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DRIVE PROGRAM DOCUMENTATION

Job Order 92-011

Task 1301

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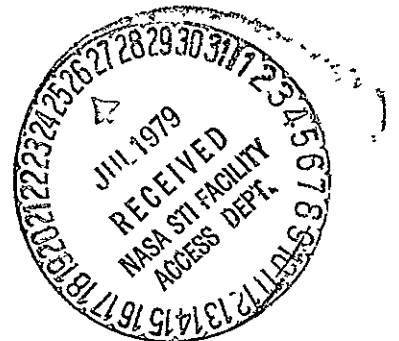
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16. Abstract This document provides the program description and user's guide for the Downlist Requirement Integrated Verification and Evaluation (DRIVE) program. The program is used to compare existing telemetry downlist files with updated downlist requirements.			
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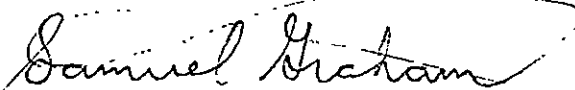
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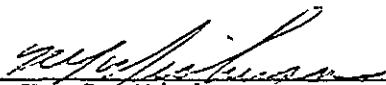


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## ACRONYMS

BCD	Binary Coded Decimal
EBCDIC	Expanded Binary Coded Decimal Interchange Code
MML	Master Measurement List
OPS	Operational Sequence
RTLS	Return-to-Launch Site

## 1.0 INTRODUCTION

The Downlist Requirement Integrated Verification and Evaluation (DRIVE) program is used to compare existing telemetry downlist files with updated navigation downlist requirements. The downlist files contain records of variables used in the Orbiter onboard computer that will be transmitted to the ground tracking stations. The program is used to verify that the required variables are available in the downlist files and then compare their characteristics against the required characteristics.

The comparisons verify that the variables are present in the proper Orbiter flight phases or operational sequences (OPS) of the Orbiter flights. The sequences verified are return-to-launch site (RTL), onorbit, entry, onorbit checkout, ascent backup and entry backup. In each of the sequences, the Master Measurement List (MML) number is compared to the navigation downlist requirement file to determine whether the variable is present in one or more sequences. The nomenclature and user code are compared and a comment from the navigation downlist file is printed for each compared variable.

All parts of the record are then compared. A search code is printed to reflect any combinations of the following: MATCH, NFXX, LETTER, RATE, or DESCRP. The MATCH code indicates that the data in both files agree. The NFXX code indicates that the MML number is not found in that OPS file. The LETTER code indicates

a letter discrepancy in the MML number. The RATE code indicates a rate discrepancy. The DESCRP code indicates a description discrepancy. The program is designed so that each discrepancy detected in a record is listed individually.

### 1.1. DOCUMENT USAGE

This document is composed of three sections and two appendixes. Section 1.0 presents an overview of the document and the program. Section 2.0 describes the program design and also contains the detailed program description. Section 3.0 is the Users Guide. Appendix A contains the output from the DRIVE program. Appendix B contains the complete DRIVE program and flow listing.

### 1.2 FUNCTIONAL DESCRIPTION

The navigation downlist file is a conversational data file operating in the demand mode from a Hazeltine 2000 terminal. The user can change any attribute on any record, insert new records, delete any record, and move records from the navigation downlist requirement files to nonrequirement files. The navigation downlist requirement files are loaded into mass storage by using the text edit mode of the demand terminal.

The OPS data tape files also operate in the demand mode from a Hazeltine 2000 terminal. The user can change an attribute on any record, insert new records, delete, and move records. Initially the OPS data tape files are loaded into mass storage by reading and writing from tapes.



## 2.0 SOFTWARE DESCRIPTION

### 2.1 DATA FILES

The data from the OPS tape is supplied on a 9-track, 800-bpi tape in the Expanded Binary Coded Decimal Interchange Code (EBCDIC) character set. The tape is converted from a nine-track to a seven-track Binary Coded Decimal (BCD) character set in order to use it in the EXEC 8 processor of the UNIVAC 1100 system. JSC Form 430 (fig. 2-1) is used to request tape conversion. The form is completed (in duplicate) and submitted to the JSC Work Control office located in Building 12. After the tapes are converted to a seven-track tape, a program is used to read, write, and copy the needed files into mass storage to be utilized by the DRIVE program.



The runstream and program listing illustrated in figures 2-2 and 2-3 are for program execution utilizing the OPS tapes as input.

```
@RUN,R/T 175SG,FM8/1301G,FM8-A26082,15
@ASG,A OFTDWL..
@ASG,T 10.
@AST,T 11.
@AST,T 12.
@ASG,T 13.
@ASG,TIE DUIE.,8C,X065251
@USE 1.,DUIE.
@FOR,S SDWNLT.TAPE1,TAPE1
@XQT
@COPY,I 10.,OFTDWL.SOPS21
@COPY,I 11.,OFTDWL.SOPS22
@COPY,I 12.,OFTDWL.SOPS23
@COPY,I 13.,OFTDWL.SOPS32
@FIN
```

<sup>1</sup>Output tape number assigned after nine-track to seven-track conversion.

Figure 2-2.- Runstream.

```

00100      1*      C
00100      2*      C
00100      3*      C
00101      4*
00103      5*      5
00104      6*
00106      7*      3
00107      8*
00110      9*
00111     10*      4
00112     11*
00113     12*
00115     13*
00116     14*
00121     15*
00122     16*
00125     17*
00126     18*
00127     19*      10
00131     20*
00132     21*      15
00134     22*
00135     23*
00140     24*
00141     25*
00147     26*
00156     27*
00165     28*
00174     29*
00203     30*
00204     31*      20
00206     32*
00207     33*      6
00210     34*
00211     35*
00213     36*      21
00214     37*
00215     38*
00217     39*
00220     40*      8
00221     41*
00222     42*

      ** TO READ THE SECOND LOADING TAPE FROM IBM TO MY SECURE FILE **
      DIMENSION C(284),KC(1704)
      FORMAT(1X,131R1/1X,39R1)
      WRITE(6,3)
      FORMAT(1H1)
      KJUMP = 0
      CALL NTRAN(1,8,4,22)
      CONTINUE
      CALL NTRAN(1,2,284,C,L,22)
      IF( L .EQ. -2 )GO TO 6
      KM = 1
      DO 15 M = 1,284
      CM = C(M)
      DO 10 K = 0,5
      KL = K * 6
      KC (KM + K) = FLD(KL,6,CM)
      CONTINUE
      KM = KM + 6
      CONTINUE
      @ WRITING OUT THE BLOCKS
      M1 = 1
      DO 20 M = 1,10
      M2 = M1 + 169
      WRITE(6,5)(KC(KM),KM = M1,M2)
      IF(KJUMP .EQ. 0)WRITE(10,5)(KC(KM), KM = M1,M2) @ 21
      IF(KJUMP .EQ. 1)WRITE(11,5)(KC(KM), KM = M1,M2) @ 22
      IF(KJUMP .EQ. 2)WRITE(12,5)(KC(KM), KM = M1,M2) @ 23
      IF(KJUMP .EQ. 4)WRITE(13,5)(KC(KM), KM = M1,M2) @ 32
      M1 = M1 + 170
      CONTINUE
      GO TO 4
      CONTINUE
      @ MOVING TO THE SPECIFY FILES
      CALL NTRAN(1,8,2,22)
      WRITE(6,21)
      FORMAT(1H1)
      KJUMP = KJUMP + 1
      IF( KJUMP .EQ. 5 )GO TO 8
      GO TO 4
      CONTINUE
      STOP
      END

```

END OF COMPILATION: NO DIAGNOSTICS.

Figure 2-3.- Program listing..

2-4

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The navigation downlist requirement data is stored in the data file and element name as follows:

FM8-A26082\*SDWNLT.CARDIMAGES

This file and element name contains all the operational phases of telemetry data for flight one requirements.

The OPS data is stored in the data file and element name as follows:

<u>File and element</u>	<u>Contents</u>
FM8-A26082*OFTDWL.SOPS21	The predefined RTLS telemetry data.
FM8-A26082*OFTDWL.SOPS22	The predefined onorbit telemetry data.
FM8-A26082*OFTDWL.SOPS23	The predefined entry telemetry data.
FM8-A26082*OFTDWL.SOPS32	The predefined onorbit checkout telemetry data.

## 2.2 SORTING PROCESS

The sorting process for the data files must be performed before the user can utilize the DRIVE program. The files to be sorted are loaded into a system data file. The system data file is separate and cannot be broken into elements. The output file is also a system data file. Both files must be temporarily cataloged before the sort is executed. To catalog a temporary file use the following assign card option:

@ASG,T (a filename).

To load the OPS data into a data file use the following system data option:

@DATA,I (same filename as above).

No element name can be used in a system data filename. The data files from mass storage are inserted after the DATA record and an @END record follows the data file. An @ADD execution is used to copy a subset element into a DATA file for sorting. A complete sorting process is as follows:

```
@RUN, (options and runid).
@ASG,A (your secure filename).
@ASG,T (temporary input filename).
@ASG,T (temporary output filename).
@DATA,I (input filename).
@ADD,D (filename and element to be sorted).
@END
@E*B.SORTSDF. (input      . (output      .,600,80,KEY/26/2.A
              filename)  filename)
@DATA,L (output filename).
@FIN
```

The system sort statement is as follows:

```
@E*B.SORTSDF.IN.,OUT.,NREC,RSIZE,KEY/SCHAR/NCHAR,ORDER,...
```

Where:

IN Is the name of the input file.

OUT Is the name of the output file.

NREC Integer giving the approximate number of records in the input file.

NSIZE Integer giving size of input records in characters.

KEY Is the characters 'KEY' indicating a key field descriptor.

SCHAR Integer giving the leftmost character position of this key field within the record (characters numbered left to right starting at 1).

NCHAR Integer giving number of characters in key field.

ORDER Is 'A' for ascending sort or character 'D' for descending sort.

The key field descriptor can be specified up to 15 times, major to minor.

The processor call record can be continued like any other EXEC-8 control record by placing a ';' after a ',' on the first record and starting the next key descriptor on the following record.

The following example is a complete sort control statement.

```
@E*B.SORTSDF IN.,OUT.,1000,132,KEY/5/10.A,KEY/30/32.D,;KEY/75/8.A
```

### 2.3 PROGRAM DESCRIPTION

The DRIVE program is designed with the output measurement numbers in ascending order. Input is sorted with a system utility program called @E\*B,SORTSDF. The DRIVE program can only be utilized if the input measurement numbers are in ascending order.

The DRIVE program is a structured program utilizing READ, REREAD, WRITE, and ENDFILE. READ and REREAD are used to control program inputs while WRITE and ENDFILE are used for output control. The program is designed with a single-entry point, a single-exit point, and the code always flows downward to the exit point.

The output format is designed so that the heading information gives the operational phase being utilized, MML number, nomenclature, usage code, comments, and the phase of operation for which the telemetry data is to be utilized.



### 3.0 USERS GUIDE

#### 3.1 ASSUMPTIONS

Two assumptions are made for this runstream description.

- a. The use is familiar with the sign-on and operating procedures of the Hazeltine 2000 demand terminal.
- b. The current version of the absolute element of the DRIVE program is located in a secure disk file called UPDDLTL.

#### 3.2 RUNSTREAM EXPLANATION

Table 3-I illustrates a program execution utilizing the DATA files as input. Each control statement is discussed in detail. The '@' symbol is used as the first character in each control statement and is equivalent to a 7 over 8 multipunch on a key-punch machine. This is the character used by the UNIVAC 1110 series computers to signify that the statement is a control statement and not a program or data statement. A start run file can be used to start the DRIVE program from a terminal. The RUN control statement is as follows:

```
@START FM8-A26082*BAROAT.COMPARE
```

##### 3.2.1 Run Card

The first card in any runstream is the RUN card. The first parameter 'R/T' indicates a daytime run with program termination after maximum allocated time. The third parameter '175SG,' after RUN indicates the run identification. The next parameter 'FM8/1301G,' indicates the password. 'FM8-A26082,' is the programmer

TABLE 3-I.- RUNSTREAM

```

1. @RUN,R/T 175SG,FM8/1301G,FM8-A26082,5
2. @ASG,A UPDDL.T.
3. @ASG,A SDWNLT.
4. @ASG,A OFTDWL.
5. @ASG,T TAPEA.
6. @ASG,T TAPEB.
7. @ASG,T TAPEC.
8. @ASG,T TAPED.
9. @ASG,T TAPEE.
10. @ASG,T 25.
11. @USE 8., TAPEA.
12. @USE 9., TAPEB.
13. @USE 11., TAPEC.
14. @USE 13., TAPED.
15. @USE 15., TAPEE.
16. @DATA,I TAPEA.
17. @ADD,D SDWNLT.CARDIMAGES
18. @END
19. @DATA,I TAPEB.
20. @ADD,D OFTDWL.SOPS21
21. @END
22. @DATA,I TAPEC.
23. @ADD,D OFTDWL.SOPS22
24. @END
25. @DATA,I TAPED.
26. @ADD,D OFTDWL.SOPS23
27. @END
28. @DATA,I TAPEE.
29. @ADD,D OFTDWL.SOPS32
30. @END
31. @FOR,S UPDDL.T.COMPONE,COMPONE
32. @MPA,IS .SYM,.ABS
33.     IN COMPONE
34.     IN NBFO8$
35. @XQT .ABS
36. @FIN

```

identification. '5' indicates the maximum time allocated for program execution. The user fills in the run identification, password, and programmer information with the appropriate values for the run.

### 3.2.2 File Assignments

Cards 2 through 8 assign the files to the run. The 'A' on cards 2 through 4 indicates that UPDDLTL, SDWNLT, and OFTDWL have been previously cataloged. The 'T' on cards 5 through 10 indicates that TAPEA, TAPEB, TAPEC, TAPED, TAPEE, and 25 are only temporary files.

Cards 11 through 15 assign a shortened form of the file names for simplification of later control statements.

### 3.2.3 Program Execution

After initiating the run and assigning the secure disk files, cards 16 through 30 add data to the DATA files.

Card 31 compiles the program. The MAP and EXECUTE cards (32 through 35) execute the program. After normal program exit, the run is terminated with FIN (card 36).

### 3.3 OUTPUT DATA FORMAT

The heading information listed in the output data format gives the operational phase being utilized and lists the MML number, nomenclature, usage code, comments, and the frame and rate of the MML number. The heading output is illustrated in figure 3-1.

<u>Output column</u>	<u>Contents</u>
MML NO.	MML numbers for each downlist variable
NOMENCLATURE	Complete nomenclature for each variable
U/C	Usage codes corresponding to each variable
COMMENTS	Additional description of each variable
FORMAT K 21 R	If the MML number matches the launch and RTLS MML number, the frame and rate are printed; otherwise a zero.  K - represents the frame O - represents 64 frame l - represents both 64 and 128 frame  R - represents the output rate
FORMAT K 22 R	If the MML number matches the On-Orbit MML number, the frame and rate are printed; otherwise a zero.
FORMAT K 23 R	If the MML number matches the Entry MML number, the frame and rate are printed; otherwise a zero.

Output column

Contents

FORMAT  
K 32 R

If the MML number matches the onorbit checkout MML number, the frame and rate are printed; otherwise a zero.

FORMAT  
K 12 R

If the MML number matches the Ascent Backup MML number, the frame and rate are printed; otherwise a zero.

FORMAT  
K 13 R

If the MML number matches the Entry Backup MML number, the frame and rate are printed; otherwise a zero.

S/CODE

If the MML numbers match a code is printed.

MATCH - Everything agrees between the files.

If there is a discrepancy with the comparison, a combination of codes could be printed.

LETTER - An error is found in the letter part of the MML number.

RATE - A rate number is in error.

DESCRP - The description of the variable is in error.

NF XX - The MML number is not found in OPS file number XX.

DRIVE --- COMPARING ROCKWELL LOADING TAPE

DATE. 040479 ... PAGE ... 16

OFT DOWNLIST REQUIREMENTS

PN VP707060023501R DATE 12-22-78

DOWNLIST FORMAT 21 22 23 32 12 13

DBFN H2X455 REPORT NO MML-HL-800 PAGE ... 1

LAUNCH-RTLS\*ON-ORBIT\*ENTRY\*FLIGHT/CONTROL\*ASCENT BACKUP\*ENTRY BACKUP

MML NO.	NOMENCLATURE.	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
---------	---------------	-----	----------	------------------	------------------	------------------	------------------	------------------	------------------	--------

Figure 3-1.- Output heading.

3-6

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The write and format statement to list the output is as follows:

```
WRITE (6,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
          KBSF2,RATEF2,KBSF3,RATEF3,SC1

617 FORMAT (1X,A9,1X,5A6,A4,1X,A1,1X,3A6,A4,2X,
          4(I1,1X,F4.1,3X),18X,A6)
```

Where:

- WRITE represents the control statement
- 6 represents the unit number (line printer)
- 617 represents the format number to use
- FILE represents the variable name the MML number is stored in.
- FNOMN represents the variable name the nomenclature is stored in.
- CODE represents the variable name the usage code is stored in.
- HALN represents the variable name the comment is stored in.
- KBSF }  
KBSF1 } represents the variable names the rate frame is  
KBSF2 } stored in.  
KBSF3 }
- RATEF }  
RATE1 } represents the variable names the rate is stored  
RATE2 } in.  
RATE3 }
- SC1 represents the variable name the search code is stored in.

The output from the DRIVE program is illustrated in figure 3-2.

HML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23-R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE		
V71X5021B	ST TRACKER FAIL	WD1 B0		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5023B	ST TRANSMISSION ERROR	WD1 B2		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5024B	ST SHUTTER CLOSED	WD1 B3	SHUT-CLOS(1)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5025B	ST SELF-TEST	WD1 B4	ST-ST(1)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5026B	ST STAR PRESENT	WD1 B4	STAR-PRES(1)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5027B	ST HV RANGE MSB	WD1 B6		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5028B	ST HV RANGE LSB	WD1 B7		0	0	0	1.0	0	1.0	0	0	MATCH
V71M5040P	ST HORIZONTAL DATA + STATUS	WD2	HOR-ANG(1)	0	0	0	5.0	0	1.0	0	0	MATCH
V71X5053B	ST BIT COUNT ERROR	WD2B12		0	0	0	5.0	0	1.0	0	0	MATCH
V71X5054B	ST MANCHESTER NON-VALID	WD2B13		0	0	0	5.0	0	1.0	0	0	MATCH
V71M5060P	ST VERTICAL DATA + STATUS	WD3	VERT-ANG(1)	0	0	0	5.0	0	1.0	0	0	MATCH
V71X5075B	ST POWER SUPPLY FAIL	WD3 B14		0	0	0	5.0	0	1.0	0	0	MATCH
V71X5076B	ST BRT OBJECT ALERT EV	WD3 B15		0	0	0	5.0	0	1.0	0	0	MATCH
V71M5320P	ST COMMAND WORD			0	0	0	1.0	0	1.0	0	0	MATCH
V71X5521B	ST TRACKER FAIL	WD1 B0		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5523B	ST TRANSMISSION ERROR	WD1 B2		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5524B	ST SHUTTER CLOSED	WD1 B3	SHUT-CLOS(2)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5525B	ST SELF TEST ENGAGED	WD1 B4	ST-ST(2)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5526B	ST STAR PRESENT	WD1 B4	STAR-PRES(2)	0	0	0	1.0	0	1.0	0	0	MATCH
V71X5527B	ST HV RANGE MSB	WD1 B6		0	0	0	1.0	0	1.0	0	0	MATCH
V71X5528B	ST HV RANGE LSB	WD1 B7		0	0	0	1.0	0	1.0	0	0	MATCH
V71M5540P	ST HORIZONTAL DATA + STATUS	WD2	HOR-ANG(2)	0	0	0	5.0	0	1.0	0	0	MATCH
V71X5553B	ST BIT COUNT ERROR	WD2B12		0	0	0	5.0	0	1.0	0	0	MATCH
V71X5554B	ST MANCHESTER NON VALID	WD2B13		0	0	0	5.0	0	1.0	0	0	MATCH
V71M5560P	ST VERTICAL DATA + STATUS	WD3	VERT-ANG(2)	0	0	0	5.0	0	1.0	0	0	MATCH
V71X5575B	ST POWER SUPPLY FAIL	WD3 B14		0	0	0	5.0	0	1.0	0	0	MATCH
V71X5576B	ST BRT OBJECT ALERT EV	WD3 B15		0	0	0	5.0	0	1.0	0	0	MATCH
V71M5820P	ST COMMAND WORD			0	0	0	1.0	0	1.0	0	0	MATCH
V72H0910C	LH ADI ROLL SINE POSITION		ROLLSINE(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72H0911C	LH ADI ROLL COSINE POSITION		ROLLCOS(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72H0912C	LH ADI PITCH SINE POSITION		PTCHSINE(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72H0913C	LH ADI PITCH COSINE POSITION		PTCHCOS(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72H0914C	LH ADI YAW SINE POSITION		YAWSINE(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72H0915C	LH ADI YAW COSINE POSITION		YAWCOS(1)	1	1	1	1.0	1	1.0	1	1	MATCH
V72R0916C	LH ADI ROLL RATE			0	0	0	1.0	0	1.0	0	0	MATCH
V72R0917C	LH ADI PITCH RATE			0	0	0	1.0	0	1.0	0	0	MATCH
V72R0918C	LH ADI YAW RATE			0	0	0	1.0	0	1.0	0	0	MATCH
V72H1010C	RH ADI ROLL SINE POSITION		ROLLSINE(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1011C	RH ADI ROLL COSINE POSITION		ROLLCOS(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1012C	RH ADI PITCH SINE POSITION		PTCHSINE(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1013C	RH ADI PITCH COSINE POSITION		PTCHCOS(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1014C	RH ADI YAW SINE POSITION		YAWSINE(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1015C	RH ADI YAW COSINE POSITION		YAWCOS(2)	0	1	0	1.0	0	1.0	0	1	MATCH
V72H1110C	AFT ADI ROLL SINE POSITION		ROLLSINE(3)	0	0	1	1.0	0	1.0	0	1	MATCH
V72H1111C	AFT ADI PITCH SINE POSITION		PTCHSINE(3)	0	0	1	1.0	0	1.0	0	1	MATCH
V72H1112C	AFT ADI YAW SINE POSITION		YAWSINE(3)	0	0	1	1.0	0	1.0	0	1	MATCH
V72H1113C	AFT ADI ROLL COSINE POSITION		PTCHCOS(3)	0	0	1	1.0	0	1.0	0	1	MATCH
V72H1114C	AFT ADI PITCH COSINE POSITION		YAWSINE(3)	0	0	1	1.0	0	1.0	0	1	MATCH

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Figure 3-2.- Output from the DRIVE program.





APPENDIX A  
DRIVE OUTPUT

OFF DOWNLIST REQUIREMENTS

DOWNLIST FORMAT 21 22 23 32 12 13

LAUNCH-RTLS\*ON-ORBIT\*ENTRY\*FLIGHT/CONTROL\*ASCENT BACKUP\*ENTRY BACKUP

HML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V71X5021B	ST TRACKER FAIL	WD1 B0		0	0	0	0	0	0	MATCH
V71X5023B	ST TRANSMISSION ERROR	WD1 B2		0	0	0	0	0	0	MATCH
V71X5024B	ST SHUTTER CLOSED	WD1 B3	SHUT-CLOS(1)	0	0	0	0	0	0	MATCH
V71X5025B	ST SELF-TEST	WD1 B4	ST-ST(1)	0	0	0	0	0	0	MATCH
V71X5026B	ST STAR PRESENT	WD1 B4	STAR -PRES(1)	0	0	0	0	0	0	MATCH
V71X5027B	ST HV RANGE MSB	WD1 B6		0	0	0	0	0	0	MATCH
V71X5028B	ST HV RANGE LSB	WD1 B7		0	0	0	0	0	0	MATCH
V71M504CP	ST HORT DATA + STATUS	WD2	HOR-ANG(1)	0	0	0	0	0	0	MATCH
V71X5053B	ST BIT COUNT ERROR	WD2B12		0	0	0	0	0	0	MATCH
V71X5054B	ST MANCHESTER NON-VALID	WD2B13		0	0	0	0	0	0	MATCH
V71M506CP	ST VERTICAL DATA + STATUS	WD3	VERT-ANG(1)	0	0	0	0	0	0	MATCH
V71X5075B	ST POWER SUPPLY FAIL	WD3 B14		0	0	0	0	0	0	MATCH
V71X5076B	ST BRT OBJECT ALERT EV	WD3 B15		0	0	0	0	0	0	MATCH
V71M512CP	ST COMMAND WORD			0	0	0	0	0	0	MATCH
V71X5521B	ST TRACKER FAIL	WD1 B0		0	0	0	0	0	0	MATCH
V71X5522B	ST TRANSMISSION ERROR	WD1 B2		0	0	0	0	0	0	MATCH
V71X5524B	ST SHUTTER CLOSED	WD1 B3	SHUT-CLOS(2)	0	0	0	0	0	0	MATCH
V71X5525B	ST SELF TEST ENGAGED	WD1 B4	ST-ST(2)	0	0	0	0	0	0	MATCH
V71X5526B	ST STAR PRESENT	WD1 B5	STAR-PRES(2)	0	0	0	0	0	0	MATCH
V71X5527B	ST HV RANGE MSB	WD1 B6		0	0	0	0	0	0	MATCH
V71X5528B	ST HV RANGE LSB	WD1 B7		0	0	0	0	0	0	MATCH
V71M554CP	ST HORIZONTAL DATA + STATUS	WD2	HOR-ANG(2)	0	0	0	0	0	0	MATCH
V71X5553B	ST BIT COUNT ERROR	WD2B12		0	0	0	0	0	0	MATCH
V71X5554B	ST MANCHESTER NON-VALID	WD2B13		0	0	0	0	0	0	MATCH
V71M556CP	ST VERTICAL DATA + STATUS	WD3	VERT-ANG(2)	0	0	0	0	0	0	MATCH
V71X5575B	ST POWER SUPPLY FAIL	WD3 B14		0	0	0	0	0	0	MATCH
V71X5576B	ST BRT OBJECT ALERT EV	WD3 B15		0	0	0	0	0	0	MATCH
V71M582CP	ST COMMAND WORD			0	0	0	0	0	0	MATCH
V72H0911C	LH ADI ROLL SINE POSITION		ROLLSINE(1)	1	1	1	1	1	1	MATCH
V72H0911C	LH ADI ROLL COSINE POSITION		ROLLCOS(1)	1	1	1	1	1	1	MATCH
V72H0912C	LH ADI PITCH SINE POSITION		PTCHSINE(1)	1	1	1	1	1	1	MATCH
V72H0913C	LH ADI PITCH COSINE POSITION		PTCHCOS(1)	1	1	1	1	1	1	MATCH
V72H0914C	LH ADI YAW SINE POSITION		YAWSINE(1)	1	1	1	1	1	1	MATCH
V72H0915C	LH ADI YAW COSINE POSITION		YAWCOS(1)	1	1	1	1	1	1	MATCH
V72R0916C	LH ADI ROLL RATE			0	0	0	0	0	0	MATCH
V72R0917C	LH ADI PITCH RATE			0	0	0	0	0	0	MATCH
V72R0918C	LH ADI YAW RATE			0	0	0	0	0	0	MATCH
V72H1011C	RH ADI ROLL SINE POSITION		ROLLSINE(2)	0	0	0	0	0	0	MATCH
V72H1011C	RH ADI ROLL COSINE POSITION		ROLLCOS(2)	0	0	0	0	0	0	MATCH
V72H1012C	RH ADI PITCH SINE POSITION		PTCHSINE(2)	0	0	0	0	0	0	MATCH
V72H1013C	RH ADI PITCH COSINE POSITION		PTCHCOS(2)	0	0	0	0	0	0	MATCH
V72H1014C	RH ADI YAW SINE POSITION		YAWSINE(2)	0	0	0	0	0	0	MATCH
V72H1015C	RH ADI YAW COSINE POSITION		YAWCOS(2)	0	0	0	0	0	0	MATCH
V72H1111C	AFT ADI ROLL SINE POSITION		ROLLSINE(3)	0	0	0	0	0	0	MATCH
V72H1111C	AFT ADI PITCH SINE POSITION		ROLLCOS(3)	0	0	0	0	0	0	MATCH
V72H1112C	AFT ADI YAW SINE POSITION		PTCHSINE(3)	0	0	0	0	0	0	MATCH
V72H1113C	AFT ADI ROLL COSINE POSITION		PTCHCOS(3)	0	0	0	0	0	0	MATCH
V72H1114C	AFT ADI PITCH COSINE POSITION		YAWSINE(3)	0	0	0	0	0	0	MATCH

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MPL NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 P	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V72H1115C	AFT ADI YAW COSINE POSITION	B	YAWCUS (3)	0	1	0	1			MATCH
V72K2015X	LH ADI ATTITUDE SEL-INERTIAL	U		0	0	1	0			MATCH
V72K2016X	LH ADI ATTITUDE SEL-LV/LH	U		0	0	1	0			MATCH
V72K2017X	LH ADI ATTITUDE SEL-REFERENCE	U		0	0	1	0			MATCH
V72K2065X	RH ADI ATTITUDE SEL-INERTIAL	U		0	0	1	0			MATCH
V72K2066X	RH ADI ATTITUDE SEL-LV/LH	U		0	0	1	0			MATCH
V72K2067X	RH ADI ATTITUDE SEL-REFERENCE	U		0	0	1	0			MATCH
V74X0172X	RADAR ALT NO 1 LOCK-ON	U		0	0	1	0			MATCH
V74X0174X	RADAR ALT NO 1-TEST	U		0	0	1	0			MATCH
V74X0182X	RADAR ALT NO 2 LOCK-ON	U		0	0	1	0			MATCH
V74X0184X	RADAR ALT NO 2-TEST	U		0	0	1	0			MATCH
V74X1011C	MSBLS NO 1 AZIMUTH WORD	B	MSBAZIM(1)	0	0	0	0			MATCH
V74X1011E	MSBLS NO 1 AZIMUTH TEST	B		0	0	0	0			MATCH
V74X1014B	MSBLS NO 1 AZIMUTH VALIDITY	B	MSBAZIMDG(1)	0	0	0	0			MATCH
V74X1033C	MSBLS NO 1 ELEVATION WORD	B	MSBELEV(1)	0	0	0	0			MATCH
V74X1033E	MSBLS NO 1 ELEVATION TEST	B	MSBELEVST(1)	0	0	0	0			MATCH
V74X1034B	MSBLS NO 1 ELEVATION VALIDITY	B	MSBELEVDG(1)	0	0	0	0			MATCH
V74X1055C	MSBLS NO 1 RANGE WORD	B	MSBRANGE(1)	0	0	0	0			MATCH
V74X1055E	MSBLS NO 1 RANGE TEST	B		0	0	0	0			MATCH
V74X11154B	MSBLS NO 1 RANGE VALIDITY	B	MSBRANGDG(1)	0	0	0	0			MATCH
V74X1111C	MSBLS NO 2 AZIMUTH WORD	B	MSBAZIM(2)	0	0	0	0			MATCH
V74X1111E	MSBLS NO 2 AZIMUTH TEST	B		0	0	0	0			MATCH
V74X1114B	MSBLS NO 2 AZIMUTH VALIDITY	B	MSBAZIMDG(2)	0	0	0	0			MATCH
V74X1113C	MSBLS NO 2 ELEVATION WORD	B	MSBELEV(2)	0	0	0	0			MATCH
V74X1113E	MSBLS NO 2 ELEVATION TEST	B	MSBELEVST(2)	0	0	0	0			MATCH
V74X11134B	MSBLS NO 2 ELEVATION VALIDITY	B	MSBELEVDG(2)	0	0	0	0			MATCH
V74X11153C	MSBLS NO 2 RANGE WORD	B	MSBRANGE(2)	0	0	0	0			MATCH
V74X11153E	MSBLS NO 2 RANGE TEST	B		0	0	0	0			MATCH
V74X11154B	MSBLS NO 2 RANGE VALIDITY	B	MSBRANGDG(2)	0	0	0	0			MATCH
V74X1211C	MSBLS NO 3 AZIMUTH WORD	B	MSBAZIM(3)	0	0	0	0			MATCH
V74X1211E	MSBLS NO 3 AZIMUTH TEST	B		0	0	0	0			MATCH
V74X1214B	MSBLS NO 3 AZIMUTH VALIDITY	B	MSBAZIMDG(3)	0	0	0	0			MATCH
V74X1233C	MSBLS NO 3 ELEVATION WORD	B	MSBELEV(3)	0	0	0	0			MATCH
V74X1233E	MSBLS NO 3 ELEVATION TEST	B	MSBELEVST(3)	0	0	0	0			MATCH
V74X1234B	MSBLS NO 3 ELEVATION VALIDITY	B	MSBELEVDG(3)	0	0	0	0			MATCH
V74X1250C	MSBLS NO 3 RANGE WORD	B	MSBRANGE(3)	0	0	0	0			MATCH
V74X1253E	MSBLS NO 3 RANGE TEST	B		0	0	0	0			MATCH
V74X1254B	MSBLS NO 3 RANGE VALIDITY	B	MSBRANGDG(3)	0	0	0	0			MATCH
V74M1510P	TACAN NO 1 CONTROL WORD AUTO	B		0	0	0	0			MATCH
V74M1530P	TACAN 1 BEARING WORD 1	WD1	TACBEAR(1)	1	0	0	0			MATCH
V74M1531P	TACAN 1 BEARING WORD 2	WD2		1	0	0	0			MATCH
V74M1534B	TACAN 1 BEARING/STATUS	WD1B01-02	TACBEARDG(1)	1	0	0	0			MATCH
V74J1536B	TACAN 1 BEARING SELF TEST	WD2B04-07		1	0	0	0			MATCH
V74M1550P	TACAN 1 RANGE WORD 1	WD1	TACRANGA(1)	1	0	0	0			MATCH
V74M1551P	TACAN 1 RANGE WORD 2	WD2	TACRANGB(1)	1	0	0	0			MATCH
V74J1552B	TACAN 1 RANGE STATUS	WD1B00-01	TACRANGDG(1)	1	0	0	0			MATCH
V74J1556B	TACAN 1 RANGE SELF TEST	WD2B04-07		1	0	0	0			MATCH
V74M1610P	TACAN NO 2 CONTROL WORD AUTO	B		0	0	0	0			MATCH
V74M163JP	TACAN 2 BEARING WORD 1	WD1	TACBEAR(2)	1	0	0	0			MATCH
V74M1631P	TACAN 2 BEARING WORD 2	WD2		1	0	0	0			MATCH
V74M1634B	TACAN 2 BEARING/STATUS	WD1B01-02	TACBEARDG(2)	1	0	0	0			MATCH
V74J1636B	TACAN 2 BEARING SELF TEST	WD2B04-07		1	0	0	0			MATCH
V74M1650P	TACAN 2 RANGE WORD 1	WD1	TACRANGA(2)	1	0	0	0			MATCH
V74M1651P	TACAN 2 RANGE WORD 2	WD2	TACRANGB(2)	1	0	0	0			MATCH

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MHL NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V74J1652B	TACAN 2 RANGE STATUS	WD18C0-01	B TACRANGDG(2)	0	1.0	0	1.0	0	0	MATCH
V74J1656B	TACAN 2 RANGE SELF TEST	WD2B04-07	B	0	1.0	0	1.0	0	0	MATCH
V74M1710P	TACAN NO 3 CONTROL WORD	AUTO	B	0	0	0	0	0	0	MATCH
V74M1730P	TACAN 3 BEARING WORD 1	WD1	B TACBEARA(3)	0	1.0	0	1.0	0	0	MATCH
V74M1731P	TACAN 3 BEARING WORD 2	WD2	B	0	1.0	0	1.0	0	0	MATCH
V74M1734E	TACAN 3 BEARING/STATUS	WD18C1-02	B TACBEARDG(3)	0	1.0	0	1.0	0	0	MATCH
V74J1736B	TACAN 3 BEARING SLLF TEST	WD2B04-07	B	0	1.0	0	1.0	0	0	MATCH
V74M1751P	TACAN 3 RANGE WORD 1	WD1	B TACRANGA(3)	0	1.0	0	1.0	0	0	MATCH
V74M1751P	TACAN 3 RANGE WORD 2	WD2	B TACRANGB(3)	0	1.0	0	1.0	0	0	MATCH
V74J17526	TACAN 3 RANGE STATUS	WD18C0-01	B TACRANGDG(3)	0	1.0	0	1.0	0	0	MATCH
V74J17556B	TACAN 3 RANGE SELF TEST	WD2B04-07	B	0	1.0	0	1.0	0	0	MATCH
V74H1801P	RADAR ALT NO 1 PARENT WORD		B RARANGE(1)	0	0	0	0	0	0	MATCH
V74H1801P	RADAR ALT NO 2 PARENT WORD		B RARANGE(2)	0	0	0	0	0	0	MATCH
V79R1833C	RGA 1 ROLL RATE		B	0	0	0	0	0	0	MATCH
V79R1833C	RGA 1 PITCH RATE		B	0	0	0	0	0	0	MATCH
V79R1832C	RGA 1 YAW RATE		B	0	0	0	0	0	0	MATCH
V79R1835C	RGA 2 ROLL RATE		B	0	0	0	0	0	0	MATCH
V79R1836C	RGA 2 PITCH RATE		B	0	0	0	0	0	0	MATCH
V79R1837C	RGA 2 YAW RATE		B	0	0	0	0	0	0	MATCH
V79R1845C	RGA 3 ROLL RATE		B	0	0	0	0	0	0	MATCH
V79R1841C	RGA 3 PITCH RATE		B	0	0	0	0	0	0	MATCH
V79R1842C	RGA 3 YAW RATE		B	0	0	0	0	0	0	MATCH
V79A204UC	ACCEL ASSY 1 LAT ACCEL		B	0	0	0	0	0	0	MATCH
V79A204JC	ACCEL ASSY 1 NORM ACCEL		B	0	0	0	0	0	0	MATCH
V79A204JC	ACCEL ASSY 2 LAT ACCEL		B	0	0	0	0	0	0	MATCH
V79A2044C	ACCEL ASSY 2 NORM ACCEL		B	0	0	0	0	0	0	MATCH
V79A2046C	ACCEL ASSY 3 LAT ACCEL		B	0	0	0	0	0	0	MATCH
V79A2047C	ACCEL ASSY 3 NORM ACCEL		B	0	0	0	0	0	0	MATCH
V79A2048C	ACCEL ASSY 4 LAT ACCEL		B	0	0	0	0	0	0	MATCH
V79A2048C	ACCEL ASSY 4 NORM ACCEL		B	0	0	0	0	0	0	MATCH
V90X0212C	TACAN AZIMUTH MEASUREMENT RESIDUAL		B DISP-DELC(1)	0	1.0	0	1.0	0	0	MATCH
V90X0213C	TACAN AZ DISPLAY EDIT HIST IND		B	0	1.0	0	1.0	0	0	MATCH
V90X0214C	TAC RANGE MEASUREMENT RESIDUAL		B DISP-DELC(2)	0	1.0	0	1.0	0	0	MATCH
V90X0215C	TACAN RANGE DISPLAY EDIT HIST IND		B	0	1.0	0	1.0	0	0	MATCH
V90X0216C	TACAN AZ RESID RATIO		B DISP-SIG(1)	0	1.0	0	1.0	0	0	MATCH
V90X0217C	TAC RNG RESID RATIO		B DISP-SIG(2)	0	1.0	0	1.0	0	0	MATCH
V90X0218C	MSBLS AZ DISPLAY EDIT HIST IND		B	0	1.0	0	1.0	0	0	MATCH
V90X0221C	BAROALTITUDE MEASUREMENT RESIDUAL		B DISP-DELC(3)	0	1.0	0	1.0	0	0	MATCH
V90X0222C	BAROALT RESID PATIO		B DISP-SIG(3)	0	1.0	0	1.0	0	0	MATCH
V90X0223C	BAROALT DISPLAY EDIT HIST IND		B	0	1.0	0	1.0	0	0	MATCH
V90X0231C	MSBLS RANGE MEASUREMENT RESIDUAL		B DISP-DELC(4)	0	1.0	0	1.0	0	0	MATCH
V90X0232C	MSBLS ELEV MEASUREMENT RESIDUAL		B DISP-DELC(6)	0	1.0	0	1.0	0	0	MATCH
V90X0233C	MSBLS AZIM MEASUREMENT RESIDUAL		B DISP-DELC(7)	0	1.0	0	1.0	0	0	MATCH
V90X0234C	FLAG IND MLS DATA BEING PROCESSED		B 00-MLS-NAV	0	1.0	0	1.0	0	0	MATCH
V90X0235C	SEL X-COMP OF UPDATED POS VCTR RST		B R-RESET(1)	0	0	0	0	0	0	MATCH
V90X0236C	SEL Y-COMP OF UPDATED POS VCTR RST		B R-RESET(2)	0	0	0	0	0	0	MATCH
V90X0237C	SEL Z-COMP OF UPDATED POS VCTR RST		B R-RESET(3)	0	0	0	0	0	0	MATCH
V90X0239C	SEL X-COMP OF UPDATED VEL VCTR RST		B V-RESET(1)	0	0	0	0	0	0	MATCH
V90X0240C	SEL Y-COMP OF UPDATED VEL VCTR RST		B V-RESET(2)	0	0	0	0	0	0	MATCH
V90X0241C	SEL Z-COMP OF UPDATED VEL VCTR RST		B V-RESET(3)	0	0	0	0	0	0	MATCH
V90X0242C	COUNTER-MLS MEAS BEING PROCESSED		B MLS-MARK-NUM	0	0	0	0	0	0	MATCH
V90X0537X	THREE-STATE FLAG ON/OFF		B NAV-THREE-STATE	0	0	0	0	0	0	MATCH
V90X0538X	FLAG TO USE IMU ACCUM VEL OR NOT		B USE-IMU-DATA	0	1.0	0	1.0	0	0	MATCH
V90X0567C	X-COMP OF FILTER CURR POS STATE 1		B R-FILT-ONE(1)	0	0	0	0	0	0	MATCH

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MML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21	FORMAT K 22	FORMAT K 23	FORMAT K 32	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V90H0588C	Y-COMP OF FILTER CURR POS STATE	1	G X-FILT-ONE (2)	0	0	0	0	0	0	MATCH
V90H0589C	Z-COMP OF FILTER CURR POS STATE	1	G Y-FILT-ONE (3)	0	0	0	0	0	0	MATCH
V90H0590C	X-COMP OF FILTER CURR POS STATE	2	G X-FILT-TWO (1)	0	0	0	0	0	0	MATCH
V90H0591C	Y-COMP OF FILTER CURR POS STATE	2	G Y-FILT-TWO (2)	0	0	0	0	0	0	MATCH
V90H0592C	Z-COMP OF FILTER CURR POS STATE	2	G Z-FILT-TWO (3)	0	0	0	0	0	0	MATCH
V90H0593C	X-COMP OF FILTER CURR POS STATE	3	G X-FILT-THREE (1)	0	0	0	0	0	0	MATCH
V90H0594C	Y-COMP OF FILTER CURR POS STATE	3	G Y-FILT-THREE (2)	0	0	0	0	0	0	MATCH
V90H0595C	Z-COMP OF FILTER CURR POS STATE	3	G Z-FILT-THREE (3)	0	0	0	0	0	0	MATCH
V90L0639C	X-COMP OF FILTER CURR VEL STATE	1	V X-FILT-ONE (1)	0	0	0	0	0	0	MATCH
V90L0640C	Y-COMP OF FILTER CURR VEL STATE	1	V Y-FILT-ONE (2)	0	0	0	0	0	0	MATCH
V90L0641C	Z-COMP OF FILTER CURR VEL STATE	1	V Z-FILT-ONE (3)	0	0	0	0	0	0	MATCH
V90L0642C	X-COMP OF FILTER CURR VEL STATE	2	V X-FILT-TWO (1)	0	0	0	0	0	0	MATCH
V90L0643C	Y-COMP OF FILTER CURR VEL STATE	2	V Y-FILT-TWO (2)	0	0	0	0	0	0	MATCH
V90L0644C	Z-COMP OF FILTER CURR VEL STATE	2	V Z-FILT-TWO (3)	0	0	0	0	0	0	MATCH
V90L0645C	X-COMP OF FILTER CURR VEL STATE	3	V X-FILT-THREE (1)	0	0	0	0	0	0	MATCH
V90L0646C	Y-COMP OF FILTER CURR VEL STATE	3	V Y-FILT-THREE (2)	0	0	0	0	0	0	MATCH
V90L0647C	Z-COMP OF FILTER CURR VEL STATE	3	V Z-FILT-THREE (3)	0	0	0	0	0	0	MATCH
V90H0661C	X-COMP OF PREDICTED SHUTTLE POS VECTR	1	R X-PRED-FINAL (1)	0	0	0	0	0	0	MATCH
V90H0662C	Y-COMP OF PREDICTED SHUTTLE POS VECTR	1	R Y-PRED-FINAL (2)	0	0	0	0	0	0	MATCH
V90H0663C	Z-COMP OF PREDICTED SHUTTLE POS VECTR	1	R Z-PRED-FINAL (3)	0	0	0	0	0	0	MATCH
V90H0664C	X-COMP OF PREDICTED SHUTTLE VEL VECTR	1	R X-PRED-FINAL (1)	0	0	0	0	0	0	MATCH
V90H0665C	Y-COMP OF PREDICTED SHUTTLE VEL VECTR	1	R Y-PRED-FINAL (2)	0	0	0	0	0	0	MATCH
V90H0666C	Z-COMP OF PREDICTED SHUTTLE VEL VECTR	1	R Z-PRED-FINAL (3)	0	0	0	0	0	0	MATCH
V90J1916C	CURRENT LANDING SITE SELECTED		RUNWAY NAME	1	1	1	1	1	1	MATCH
V90H2201C	BANK ANGLE		BANK	1	1	1	1	1	1	MATCH
V90H2231C	BODY YAW ATTITUDE EULER ANGLE		BANK	1	1	1	1	1	1	MATCH
V90U2241C	MEASURED BODY QUAT ELE	1	0 0 0 1 (1)	0	0	0	0	0	0	MATCH
V90U2242C	MEASURED BODY QUAT ELE	2	0 0 0 1 (2)	0	0	0	0	0	0	MATCH
V90U2243C	MEASURED BODY QUAT ELE	3	0 0 0 1 (3)	0	0	0	0	0	0	MATCH
V90U2244C	MEASURED BODY QUAT ELE	4	0 0 0 1 (4)	0	0	0	0	0	0	MATCH
V90U2245C	SIDESLIP ANGLE		BANK	1	1	1	1	1	1	MATCH
V90U2331C	TO BODY QUAT TIME		TIME	1	1	1	1	1	1	MATCH
V90U2332C	ROLL GMBL WRT STBL MEM H	1	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2333C	ROLL GMBL WRT STBL MEM H	2	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2334C	ROLL GMBL WRT STBL MEM H	3	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2335C	ROLL GMBL WRT STBL MEM H	4	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2336C	ROLL GMBL WRT STBL MEM H	5	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2337C	ROLL GMBL WRT STBL MEM H	6	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2338C	ROLL GMBL WRT STBL MEM H	7	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2339C	ROLL GMBL WRT STBL MEM H	8	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2340C	ROLL GMBL WRT STBL MEM H	9	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2341C	ROLL GMBL WRT STBL MEM H	10	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2342C	ROLL GMBL WRT STBL MEM H	11	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2343C	ROLL GMBL WRT STBL MEM H	12	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2344C	ROLL GMBL WRT STBL MEM H	13	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2345C	ROLL GMBL WRT STBL MEM H	14	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2346C	ROLL GMBL WRT STBL MEM H	15	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2347C	ROLL GMBL WRT STBL MEM H	16	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2348C	ROLL GMBL WRT STBL MEM H	17	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2349C	ROLL GMBL WRT STBL MEM H	18	1 1 1 1	0	0	0	0	0	0	MATCH
V90U2350C	ROLL GMBL WRT STBL MEM H	19	1 1 1 1	0	0	0	0	0	0	MATCH
V90X2552X	IMU DILEMMA INDICATOR		IMU-DILEMMA	1	1	1	1	1	1	MATCH
V90X2553X	ATTITUDE DATA GOOD FLAG		ATT-06	1	1	1	1	1	1	MATCH
V90L2555C	SEL TOTAL X VEL H50		V-CURRENT-FILT (1)	0	0	0	0	0	0	MATCH
V90L2556C	SEL TOTAL Y VEL H50		V-CURRENT-FILT (2)	0	0	0	0	0	0	MATCH
V90L2557C	SEL TOTAL Z VEL H50		V-CURRENT-FILT (3)	0	0	0	0	0	0	MATCH
V90J2558C	SELECTED IMU ID		SEL-IMU-ID	1	1	1	1	1	1	MATCH
V90J2559C	MAG DIFF IMU 1-2		VD-1-2	0	0	0	0	0	0	MATCH
V90J2560C	MAG DIFF IMU 1-3		VD-1-3	0	0	0	0	0	0	MATCH
V90J2561C	MAG DIFF IMU 1-4		VD-1-4	0	0	0	0	0	0	MATCH
V90J2562C	MAG DIFF IMU 1-5		VD-1-5	0	0	0	0	0	0	MATCH
V90J2563C	MAG DIFF IMU 1-6		VD-1-6	0	0	0	0	0	0	MATCH
V90J2564C	MAG DIFF IMU 1-7		VD-1-7	0	0	0	0	0	0	MATCH
V90J2565C	MAG DIFF IMU 1-8		VD-1-8	0	0	0	0	0	0	MATCH
V90J2566C	MAG DIFF IMU 1-9		VD-1-9	0	0	0	0	0	0	MATCH

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HML NO.	NONENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/ CODE
V9JL2567C	IMU VEL THRESHOLD	G	TH-SV-VD	0	1.0	0	1.0	0	1.0	MATCH
V9JX2601X	IMU 1 FAIL	B	IMU-1-FAIL	1.0	0	1.0	0	1.0	0	MATCH
V9JX2701X	IMU 2 FAIL	B	IMU-2-FAIL	1.0	0	1.0	0	1.0	0	MATCH
V9JX2801X	IMU 3 FAIL	B	IMU-3-FAIL	1.0	0	1.0	0	1.0	0	MATCH
V9JH3002C	SELECTED MSBLS AZIMUTH-RAW	B	Q-AZMLS	0	0	0	0	0	0	MATCH
V9JX3003X	MSBLS AZIMUTH DATA GOOD	B		0	0	0	0	0	0	MATCH
V9JX3005X	MSBLS AZIMUTH DISAGREE	B	MSBAZIM-D	0	0	0	0	0	0	MATCH
V9JH3002C	SELECTED MSBLS ELEVATION-RAW	B	Q-ELMLS	0	0	0	0	0	0	MATCH
V9JX3003X	MSBLS ELEVATION DATA GOOD	B		0	0	0	0	0	0	MATCH
V9JX3005X	MSBLS ELEVATION DISAGREE	B	MSBELEV-D	0	0	0	0	0	0	MATCH
V9JH3062C	SELECTED MSBLS RANGE-RAW	B	Q-RANGE	0	0	0	0	0	0	MATCH
V9JX3063X	MSBLS RANGE DATA GOOD	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS RANGE DISAGREE	B	MSBRANGE-D	0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 1 AZIMUTH FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 1 ELEVATION FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 1 RANGE FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 2 AZIMUTH FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 2 ELEVATION FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 2 RANGE FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 3 AZIMUTH FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 3 ELEVATION FAIL	B		0	0	0	0	0	0	MATCH
V9JX3065X	MSBLS 3 RANGE FAIL	B		0	0	0	0	0	0	MATCH
V9JH3097C	SELECTED BEARING DATA	B		1.0	0	0	0	0	0	MATCH
V9JX30991X	BEARING DATA GOOD	B	TAC BRG	0	0	0	0	0	0	MATCH
V9JH30992C	SELECTED RANGE DATA	B		1.0	0	0	0	0	0	MATCH
V9JX30993X	RANGE DATA GOOD	B	TAC RNG	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN BEARING DILEMMA FLAG	B	BRGDIL	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN RANGE DILEMMA FLAG	B	RNGDIL	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN BEARING 1 FAIL	B	BRGF(1)	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN RANGE 1 FAIL	B	RNGF(1)	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN BEARING 2 FAIL	B	BRGF(2)	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN RANGE 2 FAIL	B	RNGF(2)	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN BEARING 3 FAIL	B	BRGF(3)	0	0	0	0	0	0	MATCH
V9JX30993X	TACAN RANGE 3 FAIL	B	RNGF(3)	0	0	0	0	0	0	MATCH
V9CH4002C	SELECTED RALT HEIGHT-RAW	B	Q-RADALT	0	0	0	5.0	0	0	MATCH
V9JX4003X	RALT HEIGHT DATA GOOD	B	OG-RADALT	0	0	0	0	0	0	MATCH
V9JH4002C	SELECTED LEFT RPTA CMD	P		0	0	0	5.0	0	0	MATCH
V9JX4004X	ADTA DILEMMA FLAG	B	ADTA-DILEMMA	0	0	0	1.0	0	0	MATCH
V9JX5001X	ADTA 1 FAIL	B	ADTA-FAULT-STATUS(1)	0	0	0	1.0	0	0	MATCH
V9JX5001X	ADTA 2 FAIL	B	ADTA-FAULT-STATUS(2)	0	0	0	1.0	0	0	MATCH
V9JX5001X	ADTA 3 FAIL	B	ADTA-FAULT-STATUS(3)	0	0	0	1.0	0	0	MATCH
V9JX5001X	ADTA 4 FAIL	B	ADTA-FAULT-STATUS(4)	0	0	0	1.0	0	0	MATCH
V9JR5001C	SELECTED RGA ROLL RATE	P		1	5.0	0	5.0	0	0	MATCH
V9JR5001C	SELECTED RGA PITCH RATE	P		1	5.0	0	5.0	0	0	MATCH
V9JR5001C	SELECTED RGA YAW RATE	P		1	5.0	0	5.0	0	0	MATCH
V9JA5001C	SELECTED AA LATERAL ACCEL	P		0	0	0	5.0	0	0	MATCH
V9JA5001C	SELECTED AA NORMAT ACCEL	P		0	0	0	5.0	0	0	MATCH
V9JX7503X	LH ADI ATTITUDE SELECT SW	B	ATT-SEL-SW(1)	0	0	0	0	1.0	0	MATCH
V9JX7504X	RH ADI ATTITUDE SELECT SW	B	ATT-SEL-SW(2)	0	0	0	0	1.0	0	MATCH
V9JX7700X	SEL SENSE -Z	B	SENSE-SW	0	0	0	0	1.0	0	MATCH
V9JX7704X	AFT ADI ATTITUDE SELECT SW	B	ATT-SEL-SW(3)	0	0	0	0	1.0	0	MATCH
V9JX8001C	MAJOR MODE CODE	B	MH-CODE	0	1.0	0	1.0	0	0	MATCH
V9JX8042C	COUNTER-TACAN MEAS BEING PROCESSED	B	TACAN-MARK-NUM	0	1.0	0	1.0	0	0	MATCH
V9JX8043C	COUNTER-BARO MEAS BEING PROCESSED	B	BARO-MARK-NUM	0	1.0	0	1.0	0	0	MATCH

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DRIVE - COMPARING SECOND LOADING TAPE FROM IBM

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MML NO*	NONENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V90J8844C	COUNTER-DRAG MEAS BEING PROCESSED	B	DRAG-MARK-NUM	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8846C	FLAG IND TACAN DATA BEING PROCESSED	B	DO-TACAN-NAV	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8847C	FLAG IND DRAG ALT BEING PROCESSED	B	DO-DRAG-NAV	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8848C	DRAG MEASUREMNT	B	Q-DRAG	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8850C	DATA SNAP-SEL TAC CHANNEL W/MODE	B	DO-BARO-NAV	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8862X	TACAN RANGE DATA GOOD	P		1.00	0.00	0.00	1.00	0.00		MATCH
V90J8864C	DATA SNAP-TACAN LRU NUMBER	P	SEL-LRU-ID	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8865X	RADAR ALTIMETER PROCESSING FLAG	B	RAH-KA-PROC	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8867L	DATA SNAP-SELECTED TACAN RANGE	B	Q-TAC-R	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8866C	DATA SNAP-SELECTED TACAN BEARING	B	Q-TAC-BRG	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8871L	TACAN SNAP-AUS CORN PRESSURE ALT	B	Q-BALG	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8880C	TAC R/OPTICS H/X/AZ-FILTER FLAG	B	SENSOR-ELCIT (2)	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8881C	SAO ALT/RR ENC-FILTER FLAG	B	SENSOR-ELCIT (3)	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8882C	CRAG ALT/RR DOT-FILTER FLAG	B	SENSOR-ELCIT (4)	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8883C	MSBLS AZ/SHAFT RATE-FILTER FLAG	B	SENSOR-ELCIT (5)	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8884C	MSBLS R/TRUN RATE-FILTER FLAG	B	SENSOR-ELCIT (6)	1.00	0.00	0.00	1.00	0.00		MATCH
V90J8885C	MSBLS EL-FILTER FLAG	B	SENSOR-ELCIT (7)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22253X	FF1 TACAN/RA BYPASS	B	TAC-CF(1)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22254X	FF2 TACAN/RA BYPASS	B	TAC-CF(2)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22255X	FF3 TACAN/RA BYPASS	B	TAC-CF(3)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22261X	FF1 ADTA BYPASS	B	ADTA-1-COMM-FAULT	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22262X	FF2 ADTA BYPASS	B	ADTA-2-COMM-FAULT	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22263X	FF3 ADTA BYPASS	B	ADTA-3-COMM-FAULT	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22264X	FF4 ADTA BYPASS	B	ADTA-4-COMM-FAULT	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22270X	FF1 MSBLS BYPASS	B	MSBLS-CF(1)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22271X	FF2 MSBLS BYPASS	B	MSBLS-CF(2)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22272X	FF3 MSBLS BYPASS	B	MSBLS-CF(3)	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22273X	FF1 IMU BYPASS	B	COMFAULT-1	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22274X	FF2 IMU BYPASS	B	COMFAULT-2	1.00	0.00	0.00	1.00	0.00		MATCH
V91X22275X	FF3 IMU BYPASS	B	COMFAULT-3	1.00	0.00	0.00	1.00	0.00		MATCH
V92M5365P	DEU 1 OISPLAY ID/MF	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92M5366P	DEU 2 OISPLAY ID/MF	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92M5367P	DEU 3 OISPLAY ID/MF	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92M5368P	DEU 4 OISPLAY ID/MF	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92M6721P	DEU 1 RESPONSE #01 [HEADER]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6722X	DEU 1 BITE STATUS AVAILABLE B14	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6723X	DEU 1 INITIALIZATION REQD B15	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6724X	DEU 1 ACK B10	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92U6725C	DEU 1 RESPONSE #02 [KYSTRK 10-12]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6728C	DEU 1 RESPONSE #03 [KYSTRK 13-15]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6732C	DEU 1 RESPONSE #04 [KYSTRK 16-18]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6736C	DEU 1 RESPONSE #05 [KYSTRK 19-21]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6740C	DEU 1 RESPONSE #06 [KYSTRK 22-24]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6744C	DEU 1 RESPONSE #07 [KYSTRK 25-27]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6748C	DEU 1 RESPONSE #08 [KYSTRK 28-30]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6752C	DEU 1 RESPONSE #09 [KYSTRK 10-12]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6756C	DEU 1 RESPONSE #010 [KYSTRK 13-15]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6760C	DEU 1 RESPONSE #011 [KYSTRK 16-18]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92J6764C	DEU 1 RESPONSE #012 [KYSTRK 19-21]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92M6780P	DEU 2 RESPONSE #01 [HEADER]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6781X	DEU 2 BITE STATUS AVAILABL B14	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6782X	DEU 2 INITIALIZATION REQD B15	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92U6784C	DEU 2 RESPONSE #02 [KYSTRK 10-12]	B		1.00	1.00	1.00	1.00	1.00		MATCH
V92X6785X	DEU 2 ACK B10	B		1.00	1.00	1.00	1.00	1.00		MATCH

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MHL NO.	NONENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V92J6792C	DEU 2		RESPONSE WD3 [KYSTRK 1-3 J	1 1.0	1 1.0	1 1.0	1 1.0			MATCH
V92J6796C	DEU 2		RESPONSE WD4 [KYSTRK 4-6 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6800C	DEU 2		RESPONSE WD5 [KYSTRK 7-9 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6804C	DEU 2		RESPONSE WD6 [KYSTRK 10-12 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6808C	DEU 2		RESPONSE WD7 [KYSTRK 13-15 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6812C	DEU 2		RESPONSE WD8 [KYSTRK 16-18 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6816C	DEU 2		RESPONSE WD9 [KYSTRK 19-21 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6820C	DEU 2		RESPONSE WD10 [KYSTRK 22-24 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6824C	DEU 2		RESPONSE WD11 [KYSTRK 25-27 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6828C	DEU 2		RESPONSE WD12 [KYSTRK 28-30 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6832X	DEU 3		RESPONSE WD1 [HEADER]	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6836X	DEU 3		INITIALIZATION RECD B15	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6840X	DEU 3		INITIALIZATION RECD B15	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6844X	DEU 3		ACK B10	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6848X	DEU 3		ACK B10	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6852X	DEU 3		RESPONSE WD2 [KYSTRK 40 CNT J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6856X	DEU 3		RESPONSE WD3 [KYSTRK 41-43 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6860X	DEU 3		RESPONSE WD4 [KYSTRK 44-46 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6864X	DEU 3		RESPONSE WD5 [KYSTRK 47-49 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6868X	DEU 3		RESPONSE WD6 [KYSTRK 50-52 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6872X	DEU 3		RESPONSE WD7 [KYSTRK 53-55 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6876X	DEU 3		RESPONSE WD8 [KYSTRK 56-58 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6880X	DEU 3		RESPONSE WD9 [KYSTRK 59-61 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6884X	DEU 3		RESPONSE WD10 [KYSTRK 62-64 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6888X	DEU 3		RESPONSE WD11 [KYSTRK 65-67 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6892X	DEU 3		RESPONSE WD12 [KYSTRK 68-70 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6896X	DEU 4		RESPONSE WD1 [HEADER]	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6900X	DEU 4		FILE STATUS AVAILABLE B14	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6904X	DEU 4		INITIALIZATION RECD B15	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6908X	DEU 4		ACK B10	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X6912X	DEU 4		ACK B10	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6916C	DEU 4		RESPONSE WD2 [KYSTRK 70 CT J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6920C	DEU 4		RESPONSE WD3 [KYSTRK 71-73 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6924C	DEU 4		RESPONSE WD4 [KYSTRK 74-76 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6928C	DEU 4		RESPONSE WD5 [KYSTRK 77-79 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6932C	DEU 4		RESPONSE WD6 [KYSTRK 80-82 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6936C	DEU 4		RESPONSE WD7 [KYSTRK 83-85 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6940C	DEU 4		RESPONSE WD8 [KYSTRK 86-88 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6944C	DEU 4		RESPONSE WD9 [KYSTRK 89-91 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6948C	DEU 4		RESPONSE WD10 [KYSTRK 92-94 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6952C	DEU 4		RESPONSE WD11 [KYSTRK 95-97 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92J6956C	DEU 4		RESPONSE WD12 [KYSTRK 98-100 J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7000C	FSP		MSG1 MAJOR ID	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92M7002P	FSP		MSG1 SOURCE/MINOR ID/MAJOR ID	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7004C	FSP		MSG1 MINOR ID	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7006C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7008C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7010C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7012C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7014C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7016C	FSP		MSG1 SOURCE	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92M7018P	FSP		MSG1 TIME	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7020C	FSP		MSG1 TIME	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7022C	FSP		MSG1 TIME [ SEC J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92U7024C	FSP		MSG1 TIME [ U.S HR J	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X7364X	GPC		1 RUN MODE CHD OI02	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X7426X	GPC		2 PUN MDEF CHD OI02	1 1.00	1 1.00	1 1.00	1 1.00			MATCH
V92X7484X	GPC		3 RUN MODE CHD OI02	1 1.00	1 1.00	1 1.00	1 1.00			MATCH

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HML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V92X7544X	CPC 4 RUN MODE CMD B102	B		0	0	1	1.0	0	0	MATCH
V92X7634X	GPC 5 RUN MODE CMD B102	B		0	0	1	1.0	0	0	MATCH
V93X4411X	TACAN 1 DES CMD	B	TACAN-SFC-1	0	0	1	1.0	0	0	MATCH
V93X4413X	TACAN 2 DES CMD	B	TACAN-SFC-2	0	0	1	1.0	0	0	MATCH
V93X4415X	TACAN 3 DES CMD	B	TACAN-SFC-3	0	0	1	1.0	0	0	MATCH
V93X4421X	MSBLS 1 DES CMD	B	MSBLS-SFC-1	0	0	1	1.0	0	0	MATCH
V93X4423X	MSBLS 2 DES CMD	B	MSBLS-SFC-2	0	0	1	1.0	0	0	MATCH
V93X4425X	MSBLS 3 DES CMD	B	MSBLS-SFC-3	0	0	1	1.0	0	0	MATCH
V93X4435X	AA 1 DES CMD	B	AA-SEC-1	0	0	1	1.0	0	0	MATCH
V93X4436X	AA 2 DES CMD	B	AA-SFC-2	0	0	1	1.0	0	0	MATCH
V93X4437X	AA 3 DES CMD	B	AA-SFC-3	0	0	1	1.0	0	0	MATCH
V93X4438X	AA 4 DES CMD	B	AA-SFC-4	0	0	1	1.0	0	0	MATCH
V93X44471X	HOR12 SIT-TAC A/I/F EDIT CMD	B	TACAN-AIF	1	1	1	1.0	1	1	MATCH
V93X44475X	HOR12 SIT-BA A/I/F EDIT CMD	B	HAKO-AIF	1	1	1	1.0	1	1	MATCH
V93X44474X	AUTO-INHIBIT-FORCE SW FOR DRAG	B	DRAG-AIF	1	1	1	1.0	1	1	MATCH
V93X4516X	FGA 1 DES CMD	B	RGA-SFC-1	0	0	1	1.0	0	0	MATCH
V93X4518X	FGA 2 DES CMD	B	RGA-SFC-2	0	0	1	1.0	0	0	MATCH
V93X4520X	FGA 3 DES CMD	B	RGA-SFC-3	0	0	1	1.0	0	0	MATCH
V93X4522X	FGA 4 DES CMD	B	RGA-SFC-4	0	0	1	1.0	0	0	MATCH
V93X45271X	ADTA 1 DES CMD	B	ADTA-SFC-1	1	1	1	1.0	1	1	MATCH
V93X45273X	ADTA 2 DES CMD	B	ADTA-SFC-2	1	1	1	1.0	1	1	MATCH
V93X45275X	ADTA 3 DES CMD	B	ADTA-SFC-3	1	1	1	1.0	1	1	MATCH
V93X45277X	ADTA 4 DES CMD	B	ADTA-SFC-4	1	1	1	1.0	1	1	MATCH
V93X6711X	IMU 1 SEL/DES CMD	P	C-SEL-1	1	1	1	1.0	1	1	MATCH
V93X6712X	IMU 2 SEL/DES CMD	P		1	1	1	1.0	1	1	MATCH
V93X6713X	IMU 3 SEL/DES CMD	P		1	1	1	1.0	1	1	MATCH
V93A67230C	IMU ALIGN-IMU 1 ACCEL CAL DELTA X	B	DELT KOX(1)	0	0	1	1.0	0	0	MATCH
V93A67210C	IMU ALIGN-IMU 1 ACCEL CAL DELTA Y	B	DELT KOY(1)	0	0	1	1.0	0	0	MATCH
V93A67220C	IMU ALIGN-IMU 1 ACCEL CAL DELTA Z	B	DELT KOZ(1)	0	0	1	1.0	0	0	MATCH
V93A67225C	IMU ALIGN-IMU 2 ACCEL CAL DELTA X	B	DELT KOX(2)	0	0	1	1.0	0	0	MATCH
V93A67226C	IMU ALIGN-IMU 2 ACCEL CAL DELTA Y	B	DELT KOY(2)	0	0	1	1.0	0	0	MATCH
V93A67227C	IMU ALIGN-IMU 2 ACCEL CAL DELTA Z	B	DELT KOZ(2)	0	0	1	1.0	0	0	MATCH
V93A67330C	IMU ALIGN-IMU 3 ACCEL CAL DELTA X	B	DELT KOX(3)	0	0	1	1.0	0	0	MATCH
V93A67310C	IMU ALIGN-IMU 3 ACCEL CAL DELTA Y	B	DELT KOY(3)	0	0	1	1.0	0	0	MATCH
V93A67320C	IMU ALIGN-IMU 3 ACCEL CAL DELTA Z	B	DELT KOZ(3)	0	0	1	1.0	0	0	MATCH
V93H67330C	IMU ALIGN-IMU 1 GYRO CAL DELTA X	B	DELDFX(1)	0	0	1	1.0	0	0	MATCH
V93H67360C	IMU ALIGN-IMU 1 GYRO CAL DELTA Y	B	DELDFY(1)	0	0	1	1.0	0	0	MATCH
V93H67370C	IMU ALIGN-IMU 1 GYRO CAL DELTA Z	B	DELDFZ(1)	0	0	1	1.0	0	0	MATCH
V93H67400C	IMU ALIGN-IMU 2 GYRO CAL DELTA X	B	DELDFX(2)	0	0	1	1.0	0	0	MATCH
V93H67410C	IMU ALIGN-IMU 2 GYRO CAL DELTA Y	B	DELDFY(2)	0	0	1	1.0	0	0	MATCH
V93H67420C	IMU ALIGN-IMU 2 GYRO CAL DELTA Z	B	DELDFZ(2)	0	0	1	1.0	0	0	MATCH
V93H67450C	IMU ALIGN-IMU 3 GYRO CAL DELTA X	B	DELDFX(3)	0	0	1	1.0	0	0	MATCH
V93H67460C	IMU ALIGN-IMU 3 GYRO CAL DELTA Y	B	DELDFY(3)	0	0	1	1.0	0	0	MATCH
V93H67470C	IMU ALIGN-IMU 3 GYRO CAL DELTA Z	B	DELDFZ(3)	0	0	1	1.0	0	0	MATCH
V95W00020C	IMU INPUT TRANS TIME TAG	P	T-IMUS	1	1	1	1.0	1	1	MATCH
V95XJ0020X	IMU 1 POWER ON	B	PKR-ON(1)	0	0	1	1.0	0	0	MATCH
V95XJ0071X	IMU 1 SELECT STATUS	X	IMU-1-SEL-STATUS	0	0	1	1.0	0	0	MATCH
V95XC0033X	IMU 1 REDUNDANT RATE FAIL	P	RGH-FAIL-1	0	0	1	1.0	0	0	MATCH
V95XC0035X	IMU 1 VELOCITY LIMIT FAIL	P	IMU1-V-FAIL	0	0	1	1.0	0	0	MATCH
V95XQ0J37X	IMU 1 RESOLVER LIMIT FAIL	P	IMU-1-RO-FAIL	0	0	1	1.0	0	0	MATCH
V95H00500C	IMU 1 COMP PITCH RES ANGLE	B	PANG(1)	0	0	1	1.0	0	0	MATCH
V95H00510C	IMU 1 COMP AZIMUTH RES ANGLE	B	AZANG(1)	0	0	1	1.0	0	0	MATCH
V95H00530C	IMU 1 COMP INNER ROLL RES ANGLE	B	IRANG(1)	0	0	1	1.0	0	0	MATCH
V95H00540C	IMU 1 COMP OUTER ROLL RES ANGLE	B	ORANG(1)	0	0	1	1.0	0	0	MATCH

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MHL NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 P	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/ CODE
V95L00665C	IMU 1 ACCUM SENSED CHG X VEL [M50]	P	VFLSUMM5LX(1)	1	1.0	1	1.0	1	1.0	MATCH
V95L00666C	IMU 1 ACCUM SENSED CHG Y VEL [M50]	P	VFLSUMM5LY(1)	1	1.0	1	1.0	1	1.0	MATCH
V95L00667C	IMU 1 ACCUM SENSED CHG Z VEL [M50]	P	VFLSUMM5LZ(1)	1	1.0	1	1.0	1	1.0	MATCH
V95L01511C	GND REL VEL MAGNITUDE IN M50 SYS	R	RCL-VEL-MAG	1	1.0	1	1.0	1	1.0	MATCH
V95A01600C	DRAG DECEL	R	ACC-DRAG	1	1.0	1	1.0	1	1.0	MATCH
V95H01655C	ALT TO REAR WHEELS/NAV BASE[ENTRY]	B	ALT-WHEELS	1	1.0	1	1.0	1	1.0	MATCH
V95H01722C	HEADING ERR WRT HAC TANGENT POINT	R	DELTAZ	1	1.0	1	1.0	1	1.0	MATCH
V95H01755C	SHUTTLE ALT ABOVE REF ELLIPSOID	B	ALT	1	1.0	1	1.0	1	1.0	MATCH
V95H01766C	RANGE TO RUNWAY THRESHOLD VIA WP1	R	RNG-TO-RW-THRESH	1	1.0	1	1.0	1	1.0	MATCH
V95U01800C	LIFT/DRAG	R	LOD	1	1.0	1	1.0	1	1.0	MATCH
V95H01855C	X-COMP OF CURRENT SHUTTLE POS VCTR	R	R-AVGG(1)	1	1.0	1	1.0	1	1.0	MATCH
V95H01866C	Y-COMP OF CURRENT SHUTTLE POS VCTR	R	R-AVGG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H01877C	Z-COMP OF CURRENT SHUTTLE POS VCTR	R	R-AVGG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95L01910C	X-COMP OF CURRENT SHUTTLE VEL VCTR	R	R-AVGG(1)	1	1.0	1	1.0	1	1.0	MATCH
V95L01911C	Y-COMP OF CURRENT SHUTTLE VEL VCTR	R	R-AVGG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L01912C	Z-COMP OF CURRENT SHUTTLE VEL VCTR	R	R-AVGG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95H02000C	TIME TAG ASSOC WITH CURRENT STATE	B	T-STAT	1	1.0	1	1.0	1	1.0	MATCH
V95H02200C	DOWNRANGE DISTANCE WRT RW	B	POSITION-WRT-RUNWAY(1)	1	1.0	1	1.0	1	1.0	MATCH
V95H02211C	CROSSRANGE DISTANCE WRT RW	B	POSITION-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L02555C	DOWNRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(1)	1	1.0	1	1.0	1	1.0	MATCH
V95L02566C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H02611C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L02655C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L02656C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H02661C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L02665C	CROSSRANGE VEL WRT RW	B	VELOCITY-WRT-RUNWAY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95X03055X	EVENT LAMP TWO INDICATOR FLAG	R	R-EVENT-LAMP-FIVE	1	1.0	1	1.0	1	1.0	MATCH
V95U03585C	IMU 1 MISALIGN ANG ABOUT X-AXIS	B	XANG(1)	1	1.0	1	1.0	1	1.0	MATCH
V95U03586C	IMU 2 MISALIGN ANG ABOUT X-AXIS	B	XANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95U03587C	IMU 3 MISALIGN ANG ABOUT X-AXIS	B	XANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95U03588C	IMU 1 MISALIGN ANG ABOUT Y-AXIS	B	YANG(1)	1	1.0	1	1.0	1	1.0	MATCH
V95U03589C	IMU 2 MISALIGN ANG ABOUT Y-AXIS	B	YANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95U03590C	IMU 3 MISALIGN ANG ABOUT Y-AXIS	B	YANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95U03591C	IMU 1 MISALIGN ANG ABOUT Z-AXIS	B	ZANG(1)	1	1.0	1	1.0	1	1.0	MATCH
V95U03592C	IMU 2 MISALIGN ANG ABOUT Z-AXIS	B	ZANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95U03593C	IMU 3 MISALIGN ANG ABOUT Z-AXIS	B	ZANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95X1021X	IMU 2 POWER ON	B	PWR-ON(2)	1	1.0	1	1.0	1	1.0	MATCH
V95X1033X	IMU 2 SELECT STATUS	X	IMU-2-SEL-STATUS	1	1.0	1	1.0	1	1.0	MATCH
V95X1033X	IMU 2 REDUNDANT RATE FAIL	P	RGM-FAIL-2	1	1.0	1	1.0	1	1.0	MATCH
V95X1033X	IMU 2 VELOCITY LIMIT FAIL	P	IMU2-V-FAIL	1	1.0	1	1.0	1	1.0	MATCH
V95X10337X	IMU 2 RESOLVER LIMIT FAIL	P	IMU-2-RO-FAIL	1	1.0	1	1.0	1	1.0	MATCH
V95H10350C	IMU 2 COMP PITCH RES ANGLE	B	PANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H10511C	IMU 2 COMP AZIMUTH RES ANGLE	B	AZANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H10533C	IMU 2 COMP INNER ROLL RES ANGLE	B	IRANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95H10544C	IMU 2 COMP OUTER ROLL RES ANGLE	B	ORANG(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L10655C	IMU 2 ACCUM SENSED CHG X VEL [M50]	P	VFLSUMM5UX(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L10666C	IMU 2 ACCUM SENSED CHG Y VEL [M50]	P	VFLSUMM5UY(2)	1	1.0	1	1.0	1	1.0	MATCH
V95L10677C	IMU 2 ACCUM SENSED CHG Z VEL [M50]	P	VFLSUMM5UZ(2)	1	1.0	1	1.0	1	1.0	MATCH
V95X2020X	IMU 3 POWER ON	B	PWR-ON(3)	1	1.0	1	1.0	1	1.0	MATCH
V95X2021X	IMU 3 SELECT STATUS	X	IMU-3-SEL-STATUS	1	1.0	1	1.0	1	1.0	MATCH
V95X2033X	IMU 3 REDUNDANT RATE FAIL	P	RGM-FAIL-3	1	1.0	1	1.0	1	1.0	MATCH
V95X2033X	IMU 3 VELOCITY LIMIT FAIL	P	IMU3-V-FAIL	1	1.0	1	1.0	1	1.0	MATCH
V95X20337X	IMU 3 RESOLVER LIMIT FAIL	P	IMU-3-RO-FAIL	1	1.0	1	1.0	1	1.0	MATCH
V95H20500C	IMU 3 COMP PITCH RES ANGLE	B	PANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95H20511C	IMU 3 COMP AZIMUTH RES ANGLE	B	AZANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95H20533C	IMU 3 COMP INNER ROLL RES ANGLE	B	IRANG(3)	1	1.0	1	1.0	1	1.0	MATCH
V95H20544C	IMU 3 COMP OUTER ROLL RES ANGLE	B	ORANG(3)	1	1.0	1	1.0	1	1.0	MATCH

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MML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/ CODE
V95L2665C	IMU 3 ACCUM SENSED CHG 4 VEL CM50J	P	VELSUMM5 X (3)	1	1.0	1	1.0	1	1.0	MATCH
V95L2666C	IMU 3 ACCUM SENSED CHG Y VEL CM50J	P	VELSUMM5 Y (3)	1	1.0	1	1.0	1	1.0	MATCH
V95L2667C	IMU 3 ACCUM SENSED CHG Z VEL CM50J	P	VELSUMM5 Z (3)	1	1.0	1	1.0	1	1.0	MATCH
V95L2670C	ADS CORRECTED PRESS ALT TIME TAG	B		0	0.0	0	0.0	0	0.0	MATCH
V95U4968C	COAS -Y HORIZ CALIBRATION ANGLE	B	Q-COAS-HORIZ	0	0.0	0	0.0	0	0.0	MATCH
V95U4969C	COAS -Z HORIZ CALIBRATION ANGLE	B	Q-COAS-HCRIZ	0	0.0	0	0.0	0	0.0	MATCH
V95X4972X	SELECTED COAS AXIS X OR -Z	B	AXN	0	0.0	0	0.0	0	0.0	MATCH
V95U4992C	COAS -Z VERT CALIBRATION ANGLE	B	Q-COAS-VERT	0	0.0	0	0.0	0	0.0	MATCH
V95U4993C	COAS -X VERT CALIBRATION ANGLE	B	Q-COAS-VERT	0	0.0	0	0.0	0	0.0	MATCH
V95L55J1C	SELECTED TACAN TIME	P	T-TACAN	1	1.0	1	1.0	1	1.0	MATCH
V95L5600C	MSBLS RANGE MEASUREMENT TIME	P	T-EF-RMLS	0	0.0	0	0.0	0	0.0	MATCH
V95L5601C	MSBLS AZIMUTH MEASUREMENT TIME	P	T-EF-AZMLS	0	0.0	0	0.0	0	0.0	MATCH
V95L5602C	MSBLS ELEVATION MEASUREMENT TIME	P	T-EF-ELMLS	0	0.0	0	0.0	0	0.0	MATCH
V99U3451C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3452C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3453C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3454C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3455C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3456C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3457C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3458C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3459C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3460C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3461C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3462C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3463C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3464C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3465C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3466C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3467C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3468C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3469C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3470C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3471C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3472C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3473C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3474C	CLUSTER TO M50/IMU-3 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3475C	CLUSTER TO M50/IMU-1 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH
V99U3476C	CLUSTER TO M50/IMU-2 COMPONENT	B		1	1.0	1	1.0	1	1.0	MATCH

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NON MATCHING VARIABLES --- SEE SEARCH CODE

MHL NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V71K5323B	-Z ST BREAK TRACK CMD	B	WD1 B2	B	BREAKCOMZ					
V71K5323B	-Y ST BREAK TRACK CMD	B	WD1 B2	B	BREAKCOMY					
V79R1845C	RGA 4 ROLL RATE	B		B						NF 32
V79R1846C	RGA 4 PITCH RATE	B		B						NF 32
V79R1847C	RGA 4 YAW RATE	B		B						LETTER
V9CWC2225C	TIME TAG OF SHUTTLE STATE	P	VCTR RST	P	T-RESET					LETTER
V9DU02544C	MSBLS RANGE RESID RATIO ALLOWED	B		B	DISP-SIG(4)					NF 23
V9DU02554C	MSBLS AZIMUTH RESID RATIO ALLOWED	B		B	DISP-SIG(5)					NF 21
V9DU02564C		B		B	DISP-SIG(6)					NF 21
V9DU02574C		B		B	DISP-SIG(6)					NF 21
V9DU02584C		B		B	DISP-SIG(7)					NF SCRP
V9DU02594C	COVARIANCE MATRIX ELEMENT	B	1-1	B	E(1,1)					NF 32
V9DU02604C	COVARIANCE MATRIX ELEMENT	B	2-2	B	E(2,2)					NF 32
V9DU02614C	COVARIANCE MATRIX ELEMENT	B	3-3	B	E(3,3)					NF 32
V9DU02624C	COVARIANCE MATRIX ELEMENT	B	4-4	B	E(4,4)					NF 32
V9DU02634C	COVARIANCE MATRIX ELEMENT	B	5-5	B	E(5,5)					NF 32
V9DU02644C	COVARIANCE MATRIX ELEMENT	B	6-6	B	E(6,6)					NF 32
V9DU02654C	DRAG ALT RESIDUAL	B		B	DISP-DEL(4)					NF 32
V9DU02664C	DRAG ALT EDIT RATIO	B		B	DISP-SIG(4)					NF 32
V9DU02674C	SNAPPED TACAN BRG DG	P		P						NF 23
V9DU02684C	TACAN/SHUTTLE ELEV ANG	B		B	ELEV-ANG					NF 23
V9DU02694C	BODY ROLL ATTITUDE EULER ANGLE	B		B	PHI					NF 23
V9DU02704C	BODY PITCH ATTITUDE EULER ANGLE	B		B	THETA					NF 23
V9DU02714C	IMU SELECTION FILTER COMMAND	B		B	IMU-SFC(1)					NF 23
V9DU02724C	IMU SELECTION FILTER COMMAND	B		B	IMU-SFC(1)					NF 23
V9DU02734C	FAULT DETECTED BUT NT IDENT.	B		B	IMU-FAULT-DETECT					NF 23
V9DU02744C	FAULT DETECTED BUT NT IDENT.	B		B	IMU-FAULT-DETECT					NF 23
V9DU02754C	FAULT DETECTED BUT NT IDENT.	B		B	IMU-FAULT-DETECT					NF 23
V9DU02764C	CRE, IMU SELECT CONTROL	B		B	IMU-SFC(2)					DE S
V9DU02774C	IMUCOMBINED STATUS FLAG	B		B	IMU-SFC(2)					NF 23
V9DU02784C	MSBLS SELECTION FILTER COMMA	B		B	IMU-STATUS					NF 23
V9DU02794C	GENERAL NAV SENSOR EDIT INDICATOR	B		B	SENSOR-EDIT(1)					NF 23
V9DU02804C	GENERAL NAV SENSOR EDIT INDICATOR	B		B	SENSOR-EDIT(1)					NF 23
V9DU02814C	IMU ATTITUDE STATUS	B		B	IMU-ATT-STATUS					DE S
V9DU02824C	IMU DELTA V STATUS	P		P	IMU-VEL-STATUS					NF 23
V9DU02834C	GPC 1 STATUS	B		B						NF 23
V9DU02844C	DEU 1 RESPONSE	B	WD16 [CHECKSUM]	B						NF 23
V9DU02854C	DEU 2 RESPONSE	B	WD16 [CHECKSUM]	B						NF 23
V9DU02864C	DEU 3 RESPONSE	B	WD16 [CHECKSUM]	B						NF 23
V9DU02874C	DEU 4 RESPONSE	B	WD16 [CHECKSUM]	B						NF 23
V9DU02884C	SELECT TACAN 1	B		B	TACAN-SFC-1					NF 23
V9DU02894C	SELECT TACAN 2	B		B	TACAN-SFC-2					NF 23
V9DU02904C	SELECT TACAN 3	B		B	TACAN-SFC-3					NF 23
V9DU02914C	UPP ACCUM DELV	P		P	V-IMU-OLC(1)					NF 23
V9DU02924C	UPP ACCUM DELV	P		P	V-IMU-OLC(1)					NF 23
V9DU02934C	UPP ACCUM DELV	P		P	V-IMU-OLC(2)					NF 23
V9DU02944C	UPP ACCUM DELV	P		P	V-IMU-OLC(2)					NF 23
V9DU02954C	UPP ACCUM DELV	P		P	V-IMU-OLC(2)					NF 23
V9DU02964C	UPP ACCUM DELV	P		P	V-IMU-OLC(2)					NF 23
V9DU02974C	UPP ACCUM DELV	P		P	V-IMU-OLC(3)					NF 23
V9DU02984C	UPP ACCUM DELV	P		P	V-IMU-OLC(3)					NF 23

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DRIVE - COMPARING SECOND LOADING TAPE FROM IDM

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HML NO.	NOMENCLATURE	U/C	COMMENTS	FORMAT K 21 R	FORMAT K 22 R	FORMAT K 23 R	FORMAT K 32 R	FORMAT K 12 R	FORMAT K 13 R	S/CODE
V95L7212C	UPP ACCUM DELV	F	V-IMU-GLD(3)	0	.0	0	1.0	0	.0	NF 32
V95H0611C	PREDICTED STATE VECTOR	U	R-PRED-FINAL(1)	0	.0	0	.0	0	1.0	NF 32
V95H0612C	PREDICTED STATE VECTOR	B	R-PRED-FINAL(2)	0	.0	0	.0	0	1.0	NF 32
V95H0613C	PREDICTED STATE VECTOR	B	R-PRED-FINAL(3)	0	.0	0	.0	0	1.0	NF 32
V95H0614C	PREDICTED STATE VECTOR	B	V-PRED-FINAL(1)	0	.0	0	.0	0	1.0	NF 32
V95H0615C	PREDICTED STATE VECTOR	B	V-PRED-FINAL(2)	0	.0	0	.0	0	1.0	NF 32
V95H0616C	PREDICTED STATE VECTOR	B	V-PRED-FINAL(3)	0	.0	0	.0	0	1.0	NF 32
V95H0844C	TIME OF PREDICTED VECTOR	B	T-PREDICT-FINAL	0	.0	1.0	.0	0	1.0	NF 22
V95H0844C	TIME OF PREDICTED VECTOR	B	T-PREDICT-FINAL	0	.0	1.0	.0	0	1.0	NF 32
V95X0872X	IMU DELTA V USE FLAG	B	USE-IMU-DATA	0	.0	1.0	.0	0	.0	NF 22
V95H3J01C	ADS CORRECTED PRESSURE ALTITUDE	B		1.0	0	1.0	.0	0	.0	NF 33
V95P3011C	GN+C DYNAMIC PRESSURE	B	GBAR	1.0	0	1.0	.0	0	.0	NF 33
V95H3J21C	GN+C ANGLE OF ATTACK	B	ALPHA-N	1.0	0	1.0	.0	0	.0	NF 33
V95L3C29C	GN+C MACH NUMBER	B	MACH	1.0	0	1.0	.0	0	.0	NF 33
V95X3111X	PRESSURE ALTITUDE DATA GOOD FLAG	B		1.0	0	1.0	.0	0	.0	NF 23
V95X3112X	ADS MACH JUMP FLAG	B		0	0	1.0	.0	0	.0	NF 23
V95J4925C	-Z ST STAR IDENT INDICATION	B	STAR-ID-1(1)	0	.0	1.0	.0	0	1.0	NF 32
V95J4926C	-Y ST STAR IDENT INDICATION	B	STAR-ID-1(2)	0	.0	1.0	.0	0	1.0	NF 32
V95J4929C	-Z ST STATUS INDICATION	B	STATUS(1)	0	.0	1.0	.0	0	1.0	NF 32
V95J4930C	-Y ST STATUS INDICATION	B	STATUS(2)	0	.0	1.0	.0	0	1.0	NF 32
V95J4960C	-Z ST OUTPUT DELTA ANGLE	B	D-ANG(1)	0	.0	1.0	.0	0	1.0	LETTER
V95J4960C	-Z ST OUTPUT DELTA ANGLE	B	D-ANG(1)	0	.0	1.0	.0	0	1.0	LETTER
V95J4960C	-Z ST OUTPUT DELTA ANGLE	B	D-ANG(1)	0	.0	1.0	.0	0	1.0	LETTER
V95J4961C	-Y ST OUTPUT DELTA ANGLE	B	D-ANG(2)	0	.0	1.0	.0	0	1.0	LETTER
V95J4961C	-Y ST OUTPUT DELTA ANGLE	B	D-ANG(2)	0	.0	1.0	.0	0	1.0	LETTER
V95J4961C	-Y ST OUTPUT DELTA ANGLE	B	D-ANG(2)	0	.0	1.0	.0	0	1.0	LETTER
V95H7000C	RADAR ALTIMETER TIME	P	RA-TIME	0	1.0	0	.0	0	1.0	NF 21

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@FIN

APPENDIX B  
PROGRAM AND FLOW LISTING

@RUN,R/T 175SAM,FM8/1301G,FM8-A26782,6

@ASG,A SOWNLT.

@ASG,A OFTDWL.

@ASG,A UPDDLTL.

@ASG,T TAPEA.

@ASG,T TAPEB.

@ASG,T TAPEC.

@ASG,T TAPED.

@ASG,T TAPEE.

@ASG,T 25.

@USE 8.,TAPEA.

@USE 9.,TAPeB.

@USE 11.,TAPeC.

@USE 13.,TAPED.

@USE 15.,TAPeE.

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@DATA,I TAPEA.  
DATA T7 RL70-5 03/20-11:27:24  
END DATA. IMAGE COUNT: 582

@DATA,I TAPEB.  
DATA T7 RL70-5 03/20-11:27:28  
END DATA. IMAGE COUNT: 3796

@DATA,I TAPEC.  
DATA T7 RL70-5 03/20-11:27:58  
END DATA. IMAGE COUNT: 3533

@DATA,I TAPED.  
DATA T7 RL70-5 03/20-11:28:40  
END DATA. IMAGE COUNT: 4236

@DATA,I TAPEE.  
DATA T7 RL70-5 03/20-11:29:29  
END DATA. IMAGE COUNT: 4033

FOR S UPDU LT. COMPONE, COMPONE  
 FOR S0E3-03/20/79-11:30:36 (12)

MAIN PROGRAM

STORAGE USED: CODE(1) 031030; DATA(C) 000330; BLANK COMMON(2) 000000

EXTERNAL REFERENCES (BLOCK, NAME)

0003 NINHTR\$  
 0004 NWDUS  
 0005 NIO2\$  
 0006 NROUS  
 0007 NIO3\$  
 0010 NIO1\$  
 0011 NWEF\$  
 0012 NRELS  
 0013 NSTOPS

STORAGE ASSIGNMENT (BLOCK, TYPE, RELATIVE LOCATION, NAME)

0001	C00017	1L	0001	000574	10L	0000	000125	100F	0000	000200	101F	0000	000261	102F
0001	001466	120L	0001	000250	13L	0001	000537	14L	0001	001024	15L	0001	001061	18L
0001	001143	19L	0001	000104	2L	0001	000135	20L	0000	000256	200F	0000	000241	201F
0001	000422	21L	0001	000707	22L	0001	001174	23L	0001	000213	3L	0001	001215	300L
0001	001346	33L	0001	000371	4L	0001	001311	40L	0001	000765	405L	0001	000500	5L
0001	001252	50L	0001	000443	500L	0001	000730	501L	0001	000656	6L	0001	000156	600L
0000	000267	617F	0000	000244	616F	0001	000307	7L	0000	000302	700F	0000	000301	701F
0001	001513	801L	0001	001624	802L	0001	000344	95L	0001	000631	91L	0001	001116	92L
0001	001403	93L	0001	001465	957L	0001	001623	958L	0000	R 000070	CODE	0000	D 000052	FILE
0000	R 000026	FNOMN	0000	R 000022	HALN	0000	I 000104	K6S	0000	I 000071	K8SF	0000	I 000073	K8SF1
0000	R 000075	KBSF2	0000	I 000077	KBSF3	0001	I 000110	KBS1	0000	I 000114	KCS2	0000	I 000120	KBS3
0000	R 000122	KLINC	0000	I 000123	KLINC2	0000	I 000066	KMMLF	0000	I 000067	KMMLF1	0000	I 000102	KMMLT
0000	R 000103	KMMLT1	0000	I 000106	KMMLT2	0000	I 000107	KMMLT3	0000	I 000112	KMMLT4	0000	I 000113	KMMLT5
0000	R 000116	KMMLT6	0000	I 000117	KMMLT7	0000	I 000064	KSTOP	0000	I 000065	KSTOP2	0000	I 000101	NOHTCH
0000	R 000105	RATE	0000	R 000072	RATEF	0000	R 000074	RATEF1	0000	R 000076	RATEF2	0000	R 000100	RATEF3
0000	R 000111	RATE1	0000	R 000115	RATE2	0000	R 000121	RATE3	0000	R 000124	SC	0000	R 000054	SC1
0000	R 000055	SC2	0000	R 000060	SC21	0000	R 000061	SC22	0000	R 000062	SC23	0000	R 000056	SC3
0000	R 000063	SC32	0000	R 000057	SC4	0000	D 000042	TAPE	0000	D 000044	TAPE1	0000	D 000046	TAPE2
0000	D 000050	TAPE3	0000	R 000000	TNOMN	0000	R 000006	TNOMN1	0000	R 000014	TNOMN2	0000	R 000034	TNOMN3

B-3

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00155      73*      2      CONTINUE
00156      74*      200     READ(9,200,END=120)KMMLT,KMMLT1
00162      75*      200     FORMAT(2X,I2,1X,I4,123X)
00163      76*      102     READ(3J,102)TAPE,TNOMN,KBS,RATE
00171      77*      102     FORMAT(1X,A9,2X,5A6,A4,1X,I1,4X,F4.0,76Y)
00172      78*      IF(RATE .EQ. 13.0)RATE = 12.5
00172      79*
00172      80*      C ***** COMPARE NUMERIC PART OF MHL NO BTWN REQ'T AND TAPE *****
00172      81*      C (FORMAT 21)
00172      82*
00174      83*      20      CONTINUE
00175      84*      IF(KMMLF .GT. KMMLT)GO TO 2
00177      85*      IF(KMMLF .LT. KMMLT)GO TO 000
00201      86*      IF(KMMLF1 .GT. KMMLT1)GO TO 2
00203      87*      IF(KMMLF1 .LT. KMMLT1)GO TO 600
00205      88*      GO TO 3
00206      89*      600     CONTINUE
00206      90*      C ***** MASTER MEASUREMENT NUMBER IS MISSING FROM TAPE 21 *****
00207      91*      IF(RATEF .EQ. 0.0)GO TO 90
00211      92*      WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00211      93*      1      KBSF2,RATEF2,KBSF3,RATEF3,SC21
00230      94*      NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00231      95*      GO TO 90
00232      96*      3      CONTINUE
00232      97*      C
00232      98*      C *** SEARCH FOR ALPHANUMIC DISC. BTWN FILE AND TAPE ON FORMAT 21 ***
00232      99*      C
00233      100*     IF(FILL .EQ. TAPE)GO TO 13
00235      101*     WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00235      102*     1      KBSF2,RATEF2,KBSF3,RATEF3,SC3
00235      103*     NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00235      104*     CONTINUE
00235      105*     C ***** SEARCH FOR RATE DISC. BTWN FILE AND TAPE *****
00256      106*     IF(RATEF .EQ. 0.0)GO TO 90
00250      107*     IF(RATEF .EQ. RATE)GO TO 7
00262      108*     WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00262      109*     1      KBSF2,RATEF2,KBSF3,RATEF3,SC2
00301      110*     NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00302      111*     CONTINUE
00302      112*     C ***** SEARCH FOR NOMEN. DISC. BTWN FILE AND TAPE *****
00303      113*     IF(FNOMN .EQ. TNOMN)GO TO 90
00305      114*     WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00305      115*     1      KBSF2,RATEF2,KBSF3,RATEF3,SC4
00324      116*     NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00325      117*     90     CONTINUE
00325      118*     C
00325      119*     C ***** COMPARE TO SEE IF TAPE IS GREATER THAN FORMAT 22 *****
00325      120*     C
00326      121*     1      IF((KMMLT2 .GT. KMMLF) .OR. ((KMMLT2 .EQ. KMMLF) .AND.
00326      122*     (KMMLT3 .GE. KMMLF1)))GO TO 21
00326      123*     C
00326      124*     C ***** READ FORMAT 22 DATA FROM TAPE *****
00326      125*     C
00330      126*     4      CONTINUE
00331      127*     READ(11,200,END=120)KMMLT2,KMMLT3
00335      128*     READ(30,102)TAPE1,TNOMN1,KBS1,RATE1
00343      129*     IF(RATE1 .EQ. 13.0)RATE1 = 12.5
00343      130*     C
00343      131*     C ***** COMPARE NUMERIC PART OF MHL NO. BTWN REQ'T AND TAPE *****

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00344	132*	C	(FORMAT 22)	000414
00345	133*	C		000414
00346	134*	C	21 CONTINUE	000422
00350	135*		IF(KMMLF .GT. KMMLT2)GO TO 4	000422
00352	136*		IF(KMMLF .LT. KMMLT2)GO TO 500	000425
00354	137*		IF(KMMLF1 .GT. KMMLT3)GO TO 4	000431
00356	138*		IF(KMMLF1 .LT. KMMLT3)GO TO 500	000435
00357	139*		GO TO 5	000441
00357	140*	C	500 CONTINUE	000443
00357	141*	C	***** MASTER MEASUREMENT NUMBER IS MISSING FROM TAPE 22 *****	000443
00360	142*		IF(RATEF1 .EQ. 0.0)GO TO 91	000443
00362	143*		WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,	000444
00362	144*	1	KBSF2,RATEF2,KBSF3,RATEF3,SC2	000444
00401	145*		NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH	000474
00402	146*		GO TO 91	000476
00403	147*	5	CONTINUE	000500
00403	148*	C	*** SEARCH FOR ALPHANUMERIC DISC. BTWN FILE AND TAPE ON FORMAT 22 ***	000500
00403	149*	C		000500
00403	150*	C		000500
00404	151*		IF(RATEF1 .EQ. 0.0)GO TO 91	000500
00406	152*		IF(FILE .EQ. TAPE1)GO TO 14	000501
00410	153*		WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,	000504
00410	154*	1	KBSF2,RATEF2,KBSF3,RATEF3,SC3	000504
00427	155*		NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH	000534
00430	156*	14	CONTINUE	000537
00430	157*	C	***** SEARCH FOR RATE DISC. BTWN FILE AND TAPE *****	000537
00431	158*		IF(RATEF1 .EQ. RATE1)GO TO 10	000537
00433	159*		WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,	000541
00433	160*	1	KBSF2,RATEF2,KBSF3,RATEF3,SC2	000541
00452	161*		NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH	000571
00453	162*	10	CONTINUE	000574
00453	163*	C	***** SEARCH FOR NOMEN. DISC. BTWN FILE AND TAPE *****	000574
00454	164*		IF(FNOMN .EQ. TNOMN1)GO TO 91	000574
00456	165*		WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,	000576
00456	166*	1	KBSF2,RATEF2,KBSF3,RATEF3,SC4	000576
00475	167*		NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH	000626
00476	168*	91	CONTINUE	000631
00476	169*	C	***** COMPARE TO SEE IF TAPE IS GREATER THAN FORMAT 23 *****	000631
00476	170*	C		000631
00477	171*	C		000631
00477	172*		IF((KMMLT4 .GT. KMMLF) .OR. ((KMMLT4 .EQ. KMMLF) .AND.	000631
00477	173*	1	(KMMLT5 .GE. KMMLF1)))GO TO 22	000631
00477	174*	C	***** READ FORMAT 23 DATA FROM TAPE *****	000631
00477	175*	C		000631
00477	176*	C		000631
00501	177*	6	CONTINUE	000656
00502	178*		READ(13,200,END=120)KMMLT4,KMMLT5	000656
00506	179*		READ(130,102)TAPE2,TNOMN2,KBS2,RATE2	000665
00514	180*		IF(RATE2 .EQ. 13.0)RATE2 = 12.5	000701
00514	181*	C		000701
00514	182*	C	***** COMPARE NUMERIC PART OF MML NO. BTWN REQ'T AND TAPE *****	000701
00514	183*	C	(FORMAT 23)	000701
00514	184*	C		000701
00516	185*	22	CONTINUE	000707
00517	186*		IF(KMMLF .GT. KMMLT4)GO TO 6	000707
00521	187*		IF(KMMLF .LT. KMMLT4)GO TO 501	000712
00523	188*		IF(KMMLF1 .GT. KMMLT5)GO TO 6	000716
00523	189*		IF(KMMLF1 .LT. KMMLT5)GO TO 501	000722
00527	190*		GO TO 405	000726

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501 CONTINUE  
C ***** MASTER MEASUREMENT NUMBER IS MISSING FROM TAPE 23 *****  
IF(RATEF2.EQ.0.0)GO TO 92  
WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,  
1 KBSF2,RATEF2,KBSF3,RATEF3,SC3  
NOMTCH = 1 & THIS FLAG SETTING INDICATES A NON-MATCH  
GO TO 92  
405 CONTINUE  
C  
C *** SEARCH FOR ALPHANUMERIC DISC BTWN FILE AND TAPE ON FORMAT 23 ***  
C  
IF(RATEF2.EQ.0.0)GO TO 92  
IF(FILE.EQ.TAPE2)GO TO 15  
WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,  
1 KBSF2,RATEF2,KBSF3,RATEF3,SC3  
NOMTCH = 1 & THIS FLAG SETTING INDICATES A NON-MATCH  
CONTINUE  
15  
C ***** SEARCH FOR RATE DISC. BTWN FILE AND TAPE *****  
IF(RATEF2.EQ.0.0)GO TO 18  
WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,  
1 KBSF2,RATEF2,KBSF3,RATEF3,SC2  
NOMTCH = 1 & THIS FLAG SETTING INDICATES A NON-MATCH  
CONTINUE  
18  
C ***** SEARCH FOR NOMEN. DISC. BTWN FILE AND TAPE *****  
IF(FNOMN.EQ.FNOMN2)GO TO 92  
WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,  
1 KBSF2,RATEF2,KBSF3,RATEF3,SC4  
NOMTCH = 1 & THIS FLAG SETTING INDICATES A NON-MATCH  
CONTINUE  
92  
C  
C ***** COMPARE TO SEE IF TAPE IS GREATER THAN FORMAT 32 *****  
C  
IF((KMMLT6.GT.KMMLF).OR.((KMMLT6.EQ.KMMLF).AND.  
1 (KMMLT7.GE.KMMLF1)))GO TO 23.  
C  
C ***** READ FORMAT 32 DATA FROM TAPE *****  
C  
19 CONTINUE  
READ(15,200,END=120)KMMLT6,KMMLT7  
READ(30,102)TAPE3,INOMN3,KBS3,RATE3  
IF(RATE3.EQ.13.0)RATE3 = 12.5  
C  
C ***** COMPARE NUMERIC PART OF MML NO. BTWN REQ'T AND TAPE *****  
C  
C  
C  
23 CONTINUE  
IF(KMMLF.GT.KMMLT6)GO TO 19  
IF(KMMLF.LT.KMMLT6)GO TO 300  
IF(KMMLF1.GT.KMMLT7)GO TO 19  
IF(KMMLF1.LT.KMMLT7)GO TO 300  
GO TO 50  
300 CONTINUE  
C ***** MASTER MEASUREMENT NUMBER IS MISSING FROM TAPE 32 *****  
IF(RATEF3.EQ.0.0)GO TO 93  
WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,  
1 KBSF2,RATEF2,KBSF3,RATEF3,SC32  
NOMTCH = 1 & THIS FLAG SETTING INDICATES A NON-MATCH.  
GO TO 93  
50 CONTINUE
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00725 250* C
00725 251* C *** SEARCH FOR ALPHANUMERIC DISC BTWN FILE AND TAPE ON FORMAT 32 ***
00725 252* C
00726 253* IF(RATEF3 .EQ. 0.0)GO TO 93
00730 254* IF(FILE .EQ. TAPE3)GO TO 40
00732 255* WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00732 256* KBSF2,RATEF2,KBSF3,RATEF3,SC3
00751 257* 1
00752 258* NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00752 259* CONTINUE
00753 260* C ***** SEARCH FOR RATE DISC. BTWN FILE AND TAPE *****
00755 261* IF(RATEF3 .EQ. RATE3)GO TO 33
00755 262* WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
00774 263* KBSF2,RATEF2,KBSF3,RATEF3,SC2
00775 264* 1
00775 265* NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
00776 266* CONTINUE
00776 267* C ***** SEARCH FOR WOMEN. DISC. BTWN FILE AND TAPE *****
01000 268* IF(FNOMN .EQ. FNOMN3)GO TO 93
01000 269* WRITE(25,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
01017 270* KBSF2,RATEF2,KBSF3,RATEF3,SC4
01020 271* 1
01020 272* NOMTCH = 1 @ THIS FLAG SETTING INDICATES A NON-MATCH
01020 273* CONTINUE
01020 274* C ***** MATCHES FOR FORMAT 21 AND 22 AND 23 AND 32 *****
01021 275* C
01023 276* IF(NOMTCH .EQ. 1 ) GO TO 1 @ CHECKING FOR NON-PRINTING MATCHES
01024 277* KLINE = KLINE + 1 @ INCREMENTING LINE COUNT
01024 278* WRITE(6,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
01043 279* KBSF2,RATEF2,KBSF3,RATEF3,SC1
01043 280* 617
01043 281* 1
01043 282* FORMAT(1X,A9,1X,5A6,A4,1X,A1,1X,3A6,A4,2X,4(I1,1X,F4.1,3X),
01044 283* 18X,A6)
01046 284* C ***** PAGE COUNT - ADVANCING TO THE TOP OF THE NEXT PAGE *****
01050 285* C
01051 286* IF(KLINE .LT. KSTOP)GO TO 957
01053 287* IF(KSTOP .EQ. 48)KSTOP = 54
01054 288* KLINE = 0 @ INITIALIZING LINE COUNT
01056 289* WRITE(6,701)
01056 290* FORMAT(1H1)
01056 291* WRITE(6,101)
01056 292* GO TO 1
01057 293* C ***** DUMPING NON-MATCHING VARIABLES *****
01060 294* C
01062 295* 120 CONTINUE
01063 296* WRITE(6,701)
01065 297* END FILE 25
01066 298* WRITE(6,700)
01070 299* FORMAT(1/79X,'NON MATCHING VARIABLES --- SEE SEARCH CODE'//)
01071 300* WRITE(6,101)
01072 301* R: WIND 25
01072 302* 801 KLINE2 = KLINE2 + 1 @ INCREMENTING LINE COUNT FOR NON-MATCHES
01111 303* READ(25,617,END=802)FILE,FNOMN,CODE,HALN,KBSF,RATEF,
01111 304* KBSF1,RATEF1,KBSF2,RATEF2,KBSF3,RATEF3,SC
01111 305* 1
01111 306* WRITE(6,617)FILE,FNOMN,CODE,HALN,KBSF,RATEF,KBSF1,RATEF1,
01130 307* KBSF2,RATEF2,KBSF3,RATEF3,SC
01130 308* C ***** PAGE COUNT - ADVANCING TO THE TOP OF THE NEXT PAGE *****
IF(KLINE2 .LT. KSTOP2)GO TO 958

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01132	309*		IF(KSTOP2.EQ.48)KSTOP? = 53	001602
01134	311*		KLINL2 = 0 @ INITIALIZING LINE COUNT	001607
01135	311*		WRITE(6,701)	001610
01137	312*		WRITE(6,101)	001615
01141	312*	258	GO TO 801	001621
01142	314*	802	CONTINUE	001624
01143	315*		STOP	001624
01144	316*		END	001627

END OF COMPILATION: NO DIAGNOSTICS.



MAP, IS .SYH, .ABS  
 MAP28R2 RL71-3 03/20/79 11:30:55 (,0)  
 1. IN COMPONE  
 2. IN NBFOS

ADDRESS LIMITS 001000 013534 5469 IBANK WORDS DECIMAL  
 040000 050453 4396 DBANK WORDS DECIMAL  
 STARTING ADDRESS 011705

SEGMENT	SHAINS	001000	013534	040000	050453
NFTCHS/FOR-E2	\$(1)	001000	001262	\$(2)	040000 040013
NBDCVS/FOR-E3	\$(1)	001263	001413	\$(2)	040014 040071
NFTV3/FOR-E2	\$(1)	001414	001436		
NCNVT3/FOR-8	\$(1)	001437	001660	\$(2)	040072 040166
NBFJDS				\$(2)	040167 042414
NCLOS3/FOR-E3	\$(1)	001661	002116	\$(2)	042415 042442
NSWTC3/FOR-9	\$(1)	002117	002143		
NWBLK3/FOR-8	\$(1)	002144	002255		
NBSBL3/FOR-E3	\$(1)	002256	002312		
NUPJA3/FOR-8	\$(1)	002313	002346		
NPBLK3/FOR-E2	\$(1)	002347	002371		
NININ3/FOR-C3	\$(1)	002372	002627	\$(2)	042443 042444
NINPT3/FORE3-CORR	\$(1)	002650	004224	\$(2)	042445 042500
NOTIN3/FOR-E3	\$(1)	004225	004321	\$(2)	042501 042504
NGUT3/FOR-E3-UPD	\$(1)	004522	006235	\$(2)	042505 042546
NFMT3/FOR-E3	\$(1)	006236	007120	\$(2)	042547 042623
NIOER3/FOR-E3	\$(1)	007121	007340	\$(2)	042624 042773
NFCHK3/FOR-E3	\$(1)	007341	010332	\$(2)	042774 043144
	\$(3)	010333	010333	\$(4)	043145 043216
NTAB3/E3-JSC				\$(2)	043217 043256
FORCOM3/FORFTN				\$(2)	043257 043264
NERR3/FOR-E3	\$(1)	010334	010675	\$(2)	043265 043444
LRU3/SYS72-8					
NERCOM3/FOR-TE3	\$(1)	010676	010755	\$(2)	043445 043460
FORVCOM3/FOR-TE3				\$(2)	043461 043470
NSTOP3/FORE3-JSC	\$(1)	010756	011055	\$(2)	043471 043542
NRWND3/FOR-E3	\$(1)	011056	011141	\$(2)	043543 043554
NWFF3/FOR-E2	\$(1)	011142	011347	\$(2)	043555 043574
NIBUF3/FOR-E2	\$(1)	011350	011407	\$(2)	043575 043575
NIER3/FOR-E3	\$(1)	011410	011566	\$(2)	043576 043715
NOBUF3/FOR-8	\$(1)	011567	011627		
NINTR3/FORE3-RLIB	\$(1)	011630	011704	\$(2)	043716 043733
BLANK\$COMMON(COMMONBLOCK)	\$(1)				
COMPONE	\$(1)	011705	013534	\$(0)	043734 044263
NBFJBS				\$(2)	BLANK\$COMMON
				\$(2)	044264 050453

SYSS\*RLIBS. LEVEL 72-8  
 END MAP

#HDG DRIVE - COMPARING SECOND LOADING TAPE FROM IBM

DRIVE - COMPARING SECOND LOADING TAPE FROM IBM  
 #XOT .ABS

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I-----[*****]
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I-----[*** **C]
I-----[**** (DRIVE) ****C]
I-----[*****]
I-----[***** DOWNLIST REQUIREMENT]
I-----[INTEGRATED ****C]
I-----[***** VERIFICATION AND]
I-----[EVALUATION ****C]
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.....
: DIMENSION INOMN(6), TNOMN1(6), TNOMN2(6),
: HALN(4), FNOMN(6), TNOMN3(4)
: DOUBLE PRECISION TAPE, TAPE1, TAPE2, TAPE3,
: FILE
: DATA SC1, SC2, SC3, SC4, SC21, SC22, SC23,
: SC32, 6HMATCH, 6HRATE, 6HLETTER, 6HDESCRP,
: 6HNF 21, 6HNF 22, 6HNF 23, 6HNF 32 /
: .....

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WRITE(6,100)

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I-----[100 FORMAT(1H1,52X,'OFT]
I-----[DOWNLIST REQUIREMENTS',21X,1']
I-----[CPN VP707060023501R DATE 12-22-78]
I-----[//,47X,2'DOWNLIST FORMAT 21,22]
I-----[23 32 12 13',9X,3'DBFN M2X455]
I-----[REPORT NO MML-ML-800 PAGE 1'//,
I-----[31X,4'LAUNCH-RTLS*ON-ORBIT*
I-----[ENTRY*FLIGHT/CONTROL*ASCENT
I-----[BACKUP*ENTRY BAC SKUP'///)

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