AD-A237 111

REPORT DOCUMENTATION PAGE

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5. FUNDING NUMBERS: Contract

6. AUTHOR(S): McDonnell Douglas Missile Systems Company

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES): McDonnell Douglas Missile Systems Company, St. Louis, Missouri 63166

8. PERFORMING ORGANIZATION REPORT NUMBER: F33600-88-D-0567

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Technology Insertion (TI)/Industrial Process Improvement (IPI) Data Base Documentation Book Volume for WR-ALC/MANPSD (Plastic & Sheet Metal).
This document contains detailed information about layouts equipment and processes for this RCC.

14. SUBJECT TERMS: MAINTENANCE, TECHNOLOGY INSERTION, DATABASE, MANPSD, PLASTICS, AFLC, AF, SHEET METAL, METALS, EQUIPMENT

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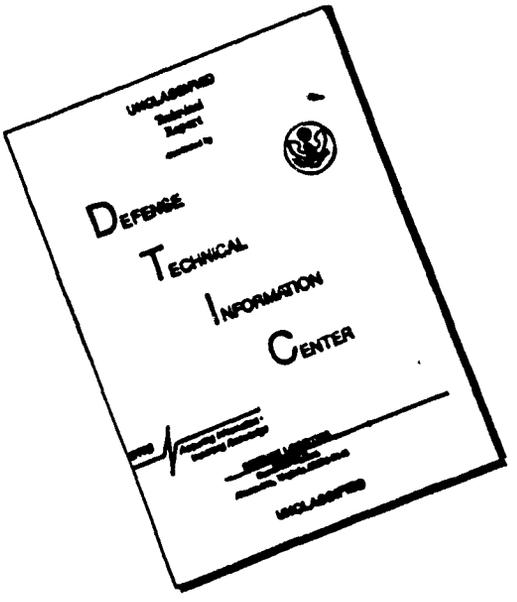

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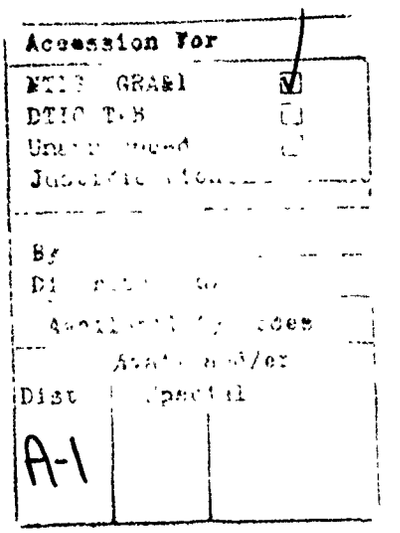
TECHNOLOGY INSERTION-ENGINEERING SERVICES
PROCESS CHARACTERIZATION
TASK ORDER NO. 1
(BLOCK 1)

DATABASE DOCUMENTATION BOOK

WR-ALC

MANPSD



CONTRACT SUMMARY REPORT
14 AUGUST 1989

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

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

2.0 General Information

MANPSD, Plastic and Sheet Metal Unit, is an RCC with MANPS section of the Industrial Products Division (MAN) at WR-ALC.

MANPSD is located in Buildings 603 and 670. The primary workload in MANPSD consists of MISTR work consisting of F-15A and F-15B Canopies, F-15 Radome, C-141 Engine Exhaust Nozzle, C-141 Wing Leading Edges, C-130E Radome, and the C-130A Radome Assembly.

MANPSD will be discussed in more detail in the following Section 2.1 through 2.8.

2.1 Facility Layout Drawing

The facility layout drawings of Buildings 603 and 670 represent the existing As-Is condition.

The "Women" toilet facilities for Building 603 are grossly inadequate comprising of only one commode in a very small space. The "Men" toilet facilities have three spaces.

The "Break Area" for Building 603 is not enclosed so to preclude dirt, dust, noise, etc. from interfering with a comfortable break period.

Several C-130 Wing Leading Edge jigs are currently being stored in Building 603. Additional work space for C-141 nozzles could be realized if these unused jigs were stored elsewhere.

Building 603 is not adequately cooled.

The drawings entitled Master Shop Layout File, Buildings 603 and 670 were updated as of April, 1989 and are of good quality, but do not show the latest floor layout including the installation of two drying ovens.

2.2 Equipment

MANPSD is comprised mainly of conventional sheet metal and certain specialized composite material fabrication equipment in Buildings 603 and 670. MANPSD has large assembly and check fixtures, rivet installation holding fixtures, fixed tables

and dollies, a mobile lifting crane, transport dollies, drying ovens, and other ordinary fiberglass, (composite), support equipment.

MANPSD has the necessary hand tools and process equipment to manufacture and repair composite sandwich structure normally used in Radome and Canopy repair.

MANPSD also has the normal sheet metal equipment to support MISTR workload such as hand brakes, hand formers, drill press, band saw, hole punch, bench grinder, as well as all the rivet driving and upsetting tools necessary to support the numerous types of fasteners used in repair/overhaul work for sheet metal and fiberglass sandwich structure.

MANPSD has the necessary test equipment and test facilities to conduct tests on sending/receiving capabilities of repaired radomes. This testing procedure also confirms repairs and splice effects on the critical "window" areas of the radomes.

The equipment within MANPSD varies in age between ten and twenty years old. The majority of the equipment is in good working and usable condition.

New, replacement pieces of equipment are being planned for purchase.

A listing of major equipment for MANPSD can be found in the equipment profile list in Section 5.0.

2.3 Workforce

MANPSD has an adequate workforce. The workforce is well trained and well supervised. Personal interviews have indicated a sense of professionalism and pride among the workforce.

The workforce is comprised mainly of aircraft sheet metal mechanics, the general plastic fabricators and workers, two foreman classifications, one leader-in-training, a secretary, a tool and parts attendant, and worker trainees.

The following constitutes a listing of the available manpower within MANPSD.

Skill Code	Skill Level	Quantity	Experience
11582	WS-14	2	20 yrs.
47881	WS-10	2	15 yrs.
48900	WS-11	3	10 yrs.
48901	WS-09	5	10 yrs.
48903	WS-07	5	8 yrs.
9A014	WS-10	40	8 yrs.
18083	WS-05	7	2 yrs.
9A012	WS-09	30	6 yrs.

2.4 Repair Process Technologies

The repair process technologies within MANPSD consist of major unit manufacturing and conventional sheet metal/fiberglass, honeycomb bonded and composite repairs on HIGH-VALUE C-130, C-141, and F-15 major aircraft assemblies. These assemblies are critical to flight safety and the performance of the aircraft in their assigned mission.

All of the aircraft assemblies to be inspected and repaired are received in Buildings 603 and 670, and are disassembled as required per the applicable Technical Order for inspection/repair/modification. They are reworked to incorporate all the aircraft modifications and Technical Order changes to meet the required configuration for the aircraft.

The sheet metal and composite components are repaired to a serviceable condition or otherwise replaced with new parts. The repairs may consist of removing local corrosion, crazed or delaminated fiberglass sections, installing new transparencies, replacing damaged metal sections and those sections with major corrosion, replacing angles, brackets, rivets, fabricating special repair plates, etc. to repair damaged members of the minor or major component of the unit.

2.5 Workload Volume and Mix

The workload within MANPSD consists mostly of Management of Item Subject To Repair (MISTR) items.

2.6 Material Handling

Material handling in MANPSD involves the use of a mobile crane, slings, manpower, holding, transport dollies, and work carts.

All the large and heavy items such as the F-15 Canopies and C-130 Radomes are loaded into and out of the holding fixtures and dollies by the use of cranes and slings. Some of these assemblies are rotated/turned by "manpower" requiring several workers to accomplish the task.

2.7 Storage

The only dedicated storage in the MANPSD area is several parts handling and storage bins. Large assemblies are occasionally stored within the work area making it difficult to work. The large items not being used should be returned to outside storage and not in Buildings 603 and 670. The large bulky items are normally received and stored in wooden crates outside the MANPSD area.

** ALC - WR	RCC - MANPSD				MODEL WORKLOAD FILE					7/ 5/1989			
03172A	MB011N	0	4	21	39	31	13			66.90		240.60	0A
F-15A	.0	.0		0		.0000		.0000		0		.344	B
03172ASUBA	MBA11N	0	4	0	0	0	0			.00		2.00	0A
F-15A	.0	.0		0		.0000		.0000		0	S	.003	B
03172ASUBB	MBB11N	0	4	0	0	0	0			.00		.00	0A
F-15A	.0	.0		0		.0000		.0000		0	S	.000	B
03427A	MB015N	0	4	6	2	0	2			63.00		240.90	0A
F-15B	.0	.0		0		.0000		.0000		0		.033	B
09193A	MB005N	0	4	16	27	29	21			31.80		95.50	1A
F-15	.0	.0		0		.0000		.0000		0		.122	B
40208A	MB013N	0	4	8	15	7	11			142.30		65.60	1A
C-130	.0	.0		0		.0000		.0000		0		.037	B
41059A	MB001N	0	4	13	14	24	36			47.30		68.00	1A
C-130	.0	.0		0		.0000		.0000		0		.081	B
51344A	MB015C	0	4	16	18	14	10			79.20		457.30	0A
C-141	.0	.0		0		.0000		.0000		0		.364	B
51344ASUBB	MBB15C	0	4	0	0	0	0			.00		.30	0A
C-141	.0	.0		0		.0000		.0000		0	S	.000	B
51344ASUBC	MBC15C	0	4	0	0	0	0			.00		.00	0A
C-141	.0	.0		0		.0000		.0000		0	S	.000	B
51344ASUBD	MBD15C	0	4	0	0	0	0			.00		.00	0A
C-141	.0	.0		0		.0000		.0000		0	S	.000	B
51420A	MB021C	0	4	2	0	2	8			51.20		97.60	0A
C-141	.0	.0		0		.0000		.0000		12		.016	B

CONTROL NUMBERS BY RCC

RCC	C/N		NOUN	ORG HOURS	
MNPSA	51454A	51455A	PETAL DOOR	19105	
	01900A		BRAKEAER	9171	
(6) (4+2)	51352A	51353A	DOOR	8342	
	51418A	51419A	LEADING	6480	43098
11/23 ADD	05502A	05503A	AILERON		
	51334A		HORZ. STABILIZER		
MNPSC	06691A	06692A	COWLING R&L	97484	
	50164A		SCOUP	4032	
	51402A		DR THRUST	3110	
5	50266A		ELEVATOR	2770	
	50242A	50244A	FLAP	3504	110900
	(50454A)				
MNPSD	03172A		CANOPY	49719	
	51344A		NOZZEL	34626	
	09193A	F15	RADOME	21,107	
(7) (6+1)	41059A	C130	RADOME ASSY	9310	
	03427A		CANOPY	6900	
	40208A	C141	RADOME	5495	127157
11/23 ADD	51420A		LEADING EDGE		281155

SHEET METAL SHOP

BB 10/14/88

RCC	ORG HRS	80%	NO. OF HRS SELECTED FOR STUDY
MANPSA	53450	42760	43098 (81%)
MANPSC	144209	115367	110900 (77%)
MANPSD	156501	125200	127157 (81%)

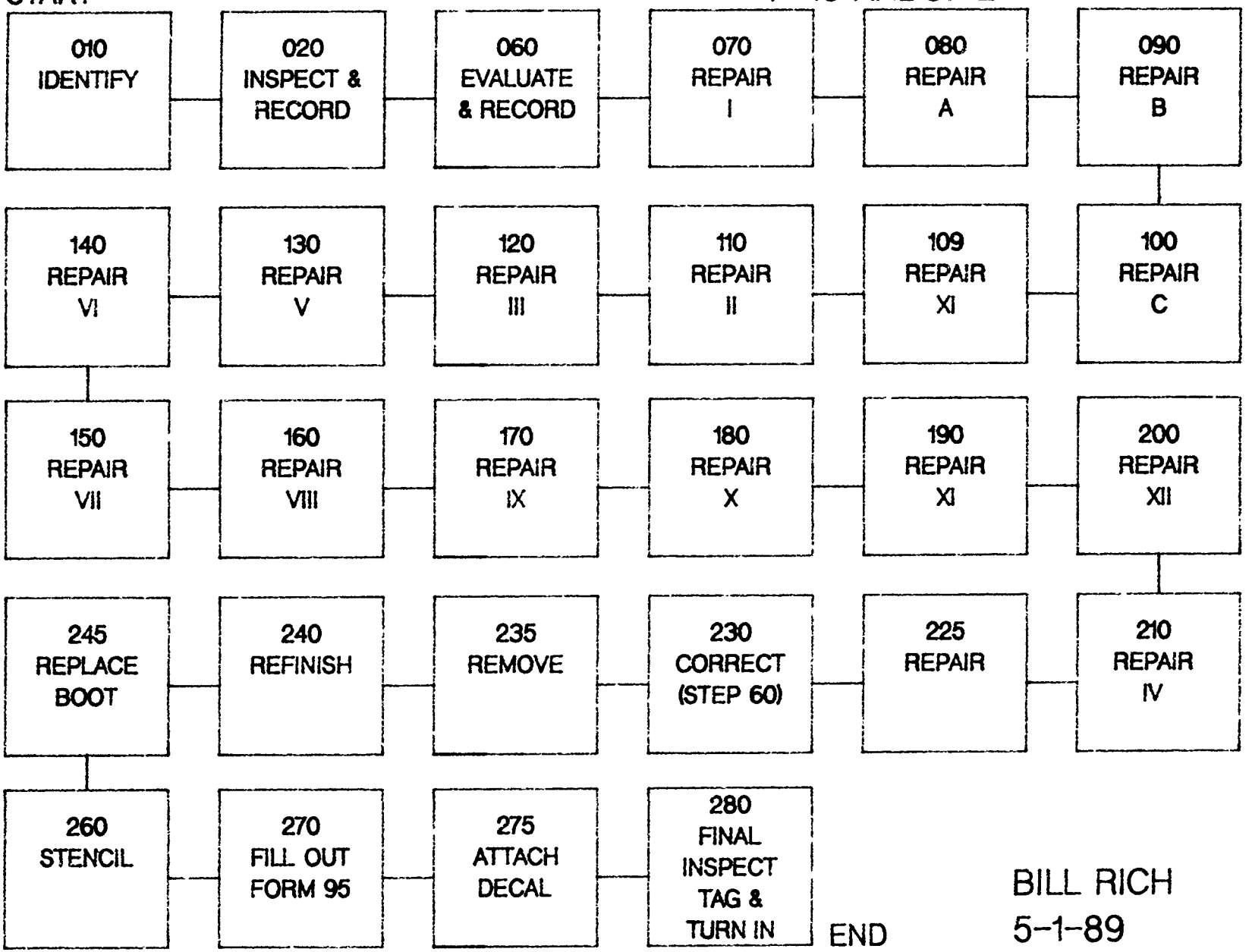
CALCULATED FROM DOC. GOPC AS OF 22SEP88 FOR RCC MANPS AND ALLOCATED C/N'S FOR UNITS A, C & D.

Bob 12/13

MANPSD

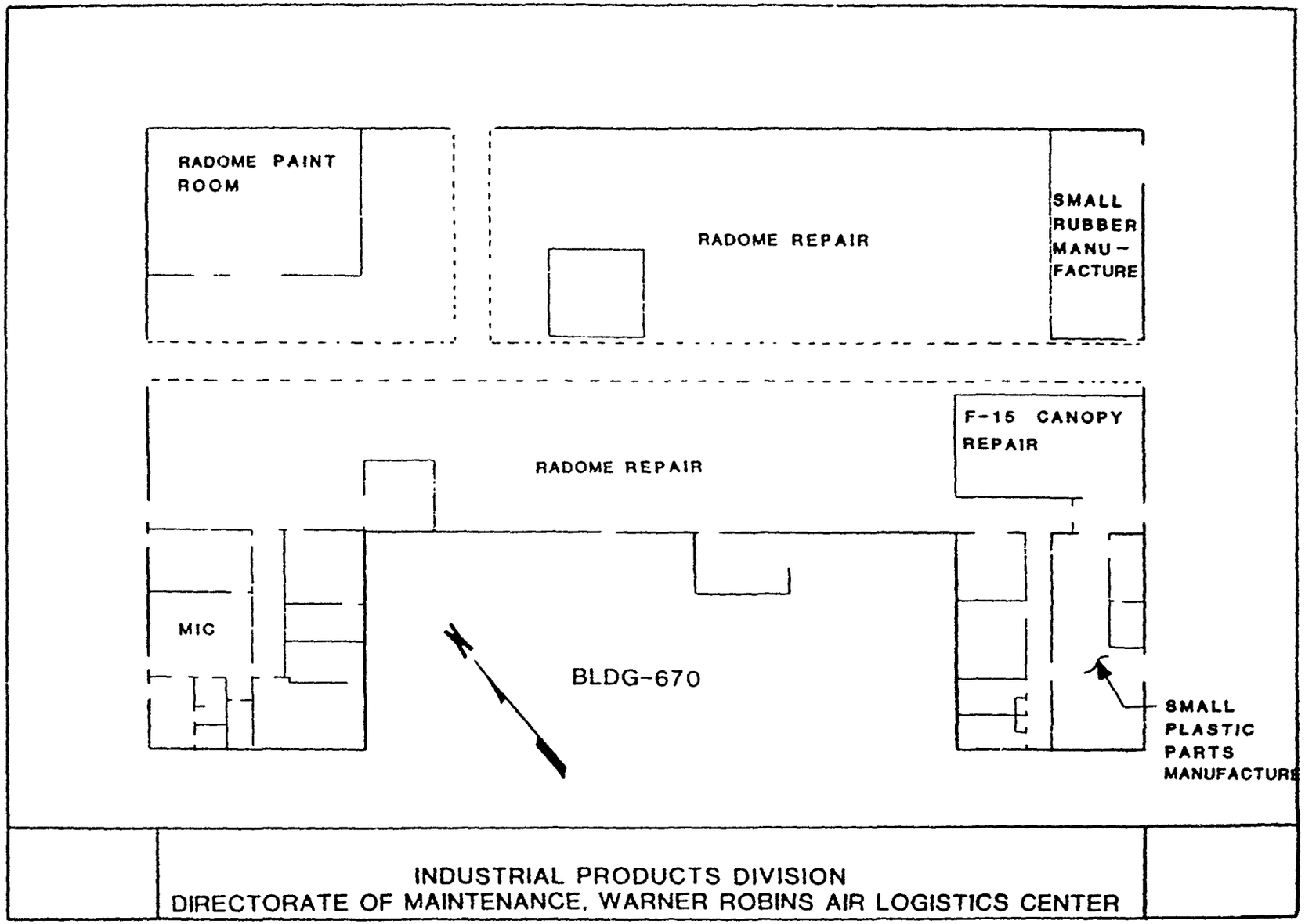
WCD=MB005N PCN=09193A

F-15 RADOME

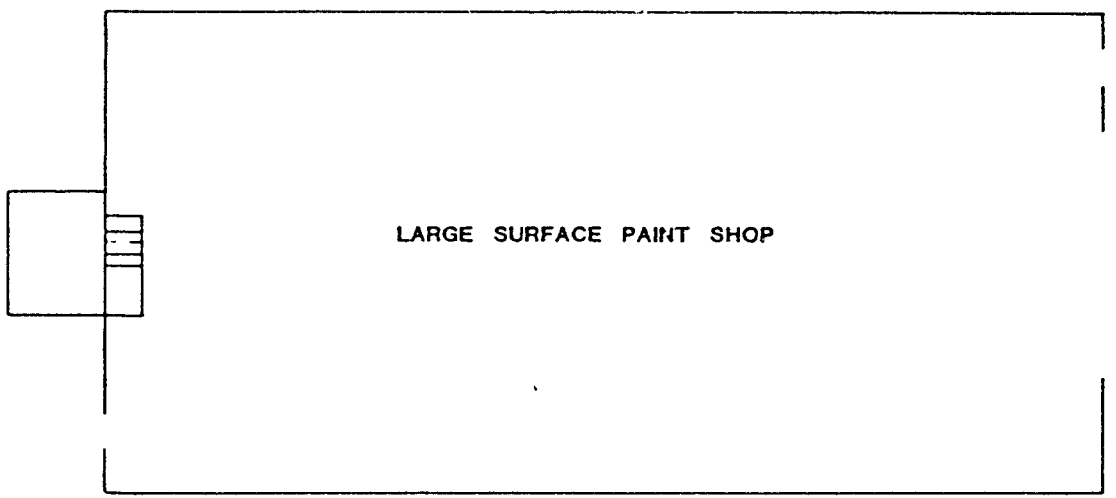


BILL RICH

5-1-89



INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER



BLDG 605

INDUSTRIAL PRODUCTS DIVISION
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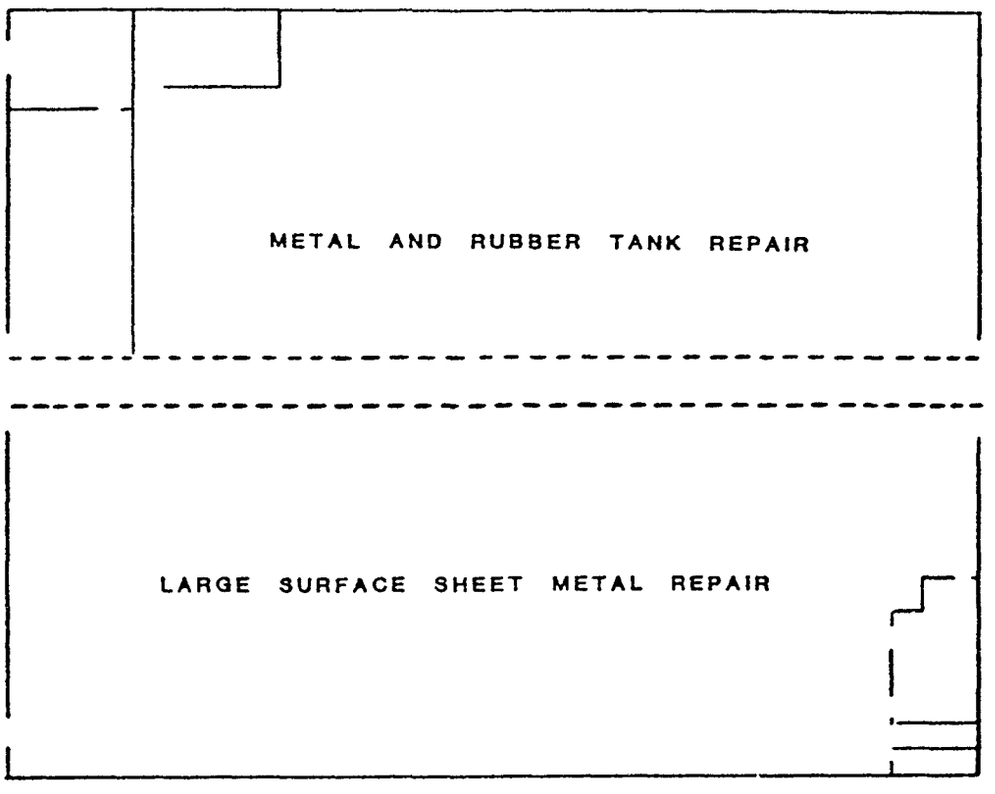
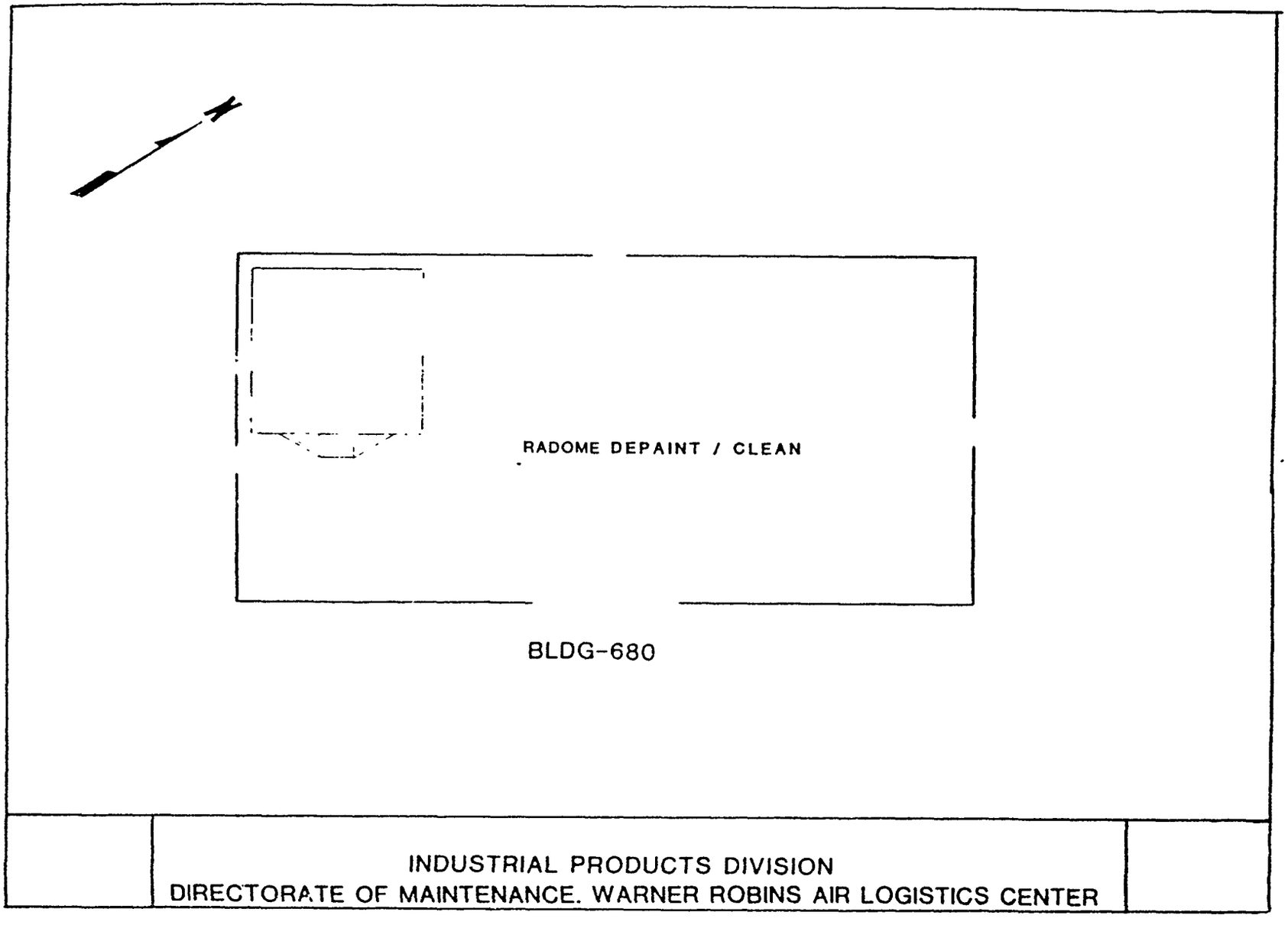


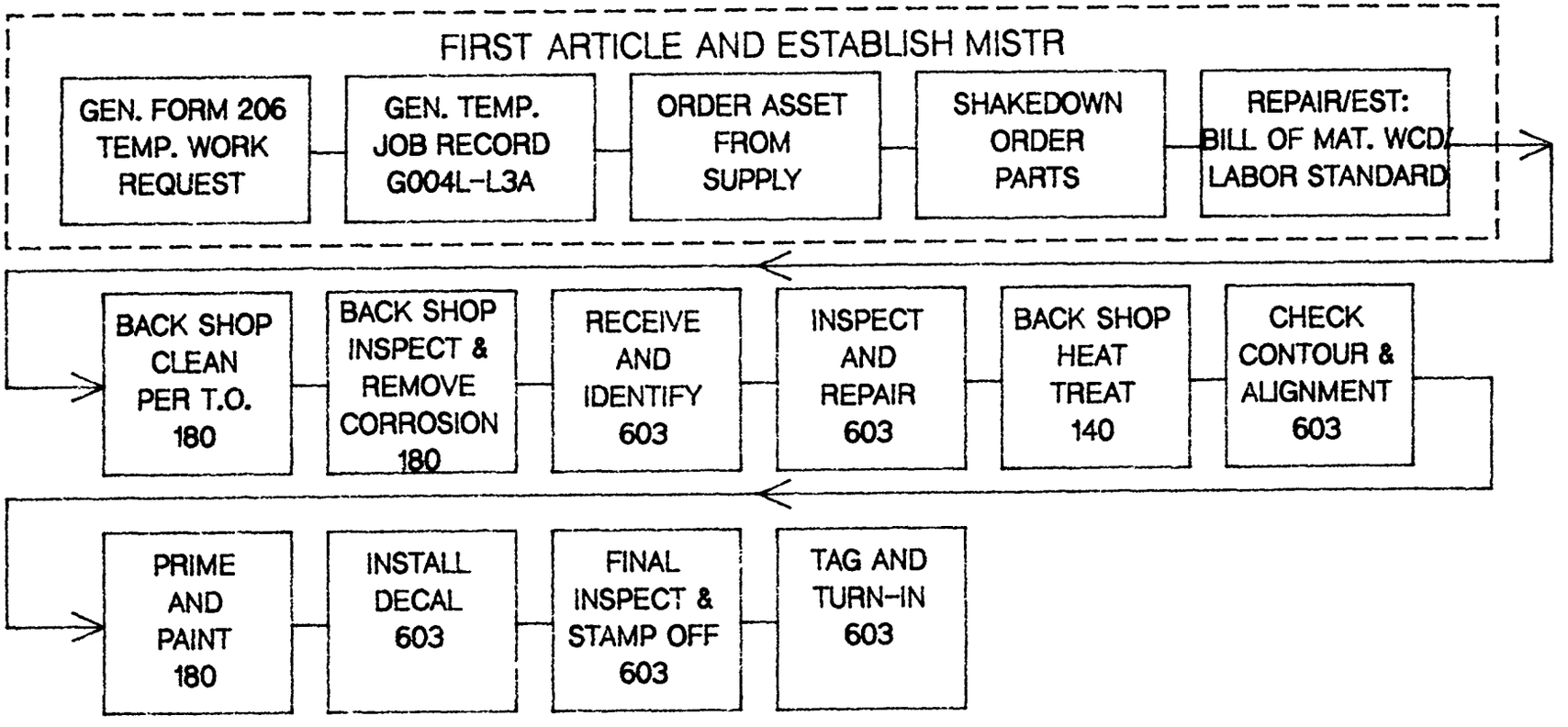
BLDG-603

INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER



INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE. WARNER ROBINS AIR LOGISTICS CENTER

MANPSD PROCESS FLOW CHART C-141 WING L.E.



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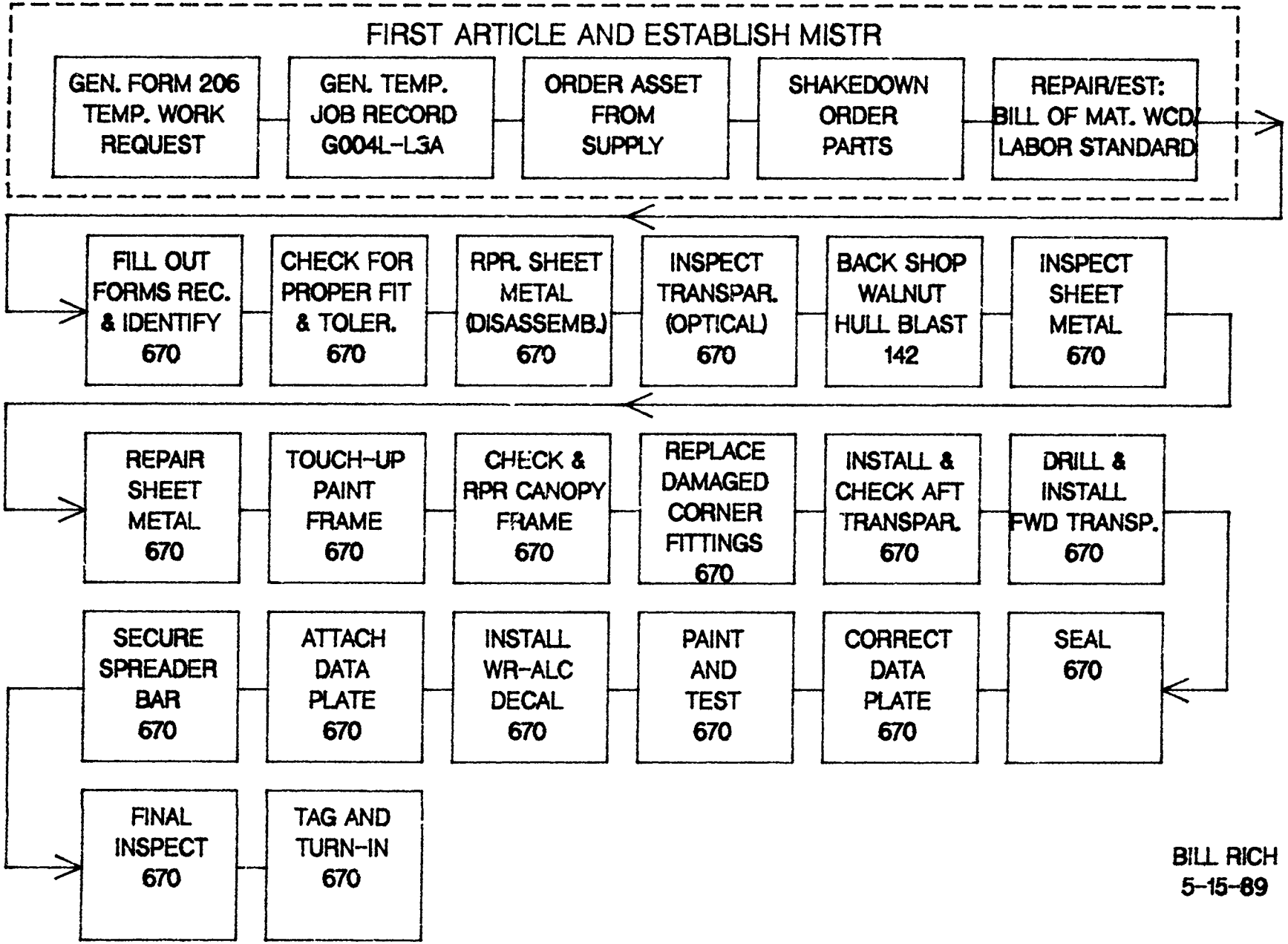
MANPSD PROCESS FLOW CHART F-15B CANOPY



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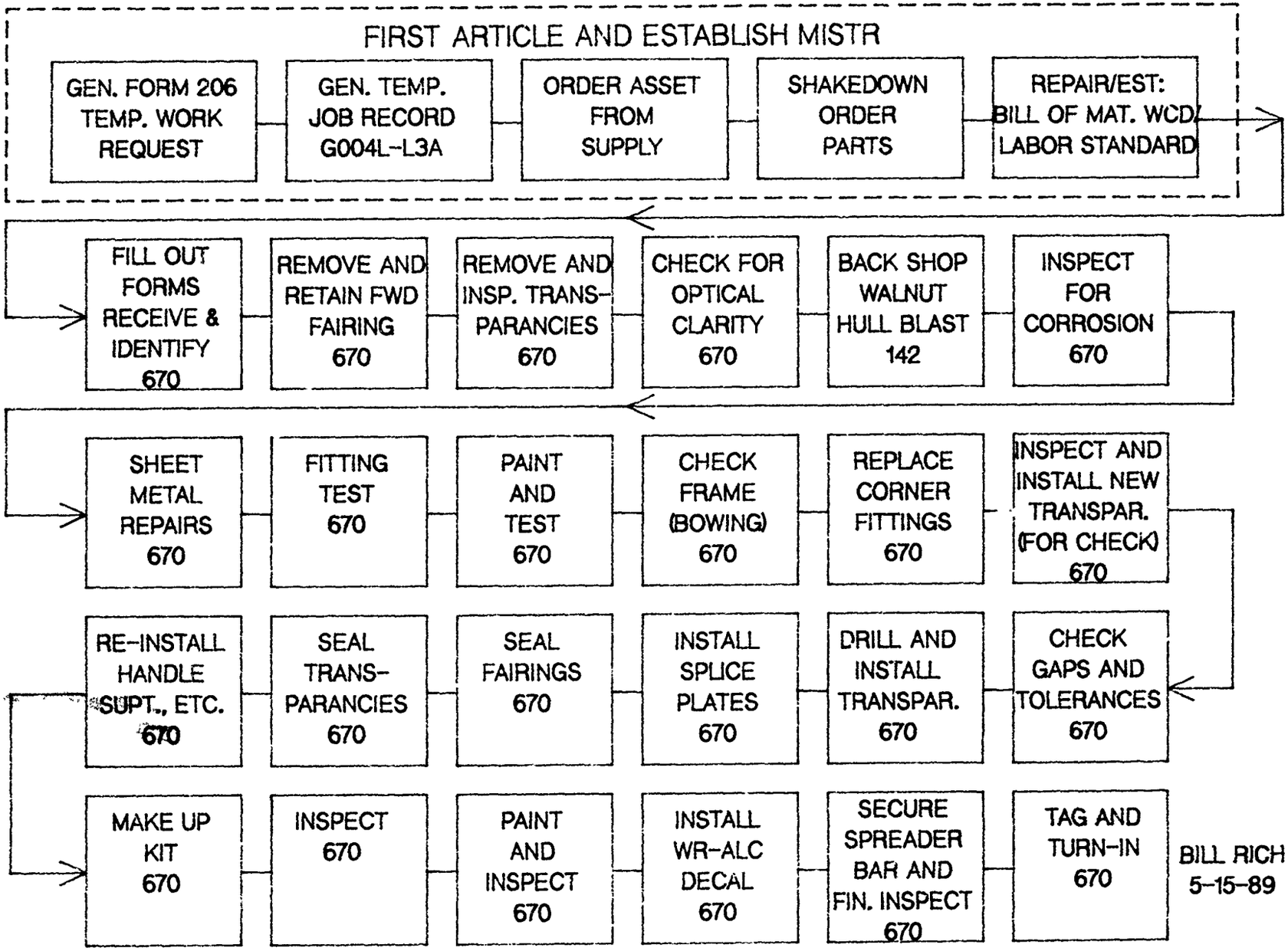
MANPSD PROCESS FLOW CHART F-15A CANOPY



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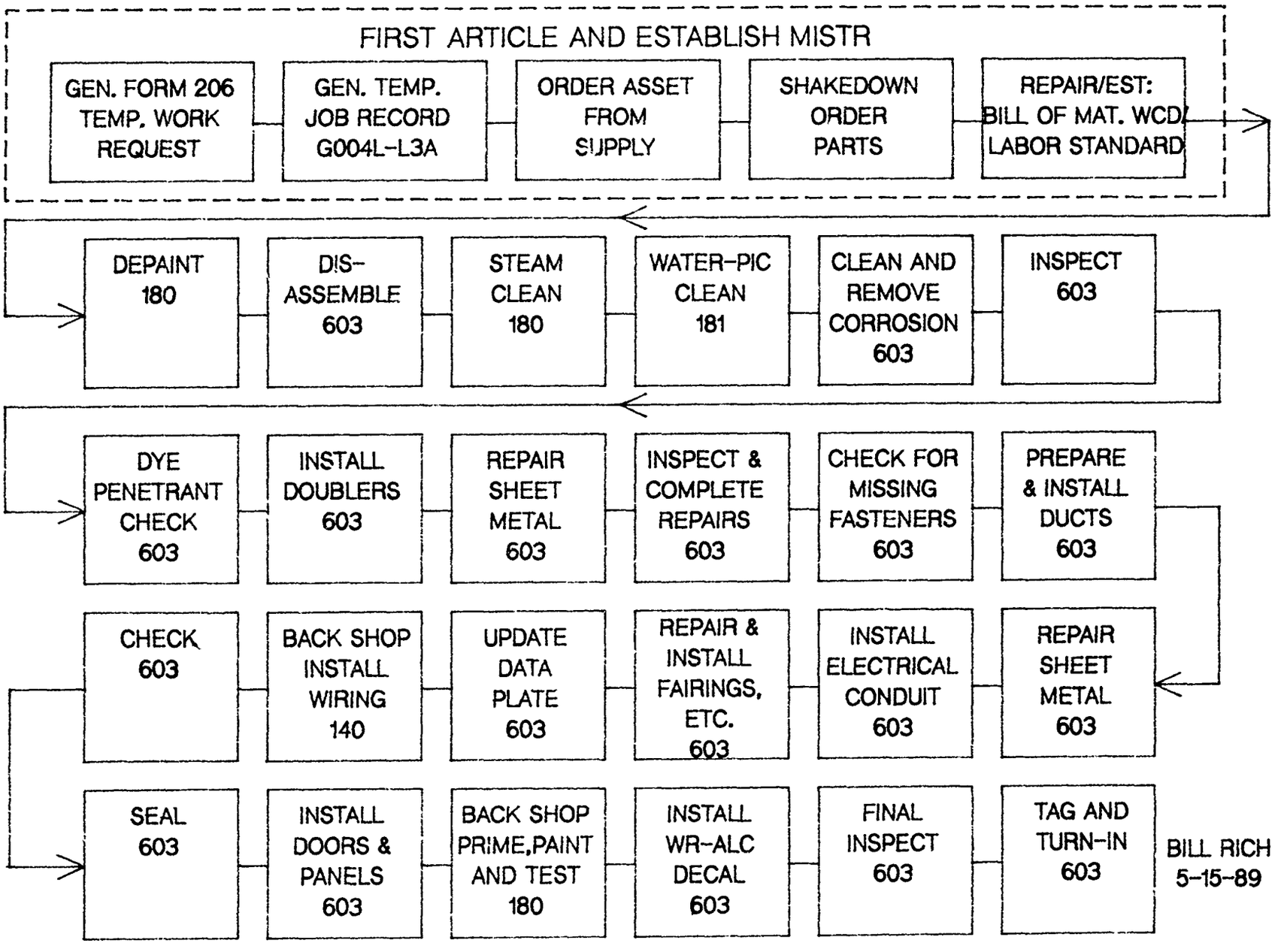
MANPSD PROCESS FLOW CHART C-141 NOZZLE



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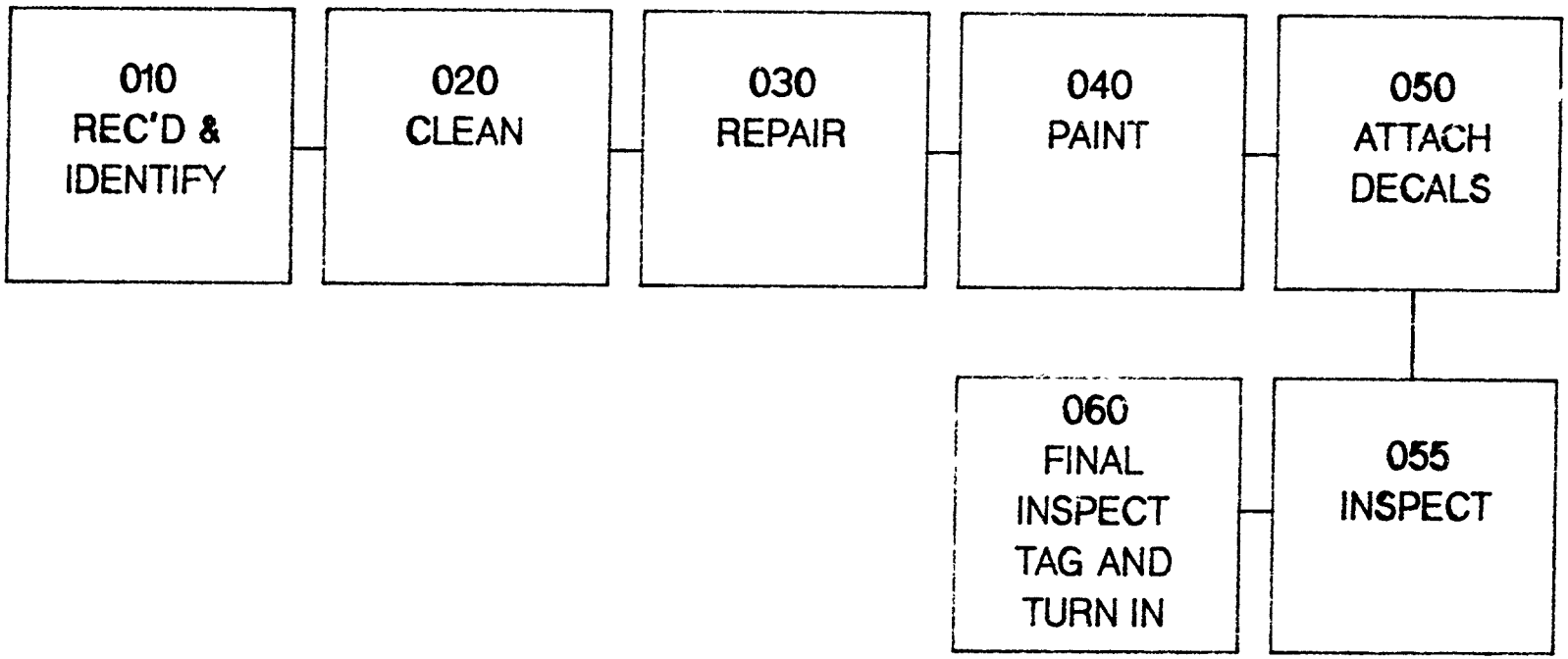
MANPSD WCD=MB013N PCN=40208A

C-130 RADOME

START



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END

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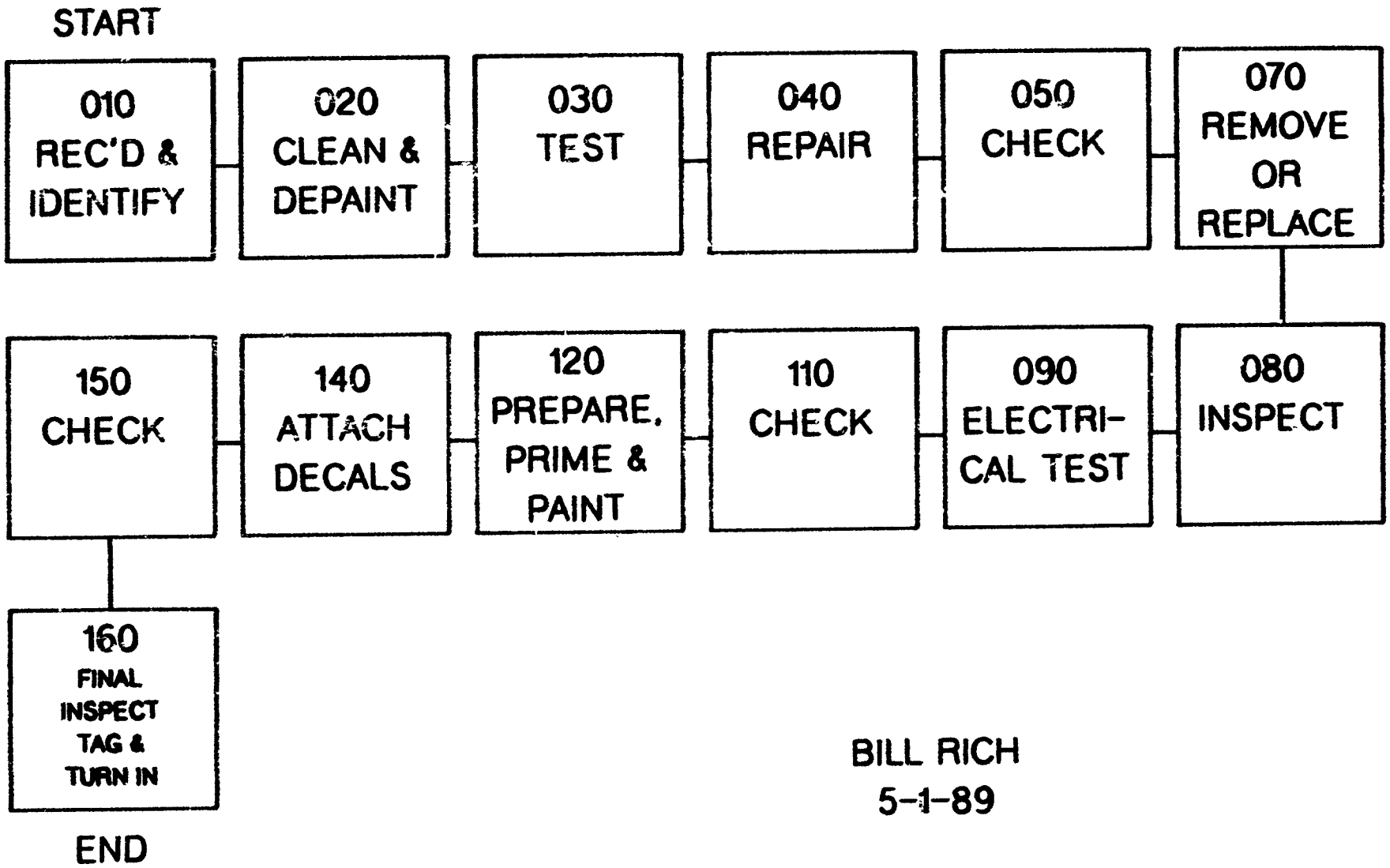
WCD=MB001N

PCN=41059A

C-130 RADOME ASSY.



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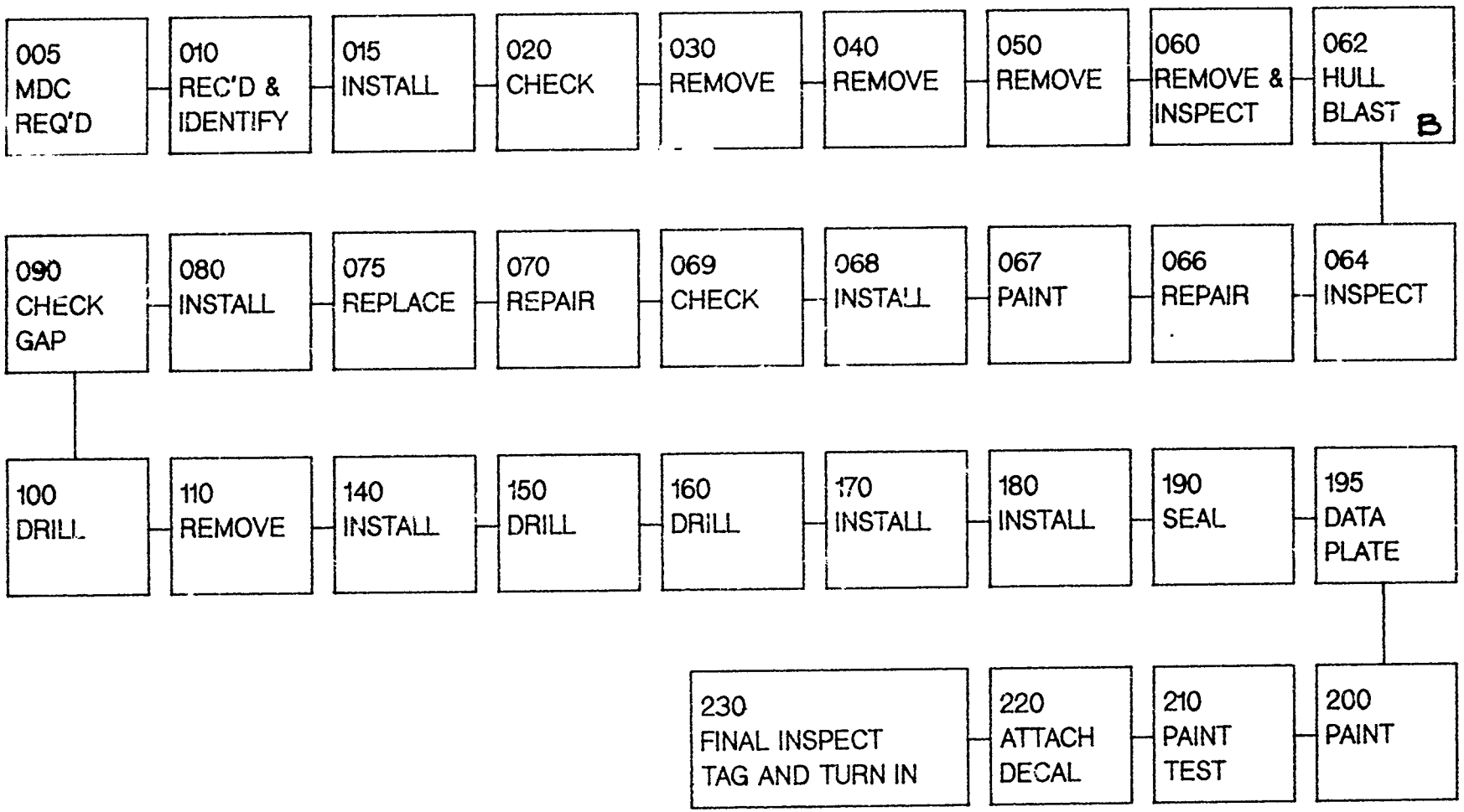
F-15B CANOPY



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MANPSD

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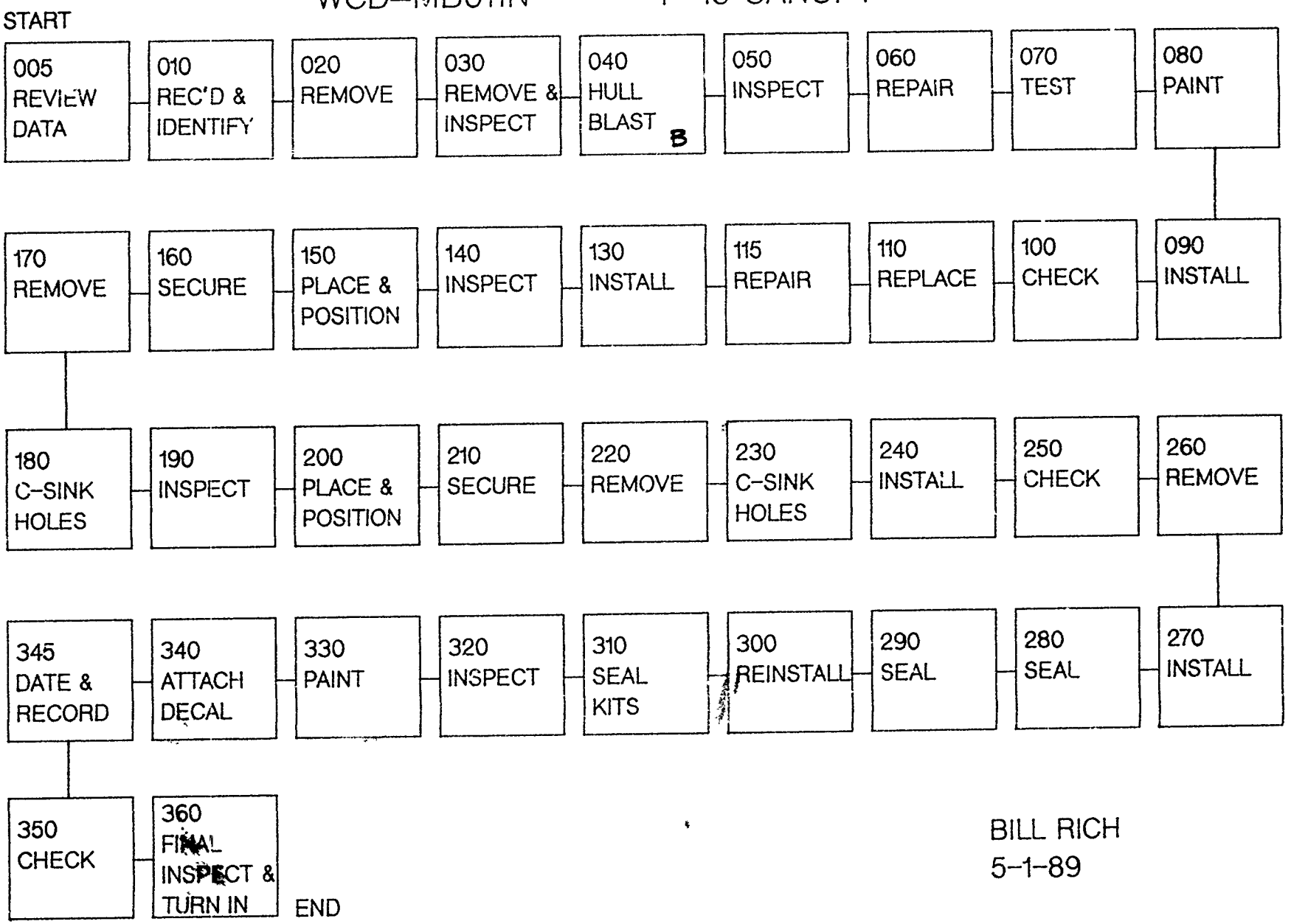
PCN=03172A
F-15 CANOPY



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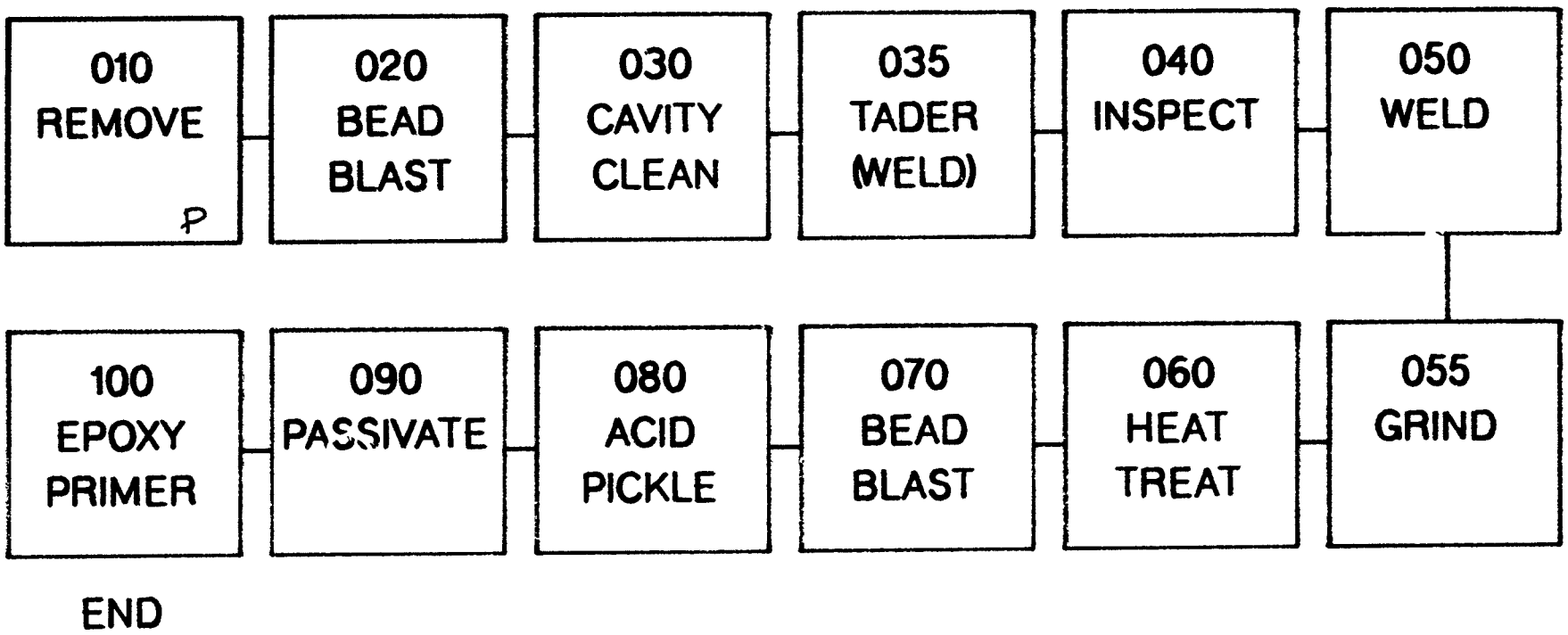
MANPSD

(CHILD WCD)
WCD=MBA11N

(PCN=03172A)

F-15 CANOPY
(CORNER FITTINGS)



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MANPSD (CHILD WCD) (PCN=03172A)

WCD=MBBIIN (F-15 CANOPY)

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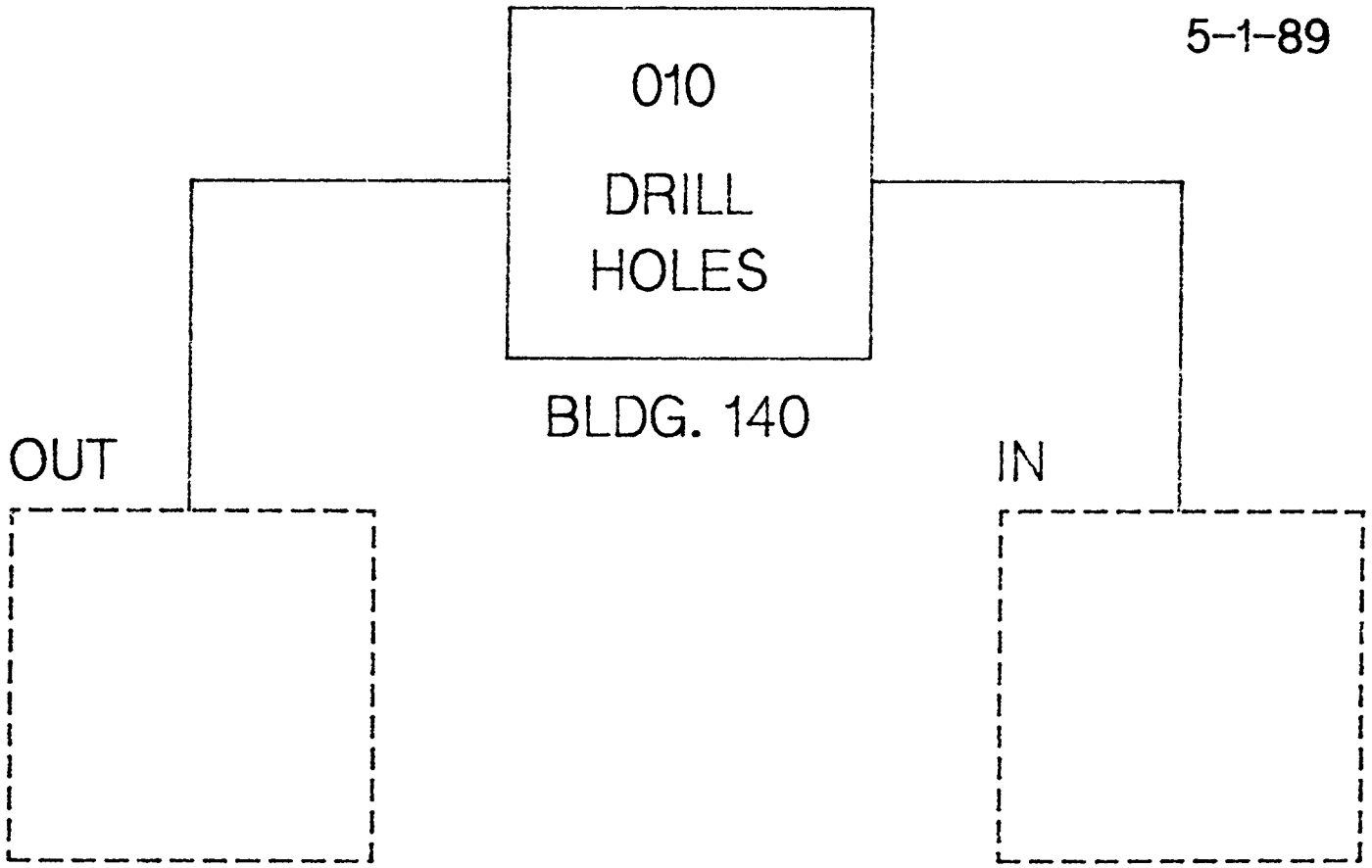

MANPSD (CHILD WCD) (PCN=03172A)

WCD=MBCIIN (F-15 CANOPY)

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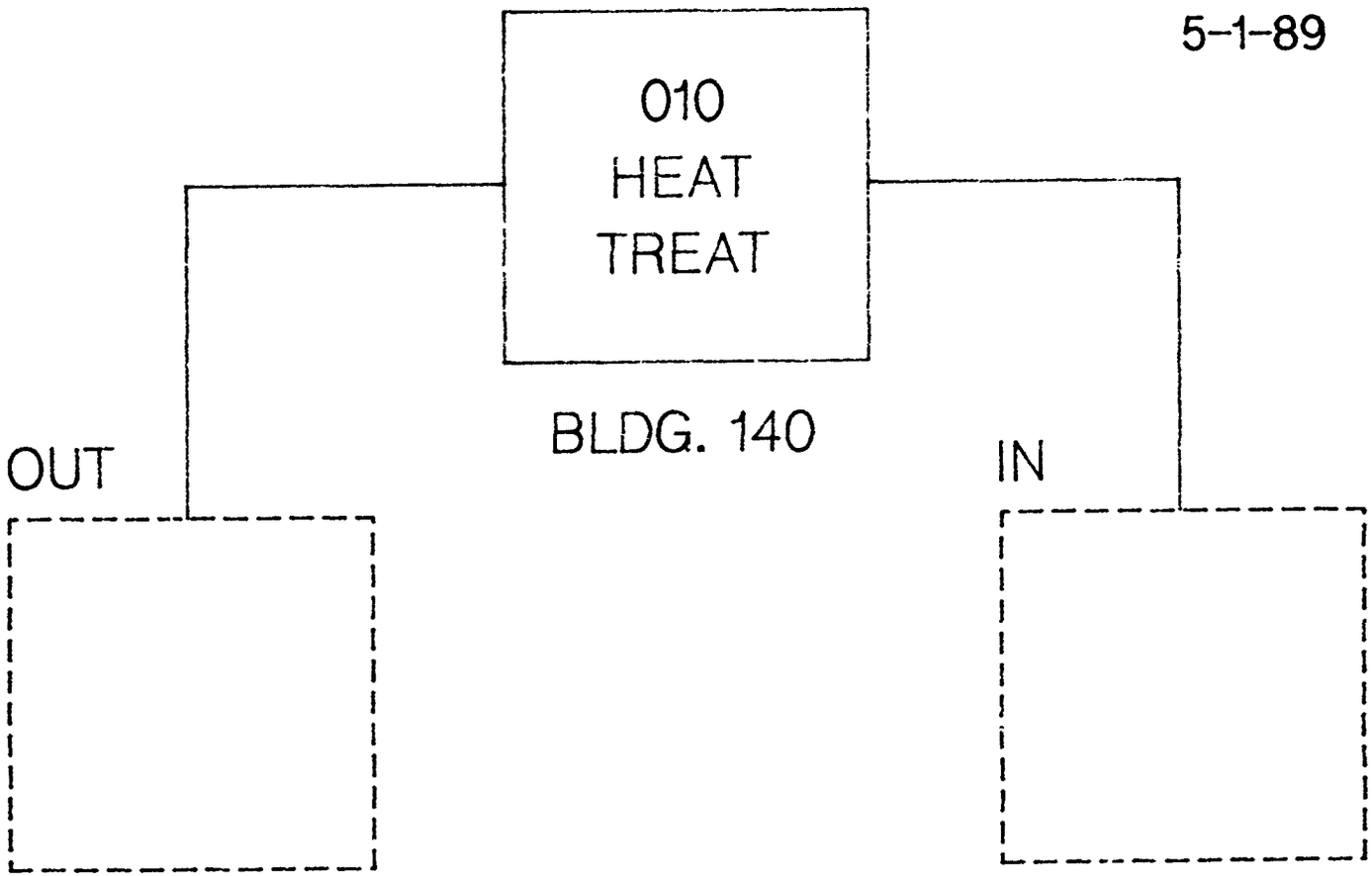

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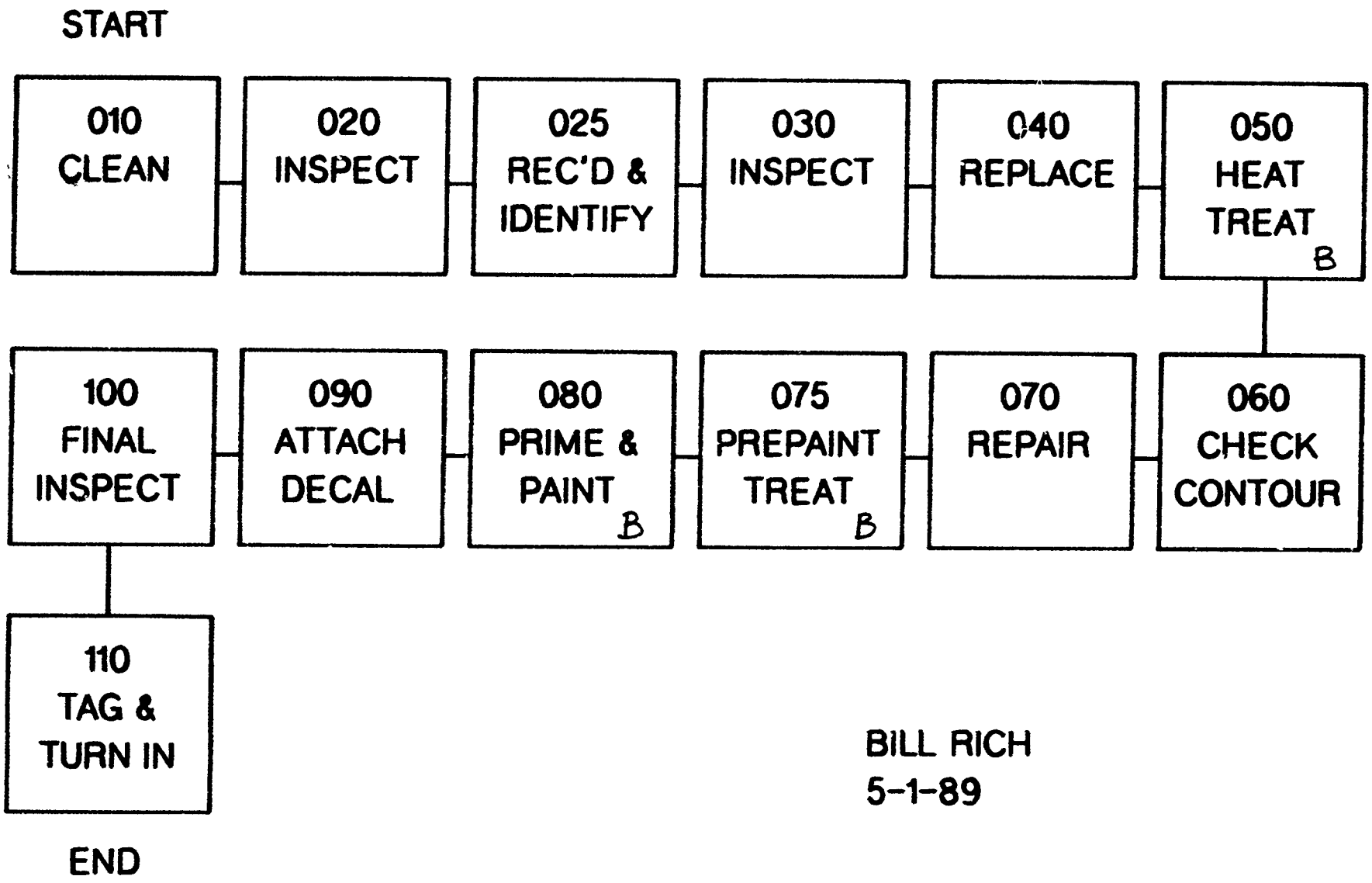
C-141 WING L.E.



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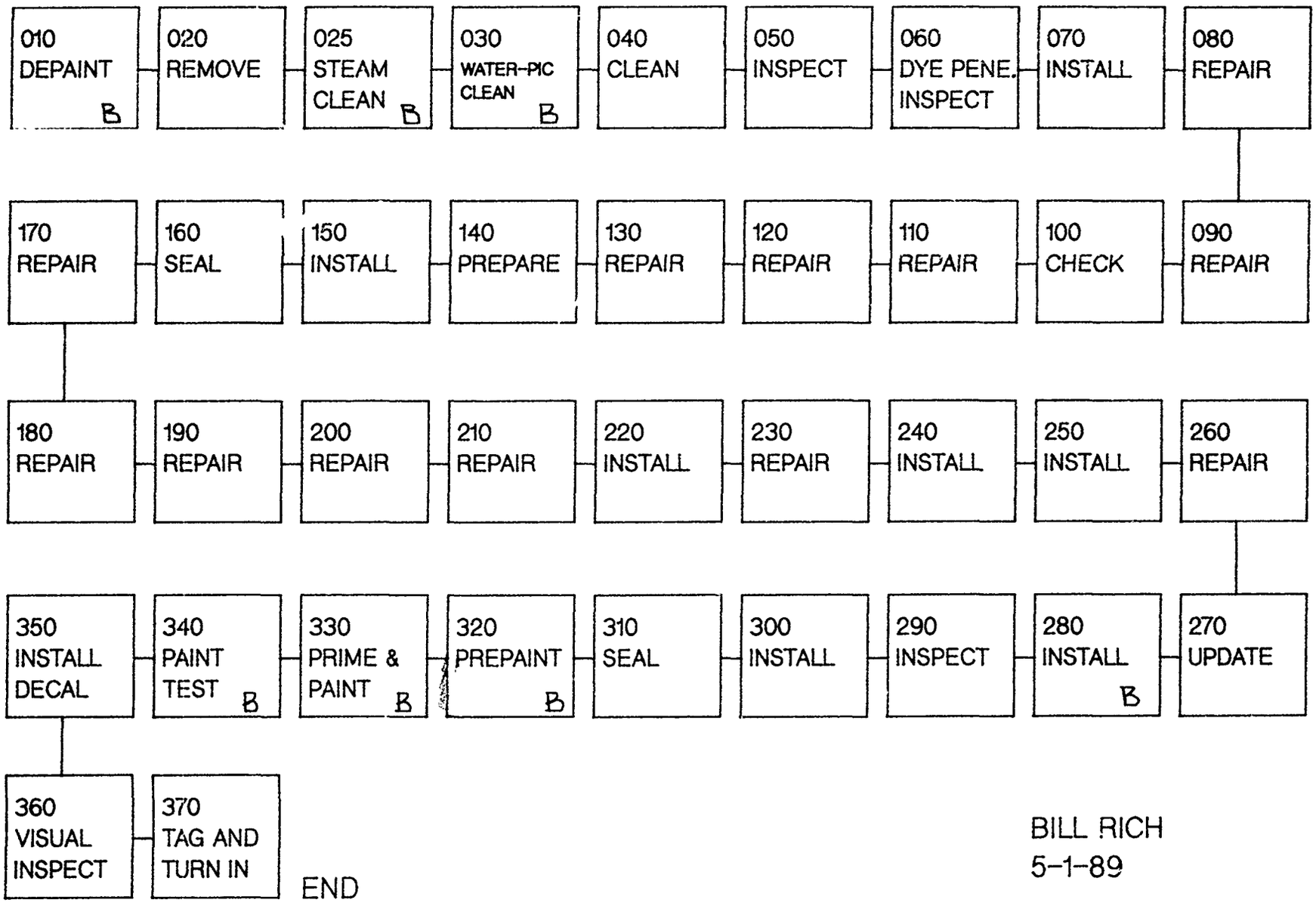
MANPSD

(PARENT WCD) PCN=51344A

WCD=MB015C

C-141 NOZZLE



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MANPSD (CHILD WCD) (PCN=51344A)

WCD=MBA15C (C-141 NOZZLE EXHAUST)

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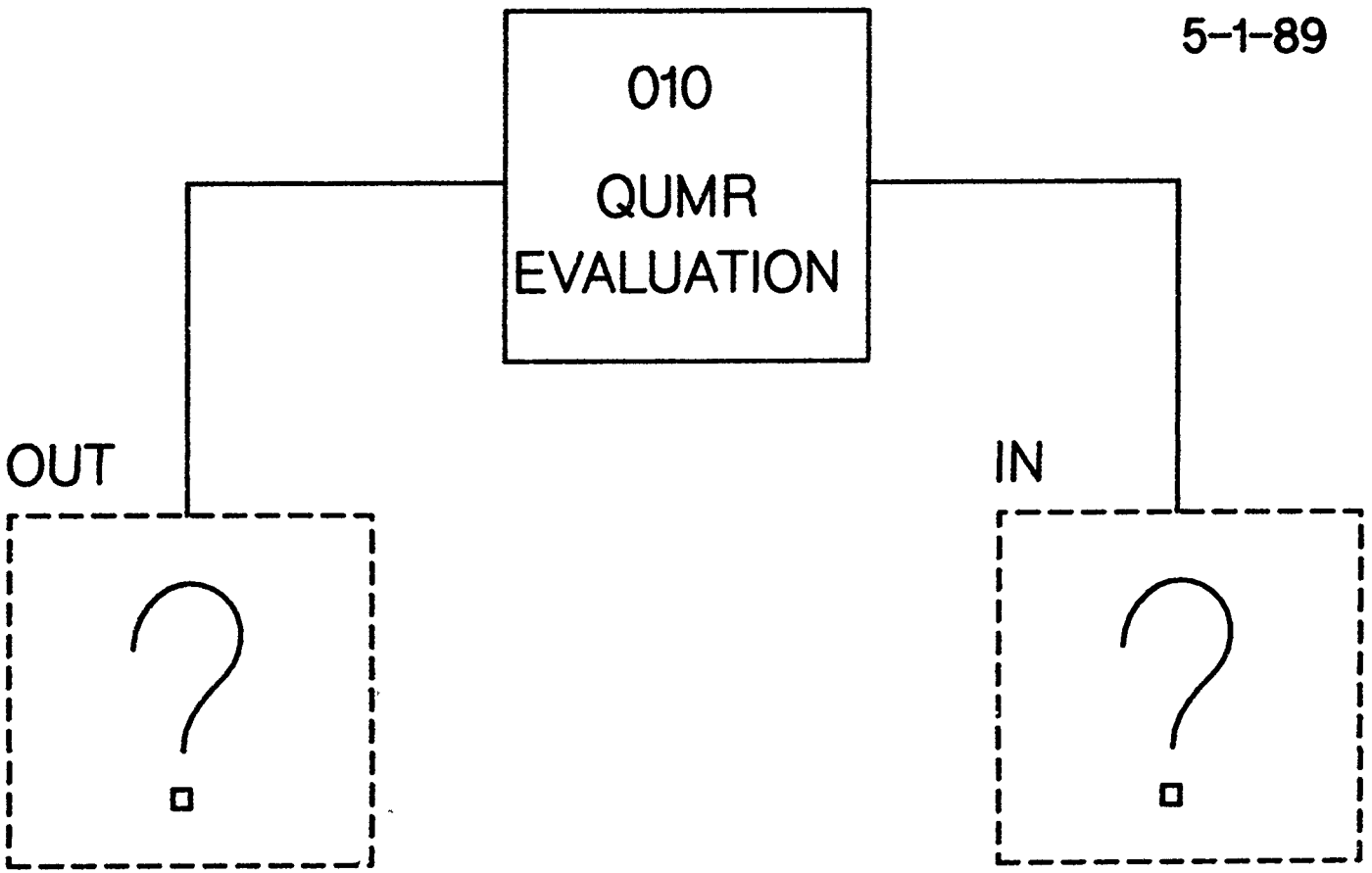
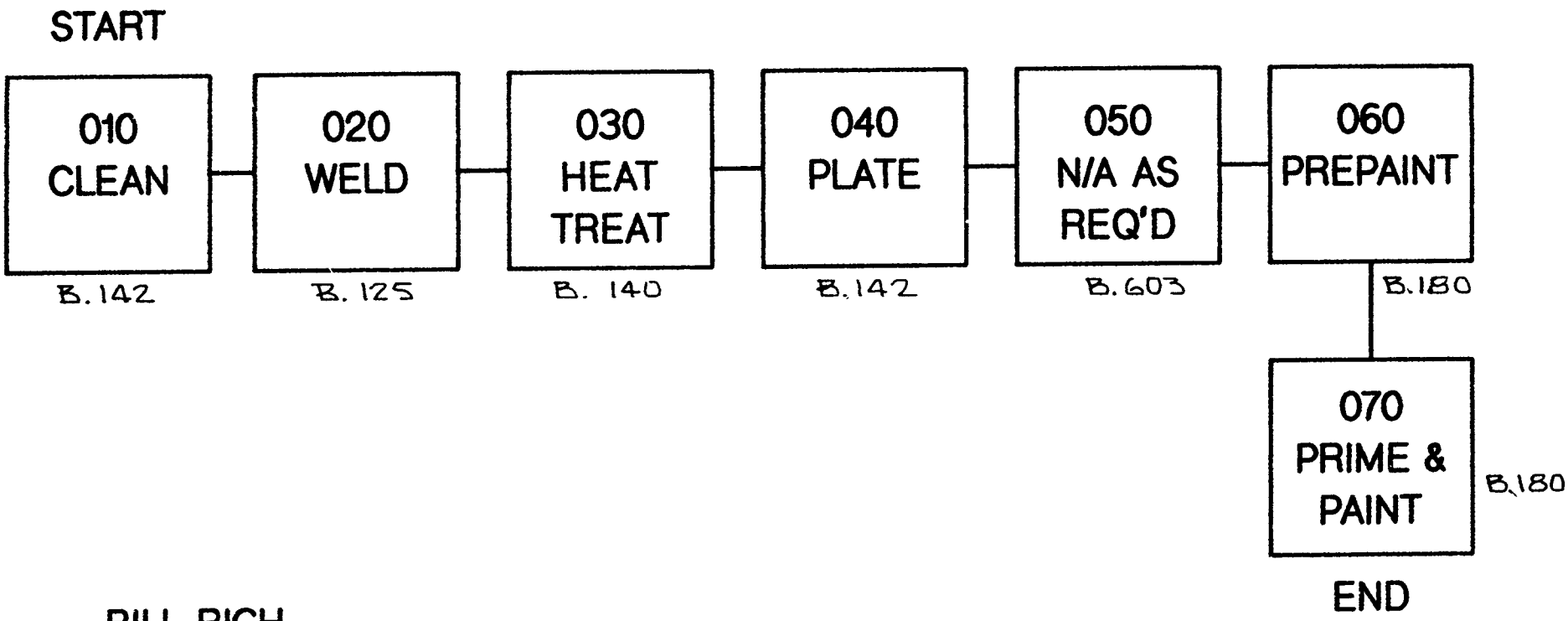


MANPSD (PARENT WCD) (PCN=51344A)

WCD=MBB15C (C-141 NOZZLE EXHAUST)



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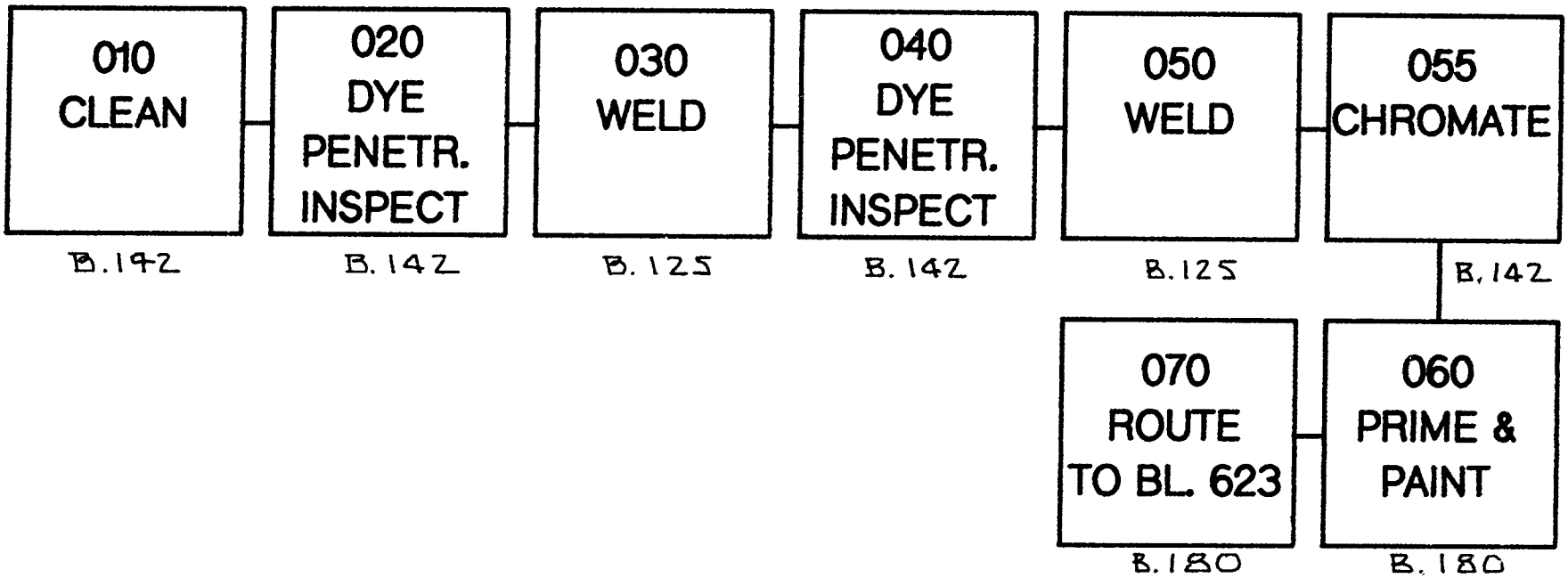
MANPSD

(CHILD WCD)
WCD=MBC15C

(PCN=51344A)
(C-141 NOZZLE EXHAUST)

START



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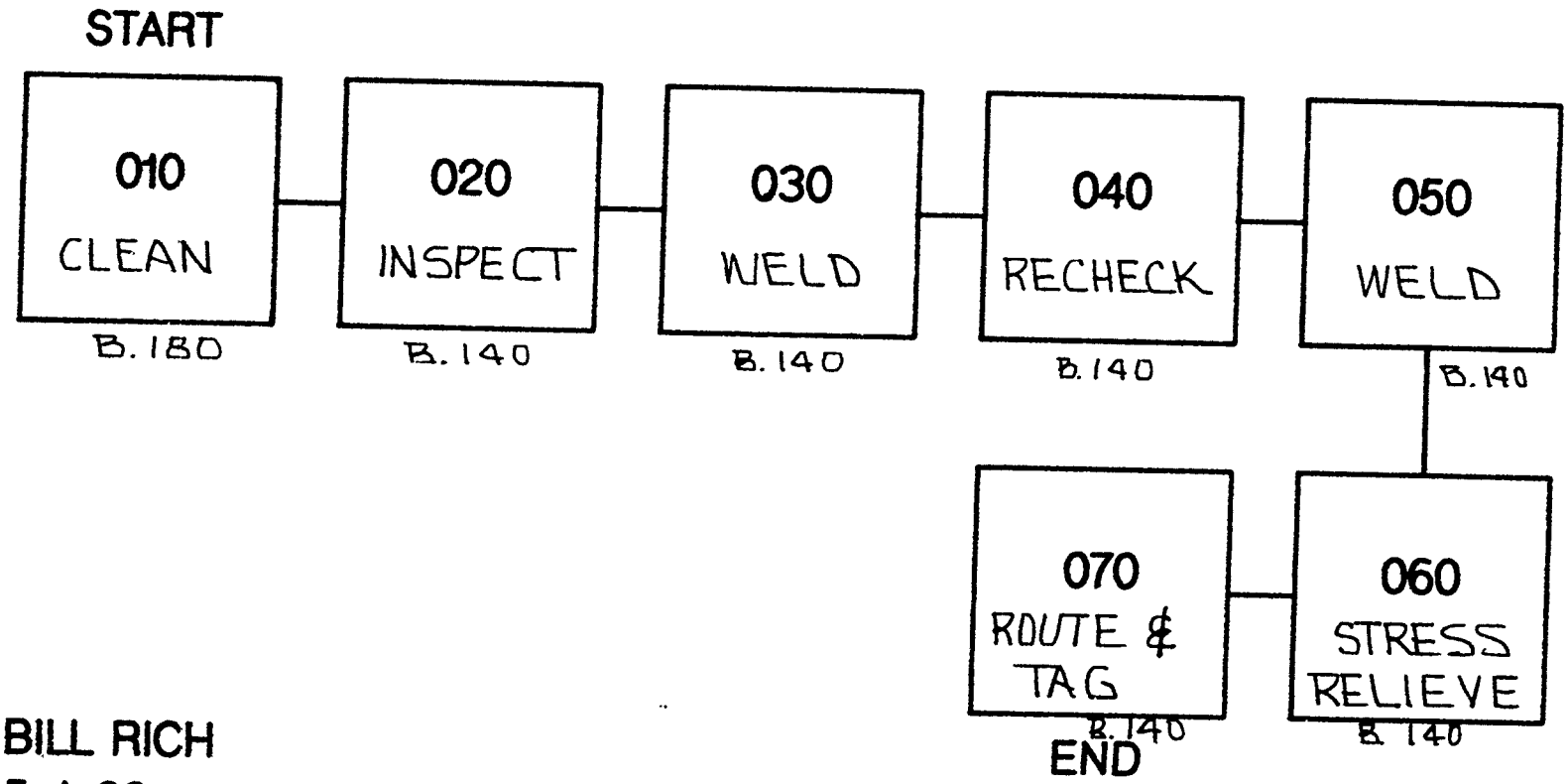
MANPSD (CHILD WCD) (PCN=51344A)

WCD=MBD 15C (C-141 NOZZLE EXHAUST)



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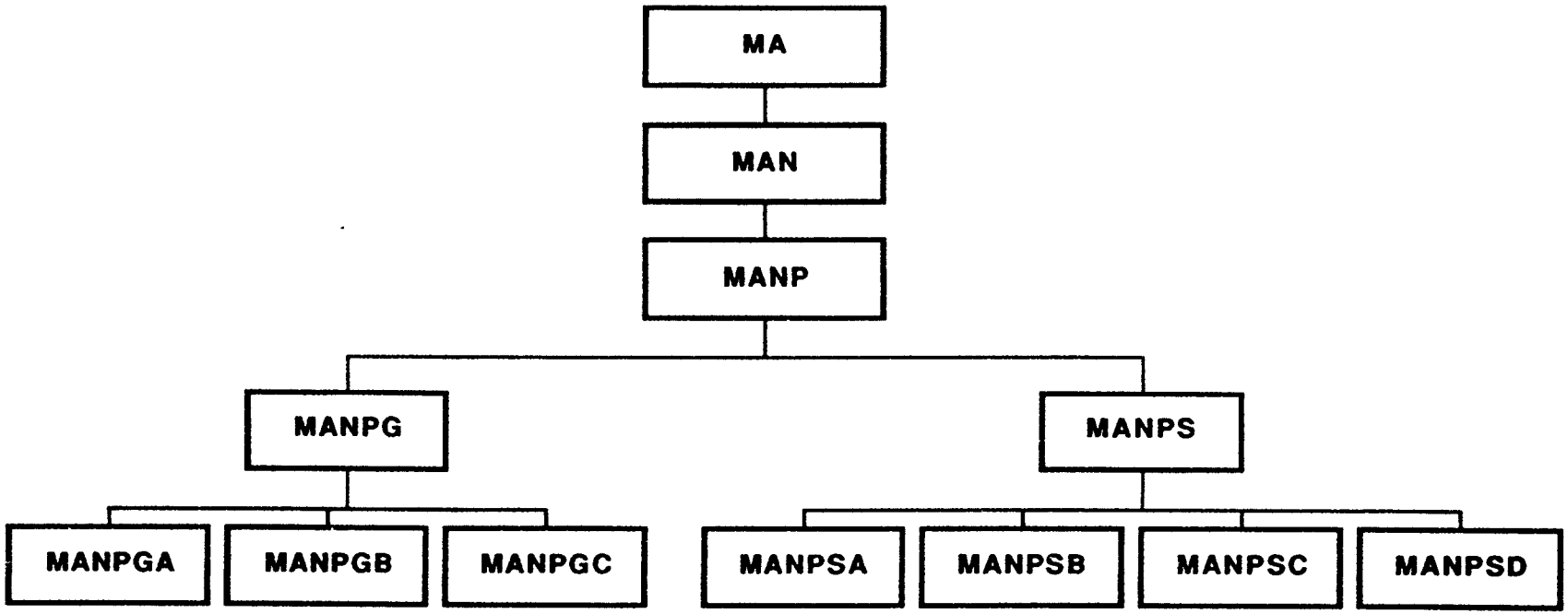


LEGEND:

MA = DIR. OF MAINT.
MAN = INDUSTRIAL PRODUCTS DIVISION
MANP = PRODUCTION BRANCH
MANPG = GYRO SECTION
MANPGA = GYRO REPAIR UNIT NO. 1
MANPGB = GYRO REPAIR UNIT NO. 2
MANPGC = GYRO REPAIR UNIT NO. 3

MANPS = SHEET METAL SECTION
MANPSA = ADHESIVE BONDING UNIT
MANPSB = SHEET METAL MANUFACTURING UNIT
MANPSC = SHEET METAL REPAIR UNIT
MANPSD = PLASTIC & MISC. SHEET METAL UNIT

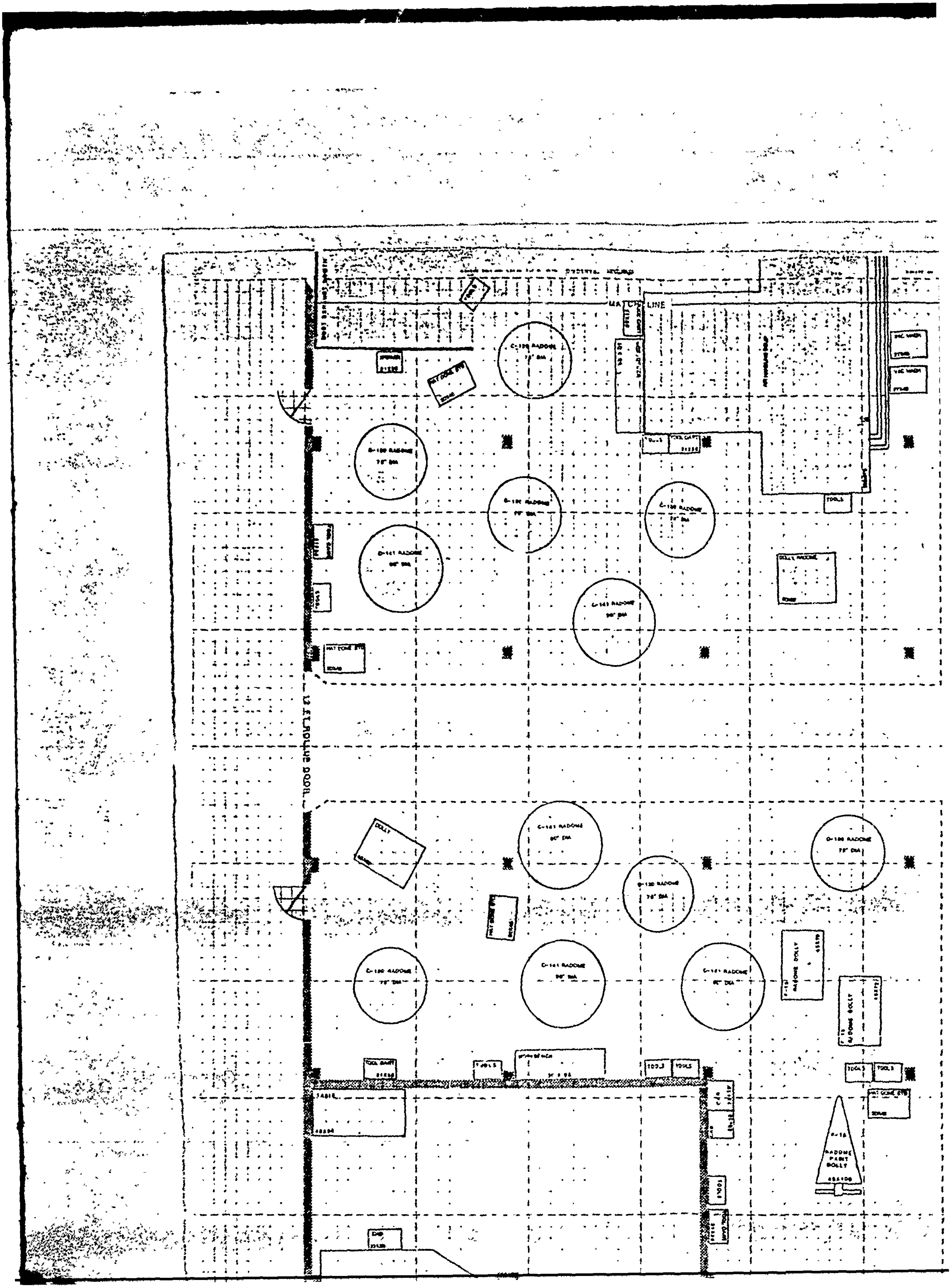
LSC-20282

WR-ALC RCC PROCESS CHARACTERIZATION COVERAGE
FIGURE 9.0-1

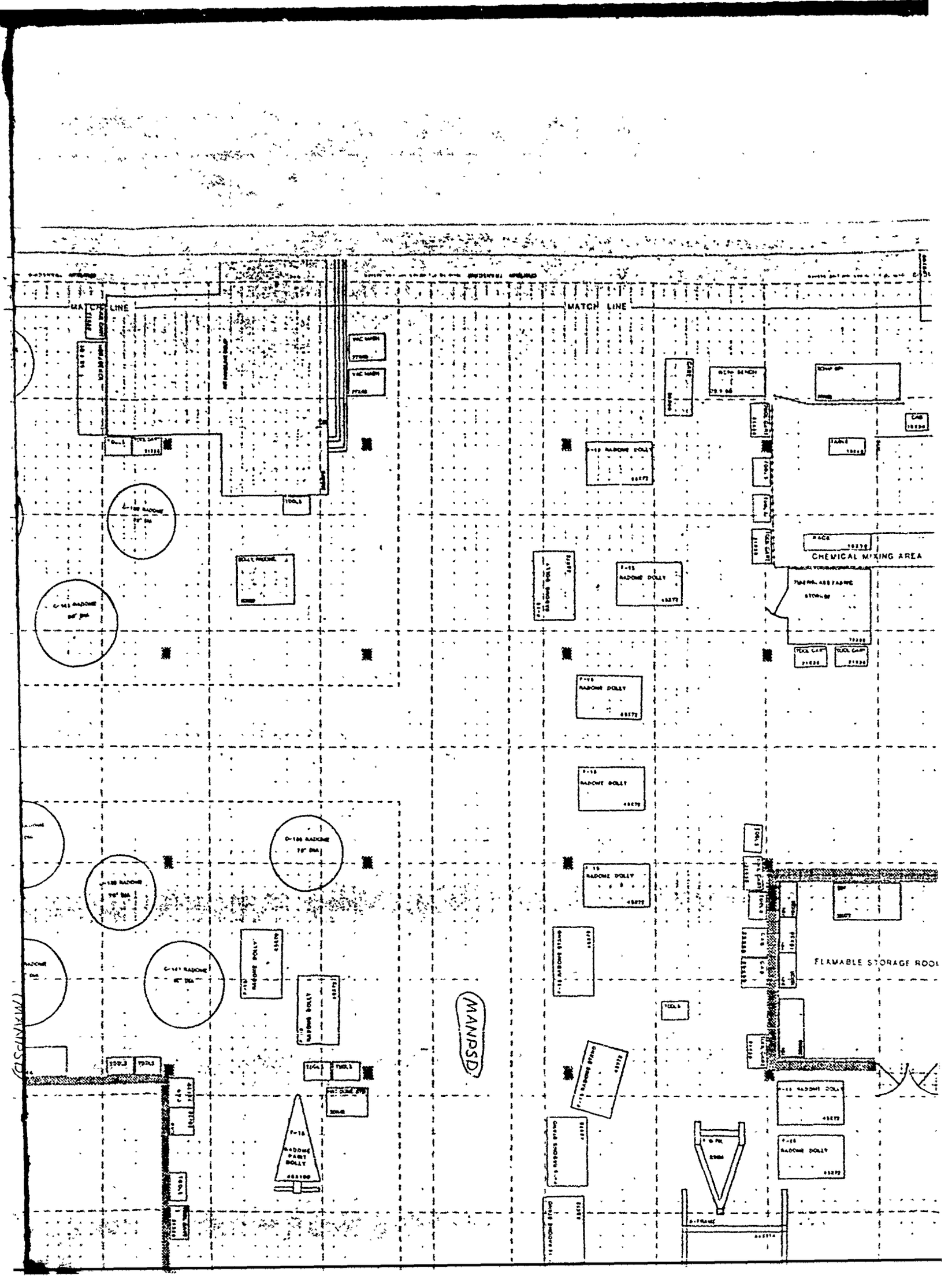
WR-ALC (MANPSD)

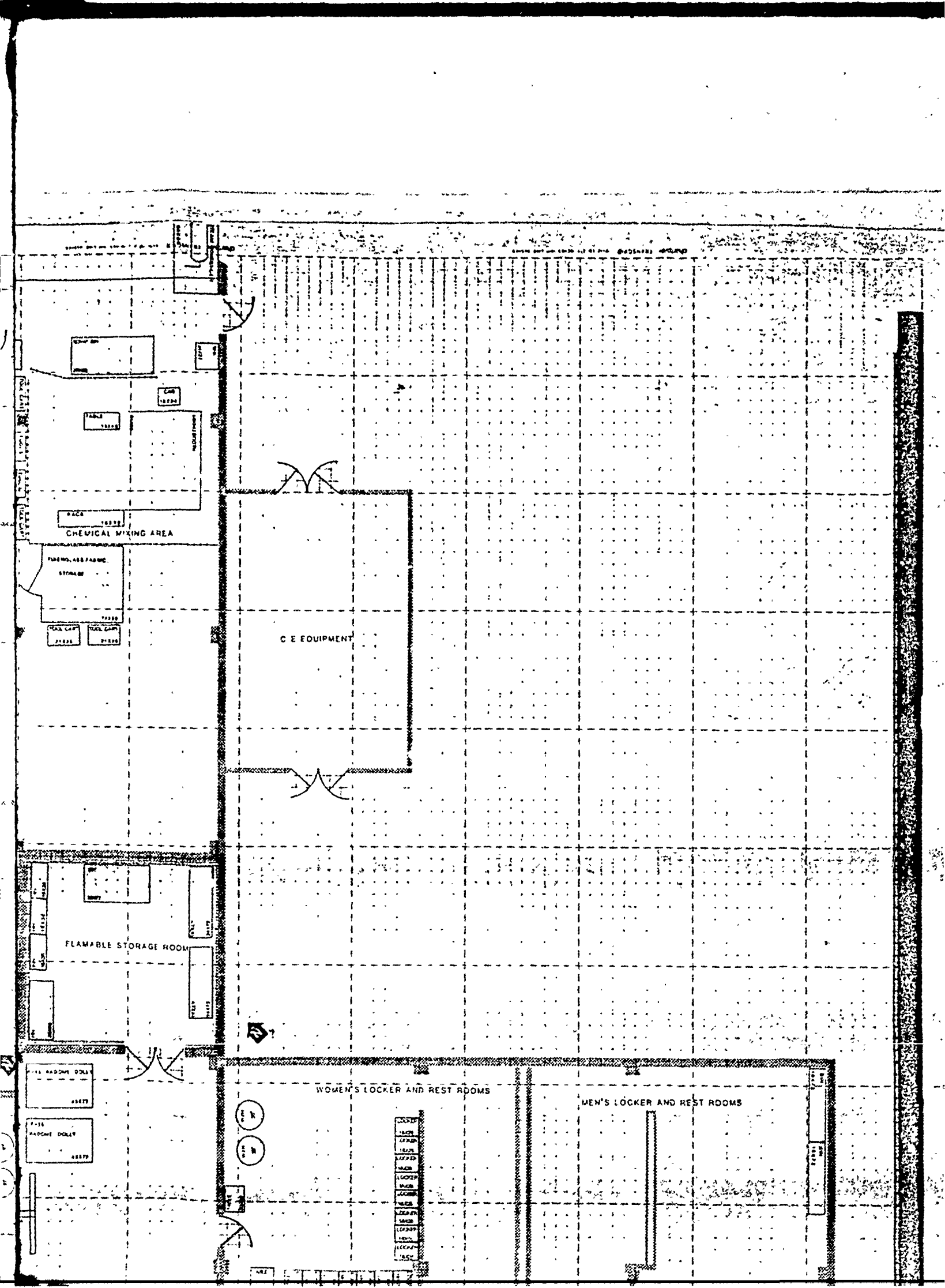
1.0 Identification of RCC

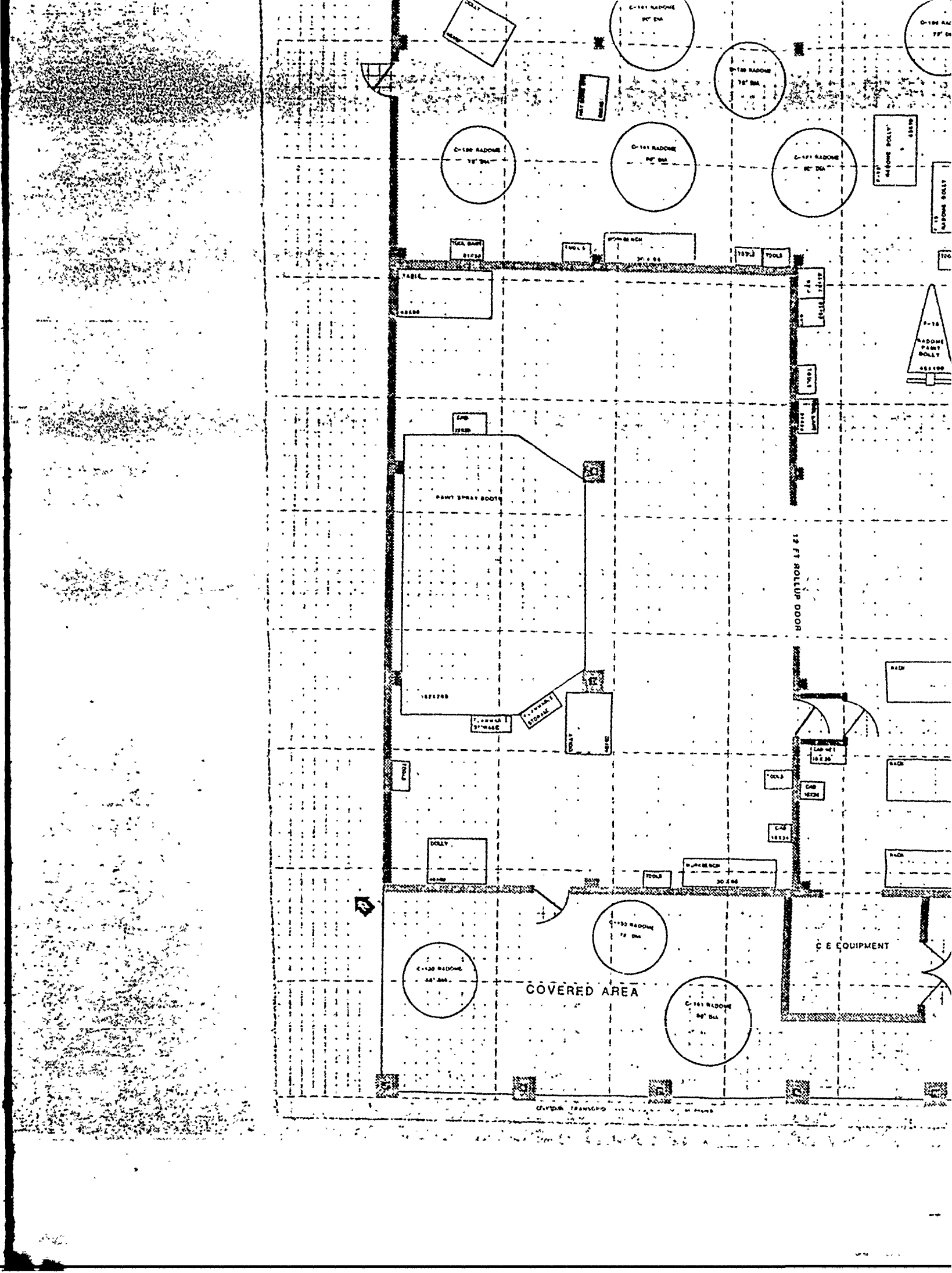
Resource Control Center (RCC) MANPSD has been identified by the Statement of Work (SOW) of the contract F33600-88-D-0567, Technology Insertion-Engineering Services (TI-ES), Cure Notice Response for process characterization.

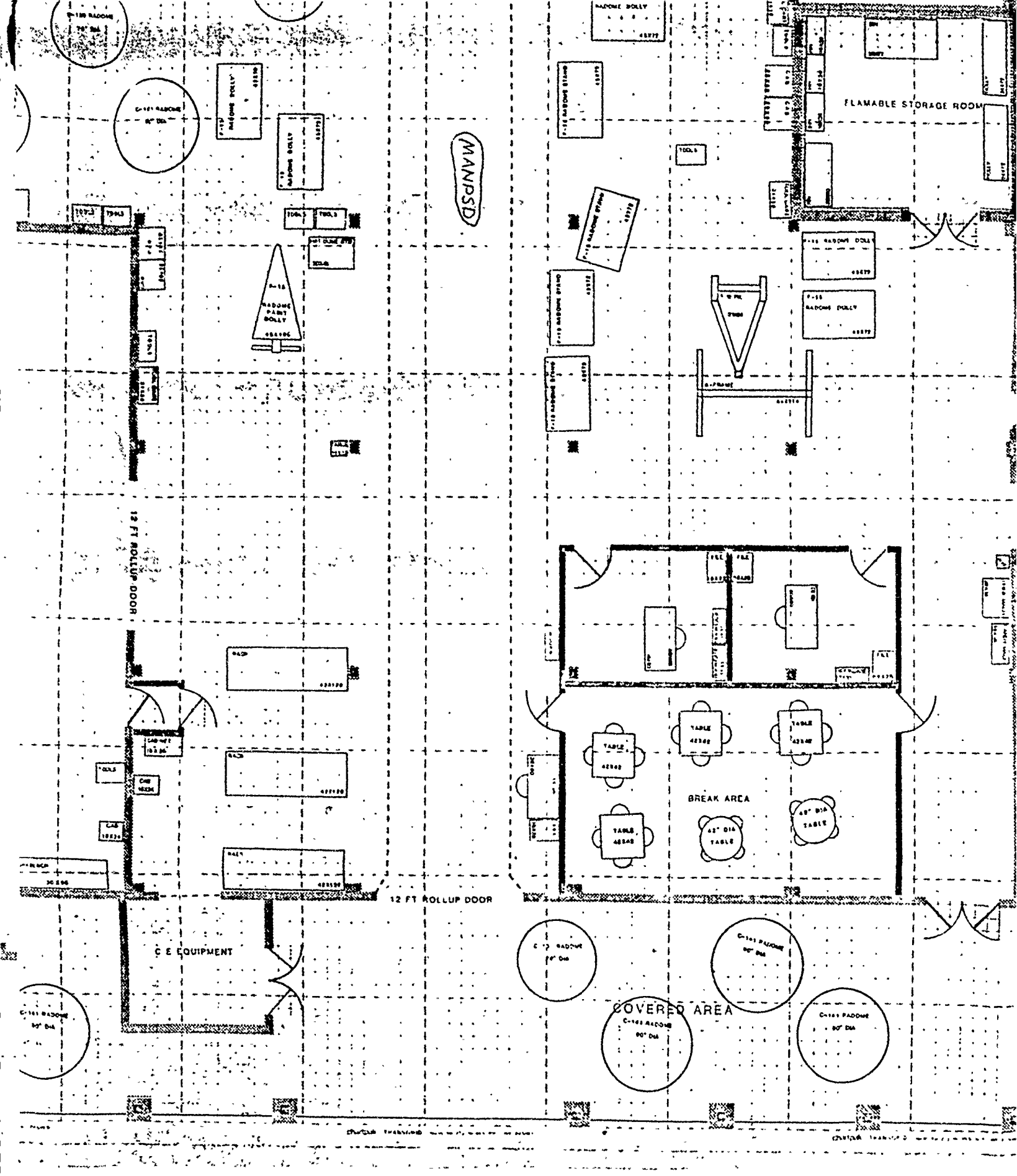


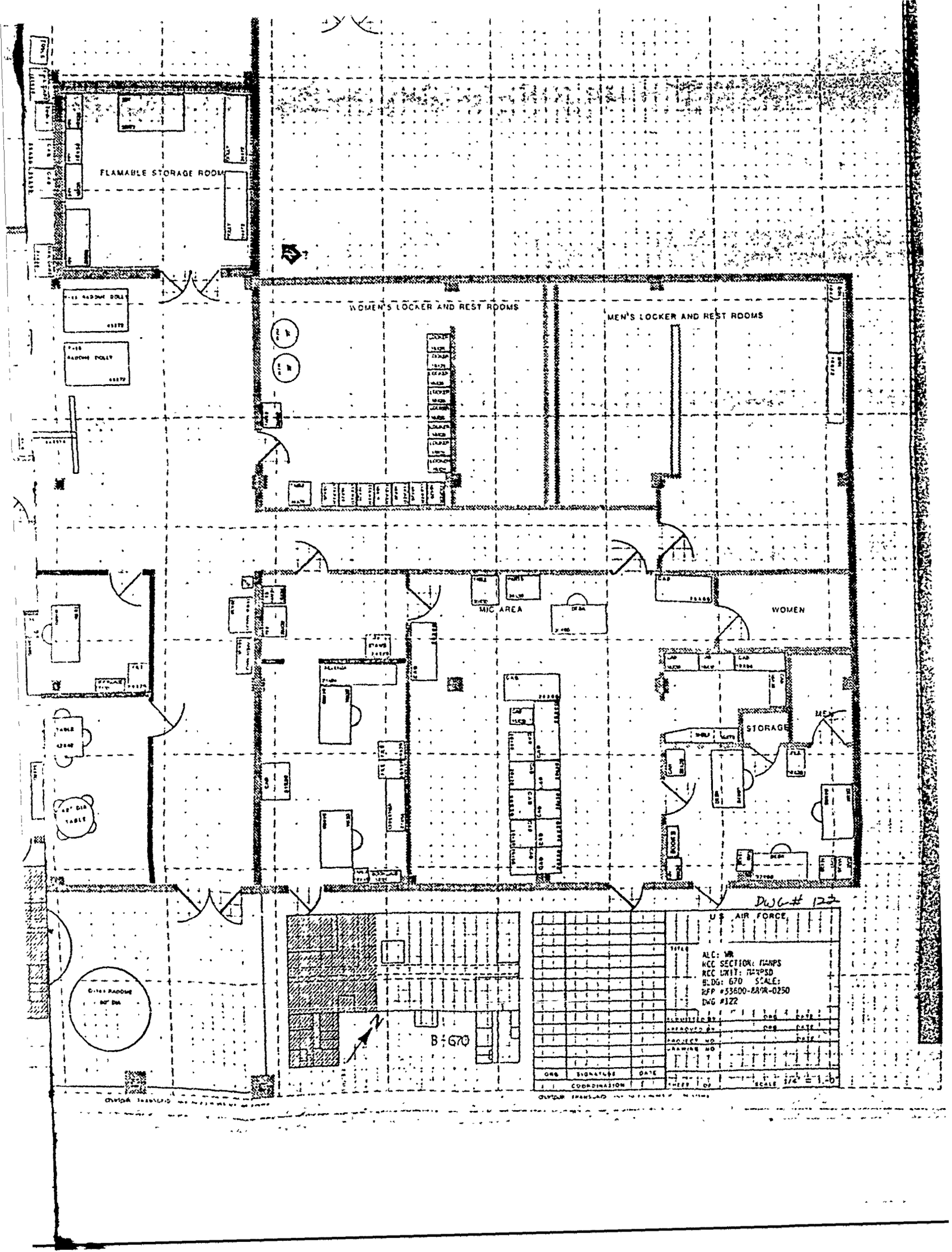
MATCH LINE
C-130 RADOME
72" DIA
C-141 RADOME
90" DIA
DOLLY
RADOME DOLLY
TOOLS
TOOL CART
TABLE
RADOME PAINT DOLLY

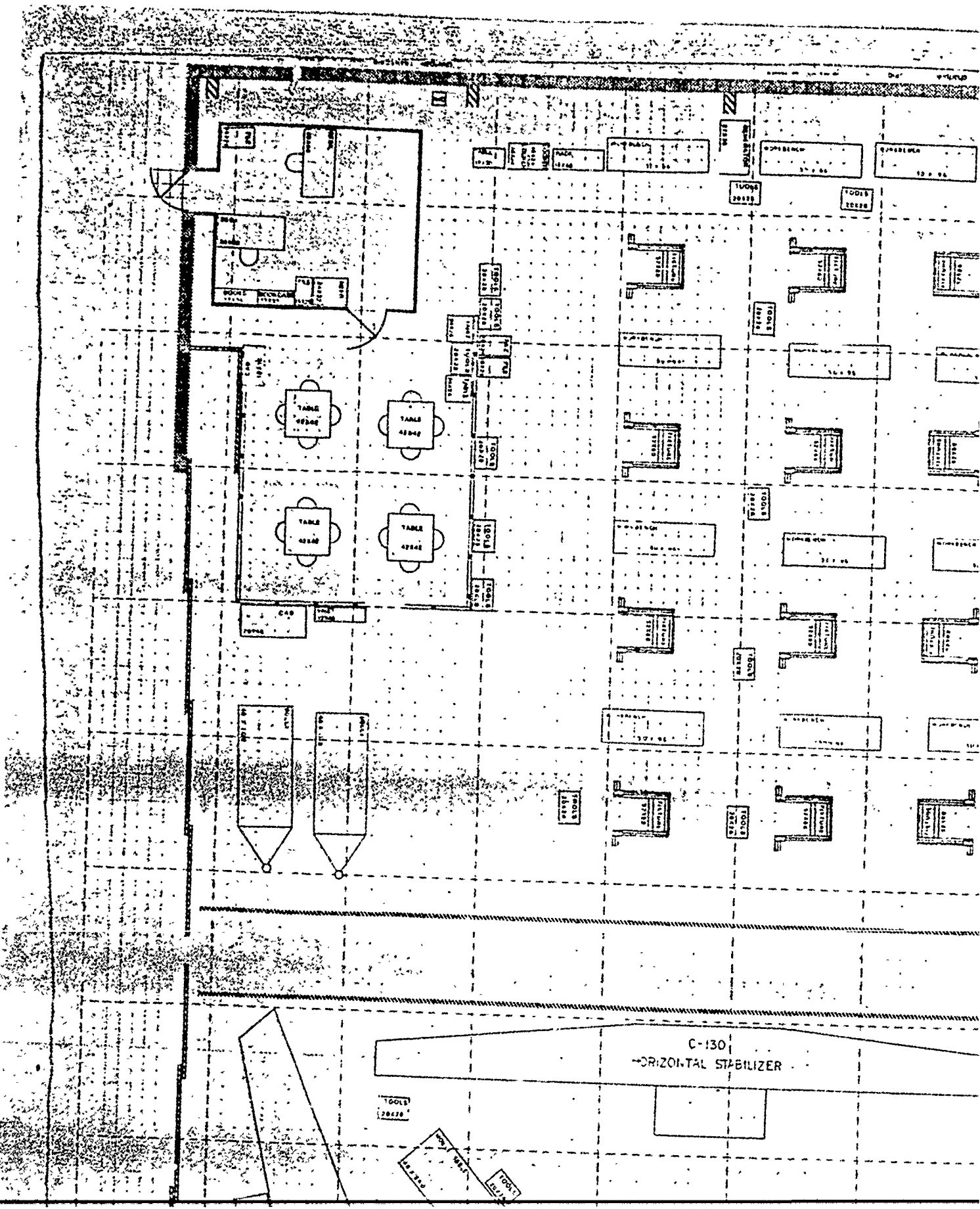

MATCH LINE
MATCH LINE
CHEMICAL MIXING AREA
FLAMABLE STORAGE ROOM
MANSD
MANSD

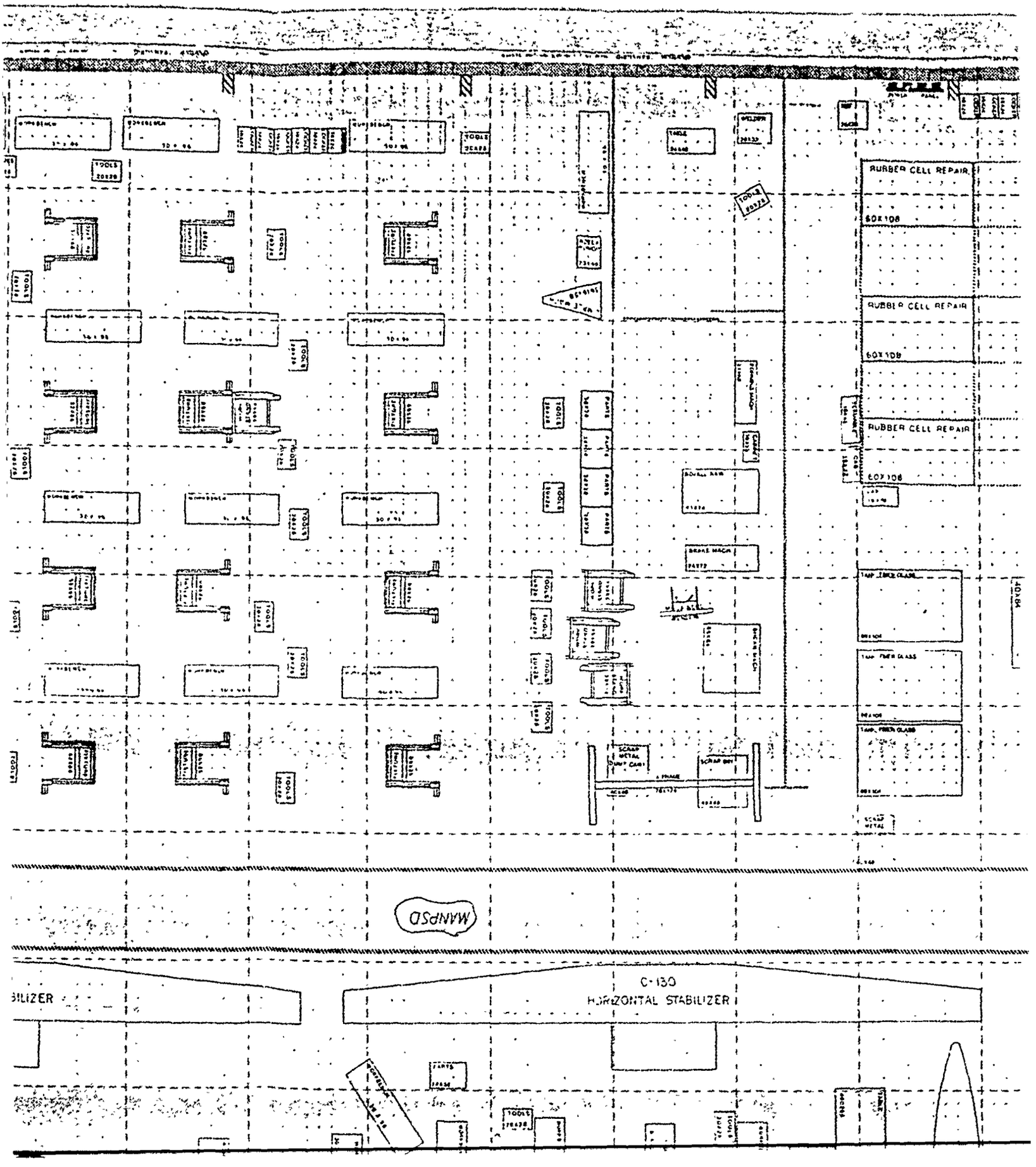

CHEMICAL MIXING AREA
C E EQUIPMENT
FLAMABLE STORAGE ROOM
WOMEN'S LOCKER AND REST ROOMS
MEN'S LOCKER AND REST ROOMS

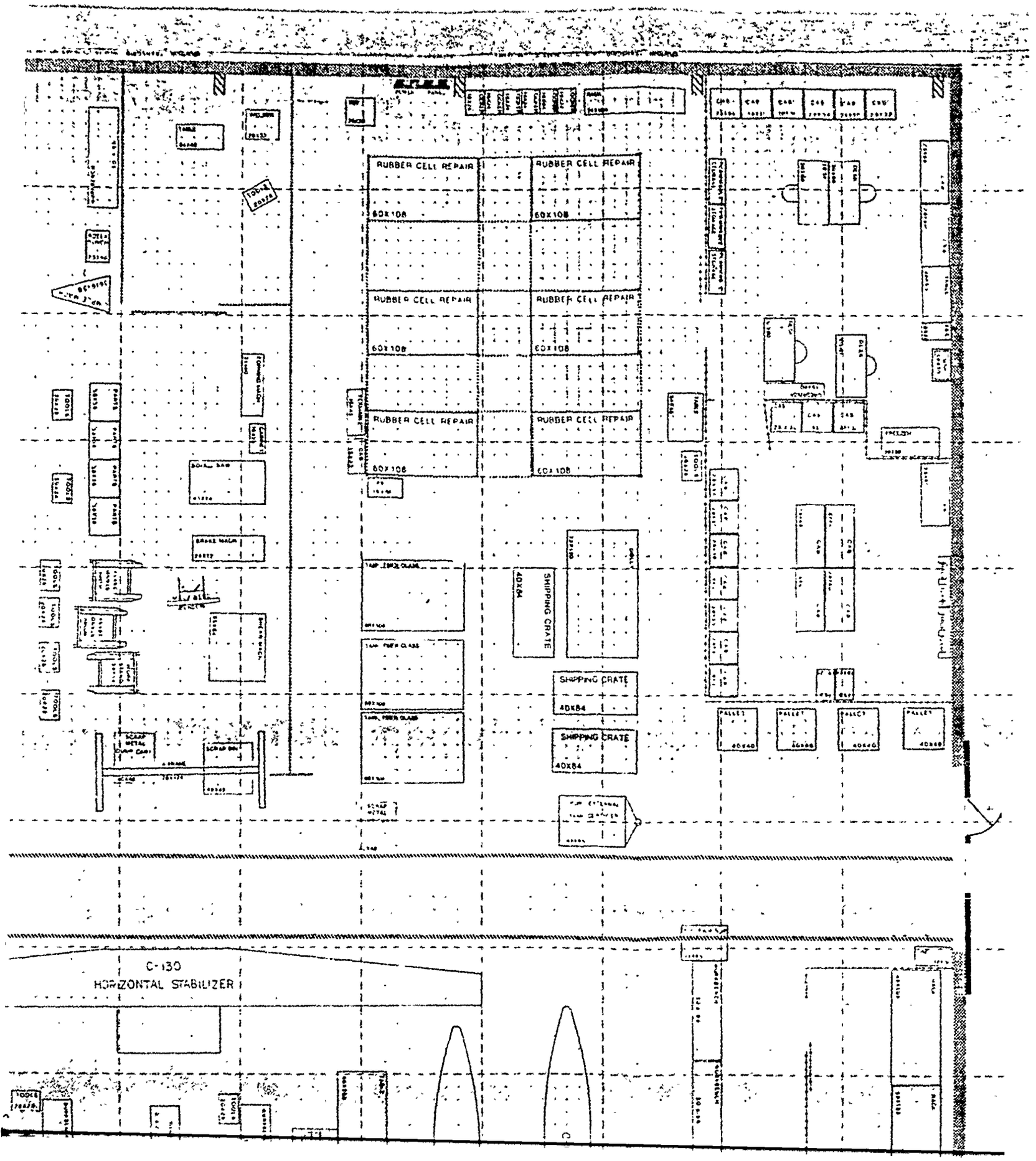

PAINT SPRAY BOOTH
40 FT ROLLUP DOOR
C E EQUIPMENT
COVERED AREA


FLAMABLE STORAGE ROOM
MANPSD
12 FT ROLLUP DOOR
BREAK AREA
C E EQUIPMENT
12 FT ROLLUP DOOR
COVERED AREA

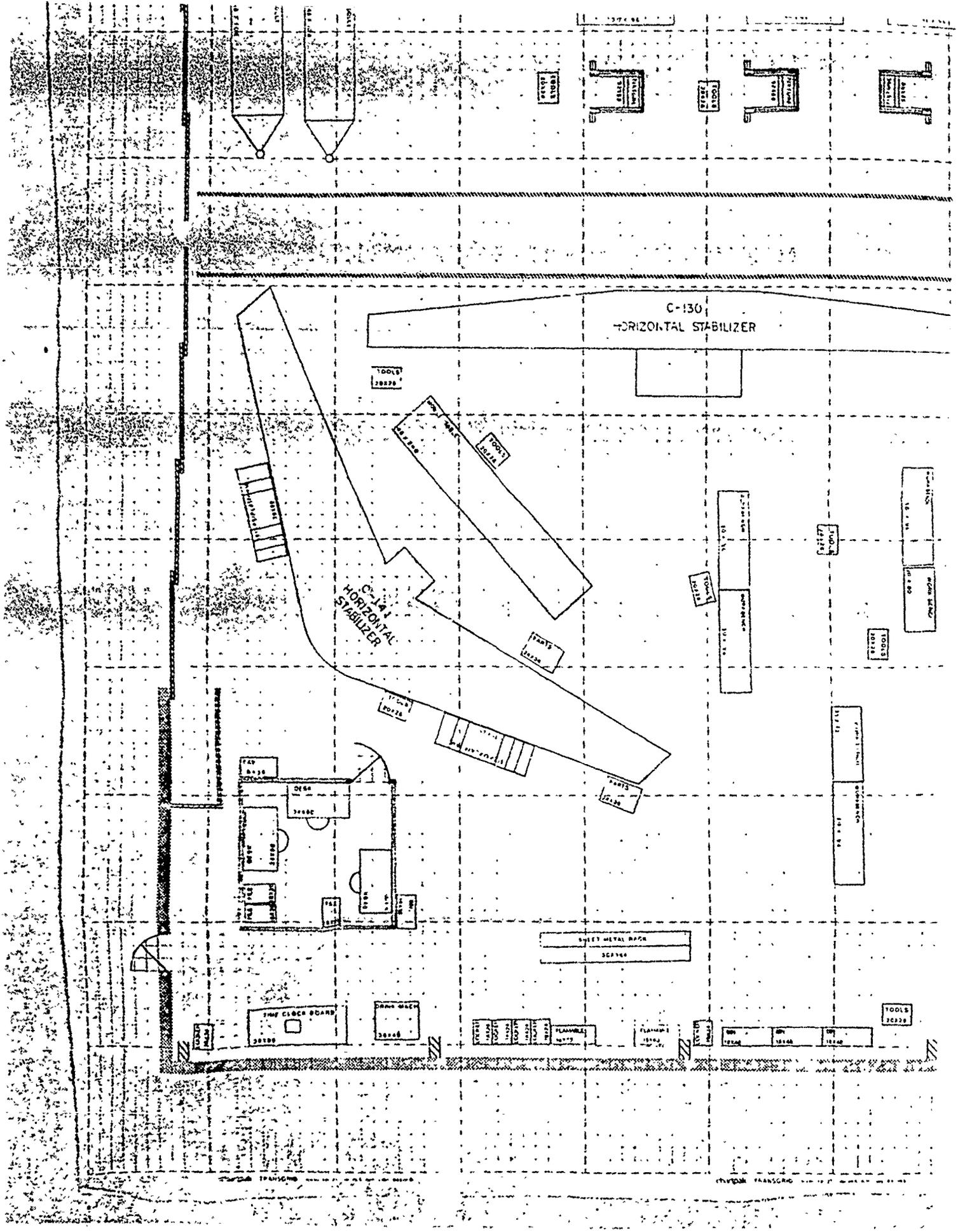

FLAMABLE STORAGE ROOM
WOMEN'S LOCKER AND REST ROOMS
MEN'S LOCKER AND REST ROOMS
MIC AREA
WOMEN
STORAGE
MEN
B-670
DWG # 122
U.S. AIR FORCE
ALC: WR
MCC SECTION: MAPS
MCC UNIT: MAPSD
BLDG: 670 SCALE:
RFP #53600-88WR-0250
DWG #122
SIGNATURE
DATE
COORDINATION
1/4" = 1-0"

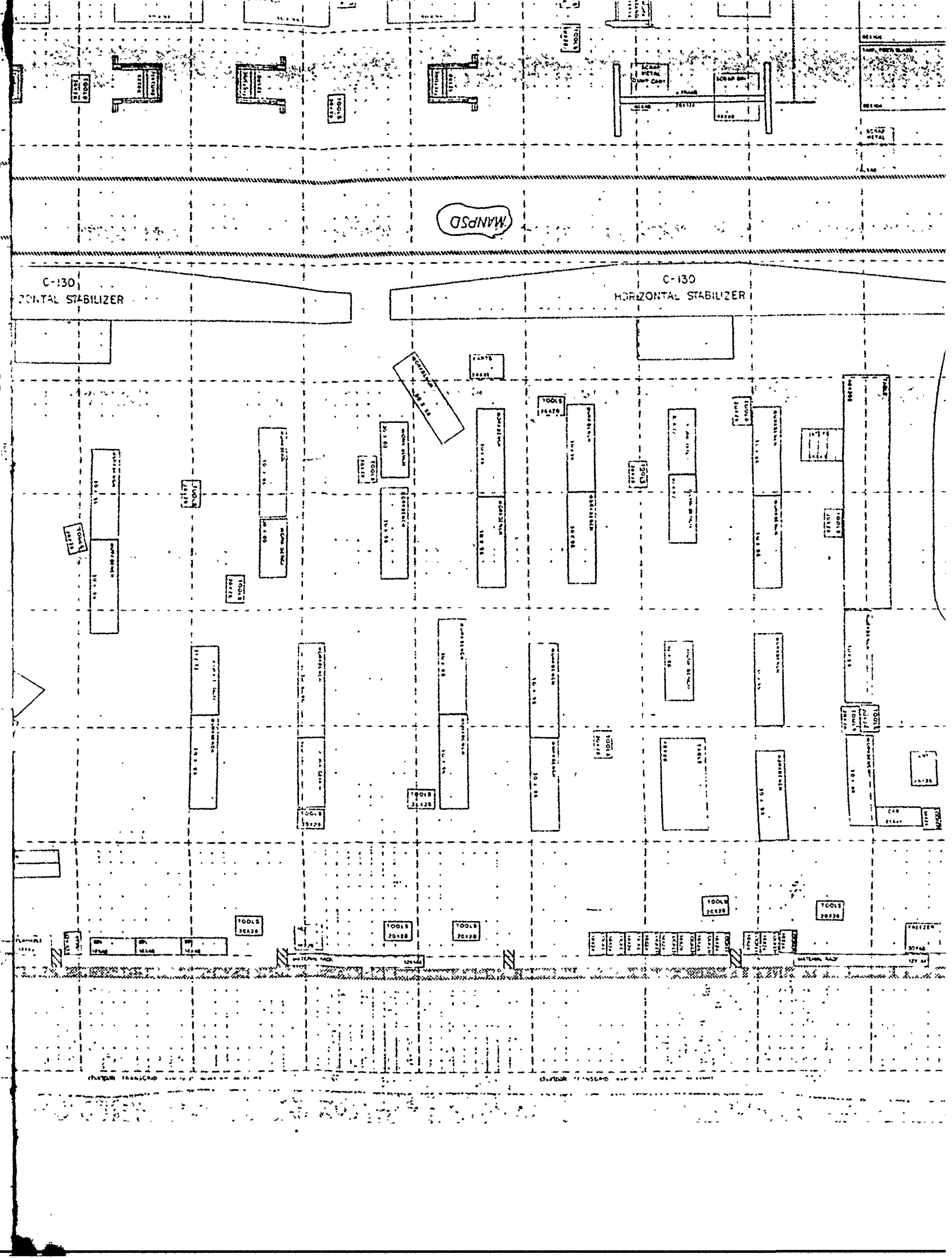

C-130
HORIZONTAL STABILIZER

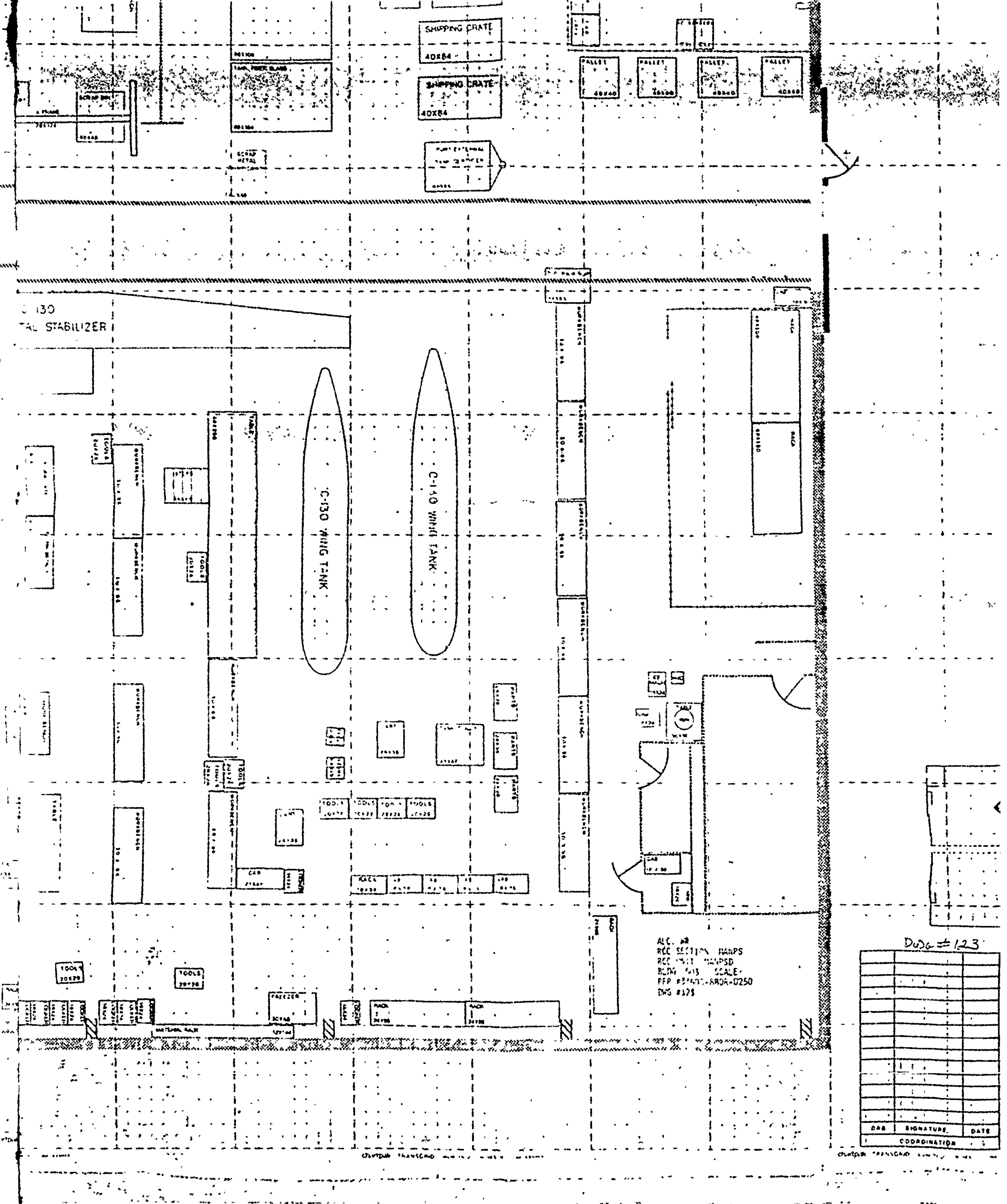

RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
MANPSD
C-130
HORIZONTAL STABILIZER


RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
RUBBER CELL REPAIR
60X108
SHIPPING CRATE
40X84
SHIPPING CRATE
40X84
SHIPPING CRATE
40X84
C-130
HORIZONTAL STABILIZER

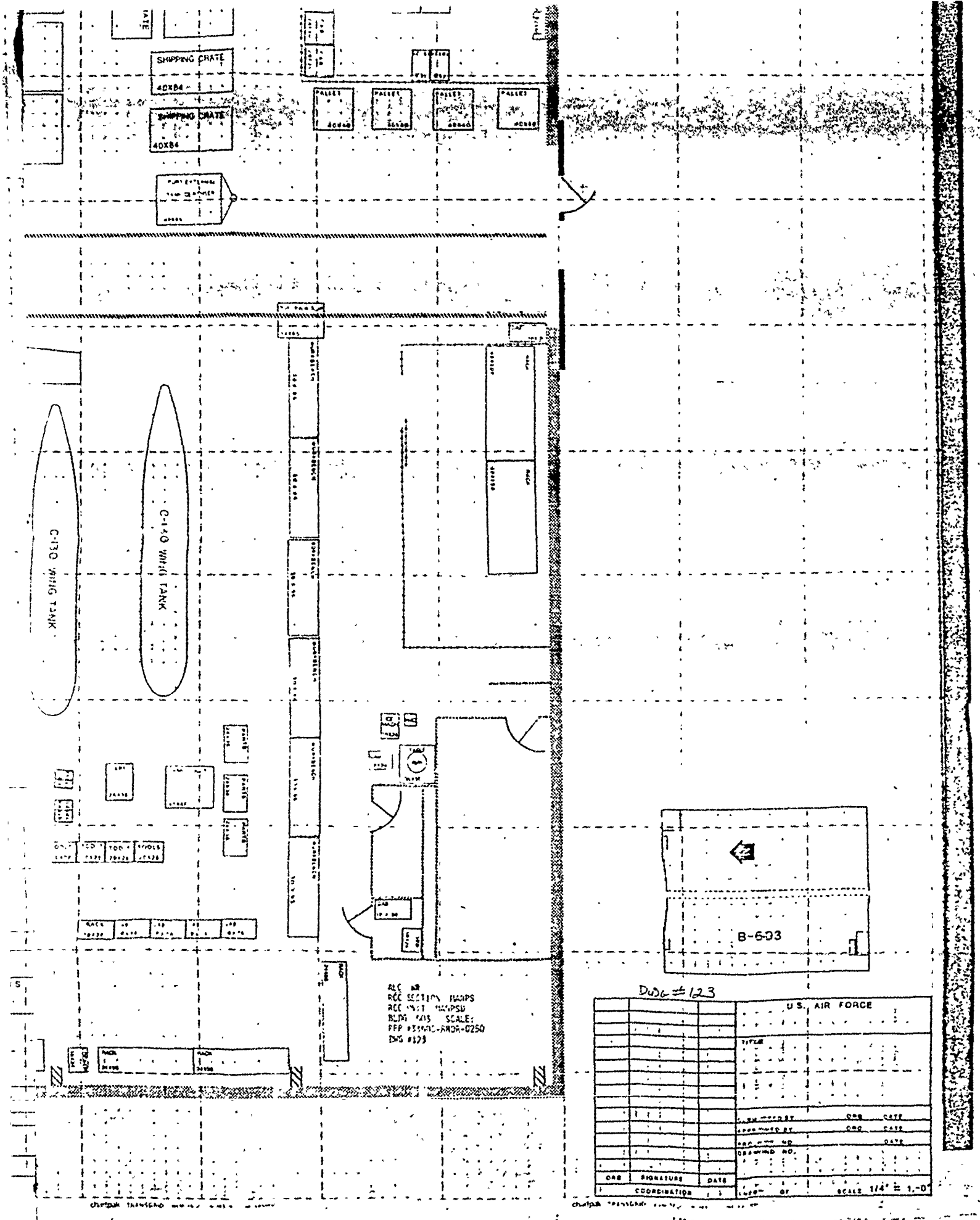
B-603 SHOP LAYOUT

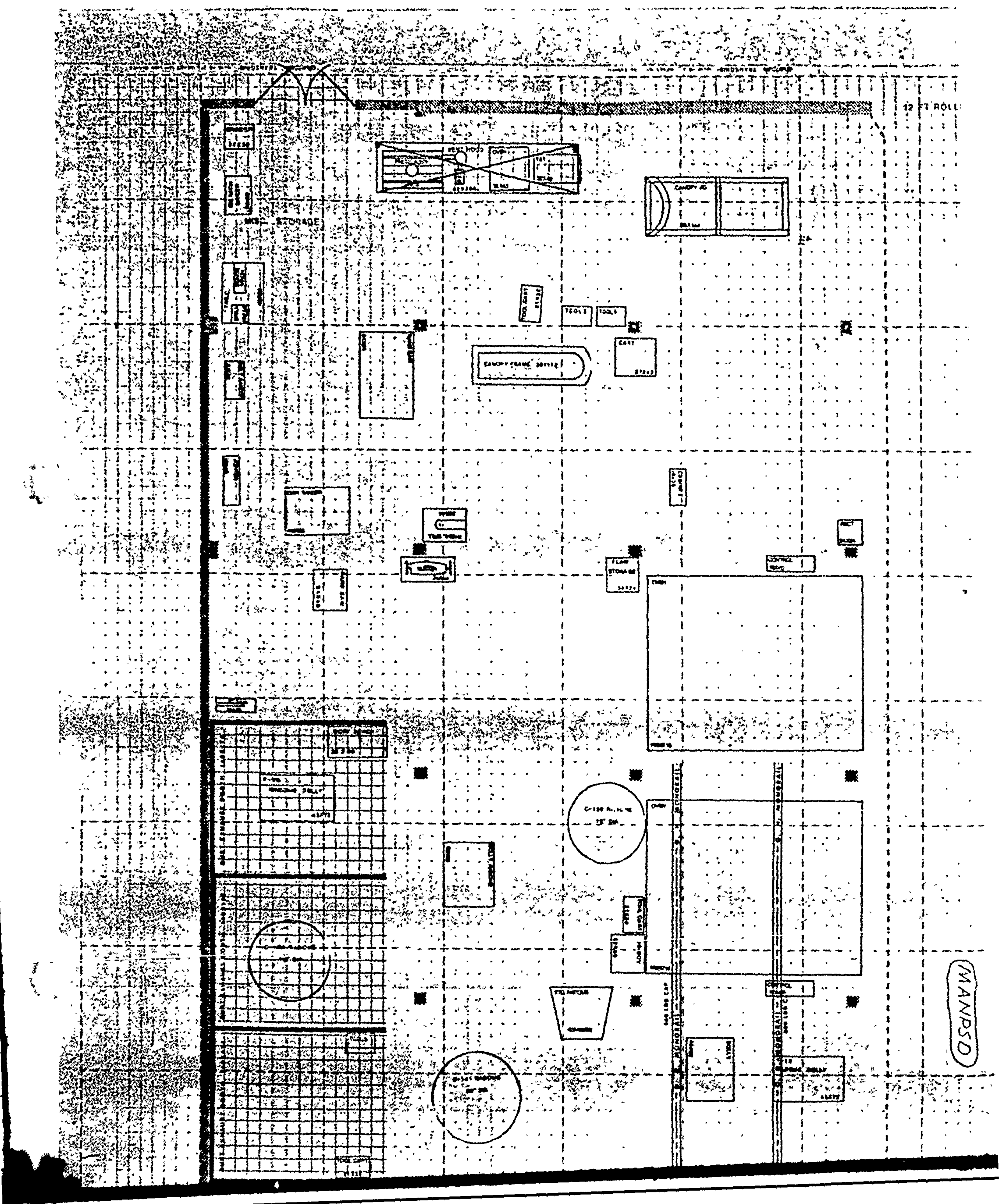

C-130
HORIZONTAL STABILIZER
C-141
HORIZONTAL
STABILIZER

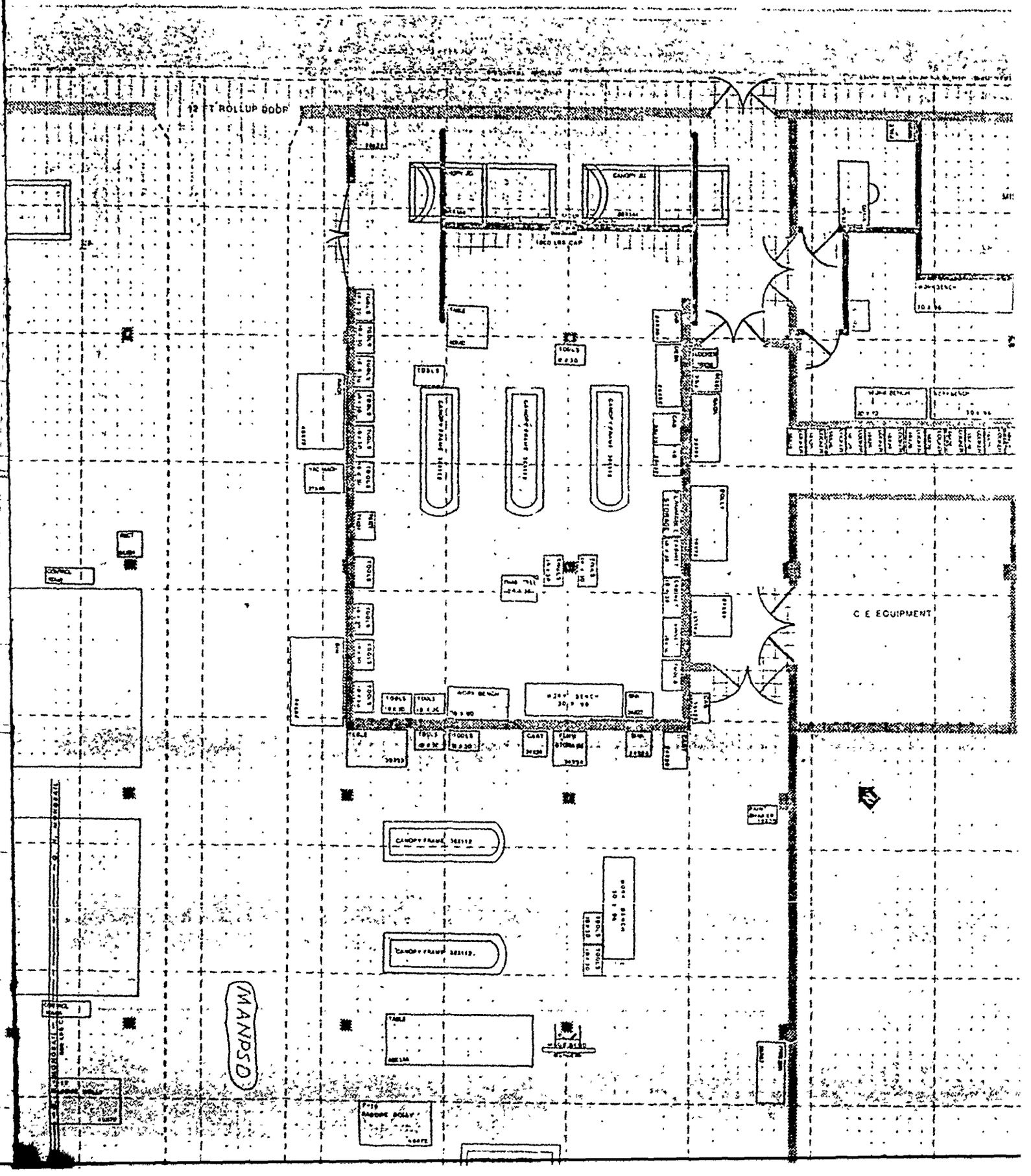

C-130
HORIZONTAL STABILIZER
C-130
HORIZONTAL STABILIZER

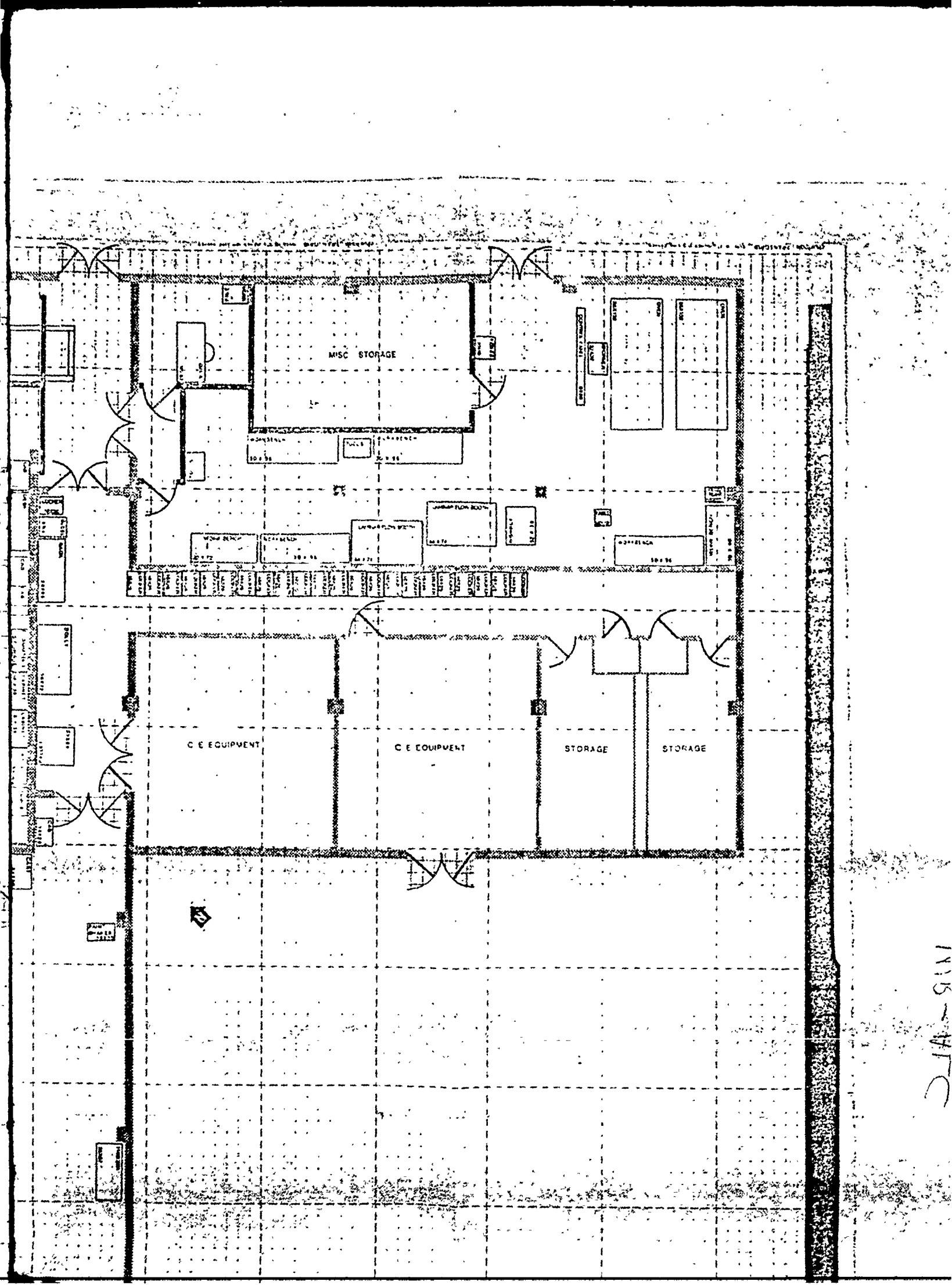


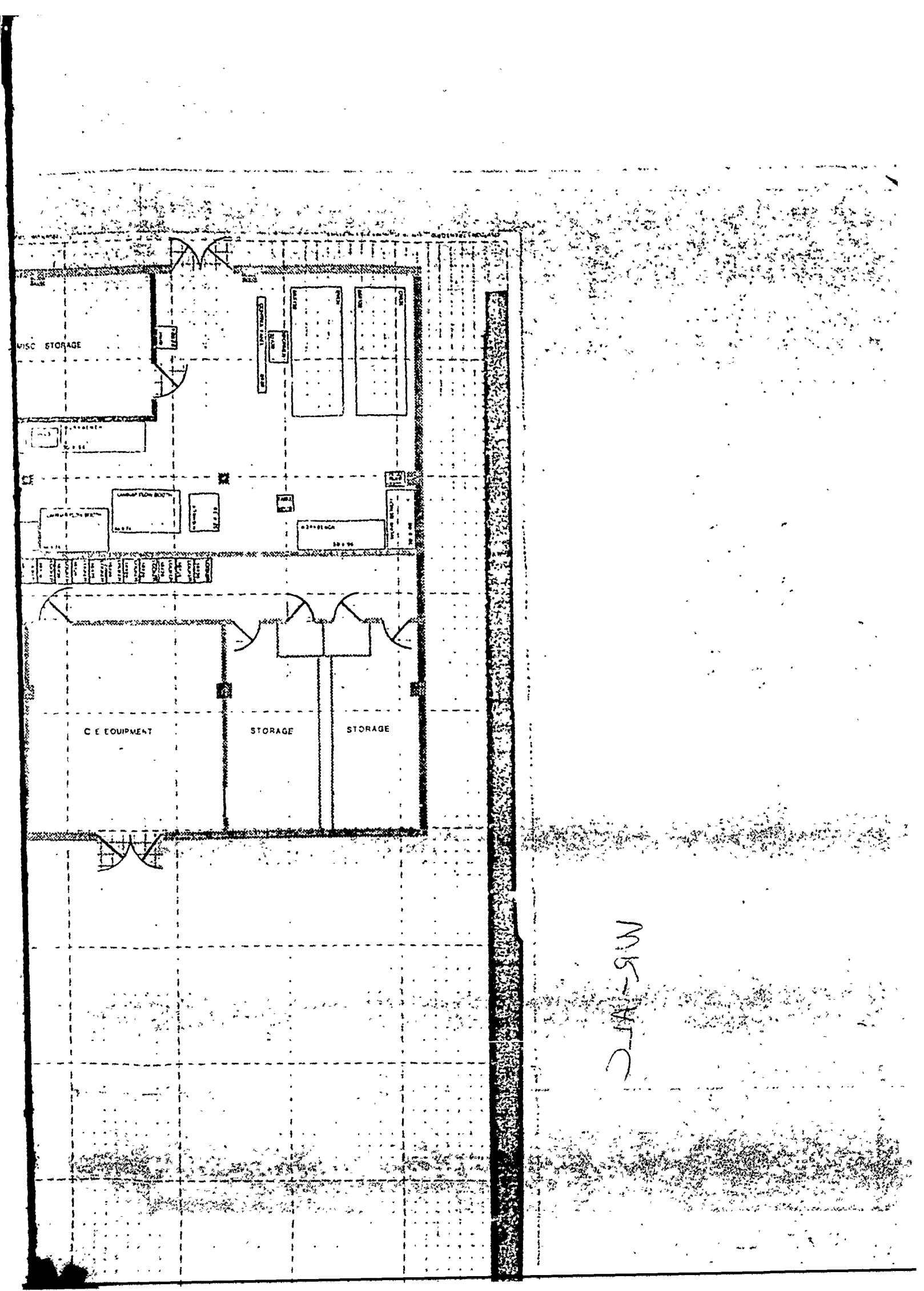
SHIPPING CRATE
40X84
SHIPPING CRATE
40X84
PALLET
PALLET
PALLET
PALLET
C-130
STABILIZER
C-130 WING TANK
C-130 WING TANK
TOOLS
TOOLS
TOOLS
TOOLS
TOOLS
TOOLS
RACK
RACK
RACK
FREEZER
SCALE
DWG #123
DRG
SIGNATURE
DATE
COORDINATION

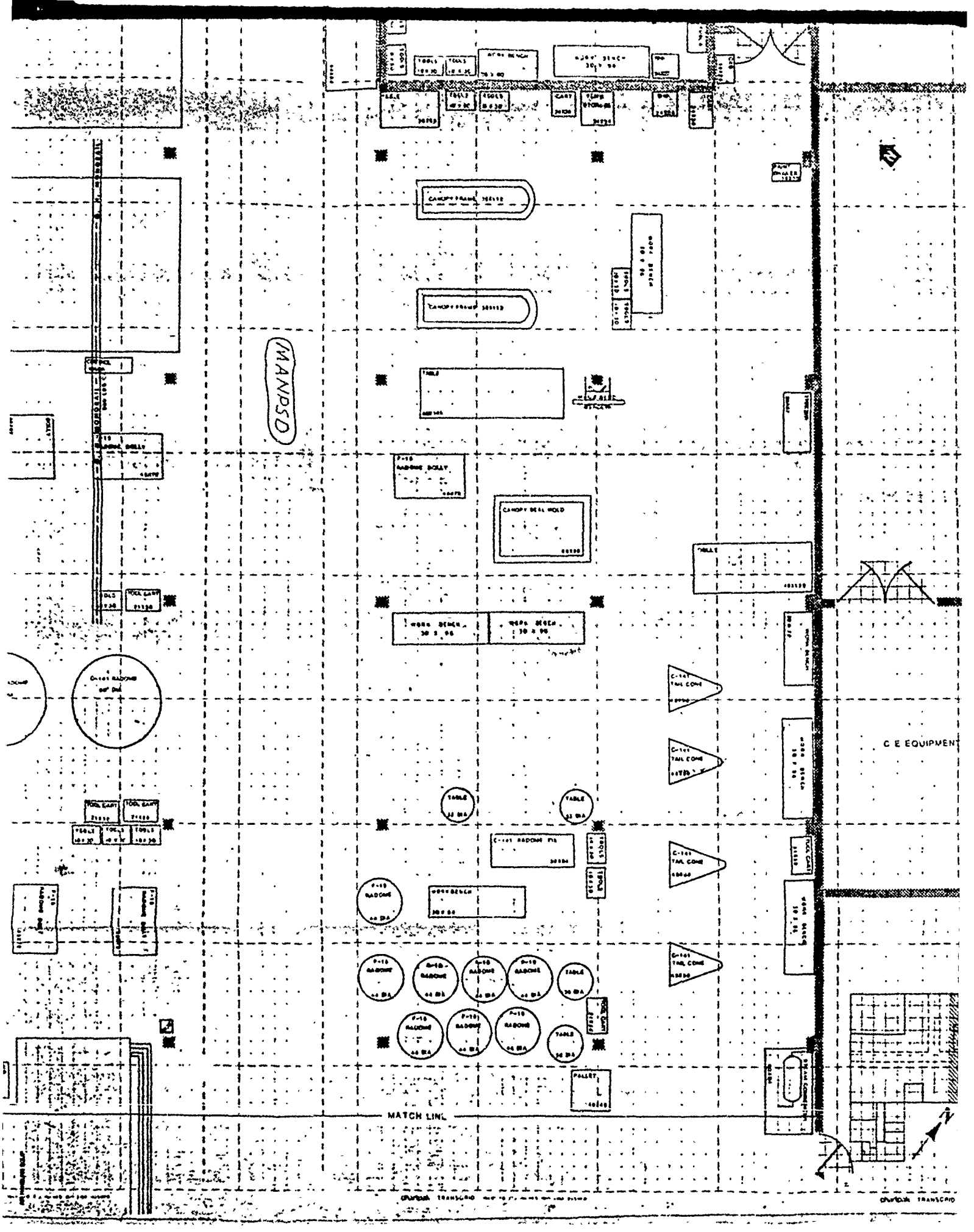

SHIPPING CRATE
40X84
SHIPPING CRATE
40X84
C-130 WING TANK
C-140 WING TANK
B-603
U.S. AIR FORCE
SCALE 1/4" = 1'-0"

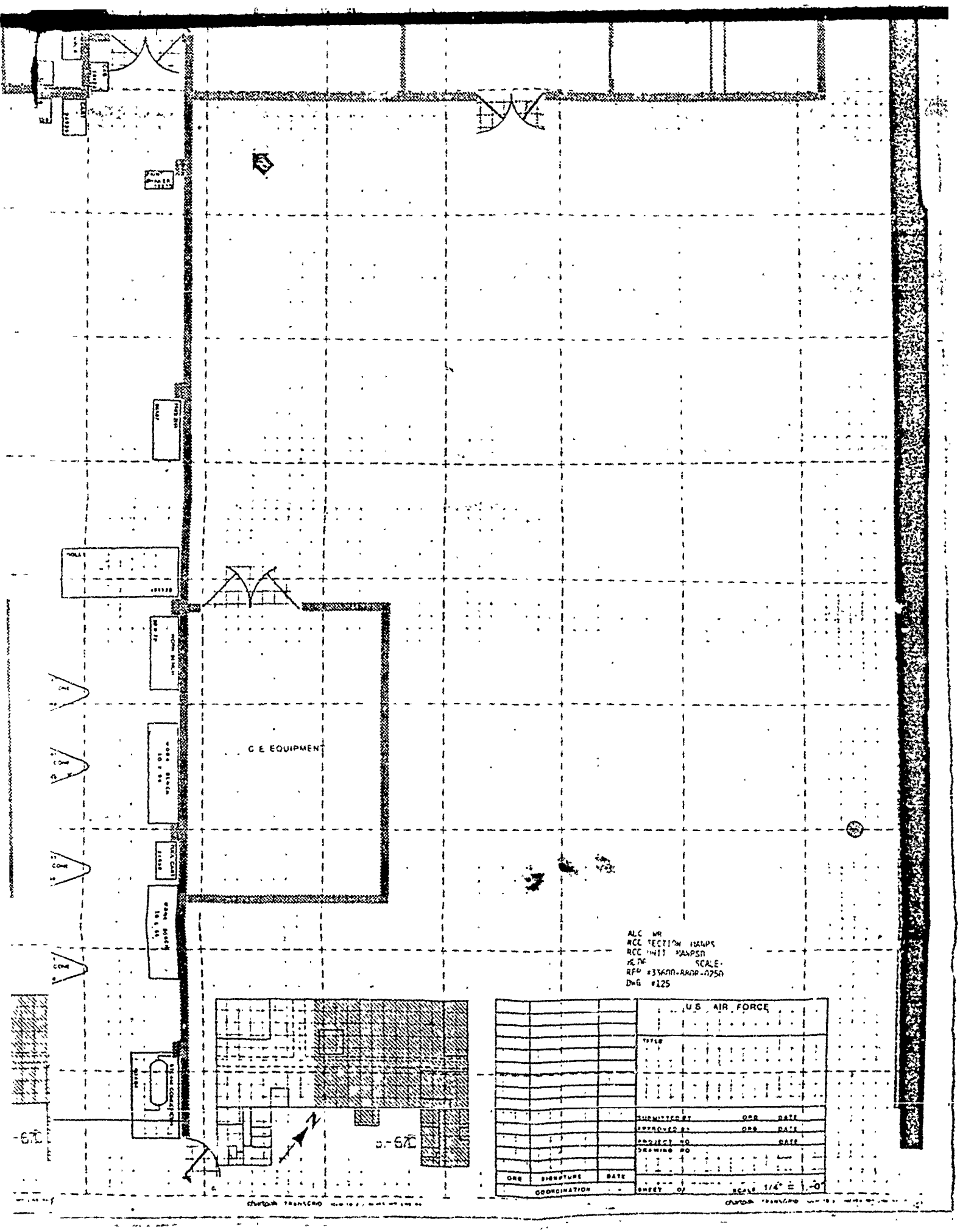

MISC. STORAGE
TOOLS
TOOLS
CART


12 FT ROLLUP DOOR
C E EQUIPMENT
MANPSD


MISC STORAGE
C E EQUIPMENT
C E EQUIPMENT
STORAGE
STORAGE


MISC STORAGE
C E EQUIPMENT
STORAGE
STORAGE


MANDSD
C E EQUIPMENT
MATCH LINE


C E EQUIPMENT
ALC WR
RCC SECTION MAPS
RCC UNIT MAPS
SCALE:
DWG #125
U.S. AIR FORCE
TITLE
SUBMITTED BY
APPROVED BY
PROJECT NO
DRAWING NO
ORG
DATE
ORG
SIGNATURE
DATE
COORDINATION
SHEET OF
SCALE 1/4" = 1'-0"

ALC: WR
RCC SECTION MANPS
RCC UNIT MANPSD
BLDG: SCALE:
RFP #33600-88OR-0250
DWG. #125

U.S. AIR FORCE

TITLE

SUBMITTED BY	ORG	DATE
APPROVED BY	ORG	DATE
PROJECT NO.		DATE
DRAWING NO.		
SHEET OF		SCALE 1/4" = 1'-0"

ORG	SIGNATURE	DATE
COORDINATION		

MANPSD

09193A

40208A

41059A

03172A

51420A

51344A

CONTROL NUMBERS BY RCC

RCC	C/N		NOUN	ORG HOURS	
MNPSA	51454A	51455A	PETAL DOOR	19105	
	01900A		BRAKEAER	9171	
6 4+2	51352A	51353A	DOOR	8342	
	51418A	51419A	LEADING	6480	43098
11/23 ADD	05502A	05503A	AILERON		
	51334A		HORZ. STABILIZER		
MNPSC	06691A	06692A	COWLING R&L	97484	
	50164A		SCOOP	9032	
	51402A		DR THRUST	3110	
5	50266A		ELEVATOR	2770	
	50242A	50244A	FLAP	3504	110900
	(50454A)				
MNPSD	03172A		CANOPY	49719	
	51344A		NOZZEL	34626	
	09193A	F15	RADOME	21107	
7 6+1	41059A	C130	RADOME ASSY	9310	
	03427A		CANOPY	6900	
	40208.9	C141	RADOME	5495	127157
11/23 ADD	51420A		LEADING EDGE		281155

SHEET METAL SHOP

BB 10/14/88

RCC	ORG HRS	80%	NO. OF HRS SELECTED FOR STUDY
MANPSA	53450	42760	43098 (81%)
MANPSC	144209	115367	110900 (77%)
MANPSD	156501	125200	127157 (81%)

CALCULATED FROM DOC. GOMC AS OF 22SEP88 FOR RCC MNNPS AND ALLOCATED C/N'S FOR UNITS A, C & D.

Bob 12/13

HEADR=09193A MB005N 8116 P 68A315004-1005

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
280	MB005N	MANPSD	P	INS	SYN	48900	1	.	0.25		.		.	.	1	1	OP01 229

HEADR=40208A MB013N 88280 P MBE9443

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB013N	MANPSD	P	PROC	SYN	48901	1	.	0.50		.		.	.	1	1	OP01 132
20	MB013N	MANPSD	P	PROC	SYN	48901	1	.	2.00		.		.	.	1	1	OP01 133
30	MB013N	MANPSD	P	REP	SYM	48901	1	.	55.00	0012	1	P	.	4.5	1	1	OP01 134
40	MB013N	MANPSD	P	PROC	SYN	48901	1	.	5.50		.		.	.	1	1	OP01 135
50	MB013N	MANPSD	P	PROC	SYN	48903	1	.	0.10		.		.	.	1	1	OP01 136
55	MB013N	MANPSD	P	INS	SYN	48901	1	.	0.10		.		.	.	1	1	OP01 137
60	MB013N	MANPSD	P	INS	SYN	48901	1	.	0.25		.		.	.	1	1	OP01 138

HEADR=41059A MB001N 88263 P 369154-1

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB001N	MANPSD	P	INS	SYN	48900	1	.	0.50		.		.	.	1	1	OP01 1
20	MB001N	MANPSD	P	PROC	SYN	48903	1	.	4.50		.		.	.	1	1	OP01 2
30	MB001N	MANPSD	P	PROC	SYN	48903	1	.	1.00		.		.	.	1	1	OP01 3
40	MB001N	MANPSD	P	PROC	SYN	48901	1	.	40.00		.		.	.	1	1	OP01 4
50	MB001N	MANPSD	P	INS	SYN	48900	1	.	10.00		.		.	.	1	1	OP01 5
70	MB001N	MANPSD	P	PROC	SYN	48903	1	.	1.00		.		.	.	1	1	OP01 6
80	MB001N	MANPSD	P	INS	SYN	48903	1	.	1.00		.		.	.	1	1	OP01 7
90	MB001N	MANPSD	B				.	.	.		.		.	.	.	.	OP01 8
110	MB001N	MANPSD	P	INS	SYN	48903	1	.	0.25		.		.	.	1	1	OP01 9
120	MB001N	MANPSD	P	PROC	SYN	48903	1	.	6.00		.		.	.	1	1	OP01 10
140	MB001N	MANPSD	P			48901	1	.	0.25		.		.	.	1	1	OP01 11
150	MB001N	MANPSD	P	INS	SYN	48903	1	.	0.25		.		.	.	1	1	OP01 12
160	MB001N	MANPSD	P	INS	SYN	48901	1	.	0.50		.		.	.	1	1	OP01 13

PART OPERATION SUMMARY

ALC: WARNER ROBBINS RCC: MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN: MBE9443 NSN: PCN: 40208A WCD: MB013N WCD DATE: 88280

OPERATION: ZPRT PRIMARY OPERATION TYPE: INS MATERIAL TYPE: SYN
SAMPLE SIZE: 23 MISSING FLOWTIMES: 2 END ITEMS: . OUTLIERS DELETED: 0

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---				--- TIME ---		BATCH	
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 22	*********
20 4	**
40 4	**
60 4	**
80 4	**
100 0	
120 0	
140 9	***
160 13	*****
180 0	
>=00 39	**********

DISTRIBUTION	PARAMETERS		D VALUE	D ALPHA
UNIFORM	3.0	380.0	0.201	1.00
TRIANGULAR	3.0 12.0	380.0	0.196	1.00
NORMAL	154.2	118.0	0.117	1.00
LOGNORMAL	.	.	1.000	.
EXPONENTIAL	154.7		0.196	1.00

OCCURRANCE FACTOR: . OCCURRANCES: 25

DISTRIBUTION OF CHOICE: NORMAL

HEADR=09193A MB005N 8116 P 68A315004-1005

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB005N	MANPSD	P	INS	SYN	48903	1	.	0.10		.		.	.	1	1	OP01 202
20	MB005N	MANPSD	P	INS	SYN	48900	1	.	0.50	6294	1	P	.	0.5	1	1	OP01 203
60	MB005N	MANPSD	P		SYN	48903	1	.	1.00		.		.	.	1	1	OP01 204
70	MB005N	MANPSD	P				.	.	.		.		.	.	.	.	OP01 205
80	MB005N	MANPSD	P	REP		48903	1	.	0.50		.		.	.	1	1	OP01 206
90	MB005N	MANPSD	P	REP	SYN	48900	1	.	1.00		.		.	.	1	1	OP01 207
100	MB005N	MANPSD	P	REP	SYN	48900	1	.	1.00		.		.	.	1	1	OP01 208
109	MB005N	MANPSD	P				.	.	.		.		.	.	.	.	OP01 209
110	MB005N	MANPSD	P	REP		48900	1	.	1.00		.		.	.	1	1	OP01 210
120	MB005N	MANPSD	P	REP		48900	1	.	0.50		.		.	.	1	1	OP01 211
130	MB005N	MANPSD	P	REP	SYN	48900	1	.	5.00		.		.	.	1	1	OP01 212
140	MB005N	MANPSD	P	REP	SYN	48900	1	.	2.00	0012	1	P	.	1.0	1	1	OP01 213
150	MB005N	MANPSD	P	REP	SYN	48900	1	.	10.00		.		.	.	1	1	OP01 214
160	MB005N	MANPSD	P	REP	SYN	48901	1	.	3.00	0012	1	P	.	1.0	1	1	OP01 215
170	MB005N	MANPSD	P	REP	SYN	48900	1	.	3.00	0012	1	P	.	1.0	1	1	OP01 216
180	MB005N	MANPSD	P	REP	SYN	48901	1	.	3.00	0012	1	P	.	1.0	1	1	OP01 217
190	MB005N	MANPSD	P	REP	SYN	48901	1	.	50.00	0012	1	P	.	1.0	1	1	OP01 218
200	MB005N	MANPSD	P	REP	SYN	48900	1	.	10.00	0012	1	P	.	3.0	1	1	OP01 219
210	MB005N	MANPSD	P	REP	SYN	48901	1	.	10.00		.		.	.	1	1	OP01 220
225	MB005N	MANPSD	P	INS		48901	1	.	0.10		.		.	.	1	1	OP01 221
230	MB005N	MANPSD	P				.	.	.		.		.	.	.	.	OP01 222
235	MB005N	MANPMA	B				.	.	.		.		.	.	.	.	OP01 223
240	MB005N	MANPSD	P	PROC	SYN	48901	2	.	2.00	0012	1	P	.	1.5	1	1	OP01 224
245	MB005N	MANPSD	P				.		.		.		.	.	.	.	OP01 225
260	MB005N	MANPSD	P	PROC	SYN	48900	1	.	0.25	0012	1	P	.	1.5	1	1	OP01 226
270	MB005N	MANPSD	P	PROC	SYN	48901	1	.	0.50		.		.	.	1	1	OP01 227
275	MB005N	MANPSD	P	PROC	SYN	48903	1	.	0.20		.		.	.	1	1	OP01 228
280	"	"	P	INS	"	48900	1		0.25						1	1	" 229

OPERATION PROFILE LIST FOR ALC=WR RCC=MANPSD

HEADR=09193A MB005N 8116 P 68A315004-1005

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
280	MB005N	MANPSD	P	INS	SYN	48900	1	.	0.25						1	1	OP01 229

HEADR=40208A MB013N 88280 P MBE9443

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB013N	MANPSD	P	PROC	SYN	48901	1	.	0.50						1	1	OP01 132
20	MB013N	MANPSD	P	PROC	SYN	48901	1	.	2.00						1	1	OP01 133
30	MB013N	MANPSD	P	REP	SYM	48901	1	.	55.00	0012	1	P	.	4.5	1	1	OP01 134
40	MB013N	MANPSD	P	PROC	SYN	48901	1	.	5.50						1	1	OP01 135
50	MB013N	MANPSD	P	PROC	SYN	48903	1	.	0.10						1	1	OP01 136
55	MB013N	MANPSD	P	INS	SYN	48901	1	.	0.10						1	1	OP01 137
60	MB013N	MANPSD	P	INS	SYN	48901	1	.	0.25						1	1	OP01 138

HEADR=41059A MB001N 88263 P 369154-1

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB001N	MANPSD	P	INS	SYN	48900	1	.	0.50						1	1	OP01 1
20	MB001N	MANPSD	P	PROC	SYN	48903	1	.	4.50						1	1	OP01 2
30	MB001N	MANPSD	P	PROC	SYN	48903	1	.	1.00						1	1	OP01 3
40	MB001N	MANPSD	P	PROC	SYN	48901	1	.	40.00						1	1	OP01 4
50	MB001N	MANPSD	P	INS	SYN	48900	1	.	10.00						1	1	OP01 5
70	MB001N	MANPSD	P	PROC	SYN	48903	1	.	1.00						1	1	OP01 6
80	MB001N	MANPSD	P	INS	SYN	48903	1	.	1.00						1	1	OP01 7
90	MB001N	MANPSD	B				.	.	.						.	.	OP01 8
110	MB001N	MANPSD	P	INS	SYN	48903	1	.	0.25						1	1	OP01 9
120	MB001N	MANPSD	P	PROC	SYN	48903	1	.	6.00						1	1	OP01 10
140	MB001N	MANPSD	P			48901	1	.	0.25						1	1	OP01 11
150	MB001N	MANPSD	P	INS	SYN	48903	1	.	0.25						1	1	OP01 12
160	MB001N	MANPSD	P	INS	SYN	48901	1	.	0.50						1	1	OP01 13

OPERATION PROFILE LIST FOR ALC=WR RCC=MANPSD

HEADR=03427A MB015N 88054 P 68A350010-2085

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY	
5	MB015N	MANPSD	P	PROC		9A012	1	.	0.25		.		.	.	1	1	OP01	14
10	MB015N	MANPSD	P	PROC		9A012	1	.	0.10		.		.	.	1	1	OP01	15
15	MB015N	MANPSD	P	PROC		9A012	1	.	2.00	6295	1	P	.	2.0	1	1	OP01	16
15	MB015N	MANPSD	P	PROC		9A014	1	.	2.00		.		.	.	.	.	OP01	17
20	MB015N	MANPSD	P	INS	AL	9A014	1	.	0.50	6295	1	P	.	0.5	1	1	OP01	18
20	MB015N	MANPSD	P	INS	AL	9A012	1	.	0.50		.		.	.	.	.	OP01	19
30	MB015N	MANPSD	P	DIS	AL	9A012	1	.	2.00		.		.	.	1	1	OP01	20
30	MB015N	MANPSD	P	DIS	AL	9A014	1	.	2.00		.		.	.	1	1	OP01	21
40	MB015N	MANPSD	P	PROC	AL	9A012	1	.	2.00		.		.	.	1	1	OP01	22
40	MB015N	MANPSD	P	PROC	AL	9A014	1	.	2.00		.		.	.	1	1	OP01	23
50	MB015N	MANPSD	P	DIS	AL	9A012	1	.	2.00		.		.	.	1	1	OP01	24
50	MB015N	MANPSD	P	DIS	AL	9A014	1	.	2.00		.		.	.	1	1	OP01	25
60	MB015N	MANPSD	P	INS	AL	9A014	1	.	0.50		.		.	.	1	1	OP01	26
60	MB015N	MANPSD	P	INS	AL	9A012	1	.	0.50		.		.	.	1	1	OP01	27
62	MB015N	MANPSD	B	TAT			.	.	.		.		.	.	1	1	OP01	28
64	MB015N	MANPSD	P	INS	AL	9A012	1	.	4.50		.		.	.	1	1	OP01	29
64	MB015N	MANPSD	P	INS	AL	9A014	1	.	4.50		.		.	.	1	1	OP01	30
66	MB015N	MANPSD	P	REP	AL	9A014	1	.	16.00	6295	1	P	.	8.0	1	1	OP01	31
66	MB015N	MANPSD	P	REP	AL	9A012	1	.	16.00		.		.	.	.	.	OP01	32
67	MB015N	MANPSD	P	PROC	AL	48901	2	.	3.50		.		.	.	1	1	OP01	33
68	MB015N	MANPSD	P	PROC	AL	9A012	1	.	0.50	6295	1	P	.	0.5	1	1	OP01	34
68	MB015N	MANPSD	P	PROC	AL	9A014	1	.	0.50		.		.		.	.	OP01	35
69	MB015N	MANPSD	P	INS	AL	9A012	1	.	1.00	6295	1	P	.	1.0	1	1	OP01	36
69	MB015N	MANPSD	P	INS	AL	9A014	1	.	1.00		.		.	.	.	.	OP01	37
70	MB015N	MANPSD	P	REP	AL	9A012	1	.	24.00	6295	1	P	.	19.2	1	1	OP01	38
70	MB015N	MANPSD	P	REP	AL	9A014	1	.	24.00		.		.	.	.	.	OP01	39
75	MB015N	MANPSD	P	REP	AL	9A014	1	.	8.00	6295	1	P	.	8.0	1	1	OP01	40

OPERATION PROFILE LIST FOR ALC=WR RCC=MANPSD

HEADR=03427A MB015N 88054 P 68A350010-2085

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY	
75	MB015N	MANPSD	P	REP	AL	9A012	1	.	8.00		.		.	.	.	.	OP01	41
80	MB015N	MANPSD	P	ASSY	AL	9A012	1	.	2.00	6295	1	P	.	2	1	1	OP01	42
80	MB015N	MANPSD	P	ASSY	AL	9A014	1	.	2.00		.		.	.	.	.	OP01	43
90	MB015N	MANPSD	P	INS	AL	9A012	1	.	2.00	6295	1	P	.	2	1	1	OP01	44
90	MB015N	MANPSD	P	INS	AL	9A014	1	.	2.00		.		.	.	.	.	OP01	45
100	MB015N	MANPSD	P	KPRO	AL	9A012	1	.	3.00	6295	1	P	.	3	1	1	OP01	46
100	MB015N	MANPSD	P	KPRO	AL	9A014	1	.	3.00		.		.	.	.	.	OP01	47
110	MB015N	MANPSD	P	PROC	AL	9A012	1	.	8.00		.		.	.	1	1	OP01	48
140	MB015N	MANPSD	P	ASSY	AL	9A014	1	.	2.00	6295	1	P	.	2	1	1	OP01	49
140	MB015N	MANPSD	P	ASSY	AL	9A012	1	.	2.00		.		.	.	.	.	OP01	50
150	MB015N	MANPSD	P	PROC	AL	9A012	1	.	3.00	6295	1	P	.	3	1	1	OP01	51
150	MB015N	MANPSD	P	PROC	AL	9A014	1	.	3.00		.		.	.	.	.	OP01	52
160	MB015N	MANPSD	P	PROC	AL	9A012	1	.	8.00		.		.	.	1	1	OP01	53
170	MB015N	MANPSD	P	ASSY	AL	9A014	1	.	16.00	6295	1	P	.	16	1	1	OP01	54
170	MB015N	MANPSD	P	ASSY	AL	9A012	1	.	16.00		.		.	.	.	.	OP01	55
180	MB015N	MANPSD	P	ASSY	AL	9A014	1	.	8.00		.		.	.	1	1	OP01	56
180	MB015N	MANPSD	P	ASSY	AL	9A012	1	.	8.00		.		.	.	1	1	OP01	57
190	MB015N	MANPSD	P	PROC	AL	9A012	1	.	8.00		.		.	.	1	1	OP01	58
190	MB015N	MANPSD	P	PROC	AL	9A014	1	.	8.00		.		.	.	1	1	OP01	59
195	MB015N	MANPSD	P	PROC	AL	9A012	1	.	0.50		.		.	.	1	1	OP01	60
200	MB015N	MANPSD	P	PROC	AL	48901	2	.	1.50		.		.	.	1	1	OP01	61
210	MB015N	MANPSD	P	TEST			.	.	.		.		.	.	1	1	OP01	62
220	MB015N	MANPSD	P	PROC	AL	9A014	1	.	0.25		.		.	.	1	1	OP01	63
220	MB015N	MANPSD	P	PROC	AL	9A012	1	.	0.25		.		.	.	1	1	OP01	64
230	MB015N	MANPSD	P	INS	AL	9A012	1	.	8.00		.		.	.	1	1	OP01	65
230	MB015N	MANPSD	P	INS	AL	9A014	1	.	8.00		.		.	.	1	1	OP01	66

HEADR=03172A MBA11N 88250 S 68A350708-2031

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBA11N	MANPSD	P	PROC	AL	9A012	1	.	1.0		.		.	.	1	1	OP01 128
100	MBA11N	MANPSD	P	PROC	AL	48901	2	.	0.5		.		.	.	1	1	OP01 129

HEADR=03172A MBB11N 89055 S 68A350004-2105

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBB11N	MANPMA	B				.	.	.		.		.	.	.	.	OP01 130

HEADR=03172A MBC11N 88250 S 68A350004-2105

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBC11N	MANOSP	B				.	.	.		.		.	.	.	.	OP01 131

HEADR=03172A MB011N 88271 P 68A350004-2105

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
20	MB011N	MANPSD	P	DIS	AL	9A012	1	.	4.50		.		.	.	1	1	OP01 67
20	MB011N	MANPSD	P	DIS	AL	9A014	1	.	4.50		.		.	.	1	1	OP01 68
30	MB011N	MANPSD	P	INS	SYN	9A012	1	.	16.00		.		.	.	1	1	OP01 69
30	MB011N	MANPSD	P	INS	SYN	9A014	1	.	16.00		.		.	.	1	1	OP01 70
40	MB011N	MANPDD	B				.	.	.		.		.	.	.	.	OP01 71
50	MB011N	MANPSD	P	INS	AL	9A014	1	.	2.00		.		.	.	1	1	OP01 72
50	MB011N	MANPSD	P	INS	AL	9A012	1	.	2.00		.		.	.	1	1	OP01 73
60	MB011N	MANPSD	P	REP	AL	9A012	1	.	11.00		.		.	.	1	1	OP01 74
60	MB011N	MANPSD	P	REP	AL	9A014	1	.	11.00		.		.	.	1	1	OP01 75
70	MB011N	MANPSD	P	PROC	AL	9A014	1	.	0.50		.		.	.	1	1	OP01 76
80	MB011N	MANPSD	P	PROC	AL	48901	2	.	0.75		.		.	.	1	1	OP01 77
90	MB011N	MANPSD	P	ASSY	AL	9A012	1	.	2.00	5859	1	P	.	1.00	1	1	OP01 78
90	MB011N	MANPSD	P	ASSY	AL	9A014	1	.	2.00		.		.	.	.	.	OP01 79
100	MB011N	MANPSD	P	INS	AL	9A014	1	.	2.50	5859	1	P	.	0.50	1	1	OP01 80

OPERATION PROFILE LIST FOR ALC=WR [redacted]=MANPSD

HEADR=03172A MB011N 88271 P 68A350004-2105

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
100	MB011N	MANPSD	P	INS	AL	9A012	1	.	2.50		.		.	.	.	.	OP01 31
110	MB011N	MANPSD	P	REP	AL	9A012	1	.	11.00	5859	1	P	.	9.60	1	1	OP01 82
110	MB011N	MANPSD	P	REP	AL	9A014	1	.	11.00		.		.	.	.	.	OP01 83
115	MB011N	MANPSD	P	REP	AL	9A012	1	.	7.50	5859	1	P	.	4.00	1	1	OP01 84
115	MB011N	MANPSD	P	REP	AL	9A014	1	.	7.50		.		.	.	.	.	OP01 85
130	MB011N	MANPSD	P	ASSY	SYN	9A014	1	.	1.50	5859	1	P	.	1.50	1	1	OP01 86
130	MB011N	MANPSD	P	ASSY	SYN	9A012	1	.	1.50		.		.	.	.	.	OP01 87
140	MB011N	MANPSD	P	INS	SYN	9A012	1	.	1.00	5859	1	P	.	0.50	1	1	OP01 88
140	MB011N	MANPSD	P	INS	SYN	9A014	1	.	1.00		.		.	.	.	.	OP01 89
150	MB011N	MANPSD	P	INS	SYN	9A012	1	.	1.50	5859	1	P	.	1.50	1	1	OP01 90
150	MB011N	MANPSD	P	INS	SYN	9A014	1	.	1.50		.		.	.	.	.	OP01 91
160	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	7.00	5859	1	P	.	5.00	1	1	OP01 92
160	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	7.00		.		.	.	.	.	OP01 93
170	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	3.00		.		.	.	1	1	OP01 94
180	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	3.00		.		.	.	1	1	OP01 95
190	MB011N	MANPSD	P	INS	SYN	9A012	1	.	1.00		.		.	.	1	1	OP01 96
190	MB011N	MANPSD	P	INS	SYN	9A014	1	.	1.00		.		.	.	1	1	OP01 97
200	MB011N	MANPSD	P	INS	SYM	9A012	1	.	1.00		.		.	.	1	1	OP01 98
200	MB011N	MANPSD	P	INS	SYM	9A014	1	.	1.00		.		.	.	1	1	OP01 99
210	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	7.00	5859	1	P	.	5.00	1	1	OP01 100
210	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	7.00		.		.	.	.	.	OP01 101
220	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	3.00		.		.	.	1	1	OP01 102
220	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	3.00		.		.	.	1	1	OP01 103
230	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	3.00		.		.	.	1	1	OP01 104
230	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	3.00		.		.	.	1	1	OP01 105
240	MB011N	MANPSD	P	ASSY	SYN	9A012	1	.	20.00	5859	1	P	.	12.00	1	1	OP01 106
240	MB011N	MANPSD	P	ASSY	SYN	9A014	1	.	20.00		.		.	.	.	.	OP01 107

HEADR=03172A MB011N 88271 P 68A350004-2105

RTOPER	WCD	RCC	RCCPR	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
250	MB011N	MANPSD	P	INS	AL	9A014	1	.	1.50	5859	1	P	.	0.50	1	1	OP01 108
250	MB011N	MANPSD	P	INS	AL	9A012	1	.	1.50		.		.	.	.	.	OP01 109
260	MB011N	MANPSD	P	PROC	AL	9A014	2	.	0.25	5859	1	P	.	0.25	1	1	OP01 110
260	MB011N	MANPSD	P	PROC	AL	9A012	2	.	0.25		.		.	.	.	.	OP01 111
270	MB011N	MANPSD	P	ASSY	AL	9A014	1	.	1.00		.		.	.	1	1	OP01 112
270	MB011N	MANPSD	P	ASSY	AL	9A012	1	.	1.00		.		.	.	1	1	OP01 113
280	MB011N	MANPSD	P	PROC	AL	9A012	1	.	6.25		.		.	.	1	1	OP01 114
280	MB011N	MANPSD	P	PROC	AL	9A014	1	.	6.25		.		.	.	1	1	OP01 115
290	MB011N	MANPSD	P	PROC	SYN	9A012	1	.	4.50		.		.	.	1	1	OP01 116
290	MB011N	MANPSD	P	PROC	SYN	9A014	1	.	4.50		.		.	.	1	1	OP01 117
300	MB011N	MANPSD	P	ASSY	SYN	9A012	1	.	10.00		.		.	.	1	1	OP01 118
300	MB011N	MANPSD	P	ASSY	SYN	9A014	1	.	10.00		.		.	.	1	1	OP01 119
310	MB011N	MANPSD	P	K	SYN	9A012	1	.	6.00		.		.	.	1	1	OP01 120
320	MB011N	MANPSD	P	INS	SYN	9A014	2	.	0.25		.		.	.	1	1	OP01 121
330	MB011N	MANPSD	P	PROC	AL	48901	2	.	1.50		.		.	.	1	1	OP01 122
340	MB011N	MANPSD	P	PROC		9A014	1	.	0.25		.		.	.	1	1	OP01 123
345	MB011N	MANPSD	P		AL	9A014	1	.	1.50		.		.	.	1	1	OP01 124
350	MB011N	MANPSD	P	INS	AL	9A014	1	.	2.00		.		.	.	1	1	OP01 125
350	MB011N	MANPSD	P	INS	AL	9A012	1	.	2.00		.		.	.	1	1	OP01 126
360	MB011N	MANPSD	P	INS	AL	9A014	1	.	3.00		.		.	.	1	1	OP01 127

HEADR=51344A MBD15C 88061 S 3P22591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBD15C	MANPDD	B														OP01 193
20	MBD15C	MANPDB	B														OP01 194
30	MBD15C	MANPDB	B														OP01 195
40	MBD15C	MANPDB	B														OP01 196
50	MBD15C	MANPDB	B														OP01 197
60	MBD15C	MANPDB	B														OP01 198
70	MBD15C	MANPDB	B														OP01 199

HEADR=51344A MBE15C 88061 S 3922591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBE15C	MANPDA	B														OP01 200
20	MBE15C	MANPDB	B														OP01 201

HEADR=51344A MB015C 88061 P 3P22591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB015C	MANPDD	B														OP01 139
20	MB015C	MANPSD	P	DIS	AL	9A012	1		14.00						1	1	OP01 140
25	MB015C	MANPDD	B														OP01 141
30	MB015C	MANPDD	B														OP01 142
40	MB015C	MANPSD	P	PROC	AL	9A014	1		14.00						1	1	OP01 143
50	MB015C	MANPSD	P	INS	AL	9A014	1		3.50						1	1	OP01 144
60	MB015C	MANPSD	P	PROC	AL	9A014	2		2.00						1	1	OP01 145
70	MB015C	MANPSD	P	ASSY	AL	9A014	1		80.00	1570	1	P		1.0	1	1	OP01 146
80	MB015C	MANPSD	P	REP	AL	9A012	1		24.00	1570	1	P		1.0	1	1	OP01 147
90	MB015C	MANPSD	P	REP	AL	9A014	2		80.00	1570	1	P		0.5	1	1	OP01 148
100	MB015C	MANPSD	P	INS	AL	9A012	1		20.00						1	1	OP01 149
110	MB015C	MANPSD	P	INS	AL	9A014	2		0.10						1	1	OP01 150

HEADR=51344A MB015C 88061 P 3P22591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
120	MB015C	MANPSD	P	REP	AL	9A014	1	.	9.00	1570	1	P	.	0.5	1	1	OP01 151
130	MB015C	MANPSD	P	REP	AL	9A012	1	.	12.00	1570	1	P	.	0.5	1	1	OP01 152
140	MB015C	MANPSD	P	PROC	MAG	9A014	1	.	14.00		.		.	.	1	1	OP01 153
150	MB015C	MANPSD	P	ASSY	MAG	9A012	2	.	12.00		.		.	.	1	1	OP01 154
160	MB015C	MANPSD	P	PROC	SYN	9A012	1	.	16.00		.		.	.	1	1	OP01 155
170	MB015C	MANPSD	P	REP	AL	9A014	1	.	28.00	1570	1	P	.	1.0	1	1	OP01 156
180	MB015C	MANPSD	P	REP	AL	9A012	1	.	30.00		.		.	.	1	1	OP01 157
190	MB015C	MANPSD	P	REP	AL	9A014	1	.	24.00	1570	1	P	.	0.5	1	1	OP01 158
200	MB015C	MANPSD	P	REP	TITA	9A012	1	.	24.00	1570	1	P	.	1.0	1	1	OP01 159
210	MB015C	MANPSD	P	REP	TITA	9A014	2	.	16.00		.		.	.	1	1	OP01 160
220	MB015C	MANPSD	P	ASSY	SYN	9A014	1	.	2.00		.		.	.	1	1	OP01 161
230	MB015C	MANPSD	P	REP	AL	9A012	1	.	32.00	1570	1	P	.	1.0	1	1	OP01 162
240	MB015C	MANPSD	P	ASSY	AL	9A014	1	.	20.00		.		.	.	1	1	OP01 163
250	MB015C	MANPSD	P	ASSY	SS	9A014	2	.	16.00		.		.	.	1	1	OP01 164
260	MB015C	MANPSD	P	INS	AL	9A014	2	.	1.00		.		.	.	1	1	OP01 165
270	MB015C	MANPSD	P	PROC		9A012	1	.	1.00		.		.	.	1	1	OP01 166
280	MB015C	MANPPC	B				.	.	.		.		.	.	.	.	OP01 167
290	MB015C	MANPSD	P	INS	AL	9A014	2	.	0.50		.		.	.	1	1	OP01 168
300	MB015C	MANPSD	P	ASSY	AL	9A012	1	.	12.00		.		.	.	1	1	OP01 169
310	MB015C	MANPSD	P	PROC	SYN	9A014	1	.	8.00		.		.	.	1	1	OP01 170
320	MB015C	MANPDD	B				.	.	.		.		.	.	.	.	OP01 171
330	MB015C	MANPDC	B				.	.	.		.		.	.	.	.	OP01 172
340	MB015C	MANPDC	B				.	.	.		.		.	.	.	.	OP01 173
350	MB015C	MANPSD	P	ASSY	SYN	9A014	1	.	0.25		.		.	.	1	1	OP01 174
360	MB015C	MANPSD	P	INS	AL	9A014	2	.	1.00		.		.	.	1	1	OP01 175
370	MB015C	MANPSD	P	PROC		9A014	1	.	0.50		.		.	.	1	1	OP01 176

OPERATION PROFILE LIST FOR ALC=WR RCC=MANPSD

---------- HEADR=51344G MBA1SC 88061 S 3P22591-197 ----------

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBA1SC	MANPSD	P				.	.	.		.	.	.	.	.	.	OP01 177

---------- HEADR=51420A MB021C 88061 P 3W32002-128 ----------

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MB021C	MANPDD	B				.	.	.		.	.	.	.	.	.	OP01 230
20	MB021C	MANPDD	B				.	.	.		.	.	.			.	OP01 231
25	MB021C	MANPSD	P	RI	AL	9A014	1	.	0.50		.	.	.	1	1		OP01 232
25	MB021C	MANPSD	P	RI	AL	18083	1	.	0.50		.	.	.	.	.		OP01 233
30	MB021C	MANPSD	P	INS	AL	9A012	1	.	1.00		.	.	.	1	1		OP01 234
40	MB021C	MANPSD	P	PROC	AL	9A014	1	.	2.00		.	.	.	1	1		OP01 235
50	MB021C	MANPDA	B				.	.	.		.	.	.	.	.		OP01 236
60	MB021C	MANPSD	P	INS	AL	9A014	1	.	0.50		.	.	.	1	1		OP01 237
70	MB021C	MANPSD	P	REP	AL	9A012	1	.	85.00		.	.	.	.	.		OP01 238
70	MB021C	MANPSD	P	REP	AL	9A014	1	.	85.00		.	.	.	1	1		OP01 239
70	MB021C	MANPSD	P	REP	AL	18083	1	.	85.00		.	.	.	.	.		OP01 240
75	MB021C	MANPDD	B				.	.	.		.	.	.	.	.		OP01 241
80	MB021C	MANPDC	B				.	.	.		.	.	.	.	.		OP01 242
90	MB021C	MANPSD	P	PROC	SYN	9A014	1	.	0.50		.	.	.	1	1		OP01 243
100	MB021C	MANPSD	P	INS	AL	9A014	1	.	0.50		.	.	.	1	1		OP01 244
110	MB021C	MANPSD	P	PROC		9A014	1	.	0.25		.	.	.	1	1		OP01 245

OPERATION PROFILE

F-15 RADOME

NAME BILL RICH ALC WR-ALC DATE 5-16-89 RCC MANPSD SHEET 1 OF 1

PCN
NSN
PIN 09193A WCD MB005N WCD DATE 8116

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											EART DOWN MECHANIC (6) 4809 J. HAMBRICK PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	48903	1		0.1					
		WCD OPERATIONS		TRANSIT											
				SETUP											
				PROCESS											
		LISTED FROM 010 THRU 280, REVISED PER MARKED-UP COMPUTER COPY.		TRANSIT											
				SETUP											
				PROCESS											
		BILL RICH 5-16-89		TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											SAM HALL SUPERVISOR (6) 1785 S. CRABB ALTERNATE (6) 1785
				SETUP											
				PROCESS		1.0	48903	1		2.0					

F-15 RADOME

SAS

8:24 WEDNESDAY, APRIL 5, 1989 25

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-12-89 RCC MANPSD SHEET 1 OF 7

ITEM CD PCN 09193A WCD. MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPSD	INS	0.95 1.00	.	T	0.		.	.	.		.	.	.	
10	MANPSD	INS	.	1.00	S	0.		.	.	0.5		.	.	.	
10	MANPSD	INS	.	.	P	0.	48903	1	.	~~0.1~~		.	.	.	
20	MANPSD	INS	0.95 1.00	.	T	0		.	.	.		.	.	.	
20	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
20	MANPSD	INS	.	.	P	0	48900	1	.	0.5	6294	1	.	0.5	
60	MANPSD	EVAL	0.95 1.00	.	T	0		.	.	.		.	.	.	
60	MANPSD	EVAL	.	1.00	S	0		.	.	.		.	.	.	
60	MANPSD	EVAL	.	.	P	0	48903	1	.	2.0 ~~1.0~~		.	.	.	
70	MANPSD	REP	0.90 1.00	.	T	0.		.	.	.		.	.	.	
70	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
70	MANPSD	REP	.	.	P	0.		.	.	.		.	.	.	
80	MANPSD	REP	0.90 1.00	.	T	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-12-89 RCC MANPSD SHEET 2 OF 7

ITEM CD PCN 09193A WCD MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
80	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
80	MANPSD	REP	.	.	P	0.	48903	1	.	0.5		.	.	.	
90	MANPSD	REP	0.90/1.00	.	T	0.		.	.	.		.	.	.	
90	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
90	MANPSD	REP	.	.	P	0.	48900	1	.	1.0		.	.	.	
100	MANPSD	REP	0.95/1.00	.	T	0.		.	.	.		.	.	.	
100	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
100	MANPSD	REP	.	.	P	0.	48900	1	.	1.0		.	.	.	
109	MANPSD	REP	1.00	.	T	0.		.	.	.		.	.	.	
109	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
109	MANPSD	REP	.	.	P	0.		.	.	.		.	.	.	
110	MANPSD	REP	0.90/1.00	.	T	0.		.	.	.		.	.	.	

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 3 OF 7

ITEM CD PCN 09193A WCD MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
110	MANPSD	REP	.	.	S	0		.	.	.		.	.	.	
110	MANPSD	REP	1.00	.	P	0	48900	1	.	1.0		.	.	.	
120	MANPSD	REP	0.99 1.00	.	T	0		.	.	.		.	.	.	
120	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
120	MANPSD	REP	.	.	P	0	48900	1	.	0.5		.	.	.	
130	MANPSD	REP	0.99 1.00	.	T	0		.	.	.		.	.	.	
130	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
130	MANPSD	REP	.	.	P	0	48900	1	.	5.0		.	.	.	
140	MANPSD	REP	0.99 1.00	.	T	0		.	.	.		.	.	.	
140	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
140	MANPSD	REP	.	.	P	0	48900	1	.	2.0	0012	1	.	1.0	
150	MANPSD	REP	0.99 1.00	.	T	0		.	.	.		.	.	.	
150	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	

OPERATION PROFILE:

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 4 OF 7

ITEM CD PCN 09193A WCD MB005N · WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
150	MANPSD	REP	.	.	P	0.	48900	1	.	10.0		.	.	.	
160	MANPSD	REP	0.90 1.00	.	T	0.		.	.	.		.	.	.	
160	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
160	MANPSD	REP	.	.	P	0.	48901	1	.	3.0	0012	1	.	1.0	
170	MANPSD	REP	0.81 1.00	.	T	0.		.	.	.		.	.	.	
170	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
170	MANPSD	REP	.	.	P	0.	48900	1	.	3.0	0012	1	.	1.0	
180	MANPSD	REP	0.90 1.00	.	T	0.		.	.	.		.	.	.	
180	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
180	MANPSD	REP	.	.	P	0.	48901	1	.	3.0	0012	1	.	1.0	
190	MANPSD	REP	0.90 1.00	.	T	0.		.	.	.		.	.	.	
190	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	

SAS

OPERATION PROFILE

SHEET 5 OF 7

NAME BILL RICH ALC WR DATE 5-12-89 RCC MANPSD

ITEM CD PCN 09193A WCD MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
190	MANPSD	REP	.	.	P	0	48901	1	.	50.0	0012	1	.	1.0	
200	MANPSD	REP	0.~~90~~ 1.00	.	T	0		.	.	.		.	.	.	
200	MANPSD	REP	.	1.00	S	0		.	.	.		.	.	.	
200	MANPSD	REP	.	.	P	0	48900	1	.	10.0	0012	1	.	3.0	
210	MANPSD	REP	0.~~95~~ 1.00	.	T	0		.	.	.		.	.	.	
210	MANPSD	REP	.	1.00	S	0		.	.	.		.	.	.	
210	MANPSD	REP	.	.	P	0	48901	1	.	10.0		.	.	.	
225	MANPSD	INS	0.~~81~~ 1.00	.	T	0		.	.	.		.	.	.	
225	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
225	MANPSD	INS	.	.	P	0	48901	1	.	0.1		.	.	.	
230	MANPSD	REP	0.~~95~~ 1.00	.	T	0		.	.	.		.	.	.	
230	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
230	MANPSD	REP	.	1.00	P	0		.	.	.		.	.	.	

SAS

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 6 OF 7

ITEM CD PCN 09193A WCD MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
235	MANPMA	Proc	0.8~~0~~ 1.00	.	T	1.0	48900	.1	.	0.5		.	.	.	
235	MANPMA	~~Proc~~	.	1.00	S	0		.	.	.		.	.	.	
235	MANPMA	Proc	.	.	P	8.0		.	.	.		.	.	.	
240	MANPSD	PROC	0.9~~5~~ 1.00	.	T	1.0	48900	.1	.	0.5		.	.	.	
240	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
240	MANPSD	PROC	.	.	P	0	48901	2	.	2.0	0012	1	.	1.5	
245	MANPSD	Proc	1.00	.	T	0		.	.	.		.	.	.	
245	MANPSD	Proc	.	1.00	S	0		.	.	.		.	.	.	
245	MANPSD	Proc	.	.	P	0		.	.	.		.	.	.	
260	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
260	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
260	MANPSD	PROC	.	.	P	0	48900	1	.	0.3	0012	1	.	1.5	

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 31

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 2 OF 2

ITEM CD PCN 09193A WCD MB005N WCDDATE 8116

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
270	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
270	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
270	MANPSD	PROC	.	.	P	0	48901	1	.	0.5		.	.	.	
275	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
275	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
275	MANPSD	PROC	.	.	P	0	48903	1	.	0.2		.	.	.	
280	MANPSD	INS	0.95	.	T	0		.	.	.		.	.	.	
280	MANPSD	INS	1.00	1.00	S	0		.	.	.		.	.	.	
280	MANPSD	INS	.	.	P	0	48900	1	.	0.3		.	.	.	

DISASSEMBLY/ASSEMBLY PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-16-89 RCC MAN PSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

NONE

W.V. Rich
5-16-89

LSC-20095A

C-130 RADOME

OPERATION ..JFILE

NAME BILL RICH ALC WR-ALC DATE 5-16-89 RCC MANPSD SHEET 1 OF 1

PCN
NSN
P/N 40208A WCD MB013N WCD DATE 88280

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											S. CRABB MECHANIC (6) 1786 J. HAMBRICK PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	48901	1		0.1					
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											C. COOPER SUPERVISOR (6) 1786 S. CRABB ALTERNATE (6) 1786
				SETUP											
				PROCESS		1.0	48901	1		2.0					

WCD OPERATIONS LISTED FROM 010 THRU 060, REVISED PER MARKED-UP COMPUTER COPY

BILL RICH 5-16-89

C-130 RADOME

SAS 8:24 WEDNESDAY, APRIL 5, 1989 32

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-12-89 IRCC MANPSD SHEET 1 OF 2

ITEM CD PCN 40208A WCD MB013N WCDDATE 88280

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
10	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
10	MANPSD	PROC	.	.	P	0.	48901	1	.	0.5		.	.	.	
20	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
20	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
20	MANPSD	PROC	.	.	P	0.	48901	1	.	2.0		.	.	.	
30	MANPSD	REP	0.96	.	T	0.		.	.	.		.	.	.	
30	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
30	MANPSD	REP	.	.	P	0.	48901	1	.	55.0	0012	1	.	4.5	
40	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
40	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
40	MANPSD	PROC	.	.	P	0	48901	1	.	5.5		.	.	.	
50	MANPSD	PROC	0.96	.	T	0		.	.	.		.	.	.	
				1.00											

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 33

NAME Bill Regn ALC WR DATE 5-12-89 RCC MANPSD SHEET 2 OF 2

ITEM CD PCN 40208A WCD MB013N WCDDATE 88280

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPSD	PROC	.	.	S	0.		.	.	.		.	.	.	
			1.00												
50	MANPSD	PROC	.	.	P	0.	48903	1	.	0.1		.	.	.	
55	MANPSD	INS	1.00	.	T	0.		.	.	.		.	.	.	
55	MANPSD	INS	.		S	0.		.	.	.		.	.	.	
			1.00												
55	MANPSD	INS	.	.	P	0.	48901	1	.	0.1		.	.	.	
60	MANPSD	INS	0.96	.	T	0.		.	.	.		.	.	.	
60	MANPSD	INS	1.00	.	S	0.		.	.	.		.	.	.	
60	MANPSD	INS	1.00	.	P	0.	48901	1	.	0.3		.	.	.	

DISASSEMBLY/ASSEM[illegible] PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-16-89 RCC MANPSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

NONE
Bill Rich
5-16-89

LSC-20095A

OPERATION PROFILE

C-130 RADOME ASSY

NAME BILL RICH ALC WR-ALC DATE 5-16-89 RCC MANPSD SHEET 1 OF 1

PCN NSN P/N 41059A WCD MB001N WCD DATE 88263

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											S. CRABB MECHANIC (6) 1786 J. HAMBRICK PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	48901	1		0.1					
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											C. COOPER SUPERVISOR (6) 1786 S. CRABB ALTERNATE (6) 1786
				SETUP											
				PROCESS		1.0	48901	1		2.0					

WCD OPERATIONS LISTED FROM 010 THRU 160, REVISED PER MARKED-UP COMPUTER COPY.

C-130 RADOME ASSY

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OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 34

NAME BILL RICH ALC WR DATE 5-12-89 RCC MANPSD SHEET 1 OF 4

ITEM CD PCN 41059A WCD MB001N WCDDATE 88263

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPSD	INS	1.00	.	T	.		.	.	.		.	.	.	
10	MANPSD	INS	.	1.00	S	.		.	.	.		.	.	.	
10	MANPSD	INS	.	.	P	.	48900	1	.	0.5		.	.	.	
20	MANPSD	PROC	1.00	.	T	.		.	.	.		.	.	.	
20	MANPSD	PROC	.	1.00	S	.		.	.	.		.	.	.	
20	MANPSD	PROC	.	.	P	.	48903	1	.	4.5		.	.	.	
30	MANPSD	PROC	1.00	.	T	.		.	.	.		.	.	.	
30	MANPSD	PROC	.	1.00	S	.		.	.	.		.	.	.	
30	MANPSD	PROC	.	.	P	.	48903	1	.	1.0		.	.	.	
40	MANPSD	PROC	0.98 / 1.00	.	T	.		.	.	.		.	.	.	
40	MANPSD	PROC	.	.	S	.		.	.	.		.	.	.	
40	MANPSD	PROC	.	1.00	P	.	48901	1	.	40.0		.	.	.	
50	MANPSD	INS	1.00	.	T	.		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 2 OF 4

ITEM CD PCN 41059A WCD MB001N WCDDATE 88263

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
50	MANPSD	INS	.	.	P	0	48900	1	.	10.0		.	.	.	
70	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
70	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
70	MANPSD	PROC	.	.	P	0	48903	1	.	1.0		.	.	.	
80	MANPSD	INS	1.00	.	T	0		.	.	.		.	.	.	
80	MANPSD	INS	.	.	S	0		.	.	.		.	.	.	
80	MANPSD	INS	.	1.00	P	0	48903	1	.	1.0		.	.	.	
90	MIPEC ~~MANPSD~~	TEST	1.00	.	T	1.0	48901	.1	.	0.5		.	.	.	
90	MIPEC ~~MANPSD~~	TEST	.	1.00	S	0		.	.	.		.	.	.	
90	MIPEC ~~MANPSD~~	TEST	.	.	P	20.0		.	.	.		.	.	.	
110	MANPSD	INS	0.92 / 1.00	.	T	1.0	48901	.1	.	0.5		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-12-89 RCC MANPSD SHEET 3 OF 4

ITEM CD PCN 41059A *WCD MB001N WCDDATE 88263

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
110	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
110	MANPSD	INS	1.00 .	.	P	0	48903	1	.	0.3		.	.	.	
120	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
120	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
120	MANPSD	PROC	.	.	P	0	48903	1	.	6.0		.	.	.	
140	MANPSD	TAG	0.98	.	T	0		.	.	.		.	.	.	
140	MANPSD	TAG	1.00 .	1.00	S	0		.	.	.		.	.	.	
140	MANPSD	TAG	.	.	P	0	48901	1	.	0.3		.	.	.	
150	MANPSD	INS	0.98	.	T	0		.	.	.		.	.	.	
150	MANPSD	INS	1.00 .	1.00	S	0		.	.	.		.	.	.	
150	MANPSD	INS	.	.	P	0	48903	1	.	0.3		.	.	.	
160	MANPSD	INS	0.98	.	T	0		.	.	.		.	.	.	
160	MANPSD	INS	1.00 .	1.00	S	0		.	.	.		.	.	.	

C-130 RADOME AFS

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OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 37

NAME BILL RICH ALC WR DATE 5-12-89 RCC MANPSD SHEET 4 OF 4

ITEM CD PCN 41059A WCD MB001N WCDDATE 88263

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
160	MANPSD	INS	1.00		P	0	48901	1	.	0.5			.	.	

DISASSEMBLY/ASSEM. ' PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-16-89 RCC MAN PSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N			NONE		PCN NSN P/N			
PCN NSN P/N				Bill Rich 5-16-89	PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

OPERATION PROFILE

F-15B CANOPY

NAME BILL RICH ALC WR-ALC DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

PCN NSN P/N 03427A WCD MB015N WCD DATE 88054

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											J. PARHAM MECHANIC (6) 0547 J. HAMBRICK PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	9A014	1		0.1					
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											W. GREATHOUSE SUPERVISOR (6) 0547 BO. GREGORY ALTERNATE (6) 0547
				SETUP											
				PROCESS		1.0	9A014	1		2.0					

WCD OPERATIONS LISTED FROM 005 THRU 230, REVISED PER MARKED-UP COMPUTER COPY

BILL RICH 5-13-89

LSC-20092C

F-15B CANOPY

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OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 15

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 1 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
5	MANPSD	PROC	0.75	.	T	0		.	.	.		.	.	.	
5	MANPSD	PROC	1.00	1.00	S	0		.	.	.		.	.	.	
5	MANPSD	PROC	.	.	P	0	9A012	1	.	0.5 ~~0.3~~		.	.	.	
10	MANPSD	PROC	0.75	.	T	0		.	.	.		.	.	.	
10	MANPSD	PROC	1.00	1.00	S	0		.	.	.		.	.	.	
10	MANPSD	PROC	.	.	P	0	9A012	1	.	0.5 ~~0.1~~		.	.	.	
15	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
15	MANPSD	PROC	.	.	S	0		.	.	.		.	.	.	
15	MANPSD	PROC	.	1.00	P	0	9A012	1	.	2.0	6295	1	.	2.0	
15	MANPSD	PROC	.	.	P	0	9A014	1	.	2.0		.	.	.	
20	MANPSD	INS	1.00	.	T	0		.	.			.	.	.	
20	MANPSD	INS	.	100	S	0		.	.	2.0		.	.	.	
20	MANPSD	INS	.	.	P	0	9A014	1	.	~~0.5~~	6295	1	.	0.5	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 2 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
20	MANPSD	INS	.	.	P	0	9A012	1	.	2.0 ~~0.5~~		.	.	.	
30	MANPSD	DIS	1.00	.	T	0		.	.	.		.	.	.	
30	MANPSD	DIS	.	1.00	S	0		.	.	.		.	.	.	
30	MANPSD	DIS	.	.	P	0	9A012	1	.	6.0 ~~2.0~~		.	.	.	
30	MANPSD	DIS	.	.	P	0	9A014	1	.	6.0 ~~2.0~~		.	.	.	
40	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
40	MANPSD	PROC	.	.	S	0		.	.	.		.	.	.	
40	MANPSD	PROC	.	1.00	P	0	9A012	1	.	2.0		.	.	.	
40	MANPSD	PROC	.	.	P	0	9A014	1	.	2.0		.	.	.	
50	MANPSD	DIS	1.00	.	T	0		.	.	.		.	.	.	
50	MANPSD	DIS	.	1.00	S	0		.	.	.		.	.	.	
50	MANPSD	DIS	.	.	P	0	9A012	1	.	2.0		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 3 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPSD	DIS	.	.	P	0.	9A014	1	.	2.0		.	.	.	
60	MANPSD	INS	1.00	.	T	0.		.	.	.		.	.	.	
60	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	
60	MANPSD	INS	.	.	P	0.	9A014	1	.	~~0.5~~ 4.0		.	.	.	
60	MANPSD	INS	.	.	P	0.	9A012	1	.	~~8.5~~ 4.0		.	.	.	
62	~~MANPSD~~ DA	TRT	1.00	.	T	1.0	9A012	1	.	0.5		.	.	.	
62	~~MANPSD~~ DA	TRT	.	1.00	S	0.		.	.	.		.	.	.	
62	~~MANPSD~~ DA	TRT	.	.	P	40.0		.	.	.		.	.	.	
64	MANPSD	INS	1.00	.	T	1.0	9A012	1	.	0.5		.	.	.	
64	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	
64	MANPSD	INS	.	.	P	0.	9A012	1	.	~~4.5~~ 10.0		.	.	.	
64	MANPSD	INS	.	.	P	0.	9A014	1	.	~~4.5~~ 10.0		.	.	.	
66	MANPSD	REP	1.00	.	T	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 4 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
66	MANPSD	REP	.	1.00	S	0		.	.	.		.	.	.	
66	MANPSD	REP	.	.	P	0	9A014	1	.	16.0	6295	1	.	8.0	
66	MANPSD	REP	.	.	P	0	9A012	1	.	16.0		.	.	.	
67	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
67	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
67	MANPSD	PROC	.	.	P	0	48901	2	.	3.5		.	.	.	
68	MANPSD	PROC	1.00	.	T	0		.	.	.		.	.	.	
68	MANPSD	PROC	.	1.00	S	0		.	.	2.0		.	.	.	
68	MANPSD	PROC	.	.	P	0	9A012	1	.	~~0.5~~	6295	1	.	0.5	
68	MANPSD	PROC	.	.	P	0	9A014	1	.	2.0 ~~0.5~~		.	.	.	
69	MANPSD	INS	1.00	.	T	0		.	.	.		.	.	.	
69	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	

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OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 5 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
69	MANPSD	INS	.	.	P	0	9A012	1	.	~~1.0~~ 4.0	6295	1	.	1.0	
69	MANPSD	INS	.	.	P	0.	9A014	1	.	~~1.0~~ 4.0		.	.	.	
70	MANPSD	REP	1.00	.	T	0.		.	.	.		.	.	.	
70	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
70	MANPSD	REP	.	.	P	0.	9A012	1	.	~~24.0~~ 16.0	6295	1	.	19.2	
70	MANPSD	REP	.	.	P	0.	9A014	1	.	~~24.0~~ 16.0		.	.	.	
75	MANPSD	REP	1.00	.	T	0.		.	.	.		.	.	.	
75	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
75	MANPSD	REP	.	.	P	0.	9A014	1	.	~~8.0~~ 6.0	6295	1	.	8.0	
75	MANPSD	REP	.	.	P	0.	9A012	1	.	~~8.0~~ 6.0		.	.	.	
80	MANPSD	ASSY	1.00	.	T	0.		.	.	.		.	.	.	
80	MANPSD	ASSY	.	1.00	S	0.		.	.	.		.	.	.	
80	MANPSD	ASSY	.	.	P	0.	9A012	1	.	~~2.0~~ 4.0	6295	1	.	2.0	

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OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 6 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
80	MANPSD	ASSY	.	.	P	0.	9A014	1	.	4.0 ~~2.0~~		.	.	.	
90	MANPSD	INS	1.00	.	T	0.		.	.	.		.	.	.	
90	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	
90	MANPSD	INS	.	.	P	0.	9A012	1	.	2.0	6295	1	.	2.0	
90	MANPSD	INS	.	.	P	0.	9A014	1	.	2.0		.	.	.	
100	MANPSD	XPROC	1.00	.	T	0		.	.	.		.	.	.	
100	MANPSD	XPROC	.	1.00	S	0		.	.	.		.	.	.	
100	MANPSD	XPROC	.	.	P	0.	9A012	1	.	3.0	6295	1	.	3.0	
100	MANPSD	XPROC	.	.	P	0.	9A014	1	.	3.0		.	.	.	
110	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
110	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
110	MANPSD	PROC	.	.	P	0.	9A012	1	.	14.0 ~~8.0~~		.	.	.	

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OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 7 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
140	MANPSD	ASSY	1.00	.	T	0.		.	.	.		.	.	.	
140	MANPSD	ASSY	.	1.00	S	0.		.	.	.		.	.	.	
140	MANPSD	ASSY	.	.	P	0.	9A014	1	.	6.0 ~~2.0~~	6295	1	.	2.0	
140	MANPSD	ASSY	.	.	P	0.	9A012	1	.	6.0 ~~2.0~~		.	.	.	
150	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
150	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
150	MANPSD	PROC	.	.	P	0.	9A012	1	.	4.0 ~~3.0~~	6295	1	.	3.0	
150	MANPSD	PROC	.	.	P	0.	9A014	1	.	4.0 ~~3.0~~		.	.	.	
160	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
160	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
160	MANPSD	PROC	.	.	P	0.	9A012	1	.	14.0 ~~8.0~~		.	.	.	
170	MANPSD	ASSY	1.00	.	T	0.		.	.	.		.	.	.	
170	MANPSD	ASSY	.	1.00	S	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 8 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
170	MANPSD	ASSY	.	.	P	0.	9A014	1	.	16.0	6295	1	.	16.0	
170	MANPSD	ASSY	.	.	P	0.	9A012	1	.	16.0		.	.	.	
180	MANPSD	ASSY	1.00	.	T	0.		.	.	.		.	.	.	
180	MANPSD	ASSY	.	1.00	S	0.		.	.	.		.	.	.	
180	MANPSD	ASSY	.	.	P	0.	9A014	1	.	10.0 ~~8.0~~		.	.	.	
180	MANPSD	ASSY	.	.	P	0.	9A012	1	.	10.0 ~~8.0~~		.	.	.	
190	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
190	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
190	MANPSD	PROC	.	.	P	0.	9A012	1	.	10.0 ~~8.0~~		.	.	.	
190	MANPSD	PROC	.	.	P	0.	9A014	1	.	10.0 8.0		.	.	.	
195	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
195	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	

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OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 9 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
195	MANPSD	PROC	.	.	P	0.	9A012	1	.	~~0.5~~ 2.0		.	.	.	
200	MANPSD	PROC	1.00	.	T	0.		.	.	.		.	.	.	
200	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
200	MANPSD	PROC	.	.	P	0.	48901	2	.	~~1.5~~ 4.0		.	.	.	
210	MANPSD	TST	~~0.67~~ .50	.	T	0.		.	.	.		.	.	.	
210	MANPSD	TST	.	.50	S	0.		.	.	.		.	.	.	
210	MANPSD	TST	.	.	P	0.	9A014	1	.	1.0		.	.	.	
220	MANPSD	PROC	~~0.67~~ 1.00	.	T	0.		.	.	.		.	.	.	
220	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
220	MANPSD	PROC	.	.	P	0.	9A014	1	.	~~0.3~~ 2.0		.	.	.	
220	MANPSD	PROC	.	.	P	0.	9A012	1	.	~~0.3~~ 2.0		.	.	.	
230	MANPSD	INS	~~0.67~~ 1.00	.	T	0.		.	.	.		.	.	.	
230	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 10 OF 10

ITEM CD PCN 03427A WCD MB015N WCDDATE 88054

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
230	MANPSD	INS	.	.	P	0.	9A012	1	.	8.0		.	.	.	
230	MANPSD	INS	.	.	P	0.	9A014	1	.	8.0		.	.	.	

DISASSEMBLY/ASSEMBLY PROFILE

NAME: BILL RICH ALC: WR-ALC DATE: 5-13-89 RCC: MAN PSD SHEET: 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			BASIC REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N (68A350718-2036)	MB015N	88054	030	180	PCN NSN P/N			
PCN NSN P/N (68A350718-2035)	MB015N	88054	030	180	PCN NSN P/N			
PCN NSN P/N (68A350718-2018)	MB015N	88054	030	180	PCN NSN P/N			
PCN NSN P/N (68A350718-2017)	MB015N	88054	030	180	PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

LSC-2(X)95A

OPERATION PROFILE

NAME BILL RICH ALC WR-ALC DATE 5-16-89 RCC MANPSD SHEET 1 OF 1

PCN
NSN
P/N 03172A WCD MBD11N WCD DATE 88271

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											B. GREGORY MECHANIC (6) 0547 J. HAMBRICK PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	9A014	1		0.1					
005	MANPSD	REV	1.00	TRANSIT											
				SETUP											
				PROCESS			9AD14	1		0.5					
010	MANPSD	IDEN	1.00	TRANSIT											
				SETUP											
				PROCESS			9A014	1		0.5					
WCD OPERATIONS LISTED FROM 020 THRU 360, REVISED PER MARKED-UP COMPUTER COPY Bill Rich 5-13-89				TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											W. GREATHOUSE SUPERVISOR (6) 0547 BD. GREGORY ALTERNATE (6) 0547
				SETUP											
				PROCESS		1.0	9A014	1		2.0					

LSC-2(XB)2C

F-15A CANOPY

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 4

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 1 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
20	MANPSD	DIS	0 ~~.00~~	.	T	0.		.	.	.		.	.	.	
20	MANPSD	DIS	1.00	1.00	S	0.		.	.	.		.	.	.	
20	MANPSD	DIS	.	.	P	0.	9A012	1	.	4.5		.	.	.	
20	MANPSD	DIS	.	.	P	0.	9A014	1	.	4.5		.	.	.	
30	MANPSD	INS	0 ~~.00~~	.	T	0.		.	.	.		.	.	.	
30	MANPSD	INS	1.00	1.00	S	0.		.	.	.		.	.	.	
30	MANPSD	INS	.	.	P	0.	9A012	1	.	16.0		.	.	.	
30	MANPSD	INS	.	.	P	0.	9A014	1	.	16.0		.	.	.	
40	MANPDD	DEP	0 ~~.00~~	.	T	1.0	9A012	1	.	1.0		.	.	.	
40	MANPDD	DEP	1.00	1.00	S	0.		.	.	.		.	.	.	
40	MANPDD	DEP	.	.	P	40.0		.	.	.		.	.	.	
50	MANPSD	INS	0 ~~.00~~	.	T	1.0	9A012	1	.	1.0		.	.	.	
50	MANPSD	INS	1.00	1.00	S	0		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 2 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPSD	INS	.	.	P	0	9A014	1	.	12.0 ~~2.0~~		.	.	.	
50	MANPSD	INS	.	.	P	0	9A012	1	.	12.0 ~~2.0~~		.	.	.	
60	MANPSD	REP	~~0.94~~ 1.00	.	T	0		.	.	.		.	.	.	
60	MANPSD	REP	.	1.00	S	0		.	.	.		.	.	.	
60	MANPSD	REP	.	.	P	0	9A012	1	.	11.0		.	.	.	
60	MANPSD	REP	.	.	P	0	9A014	1	.	11.0		.	.	.	
70	MANPSD	PROC	~~0.88~~ 1.00	.	T	0		.	.	.		.	.	.	
70	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
70	MANPSD	PROC	.	.	P	0	9A014	1	.	0.5		.	.	.	
80	MANPSD	PROC	~~0.98~~ 1.00	.	T	0		.	.	.		.	.	.	
80	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	
80	MANPSD	PROC	.	.	P	0	48901	2	.	0.8		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 3 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
80	MANPSD	ASSY	0 ~~.98~~ 1.00	.	T	0		.	.	.		.	.	.	
90	MANPSD	ASSY	.	1.00	S	0		.	.	.		.	.	.	
90	MANPSD	ASSY	.	.	P	0	9A012	1	.	2.0	5859	1	.	1.0	
90	MANPSD	ASSY	.	.	P	0	9A014	1	.	2.0		.	.	.	
100	MANPSD	INS	0 ~~.98~~ 1.00	.	T	0		.	.	.		.	.	.	
100	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
100	MANPSD	INS	.	.	P	0	9A014	1	.	2.5	5859	1	.	0.5	
100	MANPSD	INS	.	.	P	0	9A012	1	.	2.5		.	.	.	
110	MANPSD	REP	0 ~~.98~~ 1.00	.	T	0		.	.	.		.	.	.	
110	MANPSD	REP	.	1.00	S	0		.	.	.		.	.	.	
110	MANPSD	REP	.	.	P	0	9A012	1	.	11.0	5859	1	.	9.6	
110	MANPSD	REP	.	.	P	0	9A014	1	.	11.0		.	.	.	
115	MANPSD	REP	0 ~~.98~~ 1.00	.	T	0		.	.	.		.	.	.	

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 4 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
115	MANPSD	REP	.	.	S	0.		.	.	.		.	.	.	
			1.00							20.0					
115	MANPSD	REP	.	.	P	0.	9A012	1	.	~~7.5~~	5859	1	.	4.0	
										20.0					
115	MANPSD	REP	.	.	P	0.	9A014	1	.	~~7.5~~		.	.	.	
130	MANPSD	ASSY	0 ~~.00~~	.	T	0.		.	.	.		.	.	.	
			1.00												
130	MANPSD	ASSY	.	.	S	0.		.	.	.		.	.	.	
				1.00											
130	MANPSD	ASSY	.	.	P	0	9A014	1	.	1.5	5859	1	.	1.5	
130	MANPSD	ASSY	.	.	P	0	9A012	1	.	1.5		.	.	.	
140	MANPSD	INS	0 ~~.00~~	.	T	0.		.	.	.		.	.	.	
			1.00												
140	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
				1.00											
140	MANPSD	INS	.	.	P	0.	9A012	1	.	1.0	5859	1	.	0.5	
140	MANPSD	INS	.	.	P	0	9A014	1	.	1.0		.	.	.	
150	MANPSD	INS	0.~~00~~	.	T	0.		.	.	.		.	.	.	
			1.00												

SAS

OPERATION PROFILE

SHEET 5 OF 11

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
150	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
				1.00						4.0					
150	MANPSD	INS	.	.	P	0.	9A012	1	.	~~1.5~~	5859	1	.	1.5	
										4.0					
150	MANPSD	INS	.	.	P	0.	9A014	1	.	~~1.5~~		.	.	.	
160	MANPSD	PROC	0.~~96~~	.	T	0.		.	.	.		.	.	.	
			1.00												
160	MANPSD	PROC	.	.	S	0		.	.	.		.	.	.	
				1.00											
160	MANPSD	PROC	.	.	P	0.	9A012	1	.	7.0	5859	1	.	5.0	
160	MANPSD	PROC	.	.	P	0.	9A014	1	.	7.0		.	.	.	
170	MANPSD	PROC	0.~~96~~	.	T	0.		.	.	.		.	.	.	
			1.00												
170	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
										7.0					
170	MANPSD	PROC	.	.	P	0.	9A012	1	.	~~3.0~~		.	.	.	
180	MANPSD	PROC	0.~~98~~	.	T	0.		.	.	.		.	.	.	
180	MANPSD	PROC	1.00	.	S	0.		.	.	.		.	.	.	
				1.00											
180	MANPSD	PROC	.	.	P	0.	9A014	1	.	3.0		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 6 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
190	MANPSD	INS	~~0.98~~ 1.00	.	T	0.		.	.	.		.	.	.	
190	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	
190	MANPSD	INS	.	.	P	0.	9A012	1	.	1.0		.	.	.	
190	MANPSD	INS	.	.	P	0.	9A014	1	.	1.0		.	.	.	
200	MANPSD	INS	~~0.98~~ 1.00	.	T	0.		.	.	.		.	.	.	
200	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
200	MANPSD	INS	.	1.00	P	0.	9A012	1	.	~~1.0~~ 4.5		.	.	.	
200	MANPSD	INS	.	.	P	0.	9A014	1	.	~~1.0~~ 4.5		.	.	.	
210	MANPSD	PROC	~~0.98~~ 1.00	.	T	0.		.	.	.		.	.	.	
210	MANPSD	PROC	.	.	S	0.		.	.	.		.	.	.	
210	MANPSD	PROC	.	1.00	P	0.	9A014	1	.	7.0	5859	1	.	5.0	
210	MANPSD	PROC	.	.	P	0.	9A012	1	.	7.0		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 2 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	CPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
220	MANPSD	PROC	0 ~~.00~~ 1.00	. 1.10	T	0.		.	.	.		.	.	.	
220	MANPSD	PROC	.	.	S	0.		.	.	.		.	.	.	
220	MANPSD	PROC	.	.	P	0.	9A012	1	.	~~3.0~~ 6.0		.	.	.	
220	MANPSD	PROC	.	.	P	0.	9A014	1	.	~~3.0~~ 6.0		.	.		
230	MANPSD	PROC	0 ~~.00~~ 1.00	. 1.00	T	0.		.	.	.		.	.	.	
230	MANPSD	PROC	.	.	S	0		.	.	.		.	.	.	
230	MANPSD	PROC	.	.	P	0	9A014	1	.	3.0		.	.	.	
230	MANPSD	PROC	.	.	P	0	9A012	1	.	3.0		.	.	.	
240	MANPSD	ASSY	0 ~~.00~~ 1.00	. 1.00	T	0		.	.	.		.	.	.	
240	MANPSD	ASSY	.	.	S	0.		.	.	.		.	.	.	
240	MANPSD	ASSY	.	.	P	0.	9A012	1	.	~~20.0~~ 10.0	5853	1	.	12.0	
240	MANPSD	ASSY	.	.	P	0	9A014	1	.	~~20.0~~ 10.0		.	.	.	
250	MANPSD	INS	0 ~~.00~~ 1.00	.	T	0		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 8 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
250	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
				1.00											
250	MANPSD	INS	.	.	P	0.	9A014	1	.	1.5	5859	1	.	0.5	
250	MANPSD	INS	.	.	P	0.	9A012	1	.	1.5		.	.	.	
260	MANPSD	PROC	0 ~~.98~~	.	T	0		.	.	.		.	.	.	
			1.00												
260	MANPSD	PROC	.	.	S	0		.	.	.		.	.	.	
				1.00						0.5					
260	MANPSD	PROC	.	.	P	0.	9A014	2	.	~~0.3~~	5859	1	.	0.3	
										0.5					
260	MANPSD	PROC	.	.	P	0.	9A012	2	.	~~0.3~~		.	.	.	
270	MANPSD	ASSY	0 ~~.98~~	.	T	0		.	.	.		.	.	.	
			1.00												
270	MANPSD	ASSY	.	100	S	0.		.	.	.		.	.	.	
										2.0					
270	MANPSD	ASSY	.	.	P	0	9A014	1	.	~~1.0~~		.	.	.	
										20					
270	MANPSD	ASSY	.	.	P	0.	9A012	1	.	~~1.0~~		.	.	.	
280	MANPSD	PROC	0 ~~.98~~	.	T	0		.	.	.		.	.	.	
			100												

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-13-89 RCC MANPSD SHEET 9 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
280	MANPSD	PROC	.	.	S	0.		.	.	.		.	.	.	
280	MANPSD	PROC	1.00	.	P	0.	9A012	1	.	3.0 ~~6.3~~		.	.	.	
280	MANPSD	PROC	.	.	P	0.	9A014	1	.	3.0 ~~6.3~~		.	.	.	
290	MANPSD	PROC	~~0.96~~	.	T	0.		.	.	.		.	.	.	
290	MANPSD	PROC	1.00	1.00	S	0.		.	.	.		.	.	.	
290	MANPSD	PROC	.	.	P	0.	9A012	1	.	4.5		.	.	.	
290	MANPSD	PROC	.	.	P	0.	9A014	1	.	4.5		.	.	.	
300	MANPSD	ASSY	~~0.98~~	.	T	0		.	.	.		.	.	.	
300	MANPSD	ASSY	1.00	1.00	S	0.		.	.	.		.	.	.	
300	MANPSD	ASSY	.	.	P	0	9A012	1	.	5.0 ~~10.0~~		.	.	.	
300	MANPSD	ASSY	.	.	P	0	9A014	1	.	5.0 ~~10.0~~		.	.	.	
310	MANPSD	KIT	~~0.69~~	.	T	0.		.	.	.		.	.	.	
310	MANPSD	KIT	1.00	1.00	S	0.		.	.	.		.	.	.	

SAS

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 10 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
310	MANPSD	KIT	.	.	P	0.	9A012	1	.	6.0		.	.	.	
320	MANPSD	INS	0 ~~.94~~ 1.00	.	T	0.		.	.	.		.	.	.	
320	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
320	MANPSD	INS	.	.	P	0.	9A014	2	.	2.0 ~~0.3~~		.	.	.	
330	MANPSD	PROC	0 ~~.96~~ 1.00	.	T	0.		.	.	.		.	.	.	
330	MANPSD	PROC	.	1.10	S	0.		.	.	.		.	.	.	
330	MANPSD	PROC	.	.	P	0.	48901	2	.	4.0 ~~1.5~~		.	.	.	
340	MANPSD	PROC	0 ~~.94~~ 1.00	.	T	0.		.	.	.		.	.	.	
340	MANPSD	PROC	.	1.00	S	0.		.	.	.		.	.	.	
340	MANPSD	PROC	.	.	P	0.	9A014	1	.	2.5 ~~0.3~~		.	.	.	
345	MANPSD	REC	1.00	.	T	0.		.	.	.		.	.	.	
345	MANPSD	REC	.	.	S	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-13-89 RCC MANPSD SHEET 11 OF 11

ITEM CD PCN 03172A WCD MB011N WCDDATE 88271

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
345	MANPSD	REC	.	.	P	0	9A014	1	.	1.5		.	.	.	
350	MANPSD	INS	0 ~~.06~~ 1.00	.	T	0.		.	.	.		.	.	.	
350	MANPSD	INS	.	1.00	S	0.		.	.	.		.	.	.	
350	MANPSD	INS	.	.	P	0.	9A014	1	.	2.0		.	.	.	
350	MANPSD	INS	.	.	P	0.	9A012	1	.	2.0		.	.	.	
360	MANPSD	INS	0 ~~.08~~ 1.00	.	T	0.		.	.	.		.	.	.	
360	MANPSD	INS	.	.	S	0.		.	.	.		.	.	.	
360	MANPSD	INS	.	1.00	P	0	9A014	1	.	3.0		.	.	.	

F 15 CANOPY

8:24 WEDNESDAY, APRIL 5, 1989 1

SAS

OPERATION PROFILE

SHEET 1 OF 1

NAME Bill Rich DATE 5-13-89 [RCC MANPSD]

ALC WR

ITEM CD PCN 03172A WCD MBA11N WCDDATE 88250

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPSD	PROC	.	.	T	.		.	.	.					
10	MANPSD	PROC	.	.	S	.		.	.	.					
10	MANPSD	PROC	.	.	P	.	9A012	1	.	1.0					
100	MANPSD	PROC	.	.	T	.		.	.	.					
100	MANPSD	PROC	.	.	S	.		.	.	.					
100	MANPSD	PROC	.	.	P	.	48901	2	.	0.5					

B.S. HRS ARE IN PARENT WCD

F-15 CANOPY

SAS 8:24 WEDNESDAY, APRIL 5, 1989 2

OPERATION PROFILE

NAME BILL RUCH ALC WP DATE 5-13-89 LRCC MANPSD SHEET 1 OF 1

ITEM CD PCN 03172A WCD MBB11N WCDDATE 89055

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPMA	PROC	.	.	T	.		.	.	.		.	.	.	
10	MANPMA	PROC	.	.	S	.		.	.	.		.	.	.	
10	MANPMA	PROC	.	.	P	.		.	.	.		.	.	.	

BS. HAS BEEN IN PROCESS WILD

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 3

NAME Bill Rich ALC WR DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

ITEM CD PCN 03172A WCD MBC11N WCDDATE 88250

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANOSP	Proc			T										
10	MANOSP	Proc			S										
10	MANOSP	Proc			P										

Break Setup Hrs Are In Percent UCD

9:34 TUESDAY, MARCH 28, 1989

SAS
ASSEMBLY/DISASSEMBLY PROFILE

NAME _____ DATE _____ SHEET ___ OF ___

ITEM CODE	WCD	ALC WR WCD DT	DSOP	ASOP	REMOV ITEM CODE	RCC MANPSD WCD	WCD DT	INSTALL SAME	NOTES
PCN 03172A		88271	20	250	PCN 68A350718				
PCN 51344A		88061	20	170	PCN 3P33603-173				
PCN 51344A		88061	20	170	PCN 3P22502-181				
PCN 51344A		88061	20	240	PCN 3P22049-118				
PCN 51344A		88061	20	240	PCN 3P22048-101				
PCN 51344A		88061	20	230	PCN 3P22502-073				
PCN 51344A		88061	20	230	PCN 3P22502-087				
PCN 51344A		88061	20	230	PCN 3P22502-055				
PCN 51344A		88061	20	230	PCN 3P22502-057				
PCN 51344A		88061	20	210	PCN 3P22502-191				
PCN 51344A		88061	20	300	PCN 3P22580-113				
PCN 51344A		88061	20	300	PCN 3P22581-113				
PCN 51344A		88061	20	300	PCN 3P22602-101				
PCN 51344A		88061	20	300	PCN 3P22601-101				

03172A
20 250 MBA 11N
40 150 MBB 11N

51344A
20 230 MBB 15C
20 300 MBC 15C
20 210 MB2B15C

DISASSEMBLY/ASSEM... Y PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-13-89 RCC MAN PSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N 68A350718- –	MB011N ~~88271~~	88271	020	250	PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

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OPERATIO. OFILE

NAME BILL RICH ALC WR-ALC DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

PCN NSN P/N 51420A WCD MB021C WCL DATE 88061

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											MIKE BILBREY MECHANIC (6) 3557 H. BELLFLOWER PLANNER (6) 3615
				SETUP											
				PROCESS		1.0	9A014	1		0.1					
		WCD OPERATIONS LISTED FROM 010 THRU 110, REVISED PER MARKED-UP COMPUTER COPY		TRANSIT											
				SETUP											
				PROCESS											
		BILL RICH 5-13-89		TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											K. DURR SUPERVISOR (6) 3557 M. BILBREY ALTERNATE (6) 3557
				SETUP											
				PROCESS		1.0	9A014	1		2.0					

C-141 WING L.E.

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OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 56

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 1 OF 4

ITEM CD PCN 51420A WCD MB021C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDD	CLN	1.00	.	T	1.0	49534	1	.	0.5					
10	MANPDD	CLN	.	1.00	S	0									
10	MANPDD	CLN	.	.	P	20.0									
20	MANPDD	INSP	1.00	.	T	0									
20	MANPDD	INSP	.	1.00	S	0									
20	MANPDD	INSP	.	.	P	4.0									
25	MANPSD	REC RI	0.83	.	T	1.0	9A014	1	.	0.5					
25	MANPSD	REC RI	.	1.00	S	0									
25	MANPSD	REC RI	.	.	P	0	9A014	1	.	0.5					
25	MANPSD	REC RI	.	.	P	0	18083	1	.	0.5					
30	MANPSD	INS	0.83	.	T	0									
30	MANPSD	INS	.	1.00	S	0									
30	MANPSD	INS	.	.	P	0	9A012	1	.	2.0 ~~1.0~~					

OPERATION PROFILE:

NAME _____ ALC WR DATE 5-11-89 RCC MANPSD SHEET 2 OF 4

ITEM CD PCN 51420A WCD MB021C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
40	MANPSD	PROC	0.83	.	T	0.		.	.	.		.	.	.	
40	MANPSD	PROC	1.00	.	S	0.		.	.	.		.	.	.	
40	MANPSD	PROC	.	1.00	P	0.	9A014	1	.	4.0 ~~2.0~~		.	.	.	
50	MANPDA	HT	0.50	.	T	1.0	49534	1	.	0.5		.	.	.	
50	MANPDA	HT	1.00	1.00	S	0		.	.	.		.	.	.	
50	MANPDA	HT	.	.	P	20.0		.	.	.		.	.	.	
60	MANPSD	INS	0.67	.	T	1.0	9A014	1	.	0.5		.	.	.	
60	MANPSD	INS	1.00	1.00	S	0		.	.	.		.	.	.	
60	MANPSD	INS	.	.	P	0	9A014	1	.	0.5		.	.	.	
70	MANPSD	REP	0.83	.	T	0		.	.	.		.	.	.	
70	MANPSD	REP	1.00	1.00	S	0		.	.	.		.	.	.	
70	MANPSD	REP	.	.	P	0	9A012	1	.	28.0 ~~85.0~~		.	.	.	

SAS 8:24 WEDNESDAY, APRIL 5, 1989 58

OPERATION PROFILE

NAME _____ ALC WR DATE 5-11-89 RCC MANPSD SHEET 3 OF 4

ITEM CD PCN 51420A WCD MB021C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
70	MANPSD	REP	.	.	P	0.	9A014	1	.	~~85.0~~ 28.0		.	.	.	
70	MANPSD	REP	.	.	P	0	18083	1	.	~~85.0~~ 28.0		.	.	.	
75	MANPDD	PNT	1.00	.	T	1.0	49534	1	.	0.5		.	.	.	
75	MANPDD	PNT	.	1.00	S	0		.	.	.		.	.	.	
75	MANPDD	PNT	.	.	P	30.0		.	.	.		.	.	.	
80	MANPDC	PNT	1.00	.	T	0		.	.	.		.	.	.	
80	MANPDC	PNT	.1.00		S	0		.	.	.		.	.	.	
80	MANPDC	PNT	.	.	P	30.0		.	.	.		.	.	.	
90	MANPSD	PROC	0 ~~.83~~	.	T	1.0	9A014	1	.	0.5		.	.	.	
90	MANPSD	PROC	1.00	.	S	0		.	.	.		.	.	.	
				1.00											
90	MANPSD	PROC	.	.	P	0	9A014	1	.	0.5		.	.	.	
100	MANPSD	INS	0 ~~.83~~	.	T	0		.	.	.		.	.	.	
			1.00												
100	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	

SAS

QPERATION PROFILE

SHEET 4 OF 4

DATE 5-11-89 IRCC MANPSD

NAME _____

ALC WR

WCD MB021C1 WCDDATE 88061

ITEM CD PCN 51420A

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
100	MANPSD	INS	.	.	P	0.	9A014	1	.	0.5					
110	MANPSD	PROC	0.~~0~~1	.	T	0.									
110	MANPSD	PROC	1.00	.	S	0.				0.5					
110	MANPSD	PROC	1.00	.	P	0.	9A014	1	.	~~0.3~~					

PART OPERATION SUMMARY

ALC: WARNER ROBBINS RCC: MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN: 3W32002-128 NSN: PCN: 51420A WCD: MB021C WCD DATE: 88061

OPERATION: ZPRT PRIMARY OPERATION TYPE: PROC MATERIAL TYPE:
SAMPLE SIZE: 5 MISSING FLOWTIMES: 0 END ITEMS: . OUTLIERS DELETED: 1

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 20	********
10 0	
20 60	************************
30 0	
40 0	
50 0	
60 20	********
70 0	
80 0	
90 0	
>=100 0	

DISTRIBUTION	PARAMETERS			D VALUE	D ALPHA
UNIFORM	6.0		61.0	0.371	1.00
TRIANGULAR	6.0	27.0	61.0	0.329	1.00
NORMAL	29.2	19.9		0.294	1.00
LOGNORMAL	.	.		1.000	.
EXPONENTIAL	30.8			0.177	1.00

OCCURRANCE FACTOR: . OCCURRANCES: 6

DISTRIBUTION OF CHOICE: EXPONENTIAL

DISASSEMBLY/ASSEMBLY PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N				NONE	PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

LSC-2005A

OPERATION[illegible]FILE

NAME BILL RICH ALC WR-ALC DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

PCN
NSN
P/N 51344A WCD MB01SC WCD DATE 88061

OPERATION NUMBER	RCC	OPERATION DESCRIPTION	MANDATORY OCCURRENCE FACTOR	OPERATION TYPE	MANDATORY FLOW HOURS %	MANDATORY FLOW HOURS HRS.	MANPOWER SKILL CODE/ LEVEL	MANPOWER QTY.	MANPOWER TIME REQUIRED %	MANPOWER TIME REQUIRED HRS.	EQUIPMENT CODE	EQUIPMENT QTY.	EQUIPMENT TIME REQUIRED %	EQUIPMENT TIME REQUIRED HRS.	DATA SOURCE COMMENTS
0000	MANPSD	REC	1.00	TRANSIT											CHUCK SHIPES MECHANIC (6)4809 H. BELLFLOWER PLANNER (6)3615
				SETUP											
				PROCESS		1.0	9A014	1		0.1					
		WCD OPERATIONS LISTED FROM 010 THRU 370, REVISED PER MARKED-UP COMPUTER COPY. BILL RICH 5-13-89		TRANSIT											
				SETUP											
				PROCESS											
				TRANSIT											
				SETUP											
				PROCESS											
9999	MANPSD	SELL	1.00	TRANSIT											ROGER HENCLEY SUPERVISOR (6)4809 C. SHIPES ALTERNATE (6) 4809
				SETUP											
				PROCESS		1.0	9A014	1		0.1					

LSC-2(MM)26

C-141 NOZZLE (SUPLR)

SAS

8:24 WEDNESDAY, APRIL 5, 1989 55

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 1 OF 1

ITEM CD PCN 51344G WCD..MBA1SC WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPSD	EVAL			T										
10	MANPSD	EVAL			S										
10	MANPSD	EVAL			P										

BACK SHOP HRS ARE IN PATIENT WCD.

C-141 NOZZLE (SUPPL)

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 1 OF 2

ITEM CD PCN 51344A WCD MBB15C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDA	CLN			T										
10	MANPDA	CLN			S										
10	MANPDA	CLN			P										
20	MANPDB	WELD			T										
20	MANPDB	WELD			S										
20	MANPDB	WELD			P										
30	MANPDA	HT			T										
30	MANPDA	HT			S										
30	MANPDA	HT			P										
40	MANPDA	PLT			T										
40	MANPDA	PLT			S										
40	MANPDA	PLT			P										
50	MANPSD	NA			T										

BACK SIDE USE IN AREAS WELDS

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 2 OF 2

ITEM CD PCN 51344A WCD MBB15C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPSD	NA			S										
50	MANPSD	NA			P		9A014	1		0.3					
60	MANPDD	PNT			T										
60	MANPDD	PNT			S										
60	MANPDD	PNT			P										
70	MANPDC	PNT			T										
70	MANPDC	PNT			S										
70	MANPDC	PNT			P										

C141 NOZZLE (SUPPLE)

SAS

OPERATION PROFILE

NAME Bill Rich   ALC WR   DATE 5-11-89   RCC MANPSD   SHEET 1 OF 2

ITEM CD PCN 51344A   WCD MBC15C   WCDDATE 88154

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDA	CLN	.	.	T	.		.	.	.		.	.	.	
10	MANPDA	CLN	.	.	S	.		.	.	.		.	.	.	
10	MANPDA	CLN	.	.	P	.		.	.	.		.	.	.	
20	MANPDA	TEST	.	.	T	.		.	.	.		.	.	.	
20	MANPDA	TEST	.	.	S	.		.	.	.		.	.	.	
20	MANPDA	TEST	.	.	P	.		.	.	.		.	.	.	
30	MANPDB	WELD	.	.	T	.		.		.		.	.	.	
30	MANPDB	WELD	.	.	S	.		.	.	.		.	.	.	
30	MANPDB	WELD	.	.	P	.		.	.	.		.	.	.	
40	MANPDA	INSP	.	.	T	.		.	.	.		.	.	.	
40	MANPDA	INSP	.	.	S	.		.	.	.		.	.	.	
40	MANPDA	INSP	.	.	P	.		.	.	.		.	.	.	
50	MANPDB	WELD	.	.	T	.		.	.	.		.	.	.	

Booked Sep HRS Parent IN WCD BB

SAS

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 2 OF 2

ITEM CD PCN 51344A WCD MBC15C WCDDATE 88154

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPDB	WELD			S										
50	MANPDB	WELD			P										
55	MANPDA	TRT			T										
55	MANPDA	TRT			S										
55	MANPDA	TRT			P										
60	MANPDC	PNT			T										
60	MANPDC	PNT			S										
60	MANPDC	PNT			P										
70	MANPDC	RTE			T										
70	MANPDC	RTE			S										
70	MANPDC	RTE			P										

C-141 NOZZLE (SUPPLR)

SAS

OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 42

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 1 OF 2

ITEM CD PCN 51344A WCD MBD15C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDD	CLN	.	.	T	.		.	.	.		.	.	.	
10	MANPDD	CLN	.	.	S	.		.	.	.		.	.	.	
10	MANPDD	CLN	.	.	P	.		.	.	.		.	.	.	
20	MANPDB	TEST	.	.	T	.		.	.	.		.	.	.	
20	MANPDB	TEST	.	.	S	.		.	.	.		.	.	.	
20	MANPDB	TEST	.	.	P	.		.	.	.		.	.	.	
30	MANPDB	WELD	.	.	T	.		.	.	.		.	.	.	
30	MANPDB	WELD	.	.	S	.		.	.	.		.	.	.	
30	MANPDB	WELD	.	.	P	.		.	.	.		.	.	.	
40	MANPDB	TEST	.	.	T	.		.	.	.		.	.	.	
40	MANPDB	TEST	.	.	S	.		.	.	.		.	.	.	
40	MANPDB	TEST	.	.	P	.		.	.	.		.	.	.	
50	MANPDB	WELD	.	.	T	.		.	.	.		.	.	.	

BOTH SHOP HRS ARE IN PROPER WCD

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 2 OF 2

ITEM CD PCN 51344A WCD ML315C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
50	MANPDB	WELD			S										
50	MANPDB	WELD			P										
60	MANPDB	PROC			T										
60	MANPDB	PROC			S										
60	MANPDB	PROC			P										
70	MANPDB	RTE			T										
70	MANPDB	RTE			S										
70	MANPDB	RTE			P										

C-141 NOZZLE (SUPLE)

SAS

8:24 WEDNESDAY, APRIL 5, 1989 44

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 1 OF 1

ITEM CD PCN 51344A WCD MBE15C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDA	CLN	.	.	T	.		.	.	.		.	.	.	
10	MANPDA	CLN	.	.	S	.		.	.	.		.	.	.	
10	MANPDA	CLN	.	.	P	.		.	.	.		.	.	.	
20	MANPDB	WELD	.	.	T	.		.	.	.		.	.	.	
20	MANPDB	WELD	.	.	S	.		.	.	.		.	.	.	
20	MANPDB	WELD	.	.	P	.		.	.	.		.	.	.	

Backup shop hrs absent are in n WCDs

C 141 NOZZLE (PARENT)

SAS

OPERATION PROFILE

SHEET 1 OF 10

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
10	MANPDD	DEP	0.79		T	1.0	49534	1	.	0.5					
			1.00												
10	MANPDD	DEP		1.00	S	0									
10	MANPDD	DEP			P	80.0									
20	MANPSD	DIS	0.89		T	1.0	9A014	1	.	0.5					
			1.00												
20	MANPSD	DIS		1.00	S	0									
20	MANPSD	DIS			P	0	9A012	1	.	14.0					
25	MANPDD	CLN	0.84		T	1.0	49534	1	.	0.5					
			1.00												
25	MANPDD	CLN		1.00	S	0									
25	MANPDD	CLN			P	40.0									
30	MANPDD	CLN	0.84		T	1.0	9A014	1	.	0.5					
			1.00												
30	MANPDD	CLN		1.00	S	0									
30	MANPDD	CLN			P	40.0									
40	MANPSD	PROC	0.66		T	1.0	9A014	1	.	0.5					

OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 2 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
40	MANPSD	PROC	.	1.0	S	0.		.	.	.		.	.	.	
40	MANPSD	PROC	.	.	P	0.	9A014	1	.	20.0 ~~14.0~~		.	.	.	
50	MANPSD	INS	0.7~~8~~	.	T	0.		.	.	.		.	.	.	
50	MANPSD	INS	1.00 .	1.00	S	0.		.	.	.		.	.	.	
50	MANPSD	INS	.	.	P	0.	9A014	1	.	3.5		.	.	.	
60	MANPSD	PROC	0.8~~4~~	.	T	0.		.	.	.		.	.	.	
60	MANPSD	PROC	1.80 .	1.00	S	0.		.	.	.		.	.	.	
60	MANPSD	PROC	.	.	P	0	9A014	2	.	2.0		.	.	.	
70	MANPSD	ASSY	0.~~84~~	.	T	0.		.	.	.		.	.	.	
70	MANPSD	ASSY	1.80 .	1.80	S	0.		.	.	.		.	.	.	
70	MANPSD	ASSY	.	.	P	0.	9A014	1	.	80.0	1570	1	.	1.0	
80	MANPSD	REP	0.~~84~~ 1.00	.	T	0		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 3 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
80	MANPSD	REP	.	1.00	S	0.		.	.	.		.	.	.	
80	MANPSD	REP	.	.	P	0.	9A012	1	.	24.0	1570	1	.	1.0	
90	MANPSD	REP	0.7~~5~~	.	T	0.		.	.	.		.	.	.	
90	MANPSD	REP	1.00	1.00	S	0.		.	.	.		.	.	.	
90	MANPSD	REP	.	.	P	0.	9A014	2	.	80.0	1570	1	.	0.5	
100	MANPSD	INS	0.~~84~~	.	T	0.		.	.	.		.	.	.	
100	MANPSD	INS	1.00	1.00	S	0.		.	.	.		.	.	.	
100	MANPSD	INS	.	.	P	0.	9A012	1	.	20.0		.	.	.	
110	MANPSD	INS	0.~~84~~	.	T	0.		.	.	.		.	.	.	
110	MANPSD	INS	1.00	1.00	S	0.		.	.	.		.	.	.	
110	MANPSD	INS	.	.	P	0.	9A014	2	.	1.00 ~~0.1~~		.	.	.	
120	MANPSD	REP	0.7~~5~~	.	T	0.		.	.	.		.	.	.	
120	MANPSD	REP	1.00	1.00	S	0.		.	.	.		.	.	.	

OPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 4 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
120	MANPSD	REP	.	.	P	0.	9A014	1	.	9.0	1570	1	.	0.5	
130	MANPSD	REP	0.84	.	T	0.		.	.	.		.	.	.	
130	MANPSD	REP	1.00	1.00	S	0.		.	.	.		.	.	.	
130	MANPSD	REP	.	.	P	0.	9A012	1	.	12.0	1570	1	.	0.5	
140	MANPSD	PROC	0.84	.	T	0.		.	.	.		.	.	.	
140	MANPSD	PROC	1.00	1.00	S	0.		.	.	.		.	.	.	
140	MANPSD	PROC	.	.	P	0.	9A014	1	.	14.0		.	.	.	
150	MANPSD	ASSY	0.84	.	T	0.		.	.	.		.	.	.	
150	MANPSD	ASSY	1.00	1.00	S	0.		.	.	.		.	.	.	
150	MANPSD	ASSY	.	.	P	0.	9A012	2	.	12.0		.	.	.	
160	MANPSD	PROC	0.84	.	T	0.		.	.	.		.	.	.	
160	MANPSD	PROC	1.04	1.00	S	0.		.	.	.		.	.	.	

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OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 5 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
160	MANPSD	PROC	.	.	P	0	9A012	1	.	16.0		.	.	.	
170	MANPSD	REP	0.84 1.00	.	T	0		.	.	.		.	.	.	
170	MANPSD	REP	.	.	S	0		.	.	.		.	.	.	
170	MANPSD	REP	.	.	P	0	9A014	1	.	28.0	1570	1	.	1.0	
180	MANPSD	REP	0.78 1.00	.	T	0		.	.	.		.	.	.	
180	MANPSD	REP	.	.	S	0		.	.	.		.	.	.	
180	MANPSD	REP	.	.	P	0	9A012	1	.	30.0		.	.	.	
190	MANPSD	REP	0.78 1.00	.	T	0		.	.	.		.	.	.	
190	MANPSD	REP	.	.	S	0		.	.	.		.	.	.	
190	MANPSD	REP	.	.	P	0	9A014	1	.	24.0	1570	1	.	0.5	
200	MANPSD	REP	0.78 1.00	.	T	0		.	.	.		.	.	.	
200	MANPSD	REP	.	.	S	0		.	.	.		.	.	.	
200	MANPSD	REP	.	.	P	0	9A012	1	.	24.0	1570	1	.	1.0	

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OPERATION PROFILE

NAME BILL RICH ALC WR DATE 5-11-89 RCC MANPSD SHEET 6 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
210	MANPSD	REP	0.79	.	T	0		.	.	.		.	.	.	
210	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
210	MANPSD	REP	.	.	P	0	9A014	2	.	16.0		.	.	.	
220	MANPSD	ASSY	0.84	.	T	0		.	.	.		.	.	.	
220	MANPSD	ASSY	1.00	.	S	0		.	.	.		.	.	.	
220	MANPSD	ASSY	.	.	P	0	9A014	1	.	2.0		.	.	.	
230	MANPSD	REP	0.84	.	T	0		.	.	.		.	.	.	
230	MANPSD	REP	1.00	.	S	0		.	.	.		.	.	.	
230	MANPSD	REP	.	.	P	0	9A012	1	.	32.0	1570	1	.	1.0	
240	MANPSD	ASSY	0.84	.	T	0		.	.	.		.	.	.	
240	MANPSD	ASSY	1.00	.	S	0		.	.	.		.	.	.	
240	MANPSD	ASSY	.	.	P	0	9A014	1	.	20.0		.	.	.	

OPERATION PROFILE SAS

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 7 OF 10

ITEM CD PCN 51344A WCD_MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
250	MANPSD	ASSY	0.~~94~~ 1.00	.	T	0		.	.	.		.	.	.	
250	MANPSD	ASSY	. 1.00		S	0		.	.	.		.	.	.	
250	MANPSD	ASSY	.	.	P	0	9A014	2	.	16.0		.	.	.	
260	MANPSD	INS	0.~~84~~ 1.00	.	T	0		.	.	.		.	.	.	
260	MANPSD	INS	. 1.00		S	0		.	.	.		.	.	.	
260	MANPSD	INS	.	.	P	0	9A014	2	.	1.0		.	.	.	
270	MANPSD	PROC	0.~~88~~ 1.00	.	T	0		.	.	.		.	.	.	
270	MANPSD	PROC	. 1.00		S	0		.	.	.		.	.	.	
270	MANPSD	PROC	.	.	P	0	9A012	1	.	1.0		.	.	.	
280	MANPPC	INST	0.~~89~~ 1.00	.	T	1.0 9A012		1	.	0.5		.	.	.	DONE IN BLDG 603
280	MANPPC	INST	. 1.00		S	0		.	.	.		.	.	.	
280	MANPPC	INST	.	.	P	10.0		.	.	.		.	.	.	
290	MANPSD	INS	0.~~94~~ 1.00	.	T	1.0 9A012		1	.	0.5		.	.	.	

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OPERATION PROFILE

8:24 WEDNESDAY, APRIL 5, 1989 52

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 8 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
290	MANPSD	INS	.	1.00	S	0									
290	MANPSD	INS	.	.	P	0	9A014	2	.	0.5					
300	MANPSD	ASSY	0.~~94~~	1.00	T	0									
300	MANPSD	ASSY	.	1.00	S	0									
300	MANPSD	ASSY	.	.	P	0	9A012	1	.	12.0					
310	MANPSD	PROC	0.~~93~~	1.00	T	0									
310	MANPSD	PROC	.	1.00	S	0									
310	MANPSD	PROC	.	.	P	0	9A014	1	.	8.0					
320	MANPDD	TRT	0.~~76~~	1.00	T	1.0	49534	1	.	1.0					
320	MANPDD	TRT	.	1.00	S	0									
320	MANPDD	TRT	.	.	P	20.0									
330	MANPDC	PNT	0.~~93~~	1.00	T	1.0	49534	1	.	1.0					

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 9 OF 10

ITEM CD PCN 51344A WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
330	MANPDC	PNT	.	.	S	0.		.	.	.		.	.	.	
				1.00											
330	MANPDC	PNT	.	.	P	20.0		.	.	.		.	.	.	
340	MANPDC	TEST	0.~~01~~	.	T	0		.	.	.		.	.	.	
			1.00												
340	MANPDC	TEST	.		S	0		.	.	.		.	.	.	
				1.00											
340	MANPDC	TEST	.	.	P	20.0		.	.	.		.	.	.	
350	MANPSD	ASSY	0.~~80~~	.	T	1.0	49534	1	.	0.5		.	.	.	
			1.00												
350	MANPSD	ASSY	.		S	0		.	.	.		.	.	.	
				1.00											
350	MANPSD	ASSY	.	.	P	0	9A014	1	.	0.3		.	.	.	
360	MANPSD	INS	0.~~80~~	.	T	0		.	.	.		.	.	.	
			1.00												
360	MANPSD	INS	.	1.00	S	0		.	.	.		.	.	.	
360	MANPSD	INS	.	.	P	0	9A014	2	.	1.0		.	.	.	
370	MANPSD	PROC	0.~~80~~	.	T	0		.	.	.		.	.	.	
			1.00												
370	MANPSD	PROC	.	1.00	S	0		.	.	.		.	.	.	

QPERATION PROFILE

NAME Bill Rich ALC WR DATE 5-11-89 RCC MANPSD SHEET 10 OF 10

ITEM CD PCN 51344A \WCD MB015C WCDDATE 88061

OPER NUMB	RCC	OPER DESC	HIST OCCR	MAND OCCR	OPER TYPE	MAND F HRS	SKILL CD/LVL	QTY	%	HRS	EQUIP CODE	QTY	%	HRS	NOTES
370	MANPSD	PROC	.	.	P	0.	9A014	1	.	0.5		.	.	.	

SAS
ASSEMBLY/DISASSEMBLY PROFILE

NAME BILL RICH ALC WR DATE 5-9-89 SHEET 1 OF 2

ITEM CODE	WCD	WCD DT	DSOP	ASOP	REMOV ITEM CODE	RCC MANPSD WCD	RCC MANPSD WCD DT	INSTALL SAME	NOTES
~~PCN 03172A~~		88271	20	250	PCN 68A350718				
~~PCN 51344A~~		88061	20	170	PCN 3P33603-173				
PCN 51344A		88061	20	170	PCN 3P22502-181				
PCN 51344A		88061	20	240	PCN 3P22049-118				
PCN 51344A		88061	20	240	PCN 3P22048-101				
PCN 51344A		88061	20	230	PCN 3P22502-073				
PCN 51344A		88061	20	230	PCN 3P22502-087				
PCN 51344A		88061	20	230	PCN 3P22502-055				
PCN 51344A		88061	20	230	PCN 3P22502-057				
PCN 51344A		88061	20	210	PCN 3P22502-191				
PCN 51344A		88061	20	300	PCN 3P22580-113				
PCN 51344A		88061	20	300	PCN 3P22581-113				
PCN 51344A		88061	20	300	PCN 3P22602-101				
PCN 51344A		88061	20	300	PCN 3P22601-101				

SAS

ASSEMBLY/DISASSEMBLY PROFILE

NAME Bill Rich ALC WR DATE 5-9-89 RCC MANPSD SHEET 2 OF 2

ITEM CODE	WCD	WCD DT	DSOP	ASOP	REMOV ITEM CODE	RCC MANPSD WCD	RCC MANPSD WCD DT	INSTALL SAME	NOTES
~~PCN 51344A~~		~~88061~~	~~20~~	~~300~~	~~PCN 3P22601-102~~				
PCN 51344A		88061	20	300	PCN 3P22502-403				
PCN 51344A		88061	20	300	PCN 3P22553-105				
PCN 51344A		88061	20	300	PCN 3P22553-106				
PCN 51344A		88061	20	300	PCN 3P22590-101				
PCN 51344A		88061	20	70	PCN 3P22519-101				
PCN 51344A		88061	20	150	PCN 3P22518-105				
~~PCN 51344A~~		~~88061~~	~~20~~	~~150~~	~~PCN 3P22505-105~~				

DISASSEMBLY/ASSEMBLY PROFILE

NAME BILL RICH ALC WR-ALC DATE 5-13-89 RCC MANPSD SHEET 1 OF 1

TOP ASSEMBLY			REMOVAL OPERATION NUMBER	INSTALLATION OPERATION NUMBER	SUBASSEMBLY			SAME REMOVED ITEM INSTALLED INTO ASSY. Y/N
ITEM NUMBER	WCD	WCD DATE			ITEM NUMBER	CHILD WCD	CHILD WCD DATE	
PCN NSN P/N	(SEE ATTACHED SHEETS)				PCN NSN P/N			
PCN NSN P/N	THE FOLLOWING PCN, 513-14A, OF RCC MANPSD,				PCN NSN P/N			
PCN NSN P/N	FOR WCD MB015C REQUIRES A REPLACEMENT OF				PCN NSN P/N			
PCN NSN P/N	APPROXIMATELY 250 PARTS & ITEMS OF HARDWARE.				PCN NSN P/N			
PCN NSN P/N	A REPLACEMENT OF 80% OF ALL COMPONENT				PCN NSN P/N			
PCN NSN P/N	PARTS!				PCN NSN P/N			
PCN NSN P/N	"DISASSEMBLY/ASSEMBLY" FOR THIS "TOP ASSY"				PCN NSN P/N			
PCN NSN P/N	THEREFORE IS NOT APPLICABLE.				PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N	BILL RICH		
PCN NSN P/N					PCN NSN P/N	5-13-89		
PCN NSN P/N					PCN NSN P/N			
PCN NSN P/N					PCN NSN P/N			

LSC-20095A

As of 26 APRIL 89 PAGE 1

PART NUMBER	STOCK NUMBER	BIN LOCATION	NOUN
C-12	3110 00 278 7245	2F12	BEARING
L 7325-101	1560 00 780 3795 JH	2H 50	DUCT. ASS
LS2942-4	9390 00 805 1027 JH	1 B7	SEAL
LS 30090-1	9390 00 938 9349 JH	1A32	SEAL
LS 30091-3	9390 00 938 9350 JH	1A31	SEAL
MIL-P-6906	9905 01 045 7793	1C26	I.D. PLATE
SL 1907-103	5360 00 912 0906	1C 15	SPRING
SL 1907-524	5310 00 949 3859	1F 4A	SPRING
343570-3R	1560 P343 570-3R	2A1	RIB
344324R	5340 00 570 9147	5C6	HINGE
345391	1560 00 651 0006 LG	2G11	SPACER
345446	1560 00 098 7999 LG	201	DOOR
351787-3	1560 00 513 9926	4L1	EJECTOR ASSY.
356808-1	1560 00 652 4093 LG	2G13	SPACER
371351-987	4710 00 039 0768 LG	4M1	TUBING
372633-1L	1560 00 613 6549 LG	2B40	ACCESS COVER
372643-3	1560 00 670 2157 LG	2H45	BRUSH SEAL
373473-11	1560 00 199 3924 LG	6E2	CAMLOC PANEL
3B70146-103	1560 P159 348 F	2040	CONDUIT
3P21863-137	1560 01 021 1179 JH	1A18	BRACKET
3P22024-227	1560 01 269 3606 JH	6D2	SKIN
3P22025-173	1560 00 916 0106 JH	6C3	FAIRING
3P22048-105	1560 P172 346 F	6D1A	LONGERON
3P22048-106	1560 P172 483 F	1G1	LONGERON
3P22048-117	1560 00 916 0107 JH	2C40	FAIRING ASSY.
3P22049-101	1560 00 916 0106 JH	6C3	FAIRING ASSY.

3P22050-101	1560 01293 8885 JH	1E11	BRACKET
3P22051-101	1560 01278 0698 JH	1F4	ANGLE
3P22502-001	1560 P170 800F	6B1	WEB
3P22502-003	1560 P170 802F	1A10	ANGLE
3P22502-005	1560 P165 115F	1E30	WEB
3P22502-007	1560 P172 427F	1G1A	ANGLE
3P22502-009	1560 01262 6403 JH	1A7	BRACKET
3P22502-011	1560 01267 7672 JH	1A15	BRACKET
3P22502-013	1560 01263 3313 JH	1A11	BRACKET
3P22502-015	1560 01268 8507 JH	1A13	BRACKET
3P22502-017	1560 P083 579F	1E5	RETAINER
3P22502-018	1560 P083 580F	1010	RETAINER
3P22502-019	1560 01297 6543 JH	105	RETAINER
3P22502-020	1560 P083 582F	108	RETAINER
3P22502-021	1560 01297 6542 JH	1C36	RETAINER
3P22502-022	1560 01297 6541 JH	1C1	RETAINER
3P22902-023	1560 P083 584F	1G13	BRACKET
3P22502-024	1560 P083 585F	1C6	RETAINER
3P22502-033	1560 P172 595F	1G16	DOUBLER
3P22502-035	1560 P173 351F	1F40	CLIP
3P22502-047	1560 01075 3560 JH	1C20	FILLER
3P22502-055	1560 P141 380F	5D1	WEB
3P22502-057	1560 00484 7357 JH	5A1	WEB
3P22502-059	1560 P164 213F	301	TEE
3P22502-061	1560 P164 215F	4B2	TEE
3P22502-073	1560 01297 6535 JH	3C2	WEB

3P22502-087	1560 01297 6539 JH	3C1	WEB
3P22502-093	1560 P160 971F	1E15	WEB
3P22502-097	1560 P164 248F	1E16	ANGLE
3P22502-098	1560 01279 4005 JH	1B20	ANGL
3P22502-099	1560 01262 6403 JH	1B4	ANGL
3P22502-100	1560 P164 250 F	1E18	ANGL
3P22502-111	1560 01297 5404 JH	1H2	SKIN
3P22502-112	1560 01297 6588 JH	1H1	SKIN
3P22502-137	1560 01262 6382 JH	1A25	DOUBL
3P22502-139	1560 01260 2950 JH	1A26	DOUBL
3P22502-173	1560 NCC 228198 JH	3E1	SKIN
3P22502-181	1560 01297 6587 JH	2H1	SKIN
3P22502-191	1560 01297 6538 JH	6A2	PAN
3P22502-199	1560 01267 7676 JH	1C29	CHANN
3P22502-201	1560 01 222 3070	1D4	CHANN
3P22502-203	1560 01 267 7675 JH	1C2	CHANN
3P22502-211	1560 01 297 6555 JH	1C39	SUPPO
3P22502-221	1560 P164 278F	1F8	BULKH
3P22502-223	1560 P164 246F	1F7	BULKH
3P22502-225	1560 01268 4619 JH	1A17	END CA
3P22502-226	1560 01268 4621 JH	1C5	END CA
3P22502-227	1560 01268 2809 JH	1F5	END CA
3P22502-228	1560 P164 280F	1A12	ANGLE
3P22502-229	1560 01260 5408 JH	1E20	ANGLE
3P22502-230	1560 P164 222F	1C9	ANGLE
3P22502-231	1560 P164 212F	1A8	ANGLE

3P22502-241	1560 01268 2807 JH	2E40	CHANNE
3P22502-243	1560 P163 545F	3A1	CHANN
3P22502-249	1560 01268 8486 JH	1C27	CHANN
3P22502-325	1560 P164 268F	1C21	ANGLE
3P22502-327	1560 P140 419F	1D14	CHANN
3P22502-328	1560 01297 6554 JH	1E6	CHANN
3P22502-335	1560 P163 100F	1C23	CHANN
3P22502-336	1560 01297 6553 JH	1B19	CHANN
3P22502-341	1560 P079 241F	1B21	SKIN
3P22502-347	1560 P163 022F	1A9	CHANN
3P22502-348	1560 01268 2808 JH	1E26	CHANNE
3P22502-349	1560 01297 6552 JH	1C38	TEE
3P22502-351	1560 P083 591F	1G11	SPLIT
3P22502-357	1560 P083 592F	1B22	DOUBL
3P22502-358	1560 01263 2374 JH	1C24	DOUBL
3P22502-365	1560 P083 594F	1F3A	SKIN
3P22502-369	1560 01297 6551 JH	1C37	DOUBL
3P22502-370	1560 01263 0450 JH	1A29	CHANN
3P22502-381	1560 P172 579F	1G3B	SPLITT
3P22502-383	1560 P172 454F	1F4B	TEE
3P22502-385	1560 ND 140 766L JH	1G14	TEE
3P22502-387	1560 01297 6550 JH	1C18	CHANN
3P22502-388	1560 P173 356F	1F4E	CLIP
3P22502-389	1560 NCC 233 015 JH	1B23	ANGLE
3P22502-391	1560 P085 209F	1F1	ANGLE
3P22502-419	1560 01263 0438 JH	6A3	FRAME

3P22502-421	1560 01268 84 87JH	1E23	DOUBLER
3P22502-423	156000534 3928JH	1C17	DOUBLER
3P22502-425	1560 01268 8485JH	1E12	DOUBLER
3P22502-427	1560 01243 8558 JH	1E31	DOUBLER
3P22502-433	1560 00 076 5281	102	COVER
3P22502-449	156000 535 7897JH	1E9	ANGLE
3P22502-451	1560 01268 8480 JH	1G17	ANGLE
3P22502-452	1560 P171 822F	1C28	ANGLE
3P22502-453	1560 00 535 7900JH	1022	CHANNEL
3P22502-455	1560 00 535 7901JH	1D3	CHANNEL
3P22502-459	1560 01297 6565 JH	1B17	FORMER
3P22502-461	1560 00 534 3929	1B15	FORMER
3P22502-463	156000 535 7899	4E2	ANGLE
3P22502-479	1560 P165110 F	1G3A	ANGLE
3P22502-480	1560P165109F	1G15	ANGLE
3P22502-483	1560 P124 866F	1D11	INTERCOASTAL
3P22502-485	1560 01297 6537JH	5B2	DOUBLER
3P22502-487	1560 01297 6536JH	5C1	DOUBLER
3P22502-489	1560 01 088 8111 JH	1B14	DOUBLER
3P22502-503	1560 01 263 0458 JH	1D6	ZEE
3P22502-511	1560 P127 113F	1D23	ANGLE
3P22502-513	1560 P164 255F	1C19	ANGLE
3P22502-515	1560 01 067 1614 JH	1A22	FORMER
3P22502-519	1560 01 267 9540 JH	1A19	ANGLE
3P22502-537	1560 01 267 9539 JH	1A16	FLANGE
3P22502-539	1560 01 268 9246 LG	1E14	FLANGE

3P22502-541	1560 01 267 9540JH	1B2	FLANGE
3P22502-563	1560 00 535 7896JH	4C2	ANGLE
3P22502-569	1560 0 268 2814JH	1G5	ANGLE
3P22502-577	1560 01 268 2815JH	1G12	ANGLE
3P22519-101	1560 01 061 2724JH	2A10	FLANGE
3P22538-101	1560 00 103 1383JH	1A27	DOOR STOP.
3P22539-101	1560 01 268 2050JH	1C16	FITTING
3P22539-102	1560 01 268 8553JH	1C14	FITTING
3P22540-101	1560 P164 283 F	1C10	SUPPORT
3P22540-102	1560 01 268 8506JH	1C12	SUPPORT
3P22550-101	1560 P172 578 F	1G3C	FITTING ASS
3P22553-155	1560 NCC 225 845JH	6C1	DOUBLER
3P22553-157	1560 P166 422 F	6C2	DOOR
3P22553-173	1560 01 268 2051JH	4G2	CHANNEL
3P22553-195	1560 01 263 0435JH	1B12	DOOR ASSY.
3P22553-196	1560 P070 556 F	1B10	DOOR
3P22555-103	1560 P172 488 F	1G7	ANGLE
3P22555-104	1560 P172 480 F	1G8	ANGLE
3P22555-104	1560 P171 398 F	1C41	CHANNEL
3P22555-106	1560 P171 371 F	1C4	CHANNEL
3P22555-107	1560 01 293 2711JH	1D15	BRACKET
3P22555-109	1560 P131 694 F	1E2	COVER
3P22555-111	1560 01 293 2710JH	1E4	COVER
3P22555-113	1560 P131 696 F	1G3D	BRACKET
3P22555-129	1560 P167 378 F	1A24	WEB
3P22560-103	1560 01 276 5298JH	1G4	WEB

3P22562-117	1560P167645F	4L2	FRAME
3P22562-119	1560ND132973LJH	4H2	ANGLE
3P22562-121	1560012693575JH	1E22	WEB/SPLI
3P22562-123	1560012693576JH	1B1	SPLICE
3P22562-143	1560012688479JH	1G2	WEB
3P22562-149	1560P160964F	1E3	PAN
3P22562-150	5340P137868F	1E24	PAN
3P22562-157	1560P172317F	1A28	SUPPORT
3P22562-163	1560012630453JH	1E10	BRACKET
3P22562-164	1560012908546JH	1E22A	BRACKET
3P22562-165	1560P140070F	1B5	CLIP
3P22562-169	1560012886834JH	1E1	ANGLE
3P22562-171	1560012602960JH	1E21	BRACKET
3P22562-183	1560P172318F	1B16	ANGLE
3P22562-189	1560NCC228201JH	1C31	ANGLE
3P22562-190	1560012946231JH	1C33	ANGLE
3P22562-191	1560012693574JH	1B3	DOUBLER
3P22562-193	1560P156923F	1C25	DOUBLER
3P22562-199	1560012766361	1E13	SHIELD
3P22562-200	1560012766360JH	1C34	SHIELD
3P22562-203	1560NCC232088JH	1C11	FIRE SHIELD
3P22562-205	1560NCC232083JH	1E8	SHIELD
3P22562-209	1560P156924F	1F9	WEB
3P22562-213	1560P172605F	1G3	FRAME
3P22562-263	1560NCC232084JH	1C35	RETAINER
3P22562-265	1560012938915JH	1D9	RETAINER

3P22562-267	1560 NCC232086JH	6B5	RETAINER
3P22562-281	1560012946227JH	1A14	RETAINER
3P22562-282	1560P127111F	1C13	RETAINER
3P22568-103	1560P166423F	1A2	ANGLE
3P22570-103	1560012602955JH	1G6	ANGLE
3P22570-105	1560012699829JH	1E7	BRACKET
3P22571-101	1560012688476JH	1C8	PLATE
3P22572-101	1560002958586JH	1E27	SEAL
3P22573-101	5330002046751	1E25	SEAL
3P22574-101	1560P172430F	1C7	BRACKET
3P22575-103	1560P164259F	6E1	SKIN
3P22575-104	1560012688554JH	6E3	SKIN
3P22576-103	1560P172504F	4A1	CHANNEL
3P22576-105	1560P172481F	6B2	STIFFENER
3P22576-107	1560P172577F	4A2	STIFFENER
3P22576-109	1560P172431F	6D1	ANGLE
3P22577-103	1560012688477JH	1A5	SPLICE
3P22577-105	1560012688478JH	1C32	SPLICE
3P22577-107	1560P164261F	1B18	SPLICE
3P22580-113	1560007399139JH	6A1	DOOR
3P22581-113	1560007399140JH	6D3	DOOR
3P22583-103	1560012681642JH	4E1	ANGLE
3P22583-104	1560P163543F	4E1	ANGLE
3P22583-105	1560P163542F	4I1	ANGLE
3P22583-106	1560012694098JH	4H1	ANGLE
3P22583-111	1560012681634JH	3B2	VANE

3P22583-112	1560 01268 1635 JH	3B3	VANE
3P22583-113	1560 01269 9820 F	1E17	FAIRING
3P22583-115	1560 P127 826 F	1D21	ANGLE
3P22583-116	1560 P127 803 F	1D7	ANGLE
3P22583-117	1560 01223 3332 JH	1D20	ANGLE
3P22583-118	1560 01276 5307 JH	1D18	ANGLE
3P22584-103	1560 P152 623 F	4B1	ANGLE
3P22584-105	1560 P152 624 F	4G1	ANGLE
3P22584-111	1560 01268 2035 JH	3B1	WEB
3P22584-113	5365 P163 555 F	1A20	SPACER
3P22584-115	5365 P163 556 F	1C22	SPACER
3P22584-119	1560 01293 2714 JH	1D12	ANGLE
3P22584-121	1560 01226 7950 JH	1D17	ANGLE
3P22587-103	1560 01268 4626 JH	5D2	WEB
3P22587-121	1560 01243 8619 JH	4C1	RIB
3P22587-123	1560 01260 5407 JH	4D1	ANGLE
3P22587-125	1560 01293 2712 JH	1D19	ANGLE
3P22587-127	1560 01293 0228 JH	1B8	ANGLE
3P22590-101	1560 00739 9150 JH	1D1	DOOR
3P22591-113	1560 P141 371 F	1B13	DOUBLER
3P22591-123	1560 P173 321 F	1F5A	ANGLE
3P22591-125	1560 P173 322 F	1F6A	ANGLE
3P22591-127	1560 01269 3581 JH	1E19	ANGLE
3P22591-133	1560 01266 5916 JH	1A21	DOUBLER
3P22591-135	1560 P159 315 F	1A1	DOUBLER
3P22591-191	1560 01276 5308 JH	1B24	DOUBLER

3P22591-193	1560P127908F	1D24	DOUBLE
3P22601-101	1560 01022.3213 JH	1A4	DOOR
3P22601-102	1560P171825F	1D1A	DOOR
3P22602-101	1560 00 12 19819 JH	1A23	DOOR
3P33533-101	1560P173320F	1F4C	BRACKET
3P35014-101	4710 00 789 4664 JH	4D2	DRAIN ASSY.
3P35015-101	5330 00 789 4665 JH	1D13	GASKET
3P96005-107	1560 00 951 3762 JH	1B9	LATCH
3W32209-101	1560 00 909 5811 JH	2G10	SPACER
342184-4L	5340 00 521 8451 LG	2F22	HINGE
345391	1560 00 651 0006 LG	2G11	SPACER
356776-1	1560 00 652 4092 LG	2G12	SEAL
372638-1	1560 00 701 0670 LG	2A8	CLIP
4-4437-7	1560 00 951 3762 JH	1B9	LATCH
3P22502-071	1560P136128F	2B40	ANGLE

SAS

ASSEMBLY/DISASSEMBLY PROFILE

9:34 TUESDAY, MARCH 28, 1989 1

NAME _____ ALC WR DATE _____ RCC MANPSD SHEET ___ OF ___

ITEM CODE	WCD	WCD DT	DSOP	ASOP	REMOV ITEM CODE	WCD	WCD DT	INSTALL SAME	NOTES
PCN 03172A		88271	20	250	PCN 68A350718				
PCN 51344A		88061	20	170	PCN 3P33603-173				
PCN 51344A		88061	20	170	PCN 3P22502-181				
PCN 51344A		88061	20	240	PCN 3P22049-118				
PCN 51344A		88061	20	240	PCN 3P22048-101				
PCN 51344A		88061	20	230	PCN 3P22502-073				
PCN 51344A		88061	20	230	PCN 3P22502-087				
PCN 51344A		88061	20	230	PCN 3P22502-055				
PCN 51344A		88061	20	230	PCN 3P22502-057				
PCN 51344A		88061	20	210	PCN 3P22502-191				
PCN 51344A		88061	20	300	PCN 3P22580-113				
PCN 51344A		88061	20	300	PCN 3P22581-113				
PCN 51344A		88061	20	300	PCN 3P22602-101				
PCN 51344A		88061	20	300	PCN 3P22601-101				

SEE REVISED SHEET

BILL RUH 5-13-89

ASSEMBLY/DISASSEMBLY PROFILE

NAME _____ ALC WR DATE _____ RCC MANPSD SHEET ___ OF ___

ITEM CODE	WCD	WCD DT	DSOP	ASOP	REMOV ITEM CODE	WCD	WCD DT	INSTALL SAME	NOTES
PCN 51344A		88061	20	300	PCN 3P22601-102				
PCN 51344A		88061	20	300	PCN 3P22502-433				
PCN 51344A		88061	20	300	PCN 3P22553-195				
PCN 51344A		88061	20	300	PCN 3P22553-196				
PCN 51344A		88061	20	300	PCN 3P22590-101				
PCN 51344A		88061	20	70	PCN 3P22519-101				
PCN 51344A		88061	20	150	PCN 3P22518-105				
PCN 51344A		88061	20	150	PCN 3P22505-105				

MANPOWER PROFILE

NAME: BILL RICH ALC: WR DATE: 5-9-89 RCC: MANPSD SHEET 1 OF 2

SK CODE	DESCRIPTN	QTR	QUANTITY AVAILABLE WORK WEEK 1	2	3	WEEK END 1	2	3	HOLIDAY 1	2	3	AVAILABLE HRS (PER SHIFT) WORK WEEK 1	2	3	WEEK END 1	2	3	HOLIDAY 1	2	3	ALTERNATE SKILL CD/LVL	NOTES
18083	S.M. HELPER	4	7									5.4									—	
48900	PLASTIC FABRICATOR WG-11	4	3									5.7									9A014/48901	
48901	PLASTIC WORKER WG-09	1										5.7									9A012/48903	
48901	PLASTIC WORKER WG-09	4	25									5.4										
48903	PLASTIC WORKER WG-07	1										5.7									—	
48903	PLASTIC WORKER WG-07	4	2									5.4										
9A012	SHEET METAL WORKER WG-09	½										5.4	5.4								48903	
9A012	SHEET METAL WORKER WG-09	4	22	9								5.4	5.4									
9A014	SHEET METAL MECHANIC A/C, WG-10	1										5.7	5.7								9A012	

MANPOWER PROFILE

NAME: BILL RICH ALC: WR DATE: 5-9-89 RCC: MANPSD SHEET 2 OF 2

SK CODE	DESCRIPTN	QTR	QUANTITY AVAILABLE WORK WEEK 1	2	3	WEEK END 1	2	3	HOLIDAY 1	2	3	AVAILABLE HRS (PER SHIFT) WORK WEEK 1	2	3	WEEK END 1	2	3	HOLIDAY 1	2	3	ALTERNATE SKILL CD/LVL	NOTES
9A014	SHEET METAL MECHANIC A/C WG-10	4	17	1	.	.	.	.	.	.	.	5.4	5.4	.	.	.	.	.	.	.	9A012	

MANPOWER PROFILE

NAME BILL RICH ALC WR-ALC DATE 5-15-89 RCC MAN PSD SHEET 1 OF 1

SKILL CODE/LEVEL	JOB DESCRIPTION	QUARTER	QUANTITY AVAILABLE									MANPOWER AVAILABLE (HOURS)									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	
		1																			
		2																			
		3																			
		4																			
		1																			
		2																			
		3																			
		4																			
		1																			
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		4																			
		1																			
		2																			
		3																			
		4																			
		1																			
		2																			
		3																			
		4																			

REVISED 5-15-89 Bill Rich

EQUIPMENT PROFILE

NAME Bill Rich ALC WR-ALC DATE 5-15-89 RCC MANPSD SHEET 1 OF 1

EQUIPMENT CODE	EQUIPMENT TYPE/DESCRIPTION	QUANTITY PER SHIFT			DOWNTIME					PERCENT USED FOR OTHER RCCs (e.g. TIME NOT AVAILABLE)	ENVELOP UNITS		ALTERNATE EQUIPMENT CODE	SOURCE
					PREVENTIVE MAINT.			UNSCHEDULED BREAKDOWN REPAIR TIME			MIN	MAX		
		1st	2nd	3rd	FREQ.	SHIFT	DOWN TIME	MTBF	MTTR					

REVISED
5/15/89
Bill Rich

SAS

EQUIPMENT PROFILE

8:21 WEDNESDAY, APRIL 5, 1989 1

NAME: BILL RICH ALC: WR DATE: 5-9-89 RCC: MANPSD SHEET 1 OF 1

EQUIP CODE	EQUIP DESCR	QUANT AVAIL S1	S2	S3	PREV MAINT FRQ	S	TIME	UNSCHED MTBF	MTTR	% NOT AVAIL	FOOTPRNT MIN	MAX	ALT EQP	SOURCE	NOTES
0012	OVEN	1	.	.	.	.	.	180	10.0	67/10	.	.	0013	.	MAD ERNIE MIXON
0013	OVEN	1	.	.	.	.	.	90	24.0	67/10	.	.	0012	.	
1570	DO-ALL SAW	1	.	.	1	1	0.1	315	7.0	50/10	.	.	—	.	
5859	CANOPY FIXTURE	2	.	.	180	1	24.0	.	.	0	.	.	—	.	
6294	F-15 RADOME JIG ASSY	1	.	.	180	1	16.0	.	.	0	.	.	—	.	
6295	TWO-PLACE CANOPY FIXTURE	1	.	.	180	1	24.0	.	.	0	.	.	—	.	

WORKLOAD PROFILE

NAME BILL RICH ALC WR-ALC DATE 5-15-89 RCC MANPSD SHEET 1 OF 1

ITEM NUMBER	AIRCRAFT MODEL	WCD	WORKLOAD TYPE	FLOATING STOCK	ACTUAL PRODUCTION BY QUARTER				NO. OF ENVELOP UNITS	MAXIMUM W.I.P.	STANDARD HOURS
					1	2	3	4			
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											
PCN NSN P/N											

REVISED
5-15-89
BILL RICH

LSC 200608

WORKLOAD PROFILE

NAME BILL RICH ALC WR DATE 5-9-89 RCC MANPSD SHEET 1 OF 2

ITEM CODE	AIRCRAFT MODEL	WCD	WKL TYP	FLOAT STOCK	INDUCTIONS PER QTR Q1	Q2	Q3	Q4	NO OF FPS	MAX WIP	STD HRS	NOTES
PCN 03172A	CANOPY - F-15A	MBA11N	4	—	—	—	—	—	—	—	—	
PCN 03172A		MBB11N	4	—	—	—	—	—	—	—	—	
PCN 03172A		MBC11N	4	—	—	—	—	—	—	—	—	
PCN 03172A		MB011N	4	—	21	39	31	13	0	8	66.9	
PCN 03427A	CANOPY - F-15B	MB015N	4	—	6	2	0	2	0	1	63.0	
PCN 09193A	RADOME - F-15	MB005N	4	—	16	27	29	21	1	12	31.8	
PCN 40208A	RADOME - C-130	MB013N	4	—	8	15	7	11	1	10	142.3	
PCN 41059A	RADOME ASSY - C-130	MB001N	4	—	13	14	24	36	1	10	47.3	
PCN 51344A	NOZZLE . C-141	MBB15C	4	—	—	—	—	—	—	—	—	
PCN 51344A		MBC15C	4	—	—	—	—	—	—	—	—	
PCN 51344A		MBD15C	4	—	—	—	—	—	—	—	—	
PCN 51344A		MBE15C	4	—	—	—	—	—	—	—	—	
PCN 51344A		MB015C	4	—	16	18	14	10	0	16	79.2	

WORKLOAD PROFILE

NAME Bill Rich ALC WR DATE 5-9-89 RCC MANPSD SHEET 2 OF 2

ITEM CODE A	AIRCRAFT MODEL	WCD	WKL TYP	FLOAT STOCK	INDUCTIONS PER QTR Q1	Q2	Q3	Q4	NO OF FPS	MAX WIP	STD HRS	NOTES
PCN 51344 ~~N22EB~~	C-141	MBA1SC	4									
PCN 51420A- WING L.E.	C-141	MB021C	4	-	2	0	2	8	0	12	57.2	

Bill Rich
5-15-89

DATASET: I7S150ED.ALC.WRMANPSD (WORKLD)

DATE: 89/03/29
TIME: 07:22
PAGE: 1

START COL ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8

	PART	WCD	INV-	T	Q1-	Q2-	Q3-	Q4-	
1	03172A	MB011N		4	21	39	31	13	66.9
1	03172A	MBA11N							
1	03172A	MBB11N							
1	03172A	MBC11N							
1	51344A	MB015C		4	16	18	14	10	79.2
1	51344A	MBA15C							
1	51344A	MBB15N							
1	51344A	MBC15C							
1	51344A	MBD15C							
1	51344A	MBE15C							
1	09193A	MB005N		4	16	27	29	21	31.8
1	41059A	MB001N		4	13	14	24	36	47.3
1	03427A	MB015N	.	4	6	2	0	2	63 0
1	40208A	MB013N	.	4	8	15	7	11	142.3
1	51420A	MB021C	.	4	2	0	2	8	51.2

RCC= MANPSD

5.1 PROFILE DATA FILES

The profile data files for RCC MANPSD were previously submitted under memo number NKE-E016-7603, dated July 6, 1989.

5.2 MODEL INPUT FILES

The model input files for RCC MANPSD were previously submitted under memo number NKE-E016-7603, dated July 6, 1989.

6.0 VALIDATION OF INPUT DATA

All profile data was validated in accordance with paragraph 7.2 and 7.3 of the Simulation Model Definition Document (SMDD). The profile data files included in this document were validated and accurately represent this RCC.

MINUTES OF

MODEL VALIDATION MEETING

June 19 thru June 23, 1989

WR-ALC/MDMSC

6-29-89

WR-ALC MODEL VALIDATION
MEETING MINUTES

19 June 89:

- Jim Gillis started the meeting by introducing team members:

  - Jim Gillis
  - Gerald Peavy
  - Doug Keene
  - Lott Singletary

  AFLC Representative:

  - Trixie Brown

  MDMSC Representatives:

  - Bob Bashyam
  - Bill Rich
  - Roger VanderVoord
  - Scott Vroman

- Jim pointed out that AFLC instructed them not to sign off the Model Validation Form.

- Reviewed model output for RCC MANPSA. Evaluated throughput, historical flow hours vs. simulated flow hours, expected hours vs. standard hours.

- This evaluation was performed for each item number. During this process list of major assumptions, action items and concerns were noted.

  PCN 01900A: F-15 Speed Brake

  - Historical flow hours 933.5 vs. 466.70 of simulated flow hours.

    Assumption:

    Method of induction may be a problem. History does reflect 500 hours to complete first operation which is inspection.

    Historical backshop hours were greater than simulated hours. We decided to input backshop hours back into the model.

PCN 01900A: F-15 Speed Brake (continued)

- Action items:

  Doug to verify the manpower utilization. Bill to review expected and standard hours.

PCN 05502A: C-141 Aileron

- Simulated throughput 13.2% difference. The difference was due to sporadic induction method.

PCN 51334A: C-141 Leading Edge Horizontal Stabilizer

- Bill to review expected hours.
- Increase backshop hours by 180 hours based on historical report.

PCN 51352A: C-141 Access Door

- Bill to review expected hours.
- Increase backshop hours based on historical report.

PCN 51418A: C-141 Leading Edge Wing

- Bill to verify expected hours.

PCN 51454A: C-141 Petal Door

- Bill to review the subassembly process hours.
- History had one sample of 698 days - adjusted for this odd occurence and made hours from 2288 to 1334.

- This completes the evaluation of model output for RCC MANPSA. At the end of this evaluation, Bob summarized the action items and assumptions. Jim commented that the model

seems to be doing what it is suppose to and asked MDMSC team to complete the action item and re-run the output. Jim also stated that either expected or standard hours can be used in establishing baseline of model based on IE's judgment. AFLC's representative, Trixie Brown, disagreed with Jim's comment. Validation team decided that during evaluation of difference between historical vs. simulation, 10% should be used only as a guideline not as a measurement.

Evaluation of RCC MANPGC:

- Evaluated the model output for the following PCNs: 06121A, 74061A, 74063A, 74146A, 74148A and 74149A.
- Review of throughput, historical vs. simulated flow hours and expected vs. standard hours revealed the following:
  - Expected vs. standard hours were within acceptable range.
  - Throughput was good.
  - Flow hours showed lot of difference between simulation and history. Review of historical report revealed that an unique pattern of process is being followed in Gyro Shop. Gyros after inspection were stored/held for long period of time before the start of repair operation.
  - Discussed about this problem. Doug and Jim wanted to have some methodology to show the unique holding process.

20 June 89:

- Bruce Kirk of MDMSC joined us to facilitate our brainstorming effort.
- Conducted brainstorming effort at Building 169. Morning session for Sheet Metal RCC's MANPSA, MANPSB, MANPSC, and MANPSD and afternoon for Gyro RCC's MANPGA, MANPGB, and MANPGC.

- Due to the nature of process and similarity we decided to have one brainstorming effort for Sheet Metal (4 RCCs) and one for Gyro (3 RCCs).
- Doug arranged both the sessions by bringing in representatives from manufacturing, scheduling, planning and quality.
- Both the sessions went out very good with a lot of participation. Developed fish bone - details of fish bone and brainstorming activities are covered in minutes of model validation/brainstorming.

21 June 89:

- Evaluated the model output for all the RCCs MANPSA, MANPSB, MANPSC, MANPSD, MANPGA, MANPGB, and MANPGC.
- Redlined the backshop hours and added buffer operations as requested by ALC for Gyro RCCs.
- Input all the changes and re-run the model.
- Dick Donnelly and Lou Mavros joined us to support our model validation effort.
- Dick, Lou, Bob and Gerald had an opportunity to meet Mr. Clinton Lewis. Discussed about the validity of model and about future task orders.
- Jim Gillis will be on vacation for the rest of the week.

22 June 89:

- Evaluated the re-run of model ouput after inputting the redlined corrections.

MANPSA

01900A: F-15 Speed Brake

- Expected vs. standard hours is acceptable.
- Historical vs. simulated flow hours - still have a problem. History shows operation 10 takes about 500 hours to complete. This is due to induction and priority problem. Operation 40 shows 68 hours to complete (waiting for engineer) whereas model shows 1 hour. One hours represents process hour whereas 68 hours includes waiting time also.

05502A: C-141 Aileron

- This a PDM item. No historical data available. Evaluated the output and verified with mechanics and planners to validate the model output.

051334A: C-141 Leading Edge Horizontal Stabilizer

- Standard vs. expected hours is within acceptable range.
- Backshop hours were off. Redlined the output.

51454A: C-141 Petal Door

- Model output does seem to represent as-is condition.

51352A: C-141 Access Door

- Redlined backshop hours to represent historical data.

MANPSD

09193A: F-15 Radome

- Expected vs. standard hours is within acceptable range.

- Simulated flow hours are almost double the historical. Review showed us operation 190 takes about 550 hours to complete.

- Operation 190 is repair operation performed by one mechanic for about 50 hours. Model shows the manpower availability as a problem.

- Doug pointed out that the model exaggerates the problem.

41059A: C-130 Radome Assembly

- Model output does seem to represent the as-is condition.

- Needed to verify the historical data of 500 hours for operation 10.

51420A: C-141 Wing Leading Edge

- Evaluated the output and redlined backshop hours.

40208A: C-130 Radome

- Ouput does seem to represent the as-is condition except the historical hours for Operation 30.

- History shows that it takes over 4000 hours to complete Operation 30.

- Bob to check the historical input data at St. Louis, if availabe and respond to WR-ALC.

03172A: F-15A Canopy

- Evaluated model output. History shows that it takes approximately 1180 hours to complete Operation 10.

- Operation 10 is to inspect and determine what parts are required to perform the repair. It does wait for a long time in getting those required parts.

MANPSB

- This is a manufacturing RCC.
- No historical data for analysis. Reviewed only the throughput.
- Model output was validated based on it's performance on the other 6 RCCs.

MANPG

- Evaluated the re-run of model out for RCCs MANPGA, MANPGB and MANPGC.
- Output for these RCCs were reviewed earlier. Buffer operation were added where necessary to represent historical data.
- Output for PCNs 74010A, 74074A, 74163A, 74126A, 74051A, 20012A, 06121A, 74061A, 74063A, 74146A, 74148A, and 74149A from all the three RCCs were individually evaluated.
- Flow hours, process hours and throughput were within acceptable range. Model does represent the as-is condition.
- Doug and Lott questioned the validity of historical data for PCNs 74074A and 20012A. Wanted to verify with manufacturing personnel.

23 June 89:

- Doug and Lott verified and confirmed the flow hour information.
- Reviewed the re-runs of model output.
- Bob compiled the meeting of minutes and reviewed with team members.

- WR-ALC/AFLC/MDMSC validation team agrees that the model seems to represent the approximation of as-is condition of RCCs MANPSA, MANPSB, MANPSC MANPSD, MANPGA, MANPGB and MANPGC; therefore, the model can be used as a baseline for experimentation.

Doug Keene, WR-ALC/MANEE

Lott Singletary, WR-ALC/MANEE

Jim Gillis, WR-ALC/MAWF

Gerald Peavy, WR-ALC/MAWF

Trixie Brown, AFLC/MAQF

Scott Vroman, MDMSC

W. V. "Bill" Rich

Bill Rich, MDMSC

for Roger VanderVoort, ~~MDMSC~~

Bob Bashyam, MDMSC

6-29-89 / Rev-1
BB/fej

7.0 COMPUTER SIMULATION ANALYSIS OF RCC

The computer simulation analysis for RCC MANPSD was previously submitted under memo number NKE-E016-7603, dated July 6, 1989.

8.0 VALIDATION OF SIMULATION ANALYSIS

The validation of simulation analysis for RCC MANPSD was previously submitted under memo number NKE-E016-7603, dated July 6, 1989.

9.0 BRAINSTORMING

The minutes for RCC MANPSD brainstorming were previously submitted under memo number NKE-E016-7603, dated July 6, 1989.

MINUTES OF

BRAINSTORMING SESSIONS

June 20, 1989

WR-ALC/MDMSC

MINUTES OF BRAINSTORMING
SESSION FOR FOUR SHEET METAL RCCs
- June 20, 1989 Morning Session -

Jim Gillis started the brainstorming session by introducing the facilitator Bruce Kirk of MDMSC. The following were in attendance for this session:

Bashyam, Bob	MDMSC
Gillis, Jim	WR-ALC/MAWF
Jackson, John	WR-ALC/MANERS
Keene, Doug	WR-ALC/MANEE
Kirk, Bruce	MDMSC
Kittrell, Don	WR-ALC/MANSCA
Morrison, Michael	WR-ALC/MANERS
Nicholson, Richard	WR-ALC/MANERS
Powell, David	WR-ALC/MANPSA
Rich, Bill	MDMSC
Singletary, Lott	WR-ALC/MANEE
VanderVoord, Roger	MDMSC
Warnock, Kevin	WR-ALC/MANEE
Williams, Sam	WR-ALC/MANPSA

Bruce Kirk being the facilitator briefed to participant the process of brainstorming. Bruce emphasized flow time is the quality characteristic that we are trying to improve or minimize. With that round robin solution presentation process started. Following are the suggestions:

1. Time in Wet Clean (Back Shop).
2. Prioritize of workload (F-15 first).
    a. May stop in middle of repair to respond.
    b. Demand system.
3. Manpower.
4. Training shop - mechanics get transferred to F-15 Shop.

5. Two shifts in certain shops.

6. Lack of space and environmental control.

7. No storage space for fixtures etc.

8. Chemical availability - anodize, etc.

9. Hand tools - proper matching to job. Prompt replacement of broken tools. Resizing the tool box may improve space.

10. Workload - need better forecasting.

11. RCC MANPSB completes then ships to storage - delay 10 to 15 days to get the same part back in finishing the repair.

12. Major repair coordination with Engineering - delays.

13. Update drawings requires 60 days.

14. Expedite travel of priorite parts.

15. Space organization.

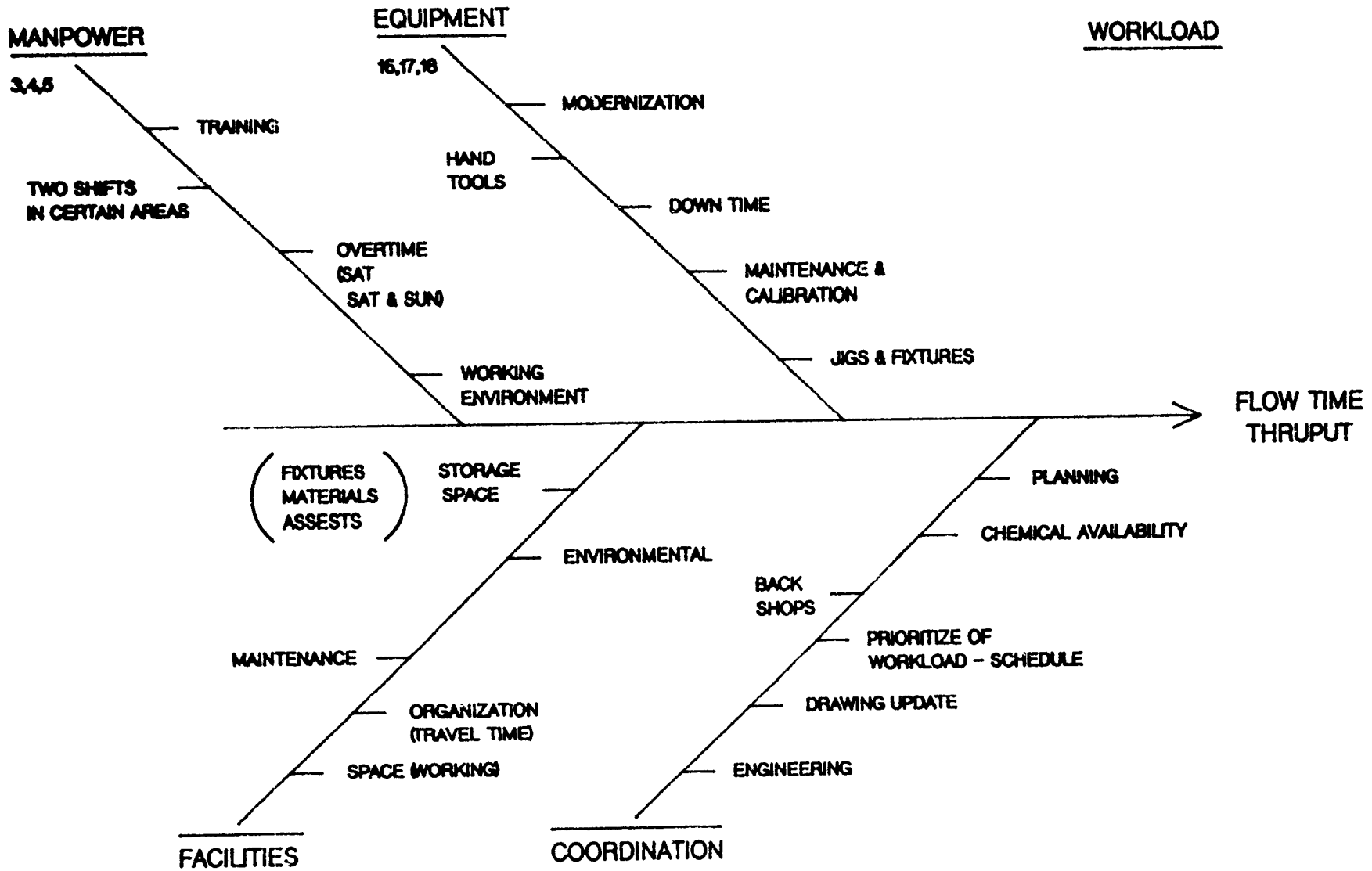
16. Equipment modernization.

17. Equipment preventive maintenance and calibration.

18. Jigs and fixtures - modify to ease use without removal. Work stand - better accessibility.

DEVELOPED FISHBONE (CAUSE AND EFFECT) DIAGRAM.

SHEET METAL SHOP
FISHBONE - CAUSE & EFFECT DIAGRAM



RCC: MAN PSD SUMMARY OF RE-EVALUATION

- Reformatted the results of L9 taguchi orthogonal array table.
- Evaluated throughput of each run for average throughput of RCC.
- Analyzed and tabulated results of best and worst PCN for each run including surge.
- This approach gives us a better understanding of the RCC's capability, process, and bottlenecks.

MANPSD SHEET METAL SHOP TAGUCHI ORTHOGONAL ARRAY

TABLE 10.7.2-2

RUN #	FACTORS & LEVELS						WORKLOAD (THROUGHPUT)		
	MANPOWER			OVERTIME		EQUIPMENT	INDUCTIONS: 531: 130% OF FY 88		
	1	2	3	SAT	SUN		AVG.	BEST	WORST
1	ALL					BASE	79.4 %	03427A 113.0 %	03172A 28.0 %
2	ALL			YES	YES	BASE +	95.8 %	03427A 120.0 %	03172A 85.0 %
3	ALL			YES	YES	BASE ++	95.8 %	03427A 120.0 %	03172A 85.0 %
4	50%	50%				BASE ++	80.0 %	03427A 106.0 %	03172A 21.0 %
5	50%	50%		YES	YES	BASE	100.0 %	03427A 108.0 %	51420A 66.7 %
6	50%	50%		YES	YES	BASE +	100.0 %	03427A 106.0 %	51420A 66.7 %
7	1/3	1/3	1/3			BASE +	76.0 %	03427A 106.0 %	03172A 18.0 %
8	1/3	1/3	1/3	YES	YES	BASE ++	102.0 %	03427A 106.0 %	51420A 72.0 %
9	1/3	1/3	1/3	YES	YES	BASE	102.0 %	03427A 106.0 %	51420A 72.0 %
SURGE*	50%**		50%**			BASE	100.7 %	03427A 106.0 %	51420A 72.0 %

NOTES: * INDUCTIONS = 502 (4 QTRS)
** TWO 12 HOUR SHIFTS.

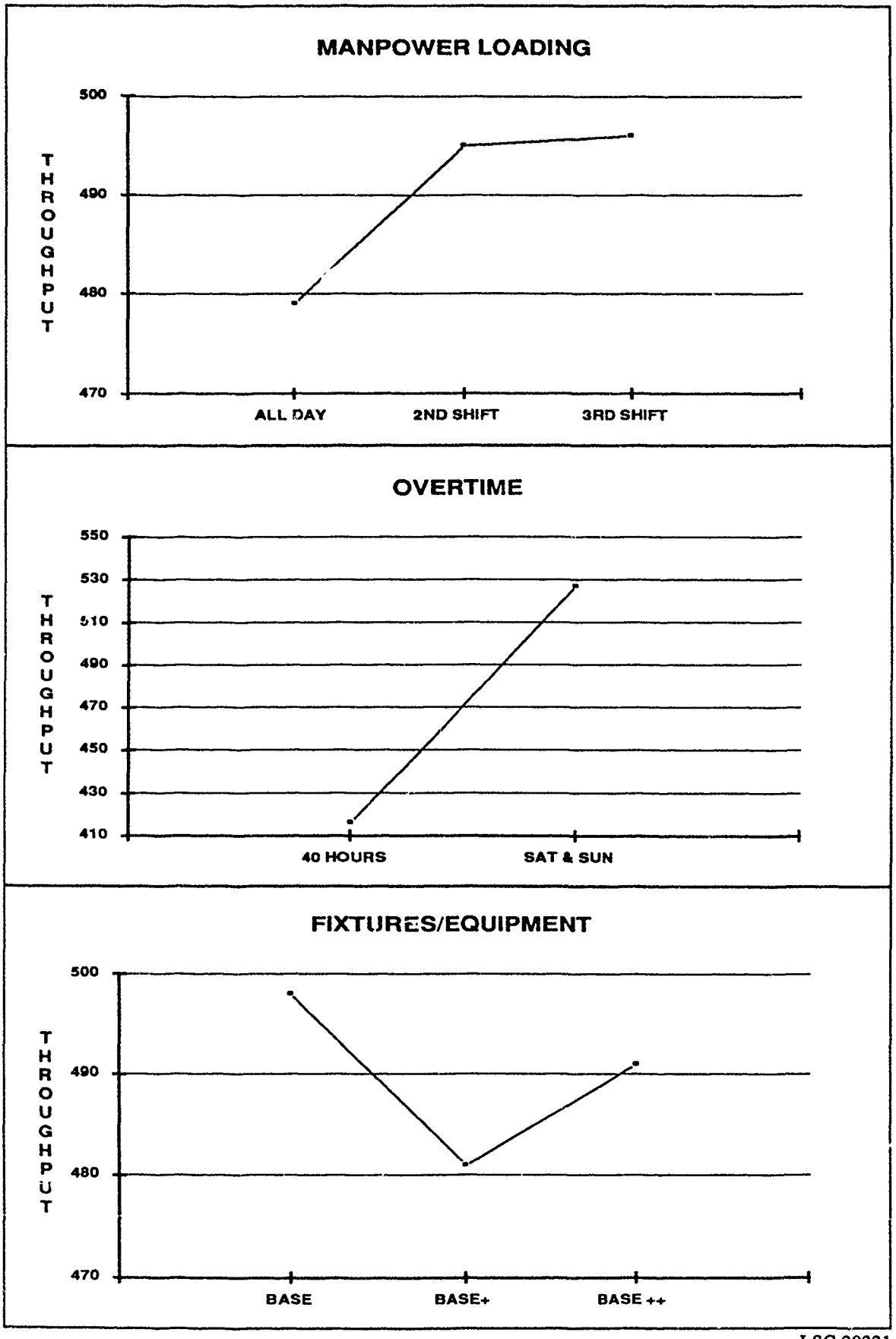
LSC-20617

MANPSD SHEET METAL TAGUCHI ORTHOGONAL ARRAY

TABLE 10._._-_

RUN #	FACTORS & LEVELS						WORKLOAD (THROUGHPUT)			
	MANPOWER			OVERTIME		EQUIPMENT	130% OF FY 88		SURGE	
	1	2	3	SAT	SUN		QTY	%	QTY	%
1	ALL					BASE	420	79	506	100
2	ALL			YES	YES	BASE +	509	96	506	100
3	ALL			YES	YES	BASE ++	509	96	506	100
4	50%	50%				BASE ++	423	80		
5	50%	50%		YES	YES	BASE	531	100		
6	50%	50%		YES	YES	BASE +	531	100		
7	/3	1/3	1/3			BASE +	404	76		
8	1/3	1/3	1/3	YES	YES	BASE ++	542	100		
9	1/3	1/3	1/3	YES	YES	BASE	543	100		

LSC-20320



LSC-20321

MANPSD EXPERIMENTATION RESULTS

MANPSD - WRALC

MANPOWER

1) $\frac{420+509+509}{3} = 479 = 90\%$

2) $\frac{423+531+531}{3} = 495 = 93\%$

3) $\frac{404+541+543}{3} = 496 = 93\%$

OVERTIME

1) SAT + SUN : $\frac{509+509+531+531+541+543}{6} = 527 = 99$

40 HRS : $\frac{420+423+404}{3} = 416 = 78\%$

FIXTURE / EQUIPMENT

BASE : $\frac{420+531+543}{3} = 498 = 94\%$

BASE + : $\frac{509+531+404}{3} = 481 = 91\%$

BASE ++ : $\frac{509+423+541}{3} = 491 = 92\%$

MANPSD - WRALC

FACTORS / ASSUMPTIONS.

WKL: 531

BASE : INCREASE FY 88 WORKLOAD BY 130 %. USE ALL OTHER RESOURCE AS IN AS-IS CONDITION.

BASE+ : INCREASE FY 88 WORKLOAD BY 130%. USE ALL OTHER RESOURCE AS IN AS-IS CONDITION - EXCEPT- REDUCE BACK SHOP (MANPDD) HOURS BY 40%.

BASE++ : INCREASE FY88 WORKLOAD BY 130%. USE ALL OTHER RESOURCE AS IN AS-IS CONDITION.

SURGE : INCREASE FY 88 WORKLOAD BY SURGE F15 : 61% C141 : 246%. C130 : 159%. MANPOWER - 5 DAYS A WEEK (2) 12HRS SHIFT.

MANPSD – WRALC

SUMMARY:

RCC MANPSD OF WR IS A PLASTIC AND SHEET METAL SHOP. PLASTIC WORK IS PERFORMED IN BLDG. 670 AND SHEET METAL JOB IN BLDG. 603. BOTH THESE BLDG'S. ARE FURTHER AWAY FROM SHEET METAL RCC'S MANPSA, MANPSB & MANPSC. THE SUPPORT OR BACK SHOPS ARE LOCATED CLOSER TO THESE THREE RCC'S NOT FOR MANPSD. TRAVEL AND WAIT TIME HISTORICALLY A PROBLEM FOR THIS MANPSD RCC.

SIMULATED RUNS TO ANALYSIS THE SENSITIVITY OF BACKSHOP TIME (MANPSD RCC) BY REDUCING BY 40%. BECAUSE OF OUR RCC ANALYSIS WE WERE NOT ABLE TO SEE ANY CHANGE. IN FUTURE TASK'S WE SHOULD BE ABLE TO ANALYSIS BY PEN WHICH WILL BE OF MORE USEFUL.

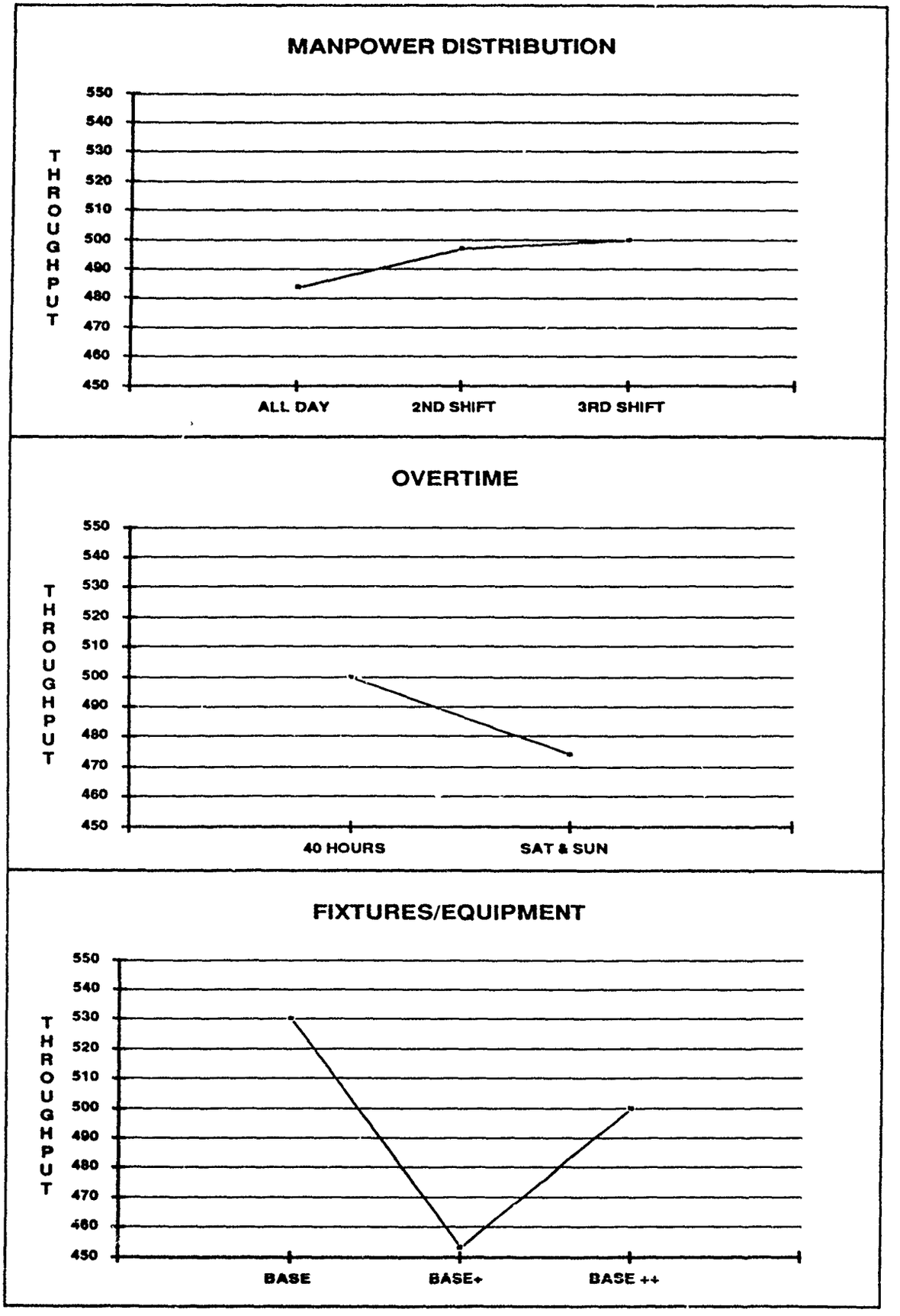
SIMULATION RUNS SHOWS THAT THE THROUGHPUT IS MORE ABOUT 26%. WHEN THE WORK IS ALSO PERFORMED DURING WEEK-END. THREE RUNS WERE SIMULATED WITH SURGE REQUIREMENT AND THE ANALYSIS SHOWS NO PROBLEM IN MEETING THE REQUIREMENT.

MANPSA SHEET METAL TAGUCHI ORTHOGONAL ARRAY

TABLE 10._._-_

RUN #	FACTORS & LEVELS						WORKLOAD (THROUGHPUT)			
	MANPOWER			OVERTIME		EQUIPMENT	130% OF FY 88		SURGE	
	1	2	3	SAT	SUN		QTY	%	QTY	%
1	ALL					BASE	528	100	723	60
2	ALL					BASE +	446	87		
3	ALL			YES	YES	BASE ++	480	93	1040	86
4	50%	50%				BASE ++	496	96		
5	50%	50%				BASE	530	100		
6	50%	50%		YES	YES	BASE +	467	91		
7	1/3	1/3	1/3			BASE +	446	87		
8	1/3	1/3	1/3			BASE ++	523	100		
9	1/3	1/3	1/3			BASE	531	100		

LSC-20312



MANPSA EXPERIMENTATION RESULTS

MANPSA - WRALC

FACTORS / ASSUMPTIONS

BASE : INCREASE FY88 WORKLOAD BY 130% AND USE ALL OTHER RESOURCE AS IN "AS-IS" CONDI

BASE+ :
- INCREASE FY88 WORKLOAD BY
- PROCESS PSEUDO WCD FOR PCN 05502A - C141 AILERON.
- MODIFY THE EXISTING 1 SET OF FIX (PM 9450) - CODE NEWFX.
- DESIGN AND BUILD CHECK BAR. CODE : CHBAR.

BASE++ :
- INCREASE FY88 WORKLOAD BY 130%.
- PROCESS PSEUDO WCD FOR PCN 055 C141 AILERON.
- MODIFY THE EXISTING 1 SET OF FIXTUR (PM 9450) - CODE : NEWFX.
- BUILD 2 MORE SET OF FIXTURE CODE : NEWFX.
- DESIGN AND BUILD CHECK BAR

WRALC - MANPSA

SURGE:

WORKLOAD - INCREASE EXPERIMENTATION WORKLOAD, WHICH IS 130% OF FY88, BY THE % OF FY90 SURGE REQ.

WEAPON SYSTEM	SURGE % FY90
C141	246
C130	159
F15	61

EXECUTE RUN #1 & RUN #3 FOR THE SENSITIVITY ANALYSIS WITH MANPOWER SPREAD BETWEEN (2) SHIFTS 12 HRS PER SHIFT AND 5 DAYS A WEEK.

WR – ALC
MANPSA

Manpower

① $\frac{528 + 446 + 480}{3} = \frac{1454}{3} = 484 = 94\%$

② $\frac{496 + 580 + 467}{3} = \frac{1493}{3} = 497 = 96\%$

③ $\frac{446 + 523 + 531}{3} = \frac{1500}{3} = 500 = 97\%$

OVERTIME

$\frac{480 + 467}{2} = \frac{947}{2} = 474 = 92$

40HRS = $\frac{\overset{R1}{528} + \overset{R2}{446} + \overset{R4}{496} + \overset{R5}{580} + \overset{R7}{446} + \overset{R8}{523} + \overset{R9}{531}}{7} = \frac{3500}{7} = 500$ = 97%

FIXTURE / EQUIPMENT

BASE : $\frac{528 + 580 + 531}{3} = \frac{1589}{3} = 529.6 = 103\%$

BASE + : $\frac{446 + 467 + 446}{3} = \frac{1359}{3} = 453 = 88\%$

BASE ++ : $\frac{480 + 496 + 523}{3} = \frac{1499}{3} = 500 = 97\%$

MANPSA - WRALC

SUMMARY:

REVIEWED THE RESULTS OF THE OUTPUT ANALYSIS OF THIS EXPERIMENTAL DESIGN FOR RCC MANPSA. THE RESULT DOES IDENTIFY THE AREA OF POTENTIAL IMPROVEMENT AND PROBLEM.

SIMULATION OUTPUTS INDICATES THAT THE 130% OF FY88 THROUGHPUT CAN BE ACCOMPLISHED WITH PRESENT MANPOWER AND FIXTURES. SPREADING OF MANPOWER SEEMS TO BE MORE EFFICIENT.

ANALYSIS OF OUTPUT DOES ALSO INDICATE THAT THE MODIFICATION OF FIXTURE ALONE WILL NOT IMPROVE THE THROUGHPUT OR FLOW TIME. BETTER ALLOCATION OF MANPOWER AND FINETUNNIN OF PROCESS IS ALSO NECESSARY.

RUN #1 OF SORCE DOES NOT CONSIDERED FOR THROUGPUT OF RCC ANALYSIS. BUT, BY ANALYSING THE THROUGPUT BY PCN REVEALS THAT ON AN AVERAGE ONLY 56% CAN BE ACCOMPLISHED AT AS-IS CONDITION.

(MODIFIED)

WORK CONTROL DOCUMENT MB017Y | 1. DATE 88141 | PAGE 1 OF 4 PAGES

2. PSSD/RCC	3. MATERIAL	4. MIC	5. ERRC	6. QTY	7. SCHED DT	8. COMP DT
NPSAC						

9. MODEL/DESIGN/SERIES	10. NOUN	11. ITEM SERIAL
	AILERON	

12. BCN 12A. SER NO.

13. TECH DATA/OPTIONAL
1-1-2, 1C-141B-3, 1-1A-8
1C-141B-36, 1C-141B-23
1C-141B-4, 1-1-8, 3W39022

14. PART NUMBER	15. STOCK NR.	16. PDN	17. BCN
8130281-10	1560011287501JH	05502A	806445
8130281-20	1560011287502JH	05503A	806446

18. DISP-STATION	19. PDN/OP NO.	20. WORK TO BE ACCOMPLISHED	21. MECH	22. P	23. Q
169	010 MNPSA	REMOVE HONEYCOMB LEADING EDGES & TAB. ROUTE AILERON & COMPONENTS TO MNPDD7 (BLDG. 180)			B
180	020 MNPDD7	DEPAINT/CLEAN/TREAT CORROSION IAW T.O. 1-1-2, SECTION VI			
169	030 MNPSA	DISASSMBLE DAMAGED LEADING EDGES; INSPECT AND REPAIR PER SUPPLEMENTAL WCD MBA17Y			
169	040 MNPSA	INSPECT/REPAIR DAMAGED LEADING EDGE SHROUDS.			
169	050 MNPSA	REMOVE/INSPECT/REPAIR AILERON TAB PER SUPPLEMENTAL WCD MBA17Y.			
169	060 MNPSA	POSITION AILERON ON 3 WORK TABLES AND MAKE HINGE ALIGNMENT CHECK USING BAR CHECK FIXTURE. RECORD FINDINGS			
169	070 MNPSA	REMOVE CHECK FIXTURE.			
169	080	REMOVE AND ROUTE BEARINGS WITH SUPPLEMENTAL WCD MBC17Y			

(MODIFIED)

WORK CONTROL DOCUMENT MB317Y — 1. DATE [illegible] — PAGE 2 OF [illegible] PAGES

18. DISP-STATION	19. PDN/OP NO.	20. WORK TO BE ACCOMPLISHED	21. MECH	22 'P'	23 'Q'
169	090 MNPSA	PRIOR TO BEGINNING EXTENDED REPAIR INVENTORY KIT FOR COMPLETENESS PER PACKING LIST/BILL OF MATERIAL.			B
169	100 MNPSA	INSTALL AILERON INWORK FIXTURE, REMOVE BOTTOM SKIN, P/N 3W34008-124 (R/H) OR 3W34008-[illegible] (L/H). NOTE: OLD SKIN WILL BE USED AS A DRILL TEMPLATE. SALVAGE DOOR CUT OUT DOUBLER, P/N 3W349[illegible].			
169	110 MNPSA	INSTALL NEW FITTINGS AND RIB CAPS IAW DRAWING 3W39022. (REPAIR/REPLACE RIB WEBS IF NEEDED).			B
169	120 MNPSA	REMOVE LOWER BEAM CAP (SPAR) AND SPLICE ANGLES/DOUBLERS.			B
169	130 MQCPCP	CONDUCT EDDY CURRENT SURFACE SCAN OF SALVAGED LOWER BEAM CAP SPLICE AREA PER DETAIL #31 OF DRAWING 3W3922. RECORD FINDINGS__________________			K
169	140 MQCPCP	CONDUCT BOLT HOLE EDDY CURRENT INSPECTION OF INDICATED HINGE FITTING ATTACH HOLES THRU WEB AND UPPER BEAM CAP PER DETAIL			K
169	150 MNPSA	VISUAL INSPECT AILERON MAIN BEAM WEB FOR DAMAGE AND CORROSION. REPAIR/REPLACE AS NEEDED.			B
169	160 MNPSA	INSTALL NEW LOWER BEAM CAP AND SPLICE ANGLES/DOUBLERS.			B
169	170 MNPSA	DRILL NEW SKIN USING OLD SKIN AS PATTERN. MAKE ALL CUT OUTS PER DRAWING 3W39022.			
169	180 MNPSA	BOND SHIM TO HINGE PLATE ATTACH POINT.			
169	190 MNPSA	PRIOR TO CLOSURE, INSPECT AREA FOR FOD.			B
169	200 MNPSA	INSTALL NEW SKIN, DOUBLERS, AND DOORS.			B
169	210 MNPSA	INSTALL BEARINGS.			

19.DISP-ATION	OP NO.	20.WORK TO BE ACCOMPLISHED	21.MECH	22.'P'	23.'Q'
169	240 MNPSA	VISUAL INSPECT/REPAIR UPPER BEAM ASSY.			B
169	250 MNPSA	VISUAL INSPECT/REPAIR STRUCTURAL DAMAGE IAW T.O. 1C-141B-3, SECTION II			B
169	260 MNPSDP	INSPECT/REPAIR FIBERGLASS TRAILING EDGE IAW T.O. 1-1-14 AND T.O. 1C-141B-3.			B
169	270 MNPSA	ROUTE MISC PARTS TO MNPDAJ FOR HEAT TREAT., IAW SUPPLEMENT SHEET MBD17Y			
169	280 MNPSA	ROUTE MISC PARTS TO MNPDAJ FOR PLATING. IAW SUPPLEMENT SHEET MBD17Y.			
169	290 MNPSA	REMOVE STATIC DISCHARGES. CHECK FOR CORROSION. REPAIR OR REPLACE IAW T.O. 1C-141B-3 AND T.O. 1C-141B-2-2JG-3-2. NOTE: USE ADHESIVE 8030011186251 (PROSEAL 872). CURE AS REQUIRED. SEAL STATIC DISCHARGES WITH MIL-S81733 SEALANT.			B
169	300 MNPSA	CHECK HYDRAULIC HOSES AND REPLACE IF NECESSARY IAW T.O. 42E 1-1-1.			B
169	310 MNPPCD	PERFORM ELECTRICAL RESISTANCE CHECK ON EACH STATIC DISCHARGER RETAINER. REF. T.O. 1C-141B-2-2JG-3-2 AND LAC PROCESS SPEC. 2058.			B
169	320 MNPSA	INSPECT/REPAIR/REPLACE DAMAGED UPPER SPAR SHROUDS.			
169	330 MNPSA	INSPECT AILERON IN FIXTURE PRIOR TO FINAL ALIGNMENT CHECK			
169	340 MNPSA	MILL SHIM.			B
169	350 MNPSA	INSPECT TAB HINGES PRIOR TO TAB INSTALLATION USING BAR CHECK FIXTURE.			
169	360 MNPSA	INSPECT/REPAIR TAB BOOT. INSTALL TAB ON AILERON.			B
169	370 MNPSA	PRIOR TO INSTALLING LEADING EDGES, INSPECT AILERON INTERIOR FOR FOD.			B

WORK CONTROL DOCUMENT (MEDIC) 1.DATE [illegible] PAGE 4 OF 4 PAGES

19.DISPOSITION	OP NO.	20.WORK TO BE ACCOMPLISHED	21.MECH	22'P'	23'Q'
169	380 MNPSA	ASSEMBLE AND INSTALL LEADING EDGES USING MIL-S-8784 SEALANT.			B
169	390 MNPSA	INSPECT/REPAIR/REPLACE LEADING EDGE FAIRINGS.			B
169	400 MNPSA	SEAL ALL SEAMS, UPPER AND LOWER SURFACES IAW T.O. 1C-141B-23. INSPECT BEFORE PREPAINT. REMOVE AILERON FROM FIXTURE.			B
169	405 MNPSA	POSITION AILERON ON 3 WORK TABLES AND MAKE FINAL HINGE ALIGNMENT CHECK USING BAR CHECK FIXTURE. RECORD FINDINGS			
180	410 MNPDD7	PREPAINT TREAT IAW T.O. 1-1-2 AND T.O. 1-1-8. NOTE: ITEM MUST BE PAINTED WITHIN 48 HOURS. RECORD TIME:_____DATE_____			
180	420 MNPDCF	APPLY FINISH TO AILERON RECORD TIME_____DATE_____			B
180	430 MNPDCF	FORTY-EIGHT HOURS AFTER PAINT. PERFORM WET TAPE TEST IAW T.O. 1-1-8 NOTE: N/A IF NOT REQUIRED. WET TAPE TEST STARTED: TIME_____DATE_____			B
180	440 MNPDCF	PERFORM WEIGHT AND BALANCE.			B
169	450 MNPSA	INSTALL WR-ALC DECAL IAW MAOI 66-40. WORK UNIT CODE 14AA0. COMPLETE FORM 349.			
169	460 MNPSA	FINAL VISUAL INSPECT.			B
169	470 MNPSA	TAG AND TURN IN.			B
		MANE/88141 MANS/88141 MANF/88141 MAON/88141			

4

TECHNOLOGY INSERTION PROGRAM
WR-ALC
MANPS - SHEET METAL SHOP

Bob Bashyam
Bill Rich

Possible Focus Study List

	Description	RCC
1.	Study to Improve Facilities Layout for Building 169	MANPSC MANPSA
2.	Study to Improve Facilities Layout for Building 603	MANPSD
3.	Study to Improve Facilities Layout for Building 670	MANPSD
4.	Redesign/Modify Existing Jigs/Fixtures Such As Aileron Jig (Make Working Jig in lieu of Solely a Check Fixture)	MANPSA MANPSC
5.	Redesign/Modify Existing Holding Fixtures so as to Rotate/Lock Part Being Repaired for Better Access and Less Worker Strain	All
6.	Study to Design Holding Fixtures (Customized Shape/Size to be Used in lieu of Flat-Top Tables)	All
7.	Study to Make a Fully Computerized "Work Book" (WCD) System in lieu of Current Unreadable "Paper-Mill"	All
8.	Study for CADAM Data Storage and Retrieval MASTER Demension Control System for General Tool Demensional Control as well as for Part/Assembly Data Source	All
9.	Study to Complement LIFT Plan and to Determine/Assign Priorities for New, More Modern/Diverse Sheet Metal Machinery, Facilities, and Equipment	All
10.	Feasibility Study for WR-ALC to Manufacture C-141 Petal Door Outer/Inner Skin Assemblies In-House	All

TECHNOLOGY INSERTION PROGRAM
WR-ALC
MANPS - SHEET METAL SHOP

Bob Bashyam
Bill Rich

Possible Quick Fix List

	Description	RCC
1.	Develop a Mechanic's "Hand Book" for Each Repaired Assembly	All
2.	Implement Mechanic "Buy-Maintain" (Buying Only Necessary Tools!) Tool-Set Program	All
3.	Provide Heavy Cardboard Shipping Boxes for Small/Medium Size Parts	All
4.	Move Bond Mechanics Closer to the Autoclaves	MANPSA MANPSC
5.	Provide Level Aileron Support Tables Until a Better Holding Fixture Can Be Provided	MANPSA
6.	Provide Better Quality Drill Bits in lieu of the Current Re-Sharpened Ones	All
7.	Provide Certain Mechanics with a Needed 45-Degree Angle Drill Attachment and an Approximate "3X" Rivet Gun (For 1/8"/5/32" Rivets)	All
8.	Provide Pictorial - Drawings with the Existing "Work Books" (WCD's)	All
9.	Review and Allocate Sufficient and Dedicated Work Space for Each Work Station	All
10.	In Conjunction with 2 Above, Reduce Size of Mechanics Tool Box to Approximately 1/2 the Current Size (Thereby Saving Much Valuable Space)	All
11.	Put More Emphasis on QP4!	All

Possible Quick Fix List (continued)

MANPS
Bob Bashyam
Bill Rich

	Description	RCC
12.	Include the Manufacturing Supervisor in ALL Task Force Formations When Quality/Production Would Be Discussed or/and Decisions Made to Affect Same	All
13.	Design/Build Aileron Tab Hinge Locator	MANPSA
14.	Design/Build a "Newspaper Clipping Cutter" to Cut the Thin Skins on the C-141 Horizontal Stabilizer Leading Edges	MANPSA
15.	Evaluate Cleanliness Condition in Work/Staging Area Near the Autoclaves in Building 169	MANPSA
16.	Review Safety Precautions in the Use of Methel-Ethel-Ketone (MEK), Depleted Uranium Counter-Balance Weights and Asbestos Clamps Used in Building 603 on the C-141 Wing Leading Edge	All
17.	Senior Mechanics/Supervisors/Alternates should Outline the Repair Processes for the Repaired Assemblies (to be Used in Conjunction with 1 Above)	All
18.	Implement Methodology to Eliminate Missing Petal Door Strake Parts	MANPSA
19.	Use "T" Material (Form in "W" Temper) in lieu of "O"	All
20.	Use Lockhead "Status" to Determine Latest Drawing/Effectivity	All
21.	Certify Mechanic Doing Repair Work on the Horizontal Stabilizer Leading Edges for "Ohmmeter" and "Brazing" Use	MANPSA
22.	Need "Window Area" Plot for F-15 Radome Repair Use	MANPSD

Page 6 of 6

Possible Quick Fix List (continued)

MANPS
Bob Bashyam
Bill Rich

	Description	RCC
23.	Need Holding/Support Fixtures for ALL Radomes	MANPSD
24.	Move F-15 Canopy Repair Effort Out of Building 670	MANPSD
25.	Provide Capability to Brush Alodine for Building 603	MANPSD
26.	Remove C-130 Leading Edge (Unused) Jigs From Building 603	MANPSD
27.	Need Better/Larger/Cleaner Toilet Facility for the Women Mechanics in Building 603	MANPSD
28.	Need More Space for the C-141 Nozzles in Building 603	MANPSD
29.	Need More Space for the Radomes in Building 670	MANPSD
30.	Combine Repair Operations for the C-141 AFT Cowl Door to Use One (1) Mechanic in lieu of the Present Two (2)	
31.	Make Available to ALL ALC's Paul C. Bevan "Patch-Puller-Ring" for Fiberglass Repair	MANPSD
32.	Encourage Suggestions Like Wendell Pittman's Investigation and Persistence in His Investigation of Missing Petal Door Strake Parts	MANPSA
33.	Make Use of and Assign More Manufacturing Responsibility to the Planning Section for ALL Manufacturing/Engineering Coordination	
34.	Make Available Cobalt-Tipped Drill Bits, or Equipment, for Mechanic's Use for Drilling Out Fasteners	

Page 7 of

Following are the Potential Improvements for Quick Fix.

10.0 WARNER ROBINS AIR LOGISTIC CENTER (WR-ALC)

10.1 QUICK FIX OPPORTUNITY TO DEVELOP A MECHANIC'S "HAND BOOK" FOR EACH REPAIRED ASSEMBLY. THE MECHANICS WOULD OUTLINE THE REPAIR PROCESSES FOR THE ASSEMBLIES BEING REPAIRED (MANPS).

10.1.1 Description of Current Operations

Most of the mechanic's training is received by actual "on-the-job" experience working with someone more experienced on the particular unit being repaired. Most experienced mechanics have made written notes to help guide them in the repair effort.

10.1.2 Description of Current Process Problems

The mechanic's sequence of tear-down, inspection and repair may vary compared with the WCD operation numbering. Certain peculiarities in the rework process may require a knowledge far in excess of the T.O. and the WCD instructions.

10.1.3 Description of New Process

Compile and publish a mechanic's training handbook written for each assembly being repaired in MANPS. The manual would compliment and supplement the Technical Orders and be compiled by training specialists using the experiences and input of the top mechanics currently doing the repair work as a guide. The training manual would be initiated to recognize the subtles of the repair process and would document all major steps and techniques of each repaired assembly unit. The Manual would be coordinated through the Training Monitor and the cognizent Process Engineer, Manufacturing Engineer, Planner, Production Supervisor and Quality People.

10.1.4 Rationale Leading to Change

The "Hand-Books" would help train new people in a rapid build-up such as a "Surge" or "War-Time" situation or in any crisis such as the present mechanics "turn-around" due to the F-15 wing effort or where a production rate increase would be necessary. Additional training and motivational courses would also be beneficial in conjunction with the "Hand-Books".

10.1.5 Estimated Cost Savings

Observations and interviews have indicated a potential average increase in efficiency for each new/old mechanic of 20% for the first 30 day period and a 10% increase therafter.

10.1.6 Implementation Cost/Schedule

Cost of an existing training specialist to coordinate the inputs is estimated to be $10,000 per anum (pro-rated).

Cost of preparing and reproducing each manual is estimated to $10 per copy.

Implementation could be realized in about 60 days from "Go-Ahead".

10.2 QUICK FIX OPPORTUNITY TO IMPLEMENT MECHANIC "BUY - MAINTAIN" TOOL-SET PROGRAM (BUYING ONLY NECESSARY TOOLS, THEREBY REDUCING THE SIZE OF THE TOOL BOX) (MANPS).

10.2.1 Description of Current Operations

All sheet metal mechanics are issued a standard set of tools, a tool box and a tool stand with drawers. Some of the tools have an everyday use, some have a limited use and some of the tools issued are never used: For example, the rivet guns issued have limited use while the most widely used gun, (3X type for 1/8" and 5/32" ad rivets) is not included - neither has a 45 degree pheumatic angle drill attachment been included. There are other instances.

10.2.2 Description of Current Process Problems

In some instances the replacement of a broken tool takes up to several weeks for replacement. In the interim, the mechanic either uses a "loaner" from the tool crib or borrows/shares a tool with a team member. These large tool box/tool stand occupy much valuable space and to reduce the number of tools would save much space, by requiring much smaller box/tool stands.

10.2.3 Description of New Process

Other repair facilities require the mechanics to buy and maintain their own set of necessary tools. These companies establish the requirements for the tool set and assist the mechanics in selecting the manufacturers of the tools. Inferior quality items that do not hold up and which constantly require replacement are eliminated. The tool manufacturers most often offer a life-time guarantee and a substantial discount to the mechanic because of the volume purchases. This has proven to be cost effective in many instances, for maintenance facilities such as Eastern, Delta, Hayes and Lockheed Air Service, etc.

One or two sets of "Limited-Use Tools" could be issued to a RCC repair area for general use.

10.2.4 Rationale Leading to Change

- The reduction of the number of tools/tool box/tool box stand by 50% would save much space.
- Eliminate/reduce tool crib manpower and storage area.
- Eliminate/reduce buying activity and expense.
- Provide the mechanic with the necessary tools to work with!
- Provide the mechanic with an expeditious way to replacd broken tools.
- Make the mechanic responsible for the tools that he uses to do his assigned tasks.

10.2.5 Estimated Cost Savings

Interviews have indicated a possible savings of 10 man hours per week for each mechanic if he/she had a proper "Tool Set".

Observations have shown that a reduction in size due to the mechanic having only necessary tools from 6.50 square feet to 3.25 square feet would also save approximately 3 square feet per mechanic. This would be a significant amount of space to be gained in Building 670, for example.

10.2.6 Implementation Cost/Schedule

The schedule and implementation cost would require further study and selection of tool needs, which would vary with each RCC, and tool suppliers.

10.13 QUICK FIX OPPORTUNITY TO MOVE BOND MECHANICS CLOSER TO THE AUTOCLAVES OR ALLOW THE REPAIR GROUP CLOSE TO THE AUTOCLAVE TO DO THE BOND WORK (MANPSA).

10.13.1 Description of Current Operations

In addition to other miscellaneous small bonded assembly units, there are approximately fourteen (14) frame and longeron assemblies for the C-141 Petal and seven (7) Leading Edge Sections for the C-141, Aileron which require the units to be rebonded when they undergo repair.

10.13.2 Description of Current Process Problems

The Aileron parts are rebuilt in W. Blackmon's area adjacent to the autoclave area and returned to S. Williams' control after completion, but the Petal Door parts are rebuilt in T. Cherry's area and then sent to rebond by the Petal Door mechanic and returned to him after completion. This is not an efficient flow of work effort.

10.13.3 Description of New Process

(Need to "certify" all mechanics in Bond Shop.)

Move those workers closer to the autoclave who work/repair small bonded assemblies such as the frame assemblies for the C-141 Petal Doors and the C-141 Aileron Leading Edges, thereby reducing time lost by going back and to. (Always make the transit worker responsible to the Supervisor who is responsible for the final inspection and buy-off of the unit being repaired).

An alternate way to eliminate to and fro travel by the mechanics would be to allow the repair group close to the autoclave to do all the bond work.

10.13.4 Rationale Leading to Change

Centralizing the bonding of small rebuilt assemblies would tend to:

- Eliminate wasted time and steps.
- Produce consistently better quality work.
- Have the bonding operation in a cleaner and better controlled enbvironment.
- "Free" the "Home" mechanic to do more specialized work for which he is more qualified than others.

10.~~4~~3.5 Estimated Cost Savings

It is estimated that a savings of 10 man hours per week could be realized.

10.~~4~~3.6 Implementation Cost/Schedule

Cost of moving would be negligible and the schedule-to-move would be very flexible.

10.4 QUICK FIX OPPORTUNITY TO PROVIDE LEVEL AILERON SUPPORT TABLES UNTIL A BETTER HOLDING FIXTURE CAN BE PROVIDED (MANPSA).

10.4.1 Description of Current Operations

The support tables for the C-141 Ailerons are not all the same height requiring time and effort to level, per WCD instructions, before the Aileron can be worked. The Aileron must be level while skin work, hinge work, tab removal work or the leading edges are removed.

10.4.2 Description of Current Process Problems

(The effort to level the tables has been in the planning stage for about a year or so, according to some interviewees in the area.)

10.4.3 Description of New Process

Provide tables the same height to support the Ailerons (until customized cradle-type support holding fixtures are available).

10.4.4 Rationale Leading to Change

The customized cradles will support the Ailerons and eliminate the "Man-handling" and "Flip-flopping" from side to side and also allow both sides and the beam/tab area to be worked simultaneously.

10.4.5 Estimated Cost Savings

The level tables will save leveling time (usually 15-20 minutes) for 2 -3 mechanics and eliminate overhanging of the Aileron when tables are not available.

10.4.6 Implementation Cost/Schedule

The cost and schedule of leveling the existing tables should be available through Kevin Warnock (926-4446).

10.5 QUICK FIX OPPORTUNITY TO PROVIDE PICTORIAL - DRAWINGS WITH THE EXISTING "WORK BOOKS" (WCD'S) (MANPS).

10.5.1 Description of Current Operations

The current copies of the WCD's (Work Books) are difficult to read and hard to understand. (This is true industry-wide.)

10.5.2 Description of Current Process Problems

Mechanic personnel do not adequately use the WCD's for repair instructions! They do not make proper use of the T.O.'s either!

10.5.3 Description of New Process

The Production Planner, with assistance from the Art Department, should provide a pictorial drawing, (exploded step-by-step drawing or otherwise), to accompany the "Work Book" (Work Control Document) to assist the worker to better understand the task and to help train others in a Surge or War-Time emergency situation.

10.5.4 Rationale Leading to Change

New mechanics (and old mechanics, also) would be more productive and understand what they are doing if better work instructions were given them.

Most other repair facilities are using pictorial drawings to supplement the T.O.'s and the planning sheets, and quality has in most cases, improved considerably because the mechanic better understood what they were supposed to do.

10.5.5 Estimated Cost Savings

It is estimated that the mechanic's efficiency would increase from 10% to 20% (but would vary with the individual) if he/she had a more comprehensive and understandable set of repair instructions to follow.

10.5.6 Implementation Cost/Schedule

A full time illustrator to make the drawings would cost approximately $20,000 per year and could reduce the planning staff by a like number due to a reduction in contacts from manufacturing. An estimate of about 30 - 90 days to hire the necessary people and organize the effort would be required.

10.~~10~~6 QUICK FIX OPPORTUNITY TO DESIGN/BUILD AILERON TAB HINGE LOCATOR (MANPSA).

10.~~10~~6.1 Description of Current Operations

The current method, when a tab hinge bracket has to be replaced, is to use the tab assembly as a tool and locate the bracket being replaced by using the tab. This is rather difficult to do because the tab leading edge is in the way which makes it hard to position and locate the required shims behind the new fittings.

10.~~10~~6.2 Description of Current Process Problems

A hinge locator and alignment tool is sorely needed to assist the replacement of an aileron tab hinge fitting on the C-141 Aileron rear beam.

10.~~10~~6.3 Description of New Process

A simple bar type locator tool would be sufficient and speed up the task.

10.~~10~~6.4 Rationale Leading to Change

Observation and interviews with the supervisor and several mechanics indicated the hinges replacement was a problem.

10.~~10~~6.5 Estimated Cost Savings

The hinge replacement requires an average of 10 man hours per Aileron to replace the bad tab hinge fittings. This time would be reduced to approximately 1/2 of this or about 5 man hours with a bar-type locator tool.

10.~~10~~6.6 Implementation Cost/Schedule

The cost of a simple bar-type tool would be the primary cost involved:

- Material Cost = $500 (Steel tube and bar)
- Welding = 100 (4 man hours)
- Machining = 300 (10 man hours)
- Engineering = 500 (8 man hours)

10.~~11~~7 QUICK FIX OPPORTUNITY TO DESIGN/BUILD A "NEWSPAPER CLIPPING CUTTER" TO CUT THE THIN SKINS ON THE C-141 HORIZONTAL STABILIZER LEADING EDGES (MANPSA).

10.~~11~~7.1 Description of Current Operations

The thin .005 thick stainless steel cover skins for the C-141 Horizontal Stabilizer de-icer leading edge assemblies (8 per aircraft) must be removed in order to inspect and repair the embedded direct current wires and the heating elements.

10.~~11~~7.2 Description of Current Process Problems

The current way of skin removal is to cut and peel the cover skins using a wood chisel, tin snips, pliars, etc. to remove the skin without damaging the wires or the heating elements.

10.~~11~~7.3 Description of New Process

Design and make a depth cutter similar to the type cutter used to cut out newspaper clippings. This type cutter may be set to cut at a predetermined depth so as to cut the (.005) stainless steel thin skin cover and not cut the wires.

10.~~11~~7.4 Rationale Leading to Change

(Observation led to believing that a better way should be found.)

This new method of skin removal would allow the old skins to be removed in an easier manner thereby saving time and producing a neater and a more professional repair job.

10.~~11~~7.5 Estimated Cost Savings

A possible savings of two (2) man hours per leading edge section should be realized; for a total of eight (8) sections times two (2) equals sixteen (16) man hours saved per A/C.

10.~~11~~7.6 Implementation Cost/Schedule

The only cost would be the "Clipping-Cutter" design and machine costs which should not exceed $200. Machine time for the cutter should be under $100.

10.~~15~~ 8 QUICK FIX OPPORTUNITY TO USE "T" MATERIAL (FORM IN "W" TEMPER) IN LIEU OF "O" (MANPS).

10.~~15~~ 8.1 Description of Current Operations

Most all forming of aluminum for aircraft requires that the material be in soft condition, either in "O" condition or in "W" temper condition. Both conditions, "O" and "W" are of the same softness.

Most engineering drawings and/or material specifications call for the two material conditions to be used interchangeably.

10.~~15~~ 8.2 Description of Current Process Problems

It is hard to store "O" condition material, easy to damage, and handle because of it's softness therefore it is better to buy and store aluminum in the "T" condition. There is also the possibility of a part made out of the "O" material getting on the structural airframe of an air vehicle, inadvertantly.

10.~~15~~ 8.3 Description of New Process

The "O" material requires a heat treat operation after forming to bring the part to a hardened state or "T" condition. The "W" condition is produced by a heat treat operation from the "T" condition, formed into the desired state, then the material returns to a hardened "T" condition at room temperature without any further heat treat.

In the event that "W" condition aluminum alloy sheet is used in lieu of "O", the material must be stored in cold storage while it is awaiting it's time to be worked. It has a shorter work time when it removed from the "ice-box" due to the materials ability to return to a hardened state at room temperature.

It is suggested that certain selected parts such as reinforcement doublers and formed parts be looked at and made from "W" condition rather than "O" condition thereby reducing the inventory of "O" material and conceivably reducing material costs, by eliminating excess scrappage.

10.~~15~~ 8.4 Rationale Leading to Change

Other production and repair facilities do not use and stock aluminum sheet stock in the "O" Temper in the thickness of .064 or less because of it's softness.

10.~~15~~9.5 Estimated Cost Savings

The cost svings would be indicated on the present scrappage cost which would be eliminated.

Scheduling is not available at this time.

10.~~15~~9.6 Implementation Cost/Schedule

Implementation of this suggestion requires selection of parts and procedure change. Estimated implementation time approximately 2 months.

10.~~17~~ 9 QUICK FIX OPPORTUNITY TO CERTIFY MECHANIC DOING REPAIR WORK ON THE HORIZONTAL STABILIZER LEADING EDGES FOR "OHMMETER" AND "BRAZING" USE (MANPSA).

10.~~17~~ 9.1 Description of Current Operations

The mechanic (Amanda Knight) has to use an Ohmmeter to check the continuity of the wiring on the C-141 Horizontal Stabilizer leading edge sections. These sections form an electrically de-iced section of the horizontal stabilizer. All sections are repaired either by repairing the wires and welding breaks in the mesh.

10.~~17~~ 9.2 Description of Current Process Problems

The mechanic has to use the back shop on four (4) occasions for the use of the "Ohmmeter" or the "Welding Unit," usually making the trips herself, to verify the repair.

10.~~17~~ 9.3 Description of New Process

In repairing the leading edge sections, the mechanic has to use an Ohmmeter to determine the repair so why not make it official by certifying the mechanic in it's use as well as the welding required to make the repairs to the mesh heating element.

10.~~17~~ 9.4 Rationale Leading to Change

Discussed with Sonny Heard, Training, the possibility of training/certification of Amanda Knight and others, if necessary, to the use of the Ohmmeter and the Welding/Brazing unit which would eliminate the back shop work and the related expense of the mechanic hand carrying the parts to and from the electrical building.

10.~~17~~ 9.5 Estimated Cost Savings

The elimination of four (4) back shop operations would save 4 times 2 man hours = 8 manhours per part; 8 parts times 8 man hours equals 64 man hours saved per aircraft.

10.~~17~~ 9.6 Implementation Cost/Schedule

The mechanic has checked out an Ohmmeter for repair use. Kevin Warnock (926-4446) has moved a "welder" to Building 169 for the mechanic's use.

10.10 QUICK FIX OPPORTUNITY TO NEED HOLDING/SUPPORT FIXTURES FOR ALL RADOMES (MANPSD).

10.10.1 Description of Current Operations

The primary method of support for the radome repair in Building 670 is to place them directly on the floor. Some are elevated off the floor by the mechanics with 2 X 4's or other makeshift timbers.

Holding stands were made sometime back but are not being used and their whereabouts are now unknown.

10.10.2 Description of Current Process Problems

Some workers have expressed a desire to have the radomes elevated for better access and comfort.

10.10.3 Description of New Process

Holding stands/fixtures should be made to hold the radome on it's side and to allow the radome to be rotated. This method would be similar to the holding fixture currently being used with the C-141 nozzle repair effort.

10.10.4 Rationale Leading to Change

- The radome would be accessible from one side thereby making better use of space.
- Less worker fatigue.
- Work efficiency increased.
- Production rate increased.

10.10.5 Estimated Cost Savings

An increase of work efficiency from 10% to 15% is predicted which should increase throughput by a like amount for all radomes being worked in Building 670.

10.10.6 Implementation Cost/Schedule

The schedule and implementation costs will require further study based on an austere-type stand design.

10.~~21~~ QUICK FIX OPPORTUNITY TO PROVIDE CAPABILITY TO BRUSH ALODINE FOR BUILDING 603 (MANPSD).

10.~~21~~.1 Description of Current Operations

Parts requiring alodine treatment have to be taken to Building 180, which is about two (2) miles distance from 603.

10.~~21~~.2 Description of Current Process Problems

No alodine treatment is currently available because of the lack of waste treatment/disposal.

10.~~21~~.3 Description of New Process

Either one of the following:

(1) Step up the existing "Fast-Flow" pick-up and delivery system for the parts.

(2) Temporarily provide five (5) collection drums with adequate exhaust/vent system at Building 603 and transfer the toxic waste to a tank truck for disposal.

(3) Tie in to an existing waste disposal line at Building 645.

10.~~21~~.4 Rationale Leading to Change

- Flow time will be reduced.
- Throughput will be increased.
- Cost will be reduced.

10.~~21~~.5 Estimated Cost Savings

The estimated cost would be contingent on the decision as to the selection of (1), (2) or (3).

The (1) is estimated to be the least expensive and (3) the most expensive with (2) somewhere in between but only as a temporary measure. Number (3) would be the ideal method to provide treatment.

10.~~21~~.6 Implementation Cost/Schedule

Implementation cost and schedule is contingent on the process selected:

(1) Shortest time to implement.

(2) Somewhere in between (1) and (3).

(3) Longest time.

10.~~24~~ 12 QUICK FIX OPPORTUNITY TO COMBINE REPAIR OPERATIONS FOR THE C-141 AFT COWL DOOR TO USE ONE (1) MECHANIC IN LIEU OF THE PRESENT TWO (2) (MANPSA).

10.~~24~~ 12.1 Description of Current Operations

The current way of reworking the C-141, AFT Cowl Door, is to have one mechanic to tear down the old assembly and salvage the salvagable hardware and miscellaneous parts and another mechanic in another area to repair/rebuild the bonded honeycomb section of the door. (A third mechanic is also involved by removing the door from the cowl - in another area.)

After the bonded section is completed, it is transported back to the "Tear-Down" area and reassembled by the first mechanic (who is not bond certified).

10.~~24~~ 12.2 Description of Current Process Problems

The current way of repairing the doors has no obvious problems with the exception of completion responsibility, and the excessive amount of flow time required between workers.

10.~~24~~ 12.3 Description of New Process

The entire operation for repairing the door should be done in one area and the part not moved back and forth from one area to another. The "Tear-Down" mechanic should be trained and certified for bond operations.

10.~~24~~ 12.4 Rationale Leading to Change

- Eliminate duplicity of effort.
- Decrease "Flow-Time".
- Provide more trained workers.
- Provide more versatile worker.

10.~~24~~ 12.5 Estimated Cost Savings

At least one (1) full time mechanic will be released for other work.

Flow time will be increased at least by the time required for the part to flow between the areas which is usually 4-6 hours per door.

By certifying ALL workers for bonding, a more versatile utilization of the worker is possible who in turn is more capable of training others.

10.~~24~~12.6 Implementation Cost/Schedule

This may be done immediately with a very little cost effect to implement.

10.~~28~~ 13 QUICK FIX OPPORTUNITY TO MAKE AVAILABLE COBALT-TIPPED DRILL BITS, OR EQUIVALENT, FOR MECHANIC'S USE FOR DRILLING OUT FASTENERS (MANPS).

10.~~28~~ 13.1 Description of Current Operations

The present lot of resharpened drill bits, especially the sizes normally used to drill out rivets and other type fasteners are not properly ground on center and the tips are softer than the normal quality of new drill bits.

10.~~28~~ 13.2 Description of Current Process Problems

These off-center and soft bits wander off-center when the fastener is drilled out sometimes enlarging the hole and requiring a backing strip, or making necessary the next size larger salvage rivet in the enlarged hole.

These drill bits are soft and consequently do not last - only a few holes - and they are dull.

10.~~28~~ 13.3 Description of New Process

Provide the Sheet Metal Mechanic with a better quality drill bit such as a Cobalt tipped bit, or equivalent, to be used on High-Value assemblies when drilling out rivets, other type fasteners such as lock bolts or blind rivets and bolts.

10.~~28~~ 13.4 Rationale Leading to Change

The current quality of resharpened drill bits is extremely poor, contributing to oversize and nonconforming holes, causing unnecessary work and much time lost.

Making available better quality drill bits for the mechanic's use, especially the sizes used to drill out fasteners will same time, money and provide a better quality product.

10.~~28~~ 13.5 Estimated Cost Savings

It is estimated that around 20 man hours are lost per unit every week trying to make quality work with these inferior quality drill bits.

Observation and interviews have indicated that most mechanics are not using the resharpened bits but are obtaining better quality drill bits from other areas such as the F-15 wing effort which is supplied with better quality bits.

10.~~28~~ 13.6 Implementation Cost/Schedule

Not available at this time.

Following are the Potential Improvements for Focus Studies.

10.4 DB
~~10.3~~

QUICK FIX OPPORTUNITY TO PROVIDE HEAVY CARDBOARD RE-USABLE SHIPPING BOXES FOR SMALL/MEDIUM SIZE PARTS (MANPS).

10.3.1 Description of Current Operations

Parts are currently being moved from one area to another by hand-carrying or by laying loose on a rolling hand cart while they are being transported.

10.3.2 Description of Current Process Problems

10.3.3 Description of New Process

Heavy cardboard, reusable boxes should be used to protect the smaller parts when they are transported from one area or backshop to another area. These are sometimes called "Banana Boxes" because they are about the same shape and construction as the boxes used to ship bananas. These boxes would be similar to the ones used in the tubing/cable shop to contain and transport parts.

10.3.4 Rationale Leading to Change

10.3.5 Estimated Cost Savings

Using these boxes with styrofoam and/or "bubble wrap" will minimize damage to parts being transported.

10.3.6 Implementation Cost/Schedule

10.8 6b

~~10.7~~ QUICK FIX OPPORTUNITY TO REVIEW AND ALLOCATE SUFFICIENT AND DEDICATED WORK SPACE FOR EACH WORK STATION (MANPS).

10.7.1 Description of Current Operations

Much confusion exists now in certain areas because of the lack of dedicated and sufficient space for the mechanic and the work he/she is required to do. Traffic cross-flow is bad and in some instances there is no assigned or dedicated work space for the mechanic to do his/her assigned task.

10.7.2 Description of Current Process Problems

The work space for a given repair task must be adequate to allow the work to be performed in the most timely and cost effective manner.

10.7.3 Description of New Process

Each work station must be designed and space allotted to allow the mechanic to do his/her assigned task without interruption from people passing by, cross-flow traffic from fellow workers, insufficient space and confusion.

As a stop-gap measure, (before an in-depth facilities layout can be made), each work station must be identified and permanently marked so that the mechanic assigned to that work station may work with a minimum of interruptions. Rails or fences should be considered to outline the stations.

10.7.4 Rationale Leading to Change

Observation of several areas in Building 169, such as the areas for the petal doors and ailerons for the C-141, led to this present condition.

10.7.5 Estimated Cost Savings

Time will be saved and/or work efficiency will be increased along with the production rate.

10.7.6 Implementation Cost/Schedule

Implementation cost would involve about 16 man hours to layout and mark that stations. Equipment needed such as rails are assumed to be available. The time to implement would approximate two (2) weeks for each area from go-ahead.

10.C
~~10.8~~ DB

QUICK FIX OPPORTUNITY TO PUT MORE EMPHASIS ON QP4! (MANPS).

10.8.1 Description of Current Operations

Some RCC repair units do not have an active QP4 team. Those that do are not allotted the necessary time to be effective - manpower seems to be the problem.

NOTE: QP4 is currently being revised and restructured. It is suggested that more recognition and prestige be given the group.

10.8.2 Description of Current Process Problems

10.8.3 Description of New Process

More emphasis should be placed on the "QP 4" team effort and to use these groups with greater visibility and recognition as problem solvers.

Long standing complicated problems have a greater chance of being solved when a QP4 team is active in the area.

10.8.4 Rationale Leading to Change

10.8.5 Estimated Cost Savings

- More employee awareness and concern.
- Better quality realized.
- Better worker recognition and efficiency.
- Money saved.

10.8.6 Implementation Cost/Schedule

10.D

~~10.9~~ QUICK FIX OPPORTUNITY TO INCLUDE THE MANUFACTURING SUPERVISOR IN ALL TASK FORMATIONS WHEN QUALITY/ PRODUCTION WOULD BE DISCUSSED OR/AND DECISIONS MADE TO AFFECT SAME (MANPS).

10.9.1 Description of Current Operations

Decisions are sometimes made that affect the production effort or the quality of a repair unit without the Supervisor being told or asked to participate in the decision making process.

10.9.2 Description of Current Process Problems

10.9.3 Description of New Process

Better solutions to MANPS problems may be realized so that when a task force is formed, it is formed from individuals most knowledgable and intimately concerned with a solution to the problem, such as the Production Supervisor if the problem involves the production effort; or the Tooling expert if the problem involves a tool change; and the Planner if ANY change is contemplated in the work sequence or planning. The task force should always be headed up by the Production Supervisor if the problem involves production or quality.

10.9.4 Rationale Leading to Change

10.9.5 Estimated Cost Savings

- Better utilization of the Supervisors.
- Better quality.
- More Supervisor awareness.
- More cooperation from all concerned.

10.9.6 Implementation Cost/Schedule

10.12 QUICK FIX OPPORTUNITY TO EVALUATE CLEANLINESS CONDITION IN WORK/STAGING AREA NEAR THE AUTOCLAVES IN BUILDING 169 (MANPSA).

10.12.1 Description of Current Operations

Most lay-up is done in the Lay-Up Room in Building 169 which is a controlled and compatible environment for the use of adhesives and bonding materials used in the manufacturing of MANPSA work.

Some small patches and repair work is done in the teardown areas and in the staging area of the autoclave. There is not as much concern or attention given to bonding conditions and cleanliness in this as there should be.

10.12.2 Description of Current Process Problems

10.12.3 Description of New Process

A study should be conducted to determine if the conditions are adverse and if a plastic curtain dropped from the ceiling would help the situation. The sanding, drilling and working of metals/composites should be moved further away from the area where adhesive bonding is being done.

10.12.4 Rationale Leading to Change

10.12.5 Estimated Cost Savings

The major benefit to isolating the bonding from the fabrication will be to create a somewhat controlled environment which a requirement to the use of structural adhesives.

10.12.6 Implementation Cost/Schedule

SAS

PART OPERATION SUMMARY

ALC WARNER ROBBINS RCC MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN. 68A350708-2031 NSN PCN 03172A WCD MBA11N WCD DATE 88250

OPERATION. ZPRT PRIMARY END ITEMS OPERATION TYPE PROC MATERIAL TYPE AL
SAMPLE SIZE MISSING FLOWTIMES. OUTLIERS DELETED

-------- MANPOWER REQUIRED -------- ---------- EQUIPMENT REQUIRED ----------

SKILL	QTY	--- TIME --- FRACTION	HOURS	CODE	CATEGORY	QTY	--- TIME --- FRACTION	HOURS	BATCH MIN	BATCH MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	
>= 0	

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM			
TRIANGULAR			
NORMAL			
LOGNORMAL			
EXPONENTIAL			

OCCURRANCE FACTOR OCCURRANCES

DISTRIBUTION OF CHOICE

10.C 03

~~10.13~~ QUICK FIX OPPORTUNITY TO REVIEW SAFETY PRECAUTIONS IN THE USE OF METHEL-ETHEL-KETONE (MEK), DEPLETED URANIUM COUNTER-BALANCE WEIGHTS AND ASBESTOS CLAMPS USED IN BUILDING 603 ON THE C-141 WING LEADING EDGE (MANPS).

10.13.1 Description of Current Operations

Two safety situations are prevalent in the aileron repair and adjacent areas concerning: (1) The use of Methel-Ethel-Ketone, which should not be used. "Safety Solvents" are available and are not as toxic and just as effective as MEK; and (2) Inadequate marking and warning to the mechanics and handlers of the Depleted Uranium counterblance weight used as the balance material for the weight.

The planners have addressed the problem of the depleted uranium with a vinyl cover but it is not used effectively.

10.13.2 Description of Current Process Problems

10.13.3 Description of New Process

The applicable T.O. lists all the precautions that must be taken to prevent undue exposure to the radioactivity of the material and the mechanics are aware of this. There is no awareness of the "heavy-metal" effects of ingesting ground depleted uranium powder or the fact that grinding or drilling causes sparking which would cause ignition. The Base Safety Engineer should address this problem.

10.13.4 Rationale Leading to Change

10.13.5 Estimated Cost Savings

Employee safety.

10.13.6 Implementation Cost/Schedule

P.G 83

~~10.14~~ QUICK FIX OPPORTUNITY TO IMPLEMENT METHODOLOGY TO ELIMINATE MISSING PETAL DOOR STRAKE PARTS (MANPSA).

10.14.1 Description of Current Operations

The Petal Doors arrive at WR-ALC to be inspected and repaired consistently missing the Strake which should accompany the door. This is an expensive group of parts! This is an expensive operation for every C-141 Petal Door to come in for repairs a NEW Strake has to be manufactured and shipped back out to stores!

Where are the missing strake parts? Who removes them from the Petal Door Assembly? By what authority are they removed? Records show that some of these parts have a value of $20 to $30 each and in many cases as many as twenty (20) parts are missing!

10.14.2 Description of Current Process Problems

10.14.3 Description of New Process

An investigation into this matter has been made and an employee was given a cash award for bringing this matter to the attention of his managers but no resolution to the problem has been effected as of this date.

10.14.4 Rationale Leading to Change

10.14.5 Estimated Cost Savings

(See Attachments.)

10.14.6 Implementation Cost/Schedule

10.H

~~10.16~~ QUICK FIX OPPORTUNITY TO USE LOCKHEAD "STATUS" TO DETERMINE LATEST DRAWING/EFFECTIVITY (MANPS).

10.16.1 Description of Current Operations

There seems to be a bit of confusion at WR-ALC as to how to determine the effectivity of a part or of a drawing revision. This is especially pertinent to the drawings and parts for the Lockheed C-130 and C-141 aircraft. When the Air Force bought these airplanes from Lockheed, they also bought the drawings and the drawing submittal system, which would be in accordance with the applicable MIL Specification for the drawing requirements.

10.16.2 Description of Current Process Problems

10.16.3 Description of New Process

It is possible that a phone call to "Status" at Lockheed each time could get an answer to a problem involving a part as to whether it is required on a particular Model or not.

"Status" could also be used to verify the latest drawing revision or Engineering Order (EO) change to a drawing.

10.16.4 Rationale Leading to Change

10.16.5 Estimated Cost Savings

- Time saved.
- Money saved.
- More confidence in working with Lockheed drawings.

10.16.6 Implementation Cost/Schedule

P.I DB.

~~10.18~~ QUICK FIX OPPORTUNITY TO NEED "WINDOW AREA" PLOT FOR F-15 RADOME REPAIR USE (MANPSD).

10.18.1 Description of Current Operations

There are approximately 150 F-15 Radomes in an "X" condition (a condition of maximum damage) which will require a maximum effort to repair in the near future for MANPSD, (Building 670).

10.18.2 Description of Current Process Problems

The F-15 repair T.O.'s do not give a "stay-out" or "window" area for the Radome to help guide the repair. Other T.O.'s such as for the C-130 Radomes give this information to establish repair limitations and help guide the mechanic making the repair.

10.18.3 Description of New Process

There is a need to establish the repair limitations for the F-15 Radomes. Hugh Darsey, (6)5374, MMFRB, Cognizent Engineer is working with the test range, (Building 675), people to derive information to define the repair limitations.

10.18.4 Rationale Leading to Change

In the event the repair limits are not defined it is probable that Radomes will be repaired and not be usable thereby wasting time, money, and effort.

10.18.5 Estimated Cost Savings

Cost savings not determinable, at this time.

10.18.6 Implementation Cost/Schedule

Not determinable at this time.

10.J 013

Good Comment

~~10.20~~ QUICK FIX OPPORTUNITY TO MOVE F-15 CANOPY REPAIR EFFORT OUT OF BUILDING 670 (MANPSD).

10.20.1 Description of Current Operations

The F-15 Canopy repair effort occupies only a small portion of Building 670 and the repair effort does not have sufficient space.

10.20.2 Description of Current Process Problems

10.20.3 Description of New Process

Additional space is currently needed and by moving the canopy effort out of the building more space will be available for the radomes.

The F-15 Canopy should be moved to an area closer to the sheet metal repair, Building 169.

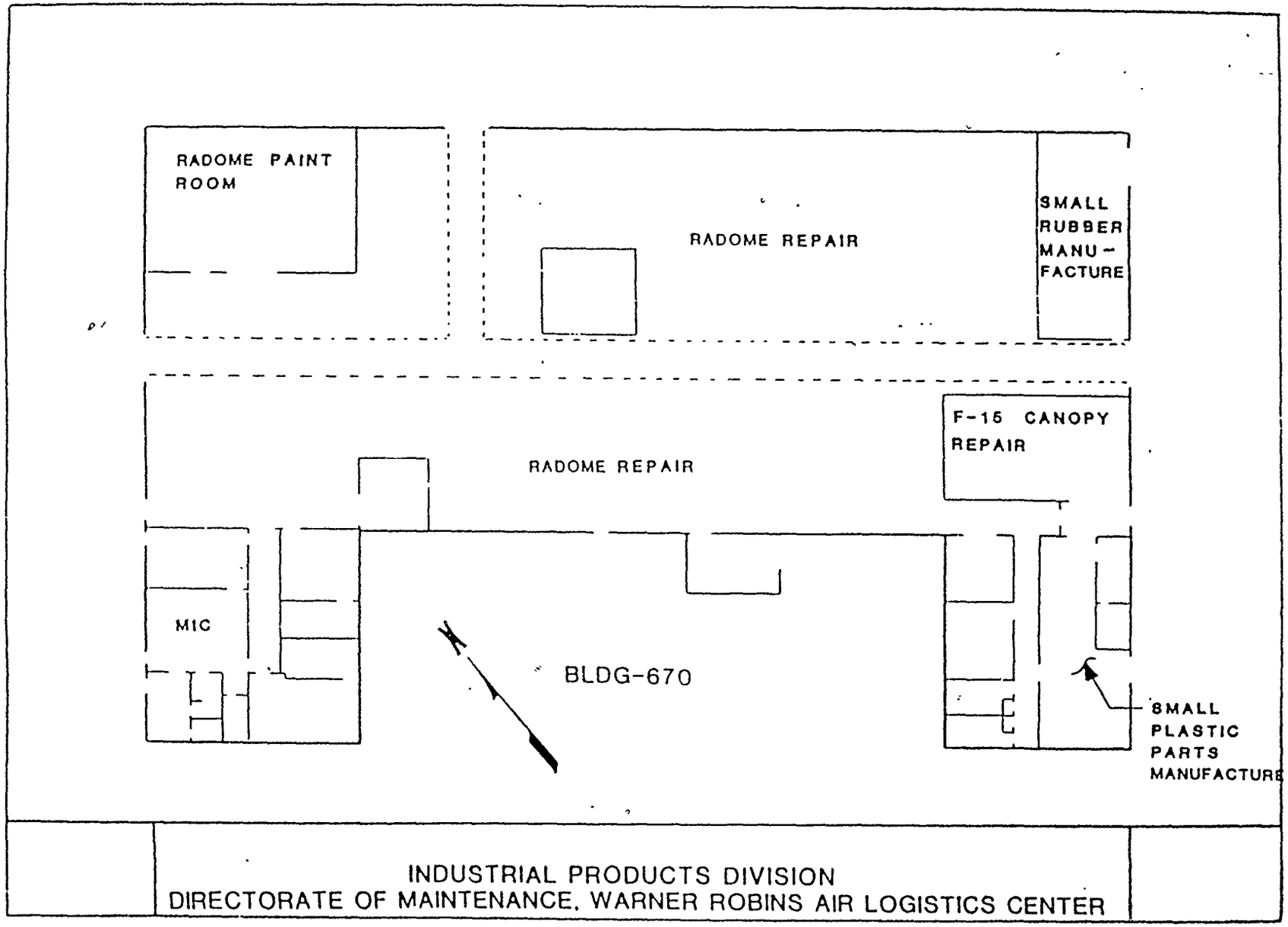
There is no GRID BOARD available to check the optical qualities of the transparancies when scratches are buffed out and the surface distorted.

10.20.4 Rationale Leading to Change

10.20.5 Estimated Cost Savings

Time will be saved and/or work efficiency will be increased and consequently the production rate increased. (See attached sketch.)

10.20.6 Implementation Cost/Schedule


RADOME PAINT ROOM
RADOME REPAIR
SMALL RUBBER MANU-FACTURE
F-15 CANOPY REPAIR
RADOME REPAIR
MIC
BLDG-670
SMALL PLASTIC PARTS MANUFACTURE
INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER

10.K

GOOD LAYOUT OBSERVATION

~~10.22~~ QUICK FIX OPPORTUNITY TO REMOVE C-130 LEADING EDGE (UNUSED) JIGS FROM BUILDING 603 (MANPSD).

10.22.1 Description of Current Operations

There are several unused C-130 Leading Edge jigs stored in Building 603 that are occupying much needed space needed for 4 - 6 additional nozzle stations.

10.22.2 Description of Current Process Problems

10.22.3 Description of New Process

Remove these jigs from the building thereby allowing the C-141 Nozzle effort to be expanded, as planned.

10.22.4 Rationale Leading to Change

10.22.5 Estimated Cost Savings

Space is at a premium in Building 603 and this space will be used to increase production rate for the C-141 Nozzle effort.

10.22.6 Implementation Cost/Schedule

10.L

10.23 QUICK FIX OPPORTUNITY TO NEED BETTER/LARGER/CLEANER TOILET FACILITY FOR THE WOMEN MECHANICS IN BUILDING 603 (MANPSD).

10.23.1 Description of Current Operations

The women's toilet in Building 603 has only one (1) commode for 6-8 women to use. Water stands in the general area of the toilet when it rains. The women have to go to adjacent buildings or either wait!

10.23.2 Description of Current Process Problems

10.23.3 Description of New Process

Provide better toilet facilities.

10.23.4 Rationale Leading to Change

10.23.5 Estimated Cost Savings

Increased worker comfort station and sanitary conditions.

10.23.6 Implementation Cost/Schedule

10.25 QUICK FIX OPPORTUNITY TO MAKE AVAILABLE TO ALL ALC'S PAUL C. BEVAN'S "PATCH-PULLER-RING" FOR FIBERGLASS REPAIR (MANPS).

10.25.1 Description of Current Operations

(See Attachment.)

10.25.2 Description of Current Process Problems

10.25.3 Description of New Process

(See Attachment.)

10.25.4 Rationale Leading to Change

10.25.5 Estimated Cost Savings

(See Attachment.)

10.25.6 Implementation Cost/Schedule

PAUL C. BEVAN'S COPY

NOTE*** THIS IS A CONFIRMATORY SUGGESTION.

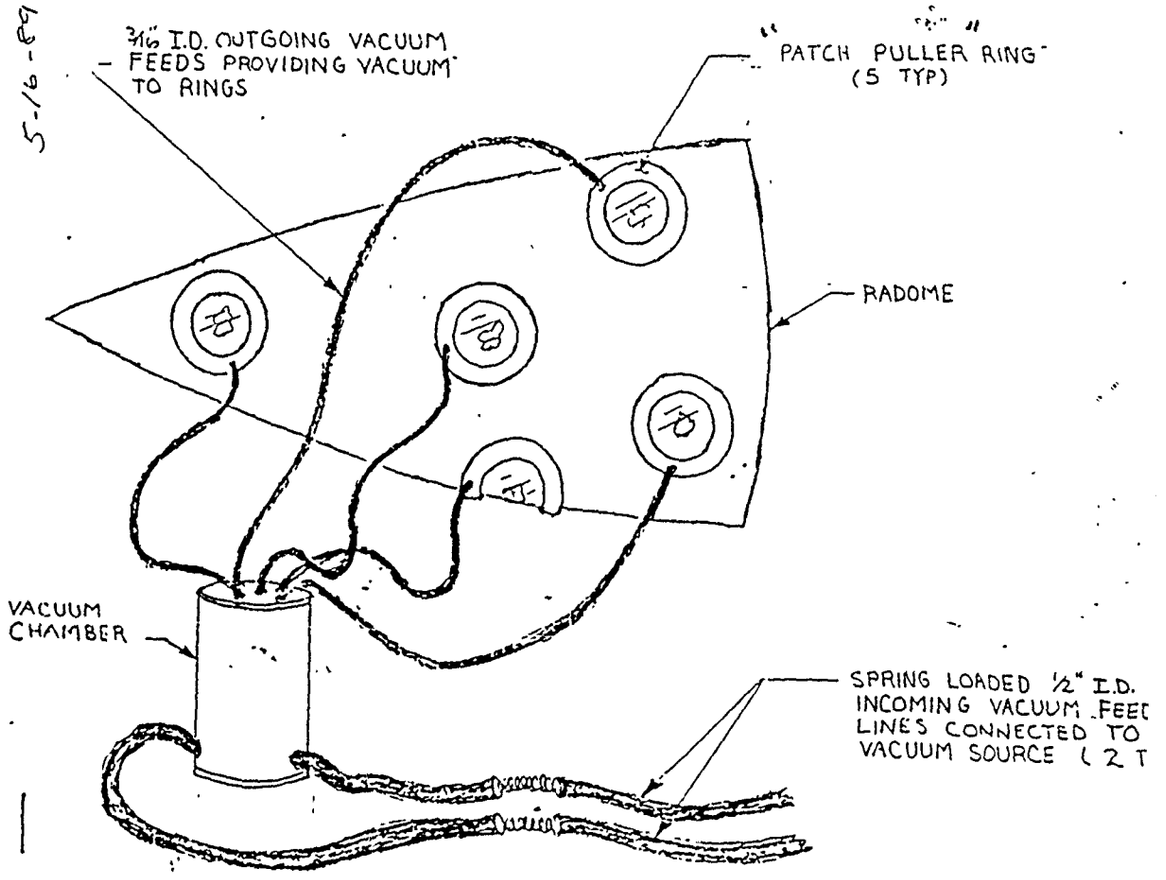
On 11-17-88, I discussed and demonstrated this concept in the presence of Hambrick, David Turner, and Hugh Darsey. They were responding to an AFLC 103 submitted by myself on 11-15-88. The 103 number is MANERS-8-558. I attached a copy.

Problem: Present vacuum bag patching techniques are costly, both in labo material. The government can reduce these costs.

Solution: I have prototyped and developed two systems that greatly reduc material costs and labor costs on the repair of fiberglass items. One sy was designed and developed to be used on the F-15 radome. It will work o aircraft that has a radome of the same configuration as the F-15 radome. implementation of the system, 98% of labor cost and 98% of material costs be saved in the patch set-up procedure. Approximately seven labor hours per F-15 radome will be saved. This system is also effective in spot patching on all types of fiberglass and on many fiberglass items DoD-wide Some examples are the C-130 radome, C-141 radome, C-141 tail cone, C-130 dome, and C-141 hat dome.

Some benefits of the F-15 patch puller follow:

5-16-89



1. Eliminates 98% of material used for patch set-up (tapes, spring, tacky t

2. Eliminates 98% of patch set-up material handling, application, and remov

3. Eliminates any possibility of pulling up circs by eliminating adhesive t presently used.

4. Functions effectively over grid wires, copper foil tape, radar balancing tape, and oil- or fluid-contaminated surfaces where adhesive tapes now used encounter problems.

5. Works effectively on interior and exterior surfaces

6. I have prototyped and developed the part and mold: no additional tooling needed.

7. Would be effective for field use in the form of an inexpensive kit. The kit would consist of cloth, resin, Mylar film, and patch puller ring. The system could be operated by a portable vacuum pump.

8. The system could be used throughout the Air Force on any aircraft havin radome with a similar configuration.

9. The system could be used DoD-wide (Navy, Army, ANG, etc).

10. The system is effective in spot patching

11. All components of the system are durable and reusable.

The second system I have developed operates off the same vacuum concept. I have developed a 2-inch-wide band of urethane that vacuums to the radome su face. The system incorporates the vacuum band, a dual vacuum feed, 1-inch masking tape, zinc chromate, and spring. One vacuum source will have a tra built into the line to allow for bleed-outs. Set up and operation is as follows:

1. Vacuum band down to face of radome operating off a straight line vacuu source (no trap). The band will surround the repair area.

2. Once in place, apply the zinc chromate to the outside face of the band

NOTE: After the chromate has been applied to the vacuum band on the ba first use, the chromate will stay in place and require very little handlin the next several patches. Periodic reapplication of the chromate may be r quired to insure effectiveness of the device. The zinc chromate serves as adhesive for alcohol sheet or Mylar film.

3. Next apply the spring with 2-inch pieces of 1-inch-wide masking tape j outside the repair area and within the vacuumband.

4. Attach the vacuum feed with the trap to this spring. This will allow excess air resin to be bled from the patch. The system will now be ready use.

5. Apply patch material to repair area (per TO 1-1-24).

6. Activate bleed-out vacuum and stretch Mylar sheet over the repair, adh the sheet to the chromate. The patch is complete.

This method will reduce tape use by 90%. Labor required for patch set up break down will be reduced by 70%. This will equate to an average of 6 la hours saved per dome on the C-130 and C-141. I am in the process of makir different sizes and shapes to accommodate different size and shape repairs 1-1-24, pg 4-19, para 4-86 suggests that mechanics keep their repairs bet 144 sq in and 324 sq in for best results. THis is not always practical. have developed a vacuum band that will allow patches of 500 sq in to be pu Based on the prototypes and the success of the system, pulling patches wit areas of 1000 square inches and greater is realistic. The pullers are alr applicable to 90% of the interior and exterior of the C-130 and C-141 radc

Some benefits of the vacuumized band follow:

1. Eliminates 70% of material handling in patch set-up on C-130 and C-14: radomes (approximately 6 hours per radome will be saved).

2. Eliminates 90% of tape used during patch set-up.

3. Functions effectively over contaminated surfaces where tape may lose adhesion.

4. Works effectively on interior and exterior surfaces.

5. Would be applable DoD-wide.

6. The vacuumized band is reusable and very durable.

7. Can be applied to numerous fiberglass items.

10.N

~~10.26~~ QUICK FIX OPPORTUNITY TO ENCOURAGE SUGGESTIONS LIKE WENDELL PITTMAN'S INVESTIGATION AND PERSISTENCE IN HIS INVESTIGATION OF MISSING PETAL DOOR STRAKE PARTS. CONTINUE INVESTIGATION TO ELIMINATE MISSING PETAL DOOR STRAKE PARTS (MANPSA).

10.26.1 Description of Current Operations

The Petal Doors arrive at WR-ALC to be inspected and repaired consistently missing the strake which should accompany the door. This is an expensive group of parts! This is an expensive operation for every C-141 Petal Door to come in for repairs a NEW strake has to be manufactured and shipped back out to stores!

Where are the missing strake parts? Who removes them from the Petal Door Assembly? By what authority are they removed? Records show that some of these parts have a value of $20 to $30 each and in many cases as many as twenty (20) parts are missing!

10.26.2 Description of Current Process Problems

10.26.3 Description of New Process

An investigation into this matter has been made and an employee was given a cash award for bringing this matter to the attention of his managers but no resolution to the problem has been effected as of this date.(See Attachment.)

10.26.4 Rationale Leading to Change

10.26.5 Estimated Cost Savings

(See Attachment.)

10.26.6 Implementation Cost/Schedule

THIS IS A COPY FROM THE "ORIGINAL"

TO: ALC/DPF/Donna Layfield

FROM: Wendell T. Pittman (926-4812)

DATE:

REF.: Reopen and Reevaluate Suggestion #863055

Ms. Layfield:

I would like to have this suggestion re-opened and re-evaluated.

I have been trying to get someone to realize that the Government could have been saving money since 1984. Nothing has seemed to have any effect.

The latter part of 1987 I contacted the Fraud Waste and Abuse Division and they checked into the matter. After an inquiry and finding that on a lot that Petal Doors coming to Depot Maintainance are stored on over half the doors. Out of 22 doors, 12 were minus strakes. If I remember right they had the suggestion re-submitted and it was further implemented by on through the General.

Some time around the first of the year I was instructed that a $250.00 settlement could be made on the suggestion or a $100.00 awared would be paid and the suggestion would be further evaluated. After a period of time I was told that the implementation process had been completed and that the personnel in the field could not or would not comply with the directives so therefore my suggestion warranted no further compensation.

On the 11th of December, 1980, the doors were numbered and logged coming into the shop. From then until 17 August 1984 some of the doors were marked with or without strakes. I wasn't there all this period of time so I can't verify that everything was logged. But I can authenticate the validity of these facts. From Door #819 thru Door #1131 ther were 96 doors sent to Depot Maintainance minus strake assemblies. At approximately 3,000.00 per strake this was a loss of 288 thousand dollars. From 17 August 1984 through January 1, 1988 I have no accurate count as to missing strakes except for the fact that out of even 20 doors 12 were missing strakes. Since my suggestion was implemented, there has been a drastic change from January 1988. July 15, 1988 the Petal Door shop has been delivers 34 doors for repair.

Out of these 34 doors only 3 have been minus strake. So as you can see this has been a tremendous reduction in lost strakes since my suggestion was put in force. Since 1981 my guess would be that over one half million dollars have been lost due careless and unattention. From 12 out of 20 doors missing strakes in the latter part of 1987 to 3 out of 34 door missing strakes should warrant a monetary re-evaluation. If you would please look into this matter for me.

Thanking you in advance,

Wendell T. Pittman
MANPSA/WR-ALC WRAFB/926-4812

cc: Shirley L. Wade, Manager
Air Force Management
Engineering Agency
Randolph AFB, Texas

Honorable Sam Nunn
U. S. Senate
Washington, D.C.

51454A

Left Hand Strake Assembly

1560009466505	3F40353	279	$132.49
1560009466503	"	281	78.92
1560009466501	"	283	148.21
1560004656499	"	285	204.99
1560004653971JH	"	141	34.51
1560001823974JH	"	143	24.07
1560004605362JH	"	145	37.07
1560004653418JH	"	147	46.16
1560004653969JH	"	243	23.71
1560004600716JH	"	149	91.00
1560004603420JH	"	151	98.68
1560004660743JH	"	153	90.10
1560004653977JH	"	269	49.18
1560004907654JH	"	199	92.53
1560004907656JH	"	201	92.61
1560004907657JH	"	203	49.75
1560004907667JH	"	257	60.77
1560004907670JH	"	271	17.63

51455A

Right Hand Strake Assembly

1560009466504	3F40353	280	$ 94.36
1560009466502	"	282	109.15
1560009466500	"	284	86.70
1560009466508	"	286	189.30
1560001825369JH	"	146	59.13
1560004653973JH	"	142	35.11
1560002243239JH	"	148	51.91
1560004653975JH	"	144	29.81
1560004653968JH	"	244	25.68
1560P0775322065	"	258	57.78
1560004603419JH	"	150	77.39
1560P0949672065	"	152	175.93
1560004603421JH	"	154	78.92
1560004653981JH	"	270	32.69
1560004657655JH	"	200	25.77
1560004907658JH	"	204	46.40
1560004907669JH	"	258	57.36
1560004907671JH	"	272	82.09
1560P077532F	3F40352	228	83.62

10.0 83

~~10.27~~ QUICK FIX OPPORTUNITY TO MAKE USE OF AND ASSIGN MORE MANUFACTURING RESPONSIBILITY TO THE PLANNING SECTION FOR ALL MANUFACTURING/ENGINEERING COORDINATION (MANPS).

10.27.1 Description of Current Operations

When the manufacturing people (mechanics) have problems pertaining to the engineering and other data requirements for a particular unit being repaired they most often contact the technical support people, such as the manufacturing, tooling, facilities, or materials engineer in a DIRECT contact manner.

Usually the mechanics are not as well-versed as the planner as to the overall part requirement and design intent and consequently should take the problem through the planner for him to make the contact.

10.27.2 Description of Current Process Problems

10.27.3 Description of New Process

Make better use of the Planning Section to help solve ALL problems involving the technical implementation of the Work Control Document (WCD).

10.27.4 Rationale Leading to Change

10.27.5 Estimated Cost Savings

When the planner is contacted he will be in a better position to:

- Assist the mechanic to prevent work stoppages.
- Revise the WCD, when required.
- Coordinate the production effort.
- Influence the standard hour requirement.
- Help solve tooling problems and requirements.
- Etc.

10.27.6 Implementation Cost/Schedule

10.P

~~10.29~~ QUICK FIX OPPORTUNITY TO STUDY TO OBTAIN BETTER QUALITY/DELIVERY FOR THE PETAL DOOR INNER/OUTER SKIN ASSEMBLIES FROM THE NEW SUBCONTRACTOR (MANPSA).

10.29.1 Description of Current Operations

The new inner skin and outer skin bonded assemblies for the Petal Door, which are made off-site at a Sub-Contractor, require inspection and repair work on the new assemblies before they are acceptable to be used. These new skins are sometime dented, scratched, have voids, have delaminations, etc. that require time and effort to fix before they can be used as acceptable parts. Also, the potted location for the attachment fasteners require re-potting in the honeycomb skin area due to not falling within the potted area. A cursory investigation shows that an increase in the potting area diameter from about one-half inch to about one inch could possibly eliminate the problem of re-potting. Most of the damage problems aforementioned are the fault of WR-ALC but the voids, delaminations, or core damage are most likely the fault of the Sub-Contractor.

10.29.2 Description of Current Process Problems

10.29.3 Description of New Process

Redesign the Petal Door Assembly jig to allow a greater amount of work to be performed in the jig without having to remove the parts so often. At the present time the skin assemblies and the frame parts require removal and replacement approximately six (6) times for each door. This could be reduced by adding a "Box-Jig" adaptation that would allow the skins to be folded back out of the way rather than removing the skins and the frame from the jig each time. More jigs are required for the current workload of Petal Doors.

10.29.4 Rationale Leading to Change

10.29.5 Estimated Cost Savings

An investigation team should be formed to ascertain how much time and money is being spent to rework these "New" Inner Skin and Outer Skin Assemblies and visit the new Subcontractor, if necessary.

A cursory investigation has also discovered that these skin assemblies frequently are not made to the correct contour! After reviewing the bonding capabilities and the autoclave facilities MDMSC has concluded that both of these skin assemblies should be made at WR-ALC!

10.29.6 Implementation Cost/Schedule

10.Q

~~10.30~~ QUICK FIX OPPORTUNITY TO MAKE BETTER USE OF QUALITY PEOPLE TO HELP SOLVE PROBLEMS RELATED TO THE REPAIR EFFORTS (MANPS).

10.30.1 Description of Current Operations

The Supervisors and their Designees often do not call the Quality Assurance Specialist to help solve problems arising from the repair effort.

10.30.2 Description of Current Process Problems

10.30.3 Description of New Process

The Quality Assurance Specialist should be used by issuing a Request for Quality Assistance (RQA) (AFLC Form 354).

The Quality Assurance Specialist will use the skills and facilities available to develop valid solutions or recommendations on all RQAs. Examples include: Quality Engineering, Methods Improvement Laboratory, chemical or materials laboratories, and subject matter specialists from other divisions or directorates. All corrective actions will be thoroughly coordinated with all activities having a primary or collateral responsibility.

10.30.4 Rationale Leading to Change

10.30.5 Estimated Cost Savings

Time will be reduced and/or work efficiency will be increased and as a result the production rate increased. (See attached copy of MAOI 74-2.)

10.30.6 Implementation Cost/Schedule

WARNER ROBINS AIR LOGISTICS CENTER
Directorate of Maintenance
Robins Air Force Base GA 31098

MA OPERATING INSTRUCTION 74-2

23 June 1988

Quality and Reliability Assurance

REQUEST FOR QUALITY ASSISTANCE (RQA)

This MAOI outlines procedures for submitting a Request for Quality Assistance (RQA). This instruction applies to all employees and organizations in the Directorate of Maintenance (MA).

1. **GENERAL.** The purpose of the RQA program is to provide all employees with a medium to seek solutions for a known or suspected problem on any product, process, system, or procedure that may adversely impact the quality of products or services produced by this activity.

*2. **REQUIREMENTS.** AFLC Form 354, Request for Quality Assistance (RQA), is a means of initiating requests to the Product Quality and Reliability Division (MAQ) when initial investigative actions have failed to remedy the problem. Anyone who recognizes or suspects a problem may initiate an RQA. The RQA will not be used for resolution of personal grievances, subjects covered by the Master Labor Agreement, matters under the jurisdiction of 40-series regulations, or items covered by other programs (component failures-use QDR, tech data errors-use AFTO Form 22, etc).

3. **PROCEDURES:**

a. Individuals requesting Quality Assistance will:

(1) Prepare AFLC Form 354 when a suspected or known deficiency is compromising the quality of a product produced by MA.

*(2) Complete all blanks of Part I of AFLC Form 354 and forward t the applicable Quality Branch (MAQ_). Routing through section and/or branch office is at the option of the applicable division. The form may be handscribed.

(3) State the deficient condition in sufficient detail to aid investigation; that is, include attachments, national stock numbers (NSNs), technical orders (TOs), etc.

(4) Assist Quality Assurance Specialist during problem review.

b. Applicable Quality Branch (MAQ_) will:

(1) Maintain an RQA log book reflecting the RQA control number, date request received, subject, initiator's name, office symbol, suspense date, and date project closed.

(a) The control number will be comprised of the Quality Branch symbol, the last two digits of the year, and the numerical sequence of the project (for example, MAQB-86-1).

(b) A suspense date of not more than 25 workdays will be established.

(2) Contact the originator of the RQA to obtain additional information as required.

(3) Perform a comprehensive evaluation concerning the problem identified through the RQA.

Supersedes MAOI 74-2, 18 Apr 86.
OPR: MAQSS (Sue Pierce)
Editor: Wanda B. Wood
Distribution: F,
X: AUDGN, MMIMF-Q, 2853 ABG/DAP.....1 ea

(4) Coordinate all findings/recommendations with responsible supervisors.

(5) Provide the initiator a thorough report, with recommendations, if applicable, within established suspense date. Also, provide copies to other organizations with an interest in or collateral responsibility for the problem or for actions associated with the solutions or recommendations. If evaluation cannot be completed within required suspense date, provide initiator with an interim status report.

(6) Initiate requests to effect changes to technical orders, regulations, or other directives when needed.

(7) Provide all recipients of the initial report with copies of all follow-on correspondence.

(8) Maintain a file on completed RQA actions in accordance with MAQOI 74-1.

c. The Quality Assurance Specialist will use the skills and facilities available to develop valid solutions or recommendations on all RQAs. Examples include: Quality Engineering, Methods Improvement Laboratory, chemical or materials laboratories, and subject matter specialists from other divisions or directorates. All corrective actions will be thoroughly coordinated with all activities having a primary or collateral responsibility.

d. Applicable personnel shall assist the Quality Assurance Specialist during evaluation process and assure corrective actions are taken when a problem is identified to their particular area.

FOR THE DIRECTOR

WALTER R. PEACOCK, Jr., Col. USAF
Chief, Resources Management Division
Directorate of Maintenance

1 Attachment
AFLC Form 354 (Sample)

REQUEST FOR QUALITY ASSISTANCE (RQA)

TO	FROM (Name, Organization, Extension)	DATE
MAQ N	Jane Doe/MANPM/3491	4 Apr 86

SUBJECT
(System/Item/Process)

PROBLEM/CONDITION/RECOMMENDATION (If needed, continue on reverse. Do not write below this block.)

(Define problem in sufficient detail, state previous actions taken to resolve problem, attach all pertinent information - drawings, previous correspondence, etc.)

SIGNATURE
(Signature of Initiator)

REPORT

TO	FROM	CONTROL NUMBER	DATE
MANPM	MAQ NM	MAQN-86-3	14 Apr 86

BENEFITS DERIVED/EXPECTED (If applicable)

(Provide findings, recommendations, action taken, and benefits derived.)

CORRECTIVE ACTION ON THIS REPORT IS

[x] COMPLETE [ ] PENDING [ ] NOT REQUIRED

MAQ MANHOURS: 14 hrs

SIGNATURE	ORGANIZATION	EXTENSION
(Section Level)	MAQNE	2441

AFLC FORM JAN 86 354 PREVIOUS EDITION WILL BE USED SAMPLE - NOT TO BE REPRODUCED.

REPAIR OF C-130 SECONDARY EXHAUST NOZZLE
1560-00-959-2302JH
P/N 3P22519-197
MISTR C/N 51344A OPER: 00100

1. Nozzle is received in storage lot, building 163. The MIC personnel unbox the nozzle. The MIC personnel transport nozzle to Depaint area, building 180. The nozzle is depainted at building 180 and transported to storage lot, building 603.

2. The nozzle is transferred from storage lot to work table in Repair Shop, building 603.

3. The nozzle is disassembled, removing outer sheet metal components for access to steam clean all area of nozzle. The excess sealer and bulk material is scraped off nozzle for better cleaning. Nozzle and all removed parts are routed back to Depaint for steam cleaning.

4. The repair of nozzle is broken down into following categories:

01. Tear down for steam cleaning.
02. Remove nozzle flange/ring and dye-penetrant check.
03. Remove sealant and inspect for damage.
04. Remove and repair interior damage components (seal nozzle on inside)
05. Repair/Replace/Install outer sheet metal components.
06. Seal nozzle.

No two nozzles will have the same amount of damage. The study was developed by using the listed categories and marking what the workers were doing at the time of observation. The workers follow a repair procedure of working all damage on the inside of nozzle, first repairing damage on outside of nozzle.

5. After the repair of the nozzle, it is electrical checked.

6. The technique used to establish this Labor Standard for repair of nozzle:

A. GTT was used for repair because a group of workers were working several nozzles close together. Each worker listed on AFLC Form 247 worked a nozzle through the complete repair except where an asterisk * is marked during study.

B. GTT was used to cover the group of workers. Each nozzle was studied for repair only.

7. All walking distances are recorded on shop layout sheet.

METHOD IMPROVEMENT STUDY

1. During the Method Improvement Study, the following conditions were found:

   a. Nozzles were located all over the Repair Shop.

   b. Hardware christmas trees were not complete.

   c. Direct material was stored all over Repair Shop.

   d. Some repair tables were not tied together. (Safety hazard to workers)

   e. One worker was used to repair nozzle. This caused a delay in production.

   f. Sealant was removed by hand method which is a time-consuming operation.

2. The following actions have been taken to correct listed conditions:

   a. Nozzles were located in one area of Repair Shop.

   b. Hardware christmas trees were completed with complete line of hardware for nozzles.

   c. A direct material storage area has been established for control of all direct material.

   d. Repair tables connected for safety of personnel.

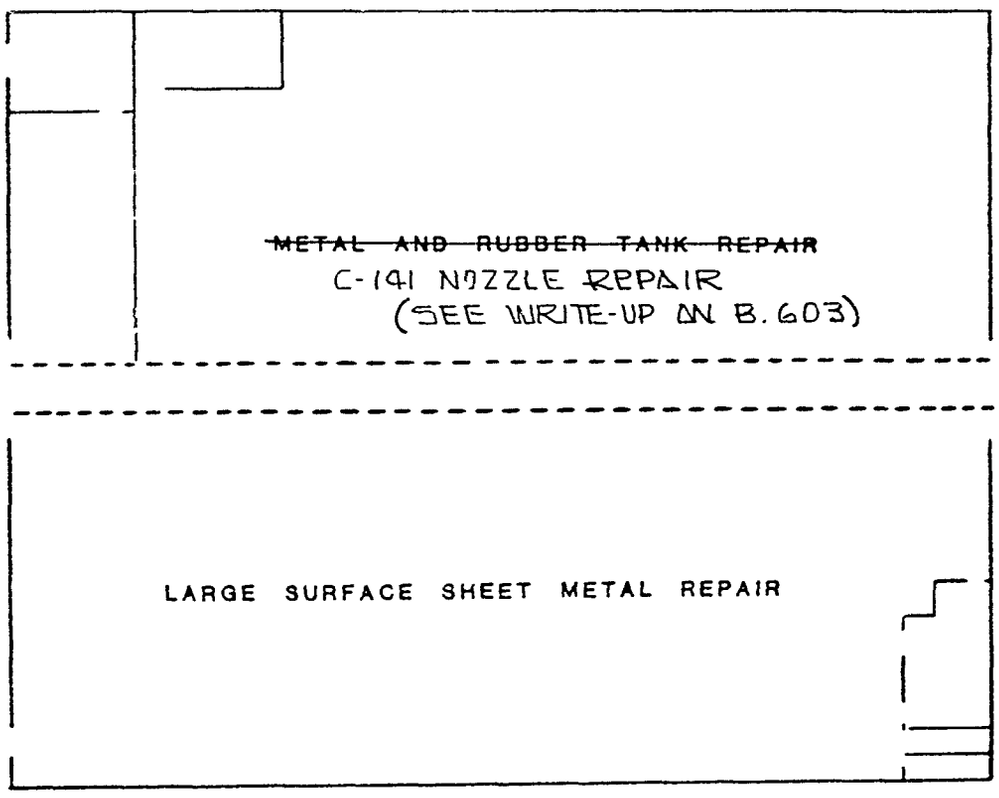
   e. A team of two workers are used to repair each nozzle to increase production. (A team of journeymen, WG-10, and a helper, WG-08)

   f. Change removal of all sealant to a water-pic operation.

3. Due to the increase of demand for nozzles, the two-man teams for nozzles has increased production.

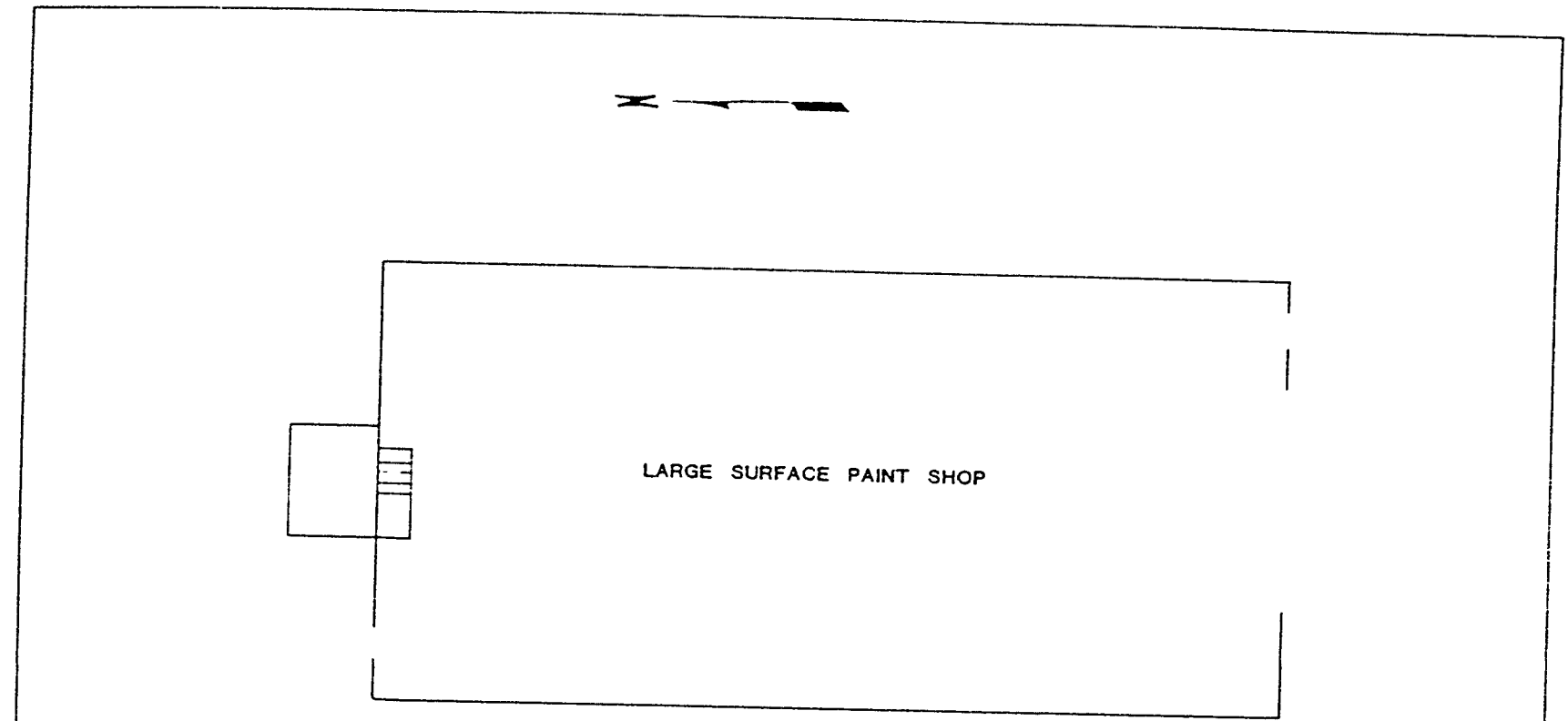
COVER SI T

STEP	CATEGORY	MEAN MINUTES	OCCURRENCE FACTOR	TOTAL MINUTES	PF & D 13%	BASE MINUTES	STD HOURS
1	Tear Down & Steam Clean	668.58	100	668.58	86.915	755.495	12.591
2	Remove Parts & Inspect	303.65	100	303.65	39.474	343.125	5.719
3	Remove Sealant & Inspect	810.19	100	810.19	105.325	915.515	15.259
4	Remove/Repair/Replace Interior Parts	10070.09	100	10070.09	1309.112	11379.201	189.653
5	Remove/Repair/Replace Exterior Parts	11035.83	100	11035.83	1434.658	12470.487	207.841
6	Seal Nozzle	381.94	100	381.94	49.652	431.592	7.193
	Total Std Hrs						438.256
	This Labor Standard has been coordinated						
	with the following activities:						
	MANPSD Gary D. Steele						
	MANPS Curtis R Cowles						
	MANERS Wilma L Norris 26 Nov. 86						
	MANER Jackie D Clyburn						



BLDG-603

INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE. WARNER ROBINS AIR LOGISTICS CENTER



BLDG 605

INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER

FLOW PROCESS CHART

1. NUMBER: Ø3172A | 2 PAGE NO: 1 | 3. NO OF PGS: 2

4. PROCESS: REPAIR CANOPY

6. ☒ MAN OR ☐ MATERIAL

7. CHART BEGINS: Receive FROM DEPACK

8. CHART ENDS: TURN-IN TO SUPPLY

9. CHARTED BY: D.J. TURNER

10. DATE: JAN. 89

11. ORGANIZATION: MNPSDP

5 SUMMARY

a. ACTIONS	b. PRESENT NO.	b. PRESENT TIME	c. PROPOSED NO	c. PROPOSED TIME	DIFFERENCE NO	DIFFERENCE TIME
○ OPERATIONS						
⇨ TRANSPORTATIONS						
□ INSPECTIONS						
D DELAYS						
▽ STORAGES						
DISTANCE TRAVELLED (Feet)						

12a. DETAILS OF ☐ PRESENT ☐ PROPOSED METHOD	b. OPERATION	TRANSPORTATION	INSPECTION	DELAY	STORAGE	c. DISTANCE IN FEET	d. QUANTITY	e. TIME	f. ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	g. NOTES	h. ANALYSIS ELIMINATE	COMBINE	CH SEQUENCE	PLACE	PERSON	IMPROVE
1. Receive FROM DEPACK	○	●	□	D	▽															
2. Move CANOPY To Bldg 670	○	●	□	D	▽	2.5		.32						2.5 miles						
3. Place CANOPY IN WORK AREA ON Padded Work STAND	●	⇨	□	D	▽															
4. Teardown CANOPY	●	⇨	□	D	▽															
5. EVALUATE DAMAGE	○	⇨	■	D	▽															
6. Order PARTS To REPLACE	●	⇨	□	D	▽															
7. Move CANOPY FRAME To Bldg 669	○	●	□	D	▽	2.5		.32						2.5 miles						
8. REMOVE PAINT (HULL SIDE)	●	⇨	□	D	▽															
9. Move CANOPY FRAME To Bldg 670	○	●	□	D	▽	2.5		.32						2.5 miles						
10. Place CANOPY FRAME ON Padded Work STAND.	●	⇨	□	D	▽															
11. Remove EXCESS Sealer AND PAINT.	●	⇨	□	D	▽															
12. INSPECT FRAME For Corrosion	○	⇨	■	D	▽															
13. INSPECT FRAME For DAMAGE AND Correct Hole dimensions.	○	⇨	■	D	▽															
14. INSPECT Corner FITTINGS To Determine MATERIAL Type.	○	⇨	■	D	▽															
15. INSPECT FRAME For Oil CAN.	○	⇨	■	D	▽															
16. INSPECT SEAL TRACKS For Gouges, Breaks, Cracks AND CHAFING	○	⇨	■	D	▽															
17. Remove Corrosion AND Replace DAMAGED PARTS.	●	⇨	□	D	▽															
18. Repair All Sheet METAL DAMAGE	●	⇨	□	D	▽															
19. INSPECT FAIRINGS For DAMAGE	○	⇨	■	D	▽															
20. Repair FAIRINGS.	●	⇨	□	D	▽															
21. Clean CANOPY FRAME	●	⇨	□	D	▽															

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DETAILS OF ☐ PRESENT ☐ PROPOSED METHOD	OPERATION	TRANSPORTATION	INSPECTION	DELAY	STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT? WHERE? WHEN? WHO? HOW?	NOTES	ANALYSIS ELIMINATE COMBINE SEQUENCE PLACE PERSON IMPROVE CM
22. Seal CANOPY Frame	●	⇨	□	D	▽						
23. Prepare CANOPY Frame For PAINTING.	●	⇨	□	D	▽						
24. Move To PAINT AREA	○	●	□	D	▽						
25. PAINT CANOPY Frame.	●	⇨	□	D	▽						
26. Cure PAINT (Drying)	○	⇨	□		▽						
27. Move CANOPY Frame TO OVERHAUL WORK AREA.	○	●	□	D	▽						
28. Load CANOP FRAME INTO Over Haul FIXTURE AND Check Tolerance	●	⇨	□	D	▽						
29. INSPECT Side Frame For Twisted CONDITION.	○	⇨	■	D	▽						
30. INSPECT CANOPY Frame For Bowed CONDITION.	○	⇨	■	D	▽						
31. INSPECT AFT FAIRINGS and HINGE ARMS.	○	⇨	■	D	▽						
INSPECT Side RESTRAINT AND Arch Dementions.	○	⇨	■	D	▽						
33. Remove AND Replace Damage COMPONENTS ON CANOPY FRAME	●	⇨	□	D	▽						
34. Relocate ARCH For Proper ALIGNMENT.	●	⇨	□	D	▽						
35. Replace Corner FITTING (Shime - INPLACE WITH ARCH)	●	⇨	□	D	▽						
36. CURE Liquid Shim 1751	●	⇨	□	D	▽						
37. Remove ARCH, SAND OF EXCESS LIQUID Shim. TREAT AND PAINT.	●	⇨	□	D	▽						
38. Reinstall ARCH using PRO SEAL 890 AND FASTENERS.	●	⇨	□	D	▽						
39. INSPECT ARCH STIFFENER	○	⇨	■	D	▽						
40. Replace ARCH STIFFENER	●	⇨	□	D	▽						
41. INSTALL ARCH STIFFENER USING LIQUID Shim & FASTENERS.	●	⇨	□	D	▽						
42. INSPECT Corner FITTING INDEX PINS For ALIGNMENT.	○	⇨	■	D	▽						
43. Drill TRANSPARENCY Holes OVERSIZE.	●	⇨	□	D	▽						
44. Debur AND METAL Treat Holes.	●	⇨	□	D	▽						
45. CUT Rubber STRIPS	●	⇨	□	D	▽						
46. Clean Frame AND Rubber STRIPS	●	⇨	□	D	▽						
47. Apply Adhesive To Rubber STRIPS AND CANOPY Frame.	●	⇨	□	D	▽						
48. INSTALL Rubber STRIPS To CANOPY Frame	●	⇨	□	D	▽						

DETAILS OF ☐ PRESENT ☐ PROPOSED METHOD	OPERATION	TRANSPORTATION	INSPECTION	DELAY	STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	NOTES	ANALYSIS ELIMINATE	COMBINE	CH SEQUENCE	PLACE	PERSON	IMPROVE
22. INSPECT CANOPY AREA FOR SAD ON OUTSIDE.	○	⇨	■	D	▽															
23. INSPECT 68A350721 CANOPY SUPPORT FOR CLEARANCE OF FAIRING.	○	⇨	■	D	▽															
24. REMOVE CANOPY FROM OVERHAUL FIXTURE	●	⇨	□	D	▽															
25. INSTALL SPLICE PLATES TO AFT. FAIRINGS	●	⇨	□	D	▽															
26. SHIM FAIRINGS AND INSTALL FASTENERS.	●	⇨	□	D	▽															
27. INSTALL BRACKETS, COMPASS SUPPORT AND HANDLE.	●	⇨	□	D	▽															
28. PREPARE CANOPY FOR SEALING	●	⇨	□	D	▽															
29. SEAL CANOPY	●	⇨	□	D	▽															
30. INSTALL CABLE GUARD AND SUPPORT CABLE.	●	⇨	□	D	▽															
31. INSTALL PIVOT & GROMMETS, MARKERS, TUBES AND CLAMPS	●	⇨	□	D	▽															
32. INSPECT PRIOR TO PAINTING	○	⇨	■	D	▽															
33. CLEAN & TAPE CANOPY FOR PAINTING	●	⇨	□	D	▽															
34. MOVE TO PAINT AREA	○	⇨	□	D	▽															
35. PAINT CANOPY	●	⇨	□	D	▽															
36. CURE PAINT	○	⇨	□	D	●															
37. MOVE TO OVERHAUL WORK AREA	○	⇨	□	D	▽															
38. PREPARE CANOPY KIT.	●	⇨	□	D	▽															
39. INSTALL WARNING DECAL AND HISTORICAL DATA DECAL.	●	⇨	□	D	▽															
40. INSTALL AFT LATCHES.	●	⇨	□	D	▽															
41. PLACE CANOPY KIT INSIDE OF CANOPY.	●	⇨	□	D	▽															
42. FINAL INSPECTED	○	⇨	■	D	▽															
43. MOVE TO SHIPPING AREA	○	⇨	□	D	▽															
44. TURN-IN TO SUPPLY	○	⇨	□	D	●															
45.	○	⇨	□	D	▽															
46.	○	⇨	□	D	▽															
47.	○	⇨	□	D	▽															
48.	○	⇨	□	D	▽															

FLOW PROCESS CHART

1. NUMBER	2 PAGE NO	3 NO OF PGS
83172	2	2

4. PROCESS: Repair Canopy

6. ☒ MAN OR ☐ MATERIAL

7. CHART BEGINS: Receive From DePACK

8. CHART ENDS: Turn In To Supply

9. CHARTED BY:

10. DATE: JAN 82

11. ORGANIZATION: MMDSDP

5. SUMMARY

a. ACTIONS	b. PRESENT NO.	b. PRESENT TIME	c. PROPOSED NO.	c. PROPOSED TIME	d. DIFFERENCE NO.	d. DIFFERENCE TIME
○ OPERATIONS						
⇨ TRANSPORTATIONS						
□ INSPECTIONS						
D DELAYS						
▽ STORAGES						
DISTANCE TRAVELLED (Feet)						

12a. DETAILS OF ☒ PRESENT ☐ PROPOSED METHOD	b. OPERATION	TRANSPORTATION	INSPECTION	DELAY	STORAGE	c. DISTANCE IN FEET	d. QUANTITY	e. TIME	f. ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	g. NOTES	h. ANALYSIS CH ELIMINATE	COMBINE	SEQUENCE	PLACE	PERSON	IMPROVE
1. Punch Holes IN Rubber FOR Transparency Fastener	●	⇨	□	D	▽															
2. INSPECT FWD & AFT Transparencies For LAMINAR CRACKS & DAMAGE.	○	⇨	■	D	▽									New Transparencies are used. Laminar Crack Insp. Req.						
3. Radius Lower Edge OF Foward Transparency	●	⇨	□	D	▽															
4. Center And Secure Foward Transparency For Placement	●	⇨	□	D	▽															
5. Pilot Drill Transparencys	●	⇨	□	D	▽															
6. Remove FWD Transparency Place on Padded Work Surface	●	⇨	□	D	▽															
7. Center And Secure AFT Transparency For Placement	●	⇨	□	D	▽															
8. Pilot Drill AFT Transparency	●	⇨	□	D	▽															
9. Remove AFT Transparency Place on Padded Work Surface	●	⇨	□	D	▽															
10. Drill, Countersink And Ream Holes Foward And AFT. Transparency	●	⇨	□	D	▽															
11. Debur And Clean Holes IN Transparencies	●	⇨	□	D	▽															
12. INSPECT Holes IN Transparencies	○	⇨	■	D	▽															
13. Trim Transparencies For Edge Distance	●	⇨	□	D	▽															
14. Clean Canopy Frame For Transparency Installation	●	⇨	□	D	▽															
15. Secure Canopy Frame INTO Overhaul Fixture With Clamps	●	⇨	□	D	▽															
16. Install Transparencys	●	⇨	□	D	▽															
17. INSPECT Foward Fairing	○	⇨	■	D	▽															
18. Replace Foward Fairing.	●	⇨	□	D	▽															
19. INSPECT Foward Fairing Height And Edge Distance	○	⇨	■	D	▽															
20. Shim. Fairing Using Shim Stock	●	⇨	□	D	▽															
21. INSPECT Shims For Bonded Condition.	○	⇨	■	D	▽															

DD FORM 1 SEP 76 1723

AFLCR 66-11

SHOP FLOW DAY STANDARD
MISTR C/N 03172-A REVIEW DATE 10 MAR 89

A(((B / C) + D + E) / F)

A = CONVERSION FACTOR, CHANGING WORKDAYS TO CALENDAR DAYS A = 1.46 — A = 1.46

B = ITEM STANDARD HOURS / NUMBER OF WORKERS TOTAL FOR ALL SHOPS 278.35 / 2 = B — B = 139.18

C = (a) Obtain the RCC yearly indirect time values for duty codes (G037G - EH1 - M1 - MEH)

Duty Code	% Value	Duty Code	% Value
24	0.2	25	0.0
26	2.5	29	0.1

1.00 - 0.028 (a) = 0.972

(b) Obtain the RCC efficiency factor from the G037G - FD1 - D2 - MFD (YR 89)

JAN	92.2	MAY	105.4	SEP	96.4
FEB	93.7	JUN	95.5	OCT	87.2
MAR	96.2	JUL	81.2	NOV	95.4
APR	103.3	AUG	75.9	DEC	95.6

TOTAL 1118 - 12 = 93.166 (b) = 93.17 C = 90.56

Multiply (a) X (b) = C

D = Process Support

	12 Hours
244 Card input/output DO33 System	.96
Transportation time between RCC moves	ϕ
Packing	3.54
Unpacking	12.00
Awaiting Maintenance	ϕ
Inspection	ϕ
Other	

D = 29.50

E = Unique Process Support

	Hrs
Plating Process	ϕ
Welding Process	ϕ
Heat Treat Process	ϕ
Paint Process	8
Electrical	ϕ
Wet Tape Test	ϕ
Wet Cleaning	ϕ
Other	ϕ

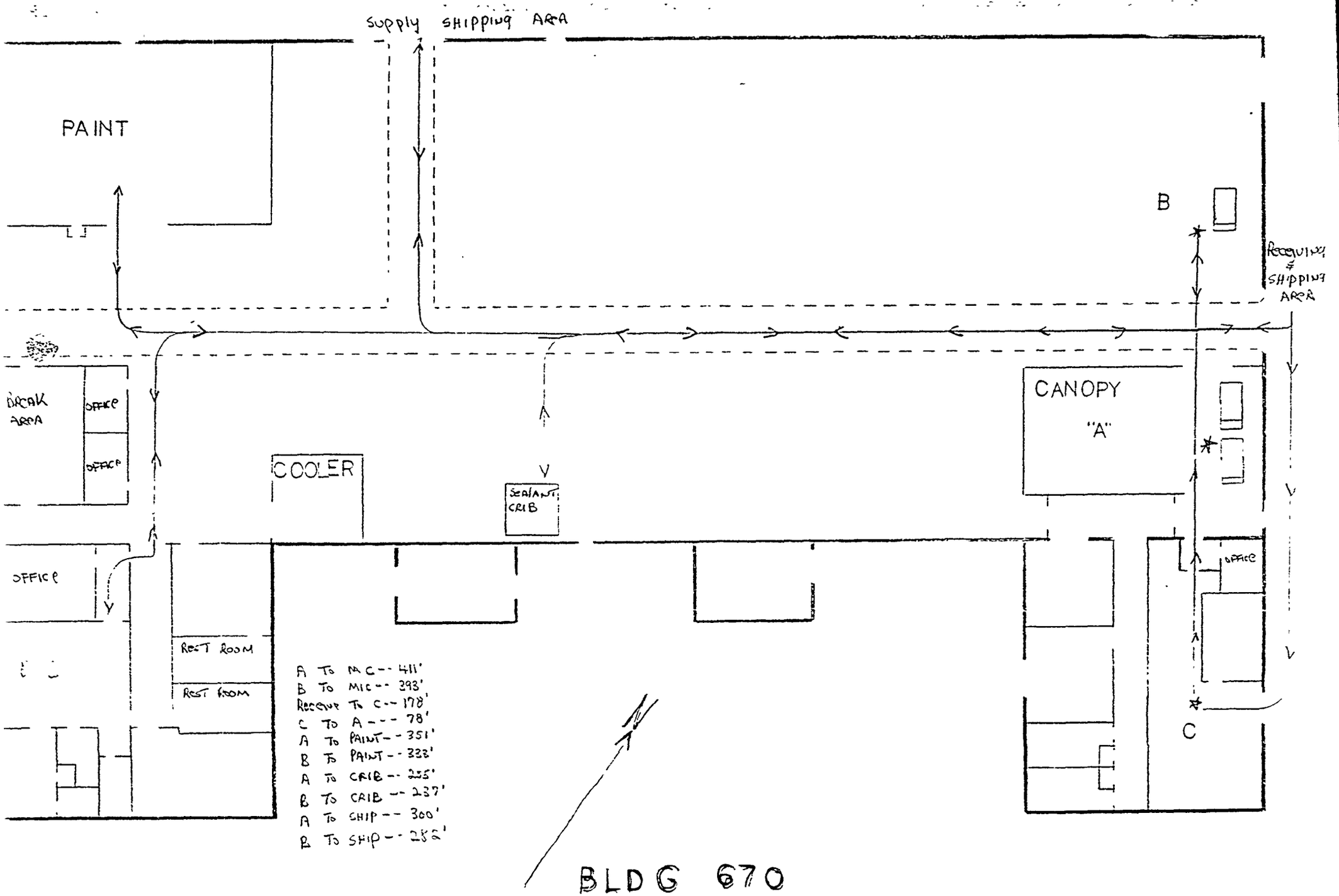
E = 8.ϕ

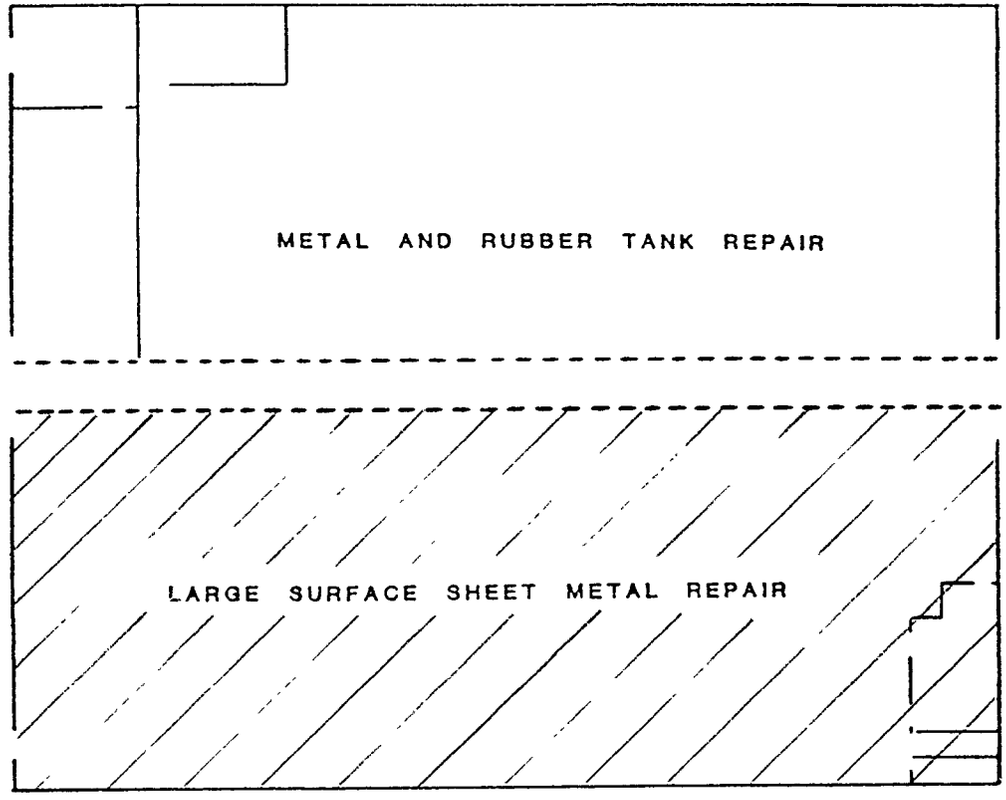
F = Shift Hours (8) X # of Shifts Working = 2 F = 16

A(((B / C) + D + E) / F)

Number of Flow Days 17

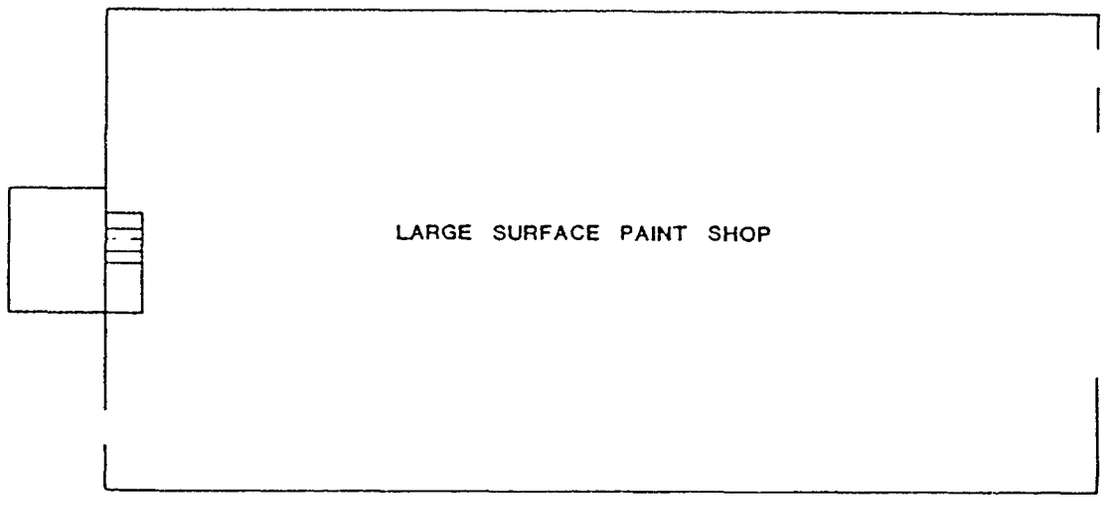
1.46(((139.18 ÷ 90.56) + 29.50 + 8.0) ÷ 16 =


Supply Shipping Area
PAINT
B
Receiving & Shipping Area
BREAK AREA
OFFICE
OFFICE
COOLER
SEALANT CRIB
CANOPY "A"
OFFICE
OFFICE
REST ROOM
REST ROOM
A To MC -- 411'
B To MIC -- 393'
Receive To C -- 178'
C To A --- 78'
A To PAINT -- 351'
B To PAINT -- 338'
A To CRIB -- 255'
B To CRIB -- 237'
A To SHIP -- 300'
B To SHIP -- 282'
C
BLDG 670



BLDG-603

INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER



BLDG 605

INDUSTRIAL PRODUCTS DIVISION
DIRECTORATE OF MAINTENANCE, WARNER ROBINS AIR LOGISTICS CENTER

PART OPERATION SUMMARY

ALC WARNER ROBBINS RCC: MANPDC

PN. 3P22591-197 NSN PCN: 51344A WCD: MBB15C WCD DATE. 88061

OPERATION: ZPRT BACKSHOP OPERATION TYPE MATERIAL TYPE
SAMPLE SIZE: . MISSING FLOWTIMES END ITEMS. OUTLIERS DELETED.

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0	.
0	.
0	.
0	.
0	.
0	
0	.
0	.
0	.
0	.
>= 0	.

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	. .	.	.
TRIANGULAR	.	.	
NORMAL	.		
LOGNORMAL			.
EXPONENTIAL			.

OCCURRANCE FACTOR: . OCCURRANCES: .

DISTRIBUTION OF CHOICE

PART OPERATION SUMMARY

ALC. WARNER ROBBINS RCC: MANPDC

PN. 3922591-197 NSN· PCN: 51344A WCD: MBC15C WCD DATE 88154

OPERATION: ZPRT BACKSHOP OPERATION TYPE MATERIAL TYPE:
SAMPLE SIZE. . MISSING FLOWTIMES: END ITEMS . OUTLIERS DELETED·

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100	DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
0		UNIFORM	.		.
0	.	TRIANGULAR			
0		NORMAL		.	.
0	.	LOGNORMAL			
0		EXPONENTIAL	.	.	
0	.				
0					
0	.				
0		OCCURRANCE FACTOR: .	OCCURRANCES:		
0	.				
>= 0	.	DISTRIBUTION OF CHOICE			

PART OPERATION SUMMARY

ALC. WARNER ROBBINS RCC. MANPDB

PN: 3P22591-197 NSN PCN: 51344A WCD MBD15C WCD DATE. 88061

OPERATION. ZPRT BACKSHOP OPERATION TYPE MATERIAL TYPE.
SAMPLE SIZE: . MISSING FLOWTIMES. END ITEMS: . OUTLIERS DELETED .

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100	DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
0	.	UNIFORM	. .	.	.
0	.	TRIANGULAR	. . .		.
0	.	NORMAL	.		.
0	.	LOGNORMAL	.		.
0	.	EXPONENTIAL	.	.	.
0					
0	.				
0					
0		OCCURRANCE FACTOR.	OCCURRANCES.		
0	.				
>= 0	.	DISTRIBUTION OF CHOICE.			

PART OPERATION SUMMARY

ALC WARNER ROBBINS RCC: MANPDB

PN: 3922591-197 NSN: PCN: 51344A WCD: MBE15C WCD DATE: 88061

OPERATION: ZPRT BACKSHOP OPERATION TYPE: MATERIAL TYPE:
SAMPLE SIZE: . MISSING FLOWTIMES. . END ITEMS: . OUTLIERS DELETED .

MANPOWER REQUIRED		--- TIME ---		EQUIPMENT REQUIRED			--- TIME ---		BATCH	
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN	MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0	.
0	
0	.
0	
0	
0	
0	
0	.
0	.
0	.
>= 0	.

DISTRIBUTION	PARAMETERS		D VALUE	D ALPHA
UNIFORM	.	.	.	.
TRIANGULAR	.	.	.	
NORMAL	.	.	.	.
LOGNORMAL	.		.	
EXPONENTIAL	.		.	

OCCURRANCE FACTOR: . OCCURRANCES:

DISTRIBUTION OF CHOICE.

PART OPERATION SUMMARY

ALC: WARNER ROBBINS RCC MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN: 3P22591-197 NSN: PCN: 51344A WCD. MB015C WCD DATE: 88061

OPERATION: ZPRT PRIMARY OPERATION TYPE. PROC MATERIAL TYPE.
SAMPLE SIZE: 19 MISSING FLOWTIMES. 0 END ITEMS: . OUTLIERS DELETED: 0

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 21	********
20 0	
40 21	********
60 11	****
80 11	****
100 5	**
120 21	********
140 11	****
160 0	
180 0	
>=00 0	

DISTRIBUTION	PARAMETERS			D VALUE	D ALPHA
UNIFORM	0.0		153.0	0.152	1.00
TRIANGULAR	0.0	0.0	159.0	0.240	0.19
NORMAL	78.7	51.9		0.092	1.00
LOGNORMAL	78.7	51.9		0.341	0.02
EXPONENTIAL	82.3			0.158	1.00

OCCURRANCE FACTOR: OCCURRANCES 19

DISTRIBUTION OF CHOICE. NORMAL

PART OPERATION SUMMARY

ALC: WARNER ROBBINS RCC: MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN: 3P22591-197 NSN: PCN: 51344G WCD: MBA1SC WCD DATE: 88061

OPERATION: ZPRT PRIMARY OPERATION TYPE: MATERIAL TYPE:
SAMPLE SIZE: . MISSING FLOWTIMES. END ITEMS: OUTLIERS DELETED. .

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0	.
0	.
0	.
0	.
0	
0	
0	.
0	.
0	.
0	.
>= 0	.

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	.	.	.
TRIANGULAR	.		.
NORMAL	. .		
LOGNORMAL	.		
EXPONENTIAL		.	.
		.	.

OCCURRANCE FACTOR: . OCCURRANCES: .

DISTRIBUTION OF CHOICE:

HEADR=51344A MBB15C 88061 S 3P22591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBB15C	MANPDA	B														OP01 178
20	MBB15C	MANPDB	B														OP01 179
30	MBB15C	MANPDA	B														OP01 180
40	MBB15C	MANPDA	B														OP01 181
50	MBB15C	MANPSD	P			9A014	1		0.25					1	1		OP01 182
60	MBB15C	MANPDD	B														OP01 183
70	MBB15C	MANPDC	B														OP01 184

HEADR=51344A MBC15C 88154 S 3922591-197

RTOPER	WCD	RCC	RCCPB	OPTYP	MTLTYPE	MSKILL	MQTY	MFRACT	MHRS	ECODE	EQTY	EPA	EFRACT	EHOURS	BTCHMIN	BTCHMAX	OKEY
10	MBC15C	MANPDA	B														OP01 185
20	MBC15C	MANPDA	B														OP01 186
30	MBC15C	MANPDB	B														OP01 187
40	MBC15C	MANPDA	B														OP01 188
50	MBC15C	MANPDB	B														OP01 189
55	MBC15C	MANPDA	B														OP01 190
60	MBC15C	MANPDC	B														OP01 191
70	MBC15C	MANPDC	3														OP01 192

WORK MEASUREMEN[illegible]DARD DATA COMPUTATI[illegible]HEET

Page 1 Pages | DATE: 13 Mar 89

INSTRUCTIONS: Industrial Engineering Division will complete "Work Measurement Requirements" and furnish cut sheets to applicable using activities for each type of computation sheet as required.

JOB ASSIGNED TO: WR-ALC MANERS

COMPUTED BY: Jack W. Hambrick

WORK ORDER	PART NUMBER	STOCK NUMBER	JOB STANDARD	STATION NO.
03172A/03427-A	68A350010-2085	1560-01-057-6291FX	N/A	N/A

NOUN	QUANTITY	STD HRS PER	PIECES	TIME PER PIECE
F-15 Canopy	N/A	N/A	N/A	N/A

WORK MEASUREMENT REQUIREMENTS:
Production Supervisor Labor Standard Review

Observations were made 30 Jan 89 thru 7 Mar 89 in accordance with AFR 66-4 using group timing techniques. Overall productivity was 93%.

CATEGORY	TIME	OCCR	MINUTES	PFD 13%	STD HOURS
Teardown	751.79	100%	751.79	97.73	14.159
Sheet Metal Repair	2179.85	100%	2197.85	285.72	41.393
Pressure Deck Replacement	3794.94	20%	758.99	98.67	14.294
Paint Frame	66.28	100%	66.28	8.62	1.248
Canopy Overhaul	8699.65	100%	8699.65	1130.95	163.844
Paint Canopy	60.00	100%	60.00	7.80	1.130
Final Inspection & Turn-In	354.71	100%	354.71	46.11	6.680
				SUB TOTAL	242.748

ESTIMATES OF REPAIR NOT OBSERVED DURING STUDY	HOURS	OCCR	HOURS	PFD 13%	STD HOURS
Replace Side Arms	60.00	20%	12.00	.00	12.00
Replace Full Aft Fairing	20.00	20%	4.00	.00	4.00
Polish Damaged Transparency	8.00	15%	1.20	.00	1.20
Replace Arch	20.00	20%	4.00	.00	4.00
Replace Center Splice	12.00	20%	2.40	.00	2.40
Replace Nut Channel	16.00	30%	4.80	.00	4.80
Replace New parts (No Holes)	6.00	20%	1.20	.00	1.20
				TOTAL	272.348

This total is manually computed and may vary slightly from E046 output. In accordance with AFLCR 66-4, para 1-18, all standards should be reviewed by affected supervisory personnel for completeness of work content. Production supervisors will be given five workdays to express in writing their reasons for nonconcurrence. If, after this time, no reply has been received from the coordinating agency, the standard will be considered coordinated and acceptable.

APPROVALS	DATE	APPROVALS	DATE
INDUSTRIAL ENGINEER [signature]	21 Mar 89	WORK CENTER FOREMAN [signature]	20 MAR 89
PROCESS TECHNICIAN Jack W. Hambrick	14 Mar 89		

AFLC FORM SEP 60 774 REPLACES AMC FORM 774, SEP 60, WHICH MAY BE USED. AFLC-WPAFB-APR 73 213

	Description	STUDY TIME	OCCURANCE	OCCURANCE TIME	PF & D 13 %	STANDARD TIME	STANDARD HOURS
1.	TEARDOWN	751.79	100 %	751.79	97.73	849.52	14.159
2.	SHEETMETAL REPAIR	2197.85	100 %	2197.85	285.72	2483.57	41.393
3	PRESSURE DECK REPLACEMENT	3794.91	20 %	758.99	98.67	857.66	14.294
4	PAINT FRAME	66.28	100 %	66.28	8.62	74.89	1.248
5	CANOPY OVERHAUL	8699.65	100 %	8699.65	1130.95	9830.61	163.844
6	PAINT CANOPY	60.00	100 %	60.00	7.80	67.80	1.130
7	FINAL INSPECTION AND TURN-IN	354.71	100 %	354.71	46.11	400.82	6.680
							242.748
	Estimates	Hours					
1.	Replace Side Apins	60.00	20 %	12.00	.00	12.00	12.00
2	Replace Full Aft Fairing	20.00	20 %	4.00	.00	4.00	4.00
3	Polish Dam Transparancy	8.00	15 %	1.20	.00	1.20	1.20
4	Replace Deck	20.00	20 %	4.00	.00	4.00	4.00
5	Replace Center Splice	12.00	20 %	2.40	.00	2.40	2.40
6	Replace Nut Plate Channel	16.00	30 %	4.80	.00	4.80	4.80
7	Replace New Nio Holes PARTS	6.00	20	1.20	.00	1.20	1.20
							272.348

METHOD IMPROVEMENT STUDY

An indepth improvement of the repair procedure on the F-15 canopy was accomplished prior to GTT study.

1. Due to excessive corrosion and oil canning in some of the frame pressure deck, a procedure was developed to replace the deck skin. This eliminated condemning of the canopy.

2. Approximately 15 canopies were returned that would not fit the aircraft. Engineer evaluation found that the workers were having to force the frame into the overhaul fixture. New rework proceaures were developed to correct this problem. One method was to remove both corner fittings and reinstall them using liquid shims. This eliminated canopies being returned to depot for rework.

3. Due to the high cost of buying rubber seals already cut to fit, a change was made to allow the mechanics to cut the seals from sheet stock. This saves about $300.00 per canopy.

4. A study was made on polishing/reworking the transparencies, but an engineer decision was made stating that no transparencies would be reworked unless they had less than five years service. There is no required data available. We have started putting a data plate on each canopy with the serial number and data that each transparency was installed. This will be used for future history in reworking transparencies.

5. Several templates were developed to be used in drilling parts.

6. When the corner fittings are removed they were being replaced with new fittings because the holes would not mate when reinstalled with the liquid shim procedure. A procedure was developed to weld the holes and reuse the old fittings.

7. The tech data for overhaul of the canopy was not adequate so MANQ, MANE, MANP and MMFR rewrote the complete repair procedure.

8. Holding fixtures are being locally manufactured. This will improve the sheet metal repair process. But, due to higher priority workload, it will be an estimated 15 to 24 months before fixtures are in use.

STUDY DESIGN

F-15 CANOPY

The canopy repair is separated into seven elements with a narrative for each. The canopy was engineered using group timing technique (GTT) when two or more mechanics were working simultaneously on the same or different serial number item.

This time study was generated as the F-15 canopy workload generated the highest DPSH in the division.

The study is separated under the following steps. Each step narrative is covered on separate sheets.

1. Teardown
2. Sheet Metal Repair
3. Pressure Deck Replacement
4. Paint Canopy Frame
5. Canopy Overhaul
6. Paint Canopy
7. Final Inspection and Turn-In

Note: Historical data not available for occurrence factors used in study. Occurrence factors are a coordinated estimate between Planner Technician, Jack Hambrick and Production Supervisor, Willie Greathouse.

1

TEARDOWN

Walk to receiving area and check canopy to see if the identification is correct, the right work control document and AFLC Form 349 is attached. Unstrap canopy and move it to work area A. Assign a Warner Robins control serial number to canopy. Get tool box and move to canopy. Remove fwd fairing and retain shims and rain seal retainers. Remove handle support, cable guard, pressurized seals, rain seals, ID plate, shims, latches, hi-locks, center splice, bell come support, tubing assembly, warning plate, gromments, compass support, lock shoot brackets, handles, cable guide supports, spreader bar and pulley supports. Inspect all parts and fill out 244 cards to replace damaged parts. Carry 244 cards to MIC and pick up replacement parts. Place all parts in a box that is marked with WR serial number to match canopy. Remove fasteners and remove fwd and aft transparencies. Remove sealing compound and inspect transparencies for laminar cracks and optical clarity. If transparencies fail to meet specification, move to storage area for turn-in to supply. If transparencies meet all specifications, cover surface with protex 20 paper and masking tape. Mark identification on transparencies and place in a storage container. Stamp WCD and move canopy frame to shipping area, strap to trailer and return to work area. Pick up fasteners, hi-lok from floor and clean up area where canopy was worked. Replace tool in tool box and move tool box to storage area. This operation includes all work from removing from trailer until reloading on trailer to route to walnut hull cleaning.

SHEET METAL REPAIR

Walk to receiving area, unstrap canopy frame and move frame to work area. Place frame in repair fixture, inspect and record data on check sheet. Remove canopy from frame fixture and place on padded work stand. Remove old sealant, visually inspect structure, corner fitting to determine material, hinge arm, jettison linkage support, support fittings, fairing support, oil can condition, seal track, and all other components for cracks, breaks, gouges. Remove items necessary to remove corrosion, remove corrosion and treat all bare metal. Remove and replace all damaged components using overhaul fixture and on work bench, hinge arms, jettison linkage support, support fittings, fairing support assembly, and seal track. Clean and seal canopy frame. Mask frame for paint. Move frame to paint area and return to work area. Includes getting sealant, adhesive, conversion treatment solution, cleaning up work area during process, placing trash in cans, getting and putting up tools and any work done on frame from removing from trailer until move to paint. Stamp WCD.

PRESSURE DECK REPLACEMENT

Get tools and remove fasteners that attach web to frame. Remove web from frame, remove old sealant from frame that mates with web, cut replacement web, locate holes from old web and frame, position web on frame, drill holes in web, trim web, deburr and treat metal, fay seal mating surfaces, install web, form doubler, drill fasteners holes, deburr and treat metal, fay seal mating surface, install all fasteners wet with sealant, and seal doubler and edges. Includes all operations to remove and install a new web on canopy frame. Includes get sealant, parts, forming web, get fasteners, put up tools, place trash in can and clean up work area during work. Stamp WCD.

PAINT CANOPY FRAME

Move frame into spray paint area. Get paint, mix primer, get spray equipment and place primer in spray gun. Spray primer on frame. Clean primer from spray gun. Get and put-up protective equipment, mix paint and place in spray gun. Spray paint on frame. Clean up spray equipment, put up spray gun and allow paint to dry. Move frame into shop area. Stamp WCD and return to work area.

CANOPY OVERHAUL

Move canopy frame from paint to overhaul fixture, install canopy frame into overhaul fixture, check side frame for twisted condition, inspect aft fairings, corner fittings, and arch. Rework arch location, remove and replace fairings, remove and replace corner fittings, arch stiffener, rework oversized fastener holes, rework bowed canopy, get and cut rubber strips, unpack and inspect fwd and aft transparencies and fit/place on canopy frame. Drill and inspect holes in transparencies. Trim transparencies and install. Inspect and replace fwd fairings, seal and install parts removed during teardown. Install tubing. Inspect and mask for paint, move to paint area. Includes get and put up tools, get sealant, clean up work area during work. Includes all work from getting from paint frame to return to paint canopy. Stamp WCD and return to work area.

PAINT CANOPY

Move canopy into spray paint area. Get paint, mix primer, get spray equipment and place primer in spray gun. Spray primer on canopy. Clean spray gun. Mix paint and place in spray gun. Spray paint on canopy. Clean up spray equipment, put up spray gun. Includes getting and putting up spray protection equipment. Stamp WCD and move canopy to shop area and return to work area.

FINAL INSPECTION AND TURN-IN

Get canopy from paint area and move to work area. Retorque all fasteners. Check all rivets and replace if required. Install data plate, historical data plate and hazard warning decals. Check all attaching components, remove and replace if required. Prepare canopy kit, place in plastic bay, assemble latches, seal shipping container, identify transparencies on data plate, identify all parts to canopy serial number and place with canopy. Fill out turn-in cards, complete AFLC Form 349 and complete WCD. Load canopy on trailer and move trailer to shipping area. Turn in paperwork to supervisor.

SAS

PART OPERATION SUMMARY

ALC. WARNER ROBBINS RCC MANPMA

PN· 68A350004-2105 NSN PCN 03172A WCD MBB11N WCD DATE· 89055

OPERATION: ZPRT BACKSHOP OPERATION TYPE MATERIAL TYPE
SAMPLE SIZE· . MISSING FLOWTIMES END ITEMS OUTLIERS DELETED

-------- MANPOWER REQUIRED --------
--- TIME ---

SKILL	QTY	FRACTION	HOURS

---------- EQUIPMENT REQUIRED ----------
--- TIME --- BATCH

CODE	CATEGORY	QTY	FRACTION	HOURS	MIN	MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0	10	20	30	40	50	60	70	80	90	100
0											
0											
0											
0	.										
0											
0											
0											
0	.										
0											
0											
>= 0	.										

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM		.	
TRIANGULAR			
NORMAL			
LOGNORMAL		.	
EXPONENTIAL			

OCCURRANCE FACTOR OCCURRANCES .

DISTRIBUTION OF CHOICE

SAS

PART OPERATION SUMMARY

ALC WARNER ROBBINS RCC MANOSP

PN 68A350004-2105 NSN PCN 03172A WCD MBC11N WCD DATE 88250

OPERATION ZPRT
SAMPLE SIZE MISSING FLOWTIMES BACKSHOP OPERATION TYPE MATERIAL TYPE
END ITEMS OUTLIERS DELETED

-------- MANPOWER REQUIRED --------
--- TIME ---
SKILL QTY FRACTION HOURS

---------- EQUIPMENT REQUIRED ----------
--- TIME --- BATCH
CODE CATEGORY QTY FRACTION HOURS MIN MAX

HISTORICAL DATA

ACTUAL FREQ	0	10	20	30	40	50	60	70	80	90	100
0											
0											
0											
0											
0											
0											
0											
0											
0											
0											
>= 0											

DISTRIBUTION PARAMETERS D VALUE D ALPHA

UNIFORM
TRIANGULAR
NORMAL
LOGNORMAL
EXPONENTIAL

OCCURRANCE FACTOR OCCURRANCES.

DISTRIBUTION OF CHOICE

SAS

PART OPERATION SUMMARY

ALC WARNER ROBBINS RCC MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN 68A350004-2105 NSN. PCN 03172A WCD MB01N WCD DATE 88271

OPERATION ZPRT PRIMARY OPERATION TYPE INS MATERIAL TYPE AL
SAMPLE SIZE 46 MISSING FLOWTIMES 0 END ITEMS OUTLIERS DELETED 1

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 9	***
20 39	**********
40 22	*********
60 7	***
80 7	***
100 7	***
120 2	*
140 4	**
160 2	*
180 0	
>=00 2	*

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	0 0 243 0	0 464	
TRIANGULAR	0 0 34 5243 0	0 420	
NORMAL	59 0 48 5	0 262	
LOGNORMAL	59.0 48.5	0.379	.
EXPONENTIAL	59 5	0 245	.

OCCURRANCE FACTOR . OCCURRANCES 47

DISTRIBUTION OF CHOICE: HISTORICAL DISCRETE

PART OPERATION SUMMARY

ALC. WARNER ROBBINS RCC: MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN 68A350010-2085 NSN PCN. 03427A WCD MB015N WCD DATE: 88054

OPERATION ZPRT PRIMARY OPERATION TYPE INS MATERIAL TYPE AL
SAMPLE SIZE: 4 MISSING FLOWTIMES 0 END ITEMS: OUTLIERS DELETED 0

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 50	**********
20 0	
40 0	
60 25	**********
80 0	
100 0	
120 0	
140 25	**********
160 0	
180 0	
>=00 0	

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	6 0 159 0	0 468	
TRIANGULAR	6 0 9.0159 0	0 455	
NORMAL	62 5 71 7	0.266	
LOGNORMAL		1 000	
EXPONENTIAL	65 4	0 345	

OCCURRANCE FACTOR. OCCURRANCES 4

DISTRIBUTION OF CHOICE HISTORICAL DISCRETE

SAS

PART OPERATION SUMMARY 7:25 FRIDAY, FEBRUARY 24, 1989 6

ALC: WARNER ROBBINS RCC MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN. 68A315004-1005 NSN PCN: 09193A WCD MB005N WCD DATE: 8116

OPERATION: ZPRT PRIMARY OPERATION TYPE: INS MATERIAL TYPE SYN
SAMPLE SIZE 21 MISSING FLOWTIMES 0 END ITEMS OUTLIERS DELETED 0

MANPOWER REQUIRED				EQUIPMENT REQUIRED					
		--- TIME ---					--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ		RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0	5	**
10	24	**********
20	29	**********
30	19	********
40	10	****
50	5	**
60	0	
70	5	**
80	5	**
90	0	
>=100	0	

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	7 0 83 0	0.411	
TRIANGULAR	7 0 24 5 83 0	0 310	0 04
NORMAL	31 3 20 4	0 220	1 00
LOGNORMAL		1 000	
EXPONENTIAL	31 8	0 205	1 00

OCCURRANCE FACTOR . OCCURRANCES 21

DISTRIBUTION OF CHOICE EXPONENTIAL

SAS

PART OPERATION SUMMARY 7 25 FRIDAY FEBRUARY 24, 1989 8

ALC: WARNER ROBBINS RCC MANPSD SHEETMETAL, PLASTIC AND MISCELLANEOUS SHEETMETAL

PN 369154-1 NSN PCN 41059A WCD MB001N WCD DATE 88263

OPERATION ZPRT PRIMARY OPERATION TYPE INS MATERIAL TYPE SYN
SAMPLE SIZE 51 MISSING FLOWTIMES 0 END ITEMS OUTLIERS DELETED 1

MANPOWER REQUIRED		--- TIME ---		EQUIPMENT REQUIRED			--- TIME ---		BATCH
SKILL	QTY	FRACTION	HOURS	CODE	CATEGORY	QTY	FRACTION	HOURS	MIN MAX

HISTORICAL DATA

ACTUAL FREQ	RELATIVE FREQUENCY 0 10 20 30 40 50 60 70 80 90 100
0 39	**********
20 35	*********
40 8	***
60 2	*
80 8	***
100 4	**
120 0	
140 0	
160 0	
180 0	
>=00 4	**

DISTRIBUTION	PARAMETERS	D VALUE	D ALPHA
UNIFORM	7 0 212 0	0 634	
TRIANGULAR	7 0 14 0212 0	0 504	
NORMAL	39 2 41 4	0 263	
LOGNORMAL		1 000	
EXPONENTIAL	39 7	0 164	0 13

OCCURRANCE FACTOR OCCURRANCES 52

DISTRIBUTION OF CHOICE EXPONENTIAL