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13. ABSTRACT *(Maximum 200 words)*

Technology Insertion (TI)/Industrial Process Improvement (IPI) Data Base Documentation Book Volume, for OO-ALC/MANPNA (Non-Destructive Test). This document contains detailed information about layouts equipment and processes for this RCC.

14. SUBJECT TERMS
Data Base Documentation for Process Characterization (Simulation modeling of 1 RCC's at OO-ALC

15. NUMBER OF PAGES
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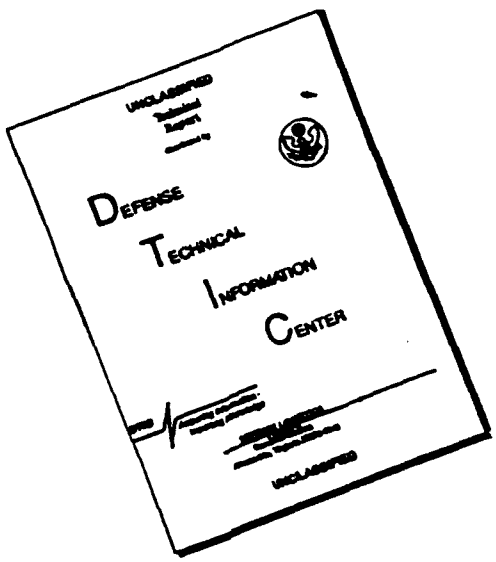

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TECHNOLOGY INSERTION-ENGINEERING SERVICES
PROCESS CHARACTERIZATION
TASK ORDER NO. 1

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

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2.0 GENERAL INFORMATION

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

[redacted]

DESCRIPTION OF CURRENT OPERATION

MANPNA IS A RESOURCE CONTROL CENTER UNDER THE MANP SECTION OF THE INDUSTRIAL PRODUCTS DIVISION (MAN) AT OO-ALC. MANPNA IS LOCATED IN MANY DIFFERENT AREAS. THESE AREAS ARE BUILDINGS 225, 261, 265, 283, 270, 272, 507, 508, 510, 2113, 986, 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 MANPGW IN 507. IN 508 MANPNA IS LOCATED IN THE WEST END OF THE MACHINE SHOP.

THE WORKLOAD IS PRIMARILY MISTER WORK. IT CONSISTS OF OF VARIOUS WHEELS, BRAKES, AND LANDING GEAR. THIS AREA IS RESPONSIBLE FOR MAGNETIC PARTICAL INSPECTION, PENETRANT INSPECTION, ULTRASONIC INSPECTION AND EDDY CURRENT, AND TEMPER ETCH. THE MANPNA AREA WE ARE STUDING SUPPORTS MANPGW, [redacted], MANPRB, MANPRC, MANPWW. AT OGDEN THEY HAVE AN UNIQUE SITUATION. THE SITUATION IS THAT THE PRODUCT FLOWS through all of these [redacted] RCC's.

PERCENT OF OTHER WORKLOAD FOR RCC

(80/20 LISTING)
RCCs

JOB TYPES	MANPGP	MANPGW	[redacted]	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
MISTER	85.28	77.37	52.92	97.41	91.69	83.46	47.69

MAGNAFLUX TESTER AND TANKS

THE MAGNA EQUIPMENT CONSISTS OF MAGNAFLUX machines, EDDY current testers, ULTRA SOUND TESTER, Laboratory Tanks 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 checking 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 EDDY current TESTER. THE EQUIPMENT IS IN Good condition.

THE PARTS [redacted] ASSEMBLED [redacted]

AND CHEMICAL CLEANED AND STRIPED THEY 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 A ULTRA-VIOLET LIGHT. AS THE PARTS COME DOWN THE COMPUTER CONTROLLED LINE, THE COMPUTER AUTOMATICALLY (HAS THE OPER HEAD CRANE) DUNK THE PARTS INTO THE CORRECT TANKS FOR A SPECIFIC AMOUNT OF TIME. THE PART 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, EMULSIFIER, 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 E AND I 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. OU ID RATHER IT IS GOOD OR BAD IN BORDER LINE CASES.

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 THROUH 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 SAYS IT OFF OR SENDS IT TO E AND I.

[redacted] PARTICLE 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 COMMING 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 NDI FORKLIFT OPERATORS ON FIRST IN FIRST OUT PRINCIPLE. THE 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.

TANDEM IS ALSO OVER EDDY CURRENT TESTING. IN THIS WORK CELL THEY HAVE FOUR DIFFERENT TYPES OF TESTERS. A EDDY CURRENT TESTER, CONDUCTIVITY TESTER, ULTRA SONIC TESTER, AND A. HARDNESS TESTER.

THE EDDY CURRENT TESTER IS THE ONE WHICH IS USED MOST OF THE TIME. THIS OPERATION IS PREFORMED BY PLACING THE WHEEL ON A TURN TABLE, AND ROTATING THE WHEEL. THE TESTER'S PROBE IS HELD AGINST 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 WCO IS WHAT INFORMS THE OPERATOR AS TO WHICH TESTER IS TO BE USE TO PREFORM THE TEST.

FACILITY LAYOUT

THE LAYOUT OF EQUIPTMENT 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 EQUIPTMENT 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.

[redacted]

FACILITY LAYOUT

THE LAYOUT OF EQUIPTMENT 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 EQUIPTMENT 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 L LOGIC OF

[redacted]

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 ACQUISTION 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 [redacted] EQUIPMENT IN NDI IS MERELY TANKS FOR PENETRANT & TEMPER ETCH PROCESSES. THESE TANKS HAVE AN INDEFINATE 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 MACHININES SPECIFICALLY DESIGNED TO REMOVE MAGNETISM CALLED "DEGAUSS MACHINES." THE USE THESE MACHINES SPEEDS [redacted] THE CYCLE TIME ON SMALL MAGNETIC PARTICLE INSPECTED PARTS.

TYPICALLY THE AFLC SUGGESTS REPLACEMENT. EQUIPTMENT 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 SACREMENTO ALC EXCEEDING THEM IN NDI EQUIPTMENT.

MR. JOSE GUTTIERREZ 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

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000671 / L01958 / MADPS	00005	[redacted]	507 D7 SE 2/17/89 5/19/89	TANK PENE H 15 MANPG

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

PM-NUMBER CROSS REFERENCE SCREEN

ENTER PM-NUMBER 000672

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000672 / L07992 / MADPS	00005	90	507 E 12 2/17/89 5/19/89	TANK PENET E 12 MANPG

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000678 L07991 MADPS	00005	90	507 D7 NE 2/17/89 5/19/89	TANKEMULS MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000678 L07989 MADPS	00005	90	507 D7 SE 2/17/89 5/19/89	TANKDEVEL MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000675 00000 L02730 MADP		[redacted]	507 D6 NW 5/ 6/89 8/ 4/89	OVEN DRYING MANPG
000675 00044 L10152 MADP		180	507 D6 NW 3/11/89 9/ 7/89	OVEN DRYING MANPG
000675 00000 L10153 MADP		[redacted]	507 D6 NW 2/17/89 8/20/89	OVEN DRYING MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000673 00005 L07988 MADPS		90	507 D7 NE 2/17/89 5/19/89	TANKHOTRN MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000685 00005 L07997 MADPS		90	507 F 12 2/17/89 5/19/89	TANK PENET F 12 MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000684 L07996 MADPS	00005	90	507 D7 NE 2/17/89 5/19/89	TANKEMULS MANPG

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

PM-NUMBER CROSS REFERENCE SCREEN

ENTER PM-NUMBER 000683 **** PRESS RETURN TO CONTINUE ****

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000682 L07994 MADPS	00005	90	507 D6 SE 2/17/89 5/19/89	TANKDEVEL MANPG

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

PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
000681 [illegible]000		[illegible]	507 D6 NW	OVEN DRYING
L02731			5/ 6/89	MANPG
MADP			8/ 4/89	
000681 00[illegible]0		180	507 D6 NW	OVEN DRYING
L10149			2/ 4/89	MANPG
MADP			8/ 3/89	
000681 [illegible]000		365	507 D6 NW	OVEN DRYING
L10150			2/17/89	MANPG
MADP			8/20/89	

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000960 L02402 MADP	00340	[redacted]	507 D4 N 3/11/89 6/ 9/89	COVEYOR 31 MANPG
000960 L02399 MADP	00340	180	507 D4 N 3/ 4/89 8/31/89	COVEYOR 31 MANPG
000960 L02400 MADP	02000	365	507 D4 N 2/17/89 9/17/89	COVEYOR 31 MANPG

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000911 L02110 MADP	00360	[redacted]	507 D4 NE 2/11/89 5/12/89	CONVEYOR 7 MANPG
000911 L02107 MADP	00040	[redacted]	507 D4 NE 2/11/89 8/10/89	CONVEYOR 7 MANPG
000911 L02108 MADP	02000	[redacted]	507 D4 NE 2/17/89 8/27/89	CONVEYOR 7 MANPG

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
000401	02300	180	507 A3 SW	MAGNAFLUX
L02682			1/14/89	MANPN
MADP			7/13/89	

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

PM INVENTORY REPORT

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

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

PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO / RCC-RE	SKILL / INSTR	FREQ / SK	LOCATION / COMPL-DATE / DUE-DATE	NOMENCLATURE / OWN-ORGN / CUST-ACCT-CDE
00[illegible]	00300	90	505	GRND RM MAGNAFLUX
L08267			2/17/89	MANPNB
MADPS			6/16/89	
006366	02000	180	505	GRND RM MAGNAFLUX
L08268			2/17/89	MANPNB
MADPG			9/14/89	

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

PM-NUMBER CROSS REFERENCE SCREEN

ENTER PM-NUMBER 005813

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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
005813	00005	180	505 CR 66	HOT RINSE
L07545			2/17/89	MANPRC
MADPG			7/13/89	

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005610 L10515	00005	180	505 CR 71 2/17/89 6/15/89	METALETCH MANPRC
MADPG				

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005821 L07539 MADPG	00005	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 RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005822 L07540 MADPG	00005	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 RCC-RE	SKILL INSTR	FREQ SK	LOCATION COMPL-DATE DUE-DATE	NOMENCLATURE OWN-ORGN CUST-ACCT-CDE
005823 L07541 MADPG	00005	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	FREQ	LOCATION	NOMENCLATURE
RCC-RE	INSTR	SK	DUE-DATE	CUST-ACCT-CDE
005824	02005	180	505 LINE 4	DRY BOOTH
L03352			4/29/89	MANPRC
MADPG			10/26/89	

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

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PM INVENTORY REPORT

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

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

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PM INVENTORY REPORT

EQUIP-ID-NO RCC-RE	SKILL 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

ENTER PM-NUMBER 007293 **** PRESS RETURN TO C
NTINUE ****

ENTER PM NUMBER:007293

THERE ARE NO RECORDS FOR PM.NUMBER 007293 .

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PM RECORD TRANSACTION LIST

EQUIP-	INST NR	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	ELECTR [2]	MECHAN [3]	LUBE [4]	PLUMB [5]	FREQ	AVER
PM0911		.50			90	.69
			.20		180	
	.35				365	
PM 0401					NONE	←
PM 6369		.50			90	.68
	.35				180	
PM 6368		.50			90	.68
	.35				180	
PM 6668		.50			90	.68
	.35				180	
PM 6669		.50			90	.68
	.35				180	
PM 3428				.75	90	1.25
				2.00	365	
PM 0902		.50	4.00		30	5.13
		.50	.20		90	
	.35	.50	.50		180	
	1.05	.50	.50		365	
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 1.65	.50	.20		90 180 365	1.11
PM 0673				.25	90	.25
PM0685				.25	90	.25
PM0684				.25	90	.25
PM 0683					NONE	0
PM0682				.25	90	.25
PM 0681	.35 1.65	.50	.20		90 180 365	1.11
PM 0680				.25	90	.25
PM 0960	.35	.50	.20		90 180 365	.69

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						

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	86060646	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
000681							20.0	400.00	
							20.0	400.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PMNUMBERS

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 89050061
	DEGREASER	5/ 2/89	5/ 3/89	89050061	0	42M	10.0	200.00	PUMP TRICH
	DEGREASR	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
005600							259.5	5190.00	
							259.5	5190.00	

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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
005813	CR25 TANK	11/ 7/85	11/ 8/85	85110202	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	9/23/86	10/ 1/86	86090683	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	5/26/87	5/27/87	87050736	0	46P	8.0	160.00	DRAIN PLUGGED
	HOT RINSE	6/16/87	6/18/87	87060520	0	46P	6.0	120.00	CHECK OUT STEAM VALVE
	HOT RINSE	9/ 2/88	9/ 2/88	88090064	0	46P	8.0	160.00	PLUGGED DRAIN
	HOT RINSE	9/ 2/88	9/ 6/88	88090065	0	48E	6.0	120.00	CIRCUT 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	89040697	0	46P	2.0	40.00	PLUGGED DRAIN
005813							85.0	1700.00	
							85.0	1700.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
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							12.0	240.00	
							12.0	240.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000911	CONVEYOR 7	8/12/87	8/12/87	87080394	0	47	1.0	20.00	WON'T RUN NO POWER

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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
000680	TANK G7	3/24/86	3/25/86	86030659	0	43	6.0	120.00	STEAM LEAK
	TANKHOTRM	5/14/87	5/15/87	87050441	0	43P	6.0	120.00	NEEDS TO REPLACE VALVE
	TANKHOTRM	7/29/88	7/29/88	88070843	0	43P	2.0	40.00	UNPLUG DRAIN
	TANKHOTRM	11/ 1/88	11/ 4/88	88110006	0	43P	4.0	80.00	LEAKING PIPE
	TANKHOTRM	3/ 8/89	3/ 8/89	89030235	0	43P	4.0	80.00	DRAIN ON TANK IS CLOGGED
							22.0	440.00	
000680							22.0	440.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
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
000682							12.0	240.00	
							12.0	240.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

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

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)

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000678	TANKEMULS	5/19/87	5/20/87	87050553	0	43P	6.0	120.00	WATER VALVE LEAKING

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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
000677	SPRAY RINSE TANK	7/29/88	8/15/88	88070848	0	22	0.0	0.00	TORN CURTIN NEEDS REPAIR OR REPPLACE
	SPRAY RINSE TANK	10/12/88	10/14/88	88100266	0	23	0.0	0.00	CUT LARGER SLOT IN TIN WALL\
	SPRAY RINSE TANK	10/24/88	10/27/88	88100613	0	43E	8.0	160.00	BOTH HOIST SWITCHES ON FLOOR ARE STICKING
000677							8.0	160.00	
							8.0	160.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000676	TANK	4/11/86	4/14/86	86040346	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)
000676							10.0	200.00	
							10.0	200.00	

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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
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	1/10/89	1/10/89	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 .

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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
000673	RINSE TANK	6/25/85	6/25/85	85060729	0	43	6.0	120.00	RETURN STEAM LINE LEAKING
	MAG 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	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000679	TANK GG (PREPARE PM 0642)	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
000679							18.0	360.00	
							18.0	360.00	

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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
009633	COLDRINSE	8/30/88	8/30/88	88081035	0	48E	4.0	80.00	TEMP CONTROLL INOP

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	WP.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

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	NITRICACD	11/24/87	11/25/87	87110753	0	48	2.0	40.00	OVER FLOW PLUGGED
	NITRICACD	4/26/88	4/26/88	88040749	0	46P	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 .

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	6/26/85	85060323	0 46	3.0	60.00	NEEDS COVER REPLACED

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
		5-10 85	130						
005822	WASH TANK	7/ 2/85	7/ 3/85	85070045	0	46	3.0	60.00	HAS A LEAKING VALVE
			365						
	SPRAYRINS	7/27/88	8/ 1/88	88070760	0	46P	8.0	160.00	PLUG UP DRAIN
			200						
	SPRAYRINS	8/17/88	8/18/88	88080619	0	46P	4.0	80.00	NOZZLE IS LEAKING
		5-10-89	366						
			130						
005822							15.0	300.00	
							15.0	300.00	

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	60903	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	86060048	0	46P	2.0	40.00	COILS LEAKING
	DRY BOOTH	11/21/86	12/ 1/86	86110575	0	46E	6.0	120.00	DISCONNECT ELECTRICAL ON DRYING BOOTH
	DRY BOOTH	11/ 9/87	11/12/87	87110293	313	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	341	0 46P	0.0	0.00	HEATER COIL BROKEN / BREAK IN COIL
	DRY BOOTH	1/ 4/88	1/ 5/88	88010029	4	0 46P	2.0	40.00	COIL LEAK
	DRY BOOTH	2/17/88	2/18/88	88020568	48	0 25	4.0	80.00	CUT SUPPORT BEAMS
	DRY BOOTH	7/26/88	7/26/88	88070729	208	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
005824							186.0	3720.00	
							186.0	3720.00	

ENTER PM NUMBER:005821 .

THERE ARE NO RECORDS FOR PM.NUMBER 005821 .

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
005820	DYEPENETR	4-1-86 9/22/86 3-31-89	9/22/86	86090649	0	42	2.0	40.00	ADD TRICH

86 100
87 365
88 366
89 130

5/10/89

PM.NO	NOMENC
000677	SPRAY
	SPRAY
	SPRAY
000677	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	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
		56							
	CR84 TANK	12/17/85	12/18/85	85120448	0	46P	6.0	120.00	BROKEN DRAIN PIPE
		14							
	CR84 TANK	12/31/85	1/ 3/86	85120704	0	46P	6.0	120.00	HAS BROKEN HEATING COIL
		99							
	HOTRINSE	9/23/86	10/ 1/86	86090689	0	23	24.0	480.00	REPAIR BACK DUCT
		14							
	HOTRINSE	10/ 7/86	10/ 8/86	86100171	0	23	8.0	160.00	REPLACE BACK VENT HOOD ON TANK
		48							
	HOTRINSE	11/24/86	11/25/86	86110654	0	21	6.0	120.00	NEED WIRES PULLED
		382							
	HOTRINSE	12/17/87	12/17/87	87120583	0	46P	6.0	120.00	BUSTED WATER LINE
		138							
	HOTRINSE	5/ 3/88	5/ 3/88	88050050	0	48	5.0	100.00	PLUGGED DRAIN NO AIR AGATATION
		372							
		5/10/89							
							64.0	1280.00	
005611							64.0	1280.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
005825	ZYGLO READING BOOT	5/31/85	6/ 5/85	85050811	151	0 43	2.0	40.00	CURTAIN WONT SLIDE ROLLER COMING OFF
	ZYGOL BOOTH	6/ 5/85	6/12/85	85060094	156	0 25	4.0	80.00	REPAIR DOOR SEE REQUESTER
	ZYGLO BOOTH	6/12/85	6/13/85	85060355	163	0 46	2.0	40.00	CURTAIN WILL NOT OPEN ON WEST END
	PENETRANT READING	6/26/85	6/27/85	85060730	176	0 46	8.0	160.00	OTH CANT GET CURTAIN TO SLIDE OPEN
	BLACK LIGHT	7/17/85	7/17/85	85070453	198	0 46E	2.0	40.00	CORD REPAIRED AND NEW LIGHT SOCKET
							3.6		
005825							18.0	360.00	
							18.0	360.00	

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
		4-1-38							
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	89030527	0	46E	4.0	80.00	FILTER PUMP / CAN'T TURN OFF INSTALL TO TANK / PUMP
005823							6.0	120.00	
							6.0	120.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006571	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	88020652	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							
006671							131.5	2630.00	
							131.5	2630.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
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	87030229	0	43E	3.0	60.00	REPLACE WHITE LIGHT SOCKET
	PARTICLE INSPECTIO	3/25/87	3/30/87	87030836	0	43M	2.0	40.00	REPLACE DRY PIN IN MOTOR
	PARTICLE INSPECTIO	7/23/87	7/23/87	87070696	0	43E	1.0	20.00	BLACK LIGHT / SOCKET INOP / LIGHT NOT WORKING
	PARTICLE INSPECTIO	8/20/87	8/20/87	87080871	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	88040169	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	89020563	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	

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	46	8.0	160.00	PUMP NEEDS REPAIR MP NO CANCELLED 6-14-85
	CR72 TANK	6/18/85	6/18/85	85060501	0	46	8.0	160.00	INSTALL DEGREASER PUMP
	CR72 DEGREASER	6/25/85	6/27/85	85060739	0	42	2.0	40.00	NEEDS ONE BARREL ADDED
	DEGREASER	7/17/85	7/18/85	85070451	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	46M	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	46M	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	86100166	0	42	2.0	40.00	NEED TRIC ADDED

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	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	87050448	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
	DEREASER	9/14/87	9/15/87	87090369	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
	DEGRESER	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	80.0	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
	DEGRASER	1/ 8/88	1/ 8/88	88010240	0	47	2.0	40.00	REPLACE LID IN DEGREASER
	DEGREASER	1/14/88	1/15/88	88010398	0	26	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
	DESGREASER	3/17/88	3/17/88	88030597	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	88060103	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 TRANSFERED FROM 48
	DEGREASER	7/25/88	7/2/88	88070654	0	42L	8.0	160.00	NEED TANK PUMPED OUT

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	88080839	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 TRANSFERED 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	8809056	0	42M	6.0	120.00	PUMP TRICH
	DEGREASER	10/12/88	10/12/88	88100242	0	42M	2.0	40.00	ADD TRIH
	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
	DGREASER	11/ 2/88	11/ 3/88	88110094	0	48	6.0	120.00	INOP. TRANSFERED FROM 47
	COLDRINSE	11/18/88	11/21/88	88110540	0	42M	2.0	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	8020500	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	46M	0.0	0.00	FULL OF WATER REPAIR

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	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	88110796	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
003428							429.5	8590.00	
							429.5	8590.00	

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	519/87	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	NOMENCLATURE	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 1 Dr.
	DEGREASER	3/ 9/87	3/10/87	87030271	0	43E	2.0	40.00	WON'T TURN ON AND HEAT UP
	EGREASER	3/19/87	6/ 8/87	87030639	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

EGREASER	8/15/88	8/15/88	88080549	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

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006366	MAG BOOTH	11/18/85	11/19/85	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	86050550	0	41	8.5	170.00	CUT 4EA PIECES OF PHENOLIC AS REQUIRED
	MAG MACHINE	5/30/86	6/ 6/86	86050871	0	43E	8.0	160.00	REMOVE POPWEWER SUPPLY
	MAG MACH.	7/23/86	7/25/86	86070624	0	43	6.0	120.00	HEAD WONT LOCK
	MAGNAFLUX	4/27/87	5/ 4/87	87040824	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	87080729	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	87090612	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 ON COIL / NEW HOSE ALSO

[redacted]

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	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	88060903	0	23	2.0	40.00	NEED SCREENS MADE AND INSTALLED/SEE THEM 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	INOP / WON'T MAG / LIGHTS UP & THAT'S IT HAS POWER TO IT
	MAGNAFLUX	4/18/89	4/18/89	89040517	0	22	21.0	420.00	CUT DOWN PLATFORM TO EQUIPMENT
	MAGNAFLUX	4/13/89	4/19/89	89040399	0	46	1.0	20.00	WONT DE MAG TRANSFERED FROM 46TRANSFERED FROM 43
	MAGNAFLUX	5/ 4/89	/ /	89050175	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	89050203	0	41	2.0	40.00	MFG PLATES AS PER SAMPLE / 2 EACH
006366							172.5	3450.00	
							172.5	3450.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
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	85090587	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

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	8/28/86	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

5/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000401	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	REPAI WHITE LIGHTS
	MAGNAFLUX	3/ 4/87	3/ 6/87	87030128	0	43E	4.0	80.0	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
	MAGAFLUX	3/26/87	4/ 6/87	87030922	0	43M	4.0	80.00	REPAIER STEPS
	MAGNAFLUX	3/27/87	4/ 7/87	87030936	0	25	4.0	80.00	NEEDS HAND RAILS ON STEP
	MAGNAFUX	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/ 0/87	7/13/87	87070217	0	43E	24.0	480.00	WON'T DEMAG

5/1/89

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	7/2487	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 OWER 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	OP / 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	80.00	OIL LEAKING UNDER MONSTER MAG / AT ELBOW
	MAGNAFLUX	4/18/88	4/19/88	88040498	0	43E	2.0	40.00	CIRCUI BREAKER / NO POWER
	MAGNAFLUX	4/18/88	4/18/88	88040503	0	47	1.0	20.00	INOP
	AGNAFLUX	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	88050476	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

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOENCLATURE	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
	MAGAFLUX	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							398.0	7960.00	
							398.0	7960.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006668	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/ 8/87	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	87080672	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	87090319	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 TRANSFERED 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 TRANSFERED 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

9/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006668	AIR HOSE	4/26/89	4/26/89	89040829	0	47M	1.0	20.00	REPLACE AIR HOSE
							79.5	1590.00	
006668							79.5	1590.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
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	87120687	0	46M	12.0	240.00	MAG MACHINE HEAD WON'T LOCK DOWN

5/10/6

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	1/19/88	1/19/88	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	88020653	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/ 6/88	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
	AG PRT INSP UNIT	10/28/88	11/ 1/88	88100789	0 46E	20.0	400.00	WILL NOT DEMAG PROPERLY
	MAG PRT INSP UNT	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	11/23/8	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

MALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	RQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006670	MAG PRT INSP UNIT	12/ 2/88	12/ 5/88	88120062	0	46M	12.0	240.00	WON'T DEMAG
	MAG PRTINSP UNIT	12/ 8/88	12/13/88	88120156	0	46E	12.0	240.00	WILL NOT DEMAG
	MAG PRT INSP UNI	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 COILTRANSFERED FROM 43
	MAG PRT INSP UNIT	1/30/89	1/3089	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
006670							268.0	5360.00	
							268.0	5360.0	

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	85110[illegible]45	0	42	6.0	120.00	NEEDS TRIC ADDED
	DEGREASERR	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	5/19/86	5/20/86	86050549	0	42	2.0	40.00	ADD TRIC
	DEGREASER	6/ 2/86	6/ 3/86	86060002	0	42	8.0	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

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 DLE
	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 1EA 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 MAGNATIZING 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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TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
006368	MAGNAFLUX	5/ 8/87	5/12/87	87050239	0	43E	8.0	160.00	WON'T DEMAG
	MAGNAFLUX	6/ 2/87	6/ 8/87	87060929	0	43E	6.0	120.00	DEMAG ADJUSTMENT
	MAGNAFLUX	6/16/87	6/16/87	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	87100946	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\
	MAGAFLUX	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

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	MAGNAFLUX	10/11/88	10/12/88	88100225	0	43E	6.0	120.00	WON'T DEMAG TRANSFERED 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
006368							234.0	4680.00	
							234.0	4680.00	

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

PM.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
005815	MILLING MACH	3/13/86	3/13/86	86030402	0	47	1.0	20.00	INOP

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
000902	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 AJUSTMENT
	SWITCH 427 428	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	8/19/85	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

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	8/16/85	8/16/85	85080495	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
	1CONVEYOR	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	60.0	PROGRAM STOP 12A HAND CONTROL PENDANT HAS BROKEN
	CONVEYOR	1/ 9/86	1/10/86	86010217	0	43M	6.0	120.0	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	NOMENCLATURE	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	1/29/86	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 SWTCH 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	8680402	0	43M	16.0	320.00	OVERHEAD CONVEYOR STOPPED 1238

ANALYSIS REORT 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	8090408	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	11/26/86	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 ADJST OVER TENSION SWITCH
	CONVEYOR 4	12/18/86	12/19/86	86120601	0	43	16.0	320.00	CHAN JAMMING

5/10/89

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 *SE MECHANICS*
	CONVEYOR	2/26/87	2/26/87	87020763	0	43M	4.0	80.00	PROBLEM IS IN 505 BAD AIRLEAK ABOVE STATION 24 26
	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	6/18/8	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	8709014	0	46E	6.0	120.00	NO POWER TO PENDENTS REMOTE UP AND DOWN SWITCH
	CONVEYOR 4	9/14/87	9/14/87	8709041	0	43M	4.0	80.00	SWITCH DRIVE UNIT IN LOOP 4
	CONVEYOR 4	9/14/87	9/16/87	8709011	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

5/10/89

ANALYSIS REPORT OF
TROUBLE CALLS FOR SPECIFIC PM NUMBERS

P.NO	NOMENCLATURE	REQ.DATE	COMP.DATE	PROD.NO	MP.NO	SHOP	MANHRS	COST	PROBLEM
000902	CONVEYOR 4	9/16/87	9/18/87	87090461	0	46E	10.0	200.00	LOOP 4 / NO OT POWER ON THE PENDAND
	CONVEYOR 4	9/18/87	9/18/87	87090572	0	43E	2.0	40.00	SWITC INOP
	CONVEYOR 4	9/22/87	9/22/87	87090674	0	47	1.0	20.00	CHAIN NEEDS TO BE SHORTNED
	CONVEYOR 4	12/ 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	0	47	2.0	40.00	SHORT BLEW A FUSE
	CONVEYOR 4	4/25/88	4/26/88	8804061	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	0	43E	2.0	40.00	RELIEF BUTTON STUCK / ON STATION 9 LOOP 4
	CONVEYOR 4	5/12/88	5/12/88	88050390	0	47M	2.0	40.00	REMOVE LINKS FROM CHAIN
	CONVEYOR 4	6/20/88	6/21/88	88060667	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	0	47E	2.0	40.00	PROGRAM STATION 10IS SHORTED TRANSFERED ROM 43
	CONVEYOR 4	7/ 7/88	7/ 7/88	88070156	0	43E	10.0	200.00	MOTOR ON LOOP 4 IS BURNING UP
	CONVEYOR 4	7/13/88	7/20/88	88070349	0	43M	1.0	20.00	WHEEL GREASER FOR CHAN INOP

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
	CONVEYOR 4	27 8/17/88	8/17/88	88080642	230	0 43E	6.0	120.00	OPEN IN CIRCUIT ONE END HAS NO POWER
	CONVEYOR 4	1 8/18/88	8/22/88	8080685	231	0 43E	6.0	120.00	REPAIR PENDANT
	CONVEYOR 4	42 9/29/88	9/29/88	88090909	273	0 46E	1.0	20.00	WON'T START
	CONVEYOR 4	1 9/30/88	10/ 3/88	88090962	274	0 43M	8.0	160.00	STOP IS LOOSE TRASFERED FROM 43TRANSFERED FROM 47
	CONVEYOR 4	21 10/21/88	10/21/88	88100588	295	0 47E	2.0	40.00	DOW PEDAL INOP.
	CONVEYOR 4	6 10/27/88	10/27/88	88100752	301	0 47M	2.0	40.00	PERAIR BROKEN COLLECTOR SEE SAUNDERS
	CONVEYOR 4	1 10/28/88	10/8/88	88100777	302	0 43E	2.0	40.00	TENDENT SWITCH BROKEN
	CONVEYOR 4	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
	CONVEYOR 4	17 11/18/88	1/18/88	88110557	323	0 43M	4.0	80.00	CHAIN OFF THE DRIVE
	CONVEYOR 4	49 1/ 6/89	1/ 6/89	89010197	6	0 43M	1.0	20.00	CHAIN JAMMED
	CONVEYOR 4	38 2/13/89	2/13/8	89020419	94	0 43M	8.0	160.00	MULTIPLE CHAIN JAM ON LOOPE 4
	CONVEYOR 4	16 3/ 1/89	3/ 1/89	89030022	60	0 43M	8.0	160.00	ADJUST CATAPILLER DRIVE
	CONVEYOR 4	2 3/ 3/89	3/ 6/89	89030100		0 43M	8.0	160.00	REPLACE TORQUE RILL ON CARRYER
	CONVEYOR 4	10 3/13/89	3/14/89	89030351		0 43E	3.0	60.00	LIMIT SWITCH 661 / OUT OF ADJUSTMENT
	CONVEYOR 4	8 3/21/89	3/22/89	89030622		0 43E	4.0	80.00	ALSO ELEC/ MAIN DRIVE IS JAMMED
	CONVEYOR 4	6 3/27/89	3/27/89	89030779		0 43E	2.0	40.00	RELEASE BUTTON STUCK IN
		AA					41		
000902							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 INSULLATING 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
006369	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 O
	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	80.00	WON'T DEMAG
	MAGNAFLUX	2/18/88	2/18/88	88020648	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
006369	MAGNAFLUX	5/19/8	5/23/88	88050619	0	43E	4.0	80.00	WON'T DEMAG
	MAGNAFLUX	6/27/8	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		043E	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
006369							166.0	330.00	
							166.0	3320.00	

REPORT DATE 04/13/89 CRANES REPORT SORTED BY BUILDING NUMBER MBULD MUXXRPT PGM001 PAGE 4

BLDG NO	DES	RECERT DATE	R	CAPICITY	DRIVE	MAKE	TYPE	STYLE	REMARKS
00505	CE20	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 7
00505	CE21	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	BLAST RM
00505	CE22	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	BLAST RM
00505	CE23	900228	Y	1000	AIR	BUDGET	MONO	L CHAI	BLAST RM
00505	CE24	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 5
00505	CE25	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 2
00505	CE26	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 2
[illegible]									
00505	CE28	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 6
00505	CE29	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 2
00505	CE30	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 9
00505	CE31	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	LINE 5
00505	CE32	900228	Y	1000	ELECT	BUDGIT	MONORAIL	LINKCH	LINE 6
00505	CE33	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 6
00505	CE34	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE7
00505	CE35	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE8
00505	CE36	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE7
00505	CE37	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE8
00505	CE38	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 8
00505	CE39	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 8
00505	CE40	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 8
00505	CE41	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 5
00505	CE42	900228	Y	1000	ELECT	BUDGET	MONORAIL	LINKCH	LINE 9
00505	CE43	900228	Y	1000	ELECT	BUDGET	MONO	L CHAI	
00505	CE44	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	
00505	CE45	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	
00505	CE46	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	
00505	CE47	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	
00505	CE48	900228	Y	1000	ELEC	YALE	BRIDGE	L CHAI	
00505	CE49	900228	Y	1000	ELEC	BUDGET	MONO	L CHAI	
[illegible]									
00507	CE11	900331	Y	1 TON	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	MACHINE SHOP AREA
00507	CE12	900331	Y	1 TON	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	MACHINE SHOP AREA
00507	CE13	900331	Y	1 TON	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	MACHINE SHOP BRAKE BP. 96
00507	CE14	900331	Y	1 TON	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	MACHINE SHOP AREA
[illegible]									
00507	CE16	900331	Y	2000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	MACHINE SHOP AREA
00507	CE17	900331	Y	2000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	NDI BAY N.E. CORNER
00507	CE18	900331	Y	2000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	ACROSS FROM MENS LATRINE
00507	CE19	900331	Y	2000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	ACROSS FROM MENS LATRINE
00507	CE2	900331	Y	2000	ELEC	WRIGHT WAY	BRIDGE	LCHAIN	
00507	CE20	900331	Y	2000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	NEAR PAINT BOOTH
00507	CE21	900331	Y	1000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	NEAR C-5 STANDS
00507	CE22	900331	Y	1000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	NEAR C-5 STANDS
00507	CE23	900331	Y	1000	ELECT.	WRIGHT WAY	BRIDGE	LINKCH	
00507	CE24	900331	Y	10 TON	ELECT.	P+H	BRIDGE	WIRERO	WELDING SHOP
00507	CE25	900331	Y	4 TON	ELECT.	P+H	BRIDGE	WIRERO	C-5 LANDING GEAR STAND
00507	CE26	900331	Y	5 TON	ELECT.	P+H	BRIDGE	WIRERO	FOUNDRY ROOM

CE — # 25
has had no maintenance Problems in the Pass year.

NSN / CUST DIR ACCT	IOS CD	<------ NOUN ------> SERIAL NO.	<-- ACQUISITION --> DATE DOCUMENT NO.	PUR CD	COST BLDG #	YR MFG	T S	C P	RECONDITION --> DATE CD	CR	D	COST EQ	NEW USE	COMMENTS	<- DEPRECIATION > $ TO-DATE RCC	USE LIFE	DATE LA INSTALL COST	R/V NEW	R/V OLD	MO RESIDUAL VALUE	MO HST	<EOM> UTIL D/T	TO <-- DATE --> UTIL D/T	X
3510 PZ0-1		ZYGLO CABINET	83112		56,000.00							.00			.00	0	000	000	0	.0	.0	.0
MA 170AJ	I	890450063														0	.00		.00	0	0	.0
3510 PZ0-1		ZYGLO CABINET	83112		56,000.00							.00			.00	0	000	000	0	.0	.0	.0
MA 170AJ	I	890450064														0	.00		.00	0	0	.0
6635 PC200KV		X RAY MACH 200KV	89016		51,273.00							.00			.00	0	000	000	0	.0	.0	.0
MA 170AJ	I	890450026														0	.00		.00	0	0	.0
6635 PC200KV		X RAY MACH 200KV	89016		51,273.00							.00			.00	0	000	000	0	.0	.0	.0
MA 170AJ	I	890450027														0	.00		.00	0	0	.0
RCC TOTALS:					214,546.00										0.00								
3950 011500042		BRIDGE CRANE	86213		8,575.00							.00			844.31	16	88278	127	127	0	.0	.0	.0
MA 170AJ	I	6531 871950013			507	86	3	1	C2	B5	0	N		CSNNEEDED	NPNA	204		.00	1.00	0	0	.0	.0
6635 005347419		INSPECTION UNIT,FLU79166	791720005	C	7,705.00							.00			5,919.14	116	88278	104	104	0	.0	.0	.0
MA 170AJ	I	5			507	67	3	2	C3	A4	0	U			NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	88356	129	129	0	.0	.0	.0
MA 170AJ	I	47 871110022			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	88356	129	129	0	.0	.0	.0
MA 170AJ	I	57 871110023			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	88356	129	129	0	.0	.0	.0
MA 170AJ	I	62 871110025			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	89021	128	129	0	.0	.0	.0
MA 170AJ	I	86 871110027			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	88356	129	129	0	.0	.0	.0
MA 170AJ	I	92 871110024			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 004330034		EDDY CURRENT T/S	85197		16,021.00							.00			2,313.60	22	89021	128	129	0	.0	.0	.0
MA 170AJ	I	94 871110026			225	85	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 008473834		DEGAUSS MACH	86268		11,230.80							.00			1,621.81	22	89021	129	131	0	.0	.0	.0
MA 170AJ	I	88046 871110007			507	86	3	1	C1	C1	0	B	N		NPNA	156		.00	1.00	0	0	.0	.0
6635 010651233		ULTRASONIC TESTER	87041		33,450.00							.00			3,583.83	16	88278	125	125	0	.0	.0	.0
MA 170AJ	I	5C6321 871950014			265	86	3	1	C2	B5	0	N			NPNA	156		.00	1.00	0	0	.0	.0

```
                                       <-- ACQUISITION -> <- RECONDITION --> <- DEPRECIATION >  DATE    R/V   NO                  TO
  NSN              <----- [illegible] ------> DATE    COST    DATE      COST   $ TO-DATE   AMO    LA   NEW OLD HST <EOM> <-- DATE -->
    CUST  IOS SERIAL            DOCUMENT PUR  BLDG YR T C        S EQ NEW             USE  INSTALL  RESIDUAL  UTIL  UTIL      X
DIR ACCT  CD  NO.                  NO.   CD    #  MFG S P CD CR D EX USE COMMENTS  RCC LIFE    COST     VALUE  D/T   D/T       X

6435 011028043   DETECTOR FLAW ULTR 87051     7,400.00                  .00     1,068.62  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  8142               870440042    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011149421   MAG PART INSP MACH 81320   150,000.00                  .00    88,342.60  89 88312   122 119 12     .0  160.0   7.9
 MA 170AJ  I  401                813200045  C  507 82 1 3 A1 A5 2  B  N             NPNA  156      .00     1.00   0      0     .0
                            NA926E170AJ012107  6635011720217      ANALYSIS REFERENCE

6435 011149421   MAG PART INSP MACH 81320   150,000.00                  .00    88,342.60  89 88312   090 087 12     .0   60.0   3.0
 MA 170AJ  I  402                813200046  C  507 82 3 3 C4 B5 2  B  N             NPNA  156      .00     1.00   0     60    3.0

6435 011274453   BORDSCOPE 2100     86183    30,238.84                  .00     4,366.92  22 89021   129 131  0     .0     .0    .0
 MA 170AJ  I  803389             871270032    265 86 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011720216   MAG PART INSPECT   84324    33,200.00                  .00     4,794.56  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  85083              840520053    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011720216   MAG PART INSPECT   84324    33,200.00                  .00     4,794.56  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  88054              840520052    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011720216   MAG PART INSPECT   84324    33,200.00                  .00     4,794.56  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  88055              840520051    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011720217   MAG PART INSPECT   84331    30,000.00                  .00     4,332.46  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  85086              840520055    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011720217   MAG PART INSPECT   84331    30,000.00                  .00     4,332.46  22 89021   126 128  0     .0     .0    .0
 MA 170AJ  I  85087              840520054    507 84 3 1 C1 C1 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 011963440   XRAY MACHINE INDST 87316     8,446.00                  .00       904.87  16 88278   125 125  0     .0     .0    .0
 MA 170AJ  I  5P231              873180028    216 86 3 1 C2 B5 0  B  N              NPNA  156      .00     1.00   0      0     .0

6435 PAA-3137-08 RADIOGRAPHY SYSTEM 87314   445,350.00                  .00    47,716.05  16 88312   126 125 12     .0  168.0   8.3
 MA 170AJ  I  RLT002             873180029    265 86 3 1 C2 B5 0  B  N              NPNA  156      .00     1.00   0      0     .0
                            NA88MF170AJ012107  6635011653669      ANALYSIS REFERENCE

6650 PBORESYS    FIBERSCOPE SYS     86274    27,931.96                  .00     4,958.45  22 88312   131 131  0     .0     .0    .0
 MA 170AJ  I  S/N NEEDED         871110006    507 86 3 1 C1 C1 0  B  N              NPNA   96      .00     1.00   0      0     .0

6780 PT3200      DARK ROOM,PORTABLE 87306    89,995.00                  .00     7,731.11  16 88278   127 127 12     .0  168.0   8.3
 MA 170AJ  O  ANDT01             873110018    216 87 3 1 C2 B5 0  B  N              NPNA  264      .00     1.00   0      0     .0

          RCC  NPNA  TOTALS:               1,226,048.60                         292,330.51

9999             1-5K UPHOLD ITEMS  87275    65,650.10                  .00    19,492.63  15 88312   150 158  0     .0     .0    .0
 MA 170AJ  O  MANY               880070024    507 87 2 1 C1 A4 0  B  N              NPXX   48      .00     1.00   0      0     .0
```

NSN / CUST / DIR ACCT	<---- NOUN ----> / IOS / CD	SERIAL NO.	DATE DOCUMENT NO.	PUR CD	<-- ACQUISITION -> COST BLDG #	YR	T	MFG	<- RECONDITION --> DATE C	S	P	CD	COST CR	D	EX	NEW USE	<- DEPRECIATION > $ TO-DATE COMMENTS	PMO RCC	DATE LA LIFE	R/V NEW INSTALL COST	R/V OLD RESIDUAL VALUE	MO HST UTIL D/T	<EOD> UTIL D/T	TO <-- DATE --> %
	RCC MPXX TOTALS:				65,650.10												19,492.63							
6635 000185835	PORTABLE X-RAY	80181			10,897.40								.00				1,075.32	15	88225	125	123	0	.0	.0
MA 170AJ	I 837	880070064			100	80	2	1	C2	C3	0	B	N				QCMM	156		.00	1.00	0	0	.0
	RCC QCMM TOTALS:				10,897.40												1,075.32							

DIR/CUST MA/170AJ SUMMARY

EQUIP TYPE	NO. MACHINES	ACQ COST	INST COST	RECOND COST	TOTAL COST
IPE	27	1,361,497.00	.00	.00	1,361,497.00
OPE	2	155,645.10	.00	.00	155,645.10
STE	0	.00	.00	.00	.00
TOTAL	29	1,517,142.10	.00	.00	1,517,142.10

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

ACFCM (2) MANPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G61-D2-MG6

RCC: MANPNA 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
Δ	[redacted]	528134030	C	11	DB	1	1		9											
	COTTLE LYNN D	528783018	C	11	DB	1	1		10	X-RAY										
Δ	[redacted]	529801515	C	11	DB	1	1		9											
Δ	[redacted]	153424816	C	11	DB	1	1		9											
Δ	[redacted]	528580252	C	11	DB	1	1		9											
	[redacted]	529663756	C	11	DB	1	1		10	TRAINER										
Δ	[redacted]	529889675	C	11	DB	1	1		9											
Δ	[redacted]YLOR DIXIE L	528644303	C	11	DB	1	1		9											
	PEEK LARRY R	529729035	C	11	DB	1	1		10	X-RAY										
Δ	[redacted]	563706982	C	11	DB	1	1		9											
Δ	[redacted]	528663217	C	11	DB	1	1		9											
	WOOD VERN K	519521764	C	11	DB	1	1		10	X-RAY										
	CANNON GARY	529707631	C	11	DN	1	1		10	X-RAY										
	PEERY DENNIS J	528607902	C	11	DN	1	1		10	X-RAY										

DUTY CODE TOTALS:	PERSONNEL ASSIGNED	14
	PERSONNEL BORROWED	0
	PERSONNEL LOANED	0
	NET STRENGTH	14
F/C TOTAL:	NET STRENGTH	14

Linda Byington
Cindy Hills } ON LOAN
Scott Rowe

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

ACFCM (2) MANPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G61-D2-

RCC: MANPNA 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	J
HATCH WILLIAM W	529580271	C	11	DB	1	1		10										
BAILEY ROBERT W	529467916	C	11	DN	1	1		10										
CORBETT MICHAEL L	529841921	C	11	DN	1	1		10										
[redacted]	528583868	C	11	DN	1	1		10	EC 507									
RAUN RICHARD L	542345000	C	11	DN	1	1		10										
WARDELL THOMAS R	528568153	C	11	DN	1	1		10										

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

ACFCM (2) MANPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G61-D2-MG6 P

RCC: MANPNA 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	J-O-N
DAWSON MAX A	722182752	C	11	DT	1	1	13	10										
DUBBERLY JAMES B	522440003	C	11	DT	1	1	13	10										
GOULD BARRY	529807814	C	11	DT	1	1	13	10										
HUBER RANDALL J	572151114	C	11	DT	1	1	13	10										
HUFFER DEBRA L	529136385	C	11	DT	1	1	13	10										
HUFFER WAYNE E	387426248	C	11	DT	1	1	13	10										
JUAREZ SALVADOR	529781553	C	11	DT	1	1	13	10										
MCCARTY ARTHUR T	119381094	C	11	DT	1	1	13	10										
WATERHOUSE JAY R	011341269	C	11	DT	1	1	13	10										

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) MANPNA (2) RCC TOTAL LABOR ASSIGNMENT REPORT DATE 04-30-89 A-G037G-G81-D2-MG6 PG

RCC: MANPNA FOREMAN CODE: A4 GEORGE KAIN

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

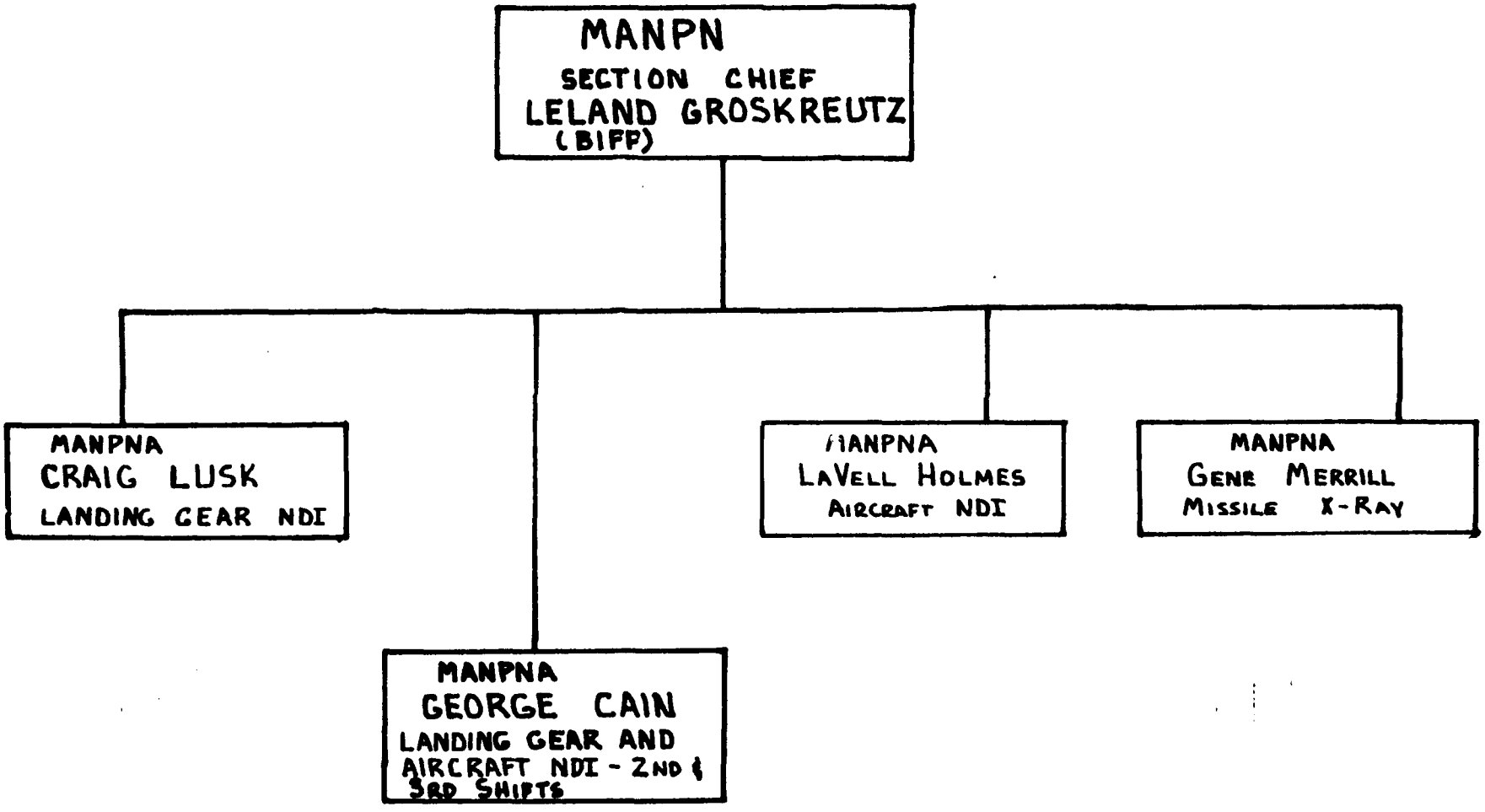
EMPLOYEE NAME	IDENT	MC	DC	SK	DO	SH	SP	STATUS		RCC	DC	SK	DO	FC	SH	SP	EFF DATE	TERM DATE	J-O-N
[redacted]	529566510	C	11	DB	1	2		1											
	529688101	C	11	DB	1	2		1											
	529564227	C	11	DB	1	2		1											
	439946153	C	11	DB	1	2		1											
	529828290	C	11	DB	1	2		1											
	529380592	C	11	DB	1	3		1											
	529781375	C	11	DB	1	2		1											
	528547669	C	11	DB	1	2		1											
	521660002	C	11	DB	1	3		1											
	529788906	C	11	DN	1	2		10	EC 507										
REGAN THOMAS A	573702377	C	11	DN	1	2		10	X-RAY										
SHERWOOD STEPHEN	529627374	C	11	DN	1	2		10	X-RAY										

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

F/C TOTAL: NET STRENGTH 12

RCC TOTAL: NET STRENGTH 47

ORGANIZATION CHART



NON-DESTRUCTIVE INSPECTION CHAIN OF COMMAND AND APPLICABLE LOCATIONS

BIFF GROSKRENTZ (79750)
SECTION CHIEF - MANPN

CRAIG LUSK (7-1026)	GEORGE KANE (7-1026)	LAVELLE HOLMES (7-0309)	GENE MERRILL (7-2113)
507 DAYS	507 SWING	225 DAYS	985
505 DAYS	507 SWING	1	2113
509	225 SWING	265	
216	505 GRAVEYARD	261	
265		233	
TRAILER		270	
1915		271	
510		272	
		507	
		509	

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.

Foreman	Workshift	No. of grade 9's
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 Amoung 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 Collectivily 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 we 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 each morning should be to load the cleaning line since it drives the "downstream" stations.

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	3.88	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 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 Bootnes. 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 Equipted 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 EQUIPTMENT PROCUREMENT GROUP.
THE MAY BE THE METHOD CHOOSEN TO SOLVE THE PROBLEM.

STORAGE

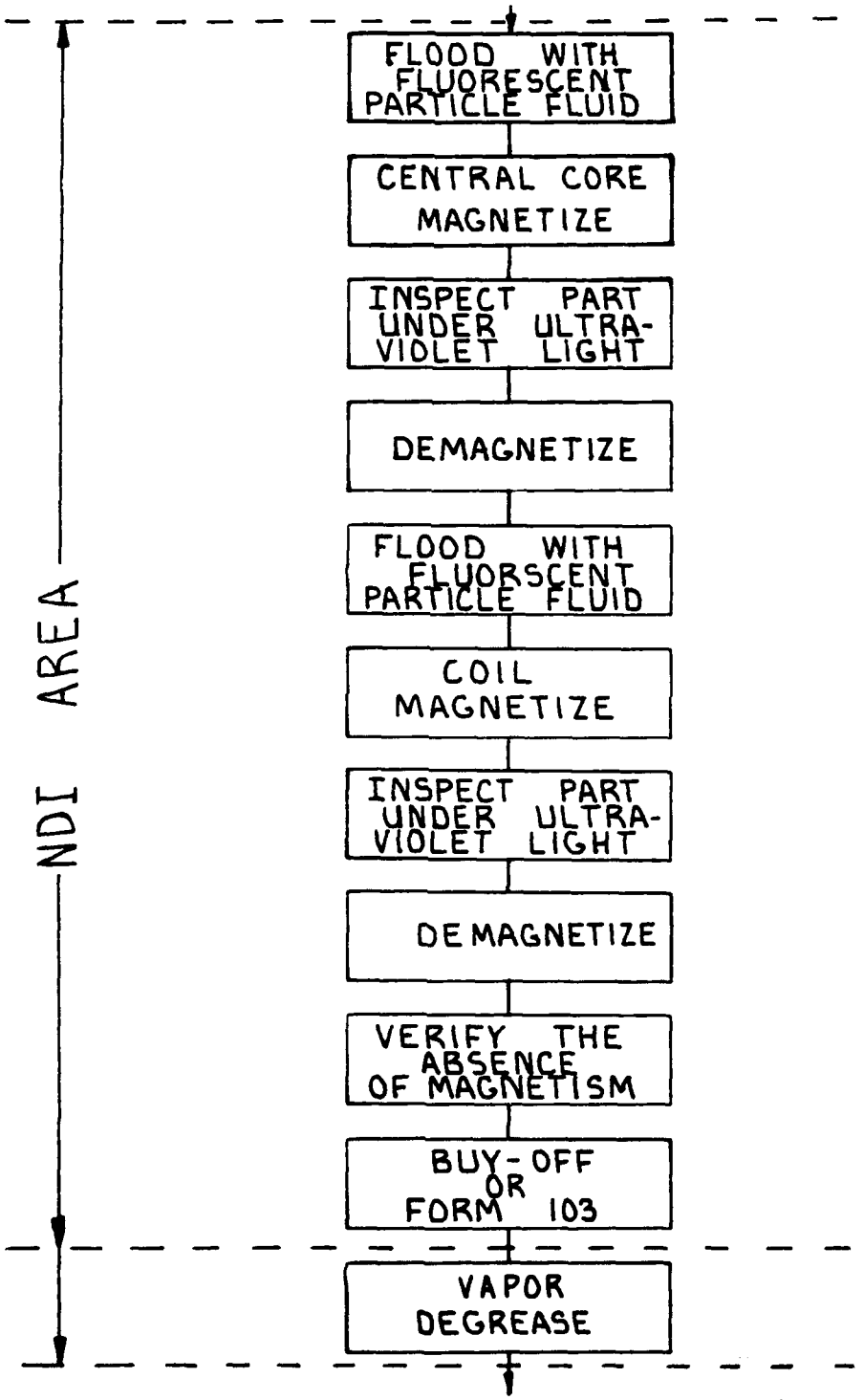
THE FIRST QUEUE AREA IN THE NDI LOOP IS LOCATED IN THE EDDY CURRENT INSPECTION AREA. THE PARTS ARE UNLOADED FROM THE OVERHEAD TROLLEY AND PLACED AROUND THE EDDY CURRENT AREA ON ROLLER CONVEYERS. (STATION 34)

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.

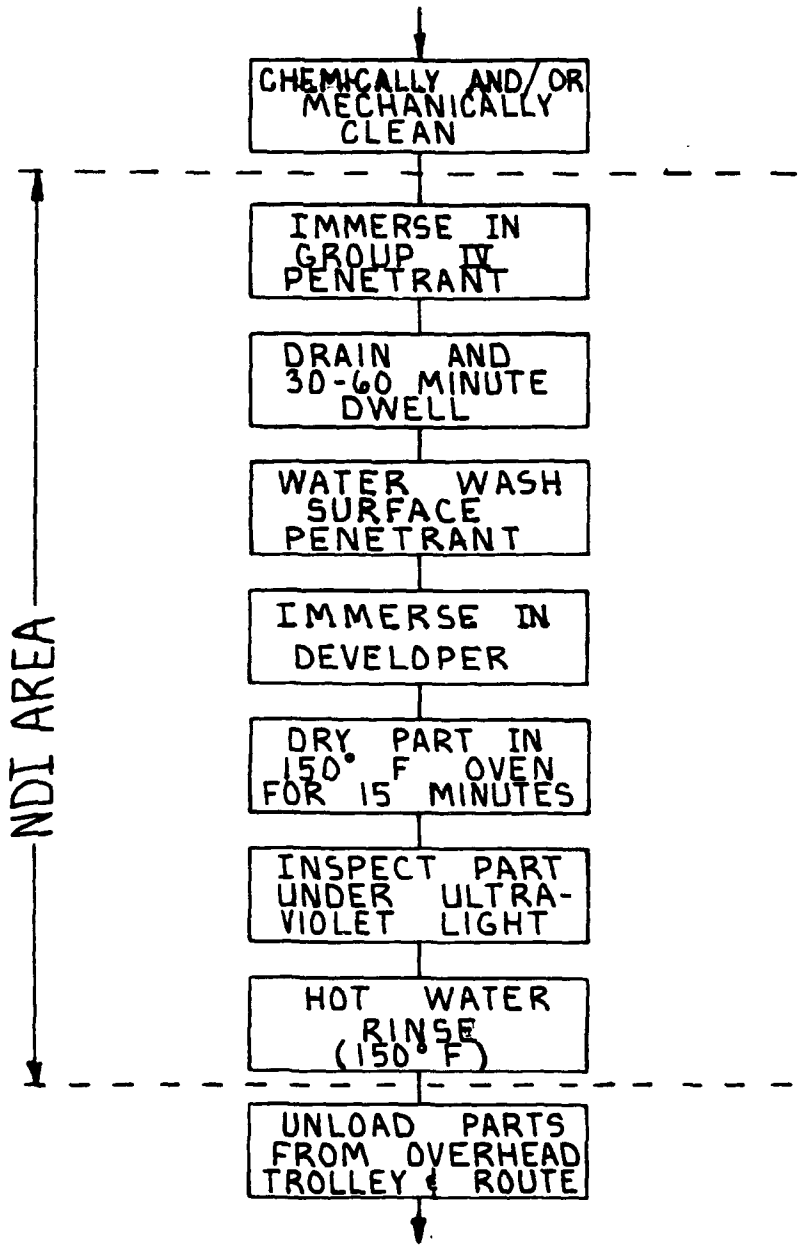
THE NEXT QUEUE AREA IN NDI IS STATION 69. THIS IS THE FLUORESCENT MAGNETIC PARTICLE INSPECTION AREA FOR SMALL PARTS. THE SCHEDULING GROUP SHUTTLES THESE SMALL PARTS FROM THE PREVIOUS OPERATION TO THIS AREA ON PALLETS VIA A FORK TRUCK. PALLETS OF PARTS ARE STACKED DIRECTLY IN FRONT OF THE WORK AREA. IN 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

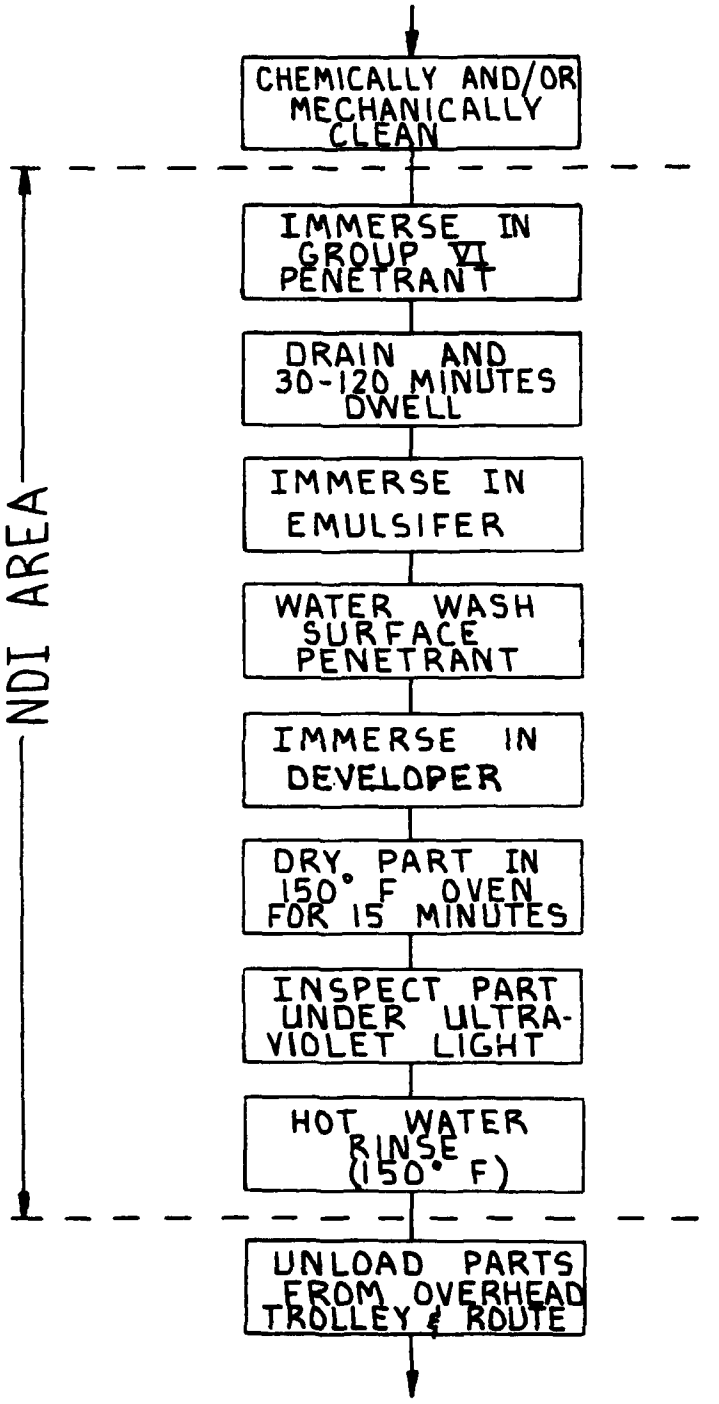


MAGNEZIUM HARDWARE FLOW CHART
(CASTINGS)

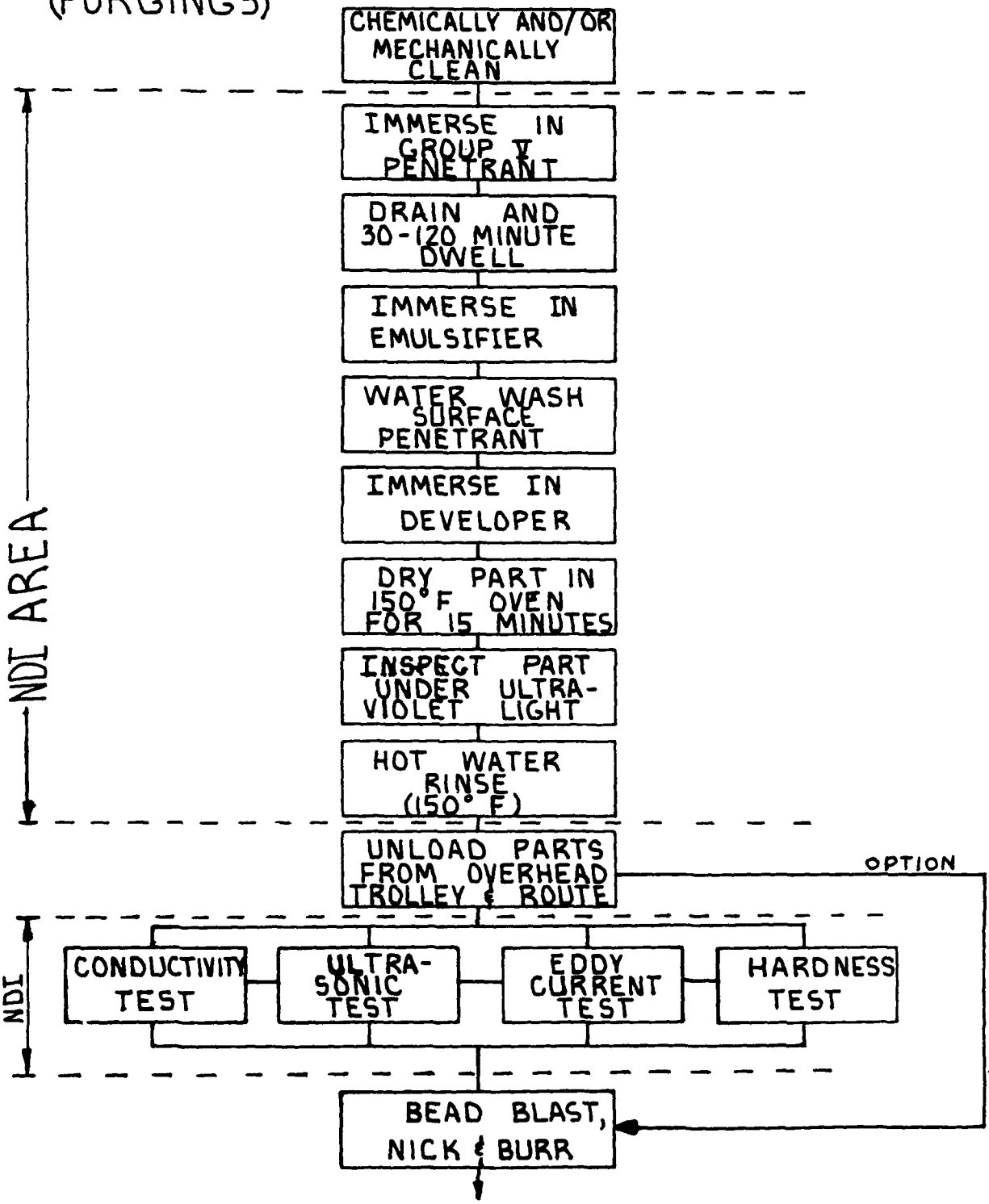
- MANPNA



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 Macklet.

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 methoo 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
MANPWW	MAIN LANDING GEAR EXCEPT C5
MANPWN	NOSE LANDING GEAR EXECPT 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 %	CUMM % EARNED HR
1	00126B	00RF0004C	AIRCRAFT	1661.70	0.0782	0.0782
2	00124B	000F0004E	AIRCRAFT	1646.10	0.0775	0.1557
3	T4885I	LOG-00008492005		1560.00	0.0734	0.2291
4	15468A	1630004927144	KC-135 M	612.71	0.0288	0.2579
5	00458A	0LGM0030F	MSL 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	1300PGROUNDTEST		370.00	0.0174	0.3309
9	16836A	1620001099286	STRUTF4C	342.84	0.0161	0.3470
10	00129B	000F0004G	AIRCRAFT	307.60	0.0145	0.3615
11	00473A	0LGM0030G	MSL RCY	303.10	0.0143	0.3758
12	T4582Q	1300PGROUNDTEST		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	000F0004G	AIRCRAFT	190.80	0.0090	0.4523
19	00131B	000C0130E	AIRCRAFT	189.00	0.0089	0.4612
20	14539A	1560009115682BF	STBLRF4E	186.55	0.0088	0.4700
21	17143A	1620001398474	B52M-AFT	180.74	0.0085	0.4785
22	T4452Q	1300PGR-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	CSMLGRHA	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	1337009784250		150.00	0.0071	0.5639
33	69354A	1620010597842	KC-135 N	146.79	0.0069	0.5708
34	74521A	1620001877445	NLG	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	1337009574611		120.00	0.0056	0.6010
39	16019A	1620010240844	STRUT F4	116.85	0.0055	0.6065
40	13822A	1560007883941BF	RING ASS	115.50	0.0054	0.6119
41	17576A	1620010054192	CSMLGLHA	115.40	0.0054	0.6173
42	17577A	1620010054193	CSMLGLHF	115.40	0.0054	0.6227
43	M6276K	1620012352270		115.06	0.0054	0.6281
44	13829A	1560007906873BF	RING ASS	114.00	0.0054	0.6335
45	15841A	1630002769849	F4 MSG	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 BM	99.91	0.0047	0.6582
50	17239A	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 %	CUMM % 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	15485A	1630004463778	WHL F4	89.44	0.0042	0.7029
60	T2733I	SYS-00005140023		89.00	0.0042	0.7071
61	17327A	1620009118301	TRUNNION	88.32	0.0042	0.7113
62	69549A	1620001386373	LWRSIDES	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	1560012452818WF		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	MLGSTRUT	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-HW	55.65	0.0026	0.7822
84	17396A	1620002671046	DAMPER	54.50	0.0026	0.7848
85	69752A	1560010418545WF	HOR STAB	54.00	0.0025	0.7873
86	T1384I	LOG-00008498028		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	50.08	0.0024	0.8020
92	M4292K	3120018595944LE		50.00	0.0024	0.8044
93	72896A	1630004649162	C5 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	1095009960698	RACK	47.88	0.0023	0.8136
97	69828A	1620005676883	ST VALVE	47.57	0.0022	0.8158
98	15054A	1630000585242	KC135BRK	47.38	0.0022	0.8180
99	T4881J	1620001791083		47.38	0.0022	0.8202
100	17354A	1620005459439	STRUT NL	46.64	0.0022	0.8224
101	19937A	1620010816339	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	1680010520816LS	REEL AS	40.87	0.0019	0.8384
109	14781A	1560008561386BF	HKPNT F4	40.59	0.0019	0.8403
110	26726A	1560012355200WF	VENT FIN	37.80	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	37.18	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	25.20	0.0012	0.8770
134	17407A	1620009921498	BOLT ASY	24.40	0.0011	0.8781
135	14855A	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	1440010736446JB		24.00	0.0011	0.8836
140	26518A	0LGM0030G	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	1620002640744	T38M-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 N	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 % EARNED HR
154	16271A	1650004558129LE	MANIFOLD	20.88	0.0010	0.8996
155	68735A	1630010830445	F15ABBRK	20.80	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	18.98	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	ML6 OUTR	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	SYS-00006514		17.08	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	1630010054189	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	1650003017883		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	13.78	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	T38H-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	SWIVEL	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	1620ND053797G	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	MS224K	1560ND028868CBF		11.57	0.0005	0.9475
220	69554A	1620005251156	LWR 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	74529A	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	1630008521432	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	C5 STR	9.00	0.0004	0.9578
241	T4857J	1620001791083		9.00	0.0004	0.9582
242	74568A	1630004100856	A7 BRK	8.88	0.0004	0.9586
243	69103A	1620010972968	LH CONTR	8.82	0.0004	0.9590
244	S7174A	1440001727419AH	ROTARY I	8.75	0.0004	0.9594
245	15481A	1630004534893	WHL C141	8.66	0.0004	0.9598
246	16296A	1620004821247	CH3-MLG	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	W0124K	1560ND024233CBF		8.28	0.0004	0.9618
251	25918A	1620010141984	RHSTRUT	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	1630008329087	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-0000S140033		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-0000D8FFC89		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	S STRUT	5.90	0.0003	0.9751
291	17315A	1620003069943	S 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	WHLF111	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	F15CDHSG	5.61	0.0003	0.9772
298	16743A	1620002041208	BELLCRNK	5.56	0.0003	0.9775
299	25598A	1630007057296	T38 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	1620010805925	INNER CL	5.28	0.0002	0.9789
304	255840	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 %	CUMM % 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	1650001685965BF	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	TORQ ST	4.72	0.0002	0.9817
318	13306A	1560002265403BF	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	1560P16B710-88		4.50	0.0002	0.9827
323	M3800K	1560P16B710-87		4.50	0.0002	0.9829
324	M3807K	1560P16B710-85		4.50	0.0002	0.9831
325	16316A	1450D11005927AH	SUPT STR	4.40	0.0002	0.9833
326	15641J	1630002769849	HOUSING	4.35	0.0002	0.9835
327	17547A	1620001405242	FS-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	1560010771314WF	RUDDER	4.00	0.0002	0.9849
334	26027A	1560011732771WF	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	1560P16B710-86		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	4310009371374BF	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	27083A	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	FS-LH-DB	3.51	0.0002	0.9883
351	15521A	1630008562073	FB111 PP	3.45	0.0002	0.9885
352	17595A	1620008372427	A7-MLG	3.45	0.0002	0.9887
353	74551A	1620008670810	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

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	PROD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
358	25369A	1620010569656	F-16 CYL	3.04	0.0001	0.9897
359	25734A	4820001390390LE	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 H&G	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	534000527321 3BF		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 NLG	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	1620003051849	BRACE	2.10	0.0001	0.9925
387	74831A	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	15862A	1620010710538	F16PASSY	1.87	0.0001	0.9934
396	96906A	1630008593997	VALVE	1.87	0.0001	0.9935
397	69887A	1620007057261	BS2-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	1005004767940	RACK ASY	1.84	0.0001	0.9940
402	16288A	1620009248927	YOKE	1.82	0.0001	0.9941
403	15161J	1630008810815	BRAKE 14	1.80	0.0001	0.9942
404	15327J	1630008254794	BRKC130	1.80	0.0001	0.9943
405	15819A	1005009118487	BREECH	1.80	0.0001	0.9944
406	15361A	1630000542557	WHLBS2	1.76	0.0001	0.9945
407	16317A	1450011005926AH	ELV W C	1.75	0.0001	0.9946
408	14814A	1560004896619BF	PYLNRF4C	1.70	0.0001	0.9947

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	PROD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
409	T1510Q	1620006776681		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	1620008961203		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	1630008585242	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	697520	1560010410545WF	HOR STAB	1.25	0.0001	0.9971
433	T1383Q	1620PC141CAIPLG		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	1620008699889	BRACE DR	1.20	0.0001	0.9976
438	T7692A	1560011578040WF		1.20	0.0001	0.9977
439	14813A	1560004896617BF	PYLNRF4C	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	000F00165B	AIRCRAFT	1.00	0.0000	0.9982
447	00167C	000F00165C	AIRCRAFT	1.00	0.0000	0.9982
448	00169C	000F00165D	AIRCRAFT	1.00	0.0000	0.9982
449	16582A	1620010715592	F-16TARM	1.00	0.0000	0.9982
450	62486A	1095004767947	RACK MAU	1.00	0.0000	0.9982
451	M6288K	4710010372209		1.00	0.0000	0.9982
452	M7569K			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	C5 HSG	0.90	0.0000	0.9982
459	T5578A	1630011392892		0.88	0.0000	0.9982

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	PROD NO.		NOUN	RCC DPEH	RCC DPEH X	CUMM X EARNED HR
460	17617A	1620001299158	SPRING	0.85	0.0000	0.9982
461	71924A	14400047315555CJ	ACCUMULA	0.85	0.0000	0.9982
462	15053A	1630000528403	BRAKEASS	0.84	0.0000	0.9982
463	16329A	1005010376890	GUN 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	5360ND029601GAH		0.84	0.0000	0.9982
467	T8586A	1630005090317		0.84	0.0000	0.9982
468	15143A	1630006896014	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	1630004100858	P-N 2-12	0.75	0.0000	0.9982
472	74565A	1630000752003	ATD WHL	0.68	0.0000	0.9982
473	15644A	1630001230806	F15 HSG	0.66	0.0000	0.9982
474	16334A	1620010710537	F18MAXLE	0.66	0.0000	0.9982
475	17605A	1620010451024	CYLINDER	0.58	0.0000	0.9982
476	T4629G	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	1630010688013	F15CD TT	0.50	0.0000	0.9982
480	26357A	1005003441550	ROTORBDY	0.50	0.0000	0.9982
481	M5336K	1560ND029098GBF		0.50	0.0000	0.9982
482	M6430K	1650001654582XW		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	1377006605723	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	C130H 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	1560ND026083GBF		0.40	0.0000	0.9982
503	T5305A	1620010088102		0.40	0.0000	0.9982
504	T9357I	1620010576293		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	T7043A	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

	PROD NO.		NOUN	RCC DPEH	RCC DPEH %	CUMM % EARNED HR
511	T?863I	1630011894176		0.33	0.0000	0.9982
512	1?295J	1630000827955	BRKF111	0.30	0.0000	0.9982
513	1?583J	1630008329088	BRAKE PN	0.30	0.0000	0.9982
514	M?590K	5340ND030327GBF		0.30	0.0000	0.9982
515	3?055A	1005000180845	FEED ASY	0.28	0.0000	0.9982
516	M?330K	1560P875799F		0.28	0.0000	0.9982
517	T?587J	1620008277809		0.28	0.0000	0.9982
518	1?438A	1630005802857	T-29 BRK	0.27	0.0000	0.9982
519	6?119A	1630006526092	BRAKE	0.27	0.0000	0.9982
520	6?557A	1620006587980	BRAKEROD	0.26	0.0000	0.9982
521	5?596A	1450001142786AH	YOKE AY	0.25	0.0000	0.9982
522	6?687A	1005010048421	MY DRIVE	0.24	0.0000	0.9982
523	2?597A	1620012548600	TORQUEAM	0.23	0.0000	0.9982
524	6?569A	1620008058495	TORQ STR	0.23	0.0000	0.9982
525	1?693A	1630008736244TH	CYLINDER	0.21	0.0000	0.9982
526	1?576A	1630001473854	FSE BRK	0.20	0.0000	0.9982
527	M1854K	1560ND026002GBF		0.20	0.0000	0.9982
528	M?760K	1560ND030417GWF		0.20	0.0000	0.9982
529	T?521Q	1620001877445		0.20	0.0000	0.9982
530	T?564A	1620008840372		0.20	0.0000	0.9982
531	M?512K	1560ND027399GBF		0.18	0.0000	0.9982
532	1?053J	1630000528403	BRAKEASS	0.15	0.0000	0.9982
533	1?229J	1630003154832	BRAKE	0.15	0.0000	0.9982
534	1?728J	1630009376604	HOUSING	0.15	0.0000	0.9982
535	1?752J	1630010627046	A10 BRAK	0.15	0.0000	0.9982
536	1?847J	1630010597069	F15 C&D	0.15	0.0000	0.9982
537	T?528A	1620005073015		0.15	0.0000	0.9982
538	T?743I	1620010403581		0.15	0.0000	0.9982
539	9?021A	1630007583758	VALVE	0.12	0.0000	0.9982
540	1?822A	1630010555056	WHL F5M	0.11	0.0000	0.9982
541	T11520	1620006238911		0.11	0.0000	0.9982
542	6?556A	1620005918508	ACT BEAM	0.10	0.0000	0.9982
543	M?931K	1560ND029692GBF		0.10	0.0000	0.9982
544	1?138A	1630010345387	E3A TT	0.08	0.0000	0.9982
545	1?279A	1560007393174BF	SPOILERA	0.05	0.0000	0.9982
546	T-175N	000F0016A		0.01	0.0000	0.9982
547	T-601A			0.01	0.0000	0.9982
548	6?555A	1620006142351	UPUNIVLH	-0.21	0.0000	0.9982
549	72897A	1630004649165	CS EP	-2.00	-0.0001	0.9981
550	1?567A	1620010381912	KC-135 N	-3.11	-0.0001	0.9980
				21,240.31		

** TOTAL PAGE.05

OGDEN 80/20 SORTED BY MANPNA

NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
00RF0004C	00126B		.	.	74	0.0035			1	0.0782					18	0.0146	2	0.0836	3575.29	0.017639
000F0004E	00124B		.	.	70	0.0039			2	0.0775	227	0.0001			11	0.0188	1	0.0858	3744.75	0.036115
LOG-00008492005	T4885I		.	.					3	0.0734									1559.04	0.043807
1630004927144	15468A	S	5	.	2	0.0415	1	0.0557	4	0.0288	4	0.0391			6	0.0242			6348.32	0.075127
OL0M0030F	00458A		.	.					5	0.0206									437.55	0.077286
1620001099287	18837A		30	87	17	0.0129	15	0.0124	6	0.0176	8	0.0306	1	0.0722	2	0.0356	29	0.0100	5200.55	0.102944
000F0004E	00199B		.	.	169	0.0008			7	0.0174							38	0.0068	509.36	0.105457
1300PGROUNDTEST	T4989Q		.	.					8	0.0174									369.58	0.107280
1620001099288	18838A		.	11	15	0.0131	13	0.0137	9	0.0161	10	0.0279	2	0.0695	4	0.0298	24	0.0107	4870.74	0.131311
000F0004G	00129B		.	.	190	0.0005			10	0.0145					72	0.0033	11	0.0205	754.50	0.135034
OL0M0030G	00473A		.	.					11	0.0143									303.74	0.136532
1300PGROUNDTEST	T4582Q		.	.					12	0.0141									299.49	0.138010
1630011320400	82027A	S	5	241	9	0.0238	3	0.0400	13	0.0123	11	0.0233			23	0.0115			3748.80	0.156505
00RF0004C	00109B		.	.	182	0.0005			14	0.0109					108	0.0020	39	0.0061	409.67	0.158526
1620009485066	18815A		.	.	118	0.0019	20	0.0106	15	0.0106	45	0.0059	7	0.0302	9	0.0190	12	0.0190	2315.59	0.169951
1630004210318	15592A		5	115	22	0.0105	99	0.0024	16	0.0101	3	0.0467							2774.30	0.183638
1620002468005	74524A		.	9	37	0.0063	22	0.0097	17	0.0095	12	0.0230			14	0.0157			2234.99	0.194665
000F0004G	00119B		.	.	254	0.0002			18	0.0090					109	0.0020	25	0.0108	428.73	0.196780
000C0130E	00131B		.	.					19	0.0089							138	0.0008	198.56	0.197760
1560009110882BF	14539A		.	85					20	0.0088							8	0.0302	665.96	0.201045
1620001388474	17143A		15	38	10	0.0197	8	0.0204	21	0.0085	5	0.0341	5	0.0414	1	0.0400	54	0.0043	5134.89	0.226379
1300PGR-TEST288	T4452Q		.	.					22	0.0085									180.54	0.227270
1620001388473	17142A		15	28	12	0.0161	8	0.0162	23	0.0084	9	0.0290	6	0.0321	3	0.0328	55	0.0043	4241.38	0.248198
1620010204973	17565A		10	.	23	0.0099	10	0.0161	24	0.0083	6	0.0336	3	0.0551	8	0.0197	27	0.0102	4318.94	0.269504
1630010389239	15828A	S	6	250	6	0.0301	2	0.0403	25	0.0083	7	0.0325							3978.63	0.289133
1620010054191	17575A		.	37	5	0.0393	48	0.0058	26	0.0081	14	0.0197	8	0.0285	17	0.0132	87	0.0017	3744.30	0.307607
1620007419178	17357A		.	.	71	0.0036	26	0.0095	27	0.0076			44	0.0051	19	0.0128			1066.71	0.312869
1560012355201WF	20727A		.	.					28	0.0075									159.30	0.313655
1377011418911	89603A		.	.					29	0.0073									155.05	0.314420
000V0010A	00141B		.	.			378	0.0000	30	0.0072	189	0.0003	123	0.0007	147	0.0012	119	0.0009	230.43	0.315557
1630010585912	19588A		5	166	21	0.0110	42	0.0070	31	0.0071	16	0.0191	12	0.0224	59	0.0043			2187.93	0.326352
1337000784250	T1532I		.	.					32	0.0071									150.81	0.327098
1620010597842	88354A		12	54	25	0.0088	12	0.0140	33	0.0069	21	0.0124	34	0.0076	13	0.0164	19	0.0137	2313.41	0.338510
1620001877445	74521A		.	7	44	0.0060	21	0.0104	34	0.0066	13	0.0200			34	0.0079	46	0.0054	1894.49	0.347856
1630011375742	20183A		5	26	19	0.0119	11	0.0151	35	0.0063	24	0.0107			48	0.0053			1680.61	0.356148
1630000130120	15359A		5	.	26	0.0084	16	0.0116	36	0.0059	18	0.0175			64	0.0039			1690.43	0.364488
1630011826267	80101A		5	188	3	0.0403	4	0.0400	37	0.0058	1	0.0532			7	0.0215			5902.71	0.393610
1337009574011	T1531I		.	.					38	0.0058									118.95	0.394197
1620010248844	18019A		.	20	51	0.0052	48	0.0064	39	0.0055	40	0.0063	10	0.0237	18	0.0130	191	0.0003	1633.71	0.402257
1560007883947BF	13822A		.	.					40	0.0054									114.70	0.402823
1620010054192	17576A		21	3			29	0.0088	41	0.0054	17	0.0190	15	0.0191	20	0.1220			5315.04	0.429046
1620010054193	17577A		21	5			47	0.0058	42	0.0054	28	0.0100	18	0.0184	38	0.0073	72	0.0024	1330.45	0.435610
1620012352270	M8276K		.	.					43	0.0054					49	0.0051			271.39	0.436949
1560007906873BF	13829A		.	.					44	0.0054							9	0.0287	538.23	0.439604
1630002769849	15641A		32	141	34	0.0068	35	0.0078	45	0.0053	22	0.0123			193	0.0007	7	0.0302	1654.54	0.447767
1560007944727BF	13288A		.	50					46	0.0051							32	0.0093	255.85	0.449030
1620004427877	74527A		.	2	38	0.0062	14	0.0134	47	0.0049	2	0.0494	28	0.0108	10	0.0189	51	0.0047	3785.10	0.467704
1630002892622	15162A		28	136	11	0.0166	23	0.0097	48	0.0047	15	0.0195	178	0.0001	65	0.0038	30	0.0097	2178.78	0.478453
1620001791425	74692A		.	.	18	0.0121	58	0.0049	49	0.0047	44	0.0059	38	0.0065	24	0.0106	69	0.0027	1474.91	0.485730

OGDEN 80/20 SORTED BY MANPNA

NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWS	PWP	LTOT	CUM
1820006793440	17239A		.	2	108	0.0021	53	0.0051	50	0.0046	41	0.0062	23	0.0125	27	0.0096		.	1131.17	0.491311
1820008981203	19844A		.	.	87	0.0028	48	0.0058	51	0.0046	37	0.0066	22	0.0131	22	0.0118		.	1275.75	0.497605
000F0004E	001188		.	.	.	.	.	.	52	0.0046	.	.	.	.	.	.	.	.	97.71	0.498087
1820010159458	17631A		.	.	.	.	.	.	53	0.0046	.	.	52	0.0038	37	0.0073	.	.	392.79	0.500025
1580011358856WF	25584A		.	.	.	.	.	.	54	0.0045	.	.	.	.	.	.	.	.	95.58	0.500497
1820002890278	17478A		.	9	55	0.0049	17	0.0115	55	0.0045	29	0.0079	19	0.0152	26	0.0099	.	.	1559.86	0.508193
1820010389102	68657A		.	.	41	0.0061	34	0.0080	56	0.0045	230	0.0001	.	.	101	0.0021	.	.	638.10	0.511341
000F0004D	001218		.	.	236	0.0003	.	.	57	0.0043	.	.	.	.	194	0.0007	59	0.0037	183.50	0.512246
1820006778681	16123A		.	.	28	0.0070	93	0.0028	58	0.0043	133	0.0008	.	.	87	0.0026	.	.	566.53	0.515041
1830004483778	15485A		.	25	63	0.0042	33	0.0083	59	0.0042	100	0.0014	.	.	33	0.0080	.	.	803.51	0.519006
SYS-00005140023	T2733I		.	.	.	.	.	.	60	0.0042	.	.	.	.	.	.	.	.	89.21	0.519446
1820009118301	17327A		78	89	122	0.0017	51	0.0055	61	0.0042	33	0.0073	27	0.0104	30	0.0087	.	.	1100.24	0.524874
1820001386373	69549A		.	.	75	0.0034	89	0.0035	62	0.0041	.	.	.	.	78	0.0032	.	.	421.76	0.526955
1820010054184	17578A		21	5	8	0.0264	65	0.0041	63	0.0041	47	0.0054	18	0.0170	42	0.0064	103	0.0010	2027.08	0.536956
1830007776698	15068A		35	.	24	0.0088	45	0.0066	64	0.0039	38	0.0064	13	0.0216	240	0.0004	20	0.0117	1508.12	0.544396
1337011451963	T2532A		.	.	.	.	.	.	65	0.0039	.	.	.	.	.	.	.	.	82.84	0.544805
8888P-LGM118A	T5733N		.	.	.	.	.	.	66	0.0038	.	.	.	.	.	.	.	.	80.71	0.545203
43100093713748F	68661A		.	.	.	.	.	.	67	0.0037	.	.	.	.	.	.	.	.	78.59	0.545591
1820006518221	17451A		.	1	138	0.0014	68	0.0040	68	0.0036	62	0.0037	37	0.0067	28	0.0095	.	.	828.29	0.549677
1820006525472	17245A		.	.	81	0.0031	97	0.0026	69	0.0034	56	0.0046	.	.	53	0.0049	.	.	625.33	0.552763
1560012452818WF	M1069K		.	.	.	.	.	.	70	0.0033	.	.	.	.	.	.	.	.	70.09	0.553108
1005000588753	74805A		.	2	.	.	.	.	71	0.0033	.	.	88	0.0017	5	0.0278	14	0.0173	1230.31	0.559178
1830004210319	15592J		5	115	.	.	19	0.0110	72	0.0031	.	.	.	.	.	.	.	.	382.39	0.561065
1830012288043	69595A	S	.	71	18	0.0130	7	0.0207	73	0.0030	23	0.0113	.	.	15	0.0146	.	.	2127.89	0.571563
1560009834324BF	18385A		.	.	.	.	.	.	74	0.0030	.	.	162	0.0002	426	0.0000	178	0.0003	72.21	0.571920
1830005756750	T5736I		.	.	48	0.0055	55	0.0050	75	0.0029	.	.	.	.	.	.	13	0.0178	707.24	0.575409
1095011003892	69324A		.	.	.	.	147	0.0013	76	0.0029	172	0.0004	.	.	12	0.0172	.	.	645.20	0.578592
9999POV10A	T13D2A		.	.	86	0.0028	114	0.0019	77	0.0028	72	0.0027	.	.	75	0.0033	.	.	447.02	0.580798
1560009547752BF	14729A		8	85	.	.	.	.	78	0.0028	.	.	.	.	.	.	.	.	59.47	0.581091
1830010385128	68521A		.	.	32	0.0089	5	0.0280	79	0.0027	34	0.0069	.	.	91	0.0025	.	.	1463.73	0.588313
1820011851141	25737A		.	.	33	0.0069	126	0.0017	80	0.0027	71	0.0028	9	0.0253	21	0.0119	.	.	1342.79	0.594938
1560001706671BF	18863A		.	.	.	.	.	.	81	0.0027	.	.	.	.	427	0.0000	186	0.0003	62.11	0.595244
000F0004F	A4141N		.	.	.	.	.	.	82	0.0026	.	.	.	.	.	.	.	.	55.22	0.595516
1820011671000	26338A		.	.	59	0.0043	36	0.0074	83	0.0026	.	.	48	0.0041	35	0.0075	.	.	746.54	0.599200
1820002871046	17386A		.	.	.	.	.	.	84	0.0026	120	0.0009	107	0.0010	83	0.0030	.	.	205.98	0.600216
1560010410545WF	69752A		.	.	.	.	.	.	85	0.0025	.	.	47	0.0043	.	.	.	.	133.22	0.600873
LOG-00008492028	T1384I		.	.	.	.	.	.	86	0.0025	.	.	.	.	.	.	.	.	53.10	0.601135
1830011253857	62823A	S	5	8	68	0.0041	37	0.0074	87	0.0025	28	0.0079	.	.	100	0.0022	.	.	847.88	0.605317
1820004325851	72877A	S	12	19	91	0.0025	133	0.0016	88	0.0025	134	0.0008	31	0.0090	85	0.0027	125	0.0007	496.13	0.607765
1820006052788	69855A	S	41	63	237	0.0003	177	0.0008	89	0.0024	52	0.0048	.	.	25	0.0100	.	.	606.15	0.610755
1820010627002	17402A		.	17	69	0.0040	30	0.0086	90	0.0024	25	0.0105	11	0.0230	39	0.0072	44	0.0056	1882.48	0.618958
1820000222823	94332A		.	.	.	.	.	.	91	0.0024	74	0.0027	137	0.0004	97	0.0022	.	.	245.81	0.620170
3120010595844LE	M4202K		.	.	.	.	.	.	92	0.0024	.	.	.	.	113	0.0020	.	.	112.42	0.620725
1830004649162	72896A		.	.	49	0.0055	81	0.0047	93	0.0023	.	.	.	.	.	.	71	0.0025	443.17	0.622911
1830008810815	15161A		.	.	36	0.0063	67	0.0037	94	0.0023	27	0.0090	110	0.0010	164	0.0009	90	0.0015	876.01	0.627233
1820006518222	17313A		.	22	162	0.0009	94	0.0027	95	0.0023	49	0.0053	39	0.0061	58	0.0044	246	0.0001	848.02	0.630431
1095009980098	74955A		.	.	.	.	123	0.0018	96	0.0023	.	.	.	.	94	0.0023	136	0.0006	180.83	0.631323
1820005676803	69828A		.	.	.	.	.	.	97	0.0022	.	.	86	0.0018	87	0.0037	.	.	193.95	0.632280
1830000585242	15054A		28	82	27	0.0082	25	0.0095	98	0.0022	30	0.0077	84	0.0019	146	0.0012	.	.	1061.11	0.637515

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NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1620001791083	T4881J		67	.	.	.	.	.	99	0.0022									46.73	0.637745
1620005459439	17354A		.	.	84	0.0024	58	0.0048	100	0.0022	101	0.0013	24	0.0113	32	0.0084		.	806.91	0.641726
1620010816339	19037A		.	2	58	0.0045	74	0.0033	101	0.0021	36	0.0066	21	0.0145	44	0.0061		.	1069.49	0.647003
1630008658700	62805A		.	.	20	0.0112	6	0.0218	102	0.0021	84	0.0033		.	152	0.0011		.	1298.94	0.653411
1620008825059	15088A		.	.	.	.	.	.	103	0.0020		.	14	0.0194	90	0.0025		.	480.78	0.655783
1620001791083	74516A		67	.	141	0.0013	85	0.0026	104	0.0020	19	0.0156	82	0.0020	62	0.0040	85	0.0018	1049.96	0.660964
1005010086283	25638A		.	1	.	.	.	.	105	0.0020		.		.	119	0.0018		.	97.78	0.661446
1630011158736	25425A		.	.	46	0.0058	31	0.0084	106	0.0020	60	0.0038		.	110	0.0020		.	745.62	0.665125
1580005660341BF	13278A		.	.	.	.	.	.	107	0.0019		.		.		.		.	40.36	0.665324
1680010520816LS	63070A		.	.	.	.	.	.	108	0.0019		.		.		.		.	40.36	0.665523
1580008581388BF	14781A		18	54		.	221	0.0005	109	0.0019		.	43	0.0052	238	0.0004	15	0.0155	409.80	0.667545
1560012355200WF	20726A		.	.	.	.	.	.	110	0.0018		.		.		.		.	38.23	0.667733
1620012026349	20842A		.	.	78	0.0032	137	0.0015	111	0.0018	43	0.0061	136	0.0004		.		.	487.13	0.670137
1620001177320	19838A		.	.	.	.	.	.	112	0.0018	269	0.0000	80	0.0020	219	0.0006		.	93.93	0.670600
1620007391748	19839A		.	.	.	.	.	.	113	0.0018	267	0.0000	63	0.0028	184	0.0007		.	111.91	0.671152
1630005918349	15803A		11	.	52	0.0051	50	0.0057	114	0.0017	50	0.0052		.		.	73	0.0024	672.36	0.674469
1620000271193	72573A		.	.	.	.	.	.	115	0.0017		.	35	0.0074	50	0.0050		.	327.61	0.676086
1630011382882	45578A		.	.	88	0.0028	88	0.0028	116	0.0017	155	0.0005		.	191	0.0007		.	258.34	0.677360
1620011670999	20337A		.	.	370	0.0000	59	0.0048	117	0.0017	42	0.0062	54	0.0036	52	0.0049		.	666.92	0.680651
1620007117771	17348A		.	.	78	0.0033	57	0.0049	118	0.0016		.	59	0.0032	36	0.0075		.	596.69	0.683595
1630011414895	89794A	S	5	28	72	0.0035	115	0.0019	119	0.0016	122	0.0009		.	316	0.0002		.	274.36	0.684948
1620010856009	19838A		.	.	174	0.0007		.	120	0.0016	98	0.0018	56	0.0034	47	0.0053	152	0.0005	367.01	0.686759
SYS-00006514	T1484I		.	.	.	.	.	.	121	0.0016		.		.		.		.	33.98	0.686927
1620008322368	74506A		.	.	121	0.0017	148	0.0013	122	0.0015	84	0.0022		.	98	0.0022		.	302.28	0.688418
1620007098371	17347A		.	.	115	0.0019	87	0.0029	123	0.0015	114	0.0011	89	0.0017	41	0.0065		.	471.29	0.690743
1620PC141CAIPLG	T1386Q		.	.	227	0.0003	86	0.0029	124	0.0014		.		.		.		.	125.16	0.691361
1620006986015	97709A		.	.	.	.	.	.	125	0.0014	173	0.0004	142	0.0003		.	161	0.0004	59.42	0.691654
1620011627542	83317A		.	.	110	0.0020	78	0.0031	126	0.0014	111	0.0011		.	112	0.0020	76	0.0022	343.88	0.693350
1620PC141CAIPLG	T1385Q		.	.	223	0.0003	85	0.0029	127	0.0014		.		.		.		.	125.16	0.693968
1620010063237	17527A		.	.	109	0.0020	121	0.0018	128	0.0014	128	0.0008	33	0.0083	142	0.0013		.	391.41	0.695899
1630000816687	15746J		6	244	.	.	63	0.0045	129	0.0013		.		.		.		.	157.11	0.696674
1620012348655	28109A		.	.	165	0.0008	108	0.0020	130	0.0013	86	0.0020		.	168	0.0009		.	233.46	0.697826
000F0016A	00161A		.	.	.	.	.	.	131	0.0013		.		.		.	174	0.0004	33.96	0.697994
1620009746793	74553A		.	.	124	0.0016	84	0.0029	132	0.0012	76	0.0026		.	122	0.0017		.	340.35	0.699673
1560002328048BF	18063A		.	.	.	.	.	.	133	0.0012		.		.		.		.	25.49	0.699798
1620009921498	17407A		.	.	147	0.0012	109	0.0020	134	0.0011	165	0.0004	30	0.0092	84	0.0029		.	407.08	0.701807
1560001141898BF	14855A		.	.	.	.	.	.	135	0.0011		.		.		.		.	23.38	0.701922
1620006706802	16264A		.	.	83	0.0030	76	0.0032	136	0.0011	58	0.0040		.	61	0.0041		.	538.55	0.704579
1580011411084WF	26258A		.	.	.	.	.	.	137	0.0011		.	78	0.0021		.		.	82.49	0.704887
5306002972568FG	M0194K		.	.	.	.	.	.	138	0.0011		.		.	470	0.0000	175	0.0004	29.71	0.705034
1440010738446JB	T6874L		.	.	.	.	175	0.0008	139	0.0011		.		.	176	0.0008		.	70.98	0.705384
OLGM0030G	26518A		.	.	.	.	.	.	140	0.0011		.		.		.		.	23.36	0.705499
1620006986014	97659A		.	.	.	.	.	.	141	0.0011	181	0.0003	148	0.0003	227	0.0005	173	0.0004	63.97	0.705815
1620009272600	98136A		.	.	.	.	.	.	142	0.0011		.		.		.		.	23.36	0.705930
1630010627046	15752A		.	.	29	0.0070	52	0.0055	143	0.0011	31	0.0075	130	0.0005	263	0.0003		.	812.16	0.709937
1620004427875	89761A		.	.	.	.	.	.	144	0.0011	195	0.0002	134	0.0004	235	0.0004		.	51.98	0.710194
1560008581388BF	T5046J		18	54		.	120	0.0018	145	0.0011		.		.		.	150	0.0005	83.09	0.710604
1630009376804	15728A		.	.	231	0.0003	100	0.0024	146	0.0011		.		.	278	0.0003		.	113.61	0.711164
1630009009739	15139A	S	39	104	47	0.0057	32	0.0083	147	0.0011	53	0.0048		.	31	0.0087		.	969.85	0.715949

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NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1820001486466	74652A		.	.	107	0.0021	154	0.0011	148	0.0011	116	0.0010	57	0.0033	82	0.0030	143	0.0006	346.34	0.717658
1820002840744	17474A		8	28	85	0.0024	68	0.0035	149	0.0011	69	0.0029	49	0.0041	78	0.0032	.	.	523.20	0.720239
1820010185824	17479A		.	.	.	.	.	.	150	0.0010	238	0.0001	87	0.0017	107	0.0020	.	.	118.80	0.720825
1580002328030BF	18061A		.	.	.	.	.	.	151	0.0010	.	.	.	.	.	.	.	.	21.24	0.720930
1830002861870	72898A		.	15	85	0.0028	28	0.0088	152	0.0010	39	0.0064	.	.	95	0.0023	.	.	740.77	0.724585
1820007158562	42626A		.	.	103	0.0021	131	0.0017	153	0.0010	130	0.0008	41	0.0058	55	0.0047	211	0.0002	445.07	0.726781
1850004558128LE	18271A		.	.	.	.	.	.	154	0.0010	123	0.0009	.	.	231	0.0004	.	.	73.46	0.727143
1830010830445	88735A		.	.	93	0.0024	90	0.0028	155	0.0010	141	0.0007	147	0.0003	182	0.0007	167	0.0004	262.06	0.728436
1830005470118	T5530I		.	.	118	0.0017	118	0.0018	156	0.0010	.	.	.	.	.	.	41	0.0059	237.32	0.729607
1820010135910	17418A		.	.	135	0.0014	110	0.0020	157	0.0010	90	0.0018	71	0.0024	108	0.0020	.	.	320.67	0.731189
1005008853726	63822A		.	.	.	.	.	.	158	0.0009	.	.	.	.	40	0.0071	47	0.0054	322.91	0.732782
1300PDYETEST	T4449N		.	.	.	.	.	.	159	0.0009	.	.	.	.	.	.	.	.	19.12	0.732876
1830010506139	62922A	S	5	1	99	0.0023	79	0.0030	160	0.0009	54	0.0048	.	.	223	0.0005	.	.	425.51	0.734976
1830007776898	15068J		35	.	.	.	105	0.0022	161	0.0009	.	.	.	.	.	.	.	.	82.42	0.735382
1820010389541	17688A		.	.	.	.	.	.	162	0.0009	187	0.0003	.	.	.	.	.	.	32.43	0.735542
1820001790438	72863A		.	.	.	.	.	.	163	0.0009	199	0.0002	73	0.0024	153	0.0011	.	.	106.51	0.736068
1580002488184BF	13816A		.	.	.	.	.	.	164	0.0009	.	.	.	.	.	.	28	0.0101	179.33	0.736953
1830007300128	18288A		.	.	42	0.0081	39	0.0072	165	0.0009	73	0.0027	.	.	145	0.0012	.	.	626.31	0.740043
1580002488159BF	18133A		.	.	.	.	.	.	166	0.0009	.	.	.	.	.	.	33	0.0088	158.71	0.740828
1820003238292	72858A		.	.	.	.	.	.	167	0.0009	282	0.0000	62	0.0028	158	0.0010	290	0.0000	102.01	0.741329
1820011031850	69833A		.	.	148	0.0012	152	0.0012	168	0.0009	168	0.0004	.	.	118	0.0018	.	.	174.57	0.742190
1820002223887	72868A		.	.	.	.	.	.	169	0.0009	234	0.0001	66	0.0026	102	0.0021	.	.	136.52	0.742864
1820002307141	72864A		.	.	.	.	.	.	170	0.0009	252	0.0000	67	0.0028	181	0.0007	.	.	89.07	0.743303
1820010700632	17664A		.	.	104	0.0021	.	.	171	0.0008	131	0.0008	81	0.0020	114	0.0019	.	.	231.90	0.744447
1830001578723	15523A		5	.	137	0.0014	43	0.0069	172	0.0008	20	0.0147	.	.	131	0.0014	250	0.0001	968.16	0.749224
1830005557523	15387A		25	44	77	0.0033	41	0.0071	173	0.0008	88	0.0018	.	.	322	0.0002	57	0.0040	502.40	0.751703
1820004483778	72879A	S	106	51	200	0.0004	248	0.0003	174	0.0008	81	0.0023	48	0.0045	99	0.0022	226	0.0001	296.65	0.753166
1820011252217	18214A		.	.	.	.	.	.	175	0.0008	277	0.0000	182	0.0000	54	0.0047	.	.	161.39	0.753962
1820011680338	69803A		.	.	114	0.0020	136	0.0015	176	0.0008	150	0.0006	77	0.0021	115	0.0019	94	0.0014	286.27	0.755375
SYS-00006514	A0860N		.	.	.	.	.	.	177	0.0008	.	.	.	.	.	.	.	.	16.99	0.755459
1830000818887	15748A		8	244	98	0.0023	62	0.0045	178	0.0008	67	0.0030	.	.	.	.	.	.	371.34	0.757291
1820007158561	42625A		.	.	120	0.0017	144	0.0014	179	0.0008	158	0.0005	42	0.0056	228	0.0005	210	0.0002	270.16	0.758624
1450011681130AH	M0600K		.	.	.	.	.	.	180	0.0008	.	.	.	.	.	.	.	.	16.99	0.758707
1830005582584	15851A		.	2	155	0.0011	412	-0.0008	181	0.0008	109	0.0011	.	.	331	0.0001	.	.	89.73	0.759150
1830002420942	15520A		.	8	84	0.0029	38	0.0073	182	0.0008	75	0.0026	.	.	89	0.0026	.	.	537.98	0.761804
1830010054188	15642A	S	11	5	136	0.0014	98	0.0025	183	0.0007	.	.	100	0.0013	.	.	146	0.0006	176.40	0.762675
1830005404253	34507J		.	.	.	.	118	0.0019	184	0.0007	.	.	.	.	.	.	.	.	89.54	0.763018
1820000254773	83711A		.	.	158	0.0011	164	0.0010	185	0.0007	259	0.0000	.	.	188	0.0007	.	.	109.03	0.763556
1830008691784	38192A		.	.	152	0.0011	72	0.0035	186	0.0007	204	0.0002	.	.	.	.	113	0.0009	182.62	0.764457
1880010530071L8	18557A		.	.	.	.	.	.	187	0.0007	.	.	.	.	.	.	.	.	14.87	0.764530
1830009141329	15757A		.	.	56	0.0048	18	0.0114	188	0.0007	66	0.0031	.	.	128	0.0015	107	0.0009	732.30	0.768143
1820009192742	T996DA		.	.	.	.	.	.	189	0.0007	.	.	.	.	.	.	.	.	14.87	0.768216
1820010692334	69813A		.	.	.	.	.	.	190	0.0007	.	.	99	0.0013	.	.	.	.	39.09	0.768409
1820011037747	15868A		.	.	142	0.0012	212	0.0005	191	0.0007	119	0.0010	36	0.0070	74	0.0033	.	.	353.31	0.770152
1830011998430	25874A		27	98	7	0.0270	27	0.0092	192	0.0007	91	0.0018	.	.	220	0.0005	97	0.0013	1472.57	0.777417
1820010389101	69658A		.	.	175	0.0007	130	0.0017	193	0.0007	239	0.0001	98	0.0014	298	0.0002	.	.	128.38	0.778051
1820001220474	18507A		.	.	.	.	.	.	194	0.0007	.	.	.	.	.	.	.	.	14.87	0.778124
1580003017883	M6604K		.	.	.	.	.	.	195	0.0007	.	.	.	.	.	.	.	.	14.87	0.778198
1580002265402BF	13305A		.	.	.	.	.	.	196	0.0007	.	.	.	.	.	.	.	.	14.87	0.778271

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NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1620001058930	93238A		.	.	.	.	.	.	197	0.0007	224	0.0001	95	0.0014	190	0.0007	.	.	66.898	0.778601
1620010374839	16297A		.	1	128	0.0015	91	0.0028	198	0.0006	97	0.0016	74	0.0023	63	0.0040	75	0.0023	426.377	0.780705
1630000883507	97491A		.	.	.	.	.	.	199	0.0006	.	.	.	.	.	.	137	0.0006	22.262	0.780814
1620002421514	T6295I		78	56	143	0.0012	150	0.0013	200	0.0006	35	0.0068	105	0.0012	104	0.0021	34	0.0083	618.243	0.783865
1005010446174	17921A		.	.	.	.	252	0.0003	201	0.0006	.	.	.	.	232	0.0004	237	0.0001	35.253	0.784039
1630002282376	28041A		.	.	131	0.0014	194	0.0007	202	0.0006	.	.	85	0.0018	.	.	104	0.0010	138.141	0.784720
1620002795839	17476A		.	10	127	0.0015	82	0.0030	203	0.0006	139	0.0007	94	0.0015	123	0.0017	.	.	270.149	0.786053
4310008092351BF	68672A		.	.	.	.	.	.	204	0.0006	.	.	.	.	.	.	.	.	12.744	0.786116
1620002160993	87473A		.	.	.	.	.	.	205	0.0006	.	.	.	.	.	.	.	.	12.744	0.786179
1630001132133	15519A		11	.	153	0.0011	60	0.0048	206	0.0006	.	.	125	0.0006	.	.	139	0.0006	215.452	0.787242
1630000827955	15295A		.	.	.	.	.	.	207	0.0006	.	.	.	.	.	.	.	.	12.744	0.787305
1630001132133	15519J		11	.	.	.	80	0.0030	208	0.0006	.	.	.	.	.	.	.	.	99.074	0.787793
1620000071783	17508A		15	14	113	0.0020	92	0.0028	209	0.0006	229	0.0001	.	.	56	0.0046	.	.	318.870	0.789367
1620010088948	17663A		.	.	126	0.0016	138	0.0015	210	0.0006	153	0.0005	83	0.0019	135	0.0014	.	.	220.337	0.790454
1620ND0537976	26578A		.	.	219	0.0004	208	0.0005	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
1630005989637	15686A		.	.	73	0.0035	44	0.0066	213	0.0006	106	0.0012	.	.	79	0.0031	.	.	490.777	0.793751
1620012352270	T6276Q		.	.	.	.	.	.	214	0.0006	.	.	.	.	.	.	.	.	12.744	0.793814
1650002193602LE	98929A		.	.	.	.	.	.	215	0.0006	221	0.0001	68	0.0026	68	0.0036	.	.	176.232	0.794683
5308008249117	M9195K		.	.	.	.	.	.	216	0.0006	.	.	.	.	271	0.0003	.	.	21.961	0.794792
1630008328088	15583A		18	20	105	0.0021	70	0.0035	217	0.0006	146	0.0006	32	0.0084	483	0.0000	74	0.0023	416.860	0.796848
1005010595785	63819A		34	.	.	.	.	.	218	0.0006	.	.	152	0.0003	60	0.0042	66	0.0029	193.375	0.797802
1560ND028868GBF	MS224K		.	.	.	.	.	.	219	0.0005	.	.	.	.	.	.	.	.	10.620	0.797855
1620005251156	96554A		.	.	.	.	.	.	220	0.0005	.	.	.	.	.	.	.	.	10.620	0.797907
1630010054188	15639A	S	13	4	164	0.0008	414	-0.0013	221	0.0005	.	.	.	.	.	.	198	0.0002	12.287	0.797968
1620008624060	T6254A		.	.	283	0.0001	182	0.0008	222	0.0005	105	0.0012	65	0.0026	80	0.0031	.	.	234.558	0.799125
1620004719859	74528A		.	.	193	0.0005	180	0.0008	223	0.0005	48	0.0054	.	.	218	0.0006	.	.	311.591	0.800662
1580005158043BF	M4880K		.	.	.	.	.	.	224	0.0005	.	.	.	.	.	.	.	.	10.620	0.800715
1620010876091	69104A		.	.	.	.	.	.	225	0.0005	.	.	.	.	281	0.0003	.	.	19.837	0.800813
5315007575890LE	M8055K		.	.	.	.	.	.	226	0.0005	.	.	.	.	69	0.0034	.	.	115.081	0.801380
1085004538407	74958A		.	.	.	.	207	0.0006	227	0.0005	.	.	.	.	185	0.0007	236	0.0001	50.979	0.801632
1630008254794	15327A		20	.	50	0.0053	24	0.0097	228	0.0005	129	0.0008	.	.	303	0.0002	21	0.0116	726.828	0.805218
1620011627518	28108A		.	.	.	.	178	0.0008	229	0.0005	132	0.0008	.	.	217	0.0006	.	.	87.567	0.805850
4310008974475AY	62499A		.	.	.	.	.	.	230	0.0005	.	.	.	.	.	.	.	.	10.620	0.805702
1620001239478	19841A		.	.	.	.	.	.	231	0.0005	272	0.0000	75	0.0023	189	0.0009	.	.	81.128	0.806103
1650011327337LE	25660A		.	.	.	.	.	.	232	0.0005	.	.	.	.	.	.	.	.	10.620	0.806155
1095004780051	M84BGK		.	.	.	.	.	.	233	0.0005	.	.	.	.	.	.	.	.	10.620	0.806207
1095004780037	M8488K		.	.	.	.	.	.	234	0.0005	.	.	.	.	211	0.0006	.	.	29.054	0.806351
1620009272801	15865A		.	.	111	0.0020	113	0.0019	235	0.0005	83	0.0038	.	.	121	0.0018	.	.	360.097	0.808127
1630008521432	18287A		.	.	88	0.0040	84	0.0042	236	0.0005	65	0.0032	.	.	127	0.0015	.	.	479.107	0.810491
1620001157413	72845A		.	.	.	.	.	.	237	0.0005	.	.	121	0.0007	162	0.0010	.	.	54.387	0.810759
1630008873207	28829A		.	.	186	0.0008	149	0.0013	238	0.0004	87	0.0019	.	.	.	.	.	.	182.113	0.811559
1620009224173	18182A		27	139	167	0.0008	125	0.0017	239	0.0004	.	.	.	.	379	0.0001	.	.	92.403	0.812015
1630004649160	72895A		.	.	82	0.0031	103	0.0022	240	0.0004	.	.	.	.	.	.	80	0.0020	227.199	0.813136
1620001791083	T4857J		67	.	.	.	.	.	241	0.0004	.	.	.	.	.	.	.	.	8.496	0.813178
1630004100858	74568A		.	.	54	0.0049	71	0.0035	242	0.0004	51	0.0051	.	.	304	0.0002	116	0.0009	551.371	0.815898
1620010972988	89103A		.	.	.	.	.	.	243	0.0004	177	0.0003	.	.	279	0.0003	.	.	31.023	0.816051
1440001727419AH	57174A		.	.	.	.	.	.	244	0.0004	.	.	.	.	320	0.0002	.	.	14.641	0.816124
1630004534893	15481A	S	5	89	134	0.0014	132	0.0016	245	0.0004	99	0.0015	.	.	155	0.0011	.	.	210.732	0.817163

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NSN	PCN	S	OPERS	OBSER	PGFS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
16200048212 47	16296A		.	.	186	0.0005	112	0.0010	246	0.0004	178	0.0003	90	0.0017	92	0.0023		.	198.769	0.818144
000F0018A	00162C		.	.	318	0.0001	.	.	247	0.0004	104	0.0012	.	.	.	.	81	0.0019	95.882	0.818617
16300090087 38	15139J	S	39	104	.	.	88	0.0029	248	0.0004	.	.	.	.	.	.	.	.	91.948	0.819070
16200083026 09	24373A		.	.	222	0.0003	281	0.0002	249	0.0004	217	0.0001	.	.	221	0.0005	.	.	46.018	0.819298
1580ND024233GBF	MD124K		.	.	.	.	.	.	250	0.0004	.	.	.	.	284	0.0002	.	.	14.641	0.819370
16200101419 84	25918A		.	2	181	0.0009	157	0.0011	251	0.0004	107	0.0012	69	0.0025	140	0.0013	.	.	215.816	0.820435
16200117418 55	15677A		.	.	285	0.0002	258	0.0003	252	0.0004	159	0.0005	.	.	253	0.0004	.	.	59.580	0.820728
16200028106 22	17666A		.	.	202	0.0004	127	0.0017	253	0.0004	59	0.0039	.	.	158	0.0010	.	.	277.119	0.822096
10050104635 38	88814A		.	.	.	.	235	0.0004	254	0.0004	.	.	.	.	.	.	.	.	20.007	0.822194
43100101830408F	88815A		.	.	.	.	.	.	255	0.0004	.	.	.	.	.	.	.	.	8.498	0.822236
16300100309 09	15884A		.	.	.	.	.	.	256	0.0004	.	.	.	.	.	.	.	.	8.496	0.822278
16200017910 87	74518A		.	2	238	0.0003	386	0.0000	257	0.0004	57	0.0045	128	0.0006	189	0.0007	133	0.0006	282.309	0.823572
16200011574 19	T8850A	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
16200038774 13	17574A		.	.	240	0.0003	163	0.0010	259	0.0004	117	0.0010	50	0.0040	120	0.0018	.	.	223.441	0.825719
16200020461 78	17552A		.	.	.	.	.	.	260	0.0004	.	.	.	.	.	.	.	.	8.496	0.825761
16200078560 73	16283A		.	.	195	0.0005	135	0.0010	261	0.0004	.	.	.	.	96	0.0023	.	.	145.150	0.826477
1560010440178WF	78253A		.	.	.	.	.	.	262	0.0004	.	.	.	.	.	.	.	.	8.496	0.826519
16300054042 53	34507A		.	.	207	0.0004	271	0.0002	263	0.0004	127	0.0008	175	0.0001	258	0.0003	.	.	76.781	0.826898
16200031286 64	89551A		.	.	229	0.0003	174	0.0008	264	0.0003	110	0.0011	.	.	186	0.0007	.	.	111.669	0.827449
16300083290 87	22420A		.	.	205	0.0004	251	0.0003	265	0.0003	80	0.0023	.	.	285	0.0003	283	0.0000	142.218	0.828150
10050018888 68	88789A		.	.	.	.	.	.	266	0.0003	.	.	.	.	.	.	48	0.0051	87.271	0.828581
16200007946 30	89908A		.	.	.	.	.	.	267	0.0003	.	.	.	.	.	.	.	.	6.372	0.828612
16300024215 25	72893A		.	.	.	.	.	.	268	0.0003	.	.	.	.	.	.	77	0.0022	41.270	0.828818
16200065083 35	17487A		.	.	132	0.0014	107	0.0021	269	0.0003	96	0.0016	.	.	126	0.0015	.	.	239.722	0.829999
16200054593 95	17353A		.	.	252	0.0002	197	0.0006	270	0.0003	281	0.0000	61	0.0028	125	0.0016	.	.	132.948	0.830655
16300107161 12	17864A	S	5	24	130	0.0015	134	0.0016	271	0.0003	151	0.0006	.	.	276	0.0003	.	.	148.090	0.831385
SYS-000051400 33	T2707I		.	.	.	.	.	.	272	0.0003	.	.	.	.	.	.	.	.	6.372	0.831417
16200048537 52	T4798A		.	.	194	0.0005	286	0.0002	273	0.0003	169	0.0004	91	0.0016	154	0.0011	.	.	113.429	0.831976
16800040510 42LS	62963A		.	.	.	.	265	0.0003	274	0.0003	.	.	.	.	70	0.0033	247	0.0001	117.979	0.832558
16800041827 85LS	62964A		.	.	.	.	272	0.0002	275	0.0003	.	.	.	.	71	0.0033	248	0.0001	115.102	0.833126
16200113887 58	89784A		.	.	.	.	.	.	276	0.0003	.	.	.	.	.	.	.	.	6.372	0.833158
	M8408K		.	1	.	.	.	.	277	0.0003	.	.	.	.	286	0.0003	.	.	15.589	0.833234
31200121467 45	M8409K		.	.	.	.	.	.	278	0.0003	.	.	.	.	287	0.0003	.	.	15.589	0.833311
16200033534 04	35571A		.	.	.	.	.	.	279	0.0003	124	0.0009	161	0.0002	103	0.0021	.	.	114.547	0.833877
16200092986 92	74575A		.	.	211	0.0004	195	0.0006	280	0.0003	140	0.0007	.	.	250	0.0004	.	.	82.940	0.834286
16200067788 81	T1215Q		.	.	287	0.0001	211	0.0005	281	0.0003	.	.	.	.	.	.	.	.	24.750	0.834408
10050102806 28	19876A		.	.	.	.	.	.	282	0.0003	.	.	.	.	473	0.0000	.	.	6.372	0.834439
16200050511 84	89626A		.	.	.	.	189	0.0007	283	0.0003	194	0.0003	106	0.0011	179	0.0008	.	.	84.901	0.834858
16200120071 31	26111A		.	.	181	0.0005	153	0.0011	284	0.0003	112	0.0011	26	0.0103	57	0.0044	.	.	433.881	0.836999
14200018546 28CJ	T1032A		.	.	.	.	.	.	285	0.0003	.	.	.	.	.	.	.	.	6.372	0.837030
14200016546 28CJ	T1173A		.	.	.	.	.	.	286	0.0003	.	.	.	.	.	.	.	.	6.372	0.837062
LOG-0000D8FFC89	T1425I		.	.	.	.	.	.	287	0.0003	.	.	.	.	.	.	.	.	6.372	0.837093
14500126389 28AV	T4283J		.	.	.	.	375	0.0000	288	0.0003	.	.	.	.	.	.	.	.	6.372	0.837125
16200091018 98	72571A		.	.	.	.	.	.	289	0.0003	.	.	93	0.0016	161	0.0010	.	.	66.909	0.837455
16200030699 42	17314A		.	.	234	0.0003	209	0.0005	290	0.0003	166	0.0004	126	0.0006	159	0.0010	.	.	92.378	0.837910
16200030699 43	17315A		.	.	218	0.0004	246	0.0003	291	0.0003	167	0.0004	127	0.0006	160	0.0010	.	.	90.612	0.838357
16200106814 43	16754A		.	.	.	.	.	.	292	0.0003	.	.	.	.	.	.	.	.	6.372	0.838389
16200062389 11	T1516Q		.	.	.	.	179	0.0008	293	0.0003	.	.	.	.	.	.	.	.	29.393	0.838534
16300084309 65	15348A		.	.	244	0.0003	285	0.0002	294	0.0003	243	0.0001	.	.	224	0.0005	.	.	43.894	0.838750

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NSN	PCN	S	OPERS	OBSER	FGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1820011431155	89578A		.	.	242	0.0003	210	0.0005	295	0.0003					398	0.0001		.	35.801	0.838927
1820004023387	84829A		.	.					296	0.0003	245	0.0001	153	0.0002	326	0.0002		.	20.680	0.839029
1830010658469	16298A		.	.	302	0.0001	204	0.0006	297	0.0003	197	0.0002		.	319	0.0002		.	42.645	0.839240
1820002041208	16743A		.	.	262	0.0002	111	0.0020	298	0.0003	77	0.0025		.		.		.	182.815	0.840142
1830007057298	25598A		.	.	288	0.0001	160	0.0010	299	0.0003	196	0.0002		.		.	93	0.0014	70.218	0.840488
1830000139129	15359J		5	.			196	0.0006	300	0.0003									23.638	0.840605
1820009270298	74552A		.	.	185	0.0005	279	0.0002	301	0.0003	247	0.0001	70	0.0025	129	0.0015		.	129.179	0.841242
1820001357877	74561A		.	.	184	0.0005	161	0.0010	302	0.0003	118	0.0010	72	0.0024	163	0.0009		.	171.831	0.842090
1820010805825	17687A		.	.	228	0.0003	250	0.0003	303	0.0002	156	0.0005	103	0.0012	177	0.0008		.	93.970	0.842553
1560011358958WF	25584Q		.	.					304	0.0002									4.248	0.842574
1830005878162	15616A		.	.	210	0.0004	301	0.0002	305	0.0002			168	0.0001			201	0.0002	30.997	0.842727
1095001419328	74909A		.	.			374	0.0000	306	0.0002					167	0.0009	99	0.0013	52.521	0.842986
1820003079442	18751A		.	.	112	0.0020	278	0.0002	307	0.0002									89.790	0.843429
1005002755748	25319A		.	.					308	0.0002							60	0.0036	61.353	0.843732
1830008691784	T5693I		.	.	170	0.0008	140	0.0015	309	0.0002							92	0.0014	101.535	0.844233
1820010688945	17662A		.	.	180	0.0008	205	0.0008	310	0.0002	176	0.0003	109	0.0010	187	0.0007		.	98.899	0.844721
1450010315894AH	19328A		.	.					311	0.0002									4.248	0.844742
9999P-FIRST-ART	T5023Q		.	.					312	0.0002									4.248	0.844763
1650001685985BF	98274A		.	.			406	0.0000	313	0.0002	258	0.0000	178	0.0000	351	0.0001		.	7.320	0.844799
5315002952512LE	74525A		.	.	274	0.0001	172	0.0009	314	0.0002	263	0.0000	140	0.0004	399	0.0001		.	44.662	0.845019
4730007586711LE	17757A		.	.	187	0.0005	215	0.0005	315	0.0002	271	0.0000	101	0.0013	180	0.0008		.	87.385	0.845450
1830004681727	16734A	S	9	1	277	0.0001	156	0.0011	316	0.0002	152	0.0006						.	66.510	0.845779
1820008238913	89573A		.	.	288	0.0001	202	0.0006	317	0.0002	220	0.0001	129	0.0006	272	0.0003		.	50.337	0.846027
1560002265403BF	13306A		.	.					318	0.0002									4.248	0.846048
1820010141983	25917A		.	.	197	0.0004	249	0.0003	319	0.0002	154	0.0005	108	0.0010	265	0.0003		.	78.871	0.846437
1820009438754	78048A		.	.	203	0.0004			320	0.0002	142	0.0006					114	0.0009	61.100	0.846738
1005010086283	87051H		.	1					321	0.0002					313	0.0002	131	0.0006	19.910	0.846837
1560P168710-88	M3798K		.	.					322	0.0002									4.248	0.846858
1560P168710-87	M3800K		.	.					323	0.0002									4.248	0.846879
1560P168710-85	M3807K		.	.					324	0.0002									4.248	0.846899
1450010059274H	18316A		.	.					325	0.0002									4.248	0.846920
1830002769849	15641J		32	141			139	0.0015	326	0.0002									47.413	0.847154
1820001405242	17547A		.	12	173	0.0007	198	0.0006	327	0.0002	136	0.0007			170	0.0009		.	108.146	0.847688
1830010597069	19847A		.	.	172	0.0007	158	0.0010	328	0.0002	191	0.0003			328	0.0002		.	80.404	0.848085
1820011009806	88878A		.	.	204	0.0004	247	0.0003	329	0.0002	211	0.0001	97	0.0013	234	0.0004		.	69.788	0.848429
1830005582584	15651J		.	2			187	0.0008	330	0.0002								.	27.269	0.848563
1830070414570	15698A		.	.					331	0.0002								.	4.248	0.848584
1830009000745	15248A		.	.	171	0.0008	171	0.0009	332	0.0002	149	0.0006			350	0.0001		.	91.753	0.849037
1560010771314WF	25730A		.	.					333	0.0002								.	4.248	0.849058
1560011732771WF	26027A		.	.					334	0.0002								.	4.248	0.849079
SYS-00006514	T1463I		.	.					335	0.0002								.	4.248	0.849100
SYS-00006514	T1473I		.	.					336	0.0002								.	4.248	0.849121
SYS-00006514	T1479I		.	.					337	0.0002								.	4.248	0.849142
SYS-00006514	T1492I		.	.					338	0.0002								.	4.248	0.849163
1560P168710-86	M5808K		.	.					339	0.0002								.	4.248	0.849184
1820000018416	72832A		.	.					340	0.0002	203	0.0002	124	0.0006	229	0.0005		.	39.663	0.849380
1830006107199	89898A		.	.					341	0.0002								.	4.248	0.849400
3010011950479GG	26598A		.	.			394	0.0000	342	0.0002								.	4.248	0.849421
1005008953722	42078A		.	.					343	0.0002							148	0.0005	12.179	0.849482

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NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
4310009371374BF	10304A		.	.	.	.	.	.	344	0.0002	.	.	.	.	.	.	.	.	4.248	0.849502
1620006133476	43619A		.	.	.	.	.	.	345	0.0002	.	.	.	.	.	.	.	.	4.248	0.849523
1620007330993	77261A		21	47	260	0.0002	213	0.0005	346	0.0002	200	0.0002	.	.	243	0.0004	.	.	47.777	0.849759
1620004711178	27083A		.	1	.	.	.	.	347	0.0002	.	.	.	.	.	.	.	.	4.248	0.849780
1620007187427	T6689J		.	.	.	.	143	0.0014	348	0.0002	.	.	.	.	.	.	.	.	44.535	0.850000
1620005701054	89553A		.	.	.	.	.	.	349	0.0002	.	.	.	.	.	.	.	.	4.248	0.850021
1620001405241	17546A		.	18	208	0.0004	187	0.0009	350	0.0002	179	0.0003	.	.	137	0.0014	.	.	102.427	0.850526
1630008582073	15521A		11	.	206	0.0004	192	0.0007	351	0.0002	.	.	118	0.0008	.	.	200	0.0002	58.428	0.850814
1620008372427	17595A		.	.	212	0.0004	145	0.0013	352	0.0002	103	0.0012	.	.	149	0.0012	.	.	147.721	0.851543
1620008870810	74551A		.	.	269	0.0002	411	-0.0004	353	0.0002	163	0.0005	143	0.0003	256	0.0004	254	0.0001	42.364	0.851752
1630009414191	15302A		.	.	179	0.0006	168	0.0009	354	0.0002	186	0.0003	.	.	371	0.0001	.	.	70.465	0.852100
1620003654001	69098A		.	.	220	0.0004	253	0.0003	355	0.0002	.	.	166	0.0002	348	0.0001	341	0.0000	35.637	0.852276
1620009195750	19959A		.	.	.	.	.	.	356	0.0002	278	0.0000	181	0.0000	478	0.0000	.	.	4.248	0.852297
1630010054262	15652A	S	5	30	196	0.0005	377	0.0000	357	0.0001	175	0.0004	.	.	.	.	.	.	39.816	0.852493
1620010569656	25369A		.	.	314	0.0001	269	0.0003	358	0.0001	.	.	159	0.0002	354	0.0001	.	.	21.545	0.852599
4820001390380LE	25734A		.	.	.	.	.	.	359	0.0001	.	.	.	.	.	.	.	.	2.124	0.852810
1560009547748BF	14728A		8	2	.	.	.	.	360	0.0001	.	.	.	.	.	.	164	0.0004	8.469	0.852652
1580007845473BF	63895A		.	.	.	.	305	0.0001	361	0.0001	.	.	.	.	.	.	.	.	5.002	0.852676
1005P36-2603-2	M7946K		.	.	.	.	.	.	362	0.0001	.	.	.	.	.	.	333	0.0000	2.124	0.852687
1620002421519	T6301A		.	.	224	0.0003	261	0.0003	363	0.0001	145	0.0008	.	.	293	0.0002	.	.	55.488	0.852961
1620001753939	T7163A	S	57	42	213	0.0004	229	0.0004	364	0.0001	79	0.0024	185	0.0002	337	0.0001	.	.	142.866	0.853665
1620003486485	17517A		.	.	326	0.0000	382	0.0000	365	0.0001	270	0.0000	.	.	317	0.0002	.	.	8.269	0.853706
1620011431155	T1515Q		.	.	.	.	238	0.0004	366	0.0001	.	.	.	.	.	.	.	.	13.635	0.853773
1620001405240	T7546A		.	.	250	0.0002	298	0.0002	367	0.0001	233	0.0001	.	.	238	0.0004	.	.	32.584	0.853934
1650004894674	98343A		.	.	.	.	.	.	368	0.0001	.	.	.	.	.	.	.	.	2.124	0.853945
1620004849208	17368A		.	.	.	.	.	.	369	0.0001	.	.	.	.	.	.	.	.	2.124	0.853955
1620004221839	17677A		.	.	275	0.0001	282	0.0002	370	0.0001	.	.	.	.	.	.	.	.	11.869	0.854014
1580011798270WF	18441A		.	.	.	.	.	.	371	0.0001	.	.	.	.	.	.	.	.	2.124	0.854024
1630009271825	15222A		.	1	253	0.0002	222	0.0005	372	0.0001	202	0.0002	.	.	577	0.0000	100	0.0011	50.813	0.854275
1620000090878	18481A		.	.	.	.	.	.	373	0.0001	.	.	.	.	.	.	.	.	2.124	0.854285
1005005703715	19899A		.	.	.	.	.	.	374	0.0001	.	.	.	.	396	0.0001	.	.	5.196	0.854311
5340005273213BF	M6537K		.	.	.	.	.	.	375	0.0001	.	.	.	.	517	0.0000	286	0.0000	2.124	0.854322
1560004896619BF	T4923J		.	.	.	.	.	.	376	0.0001	.	.	.	.	.	.	.	.	2.124	0.854332
1630008562195	68891A		.	.	241	0.0003	280	0.0002	377	0.0001	.	.	167	0.0001	.	.	203	0.0002	24.883	0.854455
1620002160884	87476A		.	.	.	.	.	.	378	0.0001	.	.	.	.	.	.	.	.	2.124	0.854465
	T8888A		.	1	.	.	.	.	379	0.0001	.	.	.	.	.	.	.	.	2.124	0.854476
1620003109830	80343A		55	.	316	0.0001	237	0.0004	380	0.0001	.	.	.	.	.	.	.	.	17.824	0.854563
1620009317355	74571A		.	.	246	0.0003	122	0.0018	381	0.0001	95	0.0016	.	.	244	0.0004	.	.	149.163	0.855299
4310007754093	82921A		.	.	.	.	.	.	382	0.0001	.	.	.	.	.	.	.	.	2.124	0.855309
1630004351350	98168A		.	.	.	.	.	.	383	0.0001	.	.	.	.	.	.	294	0.0000	2.124	0.855320
1620010639477	T5582Q		.	.	.	.	.	.	384	0.0001	.	.	.	.	.	.	.	.	2.124	0.855330
1620011146869	18623A		.	.	245	0.0003	208	0.0008	385	0.0001	92	0.0017	.	.	370	0.0001	.	.	109.850	0.855872
1620003051849	69707A		.	.	259	0.0002	395	0.0000	386	0.0001	201	0.0002	.	.	415	0.0000	.	.	18.976	0.855966
1005004985359	74831A		.	.	.	.	270	0.0002	387	0.0001	.	.	.	.	.	.	70	0.0026	49.122	0.856208
1620003084145	17494A		21	10	.	.	266	0.0003	388	0.0001	.	.	58	0.0033	340	0.0001	.	.	75.319	0.856580
1005010525278	19908A		.	.	.	.	.	.	389	0.0001	.	.	.	.	413	0.0000	.	.	2.124	0.856590
000F00168	00166C		.	.	.	.	.	.	390	0.0001	236	0.0001	.	.	436	0.0000	124	0.0007	17.664	0.856677
1620000922837	34456A		28	53	290	0.0001	268	0.0003	391	0.0001	138	0.0007	.	.	297	0.0002	.	.	51.946	0.856934
1620001164431	T9954J		11	25	.	.	352	0.0001	392	0.0001	.	.	.	.	.	.	.	.	5.002	0.856958

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NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1630010054189	15642J	S	11	5			193	0.0007	393	0.0001									22.288	0.857068
1620010714803	60420A						333	0.0001	394	0.0001					225	0.0005			20.364	0.857169
1620010710538	15862A				335	0.0000	354	0.0001	395	0.0001	231	0.0001			246	0.0004			21.728	0.857276
1630008583997	86906A								396	0.0001									2.124	0.857286
1620007057261	69887A				303	0.0001	288	0.0002	397	0.0001			119	0.0008	259	0.0003			35.992	0.857464
3040001646783LE	14991A				306	0.0001	287	0.0002	398	0.0001					305	0.0002			18.013	0.857553
1620012005320	26110A				268	0.0002	257	0.0003	399	0.0001	240	0.0001	170	0.0001	248	0.0004			37.325	0.857737
304000167085LE	18076A								400	0.0001									2.124	0.857747
1095004787948	74941A						368	0.0000	401	0.0001	280	0.0000			241	0.0004			14.413	0.857818
1620009248927	16283A								402	0.0001									2.124	0.857829
1630008810815	15161J						165	0.0009	403	0.0001									28.023	0.857967
1630008254794	15327J		20				162	0.0010	404	0.0001									30.901	0.858120
1095009118407	15819A								405	0.0001					377	0.0001			5.196	0.858145
1630000542557	15361A		5	8	239	0.0003	203	0.0006	406	0.0001	222	0.0001			284	0.0003			45.012	0.858367
1450011005926AH	16317A								407	0.0001					312	0.0002			8.269	0.858408
1560004896619BF	14814A								408	0.0001	70	0.0029					189	0.0003	135.540	0.859077
1620006776881	T1510Q				304	0.0001	294	0.0002	409	0.0001									11.869	0.859135
1630009253156	98659A								410	0.0001	287	0.0000							2.124	0.859146
1630009141329	19911A				188	0.0005	101	0.0024	411	0.0001	223	0.0001					251	0.0001	97.157	0.859625
1620001157393	74844A	S	35	42	342	0.0000	369	0.0000	412	0.0001			174	0.0001					3.987	0.859645
1620007659187	69548A								413	0.0001	213	0.0001			384	0.0001			9.633	0.859692
1005005585216	19896A						402	0.0000	414	0.0001					463	0.0000			2.124	0.859703
1005004197188	18395A			36					415	0.0001					395	0.0001	182	0.0003	9.955	0.859752
	T1005A			1					416	0.0001									2.124	0.859762
	T1006A			1					417	0.0001									2.124	0.859773
1620000563339	T6779I				324	0.0001	336	0.0001	418	0.0001	237	0.0001	164	0.0002	309	0.0002			23.299	0.859888
1620009872517	T9439A				309	0.0001			419	0.0001					295	0.0002			12.258	0.859948
1620008961203	T1335O								420	0.0001									2.124	0.859959
1620ND0520836	26579A				330	0.0000	338	0.0001	421	0.0001	182	0.0003	158	0.0002	367	0.0001	208	0.0002	28.283	0.860098
1620009438753	69288A				331	0.0000	385	0.0000	422	0.0001	183	0.0003			368	0.0001	209	0.0002	21.678	0.860205
5315005006801LE	69775A				340	0.0000	368	0.0001	423	0.0001			139	0.0004	296	0.0002			18.600	0.860297
1630000585242	15054J		28	82			155	0.0011	424	0.0001									33.778	0.860464
1630008562073	15521J		11				230	0.0004	425	0.0001									13.635	0.860531
1630006526092	T5466A			3	243	0.0003	284	0.0002	426	0.0001	184	0.0003							33.157	0.860695
1005010912723	19882A						409	0.0000	427	0.0001									2.124	0.860705
1440010595257BL	26603A								428	0.0001									2.124	0.860716
16300C2272000	15749A				255	0.0002	273	0.0002	429	0.0001					840	0.0000			15.858	0.860794
1620000313537	82902A								430	0.0001	248	0.0001	157	0.0002	324	0.0002			16.432	0.860875
2590005667793AH	46538A								431	0.0001									2.124	0.860885
1560010410545WF	69752Q								432	0.0001									2.124	0.860896
1620PC141CAIPLG	T1383Q				297	0.0001	277	0.0002	433	0.0001									11.869	0.860954
	T7263Q			1	360	0.0000	373	0.0000	434	0.0001	260	0.0000			347	0.0001			5.196	0.860980
1620011249137	16727A				273	0.0001	262	0.0003	435	0.0001	174	0.0004			302	0.0002			38.637	0.861171
1620009535572	69566A								436	0.0001			183	0.0000	403	0.0001			5.196	0.861196
1620008899889	74535A				258	0.0002	241	0.0004	437	0.0001	115	0.0010	179	0.0000	291	0.0002			72.123	0.861552
1560011578040WF	T7692A								438	0.0001					462	0.0000	339	0.0000	2.124	0.861563
1560004896617BF	14813A								439	0.0001	85	0.0020					213	0.0002	94.026	0.862028
1620003002261	17324A				317	0.0001	188	0.0007	440	0.0001	171	0.0004	55	0.0035	166	0.0009			136.871	0.862702
1630010054188	26029A	S	13	4	300	0.0001	275	0.0002	441	0.0001							344	0.0000	11.869	0.862760

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1820010710535	10315A		.	.	347	0.0000	233	0.0004	442	0.0001	255	0.0000	53	0.0037	105	0.0020		.	144.025	0.863471
1820010710868	10314A		.	.	301	0.0001	310	0.0001	443	0.0001					307	0.0002		.	15.138	0.863546
1830008473731	10776A		.	.	209	0.0004	119	0.0019	444	0.0000	188	0.0003	186	0.0000			145	0.0006	93.460	0.864007
1820008242889	24372A		.	.	225	0.0003	361	0.0001	445	0.0000					192	0.0007			36.352	0.864186
000F00018B	00185A		.	.					446	0.0000	208	0.0001					214	0.0002	7.609	0.864224
000F00018C	00187C		.	.					447	0.0000									0.000	0.864224
000F00018D	00189C		.	.					448	0.0000									0.000	0.864224
1820010715592	10582A		.	.	343	0.0000			449	0.0000	160	0.0005			292	0.0002		.	28.327	0.864363
1005004767947	62486A		.	.					450	0.0000	284	0.0000			310	0.0002		.	6.145	0.864394
4710010372209	M8288K		.	.					451	0.0000								.	0.000	0.864394
	M7569K		.	1					452	0.0000								.	0.000	0.864394
1820011607187	T6111A		.	.					453	0.0000					448	0.0000		.	0.000	0.864394
1560012355201WF	T8739H		.	.					454	0.0000								.	0.000	0.864394
1820006133512	T6812A		.	.	271	0.0002	201	0.0006	455	0.0000	78	0.0024	40	0.0080	77	0.0032		.	341.835	0.866080
1820004100874	89625A		.	.					456	0.0000			160	0.0002	384	0.0001	307	0.0000	6.799	0.866114
1820004107094	89385A		.	.					457	0.0000			151	0.0003	352	0.0001		.	8.662	0.866156
1830004649167	74709A		.	.	305	0.0001	232	0.0004	458	0.0000	190	0.0003			394	0.0001		.	31.882	0.866314
1830011392892	T5578A		.	.	322	0.0001	340	0.0001	459	0.0000					567	0.0000		.	6.867	0.866348
1820001299158	17817A		.	.					460	0.0000								.	0.000	0.866348
1440004731555CJ	71924A		.	.					461	0.0000								.	0.000	0.866348
1830000528403	15053A		27	18	233	0.0003	146	0.0013	462	0.0000	55	0.0047	113	0.0009	275	0.0003	141	0.0006	293.396	0.867795
1005010376890	16329A		.	.					463	0.0000								.	0.000	0.867795
1820002695025	89321A		.	.					464	0.0000	225	0.0001			515	0.0000		.	4.436	0.867817
4810007634797LE	69896A		.	.					465	0.0000								.	0.000	0.867817
5360ND29801GAH	M4996K		.	.					466	0.0000								.	0.000	0.867817
1830005090317	T8586A		.	.	263	0.0002	276	0.0002	467	0.0000	209	0.0001			430	0.0000		.	18.170	0.867907
1830006896OT4	15143A		.	.					468	0.0000								.	0.000	0.867907
1830005557523	15387J		25	44			178	0.0008	469	0.0000								.	23.021	0.868020
1830010414570	15698J		.	.			151	0.0012	470	0.0000								.	34.532	0.868191
1830004100858	74568J		.	.			183	0.0008	471	0.0000								.	23.021	0.868304
1830001238806	15844A		.	.	349	0.0000	328	0.0001	473	0.0000	218	0.0001			429	0.0000		.	7.314	0.868340
1820010710537	16334A		.	.	336	0.0000	260	0.0003	474	0.0000	279	0.0000	150	0.0003	143	0.0013		.	54.164	0.868607
1820010451024	17605A		.	.					475	0.0000	244	0.0001			494	0.0000		.	4.436	0.868629
1830002282371	T4629G		.	.					476	0.0000								.	0.000	0.868629
1820003051772	T8247I		.	.	361	0.0000			477	0.0000								.	0.000	0.868629
1820009383574	19681A		.	.					478	0.0000	288	0.0000	187	0.0000	485	0.0000		.	0.000	0.868629
1830010688013	20182A		.	.	308	0.0001	323	0.0001	479	0.0000	212	0.0001						.	11.303	0.868685
1005003441550	20357A		.	1					480	0.0000					475	0.0000	238	0.0001	1.586	0.868693
1560ND029098GBF	M5336K		.	.					481	0.0000								.	0.000	0.868693
1650001654582XW	M8430K		.	.					482	0.0000								.	0.000	0.868693
1830007947437	T5652A		.	.	344	0.0000	348	0.0001	483	0.0000	264	0.0000	177	0.0001	445	0.0000		.	4.741	0.868716
1830006035059	T8684A		.	.					484	0.0000								.	0.000	0.868716
1820011487849	T7659I		.	.					485	0.0000								.	0.000	0.868716
1820011487849	T7660I		.	.					486	0.0000								.	0.000	0.868716
1820011487849	T9321H		.	.					487	0.0000								.	0.000	0.868716
1005010418667	23468A		.	.					488	0.0000								.	0.000	0.868716
1650007838881BF	28259A		.	.					489	0.0000								.	0.000	0.868716
1377000605723	48534A		.	.					490	0.0000								.	0.000	0.868716
1820006238911	69651A		.	.			142	0.0014	491	0.0000					117	0.0018		.	95.590	0.869188

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10050088897034	74866A		.	.		.		.	492	0		.		.		.		.	0.000	0.869188
1560011044353BF	M5843K		.	.		.		.	493	0		.		.		.		.	0.000	0.869188
1630010140656LC	16404A		.	.	296	0.0001	314	0.0001	494	0		.		.	454	0.0000	351	0.0000	6.867	0.869222
1630010098475	19266A		.	.	251	0.0002	141	0.0014	495	0	232	0.0001	156	0.0002	380	0.0001	220	0.0001	61.088	0.869523
1620006099886	90400A	S	28	55	358	0.0000	381	0.0000	496	0	198	0.0002		.	477	0.0000	353	0.0000	8.873	0.869567
1620003051726	68884A		.	8	312	0.0001	398	0.0000	497	0	125	0.0008		.	434	0.0000	95	0.0014	61.688	0.869871
1630001024365	26049A	S	8	5	339	0.0000	370	0.0000	498	0		.		.		.		.	0.000	0.869871
1620006142352	69558A		.	.	352	0.0000	295	0.0002	499	0	216	0.0001		.	409	0.0000		.	10.192	0.869922
1620009783391	69577A		.	.	346	0.0000		.	500	0	251	0.0001		.	397	0.0001		.	7.509	0.869959
1630000752003	74565A		.	.	285	0.0001	255	0.0003	501	0		.		.	408	0.0000		.	12.622	0.870021
1560ND026083GBF	M1855K		.	.		.		.	502	0		.		.		.		.	0.000	0.870021
1620010888102	T5305A		.	.	298	0.0001		.	503	0	162	0.0005	104	0.0012	208	0.0006		.	66.966	0.870351
1620010576293	T9357I		.	.	327	0.0000		.	504	0		.		.		.		.	0.000	0.870351
1005001051083	74808A		.	.		.		.	505	0		.		.		.		.	0.000	0.870351
1560009109099BF	14557A		.	.		.	389	0.0000	506	0		.		.		.		.	0.000	0.870351
1630003154832	15229A		.	3		.	413	-0.0011	507	0		.	148	0.0003		.	180	0.0003	-21.306	0.870246
1620005343888	T7043A		.	.	338	0.0000	337	0.0001	508	0	241	0.0001	171	0.0001	346	0.0001		.	12.250	0.870307
1005002392929	15803A		.	.		.	390	0.0000	509	0		.		.		.	205	0.0002	3.172	0.870322
1630010098474	15753A		.	.	270	0.0002	166	0.0009	510	0	254	0.0000		.	282	0.0003	199	0.0002	46.267	0.870551
1630011894178	T7863I		.	.	149	0.0011		.	511	0		.		.	484	0.0000		.	43.883	0.870767
1630000827955	18295J		23	236		.		.	512	0		.		.		.		.	0.000	0.870767
1630008329088	15583J		18	20		.	184	0.0008	513	0		.		.		.		.	23.021	0.870881
5340ND030327GBF	M9590K		.	.		.		.	514	0		.		.		.		.	0.000	0.870881
10050001808845	31055A		.	.		.		.	515	0		.		.		.		.	0.000	0.870881
1560P875799F	M4330K		.	.		.		.	516	0		.		.		.		.	0.000	0.870881
1620006277809	T8587J		.	.		.		.	517	0		.		.		.		.	0.000	0.870881
1630005802857	15438A		.	1		.	239	0.0004	518	0		.	169	0.0001		.		.	13.374	0.870947
1630008528092	81119A		.	3		.		.	519	0		.		.		.		.	0.000	0.870947
1620006587980	68557A		.	.		.		.	520	0		.		.		.		.	0.000	0.870947
1450001142786AH	59596A		.	.		.		.	521	0		.		.	383	0.0001	228	0.0001	4.659	0.870970
10050100484421	62687A		.	.		.		.	522	0		.		.		.		.	0.000	0.870970
1620012548600	26597A		.	.	299	0.0001	339	0.0001	523	0	157	0.0005		.	330	0.0002		.	35.194	0.871143
1620008058495	69569A		.	.	286	0.0001		.	524	0	219	0.0001		.		.		.	8.426	0.871185
1630008736244TH	15693A		.	.		.		.	525	0		.		.		.		.	0.000	0.871185
1630001473854	15576A		.	.		.	199	0.0006	526	0	242	0.0001		.	453	0.0000	304	0.0000	21.702	0.871292
1560ND026082GBF	M1854K		.	.		.		.	527	0		.		.		.	348	0.0000	0.000	0.871292
1560ND030417GWF	M9780K		.	.		.		.	528	0		.		.		.		.	0.000	0.871292
1620001877445	T4521Q		.	7	256	0.0002	387	0.0000	529	0	273	0.0000		.	393	0.0001	185	0.0003	15.810	0.871370
1620008840372	T5564A		.	.		.		.	530	0		.		.		.		.	0.000	0.871370
1560ND027389GBF	M8512K		.	.		.		.	531	0		.		.		.		.	0.000	0.871370
1630000528403	15053J		27	18		.	367	0.0001	532	0		.		.		.		.	2.878	0.871384
1630003154832	15229J		.	3		.	320	0.0001	533	0		.		.		.		.	2.878	0.871398
1630009376604	15728J		.	.		.	380	0.0000	534	0		.		.		.		.	0.000	0.871398
1630010827046	15752J		.	.		.	299	0.0002	535	0		.		.		.		.	5.755	0.871427
1630010597069	15847J		.	.		.		.	536	0		.		.		.		.	0.000	0.871427
1620005073015	T4528A		.	.	355	0.0000		.	537	0		.		.		.		.	0.000	0.871427
1620010403581	T9743I		.	.		.	388	0.0000	538	0		.	172	0.0001	433	0.0000		.	1.863	0.871436
1630007583758	97021A		.	.		.		.	539	0		.		.		.		.	0.000	0.871436
1630010555058	15822A		.	.	315	0.0001	355	0.0001	540	0	262	0.0000		.	532	0.0000		.	6.867	0.871470

OGDEN 80/20 SORTED BY MANPNA

NSN	PCN	S	OPERS	OBSER	PGPS	PGPP	PGWS	PGWP	PNAS	PNAP	PRAS	PRAP	PRBS	PRBP	PRCS	PRCP	PWWS	PWWP	LTOT	CUM
1820000238811	T1152Q		.	.	341	0.0000	358	0.0001	541	0.0000									3	0.871484
1820005818508	69556A		.	.	337	0.0000	328	0.0001	542	0.0000	214	0.0001			432	0.0000			7	0.871520
1560ND0298928BF	M1831K		.	.		.		.	543	0.0000		.				.			0	0.871520
1830010345387	18138A		.	.		.		.	544	0.0000		.				.			0	0.871520
1560007393174BF	1 279A		.	.		.		.	545	0.0000		.				.			0	0.871520
000F00016A	T 175N		.	.		.		.	546	0.0000		.				.			0	0.871520
	T 681A		.	1		.		.	547	0.0000		.				.			0	0.871520
1820000142351	69555A		.	.		.	304	0.0001	548	0.0000	215	0.0001			365	0.0001			10	0.871571
1830004649185	72897A		.	.		.	410	-0.0002	549	-0.0001		.				.	357	0.0002	-5	0.871548
1820010381812	17567A		12	17	232	0.0003	415	-0.0021	550	-0.0001	113	0.0011	51	0.0039	73	0.0033	358	0.0027	215	0.872609
																			176867	

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 (PIO) 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 PARTICULARILY 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 (PIO) exists to MAG PARTICLE INSP at RCC MANPNA at OO 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 EQUIPTMENT 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
[redacted] OPPORTUNITY

TITLE: A potential process improvement opportunity (PIO) 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

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

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/DPMATE and HQ AFMPC/DPMYA

FY85 AF Maintenance Personnel Turnover Rate

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

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 absenses) 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).

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

WAGE FOR OVER TIME

DIRECT	$18.66
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 HRS)(7.5%) = 130.8 HRS. OVERTIME / MAN

OVER TIME PAY = BASE PAY (12.44)(1.5) = $18.66 FOR OT.

PAY FOR.

A. STANDARD HRS. = (1744 HR)($31.98/HR) = 55,773.12 MAN/YEAR

B OVERTIME HRS. (130.8 HRS)($18.66/HR) = 2440.73 OT PAY

TOTAL PAY WITH OVERTIME ONE MAN = 58213.85

1/2/27

NON-DESTRUCTIVE INSPECTION

MANPNA RCC OO-ALC

ENGINEERING NOTES

MEL ANDERSON

Work 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 foremans 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 jusidiction, 8 of whom are grade DB 9's and therefore cerified 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 Equiptment And Perform The Process. Each Shop Of Course Had A Few Extra NDI People To Cover Vacations, Sick Days, Annual Leave, Etc. Hill Air Force Base Had Approx 400 Certified NDI Personnel During This Peroid.

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 Equiptment 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. LUSKS INITIAL COMMENTS CONCERNING NDI EQUIPTMENT 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 LUSKS ALTERNATE, QUENTIN MILLER AND TOOK OPPERTUNITY 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-EMULSIFER.
EACH WORK CONTROL DOCUMENT (#958) LISTS A TECH. ORDER WHICH DEFINES THE ACCEPTANCE CRITERIA FOR THE PART. GENERALLY [redacted] 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 [redacted] 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 EQUIPTMENT IN THE BUILDING.
THIS MACHINE IS TO ME VERIFY INVESTMENT CASTINGS QUALITY.
MR. LUSK GAVE [redacted] PERMISSION TO RANDOMLY TOUR THE NDI AREA WHILE I LOOKED FOR KENT KENNEDY TO CONTINUE THE TOUR [redacted] 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 [redacted] 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 B OR C. NO DEFECTS ARE ALLOWED.

JOE GUTIERREZ, A LEVEL 10 NDI INSPECTOR WHO OPERATES THE EDDY CURRENT & ULTRA-SONIC EQUIPMENT [redacted] 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 [redacted] 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 [redacted] 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 [redacted] 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 [redacted] 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 ON PART MASS & GEOMETRY. AT PRESENT EACH OPERATOR IS TRAINED AND EXPERIENCED TO KNOW THE APPROXAMATE 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 DETECTED. THE PROCESS WAS REPEATED ON A KNOWN DEFECT ARTICLE TO SHOW THE INDICATION TO BE EXPECTED.

MAGNETIC PARTICLE INSPECTION REQUIRES THE FIELD TO BE CREATED CROSSWISE TO THE PART, AND THEN DEMAGNETIZED. THE FIELD IS THEN GENERATED PARALLEL TO THE PART AND AGAIN DEMAGNETIZED. THIS PROCESS SHOULD ALLOW SIGHTING OF A CRACK 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 CONCERN~~ING~~. 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 BOOTHES. 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;
   Magnisium 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 Approxamately 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 Haroware 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 IMMERSED.

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

EACH OVEN CAN HOLD 3 TROLLEYS OF PARTS

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.

WENT TO BLDG # 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 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 CURRENT INDUCED THROUGH THE COIL. THIS CREATES FLUX LINES WHICH TRAVEL THE LENGTH OF THE PART.

THE PART IS USUALLY LAID AT THE BOTTOM EGDE 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 [redacted] 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 EQUIPTMENT.

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; [redacted] 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 <u>TWO</u> 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 EQUIPTMENT 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 I & II 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 THOUROUGHLY 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 GROSKRENTZ 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 1/7TH 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 EQUIPTMENT 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 LaVelle 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 Equiptment 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 EQUIPTMENT 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. APPROXAMATELY 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 EQUIPTMENT. 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 EQUIPTMENT 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 EQUIPTMENT.

Buildings In Which Non-Destructive Testing Is Performed

Bldg	Location Area	Types Of NDI
✓ 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 CAMBELL

WE DISCUSSED EQUIPTMENT NEEDS IN THE NDI AREAS. TYPICALLY EQUIPTMENT 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 EQUIPTMENT IS IN GREATEST NEED OF REPLACEMENT. SEVERAL X-RAY MACHINES IN USE CANNOT BE REPAIRED IF NECCESSARY BECAUSE THE PARTS ARE NOT MADE ANYMORE. CRAIG TOLD ME THAT A LIST OF EXISTING EQUIPTMENT AND PURCHASE DATES MIGHT BE AVAILABLE IN WALT JOHNSTON'S OFFICE - EQUIPTMENT PLANNING. (7-3893

WHEN I FIRST VISITED THE NDI AREA ON APRIL 20, 1989 ONLY PENETRANT LINE F WAS BEING USED BECAUSE THE DEVELOPER IN E LINE WAS NOT AT SPEC. 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 [redacted] INCORRECTLY A FILLED UP WITH PENTRANT, THEN EMULSIFIER. THIS FLUID WAS NOT EMPTIED IN THE SPRAY TANK BUT RATHER MOVED TO DEVELOPER WHEN PART WAS DIPPED IN DEVELOPER, [redacted] EMULSIFIER ESCAPED AND CONTAMINANT TANK.

VISITED WITH JIM PATTERSON IN THE EQUIPTMENT PLANNING DEPT TO OBTAIN INFORMATION ON THE AGE AND TYPE OF NDI EQUIPTMENT. HE PROVIDED 3 SHEETS WHICH NOTE ACQUISTION DATES AND EXPECTED LIFE OF EACH MACHINE. THESE SHEETS WILL BE FOUND IN THE EQUIPTMENT 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 [redacted] 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 [redacted] 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. [redacted]
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, I" 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.

June 20th

On Tuesday All Of TI People Took Andy Currie, Stephanie Flynn, Dee Mackliet, & Grant Cheevers On A Tour Through Each RCC Highlighting The Pathes Of Wheels, Brakes, & Struts.

The NDI Area Was Shut Down Because Of A Water Problem. The Penetrant Dwell Queue Was Full And All Stations Through The Anodize Strip Line Were Backed Up.

After Some Investation 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~~ 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 2½ 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 ¾'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 Equiptment 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 [redacted] 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 <u>At Least</u> 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. [redacted] 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 [redacted] Obtain Occurance Factor Info From Roger Murray But He Has Told Me That He Does Have It.

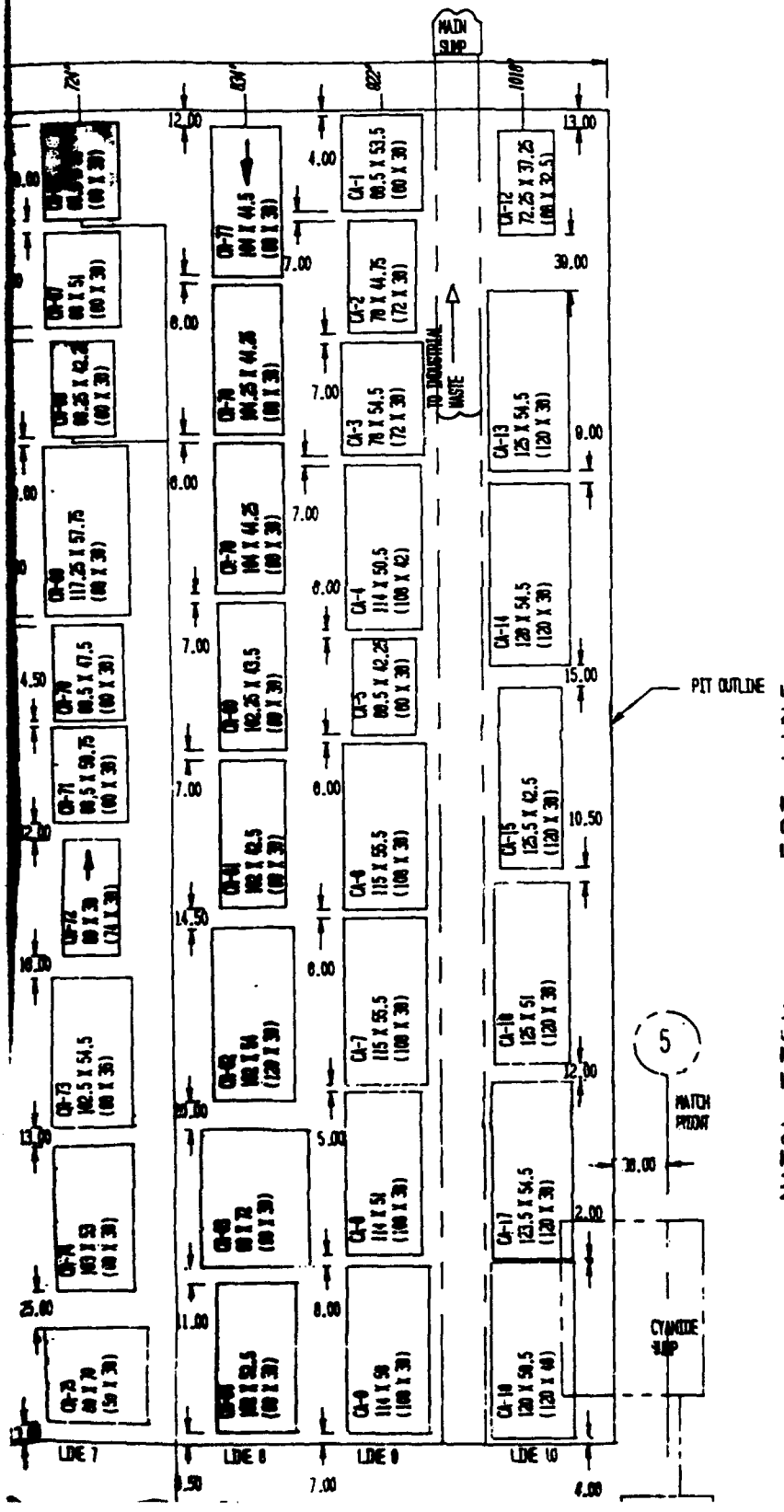
8. FINALLY I WOULD COMMEND THE OGDEN ALC PEOPLE NAMELY ANDY CURRIE, STEPHANIE FLYNN, DEE MACKLIET, & GRANT CHEEVERS [redacted] FOR THE SUPPORT GIVEN THE TI PROGRAM. IT IS APPARENT THAT THIS PROJECT IS HIGH PRIORITY IN THEIR EYES. MANY OTHERS IN THE VARIOUS DEPARTMENTS ON THE BASE HAVE HELPED [redacted]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

RCC CHECKLIST
(For Internal Use, Not a Model Input)

NAME MEL ANDERSON ALC 00 DATE 5-25-89 SHEET 1 OF 1

	DATABASE DOCUMENTATION								PROCESS CHARACTERIZATION			
RCC	FACILITY LAYOUT	EQUIPMENT	WORK FORCE	REPAIR WORK TECHNOLOGY	WORKLOAD MIX & VOLUME	MATERIAL HANDLING	STORAGE	FLOW CHARTS	EQUIPMENT PROFILE	MANPOWER PROFILE	WORKLOAD PROFILE	80/20 ANALYSIS
MANPNA	✓	✓	✓	✓	✓	✓	✓	✓	✓	·	WHERE	✓

BUILDING 505 NDI



TANK	TANK CHEMICALS OR CONTENTS	SOLUTION TEMP	TANK MATL.	TYPE
CA-12 VAPOR DEGREASER	111, TRICHLOROETHANE	180°F.	1020	V
CA-13 HOT WATER RINSE	HOT WATER	180°F.	302	II
CA-14 CHROMIC ACID	CHROMIC ACID <1Z 1/1b/100 GAL.	AMBIENT	316	
CA-15 COLD RINSE	COLD WATER	AMBIENT	430	I
CA-16 CYANIDE HOLDING	SODIUM CYANIDE 14Z SODIUM HYDROXIDE 10Z	AMBIENT	1020 PVC	IV
CA-17 CADMIUM PLATE	CAD. OXIDE 3Z, SOD. CYA. 14Z SOD. HYD. 4Z, SOD. CARB. 4Z	AMBIENT	1020 PVC	IV
CA-18 CADMIUM PLATE	CAD. OXIDE 3Z SOD. CYA. 14Z SOD. HYD. & SOD. CAR. 4Z	AMBIENT	1020 PVC	IV
CA-1 CADMIUM STRIP	AMMONIUM NITRATE 13Z	AMBIENT	1020	VI
CA-2 FORMULA P	SODIUM HYDROXIDE 3Z TRISODIUM PHOS. 10Z	200°F.	1020	IV A
CA-3 FORMULA P	SODIUM HYDROXIDE 3Z TRISODIUM PHOS. 10Z	200°F.	1020	IV A
CA-4 ALODINE	CHROMIC ACID 2Z POT. FERR. CYA. <1Z	AMBIENT	302	IV
CA-5 COLD RINSE	COLD WATER	AMBIENT	430	I
CA-6 HOT RINSE	HOT WATER	180 F.	430	IV
CA-7 IRIDATE	CHROMIC ACID 3Z PROPRIETARY	AMBIENT	302	II
CA-8 COLD RINSE	COLD WATER	AMBIENT	NON RUBBER LINED	III
CA-77	FLUORESCENT DYE OIL BASE	AMBIENT	1020	III
CA-78	FLUORESCENT DYE OIL BASE (KEROSENE)	AMBIENT	1020	III
CA-79	—	AMBIENT	120	III
[illegible]	WATER	AMBIENT	430	I
[illegible]	TALK SLURRY PROPRIETARY	AMBIENT	302	III
CA-82	—	—	1020	
CA-83	—	—	1020	
CA-84	HOT WATER	180°F.	302	II
[illegible]	HOT WATER	180°F.	302	II
[illegible]	[illegible] CHROMATE 6Z	AMBIENT	430	IV
[illegible]	COLD WATER	AMBIENT	430	I
[illegible]	HYDROCHLORIC ACID 6Z	AMBIENT	1020	III
[illegible]	COLD WATER	AMBIENT	304	IV
[illegible]	NITRIC ACID 4Z	AMBIENT	302	II
[illegible]	[illegible] TRICHLOROETHANE	180°F.	304	IV
CA-73 RUST STRIPPER	SODIUM HYDROXIDE 30Z	250°F.	430	I
CA-74 HOT RINSE	HOT WATER	170°F.	430	III
CA-75 HYDROCHLO. ACID	HYDROCHLORIC ACID 50Z	AMBIENT	1020	VI
CA-56 CHROME STRIP STL.	SODIUM HYDROXIDE 6Z	AMBIENT	430	III
CA-58 CHROME STRIP STL.	SODIUM HYDROXIDE 5Z	AMBIENT	430	III
CA-57 CHROME STRIP STL.	SODIUM HYDROXIDE 6Z	AMBIENT	430	I
CA-59 COLD RINSE	COLD WATER	AMBIENT	430	III

Operation (Tank No)	Chemicals	Operating Limit (oz/gal)	Optimum Concentration (oz/gal)	Testing Frequency
25. Woods Nickel (SI-9)	Nickel	7 - 9	8	Once/month
	Hydrochloric Acid	11 - 19	14	Once/month
26. Mital Etch (hydrochloric acid) (CR-69)	Hydrochloric Acid	4 - 6%	5%	Once/month
27. Mital Etch (nitric acid) (CR-71)	Nitric Acid	3 - 5%	4%	Once/month
28. Mital Etch (neutralizer) (CR-67)	pH	10 minimum		Once/month
	Sodium Carbonate	4 - 6	5	Once/month
29. Nitric Acid (50% V/V) (CR-48)	Nitric Acid	55 - 82	62	Once/month
30. Passivate (AN-30, 17)	Sodium Dichromate ($2H_2O$)	2.7 - 4.1	3.4	Once/2 weeks
	Nitric Acid	27 - 34	30.5	Once/2 weeks
31. Phosphatize Manganese (AN-53)	Total Acid (TA)	16 - 21	19.5	As required
	TA/FA Ratio	5.5 - 7.0	6.0	As required
	Iron	0.27 - 0.4	0.3	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	0 - 4	1	Once/month
	Silver Cyanide	10 - 15	13	Once/month
	Free Potassium Cyanide	7 - 12	10	Once/month
	Potassium Carbonate	2 - 15	2	Once/year

Sheet Metal

Operation (Tank No)	Chemicals	Operating Limit (oz/gal)	Optimum Concentration (oz/gal)	Testing Frequency
1. Chemical Milling	Turco Form 9H	12 - 16	14	As required
	Aluminum	2 - 8		As required
2. Spot Weld	Smut-GO I	8 - 16	11	As required
3. FPL Etchant	Sulfuric Acid	38.5 - 41.5	42	As required
	Sodium Dichromate	4.1 - 12	4.5	As required
4. Turco 4215	Turco 4215	4 - 8	6	As necessary to maintain control. Change when total additions equal initial makeup.

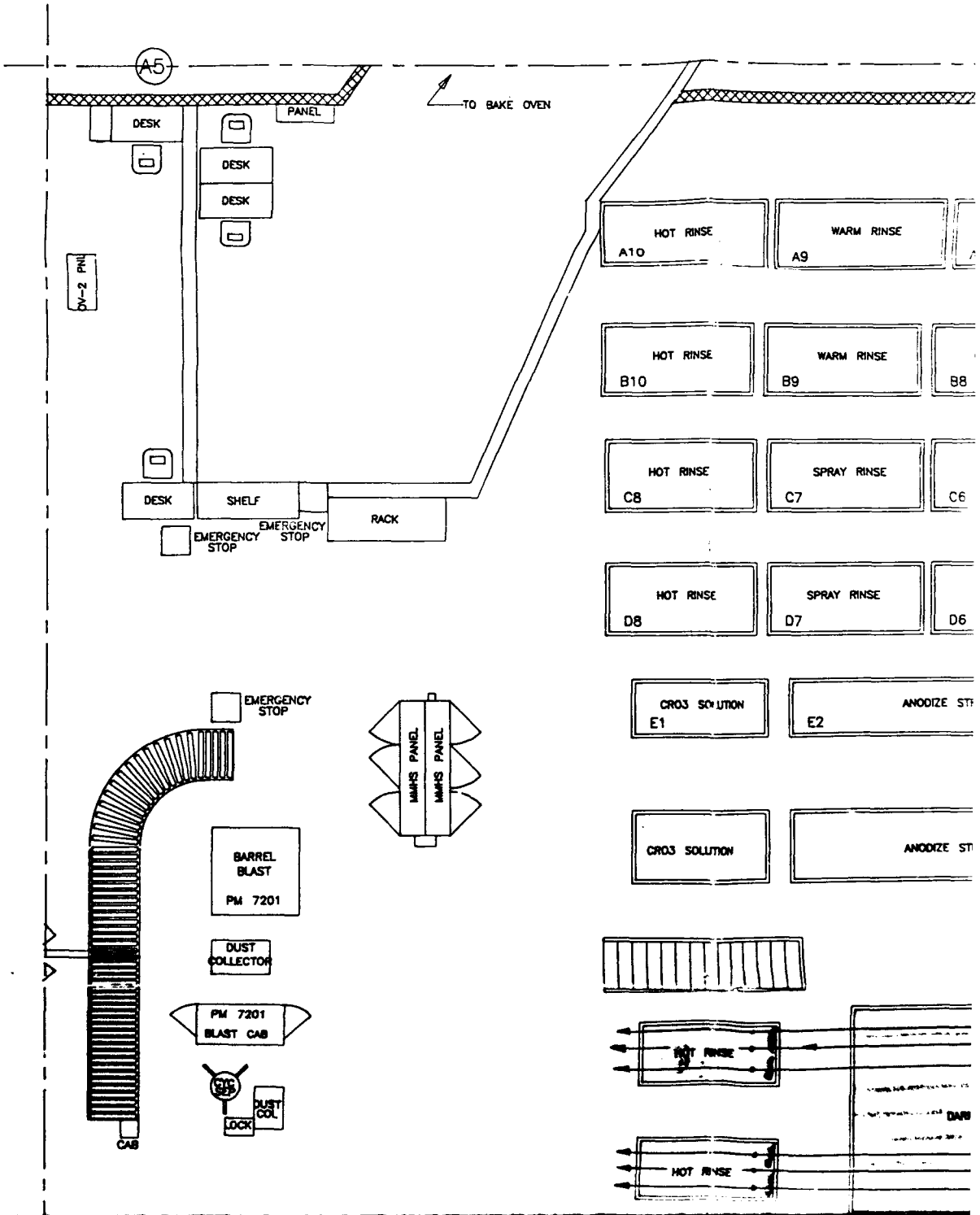
Vapor Degreasers

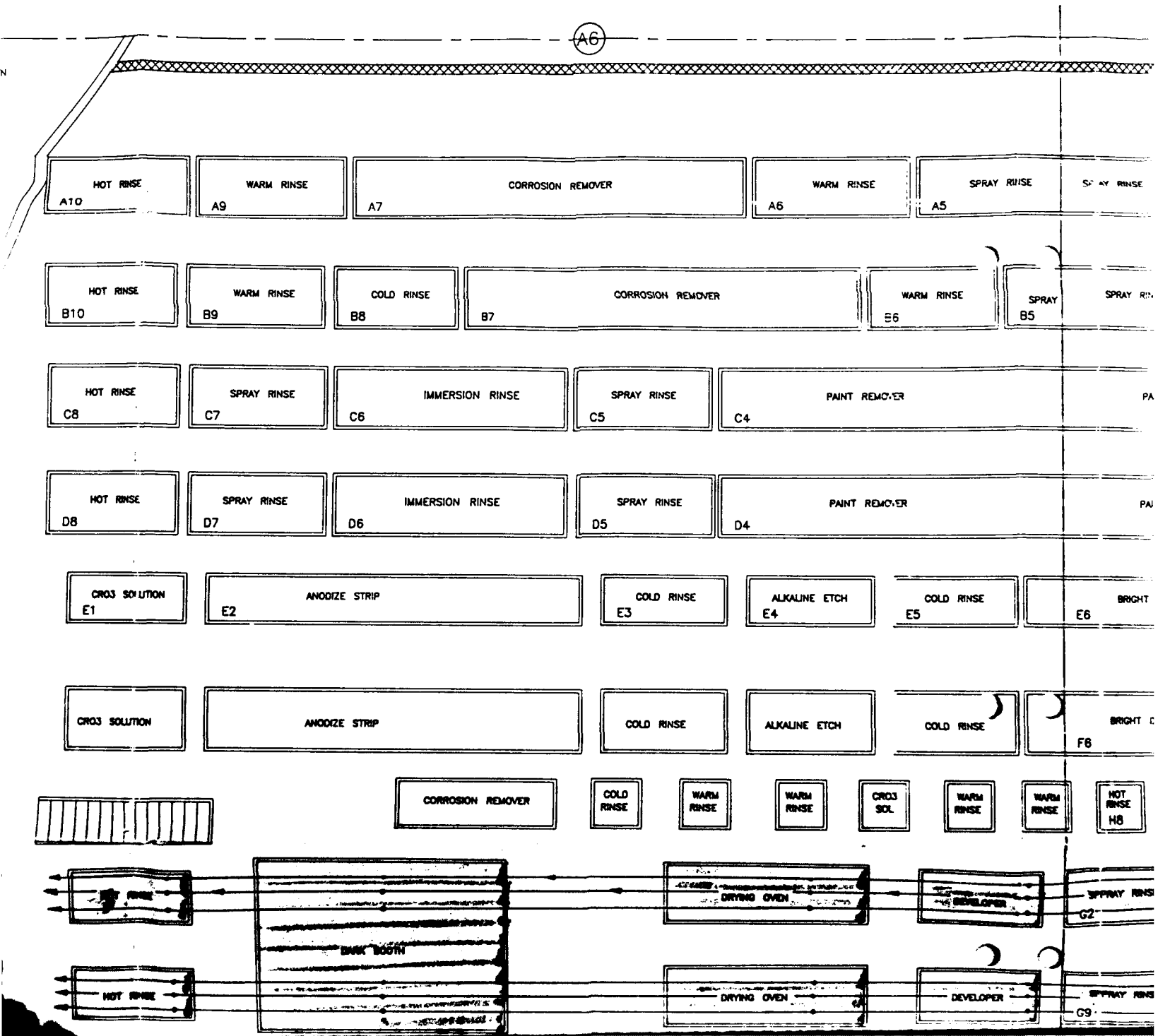
1. 1,1,1-tricholorethane				
Bldg 505	CR-33, 72, CA-12, 25, AN-3, 25	Acid Acceptance	5 ml max	Once/week
Bldg 507	Welding Teardown Wheel Assembly Strut Assembly B-52 Teardown	Acid Acceptance	5 ml max	Once/week
Bldg 510	Hydraulics	Acid Acceptance	5 ml max	Once/week
Bldg 265	Chemical Milling Tubing	Acid Acceptance	5 ml max	Once/week
Bldg 511		Acid Acceptance	5 ml max	Once/week
2. Perchloroethylene				
Bldg 507	Resin Impregnation	Acid Acceptance	pH-7 min	Once/week

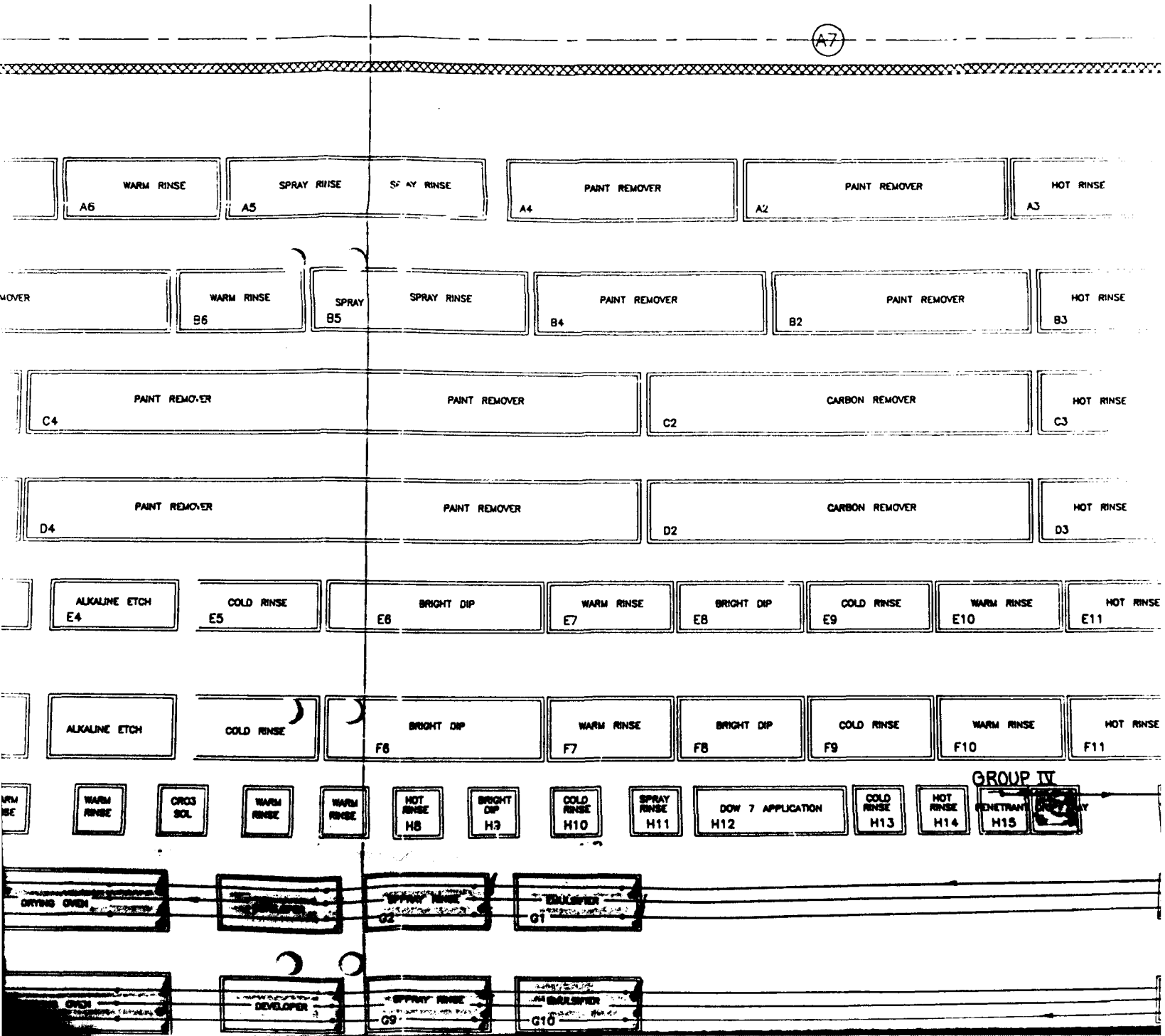
(1)

BUILDING 507 - EAST CENTER

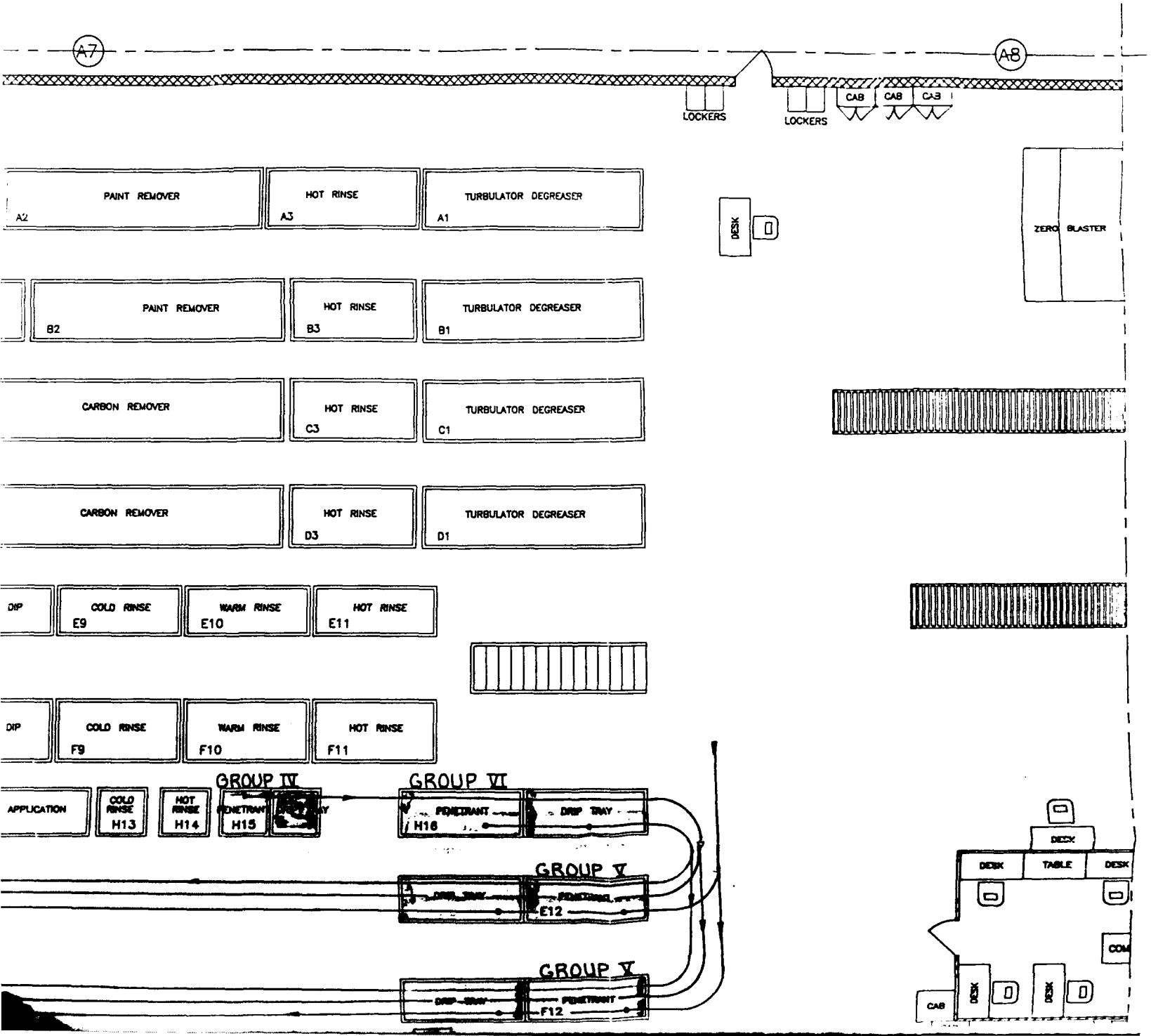
NON-DESTRUCTIVE INSPECTION AREAS




A6
HOT RINSE
A10
WARM RINSE
A9
CORROSION REMOVER
A7
WARM RINSE
A6
SPRAY RINSE
A5
HOT RINSE
B10
WARM RINSE
B9
COLD RINSE
B8
CORROSION REMOVER
B7
WARM RINSE
B6
SPRAY
B5
HOT RINSE
C8
SPRAY RINSE
C7
IMMERSION RINSE
C6
SPRAY RINSE
C5
PAINT REMOVER
C4
HOT RINSE
D8
SPRAY RINSE
D7
IMMERSION RINSE
D6
SPRAY RINSE
D5
PAINT REMOVER
D4
CRO3 SOLUTION
E1
ANODIZE STRIP
E2
COLD RINSE
E3
ALKALINE ETCH
E4
COLD RINSE
E5
BRIGHT
E6
CRO3 SOLUTION
ANODIZE STRIP
COLD RINSE
ALKALINE ETCH
COLD RINSE
F6
CORROSION REMOVER
COLD RINSE
WARM RINSE
WARM RINSE
CRO3 SOL
WARM RINSE
WARM RINSE
HOT RINSE
H8
DRYING OVEN
DEVELOPER
G2
DRYING OVEN
DEVELOPER
G9


A7
WARM RINSE
A6
SPRAY RINSE
A5
SPRAY RINSE
PAINT REMOVER
A4
PAINT REMOVER
A2
HOT RINSE
A3
WARM RINSE
B6
SPRAY
B5
SPRAY RINSE
PAINT REMOVER
B4
PAINT REMOVER
B2
HOT RINSE
B3
PAINT REMOVER
C4
PAINT REMOVER
CARBON REMOVER
C2
HOT RINSE
C3
PAINT REMOVER
D4
PAINT REMOVER
CARBON REMOVER
D2
HOT RINSE
D3
ALKALINE ETCH
E4
COLD RINSE
E5
BRIGHT DIP
E6
WARM RINSE
E7
BRIGHT DIP
E8
COLD RINSE
E9
WARM RINSE
E10
HOT RINSE
E11
ALKALINE ETCH
COLD RINSE
BRIGHT DIP
F6
WARM RINSE
F7
BRIGHT DIP
F8
COLD RINSE
F9
WARM RINSE
F10
HOT RINSE
F11
GROUP IV
WARM RINSE
CROS SOL
WARM RINSE
WARM RINSE
HOT RINSE
H8
BRIGHT DIP
H9
COLD RINSE
H10
SPRAY RINSE
H11
DOW 7 APPLICATION
H12
COLD RINSE
H13
HOT RINSE
H14
H15
DRYING OVEN
G2
G1
DEVELOPER
SPRAY RINSE
G9
G10

(41)


A7
A8
LOCKERS
LOCKERS
CAB
CAB
CAB
PAINT REMOVER
A2
HOT RINSE
A3
TURBULATOR DEGREASER
A1
DESK
ZERO BLASTER
PAINT REMOVER
B2
HOT RINSE
B3
TURBULATOR DEGREASER
B1
CARBON REMOVER
HOT RINSE
C3
TURBULATOR DEGREASER
C1
CARBON REMOVER
HOT RINSE
D3
TURBULATOR DEGREASER
D1
DIP
COLD RINSE
E9
WARM RINSE
E10
HOT RINSE
E11
DIP
COLD RINSE
F9
WARM RINSE
F10
HOT RINSE
F11
GROUP IV
APPLICATION
COLD RINSE
H13
HOT RINSE
H14
PENETRANT
H15
GROUP VI
PENETRANT
H16
DRIP TRAY
GROUP V
E12
GROUP V
F12
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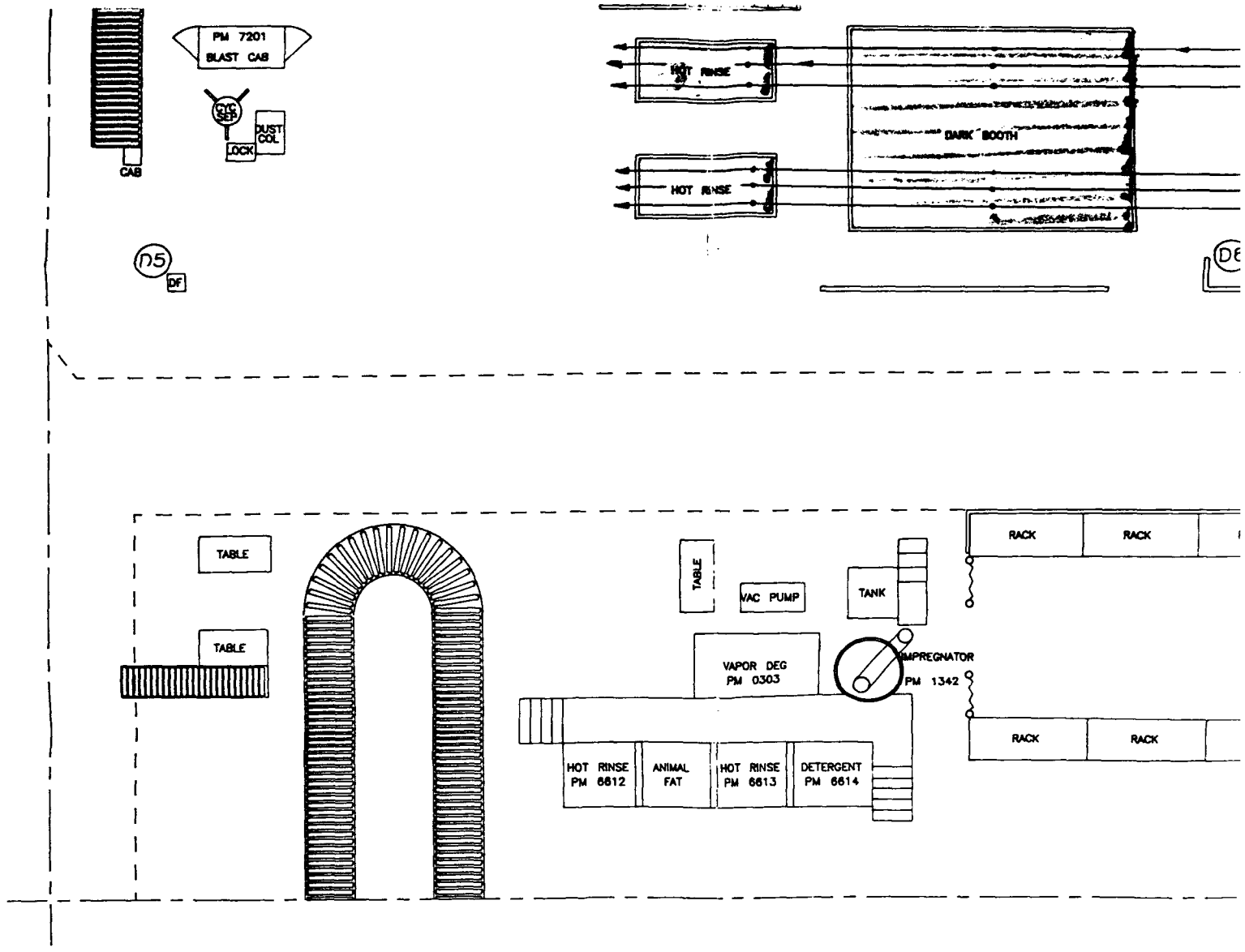
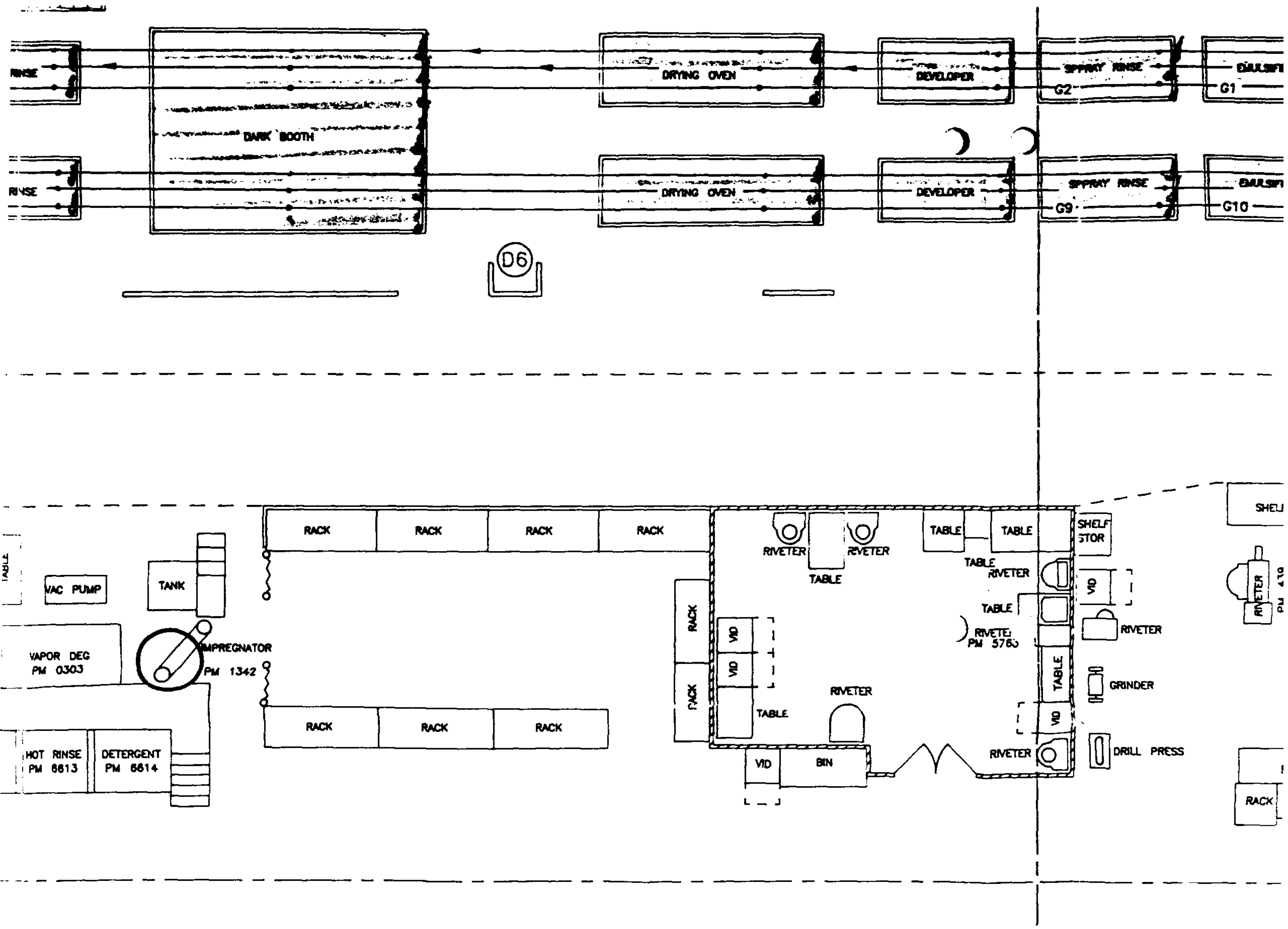
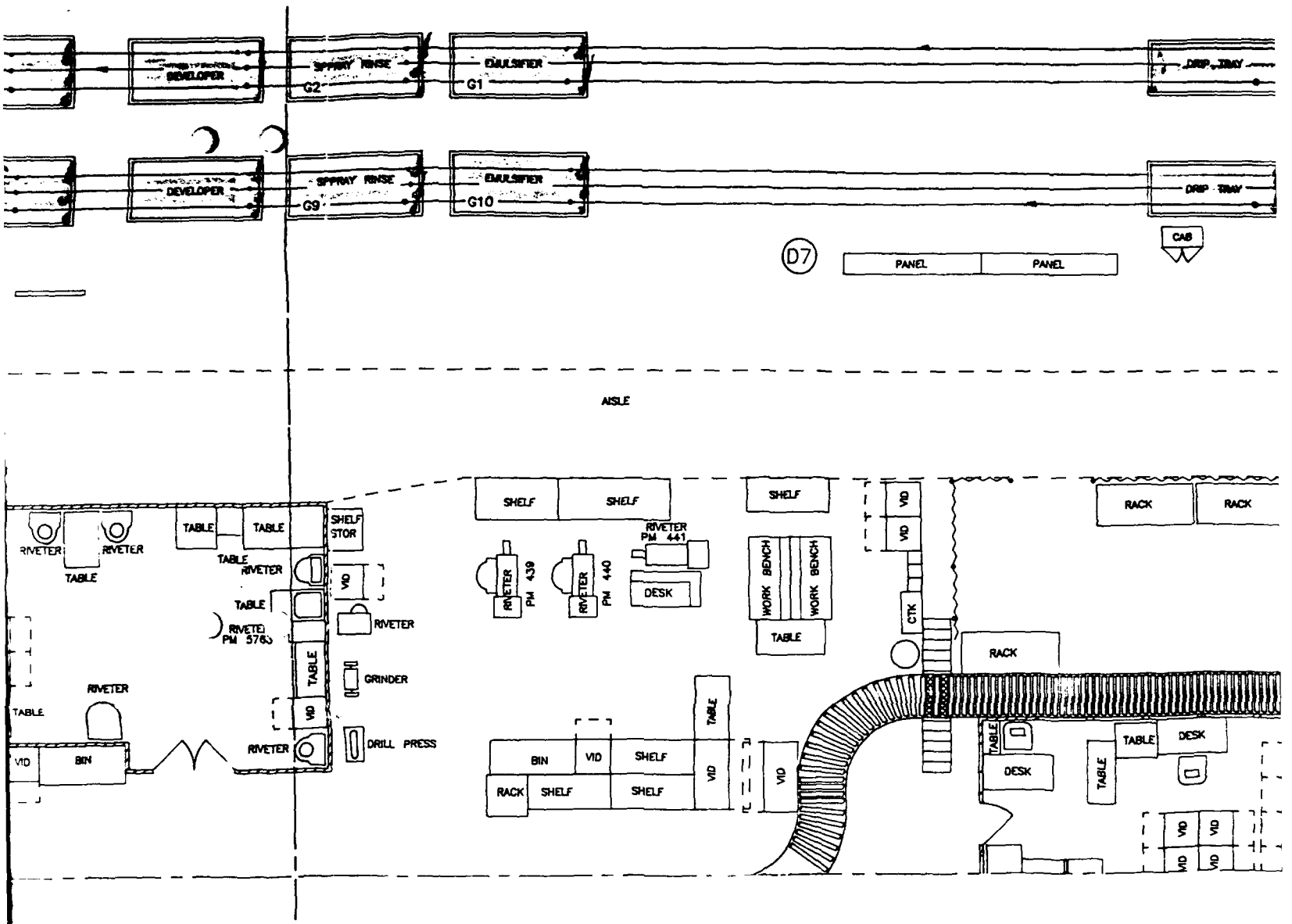
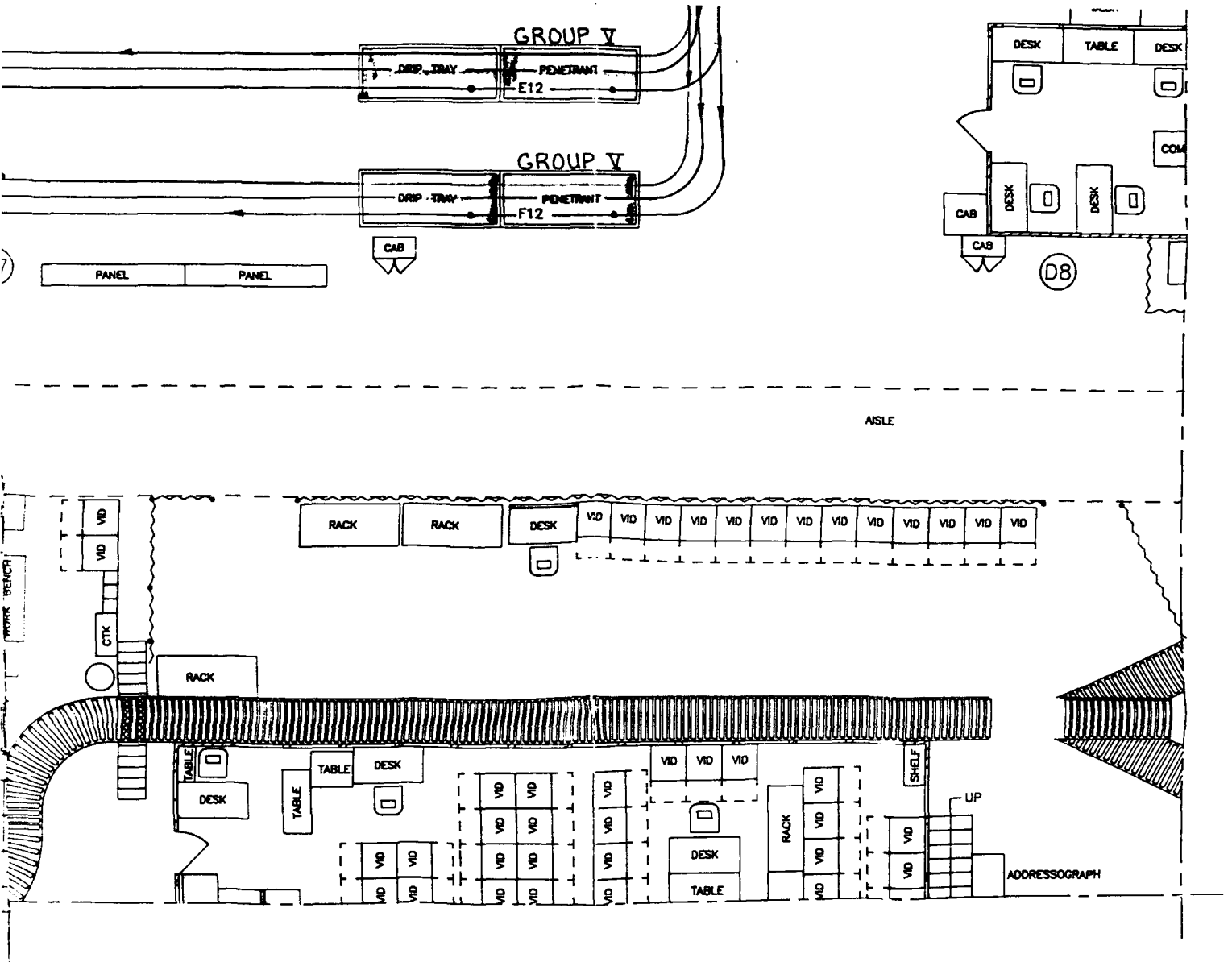
DESK
TABLE
DESK
DESK
DESK
CAB


PM 7201
BLAST CAB
CAB
CYC SEP
DUST COL
LOCK
D5
DF
HOT RINSE
DARK BOOTH
HOT RINSE
TABLE
TABLE
TABLE
VAC PUMP
TANK
VAPOR DEG
PM 0303
IMPREGNATOR
PM 1342
RACK
RACK
RACK
RACK
HOT RINSE
PM 6812
ANIMAL
FAT
HOT RINSE
PM 6813
DETERGENT
PM 6814

(5)


RINSE
DARK BOOTH
DRYING OVEN
DEVELOPER
SPRAY RINSE
EMULSIFI
G2
G1
RINSE
DRYING OVEN
DEVELOPER
SPRAY RINSE
EMULSIFI
G9
G10
D6
RACK
RACK
RACK
RACK
SHELF STOR
VAC PUMP
TANK
VAPOR DEG PM 0303
IMPREGNATOR PM 1342
RIVETER
RIVETER
TABLE
TABLE
TABLE
TABLE
RIVETER
TABLE
VID
RIVETER
RACK
VID
VID
RIVETER PM 5763
RACK
TABLE
TABLE
RIVETER
GRINDER
RIVETER
VID
HOT RINSE PM 6613
DETERGENT PM 6614
RACK
RACK
RACK
VID
BIN
RIVETER
DRILL PRESS
RACK
RIVETER


DEVELOPER
SPRAY RINSE
G2
EMULSIFIER
G1
DRIP TRAY
DEVELOPER
SPRAY RINSE
G9
EMULSIFIER
G10
DRIP TRAY
CAB
D7
PANEL
PANEL
AISLE
RIVETER
RIVETER
TABLE
TABLE
TABLE
SHELF STOR
TABLE
RIVETER
VID
TABLE
RIVETER
RIVETER PM 576
TABLE
GRINDER
RIVETER
TABLE
VID
BIN
RIVETER
DRILL PRESS
SHELF
SHELF
RIVETER PM 439
RIVETER PM 440
RIVETER PM 441
DESK
SHELF
WORK BENCH
WORK BENCH
TABLE
VID
VID
CTK
RACK
RACK
RACK
TABLE
BIN
VID
SHELF
RACK
SHELF
SHELF
TABLE
VID
VID
TABLE
DESK
TABLE
TABLE
DESK
VID
VID
VID
VID



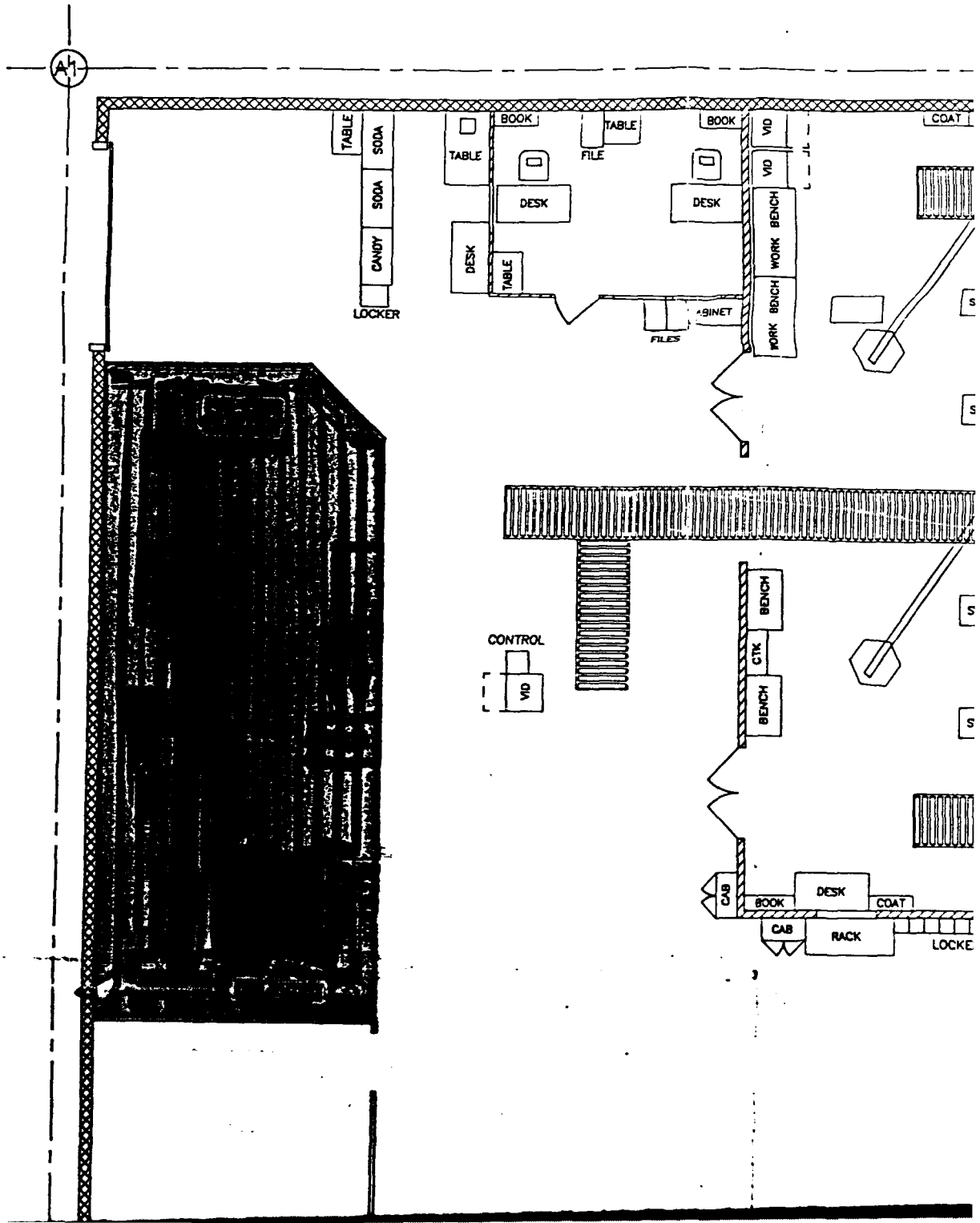
MAGNESIUM PARTS

STEEL / CHROME PARTS

ALUMINUM PARTS

BUILDING 507 - NORTH EAST

NON-DESTRUCTIVE INSPECTION AREAS



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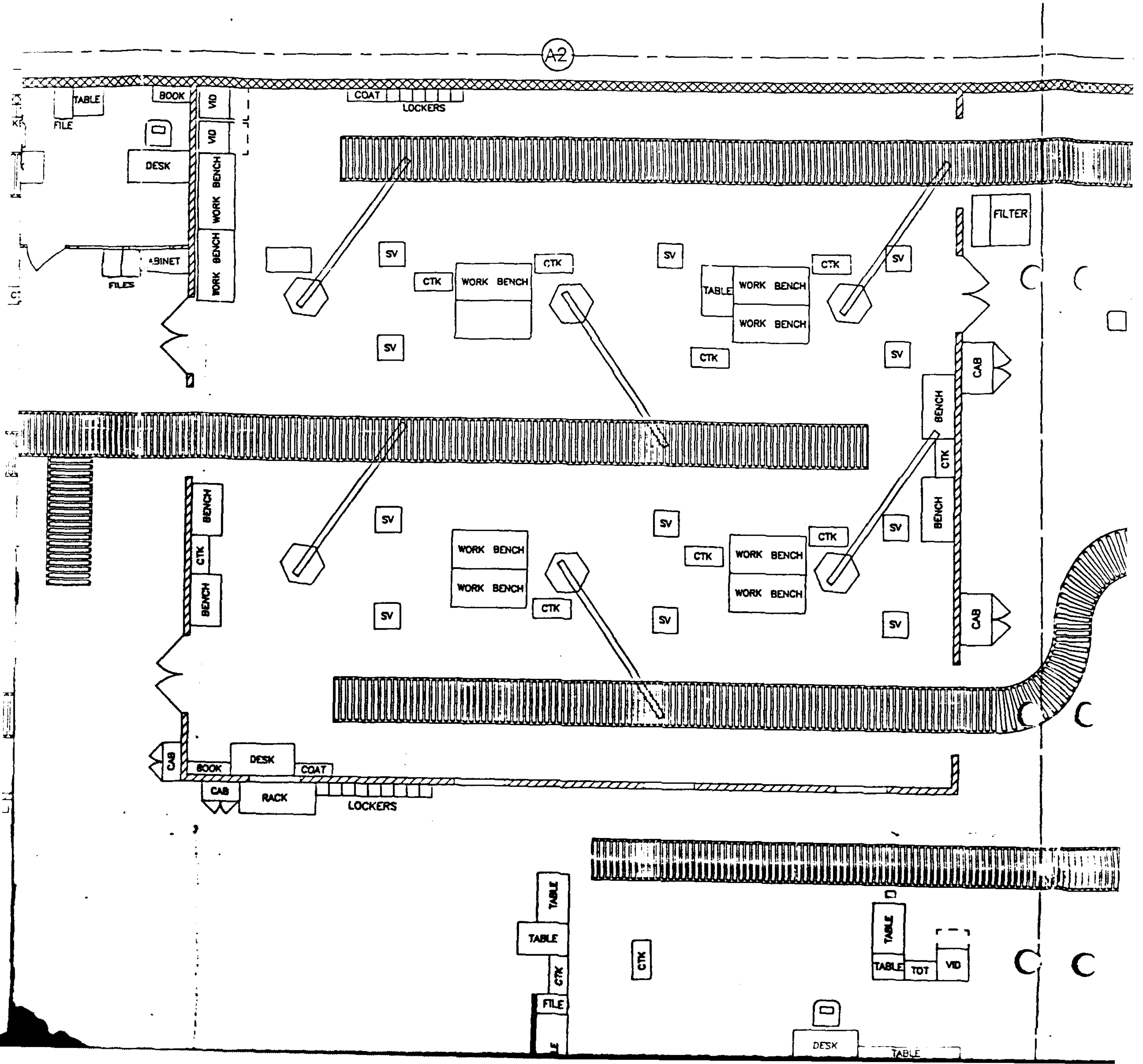
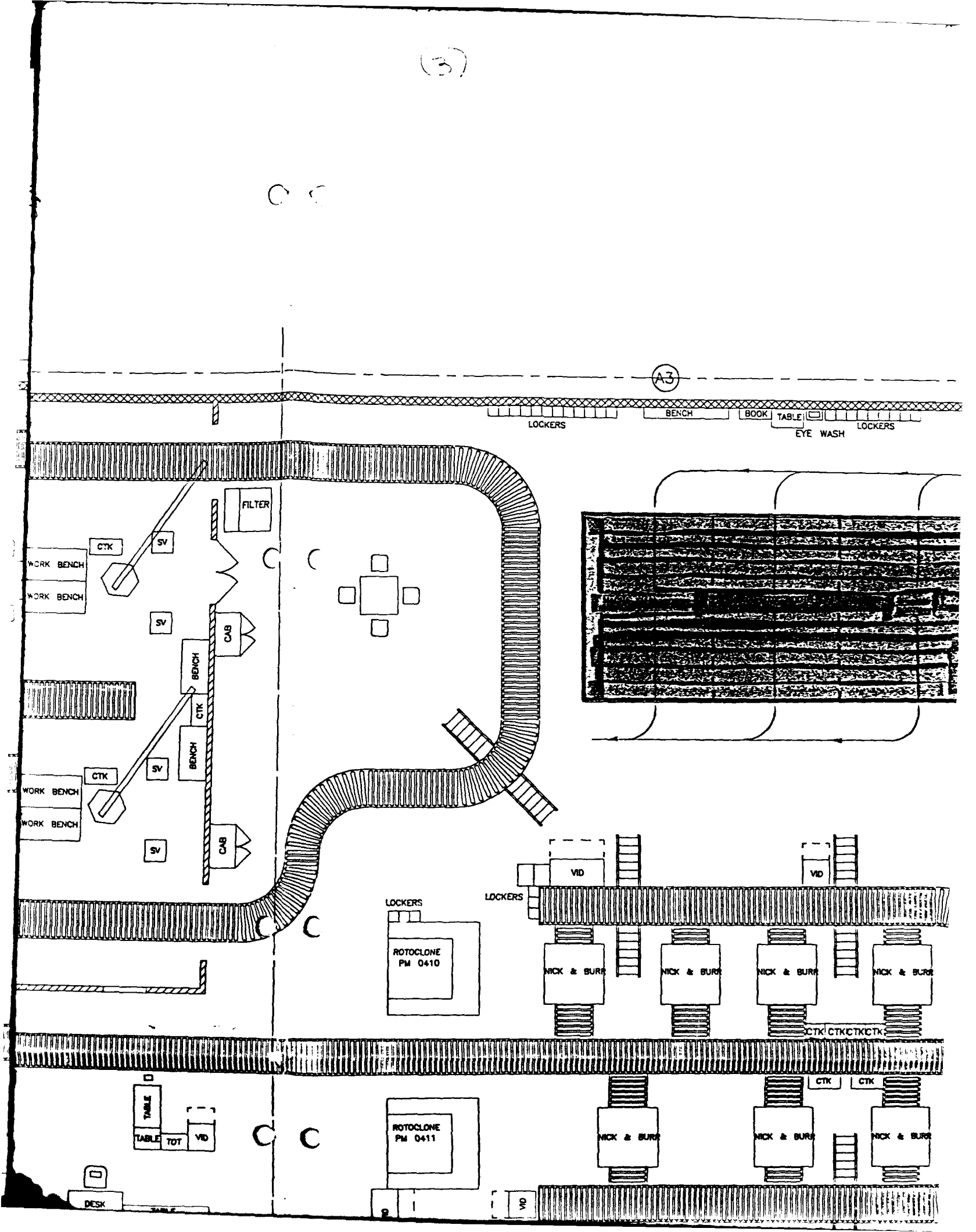
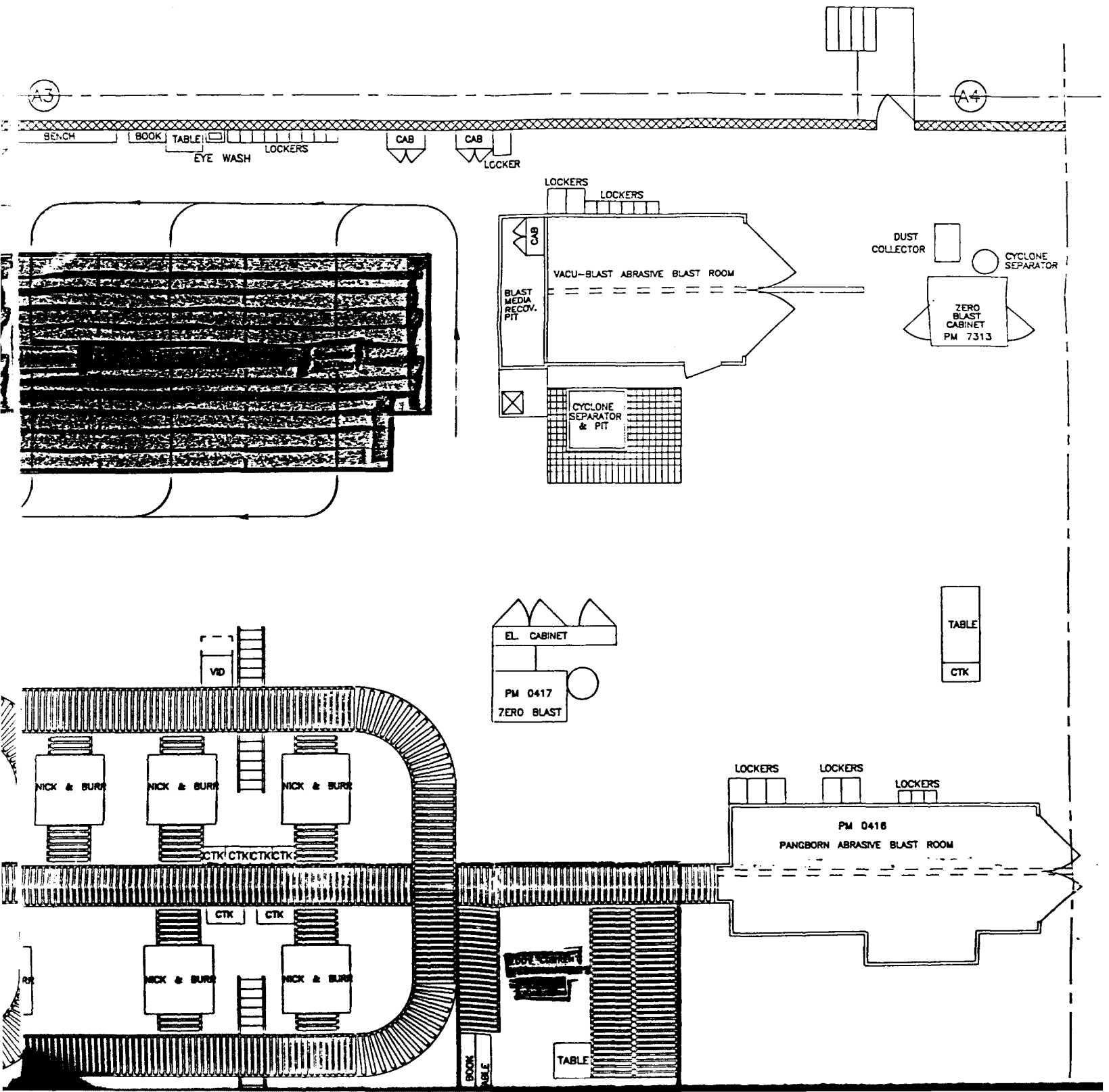
ST

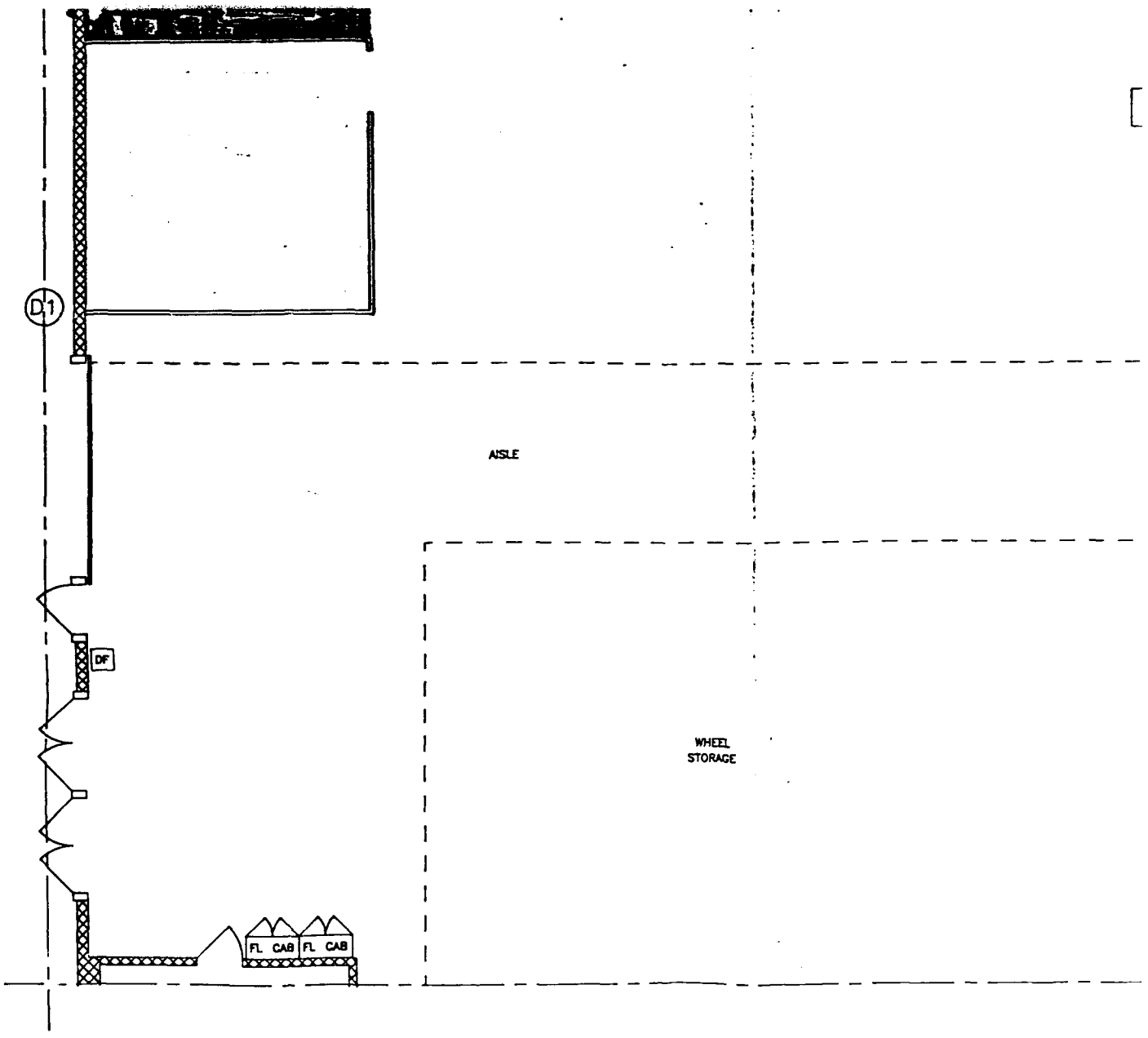


A2
TABLE
FILE
BOOK
VID
VID
DESK
WORK BENCH
WORK BENCH
CABINET
FILES
COAT
LOCKERS
SV
CTK
WORK BENCH
CTK
SV
TABLE
WORK BENCH
WORK BENCH
CTK
SV
FILTER
CTK
CAB
BENCH
CTK
BENCH
CAB
BENCH
CTK
BENCH
SV
WORK BENCH
WORK BENCH
CTK
SV
CTK
WORK BENCH
WORK BENCH
CTK
SV
CAB
BOOK
DESK
COAT
CAB
RACK
LOCKERS
TABLE
TABLE
CTK
FILE
CTK
TABLE
TABLE
TOT
VID
DESK
TABLE

(3)


A3
LOCKERS
BENCH
BOOK
TABLE
EYE WASH
LOCKERS
FILTER
CTK
SV
WORK BENCH
WORK BENCH
SV
CAB
BENCH
CTK
BENCH
CTK
SV
WORK BENCH
WORK BENCH
SV
CAB
VID
VID
LOCKERS
LOCKERS
ROTOCLONE PM 0410
NICK & BURR
NICK & BURR
NICK & BURR
NICK & BURR
CTK CTK CTK CTK
CTK
CTK
TABLE
TABLE
TOT
VID
ROTOCLONE PM 0411
NICK & BURR
NICK & BURR
NICK & BURR
DESK
VID


A3
A4
BENCH
BOOK
TABLE
EYE WASH
LOCKERS
CAB
CAB
LOCKER
LOCKERS
LOCKERS
CAB
VACU-BLAST ABRASIVE BLAST ROOM
BLAST MEDIA RECOV. PIT
CYCLONE SEPARATOR & PIT
DUST COLLECTOR
CYCLONE SEPARATOR
ZERO BLAST CABINET PM 7313
EL. CABINET
PM 0417 ZERO BLAST
TABLE
CTK
VID
NICK & BURR
NICK & BURR
NICK & BURR
CTK CTK CTK CTK CTK
CTK
CTK
NICK & BURR
NICK & BURR
LOCKERS
LOCKERS
LOCKERS
PM 0416
PANGBORN ABRASIVE BLAST ROOM
TABLE


D.1
AISLE
DF
WHEEL
STORAGE
FL CAB
FL CAB

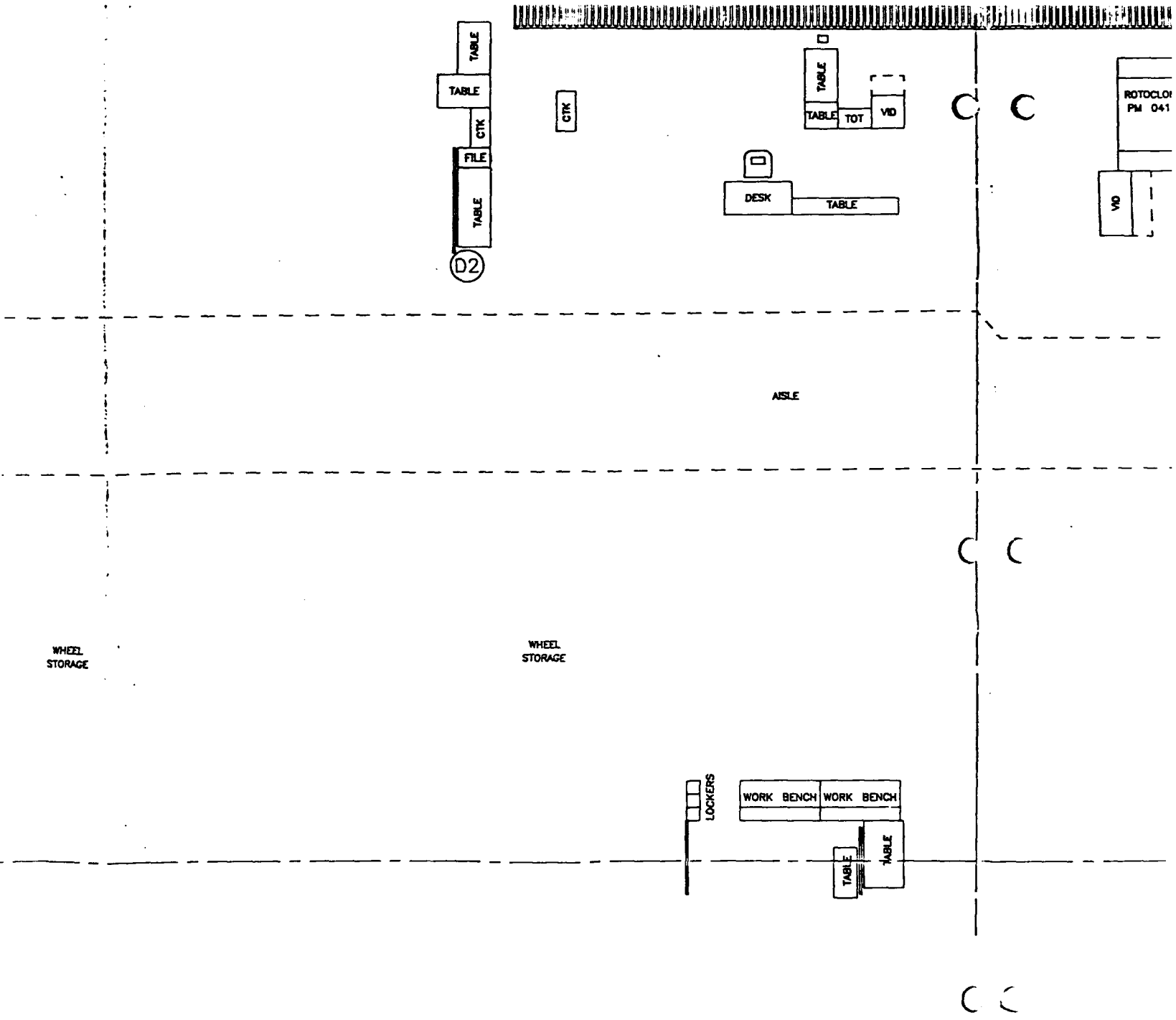


TABLE
TABLE
CTK
FILE
TABLE
D2
CTK
TABLE
TABLE
TOT
VID
DESK
TABLE
VID
AISLE
WHEEL STORAGE
WHEEL STORAGE
LOCKERS
WORK BENCH
WORK BENCH
TABLE
TABLE

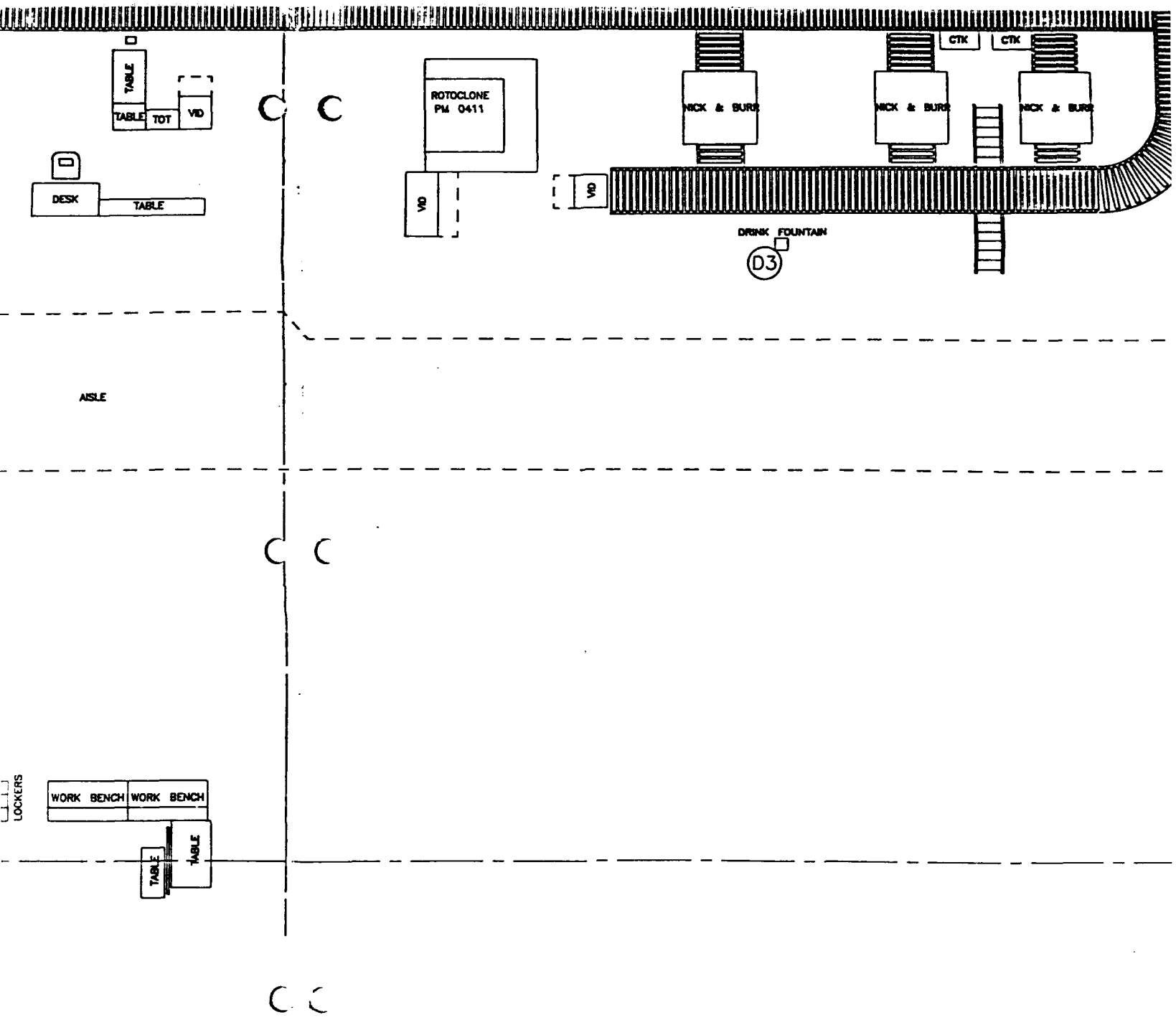
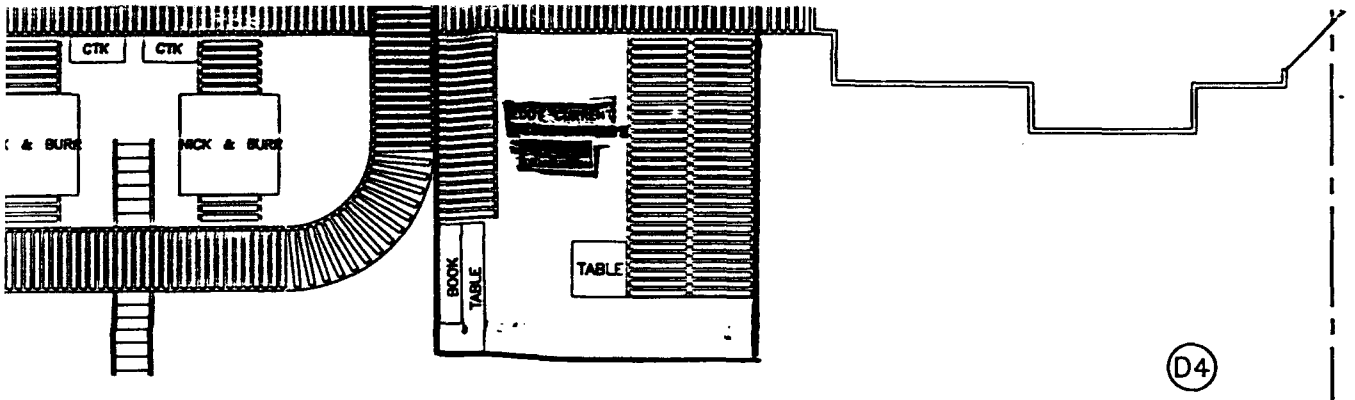


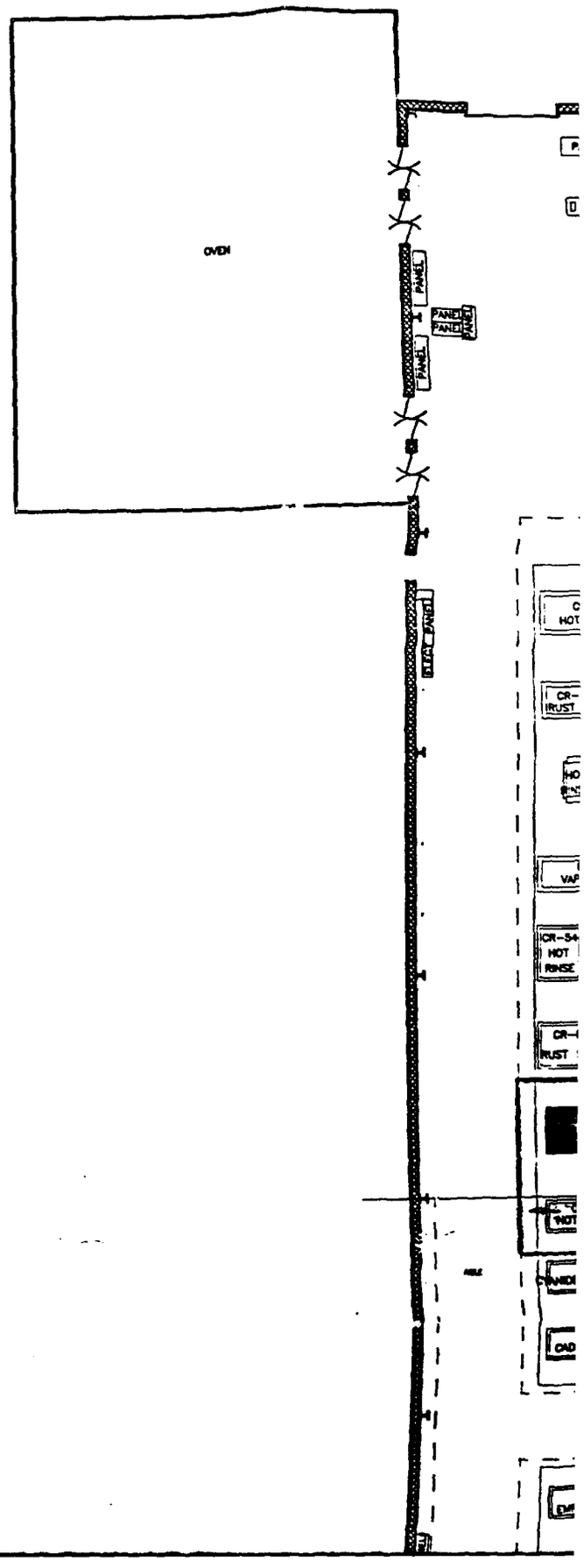
TABLE
TABLE
TOT
VID
DESK
TABLE
ROTOCLONE
PM 0411
VID
VID
NICK & BURR
NICK & BURR
NICK & BURR
CTK
CTK
DRINK FOUNTAIN
D3
AISLE
LOCKERS
WORK BENCH
WORK BENCH
TABLE
TABLE

(77)

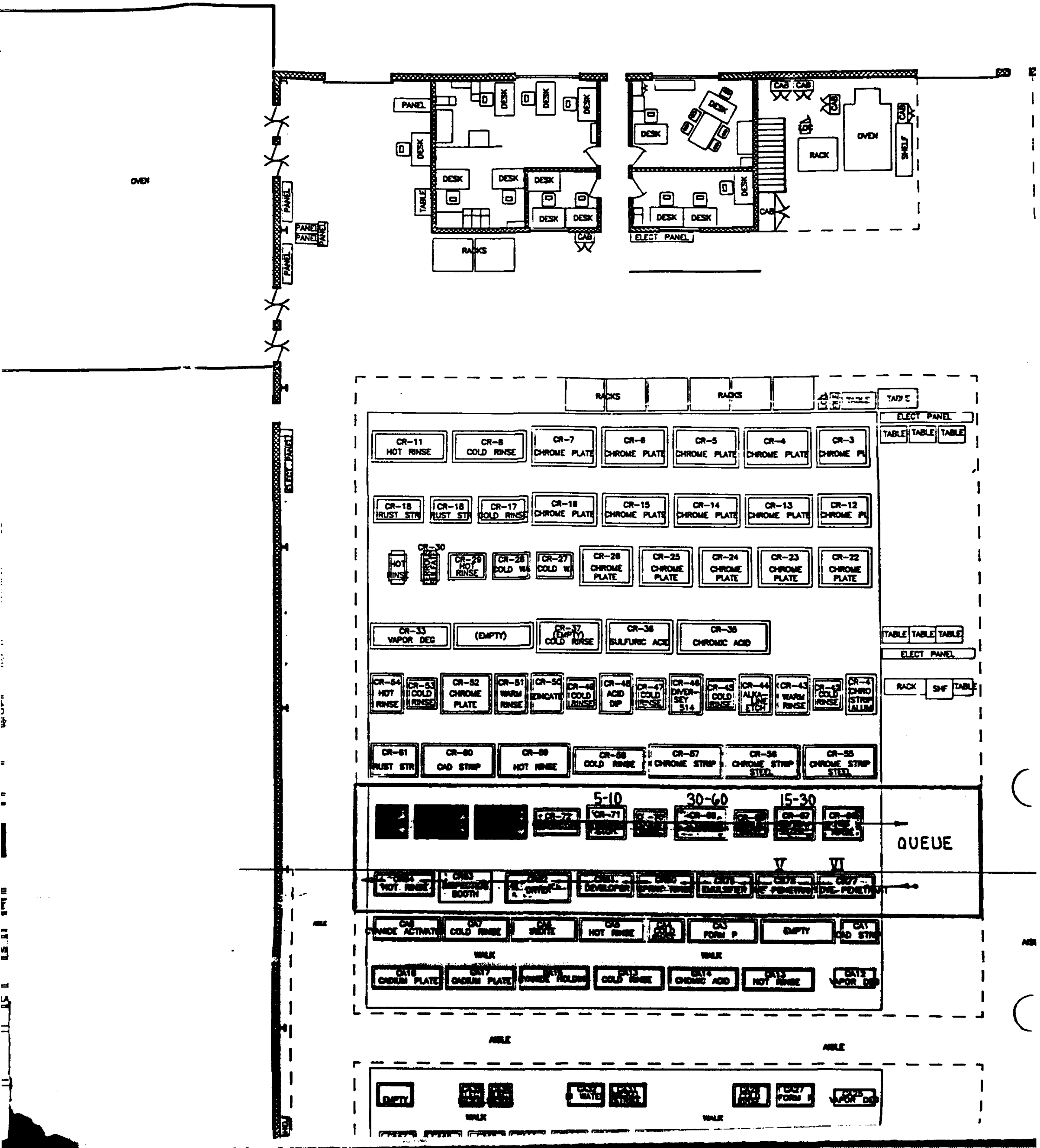

CTK
CTK
NICK & BURR
BOOK
TABLE
TABLE
D4

BUILDING 505

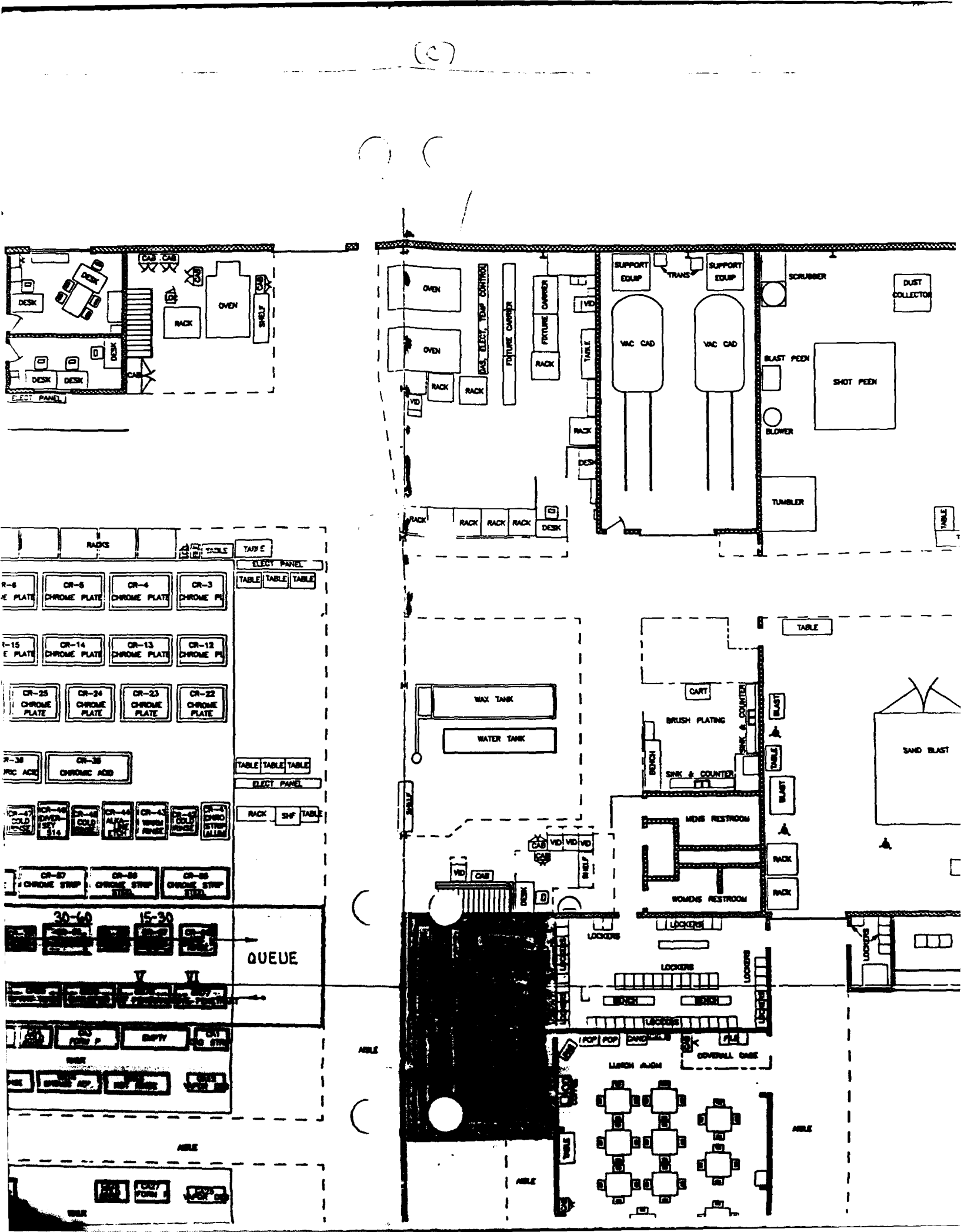
NON-DESTRUCTIVE INSPECTION AREAS



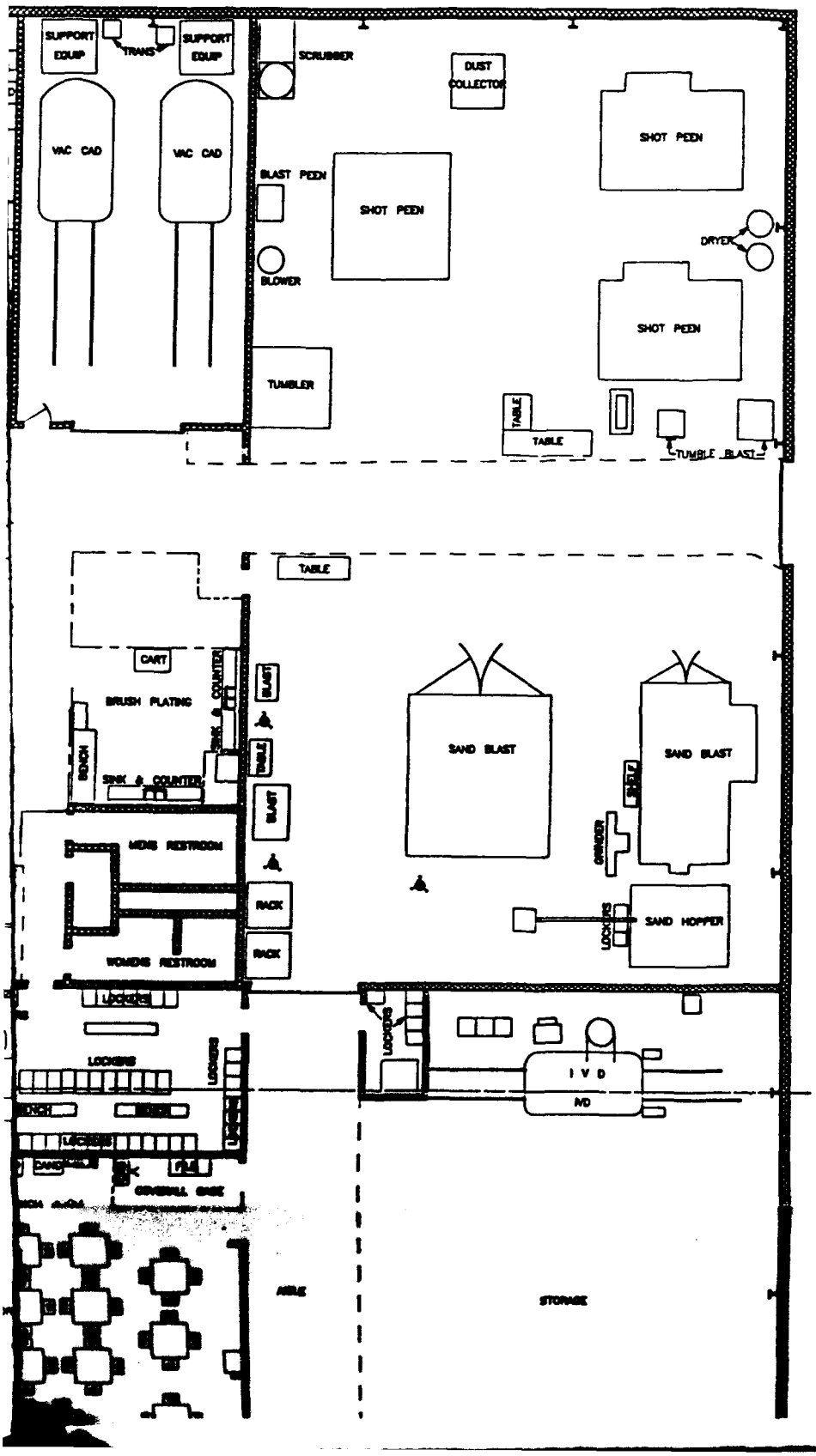
(b)



OVEN
PANEL
DESK
TABLE
RACKS
CAB
ELECT PANEL
RACK
SHELF
CR-11 HOT RINSE
CR-8 COLD RINSE
CR-7 CHROME PLATE
CR-6 CHROME PLATE
CR-5 CHROME PLATE
CR-4 CHROME PLATE
CR-3 CHROME PL
CR-18 RUST STR
CR-17 COLD RINSE
CR-16 CHROME PLATE
CR-15 CHROME PLATE
CR-14 CHROME PLATE
CR-13 CHROME PLATE
CR-12 CHROME PL
HOT RINSE
CR-30
CR-29 HOT RINSE
CR-28 COLD WA
CR-27 COLD W
CR-26 CHROME PLATE
CR-25 CHROME PLATE
CR-24 CHROME PLATE
CR-23 CHROME PLATE
CR-22 CHROME PLATE
CR-33 VAPOR DEG
(EMPTY)
CR-37 (EMPTY) COLD RINSE
CR-36 SULFURIC ACID
CR-35 CHROMIC ACID
CR-54 HOT RINSE
CR-53 COLD RINSE
CR-52 CHROME PLATE
CR-51 WARM RINSE
CR-50 ZINCATE
COLD RINSE
ACID DIP
CR-47 COLD RINSE
CR-46 DIVER-SEY 514
COLD RINSE
CR-44 ALKA-LINE ETCH
CR-43 WARM RINSE
COLD RINSE
CHRO STRIP ALUM
SHF
CR-61 RUST STR
CR-60 CAD STRIP
CR-59 HOT RINSE
CR-58 COLD RINSE
CR-57 CHROME STRIP
CR-56 CHROME STRIP STEEL
CR-55 CHROME STRIP STEEL
5-10
30-60
15-30
CR-72
CR-71
CR-67
QUEUE
V
VI
HOT RINSE
INSPECTION BOOTH
DRYER
DEVELOPER
EMULSIFIER
DYE PENETRANT
AISLE
COLD RINSE
HOT RINSE
FORM P
EMPTY
WALK
CADMIUM PLATE
COLD RINSE
CHROMIC ACID
HOT RINSE
VAPOR DEG
EMPTY
VAPOR DEG

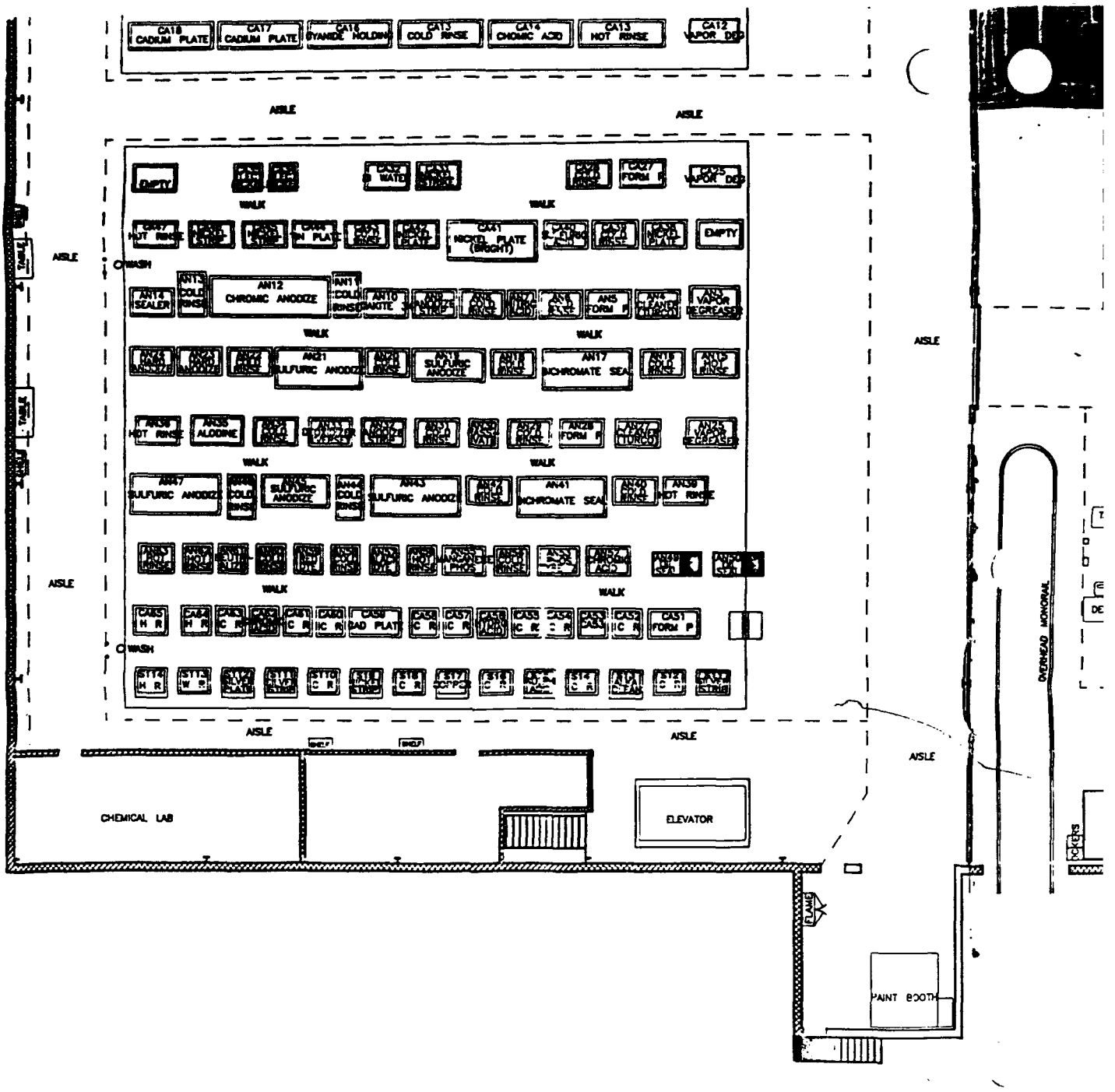

DESK
CAB
OVEN
RACK
SHELF
ELECT PANEL
OVEN
FIXTURE CARRIER
TABLE
VAC CAD
SUPPORT EQUIP
TRANS
SCRUBBER
DUST COLLECTOR
BLAST PEEN
SHOT PEEN
BLOWER
TUMBLER
RACKS
CR-6 CHROME PLATE
CR-5 CHROME PLATE
CR-4 CHROME PLATE
CR-3 CHROME PLATE
CR-15 CHROME PLATE
CR-14 CHROME PLATE
CR-13 CHROME PLATE
CR-12 CHROME PLATE
CR-25 CHROME PLATE
CR-24 CHROME PLATE
CR-23 CHROME PLATE
CR-22 CHROME PLATE
CR-38 CHROMIC ACID
CR-47 COLD RINSE
CR-46 OVERFLOW RINSE
CR-45 COLD RINSE
CR-44 ALKALINE ETCH
CR-43 WARM RINSE
CR-42 COLD RINSE
CR-41 CHRO STRIP ALUM
CR-87 CHROME STRIP
CR-88 CHROME STRIP
CR-89 CHROME STRIP
30-60
15-30
QUEUE
EMPTY
AISLE
WAX TANK
WATER TANK
BRUSH PLATING
SINK & COUNTER
BENCH
MENS RESTROOM
WOMENS RESTROOM
LOCKERS
SAND BLAST
COVERALL OVEN
LUNCH AREA

(D)

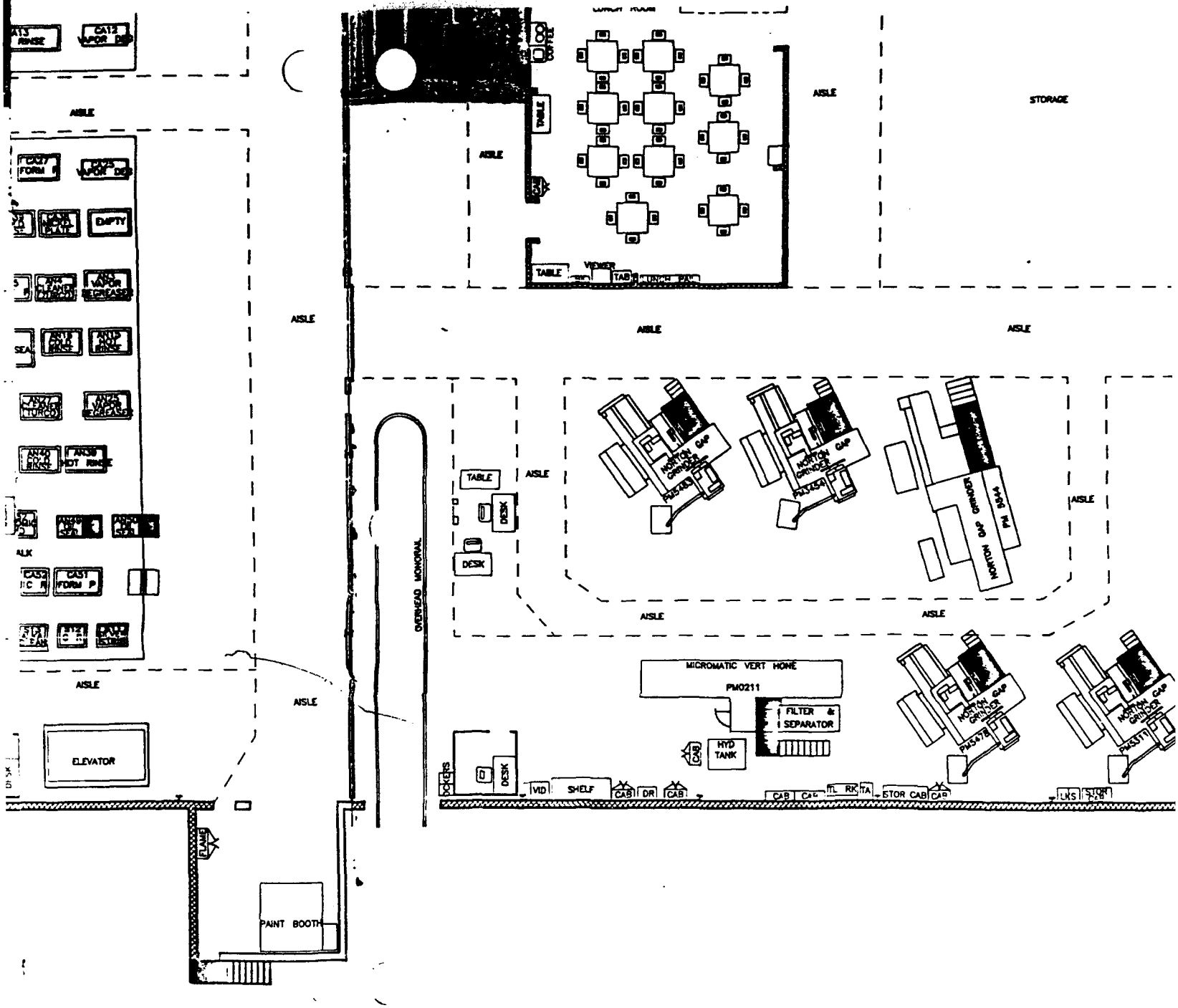


BUILDING 505

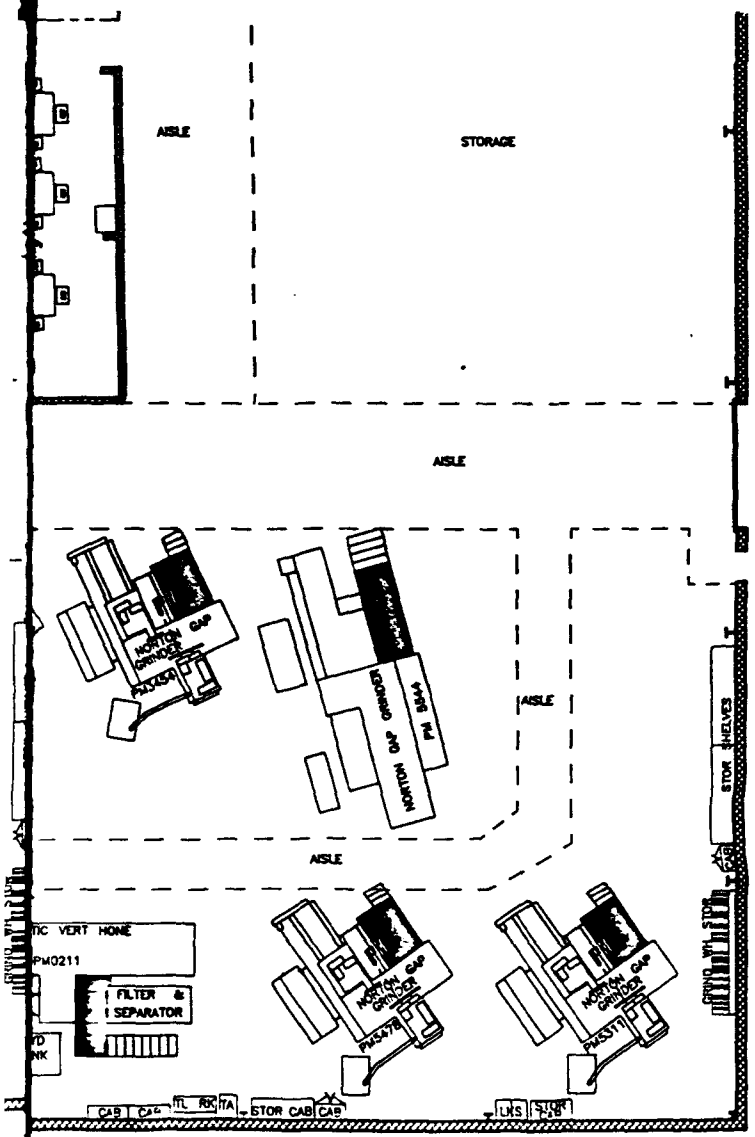
NON-DESTRUCTIVE INSPECTION AREAS

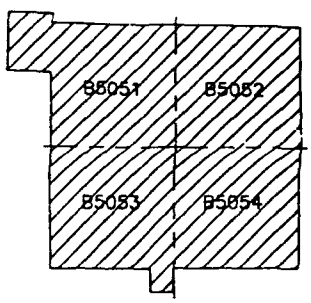

AISLE
AISLE
WALK
WALK
AISLE
WASH
WALK
WALK
AISLE
WALK
WALK
AISLE
WALK
WALK
AISLE
WASH
AISLE
AISLE
AISLE
CHEMICAL LAB
ELEVATOR
OVERHEAD MONORAIL
PAINT BOOTH

(E)

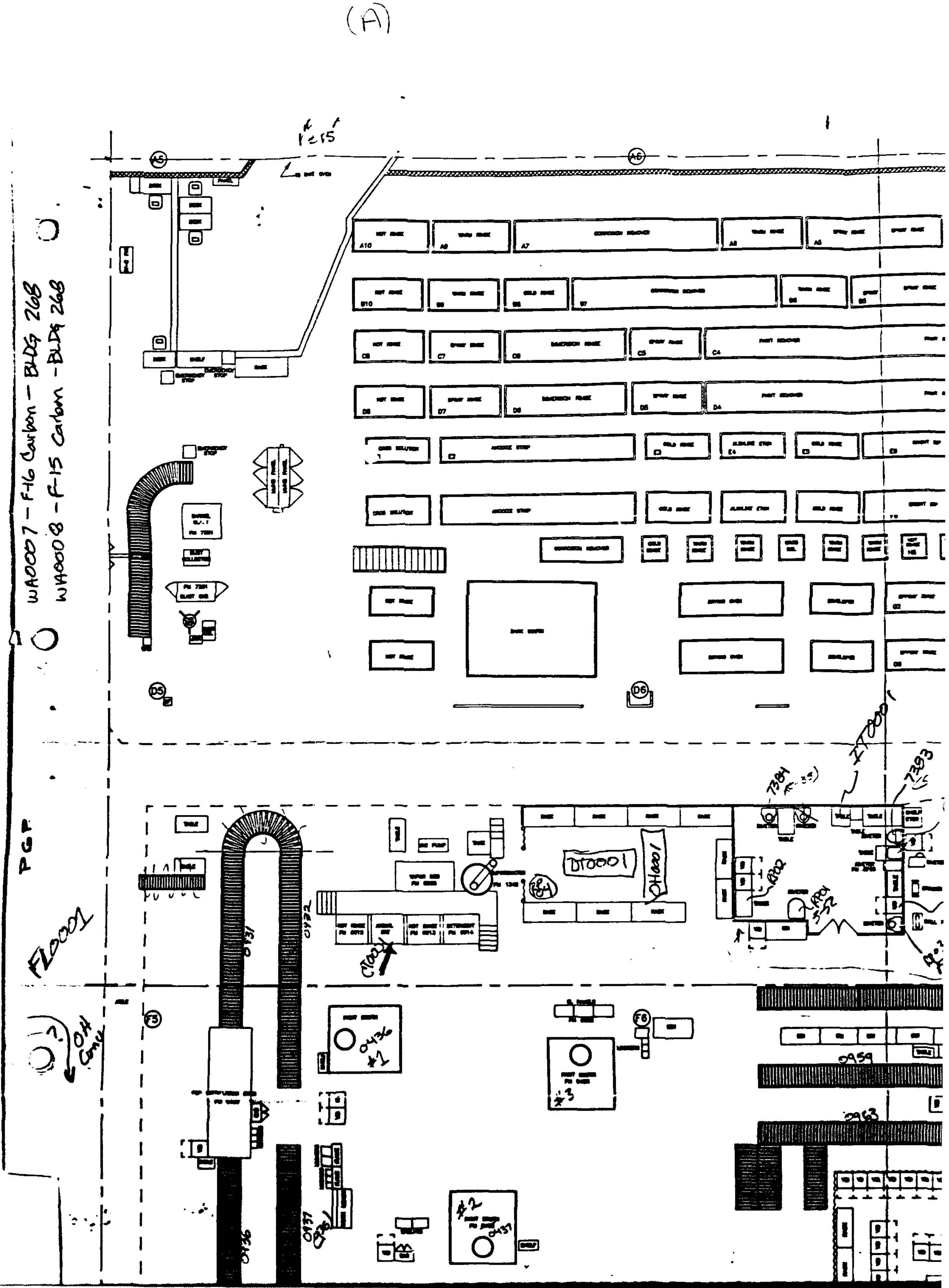

AISLE
STORAGE
TABLE
DESK
OVERHEAD MONORAIL
ELEVATOR
PAINT BOOTH
FLAME
MICROMATIC VERT HONE
PM0211
FILTER & SEPARATOR
HYD TANK
NORTON GRINDER
VID
SHELF
CAB
DR
STOR
LKS

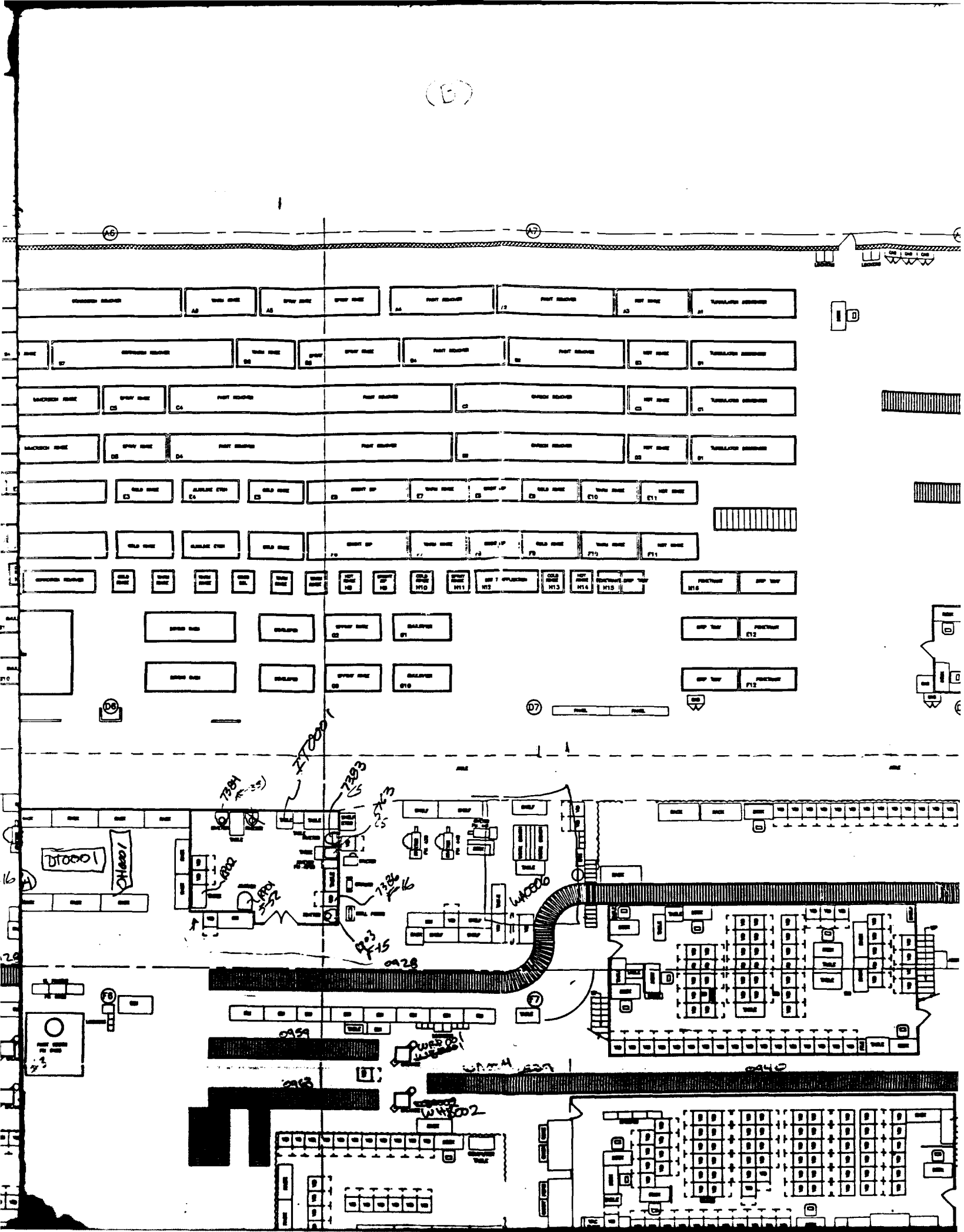
(F)

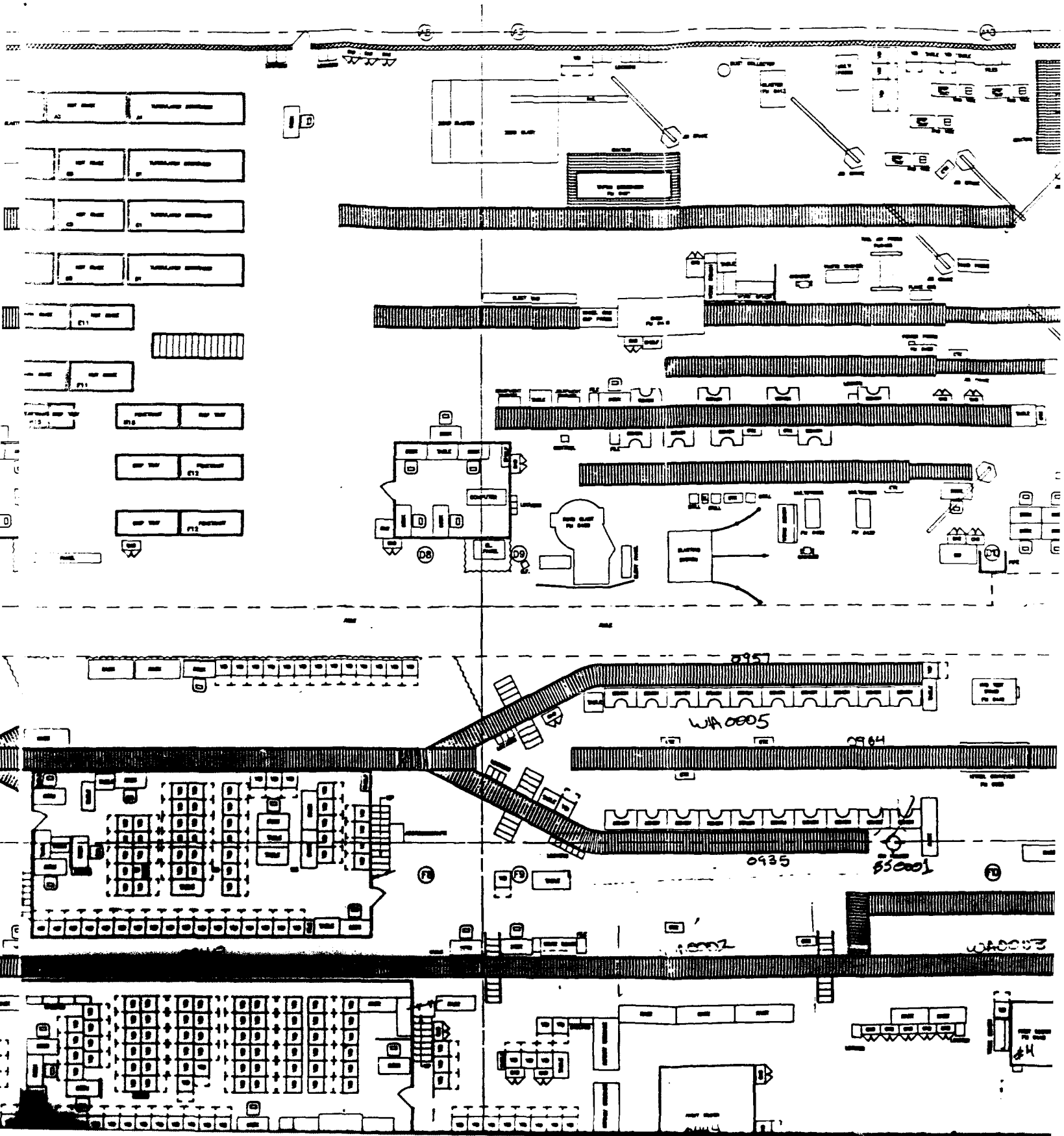


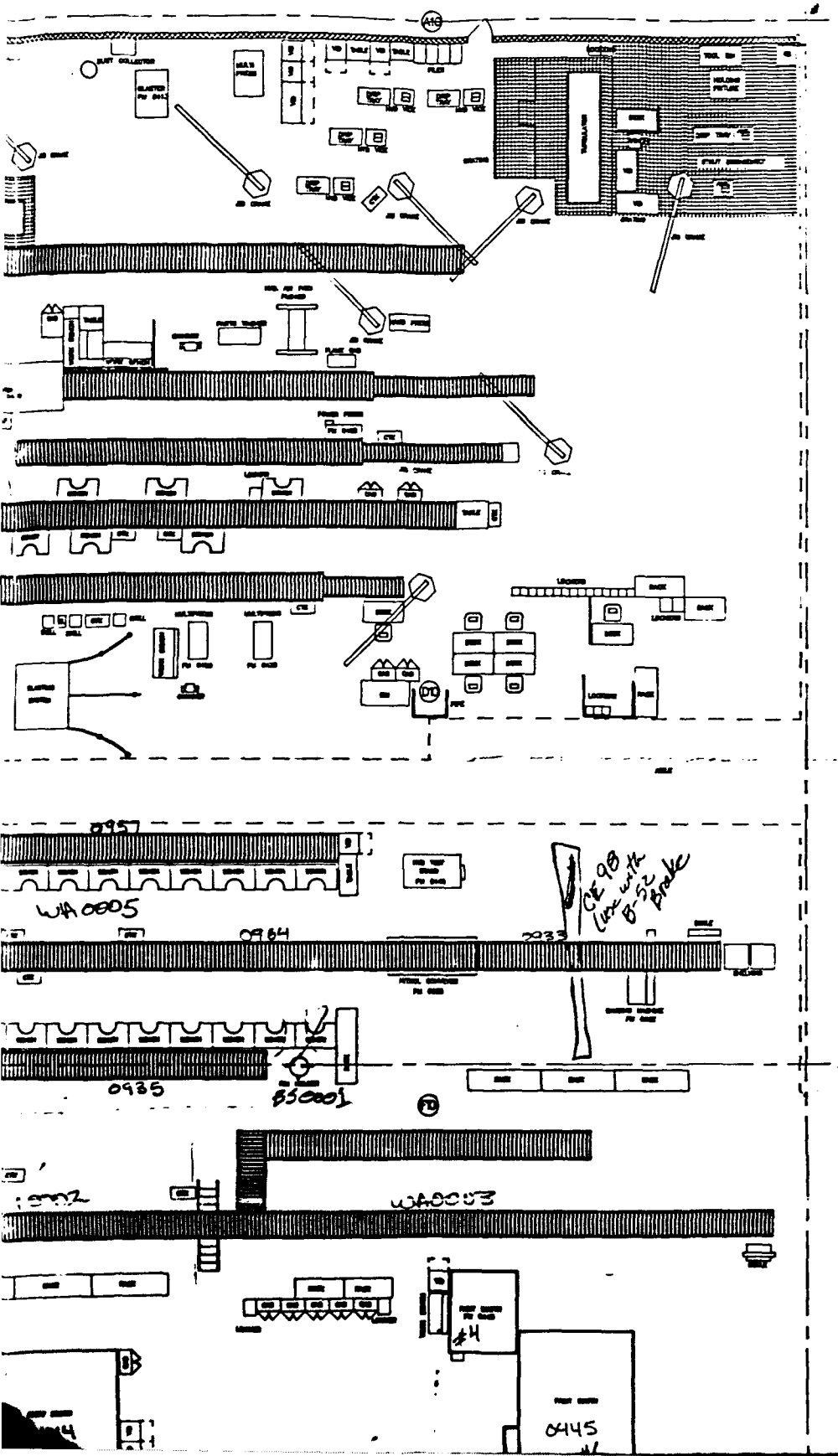


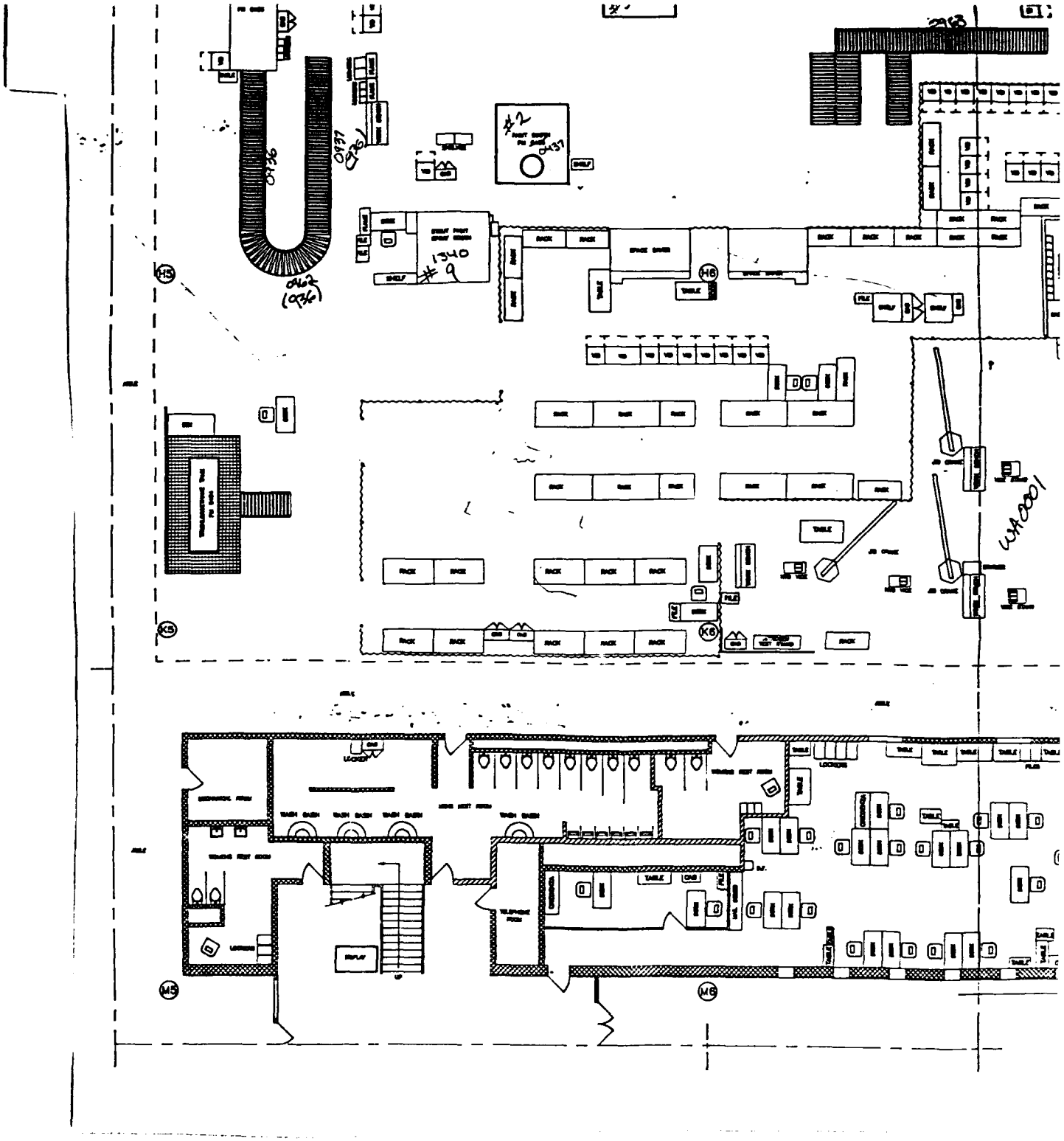
BLDG 505 FLOOR GRID KEY PLAN


(A)
1"=15'
A5
A6
WA0007 - F-16 Carbon - BLDG 268
WA0008 - F-15 Carbon - BLDG 268
PGP
FL0001
OH Conc
D5
D6
F5
F6
DT0001
DH0001
IT0001
7384
7393
CT0001
0431
0432
0436
#1
#3
#2
0437
0959
0963

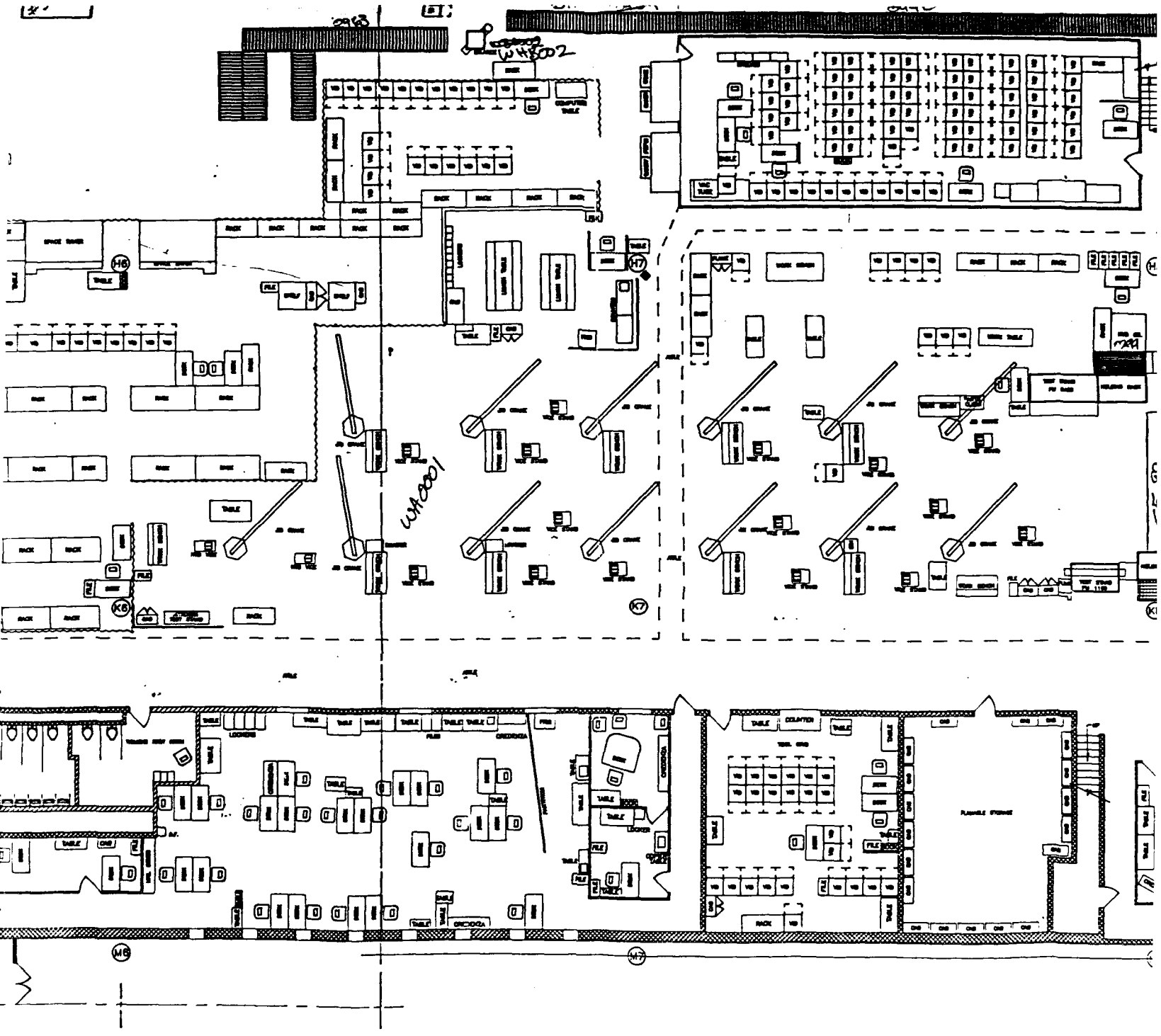



WA0005
0964
0957
0935
WA0003

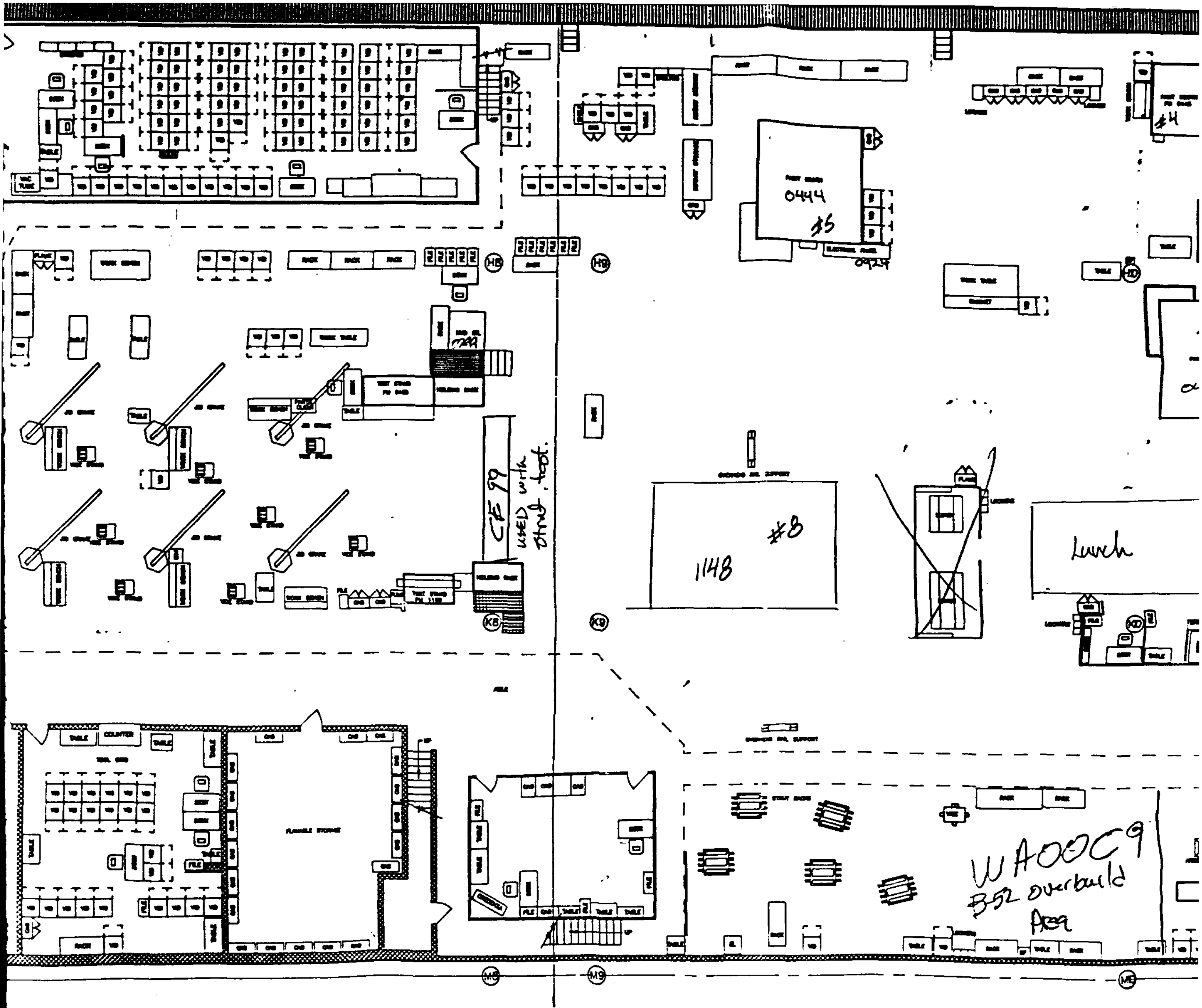

WA0005
0964
2033
CE 98 Line with B-52 Brake
0935
WA0003
#4
0445



(E)

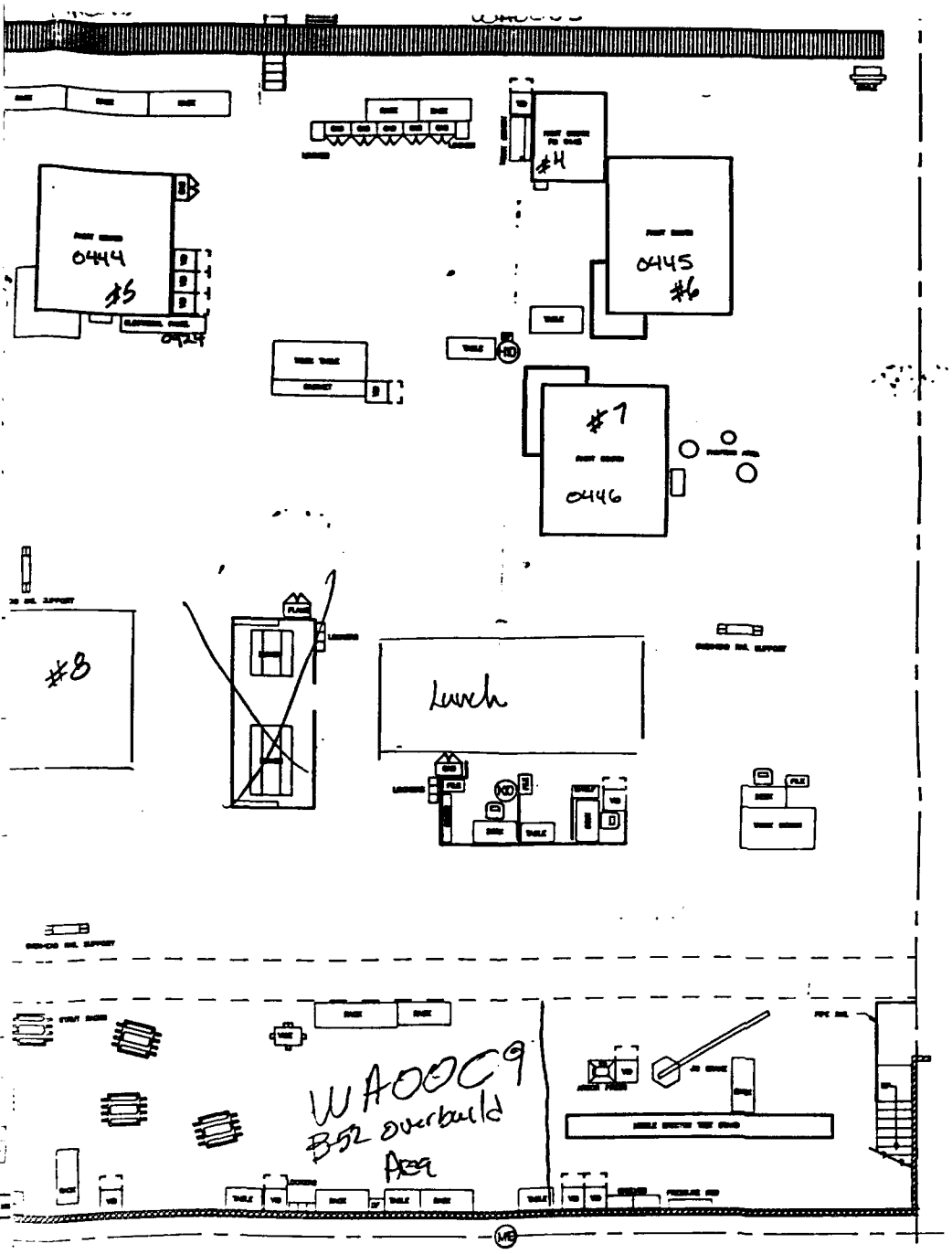


(F)



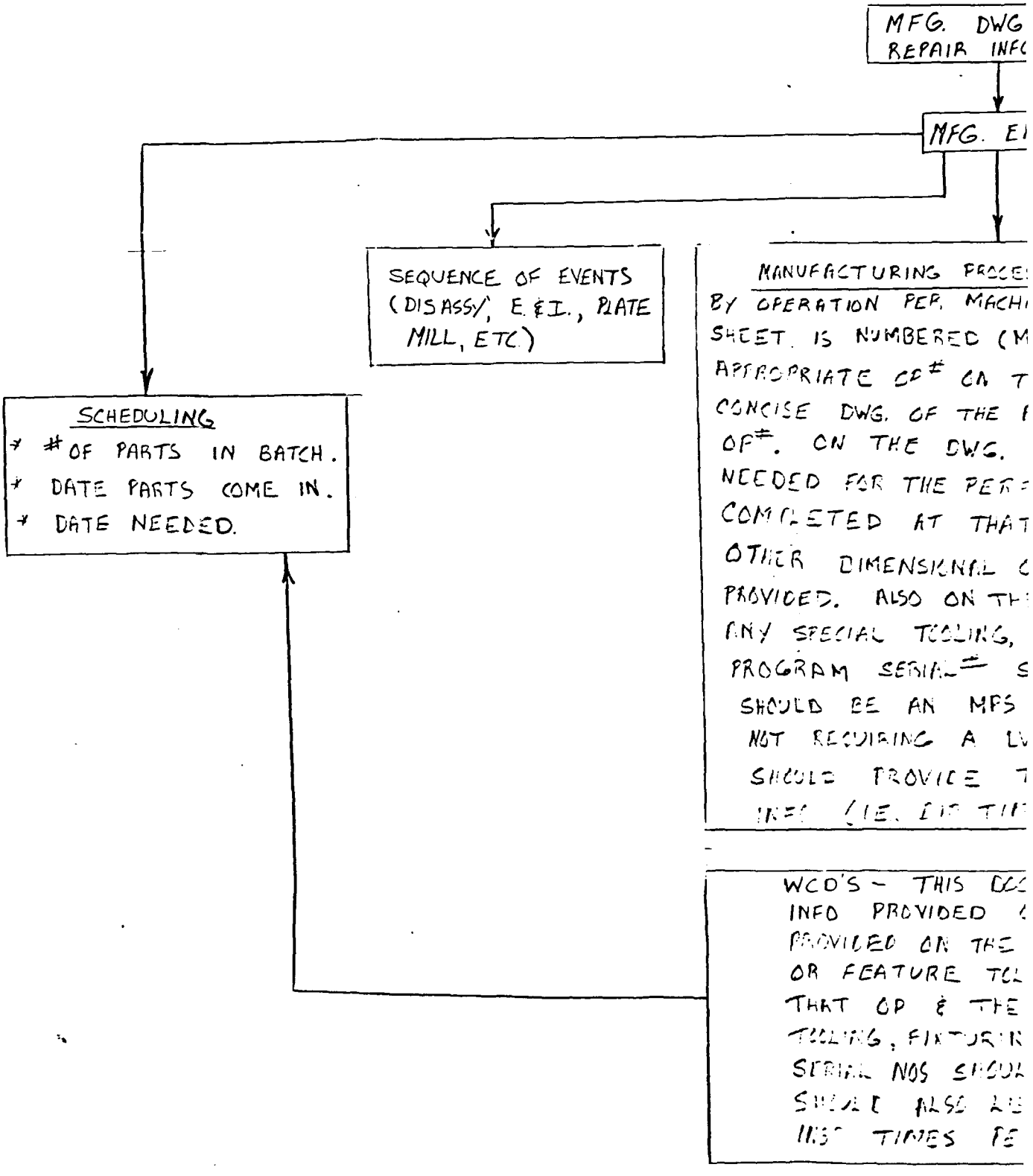
0444
#5
#4
COUNTER
TABLE
H8
H9
K8
K9
M8
M9
CE 79
used with stand, test.
#8
1148
Lunch
WA00C9
B-52 overbuild Area

(G)



(H)

(A)


MFG. DWG
REPAIR INFO
MFG. EI
SEQUENCE OF EVENTS (DISASSY, E.&I., PLATE MILL, ETC.)
MANUFACTURING PROCE
BY OPERATION PER MACHI
SHEET IS NUMBERED (M
APPROPRIATE CD# ON T
CONCISE DWG. OF THE
OF#. ON THE DWG.
NEEDED FOR THE PER
COMPLETED AT THAT
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ANY SPECIAL TOOLING,
PROGRAM SERIAL# S
SHOULD BE AN MPS
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INFO (IE. DP TIM
SCHEDULING
* # OF PARTS IN BATCH.
* DATE PARTS COME IN.
* DATE NEEDED.
WCO'S - THIS DOC
INFO PROVIDED
PROVIDED ON THE
OR FEATURE TOL
THAT OP & THE
TOOLING, FIXTURIN
SERIAL NOS SHOUL
SHOULD ALSO BE
INSP TIMES BE

(B)

MFG. DWG. & REPAIR INFORMATION

MFG. ENGR.

...ENTS
..., PLATE

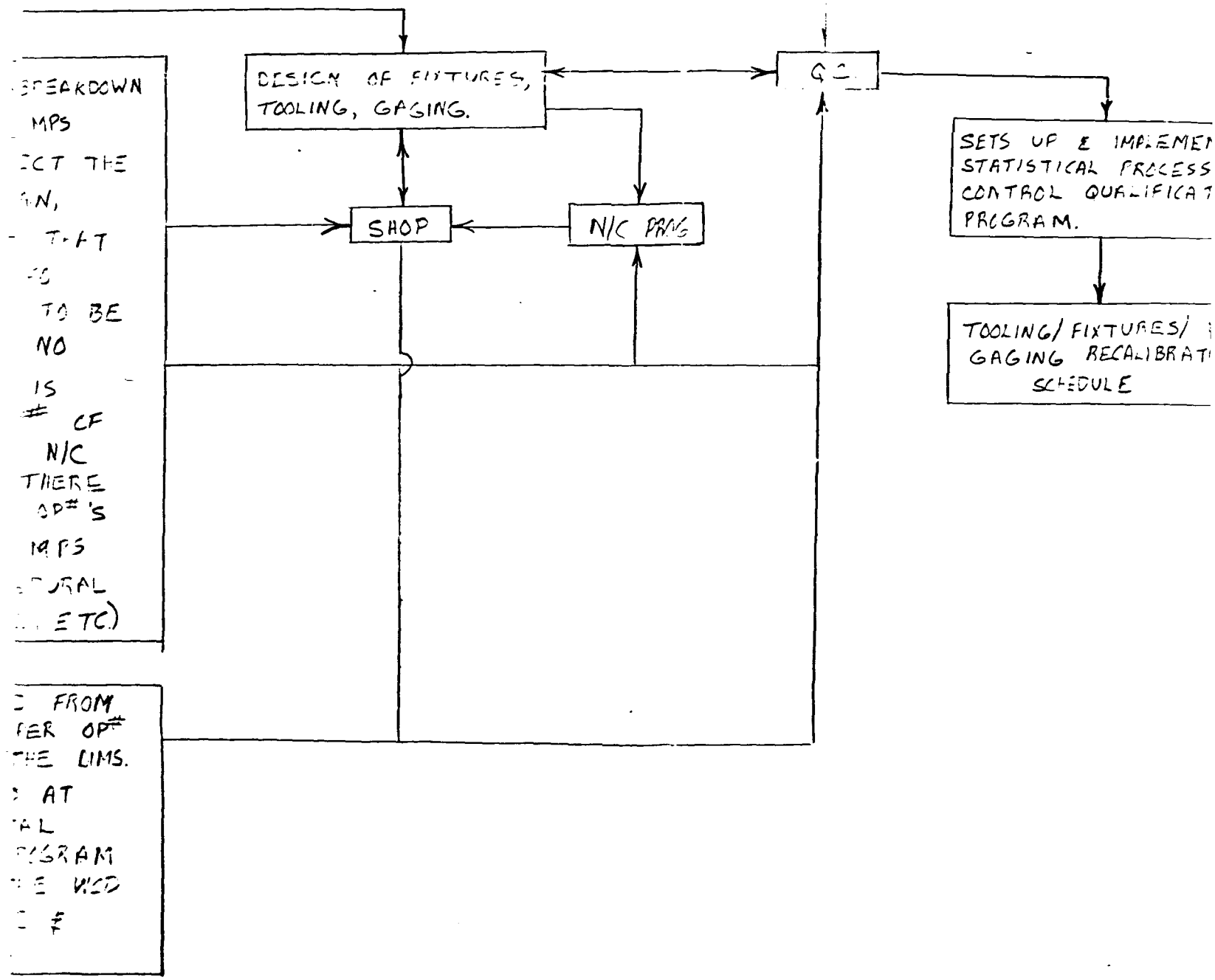
MANUFACTURING PROCESS SHEETS (MPS) - A BREAKDOWN BY OPERATION PER MACHINE OR STATION. THE MPS SHEET IS NUMBERED (MPS10, MPS20, ETC) TO REFLECT THE APPROPRIATE OP# ON THE WCO. IT IS A PLAIN, CONCISE DWG. OF THE PART AS IT EXISTS AT THAT OP#. ON THE DWG. IS THE DIMENSIONAL INFO NEEDED FOR THE PERFORMANCE 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. N/C PROGRAM SERIAL# SHOULD ALSO BE LISTED. THERE SHOULD BE AN MPS FOR EVERY OP. FOR OP#'S NOT REQUIRING A LWG (I.E., F.P.I.) THE MPS SHOULD PROVIDE THE APPROPRIATE PROCEDURAL INFO (I.E. DIP TIME, SOLUTION, MIL SPEC, ETC)

DESIGN OF FIX... TOOLING, GAGING

SHOP

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

(c)


BREAKDOWN
MPS
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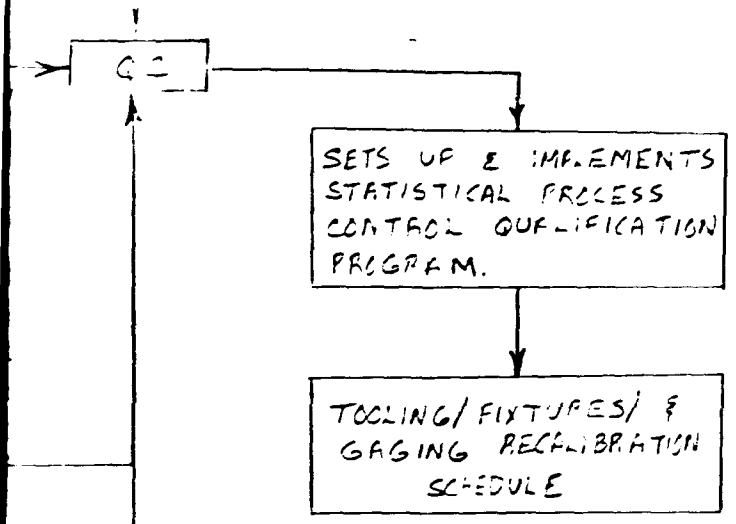
OF
N/C
THERE
OP#'S
MPS
URAL
ETC.)
FROM
PER OP#
THE LIMS.
AT
AL
PGRAM
E WED
F
DESIGN OF FIXTURES, TOOLING, GAGING.
QC
SHOP
N/C PRG
SETS UP & IMPLEMEN
STATISTICAL PROCESS
CONTROL QUALIFICAT
PROGRAM.
TOOLING/ FIXTURES/
GAGING RECALIBRAT
SCHEDULE


QE
SETS UP & IMPLEMENTS STATISTICAL PROCESS CONTROL QUALIFICATION PROGRAM.
TOOLING/FIXTURES/& GAGING RECALIBRATION SCHEDULE