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**TECHNOLOGY INSERTION-ENGINEERING SERVICES
 PROCESS CHARACTERIZATION
 TASK ORDER NO. 1
 (BLOCK 1)**

DATABASE DOCUMENTATION BOOK

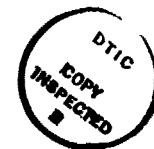
SA-ALC

MATPSS

**CONTRACT SUMMARY REPORT
 14 AUGUST 1989**

**CONTRACT NO. F33600-88-D-0567
 CDRL SEQUENCE NO. B008**

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MCDONNELL DOUGLAS
McDonnell Douglas Missile Systems Company
St. Louis, Missouri 63166-0516 (314) 232-0232

Distribution Statement A. Approved for public release;
 distribution is unlimited.

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**TECHNOLOGY INSERTION-ENGINEERING SERVICES
 PROCESS CHARACTERIZATION
 TASK ORDER NO. 1
 (BLOCK 1)**

DATABASE DOCUMENTATION BOOK

SA-ALC

MATPSI

**CONTRACT SUMMARY REPORT
 14 AUGUST 1989**

**CONTRACT NO. F33600-88-D-0567
 CDRL SEQUENCE NO. B008**

Accession For	
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Dist	Avail and/or Special
A-1	



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TECHNOLOGY INSERTION ENGINEERING SERVICES

PROCESS CHARACTERIZATION

TASK ORDER NO. 1

DATA DOCUMENTATION BOOK FOR RCC MATPSS

SA - ALC

1989

1.0 IDENTIFICATION OF RCC MATPSS

RCC MATPSS HAS BEEN IDENTIFIED
BY STATEMENT OF WORK OF CONTRACT
F33600-88-D-0567 FOR PROCESS
CHARACTERIZATION.

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2.0 GENERAL INFORMATION

MATPSS IS A RESOURCE CONTROL CENTER (RCC) LOCATED IN TWO BUILDINGS - 329 ASSEMBLY SHOP AND 340 TEST CELLS - ALONG WITH OTHER RCC'S (MATPSI AND MATPGB).

THE PRIMARY WORKLOAD IN MATPSS CONSISTS OF MISTR END ITEMS. THE WORKLOAD HAS BEEN STABLE FOR THE LAST FEW YEARS. THE 80/20 LIST WAS ESTABLISHED TO IDENTIFY THE SPECIFIC PART CONTROL NUMBERS (PCN) TO BE CHARACTERIZED IN TASK ORDER NO. 1.

THE PCN NUMBERS AND END ITEMS NOUNS ARE AS FOLLOW :

08004A F15 L/H AIRFRAME MOUNTED AUXILIARY DRIVE (AMAD)

08005A F15 R/H AIRFRAME MOUNTED AUXILIARY DRIVE (AMAD)

08006A F15 JET FUEL STARTER (JFS)

13096A F16 JET FUEL STARTER (JFS)

08007A F15 CENTRAL GEARBOX (CGB)

12712A F16 ACCESSORY DRIVE GEARBOX (ADG)

04542A B52G CPS02 MOD. STARTER

10598A F4C ATSC100-87 STARTER

10718A B52H ATSC100-97-97A STARTER

MATPSS WILL BE DISCUSSED FURTHER IN

SECTION 2.1 THROUGH 2.8

2.1 FACILITY LAYOUT DRAWING

THE FACILITY LAYOUT DRAWING FOR BUILDING 329 DOES NOT REPRESENT AS-IS CONDITIONS FOR THE EQUIPMENT LAYOUT IN THE CENTRAL GEARBOX AND ACCESSORY DRIVE GEARBOX ASSEMBLY AREAS.

MATPSS RCC ASSEMBLY OF THE ABOVE NINE END ITEMS IS ACCOMPLISHED IN FIVE INDEPENDENT SHOPS AS WELL AS IN CONJUNCTION WITH OTHER RCC'S, MATPSI AND MATPSS IN THE EASTERN HALF OF BUILDING 329.

MATPSS OCCUPIES 9920 SQUARE FEET, (SEE LAYOUT DRAWING).

THE FACILITY LAYOUT DRAWING FOR BUILDING 340 IS CURRENT AND REPRESENTS THE AS-IS CONDITION. THERE ARE 21 TEST CELLS IN BUILDING 340, OF WHICH 10 ARE DEDICATED TO MATPSS FOR THE TESTING OF THE ABOVE 9 END ITEMS. THESE 10 TEST CELLS OCCUPY 4905 SQUARE FEET. REFERENCE THE LAYOUT DRAWING ATTACHED.

2.2

EQUIPMENT

MATPSS ASSEMBLY IN BUILDING 329 IS COMPRISED MAINLY OF SMALL ASSEMBLY STANDS, SMALL INSTALLATION FIXTURES, WORK BENCHES, OVENS, ICE CHESTS AND TRANSPORTATION CARTS. MATPSS ASSEMBLY AND TEST OPERATIONS ARE PRECEDED BY MATPSI RECEIPT, DISASSEMBLY, INSPECTION, CLEANING AND BY PARTS POOL KITTING. THE EQUIPMENT ITEMS WITHIN MATPSS ASSEMBLY ARE APPROXIMATELY FIVE TO TEN YEARS OLD, AND ARE IN GOOD WORKING CONDITION.

MATPSS TEST IN BUILDING 340 IS COMPRISED TOTALLY OF TEST CELLS, TEST STANDS AND COMPUTERIZED CONTROL PANELS TO MONITOR AND RECORD TEST DATA.

2.2

EQUIPMENT CROSS REFERENCE LIST

DATE 06-02-89

PCN NO. 04542A, 10598A, 10718A

ALC SA

PART NAME STARTERS

RCC MATPSS

ASSEMBLY

PAGE 1 OF

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENTS
DPS02 R05 FINAL ASSY.				
N-1	6PT-83728	LOCATING RING	1	
N-2	6PT-81474	SWITCH SETTING FIX	2	
N-3	8871218-03	BEARING DRIVER	2	
N-4	6PT-82183	HOLDING FIXTURE	2	
N-5	6PT-80063	SPANNER WRENCH	3	
N-6	8871218-01	CONNECTOR DRIVER	2	
N-7	881A102	HOLDING FIXTURE	1	
N-8	6PT-46232	COMPRESSION FIXTURE	1	
N-9	835-423	ASSY. FIXTURE	1	
N-10	7359411	SHAFT HOLDER	1	
ATSC100-87 ASSEMBLY				
N-11	280012	HOLDER	4	
N-12	281236	PILOT SEAL	3	
N-13	284251-1-1	ALIGNMENT TOOL	1	
N-14	284252-1-1	SEAL HOLDER	1	
N-15	284253-1-1	BEARING DRIVER	1	
N-16	284255-1-1	SEAL DRIVER	2	
N-17	284267-1-1	HOLDER, PANEL ASSY.	5	
ATSC100-97-97A STARTER ASSY.				
N-18	281690-1	DRIVER	2	
N-19	284253-1-1	DRIVER	1	
N-20	284252-1-1	HOLDER	1	
N-21	280012	HOLDER	2	
N-22	281093	HOLDER	4	
N-23	280022	PILOT	2	
N-24	280292	SPECIAL WRENCH	2	
N-25	281257-2	DRIVER SEAL	3	
N-26	283543-1	ADAPTER	1	
TEST				
N-27	53E38-85/	TEST CELL	4	
N-28	NC116	TEST CELL	1	
N-29	53E38-7A	TEST CELL	2	

FILE 2.2.1

2.2

EQUIPMENT CROSS REFERENCE LIST

DATE 06-01-89

PCN NO. 00004A & 00005A

ALC SA

PART NAME AMAB

REC INT/SS

OPERATION RH & LH AMAB ASSEMBLY & TEST

PAGE 1 OF 3

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENTS
A-1	287951-1	SPLINED TORQUE WRENCH ADAPTER	2	
A-2	287959-1	SPLINED TORQUE WRENCH ADAPTER	2	
A-3	287951-1	SPLINED TORQUE WRENCH ADAPTER	2	
A-5	287966-2	SPLINED TORQUE WRENCH ADAPTER	1	
A-7	289602-1	SEAL DRIVER	1	
A-8	289639-2	SHAFT ASSEMBLY WRENCH	1	
A-9	291371-1	SHIM GAGE	2	
A-13	291398-1	SHIM GAGE	1	
A-14	291399-1	MOUNT STAND ADAPTER	7	
A-15	291400-1	MOUNT STAND	7	
A-17	291409-1	BEARING ADAPTER	2	
A-18	291416-1	BEARING DRIVER	2	
A-19	291419-1	BEARING DRIVER	2	
A-20	291422-1	BEARING INSTL.	2	
A-21	291423-1	BACKLASH TOOL	2	
A-25	291458-1	NUT TORQUE ADAPTER	2	
A-26	291442	FIXTURE	2	
A-27	291681-1	TEST FIXTURE	2	
A-28	291867-1	TUBE PLIERS	1	
A-30	291917-1	TORQUE WRENCH ADAPTER	1	
A-33	291959-1	SPANNER WRENCH	1	
A-36	293428-1	DECOUPLER LOADING FIXTURE	1	
A-37	293705-1	SEAL DRIVER	1	
A-41	8229010	HOLD DOWN	1	
A-44	LP2657-7	SNAP RING PLIERS	1	
A-47		TEST SET	1	

2.2

EQUIPMENT CROSS REFERENCE LIST

DATE 06-01-97

PCN NO. 00096A

A/C SA

PART NAME FIS JFS

REC 067PSS

OPERATION ASSEMBLY

PAGE 1 OF

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENT
6-00	0319622-01	ADAPTER	4	
6-101	HL-16.1	SYMMIC BALANCE, HOFFMAN	2	
6-102	297575-1	BALANCE KIT ROTATING	1	
6-14	297671-1	HOLDER, GEAR SHIFT SPLINES	2	
6-15	297687-1	HOLDER, TURBINE WHEEL	2	
6-16	297689-1	HOLDER, WHEEL PRESS	2	
6-17	297690-1	SLEEVE, BEARING ALIGNMENT	2	
6-18	297691-1	ADAPTER, TURBINE WRENCH, SPLINES	1	
6-21	297707-1	HOLDER, ROTATING ASSEMBLY	1	
6-22	297708-2	FIXTURE, SHAFT STRETCHING	1	
6-25	297719-1	PULLER, MECHANICAL COUPLING	1	
6-27	297727-1	HOLDER, NUT TORQUING	2	
6-28	297728-1	ADAPTER, NUT TORQUING	2	
6-30	297735-1	ADAPTER, TURBINE WRENCH, SPLINES	1	
6-32	297792-1	ADAPTER, MAINTENANCE STAND	13	
6-33	297406-1	STAND, MAINTENANCE, GEARBOX	13	
6-34	297461-1	DRIVER, BEARING	1	
6-35	297471-1	ADAPTER, TURBINE WRENCH	2	
6-36	297467-1	SUPPORT, DIFFUSER	2	
6-37	297468-1	DRIVER, SEAL FEELING	2	
6-38	297472-1	HOLDER, SPLINES, GEAR	2	
6-39	297461-1	HOLDER/DRIVER, GEAR	2	
6-43	297467-1	DRIVER, BEARING	2	
6-51	297908-1	REMOTE CHECKING, FIXTURE	1	
6-54	297312-1	HOLDER, DIFFUSER, NUT TORQUING	1	
6-55	297315-1	DRIVER, HOLDER, TRANSFER TUBE	2	
6-60	0221114-10	ADAPTER, TURBINE WRENCH	2	
6-61	0221115-10	INSTALLATION, BEARING	1	
6-62	0221117-10	INSTALLATION, BEARING OUTER RACE	1	
6-66	297715-1	GAGE, SHIM CHECKING	2	
6-81	297726-1	CHECKING, GAGE, INCLUSIVE	2	
L-93	297661-2	JFS/CGO TEST SET	2	
I-10		SEE CHEST	1	
I-5		OPEN	1	
I-6		SEE CHEST	1	
I-9		OPEN	1	

2.2

EQUIPMENT REFERENCE LIST

DATE 06-01-89

PCN NO. 08007A

ALC SA

PART NAME CGB

RCC MATPSS

OPERATION ASSEMBLY & TEST

PAGE 1 OF 3

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENTS
L-1	291400-1	ROLL OVER STAND	10	
L-2	291392-1	STAND ADAPTER	10	
L-3	293158-1	CLUTCH HOLDER	1	
L-6	293157-1	HOLDER	3	
L-7	X720A	SPECIAL WRENCH	2	
L-17	8140811	DRIFT	1	
L-23	8319608	HOLD FIXTURE	1	
L-28	289607-1	SPANNER WRENCH	4	
L-37	289031-1	WRENCH ADAPTER	1	
L-42	291444-1	SPLINED WRENCH	1	
L-43	291395-1	SHIM CHECKING GAGE	3	
L-44	291393-1	SHIM CHECKING GAGE	2	
L-45	291394-1	CHECKING GAGE	1	
L-46	291415-1	CHECKING GAGE	2	
L-47	8442023	SHIM GAGE	2	
L-48	8319611	SEAL EXPANDER	1	
L-49	293227-1	GUIDE	2	
L-50	8319627	ALIGNMENT TOOL	1	
L-51	289681-1	SPRING COMPRESSOR	2	
L-52	293228-1	BEARING HOLDER/DRIVER	1	
L-53	289657-1	ADAPTER, TORQUE WRENCH	1	
L-55	296251-1	TEST ADAPTER	3	
L-56	289665-1	BEARING HOLDER/DRIVER	2	
L-57	8319620	HOLDER	3	
L-58	296803-1	INSTALLATION/SEAL TOOL	1	
L-59	291194-1	SEAL DRIVER	1	
L-60	289384-1	SEAL PILOT	2	
L-62	291421-1	WRENCH ADAPTER/HOLDER	2	
L-63	291425-1	DECOUPLER TEST FIXTURE	2	
L-65	291445-1	BEARING HOLDER/DRIVER	2	
L-66	291450-1	BEARING DRIVER/HOLDER	1	
L-67	291436-1	CLUTCH DRIVE/SLEEVE	2	
L-68	291437-1	BEARING DRIVER	2	
L-69	291188-1	PAWL CARRIER, DRIVER	2	
L-70	291690-1	BEARING DRIVER	2	
L-71	291439-1	TORQUE WRENCH/ADAPTER	1	
L-72	291440	GEAR HOLDER/NUT TORQUING	1	
L-73	296810-1	RUN OUT FIXTURE	1	
L-74	8319613	PRESS BEARING	1	
L-75	293157-1	CLUTCH HOLDER	1	TEST
L-76	293158-1	CLUTCH HOLDER	1	
L-77	8219996	PORT PLUG ADAPTER	2	
L-79	8441974	ALIGN BACKLASH TOOL	2	
L-80	289658-1	HOLDER	2	
L-81	8220081	DIAL INDICATOR/HOLDER	1	
L-82	291453-1	GAUGE SHIM/CHECKING	2	
L-83	296808-1	WRENCH SET	1	
L-85	5695216587402	FIXTURE AIR GAUGE	3	
L-86	266992-1	SHAFT	1	
L-87	129710	OVEN	1	

*✓

: L-88	: J172	: THERM	: 1	:
: L-89	: 8319613	: PRESS ADAPTER	: 1	:
: L-90	: 8221169	: DRIVER	: 2	:
: L-91	: 289659-1	: GAUGE	: 2	:
: L-93	: 291661-2	: TEST SET CGB	: 2	: TEST
: L-94	: C-11198	: ICE CHEST	: 1	:

2.2

EQUIPMENT CROSS REFERENCE LIST

DATE 06-01-89

PCN NO. 12712A

ALC SA

PART NAME ACCESSORY DRIVE GEARBOX

RCC MATPSS

OPERATION ASSEMBLY & TEST

PAGE 1 OF 3

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENTS
J-1	AKS-31466	ASSEMBLY TOOL	1	
J-2	AKS-31957	DRIVER	1	
J-15	DJS-27669	DRIVER	1	
J-17	DJS-29062	DRIVER	1	
J-18	DJS-30718	DRIVER	1	
J-23	FDS-27580	HOLDING FIXTURE	2	
J-24	FDS-28439	HOLDING FIXTURE	1	
J-25	FDS-28440	HOLDING FIXTURE	2	
J-29	PWS-27074	GEAR PULLER	1	
J-38	WCS-27062	SPANNER WRENCH	4	
J-39	5401-30393	ROLL OVER STAND	4	
J-56	AKS-29050	ASSEMBLY TOOL	1	
J-57	LTS-28183	BEARING NEST	1	
J-58	161-22052	GO PLUG GAGE	1	
J-59	161-22053	GO GAGE	1	
J-60	AKS-29052	TOOL	1	
J-61	AKS-29053	TOOL	1	
J-62	DMS-27670	DRIVER	2	
J-64	DMS-27662	DRIVER	2	
J-65	DMS-27663	BE DRIVER	2	
J-66	DMS-27661	BEARING DRIVER	2	
J-67	DMS-27660	BEARING DRIVER	2	
J-68	DMS-27659	BEARING DRIVER	2	
J-69	AKS-29051	BEARING DRIVER	1	
J-70	DMS-27685	BEARING DRIVER	2	
J-71	DMS-27684	BEARING DRIVER	2	
J-72	DMS-27059	BEARING DRIVER	2	
J-73	FDS-31836	HOLDING FIXTURE	2	
J-74	DMS-27626	BEARING DRIVER	2	
J-75	AKS-25109-23	ASSY BULLET	1	

2.2

EQUIPMENT CROSS REFERENCE LIST

DATE 06-01-89

PCN NO. 13096A

ALC SA

PART NAME F16 JET FUEL STARTER

RCC MATPSS

OPERATION ASSEMBLY & TEST

PAGE 1 OF

EQUIPMENT CODE	TOOL/EQUIPMENT NUMBER	NAME	QUANTITY	COMMENT
M-1	ST91125	COMBUSTOR ASSY. PULLER	1	
M-11	8621514	WOODEN STAND	1	
M-13	HL-16.1	HOFFMAN DYNAMIC BALANCING MACHINE	2	
M-14	ST90857	ALIGNMENT PINS (3)	6	
M-15	ST70078	ASSEMBLY STAND	2	
M-16	ST91087	DRIVER	1	
M-17	ST60714	INSPECTION FIXTURE	2	
M-18	ST91021	DRIVER	2	
M-19	ST80043	BALANCING FIXTURE	1	
M-2	ST93466	PULLER ADAPTER	1	
M-20	ST62374	MASTER INDICATOR GAGE	1	
M-21	ST90838	SEAL PLATE SUPPORT	2	
M-22	ST70941	LOCATING FIXTURE	1	
M-23	ST61188-03	RING GAGE	1	
M-24	ST61188-04	RING GAGE	1	
M-25	ST60880	WIRE GAGE	2	
M-26	ST62887	INSPECTION GAGE	2	
M-27	ST10223	SPOT PUNCH TEMPLATE	1	
M-28	ST61189-06	PLUG	2	
M-29	ST62886	INSP. BRIDGE GAGE	2	
M-3	ST70137	HOLDING FIXTURE	1	
M-30	ST70108	DRIVER	1	
M-31	ST70110	DRIVER	4	
M-32	ST70461	RING SPACER	5	
M-33	ST70468	ALIGNING TOOL	1	
M-34	ST91644	RETAIN RING CHECK	2	
M-35	ST93151	TEST STAND JFS	1	
X-5		OVEN	1	
X-6		ICE CHEST	1	
X-7		LIQUID NITROGEN	1	

THE EQUIPMENT WITHIN MATPSS TEST IS MOSTLY OVER 20 YEARS OLD. FORTY PERCENT OF THE TEST STANDS IN THE TEN MATPSS TEST CELLS ARE NOT IN WORKING CONDITION. THE MAIN PROBLEM WITH REPAIR OF THE OLD EQUIPMENT IS THE TIME IT TAKES TO OBTAIN REPLACEMENT PARTS. MOST OF THE TEST STANDS AND CONTROL PANELS ARE OBSOLETE.

A LISTING OF ALL EQUIPMENT FOR MATPSS CAN BE FOUND IN THE EQUIPMENT PROFILE LIST.

2.3 WORKFORCE

MATPSS HAS A STABLE WORKFORCE WITH LITTLE VARIANCE.

IT HAS A WELL-DEFINED WORKLOAD. THE WORKFORCE IS COMPRISED OF 65 ASSEMBLY MECHANICS WITH FOUR SUPERVISORS IN BUILDING 329, AND 21 TESTERS WITH THREE SUPERVISORS IN BUILDING 340 A TOTAL WORKFORCE OF 93.

THE FOLLOWING IS A BREAKDOWN OF THE MANPOWER WITHIN MATPSS.

<u>SKILL CODE / LEVEL</u>	<u>QUANTITY</u>	<u>AVG. YRS. OF EXPERIENCE</u>
8602 BC 05 MECHANIC	4	3.0
8602 BE 05 MECHANIC	1	0.5
8602 BK 05 TESTER	3	9.0
8602 BK 08 TESTER	1	6.0
8602 BC 09 MECHANIC	44	9.0
8602 BE 09 MECHANIC	11	8.0
8602 BK 09 TESTER	1	6.0
8602 BC 10 MECHANIC	4	10.0
8602 BE 10 MECHANIC	1	20.0
8602 BK 10 TESTER	16	8.0

2.4 REPAIR PROCESS TECHNOLOGIES

THE REPAIR PROCESS TECHNOLOGY WITHIN MATPSS CONSISTS OF DISASSEMBLY, CLEANING, INSPECTION, ASSEMBLY AND TEST OF THE MEN. END ITEMS MENTIONED IN 2.0 THE END ITEMS ARE ASSEMBLED FROM KITS, OBTAINED FROM THE PARTS POOL, AND ARE TESTED IN ACCORDANCE WITH APPLICABLE TECHNICAL ORDERS.

2.5 WORKLOAD MIX AND VOLUME

THE WORKLOAD FOR MATPSS CONSISTS PRIMARILY OF THE END ITEMS ON THE MISTR FILES FOR MATPSS WHICH ARE FOUND IN THE 80/20 WORKLOAD SECTION OF THIS BOOK .

THE NUMBER INDUCTED IN FY88 FOR THE 80 PERCENT OF THE END ITEM LIST WAS AS FOLLOWS :

<u>PCN</u>	<u>MOJN</u>	<u>1ST Q.</u>	<u>2ND Q.</u>	<u>3RD Q.</u>	<u>4TH Q.</u>	<u>TOTAL</u>
08004A	F15 LH AMAD	56	47	40	47	190
08005A	F15 RH A.MAD	27	15	30	36	108
08006A	F15 JFS	82	68	85	90	325
08007A	F15 CGB	120	73	72	134	399
12712A	F16 ADG	35	34	36	39	144
13096A	F16 JFS	20	40	58	90	208
04542A	CPS-02 MOD	110	107	80	128	425
10598A	ATSC 100-87	50	60	43	62	235
10718A	ATSC 100-97	44	78	77	59	258
TOTAL		544	542	521	685	2292

2.6. MATERIAL HANDLING

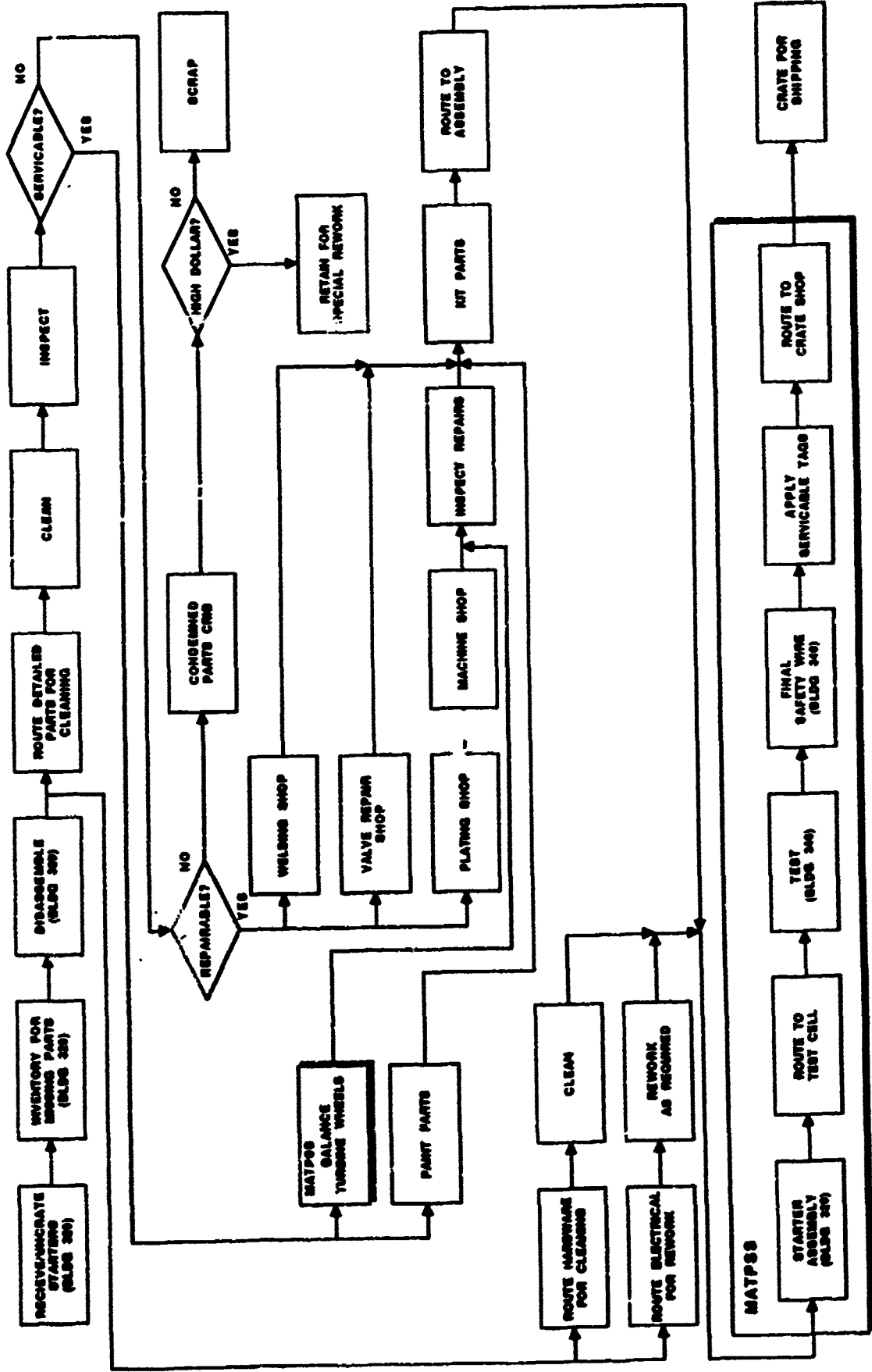
MATERIAL HANDLING IN MATPSS INVOLVES THE USE OF OVERHEAD CRANES, ROLLING STANDS AND MANUAL TRANSPORTATION CARTS.

MINIMUM MOVES WERE OBSERVED DURING THE ASSEMBLY OF THE END ITEMS BECAUSE THE ASSEMBLY WORK IS BEING PERFORMED AT A SINGLE LOCATION. THE END ITEMS ARE MOVED BETWEEN THE ASSEMBLY, PAINT AND TEST CELLS ON TRANSPORTATION CARTS BY THE MATPSS MECHANICS.

2.7 STORAGE

MATPSS HAS NO STORAGE AREA, EXCEPT FOR TOOL CABINETS AND PARTS IN QUEUE ON SHELVES WAITING TO BE PROCESSED.

2.8 PROCESS FLOW CHART



LSC-20229

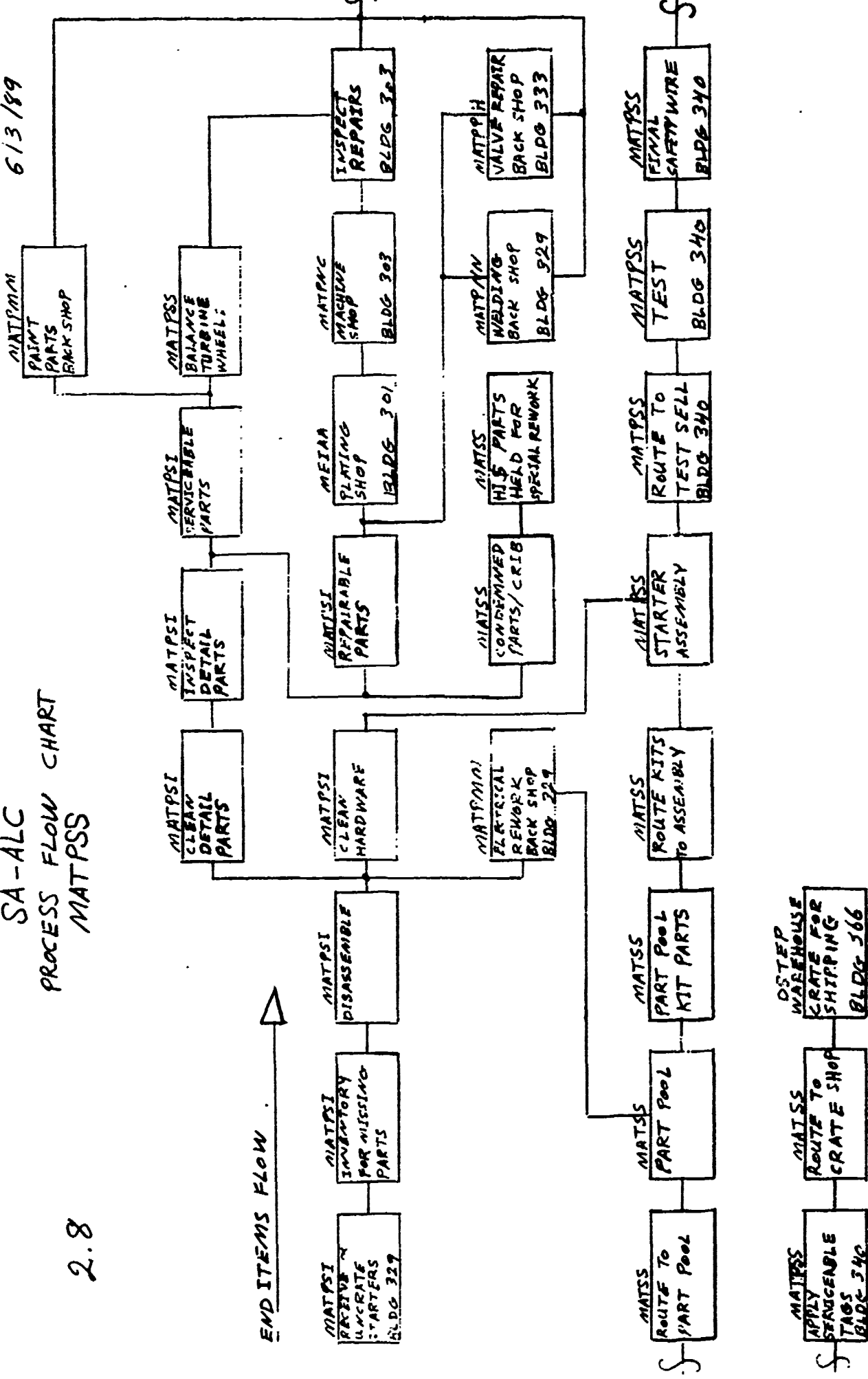
PROCESS FLOW MATPSS

SA-ALC
PROCESS FLOW CHART
MATPSS

6/3/89

2.8

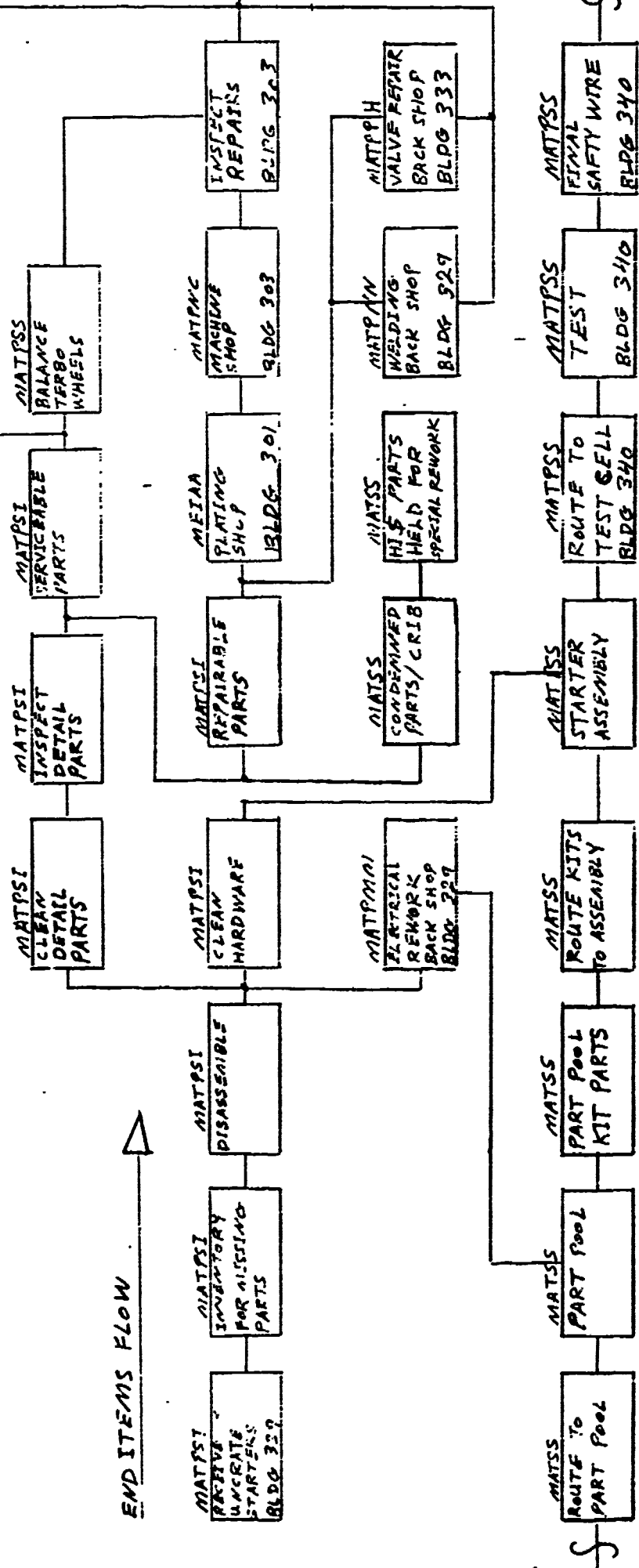
END ITEMS FLOW



EDWARD GARZA (SA-ALC)
925-4323

KAMAL ATTARIA (MDMSC)

SA-ALC
 PROCESS FLOW CHART
 MATPSS STARTERS
 6/3/89



EDWARD GARZA (SA-ALC)
 925-4323

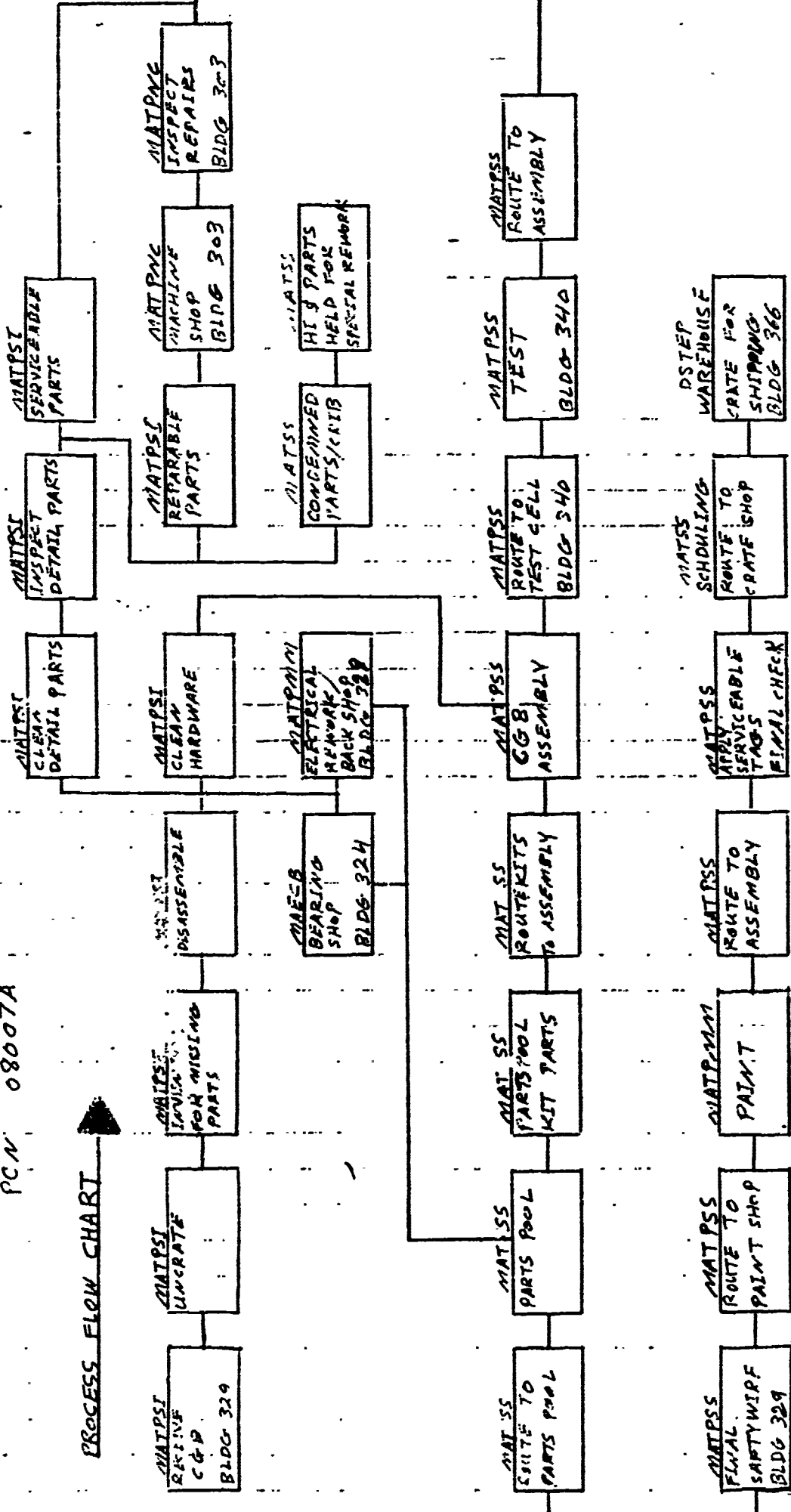
KAMAL ATTARIA (MDMSC)

CENTRAL GEAR BOX (C.G.B)
ASSEMBLY AND DISASSEMBLY

PCN 08007A

RCC MATPSS AND MATPSS
BUILDING 329

PROCESS FLOW CHART

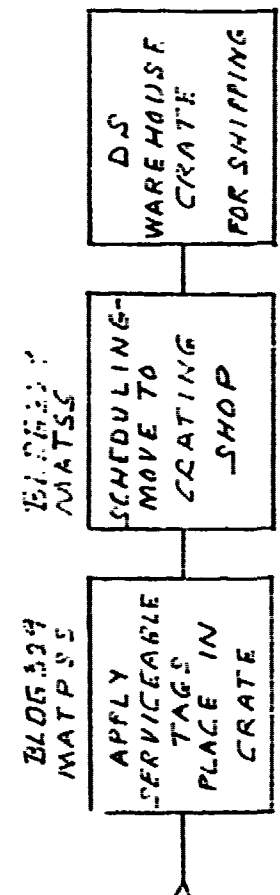
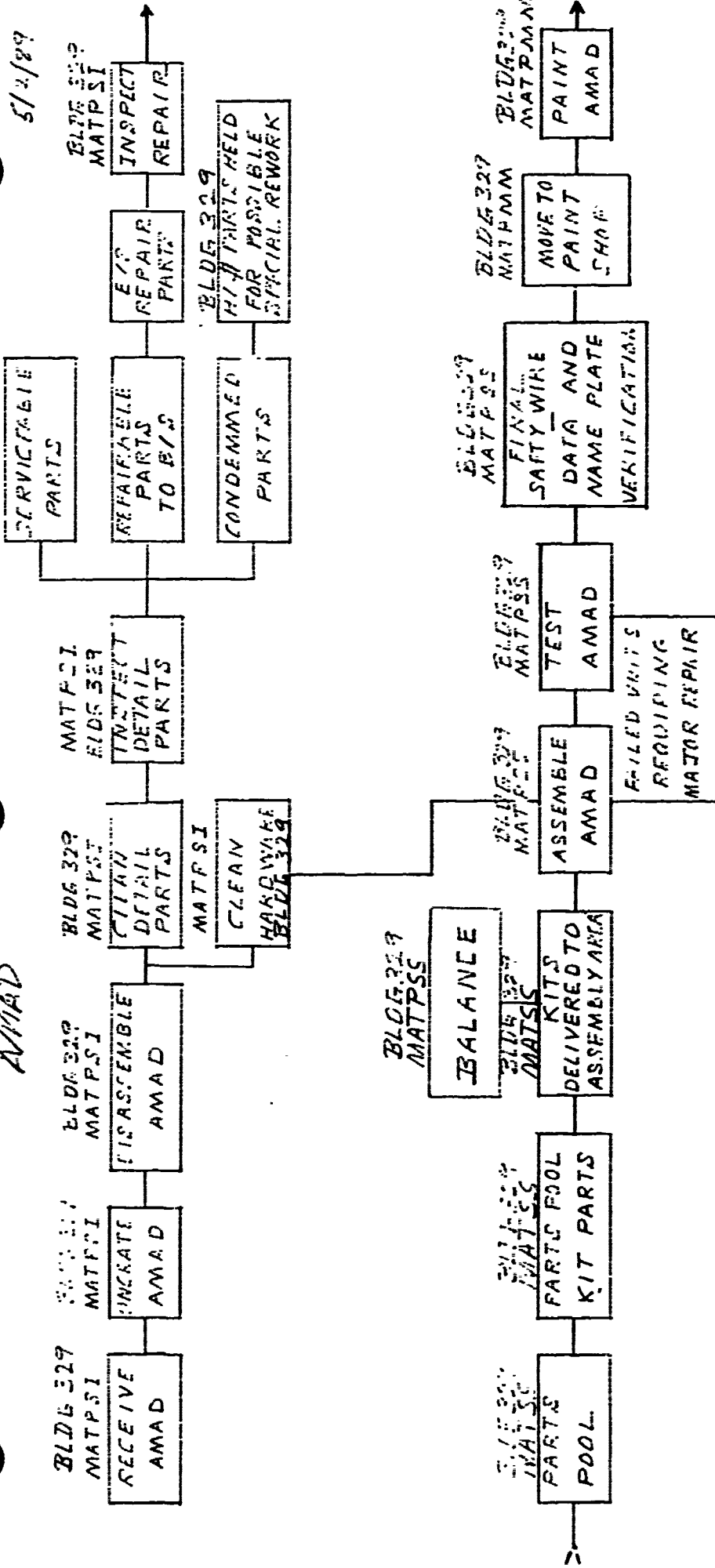


EDWARD GARZA (ALC)
726-4723

KAMAL ATTARIA (MIDISE)

AMAD

5/2/89

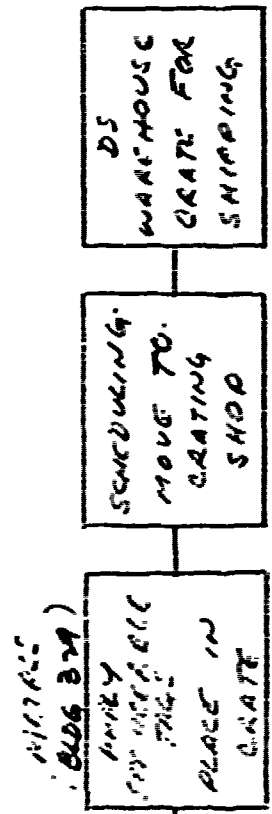
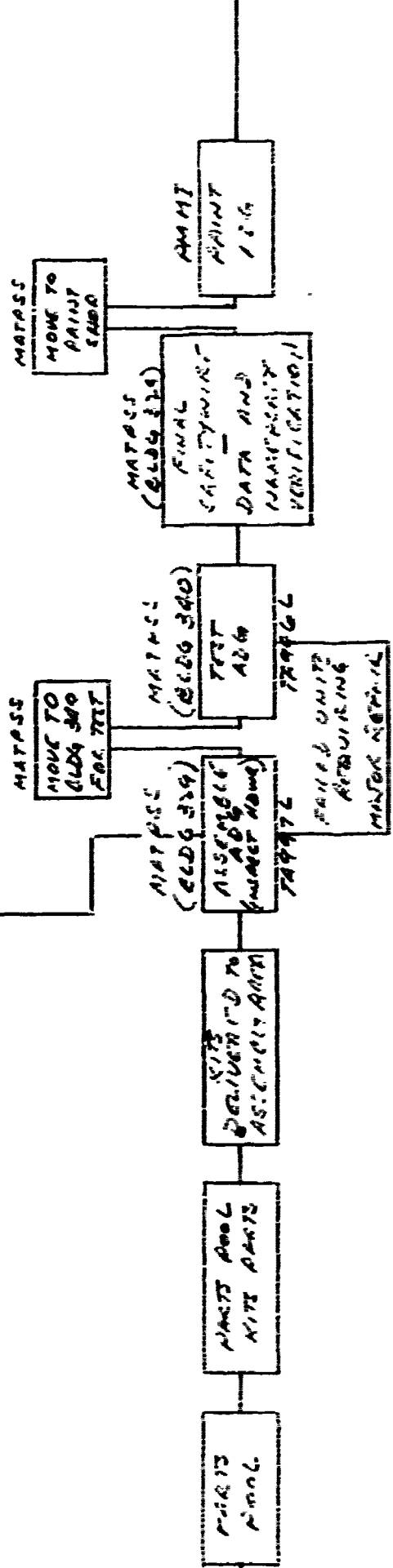
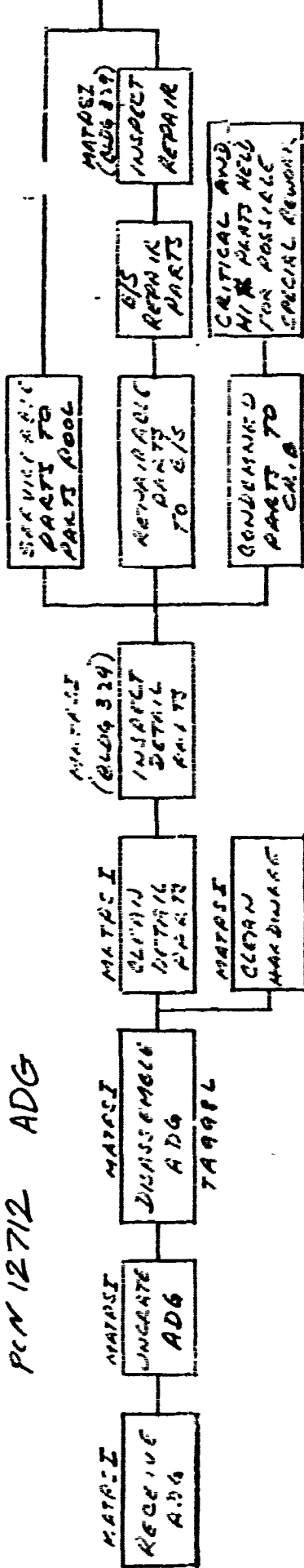


PROCESS FLOW CHART FOR AMAD

AMAD

PCN'S ORG/MAT/GR/CSA
RCC MATPSS MATPSS

PCN 12712 ADG

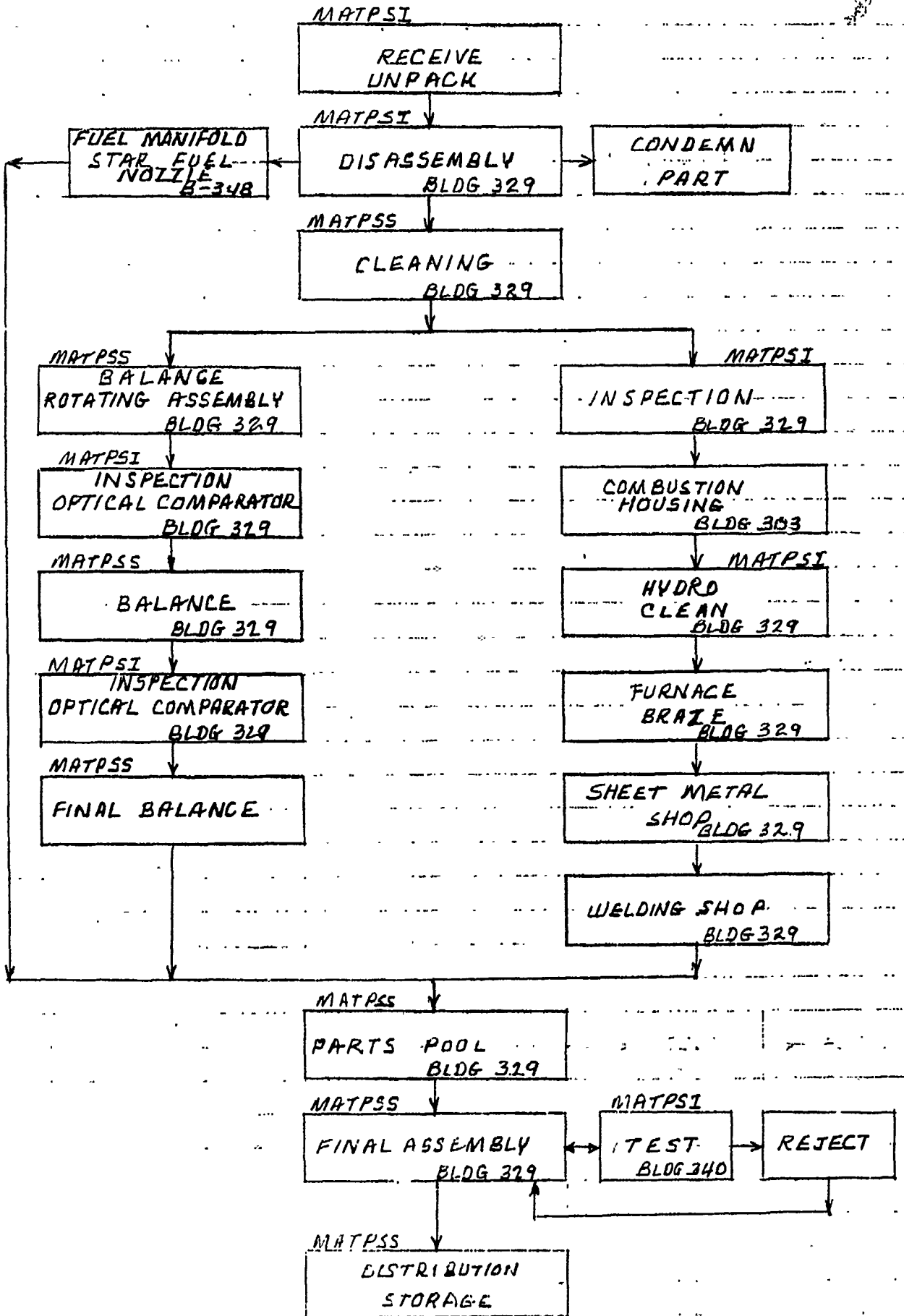


PROCESS FLOW CHART
 FOR
 ACCESSORY DRIVE GEARBOX
 PCN 12712A RCC MATPASS

PROCESS FLOW CHART

F-16 JFS

R/N 13096A

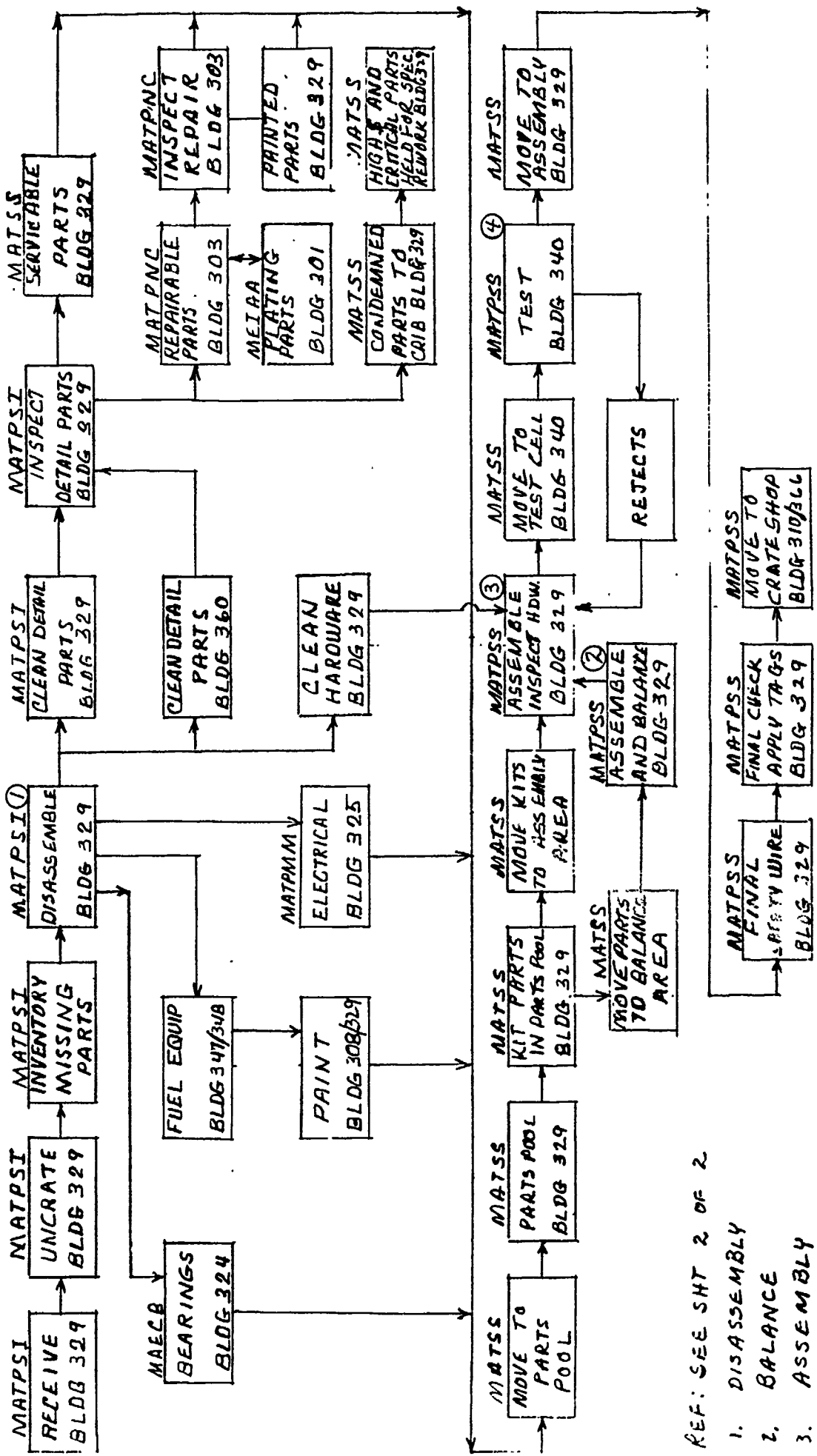


PROCESS FLOW HART

S-89
SHT 1 OF 2

F-15 JFS PCN 18096 A
F-15 JFS PCN 08006 A

RCC MATPSS



REF: SEE SHT 2 OF 2

- 1. DISASSEMBLY
- 2. BALANCE
- 3. ASSEMBLY
- 4. TEST

3.0 80/20 WORKLOAD ANALYSIS

AN 80/20 ANALYSIS WAS PERFORMED FOR MATPSS USING INFORMATION CONTAINED IN THE GO 19C DATA FILE TAPE, BASED ON F.Y. 1988 WORKLOAD. THE TAPE TRACKS THE EARNED HOURS FOR EACH PART CONTROL NUMBER (PCN) FOR THE RESPECTIVE RCC, MATPSS. FROM THE 80/20 ANALYSIS OF MATPSS RCC THE NINE PART CONTROL NUMBERS (REFER TO 2.0) MAKE UP 83.74 PERCENT OF OF THE WORKLOAD FOR RCC MATPSS .

3.1 VALIDATION OF 80/20 ANALYSIS

A SIMPLE CALCULATION WAS USED TO VERIFY THE 80/20 ANALYSIS.

$$\begin{aligned} & (\text{NO. OF PCN COMPLETED}) \times (\text{EARNED HOURS/RCC}) \\ & = \text{OUTPUT OF 80/20 FOR PCN} \end{aligned}$$

SEE ATTACHED 80/20 LIST FOR MATPSS RCC .

MANAGER 150ED-ALCSA-G019C-1058435
LISTING OF ITEMS SUBJECT TO REPAIR
PS=MTPS

SI

OBS	PCN	ANSN	REVES	NOUN	ENG	WGA	UC	(IDPSH	FYIR	YTDTIM
2124	08007	2835010346948	DK	STARTER	AK	F+15A-TF15A	5109998	833.0	419.0	349027.0
2125	08005	2835010912433	AD	JFSTARTER	AK	F+15A-TF15A	11045000	832.0	345.0	321540.0
2126	12712	2835012355249	AG	A.D.-G.	ML	F-16 A/B	6489300	1739.0	183.0	318237.0
2127	13006	2835011543533	AG	JFS	ML	F-16	2902280	516.0	221.7	202436.0
2128	03104	2835010207249	AG	LHGB	MS	F+15A-TF15A	3746225	595.0	219.0	130305.0
2129	10713	2835010389099	AG	STARTER	MS	B52	1218025	355.0	340.0	120700.0
2130	04542	2835010776708	AG	STARTER	MS	B52G	3335275	276.0	423.0	109568.0
2131	10593	2835010776708	ME	STARTER	MS	F004C	1789500	270.0	282.0	76140.0
2132	08005	2835010481009	YR	RHGB	MS	F-15A-TF15A	1558000	573.0	123.0	71052.0
2133	40721	2835010434502		STARTER	MS	EC135	229958	272.0	233.0	63376.0
2134	10148	2835010363713		STARTER	MS	F-15	2536200	248.0	227.0	56296.0
2135	11064	1650010053500FS		HEATEXCH	MS	F15A B C D	365375	80.0	468.0	37440.0
2136	12199	2835010489580		STARTER	MS	A10	1046480	196.0	153.0	29988.0
2137	10149	283500492148C		STARTER	MS	C141	1258969	170.0	176.0	29920.0
2138	10172	2835003829870		STARTER	MS	F111	4305400	251.0	111.0	28305.0
2139	12351	2835011396642		STARTER	MS	C/KC-135E	3172194	328.0	73.0	23944.0
2140	43134	2835009985303		STARTER	MS	C005A	1405950	232.0	61.0	14152.0
2141	10150	2835003375116		STARTER	MS	C130	630200	173.0	63.0	10899.0
2142	10015	2835003513212		STARTER	MS	F111A	685485	179.0	54.0	9666.0
2143	10147	2835009513466		STARTER	MS	C135	2515208	304.0	18.0	5472.0
2144	10159	2835003375145		STARTER	MS	C130	630200	173.0	31.0	5190.0
2145	10167	2835000512983		STARTER	MS	C135	802358	160.0	28.0	4480.0
2146	10155	2835003569466		STARTER	MS	C135	1103734	162.0	24.0	3884.0
2147	10144	2835009201719		STARTER	MS	C125	1353300	261.0	6.0	1566.0
2148	12235	2835011072202		FAN & AD	MS	F15ACFT	88600.00	22.0	65.0	1452.0
2149	09264	2835010286888		GEN GAS	MS	F-15	1958367	627.0	22.0	1254.0
2150	10170	2835000199649		CAP&BREC	MS	F4C	70000.00	42.0	21.0	882.0
2151	11652	2835003435338		CHAMBERA	MS	H52H	134171	17.0	42.0	714.0
2152	47573	2835009959481		BREECHCP	MS	F4C	70850.00	23.0	16.0	368.0
2153	11577	2835010387155		LAYSCHAF	MS	F15	133256	68.0	4.0	272.0
2154	11063	1650010732180FS		HEATEXCH	MS	F15A B C D	279100	79.0	3.0	237.0
2155	47580	2835009246480		CAP	MS	F+111	133400	27.0	6.0	162.0

1699005 = 83.792
2028928

PS

WORKLOAD DEFINITION MATRIX

ALC LOCATION SAN ANTONIO

GOAL

5 8551
54471

BCC	WORKLOAD PERCENTAGE %			WORKLOAD DEFINED BY			GRAPESIS USED			TIME REQUIRED TO REFINE W/L	REMARKS
	MASTR	POB	MA	ALC	BOB	OTHER	COMP.	CMC	BOB			OTHER
MABPC	100%	100%	100%	✓	✓					6 DAYS	WAS MABPC & MABPMF
MABPSA	75	5	35%	✓			✓			2.0 HRS	
MABPSB	85	2	15%	✓			✓			2.0 HRS	
MABPSP	60	10	30%	✓			✓			2.0 HRS	
MATAGB	100			✓			✓			2.0 HRS	4 YRS INCLD IN MATPDS
MATAGG	NOT USED										
MATAS1	100			✓			✓			2.0 HRS	
MATPSS	100			✓			✓			2.0 HRS	
* CUL IS A COMBINATION OF MATR & PROJECT DIRECTIVE (PD) WORK. PD WORK IS TRATED SEPARATELY FOR OUR PUA POS. IT IS											
SAME AS MATR WORK EXCEPT IT FUNDED MATR 54% PD 46%											
CONSIDERED AS MATR											
							SE			83%	17%
							SS			98%	2%

INSTRUCTIONS

1. WORKLOAD DEFINITION MATRIX

- A. WORKLOAD PERCENTAGE TO BE NUMERICAL UP TO 3 DIGITS**
- B. ALL OTHER ENTRIES ARE CHECK MARKS**
- C. TIME REQUIRED IN HOURS**
- D. ENTER ANY REMARKS YOU FEEL WILL CLARIFY DATA**

2. PROFILE SHEET DATA COMPLETION MATRIX

- A. WORK CONTROL DOCUMENT-HEADER
USE CHECK MARKS IN APPLICABLE COLUMNS**

LEGEND

E	=	ENGINEERING
P	=	PLANNING
S	=	SCHEDULING
PC	=	PRODUCTION CONTROL
PR	=	PRODUCTION
O	=	OTHER (DEFINE IN REMARKS)

- B. PROFILE SHEET INTERVIEW-HEADER**

- JOB FUNCTION - USE CODES SHOWN ABOVE**
- TIME TO INTERVIEW IS 1 ON 1 TIME IN HOURS**
- MDAC TIME TO COMPLETE IS HOURS OVER THE 1 ON 1 INTERVIEW TIME**

- C. ADD ANY REMARKS FOR THIS SHEET ON A SEPARATE SHEET.**

All Site Leads

*Please Complete By WED 11/23
And Fax to me.*

THANKS

*J. Hall.
11-18-88.*

Normal

18 November 1988

To: All Site Leaders T.O. #1

Attached: Data Collection History Matrix Sheets With Instructions

1. Please complete the attached Matrix Sheets for your ALC per the instructions. Should there be any questions, please call.

These completed Data Sheets will be used to respond to an action item arising from the HQ Program Review on Tuesday, 11-15-88. This action related to our discussion of data consistency, degree of availability, ease of attainment, etc. Our response is due on 12/1/88; therefore, I need these returned by Wednesday, 11/23/88.

Do not attempt to be 100% accurate in your man hour estimates and workload %. Do the best you can from memory, notes and your team members' inputs.

Our goal with the Matrix is to respond to HQ in a consistent format.

PLEASE DO NOT REVIEW THE DATA WITH ALC PERSONNEL.

Additional information that would be helpful.

Are you aware of any ALC functional area that is maintaining their own data bases manually or on PC's outside the recognized system? If so, where?

2. Be sure to record in your notebook those areas where you perceive "Quick Fixes" and "Future Focus Study Recommendations" so that our reports can be quickly assembled upon return to St. Louis.

Thanks! Keep up the good work. Our progress looks good. A Happy Thanksgiving to both You and Your Families!


Jerry

0011P/1

TO: E. R. Mory
COMPANY: Co La Quinta
LOCATION: Lockland, TX
PHONE NO: _____
FAX NO.: 512 - 673 - 5918
CONFIRMATION: _____

FROM: Jerry Ruell
LOCATION: MDAC Bldg 92-2E Ext: 314-925-
FAX NO.: 314-925-3691
CONFIRMATION NO. CALL ADDRESSEE
NUMBER OF PAGES: LEAD + 4
DATE: 11/18/88 TIME OUT: _____



SA	11/16	MELH J. SANCHEZ / J. FOLEMAN ESQUIVER	3 25 HRS	4 HRS
	11/16	LD MAN	6	6
	11/16	MECHANIC	3	6
	11/16	"	2	2
	11/18	"	3	8
			<hr/> 17	<hr/> 26

SB	11/14	CHRIS DONALINA / A. VERDUGO	8 HRS	14 HRS
	11/16	GABRIEL BARRIOS / E. CORTES	2	4
	11/15	MECHANIC	3	5
	11/15	"	4	6
	11/17	"	1	3
	11/17	"	4 <hr/> 22	8 <hr/> 26

SP	11/17	MECHANIC	1	1
	11/7	"	1	2
	11/17	SUPERVISOR	2	4
			<hr/>	<hr/>

	10/28	MECHANIC	4	8
	11/2	SUPERVISOR	2	4
SS	10/26	DAVID HIGHTSMITH / Y. RIOS	14	20
	11/7	PETE CANTU / MARGARET JAMES	2	4
	10/27	RUDY GUEVARA / JOE VILLARREAL	16	8
	10/25	HARPO	8	20
	11/2	PLANNER	4	8
	11/8	PLANNER	4	8
	11/9	PLANNER	6	12
	10/29	PLANNER	12 <hr/> 20	32 <hr/> 24

SI	10/26	JULIO AYALA / DAN HAYWARD EMILIO CERVAANTES / HENRY HALL MARGARET LITTLE	16 <hr/>	16 <hr/>
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GB

11/1 BRENT CASTLE/SOLIO AYALA
HENRY HALL
MARGARET LITTLE

24

10

11/1 "

24

16

10/26 PLANNER/MECHANICS

16

24

10/26 MECHANICS

16

16

80

72

4.0 DATA COLLECTION

SEVERAL DIFFERENT PROFILE DATA SHEETS WERE MADE AVAILABLE TO THE WORKING GROUP AT THE SITE FOR COLLECTION OF DATA .

THE DATA COLLECTED FROM MATPSS WAS FROM SHOP INTERVIEWS WITH THE SHOP FOREMEN PLANNERS, WORKLEADERS , MECHANICS , TESTERS AND FROM APPROPRIATE ALC PERSONNEL .

DATA HAS BEEN REGISTERED IN RESPECTIVE PROFILE SHEETS FOR THE MATPSS RCC PCN'S .

EXAMPLES OF THESE PROFILE SHEETS AND THEIR RESPECTIVE INSTRUCTIONS ON HOW TO PROPERLY FILL OUT THESE PROFILE SHEETS ARE ATTACHED .

AFLC TECHNOLOGY INSERTION PROGRAM
PROFILE AND INSTRUCTION MASTERS

APRIL 1, 1989

PLEASE FORWARD ANY QUESTIONS, COMMENTS OR REVISION REQUESTS TO C. GONZALES
AT (314) 925-5395.

AFLC TECHNOLOGY INSERTION PROGRAM "IN" AND "OUT" DATES INSTRUCTIONS

IN ORDER TO CAPTURE THE FLOW TIME ENCOUNTERED AT THE BEGINNING OF A PROCESS, (THE TIME BETWEEN WHEN AN RCC TAKES POSSESSION OF AN ITEM AND THE END OF THE FIRST OPERATION), AN OPERATION MUST BE ADDED TO THE OPERATION PROFILE. THIS WILL BE THE FIRST OPERATION, DESIGNATED AS OPERATION NUMBER "IN".

IN ORDER TO CAPTURE THE FLOW TIME ENCOUNTERED AT THE END OF A PROCESS, (THE TIME BETWEEN THE END OF THE LAST OPERATION AND THE TIME THE POSSESSION OF THE ITEM IS TRANSFERRED FROM THE RCC), AN OPERATION MUST BE ADDED TO THE OPERATION PROFILE. THIS WILL BE THE LAST OPERATION, DESIGNATED AS OPERATION "9999".

THIS DATA WILL BE ADDED (OPERATIONS "IN" AND "9999") TO EACH OPERATION PROFILE FOR EACH ITEM NUMBER. THE MANDATORY OCCURRENCE FACTOR FOR THESE OPERATIONS WILL ALWAYS BE 1.00. THE MANDATORY FLOW TIME WILL BE DETERMINED BY INTERVIEW. IF THE ALC ENGINEER ASSIGNED TO THE TI TEAM DETERMINES THAT MORE ACCURATE DATA IS AVAILABLE, THIS DATA CAN BE SUBSTITUTED.

THESE OPERATIONS WILL BE TRANSFERRED FROM THE OPERATION PROFILES TO THE LOTUS INPUT USING THE "IN" AND "9999" OPERATION NUMBERS.

THE OPERATION PROFILES PREVIOUSLY GATHERED MUST BE MODIFIED TO INCLUDE OPERATION NUMBERS "IN" AND "9999" AND THE DATA GATHERED. THIS WILL BE ACCOMPLISHED BY WRITING IN THE DATA WHILE GATHERING OTHER SUPPLEMENTARY DATA.

THIS INFORMATION MUST ALSO BE INCLUDED IN THE WCD HISTORY COLLECTION SYSTEM. WHEN BUILDING A MASTER FILE, ADD "IN" AS THE FIRST OPERATION AND "9999" AS THE LAST OPERATION FOR EACH MASTER. THE DATES TO BE ENTERED ON THE WCD DETAIL FILES CAN BE FOUND ON THE STAMPED WCD OR ON ACCOMPANYING DOCUMENTATION.

FOR WCD HISTORY ALREADY COLLECTED, THE "IN" AND "9999" DATA CAN BE COLLECTED ON "IN" DATE PROFILE AND THE "OUT" DATE PROFILE. THIS WILL BE ACCOMPLISHED BY SAMPLING ARCHIVED WCDs FOR ITEMS WHICH ALREADY HAVE HISTORY RESIDENT ON THE WCD HISTORY COLLECTION SYSTEM.

**AFLC TECHNOLOGY INSERTION PROGRAM
"IN" AND "OUT" DATES INSTRUCTIONS (CONTINUED)**

SITE LEADERS, PLEASE ATTACH A COPY OF THESE INSTRUCTIONS TO THE DOCUMENTATION FOR THE WCD HISTORY DATA SYSTEM, THE MASTER PROFILE PROGRAM GUIDE, AND THE OPERATION PROFILE INSTRUCTIONS.

ANY QUESTIONS ON THESE PROCEDURE WILL BE ANSWERED BY C. GONZALES. CONTACT THROUGH ST. LOUIS OFFICE (314) 925-5395.

**AFCLC TECHNOLOGY INSERTION PROGRAM
OPERATION PROFILE INSTRUCTIONS**

SOURCE

SM = McCLELLAN AIR BASE
 OC = TINKER AIR BASE
 SA = KELLY AIR BASE
 WR = WARNER ROBINS AIR BASE
 OO = HILL AIR BASE

DESCRIPTION

DATA ITEM

NAME NAME OF PERSON COLLECTING DATA

ALC NAME OF ALC WHERE THIS DATA IS COLLECTED

DATE START DATE OF DATA COLLECTION

RCC NAME OF RCC WHERE THIS DATA IS COLLECTED (6 CHARACTERS)

ITEM CODE LIST ONLY ONE ITEM CODE FROM THE FOLLOWING:
 PCN = PRODUCTION CONTROL NO.
 NSN = NATIONAL STOCK NO.
 P/N = PART NO.
 SHOULD BE SAME ITEM CODE AS ON 80/20 LISTING (18 CHARACTERS) CIRCLE ITEM CODE USED.

WCD NAME/NUMBER OF WORK CONTROL DOCUMENT (THE PRESENT WCD IN USE BY PRODUCTION) (8 CHARACTERS)

WCD DATE WORK CONTROL DOCUMENT REVISION DATE (6 CHARACTERS)

OPERATION NO. A THREE DIGIT NUMBER THAT SEQUENCE THE STEPS OF WORK BEING PERFORMED AS LISTED IN WCD (4 CHARACTERS). FROM 1 TO 4 NUMERIC DIGITS OR 1 TO 3 NUMERIC DIGITS WITH ONE ALPHA CHARACTER, RIGHT JUSTIFIED. DO NOT ENTER LEADING ZEROS. (ex. ENTER 10, NOT 010).

- 80/20 LISTING
- ITEM 14, 15 OR 16 OF WCD
- G037E (PDM)
- FORM 206 (T&M)
- TOP LEFT CORNER OF THE 1ST PAGE OF THE WCD.
- G037E WCD (PDM)
- FORM 206 (T&M)
- ITEM NO. 1 OF WCD.
- G037E
- FORM 206 PLAN DATE

LISTED IN COLUMNS UNDER ITEM 19 OF WCD.

**AFCLC TECHNOLOGY INSERTION PROGRAM
OPERATION PROFILE INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION	SOURCE
RCC	ENTER RCC NAME FOR THAT OPERATION. IF THIS RCC NAME IS NOT THE PRIMARY RCC, THE OPERATION WILL BE A BACK SHOP OPERATION. IF BACK SHOP, ENTER ONLY MANDATORY OCCURRENCE FACTOR AND MANDATORY FLOW HOURS. (6 CHARACTERS)	RCC WILL BE LISTED UNDER THE OPERATION NO. IN COLUMN 19 OF WCD.

OPERATION DESCRIPTION

ENTER AN ABBREVIATED DESCRIPTION OF WORK BEING PERFORMED. LIMIT FOUR CHARACTERS. USE THE FOLLOWING ABBREVIATIONS AND CREATE ADDITIONAL ABBREVIATIONS AS REQUIRED.

- | | |
|--|---|
| ABBREVIATION
ASSY
DIS
NDI
MOVE
PROC
REP
REPL
MFG
LOAD
UNLD
TEST
INSP
REC
SHIP
INFO
MACH
CLN
IND
SELL | DESCRIPTION
ASSEMBLY
DISASSEMBLY
NON-DESTRUCTIVE INSPECTION
TRAVEL BETWEEN OPERATIONS
PROCESS OPERATION
REPAIR
REPLACE
MANUFACTURE
LOAD
UNLOAD
TEST
INSPECTION
RECEIVE OF ITEM
SHIPMENT OF ITEM
INFORMATION
MACHINING
CLEAN
INDUCTION
SELL DATE |
|--|---|

ITEM 20 OF WCD

**AFLC TECHNOLOGY INSERTION PROGRAM
OPERATION PROFILE INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION	SOURCE
MANDATORY OCCURRENCE FACTOR	ENTER MANDATORY OCCURRENCE FACTOR FOR ALL THE OPERATIONS. (4 CHARACTERS, UP TO 3 DECIMAL PLACES)	INTERVIEWEE
OPERATION TYPE TRANSIT (T) SETUP (S) PROCESS (P)	<p>TRANSIT - THE MOVEMENT BETWEEN OPERATIONS. SETUP - MAKING READY OR PREPARING FOR THE PERFORMANCE OF A JOB OR OPERATION. MACHINE SETUP INVOLVES EQUIPING A MACHINE WITH APPROPRIATE ACCESSORIES, TOOLS AND FIXTURES, SETTING THE PROPER FEED, SPEED AND DEPTH OF CUT AND SO FORTH. IN MANUAL WORK, SETUP IS THE ARRANGEMENT PRIOR TO COMMENCING THE WORK, OF THE TOOLS, ACCESSORIES, COMPONENT PARTS AND DETAILS INVOLVED. IT ALSO INCLUDES THE TEARDOWN TO RETURN THE MACHINE OR WORK AREA TO ITS ORIGINAL OR NORMAL CONDITION. PROCESS - ACTUAL WORK PERFORMED ON THE ITEM. A PLANNED SERIES OF ACTIONS WHICH ADVANCES A MATERIAL OR PROCEDURE FROM ONE STAGE OF COMPLETION TO ANOTHER.</p>	INTERVIEWEE
MANDATORY FLOW HOURS	MANDATORY FLOW HOURS REQUIRED TO COMPLETE AN OPERATION (INCLUDE TRANSIT TIME) (I.E., WAITING 24 HOURS MINIMUM FOR SEALANT TO CURE. (5 CHARACTERS WITH ONE DECIMAL PLACE) ALL BACK SHOP OPERATIONS MUST HAVE FLOW HOURS. IF THE TIMES ARE CONSTANT, ENTER WITHOUT A PERCENT. IF THE TIMES ARE VARIABLE DUE TO A CHANGING LEVEL OF EFFORT, ENTER VARIABLE TIMES WITH A PERCENT. SEE EXAMPLE FOR TIME REQUIRED.	INTERVIEWEE
SKILL CODE/LEVEL	INDICATE THE SKILL CODE/LEVEL REQUIRED TO PERFORM THE OPERATION (3 CHARACTERS) (I.E., SHEET METAL MECHANIC - SA WG 10 ENTER SA10)	INTERVIEWEE/ SUPERVISOR

**AFLC TECHNOLOGY INSERTION PROGRAM
OPERATION PROFILE INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION	SOURCE												
QTY	QUANTITY OF MANPOWER AT THE SKILL CODE/LEVEL REQUIRED TO PERFORM THE OPERATION (3 CHARACTERS)	INTERVIEWEE												
TIME REQUIRED	<p>THE TIME MANPOWER IS REQUIRED TO PERFORM THE OPERATION. IF THE TIMES ARE CONSTANT, ENTER TIME WITHOUT A PERCENT. IF THE TIMES ARE VARIABLE DUE TO A CHANGING LEVEL OF EFFORT, ENTER VARIABLE TIMES WITH A PERCENT. IF AN OPERATION IS PERFORMED :</p> <p>20% OF THE TIME IN 1 HOUR</p> <p>80% OF THE TIME IN 2 HOURS</p> <p>ENTER: TIME REQUIRED</p> <table border="0"> <tr> <td>%</td> <td>HRS</td> </tr> <tr> <td>20</td> <td>1.0</td> </tr> <tr> <td>80</td> <td>2.3</td> </tr> </table> <p>(5 CHARACTERS MAX. WITH ONE DECIMAL PLACE). TRIANGULAR DISTRIBUTIONS MAY ALSO BE USED, SUCH AS:</p> <table border="0"> <tr> <td>MIN.</td> <td>4.0</td> </tr> <tr> <td>MAX.</td> <td>10.0</td> </tr> <tr> <td>MEAN</td> <td>6.0</td> </tr> </table>	%	HRS	20	1.0	80	2.3	MIN.	4.0	MAX.	10.0	MEAN	6.0	INTERVIEWEE
%	HRS													
20	1.0													
80	2.3													
MIN.	4.0													
MAX.	10.0													
MEAN	6.0													
EQUIPMENT CODE	ENTER ALPHANUMERIC CODE OF EQUIPMENT NEEDED TO PERFORM THE OPERATION. USE ALC CODES AND SHORTEN TO 8 CHARACTERS. THIS CODE WILL ALSO BE USED ON THE EQUIPMENT PROFILE SHEET. (8 CHARACTERS)	INTERVIEWEE LOCATION OF EQUIP. EQUIPMENT LIST												
QTY	INDICATE THE QUANTITY OF EQUIPMENT NEEDED TO PERFORM OPERATION (3 CHARACTERS)	INTERVIEWEE												
TIME REQUIRED	SEE TIME REQUIRED FOR MANPOWER	INTERVIEWEE												
DATA SOURCE	PLEASE INDICATE THE SOURCE OF INFORMATION (I.E., PERSONNEL DATABASE, PAPER REPORT) ALSO LIST ANY PECULIARITIES ASSOCIATED WITH AN OPERATION NUMBER.	INTERVIEWEE												

OPERATION PROFILE

NAME _____ ALC _____ DATE _____ RCC _____ SHEET _____ OF _____

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE F OR	OPERATION TYPE	MANDATORY FLOW HOURS		MANPOWER			EQUIPMENT			DATA SOURCE COMMENTS	
					%	HRS.	SKRL CODE/ LEVEL	QTY.	%	HRS.	EQUIPMENT CODE	QTY.		%	HRS.
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										

**AFLC TECHNOLOGY INSERTION PROGRAM
PARALLEL PROCESS PROFILE INSTRUCTIONS (CONTINUED)**

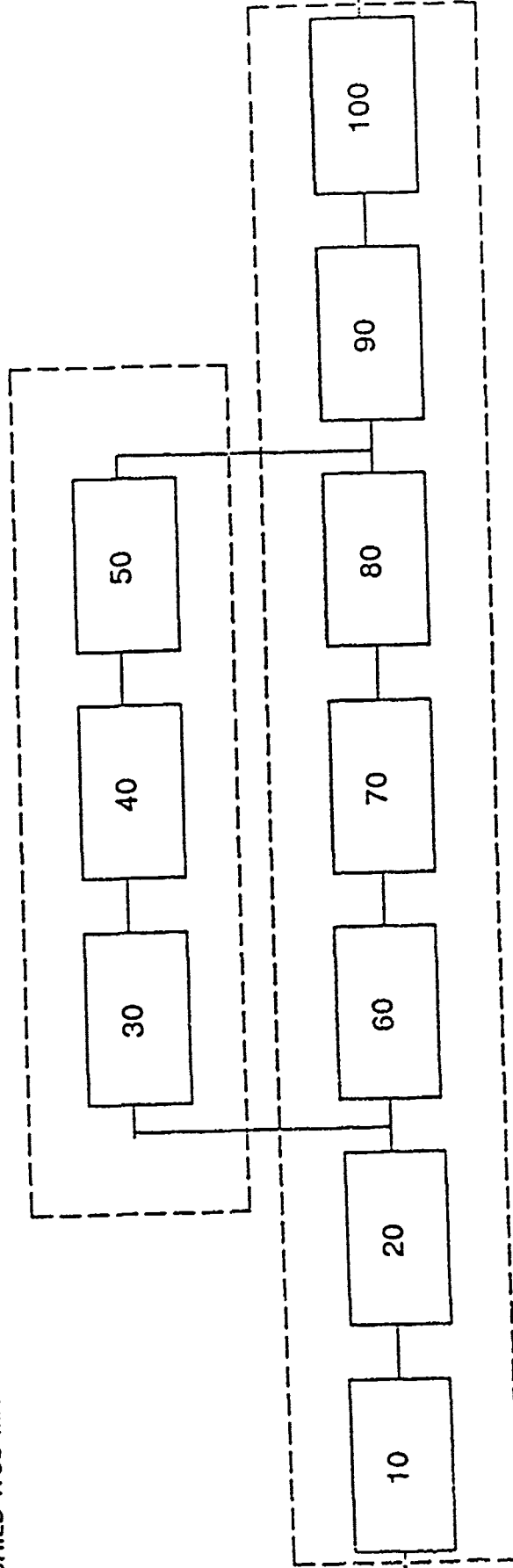
DATA ITEM	DESCRIPTION	SOURCE
ENDING OPERATION NO.	THE THREE DIGIT OPERATION NUMBER IN THE PARENT WCD, WHICH REPRESENTS THE END OF THE PARALLEL PROCESSING.	LISTED IN COLUMNS UNDER ITEM 19 OF WCD.
CHILD PROCESS INFORMATION • ITEM NUMBER	SAME AS ITEM CODE DESCRIPTION WHEN CHILD HARDWARE HAS A SEPARATE WCD. THIS ITEM NUMBER AND WCD MUST BE ENTERED ON THE WORKLOAD PROFILE.	---
• CHILD WCD	WHEN NO SEPARATE WCD IS PROVIDED - DEVELOP AN ITEM NO. BY USING THE PARENT'S ITEM CODE NO. FOLLOWED BY A SLASH AND S1 (FIRST SUB-COMPONENT) i.e., 1111A/S1	---
• CHILD WCD DATE	USE THE GIVEN WCD NAME/NUMBER WHEN A WCD IS PROVIDED FOR A GIVEN CHILD.	---
• CHILD WCD DATE	WHEN NO SEPARATE WCD IS PROVIDED - DEVELOP A WCD NAME/NUMBER BY USING A RE-ABBREVIATED SUFFIX OF THE ITEM NUMBER. i.e., ITEM NO. = 1111A/S1 (CHILD WCD = SUB 1) (8 CHARACTER)	---
• CHILD WCD DATE	USE THE GIVEN WCD DATE WHEN A WORK CONTROL DOCUMENT IS PROVIDED.	---
• CHILD WCD DATE	WHEN NO SEPARATE WCD IS PROVIDED - USE WCD DATE OF PARENT.	---

**AFLC TECHNOLOGY INSERTION PROGRAM
PARALLEL PROCESS PROFILE INSTRUCTIONS (CONTINUED)**

IN THIS EXAMPLE, OPERATIONS 30, 40 AND 50 ARE BEING
PROCESSED IN PARALLEL WITH OPERATIONS 60, 70 AND 80.
THE BEGINNING OPERATION NUMBER IS 20.
THE ENDING OPERATION NUMBER IS 90.

CHILD WCD

CHILD ITEM NUMBER 1111A/S1
CHILD WCD MAD001S1



PARENT WCD

PARENT ITEM NO. 1111A
PARENT WCD MAD001

PARALLEL PROCESS PROFILE

NAME _____ ALC _____ DATE _____ RCC _____ SHEET _____ OF _____

ITEM NUMBER	PARENT WCD	PARENT WCD DATE	BEGINNING OPERATION NUMBER	ENDING OPERATION NUMBER	CHILD PROCESS INFORMATION		
					ITEM NUMBER	CHILD WCD	CHILD WCD DATE
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		
PCH NSN P/IN					PCH NSN P/IN		

**AFCLC TECHNOLOGY INSERTION PROGRAM
DISASSEMBLY/ASSEMBLY PROFILE INSTRUCTIONS**

SOURCE
—
SM = McCLELLAN AIR BASE
OC = TINKER AIR BASE
SA = KELLY AIR BASE
WR = WARNER ROBINS
AIR BASE
OO = HILL AIR BASE

DESCRIPTION

DATA ITEM

NAME NAME OF PERSON COLLECTING DATA
ALC NAME OF ALC WHERE THIS DATA IS COLLECTED

DATE START DATE OF DATA COLLECTION
RCC NAME OF RCC WHERE THIS DATA IS COLLECTED (6 CHARACTERS)

ITEM CODE LIST ONLY ONE ITEM CODE FROM THE FOLLOWING:
PCN = PRODUCTION CONTROL NO.
NSN = NATIONAL STOCK NO.
P/N = PART NO.
SAME AS ON OPERATION PROFILE SHEET AND 80/20 LISTING.

WCD NAME/NUMBER OF WCD (SAME AS ON OPERATION PROFILE SHEET)
WCD DATE REVISION DATA OF WCD (SAME AS ON OPERATION PROFILE SHEET).

REMOVAL OPERATION NUMBER THE OPERATION NUMBER OF THE WCD IN WHICH A PART IS DISASSEMBLED OR REMOVED. REMOVAL OCCURS AT THE END OF AN OPERATION.
INSTALLATION OPERATION NUMBER THE OPERATION NUMBER OF THE WCD IN WHICH A PART IS ASSEMBLED OR INSTALLED. INSTALLATION OCCURS AT THE BEGINNING OF AN OPERATION. NOTE: IF INSTALLATION OPERATION IS NOT IN THE SAME WCD AS THE REMOVAL OPERATION, THE REMOVAL OPERATION WOULD BE LISTED ON ONE LINE WITH ITS WCD, AND THE INSTALLATION OPERATION WOULD BE LISTED ON A SEPARATE LINE WITH ITS WCD.

WCD - INTERVIEW

WCD - INTERVIEW

**AFLC TECHNOLOGY INSERTION PROGRAM
DISASSEMBLY/ASSEMBLY PROFILE INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION	SOURCE
REMOVED/ DISASSEMBLED PART	PART THAT WAS REMOVED/DISASSEMBLED IN THE REMOVAL OPERATION NUMBER.	WCD
ITEM NUMBER	LIST ONLY ONE ITEM CODE FROM THE FOLLOWING: PCN = PRODUCTION CONTROL NUMBER NSN = NATIONAL STOCK NUMBER P/N = PART NUMBER CIRCLE ITEM CODE USED.	...
WCD	NAME/NUMBER OF WCD THAT IS USED TO PROCESS THE REMOVED ITEM NUMBER.	WCD
WCD DATE	REVISION DATE OF WCD.	WCD
SAME REMOVED ITEM INSTALLED INTO ASSY	IF THE REMOVAL ITEM MUST BE REPAIRED AND REINSTALLED INTO THE SAME END ITEM, ENTER YES. WHEN A SPARE PART CAN BE USED TO REPAIR THE END ITEM, ENTER NO.	INTERVIEWEE

NOTE: ALL ITEM NUMBERS AND THEIR WCD MUST BE LISTED ON THE WORKLOAD PROFILE.

AFLC TECHNOLOGY INSERTION PROGRAM MANPOWER PROFILE INSTRUCTIONS

DATA ITEM	DESCRIPTION	SOURCE
NAME	NAME OF PERSON COLLECTING DATA	—
ALC	NAME OF ALC WHERE THIS DATA IS COLLECTED	—
DATE	START DATE OF DATA COLLECTION	—
RCC	NAME OF RCC WHERE THIS DATA IS COLLECTED (6 CHARACTERS)	—
SKILL CODE/ LEVEL	IDENTIFY SKILL CODES AND THE LEVELS WITHIN RCC. ALL SKILL CODES AND LEVELS LISTED ON OPERATION PROFILE SHEETS MUST BE ENTERED. (EIGHT CHARACTERS) (e.g., SA - SKILL CODE, 00 - LEVEL - ENTER SA00)	SUPERVISOR
JOB DESCRIPTION	BRIEF DESCRIPTION OF JOB TO BE PERFORMED. e.g., AIRCRAFT SHEET METAL MECHANIC (9 CHARACTERS)	—
QUARTER	FY88 - AFLC's CALENDER WHICH STARTS OCTOBER (FOUR QUARTERS)	—
QUANTITY AVAILABLE	THE MANPOWER QUANTITY FOR EACH SKILL CODE AND LEVEL. ENTER THE QUANTITY AVAILABLE FOR WORK WEEK, WEEKENDS, AND HOLIDAYS PER SHIFT. (3 CHARACTERS)	RCC SECTION CHIEF
MANPOWER AVAILABLE (HOURS)	THE WORK STANDARD/MANPOWER FACTOR (WHICH ALCs USE FOR WORKLOAD NEGOTIATION) FOR EACH SKILL CODE AND LEVEL PER SHIFT. NUMBER OF HOURS AVAILABLE PER PERSON PER DAY, EXCLUDING TRAINING, TDY, ETC. (4 CHARACTERS WITH ONE DECIMAL PLACE)	RCC SECTION CHIEF

AFLC TECHNOLOGY INSERTION PROGRAM MANPOWER PROFILE INSTRUCTIONS (CONTINUED)

SOURCE
RCC SECTION
CHIEF

DESCRIPTION

MANPOWER SKILL CODE/LEVEL THAT CAN BE USED IN PLACE OF THE SPECIFIED MANPOWER SKILL CODE/LEVEL. USE THE SAME CODE AS IN OPERATION PROFILE. IN A SITUATION WHERE A SKILL/LEVEL CAN SUBSTITUTE FOR ANOTHER SKILL LEVEL FOR SAME OPERATIONS BUT NOT FOR OTHERS, THE TECHNIQUE AS SHOWN IN THE FOLLOWING EXAMPLE CAN BE USED.

EXAMPLE: SA08 IS USED IN 4 OPERATIONS (10, 20, 30, 40) AND CAN BE SUBSTITUTED BY SA10 IN OPERATIONS (10, 20 AND 40). THIS CAN BE CODED BY USING SA08 AS THE SKILL CODE FOR OPERATION 10, 20 AND 40 AND USING A PSEND0 NAME SA08A FOR OPERATION 30. THEN IN YOUR MANPOWER TABLE, THE FOLLOWING WOULD BE ENTERED.

DATA ITEM

ALTERNATE SKILL
CODE/LEVEL

SKILL CODE/LEVEL

ALTERNATE
SKILL CODE/LEVEL

SA08
SA08A (LEAVE QTY BLANK OR 0)

SA10
SA08

SINCE SA08A IS ENTERED WITH A QTY OF 0, IT WILL IMMEDIATELY USE THE ALTERNATE WHICH IS SA08.

MANPOWER PROFILE

NAME _____ ALC _____ DATE _____ RCC _____ SHEET _____ OF _____

SKILL CODE/LEVEL	JOB DESCRIPTION	QUARTER	QUANTITY AVAILABLE						MANPOWER AVAILABLE (PDURS)						ALTERNATE SKILL CODE/LEVEL				
			WORK WEEK		WEEKEND		HOLIDAYS		WORK WEEK		WEEKEND		HOLIDAYS						
			1	2	3	1	2	3	1	2	3	1	2	3		1	2	3	
		1																	
		2																	
		3																	
		4																	
		1																	
		2																	
		3																	
		4																	
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		3																	
		4																	
		1																	
		2																	
		3																	
		4																	

AFLC TECHNOLOGY INSERTION PROGRAM EQUIPMENT PROFILE INSTRUCTIONS

DATA ITEM	DESCRIPTION	SOURCE
NAME	NAME OF PERSON COLLECTING DATA	—
ALC	NAME OF ALC WHERE THIS DATA IS COLLECTED	SM - McCLELLAN AIR BASE OC - TINKER AIR BASE SA - KELLY AIR BASE WR - WARNER ROBINS AIR BASE OO - HILL AIR BASE
DATE	START DATE OF DATA COLLECTION	—
RCC	NAME OF RCC WHERE THIS DATA IS COLLECTED (6 CHARACTERS)	—
EQUIPMENT CODE	ENTER ALPHANUMERIC CODE OF EQUIPMENT. USE ALC CODES AND SHORTEN TO 8 CHARACTERS. KEEP SAME CODE AS USED ON OPERATION PROFILE SHEET.	INTERVIEWEE LOCATION OF EQUIP. EQUIPMENT LIST LAYOUT DRAWINGS
EQUIPMENT TYPE/ DESCRIPTION	ENTER A NOUN TO DESCRIBE EQUIPMENT (9 CHARACTERS)	—
QTY PER SHIFT	ENTER QUANTITY OF EQUIPMENT AVAILABLE PER SHIFT (3 CHARACTERS)	—
PREVENTIVE MAINTENANCE	DOWNTIME THAT IS SCHEDULED FOR PREVENTIVE MAINTENANCE ON THE EQUIPMENT LIST	G017C INTERVIEWS EQUIPMENT SPECS. G004I - INSPECTION AND CALIBRATION REPORT

**AFLC TECHNOLOGY INSERTION PROGRAM
EQUIPMENT PROFILE INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION	SOURCE
FREQ	INDICATE THE FREQUENCY THAT PREVENTIVE MAINTENANCE IS PERFORMED IN DAYS. (3 CHARACTERS)	---
SHIFT	INDICATE ON WHICH SHIFT PREVENTIVE MAINTENANCE IS PERFORMED. (1, 2, 3)	---
DOWNTIME	THE TIME REQUIRED TO PERFORM PREVENTIVE MAINTENANCE (i.e., ALIGNMENT, TESTING, CALIBRATION, MINOR REPAIR, ETC. - IN HOURS) (5 CHARACTERS WITH 1 DECIMAL PLACE)	G017C INTERVIEWS EQUIPMENT SPECS. G004j - INSPECTION AND CALIBRATION REPORT
UNSCHEDULED BREAKDOWN REPAIR TIME	EQUIPMENT DOWNTIME THAT IS NOT SCHEDULED. BREAKDOWN/ EQUIPMENT FAILURES	G017C TROUBLE CALL REPORTS, EQUIPMENT OPERATORS, EQUIPMENT SPECS.
MTDF	MEAN TIME BETWEEN FAILURES. AVERAGE TIME INTERVAL BETWEEN FAILURES IN DAYS (3 CHARACTERS)	G017C TROUBLE CALL REPORTS, EQUIPMENT OPERATORS, EQUIPMENT SPECS.
MTTR	MEAN TIME TO REPAIR AVERAGE TIME TO REPAIR FAILED EQUIPMENT - HOURS WITH ONE DECIMAL PLACE (5 CHARACTERS)	G017C TROUBLE CALL REPORTS, EQUIPMENT OPERATORS, EQUIPMENT SPECS.
PERCENT USED FOR OTHER RCC	INDICATE THE PERCENT THAT THE EQUIPMENT IS BEING USED BY OTHER RCCS.	INTERVIEWEE
ENVELOP UNITS MIN/MAX	MINIMUM QUANTITY OF ENVELOP UNITS EQUIPMENT CAN PROCESS. MAXIMUM QUANTITY OF ENVELOP UNITS EQUIPMENT CAN PROCESS. (4 CHARACTERS)	---

**AFLC TECHNOLOGY INSERTION PROGRAM
EQUIPMENT PROFILE INSTRUCTIONS (CONTINUED)**

**SOURCE
INTERVIEWEE**

DESCRIPTION

EQUIPMENT THAT CAN BE USED IN PLACE OF THE EQUIPMENT LISTED IN THE EQUIPMENT CODE COLUMN. ENTER ALPHANUMERIC CODE OF EQUIPMENT. USE ALC CODES AND SHORTEN TO 8 CHARACTERS. KEEP SAME CODE AS USED ON OPERATION PROFILE SHEET.

DATA ITEM

**ALTERNATE
EQUIPMENT**

PLEASE INDICATE THE SOURCE OF THE INFORMATION (I.E., PERSONNEL, DATABASE, PAPER REPORT). ALSO LIST ANY OTHER PECULIARITIES THAT MAY BE HELPFUL.

DATA SOURCE

AFLC TECHNOLOGY INSERTION PROGRAM WORKLOAD PROFILE INSTRUCTIONS

DATA ITEM	DESCRIPTION	SOURCE
NAME	NAME OF PERSON COLLECTING DATA	---
ALC	NAME OF ALC WHERE THIS DATA IS COLLECTED	---
DATE	START DATE OF DATA COLLECTION	---
RCC	NAME OF RCC WHERE THIS DATA IS COLLECTED (6 CHARACTERS)	---
ITEM CODE	USE SAME ITEM CODE AS IN OPERATION PROFILE P/N, PCN OR NSN.	OPERATION PROFILE
AIRCRAFT MODEL	LIST THE AIRCRAFT MODEL ON WHICH THIS ITEM IS USED.	OPERATION PROFILE
WCD	LIST WCD NAME/NUMBER. IF WCD HAS DIS/ASS OR PARALLEL OP. WCD ASSOCIATED WITH IT, LIST THEM BELOW THE PARENT WCD IN THE ORDER WHICH THEY ARE PROCESSED.	SUPERVISOR
WORKLOAD TYPE	ENTER ONE OF THE FOLLOWING WORKLOAD NUMBERS: MISTR - 4, PDM - 0, T - 8, M - 7, MICAP - 2	SUPERVISOR
FLOATING STOCK	NUMBER OF ITEMS THAT ARE AVAILABLE FOR USE.	G019C, G004L G037E
ACTUAL PRODUCTION PER QUARTER	ACTUAL OUTPUTS OF END ITEMS FOR RCC PER QUARTER OF FY88. (4 CHARACTERS)	SUPERVISOR
NUMBER OF ENVELOP UNITS	ENTER ENVELOP UNIT SIZE (2 CHARACTERS)	E046B, G037E, G004L
MAXIMUM W.I.P.	MAXIMUM QUANTITY OF END ITEMS PER ITEM CODE THAT CAN BE IN PROCESS FOR REPAIR AT ANY ONE TIME, GIVEN THE "AS-IS" WORKLOAD MIX.	
STANDARD HOURS	THE HOURS ALLOCATED BY RCC TO PERFORM THE OPERATIONS IN THE REPAIR CYCLE.	

AFLC TECHNOLOGY INSERTION PROGRAM ENVELOP INSTRUCTIONS

ENVELOP UNITS ARE CONSIDERED AS THE EVALUATION OF DATA PROCESS EQUIPMENT TO DETERMINE THE MIN/MAX NUMBER OF PARTS THAT CAN BE PROCESSED AT ONE TIME.

DATA ITEM	DESCRIPTION
ALC	NAME OF ALC
RCC	NAME OF RCC (6 CHARACTERS)
WCD	NAME/NUMBER OF WORK CONTROL DOCUMENT (SAME AS ON OPERATION PROFILE) (8 CHARACTERS)
WCD DATE	WORK CONTROL DOCUMENT REVISION DATE. (6 CHARACTERS) SAME AS ON OPERATION PROFILE
EQUIPMENT CODE	ENTER ALPHANUMERIC CODE OF PROCESS EQUIPMENT. USE ALC CODES AND SHORTEN TO 8 CHARACTERS
TOTAL VOLUME OF EQUIPMENT IN CU. FT.	TOTAL USABLE VOLUME OF PROCESS EQUIPMENT IN CU. FT. ROUND TO NEAREST TENTH.
LIST OF PARTS BY ITEM CODE	LIST THE ITEM CODE OF EACH TYPE OF PART THAT IS PROCESSED BY THE LISTED EQUIPMENT.
VOLUME IN CU. FT.	DETERMINE THE VOLUME OF THE PART IN CU. FT. INCLUDING FIXTURES. ROUND UP TO NEXT TENTH OF CU. FT.
UNIT VALUE	ASSIGN A UNIT VALUE OF ONE (1) TO THE SMALLEST PART DETERMINE THE UNIT VALUE OF THE OTHER PARTS LISTED IN DIRECT RELATION TO THE SMALLEST PART. ROUND EACH NUMBER UP TO THE NEAREST WHOLE NUMBER.

**AFLC TECHNOLOGY INSERTION PROGRAM
ENVELOP INSTRUCTIONS (CONTINUED)**

DATA ITEM	DESCRIPTION
MINIMUM	MINIMUM NUMBER OF PARTS THAT CAN BE PLACED IN THE EQUIPMENT FOR PROCESSING ON A PRACTICAL BASIS (USE IE JUDGEMENT)
MAXIMUM	MAXIMUM NUMBER OF PARTS THAT CAN BE PLACED IN THE EQUIPMENT FOR PROCESSING.

4.1 DATA COLLECTION PROCESS

- * DATA WAS COLLECTED FOR EACH PCN AS IDENTIFIED BY THE 80/20 ANALYSIS FOR MATPSS RCC .
- * THE SHOP FOREMAN WAS REQUESTED TO IDENTIFY THE PERSON MOST FAMILIAR WITH EACH PCN OF THE 80/20 ANALYSIS
- * THE PERSON IDENTIFIED BY THE SHOP FOREMAN WAS INTERVIEWED BY THE DATA COLLECTOR. THE COLLECTOR TRANSFERRED THE DATA TO THE PROFILE SHEETS.
- * THE PROFILE FOR EACH PCN WAS COMPILED INTO AN EXPANDING FILE FOR THE PARTICULAR RCC.
- * THE DATA WAS SCRUTINIZED BY THE WORKING GROUP FOR COMPLETENESS AND CORRECTNESS.
- * THE DATA COLLECTED WILL BE USED TO GENERATE THE MODEL INPUT FOR THE RCC .

NAME: HULM
 FONE: 68004A

ALC: SA NCU: MATPSS

WLD: 1A200K WLDDATE: 88.1.1

UP #	NCU	UP DESC	UCCU FAC	UP TYPE	MAND FLOW HRS	SPIC CODE	UCCU	TIME REC %	EQUIP CODE	WLD: 1A400K	WLDDATE: 88.1.1
10	MATPSS	RTE	1.00	F		B602RL09	1	0.05			
20	MATPSS	RTE	1.00	F	0.5		1	0.05			
30	MATPSS	JNFU	1.00	F			1	0.08			
40	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
50	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
60	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
70	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
80	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
90	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
110	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
120	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
130	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
140	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
150	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
160	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
170	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
180	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
190	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
200	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
210	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
220	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
230	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
240	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
250	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
260	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
270	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
280	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
290	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
300	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
310	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
320	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
330	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
340	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
350	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
360	MATPSS	VIS	1.00	F		B602RL09	1	0.08			
370	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
380	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
390	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
400	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
410	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
420	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
430	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
440	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
450	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
460	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
470	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
480	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
490	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
500	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
510	MATPSS	VIS	1.00	F		B602RL09	1	0.17			
520	MATPSS	VIS	1.00	F		B602RL09	1	0.05			
530	MATPSS	VIS	1.00	F		B602RL09	1	0.05			

NAME: HULM
 FONE: 68004A

ALC: SA

NCU: MATPSS

WLD: 1A400K WLDDATE: 88.1.1

Best Available Copy

SUBJECT F15 AMAD LH VISUAL FLOW PROCESS CHART

DATE 5-26-89

ITEM CODE
PCN
NSN
P/N

WCD TA200K WCD DATE 88270

08004A

CHART BEGINS 10

CHART ENDS 520

PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
10	10	○▶D□▽	ROUTE	330	330	○DD■▽	VISUAL
20	20	○▶D□▽	ROUTE	340	340	○DD■▽	VISUAL
30	30	●DD□▽	INFO	350	350	○DD■▽	VISUAL
40	40	○DD■▽	VISUAL	360	360	○DD■▽	VISUAL
50	50	○DD■▽	VISUAL	370	370	○DD■▽	VISUAL
60	60	○DD■▽	VISUAL	380	380	○DD■▽	VISUAL
70	70	○DD■▽	VISUAL	390	390	○DD■▽	VISUAL
80	80	○DD■▽	VISUAL	400	400	○DD■▽	VISUAL
90	90	○DD■▽	VISUAL	410	410	○DD■▽	VISUAL
100	100	○DD■▽	VISUAL	420	420	○DD■▽	VISUAL
110	110	○DD■▽	VISUAL	430	430	○DD■▽	VISUAL
120	120	○DD■▽	VISUAL	440	440	○DD■▽	VISUAL
130	130	○DD■▽	VISUAL	450	450	○DD■▽	VISUAL
140	140	○DD■▽	VISUAL	460	460	○DD■▽	VISUAL
150	150	○DD■▽	VISUAL	470	470	○DD■▽	VISUAL
160	160	○DD■▽	VISUAL	480	480	○DD■▽	VISUAL
170	170	○DD■▽	VISUAL	490	490	○DD■▽	VISUAL
180	180	○DD■▽	VISUAL	500	500	○DD■▽	VISUAL
190	190	○DD■▽	VISUAL	510	510	○DD■▽	VISUAL
200	200	○DD■▽	VISUAL	520	520	○DD■▽	VISUAL
210	210	○DD■▽	VISUAL			○DD□▽	
220	220	○DD■▽	VISUAL			○DD□▽	
230	230	○DD■▽	VISUAL			○DD□▽	
240	240	○DD■▽	VISUAL			○DD□▽	
250	250	○DD■▽	VISUAL			○DD□▽	
260	260	○DD■▽	VISUAL			○DD□▽	
270	270	○DD■▽	VISUAL			○DD□▽	
280	280	○DD■▽	VISUAL			○DD□▽	
290	290	○DD■▽	VISUAL			○DD□▽	
300	300	○DD■▽	VISUAL			○DD□▽	
310	310	○DD■▽	VISUAL			○DD□▽	
320	320	○DD■▽	VISUAL			○DD□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

▶ TRANSPORTATION

D DELAY

LSC-20147

NAME: HUL M
 PONE 080046

ALU: 56 RCU: MATPSS

MCD: 1A000 BLDDATE: 88100

OF #	RCU	OP	DESC	OP	MAND	FLOW	SO	CODE	QTY	TIME	FED	EQUIP	TIME
		FAC	TYPE	Z	HRS					%	HRS	CODE	%
10	MATPSS	1.00	F					8602RC09	1		0.05		
20	MATPSS	1.00	F			0.5			1		0.05		
30	MATPSS	1.00	F										
40	MATPSS	1.00	F					8602RC09	1		0.05		
50	MATPSS	1.00	F					8602RC09	1		0.05		
60	MATPSS	1.00	F					8602RC09	1		0.05		
70	MATPSS	1.00	F					8602RC09	1		0.05		
80	MATPSS	1.00	F					8602RC09	1		0.05		
90	MATPSS	1.00	F					8602RC09	1		0.05		
100	MATPSS	1.00	F					8602RC09	1		0.05		
110	MATPSS	1.00	F					8602RC09	1		0.05		
120	MATPSS	1.00	F					8602RC09	1		0.05		
130	MATPSS	1.00	F					8602RC09	1		0.05		
140	MATPSS	1.00	F					8602RC09	1		0.05		
150	MATPSS	1.00	F					8602RC09	1		0.05		
160	MATPSS	1.00	F					8602RC09	1		0.05		
170	MATPSS	1.00	F					8602RC09	1		0.05		
180	MATPSS	1.00	F					8602RC09	1		0.05		
190	MATPSS	1.00	F					8602RC09	1		0.05		
200	MATPSS	1.00	F					8602RC09	1		0.05		
210	MATPSS	1.00	F					8602RC09	1		0.05		
220	MATPSS	1.00	F					8602RC09	1		0.05		
230	MATPSS	1.00	F					8602RC09	1		0.05		
240	MATPSS	1.00	F					8602RC09	1		0.05		
250	MATPSS	1.00	F					8602RC09	1		0.05		
260	MATPSS	1.00	F					8602RC09	1		0.05		
270	MATPSS	1.00	F					8602RC09	1		0.05		
280	MATPSS	1.00	F					8602RC09	1		0.05		
290	MATPSS	1.00	F					8602RC09	1		0.05		
300	MATPSS	1.00	F					8602RC09	1		0.05		
310	MATPSS	1.00	F					8602RC09	1		0.05		
320	MATPSS	1.00	F					8602RC09	1		0.05		
330	MATPSS	1.00	F					8602RC09	1		0.05		
340	MATPSS	1.00	F					8602RC09	1		0.05		
350	MATPSS	1.00	F					8602RC09	1		0.05		
360	MATPSS	1.00	F					8602RC09	1		0.05		
370	MATPSS	1.00	F					8602RC09	1		0.05		
380	MATPSS	1.00	F					8602RC09	1		0.05		
390	MATPSS	1.00	F					8602RC09	1		0.05		
400	MATPSS	1.00	F					8602RC09	1		0.05		
410	MATPSS	1.00	F					8602RC09	1		0.05		
420	MATPSS	1.00	F					8602RC09	1		0.05		
430	MATPSS	1.00	F					8602RC09	1		0.05		
440	MATPSS	1.00	F					8602RC09	1		0.05		
450	MATPSS	1.00	F					8602RC09	1		0.05		
460	MATPSS	1.00	F					8602RC09	1		0.05		
470	MATPSS	1.00	F					8602RC09	1		0.05		
480	MATPSS	1.00	F					8602RC09	1		0.05		
490	MATPSS	1.00	F					8602RC09	1		0.05		
500	MATPSS	1.00	F					8602RC09	1		0.05		
510	MATPSS	1.00	F					8602RC09	1		0.05		
520	MATPSS	1.00	F					8602RC09	1		0.05		

SAS

OPERATION PROFILE

SHEET 3 OF

NAME	ITEM CD	PCN	08004A	ALC SA	WCD TA008K	WCD DATE	85094	OPER	HIST MAND	OPER MAND	SKILL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
50	MATPSS	ASSY	0-00																	
50	MATPSS	ASSY	1.0 P		8602BLO9	4						1		0.4	A-14		1		0.4	
50	MATPSS	ASSY			4							1		0.4	A-15		1		0.4	
55	MATPSS	ASSY	0-00																	
16	MATPSS	ASSY	1.0 P		8602BLO9	7						1		0.7	A-3		1		0.7	
16	MATPSS	ASSY										1		0.7	A-14		1		0.7	
16	MATPSS	ASSY										1		0.7	A-15		1		0.7	
16	MATPSS	ASSY	1.0 P		7							1		0.7	A-17		1		0.7	
60	MATPSS	ASSY	0-00																	
60	MATPSS	ASSY	1.0 P		8602BLO9	1						1		0.1	A-14		1		0.1	
60	MATPSS	ASSY										1		0.1	A-15		1		0.1	
65	MATPSS	ASSY	0-00																	
65	MATPSS	ASSY	1.0 P		8602BLO9	1						1		0.1	A-14		1		0.1	
65	MATPSS	ASSY										1		0.1	A-15		1		0.1	
65	MATPSS	ASSY										1		0.1	A-17		1		0.1	
70	MATPSS	ASSY	0-00																	

OPERATION 16 MFS - OPERATION 55

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SAS

OPERATION PROFILE

SHEET 4 OF

NAME	ITEM CD	PCN	08004A	ALC	SA	WCD	TA008K	WCD	DATE	8509	OPER	HIST	MAND	OPER	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	70	MATPSS	ASSY						1								1		0.3	A-14		1		0.3	
	70	MATPSS	ASSY														1		0.3	A-15		1		0.3	
	75	MATPSS	ASSY																						
	75	MATPSS	ASSY																						
	75	MATPSS	ASSY						1								1		0.5	A-14		1		0.5	
	75	MATPSS	ASSY														1		0.5	A-15		1		0.5	
	75	MATPSS	ASSY														1		0.5	A-5		1		0.5	
	80	MATPSS	ASSY																						
	80	MATPSS	ASSY																						
	80	MATPSS	ASSY						1								1		0.3	A-14		1		0.3	
	80	MATPSS	ASSY														1		0.3	A-15		1		0.3	
	80	MATPSS	ASSY														1		0.3	A-30		1		0.3	
	80	MATPSS	ASSY														1		0.3	A-18		1		0.3	
	85	MATPSS	ASSY																						
	85	MATPSS	ASSY																						
	85	MATPSS	ASSY						1								1		0.1	A-14		1		0.1	
	85	MATPSS	ASSY														1		0.1	A-15		1		0.1	
	90	MATPSS	ASSY																						
	90	MATPSS	ASSY																						
	90	MATPSS	ASSY						1								1		0.1	A-14		1		0.1	
	90	MATPSS	ASSY														1		0.1	A-15		1		0.1	

4.1

110 MATPS 1.0 P
 110 MATPS 1.0 P
 110 MATPS 1.0 P
 110 MATPS 1.0 P

86028C09
 3 A-37
 A-14
 A-15
 A-19

SHEET 5 OF

OPERATION PROFILE

SAS

ALC SA DATE

WCD TA008K WCDDATE 8508A

ITEM NO PCN 08004A OPER HIST MAND OPER MAND SKILL EQUIP

NUMB RCC DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

90 MATPS ASSY 1.0 P 86028C09 1 0.1 1.3 1 0.1

~~100 MATPS ASSY 0.96~~

~~100 MATPS ASSY~~

100 MATPS ASSY 1.0 P 86028C09 1 1.3 1 1.3

100 MATPS ASSY 1.5 P A-21 1 1.5

100 MATPS ASSY 1.3 P A-14 1 1.3

100 MATPS ASSY 1.3 P A-15 1 1.3

~~115 MATPS ASSY 0.00~~

~~115 MATPS ASSY~~

115 MATPS ASSY 1.0 P 86028C09 1 0.5 1 0.5

~~120 MATPS ASSY 0.00~~

120 MATPS ASSY 1.0 P 86028C09 1 0.3 1 0.3

120 MATPS ASSY 1.0 P A-20 1 0.3

120 MATPS ASSY 1.0 P A-19 1 0.3

120 MATPS ASSY 1.0 P A-37 1 0.3

120 MATPS ASSY 1.0 P A-15 1 0.3

*Print 110
 in sequence*

SAS

OPERATION PROFILE

SHEET 10 OF

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	WCD	TAD08K	WCD	DATE	DATE	QTY	X	HRS	EQUIP	QTY	X	HRS	NOTES
			DESC	OCGR	TYPE	F	HRS	CD/LVL									CODE				
125	125	MATPSS	ASSY																		
125	MATPSS	ASSY					1.0	P						1		0.3	A-14	1		0.3	
125	MATPSS	ASSY												1			A-15	1			0.3
130	130	MATPSS	ASSY																		
130	130	MATPSS	ASSY																		
130	MATPSS	ASSY					1.0	P						1		0.5	A-14	1		0.5	
130	MATPSS	ASSY												1			A-15	1			0.5
135	135	MATPSS	ASSY																		
135	135	MATPSS	ASSY																		
135	MATPSS	ASSY												1		0.3	A-14	1		0.3	
135	MATPSS	ASSY												1			A-37	1			0.3
135	MATPSS	ASSY												1			A-15	1			0.3
140	140	MATPSS	ASSY																		
140	140	MATPSS	ASSY																		
140	MATPSS	ASSY					1.0	P						1		1.0	A-8	1			1.1

SAS

OPERATION PROFILE
SHEET 2 OF

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	WCD	TAD08K	WCD	DATE	QTY	%	HRS	EQUIP	CODE	RCC	MATPSS	QTY	%	HRS	NOTES
	152		MATPSS	ASSY		1.0	P						1		0.3	A-14			1		0.3		
	152		MATPSS	ASSY												A-14			1		0.3		
	155		MATPSS	ASSY												A-15							
	155		MATPSS	ASSY												A-15			1		0.3		
	155		MATPSS	ASSY		1.0	P						1		0.3	A-14				1		0.3	
	155		MATPSS	ASSY												A-14			1		0.3		
	155		MATPSS	ASSY												A-15			1		0.3		
	160		MATPSS	ASSY		1.0	P						1		0.1	A-14				1		0.1	
	160		MATPSS	ASSY												A-14			1		0.1		
	160		MATPSS	ASSY		1.0	P						1		0.1	A-15				1		0.1	
	160		MATPSS	ASSY												A-15			1		0.1		
	165		MATPSS	ASSY		1.0	P						1		0.3	A-14				1		0.3	
	165		MATPSS	ASSY												A-14			1		0.3		
	170		MATPSS	ASSY		1.0	P						1		0.3	A-15				1		0.3	
	170		MATPSS	ASSY												A-15			1		0.3		
	170		MATPSS	ASSY		1.0	P						1		0.3	A-28				1		0.3	
	170		MATPSS	ASSY												A-28			1		0.3		

SAS

SHEET 10 OF

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08004A WCD TA008K WCD DATE 85084

OPER NMBR RCC OPER DESC HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE QTY X HRS NOTES

~~200~~ MATTRESS ASSY 0.00 P

~~200~~ MATTRESS ASSY

200 MATTRESS ASSY 1.0 P
 200 MATTRESS ASSY

210 MATTRESS ASSY 0.00 P

~~210~~ MATTRESS ASSY

210 MATTRESS ASSY 1.0 P
 210 MATTRESS ASSY

~~220~~ MATTRESS ASSY 0.00 P

~~220~~ MATTRESS ASSY

220 MATTRESS ASSY 1.0 P
 220 MATTRESS ASSY

~~230~~ MATTRESS ASSY 0.00 P

~~230~~ MATTRESS ASSY

230 MATTRESS ASSY 1.0 P
 230 MATTRESS ASSY
 230 MATTRESS ASSY

8602BLO9
~~46-9~~
 A-14
 A-15

8602BLO9
~~46-9~~
 A-14
 A-15

8602BLO9
~~46-9~~
 A-14
 A-15

8602BLO9
~~46-9~~
 A-14
 A-15
 A-26

SAS

OPERATION PROFILE

DATE

ALC SA

WCD TAO08K

WCD TAO08K

ITEM CD PCN 08004A

OPER NUMB RCC OPER DESC HIST MAND OCCR TYPE F HRS CD/LVL SKILL QTY X HRS

EQUIP CODE

QTY X HRS

NOTES

RCC MATPSS

SUBJECT F15 AMAD-LH ASSEMBLY

FLOW PROCESS CHART

DATE 5-25-89

ITEM CODE

WCD TA008K WCD DATE 85094

PCN
NSN
PM

08004A

CHART BEGINS 5

CHART ENDS 270

PREPARED BY AP Helm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	5	●○○□▽	ASSY	180	180	●○○□▽	ASSY
10	10	●○○□▽	ASSY	185	185	●○○□▽	ASSY
15	15	●○○□▽	ASSY	190	190	●○○□▽	ASSY
16	55	●○○□▽	ASSY	200	200	●○○□▽	ASSY
20	20	●○○□▽	ASSY	210	210	●○○□▽	ASSY
25	25	●○○□▽	ASSY	220	220	●○○□▽	ASSY
30	30	●○○□▽	ASSY	230	230	●○○□▽	ASSY
40	40	●○○□▽	ASSY	240	240	●○○□▽	ASSY
45	45	●○○□▽	ASSY	250	250	●○○□▽	ASSY
50	50	●○○□▽	ASSY	260	260	●○○□▽	ASSY
60	60	●○○□▽	ASSY	270	270	●○○□▽	ASSY
65	65	●○○□▽	ASSY			○○□▽	
70	70	●○○□▽	ASSY			○○□▽	
75	75	●○○□▽	ASSY			○○□▽	
80	80	●○○□▽	ASSY			○○□▽	
85	85	●○○□▽	ASSY			○○□▽	
90	90	●○○□▽	ASSY			○○□▽	
100	100	●○○□▽	ASSY			○○□▽	
110	—	●○○□▽	ASSY			○○□▽	
115	115	●○○□▽	ASSY			○○□▽	
120	120	●○○□▽	ASSY			○○□▽	
125	125	●○○□▽	ASSY			○○□▽	
130	130	●○○□▽	ASSY			○○□▽	
135	135	●○○□▽	ASSY			○○□▽	
140	140	●○○□▽	ASSY			○○□▽	
150	150	●○○□▽	ASSY			○○□▽	
152	152	●○○□▽	ASSY			○○□▽	
155	155	●○○□▽	ASSY			○○□▽	
160	160	●○○□▽	ASSY			○○□▽	
165	165	●○○□▽	ASSY			○○□▽	
170	170	●○○□▽	ASSY			○○□▽	
175	175	●○○□▽	ASSY			○○□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147

cont Hold
A hood
Test

21

8:18 TUESDAY, MARCH 28, 1989 41

SHEET 1 OF 10

SAS

OPERATION PROFILE

DATE 4-10-89

RCC MATPSS

QTY % HRS

QTY % HRS

NAME APR 10/10 WCD TA102K WCD DATE 87058

ITEM CD PCN 08004A OPER HIST MAND OPER SKILL EQUIP

NUMB RCC DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

NOTES
RCC SEPARATION CS FOR
SETUP (TEST SET)

~~10 MATPSS TEST 1.0 P~~

~~10 MATPSS TEST 1.0 P~~

10 MATPSS TEST 1.0 P

~~10 MATPSS TEST 1.0 P~~

~~10 MATPSS TEST 1.0 P~~

~~20 MATPSS TEST 1.0 P~~

~~20 MATPSS TEST 1.0 P~~

20 MATPSS TEST 1.0 P

~~20 MATPSS TEST 1.0 P~~

~~20 MATPSS TEST 1.0 P~~

~~30 MATPSS TEST 1.0 P~~

~~30 MATPSS TEST 1.0 P~~

30 MATPSS TEST 1.0 P

8602 BC10
~~1.0 P~~

8602 BC10
~~1.0 P~~

8602 BC10
~~1.0 P~~

0.1 A-47
0.3 A2-10/T 1 0.3

0.3 A-47
0.3 A2-10/T 1 0.3

0.1 A-47
0.3 A2-10/T 1 0.3

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 08004A WCD TA102K WCD DATE 87059

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE QTY X HRS QTY X HRS NOTES

~~30 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~30 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~40 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~40 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

40 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1

~~40 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~40 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~50 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~50 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

50 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1

~~50 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

~~50 MATPSS TEST 1.0 P 1 0.1 A2-10/1 1 0.1~~

OPERATION PROFILE

SAS _____ SHEET 5 OF _____

NAME _____

ALC SA _____ DATE _____

ITEM CD PCN 08004A WCD TA102K WCD DATE 87059

OPER NUMB	RCC	HIST OCCR	MAND TYPE	OPER F	MAND HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
120	MATPSS	TEST	1.00	I										
120	MATPSS	TEST	S											
120	MATPSS	TEST	1.0 P			8602BC10 64WG-10	1		0.1	A-47 A2-10/1	1		0.1	
120	MATPSS	TEST	P							A2-1/28	1		0.2	
120	MATPSS	TEST	P							A2-0/0	1		0.2	
130	MATPSS	TEST	1.00	I										
130	MATPSS	TEST	S											
130	MATPSS	TEST	1.0 P			8602BC10 64WG-10	1		0.1	A-47 A2-10/1	1		0.1	
130	MATPSS	TEST	P							A2-2/28	1		0.1	
130	MATPSS	TEST	P							A2-0/0	1		0.1	
140	MATPSS	TEST	0.05	I										
140	MATPSS	TEST	S											
140	MATPSS	TEST	1.0 P			8602BC10 64WG-10	1		0.2	A-47 A2-10/1	1		0.2	

SAS

OPERATION PROFILE

SHEET 6 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08004A WCD TA102K WCD DATE 87059

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
140		MATPSS TEST		P					A8-1728				
140		MATPSS TEST		P					A8-073				
140		MATPSS TEST	0.05	P									
150		MATPSS TEST		P									
150		MATPSS TEST		P									
150		MATPSS TEST	1.0 P	P		1		0.2	A-47	1		0.2	
150		MATPSS TEST		P					A8-1071	1			
150		MATPSS TEST		P					A8-1071	1			
150		MATPSS TEST		P					A8-1071	1			
160		MATPSS TEST	0.00	P									
160		MATPSS TEST		P									
160		MATPSS TEST	1.0 P	P		1		0.2	A-47	1		0.2	
160		MATPSS TEST		P					A8-1/28	1		0.1	
160		MATPSS TEST		P					A8-1071	1			

140 MATPSS TEST 0.05 P

140 MATPSS TEST P

140 MATPSS TEST 0.05 P

150 MATPSS TEST P

150 MATPSS TEST 1.0 P P

150 MATPSS TEST P

150 MATPSS TEST P

150 MATPSS TEST P

160 MATPSS TEST 0.00 P

160 MATPSS TEST P

160 MATPSS TEST 1.0 P P

160 MATPSS TEST P

160 MATPSS TEST P

160 MATPSS TEST P

OPERATION PROFILE SAS

SHEET 2 OF

NAME _____ ALC SA _____ DATE _____ WCD 1A102K WCDDATE 87059

ITEM CD PCN 0800AA OPER HIST MAND OPER MAND SKILL EQUIP QTY % HRS QTY % HRS NOTES

170 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.8 A-47

170 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

170 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

170 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

175 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

175 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

175 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

175 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

180 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

180 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.2 A-47

185 100 MATPSS TEST 0.00 ~~1.0 P~~ 8602BC10 0.1 A-47

OPERATION PROFILE SAS

SHEET 8 OF

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____
 ITEM CD PCN 08004A WCD TA102K WCD DATE 87059
 OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP QTY % HRS QTY % HRS NOTES
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

~~185 MATPSS TEST 1.0 P 0.1~~

~~186 MATPSS TEST 1.0 P 0.1~~

~~189 MATPSS TEST 1.0 P 0.1~~

~~189 MATPSS TEST 1.0 P 0.1~~

190 MATPSS TEST 1.0 P 0.2 A-47 1 1.0 0.2

~~190 MATPSS TEST 1.0 P 0.3~~

~~190 MATPSS TEST 1.0 P 0.3~~

~~190 MATPSS TEST 1.0 P 0.3~~

~~200 MATPSS TEST 1.0 P 0.3~~

200 MATPSS TEST 1.0 P 0.3 A-47 1 1.0 0.3

~~200 MATPSS TEST 1.0 P 0.3~~

~~200 MATPSS TEST 1.0 P 0.3~~

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08004A WCB TA102K WCCDATE 87059

OPER NMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR OCCR TYPE F HRS CD/LVL QTY X HRS CODE

OPER NMB	RCC	OPER HIST MAND OPER MAND SKILL EQUIP	DESC OCCR OCCR TYPE F HRS CD/LVL	QTY	X HRS	QTY	X HRS	NOTES
210	MATPSS	MOVE	0.85	1	0.1			
220	MATPSS	ASSY	0.98	1				
230	MATPSS	ASSY	1.0 P	1	0.5			Transit to paint shop MATPMM
240	MATPSS	MOVE	0.85	1				
240	MATPMM			1	2.0			Paint Shop
242	MATPSS	ASSY	0.98	1	0.1			Transit from paint shop

LH AMAD TEST

OPERATION PROFILE

NAME AA ALC SA DATE 4/10/89 RCC MATPSS SHEET 1 OF 2

WCD IA102K WCD DATE 89058

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY LOW HOUR		SKILL CODE/ LEVEL	MANPOWER		EQUIPMENT		DATA SOURCE COMMENTS		
					%	HRS.		QTY.	%	HRS.	QTY.		%	HRS.
IN				TRANSIT										
				SETUP										
				PROCESS										
CS	MATPSS	SETUP	1	TRANSIT					1					
				SETUP					1	0.5	A-47	1	0.5	TEST SFT
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										
				TRANSIT										
				SETUP										
				PROCESS										

FLOW PROCESS CHART

SUBJECT F15 AMAD LH TEST

DATE 5-26-89

ITEM CODE
PCN
NSN
PIN

WCD TA102K

WCD DATE 89058

08004A

CHART BEGINS 5

CHART ENDS 250

PREPARED BY A.P. Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	-	●DD□▽	S/U			○DD□▽	
10	10	●DD□▽	TEST			○DD□▽	
20	20	●DD□▽	TEST			○DD□▽	
30	30	●DD□▽	TEST			○DD□▽	
40	40	●DD□▽	TEST			○DD□▽	
50	50	●DD□▽	TEST			○DD□▽	
70	70	●DD□▽	TEST			○DD□▽	
80	80	●DD□▽	TEST			○DD□▽	
90	90	●DD□▽	TEST			○DD□▽	
100	100	●DD□▽	TEST			○DD□▽	
110	110	●DD□▽	TEST			○DD□▽	
120	120	●DD□▽	TEST			○DD□▽	
130	130	●DD□▽	TEST			○DD□▽	
140	140	●DD□▽	TEST			○DD□▽	
150	150	●DD□▽	TEST			○DD□▽	
160	160	●DD□▽	TEST			○DD□▽	
170	170	●DD□▽	TEST			○DD□▽	
180	180	●DD□▽	TEST			○DD□▽	
185	185	●DD□▽	TEST			○DD□▽	
190	190	●DD□▽	TEST			○DD□▽	
200	200	●DD□▽	TEST			○DD□▽	
210	210	●DD□▽	TEST			○DD□▽	
220	220	●DD□▽	ASSY			○DD□▽	
230	230	○DD□▽	MOVE			○DD□▽	
240	240	●DD□▽	PAINT/BS			○DD□▽	
242	242	○DD□▽	MOVE			○DD□▽	
244	244	●DD□▽	ASSY			○DD□▽	
250	250	●DD□▽	ASSY			○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	

○ OPERA. IN

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DEL.??

NOVEMBER 1964
PUNJ AIRBASE

RECEIPTS

RECEIPTS

QTY	UNIT	DESCRIPTION	DATE	AMOUNT	TOTAL	REMARKS
10	MT	...	...	...	...	...
20	MT	...	...	...	...	...
30	MT	...	...	...	...	...
40	MT	...	...	...	...	...
50	MT	...	...	...	...	...
60	MT	...	...	...	...	...
70	MT	...	...	...	...	...
80	MT	...	...	...	...	...
90	MT	...	...	...	...	...
100	MT	...	...	...	...	...
110	MT	...	...	...	...	...
120	MT	...	...	...	...	...
130	MT	...	...	...	...	...
140	MT	...	...	...	...	...
150	MT	...	...	...	...	...
160	MT	...	...	...	...	...
170	MT	...	...	...	...	...
180	MT	...	...	...	...	...
190	MT	...	...	...	...	...
200	MT	...	...	...	...	...
210	MT	...	...	...	...	...
220	MT	...	...	...	...	...
230	MT	...	...	...	...	...
240	MT	...	...	...	...	...
250	MT	...	...	...	...	...
260	MT	...	...	...	...	...
270	MT	...	...	...	...	...
280	MT	...	...	...	...	...
290	MT	...	...	...	...	...
300	MT	...	...	...	...	...
310	MT	...	...	...	...	...
320	MT	...	...	...	...	...
330	MT	...	...	...	...	...
340	MT	...	...	...	...	...
350	MT	...	...	...	...	...
360	MT	...	...	...	...	...
370	MT	...	...	...	...	...
380	MT	...	...	...	...	...
390	MT	...	...	...	...	...
400	MT	...	...	...	...	...
410	MT	...	...	...	...	...
420	MT	...	...	...	...	...
430	MT	...	...	...	...	...
440	MT	...	...	...	...	...
450	MT	...	...	...	...	...
460	MT	...	...	...	...	...
470	MT	...	...	...	...	...
480	MT	...	...	...	...	...
490	MT	...	...	...	...	...
500	MT	...	...	...	...	...
510	MT	...	...	...	...	...
520	MT	...	...	...	...	...

Handwritten signature or mark.

SUBJECT F15 AMAD RH VISUAL FLOW PROCESS CHART

DATE 5-26-89

ITEM CODE
PCN
NSN
P/N

WCD TA 400K

WCD DATE 88270

08005A

CHART BEGINS

10

CHART ENDS

520

PREPARED BY A Pholm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
10	10	O D □ ▽	ROUTE	330	330	O D □ ▽	VISUAL
20	20	O D □ ▽	ROUTE	340	340	O D □ ▽	VISUAL
30	30	● D □ ▽	TNFO	350	350	O D □ ▽	VISUAL
40	40	O D □ ▽	VISUAL	360	360	O D □ ▽	VISUAL
50	50	O D □ ▽	VISUAL	370	370	O D □ ▽	VISUAL
60	60	O D □ ▽	VISUAL	380	380	O D □ ▽	VISUAL
70	70	O D □ ▽	VISUAL	390	390	O D □ ▽	VISUAL
80	80	O D □ ▽	VISUAL	400	400	O D □ ▽	VISUAL
90	90	O D □ ▽	VISUAL	410	410	O D □ ▽	VISUAL
100	100	O D □ ▽	VISUAL	420	420	O D □ ▽	VISUAL
110	110	O D □ ▽	VISUAL	430	430	O D □ ▽	VISUAL
120	120	O D □ ▽	VISUAL	440	440	O D □ ▽	VISUAL
130	130	O D □ ▽	VISUAL	450	450	O D □ ▽	VISUAL
140	140	O D □ ▽	VISUAL	460	460	O D □ ▽	VISUAL
150	150	O D □ ▽	VISUAL	470	470	O D □ ▽	VISUAL
160	160	O D □ ▽	VISUAL	480	480	O D □ ▽	VISUAL
170	170	O D □ ▽	VISUAL	490	490	O D □ ▽	VISUAL
180	180	O D □ ▽	VISUAL	500	500	O D □ ▽	VISUAL
190	190	O D □ ▽	VISUAL	510	510	O D □ ▽	VISUAL
200	200	O D □ ▽	VISUAL	520	520	O D □ ▽	VISUAL
210	210	O D □ ▽	VISUAL			O D □ ▽	
220	220	O D □ ▽	VISUAL			O D □ ▽	
230	230	O D □ ▽	VISUAL			O D □ ▽	
240	240	O D □ ▽	VISUAL			O D □ ▽	
250	250	O D □ ▽	VISUAL			O D □ ▽	
260	260	O D □ ▽	VISUAL			O D □ ▽	
270	270	O D □ ▽	VISUAL			O D □ ▽	
280	280	O D □ ▽	VISUAL			O D □ ▽	
290	290	O D □ ▽	VISUAL			O D □ ▽	
300	300	O D □ ▽	VISUAL			O D □ ▽	
310	310	O D □ ▽	VISUAL			O D □ ▽	
320	320	O D □ ▽	VISUAL			O D □ ▽	

OPERATION

STORAGE

INSPECTION

TRANSPORTATION

DELAY

LSC-20147

At Ha
Armad
Assy

8:18 TUESDAY, MARCH 28, 1989 51

SAS

OPERATION PROFILE

SHEET 1 OF 11

RC. CLASS

DATE 4-7-89

NAME ADKholm
ITEM CD PCN 08005A
ALC SA MCD TA276K WCD DATE 4-7-89 WCD DATE 85094

OPER NUMB RCC OPER DESC HIST MAND OPER MAND SKILL CD/LVL QTY % HRS
~~5 MATPSS ASSY 1.00 I~~
~~5 MATPSS ASSY 1.00 P~~
~~10 MATPSS ASSY 1.00 I~~
~~10 MATPSS ASSY 1.00 P~~
~~15 MATPSS ASSY 1.00 I~~
~~15 MATPSS ASSY 1.00 P~~
~~20 MATPSS ASSY 1.00 I~~
~~20 MATPSS ASSY 1.00 P~~
~~20 MATPSS ASSY 1.00 P~~
~~25 MATPSS ASSY 1.00 I~~

5 MATPSS ASSY 1.00 P
 5 MATPSS ASSY 1.5 A-14
 MATPSS ASSY 1.5 A-15

10 MATPSS ASSY 1.00 P
 10 MATPSS ASSY 0.8 A-14
 MATPSS ASSY 0.8 A-15

15 MATPSS ASSY 1.00 P
 15 MATPSS ASSY 0.5 A-13
 MATPSS ASSY 0.5 A-14
 MATPSS ASSY 0.5 A-15

20 MATPSS ASSY 1.00 P
 20 MATPSS ASSY 0.5 A-44
 MATPSS ASSY 0.5 A-14
 MATPSS ASSY 0.5 A-15

36028E09
Jet Engine
Overhauler
Lorenzo (Chap.)

SAS

OPERATION PROFILE

SHEET 2 OF

NAME _____

ALC SA _____

DATE _____

ITEM CD PCN 08005A WCD TA276K WDDATE 85094

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE QTY X HRS NOTES

~~25 MATPSS ASSY 1.00~~

25 MATPSS ASSY 1.0 P

~~25 MATPSS ASSY~~

~~30 MATPSS ASSY 1.00~~

8602BC09

1

0.8

A-9

1

1.6

A-14

A-15

1

1.6

1.6

~~30 MATPSS ASSY~~

30 MATPSS ASSY 1.0 P

~~30 MATPSS ASSY~~

8602BC09

1

0.8

A-14

1

0.8

A-15

1.8

~~40 MATPSS ASSY 1.00~~

~~40 MATPSS ASSY~~

40 MATPSS ASSY 1.0 P

~~40 MATPSS ASSY~~

8602BC09

1

0.1

A-14

1

0.1

A-15

1

45 MATPSS ASSY 1.00 T

45 MATPSS ASSY S

45 MATPSS ASSY 1.0 P

~~45 MATPSS ASSY~~

8602BC09

1

0.5

A-14

1

0.5

A-15

1.5

~~50 MATPSS ASSY 1.00~~

OPERATION PROFILE

NAME _____ SAS _____
 ITEM CD PCN 08005A ALC SA _____ DATE _____
 WCD TA276K WCDDATE 85094

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
50	MATPSS	ASSY	1.0	P		8602BC09	1	0.1	A-14	1	0.1	
50	MATPSS	ASSY	1.0	P		8602BC09	1	0.1	A-15	1	0.1	
16	MATPSS	ASSY	1.00	P		8602BC09	1	0.1	A-3	1	0.1	OP.55 becomes
16	MATPSS	ASSY	1.00	P		8602BC09	1	0.1	A-17	1	0.1	OP.16
16	MATPSS	ASSY	1.00	P		8602BC09	1	0.1	A-14	1	0.1	
16	MATPSS	ASSY	1.00	P		8602BC09	1	0.1	A-15	1	0.1	

60 MATPSS ASSY 1.00 P

60 MATPSS ASSY 1.00 P

60 MATPSS ASSY 1.00 P

66 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

65 MATPSS ASSY 1.00 P

SAS

OPERATION PROFILE

SHEET 4 OF

RCC MATPSS

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 08005A WCD TA276K WCDDATE 85094

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
70	MATPSS	ASSY	1.0	P		8602BC09	1		0.3	A-14	1		0.3	
70	MATPSS	ASSY		P						A-15	1		.3	
75	MATPSS	ASSY	1.00	P										
75	MATPSS	ASSY												
75	MATPSS	ASSY	1.0	P		8602BC09	1		0.5	A-14	1		0.5	
75	MATPSS	ASSY		P						A-15	1		.5	
80	MATPSS	ASSY	1.00	P		8602BC09	1		.3	A-14	1		.3	
80	MATPSS	ASSY		P						A-15	1		.3	
80	MATPSS	ASSY		P						A-18	1		.3	
80	MATPSS	ASSY		P						A-30	1		.3	
80	MATPSS	ASSY		P						A-14	1		0.3	
80	MATPSS	ASSY		P						A-15	1		.3	
85	MATPSS	ASSY	1.00	P										
85	MATPSS	ASSY												
85	MATPSS	ASSY	1.0	P		8602BC09	1		0.1	A-14	1		0.1	
85	MATPSS	ASSY		P						A-15	1		.1	
90	MATPSS	ASSY	1.00	P										
90	MATPSS	ASSY												
90	MATPSS	ASSY	1.0	P		8602BC09	1		.1	A-14	1		.1	
90	MATPSS	ASSY		P						A-15	1		.1	

OPERATION PROFILE

SAS _____ SHEET 5 OF _____

NAME _____

ALC SA _____

DATE _____

ITEM CD PCN 08005A

WCD TA276K

WCDDATE 85094

OPER NUMB	RCC	OPER DESC	HIST OCCR TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
100	MATPSS	ASSY	1.00	P	86028C09	1	0.8	0.8	A-14	1	0.8	0.8	
100	MATPSS	ASSY	1.00	P	86028C09	1	0.8	0.8	A-14	1	0.8	0.8	
100	MATPSS	ASSY	1.0	P	86028C09	1	0.8	0.8	A-14	1	0.8	0.8	
100	MATPSS	ASSY		P					A-15	1		0.8	
100	MATPSS	ASSY		P					A-21	1		0.8	

110	MATPSS	ASSY	1.00	P	86028C09	1	0.3	0.3	A-14	1	0.3	0.3	
110	MATPSS	ASSY		P					A-15	1		0.3	
110	MATPSS	ASSY		P					A-19	1		0.3	
110	MATPSS	ASSY		P					A-37	1		0.3	

115	MATPSS	ASSY	1.0	P	86028C09	1	0.3	0.3	A-14	1	0.3	0.3	
115	MATPSS	ASSY		P					A-15	1		0.3	
120	MATPSS	ASSY	1.00	P	86028C09	1	0.5	0.5	A-14	1	0.5	0.5	
120	MATPSS	ASSY		P					A-15	1		0.5	

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	08005A	ALC SA	DATE	WCD	YA276K	WCJDATE	85094	OPER	HIST	MAND	SKILL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
120	MATPSS	ASSY	P																			
120	MATPSS	ASSY	P																			
120	MATPSS	ASSY	P																			
125	MATPSS	ASSY	P																			
125	MATPSS	ASSY	P																			
130	MATPSS	ASSY	P																			
130	MATPSS	ASSY	P																			
135	MATPSS	ASSY	P																			
135	MATPSS	ASSY	P																			
135	MATPSS	ASSY	P																			

~~125 MATPSS ASSY 1.00 P~~

~~125 MATPSS ASSY~~

125 MATPSS ASSY 1.0 P

~~130 MATPSS ASSY 1.00 P~~

~~130 MATPSS ASSY~~

130 MATPSS ASSY 1.0 P

130 MATPSS ASSY P

~~135 MATPSS ASSY 1.00 P~~

~~135 MATPSS ASSY~~

135 MATPSS ASSY 1.0 P

135 MATPSS ASSY P

135 MATPSS ASSY P

135 MATPSS ASSY P

OPERATION PROFILE

SHEET 7 OF

NAME: _____ SAS _____
 ITEM CD PCN 08005A ALC SA _____ DATE _____
 WCD TA276K WDDATE 85084

OPER NLYB RCC OPER HIST MAND OPER MAND SKILL
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS QTY X HRS EQUIP CODE

ITEM	CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	QTY	X	HRS	QTY	X	HRS	NOTES
140			MATPSS	ASSY											
140			MATPSS	ASSY											
140			MATPSS	ASSY					1		1.0	1		1.0	A-14
140			MATPSS	ASSY					1		1.0	1		1.0	A-15
140			MATPSS	ASSY					1		1.0	1		1.0	A-8
140			MATPSS	ASSY					1		1.0	1		1.0	A-25
140			MATPSS	ASSY					1		1.0	1		1.0	A-27
140			MATPSS	ASSY					1		1.0	1		1.0	A-41

145			MATPSS	ASSY											
145			MATPSS	ASSY											
145			MATPSS	ASSY					1		1.0	1		1.0	A-14
145			MATPSS	ASSY					1		1.0	1		1.0	A-15

150			MATPSS	ASSY											
150			MATPSS	ASSY											
150			MATPSS	ASSY					1		0.3	1		0.3	A-28
150			MATPSS	ASSY					1		0.3	1		0.3	A-14
150			MATPSS	ASSY					1		0.3	1		0.3	A-15

SAS

OPERATION PROFILE

SHEET 8 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08035A WCD TA276K WCD DATE 85094

OPER NUNB RCC OPER DESC HIST MAND OCCR TYPE F HRS CD/LVL SKILL QTY X HRS EQUIP CODE QTY X HRS NOTES

~~150 MATPSS ASSY~~

~~160 MATPSS ASSY 0.30~~

~~160 MATPSS ASSY~~

160 MATPSS ASSY 1.0 P 8602BC09 1 0.5 A-14 .5
 160 MATPSS ASSY 1.0 P 8602BC09 1 0.5 A-15 .5

~~170 MATPSS ASSY 2.00~~

170 MATPSS ASSY 1.0 P 8602BC09 1 .3 A-14 .3
 170 MATPSS ASSY 1.0 P 8602BC09 1 .3 A-15 .3
 170 MATPSS ASSY 1.0 P 8602BC09 1 .3 A-15 .3

~~180 MATPSS ASSY 2.00~~

~~180 MATPSS ASSY~~

180 MATPSS ASSY 1.0 P 8602BC09 1 0.1 A-14 .1
 180 MATPSS ASSY 1.0 P 8602BC09 1 0.1 A-15 .1

~~190 MATPSS ASSY 2.00~~

~~190 MATPSS ASSY~~

SAS

OPERATION PROFILE

NAME _____

ALC SA _____

DATE _____

WCD TAZ76K

WCD DATE 85084

ITEM CD PCN 08005A

OPER NUMB RCG

HIST MAND OPER

OCOR TYPE F

MAND SKILL

HRS CD/LVL

8609 SC09

190 MATPSS ASSY

1.0 P

0.3

A-14

A-15

1

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230

OPERATION PROFILE SAS

SHEET 10 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08005A WCD TA276K WCD DATE 85094

OPER NUMB RGC OPER HIST MAND OPER MAND SKILL EQUIP CODE
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS QTY X HRS NOTES

~~240 MATPSS ASSY 1.00 P~~

~~240 MATPSS ASSY~~

240 MATPSS ASSY 1.0 P
 240 MATPSS ASSY P

~~250 MATPSS ASSY 1.00 P~~

~~250 MATPSS ASSY~~

250 MATPSS ASSY 1.0 P
 250 MATPSS ASSY P

~~260 MATPSS ASSY 1.00 P~~

~~260 MATPSS ASSY~~

260 MATPSS ASSY 1.0 P
 260 MATPSS ASSY P

~~270 MATPSS ASSY 1.00 P~~

~~270 MATPSS ASSY~~

270 MATPSS ASSY 1.0 P
 270 MATPSS ASSY P

8608BC09
 1 0.3 A-14
 A-15 .3

8608BC09
 1 0.3 A-14
 A-15 .3

8608BC09
 1 0.2 A-14
 A-15 .2

8608BC09
 1 0.3 A-14
 A-15 .3

SAS

OPERATION PROFILE

SHEET 11 OF

NAME	ITEM CD	PCN	OPER	DESC	MAND	WCD	TA276K	ALC	SA	DATE	WCD	DATE	85094	QTY	%	HRS	EQUIP	CONV	QTY	%	HRS	NOTES
280	MATPSS	ASSY	0-00																			
280	MATPSS	ASSY																				
280	MATPSS	ASSY												1		0.1	A-14		1			1
280	MATPSS	ASSY															A-15		1			1
290	MATPSS	ASSY	0-00																			
290	MATPSS	ASSY																				
290	MATPSS	ASSY												1		0.3	A-14		1			1
290	MATPSS	ASSY															A-15		1			1
300	MATPSS	ASSY	1-00																			
300	MATPSS	ASSY																				
300	MATPSS	ASSY												1		0.4	A-14		1			1
300	MATPSS	ASSY															A-15		1			1
310	MATPSS	ASSY	1-00																			
310	MATPSS	ASSY																				
310	MATPSS	ASSY												1		0.3						

8602809

8602809

8602809

8602809

FLOW PROCESS CHART

SUBJECT F15 AMAD-RH ASSEMBLY DATE 5-25-89

ITEM CODE

PCH
NSM
PM

WCD TA276K

WCD DATE 85094

08005A

CHART BEGINS 5

CHART ENDS 310

PREPARED BY A.P. Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	5	●DD□▽	ASSY	210	210	●DD□▽	ASSY
10	10	●DD□▽	ASSY	220	220	●DD□▽	ASSY
15	15	●DD□▽	ASSY	230	230	●DD□▽	ASSY
16	55	●DD□▽	ASSY	240	240	●DD□▽	ASSY
20	20	●DD□▽	ASSY	250	250	●DD□▽	ASSY
25	25	●DD□▽	ASSY	260	260	●DD□▽	ASSY
30	30	●DD□▽	ASSY	270	270	●DD□▽	ASSY
40	40	●DD□▽	ASSY	280	280	●DD□▽	ASSY
45	45	●DD□▽	ASSY	290	290	●DD□▽	ASSY
50	50	●DD□▽	ASSY	300	300	●DD□▽	ASSY
60	60	●DD□▽	ASSY	310	310	●DD□▽	ASSY
65	65	●DD□▽	ASSY			○DD□▽	
70	70	●DD□▽	ASSY			○DD□▽	
75	75	●DD□▽	ASSY			○DD□▽	
80	80	●DD□▽	ASSY			○DD□▽	
85	85	●DD□▽	ASSY			○DD□▽	
90	90	●DD□▽	ASSY			○DD□▽	
100	100	●DD□▽	ASSY			○DD□▽	
110	110	●DD□▽	ASSY			○DD□▽	
115	115	●DD□▽	ASSY			○DD□▽	
120	120	●DD□▽	ASSY			○DD□▽	
125	125	●DD□▽	ASSY			○DD□▽	
130	130	●DD□▽	ASSY			○DD□▽	
135	135	●DD□▽	ASSY			○DD□▽	
140	140	●DD□▽	ASSY			○DD□▽	
145	145	●DD□▽	ASSY			○DD□▽	
150	150	●DD□▽	ASSY			○DD□▽	
160	160	●DD□▽	ASSY			○DD□▽	
170	170	●DD□▽	ASSY			○DD□▽	
180	180	●DD□▽	ASSY			○DD□▽	
190	190	●DD□▽	ASSY			○DD□▽	
200	200	●DD□▽	ASSY			○DD□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

Hand.
Amad
Test

9:18 TUESDAY, MARCH 28 1989 81
SHEET 7 OF 10

SAS

OPERATION PROFILE
ALC SA DATE 11-10-89

RCC MATPSS

NAME APB/elm
ITEM CD PCN 0800SA) WCD TASSOK WCD DATE 87039

OPER NUMB	RCC	OPER DESC	HIST MAND	OPER MAND	SKILL CD/LVL	QTY	X	HRS	EQUIP CODE	QTY	X	HRS	NOTES
10	MATPSS	TEST	1.0 P			1		0.1	A-47	1		0.1	
10	MATPSS	TEST	1.0 P			1		0.1	A-47	1		0.1	
10	MATPSS	TEST	1.0 P			1		0.1	A-47	1		0.1	
10	MATPSS	TEST	1.0 P			1		0.1	A-47	1		0.1	
20	MATPSS	TEST	1.0 P			1		0.3	A-47	1		0.3	
20	MATPSS	TEST	1.0 P			1		0.3	A-47	1		0.3	
20	MATPSS	TEST	1.0 P			1		0.3	A-47	1		0.3	
20	MATPSS	TEST	1.0 P			1		0.3	A-47	1		0.3	
40	MATPSS	TEST	1.0 P			1		0.1	A-47	1		0.1	

OPERATION PROFILE SAS

SHEET 3 OF

NAME	ITEM CD	PCN	08005A	WCD	TA330K	WCD	DATE	87059	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
170	MATPSS	TEST	1.00																
200	MATPSS	TEST																	
70	MATPSS	TEST	1.0 P								1	0.1		A-47	A2-10/1	1			0.1
70	MATPSS	TEST																	
70	MATPSS	TEST																	
70	MATPSS	TEST																	
70	MATPSS	TEST																	
80	MATPSS	TEST	1.0 P								1	0.1		A-47	A2-10/1	1			0.1
80	MATPSS	TEST																	
80	MATPSS	TEST																	
80	MATPSS	TEST																	
90	MATPSS	TEST	1.00																
90	MATPSS	TEST																	
90	MATPSS	TEST	1.0 P								1	0.2		A-47	A2-10/1	1			0.2

8602 BC10
64 MG-10

8602 BC10
64 MG-10

8602 BC10
64 MG-10



OPERATION PROFILE SAS

SHEET 4 OF

RCC MATPSS

DATE

WCD DATE 87059

ALC SA

WCD TA330K

NAME

ITEM CD PCN 08005A

OPER NUMS RCC OPER HIST MAND OCCR TYPE F HRS CD/LVL SKILL

MAND OCCR TYPE F HRS CD/LVL

OPER HIST MAND OCCR TYPE F HRS

CD/LVL SKILL

NOTES

HRS

QTY

X

RCC MATPSS

EQUIP CODE

HRS

X

QTY

HRS

X

QTY

HRS

X

QTY

HRS

X

QTY

HRS

~~90 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

~~90 MATPSS TEST~~ ~~A2-073~~ ~~1~~ ~~0.2~~

~~100 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

~~100 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

100 MATPSS TEST 1.0 P 8602BC10 A-47 0.2 A2-10/1 1 0.2

~~100 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

~~100 MATPSS TEST~~ ~~A2-073~~ ~~1~~ ~~0.2~~

~~110 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

~~110 MATPSS TEST~~ ~~A2-073~~ ~~1~~ ~~0.2~~

110 MATPSS TEST 1.0 P 8602BC10 A-47 0.1 A2-10/1 1 0.1

~~120 MATPSS TEST~~ ~~A8-1728~~ ~~1~~ ~~0.2~~

~~120 MATPSS TEST~~ ~~A2-073~~ ~~1~~ ~~0.2~~

SAS

OPERATION PROFILE

SHEET 5 OF

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 08005A WCD TA330K WOODATE 87059

OPER NUMB RCC OPER HIST I AND OPER MAND SKILL CD/LVL QTY % HRS

EQIP CODE QTY % HRS NOTES

~~120 MATPSS TEST 1.0 P~~

~~120 MATPSS TEST 1.0 P~~

120 MATPSS TEST 1.0 P 8602BC10 1 0.1 ~~A-47~~ 1 0.0

120 MATPSS TEST 1.0 P ~~A-47~~ 1 0.0

120 MATPSS TEST 1.0 P ~~A-47~~ 1 0.0

~~120 MATPSS TEST 1.0 P~~

~~120 MATPSS TEST 1.0 P~~

130 MATPSS TEST 1.0 P 8602BC10 1 0.1 ~~A-47~~ 1 0.2

130 MATPSS TEST 1.0 P ~~A-47~~ 1 0.0

130 MATPSS TEST 1.0 P ~~A-47~~ 1 0.0

~~130 MATPSS TEST 1.0 P~~

~~130 MATPSS TEST 1.0 P~~

140 MATPSS TEST 1.0 P 8602BC10 1 0.1 ~~A-47~~ 1 0.2

140 MATPSS TEST 1.0 P ~~A-47~~ 1 0.0

OPERATION PROFILE SAS

SHEET 7 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08005A WCD TA330K WJDDATE 87059

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL QTY X HRS EQUIP CODE QTY X HRS NOTES

ITEM NUMB	RCC	OPER HIST	MAND OPER	MAND SKILL	QTY	X HRS	EQUIP CODE	QTY	X HRS	NOTES
170	MATPSS	TEST	0.92	W						
170	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	1.0	P	1	0.2	A-47	1	0.2	
170	MATPSS	TEST	1.0	P						
170	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						
180	MATPSS	TEST	1.0	P						
180	MATPSS	TEST	0.82	W						

OPERATION PROFILE SAS

SHEET 8 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08005A WCD TA330K WCD DATE 87059

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE QTY X HRS QTY X HRS NOTES

~~190 MATPSS TEST P 0.0 0.0~~

~~190 MATPSS TEST P 0.0 0.0~~

~~200 MATPSS TEST 0.0 0.0~~

~~200 MATPSS TEST 0.0 0.0~~

200 MATPSS TEST 1.0 P 1.0 0.0 F602BC10 1 0.2 A-47

~~200 MATPSS TEST P 0.0 0.0~~

~~200 MATPSS TEST P 0.0 0.0~~

TEST

~~200 MATPSS TEST 0.0 0.0~~

210 MATPSS TEST 1.0 P 1.0 0.0 F602BC10 1 0.3 A-47

~~220 MATPSS TEST 0.0 0.0~~

~~220 MATPSS TEST 0.0 0.0~~

RH AMAD TEST

OPERATIONAL PROFILE

NAME BILL MADREHALL SA DATE 4-10-89 RCC MAIPSS SHEET 1 OF 1

PCN 08005A WCD TA330K WCD DATE 89058

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS		MANPOWER		EQUIPMENT		DATA SOURCE COMMENTS		
					%	HRS.	SKILL CODE/ LEVEL	QTY.	TIME REQUIRED %	HRS.		QTY.	TIME REQUIRED %	HRS.
05	MAIPSS	SETUP		TRANSIT									
				SETUP									
				PROCESS									
				TRANSIT									
				SETUP	100	.5	1	.5	100	1	100	.5	TEST SET
				PROCESS									
				TRANSIT									
				SETUP									
				PROCESS									
				TRANSIT									
				SETUP									
				PROCESS									
				TRANSIT									
				SETUP									
				PROCESS									

SUBJECT F15 AMAD RH TEST FLOW PROCESS CHART DATE 5-26-89

ITEM CODE
 PCH
 NSM
 P.N

WCD TA 330K WCD DATE 89058

08005K

CHART BEGINS 5

CHART ENDS 260

PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	-	●DD□▽	S/U			○DD□▽	
10	10	●DD□▽	TEST			○DD□▽	
20	20	●DD□▽	TEST			○DD□▽	
40	40	●DD□▽	TEST			○DD□▽	
50	50	●DD□▽	TEST			○DD□▽	
60	60	●DD□▽	TEST			○DD□▽	
70	70	●DD□▽	TEST			○DD□▽	
80	80	●DD□▽	TEST			○DD□▽	
90	90	●DD□▽	TEST			○DD□▽	
100	100	●DD□▽	TEST			○DD□▽	
110	110	●DD□▽	TEST			○DD□▽	
120	120	●DD□▽	TEST			○DD□▽	
130	130	●DD□▽	TEST			○DD□▽	
140	140	●DD□▽	TEST			○DD□▽	
150	150	●DD□▽	TEST			○DD□▽	
160	160	●DD□▽	TEST			○DD□▽	
180	180	●DD□▽	TEST			○DD□▽	
185	185	●DD□▽	TEST			○DD□▽	
190	190	●DD□▽	TEST			○DD□▽	
200	200	●DD□▽	TEST			○DD□▽	
210	210	●DD□▽	S/U			○DD□▽	
220	220	●DD□▽	TEST			○DD□▽	
230	230	●DD□▽	ASSY			○DD□▽	
240	240	○DD□▽	MOVE			○DD□▽	
250	250	●DD□▽	PAINT/BS			○DD□▽	
252	252	○DD□▽	MOVE			○DD□▽	
254	254	●DD□▽	ASSY			○DD□▽	
260	260	●DD□▽	ASSY			○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	
		○DD□▽				○DD□▽	

○ OPERATION ▽ STORAGE □ INSPECTION
 ◊ TRANSPORTATION D DELAY

F15 IFS Gas Gen/Relating Assy Balance

• V F

8:18 TUESDAY, MARCH 28, 1989 104

SHEET 1 OF

OPERATION PROFILE

SAS DATE 4-18-89

ALC SA

WCD TAJ03H

WCD DATE 88271

NAME: Holm

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	MANO F	SKILL CD/LVL	QTY	X	HRS	EQUIP CODE	NOTES
5	MATPSS	ASSY	1.00	1.0 P		8602BC09	1		.3	G-21	STEVEN REYES MEI
5	MATPSS	ASSY		3 P			1		.2	X-9	
5	MATPSS	ASSY		P			1		0.3	X-10	

5	MATPSS	ASSY	1.00	1							
5	MATPSS	ASSY	1.00	1							
6	MATPSS	ASSY	1.00	P		8602BC09	1		0.1	G-21	
10	MATPSS	ASSY	1.00	1							
10	MATPSS	ASSY	1.00	1							
10	MATPSS	ASSY	1.00	P		8602BC09	1		0.1	G-21	
15	MATPSS	ASSY	1.00	1							
15	MATPSS	ASSY	1.00	1							
15	MATPSS	ASSY	1.00	P		8602BC09	1		0.1	G-21	
20	MATPSS	ASSY	1.00	1							

SAS

OPERATION PROFILE

SHEET 3 OF

DATE

ALC SA

WCD TA103H

NAME

WCD DATE 88271

WCD TA103H

ITEM CD PCN 08006A

OPER NUMB RCC OPER DESC OCCR TYPE F HRS MAND OCCR TYPE F HRS SKILL CD/LVL QTY % HRS EQ'IP C.M. QTY % HRS NOTES

~~35 MATPSS MOVE~~

~~40 MATPSS S/U 0.00~~

~~40 MATPSS S/U~~

40 MATPSS S/U 1.0 P 86028C09 1 1.5 G-101 1 .1

~~50 MATPSS BAL 0.99~~

~~50 MATPSS BAL~~

50 MATPSS BAL 1.0 P 86028C09 1 0.2 G-101 1 .2

55 MATPSS BAL .8 P 86028C09 1 .2 G-101 1 .2

56 MATPSS MOVE 0.97 1,0 T 86028C09 1 .2

~~56 MATPSS MOVE~~

~~56 MATPSS MOVE~~

~~65 MATPSS BAL 0.01~~

~~65 MATPSS BAL~~

65 MATPSS BAL .8 P 86028C09 1 0.5 G101 1 .5

41001

NAME: HOLM
PCN: 08006A

ALC: SA

RCC: MATPSS

WCD: TA500H

WCDDATE: 88263

OP #	RCC	OP DESC	OCCU FAC	OP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EQUIP CODE	TIME %	REQ HRS
5	MATPSI	RTE	1	T									
10	MATPSI	RTE	1	T									
20	MATPSS	NOTE	1	S									
30	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
31	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
32	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
33	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
34	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
35	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
36	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
37	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
38	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
55	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
60	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
65	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
68	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
70	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
71	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
72	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
75	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
80	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
85	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
90	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
95	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
105	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
120	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
131	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
132	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
133	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
134	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
140	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
145	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
146	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
147	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			
150	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
151	MATPSS	VIS	1	P			8602BC09	1	0.03	0.03			
152	MATPSS	VIS	1	P			8602BC09	1	0.04	0.04			

150 MATPSS

1A

160 MATPSS	VIS	1 P	8602BC09	1	0.03
165 MATPSS	VIS	1 P	8602BC09	1	0.03
166 MATPSS	VIS	1 P	8602BC09	1	0.04
167 MATPSS	VIS	1 P	8602BC09	1	0.03
168 MATPSS	VIS	1 P	8602BC09	1	0.03
170 MATPSS	VIS	1 P	8602BC09	1	0.04
185 MATPSS	VIS	1 P	8602BC09	1	0.03
190 MATPSS	VIS	1 P	8602BC09	1	0.03
191 MATPSS	VIS	1 P	8602BC09	1	0.04
192 MATPSS	VIS	1 P	8602BC09	1	0.03
193 MATPSS	VIS	1 P	8602BC09	1	0.03
194 MATPSS	VIS	1 P	8602BC09	1	0.04
210 MATPSS	VIS	1 P	8602BC09	1	0.03
220 MATPSS	VIS	1 P	8602BC09	1	0.03
225 MATPSS	VIS	1 P	8602BC09	1	0.04
230 MATPSS	VIS	1 P	8602BC09	1	0.03
305 MATPSS	VIS	1 P	8602BC09	1	0.03
310 MATPSS	VIS	1 P	8602BC09	1	0.04
312 MATPSS	VIS	1 P	8602BC09	1	0.03
315 MATPSS	VIS	1 P	8602BC09	1	0.03
320 MATPSS	VIS	1 P	8602BC09	1	0.04
325 MATPSS	VIS	1 P	8602BC09	1	0.03

1A

160 MATPSS	VIS	1 P	8602BC09	1	0.03
165 MATPSS	VIS	1 P	8602BC09	1	0.03
166 MATPSS	VIS	1 P	8602BC09	1	0.04
167 MATPSS	VIS	1 P	8602BC09	1	0.03
168 MATPSS	VIS	1 P	8602BC09	1	0.03
170 MATPSS	VIS	1 P	8602BC09	1	0.04
185 MATPSS	VIS	1 P	8602BC09	1	0.03
190 MATPSS	VIS	1 P	8602BC09	1	0.04
191 MATPSS	VIS	1 P	8602BC09	1	0.03
192 MATPSS	VIS	1 P	8602BC09	1	0.03
193 MATPSS	VIS	1 P	8602BC09	1	0.03
194 MATPSS	VIS	1 P	8602BC09	1	0.04
210 MATPSS	VIS	1 P	8602BC09	1	0.03
220 MATPSS	VIS	1 P	8602BC09	1	0.04
225 MATPSS	VIS	1 P	8602BC09	1	0.03
230 MATPSS	VIS	1 P	8602BC09	1	0.03
305 MATPSS	VIS	1 P	8602BC09	1	0.04
310 MATPSS	VIS	1 P	8602BC09	1	0.03
312 MATPSS	VIS	1 P	8602BC09	1	0.03
315 MATPSS	VIS	1 P	8602BC09	1	0.04
320 MATPSS	VIS	1 P	8602BC09	1	0.04
326 MATPSS	VIS	1 P	8602BC09	1	0.03

FLOW PROCESS CHART
 SUBJECT F15 JFS VISUAL INSPECTED PARTS DATE 5-22-89

ITEM CODE
 PCN
 NSN
 P/N

WCD TA500H WCD DATE 88263

08006A

CHART BEGINS 5

CHART ENDS 325 PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	...SCRIPTIO...	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	5	○▷D□▽	Route	146	146	○▷D□▽	INSP
10	10	○▷D□▽	Route	147	147	○▷D□▽	INSP
20	20	○▷D□▽	Note	150	150	○▷D□▽	INSP
30	30	○▷D□▽	INSP	151	151	○▷D□▽	INSP
31	31	○▷D□▽	INSP	152	152	○▷D□▽	INSP
32	32	○▷D□▽	INSP	160	160	○▷D□▽	INSP
33	33	○▷D□▽	INSP	165	165	○▷D□▽	INSP
34	34	○▷D□▽	INSP	166	166	○▷D□▽	INSP
35	35	○▷D□▽	INSP	167	167	○▷D□▽	INSP
36	36	○▷D□▽	INSP	168	168	○▷D□▽	INSP
37	37	○▷D□▽	INSP	170	170	○▷D□▽	INSP
38	38	○▷D□▽	INSP	185	185	○▷D□▽	INSP
55	55	○▷D□▽	INSP	190	190	○▷D□▽	INSP
60	60	○▷D□▽	INSP	191	191	○▷D□▽	INSP
65	65	○▷D□▽	INSP	192	192	○▷D□▽	INSP
68	68	○▷D□▽	INSP	193	193	○▷D□▽	INSP
70	70	○▷D□▽	INSP	194	194	○▷D□▽	INSP
71	71	○▷D□▽	INSP	210	210	○▷D□▽	INSP
72	72	○▷D□▽	INSP	220	220	○▷D□▽	INSP
75	75	○▷D□▽	INSP	225	225	○▷D□▽	INSP
80	80	○▷D□▽	INSP	230	230	○▷D□▽	INSP
85	85	○▷D□▽	INSP	305	305	○▷D□▽	INSP
90	90	○▷D□▽	INSP	310	310	○▷D□▽	INSP
95	95	○▷D□▽	INSP	315	315	○▷D□▽	INSP
105	105	○▷D□▽	INSP	320	320	○▷D□▽	INSP
120	120	○▷D□▽	INSP	325	325	○▷D□▽	INSP
131	131	○▷D□▽	INSP			○▷D□▽	
132	132	○▷D□▽	INSP			○▷D□▽	
133	133	○▷D□▽	INSP			○▷D□▽	
134	134	○▷D□▽	INSP			○▷D□▽	
140	140	○▷D□▽	INSP			○▷D□▽	
145	145	○▷D□▽	INSP			○▷D□▽	

○ OPERATION ▽ STORAGE □ INSPECTION
 ▷ TRANSPORTATION D DELAY

F15 JFS ASSY
Gas Gen Module

8:18 TUESDAY, MARCH 28, 1989 173
SHEET 1 OF 20

OPERATION PROFILE
SAS
DATE 4-14-89
RCC MATPSS

NAME APH/5/m
ITEM CD PCN 08006A
WCD TA104H Y WCDDATE 88065 Y

ALC SA
OPER HIST MAND OPER MAND
DESC OCCR TYPE F HRS CD/LVL QTY X HRS EQUIP CODE

NOTES
Juan Martinez
8602BC09
Joe Villarell
Supervisor

5	MATPSS ASSY	1.0 P	8602BC09	1	0.5	0.5	1	0.5
5	MATPSS ASSY	1.0 P	8602BC09	1	0.5	0.5	1	0.5
5	MATPSS ASSY	P						
5	MATPSS ASSY	P						
10	MATPSS ASSY	0.99						
10	MATPSS ASSY	S						
10	MATPSS ASSY	1.0 P	8602BC09	1	0.1			
15	MATPSS ASSY	0.99						
15	MATPSS ASSY	S						
15	MATPSS ASSY	1.0 P	8602BC09	1	0.1	0.5	1	0.5
15	MATPSS ASSY	P						
20	MATPSS ASSY	0.99						

I.e only
Part placed in Dry
Ice for .5 hr
at start of OPS

3x

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SAS _____ RCC MATPSS _____

ITEM CD PCN 08006ASUB1 WCD TA104H WCDDATE 88065

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP QTY X HRS QTY X HRS NOTES

ITEM CD	RCC	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	QTY	X	HRS	QTY	X	HRS	NOTES
20	MATPSS	ASSY													
20	MATPSS	ASSY			1.0	P		8602 BC 09 8602 BC 09	1		0.1	1		0.1	G-39
20	MATPSS	ASSY						8602 BC 09							
20	MATPSS	ASSY						8602 BC 09							
25	MATPSS	ASSY						8602 BC 09							
25	MATPSS	ASSY			1.0	P		8602 BC 09 8602 BC 09	1		0.1	1		0.1	
25	MATPSS	ASSY						8602 BC 09							
25	MATPSS	ASSY						8602 BC 09							
20	MATPSS	ASSY						8602 BC 09							
20	MATPSS	ASSY						8602 BC 09							
30	MATPSS	ASSY				P		8602 BC 09 8602 BC 09	1			1			G-60
30	MATPSS	ASSY						8602 BC 09							

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	08006ASUB1	WCD	TA104H	WCDDATE	88065	ALC	SA	DATE	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
30	MATPSS	ASSY	P	P	P	P	P	P	P	P	1	1	0.2	G-33	G-33	1	1	0.2	
35	MATPSS	ASSY	T	T	T	T	T	T	T	T	1	1	0.2	G-33	G-33	1	1	0.2	
35	MATPSS	ASSY	S	S	S	S	S	S	S	S	1	1	0.2	G-33	G-33	1	1	0.2	
35	MATPSS	ASSY	1,0 P								1	1	0.1	8602BC09	G-33	1	1	0.1	
35	MATPSS	ASSY	P	P	P	P	P	P	P	P	1	1	0.2	G-33	G-33	1	1	0.2	
40	MATPSS	ASSY	T	T	T	T	T	T	T	T	1	1	0.2	G-33	G-33	1	1	0.2	
40	MATPSS	ASSY	S	S	S	S	S	S	S	S	1	1	0.2	G-33	G-33	1	1	0.2	
40	MATPSS	ASSY	1,0 P								1	1	0.3	8602BC09	G-61	1	1	0.3	
40	MATPSS	ASSY	P								1	1	0.3	G-30	G-61	1	1	0.3	
40	MATPSS	ASSY	P	P	P	P	P	P	P	P	1	1	0.2	G-33	G-33	1	1	0.2	
40	MATPSS	ASSY	P	P	P	P	P	P	P	P	1	1	0.2	G-33	G-33	1	1	0.2	
45	MATPSS	ASSY	T	T	T	T	T	T	T	T	1	1	0.2	G-33	G-33	1	1	0.2	
45	MATPSS	ASSY	S	S	S	S	S	S	S	S	1	1	0.2	G-33	G-33	1	1	0.2	

OPERATION PROFILE SAS

SHEET 4 OF

NAME	ITEM CD	PCN	ALC SA	DATE	WCD	T	MAND	OPER	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES	
	08006ASUB1		TA104H		88065															
45	MATPSS	ASSY	1.0 P								1	0.3	0.3							
45	MATPSS	ASSY	1.0 P								1	0.3	0.3							
50	MATPSS	ASSY	0.00								1	0.3	0.3							
50	MATPSS	ASSY	1.0 P								1	0.3	0.3							
50	MATPSS	ASSY	1.0 P								1	0.3	0.3							
50	MATPSS	ASSY									1	0.3	0.3							
50	MATPSS	ASSY	1.0 P								1	0.3	0.3							
50	MATPSS	ASSY	1.0 P								1	0.3	0.3							
55	MATPSS	ASSY	1.0 P								1	0.3	0.3							
55	MATPSS	ASSY	1.0 P								1	0.3	0.3							
55	MATPSS	ASSY	1.0 P								1	0.3	0.3							

(add of 55A extra)

SAS >

OPERATION PROFILE

SHEET 5 OF

NAME _____
 ITEM CD PCN 08006ASUB)

ALC SA _____ DATE _____
 WCD TAJ04H WCDDATE 88065

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE QTY X HRS QTY X HRS NOTES

ITEM	CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	X	HRS	QTY	X	HRS	NOTES
60			MATPSS	ASSY	0.99	I											
60			MATPSS	ASSY	0.99	S											
60			MATPSS	ASSY	1.0	P			8002BC09	WG-8	1		0.1			0.1	
60			MATPSS	ASSY	0.99	I			8002BC09	WG-8	1		0.1			0.1	
65			MATPSS	ASSY	0.99	I											
65			MATPSS	ASSY	0.99	S											
65			MATPSS	ASSY	1.0	P			8002BC09	WG-8	1		0.3			0.3	
65			MATPSS	ASSY	0.99	I			8002BC09	WG-8	1		0.3			0.3	
65			MATPSS	ASSY	0.99	I			8002BC09	WG-8	1		0.3			0.3	
75			MATPSS	ASSY	0.99	I											
75			MATPSS	ASSY	0.99	S											
75			MATPSS	ASSY	1.0	P			8002BC09	WG-8	1		0.1			0.1	
75			MATPSS	ASSY	0.99	I			8002BC09	WG-8	1		0.1			0.1	
75			MATPSS	ASSY	0.99	I			8002BC09	WG-8	1		0.1			0.1	

OPERATION PROFILE

NAME _____

SAS

ALC SA _____

DATE _____

ITEM CD PCN 08006ASUB1

WCD TA104H

WCDDATE 88065

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

~~76 MATPSS ASSY 0.07 I~~

~~76 MATPSS ASSY S~~

76 MATPSS ASSY 1.0 P 8602809 1 0.1 G-32 1.0-1

~~76 MATPSS ASSY P~~

~~85 MATPSS ASSY 0.00 I~~

~~85 MATPSS ASSY S~~

85 MATPSS ASSY 1.0 P 8602809 1 0.1 G-32

~~85 MATPSS ASSY~~

~~85 MATPSS ASSY~~

~~85 MATPSS ASSY 0.07 I~~

~~90 MATPSS ASSY~~

90 MATPSS ASSY 1.0 P 8602809 1 0.1 G-32 1.0-1

OPERATION PROFILE

NAME _____
 ITEM CD PCN 08006ASUB1

ALC SA _____
 WCD TAJ04H

DATE _____
 WCCDATE 88065

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 NUMB RCC OCCR OCCR TYPE F HRS CD/LVL QTY % HRS CODE

90 MATPSS ASSY . . . P 1 . . . 0.1

~~92 MATPSS ASSY 0.10 . . . T~~

~~92 MATPSS ASSY C~~

92 MATPSS ASSY . 1.0 P 1 . . . 0.5

~~92 MATPSS ASSY P~~

~~95 MATPSS ASSY 0.00 T~~

~~95 MATPSS ASSY S~~

95 MATPSS ASSY . 1.0 P 1 . . . 0.3

95 MATPSS ASSY P

95 MATPSS ASSY P

~~100 MATPSS ASSY 0.00 T~~

~~100 MATPSS ASSY S~~

100 MATPSS ASSY . 1.0 P 1 . . . 0.3

No Labor
 Dry Ice

A-Torch

MATPSS Assy

8602BC09

OPERATION PROFILE

NAME	ITEM CD	PCN	08006ASUB1	ALC SA	WCD	TA104H	WCDDATE	88065	DATE	SAS	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES	
	OPER	HIST	MAND	OPER	SKILL																	
	NUMB	RCC	DESC	OCRR	TYPE	F	HRS	CD/LVL	QTY	%	HRS											
145	MATPSS	ASSY		P									1		0.1	G-33						
150	MATPSS	ASSY	0-07	T																		
150	MATPSS	ASSY		S																		
150	MATPSS	ASSY	1.0 P						1	0.3			1		0.3	G-32						
150	MATPSS	ASSY		P									1		0.3	G-33						
150	MATPSS	ASSY		P									1		0.3	G-36						
150	MATPSS	ASSY		P									1		0.3	G-37						
150	MATPSS	ASSY		P									1		0.3	G-54						
155	MATPSS	ASSY	0-97	T																		
155	MATPSS	ASSY		S																		
155	MATPSS	ASSY	1.0 P						1	0.3			1		0.3	G-27						
155	MATPSS	ASSY		P									1		0.3	G-32						
155	MATPSS	ASSY		P									1		0.3	G-33						

8602 BCO9
WG-8

8602 BCO9
WG-8

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	08006ASUB1	WCD	T	A104H	WCD	DATE	88065	ALC	SA	DATE	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CD/LVL	QTY	%	HRS	QTY	%	HRS	NOTES
155	MATPSS	ASSY		P															G-28				1		0.3		
160	MATPSS	ASSY	0-07	T																							
160	MATPSS	ASSY		S																							
160	MATPSS	ASSY		1.0	P														G-32				1		0.1		
160	MATPSS	ASSY			P														G-33				1		0.1		
165	MATPSS	ASSY	0-07	T																							
165	MATPSS	ASSY		S																							
165	MATPSS	ASSY		1.0	P														G-32				1		0.1		
165	MATPSS	ASSY			P														G-21				1		0.1		
165	MATPSS	ASSY			P														G-33				1		0.1		
170	MATPSS	ASSY	0-07	T																							
170	MATPSS	ASSY		S																							

8602BC09
WG-8

8602BC09
WG-9

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____

WCD TAI04H WCDDATE 88065

ITEM CD PCN 08006ASUB1

OPER NUMB

RCC HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

170 MATPSS ASSY 1 0.2 G-32

170 MATPSS ASSY 1 0.2 G-22

170 MATPSS ASSY 1 0.2 G-33

~~175 MATPSS ASSY 0.97 1 0.2 G-32~~

~~175 MATPSS ASSY 1 0.2 G-32~~

175 MATPSS ASSY 1 0.2 G-32

175 MATPSS ASSY 1 0.2 G-25

175 MATPSS ASSY 1 0.2 G-33

~~180 MATPSS ASSY 0.97 1 0.1 G-32~~

~~180 MATPSS ASSY 1 0.1 G-32~~

180 MATPSS ASSY 1 0.1 G-32

180 MATPSS ASSY 1 0.1 G-33

~~185 MATPSS ASSY 0.97 1 0.1 G-33~~

NOTES

8602BC09

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8602BC09

OPERATION PROFILE

SAS

DATE

ALC SA

WCD TAJ04H WCDDATE 88085

NAME
 ITEM CD PCN 08006ASUB1

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

250	MATPSS	ASSY	1.0	P	1	0.3	G-32	1	0.3	
250	MATPSS	ASSY		P			G-80	1	0.3	
250	MATPSS	ASSY		P			G-33	1	0.3	

8602BC09
~~WG-9~~

~~255 MATPSS ASSY 0.07 T~~

~~255 MATPSS ASSY S~~

255	MATPSS	ASSY	1.0	P	1	0.1	G-32	1	0.1	
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8602BC09
~~WG-9~~

255	MATPSS	ASSY		P			G-33	1	0.1	
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~~260 MATPSS ASSY 0.07 T~~

~~260 MATPSS ASSY S~~

260	MATPSS	ASSY	1.0	P	1	0.1	G-32	1	0.1	
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8602BC09
~~WG-9~~

260	MATPSS	ASSY		P			G-33	1	0.1	
-----	--------	------	--	---	--	--	------	---	-----	--

~~265 MATPSS ASSY 0.06 T~~

SAS

SHEET 20 OF

OPERATION PROFILE

NAME	DATE	ALC SA	WCD	TA104H	WCD	DATE	88065	RCC	HIST	MAND	OPER	SKILL	EQUIP	QTY	%	HRS	NOTES
ITEM CD	PCN	08008ASUB1															
OPER	NUMB	RCC	DESC	OC	CR	TYPE	F	HRS	CD/LVL	QTY	%	HRS	CODE				
285			MATPSS	ASSY						1		0.1	G-32	1		0.1	
285			MATPSS	ASSY									G-33	1		0.1	
290			MATPSS	ASSY													
290			MATPSS	ASSY													
290			MATPSS	ASSY													
290			MATPSS	ASSY													

*see those
see 28 bill*

291392

291400

FLOW PROCESS CHART

SUBJECT F15 JFS Gas Generator Module Assembly DATE 5-22-89

ITEM CODE
PCN
NSN
PM

WCD TA104H WCD DATE 88065

08006A

CHART BEGINS 3

CHART ENDS 285

PREPARED BY A. P. Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
3	15	●○○□▽	ASSY	165	165	○○□□▽	ASSY
5	5	●○○□▽	ASSY	170	170	○○□□▽	ASSY
10	10	●○○□▽	ASSY	175	175	○○□□▽	ASSY
20	20	●○○□▽	ASSY	180	180	○○□□▽	ASSY
25	25	●○○□▽	ASSY	185	185	○○□□▽	ASSY
30	30	●○○□▽	ASSY	190	190	○○□□▽	ASSY
35	35	●○○□▽	ASSY	195	195	○○□□▽	ASSY
40	40	●○○□▽	ASSY	200	200	○○□□▽	ASSY
45	45	●○○□▽	ASSY	205	205	○○□□▽	ASSY
50	50	●○○□▽	ASSY	215	215	○○□□▽	ASSY
55	55	●○○□▽	ASSY	220	220	○○□□▽	ASSY
60	60	●○○□▽	ASSY	225	225	○○□□▽	ASSY
65	65	●○○□▽	ASSY	230	230	○○□□▽	ASSY
75	75	●○○□▽	ASSY	235	235	○○□□▽	ASSY
76	76	●○○□▽	ASSY	240	240	○○□□▽	ASSY
85	85	●○○□▽	ASSY	250	250	○○□□▽	ASSY
90	90	●○○□▽	ASSY	255	255	○○□□▽	ASSY
92	92	●○○□▽	ASSY	260	260	○○□□▽	ASSY
95	95	●○○□▽	ASSY	265	265	○○□□▽	ASSY
100	100	●○○□▽	ASSY	270	270	○○□□▽	ASSY
105	105	●○○□▽	ASSY	280	280	○○□□▽	ASSY
110	110	●○○□▽	ASSY	285	285	○○□□▽	ASSY
115	115	●○○□▽	ASSY			○○□□▽	
120	120	●○○□▽	ASSY			○○□□▽	
125	125	●○○□▽	ASSY			○○□□▽	
130	130	●○○□▽	ASSY			○○□□▽	
135	135	●○○□▽	ASSY			○○□□▽	
140	140	●○○□▽	ASSY			○○□□▽	
145	145	●○○□▽	ASSY			○○□□▽	
150	150	●○○□▽	ASSY			○○□□▽	
155	155	●○○□▽	ASSY			○○□□▽	
160	160	●○○□▽	ASSY			○○□□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147

F15 II - Assembly Power Turbine Module

8:18 TUESDAY, MARCH 28, 1989 202
SHEET 1 OF 5

OPERATION PROFILE
SAS
DATE 4-17-89

ALC SA
WCD TA105H ✓ WCD DATE 87226 X

NAME A P Holm
ITEM CD PCN 08006A0002

OPER HST MAND OPER MAND SKILL
NUMR RCG DESC OCCR TYPE F HRS CD/LVL QTY X HRS EQUIP CODE

~~5 MATPSS ASSY 1.00~~
5 MATPSS ASSY 1.0 S 8602BC09 1 0.2 G-16 1 0.2
5 MATPSS ASSY 1.0 P 8602BC09 1 0.3 G-16 1 0.3

~~15 MATPSS ASSY 1.00~~
15 MATPSS ASSY 1.0 P 8602BC09 1 0.3 G-16 1 0.3

~~20 MATPSS ASSY 1.00~~
20 MATPSS ASSY 1.0 P 8602BC09 1 0.1 G-16 1 0.1

~~22 MATPSS ASSY 1.00~~
22 MATPSS ASSY 1.0 P 8602BC09 1 0.1 G-16 1 0.1

~~25 MATPSS ASSY 1.00~~
25 MATPSS ASSY 1.0 P 8602BC09 1 0.1 G-16 1 0.1

WCP for 89014
same as 89014
OP 55
79 account
V.11 5/2/89
copy of order
1/1/89

ITEM NUMR	RCG	DESC	OCCR	TYPE	F	HRS	CD/LVL	QTY	X	HRS	EQUIP CODE	QTY	X	HRS	NOTES
5	MATPSS	ASSY	1.00												
5	MATPSS	ASSY	1.0	S			8602BC09	1		0.2	G-16	1		0.2	
5	MATPSS	ASSY	1.0	P			8602BC09	1		0.3	G-16	1		0.3	
15	MATPSS	ASSY	1.00												
15	MATPSS	ASSY	1.0	P			8602BC09	1		0.3	G-16	1		0.3	
20	MATPSS	ASSY	1.00												
20	MATPSS	ASSY	1.0	P			8602BC09	1		0.1	G-16	1		0.1	
22	MATPSS	ASSY	1.00												
22	MATPSS	ASSY	1.0	P			8602BC09	1		0.1	G-16	1		0.1	
25	MATPSS	ASSY	1.00												
25	MATPSS	ASSY	1.0	P			8602BC09	1		0.1	G-16	1		0.1	

SAS

OPERATION PROFILE

SHEET 2 OF

NAME _____
 ITEM CD FCN UR06GASUE2

ALC SA _____
 WCD TA105H

DATE _____
 WCDDATE 87226

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE
 DESC OCCR TYPE F P RS CD/LVL QTY % HRS QTY % HRS NOTES

~~25 MATPSS ASSY 1.0 P 8 1 0.1 G-16 1 0.1~~

25 MATPSS ASSY 1.0 P 8 1 0.1 G-16 1 0.1

~~30 MATPSS ASSY 1.00 P 1~~

30 MATPSS ASSY 1.0 P 1 0.1 G-16 X-6 1 0.1

~~35 MATPSS ASSY 1.00 P 1~~

35 MATPSS ASSY 1.0 P 1 0.1 G-16 X-6 1 0.1

~~40 MATPSS ASSY 1.00 P 1~~

40 MATPSS ASSY 1.0 P 1 0.1 G-16 X-6 1 0.1

~~45 MATPSS ASSY 1.00 P 1~~

45 MATPSS ASSY 1.0 P 1 0.2 G-16 1 0.2

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08006ASUB2 WCD TAIO5H WCDDATE 87226

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS

~~65 MATPSS ASSY~~ ~~1.0 P~~ ~~1~~ ~~0.3~~ ~~G-15~~ ~~1~~ ~~0.3~~ ~~0.3~~

65 MATPSS ASSY 1.0 P 1 0.3^{1.2} G-15 1 0.3^{0.2}

~~65 MATPSS ASSY~~ ~~1.0 P~~ ~~1~~ ~~0.3~~ ~~G-15~~ ~~1~~ ~~0.3~~ ~~0.3~~

~~70 MATPSS ASSY 1.00~~ ~~I~~

~~70 MATPSS ASSY~~ ~~S~~

70 MATPSS ASSY 1.0 P 1 0.3^{G-15} G-15 1 0.3

70 MATPSS ASSY . P 1 0.3

~~75 MATPSS ASSY 1.00~~ ~~I~~

~~75 MATPSS ASSY~~ ~~S~~

75 MATPSS ASSY 1.0 P 1 0.1^{G-15} G-15 1 0.1

~~80 MATPSS ASSY 0.97~~ ~~I~~

~~80 MATPSS ASSY~~ ~~S~~

FIS & FS Final Assembly

• 1 F

8:18 TUESDAY, MARCH 28, 1989 91

SAS

OPERATION PROFILE

SHEET 1 OF 12

DATE 4-17-89

ALC SA

NAME AP Holm

ITEM CD PCN 08006A WCD TA101HV WCD DATE 88076V

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

NOTES

~~1 MATPSS ASSY~~

1 MATPSS ASSY . 1.0 P . 86028C09 1 . 1 G-32 1

1 MATPSS ASSY . . . P . ~~86028C09~~ 1 . ~~1~~ G-33 1

~~5 MATPSS ASSY~~

5 MATPSS ASSY . 1.0 P . 86028C09 1 . 1 G-32 1

5 MATPSS ASSY . . . P . ~~86028C09~~ 1 . ~~1~~ G-33 1

~~10 MATPSS ASSY~~

10 MATPSS ASSY . 1.0 P . 86028C09 1 . 1 G-32 1

10 MATPSS ASSY . . . P . ~~86028C09~~ 1 . ~~1~~ G-33 1

~~25 MATPSS ASSY~~

25 MATPSS ASSY . 1.0 P . 86028C09 1 . 1 G-32 1

25 MATPSS ASSY . . . P . ~~86028C09~~ 1 . ~~1~~ G-33 1

~~30 MATPSS ASSY~~

"Mark" Juan Martinez

OPERATION PROFILE SAS

SHEET 3 OF

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 08006A WCD TAJ01H WCDDATE 88076

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

~~65 MATPSS ASSY~~

65 MATPSS ASSY . 1.0 P . 8602BC09 1 . 0.3 G-32 1 . 0.3

65 MATPSS ASSY . . P G-33 1 . 0.3

~~75 MATPSS ASSY~~

~~75 MATPSS ASSY~~

75 MATPSS ASSY . 1.0 P . 8602BC09 1 . 0.3 G-32 1 . 0.3

75 MATPSS ASSY P G-33 1 . 0.3

~~77 MATPSS ASSY~~

~~77 MATPSS ASSY~~

77 MATPSS ASSY . 1.0 P . 8602BC09 1 . 0.3 G-32 1 . 0.3

77 MATPSS ASSY . . P G-33 1 . 0.3

~~80 MATPSS ASSY~~

~~80 MATPSS ASSY~~

SAS

OPERATION PROFILE

SHEET 6 OF

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 08006A WCD TA101H WCDDATE 88076

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY X HRS CD/LVL QTY X HRS EQUIP CODE NOTES

114 MATPSS ASSY . . . P G-33 1 ~~0-0~~ ¹

~~116 MATPSS ASSY~~

~~116 MATPSS ASSY~~

116 MATPSS ASSY . . . P ~~0-0~~ ¹ 86028C09 1 G-32 1 ~~0-0~~ ¹

116 MATPSS ASSY . . . P G-33 1 ~~0-0~~ ¹

~~118 MATPSS ASSY~~

~~118 MATPSS ASSY~~

118 MATPSS ASSY . . . P ~~0-0~~ ¹ 86028C09 1 G-32 1 ~~0-0~~ ¹

118 MATPSS ASSY . . . P G-33 1 ~~0-0~~ ¹

~~120 MATPSS ASSY~~

~~120 MATPSS ASSY~~

120 MATPSS ASSY . . . P ~~0-0~~ ¹ 86028C09 1 G-32 1 ~~0-0~~ ¹

OPERATION PROFILE

SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 08006A WCD TAI01H WCDDATE 88078

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS CCUDE
 120 MATPSS ASSY P G-33

~~122 MATPSS ASSY~~

~~122 MATPSS ASSY~~

122 MATPSS ASSY . 1.0 P 8602B09 G-32 1

122 MATPSS ASSY P G-33 1

~~124 MATPSS ASSY~~

~~124 MATPSS ASSY~~

124 MATPSS ASSY . 1.0 P 8602B09 G-32 1

124 MATPSS ASSY P G-33 1

~~126 MATPSS ASSY~~

~~126 MATPSS ASSY~~

126 MATPSS ASSY . 1.0 P 8602B09 G-32 1

126 MATPSS ASSY P G-33 1

SAS

OPERATION PROFILE

SHEET 8 OF

NAME _____ ALC SA _____ DATE _____ WCD TAJ01H WCDDATE 88076

ITEM CD PCN 08006A OPER HIST MAND OPER MAND SKILL EQUIP

NUMB RCC OPER DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS QTY % HRS NOTES

128	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
128	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
128	MATPSS	ASSY	1.0	P						1			
128	MATPSS	ASSY		P						1			

130	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
130	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
130	MATPSS	ASSY	1.0	P						1			
130	MATPSS	ASSY		P						1			

132	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
132	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	 	
132	MATPSS	ASSY	1.0	P						1			
132	MATPSS	ASSY		P						1			

OPERATION PROFILE

SAS

NAME ALC SA DATE RCC MATPSS

ITEM CD PCN 08006A WCD TA101H WCDDATE 88076

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE

DESC OCCR TYPE F HRS CD/LVL QTY X HRS QTY X HRS NOTES

ITEM CD	PCN	OPER NUMB	RCC	OPER HIST MAND	OPER MAND	SKILL	EQUIP CODE	DESC	OCCR TYPE	F	HRS	CD/LVL	QTY	X	HRS	QTY	X	HRS	NOTES
135	MATPSS	ASSY																	
135	MATPSS	ASSY		1.0	P								1		0.3	1		0.3	
135	MATPSS	ASSY			P											1		0.3	
140	MATPSS	ASSY																	
140	MATPSS	ASSY																	
140	MATPSS	ASSY		1.0	P								1		0.2	1		0.2	
140	MATPSS	ASSY			P											1		0.2	
145	MATPSS	ASSY																	
145	MATPSS	ASSY																	
145	MATPSS	ASSY		1.0	P								1		0.1	1		0.1	
145	MATPSS	ASSY			P											1		0.1	

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 08006A WCD TA101H WCDDATE 88076

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE QTY X HRS NOTES

180 MATPSS ASSY . 1.0 P 8602BC09 1 . 0.2 G-32 1 . 0.2

180 MATPSS ASSY . . P . . . G-33 1 . 0.2

~~185 MATPSS ASSY~~

~~185 MATPSS ASSY~~

185 MATPSS ASSY . 1.0 P 8602BC09 1 . 0.3 G-32 1 . 0.3

185 MATPSS ASSY . . P . . . G-33 1 . 0.3

~~187 MATPSS ASSY~~

~~187 MATPSS ASSY~~

187 MATPSS ASSY . 1.0 P 8602BC09 1 . 0.1 G-32 1 . 0.1

187 MATPSS ASSY . . P . . . G-33 1 . 0.1

~~189 MATPSS ASSY~~

~~190 MATPSS ASSY~~

OPERATION PROFILE SAS

SHEET 13 OF

NAME	ITEM CD	PCN	ALC SA	WCD	TA101H	WCD	DATE	DATE	88076	RCC	MATPSS	QTY	%	HRS	NOTES
	OPER	DESC	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE						
	NUMB	RCC	OC	CR	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS	
190	1TPSS	ASSY	1.0	P			0.3	G-32	1		0.3	1		0.3	
190	MATPSS	ASSY		P				G-33	1		0.3	1		0.3	
195	MATPSS	ASSY													
195	MATPSS	ASSY	1.0	P			0.1	G-32	1		0.1	1		0.1	
195	MATPSS	ASSY		P				G-33	1		0.1	1		0.1	
200	MATPSS	ASSY													
200	MATPSS	ASSY	1.0	P			0.8	G-32	1		0.8	1		0.8	
200	MATPSS	ASSY		P				G-33	1		0.8	1		0.8	

FLOW PROCESS CHART

SUBJECT F15 JFS Final ASSEMBLY

DATE 5-22-89

ITEM CODE

PCN
NSN
PRI

WCD TA101H

WCD DATE 88076

08006A

CHART BEGINS 1

CHART ENDS 200

PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
1	1	●DD□▽	ASSY	164	164	●DD□▽	ASSY
5	5	●DD□▽	ASSY	170	170	●DD□▽	ASSY
10	10	●DD□▽	ASSY	175	175	●DD□▽	ASSY
25	25	●DD□▽	ASSY	180	180	●DD□▽	ASSY
30	30	●DD□▽	ASSY	185	185	●DD□▽	ASSY
40	40	●DD□▽	ASSY	187	187	●DD□▽	ASSY
50	50	●DD□▽	ASSY	190	190	●DD□▽	ASSY
65	65	●DD□▽	ASSY	195	200	●DD□▽	ASSY
75	75	●DD□▽	ASSY	200	200	●DD□▽	ASSY
77	77	●DD□▽	ASSY			○DD□▽	
80	80	●DD□▽	ASSY			○DD□▽	
100	101	●DD□▽	ASSY			○DD□▽	
105	105	●DD□▽	ASSY			○DD□▽	
108	108	●DD□▽	ASSY			○DD□▽	
110	110	●DD□▽	ASSY			○DD□▽	
112	112	●DD□▽	ASSY			○DD□▽	
114	114	●DD□▽	ASSY			○DD□▽	
116	116	●DD□▽	ASSY			○DD□▽	
118	118	●DD□▽	ASSY			○DD□▽	
120	120	●DD□▽	ASSY			○DD□▽	
122	122	●DD□▽	ASSY			○DD□▽	
124	124	●DD□▽	ASSY			○DD□▽	
126	126	●DD□▽	ASSY			○DD□▽	
128	128	●DD□▽	ASSY			○DD□▽	
130	130	●DD□▽	ASSY			○DD□▽	
132	132	●DD□▽	ASSY			○DD□▽	
135	135	●DD□▽	ASSY			○DD□▽	
140	140	●DD□▽	ASSY			○DD□▽	
145	145	●DD□▽	ASSY			○DD□▽	
150	150	●DD□▽	ASSY			○DD□▽	
155	155	●DD□▽	ASSY			○DD□▽	
160	160	●DD□▽	ASSY			○DD□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147

OPERATION PROFILE

SHEET 2 OF

SAS

NAME _____ DATE _____

ALC SA _____

ITEM CD PCN 08006A WCD TA109H WCDDATE 88162

OPER NUMB	RCC	OPER DESC	MAND OCCR	OPER TYPE	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
10	MATPSS	TEST	.	P	.	.	.	.	H-11	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-1	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-2	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-3	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-4	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-5	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-6	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-7	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-9	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-11	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-12	1	0.2	
10	MATPSS	TEST	.	P	.	.	.	.	K-13	1	0.2	

SAS

OPERATION PROFILE

SHEET 3 OF

NAME

ALC SA

DATE

ITEM CD PCN 08006A WCD TAI09H WCD DATE 88162

OPER NUMB RCC OPER HIST MAND OPER SKILL EQUIP CODE QTY % HRS. NOTES

10 MATPSS TEST . . . P QTY % HRS. 1 . . 0.2

10 MATPSS TEST . . . P G.2

10 MATPSS TEST . . . P 0.2

10 MATPSS TEST . . . P 0.2

10 MATPSS TEST . . . P 0.2

10 MATPSS TEST . . . P 0.2

10 MATPSS TEST . . . P 0.2

10 MATPSS TEST . . . P 0.2

20 MATPSS TEST 1.00 . . . T

20 MATPSS TEST . . . S

20 MATPSS TEST . . . P 0.1 0.1 0.1

20 MATPSS TEST . . . P 0.1

20 MATPSS TEST . . . P 0.1

86028X10
L-93

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SAS _____
 ITEM CD PCN C-006A WCD TA109H WCDDATE 88102

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	OPER F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
20	MATPSS	TEST	.	P	.	H-4	1	.	0.1	H-4	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-5	1	.	0.1	H-5	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-6	1	.	0.1	H-6	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-7	1	.	0.1	H-7	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-7A	1	.	0.1	H-7A	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-8	1	.	0.1	H-8	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-9	1	.	0.1	H-9	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-10	1	.	0.1	H-10	1	.	0.1	
20	MATPSS	TEST	.	P	.	H-11	1	.	0.1	H-11	1	.	0.1	
20	MATPSS	TEST	.	P	.	K-1	1	.	0.1	K-1	1	.	0.1	
20	MATPSS	TEST	.	P	.	K-2	1	.	0.1	K-2	1	.	0.1	
20	MATPSS	TEST	.	P	.	K-3	1	.	0.1	K-3	1	.	0.1	

OPERATION PROFILE SAS

SHEET 5 OF

NAME	ITEM CD	PCN	Q8008A	OPER	HIST	MAND	O'ER	MAND	SKILL	WCD	TA109H	WCDDATE	88162	DATE	ALC	SA	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
OPER	NUMB	RCC	DESC	TYPE	OCOR	F	HRS	CD/LVL	CD	F	HRS	CD/LVL	CD	F	HRS	CD/LVL	CD	F	HRS	CD/LVL	CD	F	HRS	CD/LVL	CD
20	MATPSS	TEST		P													1	.	0.1	K-4		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-5		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-6		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-7		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-8		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-11		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-12		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-13		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-14		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-17		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-18		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-19		1	.	0.1	
20	MATPSS	TEST		P													1	.	0.1	K-20		1	.	0.1	

OPERATION PROFILE

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	ALC	SA	DATE	SAS	RCC	MATPSS	QTY	%	HRS	NOTES
			DESC	OCGR	TYPE	F	HRS	CD/LVL										
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	
30			MATPSS TEST	.	P	.	.	.	.	.	.	.	.	.	1	.	0.0	

WCD 7A109H WCDDATE 88162

EQUIP CODE

H-7A H-8 H-9 H-10 H-11 K-1 K-2 K-3 K-4 K-5 K-6 K-7 K-8

OPERATION PROFILE

SHEET 9 OF

RCC MATPSS

QTY % HRS

NOTES

NAME

ALC SA

DATE

WCD TAI08H

WCDDATE 88162

HIST MAND OPER

SKILL

EQUIP

CODE

OPER

DESC

RCC

QTY % HRS

ITEM CD	PCN	08008A	OPER	DESC	RCC	HIST	MAND	OPER	SKILL	EQUIP	CODE	QTY	%	HRS	NOTES
40			MATPSS	TEST											
40			MATPSS	TEST	1.0	P						1		0.1	16 L-93
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	
40			MATPSS	TEST		P						1		0.1	

8602BK10

10 L-93

10 L-93

1.0 P

1.0 P

1.0 P

1.0 P

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	SKILL	DATE	WCD	WCDDATE	ALC	SA	RCC	MATPSS	QTY	HRS	NOTES
			DESC	OCOR	TYPE	F	CD/LVL			88162							
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	
50	MATPSS	TEST	P	.	.	.	.	.	.	.	.	.	.	.	1	0.7	

OPER NOMB

OPER DESC

HIST OCOR

MAND TYPE

OPER F

SKILL CD/LVL

DATE

WCD

WCDDATE

ALC

SA

RCC

MATPSS

QTY

HRS

NOTES

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET 14 OF _____

ITEM CD PCN 08006A WCD TAJ09H WCDDATE 88162

OPER NUMB RCC OPER MAND OPER SKILL EQUIP CODE QTY % HRS QTY % HRS QTY % HRS NOTES

~~50 MATPSS TEST . . . P K-23 1 . . 0.7~~

~~50 MATPSS TEST . . . P K-24 1 . . 0.7~~

~~60 MATPSS NOTE 1~~

~~60 MATPSS NOTE S~~

✓ 60 MATPSS NOTE 1.0 P 8002BK10 0.1 L-93 1 0.1

~~70 MATPSS TEST 1.0 P T~~

~~70 MATPSS TEST S~~

✓ 70 MATPSS TEST 1.0 P 8002BK10 0.1 L-93 1 0.1

~~70 MATPSS TEST P H-2 1 . . 0.1~~

~~70 MATPSS TEST P H-3 1 . . 0.1~~

~~70 MATPSS TEST P H-4 1 . . 0.1~~

~~70 MATPSS TEST P H-5 1 . . 0.1~~

OPERATION PROFILE SAS

NAME	ITEM UD	PCN	OPR	HIST	MAND	OPER	WCD	TA109H	ALC	SA	DATE	WCDDATE	88162	RCC	MATPSS	QTY	%	HRS	EQUIP	NOTES
	NUMB		DESC	DESCR	OCGR	TYPE	F	HRS	CD/LVL	SKILL	QTY	%	HRS					CODE		
	70		MATPSS	TEST		P										1		0.1	H-6	
	70		MATPSS	TEST		P										1		0.1	H-7	
	70		MATPSS	TEST		P										1		0.1	H-7A	
	70		MATPSS	TEST		P										1		0.1	H-8	
	70		MATPSS	TEST		P										1		0.1	H-9	
	70		MATPSS	TEST		P										1		0.1	H-10	
	70		MATPSS	TEST		P										1		0.1	H-11	
	70		MATPSS	TEST		P										1		0.1	K-1	
	70		MATPSS	TEST		P										1		0.1	K-2	
	70		MATPSS	TEST		P										1		0.1	K-3	
	70		MATPSS	TEST		P										1		0.1	K-4	
	70		MATPSS	TEST		P										1		0.1	K-5	
	70		MATPSS	TEST		P										1		0.1	K-6	

OPERATION PROFILE SAS

NAME ALC SA DATE

ITEM CD PCN 08008A WCD YAI09H WCDDATE 88162

OPER NUMB RCC OPER DESC MAND OCCR TYPE F HRS CD/LVL SKILL CD/LVL QTY X HRS EQUIP CODE

OPER NUMB	RCC	OPER DESC	MAND OCCR TYPE	F HRS	CD/LVL	SKILL CD/LVL	QTY	X HRS	EQUIP CODE	RCC	MATPSS	QTY	X HRS	NOTES
70		MATPSS TEST		P	.	.	.	.	K-7			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-9			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-11			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-12			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-13			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-14			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-17			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-18			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-19			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-20			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-21			1	. 0.1	
70		MATPSS TEST		P	.	.	.	.	K-23			1	. 0.1	

OPERATION PROFILE

NAME ALC SA DATE SAS
 ITEM CD PCN 08006A WCD TA109H WDDA E 88182

OPER NUMB	RCC	OPER DESC	MAND OCCR	OPER TYPE	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
80	MATPSS	TEST	.	P	.	H-10	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	H-11	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-1	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-2	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-3	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-4	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-5	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-6	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-7	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-9	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-11	1	0.8		1	0.8	
80	MATPSS	TEST	.	P	.	K-12	1	0.8		1	0.8	

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SAS

OPERATION PROFILE

NAME _____ DATE _____

ALC SA _____

RCC MATPSS _____

ITEM CD PCN 00008A WCD TA109H WCD DATE 88182

OPER HIST MAND OPER SKILL EQUIP
NUMB RCC DESC OCCR TYPE F HRS CD/LVL QTY X HRS CODE QTY X HRS NOTES

90	MATPSS	TEST	.	P	.	.	.	.	.	H-3	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-4	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-5	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-6	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-7	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-7A	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-8	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-9	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-10	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	H-11	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	K-1	1	.	0.5	
90	MATPSS	TEST	.	P	.	.	.	.	.	K-2	1	.	0.5	

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC _____ SHEET 22 OF _____

ITEM CD PCN 08006A WCD TAI09H WCDDATE 88162

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	OPER F	MA'ND HRS	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
100	MATPSS	TEST	.	P	.	.	H-7	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	H-7A	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	H-8	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	H-9	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	H-10	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	H-11	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-1	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-2	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-3	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-4	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-5	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-6	1	0.5		1	0.5	
100	MATPSS	TEST	.	P	.	.	K-7	1	0.5		1	0.5	

OPERATION PROFILE

SAS

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NAME

DATE

ALC SA

ITEM CD PCN 08006A

WCD TA109H WCDDATE 88162

OPER NUMB RCC OPER DESC HIST MAND OCCR TYPE F HRS CD/LVL SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	
100	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	0.5	

SAS

OPERATION PROFILE

NAME _____

ALC SA _____

DATE _____

RCC MATPSS _____

NOTES _____

ITEM CD PCN 08006A WCD TA109H WCDDATE 88162

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS

110 MATPSS TEST 1.00 P

110 MATPSS TEST

110 MATPSS TEST . 1.0 P 86028K 10
~~10-10~~ ^{0.1} L-93
~~0.0~~ ~~H-1~~ 1 1 0.0

110 MATPSS TEST P H-2 1 0.0

110 MATPSS TEST P H-3 1 0.0

110 MATPSS TEST P H-4 1 0.0

110 MATPSS TEST P H-5 1 0.0

110 MATPSS TEST P H-6 1 0.0

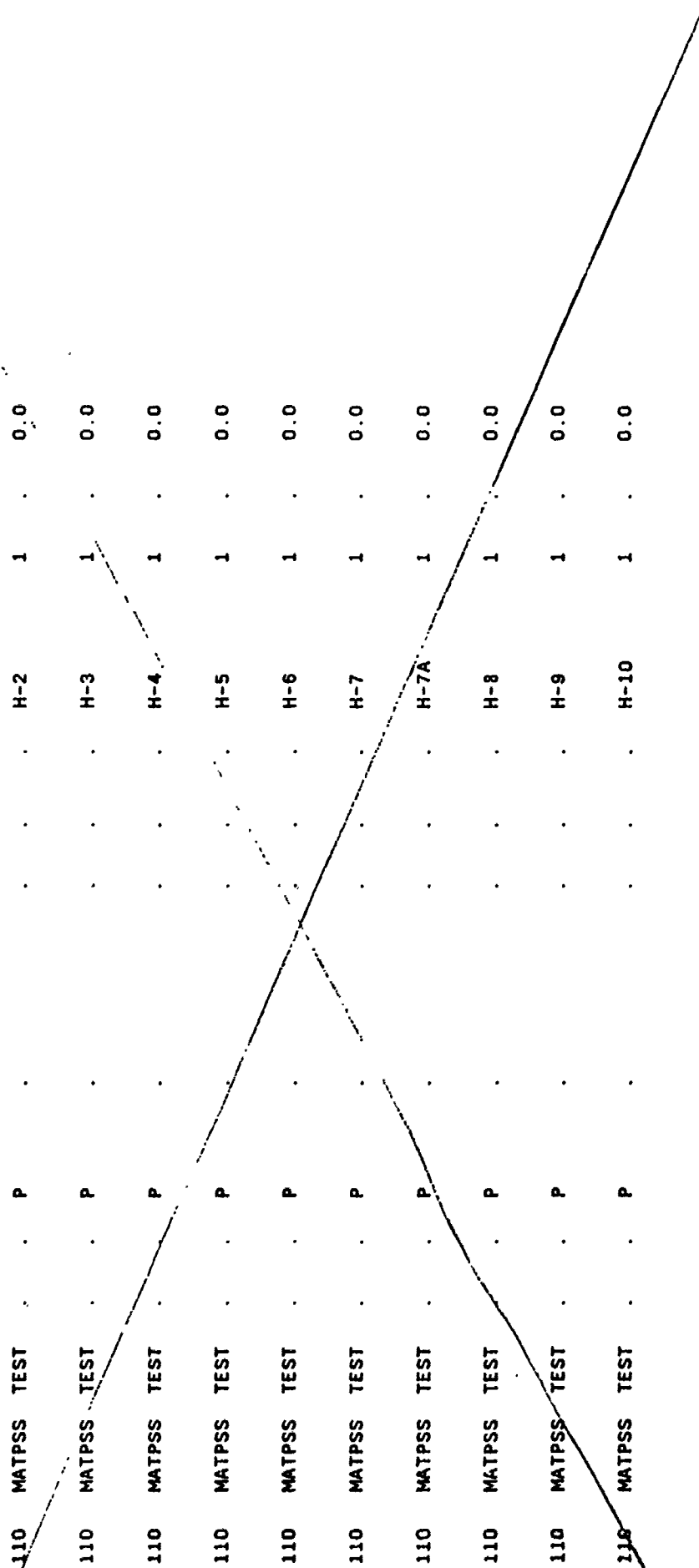
110 MATPSS TEST P H-7 1 0.0

110 MATPSS TEST P H-7A 1 0.0

110 MATPSS TEST P H-8 1 0.0

110 MATPSS TEST P H-9 1 0.0

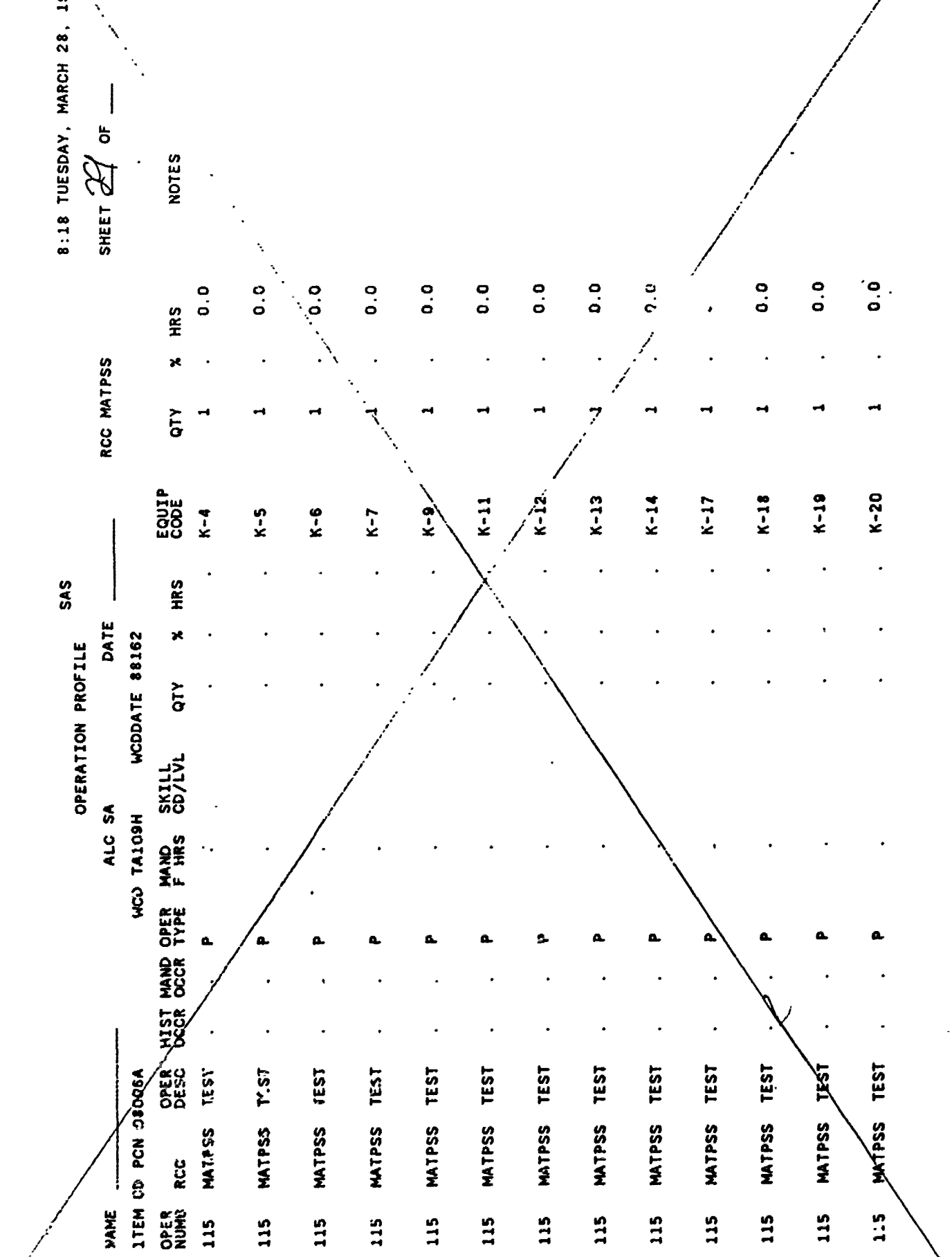
110 MATPSS TEST P H-10 1 0.0



SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	WCD	TA109H	WCD	DATE	DATE	ALC	SA	WCD	DATE	88162	OPER	HIST	MAND	OPER	SKILL	EQUIP	QTY	%	HRS	NOTES	
NUMB	RCC	DESC	DCR	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS	CD/LVL	QTY	%	HRS	CODE	RCC	MATPSS	QTY	%	HRS
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-4	1	.	0.0	
115	MATPSS	T-ST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-5	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-6	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-7	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-9	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-11	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-12	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-13	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-14	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-17	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-18	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-19	1	.	0.0	
115	MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	.	.	K-20	1	.	0.0	



OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ WCD TA109H WCDDATE 88162

ITEM CD	PCN	RCC	OPER DESC	HIST OCCR	MAND TYPE	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
115			MATPSS TEST		P					K-21	1	0.0	
115			MATPSS TEST		P					K-23	1	0.0	
115			MATPSS TEST		P					K-24	1	0.0	

~~120 MATPSS TEST 1.00 I~~

~~120 MATPSS TEST S~~

120 MATPSS TEST 1.0 P 8602BK10 1 0.3 H-1 1 0.3

~~120 MATPSS TEST P H-2 1 0.3~~

~~120 MATPSS TEST P H-3 1 0.3~~

~~120 MATPSS TEST P H-4 1 0.3~~

~~120 MATPSS TEST P H-5 1 0.3~~

~~120 MATPSS TEST P H-6 1 0.3~~

~~120 MATPSS TEST P H-7 1 0.3~~

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	09006A	OPER	HJST	MAND	OPER	MAND	SKILL	WCD	TA109H	WCDDATE	88162	DATE	ALC	SA	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	120			MATPSS	TEST		P												1		0.3	H-7A		1		0.3	
	120			MATPSS	TEST		P												1		0.3	H-8		1		0.3	
	120			MATPSS	TEST		P												1		0.3	H-9		1		0.3	
	120			MATPSS	TEST		P												1		0.3	H-10		1		0.3	
	120			MATPSS	TEST		P												1		0.3	H-11		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-1		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-2		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-3		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-4		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-5		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-6		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-7		1		0.3	
	120			MATPSS	TEST		P												1		0.3	K-9		1		0.3	

OPERATION PROFILE

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RCC MATPSS

DATE

ALC SA

WCD TAI09H

WCDDATE 88162

ITEM CD PCN 08006A

OPER NUMB

RCC

HIST MAND

OPER MAND

SKILL CD/LVL

QTY

% HRS

EQUIP CODE

NOTES

QTY

% HRS

QTY

% HRS

QTY

% HRS

NOTES

130 MATPSS TEST 1.0 P 86025K10 1 0.3 L-93 1 1.3

~~150 MATPSS TEST 1.0 P~~

~~150 MATPSS TEST~~

150 MATPSS TEST 1.0 P 86025K10 1 0.3 L-93

~~150 MATPSS TEST . . . P . . . H-2 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-3 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-4 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-5 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-6 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-7 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-7A 1 . 0.3~~

~~150 MATPSS TEST . . . P . . . H-8 1 . 0.3~~

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	DATE	WCD	TAI09H	WCDDATE	88162	ALC	SA	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-2	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-3	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-4	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-5	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-6	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-7	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-7A	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-8	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-9	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-10	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	H-11	.	1	.	0.0	
	160		MATPSS	TEST	.	.	P	.	.	.	.	.	.	.	.	.	.	1	.	0.0	K-1	.	1	.	0.0	

OPERATION PROFILE SAS

NAME _____ ALC SA _____ WCD TA109H WCD DATE _____ WCD DATE 88162

ITEM CD	PCN	OPER	RCC	MATPSS	TEST	HIST	MAND	OPER	MAND	SKILL	QTY	%	HRS	EQUIP	QTY	%	HRS	NOTES
NUMB	DESC	OC	OC	TYPE	F	HRS	CD/LVL	CD/LVL	CD/LVL	CD/LVL				CODE				
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-2	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-3	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-4	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-5	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-6	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-7	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-9	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-11	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-12	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-13	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-14	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-17	1	.	0.0	
160	MATPSS	TEST	.	P	.	.	.	.	.	.	.	.	0.0	K-18	1	.	0.0	

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	08006A	ALC SA	WCD	TAL09H	WCD	DATE	88162	OPER	HIST	AND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	RCC	MATPSS	QTY	%	HRS	NOTES
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		
165	MATPSS	TEST	P																		1		0.8		

OPER

HIST

AND

OPER

MAND

SKILL

CD/LVL

QTY

%

HRS

RCC

MATPSS

QTY

%

HRS

NOTES

SAS

OPERATION PROFILE

SHEET AD OF

NAME

ALC SA

DATE

WCD TAI09H

WCDDATE 88162

RCC MATPSS

ITEM CD	FCN	OPER	DESC	RCC	HIST	MAND	OPER	SKILL	CD/LVL	QTY	%	HRS	NOTES
					OC	OC	TYPE	F	HRS				
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	
165		MATPSS	TEST		P					1		0.8	

165 MATPSS TEST P 1 0.8

OPERATION PROFILE SAS

NAME ALC SA DATE
 ITEM CD PCN 08006A WCD TA109H WCD DATE 88162

OPER NUMB RCC OPER HIST MAND OPER SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE NOTES

170	MATPSS TEST	P	.	.	.	H-10	1	.	0.3	
170	MATPSS TEST	P	.	.	.	H-11	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-1	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-2	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-3	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-4	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-5	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-6	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-7	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-9	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-11	1	.	0.3	
170	MATPSS TEST	P	.	.	.	K-12	1	.	0.3	

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OPERATION PROFILE

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NAME
 ITEM CD PCN 08006A
 OPER NUMB RCC

ALC SA DATE
 WCD TAL09H WCDDATE 88162

RCC MATPSS
 QTY % HRS

HIST MAND OPER MAND SKILL EQUIP
 OCCR TYPE F HRS CD/LVL QTY % HRS CODE NOTES
 170 MATPSS TEST P K-13 1 0.3

170 MATPSS TEST P K-14 1 0.3

170 MATPSS TEST P K-17 1 0.3

170 MATPSS TEST P K-18 1 0.3

170 MATPSS TEST P K-19 1 0.3

170 MATPSS TEST P K-20 1 0.3

170 MATPSS TEST P K-21 1 0.3

170 MATPSS TEST P K-23 1 0.3

170 MATPSS TEST P K-24 1 0.3

~~180 MATPSS TEST 0.07~~

~~180 MATPSS TEST~~

180 MATPSS TEST . 1.0 P 8602BK10 1 0.3 L-93

180 MATPSS TEST P M-2 1 0.3

OPERATION PROFILE SAS

SHEET 47 OF

NAME	ITEM CD	PCN	08006A	ALC SA	DATE	WCD	TA109H	WCDDATE	88162	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	X	HRS	EQUIP	CODE	QTY	X	HRS	NOTES
182	MATPSS	TEST		P																H-7	1		0.0	
182	MATPSS	TEST		P																H-7A	1		0.0	
182	MATPSS	TEST		P																H-8	1		0.0	
182	MATPSS	TEST		P																H-9	1		0.0	
182	MATPSS	TEST		P																H-10	1		0.0	
182	MATPSS	TEST		P																H-11	1		0.0	
182	MATPSS	TEST		P																K-1	1		0.0	
182	MATPSS	TEST		P																K-2	1		0.0	
182	MATPSS	TEST		P																K-3	1		0.0	
182	MATPSS	TEST		P																K-4	1		0.0	
182	MATPSS	TEST		P																K-5	1		0.0	
182	MATPSS	TEST		P																K-6	1		0.0	
182	MATPSS	TEST		P																K-7	1		0.0	

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08006A WCD TA109H WCD DATE 88162

OPER NUMB	RCC	OPER DESC	MAND OCCR	OPER TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CASE	QTY	%	HRS	NOTES
185	MATPSS	TEST	.	P	.	.	.	.	0.0	H-11	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-1	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-2	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-3	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-4	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-5	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-6	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-7	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-9	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-11	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-12	1	.	0.0	
185	MATPSS	TEST	.	P	.	.	.	.	0.0	K-13	1	.	0.0	

OPERATION PROFILE SAS

SHEET 51 OF

NAME	ITEM CD	PCN	08006A	ALC SA	WCD	TA109H	WCDDATE	88162	DATE	SAS	RCC	MATPSS	QTY	%	HRS	EQUIP	NOTES
OPER	NUMB	RCC	DESC	HIST	MAND	OPER	SKILL	CD/LVL	QTY	%	HRS					CODE	
185	MATPSS	TEST	P										1		0.0	K-14	
185	MATPSS	TEST	P										1		0.0	K-17	
185	MATPSS	TEST	P										1		0.0	K-18	
185	MATPSS	TEST	P										1		0.0	K-19	
185	MATPSS	TEST	P										1		0.0	K-20	
185	MATPSS	TEST	P										1		0.0	K-21	
185	MATPSS	TEST	P										1		0.0	K-23	
185	MATPSS	TEST	P										1		0.0	K-24	
185	MATPSS	TEST	P										1		0.0		
186	MATPSS	TEST	P										1		0.5		
186	MATPSS	TEST	P										1		0.5		
186	MATPSS	TEST	P										1		0.5		
186	MATPSS	TEST	P										1		0.5		

8602BK05

1.0 QT

[Handwritten scribbles]

OPERATION PROFILE SAS

SHEET 52 OF

NAME	ITEM CD	PCN	WCD	DATE	WCDDATE	SAS	RCC	HIST	MAND	OPER	TYPE	F	HRS	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	186	MATPSS	TEST							P					1		0.5	H-4		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-5		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-6		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-7		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-7A		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-8		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-9		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-10		1		0.5	
	186	MATPSS	TEST							P					1		0.5	H-11		1		0.5	
	186	MATPSS	TEST							P					1		0.5	K-1		1		0.5	
	186	MATPSS	TEST							P					1		0.5	K-2		1		0.5	
	186	MATPSS	TEST							P					1		0.5	K-3		1		0.5	

~~186 MATPSS TEST . . . P 1 . . . 0.5~~

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08006A WCD TAI09H WCDDATE 88162

OPER NUMB RCC HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE NOTES

OPER NUMB	RCC	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP CODE	NOTES
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-4	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-5	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-6	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-7	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-9	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-11	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-12	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-13	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-14	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-17	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-18	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-19	
186	MATPSS	TEST	.	P	.	.	.	.	.	0.5	K-20	

OPERATION PROFILE

SAS

NAME _____

DATE _____

ALC SA _____

WCD TAI09H

WCD DATE 88162

SHEET 54 OF _____

ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	%	HRS	NOTES
NUMB	RCC	DESC	OCCR	TYPE	F	HRS	CD/LVL	QTY	%	HRS			
186	MATPSS	TEST	.	.	P	.	.	.	K-21	1	.	0.5	
186	MATPSS	TEST	.	.	P	.	.	.	K-23	1	.	0.5	
186	MATPSS	TEST	.	.	P	.	.	.	K-24	1	.	0.5	
190	MATPSS	TEST	.	.	T	.	.	.	.	.	.	.
190	MATPSS	TEST	.	.	S	.	.	.	.	.	.	.
190	MATPSS	TEST	.	1.0	P	.	.	0.1	---	1	.	0.1	8602BK10
190	MATPSS	TEST	.	.	P	.	.	.	H-2	1	.	0.1	
190	MATPSS	TEST	.	.	P	.	.	.	H-3	1	.	0.1	
190	MATPSS	TEST	.	.	P	.	.	.	H-4	1	.	0.1	
190	MATPSS	TEST	.	.	P	.	.	.	H-5	1	.	0.1	
190	MATPSS	TEST	.	.	P	.	.	.	H-6	1	.	0.1	
190	MATPSS	TEST	.	.	P	.	.	.	H-7	1	.	0.1	

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	08006A	ALC SA	WCD TA109H	WCD DATE	88162	OPER	HIST	MAND	OPER	SKILL	EQUIP	QTY	%	HRS	NOTES
NUMB	RCC	DESC		TYPE	F	HRS	CD/LVL	QTY	%	HRS	CODE						
190	MATPSS	TEST		P			H-ZA	1					1			0.1	
190	MATPSS	TEST		P			H-8	1					1			0.1	
190	MATPSS	TEST		P			H-9	1					1			0.1	
190	MATPSS	TEST		P			H-10	1					1			0.1	
190	MATPSS	TEST		P			H-11	1					1			0.1	
190	MATPSS	TEST		P			K-1	1					1			0.1	
190	MATPSS	TEST		P			K-2	1					1			0.1	
190	MATPSS	TEST		P			K-3	1					1			0.1	
190	MATPSS	TEST		P			K-4	1					1			0.1	
190	MATPSS	TEST		P			K-5	1					1			0.1	
190	MATPSS	TEST		P			K-6	1					1			0.1	
190	MATPSS	TEST		P			K-7	1					1			0.1	
190	MATPSS	TEST		P			K-9	1					1			0.1	

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	DATE	WCD	TA109H	WCD	DATE	88162	ALC	SA	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
191	MATPSS	ASSY	S																								
191	MATPSS	ASSY	/	O	P																						
192	MATPSS	ASSY	T																								
192	MATPSS	ASSY	S																								
192	MATPSS	ASSY	/	O	P																						
192	MATPSS	ASSY	.	.	P																						
193	MATPSS	ASSY	T																								
193	MATPSS	ASSY	S																								
193	MATPSS	ASSY	/	O	P																						
193	MATPSS	ASSY	.	.	P																						
194	MATPSS	ASSY	T																								
194	MATPSS	ASSY	S																								

8602BC09

8602BC09

8602BC09

OPERATION PROFILE SAS

SHEET 59 OF

NAME _____

ALC SA _____

RCC MATPSS _____

DATE _____

ITEM CD PCN 08006A WCD TAI09H WCDDATE 88102

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	OPER F	MAND HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
220	MATPSS	ASSY		P		1.0		1		1.0	G-32	1		1.0	
220	MATPSS	ASSY		P							G-33	1		1.0	

~~8602-BC09~~

FLOW PROCESS CHART

SUBJECT F15 JFS Test DATE 5-23-89

ITEM CODE
PCN
NSN
P/N

WCD TA107H WCD DATE 88162

08006A

CHART BEGINS 5

CHART ENDS 220 PREPARED BY APHolm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OF	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	—	○▷D□▽	Move			○▷D□▽	
10	10	●▷D□▽	TEST			○▷D□▽	
20	20	●▷D□▽	TEST			○▷D□▽	
30	30	●▷D□▽	TEST			○▷D□▽	
40	40	●▷D□▽	TEST			○▷D□▽	
50	50	●▷D□▽	TEST			○▷D□▽	
60	60	●▷D□▽	TEST			○▷D□▽	
70	70	●▷D□▽	TEST			○▷D□▽	
80	80	●▷D□▽	TEST			○▷D□▽	
90	90	●▷D□▽	TEST			○▷D□▽	
95	95	●▷D□▽	TEST			○▷D□▽	
100	100	●▷D□▽	TEST			○▷D□▽	
110	110	●▷D□▽	TEST			○▷D□▽	
115	115	●▷D□▽	TEST			○▷D□▽	
120	120	●▷D□▽	TEST			○▷D□▽	
130	130	●▷D□▽	TEST			○▷D□▽	
150	150	●▷D□▽	TEST			○▷D□▽	
160	160	●▷D□▽	TEST			○▷D□▽	
165	165	●▷D□▽	TEST			○▷D□▽	
170	170	●▷D□▽	TEST			○▷D□▽	
180	180	●▷D□▽	TEST			○▷D□▽	
182	182	●▷D□▽	TEST			○▷D□▽	
185	185	●▷D□▽	TEST			○▷D□▽	
186	186	○▷D□▽	MOVE			○▷D□▽	
190	190	●▷D□▽	TEST			○▷D□▽	
191	191	●▷D□▽	ASSY			○▷D□▽	
192	192	●▷D□▽	ASSY			○▷D□▽	
193	193	●▷D□▽	ASSY			○▷D□▽	
194	194	●▷D□▽	ASSY			○▷D□▽	
195	195	●▷D□▽	ASSY			○▷D□▽	
196	196	●▷D□▽	ASSY			○▷D□▽	
220	220	●▷D□▽	ASSY			○▷D□▽	

○ OPERATION ▽ STORAGE □ INSPECTION
▷ TRANSPORTATION D DELAY

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD TA138R WCD TA138R WCD DATE 88230

OPER NUMB RCC OPER DESC HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

~~40 MATPSS TEST~~
 40 MATPSS TEST 1.0 P 0.3 L-93 1 0.3

~~50 MATPSS TEST 1.00~~

~~50 MATPSS TEST~~

50 MATPSS TEST P 0.2 L-93 1 0.3

60 MATPSS TEST 1.00 P 0.2 L-93 1 0.2

~~65 MATPSS TEST 0.99~~

~~65 MATPSS TEST~~

65 MATPSS TEST P 0.1 L-93 1 0.1

70 MATPSS TEST 1.00 P 0.1 L-93 1 0.1

~~80 MATPSS TEST 0.98~~

~~80 MATPSS TEST~~

80 MATPSS TEST 1.0 P 0.1 L-93 1 0.1

~~80 MATPSS TEST 0.98~~

47

47

PROCESS OPERATION

PROCESS OPERATION

SAS

OPERATION PROFILE

SHEET ___ OF ___

RCC MATPSS

DATE

WCD

QTY

%

HRS

OPER

MAND

TYPE

F

HRS

SKILL

CD/LVL

EQUIP

ITEM CD PCN 08007A

WCD TAI36R

WCDDATE 88230

OPER

NUMB

RCC

MATPSS

TEST

1.0

P

0.91

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OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD TA136R WCD DATE 88230

OPER NUMB	RCC	OPER DESC	HIST OCCR TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
215	MATPSS	TEST	0.95	T									
215	MATPSS	TEST		S									
215	MATPSS	TEST	1.0	P	8602BK10 WG-10	1	0.2	0.2	L-93	1		0.2	
220	MATPSS	TEST	0.99	T									
230	MATPSS	TEST		S									
230	MATPSS	TEST	1.0	P	8602BK10 WG-10	1	0.3	0.3	L-93	1		0.3	
240	MATPSS	MOVE	0.17	T	8602BK05	1		0.1					
240	MATPSS	MOVE		S									
240	MATPSS	MOVE		P				0.1					
243	MATPSS	ASSY	0.85	T									
243	MATPSS	ASSY		S									
243	MATPSS	ASSY	1.0	P	8602BC09 WG-9	1	0.1	0.1	L-42	1		0.1	

DELETE

DELETE

SAS

OPERATION PROFILE

SHEET ___ OF ___

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	SKILL	WCD	TA136R	WCDDATE	88230	DATE	ALC	SA	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
245	MATPSS	ASSY	0.85	T																			
245	MATPSS	ASSY																					DELETE
245	MATPSS	ASSY		1.0	P					8602BC09					1		0.5	EWB005		1		0.4	
247	MATPSS	INST	0.76	T																			DELETE
247	MATPSS	INST																					DELETE
247	MATPSS	INST		1.0	P					8602BC09							0.8	L-75		1		0.8	INSR BY ASSY MECHANIC
248	MATPSS	INST	0.69	T																			DELETE //
248	MATPSS	INST																					DELETE //
248	MATPSS	INST		1.0	P					8602BC09							0.8	EWB005		1		0.8	
250	MATPSS	INSP	0.84	T																			DELETE //
250	MATPSS	INSP																					DELETE //
250	MATPSS	INSP		1.0	P					8602BC09					1		0.9	EWB005		1		0.9	
260	MATPSS	MOVE			T																		DELETE
260	MATPSS	MOVE			T																		DELETE

DELETE //

DELETE //

DELETE //

DELETE //

SAS

OPERATION PROFILE

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 08007A WCD TAI36R MCDDATE 88230

OPER NUMB	RCC	OPER HIST OCCR TYPE	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
260	MAIPSS	MOVE	S	MG-5	1	0.3				DELETE
260	MAIPSS	MOVE	P	MG-5	1	0.3				DELETE
270	MAIPSS	PAIN	T							DELETE
270	MAIPSS	PAIN	S							DELETE
270	MATPMM	PAIN	1.0 P	6.0		0.6		0.1		Paint stop
280	MATPMM	MOVE	0.06	1.0 T	0.3					
280	MAIPSS	MOVE	S							DELETE
280	MAIPSS	MOVE	P							DELETE
290	MAIPSS	ASSY	0.01	T						DELETE
290	MAIPSS	ASSY	S							DELETE
290	MATPSS	ASSY	1.0 P	0.5 L-WBee 5	1	0.5				Paint to Axis

~~DELETE~~

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2602BC09
MG-10

FLOW PROCESS CHART

SUBJECT CENTRAL GEAR BOX TEST

DATE 5/23/89

ITEM CODE
PCN 08007A
NSN
PIN

WCD TA136R

WCD DATE 88230

CHART BEGINS OPERATION 10 RECEIVE AND PREPARE FOR TEST

CHART ENDS OPERATION 240

PREPARED BY K. ATTARIA

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
10	10	⊙▷▷□▽	SETUP			○▷▷□▽	
15	15	⊙▷▷□▽	TEST			○▷▷□▽	
20	20	⊙▷▷□▽	"			○▷▷□▽	
30	30	⊙▷▷□▽	"			○▷▷□▽	
40	40	⊙▷▷□▽	"			○▷▷□▽	
50	50	⊙▷▷□▽	"			○▷▷□▽	
60	60	⊙▷▷□▽	"			○▷▷□▽	
65	65	⊙▷▷□▽	"			○▷▷□▽	
70	70	⊙▷▷□▽	"			○▷▷□▽	
80	80	⊙▷▷□▽	"			○▷▷□▽	
90	90	⊙▷▷□▽	"			○▷▷□▽	
100	100	⊙▷▷□▽	"			○▷▷□▽	
110	110	⊙▷▷□▽	"			○▷▷□▽	
120	120	⊙▷▷□▽	"			○▷▷□▽	
130	130	⊙▷▷□▽	"			○▷▷□▽	
140	140	⊙▷▷□▽	"			○▷▷□▽	
150	150	⊙▷▷□▽	"			○▷▷□▽	
160	160	⊙▷▷□▽	"			○▷▷□▽	
170	170	⊙▷▷□▽	"			○▷▷□▽	
180	180	⊙▷▷□▽	"			○▷▷□▽	
190	190	⊙▷▷□▽	"			○▷▷□▽	
200	200	⊙▷▷□▽	"			○▷▷□▽	
210	210	⊙▷▷□▽	"			○▷▷□▽	
215	215	⊙▷▷□▽	"			○▷▷□▽	
230	230	○▷▷□▽	VISUAL INSP.			○▷▷□▽	
240	240	○▷▷□▽	ROUTE TO ASSY.			○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	
		○▷▷□▽				○▷▷□▽	

○ OPERATION ▽ STORAGE □ INSPECTION
▷ TRANSPORTATION D DELAY

76

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007ASUP WCD TA138R WCDDATE 87196

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

5	MATPNC	1.00	T																		
5	MATPNC		S																		MACHIN SHOP B/S
5	MATPNC		P																		
10	MATPNC	1.00	T																		MACHINE SHOP B/S
10	MATPNC		S																		
10	MATPNC		P																		
15	MATPNC	1.00	T																		
15	MATPNC		S																		
15	MATPNC		P																		MACHINE SHOP B/S
20	MATPSS ASSY	1.00	T																		
20	MATPSS ASSY		S																		
20	MATPSS ASSY	1.0	P																		
20	MATPSS ASSY		P																		
20	MATPSS ASSY		P																		
20	MATPSS ASSY		P																		

0.6
0.1
0.16
0.3
0.1

8602809
0.6
1.0

1.0
1.87
1.2
1.88
1.94

SAS

OPERATION PROFILE

SHEET ___ OF ___

NAME _____
 ITEM CD PCN 08007ASUB1

ALC SA _____

DATE _____

WCD T138R

WCDDATE 87196

OPER NUMB	RCC	OPER HIST	MAND OCCR	OPER TYPE	F	HRS	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
-----------	-----	-----------	-----------	-----------	---	-----	------	-------	--------	-----	---	-----	------------	-----	---	-----	-------

20	MATPSS	ASSY		1.0	P								L-66	1		0.1	
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25	MATPSS	ASSY		1.00	P												
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25	MATPSS	ASSY			P												
---------------	-------------------	-----------------	--	--	--------------	--	--	--	--	--	--	--	--	--	--	--	--

25	MATPSS	ASSY		1.0	P					1		0.1	L-1	1		0.1	
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8602Bc09
~~4609~~

25	MATPSS	ASSY			P								L-2	1		0.1	
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30	MATPSS	ASSY		1.00	P												
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30	MATPSS	ASSY			P												
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30	MATPSS	ASSY		1.0	P					1		0.1	L-1	1		0.1	
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8602Bc09
~~4609~~

30	MATPSS	ASSY			P								L-2	1		0.1	
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OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007ASMBZ WCD TAI39R WCD DATE 87292

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE
DESC OCCR TYPE F HRS CD/LVL QTY X HRS CD/LVL QTY X HRS
8602Bc09
-MG-0-
L-1
L-2
L-74

MANUEL
AREVALOS

ITEM	NUMB	RCC	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	X	HRS	NOTES
5			MATPSS	ASSY	1.00									
5			MATPSS	ASSY										
5			MATPSS	ASSY	1.0	P		8602Bc09	0.1	L-1	1		0.1	
5			MATPSS	ASSY							1		0.1	
5			MATPSS	ASSY							1		0.1	

10			MATPSS	ASSY	1.00									
10			MATPSS	ASSY										
10			MATPSS	ASSY	1.0	P		8602Bc09	0.1	L-1	1		0.1	
10			MATPSS	ASSY							1		0.1	
10			MATPSS	ASSY							1		0.1	

15			MATPSS	ASSY	1.00									
15			MATPSS	ASSY										
15			MATPSS	ASSY	1.0	P		8602Bc09	0.1	L-1	1		0.1	
15			MATPSS	ASSY							1		0.1	

8:18 TUESDAY, MARCH 28, 1989 257

SAS

OPERATION PROFILE

NAME _____ SHEET _____ OF _____

ALC SA _____ DATE _____

WCD TAI41R WCDDATE 87140

ITEM CD PCN 06007A0064

OPER NUMB RCC OPER HIST MAND OCCR TYPE F HRS CD/LVL QTY % HRS SKILL EQUIP CODE

NOTES
MANUEL
AREVALOS

05 MATPSS ASSY 1.0 P 1.0 0.1

10 MATPSS ASSY 1.0 P 1.0 0.1 L-11

~~10 MATPSS ASSY 1.0 P 1.0 0.1 L-2~~

~~10 MATPSS ASSY 1.0 P 1.0 0.1 L-67~~

~~15 MATPSS ASSY 1.00 P 1.00 0.1 L-67~~

~~15 MATPSS ASSY 1.00 P 1.00 0.1 L-2~~

15 MATPSS ASSY 1.0 P 1.0 0.1 L-67

~~15 MATPSS ASSY 1.0 P 1.0 0.1 L-2~~

~~20 MATPSS ASSY 1.00 P 1.00 0.1~~

~~20 MATPSS ASSY 1.00 P 1.00 0.1~~

20 MATPSS ASSY 1.0 P 1.0 0.1 L-11

~~20 MATPSS ASSY 1.0 P 1.0 0.1 L-2~~

OPERATION PROFILE SAS

SHEET ____ OF ____

NAME	ITEM CD	PCN	08007ASUB4	ALC SA	WCD	TA141R	WCDDATE	87140	DATE	OPER	HIST	MAND	OPER	SKILL	EQUIP	CODE	QTY	%	HRS	QTY	%	HRS	NOTES
30	MATPSS	ASSY	1.00	T																			
30	MATPSS	ASSY		G																			
30	MATPSS	ASSY	1.0	P													1		0.0	1		0.0	
30	MATPSS	ASSY		P																			
35	MATPSS	ASSY	1.0	T																			
35	MATPSS	ASSY		S																			
35	MATPSS	ASSY	1.0	P													1		0.1	1		0.1	
35	MATPSS	ASSY		P																			
40	MATPSS	ASSY	1.00	T																			
40	MATPSS	ASSY		S																			
40	MATPSS	ASSY		P													1		0.1	1		0.1	
40	MATPSS	ASSY		P																			
45	MATPSS	ASSY	1.00	T																			

8602BC09

8602BC09

8602BC09

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OPERATION PROFILE SAS

SHEET ___ OF ___

RCC MATPSS

QTY X HRS

DATE

WCDDATE 87292

ALC SA

ITEM CD PCN 08007ASMB1

OPER NUMB RCC OPER DESC OCCR TYPE F HRS MAND SKILL CD/LVL QTY X HRS EQUIP CODE

MANUEL AREVALOS ASSY MECHANIC

05 MATPSS ASSY 1.0 P 8602BC09 1 0.2

~~10 MATPSS ASSY 1.0 P 8602BC09 1 0.2~~

~~10 MATPSS ASSY 1.0 P 8602BC09 1 0.2~~

10 MATPSS ASSY 1.0 P 8602BC09 1 0.1

10 MATPSS ASSY 1.0 P 8602BC09 1 0.1

~~15 MATPSS ASSY 1.00 P 8602BC09 1 0.3~~

~~15 MATPSS ASSY 1.00 P 8602BC09 1 0.3~~

~~15 MATPSS ASSY 1.00 P 8602BC09 1 0.3~~

~~15 MATPSS ASSY 1.00 P 8602BC09 1 0.3~~

15 MATPSS ASSY 1.0 P 8602BC09 1 0.3

15 MATPSS ASSY 1.0 P 8602BC09 1 0.3

15 MATPSS ASSY 1.0 P 8602BC09 1 0.3

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007ASUB4 WCC TAI42R WCCDATE 87292

OPER NUMB RCG OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

15 MATPSS ASSY . . . P L-51 1 . . . 0.3
~~0.1~~

~~20 MATPSS ASSY 1.00 . . . T~~

~~20 MATPSS ASSY . . . S~~

~~20 MATPSS ASSY . . . P~~ 0.1 ~~0.1~~ ~~0.1~~

20 MATPSS ASSY . . . P 8602BC09 1 . . . 0.1 L-88
~~0.1~~

20 MATPSS ASSY . . . P L-52 1 . . . 0.1

20 MATPSS ASSY . . . P L-53 1 . . . 0.1

20 MATPSS ASSY . . . P L-37 1 . . . 0.1

~~25 MATPSS ASSY 1.00 . . . T~~

~~25 MATPSS ASSY . . . S~~

~~25 MATPSS ASSY . . . P~~ 0.1 ~~0.1~~ ~~0.1~~

~~25 MATPSS ASSY . . . P~~ 0.1 ~~0.1~~ ~~0.1~~

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007ASUB4 WCD TA142R WCDDATE 87292 RCC MATPSS

OPER HIST MAND OPER MAND SKILL EQUIP QTY % HRS NOTES

NUMB RCC OPER DESC OCCR TYPE F HRS CD/LVL QTY % HRS EQUIP CODE

~~40~~ MATPSS ASSY 0

40 MATPSS ASSY . 1.0 P 8602Bc09
~~WG-8~~ 1 . 0.1 ~~1-1~~ 1 . 0.1

~~40~~ MATPSS ASSY P 1-2 1 . 0.1

~~45~~ MATPSS ASSY 1.00 . T

~~45~~ MATPSS ASSY S

45 MATPSS ASSY . 1.0 P 8602Bc09
~~WG-8~~ 1 . 0.1 ~~1-1~~ 1 . 0.0

~~45~~ MATPSS ASSY P 1-2 1 . 0.0

~~50~~ MATPSS ASSY 0.93 . T

~~50~~ MATPSS ASSY S

50 MATPSS ASSY . 1.0 P 8602Bc09
~~WG-8~~ 1 . 0.1 ~~1-1~~ 1 . 0.1

~~50~~ MATPSS ASSY P 1-2 1 . 0.1

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SHILL	DATE	WCDDATE	ALC	SA	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
43	MATPSS	ASSY	0.99																		
45	MATPSS	ASSY																			
45	MATPSS	ASSY		1.0	P					8602Bco9			1	0.5	L-1			1		0.5	
45	MATPSS	ASSY			P										L-2			1		0.5	
45	MATPSS	ASSY			P										L-62			1		0.5	
45	MATPSS	ASSY			P										L-56			1		0.3	
50	MATPSS	ASSY	0.99																		
50	MATPSS	ASSY																			
50	MATPSS	ASSY		1.0	P					8602Bco9			1	0.1	L-1			1		0.1	
50	MATPSS	ASSY			P										L-2			1		0.1	
55	MATPSS	ASSY	0.99																		
55	MATPSS	ASSY																			
55	MATPSS	ASSY		1.0	P					8602Bco9			1	0.1	L-1			1		0.1	
55	MATPSS	ASSY			P										L-42			1		0.1	

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08007ASUB4 WCD TA143R WCDDATE 86252
 OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE NOTES
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS QTY X HRS
 55 MATPSS ASSY . . P L-2 . . 1 . . 0.1

~~60 MATPSS ASSY 0.99 . . T~~

~~60 MATPSS ASSY . . S~~

60 MATPSS ASSY . 1.0 P 8602Bco9
 W-9 1.1 L-1 1 . 0.5 L-1 1 . 0.5 ✓

60 MATPSS ASSY . . P L-2 . . 1 . . 0.5

60 MATPSS ASSY . . P L-55 . . 1 . . 0.3

60 MATPSS ASSY . . P L-77 . . 1 . . 0.3

~~65 MATPSS ASSY 0.99 . . T~~

~~65 MATPSS ASSY . . S~~

65 MATPSS ASSY . 1.0 P 8602Bco9
 W-9 0.3 L-1 1 . 0.3 L-1 1 . 0.3

65 MATPSS ASSY . . P L-2 . . 1 . . 0.3

65 MATPSS ASSY . . P W-9 L-58 1 . 0.3 L-58 1 . 0.3

~~70 MATPSS ASSY 0.99 . . T~~

OPERATION PROFILE

SAS SHEET ___ OF ___

NAME	ITEM CD	PCN	ALC SA	DATE	WCD	TAI43R	WCD	DATE	86252	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	QTY	%	HRS	QTY	%	HRS	NOTES
										NUMB	RCC	DESC	OC	CR	TYPE	F	HRS	CD/LVL	QTY	%	HRS	CODE	
	80																						
	80																						
	80																						
	85																						
	85																						
	85																						
	85																						
	85																						
	86																						
	86																						
	86																						
	86																						
	86																						

8602Bco9
 8602Bco9
 8602Bco9

0.3
 0.3
 0.3

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____ WCD T143R WCDDATE 86252

ITEM CD PCN 08007ASUB4 OPER HIST MAND OPER MAND SKILL EQUIP CODE

NUMB RCC OCCR DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

86	MATPSS	ASSY	.	P	.	.	.	L-56	1	.	0.3	
86	MATPSS	ASSY	.	P	.	.	.	L-48	1	.	0.3	
86	MATPSS	ASSY	.	P	.	.	.	L-57	1	.	0.3	

~~87 MATPSS ASSY 0.89 T~~
~~87 MATPSS ASSY~~

87	MATPSS	ASSY	1.0	P	.	.	.	L-1	1	.	0.5	
87	MATPSS	ASSY	.	P	.	.	.	L-2	1	.	0.5	
87	MATPSS	ASSY	.	P	.	.	.	L-62	1	.	0.3	
87	MATPSS	ASSY	.	P	.	.	.	L-57	1	.	0.3	

87	MATPSS	ASSY	.	P	.	.	.	L-50	1	.	0.3	
87	MATPSS	ASSY	.	P	.	.	.	L-58	1	.	0.3	

~~88 MATPSS ASSY 0.89 T~~
~~88 MATPSS ASSY~~

88	MATPSS	ASSY	1.0	P	.	.	.	L-1	1	.	0.3	
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OPERATION PROFILE
SHEET ___ OF ___

NAME _____

ALC SA _____

DATE _____

WCD TAI43R

WCD TAI43R

WCD TAI43R

ITEM CD PCN 08007ASUB4

WCD TAI43R

WCD TAI43R

OPER NUMB

OPER HIST MAND

OPER MAND

OPER NUMB

OCRR TYPE

OCRR TYPE

DESC

ASSY

ASSY

ASSY

QTY

QTY

QTY

% HRS

% HRS

% HRS

RCC

RCC

RCC

MATPSS

MATPSS

MATPSS

ASSY

ASSY

ASSY

QTY

QTY

QTY

% HRS

% HRS

% HRS

EQUIP CODE

EQUIP CODE

EQUIP CODE

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8602BC09

8602BC09

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007ASUB4 WCD TAI43R WCDDATE 80252 RCC MATPSS

OPER NUMB RCG OPER HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE NOTES

95 MATPSS ASSY P L-63 1 . 0.3

95 MATPSS ASSY P L-2 1 . 0.3

~~100 MATPSS ASSY T~~

~~100 MATPSS ASSY S~~

100 MATPSS ASSY 1.0 P S/602 Bco9 1 . 0.3

100 MATPSS ASSY P L-63 1 . 0.3

100 MATPSS ASSY P L-2 1 . 0.3

~~105 MATPSS ASSY T~~

~~105 MATPSS ASSY S~~

105 MATPSS ASSY 1.0 P S/602 Bco9 1 . 0.8

105 MATPSS ASSY P L-2 1 . 0.8

105 MATPSS ASSY P L-55 1 . 0.3

105 MATPSS ASSY P L-77 1 . 0.3

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD TAI44R WCDDATE 86252

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL QTY % HRS EQUIP CODE QTY % HRS NOTES

~~5~~ MATPSS ASSY 1.00 . T

~~5~~ MATPSS ASSY

5 MATPSS ASSY . 1.0 P 8602BC09
~~4608~~ 0.2 ~~1-1~~ ~~1-1~~ 0.2

5 MATPSS ASSY P ~~1-2~~ 0.2

~~10~~ MATPSS ASSY 1.00 . T

~~10~~ MATPSS ASSY

10 MATPSS ASSY . 1.0 P 8602BC09
~~4608~~ 0.3 L-1 1 0.2

10 MATPSS ASSY P L-2 1 0.2

~~15~~ MATPSS ASSY 0.99 . T

~~15~~ MATPSS ASSY

15 MATPSS ASSY . 1.0 P 8602BC09
~~4608~~ 0.5 L-1 1 0.5

15 MATPSS ASSY P L-2 1 0.5

~~20~~ MATPSS ASSY 1.00 . T

MANUEL
 AREVALOS
 ASSEMBLY MECHANIC

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	08007A	ALC SA	WCD	TAL44R	WCDDATE	86252	DATE	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
35	MATPSS	ASSY															
35	MATPSS	ASSY								1		0.3	L-1	.1		0.3	
35	MATPSS	ASSY											L-2	1		0.3	
40	MATPSS	ASSY															
40	MATPSS	ASSY															
40	MATPSS	ASSY								1		0.4	L-1	1		0.4	
40	MATPSS	ASSY											L-2	1		0.4	
42	MATPSS	ASSY															
42	MATPSS	ASSY															
42	MATPSS	ASSY								1		0.3	L-1	1		0.3	
42	MATPSS	ASSY											L-2	1		0.3	
45	MATPSS	ASSY															
45	MATPSS	ASSY															

1

SAS

SHEET ___ OF ___

OPERATION PROFILE

NAME	ALC SA	DATE	RCC	MATPSS	QTY	%	HRS	NOTES
ITEM CD PCN 08007A	WCD TAI44R	WCDDATE 86252						
OPER NMB	OPER DESC	HIST MAND	OPER MAND	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE
45	MATPSS ASSY	1.0 P			1		0.4	L-1
45	MATPSS ASSY				1		0.4	L-2
50	MATPSS ASSY	1.00	T					
50	MATPSS ASSY		B					
50	MATPSS ASSY	1.0 P			1		0.1	L-1
50	MATPSS ASSY				1		0.1	L-2
55	MATPSS ASSY	0.98	T					
55	MATPSS ASSY		B					
55	MATPSS ASSY	1.0 P			1		0.2	L-1
55	MATPSS ASSY				1		0.2	L-2
60	MATPSS ASSY	1.00	T					
60	MATPSS ASSY		B					

8602Bco9
-48-8

8602Bco9
-48-8

8602Bco9
-48-8

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	DATE	QTY	X	HRS	EQUIP	QTY	X	HRS	NOTES
			DESC	OCRR	TYPE	F	HRS	CD/LVL	WCDDATE				CODE				
	60	MATPSS	ASSY	1-0	P			8602Bco9 -MG-8		1		0.1	L-1	1		0.1	
	60	MATPSS	ASSY		P								L-2	1		0.1	
65	MATPSS	ASSY	1.00	T													
65	MATPSS	ASSY	1.0	P				5602Bco9 -MG-8		1		0.3	L-1	1		0.3	
65	MATPSS	ASSY	1.0	P									L-2	1		0.3	
70	MATPSS	ASSY	1.00	T													
70	MATPSS	ASSY	1.0	P				Y602Bco9 -MG-8		1		0.2	L-1	1		0.2	
70	MATPSS	ASSY	1.0	P									L-2	1		0.2	
75	MATPSS	ASSY	0.80	T													
75	MATPSS	ASSY	1.0	P				Y602Bco9 -MG-8		1		0.1	L-1	1		0.1	
75	MATPSS	ASSY	1.0	P									L-1	1		0.1	

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD TAI44R WCD DATE 86252

OPER NUMB RCG OPER HIST MAND OPER MAND SKILL EQUIP CODE
DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

75 MATPSS ASSY . . . P L-2 . . . 1 . . . 0.1

~~80 MATPSS ASSY 1.00 . . . T~~

~~80 MATPSS ASSY~~

80 MATPSS ASSY . . . P L-1 . . . 1 . . . 0.1
8602Bco9
W-0

80 MATPSS ASSY . . . P L-2 . . . 1 . . . 0.1

~~85 MATPSS ASSY 0.94 . . . T~~

~~85 MATPSS ASSY~~

80 MATPSS ASSY . . . P L-1 . . . 1 . . . 0.5
8602Bco9
W-0

80 MATPSS ASSY . . . P L-2 . . . 1 . . . 0.5

80 MATPSS ASSY . . . P L-82 . . . 1 . . . 0.3

~~85 MATPSS ASSY 0.97 . . . T~~

~~85 MATPSS ASSY~~

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	WCD	TAI	DATE	WCD	DATE	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	97		MATPSS	ASSY		P										1		0.4	L-55					
	97		MATPSS	ASSY		P										1		0.4	L-77					
	98		MATPSS	ASSY		T																		
	98		MATPSS	ASSY		S																		
	98		MATPSS	ASSY	1.0	P										1		0.2	L-1					0.2
	98		MATPSS	ASSY		P													L-2					0.2
	100		MATPSS	ASSY		T																		
	100		MATPSS	ASSY		S																		
	100		MATPSS	ASSY	1.0	P										1		0.3	L-1					0.3
	100		MATPSS	ASSY		P													L-86					0.3
	100		MATPSS	ASSY		P										1		0.3	L-2					0.3
	110		MATPSS	ASSY		T																		
	110		MATPSS	ASSY		S																		
	110		MATPSS	ASSY	1.0	P										1		0.1						

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OPERATION PROFILE SAS

SHEET ___ OF ___

RCC MATPSS

DATE

ALC SA

WCD TA144R

WCDDATE 86252

ITEM CD PCN 08007A

OPER DESC HIST MAND OPER MAND SKILL EQUIP CODE
NUMB RCC OCCR TYPE F HRS CD/LVL QTY X HRS

NOTES
Routed by mechanics?

115 MATPSS ASSY 0.95 1.0 T - .8602Bc05 1 . 0.2

120 MATPSS ASSY 1.0 T .8602Bc05 1 0.0

*OPERATION 121 add TO THIS
FINAL ASSEMBLY WCD,
IT WAS ON THE TEST WCD*

121 MATPSS ASSY 1.0 P .8602Bc05 1 0.1 L-42 1 0.1

125 MATPSS ASSY 1.0 P .8602Bc05 1 0.5 L-1 1 0.5

125 MATPSS ASSY . P .8602Bc05 1 0.5 L-2 1 0.5

126 MATPSS INFO 1.0 P .8602Bc05 1

127 MATPSS ASSY 1.0 P .8602Bc05 1 0.4 L-1 1 0.4

127 MATPSS ASSY 1.0 P .8602Bc05 1 0.4 L-2 1 0.4

130 MATPSS ASSY 1.0 P .8602Bc05 1 3.5 L-1 1 1.8

130 MATPSS ASSY . P .8602Bc05 1 1.8 L-2 1 1.8

135 MATPSS MOVE 0.99 1.0 T .8602Bc05 1 0.3

~~135 MATPSS MOVE~~

INFORMATION

*Routed by mechanics?
Should be routed by
transportation!*

FLOW PROCESS CHART

SUBJECT CENTRAL GEAR BOX ASSEMBLY (FINAL)

DATE 5/22/89

ITEM CODE
PCN 08007A
NSM
PM

WCD TA144R

WCD DATE 86752

CHART BEGINS OPERATION 005

CHART ENDS OPERATION 145

PREPARED BY K. ATTARIA

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
5	5	⊙⊙D□▽	ASSEMBLY	135	135	○⊙D□▽	ROUTE TO PART
10	10	⊙⊙D□▽	"	140	140	●⊙D□▽	PAINT B/S
15	15	⊙⊙D□▽	"	145	145	●⊙D□▽	CER
20	20	⊙⊙D□▽	"			○⊙D□▽	
25	25	⊙⊙D□▽	"			○⊙D□▽	
30	30	⊙⊙D□▽	"			○⊙D□▽	
35	35	⊙⊙D□▽	"			○⊙D□▽	
40	40	⊙⊙D□▽	"			○⊙D□▽	
42	42	⊙⊙D□▽	"			○⊙D□▽	
45	45	⊙⊙D□▽	"			○⊙D□▽	
50	50	⊙⊙D□▽	"			○⊙D□▽	
55	55	⊙⊙D□▽	"			○⊙D□▽	
60	60	⊙⊙D□▽	"			○⊙D□▽	
65	65	⊙⊙D□▽	"			○⊙D□▽	
70	70	⊙⊙D□▽	"			○⊙D□▽	
75	75	⊙⊙D□▽	"			○⊙D□▽	
80	80	⊙⊙D□▽	"			○⊙D□▽	
90	90	⊙⊙D□▽	"			○⊙D□▽	
95	95	⊙⊙D□▽	"			○⊙D□▽	
96	96	⊙⊙D□▽	"			○⊙D□▽	
97	97	⊙⊙D□▽	"			○⊙D□▽	
98	98	⊙⊙D□▽	"			○⊙D□▽	
100	100	⊙⊙D□▽	"			○⊙D□▽	
110	110	⊙⊙D□▽	"			○⊙D□▽	
115	115	○⊙D□▽	ROUTE TO TEST			○⊙D□▽	
116	--	●⊙D□▽	TEST			○⊙D□▽	
120	120	○⊙D□▽	ROUTE TO ASS.			○⊙D□▽	
121	-	⊙⊙D□▽	ASSEMBLY			○⊙D□▽	
125	125	⊙⊙D□▽	"			○⊙D□▽	
126	-	●⊙D□▽	INFO			○⊙D□▽	
127	-	●⊙D□▽	ASSEMBLY			○⊙D□▽	
130	130	⊙⊙D□▽	"			○⊙D□▽	

○ OPERATION ▽ STORAGE □ INSPECTION
 ⊙ TRANSPORTATION D DELAY

VISUAL INSPECTION

8:18 TUESDAY, MARCH 28, 1989 235

SHEET 1 OF 1

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 08007A WCD TA500R WCDDATE 88257

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP QTY X HRS QTY X HRS QTY X HRS

DESC OCCR TYPE F HRS CD/LVL CD/LVL CODE

~~10 MATPSI~~ . . . ~~T~~

~~10 MATPSS~~ . . . ~~S~~

10 MATPSI . . . 1.0 P 3.0 . . . 2.85

20 MATPSI . . . 1.0 T 0.1 . . . 0.1

~~10 MATPSS~~ . . . ~~S~~

~~20 MATPSS~~ . . . ~~T~~

~~30 MATPSS~~ . . . ~~S~~

30 MATPSS INSP . . . 1.0 P . . . 8602B004 . . . 0.07

~~30 MATPSS~~ . . . ~~T~~

~~30 MATPSS~~ . . . ~~S~~

33 MATPSS INSP . . . 1.0 P . . . 8602B004 . . . 0.07

~~30 MATPSS~~ . . . ~~T~~

1.1
SORT PARTS

P/E

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08007A WCD TA500R WCDDATE 88257
 OPER NUMB RCC OPER DESC HIST MAND OPER MAND SKILL EQUIP
 OCCR TYPE F HRS CD/LVL QTY % HRS OCCR TYPE F HRS CD/LVL QTY % HRS

OPER NUMB	RCC	OPER DESC	HIST OCCR TYPE	F	HRS	CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
37	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
37	MATPSS	INSP	.	1.0	P	.	1	.	0.07	0.1	.	.	.	
										8602Bco9				
										WG-8				
40	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
40	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
40	MATPSS	INSP	.	1.0	P	.	1	.	0.07	0.1	.	.	.	
										8602Bco9				
										WG-8				
50	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
50	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
50	MATPSS	INSP	.	1.0	P	.	1	.	0.07	0.1	.	.	.	
										8602Bco9				
										WG-8				
60	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	INSP	.	1.0	P	.	1	.	0.07	0.1	.	.	.	
										8602Bco9				
										WG-8				
65	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.

12
3
110

SAS OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD TAS00R WCDDATE 88257

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS CODE QTY % HRS NOTES

95 MATPSS INSP . 1.0 P . ~~1.0~~ ^{8602Bc09} 1 . ~~0.07~~ ^{0.07}

~~100 MATPSS INSP~~

~~100 MATPSS INSP~~

100 MATPSS INSP . 1.0 P . ~~1.0~~ ^{8602Bc09} 1 . ~~0.07~~ ^{0.07}

~~110 MATPSS INSP~~

~~110 MATPSS INSP~~

110 MATPSS INSP . 1.0 P . ~~1.0~~ ^{8602Bc09} 1 . ~~0.07~~ ^{0.07}

~~115 MATPSS INSP~~

~~115 MATPSS INSP~~

115 MATPSS INSP . 1.0 P . ~~1.0~~ ^{8602Bc09} 1 . ~~0.07~~ ^{0.07}

~~120 MATPSS INSP~~

~~120 MATPSS INSP~~

SAS

OPERATION PROFILE

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 08007A WCD TA500R WCDDATE 88257

OPER NMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE NOTES

OPER NMB	RCC	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	QTY	%	HRS	CODE	NOTES
160	MATPSS	INSP											
160	MATPSS	INSP											
160	MATPSS	INSP			1.0	P			1		0.07		
											0.07		
170	MATPSS	INSP											
170	MATPSS	INSP											
170	MATPSS	INSP			1.0	P			1		0.07		
											0.07		
180	MATPSS	INSP											
180	MATPSS	INSP											
180	MATPSS	INSP			1.0	P			1		0.07		
											0.07		
190	MATPSS	INSP											
190	MATPSS	INSP											
190	MATPSS	INSP			1.0	P			1		0.07		
											0.07		
200	MATPSS	INSP											
200	MATPSS	INSP											
200	MATPSS	INSP			1.0	P			1		0.07		
											0.07		

8/02 Bco9
 8/02 Bco9
 8/02 Bco9
 8/02 Bco9

SAS

OPERATION PROFILE

SHEET ___ OF ___

NAME	ITEM CD	PKC	ALC	SA	WCD	TA500R	MAND	OPER	HIST	MAND	SKILL	DATE	WCD	DATE	88257	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	230	MATPSS	INSP																					
	230	MATPSS	INSP														1		0.07					
	240	MATPSS	INSP																					
	240	MATPSS	INSP														1		0.07					
	250	MATPSS	INSP																					
	250	MATPSS	INSP														1		0.07					
	260	MATPSS	INSP																					
	260	MATPSS	INSP														1		0.07					
	270	MATPSS	INSP																					
	270	MATPSS	INSP														1		0.07					

SAS OPERATION PROFILE

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____ WCD TA500R WCDDATE 88257 RCC MATPSS _____

ITEM CD PCN 08007A OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS % HRS

270 MATPSS INSP . . . S 8602Bc09 1 0.07

280 MATPSS INSP . . . T 8602Bc09 1 0.07

280 MATPSS INSP . . . S 8602Bc09 1 0.07

290 MATPSS INSP . . . P 8602Bc09 1 0.07

290 MATPSS INSP . . . T 8602Bc09 1 0.07

290 MATPSS INSP . . . S 8602Bc09 1 0.07

300 MATPSS INSP . . . P 8602Bc09 1 0.07

300 MATPSS INSP . . . T 8602Bc09 1 0.07

300 MATPSS INSP . . . S 8602Bc09 1 0.07

310 MATPSS INSP . . . P 8602Bc09 1 0.07

310 MATPSS INSP . . . T 8602Bc09 1 0.07

310 MATPSS INSP . . . S 8602Bc09 1 0.07

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 08007A WCD T4500R WCD DATE 88257

OPER NUMB RCC OPER HIST MAND OCCR TYPE F HRS CD/LVL SKILL QTY % HRS EQUIP CODE QTY % HRS NOTES

310 MATPSS INSP . 1.0 P . 8602Bc09 1 . 0.07
~~WG-9~~ -0.1

~~320 MATPSS INSP . . T~~

~~320 MATPSS INSP . . S~~

320 MATPSS INSP . 1.0 P . 8602Bc09 1 . 0.14
~~WG-9~~ -0.1

~~330 MATPSS INSP . . T~~

~~330 MATPSS INSP . . S~~

330 MATPSS INSP . 1.0 P . 8602Bc09 1 . 0.14
~~WG-9~~ -0.1

~~340 MATPSS INSP . . T~~

~~340 MATPSS INSP . . S~~

340 MATPSS INSP . 1.0 P . 8602Bc09 1 . 0.28
~~WG-9~~ -0.1

~~350 MATPSS INSP . . T~~

~~350 MATPSS INSP . . S~~

SAS

OPERATION PROFILE

SHEET ___ OF ___

RCC MATPSS

QTY % HRS

DATE

ALC SA

WCD TA500R

WCDDATE 88257

ITEM CD PCN 08007A

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

350 MATPSS INSP . 1.0 P 86028c09 1 . 0.14 0.1

~~360 MATPSS INSP T~~

~~360 MATPSS INSP S~~

360 MATPSS INSP . 1.0 P 86028c09 1 . 0.28 0.2

~~370 MATPSS INSP T~~

~~370 MATPSS INSP S~~

370 MATPSS INSP . 1.0 P 86028c09 1 . 0.14 0.1

~~380 MATPSS INSP T~~

~~380 MATPSS INSP S~~

380 MATPSS INSP . 1.0 P 86028c09 1 . 0.07 0.1

~~385 MATPSS INSP T~~

~~385 MATPSS INSP S~~

385 MATPSS INSP . 1.0 P 86028c09 1 . 0.07 0.1

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD ~~CON~~ 08007A WCD T4500R WCDDATE 88257

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE
 OCCR OCCR TYPE F HRS CD/LVL QTY % HRC QTY % HRS NOTES

460	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
460	MATPSS	INSP	.	1.0	P	.	.	1	.	0.17	.	.	.	.	.	.	.	.	.	.
470	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
470	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
470	MATPSS	INSP	.	1.0	P	.	.	1	.	0.07	.	.	.	.	.	.	.	.	.	.
480	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
480	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
480	MATPSS	INSP	.	1.0	P	.	.	1	.	0.07	.	.	.	.	.	.	.	.	.	.
490	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
490	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
490	MATPSS	INSP	.	1.0	P	.	.	1	.	0.07	.	.	.	.	.	.	.	.	.	.
500	MATPSS	INSP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

150
1.01

SAS

SHEET ___ OF ___

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 08007A WCD TA500R WCDDATE 88257

OPER NUMB RCC OPER MAND OCCR TYPE F HRS CD/LVL SKILL QTY % HRS EQJIP OCCUR

540 MATPSS INSP . . . 1.0 P . . . ~~WG-8~~ 5602B009 1 . . . 0.07

~~550 MATPSS INSP . . . T . . .~~

~~550 MATPSS INSR . . . S . . .~~

550 MATPSS INSP . . . 1.0 P . . . 5602B009 1 . . . 0.07

~~WG-8~~

FLOW PROCESS CHART

SUBJECT CENTRAL GEAR BOX PARTS VISUAL INSPECTION DATE 5/23/89

ITEM CODE
PCN 08007A
NSN
PIN

WCD TA5CDR

WCD DATE 88257

CHART BEGINS OPERATION 010 SORT PARTS FOR VISUAL INSPECTION MATPSI

CHART ENDS OPERATION 550 VISUAL INSPECTION PREPARED BY K. ATTARIA

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
10	10	⊕○○□▽	SORT PARTS B/S	260	260	○○○□▽	INSPECTION
20	20	○○○□▽	ROUTE TO PARTS ROOM	270	270	○○○□▽	"
30	30	○○○□▽	INSPECTION	280	280	○○○□▽	"
33	33	○○○□▽	"	290	290	○○○□▽	"
37	37	○○○□▽	"	300	300	○○○□▽	"
40	40	○○○□▽	"	310	310	○○○□▽	"
50	50	○○○□▽	"	320	320	○○○□▽	"
60	60	○○○□▽	"	330	330	○○○□▽	"
65	65	○○○□▽	"	340	340	○○○□▽	"
70	70	○○○□▽	"	350	350	○○○□▽	"
80	80	○○○□▽	"	360	360	○○○□▽	"
90	90	○○○□▽	"	370	370	○○○□▽	"
95	95	○○○□▽	"	380	380	○○○□▽	"
100	100	○○○□▽	"	385	385	○○○□▽	"
110	110	○○○□▽	"	390	390	○○○□▽	"
115	115	○○○□▽	"	400	400	○○○□▽	"
120	120	○○○□▽	"	405	405	○○○□▽	"
125	125	○○○□▽	"	410	410	○○○□▽	"
130	130	○○○□▽	"	420	420	○○○□▽	"
140	140	○○○□▽	"	430	430	○○○□▽	"
150	150	○○○□▽	"	440	440	○○○□▽	"
160	160	○○○□▽	"	450	450	○○○□▽	"
170	170	○○○□▽	"	460	460	○○○□▽	"
180	180	○○○□▽	"	470	470	○○○□▽	"
190	190	○○○□▽	"	480	480	○○○□▽	"
200	200	○○○□▽	"	500	500	○○○□▽	"
210	210	○○○□▽	"	510	510	○○○□▽	"
220	220	○○○□▽	"	520	520	○○○□▽	"
225	225	○○○□▽	"	530	530	○○○□▽	"
230	250	○○○□▽	"	540	540	○○○□▽	"
240	250	○○○□▽	"	550	550	○○○□▽	"
250	250	○○○□▽	"			○○○□▽	"

○ OPERATION ▽ STORAGE □ INSPECTION
◊ TRANSPORTATION D DELAY

LSC-20147

NABL:10ULR
PCNE: 12712A

ALC: SA

KCC:MATPSS

MJD: 1A001L WEDDATE:88258

OF	H	RCC	UP	DESC	FAC	UUU	UP	UP	UP	FLW	SKUL	QTY	TIME	RED	EQUIP	WEDDATE	TIME	RED
							TYPE	%		HRS	CODE		%	HRS	CODE		%	HRS
1		MATPSS	KTE	1.00	F							1		0.05				
5		MATPSS	KTE	1.00	F				0.50		8602RE09	1		0.05				
10		MATPSS	INFO	1.00	P						8602RE09	1		0.05				
15		MATPSS	INFO	1.00	P						8602RE09	1		0.05				
20		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
30		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
40		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
50		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
60		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
70		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
80		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
90		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
100		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
110		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
120		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
130		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
140		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
150		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
160		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
170		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
180		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
190		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
200		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
210		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
220		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
230		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
240		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
250		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
260		MATPSS	VIS	1.00	P						8602RE09	1		0.05				
270		MATPSS	VIS	1.00	P						8602RE09	1		0.05				

Flight Deck
#16

2File

NAME: HOLM
PCN: 12712A

ALC: SA RCC: MATPSS

WCD: TA001L WCDDATE: 88258

OP #	RCC	OP #	DESC	FAC	OCCU	OP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	EQUIP CODE	QTY	TIME %	REQ HRS	REQ HRS
1	MATPSI		RTE		1.00	P				1					0.05	
3	MATPSI		RTE		1.00	P		0.50		1					0.05	
5	MATPSS		INFO		1.00	P			8602BE09	1						
10	MATPSS		INFO		1.00	P			8602BE09	1						
15	MATPSS		VIS		1.00	P			8602BE09	1					0.05	
20	MATPSS		VIS		1.00	P			8602BE09	1					0.08	
30	MATPSS		VIS		1.00	P			8602BE09	1					0.13	
40	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
50	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
60	MATPSS		VIS		1.00	P			8602BE09	1					0.05	
70	MATPSS		VIS		1.00	P			8602BE09	1					0.08	
80	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
90	MATPSS		VIS		1.00	P			8602BE09	1					0.07	
100	MATPSS		VIS		1.00	P			8602BE09	1					0.17	
110	MATPSS		VIS		1.00	P			8602BE09	1					0.25	
120	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
130	MATPSS		VIS		1.00	P			8602BE09	1					0.07	
140	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
150	MATPSS		VIS		1.00	P			8602BE09	1					0.07	
160	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
170	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
180	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
190	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
200	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
210	MATPSS		VIS		1.00	P			8602BE09	1					0.08	
220	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
230	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
240	MATPSS		VIS		1.00	P			8602BE09	1					0.03	
250	MATPSS		VIS		1.00	P			8602BE09	1					0.08	
260	MATPSS		VIS		1.00	P			8602BE09	1					0.13	
270	MATPSS		VIS		1.00	P			8602BE09	1					0.12	

SUBJECT F16 ADG VISUAL INSPECTS

FLOW PROCESS CHART

DATE 5-23-89

ITEM CODE

PCN
NSM
P/N

WCD TA001L WCD DATE 88258

12712A

CHART BEGINS 1

CHART ENDS 270

PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
1	1	O●D□▽	Route			O●D□▽	
3	3	O●D□▽	Route			O●D□▽	
5	5	●DD□▽	INFO			O●D□▽	
10	10	●DD□▽	INFO			O●D□▽	
15	15	O●D■▽	VISUAL			O●D□▽	
20	20	O●D■▽	VISUAL			O●D□▽	
30	30	O●D■▽	VISUAL			O●D□▽	
40	40	O●D■▽	VISUAL			O●D□▽	
50	50	O●D■▽	VISUAL			O●D□▽	
60	60	O●D■▽	VISUAL			O●D□▽	
70	70	O●D■▽	VISUAL			O●D□▽	
80	80	O●D■▽	VISUAL			O●D□▽	
90	90	O●D■▽	VISUAL			O●D□▽	
100	100	O●D■▽	VISUAL			O●D□▽	
110	110	O●D■▽	VISUAL			O●D□▽	
120	120	O●D■▽	VISUAL			O●D□▽	
130	130	O●D■▽	VISUAL			O●D□▽	
140	140	O●D■▽	VISUAL			O●D□▽	
150	150	O●D■▽	VISUAL			O●D□▽	
160	160	O●D■▽	VISUAL			O●D□▽	
170	170	O●D■▽	VISUAL			O●D□▽	
180	180	O●D■▽	VISUAL			O●D□▽	
190	190	O●D■▽	VISUAL			O●D□▽	
200	200	O●D■▽	VISUAL			O●D□▽	
210	210	O●D■▽	VISUAL			O●D□▽	
220	220	O●D■▽	VISUAL			O●D□▽	
230	230	O●D■▽	VISUAL			O●D□▽	
240	240	O●D■▽	VISUAL			O●D□▽	
250	250	O●D■▽	VISUAL			O●D□▽	
260	260	O●D■▽	VISUAL			O●D□▽	
270	270	O●D■▽	VISUAL			O●D□▽	
		O●D■▽				O●D□▽	

○ OPERATION

◇ TRANSPORTATION

▽ STORAGE

D DELAY

□ INSPECTION

INDOENCIO SANCHEZ - MECHANIC

ADIS ASSY. (ACCESSORY DRIVE GEAR BOX)

8:18 TUESDAY, MARCH 28, 1989 301
APR

SHEET 1 OF 4

SAS

OPERATION PROFILE

NAME BILL MORGAN
ITEM CD PCN 12712A
WCD TA997L WCD DATE 4-17-89 WCD DATE 88028

OPER NUB RCC OPER HIST MAND OPER MAND SKILL EQUIP
DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

1 MATPSS ASSY 1.0 T 8602BLO9 1 .1
1 MATPSS ASSY 1.0 S 8602BLO9 1 .2

1 MATPSS ASSY 1.0 P 8602BLO9 1 .1

~~5 MATPSS ASSY 1.00 T~~

~~5 MATPSS ASSY~~

5 MATPSS ASSY 1.0 P 8602BLO9 1 0.3 J-57 0.3

~~10 MATPSS ASSY 1.00 T~~

~~10 MATPSS ASSY~~

10 MATPSS ASSY 1.0 P 8602BLO9 1 1.1 J-56 1.1 0.3

10 MATPSS ASSY . P J-15 1.1 0.3

10 MATPSS ASSY P X-1 1 .8

10 MATPSS ASSY . P J-58 1 0.3

10 MATPSS ASSY P X-3 1 .3

10 MATPSS ASSY . P J-59 1 0.3

~~15 MATPSS ASSY 1.00 T~~

OPERATION PROFILE SAS

SHEET 2 OF

RCC MATPSS

QTY % HRS

DATE

WCD TA997L WCDDATE 88026

ITEM CD PCN 12712A

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

15 MATPSS ASSY 1.0 J-60 1 0.5

15 MATPSS ASSY 1.0 J-60 1 0.5

15 MATPSS ASSY 1.0 J-60 1 0.5

15 MATPSS ASSY 1.0 J-60 1 0.5

15 MATPSS ASSY 1.0 J-60 1 0.5

15 MATPSS ASSY 1.0 J-60 1 0.5

20 MATPSS ASSY 1.0 J-60 1 0.5

20 MATPSS ASSY 1.0 J-60 1 0.5

20 MATPSS ASSY 1.0 J-60 1 0.5

20 MATPSS ASSY 1.0 J-60 1 0.5

20 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

25 MATPSS ASSY 1.0 J-60 1 0.5

8602BC09

8602BC09

8602BC09

J-65

J-65

SAS

OPERATION PROFILE

SHEET 3 OF

ITEM CD	PCN	12712A	OPER	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
30	MATPSS	ASSY	1.00	T														
30	MATPSS	ASSY	S															
30	MATPSS	ASSY	1.0 P							1	0.5	J-68			1	0.5	0.5	
30	MATPSS	ASSY	P							1		J-67			1		0.5	
35	MATPSS	ASSY	1.00	T														
35	MATPSS	ASSY	S															
35	MATPSS	ASSY	1.0 P							1	1.5	J-68			1		0.7	
35	MATPSS	ASSY	P							1		J-56			1		0.7	
35	MATPSS	ASSY	P							1		X-1			1		.8	
35	MATPSS	ASSY	P							1		J-70			1		.6	
35	MATPSS	ASSY	P							1		X-3			1		.3	
35	MATPSS	ASSY	P							1		J-69			1		0.7	
40	MATPSS	ASSY	1.00	T														
40	MATPSS	ASSY	S															
40	MATPSS	ASSY	1.0 P							1	1.3	X-1			1		.8	
40	MATPSS	ASSY	P							1		X-3			1		.5	

SAS

OPERATION PROFILE

SHEET 5 OF

NAME _____

ALC SA _____

DATE _____

WCD TA997L

WCD DATE 88026

ITEM CD PCN 12712A

OPER MAND OPER MAND SKILL

NUMB RCC OCCR UCCR TYPE F HRS CO/LVL QTV % HRS EQUIP CODE

60 MATPSS ASSY 1.0 P 1 0.6

WG-8
8602BC09

~~62 MATPSS ASSY 1.0 P~~

~~62 MATPSS ASSY~~

62 MATPSS ASSY 1.0 P 1 0.5

WG-8
8602BC09

~~63 MATPSS ASSY 1.00~~

~~63 MATPSS ASSY~~

65 MATPSS ASSY 1.0 P 1 0.5

WG-8
8602BC09

~~70 MATPSS ASSY 1.00~~

~~70 MATPSS ASSY~~

70 MATPSS ASSY 1.0 P 1 0.5

WG-8
8602BC09

70 MATPSS ASSY . . . P 1 0.5

70 MATPSS ASSY . . . P 1 0.5

~~75 MATPSS ASSY 1.00~~

SAS

OPERATION PROFILE

SHEET 6 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA97L WCD DATE 88026

OPER NMBR RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS CODE NOTES

~~75 MATPSS ASSY~~
 75 MATPSS ASSY 1.0 P ~~1.0~~ ~~1.0~~ J-77 1 0.5
 8602BC09

~~80 MATPSS ASSY 1.00~~
~~80 MATPSS ASSY~~

80 MATPSS ASSY 1.0 P 8602BC09 1.0 J-78 1 0.5
 80 MATPSS ASSY P J-79 0.5

80 MATPSS ASSY P 1.0 J-80 1 0.5
 80 MATPSS ASSY P J-81 1 0.5

~~85 MATPSS ASSY 1.00~~
~~85 MATPSS ASSY~~

85 MATPSS ASSY 1.0 P 8602BC09 1.0 J-82 1 0.3
 85 MATPSS ASSY P J-25 1 0.3

SAS

SHEET 7 OF

OPERATION PROFILE

NAME	ITEM CD	PCN	12712A	OPER	HIST	MAND	OPER	MAND	SKILL	DATE	QTY	%	HRS	EQUIP	QTY	%	HRS	NOTES
				DESC	OCCR	TYPE	F	HRS	CD/LVL	WCD	DATE			CORE				
85	MATPSS	ASSY				P				8600 BCO9	1		4.5	J-84	1		0.5	
90	MATPSS	ASSY				P								J-85	1		0.5	
90	MATPSS	ASSY				P								J-29	1		0.5	
90	MATPSS	ASSY				P								J-72	1		0.5	
90	MATPSS	ASSY				P								J-86	1		0.5	
90	MATPSS	ASSY				P								J-38	1		0.5	
90	MATPSS	ASSY				P								J-24	1		0.5	
90	MATPSS	ASSY				P								J-87	1		0.5	
90	MATPSS	ASSY				P								J-97	1		1.0	

~~90 MATPSS ASSY 1.00~~

~~90 MATPSS ASSY 1.00~~

90 MATPSS ASSY 1.00 P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

90 MATPSS ASSY P

~~90 MATPSS ASSY 1.00~~

01214510

OPERATION PROFILE SAS

SHEET 8 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE NOTES

90	MATPSS	ASSY	1.0	P	 	 	 	 	 	 	 	
95	MATPSS	ASSY	1.0	P	8602BC09	1	0.7	J-23	1	0.7		
95	MATPSS	ASSY	1.0	P				J-39	1	0.7		

~~100 MATPSS ASSY 1.00 P~~

~~100 MATPSS ASSY 1.00 P~~

100	MATPSS	ASSY	1.0	P	8602BC09	1	0.7	J-23	1	0.7		
100	MATPSS	ASSY	1.0	P				J-39	1	0.7		
100	MATPSS	ASSY	1.0	P				J-88	1	0.4		

~~105 MATPSS ASSY 1.00 P~~

~~105 MATPSS ASSY 1.00 P~~

105	MATPSS	ASSY	1.0	P	8602BC09	1	0.5	J-23	1	0.5		
105	MATPSS	ASSY	1.0	P				J-39	1	0.5		

SAS

OPERATION PROFILE

SHEET 9 OF

RCC MATPSS

DATE

ALC SA

NAME

ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB	RCC	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
105	MATPSS	ASSY		P							J-88	1		0.5	
110	MATPSS	ASSY	1.00	P											
110	MATPSS	ASSY	1.00	P											
110	MATPSS	ASSY	1.0	P				1	0.4		J-23	1		0.4	
110	MATPSS	ASSY		P							J-39	1		0.4	
110	MATPSS	ASSY		P							J-57	1		0.4	
113	MATPSS	ASSY	1.00	P											
113	MATPSS	ASSY	1.00	P											
115	MATPSS	ASSY	1.0	P				1	0.7		J-23	1		0.7	
115	MATPSS	ASSY		P							J-39	1		0.7	
120	MATPSS	ASSY	1.00	P											
120	MATPSS	ASSY	1.00	P											
120	MATPSS	ASSY	1.0	P				1	0.7		J-23	1		0.7	

~~308-8~~
8602BC09

~~308-8~~
8602BC09

~~308-8~~
8602BC09

OPERATION PROFILE SAS

SHEET 10 OF

NAME	ITEM CD	PCN	12712A	WCD	TA997L	WCDDATE	88026	ALC	SA	DATE	SAS	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	%	HRS	NOTES
NUMB	RCC	...	DESC	OCGR	TYPE	F	HRS	CD/LVL	QTY	%	HRS												
120	MATPSS	ASSY		P														J-39		1		0.7	
120	MATPSS	ASSY		P														J-88		1		0.3	
125	MATPSS	ASSY	1.00	P																			
125	MATPSS	ASSY	1.00	P																			
125	MATPSS	ASSY	1.0 P						1		0.3							J-23		1		0.3	
125	MATPSS	ASSY		P														J-39		1		0.3	
125	MATPSS	ASSY		P														J-89		1		0.3	
130	MATPSS	ASSY	1.00	P																			
130	MATPSS	ASSY	1.00	P																			
130	MATPSS	ASSY	1.0 P						1		0.3							J-23		1		0.3	
130	MATPSS	ASSY		P														J-39		1		0.3	
130	MATPSS	ASSY	1.00	P																			

8602BC09

8602BC09

SAS

OPERATION PROFILE

SHEET 11 OF

NAME	ITEM CD	PCN	12712A	WCD	TA997L	WCDDATE	88026	ALC	SA	DATE	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES	
135	MATPSS	ASSY																		
135	MATPSS	ASSY									1	0.3	J-90			1	0.3			
135	MATPSS	ASSY														1				
135	MATPSS	ASSY														1	0.3			
135	MATPSS	ASSY														1				
135	MATPSS	ASSY														1	0.3			
135	MATPSS	ASSY														1	0.3			

140	MATPSS	ASSY																		
140	MATPSS	ASSY																		
140	MATPSS	ASSY									1	0.3	J-23			1	0.3			
140	MATPSS	ASSY														1	0.3			
145	MATPSS	ASSY																		
145	MATPSS	ASSY																		
145	MATPSS	ASSY									1	0.3	J-23			1	0.3			
145	MATPSS	ASSY														1	0.3			

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA897L WCDDATE 88028

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE NOTES

~~165 MATPSS ASSY 1.00 P~~

~~165 MATPSS ASSY~~

165 MATPSS ASSY . 1.0 P . ^{WGS} 1 . 0.3 J-23 . 1 . 0.3
8602B C09

165 MATPSS ASSY . . P . . . J-39 . 1 . 0.3

~~170 MATPSS ASSY 1.00 P~~

~~170 MATPSS ASSY~~

170 MATPSS ASSY . 1.0 P . ^{WGS} 1 . 0.3 J-23 . 1 . 0.3
8602B C09

170 MATPSS ASSY . . P . . . J-39 . 1 . 0.3

~~175 MATPSS ASSY 1.00 P~~

~~175 MATPSS ASSY~~

175 MATPSS ASSY . 1.0 P . ^{WGS} 1 . 0.3 J-23 . 1 . 0.3
8602B C09

175 MATPSS ASSY . . P . . . J-39 . 1 . 0.3

~~165 MATPSS ASSY 1.00 P~~

OPERATION PROFILE SAS

NAME ALC SA DATE RCC MATPSS

ITEM CD PCN 12712A WCD TA997L WCD DATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS CODE QTY % HRS NOTES

~~180 MATPSS ASSY~~

180 MATPSS ASSY . 1.0 P . ~~WG-9~~ 0.1 J-23 1 . 0.1
 86028C09

~~185 MATPSS ASSY~~

~~188 MATPSS ASSY~~

185 MATPSS ASSY . 1.0 P . ~~WG-9~~ 0.1 J-23 1 . 0.1
 86028C09

~~190 MATPSS ASSY~~

~~190 MATPSS ASSY~~

190 MATPSS ASSY . 1.0 P . ~~WG-9~~ 0.2 J-23 1 . 0.2
 86028C09

~~190 MATPSS ASSY~~

~~190 MATPSS ASSY~~

OPERATION PROFILE SAS

OF _____

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS CODE QTY % HRS NOTES

210	MATPSS	ASSY	1.0	P	1	0.2	23	1	0.2	
210	MATPSS	ASSY		P			J-39	1	0.2	

8602BC09

~~215 MATPSS ASSY 1.0 P~~

~~215 MATPSS ASSY~~

215	MATPSS	ASSY	1.0	P	1	0.1	J-23	1	0.1	
215	MATPSS	ASSY		P			J-39	1	0.1	

8602BC09

~~220 MATPSS ASSY 1.0 P~~

~~220 MATPSS ASSY~~

220	MATPSS	ASSY	1.0	P	1	0.1	J-23	1	0.1	
220	MATPSS	ASSY		P			J-39	1	0.1	

8602BC09

~~225 MATPSS ASSY 1.0 P~~

~~225 MATPSS ASSY~~

OPERATION PROFILE

SAS

NAME

ALC SA

DATE

WCD TA997L

WCD DATE 88026

ITEM CD PCN 12712A

OPER NUMB RCC OPER HIST MAND OPER SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

240 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2

~~245 MATPSS ASSY 1.00~~

~~245 MATPSS ASSY~~

245 MATPSS ASSY . . . P J-23 . . . 1 . . . 0.2

245 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2

245 MATPSS ASSY . . . P J-98 . . . 1 . . . 0.2

~~250 MATPSS ASSY 1.00~~

~~250 MATPSS ASSY~~

250 MATPSS ASSY . . . P J-23 . . . 1 . . . 0.2

250 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2

~~255 MATPSS ASSY 1.00~~

~~255 MATPSS ASSY~~

8602BC09

8602BC09

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA997L WCD DATE 88026

OPER NUMB	RCC	HIST OCCR	MAND TYPE	OPER	MAND F	SKILL CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
255	MATPSS	ASSY	1.0	P			1	0.1	J-23	1	0.1	
255	MATPSS	ASSY		P					J-39	1	0.1	

~~260 MATPSS ASSY 1.0 P~~

~~260 MATPSS ASSY 1.0 P~~

260 MATPSS ASSY 1.0 P

260 MATPSS ASSY P

~~265 MATPSS ASSY 1.0 P~~

~~265 MATPSS ASSY 1.0 P~~

265 MATPSS ASSY 1.0 P

265 MATPSS ASSY P

~~265 MATPSS ASSY 1.0 P~~

~~265 MATPSS ASSY 1.0 P~~

~~270 MATPSS ASSY 1.0 P~~

8602BC09

8602BC09

8602BC09

OPERATION PROFILE SAS

SHEET 21 OF

NAME	ALC SA	DATE	RCC MATPSS	NOTES
ITEM CD PCN 12712A	WCD TA97L	WCD DATE 88026		
OPER NUMB	OPER HIST MAND OPER MAND SKILL	CD/LVL	QTY	% HRS
280	MATPSS ASSY	P	1	0.2

~~285 MATPSS ASSY 1.00~~

~~285 MATPSS ASSY~~

285 MATPSS ASSY . 1.0 P . 0.2 J-23 1 . 0.2

285 MATPSS ASSY . P . J-39 1 . 0.2

8602BC09

~~290 MATPSS ASSY 1.00~~

~~290 MATPSS ASSY~~

290 MATPSS ASSY . 1.0 P . 0.1 J-23 1 . 0.1

290 MATPSS ASSY . P . J-39 1 . 0.1

8602BC09

~~295 MATPSS ASSY 1.00~~

~~295 MATPSS ASSY~~

295 MATPSS ASSY . 1.0 P . 0.2 J-23 1 . 0.2

295 MATPSS ASSY . P . J-39 1 . 0.2

8602BC09

OPERATION PROFILE SAS

SHEET 22 OF

NAME	ITEM CD	PCN	ALC SA	DATE	WCD	TA997L	WCDDATE	88026	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	NUMB	RCC	DESC	OC	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS	NOTES	
300	MATPSS	A56X	1.00																												
300	MATPSS	ASSY	6																												
300	MATPSS	ASSY	1.0	P																						1		0.2			
300	MATPSS	ASSY		P																						1		0.2			
305	MATPSS	A56X	1.00																												
305	MATPSS	ASSY	9																												
305	MATPSS	ASSY	1.0	P																						1		0.1			
305	MATPSS	ASSY		P																						1		0.1			
310	MATPSS	A56X	1.00																												
310	MATPSS	ASSY	6																												
310	MATPSS	ASSY	1.0	P																						1		0.7			
310	MATPSS	ASSY		P																						1		0.7			
310	MATPSS	ASSY		P																						1		0.7			

Handwritten notes:
 8602BC09
 J98
 J98

OPERATION PROFILE SAS

NAME _____

DATE _____

ALC SA _____

WCD TA897L

WCDDATE 88028

ITEM CD PCN 12712A

OPER NUMB RCC

OPER HIST MAND OPER MAND

DESC OCCR TYPE F HRS CD/LVL

QTY

% HRS

EQUIP CODE

QTY

% HRS

NOTES

RCC MATPSS

~~300 MATPSS ASSY~~

330 MATPSS ASSY . 1.0 P

~~WCD~~
8602BC09

1 . 0.3 J-23

1 . 0.3

330 MATPSS ASSY . P

1 . J-39

1 . 0.3

~~325 MATPSS ASSY 1.00~~

~~335 MATPSS ASSY~~

335 MATPSS ASSY . 1.0 P

~~WCD~~
8602BC09

1 . 0.3 J-23

1 . 0.3

335 MATPSS ASSY . P

1 . J-39

1 . 0.3

~~340 MATPSS ASSY 1.00~~

~~340 MATPSS ASSY~~

340 MATPSS ASSY . 1.0 P

~~WCD~~
8602BC09

1 . 0.7 J-23

1 . 0.7

340 MATPSS ASSY . P

1 . J-39

1 . 0.7

340 MATPSS ASSY P

J-1D4

1 . 0.7

345 MATPSS ASSY 1.00 . T

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	WCD	TAG	SA	DATE	WCD	DATE	88028	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	QTY	%	HRS	RCC	MATPSS	QTY	%	HRS	NOTES	
	NUMB	RCC	DESC	OC	TYPE	F	HRS	CD/LVL	QTY	%	HRS	CD	LVL	QTY	%	HRS	CODE									
345	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
345	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
345	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
350	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
350	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
350	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
350	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
350	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.3	J-23	1	0.3	1	0.3	J-23	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3
355	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
355	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
355	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
360	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
360	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
360	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2
360	MATPSS	ASSY	1.0	P	1.0	P	1.0	P	1	0.2	J-23	1	0.2	1	0.2	J-23	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2

WCD T897L WCD DATE 88028

ALC SA

OPER HIST MAND OPER MAND SKILL

NUMB RCC DESC OCCR TYPE F HRS CD/LVL QTY % HRS EQUIP CODE

~~345~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~

345 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.3 J-23 1 0.3 1 0.3 J-23 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3

345 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.3 J-23 1 0.3 1 0.3 J-23 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3

~~350~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~

350 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.3 J-23 1 0.3 1 0.3 J-23 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3

~~350~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~J-23~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~ ~~1~~ ~~0.3~~

350 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.3 J-23 1 0.3 1 0.3 J-23 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3 1 0.3

~~355~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~

355 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.2 J-23 1 0.2 1 0.2 J-23 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2

~~355~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~

355 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.2 J-23 1 0.2 1 0.2 J-23 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2

~~360~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~

360 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.2 J-23 1 0.2 1 0.2 J-23 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2

~~360~~ ~~MATPSS~~ ~~ASSY~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1.0~~ ~~P~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~J-23~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~ ~~1~~ ~~0.2~~

360 MATPSS ASSY 1.0 P 1.0 P 1.0 P 1 0.2 J-23 1 0.2 1 0.2 J-23 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2 1 0.2

OPERATION PROFILE SAS

SHEET 28 OF

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB	RCC	OPER DESC	MAND OCCR	TYPE	F	HRS	MAND	SKILL CD/LVL	QTY	X	HRS	EQUIP CODE	QTY	X	HRS	NOTES
390	MATPSS	ASSY			P							J-39	1		0.2	

~~390 MATPSS ASSY 1.00 P~~

~~395 MATPSS ASSY~~

395 MATPSS ASSY . 1.0 P
 MB-9
 8602BCC09

395 MATPSS ASSY . P 0.5 J-23 1 . 0.5

~~400 MATPSS ASSY~~

~~400 MATPSS ASSY~~

400 MATPSS ASSY . 1.0 P
 MB-9
 8602BCC09

400 MATPSS ASSY . P 0.5 J-23 1 . 0.5

~~405 MATPSS ASSY 1.00 P~~

~~405 MATPSS ASSY~~

405 MATPSS ASSY . 1.0 P
 MB-9
 8602BCC09

405 MATPSS ASSY . P 0.5 J-23 1 . 0.5

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SAS _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD T897L WCD DATE 88028

PER UMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE NOTES

05 MATPSS ASSY . . . P 1 . . 0.5

~~410 MATPSS ASSY 1.0 P~~

~~410 MATPSS ASSY 1.0 P~~

410 MATPSS ASSY . 1.0 P 1 . . 0.5
W-8
86028C09

410 MATPSS ASSY . . . P 1 . . 0.5

~~415 MATPSS ASSY 1.0 P~~

~~415 MATPSS ASSY 1.0 P~~

415 MATPSS ASSY . 1.0 P 1 . . 0.3
W-8
86028C09

415 MATPSS ASSY . . . P 1 . . 0.3
 415 MATPSS ASSY . . . P 1 . . 0.3
J-39
J-105

~~420 MATPSS ASSY 1.0 P~~

~~420 MATPSS ASSY 1.0 P~~

420 MATPSS ASSY . 1.0 P 1 . . 0.3
W-8
86028C09

420 MATPSS ASSY . . . P 1 . . 0.3

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA997L WCD DATE 88026

OPER NOMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

~~425 MATPSS ASSY 1.0 P~~

~~425 MATPSS ASSY 1.0 P~~

425 MATPSS ASSY . 1.0 P 0.3 J-23 1 . 0.3

425 MATPSS ASSY . . P J-38 1 . 0.3

~~430 MATPSS ASSY 1.0 P~~

~~430 MATPSS ASSY 1.0 P~~

430 MATPSS ASSY . 1.0 P 0.1 J-23 1 . 0.1

430 MATPSS ASSY . . P J-39 1 . 0.1

~~435 MATPSS ASSY 1.0 P~~

~~435 MATPSS ASSY 1.0 P~~

435 MATPSS ASSY . 1.0 P 0.1 J-23 1 . 0.1

435 MATPSS ASSY . . P J-39 1 . 0.1

WG-9
8602BC09

WG-9
8602BC09

WG-9
8602BC09

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SAS _____

ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CODE

DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

455 ~~MATPSS ASSY~~

455 MATPSS ASSY . 1.0 P . ^{MG-8} 1 . 0.3 J-23 1 . 0.3

8602BC09

455 MATPSS ASSY . . P . . J-39 1 . 0.3

460 ~~MATPSS ASSY~~

460 ~~MATPSS ASSY~~

460 MATPSS ASSY . 1.0 P . ^{MG-8} 1 . 0.2 J-23 1 . 0.2

8602BC09

460 MATPSS ASSY . . P . . J-39 1 . 0.2

J-105

465 ~~MATPSS ASSY~~

465 ~~MATPSS ASSY~~

465 MATPSS ASSY . 1.0 P . ^{MG-8} 1 . 0.2 J-23 1 . 0.2

8602BC09

465 MATPSS ASSY . . P . . J-39 1 . 0.2

470 ~~MATPSS ASSY~~

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA97L WCD DATE 88026

OPER NUMB	RCC	DESC	ASSY	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
500	MATPSS	ASSY			1.0	P				1	0.3	0.3	J-23	1	0.3	0.3	
500	MATPSS	ASSY				P							J-39	1	0.3	0.3	

8602BC09

~~505 MATPSS ASSY 1.00 P~~

~~505 MATPSS ASSY~~

505 MATPSS ASSY 1.0 P

505 MATPSS ASSY P

8602BC09

~~510 MATPSS ASSY 1.00 P~~

~~510 MATPSS ASSY~~

510 MATPSS ASSY 1.0 P

510 MATPSS ASSY P

8602BC09

~~515 MATPSS ASSY 1.00 P~~

~~515 MATPSS ASSY~~

515 MATPSS ASSY 1.0 P

8602BC09

OPERATION PROFILE SAS

SHEET 36 OF

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA997L WCD DATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
DESC OCCR TYPE F HRS CD/LVL QTY X HRS CODE QTY X HRS NOTES

515 MATPSS ASSY . . . P J-1 . . . 1 . . . 0.3

515 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.3

~~520 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.3~~

~~520 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.3~~

520 MATPSS ASSY . . . P J-23 . . . 1 . . . 0.2

520 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2

~~525 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2~~

~~525 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2~~

525 MATPSS ASSY . . . P J-23 . . . 1 . . . 0.2

525 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2

~~530 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2~~

~~590 MATPSS ASSY . . . P J-39 . . . 1 . . . 0.2~~

*WG-8
8602BC09*

*WG-8
8602BC09*

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	ALC SA	WCD	TAB97L	WCD	DATE	DATE	WCD	DATE	88026	OPER	HIST	MAND	OPER	SKILL	CD/LVL	QTY	X	HRS	EQUIP	CODE	QTY	X	HRS	NOTES	
	530	MATPSS	ASSY	1.0	P	WG-9	8602BC09	1	0.2	J-23		1	0.2					1		0.2			1		0.2		
	530	MATPSS	ASSY		P																						
	530	MATPSS	ASSY		P																						
	530	MATPSS	ASSY		P																						
	535	MATPSS	ASSY		P																						
	535	MATPSS	ASSY	1.0	P	WG-9	8602BC09	1	0.2	J-23		1	0.2					1		0.2			1		0.2		
	535	MATPSS	ASSY		P																						
	540	MATPSS	ASSY		P																						
	540	MATPSS	ASSY	1.0	P	WG-9	8602BC09	1	0.2	J-23		1	0.2					1		0.2			1		0.2		
	540	MATPSS	ASSY		P																						
	545	MATPSS	ASSY		P																						
	545	MATPSS	ASSY	1.0	P	WG-9	8602BC09	1	0.1	J-23		1	0.1					1		0.1			1		0.1		

OPERATION PROFILE SAS

SHEET 37 OF

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	545		MATPSS	ASSY		P							J-38		1		0.1	
	550		MATPSS	ASSY	1.00	P												
	550		MATPSS	ASSY	1.00	P												
	550		MATPSS	ASSY	1.0	P				1		0.2	J-23		1		0.2	MG-9 8602BC09
	550		MATPSS	ASSY		P							J-39		1		0.2	
	555		MATPSS	ASSY	1.00	P												
	555		MATPSS	ASSY	1.00	P												
	555		MATPSS	ASSY	1.0	P				1		0.2	J-23		1		0.2	MG-9 8602BC09
	555		MATPSS	ASSY		P							J-39		1		0.2	
	560		MATPSS	ASSY	1.00	P												
	560		MATPSS	ASSY	1.00	P												
	560		MATPSS	ASSY	1.0	P				1		0.2	J-23		1		0.2	MG-9 8602BC09

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	12712A	WCD	TA997L	WCDDATE	88028	DATE	ALC	SA	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	X	HRS	NOTES
560	MATPSS	ASSY																				
565	MATPSS	ASSY	1.00																			
565	MATPSS	ASSY	1.00																			
565	MATPSS	ASSY	1.0 P																1		0.2	
565	MATPSS	ASSY																	1		0.3	
570	MATPSS	ASSY	1.00																			
570	MATPSS	ASSY	1.00																			
570	MATPSS	ASSY	1.0 P																1		0.2	
570	MATPSS	ASSY																	1		0.2	
575	MATPSS	ASSY	1.00																			
575	MATPSS	ASSY	1.00																			
575	MATPSS	ASSY	1.0 P																1		0.2	
575	MATPSS	ASSY																	1		0.2	

MG-8
8602BC09

MG-8
8602BC09

MG-8
8602BC09

SAS

SHEET 41 OF

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 12712A WCD TA997L WCDDATE 88028

OPER NUMB	RCC	OPER DESC	HIST	MAND	OPER TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
580	MATPSS	ASSY	1.00												
580	MATPSS	ASSY													
580	MATPSS	ASSY	1.0 P				WG-8 8602BC09	1		0.1	J-23	1		0.1	
580	MATPSS	ASSY									J-39	1		0.1	
585	MATPSS	ASSY	1.00												
585	MATPSS	ASSY													
585	MATPSS	ASSY	1.0 P				WG-8 86028C09	1		0.1	J-23	1		0.1	
585	MATPSS	ASSY									J-39	1		0.1	
590	MATPSS	ASSY	1.00												
590	MATPSS	ASSY													
590	MATPSS	ASSY	1.0 P				WG-8 86028C09	1		0.1	J-23	1		0.1	
590	MATPSS	ASSY									J-39	1		0.1	

SAS OPERATION PROFILE

SHEET 42 OF

ALC SA _____ DATE _____

ITEM CD PCN 12712A WCD TA997L WCD DATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP QTY X HRS QTY X HRS NOTES

590	MATPSS ASSY	1.0 P	1	0.2	J-39	1	0.2	2
595	MATPSS ASSY	1.0 P	1	0.2	J-23	1	0.2	
595	MATPSS ASSY	P			J-39	1	0.2	

600	MATPSS ASSY	1.0 P	1	0.3	J-39	1	0.3	
600	MATPSS ASSY	1.0 P	1	0.3	J-23	1	0.3	
600	MATPSS ASSY	P			J-39	1	0.3	
600	MATPSS ASSY	P			J-95	1	0.3	

605	MATPSS ASSY	1.0 P	1	0.8	J-39	1	0.5	
605	MATPSS ASSY	1.0 P	1	0.8	J-39	1	0.5	
605	MATPSS ASSY	P			J-23	1	0.5	

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA997L WCDDATE 88026

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS QTY % HRS QTY % HRS NOTES

605 MATPSS ASSY . . P J-96 1 . . 0.5

~~610 MATPSS ASSY 1.0 P~~

~~610 MATPSS ASSY 1.0 P~~

610 MATPSS ASSY . . P J-23 1 . . 0.3

610 MATPSS ASSY . . P J-39 1 . . 0.3

~~615 MATPSS ASSY 1.0 P~~

~~615 MATPSS ASSY 1.0 P~~

615 MATPSS ASSY . . P J-23 1 . . 0.3

615 MATPSS ASSY . . P J-39 1 . . 0.3

~~620 MATPSS ASSY 1.0 P~~

620 MATPSS ASSY . . P J-23 1 . . 1.4

620 MATPSS ASSY . . P J-23 1 . . 1.5

8602BC09

8602BC09

8602BC09

8602BC09

SAS

OPERATION PROFILE

NAME _____

ALC SA _____

DATE _____

RCC MATPSS _____

ITEM CD PCN 12712A

WCD T897L . WCDDATE 88028

OPER NUMB 620
RCC MATPSS ASSY P

HIST MAND OPER
OCCR OCCR TYPE F HRS CD/LVL

SKILL
CD/LVL QTY % HRS

EQUIP
CODE J-39

QTY X HRS
1 ~~1.4~~ ^{1.4}

NOTES

SUBJECT FIG AOC ASSEMBLY (continued) DATE 5-24-89

FLOW PROCESS CHART

ITEM CODE

PCN
 NSN
 P/N

WCD TA997L WCD DATE 88026

17712A

CHART BEGINS 1

CHART ENDS 620

PREPARED BY APHolm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
310	310	●DD□▽	ASSY	470	470	●DD□▽	ASSY
315	315	●DD□▽	ASSY	475	475	●DD□▽	ASSY
320	320	●DD□▽	ASSY	480	480	●DD□▽	ASSY
325	325	●DD□▽	ASSY	485	485	●DD□▽	ASSY
330	330	●DD□▽	ASSY	490	490	●DD□▽	ASSY
335	335	●DD□▽	ASSY	495	495	●DD□▽	ASSY
340	340	●DD□▽	ASSY	500	500	●DD□▽	ASSY
345	345	●DD□▽	ASSY	505	505	●DD□▽	ASSY
350	350	●DD□▽	ASSY	510	510	●DD□▽	ASSY
355	355	●DD□▽	ASSY	515	515	●DD□▽	ASSY
360	360	●DD□▽	ASSY	520	520	●DD□▽	ASSY
365	365	●DD□▽	ASSY	525	525	●DD□▽	ASSY
370	370	●DD□▽	ASSY	530	530	●DD□▽	ASSY
375	375	●DD□▽	ASSY	535	535	●DD□▽	ASSY
380	380	●DD□▽	ASSY	540	540	●DD□▽	ASSY
385	385	●DD□▽	ASSY	545	545	●DD□▽	ASSY
390	390	●DD□▽	ASSY	550	550	●DD□▽	ASSY
395	395	●DD□▽	ASSY	555	555	●DD□▽	ASSY
400	400	●DD□▽	ASSY	560	560	●DD□▽	ASSY
405	405	●DD□▽	ASSY	565	565	●DD□▽	ASSY
410	410	●DD□▽	ASSY	570	570	●DD□▽	ASSY
415	415	●DD□▽	ASSY	575	575	●DD□▽	ASSY
420	420	●DD□▽	ASSY	580	580	●DD□▽	ASSY
425	425	●DD□▽	ASSY	585	585	●DD□▽	ASSY
430	430	●DD□▽	ASSY	590	590	●DD□▽	ASSY
435	435	●DD□▽	ASSY	595	595	●DD□▽	ASSY
440	440	●DD□▽	ASSY	600	600	●DD□▽	ASSY
445	445	●DD□▽	ASSY	605	605	●DD□▽	ASSY
450	450	●DD□▽	ASSY	610	610	●DD□▽	ASSY
455	455	●DD□▽	ASSY	615	615	●DD□▽	ASSY
460	460	●DD□▽	ASSY	620	620	●DD□▽	ASSY
465	465	●DD□▽	ASSY			○DD□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147

SUBJECT F16 ADG Assembly FLOW PROCESS CHART DATE 5-29-89

ITEM CODE
 PCN
 NSM
 PM

WCD TA997L WCD DATE 88026

12712A

CHART BEGINS 1

CHART ENDS 620 PREPARED BY AP Holm

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
1	—	○●D□▽	move	150	150	●DD□▽	ASSY
1.	1	●DD□▽	ASSY	155	155	●DD□▽	ASSY
5	5	●DD□▽	ASSY	160	160	●DD□▽	ASSY
10	10	●DD□▽	ASSY	165	165	●DD□▽	ASSY
15	15	●DD□▽	ASSY	170	170	●DD□▽	ASSY
20	20	●DD□▽	ASSY	175	175	●DD□▽	ASSY
25	25	●DD□▽	ASSY	180	180	●DD□▽	ASSY
30	30	●DD□▽	ASSY	185	185	●DD□▽	ASSY
35	35	●DD□▽	ASSY	190	190	●DD□▽	ASSY
40	40	●DD□▽	ASSY	195	195	●DD□▽	ASSY
45	45	●DD□▽	ASSY	200	200	●DD□▽	ASSY
50	50	●DD□▽	ASSY	205	205	●DD□▽	ASSY
55	55	●DD□▽	ASSY	210	210	●DD□▽	ASSY
60	60	●DD□▽	ASSY	215	215	●DD□▽	ASSY
62	62	●DD□▽	ASSY	220	220	●DD□▽	ASSY
65	65	●DD□▽	ASSY	225	225	●DD□▽	ASSY
70	70	●DD□▽	ASSY	230	230	●DD□▽	ASSY
75	75	●DD□▽	ASSY	235	235	●DD□▽	ASSY
80	80	●DD□▽	ASSY	240	240	●DD□▽	ASSY
85	85	●DD□▽	ASSY	245	245	●DD□▽	ASSY
90	90	●DD□▽	ASSY	250	250	●DD□▽	ASSY
95	95	●DD□▽	ASSY	255	255	●DD□▽	ASSY
100	100	●DD□▽	ASSY	260	260	●DD□▽	ASSY
105	105	●DD□▽	ASSY	265	265	●DD□▽	ASSY
110	110	●DD□▽	ASSY	270	270	●DD□▽	ASSY
115	115	●DD□▽	ASSY	275	275	●DD□▽	ASSY
120	120	●DD□▽	ASSY	280	280	●DD□▽	ASSY
125	125	●DD□▽	ASSY	285	285	●DD□▽	ASSY
130	130	●DD□▽	ASSY	290	290	●DD□▽	ASSY
135	135	●DD□▽	ASSY	295	295	●DD□▽	ASSY
140	140	●DD□▽	ASSY	300	300	●DD□▽	ASSY
145	145	●DD□▽	ASSY	305	305	●DD□▽	ASSY

○ OPERATION ▽ STORAGE □ INSPECTION
 ▷ TRANSPORTATION D DELAY

SAS

OPERATION PROFILE

SHEET 3 OF

NAME _____ ALC SA _____ DATE _____

ITEM CD PCN 12712A WCD T4986L WCDDATE 88124

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE

~~80 MATPSS TEST~~ ~~1.00~~ ~~S~~

80 MATPSS TEST S/U 1.00 S 8602BK10 1 1.00 J-99

~~90 MATPSS TEST 1.00 S~~

~~90 MATPSS TEST 1.00 S~~

90 MATPSS TEST S/U 1.00 S 8602BK10 1 1.00 J-99

~~100 MATPSS TEST 1.00 S~~

~~100 MATPSS TEST 1.00 S~~

100 MATPSS TEST S/U 1.00 S 8602BK10 1 1.00 J-99

~~110 MATPSS TEST 1.00 S~~

~~110 MATPSS TEST 1.00 S~~

110 MATPSS TEST S/U 1.00 S 8602BK10 1 1.00 J-99

~~120 MATPSS TEST 1.00 S~~

~~120 MATPSS TEST 1.00 S~~

RCC MATPSS

QTY X HRS

NOTES

1.00

1.00

1.00

1.00

SAS

SHEET 4 OF

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD TA986L WCDDATE 88124

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY % HRS CODE

120 MATPSS TEST S/U 1.0 PS 1 1.0 J-99 1 1.0 J-99

~~130 MATPSS TEST 1.00 T~~

~~130 MATPSS TEST S~~

130 MATPSS TEST S/U 1.0 PS 1 1.0 J-99 1 1.0 J-99

~~135 MATPSS TEST 1.00 T~~

~~135 MATPSS TEST S~~

135 MATPSS TEST S/U 1.0 PS 1 1.0 J-99 1 1.0 J-99

~~140 MATPSS TEST 1.00 T~~

~~140 MATPSS TEST S~~

140 MATPSS TEST S/U 1.0 PS 1 1.0 J-99 1 1.0 J-99

~~145 MATPSS TEST T~~

~~145 MATPSS TEST S~~

SAS

OPERATION PROFILE

SHEET 5 OF

NAME	ITEM CD	PCN	CD	TA986L	WCD	TA986L	WCD	DATE	DATE	88124	ALC	SA	RCC	MATPSS	QTY	%	HRS	QTY	%	HRS	NOTES
	OPER	NUMB	RCC	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY <td>% <td>HRS <td>EQUIP</td> <td>CODE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </td></td>	% <td>HRS <td>EQUIP</td> <td>CODE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </td>	HRS <td>EQUIP</td> <td>CODE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	EQUIP	CODE							
	145	MATPSS	TEST	1.0	FS					1			J-99		1		0.5	1		0.5	
	150	MATPSS	TEST	1.00	I																
	150	MATPSS	TEST	1.0	FS					1			J-99		1		1.0	1		1.0	
	160	MATPSS	TEST	1.00	I																
	160	MATPSS	TEST	1.0	FS					1			J-99		1		1.0	1		1.0	
	170	MATPSS	TEST	1.00	I																
	170	MATPSS	TEST	1.0	FS					1			J-99		1		1.0	1		1.0	
	180	MATPSS	TEST	1.00	I																
	180	MATPSS	TEST	1.0	FS					1			J-99		1		0.5	1		0.5	

SAS

OPERATION PROFILE

SHEET 6 OF

NAME _____

ALC SA _____

DATE _____

ITEM CD PCN 12712A WCD TA996L WCDDATE 88124

OPER NUMB	RCC	OPER HIST OCCR TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
190	MATPSS	TEST	1.00									
190	MATPSS	TEST	1.00									
180	MATPSS	S/U TEST	1.0 P S	8602BK10	1		1.0	J-99	1		1.0	
200	MATPSS	TEST	1.00									
200	MATPSS	TEST	1.00									
200	MATPSS	S/U TEST	1.0 P S	8602BK10	1		0.1	J-99	1		0.1	
210	MATPSS	TEST	1.00									
210	MATPSS	TEST	1.00									
210	MATPSS	S/U TEST	1.0 P S	8602BK10	1		0.2	J-99	1		0.2	
220	MATPSS	TEST	1.00									
220	MATPSS	TEST	1.00									
220	MATPSS	TEST	1.0 P	8602BK10	1		0.1	J-99	1		0.1	

SAS

OPERATION PROFILE

SHEET 8 OF

NAME	ITEM CD	PCN	CD	ALC SA	DATE	WCD	TA996L	WCDDATE	88124	OPER	HIST	MAND	OPER	SKILL	EQUIP	NUMB	RCC	DESC	OC	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS	NOTES					
260	MATPSS	TEST	S																																
260	MATPSS	TEST	1.0 P																																
270	MATPSS	TEST	0.00																																
270	MATPSS	TEST	1.0 P																																
275	MATPSS	TEST	0.00																																
275	MATPSS	TEST	1.0 P																																
280	MATPSS	TEST	0.00																																
280	MATPSS	TEST	1.0 P																																
290	MATPSS	TEST	1.00																																
290	MATPSS	TEST	1.0 P																																

8602BK10

8602BK10

8602BK10

8602BK10

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____

ITEM CD PCN 12712A WCD TA986L WCD DATE 88124

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE QTY X HRS NOTES

~~200 MATPSS TEST~~
 280 MATPSS TEST S/U 1.0 DYS 8602BK10 1 0.5 J-99 1 0.5

~~290 MATPSS TEST 1.00~~

~~310 MATPSS TEST~~

310 MATPSS TEST S/U 1.0 DYS 8602BK10 1 0.1 J-99 1 0.1

~~320 MATPSS TEST 1.00~~

~~320 MATPSS TEST~~

320 MATPSS TEST S/U 1.0 DYS 8602BK10 1 0.1 J-99 1 0.1

~~330 MATPSS TEST 1.00~~

~~330 MATPSS TEST~~

330 MATPSS TEST S/U 1.0 DYS 8602BK10 1 0.2 J-99 1 0.2

~~340 MATPSS TEST 1.00~~

~~340 MATPSS TEST~~

SAS

OPERATION PROFILE

NAME

ALC SA

DATE

ITEM CD PCN 12712A

WCD T8986L

WCDDATE 88124

OPER NUMB RCC

OPER HIST MAND OPER MAND

DESC OCCR TYPE F HRS CD/LVL

QTY

X HRS

EQUIP CODE

QTY

X HRS

NOTES

340 MATPSS ~~TEST~~ S/U 1.0 P S 8602BK10 WG-10 1 0.1 J-99 1 0.1

~~350 MATPSS TEST 1.00~~

~~360 MATPSS TEST~~

350 MATPSS ~~TEST~~ S/U 1.0 P S 8602BK10 WG-10 1 0.1 J-99 1 0.1

~~360 MATPSS TEST 1.00~~

~~360 MATPSS TEST~~

360 MATPSS ~~TEST~~ S/U 1.0 P S 8602BK10 WG-10 1 0.1 J-99 1 0.1

~~370 MATPSS TEST 1.00~~

~~370 MATPSS TEST~~

370 MATPSS ~~TEST~~ S/U 1.0 P S 8602BK10 WG-10 1 0.1 J-99 1 0.1

~~380 MATPSS TEST 1.00~~

~~380 MATPSS TEST~~

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 12712A WCD T896L WCD DATE 88124

OPER NOMB RCC OPER HIST MAND OPER MAND SKILL EQUIP
 DESC OCCR TYPE F HRS CD/LVL QTY X HRS CODE NOTES

380 MATPSS TEST 1.0 PS ~~MG-10~~ 8602BK10 1 0.1 J-99 1 0.1

~~390 MATPSS TEST 1.00 T~~

~~390 MATPSS TEST 1.0 PS~~

390 MATPSS TEST 1.0 PS ~~MG-10~~ 8602BK10 1 0.1 J-99 1 0.1

~~400 MATPSS TEST 1.00 T~~

~~400 MATPSS TEST 1.0 P~~

400 MATPSS TEST 1.0 P ~~MG-10~~ 8602BK10 1 0.2 J-99 1 0.2

~~410 MATPSS TEST 0.00 T~~

~~410 MATPSS TEST 1.0 P~~

410 MATPSS TEST 1.0 P ~~MG-10~~ 8602BK10 1 0.3 J-99 1 0.3

420 MATPSS TEST 1.00 T 8602BK05 1.0 0.3

~~420 MATPSS TEST 1.00 T~~

~~420 MATPSS TEST 1.00 T~~

SAS

OPERATION PROFILE

SHEET 13 OF

NAME	ITEM C	ALC SA	DATE	WCD	WCDDATE	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
	12712A	A896L			88124								
OPER NUMB	OPER DESC	HIST OCCR	OPER TYPE	MAND F	SKILL CD/LVL	QTY	%	HRS					
460	PAW1 MATPSS	0.96	1.0	T	8602 BC 09	1		.3					
460	PAW1	0.96	1.0	T	8602 BC 09	1		0.3					
460	PAW1	0.96	1.0	T	8602 BC 09	1		0.3					
470	MATP65	ASSY	0.96	T									
470	MATPSS	ASSY		S									
470	MATPSS	ASSY	1.0	P	8602 BC 09	1		0.5					

SUBJECT FILE ADG TEST FLOW PROCESS CHART

DATE 5-29-89

ITEM CODE
PCN
NSN
P/N

WCD TA996L WCD DATE 88124

CHART BEGINS 10

CHART ENDS 470

PREPARED BY _____

OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION	OP. PROFILE OP. NO.	WCD OP. NO.	SYMBOLS	DESCRIPTION
10	10	●DD□▽	S/U	280	280	●DD□▽	TEST
20	20	●DD□▽	S/U	290	290	●DD□▽	S/U
30	30	●DD□▽	S/U	310	310	●DD□▽	S/U
40	40	●DD□▽	S/U	320	320	●DD□▽	S/U
50	50	●DD□▽	S/U	330	330	●DD□▽	S/U
60	60	●DD□▽	S/U	340	340	●DD□▽	S/U
70	70	●DD□▽	S/U	350	350	●DD□▽	S/U
75	75	●DD□▽	S/U	360	360	●DD□▽	S/U
80	80	●DD□▽	S/U	370	370	●DD□▽	S/U
90	90	●DD□▽	S/U	380	380	●DD□▽	S/U
100	100	●DD□▽	S/U	390	390	●DD□▽	S/U
110	110	●DD□▽	S/U	400	400	●DD□▽	S/U
120	120	●DD□▽	S/U	410	410	●DD□▽	S/U
130	130	●DD□▽	S/U	420	420	○DD□▽	MOVE
135	135	●DD□▽	S/U	430	430	●DD□▽	ASSY
140	140	●DD□▽	S/U	440	440	○DD□▽	MOVE
145	145	●DD□▽	S/U	445	445	●DD□▽	PRIME B/S
150	150	●DD□▽	S/U	450	450	●DD□▽	PAINT B/S
160	160	●DD□▽	S/U	460	460	○DD□▽	MOVE
170	170	●DD□▽	S/U	470	470	●DD□▽	ASSY
180	180	●DD□▽	S/U			○DD□▽	
190	190	●DD□▽	S/U			○DD□▽	
200	200	●DD□▽	S/U			○DD□▽	
210	210	●DD□▽	S/U			○DD□▽	
220	220	●DD□▽	TEST			○DD□▽	
230	230	●DD□▽	TEST			○DD□▽	
240	240	●DD□▽	TEST			○DD□▽	
245	245	●DD□▽	TEST			○DD□▽	
250	250	●DD□▽	TEST			○DD□▽	
260	260	●DD□▽	TEST			○DD□▽	
270	270	●DD□▽	TEST			○DD□▽	
275	275	●DD□▽	TEST			○DD□▽	

○ OPERATION

▽ STORAGE

□ INSPECTION

▷ TRANSPORTATION

D DELAY

LSC-20147

NAME: HOLM
PCN: 13096A

ALC: SA

RCC: MATPSS

WCD: TA101U

MCDDATE: 89103

OF #	RCC	OP DESC	OCCU FAC	OF TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EQUIF CODE	QTY	TIME %	REQ HRS
15	MATPSS	MWVE	1.0	Y		.25	8602BC09	1		.25				
20	MATPSS	PREP	1.0	S			8602BC09	1		.10				
21	MATPSS	VIS	1.0	P			8602BC09	1		.05				
22	MATPSS	VIS	1.0	P			8602BC09	1		.05				
23	MATPSS	VIS	1.0	P			8602BC09	1		.05				
24	MATPSS	VIS	1.0	P			8602BC09	1		.05				
25	MATPSS	VIS	1.0	P			8602BC09	1		.05				
26	MATPSS	VIS	1.0	P			8602BC09	1		.05				
27	MATPSS	VIS	1.0	P			8602BC09	1		.05				
28	MATPSS	VIS	1.0	P			8602BC09	1		.05				
29	MATPSS	VIS	1.0	P			8602BC09	1		.05				
30	MATPSS	VIS	1.0	P			8602BC09	1		.05				
31	MATPSS	VIS	1.0	P			8602BC09	1		.05				
32	MATPSS	VIS	1.0	P			8602BC09	1		.05				
33	MATPSS	VIS	1.0	P			8602BC09	1		.05				
34	MATPSS	VIS	1.0	P			8602BC09	1		.05				

NAME: HOLM
PCN: 13096A

ALC: SA RCC: MATPSS

WCD: TA101U WCDDATE: 89103

OP #	RCC	OP DESC	OCCU FAC	OP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EQUIP CODE	QTY	TIME %	REQ HRS
15	B	MOVE	1.0	T		.25		1	.25					
20	MATPSS	PREP	1.0	S			8602BC09	1	.10		M-WB11	1	.10	.10
21	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
22	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
23	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
24	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
25	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
26	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
27	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
28	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
29	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
30	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
31	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
32	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
33	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05
34	MATPSS	INSP	1.0	P			8602BC09	1	.05		M-WB11	1	.05	.05

OPERATION PROFILE SAS

NAME _____ DATE _____

ALC SA _____ RCC MATPSS _____

ITEM CD PCN 13096A WCD TA026Q WCDDATE 88281

OPER NUMB	RCC	OPER HIST OCCR	MAND TYPE	SKILL CD/LVL	QTY	X	HRS	EQUIP CODE	QTY	X	HRS	NOTES
40	MATPSS	BAL						M15	1		2.0	
								M15			2.0	
								M2.7	1		.5	
											2.0	

40 MATPSS BAL P

Fig - I S Rotor Assy

• F

8:18 TUESDAY, MARCH 28, 1989 378

SHEET 1 OF 4

SAS

OPERATION PROFILE

NAME AP Holm

ITEM CD PCN 13096A

ALC SA

DATE

4-20-89

RCC MATPSS

OPER NUMB

OPER DESC

HIST MAND

OCRR TYPE

WCD TA031Q

WCD DATE

88278 ✓

10 MATPSS ASSY

MAND F

SKILL CD/LVL

QTY

% HRS

EQUIP CODE

QTY

% HRS

NOTES

Joe Suarez
Mechanic W609

New WCD
TA130U dated 8908

Heat + Nz

- Grps done in Pt
(16.8 m)

~~10 MATPSS ASSY~~

~~10 MATPSS ASSY~~

✓ 10 MATPSS ASSY . . . 1.0 P . . . ✓ 4.0 M-14 ✓ 1 . . . 3.0

10 MATPSS ASSY . . . P . . . M-15 ✓ 1 . . . 3.0

10 MATPSS ASSY . . . P . . . M-16 ✓ 1 . . . 0.2

10 MATPSS ASSY . . . P . . . M-17 ✓ 1 . . . 0.2

10 MATPSS ASSY . . . P . . . M-18 ✓ 1 . . . 0.3

10 MATPSS ASSY . . . P . . . X-5 / 3.0

10 MATPSS ASSY . . . P . . . M-3 ✓ 1 . . . 0.3

10 MATPSS ASSY . . . P . . . X-7 / 1.0

~~20 MATPSS ASSY~~

~~20 MATPSS ASSY~~

✓ 20 MATPSS ASSY . . . 1.0 P . . . ✓ 0.1 M-15 1 . . . 0.1

20 MATPSS ASSY . . . P . . . M-3 1 . . . 0.1

~~25 MATPSS ASSY~~

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	13098A	ALC	SA	DATE	WCDDATE	88278	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
	40	MATPSS	AGGY														
	40	MATPSS	AGGY														
✓	40	MATPSS	ASSY						1		1.5		M-3	1		1.5	
	40	MATPSS	ASSY										X-5	1		1.5	
	40	MATPSS	ASSY										M-15	1		1.5	
✓	50	MATPSI															
	50	MATPSI															
	50	MATPSI							1		1.3					1.3	
	50	MATPSI							1		1.5					1.5	
	70	MATPSS	BAL														
	70	MATPSS	BAL														
✓	70	MATPSS	BAL						1		2.0		M-19	1		0.5	
	70	MATPSS	BAL										M-13	1		1.0	
	70	MATPSS	BAL										M-21	1		0.5	

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ RCC MATPSS _____
 ITEM CD PCN 13088A WCD TA031Q WCDDATE 88278
 OPER NUMB RCC OPER HIST MAND OPER MAND SKILL EQUIP QTY % HRS QTY % HRS NOTES
 CD/LVL

~~70 MATPSS ASSY~~

~~70 MATPSS BAL~~

~~80 MATPSS~~

80 MATPSS . . . S . . . 1 . . . 3

80 MATPSS . . . 1,0 P . . . 1 . . . 2

~~80 MATPSS ASSY~~

~~80 MATPSS ASSY~~

80 MATPSS ASSY . . . 1,0 P . . . 1 . . . 3
 3602809

~~80 MATPSS ASSY~~

FIG FS Turbine Assy

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 SHEET 1 OF 3

OPERATION PROFILE
 SAS
 DATE 4-19-89

NAME AP Holm
 ITEM CD PCN 13086A
 WCD TA032Q ✓ WCD DATE 88157 K

OPER MAND HIST MAND OPER MAND SKILL EQUIP
 NUMB RCC DESC OCCR TYPE F HRS CD/LVL QTY X HRS CODE

~~10 MATPSS ASSY~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~20 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~20 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~40 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~40 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~40 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~40 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~40 MATPSS INSP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~50 MATPSS PREP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~50 MATPSS PREP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~50 MATPSS PREP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

~~50 MATPSS PREP~~ ~~1~~ ~~1.0 P~~ ~~8602809~~ ~~1~~ ~~4.0~~ ~~M-3 M-4 M-5 M-8 M-9 M-10 M-11 M-12 M-13 M-14 M-15 M-16 M-17 M-18 M-19 M-20 M-21 M-22 M-23 M-24 M-25 X-6~~ ~~1~~ ~~4.0~~

See attached sheets for change

Replaced By
 WED TA131U
 Dated 89089

T.O. 27A3-57-3

Fuay Martinez
 Mechanic

NOTES

SAS

OPERATION PROFILE

DATE 4-19-89

ALC SA

WCDDATE 88157

NAME APH

ITEM CD PCN 13096A

WCD TA032Q

OPER NUMB RCC OPER DESC HIST MAND OPER TYPE F HRS CD/LVL SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

50 MATPSS PREP . . . P M-15 ✓ 1 . . 0.1

~~60 MATPSS PREP . . . T~~

~~60 MATPSS PREP . . . S~~

60 MATPSS PREP . . . 1.0 P M-25 ✓ 1 . . 0.1

80 MATPSS PREP . . . P M-15 ✓ 1 . . 0.1

~~70 MATPSS PREP . . . T~~

~~70 MATPSS PREP . . . S~~

70 MATPSS PREP . . . 1.0 P M-3 ✓ 1 . . 0.1

70 MATPSS PREP . . . P M-15 ✓ 1 . . 0.1

~~80 MATPSS PREP . . . T~~

~~80 MATPSS PREP . . . S~~

✓ 80 MATPSS PREP . . . 1.0 P M-24 ✓ 1 . . 0.1

~~8602BCD9~~

~~8602BCD9~~

~~8602BCD9~~

SAS

OPERATION PROFILE

DATE 4-19-89

ALC SA

NAME ADH

WCD TA032Q WCDDATE 88157

OPER NOMB RCC OPER HIST MAND OCCR TYPE F HRS CD/LVL SKILL QTY % HRS EQUIP CODE QTY % HRS NOTES

80 MATPSS PREP . . . P M-15 ✓ 1 . . 0.1

~~90 MATPSS PREP . . . P M-15 ✓~~

~~90 MATPSS PREP . . . P M-15 ✓~~

90 MATPSS PREP . . . P M-26 ✓ 1 . . 0.0

90 MATPSS PREP . . . P M-15 ✓ 1 . . 0.1

~~100 MATPSS PREP . . . P M-15 ✓~~

~~100 MATPSS PREP . . . P M-15 ✓~~

100 MATPSS PREP . . . P M-25 ✓ 1 . . 0.2

100 MATPSS PREP . . . P M-15 ✓ 1 . . 0.2

~~8602809~~

~~8602809~~

1.0 P

1.0 P

FIG 1F Power Section Assy

OF

8:18 TUESDAY, MARCH 28, 1989 385
SHEET 1 OF 2

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	130865	WCD	TA033QV	WCD	DATE	88155	WCD	DATE	4-19-89	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES
AP Holm	10	MATPSS	ASSY	1.00																		
	10	MATPSS	ASSY	1.0	P									1		0.5	M-22	✓	1		0.5	
	10	MATPSS	ASSY		P									1		0.2	M-1	✓	1		0.2	
	10	MATPSS	ASSY		P									1		0.1	M-2	✓	1		0.1	
	10	MATPSS	ASSY		P									1		3.5	M-15	✓	1		3.5	
	10	MATPSS	ASSY																			
	20	MATPSS	ASSY	1.00	I																	
	20	MATPSS	ASSY		S																	
	20	MATPSS	ASSY	1.0	P									1		0.3	M-15	✓	1		0.3	
	20	MATPSS	ASSY																			
	30	MATPSS	PREP	1.00	I																	
	30	MATPSS	PREP		S																	

Replaced By
WCD TA1320
Dated 89089

T.O. 21A3-57-3
Tank Martics #
"Marty"

8602809

8602809

SAS OPERATION PROFILE

NAME AP Holm

ITEM CD PCN 13098A ALC SA _____ DATE _____ WCD TA033Q WCDDATE 88155

OPER RUMB RCC OPER DESC HIST MAND OPER MAND SKILL CD/LVL QTY X HRS EQUIP CODE QTY X HRS NOTES

30 MATPSS PREP . 1.0 P . ~~1.0~~ ¹ . ~~0.0~~ ^{0.1} M-15 1 . ~~0.0~~ ^{0.1}

~~30 MATPSS PREP . 1.0 P . 1.0 M-15 1 . 0.0~~

~~40 MATPSS MOVE . 0.0 P . 0.0 M-15 1 . 0.0~~

~~40 MATPSS MOVE . 0.0 P . 0.0 M-15 1 . 0.0~~

40 MATPSS MOVE . 1.0 P . ~~1.0~~ ¹ . ~~0.0~~ ^{0.1} M-15 1 . ~~0.0~~ ^{0.1}

~~40 MATPSS MOVE . 1.0 P . 1.0 M-15 1 . 0.0~~

9602098

9602099

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ WCD TAD34Q WCDDATE 88134

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

20	MATPSS	PREP	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	1.0 P	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30	MATPSS	PREP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

M. 35

9608 BK10

1.0 P

OPERATION PROFILE

SAS _____ SHEET 2 OF _____

NAME _____ ALC SA _____ DATE _____
 ITEM CD PCN 13096A WCD TA034Q WDDATE 88134

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	SKILL CD/LVL	QTY	X HRS	EQUIP CODE	QTY	X HRS	NOTES
-----------	-----	-----------	-----------	-----------	--------------	-----	-------	------------	-----	-------	-------

40	MATPSS	PREP	P	P	K-5	1	0.3	K-5	1	0.3	
40	MATPSS	PREP	P	P	K-6	1	0.3	K-6	1	0.3	
40	MATPSS	PREP	P	P	K-7	1	0.3	K-7	1	0.3	
40	MATPSS	PREP	P	P	K-9	1	0.3	K-9	1	0.3	
40	MATPSS	PREP	P	P	K-11	1	0.3	K-11	1	0.3	
40	MATPSS	PREP	P	P	K-12	1	0.3	K-12	1	0.3	
40	MATPSS	PREP	P	P	K-10	1	0.3	K-10	1	0.3	
40	MATPSS	PREP	P	P	K-14	1	0.3	K-14	1	0.3	
40	MATPSS	PREP	P	P	K-17	1	0.3	K-17	1	0.3	
40	MATPSS	PREP	P	P	K-18	1	0.3	K-18	1	0.3	
40	MATPSS	PREP	P	P	K-19	1	0.3	K-19	1	0.3	
40	MATPSS	PREP	P	P	K-20	1	0.3	K-20	1	0.3	

OPERATION PROFILE

SHEET 10 OF

NAME	ALC SA	DATE	RCC	MATPSS	QTY	%	HRS	NOTES
ITEM CD PCN 1309NA	WCD TA034Q	WCDDATE 88134						
OPER NUMB	RCT	OPER DISC	HIST OCCR	MAND TYP	SKILL CD/LVL	QTY	%	HRS
50					H-9	1		0.3
50					H-10	1		0.3
50					H-11	1		0.3
50					K-1	1		0.3
50					K-2	1		0.3
50					K-3	1		0.3
50					K-4	1		0.3
50					K-5	1		0.3
50					K-6	1		0.3
50					K-7	1		0.3
50					K-8	1		0.3
50					K-11	1		0.3

SAS

OPERATION PROFILE

SHEET 11 OF

NAME	ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	WCD	TA034Q	WCDDATE	88134	DATE	ALC	SA	QTY	%	HRS	RCC	MATPSS	QTY	%	HRS	NOTES
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	50		MATPSS	PREP	P																1		0.3	
	60		MATPSS	TEST	T																			
	60		MATPSS	TEST	S																			
	60		MATPSS	TEST	P																1		0.5	

M-35

8602BK10
WB-10

OPERATION PROFILE SAS

NAME	ITEM CD	PCN	13096A	WCD	TA034Q	WCD	DATE	88134	ALC	SA	RCC	MATPSS	QTY	%	HRS	EQUIP	CODE	NOTES
60	MATPSS	TEST	P										1		0.5	H-2		
60	MATPSS	TEST	P										1		0.5	H-3		
60	MATPSS	TEST	P										1		0.5	H-4		
60	MATPSS	TEST	P										1		0.5	H-5		
60	MATPSS	TEST	P										1		0.5	H-6		
60	MATPSS	TEST	P										1		0.5	H-7		
60	MATPSS	TEST	P										1		0.5	H-8		
60	MATPSS	TEST	P										1		0.5	H-9		
60	MATPSS	TEST	P										1		0.5	H-10		
60	MATPSS	TEST	P										1		0.5	H-11		
60	MATPSS	TEST	P										1		0.5	K-1		
60	MATPSS	TEST	P										1		0.5	K-2		

OPERATION PROFILE SAS

SHEET 14 OF

NAME	ITEM CD	PCN	ALC	SA	WCD	TAC34Q	WCD	DATE	88134	OPER	HIST	MAND	OPER	SKILL	EQUIP	NOTES
NUMB	RCC	DESC	OC	CR	TYPE	F	HRS	CC/LVL	QTY	X	HRS	CODE	QTY	X	HRS	
60	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.5	
60	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.6	
60	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.6	
60	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.5	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.5	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	0.5	
70	MATPSS	TEST	P	P	P	P	P	P	1	P	1.0	8608BK10	1	P	1.5	05 M-35
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	1.0	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	1.0	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	1.0	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	1.0	
70	MATPSS	TEST	P	P	P	P	P	P	P	P	P	P	1	P	1.0	

OPERATION PROFILE

SAS SHEET 16 OF

NAME

ALC SA

DATE

ITEM CD PCN 13098A WCD TA034Q WCDDATE 88134

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND TYPE	SKILL CD/LVL	QTY	HRS	EQUIP CODE	QTY	HRS	NOTES
70	MATPSS	TEST	P		K-21	1	1.0				
70	MATPSS	TEST	P		K-22	1	1.0				
70	MATPSS	TEST	P		K-23	1	1.0				
70	MATPSS	TEST	P		K-24	1	1.0				
70	MATPSS	TEST	P		K-25	1	1.0				
70	MATPSS	TEST	P		K-26	1	1.0				
70	MATPSS	TEST	P		K-27	1	1.0				
70	MATPSS	TEST	P		K-28	1	1.0				
70	MATPSS	TEST	P		K-29	1	1.0				
70	MATPSS	TEST	P		K-30	1	1.0				
70	MATPSS	TEST	P		K-31	1	1.0				
70	MATPSS	TEST	P		K-32	1	1.0				
70	MATPSS	TEST	P		K-33	1	1.0				
70	MATPSS	TEST	P		K-34	1	1.0				
70	MATPSS	TEST	P		K-35	1	1.0				

SAS

OPERATION PROFILE

NAME	ITEM CD	PCN	WCD	TA034Q	WCD	DATE	88134	ALC	SA	RCC	MATPSS	QTY	%	HRS	OPER	HIST	MAND	OPER	MAND	TYPE	F	HRS	CD/LVL	SKILL	EQUIP	CODE	QTY	%	HRS	NOTES								
80	MATPSS	TEST	0																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								
80	MATPSS	TEST	P																																			
80	MATPSS	TEST	P									1		0.5																								

8609 BK/O
~~0.5 H-1~~ 1.5 M-35
~~0.5 H-1~~

SAS

OPERATION PROFILE

NAME _____

ALC SA _____

DATE _____

WCD TA034Q

WCDDATE 88174

ITEM CD PCN 13086A

RCC MATPSS

QTY % HRS

EQUIP CODE

QTY % HRS

SKILL CD/LVL

OPER HIST MAND OPER MAND

DESC C-OR OCCR TYPE F HRS

NOTES

~~110 MATPSS TEST P H-6 1 0.7~~

~~110 MATPSS TEST P H-7 1 0.7~~

~~110 MATPSS TEST P H-8 1 0.7~~

~~110 MATPSS TEST P H-9 1 0.7~~

~~110 MATPSS TEST P H-10 1 0.7~~

~~110 MATPSS TEST P H-11 1 0.7~~

~~110 MATPSS TEST P K-1 1 0.7~~

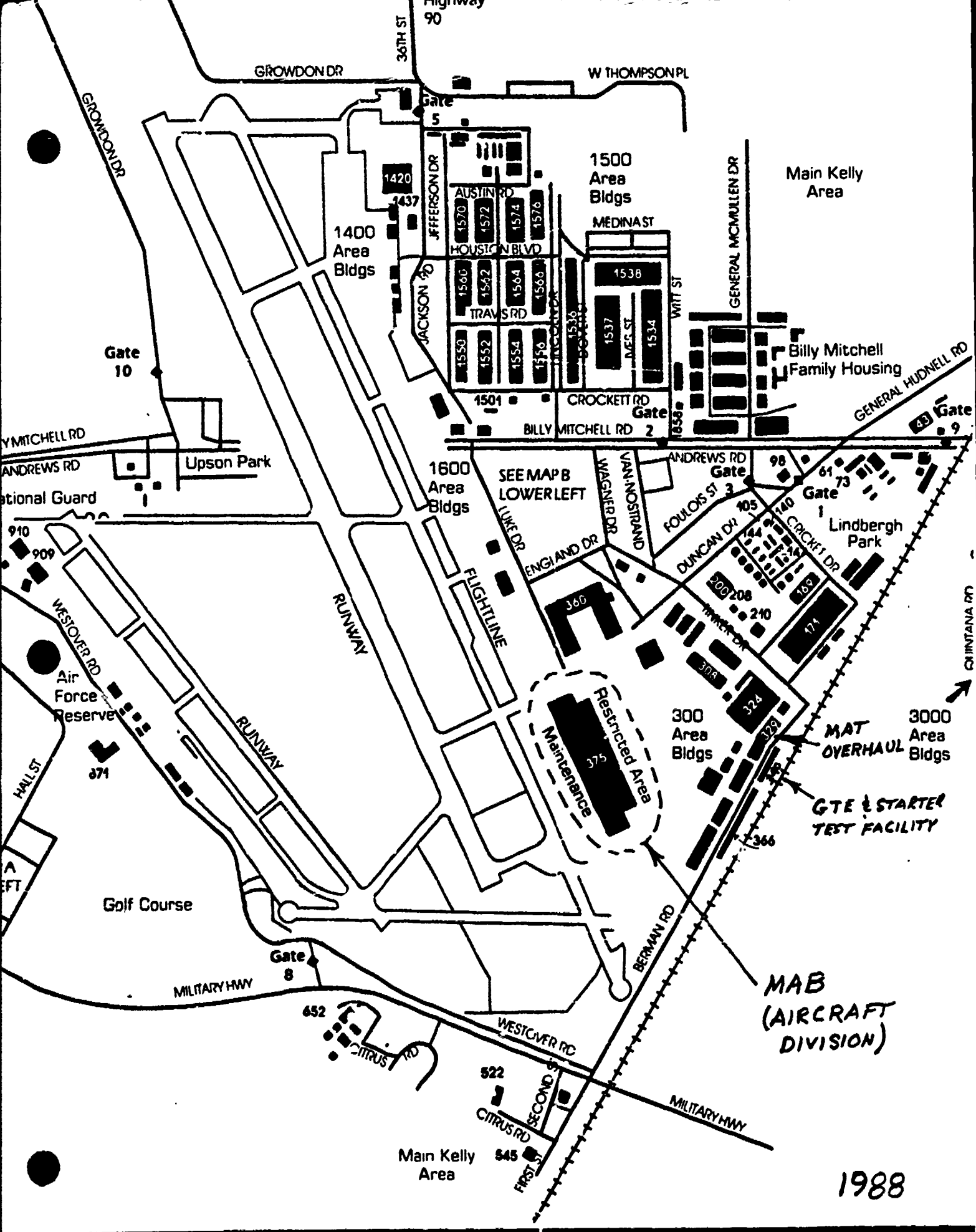
~~110 MATPSS TEST P K-2 1 0.7~~

~~110 MATPSS TEST P K-3 1 0.7~~

~~110 MATPSS TEST P K-4 1 0.7~~

~~110 MATPSS TEST P K-5 1 0.7~~

~~110 MATPSS TEST P K-6 1 0.7~~



OPERATION PROFILE SAS

SHEET ___ OF ___

NAME _____ ALC SA _____ DATE _____ WCD TAD34Q WCDDATE 88134

ITEM CD PCN 13098A OPER HIST MAND OPER MAND SKILL EQUIP CODE QTY % HRS QTY % HRS NOTES

ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	CODE	QTY	%	HRS	QTY	%	HRS	NOTES
120	MATPSS	MOVE	.	.	.	.	.	.	K-17	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-18	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-19	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-20	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-21	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-23	1	.	0.3	1	.	0.3	
120	MATPSS	MOVE	.	.	.	.	.	.	K-24	1	.	0.3	1	.	0.3	
130	MATPSS	PREP	0.37	.	.	.	.	.	.	.	.	.	.	.	.
130	MATPSS	PREP	.	.	.	.	.	.	.	.	.	.	.	.	.
130	MATPSS	PREP	1.0 P	.	.	.	.	.	8602B.K09	1	.	2.0	1	.	2.0	
									M-1							
130	MATPSS	PREP	.	.	.	.	.	.	H-1	1	.	3.0	1	.	3.0	
130	MATPSS	PREP	.	.	.	.	.	.	H-2	1	.	3.0	1	.	3.0	

SAS

SHEET ___ OF ___

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ WCD TA034Q WCD DATE 88134

ITEM CD PCN 13086A OPER HIST MAND OPER MAND SKILL EQUIP

NUMB RCC OPER DESC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

ITEM CD	PCN	OPER	HIST	MAND	OPER	MAND	SKILL	EQUIP	NUMB	RCC	OPER	DESC	OCCR	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS	NOTES
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				
130		MATPSS	PREP	P														1		3.0				

OPERATION PROFILE SAS

NAME _____ SHEET ____ OF ____

ALC SA _____ RCC MATPSS

DATE _____

WCD TA034Q

WCDDATE 88134

NOTES

HRS

%

QTY

EQUIP CODE

HRS

%

QTY

SKILL CD/LVL

MAND

OPER TYPE

HIST OCCR

DESC

OPER

NUMB

~~130 MATPSS PREP~~ 3.0

~~130 MATPSS PREP~~ 3.0

Sheet # 7

NAME: ALVARIA PCN: 10598A ALL: SA RCC: MATPSS WCD: 1A001A WCDDATE: 88258

OP #	RCC	UP DESC	OCCU FAC	UP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EC CODE	QTY	TIME %	REQ HRS
10	MATPSI	DIS	1.00	P	100	1	8602BA08	1	100	1.00				
15	MATPSI	RTE	1.00	T	100	0.5	8602BA08	1	100	0.10				
20	MATPSS	INFO	1.00	P	100	0.05	8602BE09	1	100	0.05				
30	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
40	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
50	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
60	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
70	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
80	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
90	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
100	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
110	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
NAME: ALVARIA PCN: 04542A RCC: MATPSS WCD: 1A2760 WCDDATE: 88237														

OP #	RCC	UP DESC	OCCU FAC	UP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EQUIP CODE	QTY	TIME %	REQ HRS
10	MATPSI	DIS	1.00	P	100	1	8602BA08	1	100	1.00				
20	MATPSI	INFO	1.00	T	100	0.1	8602BA08	1	100	0.10				
30	MATPSI	RTE	1.00	T	100	0	8602BA08	1	100	0.00				
40	MATPSS	INFO	1.00	P	100	0.05	8602BE09	1	100	0.05				
50	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
60	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
70	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
80	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
90	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
100	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
110	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
120	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
130	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
140	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
150	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
160	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
170	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
180	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
190	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
200	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
210	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
NAME: ALVARIA PCN: 10718A RCC: MATPSS WCD: 1A043T WCDDATE: 88257														

OP #	RCC	UP DESC	OCCU FAC	UP TYPE	MAND %	FLOW HRS	SKIL CODE	QTY	TIME %	REQ HRS	EQUIP CODE	QTY	TIME %	REQ HRS
10	MATPSI	DIS	1.00	P	100	1	8602BA08	1	100	1.00				
20	MATPSI	INFO	1.00	T	100	0.5	8602BA08	1	100	0.10				
30	MATPSS	INFO	1.00	P	100	0.05	8602BE09	1	100	0.05				
40	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
50	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
60	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
70	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
80	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
90	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
100	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				
110	MATPSS	INSP	1.00	P	100	0.05	8602BE09	1	100	0.05				

RATION PROFILE SAS

NAME _____ DATE _____ WCD TA2010 WCD DATE 88250

ITEM CD PCN 04542A OPER HIST MAND OPER MAND SKILL EQUIP

NUMB RCC OCCR TYPE F HRS CD/LVL QTY % HRS QTY % HRS NOTES

ITEM NUMB	RCC	OPER HIST	MAND OCCR	OPER TYPE	F HRS	CD/LVL	QTY	% HRS	EQUIP CODE	QTY	% HRS	NOTES
50	MATPSS	ASSY	1.00	T								
50	MATPSS	ASSY	1.00	S								
50	MATPSS	ASSY	1.0	P		8602BF09 WB-9	1	1.5 2.8	N-4	1	0.2	
50	MATPSS	ASSY		P					N-5	1	0.2	
60	MATPSS	ASSY	1.00	T								
60	MATPSS	ASSY	1.00	S								
60	MATPSS	ASSY	1.0	P		8602BF09 WB-9	1	0.5	N-6	1	0.5	
60	MATPSS	ASSY		P					N-7	1	0.2	
60	MATPSS	ASSY		P					N-8	1	0.3	
70	MATPSS	ASSY	1.00	T								
70	MATPSS	ASSY	1.00	S								
70	MATPSS	ASSY	1.0	P		8602BF09 WB-9	1	1.5	N-9	1	0.3	

CPS 200 MOD

TEST

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SHEET ___ OF ___

SAS

OPERATION PROFILE

DATE

ALC SA

DATE

RCC MATPSS

SHEET ___ OF ___

NAME Attavia

ITEM CD PCN 04542A

WCD TA2330 WCD DATE 88145

OPER NUMB

RCC

OPER DESC

HIST OCCR TYPE

MAND

SKILL CD/LVL

QTY

% HRS

EQUIP CODE

QTY

% HRS

NC TES

~~6 MATPSS TEST 0.98~~ ~~T~~

6 MATPSS TEST 1.0 S

8602BK05

1

0.1

~~6 MATPSS TEST~~ ~~P~~

WG-10

1

0.1

~~10 MATPSS TEST 0.59~~ ~~T~~

~~10 MATPSS TEST~~ ~~S~~

10 MATPSS TEST 1.0 P

INSP

8602BK05

1

0.1

~~20 MATPSS TEST 1.00~~ ~~T~~

~~20 MATPSS TEST~~ ~~S~~

20 MATPSS TEST 1.0 P

8602BK10

1

0.3

~~21 MATPSS TEST 1.00~~ ~~T~~

~~21 MATPSS TEST~~ ~~S~~

21 MATPSS TEST 1.0 P

8602BK10

1

0.2

0.2

~~22 MATPSS TEST 1.00~~ ~~T~~

JORI BELTRAC
925-4147
TESTERS FORMAN

NOTES
MARTIN SANCHEZ
925-4147
TESTER
FORMAN ALTERNATE

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 04542A WCD TA2330 WCDDATE 88145

OPER NUMB RCC OPER DESC HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

22	MATPSS	TEST	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.
22	MATPSS	TEST	.	1.0	P	.	.	0.3	N-27	1	.	0.3	.	.	.	.	.	0.5
30	MATPSS	TEST	.	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.
30	MATPSS	TEST	.	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.
30	MATPSS	TEST	.	1.0	P	.	.	0.3	N-27	1	.	0.3	.	.	.	.	.	0.5
70	MATPSS	TEST	.	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.
70	MATPSS	TEST	.	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.
70	MATPSS	TEST	.	1.0	P	.	.	0.5	N-27	1	.	0.5	.	.	.	.	.	0.5
90	MATPSS	TEST	.	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.
90	MATPSS	TEST	.	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.
90	MATPSS	TEST	.	1.0	P	.	.	0.5	N-27	1	.	0.5	.	.	.	.	.	0.5
100	MATPSS	TEST	.	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.

5602BK10
~~WG-10~~

8602BK10
~~WG-10~~

8602BK10
~~WG-10~~

8602BK10
~~WG-10~~

OPERATION PROFILE SAS

NAME _____ ALC SA _____ WCD TA2330 WCDDATE 88145 DATE _____ SHEET _____ OF _____

ITEM CD PCN 04542A OPER HIST MAND OPER MAND SKILL EQUIP QTY % HRS QTY % HRS

NUMB RCD OCCR TYPE F HRS CD/LVL QTY % HRS CODE

100 ~~MATPSS TEST~~ S

100 MATPSS TEST . 1.0 P S ^{8602BK10} 1 . 1.0 N-27 1 . 1.0

~~110 MATPSS TEST 1.00 . T~~

~~110 MATPSS TEST S~~

110 MATPSS TEST . 1.0 P S ^{8602BK10} 1 . 0.3 N-27 1 . 0.3

~~120 MATPSS TEST 0.97 . T~~

~~120 MATPSS TEST S~~

120 MATPSS TEST . 1.0 P S ^{8602BK10} 1 . 1.0 N-27 1 . 1.0

~~130 MATPSS TEST 0.95 . T~~

~~130 MATPSS TEST S~~

130 MATPSS TEST . 1.0 P S ^{8602BK10} 1 . 0.1 N-27 1 . 0.1

NAME: ATTARIA
 FCN: 10598A

ALC: SA

RCC: MATPSS

W.D: 100010

W.CDDATE: 88158

UP #	RCC	OP	DESC	FAC	OCCU	OP	MAND	FLW	SKIL	QTY	LINE	REG	EQUIP	QTY	TIME	REG
						TYPE	%	HRS	CODE		%	HRS	CODE		%	HRS
10	MATPSI		DIS	1.00	P		100	1	8602BA08	1	100	1.00				
15	MATPSI		RTE	1.00	T		100	0.5	8602BA08	1	100	0.10				
30	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
50	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
70	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
80	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
90	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
100	MATPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				
110	IPSS		INSP	1.00	P		100	0.05	8602BE09	1	100	0.05				

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SAS

OPERATION PROFILE

SHEET ___ OF ___

RCC MATPSS

DATE

ALC SA

WCDDATE 88215

ITEM CD PCN 10598A

OPER NUMB	RCC	OPER DESC	HIST	MAND	OPER	MAND	SKILL	EQUIP	CD/LVL	QTY	%	HRS	QTY	%	HRS	NOTES
10		MATPSS ASSY			P					1		0.3				
20		MATPSS ASSY			P		8602BE09 WG-9			1		1.0	N-11			0.1
20		MATPSS ASSY			P								N-12			0.1
20		MATPSS ASSY			P								N-13			0.1
30		MATPSS ASSY			T											
30		MATPSS ASSY			S											
30		MATPSS ASSY			P		8602BE09 WG-9			1		2.0 1.0	N-14			0.1
30		MATPSS ASSY			P								N-15 N-17			0.1 0.1
30		MATPSS ASSY			P								N-16			2.0 0.1
40		MATPSS ASSY			T											
40		MATPSS ASSY			S											
40		MATPSS ASSY			P		8602BE09 WG-9			1		1.0	N-17			0.1

RICHARD RODRIGUEZ
925-5146
ASSEMBLY MECHANIC

2

OPERATION PROFILE SAS

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 10598A WCD TA080A WCDDATE 88215

OPER NUMB RCC OPER HIST MAND OPER MAND SKILL CD/LVL QTY % HRS EQUIP CODE QTY % HRS NOTES

45	MATPSS	ASSY	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	MATPSS	ASSY	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	MATPSS	ASSY	1.0	P				1	0.3											
50	MATPSS	ASSY	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	MATPSS	ASSY	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	MATPSS	ASSY	1.0	P				1	0.3											
60	MATPSS	ASSY	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	ASSY	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	ASSY	1.0	P				1	1.5											
65	MATPSS	ASSY	1.00	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
65	MATPSS	ASSY	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
65	MATPSS	ASSY	1.0	P				1	0.2											

8602BE09
WG-9

8602BE09
WG-9

8602BE09
WG-9

8602BE09
WG-9

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ALC SA	DATE	WCD	TA080A	WCD	DATE	88215	RCC	MATPSS	QTY	%	HRS	NOTES		
ITEM CD	PCN	10598A	OPER	DESC	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE
80	MATPSS	ASSY	1.00	T											
80	MATPSS	ASSY		S											
80	MATPSS	ASSY	1.0	P						1		0.3			
80	MATPSS	ASSY	1.00	T											
80	MATPSS	ASSY		S											
90	MATPSS	ASSY		P						1		0.2			
85	MATPSS	ASSY	1.00	T											
85	MATPSS	ASSY		S											
95	MATPSS	ASSY		P						1		0.1			
100	MATPSS	ASSY	1.00	T											
100	MATPSS	ASSY		S											
100	MATPSS	ASSY		P						1		0.1			

8602BE09
WG-9

8602BE09
WG-9

8602BE09
WG-9

8602BE09
WG-9

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ATSC 100-87

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OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	10598A	WCD	TA081A	WCD	DATE	88146	ALC	SA	MAND	OPER	SKILL	EQUIP	CODE	QTY	%	HRS	QTY	%	HRS	NOTES
	OPER	RCC	HIST	MAND	OPER	MAND	SKILL				F	HRS	CD/LVL									
	10	MATPSS	TEST	0.98																		
	10	MATPSS	TEST		1.0	S										1		0.3				
	10	MATPSS	TEST																			
	20	MATPSS	TEST	1.00																		
	20	MATPSS	TEST																			
	20	MATPSS	TEST		1.0	P										1		0.3				0.3
	30	MATPSS	TEST	1.00																		
	30	MATPSS	TEST																			
	30	MATPSS	TEST		1.0	P										1		0.8				
	40	MATPSS	TEST	1.00																		
	40	MATPSS	TEST																			
	40	MATPSS	TEST		1.0	P										1		0.3				0.3
	50	MATPSS	TEST	1.00																		

APRIL SCHEDULE
FOR: AN ALTERNATE
925-4147

SAS

OPERATION PROFILE

NAME _____ ALC SA _____ DATE _____ SHEET _____ OF _____

ITEM CD PCN 10598A WCD TA081A WCDDATE 88146

OPER NMB RCC OPER HIST MAND OPER MAND SKILL EQUIP CD/LVL QTY % HRS QTY % HRS QTY % HRS NOTES

50	MATPSS	TEST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	MATPSS	TEST	.	1.0	P	.	.	.	1	.	1.0	M-27	1	.	1.0	.	.	.	.	1.0	
60	MATPSS	TEST	0.89	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	TEST	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	MATPSS	TEST	.	1.0	P	.	.	.	1	.	0.3		1	.	0.3	.	.	.	.	.	.
70	MATPSS	TEST	0.93	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
70	MATPSS	TEST	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
70	MATPSS	TEST	.	1.0	P	.	.	.	1	.	0.3		1	.	0.3	.	.	.	.	.	.
80	MATPSS	TEST	0.93	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
80	MATPSS	TEST	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
80	MATPSS	TEST	.	1.0	P	.	.	.	1	.	0.8		1	.	0.8
90	MATPSS	TEST	0.93	.	T

8602BK10
~~WG-10~~

8602BK05
~~WG-10~~

8602BK05
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8602BK05
~~WG-10~~

NAME: ATTARIA
PCN: 10718A

ALC: SA

IND: MATPSS

WDE: 170037

WCODE: 88.57

OP #	RCC	OP	DESC	FAC	QCCU	OP	TYPE	%	MAND	FLW	SKIL	TIME	REG	EQUIP	TIME	REG
										HR	CODE	%	HR	CODE	%	HR
10	MATPSS	INFD		1.00	P											
20	MATPSS	DIS		1.00	P	100			1	8602RA08		100	1.00			
25	MATPSS	RTE		1.00	T	100			0.5	8602RA08		100	0.10			
30	MATPSS	INFD		1.00	P											
40	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
50	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
60	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
70	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
80	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
90	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
100	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			
110	MATPSS	INSP		1.00	P	100			0.05	8602BE09		100	0.05			

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SAS OPERATION PROFILE

SHEET ___ OF ___

NAME	ITEM CD	PCN	ALC SA	WCD	TAD40T	WCDDATE	DATE	MAND	OPER	HIST	MAND	OPER	MAND	SKILL	CD/LVL	QTY	%	HRS	EQUIP	CODE	QTY	%	HRS	NOTES	
	10718A					88218																			
35	MATPSS	ASSY																							
35	MATPSS	ASSY														1									
40	MATPSS	ASSY																							
40	MATPSS	ASSY														1									
45	MATPSS	ASSY																							
45	MATPSS	ASSY														1									
50	MATPSS	ASSY																							
50	MATPSS	ASSY														1									
60	MATPSS	ASSY	0.97	1.0	T											1									

ROUTE TO TEST

ATSC. 0-97-97A

TES.

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OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	FCN	10718A	ALC SA	WCD TA041T	WCD DATE	87106	MAND	OPER	SKILL	EQUIP	QTY	%	HRS	NOTES
	OPER	DESC	HIST	MAND	OPER	MAND	F	HRS	CD/LVL	QTY	%	HRS			
5	MATPSS	TEST	1.00	T											
5	MATPSS	TEST	1.0	S						8602BK05	1	0.1			
5	MATPSS	TEST	1.0	P						WG-10	1	0.1			
10	MATPSS	TEST	1.00	T											
10	MATPSS	TEST		S											
10	MATPSS	TEST	1.0	P						8602BK10	1	0.2			
20	MATPSS	TEST	1.00	T											
20	MATPSS	TEST		S											
20	MATPSS	TEST	1.0	P						8602BK10	1	0.2	N-27		0.2
30	MATPSS	TEST	1.00	T											
30	MATPSS	TEST		S											
30	MATPSS	TEST		P						8602BK10	1	0.5	N-27		0.5
40	MATPSS	TEST	1.00	T											

MARIA SIMONEZ
FORM. AN. LITERATE
02-4147

v

SAS OPERATION PROFILE

SHEET ___ OF ___

NAME	ITEM CD	PCN	ALC SA	WCD	TAO41T	WCD	DATE	DATE	WCD	DATE	87106	OPER	HIST	MAND	OPER	SKILL	EQUIP	QTY	%	HRS	QTY	%	HRS	NOTES
NUMB	RCC	DESC	OC	CR	TY	F	HRS	CD/LVL	QTY	%	HRS	CD	QTY	%	HRS	CD	CODE							
40	MATPSS	TEST																						
40	MATPSS	TEST					1.0	P	1								0.3N-27	1					0.3	
50	MATPSS	TEST																						
50	MATPSS	TEST					1.00	T																
50	MATPSS	TEST																						
50	MATPSS	TEST					1.0	P	1								0.3N-27	1					0.3	
60	MATPSS	TEST																						
60	MATPSS	TEST					1.0	P	1								0.3N-27	1					0.3	
70	MATPSS	TEST																						
70	MATPSS	TEST					0.99	T																
70	MATPSS	TEST																						
70	MATPSS	TEST					1.0	P	1								0.5N-27	1					0.5	
80	MATPSS	TEST																						
80	MATPSS	TEST					1.00	T																

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OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	ALC SA	DATE	WCD	TAD41T	WCDDATE	87106	OPER	HIST	MAND	OPER	SKILL	EQUIP	NOTES
	NUMB	RCC	DESC	TYPE	F	HRS	CD/LVL	QTY	%	HRS	QTY	%	HRS		
80	MATPSS	TEST													
80	MATPSS	TEST						1		0.1			N-27	0.1	
85	MATPSS	TEST													
85	MATPSS	TEST													
85	MATPSS	TEST						1		1.0			N-27	0.1	
80	MATPSS	TEST													
90	MATPSS	TEST													
90	MATPSS	TEST						1		1.0			N-27	0.1	
100	MATPSS	TEST													
100	MATPSS	TEST													
100	MATPSS	TEST						1		0.97			N-27	0.2	
110	MATPSS	TEST													
110	MATPSS	TEST													

8602BK10
WG-10

8602BK10
WG-10

8602BK10
WG-10

8602BK05
WG-10

OPERATION PROFILE SAS

SHEET ___ OF ___

NAME	ITEM CD	PCN	10718A	ALC SA	DATE	WCD	TA041T	WCD	DATE	87106	HIST	MAND	OPER	MAND	SKILL	EQUIP	QTY	%	HRS	RCC	MATPSS	QTY	%	HRS	NOTES
110	MATPSS	TEST									1.0	P					1		0.2						
115	MATPSS	TEST																							
115	MATPSS	TEST									1.0	P					1		0.2						
120	MATPSS	TEST																							
120	MATPSS	TEST									1.0	P					1		0.7						
130	MATPSS	TEST																							
130	MATPSS	TEST									1.0	P					1		0.1						

8602BK05
WG-10

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8602BK05
WG-10

8602BK10
WG-10

5.2 MODEL INPUT FILES

THE MODEL INPUT FILES FOR THIS RCC WERE SUBMITTED UNDER SEPARATE COVER AS AN ATTACHMENT TO MDMSC LETTER NKE-EO16-7622 DATED 19 JULY 1989.

MCDONNELL DOUGLAS

**McDonnell Douglas
Missile Systems Company**

**19 July 1989
NKE-E016-7622**

Subject: Contract F33600-88-D-0567, Technology Insertion Engineering Services, Submittal of Validation Minutes

**To: Department of the Air Force
Attention: Ms. J. Hoyt (PMRP)
Contracting Officer
Building 1, Area C
Wright Patterson Air Force Base, Ohio 45433-5320**

Enclosure: (1) Task Order 1, Process Characterization, Validation of RCCs MATPGB, MATPSI, and MATPSS at SA-ALC, 10-14 July 1989

- 1. For documentation purposes, McDonnell Missile Systems Company (MMSC) herein submits the Enclosure (1) validation minutes.**
- 2. Please address any questions or requests for additional information to the undersigned at (314) 233-8724.**

D.W. Engelbart

**D. W. Engelbart
Senior Contracts Administrator
Advanced Programs**

**EC: Department of the Air Force
SA-ALC/MAHF
Attn: Mr. Pete Garza
Building 171
Kelly AFB, TX 78241**

**Department of the Air Force
HQ AFLC/MAQF
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KSS/0112-8

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SA-ALC/
MDMSC MODEL
VALIDATION MINUTES
10-14 JULY 1989

VALIDATION IN-BRIEFING
MONDAY, 10 JUL 89, 0845

<u>NAME</u>	<u>ORGANIZATION</u>	<u>PHONE NUMBER</u>
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Gardner, Greg	MDMSC	(314)925-5396
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Gill, Edward	SA-ALC/MATEA	(512)925-8885
Gonzales, Dan	SA-ALC/MATEG	(512)925-4667
Holm, Allen	MDMSC	(314)925-5433
McFarland, Sadie	MDMSC	(314)925-5395
Pfeiffer, Lamar	SA-ALC/MAWSD	(512)925-4747
Stirgus, Connie	SA-ALC/MAWSD	(512)925-4747
Totten, Evan	MDMSC	(314)925-5440
Vroman, Scott	MDMSC/Soft Services	(314)925-5842

10 JULY 1989

- The meeting began at 0800. Greg Gardner briefed the UDOS 2.0 simulation process and model goals and objectives.
- Trixie Brown requested the group establish goals for acceptable variances for validation. Bill recommended $\pm 10\%$ on throughput and $\pm 15\%$ on flow time. These goals were accepted by the validation group for all RCCs.

PSS

- Historical flow for all PCNs was examined and found to be erroneous. The historical flow times did not include all WCDs that were applicable. This was corrected and all flow-time variances reduced.
- All parts were found to have acceptable throughputs except 13096A at 32% variance.
- Corrected historical flow times were substantially higher than model flow times. SA-ALC engineers and planners examined the historical data and reported that it was too high. The historical data contained considerable delay time where PCNs were held awaiting parts (clutch assemblies and bearings in particular) in 1988.
- Changes were made in the equipment required for two operations on PCN 13096A.
- Paint shop times were adjusted on 08004A and 08005A from 5 to 60 hours. A new run was conducted.

11 JULY 1989

PSS

- The changes made on 10 Jul corrected the throughput for 13096A. All throughputs were accepted. The increased flow caused an increase in flow time/queue time for several parts.
- SA-ALC engineers examined the equipment profile and felt that it was too detailed. The equipment with utilizations below 5% was deleted. A new run was conducted.

PG8

- The historical data for 13081A, 13094A, and 13095A (parent items) were examined and corrected as for PSS. Corrected flow times were substantially higher than model flow times. SA-ALC personnel examined the history and felt that the history contained substantial delay time for parts and should be much longer than model time.

- All throughputs were found to be acceptable except 13095A, which had a substantial queue for equipment. The machine utilization was changed and a new run conducted.
- Backshop flow times were modified to reflect historical flow vs. interview.

PSI

- No historical data was available. Trixie Brown and the SA-ALC engineer, decided to validate using estimated flow time vs. model flow time and throughput. Operations were examined for each PCN and estimates provided.

12 JULY 1989

PSS

- The new run was examined. Equipment deletions had no significant effect on flow times. Queues were distributed across the operations, caused primarily by highly utilized manpower and equipment. RCC supervisory personnel were called in to review the outputs vs. real-world RCC conditions. The RCC personnel indicated that the queue distribution was generally representative of that found in the RCC itself. Examination of flow times was continued.

PSI

- PCNs 13081A/13094A/13096A are disassembled by MATPGB, then received by MATPSI for cleaning and inspection. These three parent assemblies were found to be unnecessary in modeling MATPSI as they are not actually present in this RCC. These PCNs seem to represent "as is" conditions to the best of ALC knowledge.
- RCC personnel were asked to compare conditions within the model and in the RCC.

PGB

- The new run was examined. All throughput problems were corrected and throughputs were accepted. Examination of flow times was continued.

13 JULY 1989

- A brainstorming session was conducted with participants from MDMSC and each RCC, facilitated by Greg Gardner. The factors and levels shown on Attachment (1) were selected by the group. These factors will be fit to a Taguchi orthogonal array and the appropriate experiments conducted by MDMSC beginning 17 Jul 89 in St. Louis.

PSS

- After examination of the most current run, SA-ALC personnel and AFLC representative agreed that all variances could be adequately explained. The model for this RCC seems to represent "as is" shop floor to the best of ALC knowledge.

PSI

- Given the minimal impact of equipment deletion in PSS it was decided not to delete low-utilization equipment in PSI. As a result of the brainstorming session, it was determined (by RCC personnel) that the queues indicated in the model were realistic. When parts actually begin to queue on the shop floor, a temporary second shift is added and/or workers are borrowed from another RCC.
- Backshop flow times were adjusted per SA-ALC personnel on several PCNs. A new run was conducted.

14 JULY 1989

PSI

- After examination of the most current run, SA-ALC personnel and AFLC representatives agreed that all variances could be adequately explained. The model for this RCC seems to represent "as is" conditions of the shop floor to the best of ALC knowledge. The problems with temporary additional manpower/2nd shift operations are heavily addressed in the Taguchi experimentation schedule for the week of 17 Jul 89.

ALL

- The SA-ALC, MDMSC, and HQ-AFLC validation team members agreed that the models for MATPSI, MATPSS, and MATPGB seem to represent the shop floor "as is" condition and are accepted for experimentation.

MDMSC MODEL VALIDATION MINUTES
 ATTACHMENT (1)
 PAGE 1 OF 3

SA BRAINSTORMING
 13 JULY 1989

<u>TAGUCHI FACTORS</u>	<u>LEVELS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
<u>PSI</u>			
WORKLOAD	AS IS	SURGE	Ⓔ ¹
CHEM CLEAN	AS IS	IN-HOUSE	SPLIT ~25% IN-HOUSE ~75% BACK-SHOP
INSP TNG	AS IS	+20 INSP TRAINED	+20 INSP UNTRAINED NEW @ 50%
INDUCTIONS	RANDOM FULL SHOP	LEVEL	AS IS EMPTY SHOP @ START ²

NOTES:

- 1 Ⓔ IS ACCELERATED INDUCTIONS, VALUE CURRENTLY UNSPECIFIED
- 2 THIS IS THE ACTUAL "AS IS" FOR PSI

MDMSC MODEL VALIDATION MINUTES
 ATTACHMENT (1)
 PAGE 2 OF 3

SA BRAINSTORMING
 13 JULY 1989

<u>TAGUCHI FACTORS</u>	<u>LEVELS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
<u>PSS</u>			
WORKLOAD	AS IS	SURGE	Ⓔ ¹
TEST CAPABILITY	AS IS	3 SHIFT 7 DAY	EXTRA 12712AS 13096A TEST STAND
ASSEMBLER TNG	AS IS	+5 TRAINED	+5 UNTRAINED NEW @ 50%
INDUCTION	RANDOM FULL SHOP	LEVEL	AS IS EMPTY SHOP
TEST REJECTION	AS IS	0 ²	MID POINT

NOTES:

¹ Ⓔ IS ACCELERATED INDUCTIONS, VALUE CURRENTLY UNSPECIFIED

² NIL

MOMSC MODEL VALIDATION MINUTES
ATTACHMENT (1)
PAGE 3 OF 3

SA BRAINSTORMING
13 JULY 1989

TAGUCHI FACTORS	LEVELS		
	1	2	3
PGB			
WORKLOAD	AS IS	SURGE	Ⓔ ¹
TEST CAPACITY (1)	AS IS	3 SHIFT 7 DAY	+3 ADDED 13094 13095 TEST STAND
BALANCER TNG	AS IS	+3 TRAINED	+3 UNTRAINED NEW @ 50%
INDUCTIONS	RANDOM FULL SHOP	LEVEL	AS IS EMPTY SHOP
TEST REJECTION	AS IS	0 ²	MID POINT
TEST CAPACITY (2)	NEW EQUIP 1-SHIFT	x ³	x ³

NOTES:

- 1 Ⓔ IS ACCELERATED INDUCTIONS, VALUE CURRENTLY UNSPECIFIED
- 2 NIL
- 3 X - VALUE NOT KNOWN

13 JULY 1989

- **A brainstorming session was conducted with participants from MDMSC and each RCC, facilitated by Greg Gardner. The factors and levels shown on Attachment (1) were selected by the group. These factors will be fit to a Taguchi orthogonal array and the appropriate experiments conducted by MDMSC beginning 17 Jul 89 in St. Louis.**

MDMSC MODEL VALIDATION MINUTES
 ATTACHMENT (1)
 PAGE 2 OF 3

SA BRAINSTORMING
 13 JULY 1989

TAGUCHI FACTORS	LEVELS		
	1	2	3
PSS			
WORKLOAD	AS IS	SURGE	Ⓔ ¹
TEST CAPABILITY	AS IS	3 SHIFT 7 DAY	EXTRA 12712AS 13096A TEST STAND
ASSEMBLER TNG	AS IS	+5 TRAINED	+5 UNTRAINED NEW @ 50%
INDUCTION	RANDOM FULL SHOP	LEVEL	AS IS EMPTY SHOP
TEST REJECTION	AS IS	02	MID POINT

NOTES:

1 Ⓔ IS ACCELERATED INDUCTIONS, VALUE CURRENTLY UNSPECIFIED

2 NIL

BRAINSTORMING

After completing validation of the UDOF 2.0 simulation model for RCL MATPSS, a Brainstorming session was conducted with personnel from SA-ALL and MDMSC. This brainstorming session was facilitated by MDMSC and was designed to help SA-ALL personnel select those areas of the RCL which they would like as factors in model experimentation. It resulted in the identification of four (4) factors, at three (3) levels each, for inclusion into the experimental

9.1 GENERAL DESCRIPTION OF FACTORS AND LEVELS

FACTOR NAME	LEVEL		
	<u>1</u>	<u>2</u>	<u>3</u>
1) TEST CAPACITY :	AS IS	TEST PERSONNEL SPREAD OVER 3 SHIFTS	LEVEL 2 + ADDITIONAL TEST STANDS FOR 12712A + 13076A
2) ASSEMBLER TRAINING :	AS IS	+ 7 Fully - TRAINED ASSEMBLERS	+ 7 UNTRAINED ASSEMBLERS - NOT MODELED AT 50% OF A TRAINED WORKER
3) INDUCTION SCHEDULE :	RANDOM IND. TO A FULL SHOP	RANDOM IND TO AN EMPTY SHOP	LEVEL IND. WORK-IN-PROCES. HELD TO 25% OF SMALLEST FY 88 QUARTER. INDUCTIONS.
4) REJECTION RATE :	0% Rejection on all parts - Reduce frequency of operations	5%	10% (AS IS)

10.0 EXPERIMENTATION OF TAGUCHI FACTORS

THE TAGUCHI EXPERIMENTATION
WORK SHEETS AND ANALYSIS
DRAFTS FOR THIS RCC ARE
ENCLOSED IN THIS SECTION.
THE FINISHED DRAFT OF THIS DATA
IS PRESENTED IN THE "STATISTICAL
SYSTEM PERFORMANCE MEASURES"
SECTION FOR THIS RCC IN THE
CONTRACT SUMMARY REPORT.
THE PRINTOUTS FOR THE INDIVIDUAL
EXPERIMENTAL RUNS ARE BEING
FURNISHED SEPARATELY TO SA-ALC.

**SA-ALC PROCESS IMPROVEMENT BRAINSTORMING
TAGUCHI ARRAY FOR EXPERIMENTATION - MATPSS
TABLE 8.7.2-1**

TAGUCHI FACTOR	PROCESS LEVEL		
	1	2	3
WORK LOAD	AS-IS	SURGE	ACCELERATED INDUCTIONS
TEST CAPACITY	AS-IS	3 SHIFT, 7 DAY	EXTRA PCN 12712A & 13096A TEST STAND
ASSEMBLER TRAINING	AS-IS	+7 PERSONNEL TRAINED	+7 PERSONNEL UNTRAINED NEW @ 50%
INDUCTION	RANDOM FULL SHOP	LEVEL	AS-IS EMPTY SHOP
TEST REJECTION	AS-IS (10%)	Ø	MID POINT (5%)

MATPSS L9 TAGUCHI ORTHOGONAL ARRAY
 THROUGH PUT EXPERIMENTATION RESULTS - FY88
 TABLE S.7.2-2

EXP #	QTRS	A TEST CAPACITY	B ASSEMBLER TRAINING	C INDUCTIONS	D TEST REJECTION RATE	NORMAL WORKLOAD	
						AUG	SEP
1	4	AS 15	AS 15	RANDOM FULL SHOP	10% (AS 15)	99%	08007A 102% 13007A 94%
2	2	AS 15	+ 7 ASSEMBLERS TRAINED	LEVEL	0%	96%	08007A 108% 12712A 97%
3	2	AS 15	+ 7 ASSEMBLERS UNTRAINED	RANDOM EMPTY SHOP	5%	97%	13096A 100% 12712A 93%
4	2	3 SHIFTS 7 DAYS/WK	AS 15	LEVEL	5%	102%	08007A 110% 10718A 98%
5	2	3 SHIFTS 7 DAYS/WK	+ 7 ASSEMBLERS TRAINED	RANDOM EMPTY SHOP	10% (AS 15)	99%	10591A 100% 08007A 93%
6	4	3 SHIFTS 7 DAYS/WK	+ 7 ASSEMBLERS UNTRAINED	RANDOM FULL SHOP	0%	99%	08004A 101% 08007A 97%
7	4	3 SHIFTS/7 DAYS + 2 TEST STANOS	AS 15	RANDOM EMPTY SHOP	0%	98%	10596A 100% 08007A 93%
8	2	3 SHIFTS/7 DAYS + 2 TEST STANOS	+ 7 ASSEMBLERS TRAINED	RANDOM FULL SHOP	5%	100%	08007A 110% 10718A 98%
9	2	3 SHIFTS/7 DAYS + 2 TEST STANOS	+ 7 ASSEMBLERS UNTRAINED	LEVEL	10% (AS 15)	101%	10718A 107% 08006A 98%

SCRAGE WORKLOAD	
SG1	92% 08009A 101% 08007A 68%
SG2	97% 04542A 100% 08005A 78%
SG3	93% 12712A 107% 08005A 70%

**SA-ALC TAGUCHI EXPERIMENTATION RESULTS:
SIMULATED RCC OPTIMAL CONFIGURATION - MATPSS**

TABLE 8.7.2-3

	TEST CAPACITY	ASSEMBLER TRAINING	INDUCTION SCHEDULE	TEST REJECTION
TAGUCHI FACTOR:	1	2	3	4
LEVEL:	3	2	3	2

LSC-20364

MATPSS

8-25-89

544/542
= 1086

INDUST → 56/47 = 103 27/5 = 42
82/68 = 150 120/73 = 193 110/67 = 217 50/80 = 130 44/78 = 122 35/34 = 69 29/40 = 60

Q	OP	08004A	08005A	08006A	08007A	08008A	10598A	10718A	10719A	13096A	RUN LF. NETH HR 5
4	91	245.29	250.18	117.09	348.15	17.60	42.15	75.53	283.88	179.96	10920
2	91	190 | 193	108 105	325 373	399 390	425 425	235 236	258 255	144 145	208 195	6552
2	0	212.57	220.60	89.68	344.70	43.68	38.21	56.56	236.21	62.28	4368
2	91	103 108	42 42	150 149	193 209	217 216	130 131	122 119	69 67	60 60	6552
2	91	226.39	225.28	96.96	328.44	46.03	42.22	68.04	261.43	64.08	4368
2	91	103 101	42 41	150 148	193 182	217 215	130 130	122 116	69 64	60 60	6552
2	91	237.89	239.06	103.86	348.31	45.43	39.60	66.92	256.95	61.72	6552
2	91	103 108	42 42	150 148	193 213	217 216	130 131	122 120	69 69	60 60	4368
2	91	242.37	245.13	104.37	334.57	46.69	43.64	74.37	282.27	70.30	4368
2	91	103 101	42 41	150 146	193 179	217 215	130 130	122 116	69 64	60 60	10920
2	91	219.22	215.45	96.92	324.12	43.28	35.35	60.32	230.66	99.48	10920
2	91	190 192	108 105	325 325	399 389	425 425	235 236	258 257	144 144	208 204	8736
2	91	216.56	211.65	93.47	317.58	43.51	34.61	60.16	235.25	96.77	8736
2	91	190 185	108 105	325 324	399 373	425 424	235 235	258 253	144 141	208 206	6552
2	91	237.89	239.06	103.86	348.31	45.43	39.60	66.92	256.95	61.72	6552
2	91	103 108	42 42	150 148	193 213	217 216	130 131	122 120	69 69	60 60	6552
2	91	252.64	250.82	120.08	376.57	47.13	43.99	75.27	271.41	66.83	6552
2	91	103 110	42 43	150 147	193 207	217 216	130 131	122 131	69 69	60 60	6552
2	91	90/76/6A/	43/24/48/	132/109/137	193/118/116	315/306/229	70/111/60	40/70/69	47/45/48	27/53/77	957/912
2	91	78 = 308	59 = 174	132 = 510	210 = 637	401 = 1251	80 = 321	46 = 225	51 = 191	116 = 273	848/1173 = 3890
2	91	280.25	293.24	118.05	359.94	47.97	46.66	61.48	273.65	105.58	10920
2	91	308 312	174 118	510 508	637 436	1251 1248	321 322	225 225	197 185	273 238	10920
2	91	964.92	1534.35	247.80	529.03	49.74	48.99	62.12	346.61	191.82	10920
2	91	308 293	174 136	510 503	637 620	1251 1250	321 322	225 224	191 186	273 233	10920
2	91	1492.87	2556.16	750.18	1109.63	67.02	69.68	82.81	532.33	292.93	10920
2	91	308 274	174 164	510 494	637 567	1251 1249	321 321	225 224	191 197	273 206	10920

~~SA~~ SAPSS

Run

Test Capacity

6+7

Spread 8602 BK10 personnel
over 3 shifts / 7 days per week

7 Add 2 ZM-35 Test stands

Assembler TNG

6 Add 7 men as alternates
for 8602 BCOS. SET ~~Availability~~ Availability at 3.2 hours/day

7 Add 7 men " " Availability at 6.3 hours/day

TAGUCHI EXPERIMENT ANALYSIS

GLE : SA

RCC : MATPSS

PCN: 08004A

L9 ARRAY

11-Sep-89

PSS08004

RUN NO.	FACTOR				FLOW TIME RESULT	TOTAL		NET		FACTOR	FLOW TIME		THRU PUT	
	A LEVEL	B LEVEL	C LEVEL	D LEVEL		THRU PUT RESULT	INDUCTED FOR RUN	THRU PUT FOR RUN	EFFECT		PERCENT	EFFECT	PERCENT	
1	1	1	1	1	245	1.62	190	193	A 1	228.1	1.82	1.01	-0.44	
2	1	2	2	2	213	1.05	163	168	A 2	233.2	-0.36	1.01	-0.61	
3	1	3	3	3	226	0.98	163	161	A 3	235.7	-1.46	1.03	1.04	
4	2	1	2	3	238	1.05	163	168	B 1	233.2	-0.40	1.01	-0.66	
5	2	2	3	1	242	0.98	163	161	B 2	230.9	0.59	1.03	0.63	
6	2	3	1	2	219	1.61	190	192	B 3	232.2	-0.19	1.02	0.03	
7	3	1	3	2	217	0.97	196	185	C 1	234.1	-0.76	1.02	0.54	
8	3	2	1	3	238	1.75	163	168	C 2	234.1	-1.88	1.06	3.49	
9	3	3	2	1	253	1.07	163	110	C 3	228.4	1.67	0.98	-4.04	
									D 1	246.8	-5.22	1.02	0.25	
									D 2	216.1	5.97	1.01	-0.83	
									D 3	234.1	-0.75	1.03	0.63	
					TOTAL	2091	9.17	1188	1206					
					AVERAGE	232	1.62	132.0	134.0		232.2	0.00	1.02	0.00
					MAXIMUM	253	1.07	196	193		246.3	5.97	1.06	3.49
					MINIMUM	213	0.97	163	161		216.1	-5.22	0.98	-4.04

TABUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATFSS

PCN: 00005A

L9 ARRAY

11-Sep-87

PSS08005

RUN NO.	FACTOR				FLOW TIME RESULT	THRU PUT RESULT	TOTAL		FACTOR	FLOW TIME		THRU PUT		
	A LEVEL	B LEVEL	C LEVEL	D LEVEL			INDUCTED FOR RUN	NET FOR RUN		EFFECT PERCENT	EFFECT PERCENT			
1	1	1	1	1	250	6.97	109	105	A 1	232.0	0.43	0.98	-0.54	
2	1	2	2	2	221	1.00	42	42	A 2	233.2	-0.08	0.98	-0.54	
3	1	3	3	3	235	0.98	42	41	A 3	233.8	-0.35	1.00	1.07	
4	2	1	2	3	237	1.00	42	42	B 1	233.6	-0.25	0.98	-0.67	
5	2	2	3	1	245	0.98	42	41	B 2	234.9	-0.32	0.99	0.40	
6	2	3	1	2	215	0.97	108	105	B 3	230.5	1.18	0.95	0.27	
7	3	1	3	2	212	0.97	108	105	C 1	234.9	-0.30	0.96	-0.67	
8	3	2	1	3	239	1.00	42	42	C 2	236.8	-1.63	1.01	2.01	
9	3	3	2	1	251	1.02	42	43	C 3	227.4	2.43	0.97	-1.34	
									D 1	248.7	-6.73	0.99	0.27	
									D 2	215.9	7.35	0.95	-0.67	
									D 3	234.5	-0.62	0.99	0.40	
					TOTAL	2097	3.39	576	566					
					AVERAGE	233.0	0.99	64.0	-2.9		233.0	0.00	0.99	0.00
					MAXIMUM	251	1.02	108	105		248.7	7.35	1.01	2.01
					MINIMUM	212	0.97	42	41		215.9	-6.73	0.97	-1.34

Taguchi Experiment Analysis

ALC : SA RCC : MATPSS

PCN: 08006A

L9 ARRAY

12-Sep-89

FILE : PSS02036

RUN NO.	FACTOR				FLOW TIME RESULT	THRU PUT RESULT	TOTAL	NET	FACTOR	FLOW TIME		THRU PUT		
	A LEVEL	B LEVEL	C LEVEL	D LEVEL			INDUCTED FOR RUN	THRU PUT FOR RUN		EFFECT	PERCENT	EFFECT	PERCENT	
1	1	1	1	1	117	0.99	325	323	A 1	101.2	1.63	0.99	0.27	
2	1	2	2	2	90	0.99	150	149	A 2	101.7	1.17	0.99	-0.20	
3	1	3	3	3	97	0.99	150	148	A 3	103.9	-2.80	0.99	-0.07	
4	2	1	2	3	104	0.99	150	148	B 1	104.8	-1.93	0.99	0.39	
5	2	2	3	1	104	0.97	150	146	B 2	99.3	3.52	0.98	-0.42	
6	2	3	1	2	97	1.00	325	325	B 3	104.7	-1.68	0.99	0.03	
7	3	1	3	2	93	1.00	325	324	C 1	106.0	-2.95	0.99	0.50	
8	3	2	1	3	104	0.99	150	148	C 2	104.5	-1.57	0.99	-0.20	
9	3	3	2	1	120	0.98	150	147	C 3	99.3	4.52	0.99	-0.36	
									D 1	113.6	-10.62	0.98	-0.63	
									D 2	93.4	9.29	1.00	0.82	
									D 3	101.6	1.32	0.99	-0.20	
					TOTAL	926	8.94	1875	1852					
					AVERAGE	102.9	0.99	206.3	206.4		102.9	0.00	0.99	0.00
					MAXIMUM	120	1.00	325	325		113.6	9.29	1.00	0.82
					MINIMUM	90	0.97	150	146		93.4	-10.62	0.98	-0.63

TAGUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATPSS

PCN: 08007A

L9 ARRAY

11-Sep-89

FILE : PSS08007

RUN NO.	FACTOR				FLOW TIME RESULT	THRU PUT RESULT	TOTAL	NET	FACTOR	FLOW TIME		THRU PUT		
	A LEVEL	B LEVEL	C LEVEL	D LEVEL			INDUCTED FOR RUN	THRU PUT FOR RUN		EFFECT	PERCENT	EFFECT	PERCENT	
1	1	1	1	1	348	0.98	399	390	A 1	340.4	0.22	1.00	-1.21	
2	1	2	2	2	345	1.08	193	209	A 2	335.7	1.62	1.00	-1.12	
3	1	3	3	3	328	0.94	193	182	A 3	347.5	-1.84	1.04	2.33	
4	2	1	2	3	348	1.10	193	213	B 1	338.0	0.93	1.01	-0.80	
5	2	2	3	1	335	0.93	193	179	B 2	342.5	-0.39	1.04	2.43	
6	2	3	1	2	324	0.97	399	389	B 3	343.0	-0.54	1.00	-1.63	
7	3	1	3	2	318	0.93	399	373	C 1	340.2	0.29	1.02	0.52	
8	3	2	1	3	348	1.10	193	213	C 2	356.5	-4.49	1.09	7.20	
9	3	3	2	1	377	1.07	193	207	C 3	326.9	4.20	0.94	-7.72	
									D 1	353.1	-3.49	0.99	-2.06	
									D 2	328.8	3.63	1.00	-1.56	
									D 3	341.7	-0.14	1.05	3.62	
					TOTAL	3071	9.12	2355	2355					
					AVERAGE	341.2	1.01	261.7	261.7		341.2	0.00	1.01	0.00
					MAXIMUM	377	1.10	399	390		356.5	4.20	1.09	7.20
					MINIMUM	318	0.93	193	179		326.9	-4.49	0.94	-7.72

TAGUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATPSS

PCN: 04542A

L9 ARRAY

11-Sep-89

FILE : PSS04542

RUN NO.	FACTOR				FLOW TIME RESULT	THRU PUT RESULT	TOTAL	NET	FACTOR	FLOW TIME		THRU PUT		
	A LEVEL	B LEVEL	C LEVEL	D LEVEL			INDUCTED FOR RUN	THRU PUT FOR RUN		EFFECT	PERCENT	EFFECT	PERCENT	
1	1	1	1	1	48	1.00	425	425	A 1	45.8	-0.77	1.00	-0.03	
2	1	2	2	2	44	1.00	217	216	A 2	45.1	0.63	1.00	-0.03	
3	1	3	3	3	46	0.99	217	215	A 3	45.4	0.14	1.00	0.05	
4	2	1	2	3	45	1.00	217	216	B 1	45.5	-0.21	1.00	0.20	
5	2	2	3	1	47	0.99	217	215	B 2	45.3	0.34	0.99	-0.18	
6	2	3	1	2	43	1.00	425	425	B 3	45.5	-0.13	1.00	-0.03	
7	3	1	3	2	44	1.00	425	424	C 1	45.4	-0.04	1.00	0.28	
8	3	2	1	3	45	1.00	217	216	C 2	45.4	0.01	1.00	-0.03	
9	3	3	2	1	47	1.00	217	216	C 3	45.4	0.02	0.99	-0.26	
									D 1	47.1	-3.79	1.00	-0.03	
									D 2	43.5	4.25	1.00	0.20	
									D 3	45.6	-0.4c	0.99	-0.18	
					TOTAL	409	8.96	2577	2568					
					AVERAGE	45.4	1.00	286.3	285.3		45.4	0.00	1.00	0.00
					MAXIMUM	48	1.00	425	425		47.1	4.25	1.00	0.28
					MINIMUM	43	0.99	217	215		43.5	-3.79	0.99	-0.26

TAGUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATPSS

PCN: 10598A

L9 ARRAY

11-Sep-89

FILE : PSS10598

RUN NO.	FACTOR				FLOW TIME RESULT	TOTAL		NET		FACTOR	FLOW TIME		THRU PUT	
	A LEVEL	B LEVEL	C LEVEL	D LEVEL		THRU PUT RESULT	INDUCTED FOR RUN	THRU PUT FOR RUN	EFFECT		PERCENT	EFFECT	PERCENT	
1	1	1	1	1	42	1.00	235	236	A 1	40.9	-1.33	1.00	-0.04	
2	1	2	2	2	38	1.01	130	131	A 2	39.5	1.00	1.00	-0.04	
3	1	3	3	3	42	1.00	130	130	A 3	39.4	1.33	1.01	0.08	
4	2	1	2	3	40	1.01	130	131	B 1	38.8	2.86	1.00	-0.04	
5	2	2	3	1	44	1.00	130	130	B 2	40.5	-1.39	1.01	0.08	
6	2	3	1	2	35	1.00	235	236	B 3	40.5	-1.48	1.00	-0.04	
7	3	1	3	2	35	1.00	235	235	C 1	39.0	2.25	1.01	0.10	
8	3	2	1	3	40	1.01	130	131	C 2	40.6	-1.68	1.01	0.33	
9	3	3	2	1	44	1.01	130	131	C 3	40.2	-0.57	1.00	-0.43	
									D 1	43.3	-8.34	1.00	-0.04	
									D 2	36.1	9.70	1.00	-0.04	
									D 3	40.5	-1.36	1.01	0.08	
					TOTAL	359	9.04	1485	1491					
					AVERAGE	39.9	1.00	165.0	165.7		39.9	0.00	1.00	0.00
					MAXIMUM	44	1.01	235	236		43.3	9.70	1.01	0.33
					MINIMUM	35	1.00	130	130		36.1	-8.34	1.00	-0.43

TAGUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATPSS

PCN: 10718A

L7 ARRAY

11-Sep-89

FILE : PSS10718

RUN NO.	FACTOR				FLOW TIME RESULT	THRU PUT RESULT	TOTAL	NET	FACTOR	FLOW TIME		THRU PUT			
	A LEVEL	B LEVEL	C LEVEL	D LEVEL			INDUCTED FOR RUN	THRU PUT FOR RUN		EFFECT	PERCENT	EFFECT	PERCENT		
1	1	1	1	1	75	0.99	258	255	A 1	66.7	0.61	0.97	-1.57		
2	1	2	2	2	57	0.98	122	119	A 2	67.2	-0.12	0.98	-1.03		
3	1	3	3	3	68	0.95	122	116	A 3	67.5	-0.49	1.01	2.60		
4	2	1	2	3	67	0.98	122	120	B 1	67.5	-0.62	0.98	-0.29		
5	2	2	3	1	74	0.95	122	116	B 2	66.0	1.74	0.97	-1.73		
6	2	3	1	2	60	1.00	259	257	B 3	67.9	-1.13	1.01	2.31		
7	3	1	3	2	60	0.98	259	253	C 1	67.6	-0.70	0.99	0.24		
8	3	2	1	3	67	0.98	122	120	C 2	66.3	1.30	1.01	2.42		
9	3	3	2	1	75	1.07	122	131	C 3	67.5	-0.60	0.96	-2.66		
									D 1	75.1	-11.82	1.00	1.75		
									D 2	59.0	12.08	0.98	-0.30		
									D 3	67.3	-0.26	0.97	-1.45		
					TOTAL		604	3.88	1566	1487					
					AVERAGE		67.1	0.99	167.3	165.2		67.1	0.00	0.99	0.00
					MAXIMUM		76	1.07	253	257		75.1	12.08	1.01	2.60
					MINIMUM		57	0.95	122	116		59.0	-11.82	0.96	-2.66

TASUCHI EXPERIMENT ANALYSIS

ALC : SA

RCC : MATPSS

PCN: 12712A

L9 ARRAY

12-Sep-89

FILE : PSS12712

RUN NO.	FACTOR				FLOW TIME RESULT	TOTAL		NET		FACTOR	FLOW TIME		THRU PUT	
	A LEVEL	B LEVEL	C LEVEL	D LEVEL		THRU PUT RESULT	INDUCTED FOR RUN	THRU PUT FOR RUN	EFFECT		PERCENT	EFFECT	PERCENT	
1	1	1	1	1	284	1.01	144	145	A 1	260.5	-1.28	0.97	-1.09	
2	1	2	2	2	236	0.97	69	67	A 2	256.6	0.23	0.98	-0.34	
3	1	3	3	3	261	0.93	69	64	A 3	254.5	1.04	0.99	1.42	
4	2	1	2	3	257	1.00	69	69	B 1	258.7	-0.57	1.00	1.56	
5	2	2	3	1	282	0.93	69	64	B 2	258.5	-0.49	0.97	-1.32	
6	2	3	1	2	231	1.00	144	144	B 3	254.5	1.06	0.98	-0.34	
7	3	1	3	2	235	0.98	144	141	C 1	257.2	0.02	1.00	2.37	
8	3	2	1	3	257	1.00	69	69	C 2	254.9	0.92	0.99	1.14	
9	3	3	2	1	271	1.00	69	59	C 3	259.7	-0.94	0.94	-3.51	
									D 1	279.2	-8.54	0.98	-0.10	
									D 2	234.0	9.01	0.98	0.44	
									D 3	258.4	-0.47	0.98	-0.34	
					TOTAL	2315	8.81	946	932					
					AVERAGE	257.2	0.98	94.0	92.4		257.2	0.00	0.98	0.00
					MAXIMUM	284	1.01	144	145		279.2	9.01	1.00	2.37
					MINIMUM	231	0.93	69	64		234.0	-8.54	0.94	-3.51

TAGUCHI EXPERIMENT ANALYSIS

ALC · SA

RCC : MATPSS

PCN: 13096A

L9 ARRAY

13-Sep-89

FILE : PSS13096

RUN NO.	FACTOR				FLOW TIME RESULT	TOTAL		NET		FACTOR	FLOW TIME		THRU PUT	
	A LEVEL	B LEVEL	C LEVEL	D LEVEL		THRU PUT RESULT	INDUCTED FOR RUN	THRU PUT FOR RUN	EFFECT		PERCENT	EFFECT	PERCENT	
1	1	1	1	1	105	0.94	208	195	A 1	77.1	-0.86	0.98	-1.08	
2	1	2	2	2	62	1.00	60	60	A 2	77.2	-0.92	0.99	0.38	
3	1	3	3	3	64	1.00	60	60	A 3	75.1	1.78	1.00	0.70	
4	2	1	2	3	52	1.00	60	60	B 1	87.8	-14.86	0.98	-1.40	
5	2	2	3	1	70	1.00	60	60	B 2	64.8	15.30	1.00	1.03	
6	2	3	1	2	99	0.98	208	204	B 3	76.8	-0.43	0.99	0.38	
7	3	1	3	2	97	0.99	208	206	C 1	88.7	-16.05	0.97	-1.73	
8	3	2	1	3	62	1.00	60	60	C 2	63.6	16.81	1.00	1.63	
9	3	3	2	1	67	1.00	60	60	C 3	77.1	-0.77	1.00	0.70	
									D 1	80.7	-5.55	0.98	-1.08	
									D 2	26.2	-12.70	0.99	0.05	
									D 3	62.5	18.25	1.00	1.03	
					TOTAL	688	8.91	984	965					
					AVERAGE	76.5	0.99	109.3	107.2		76.5	0.00	0.99	0.00
					MAXIMUM	105	1.00	208	206		88.7	18.25	1.00	1.03
					MINIMUM	62	0.94	60	60		62.5	-16.05	0.97	-1.73

9.0

MAT PSS.

BRAINSTORMING

After completing validation of the UDOS 2.0 simulation model for RCC MATPSS, a brainstorming session was conducted with personnel from SA-ALL and MDMSC. This brainstorming session was facilitated by MDMSC and was designed to help SA-ALL personnel select those areas of the RCC which they would like as factors in model experimentation. It resulted in the identification of four (4) factors, at three (3) levels each, for inclusion into the experimentation.

9. GENERAL DESCRIPTION OF FACTORS AND LEVELS

FACTOR NAME	LEVEL		
	<u>1</u>	<u>2</u>	<u>3</u>
A) TEST CAPACITY :	AS IS	TEST PERSONNEL SPREAD OVER 3 SHIFTS	LEVEL 2. + ADDITIONAL TEST STANDS FOR 12712A + 13076A.
B) ASSEMBLER TRAINING :	AS IS	+ 7 Fully - TRAINED ASSEMBLERS	+ 7 UNTRAINED ASSEMBLERS - 100 MODELED BT 50% OF A TRAINED WORKER
C) INDUCTION SCHEDULE :	RANDOM IND. TO A FULL SHOP	RANDOM IND TO AN EMPTY SHOP	LEVEL IND. WORK-IN-PROCESS HELD TO 25% OF SMALLEST FY 88 QUARTER'S INDUCTIONS.
D) REJECTION RATE :	0% Rejection on ail parts - Reduces frequency of operations	5%	10% (AS IS)

MATPSS

10.0

EXPERIMENTATION

The factors and levels developed in the Brainstorming session were fitted into a Taguchi L(9) orthogonal array for model experimentation. The use of this array reduced the number of runs required from 81 to 9.

10.1 ORTHOGONAL ARRAY

orthogonal array used to design the experimentation for this ACC. Table # 10.1 is the

TAGUCHI L(9) ARRAY FACTORS

EXPERIMENT #	1 TEST CAPACITY	2 ASSEMBLER TRAINING	3 INDUCTION SCHEDULE	4 TEST REJECTION
1	AS IS	AS IS	RANDOM IND. FULL SHOP	10% (AS IS)
2	AS IS	+ 7 ASSEMBLERS TRAINED	LEVEL INDUCTIONS	0% REJECTS
3	AS IS	+ 7 ASSEMBLERS UNTRAINED	RANDOM IND. EMPTY SHOP	5% REJECTS
4	3 SHIFTS - 7 DAYS/WK	AS IS	LEVEL INDUCTIONS	5% REJECTS
5	3 SHIFTS - 7 DAYS/WK	+ 7 ASSEMBLERS TRAINED	RANDOM IND. EMPTY SHOP	AS IS 10% REJECTS
6	3 SHIFTS - 7 DAYS/WK	+ 7 ASSEMBLERS UNTRAINED	RANDOM IND. FULL SHOP	0% REJECTS
7	3 SHFT/7 DAYS + 2 TEST STANDS	AS IS	RANDOM IND. EMPTY SHOP	0% REJECTS
8	3 SHFT/7 DAYS + 2 TEST STANDS	+ 7 ASSEMBLERS TRAINED	RANDOM IND. FULL SHOP	5% REJECTS
9	3 SHFT/7 DAYS + 2 TEST STANDS	+ 7 ASSEMBLERS UNTRAINED	LEVEL INDUCTIONS	AS IS 10% REJECTS

TABLE # 10.1

10.2 CONDUCT OF THE EXPERIMENTS

The experimental runs described in Table 10-1 were conducted on the UDAS 2.0 model, under normal (AS IS) workload conditions. APPENDIX provides the detailed results of these runs, including response charts and a table of results by PCN. Table 10-2 shows the optimal RCC configuration. It should be noted that only Factor ~~D~~ - Rejection Rate - showed significant effects on PCN flowtime. ONLY Factor ~~B~~ - INDUCTION SCHEDULE - showed significant effect on PCN Throughput. No signal-to-noise calculations were performed as no noise factors were incorporated into the array.

OPTIMAL CONFIGURATION

FACTOR :	A	B	C	D
LEVEL :	3	2	3	2

TABLE 10-2

10.2.1 SURGE

The RCC was modeled under surge workload conditions as well as normal. Surge figures for PCN inductions were based on data provided by HQ-AFLC. Given the "extremely flat responses from factors A and B, and the linear response of factor ~~D~~, no orthogonal array was deemed necessary for surge experiments. Three surge runs were conducted; one at optimal configuration, one at optimal with factor ~~C~~ - INDUCTION SCHEDULE - SET AT LEVEL 1 (to test the effect on throughput) and one at the AS IS (Baseline) configuration. The results are detailed in appendix —.

10.3 RESULTS SUMMARY - NORMAL WORKLOAD

- FLOW TIME WAS LARGELY UNAFFECTED BY CHANGES IN TEST CAPACITY OR ASSEMBLER TRAINING. IN SPITE OF THE INTUITIVE FEELING OF MATASS SUPERVISION - THESE AREAS ARE NOT BOTTLENECKS IN THE 'AS IS' PROCESS.
- REJECTION RATE HAD A MAJOR, LINEAR AFFECT ON FLOW TIME FOR ALL PARTS. ANY REDUCTION IN REJECT RATE OR OPERATION TIMES WILL RELIABLY PRODUCE A CORRESPONDING REDUCTION IN FLOWTIME FOR THAT PCN.
- THE INDUCTION SCHEDULE HAD VERY LITTLE EFFECT ON OVERALL PCN FLOW TIME. WHEN PRE-INDUCTION QUEUE TIMES WERE SUBTRACTED, HOWEVER, FLOWTIMES FOR SEVERAL PCNS DROPPED DRAMATICALLY UNDER LEVEL INDUCTIONS. ADDITIONALLY, THROUGHPUT (UN AFFECTED BY ANY OTHER FACTOR) WAS SIGNIFILANTLY IMPROVED UNDER LEVEL INDUCTIONS. PARTS MOVED THROUGH THE SYSTEM MUCH MORE QUICKLY AND RELIABLY UNDER LEVEL INDUCTIONS.
- ALTHOUGH NO INTERACTIONS WERE SPECIFICALLY MODELED, A MILD INTERACTION APPEARS TO EXIST BETWEEN TEST CAPACITY - LEVEL 2 (SHIFT WORK) AND REJECTION RATES. USE OF EXTENDED SHIFTS, COUPLED WITH A REDUCTION IN REJECT RATE CAN BE EXPECTED TO CAUSE A DECREASE IN FLOW TIME GREATER THAN THE SUM OF THE CHANGES.

10.4 RESULTS SUMMARY - SURGE WORKLOAD.

- UNDER SURGE WORKLOAD, FLOW TIMES INCREASED for all PCs. Small but significant queues, formed at a variety of operations. While test stands were critical for most parts, manpower appeared to be the most critical resource. The tight manpower situation tended to exacerbate the queues for each piece of equipment.
- The Taguchi optimum configuration performed better than the AS IS configuration under surge workloads. The additional manpower, equipment and reduced rejection rate produced significant improvements in both flowtime and throughput. Even the Taguchi configuration, however, was overloaded under the surge workload.
- Using the same maximum work-in-progress figures (Leveled Inductions) as were applied to the AS IS workload, resulted in problems. While flowtimes remained at their AS IS levels, throughput dropped from 96.8% (Taguchi optimum with unlevelled inductions) to 92.3% (Taguchi optimum with leveled inductions). These ^{WIP} levels, selected to approximate process capacity at normal work loads, are too restrictive to handle surge. A more detailed experiment using various ^{WIP} levels would be necessary to gain the full benefit of leveled inductions at surge.

10.5 CONCLUSIONS & Recommendations

While improvements in RCC operation can be obtained by adding additional equipment and/or manpower, the most attractive improvements can be obtained by adjusting the induction schedule. If further experimentation were performed, the uoos 2.0 model could be used to determine the exact capacity of the RCC in the AS IS configuration. If inductions were adjusted to meet this capacity, a more balanced line would result. If the induction line were balanced

10.5 cont.

a Just - In - Time (JIT) parts flow could be developed. This would result in an optimum flowtime and throughput, with a minimum amount of inventory and work in process, thus, giving a substantial decrease in cost with no requirement for capital investment. If the overall capacity under this method is still not sufficient, shift work and additional manpower should be added before new capital equipment is purchased.

MATPSS

APPENDIX

RESULTS SUMMARY TABLE
Flow Times

EXPERIMENTAL RUN NUM.	0800HR	0800SA	0800LA	0800PA	0854LA	1054RA	1071RA	1271RA	1301RA	THEORICAL PERCENT
1	266.93	256.17	132.23	376.28	47.77	41.93	75.87	285.56	105.19	98.7%
2	212.57	220.60	89.68	344.70	43.68	38.21	6.56	236.21	62.28	101%
3	226.39	225.28	96.96	328.44	46.03	42.22	68.04	261.43	64.08	97.3%
4	237.89	239.06	103.86	348.31	45.83	39.60	66.92	256.95	61.72	102%
5	242.37	245.13	104.37	334.57	46.69	43.64	74.37	282.27	70.30	96.9%
6	214.24	201.04	90.05	314.95	43.62	36.96	58.77	235.73	59.47	97.5%
7	214.24	201.04	90.05	314.95	43.62	36.96	58.77	235.73	59.47	97.5%
8	237.89	239.06	103.86	348.31	45.43	39.10	66.92	256.95	61.72	102%
9	252.64	250.82	120.08	376.57	47.13	43.99	75.27	271.41	66.83	101%
SURGE 1	280.25	293.24	112.05	359.94	47.97	46.66	61.48	273.65	105.58	92.3%
SURGE 2	964.92	1534.35	247.80	529.03	49.74	48.99	62.12	346.61	191.82	96.8%
SURGE 3	1492.87	2550.16	750.18	1109.63	67.02	69.68	82.21	532.33	292.83	93.5%

MATPSS

TAGUCHI L₉ ARRAY

PCN: 08004A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N JB
1	AS IS	AS IS	FULL	10%	20.3	
2	AS IS	+7 TND	LEVEL	∅	212.57	
3	AS IS	+7 UN TND	EMPTY	5%	226.39	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	237.89	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	242.37	
6	3 SFT/7 DAY LEVEL 2 +	+7 UN TND	FULL	∅	214.24	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	214.24	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	237.89	
9	NEW STANDS	+7 UN TND	LEVEL	10%	252.64	

$$\bar{X} = 233.91$$

08004A

REJECTION RATE

$$0\%: \bar{R}_{(0)} = 213.68 : -(\bar{X} - \bar{R}_{(0)}) = -20.23 \text{ Hours} \\ -8.6\%$$

$$5\%: \bar{R}_{(5)} = 234.06 : -(\bar{X} - \bar{R}_{(5)}) = .15 \text{ Hours} \\ \text{N/A}$$

$$10\%: \bar{R}_{(10)} = 253.98 : -(\bar{X} - \bar{R}_{(10)}) = 20.07 \text{ Hours} \\ 8.6\%$$

INDUCTION SCHEDULES

$$\text{FULL SHOP: } \bar{R}_{(F)} = 239.69 : -(\bar{X} - \bar{R}_{(F)}) = 5.78 \text{ Hours} \\ 2.5\%$$

$$\text{EMPTY SHOP: } \bar{R}_{(E)} = 227.67 : -(\bar{X} - \bar{R}_{(E)}) = -6.24 \text{ Hours} \\ -2.7\%$$

$$\text{LEVEL INDUCTIONS: } \bar{R}_{(L)} = 234.37 : -(\bar{X} - \bar{R}_{(L)}) = .5 \text{ Hours} \\ .2\%$$

LEVEL INDUCTIONS CORRECTED

FOR PRE-INDUCTION QUEUING:

$$\bar{R}_{(LL)} = 198.33 : -(\bar{X} - \bar{R}_{(LL)}) = -35.58 \text{ Hours} \\ 15.2\%$$

NOTE: $R_{(LL)}$ = AVG FLOWTIME - AVG WORK IN PROCESS QUEUE TIME

08004A

TEST CAPACITY

$$\text{AS IS: } \bar{R}_{(1)} = 235.30 : -(\bar{X} - \bar{R}_{(1)}) = 1.39 \text{ Hours} \\ .6\%$$

$$3 \text{ SHFT: } \bar{R}_{(2)} = 231.5 : -(\bar{X} - \bar{R}_{(2)}) = -2.41 \text{ Hours} \\ 1.03\%$$

$$3 \text{ SHFT} \\ + \text{ EQ: } \bar{R}_{(3)} = 234.92 : -(\bar{X} - \bar{R}_{(3)}) = 1.01 \text{ Hours} \\ .4\%$$

NOTE: THE EXTRA TEST EQUIPMENT USED IN LEVEL 3
IS NOT USED ON THIS PCN.

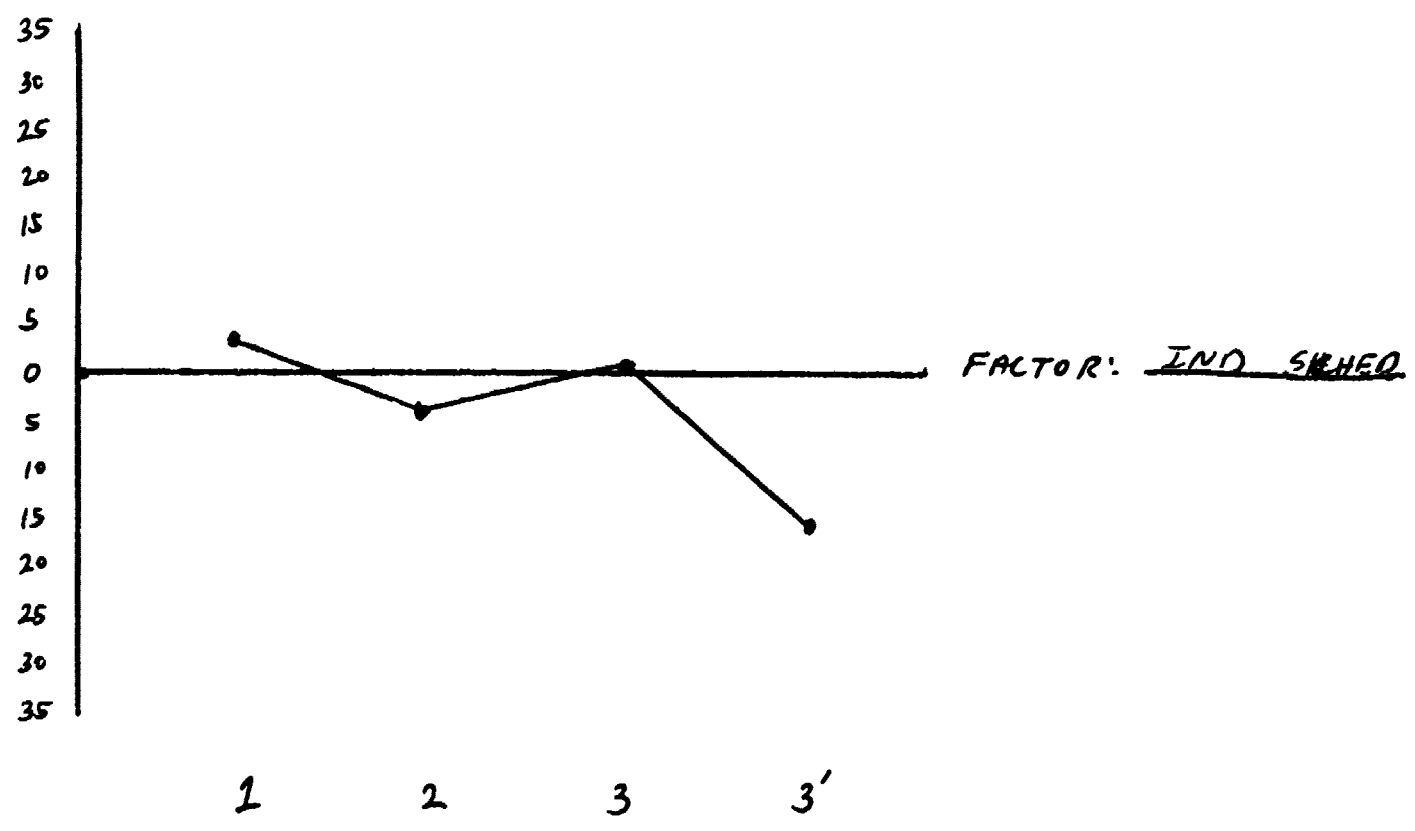
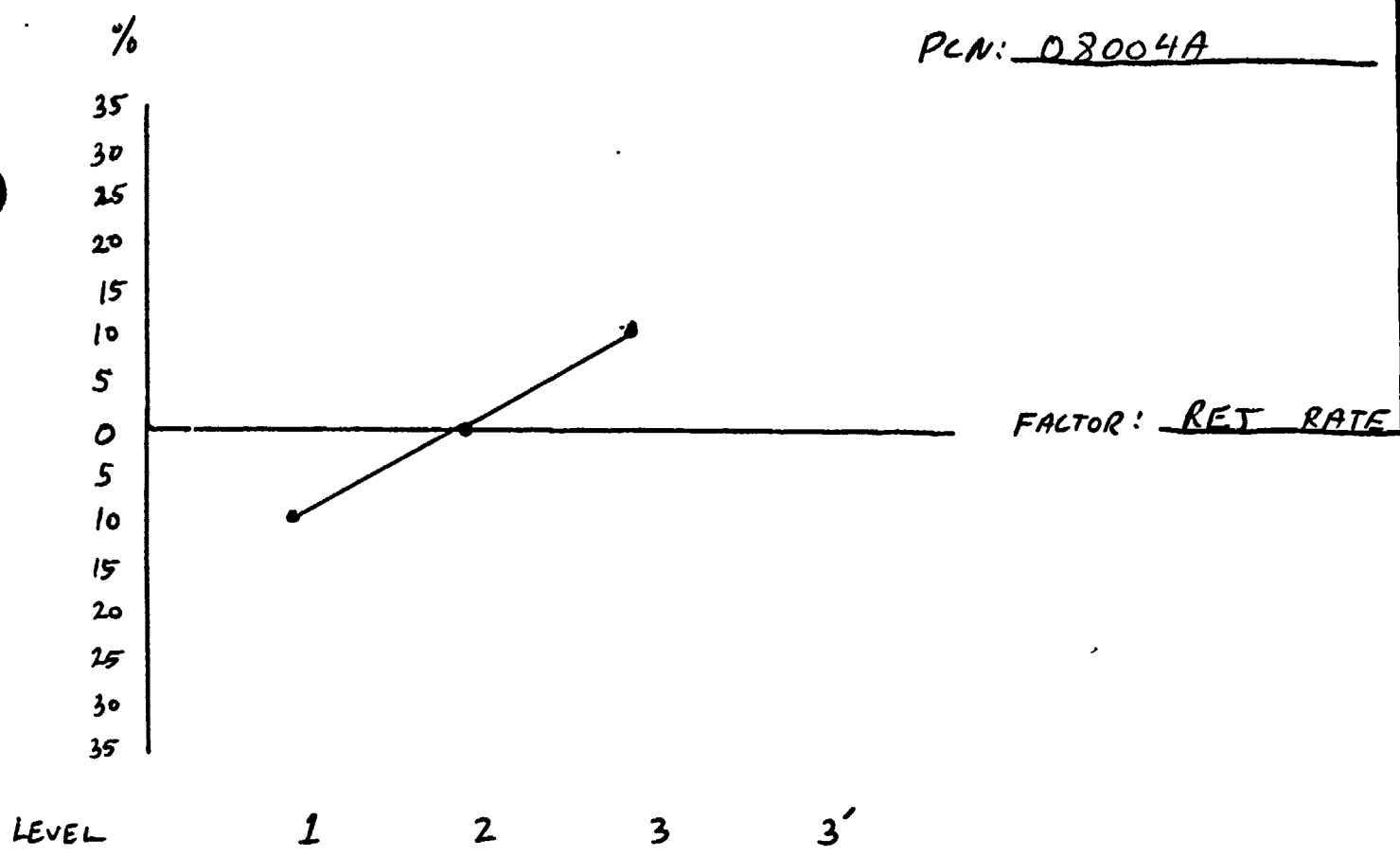
ASSEMBLER TRAINING

$$\text{AS IS: } \bar{R}_{(1)} = 239.69 : -(\bar{X} - \bar{R}_{(1)}) = 5.78 \text{ Hours} \\ 2.5\%$$

$$+ 7 \text{ TND: } \bar{R}_{(2)} = 230.94 : -(\bar{X} - \bar{R}_{(2)}) = ~~2.97~~ -2.97 \text{ Hours} \\ 1.3\%$$

$$+ 7 \text{ UNTND: } \bar{R}_{(3)} = 231.09 : -(\bar{X} - \bar{R}_{(3)}) = -2.82 \text{ Hours} \\ 1.2\%$$

PCN: 08004A



MATPSS

TAGUCHI L₉ ARRAY

PCN: 08005A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
	AS IS	AS IS	FULL	10%	256.17	
2	AS IS	+7 TND	LEVEL	∅	220.60	
3	AS IS	+7 UN TND	EMPTY	5%	225.28	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	239.06	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	245.13	
6	3 SFT/7 DAY LEVEL 2 +	+7 UN TND	FULL	∅	201.04	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	201.04	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	239.06	
9	NEW STANDS	+7 UN TND	LEVEL	10%	250.82	

$$\bar{X} = 230.71$$

08005A

REJECTION RATE

$$0\% : \overline{R_{(0)}} = 207.56 : -(\overline{X} - \overline{R_{(0)}}) = -23.35 \text{ Hours}$$

-10.1%

$$5\% : \overline{R_{(5)}} = 234.47 : -(\overline{X} - \overline{R_{(5)}}) = 3.56 \text{ Hours}$$

1.5%

$$10\% : \overline{R_{(10)}} = 250.71 : -(\overline{X} - \overline{R_{(10)}}) = 19.80 \text{ Hours}$$

8.6%

INDUCTION SCHEDULE

$$\text{FULL} : \overline{R_{(F)}} = 232.09 : -(\overline{X} - \overline{R_{(F)}}) = 1.18 \text{ Hours}$$

.5%

$$\text{EMPTY} : \overline{R_{(E)}} = 223.82 : -(\overline{X} - \overline{R_{(E)}}) = -7.09 \text{ Hours}$$

-3.1%

$$\text{LEVEL} : \overline{R_{(L)}} = 236.83 : -(\overline{X} - \overline{R_{(L)}}) = 5.92 \text{ Hours}$$

2.6%

LEVEL INDUCTIONS CORRECTED

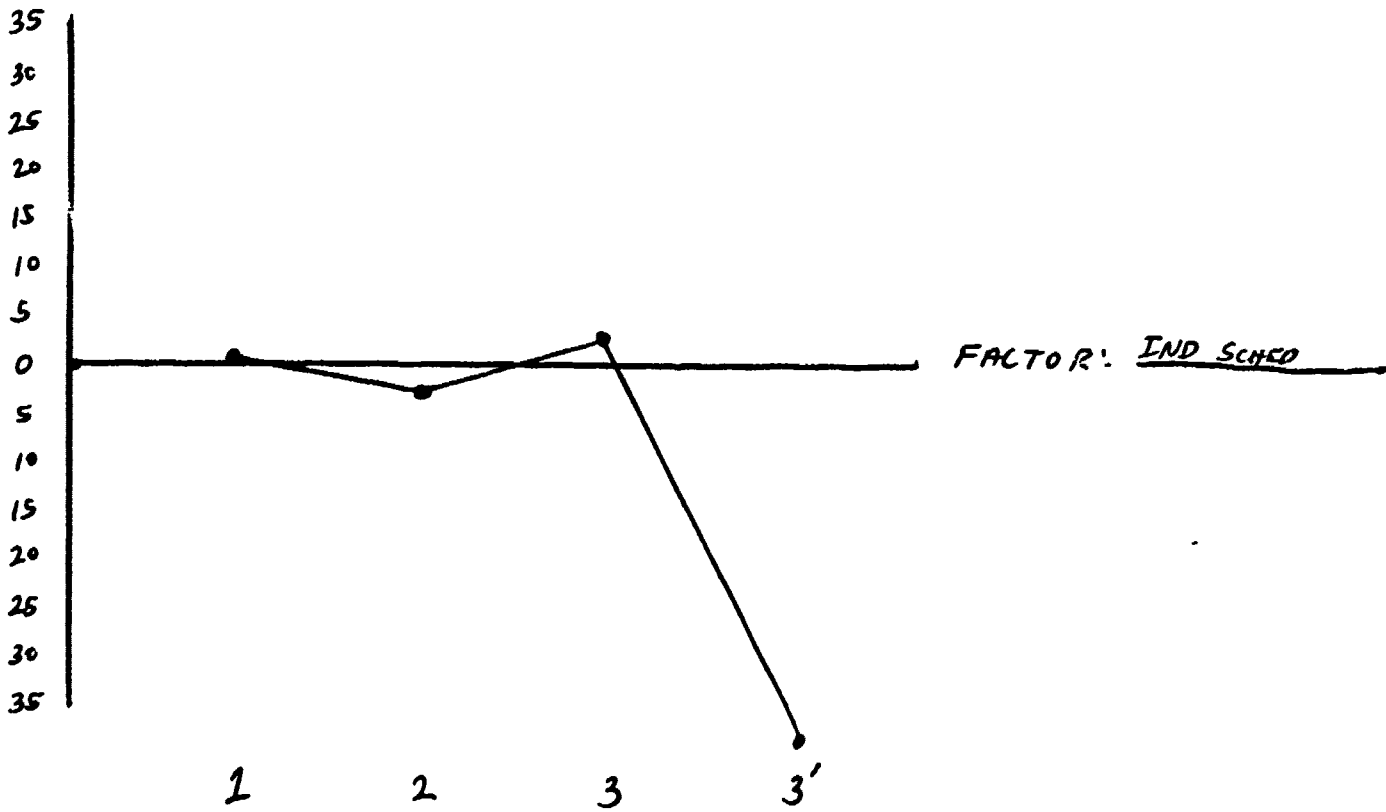
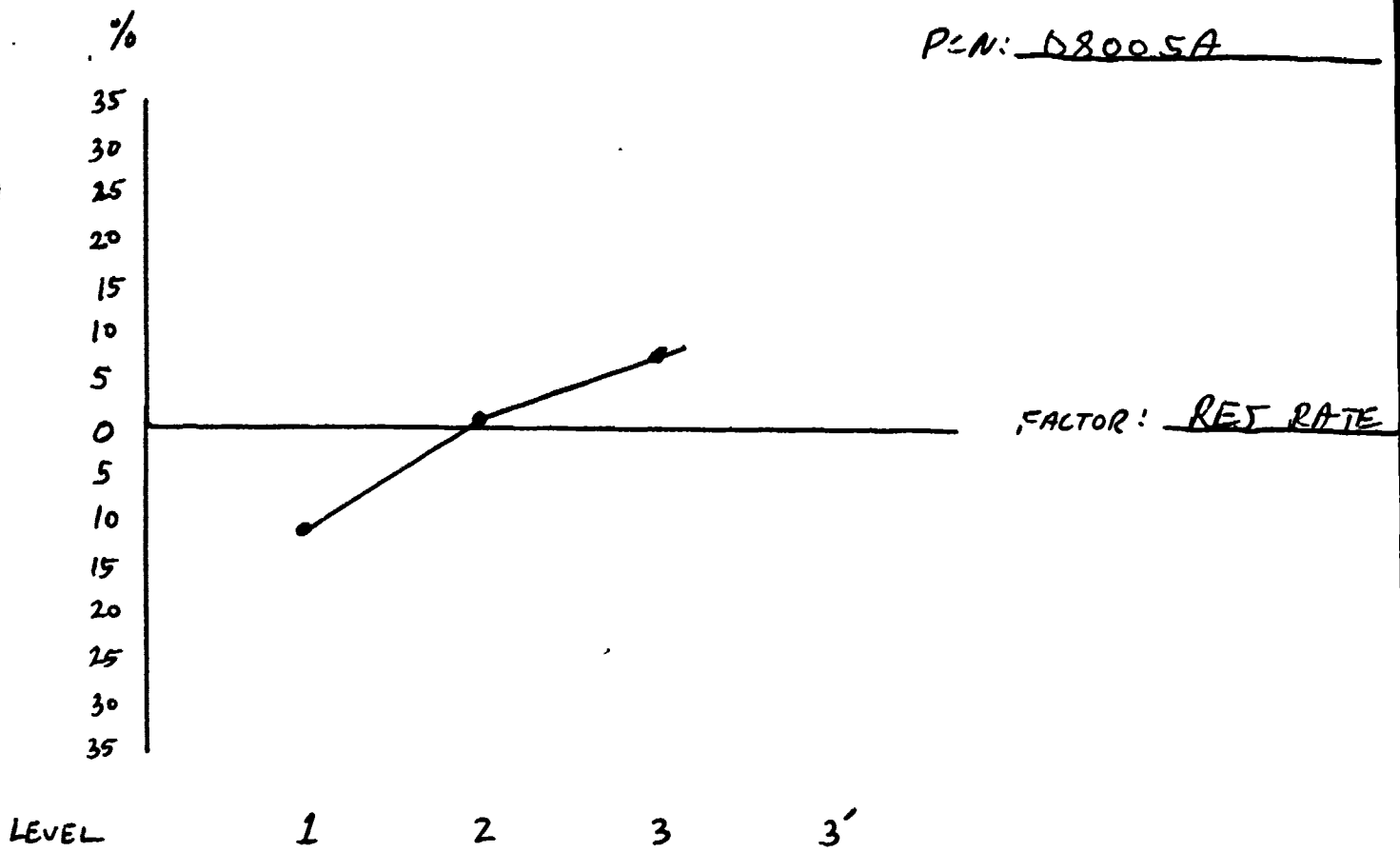
FOR PRE-INDUCTION QUEUING:

$$\overline{R_{(L)}} = 148.99 : -(\overline{X} - \overline{R_{(L)}}) = -81.92 \text{ Hours}$$

-35.5%

NOTE: $R_{(L)} = \text{AVG FLOW TIME} - \text{AVG WORK IN PROCESS QUEUE TIME}$

PCN: D8005A



MATPSS

TAGUCHI L₉ ARRAY

PCN: 08006A

EXP	TEST CAPACITY	ASSEMBLER TNG	INJECTION SCHED.	REJECT RATE	FLOW TIME	S/N db
	AS IS	AS IS	FULL	10%	132.23	
2	AS IS	+7 TND	LEVEL	∅	89.68	
3	AS IS	+7 UN TND	EMPTY	5%	96.96	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	103.86	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	104.37	
6	3 SFT/7 DAY LEVEL 2 +	+7 UN TND	FULL	∅	90.05	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	90.05	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	103.86	
9	NEW STANDS	+7 UN TND	LEVEL	10%	120.08	

$$\bar{X} = 103.46$$

08006A

REJECTION RATE

0%: $\overline{R_{(0)}} = 89.93$	: $-(\bar{X} - \overline{R_{(0)}}) = -13.5$ Hours
	-13.05% $\Omega = -8.24$
5%: $\overline{R_{(5)}} = 101.56$	: $-(\bar{X} - \overline{R_{(5)}}) = -1.9$ Hours
	-1.8% $\Omega = -17.28$
10%: $\overline{R_{(10)}} = 118.89$	: $-(\bar{X} - \overline{R_{(10)}}) = 15.43$ Hours
	14.9% $\Omega = 7.56$

INDUCTION SCHEDULE

FULL: $\overline{R_{(F)}} = 108.71$	: $-(\bar{X} - \overline{R_{(F)}}) = 5.25$ Hours
	5.07% $\Omega = +17.72$
EMPTY: $\overline{R_{(E)}} = 97.0$	: $-(\bar{X} - \overline{R_{(E)}}) = -6.33$ Hours
	-6.2% $\Omega = -11.8$
LEVEL: $\overline{R_{(L)}} = 104.54$	: $-(\bar{X} - \overline{R_{(L)}}) = 1.08$ Hours
	1.04% $\Omega = +19.77$

NOTE: THERE WERE NO ~~08006A~~ PARTS WAITING IN THE WIP QUEUE DURING THESE RUNS.

NOTE: $\Omega = -10 \left[\log_{10} \left(\frac{100}{\%} - 1 \right) \right]$

08006A

TEST CAPACITY

AS IS : $\overline{R_{(1)}} = 106.29$: $-(\overline{X} - \overline{R_{(1)}}) = 2.83$ Hours

2.7% $\Omega = 15.51$

3 SHFT : $\overline{R_{(2)}} = 99.43$: $-(\overline{X} - \overline{R_{(2)}}) = -4.03$ Hours

-4% $\Omega = -13.92$

3 SHFT + EQ : $\overline{R_{(3)}} = 104.66$: $-(\overline{X} - \overline{R_{(3)}}) = 1.20$ Hours

1.2% $\Omega = 19.3$

NOTE: EQUIPMENT ADDED IN LEVEL 3 DOES NOT AFFECT THIS PCU

ASSEMBLER TRAINING

AS IS : $\overline{R_{(1)}} = 108.71$: $-(\overline{X} - \overline{R_{(1)}}) = 5.25$ Hours

5.07% $\Omega = 17.72$

+ 7 TND : $\overline{R_{(2)}} = 99.30$: $-(\overline{X} - \overline{R_{(2)}}) = -4.16$ Hours

-4.02% $\Omega = -13.78$

+ 7 UN TND : $\overline{R_{(3)}} = 102.36$: $-(\overline{X} - \overline{R_{(3)}}) = -1.1$ Hours

1.06% $\Omega = -19.69$

PCN: 08006A

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35
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30
35

FACTOR: TEST CAP

LEVEL

1 2 3 3'

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20
25
30
35

FACTOR: ASBY TNG

1 2 3 3'

PCN: 08006A

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35

FACTOR: RET RATE

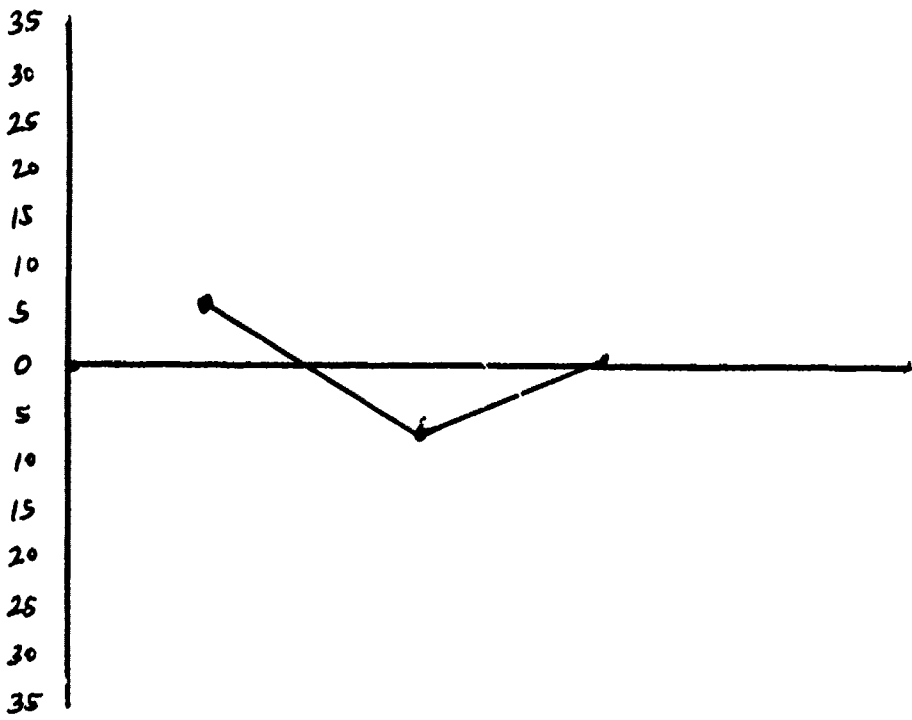
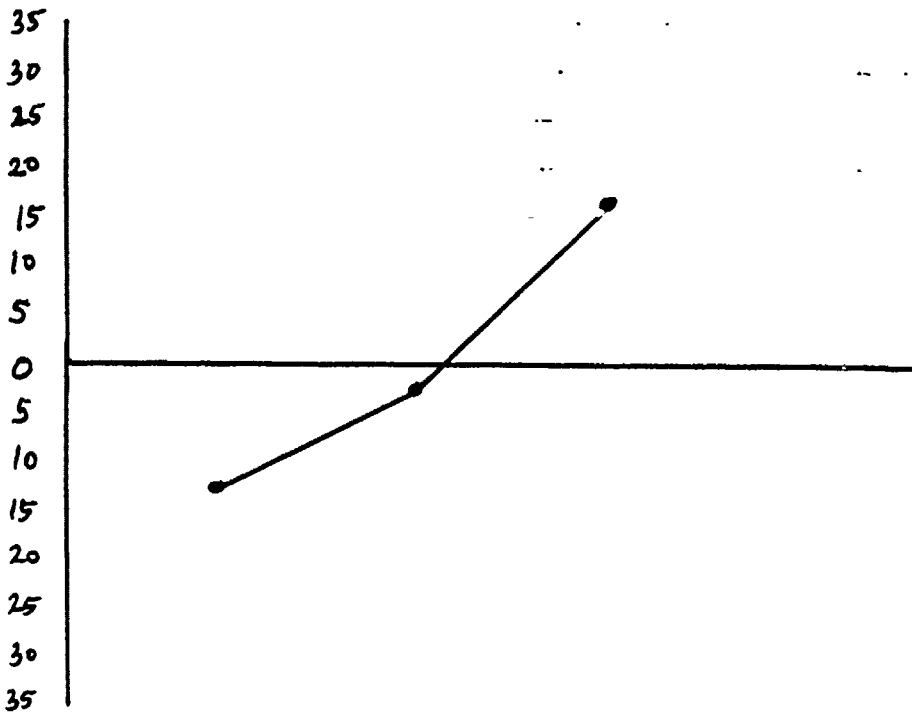
LEVEL

1 2 3 3'

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35

FACTOR: IND SCHED

1 2 3 3'



MATPSS

TAGUCHI L₉ ARRAY

PCN: 08007A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	Flow TIME	S/N db
1	AS IS	AS IS	FULL	10%	376.28	-25.76
2	AS IS	+7 TND	LEVEL	∅	344.70	-25.37
3	AS IS	+7 UN TND	EMPTY	5%	328.44	-25.16
4	3 SFT/7 DAY	AS IS	LEVEL	5%	348.31	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	334.57	-25.24
6	3 SFT/7 DAY LEVEL 2 +	+7 UN TND	FULL	∅	314.95	-24.98
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	314.95	-24.98
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	348.31	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	376.57	-25.76

$$\bar{X} = 343.01$$

08007A

TEST CAPACITY

$$\text{AS IS: } \bar{R}_{(1)} = 349.81 : -(\bar{X} - \bar{R}_{(1)}) = 6.80 \text{ Hours} \\ \text{2\%}$$

$$3 \text{ SHIFT: } \bar{R}_{(2)} = 332.61 : -(\bar{X} - \bar{R}_{(2)}) = -10.4 \text{ Hours} \\ \text{3\%}$$

$$\text{3 SHIFT / EXTRA EQ.: } \bar{R}_{(3)} = 346.61 : -(\bar{X} - \bar{R}_{(3)}) = 3.6 \text{ Hours} \\ \text{1.05\%}$$

NOTE: THE EXTRA TEST EQUIPMENT USED IN LEVEL 3 DOES NOT AFFECT THIS PCN.

ASSEMBLER TRAINING

$$\text{AS IS: } \bar{R}_{(1)} = 346.51 : -(\bar{X} - \bar{R}_{(1)}) = 3.5 \text{ Hours} \\ \text{1.02\%}$$

$$+7 \text{ TRAINED: } \bar{R}_{(2)} = 342.53 : -(\bar{X} - \bar{R}_{(2)}) = -.5 \text{ Hours}$$

$$+7 \text{ UNTRAINED: } \bar{R}_{(3)} = 339.99 : -(\bar{X} - \bar{R}_{(3)}) = -3.02 \\ \text{N/A} \\ \text{.9\%}$$

08007A

REJECTION RATE

$$0\% : \bar{R}_{(0)} = 524.87 : - \left(\bar{X} - \bar{R}_{(0)} \right) = -18.14 \text{ hours}$$

-5.3%

$$5\% : \bar{R}_{(5)} = 341.64 : - \left(\bar{X} - \bar{R}_{(5)} \right) = -1.3 \text{ hours}$$

-1.4%

$$10\% : \bar{R}_{(10)} = 362.47 : - \left(\bar{X} - \bar{R}_{(10)} \right) = 19.46 \text{ hours}$$

5.7%

INDUCTION SCHEDULE

$$\text{FULL SHOP : } \bar{R}_{(F)} = 346.51 : - \left(\bar{X} - \bar{R}_{(F)} \right) = 3.5 \text{ hours}$$

1.02%

$$\text{EMPTY SHOP : } \bar{R}_{(E)} = 330.57 : - \left(\bar{X} - \bar{R}_{(E)} \right) = -12.44 \text{ hours}$$

-3.6%

$$\text{LEVEL INDUCTIONS : } \bar{R}_{(L)} = 356.52 : - \left(\bar{X} - \bar{R}_{(L)} \right) = 13.52 \text{ hours}$$

3.9%

LEVEL INDUCTIONS CORRECTED

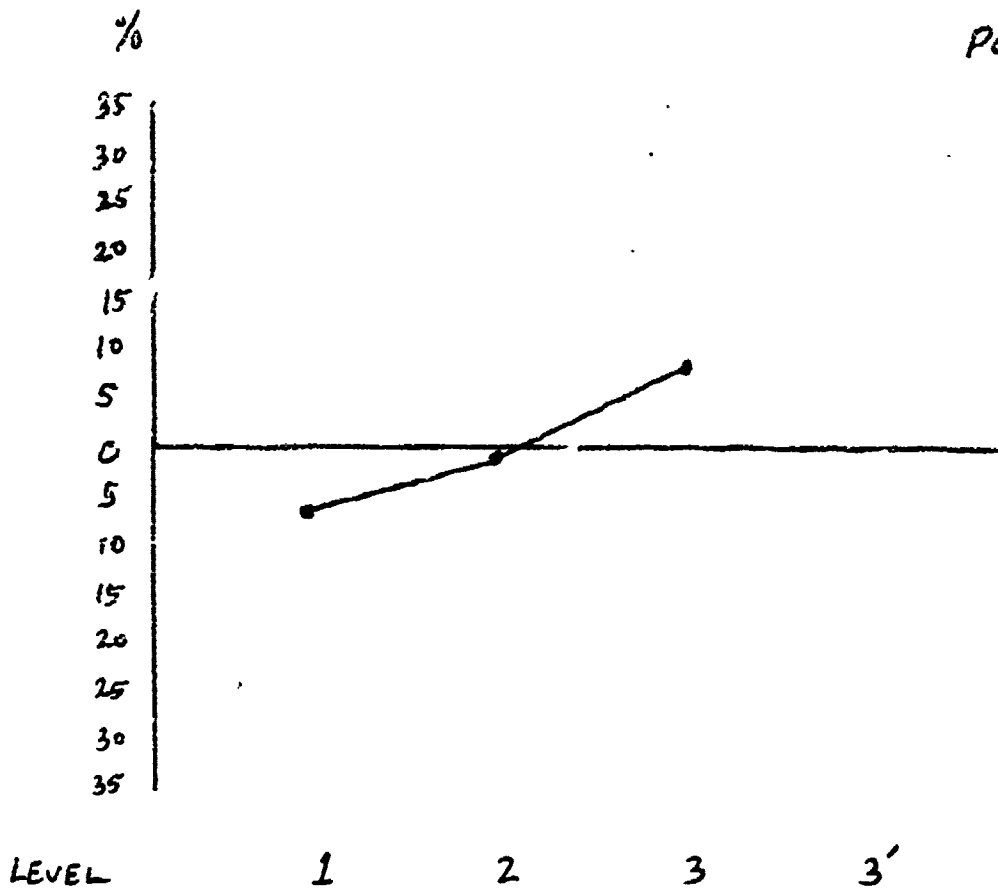
FOR PRE-INDUCTION QUEUING:

$$\bar{R}_{(LC)} = 301.48 : - \left(\bar{X} - \bar{R}_{(LC)} \right) = -41.52 \text{ hours}$$

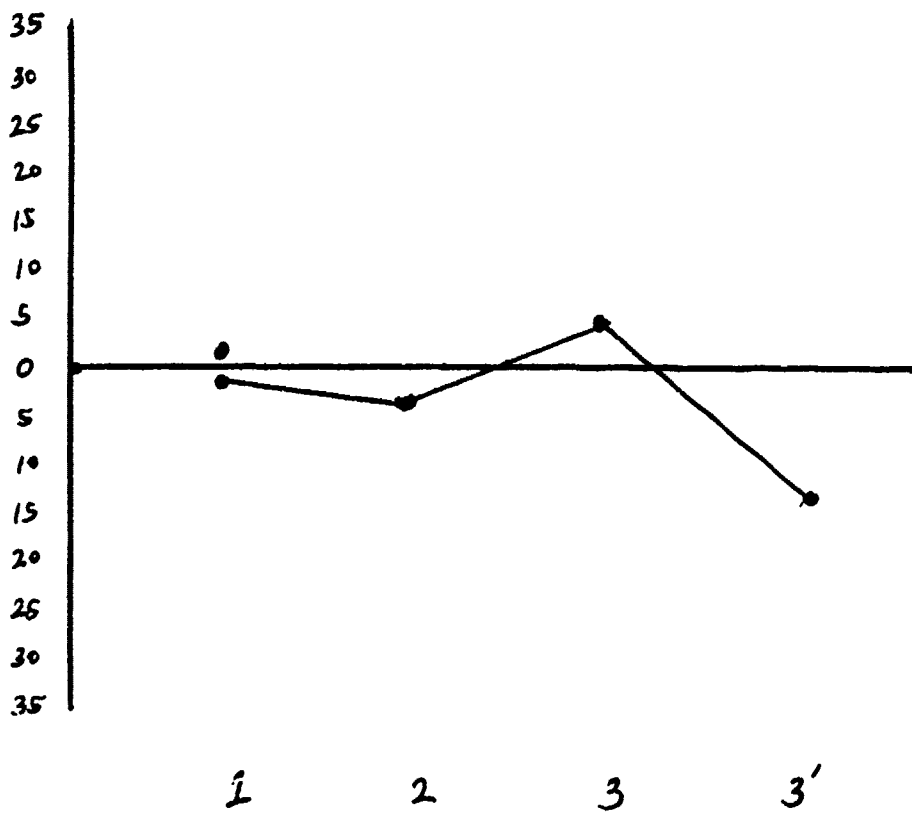
-12.1%

NOTE: $R_{(C)}$ = MAX FLOW TIME - AVG WORK-IN-PROCESS WAITING TIME
MAX FLOW TIME WAS USED INSTEAD OF AVERAGE FLOW TIME
BECAUSE WIP WAIT TIMES IN EXP #9 ACTUALLY EXCEEDED
AVG FLOW TIMES.

PCN: 08007A



FACTOR: RES RATE



FACTOR: IND SCHED

MAT PSS

TAGUCHI L₉ ARRAY

PCN: 04542A

EXP	TEST CAPACITY	ASSEMBLER TNG	DURATION SCHED.	REJECT RATE	FLOW TIME	S/N db
	AS IS	AS IS	FULL	10%		47.77
2	AS IS	+7 TND	LEVEL	∅		43.68
3	AS IS	+7 UN TND	EMPTY	5%		46.03
4	3 SFT/7 DAY	AS IS	LEVEL	5%		45.48
5	3 SFT/7 DAY	+7 TND	EMPTY	10%		46.69
6	3 SFT/7 DAY	+7 UN TND	FULL	∅		43.62
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅		43.62
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%		45.43
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%		47.13

$$\bar{X} = 45.49$$

04542 A

REJECTION RATE

0% : $\overline{R}_{(0)} = 43.64$

: $-(\bar{X} - \overline{R}_{(0)}) = -1.85$ Hours
-4.1%

5% : $\overline{R}_{(5)} = 45.63$

: $-(\bar{X} - \overline{R}_{(5)}) = .14$ Hours
.3%

10% : $\overline{R}_{(10)} = 47.2\phi$

: $-(\bar{X} - \overline{R}_{(10)}) = 1.71$ Hours
3.8%

INDUCTION SCHEDULE

FULL : $\overline{R}_{(F)} = 45.61$

: $-(\bar{X} - \overline{R}_{(F)}) = .12$ Hours
.3%

EMPTY : $\overline{R}_{(E)} = 45.45$

: $-(\bar{X} - \overline{R}_{(E)}) = -.04$ Hours

LEVEL : $\overline{R}_{(L)} = 45.41$

: $-(\bar{X} - \overline{R}_{(L)}) = -.08$ Hours
N/A

NOTE: THERE WERE NO 04542A PARTS IN THE WIP QUEUE DURING THESE RUNS

PCN: 04542A

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35

FACTOR: RES RATE

LEVEL

1 2 3 3'

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25
30
35

FACTOR: _____

1 2 3 3'

MATPSS

TAGUCHI L₉ ARRAY

PCN: 10588A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	41.93 45.57	
2	AS IS	+7 TND	LEVEL	∅	38.21	
3	AS IS	+7 UN TND	EMPTY	5%	42.22	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	39.60	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	43.64	
6	3 SFT/7 DAY	+7 UN TND	FULL	∅	36.96	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	36.96	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	39.60	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	43.99	

$$\bar{X} = 40.35$$

PCN: 10598A

%

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15
10
5
0
5
10
15
20
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30
35

FACTOR: REJ RATE

LEVEL

1 2 3 3'

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15
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0
5
10
15
20
25
30
35

FACTOR: _____

1 2 2 3'

10598 A

TEST CAPACITY

AS IS	: $\overline{R_{(1)}} = 40.79$: $-(\bar{X} - \overline{R_{(1)}}) = .44$ Hours
		1.1%
3 SHFT	: $\overline{R_{(2)}} = 40.07$	: $-(\bar{X} - \overline{R_{(2)}}) = -.28$ Hours
		.7%
3 SHFT + EQ.	: $\overline{R_{(3)}} = 40.18$	: $-(\bar{X} - \overline{R_{(3)}}) = -.17$ Hours
		.4%

NOTE: THE EQUIPMENT ADDED IN LEVEL 3 DOES NOT AFFECT THIS PLAN

~~ASSEMBLER TRAINING~~
ASSEMBLER TRAINING

AS IS	: $\overline{R_{(1)}} = 39.5$	: $-(\bar{X} - \overline{R_{(1)}}) = -.85$ Hours
		2.1%
+7 TND	: $\overline{R_{(2)}} = 40.48$	: $-(\bar{X} - \overline{R_{(2)}}) = .13$ Hours
		.3%
+7 UNTND	: $\overline{R_{(3)}} = 41.06$	: $-(\bar{X} - \overline{R_{(3)}}) = .71$ Hours
		1.8%

10598A

REJECTION RATE

$$\begin{aligned} 0\% : \overline{R_{(0)}} = 37.38 & \quad : -(\overline{X} - \overline{R_{(0)}}) = -2.97 \text{ Hours} \\ & \quad \quad \quad -7.4\% \\ 5\% : \overline{R_{(5)}} = 40.47 & \quad : -(\overline{X} - \overline{R_{(5)}}) = .12 \text{ Hours} \\ & \quad \quad \quad .3\% \\ 10\% : \overline{R_{(10)}} = 43.19 & \quad : -(\overline{X} - \overline{R_{(10)}}) = 2.84 \text{ Hours} \\ & \quad \quad \quad 7.03\% \end{aligned}$$

INDUCTION SCHEDULE

$$\begin{aligned} \text{FULL} : \overline{R_{(F)}} = 39.5 & \quad : -(\overline{X} - \overline{R_{(F)}}) = -1.85 \text{ Hours} \\ & \quad \quad \quad 2\% \\ \text{EMPTY} : \overline{R_{(E)}} = 40.94 & \quad : -(\overline{X} - \overline{R_{(E)}}) = .59 \text{ Hours} \\ & \quad \quad \quad 1.5\% \\ \text{LEVEL} : \overline{R_{(L)}} = 40.6 & \quad : -(\overline{X} - \overline{R_{(L)}}) = .25 \text{ Hours} \\ & \quad \quad \quad .62\% \end{aligned}$$

NOTE: NO 10598A PARTS WAITED IN THE WIP QUEUE DURING THESE RUNS.

MAT PSS

TAGUCHI L₉ ARRAY

PCN: 10718A

EXP	TEST CAPACITY	ASSEMBLER TNG	INJECTION SCHED.	REJECT RATE	FLOW TIME	S/N JB
1	AS IS	AS IS	FULL	10%	75.87	
2	AS IS	+7 TND	LEVEL	0	56.56	
3	AS IS	+7 UN TND	EMPTY	5%	68.04	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	66.92	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	74.37	
6	3 SFT/7 DAY LEVEL 2 +	+7 UN TND	FULL	0	58.75	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	0	58.75	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	66.92	
9	NEW STANDS	+7 UN TND	LEVEL	10%	75.27	

$$\bar{X} = 66.83$$

10718A

TEST CAPACITY

AS IS : $\overline{R_{(1)}} = 66.82$: $-(\bar{X} - \overline{R_{(1)}}) = -.01$ Hours

3 SHFT : $\overline{R_{(2)}} = 66.68$: $-(\bar{X} - \overline{R_{(2)}}) = -.15$ Hours
N/A

3 SHFT + EQ : $\overline{R_{(3)}} = 66.98$: $-(\bar{X} - \overline{R_{(3)}}) = .15$ Hours
2%
2%

NOTE: THE EQUIPMENT ADDED IN LEVEL 3 DOES NOT AFFECT THIS PEN

ASSEMBLER TRAINING

AS IS : $\overline{R_{(1)}} = 67.18$: $-(\bar{X} - \overline{R_{(1)}}) = .35$ Hours
.5%

+7 TND : $\overline{R_{(2)}} = 65.95$: $-(\bar{X} - \overline{R_{(2)}}) = -.88$
1.3%

+7 UNTND : $\overline{R_{(3)}} = 67.35$: $-(\bar{X} - \overline{R_{(3)}}) = .53$
.8%

10718A

REJECTION RATE

$$0\% : \overline{R_{(0)}} = 58.02 : -(\overline{X} - \overline{R_{(0)}}) = -8.81 \text{ Hours}$$

-13.2%

$$5\% : \overline{R_{(5)}} = 67.29 : -(\overline{X} - \overline{R_{(5)}}) = .47 \text{ Hours}$$

.7%

$$10\% : \overline{R_{(10)}} = 75.17 : -(\overline{X} - \overline{R_{(10)}}) = 8.34 \text{ Hours}$$

12.43%

INDUCTION SCHEDULE

$$\text{FULL: } \overline{R_{(F)}} = 67.18 : -(\overline{X} - \overline{R_{(F)}}) = .35 \text{ Hours}$$

.5%

$$\text{EMPTY: } \overline{R_{(E)}} = 67.05 : -(\overline{X} - \overline{R_{(E)}}) = .23 \text{ Hours}$$

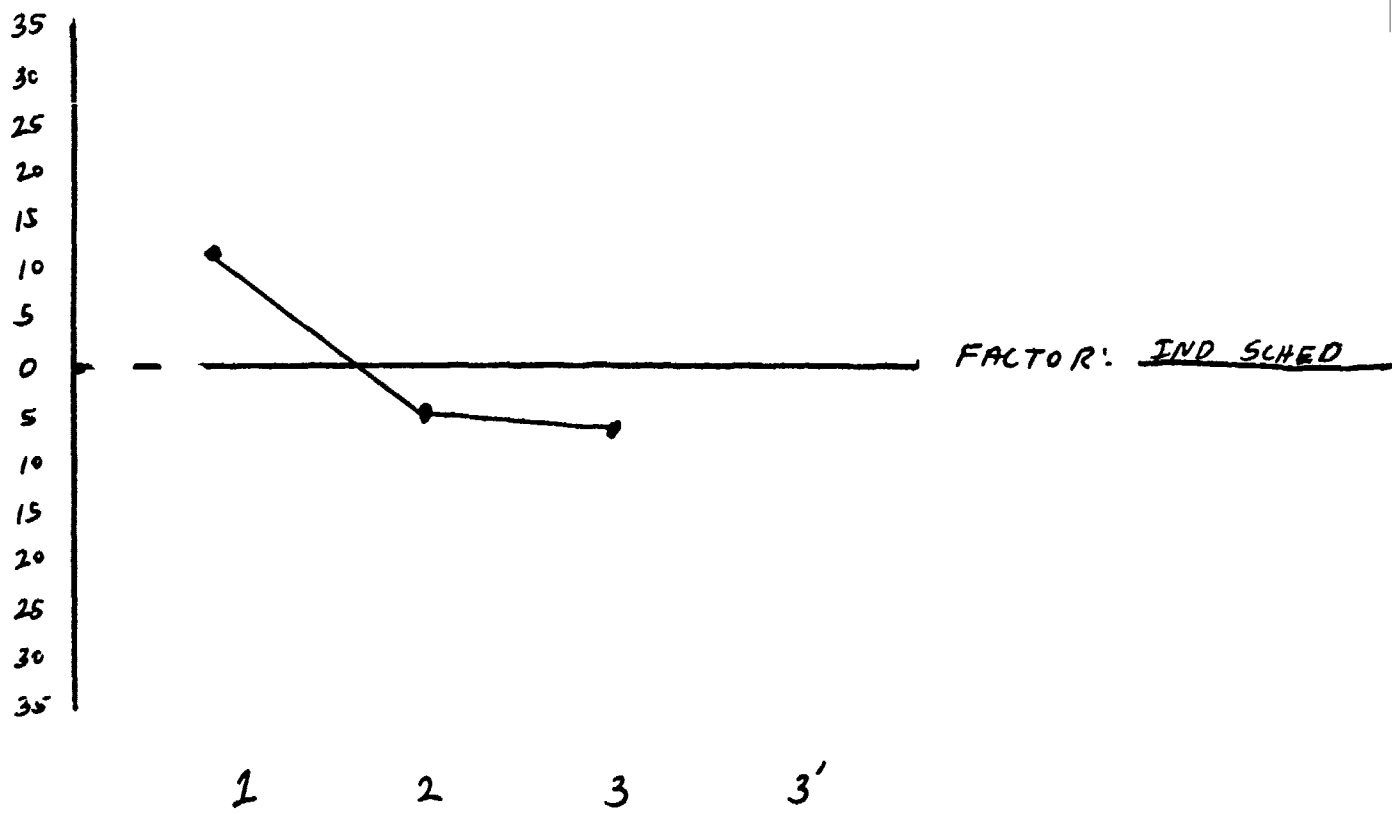
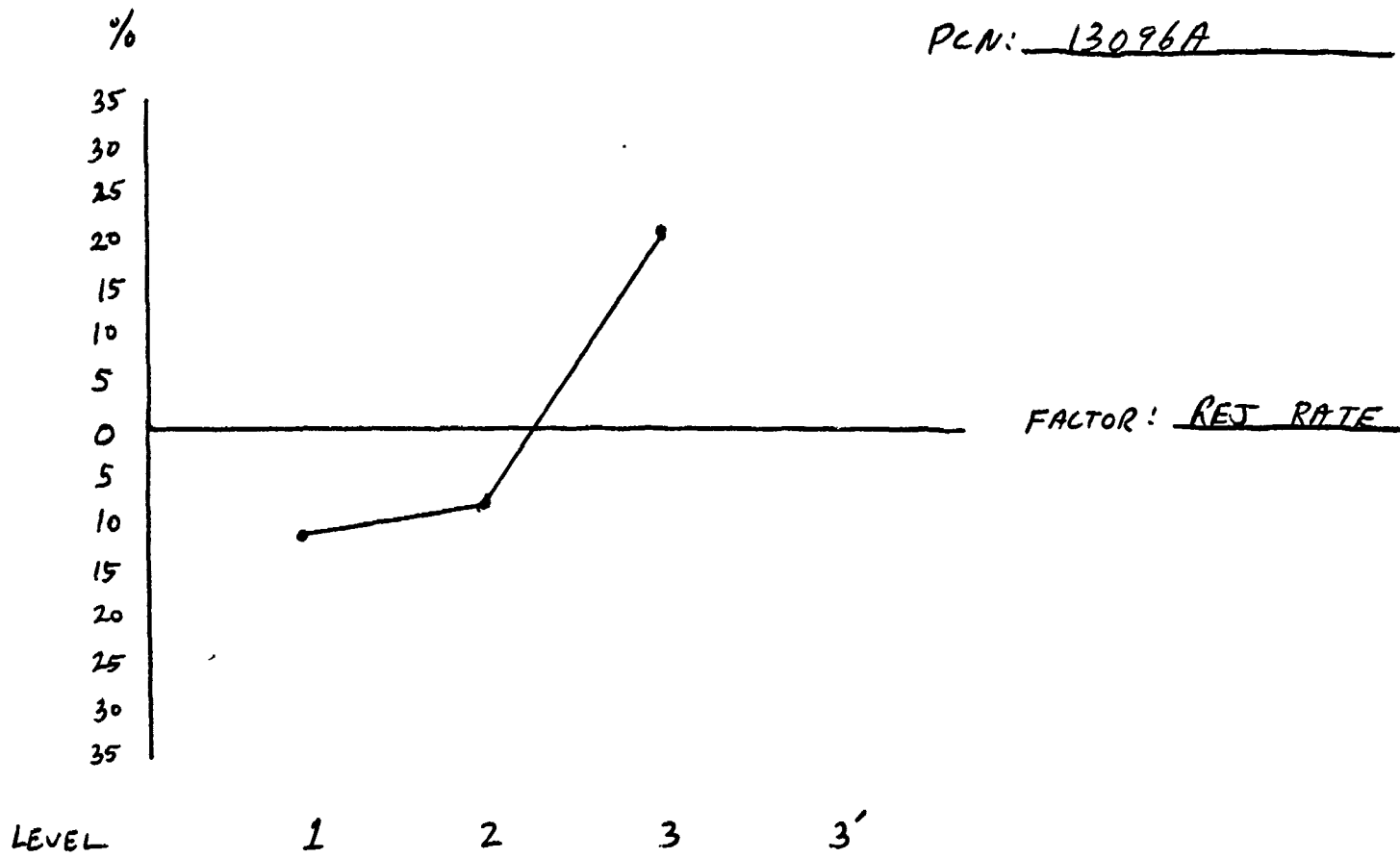
.3%

$$\text{LEVEL: } \overline{R_{(L)}} = 66.25 : -(\overline{X} - \overline{R_{(L)}}) = .58 \text{ Hours}$$

.9%

NOTE: NO 10718A PARTS WAITED IN THE WIP QUEUE DURING THESE RUNS.

PCN: 13096A



PCN: 10718A

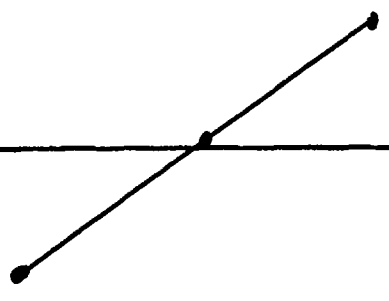
%

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35

LEVEL

1 2 3 3'

FACTOR: RET RATE



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25
30
35

1 2 3 3'

FACTOR: _____

MAT PSS

TAGUCHI L₉ ARRAY

PCN: 12712A

EXP	<u>TEST CAPACITY</u>	<u>ASSEMBLER TNG</u>	<u>INDUCTION SCHED.</u>	<u>REJECT RATE</u>	<u>FLOW TIME</u>	<u>S/N db</u>
	AS IS	AS IS	FULL	10%	235.56	
2	AS IS	+7 TND	LEVEL	∅	236.21	
3	AS IS	+7 UN TND	EMPTY	5%	235.23 261.43	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	256.95	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	232.27	
6	3 SFT/7 DAY	+7 UN TND	FULL	∅	235.73	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	∅	235.73	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	256.95	
9	NEW STANDS	+7 UN TND	LEVEL	10%	271.41	

$$\bar{X} = 258.03$$

12712A

REJECTION RATE

$$0\%: \overline{R_{(0)}} = 235.89 : -(\overline{X} - \overline{R_{(0)}}) = -22.14 \text{ Hours}$$

-8.6%

$$5\%: \overline{R_{(5)}} = 258.44 : -(\overline{X} - \overline{R_{(5)}}) = .42 \text{ Hours}$$

.2%

$$10\%: \overline{R_{(10)}} = 279.75 : -(\overline{X} - \overline{R_{(10)}}) = 21.72 \text{ Hours}$$

8.4%

INDUCTION SCHEDULE

$$\text{FULL} : \overline{R_{(F)}} = 259.41 : -(\overline{X} - \overline{R_{(F)}}) = 1.39 \text{ Hours}$$

.5%

$$\text{EMPTY} : \overline{R_{(E)}} = 259.81 : -(\overline{X} - \overline{R_{(E)}}) = 1.78 \text{ Hours}$$

.7%

$$\text{LEVEL} : \overline{R_{(L)}} = 254.86 : -(\overline{X} - \overline{R_{(L)}}) = -3.17 \text{ Hours}$$

1.2%

LEVEL INDUCTIONS

~~LEVEL INDUCTIONS~~ CORRECTED

FOR PRE-INDUCTION QUEUING:

$$\overline{R_{(L)}} = 219.32 : -(\overline{X} - \overline{R_{(L)}}) = -38.70 \text{ Hours}$$

-15%

NOTE: $R_{(L)} = \text{AVG FLOWTIME} - \text{AVG WORK IN PROCESS QUEUE TIME}$

12712A

TEST CAPACITY

$$\text{AS IS: } \overline{R_{(1)}} = 261.07 : -(\overline{X} - \overline{R_{(1)}}) = 3.04 \text{ Hours} \\ 1.2\%$$

$$3 \text{ SHFT: } \overline{R_{(2)}} = 258.32 : -(\overline{X} - \overline{R_{(2)}}) = .29 \text{ Hours} \\ .1\%$$

$$3 \text{ SHFT} \\ + \text{ EQ: } \overline{R_{(3)}} = 254.70 : -(\overline{X} - \overline{R_{(3)}}) = -3.33 \text{ Hours} \\ -1.3\%$$

NOTE: THE EQUIPMENT ADDED IN LEVEL 3 DOES AFFECT THIS RUN

ASSEMBLER TRAINING

$$\text{AS IS: } \overline{R_{(1)}} = 259.41 : -(\overline{X} - \overline{R_{(1)}}) = 1.39 \text{ Hours} \\ .5\%$$

$$+ 7 \text{ TND: } \overline{R_{(2)}} = 258.48 : -(\overline{X} - \overline{R_{(2)}}) = .45 \text{ Hours} \\ .2\%$$

$$+ 7 \text{ UNTND: } \overline{R_{(3)}} = 256.19 : -(\overline{X} - \overline{R_{(3)}}) = -1.84 \text{ Hours} \\ -.7\%$$

PCN: 12712A

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FACTOR: RET RATE

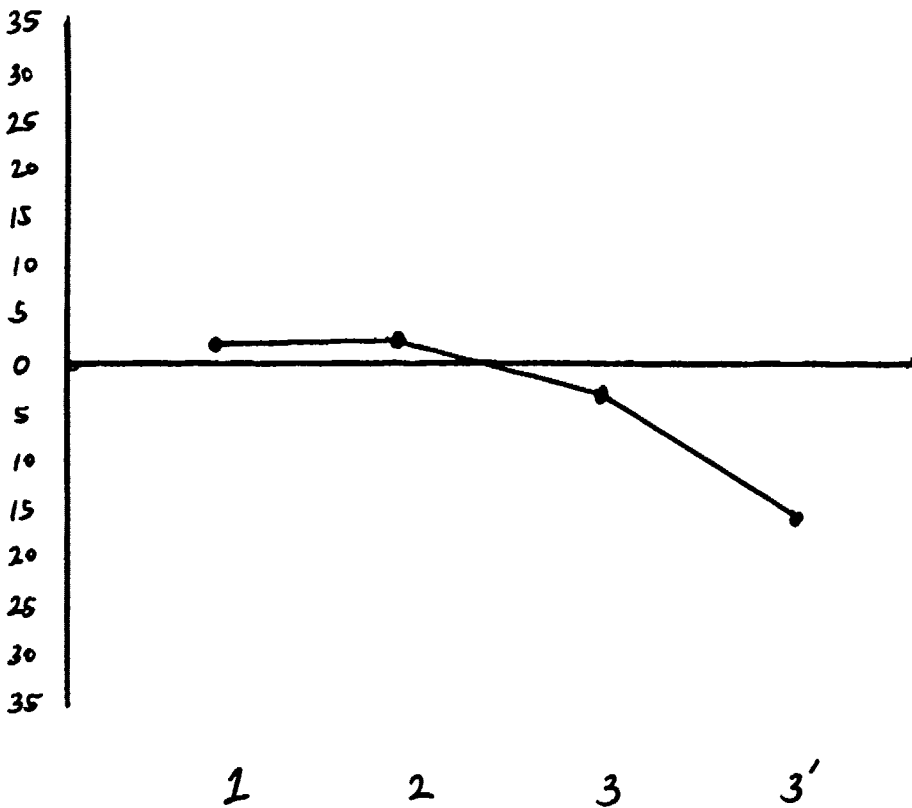
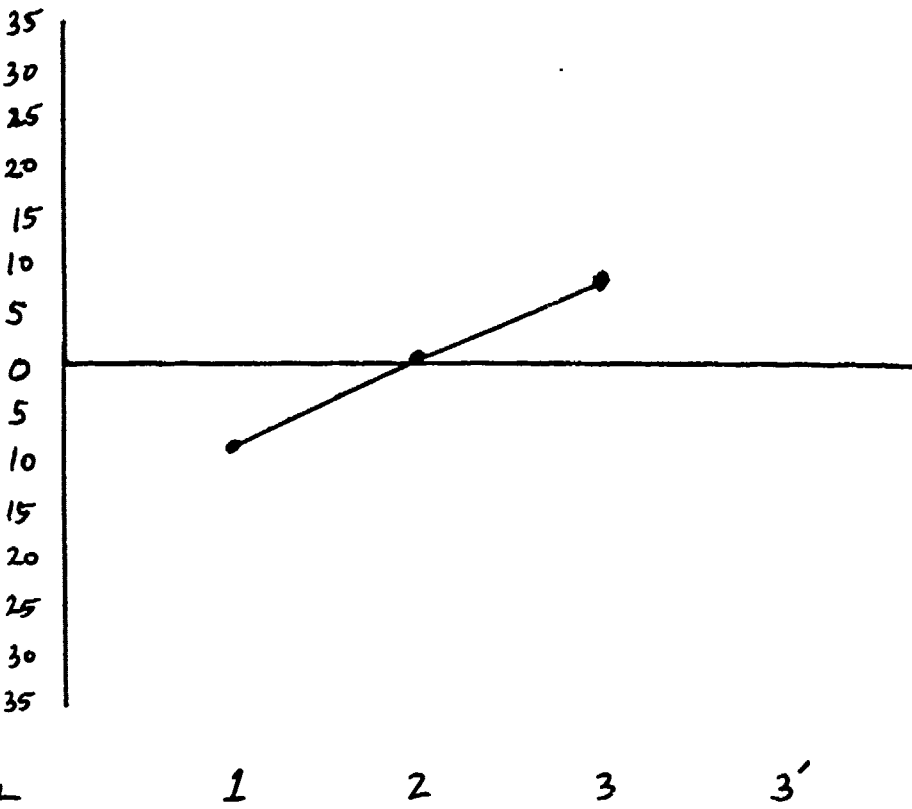
LEVEL

1 2 3 3'

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30
35

FACTOR: IND SCHED

1 2 3 3'



MAT PSS

TAGUCHI L; ARRAY

PCN: 13096A

S/N	TEST CAPACITY	ASSEMBLER TNG	INJECTION SCHED.	REJECT RATE	FLOW TIME	S/N JB
1	AS IS	AS IS	FULL	10%	105.19	-20.02
2	AS IS	+7 TND	LEVEL	Ø	62.28	-17.94
3	AS IS	+7 UN TND	EMPTY	5%	64.08	-18.06
4	3 SFT/7 DAY	AS IS	LEVEL	5%	61.72	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	70.30	-18.47
6	3 SFT/7 DAY	+7 UN TND	FULL	Ø	42.60 59.47	-16.29
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	Ø	59.47	-17.74
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	61.72	
9	NEW STANDS	+7 UN TND	LEVEL	10%	66.83	-18.25

$$\bar{X} = 67.90$$

13096 A

TEST CAPACITY

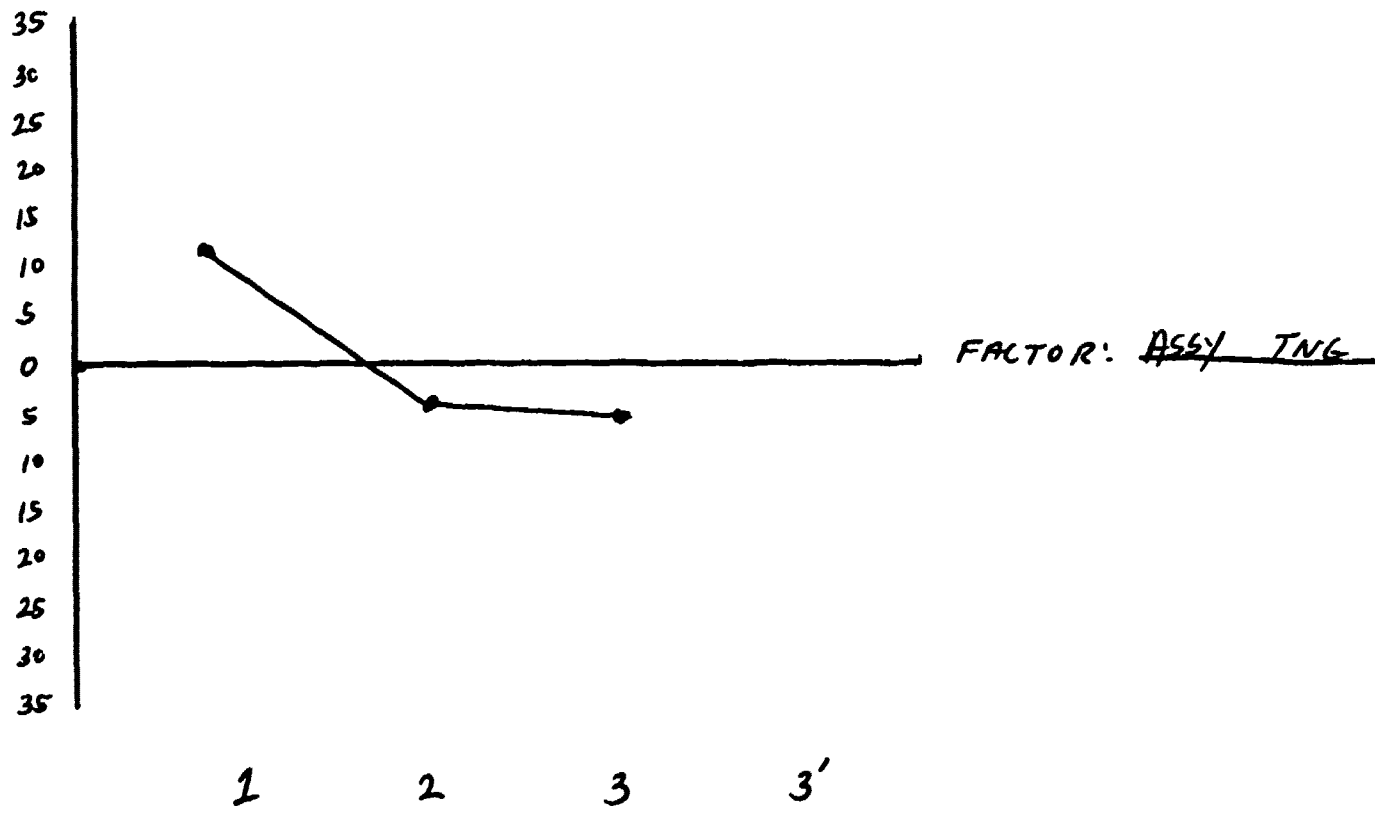
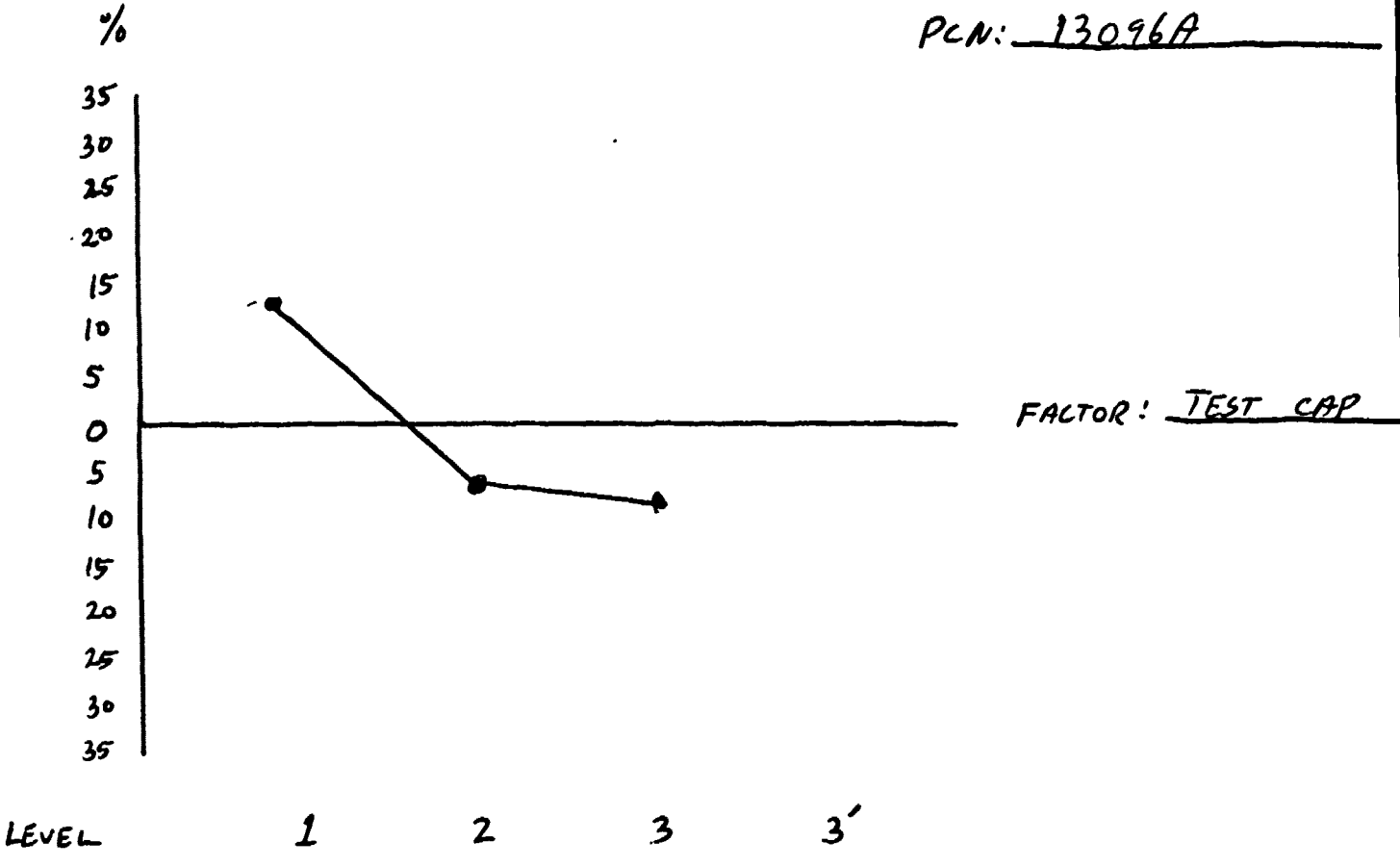
$$\begin{aligned} \text{AS IS} : \overline{R_{(1)}} = 77.18 : -(\bar{X} - \overline{R_{(1)}}) &= 9.28 \text{ Hours} \\ & \quad 13.7\% \\ \text{3 SHFT} : \overline{R_{(2)}} = 63.83 : -(\bar{X} - \overline{R_{(2)}}) &= -4.07 \text{ Hours} \\ & \quad -6\% \\ \text{3 SHFT +} \\ \text{EQ.} : \overline{R_{(3)}} = 62.67 : -(\bar{X} - \overline{R_{(3)}}) &= -5.23 \text{ Hours} \\ & \quad -8\% \end{aligned}$$

NOTE: THE EQUIPMENT ADDED IN LEVEL 3 AFFECTS THIS PCT.

ASSEMBLER TRAINING

$$\begin{aligned} \text{AS IS} : \overline{R_{(1)}} = 75.46 : -(\bar{X} - \overline{R_{(1)}}) &= 7.56 \text{ Hours} \\ & \quad 11.1\% \\ \text{+7 TND} : \overline{R_{(2)}} = 64.77 : -(\bar{X} - \overline{R_{(2)}}) &= -3.13 \text{ Hours} \\ & \quad -4.6\% \\ \text{+7 UNTND} : \overline{R_{(3)}} = 63.46 : -(\bar{X} - \overline{R_{(3)}}) &= -4.44 \text{ Hours} \\ & \quad -6.5\% \end{aligned}$$

PCN: 13096A



10.0

EXPERIMENTATION

The factors and levels developed in the brainstorming session were fitted into a Taguchi L₉ orthogonal array for model experimentation. The use of this array reduced the number of runs required from 81 to 9.

10.1 ORTHOGONAL ARRAY

Table # 10.1 is the orthogonal array used to design the experimentation for this ACC.

TAGUCHI L₉ ARRAY
FACTORS

EXPERIMENT #	1 TEST CAPACITY	2 ASSEMBLER TRAINING	3 INDUCTION SCHEDULE	4 TEST REJECTION
1	AS IS	AS IS	RANDOM IND. FULL SHOP	10% (AS IS)
2	AS IS	+7 ASSEMBLERS TRAINED	LEVEL INDUCTIONS	0% REJECTS
3	AS IS	+7 ASSEMBLERS UNTRAINED	RANDOM IND. EMPTY SHOP	5% REJECTS
4	3 SHIFTS - 7 DAYS/WK	AS IS	LEVEL INDUCTIONS	5% REJECTS
5	3 SHIFTS - 7 DAYS/WK	+7 ASSEMBLERS TRAINED	RANDOM IND. EMPTY SHOP	AS IS 10% REJECTS
6	3 SHIFTS - 7 DAYS/WK	+7 ASSEMBLERS UNTRAINED	RANDOM IND. FULL SHOP	0% REJECTS
7	3 SHFT/7 DAYS + 2 TEST STANDS	AS IS	RANDOM IND. EMPTY SHOP	0% REJECTS
8	3 SHFT/7 DAYS + 2 TEST STANDS	+7 ASSEMBLERS TRAINED	RANDOM IND. FULL SHOP	5% REJECTS
9	3 SHFT/7 DAYS + 2 TEST STANDS	+7 ASSEMBLERS UNTRAINED	LEVEL INDUCTIONS	AS IS 10% REJECTS

TABLE # 10.1

10.2 CONDUCT OF THE EXPERIMENTS

The experimental runs described in Table 10-1 were conducted on the UDS 2.0 model under normal (AS IS) workload conditions. APPENDIX provides the detailed results of these runs, including response charts and a table of results by PCN. Table 10-2 shows the optimal RCC configuration. It should be noted that only Factor 4 - Rejection Rate - showed significant effects on PCN flowtime. ONLY Factor 3 - INDUCTION SCHEDULE - showed significant effect on PCN Throughput. No signal-to-noise calculations were performed as no noise factors were incorporated into the array.

OPTIMAL CONFIGURATION

FACTOR :	1	2	3	4
LEVEL :	3	2	3	2

TABLE 10-2

10.2.1 SURGE

The RCC was modeled under surge workload conditions as well as normal. Surge figures for PCN inductions were based on data provided by HQ-DFLC. Given the extremely flat responses from factors 1 and 2, and the linear response of factor 4, no orthogonal array was deemed necessary for surge experiments. Three surge runs were conducted; one at optimal configuration, one at optimal with factor 3 - INDUCTION SCHEDULE - SET AT LEVEL 1 (to test the effect on throughput) and one at the AS IS (Baseline) configuration. The results are detailed in appendix —.

10.3 RESULTS SUMMARY - NORMAL WORKLOAD

- FLOW TIME WAS LARGELY UNAFFECTED BY CHANGES IN TEST CAPACITY OR ASSEMBLER TRAINING. IN SPITE OF THE INTUITIVE FEELING OF MATASS SUPERVISION - THESE AREAS ARE NOT BOTTLENECKS IN THE 'AS IS' PROCESS.
- REJECTION RATE HAD A MAJOR, LINEAR AFFECT ON FLOW TIME FOR ALL PARTS. Any reduction in REJECT RATE OR OPERATION TIMES WILL RELIABLY PRODUCE A CORRESPONDING REDUCTION IN FLOWTIME FOR THAT PCN.
- THE INDUCTION SCHEDULE HAD VERY LITTLE EFFECT ON OVERALL PCN FLOW TIME. WHEN PRE-INDUCTION QUEUE TIMES WERE SUBTRACTED, HOWEVER, FLOWTIMES FOR SEVERAL PCNS DROPPED DRAMATICALLY UNDER LEVEL INDUCTIONS. ADDITIONALLY, THROUGHPUT (UNAFFECTED BY ANY OTHER FACTOR) WAS SIGNIFICANTLY IMPROVED UNDER LEVEL INDUCTIONS. PARTS MOVED THROUGH THE SYSTEM MUCH MORE QUICKLY AND RELIABLY UNDER LEVEL INDUCTIONS.
- ALTHOUGH NO INTERACTIONS WERE SPECIFICALLY MODELED, A MILD INTERACTION APPEARS TO EXIST BETWEEN TEST CAPACITY - LEVEL 2 (SHIFT WORK) AND REJECTION RATES. USE OF EXTENDED SHIFTS, COUPLED WITH A REDUCTION IN REJECT RATE CAN BE EXPECTED TO CAUSE A DECREASE IN FLOW TIME GREATER THAN THE SUM OF THE CHANGES.

10.4 RESULTS SUMMARY - SURGE WORKLOAD.

- UNDER SURGE WORKLOAD, FLOW TIMES INCREASED for all PCs. Small but significant queues formed at a variety of operations. While test stands were critical for most parts, manpower appeared to be the most critical resource. The tight manpower situation tended to exacerbate 'e queues for each piece of equipment.
- The Taguchi optimum configuration performed better than the AS 15 configuration under surge workloads. The additional manpower, equipment and reduced rejection rate produced significant improvements in both flowtime and throughput. Even the Taguchi configuration, however, was overloaded under the surge workload.
- Using the same maximum work-in-progress ^(M_{WIP}) figures (Levelled Inductions) as were applied to the AS 15 workload, resulted in problems. While flowtimes remained at their AS 15 levels, throughput dropped from 96.8% (Taguchi optimum with unlevelled inductions) to 92.3% (Taguchi optimum with levelled inductions). These M_{WIP} levels, selected to approximate process capacity at normal work loads, are too restrictive to handle surge. A more detailed experiment using various M_{WIP} levels would be necessary to gain the full benefit of levelled inductions at surge.

10.5 CONCLUSIONS & RECOMMENDATIONS

While improvements in RCC operation can be obtained by adding additional equipment and/or manpower, the most attractive improvements can be obtained by adjusting the induction schedule. If further experimentation were performed, the UOOS 2.0 model could be used to determine the exact capacity of the RCC in the AS 15 configuration. If inductions were adjusted to meet this capacity, a more balanced line would result. If the induction line were balanced.

10.5 cont.

a Just - In - Time (JIT) parts flow could be developed. This would result in an optimum flowtime and throughput, with a minimum amount of inventory and work in process, thus, giving a substantial decrease in cost with no requirement for capital investment. If the overall capacity under this method is still not sufficient, shift work and additional manpower should be added before new capital equipment is purchased.

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APPENDIX

EXPERIMENTAL RESULTS SUMMARY FABER (Flow Hours per Run)

EXPERIMENTAL

RUN. N^o. 1.

	08004A	08005A	08006A	08007A	08042A	10578A	10717A	12372A	13076A	THROUGH PUT
1	266.93	256.17	132.23	376.28	47.77	41.93	75.87	285.56	105.17	98.7%
2	212.57	220.60	87.68	344.70	43.68	38.21	56.56	236.21	62.28	101%
3	226.39	225.28	96.96	328.44	46.03	42.22	68.04	261.43	64.08	97.5%
4	237.89	239.06	103.86	348.31	45.43	39.60	66.92	256.95	61.72	102%
5	242.37	245.13	104.37	334.57	46.69	43.64	74.37	282.27	70.30	96.9%
6	214.24	201.04	90.05	314.95	43.62	36.96	58.75	235.73	59.47	97.5%
7	214.24	201.04	90.05	314.95	43.62	36.96	58.75	235.73	59.47	97.5%
8	237.89	239.06	103.86	348.31	45.43	39.60	66.92	256.95	61.72	102%
9	252.14	250.82	120.08	376.57	47.13	42.99	75.27	271.41	66.83	101%
SURGE 1	280.25	293.24	112.05	359.94	47.97	46.66	61.48	273.65	105.58	92.3%
SURGE 2	964.92	1534.35	247.80	529.03	49.74	48.99	62.12	346.61	191.82	96.2%
SURGE 3	1492.87	2550.16	750.18	1109.63	67.02	69.68	82.21	532.33	292.93	93.5%

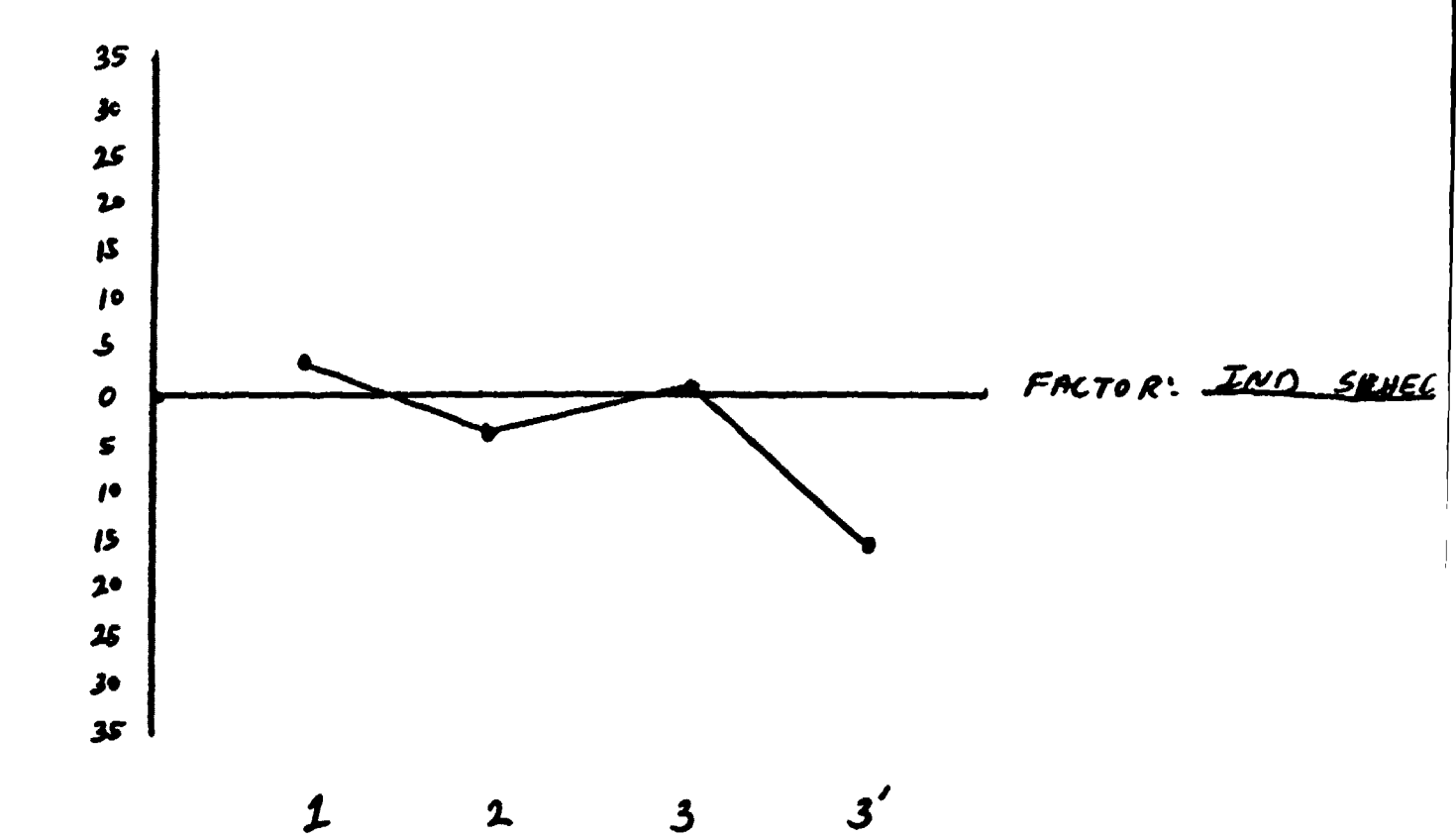
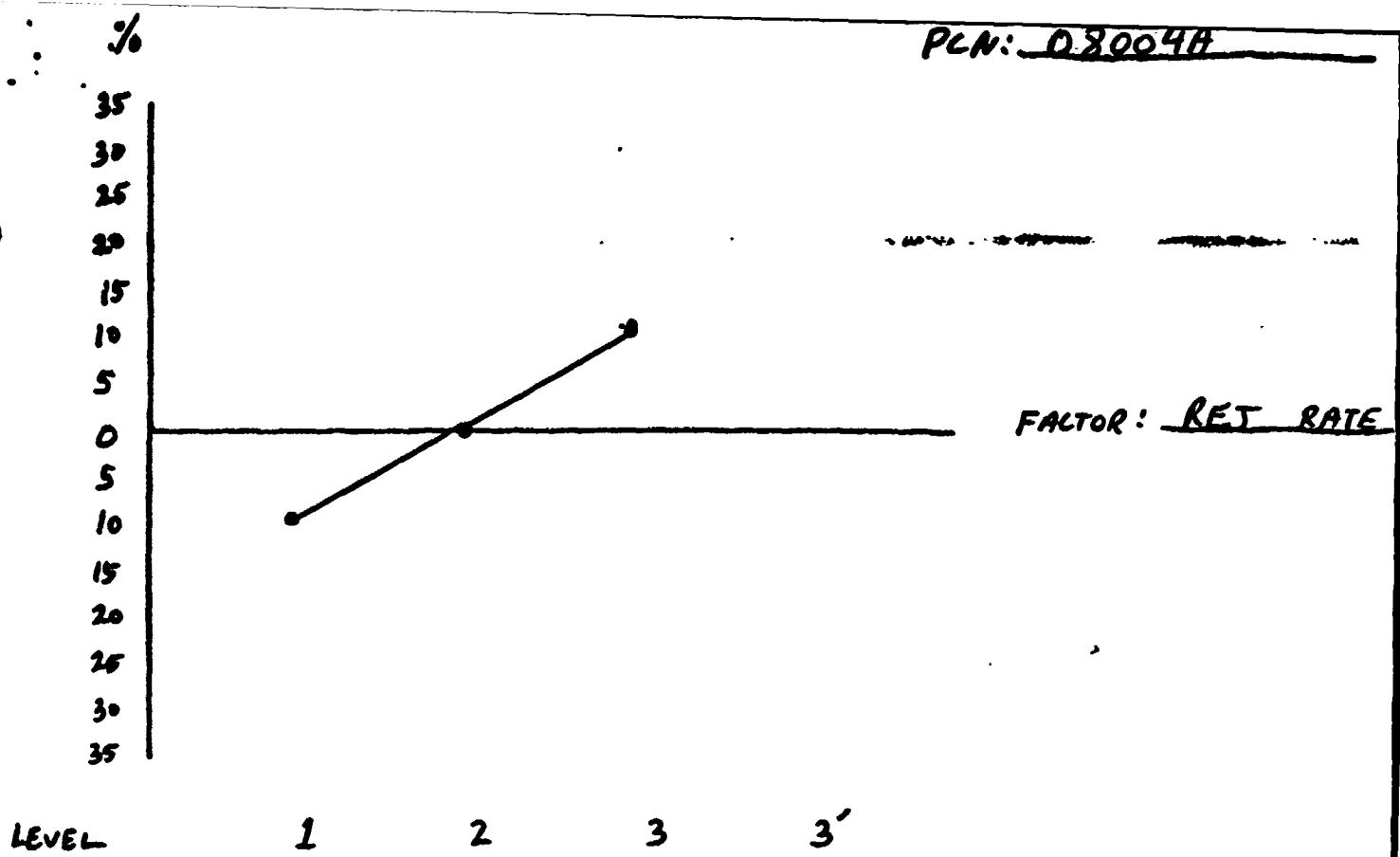
MAT PSS

TAGUCHI L₉ ARRAY

PCN: 08004A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/AI db
1	AS IS	AS IS	FULL	10%	266.93	
2	AS IS	+7 TND	LEVEL	Ø	212.57	
3	AS IS	+7 UN TND	EMPTY	5%	226.39	
4	3 SPT/7 DAY	AS IS	LEVEL	5%	237.89	
5	3 SPT/7 DAY	+7 TND	EMPTY	10%	242.37	
6	3 SPT/7 DAY LEVEL 2 +	+7 UN TND	FULL	Ø	214.24	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	Ø	214.24	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	237.89	
9	NEW STANDS	+7 UN TND	LEVEL	10%	252.64	

$$\bar{X} = 233.91$$



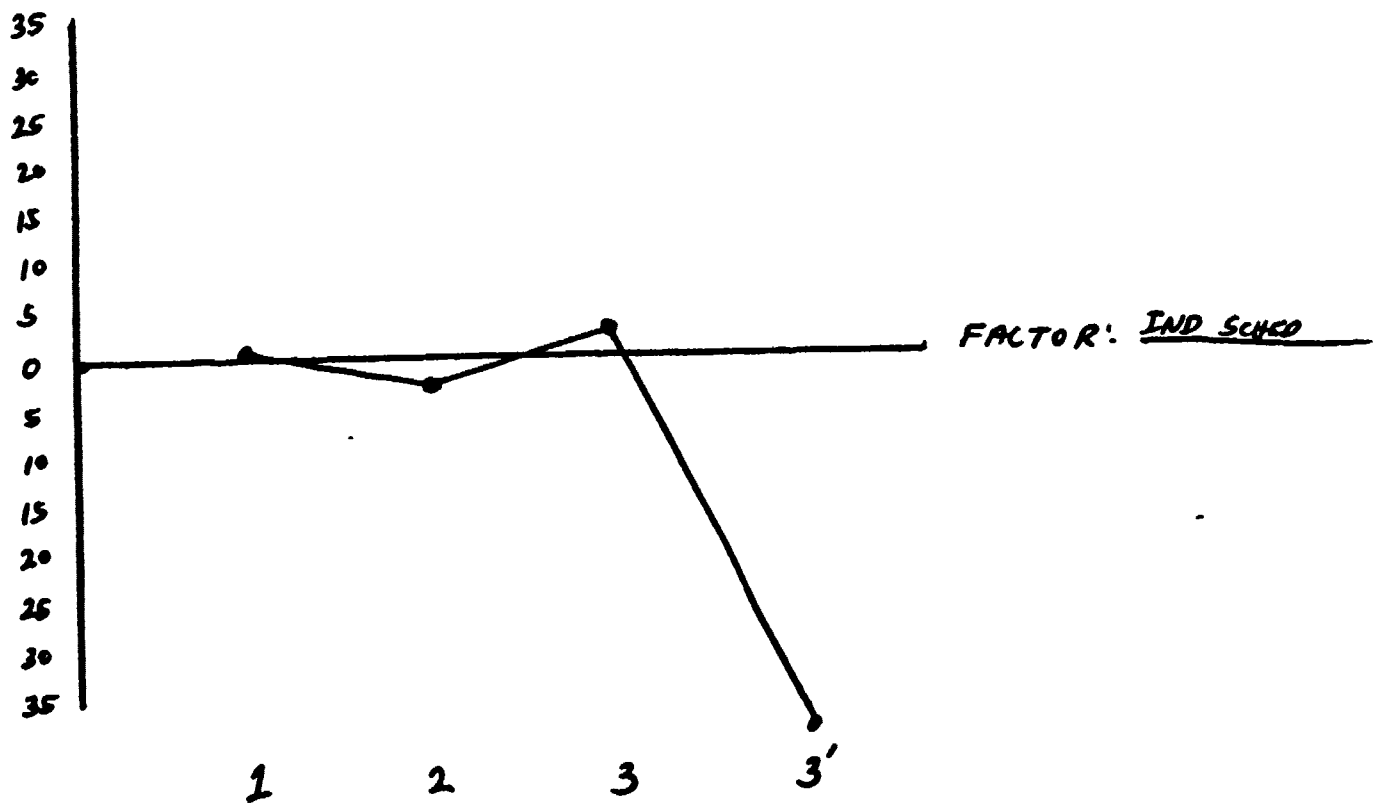
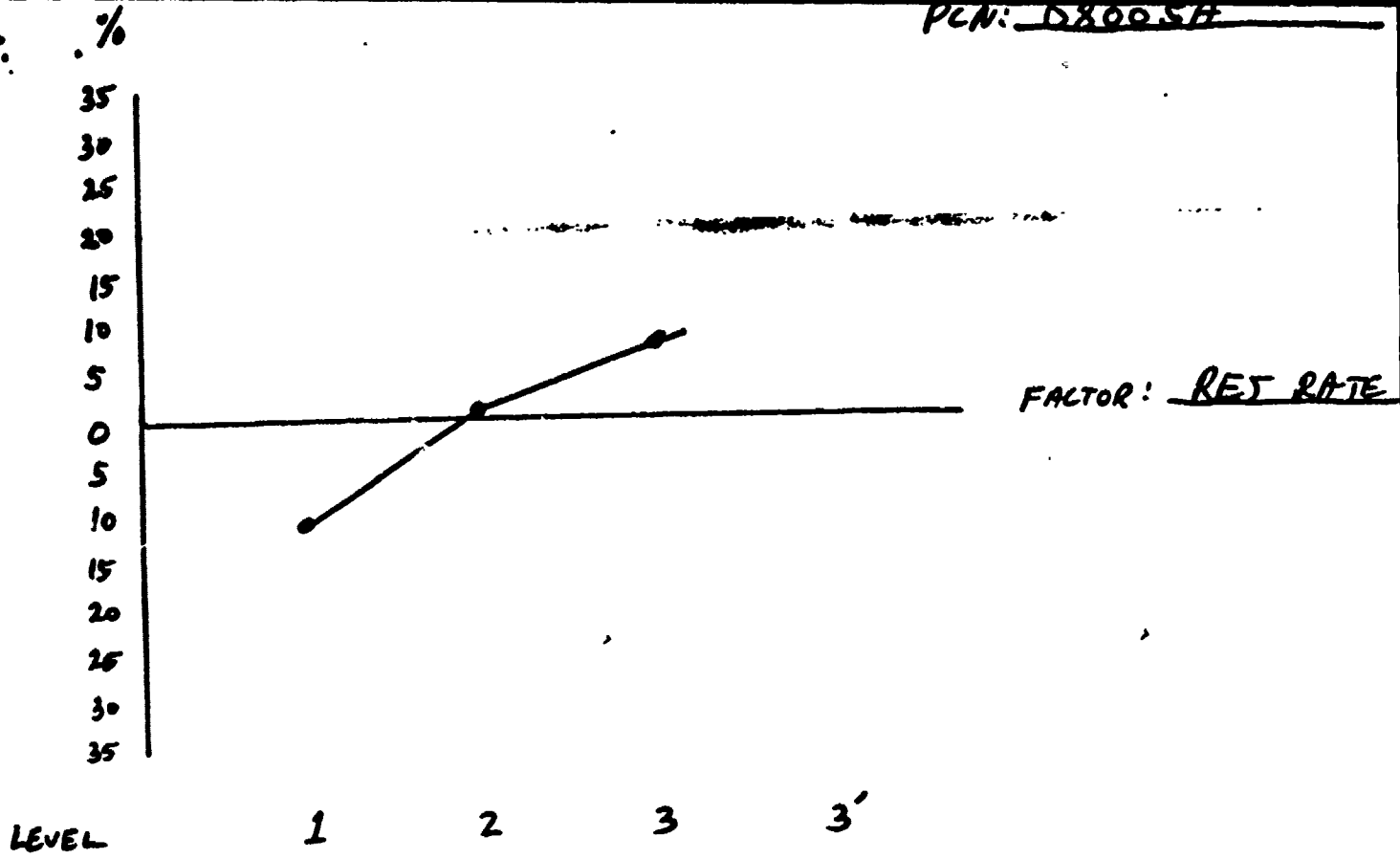
MAT PSS

TAGUCHI L₉ ARRAY

PCN: 08005A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	256.17	
2	AS IS	+7 TND	LEVEL	0	220.60	
3	AS IS	+7 UN TND	EMPTY	5%	225.28	
4	3 SPT/7 DAY	AS IS	LEVEL	5%	239.06	
5	3 SPT/7 DAY	+7 TND	EMPTY	10%	245.13	
6	3 SPT/7 DAY LEVEL 2 +	+7 UN TND	FULL	0	201.04	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	0	201.04	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	239.06	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	250.82	

$$\bar{X} = 230.91$$



MATPSS

TAGUCHI ~~and~~ ARRAY

PCN: 08006A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	Flow TIME	S/N db
1	AS IS	AS IS	FULL	10%	132.23	
2	AS IS	+7 TND	LEVEL	0	39.68	
3	AS IS	+7 UN TND	EMPTY	5%	96.96	
4	3 SPT/7 DAY	AS IS	LEVEL	5%	103.36	
5	3 SPT/7 DAY	+7 TND	EMPTY	10%	104.37	
6	3 SPT/7 DAY	+7 UN TND	FULL	0	90.05	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	0	90.05	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	103.86	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	120.08	

$$\bar{X} = 103.46$$

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LEVEL

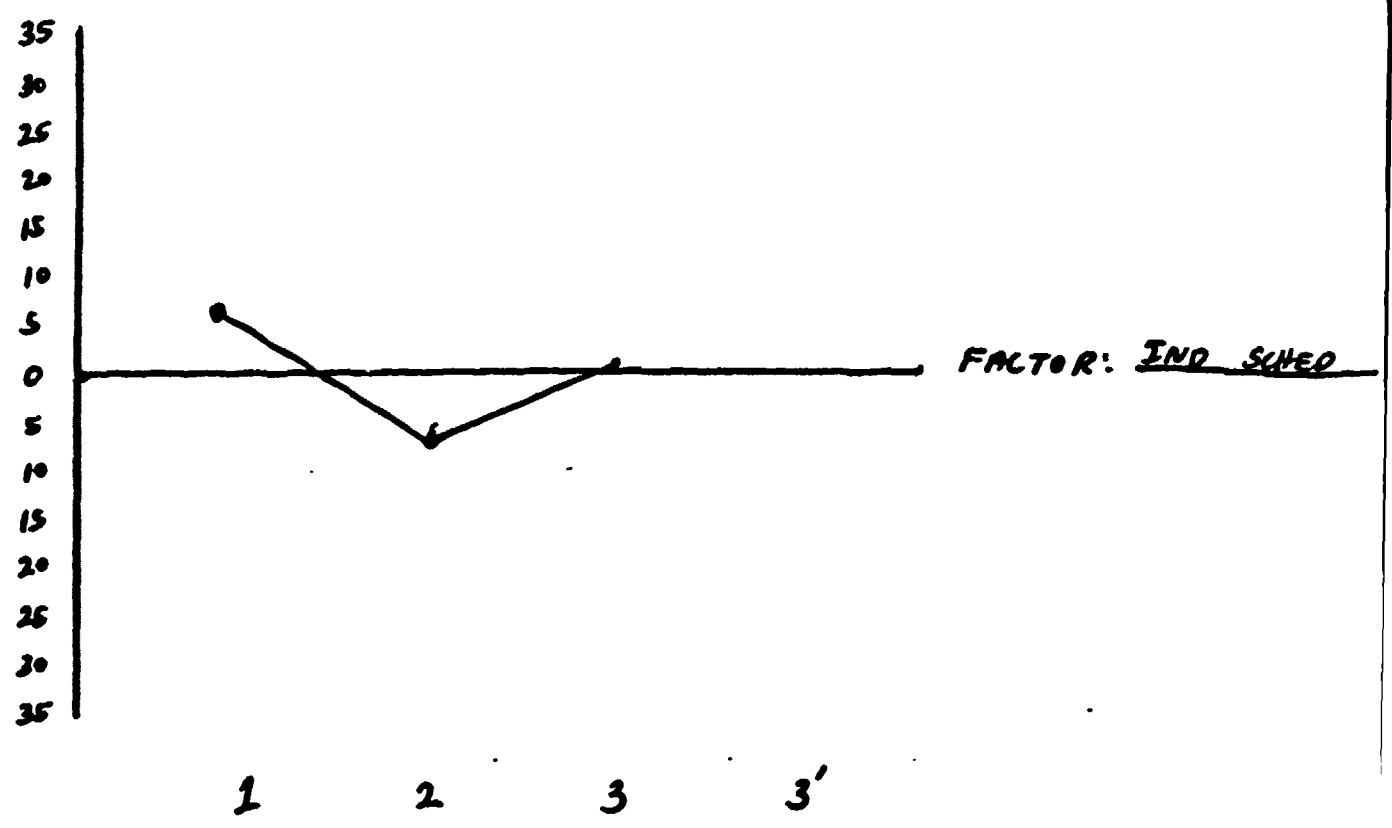
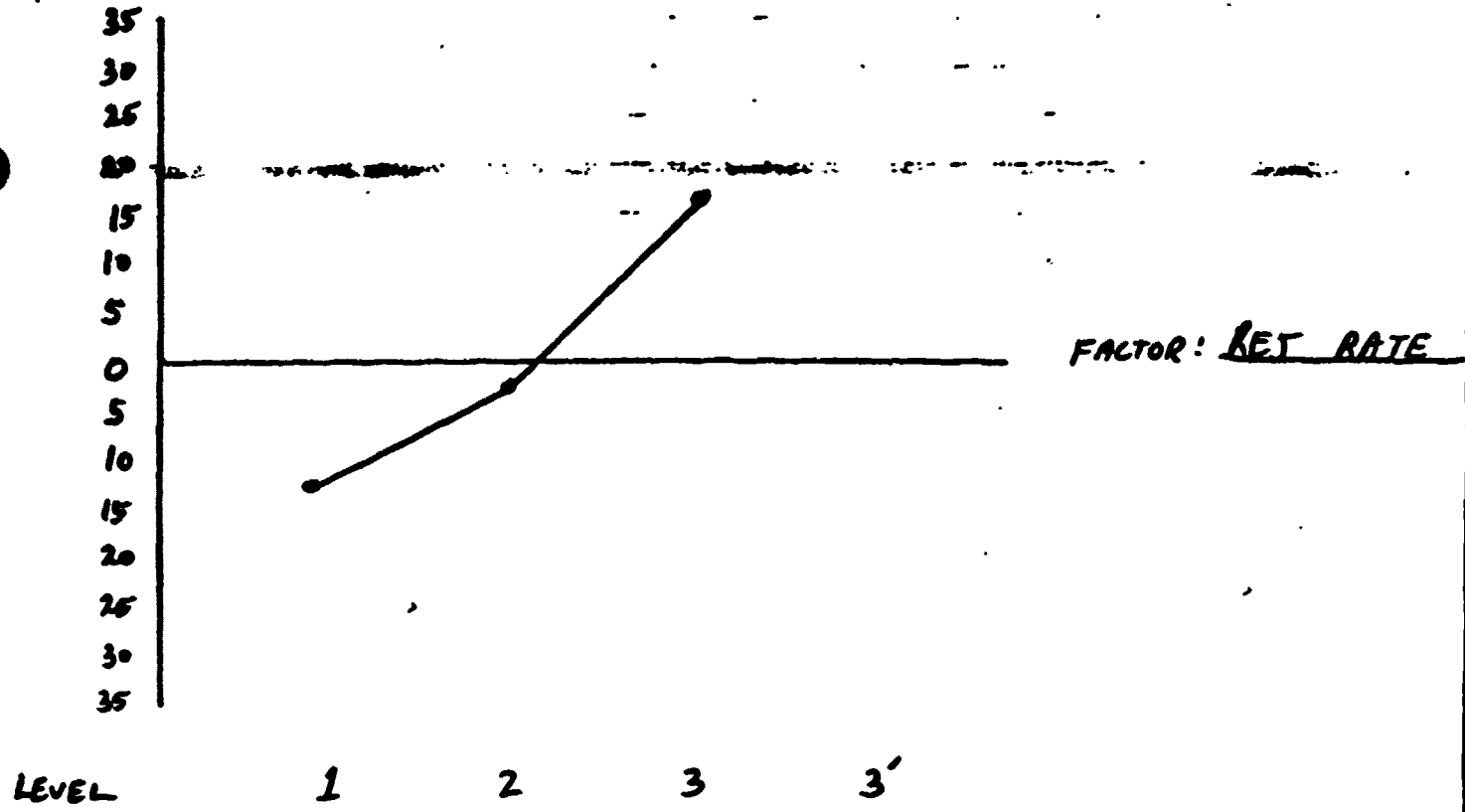
1 2 3 3'

FACTOR: TEST CAP

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1 2 3 3'

FACTOR: ASSY TNE



MAT PSS

TAGUCHI L₉ ARRAY

PCN: 03007A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	376.28	-25.76
2	AS IS	+7 TND	LEVEL	Ø	344.70	-25.37
3	AS IS	+7 UN TND	EMPTY	5%	328.44	-25.14
4	3 SFT/7 DAY	AS IS	LEVEL	5%	348.31	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	334.57	-25.24
6	3 SFT/7 DAY	+7 UN TND	FULL	Ø	314.95	-24.98
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	Ø	314.95	-24.98
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	348.31	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	376.57	-25.76

$$\bar{X} = 343.01$$

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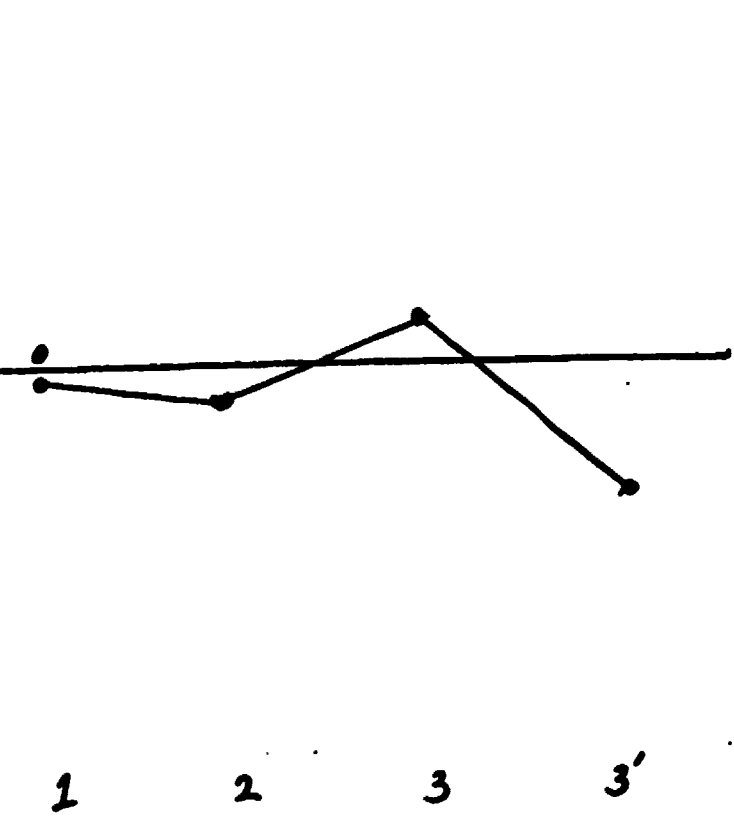
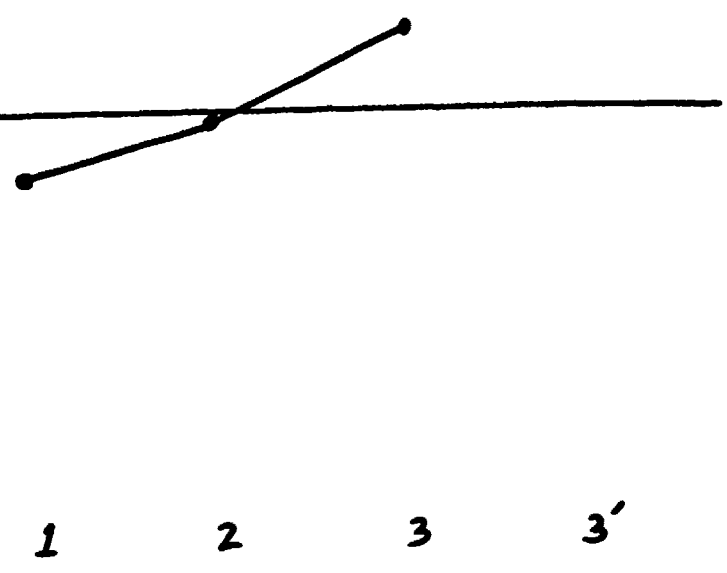
FACTOR: RES RATE

LEVEL 1 2 3 3'

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FACTOR: IND SCHED

1 2 3 3'



MAT PSS

TAGUCHI L₉ ARRAY

PCN: 04542A

EXP	TEST CAPACITY	ASSEMBLER TNG	FUNCTION CENTER	REJECT RATE	FLOW TIME	S/AL Jb
1	AS IS	AS IS	FULL	10%	47.77	
2	AS IS	+7 TND	LEVEL	0	43.68	
3	AS IS	+7 UN TND	EMPTY	5%	46.03	
4	3 SPT/7 DAY	AS IS	LEVEL	5%	45.49	
5	3 SPT/7 DAY	+7 TND	EMPTY	10%	46.69	
6	3 SPT/7 DAY	+7 UN TND	FULL	0	43.62	
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	0	43.62	
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	45.43	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	47.13	

$$\bar{X} = 45.49$$

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LEVEL

1 2 3 3'

ESN: 1211
FACTOR: RES RATE

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1 2 3 3'

FACTOR:

MAIPSS

TAGUCHI L₉ ARRAY

PCN: 10588A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	41.93 41.93	
2	AS IS	+7 TND	LEVEL	∅	38.21	
3	AS IS	+7 UN TND	EMPTY	5%	42.22	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	39.60	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	43.64	
6	3 SFT/7 DAY	+7 UN TND	FULL	∅	36.96	
7	LEVEL 2 + NEW STANDS	AS IS	EMPTY	∅	36.96	
8	LEVEL 2 + NEW STANDS	+7 TND	FULL	5%	39.60	
9	LEVEL 2 + NEW STANDS	+7 UN TND	LEVEL	10%	43.99	

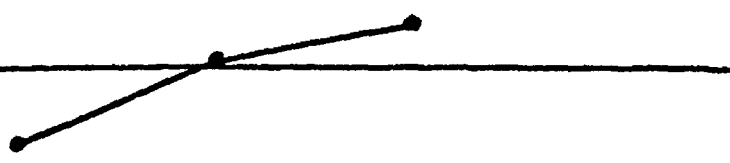
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FACTOR: REJ RATE

LEVEL

1 2 3 3'



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35

FACTOR: _____

1 2 3 3'

MATPSS

TAGUCHI L₉ ARRAY

PCN: 10718A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	75.37	
2	AS IS	+7 TND	LEVEL	∅	56.56	
3	AS IS	+7 UN TND	EMPTY	5%	68.04	
4	3 SPT/7 DAY	AS IS	LEVEL	5%	66.92	
5	3 SPT/7 DAY	+7 TND	EMPTY	10%	74.37	
6	3 SPT/7 DAY	+7 UN TND	FULL	∅	58.75	
7	LEVEL 2 + NEW STANDS	AS IS	EMPTY	∅	58.75	
8	LEVEL 2 + NEW STANDS	+7 TND	FULL	5%	66.92	
9	LEVEL 2 + NEW STANDS	+7 UN TND	LEVEL	10%	75.27	

$$\bar{X} = 66.83$$

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35

FACTOR: RET RATE

LEVEL

1 2 3 3'

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FACTOR: _____

1 2 3 3'

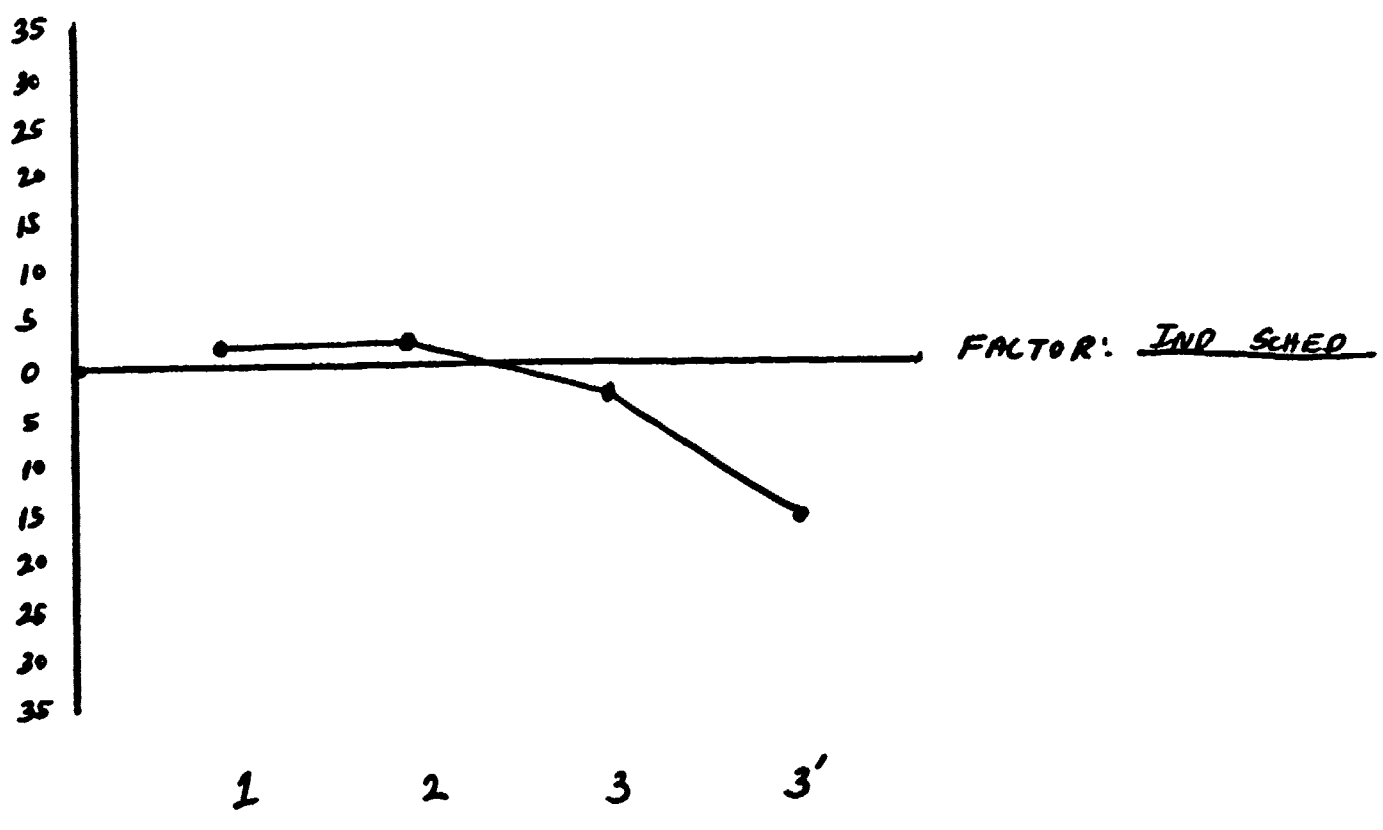
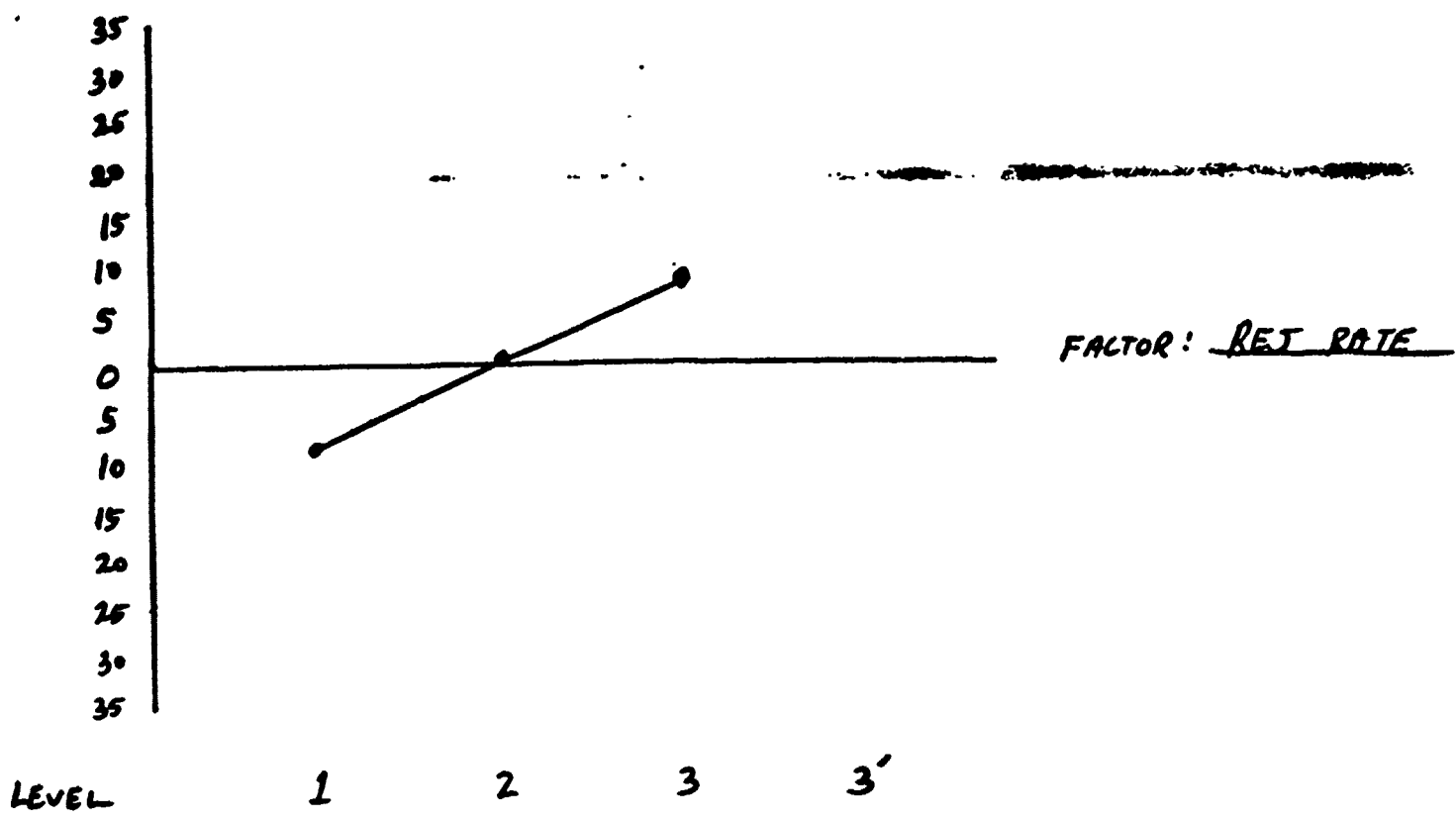
MATPSS

TAGUCHI L₉ ARRAY

PCN: 12712A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	FLOW TIME	S/N db
1	AS IS	AS IS	FULL	10%	285.56	
2	AS IS	+7 TND	LEVEL	∅	236.21	
3	AS IS	+7 UN TND	EMPTY	5%	261.43	
4	3 SFT/7 DAY	AS IS	LEVEL	5%	256.95	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	282.27	
6	3 SFT/7 DAY	+7 UN TND	FULL	∅	235.73	
7	LEVEL 2 + NEW STANDS	AS IS	EMPTY	∅	235.73	
8	LEVEL 2 + NEW STANDS	+7 TND	FULL	5%	256.95	
9	LEVEL 2 + NEW STANDS	+7 UN TND	LEVEL	10%	271.41	

$$\bar{X} = 258.03$$



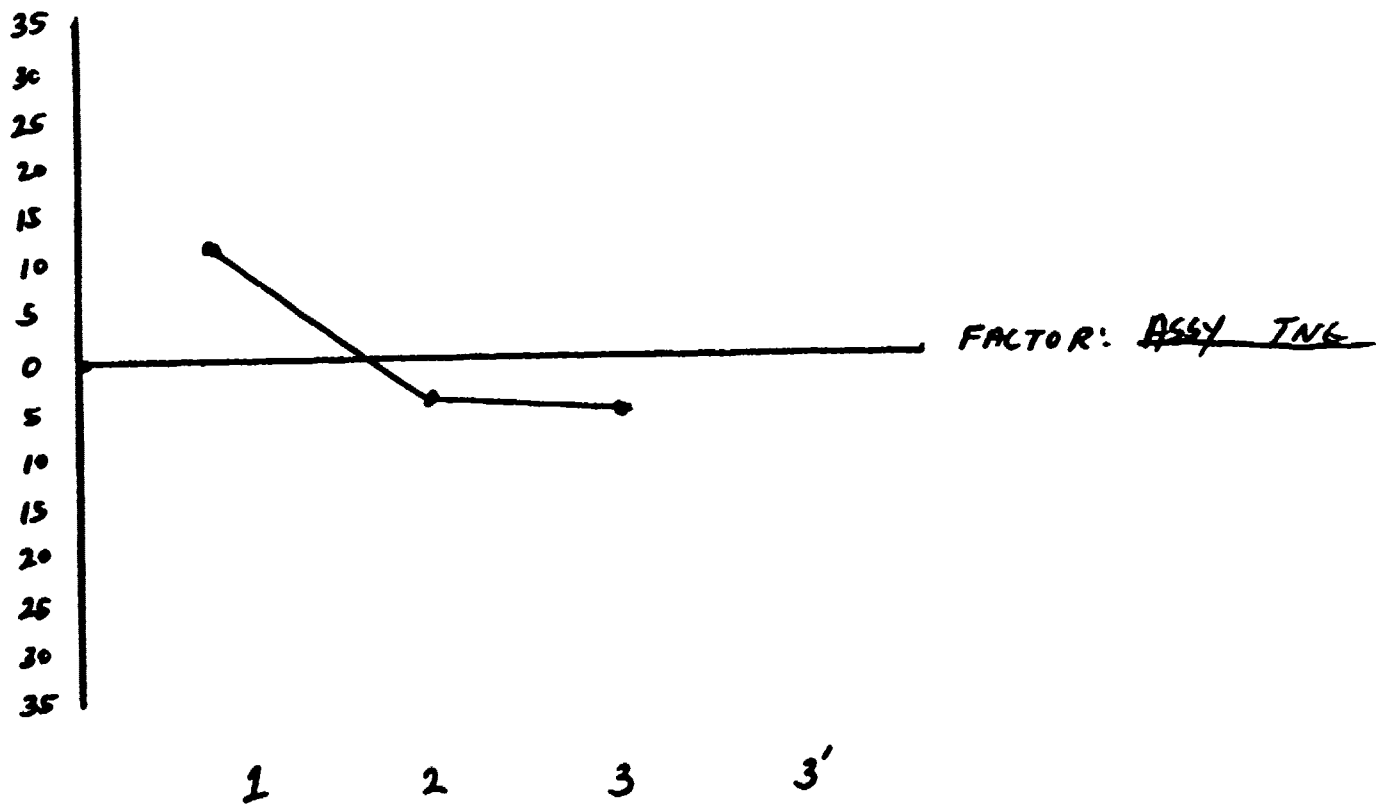
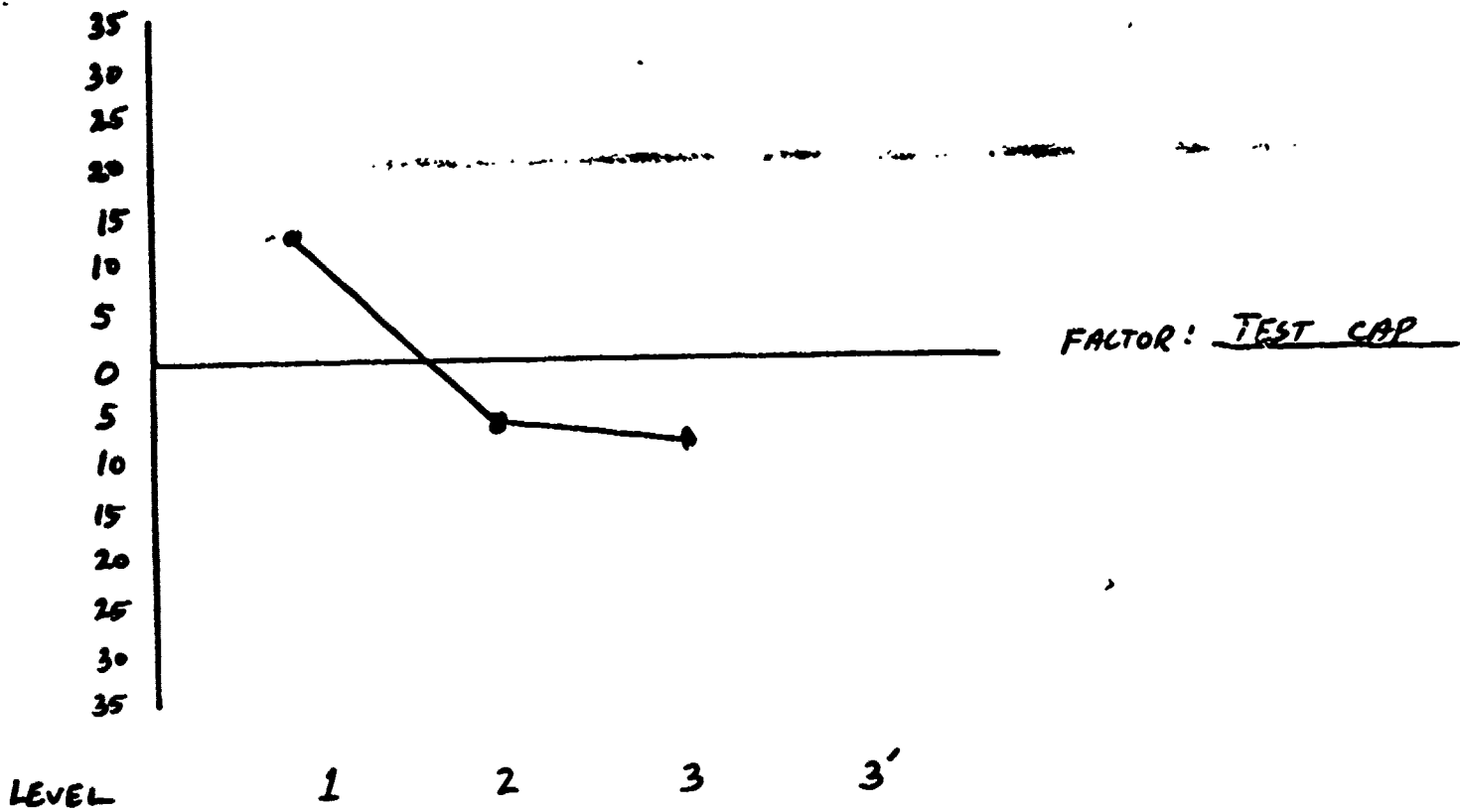
MAT PSS

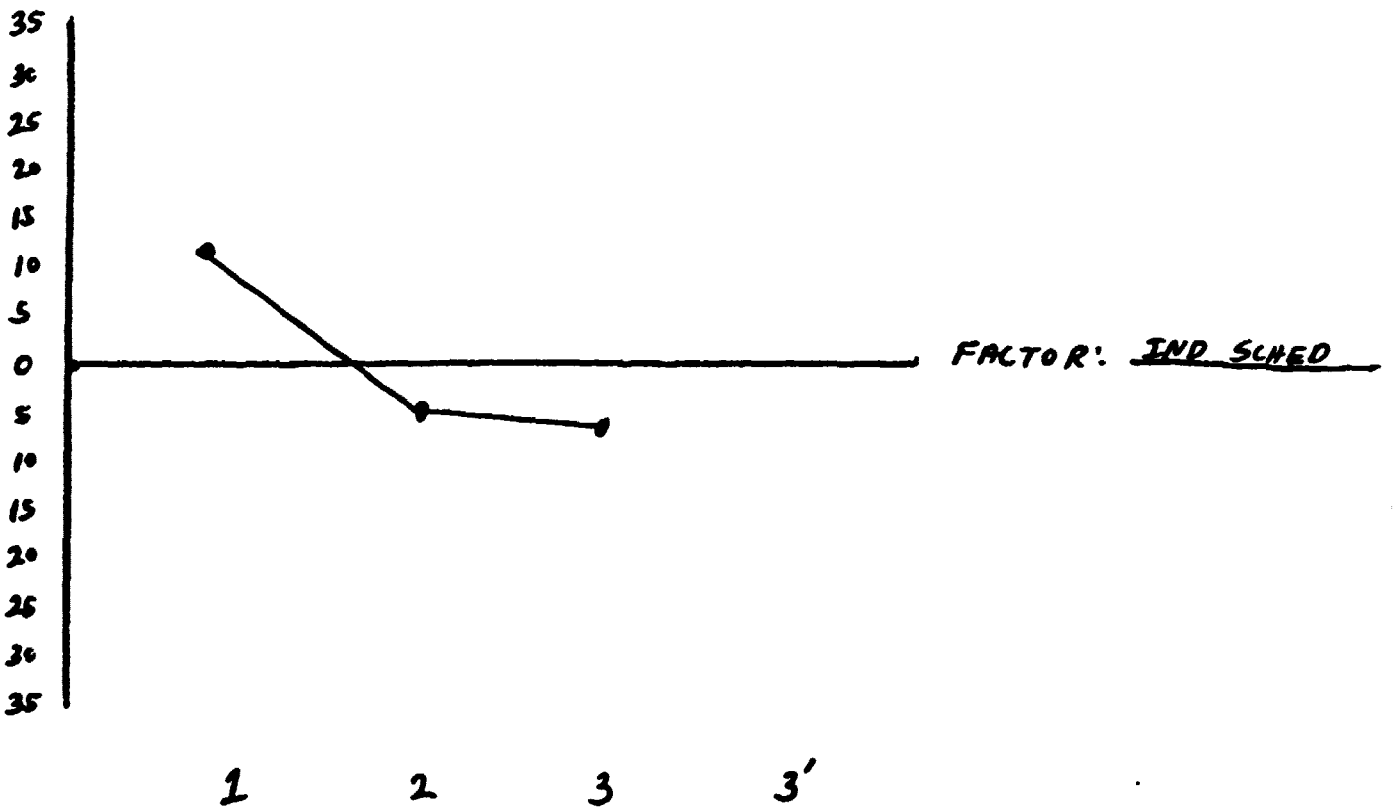
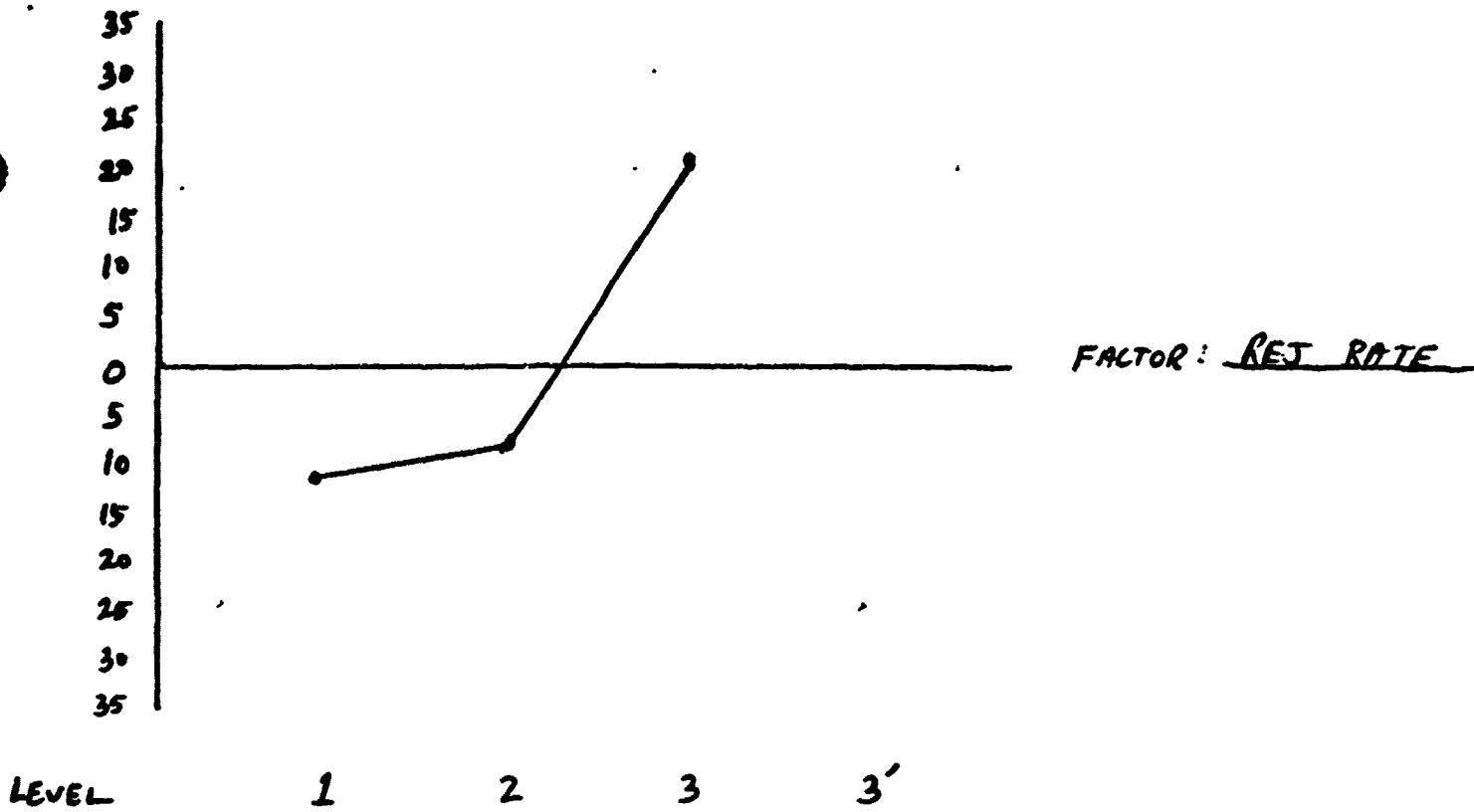
TAGUCHI L₉ ARRAY

PCN: 13096A

EXP	TEST CAPACITY	ASSEMBLER TNG	INDUCTION SCHED.	REJECT RATE	Flow TIME	S/N db
1	AS IS	AS IS	FULL	10%	105.19	-20.02
2	AS IS	+7 TND	LEVEL	Ø	62.28	-17.94
3	AS IS	+7 UN TND	EMPTY	5%	64.08	-18.06
4	3 SFT/7 DAY	AS IS	LEVEL	5%	61.72	
5	3 SFT/7 DAY	+7 TND	EMPTY	10%	70.30	-18.47
6	3 SFT/7 DAY	+7 UN TND	FULL	Ø	42.60 59.47	-16.25
7	NEW STANDS LEVEL 2 +	AS IS	EMPTY	Ø	59.47	-17.74
8	NEW STANDS LEVEL 2 +	+7 TND	FULL	5%	61.72	
9	NEW STANDS LEVEL 2 +	+7 UN TND	LEVEL	10%	66.83	-18.25

$$\bar{X} = 67.90$$





TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM

1/AMAL ATTARIA

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

CONTROL NO. _____

TYPE PROPOSAL

- QUICK FIX
 FOCUS STUDY
 OTHER _____

ALC SA DATE 5/17/89
RCC MATPSS ITEM NO. 08007A, 04542A, 10598A, 10718A.
NOUN PARTS Pool

CURRENT METHOD

THE CENTRAL GEAR BOX AND THE THREE STARTERS ASSEMBLY AREA HAVE BEEN EXPERIENCING PROBLEMS WITH THE KITS SENT FROM PARTS POOL. PARTS POOL IN BUILDING 329 ASSEMBLES THE KITS AFTER THE DISASSEMBLED PARTS ARE RECEIVED FROM INSPECTION AND CLEANING. CURRENTLY THE ASSEMBLY MECHANICS MAKE SEVERAL TRIPS TO PARTS POOL AREA TO EXCHANGE OR EXPEDITE PARTS.

PROPOSED METHOD

THE WORKERS IN THE PARTS POOL AREA ARE SKILL LEVEL FIVE AND SEVEN COMPARE TO NINE AND TEN IN THE ASSEMBLY AREAS. TO SOLVE THE PROBLEM, AN EXPERIENCED ASSEMBLY MECHANIC SKILL LEVEL NINE OR TEN SHOULD HELP THE WORKERS IN THE PARTS POOL AREA TO MAKE ONE KIT FOR EACH ASSEMBLY.

BENEFIT OF CHANGE

SAVING OF TWO HOURS PER ASSEMBLY ON THE STARTERS AND CENTRAL GEAR BOX CAN BE ACHIEVED IF THIS PROBLEM IS ELIMINATED.

PRODUCTIVITY IMPROVEMENT SUMMARY

THE PRODUCTIVITY OF 31 ASSEMBLY MECHANICS WOULD BE IMPROVED BY ONE HOUR PER DAY.

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

KAMAL ATTARIA

TI PROGRAM COST BENEFIT ANALYSIS REPORT

CONTROL NO.

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

ALC SA DATE 5/19/89
 RCC MATPSS ITEM NO. 08002A & 04542A, 10528A, 10718A
 NOUN MATERIAL HANDLING

CURRENT METHOD

DURING ASSEMBLY AND TESTING OF THE CENTRAL GEAR BOX AND THE THREE CONVENTIONAL STARTERS THE COMPONENTS ARE MOVED BACK AND FORTH BETWEEN THE BUILDINGS SEVERAL TIMES. CURRENTLY THE ASSEMBLY AND TEST MECHANICS ARE TRANSPORTING THE COMPONENTS BACK AND FORTH BETWEEN THE BUILDINGS. TOTAL TIME SPENT TO TRANSPORT EACH COMPONENT BETWEEN THE VARIOUS SHOPS IS AVERAGING TWO HOURS PER ASSEMBLY.

PROPOSED METHOD

TRANSPORTATION OF PARTS, COMPONENTS AND ASSEMBLIES SHOULD BE ACCOMPLISHED BY THE TRANSPORTATION GROUP.

11/11/89
 KNOWLEDGE
 AND TO THE
 AVAILABLE

BENEFIT OF CHANGE

TWO TO THREE MECHANICS PER DAY WOULD BE FREE TO PERFORM ASSEMBLY JOBS INSTEAD OF DOING LOW SKILL WORK.

PRODUCTIVITY IMPROVEMENT SUMMARY

THE OUTPUT OF THE CENTRAL GEAR BOX AND THE CONVENTIONAL STARTERS ASSEMBLY WOULD IMPROVE BY SEVEN TO TEN PERCENT.

BILL MORENO 643, 645

CONTROL NO. SA 07

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER _____

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM

ALC SA DATE 5-19-89

RCC MTPSS ITEM NO. _____

NOUN _____

CURRENT METHOD REPAIR PART KITS (FOR GEAR BOX ASSEMBLY) FREQUENTLY HAVE PARTS MISSING, THIS CAUSES A LINE STOPPAGE AND A HEAVY LOSS OF MANHOURS. THE MECHANICS REPORT PART SHORTAGES THEIR #1 PROBLEM IN GEAR BOX ASSEMBLY.

PROPOSED METHOD

A COMPLETE REVIEW OF THE INVENTORY CONTROL PROCEDURES RELATED TO PART KITS.

BENEFIT OF CHANGE

INCREASED PRODUCTION.

PRODUCTIVITY IMPROVEMENT SUMMARY

5/22/89

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

TI PROGRAM COST BENEFIT ANALYSIS REPORT

ALC SA DATE 5-19-89
RCC MATPSS ITEM NO. _____
NOUN _____

(Add 631?)

BILL MURKIN

CONTROL NO. SA. 28

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER _____

CURRENT METHOD

WORKSTANDS IN THE GEARBOX ASSEMBLY AREA HAVE VERY LIMITED MOVEMENT REQUIRING THE MECHANIC TO BEND AND SQUAT TO ACHIEVE ACCESS AND VISION INSIDE THE GEARBOX.

PROPOSED METHOD

REPLACE PRESENT WORKSTANDS WITH DOUBLE SWIVEL WORKSTANDS.

BENEFIT OF CHANGE

INCREASED PRODUCTION AND DECREASED MANPOWER FATIGUE.

PRODUCTIVITY IMPROVEMENT SUMMARY

5/20/89

TEC. INCLGY INSERTION ENGINEERING SERVICES PROGRAM

TI PROGRAM COST BENEFIT ANALYSIS REPORT

ALC SA DATE 5-15-89
RCC MATRS ITEM NO. 08004A → 08005A
NOUN FIS AMAD LH + RH

AP Holm

CONF NO. SA-011

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

CURRENT METHOD

The assembly WCD's presently call for operation no. 55 which assembles the LAP shaft and then installs it in operation 60. Epoxy is used to repair/replace a seal in operation and must be allowed to set before the parts can be handled.

PROPOSED METHOD

The work called for in operation 55 should be the first operation of the WCD's so the LAP shaft assembly can be set aside and allowed to set before it is needed in the assembly process.

BENEFIT OF CHANGE

Delay time is eliminated waiting for the epoxy to set enough to permit the safe handling of the LAP shaft. Revision of the WCD's will assure that the knowledge of these more experienced mechanics is incorporated into the process.

PRODUCTIVITY IMPROVEMENT SUMMARY

5/22/89

632

CONTROL NO. SL 012

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

TI PROGRAM COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

ALC SA DATE 5-15-89
 RCC MATPS ITEM NO. 0800AA 108005A
 NOUN F15 AMAD LH+RH

AP Holm

CURRENT METHOD

The disassembly WCD's have an operation no. 40 which is approximately 1/2 hour into the process. This operation calls for an examination of the unit to determine if it has been exposed to excessive heat and should therefore be condemned.

PROPOSED METHOD

Perform the examination call for in operation 40 first and condemn those units which have been overheated immediately.

BENEFIT OF CHANGE

Labor will not be wasted on units which are condemned by the examination now done in operation 40.

PRODUCTIVITY IMPROVEMENT SUMMARY

TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM
KAMAL ATTARIA

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

CONTROL NO. SA-020

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

ALC SA DATE 5/23/89
RCC MATRESS ITEM NO. 08007A
NOUN CENTRAL GEAR BOX ASSEMBLY SHOP

CURRENT METHOD

THE CENTRAL GEAR BOX ASSEMBLY AREA HAS TWO VISES MOUNTED ON TWO WORK BENCHES. EACH MECHANIC USES A VISE 20 TO 30 TIMES DURING THE ASSEMBLY OF EACH CENTRAL GEAR BOX. CURRENTLY THE 18 MECHANICS HAVE TO HAUL THE PARTS AND TOOLS ACROSS THE ASSEMBLY SHOP.

PROPOSED METHOD

FIVE NEW VISES SHOULD BE ADDED TO THE CENTRAL GEAR BOX ASSEMBLY SHOP.

BENEFIT OF CHANGE

EACH MECHANIC WILL HAVE A VISE CLOSE TO HIS WORK BENCH

PRODUCTIVITY IMPROVEMENT SUMMARY

ELIMINATION OF TWO AND THREE MECHANICS STANDING IN LINE TO USE A VISE. SAVING OF ONE HOUR PER CENTRAL GEAR BOX ASSEMBLY.

E. R. MARY

CONTROL NO. 5 - 032

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

TI PROGRAM COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

ALC SA DATE 5/8/89
 FCC MATR'S ITEM NO. _____
 NOUN INSPECTION

CURRENT METHOD APPROXIMATELY 25% OF ALL DETAIL PARTS FLOW FROM DISASSEMBLY THRU CLEANING, BY-PASS INSPECTION AND GO DIRECTLY TO THE PARTS POOL. THESE PARTS ARE PRIMARILY HARDWARE ITEMS AND ARE MAINTAINED AS A KIT AND ARE DISBURSED BY PARTS POOL ALONG WITH THE ASSEMBLY PARTS KITS. THE FIRST THING THE ASSEMBLY MECHANIC (WG-9'S AND 10'S) IS REQUIRED TO DO IS VISUALLY INSPECT THE HARDWARE KIT, REMOVE NICKS AND BURRS AND CORROSION TREAT PER A WCD. PROPOSED METHOD ESTABLISH ONE OR MORE INSPECTION STATIONS WHERE THIS INSPECTION AND REWORK WOULD BE ACCOMPLISHED BY LOWER GRADE INSPECTORS WITHIN THE INSPECTION AREA.

(THESE ARE SAME INSPECTION STATIONS RECOMMENDED BY QUICK FIX SA-001.)

BENEFIT OF CHANGE WOULD ELIMINATE THESE PARTS FROM BEING INSPECTED BY HIGHER GRADE / HIGHER SKILL LEVEL / HIGHLY TRAINED MECHANICS, WOULD REMOVE THIS TYPE INSPECTION AND REWORK FROM THE ASSEMBLY STATIONS, WOULD ELIMINATE BAD PARTS GETTING TO THE ASSEMBLY STATIONS WHICH REQUIRES THE ASSEMBLY MECHANIC TO REPLACE, WILL INCREASE THE THRU-PUT CAPACITY OF THE ASSEMBLY STATIONS.

PRODUCTIVITY IMPROVEMENT SUMMARY

WILL REDUCE COST AS A RESULT OF LOWER LABOR CLASSIFICATIONS, INCREASE THRU-PUT CAPACITY AND ELIMINATE BAD PARTS GETTING TO THE ASSEMBLY STATIONS.

TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

ALC SA-ALC DATE 24 MAY 1989
RCC ^{COMMAND} ~~WIDE~~ ITEM NO. _____
NOUN WARRANTY OF NEW PARTS

CONTROL NO. SA 229

TYPE PROPOSAL

- QUICK FIX
 FOCUS STUDY
 OTHER _____

CURRENT METHOD: SUPPLY RECEIVES AND STORES NEW SUPPLIER PARTS
FOR SUBSEQUENT DISTRIBUTION FOR ALC USE. PARTS ARE DISTRIBUTED
RANDOMLY WITHOUT REGARD TO WARRANTY DATES. DISTRIBUTED

PROPOSED METHOD: FOCUS STUDY TO DETERMINE A WAY TO DATE
STAMP EVERY PART (OR PACKAGE THAT CONTAINS A PART) AS IT IS RECEIVED.
DETERMINE HOW PARTS SHOULD BE STORED IN SUCH A WAY THAT
THE OLDEST DATE STAMPED PART IS ISSUED FIRST (FIFO).

BENEFIT OF CHANGE: SIGNIFICANT COST SAVINGS IN RECEIVING FULL
SUPPLIER CREDIT FOR DEFECTIVE PARTS STILL UNDER WARRANTY.
INCREASE CONTROL OVER SUPPLIER PROBLEMS QUICKLY. SUPPLIER
CORRECTIVE ACTION BECOMES MORE TIMELY, RESPONSIVE AND
EFFECTIVE AT THEIR COST.

PRODUCTIVITY IMPROVEMENT SUMMARY

- 1) LESS DOWNTIME DUE TO REMOVAL OF DISCREPANT PARTS FROM
SUPPLY. (2) ONCE NEW SYSTEM IS IN PLACE AND OPERATING
A MORE EFFICIENT OPERATION WILL INSURE.

CIC BUTLER 'B

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

TIP PROGRAM COST BENEFIT ANALYSIS REPORT

CONTROL NO. SA-035

TYPE PROPOSAL

QUICK FIX

FOCUS STUDY

OTHER _____

ALC ALL DATE 13 JUN 79

R/C ALL ITEM NO. 6

NOUN SCRAP

CURRENT METHOD

PRODUCTION OPERATIONS GENERATE SCRAP THROUGH A VARIETY OF CAUSES. THIS SCRAP IS ORDINARILY REMOVED FROM THE RCC FOR DISPOSAL, ALONG WITH THE ACCOMPANYING WCD'S

PROPOSED METHOD

EACH RCC SHOULD MAINTAIN A SCRAP LOGBOOK THAT LISTS EACH PART AS IT IS SCRAPPED AND THE CAUSE FOR SCRAPPING THE PART.

BENEFIT OF CHANGE

A PERIODIC REVIEW OF AN RCC'S SCRAP LOGBOOK COULD BE USED TO DETERMINE HOW TO REDUCE EXCESSIVE SCRAP BY IMPLEMENTING METHODS TO ELIMINATE, OR REDUCE, THE REPETITIVE CAUSES FOR SCRAPPING PARTS.

PRODUCTIVITY IMPROVEMENT SUMMARY

PRODUCTIVITY IMPROVEMENT IS DIRECTLY RELATED TO REDUCING SCRAP BY CORRECTLY REPAIRING A PART OVER THE SAME TIME PERIOD THAT A PART PREVIOUSLY WAS INCORRECTLY REPAIRED. ALSO, MATERIAL WASTE IS REDUCED BY NOT HAVING TO DISPOSE OF THE SCRAPPED PART.

cc: Buttry
CONTROL NO. SA 137

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

COMMAND _____
ALC WIDE DATE 18 MAY 89
RCC ITEM NO. _____
NOUN TECHNICAL ORDERS

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER _____

CURRENT METHOD: THE TECH ORDERS USED BY THE MECHANICS ARE USUALLY UNAUTHORIZED AND UNCONTROLLED COPIES. THE COPIES MAY ALSO BE OUT OF DATE. AT TIMES "WORD OF MOUTH" INFORMATION IS USED AS TECH ORDER REVISIONS OR UPDATES.

PROPOSED METHOD: REPLACE TECH ORDER MANUALS WITH COMPUTER GENERATED ELECTRONICALLY UPDATED TECH ORDERS. TRAIN MECHANICS TO USE THE COMPUTER GENERATED TECH ORDERS. THIS WAY THE MOST CURRENT PROCEDURES CAN BE FOLLOWED AS THEY BECOME AVAILABLE.

BENEFIT OF CHANGE: CURRENT TECH ORDERS ALWAYS EASILY ACCESSIBLE DECREASE IN TIME SPENT IN REWORK.

PRODUCTIVITY IMPROVEMENT SUMMARY: PRODUCTIVITY WILL IMPROVE DUE TO THE DECREASE OF REWORK RATE CAUSED BY IMPROPER MANCURRENT PROCEDURES BEING USED.

TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

ALC SA DATE 4-17-89
RCC MATTERS ITEM NO. PCN # 08060A # 13010EA / WCD # TA010H # TA030Q
NOUN FILE # File Jet Fuel Starters

A. H. / m
CONTROL NO. SA-041

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER _____

CURRENT METHOD Jet Fuel Starter assembly mechanics have developed a cardboard assembly aid to solve the bolts used in build up of the assembly. They select the proper bolts for each location and place them on this template before they begin the assembly operation. This helps to prevent errors and speed up the process.

PROPOSED METHOD This template is made of ordinary corrugated cardboard and has to be replaced regularly. More durable materials could be used and sealed labels put on the template to further resist in error-free work.

BENEFIT OF CHANGE Other uses for this may well be found by a review of similar equipment. Advantages would be reduction in labor and less error.

PRODUCTIVITY IMPROVEMENT SUMMARY

TECHNOLOGY INSERTION ENGINEERING
SERVICES PROGRAM

TI PROGRAM
COST BENEFIT ANALYSIS REPORT

ALC SA DATE 04/02/81
RCC MATRS ITEM NO. Various
NOUN FIS, Flg & Stacers

A. Holm
CONTROL NO. SH-D42

TYPE PROPOSAL

QUICK FIX
 FOCUS STUDY
 OTHER

CURRENT METHOD THE PARTS THAT NEED TO BE HEATED OR COOLED ARE PREPARED ARE NOT STARTED UNTIL NEEDED TO BE WORKED.

PROPOSED METHOD Wherever possible the heating and/or cooling should be started far enough in advance of the operation where the parts are to be assembled or disassembled so that wait time can be eliminated. A review of WCD's which call for parts to be heated and/or cooled to facilitate assembly or disassembly should be started.

BENEFIT OF CHANGE Adding an operation to start the heating and/or cooling where it is possible to do so will reduce wait time as much as possible. Some mechanics seem to do this already but others may need to have direct instructions put into the WCD's to get this benefit.

PRODUCTIVITY IMPROVEMENT SUMMARY

TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

CONTROL NO. SA-59

EARL MARY

TI PROGRAM COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- QUICK FIX
- FOCUS STUDY
- OTHER

ALC SA DATE 8/13/89

RCC ⁷⁰⁰⁰⁰⁰⁰⁰ ₄₄₂₀₀₀₀₀ ITEM NO.

NOUN STANDARDIZE FORMAT & CONTENT OF WCD'S

CURRENT METHOD No current standard exists, prior work to format that WCD's are written using a similar format. This many different plans require WCD's. Different agencies and persons. Steps present for similar parts and plans.

PROPOSED METHOD Develop standards for writing WCD's. Make it mandatory that planners use the standard procedure.

BENEFIT OF CHANGE More consistent planning for mechanics to follow. Would ensure that all right information is included and that agencies are consistent.

PRODUCTIVITY IMPROVEMENT SUMMARY

The benefits from this recommendation will result in targeted savings which are not directly measurable. Improved quality and productivity in the work will result from having high quality and consistent WCD's. The total time spent in writing could be reduced considerably once a well-defined standard is established and implemented.

PIO-QF

HOLM

DATE: 4-20-89

ENGINEERING DATA (PIO)

PRODUCT: F15 + F16 + Starters
RCC CODE: MATPSS
WCD: Various
PCN: Various
DISP./FS STATION: _____

A review of WCD's which call for parts to be heated and/or cooled to facilitate assembly or disassembly should be started. Where ever possible the heating and/or cooling should be started far enough in advance of the operation where the parts are to be assembled or disassembled so that wait time can be eliminated. Adding an operation to start the heating and/or cooling where it is possible to do so will reduce wait time as much as possible. Some mechanics seem to do this already but others may need to have direct instructions put into the WCD's to get this benefit.

APM

AMAD & ADG GEAR BOX ASSEMBLY

PROBLEM: MANPOWER FATIGUE

GEAR BOX ASSEMBLY REQUIRES EXTENSIVE VISUAL INSPECTION BY THE MECHANIC PERFORMING THE ASSEMBLY.

PRESENT WORKSTANDS HAVE LIMITED MOVEMENT REQUIRING THE MECHANIC TO SQUAT & BEND HIS BODY TO ACHIEVE VISION INSIDE THE GEAR BOX.

RECOMMEND A DOUBLE SWIVAL WORK STAND

Bill Morgan

PIO Q^r

DATE: 4-17-89

ENGINEERING DATA (PIO)

PRODUCT: F15 & F16 Jet Fuel Starters
RCC CODE: MATPSS
WCD: TA101H + TA032Q
PCN: 08006A + 13090A
DISP./FS STATION:

Jet Fuel Starter assembly mechanics have developed a cardboard assembly aid to store the bolts used in build up of the assemblies. They select the proper bolts for each location and place them on this template before they begin the assembly operation. This helps to prevent error and speed up the process. This template is made of ordinary corrugated cardboard and has to be replaced regularly. More durable materials could be used and sealed labels put on the template to further assist in error free work. Other uses for this may will be found by a review of similar equipment. Advantage would be reduction in labor and less error.

AAH

1. Operations of fork lift equipment needs to be reviewed for safety reasons.

Observed careless and imprudent operation. Provide additional mirrors at aisle (blind) intersections.

Pedestrian traffic aisles should be provided and marked to allow efficient flow of traffic for both employees and vehicular traffic.

2. WCD's are based on the TO Manuals and don't necessarily reflect what actually is being done in Production.

° TO should be used as a reference document only when WCD is being written but Planner needs to review floor operations to establish proper sequence of operations and proper tool usage.

° Tools should be called out on WCD to aide operator and eliminate unnecessary research of TO's by operators.

° "Planner is responsible for accomplishing the think time so that operator only has to read and do."

° In some cases, TO's are out of date calling for non-existent tools and processes and do not agree with tools that are being used.

° WCD's are responsibility of Planners and do not appear to be dedicated to accuracy and reliability. WCD's are inconsistent in detail from Planner to Planner. One calls out tool and other will refer to TO by paragraph.

3. Mechanics time observed to be not fully utilized.

° Allowed to spend too much time away from work station.

° Chasing parts they need.

° Long discussions between operators that didn't pertain to work (non-related subjects to work).

° If they didn't have an item to work on they sat around.

Opinion: Most supervision has been elevated from mechanics force/ranks and continue to foster above problems; due to lack of management training or "don't rock the boat syndrome".

4. WCD - Inaccurate History - When an operation was completed the operator didn't stamp it off as complete at that time but waited until job was complete and then stamped operations at that time. Would give a false reading as to when work was actually completed.

43 5. Inspection Area -- Large backlog of work stored in tote boxes.

6. Parts System -

- While in Building 329, part of the Parts Pool was relocated. (GIVE PARTS)
- Generally, parts storage and retrieval systems appeared to be antiquated and very inefficient. Many tote boxes sitting around.
- Appeared to have very little organization.
- Did not spend much time investigating this area therefore above observations are first impressions.
- In all ROC's it was mentioned that part shortages are one of their biggest problems.
- Many kits supplied to production with part shortages and shortages not identified and weren't discovered until mechanic started assembly.
- THIS AREA WOULD MAKE A GOOD FOCUS STUDY.
- Have plans for carousel but don't think funding approved at this time.

7. WCD's should specify labor grades by operation. WCD's do not specify lowest labor grade required to perform an operation. Therefore, many instances observed where highest mechanic grade is performing the lowest labor grade work.

± 1 8. Improper handling and kitting of parts by material system has caused damage to parts therefore, mechanic inspects all parts before using part in assembly.

- 15#3 9. Cleaning of Parts - Even though parts are sent to Building 360 for cleaning, many parts are recleaned in Building 329. Either provide Building 329 with their own total cleaning facility or make sure parts are cleaned thoroughly in Building 360 and eliminate cleaning facility in Building 329.
10. Sheltered work shops could be used to sort small expensive parts and also do simple inspections.
11. Training - It appears there are Journeymen Mechanics that are not fully qualified to perform all aspects of their job classification. There seems to be a perponderance of WC-10's verses other labor grades. Is there justification for this situation?
- FSE 12. Tools - Mechanics stated that bad/worn tools are turned in to tool crib and replacement tools issued are just as bad/worn as tools turned in. Its quite a hassle to get a good/useable tool.
- ° Many tools are poor quality.
 - ° Operators prohibited from bringing own tools in.
13. Facility Layout - Each major part has its own room/area (air conditioned). It appears better utilization of space and manpower could be achieved if some of these were combined.
- ° Not overly impressed with general flow and movement of material.
14. Setting up equipment and room with new equipment for purpose of doing their own balancing of rotating components. Is this redundant with existing capabilities?
- QF# 15. There's a lot of material movement accomplished by WC-10 mechanics that could be handled by a lower grade material handling personnel if these people existed.
16. Time Standards - In most cases observed, standards are in gross terms and can not be identified by operation sequence.

17. Parts Pool - Observed material personnel kitting parts. Totes boxes on floor and personnel was placing parts in each tote box. This area appears to need investigation to improve productivity. (Comments made about carousels, reference paragraph 6).

18. Material - Engineer responsible to review rejected parts for possible rework of rejected parts. This area is understaffed, therefore there appears to be a large number of parts in this area. This is area Bin C Condemned Parts. MM Engineer can disposition to rework in house, send outside for rework or condemn.

RCC MATPSS (AMAD) (CENTRAL GEAR BOX) (ACCESSORY GEAR BOX)

BLDG 329-9

1. Mechanics time observed to be not fully utilized.
2. Special tools cabinet located inconveniently. Too many trips back and forth to get tools and/or put them away. Same applies to the standard tool cabinet. All tools get inventoried and locked up every night.
3. If work stand were modified to provide trays to hold tools and parts, travel back and forth to tool cabinets would be eliminated. Need methodization of work stations.
4. Survey standard tools provided to ascertain that adequate and proper tools are available to accomplish the task.
5. Utilization of Air Driven/Pneumatic tools would reduce fatigue and improve productivity.
6. Incoming and outgoing material supporting AMAD area could be a potential safety problem due to storage on main aisle.
7. WCD Operations not followed sequentially by operators because they use shortcuts in many cases.
8. Before mechanic starts assembly he must first take AMAD housing outside of room and clean with air and freon. This is necessary because housing has not been properly maintained/stored after cleaning and inspection. Operator must wear ear muffs and safety glasses. Cleaning area and equipment is located in the aisle which is a hazard to any passerby.
9. Completed WCD's for AMAD disassembly were not saved therefore no history available.
10. Testing - (2) test stands available but only one capable of testing because parts missing from other one.

- ° Much mechanic time is idle time waiting for temperature to drop on part so that part can be handled.

11. AMAD Work Stand design modified five (5) years (?) ago. One (1) stand has been modified to add rotating device and five (5) stands still waiting to be modified.

RCC MATPSS (JET FUEL STARTER F15 & F16)

12. Balancing - Mechanic takes the Gas Generator and Power Turbine to a balancing room (100 ^{YARDS} ~~years~~ away) plus associated/required special tools to balance these items. While tools are gone from shop they are not available for use by other mechanics. The assembly and balancing areas should be adjacent to one another. Balancing equipment is common to and used for other assemblies.
13. WCD does not reflect the actual disassembly and assembly sequences as performed by mechanic.
14. Need to provide modified fixtures/work stands to eliminate use of wooden holding fixture/garbage can to perform assembly sequence. AMAD could receive serious damage if knocked off of fixture.

RCC (MATPSS) F16 Jet Fuel Starter

1. Disassembly of Combuster Housing and Turbine Housing homemade 3'x3' stand bolted to floor with a wood fixture bolted to the stand to accomplish this disassembly. Physical effort required to separate these items. There should be a better way with better fixturing to perform this task. Requires mechanics to ^{BEND} bond over fixture.

ALC

1. 3/31/89
Founde Bldg 349 with TI Team members for their familiarization of the facility.

2. Requested Workload Requirements for FY 88 and related facility layouts available from Juan Pagan and Don Dominguez MATEA. (x54667)

3. 4/3/89
Conducted TI Program briefing requested by Don Pagan MAT Division Chief at 3:00 PM. He wanted to know what the purpose of our trip and what was to be accomplished.

Conway gave a synopsis of what has happened with the contract for data from the ALC point of view.

I gave my presentation as to what had transpired from MDMSC point of view and a detailed plan down of the effort we are to put forth.

Attendees: Don Pagan - Division Chief - MAT
Col. Blackburn - Deputy Division Chief - MAT-1
Tom Green - Deputy Chief - MAT
Jerry Kean - Engineering Branch Chief - MATE
John Pike - Station Chief - MAREA
Angel Perez - Deputy Production - MATP
Juan Pagan - Unit Chief Planning - MATEA/6
Danny Dominguez - Engineer - MATEA/6
Bill Conroy - TI Liaison - MAMET

Earl Mary - Site Leader - MDMSC
Allen Roblin - I.E.
Kamal Attaria - I.E.
Pat Chambers - I.E.
Bill Morgan - I.E.

4. We have been provided a Conference Room to set up as our office in the sub-assembly area of MATPGB.

ALC doesn't work.

A phone installed but doesn't have line outside line. We have to go thru operator or use Class A phone in Danny Dominguez' office.

4/5/89
Ed Hill, Planner, MATEA came to office and informed us that he was assigned by Mike Gene, Station Chief, MATEA to support MATPSI and MATPSS.

SA-ALC

RCC: GENERAL

NAME: E. R. MARY

4/5/89 (Continued)

I gave him a brief indoctrination about the TI Program.

First info I requested from Ed Hill was info about skill codes and level.

6.

4/6/89

Problem with Badges for Restricted Area Bldg 375. CPI people and R. Attaria do not have secret clearances. It won't be a problem for A. Holm and Al Britty because their secret clearances have been forwarded to Kelly A.E.C. Security. Conway and Judy Garcia working on this problem.

Jim Biers, Security Manager x 54826.

7.

4/10/89

Get Contractors badge resolved.

Have to fill out Form 496 again. Originals can't be found. This form is required to get Base Badges.

Form 1199 Badges which permit access to Restricted Area Bldg 375 will not be issued to Morgan, Attaria, and Chambers.

8

Requested G017 & G011 reports for MTR and MTRF from Ken Douglas.

9

4/20/89

Judie Brown, Bill Conway and Karl Mary met with Ray Rangan, Station Chief Planning MATEA Bldg 375.

Judie briefed Rangan on TI Program.

Ray stated he has people vs workload problems.

Ed Himes is candidate for support Taguchi and Pinel for art modeling.

Ken Ganda took Judie on tour of MABPSA, SB, SC & SP.

Judie Brown invited Ed Tandler Porter Branch Chief MATEA to solicit his support for TI Program.

10

4/21/89

The lack of a Class A telephone is creating a hardship.

11

6/10/89

General observation for Bldg 329 material handling and Parts Pool.

- Mechanics chase own parts shortages.
- Mechanics move parts and assemblies.
- Parts in tote boxes stacked or gone under and in disorder.
- Some areas have racks for tote boxes and other areas don't.
- Some parts and tote boxes sitting around and don't appear to have a home.
- Mechanics spend much time inventorying tote to ascertain if they have all parts and to identify part shortages before starting work.
- Parts Pool doesn't appear to be neat and orderly or organized and leads you to doubt the efficiency and accuracy of the work that is being accomplished.
- Without exception, all Mechanics interviewed stated that their biggest problem is part shortages.
- A Carousel material storage system would greatly enhance the Parts Pool operation. More parts would be concentrated in much less floor space and make parts retrieval/hitting less labor intensive. It would also provide a simple "First In - First out" system if so desired.

Note: Comments have been made by ALC personnel that a Carrousel System has been considered for Bldg 329.

- Conditions as described above would require extensive analysis to validate and should be considered for a Feasibility Study.

1- cont APPROVED FY 89 MATPSS RCL \$ RATES

\$ 38.69 basic labor rate/hr
 \$ 157.70 direct material/hr
\$ 196.39 RCL total rate/hr

TOTAL REWORK COST

$$219 \times 25.7 \times 196.39 = \underline{\underline{\$ 1,105,340/\text{year}}}$$

80% of the rejects due to high vibration of the fan and Adapter P/N 367614-1, stated by the inspector and mechanic.

TO SOLVE THE PROBLEM

- * Need to double the inspection on vital parts, like fan and Adapter P/N 367614-1.
- * Need to calibrate the testing and inspection equipments more often.
- * Need to retrain inspectors and mechanics periodically.

cont 938

1 - cont *

Need to pinpoint the cause of the
problem so it can be reduced.

Investigating and reducing this
problem should increase the throughput
throughout the RCC.

x x x x x x x x x

Kamal Attoria
5/17/89

636

8

MATPSS

PARTS POOL

The Central Gear Box and the three Starters assembly areas have been experiencing problems with the kits sent from parts pool.

Parts Pool in building 329 assembles the kits after the disassembled parts are received from inspection and cleaning.

During the time spent in the assembly area of the Central Gear Box and Starters I observed, most of the kits are incomplete or miscounted.

The assembly mechanic has to make several trips to the Parts Pool area during the assembly of each kit to exchange or expedite parts to complete the assembly.

This problem is common in both assembly areas of the Central Gear Box and the conventional Starters which effecting

mechanics at a cost of two hours each mechanic per assembly.

The workers in the Parts Pool area are skill level five and seven compare to nine and ten in the assembly areas.

Skill level five and seven have no experience nor familiar in the assembly of the Central Gear Box and Starters.

To solve the problem, an experienced assembly mechanic skill level nine or ten should help the workers in the Parts Pool area to make one kit for each assembly.

Kamal Allaria
5/17/89

PIO # 4

637

11

MATPSS & MATPSI

ATSC 100-97-97A STARTER

An additional operation number 25 should be added to PCN 10718, WCD number TA043T to show the routing of parts from RCC-MATPSI disassembly and inspection to RCC MATPSS assembly area for visual inspection by the assembly mechanic.

PIO # 5

638

ATSC 100-87 STARTER

An additional operation number 15 should be added to PCN 10598A, WCD number TA001A to show the routing of parts from RCC-MATPSI disassembly and inspection to RCC MATPSS assembly area for visual inspection by the assembly mechanic.

Kamal Attaria
5/17/89

10

WATPSS

MATERIAL HANDLING

The Central Gear Box and the three Starters are assembled and painted in building 329 and tested in building 340.

During assembly and testing the components are moved back and forth between the buildings several times.

Currently the assembly and test mechanics are transporting the components back and forth between the buildings. Total time spent to transport each component between the various shops is three hours.

Transportation of parts or assemblies should be accomplished by the transportation group.

When a part or assembly have to be expedited from other building it should be accomplished by labor grad five, not by labor grad nine and ten.

Kamal Attaria
MATPSS

5/22/89

CENTRAL GEAR BOX
ASSEMBLY SHOP

16

THE CENTRAL GEAR BOX ASSEMBLY AREA HAVE TWO VISES MOUNTED ON TWO WORK BENCHES .

EACH MECHANIC NEED TO USE A VISE 20 TO 30 TIMES DURING THE ASSEMBLY OF EACH CENTRAL GEAR BOX .

CURRENTLY THE 18 CENTRAL GEAR BOX ASSEMBLY MECHANICS HAVE TO HAUL THE PARTS AND TOOL ACROSS THE ASSEMBLY SHOP TO USE THE ONLY TWO VISES . DURING THE TIME I SPENT IN THE ASSEMBLY SHOP I OBSERVED TWO AND THREE MECHANICS STANDING IN LINE TRYING TO USE A VISE .

THE SHORTAGE OF VISES IS CAUSING A DELAY OF ONE HOUR PER CENTRAL GEAR BOX ASSEMBLY .

TO AVOID THE DELAY AND TO IMPROVE PRODUCTIVITY FIVE VISES SHOULD BE ADDED TO THE CENTRAL GEAR BOX ASSEMBLY SHOP .

5/25/89
MATPSS

K. ATTARIA

CENTRAL GEAR BOX

THE LAST FEW OPERATIONS ON FINAL ASSEMBLY AND TEST WCD'S ARE CALLING FOR THE SAME WORK TO BE PERFORMED ON THE CENTRAL GEAR BOX FOLLOWING THE TEST PROCESS. THE CENTRAL GEAR BOX IS ASSEMBLED AND SENT TO BE TESTED, IT IS RETURNED TO FINAL ASSEMBLY SHOP AFTER TEST FOR FINAL CHECK, REMOVAL OF PARTS, SAFTY WIRE AND TAGS.

OPERATIONS # 116, 121, 126 AND 127 ARE ADDED TO WCD TAI44R CENTRAL GEAR BOX FINAL ASSEMBLY, THESE FOUR OPERATIONS REMOVED FROM WCD TAI36R CENTRAL GEAR BOX TEST OPERATIONS 243 AND 290.

OPERATIONS # 243, 245, 247, 248, 250, 260, 270, 280 AND 290 ARE DELETED FROM WCD TAI36R CENTRAL GEAR BOX TEST, THESE ~~THESE~~ OPERATIONS ARE COVERED ON THE FINAL ASSEMBLY WCD TAI44R.

THE REQUIRED CHANGE WAS MENTIONED TO THE AREA PLANNER EDWARD GARZA PA# 925-4323.

6/7/89

TEST CELL #2C

MATPSS
K. ATTARIA

CELL NUMBER 2C IS SETUP TO TEST THE CPSO2 MOD CARTRIDGE STARTER IN BUILDING 346.

THE EXHAUST SYSTEM IN THE CELL IS IN NEED OF REPAIR AND IN IMPROPER WORKING CONDITION, THE EXHAUST PIPES ARE HANGING IN DISARRAY OVER THE TEST STAND. THE PIPES ARE CORRODED AND DO NOT HAVE THE SUCTION POWER TO REMOVE THE GUN POWDER SMOKE AFTER THE CARTRIDGE IS FIRED. AS A RESULT OF THIS CONDITION THE ROOM AND EQUIPMENT ARE COVERED WITH RESIDUE FROM THE FIRING OF CARTRIDGE. THE OPERATOR HAS TO WAIT OVER ONE HOUR TO BE ABLE TO ENTER THE TEST CELL TO FINISH THE TEST.

BECAUSE OF THIS PROBLEM THE EXHAUST SYSTEM SHOULD BE OVERHAULED OR REPLACED AS SOON AS POSSIBLE TO ALLOW THE TESTING OPERATION TO BE PERFORMED EFFICIENTLY.

THE INFORMATION AND OBSERVATION OF THE TEST CELL WAS DISCUSSED WITH ADOLFO PEREZ THE SECOND SHIFT SUPERVISOR.

6/6/89

MATPSS
K. ATTARIA

ADG FINAL ASSEMBLY

THE F16 ACCESSORY DRIVE GEARBOX (ADG) FINAL ASSEMBLY SHOP LOCATED ALONG WITH THE F15 CENTRAL GEARBOX (CGG) IN THE EAST SIDE OF BUILDING 329.

THERE ARE FOUR ASSEMBLY STANDS ARE USED BY THE MECHANICS TO COMPLETE THE ACCESSORY DRIVE GEARBOX ASSEMBLY.

TWO OF THE FOUR STANDS ARE TOO HIGH OFF THE FLOOR FOR THE ASSEMBLY MECHANICS TO PERFORM THE ASSEMBLY.

CURRENTLY THE MECHANICS ARE USING BOXES AND ~~AND~~ OTHER OBJECTS TO STAND ON SO THEY CAN REACH ON TOP TO COMPLETE THE ASSEMBLY.

TO IMPROVE THE WORKERS PERFORMANCE, NEW STANDS SHOULD BE PURCHASED OR REBUILT THE EXISTING STANDS TO MEET THE WORKFORCE ERGONOMICS IN THE ASSEMBLY SHOP.

THIS INFORMATION AND OBSERVATION OF THE ADG ASSEMBLY SHOP WAS DISCUSSED WITH THE ASSEMBLY MECHANICS.

6-7/89

TEST CELL # 15A

TEST CELL NUMBER 15A IS SETUP TO TEST THE F15
JET FUEL STARTER AND CENTRAL GEARBOX IN
BUILDING 340 .

THE TEST MECHANIC HAS BEEN EXPERIENCING PROBLEMS
WITH THE TEST STAND ENGAGEMENT AND DISENGAGEMENT
GEAR MECHANISM FOR THE SLAVE UNIT USED TO ACCOMPLISH
THE TEST . SEVERAL REQUESTS WERE MADE BY THE TESTERS
TO OBTAIN PARTS TO REPAIR THE GEAR MECHANISM . THE
EQUIPMENTS IN THE TEST CELL ARE OLD AND OBSOLETE
WHICH MAKES IT HARD AND TIME CONSUMING TO OBTAIN
REPLACEMENT PARTS .

MAINTENANCE SHOULD BE TASKED TO FABRICATE THE
REPLACEMENT PARTS FOR THE EQUIPMENTS BEFORE
BREAKDOWN . PERIODIC OVERHAULS OF THE EQUIPMENTS
IN THE CELL SHOULD BE PERFORMED .

THE INFORMATION AND OBSERVATIONS OF THE TEST
EQUIPMENTS MENTIONED ABOVE WERE DISCUSSED WITH
ADOLFO PENE THE SECOND SHIFT SUPERVISOR .

COMMAND WIDE T.O. # 1: PROCESS CHARACTERIZATION

V A-18 MAY 89

QUICK FIX PLAN OUTLINE

FOCUS STUDY

QUICK FIX # 4

BOB BUTRY - QUALITY & SAFETY SITE REVIEW, DURING JAN 89

QUICK FIX OPPORTUNITY TO ELIMINATE UNAUTHORIZED AND UNCONTROLLED COPIES OF TECHNICAL ORDERS ON THE PRODUCTION FLOOR.

SA-037

1. CURRENT OPERATION: MECHANICS WORK TO THE REQUIREMENTS OF THE TECH ORDERS AS REFERENCED PER THE INSTRUCTIONS IN THE WCDs. THE TECH ORDERS BEING USED BY THE MECHANICS ARE USUALLY UNAUTHORIZED AND UNCONTROLLED COPIES THAT THEY KEEP HANDY AT THEIR WORKSTATIONS. THESE COPIES MAY ALSO BE OUT-OF-DATE. THE MECHANICS MAKE NEW, UNAUTHORIZED TECH ORDERS FROM WHICH TO WORK WHEN "WORD OF MOUTH" INFORMATION INFORMS THEM THAT A TECH ORDER REVISION HAS BEEN ISSUED.

2. OVERALL ASSESSMENT OF CURRENT OPERATION: UNDER THE PRESENT PRODUCTION METHOD, SHOP MECHANICS MAY BE REFURBISHING/REPAIRING ELECTROMECHANICAL PARTS TO OUTDATED TECH ORDERS.

3. RATIONALE LEADING TO CHANGE:

PARTS SHOULD BE REFURBISHED TO THE INTENDED (MOST RECENT) CONFIGURATION. FAILURE FOR THIS TO OCCUR WILL RESULT IN A DEFICIENCY IN THE MODERNIZING AND UPDATING OF FLIGHT READY EQUIPMENT AS IT ROTATES THROUGH THE ALC. THE SAFETY, RELIABILITY, AND READINESS OF REFURBISHED FLIGHT HARDWARE MAY BECOME COMPROMISED AS A RESULT OF CONDONING REFURBISHMENT/REPAIR PROCEDURES TO OUTDATED TECH ORDERS.

4. DESCRIPTION OF NEW PROCESS:

REPLACE ALL TECHNICAL ORDER MANUALS WITH COMPUTER GENERATED, ELECTRONICALLY UPDATED, CRT-AVAILABLE TECH. ORDERS. LOCATE CRTS THROUGHOUT THE RCCS AT THE ALCs SO THAT OPERATOR ACCESSIBILITY TO THE CRT IS CONVENIENT. TRAIN THE OPERATORS HOW TO CALL UP ANY DESIRED TECH ORDER IN ORDER TO FOLLOW THE MOST CURRENT PROCEDURES, AND KEEP PROCEDURES CURRENT AS THEY BECOME REVISED/APPROVED.

5. BENEFITS/TRADEOFFS (REF. PARA. II):

BESIDES REPAIRING A PART TO THE RIGHT CONFIGURATION, TECH ORDER MANUALS WILL NOT REQUIRE PERIODIC UPDATING SINCE AN ELECTRONIC (PAPERLESS) MANUAL WILL BE AUTOMATICALLY UPDATED INSTANTLY THROUGHOUT ALL RCCs AS SOON AS THE AMENDMENT OR NEW RELEASE IS APPROVED. THE PERSONNEL NOW DESIGNATED TO UPDATE THE MANUALS COULD BE PRODUCTIVELY USED

TO FULLFILL OTHER ALC FUNCTIONS
AT A SIGNIFICANT COST SAVINGS.

6. IMPLEMENTATION COST/IMPACT (REF. PARA. 10):

A. THE APLC WOULD HAVE TO INCUR THE
COST OF THE SOFTWARE TO CONTAIN
THE TECHNICAL ORDERS WITH SUBSE-
QUENT UPDATING CAPABILITIES.

^{DATA PROCESSING}
B. PERSONNEL WILL BE REQUIRED TO ENTER
AND SUBSEQUENTLY UPDATE THIS
INFORMATION.

C. ENOUGH CRTS WILL NEED TO BE PURCHASED
AND LOCATED FOR OPERATOR AVAILABILITY
THROUGHOUT THE ALC.

D. NO SCHEDULE IMPACT SHOULD OCCUR
IF THE CURRENT TECH ORDER MANUALS
ARE MAINTAINED AS USUAL UNTIL
THE ELECTRONIC MANUAL INFORMATION
IS WELL INTO ON-LINE CAPABILITY,
AND ALL ALC PERSONNEL ARE
TRAINED IN USING THE CRTS FOR
TECH ORDER RETRIEVAL.

7. SAFETY: (NOT APPLICABLE)

8. ENVIRONMENTAL: (NOT APPLICABLE)

9. RELIABILITY/MAINTAINABILITY:

THE ELECTRONIC TECH ORDER MANUAL WILL
BE TOTALLY RELIABLE AND CAN BE EASILY
MAINTAINED.

10. HUMAN FACTORS DESIGN CRITERIA:
THIS EFFORT IS DIRECTED TOWARD
INSTILLING CONFIDENCE IN THE
MECHANICS THAT THE PROCEDURES
TO WHICH THEY MUST OPERATE ARE
READILY ACCESSIBLE AND CURRENT.
NO DOUBT SHOULD EXIST IN THEIR
MINDS WHETHER OR NOT THEY ARE
PERFORMING THEIR TASKS TO THE
CORRECT INSTRUCTIONS.

A/ II. COST IMPROVEMENT DATA:

PRESENT CONDITION COST

- REWORK AND SCRAP COSTS ASSOCIATED WITH MECHANICS REPAIRING PARTS TO UNAUTHORIZED/UNCONTROLLED COPIES OF TECHNICAL ORDERS FOR THE LAST 12 MONTHS = _____.
- COST TO PRINT, DISTRIBUTE, AND INCORPORATE ALL CHANGES TO THE TECHNICAL ORDERS OVER THE LAST 12 MONTHS = _____.

PROPOSED IMPLEMENTATION COST

- COST INVOLVED TO INSTALL CRTS ON THE PRODUCTION FLOOR SO THAT ALL MECHANICS WILL HAVE CONVENIENT ACCESS TO ONE = _____.
- THE SPECIAL DATA PROCESSING COSTS REQUIRED TO INITIATE/IMPLEMENT THIS SYSTEM = _____.

ANNUAL COST SAVINGS (FIRST YEAR):

$$[\text{PRESENT CONDITION COST}] - [\text{PROPOSED IMPLEMENTATION COST}] = \underline{\hspace{2cm}}$$

FOCUS STUDY CONTROL NO. SA-037

Unauthorized, outdated, and uncontrolled copies of technical orders is a problem that can be easily solved.

There are three avenues for creating a change to a T.O.:

(a) AFTO Form 22 requesting a change, (b) one generated by an AFLC Form 103, Nonconforming Technical Assistance Request and Reply, (c) Self generated AFLC Form 252 by the Equipment Specialist (ES).

Under (a), the AFTO 22 is evaluated by the ES and if the requested change is approved an AFLC 252 is submitted. The formal change to the T.O. is sent to all the "satellites" in Maintenance that are on distribution for that particular T.O. in the quantities specified.

Under (c), the AFLC 252 is generated by the ES and forwarded for printing and distribution. Usually the changes are minor in nature and not critical. The T.O. editor will turn in accumulated AFLC 252's (routine) and have them printed and distributed. Again, the satellites in Maintenance will receive the changes based on the number of T.O.'s credited to their account.

Under (b), the AFLC Form 103 is received by the ES. It is either approved or disapproved. If approved, the ES has 2 options. He may authorize the deviation from the T.O. for a specified length of time not to exceed 120 days or initiate a Special Handling AFLC 252. The copy of the approved AFLC 103 and/or SH AFLC 252 is returned to MATEG personnel. The approved AFLC 252 copies are distributed by MAATA to the different satellites for posting in their respective T.O.'s.

From the description of the T.O. changes procedures stated above, there is no reason for unauthorized or outdated T.O.'s. The new work package concept breaks out the T.O. into 12 different sections (assembly, disassembly, inspection, repair, etc.). This allows the different work stations the opportunity to order one complete set (12 work pkgs) for their T.O. file and as many of the specific work packages required in their area. This can be done even to the point of one T.O. per mechanic. In the past, all changes to the T.O. had to be filed regardless of what section of the T.O. was changed. Supervisors tended to have as few T.O.'s as possible to preclude having to post all the changes generated. Now, the supervisor receives only those changes pertaining to the books in his area plus only one set of changes to the other set of books. The SH AFLC 252's are controlled by a project number and copies are provided to the different satellites by MAATA according to the number of work packages in that area. The AFLC 103's and SH 252's are then easily posted. These forms are removed and discarded when the formal changes are received covering the information requested.

POC: Gilbert Maldonado/SA-ALC-MMPETB/(512) 925-6001

(WR)

REV. A-18 MAY 89

REV. B-24 MAY 89

COMMAND
WIDE

T.O. # 1: PROCESS CHARACTERIZATION

QUICK FIX PLAN OUTLINE

COMMAND WIDE

QUICK FIX

BOB BUTRY - QUALITY & SAFETY

#1

SITE REVIEW DURING JAN 89

FOCUS STUDY

~~QUICK FIX~~ OPPORTUNITY TO ELIMINATE THE COSTS DUE TO SCRAPPING OR REPAIRING OUT-OF-WARRANTY NEW PARTS.

SA029

1. CURRENT OPERATION: SUPPLY RECEIVES AND STORES NEW SUPPLIER PARTS FOR SUBSEQUENT DISTRIBUTION FOR SHOP ALC USAGE. NO STOCK ROTATION METHOD IS USED TO ASSURE A "FIRST IN - FIRST OUT" DISTRIBUTION FOR THESE PARTS.

2. OVERALL ASSESSMENT OF CURRENT OPERATION: SUPPLY ISSUES PARTS TO THE SHOP ALC THAT MAY HAVE BEEN IN STORAGE FOR MANY YEARS. THIS PRACTICE USUALLY VOIDS THE WARRANTY ON PARTS HELD IN STORAGE THIS LONG, RESULTING IN THE ALCs HAVING TO SCRAP DEFECTIVE PARTS OR TO SCREEN AND REPAIR THEM AT THEIR OWN EXPENSE.

B/

3. RATIONALE FOR CHANGE: (A) THE SUPPLIER OF DISCREPANT PARTS WILL BE REQUIRED TO REPLACE OR REPAIR DEFECTIVE PARTS, AT NO COST TO THE ALCS, IF THE PARTS ARE STILL UNDER WARRANTY.

B/

B/

(B) THE DISCOVERY OF SOME DISCREPANT PARTS WITHIN A CONTRACT LOT, BEFORE THE WARRANTY HAS EXPIRED, WILL USUALLY ALLOW THE RETURN OF THAT ENTIRE LOT TO THE SUPPLIER FOR PART SCREENING AND SUBSEQUENT REPLACEMENT OR REPAIR AT THE SUPPLIER'S EXPENSE.

4. DESCRIPTION OF NEW PROCESS: SUPPLY SHOULD DATE STAMP EVERY PACKAGE AS IT IS RECEIVED. THESE PARTS SHOULD THEN BE STORED IN SUCH A WAY ~~BE~~ THAT THE OLDEST DATE-STAMPED PACKAGE IS ISSUED FIRST.

A) PRODUCTIVITY IMPROVEMENTS

- LESS DOWNTIME DUE TO REMOVAL OF DISCREPANT LOTS FROM SUPPLY, IN A TIMELY MANNER, FOR SUPPLIER SCREENING, REPAIR, AND REPLACEMENT.

B) QUALITY IMPROVEMENTS

- SUPPLIER CORRECTIVE ACTION BECOMES MORE TIMELY, RESPONSIVE, AND EFFECTIVE.
- UNRELIABLE SUPPLIERS ARE IDENTIFIED AND ELIMINATED BEFORE OUT-OF-WARRANTY LOTS HAVE TO BE SCRAPPED OR REPAIRED AT THE EXPENSE OF THE ALCS.

B/

C) RESOURCE UTILIZATION

- FEWER PARTS HAVE TO BE SCRAPPED.

5. BENEFITS/TRADEOFFS (REF. PARA. II):

B/

- 1) THERE WILL BE A SIGNIFICANT COST SAVINGS BENEFIT IN RECEIVING FULL CREDIT FOR DEFECTIVE PARTS STILL UNDER WARRANTY.
- 2) MORE TIMELY CONTROL OVER SUPPLIER PROBLEMS WILL REDUCE REPETATIVE PROBLEMS QUICKLY AND SIGNIFICANTLY.

6. IMPLEMENTATION COST/SCHEDULE (REF. PARA. II)

- A) DATE STAMPS WILL HAVE TO BE PURCHASED AND USED.
- B) SUPPLY'S STOCK WILL HAVE TO BE REVIEWED, WHEN ISSUED, TO RELEASE THE OLDEST PARTS FIRST.
- C) THERE WILL BE NO SCHEDULE IMPACT.

7. SAFETY IMPROVEMENTS: (NONE)

8. ENVIRONMENTAL HAZARDS/IMPROVEMENTS: (NONE)

9. RELIABILITY/MAINTAINABILITY CHARACTERISTICS:

- A) PARTS FROM SUPPLY WILL BECOME MORE RELIABLE DUE TO QUICKER SUPPLIER CORRECTIVE ACTION RESPONSES, FOR NEW PART DISCREPANCIES.

10. HUMAN FACTORS DESIGN CRITERIA:

- A) HIGHER SHOP MORALE AS PARTS FROM SUPPLY BECOME MORE RELIABLE AT INSTALLATION.
- B) LESS FRUSTRATION BY ELIMINATING REPETATIVE PARTS PROBLEMS FROM SUPPLY.

II. COST IMPROVEMENT DATA:

PRESENT CONDITION COST

B/ - COST OF ALL NEW PURCHASED PARTS THAT WERE SCRAPPED OVER THE LAST 12 MONTHS AT THE EXPENSE OF THE ALL DUE TO EXPIRED WARRANTIES = _____.

B/ - COST OF REPAIRING ALL NEW PARTS PURCHASED OVER THE LAST 12 MONTHS AT THE EXPENSE OF THE ALL DUE TO EXPIRED WARRANTIES = _____.

PROPOSED IMPLEMENTATION COST

- LABOR COSTS INVOLVED TO DATE STAMP THE NEW PURCHASED PARTS AND ROTATE THE OLDEST STOCK FORWARD DURING THE STORAGE OF NEW PARTS = _____.

ANNUAL COST SAVINGS (FIRST YEAR):

$$[\text{PRESENT CONDITION COST}] - [\text{PROPOSED IMPLEMENTATION COST}] = \underline{\hspace{2cm}}$$

PCN 08007A

F15 CGB

CENTRAL GEAR BOX

DISASSEMBLY
TA 145R

08007AA

08007AB

08007AC

08007AD

08007AE

P TAO92R
89005

C TAO46R
89082

C TAO04R
88181

C TAO98R
89082

WCD - G3
GENERIC

VISUAL INSPECTION
TA 500R

CLUTCH GEAR ASSY
TA 138R

IDLER GEAR ASSY
TA 139R

HIGH SPEED PINION ASSY
TA 140R

CLUTCH SHAFT ASSY
TA 141R

CLUTCH SHAFT ASSY
TA 142R

CLUTCH SHAFT ASSY
TA 143R

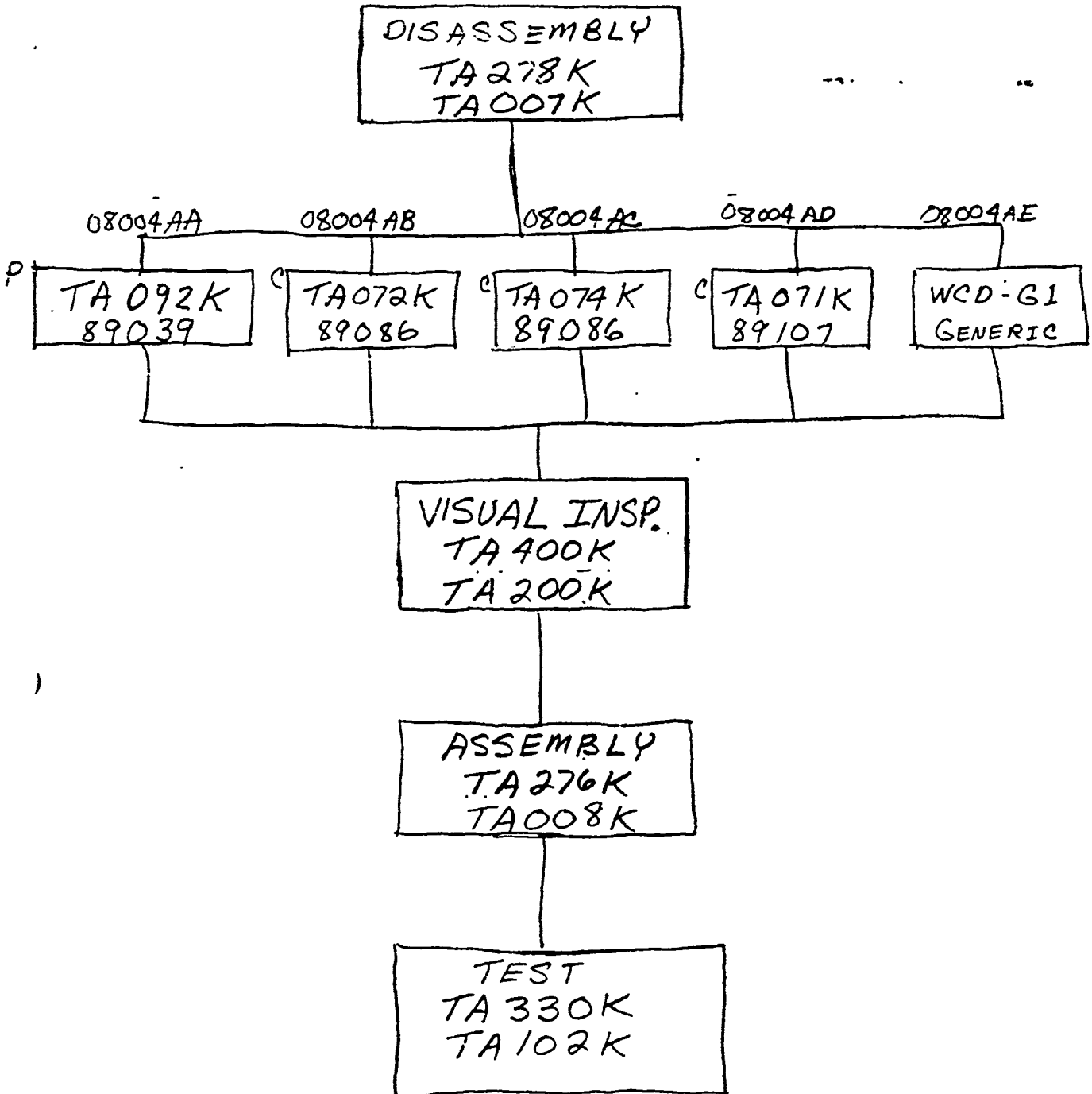
FINAL ASSEMBLY
TA 144R

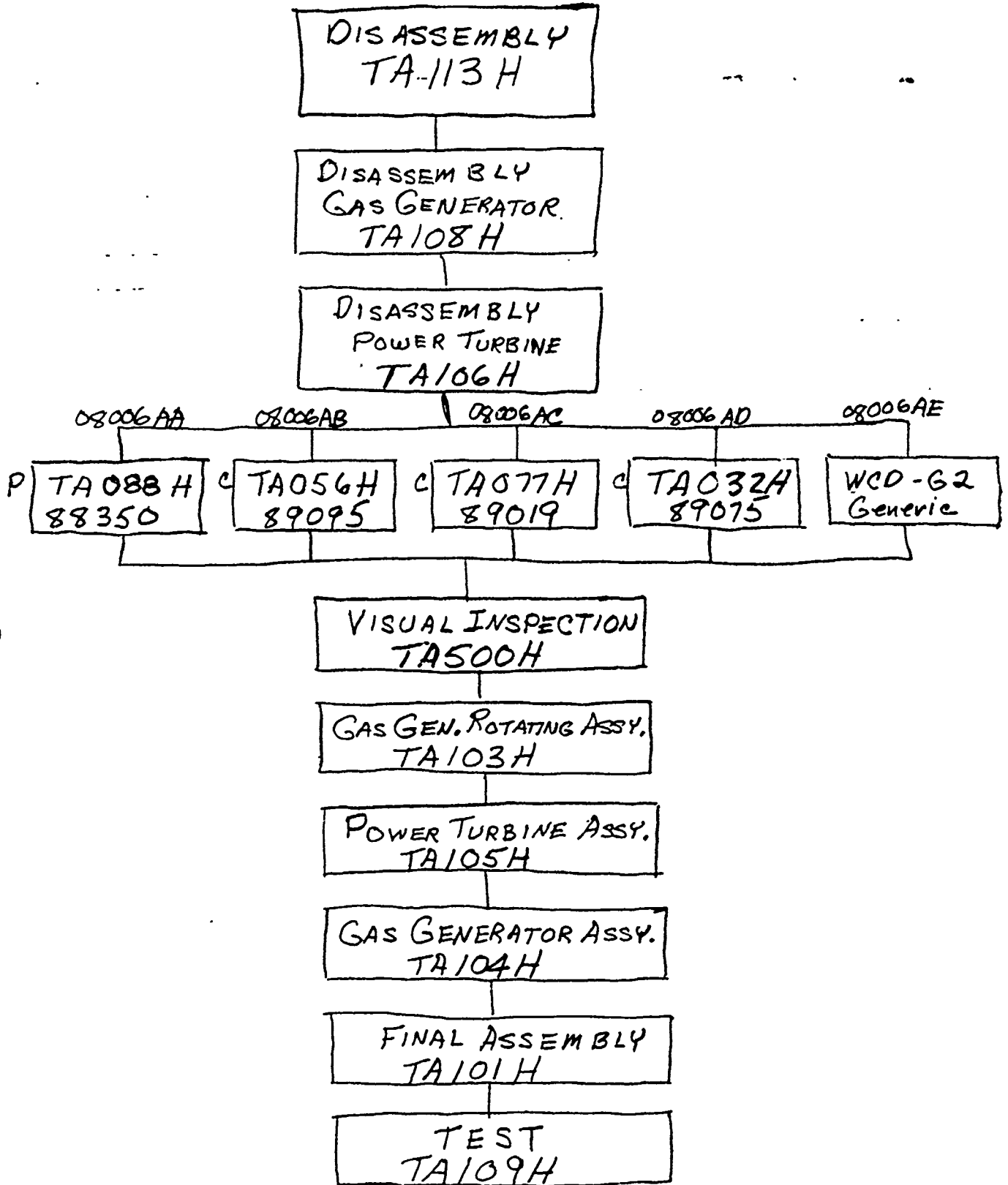
TEST CGB
TA 136R

PCN 08005 A
08004 A

R.H. AMAD
L.H. AMAD

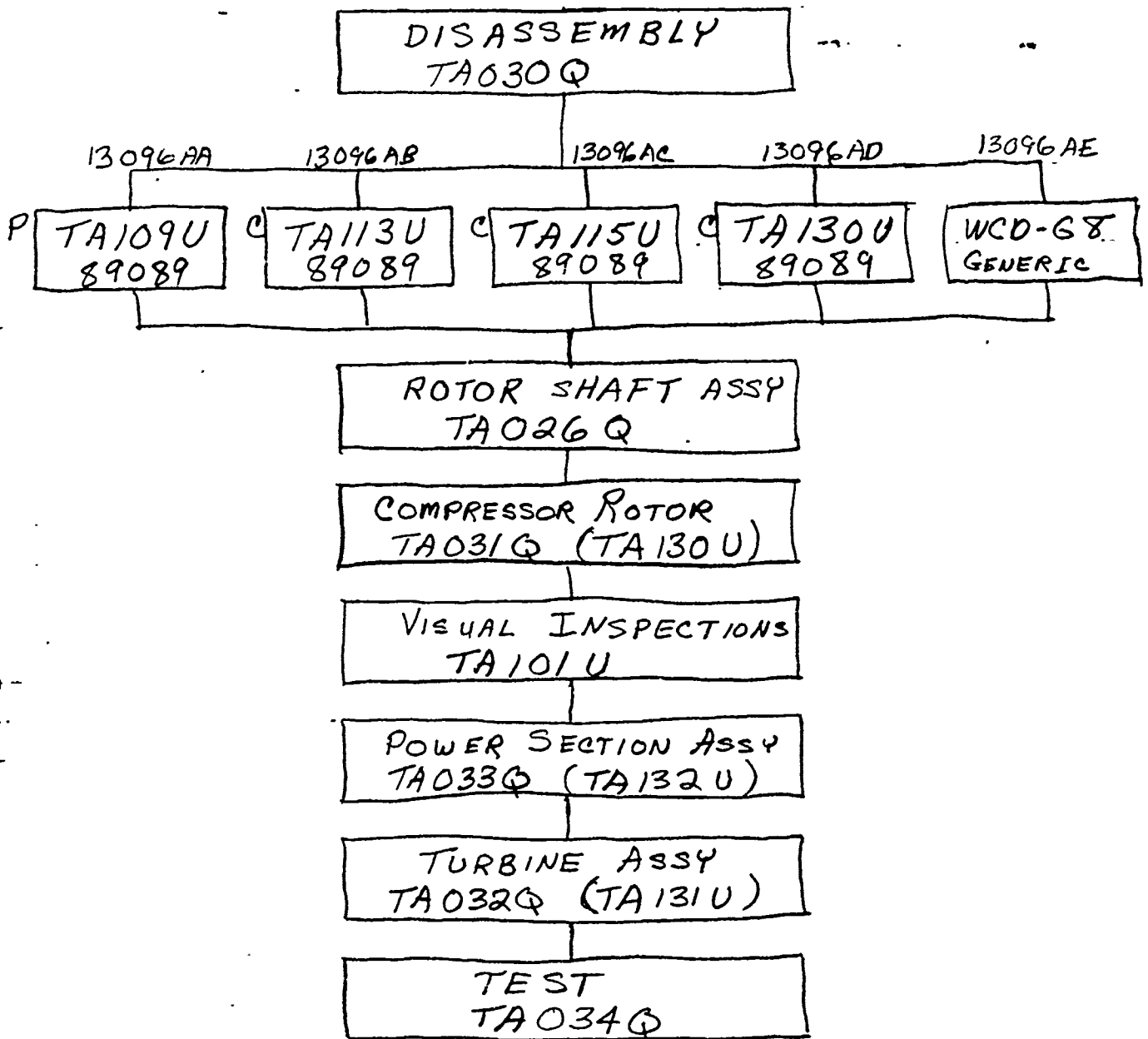
5-16-89





5-10-89

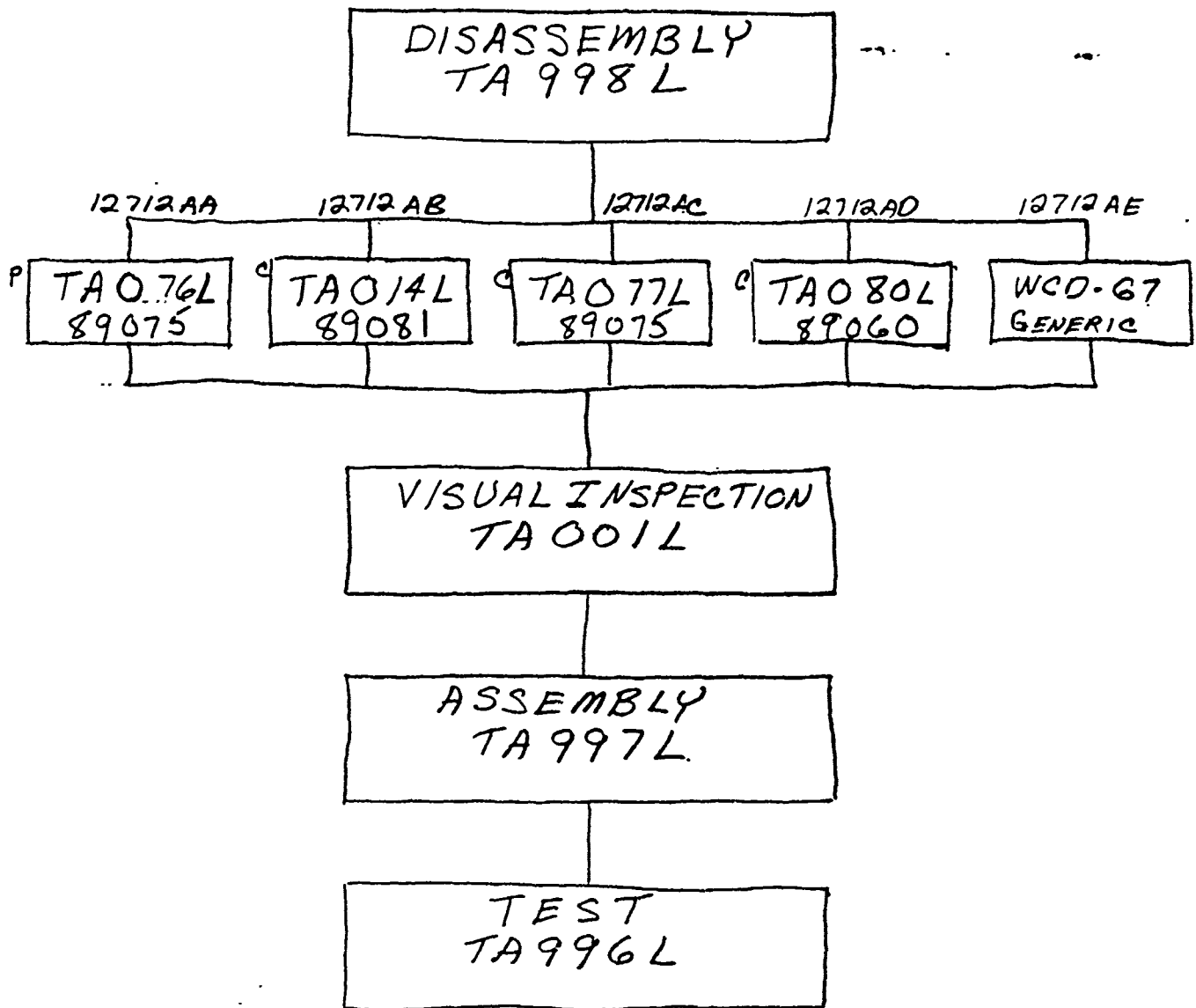
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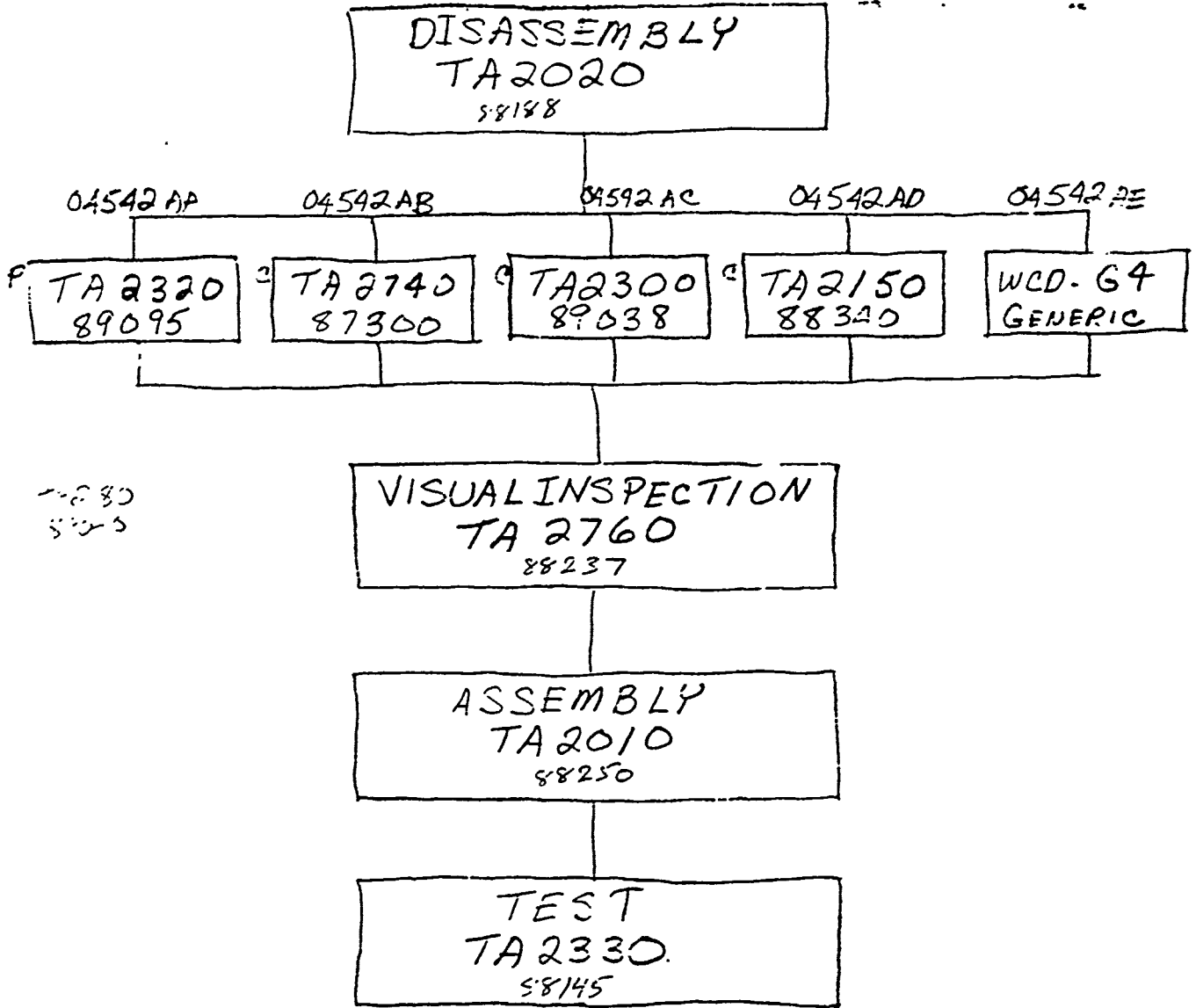
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F16 ADG

5-16-89

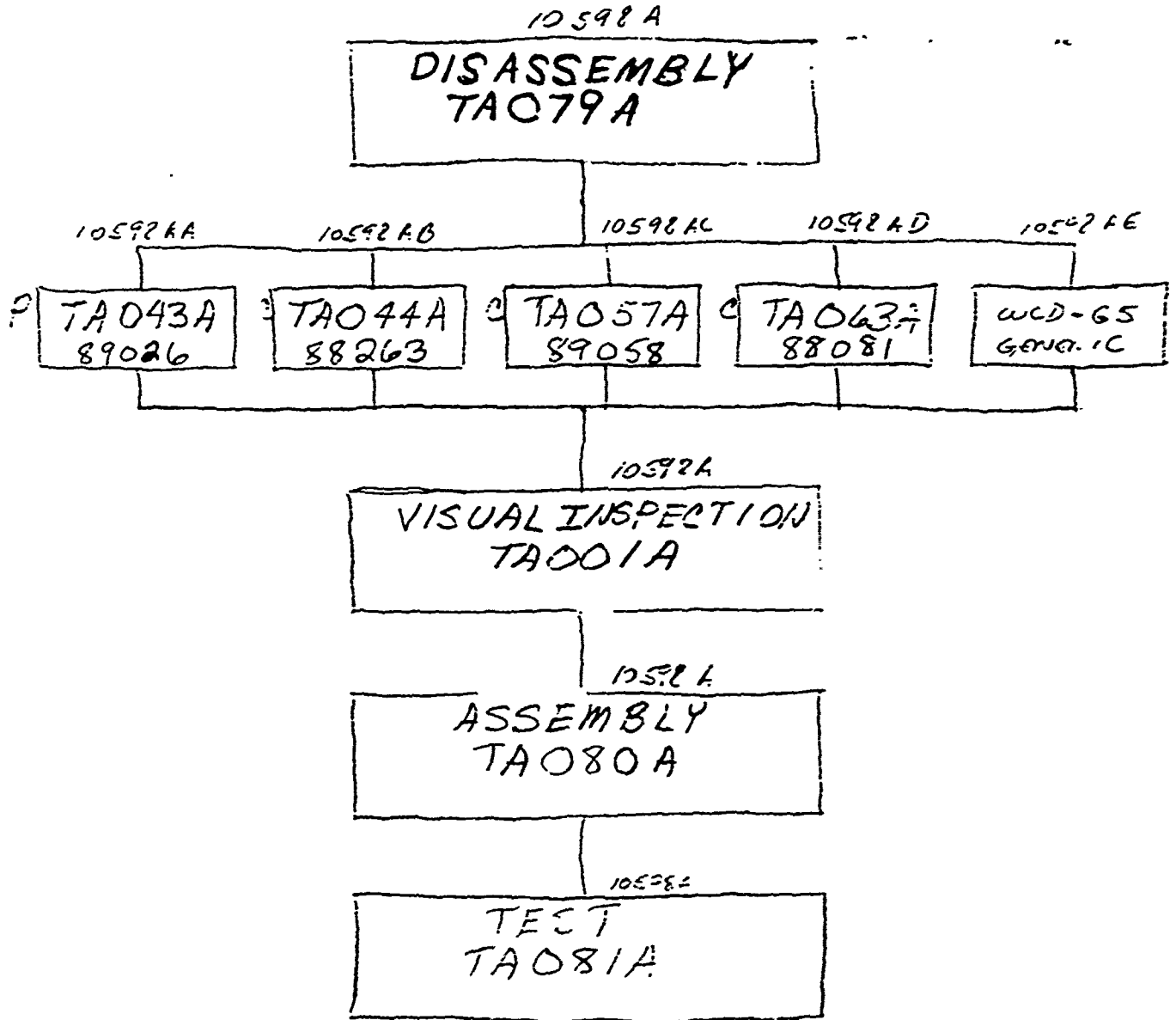


PCN 04542A CPSO2MOD STARTER

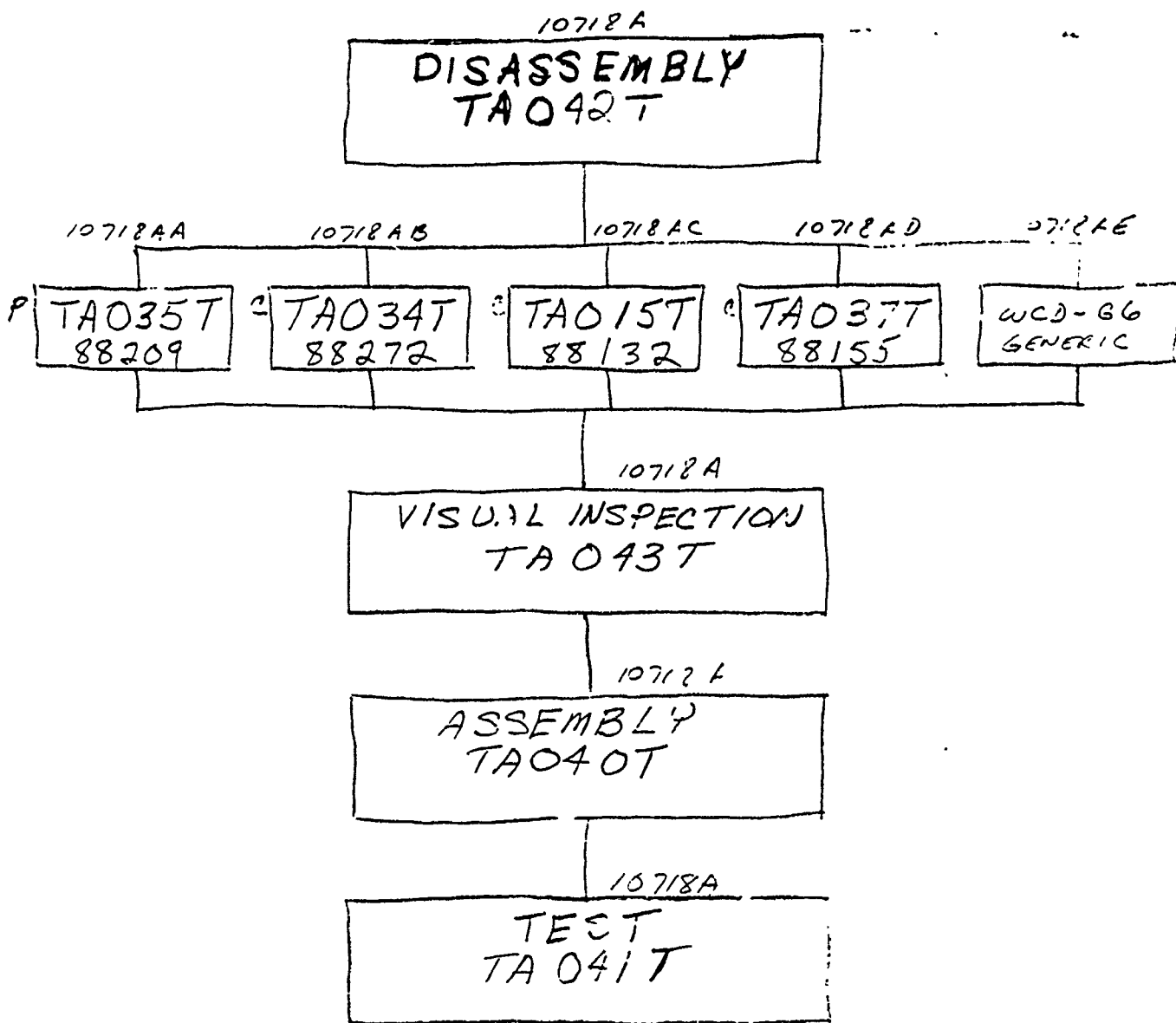


PCN 10598A ATSC 100-87
STARTER

17

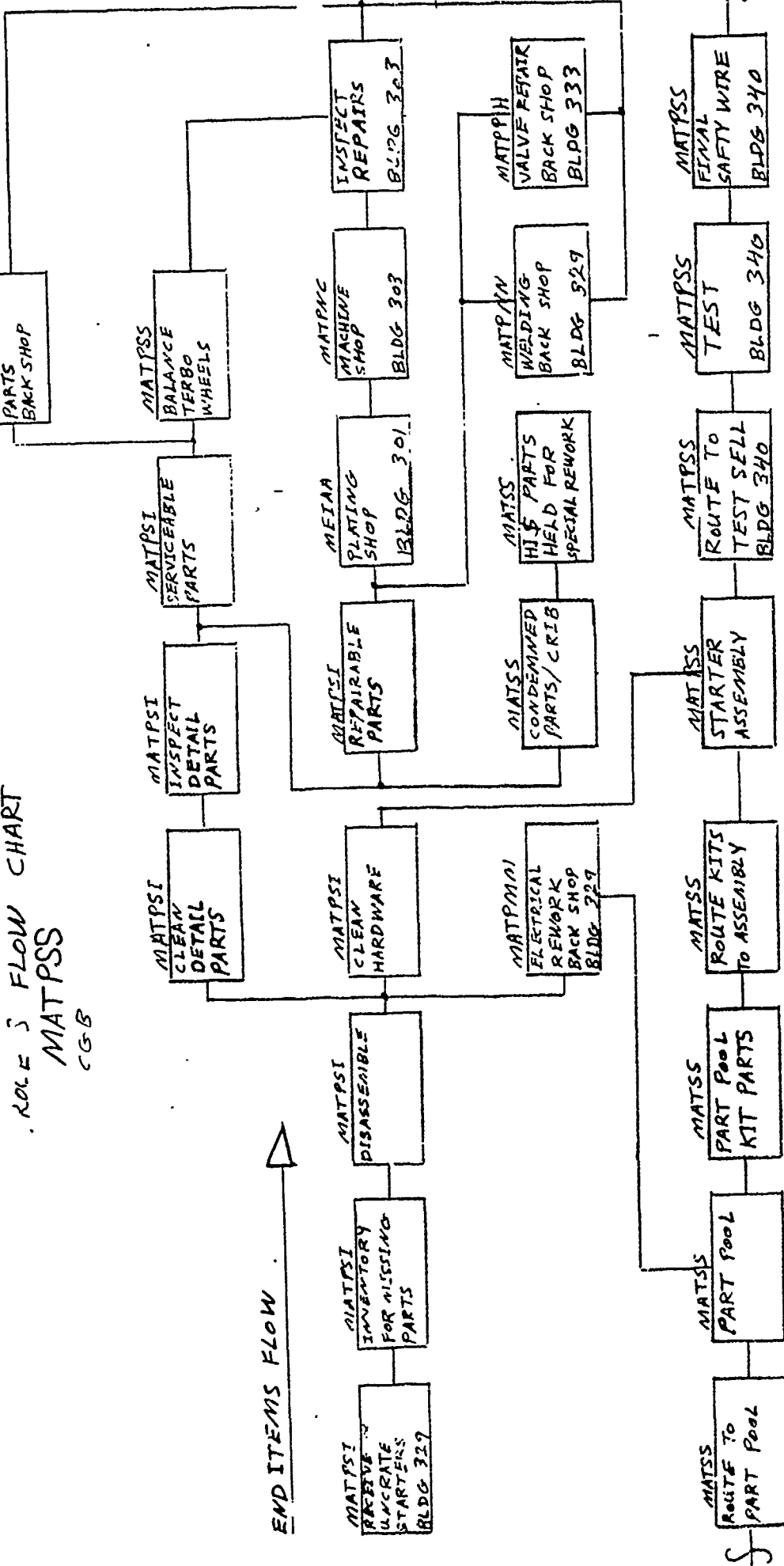


PCN 10718A ATSC 100-97 + 97A
STARTER



6/3/89

SA-ALC
ROLE'S FLOW CHART
MATPSS
CGB



END ITEMS FLOW

KAMAL ATTARIA (ADM/SC)

EDWARD GARZA (SA-ALC)
925-4323

