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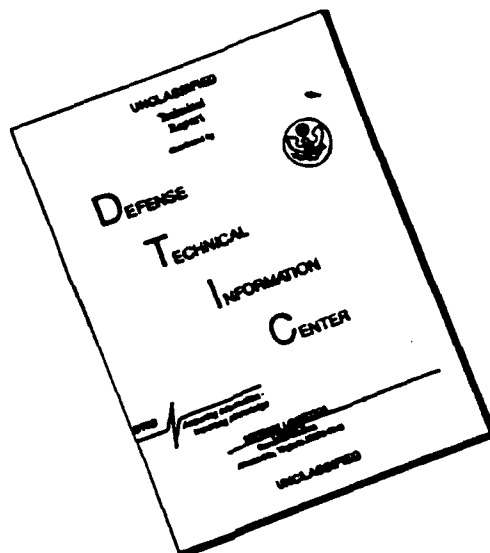
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**TECHNOLOGY INSERTION-ENGINEERING SERVICES
PROCESS CHARACTERIZATION
TASK ORDER NO. 1**

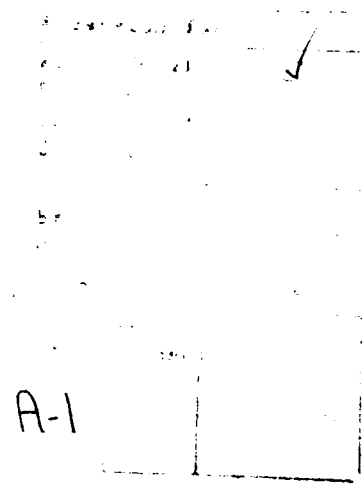
DATABASE DOCUMENTATION BOOK

OO-ALC

MANPNA

**CONTRACT SUMMARY REPORT
15 DECEMBER 1989**

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



A-1



MCDONNELL DOUGLAS
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2.0 GENERAL INFORMATION

MANPNA is a Resource Control Center (RCC) under the Production (P7ANP) branch of the Industrial Products Division (MAN) at OO-ALC and performs various non-destructive testing functions under the Nondestructive Test Support Section (P7ANPN) as a support function to the repair/manufacture RCCs within P7ANP.

DESCRIPTION OF CURRENT OPERATION

MANPNA IS A RESOURCE CONTROL CENTER

UNDER THE MANP SECTION OF THE INDUSTRIAL PRODUCTS DIVISION (MAN) OF OO-ALC. MANPNA IS LOCATED IN MANY DIFFERENT AREAS. THESE AREAS ARE BUILDINGS 228, 241, 248, 232, 270, 272, 507, 508, 510, 2113, 926, 216, 1915, 100, AND THE TRAILER WEST OF 507. IN THIS STUDY WE WILL FOCUS ON BUILDINGS 507, 508 WHICH DEALS WITH LAND GEARS. MANPNA IS LOCATED IN THE MIDDLE OF MANPCW IN 507. IN 508 MANPNA IS LOCATED IN THE WEST END OF THE MACHINE SHOP.

THE WORKLOAD IS PRIMARILY MISTAKE WORK. IT CONSISTS OF OF VARIOUS WHEELS, BRAKES, AND LANDING GEAR. THIS AREA IS RESPONSIBLE FOR MAGNETIC PARTICAL INSPECTION, PENETRANT INSPECTION, ULTRASONIC INSPECTION AND BODY CURRENT, AND TEMPER ETCH. THE MANPNA AREA WE ARE STUDYING SUPPORTS MANPCW, MANPRB, MANPRE, MANPWW. AT OGDEN THEY HAVE AN UNIQUE SITUATION. THE SITUATION IS THAT THE PRODUCT FLOWS THROUGH ALL OF THESE ECC'S.

PERCENT OF OTHER WORKLOAD FOR RCC

(80/20 LISTING)
RCCs

JOB TYPES	MANPGP	MANPGW	MANPGR	MANPRA	MANPRB	MANPRC	MANPWW
TEMPORARY	13.72	2.35	15.11	1.40	1.05	1.35	1.05
MANUFACTURE	0.00	0.00	0.92	0.00	4.51	2.74	12.50
PDM	1.00	0.00	22.79	0.04	0.07	4.39	22.44
ARMAMENT	0.00	0.23	1.26	0.04	0.03	4.18	2.38
HYDRAULICS	0.00	0.05	7.00	1.11	2.67	3.88	13.99
MISCELL	95.29	97.37	52.92	97.41	91.69	83.46	97.67

3400 NEW TESTER
AUG. TRUCKS

THE MAINLINE EQUIPMENT CONSISTS OF MAGNAFLUX
MACHINES, EDDY CURRENT TESTER, ULTRA SOUND TESTER, LOW VOLTAGE TESTER
FOR ALL OF THE DIFFERENT TYPES OF
SOLUTIONS. THE SUPPORT PROCESS OF THIS
REC INCLUDE THE CHEMICAL TREATMENT OF
THE PARTS ACCORDANCE WITH THE BASE METAL
OF THE PART. TO PREPARE THE PART FOR
THE MAGNAFLUX MACHINES. THE MAGNAFLUX MACHINES
ARE SCHEDULED FOR REPLACEMENT EVERY
THIRTEEN YEARS. THEY HAVE BEEN IN SERVICE
FOR ABOUT FOUR YEARS. THERE IS ALSO THE
Eddy current testing cell. IN THE PAST A
BRITISH COMPANY TRIED TO INSTALL AN
AUTOMATIC Eddy CURRENT MACHINE. HOW EVER
THEY NEVER GOT THE UNIT ON LINE. IT HAS
BEEN SINCE REMOVED FROM THE AREA. AT
PRESENT THEY HAVE NO PLANS OF GETTING AN OTHER
AUTOMATIC BODY CURRENT TESTER. THE EQUIPMENT IS
IN GOOD CONDITION.

THE PARTS ARE FIRST ASSEMBLED AND CHEMICAL CLEANED AND STRIPED THEN GO TO NDI (NON-DESTRUCTIVE INSPECTION). THIS PROCESS WILL VARY DEPENDING UPON THE TYPE OF MATERIAL THE PART IS CONSTRUCTED OF. ALL EXCEPT THE TEMPER ETCH WHICH IS USED ON STEEL, ^(IT HAS ITS OWN SPECIAL PROCESS.) ARE INSPECTED UNDER ULTRA-VIOLET LIGHT. AS THE PARTS COME DOWN THE COMPUTER CONTROLLED LINE, THE COMPUTER ^{HAS THE SPEC HEAD CRAB} AUTOMATICALLY DUNK THE PARTS INTO THE CORRECT TANKS FOR A SPECIFIC AMOUNT OF TIME. THE PARTS ARE THEN AUTOMATICALLY BROUGHT UP OUT OF THE SOLUTION OR LIQUID AND ALLOWED TO DRIP FOR A FEW MINUTES BEFORE THEY MOVE ON TO THE NEXT STATION. THESE PARTS GO THROUGH A SERIES OF TANKS. THE CHEMICAL AND LIQUID TANKS ARE AS FOLLOWS. PENETRANT GROUPS II, I, II, EMULSIFER, WATER WASH (FOR SURFACE PENETRANT), DEVELOPER, HOT WATER RINSE, FLOURESCENT PARTICLE FLUID, VAPOR DEGREASE. SOME OF THE PARTS ALSO GO THROUGH AN OVEN, MAGNETIZE AND DEMAGNETIZE CYCLE. THEY ARE ALL INSPECTED UNDER A ULTRA VIOLET LIGHT.

THESE PARTS ARE EITHER BOUGHT OFF AT NDI OR THEY ARE SENT TO EANDI FOR EVALUATION AND ROUTING.

AT INSPECTION THE INSPECTOR HAS A LOT OF RESPONSIBILITY. THE OPERATOR AT THE PRESENT TIME SETS THE MACHINE (MAG PARTICLE INSPECTION) FROM PAST EXPERIENCE. EACH PART HAS A SPECIFIC SETTING. THIS SETTING CAN BE MATHEMATICALLY CALCULATED FOR ANY GIVEN PART. AS THEY LOOK AT EACH PART IT IS ALSO A JUDGEMENT CALL. IS IT RATHER IT IS GOOD OR BAD IN BORDER LINE CASE?

THIS WOULD BE AN EXCELLENT OPPORTUNITY FOR A QUICK FIX PLAN. THE PLAN IS THAT THEY DEVELOP SET UP SHEETS FOR EACH PART AT EACH MACHINE WHICH PROVIDES SPECIFIC PROVEN INSTRUCTIONS FOR THE EQUIPMENT SETTINGS AND PERIPHERAL TOOLING REQUIRED.

THE TEMPER ETCH GOES THROUGH A COMPLETELY DIFFERENT PROCESS. THE PROCESS FOR TEMPER ETCH IS; First they VAPOR DEGREASE THE PARTS. TO REMOVE ALL FOREIGN MATERIALS, IT THEN GOES TO NITRIC ETCH, COLD WATER RINSE, HYDROCHLORIC ETCH, COLD WATER, NEUTRALIZER, HOT WATER RINSE, AND THEN TO INSPECTION. AT INSPECTION THE OPERATOR VISUALLY INSPECTS THE PART AND EITHER SHUTS IT OFF OR SENDS IT TO E AND I.

PARTICULAR INSPECTION STATION

THERE IS A GREAT OPPORTUNITY FOR A QUICK FIX. THE QUICK FIX OPPORTUNITY IS THIS; AT PRESENT THE MATERIAL HANDLERS ARE JUST STACKING IN COMING PALLETS OF PARTS IN FRONT OF THE WORK AREA. THIS RESTRICTS THE PRODUCTIVITY OF THIS AREA. PARTICULARLY AT TIMES OF INCREASED WORK FLOW. TO ELIMINATE THIS PROBLEM. CLEAR AN AREA FOR A MULTI-LEVEL RACK FOR THE PALLETS OF PARTS. THEN INSTRUCT THE NOI FORK LIFT OPERATORS ON FIRST IN FIRST OUT PRINCIPLE. THIS WOULD SOLVE SEVERAL PROBLEMS. FIRST IT WOULD EXPEDITE GETTING THE PRODUCT THROUGH ON TIME. SECOND. IT WOULD IMPROVE THE APPEARANCE OF THE AREA. THIRD IT WOULD ALLOW THE AREA TO BE MORE PRODUCTIVE.

TRANSOM IS ALSO OVER BODY CURRENT TESTING.

IN THIS WORK CELL THEY HAVE FOUR DIFFERENT TYPES OF TESTERS. A BODY CURRENT TESTER, CONDUCTIVITY TESTER, ULTRA SONIC TESTER, AND A. HARDNESS TESTER.

THE BODY CURRENT TESTER IS THE ONE WHICH IS USED MOST OF THE TIME. THIS OPERATION IS PERFORMED BY PLACING THE WHEEL ON A TURN TABLE, AND ROTATING THE WHEEL. THE TESTER'S PROBE IS HELD AGAINST THE RIM OF THE WHEEL. THE OPERATOR WATCHES THE METER, IF THE METER CHANGES THAT INDICATES, THAT THERE IS A CRACK IN THE WHEEL.

THE WCD IS WHAT INFORMS THE OPERATOR AS TO WHICH TESTER IS TO BE USE TO PERFORM THE TEST.

FACILITY LAYOUT

THE LAYOUT OF EQUIPMENT WITHIN THE NDI AREAS OF BUILDINGS S05 AND S07 HAS CHANGED SLIGHTLY SINCE THE LAST PLANT DRAWING WAS MADE. THE ENCLOSED DRAWINGS HAVE BEEN "CUT & PASTED" TO SHOW CORRECT EQUIPMENT STATUS AS OF THIS DATE, MAY 2, 1989.

IN ORDER TO EXPLAIN PRODUCTION FLOW, THE DRAWINGS HAVE BEEN MARKED TO REFLECT THE PATHS OF DIFFERENT MATERIALS THROUGH VARIOUS WORK STATIONS.

~~XXXXXXXXXX~~

FACILITY LAYOUT

THE LAYOUT OF EQUIPMENT WITHIN THE NDI AREAS OF BUILDINGS 505 AND 507 HAS CHANGED SLIGHTLY SINCE THE LAST PLANT DRAWING WAS MADE. THE ENCLOSED DRAWINGS HAVE BEEN "CUT & PASTED" TO SHOW CORRECT EQUIPMENT STATUS AS OF THIS DATE, MAY 2, 1989.

IN ORDER TO EXPLAIN PRODUCTION FLOW, THE DRAWINGS HAVE BEEN MARKED TO REFLECT THE PATH EXPLAIN T MATERIALS THROUGH VARIOUS LOGIC OF

~~VARIOUS~~

FACILITY

LAYOUT

MAG → DEGREASERS

EXPLAIN

LOGIC OF

FACILITY

LAYOUT

MAG → DEGREASERS

EQUIPMENT

MR. JIM PATTERSON IN THE EQUIPMENT PLANNING SECTION PROVIDED A REPORT WITH THE MAJORITY OF THE NDI MACHINES LISTED. THE REPORT NOTES ACQUISITION DATES, COST, ESTIMATED NUMBER OF USEFUL MONTHS. THIS "EQUIPMENT MASTER LIST" SHOWS THAT THE MAGNAFLUX MACHINES ARE SCHEDULED TO BE IN USE FOR 13 YEARS. MOST HAVE BEEN ACQUIRED IN THE LAST 4 YEARS. THE BALANCE OF THE MAJOR ~~EQUIPMENT~~ EQUIPMENT IN NDI IS MERELY TANKS FOR PENETRANT & TEMPER ETCH PROCESSES. THESE TANKS HAVE AN INDEFINITE USE LIFE.

ALL OF THE NDI EQUIPMENT IS IN WORKING ORDER AND OF RELATIVELY GOOD CONDITION. ON OCCASION SOME OF EMPLOYEES HAVE COMMENTED THAT THE MAG PARTICLE MACHINES WILL NOT DEMAGNETIZE. THE RCC IS INSTALLING MACHINES SPECIFICALLY DESIGNED TO REMOVE MAGNETISM CALLED "DEGAUSS MACHINES." THE USE THESE MACHINES SPEEDS ~~THE~~ THE CYCLE TIME ON SMALL MAGNETIC PARTICLE INSPECTED PARTS.

TYPICALLY THE AFLC SUGGESTS REPLACEMENT. EQUIPMENT THEY HAVE "ON THE SHELF" BUT THIS RCC PREFERS TO RESEARCH THE INDUSTRY AND CHOOSE ITS OWN MACHINES. MR. CRAIG LUSK TOLD ME THAT THROUGH THIS PRACTICE THIS RCC HAS PROCURED EXCELLANT ASSETS WITH ONLY THE SACRAMENTO ALC EXCEEDING THEM IN NDI EQUIPMENT.

MR. JOSE GUTIERREZ TOLD ME THAT A ROOM WAS GOING TO BE BUILT IN THE EDDY CURRENT AREA WHICH WILL HOUSE AN AUTOMATED EDDY CURRENT CHECKER. IN THE PAST A BRITISH COMPANY TRIED TO SET-UP A EDDY CURRENT MACHINE BUT AFTER SEVERAL MONTHS THEY DID NOT FIND SUCCESS. EVENTUALLY THE NDI PEOPLE MOVED THE EQUIPMENT (WHICH THE BRITISH COMPANY HAD BROUGHT) OUTSIDE THE AREA AND OUTSIDE THE BUILDING.

IN CHECKING WITH WALT JOHNSTON, THE SENIOR MAN IN EQUIPMENT PROCUREMENT DIVISION, AN AUTOMATED EDDY CURRENT INSPECTION MACHINE IS NOT INCLUDED IN THE PRESENT FIVE YEAR BUDGET PLAN.

1. EDDY CURRENT NEEDS
2. MAINT. OF MAG MACH
EXCESSIVE DOWNTIME
3. CONTROL OF PENT TANK SOLUTIONS
4. C-SCAN

MADP SKILL CODE INDEX

SKILL CODE	TRANSLATION
1	AIR CONDITIONING
2	ELECTRICAL
3	MECHANIC
4	LUBE
5	PLUMBING
6	CERTIFICATION
7	VIBRATION ANALYSIS
8	LASER LEVEL

5/10/89

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000671 L01958 MADPS	000051		507 D7 SE 2/17/89 5/19/89	TANK PENE H 15 MANPG

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PM-NUMBER CROSS REFERENCE SCREEN

ENTER PM-NUMBER 000672

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000679 L07992 MADPS	000051	90	507 E 12 2/17/89 5/19/89	TANK PENET E 12 MANPG

**** PRESS RETURN TO CONTINUE ****

5/10/89

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000678 L07991 MADPS	000051		507 D7 NE 2/17/89 5/19/89	TANKEMULS MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000678 L07991 MADPS	00005	89	507 D7 NE 2/17/89 5/19/89	TANKEMULS MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000677 L02079 MADPS	00005	90	507 TANKAREA 2/17/89 6/16/89	SPRAY RINSE TANK MANPG

000677 L02084 MADPS	02000	180	507 TANKAREA 2/17/89 6/15/89	SPRAY RINSE TANK MANPG
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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000677 L07989 MADPS	00005	89	507 D7 SE 2/17/89 5/19/89	TANKDEVEL MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000675 L02730 MADP	00000		507 D6 NW 5/ 6/89 8/ 4/89	OVEN DRYING MANPG
000675 L10152 MADP	00000		507 D6 NW 3/11/89 9/ 7/89	OVEN DRYING MANPG
000675 L10153 MADP	00000		507 D6 NW 2/17/89 8/20/89	OVEN DRYING MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000673 L07988 MADPS	00000		507 D7 NE 2/17/89 5/19/89	TANKHOTRN MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000685 L07997 MADPS	00000		507 F 12 2/17/89 5/19/89	TANK PENET F 12 MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	COMPL-DATE	OWN-ORGN
			DUE-DATE	CUST-ACCT-CDE
000684	00005	30	507 D7 NE	TANKEMULS
L07996			2/17/89	MANPG
MADPS			5/19/89	

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EQUIP- ID-NO	SKILL	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	COMPL-DATE	OWN-ORGN
			DUE-DATE	CUST-ACCT-CDE
000682	00005	30	507 D6 SE	TANKDEVEL
L07994			2/17/89	MANPG
MADPS			5/19/89	

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000681 L02731 MADP	00000	301	507 D6 NW 5/ 6/89 8/ 4/89	OVEN DRYING MANPG
000681 L10149 MADP	00000	180	507 D6 NW 2/ 4/89 8/ 3/89	OVEN DRYING MANPG
000681 L10150 MADP	00000	305	507 D6 NW 2/17/89 8/20/89	OVEN DRYING MANPG

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000680 L07993 MADPS	00005	90	507 D6 NE 2/17/89 5/19/89	TANKHOTRN MANPG

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000960 L02402 MADP	00340	150	507 D4 N 3/11/89 6/ 9/89	COVEYOR 31 MANPG
000960 L02399 MADP	00340	150	507 D4 N 3/ 4/89 8/31/89	COVEYOR 31 MANPG
000960 L02400 MADP	02000	105	507 D4 N 2/17/89 9/17/89	COVEYOR 31 MANPG

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000911 L02110 MADP	00360	150	507 D4 NE 2/11/89 5/12/89	CONVEYOR 7 MANPG
000911 L02107 MADP	00080	150	507 D4 NE 2/11/89 8/10/89	CONVEYOR 7 MANPG
000911 L02108 MADP	00300	150	507 D4 NE 2/17/89 8/27/89	CONVEYOR 7 MANPG

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000401 L02882 MADP	02300	180	507 A3 SW 1/14/89 7/13/89	MAGNAFLUX MANPN

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
006369 L08273 MADPS	00300	90	507 E D3 2/17/89 6/16/89	MAGNAFLUX MANPN
006369 L08274 MADPG	02000	180	507 E D3 2/17/89 9/14/89	MAGNAFLUX MANPN

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
006368 L08271 MADPS	00300	90	507 E D3 2/17/89 6/16/89	MAGNAFLUX MANPN
006368 L08272 MADPG	02000	180	507 E D3 2/17/89 9/14/89	MAGNAFLUX MANPN

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
006668 L00108 MADPS	00300	90	507 NE E CNT 4/22/89 7/21/89	PARTICLE INSPECTION UNIT MANPNA
006668 L00109 MADPS	02000	180	507 NE E CNT 2/17/89 6/22/89	PARTICLE INSPECTION UNIT MANPNA

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
006669 L00105 MADPS	00300	90	507 NE CNTR 4/22/89 7/21/89	PARTICLE INSPECTION UNIT MANPNA
006669 L00107 MADPS	02000	180	507 NE CNTR 2/17/89 6/22/89	PARTICLE INSPECTION UNIT MANPNA

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EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
003428 L01029 MADPS	00005	30	507 NE CRNR 5/ 6/89 6/ 5/89	DEGREASER MANPGP
003428 L00811 MADPG	00005	365	507 NE CRNR 2/17/89 5/21/89	DEGREASER MANPGP

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000902 L02070 MADPW	00340	30	507 LOOP 4 4/15/89 5/15/89	CONVEYOR 4 MANPG
000902 L02071 MADPW	00340	90	507 LOOP 4 2/17/89 5/18/89	CONVEYOR 4 MANPG
000902 L02073 MADPW	02340	180	507 LOOP 4 2/17/89 6/13/89	CONVEYOR 4 MANPG
000902 L02074 MADPW	02340	365	507 LOOP 4 2/17/89 12/15/89	CONVEYOR 4 MANPG

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EQUIP- ID-NO	SKILL	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	COMPL-DATE	OWN-ORGN
			DUE-DATE	CUST-ACCT-CDE
006671 L00008 MADPG	0030000	90	505 GRIND RM	MAG PRT INSP UNIT 2/17/89 5/18/89 MANPNA
006671 L00009 MADPG	0200000	180	505 GRIND RM	MAG PRT INSP UNIT 2/17/89 6/15/89 MANPNA

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	COMPL-DATE	OWN-ORGN
			DUE-DATE	CUST-ACCT-CDE
006670 L00110 MADPG	00300	90	505 GD RM	MAG PRT INSP UNIT 4/22/89 7/21/89 MANPNA
006670 L00112 MADPG	02000	180	505 GD RM	MAG PRT INSP UNIT 2/17/89 6/22/89 MANPNA

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	COMPL-DATE	OWN-ORGN
			DUE-DATE	CUST-ACCT-CDE
006366 L08287 MADPS	00300	90	505 GRND RM	MAGNAFLUX 2/17/89 6/16/89 MANPNB
006366 L08288 MADPG	02000	180	505 GRND RM	MAGNAFLUX 2/17/89 9/14/89 MANPNB

**** PRESS RETURN TO CONTINUE ****

PM-NUMBER CROSS REFERENCE SCREEN

ENTER PM-NUMBER 005813

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005813 L07545 MADPG	00005	180	505 CR 66 2/17/89 7/13/89	HOT RINSE MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005814	00005	180	505 CR 67	NEUTRALIZ
L07554			2/17/89	MANPRC
MADPG			7/13/89	

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005633	00005	180	505 CR 68	COLD RinSE
L10551			2/17/89	MANPRC
MADPG			6/15/89	

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005815 L01471 MADPG	00005	180	505 CR 69 3/25/89 9/21/89	HYDROACID MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005816 .07546 MADPG	00005	180	505 CR 70 2/17/89 7/20/89	NITRICACD MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005810 L10515 MADPG	00005	180	505 CR 71 2/17/89 6/15/89	METALETCH MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005600 L10507 MADPG	00005	30	505 CR 72 4/22/89 5/22/89	DEGREASER MANPRC
005600 L01142 MADPG	02005	365	505 CR 72 2/17/89 6/18/89	DEGREASER MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005819 L07537 MADPG	00005	180	505 CR 77 2/17/89 7/20/89	DYEPENETR MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005819 L07538 MADPG	00005	180	505 CR 78 2/17/89 7/20/89	DYEPENETR MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005821, 00005 L07539 MADPG		180	505 CR 79 2/17/89 7/20/89	EMULSIFIE MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005822 00005 L07540 MADPG		180	505 CR 80 2/17/89 7/20/89	SPRAYRINS MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005823 00005 L07541 MADPG		180	505 CR 81 2/17/89 7/20/89	DEVELOPER MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005824 L03352 MADPG	02005	180	505 LINE 4 4/29/89 10/26/89	DRY BOOTH MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005825 L03354 MADPG	00300	180	505 CR 83 4/29/89 10/26/89	INSPECTION BOOTH MANPRC

**** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP- ID-NO	SKILL RCC-RE INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005611 L10518 MADPG	00005	180	505 CR 84 2/17/89 6/15/89	HOTRINSE MANPRC

**** PRESS RETURN TO CONTINUE ****

PM-NUMBER CROSS REFERENCE SCREEN

CONTINUE ENTER PM-NUMBER 007293

**** PRESS RETURN TO C

ENTER PM NUMBER:007293

THERE ARE NO RECORDS FOR PM.NUMBER 007293 .

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PM RECORD TRANSACTION LIST

EQUIP- NR	INST FREQ	SKILL	LOCATION	COMPL DATE	DUE DATE	ID NUMBER	OWN ORGN	TY TR
007207	30	02000	2113 2	4/ 8/89	5/ 8/89	L00497	MANPNA	U
007460	90	0030000	505	4/ 8/89	7/ 7/89	L01919	MANPRC	U
007375	30	00005	222 NORTH	4/ 1/89	5/ 1/89	L19090	MABPDA	U

ENTER PM NUMBER:000671

ENTER PM NUMBER:000671

THERE ARE NO RECORDS FOR PM.NUMBER 000671 .

ENTER PM NUMBER:000672

THERE ARE NO RECORDS FOR PM.NUMBER 000672 .

EQUIPT NUMBER	² ELECTR	³ MECHAN	⁴ LUBE	⁵ PLUMB	FREQ	AVER
PM0911		.50			90 180 365	.69
	.35		.20			
PM 0401					NONE	6
PM 6369		.50			90 180	.68
	.35					
PM 6368		.50			90 180	.68
	.35					
PM 6668		.50			90 180	.68
	.35					
PM 6669		.50			90 180	.68
	.35					
PM 3428				.75 2.00	90 365	1.25
PM 0902		.50	4.00		30 90 180 365	5.13
		.50	.20			
	.35	.50	.50			
	1.05	.50	.50			
L90078						
L90077						

TIMES
SHIFT

EQUIPT NUMBER	² ELECTR	³ MECHAN	⁴ LUBE	⁵ PLUMB	FREQ	AVER
PM 0671				.25 Hr	90	.25
PM0672				.25	90	.25
PM0679				.25	90	.25
PM0678				.25	90	.25
PM0677	.35			.25	90 ⁴ 180	.43
PM 0676				.25	90	.25
PM 0675	.35	.50	.20		90 180 365	1.11
PM0673	1.65			.25	90	.25
PM0685				.25	90	.25
PM0684				.25	90	.25
PM 0683					NONE	0
PM0682				.25	90	.25
PM 0681	.35	.50	.20		90 180 365	1.11
	1.65					
PM 0680				.25	90	.25
PM0960		.50	.20		90 180 365	.69
	.35					

EQUIPT NUMBER	ELECTR	MECHAN	LUBE	PLUMB	FREQ	AVER
CE 28						
PM 5819				.25	180	.25
PM 5820				.25	180	.25
PM 5821				.25	180	.25
PM 5822				.25	180	.25
PM 5823				.25	180	.25
PM 5824	.35			.25	180	.30
PM 5825		.50			180	.50
PM 5611				.25	180	.25

EQUIPT NUMBER	² ELECTR	³ MECHAN	⁴ LUBE	⁵ PLUMB	FREQ	AVER
PM 6671		.50			90	.68
	.35				180	
PM 6670		.50			90	.68
	.35				180	
PM 6366		.50			90	.68
	.35				180	
CE 10						
PM 5813				.25	180	.25
PM 5814				.25	180	.25
PM 5633				.25	180	.25
PM 5815				.25	180	.25
PM 5816				.25	180	.25
PM 5610				.25	180	.25
PM 5600				.25	30	.36
	.35			1.00	365	
CE 15						
CE 27						

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
000681	OVEN	6/25/86	7/ 1/86	86060846	0 43	3.0	60.00	NOISY BLOWER
	OVEN DRYING	10/14/87	10/15/87	87100389	0 43E	4.0	80.00	TEMP ARE NOT RUNNING HOT ENOUGH / ONLY RUNNING ON 150 DEGREES/ ALSO 0675 PM
	OVEN DRYING	2/24/88	2/24/88	88020824	0 47	2.0	40.00	MAKING A HELL OF NOISE
	OVEN DRYING	3/30/88	3/30/88	88031101	0 47	1.0	20.00	TIGHTEN BEARING COLLER
	OVEN DRYING	8/30/88	8/30/88	88081055	0 43E	3.0	60.00	WON'T GET HOT ENOUGH / ONLY RUNNING HALF TEMP
	OVEN DRYING	2/ 6/89	2/ 7/89	89020155	0 43E	3.0	60.00	NOT GETTING HOT ENOUGH 160 TO 190 DEGREES / BARELY GETTING TO 100TRANSF
	OVEN DRYING	2/13/89	2/14/89	89020402	0 43E	4.0	80.00	NOT GETTING ENOUGH HEAT

 20.0 400.00
 =====
 20.0 400.00

000681

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PNUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
005600	DEGREASER	5/ 2/89	/ 2/89	89050072	0 42M	0.0	0.00 PUMP TRICH CANCEL SAME AS 89050001
	DEGREASER	5/ 2/89	5/ 3/89	89050061	0 42M	10.0	200.00 PUMP TRICH
	DEGREASER	5/ 4/89	5/ 5/89	89050180	0 46P	0.0	0.00 PULL COIL AND LEAK CHECK
	DEGREASER	5/10/89	/ /	89050340	0 42M	0.0	0.00 CLEAN AND FILL WITH TRICH

 259.5 5190.00

 259.5 5190.00

005600

5/10/89

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005813	CR65 TANK	11/ 7/85	11/ 6/85	85110302	0 46P	6.0	120.00	NO AIR AGITATION
	CR66 TANK	1/17/86	1/21/86	86010482	0 46E	3.0	60.00	TEMP CONTROL INOP
	HOT RINSE	6/23/86	10/ 1/86	86080683	0 23	24.0	480.00	REPAIR BACK DUCT
	HOT RINSE	11/12/86	11/13/86	86110263	0 46P	6.0	120.00	DRAIN PLUGGED
	HOT RINSE	12/29/86	1/ 7/87	86120781	0 46P	6.0	120.00	CR66 NEED TO REPAIR HEATING COIL
	HOT RINSE	1/ 2/87	1/ 6/87	87010002	0 25	0.0	0.00	WELD HEATING COIL
	HOT RINSE	5/28/87	5/27/87	87050736	0 46P	8.0	160.00	DRAIN PLUGGED
	HOT RINSE	6/18/87	6/18/87	87060520	0 46P	6.0	120.00	CHECK OUT STEAM VALVE
	HOT RINSE	9/ 2/88	9/ 2/88	88090064	0 48P	8.0	160.00	PLUGGED DRAIN
	HOT RINSE	9/ 2/88	9/ 6/88	88090065	0 48E	6.0	120.00	CIRCUIT BREAKER KEEPS KICKING OFF ON TEMP CONTROL
	HOT RINSE	1/30/89	2/ 1/89	89010798	0 46P	4.0	80.00	WATER LINE LEAKING
	HOT RINSE	3/20/89	3/21/89	89030566	0 46P	6.0	120.00	NO HOT WATER TO TANK
	HOT RINSE	4/24/89	5/ 2/89	89040897	0 46P	2.0	40.00	PLUGGED DRAIN

005813

85.0 1700.00

85.0 1700.00

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000683	SPRAY RINSE TANK	9/19/86	9/25/86	86090597	0 43M	4.0	80.00 NEED CURTAINS REPLACED TANK G9
	SPRAY RINSE TANK	9/ 9/88	9/12/88	88090284	0 43P	2.0	40.00 CHECK WATER PRESSURE ON TANK / WORK STOPPAGE
	SPRAY RINSE TANK	9/16/88	9/20/88	88090507	0 43P	6.0	120.00 CHECK WATER PRESSURE

000683

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12.0 240.00
=====
12.0 240.00

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO Nomenclature REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANHRS COST PROBLEM

000911 CONVEYOR 7 8/12/87 8/12/87 67080394 0 47 1.0 20.00 WON'T RUN NO POWER

5/10/89

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ DATE	COMP DATE	PROD NO	MP NO	SHOP MANHRS	COST PROBLEM
000680	TANK G7	3/24/86	3/25/86	86030659	0 43	6.0	120.00 STEAM LEAK
	TANKHOTRN	5/14/87	5/15/87	87050441	0 43P	6.0	120.00 NEEDS TO REPLACE VALVE
	TANKHOTRN	7/29/88	7/29/88	88070843	0 43P	2.0	40.00 UNPLUG DRAIN
	TANKHOTRN	11/ 1/88	11/ 4/88	88110006	0 43P	4.0	80.00 LEAKING PIPE
	TANKHOTRN	3/ 6/89	3/ 8/89	89030235	0 43P	4.0	80.00 DRAIN ON TANK IS CLOGGED

 22.0 440.00
 =====
 22.0 440.00

000680

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000682	TANK	4/11/86	4/14/86	86040347	0	43P 4.0	80.00 DRAIN LINES NEED TO BE INSTALLED
	TANKDEVEL	9/16/87	9/17/87	87090492	0	43P 6.0	120.00 OVERFLOW (PLUG OR CAP)
	TANKDEVEL	10/17/88	10/18/88	88100406	0	43P 2.0	40.00 WATER LEAK

 12.0 240.00
 =====
 12.0 240.00

000682

5/10/89

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000960	CONVEYOR	9/17/85	9/20/85	85090502	0	43M	2.0	40.00	HAS LEGS THAT NEED TO BE STRAIGHTENED
	COVEYOR 31	1/ 8/87	1/ 8/87	87010184	0	47	2.0	40.00	LEGS FALLING APART

000960

 4.0 80.00
 =====
 4.0 80.00

5/10/89

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO NOMENCLATURE REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANHRS COST PROBLEM

000685 TANKPENET 9/24/87 9/25/87 87090770 0 43P 6.0 120.00 DISCONNECT DRAIN PIPE AND PLUG OPENING
DRAIN AND OVERFLOW PIPE)

5/19/89

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO NOMENCLATURE REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANHRS COST PROBLEM

000876 TANKEMULS 5/19/87 5/20/87 87050553 0 43P 6.0 120.00 WATER VALVE LEAKING

5/10/88

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	DESCRIPTION	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
000677	SPRAY RINSE TANK	7/29/88	8/18/88	88070848	0 22	0.0	0.00	TORN CURTIN NEEDS REPAIR OR REPLACE
	SPRAY RINSE TANK	10/12/88	10/14/88	88100286	0 23	0.0	0.00	CUT LARGER SLOT IN TIN WALL
	SPRAY RINSE TANK	10/24/88	10/27/88	88100913	0 43E	8.0	160.00	BOTH HOIST SWITCHES ON FLOOR ARE STICKING

000677

 8.0 160.00

 8.0 160.00

5/10/80

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000676	TANK	4/11/80	4/14/80	80040346	0	43P 4.0	80.00 NEEDS DRAIN LINE INSTALLED
	TANKDEVEL	9/16/87	9/17/87	87090491	0	43P 6.0	120.00 OVERFLOW (PLUG OR CAP)

 10.0 200.00

 10.0 200.00

000676

5/10/89

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	MOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000675	OVEN	6/13/85	6/14/85	85060391	0	43	1.0	20.00	REPLACE LIGHT BULB ON CONTROL PANEL
	OVEN DRYING	3/ 1/88	3/ 1/88	88030036	0	47	1.5	30.00	HAS A BAD NOISE
	OVEN DRYING	11/ 3/88	11/ 3/88	88110126	0	47E	2.0	40.00	BULB BURNED OUT
	OVEN DRYING	1/10/80	1/10/80	89010566	0	47M	1.5	30.00	REPLACE VALVE
	OVEN DRYING	2/ 6/89	2/ 7/89	89020154	0	43M	3.0	60.00	F NOT GETTING HOT ENOUGH

000675

 9.0 180.00
 =====
 9.0 180.00

ENTER PM NUMBER:000684

THERE ARE NO RECORDS FOR PM NUMBER 000684 .

5/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ DATE	COMP DATE	PROD NO	MP NO	SHOP MANHRS	COST PROBLEM
000673	RINSE TANK	6/25/85	6/25/85	85060729	0 43	6.0	120.00 RETURN STEAM LINE LEAKING
	MAJ BOOTH	3/25/86	3/25/86	86030724	0 47	1.0	20.00 HOIST INOP
	TANKHOTRN	5/14/87	5/15/87	87050459	0 43P	6.0	120.00 VALVE LEAKING
	TANKHOTRN	7/24/87	7/31/87	87070745	0 43P	9.0	180.00 INSTERNAL STEAM LEAK
	TANKHOTRN	7/29/88	7/29/88	88070842	0 43P	2.0	40.00 PLUGED DRAIN

ENTER PM NUMBER:000673

000673

24.0 480.00
 =====
 24.0 480.00

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000079	TANK 00 <i>PERMANENT PM 0000</i>	3/24/86	3/26/86	86030658	0	43	6.0 120.00 STEAM LEAK
	TANKPENT	9/16/87	9/17/87	87090493	0	43P	6.0 120.00 DRAIN NEEDS TO BE PLUGGED
	TANKPENT	9/17/87	9/18/87	87090538	0	43P	6.0 120.00 REMOVE DRAIN LINE AND PLUG HOLE

 18.0 360.00

 18.0 360.00

000079

5/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANNERS COST PROBLEM

PM. NO NOMENCLATURE

8/30/88 8/30/88 88081035 0 48E 4.0 80.00 TEMP CONTROL INOP

005633 COLDBRINSE

5/10/80

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO NOMENCLATURE REQ.DATE COMP.DATE PROD.NO MP.NO SHOP MANHRS COST PROBLEM

005814 CR67 TANK 2/24/86 2/26/86 86020630 0 23 4.0 80.00 NEED VENT HOOD FASTENED

5/10/89

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
005816	NITRICAD	11/24/87	11/25/87	87110753	0	48	2.0	40.00	OVER FLOW PLUGGED
	NITRICAD	4/26/88	4/26/88	88040749	0	48P	9.0	180.00	BROKEN LINE

005816

 11.0 220.00

 11.0 220.00

ENTER PM NUMBER:005610

THERE ARE NO RECORDS FOR PM NUMBER 005610 .

5/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO NOMENCLATURE REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANHRS COST PROBLEM

005819 JUNCTION BOX 6/12/85 8/28/85 85080323 0 46 3.0 60.00 NEEDS COVER REPLACED

5/10/88

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
005824	OVEN	3/17/86	6/16/86	86030489	60803	46P	32.0 640.00 STEAM COIL BROKEN WATER LEAKING
	DRYER	3/17/86	3/17/86	86030491	0	47	2.0 40.00 NOT WORKING PROPERLY
	DRYER OVEN	6/ 3/86	6/ 4/86	86080048	0	46P	2.0 40.00 COILS LEAKING
	DRY BOOTH	11/21/86	12/ 1/86	86110976	0	46E	6.0 120.00 DISCONNECT ELECTRICAL ON DRYING BOOTH
	DRY BOOTH	11/ 9/87	11/12/87	87110293	315	0 46P	6.0 120.00 PLUMBER TO FIX STEAM LEAKK
	DRY BOOTH	11/25/87	2/24/88	87110782	73411	46P	128.0 2560.00 SERIOUS STEAM LEAK / WORK STOPPAGE LEAKING BAD
	DRY BOOTH	12/ 7/87	12/ 7/87	87120191	7A1	0 46P	0.0 0.00 HEATER COIL BROKEN / BREAK IN COIL
	DRY BOOTH	1/ 4/88	1/ 5/88	88010029	41	0 46P	2.0 40.00 COIL LEAK
	DRY BOOTH	2/17/88	2/18/88	88020588	416	0 25	4.0 80.00 CUT SUPPORT BEAMS
	DRY BOOTH	7/26/88	7/26/88	88070729	212	0 47E	2.0 40.00 CHECK DRYER IT WON'T DRY
	DRY BOOTH	8/ 1/88	8/ 3/88	88080041	214	0 46E	2.0 40.00 DRYING BOOTH NOT HEATING UP

 186.0 3720.00

 186.0 3720.00

005824

ENTER PM NUMBER: 005921

THERE ARE NO RECORDS FOR PM NUMBER 005921 .

9/10/88

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO NOMENCLATURE

005020 DYPENETR

REQ. DATE COMP. DATE PROD. NO MP. NO SHOP MANHRS COST PROBLEM

174 9/22/88 9/22/88 86000649 0 42 2.0 40.00 ADD TRICH
4-1-82
3-31-89

26 100
27 365
28 366
29 130

9/10/88

PM.NO NOMENC

000877 SPRAY

SPRAY

SPRAY

000877

5/10/88

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	HOMECLECTURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005611	TANK	10/22/85	10/22/85	85100646	0	46P	3.0	60.00 WATER LINE IS BROKEN
		<i>56</i>						
	CR84 TANK	12/17/85	12/18/85	85120448	0	46P	6.0	120.00 BROKEN DRAIN PIPE
	CR84 TANK	12/31/85	1/ 3/86	85120704	0	46P	6.0	120.00 HAS BROKEN HEATING COIL
		<i>1A</i>						
	HOTRINSE	9/23/86	10/ 1/86	86090689	0	23	24.0	480.00 REPAIR BACK DUCT
		<i>9A</i>						
	HOTRINSE	10/ 7/86	10/ 8/86	86100171	0	23	8.0	180.00 REPLACE BACK VENT HOOD ON TANK
		<i>1A</i>						
	HOTRINSE	11/24/86	11/25/86	86110654	0	21	6.0	120.00 NEED WIRES PULLED
		<i>A8</i>						
		<i>38C</i>						
	HOTRINSE	12/17/87	12/17/87	87120583	0	46P	6.0	120.00 BUSTED WATER LINE
		<i>13B</i>						
	HOTRINSE	5/ 3/88	5/ 3/88	88050050	0	48	5.0	100.00 PLUGGED DRAIN NO AIR AGATATION
		<i>37C</i>						

 64.0 1280.00

 64.0 1280.00

005611

5/10/89

5/10/89

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
005825	ZYGLO READING BOOT	5/31/85	6/ 5/85	8506081115	0 43	2.0	40.00 CURTAIN WONT SLIDE ROLLER COMING OFF
			5				
	ZYGLO BOOTH	6/ 5/85	6/12/85	85060094	15 0 25	4.0	80.00 REPAIR DOOR SEE REQUESTER
			7				
	ZYGLO BOOTH	6/12/85	6/13/85	85060385	163 0 46	2.0	40.00 CURTAIN WILL NOT OPEN ON WEST END
			13				
	PENETRANT READING	6/26/85	6/27/85	85060730	176 0 46	8.0	160.00 OTH CANT GET CURTAIN TO SLIDE OPEN
			22				
	BLACK LIGHT	7/17/85	7/17/85	85070453	198 0 46E	2.0	40.00 CORD REPAIRED AND NEW LIGHT SOCKET
			16			3.6	

005825

 18.0 360.00

 18.0 360.00

9/10/89

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005823	DEVELOPER	12/16/88	12/19/88	88120559	0	46P	2.0	40.00 INSTALL NEW HEADS ON EYE WASH
	DEVELOPER	3/20/89	3/20/89	89030927	0	40E	4.0	80.00 FILTER PUMP / CAN'T TURN OFF INSTALL TO TANK / PUMP

005823

 6.0 120.00

 6.0 120.00

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	DESCRIPTION	REQ DATE	COMP DATE	PROD NO	MP NO	SHOP MANHRS	COST	PROBLEM
000071	MAGNETIC PARTICLE	1/ 6/87	1/ 7/87	87010046	0 46E	2.0	40.00	EXPLORATORY EVALUATION ON WHY IT WON'T DEMAG STILL UNDER WARRANTY
	MAGNETIC PARTICLE	2/17/87	2/18/87	87020447	0 46M	8.0	160.00	REMOVE OLD PUMP AND INSTALL NEW PUMP THEY HAVE RT ALSO WILL REQUIRE ELECTRICIAN
	MAGNETIC PARTICLE	3/ 4/87	3/ 4/87	87030106	0 46M	8.0	160.00	INSTALL NEW ROLLERS ON COIL BASE OF MAG MACHINE
	MAGNETIC PARTICLE	5/ 6/87	5/18/87	87050141	0 46E	32.0	640.00	WON'T DEMAG ON AC/OR DC BLACK LIGHT ATTACHE TO MACHINE HAS A SHORT IN IT
	MAGNETIC PARTICLE	6/18/87	6/19/87	87060580	0 46E	2.0	40.00	WON'T DEMAG ON AC OR DC
	MAGNETIC PARTICLE	6/22/87	7/ 9/87	87060652	0 46E	0.0	0.00	WON'T DEMAG
	MAGNETIC PARTICLE	7/ 2/87	7/ 9/87	87070065	0 46E	0.0	0.00	WON'T DEMAG
	MAGNETIC PARTICLE	7/ 7/87	7/10/87	87070155	0 46E	4.0	80.00	MACHINE WILL NOT DEMAG
	MAGNETIC PARTICLE	8/ 3/87	8/ 5/87	87070985	0 46E	2.0	40.00	WON'T DE MAG
	MAGNETIC PARTICLE	8/27/87	8/27/87	87080915	0 47	1.5	30.00	INSTALL VALVE REPAIR OR REPLACE HOSE
	MAGNETIC PARTICLE	8/31/87	9/ 8/87	87080963	0 46E	6.0	120.00	FLUORESCENT LIGHT/ NEED A NEW ONE
	MAGNETIC PARTICLE	11/16/87	11/17/87	87110469	0 46E	6.0	120.00	FOOT PEDAL SWITCH INOP
	MAGNETIC PARTICLE	11/17/87	11/17/87	87110509	0 46E	0.0	0.00	REPAIR ELECTRICAL SWITCH
	MAGNETIC PARTICLE	11/25/87	12/ 1/87	87110781	0 46M	2.0	40.00	HEADS NEED TO BE WORKED ON / DEMAG (CHECK)
	MAGNETIC PARTICLE	12/ 1/87	12/ 3/87	87120025	0 46E	9.0	180.00	HEADS NEED TO BE WORKED ON / DEMAG CHECK SWITCH BOX
	MAG PRT INSP UNIT	12/30/87	1/ 5/88	87120837	0 46E	16.0	320.00	ALSO 6670 / NOT NEMAGGING / IN 505
	MAG PRT INSP UNIT	2/18/88	2/18/88	88020852	0 47	1.0	20.00	REPLACE HOSE
	MAG PRT INSP UNIT	9/13/88	9/19/88	88090367	0 46E	4.0	80.00	WON'T DEMAG

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
006671	MAG PRT INSP UNIT	9/16/88	9/19/88	88090533	0 46E	0.0	0.00 INOP
		5					
	MAG PRT INSP UNIT	9/21/88	9/23/88	88090667	0 46M	4.0	80.00 NEED NEW ROLLERS ON COIL
		72					
	MAG PRT INSP UNIT	12/ 2/88	12/ 5/88	88120063	0 46E	12.0	240.00 WON'T DEMAG
		7					
	MAG PRT INSP UNIT	12/ 9/88	12/15/88	88120248	0 46E	12.0	240.00 ALSO MECH / DOES NOT DEMAG
		152					

 131.5 2630.00
 =====
 131.5 2630.00

006671

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
006669	PARTICLE INSPECTIO	1/ 6/87	1/ 9/87	87010059	0 43E	1.0	20.00	LIGHT RECEPTICAL IS BROKEN
	PARTICLE INSPECTIO	3/ 6/87	3/ 6/87	87030220	0 43E	3.0	60.00	REPLACE WHITE LIGHT SOCKET
	PARTICLE INSPECTIO	3/28/87	3/30/87	87030836	0 43M	2.0	40.00	REPLACE DRY PIN IN MOTOR
	PARTICLE INSPECTIO	7/23/87	7/23/87	87070666	0 43E	1.0	20.00	BLACK LIGHT / SOCKET INOP / LIGHT NOT WORKING
	PARTICLE INSPECTIO	8/20/87	8/20/87	87080671	0 47	1.5	30.00	REPLACE VALVES
	PARTICLE INSPECTIO	9/11/87	9/15/87	87090341	0 43E	2.0	40.00	INSTALL LARGE COIL TO MACHINE / TAKE OFF SMALL COIL
	PARTICLE INSPECTIO	11/23/87	11/30/87	87110693	0 43E	4.0	80.00	WON'T DEMAG
	PARTICLE INSPECTIO	2/18/88	2/18/88	88020651	0 47	1.0	20.00	REPLACE HOSE
	PARTICLE INSPECTIO	4/ 7/88	4/ 7/88	88040189	0 47	1.0	20.00	FOOT SWITCH INOP.
	PARTICLE INSPECTIO	5/ 2/88	5/ 2/88	88050046	0 47	1.0	20.00	REPAIR BLACK LIGHT
	PARTICLE INSPECTIO	6/ 8/88	6/13/88	88060289	0 46M	4.0	80.00	NEEDS HEADS ON MACHINE REGROUND
	PARTICLE INSPECTIO	6/27/88	7/ 1/88	88060905	0 23	2.0	40.00	NEED SCREENS MADE AND INSTALLED/SEE THEY FIRST A THEY WILL SHOW YOU WHAT THEY WANT
		6/28/88	7/ 8/88	88060969	0 41	24.0	480.00	MFG PLATES PER SAMPLE
	PARTICLE INSPECTIO	8/ 9/88	8/11/88	88080333	0 43M	0.0	0.00	INSTALL PLATES ON MACHINES / KENNEDY HAS PLATES
	PARTICLE INSPECTIO	2/16/89	2/16/89	89020663	0 47M	1.5	30.00	REPLACE HOSES
	PARTICLE INSPECTIO	3/ 8/89	3/ 9/89	89030250	0 43E	4.0	80.00	FOOT PEDDLE IS INOP

006669

53.0 1060.00

53.0 1060.00

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005600	CR72 TANK	5/16/85	6/18/85	85050428	51401	40	8.0	160.00 PUMP NEEDS REPAIR MP NO CANCELLED 6-14-85
	CR72 TANK	6/18/85	6/18/85	85060501	0	40	8.0	160.00 INSTALL DEGREASER PUMP
	CR72 DEGREASER	6/25/85	6/27/85	85060730	0	42	2.0	40.00 NEEDS ONE BARREL ADDED
	DEGREASER	7/17/85	7/18/85	85070431	0	42	2.0	40.00 ADD TRIC
	CR72 TANK	8/13/85	8/15/85	85080386	0	42	1.0	20.00 ADD TRIC
	DEGREASER	9/25/85	9/27/85	85090815	0	42	2.0	40.00 NEEDS TRIC ADDED
	CR72 DEGREASER	12/ 3/85	12/ 3/85	85120058	0	42	1.0	20.00 NEEDS TRIC ADDED
	CR72 TANK	12/ 9/85	12/10/85	85120226	0	42	8.0	160.00 NEEDS TO BE PUMPED AND REFILLED
	CR72 DEGREASER	2/10/86	2/10/86	86020261	0	42	2.0	40.00 ADD TRIC
	CR72 DEGREASER	2/27/86	2/27/86	86020758	0	40M	4.0	80.00 LID WONT GO UP OR DOWN
	CR72 DEGREASER	3/ 4/86	3/11/86	86030033	0	42	8.0	160.00 PUMP AND REFILL 4 DRUMS TRIC
	DEGREASER	6/18/86	6/19/86	86060447	0	42	2.0	40.00 CHANGED FLUID FAILED ACID
	DEGREASER	8/11/86	8/12/86	86080232	0	42	2.0	40.00 ADD TRIC
	DEGREASER	8/14/86	9/15/86	86080393	62263	40M	6.0	120.00 REPLACE PUMP
	DEGREASER	8/22/86	8/25/86	86080604	0	42	6.0	120.00 PUMP/CLEAN/REFILL
	DEGREASER	9/22/86	9/22/86	86090650	0	42	2.0	40.00 ADD TRICH
	DEGREASER	10/ 7/86	10/ 7/86	86100163	0	42	2.0	40.00 NEED TRIC ADDED
	DEGREASER	10/ 7/86	10/ 7/86	86100168	0	42	2.0	40.00 NEED TRIC ADDED

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	DESCRIPTION	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005600	DEGREASER	11/ 5/86	11/ 7/86	86110119	0 42	4.0	80.00	CLEAN AND REFILL WITH TRICH **HIGH IN ACID** 2 BARRELS
	DEGREASER	12/17/86	12/18/86	86120523	0 42P	2.0	40.00	PUMPED AND FILLED
	DEGREASER	2/ 9/87	2/ 9/87	87020215	0 42	8.0	160.00	PUMP AND CHNAGE TRIC
	DEGREASER	4/ 1/87	4/ 2/87	87040035	0 46E	6.0	120.00	PUMP WON'T WORK
	DEGREASER	4/ 1/87	4/ 1/87	87040043	0 47	1.0	20.00	PUMP INOP
	DEGREASER	5/14/87	5/15/87	87050446	0 42	3.0	60.00	ADD TRICH.
	DEGREASER	5/14/87	5/21/87	87050449	0 25	2.0	40.00	WELD SCREEN TRANSFERRED FROM SHOP 46
	DEGREASER	5/15/87	5/18/87	87050493	0 42P	3.0	60.00	NEEDS PUMPER TO PUMP AND REFILL ***** 1 DRUM
	DEGREASER	5/20/87	5/20/87	87050617	0 42M	4.0	80.00	PUMP AND CHANGE OR ADD TRICH
	DEGREASER	5/20/87	5/26/87	87050623	0 46P	8.0	160.00	HEATING COIL LINED PURGED OR FLUSHED
	DEGREASER	6/22/87	6/22/87	87060635	0 42M	4.0	80.00	CHANGE TRICH ADDED 3 DRUMS
	DEGREASER	7/29/87	7/29/87	87070873	0 42	3.0	60.00	CHAGE TRICH
	DEGREASER	8/12/87	8/13/87	87080373	0 42	2.0	40.00	ADD TRICH ADDED 1 DR
	DEGREASER	9/14/87	9/15/87	87090309	0 42L	2.0	40.00	ADD TRICH
	DEGREASER	9/16/87	9/18/87	87090479	0 46P	4.0	80.00	TRAP CLEANED OUT
	DEGREASER	9/17/87	9/17/87	87090511	0 42	3.0	60.00	PUMP IN MAKEUP MILL
	DEGREASER	9/18/87	9/18/87	87090556	0 46P	4.0	80.00	CLEAN COILS
	DEGREASER	9/22/87	9/23/87	87090639	0 42M	3.0	60.00	ADD TRICH ADDED 2 DR

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

P. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005600	DEGREASER	10/15/87	10/15/87	87100451	0 42L	4.0	80.00	ADD TRICH DDED 2 DRUMS
	DEGREASER	12/14/87	12/14/87	87120426	0 42P	2.0	4000	ADD TRICH 1 DR ADED
	DEGREASER	1/ 8/88	1/ 8/88	88010215	0 42P	3.0	60.00	ADD TRICH 1 DRUM
	DEGREASER	1/ 8/88	1/ 8/88	88010240	0 47	2.0	40.00	REPLACE LID IN DEGREASER
	DEGREASER	1/14/88	1/13/88	88010398	0 25	4.0	80.00	REMOVE BRACE / MAY NEED TO BECUT
	DEGREASER	1/20/88	1/28/88	88010532	0 48P	6.0	120.00	REMOVE COIL
	DEGREASER	1/29/88	10/29/08	88010847	0 48	6.0	120.00	INSTALL COIL
	DEGREASER	2/22/88	2/23/88	88020712	0 42L	1.0	20.00	ADD TRICH 2 DRUMS
	DEGREASER	3/17/88	3/17/88	88030897	0 42P	2.0	40.00	ADD TRICH
	DEGREASER	4/18/88	4/18/88	88040454	0 42L	2.0	40.00	ADD TRICH 1 DRUM
	HYDROACID	5/ 2/8	5/ 2/88	88050001	0 42L	2.0	40.00	ADD TRICH 2 DRUMS
	DEGREASER	5/ 5/88	5/ 5/88	88050148	0 4L	2.0	40.00	ADD TRICH 1 DRUM
	DEGREASER	5/18/88	5/18/88	88050526	0 42L	2.0	40.00	DD TRICH
	DEGREASER	5/26/88	5/26/88	88050824	0 42L	2.0	40.00	AD TRICH 1 DRUM
	DEGREASER	6/ 7/88	6/ 7/88	88060193	0 42L	2.0	40.00	ADD TRIKE TO TANK
	DEGREASER	6/20/88	6/20/88	88060643	0 42L	2.0	40.00	ADD TRICH
	DEGREASER	7/25/88	7/26/88	88070648	0 46P	8.0	160.00	LEAK TRANSFERRED FROM 48
	DEGREASER	7/25/88	7/2/88	88070654	0 42L	8.0	160.00	NEED TANK PUMPED OUT

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
005600	DEGREASER	8/23/88	8/23/88	88080800	0 42M	3.0	60.00 ADD TRICH
	DEGREASER	8/23/88	8/24/88	88080859	0 42M	10.0	200.00 PUMP AND CLEAN
	DEGREASER	9/ 6/88	9/ 6/88	88090101	0 46P	10.0	200.00 BROKEN COUPLING TRANSFERRED FROM 48
	DEGREASER	9/ 6/88	9/ 7/88	88090118	0 25W	0.5	10.00 WELD TUBE FITTING
	DEGREASER	9/ 8/88	9/ 8/88	88090218	0 42M	3.0	60.00 PUMP TRICH
	DEGREASER	9/16/88	9/16/88	88090500	0 42M	6.0	120.00 PUMP TRICH
	DEGREASER	10/12/88	10/12/88	88100242	0 42M	2.0	40.00 ADD TRICH
	DEGREASER	10/27/88	11/ 3/88	88100726	0 42M	2.0	40.00 ADD TRICH
	DEGREASER	10/31/88	10/31/88	88100826	0 42M	2.0	40.00 PUMP TRICH
	DEGREASER	11/ 2/88	11/ 3/88	88110094	0 48	6.0	120.00 INOP. TRANSFERRED FROM 47
	COLD RINSE	11/16/88	11/21/88	88110540	0 42M	3.0	40.00 ADD TRICH
	DEGREASER	12/20/88	12/20/88	88120671	0 42M	1.0	20.00 ADD TRICH
	DEGREASER	1/ 6/89	1 9/89	89010210	0 42M	0.0	0.00 ADD TRICH CANCEL SAME AS 89010140
	DEGREASER	1/ 6/89	1/ 9/89	89010162	0 42M	0.0	0.00 ADD TRICH CANCEL SAME AS 89010140
	DEGREASER	1/ 5/89	1/ 9/89	89010140	0 42M	3.0	60.00 ADD TRICH
	DEGREASER	2/15/89	2/15/89	89020500	0 42M	3.0	60.00 ADD TRIKE
	DEGREASER	3/ 9/89	3/13/89	8903273	0 42M	2.0	40.00 ADD TRIKE
	DEGREASER	5/ 2/89	/ /	8905007	0 40M	0.0	0.00 FULL OF WATER REPAIR

5/10/88

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	DESCRIPTION	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
003428	DEGREASER	10/20/88	10/20/88	88100535	0 42M	8.0	160.00	PUMP TRICH
	DEGREASER	11/23/88	11/28/88	88110739	0 42M	2.0	40.00	ADD TRICH
	DEGREASER	11/28/88	11/28/88	88110766	0 43E	4.0	80.00	WON'T STAY ON / KEEPS KICKING OUT
	DEGREASER	12/14/88	12/14/88	88120452	0 43P	2.0	40.00	BUSTED PIPE / SAFETY HAZARD
	DEGREASER	12/14/88	12/14/88	88120458	0 42M	2.0	40.00	EMERGENCY / TRICH TANK IS LEAKING NEED TO HAVE TANK PUMPED FOR REPAIR
	DEGREASER	12/16/88	12/16/88	88120536	0 42M	2.0	40.00	ADD TRICH
	DEGREASER	12/15/88	12/19/88	88120499	0 43P	8.0	160.00	OVERFLOW IS PLUGGED
	DEGREASER	12/19/88	12/19/88	88120593	0 43P	4.0	80.00	PLUGGED UP / LEAKING
	DEGREASER	1/19/89	1/20/89	89010558	0 42M	2.0	40.00	ADD TRICH
	DEGREASER	2/14/89	2/15/89	89020472	0 43E	4.0	80.00	NOT HEATING
	DEGREASER	2/24/89	2/24/89	89020775	0 43M	4.0	80.00	OVERFLOWING
	DEGREASER	3/ 8/89	3/10/89	89030255	0 43E	4.0	80.00	KEEPS KICKING OUT
	DEGREASER	4/12/89	4/12/89	89040371	0 47M	2.0	40.00	NEEDS FLUID
	DEGREASER	4/11/89	4/13/89	89040268	0 43P	4.0	80.00	INOP
	DEGREASER	4/13/89	4/13/89	89040390	0 42	2.0	40.00	NEED FLUID ADDED
	DEGREASER	4/25/89	4/26/89	89040755	0 42M	6.0	120.00	CHANGE TRICH

 429.5 8590.00

 429.5 8590.00

003428

ANALYSIS REPORT OF
ROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
003428	DEGREASER	5/19/87	5/19/87	87050561	0 42	3.0	60.00	DRAIN AND REFILL 2 DRUMS ADDED
	DEGREASER	7/ 1/87	7/ 1/87	87070019	0 42	3.0	60.00	ADD TRICH 2 DR
	DEGREASER	7/ 8/87	7/ 9/87	7070237	0 43E	2.0	40.00	WON'T TURN ON
	DEGREASER	7/ 8/87	7/ 9/87	87070238	0 42M	3.0	60.00	PUMP AND REFILL WITH TRICH

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	DESCRIPTION	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
003428	DEGREASER	10/28/86	10/29/86	86100737	0 42P	6.0	120.00 ADD TRICH
	DEGREASER	11/20/86	11/20/86	86110564	0 47	1.0	20.00 NO POWER
	DEGREASER	11/21/86	11/25/86	86110578	0 42	4.0	80.00 ADD TRICH
	DEGREASER	11/24/86	11/26/86	86110628	0 43	6.0	120.00 NOT COOLING VAPOR RISING ABOVE SAFE AREA FRED JONES FOR INFO
	DEGREASER	12/ 4/86	12/ 9/86	86120176	0 42	6.0	120.00 PUMP TANK
	DEGREASER	1/21/87	1/23/87	87010545	0 42	2.0	40.00 LOW ON TRICH TRICH ADDED
	DEGREASER	2/ 3/87	2/10/87	87020087	0 43M	30.0	600.00 SPRAY PUMP IS LEAKING TRICH THRU IT ONTO THE FLOOR *SEE JIM ROTHEY*
	DEGREASER	2/ 9/87	2/10/87	87020264	0 42	9.0	180.00 PUMP DEGREASER
	DEGREASER	2/11/87	2/12/87	87020321	0 43E	14.0	280.00 NO POWER TO DEGREASER WILL NOT TURN ON
	DEGREASER	2/11/87	2/12/87	87020338	0 42P	18.0	360.00 PUMP TRICH
	DEGREASER	2/23/87	2/24/87	87020665 70541 43E	6.0	120.00	PUMP SPRAY MOTOR BURNING UP
	DEGREASER	2/26/87	2/27/87	87020767	0 42	2.0	40.00 ADD TRICH i Dr.
	DEGREASER	3/ 9/87	3/10/87	87030271	0 43E	2.0	40.00 WON'T TURN ON AND HEAT UP
	DEGREASER	3/19/87	6/ 8/87	87030659 70892 43E	12.0	240.00	INOP
	DEGREASER	3/23/87	3/23/87	87030730	0 42	2.0	40.00 PUMP TRICH.
	DEGREASER	3/6/87	3/27/87	87030901	0 42	4.0	80.00 ADD TRICH.
	DEGREASER	3/27/7	3/27/87	87030933	0 43E	4.0	80.00 NEEDS POWER TURN ON
	DEGREASER	5/19/8	5/19/87	87050554	0 43E	4.0	80.00 SWITCH WON'T WORK/ELECTRICAL PROBLEM

DEGREASER	8/15/88	88080840	0 47M	3.0	60.00	LETTING FUMES OVER SIDE OF TANK
DEGREASER	9/29/88	10/ 3/88	88090933	0 43E	3.0	60.00 WILL NOT HEAT UP\
DEGREASER	9/29/88	9/29/88	88090940	0 47E	2.0	40.00 NOT WORKING

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	DESCRIPTION	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
006366	MAG BOOTH	11/18/86	11/19/86	85110463	0 43M	2.0	40.00 NOT WORKING
	MAG MACHINE	3/13/86	3/14/86	86030379	0 43M	1.0	20.00 AIR DRIVEN LOCKING DEAD NOT ACTIVATING
	MAG MACHINE	5/19/86	5/21/86	86080850	0 41	6.5	170.00 CUT 4EA PIECES OF PHENOLIC AS REQUIRED
	MAG MACHINE	5/30/86	6/ 6/86	86090871	0 43E	8.0	160.00 REMOVE POPWEEER SUPPLY
	MAG MACH.	7/23/86	7/25/86	86070924	0 43	6.0	120.00 HEAD WONT LOCK
	MAGNAFLUX	4/27/87	5/ 4/87	87040924	0 43E	4.0	80.00 REPLACE COIL
	MAGNAFLUX	4/29/87	5/ 4/87	87040904	0 43E	4.0	80.00 REPLACE SWITCH AND COIL
	MAGNAFLUX	6/25/87	6/26/87	87060734	0 22	2.0	40.00 RAISE HOOD ON MACHINE
	MAGNAFLUX	7/15/87	7/15/87	87070431	0 43E	2.0	40.00 FIX BROKEN SWITCH
	MAGNAFLUX	7/29/87	7/30/87	87070842	0 43E	12.0	240.00 WON'T DEMAG
	MAGNAFLUX	8/ 6/87	8/10/87	87080157	0 43E	4.0	80.00 TRAVERSING SWITCH REPLACED
	MAGNAFLUX	8/24/87	8/24/87	87080739	0 43P	6.0	120.00 TABLE NEEDS AIR TO IT / NO AIR TO TABLE / SECTIO OF AIR TAKEN OUT / STOP AIR FROM LEAKING (PLUG)
	MAGNAFLUX	9/21/87	9/25/87	87090812	0 43E	24.0	480.00 WON'T DEMAG
	MAGNAFLUX	10/ 5/87	10/ 5/87	87100097	0 43P	6.0	120.00 REPLACE AIR HOSE
	MAGNAFLUX	10/ 8/87	10/ 8/87	87100291	0 47	1.0	20.00 REPAIR WIRES ON LIGHT SEE CHARLIE
	MAGNAFLUX	1/20/88	1/27/88	88010541	0 43M	4.0	80.00 AIR LEAK
	MAGNAFLUX	1/20/88	1/20/88	88010590	0 47	1.0	20.00 HOSE RUPTURED
	MAGNAFLUX	1/28/88	2/ 1/88	88010808	0 43M	5.0	100.00 ROLLERS OF COIL / NEW HOSE ALSO

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
006366	MAGNAFLUX	1/28/88	2/ 2/88	88010811	0 43E	4.0	80.00 WON'T DEMAG
	MAGNAFLUX	2/18/88	2/18/88	88020649	0 47	1.0	20.00 REPLACE HOSE
	MAGNAFLUX	2/25/88	2/29/88	88020852	0 43	24.0	480.00 NEEDS ELECTRICAL ADJ
	MAGNAFLUX	6/27/88	7/ 1/88	88050903	0 23	2.0	40.00 NEED SCREENS MADE AND INSTALLED/SEE THEN FIRST A THEY WILL SHOW YOU WHAT THEY WANT
	MAGNAFLUX	8/ 9/88	8/12/88	88080331	0 43M	2.0	40.00 INSTALL PLATES ON MACHINES / KENNEDY HAS PLATES
	MAGNAFLUX	10/ 4/88	10/ 5/88	88100032	0 43E	15.0	300.00 IMOP / WON'T MAG / LIGHTS UP & THAT'S IT HAS POWER TO IT
	MAGNAFLUX	4/18/89	4/18/89	88040517	0 22	21.0	420.00 CUT DOWN PLATFORM TO EQUIPMENT
	MAGNAFLUX	4/13/89	4/19/89	88040399	0 40	1.0	20.00 WONT DE MAG TRANSFERRED FROM 46TRANSFERRED FROM 43
	MAGNAFLUX	5/ 4/89	/ /	88050175	0 46M	0.0	0.00 NEW HEAD PLATES / INSTALL / GET NEW PLATES FROM 0507 / LOCATED IN BLDG 505
	MAGNAFLUX	5/ 5/89	5/ 9/89	88050203	0 41	2.0	40.00 MFG PLATES AS PER SAMPLE / 2 EACH

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006366

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMERCLATURE	REQ DATE	COMP DATE	PROD NO	MP NO	SHOP MANHRS	COST	PROBLEM
000401	BIG MAG BOOTH	5/31/85	5/31/85	85050800	0 43	1.0	20.00	KEEPS TRIPPING BREAKER PUMP WONT RUN
	BIG MAC BOOTH	6/10/85	6/10/85	85060266	0 44	2.0	40.00	TRIPPED BREAKER
	BIG MAG BOOTH	6/24/85	6/25/85	85060680	0 43	1.0	20.00	NEEDS BREAKER RESET
	BIG MAG MACHINE	7/ 1/85	7/ 1/85	85070001	0 43	2.0	40.00	RESET BREAKER FOR PUMP
	BIG MAG MACHINE	7/ 3/85	7/23/85	85070092	0 43	1.0	20.00	NEED ELEC TO RESET BREAKER
	BIG MAG	7/10/85	7/11/85	85070228	0 43	2.0	40.00	RESET BREAKER
	BIG MAG	7/17/85	7/18/85	85070445	0 43E	4.0	80.00	PUMP IS DOWN POWER KICKS OFF
	BIG MAG MACHINE	7/18/85	7/18/85	85070465	0 43E	1.0	20.00	PUMP KEEPS KICKING OFF
	MAG MACHINE	9/19/85	9/19/85	85080587	0 43	3.0	60.00	PUMP CLOGGED
	BIG MAG MACHINE	9/20/85	9/21/85	85090636	0 43E	6.0	120.00	WONT DE MAG
	BIG MAG MACHINE	10/ 7/85	10/ 7/85	85100210	0 43E	8.0	160.00	WONT DEMAG
	BIG MAG MACHINE	10/29/85	10/31/85	85100842	0 43	3.0	60.00	PUMP INOP
	MAG MACHINE	11/ 5/85	11/ 5/85	85110096	0 43M	1.0	20.00	PUMP WONT PUMP
	MAG MACHINE	11/ 6/85	11/ 8/85	85110141	0 43M	1.0	20.00	PUMP IS OUT
	BIG MAG	11/25/85	11/26/85	85110626	0 43M	4.0	80.00	PUMP HAS QUIT WORKING
	BIG MAG	1/14/86	1/14/86	86010337	0 43E	4.0	80.00	PUMP WONT COME ON
	BIG MAG	2/ 3/86	2/ 4/86	86020039	0 43E	1.0	20.00	TURN ON BREAKER
	BIG MAG MACHINE	2/ 3/86	2/ 4/86	86020043	0 43P	2.0	40.00	LEAKING OIL

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ DATE	COMP DATE	PROD NO	MP NO	SHOP MANHRS	COST PROBLEM
000401	BIG MAG	3/26/86	4/ 7/86	86030734	0 43M	3.0	60.00 CURTAIN DOWN
	BIG MAG	3/27/86	3/31/86	86030791	0 43E	2.0	40.00 BLACK LIGHT FALLING APART
	BIG MAG	4/ 2/86	4/ 4/86	86040044	0 43M	1.0	20.00 CURTAINS NEED TO BE REPLACED
	MAG MACHINE	5/ 8/86	5/ 8/86	86050207	0 43E	3.0	60.00 PUMP INOP
	MAG MACHINE	5/12/86	5/14/86	86050303	0 43E	8.0	160.00 INOP ELEC
	MAG BOOTH	6/ 6/86	6/ 6/86	86060124	0 43M	8.0	160.00 INSTALL CURTAIN
	MAGNAFLUX	8/11/86	8/18/86	86080263	0 43E	8.0	160.00 DE MAG SWITCH ZNOP
	MAGNAFLUX	8/19/86	9/28/86	86080498	0 43E	32.0	640.00 WONT DEMAG.
	MAGNAFLUX	8/25/86	8/26/86	86080676	0 45M	3.0	60.00 PUMP WON'T WORK WORK STOPPAGE
	MAGNAFLUX	9/30/86	10/ 2/86	86090895	0 43E	16.0	320.00 WON'T DEMAGNATIZE
	MAGNAFLUX	11/20/86	11/20/86	86110520	0 43E	2.0	40.00 REPLACE FRAYED CORD ON PERMENANT MOUNTED BLACK LIGHT
	MAGNAFLUX	11/26/86	12/ 1/86	86110704	0 43E	2.0	40.00 RESET RECIRCULATION PUMP
	MAGNAFLUX	12/15/86	12/16/86	86120479	0 43E	6.0	120.00 REPAIR MAG CABLE ENDS ENDS ARE BRAKING LOOSE
	MAGNAFLUX	12/18/86	12/18/86	86120585	0 43P	6.0	120.00 BAD PUMP
	MAGNAFLUX	2/ 9/87	2/24/87	87020251	0 43P	56.0	1120.00 OIL LEAK OUT OF MAG MACHINE
	MAGNAFLUX	2/12/87	2/18/87	87020383	0 43	6.0	120.00 DOES NOT D-MAG
	MAGNAFLX	2/13/87	2/17/87	87020417	0 43E	20.0	400.00 WILL NOT DEMAG
	MAGNAFLUX	2/25/87	2/25/87	87020718	0 43E	4.0	80.00 SWITCH IN PANEL

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
00C401	MAGNAFLUX	2/25/87	2/25/87	87020720	0 43P	4.0	80.00	REPLACE HOSE WITH EW ENDS
	MAGNAFLUX	3/ 2/87	3/ 4/87	87030023	0 43E	3.5	70.00	REPAIR WHITE LIGHTS
	MAGNAFLUX	3/ 4/87	3/ 6/87	87030128	0 43E	4.0	80.00	EMERGENCY STOP BUTTON BROKEN
	MAGNAFLUX	3/ 9/87	3/12/87	87030261	0 43	5.0	100.00	REPAIR OR REPLACE CABLE ENDS
	MAGNAFLUX	3/18/87	3/24/87	87030596	0 43E	1.5	30.00	REPAIR BLACK LIGHT ON NORTH WALL
	MAGNAFLUX	/25/87	3/26/87	87030851	0 43E	4.0	80.00	RESET CURCUIT BREAKER ON PUMP
	MAGAFUX	3/26/87	4/ 6/87	87030922	0 43M	4.0	80.00	REPAIRER STEPS
	MAGNAFLUX	3/27/87	4/ 7/87	87030936	0 25	4.0	80.00	NEEDS HAND RAILS ON STEP
	MAGNAFLUX	4/ 1/87	4/ 3/87	87040039	0 43M	6.0	120.00	LEAKY PUMP
	MAGNAFLUX	4/ 3/87	4/ 3/87	87040102	0 43P	6.0	120.00	NEEDS GASKET REPLACE FOR OIL FILTER
	MAGNAFLUX	4/ 9/87	4/ 9/87	87040342	0 47	1.0	20.00	LEAK IN LINE
	MAGNAFLUX	4/27/87	4/27/87	87040827	0 47	1.0	20.00	INOP
	MAGNAFLUX	4/29/87	5/ 5/87	87040895	0 43E	4.0	80.00	REPLACE OVERHEAD LIGHTS
	MAGNAFLUX	6/ 4/87	6/ 8/87	8706110	0 43E	2.0	40.00	WON'T MAG
	MAGNAFLUX	6/18/87	6/18/87	87060569	0 43M	3.0	60.00	ISEAKING
	MAGNAFLUX	7/ 7/87	7/ 9/87	87070175	0 43E	4.0	80.00	POWR SHUT OFF TO MAG
	MAGNAFLUX	7/ 7/87	7/ 8/87	87070191	0 43	1.0	20.00	WON'T DEAG
	MAGNAFLUX	7/ 8/87	7/13/87	87070217	0 43E	24.0	480.00	WON'T DEMAG

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PRODNO	MP. NO	SHOP MANHRS	COST	PROBLEM
000401	MAGNAFLUX	7/9/87	7/14/87	87070274	0 23	4.0	80.00	CRAMP FOR COIL 1 EA
	MAGNAFLUX	7/24/87	7/24/87	87070748	0 47	2.0	40.00	REPAIR AIR LEAK SEE RILEY FOR LOCATION OF LEAK
	MAGNAFLUX	8/4/87	8/5/87	87080068	0 43P	4.0	80.00	LEAK IN PLUMBING UNDERNEATH / LAST LIGHT A FLOOD UNDER NEITH /
	MAGNALUX	8/5/87	8/5/87	87080134	0 43E	4.0	80.00	INOP
	MAGNAFLUX	8/1/87	8/17/87	87080510	0 47	1.0	20.00	NO POWER
	MAGNAFLUX	8/21/87	8/21/87	87080712	0 47	10	20.00	NO POWER
	MAGNAFLUX	8/24/87	8/24/87	87080762	0 47	1.	20.00	NO POWER
	MAGNAFLUX	12/30/87	12/30/87	87120830	0 43E	4.0	80.00	LOST ALL OMER TO MONSTER MAG / NEED TO BE BROKEN
	MAGNAFLUX	1/13/88	1/13/88	88010368	0 43E	3.0	60.00	REPLACE FUSES
	MAGNAFLUX	1/29/88	1/29/88	88010869	0 43E	2.0	40.00	LOP / COULD BE BLOWN FUSE
	MAGNAFLUX	3/31/88	4/1/88	88031127	0 43P	4.0	80.00	PUMPS AREN'T WORKING
	MAGNAFLUX	4/11/88	4/12/88	88040249	0 43P	4.0	60.00	OIL LEAKING UNDER MONSTER MAG / AT ELBOW
	MAGNAFLUX	4/18/88	4/19/88	88040498	0 43E	2.0	40.00	CIRCUIT BREAKER / NO POWER
	MAGNAFLUX	4/18/88	4/18/88	88040503	0 47	1.0	20.00	INOP
	MAGNAFLUX	4/19/88	4/22/88	88040514	0 43P	2.0	40.00	SATURATING HOSE HAS HOLE
	MAGNAFLUX	4/22/88	4/22/88	88040682	0 47	2.0	40.00	REPLACE HOSES AND FITTINGS
	MAG BOOTH	5/16/88	5/16/88	88050478	0 47E	2.0	40.00	WONT COME ON
	MAGNAFLU	5/20/88	5/23/88	88050637	0 43P	4.0	80.00	REPLACE HOSE

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	MOENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
00401	MAGNAFLUX	5/23/88	5/24/88	88050699	0 43E	4.0	80.00	WON'T DEMAG
	MAGNAFLUX	7/ 1/88	7/ 1/88	88070026	0 43E	2.0	40.00	NO POWER
	MAGNAFLUX	7/26/88	7/26/88	88070727	0 47E	2.0	40.00	RESET BREAKER
	MAGNAFLUX	10/18/88	10/18/88	88100460	0 47E	1.0	20.00	REPAIRED CONDUIT
	MAGNAFLUX	11/15/88	11/17/88	88110428	0 43E	8.0	160.00	LIGHTS / INSTALL NEW CORDS
	MAGNAFLUX	11/21/88	11/28/88	88110633	0 43E	9.0	180.00	REEL DROP LIGHT / 2 EACH
	MAGNAFLUX	10/12/88	12/14/88	88100249	82936 43E	4.0	80.00	REPAIR A LIGHT/ INSIDE CAME OUT / BARE WIRE
	MAGNAFLUX	3/13/89	3/13/89	89030369	0 47E	2.0	40.00	CABLE FRAIED
	MAGNAFLUX	2/15/89	3/16/89	89020528	90511 43E	4.0	80.00	BROKEN BLACK LIGHT

000401

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
006666	PARTICLE INSPECTIO	12/31/86	12/31/86	86120825	0 43E	1.5	30.00	REPLACE SWITCH
	PARTICLE INSPECTIO	2/18/87	2/19/87	87020503	0 43P	6.0	120.00	INSTALL A T ON AN AIR LINE
	PARTICLE INSPECTIO	6/ 5/87	6/ 9/87	87060133	0 43	4.0	80.00	SWITCH BROKE
	PARTICLE INSPECTIO	8/ 3/87	8/ 6/87	87070984	0 43E	24.0	480.00	BAD PUMP / COULD USE PLUMBER ALSO
	PARTICLE INSPECTIO	8/20/87	8/20/87	87080872	0 47	1.5	30.00	REPLACE VALVES
	PARTICLE INSPECTIO	9/ 4/87	9/ 4/87	87090160	0 43M	2.0	40.00	ROLLERSBASE ON COILS
	PARTICLE INSPECTIO	9/11/87	9/15/87	87090310	0 43E	12.0	240.00	DEMAG NOT WORKING
	PARTICLE INSPECTIO	9/15/87	9/16/87	87090433	0 43E	2.0	40.00	CHANGE COIL ON MAG MACHINE
	PARTICLE INSPECTIO	11/18/87	11/20/87	87110540	0 43E	1.5	30.00	FIX CORD / SAFETY HAZARD
	PARTICLE INSPECTIO	12/15/87	12/15/87	87120461	0 43E	1.5	30.00	SCREW FOR LIGHT SWITCH TO MACHINE IS MISSING SWITCH IS TAPED ON
	PARTICLE INSPECTIO	12/22/87	12/22/87	87120722	0 43M	3.0	60.00	COILS ARCKING / REPLACE COIL / THEY HAVE COIL
	PARTICLE INSPECTIO	2/18/88	2/18/88	88020650	0 47	1.0	20.00	REPLACE HOSE
	PARTICLE INSPECTIO	6/27/88	7/ 1/88	88060904	0 23	2.0	40.00	NEED SCREENS MADE AND INSTALLED/SEE THEM FIRST A THEY WILL SHOW YOU WHAT THEY WANT
	PARTICLE INSPECTIO	8/ 9/88	8/11/88	88080332	0 43M	0.0	0.00	INSTALL PLATES ON MACHINES / KENNEDY HAS PLATES
	PARTICLE INSPECTIO	12/27/88	1/ 4/89	88120832	0 43	4.0	80.00	HEAD WON'T RETRACT TRANSFERRED FROM 47
	PARTICLE INSPECTIO	2/16/89	2/16/89	89020582	0 47M	1.5	30.00	REPLACE HOSES
	PARTICLE INSPECTIO	3/14/89	3/17/89	89030408	0 43E	9.0	180.00	WON'T DEMAG TRANSFERRED FROM 47
	PARTICLE INSPECTIO	4/11/89	4/12/89	89040277	0 43P	2.0	40.00	REPLACE HOSE / END OF HOSE KEEPS COMING OFF NEEDS A FITTING

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP	MANHRS	COST	PROBLEM
006688	AIR HOSE	4/26/89	4/26/89	89040829	0	47M	1.0	20.00	REPLACE AIR HOSE

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006688

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
006670	PARTICLE INSPECTIO	9/11/86	9/11/86	86090333	0 24	2.0	40.00 MFG NEW HOSE PER DRAWING
	PARTICLE INSPECTIO	10/ 3/86	10/ 3/86	86100104	0 47	5.0	100.00 VICE ON MAGNAFLUX INOP
	PARTICLE INSPECTIO	10/17/86	10/21/86	86100428	0 46E	3.0	60.00 FRAYED ELECTRICAL CORD ON BLACK LIGHT
	PARTICLE INSPECTIO	2/ 2/87	1/30/87	87010833	0 46M	4.0	80.00 INSTALL COIL BASE ON COIL OF MAG MACHINE THEY HAVE THE PARTS
	PARTICLE INSPECTIO	6/16/87	6/16/87	87060491	0 46M	2.0	40.00 NEEDS LOW COIL BASE ROLLER INSTALL
	PARTICLE INSPECTIO	7/16/87	7/16/87	87070513	0 47	1.0	20.00 LIGHT INOP.
	PARTICLE INSPECTIO	7/20/87	7/20/87	87070650	0 46E	4.0	80.00 WILL NOT TURN ON
	PARTICLE INSPECTIO	8/19/87	8/24/87	87080578	0 46M	8.0	160.00 PUMP IS INOP
	PARTICLE INSPECTIO	8/21/87	8/24/87	87080704	0 46M	8.0	160.00 NOT PUMPING OIL OUT OF HOSE
	PARTICLE INSPECTIO	8/26/87	8/26/87	87080864	0 47	1.5	30.00 INSTALL NEW VALVE REPAIR OR REPLACE LINE
	DUIT FOR NEW OUTLE	9/ 8/87	9/ 8/87	87090195	0 46M	2.0	40.00 PUMP IS INOP
	PARTICLE INSPECTIO	9/ 8/87	9/ 8/87	87090218	0 47	3.0	60.00 REPLACE PUMP AND MOTOR
	PARTICLE INSPECTIO	11/25/87	12/ 1/87	87110780	0 46M	6.0	120.00 ROLLERS ON COIL NEEDS TO BE CHANGED / BRACKETS N D TO BE CHANGED / TABLE SLATS ARE BROKEN
	PARTICLE INSPECTIO	11/27/87	11/30/87	87110803	0 41	4.0	80.00 MFG BRACKETS
	PARTICLE INSPECTIO	12/ 1/87	12/ 1/87	87120004	0 46M	4.0	80.00 REPAIR HEAD AND TAIL STOCK BLOCK
	PARTICLE INSPECTIO	12/ 1/87	12/ 2/87	87120024	0 41	8.0	160.00 MFG ELEVATOR PLATES AS PER SAMPLE 4 EA
	PARTICLE INSPECTIO	12/ 1/87	12/ 8/87	87120039	0 23	3.0	60.00 MFG 4 EACH CLAMPS AS PER DIAGRAM
	MAG PRT INSP UNIT	12/21/87	12/31/87	87120667	0 46M	12.0	240.00 MAG MACHINE HEAD WON'T LOCK DOWN

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
006670	MAG PRT INSP UNIT	12/22/87	12/30/87	87120734	0 41	30.0	600.00	MFG 3 EACH BRAKES AS PER SAMPLE
	MAG PRT INSP UNIT	12/22/87	12/22/87	87120745	0 47	2.0	40.00	REPLACE BROKEN PART
	MAG PRT INSP UNIT	12/23/87	12/28/87	87120760	0 46	0.0	0.00	MAG HEAD WON'T ROCK / 2ND REQUEST
	MAG PRT INSP UNIT	1/ 4/88	1/ 5/88	88010021	0 46E	0.0	0.00	WILL NOT DEMAG
	MAG PRT INSP UNIT	1/10/88	1/10/88	88010516	0 46E	4.0	80.00	HEAD WON'T MOVE / BEEN HAVING TROUBLE WITH THIS MACHINE / NOT STAYING FIXED / GEARS AREN'T WORKI
	MAG PRT INSP UNIT	2/18/88	2/18/88	88020053	0 47	1.0	20.00	REPLACE HOSE
	MAG PRT INSP UNIT	4/21/88	4/21/88	88040614	0 46M	4.0	80.00	COIL WHEEL / FALLING APART
	MAG PRT INSP UNIT	5/ 3/88	5/ 8/88	88050067	0 46E	16.0	320.00	WON'T DEMAG PROPERLY
	MAG PRT INSP UNIT	6/ 9/88	6/10/88	88060330	0 41	7.0	140.00	MFG LEAD PLATES / AS PER SAMPLE / 2 EACH
	MAG PRT INSP UNIT	9/15/88	9/16/88	88090482	0 46M	4.0	80.00	ROLLERS ON COIL
	MAG PRT INSP UNIT	9/26/88	9/27/88	88090831	0 46E	4.0	80.00	WILL NOT DEMAG
	MAG PRT INSP UNIT	10/19/88	10/18/88	88100461	0 47M	0.0	0.00	REPLACE LIGHTS
	MAG PRT INSP UNIT	10/28/88	11/ 1/88	88100789	0 46E	20.0	400.00	WILL NOT DEMAG PROPERLY
	MAG PRT INSP UNIT	11/ 9/88	11/10/88	88110301	0 46E	12.0	240.00	MACHINE WON'T DEMAG
	MAG PRT INSP UNIT	11/21/88	11/28/88	88110606	0 46E	6.0	120.00	MACHINE WON'T MAG OR DEMAG
	MAG PRT INSP UNIT	11/23/88	11/23/88	88110722	0 46E	8.0	160.00	INOP
	MAG PRT INSP UNIT	11/25/88	11/25/88	88110756	0 6E	3.0	60.00	WONT DEMAG
	MAG PRT INSP UNIT	12/ 1/88	12/ 1/88	88120036	0 47	2.5	50.00	HEADS JAMS

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	RQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
000670	MAG PRT INSP UNIT	12/ 2/88	12/ 6/88	88120062	0 46M	12.0	240.00	WON'T DEMAG
	MAG PRT INSP UNIT	12/ 8/88	12/13/88	88120156	0 46E	12.0	240.00	WILL NOT DEMAG
	MAG PRT INSP UNIT	12/13/88	12/14/88	88120423	0 46E	12.0	240.00	SMOKING / OUT THE BACK / HOT WIRES CHECK OUT
	MAG PRT INSP UNIT	12/ 9/88	12/15/88	88120247	0 46M	12.0	240.00	ALSO NEED A MECH / DOES NOT DE MAG / INSTAALL NE ROLLERS ON THE COIL TRANSFERED FROM 43
	MAG PRT INSP UNIT	1/30/89	1/30/89	89010800	0 44E	4.0	80.00	ELECTRIC SWITCH ON BLOWER INOP
	MAG PRT INSP UNIT	3/ 2/89	3/ 3/89	89030085	0 48E	6.0	120.00	LIGHTS DONT WORK
	MAG PRT INSP UNIT	3/ 3/89	3/ 3/89	89030088	0 48P	2.0	40.00	REPLACE HOSE
	MAG PRT INSP UNIT	4/21/89	4/21/89	9040655	0 48P	2.0	40.00	REPLACE HOSE
	MAG PRT INSP UNIT	4/13/89	4/27/89	89040398	0 46E	2.0	40.00	WONT DE MAG

AVE

 268.0 5360.00
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000670

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
003428	DEGREASER	7/17/85	7/17/85	85070448	0 42	4.0	80.00	ADD SOLUTION
	DEGREASER	8/28/85	8/28/85	85080838	0 42	2.0	40.00	NEEDS TRIC ADDED
	DEGREASER	10/ 7/85	8/10/85	85100219	0 42	2.0	40.00	ADD TRIC
	DEGREASER	10/11/85	10/16/85	85100396	0 43	9.0	180.00	PUMP INOP
	DEGREASER	11/18/85	11/20/85	85110115	0 42	6.0	120.00	NEEDS TRIC ADDED
	DEGREASER	12/ 9/85	12/10/85	85120218	0 42	8.0	160.00	NEEDS FLUID CHANGED
	DEGREASER	12/16/85	12/17/85	85120412	0 42	4.0	80.00	TRICH PUMPED
	DEGREASER	12/24/85	1/ 7/86	85120618	0 42	6.0	120.00	NEEDS FLUID CHANGED PUMP RESV AND TANK
	DEGREASER	2/12/86	2/12/86	86020337	0 42	2.0	40.00	ADD TRIC
	DEGREASER	2/25/86	3/ 5/86	86020695	0 42	4.0	80.00	NEEDS THE FLUID CHANGED ADDED 3DR. TRIC
	DEGREASER	3/ 4/86	3/ 5/86	86030019	0 42	4.0	80.00	CHANGE FLUID
	DEGREASER	5/10/86	5/20/86	86050549	0 42	2.0	40.00	ADD TRIC
	DEGREASER	6/ 2/86	6/ 3/86	86060002	0 42	6.0	160.00	CHANGE FLUID HIGH ACID
	VAPOR DEGREASER	7/18/86	7/22/86	86070534	0 42	4.0	80.00	PUMP SOLUTION
	DEGREASER	8/22/86	8/28/86	86080610	0 42	8.0	160.00	CHANGE FLUID
	DEGREASER	8/26/86	8/27/86	86080708	0 43E	6.0	120.00	REMOVE ELECTRICAL COILS HAVE THEM SAND BLASTED
	DEGREASER	9/18/86	9/19/86	86090552	0 42	1.5	30.00	ADD ONE DRUM OF TRICH 1 DRUM
	DEGREASER	10/23/86	10/23/86	86100601	0 42	4.0	80.00	NEED TRICH ADDED

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
006368	BIG MAG BOOTH	5/31/85	5/31/85	85050787	0 43	2.0	40.00	REPLACE TIMER ON MAG MACHINE PARTS ARE ON HAND
	MAG MACHINE	6/27/85	6/27/85	85060822	0 43	1.0	20.00	OUTPUT AMPERAGE INSUFFICIENT
	MAG MACHINE	7/ 3/85	7/10/85	85070087	0 43	3.0	60.00	NEED MECH TO CHECK THE HEAD ITS SLIDING IN THE M DUE
	MAG MACHINE	7/29/85	7/30/85	85070749	0 43M	3.0	60.00	REPLACE HEAD PLATE ON MACHINE
	BIG MAG MACHINE	7/29/85	7/29/85	85070766	0 41	2.5	50.00	DRILL AND TAP PLATE
	BIG MAG	8/13/85	8/13/85	85080374	0 43P	6.0	120.00	NEED IEA HOSE REPLACED
	MAG MACHINE	9/10/85	9/11/85	85090210	0 43E	2.0	40.00	REPLACE SWITCH
	MAG MACHINE	5/ 2/86	5/ 8/86	86050044	0 43E	2.0	40.00	DOWN ELECTRICALLY
	MAG AND CABLE ENDS	8/ 4/86	1/ 8/87	86080064	62231 43E	10.0	200.00	PM6368 WON'T DEMAG PM401 NEW CABLE ENDS
	MAGNAFLUX	9/12/86	9/15/86	86090386	0 43	10.0	200.00	REPLACE MAGNETIZING COIL NEED A MECHANIC
	MAGNAFLUX	9/18/86	9/22/86	86090548	0 43M	4.0	80.00	ROLLER BASE ON A COIL NO ROLLING PROPERLY
	MAGNAFLUX	9/29/86	9/30/86	86090842	0 43M	9.0	180.00	AIR IS BENT TO MACHINE
	MAGNAFLUX	9/30/86	3/20/87	86090894	62762 43E	60.0	1200.00	WON'T MAG OR DEMAG
	MAGNAFLUX	2/17/87	2/18/87	87020476	0 46	0.0	0.00	REMOVE MOTOR AND PUMP ASSY AND INSTALL MOTOR AND UMP ASSY IN 505 6671 MACHINE 6671 CALLED IN EAR
	MAGNAFLUX	4/21/87	4/24/87	87040650	0 43M	10.0	200.00	INSTALL PUMP
	MAGNAFLUX	5/ 4/87	5/ 6/87	87050062	0 43	2.0	40.00	INSTALL LEAD PLATE TO TAIL STOCK
	MAGNAFLUX	5/ 6/87	5/ 6/87	87050150	0 47	2.0	40.00	REPLACE BROKEN HOSE
	MAGNAFLUX	5/ 7/87	5/ 8/87	87050190	0 43P	6.0	120.00	INSTALL HOSE END AND STOP A LEAK

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NUMERICALATURE	REQ. DATE	COMP. DATE	PROD. NO	MP	NO SHOP	MANHRS	COST PROBLEM
000308	MAGNAFLUX	5/ 8/87	5/12/87	87050239	0	43E	8.0	160.00 WON'T DEMAG
	MAGNAFLUX	6/ 2/87	6/ 8/87	87080929	0	43E	6.0	120.00 DEMAG ADJUSTMENT
	MAGNAFLUX	6/16/87	6/18/87	87060221	0	22	4.0	80.00 NEEDS HOOD RAISE
	MAGNAFLUX	7/10/87	7/10/87	87070316	0	47	1.0	20.00 REPLACE HOSE
	MAGNAFLUX	7/20/87	7/22/87	87070549	0	43M	9.0	180.00 PUMP INOP
	MAGNAFLUX	7/30/87	7/31/87	87070923	0	43P	9.0	180.00 AIR NOZZLE IS BROKEN OFF /
	MAGNAFLUX	8/18/87	8/18/87	87080481	0	43E	16.0	320.00 MACHINE WILL NOT DEMAG
	MAGNAFLUX	8/27/87	8/27/87	87080917	0	47	1.5	30.00 INSTALL VALVE REPAIR OR REPLACE HOSE
	MAGNAFLUX	10/30/87	11/ 5/87	87100940	0	43E	0.0	0.00 LOOSE WIRE ON MAG MACHINE
	MAGNAFLUX	11/13/87	11/13/87	87110434	0	47	2.0	40.00 TAILSTOCK MOTOR CHECK
	MAGNAFLUX	11/24/87	11/24/87	87110755	0	47	1.0	20.00 REPLACE PHENOLIC BLOCK
	MAGNAFLUX	1/27/88	2/ 1/88	88010779	0	43M	5.0	100.00 ROLLERS ON COIL NEED TO BE REPLACED
	MAGNAFLUX	2/18/88	2/18/88	88020647	0	47	1.0	20.00 REPLACE HOSE
	MAGNAFLUX	6/2/88	7/ 1/88	88060902	0	23	2.0	40.00 NEED SCREENS MADE AND INSTALLED/SEE THEM FIRST A THEY WILL SHOW YOU WHAT THEY WANT
	MAGNAFLUX	7/13/88	/14/88	88070347	0	43E	4.0	80.00 DOES NOT DEMAG PROPERLY\
	MAGNAFLUX	8/ 9/88	8/11/88	88080330	0	43M	0.0	0.00 INSTALL PLATES ON MACHINES / KENNEDY HAS PLATES
	MAGNAFLUX	8/18/88	8/22/88	88080705	0	43E	12.0	240.00 ADJUST QUICK BRAKE CIRCUIT
	MAGNAFLUX	9/ 1/88	9/ 1/88	88090063	0	47M	2.0	40.00 REPAIR LEAK

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP	MANHRS	COST	PROBLEM
006368	MAGNAFLUX	10/11/88	10/12/88	88100225	0	43E	6.0	120.00	WON'T DEMAG TRANSFERRED FROM 46
	MAGNAFLUX	10/18/88	10/19/88	88100421	0	43P	3.0	60.00	AIR PRESSURE LINE IS BROKEN OFF MACHINE
	MAGNAFLUX	2/14/89	2/15/89	89020451	0	43E	7.0	140.00	WON'T DEMAG

 234.0 4680.00

 234.0 4680.00

006368

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ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
008816	MILKING MACH ACID TANK	3/13/88	3/13/88	86030402	0	47 1.0	20.00 INOP

~~MILKING MACH~~
ACID TANK

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000802	CONVEYOR	6/ 3/85	6/ 4/85	85060021	0 43	2.0	40.00 LIMIT 423 OUT OF ADJUSTMENT
	CARRIER 510	6/ 6/85	6/ 6/85	85060141	0 43	2.0	40.00 HAS BROKEN CHAIN BUCKET
	CARRIER 539	6/ 6/85	6/10/85	85060142	0 43	3.0	60.00 REMOVE DOWN LIMIT
	LOOP 4	6/11/85	6/11/85	85060303	0 43	2.0	40.00 HAS BROKEN CHAIN BUCKET
	SWITCH 427	6/12/85	6/13/85	85060325	0 43	2.0	40.00 NEEDS ADJUSTMENT
	CARRIER NO 556	6/12/85	6/13/85	85060327	0 43	2.0	40.00 LOOSE COVER
	CARRIER 466	6/12/85	6/13/85	85060328	0 43	2.0	40.00 LOOSE COVER
	CARRIER 57	6/12/85	6/13/85	85060329	0 43	2.0	40.00 LOOSE COVER
	CARRIER 518	6/12/85	6/13/85	85060330	0 43	2.0	40.00 CABLE IS BROKEN
	LOOP 4	6/18/85	6/18/85	85060514	0 43	8.0	160.00 CHAIN IS BROKEN
	SWITCH 431	6/20/85	6/20/85	85060598	0 43	6.0	120.00 POSSIBLE BAD SWITCH
	DIVERT SWITCH # 42	6/21/85	6/25/85	85060644	0 43	1.0	20.00 OUT OF ADJUSTMENT
	SWITCH 427 426	7/ 1/85	7/ 1/85	85060903	0 43	2.0	40.00 DIRVERT SWITCH NOT OPERATING
	DIVERT SWITCH 427	7/ 8/85	7/11/85	85070157	0 43	4.0	80.00 WILL NOT OPERATE PROPERLY
	LOOP 4	8/ 6/85	8/ 6/85	85080121	0 43M	6.0	120.00 CHAIN JAM
	CONVEYOR	8/13/85	8/13/85	85080370	0 43M	4.0	80.00 DRIVE MOTOR CHAIN JAM
	PROG STA 10	8/15/85	8/10/85	85080462	0 46	2.0	40.00 CONTROL WIRES LOOSE
	CONVEYOR	8/16/85	8/16/85	85080482	0 43M	6.0	120.00 CHAIN JAM AT MOTOR BOX

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	MONUMENTATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000902	CONVEYOR	8/16/85	8/16/85	85080405	0	43M	8.0	160.00	CHAIN JAM
	CONVEYOR	8/16/85	8/27/85	85080502	0	43M	16.0	320.00	BAD BUSING ON GEAR REDUCTION MAIN MOTOR
	CONVEYOR	8/30/85	9/18/85	85080912	0	43M	4.0	80.00	8 CARRIERS HAVE LOOSE CAN COVERS
	CONVEYOR	9/ 3/85	9/ 6/85	85090023	0	46	2.0	40.00	HAND CONTROL WONT RAISE OR LOWER HOIST
	CONVEYOR	9/ 4/85	9/ 5/85	85090036	0	43M	8.0	160.00	STOP 1025 WONT CLOSE LETTING CARRIERS OUT
	CONVEYOR	9/17/85	9/17/85	85090471	0	43M	3.0	60.00	STOP 1231 HAS A BROKEN AIR LINE
	CONVEYOR	9/17/85	11/ 8/85	85090490	0	46E	12.0	240.00	PROGRAM STA 10 NEED STRETCH CORD LENGTHENED
	CONVEYOR	10/ 7/85	10/ 8/85	85100208	0	43E	8.0	160.00	NO UP LIMIT
	CARRIER 555	10/18/85	10/18/85	85100573	0	43E	3.0	60.00	BROKEN PICKUP ARM
	PROGRAM STATION 10	10/21/85	10/22/85	85100617	0	46E	2.0	40.00	REPLACE LIGHTS E STOP
	ESTOP	10/21/85	10/22/85	85100619	0	46E	4.0	80.00	FIX BROKEN CORD
	CONVEYOR LOOP 4	11/14/85	11/18/85	85110359	0	43M	2.0	40.00	CARRIER 510 HAS A BROKEN CHAIN BUCKET
	CONVEYOR	11/18/85	11/18/85	85110443	0	43M	3.0	60.00	STOP 1224 WONT RELEASE
	CONVEYOR	12/16/85	12/16/85	85120382	0	43E	2.0	40.00	DOOR SWITCH 410 IS OPEN ALL THE TIME
	CONVEYOR	12/17/85	12/23/85	85120427	0	43E	2.0	40.00	CARRIER 498 HAS A FAULTY UP LIMIT
	CONVEYOR	1/ 7/86	1/ 9/86	86010149	0	43E	3.0	60.00	PROGRAM STOP 12A HAND CONTROL PENDANT HAS BROKEN LINE
	CONVEYOR	1/ 9/86	1/10/86	86010217	0	43M	6.0	120.00	STOP 1231 WONT RELEASE
	CONVEYOR	1/17/86	1/27/86	86010457	0	43M	2.0	40.00	ARRIER 561 CHAIN BUCKET FELL OFF

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	WOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
000902	SERVICE AIR BOLT	1/22/86	1/22/86	86010540	0 46	2.0	40.00	LOOP 4
	LOOP4	1/28/86	1/28/86	86010694	0 43E	3.0	60.00	CARRIER 571 NO DOWN POWER
	CONVEYOR	2/24/86	2/24/86	86020604	0 43E	6.0	120.00	NO UP OR DOWN POWER
	CONVEYOR	3/14/86	3/19/86	86030408	0 43E	24.0	480.00	NO UP OR DOWN POWER
	CONVEYOR	3/19/86	3/19/86	86030552	0 46M	2.0	40.00	PIN OUT OF STOP WONT RELEASE
	CONVEYOR	3/19/86	3/24/86	86030559	0 43E	6.0	120.00	HAND HELD UP AND DON CONTROL INOP
	CONVEYOR	5/ 9/86	5/17/86	86050269	0 43E	16.0	320.00	CHECK OT MAIN DRIVE MOTOR
	CARRIER 6867	6/ 6/86	6/ 9/86	86060130	0 43E	6.0	120.00	CRRIER 6081 ALSO COLLECTORS NED ADJUSTMENT
	CHAIN	6/ 6/86	6/ 9/86	86060146	0 43	12.0	240.00	FIX CHAIN ON LOOP 4 DRIVE
	LOOP 4	6/10/86	6/10/86	86060188	0 43M	12.0	240.00	CHAIN JAM CHAIN TOO LOOSE REMOVE LINKS
	LIMIT SWITCH	7/14/86	7/14/86	86070340	0 43	12.0	240.00	REPAIR ON LOOP 4
	OVR HEAD CNVR	7/23/86	7/24/86	86070635	0 43E	8.0	160.00	SHORT IN PWR LINE
	CONVEYOR	7/29/86	7/29/86	86070769	0 43	5.0	100.00	CARRIERS CAUSING SUTDOWN
	OVRHD CONVEYOR	7/30/86	7/31/86	86070795	0 43	2.0	40.00	NEEDS LIMIT SWITCH 423 ADJUSTED
	LIMIT WITCH	7/31/86	8/ 1/86	86070857	0 43M	2.0	40.00	LIMIT SWITCH ADJUSTMENT
	OVER HEAD CNVR	8/ 7/86	8/ 8/86	86080163	0 43M	16.0	320.00	RAM PROBLEM -- MISFIRES
	BRACKET RAM	8/ 7/86	8/ /86	86080175	0 25	2.0	40.00	BROKEN ON OVERHEAD CONVEYOR LOOP 4
	CONVEYOR 4	8/14/86	8/20/86	86080402	0 43M	16.0	320.00	OVERHEAD CONVEYOR STOPPED 1238

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000902	CONVEYOR	8/29/86	9/ 5/86	86080844	0 43E	1.0	20.00 SHORT IN CONTROLS
	CONVEYOR4	9/11/86	9/15/86	86090363	0 43E	4.0	80.00 REPAIR PENDANT PROGRAM STATION 10
	CONVEYOR 4	9/11/86	9/15/86	86090364	0 43E	4.0	80.00 REPAIR PENDANT OPERATOR STATION 40
	CONVEYOR 4	9/15/86	9/16/86	86090407	0 22	2.0	40.00 MOUNT CONTROL STATION OP 40 PO 10 LOCATED IN 505
	CONVEYOR 4	9/15/86	9/15/86	86090408	0 43M	2.0	40.00 HAVE THE LIMIT SWITCH ADJUSTED
	CONVEYOR 4	9/15/86	9/15/86	86090409	0 4M	0.0	0.00 STOP CLOSES TO SLOW
	CONVEYOR 4	9/15/86	9/1/86	86090430	0 43M	4.0	80.00 STUCK STOP IS 1225
	CONVEYOR 4	9/18/86	9/1/86	86090581	0 43M	4.0	80.00 SWITCH #423 DOES NOT WORK NEEDS TO BE ADJUSTED
	CONVEYOR 4	10/ 7/86	2/12/87	86100153	62861 43M	8.0	160.00 STOP 238 TURNING ON AND OFF
	CONVEYOR 4	10/ 8/86	10/ 8/86	86100205	0 43M	6.0	120.00 CONVEYOR RAM IS FULL OF OIL STOPPED AT 1238
	CONVEYOR 4	10/ 8/86	10/ 9/86	86100233	0 43E	32.0	640.00 CHECK POWER ON MAIN DRIV MOTOR
	CONVEYOR 4	10/ 9/86	10/ 9/86	86100246	0 25	2.0	40.0 WELD BRACKET ON OVERHEAD CONVEYOR
	CONVEYOR 4	10/ 9/86	10/15/86	86100275	0 44	40.	800.00 REWIND TWO MOTORS
	CONVEYOR 4	11/26/86	12/ 2/86	86110719	0 43M	3.0	60.00 ADJUST LIMIT SWITCH 422
	CONVEYOR 4	11/28/86	11/26/86	86110727	0 43	.0	40.00 CHAIN JAM
	CONVEYOR 4	12/ 1/86	12/ 2/86	86120040	0 43M	2.0	40.00 LIMIT WITCH NEEDS ADJUSTING
	CONVEYOR 4	12/18/86	12/19/86	86120595	0 43	16.0	320.00 NEED TO ADJUST OVER TENSION SWITCH
	CONVEYOR 4	12/18/86	12/19/86	86120601	0 43	16.0	320.00 CHAN JAMMING

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PRO. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
000902	CONVEYOR 4	1/ 6/87	1/ 6/87	87010048	0 43M	3.0	60.00	CONVEYOR IS JAMMED
	CONVEYOR 4	1/22/87	1/22/87	87010591	0 47	4.0	80.00	JAM ON LOOP #4
	CONVEYOR 4	1/26/87	1/26/87	87010636	0 43M	24.0	480.00	CARRIER IS JAMMED IN THE TUNNEL WEDGED IN RAIL ALL BY ITSELF
	CONVEYOR 4	1/26/87	1/26/87	87010640	0 25	.0	40.00	WELD BRACKETS *SEE MECHANICS*
	CONVEYOR	2/26/87	2/26/87	87020763	0 43M	4.0	80.00	PROBLEM IS IN 505 BAD AIRLEAK ABOVE STATION 24
	CONVEYOR 4	4/ 6/87	4/ 6/87	87040150	0 43M	2.0	40.00	LEAKING OIL OUT OF STOCK STOPPED LOCATION BLDG 1256
	CONVEYOR 4	5/15/87	5/19/87	87050500	0 43E	4.0	80.00	LIMIT SWITCH 598 LOCATE ABOVE OPR STN 29 NEED ADJUST OR REPLACE
	CONVEYOR 4	6/17/87	6/18/87	87060547	0 43E	4.0	80.00	PROGRAM STATION 11 TENDANT DOWN BUTTON INOP
	CONVEYO 4	7/ 2/87	7/ 2/87	87070073	0 43E	2.0	40.00	BROKEN TENDANT STATION 11 LOOP 4
	CONVEYOR 4	7/14/87	7/1/87	87070389	0 43	4.0	80.00	STOP 1149 WON'T RELEASE NEEDS MECH AND ELEC
	CONVEYOR 4	7/28/87	7/28/87	8707830	0 43M	3.0	60.00	CHANGE JAMMED
	CONVEYOR 4	8/10/87	8/10/87	87080262	0 43M	6.0	120.00	STOP 1244 WON'T CLOSE
	CONVEYOR 4	9/ 1/87	9/10/87	87090014	0 46E	6.0	120.00	NO POWER TO PENDENTS REMOTE UP AND DOWN SWITCH
	CONVEYOR 4	9/14/87	9/14/87	87090041	0 43M	4.0	60.00	SWITCH DRIVE UNIT IN LOOP 4
	CONVEYOR 4	9/14/87	9/16/87	87090011	0 25	8.0	160.00	REPAIR BROKEN WELD ON DRIVE UNIT
	CONVEYOR 4	9/15/87	9/16/87	87090455	0 43	0.0	0.00	CHAIN JAMMED
	CONVEYOR 4	9/16/87	9/16/87	87090459	0 25	0.0	0.00	REPAIR DRIVE MOTOR BRACKET
	CONVEYOR 4	9/16/87	9/16/87	8090460	0 43M	5.0	100.00	REPAIR MAIN DRIVE MOTOR ON LOOP 4

5/10/88

ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

P. NO	NUMERICALURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000902	CONVEYOR 4	9/16/87	9/16/87	87090461	0 46E	10.0	200.00 LOOP 4 / NO OT POWER ON THE PENDAND
	CONVEYOR 4	9/16/87	9/16/87	87090572	0 43E	2.0	40.00 SWITC INOP
	CONVEYOR 4	9/22/87	9/22/87	87090574	0 47	1.0	20.00 CHAIN NEEDS TO BE SHORTNED
	CONVEYOR 4	4/87	12/ 4/87	87120187	0 47	2.0	40.00 AIR LINE TO STO BROKEN
	CONVEYOR 4	1/ 6/88	1/12/88	88010091	0 43E	2.0	40.00 CALL BUTTON ON MAG BOOTH NEEDS REPLACEMEN
	CONVEYOR 4	1/29/88	1/29/88	88010880	0 43M	9.0	180.00 CHAIN JAM
	CONVEYOR 4	2/ 9/88	2/10/88	88020332	0 43E	4.5	90.00 LIMIT SWITH NEEDS ADJUSTING
	CONVEYOR 4	2/ 9/88	2/ 9/88	88020350	0 47	1.0	20.00 SWITCH 399 OUYT OF ADJUSTMENT
	CONVEYOR 4	2/10/88	2/11/88	88020393	0 43M	6.0	120.00 CHAIN MISALIGN
	CONVEYOR 4	3/ 4/88	3/ 4/88	88030167	0 47	3.0	60.00 RE-ALINE CARRIER
	CONVEYOR 4	3/22/88	3/22/88	88030810	82 0 47	2.0	40.00 SHORT BLEW A FUSE
	CONVEYOR 4	4/25/88	4/26/88	8804001	117 0 43M	8.0	160.00 BENT MERGE RAIL NEEDS TO BE STRAIGHTENED ON LOOP 1 ABOVE AIRLINE
	CONVEYOR	5/12/88	5/12/88	88050358	133 0 43E	2.0	40.00 RELIEF BUTTON STUCK / ON STATION 9 LOOP 4
	CONVEYOR 4	5/12/88	5/12/88	88050390	133 0 47M	2.0	40.00 REMOVE LINKS FROM CHAIN
	CONVEYOR 4	6/20/88	6/21/88	88060667	172 0 46E	2.0	40.00 WIRES ARE PULLED OUT ON TATION 40 & 10 TRANSFER FRM JOHNNY / WORK IN 505
	CONVEYOR 4	6/30/88	7/ 1/88	88061031	183 0 47E	2.0	40.00 PROGRAM STATION 10IS SHORTED TRANSFERED ROM 43
	CONVEYOR 4	7/ 7/88	7/ 7/88	88070156	199 0 43E	10.0	200.00 MOTOR ON LOOP 4 IS BURNING UP
	CONVEYOR 4	7/13/88	7/20/88	88070349	197 0 43M	1.0	20.00 WHEEL GREASER FOR CHAN INOP

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ANALYSIS REPORT OF TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
000902	CONVEYOR 4	7/21/88	7/21/88	88070599	203	0 43M	3.0 60.00 CARRIER JAM
		21					
	CONVEYOR 4	8/17/88	8/17/88	88080642	250	0 43E	6.0 120.00 OPEN IN CIRCUIT ONE END HAS NO POWER
		1					
	CONVEYOR 4	8/18/88	8/22/88	8080685	231	0 43E	6.0 120.00 REPAIR PENDANT
		AZ					
	CONVEYOR 4	9/29/88	9/29/88	88090909	213	0 46E	1.0 20.00 WON'T START
		1					
	CONVEYOR 4	9/30/88	10/ 3/88	88090902	27A	0 43M	8.0 160.00 STOP IS LOOSE TRASFERED FROM 43TRANSFERED FROM 47
		21					
	CONVEYOR 4	10/21/88	10/21/88	88100588	295	0 47E	2.0 40.00 DOW PEDAL INOP.
		6					
	CONVEYOR 4	10/27/88	10/27/88	88100752	301	0 47M	2.0 40.00 PERAIR BROKEN COLLECTOR SEE SAUNDERS
		1					
	CONVEYOR 4	10/28/88	10/8/88	88100777	302	0 43E	2.0 40.00 TENDENT SWITCH BROKEN
		A					
	CONVEYOR 4	11/ 1/88	11/ 8/88	88110008	306	0 43M	4.0 80.00 BROKEN STOP STATION 10 MAX'ES SHOP TO DO WORK AS PER JOHN SONDERSTRANSF
		17					
	CONVEYOR 4	11/18/88	1/18/88	88110557	323	0 43M	4.0 80.00 CHAIN OFF THE DRIVE
		A9					
	CONVEYOR 4	1/ 6/89	1/ 6/89	89010197	6	0 43M	1.0 20.00 CHAIN JAMMED
		3B					
	CONVEYOR 4	2/13/89	2/13/8	89020419	A4	0 43M	8.0 160.00 MULTIPLE CHAIN JAM ON LOOPE 4
		16					
	CONVEYOR 4	3/ 1/89	3/ 1/89	89030022	6D	0 43M	8.0 160.00 ADJUST CATAPILLER DRIVE
		2					
	CONVEYOR 4	3/ 3/89	3/ 6/89	89030100	0	43M	8.0 160.00 REPLACE TORQUE RILL ON CARRIER
		10					
	CONVEYOR 4	3/13/89	3/14/89	89030351	0	43E	3.0 60.00 LIMIT SWITCH 661 / OUT OF ADJUSTMENT
		8					
	CONVEYOR 4	3/21/89	3/22/89	89030622	0	43E	4.0 80.00 ALSO ELEC/ MAIN DRIVE IS JAMMED
		6					
	CONVEYOR 4	3/27/89	3/27/89	89030779	0	43E	2.0 40.00 RELEASE BUTTON STUCK IN
		AA					

A.1

674.5 13490.00

674.5 13490.00

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST PROBLEM
006369	MAG MACHINE	6/27/85	6/27/85	85060821	0 43	1.0	20.00 OUTPUT AMPERAGE TO HEADS INSUFFICIENT
	MAG MACHINE	10/29/85	10/29/85	85100843	0 43M	2.0	40.00 BOLTS HAVE COME OUT OF COIL
	MAG MACHINE	10/29/85	10/30/85	85100869	0 43M	2.0	40.00 NEED ROLLER BASE REPAIRED
	MAG MACHINE	11/ 1/85	11/ 1/85	85110013	0 43P	3.0	60.00 REPLACE HOSE ON TOP OF MACHINE
	MAG BOOTH	12/ 9/85	12/ 9/85	85120203	0 43P	3.0	60.00 NEEDS HOSE REPLACED
	MAG MACHINE	2/27/86	3/ 5/86	86020793	0 43M	6.0	120.00 REPLACE ROLLA BASE ON HAND
	MAG MACHINE	3/17/86	3/20/86	86030487	0 43M	8.0	160.00 HAS A BROKEN LEVER
	MAG MACHINE	3/19/86	3/20/86	86030563	0 41	3.5	70.00 REPAIR SHAFT
	MAGNAFLUX	9/ 8/86	9/10/86	86090222	0 43M	3.0	60.00 TAIL STOCK NEED SCREW REPLACED REPLACE INSULATING BOARDS
	MAGNAFLUX	9/10/86	9/10/86	86090276	0 43E	2.0	40.00 ELECTRICAL PROBLEM IN THE HEADS THEY WON'T CLOSE
	MAGNAFLUX	9/12/86	9/15/86	86090387	0 43E	2.0	40.00 REPLACE LIGHT BULBS 2 EA
	MAGNAFLUX	9/30/86	10/ 2/86	86090896	0 43M	2.0	40.00 INSTALL A ROLLOBASE
	MAGNAFLUX	3/ 9/87	3/10/87	87030258	0 43M	4.0	80.00 REPAIR CONTROL LEVER
	MAGNAFLUX	3/ 9/87	8/ 6/87	87030260	70711 43P	8.0	160.00 PUMP LEAKING
	MAGNAFLUX	3/17/87	3/19/87	87030546	0 43M	6.0	120.00 LEAK FLUID ON FLOOR
	MAGNAFLUX	3/27/87	3/30/87	87030952	0 43M	3.5	70.00 NEEDS CHANGE DECOIL
	MAGNAFLUX	4/10/87	4/15/87	87040363	0 43M	3.0	60.00 TAIL STOCK ON MAG MACHINE WILL NOT LOCK DOWN
	MAGNAFLUX	4/28/87	4/28/87	87040857	0 43E	6.0	120.00 MACHINE WON'T DEMAG

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM. NO	NOMENCLATURE	REQ. DATE	COMP. DATE	PROD. NO	MP. NO	SHOP MANHRS	COST	PROBLEM
005369	MAGNAFLUX	5/ 8/87	5/12/87	87050238	0 43E	7.0	140.00	WON'T DEMAG
	MAGNAFLUX	5/11/87	5/11/87	87050286	0 43E	1.0	20.00	WON'T DEMAG
	MAGNAFLUX	5/11/87	5/12/87	87050291	0 43P	6.0	120.00	UNSTOP MAGO LINES / PARTIALLY STOPPED UP
	MAGNAFLUX	5/27/87	6/ 1/87	87050804	0 43E	8.0	160.00	DEMAG
	MAGNAFLUX	7/ 6/87	7/ 6/87	87070135	0 47	1.0	20.00	INOP
	MAGNAFLUX	7/10/87	7/10/87	87070317	0 47	1.0	20.00	REPLACE HOSE
	MAGNAFLUX	7/13/87	7/14/87	87070350	0 43E	1.0	20.00	FOOT PADDLE DOESN'T BRING HEAD TOGETHER
	MAGNAFLUX	7/29/87	7/29/87	87070841	0 43P	6.0	120.00	SOAKING HOSE MADE OF RUBBER IS BUSTED
	MAGNAFLUX	7/31/87	7/31/87	87070943	0 43E	2.0	40.00	MACHINE WON'T DEMAG
	MAGNAFLUX	8/14/87	8/14/87	87080452	0 43M	3.0	60.00	ROLLERS ON THE COIL ARE SHOT / THEY HAVE PART BRING ALLEN WRENCHES TO REPLACE PART
	MAGNAFLUX	8/18/87	8/17/87	87080477	0 43E	3.0	60.00	HEADS WILL NOT CLAMP SHUT WHEN THEY CLOSE
	MAGNAFLUX	8/27/87	8/27/87	87080916	047	1.5	30.00	INSTALL VALVE REPAIROR REPLACE HOSE
	MAG MACH	10/ 5/87	10/ 5/87	87100139	0 47	2.0	40.00	REPLACE HOSE
	MAGNAFLUX	10/ 9/87	10/13/87	87100304	0 43P	2.0	40.00	NOT PUMPING OIL / SWITCH IS 0
	MAGNAFLUX	1/19/88	1/20/88	88010490	0 43M	4.0	80.00	WET DOWN HOSE/ TOO STIFF / NEWHOSE MFG
	MAGNAFLUX	1/27/88	2/ 1/88	88010778	0 43M	5.0	100.00	ROLLERS ON OIL / NEED TO BE REPLACED
	MAGNAFLUX	1/29/88	2/ 1/88	88010885	0 43E	4.0	60.00	WON'T DEMAG
	MAGNAFLUX	2/18/88	2/18/88	88020848	0 47	1.0	20.00	REPLACE HOSE

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQDATE	COMP. DATE	PROD. NO	MP. NO	SHOP	MANHRS	COST	PROBLEM
006360	MAGNAFLUX	5/19/88	5/23/88	88050619	0	43E	4.0	80.00	WON'T DEMAG
	MAGNAFLUX	6/27/88	7/1/88	88060901	0	23	2.0	40.00	NEED SCREENS MADE AND INSTALLED/SEE THEM FIRST A THEY WILL SHOW YOU WHAT THEY WANT
	AGNAFLUX	8/9/88	11/10/88	88080329	0	43M	4.0	80.00	INSTALL PLATES ON MACHINES / KENNEDY HAS PLATES
	MAGNAFLUX	8/18/88	8/22/88	88080704	0	43E	12.0	240.00	ADJUST QUICK BRAKE CIRCUIT
	MAGNAFLUX	10/11/88	10/11/88	88100208	0	43E	6.0	120.00	MACHINE WON'T DEMAG
	MAGNAFLUX	10/18/88	10/19/88	88100420	0	43E	2.0	40.00	REPIAR LIGHT SWITCH
	MAGNAFLUX	2/14/89	2/15/89	89020452	0	43M	4.0	80.00	NEEDS WHEELS ON COIL MAG
	MAGNAFLUX	2/16/89	2/16/89	89020584	0	47M	1.5	30.00	REPLACE HOSES
	MAGNAFLUX	4/18/89	4/19/89	89040512	0	43E	2.0	40.00	DROP STATION BOTH INDICATOR LIGHTS STAY ON
	MAGNAFLUX	4/18/89	4/19/89	89040513	0	43E	2.0	40.00	OVERHEAD CRANE SWITCH / RUBBER COVER HAS A HOLE IN IT

006360

166.0 330.00
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166.0 3320.00

A-0017--A05--MA-201 00-ALC INDUSTRIAL EQUIPMENT MASTER LIST
 MA 170AJ 018/CUST ACCT RCS : LOG-MA(M) 7709

MSN DIR ACCT	CUST I/O SERIAL CD NO.	MSN DOCUMENT NO.	DESCRIPTION PUR MFG S P CD CR D EX USE	RECOMBINATION DATE	DEPRECIATION TO-DATE	DATE LA INSTALL	R/V NEW OLD	MSN RESIDUAL	NO HST	MSN UTIL	DATE ← DATE			
3510 P20-1 MA 170AJ I		2106.0 CABINET 090450063		56,000.00	.00	0	.000	000	0	.0	0			
3510 P20-1 MA 170AJ I		2106.0 CABINET 090450044		56,000.00	.00	0	.000	000	0	.0	0			
6435 PC200KV MA 170AJ I		X RAY MACH 200KV 090450026		51,273.00	.00	0	.000	000	0	.0	0			
6435 PC200KV MA 170AJ I		X RAY MACH 200KV 090450027		51,273.00	.00	0	.000	000	0	.0	0			
RCC TOTALS:				216,546.00	0.00									
3950 011500042 MA 170AJ I 6531		BRIDGE CRANE 04213 071950013		8,575.00	.00	16	844.31	16	88278	127	127	0	0	0
6435 004330034 MA 170AJ I 5		INSPECTION UNIT FLU79164 791720005 C		7,705.00	.00	116	5,919.14	116	88278	104	104	0	0	0
6435 004330034 MA 170AJ I 47		EDDY CURRENT T/S 071110022		16,021.00	.00	22	2,313.60	22	88356	129	129	0	0	0
6435 004330034 MA 170AJ I 57		EDDY CURRENT T/S 071110023		16,021.00	.00	22	2,313.60	22	88356	129	129	0	0	0
6435 004330034 MA 170AJ I 62		EDDY CURRENT T/S 071110025		16,021.00	.00	22	2,313.60	22	88356	129	129	0	0	0
6435 004330034 MA 170AJ I 86		EDDY CURRENT T/S 071110027		16,021.00	.00	22	2,313.60	22	89021	128	129	0	0	0
6435 004330034 MA 170AJ I 92		EDDY CURRENT T/S 071110024		16,021.00	.00	22	2,313.60	22	88356	129	129	0	0	0
6435 004330034 MA 170AJ I 94		EDDY CURRENT T/S 071110026		16,021.00	.00	22	2,313.60	22	89021	128	129	0	0	0
6435 006473034 MA 170AJ I 88046		DEGAUSS MACH 04268 071110007		11,230.80	.00	22	1,621.81	22	89021	129	131	0	0	0
6435 010651233 MA 170AJ I 56321		ULTRASONIC TESTER 07041 071950014		33,450.00	.00	16	3,583.63	16	88278	125	125	0	0	0

MSN CUST I/O SERIAL DIR ACCT CB NO.	DOCUMENT NO.	PUR NO.	MFG S P CD CR D EX	RECON DATE	COST BLDG YR T C	S EG MEN COST	COMMENTS	RCC	LIFE	DEPRECIATION \$ TO-DATE	R/V NO NEW OLD HIST	LA INSTALL	MPNO RESIDUAL	EOMP UTIL	DATE UTIL
6435 011028043 MA 170AJ I 8142	DETECTOR FLAM ULTR 87051 870440042	7,400.00		1 C1 C1 0 B N	507 84 3	1,068.62	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011149421 MA 170AJ I 401	MMS PART INSP MACH 01320 013200043 MMS026170AJ012107 6435011720217	150,000.00		1 A1 A5 2 B N	507 82 1	88,342.60	89 88312	MPNA	156	122 119 12	0	0	0	160.0	7.9
6435 011149421 MA 170AJ I 402	MMS PART INSP MACH 01320 013200044	150,000.00		3 C4 B5 2 B N	507 82 3	88,342.60	89 88312	MPNA	156	090 087 12	0	0	0	60.0	3.0
6435 011274453 MA 170AJ I 803369	BOROSCOPE 2100 871270032	30,238.84		1 C1 C1 0 B N	265 86 3	4,366.92	22 89021	MPNA	156	129 131 0	0	0	0	0	0
6435 011720216 MA 170AJ I 80053	MMS PART INSPECT 84324 840520053	33,200.00		1 C1 C1 0 B N	507 84 3	4,794.56	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011720216 MA 170AJ I 80054	MMS PART INSPECT 84324 840520052	33,200.00		1 C1 C1 0 B N	507 84 3	4,794.56	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011720216 MA 170AJ I 80055	MMS PART INSPECT 84324 840520051	33,200.00		1 C1 C1 0 B N	507 84 3	4,794.56	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011720217 MA 170AJ I 85086	MMS PART INSPECT 84331 840520053	30,000.00		1 C1 C1 0 B N	507 84 3	4,332.46	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011720217 MA 170AJ I 85087	MMS PART INSPECT 84331 840520054	30,000.00		1 C1 C1 0 B N	507 84 3	4,332.46	22 89021	MPNA	156	126 128 0	0	0	0	0	0
6435 011943440 MA 170AJ I 5PZ51	XRAY MACHINE INST 87316 873180028	8,446.00		1 C2 B5 0 B N	216 86 3	904.87	16 88278	MPNA	156	125 125 0	0	0	0	0	0
6435 PAA-3137-08 MA 170AJ I BLT002	RADIOGRAPHY SYSTEM 87314 873180029 MMS081170AJ012107 6435011653669	445,350.00		1 C2 B5 0 B N	255 86 3	47,716.05	16 88512	MPNA	156	126 125 12	0	0	0	168.0	8.3
6450 FIBROESTYS MA 170AJ I S/M NEEDED	FIBERSCOPE SYS 86274 871110006	27,931.96		1 C1 C1 0 B N	507 86 3	4,958.45	22 88312	MPNA	96	131 131 0	0	0	0	0	0
6780 FT3200 MA 170AJ 0 AMPT01	DARK ROOM, PORTABLE 87306 873110018	89,995.00		1 C2 B5 0 B N	216 87 3	7,731.11	16 88278	MPNA	264	127 127 12	0	0	0	168.0	8.3
RCC MPNA TOTALS: 1,226,048.60															
9999 MA 170AJ 0 MANY	1-SK UPHOLD ITEMS 87275 860070024	65,450.10		1 C1 A4 0 B N	507 87 2	19,492.63	15 88312	MPXX	48	150 158 0	0	0	0	0	0

SEQUENCE DIR, CUST ACCT, RCC, NSM, SERIAL #

INDUSTRIAL EQUIPMENT MASTER LIST
 RCS : LOG-MA(N) 7709

28 APR 89 PAGE 433

ACQUISITION -> <- RECONDITION -> <- DEPRECIATION >

DATE COST DATE LA MEN OLD MST <END> TO
 DOCUMENT PUR BLDG YR T C USE INSTALL RESIDUAL UTIL <- DATE ->
 NO. CD # MFG S P CD CR D EX USE COMMENTS RCC LIFE COST VALUE B/Y UTIL X

RCC MPXX TOTALS: 65,650.10 19,492.63

6435 000165835 PORTABLE X-RAY 80181 1,075.32 15 88225 125 123 0 .0 .0 .0
 MA 170AJ I 837 80070064 100 00 2 1 C2 C3 0 B N 6CMH 156 .00 1.00 0 0 .0 .0

RCC 6CMH TOTALS: 10,897.40 1,075.32

DIR/CUST MA/170AJ SUMMARY

NO. MACHINES	ACQ COST	INST COST	RECOND COST	TOTAL COST
27	1,361,497.00	.00	.00	1,361,497.00
2	155,645.10	.00	.00	155,645.10
0	.00	.00	.00	.00
TOTAL	1,517,142.10	.00	.00	1,517,142.10

PERSONAL DATA - PRIVACY ACT OF 1974 (PL93-579) FOR OFFICIAL USE ONLY
 DATE 04-30-89 A-G037G-G01-D2-MGB I

ACFCM (2) MAMPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT
 RCC: MAMPNA FOREMAN CODE: A1 CRAIG LUSK

-----CURRENT ASSIGNMENT-----<-----LOAN STATUS INFORMATION----->

EMPLOYEE NAME	IDENT	MC	DC	SK	DO	SH	SP	STATUS	RCC	DC	SK	DO	FC	SH	SP	EFF DATE	TERM DATE	J-O-N
△ STEIN MERVIN D	528134030	C	1	DB	1	1		10										
△ CUTLER LYNN D	528783018	C	1	DB	1	1		10										
△ RAYNES GARY W	529801515	C	1	DB	1	1		9										
△ HARRIS JERRY	528424818	C	1	DB	1	1		9										
△ HARRIS JERRY	528560252	C	1	DB	1	1		9										
△ HARRIS JERRY	529683258	C	1	DB	1	1		9										
△ HARRIS JERRY	529899775	C	1	DB	1	1		9										
△ HARRIS JERRY	528844502	C	1	DB	1	1		9										
△ HARRIS JERRY	529728035	C	1	DB	1	1		10										
△ HARRIS JERRY	583706882	C	1	DB	1	1		9										
△ HARRIS JERRY	528663217	C	1	DB	1	1		9										
△ HARRIS JERRY	519521784	C	1	DB	1	1		10										
△ HARRIS JERRY	529707831	C	1	DB	1	1		10										
△ HARRIS JERRY	528607802	C	1	DN	1	1		10										

DUTY CODE TOTALS: PERSONNEL ASSIGNED 14
 PERSONNEL BORROWED 0
 PERSONNEL LOANED 0
 NET STRENGTH 14

F/C TOTAL: NET STRENGTH 14

*Linda Byging for
 Cindy Hill - ON LOAN
 Scott K... /*

PERSONAL DATA - PRIVACY ACT OF 1974 (PL93-579) FOR OFFICIAL USE ONLY

ACFCM (2) MAMPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G61-D2-
 RCC: MAMPNA FOREMAN CODE: A2 LAVELLE HOLMES

-----CURRENT ASSIGNMENT-----<-----LOAN STATUS INFORMATION----->

EMPLOYEE NAME	IDENT	MC	DC	SK	DO	SH	SP	STATUS	RCC	DC	SK	DO	FC	SH	SP	EFF DATE	TERM DATE
HATCH WILLIAM W	529580271	C	11	DB	11	11	11	10									
SAILEY ROBERT	529487916	C	11	DN	11	11	11	10									
CORRETT MICHAEL	529841921	C	11	DN	11	11	11	10									
RAUN RICHARD L	528583868	C	11	DN	11	11	11	10									
WARDELL THOMAS R	542345000	C	11	DN	11	11	11	10									
	528588153	C	11	DN	11	11	11	10									

EC 507

DUTY CODE TOTALS:
 PERSONNEL ASSIGNED 6
 PERSONNEL BORROWED 0
 PERSONNEL LOANED 0
 NET STRENGTH 6

F/C TOTAL: NET STRENGTH 6

PERSONAL DATA - PRIVACY ACT OF 1974 (PL93-579) FOR OFFICIAL USE ONLY
 DATE 04-30-89 A-G037G-G81-D2-MG6 P

ACFCM (2) MAMPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT

RCC: MAMPNA FOREMAN CODE: A3 GENE MERRILL

-----CURRENT ASSIGNMENT-----<-----LOAN STATUS INFORMATION----->

EMPLOYEE NAME	IDENT	MC	DC	SK	DO	SH	SP	STATUS	RCC	DC	SK	DO	FC	SH	SP	EFF DATE	TERM DATE
DAWSON MAX A	723182752	C	11	DT			13	0									
DUBBERLY JAMES B	52244003	C	11	DT			13	0									
GOULD BARRY	528807814	C	11	DT			13	0									
HUBER RANDALL J	523151114	C	11	DT			13	0									
HUFFER DEBRA L	529136385	C	11	DT			13	0									
HUFFER WYVNE E	387426248	C	11	DT			13	0									
JUANES SALVADOR	529781553	C	11	DT			13	0									
MCCARTY ARTHUR T	119381094	C	11	DT			13	0									
WATERHOUSE JAY R	011341269	C	11	DT			13	0									

DUTY CODE TOTALS:
 PERSONNEL ASSIGNED 9
 PERSONNEL BORROWED 0
 PERSONNEL LOANED 0
 NET STRENGTH 9

F/C TOTAL:
 NET STRENGTH 9

PERSONAL DATA - PRIVACY ACT OF 1974 (PL93-579) FOR OFFICIAL USE ONLY
 ACFCM (2) MAMPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G61-D2-MG6 PG
 RCC: MAMPNA FOREMAN CODE: A4 **GEORGE KAIN**

-----CURRENT ASSIGNMENT-----<-----LOAN STATUS INFORMATION----->

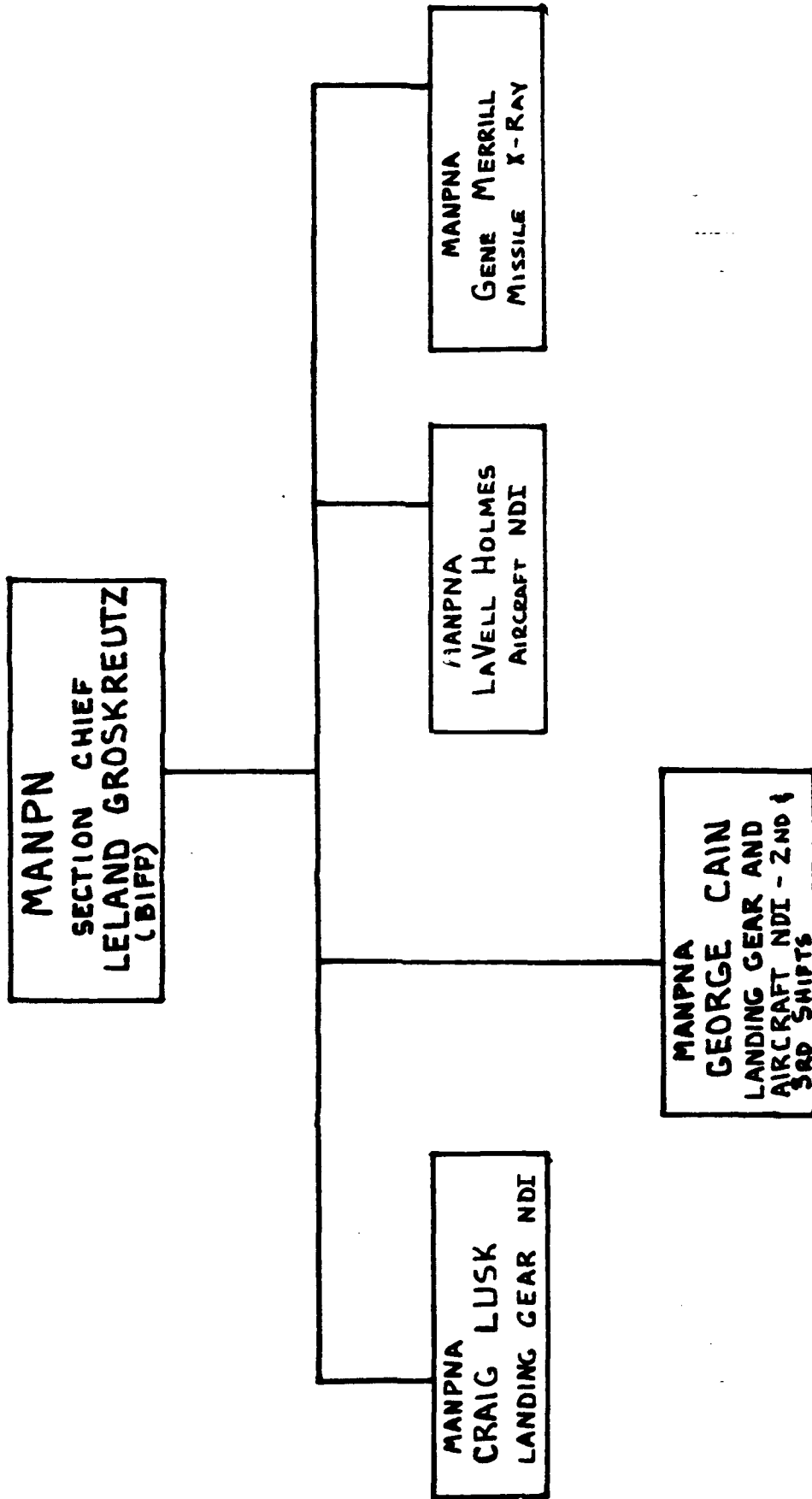
EMPLOYEE NAME	IDENT	MC	DC	SK	DO	SH	SP	STATUS	RCC	DC	SK	DO	FC	SH	SP	EFF DATE	TERM DATE
REGAN THOMAS A	52858510	C	11	DB	1	2	3	10									
SHERWOOD STEPHEN	52858510	C	11	DB	1	2	3	10									
	528584227	C	11	DB	1	2	3	10									
	438848153	C	11	DB	1	2	3	10									
	528828290	C	11	DB	1	2	3	10									
	528350592	C	11	DB	1	2	3	10									
	528781375	C	11	DB	1	2	3	10									
	528547669	C	11	DB	1	2	3	10									
	521660002	C	11	DB	1	2	3	10									
	529788906	C	11	DN	1	2	3	10									
	573702377	C	11	DN	1	2	3	10									
	528627374	C	11	DN	1	2	3	10									

EC 507
 X-RAY
 X-RAY

DUTY CODE TOTALS:
 PERSONNEL ASSIGNED 12
 PERSONNEL BORROWED 0
 PERSONNEL LOANED 12
 NET STRENGTH 47

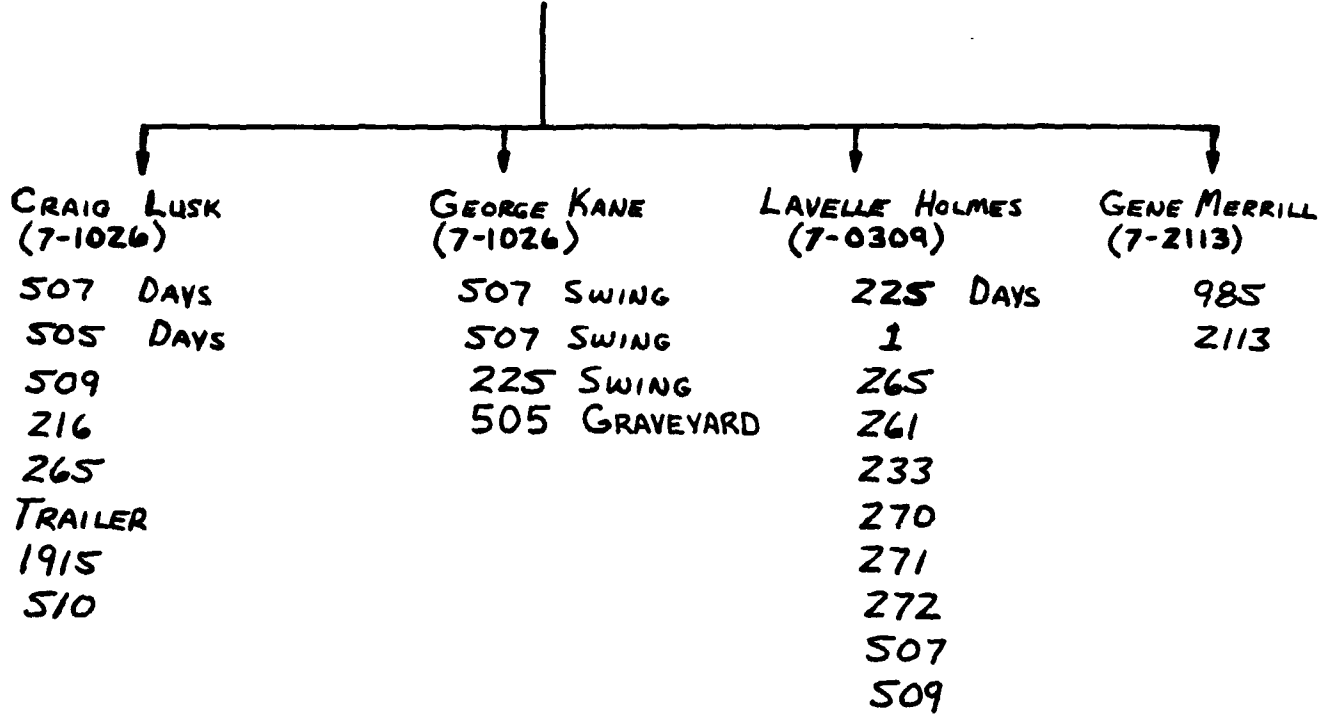
F/C TOTAL: NET STRENGTH 12
 RCC TOTAL: NET STRENGTH 47

ORGANIZATION CHART



NON-DESTRUCTIVE INSPECTION
CHAIN OF COMMAND AND
APPLICABLE LOCATIONS

BIFF GROSCKRENTZ (7-9750)
SECTION CHIEF - MANPN



ENGINEERING CONTACTS

BOB CAMPBELL
(7-9921)
GRANT CHEEVERS
(7-2558)
LLOYD HARGIS
(7-)

WORKFORCE

THE FOLLOWING PAGES SHOW THE DIRECT LABOR WORKFORCE ASSIGNED EACH OF THE 4 MANPNA FOREMEN.

EACH EMPLOYEE'S SKILL LEVEL IS SHOWN AND THE SKILL LEVELS (AS PROVIDED BY EACH FOREMAN) ARE ENTERED IN THE STATUS COLUMN.

ONE TASK IN THE NON-DESTRUCTIVE INSPECTION OF AIRCRAFT LANDING GEAR REQUIRES A GRADE LEVEL 10 PERSON TO DO EDDY CURRENT TESTING ON THE WHEELS.

ALL OTHER TASKS REQUIRE GRADE LEVEL 9 PERSONNEL.

AT PRESENT, ONE OF LAVELLE HOLMES' GRADE 10 INSPECTORS HAS THE DUTY OF EDDY CURRENT IN BUILDING 507 DURING DAY SHIFT. ON SWING SHIFT ONE OF GEORGE KAIN'S LEVEL 10 PEOPLE MAN THE EDDY CURRENT AREA.

THE GRADE LEVEL 9 PEOPLE REQUIRED TO PERFORM NDI ON LANDING GEAR ARE ASSIGNED AS FOLLOWS.

<u>FOREMAN</u>	<u>WORKSHIFT</u>	<u>NO. OF GRADE 9'S</u>
CRAIG LUSK	DAYS	7
GEORGE KAIN	SWING	6
GEORGE KAIN	GRAVE	3

THE GRADE 9 PEOPLE ON DAYS AND SWING ARE ROTATED THROUGH EACH AREA IN THE SHOP, WHILE GRAVEYARD SHIFT CONCENTRATES ON THE STATIONS WHERE THE GREATEST NEEDS ARE AT.

ALL GRADE 9 NDI PEOPLE ARE SKILL CODE DB (NDI MISCELLANEOUS COMPONENTS)

BECAUSE ALL INSPECTORS MUST BE CERTIFIED THIS RCC DOES NOT USE ANY INDIRECT LABOR FOR PRODUCTION WORK.

MANPNA DOES NOT BORROW PEOPLE FROM OTHER AREAS (UNLESS THEY HAVE PREVIOUSLY BEEN CERTIFIED TO DO NDI).

THE RANGE OF EXPERIENCE AMONG THE DB-09 INSPECTORS IS VERY BROAD. FOR EXAMPLE: JOHN HUERTA STARTED IN THE NDI AREA IN 1968 WHILE DIXIE NAILER, ALSO A DB-09, STARTED IN 1986.

21 Yrs vs. 3 Yrs

IN MY OPINION, SPEAKING COLLECTIVELY AND NOT INDIVIDUALLY, THIS RCC CONSISTS OF WELL-TRAINED, CONSCIENTIOUS INSPECTORS. I HAVE NOT SEEN AN INSTANCE WHILE I'VE OBSERVED THE AREA WHEN AN INSPECTOR DID NOT KNOW HIS/HER DUTY.

MANY OF THE NDI PEOPLE ARE PRODUCING WELL BELOW THEIR POTENTIAL WITH THE MAIN REASON BEING THE UNPREDICTED WORK FLOW. IT IS GENERALLY FELT IN THIS RCC THAT IT IS BETTER TO WORK SLOWER AND ALWAYS HAVE SOME WORK WAITING. IF MANAGEMENT SEES INSPECTORS WITH NO WORK THEY'LL TRANSFER THEM TO ANOTHER DEPARTMENT. THEN WHEN THE WORK DOES COME HEAVILY THE TRAINED & CERTIFIED PEOPLE ARE NOT AVAILABLE.

I AGREE THAT IT IS IMPORTANT AS SURGE PROTECTION TO HAVE AN EXCESS OF NDI PEOPLE, BUT AT PRESENT TOO MANY PEOPLE ARE IDLE.

REPAIR PROCESS TECHNOLOGIES

THE NON-DESTRUCTIVE INSPECTION RCC IS A SUPPORT GROUP INVOLVED ONLY IN EVALUATION OF DEFECTS; NO REPAIR IS PERFORMED WITHIN MANPNA.

THE NDI TECHNOLOGIES PRESENTLY IN USE ARE PAR WITH THE PROVEN SYSTEMS BEING USED IN OUTSIDE INDUSTRY TO THE BEST OF MY KNOWLEDGE.

PROCESSES USED AT THIS RCC INVOLVING LANDING GEAR INVOLVE:

- FLUORESCENT PENETRANT INSPECTION

- 1) GROUP IV
- 2) GROUP V
- 3) GROUP VI

- FLUORESCENT MAGNETIC PARTICLE INSPECTION

- EDDY CURRENT INSPECTION

- ULTRA-SONIC (A-SCAN) INSPECTION

- CONDUCTIVITY INSPECTION

- HARDNESS TESTING

- TEMPER ETCH INSPECTION

EXPLORER ALTERNATE
METHODS FOR
TEMPER ETCH &
PENT.

WORKLOAD VOLUME & MIX

IN SPEAKING WITH THE NDI SCHEDULER RICH WOEPPEL I WAS TOLD THAT 90-95% OF THE WORK IN BUILDINGS 505 AND 507 IS LANDING GEAR MISTR. THE BALANCE IS TEMPORARY WORK.

BECAUSE NDI IS ONLY A SUPPORT SHOP MR. WOEPPEL REALLY HAS NO CONTROL OVER THE WORK COMING INTO THE AREA.

WHEN ANOTHER SCHEDULER IS IN NEED OF A GROUP OF PARTS IN NDI, RICH WOEPPEL WILL CONTACT CRAIG LUSK OR GEORGE KAIN AND PRIORITIZE THEIR WORK. IF REQUIRED THE FOREMAN AND SCHEDULER WILL ARRANGE FOR OVERTIME.

I NOTED THAT ON FRIDAY AFTERNOON ON MAY 5TH NO PARTS WERE BEING CLEANED AND THEREFORE THE PENETRANT LINE SHUT-DOWN. IT WAS ALSO NOTED THAT WHEELS WERE SITTING AT THE END OF THE DISASSEMBLY CONVEYER, WAITING TO BE CLEANED.

I ALSO NOTED THAT THE FOLLOWING MONDAY PARTS WERE NOT LOADED FOR CLEANING UNTIL APPROX 8:30AM AND THEREFORE THE FPI LINE DID NOT BEGIN UNTIL 2 HOURS AFTER THE START OF THE SHIFT. IT WOULD SEEM THAT THE DISASSEMBLY AREAS LACK OF EFFORTS DIRECTLY IMPACT THE NDI RCC.

ONE OF THE 1ST ACTIVITIES IN DISASSEMBLY AREA SHOULD BE TO LOAD THE CLEANING LINE SINCE IT DRIVES THE "DOWNSTREAM" STATIONS.

EACH
MORNING

PERCENT OF OTHER WORKLOAD FOR RCC

(80/20 LISTING)

RCCs

JOB TYPES	MANPGP	MANPGW	MANPNA	MANPRA	MANPRB	MANPRC	MANPWW
TEMPORARY	13.72	2.35	15.11	1.40	1.05	1.35	1.05
MANUFACTURE	0.00	0.00	0.92	0.00	4.51	2.74	12.50
PDM	1.00	0.00	22.79	0.04	0.07	4.39	22.44
ARMAMENT	0.00	0.23	1.26	0.04	0.03	4.18	2.38
HYDRAULICS	0.00	0.05	7.00	1.11	2.67	3.80	13.99

MATERIAL HANDLING

THE LARGER PARTS REACH THE MANPNA RCC ON THE OVERHEAD TROLLEY AND ARE ROUTED THROUGH THE PENETRANT LINE. THESE PARTS STAY ON THE TROLLEY THROUGH PENETRANT, EDDY CURRENT, OR MAG PARTICLE UNTIL REACHING NICK & BURR / E & I.

SMALL PARTS ARE CLEANED AND RACKED. THESE PARTS ARE USUALLY LOADED ON A PALLET AND MOVED TO ONE OF THE SMALLER PENETRANT OR MAG BOOTHS. THE SCHEDULERS ARE NORMALLY THE PEOPLE RESPONSIBLE FOR TRANSPORTING THE HARDWARE VIA A FORKTRUCK.

WITHIN THE RCC IN BUILDING 505 & 507 THERE ARE 4 "PRESTO LIFTS" AND 2 HANDPALLET TRUCKS FOR MOVING PALLETS OF PARTS.

SOME OF THE NDI EMPLOYEES ARE AUTHORIZED TO OPERATE FORK TRUCKS ALSO.

MR. CRAIG LUSK TOLD ME THAT ABOUT A YEAR AGO HE HAD A STREAK OF EMPLOYEE BACK INJURIES. BECAUSE OF THESE EVENTS 4 EA 1500 LBS CAPACITY "PRESTO LIFT" HAND TRUCKS WERE PROCURED. THEY ARE LOCATED IN MAGNETIC PARTICLE INSPECTION AREAS IN BLDG # 505 & 507.

OVERHEAD CRANES ARE AVAILABLE FOR USE ABOVE THE 2 MAGNETIC PARTICLE BOOTHS. THE PENETRANT AND TEMPER ETCH INSPECTION AREA IN BUILDING 505 HAS AN OVERHEAD TRACK ON WHICH 3 EA 1000 LB CAPACITY CRANES ARE MOUNTED.

IT IS APPARENT THAT THE 505/507 NDI AREAS ARE WELL EQUIPPED WITH ASSETS TO HANDLE THE WORK.

THIS POINT WAS FIRST NOTED BY KENT KENNEDY, THE NDI TRAINER. I ALSO DISCUSSED THE TOPIC WITH FOREMAN, GEORGE KAIN. I ASKED HIM WHAT HE WOULD CHANGE IN THE AREA IF HE COULD DO ONE THING.

MR. KAIN SAID HE WOULD BUILD AN ANNEX ON THE NORTH EAST CORNER OF BUILDING 507 FOR STORAGE OF WORK IN PROCESS.

I HAVE BEEN TOLD THAT AN AUTOMATED PARTS RETRIEVAL SYSTEM IS BEING CONSIDERED BY THE EQUIPMENT PROCUREMENT GROUP. THIS MAY BE THE METHOD CHOSEN TO SOLVE THE PROBLEM.

STORAGE

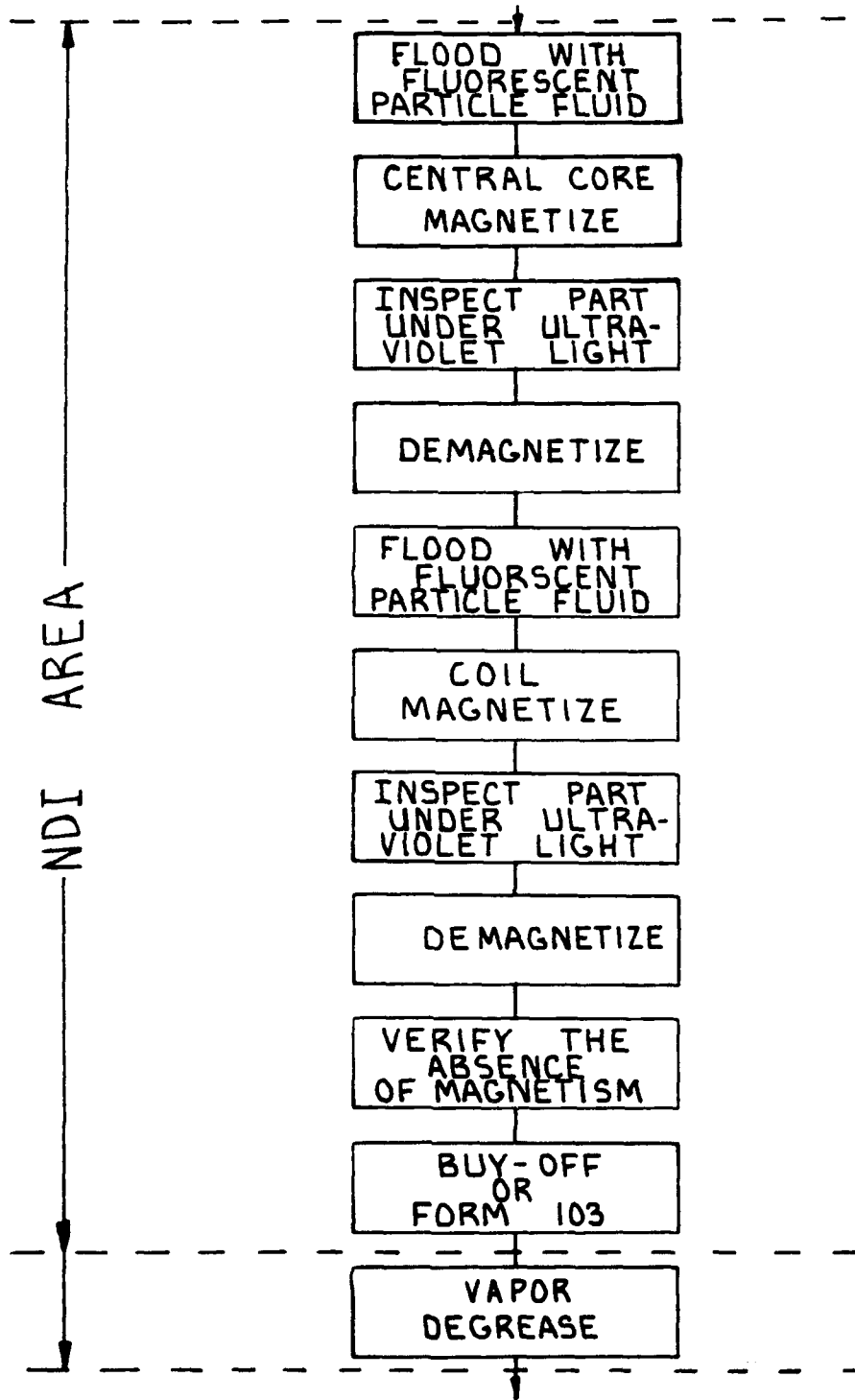
THE FIRST QUEUE AREA IN THE NDI LOOP IS LOCATED IN THE EDDY CURRENT INSPECTION AREA. THE PARTS ARE UNLOADED FROM THE OVERHEAD TROLLEY AND PLACED AROUND THE EDDY CURRENT AREA ON ROLLER CONVEYERS. (STATION 34)

AT 100% PRODUCTION LOADING AND CURRENT METHODS, THE PENETRANT BOOTH CAN KICK OUT A PART EVERY 1 MINUTE 15 SECONDS. THE GRADE 10 INSPECTOR ON DUTY JOE GUTTIERREZ, TOLD ME THAT 4 MONTHS AGO HE HAD WHEELS STACKED ALL AROUND THE EDDY CURRENT AREA AND PRODUCTION BOTTLE NECKED.

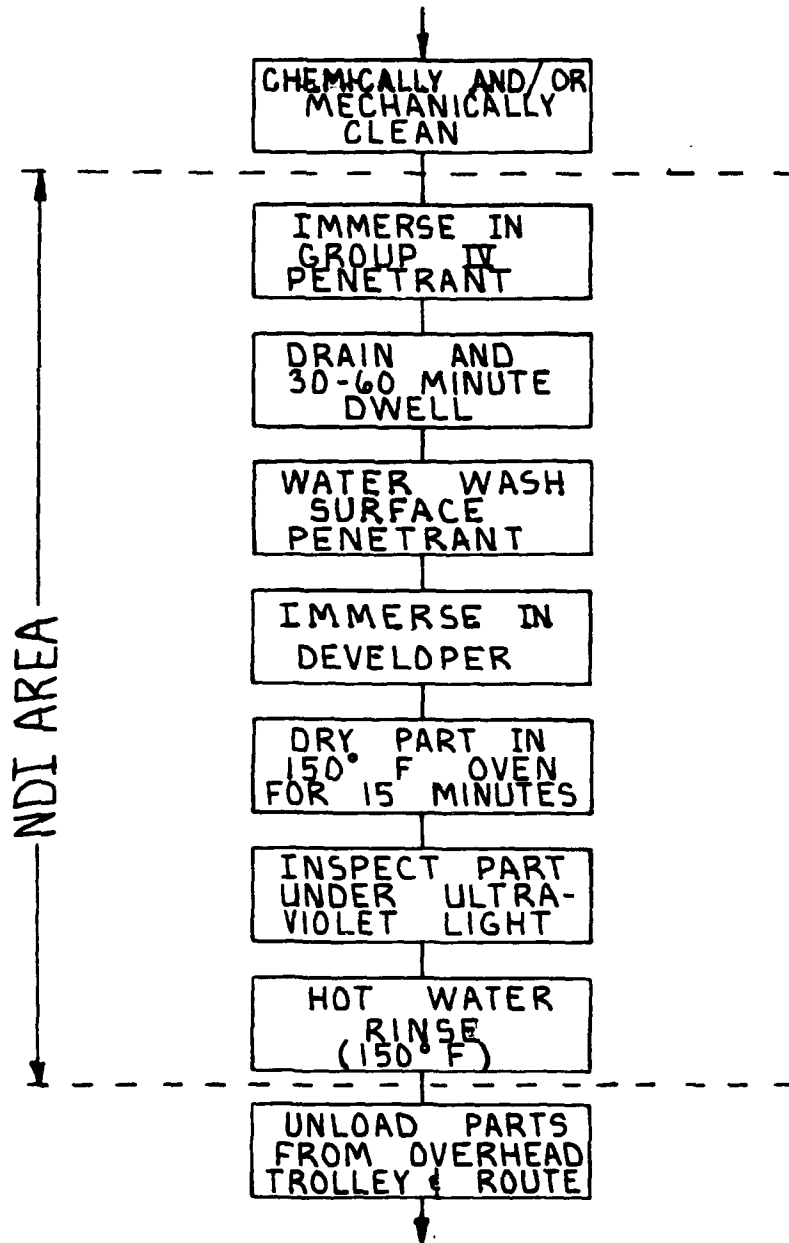
IT IS ESSENTIAL THAT IN TIMES OF SURGE INSPECTORS ARE AVAILABLE AND PRODUCTIVE IN ORDER TO STOP "BOTTLENECKS" AT THE EDDY CURRENT AREA.

THE NEXT QUEUE AREA IN NDI IS STATION 69. THIS IS THE FLUORESCENT MAGNETIC PARTICLE INSPECTION AREA FOR SMALL PARTS. THE SCHEDULING GROUP SHUTTLES THESE SMALL PARTS FROM THE PREVIOUS OPERATION TO THIS AREA ON PALLETS VIA A FORK TRUCK. PALLETS OF PARTS ARE STACKED DIRECTLY IN FRONT OF THE WORK AREA. IN TIMES OF INCREASED WORKLOAD THIS IS A MAJOR PROBLEM. TO REDUCE THE NUMBER PALLETS, SEVERAL DIFFERENT GROUPS OF PARTS ARE STACKED ON A PALLET. THIS CREATES A PROBLEM WHEN THE PARTS NEED TO BE MOVED TO THE NEXT OPERATION BECAUSE ALL PARTS DO NOT FLOW TO THE SAME NEXT OPERATION.

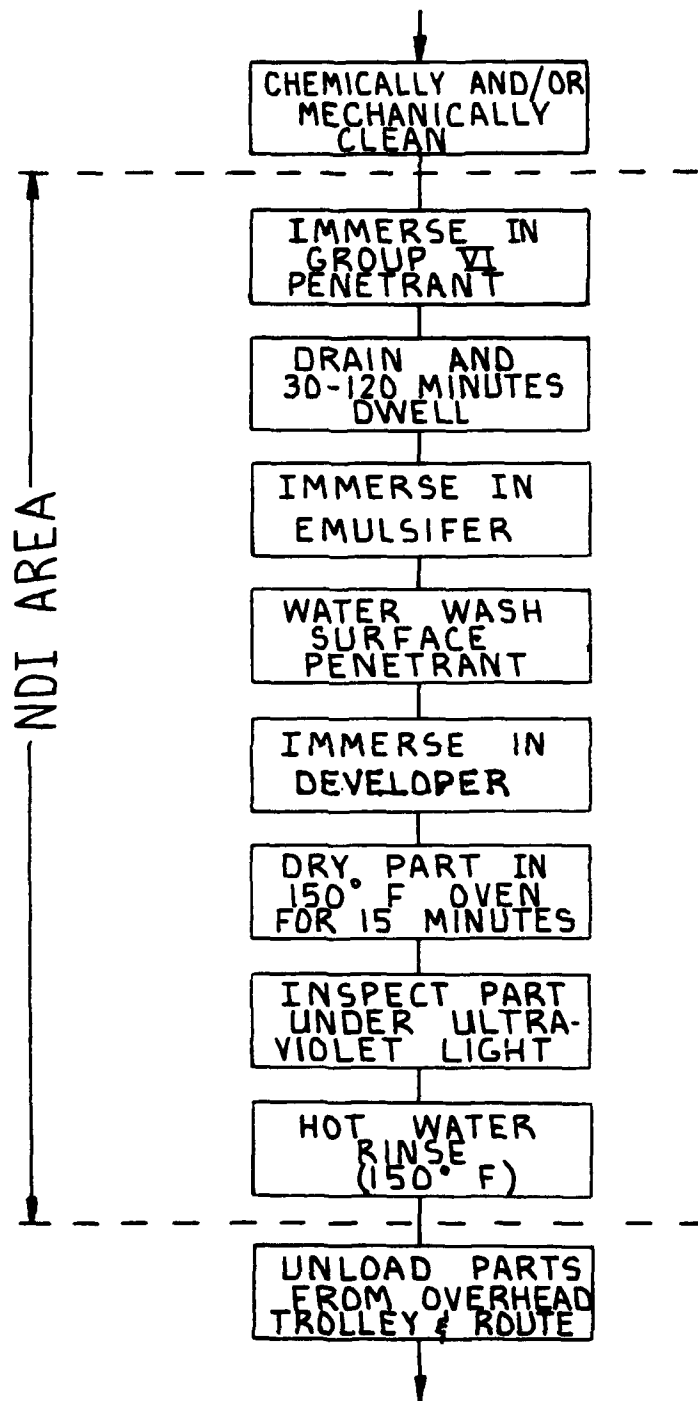
MAGNETIC PARTICLE INSPECT - MANPNA FOR STEEL / CHROME HARDWARE



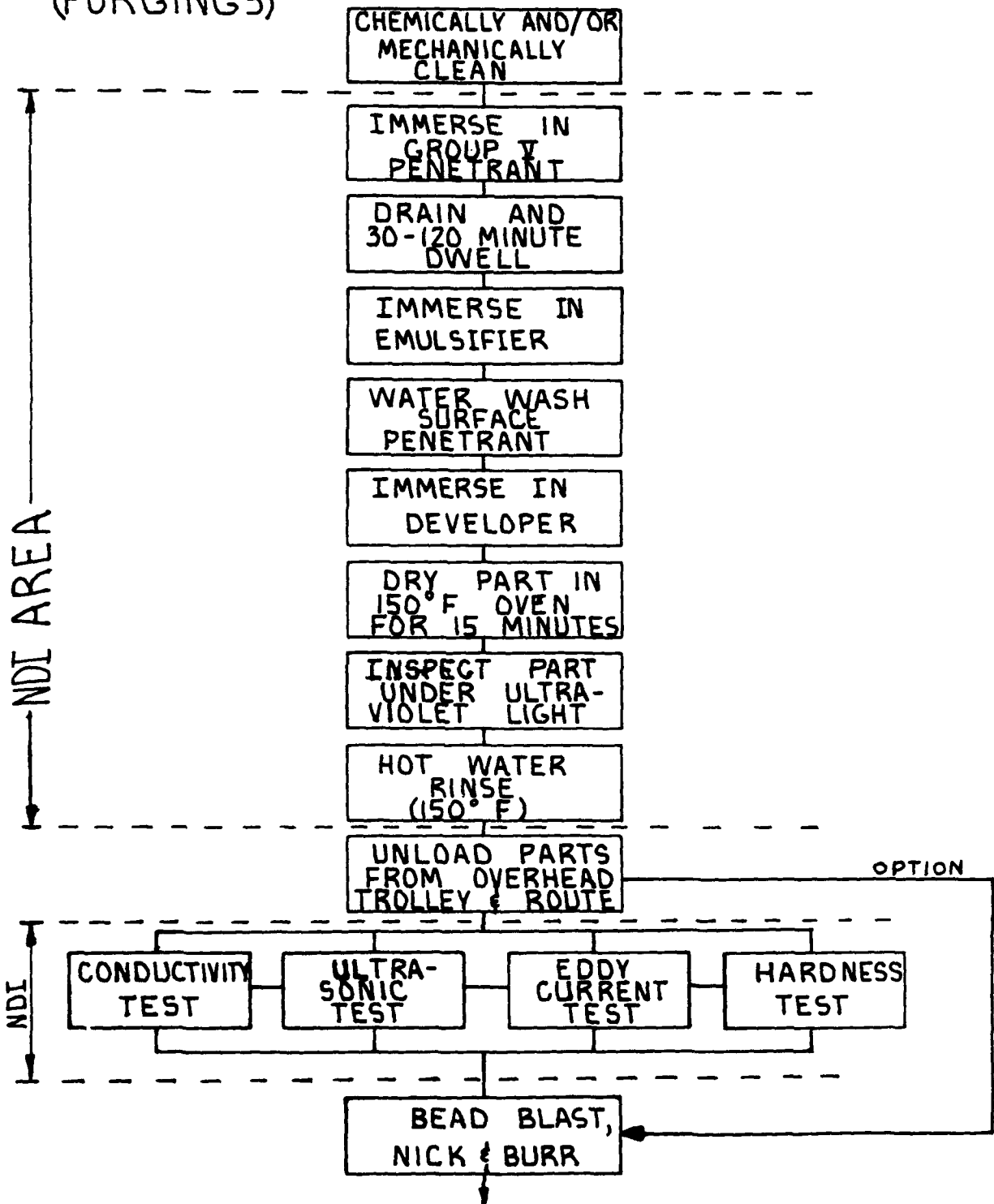
MAGNEZIUM HARDWARE FLOW CHART (CASTINGS) - MANPNA



STEEL / CHROME FLOW CHART - MANPNA (WROUGHT PRODUCTS)



ALUMINUM HARDWARE FLOW CHART - MANPNA (FORGINGS)



PROCESS FLOW CHARTS

THE FOLLOWING ARE 5 EA CHARTS WHICH SHOW STEPS INVOLVED IN FLUORESCENT PENETRANT INSPECTION ON 3 DIFFERENT MATERIALS, FLUORESCENT MAGNETIC PARTICLE INSPECTION, AND TEMPER ETCH INSPECTION.

COPIES OF THESE CHARTS HAVE BEEN REVIEWED AND APPROVED BY LARRY PRICE AND DEE MACKLIET.

IN A DISCUSSION WITH CRAIG LUSK IT WAS NOTED THAT LINKING THE PENETRANT GROUP TO A PARTICULAR MATERIAL TYPE IS NOT ALWAYS ACCURATE. A BETTER GUIDELINE IS THE TYPE OF DISCONTINUITY BEING LOOKED FOR AND THEN METHOD OF MANUFACTURE; FOR EXAMPLE

- GROUP IV - LARGE CRACKS IN CASTINGS
- GROUP V - NARROW CRACKS IN FORGINGS
- GROUP VI - MICROFINE "MUD CRACKS" IN CHROMED WROUGHT PRODUCTS.
- GROUP VII - PORTABLE PENETRANTS

I HAVE REVISED THE TEMPER ETCH CHART TO SHOW THE ACTUAL TYPES OF ACID BATHES BEING USED.

ADDITIONAL NON-DESTRUCTIVE INSPECTION PROCESSES ARE USED WITHIN THIS RCC BUT ARE NOT USED ON THE WHEELS, BRAKES, & STRUT PRODUCTS, THEREFORE THEY ARE NOT CHARTED.

PROFILE SHEETS

THE PROFILE SHEETS ARE IN THE
FOLLOWING BOOKS

MANPGW	BRAKES
MANPGP	WHEELS
MANPWV	MAIN LANDING GEAR EXCEPT C5
MANPWW	NOSE LANDING GEAR EXCEPT C5
MANPRA	C5 MAIN LANDING GEAR
MANPRA	C5 BOGIE BEAM.
MANPRA	NOSE LANDING GEAR.

MANPNA

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PROD NO		NOUN	RCC DPEH	RCC DPEH X	CUMM X EARNED HR	
1	00126B	00RF0004C	AIRCRAFT	1661.70	0.0782	0.0782
2	00124B	000F0004E	AIRCRAFT	1646.10	0.0775	0.1557
3	T488SI	LOG-00008492005		1560.00	0.0734	0.2291
4	15468A	1630004927144	KC-135 M	612.71	0.0280	0.2579
5	00458A	0LGM0030F	M8L RCY	437.40	0.0206	0.2785
6	16837A	1620001099287	STRUTF4C	374.79	0.0176	0.2961
7	00199B	000F0004E	AIRCRAFT	370.40	0.0174	0.3135
8	T4989Q	1300PCGROUNDTEST		370.00	0.0174	0.3309
9	16836A	1620001099286	STRUTF4C	342.84	0.0161	0.3470
10	00129B	000F0004C	AIRCRAFT	307.60	0.0145	0.3615
11	00473A	0LGM0030C	M8L RCY	303.10	0.0143	0.3758
12	T4582Q	1300PCGROUNDTEST		300.00	0.0141	0.3899
13	62927A	1630011326400	WHL C141	260.27	0.0123	0.4022
14	00109B	00RF0004C	AIRCRAFT	231.90	0.0109	0.4131
15	16915A	1620009485066	TRUCK AY	226.03	0.0106	0.4237
16	15592A	1630004210319	WHEEL AS	214.78	0.0101	0.4338
17	74524A	1620002468005	BOGIE B	200.91	0.0095	0.4433
18	00119B	000F0004C	AIRCRAFT	190.80	0.0090	0.4523
19	00131B	000C0130E	AIRCRAFT	189.00	0.0089	0.4612
20	14539A	1560009116602BF	STBLRF4E	186.55	0.0088	0.4700
21	17143A	1620001398474	B52M-AFT	180.74	0.0085	0.4785
22	T4452Q	1300PCR-TEST288		180.00	0.0085	0.4870
23	17142A	1620001398473	B52M-FWD	179.31	0.0084	0.4954
24	17565A	1620010204973	STRUT	176.58	0.0083	0.5037
25	15828A	1630010389239	WHL F16M	175.90	0.0083	0.5120
26	17575A	1620010054191	CSMLCRHA	173.10	0.0081	0.5201
27	17357A	1620007419178	BRACE	160.45	0.0076	0.5277
28	26727A	1560012355201WF	VENT FIN	158.40	0.0075	0.5352
29	69603A	1377011418911	INERTIA	154.80	0.0073	0.5425
30	00141B	000V0010A	AIRCRAFT	153.30	0.0072	0.5497
31	19588A	1630010585912	WHL F15M	150.65	0.0071	0.5568
32	T1532I	1337000784250		150.00	0.0071	0.5639
33	69354A	1620010597842	KC-135 N	146.79	0.0069	0.5708
34	74521A	1620001877445	NLC	139.95	0.0066	0.5774
35	26183A	1630011375742	F15 WHL	134.00	0.0063	0.5837
36	15359A	1630000139129	WHL C135	125.57	0.0059	0.5896
37	90101A	1630011826267	WHEEL	123.66	0.0058	0.5954
38	T1531I	13370009574611		120.00	0.0056	0.6010
39	16019A	1620010240844	STRUT F4	116.05	0.0055	0.6065
40	13822A	1560007883941BF	RING ASS	115.50	0.0054	0.6119
41	17576A	1620010054192	CSMLCLHA	115.40	0.0054	0.6173
42	17577A	1620010054193	CSM6LLMF	115.40	0.0054	0.6227
43	N6276K	1620012352270		115.06	0.0054	0.6281
44	13829A	1560007906873BF	RING ASS	114.00	0.0054	0.6335
45	15441A	1630002769849	F4 H8C	113.30	0.0053	0.6388
46	13288A	1560007944727BF	STABILAT	108.99	0.0051	0.6439
47	74527A	1620004427877	BRACE DR	104.21	0.0049	0.6488
48	15162A	1630002692622	KC135BRK	99.97	0.0047	0.6535
49	74692A	1620001791425	BOGIE SM	99.91	0.0047	0.6582
50	17279A	1620006783440	TRUNNION	98.64	0.0046	0.6628
51	19844A	1620008961203	STRUT AY	98.39	0.0046	0.6674

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PROD NO.	NOUN	RCC DPEH	RCC DPEH X	CUMM X EARNED HR
52 001188 000F0004E	AIRCRAFT	97.90	0.0046	0.6720
53 17631A 1620010159859	DR-BRACE	96.84	0.0046	0.6766
54 25584A 1560011358956WF	L/E HOR1	96.00	0.0045	0.6811
55 17478A 1620002990278	T38-NLG	95.55	0.0045	0.6856
56 69657A 1620010389102	STRUT LH	94.86	0.0045	0.6901
57 001218 000F0004D	AIRCRAFT	91.10	0.0043	0.6944
58 16123A 1620006776681	C130BASK	90.74	0.0043	0.6987
59 15435A 1630004463778	WHL F4	89.44	0.0042	0.7029
60 T2733I SYS-00005140023		89.00	0.0042	0.7071
61 17327A 1620009110301	TRUNNION	88.32	0.0042	0.7113
62 69549A 1620001386373	LURSIDES	87.78	0.0041	0.7154
63 17578A 1620010054194	CSMLGRHF	86.55	0.0041	0.7195
64 15068A 1630007776698	B52 BRK	83.78	0.0039	0.7234
65 T2532A 1337011451963		82.24	0.0039	0.7273
66 T5733N 9999P-LGM118A		80.00	0.0038	0.7311
67 68661A 4310009371374BF	COMP	78.69	0.0037	0.7348
68 17451A 1620006518221	TRUNNION	76.04	0.0036	0.7384
69 17245A 1620006525472	BRACE AS	72.99	0.0034	0.7418
70 M1069K 1560012452018WF		70.72	0.0033	0.7451
71 74805A 1005000566753	GUN M61A	70.52	0.0033	0.7484
72 15592J 1630004210319	WHEEL AS	65.00	0.0031	0.7515
73 69595A 1630012286043	ML WHEEL	63.11	0.0030	0.7545
74 18365A 1560009834324BF	WING SEC	62.76	0.0030	0.7575
75 T5736I 1630005756750		62.15	0.0029	0.7604
76 69324A 1095011003892	MAU-12DA	61.88	0.0029	0.7633
77 T1302A 9999POV10A		60.00	0.0028	0.7661
78 14729A 1560009547752BF	DUCT F4	58.50	0.0028	0.7689
79 68521A 1630010385126	WH 0130M	57.35	0.0027	0.7716
80 25737A 1620011951141	NLGSTRUT	56.75	0.0027	0.7743
81 18863A 1560001706671BF	C WING	56.73	0.0027	0.7770
82 A4141N 000F0004E		56.00	0.0026	0.7796
83 26338A 1620011671000	M-LH-WH	55.65	0.0026	0.7822
84 17396A 1620002671046	DAMPER	54.50	0.0026	0.7848
85 69752A 1560010410545WF	HOR STAB	54.00	0.0025	0.7873
86 T1384I LOG-00008492028		54.00	0.0025	0.7898
87 62923A 1630011253957	WHL C141	53.30	0.0025	0.7923
88 72877A 1620004325651	NLG	53.01	0.0025	0.7948
89 69855A 1620006052768	B52PLATE	51.40	0.0024	0.7972
90 17402A 1620010627002	F15-NLG	50.11	0.0024	0.7996
91 94332A 1620000222923	ACTUATOR	50.00	0.0024	0.8020
92 M4292K 3120010595944LE		50.00	0.0024	0.8044
93 72896A 1630004649162	CS RTR	49.75	0.0023	0.8067
94 15161A 1630008810815	C141 BRK	49.02	0.0023	0.8090
95 17313A 1620006518222	TRUNNION	48.22	0.0023	0.8113
96 74955A 1095009960050	RACK	47.88	0.0023	0.8136
97 69828A 1620005676883	ST VALVE	47.57	0.0022	0.8158
98 15054A 1630000505242	KC135BRK	47.38	0.0022	0.8180
99 74861J 1620001791083		47.38	0.0022	0.8202
100 17354A 1620005459439	STRUT NL	46.64	0.0022	0.8224
101 19937A 1620010016339	STRUT AY	44.53	0.0021	0.8245
102 62905A 1630009658700	C130 WHL	44.25	0.0021	0.8266

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PROD NO.	NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
103 15988A 1620009825059	POSITNER	43.32	0.0020	0.8286
104 74516A 1620001791083	BRACE DR	43.23	0.0020	0.8306
105 25638A 1005010086283	HOUSING	42.75	0.0020	0.8326
106 25425A 1630011158736	WHEEL	42.16	0.0020	0.8346
107 13278A 1560005660341BF	RUDDERAY	41.04	0.0019	0.8365
108 63079A 1680010520016LS	REEL AS	40.87	0.0019	0.8384
109 14781A 1560008561386BF	HKPNT F4	40.59	0.0019	0.8403
110 26726A 1560012355200WF	VENT FIN	37.60	0.0018	0.8421
111 26642A 1620012026349	STRUT AS	37.45	0.0018	0.8439
112 19838A 1620001177326	DAMPER	37.26	0.0018	0.8457
113 19839A 1620007391746	DAMPER	37.10	0.0018	0.8475
114 15603A 1630005918349	KC135 BP	36.40	0.0017	0.8492
115 72573A 1620000271193	ACTUATOR	36.30	0.0017	0.8509
116 45578A 1630011392892	WHEEL ML	36.05	0.0017	0.8526
117 26337A 1620011670999	M-RH-MW	35.17	0.0017	0.8543
118 17348A 1620007117771	S STRUT	34.80	0.0016	0.8559
119 69794A 1630011414695	F15 WHL.	34.45	0.0016	0.8575
120 19938A 1620010856009	A10-MLG	34.16	0.0016	0.8591
121 T1484I SYS-00006514		34.00	0.0016	0.8607
122 74506A 1620009322368	BRACE DR	32.00	0.0015	0.8622
123 17347A 1620007099371	S STRUT	31.21	0.0015	0.8637
124 T1386Q 1620PC141CAIPLG		30.56	0.0014	0.8651
125 97709A 1620006986015	CYC	30.14	0.0014	0.8665
126 83317A 1620011627542	DR BRACE	29.28	0.0014	0.8679
127 T1385Q 1620PC141CAIPLG		29.27	0.0014	0.8693
128 17527A 1620010063237	A7-MLG	29.00	0.0014	0.8707
129 15746J 1630000816687	WHL-C141	28.50	0.0013	0.8720
130 26109A 1620012348655	F16BRACE	27.17	0.0013	0.8733
131 00161A 000F0016A	AIRCRAFT	27.00	0.0013	0.8746
132 74553A 1620009746793	BRACE DR	25.92	0.0012	0.8758
133 18063A 1560002328048BF	AILERON	25.28	0.0012	0.8770
134 17407A 1620009921498	BOLT ASY	24.40	0.0011	0.8781
135 14055A 1560001141696BF	RUDDER A	24.20	0.0011	0.8792
136 16264A 1620006706602	COLLAR	24.00	0.0011	0.8803
137 26258A 1560011411064WF	HORZSTAB	24.00	0.0011	0.8814
138 M9194K 5306002972568FG		24.00	0.0011	0.8825
139 T6674L 1440010738446JB		24.00	0.0011	0.8836
140 26518A 8LGM0030G	G DLN	23.90	0.0011	0.8847
141 97659A 1620006986014	CYLINDER	23.90	0.0011	0.8858
142 69136A 1620009272600	LINK ASY	23.79	0.0011	0.8869
143 15752A 1630010627046	A10 BRK	23.56	0.0011	0.8880
144 69761A 1620004427875	XWIND CL	23.10	0.0011	0.8891
145 T5046J 1560008561386BF		22.80	0.0011	0.8902
146 15728A 1630009376604	HOUSING	22.77	0.0011	0.8913
147 15139A 1630009009739	WHEEL 52	22.50	0.0011	0.8924
148 74652A 1620001486466	BALLSCRU	22.38	0.0011	0.8935
149 17474A 16200082640744	T30M-L/H	22.32	0.0011	0.8946
150 17479A 1620010185924	ACTUATOR	22.20	0.0010	0.8956
151 18061A 1560002328030BF	AILERON	22.20	0.0010	0.8966
152 72898A 1630002861879	WHEEL M	22.00	0.0010	0.8976
153 42626A 1620007158562	B52-RH.T	21.60	0.0010	0.8986

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PROD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM X EARNED HR	
154	16271A	1650004558129LE	MANIFOLD	20.88	0.0010	0.8996
155	68735A	1630010830445	F15ABBRK	20.88	0.0010	0.9006
156	T5530I	1630005470116		20.68	0.0010	0.9016
157	17418A	1620010135910	SHOCK ST	20.21	0.0010	0.9026
158	63822A	1005008953726	M168 GUN	20.02	0.0009	0.9035
159	T4449N	1300PDYETEST		20.00	0.0009	0.9044
160	62922A	1630010506139	WHL C141	19.98	0.0009	0.9053
161	15068J	1630007776698	BRAKE	19.84	0.0009	0.9062
162	17668A	1620010369541	STR UNIT	19.44	0.0009	0.9071
163	72863A	1620001790438	XWIND CL	19.40	0.0009	0.9080
164	13816A	1560002466164BF	TEFLAP	19.25	0.0009	0.9089
165	16266A	1630007300126	F4N WHL	19.22	0.0009	0.9098
166	18133A	1560002466159BF	TEFLAP	18.96	0.0009	0.9107
167	72858A	1620003238292	CYLINDER	18.61	0.0009	0.9116
168	69833A	1620011031950	STRUT	18.58	0.0009	0.9125
169	72868A	1620002223887	CYLINDER	18.29	0.0009	0.9134
170	72864A	1620002307141	PITCH PO	18.08	0.0009	0.9143
171	17664A	1620010700632	STRUT	18.02	0.0008	0.9151
172	15523A	1630001576723	WHL F111	17.89	0.0008	0.9159
173	15387A	1630005557523	T38 BRK	17.76	0.0008	0.9167
174	72879A	1620004463776	NL6 QUTR	17.62	0.0008	0.9175
175	16214A	1620011252217	POWER UT	17.29	0.0008	0.9183
176	69803A	1620011680338	CH3-NLG	17.18	0.0008	0.9191
177	A0660N	8YS-00006514		17.00	0.0008	0.9199
178	15746A	1630000816687	WHL-C141	16.95	0.0008	0.9207
179	42625A	1620007158561	STRUT	16.81	0.0008	0.9215
180	M0600K	1450011661130AH		16.80	0.0008	0.9223
181	15651A	1630005582584	WHEEL AS	16.56	0.0008	0.9231
182	15526A	1630002420942	WHEEL B	16.53	0.0008	0.9239
183	15642A	1630010054109	C130 BP	15.87	0.0007	0.9246
184	34507J	1630005404253	F100 BK	15.64	0.0007	0.9253
185	63711A	1620000254773	B52-DRAG	15.20	0.0007	0.9260
186	36192A	1630008691784	PLATE AY	14.88	0.0007	0.9267
187	19557A	1680010530071LB	INE REEL	14.85	0.0007	0.9274
188	15757A	1630009141329	WHL C130	14.74	0.0007	0.9281
189	T9960A	1620009192742		14.69	0.0007	0.9288
190	69613A	1620010692334	MANIFOLD	14.64	0.0007	0.9295
191	15866A	1620011037747	STRUT	14.52	0.0007	0.9302
192	25874A	1630011996430	F16 BRK	14.40	0.0007	0.9309
193	69658A	1620010389101	STRUT RH	14.31	0.0007	0.9316
194	18507A	1620001220474	HYD BRAK	14.20	0.0007	0.9323
195	M6604K	1450003017083		14.08	0.0007	0.9330
196	13305A	1560002265402BF	BRAKE AY	14.04	0.0007	0.9337
197	93236A	1620001058930	ACTUATOR	13.86	0.0007	0.9344
198	16297A	1620010374639	CH3-NLG	13.72	0.0006	0.9350
199	97491A	1630000883507	BRK CYL	13.68	0.0006	0.9356
200	T6295I	1620002421514		13.65	0.0006	0.9362
201	17921A	1005010446174	DRUMASSY	13.50	0.0006	0.9368
202	28041A	1630002262376	BR PLATE	13.49	0.0006	0.9374
203	17476A	1620002795839	T38M-R/H	13.42	0.0006	0.9380
204	68672A	4310008092351BF	COMP	13.28	0.0006	0.9386

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PROD NO.	NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
205 97473A 1620002160993	SUIVEL	13.12	0.0006	0.9392
206 15519A 1630001132133	FB111STR	13.11	0.0006	0.9398
207 15295A 1630000827955	F111 BRK	13.00	0.0006	0.9404
208 15519J 1630001132133	STATOR	12.75	0.0006	0.9410
209 17568A 1620000071783	F5-TRUNN	12.65	0.0006	0.9416
210 17663A 1620010668946	STRUT	12.64	0.0006	0.9422
211 26578A 1620ND053797C	DRG BRAC	12.60	0.0006	0.9428
212 17614A 1620010510374	ROL POST	12.35	0.0006	0.9434
213 15686A 1630005969637	WHEEL N	12.30	0.0006	0.9440
214 T6276Q 1620012352270		12.15	0.0006	0.9446
215 98929A 1650002193602LE	BUNGEE	12.12	0.0006	0.9452
216 M9195K 5306008249117		12.00	0.0006	0.9458
217 15583A 1630008329088	FB111BRK	11.88	0.0006	0.9464
218 63819A 1005010595785	M61A1	11.83	0.0006	0.9470
219 M5224K 1560ND028868GBF		11.57	0.0005	0.9475
220 69554A 1620005251156	LUR UNIV	11.52	0.0005	0.9480
221 15639A 1630010054188	C130 PP	11.50	0.0005	0.9485
222 T6254A 1620008624060		11.50	0.0005	0.9490
223 74528A 1620004719659	D/B TRUN	11.48	0.0005	0.9495
224 M4880K 1560005156043BF		11.47	0.0005	0.9500
225 69104A 1620010976091	RH CONTR	11.40	0.0005	0.9505
226 M6055K 5315007575890LE		11.40	0.0005	0.9510
227 74958A 1095004538407	RACK	11.28	0.0005	0.9515
228 15327A 1630008254794	BRKC130	11.10	0.0005	0.9520
229 26108A 1620011627518	F-16 NLG	11.07	0.0005	0.9525
230 62499A 4310008974475AY	COMP	10.66	0.0005	0.9530
231 19841A 1620001239478	DAMPER	10.62	0.0005	0.9535
232 25660A 1650011327337LE	CYLINDER	10.60	0.0005	0.9540
233 M6486K 1095004760051		10.50	0.0005	0.9545
234 M6488K 1095004760037		10.50	0.0005	0.9550
235 15865A 1620009272601	C141LKAS	10.40	0.0005	0.9555
236 16267A 1630000521432	F4N WHL	10.29	0.0005	0.9560
237 72945A 1620001157413	CYLINDER	9.99	0.0005	0.9565
238 26829A 1630008873207	WHEEL	9.60	0.0005	0.9570
239 18182A 1620009224173	TUBE	9.11	0.0004	0.9574
240 72895A 1630004649160	CS STR	9.00	0.0004	0.9578
241 T4857J 1620001791083		9.00	0.0004	0.9582
242 74568A 1630004100858	A7 BRK	8.88	0.0004	0.9586
243 69103A 1620010972968	LH CONTR	8.82	0.0004	0.9590
244 57174A 1440001727419AH	ROTARY I	8.75	0.0004	0.9594
245 15481A 1630004534893	WHL C141	8.66	0.0004	0.9598
246 16296A 1620004821247	CH3-NLG	8.55	0.0004	0.9602
247 00162C 000F0016A	AIRCRAFT	8.50	0.0004	0.9606
248 15139J 1630009009739	WHEEL 52	8.40	0.0004	0.9610
249 24373A 1620008302609	LINK/ATT	8.32	0.0004	0.9614
250 M0124K 1560ND024233GBF		8.28	0.0004	0.9618
251 25918A 1620010141984	RNSTRUT	8.21	0.0004	0.9622
252 15677A 1620011741655	STRUT AY	8.16	0.0004	0.9626
253 17686A 1620002810622	LINK ASY	8.10	0.0004	0.9630
254 68614A 1005010463536	TRANSFER	8.05	0.0004	0.9634
255 68615A 4310010183040BF	COMP	8.00	0.0004	0.9638

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PROD NO.	NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
256 15684A 1630010030909	VALVE	7.82	0.0004	0.9642
257 74518A 1620001791087	BRACE DR	7.75	0.0004	0.9646
258 T6850A 1620001157419		7.75	0.0004	0.9650
259 17574A 1620003977413	CRK ASSY	7.72	0.0004	0.9654
260 17552A 1620002046179	MOTOR HY	7.68	0.0004	0.9658
261 16283A 1620007856073	SHAFT	7.59	0.0004	0.9662
262 79253A 1560010440178WF	TRAILING	7.50	0.0004	0.9666
263 34507A 1630005404253	F100 BRK	7.48	0.0004	0.9670
264 69551A 1620003129664	LINKASSY	7.35	0.0003	0.9673
265 22420A 1630008329007	WHEEL MG	7.32	0.0003	0.9676
266 68769A 1005001886968	FEEDER	7.20	0.0003	0.9679
267 69908A 1620000794630	MOTOR HY	7.20	0.0003	0.9682
268 72893A 1630002421525	VALVE	7.20	0.0003	0.9685
269 17467A 1620006509335	TORSION	7.03	0.0003	0.9688
270 17353A 1620005459395	STRUT NL	7.02	0.0003	0.9691
271 17964A 1630010716112	F15 NW	7.00	0.0003	0.9694
272 T2707I SYS-00005140033		7.00	0.0003	0.9697
273 T4798A 1620004853752		7.00	0.0003	0.9700
274 62963A 1680004051042LS	SEAT	6.75	0.0003	0.9703
275 62964A 1680004182785LS	SEAT	6.75	0.0003	0.9706
276 69784A 1620011386758	VALVE SQ	6.75	0.0003	0.9709
277 M9408K		6.75	0.0003	0.9712
278 M9409K 3120012146745		6.75	0.0003	0.9715
279 35571A 1620003353404	STOP ASY	6.65	0.0003	0.9718
280 74575A 1620009299692	P-N 3661	6.54	0.0003	0.9721
281 T1215Q 1620006776681		6.46	0.0003	0.9724
282 19876A 1005010280626	TRANSFER	6.44	0.0003	0.9727
283 69626A 1620005051184	STRUT AY	6.39	0.0003	0.9730
284 26111A 1620012007131	16PISTON	6.03	0.0003	0.9733
285 T1032A 1420001654626CJ		6.00	0.0003	0.9736
286 T1173A 1420001654626CJ		6.00	0.0003	0.9739
287 T1425I LOG-000008FFC89		6.00	0.0003	0.9742
288 T4263J 1450012639928AV		6.00	0.0003	0.9745
289 72571A 1620009101898	ACTUATOR	5.91	0.0003	0.9748
290 17314A 1620003069942	8 STRUT	5.90	0.0003	0.9751
291 17315A 1620003069943	8 STRUT	5.90	0.0003	0.9754
292 16754A 1620010681443	ROD ASSY	5.88	0.0003	0.9757
293 T1516Q 1620006238911		5.80	0.0003	0.9760
294 15348A 1630008430965	WHL F111	5.76	0.0003	0.9763
295 69578A 1620011431155	STRUT AY	5.71	0.0003	0.9766
296 94829A 1620004023387	ACTUATOR	5.66	0.0003	0.9769
297 16298A 1630010659469	F15CDHSC	5.61	0.0003	0.9772
298 16743A 1620002041208	BELLCRNK	5.56	0.0003	0.9775
299 25598A 1630007057296	T30 TT	5.50	0.0003	0.9778
300 15359J 1630000139129	WHL C135	5.44	0.0003	0.9781
301 74552A 1620009270298	PIVOT P	5.38	0.0003	0.9784
302 74561A 1620001357877	A7-NLG	5.38	0.0003	0.9787
303 17687A 1620010005925	INNER CL	5.28	0.0002	0.9789
304 25584Q 1560011358956WF	HORZ L/E	5.25	0.0002	0.9791
305 15616A 1630005678162	C141 BP	5.20	0.0002	0.9793
	RACK ASY	5.20	0.0002	0.9795

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PROD NO.		NOUN	RCC DPEH	RCC DPEH X	CUMM X EARNED HR	
307	18751A	1620003079442	B52SHAFT	5.10	0.0002	0.9797
308	25319A	1005002755748	HOUSING	5.10	0.0002	0.9799
309	T5693I	1630008691784		5.06	0.0002	0.9801
310	17662A	1620010668945	STRUT-MG	5.04	0.0002	0.9803
311	19328A	1450010315694AH	SKI	5.00	0.0002	0.9805
312	T5023Q	9999P-FIRST-ART		5.00	0.0002	0.9807
313	96274A	16500016859658F	TURBINE	4.95	0.0002	0.9809
314	74525A	5315002952512LE	ROOT PIN	4.88	0.0002	0.9811
315	17757A	4730007586711LE	BOLT	4.86	0.0002	0.9813
316	16734A	1630004681727	F111 TT	4.84	0.0002	0.9815
317	69573A	1620006238913	TORO ST	4.72	0.0002	0.9817
318	13306A	15600022654038F	BRAK-AY	4.68	0.0002	0.9819
319	25917A	1620010141983	LHSTRUT	4.53	0.0002	0.9821
320	78048A	1620009438754	BRACE	4.51	0.0002	0.9823
321	87051H	1005010086283	HOUSING	4.50	0.0002	0.9825
322	M3798K	1560P168710-88		4.50	0.0002	0.9827
323	M3800K	1560P168710-87		4.50	0.0002	0.9829
324	M3807K	1560P168710-85		4.50	0.0002	0.9831
325	16316A	1450011005927AH	SUPT STR	4.40	0.0002	0.9833
326	15641J	1630002769849	HOUSING	4.35	0.0002	0.9835
327	17547A	1620001405242	F5-RH-DB	4.35	0.0002	0.9837
328	19847A	1630010597069	F15CDBRK	4.34	0.0002	0.9839
329	68878A	1620011009806	STRUT MG	4.21	0.0002	0.9841
330	15651J	1630005502584	WHEEL AS	4.20	0.0002	0.9843
331	15698A	1630010414570	CSA BRKE	4.20	0.0002	0.9845
332	15248A	1630009000745	WHL F100	4.08	0.0002	0.9847
333	25730A	1560010771314UF	RUDDER	4.00	0.0002	0.9849
334	26027A	1560011732771UF	FLAP F16	4.00	0.0002	0.9851
335	T1463I	SYS-00006514		4.00	0.0002	0.9853
336	T1473I	SYS-00006514		4.00	0.0002	0.9855
337	T1479I	SYS-00006514		4.00	0.0002	0.9857
338	T1492I	SYS-00006514		4.00	0.0002	0.9859
339	M5608K	1560P168710-86		3.90	0.0002	0.9861
340	72832A	1620000018416	STR ACT	3.78	0.0002	0.9863
341	69698A	1630006107199	B. VALVE	3.77	0.0002	0.9865
342	26598A	3010011950479GG	GEAR DRY	3.76	0.0002	0.9867
343	42078A	1005008953722	HOUSING	3.75	0.0002	0.9869
344	16304A	43100093713748F	COMP	3.66	0.0002	0.9871
345	43619A	1620006133476	DAMPER	3.64	0.0002	0.9873
346	77261A	1620007330993	CAM	3.61	0.0002	0.9875
347	27003A	1620004711178	MANIFOLD	3.60	0.0002	0.9877
348	T6689J	1620007197487		3.60	0.0002	0.9879
349	69553A	1620005701054	VALVE ST	3.52	0.0002	0.9881
350	17546A	1620001405241	F5-LH-DB	3.51	0.0002	0.9883
351	15521A	1630000562073	F111 PP	3.45	0.0002	0.9885
352	17595A	1620000372427	A7-MLG	3.45	0.0002	0.9887
353	74551A	16200008670810	SHAFT AS	3.45	0.0002	0.9889
354	15302A	1630009414191	WHLF111	3.40	0.0002	0.9891
355	69098A	1620003654001	BALLSCRW	3.32	0.0002	0.9893

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PROD NO.	NOUN	RCC DPEH	RCC DPEH %	CUMM X EARNED HR
358 25369A 1620010569656	F-16 CYL	3.04	0.0001	0.9897
359 25734A 4820001390380LE	VALVE	3.01	0.0001	0.9898
360 14728A 1560009547748BF	DUCT F4	3.00	0.0001	0.9899
361 63895A 1560007845473BF	ADAPTER	3.00	0.0001	0.9900
362 M7946K 1005P36-2603-2		3.00	0.0001	0.9901
363 T6301A 1620002421519		3.00	0.0001	0.9902
364 T7163A 1620001753939		3.00	0.0001	0.9903
365 17517A 1620003486485	TUBE	2.97	0.0001	0.9904
366 T15150 1620011431155		2.90	0.0001	0.9905
367 T7546A 1620001405240		2.90	0.0001	0.9906
368 96343A 1650004894674	EM POWER	2.83	0.0001	0.9907
369 17368A 1620004849200	VALVE	2.80	0.0001	0.9908
370 17677A 1620004221839	STAB ROD	2.80	0.0001	0.9909
371 18441A 1560011798270WF	ENG COVR	2.80	0.0001	0.9910
372 15222A 1630009271825	F4 H6C	2.75	0.0001	0.9911
373 18481A 1620000690878	GEAR BOX	2.64	0.0001	0.9912
374 19899A 1005005703715	COVER	2.61	0.0001	0.9913
375 M6537K 5340005273213BF		2.50	0.0001	0.9914
376 T4923J 1560004896619BF		2.50	0.0001	0.9915
377 68891A 1630008562195	FB111 BP	2.47	0.0001	0.9916
378 97476A 1620002160994	SWIVEL	2.46	0.0001	0.9917
379 T8886A		2.40	0.0001	0.9918
380 60343A 1620003109830	CYL NLC	2.32	0.0001	0.9919
381 74571A 1620009317355	TORQ ARM	2.31	0.0001	0.9920
382 62921A 4310007754693	COMP	2.30	0.0001	0.9921
383 98168A 1630004351350	CYLINDER	2.28	0.0001	0.9922
384 T5582Q 1620010639477		2.25	0.0001	0.9923
385 16623A 1620011146869	C141T.A.	2.16	0.0001	0.9924
386 69707A 1620003051049	BRACE	2.10	0.0001	0.9925
387 74931A 1005004985359	TRANSFER	2.10	0.0001	0.9926
388 17494A 1620003084145	F15N-OUT	2.07	0.0001	0.9927
389 19908A 1005010525278	TURNARND	2.04	0.0001	0.9928
390 00166C 000F0016B	AIRCRAFT	2.00	0.0001	0.9929
391 34456A 1620000922837	DRG LINK	2.00	0.0001	0.9930
392 T9954J 1620001164431		2.00	0.0001	0.9931
393 15642J 1630010054189	BCK PLT	1.95	0.0001	0.9932
394 60420A 1620010714803	TEN STRU	1.92	0.0001	0.9933
395 15062A 1620010710538	F16PASSY	1.87	0.0001	0.9934
396 96906A 1630008593997	VALVE	1.87	0.0001	0.9935
397 69887A 1620007057261	B52-RH-T	1.86	0.0001	0.9936
398 14991A 3040001646783LE	LINK CON	1.85	0.0001	0.9937
399 26110A 1620012005320	F16PISTO	1.85	0.0001	0.9938
400 18076A 3040001614085LE	ROD ASSY	1.84	0.0001	0.9939
401 74941A 1095004767940	RACK ASY	1.84	0.0001	0.9940
402 16288A 1620009248927	YDKE	1.82	0.0001	0.9941
403 15161J 1630008810815	BRAKE 14	1.80	0.0001	0.9942
404 15327J 1630008254794	BRKCI30	1.80	0.0001	0.9943
405 15819A 1095009118407	BREECH	1.80	0.0001	0.9944
406 15361A 1630000542557	UHLB52	1.76	0.0001	0.9945
407 16317A 1450011005926AM	ELV U C	1.75	0.0001	0.9946
408 14814A 1560004896619BF	PYLNR4C	1.70	0.0001	0.9947

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PROD NO.	NOUN	RCC DPEH	RCC DPEH X	CUMM % EARNED HR
409 T1510Q 1620006776691		1.68	0.0001	0.9948
410 98659A 1630009253156	VALVEBRA	1.63	0.0001	0.9949
411 19911A 1630009141329	WHEEL	1.60	0.0001	0.9950
412 74644A 1620001157393	TUBE ASS	1.55	0.0001	0.9951
413 69548A 1620007659187	CENT. CYL	1.54	0.0001	0.9952
414 19896A 1005005585216	ENTRUNIT	1.52	0.0001	0.9953
415 18395A 1005004197188	BODY ROT	1.50	0.0001	0.9954
416 T1005A		1.50	0.0001	0.9955
417 T1006A		1.50	0.0001	0.9956
418 T6779I 1620000563339		1.50	0.0001	0.9957
419 T9439A 1620009872517		1.50	0.0001	0.9958
420 T1335Q 1620000961203		1.42	0.0001	0.9959
421 26579A 1620ND0520836	DRG BRAC	1.40	0.0001	0.9960
422 69288A 1620009438753	BRACE	1.40	0.0001	0.9961
423 69775A 5315005006801LE	ROOT PIN	1.36	0.0001	0.9962
424 15054J 16300008585242	BRAKE	1.35	0.0001	0.9963
425 15521J 1630008562073	PRES PLT	1.35	0.0001	0.9964
426 T5466A 1630006526092		1.35	0.0001	0.9965
427 19882A 1005010612723	EQL ASSY	1.30	0.0001	0.9966
428 26603A 1440010595257BL	LAUNCHER	1.30	0.0001	0.9967
429 15749A 1630002272000	F5 BRK	1.29	0.0001	0.9968
430 62902A 1620000313537	CYLINDER	1.26	0.0001	0.9969
431 46538A 2590005667793AH	PUMP	1.25	0.0001	0.9970
432 69752Q 1560010410545WF	HOR STAB	1.25	0.0001	0.9971
433 T1383Q 1620PC141CAIPLC		1.23	0.0001	0.9972
434 T7263Q		1.23	0.0001	0.9973
435 16727A 1620011249137	F-16TARM	1.20	0.0001	0.9974
436 69566A 1620009535572	VALVE	1.20	0.0001	0.9975
437 74535A 16200008699889	BRACE DR	1.20	0.0001	0.9976
438 T7692A 1560011578040WF		1.20	0.0001	0.9977
439 14813A 15600048966178F	PYLNRFC	1.19	0.0001	0.9978
440 17324A 1620003002261	SHOCK ST	1.18	0.0001	0.9979
441 26029A 1630010054188	C130 NPP	1.15	0.0001	0.9980
442 16315A 1620010710535	F16MAXLE	1.14	0.0001	0.9981
443 19314A 1620010710968	F16COLAR	1.12	0.0001	0.9982
444 16776A 1630008473731	A37 BRK	1.05	0.0000	0.9982
445 24372A 1620008242889	LINK ASY	1.01	0.0000	0.9982
446 00165A 000F0016D	AIRCRAFT	1.00	0.0000	0.9982
447 00167C 000F0016C	AIRCRAFT	1.00	0.0000	0.9982
448 00169C 000F0016D	AIRCRAFT	1.00	0.0000	0.9982
449 16582A 1620010715592	F-16TARM	1.00	0.0000	0.9982
450 62406A 1095004767947	RACK NAU	1.00	0.0000	0.9982
451 N6288K 4710010372209		1.00	0.0000	0.9982
452 N7569K		1.00	0.0000	0.9982
453 T6111A 1620011607167		1.00	0.0000	0.9982
454 T6739H 1560012355201WF		1.00	0.0000	0.9982
455 T6912A 1620006133512		1.00	0.0000	0.9982
456 69625A 1620004100874	CYLINDER	0.98	0.0000	0.9982
457 69385A 1620004107094	ROD CYL	0.90	0.0000	0.9982
458 74709A 1630004649167	CS H8C	0.90	0.0000	0.9982
459 T5578A 1630011392892		0.88	0.0000	0.9982

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PROD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM X EARNED HR	
460	17617A	1620001299158	SPRING	0.85	0.0000	0.9982
461	71924A	1440004731555CJ	ACCUMULA	0.85	0.0000	0.9982
462	15053A	1630000528403	BRAKEASS	0.84	0.0000	0.9982
463	16329A	1005010376890	CUN DRIV	0.84	0.0000	0.9982
464	69321A	1620002695025	IP MECUM	0.84	0.0000	0.9982
465	69896A	4810007634797LE	VALVE	0.84	0.0000	0.9982
466	M4996K	5360ND029601CAH		0.84	0.0000	0.9982
467	T8586A	1630005090317		0.84	0.0000	0.9982
468	15143A	1630006096014	WHEEL135	0.75	0.0000	0.9982
469	15387J	1630005557523	BRKT38A	0.75	0.0000	0.9982
470	15698J	1630010414570	BRAKE	0.75	0.0000	0.9982
471	74568J	1630004100058	P-N 2-12	0.75	0.0000	0.9982
472	74565A	1630000752003	ATD WHL	0.68	0.0000	0.9982
473	15644A	1630001230006	F15 HSC	0.66	0.0000	0.9982
474	16334A	1620010710537	F16MAXLE	0.66	0.0000	0.9982
475	17605A	1620010451024	CYLINDER	0.58	0.0000	0.9982
476	T4629C	1630002262371		0.55	0.0000	0.9982
477	T6247I	1620003051772		0.52	0.0000	0.9982
478	19681A	1620009383574	S-P UNIT	0.50	0.0000	0.9982
479	26182A	1630010608013	F15CD TT	0.50	0.0000	0.9982
480	26357A	1005003441550	ROTORBDY	0.50	0.0000	0.9982
481	M5336K	1560ND029098CBF		0.50	0.0000	0.9982
482	M6430K	1650001654582XU		0.50	0.0000	0.9982
483	T5652A	1630007947437		0.50	0.0000	0.9982
484	T6684A	1630006035959		0.50	0.0000	0.9982
485	T7659I	1620011487849		0.50	0.0000	0.9982
486	T7660I	1620011487849		0.50	0.0000	0.9982
487	T9321H	1620011487849		0.50	0.0000	0.9982
488	23468A	1005010418667	HYD DRI	0.48	0.0000	0.9982
489	26259A	1650007838881BF	HYD MTR	0.48	0.0000	0.9982
490	46534A	13770006605723	QSELECTO	0.48	0.0000	0.9982
491	69651A	1620006238911	STRUT	0.48	0.0000	0.9982
492	74866A	1005008997034	HYDRAULI	0.48	0.0000	0.9982
493	M5843K	1560011044353BF		0.48	0.0000	0.9982
494	16404A	1630010140656LC	C130M WH	0.46	0.0000	0.9982
495	19266A	1630010098475	E3A BRK	0.46	0.0000	0.9982
496	90400A	1620006099886	LINK	0.46	0.0000	0.9982
497	68884A	1620003051726	F15N-ARM	0.45	0.0000	0.9982
498	26049A	1630001024365	C130 TT	0.44	0.0000	0.9982
499	69558A	1620006142352	UPUNIVRL	0.42	0.0000	0.9982
500	69577A	1620009763391	BRACE AY	0.42	0.0000	0.9982
501	74565J	1630000752003	ATD WHL	0.40	0.0000	0.9982
502	M1855K	1560ND026083CBF		0.40	0.0000	0.9982
503	T5305A	1620010888102		0.40	0.0000	0.9982
504	T9357I	1620010576273		0.40	0.0000	0.9982
505	74808A	1005001051083	EXIT UNI	0.38	0.0000	0.9982
506	14557A	1560009109099BF	PYLON	0.37	0.0000	0.9982
507	15229A	1630003154832	T33 BRK	0.36	0.0000	0.9982
508	77043A	1620005343898		0.36	0.0000	0.9982
509	15803A	1005002392929	HOUSING	0.35	0.0000	0.9982
510	15753A	1630010098474	WHL E3AM	0.34	0.0000	0.9982

RCC EARNED HOURS FOR MNPNA...OCT 88 THRU JAN 89

PFOD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
511	T7863I	1630011894176	0.33	0.0000	0.9982
512	1E295J	1630000827955	0.30	0.0000	0.9982
513	1E583J	1630008329088	0.30	0.0000	0.9982
514	M5590K	5340ND0303276BF	0.30	0.0000	0.9982
515	31055A	1005000180045	0.28	0.0000	0.9982
516	M4330K	1560P875799F	0.28	0.0000	0.9982
517	T6587J	1620008277809	0.28	0.0000	0.9982
518	1E438A	1630005802057	0.27	0.0000	0.9982
519	61119A	1630006526092	0.27	0.0000	0.9982
520	65557A	1620006587980	0.26	0.0000	0.9982
521	55596A	1450001142786AK	0.25	0.0000	0.9982
522	67687A	1005010040421	0.24	0.0000	0.9982
523	25597A	1620012548600	0.23	0.0000	0.9982
524	65569A	1620008958495	0.23	0.0000	0.9982
525	1E693A	1630008736244TH	0.21	0.0000	0.9982
526	1E576A	1630001473854	0.20	0.0000	0.9982
527	M1854K	1560ND0260026BF	0.20	0.0000	0.9982
528	M5760K	1560ND0304176WF	0.20	0.0000	0.9982
529	T521Q	1620001877445	0.20	0.0000	0.9982
530	T5564A	1620008940372	0.20	0.0000	0.9982
531	M5512K	1560ND0273996BF	0.18	0.0000	0.9982
532	1E053J	1630000528403	0.15	0.0000	0.9982
533	1E229J	1630003154832	0.15	0.0000	0.9982
534	1E720J	1630009376604	0.15	0.0000	0.9982
535	1E752J	1630010627046	0.15	0.0000	0.9982
536	1E847J	1630010597069	0.15	0.0000	0.9982
537	T528A	1620005073015	0.15	0.0000	0.9982
538	T5743I	1620010403581	0.15	0.0000	0.9982
539	91021A	1630007583758	0.12	0.0000	0.9982
540	1E822A	1630010555056	0.11	0.0000	0.9982
541	T1152Q	1620006238911	0.11	0.0000	0.9982
542	65556A	1620005918508	0.10	0.0000	0.9982
543	M1931K	1560ND0296926BF	0.10	0.0000	0.9982
544	1E138A	1630010345387	0.08	0.0000	0.9982
545	1E279A	1560007393174BF	0.05	0.0000	0.9982
546	T4175M	000F0016A	0.01	0.0000	0.9982
547	T4601A		0.01	0.0000	0.9982
548	65555A	1620006142331	-0.21	0.0000	0.9982
549	72097A	1630004649165	-2.00	-0.0001	0.9981
550	1E567A	1620010381912	-3.11	-0.0001	0.9980

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ALC. SASCAN.CNTL(Q08020P)

OGDEN 80/20 SORTED BY MAMPNA

M S N	P C M	O P E R S S	O B S E R	P G P P S	P G W S	P G W S	P G W S	P A S	P R A S	P R A S	P R B S	P R B S	P R C S	P R C S	P W S	P W S	P W S	L T O T	U M
1620001791083	T4881J	67	94	0.0024	58	0.0048	100	0.0022	101	0.0013	24	0.0113	32	0.0084	46.73	0	0.0000	806.91	0.841726
1620005498438	17354A		58	0.0045	74	0.0033	101	0.0021	36	0.0086	21	0.0145	44	0.0061	1069.49	0	0.0000	1069.49	0.847003
16200010816338	19937A		20	0.0112	6	0.0218	102	0.0021	64	0.0033	14	0.0194	80	0.0025	1288.94	0	0.0000	1288.94	0.853411
1620000825059	15888A		141	0.0013	95	0.0026	104	0.0020	19	0.0156	82	0.0020	119	0.0018	480.78	0	0.0018	1049.96	0.860984
1620001791083	74516A		46	0.0058	31	0.0084	105	0.0020	60	0.0038			110	0.0020	97.78	0	0.0018	97.78	0.861446
1620001158736	25425A						106	0.0020							745.62	0	0.0018	745.62	0.865125
1580005800341BF	13278A						107	0.0019							40.36	0	0.0018	40.36	0.865324
168001020816LS	63079A						108	0.0019							40.36	0	0.0018	40.36	0.865324
1560009561388BF	14781A	18	54		221	0.0005	109	0.0019			43	0.0052	238	0.0004	409.80	0	0.0155	409.80	0.867545
1560012355200HF	26726A						110	0.0018							38.23	0	0.0000	38.23	0.867733
1620001177328	28642A		78	0.0032	137	0.0015	111	0.0018	43	0.0061	136	0.0004	219	0.0006	487.13	0	0.0000	487.13	0.870600
1620007391748	19839A						112	0.0018	269	0.0000	80	0.0020	184	0.0007	111.91	0	0.0000	93.93	0.870600
1620005918349	15803A	11	52	0.0051	50	0.0057	114	0.0017	50	0.0052	35	0.0074	50	0.0050	111.91	0	0.0000	111.91	0.871152
1620000271193	72573A		89	0.0026	96	0.0026	115	0.0017	155	0.0005			50	0.0050	672.36	0	0.0024	672.36	0.874468
16300011392882	45578A		370	0.0000	59	0.0048	117	0.0017	42	0.0062	54	0.0036	191	0.0007	327.61	0	0.0000	258.34	0.877360
16200011870999	26337A		78	0.0033	57	0.0048	118	0.0016	122	0.0009	58	0.0032	36	0.0075	666.92	0	0.0000	666.92	0.880651
1620007117771	17348A		72	0.0035	115	0.0019	119	0.0016	122	0.0009	58	0.0032	36	0.0075	586.68	0	0.0000	586.68	0.883595
1620001244685	89794A	S 5	28	0.0007	174	0.0007	120	0.0016	98	0.0016	56	0.0034	47	0.0053	274.36	0	0.0000	274.36	0.884948
1620010856008	19838A						121	0.0016							367.01	0	0.0000	367.01	0.886759
SYS-00006514	T1484T						122	0.0016							33.98	0	0.0000	33.98	0.886927
1620008322368	74506A		121	0.0017	148	0.0013	122	0.0015	84	0.0022			98	0.0022	302.28	0	0.0000	302.28	0.888416
1620007098371	17347A		115	0.0019	87	0.0029	123	0.0015	114	0.0011	89	0.0017	41	0.0065	471.29	0	0.0000	471.29	0.890743
1620PC141CAIPLG	T1386Q		227	0.0003	86	0.0029	124	0.0014							125.16	0	0.0000	125.16	0.891361
162000686015	97789A						125	0.0014	173	0.0004	142	0.0003	112	0.0020	159.42	0	0.0000	159.42	0.891654
1620011627542	83317A		110	0.0020	78	0.0031	126	0.0014	111	0.0011			112	0.0020	343.88	0	0.0000	343.88	0.893350
1620PC141CAIPLG	T1385Q		223	0.0003	85	0.0029	127	0.0014	128	0.0008	33	0.0083	142	0.0013	125.16	0	0.0000	125.16	0.893968
1620010063237	17527A		109	0.0020	121	0.0018	128	0.0013	128	0.0008			157	0.0011	391.41	0	0.0000	391.41	0.895899
1620000818687	15746T	6	244		63	0.0045	129	0.0013	86	0.0020			168	0.0009	157.11	0	0.0000	157.11	0.896674
1620012348655	26109A		165	0.0008	108	0.0020	130	0.0013					176	0.0008	233.46	0	0.0000	233.46	0.897826
000F0016A	00161A		124	0.0016	84	0.0029	131	0.0013	76	0.0026			122	0.0017	339.86	0	0.0000	339.86	0.897994
1620009748793	74553A		147	0.0012	109	0.0020	132	0.0012	165	0.0004	30	0.0092	84	0.0029	340.35	0	0.0000	340.35	0.898673
1560002228048BF	18063A		83	0.0030	76	0.0032	133	0.0011	185	0.0004			25	0.0041	25.49	0	0.0000	25.49	0.899798
1620009921498	17407A						134	0.0011	58	0.0040	78	0.0021	61	0.0041	407.06	0	0.0000	407.06	0.901807
1560001141888BF	14855A		83	0.0030	76	0.0032	135	0.0011	181	0.0003	149	0.0003	227	0.0005	23.36	0	0.0000	23.36	0.901922
1620006708802	16264A						136	0.0011	58	0.0040			176	0.0008	538.55	0	0.0000	538.55	0.904579
1560011411084HF	28258A						137	0.0011					470	0.0000	82.49	0	0.0000	82.49	0.904887
530600272588FB	96194K						138	0.0011	181	0.0003	149	0.0003	227	0.0005	29.71	0	0.0000	29.71	0.905034
1440010738446JB	96174L						139	0.0011	181	0.0003	149	0.0003	227	0.0005	70.96	0	0.0000	70.96	0.905384
OLGM0030G	26518A						140	0.0011	181	0.0003	149	0.0003	227	0.0005	23.36	0	0.0000	23.36	0.905499
1620006886014	97659A						141	0.0011	181	0.0003	149	0.0003	227	0.0005	63.97	0	0.0000	63.97	0.905815
1620009272600	96136A						142	0.0011	181	0.0003	149	0.0003	227	0.0005	23.36	0	0.0000	23.36	0.905930
1630010627046	15752A		29	0.0070	52	0.0055	143	0.0011	31	0.0075	130	0.0005	263	0.0003	812.16	0	0.0000	812.16	0.909937
1620004427875	69761A						144	0.0011	185	0.0002	134	0.0004	235	0.0004	151.98	0	0.0000	151.98	0.910194
1560008561388BF	75046J	18	54		120	0.0018	145	0.0011	185	0.0002	134	0.0004	235	0.0004	83.09	0	0.0000	83.09	0.910604
16300099378604	15728A	S 39	104		47	0.0057	146	0.0011	231	0.0003	100	0.0024	146	0.0011	113.61	0	0.0000	113.61	0.911164
1630009008739	15139A		47	0.0057	32	0.0083	147	0.0011	53	0.0048			278	0.0003	969.85	0	0.0000	969.85	0.915949

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N S N	P C N	O P E R S	O B S E R V	P G P S	P G W S	P G W P	P N A S	P N A P	P R A S	P R A P	P R B S	P R C S	P R C P	P W S	P W P	P W S	P W P	L T O T	C U M		
1620001058830	93238A						197	0.0007	224	0.0001	95	0.0014	190	0.0007				66	898	0.778601	
1620010374838	15297A						198	0.0028	97	0.0016	74	0.0023	83	0.0040				426	377	0.780705	
1630000883507	97491A						199	0.0006										137	0.0006	22.262	0.780814
1620002421514	76295I	76	56	143	0.0012	150	200	0.0006	35	0.0008	105	0.0012	104	0.0021				137	0.0006	618.243	0.783865
1620010446174	17821A						201	0.0006										34	0.0083	35.253	0.784039
1630002282376	28041A						202	0.0008										104	0.0010	138.141	0.784720
1620002783839	17476A						203	0.0006	139	0.0007	85	0.0018	123	0.0017				270	149	0.786053	
4310008092351BF	68672A						204	0.0006										12	744	0.786116	
1620002160983	67473A						205	0.0006										12	744	0.786179	
1630001132133	15519A						206	0.0008										139	0.0006	215.452	0.787242
1630000827955	15295A						207	0.0006										12	744	0.787305	
1630001132133	15519J						208	0.0006										99	074	0.787793	
1620000071783	17588A						209	0.0006	229	0.0001								318	870	0.789367	
1620010668948	17663A	15	14	113	0.0020	80	210	0.0006	153	0.0005	83	0.0019	135	0.0014				220	337	0.790454	
1620010537976	28578A						211	0.0006	83	0.0022	117	0.0008	288	0.0003				164	816	0.791267	
1620010510374	17614A						212	0.0006										12	744	0.791330	
162000588927	15886A						213	0.0006	106	0.0012								490	777	0.793751	
1620012352270	76276Q						214	0.0006										12	744	0.793814	
1620002193602LE	88929A						215	0.0006	221	0.0001	68	0.0026	68	0.0036				176	232	0.794683	
5306008249117	M9195K						216	0.0006										21	961	0.794792	
1630008328088	15533A						217	0.0006	146	0.0006	32	0.0084	483	0.0000				74	0.0023	416.860	0.796848
1095010595785	63819A	34	20	105	0.0021	70	218	0.0006	152	0.0006	60	0.0042						193	375	0.797805	
1560002886868F	M5224K						219	0.0006										10	620	0.797855	
1620005251156	98554A						220	0.0005										10	620	0.797907	
1630010054188	15639A	S 13	4	184	0.0008	414	221	0.0005	105	0.0012	65	0.0026	80	0.0031				198	0.0002	12.287	0.797968
1620008624060	76254A						222	0.0008	48	0.0054								234	558	0.799125	
1620004719859	74528A						223	0.0005										311	591	0.800662	
1560005158043BF	M4880K						224	0.0005										10	620	0.800715	
1620010678091	68104A						225	0.0005										19	837	0.800813	
5315007575890LE	M6055K						226	0.0005										115	081	0.801380	
1095004538407	74958A						227	0.0005										50	979	0.801632	
1630008254794	15327A						228	0.0005	129	0.0008								728	828	0.805218	
1620011627518	28108A	20		50	0.0053	176	229	0.0005	132	0.0008								87	567	0.805650	
4310008974475AY	62499A						230	0.0005	272	0.0000	75	0.0023	169	0.0009				10	620	0.805702	
1620001239478	16841A						231	0.0005										81	128	0.806103	
165001132737LE	25860A						232	0.0005										10	620	0.806155	
109500478009S1	M4880K						233	0.0005										10	620	0.806207	
1620009272601	15885A						234	0.0005										29	054	0.806351	
1630008521432	18287A						235	0.0005	63	0.0038								360	097	0.808127	
1620001157413	72845A						236	0.0005	65	0.0032								478	107	0.810491	
1630008873207	28829A						237	0.0005	87	0.0019								54	387	0.810759	
1620009224173	18182A	27	139	167	0.0008	125	238	0.0004										162	113	0.811559	
1630004649160	72895A	67		82	0.0031	103	240	0.0004										92	403	0.812015	
1620001791083	T4857J						241	0.0004										80	0.0020	227.199	0.813136
1630004100858	74568A						242	0.0004	51	0.0051								304	0.0002	551.371	0.813178
1620010972288	69103A						243	0.0004	177	0.0003								279	0.0003	31.023	0.816051
1440001727419AH	57174A						244	0.0004										14	641	0.816124	
16300004534893	15481A	S 5	88	134	0.0014	132	245	0.0004	98	0.0015								210	732	0.817163	

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N S M	P C N	S	O P E R S	O B S E R S	P G P	P G W S	P G W S	P G W S	P N A S	P N A S	P R A S	P R A S	P R B S	P R B S	P R C S	P R C S	P W W S	P W W S	P W W S	L T O T	C U M
1620004821247	16296A				186 0.0005	112 0.0019	246 0.0004	178 0.0003	90 0.0017	92 0.0023							81 0.0019			198 769	0 818144
0050018A	00162C				318 0.0001		247 0.0004	104 0.0012												95 862	0 818617
1630008009738	15329J		S 39	104		88 0.0028	248 0.0004	217 0.0001												91 948	0 819070
1620009302908	24373A				222 0.0003	281 0.0002	249 0.0004	217 0.0001												46 018	0 819298
1560002423368F	M0124K						250 0.0004	217 0.0001												14 641	0 819370
162001014184	25918A			2	161 0.0009	157 0.0011	251 0.0004	107 0.0012	69 0.0025	140 0.0013									215 816	0 820435	
162001174185	15677A				285 0.0002	258 0.0003	252 0.0004	159 0.0005												59 580	0 820728
1620002610422	17686A				202 0.0004	235 0.0004	253 0.0004	59 0.0039												277 119	0 822096
1005010463536	68614A						254 0.0004													20 007	0 822184
43100101830408F	68615A						255 0.0004													8 486	0 822236
1630010030809	15694A						256 0.0004													8 486	0 822278
1620001791097	74518A				238 0.0003	386 0.0000	257 0.0004	57 0.0045	128 0.0006	189 0.0007	133 0.0008								262 308	0 823572	
1620001157419	78950A		S 40	14	119 0.0017	186 0.0008	258 0.0004	137 0.0007	102 0.0012	134 0.0014	106 0.0010								211 627	0 824616	
1620003877413	17574A				240 0.0003	163 0.0010	259 0.0004	117 0.0010	50 0.0040	120 0.0018									223 441	0 825719	
1620002046178	17552A						260 0.0004													8 496	0 825761
1620007856073	16283A				195 0.0005	135 0.0016	261 0.0004													145 150	0 826477
1560010440178WF	78953A						262 0.0004													8 496	0 826519
1630005404253	34507A				207 0.0004	271 0.0002	263 0.0004	127 0.0008	175 0.0001	258 0.0003									76 781	0 826898	
1620003128664	68551A				229 0.0003	174 0.0008	264 0.0003	110 0.0011												111 669	0 827449
1630008329037	22420A				205 0.0004	251 0.0003	265 0.0003	80 0.0023												142 218	0 828150
1005001888688	68769A						266 0.0003													87 271	0 828581
1620000794830	68908A						267 0.0003													6 372	0 828612
1630002421525	72893A				132 0.0014	107 0.0021	268 0.0003													41 270	0 828816
1620006509335	17467A				252 0.0002	197 0.0006	269 0.0003	96 0.0016												239 722	0 829999
1620005458335	17353A				130 0.0015	134 0.0016	270 0.0003	281 0.0000	61 0.0028	125 0.0016									132 948	0 830655	
1630010716112	17864A		S 5	24			271 0.0003	151 0.0006												148 090	0 831385
SYS-00005140033	T2707I				194 0.0005	266 0.0002	272 0.0003	169 0.0004	91 0.0016	154 0.0011									6 372	0 831417	
1620004853752	T4798A					265 0.0003	273 0.0003													113 429	0 831976
1680004051042LS	62963A					272 0.0002	274 0.0003													117 979	0 832558
1680004182785LS	62964A						275 0.0003													115 102	0 833128
16200011386758	69794A						276 0.0003													6 372	0 833158
M9408K	M9408K		1				277 0.0003													15 588	0 833234
3120012146745	M9408K						278 0.0003													15 588	0 833311
1620003353404	35571A						279 0.0003	124 0.0009	161 0.0002	287 0.0003									114 547	0 833877	
1620006299982	74575A				211 0.0004	195 0.0008	280 0.0003	140 0.0007												82 940	0 834286
1620006778681	T12150A				287 0.0001	211 0.0005	281 0.0003													24 750	0 834408
1005010280026	18976A						282 0.0003													6 372	0 834439
1620005051134	68926A				181 0.0005	153 0.0011	283 0.0003	194 0.0003	106 0.0011	473 0.0000									84 901	0 834858	
1620012007131	26111A						284 0.0003	112 0.0011	28 0.0103	179 0.0008									433 881	0 836999	
1420001654826CJ	T1052A						285 0.0003													6 372	0 837030
1420001654826CJ	T1173A						286 0.0003													6 372	0 837062
LOG-000008FC99	T1425I						287 0.0003													6 372	0 837093
1450012639928AV	Y4263I						288 0.0003													6 372	0 837125
1620009101898	72571A				234 0.0003	209 0.0005	289 0.0003		93 0.0016	161 0.0010									68 909	0 837455	
1620003068942	17314A				218 0.0004	246 0.0003	290 0.0003	166 0.0004	126 0.0008	159 0.0010									92 378	0 837810	
1620003069943	17315A						291 0.0003	167 0.0004	127 0.0008	160 0.0010									90 612	0 838357	
1620010681443	16754A						292 0.0003													6 372	0 838389
1620006238911	T1516Q				244 0.0003	179 0.0008	293 0.0003													29 393	0 838534
1630008430985	15348A				285 0.0002	285 0.0002	294 0.0003	243 0.0001												43 894	0 838750

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M S N	P C M	O P E R S	S	O B S E R V	F G P P P	P G W S	P G W P	P G W P	P N A S	P N A P	P R A S	P R A P	P R B S	P R B P	P R C S P	P R C S P	P W W S	P W W P	L T O T	C U M
1620011431155	09578A	242	0.0003	210	0.0005	295	0.0003	245	0.0001	153	0.0002	398	0.0001	35.801	0.838927					
1620004023387	94829A	302	0.0001	204	0.0006	286	0.0003	296	0.0003	197	0.0002	326	0.0002	20.680	0.839029					
1630010658469	16228A	262	0.0002	111	0.0020	297	0.0003	197	0.0002	77	0.0025	319	0.0002	42.645	0.839240					
1620002041208	16743A	289	0.0001	160	0.0010	299	0.0003	198	0.0002	198	0.0002			182.815	0.840142					
16300007057296	25558A	185	0.0005	196	0.0006	300	0.0003	247	0.0001	70	0.0025	129	0.0015	170.218	0.840488					
16300001308128	15339J	184	0.0005	161	0.0010	301	0.0003	118	0.0010	72	0.0024	163	0.0009	23.638	0.840605					
1620008270298	74532A	228	0.0003	250	0.0003	302	0.0003	158	0.0005	103	0.0012	177	0.0008	129.179	0.841242					
1620010805925	17897A	210	0.0004	301	0.0002	303	0.0002	158	0.0002	168	0.0001			171.821	0.842090					
1580011358856WF	25534Q	112	0.0020	278	0.0002	304	0.0002							93.970	0.842553					
1630005678162	15616A	170	0.0008	140	0.0015	305	0.0002	176	0.0003	109	0.0010	187	0.0007	4.248	0.842574					
1620010149328	17892A	180	0.0006	205	0.0006	306	0.0002							30.987	0.842577					
1620003079442	18751A	112	0.0020	278	0.0002	307	0.0002							52.521	0.842986					
1005002755748	25338A	170	0.0008	140	0.0015	308	0.0002							89.790	0.843429					
1630008691784	15893J	180	0.0006	205	0.0006	309	0.0002							61.353	0.843732					
1620010688945	17892A					310	0.0002							101.535	0.844233					
1450010315894AH	19328A					311	0.0002							98.899	0.844721					
998P-FIRST-ART	T5023Q					312	0.0002							4.248	0.844742					
16500016859658F	96274A					313	0.0002							4.248	0.844763					
5315002952512LE	74525A	274	0.0001	172	0.0009	314	0.0002	258	0.0000	178	0.0000	351	0.0001	7.320	0.844799					
4730007586711LE	17757A	187	0.0005	215	0.0005	315	0.0002	263	0.0000	140	0.0004	398	0.0001	44.662	0.845019					
1630004681127	16734A	277	0.0001	156	0.0011	316	0.0002	271	0.0000	101	0.0013	180	0.0008	87.385	0.845450					
1620008238913	69573A	288	0.0001	202	0.0006	317	0.0002	152	0.0006	129	0.0006	272	0.0003	66.510	0.845779					
15600022654038F	13306A	197	0.0004	249	0.0003	318	0.0002	154	0.0005	108	0.0010	285	0.0003	50.337	0.846027					
1620010141983	25917A	203	0.0004			319	0.0002	142	0.0006					4.248	0.846048					
1620009438754	78028A					320	0.0002							78.871	0.846437					
1005010086293	87051H					321	0.0002							19.910	0.846738					
1560P168710-88	M3798K					322	0.0002							4.248	0.846837					
1560P168710-87	M3800K					323	0.0002							4.248	0.846858					
1580P168710-85	M3807K					324	0.0002							4.248	0.846879					
145001005927AH	16316A					325	0.0002							4.248	0.846899					
1630002769849	15641J					326	0.0002							4.248	0.846920					
1620001405242	17547A	173	0.0007	198	0.0006	327	0.0002	136	0.0007					47.413	0.847154					
1630010597089	18947A	172	0.0007	158	0.0010	328	0.0002	191	0.0003					108.148	0.847688					
1620011009806	68878A	204	0.0004	187	0.0003	329	0.0002	211	0.0001	97	0.0013	234	0.0004	80.404	0.848085					
1630005582584	15651J					330	0.0002							69.788	0.848429					
1630070414570	15888A					331	0.0002							27.269	0.848563					
1630009000745	15248A	171	0.0008	171	0.0008	332	0.0002	149	0.0008					4.248	0.848584					
1560010771314WF	25730A					333	0.0002							91.753	0.849037					
156001173271MF	26027A					334	0.0002							4.248	0.849058					
SYS-00006514	T1463I					335	0.0002							4.248	0.849079					
SYS-00006514	T1473I					336	0.0002							4.248	0.849100					
SYS-00006514	T1492I					337	0.0002							4.248	0.849121					
SYS-00006514	T1492I					338	0.0002							4.248	0.849142					
1560P168710-88	M5608K					339	0.0002							4.248	0.849163					
1620000018416	72332A					340	0.0002	203	0.0002	124	0.0006	229	0.0005	4.248	0.849184					
1630006107199	69698A					341	0.0002							39.663	0.849380					
3010011950479GG	26598A					342	0.0002							4.248	0.849400					
1005008953722	42078A					343	0.0002							4.248	0.849421					
														12.179	0.849482					

**FOR YOUR EASE, WE HAVE SUBDIVIDED
THIS SECTION INTO THE FOLLOWING:**

A - 2.1 FACILITY LAYOUT

B - 2.2 EQUIPMENT

C - 2.3 WORK FORCE

D - 2.4 REPAIR WORK TECHNOLOGIES

E - 2.5 WORKLOAD MIX AND VOLUME

F - 2.6 MATERIAL HANDLING

G - 2.7 STORAGE

H - 2.8 PROCESS FLOW CHARTS

QUICK FIX OPPORTUNITY

TITLE: A potential process improvement opportunity (PI0) exists to FMPI QUEUE AREA at RCC MANPNA
at OO ALC.

POINT(S) OF CONTACT: MEL ANDERSON (MDMSC TI), GEORGE CAIN, KEVIN ALLEN

AS-IS CONDITION: PALLETS OF PARTS ARE STACKED IN FRONT OF MAG MACHINES WHICH HAMPERS THE PRODUCTIVITY OF THIS AREA PARTICULARLY AT AT TIMES OF INCREASED WORK FLOW.

TO-BE: CLEAR AN AREA FOR A MULTI-LEVEL RACK FOR PARTS PALLETS AND THEN INSTRUCT NDI AND FORK-LIFT PERSONNEL ON A METHOD FOR FIRST IN - FIRST OUT FLOW.

POTENTIAL IMPROVEMENTS: FIRST IN - FIRST OUT PART FLOW IS POSSIBLE.
ELIMINATE TIME REQUIRED TO ROTATE PARTS

IMPLEMENTATION COST: COST OF PALLET RACKS AND 1 HOUR GUIDELINE INSTRUCTION PERIOD.

SCHEDULE: 2 MONTHS.

QUICK FIX OPPORTUNITY

TITLE: A potential process improvement opportunity (PI0) exists to MAG PARTICLE INSP at RCC MANPNA
at 00 ALC.

POINT(S) OF CONTACT: MEL ANDERSON (MDMSC TI) , CELEST. MONTOYA , KATHY WEAVER

AS-IS CONDITION: MACHINE AMPERAGE SETTINGS ARE PRESENTLY DETERMINED BY JUDGEMENT AND EXPERIENCE OF INSPECTORS. THE NDI PERSONNEL ARE AWARE OF THE NEED TO CALCULATE THE MACHINE SET-UPS.

TO-BE: DEVELOP SET-UP SHEETS FOR EACH PART AT EACH MACHINE WHICH PROVIDES SPECIFIC PROVEN INSTRUCTIONS FOR EQUIPMENT SETTINGS AND PERIPHERAL TOOLING REQUIRED.

POTENTIAL IMPROVEMENTS: MORE CONSISTANT INSPECTION FROM OPERATOR TO OPERATOR RELYING LESS ON JUDGEMENT AND EXPERIENCE OF PERSONNEL.

IMPLEMENTATION COST: COST TO DEVELOP AN ACCEPTABLE FORM AND THE LABOR COST TO CALCULATE AND TEST SETTINGS * AN ALTERNATIVE TO CALCULATIONS WOULD BE TO SIMPLY RECORD EMPIRICAL DATA AS PRODUCTION PARTS ARE INSPECTED.

SCHEDULE: 6 MONTHS

* OFTEN THE PERSONNEL IN THE PENETRANT INSPECT DARK BOOTH HAVE EXTRA TIME AVAILABLE AND COULD BE PRODUCTIVE DOING FMPI CALCULATIONS WHICH HE/SHE HAS BEEN TRAINED TO DO ANYWAY.

**FOCUS STUDY
OPPORTUNITY**

TITLE: A potential process improvement opportunity (PI0) exists to C-5 WHEELS at RCC MANPNA
at 00 ALC.

POINT(S) OF CONTACT: MEL ANDERSON (MDMSC TI) OR ANY EXPERIENCED FPI PERSON.

AS-IS CONDITION: A HIGH PERCENTAGE OF C-5 WHEELS (AS MANY AS 1/3) ARE FOUND CRACKED AT A PARTICULAR HIGH STRESS POINT OF THE PART. ALL WHEEL HALVES WITH THIS DEFECT WILL BE CONDEMNED.

TO-BE: STUDY THE CAUSES AND OCCURANCES OF C-5 WHEELS CRACKED AT THE HIGH STRESS AREA. CONSIDER MODIFICATION TO STRENGTHEN THIS AREA

POTENTIAL IMPROVEMENTS: IMPROVED AIRCRAFT SAFETY, REDUCED PROCUREMENT COSTS FOR REPLACEMENT WHEEL HALVES.

IMPLEMENTATION COST: _____

SCHEDULE: _____

Section F - Miscellaneous

4-10. Depot Maintenance Personnel Turnover. The annual rate of turnover of personnel performing depot maintenance. This rate is based on the average number of civilian personnel assigned to AFLC depot maintenance functions during calendar year 1985 and the total depot maintenance personnel losses experienced during that year. The source of the data is the Advanced Personnel Data System-Civilian (APDS-C), E300. The OPR is HQ AFLC/DPCC.

1985 Depot Maintenance Personnel Turnover Rate

$$\frac{\text{Losses } 2,449}{\text{Assigned } 40,109} = .0611$$

4-11. AF Maintenance Personnel Turnover. The annual rate of turnover of enlisted personnel performing Air Force base level maintenance. This rate is based upon the total number of enlisted personnel assigned to aircraft maintenance Air Force specialty codes at the end of FY85 and the total number of losses experienced during that year. The source of the data is the Retention Statistic Report prescribed by AFM 30-130, Vol 1 and the Airman Force Characteristics P769 Report Prescribed by AFR 30-3 and AFR 700-4, Vol 1 and Vol 2. The OPRs are HQ AFMPC/PMATE and HQ AFMPC/DPMYA

Calendar days	30.4375
Less:	
Holiday	0.75
Relief Days	8.6964
Assigned Days	20.9911
Times hours per day	8.0
No. Assigned hours	167.929

	Military		Civilian	
	CONUS	OS	CONUS	OS
Monthly Assigned Hours	167.929	167.929	167.929	167.929
Less Total Nonavailable	22.730	24.464	22.65	20.76
Monthly Hours Available	145.2	143.5	145.3	147.2
Times Number of Months	12.0	12.0	12.0	12.0
Annual Hours Available	1742.4	1722.0	1743.6	1766.4

1744

FY85 AF Maintenance Personnel Turnover Rate

$$\frac{\text{Losses } 18,923}{\text{Assigned } 147,567} = .1282$$

4-12. Monthly Assigned Hours. The number of hours per month a military or civilian employee is assigned for duty. Monthly assigned hours is based on a 5-day 40-hour work week. This factor equals calendar days per month less holiday and relief days (Saturday, Sunday, or compensatory weekday for weekend workday) times hours per day. The standard Air force monthly assigned hours used in allocating manpower is 167.929 hours. The source of the data is AFR 26-1. The OPR is HQ USAF/PRM. The prescribing directive is AFR 26-1 (Vol III).

4-13. Annual Available Hours. The number of hours per year a military or civilian employee is available for primary duty. Annual available hours is equal to monthly assigned hours less total nonavailable hours (leave, PCS related absences, medical leave, organizational duties, education and training, social actions, miscellaneous, overseas peculiar activities and special absences) times 12 months. The standard annual available hours for military and civilian personnel are presented. The source of the data is AFR 26-1. The OPR is HQ USAF/MPM. The prescribing directive is AFR 26-1 (Vol III).

WAGE FOR OVERTIME

DIRECT \$18.65
INDIRECT 10.06
OVERHEAD 3.27
TOTAL 31.98

BASE SALARY - WITH NO BENEFITS. \$12.44

STANDARD HOURS WORK PER 1 MAN 1744 HRS

OVERTIME IS 7½% OF THE TIME

$$(1744 \text{ HRS})(7.5\%) = 130.8 \text{ HRS. OVERTIME / MAN}$$

$$\text{OVERTIME PAY} = \text{BASE PAY } (12.44)(1.5) = \$18.66 \text{ FOR OT.}$$

PAY FOR.

$$\text{A. STANDARD HRS.} = (1744 \text{ HR}) \left(\frac{\$31.98}{\text{HR}} \right) = 55,773.12 \text{ MAN/YEAR}$$

$$\text{B OVERTIME HRS.} \quad (130.8 \text{ HRS}) \left(\frac{\$18.66}{\text{HR}} \right) = 2440.73 \text{ OT PAY}$$

$$\text{Total Pay with overtime one man} = 58213.85$$

4/13/27

NON-DESTRUCTIVE
INSPECTION

MANPNA RCC
OO-ALC

ENGINEERING NOTES

MEL ANDERSON

Whole
Book

APRIL 20, 1989

THIS MORNING JACK SCHNIEDER GAVE ME A TOUR OF BLDG # 507 TO GIVE ME A GENERAL FEEL FOR THE OPERATION TO BE SURVEYED. IN REVIEWING THE NEEDS OF THE TECHNOLOGY INSERTION PROJECT AND MY PAST EXPERIENCES IT WAS AGREED THAT I WOULD BE ASSIGNED TO STUDY THE NON-DESTRUCTIVE INSPECTION RESOURCE CONTROL CENTER (NDI RCC).

THERMAN CARTWRIGHT TOOK ME ON ANOTHER TOUR OF BLDGS # 507 & # 505. WE WENT TO THE FOREMAN'S OFFICE FOR NDI IN BLDG # 507 AND WAS INTRODUCED TO CRAIG LUSK. MR. LUSK IS ONE OF FOUR FOREMEN IN THE MANPNA RCC. MR. LUSK IS RESPONSIBLE FOR DAY SHIFT NDI OPERATIONS MAINLY IN LANDING GEAR REPAIR FACILITIES. I WAS ABLE TO SPEAK BRIEFLY WITH MR. LUSK CONCERNING HIS AREA OF RESPONSIBILITY. HIS GREATEST CONCERN IS THE UNSTABLE & UNPREDICTABLE FLOW OF PARTS THROUGH THE SHOP. HE MUST MAINTAIN ENOUGH TRAINED AND CERTIFIED INSPECTORS TO HANDLE SURGES WHILE KEEPING THIS SAME GROUP OCCUPIED DURING THE SLOW PERIODS.

CRAIG LUSK CONSIDERS HIS AREA TO BE WELL STAFFED AT THE PRESENT TIME. HE HAS 14 PEOPLE UNDER HIS JURISDICTION, 8 OF WHOM ARE GRADE DB 9'S AND THEREFORE CERTIFIED TO INSPECT LANDING GEAR COMPONENTS. AT PRESENT THERE ARE 47 CERTIFIED NDI PEOPLE WITHIN THE MANPNA RCC AT THIS AIR LOGISTICS CENTER (ALC). THESE 47 INSPECTORS PROVIDE ALL SERVICES ON THIS AIR FORCE BASE.

IN RECENT YEARS EVERY RCC WHICH HAD ANY REQUIREMENT FOR NON-DESTRUCTIVE INSPECTION HAD PEOPLE IN THE GROUP CROSS-TRAINED AND CERTIFIED TO DO THE TESTING. FOR EXAMPLE, THE WING FOLD SHOP MAY NEED AN OCCASIONAL PORTABLE PENETRANT TEST. IN THE PAST ONE OF THE SHEET METAL MECHANICS WOULD HAVE BEEN ASSIGNED TO PULL OUT HIS EQUIPMENT AND PERFORM THE PROCESS. EACH SHOP OF COURSE HAD A FEW ^{NDI} PEOPLE TO COVER VACATIONS, SICK DAYS, ANNUAL LEAVE, ETC. HILL AIR FORCE BASE HAD APPROX 400 CERTIFIED NDI PERSONNEL DURING THIS PERIOD.

IT WAS NOTED THAT IT TAKES A GREAT DEAL OF TRAINING A REPEATED HANDS ON EXPERIENCE TO BE BECOME PROFICIENT AT NDI.

THROUGH A MAJOR REORGANIZATION, THE MANPNA RCC WAS GIVEN COMPLETE RESPONSIBILITY FOR NDI. THIS CHANGE HAS NECESSITATED SOME CREATIVE MANAGEMENT, BUT APPEARS TO BE A GOOD IDEA IN MY OPINION. CONSIDER THE REDUCED TRAINING COSTS, REDUCED EQUIPMENT COSTS, HIGHER QUALITY TESTING, AND INCREASED CONFIDENCE IN THE DEPARTMENT. THIS ARRANGEMENT ALSO HAS IT NEGATIVE POINTS: SINCE THE NDI PEOPLE ARE WORKING ALL OVER THE BASE IT IS DIFFICULT TO SUPERVISE THEM ALL. A GREAT DEAL OF TRUST IS PLACED ON EACH NDI PERSON AT A REMOTE LOCATION THAT THEY WILL STAY BUSY AND PUT THE WORK OUT. NOT ALL OF THE NDI PEOPLE CAN HANDLE THIS LOWER LEVEL OF SUPERVISION. A SPECIFIC EXAMPLE OF THIS IS IN THE EDDY CURRENT CHECK AREA OF BLDG #507. THE PERSON NORMALLY ASSIGNED TO THIS AREA REPORTS TO A FOREMAN IN BLDG #225. THE AREA IS OFTEN STACKED WITH WHEELS BUT THE

INSPECTOR IS SELDOM AT THE WORK AREA. CRAIG LUSK MENTIONED THAT THE LANDING GEAR FACILITY WAS EXPECTED TO INTRODUCE AN MRP II SYSTEM WHICH MAY ASSIST IN DAMPENING THE PEAKS & VALLEYS IN THE WORK LOAD. MR. LUSK'S INITIAL COMMENTS CONCERNING NDI EQUIPMENT WERE THAT HE CONSIDERED THEIR ASSETS TO BE ADEQUATE.

THERE IS A C-SCAN ULTRASONIC MACHINE WHICH WAS PARTIALLY BUILT BY A WASHINGTON STATE COMPANY THAT NEVER WORKED. THE DETAILS ON THIS PURCHASE ARE FOUND LATER IN THIS REPORT.

MR. LUSK WAS BUSY AT THIS TIME BUT INVITED ME BACK FOR A TOUR AT 8AM ON MONDAY APRIL 24TH.

I MET CRAIG LUSK'S ALTERNATE, QUENTIN MILLER AND TOOK OPPORTUNITY TO DISCUSS THE AREA WITH HIM. HE EXPLAINED THAT PARTS MADE OF ALUMINUM, MAGNESIUM, TITANIUM, & STEEL ARE PENETRANT INSPECTED AFTER BEING CLEANED. EACH "TYPE" OF PART IS INSPECTED USING A DIFFERENT "GROUP" OF PENETRANT PRODUCTS. ALL GROUPS USE WET DEVELOPER TO DRAW PENETRANT FROM ANY POSSIBLE INDICATIONS. WET DEVELOPER WAS SELECTED BECAUSE OF THE CONTINUOUS TYPE OF PRODUCTION FLOW THROUGH THE AREA ON THE OVERHEAD CONVEYER.

ONLY THE GROUP IV PARTS USE A WATER-WASHABLE SYSTEM WITHOUT A POST-EMULSIFIER. EACH WORK CONTROL DOCUMENT (#958) LISTS A TECH. ORDER WHICH DEFINES THE ACCEPTANCE CRITERIA FOR THE PART. GENERALLY ~~ALL~~ ALL CRACKS IN WHEELS, EXCEPT THOSE IN THE BEARING BORE, ARE SUFFICIENT CAUSE TO CONDEMN A PART. SOME BEARING BORE CRACKS CAN BE MACHINED OUT OF WHEELS.

AFTERNOON, MONDAY 4-24

KENT KENNEDY WALKED ME THROUGH ALL NDI PROCESS AREAS FOR LANDING GEAR AT OO-ALC. IN BLDG # 507 THERE ARE TWO ~~FLUORESCENT~~ FLUORESCENT PENETRANT INSPECTION LINES, 5 MAGNETIC PARTICLE STATIONS, AND AN AREA FOR EDDY CURRENT, CONDUCTIVITY, HARDNESS, AND ULTRASONIC SONIC (A-SCAN) TESTING. IN BLDG # 505 THERE ARE 3 MAGNETIC PARTICLE STATIONS, 1 STEEL / CHROME & ALUMINUM FLUORESCENT PENETRANT INSPECT LINE, AND 1 TEMPER ETCH INSPECTION PROCESS LINE. EACH INSPECTION PROCESS WILL BE DETAILED LATER IN THE NOTES.

AFTERNOON 4-25-89

I MET MR. LUSK & INFORMED HIM THAT I WAS SUPPOSED TO TOUR ALL NDI WITHIN MANPNA. CRAIG LUSK TOOK ME TO BLDG # 510 AND SHOWED ME A NEW X-RAY MACHINE WHICH WAS RECENTLY INSTALLED BUT IS NOT PRESENTLY UTILIZED. THIS THE ONLY NDI EQUIPMENT IN THE BUILDING. THIS MACHINE IS TO ~~ME~~ VERIFY INVESTMENT CASTINGS QUALITY. MR. LUSK GAVE ~~ME~~ PERMISSION TO RANDOMLY TOUR THE NDI AREA WHILE I LOOKED FOR KENT KENNEDY TO CONTINUE ^{THE} TOUR ~~OF~~ OF NDI AREAS.

I WENT TO THE EDDY CURRENT / ULTRA-SONIC AREA AND PULLED THE TECH ORDER ON GENERAL MAINTENANCE OF ALL AIRCRAFT WHEELS.

THE ~~WCD~~ WCD CALLS T.O. 4W-1-61. IT STATES THAT WHEELS MUST BE FLUORESCENT PENETRANT INSPECTED PER MIL-STD-6866 TYPE I, LEVEL 3 OR 4, METHOD BOR C. NO DEFECTS ARE ALLOWED.

JOE GUTIERREZ, A LEVEL 10 NDI INSPECTOR WHO OPERATES THE EDDY CURRENT & ULTRA-SONIC EQUIPMENT ~~WCD~~ DROPPED IN AND TALKED TO ME. HE SPOKE ABOUT THE ERRATIC FLOW OF PARTS THROUGH THE AREA. TODAY'S WORK WAS RATHER SLOW AND A SURGE COULD BE HANDLED EASILY, WHEREAS 3-4 MONTHS AGO HE HAD WHEELS STACKED ALL AROUND AND COULDN'T KEEP UP WITH THE FLOW. TO COMPLICATE MATTERS, HE HAD TO PULL ~~THE~~ F-15 WHEELS OFF THE LINE AND STACK THEM ON PALLETS IN THE AREA TO MAKE SPACE TO WORK. THEN C-5 WHEELS CAME AND WERE WORKED WHILE THE F-15 WHEELS SAT. IT WAS A FIRST IN, LAST OUT SITUATION. THE SCHEDULER ASSUMED THAT HE HAD F-15 WHEELS COMING THROUGH THE SYSTEM, WHEN THEY ACTUALLY WERE STOPPED.

ALL WHEELS ARE PENETRANT INSPECTED AND MANY REQUIRE AN ADDITIONAL EDDY CURRENT TEST AROUND THE SEAL BEAD. THIS IS BECAUSE SOMETIMES RUBBER ~~FROM~~ FROM THE TIRE CAN WORK INTO A CRACK OR COVER IT DURING OPERATION.

THIS SECOND CHECK INCREASES THE CONFIDENCE IN THE QUALITY OF HARDWARE. MR. GUTIERREZ TOLD ME THAT THE ~~ITEM~~ ITEM THAT FALLS OUT MOST OFTEN AT EDDY CURRENT IS C-5A/B WHEELS. AS MANY AS 1/3 OF THESE WHEELS WILL CRACK AT A PARTICULAR HIGH STRESS POINT ON THE WEB. SOME WHEEL HALVES ARE A MATCHED SET, AND AT TIMES BOTH PIECES WILL BE REJECTED BECAUSE OF A CRACK IN ONE ONLY.

MR. MONTOYA TAUGHT ME THAT IN ORDER TO PROPERLY RUN A PART THROUGH MAG PARTICLE INSPECT THE AMPERAGE REQUIRED SHOULD BE MATHAMATICALLY CALCULATED ~~Based~~ BASED ON PART MASS & GEOMETRY. AT PRESENT EACH OPERATOR IS TRAINED AND EXPERIENCED TO KNOW THE APPROXAMATE ~~SET~~ AMPERAGE SETTINGS REQUIRED TO SET-UP A MAGNETIC FLUX FIELD.

MAGNETIC PARTICLE INSPECTION IS ONLY PERFORMED ON HARDWARE MADE OF FERROUS MATERIALS. IN THIS SHOP THE COMMON FERROUS PARTS ARE FOUND IN STRUTS AND BRAKE DETAILS.

MR. MONTOYA DEMONSTRATED THE PROCESS ON A KC-135 STRUT PART WHERE NO DEFECTS WERE ~~Also~~ DETECTED. THE PROCESS WAS REPEATED ON A KNOWN DEFECT ARTICLE TO SHOW THE INDICATION ~~When~~ TO BE EXPECTED.

MAGNETIC PARTICLE INSPECTION REQUIRES THE FIELD TO BE ^{CREATED} CROSSWISE TO THE PART, AND THEN ~~Demagnetized~~ DEMAGNETIZED. THE FIELD IS THEN GENERATED PARALLEL TO THE PART AND AGAIN DEMAGNETIZED. THIS PROCESS SHOULD ALLOW SIGHTING OF A CRACK ~~When~~ LYING AT ANY DIRECTION IN THE PART.

IT SHOULD BE NOTED THAT MAGNETIC PARTICLE INSPECTION CAN DETECT VOIDS IN MATERIAL THAT MAY NOT BE EXPOSED TO THE SURFACE.

MR. MONTOYA IS PRESENTLY TAKING A TRAINING COURSE IN THE MORNING IN PREPARATION TO BECOMING CERTIFIED IN ULTRA-SONIC INSPECTION. THE NDI SPECIFICATIONS CONTROLLING CERTIFICATION OF PERSONNEL REQUIRE RECERTIFICATION EVERY 3 YEARS. THIS RCC REQUIRES ALL INSPECTORS TO RECERTIFY ANNUALLY.

IN TALKING TO VARIOUS NDI PERSONNEL, SEVERAL HAVE NOTED THAT TECH ORDERS DO NOT ALWAYS DEFINE CLEARLY THE LIMITS OF ACCEPTANCE OR REWORK PROCEDURES FOR VOIDS. WHEN IN DOUBT THE E & I GROUP IS CONTACTED FOR AN OPINION PRIOR TO DISPOSITION OF THE INDICATION.

THE E&I DEPT. DEALS MORE DIRECTLY AND MORE FREQUENTLY WITH THE ENGINEERING DEPARTMENT. ONE OTHER ALTERNATIVE AVAILABLE TO AN NDI PERSON WHO FINDS A QUESTIONABLE INDICATION IS TO FILL OUT A FORM 103 DESCRIBING THE CONCERNING. THE PART IS THEN MOVED TO A HOLDING AREA FOR ENGINEERING EVALUATION.

AS LOU MONTOYA AND I TALKED A FORK LIFT OPERATOR WITH A PALLET OF FINISHED MACHINED PARTS STOPPED TOO QUICKLY AND PART OF THE LOAD TIPPED OFF ONTO THE CONCRETE FLOOR. THE OPERATOR HURRIEDLY RELOCATED THE PARTS ON THE PALLET AND CONTINUED ON HIS WAY. MR. MONTOYA AND I DISCUSSED THAT THE TOPPLED LOAD SHOULD BE RE-INSPECTED PRIOR TO INSTALLATION, BUT PROBABLY WOULD NOT BE.

AS I SPOKE WITH KENT KENNEDY THIS MORNING HE NOTED AN AREA OF DIFFICULTY IN THE SMALL PART MAG PARTICLE AREA. SINCE THERE IS NO STORAGE OR QUEUE AREA FOR THIS AREA, THE PARTS ARE LOADED ON PALLETS ON THE FLOOR DIRECTLY IN FRONT OF THE MAG BOOTHS. IN ORDER TO LIMIT THE SPACE OCCUPIED, THE PRODUCTION CONTROL PEOPLE SOMETIMES LOAD A PALLET WITH SEVERAL DISSIMILAR PARTS. WHEN THE MAG INSPECTION IS COMPLETE THE PRODUCTION CONTROL INDIVIDUAL THEN MUST RESTACK THE GROUPS OF PARTS ONTO SEPARATE PALLETS BECAUSE MANY TIMES THE PARTS WILL NOT HAVE THE SAME NEXT OPERATION.

SIX OF THE INSPECTORS WERE IN ULTRA-SONIC TRAINING SO QUENTIN MILLER WAS WORKING ALONE ON THE BLDG # 507 PENETRANT LINE. ONE INSPECTOR NORMALLY MANS THE SPRAY BOOTH WHILE THE OTHER EVALUATES THE PARTS IN THE DARK BOOTH. ALL THE PARTS IN THE SYSTEM TODAY WERE ALUMINUM. A DETAILED LISTING OF THE PENETRANT PROCEDURE IS AS FOLLOWS:

- 1) PARTS ARE CHEMICALLY AND/OR MECHANICALLY CLEANED IN THE MANPGW RCC. ANY CONTAMINANTS ON THE PART SURFACE WILL SHOW UP AS AN "INDICATION" DURING THE EVALUATION.
- 2) THE OVERHEAD TROLLEY MOVES PART TO THE APPROPRIATE PENETRANT TANK;

MAGNESIUM PARTS - GROUP IV TANK

ALUMINUM PARTS - GROUP V TANK

STEEL/CHROME PARTS - GROUP VI TANK

THE PART IS LOWERED BY THE AUTOMATED TROLLEY INTO THE PENETRANT SOLUTION AND SUBMERGED FOR APPROXIMATELY 1-2 MINUTES.

THE TROLLEY RAISES PART AND ALLOWS IT TO DRAIN FOR 1-2 MINUTES.

PARTS PROGRESS FORWARD TO QUEUE AT THE EMULSIFIER. THIS "DWELL" TIME MUST BE AT LEAST 30 MINUTES TO ALLOW PENETRANT TO DRAW INTO ANY SURFACE IMPERFECTIONS ON THE PART. MR. MILLER TOLD ME ALL PARTS EXCEPT THE TITANIUM HARDWARE ARE DIPPED IN EMULSIFIER AND THEREFORE COULD REMAIN IN THE QUEUE FOR 2-3

HOURS WITHOUT ANY DETRIMENTAL EFFECTS TO THE PROCESS. THIS QUEUE CAN HOLD 8 PARTS.

- 3) WHEN THE OPERATOR TRIGGERS THE "SYSTEM" THE PART IS LOWERED AND IS LOWERED MOMENTARILY INTO THE EMULSIFIER. THIS FLUID DISSOLVES THE PENETRANT ON THE PART SURFACE.

4) WITHIN 5 MINUTES OF EMULSIFICATION THE PART IS TROLLEYED TO THE SPRAY BOOTH WHERE IT IS WASHED OF ALL SURFACE PENETRANT. THIS BOOTH IS ILLUMINATED BY ULTRA-VIOLET LIGHTS. THE OPERATORS SPRAYS THE PART UNTIL ALL FLUORESCENCE IS WASHED OFF.

5) PART MOVES TO DEVELOPER WHERE IT IS LOWERED AND MOMENTARILY IMMERSUED.

6) TROLLEY RETRACTS AND INCREMENTS TO THE DRYING OVEN. PARTS ARE WARMED TO 150°F AND HELD AT TEMP FOR 15 MINUTES.

7) WHEN DRYING IS COMPLETE THE PART MOVES TO THE DARK BOOTH WHERE IT IS INSPECTED USING AN ULTRA-VIOLET SPOT LIGHT LOOKING FOR ANY FLUORESCENT "INDICATION". THE DEVELOPER AND DRYING OPERATIONS BLEED THE PENETRANT BACK OUT OF ANY CRACKS, PITS, ETC. WHICH ARE EXPOSED TO THE SURFACE OF THE PART.

IF NO VALID INDICATIONS ARE NOTED, THE INSPECTOR BUYS OFF THE WCD AND SENDS THE PART ALONG.

IF A CRACK IS NOTED THE PART WILL BE MARKED AND THE WCD REJECTED. ALUMINUM WHEELS MUST HAVE NOTED CRACKS VERIFIED BY EDDY CURRENT ALSO.



8) THE LAST STATION ON THIS PENETRANT LINE LOWERS THE PART INTO A 150°F HOT WATER RINSE TANK. PART MOVES ALONG TROLLEY TO AN UNLOAD STATION. IT IS REMOVED FROM CRANES AND ROUTED PER THE WCD INSTRUCTIONS.

ON THIS MORNING ONE PART WAS NOTED AS BEING CRACKED; A C-5B WHEEL HALF HAD A BREAK IN THE BEARING BORE. THE WCD HAD AN OPTIONAL BEARING BORE REPAIR OPERATION SO THIS PART WAS FORWARDED TO E&I FOR DISPOSITION AND ROUTING.

EACH OVEN
CAN HOLD 3
TROLLEYS OF
PARTS

WENT TO BLOG # 505 TO MAGNETIC PARTICLE AREA AND MET INSPECTOR KATHY WEAVER. SHE AGREED TO SHOW ME IN DETAIL HOW MAG PARTICLE WORKS. ONLY PARTS WHICH ARE A FERROUS METAL AND CAN BE MAGNETIZED ARE CANDIDATES FOR MAG INSPECTION.

A COMMONLY USED TERM FOR FLUORESCENT MAGNETIC PARTICLE INSPECTION IS "MAGNAFLUX".

- 1) FIRST A CENTRAL CONDUCTOR ALUMINUM ROD IS SELECTED WHICH IS MAXIMUM DIAMETER AVAILABLE AND WILL SLIDE THROUGH HOLLOW OF PART. MOUNT PART ON ROD BETWEEN CONTACT CENTERS. IF PART IS NOT HOLLOW THE ACTUAL PART
- 2) FLOOD PART WITH A COAT OF FLUORESCENT MAGNETIC PARTICLE FLUID.
- 3) SET MACHINE TO PROPER AMPERAGE REQUIRED AND SHOOT THE PART. THIS SETS UP A MAGNETIC FIELD WHICH SPIRALS AROUND AXIS OF PART.  THE PART MAY REQUIRE ~~1~~ PARTIAL ROTATIONS AND ADDITIONAL SHOTS TO FULLY DEVELOP THE FIELD, SINCE THE CENTRAL COIL WILL ONLY MAGNETIZE AN AREA 3 TIMES ITS DIAMETER.
- 4) UNDER AN ULTRA-VIOLET LIGHT THE INSPECTOR VISUALS THE PART FOR CRACKLIKE INDICATIONS. IF AN INDICATION IS NOTED, THE INSPECTION CONTINUES.
- 5) THE INSPECTOR THEN DEMAGNETIZES THE PART AND USING A METER MEASURES MAGNETISM AT ENDS OF PART. THE CENTRAL CORE SHOT DOES NOT BUILD FLUX LINES WHICH WILL MEASURE ON THE METER, BUT A PART CAN BECOME SOMEWHAT MAGNETIC THROUGH NORMAL SHOP OPERATIONS SUCH AS GRINDING.
- 6) NEXT THE PART IS UNLOADED FROM THE CONTACTS AND THE CENTRAL CORE REMOVED. THE COIL IS PLACED OVER THE PART AND ~~THE~~ CURRENT INDUCED THROUGH THE COIL. THIS CREATES FLUX LINES WHICH TRAVEL THE LENGTH OF THE PART. 

THE PART IS USUALLY LAID AT THE BOTTOM EDGE OF THE COIL. IT REQUIRES AT LEAST TWICE THE AMPERAGE TO MAGNETIZE A PART IF IT IS LOCATED IN THE CENTER OF THE COIL.

7) UNDER THE ULTRA-VIOLET LIGHT ~~THE~~ THE INSPECTOR VISUALS THE PART FOR CRACKS. BY INSPECTING THE PART UNDER TWO DIFFERENT MAGNETISM PATTERNS, A CRACK RUNNING IN ANY DIRECTION IN THE MATERIAL CAN BE LOCATED. IT SHOULD BE NOTED THAT MAG PARTICLE INSPECTION CAN REVEAL CRACKS IN THE MATERIAL WHICH MAY NOT BE EXPOSED TO THE SURFACE.

8) THE PART IS DEMAGNETIZED AND THE INSPECTOR VERIFIES THAT THE FORCE READS BELOW 2 POINTS ON THE METER. EXCESSIVE RESIDUAL MAGNETIC FORCE CAN ADVERSELY IMPACT THE FUNCTION OF THE AIRCRAFTS NAVIGATION EQUIPMENT.

USING THE PROPER AMOUNT OF CURRENT IS IMPORTANT TO THIS PROCESS. TOO LITTLE WILL NOT SET UP FLUX LINES AND NOT SHOW DEFECTS. TOO MUCH CURRENT WILL SATURATE THE PART AND COULD POSSIBLY ARC BURN IT. A SATURATED PART MIGHT MASK A CRACK OR HAVE FUZZY ENDS BECAUSE OF ESCAPING MAGNETISM.

IN BUILDING NUMBER 507 ALL STEEL PARTS ARE INITIALLY MAG PARTICLE INSPECTED.

AFTER STEEL PARTS HAVE BEEN REWORKED THEY ARE INSPECTED IN BLDG # 505. USUALLY

2 PEOPLE WORK THE MAG BOOTH IN 505; ~~2~~

3 IF WORK FLOW REQUIRES.

MS. WEAVER TOLD ME THAT AFTER 60-90 DAYS OF USE, THE FLUORESCENT FLUID MUST BE REPLACED.

ALL HIGH TEMPER STEEL PARTS REQUIRE TWO FMPI INSPECTIONS.

IN MOST CASES THE E&I PERSON WILL STAMP THE LAST MAG OPTION AVAILABLE.

I CHECKED WITH CRAIG LUSK CONCERNING THE COMPLETION OF THE TOUR OF HIS AREA OF RESPONSIBILITY. HE TOLD ME THAT HIS TRAINER, KENT KENNEDY WOULD BE COLLECTING HIS EQUIPMENT PRIOR TO A TOY TRIP.

I WAS TOLD TO CHECK BACK AFTER NOON. I WENT TO BLDG # 505 WHERE QUENTIN MILLER WAS RUNNING PENETRANT INSPECTION OF ALUMINUM HARDWARE. THE PENETRANT SYSTEM IN BLDG # 505 IS THE SAME AS GROUPS V & VI IN BLDG # 507. MR. MILLER SHOWED THE TEMPER ETCH PROCESS TO ME ON A KNOWN DEFECT SAMPLE.

THIS PROCESS PROCEDURE IS AS FOLLOWS:

- 1) PARTS ARE THOROUGHLY VAPOR DEGREASED TO REMOVE SURFACE CONTAMINANTS
- 2) INSPECTOR DIPS THE PART IN A NITAL ETCH SOLUTION FOR 5-10 SECONDS.
- 3) COLD WATER RINSE
- 4) SUBMERGE PART IN A CLEANER FLUID FOR 30-60 SECONDS.
- 5) COLD WATER RINSE
- 6) NEXT SUBMERGE PART IN A NEUTRALIZER FOR 15-30 SECONDS
- 7) HOT WATER RINSE
- 8) AT THIS POINT THE INSPECTOR VISUALS THE PART FOR COLOR VARIATIONS WHICH WOULD INDICATE A UNDER OR OVER TEMPERED CONDITION IN THE STEEL. IF A PART IS BURNED DURING A GRINDING OPERATION THE HARDNESS OF THE ITEM MAY HAVE BEEN CHANGED. THIS PROCEDURE IS ACTUALLY A CHEMICAL ETCH PROCESS BUT THE VISUAL INSPECTION STEP REQUIRES A WELL TRAINED CERTIFIED INDIVIDUAL THEREFORE THIS RESPONSIBILITY WAS ASSIGNED WITHIN THE MANPNA RCC. SOME INSPECTORS FEEL THAT THIS IS ONE OF THE MOST DIFFICULT PROCESSES TO EVALUATE.

MONDAY, MAY 1, 1989 MORNING

CALLED MR. BIFF GROSCKRENTZ ABOUT SOME CONTACTS FOR TOURING THE REMAINING NDI AREAS OF MANPNA. HE TOLD ME TO CALL GENE MERRILL AT 7-6080 AND LAVELLE HOLMES AT 7-0309, WHICH I DID. MR. MERRILL AGREED TO SHOW ME HIS AREA AT 08:00 TODAY. I MET HIM AT THE NORTH GUARD HOUSE FOR SECURED AREAS BECAUSE I DID NOT HAVE THE REQUIRED CLEARANCE. HE SIGNED ME IN AND DROVE ME TO BLDG # 2113. IN THIS BUILDING THERE IS HOUSED A COMPUTER TOPOGRAPHY (CT) MACHINE WHICH CAN SCAN A MISSILE AND SHOW THE INTERIOR ON A CRT SCREEN. THIS STATION CAN HANDLE A MISSILE UP TO 52" DIAMETER. THERE IS ALSO AN X-RAY SOURCE MOUNTED ADJACENT TO THE CT MACHINE WHICH CAN BE USED FOR EXAMINING ANY QUESTIONABLE AREAS OF THE MISSILE. IN THIS SAME BUILDING IN ANOTHER BAY THERE ARE 2 X-RAY UNITS WHICH CAN SHOOT PROPELLANT DIAMETERS UP TO 7" DIAMETER OR 1" THICK STEEL. PROPELLANT IS $\frac{1}{7}$ TH THE DENSITY OF STEEL. MR. MERRILL HAS 4 GRADE II INSPECTORS WORKING FOR HIM IN THIS BUILDING. WE TRAVELED TO ANOTHER SECURED AREA ON THE BASE WHERE BUILDING # 985 IS LOCATED. HERE THERE ARE 5 GRADE II INSPECTORS ASSIGNED ALSO TO X-RAY MISSILES. THIS BUILDING HAS TWO BAYS WITH X-RAY EQUIPMENT CAPABLE OF INSPECTING UP TO 100" DIAMETER MISSILES. ALL X-RAY MACHINES IN THIS RRC DEVELOP THEIR POTENTIAL BY ELECTRICAL MEANS BECAUSE THE AIR FORCE DOES NOT PERMIT THE USE OF RADIOACTIVE ISOTOPES IN NON-DESTRUCTIVE TESTING.

I MET LA VELLE HOLMES AT 10:00 TODAY IN HIS OFFICE IN BLDG # 225 (HANGER 3). MR. HOLMES DESCRIBED THAT HE HAS 9 PEOPLE IN HIS AREA NOW WHO DO THE NDI WORK ON THE ACTUAL AIRCRAFT. ALL OF THEIR EQUIPMENT IS PORTABLE AND RATHER THAN MOVING PARTS, THE INSPECTOR GOES TO THE PROBLEM. THEY DO EDDY CURRENT, ULTRA-SONIC, MAG PARTICLE, & PENETRANT. ALL OF MR. HOLMES' PEOPLE ARE GRADE 10'S. MOST OF THEIR WORK IS ON THE F-4. THEY HAVE INSTRUCTION SHEETS WHICH CALL FOR INSPECTION OF SPECIFIC HIGH STRESS, HIGH CORROSION AREAS OF THE AIRCRAFT. THEY ALSO DO OCCASIONAL CHECKS ON THE F-16, C-130, OV-10, & SOME HELICOPTERS.

THE BUILDINGS WHICH MR. HOLMES PEOPLE WORK IN ARE - 225 HANGER

261 CENTER WING SHOP

265 SHEET METAL

HANGER 1, C-130'S HELICOPTER'S

233

270, OV-10'S

272, F-4 WING FOLD SHOP

507 & 509, WHEELS & BOMB RACKS

AFTERNOON, MAY 1, 1989

MET WITH KENT KENNEDY AT 12:30 IN BLDG #507 AND HE AGREED TO CONTINUE WITH THE TOUR OF NDI SITES. WE WENT TO BUILDING 265 AND VIEWED THE REAL TIME X-RAY MACHINE. THIS EQUIPMENT DO NOT USE FILM BUT RATHER DISPLAYS A CRT PICTURE OF PART CROSS-SECTION. THE MAJOR USE OF THIS MACHINE IS FOR THE FINAL INSPECTION OF BONDED HONEYCOMB FLIGHT CONTROL SURFACES. TYPICAL PROBLEMS INCLUDE FOREIGN MATTER OR BLOWN OUT CORES.

WE NEXT LOOKED AT THE TRAILER WHERE THE AIRCRAFT X-RAY FILM IS DEVELOPED AND EVALUATED WHEN

THE MAINTENANCE TO THE AIRFRAME IS COMPLETED AT OO-ALC & THE ENGINES ARE REINSTALLED,

THE ENTIRE AIRCRAFT IS TOWED TO BLDG #216 WHICH IS OUT ON THE FLIGHT LINE EAST OF BLDG #2 INSIDE THIS BUILDING THE AIRCRAFT IS X-RAYED IN PARTICULAR LOCATIONS LOOKING FOR FOREIGN OBJECTS THAT MIGHT HAVE BEEN LEFT LYING INSIDE. BUILDING 216 HAS 3 X-RAY MACHINES AVAILABLE. APPROXIMATELY 30 SHOTS ARE TAKEN OF EACH AIRCRAFT. THE EXPOSED FILM IS TAKEN TO THE TRAILER OUTSIDE BLDG 507 WHERE IT IS DEVELOPED AND EXAMINED. MR. KENNEDY SHOWED ME EXAMPLES FILM SHOWING TIE WIRES & RIVETS LYING IN THE AIRCRAFT. THE FILM ALSO SHOWS SOME CORROSION AND UNSEATED RIVETS.

THE ENGINES CANNOT BE FIRED UP UNTIL THE NDI INSPECTOR RELEASES THE AIRCRAFT.

KENT KENNEDY & I ATTEMPTED TO TOUR BLDG 1915 ON THE NORTH END OF THE BASE, BUT WERE TURNED BACK BY OFFICIALS BECAUSE OF A ROCKET FIRE IN THE SECURED AREA.

MR. KENNEDY EXPRESSED AN OPINION CONCERNING THE PROCUREMENT OF NEW EQUIPMENT. THE ALC IS ESSENTIALLY A BUSINESS IN THE MARKETPLACE AND MUST MAINTAIN STATE OF ART ASSETS TO STAY COMPETITIVE. WHEN IT IS DETERMINED THAT A NEW PIECE OF EQUIPMENT IS NEEDED, THE TIME LAG BETWEEN INITIAL REQUEST AND INSTALLATION CAN BE AS LONG AS 2 YEARS. THIS MEANS THAT BECAUSE OF THE LONG CHAIN OF APPROVALS REQUIRED, THE ASSOCIATED LEAD TIME, AND RAPIDLY ADVANCING TECHNOLOGY, THE ALC CANNOT PURCHASE STATE OF THE ART EQUIPMENT.

BUILDINGS IN WHICH NON-DESTRUCTIVE TESTING IS PERFORMED

<u>BLDG</u>	<u>LOCATION AREA</u>	<u>TYPE OF NDT</u>
✓ 507	5 EAST	M, P, U, E
✓ 505	5 EAST	P, M, T
509	5 EAST	E, U
✓ 510	5 EAST	X
1915	NORTH SECURED	P
216	2 EAST	X
✓ 265	2 EAST	M, P, U, E
✓ TRAILER	5 EAST	X
100	1 EAST	LAB, U
✓ 225	2 EAST	M, P, U, E
✓ 985	WEST SECURED	X
✓ 2113	NORTH SECURED	X, C
261	2 EAST	M, P, U, E
233	2 EAST	M, P, U, E
HANGER 1	1 EAST	M, P, U, E
270	2 EAST	M, P, U, E
272	2 EAST	M, P, U, E

M MAGNETIC PARTICLE
 P PENETRANT
 U ULTRASONIC
 E EDDY CURRENT
 C COMPUTER TOPOGRAPHY
 X X-RAY
 T TEMPER ETCH

MORNING, MAY 4, 1989

SPOKE WITH CRAIG LUSK THIS MORNING ABOUT A FEW LINGERING NDI AREA QUESTIONS. HE TOLD ME THAT DURING LAST QUARTER HIS WORK FORCE ON LANDING GEAR WAS THE SAME AS AT PRESENT (7EA GRADE DB-09). DURING THE 2 PREVIOUS QUARTERS HE HAD THREE ADDITIONAL GRADE 9 PEOPLE.

MR. LUSK GAVE THE NAMES OF NDI RELATED PEOPLE:

RCC PLANNER - LLOYD HARGIS
RCC SCHEDULER - RICHARD WHOPPLE
RCC ENGINEERING LIASON - BOB CABBELL

WE DISCUSSED EQUIPMENT NEEDS IN THE NDI AREAS. TYPICALLY EQUIPMENT IS SCHEDULED TO BE USED FOR 10-15 YEARS. THE MAGNAFLUX MACHINES PRESENTLY INSTALLED ARE 4 YEARS OLD. MR. LUSK EXPRESSED HIS FEELINGS THAT THE X-RAY EQUIPMENT IS IN GREATEST NEED OF REPLACEMENT. SEVERAL X-RAY MACHINES IN USE CANNOT BE REPAIRED IF NECESSARY BECAUSE THE PARTS ARE NOT MADE ANYMORE. CRAIG TOLD ME THAT A LIST OF EXISTING EQUIPMENT AND ~~PURCHASE~~ PURCHASE DATES MIGHT BE AVAILABLE IN WALT JOHNSTON'S OFFICE - EQUIPMENT PLANNING. (7-3893

WHEN I FIRST VISITED THE NDI AREA ON APRIL 20, 1989 ONLY PENETRANT LINE F WAS BEING USED BECAUSE ~~OF~~ THE DEVELOPER IN E LINE WAS NOT AT SPEC. ~~ON~~ ~~THIS~~ THIS TANK WAS BROUGHT UP AND ON MAY 1ST THE DEVELOPER IN LINE F WAS CONDEMNED, & THE LINE WAS SHUT DOWN.
(SEE PAGE # FOR DISCUSSION ON THIS

THE PENETRANT OPERATION THEN ONLY RAN ON LINE E.

I ASKED CRAIG IF WHEN BOTH LINES ARE UP DO THEY RUN BOTH LINES. HE ASSURED ME THAT YES BOTH LINES RUN. THIS IS IMPORTANT BECAUSE THERE IS A POTENTIAL BOTTLENECK AT THE DRYING OVEN WHEN ONLY ONE LINE RUNS BECAUSE EACH PART IS PROGRAMMED TO DRY FOR 15 MINUTES AND ONLY 3 PARTS CAN FIT IN EACH OVEN.

THE LINE F DEVELOPER WAS CONDEMNED BECAUSE A PART WAS HUNG ~~BE~~ INCORRECTLY A FILLED UP WITH PENETRANT, THEN EMULSIFIER; THIS FLUID WAS NOT EMPTIED IN THE SPRAY TANK BUT RATHER MOVED TO DEVELOPER WHEN PART WAS DIPPED IN DEVELOPER, ~~EMULSIFIER~~ EMULSIFIER ESCAPED AND CONTAMINANT TANK.

VISITED WITH JIM PATTERSON IN THE EQUIPMENT PLANNING DEPT TO OBTAIN INFORMATION ON THE AGE AND TYPE OF NDI EQUIPMENT. HE PROVIDED 3 SHEETS WHICH NOTE ACQUISITION DATES AND EXPECTED LIFE OF EACH MACHINE. THESE SHEETS WILL BE FOUND IN THE EQUIPMENT SECTION OF THIS NOTEBOOK.

I WENT TO THE PLANNING DEPARTMENT TO FIND LLOYD HARGIS WHO IS OVER NDI. MR. HARGIS IS IN TRAINING FOR THIS POSITION. HE IS REPLACING DAVID PARKER. MR. PARKER DESCRIBED THE 3 TYPES OF WORK PERFORMED BY THE MANPNA RCC; MISTR, TEMPORARY, & SYBR (DARK CARD). MISTR WORK ORDERS ARE NORMALLY PLANNED BY A "PRIME PLANNER" AND TYPICALLY HE WILL NOT REQUIRE THE ASSISTANCE OF MR. PARKER OR MR. HARGIS. THE NDI PLANNER IS AVAILABLE FOR CONSULTATION IF THE PRIMER

THE NDI PLANNER'S TIME IS INVOLVED IN TEMPORARY WORK OR DARK CARDS. OCCASIONALLY ANOTHER GOVERNMENT FACILITY WILL REQUEST SOME NON-DESTRUCTIVE TESTING AND MR. PARKER PLANS THE JOB. HE WILL DETAIL THE PROCESS, ESTAMATING THE COST OF MATERIALS AND LABOR. THIS INFORMATION WILL BE ENTERED IN THE COMPUTER AND A ~~WORK~~ SHOP ORDER RELEASED. AS EACH AIRCRAFT AGES ADDITIONAL TESTS ARE REQUIRED TO ASSURE THE LACK OF STRESS CORROSION AND CRACKS. MR. PARKER PREPARES THESE SYBER DARK CARDS WHICH EVENTUALLY ARE GIVEN THE LAVELLE HOLMES GROUP FOR ACTUAL AIRCRAFT NDI.

MONDAY, MAY 15, 1989

WENT DIRECTLY TO BUILDING 507 SO I COULD TIME THE FIRST PART THROUGH THE PENETRANT LINE. I WAS SURPRIZED TO SEE THAT THE DISASSEMBLY PEOPLE DID NOT ~~START~~ BEGIN LOADING THE OVERHEAD CRANE SYSTEM FOR CLEANING UNTIL ABOUT 8:30 AM. THE BUILDING WAS EVACUATED

FOR A 1/2 HOUR BECAUSE THE VENTILATION SYSTEM WASN'T WORKING AND FUMES WERE COLLECTING. ~~THE BUILDING WAS EVACUATED~~

THE FIRST PART THROUGH PENETRANT REQUIRED 58 MINUTES TO PROCESS. THE OPERATION PROFILE TIME WAS SET AT 63^{MINUTES} TO ACCOUNT FOR TIME REQUIRED TO DISPOSITION ANY SCRAPPED OR CRACKED ITEMS.

I SPOKE WITH MEL GALLEGOS AT 507 PENETRANT AND ASKED HIM HOW LONG A TYPICAL WHEEL REQUIRES TO EVALUATE. HE TOLD ME 1-3 MINUTES FOR A WHEEL HALF REGARDLESS IF IT IS CRACKED OR NOT. THE CONDEMNED TAGS AND FORM 103'S ARE WRITTEN AFTER PART IS REMOVED FROM OVERHEAD CRANE AT EDDY CURRENT AREA.

I HAVE BEEN TOLD THAT BOTH PENETRANT LINES RUN BETWEEN 75% (CRAIG LUSK) & 95% (QUENTIN MILLER) OF THE TIME. I HAVE TROUBLE WITH THIS STATEMENT BECAUSE DURING THE LAST 10+ WEEKS THAT I'VE BEEN OBSERVING NDI, 1 LINES HAVE RUN ONLY 3 DAYS.

APRIL 20TH - APRIL 28TH
EAST PENETRANT DEVELOPER CONDEMNED AND OUT OF SERVICE.

MAY 1ST - LAB CONDEMNS WEST PENETRANT DEVELOPER TANK BECAUSE OF EMULSIFIER CONTAMINATION.

JUNE 13TH - PALLETS OF DRY BAGGED DEVELOPER ARE DELIVERED IN BLDG #507.

JUNE 26TH - WEST DEVELOPER TANK IS PUMPED AND RECHARGED WITH NEW DEVELOPER.

JUNE 28TH - BOTH PENETRANT LINES ARE BEING USED AS DESIGNED.

JUNE 29TH - THE ANODIZE STRIP LINES ARE CONDEMNED AND ALL PENETRANT INSPECTION IS STOPPED TODAY. WHEELS ARE NOT ACCEPTABLE FOR PENETRANT.

GEORGE CAIN TOLD ME THAT THE PROCEDURE FOR CONDEMNING AND RECHARGING A TANK IS AS FOLLOWS:

- LAB PERSONNEL FROM BLDG 100 RED TAG IF OUT OF LIMITS.
- LAB INFORMS NDI NOT TO USE TANK.
- LAB NOTIFIES PUMPING TEAM IN BLDG #505 IN WRITING THAT A TANK NEEDS TO BE DUMPED AND CLEANED.

- NDI FOREMAN ORDERS NEW CHEMICALS
- BLDG # 505 PUMPER TEAM DUMPS THE TANK
- NDI PERSONNEL RE-CHARGE TANK WITH FRESH SOLUTIONS
- LAB PERSONNEL TEST AND APPROVE SOLUTION FOR USE.
- LAB MAKES PERIODIC RANDOM TESTS OF THE VARIOUS TANKS BEING USED.
- NDI PERSONNEL TEST DEVELOPER AND PENETRANT SYSTEMS DAILY FOR SENSITIVITY.

ON TUESDAY ^{JUNE 20TH} ALL OF TI PEOPLE TOOK ANDY CURRIE, STEPHANIE FLYNN, DEE MACKLIET, & GRANT CHEEVERS ON A TOUR THROUGH EACH RCC HIGHLIGHTING THE PATHS OF WHEELS, BRAKES, & STRUTS.

THE NDI AREA WAS SHUT DOWN BECAUSE OF A WATER PROBLEM. THE PENETRANT DWEL QUEUE WAS FULL AND ALL STATIONS THROUGH THE ANODIZE STRIP LINE WERE BACKED UP.

AFTER SOME INVESTIGATION I WAS TOLD BY QUENTIN MILLER THAT MAINTENANCE HAD BEEN CALLED CONCERNING SOME WATER LEAKS IN THE BASEMENT. THE LEAKS DID NOT STOP THE PRODUCTION PROCESS SO THE TROUBLE CALL WAS NOT STATED AS PRIORITY.

~~MAINTENANCE CAME TO FIX THE LEAKS LAST~~
 WHEN THIS ITEM GOT TO THE TOP OF THE LIST MAINTENANCE CAME TO BLDG # 507, TURNED OFF THE WATER, AND PROCEEDED TO FIX THE PIPES. THE PROBLEM OF LEAKING PIPES WOULD HAVE BEEN MUCH BETTER TAKEN CARE OF DURING 2ND OR 3RD SHIFTS. CHUCK CRAWFORD & I VISITED DONNA _____ UPSTAIRS IN BLDG # 274.

SHE TOLD US THAT PRIORITIES ON TROUBLE CALLS ARE SET BASED ON

- 1- SAFETY
 - 2- PRODUCTION STOPS
 - 3- OTHERS
- IN THAT ORDER.

OBSERVATIONS - THROUGHOUT THE 2 1/2 MONTHS I HAVE BEEN WATCHING THE LANDING GEAR SHOP THERE ARE A NUMBER OF ITEMS WHICH I FEEL SHOULD BE NOTED.

1. ALTHOUGH MANPNA WAS BRIEFLY OVERVIEWED WITH ONLY LANDING GEAR AREA HIGHLIGHTED, AN ADDITIONAL 3/4'S OF NDI OPERATIONS ON THIS BASE ARE AVAILABLE FOR STUDIES. I HAVE SEEN SOME AREAS IN X-RAY THAT DO NOT SEEM EFFICIENT THAT ARE NOT ADDRESSED.
2. I TRIED TO OBTAIN ACTUAL NDI PROCESSING TIMES FROM PERSONNEL INTERVIEWS BUT BUT UNSUCCESSFUL BECAUSE THE PEOPLE WOULD NOT COMMIT TO FIGURE OR EVEN A MAX/MIN RANGE. BECAUSE OF SO MANY PROCESS VARIABLES AND VARIETY OF HARDWARE THE PEOPLE WERE RELUCTANT TO DISCUSS TIMES. ON BRAKES & STRUTS THE OCCURANCE FACTORS AND PROCESSING TIMES WERE OBTAINED FROM MRP II LABOR STANDARDS ON FILE IN THE ENGINEERING PLANNING AREA OF BLDG # 507. LARRY PRICE & NED MONROE PROVIDED THIS INFORMATION.

3. IN MOST CASES I THINK THE FOREMAN WOULD TAKE A STRONGER LEADERSHIP ROLE EXCEPT THAT THE LABOR UNION MAKES IT SO DIFFICULT TO DISCIPLINE AN EMPLOYEE THAT IT IS NOT WORTH THE TROUBLE REQUIRED. THE GREATEST AREA OF CONCERN IN MANPNA IS THE FACT THAT A FEW OF THE PERSONEL ARE NOT USED TO A FULL DAY OF WORK. I DON'T BELIEVE ANY MORE MANPOWER OR EQUIPMENT SHOULD BE ACQUIRED, BUT MERELY MORE PRODUCTIVE OUTPUT FROM ALL EMPLOYEES. THIS STATEMENT RISES BECAUSE OF THE ACTIONS OF A FEW.

4. IN OUR ASSOCIATIONS WITH ENGINEERS AND PRODUCTION PEOPLE WE DON'T FIND THE CLOSE RELATIONSHIP THAT SHOULD EXIST AND WHICH DOES EXIST IN PRIVATE INDUSTRY. ENGINEERS FROM ALL GROUPS (FACILITY, PROCESS, PLANN) NEED TO SPEND MUCH MORE TIME ON THE FLOOR WITH THE PRODUCTION PEOPLE. THE BEST IDEAS FOR IMPROVEMENT WILL BE PASSED FROM WORKERS TO ENGINEERS IF THE RELATIONSHIP EXISTS.

IT APPEARS THAT EITHER THE PRODUCTION FOREMEN HAVE REFUSED TO ALLOW THE ENGINEERS IN THE AREA OR THE ENGINEERS ARE UNCOMFORTABLE GOING DOWN TO THE FLOOR.

UPPER MANAGEMENT IN MAN, MANE, & MANP WILL BE ULTIMATELY RESPONSIBLE IF THIS AVENUE OF COMMUNICATION IS BROADENED.

NOTE: THIS ALC HAS ENGINEERS CAPABLE OF SOLVING NEARLY ANY PROBLEM THEY ENCOUNTER. THE MDMSC TI PROGRAM WOULD NOT BE NECESSARY IF THE ALC ENGINEERS WOULD SPEND MORE TIME ON THE PRODUCTION FLOOR.

5. IT SHOULD BE NOTED THAT THE #958 WORK CONTROL DOCUMENTS FOR THE MAJORITY OF THE BRAKE HARDWARE ARE BEING THROWN IN THE TRASH IN ~~THE~~ MANPGP PRIOR TO COMPLETION OF THE ASSEMBLY. ANY ACTUAL WCD HISTORY THIS TI TEAM WAS ABLE TO GATHER WAS VERY LIMITED. IT SEEMS THAT PRODUCT TRACABILITY WOULD BE REQUIRED AT LEAST UNTIL THE FIRST SUCCESS LANDING WITH REPAIRED HARDWARE.

6. IT SHOULD BE THE GOAL OF THE PLANNING DEPARTMENT TO SELECT AN OPTIMUM FORMAT FOR WCD'S AND ALL PLANNERS USE IT, AT PRESENT THE EMPLOYEES MUST USE A MEASURE OF JUDGEMENT ON EACH PART BECAUSE THE WCD'S DO NOT TELL EVERYTHING. ~~AT~~ AT PRESENT THE KC-135 & C-130 BRAKE PLANNING DOES NOT USE A SEPERATE ASSEMBLY WCD WHILE THE OTHER 4 AIRCRAFT WE PROFILED DO.

7. LARRY PRICE TOLD ME THAT APPROX. 4 YEARS AGO HE HAD A TEAM OF PEOPLE COLLECTING WCD HISTORY SIMILAR TO MCD. DOUG. TI'S COLLECTION BUT THIS PRACTICE WAS TERMINATED BECAUSE OF AIR FORCE BUDGET CUTS. THE MRP II OCCURANCE FACTORS WE HAVE USED ARE 4 YEAR OLD. I ATTEMPTED TO ~~GET~~ OBTAIN OCCURANCE FACTOR INFO FROM ROGER MURRAY BUT HE HAS TOLD ME THAT HE DOES HAVE IT.

8. FINALLY I WOULD COMMEND THE
OGDEN ALC PEOPLE NAMELY
ANDY CURRIE, STEPHANIE FLYNN, DEE MACKLIET,
& GRANT CHEEVERS [REDACTED] FOR THE SUPPORT
GIVEN THE TI PROGRAM. IT IS
APPARENT THAT THIS PROJECT IS HIGH
PRIORITY IN THEIR EYES.
MANY OTHERS IN THE VARIOUS DEPARTMENTS
ON THE BASE HAVE HELPED [REDACTED]
TREMENDOUSLY.

Operation (Tank No.)	Chemicals	Operating Limit (oz/gal)	Optimum Concentration (oz/gal)	Testing Frequency
25. Woods Nickel (SI-9)	Nickel Hydrochloric Acid	7 - 9 11 - 19	8 14	Once/month Once/month
26. Nital Etch (hydrochloric acid) (CR-69)	Hydrochloric Acid	4 - 6%	5%	Once/month
27. Nital Etch (nitric acid) (CR-71)	Nitric Acid	3 - 5%	4%	Once/month
28. Nital Etch (neutralizer) (CR-67)	pH Sodium Carbonate	10 minimum 4 - 6	5	Once/month Once/month
29. Nitric Acid (50% V/V) (CR-48)	Nitric Acid	55 - 82	62	Once/month
30. Passivate (AN-30, 17)	Sodium Dichromate (2H ₂ O) Nitric Acid	2.7 - 4.1 27 - 34	3.4 30.5	Once/2 weeks Once/2 weeks
31. Phosphatize Manganese (AN-53)	Total Acid (TA) TA/FA Ratio Iron	16 - 21 5.5 - 7.0 0.27 - 0.4	19.5 6.0 0.3	As required As required As required
32. Red Dye (AN-59)	pH	5 - 7	6	As required
33. Rust Stripper (CR-19, 61)	Rust Stripper	25 - 32	28	Once/month
34. Silver Plate (SI-12)	Potassium Hydroxide Silver Cyanide Free Potassium Cyanide Potassium Carbonate	0 - 4 10 - 15 7 - 12 2 - 15	1 13 10 2	Once/month Once/month Once/month Once/year

Sheet Metal

**Operation
(Tank No.)**

1. Chemical Milling
2. Spot Weld
3. FPL Etchant
4. Turco 4215

Chemicals

- Turco Form 9H
Aluminum
- Smut-GO I
- Sulfuric Acid
Sodium Dichromate
- Turco 4215

**Operating
Limit (oz/gal)**

- 12 - 16
2 - 8
- 8 - 16
- 38.5 - 41.5
4.1 - 12
- 4 - 8

**Optimum
Concentration
(oz/gal)**

- 14
- 11
- 42
4.5
- 6

**Testing
Frequency**

- As required
As required
- As required
- As required
As required
- As necessary to
maintain control.
Change when total
additions equal
initial makeup.

Vapor Degreasers

1. 1,1,1-trichloroethane
Bldg 505

Bldg 507

Bldg 510

Bldg 265

Bldg 511

2. Perchloroethylene

Bldg 507

Acid Acceptance

Acid Acceptance

Acid Acceptance

Acid Acceptance

Acid Acceptance

Acid Acceptance

5 ml max

5 ml max

5 ml max

5 ml max

5 ml max

pH-7 min

Once/week

Once/week

Once/week

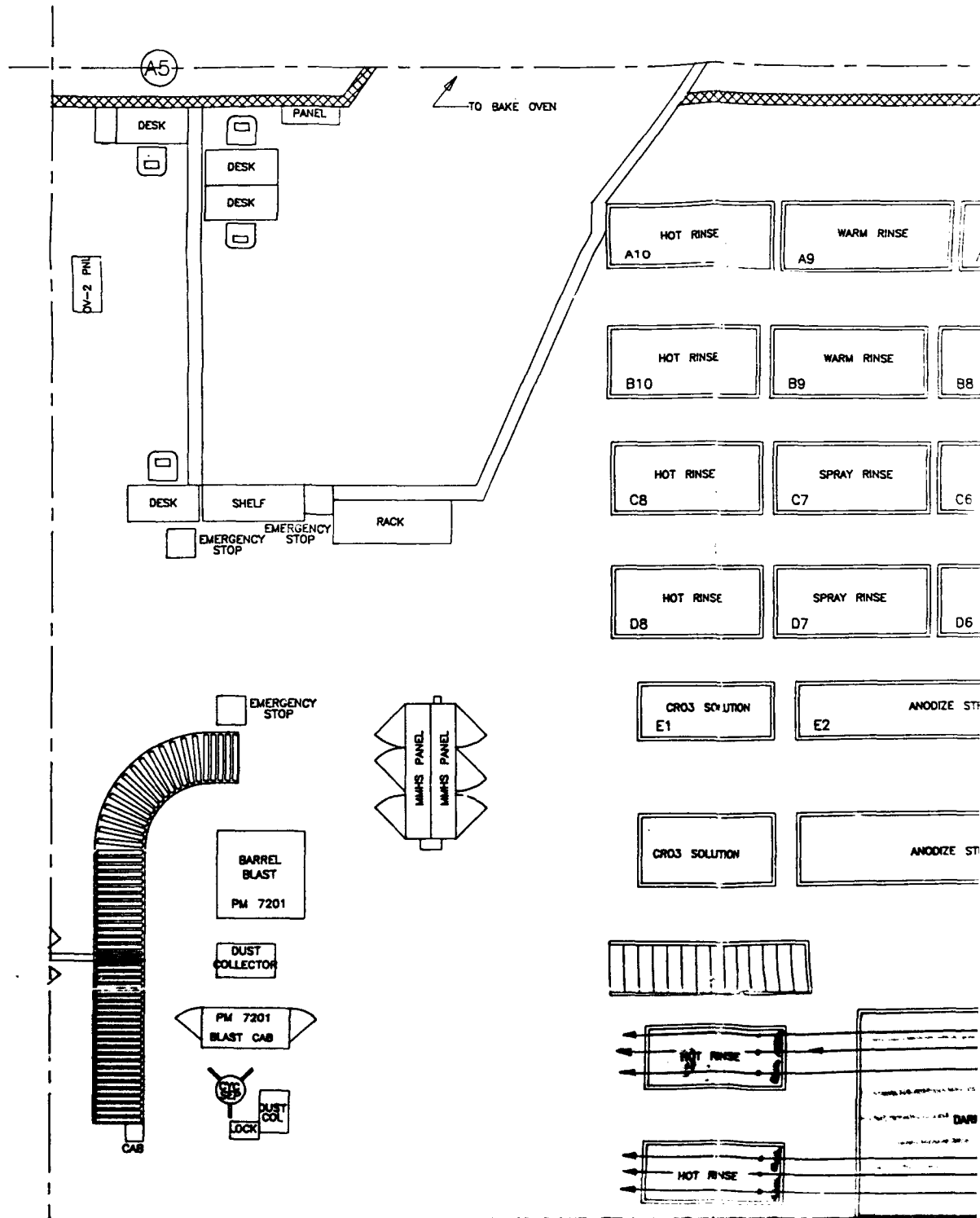
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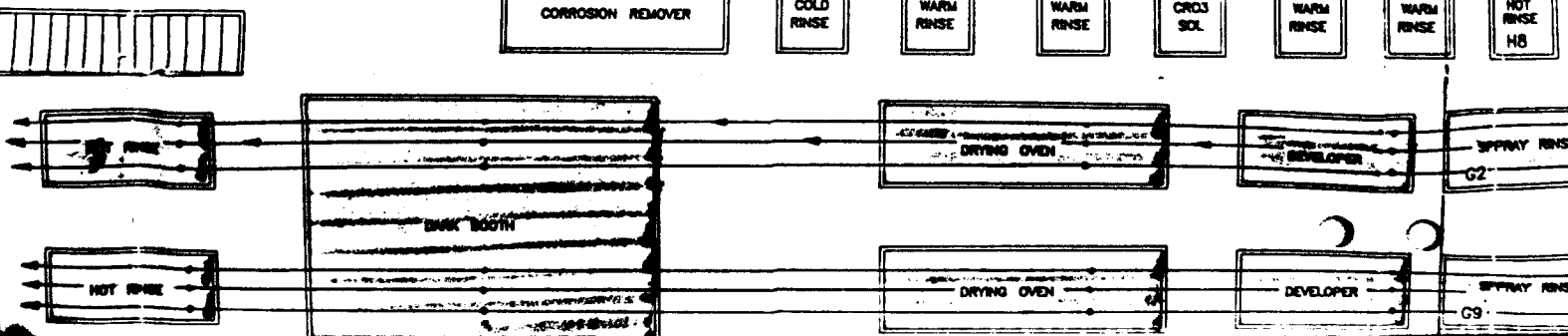
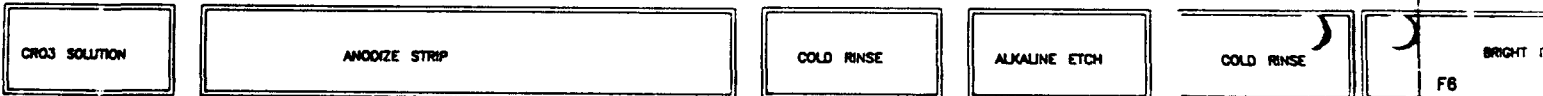
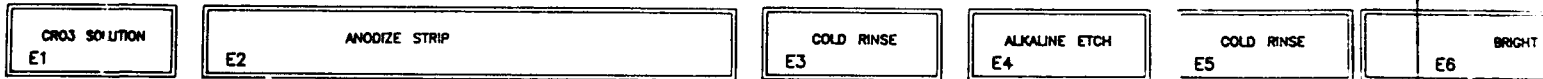
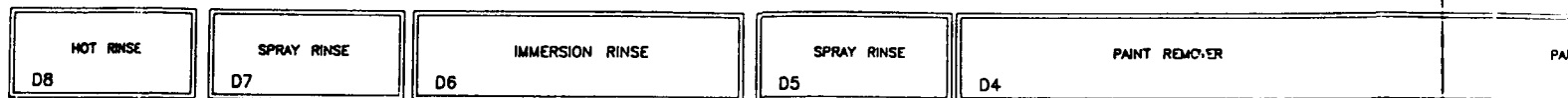
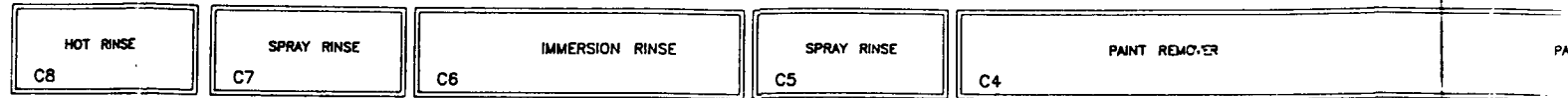
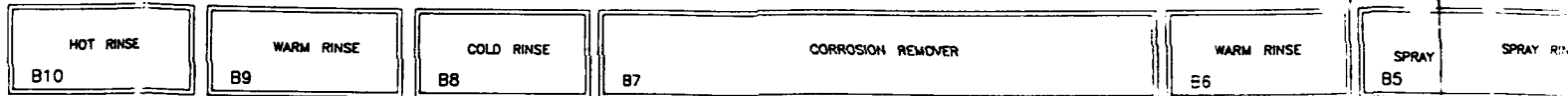
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BUILDING 507 - EAST CENTER
NON-DESTRUCTIVE
INSPECTION
AREAS



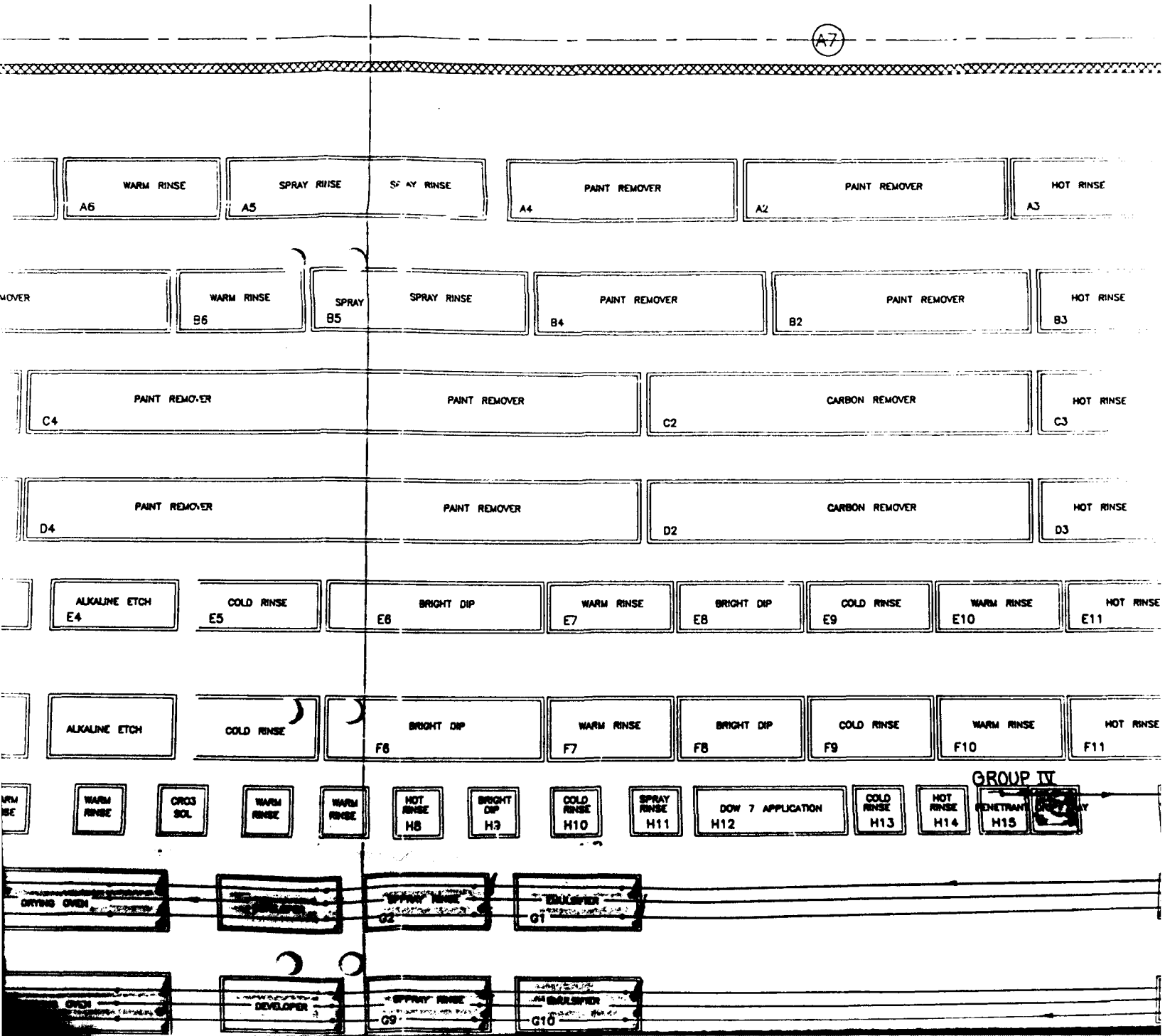
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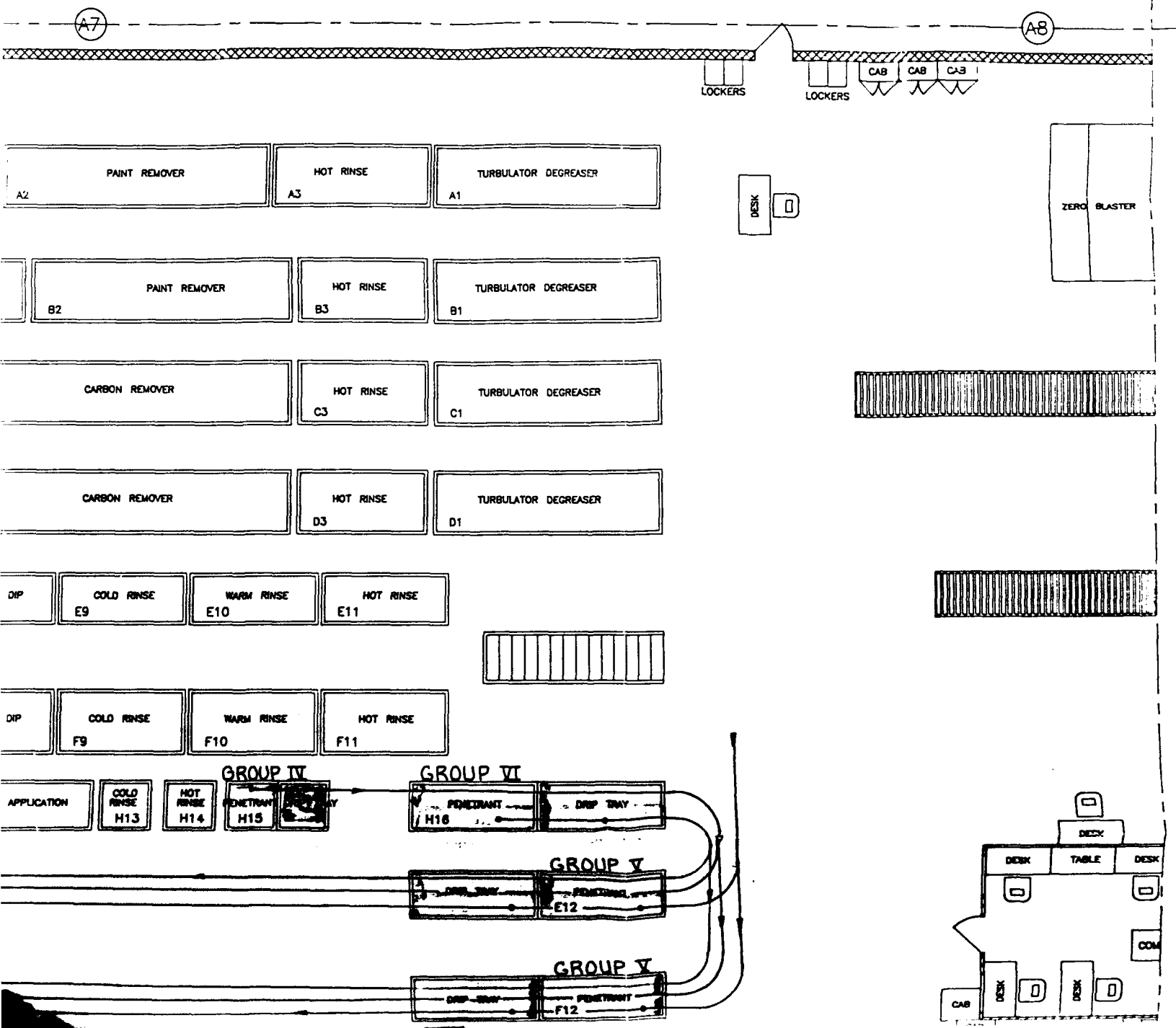


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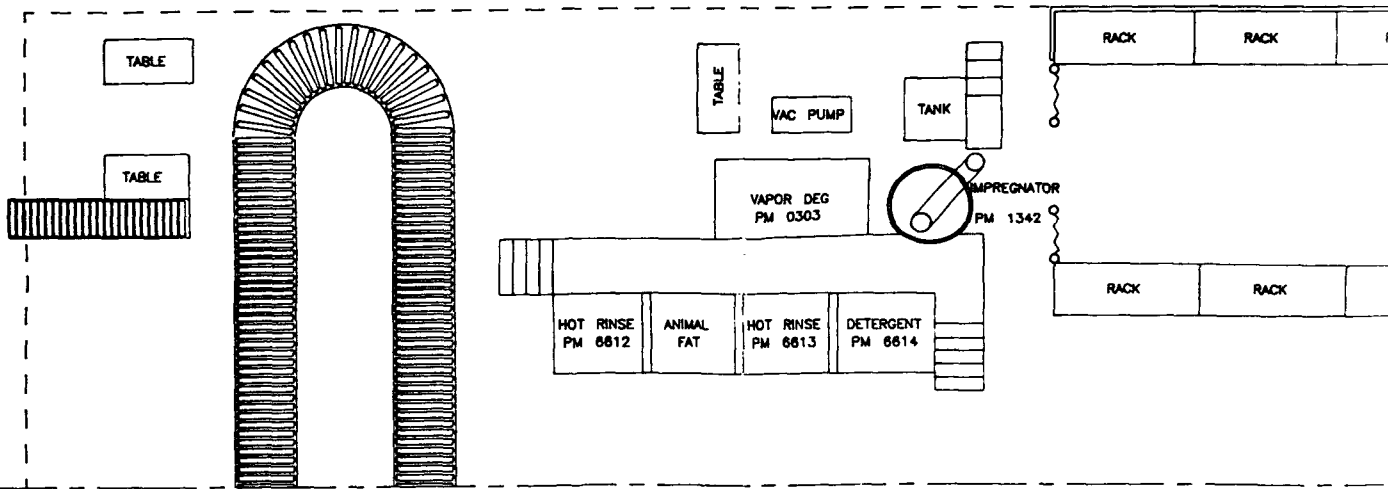
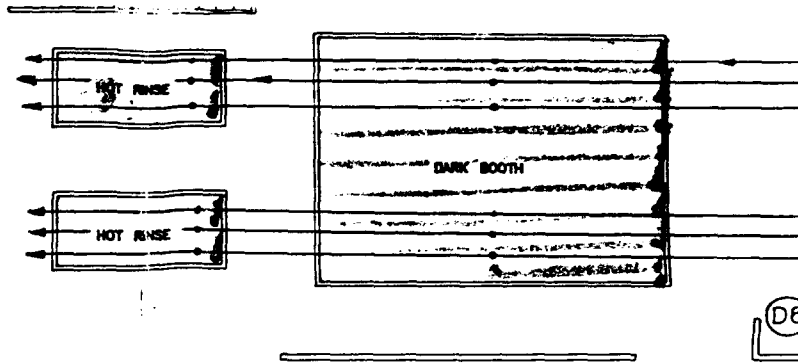




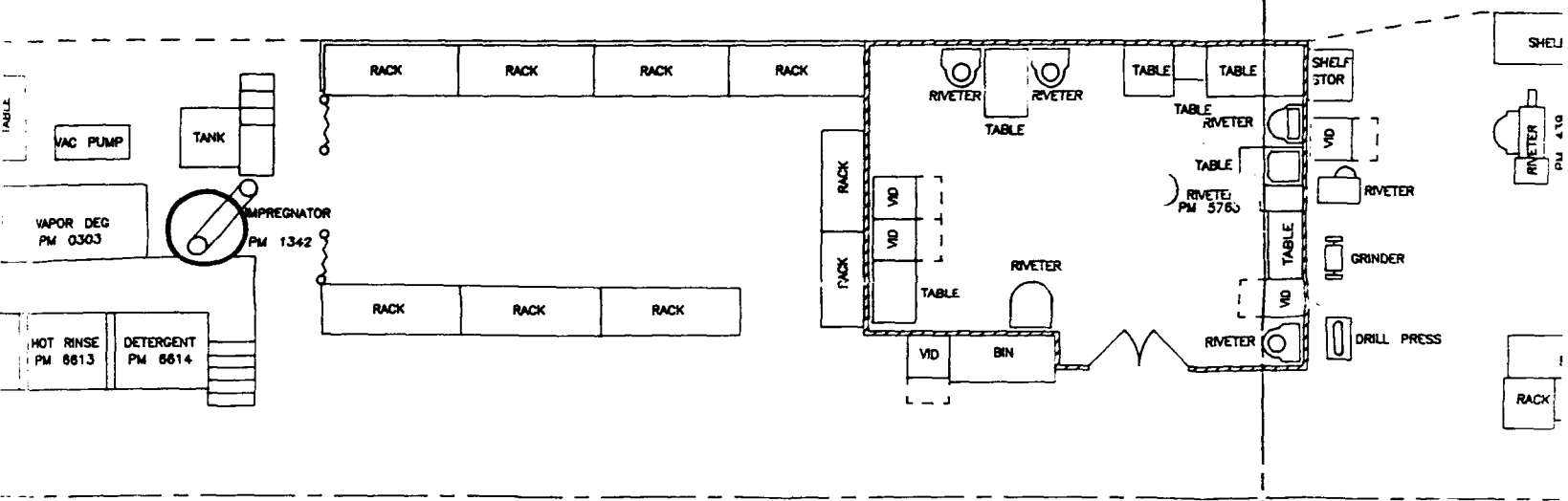
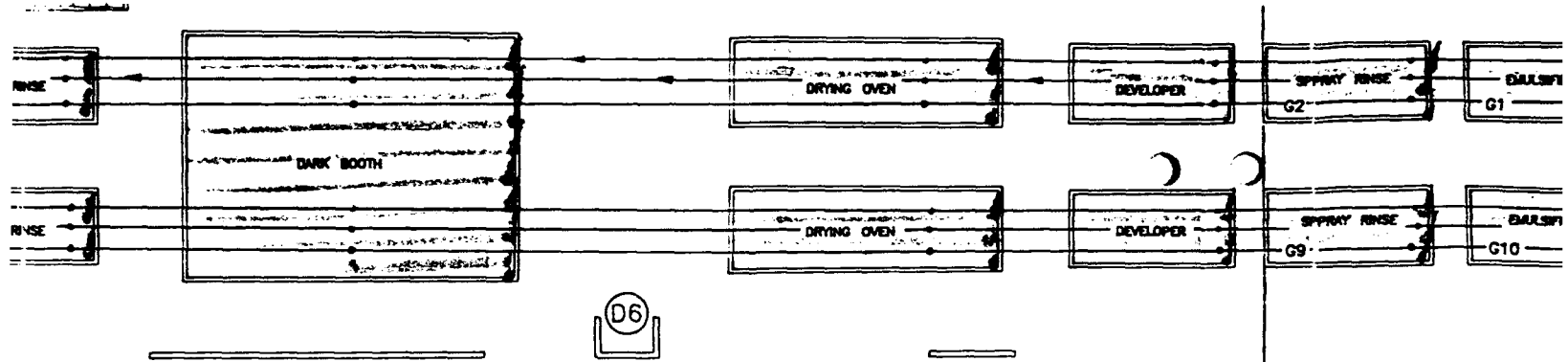
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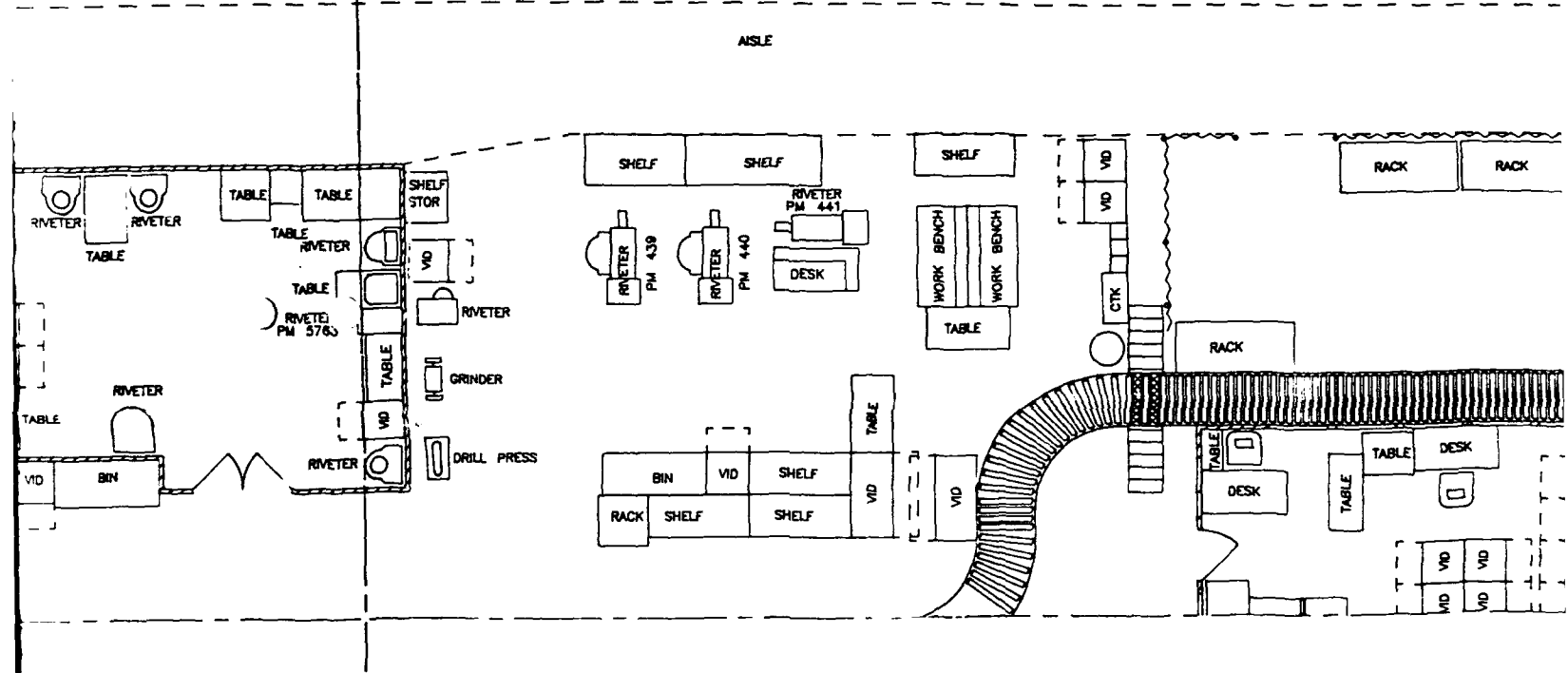
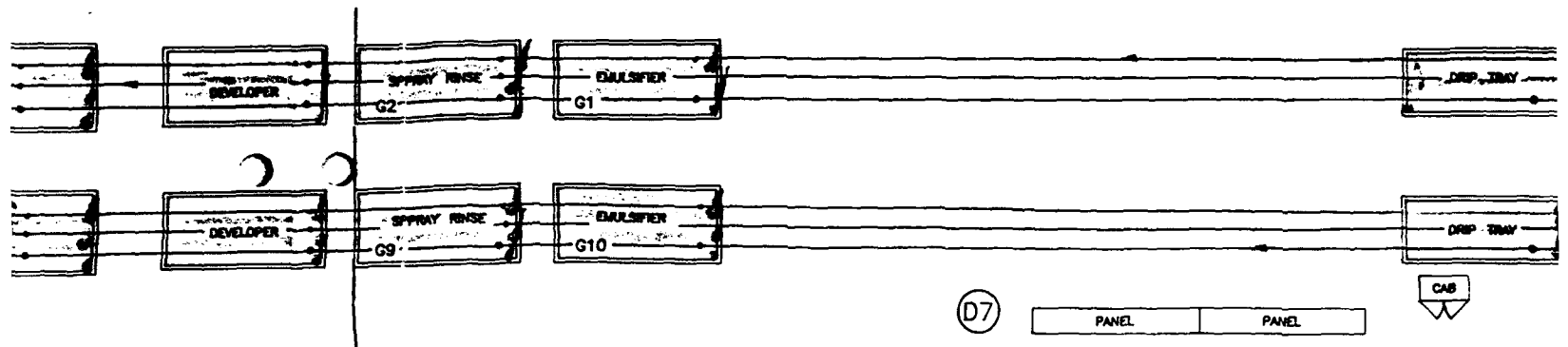
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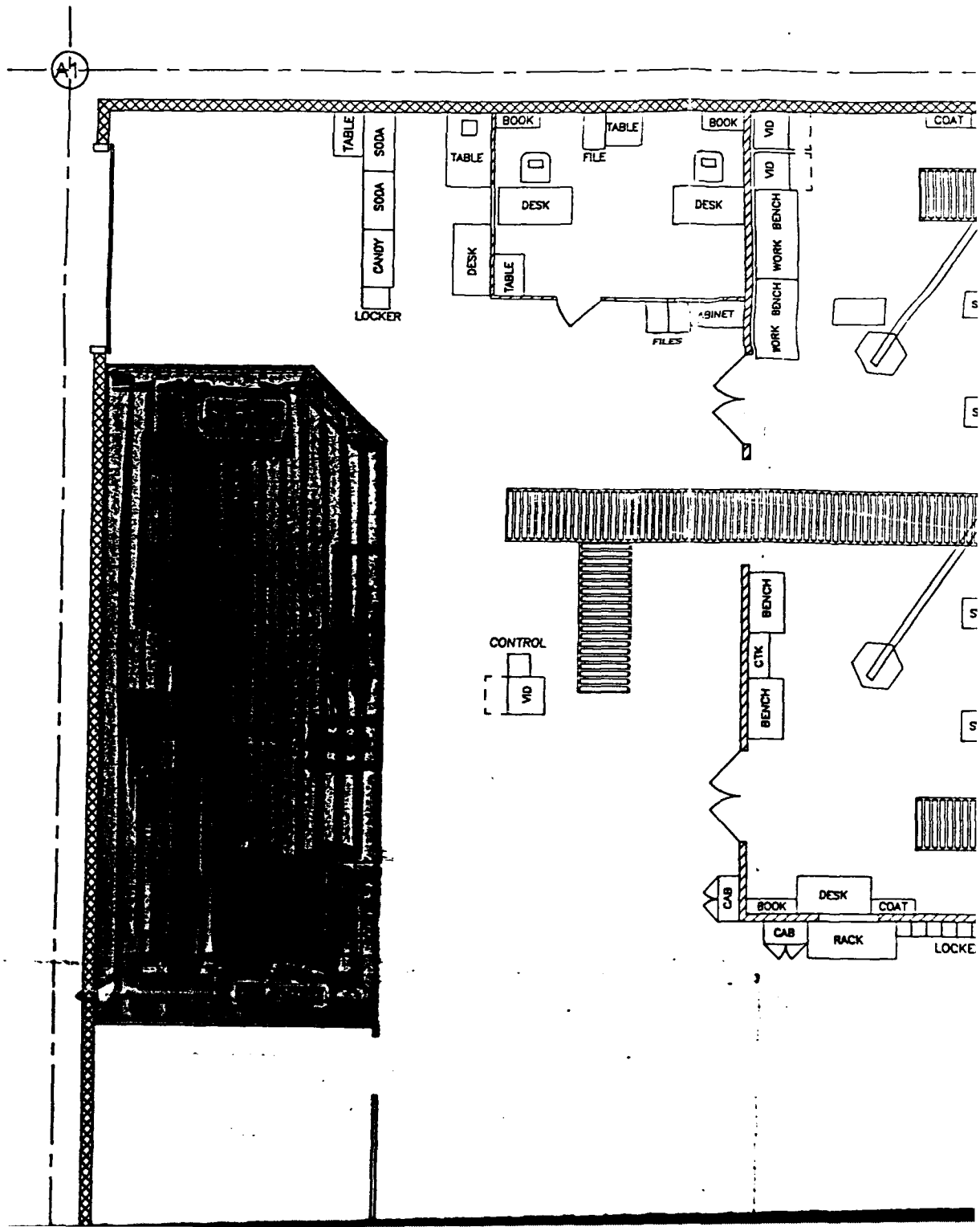
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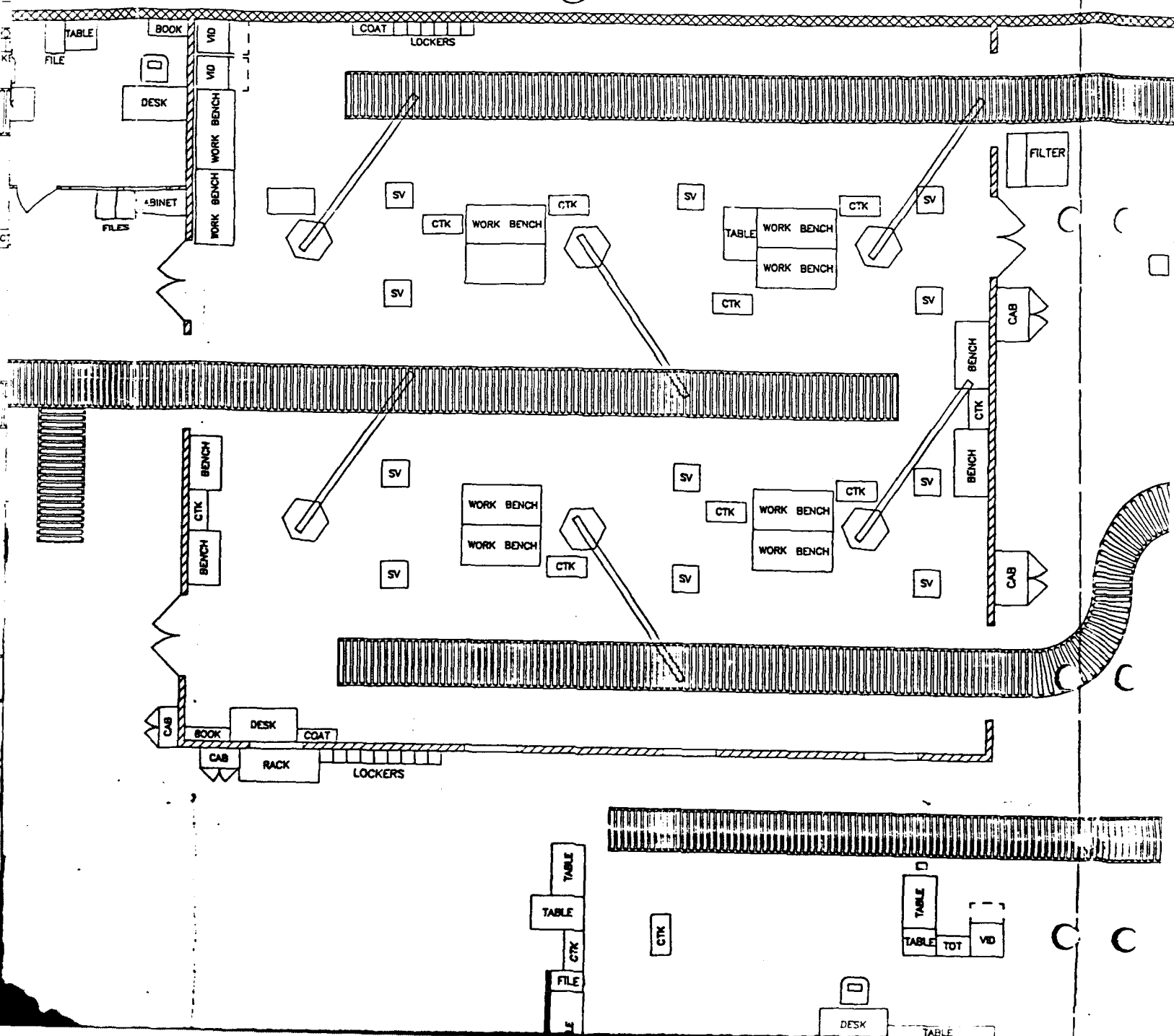
BUILDING 507 - NORTH EAST
NON-DESTRUCTIVE
INSPECTION
AREAS



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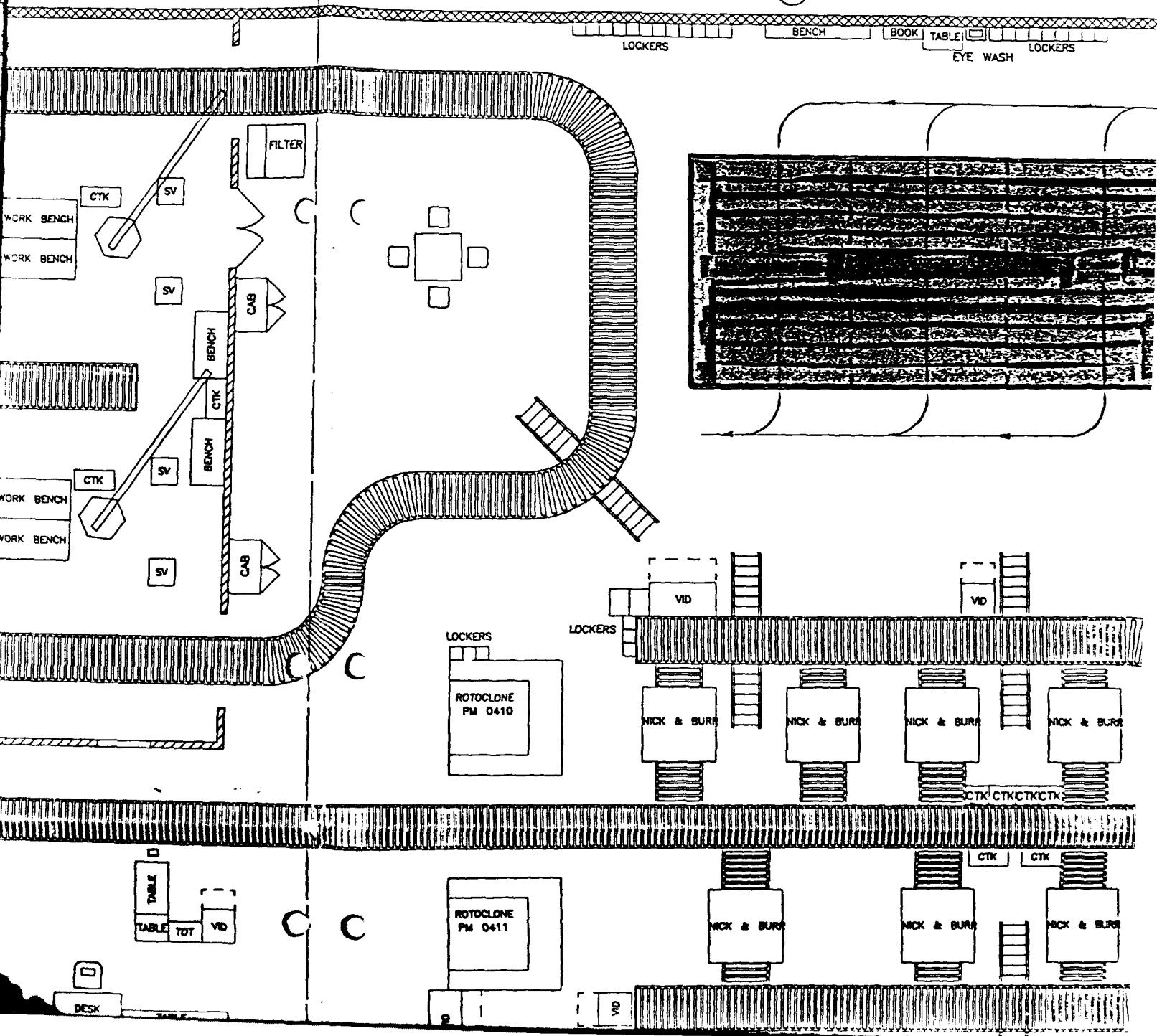
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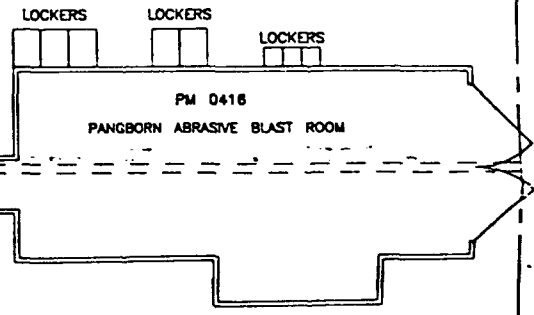
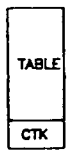
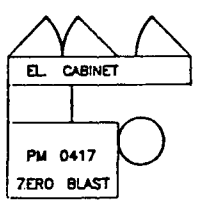
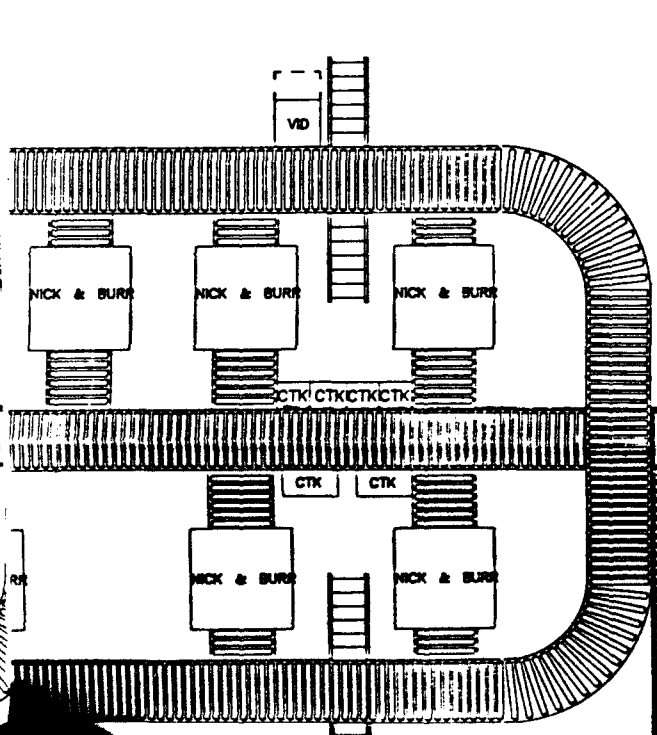
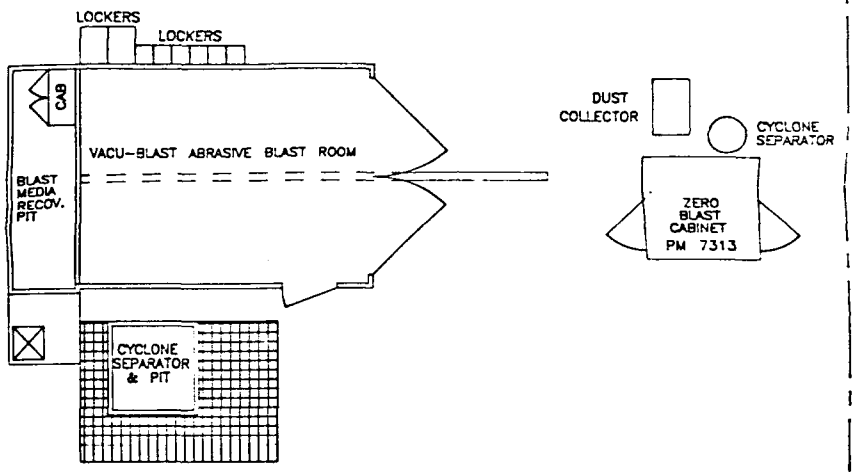
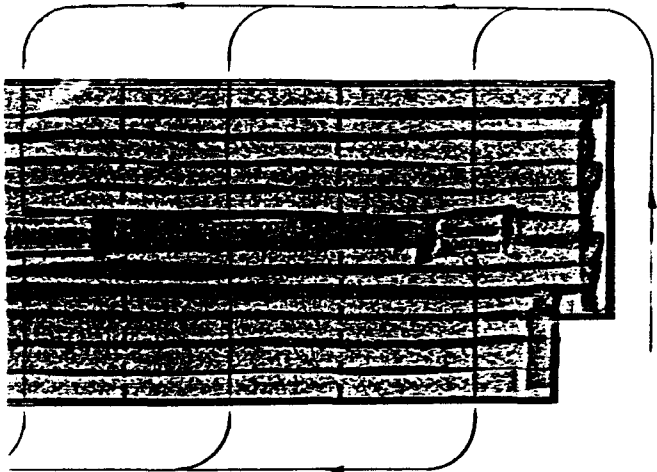
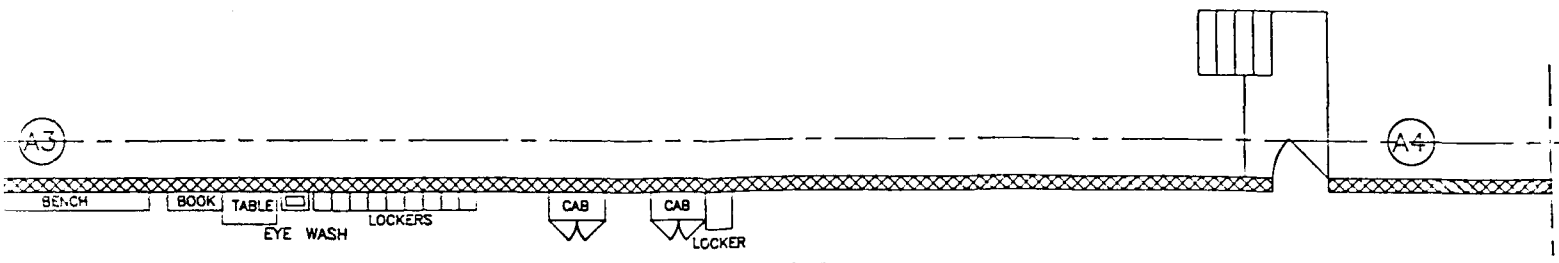


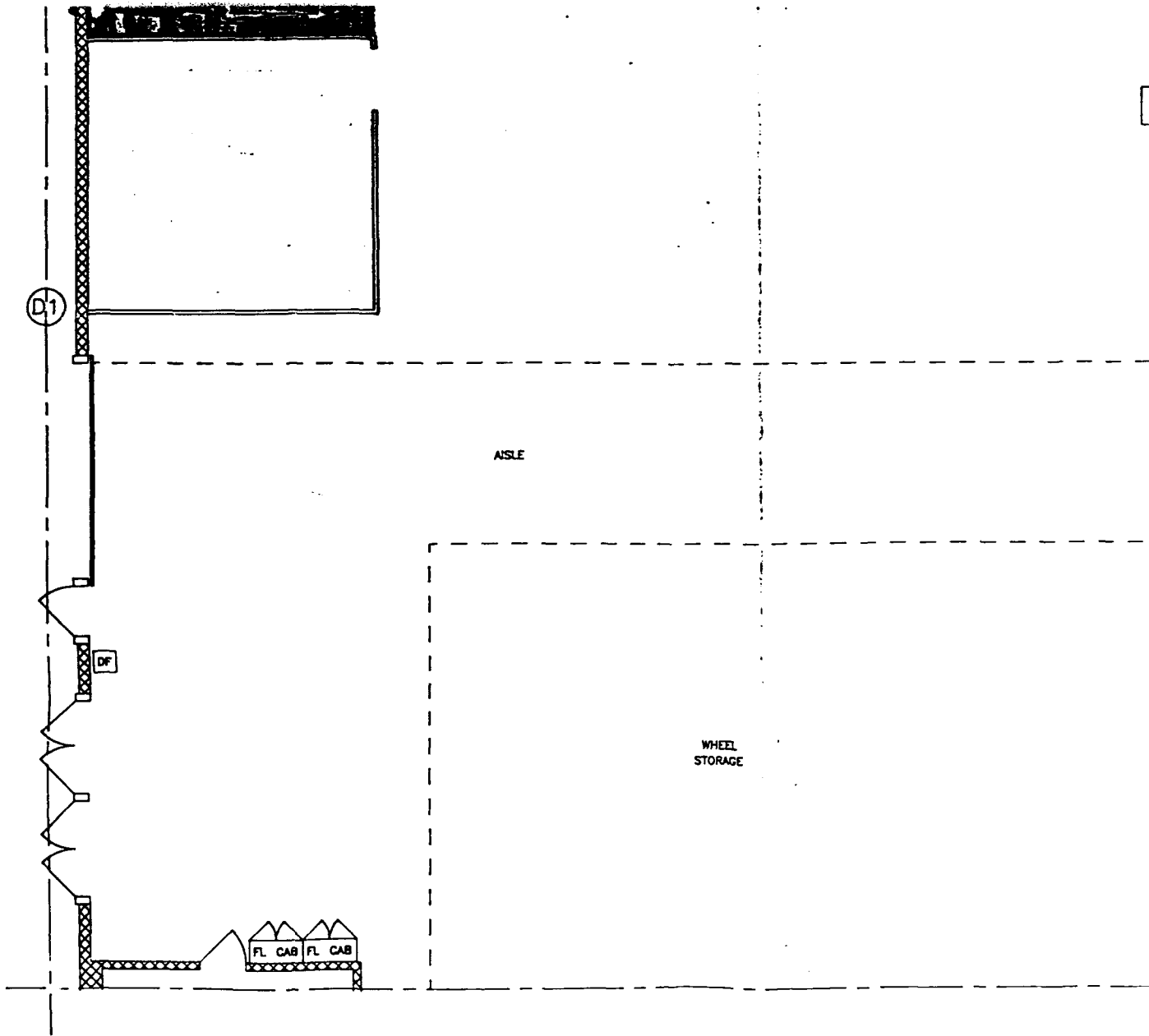
(3)

A3

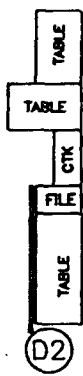


66

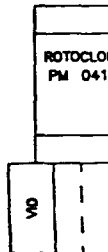
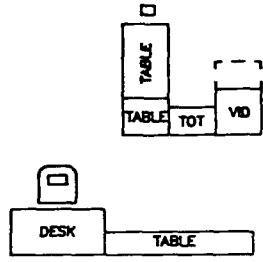




(5)



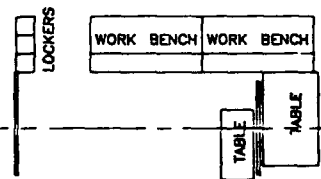
CTK



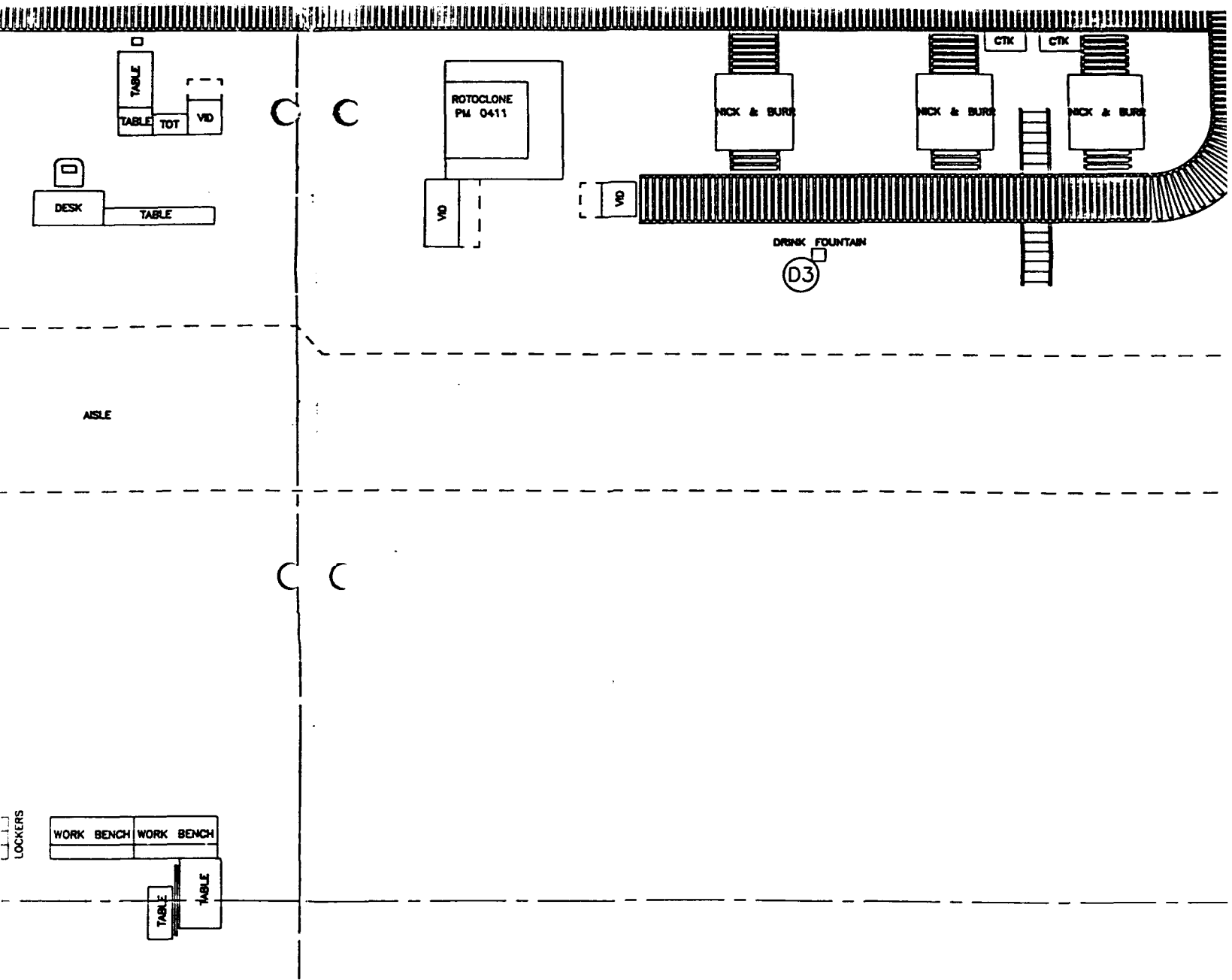
aisle

WHEEL STORAGE

WHEEL STORAGE

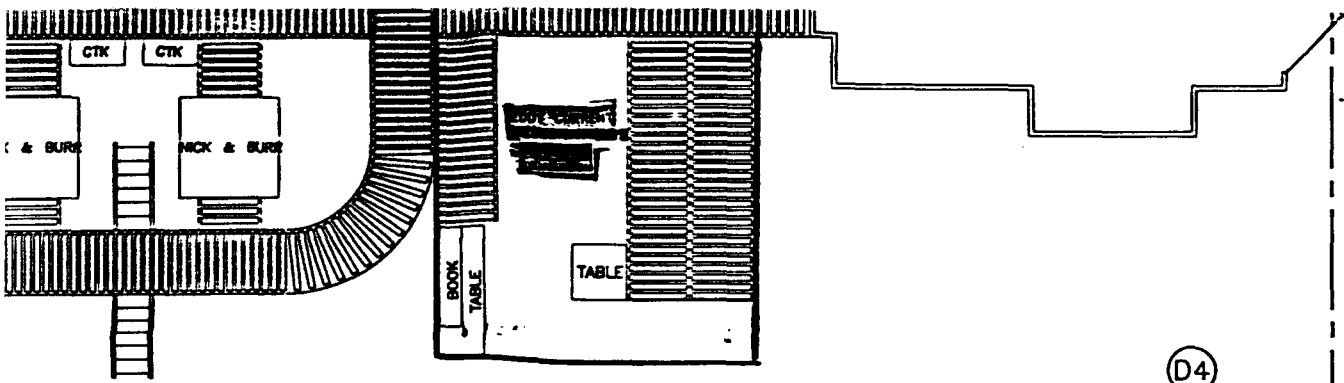


(6)



aisle

(77)

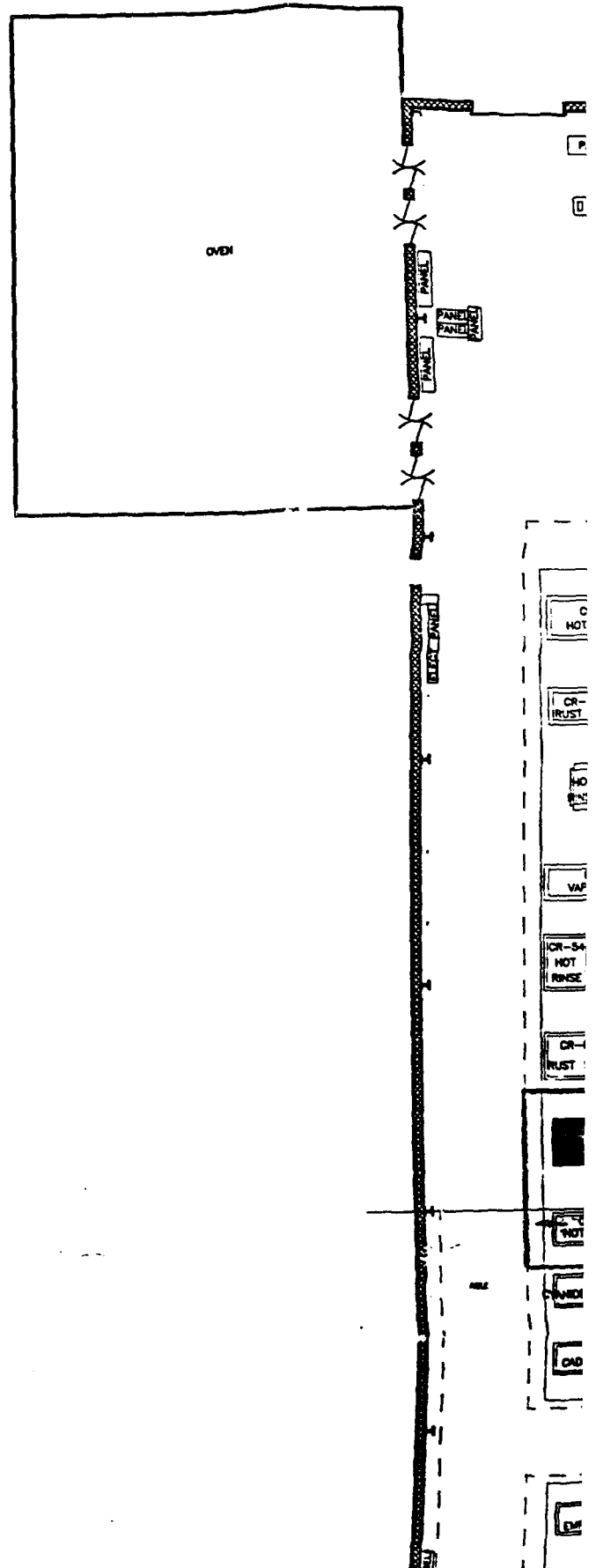


D4

(8)

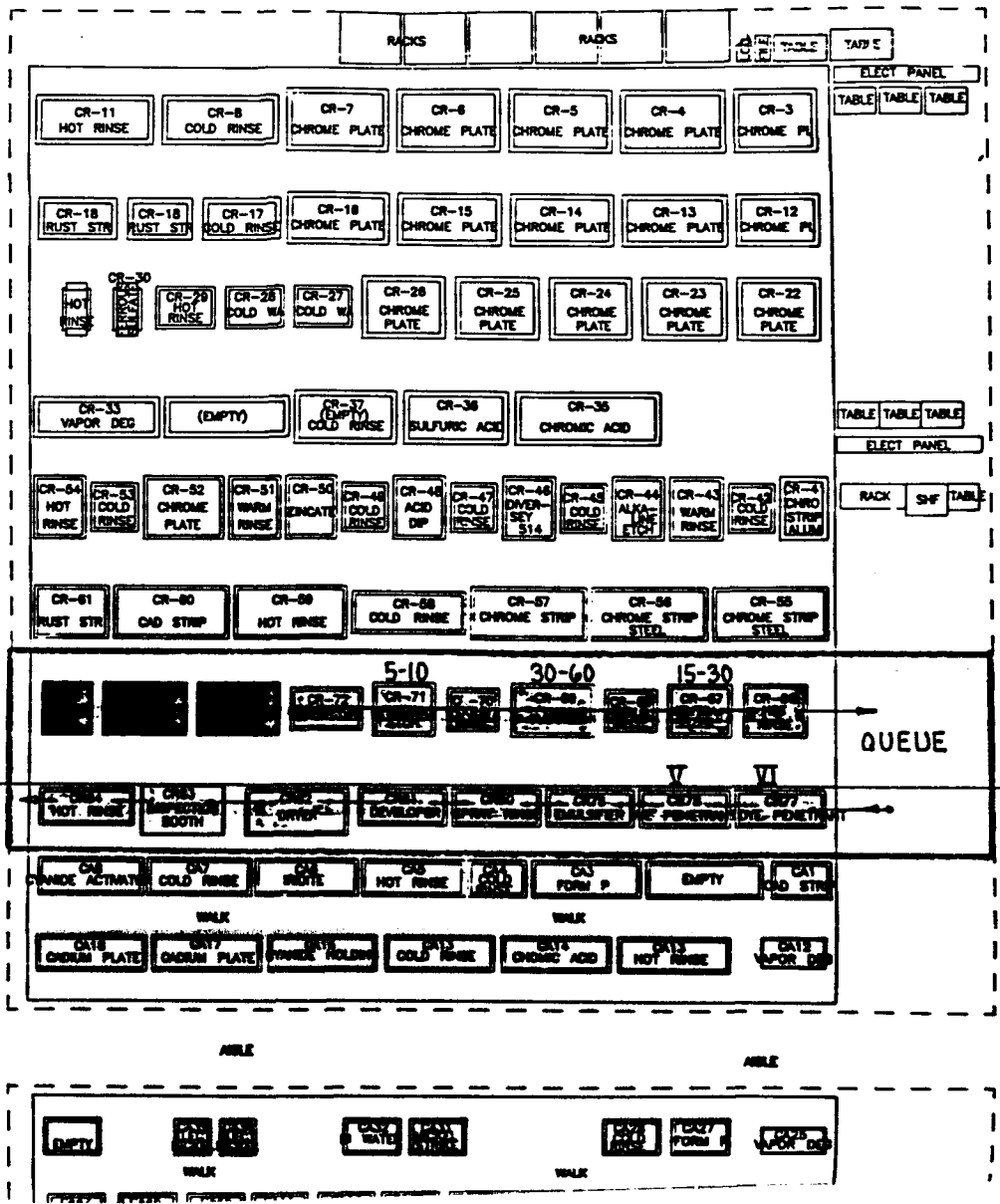
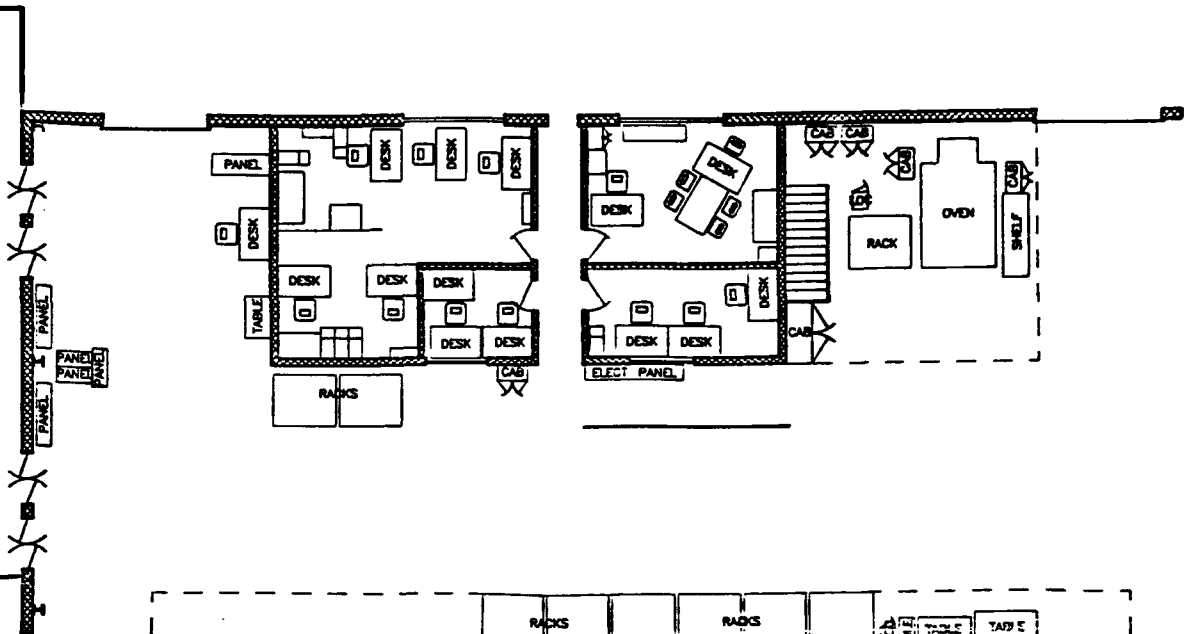
(A)

BUILDING 505
NON-DESTRUCTIVE
INSPECTION
AREAS

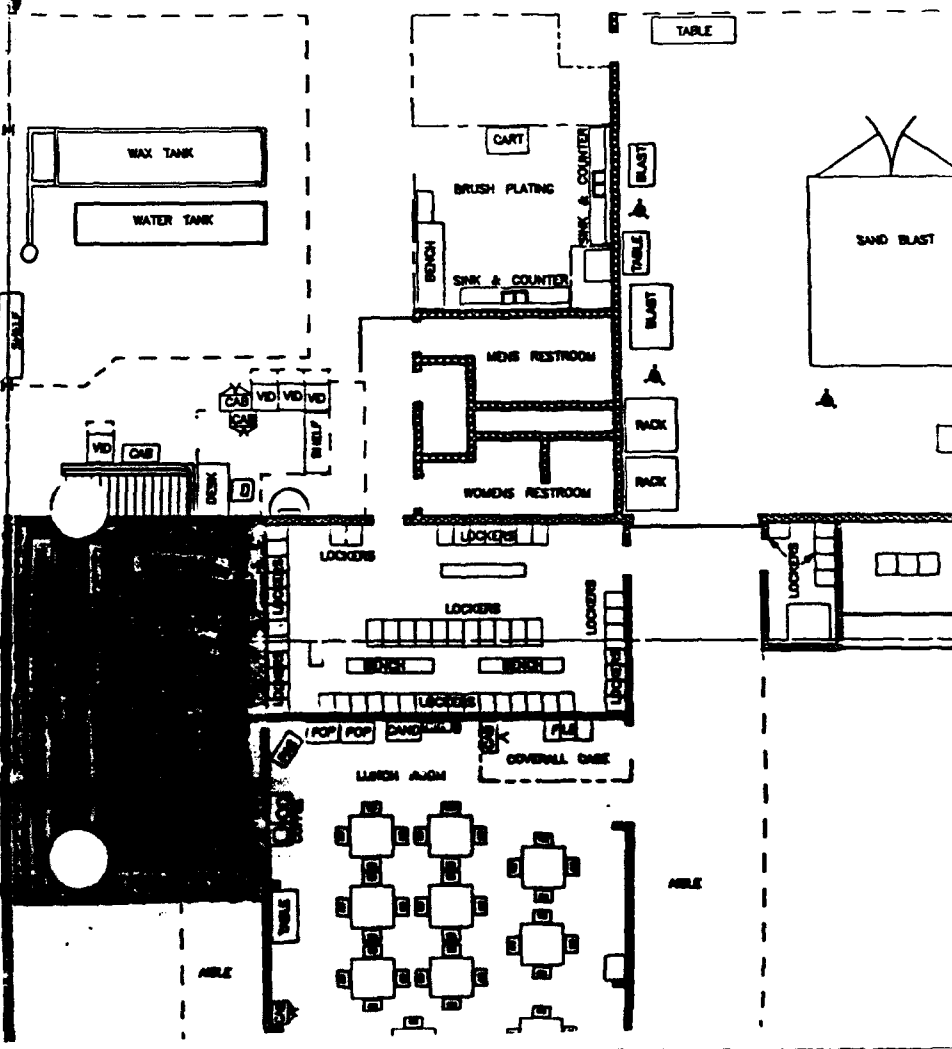
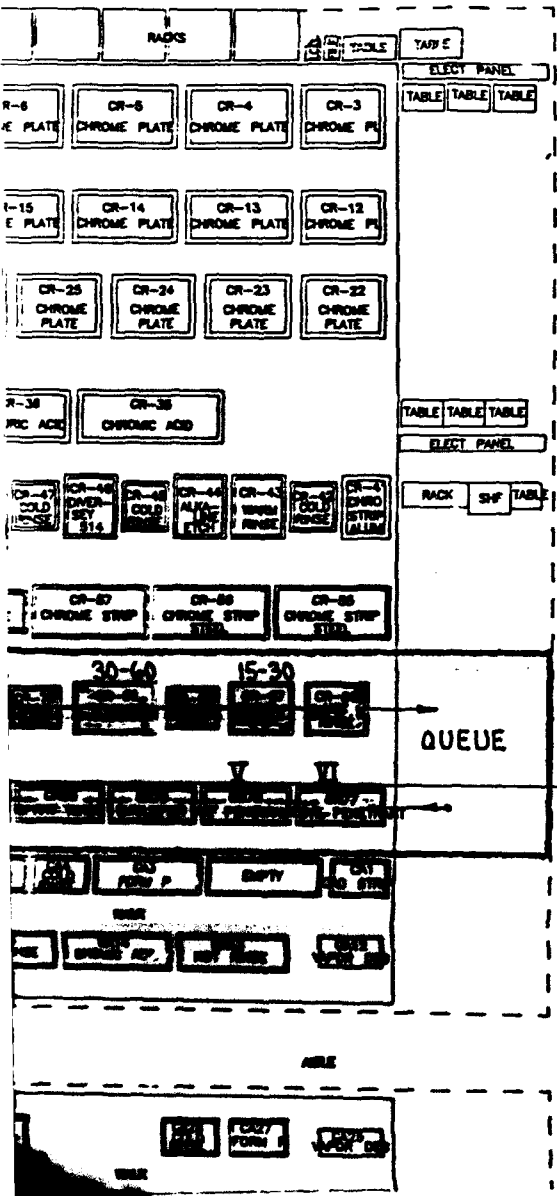
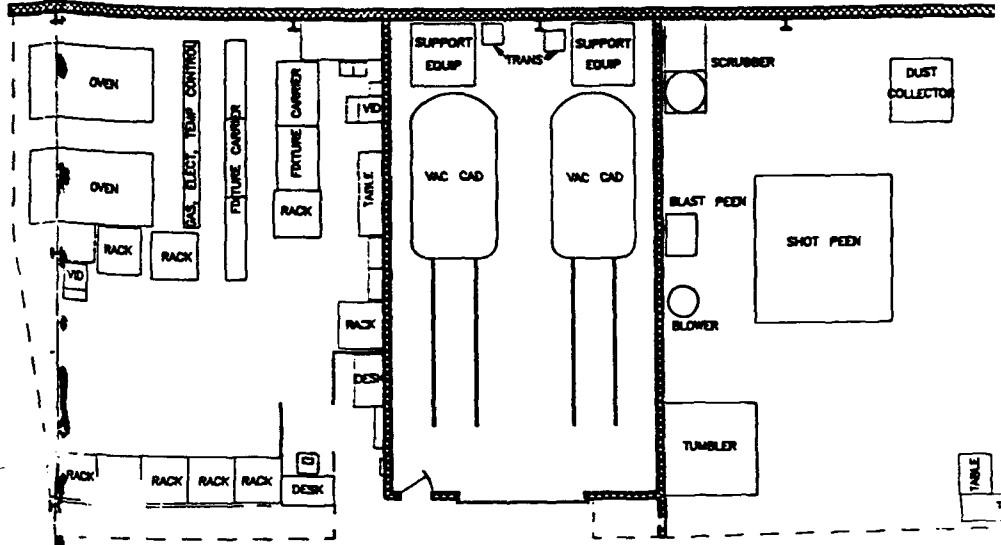
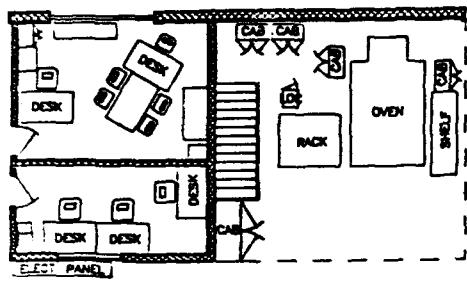


(b)

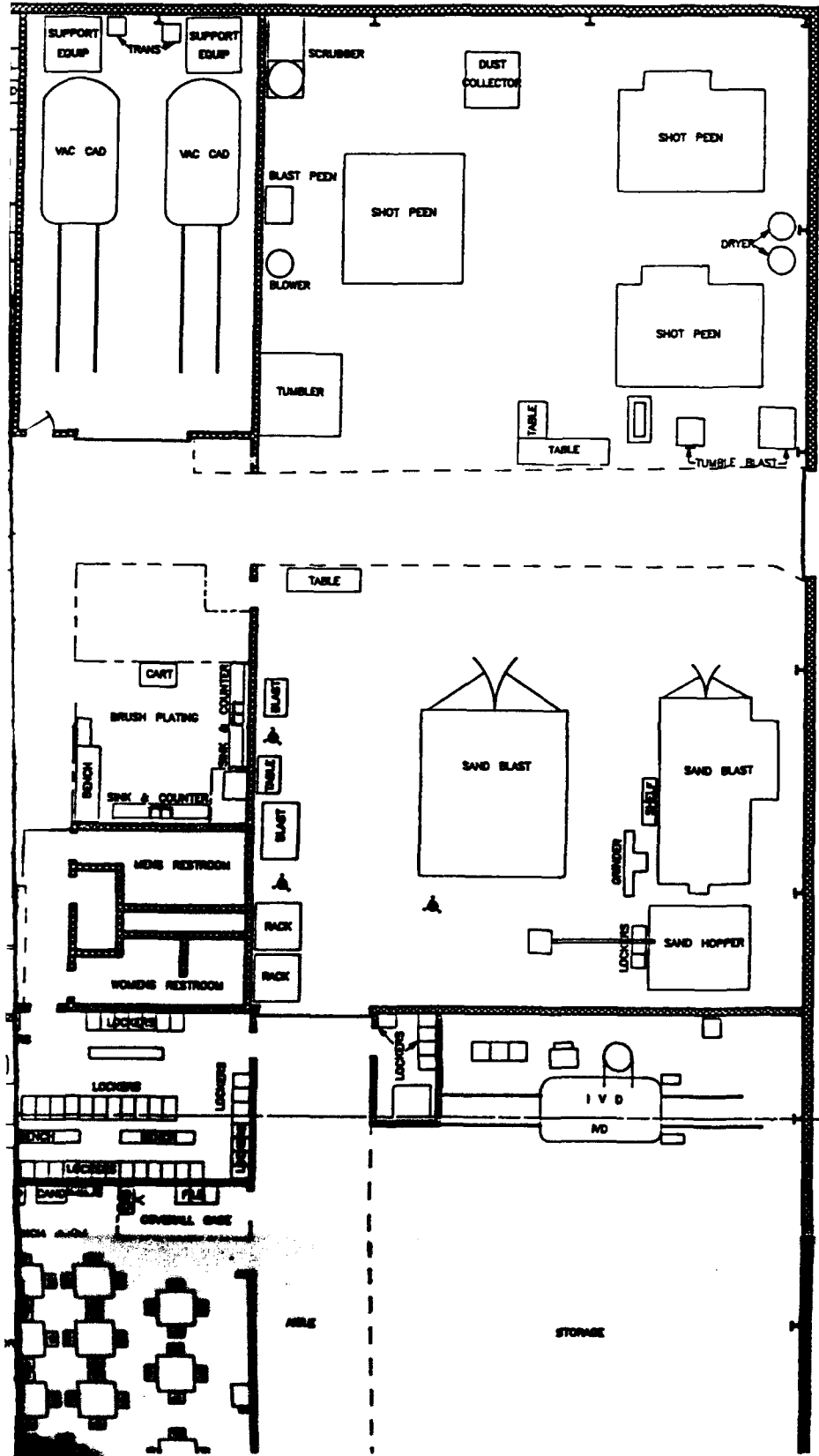
OVEN



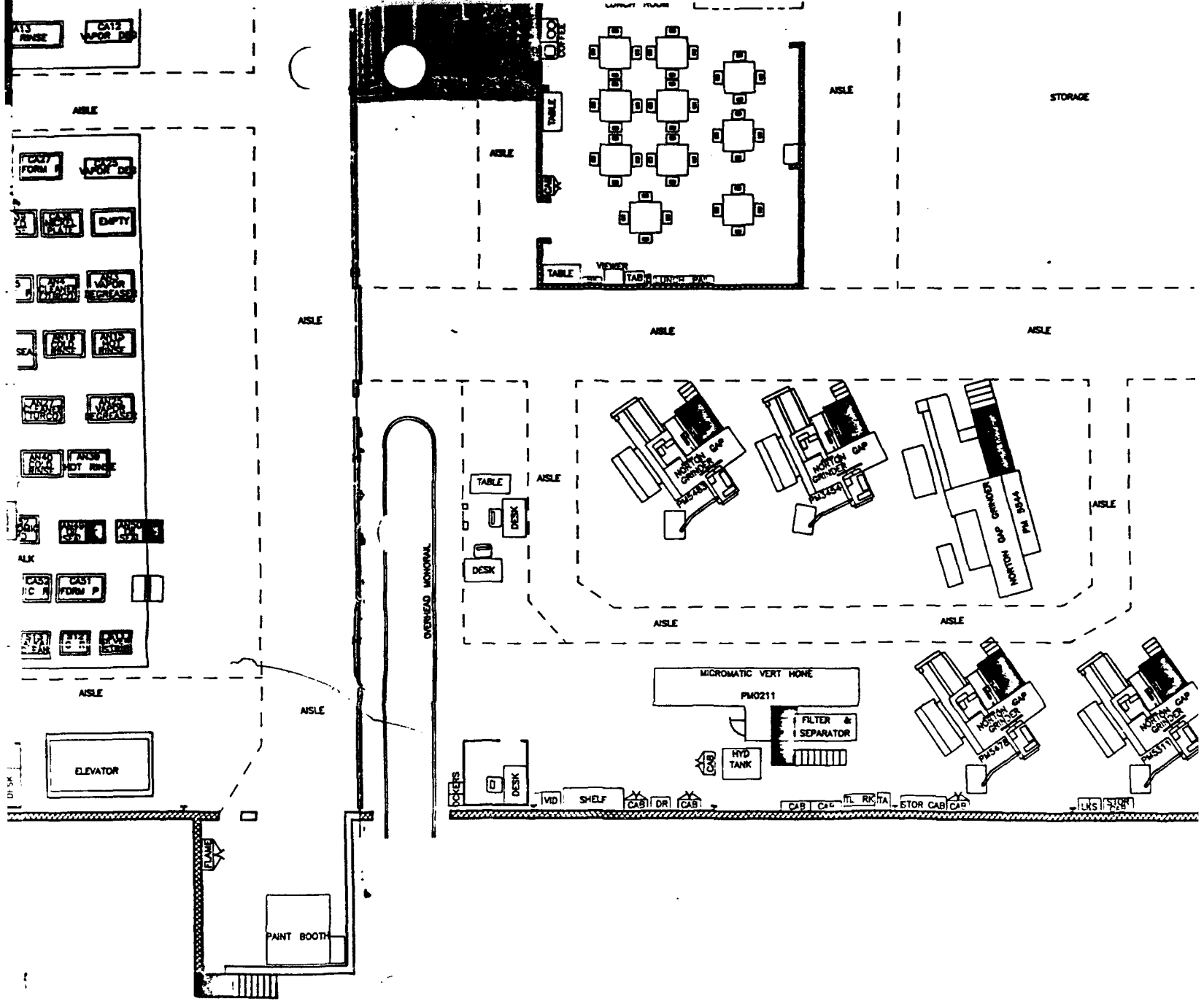
(C)



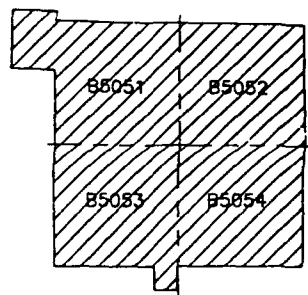
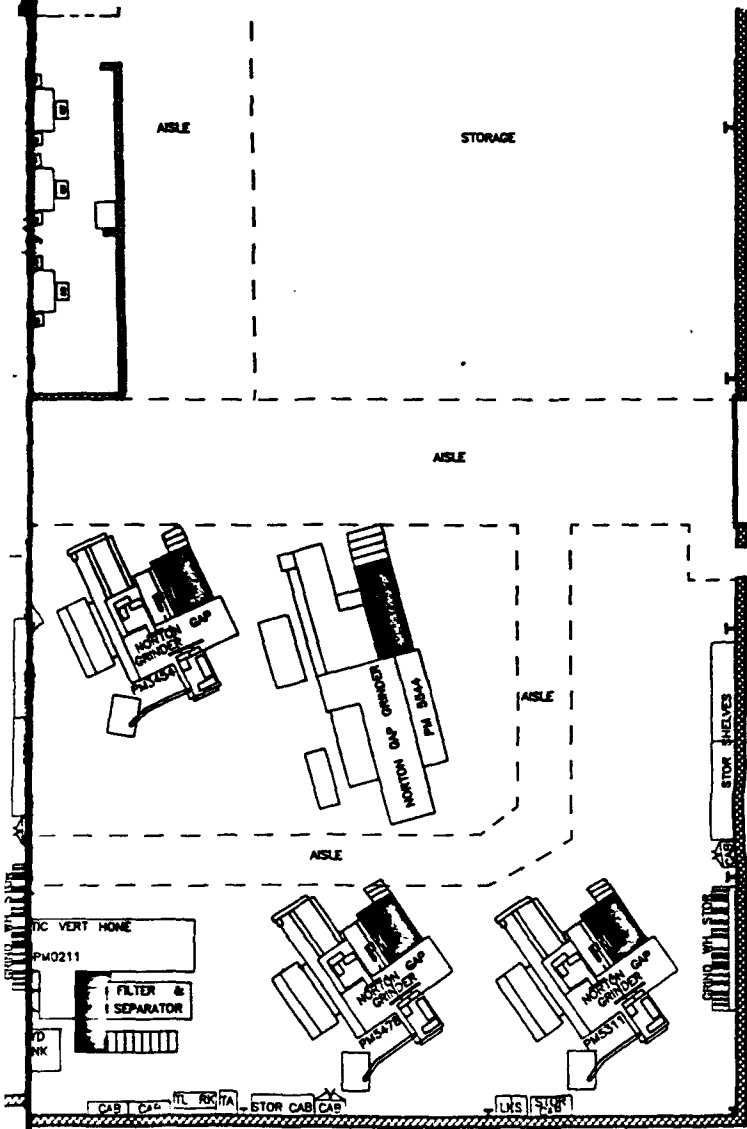
(D)



BUILDING 505
NON-DESTRUCTIVE
INSPECTION
AREAS



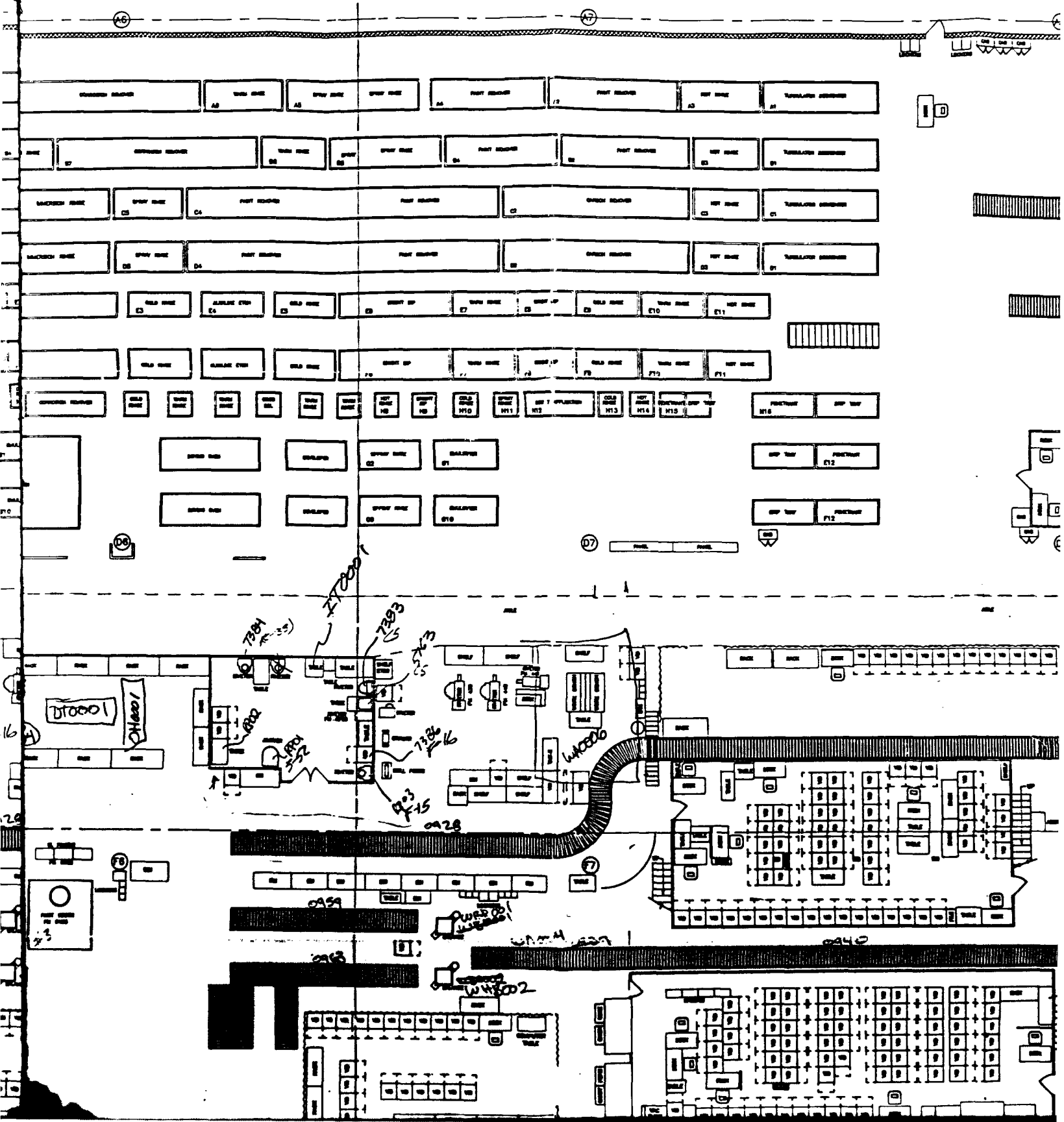
(F)

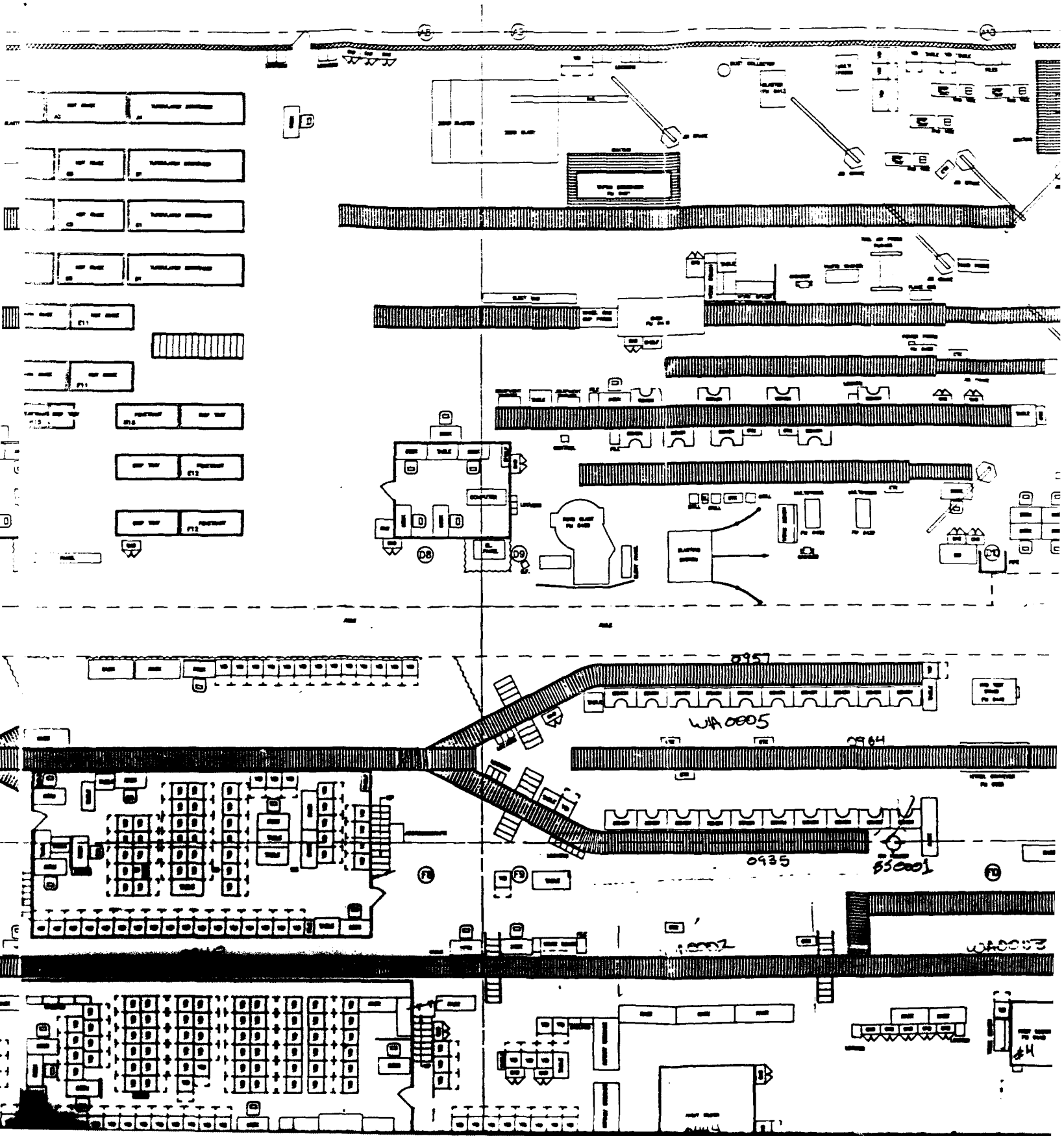


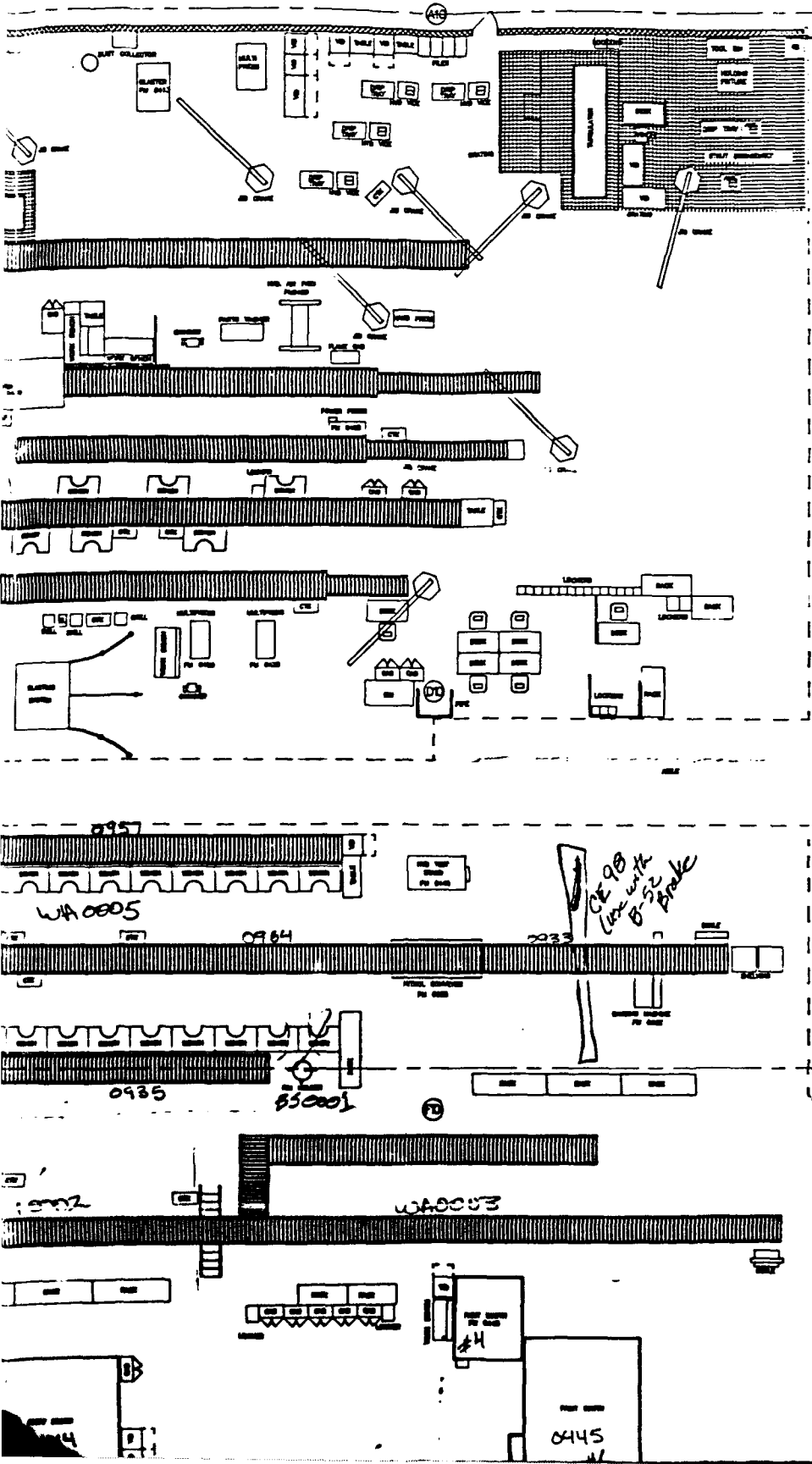
BLDG 505 FLOOR GRID KEY PLAN

(G)

(E)







CE 98
Line with
B-52
A-10

WA 0005

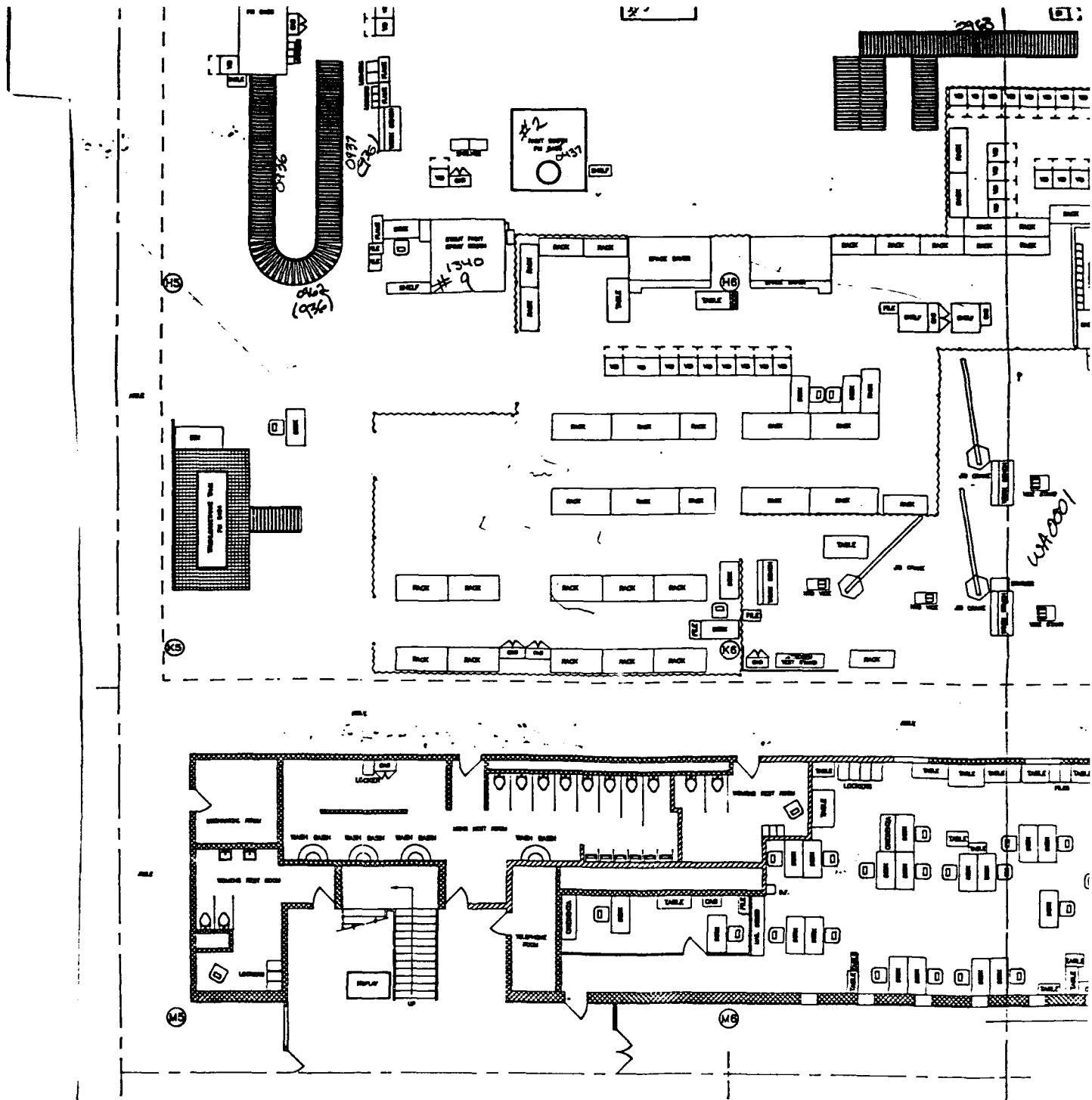
0964

2033

0965

05000

0445



(E)

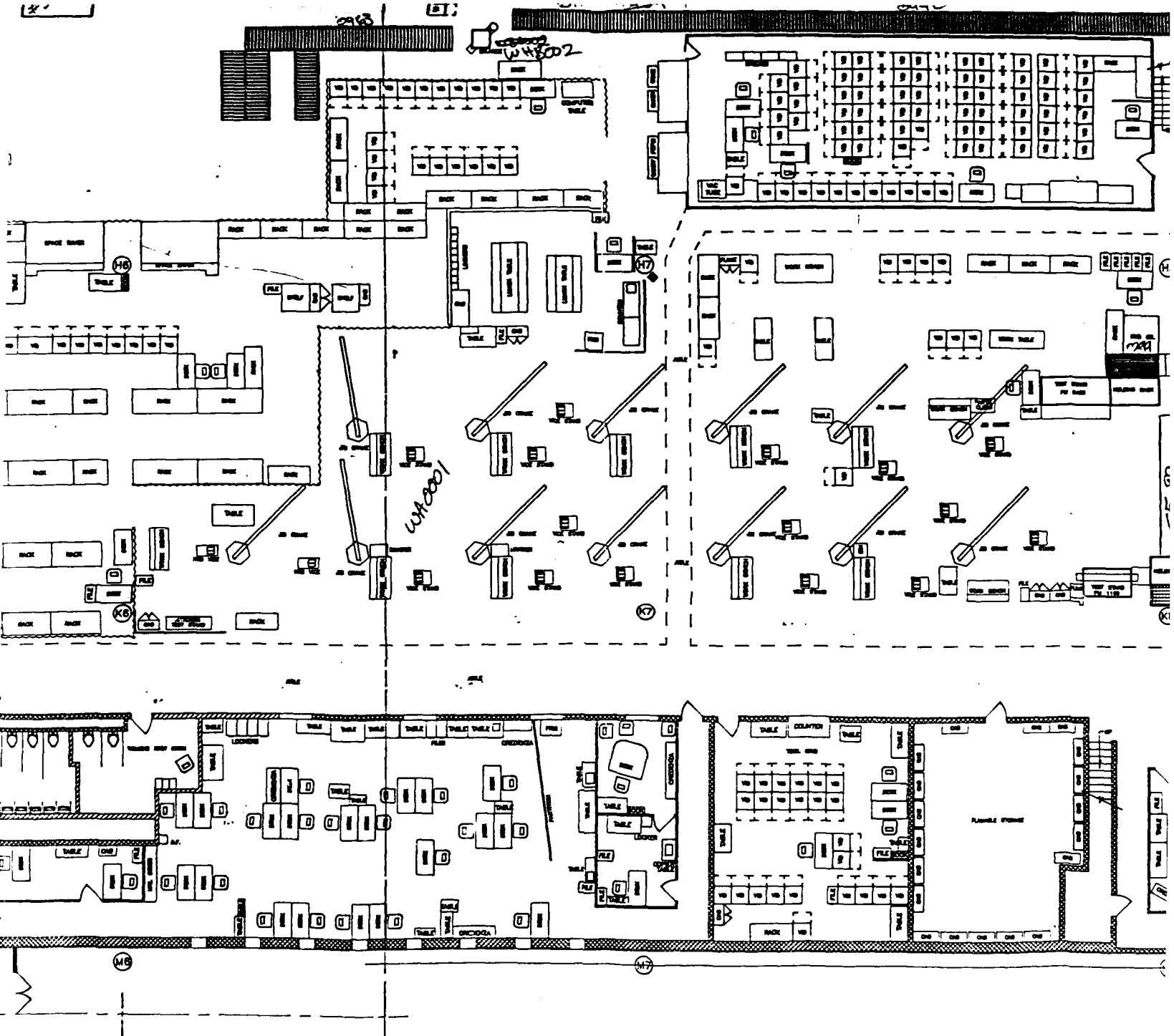
12'

218

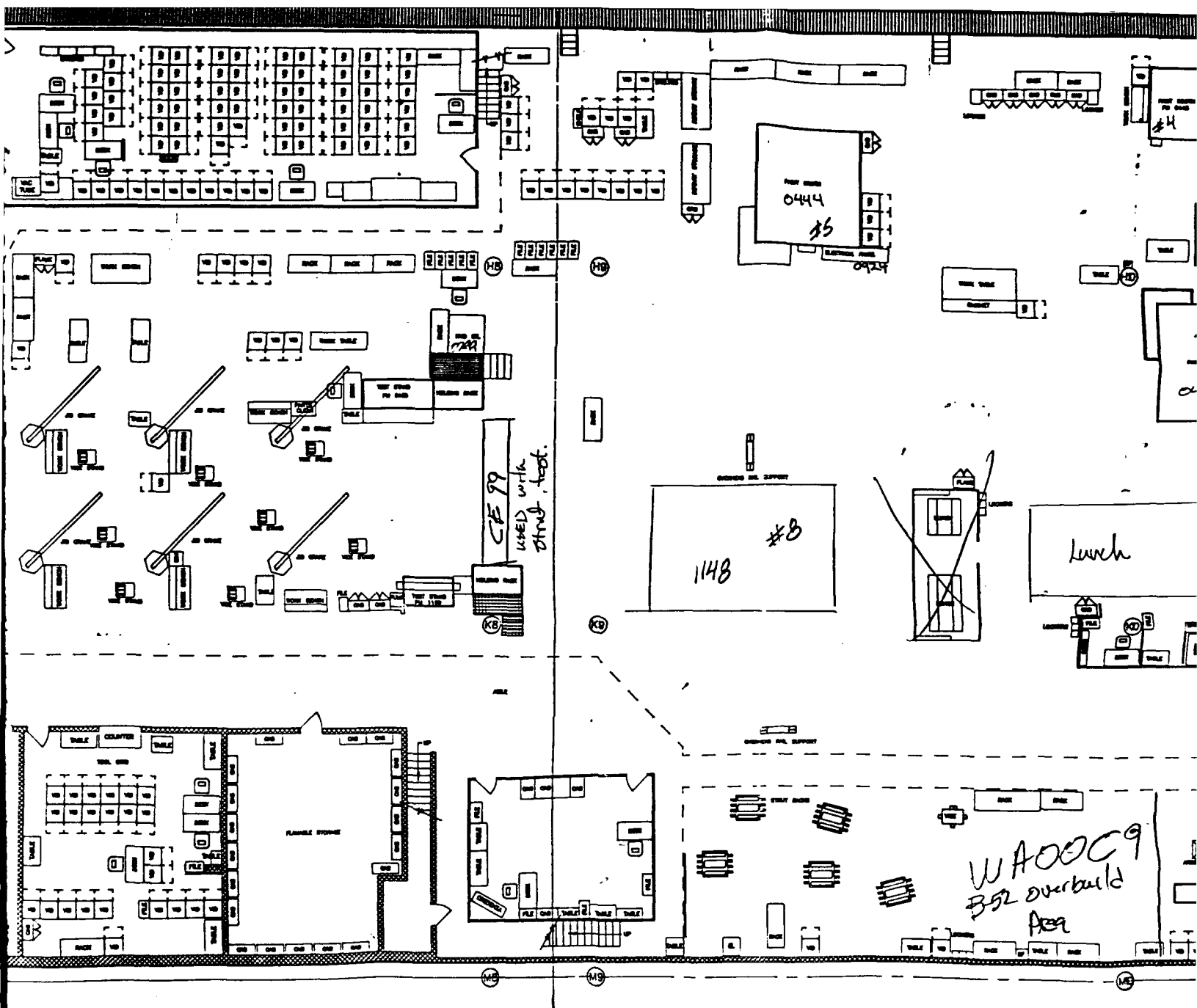
217

WH 5002

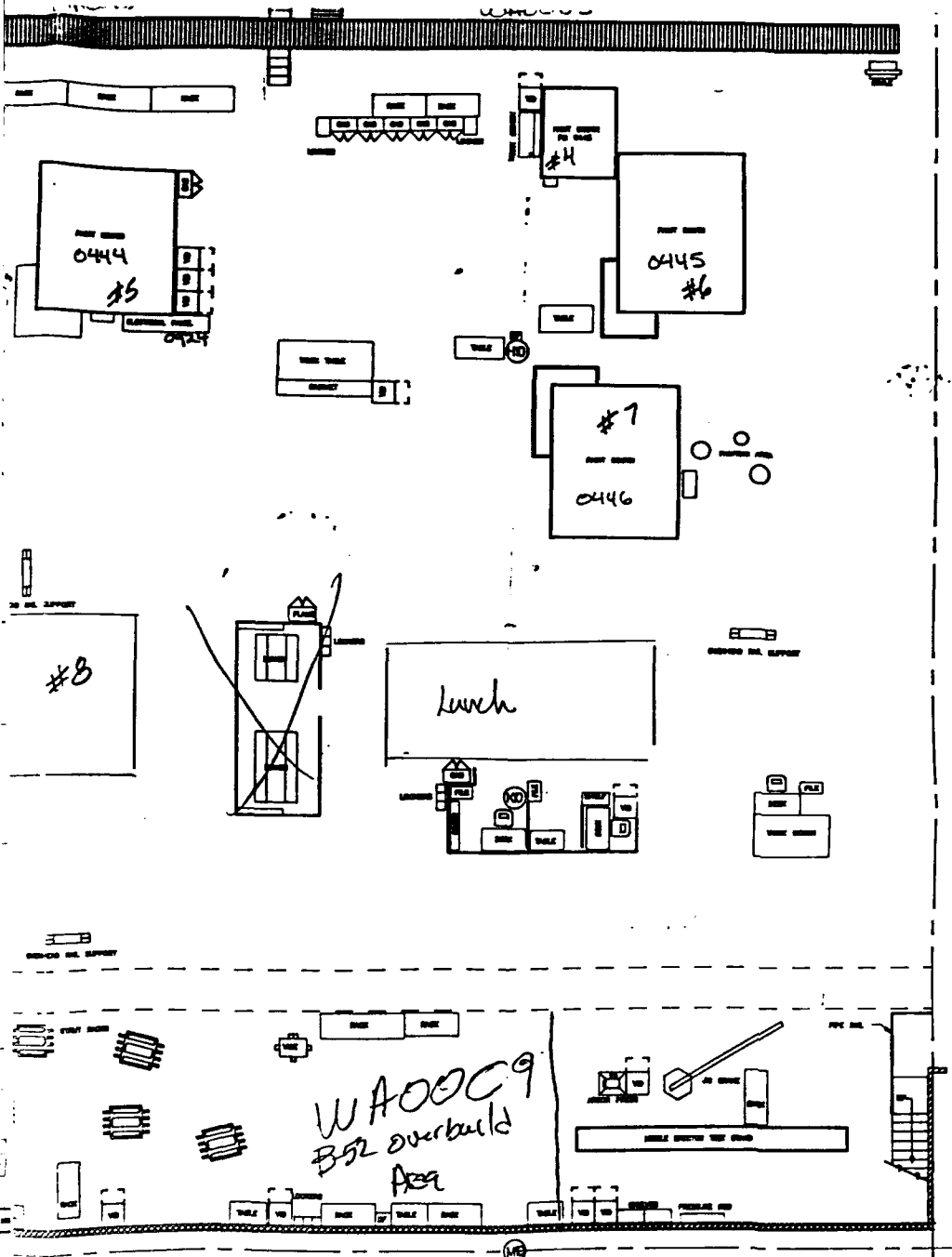
WH 5001



(F)

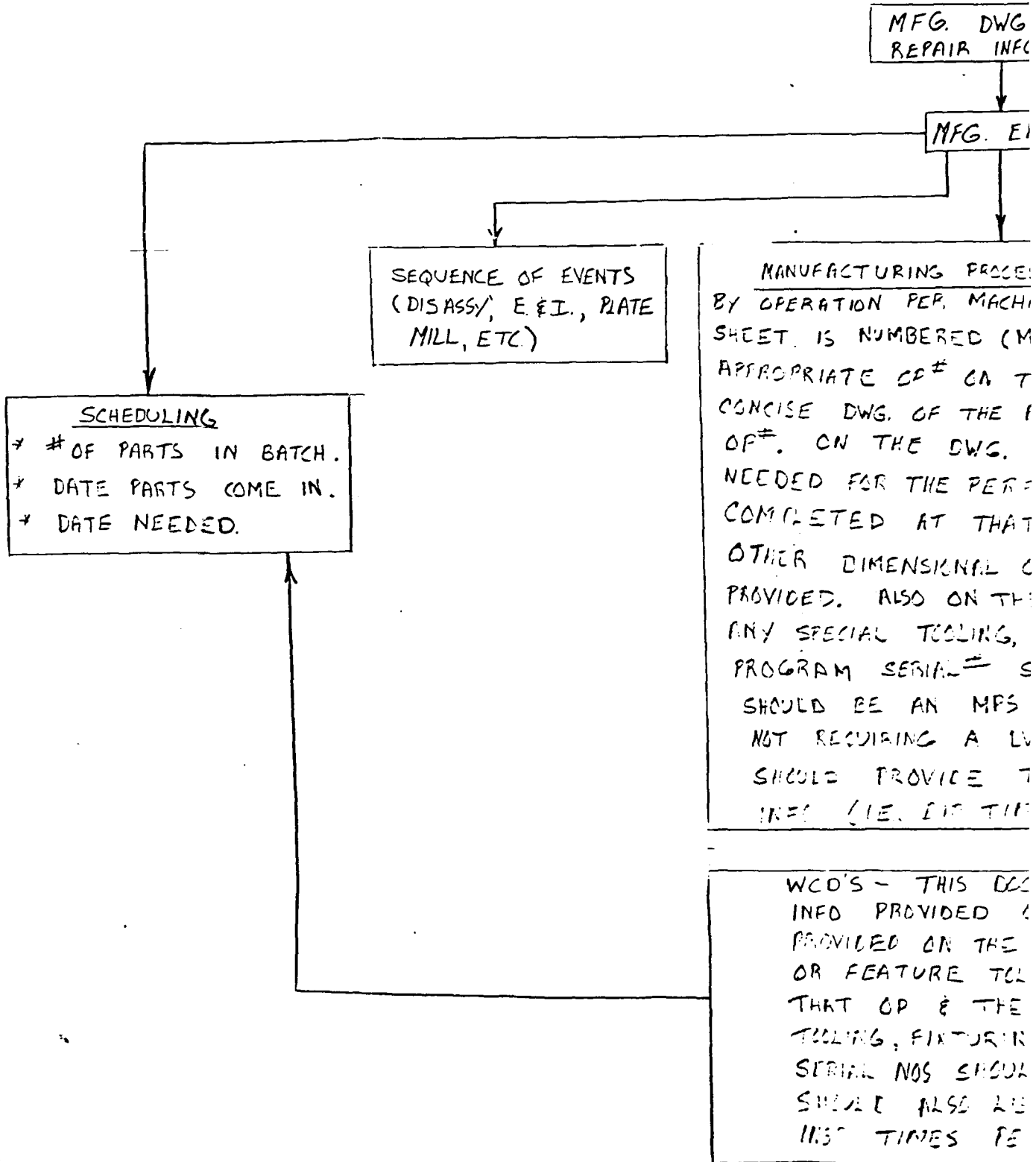


(G)



(H)

(A)



(B)

MFG. DWG. &
REPAIR INFORMATION

MFG. ENGR.

MANUFACTURING PROCESS SHEETS (MPS) - A BREAKDOWN BY OPERATION PER MACHINE OR STATION. THE MPS SHEET IS NUMBERED (MPS10, MPS20, ETC) TO REFLECT THE APPROPRIATE OP# ON THE WCD. IT IS A PLAIN, CONCISE DWG. OF THE PART AS IT EXISTS AT THAT OP#. ON THE DWG. IS THE DIMENSIONAL INFO NEEDED FOR THE PERFORMANCE OF THE WORK TO BE COMPLETED AT THAT PARTICULAR OP#. NO OTHER DIMENSIONAL OR PART FEATURE INFO IS PROVIDED. ALSO ON THE MPS IS THE SERIAL# OF ANY SPECIAL TOOLING, FIXTURING OR GAGING. NC PROGRAM SERIAL# SHOULD ALSO BE LISTED. THERE SHOULD BE AN MPS FOR EVERY OP. FOR OP#'S NOT REQUIRING A DWG (I.E., F.P.I.) THE MPS SHOULD PROVIDE THE APPROPRIATE PROCEDURAL INFO (I.E., LTD TIME, SOLUTION, MIN SPEC, ETC)

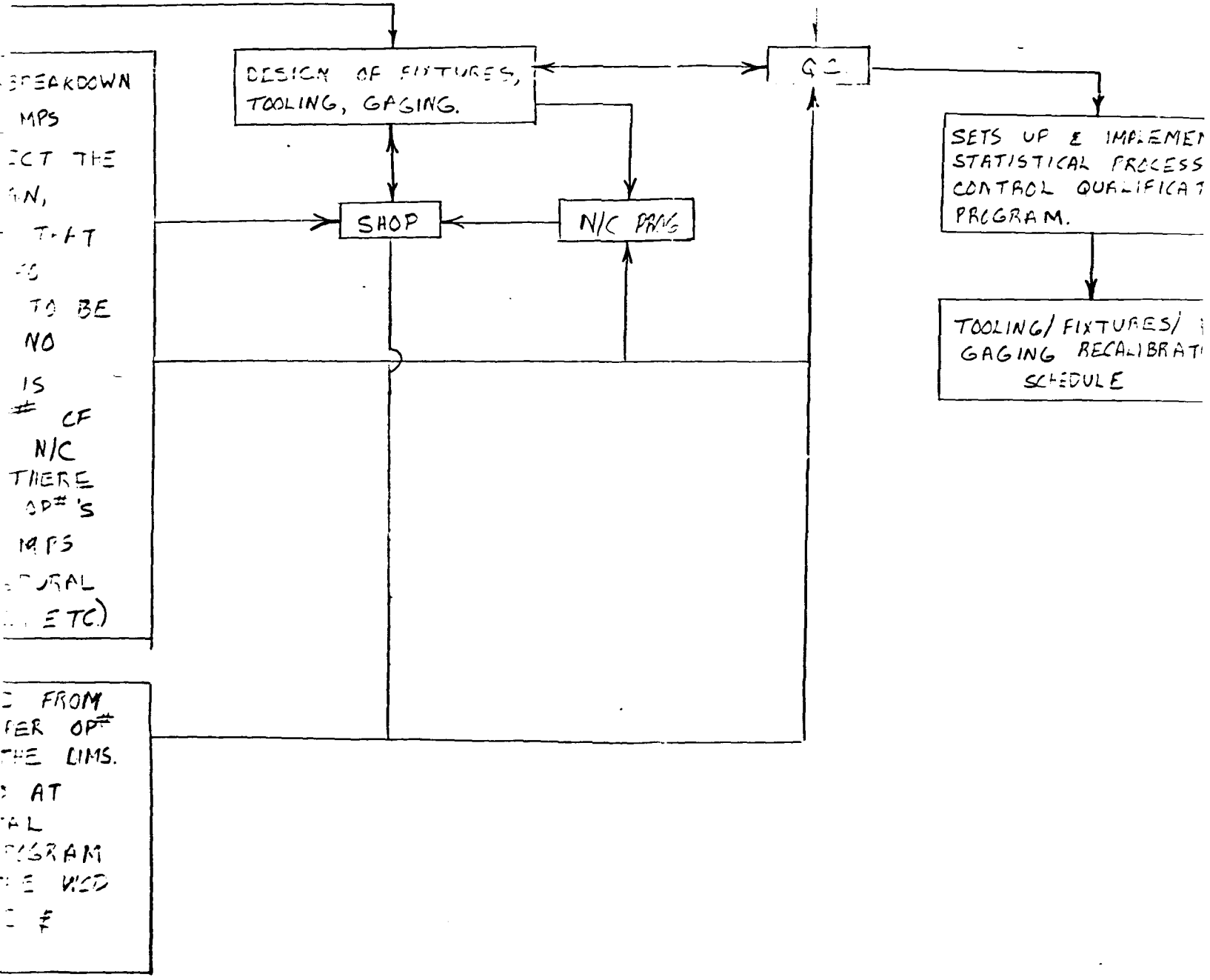
WCD'S - THIS DOCUMENT IS GENERATED FROM INFO PROVIDED ON THE MPS'S. INFO PER OP# PROVIDED ON THE WCD SHOULD INCLUDE THE DIMS. OR FEATURE TOLERANCES TO BE WORKED AT THAT OP & THE SERIAL# OF ANY SPECIAL TOOLING, FIXTURING OR GAGING. NC PROGRAM SERIAL NOS SHOULD ALSO BE LISTED. THE WCD SHOULD ALSO LIST THE SET UP CYCLE & INS TIMES PER OP#.

DESIGN OF FIXT
TOOLING, GAGING

SHOP

MENTS
PLATE

(c)



D

