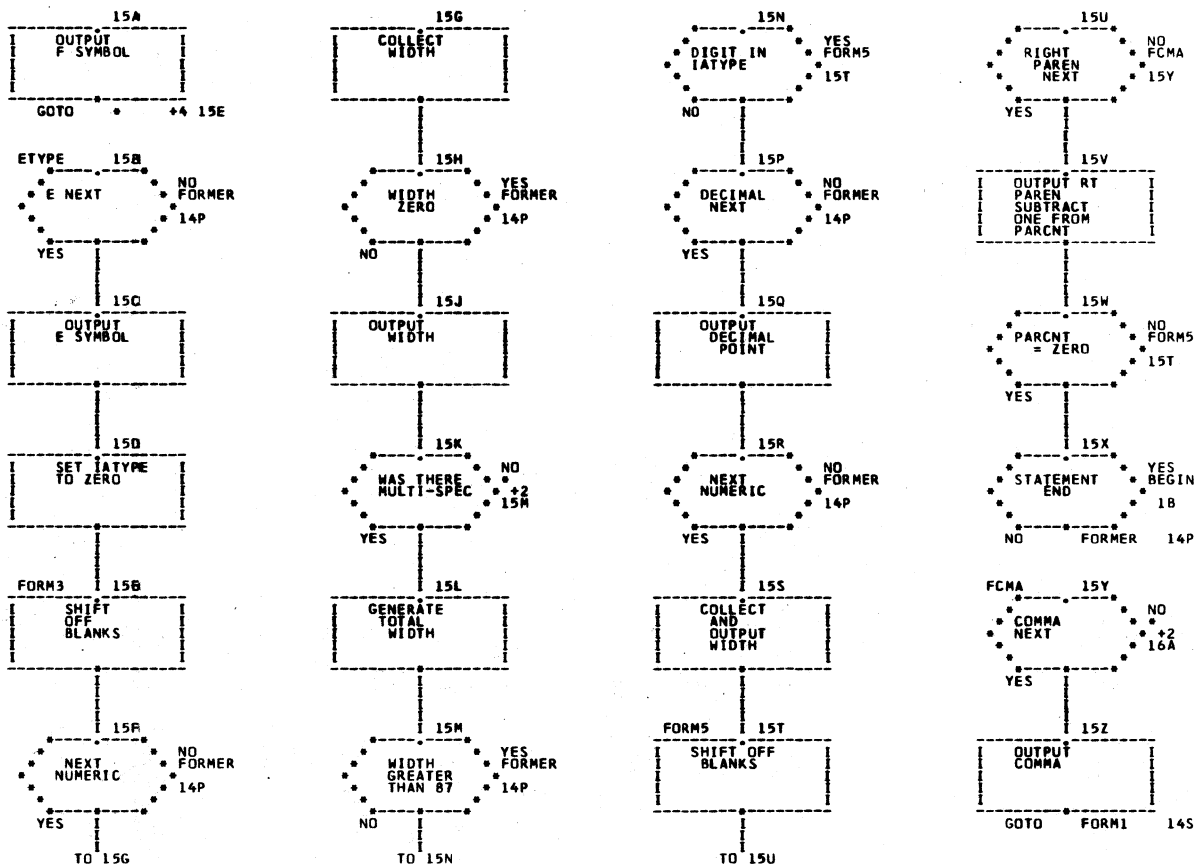
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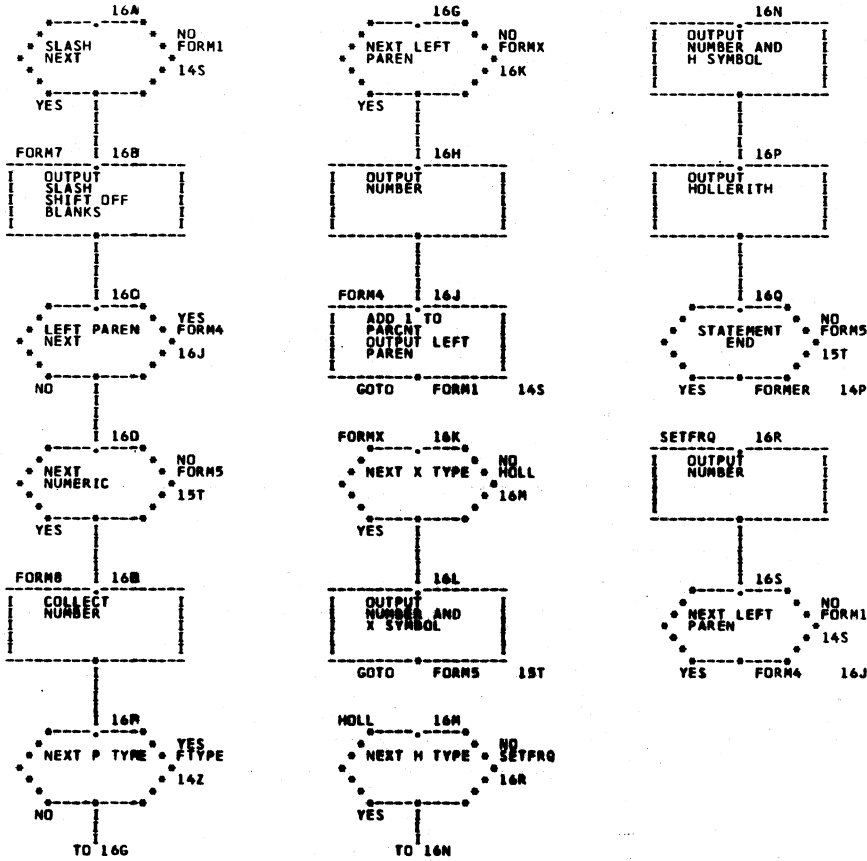
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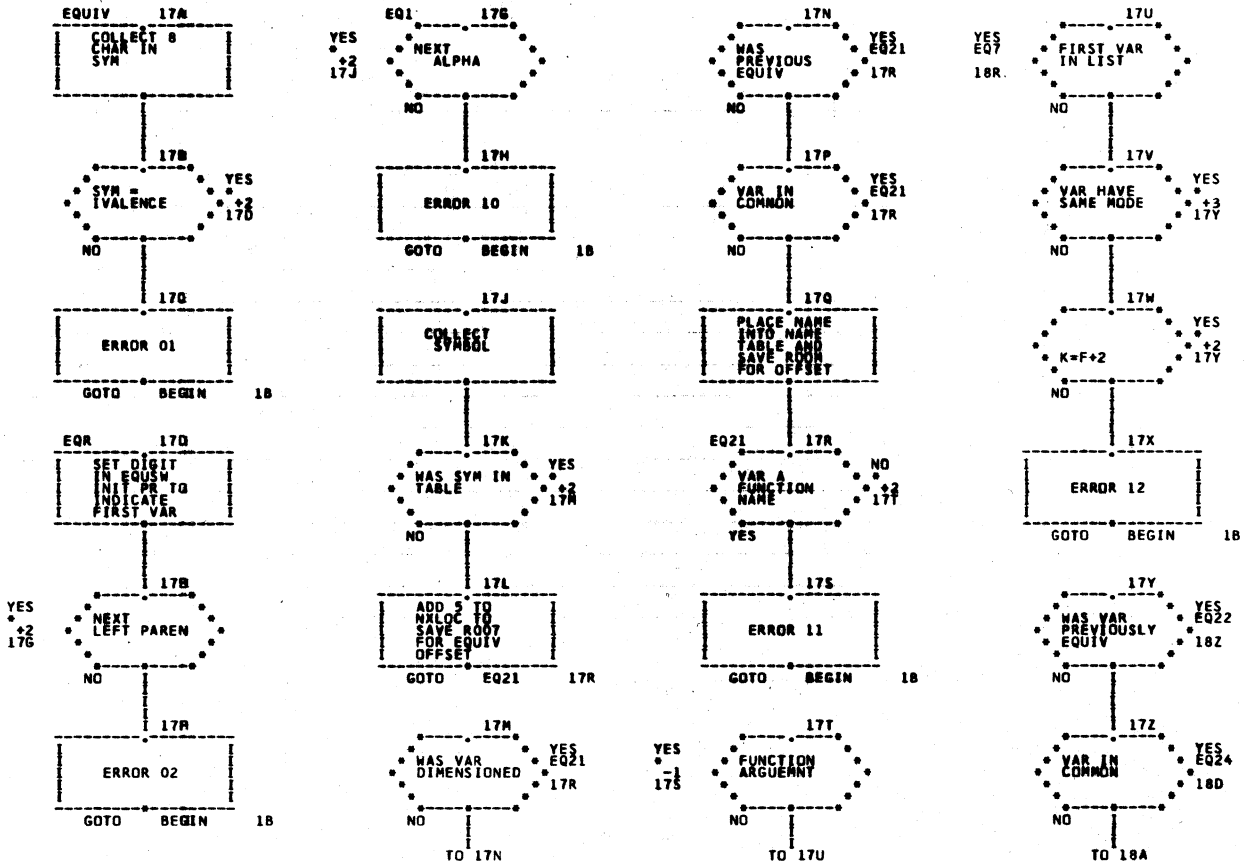
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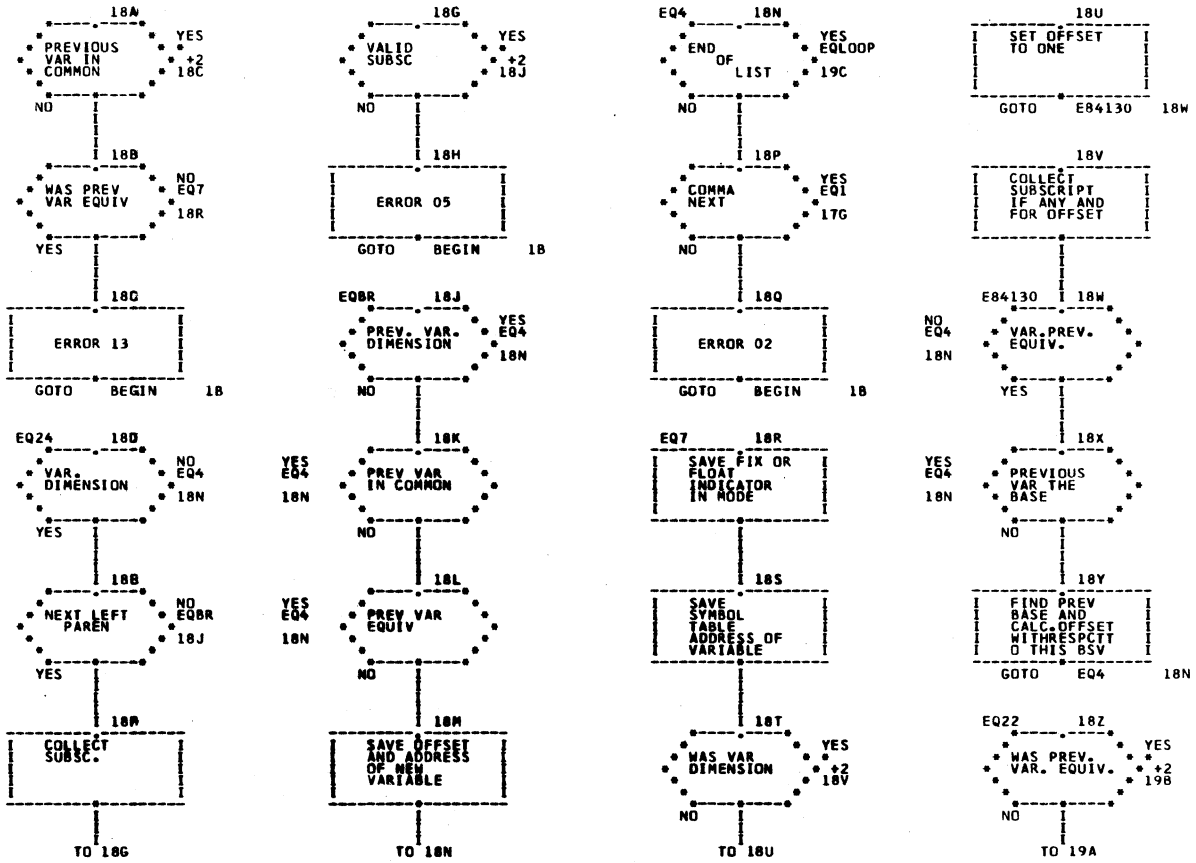
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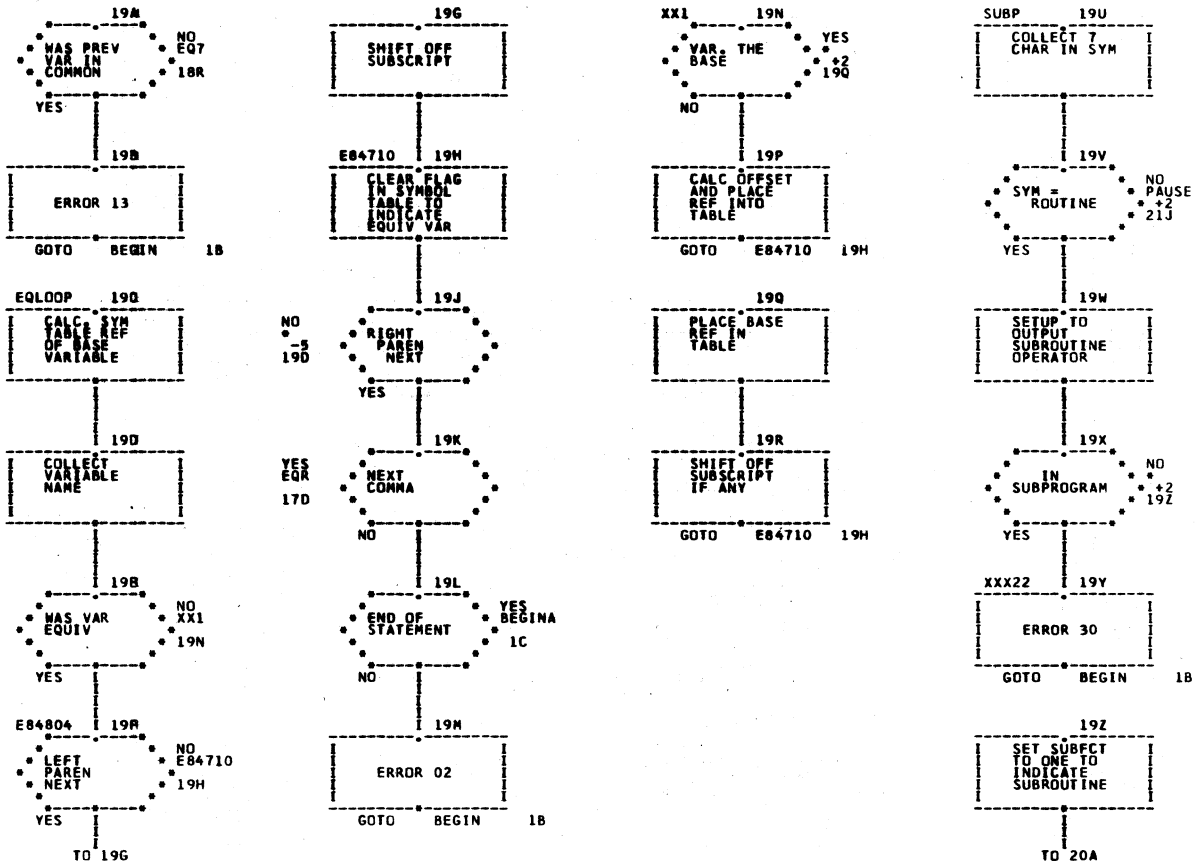
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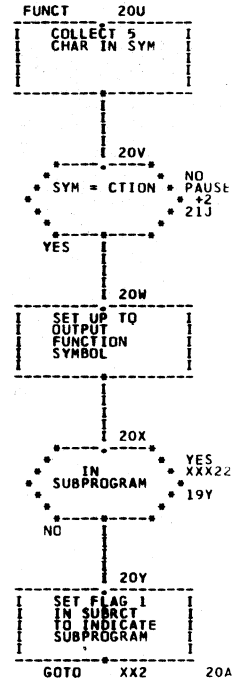
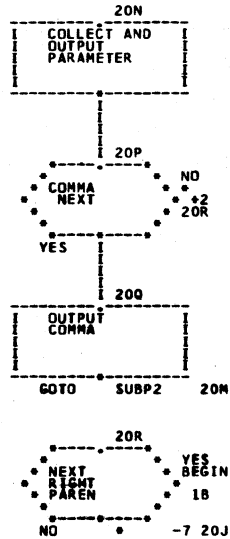
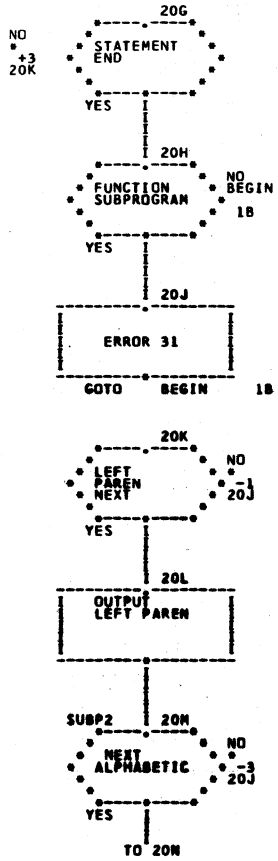
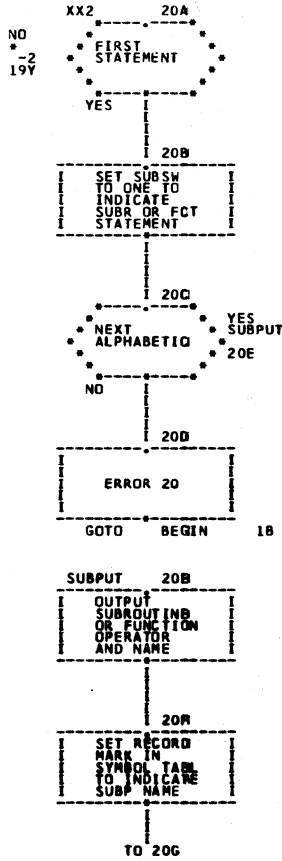
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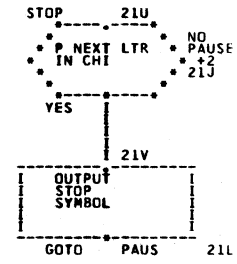
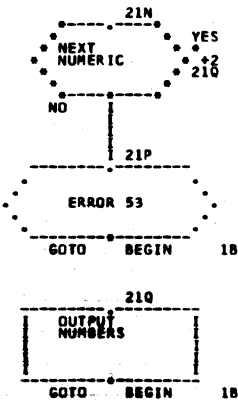
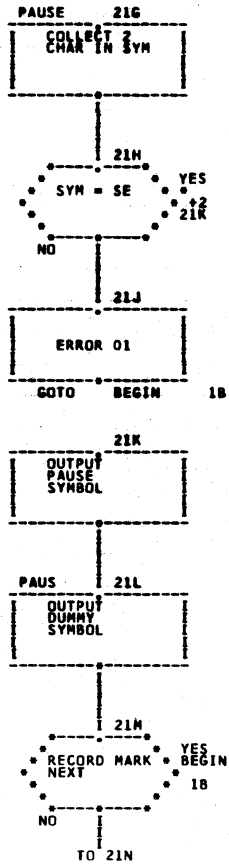
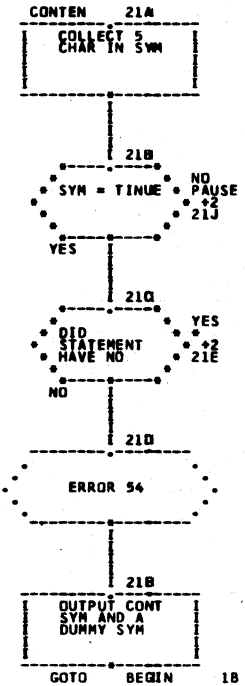
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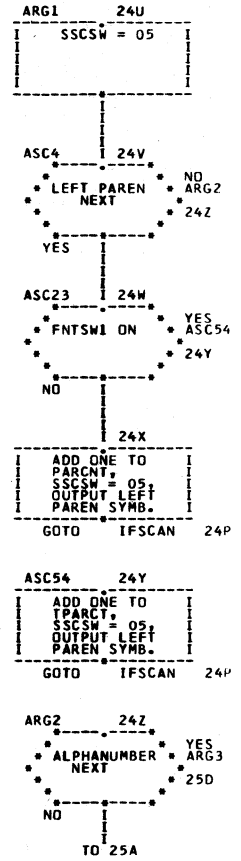
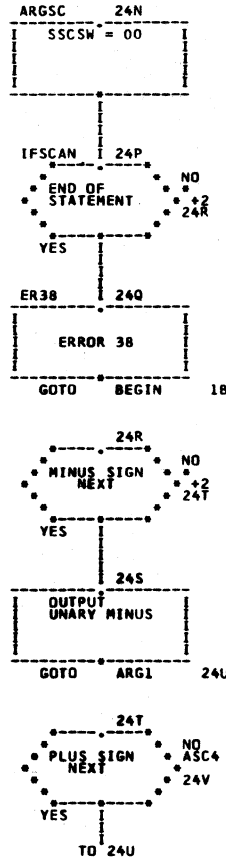
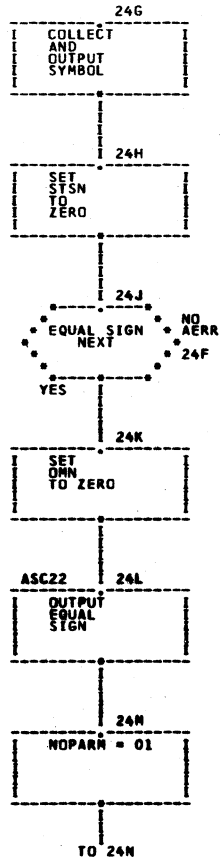
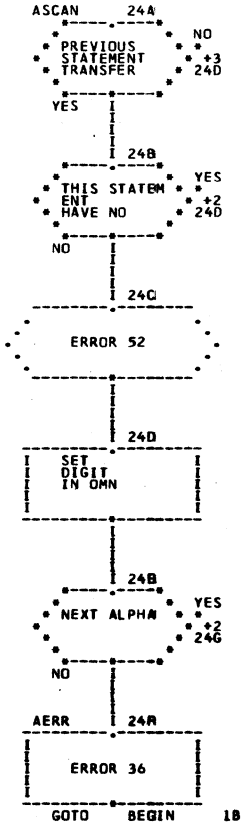
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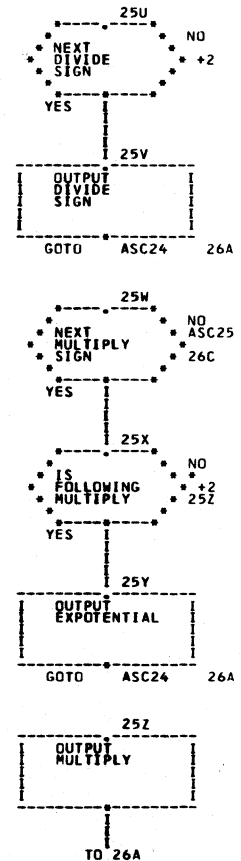
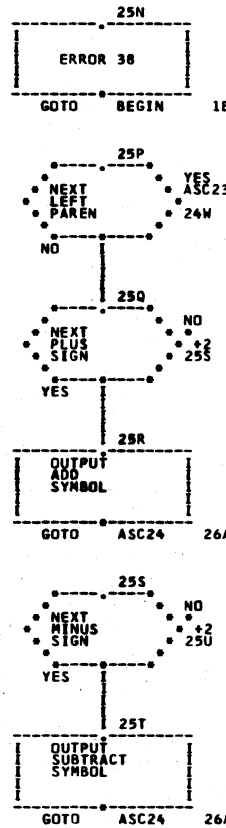
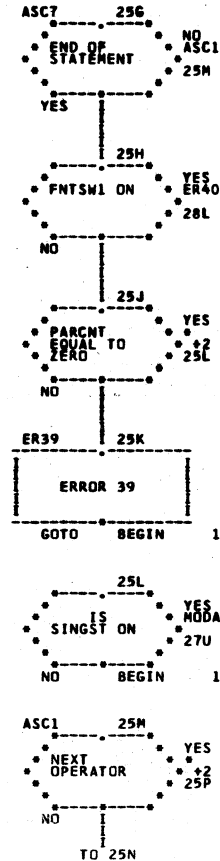
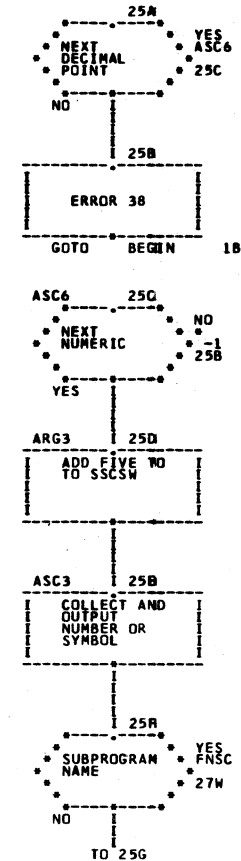
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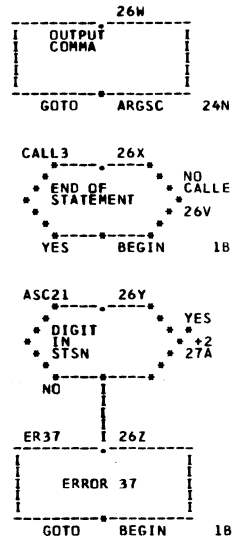
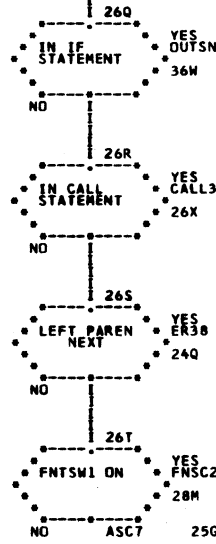
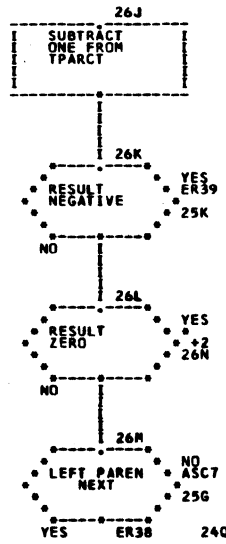
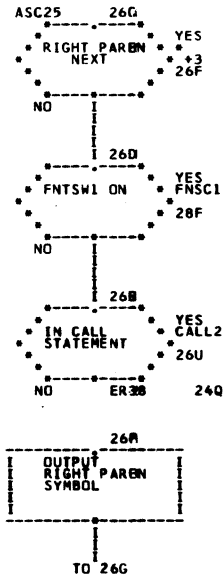
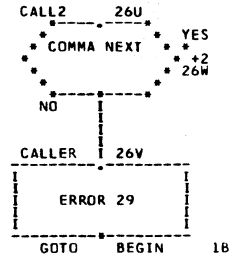
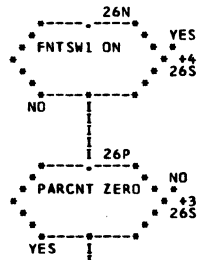
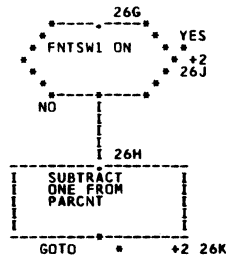
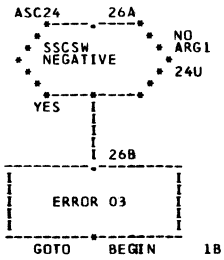
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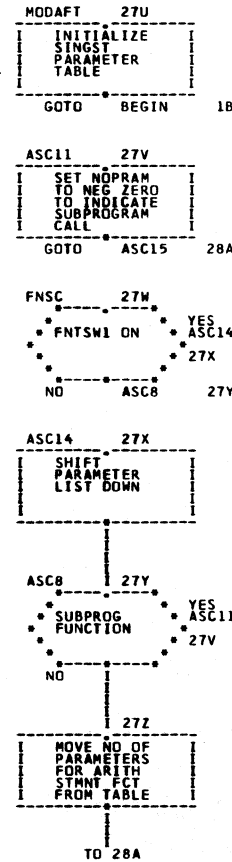
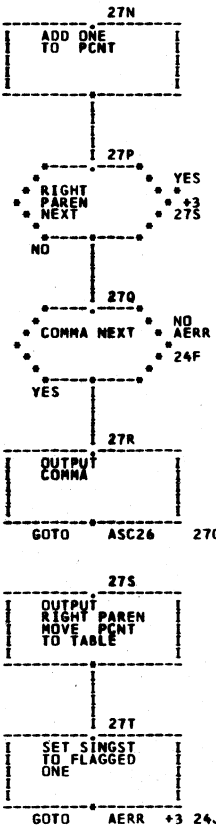
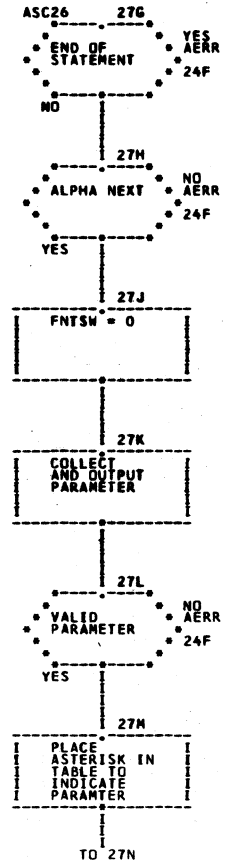
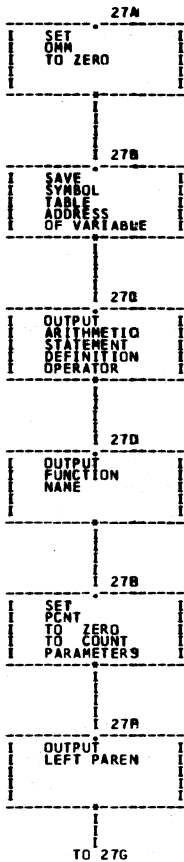
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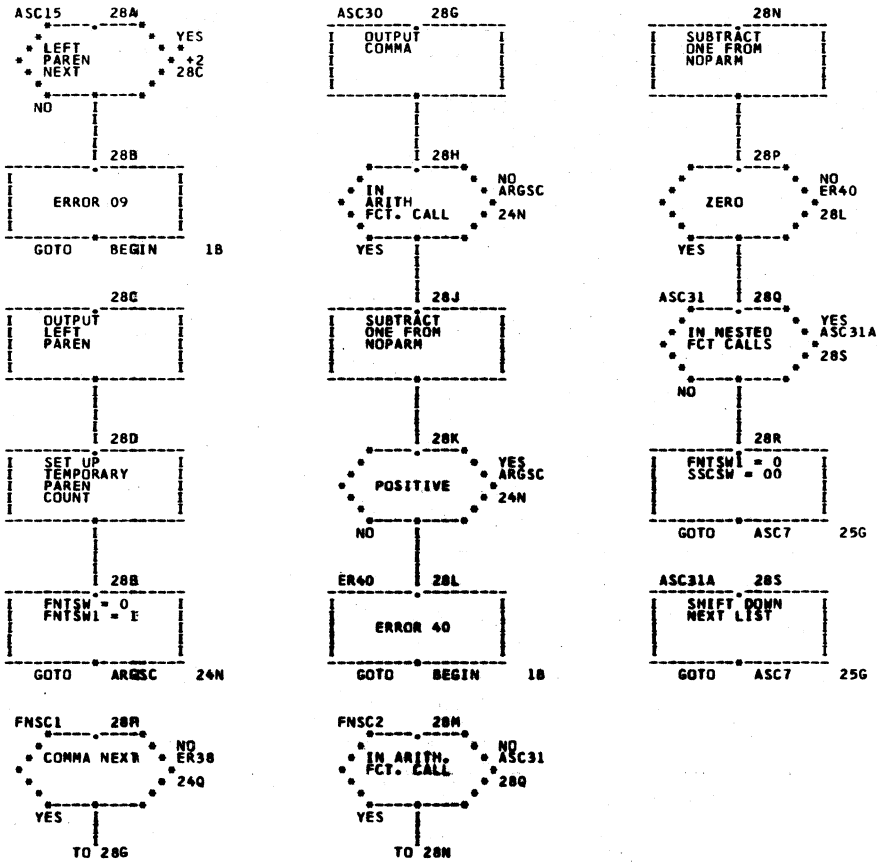
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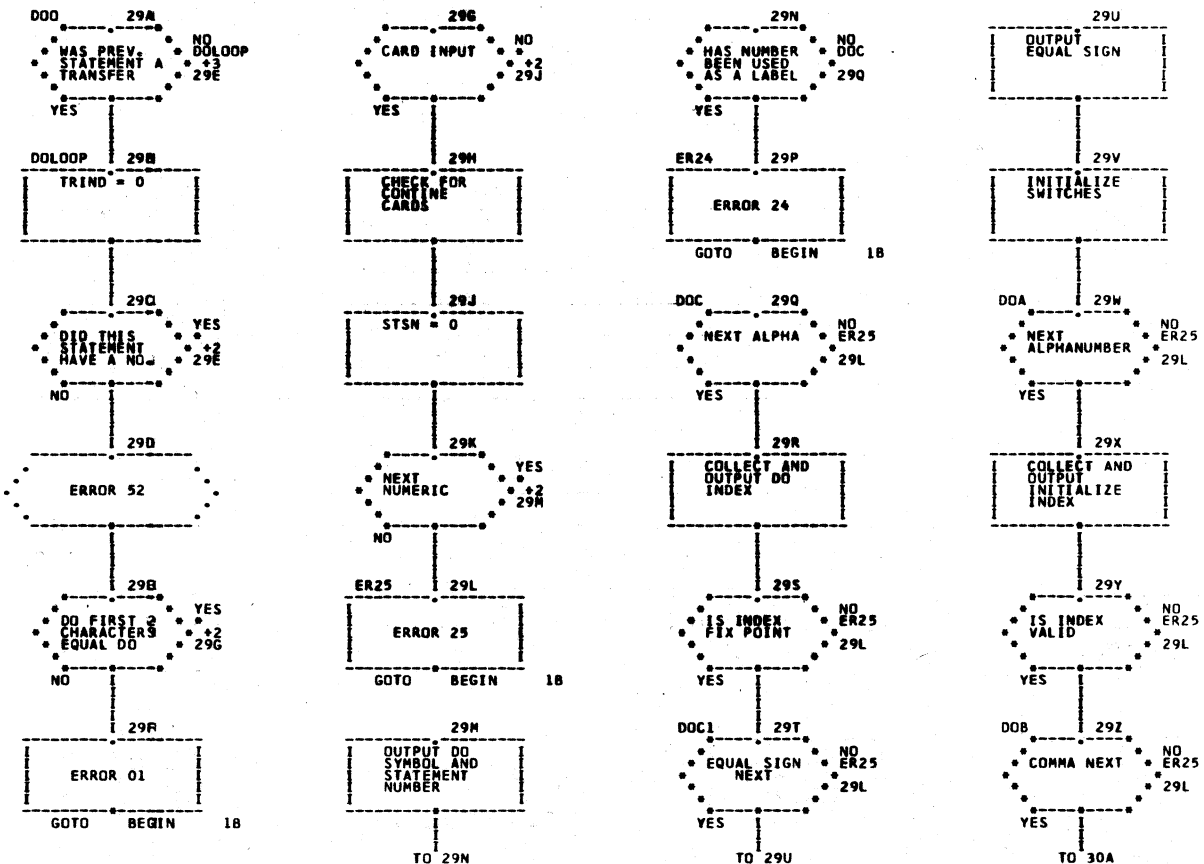
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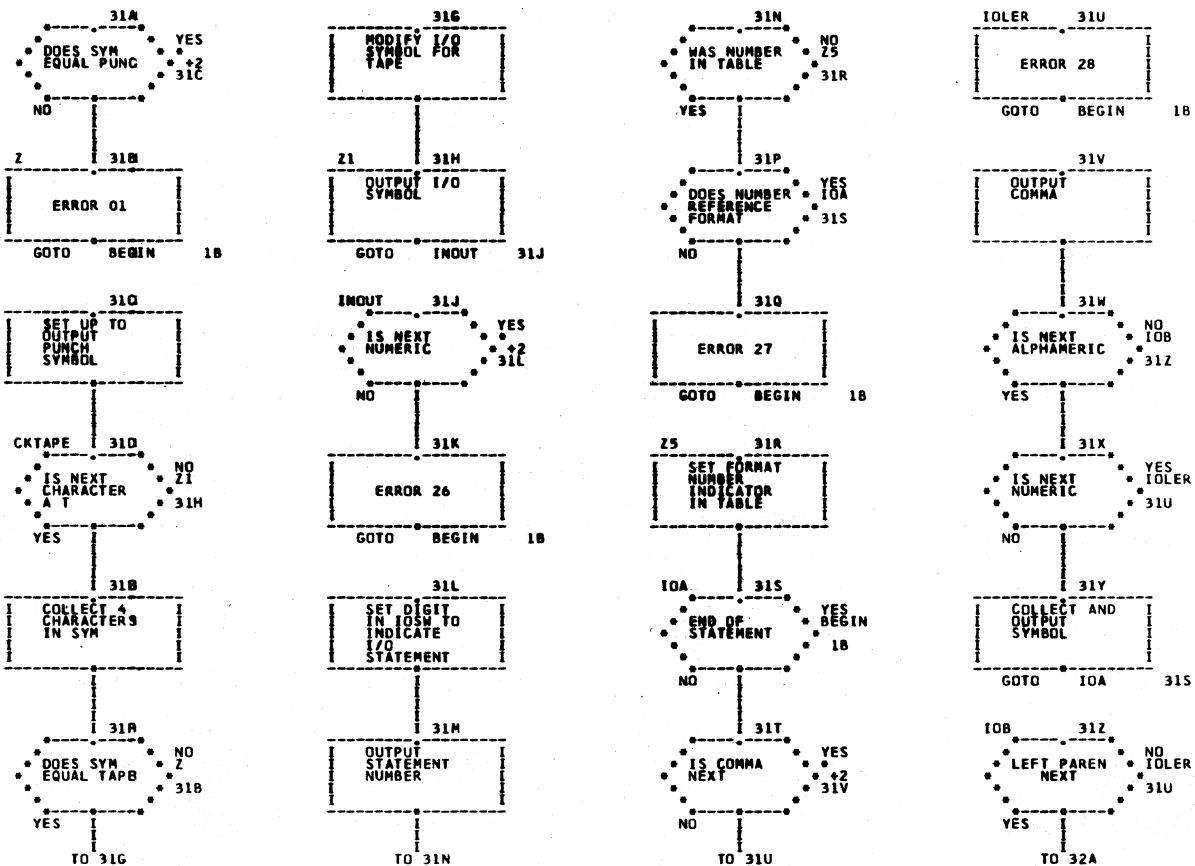
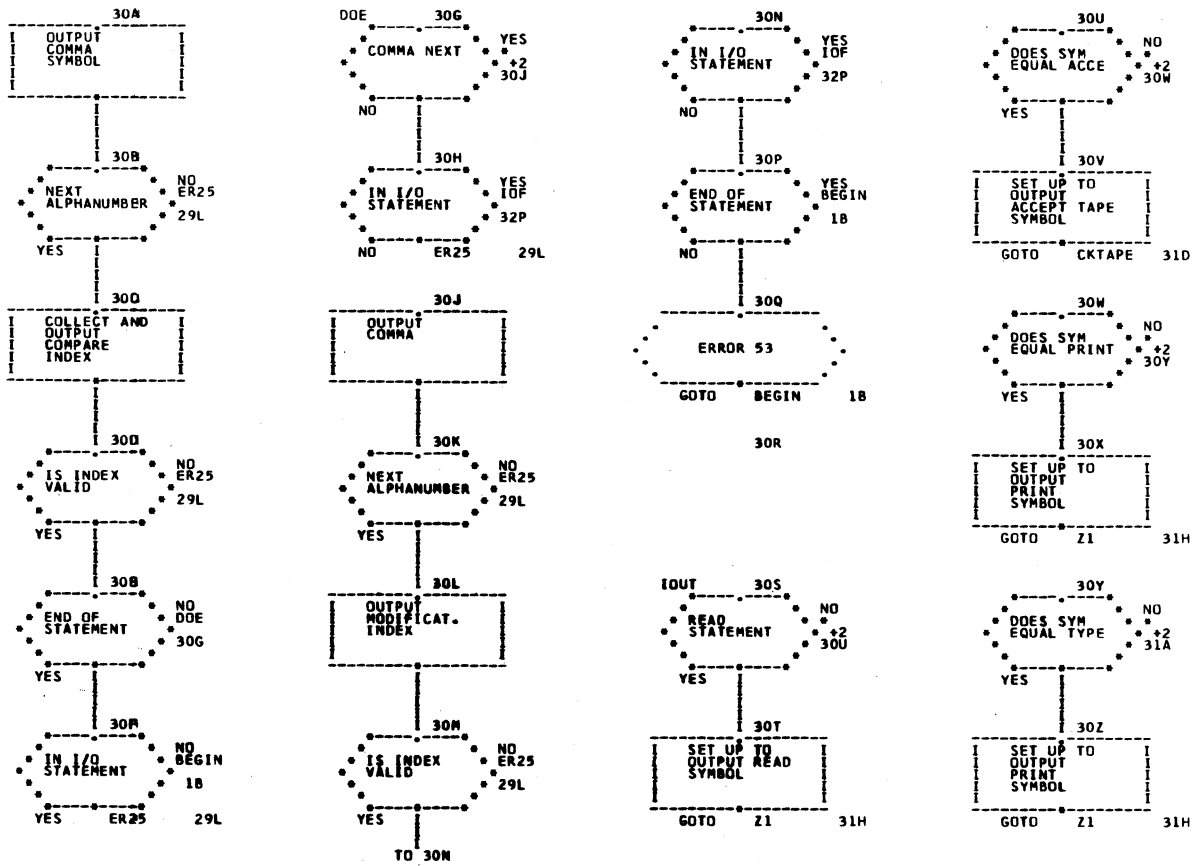
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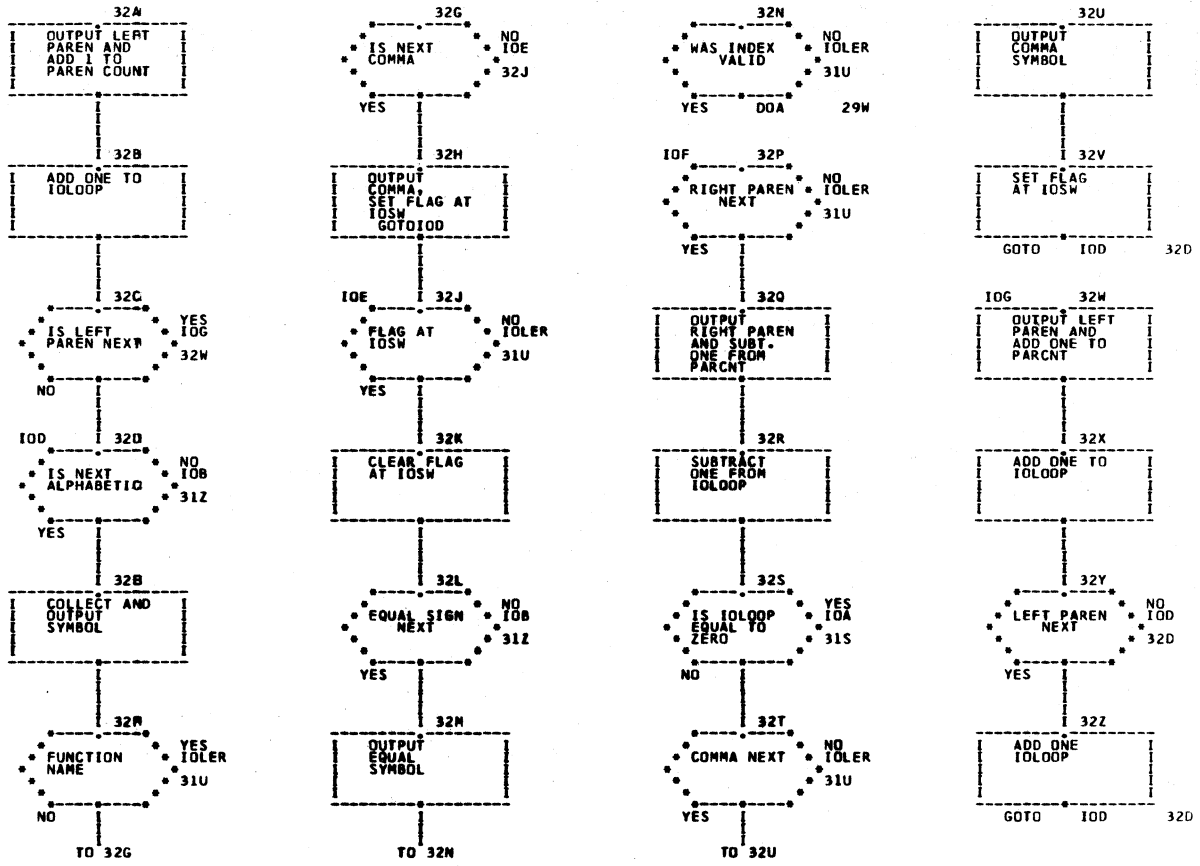


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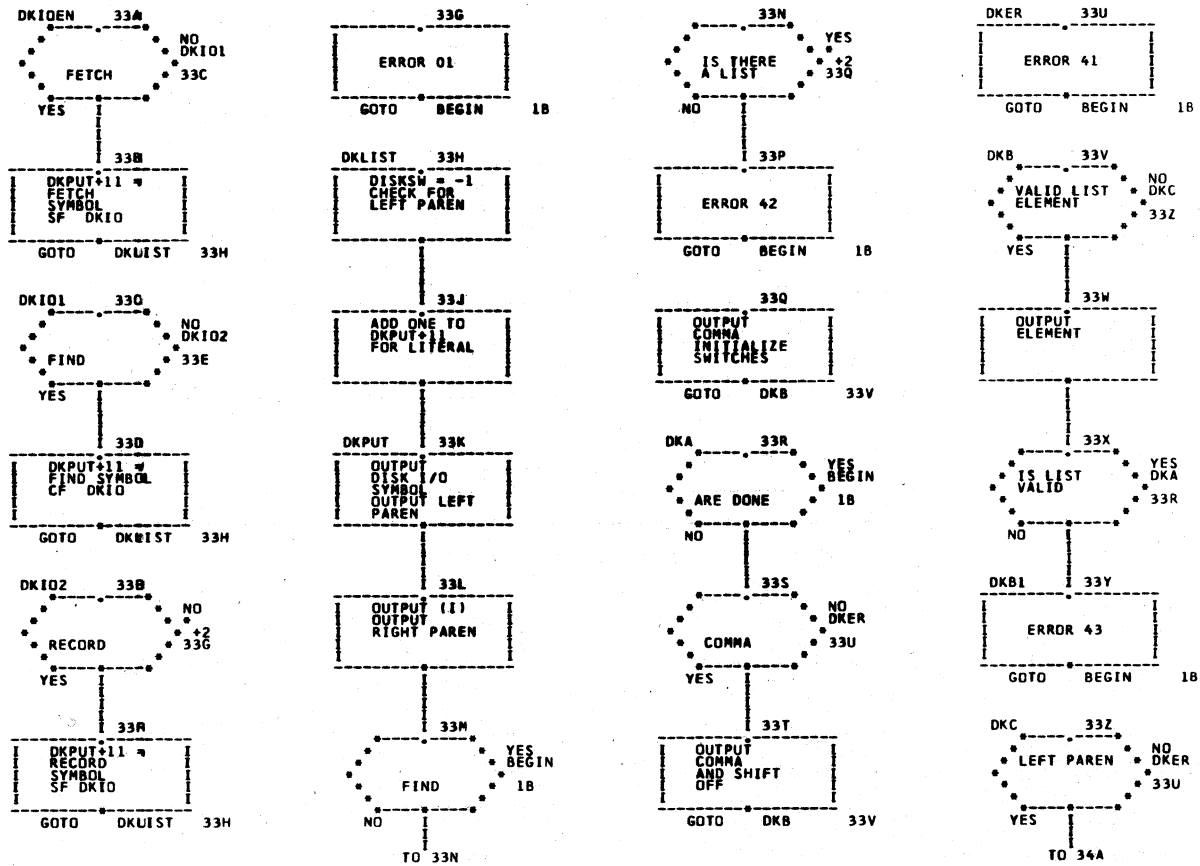


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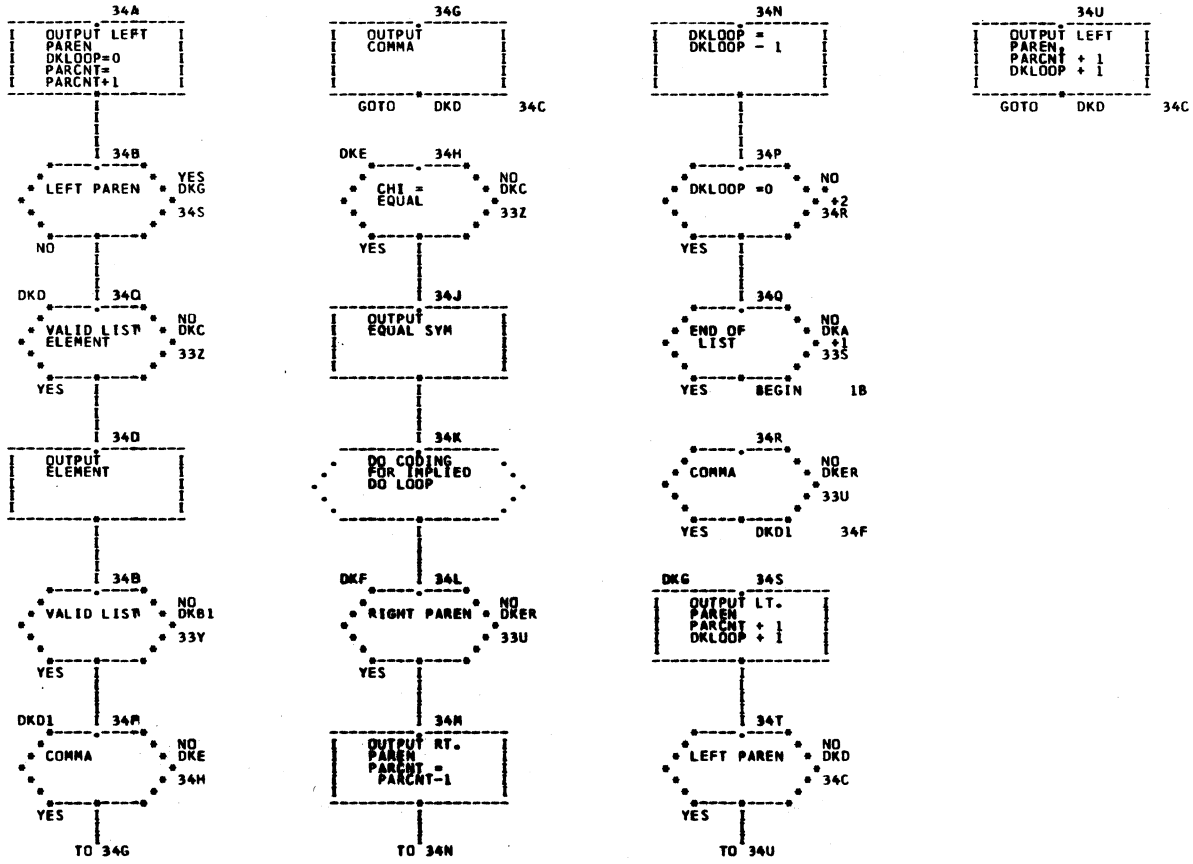




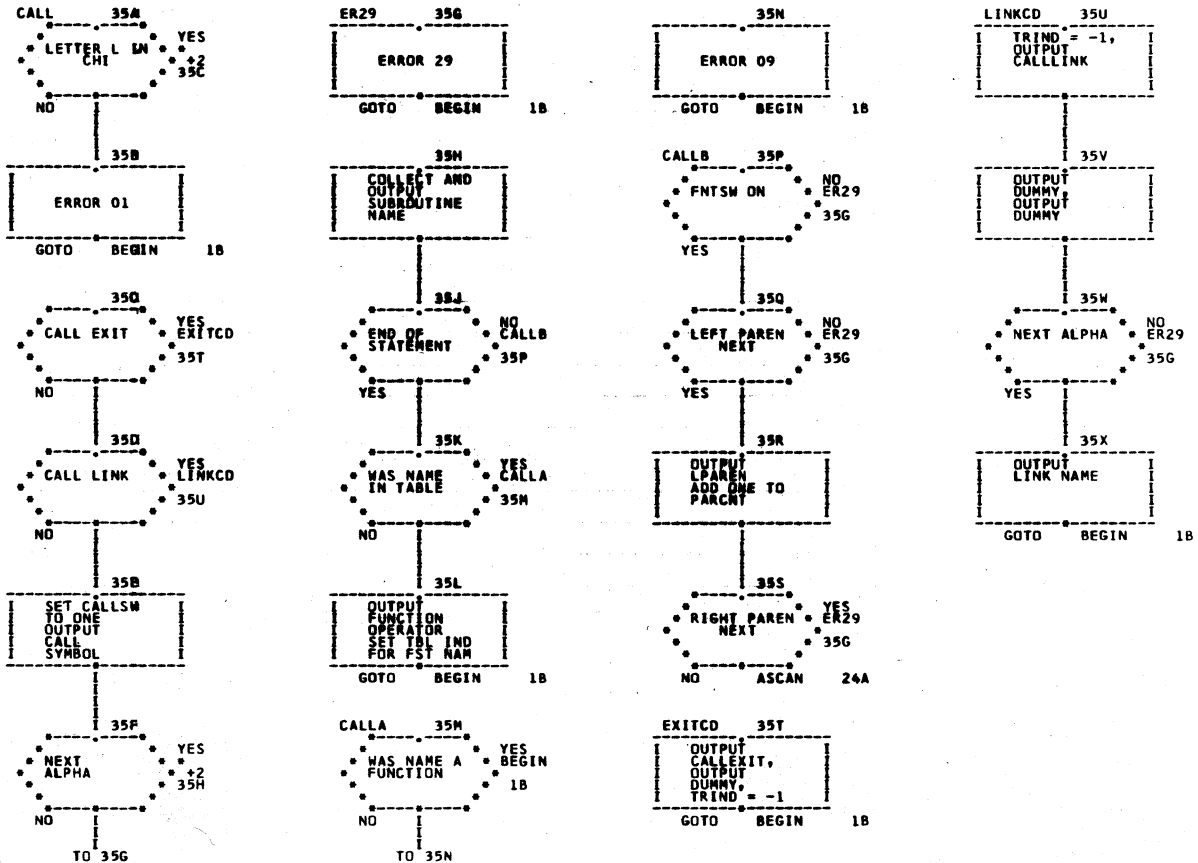
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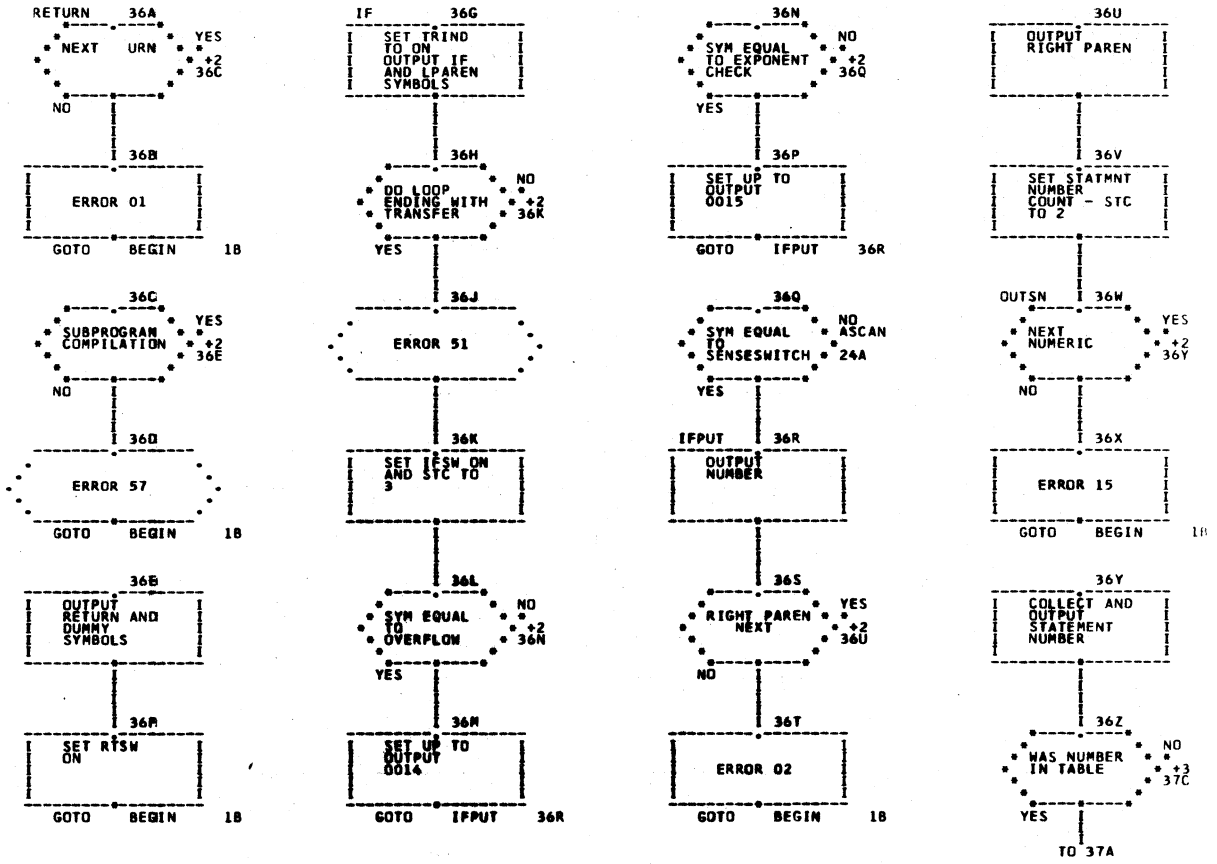
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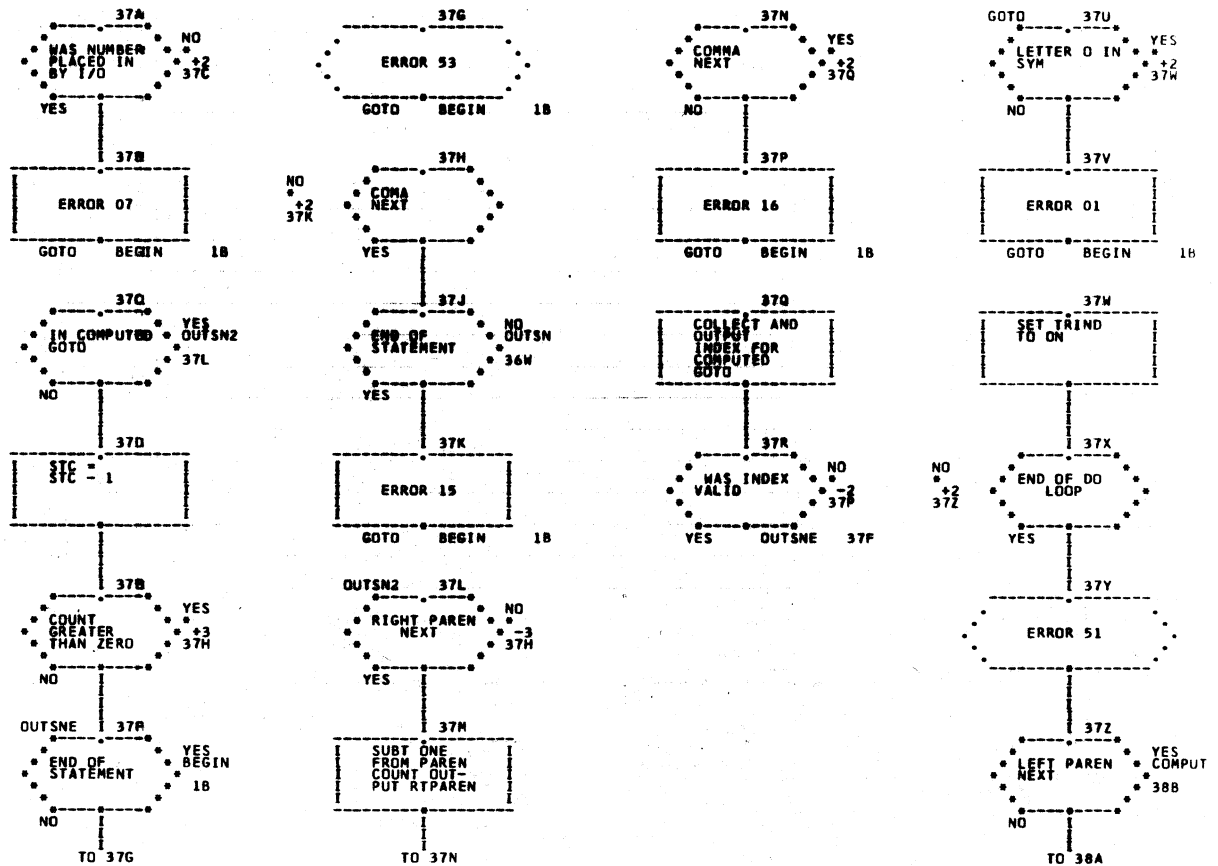
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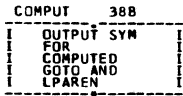
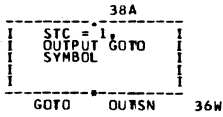
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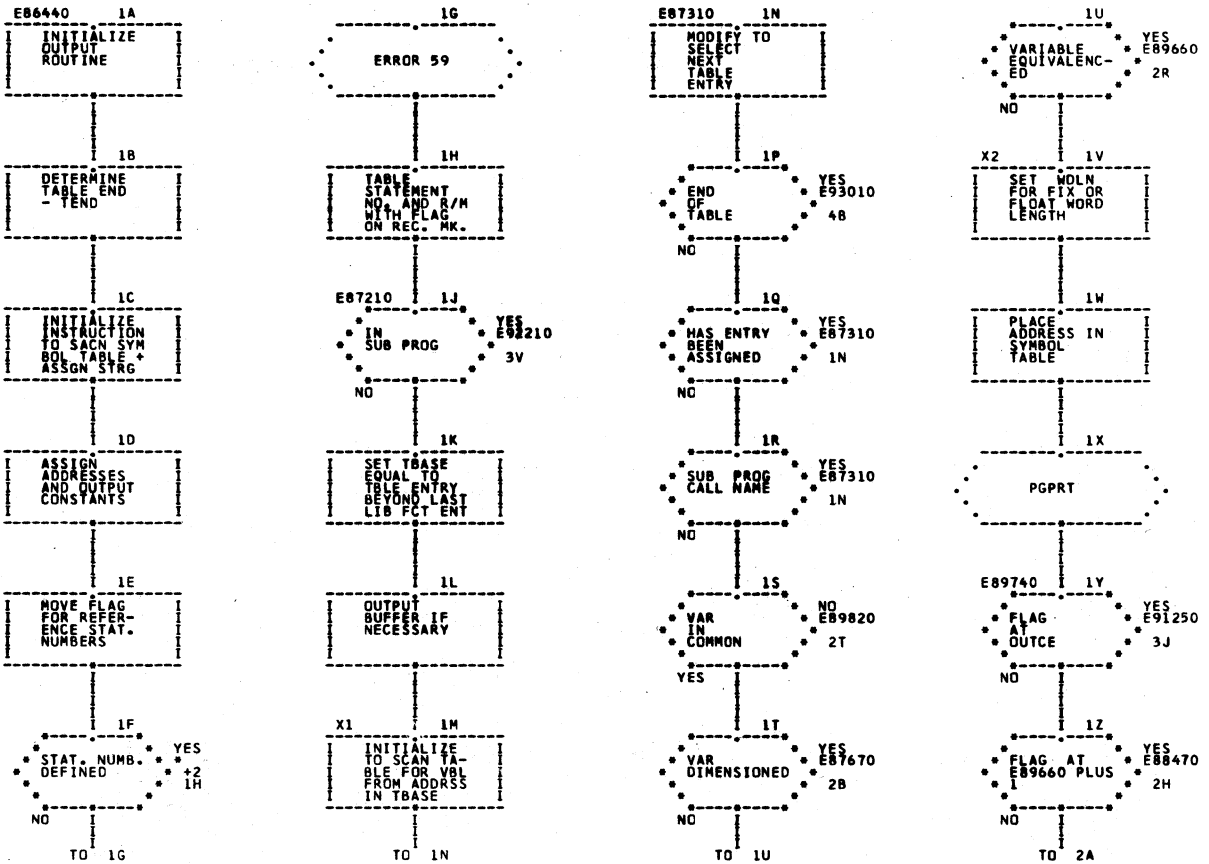


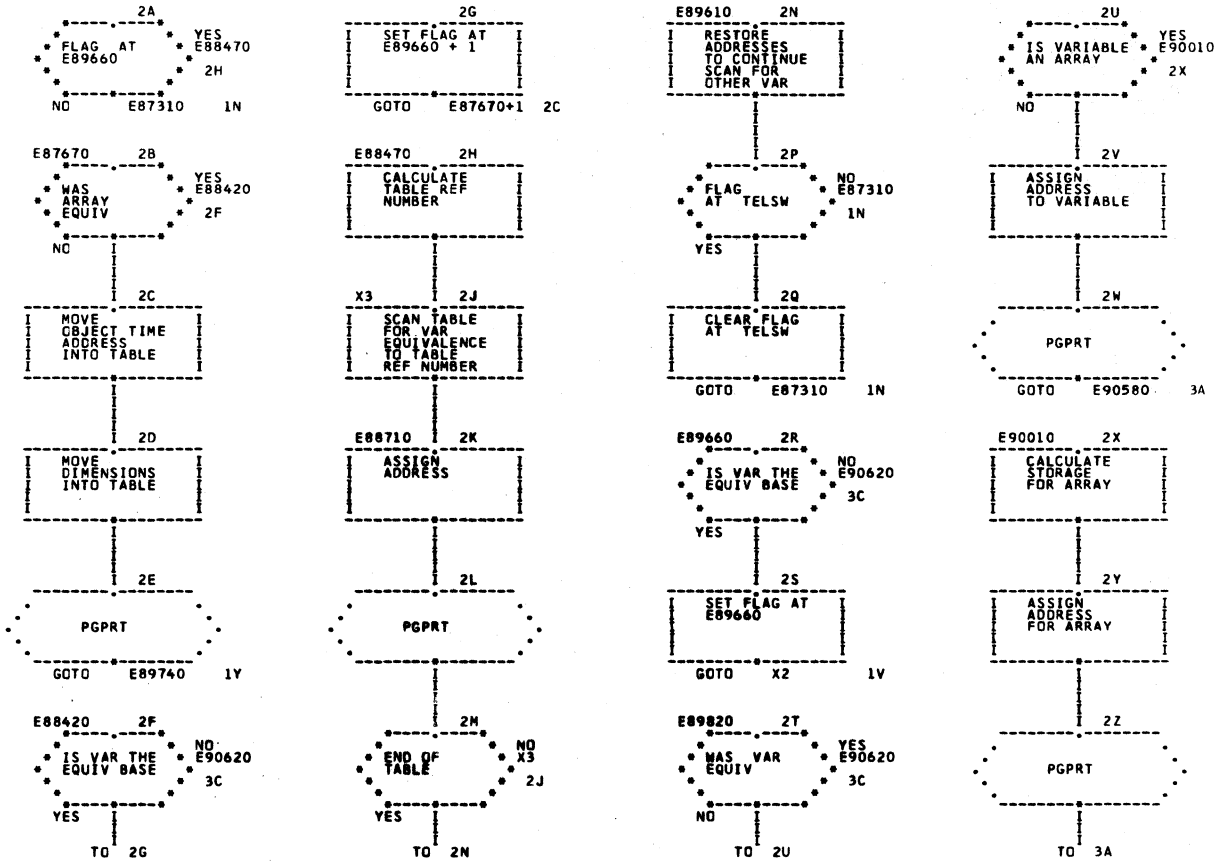
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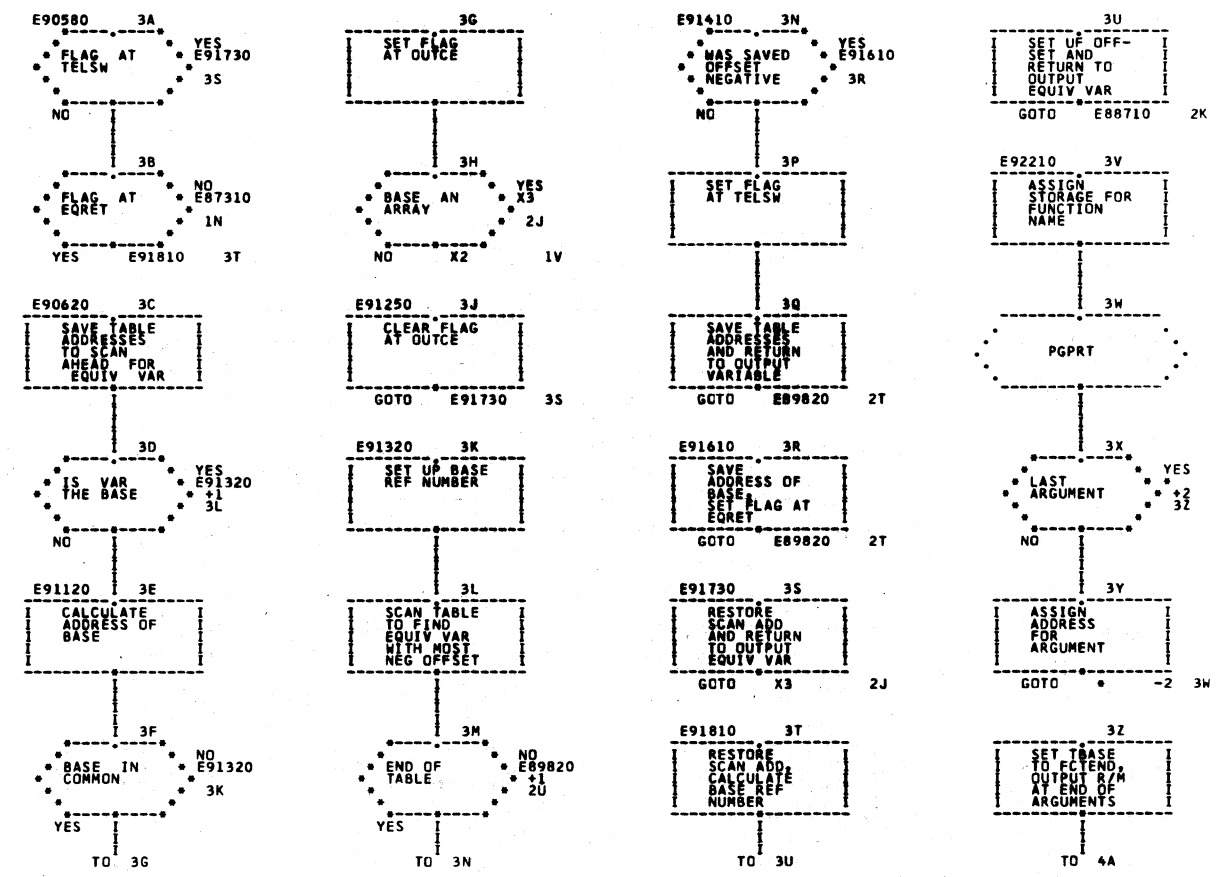
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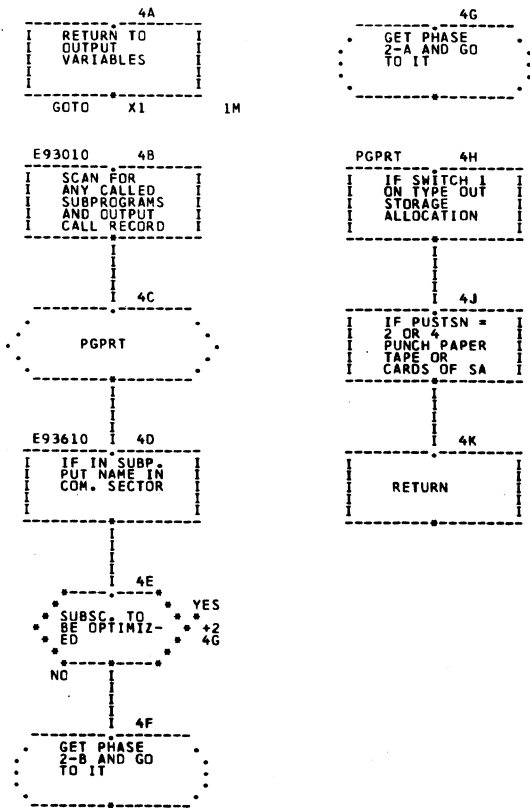




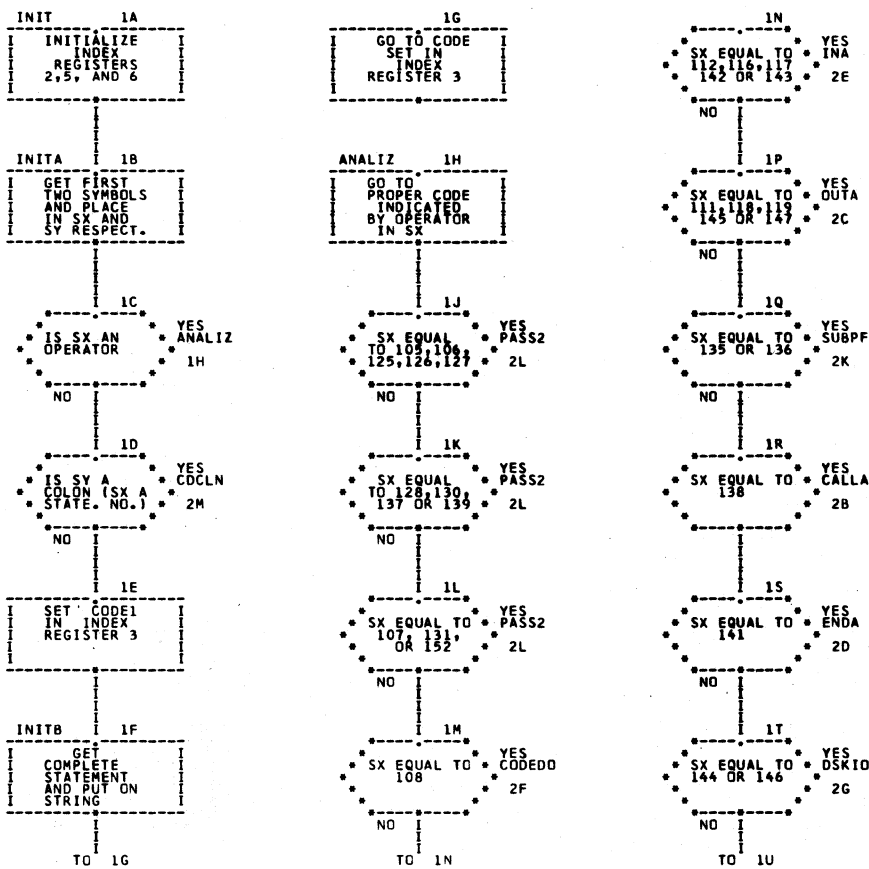
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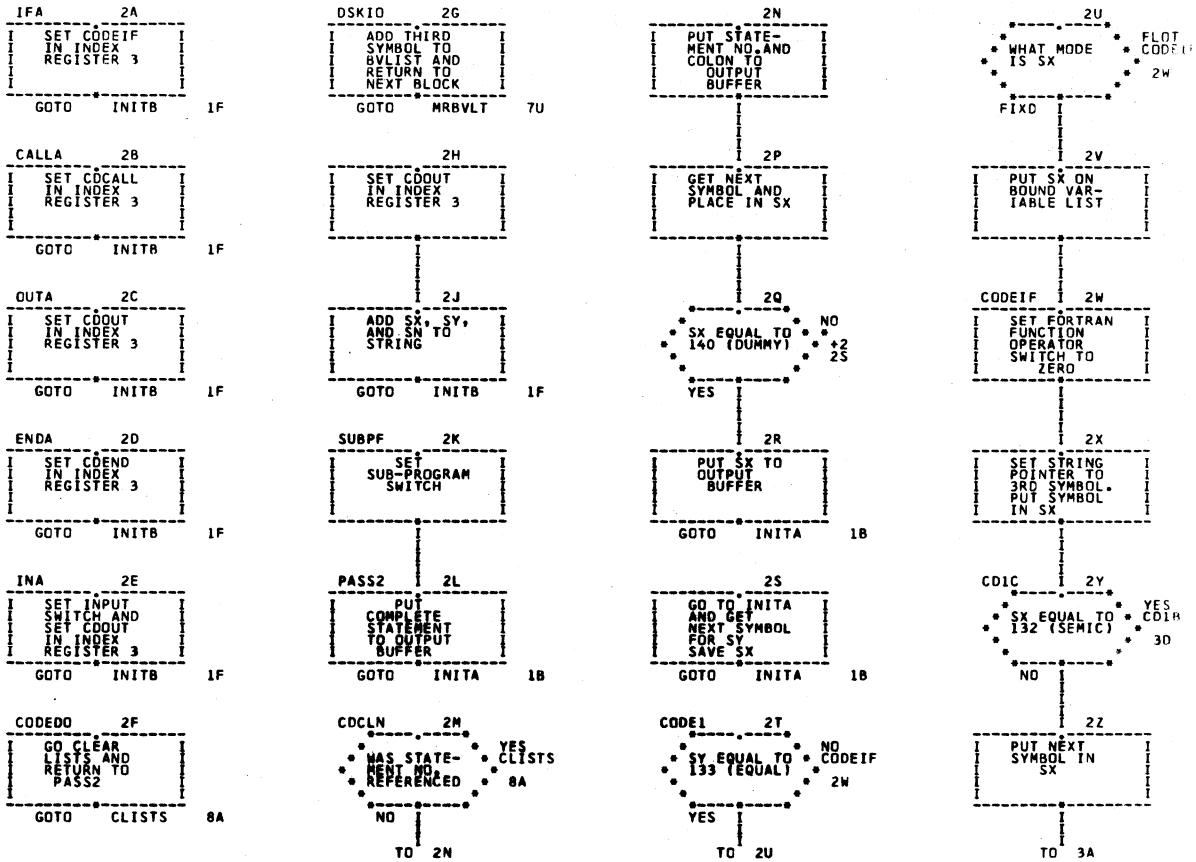
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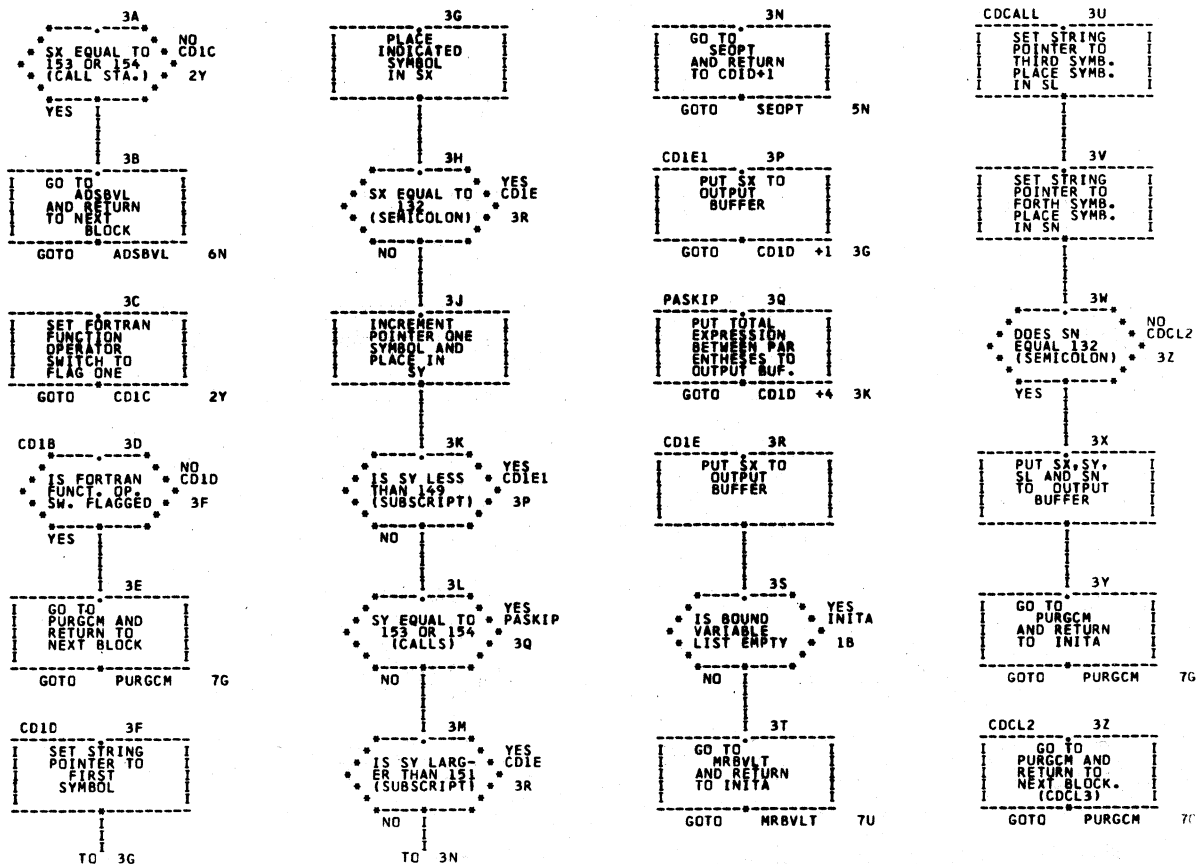
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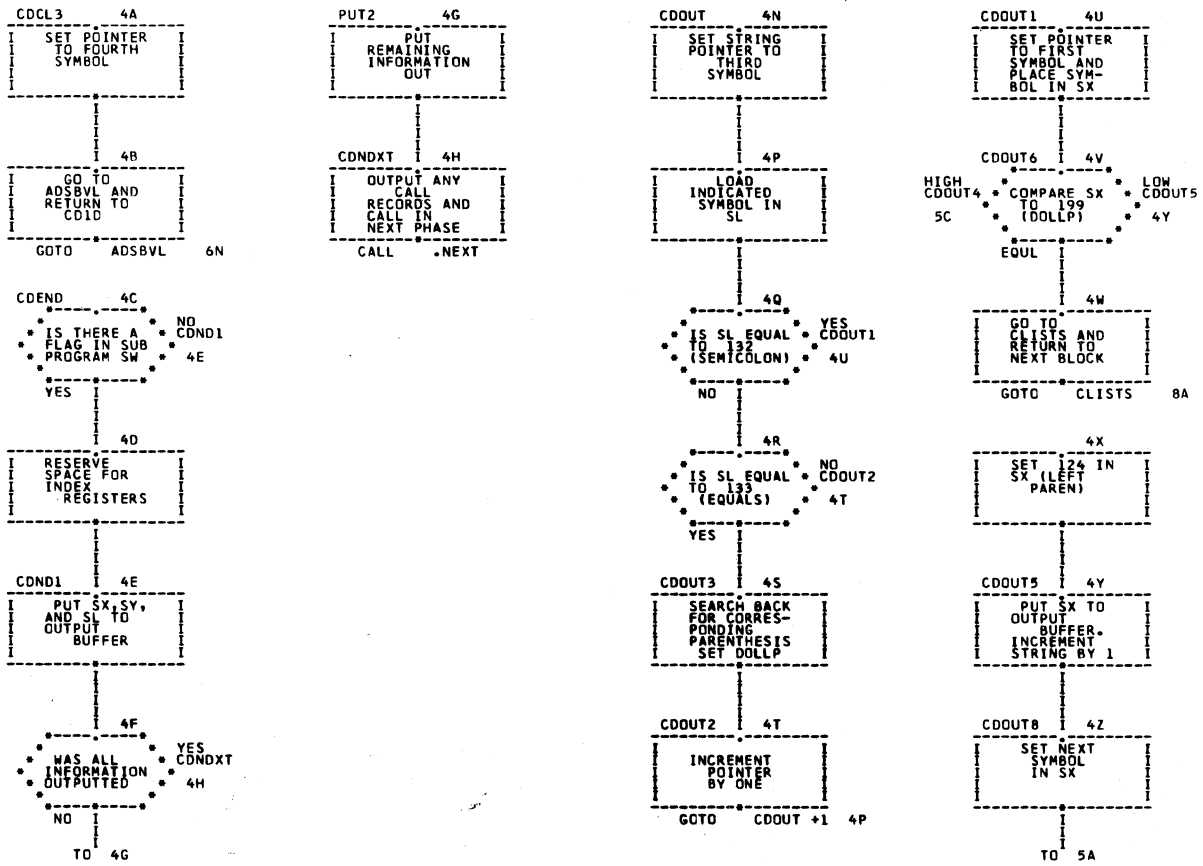


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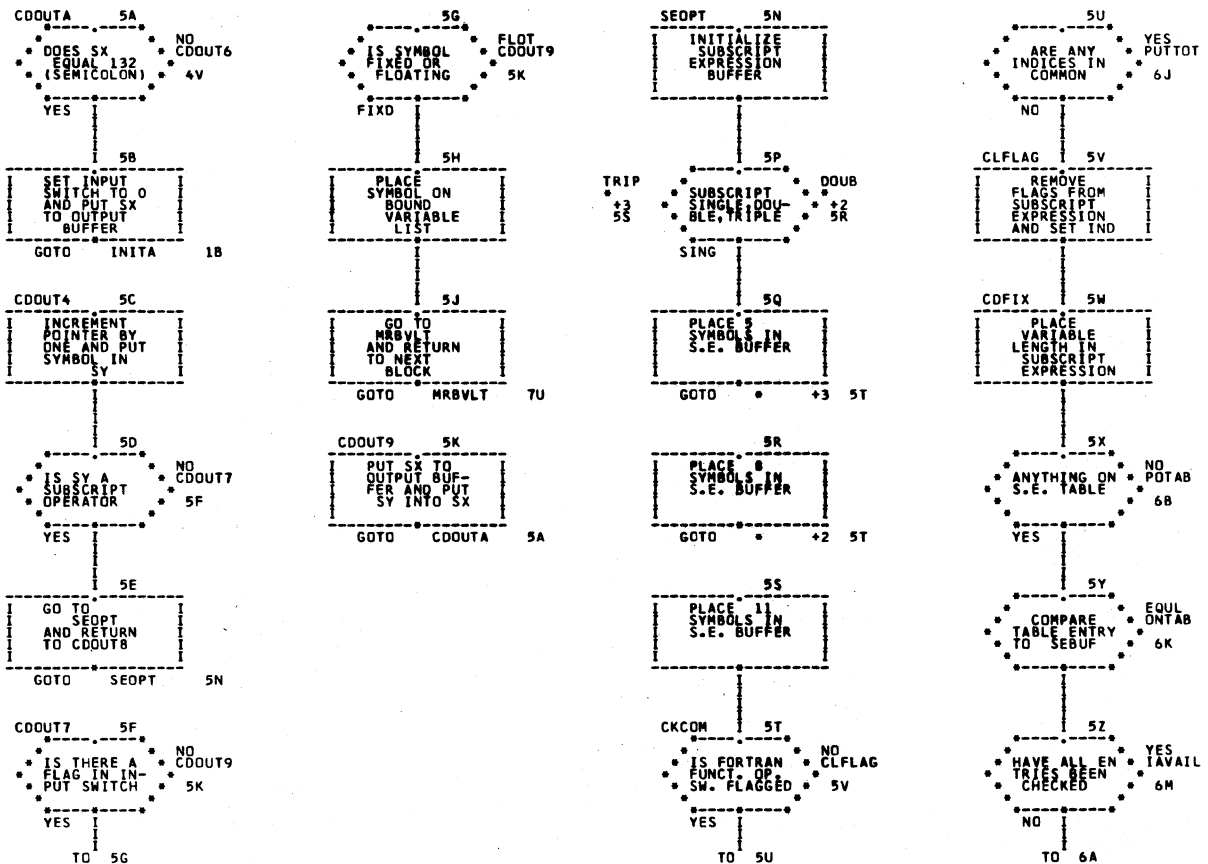


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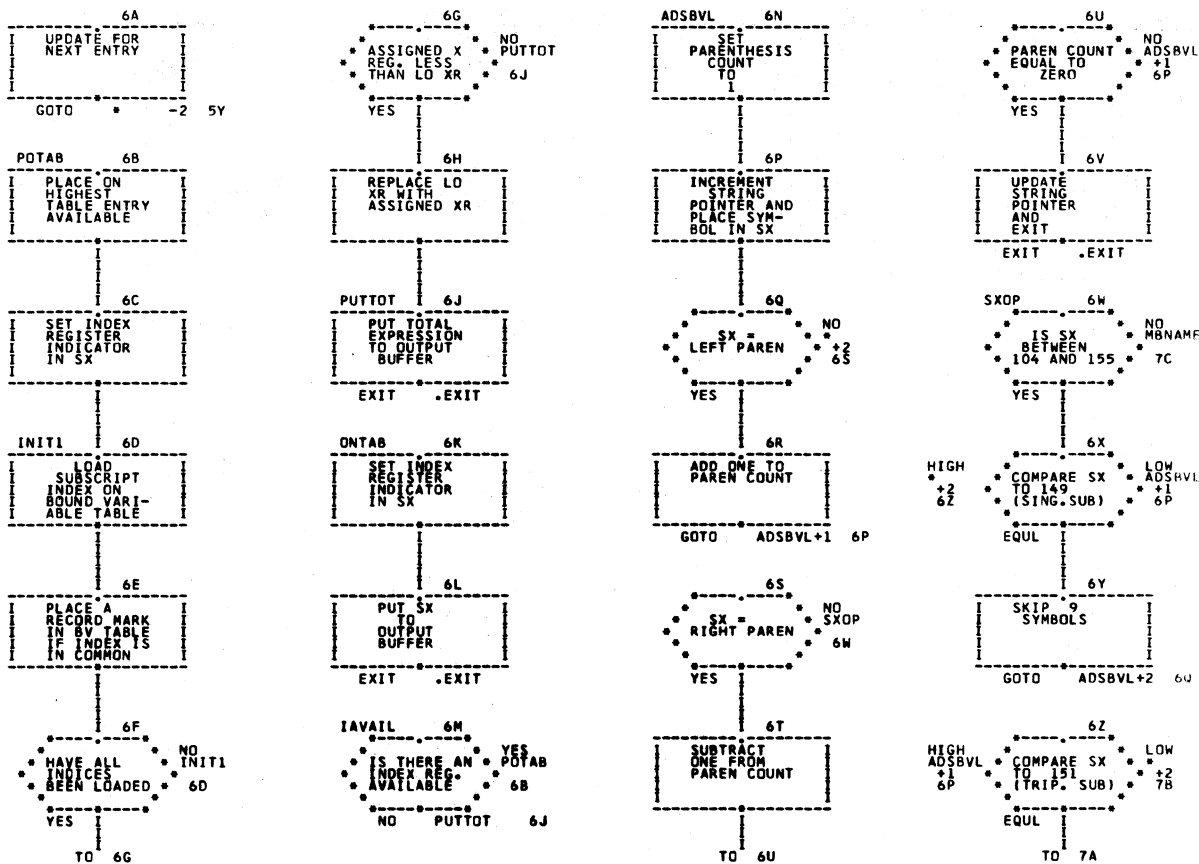




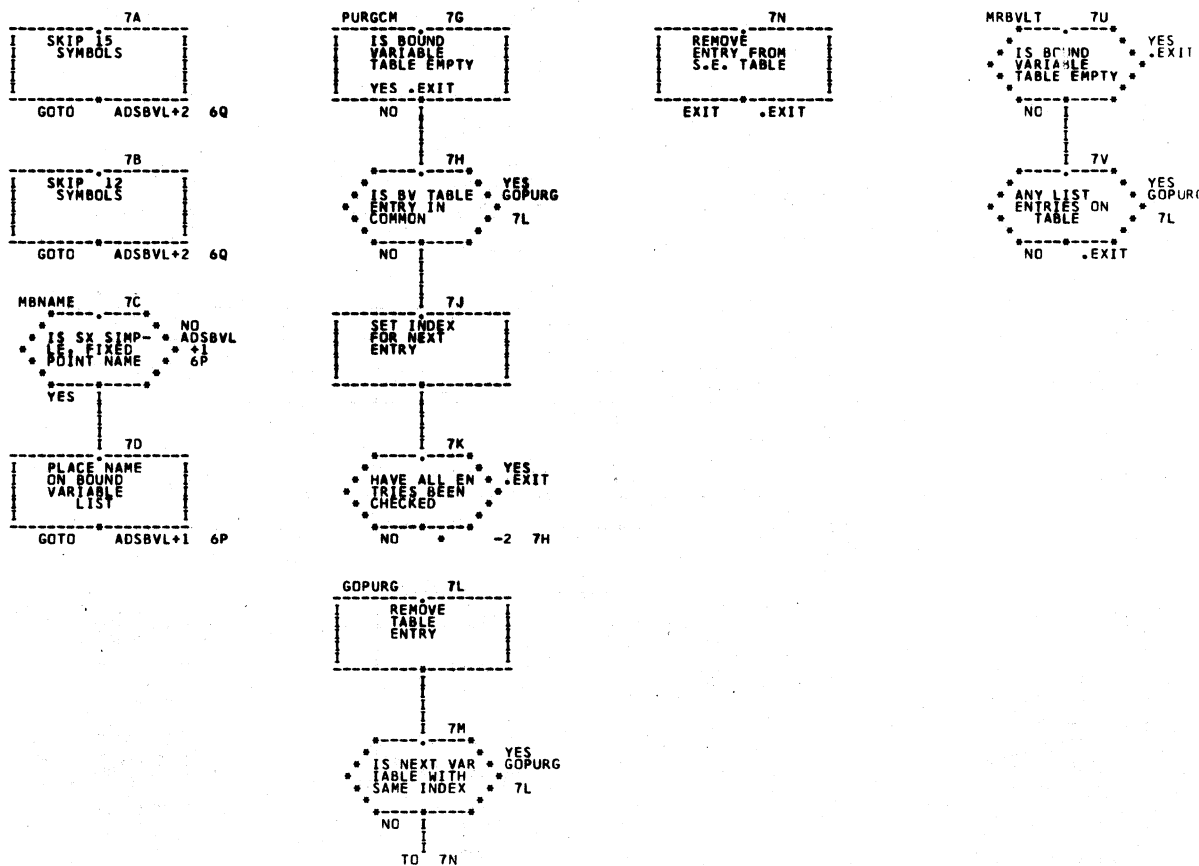
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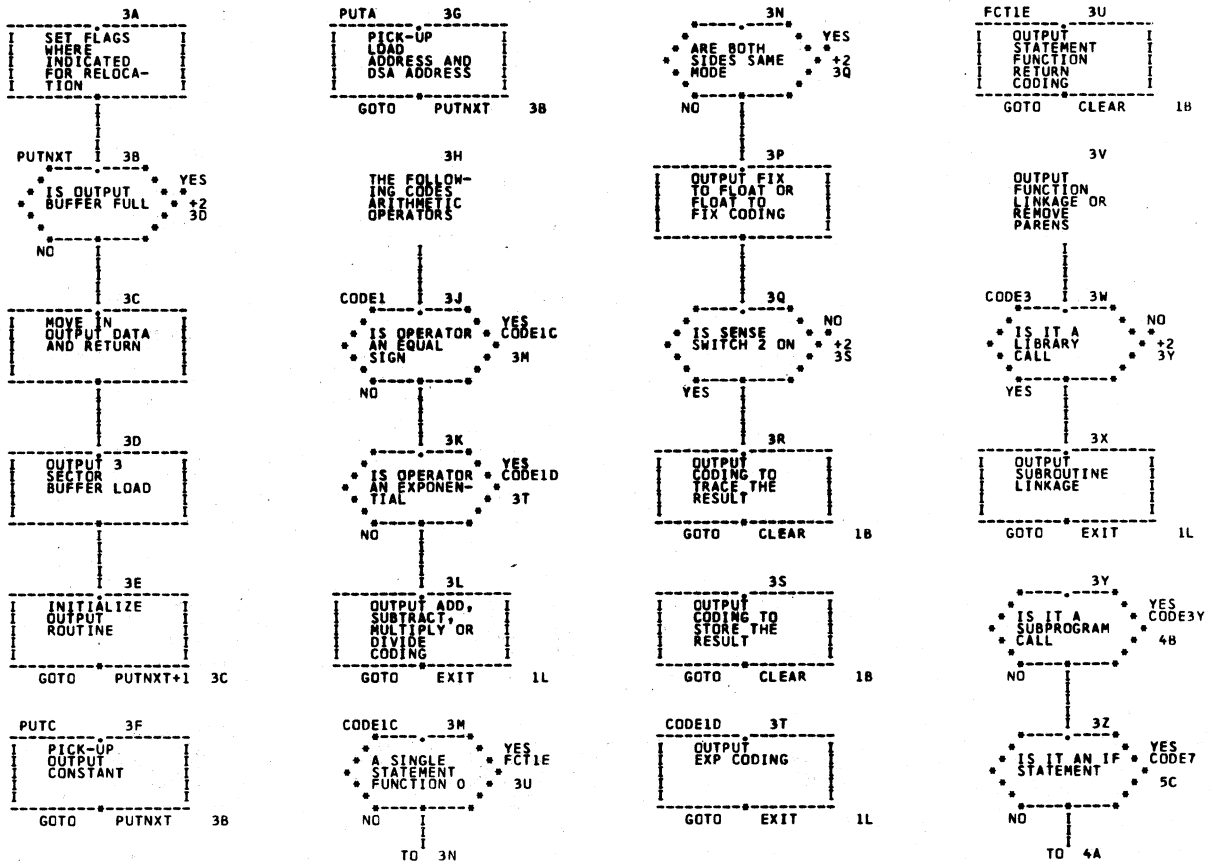
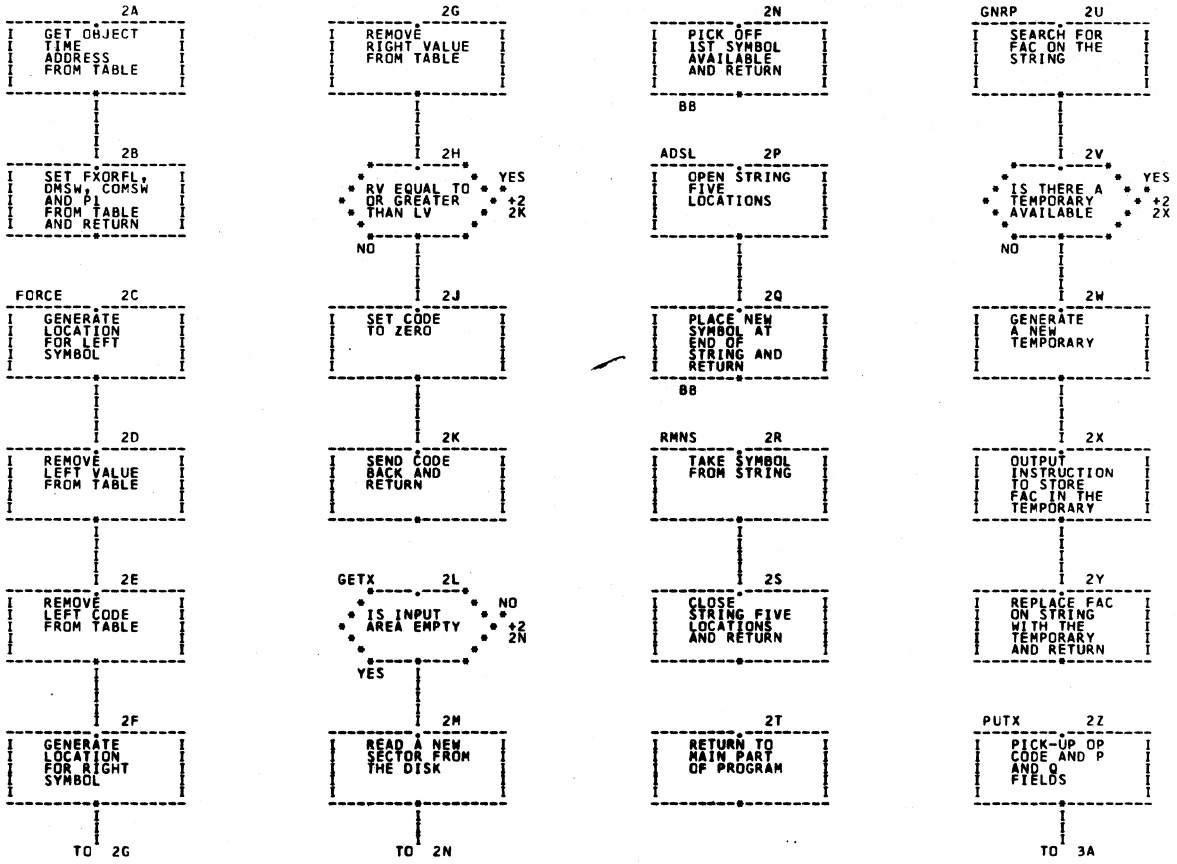
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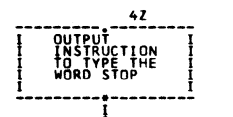
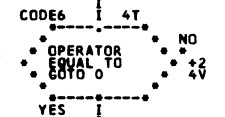
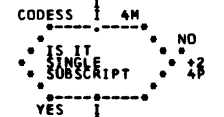
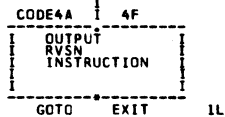
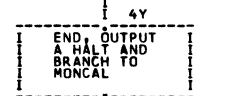
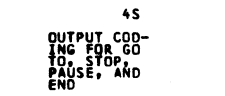
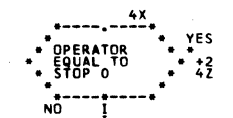
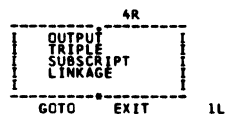
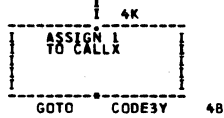
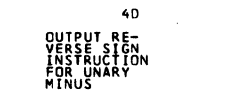
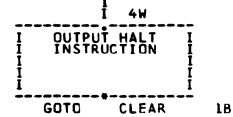
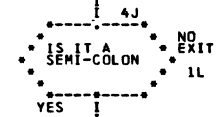
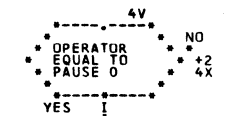
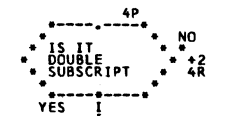
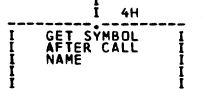
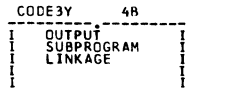
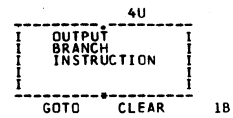
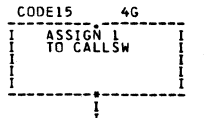
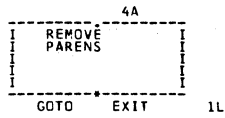


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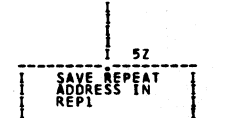
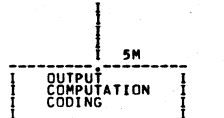
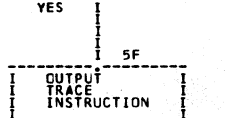
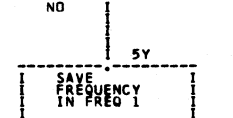
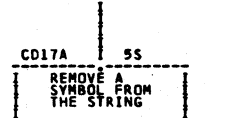
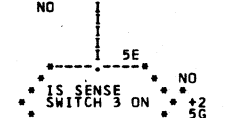
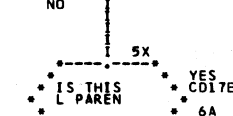
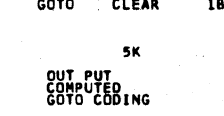
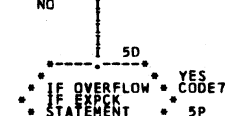
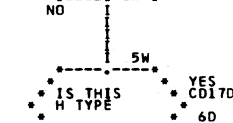
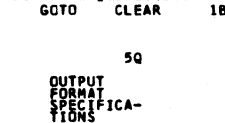
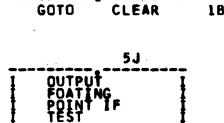
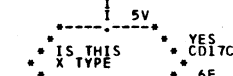
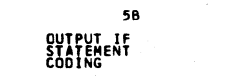
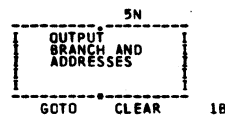
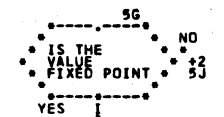
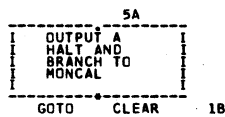


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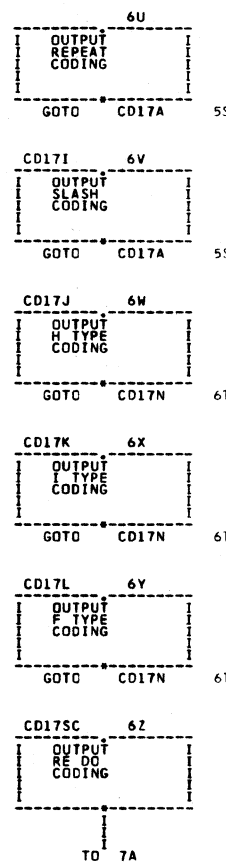
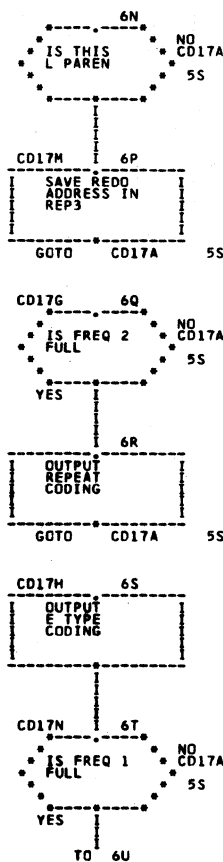
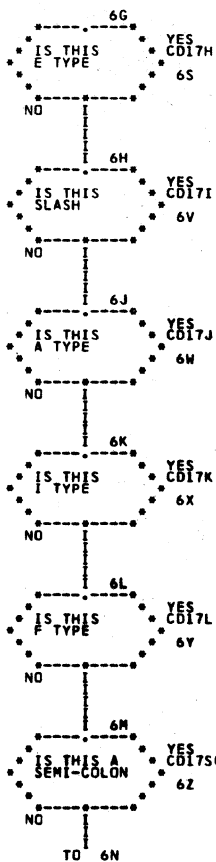
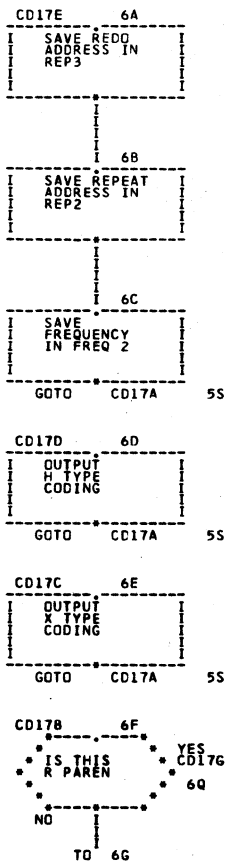
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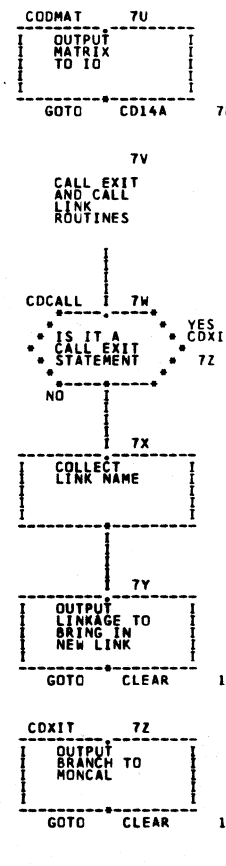
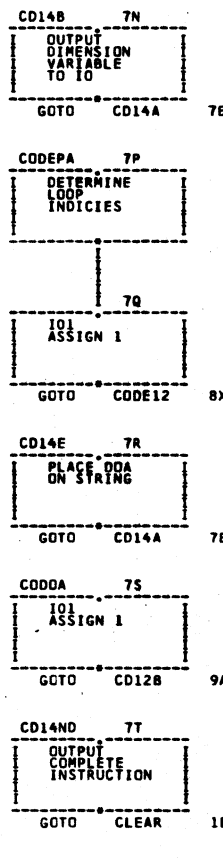
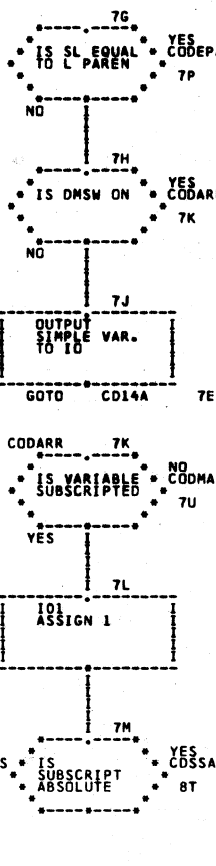
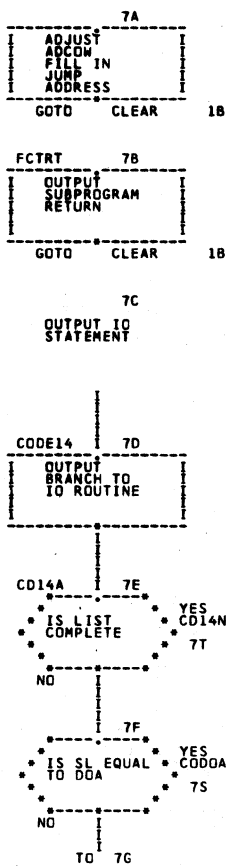
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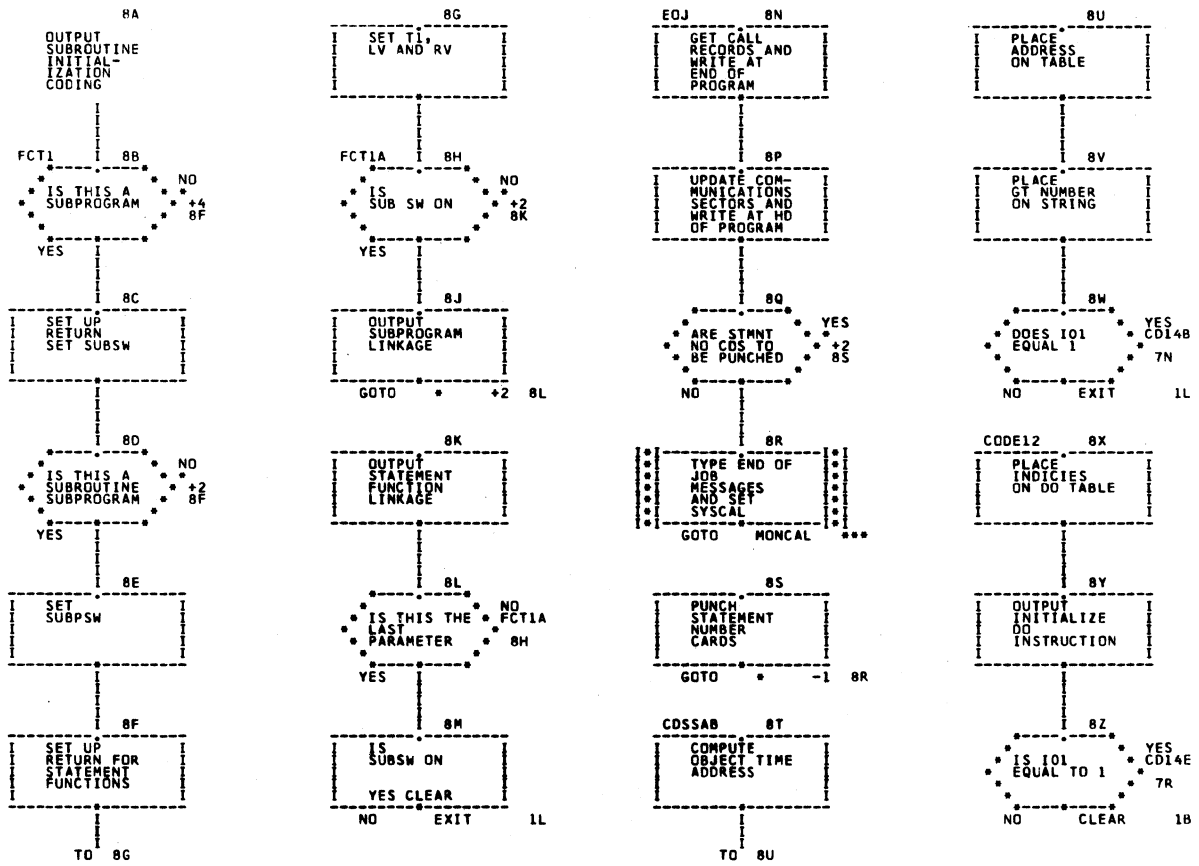
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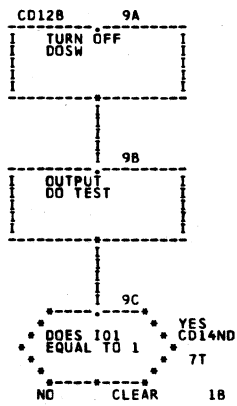
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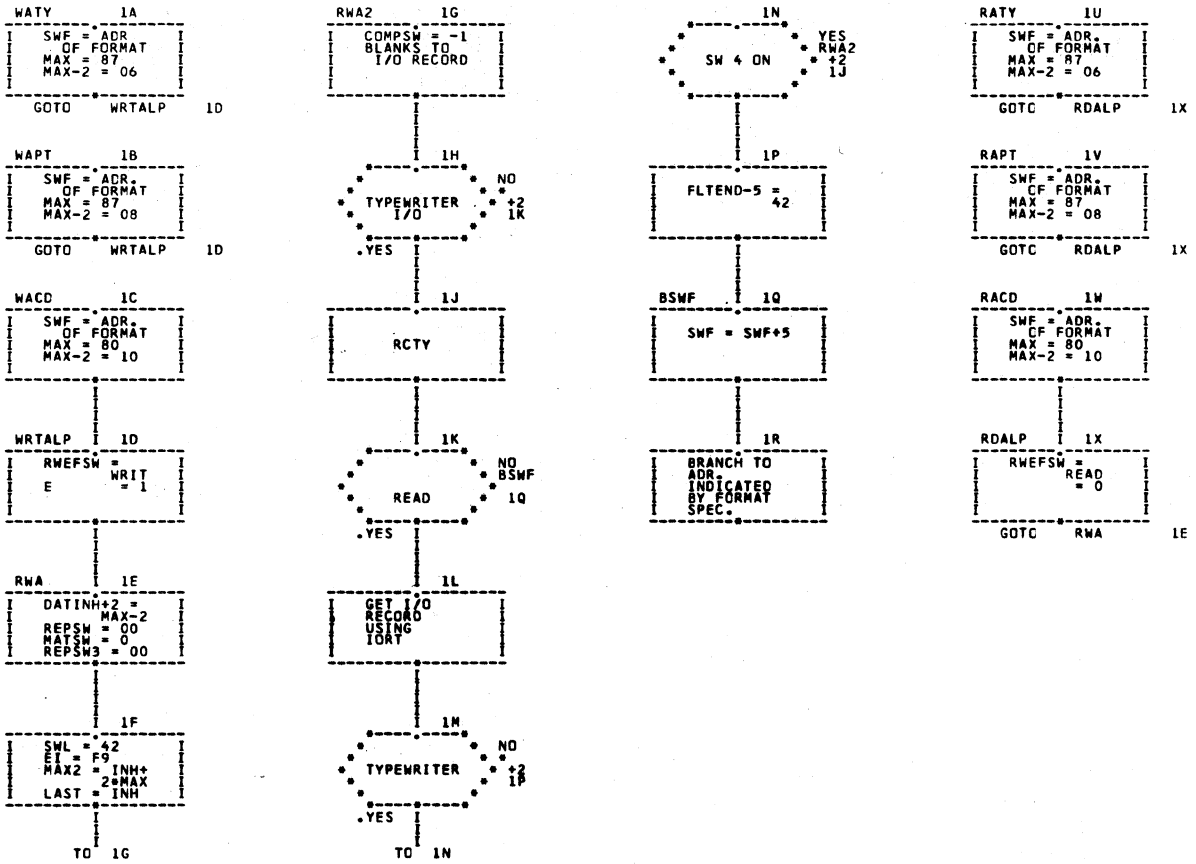
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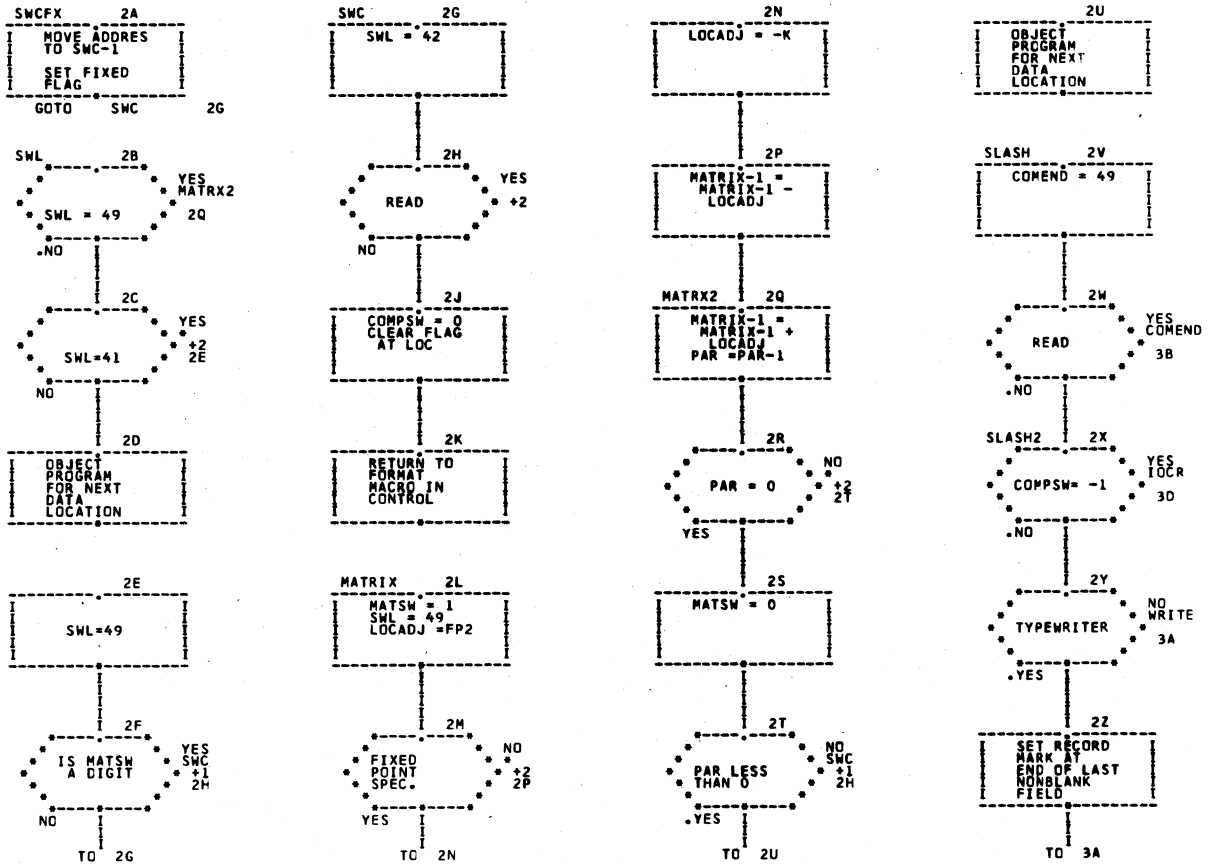
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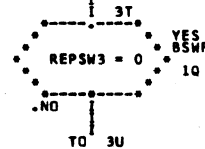
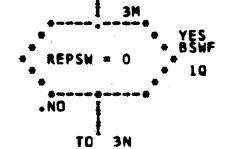
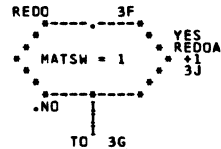
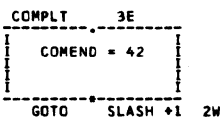
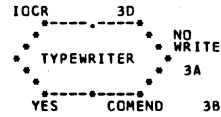
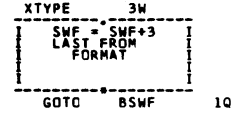
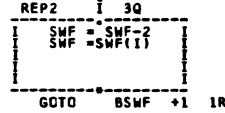
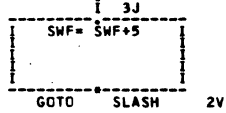
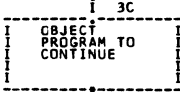
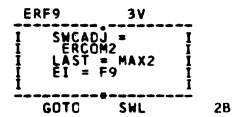
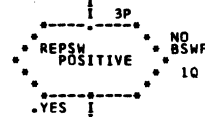
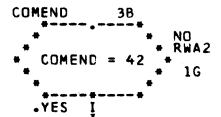
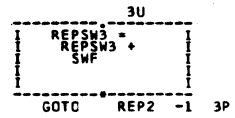
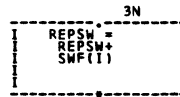
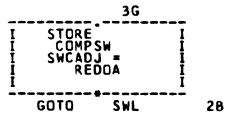
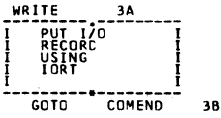
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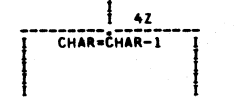
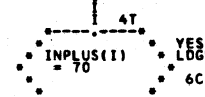
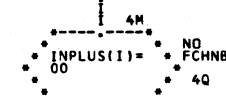
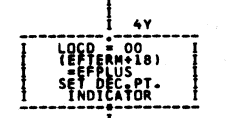
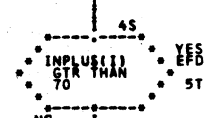
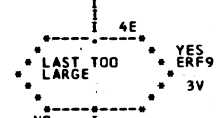
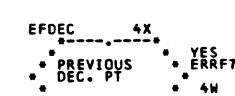
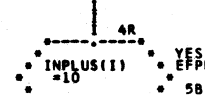
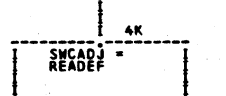
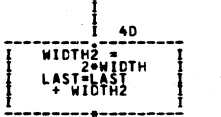
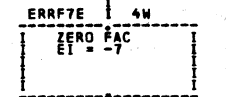
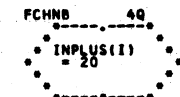
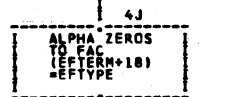
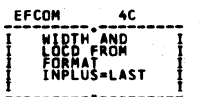
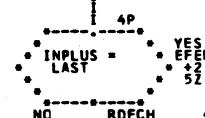
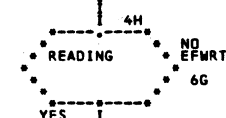
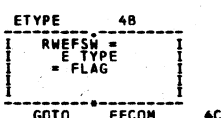
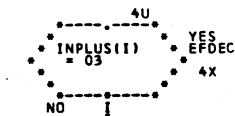
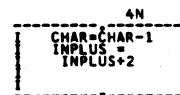
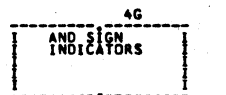
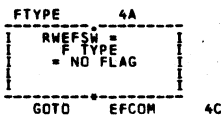
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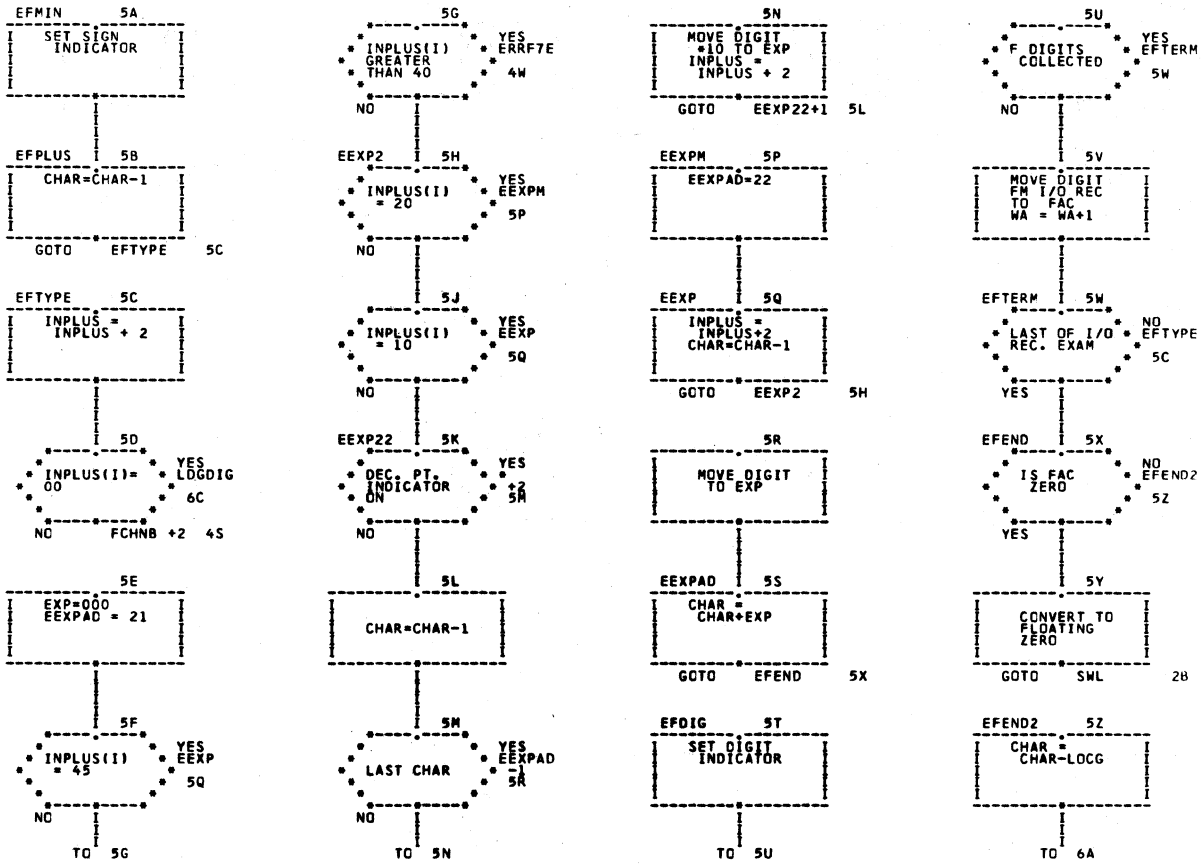
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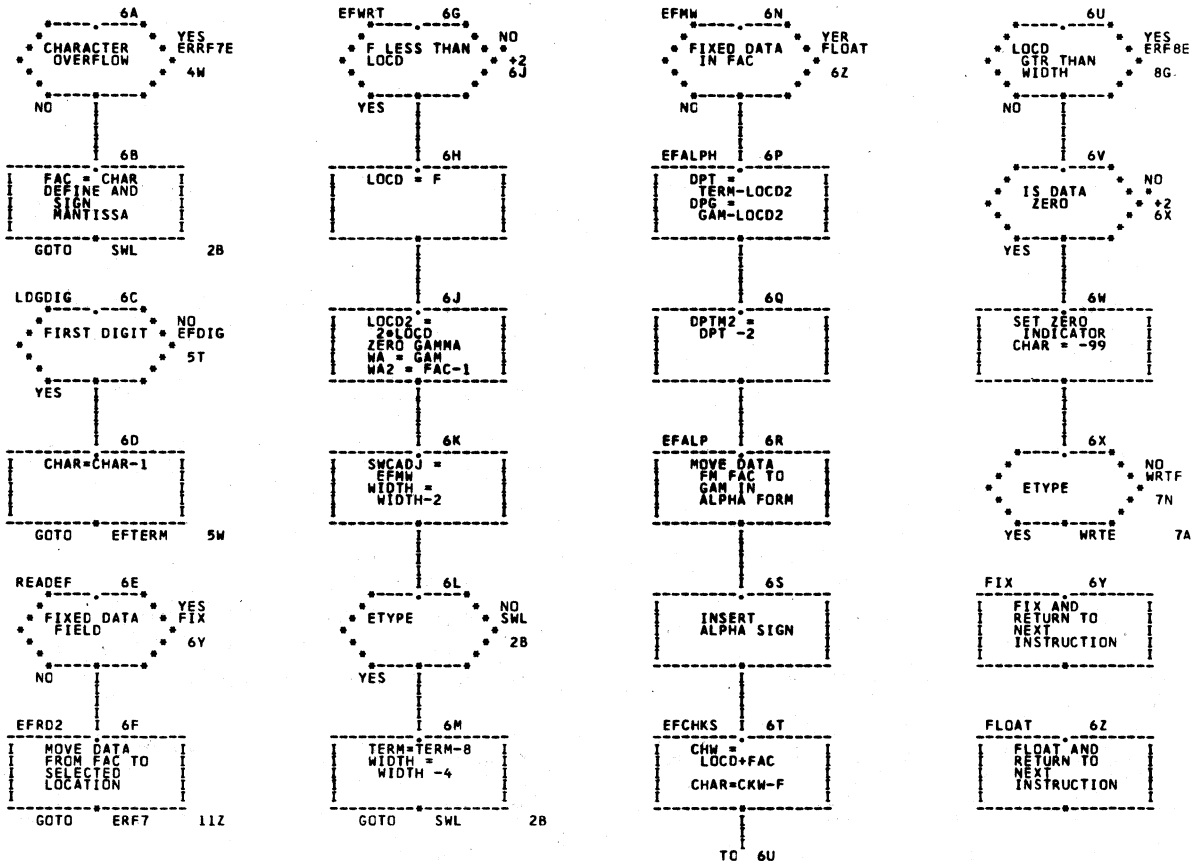
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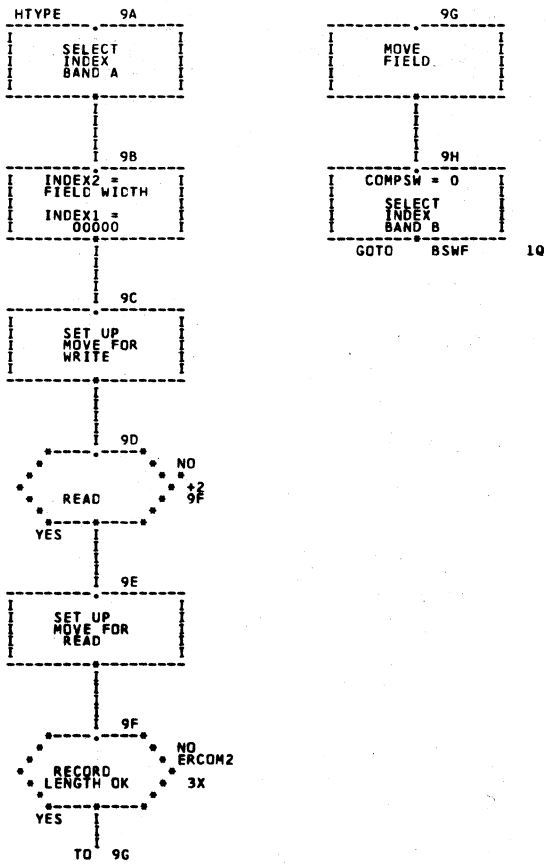
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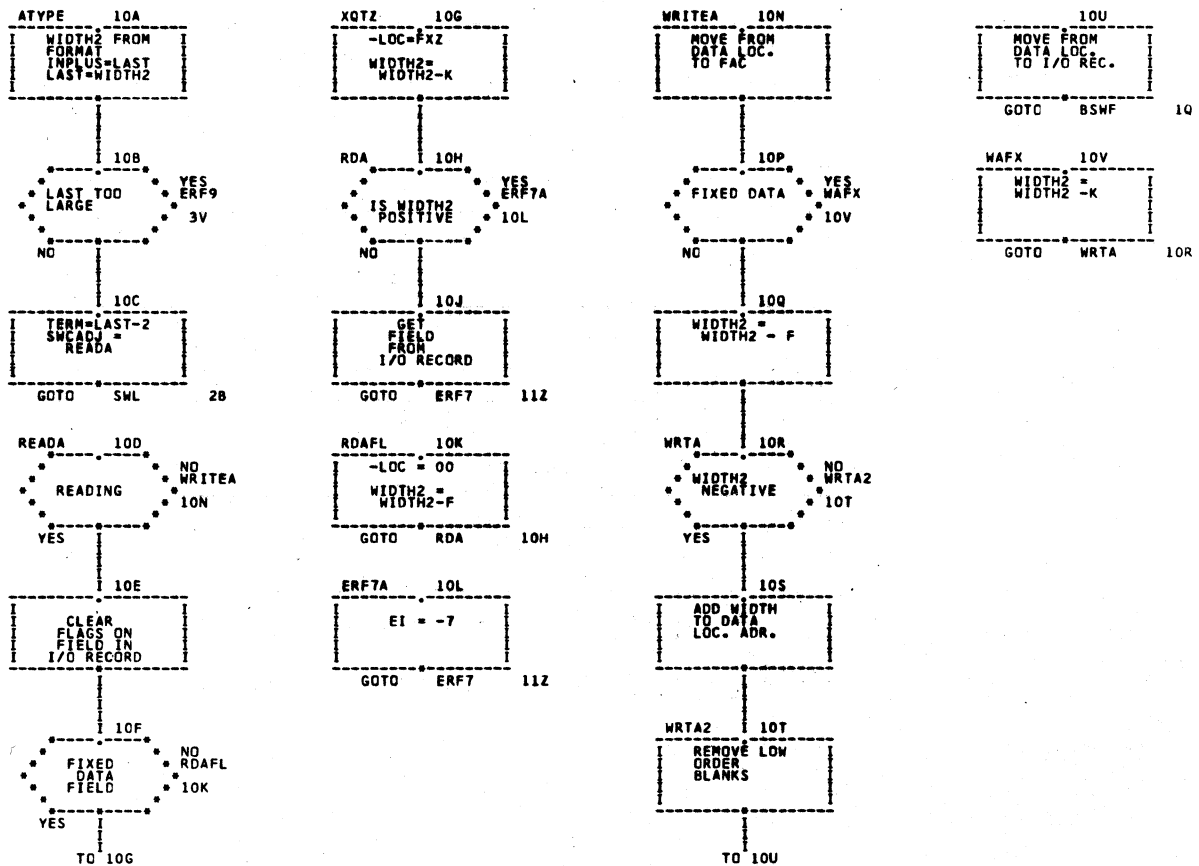
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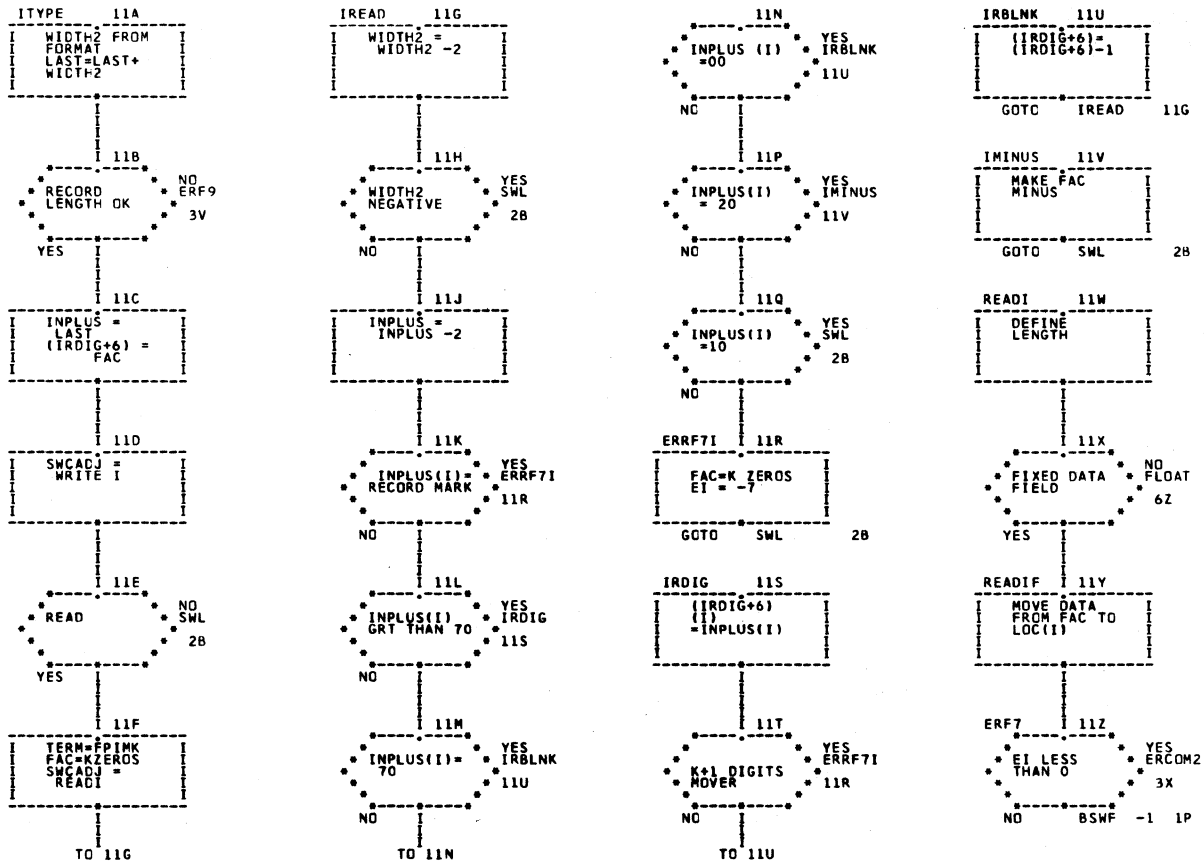
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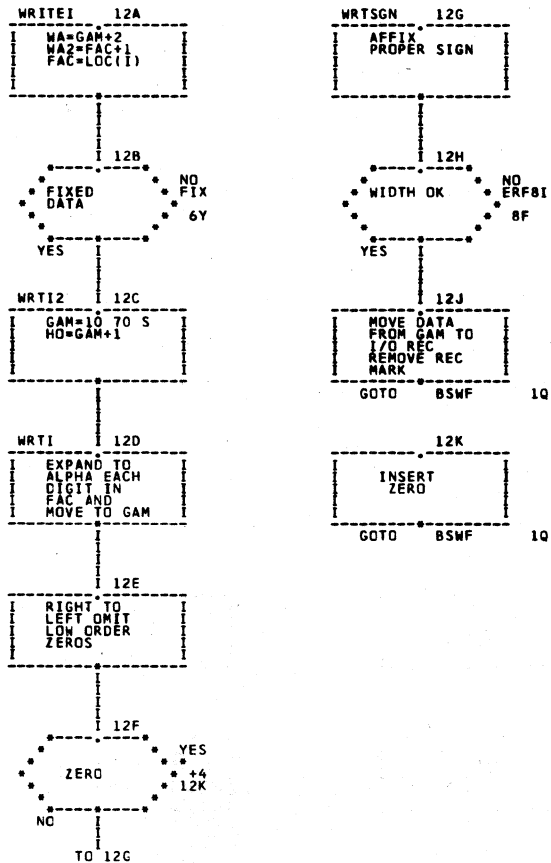
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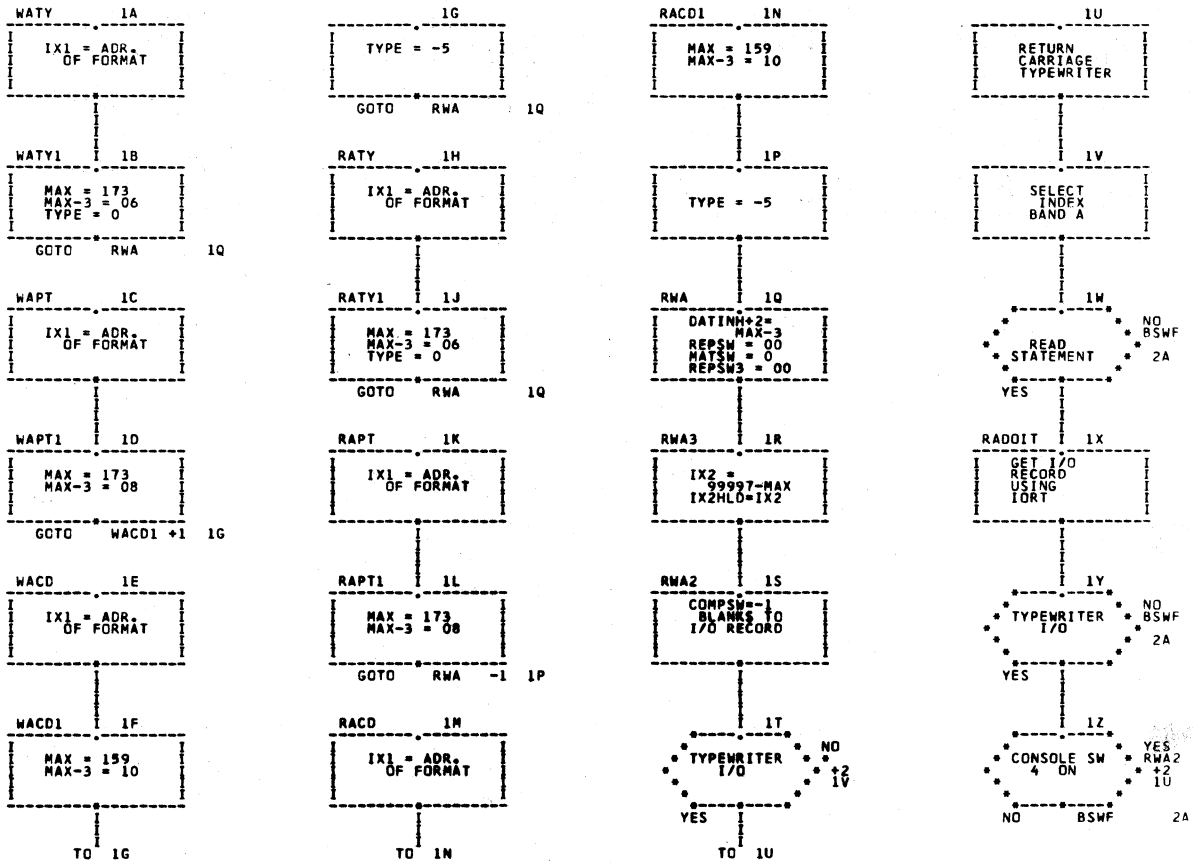
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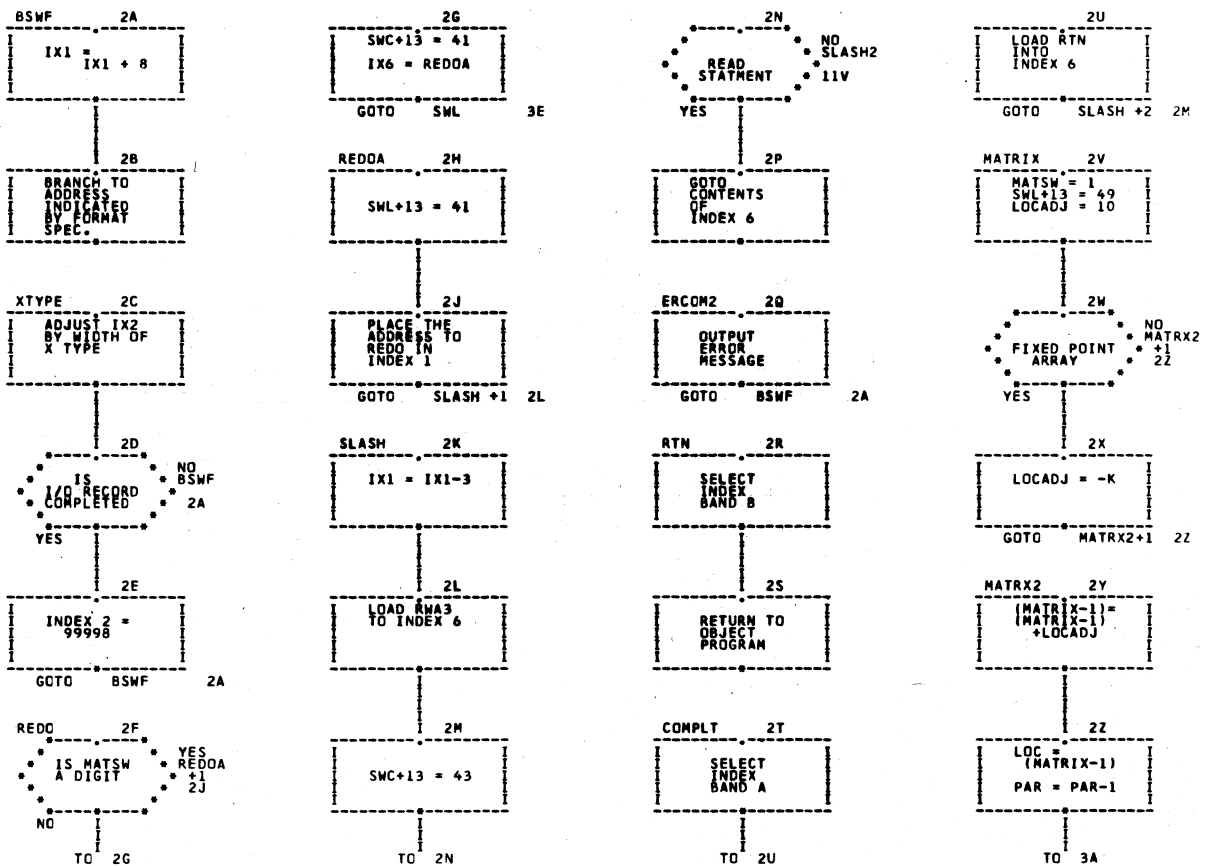
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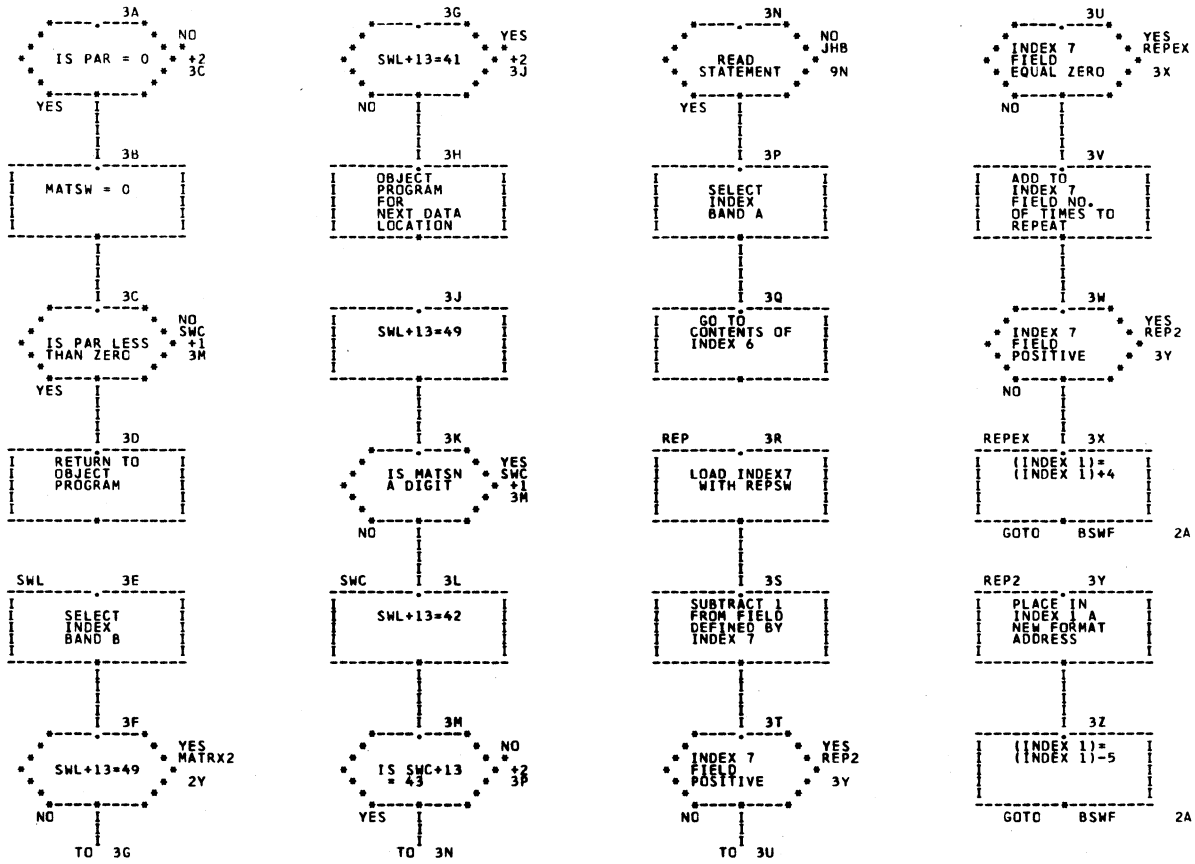
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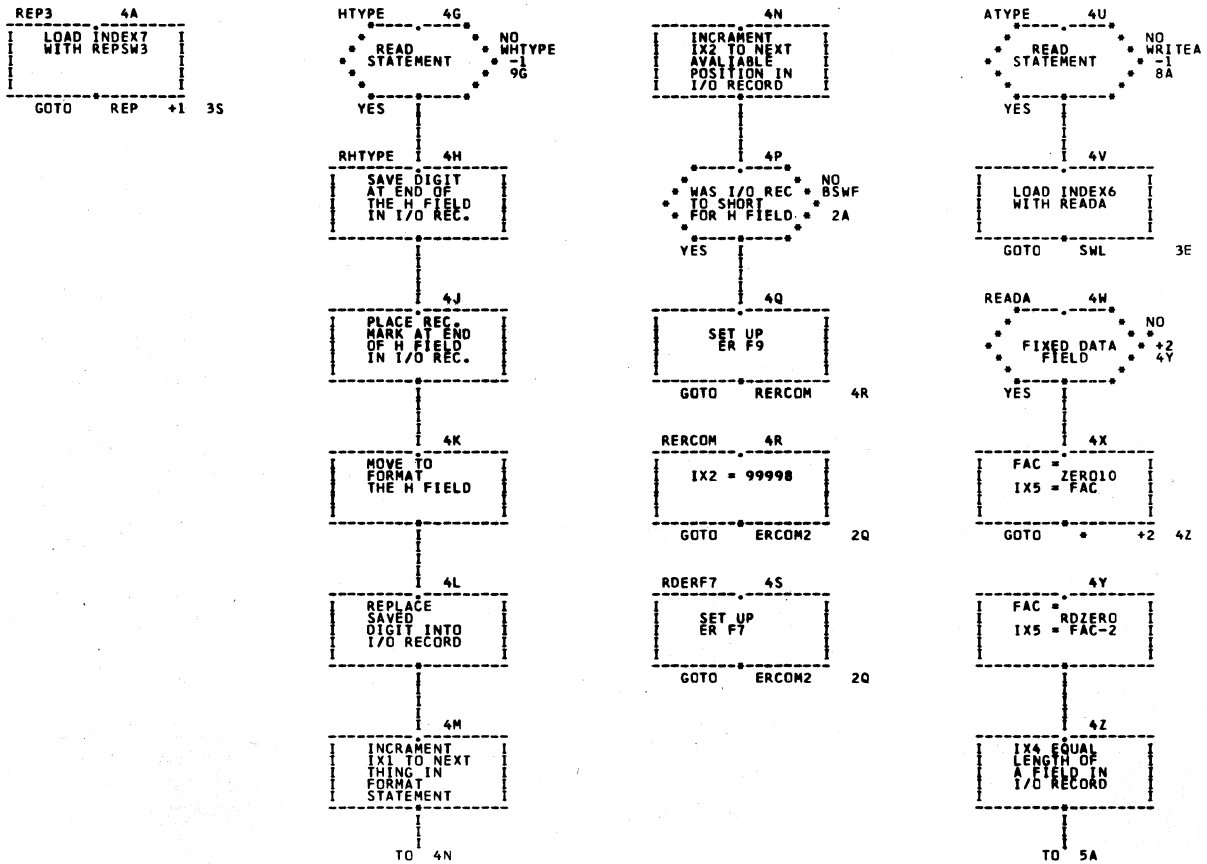
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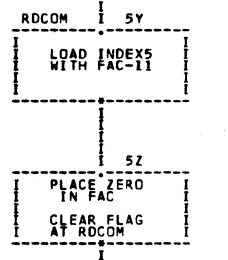
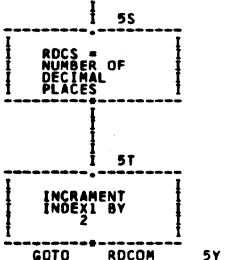
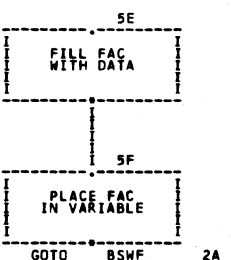
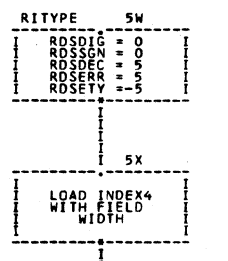
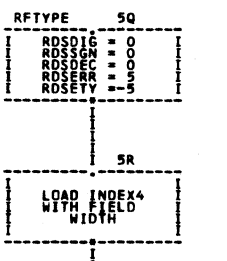
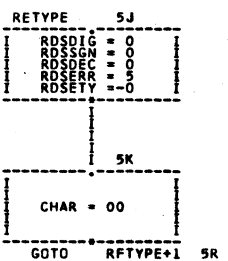
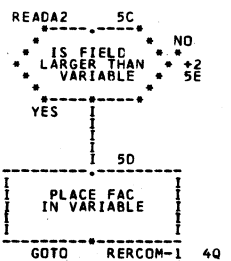
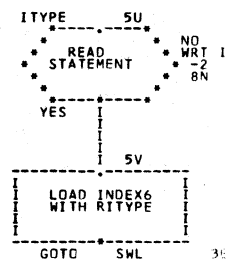
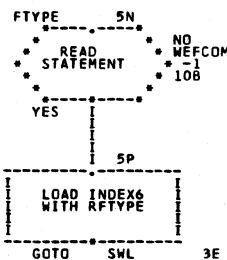
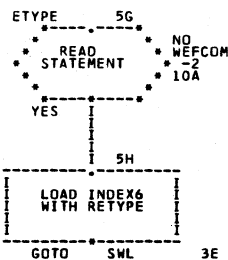
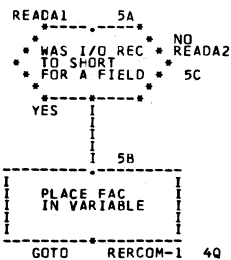
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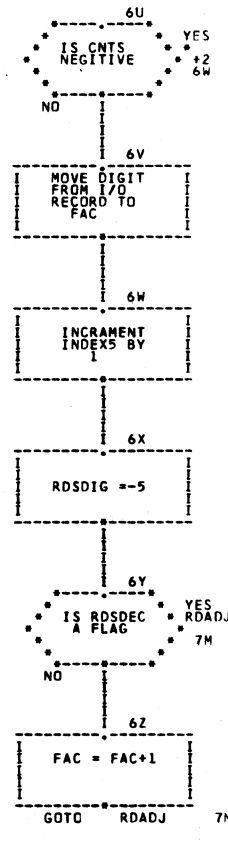
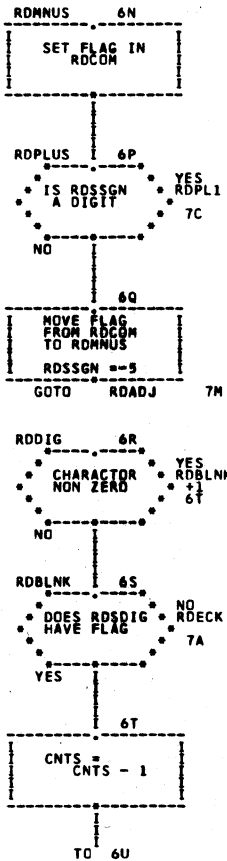
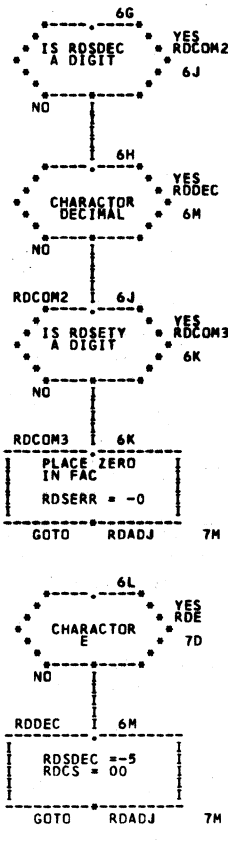
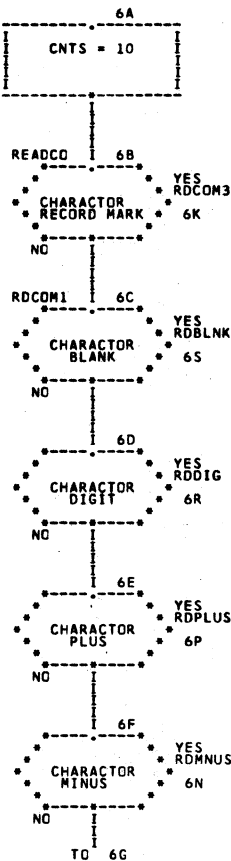
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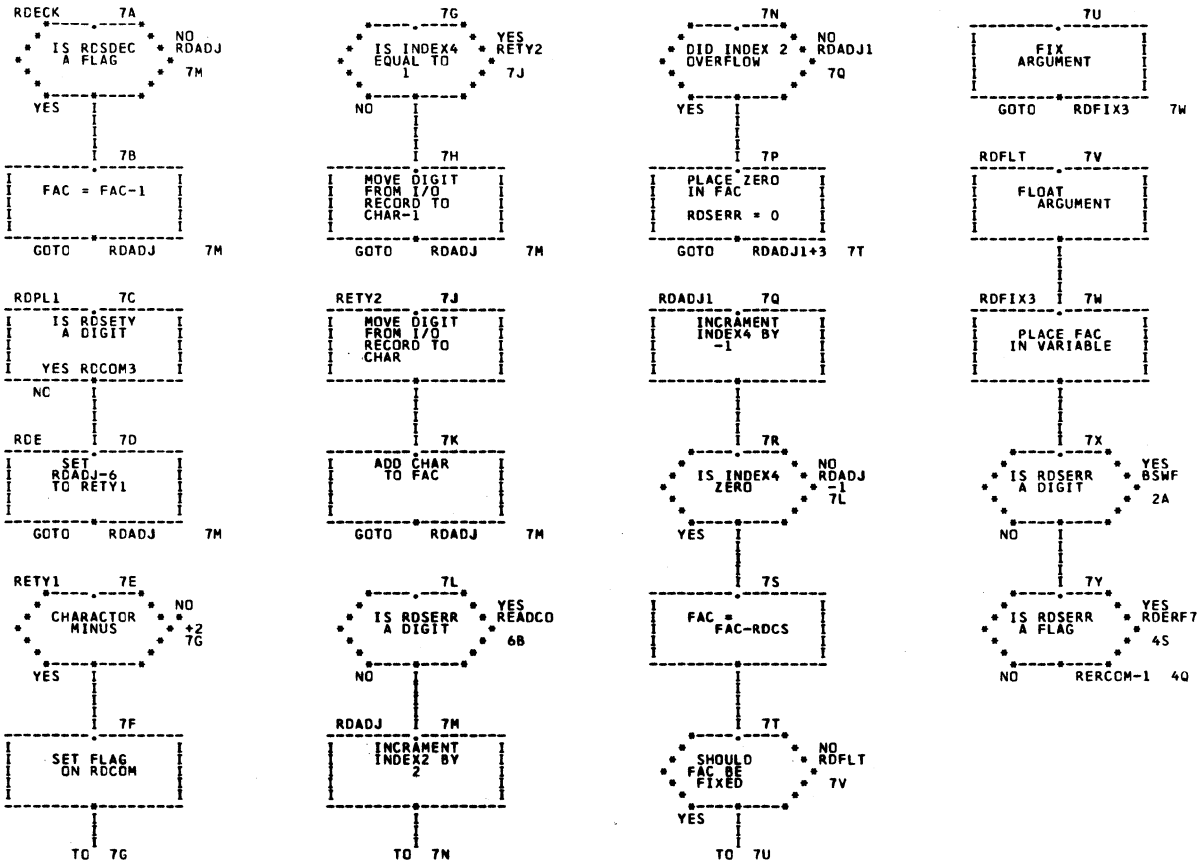
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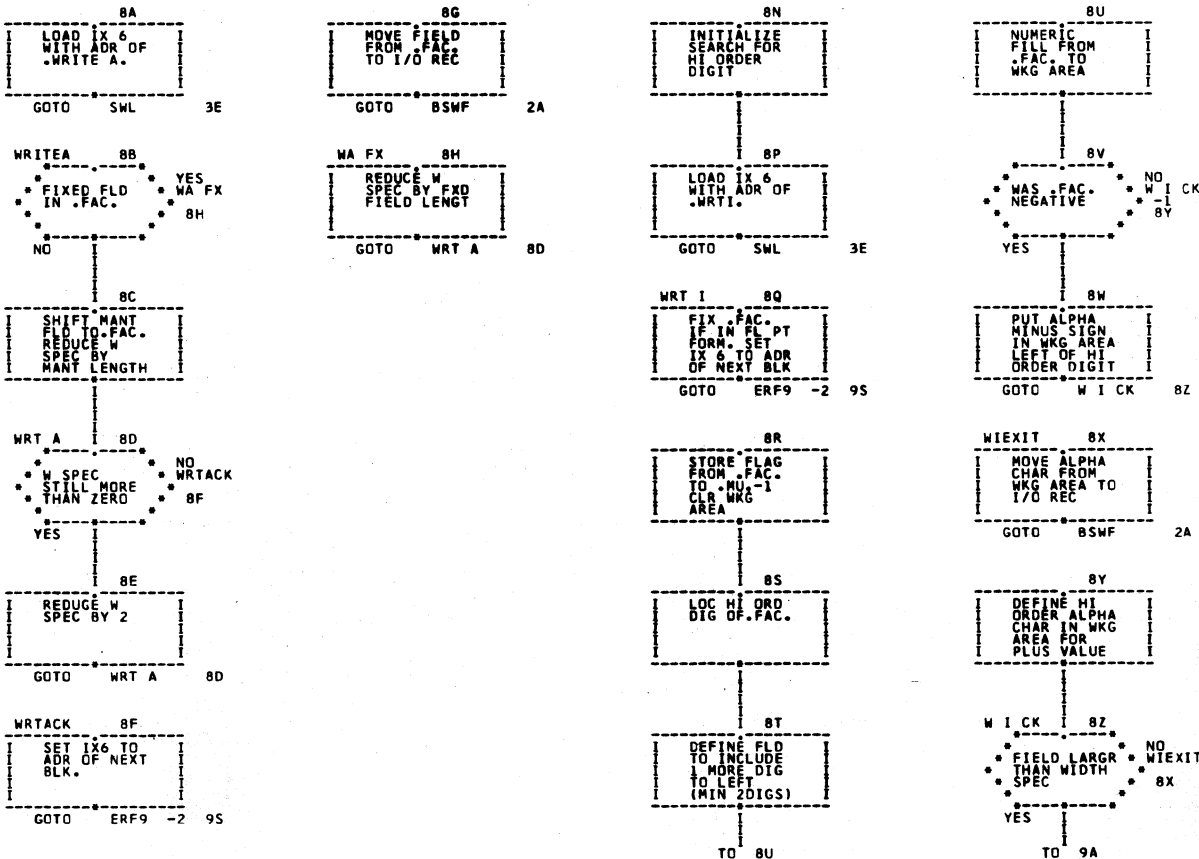
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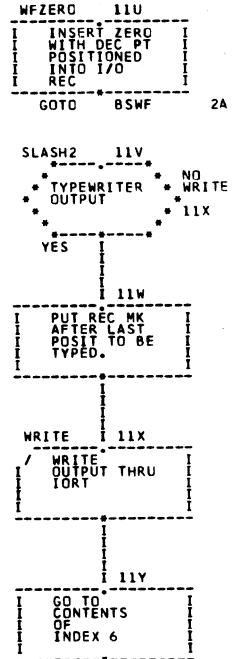
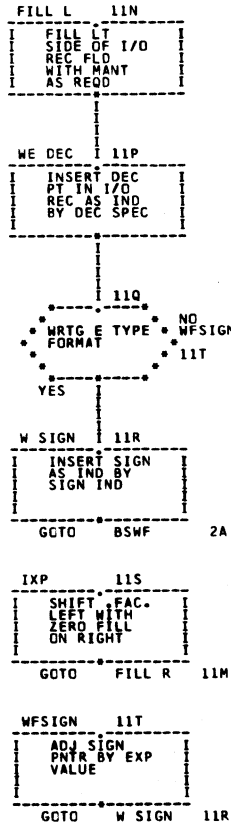
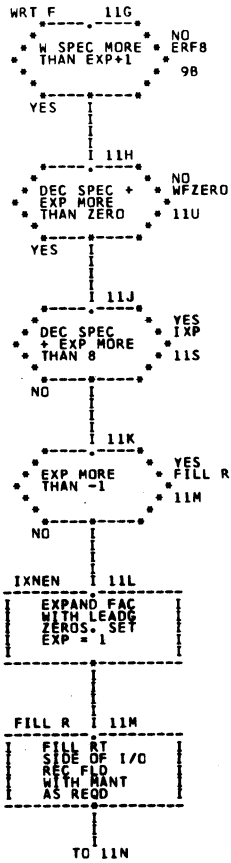
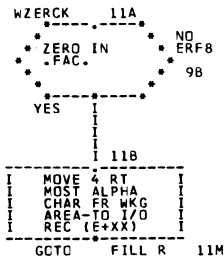
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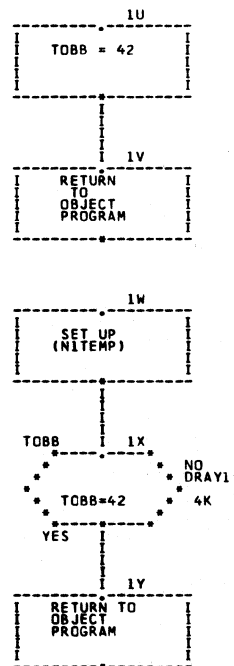
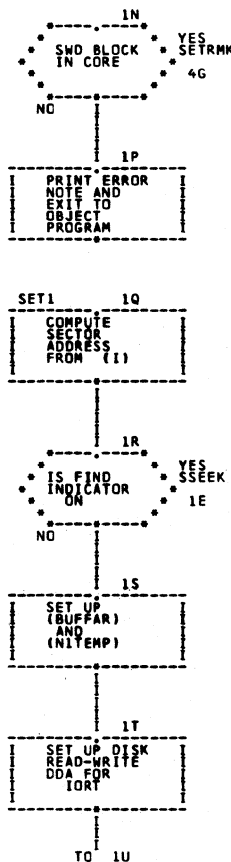
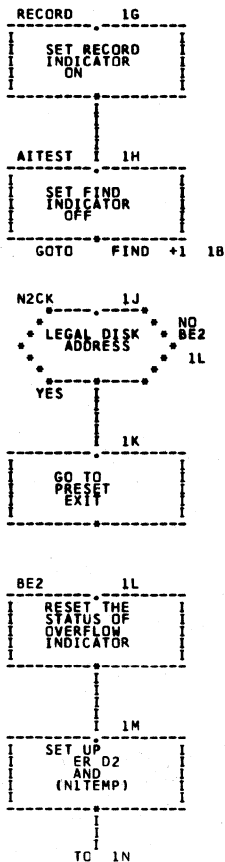
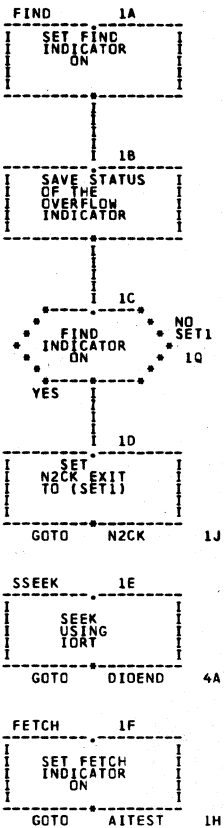
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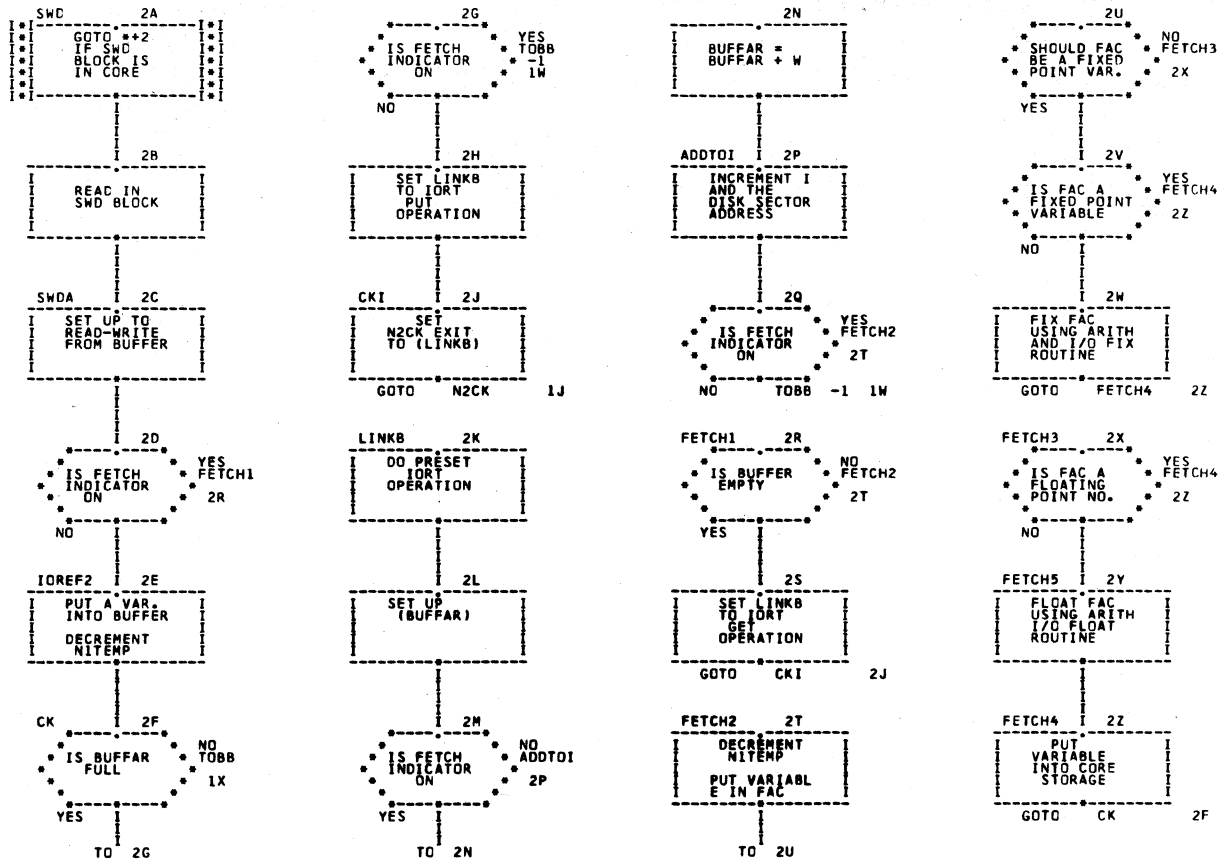
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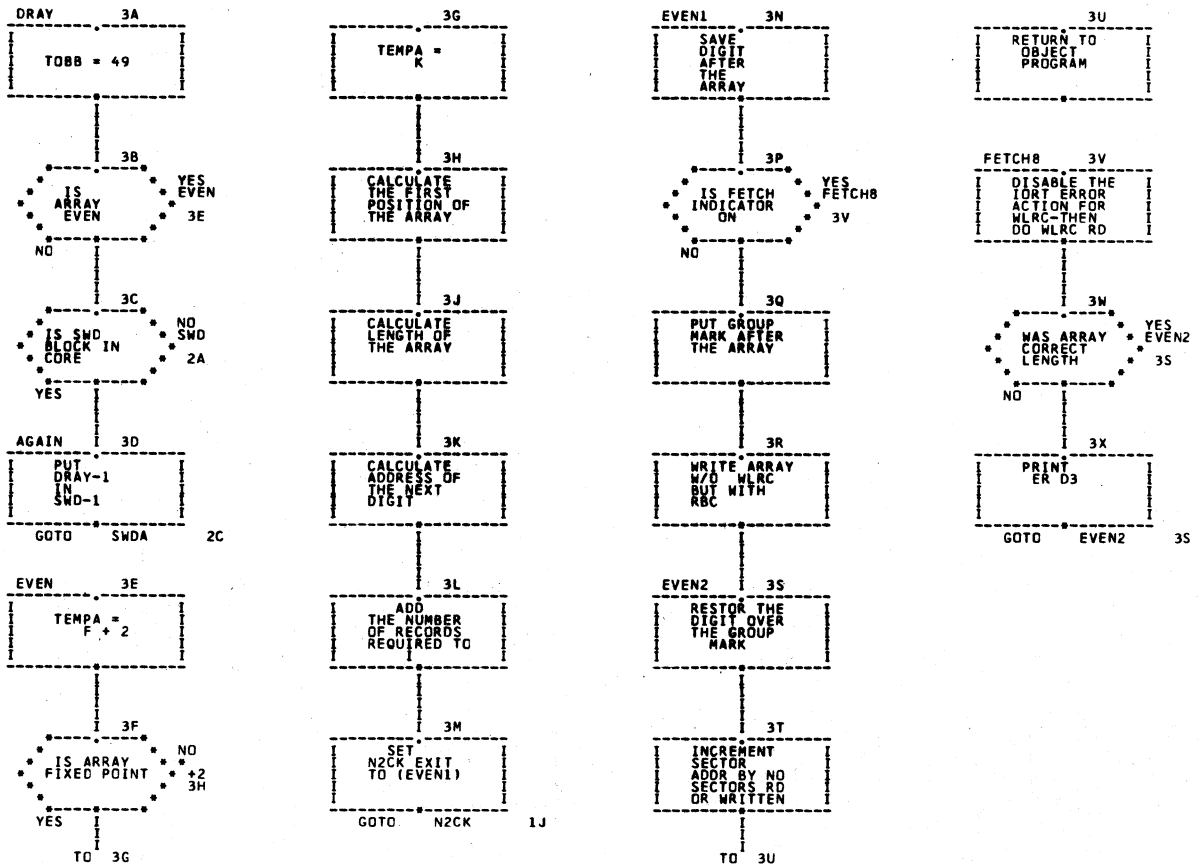
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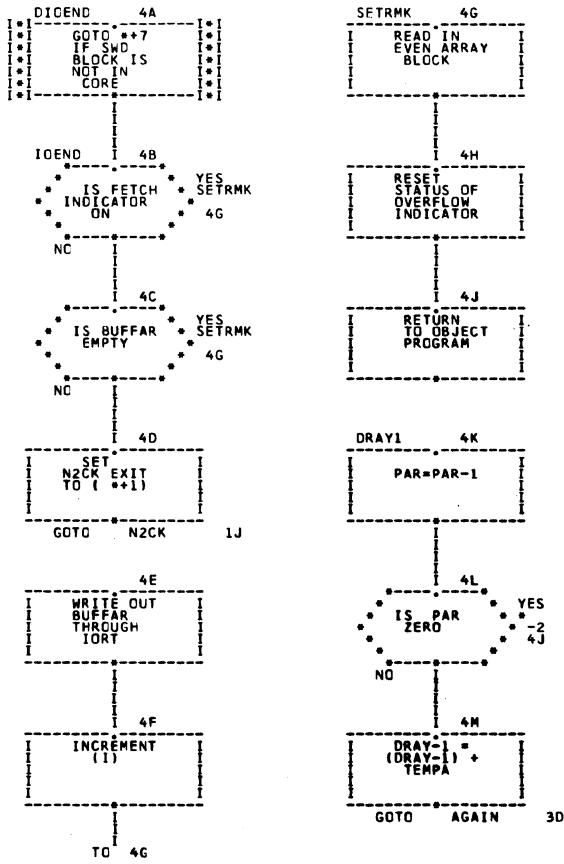
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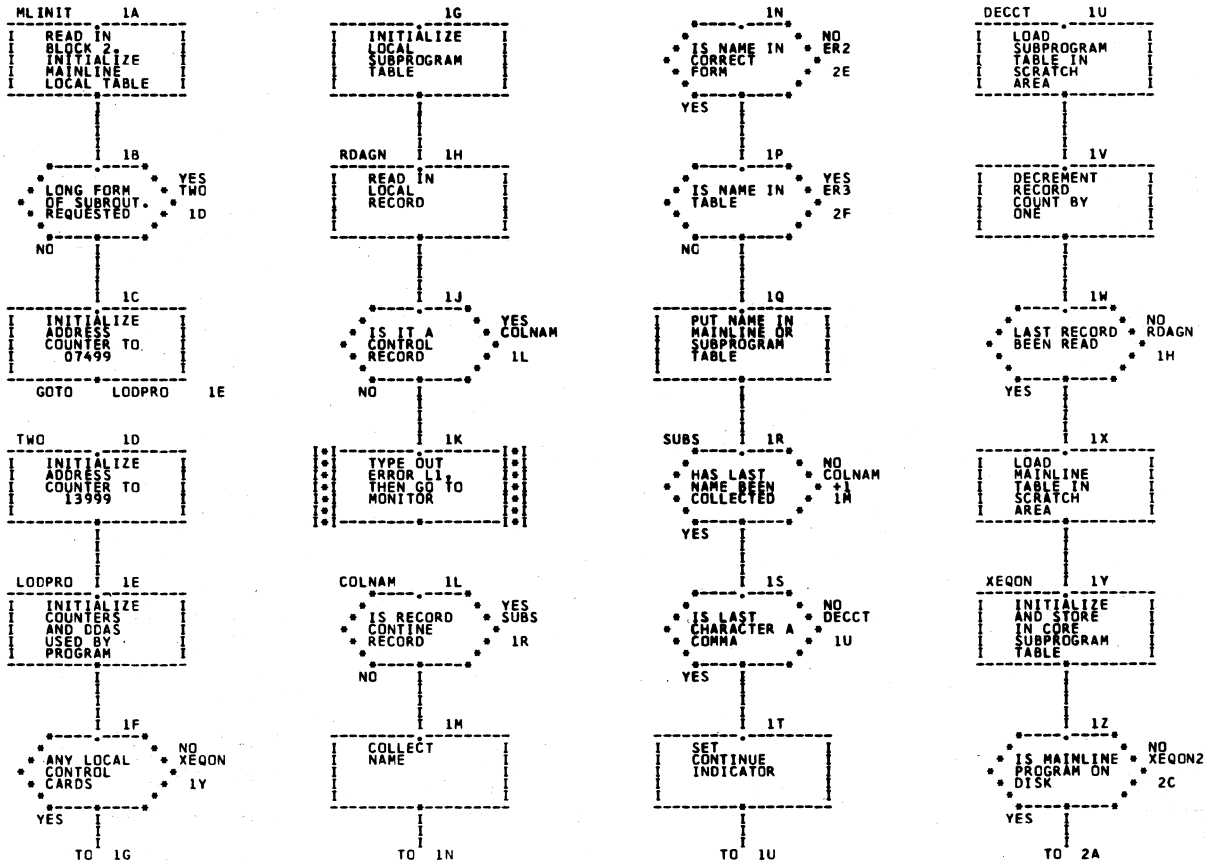
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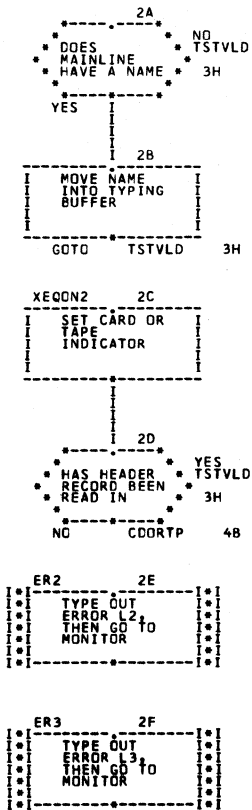
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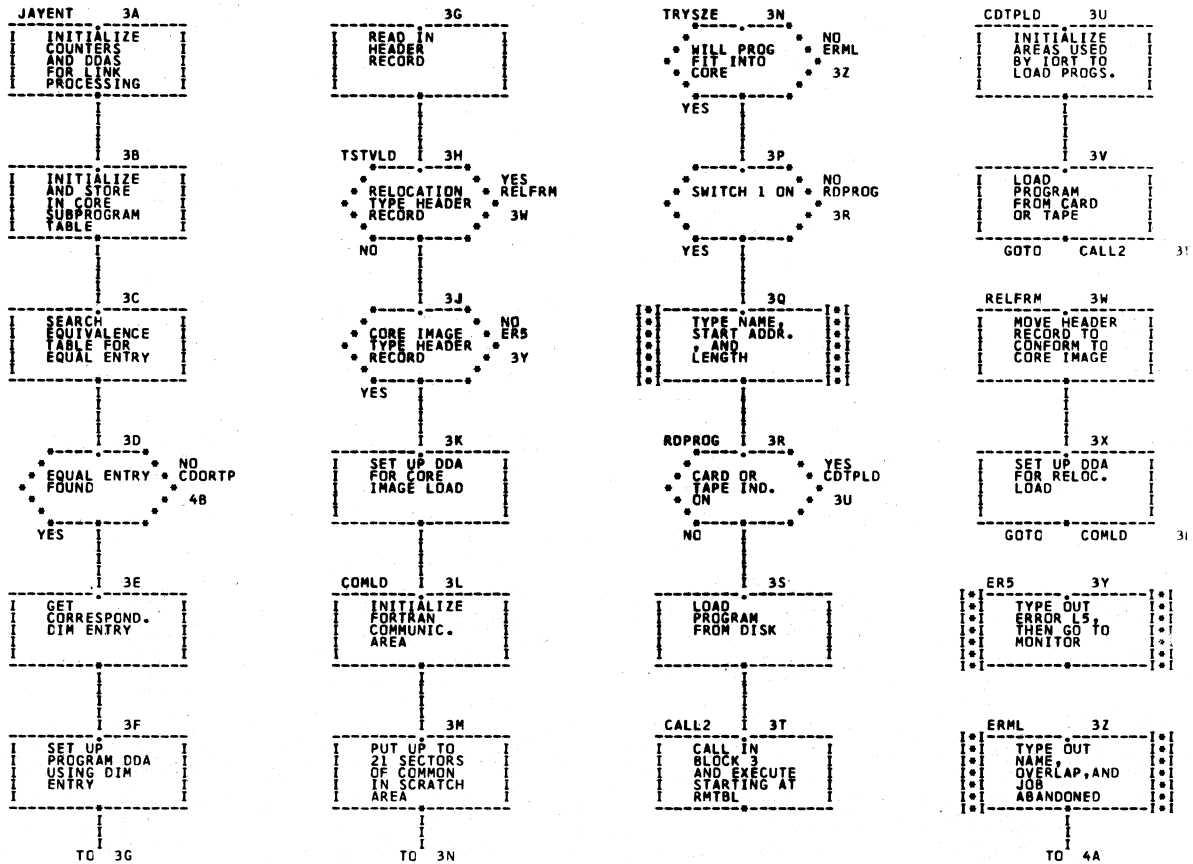
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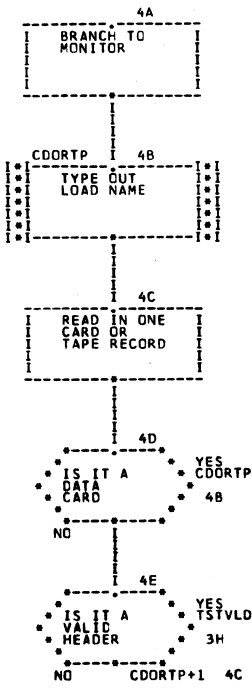
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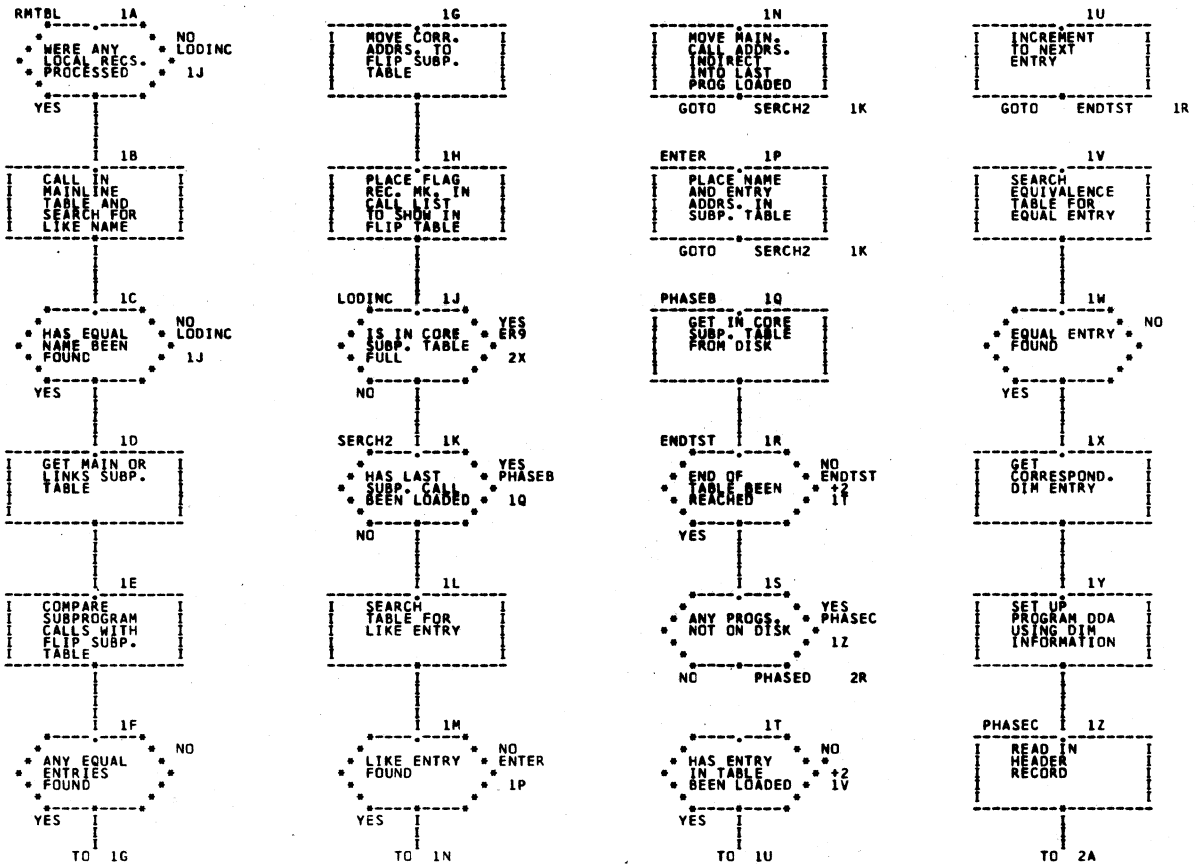
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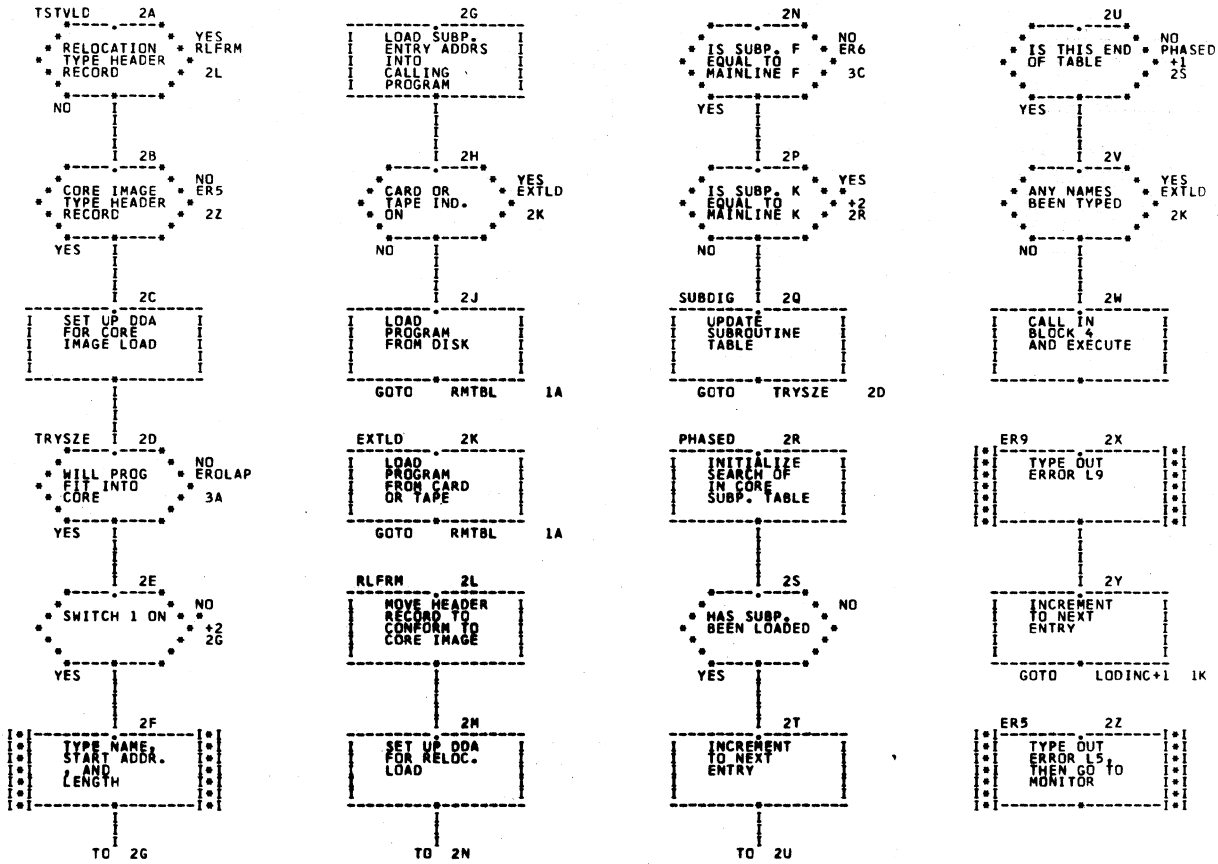
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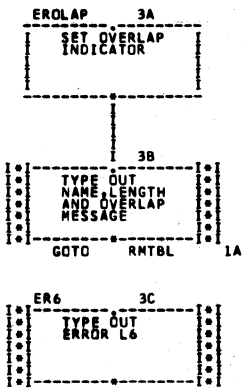
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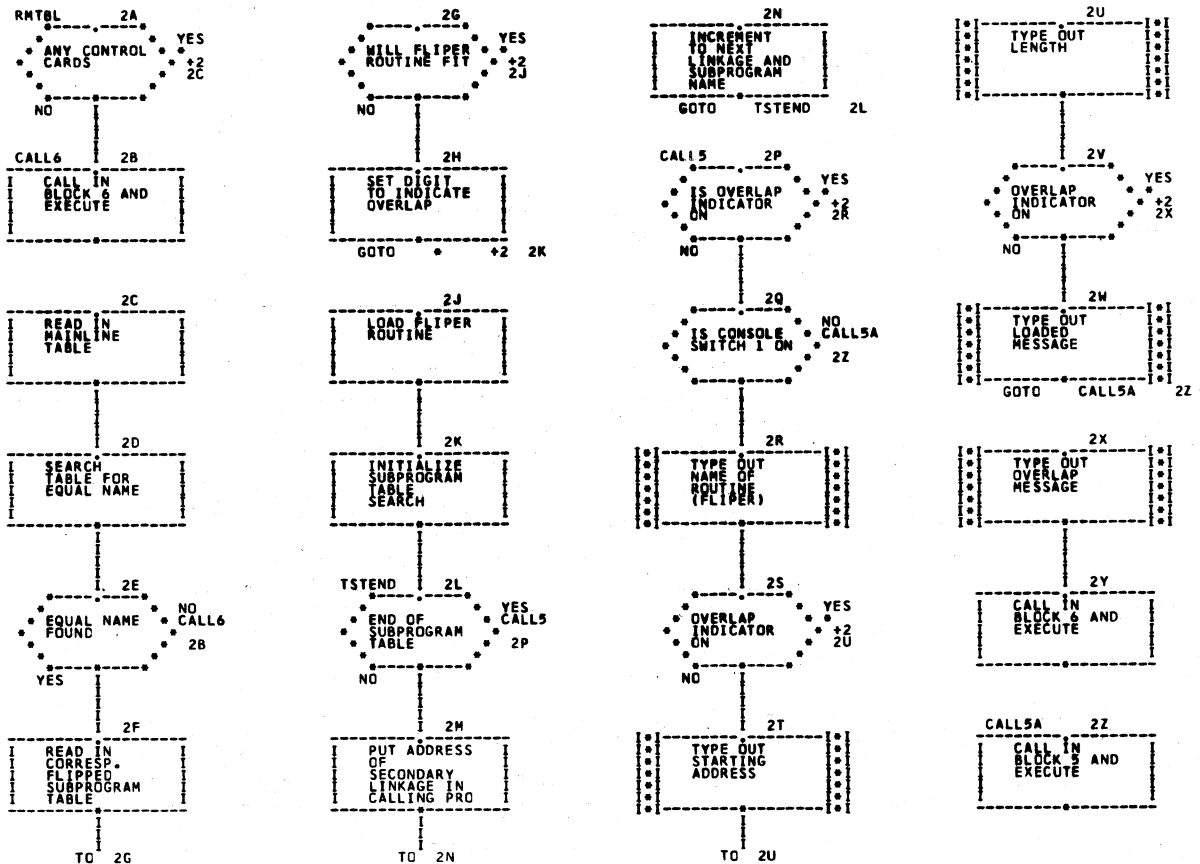
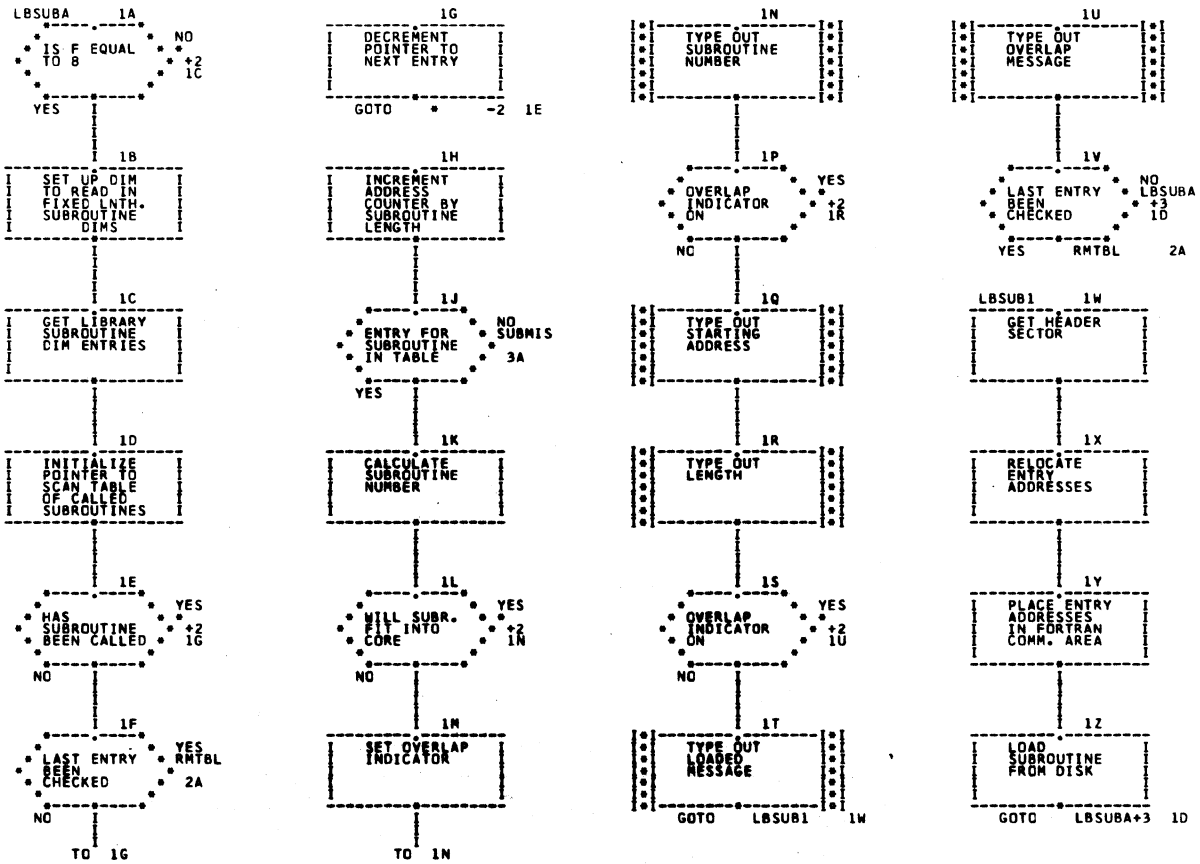
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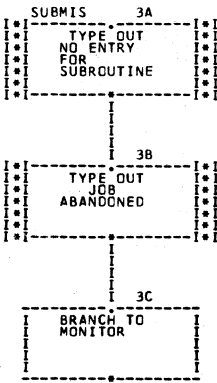
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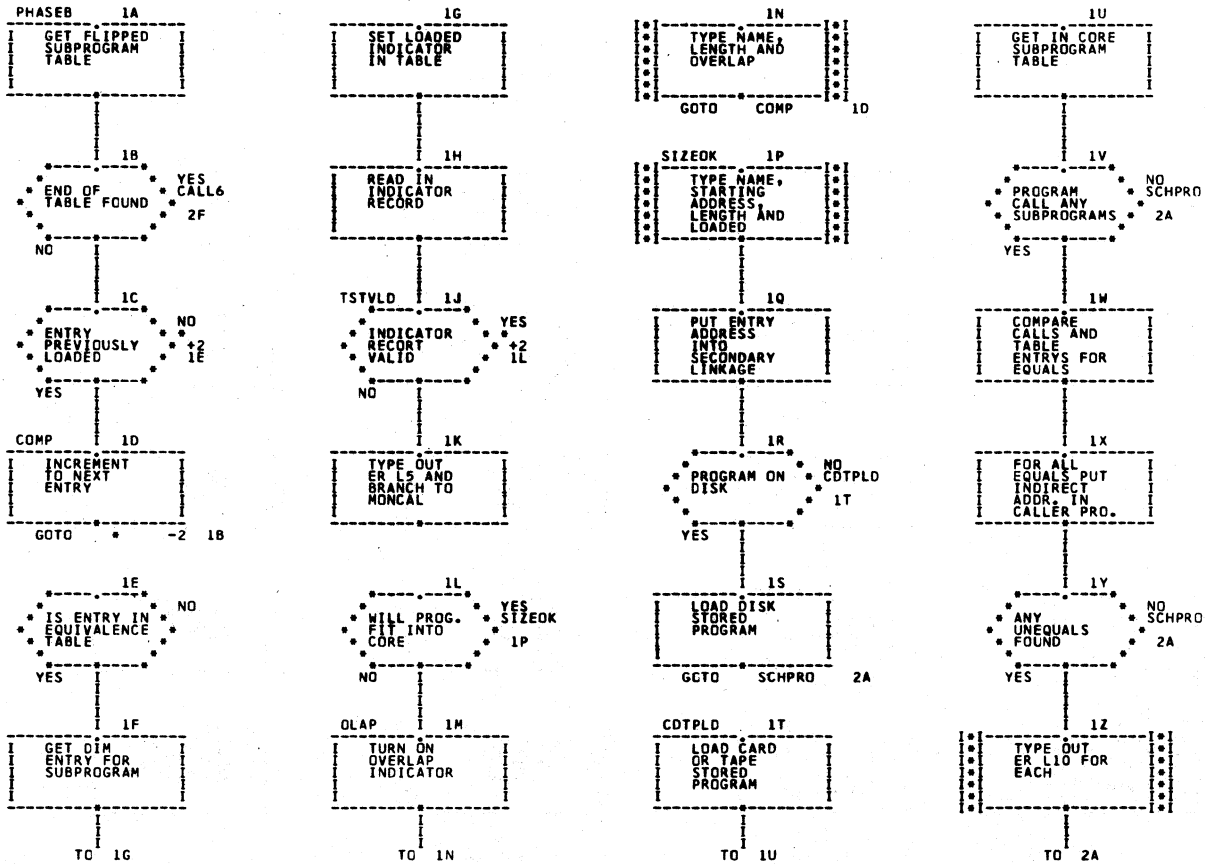
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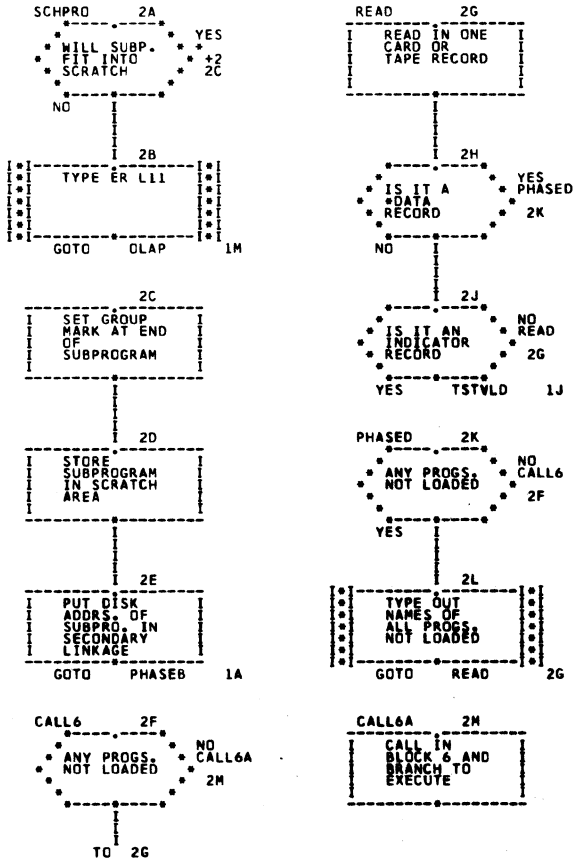
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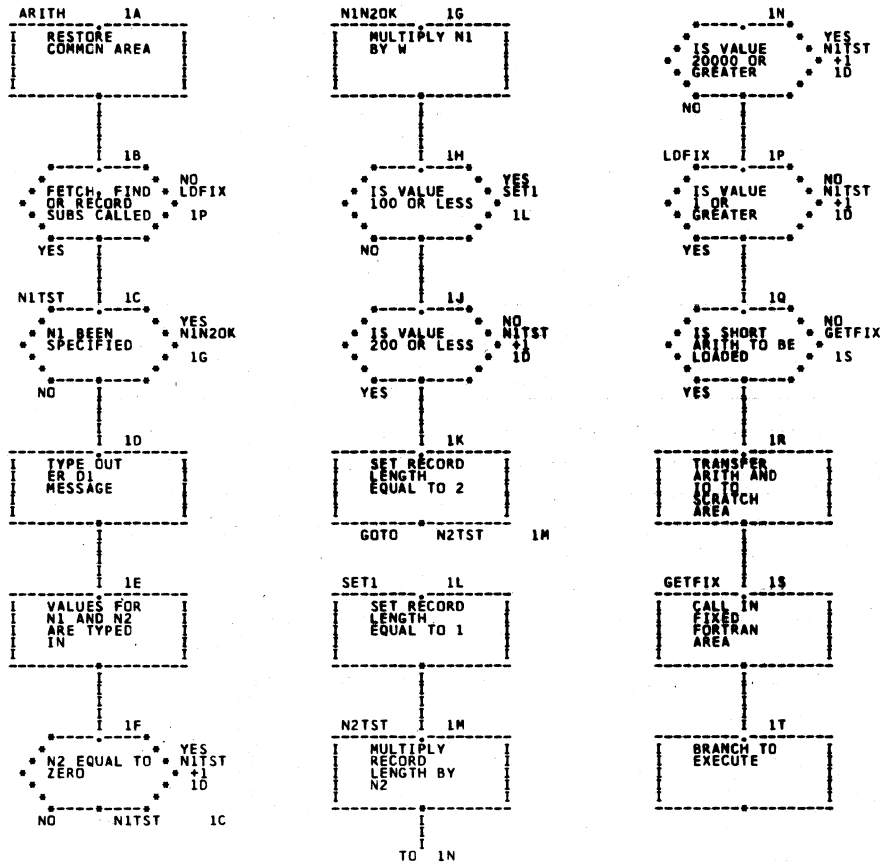
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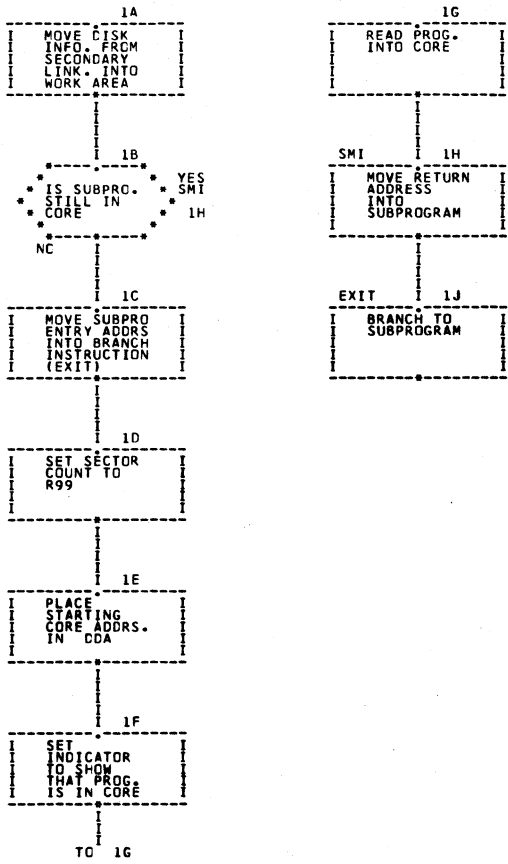
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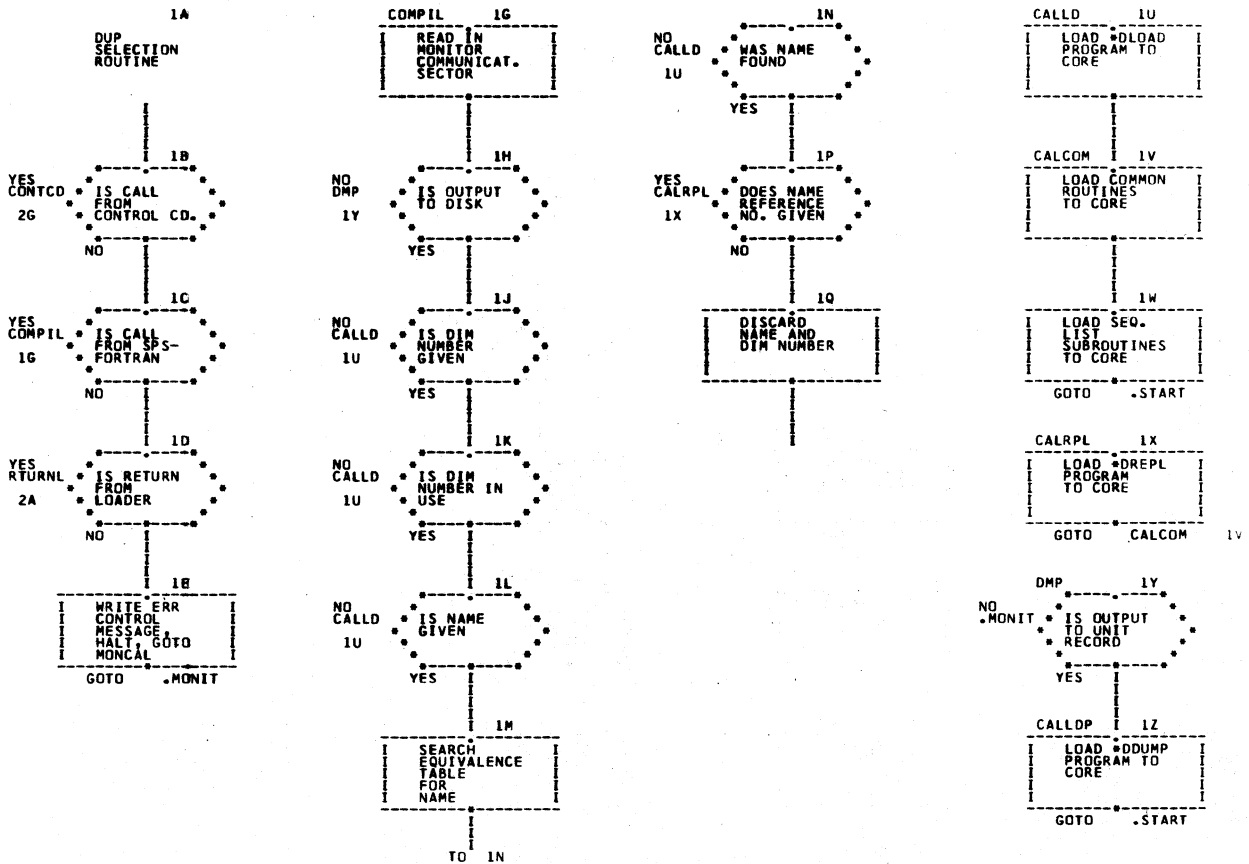


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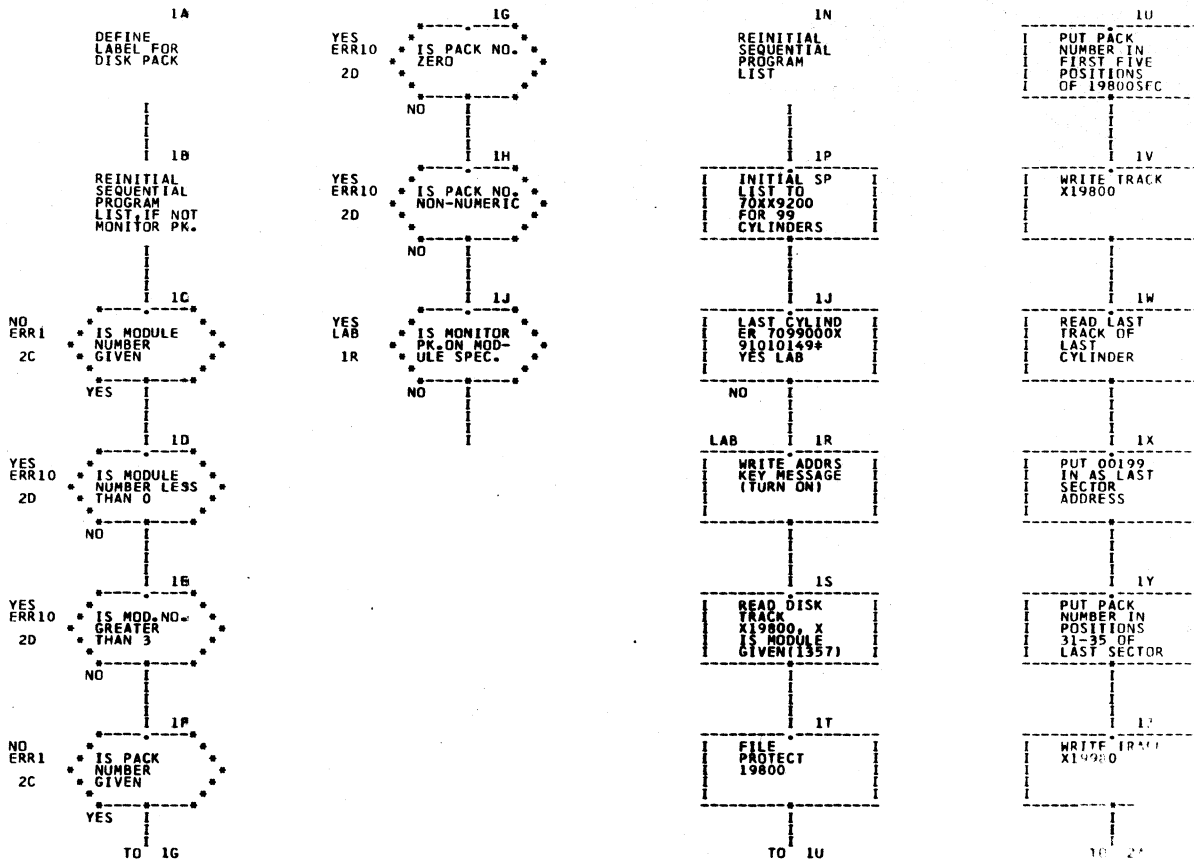


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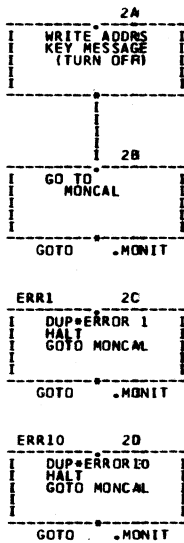
1620 DISK UTILITY SELECTION ROUTINE



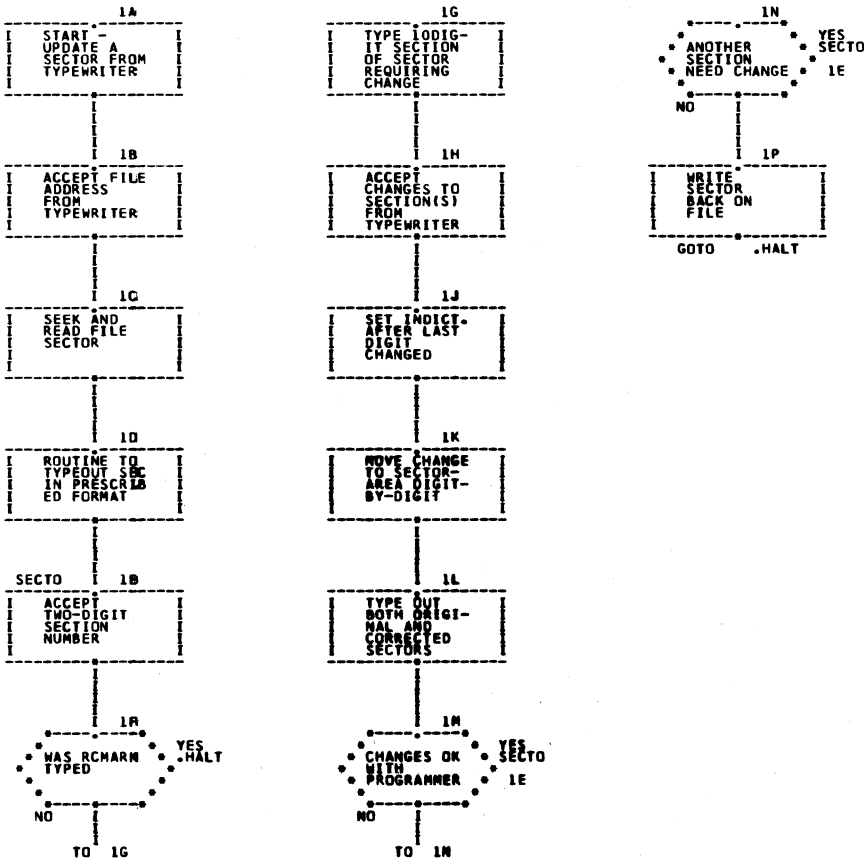
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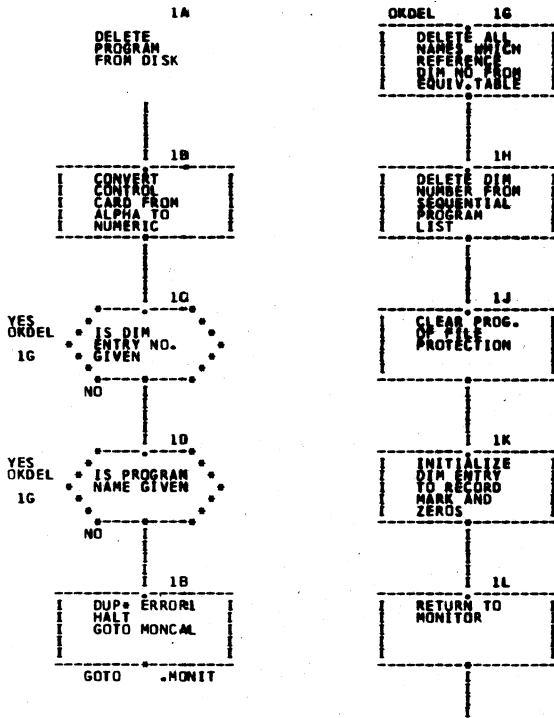


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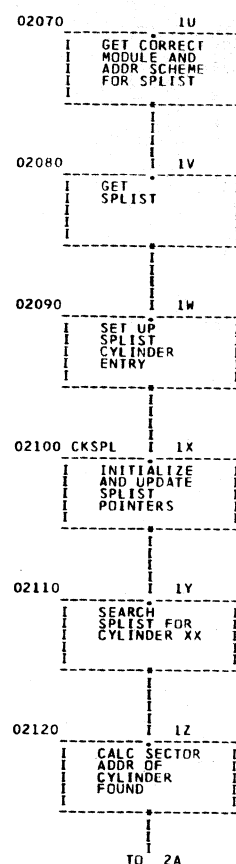
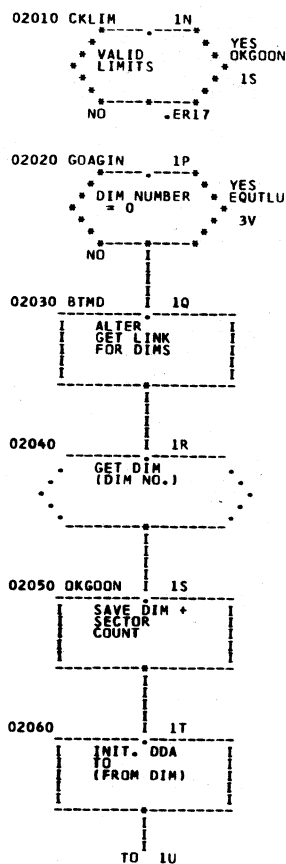
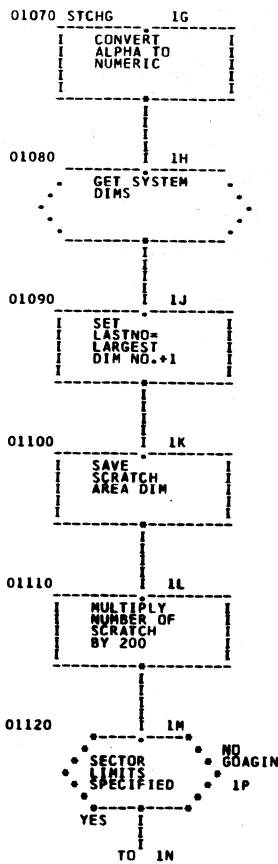
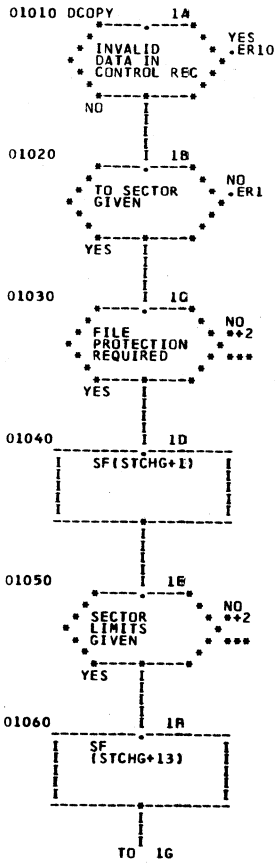


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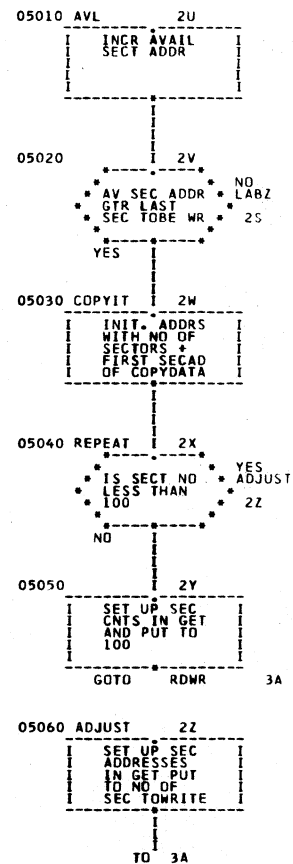
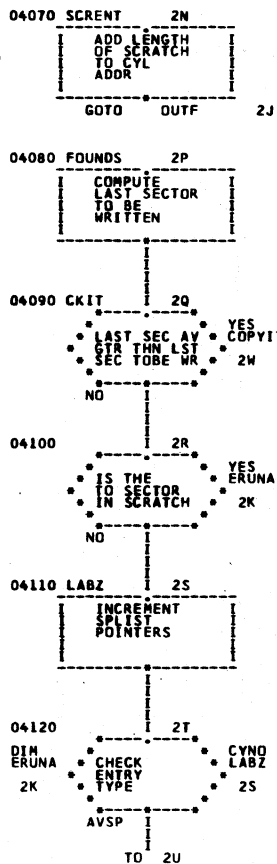
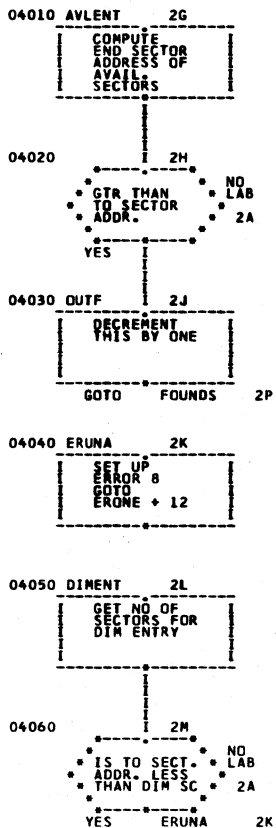
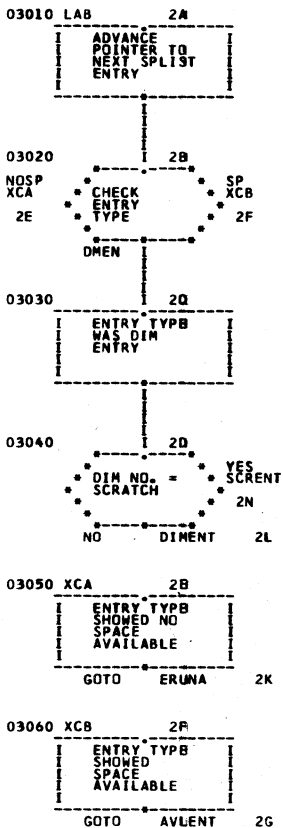
1620 DISK UTILITY PROGRAM •DELET



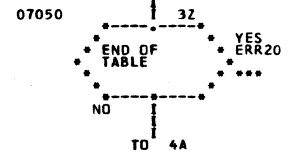
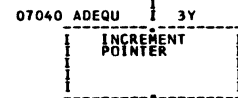
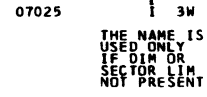
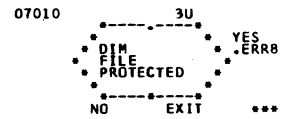
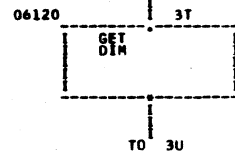
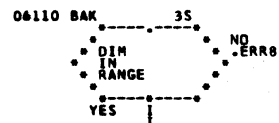
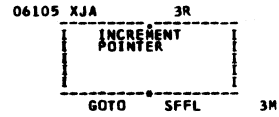
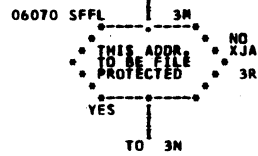
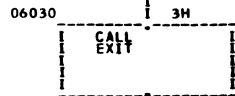
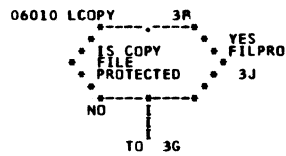
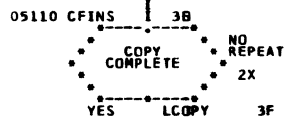
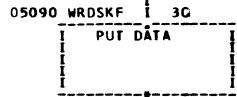
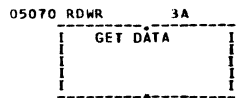
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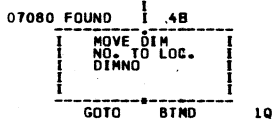
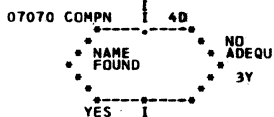
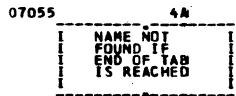
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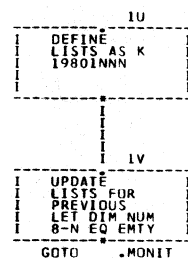
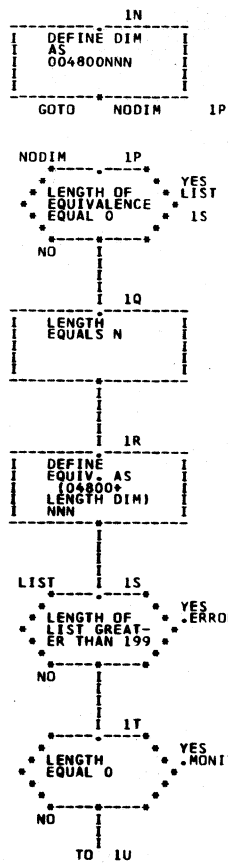
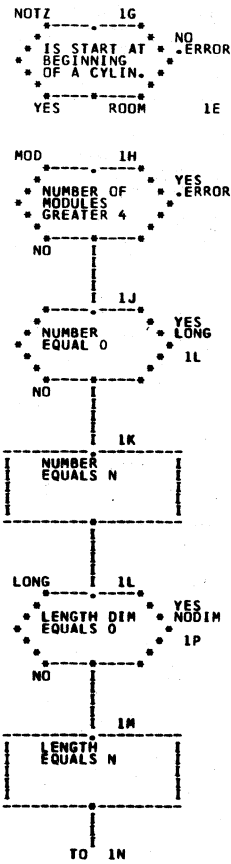
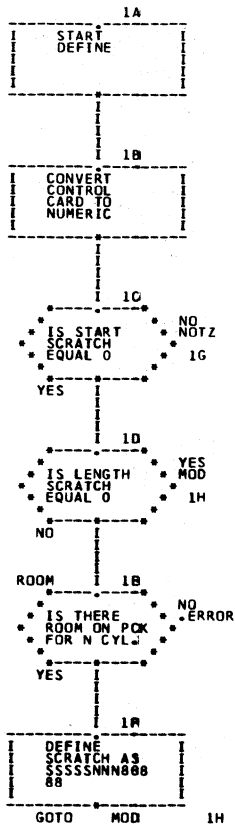
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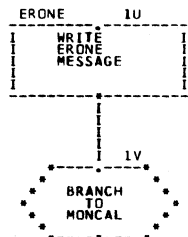
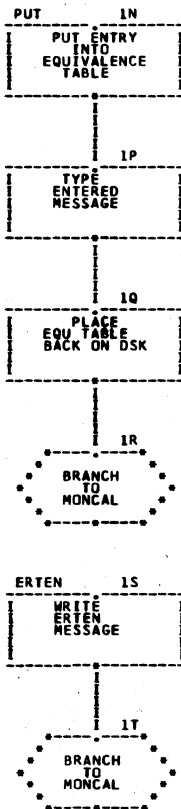
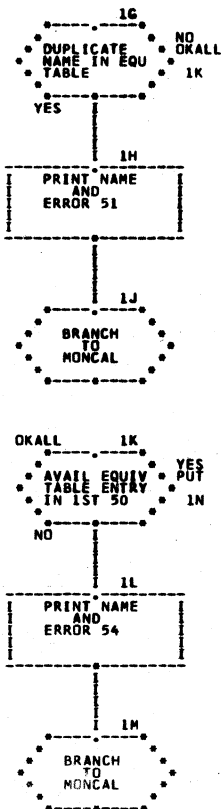
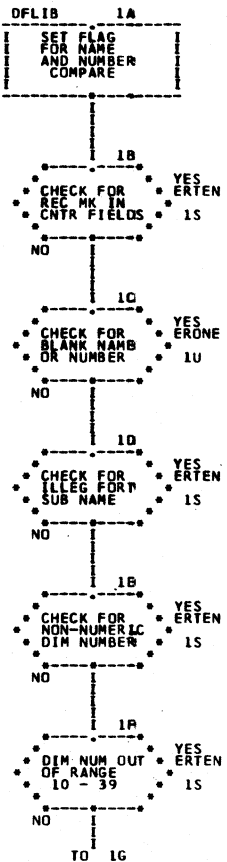


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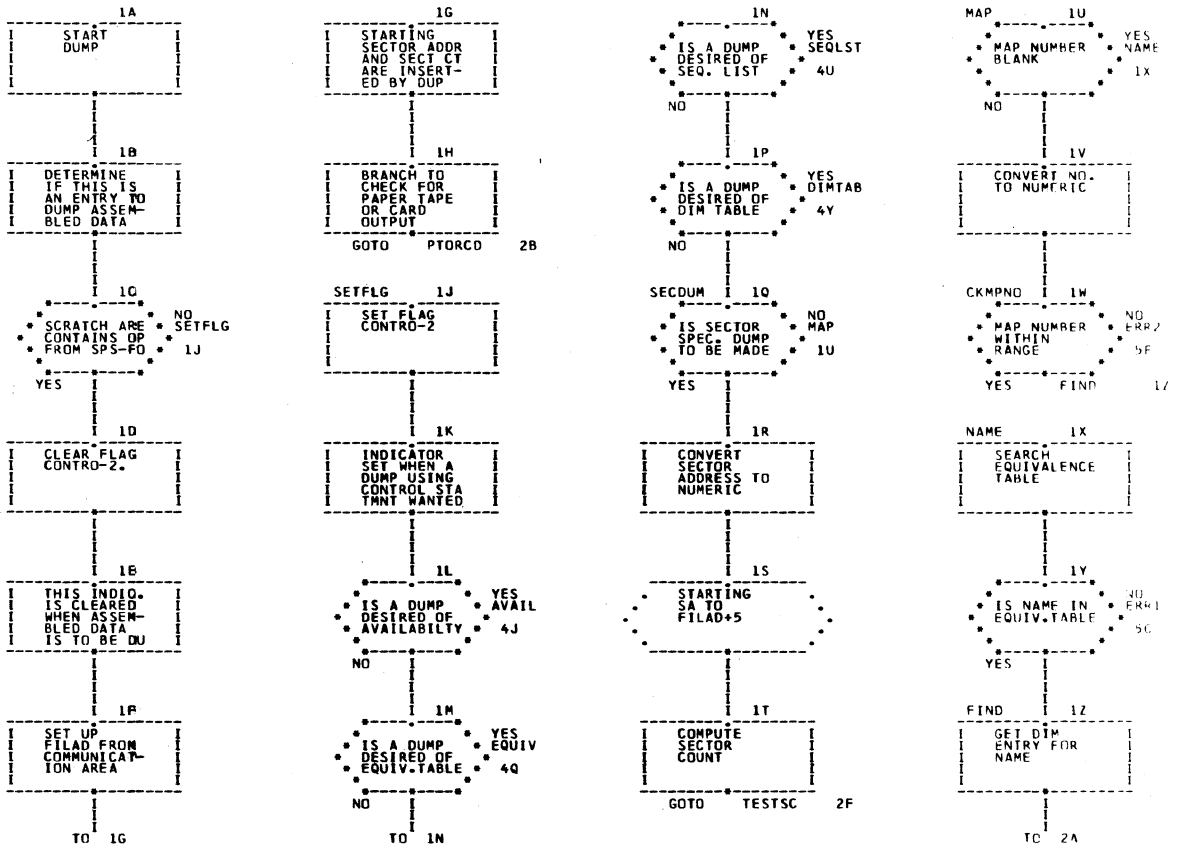


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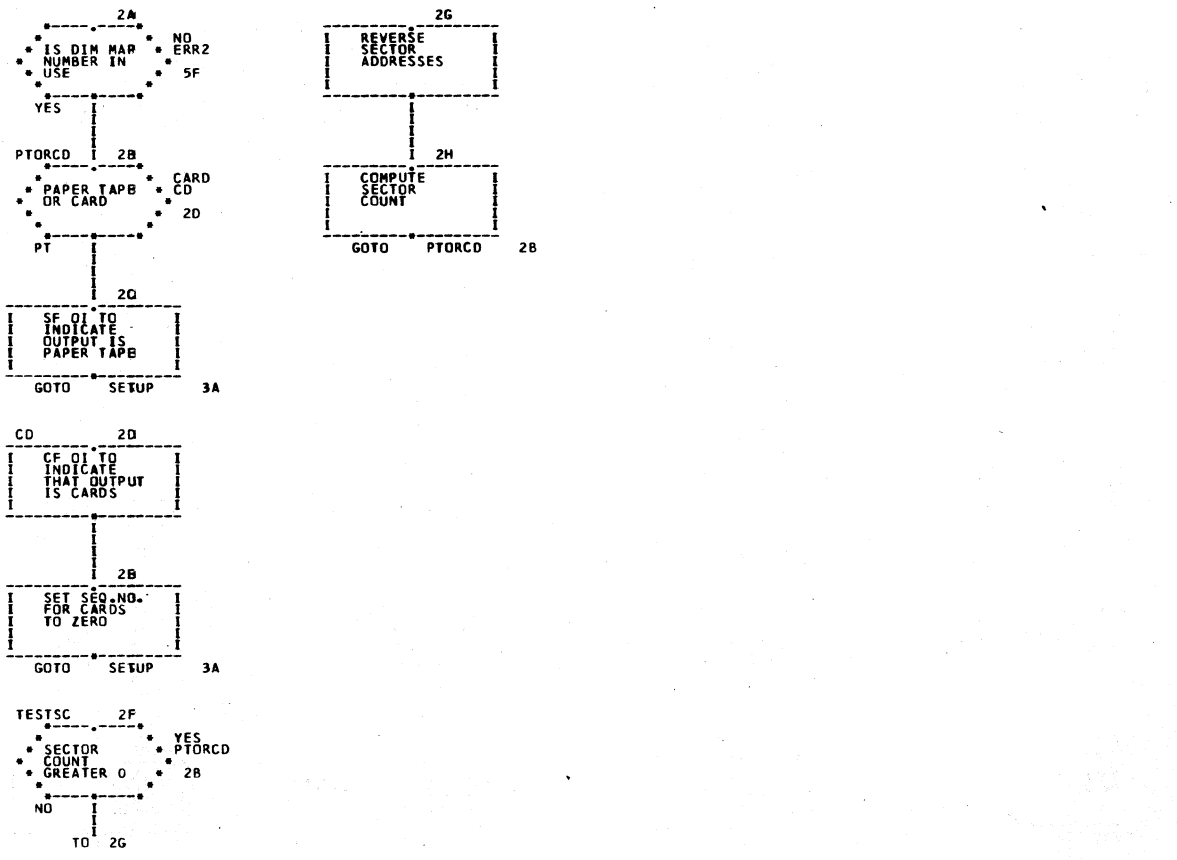
DUP ROUTINE DFLIB



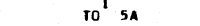
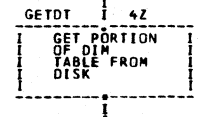
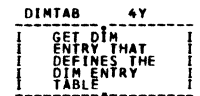
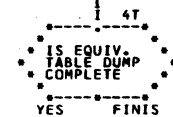
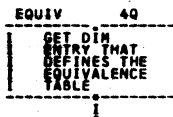
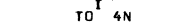
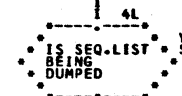
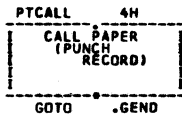
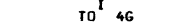
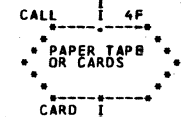
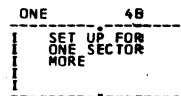
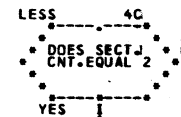
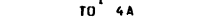
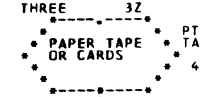
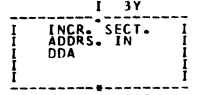
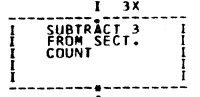
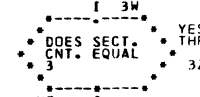
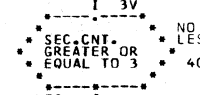
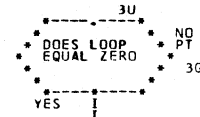
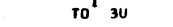
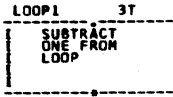
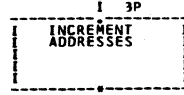
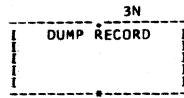
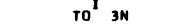
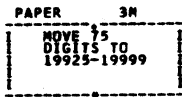
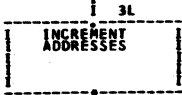
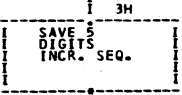
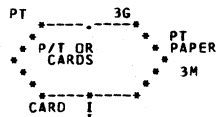
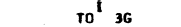
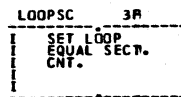
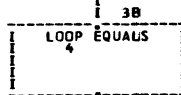
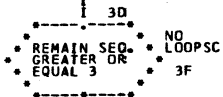
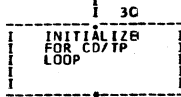
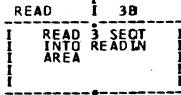
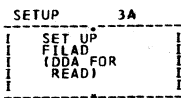
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1039

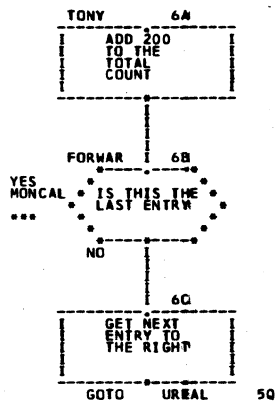
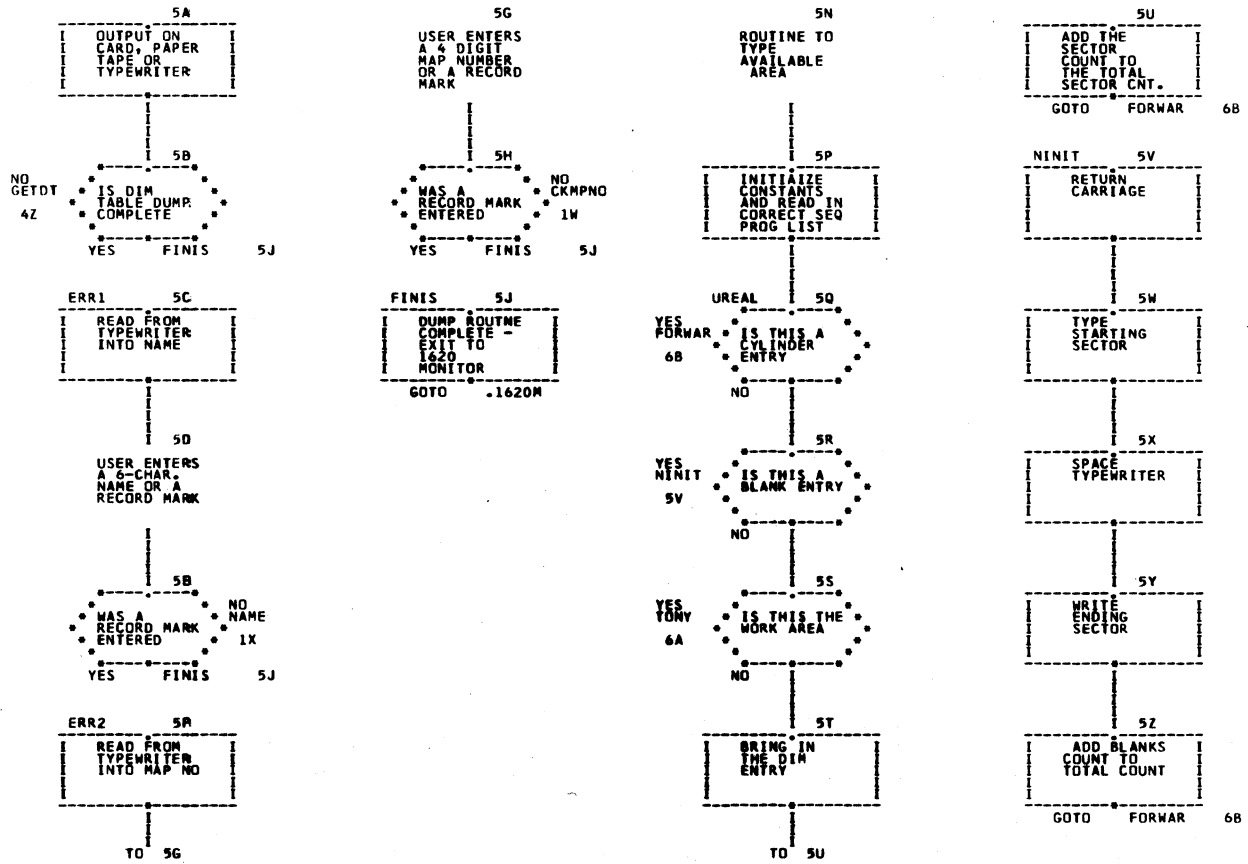


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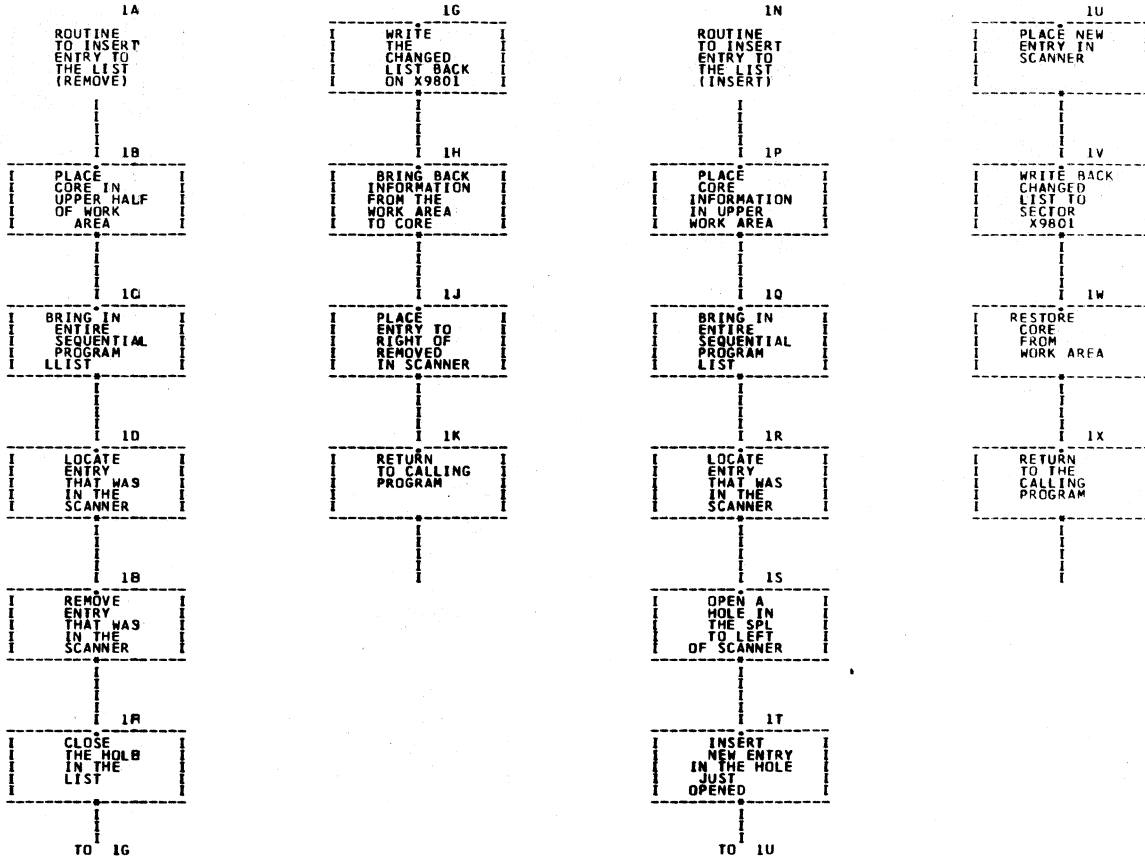
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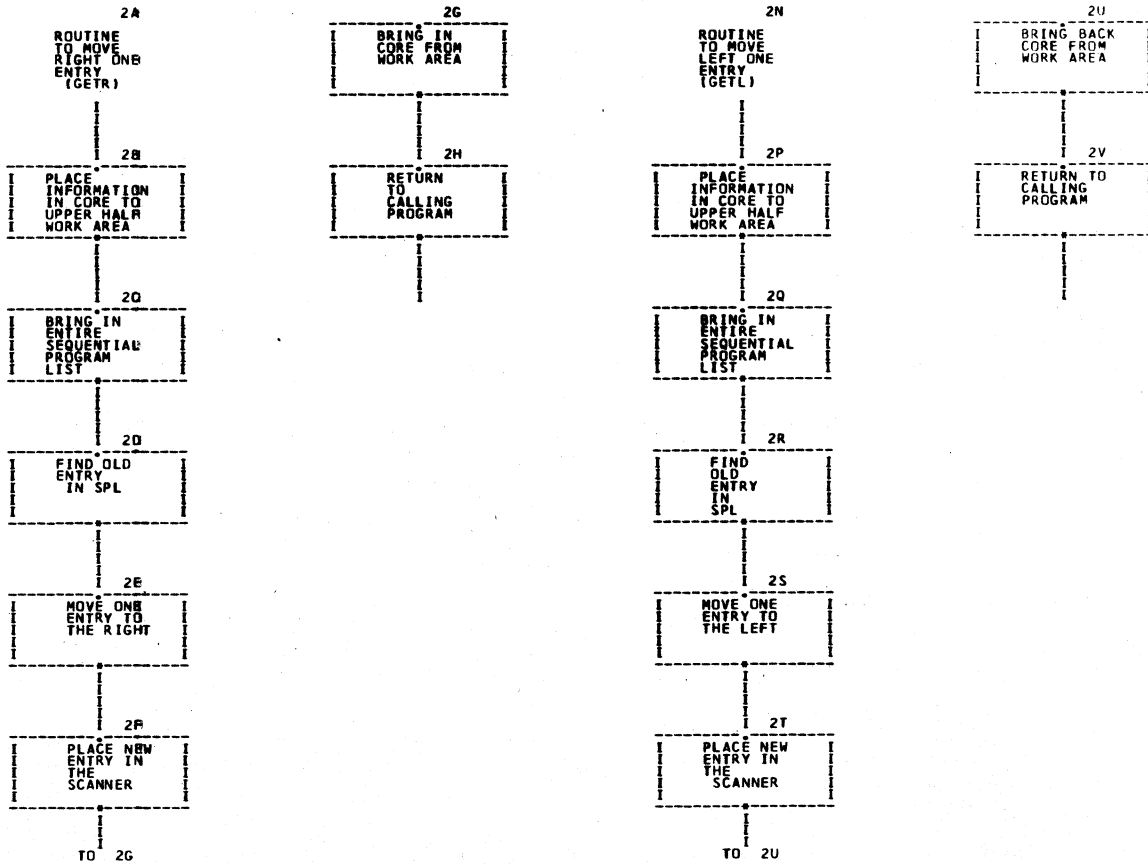


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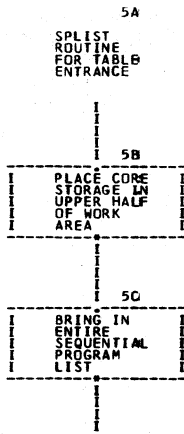
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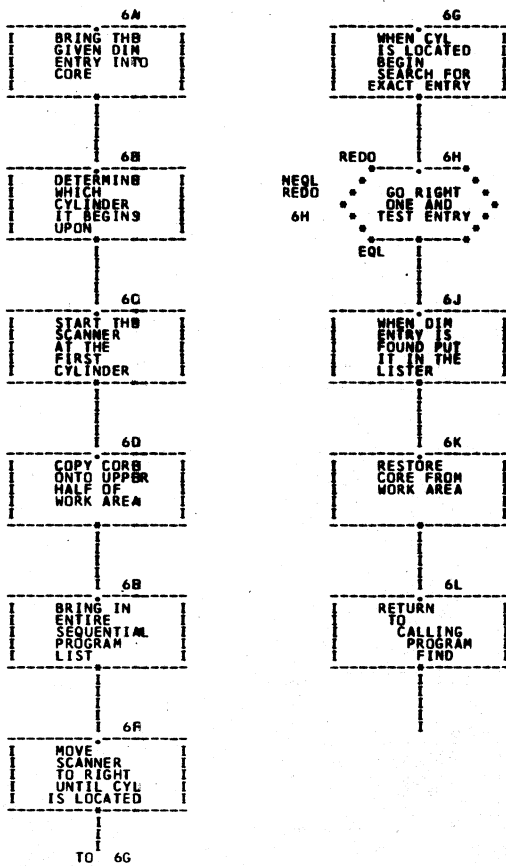
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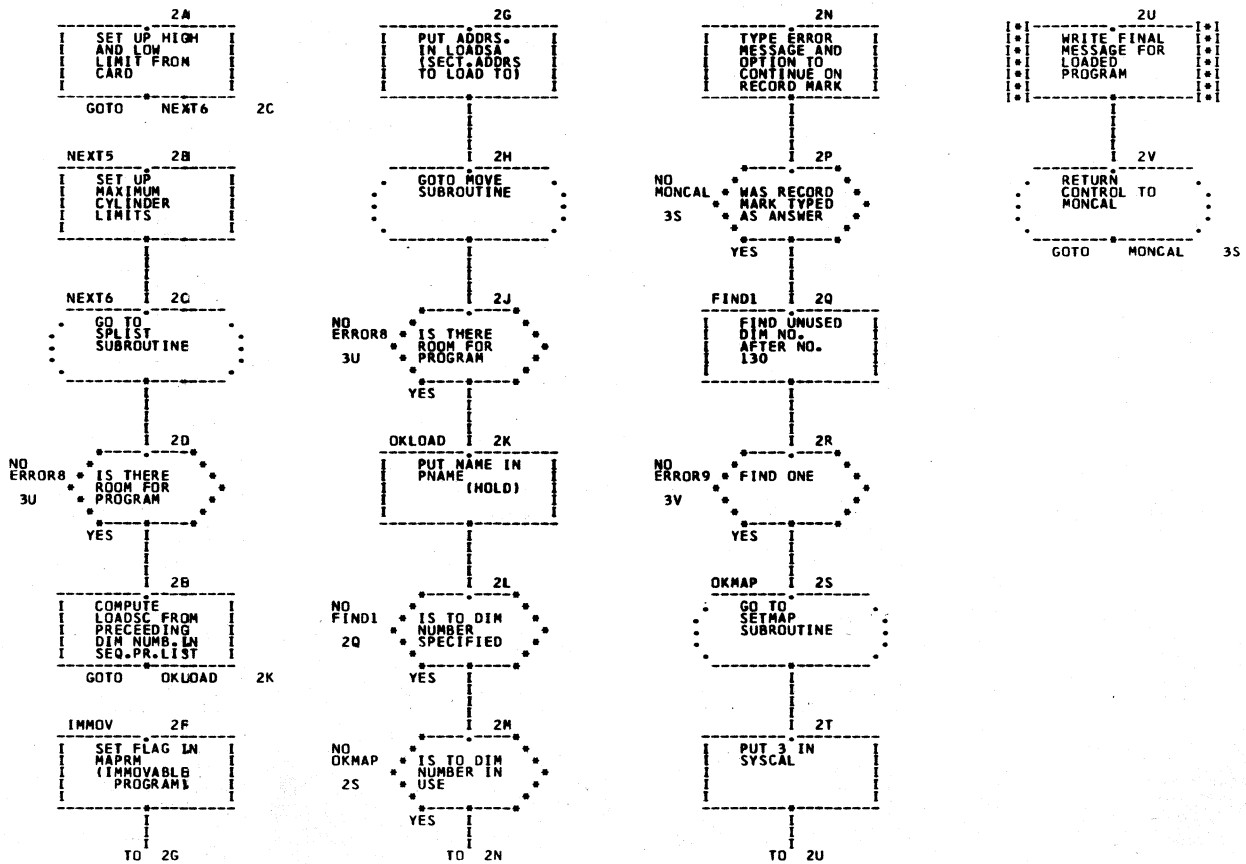
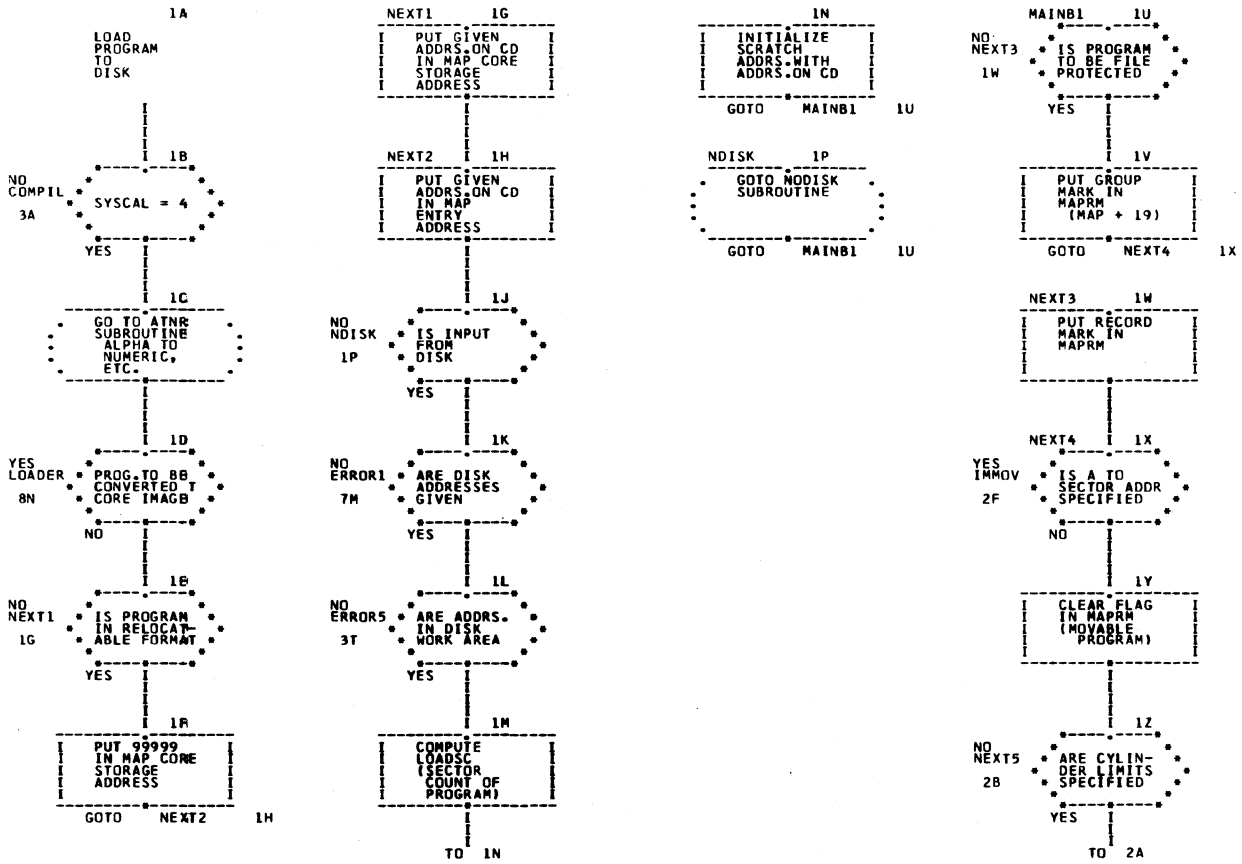
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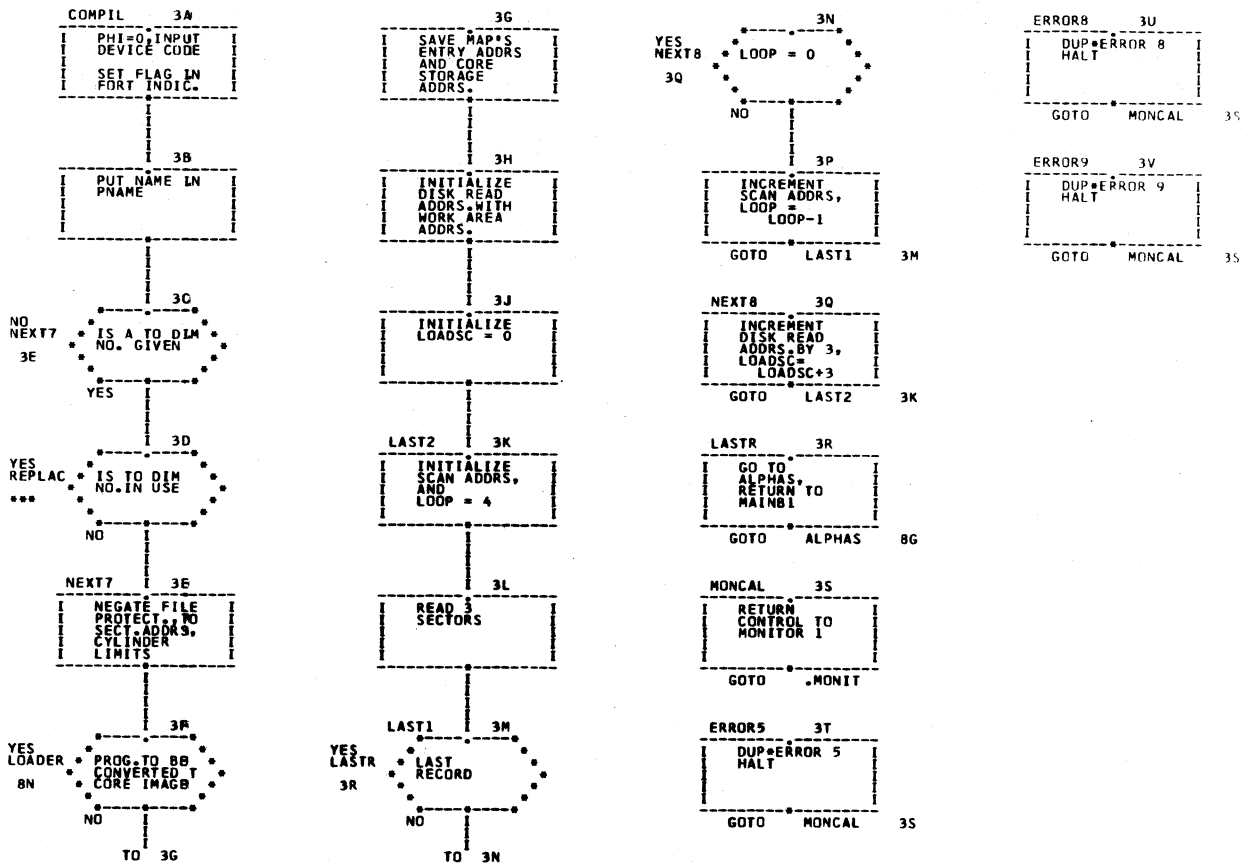


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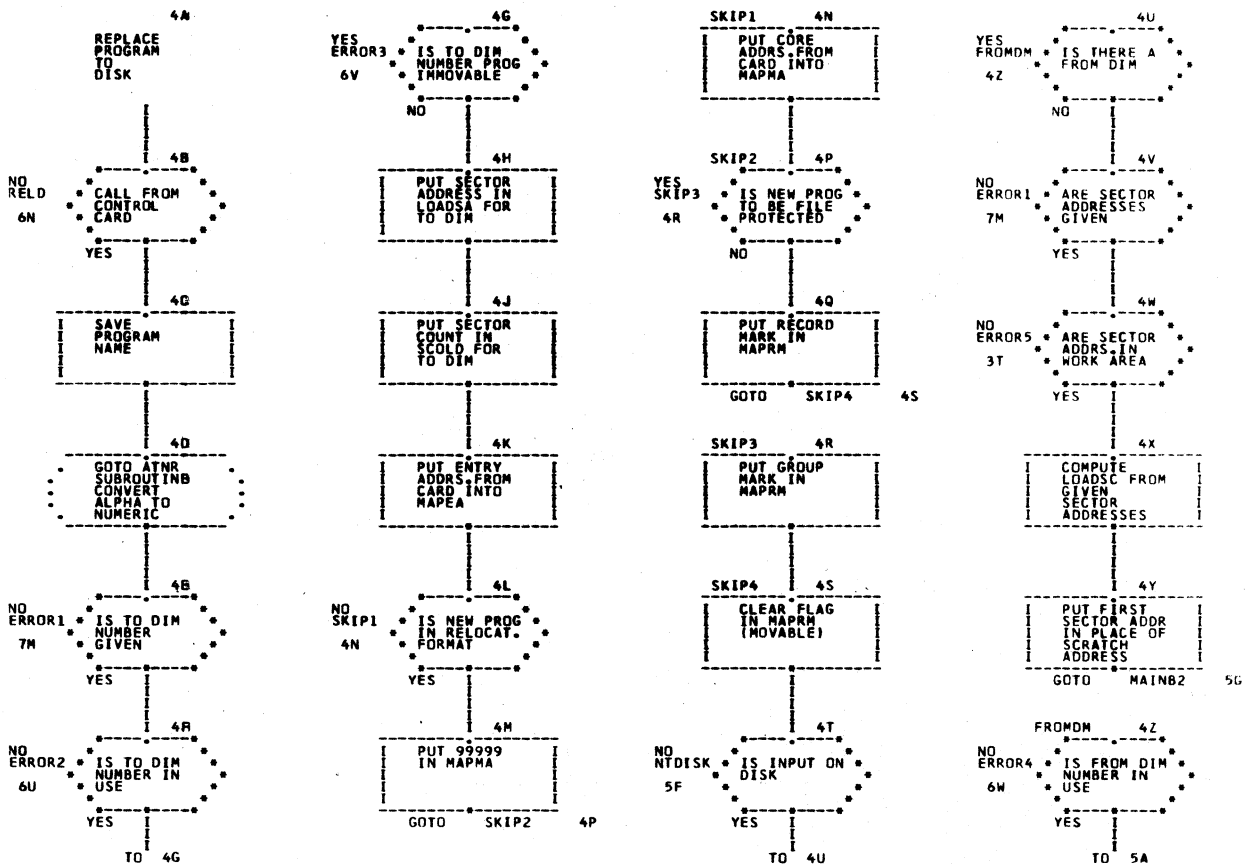


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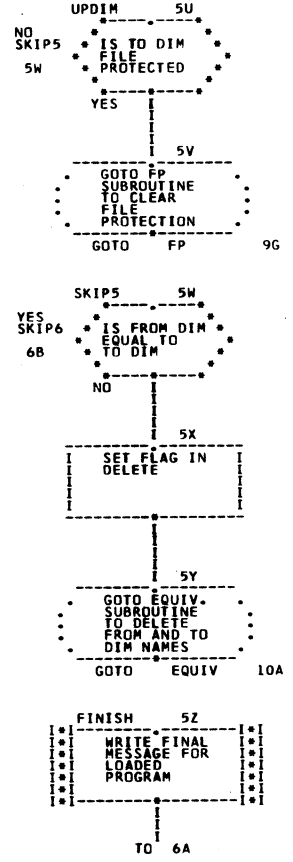
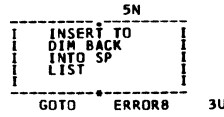
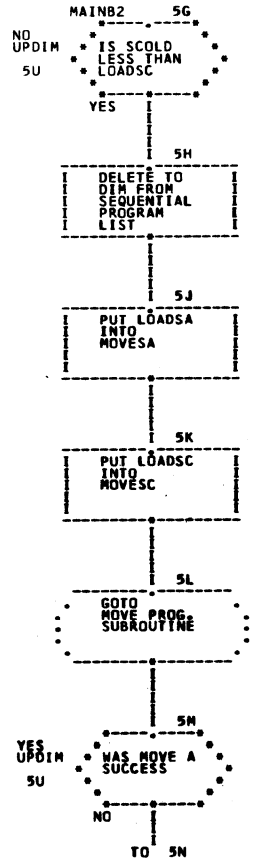
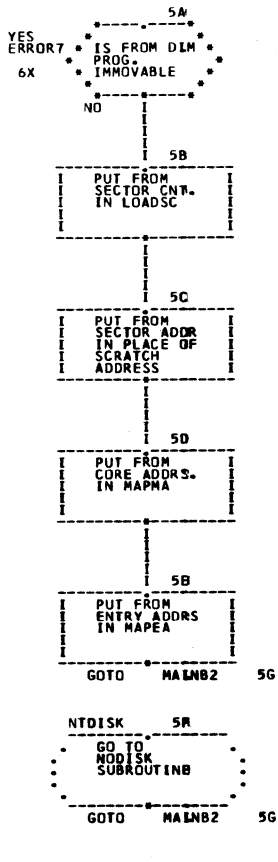
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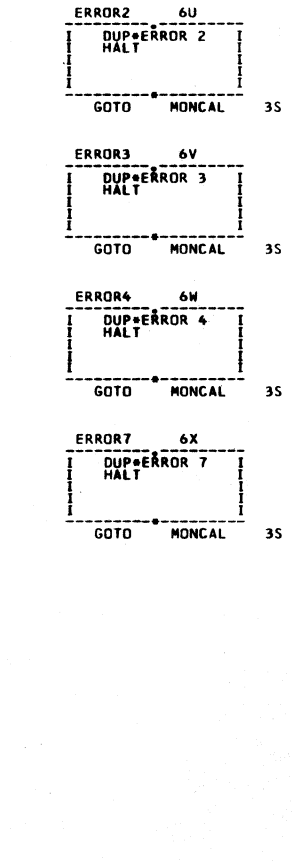
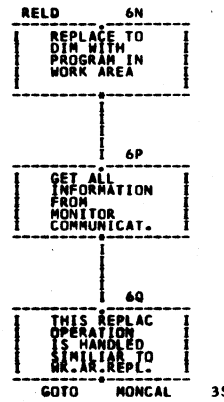
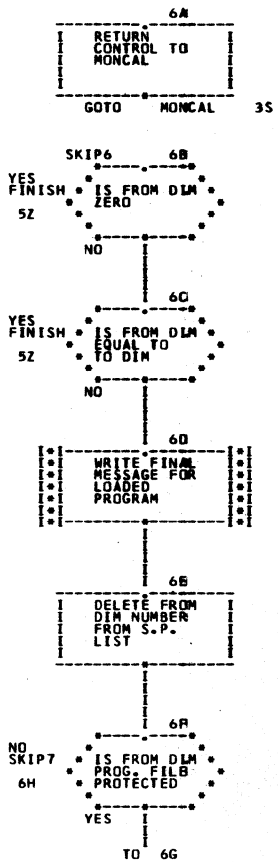
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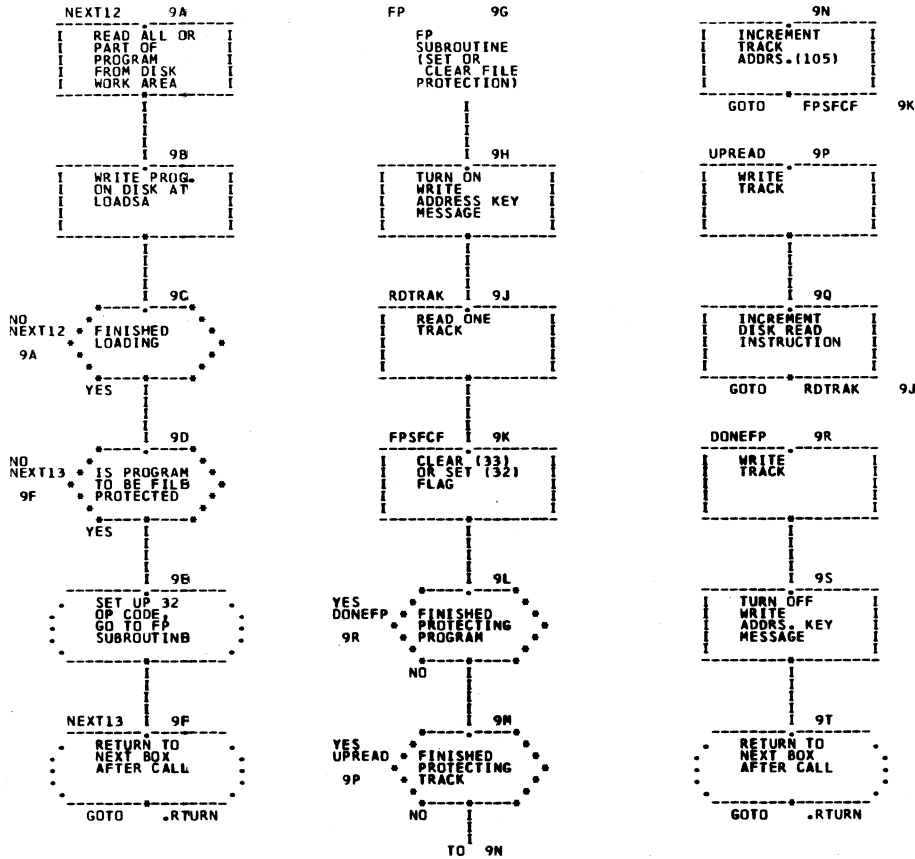
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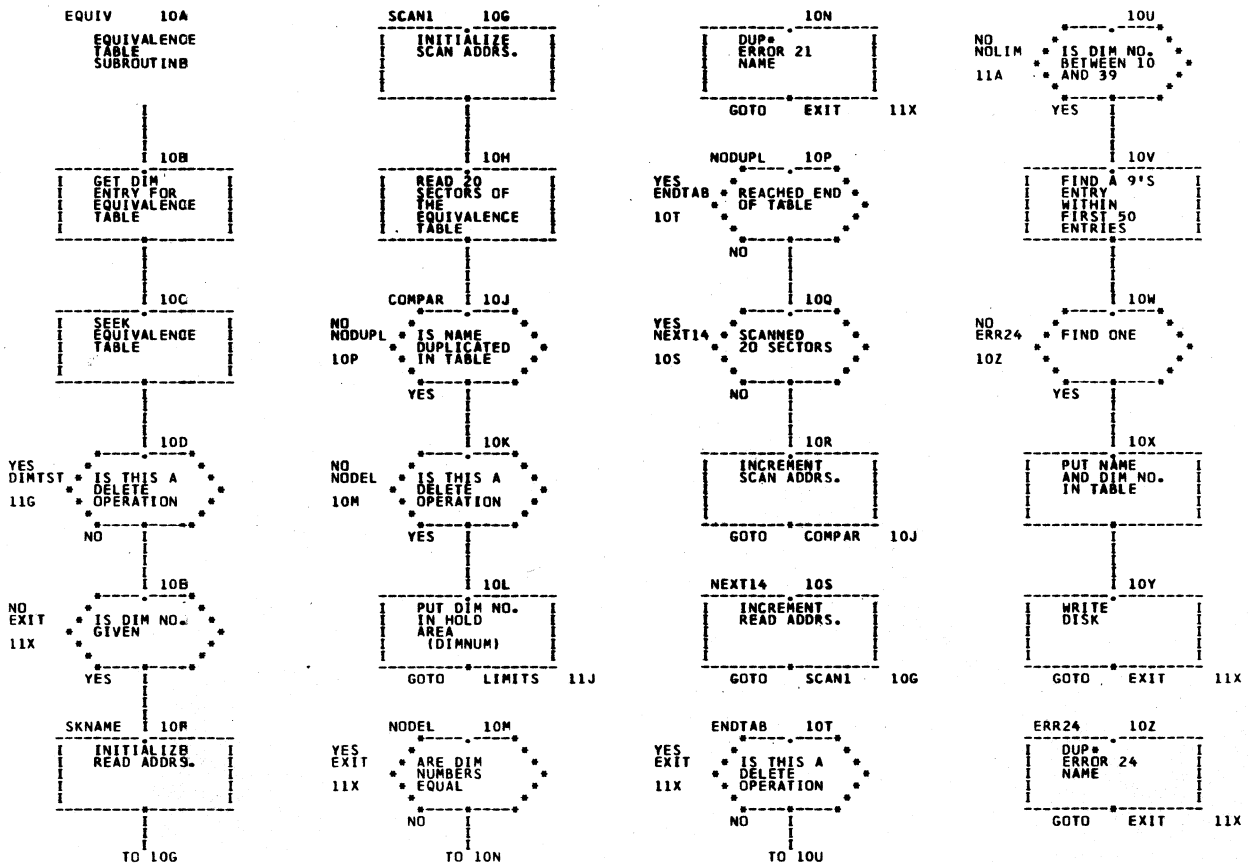
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1056



105g



106h

