

SEPARATOR SET PN 83464

THIS SEPARATOR SET CONTAINS 19
TABS TOTAL IN THE FOLLOWING
ORDER:

MAINTENANCE MANUAL

1. INTRODUCTION
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3. INSTALLATION
4. STORAGETEK INTERFACE
5. INDUSTRY INTERFACE
6. SCSI INTERFACE
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8. FUNCTIONAL DESCRIPTION
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APPENDICES

IPC

PN COMPATIBILITY

MMLL

21/22/25 STD & 25 IND STD FCD

21/22 IND STD FCD

2925 SCSI FCD

Storage Technology Corporation

**2920
Tape
Subsystem**

Illustrated Parts
Catalog

PN 95522

Information contained in this publication is subject to change. In the event of changes, the publication will be revised. Comments concerning the contents of this manual should be directed to Tape/Disk Technical Publications at the address below. A prepaid Reader's Comment Form is provided at the back of the manual.

This publication was prepared by Storage Technology Corporation, Tape/Disk Technical Publications, MD 97, 2270 South 88th Street, Louisville, Colorado 80028.

Warning: For the purpose of designing a system that complies with FCC Rules and Regulations, Volume II, Part 15, Subpart J, this product is considered to be a component within the total system configuration. It is the customer's responsibility to take such action as necessary (shielded cabling, cabinet considerations, etc.) while integrating this product into his system so as to comply with the above rules. Contact Storage Technology Corporation for technical assistance in this matter.

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LIST OF EFFECTIVE PAGES

Manual PN 95522

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Total number of pages in this document is 54, consisting of the following pages:

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ii	EC 49994	87783	
iii thru iv	EC 26499	88536	REPLACE
v	EC 23953A	88125	
vi thru x	EC 49997	87707	
1	EC 49997	87707	
2	EC 23462	83411	
3	EC 49997	87707	
4	EC 26258	88375	
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7	EC 26087	88113	
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24	EC 49997	87707	
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39	EC 26499	88536	REPLACE
40	EC 26499	88536	REPLACE
41	EC 26499	88536	REPLACE
42	EC 23953A	88125	
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Reader's Comment Form
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HOW TO USE THE ILLUSTRATED PARTS CATALOG

GENERAL

illustrations always precede their parts lists, and when possible, appear on the facing page.

The first number in each Descriptive Parts List (DPL) identifies the figure in which the listed parts are shown (see Arrow 1). The index numbers (see Arrow 2) key the parts in the figures to the related information in the list. On subsequent pages of the same list, the first line repeats the figure number and the next line gives the index number of the next item listed (Arrow 3).

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4	DESCRIPTION
1 → 2	-BKD	42011510	DECK ASSEMBLY, 1910 DECK ASSEMBLY, 1920 (SEE FIGURE 1-1 FOR NHA)
	-BKD	42002410	
2 →	- 1	00002708	
	- 2	42005001	OPERATOR PANEL
	- 3	42420021	EOT/BOT ASSEMBLY CAPSTAN WHEEL

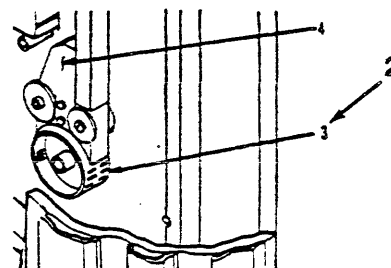


FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4	DESCRIPTION
3 → 2	-52	42024900	CABLE ASSEMBLY, DECK SIGNAL (SEE FIG. 7-6, 8, 10, 13, 22, 24, 28, 29 FOR TERMINATIONS)
		42008510	

The figure numbers and assemblies follow a logical sequence of breakdown. Any assembly that is broken down into its component parts is identified with a BKD (breakdown) designation in place of an index number (Arrow 4). The first assembly listed in each DPL will always carry the BKD designation. If an assembly is broken down (detailed) in another figure in this catalog, that figure is referenced in the description column (Arrow 5).

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4	DESCRIPTION	USABLE ON CODE	QTY PER ASM
4 → 2	-BKD	30400202	FINAL ASSEMBLY (SEE FIGURE 1-29 FOR NHA)		1
	- 1	30450217	CONTROL SWITCH PANEL ASSEMBLY (SEE FIGURE 9 FOR BREAKDOWN)		1
	- 2	10028059	NUT, HEX, 8-32		4
	- 3	30455501	AC POWER SUPPLY, 60HZ		1
		30456301	AC POWER SUPPLY, 50HZ (SEE FIGURE 4 FOR DETAILS)		1
	- 4	10013062	SCREW, MACHINE, SBNH, 10-32 X .375		3
	- 5	10030505	WASHER, LOCK, NO. 10		3

Detailed figures refer back to the next higher overall view or next higher assembly (NHA) (Arrow 6). Assemblies that are not detailed can be ordered only as complete assemblies.

A detail part may be unlisted for several reasons: it is part of a matched set, part of an assembly that is purchased as a unit, or part of a welded or bonded assembly. If you need an unlisted part, you must order the assembly that contains it, and not the detailed part.

LEVEL OF ASSEMBLY

The indented parts list indicates the subordination of major assemblies, subassemblies and detail parts. Attaching hardware normally follows the detail part. The top assembly in each parts list is level 1 (Arrow 7). Descriptions preceded by a single dot (.) (Arrow 8) are second level assemblies or parts which are subordinate to those not preceded by a dot. Descriptions for level 3 are preceded by two dots (..), and are subordinate to level 2 (Arrow 9).

FIGURE & INDEX NUMBER	PART NUMBER	LEVEL				DESCRIPTION	USABLE ON CODE	QTY PER ASM
		1	2	3	4			
3-BKD	42012310					CAGE ASSEMBLY, 1910	A	1
	42012310					CAGE ASSEMBLY, 1920	B	1
						(SEE FIG. 1-2 FOR NHA)		
- 1	42420367					HOSE, MANUAL EXHAUST	A	1
	42420369					HOSE, AUTO EXHAUST	B	1
- 2	42420370					HOSE, VACUUM		1
- 3	42005700					PNEUMATIC SUPPLY ASSEMBLY (SEE FIG. 6 FOR DETAILS)		1
- 4	42420368					HOSE, EXHAUST 2.25 LONG	B	1
- 5	42420389					TUBE, FLEXIBLE 62 X 38.0	B	1
- 6	42007200					DIVERTER VALVE ASSEMBLY	B	1
- 7	(PN CO/MP)					CKT CD, DP, 1900 PC ASSEMBLY		1
- 8	(PN C/MP)					CKT CD, DC, 1900 PC ASSEMBLY		1
- 9	10031113					FAN, AXIAL, 125 VAC, 6 IN DIA		1
-BKD	42001810					COVER ASSEMBLY, REAR		1
-10	42011400					RECTIFIER ASSEMBLY		1
-11	42124500					SERVO HEAT SINK ASSEMBLY	A	1
	421024500					SERVO HEAT SINK ASSEMBLY	B	2
-12	42007730					TRANSFORMER ASSEMBLY		1
-13	42021000					CABLE ASSEMBLY, SERVO SIGNAL		1

USABLE ON CODE

Usable On Codes identify all related parts (Arrow 10). The codes characterize differences in like assemblies listed in the description column. In the example shown, two cage assemblies are identified for use on the machine. The first occurrence of a code (A, B, etc.) in the Usable On Code column identifies such assemblies (i.e. the two versions of the cage assemblies are coded A and B). Subsequent occurrences of these codes identify which of the coded assemblies a particular part is used on (Arrow 11). If there is no code identified, the part is used on all listed codes.

There are occasions when the same part is used on more than one coded assembly and the only difference is the 'QTY PER ASM' (Quantity Per Assembly) (Arrow 12).

NUMERICAL INDEX

The numerical index lists all part numbers in numerical order. The part number is cross referenced to each figure and index number where the part can be found in the catalog. For example (Arrow 13): Part No. 00010245 can be found on Figure 7, Index No. 33.

NUMERICAL INDEX

	PART NUMBER	FIGURE & INDEX NUMBER	PART NUMBER	FIGURE & INDEX NUMBER	PART NUMBER	FIGURE & INDEX NUMBER	PART NUMBER	FIGURE & INDEX NUMBER
13 →	00002708	2-1	10081010	4-1	42017800	2-25	42420409	4-22
	00010245	7-33	10096273	2-7	42017700	2-24	42420421	2-50
	10037013	3-9	10097224	7-31	42017800	2-23	42420421	2-47
	10037015	6-3	10097245	5-3	42017900	2-39	42420434	2-16
	10041010	7-25	10111000	2-68	42018200	2-32	42420451	2-33
	10041011	7-18	10111004	2-69	42018600	2-74	42420485	2-65

CHANGE BARS

A Change Bar (Arrow 14) indicates the latest EC revisions to a parts list. These are changes that have occurred since the last issue date of the IPC.

14 →	-10	42004600	. FILE HUB ASSEMBLY		1
	-11	42420111	. HUB RING		1
	-12	42005400	. TAKEUP REEL ASSEMBLY, MANUAL	A	1
		42004700	. TAKEUP REEL ASSEMBLY, AUTO LOAD	B	1
	-13	42420337	. COLLAR, CLAMPTITE		2
	-14	42022200	. RESTRAINT COVER ASSEMBLY, UPPER	A	1
		42005200	. RESTRAINT ASSEMBLY, UPPER	B	1
	-15	42022100	. RESTRAINT COVER ASSEMBLY, LOWER	A	1
		42010900	. RESTRAINT ASSEMBLY, LOWER	B	1

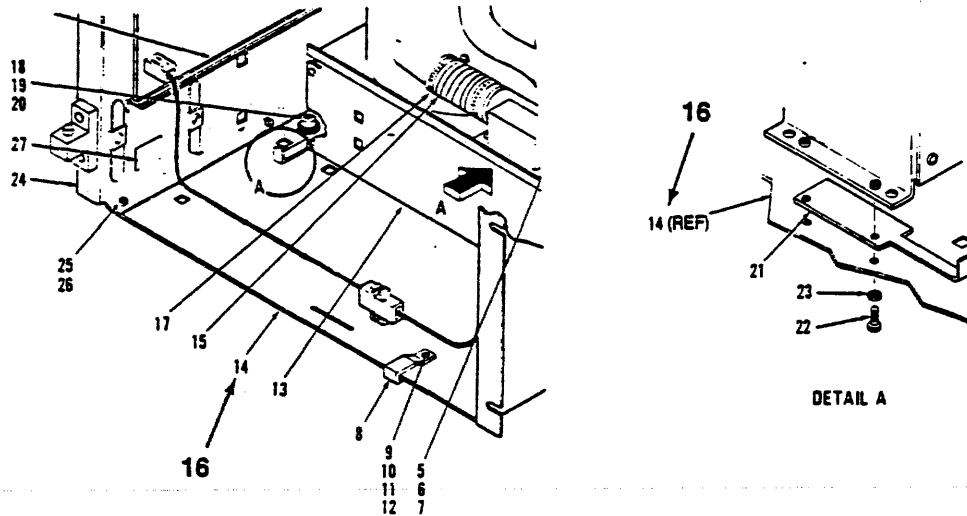
PART NUMBER COMPATIBILITY LIST

Whenever (PN COMP) (Arrow 15) appears in the part number column, refer to the machine part number compatibility list for the latest part number.

15 →	- 6	42007200	. DIVERTER VALVE ASSEMBLY		3
	- 7	(PN COMP)	. CKT CD, DP, 1900 PC ASSEMBLY		1
	- 8	(PN COMP)	. CKT CD, DC, 1900 PC ASSEMBLY		1
	- 9	10037013	. FAN, AXIAL, 125 VAC, 6 IN. DIA		1
	-BKD	42005810	. COVER ASSEMBLY, REAR		1
	-10	42001400	. RECTIFIER ASSEMBLY		1

REFERENCE (REF) DESIGNATIONS

A reference (REF) designation after an index number on an illustration indicates that the part or assembly is shown elsewhere in the same figure (Arrow 16). These designations are used as an aid to the user in identifying parts shown in details and views.



IPC STRUCTURE

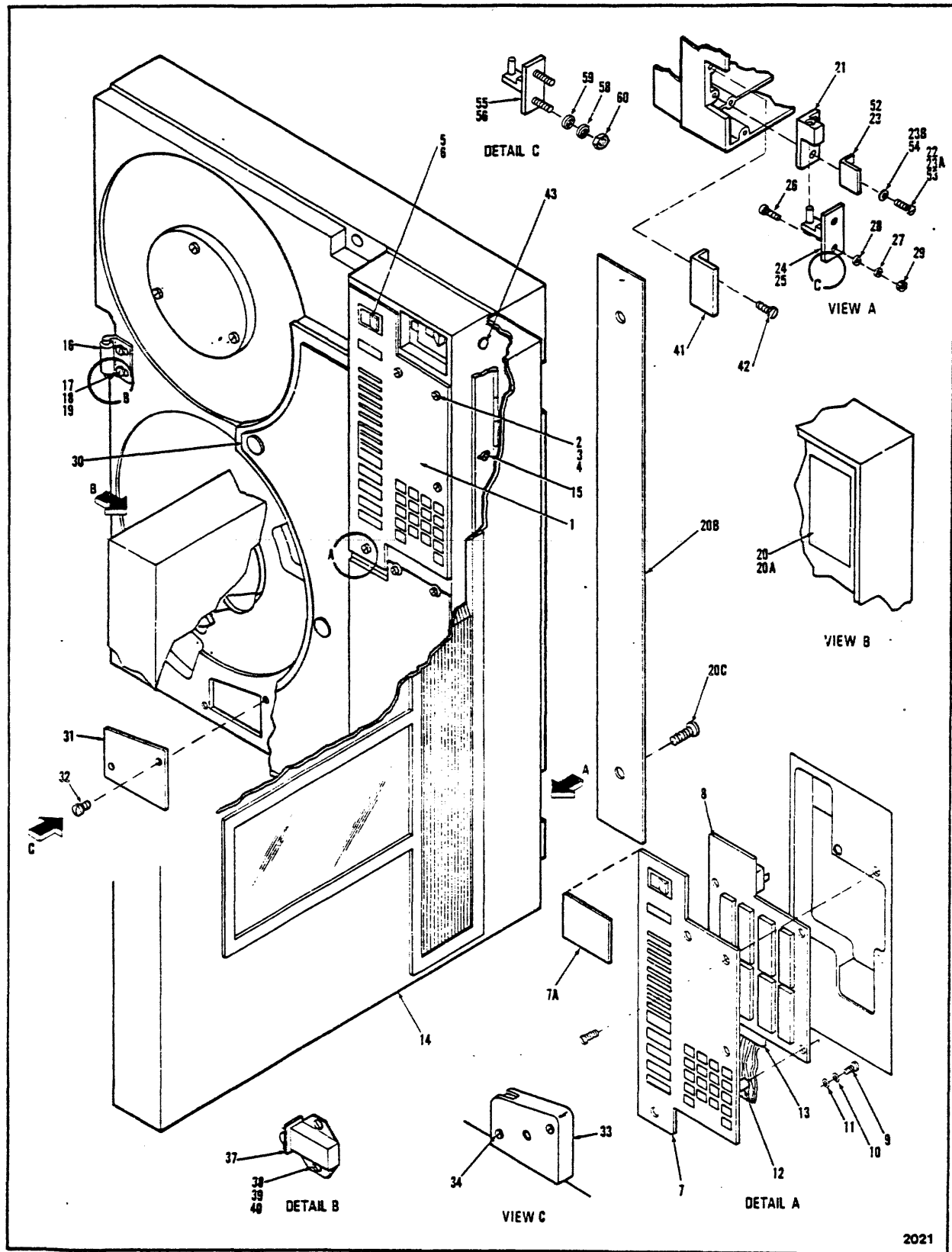
The IPC is structured using the most current parts from the assembly parts lists (APLs), the configuration control documents (CCDs), and the top level assemblies (TLAs) produced by various engineering groups. The descriptive parts lists (DPLs) in the IPC list parts and assemblies followed by their attaching hardware. Whenever possible, the parts and assemblies are listed in order either in a clockwise or counterclockwise direction around the assembly. At times, the numbering sequence appears to be discontinuous on the art, due to the locations of the attaching hardware, or due to views or details included in the figure.

Any part number on the DPL which is followed by an asterisk (*), indicates that the part appears on APL(s) or documents other than the ones listed on that DPL.

An assembly and its attaching hardware may be included in a DPL even though neither appears on the APL(s) being listed in the DPL. This is done because the assembly may not be listed on a higher APL, i.e., it may come directly from a CCD or TLA; therefore the assembly is shown in a figure where it would logically appear. (Example: An operator panel assembly may be included in a frame assembly DPL (and its figure) since it is attached to the frame.) In this case the part numbers for the assembly, and its attaching hardware, are followed by an asterisk. If the assembly in question is also broken down in the DPL, the individual parts in the assembly are assumed to have asterisks following their part numbers.

**2920 TAPE SUBSYSTEM
ILLUSTRATED PARTS CATALOG**

PN 95522



2021

1

FIGURE 1. COVER GROUP (SHEET 1 OF 2)

2

EC 23462
KIT PN 83411

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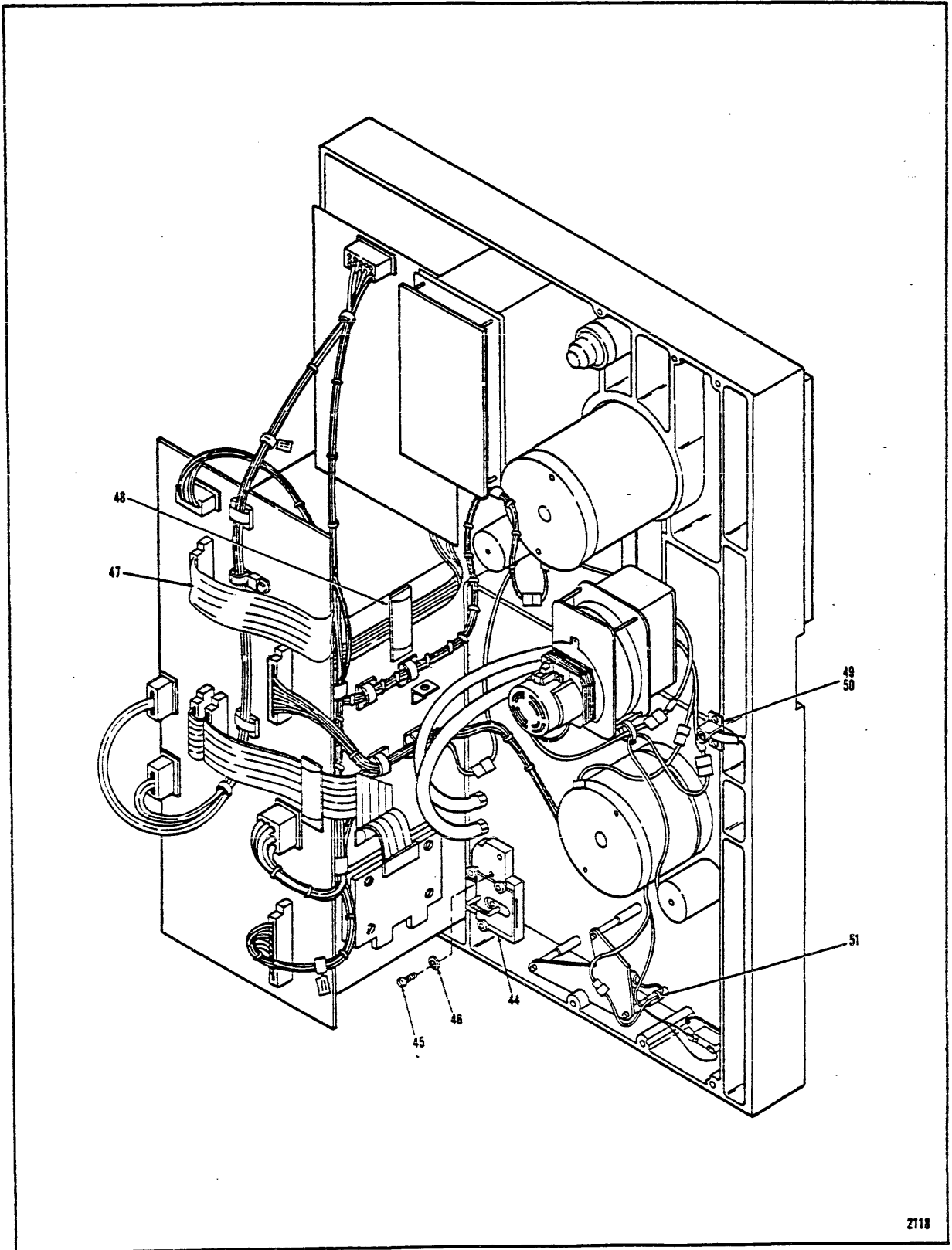
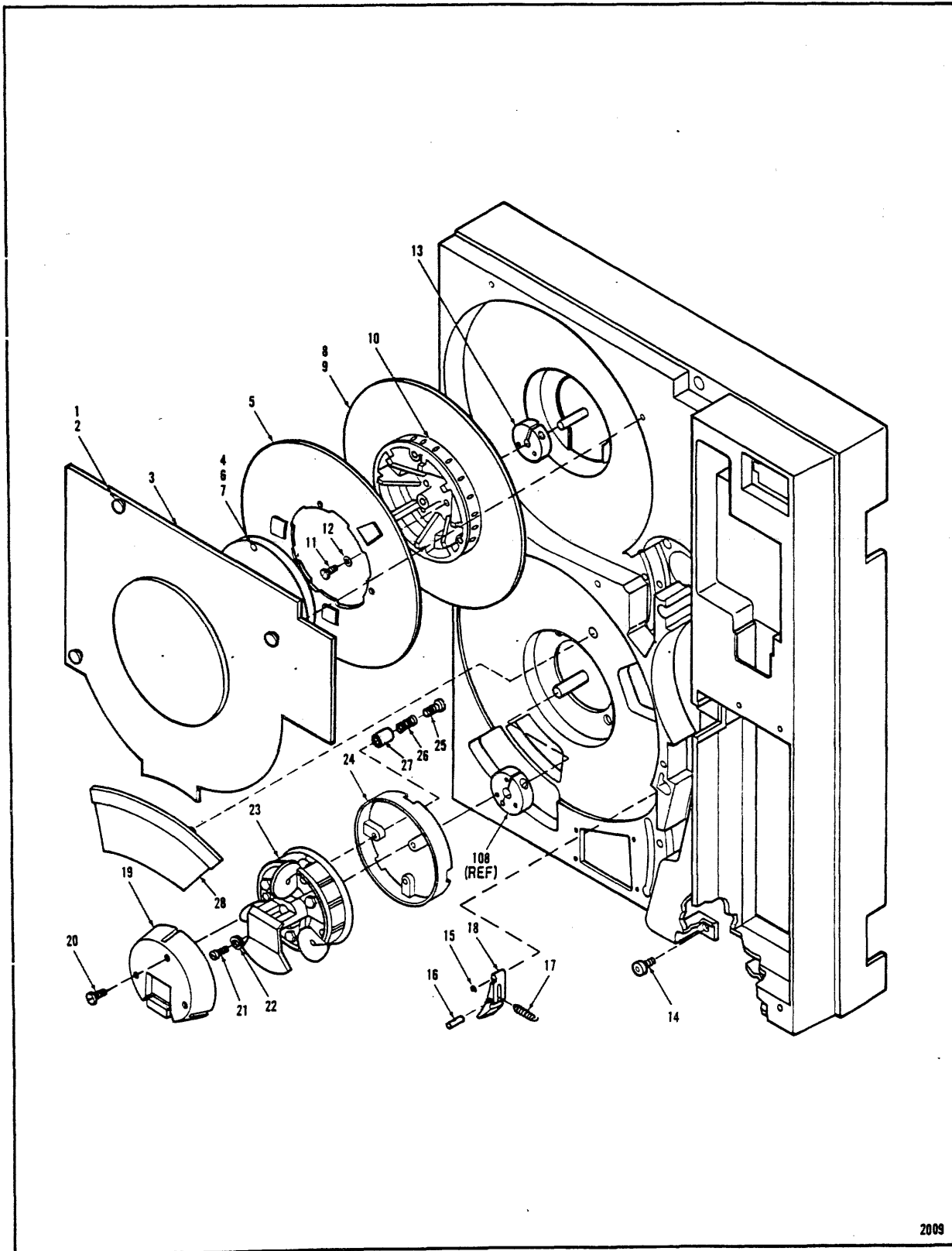


FIGURE 1. COVER GROUP (SHEET 2 OF 2)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE	QTY PER ASM
			ON CODE	
1	-BKD 403420201	OPERATOR PANEL,BASIC ASSEMBLY	A	1
	-BKD 403455101	OPERATOR PANEL GROUP,BASIC HORIZ	B	1
	-BKD 403795001	OPERATOR PANEL DG VERT	C	1
	-BKD 403477701	OPERATOR PANEL GROUP,C/G	D	1
	-BKD 404080001	OPERATOR PANEL ASSEMBLY,DC	E	1
	- 1 402337204	. OPERATOR PANEL ASSEMBLY	A	1
	403806201	. OPERATOR PANEL ASSEMBLY	C	1
	403386203	. PANEL SWITCH ASSY,HORIZ MOUNT	B,D	1
	404043003	. DC OPERATOR PANEL ASSEMBLY	E	1
- 2	10311363	. SCREW,TF,TXPH,C/SEMS,6-32 X 7/16		4
- 3	10096070	. WASHER,LOCK,SPLIT BLK OXIDE	B,D	4
- 4	10096055	. WASHER,FLAT,NO.6 X .312 X .036 T,S	B,D	4
- 5	403022202	. SWITCH ROCKER		1
- 6	403022301	. ROCKER SWITCH		1
- 7	403470202	. PANEL SWITCH HORIZ MOUNT	B,D	1
- 7A	404076201	. PLATE,SWITCH COVER	E	1
- 8	(PN COMP)	. CKT,CD,KK,PC ASSEMBLY	A,B,C,E	1
- 9	10310327	. SCREW,TXPH,ZP,4-40 X 1/4	A,B,C,E	4
- 10	10030502	. WASHER,LOCK,HEL,MED,PS,4	A,B,C,E	4
- 11	10092019	. WASHER,NYLON,NO.4B	A,B,C,E	6
-BKD	403470003	. OPERATOR PANEL SUBASSEMBLY	A	1
-BKD	403135001	. OPERATOR PANEL ASSEMBLY	B	1
-BKD	403650902	. OPERATOR PANEL SUBASSEMBLY	C	1
-BKD	404107201	. OPERATOR PANEL SUBASSEMBLY	E	1
- 12	10109158	. . . STDF,SLFCLN,THRUT HD,4-40 X .25		4
- 13	403176501	. . . CONN FLEX CABLE		1
-BKD	403470301	VERTICAL COVERS GROUP	A	1
-BKD	403887501	COVERS GROUP,BEIGE	A	1
-BKD	403931801	COVERS GROUP,BLACK	A	1
-BKD	404192801	COVERS GROUP,WHITE	A	1
- 14	403931701	. FRONT DOOR ASSEMBLY,BLACK	A	1
	403896401	. DOOR ASSEMBLY,FRONT,BEIGE	A	1
	403437704	. DOOR ASSEMBLY,FRONT,CLOUD WHITE	A	1
	404193101	. DOOR ASSEMBLY,FRONT,WHITE	A	1
- 15	10310405	. SCREW,TXPH,C/SEMS,ZP,6-32 X .500	A	5
- 16	403484602	. LATCH,DOOR	A	1
- 17	10311352	. SCREW,TXPH,BZ,4-40 X 3/8	A	2
- 18	10096069	. WASHER,LOCK SPLIT BLK OXIDE,4	A	2
- 19	10096052	. WASHER,FLAT,NO.4 X .446 X .045 T,S	A	2
- 20	403922403	. LABEL,TAPE PATH	A	1
-20A	403931902	. LABEL,TAPE PATH/MAINTENANCE		1
-20B	403930901	. SIDE,PANEL		1
-20C	10311353	. SCREW,TXPH,BZ,6-32 X 1/4 (INDEX NO.20A, B, C USED ONLY ON BLACK AND WHITE COVERS GROUP)		2
-BKD	403420101	HINGE GROUP	A,C	1
- 21	403478003	. HINGE HALF,DECK	A,C	2
- 22	10203024	. SCREW,TF,TXPH,SEM,10-32 X .625	A,C	4
-BKD	403665001	HARDWARE,2920	A,C	1
- 23	403440701	. BRACKET KEEPER CLOSURE	A,C	1
-23A	10017060	. SCREW,MACHINE,SHH,10-32 X 1/4,PS	A,C	1
-23B	10030522	. WASHER,LOCK,EXT,MED,PS,10	A,C	1
- 24	403477802	. HINGE HALF,RACK BOTTOM	A,C	1
- 25	403477902	. HINGE HALF,RACK TOP	A,C	1
- 26	10021063	. SCREW,MACHINE,SHWH,10-32 X 1/2	A,C	4
- 27	10030505	. WASHER,LOCK,HEL,MED,PS,10	A,C	4
- 28	10026006	. WASHER,FLAT,A,NO.10	A,C	4
- 29	10028006	. NUT,HEX,10-32,ZP	A,C	4

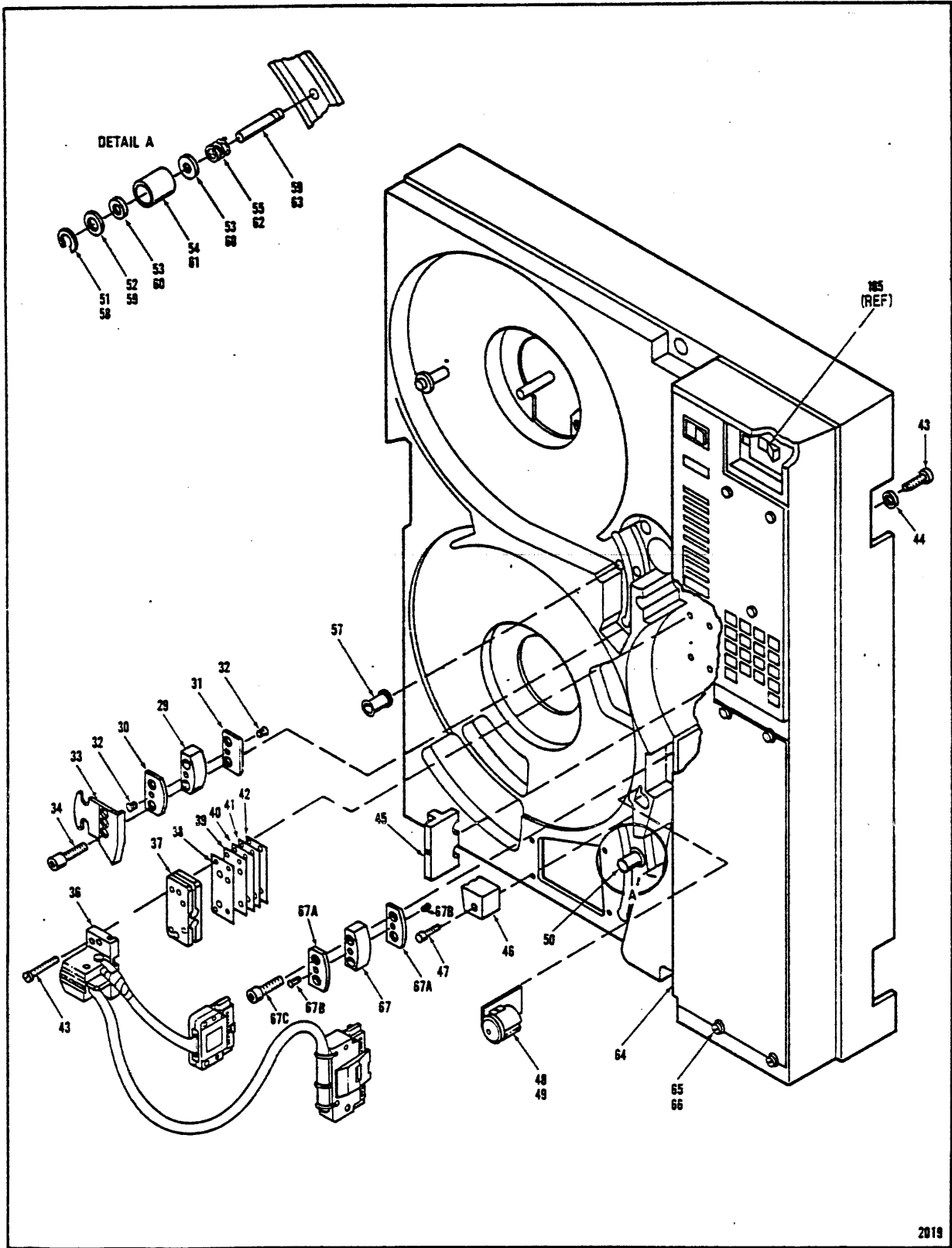
FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE	QTY PER ASM
			ON CODE	
1	-BKD 403468901	MOUNTING GROUP, VERTICAL	A	1
	-BKD 403795201	MOUNTING GROUP, MAIN VERT	A*	1
	-BKD 403467401	MOUNTING GROUP, HORIZ	B	1
	-BKD 403795101	MOUNTING GROUP, D.G. VERT	C	1
	-BKD 403478101	MOUNTING GROUP, C/G	D	1
	-30 402336905	. COVER ASSEMBLY THREADING VERT	A, C	1
	403440103	. COVER ASSEMBLY THREADING HORIZ (SEE FIG 7 FOR MOUNTING HARWARE AND DETAILS)	A*, B, D	1
	-31 403482501	. SENSOR HOLE COVER	A*, B, D	1
	-32 10096018	. SCREW, MACHINE, SFHC, 6-32 X 3/8	A*, B, D	2
	-33 403865701	. LEADER SENSE HOUSING ASSEMBLY	A, C	1
	-34 10007331	. SCREW, SHC, 6-32 X 1.00, STL, 80	A, C	2
	-35	. DELETED		
	-36	. DELETED		
	-37 403242501	. DOOR CATCH	B, C	1
	-38 10096022	. SCREW, MACHINE, SBNH, 4-40 X 3/8, 80	B, C	2
	-39 10096069	. WASHER LOCK SPLIT, BLK OXIDE	B, C	2
	-40 10096052	. WASHER, FLAT, NO. 4 X .446 X .045 T, S	B, C	2
	-41 403434502	. CLOSURE BRACKET	D	2
	-42 10203023	. SCREW, TF, TXPH, SEM, 10-32 X .50	D	4
	-43 413455001	. CLIP SNAP IN	B, D	5
	-BKD 403440901	. VERTICAL VACUUM SEAL	A, C	1
	-44 402624902	. MUD FLAP ASSEMBLY	A, C	1
	-45 10007028	. SCREW, SHC, 6-32 X .625	A, C	3
	-46 10030514	. WASHER, LOCK, INT, NO 6	A, C	3
	-47 402610802	. CABLE ASSEMBLY, KEYBOARD	A, A*, C	1
	-48 10075105	. CABLE CLAMP, FLAT, ADH BACK, 1.8	A, A*, C	1
	-49 403127302	. LATCH DECK	A, A*, B, C	1
	-50 10203009	. SCREW, TF, TXPH, SEM, 6-32 X .50	A, A*, B, C	2
	-51 10075020	. CA-CLP, T, 3/4	A, C	1
	-BKD 403887401	SHIP GROUP - 1 INCH HINGE VERT	A	1
	-BKD 424210201	1 INCH BOLT HINGE, VERT SHIP GROUP	B	1
	-52 403440701	. BRACKET KEEPER CLOSURE		2
	-53 10017060	. SCREW, MACHINE, SHH, 10-32 X 1/4, PS		2
	-54 1030522	. WASHER, LOCK, EXT, MED, PS, 10		1
	-55 403458504	. HINGE, HALF, RACK, BOT 1 INCH	A	1
	404118801	. HINGE, HALF, BOTTOM	B	1
	-56 403458404	. HINGE, HALF, RACK, TOP 1 INCH	A	1
	404118701	. HINGE, HALF, TOP	B	1
	-57			
	-58 10030505	. WASHER, LOCK, HEL, MED, PS, 10		4
	-59 10026006	. WASHER, FLAT, A, 10		4
	-60 10028006	. NUT, HEX, 10-32, ZP		4



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FIGURE 2. BASIC ASSEMBLY (SHEET 1 OF 5)

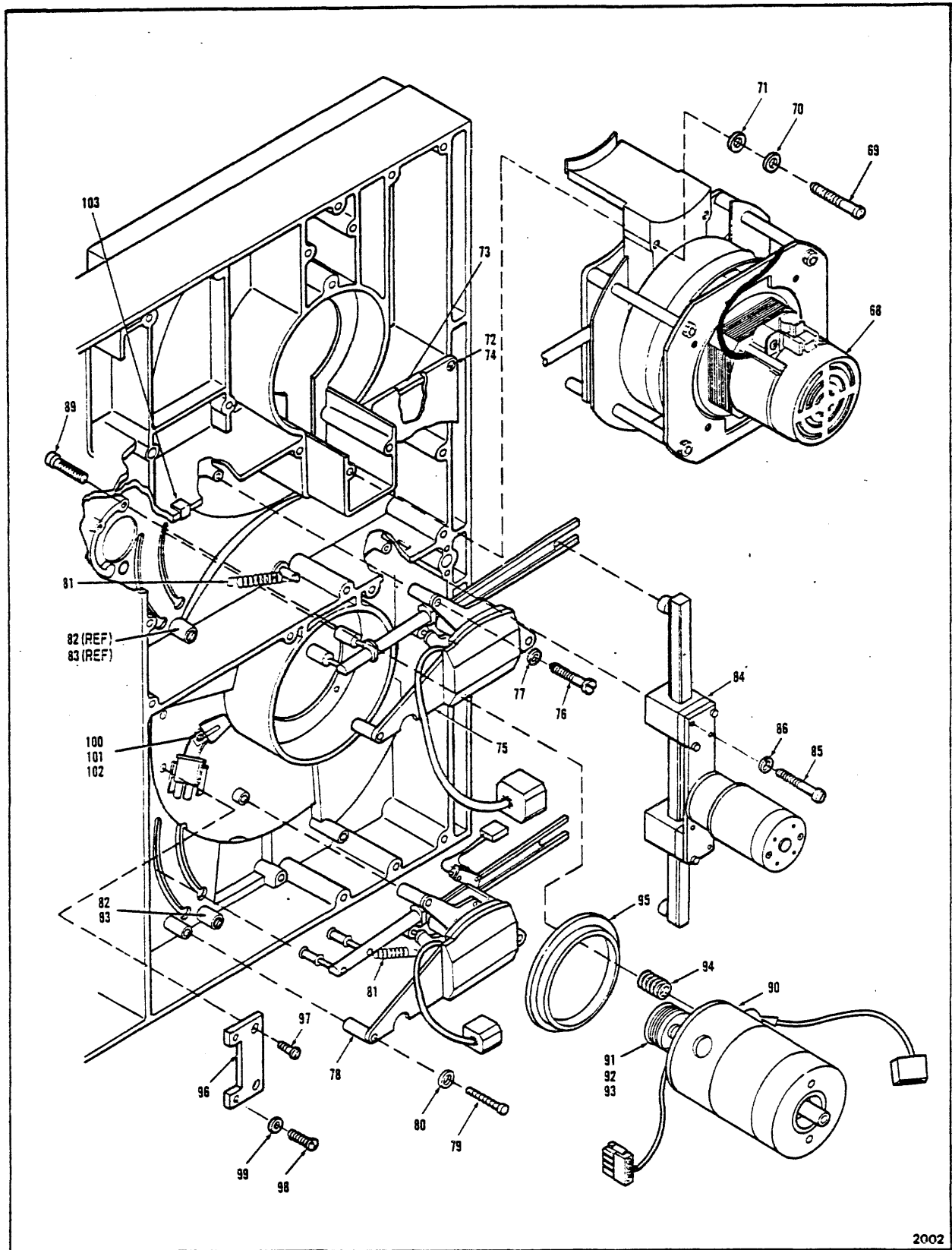
FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION				USEABLE ON CODE	QTY PER ASM
		1	2	3	4		
2	-BKD 403467301	BASIC ASSEMBLY, 2920 MTS				A	1
	-BKD 403862001	BASIC ASSEMBLY, 2922(CACHE) MTS				B	1
	-BKD 404042801	BASIC ASSEMBLY, DC POWER GROUP				C	1
	-BKD 402370902	. COVER ASSEMBLY, SEAL					1
	-1 10097221	. . FASTENER					3
	-2 10097222	. . FASTENER					3
	-3 402339907	. . COVER, SEAL					1
	-4 42420324	. CAP, HUB					1
	-5 403442802	. FLANGE, FRONT, AUTO LOAD					1
	-6 10096304	. SCREW, MACHINE, SHC, 10-32 X .625					3
	-7 10030505	. WASHER, LOCK, NO. 10					3
	-8 401209304	. FLANGE, REAR, MACHINE, REEL					1
	-9 10013012	. SCREW, MACHINE, SBNH, 4-40 X .250					6
	-10 402339303	. HUB, TAKEUP REEL					1
	-11 10007027	. SCREW, MACHINE, SHC, 6-32 X .500, PS					3
	-12 10030503	. WASHER, LOCK, HEL, MED, PS, NO. 6					3
	-13 402573701	. COLLAR, MOUNTING					1
	-14 10410204	. CONNECTOR, BANANA JACK, UNINSULATED					1
	-BKD 403479703	. DIVERTER ASSEMBLY, THREADING					1
	-15 10090005	. RING, RETAINING, EXT. .125					1
	-16 10025014	. . PIN, DOWEL					1
	-17 10308401	. . SPRING, EXT					1
	-18 403469003	. . DIVERTER, THREADING					1
	-19 403802401	. HUB CAP ASSEMBLY					1
	-20 10007202	. SCREW, MACHINE, SHC, 4-40 X 1.5					3
	-BKD 403375301	. FILE PROTECT ASSEMBLY					1
	-21 10007027	. SCREW, MACHINE, SHC, 6-32 X 1/2					3
	-22 10030503	. WASHER, LOCK, HEL, MED, PS, 6					3
	-23 401292314	. . FILE HUB SUBASSEMBLY, MANUAL (SEE FIGURE 6 FOR BREAKDOWN)					1
	-24 403376601	. . RING, FILE PROTECT					1
	-25 10204013	. . SCREW, TXPH, 6-19 X .625					3
	-26 403375201	. . SPRING, FILE PROTECT					3
	-27 403376502	. . BUSHING, FILE PROTECT					3
	-28 404077301	. SUPPORT, REEL REMOVAL					1



2019

FIGURE 2. BASIC ASSEMBLY (SHEET 2 OF 5)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE ON CODE	QTY PER ASM
2-		1 2 3 4		
- 29	402338908	. BEARING, GUIDE		1
- 30	402339009*	. FLANGE, GUIDE BEARING		1
- 31	403651502*	. REAR GUIDE FLANGE		1
- 32	10013024	. SCREW, MACHINE, SBNH, 6-32 X .250, PS		2
- 33	403631701*	. THREADING RESTRAINT		1
- 34	403391101	. SCREW, SHOULDER GUIDE		2
- 35		. DELETED		
- 36	402606604	. CERAMIC R/W HEAD ASSEMBLY		1
- 37	402603703	. SKEW BLOCK ASSEMBLY		1
- 38	402390702	. SHIM, SKEW, .001		1
- 39	402390802	. SHIM, SKEW, .002		1
- 40	402390902	. SHIM, SKEW, .004		1
- 41	402391002	. SHIM, SKEW, .006		1
- 42	402390002	. SHIM, SKEW, .010		1
- 43	10008026	. SCREW, MACHINE, SHC, 6-32 X 3/8, SS		7
- 44	10030503	. WASHER, LOCK, HEL, MED, PS, NO. 6		4
- 45	403579001	. FILLER, BLOCK MOLDED		1
- 46	403554502	. CLEANER ASSEMBLY		1
- 47	10008031	. SCREW, SCH, 6-32 X 1.0		1
- 48	403081406	. EOT/BOT ASSEMBLY		1
- 49	10007202	. SCREW, MACHINE, SHC, 4-40 X 1.00, PS		2
- 50	402552003	. ROLLER ASSEMBLY, CROWNED		1
- 51	10090033	. . RING, RETAINING, EXT, . 125, S/PH		1
- 52	403069302	. . WASHER, ROLLER		1
-BKD	403540701	. . ROLLER SUBASSEMBLY, CROWNED		1
- 53	403071001	. . . BEARING, BALL		2
- 54	402545207	. . . ROLLER, CROWNED		1
- 55	403137601	. . SPRING, ROLLER		1
- 56	402340506	. . POST, FIXED ROLLER		1
- 57	402336703	. ROLLER ASSEMBLY, FLANGED FLAT		2
- 58	10090033	. . RING, RETAINING, EXT, . 125, S/PH		1
- 59	403069302	. . WASHER, ROLLER		1
-BKD	403469801	. . ROLLER SUBASSEMBLY, FLAT		1
- 60	403071001	. . . BEARING, BALL		2
- 61	403469701	. . . ROLLER, 2920 FLAT		1
- 62	403137601	. . SPRING, ROLLER		1
- 63	402340506	. . POST, FIXED ROLLER		1
- 64	403470103	. COVER PLATE, CARD CAGE		1
- 65	10311363	. SCREW, TF, TXPH, C/SEMS, 6-32 X 7/16		4
- 66	10030514	. WASHER, LOCK, INT, MED, PS, 6	C	4
- 67	402338908	. BEARING, GUIDE		1
-67A	402339009	. FLANGE, GUIDE BEARING		2
-67B	10013024	. SCREW, MACHINE, SBNH, 6-32 X .250, PS		2
-67C	403391101	. SCREW, SHOULDER GUIDE		2
-67D		. DELETED		



2002

FIGURE 2. BASIC ASSEMBLY (SHEET 3 OF 5)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION				USEABLE ON CODE	QTY PER ASM
		1	2	3	4		
-68	403219205	.	BLOWER ASSEMBLY				1
		.	(SEE FIGURE 5 FOR DETAILS)				
-69	10007070	.	SCREW, MACHINE, SHC, 10-32 X 1.75, PS				4
-70	10030505	.	WASHER, LOCK, HEL, MED, NO. 10, PS				4
-71	10026006	.	WASHER, FLAT, A, NO. 10				4
-BKD	402553003	.	COVER ASSEMBLY, REAR				1
-72	10206239	.	SCREW, MAC, SEMS, TXPH, 10-32 X 3/8				12
-73	403231002	.	GASKET, REAR COVER				1
-74	402340006	.	COVER, REAR				1
-75	402560108	.	SWING ARM ASSEMBLY, UPPER				1
		.	(SEE FIGURE 8 FOR BREAKDOWN)				
-76	10007032	.	SCREW, MACHINE, SHC, 6-32 X .250				3
-77	10030503	.	WASHER, LOCK, HEL, MED, PS, NO. 6				3
-78	402560208	.	SWING ARM ASSEMBLY, LOWER				1
		.	(SEE FIGURE 8 FOR BREAKDOWN)				
-79	10007032	.	SCREW, MACHINE, SHC, 6-32 X .250				3
-80	10030503	.	WASHER, LOCK, HEL, MED, PS, NO. 6				3
-81	403156502	.	SPRING, TENSION				2
-82	403522001	.	BUMPER, SWING ARM				2
-83	10203012	.	SCREW, TF, TXPH, SEM, 6-32 X .87				2
-84	403826001*	.	RETRACTOR ASSEMBLY W/MOUNT SCREWS (FUO)				1
	403123804	.	RETRACTOR ASSEMBLY				1
		.	(SEE FIGURE 3 FOR BREAKDOWN)				
-85	10007033	.	SCREW, MACHINE, SHC, 6-32 X 1.5, PS				4
-86	10030503	.	WASHER, LOCK, HEL, MED, PS, NO. 6				4
-87		.	DELETED				
-88		.	DELETED				
-BKD	402271201	.	MOTOR ASSEMBLY, CAPSTAN				1
-89	403125302	.	SCREW, SOCKET HEAD CAP				3
-90	402338302	.	MOTOR, CAPSTAN				1
-91	402338401	.	WHEEL, CAPSTAN				1
-92	10013026	.	SCREW, MACHINE, SBNH, 6-32 X 3/8, PS				1
-93	10030520	.	WASHER, LOCK, EXT, MED, PS, 6				1
-94	403854201	.	SPRING, MOTOR ASSEMBLY				3
-95	403853901	.	SEAL, CAPSTAN MOTOR				1
-96	403096302	.	PLATE, MTG, EOT/BOT CONNECTOR				1
-97	10203008	.	SCREW, TF, TXPH, SEM, 6-32 X .37				2
-98	10013015	.	SCREW, MACHINE, SBNH, 4-40 X .50, PS				2
-99	10030502	.	WASHER, LOCK, HEL, MED, PS, 4				2
-100	402637801	.	SENSE ASSEMBLY, FILE PROTECT				1
-101	10007014	.	SCREW, MACHINE, SHC, 4-40 X .375, PS				1
-102	10027014	.	WASHER, FLAT, B, NO. 4, N				1
-103	403862401	.	FILLER BLOCK, DECK				1

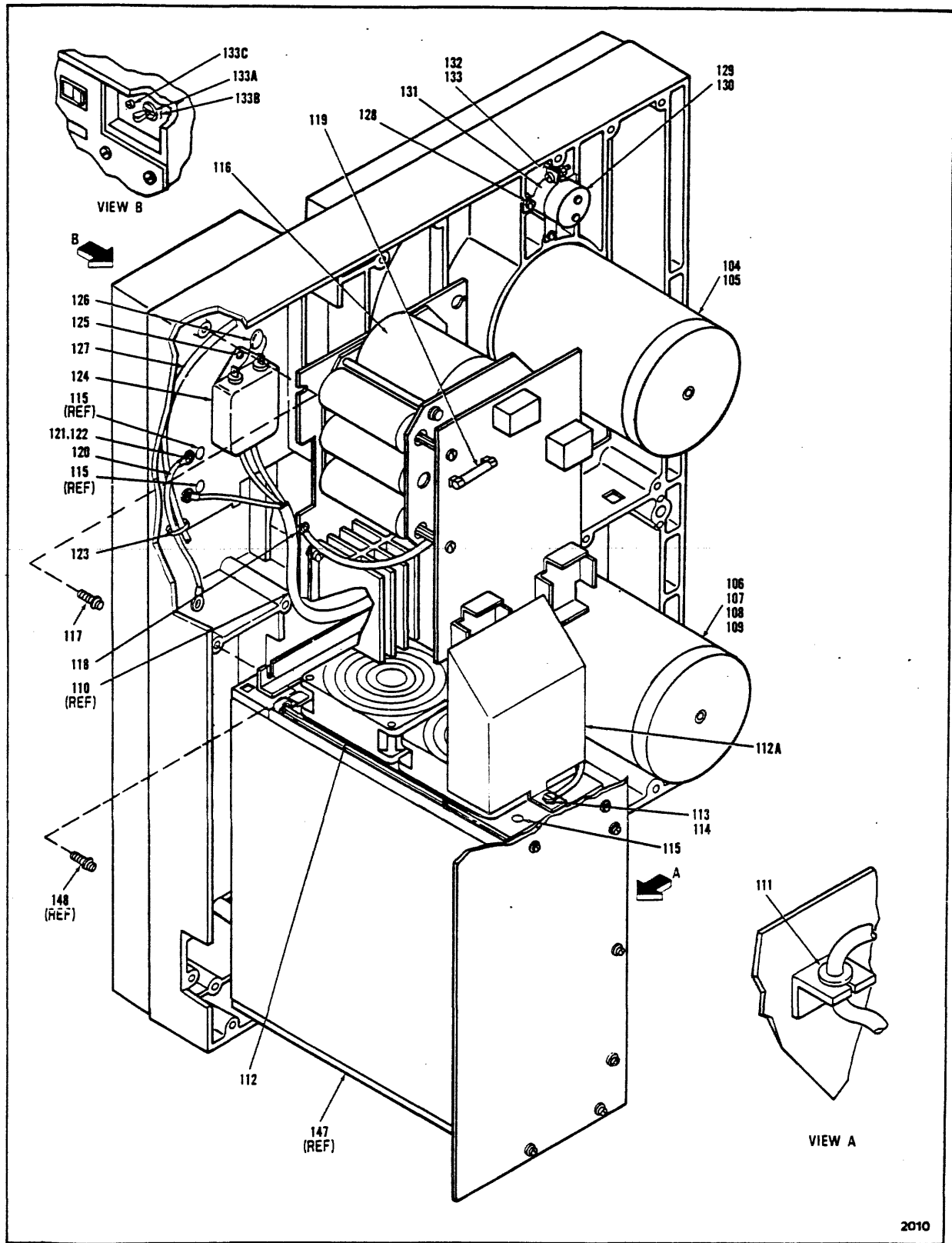
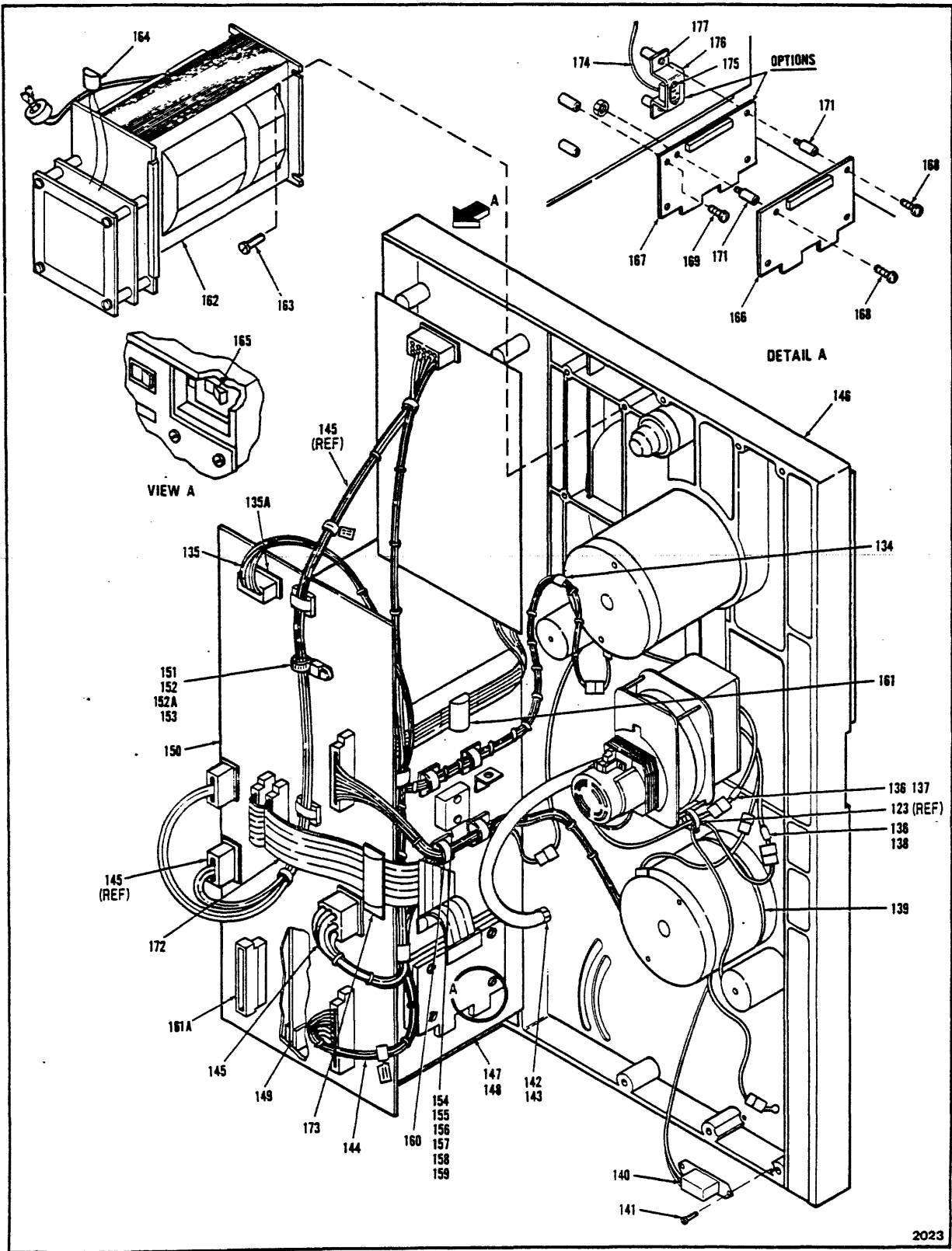


FIGURE 2. BASIC ASSEMBLY (SHEET 4 OF 5)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE ON CODE	QTY PER ASM
2- 104	402271403	. MOTOR ASSEMBLY, REEL		1
- 105	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62		4
- BKD	402271301	. MOTOR ASSEMBLY, FILE REEL		1
- 106	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62		4
- 107	402278102	. . MOTOR REEL		1
- 108	402573701	. . COLLAR ASSEMBLY, MOUNTING		1
- 109	10041170	. . CONN. RE. PWB. M, 3, C. .84. .250		1
- 110		. DELETED		
- 111	10097203	. BUSHING, STRAIN RELIEF		1
- 112	403777503	. FAN ASSEMBLY		1
	404073003*	. DC FAN ASSEMBLY	C	1
		(SEE FIGURE 4 FOR DETAILS)		
-112A	404076003	. HOOD, FAN	C	1
- 113	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62		1
- 114	10030522	. WASHER, LOCK, EXT, MED, PS, 10		1
- 115	00029526	. DECAL, GROUND LOCATION	A, B	3
	00029526	. DECAL, GROUND LOCATION	C	1
- 116	403859703	. REGULATOR ASSEMBLY, CACHE	A, B	1
	404042902*	. POWER SUPPLY ASSEMBLY, DC	C	1
- 117	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62	A, B	4
	10310493*	. SCREW, TXPH, C/SEM, ZP, 1/4-20 X 3/4	C	1
- 118	10030522	. WASHER, LOCK, EXT, MED, PS, 10		1
- 119	10080078*	. FUSE, 20A, 60V, 3AB, VERY FAST		1
- 120	403198201	. CABLE ASSEMBLY, GROUND DECK TO FRAME		1
- 121	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62		2
- 122	10030522	. WASHER, LOCK, EXT, MED, PS, NO. 10		2
- 123	10075020	. CABLE TIE, 3/4	A, B	2
	10075020	. CABLE TIE, 3/4	C	1
- 124	10058094	. LINE FILTER, 10A, 220 VAC, 400 HZ	A, B	1
- 125	10203008	. SCREW, RF, TXPH, SEM, 6-32 X .375	A, B	2
- 126	402584501	. VARISTOR ASSEMBLY	A, B	1
- 127	403215502	. CABLE HARNESS, AC	A, B	1
- BKD	403257203	. CAPACITOR, INSULATED, 6-UF, 660V	A, B	1
- 128	10203009	. SCREW, TF, TXPH, SEM, 6-32 X .500	A, B	3
- 129	10049051	. . CAP. AC, 6% 660 VAC, POLY, 6.0 UF	A, B	1
- 130	10057075	. . TUBE, EL, SHRINK, 2100/1.00, IEC	A, B	AR
- 131	403370503	. BRACKET, CAPACITOR	A, B	1
- 132	10005027	. SCREW, MACHINE, SPH, 6-32 X .500, PS	A, B	1
- 133	10027019	. . WASHER, FLAT, B, NO. 6, N	A, B	1
-133A	10077232*	. CB, T, 1P, 25A, 65 VDC, IEC	C	1
-133B	404076303*	. PLATE, POWER, SWITCH	C	1
-133C	10096018*	. SCREW, MACHINE, SFHC, 6-32 X 3/8, BLZ	C	2
-134	10075063	. CA-CLP, ADJ/REL, 3/16 - 11/16		2
-135	402375504	. CABLE HARNESS MOTORS		1
-135A	404029103	. EDGE LINER, .05-.12, POLY, 3.00	C	3
-136	403214301	. . FUSE HOLDER, IN-LINE, 18-22GA		2
-137	10080118	. . FUSE, .75A, 250V, SLO-BLO		1
-138	10080132	. . FUSE, 4A, 250V, SLO-BLO		1
-139	10075131	. CABLE TIE, REL, NY, 5.0" MAX DIA		1
-140	403376303	. SWITCH ASSEMBLY, INTERLOCK		1
-141	10203008	. SCREW, TF, TXPH, 6-32 X .375		2
-142	403496001	. MALE CONNECTOR, FTG		1
-143	10096316	. CLAMP, HOSE, .87/38, WORM DRV		1
-144	402339603	. CABLE HARNESS SENSOR		1
-145	403840101	. CABLE HARNESS, POWER CACHE		1
-146	403458811	. DECK DIE, 2920		1



2023

FIGURE 2. BASIC ASSEMBLY (SHEET 5 OF 5)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION				USEABLE ON CODE	QTY PER ASM		
		1	2	3	4				
2	-BKD 403420001	STD.	CARDS.	AND	CAGE	A	1		
	-BKD 403568401	A117.	CARDS	AND	CAGE	B	1		
	-BKD 403532101	IND	STD.	CARDS	AND	CAGE	C	1	
	-BKD 403517701	CARD	SET	IND	STD	100	IPS	D	1
	-BKD 403539001	100	IPS.	CARDS	AND	CAGE	E	1	
	-BKD 403826301	CARD	SET.	CACHE				F	1
	-BKD 403851001	CARD	SET.	CACHE.	IND	STD		G	1
	-BKD 404072101	CARD	SET.	CACHE.	LOW	DR.	15	H	1
	-BKD 404072201	CARD	SET.	CACHE.	PARITY.	15		J	1
	-BKD 404076601	CARD	SET.	CACHE.	SINGLE-ENDED			K	1
	-BKD 404076701	CARD	SET.	CACHE.	DIFFERENTIAL			L	1
	-BKD 404082901	CARD	SET.	CACHE.	VS	INTERFACE		M	1
	-BKD 404080201	100	IPS	CARD	SET.	STD-DC		N	1
	-BKD 404080301	100	IPS	CARD	SET.	I/S-DC		O	1
	-BKD 404080401	CARD	SET.	CACHE.	STD-DC			P	1
	-BKD 404080501	CARD	SET.	CACHE.	I/S-DC			Q	1
	-BKD 404080601	CARD	SET.	CACHE.	SINGLE-END/DC			R	1
	-BKD 404080701	CARD	SET.	CACHE.	DIFF/DC			S	1
	-BKD 404186501	CARD	SET.	CACHE.	NRSK	DIFF		T	1
	-BKD 404173601	CARD	SET.	STD.	100	IPS.	HSI	U	1
	-BKD 403612601	. POPULATED	STD	CARD	CAGE			A	1
	-BKD 403612701	. POPULATED	A117	CARD	CAGE			B	1
	-BKD 403612801	. POPULATED	IND	STD	CARD	CAGE		C	1
	-BKD 403613001	. POPULATED	100	IND.	STD	CARD	CAGE	D	1
	-BKD 403612901	. POPULATED	100	IPS	CARD	CAGE		E	1
	-BKD 403922801	. POPULATED	CARD	CAGE.	CACHE			F	1
	-BKD 403922701	. POPULATED	IND	STD	CARD	CAGE.	CACHE	G	1
	-BKD 404072301	. POPULATED	CARD	CAGE.	CACHE.	LOW	DR	H	1
	-BKD 404072401	. POPULATED	CARD	CAGE.	CACHE.	PARITY		J	1
	-BKD 404076801	. POPULATED	CARD	CAGE.	SINGLE-ENDED			K	1
	-BKD 404076901	. POPULATED	CARD	CAGE.	DIFFERENTIAL			L	1
	-BKD 404083001	. POPULATED	CARD	CAGE.	CACHE	VS		M	1
	-BKD 404080901	. POPULATED	CARD	CAGE.	100	IPS	STD/DC	N	1
	-BKD 404081001	. POPULATED	CARD	CAGE.	100	IPS	I/S-DC	O	1
	-BKD 404081101	. POPULATED	CARD	CAGE.	CACHE	STD-DC		P	1
	-BKD 404081201	. POPULATED	CARD	CAGE.	CACHE	I/S-DC		R	1
	-BKD 404081301	. POPULATED	CARD	CAGE.	CACHE	SINGLE-END/DC		S	1
	-BKD 404081401	. POPULATED	CARD	CAGE.	CACHE	DIFF/DC		T	1
	-BKD 404186601	. POPULATED	CARD	CAGE.	NRSK	DIFF		U	1
	-BKD 404173902	. POPULATED	100	IPS.	CARD	CAGE/HSI		A	1
	-BKD 403629405	. . .	CARD	CAGE	ASSEMBLY			M	1
	-BKD 404072901	. . .	DC	CARD	CAGE	ASSEMBLY		T	1
	-147 10203024*	. . .	SCREW.	TF.	TXPH.	SEM.	10-32 X .625	U	4
	-BKD 402336808	. . .	CARD	CAGE	SUBASSEMBLY			N	1
	-148 402340608	. . .	CARD	CAGE				S	1
	-149 402340701	. . .	GUIDE.	CARD.	SNAP-IN			12	
	-150 (PN COMP)	. . .	CKT	CD.	MOB.	PCC	ASSEMBLY	1	
	-151 10075022	. . .	CA-CLP.	T.	1.75.	NO.	10	1	
	-152 10026006	. . .	WASHER.	FLAT.	A.	NO.	10	8	
	-152A 404081601	. . .	WASHER.	SHOULDER				N-S	16
	-153 10028061	. . .	NUT.	KEPS.	w/WASHER.	PS.	10-32	8	
	-154 10078177	. . .	RELAY.	SS.	PHOTO	ISOL.	1P. 1T. SA. 80	1	
	-155 10026004	. . .	WASHER.	FLAT.	A.	NO.	6	2	
	-156 10030503	. . .	WASHER.	LOCK.	HEL.	MED.	PS. 6	2	
	-157 10028003	. . .	NUT.	HEX.	6-32.	2P		2	
	-158 10030514	. . .	WASHER.	LOCK.	INT.	MED.	PS. 6	2	
	-159 10030515	. . .	WASHER.	LOCK.	INT.	MED.	PS. 8	2	
	-160 10075063	. . .	CA-CLP.	ADJ/REL.	3/16	-	11/16	4	
	-161 10075105	. . .	CA-CLP.	FLAT.	ADH	BACK.	1.0 INCH MAX	1	
	-161A 10097444	. . .	TERMINATOR.	SCSI.	DIFFERENTIAL			T	1
	-161B	. . .	DELETED						
	-161C	. . .	DELETED						
	-161D	. . .	DELETED						

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE	QTY
			ON CODE	PER ASM
2-				
-BKD	403615601	50 HZ. 100 V. DG STRIP LEADS	A	1
-BKD	403615501	50 HZ. 120 V. DG STRIP LEADS	B	1
-BKD	403481901	50 HZ. 220 V. POWER. OPT. NEMA. 6-15	C	1
-BKD	403419601	50 HZ. 240 V. STRIP LEADS	D	1
-BKD	403419501	50 HZ. 200 V. STRIP LEADS	E	1
-BKD	403107901	50 HZ. 220 V. STRIP LEADS	F	1
-BKD	403419401	60 HZ. 100 V. NEMA. 5-15	G	1
-BKD	403108002	60 HZ. 120 V. POWER. OPT. NEMA. 5-15	H	1
-BKD	403840601	50 HZ. 220 V. STRIP LEADS CACHE	J	1
-BKD	403840701	50 HZ. 200 V. STRIP LEADS CACHE	K	1
-BKD	403840801	50 HZ. 240 V. STRIP LEADS CACHE	L	1
-BKD	403840901	50 HZ. 220 V. NEMA. 6-15 CACHE	M	1
-BKD	403841201	60 HZ. 120 V. NEMA. 5-15 CACHE	N	1
-BKD	403841301	60 HZ. 100 V. NEMA. 5-15 CACHE	P	1
-BKD	404026001	60 HZ. 120 V. 50 IPS DG	Q	1
-BKD	404026201	50 HZ. 220 V. 6-15 DG	R	1
-BKD	404026401	60 HZ. 120 V. 100 IPS DG	S	1
-BKD	404026101	50 HZ. 220 V. NEMA DG	T	1
-162	403615303	. XFMR PK ASSEMBLY. 10 AMP	A, B	1
	403255504	. XFMR PK ASSEMBLY. 50 HZ	C, D, E, F	1
	402573506	. XFMR PK ASSEMBLY. 60 HZ	G, H	1
	403840502	. XFMR PK ASSEMBLY. 50 HZ CACHE	J, K, L, M	1
	403841102	. XFMR PK ASSEMBLY. 60 HZ CACHE	N, P	1
	404025701	. XFMR PK ASSEMBLY. 60 HZ. 120 V. DG	Q	1
	404025901	. XFMR PK ASSEMBLY. 50 HZ. 220 V. DG	R	1
	404026301	. XFMR PK ASSEMBLY. 60 HZ. 120 V. DG	S	1
	404025801	. XFMR PK ASSEMBLY. 50 HZ. 220 V. DG	T	1
-163	10203032	. SCREW. TF, TXPH, SEM. 1/4-20 X .75		4
-164	10075020	. CABLE CLAMP. T, 3/4		1
-165	403215602	. CIRCUIT BREAKER ASSEMBLY. 10 AMP	A, B, H, N	1
	403215601	. CIRCUIT BREAKER ASSEMBLY. 7.5 AMP	C, D, E, F	1
	10077158	. CB. R. 2P. PO. SNAP. RLY. IEC	J, K, L, M G, P	1
-BKD	403514001	PA/PB INTERFACE ASSEMBLY	A	1
-BKD	403937801	PA/PB INTERFACE ASSEMBLY. CACHE	B	1
-BKD	404083101	VS INTERFACE ASSEMBLY	C	1
-BKD	404175201	PA/PB INTERFACE ASSEMBLY. CACHE. DC	D	1
-BKD	404175401	PA/PB INTERFACE ASSEMBLY. 2921/2922. DC	E	1
-BKD	403835701	. PA/PB INTERFACE SUBASSEMBLY	A	1
-BKD	403937901	. PA/PB INTERFACE SUBASSEMBLY. CACHE	B	1
-BKD	404084101	. VS INTERFACE SUBASSEMBLY	C	1
-BKD	404175101	. PA/PB INTERFACE SUBASSEMBLY. CACHE. DC	D	1
-BKD	404175301	. PA/PB INTERFACE SUBASSEMBLY. DC	E	1
-166	(PN COMP)	. . CKT CD. PA. ASSEMBLY	A, B	1
	(PN COMP)	. . PWA. PW	C	1
	(PN COMP)	. . PWA. PA-DC	D, E	1
-167	(PN COMP)	. . CKT CD. PB. ASSEMBLY	A, B	1
	(PN COMP)	. . PWA. PB-DC	D, E	1
-168	10203008	. . SCREW. RF, TXPH, SEM. 6-32 X .37		4
-169	10203009	. . SCREW. TF, TXPH, SEM. 6-32 X .50	A, B	1
-170	10028058	. . NUT. HEX. 6-32	A, B	1
-171	403619501	. . STDF. MF. H. 6-32 X .38. S. ZINC PLT	A, B	4
-172	403521001	. . CABLE ASSEMBLY. 60 P/N PERTEC		2
-173	10075107	. . CA-CLP. FLAT. ADH BACK. 3.0 INCHES MAX		1
-BKD	404208801	POWER CORD SELECT. REGULAR	A	1
-BKD	404208901	POWER CORD SELECT. SHIELDED	B	1
-174	402339803	. CORD POWER	A	1
	404192701	. CORD POWER SHIELDED	B	1
-175	10310529	. SCREW. TXPH. C/SEMS. ZP. 4-40 X 3/8	B	2
-176	404186001	. STANDOFF. POWER. CONNECTOR	B	1
-177	10310405	. SCREW. TXPH. C/SEMS. ZP. 6-32 X 3/8	B	2

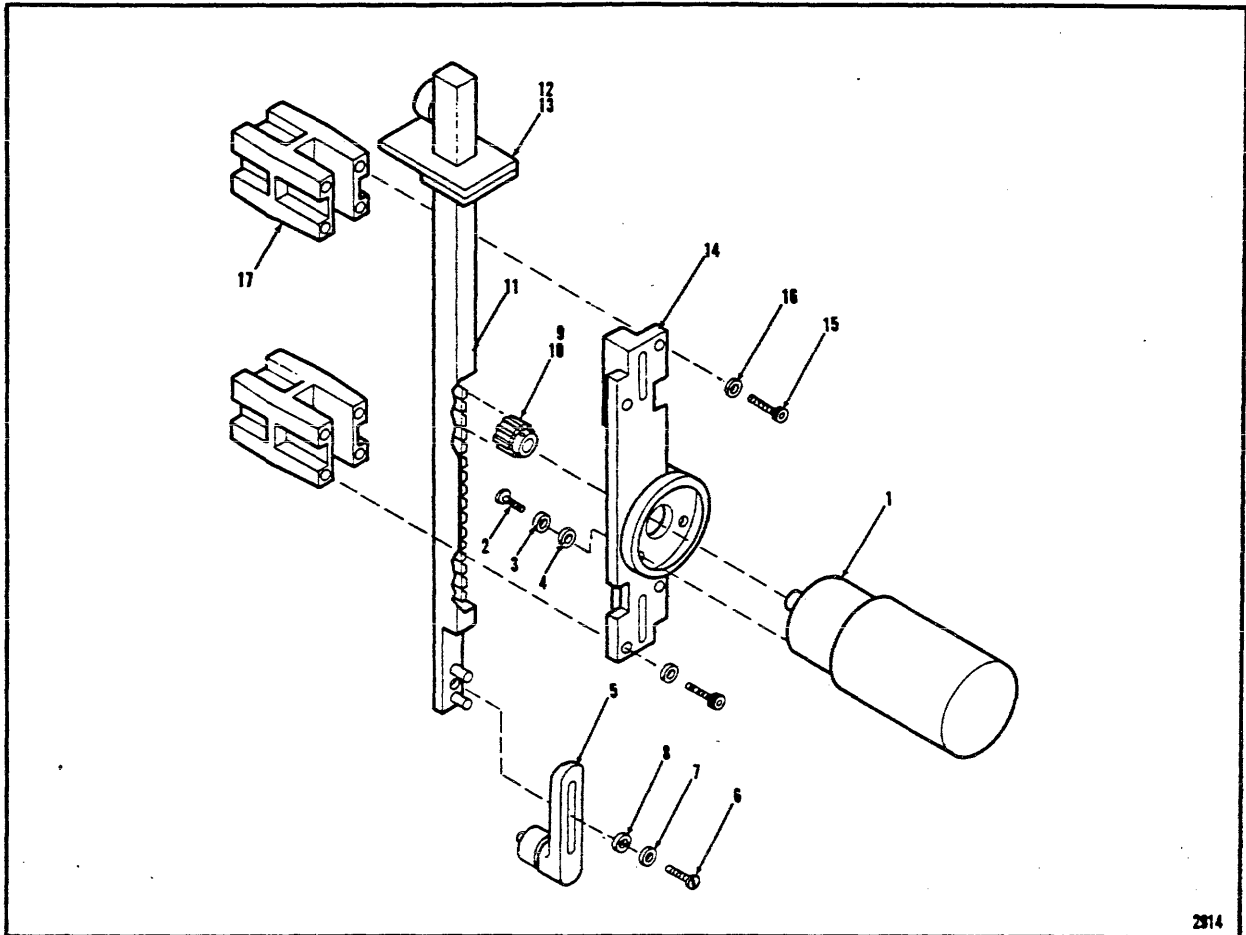


FIGURE 3. RETRACTOR ASSEMBLY

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
3 -BKD	403123804	RETRACTOR ASSEMBLY (SEE FIGURE 2-84 FOR NHA)					1
- 1	403123501	. GEAR MOTOR ASSEMBLY					1
- 2	10007014	. SCREW, MACHINE, SHC, 4-40 X 3/8, PS					3
- 3	10030502	. WASHER, LOCK, HEL, MED, PS, 4					3
- 4	10027013	. WASHER, FLAT, B, NO. 4, N					3
- 5	403124003	. CONNECTING ROD END ASSEMBLY					1
- 6	10007014	. SCREW, MACHINE, SHC, 4-40 X 3/8, PS					1
- 7	10030502	. WASHER, LOCK, HEL, MED, PS, 4					1
- 8	10027013	. WASHER, FLAT, B, NO. 4, N					1
- 9	403114006	. SPUR GEAR					1
-10	10094021	. SCREW, SET, SCP, SL, 8-32 X 3/16					1
-11	403123604	. CONNECTING ROD ASSEMBLY					1
-12	403224601	. GASKET, RETRACTOR					1
-13	403823001	. HALF GASKET, RETRACTOR					1
-14	403390901	. PLATE, MOTOR MOUNT					1
-15	10007027	. SCREW, MACHINE, SHC, 6-32 X 1/2, PS					4
-16	10030503	. WASHER, LOCK, HEL, MED, PS, 6					4
-17	403391202	. BLOCK, GUIDE					2

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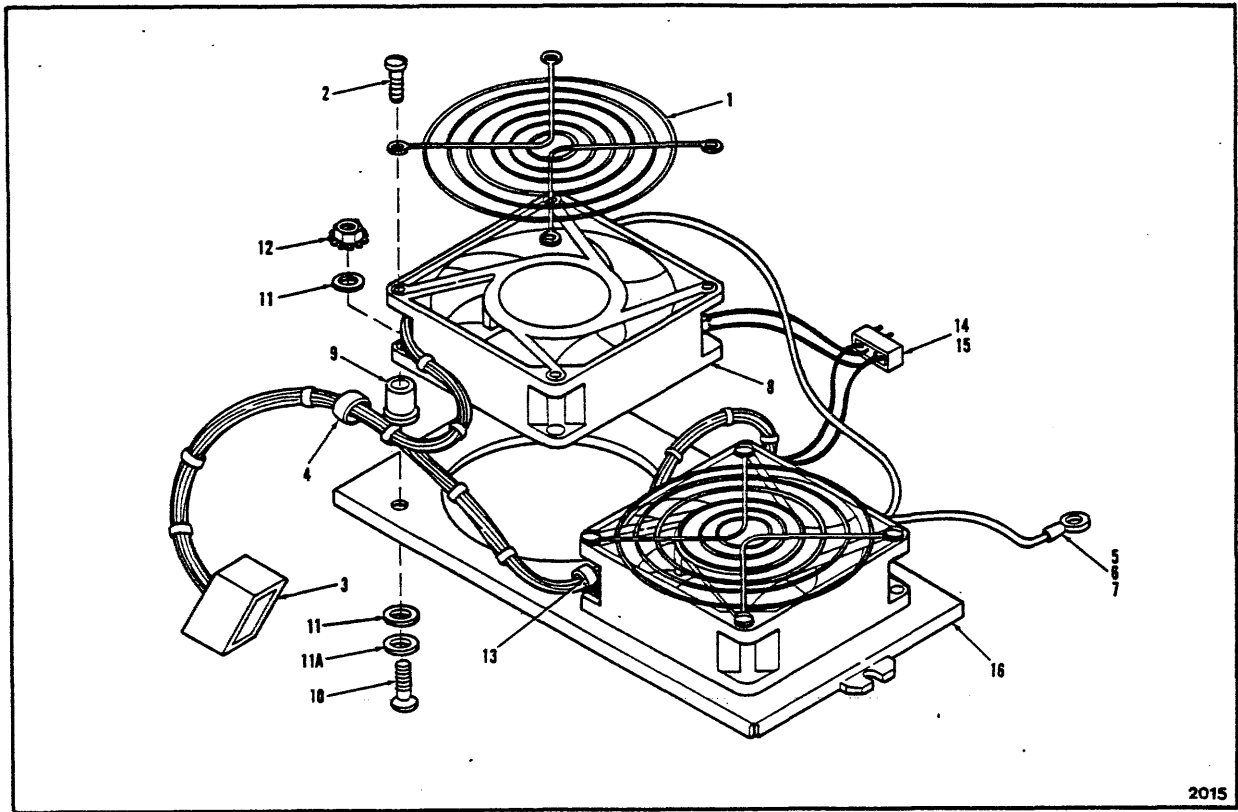


FIGURE 4. FAN ASSEMBLY

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION	USABLE ON				QTY PER ASM
			1	2	3	4	
4	-BKD 403777503	FAN ASSEMBLY					1
	-BKD 404073003	DC FAN ASSEMBLY (SEE FIGURE 2-112 FOR NHA)					1
- 1	10037082	. FINGER GUARD, FAN, AX-3.63 SIZE					2
- 2	10421501	. RIVET, TRUSS HEAD, 1/8, ALUM					6
- 3	403281603	. CABLE, POWER FAN				A	1
- 4	10075109	. CABLE CLAMP, T, .062/1.25, 1.87 HT DIA				A	1
- 5	403198302	. CABLE ASSY, GROUND, FAN				A	1
- 6	10310426	. SCREW, TXPH, C/SEMS, ZP, 8-32 X .37				A	2
- 7	10030515	. WASHER, LOCK, INT, STAR, NO. 8				A	2
- 8	10037026	. FAN, AXIAL, 40 CFM, 3.625, 115V				A	2
	10037072	. FAN, AX, 24 VDC, 40 CFM, 3 INCHES, B				B	2
- 9	403076801	. MOUNT, ISOLATOR					6
-10	10310211	. SCREW, TXPH, ZP, 6-32 X 3/4					6
-11	10026004	. WASHER, FLAT, NO. 6					12
-11A	10030503	. WASHER, LOCK, HEL MED, PS, 6				B	6
-12	10028058	. NUT, HEX, 6-32, KEPS W/WASHER					6
-13	10075005	. CABLE CLAMP, R, .187, 3/16, .500, .203				A	1
-14	10601003	. CONT, RND, F, 18-24 AWG, .084, TIN				B	2
-15	10410056	. CONN, RE, POWER, :M, Z, C, .084, .250				B	1
-16	402341004	. BRACKET, FAN MOUNTING					1

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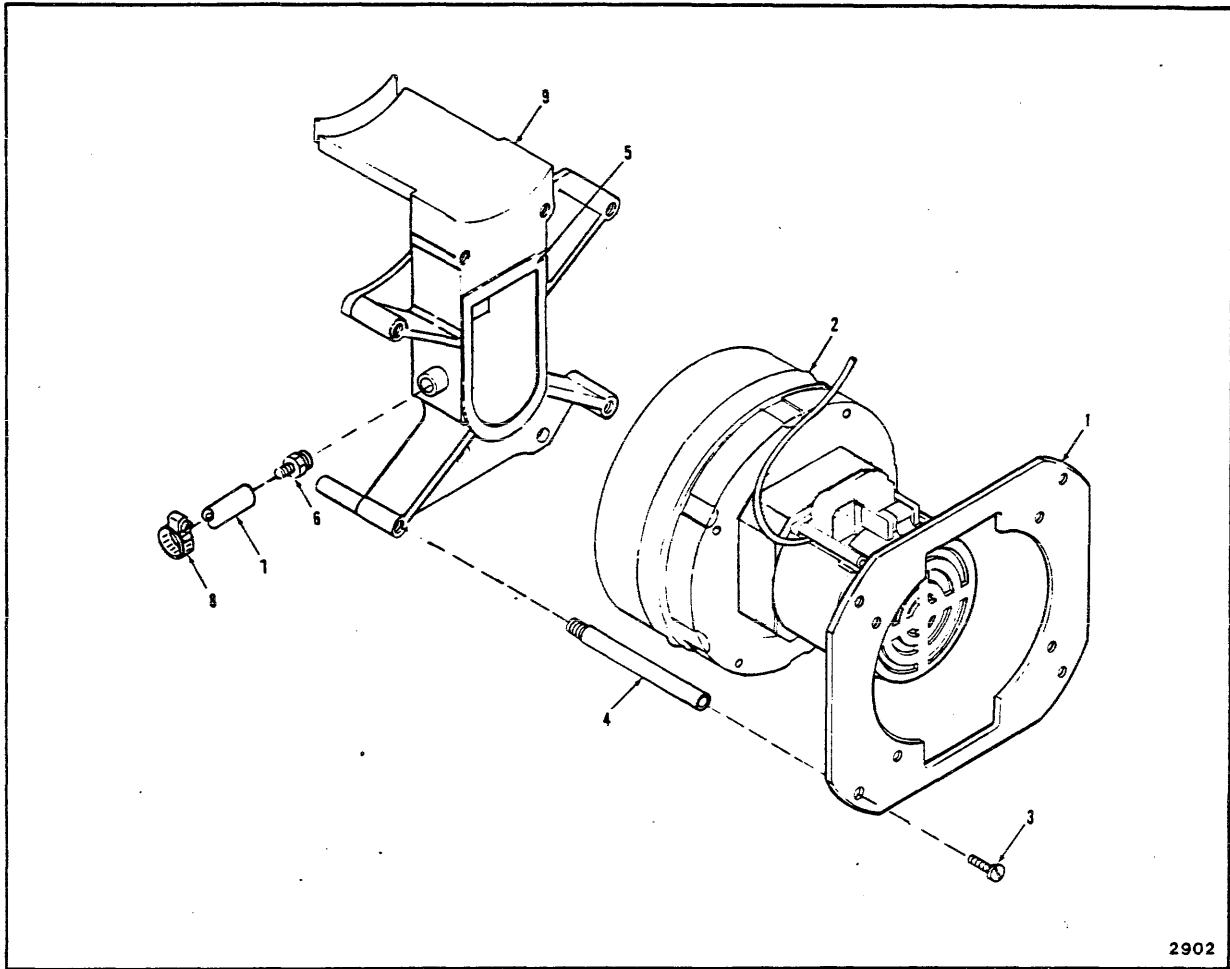


FIGURE 5. BLOWER ASSEMBLY

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
5 -BKD	403219205	BLOWER ASSEMBLY (SEE FIGURE 2-68 FOR NHA)					1
- 1	402365502	. PLATE, BLOWER MOUNTING					1
- 2	403778201	. BLOWER SUBASSEMBLY, VACUUM					1
- 3	10203024	. SCREW, TF, TXPH, SEM, 10-32 X .62					6
- 4	403389501	. STANDOFF, 2.750					4
- 5	402545304	. GASKET, BLOWER					1
- 6	403496001	. MALE, CONN FITTING					1
- 7	403495913	. TUBING, BLOWER, 13 IN					1
- 8	10096316	. CLAMP, HOSE, .38/.87					1
- 9	403513601	. ADAPTER, BLOWER, MACHINED					1

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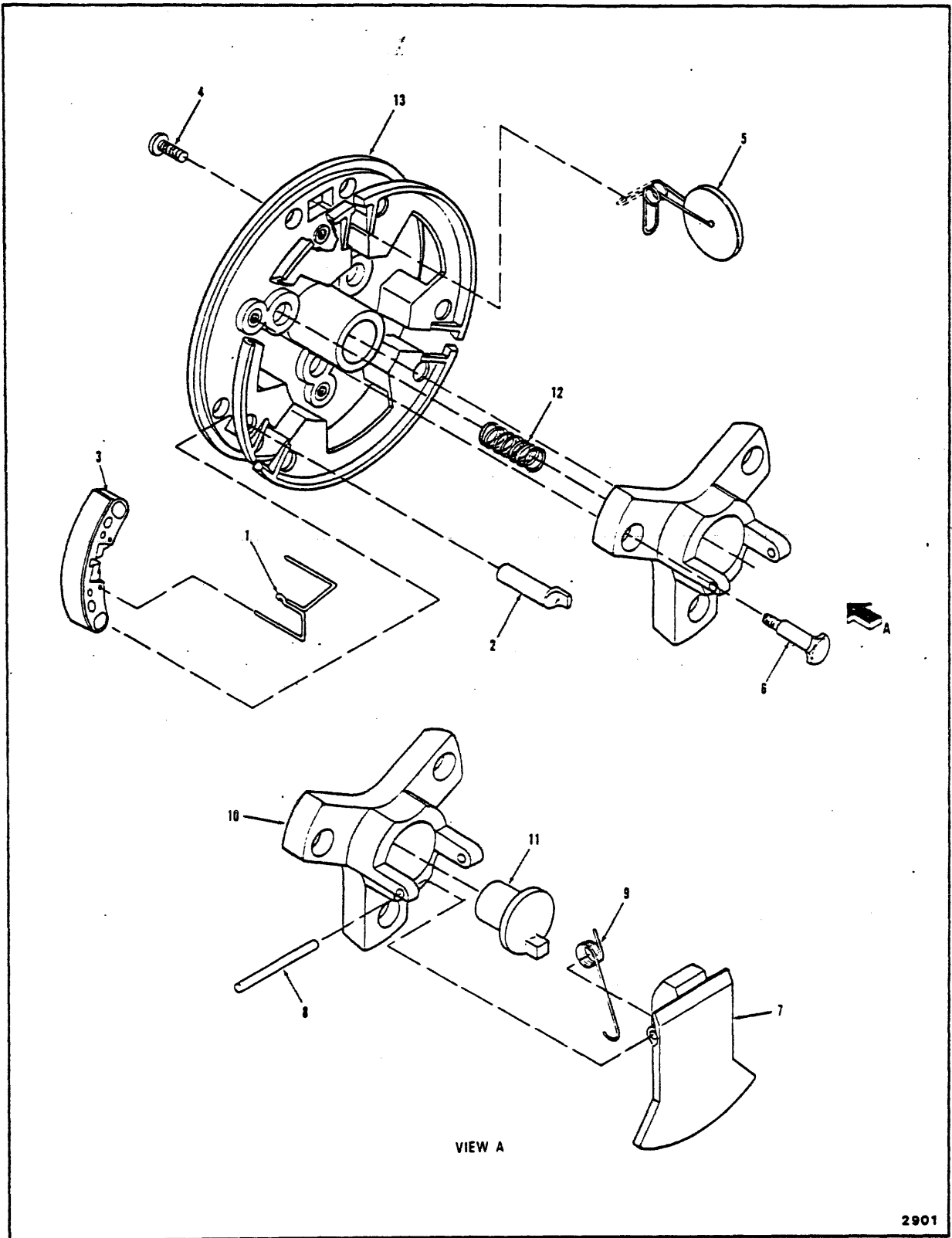


FIGURE 6. FILE HUB SUBASSEMBLY, MANUAL

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
6 -BKD	401292314	FILE HUB SUBASSEMBLY, MANUAL (SEE FIGURE 2-23 FOR NHA)					1
- 1	401259301	. SPRING, CAM RETAINING					3
- 2	401259402	. PIN, CAM RETAINING					6
- 3	403859101	. GROUND ASSEMBLY, CAM PAD					6
- 4	10013027	. SCREW, MACHINE, SBNH, 6-32 X .50, PS					3
- 5	402586801	. SPRING DETENT ASSEMBLY					3
- 6	401215401	. SCREW, SHOULDER					3
-BKD	401600002	. CONE ASSEMBLY, HSH					1
- 7	401290803	. . LATCH, HIGH SPEED HUB					1
- 8	401259601	. . PIN, LATCH					1
- 9	401290901	. . SPRING, LATCH RETURN					1
-10	401211703	. . CONE, HIGH SPEED HUB					1
-11	401215506	. BUTTON, HIGH SPEED HUB					1
-12	00000006	. SPRING, CONE					3
-13	402205502	. HUB, HIGH SPEED					1

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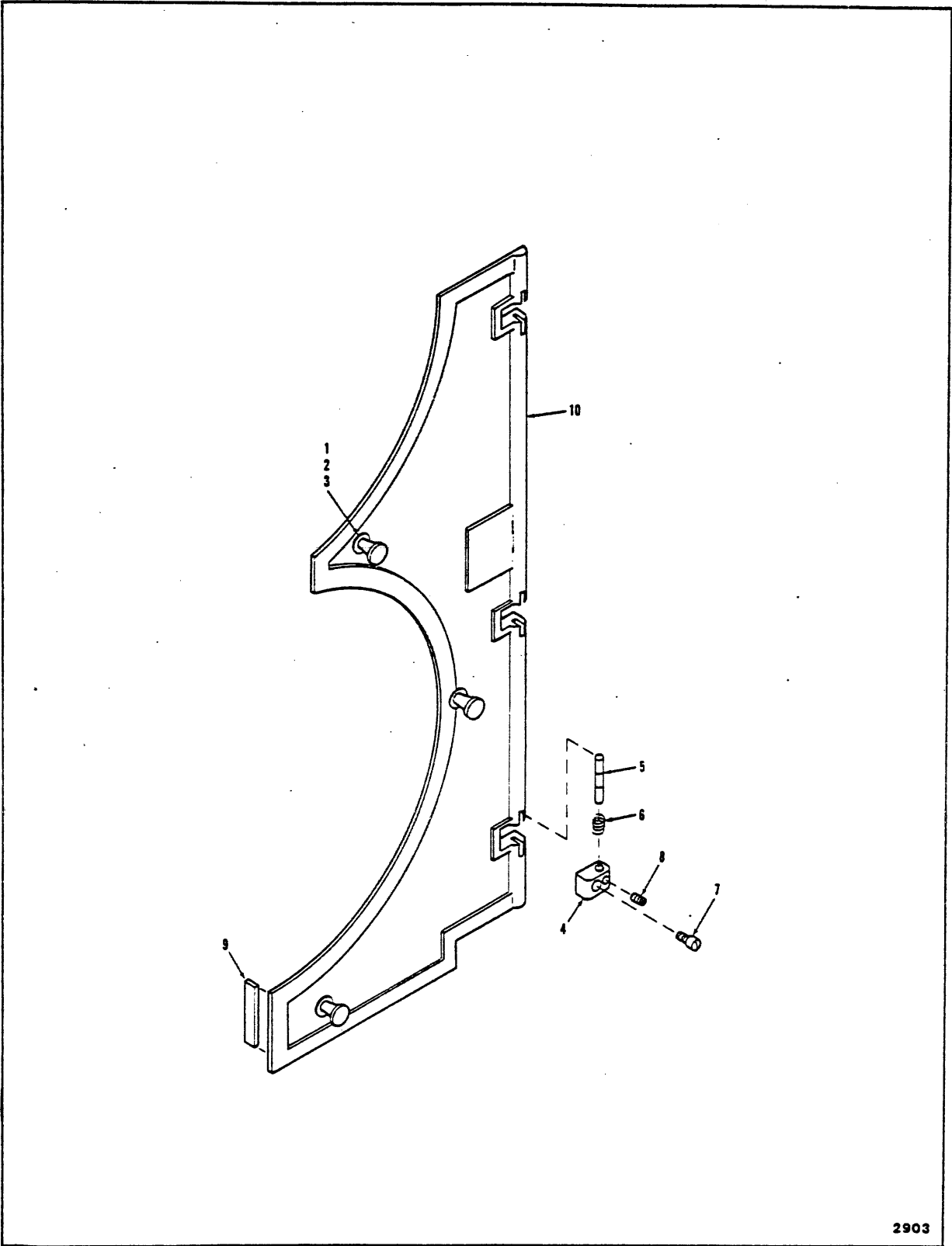


FIGURE 7. COVER ASSEMBLY, THREADING

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM	
		1	2	3	4			
7 -BKD	402336905	COVER ASSEMBLY, THREADING VERTICAL				A	1	
	403440103	COVER ASSEMBLY, THREADING HORIZONTAL (SEE FIGURE 1-30 FOR NHA)				B	1	
	- 1	10097221	. FASTENER, GROMMET				A	3
	- 2	10097222	. FASTENER, GROMMET				B	2
	- 3	403389302	. WASHER, DOOR				A	3
	- 4	403531801	. BLOCK, HINGE				B	2
	- 5	402554103	. PIN, HINGE					3
	- 6	403826101	. COMPRESSION SPRING					3
	- 7	10501250	. SCREW, SHOULDER, .25 L, .12 DIA, SS, BO					3
	- 8	10401013	. SCREW, SET, SCP, 4-40 X .125, BO					3
- 9	403495801	. EXTRUSION, FRONT DOOR					AR	
-10	403458902	. THREADING COVER, VERTICAL				A	1	
	403441002	. THREADING COVER, HORIZONTAL				B	1	

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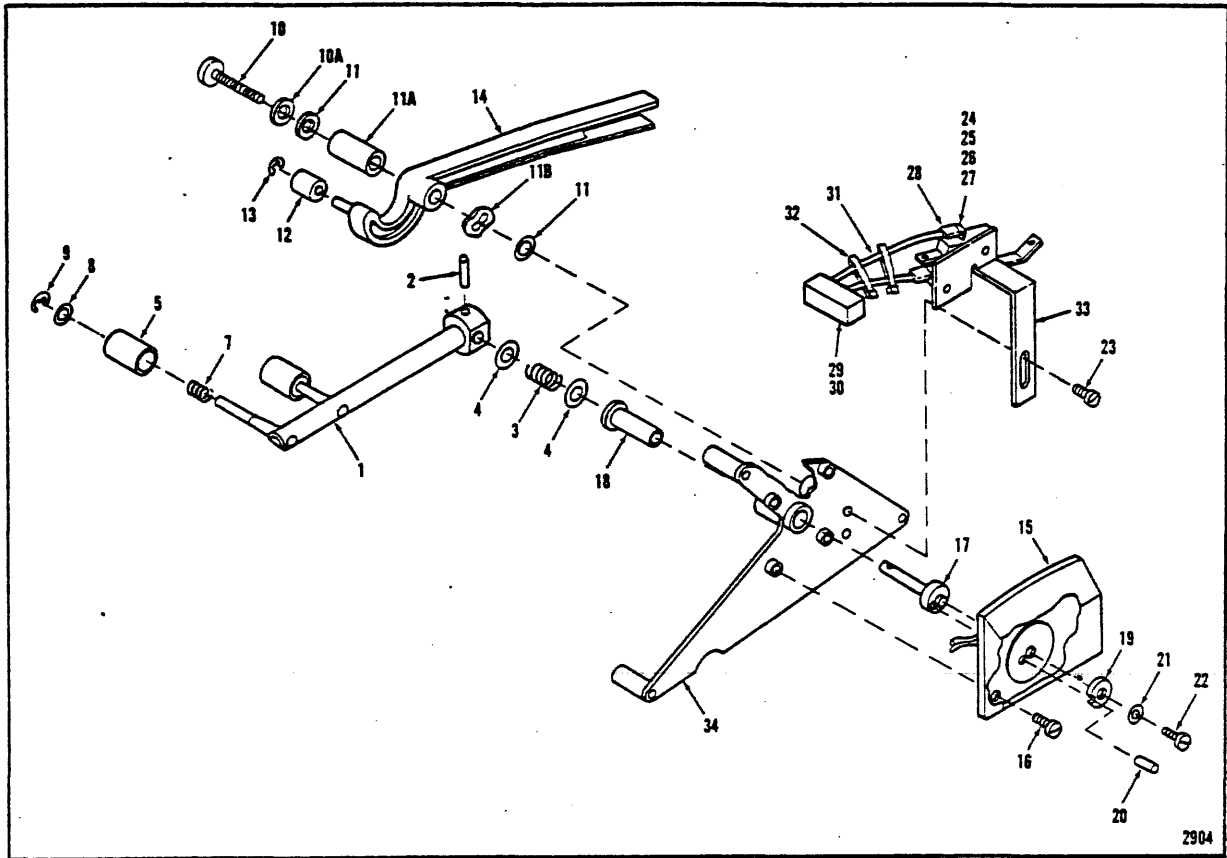


FIGURE 8. SWINGARM ASSEMBLY, UPPER AND LOWER

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION	1 2 3 4				USABLE ON CODE	QTY PER ASM
			1	2	3	4		
8 -BKD	402560108	SWINGARM ASSEMBLY, UPPER (SEE FIGURE 2-75 FOR NHA)					A	1
-BKD	402560208	SWINGARM ASSEMBLY, LOWER (SEE FIGURE 2-78 FOR NHA)					B	1
- 1	403078405	. SWINGARM ASSEMBLY						1
- 2	10190504	. PIN, ROLL, .125 DIA X .625 LG, PS						1
- 3	10308203	. SPRING, COMPRESSION, .50 FL, .370 D, 7.49 RT						1
- 4	10026069	. WASHER, .261 ID, .5 D, .016 T, SS						2
- 5	403540701	. ROLLER, SUBASSEMBLY, CROWNED					A	2
- 6	403540801	. ROLLER, SUBASSEMBLY, FLANGED					B	2
- 6		. DELETED						

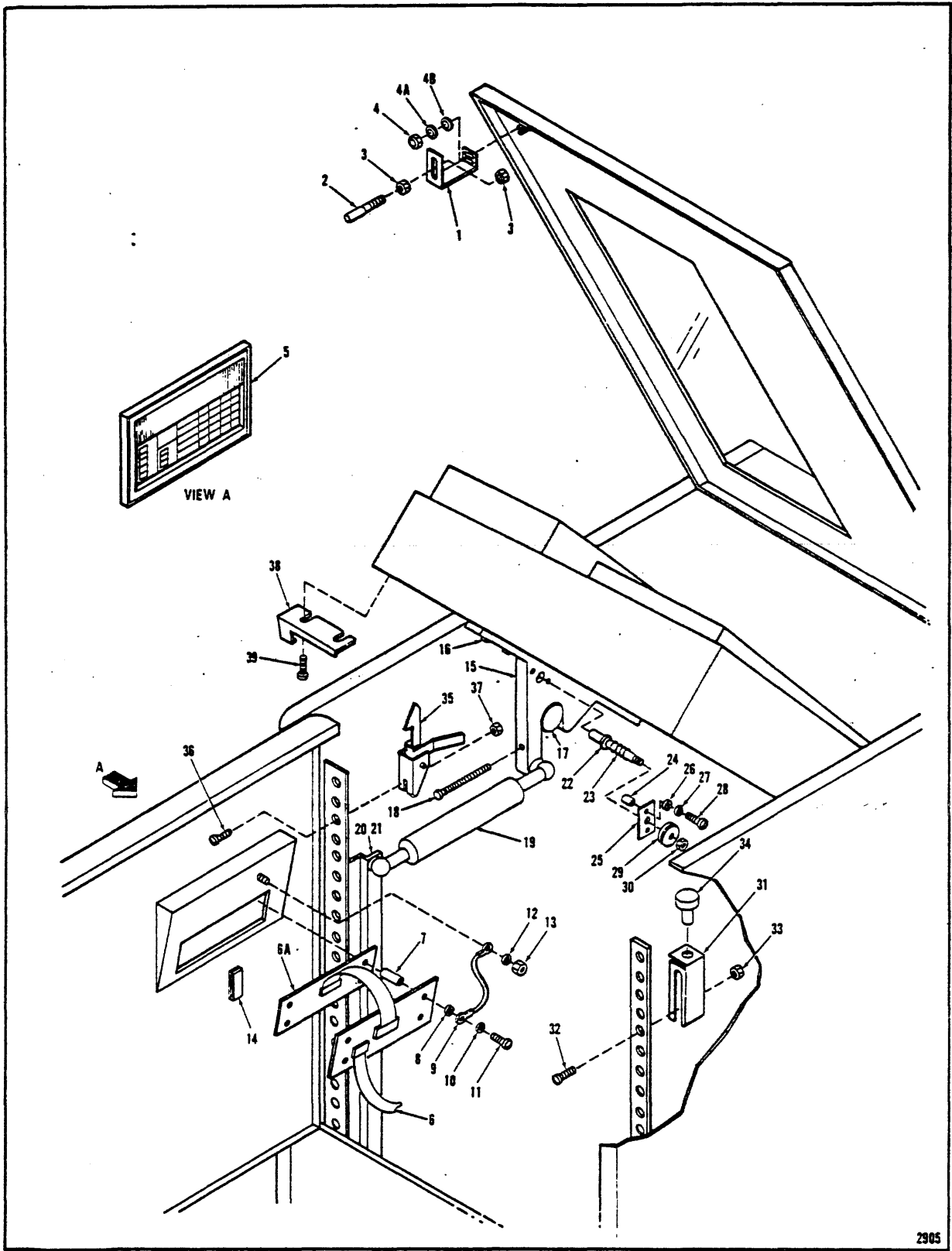
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FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
8-							
- 7	403137601	.	SPRING, ROLLER				2
- 8	403069302	.	WASHER, ROLLER				2
- 9	10090033	.	RING, RETAINING, EXT, .125, S/PH				2
-BKD	403826202*	.	RETRACTOR ARM ASSEMBLY, FUD				1
-BKD	403123905	.	RETRACTOR ARM ASSEMBLY				1
-10	10007068	.	SCREW, M, SHC, 10-32 X 1 1/4, PS				1
-10A	10027026	.	WASHER, FLAT, B, NO. 10, R				1
-11	403116002	.	WASHER, TEFLON				2
-11A	403764902	.	SLEEVE, RETTRACTOR ARM				1
-11B	10096393	.	WASHER, WAVE SPRING				1
-12	403116101	.	ROLLER, NYLON				1
-13	10090027	.	RING, RETAINING, EXT, .188, S/ST				1
-14	403443902	.	ARM, RETTRACTOR, MACH				1
-15	402339403	.	ENCODER ASSY, SWINGARM				1
-16	10008027	.	SCREW, MACHINE, SHC, 6-32 X .500, SS				4
-17	402500105	.	SHAFT, SWINGARM PIVOT				1
-18	402388504	.	BUSHING, SWINGARM PIVOT				1
-19	403247802	.	WASHER, ENCODER				1
-20	10025001	.	PIN, DOWEL, 1/16 X 3/16, AL, ST				1
-21	10027014	.	WASHER, FLAT, B, NO. 4, N				1
-22	10005011	.	SCREW, MACHINE, SPH, 4-40 X .187, PS				1
-BKD	403156904	.	RETRACTOR SWITCH ASSEMBLY		B		1
-23	10203009	.	SCREW, TF, TXPH, SEM, 6-32 X .500		B		2
-24	400394301	.	SWITCH, WINDOW		B		1
-25	10005016	.	SCREW, MACHINE, SPH, 4-40 X .625, PS		B		2
-26	10030502	.	WASHER, LOCK, HEL, MED, NO. 4		B		2
-27	10026003	.	WASHER, FLAT, A, NO. 4		B		2
-28	10057013	.	TUBING, EL, SHRINK, .125/.062				2
-29	10410056	.	CONNECTOR, RE, PWR M, 2, C, .084, .250		B		1
-30	10073181	.	CONTACT, RMD, F, 14-20 AWR, .084, TIN		B		2
-31	10005016	.	WIRE, 18, 1, STRND, UL 1061, BLACK				-
-32	10075020	.	CABLE CLAMP, T, 3/4				2
-33	403156804	.	BRACKET, SWITCH		B		1
-34	403744702	.	PIVOT, PLATE, SWINGARM				1

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FIGURE 9. CENTER OF GRAVITY MOUNTING KIT

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
9-	403528005	CENTER OF GRAVITY MOUNTING KIT					1
	403528502	. . KIT, INTERLOCK					1
- 1	403494002	. . . BRACKET, INTERLOCK PIN					1
- 2	403523801	. . . PIN, INTERLOCK ACTUATOR					1
- 3	10028081	. . . NUT, HEX, KEPS, W/WASHER, PS, 10-32					2
- 4	10028006	. . . NUT, HEX, 10-32, ZP					2
-4A	10030505	. . . WASHER, LOCK, HEL, MED, PS, 10					2
-4B	10027025	. . . WASHER, FLAT, B, NO. 10					2
-BKD	403528303	. . OPERATOR PANEL KIT					1
- 5	403491901	. . . TRIM, OP PANEL C/G (MACH)					1
- 6	403378701*	. . . CABLE ASSEMBLY KEYBOARD, HORIZONTAL					1
-6A	403457401*	. . . OPERATOR PANEL ASSY, C/G MOUNT					1
- 7	10200098	. . . STDF, CH, .115 ID, .25 DIA, .31 K, NY					4
- 8	10092019	. . . WASHER, NYLON, NO. 4R					4
- 9	403495701	. . . CABLE, GROUND, OP PANEL TO DOOR					1
-10	10030502	. . . WASHER, LOCK, HEL, MED, PS, 4					4
-11	10005016	. . . SCREW, MACHINE, SPH, 4-40 X 5/8, PS					4
-12	10030514	. . . WASHER, LOCK, INT, MED, PS, 6					1
-13	10028003	. . . NUT, HEX, 6-32					1
-14	10075105	. . . CA-CLP, FLAT, ADH BACK, 1.0" MAX					4
-BKD	403528403	. . PIVOT PLATE KIT					1
-15	403492002	. . . C/G PIVOT BRACKET					2
-16	10203027	. . . SCREW, TF, TXPH, SEM, 10-32 C, 1.00					8
-17	403848701	. . . C/G MOUNTING SPACER					2
-18	10017100	. . . SCREW, MACHINE, SHH, 1/4-20 X 2 1/4, PS					2
-19	403493901	. . . DAMPER, VERTICAL					1
-20	10030507	. . . WASHER, LOCK, HEL, MED, PS, 5/16					1
-21	10028008	. . . NUT, HEX, 5/16-18, ZP					1
-22	403492101	. . . PIN, DETENT					1
-23	403523901	. . . SPRING, DETENT PIN					1
-24	10200001	. . . SPCR, CH, R, .194 ID X 3/15, P					2
-25	403492201	. . . PLATE, DETENT					1
-26	10027023	. . . WASHER, FLAT, B, NO. 8					2
-27	10030504	. . . WASHER, LOCK, HEL, MED, PS, 8					2
-28	10005040	. . . SCREW, SPH, 8-32 X 5/8, PS					2
-29	403520901	. . . KNOB, DETENT PIN					1
-30	10028006	. . . NUT, HEX, 10-32					1
-BKD	403528803	. . C/G BUMPER KIT					1
-31	403848801	. . . C/G BUMPER BRACKET					1
-32	10005084	. . . SCREW, MACHINE, SPH, 10-32 X 5/8, PS					2
-33	10028081	. . . NUT, HEX, KEPS, W/WASHER, PS, 10-32					2
-34	403850801	. . . C/G BUMPER					1
-35	403568801	. . . C/G LATCH ASSEMBLY					1
-36	10005084	. . . SCREW, MACHINE, SPH, 10-32 X 5/8, PS					1
-37	10028081	. . . NUT, KEPS, W/WASHER, PS, 10-32					1
-38	403578801	. . . STRIKER PLATE					1
-39	10180053	. . . SCREW, MACHINE, SPH, 10-32 X 1/2					2

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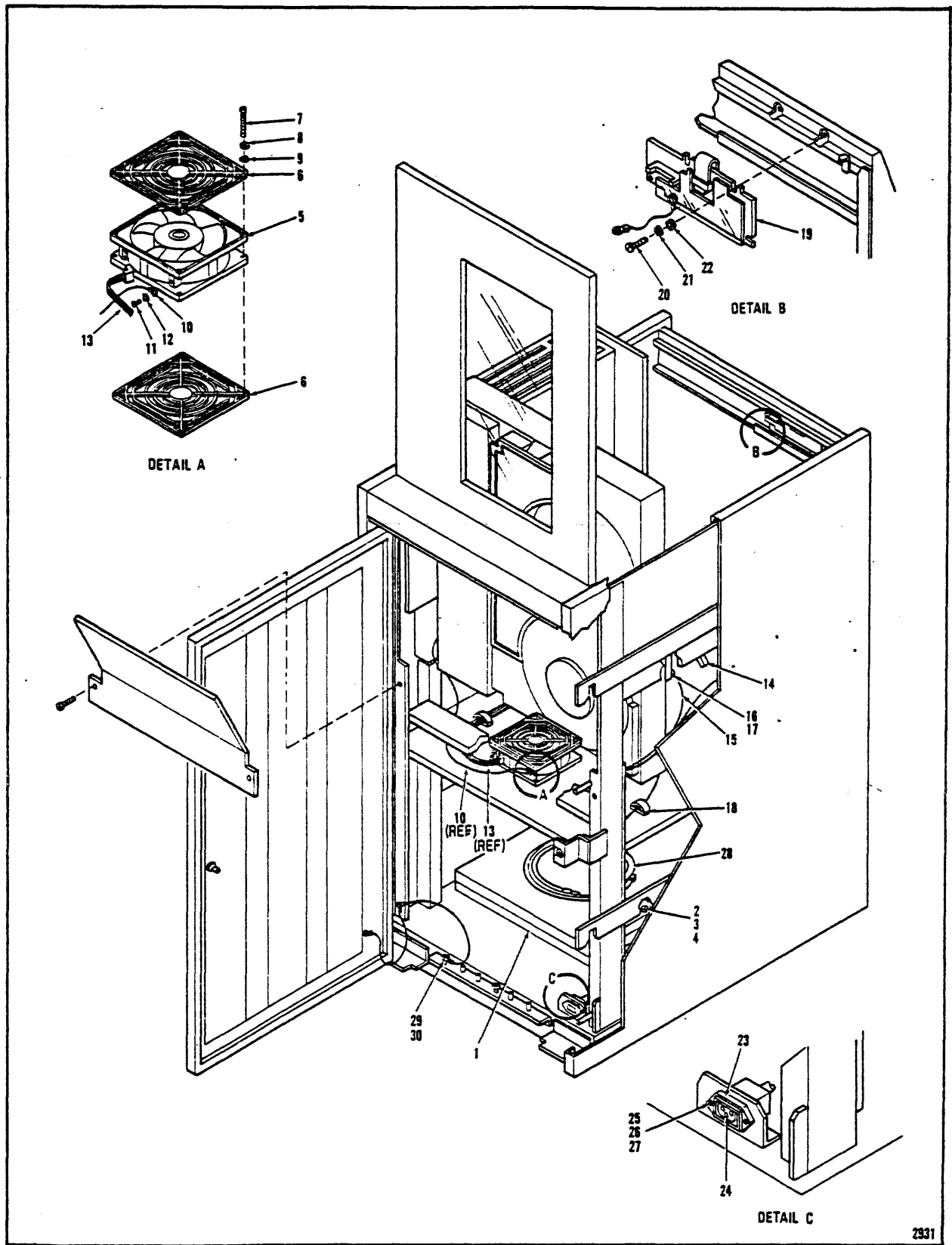


FIGURE 10. CABINET ASSEMBLY (SHEET 1 OF 2)

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
10-BKD	404082701	CABINET ASSEMBLY, 60HZ, BEIGE					1
- 1	403805201	. PLATE, BALLAST					2
- 2	10017091	. SCREW, MACH, SHH, PS, 3/8-16 X 2					2
- 3	10030508	. WASHER, LOCK, HEL, MED, PS, 3/8					2
- 4	10027038	. WASHER, FLAT, B, 3/8, R					2
- 5	10037042	. FAN, AC, 115V, AX, AL, 465IN, 100C					1
- 6	00010257	. FINGER GUARD					2
- 7	10005103	. SCREW, SPH, 6-32 X 2, 250, CS, ZP					4
- 8	10030503	. WASHER, LOCK, HEL, MED, PS, 6					4
- 9	10026004	. WASHER, FLAT, A, NO. 6					4
-10	403955101	. CABLE ASSEMBLY, 14.00 GROUND					1
-11	10186038	. SCREW, TF, SHWH, PS, 8-32 X 3/8					1
-12	10030515	. WASHER, LOCK, INT, MED, PS, 8					1
-13	403949502	. CABLE ASSEMBLY, CAB FAN POWER					1
-14	403492002	. C/G PIVOT BRACKET					1
-15	403962101	. 17.00 GROUND WIRE ASSEMBLY					1
-16	10203027	. SCREW, TF, TXPH, SEM, 10-32, 1.00					4
-17	1030516	. WASHER, LOCK, INT, MED, PS, 10					1
-18	10075063	. CA-CLP, ADJ/REL, 3/16 - 11/16					5
-19	403952601	. OP PANEL ASSEMBLY, HORIZONTAL MOUNT (SEE FIGURE 10 FOR BREAKDOWN)					1
-20	10005014	. SCREW, MACH, SPH, 4-40 X 3/8, PS					4
-21	10030502	. WASHER, LOCK, HEL, MED, PS, 4					3
-22	10092019	. WASHER, NYLON, NO. 4R					4
-23	10041512	. CONN, RE, PWR, M, 3POS, 6A, 250V, A					1
-24	10073381	. CONT, RE, M, 20-16, AWG, UNS, TI					5
-25	10005014	. SCREW, MACH, SPH, 4-40 X 3/8, PS					2
-26	10027013	. WASHER, FLAT, B, NO. 4, N					2
-27	10030502	. WASHER, LOCK, HEL, MED, PS, 4					2
-28	10082220	. CORD, 18, 3, PWR UL SJT, BLK					1
-29	403198201	. CABLE ASSEMBLY, GND, DECK TO FRAME					1
-30	10028059	. NUT, KEPS, WWASHER, PS, 8-32					6

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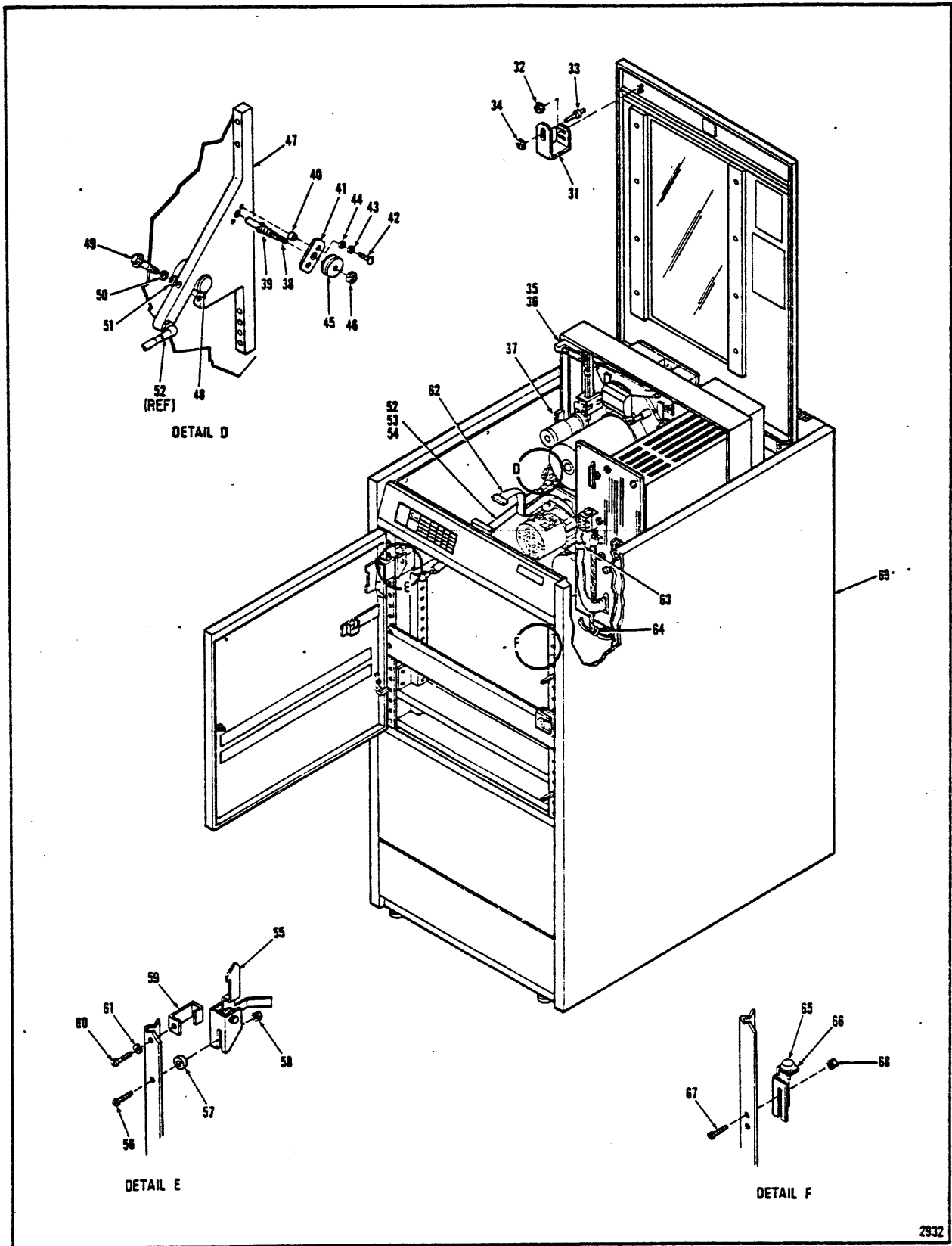


FIGURE 10. CABINET ASSEMBLY (SHEET 2 OF 2)

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION				USABLE ON CODE	QTY PER ASM
		1	2	3	4		
10-							
-31	403494002	.	BRACKET, INTERLOCK PIN				1
-32	10028061	.	NUT, KEPS, W/WASHER, PS, 10-32				2
-33	403523801	.	PIN, INTERLOCK ACTUATOR				1
-34	10028061	.	NUT, KEPS, W/WASHER, PS, 10-32				2
-35	403578801	.	STRIKER PLATE				1
-36	10180053	.	SCREW, MACH, SPH, SEMS 10-32 X 1/2				2
-BKD	403952801	.	PIVOT PLATE ASSEMBLY				1
-37	10203027	.	SCREW, TF, TXPH, SEM, 10-32 C, 1.00				4
-38	403492101	.	PIN DETENT				1
-39	403523901	.	SPRINT, DETENT PIN				1
-40	10200001	.	SPCR, CH, R, .194 ID X 3/16, P				2
-41	403492201	.	PLATE, DETENT				1
-42	10005040	.	SCREW, SPH, 8-32 X 5/8, PS				2
-43	10030504	.	WASHER, LK, HEL, MED, PS, 8				2
-44	10027023	.	WASHER, FLAT, B, NO. 8, R				2
-45	403520901	.	KNOB, DETENT PIN				1
-46	10028006	.	NUT, HEX, 10-32, ZP				1
-47	403492002	.	C/G PIVOT BRACKET				1
-48	403646701	.	C/G MOUNTING SPACER				2
-49	10017100	.	SCREW, MACH, SHH, 1/4-20 X 2 1/4, PS				2
-50	10030506	.	WASHER, LOCK, HEL, MED, PS, 1/4				2
-51	10027031	.	WASHER, FLAT, B, 1/4, N				2
-52	403493901	.	DAMPER, VERTICAL				1
-53	10028008	.	NUT, HEX, 5/16-18, ZP				1
-54	10030507	.	WASHER, LOCK, HEL, MED, PS, 5/16				1
-55	403566801	.	C/G LATCH ASSEMBLY				1
-56	10013064	.	SCREW, MACH, SBNH, 10-32 X 5/8, PS				1
-57	10200073	.	SPCR, CH, R, SS, NO. 10 X 3/16L X 1/200				1
-58	10028061	.	NUT, KEPS, W/WASHER, PS, 10-32				1
-59	403961301	.	BRACKET, SHIP				1
-60	10013064	.	SCREW, MACH, SBNH, 10-32 X 5/8, PS				1
-61	10030505	.	WASHER, LOCK, HEL, MED, PS, 10				1
-62	402610802	.	CABLE ASSEMBLY, KEYBOARD				1
-63	10075105	.	CA-CLP, FLAT, ADH BACK, 1.0" MAX				1
-64	10075020	.	CA-CLP, T, 3/4				1
-65	403650601	.	C/G BUMPER				1
-66	403646601	.	C/G BUMPER BRACKET				1
-67	10013064	.	SCREW, MACH, SBNH, 10-32 X 5/8, PS				2
-68	10028061	.	NUT, KEPS, W/WASHER, PS, 10-32				2
-69	403950201	.	HORIZONTAL MOUNT, TAPE CABINET				1

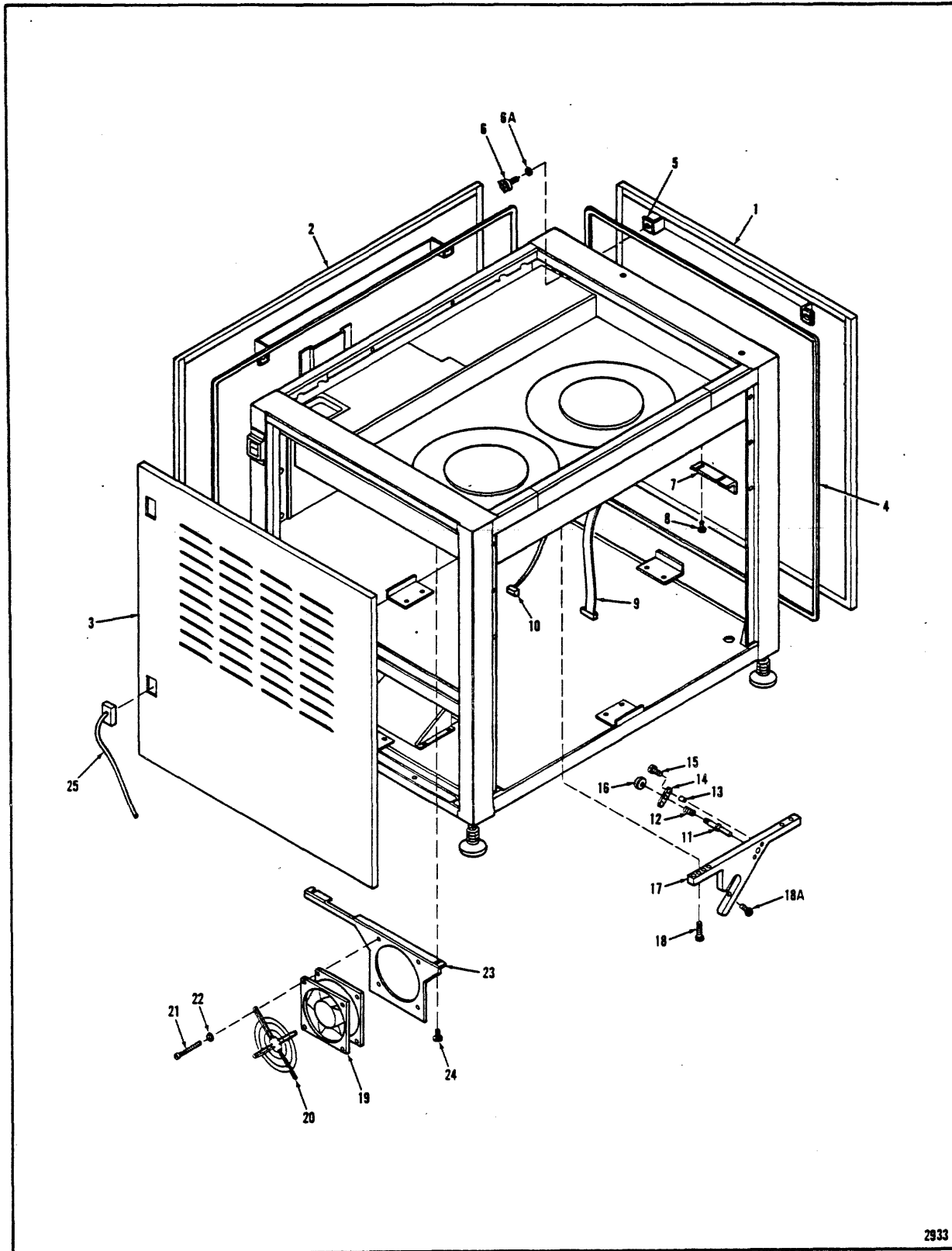
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FIGURE 11. 30 INCH AND 1 METER HORIZONTAL CABINETS (SHEET 1 OF 3)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE ON CODE	QTY PER ASM
11-BKD	404176501	STANDARD CABINET,30",WHITE/50 HZ	A	1
- BKD	404154001	STANDARD CABINET,30",WHITE/60 HZ	B	1
- BKD	404176301	STANDARD CABINET,30",GRAY/50 HZ	C	1
- BKD	404176201	STANDARD CABINET,30",GRAY/60 HZ	D	1
- BKD	404176601	STANDARD CABINET,1 MTR,WHITE/50 HZ	E	1
- BKD	404145601	STANDARD CABINET,1 MTR,WHITE/60 HZ	F	1
- BKD	404176701	STANDARD CABINET,1 MTR,BEIGE/50 HZ	G	1
- BKD	404176401	STANDARD CABINET,1 MTR,BEIGE/60 HZ	H	1
- 1	404084404	. PANEL,FRONT SHORT,WHITE	A,B	1
	404084406	. PANEL,FRONT,SHORT,LIGHT GRAY	C,D	1
	404158102	. FRONT PANEL,1 METER,WHITE	E,F	1
	404158103	. FRONT PANEL,1 METER,BEIGE	G,H	1
- 2	404084204	. PANEL,SIDE,SHORT,WHITE	A,B	2
	404084206	. PANEL,SIDE,SHORT,LT GRAY	C,D	2
	404158202	. SIDE PANEL,1 METER,WHITE	E,F	2
	404158203	. SIDE PANEL,1 METER,BEIGE	G,H	2
- 3	404084304	. PANEL,BACK,SHORT,WHITE	A,B	1
	404084306	. PANEL,BACK,SHORT,LIGHT GRAY	C,D	1
	404157904	. BACK PANEL,1 METER,WHITE	E,F	1
	404157905	. BACK PANEL,1 METER,BEIGE	G,H	1
- 4	10100233	. TAPE,ADH,VINYL,BK,.063" T,.5" H		AR
- 5	10109712	. RECPTL,1/4 TN,CLIP-ON,PS		8
- 6	10109835	. FSTNR,WING HEAD		8
- 6A	10096256	. WSHR,RET,SPLIT,.270 ID X .437 OD		8
- 7	404089502	. STRIKE PLATE		1
- 8	10310470	. SCRW,TXPH,C/SEMS,ZP,10-32 X 1/2		2
- 9	404154902	. CABLE,OP PANEL		1
- 10	404154803	. CABLE,FAN POWER		1
- 11	404145403	. PIN,DETENT		1
- 12	403523901	. SPRING,DETENT PIN		1
- 13	10200001	. SPCR,CH,R,.194 ID X 3/16,P		2
- 14	403492201	. PLATE,DETENT		1
- 15	10310430	. SCRW,TXPH,C/SEMS,ZP,8-32 X 5/8		2
- 16	403520901	. KNOB,DETENT PIN		1
- 17	403492002	. C/G PIVOT BRACKET		2
- 18	10310478	. SCREW,TXPH,C/SEM,ZP,10-32 X 1.0		8
-18A	10017100	. SCREW,MACH,SHH,1/4-20 X 2 1/4,PS		2
- 19	10037042	. FAN,AC,115V,AX,AL,465IN,100C		1
- 20	00010257	. FINGER GUARD		2
- 21	10184100	. SCREW,MACHINE,PPH,PS,4-40 X 1 3/4		4
- 22	10027014	. WASHER,FLAT,B NO.4,N		4
- 23	404087803	. FAN BRACKET		1
- 24	10310470	. SCRW,TXPH,C/SEMS,ZP,10-32 X 1/2		2
- 25	10082220	. CORD,18.3.POWER,UL,SJT,BLK		1

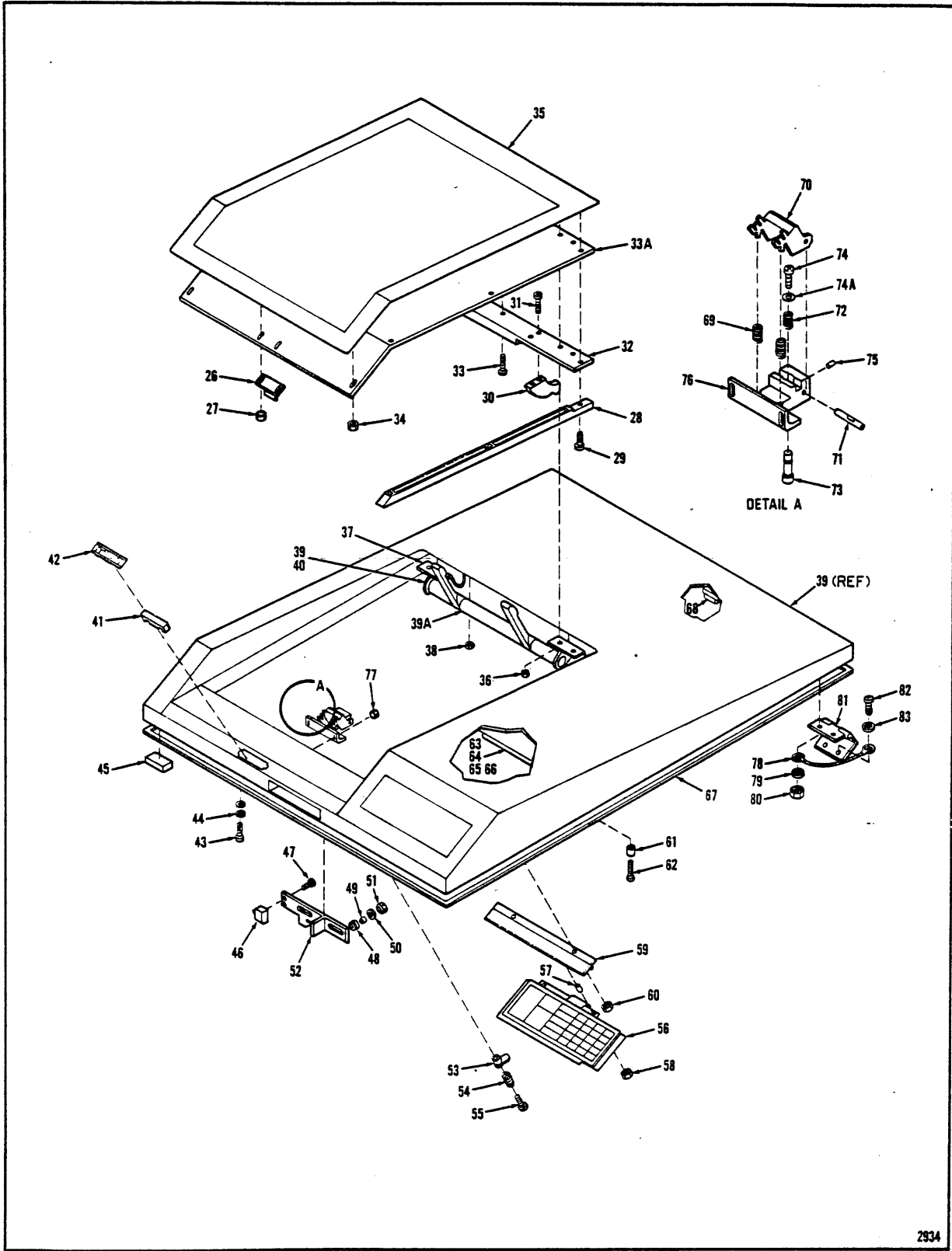
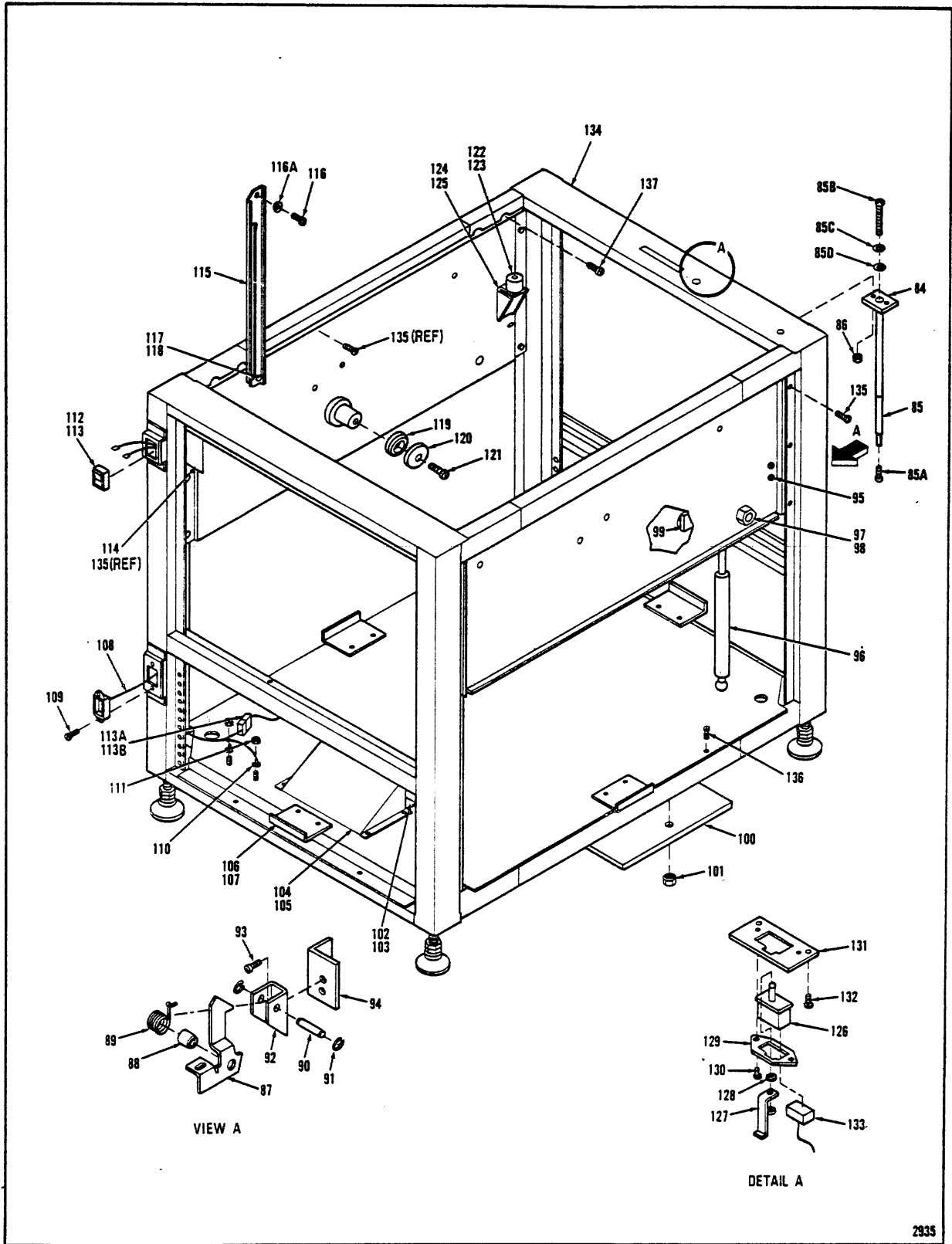


FIGURE 11. 30 INCH AND 1 METER HORIZONTAL CABINETS (SHEET 2 OF 3)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION				USEABLE ON CODE	QTY PER ASM
		1	2	3	4		
11- 26	404144601	.	CATCH, WINDOW RELEASE				1
- 27	10028057	.	NUT, KEPS, W/WASHER, PS, 4-40				2
- 28	404145803	.	STIFFNER, WINDOW				2
- 29	10310331	.	SCREW, TXPH, ZP, 4-40 X 1/2				6
- 30	404154502	.	CAMS, COUNTER BALANCE				2
- 31	10310230	.	SCREW, TXPH, ZP, 8-32 X 5/8				4
- 32	404145703	.	STIFFNER, HINGE				1
- 33	10310331	.	SCREW, TXPH, ZP, 4-40 X 1/2				1
-33A	404144503	.	WINDOW				1
- 34	10028057	.	NUT, KEPS, W/WASHER, PS, 4-40				2
- 35	404144403	.	FRAME, WINDOW				1
- 36	10028059	.	NUT, KEPS, W/WASHER, PS, 8-32				4
- 37	404155502	.	HINGE, WINDOW				2
- 38	10028059	.	NUT, KEPS, W/WASHER, PS, 8-32				4
- 39	404144205	.	TOP COVER, WHITE			A, B, E, F	1
	404144204	.	TOP COVER, MOM GRAY			C, D	1
	404144203	.	TOP COVER, BEIGE			G, H	1
-39A	404154401	.	AIRPOT, COUNTER BALANCE				1
- 40	10028059	.	NUT, KEPS, W/WASHER, PS, 8-32				2
- 41	404154102	.	BUTTON, WINDOW RELEASE				1
- 42	404153701	.	BEZEL, WINDOW RELEASE				1
- 43	10310327	.	SCREW, TXPH, ZP, 4-40 X 1/4				2
- 44	10027014	.	WASHER, FLAT, B NO. 4, N				4
- 45	10501026	.	BUMP, HEMIS, RUB, .44 X .2, ADH BK				1
- 46	404174902	.	PROBE				2
- 47	10310531	.	SCRW, TXPH, C/SEMS, ZP, 4-40 X 1/2				2
- 48	403032101	.	BEARING				2
- 49	403032201	.	SLEEVE				2
- 50	10027023	.	WASHER, FLAT, B, NO. 8, R				2
- 51	10028059	.	NUT, KEPS, W/WASHER, PX, 8-32				2
- 52	404174802	.	BRACKET, SLIDE				1
- 53	403379501	.	LATCH, COLUMN DOOR				2
- 54	10308218	.	SPRING				2
- 55	10096267	.	SCREW, SHLDR, SLT, SS, 10-32 X .313				2
- 56	404153301	.	OPERATOR PANEL, STD CABINET				1
- 57	403032201	.	SLEEVE				2
- 58	100280057	.	NUT, KEPS, W/WASHER, PS, 4-40				2
- 59	404087102	.	HINGE, OP PANEL				1
- 60	100280057	.	NUT, KEPS, W/WASHER, PS, 4-40				2
- 61	10501007	.	BUMP, REC, RUBBFR, 3/16 HOLE				1
- 62	10310230	.	SCREW, TXPH, ZP, 8-32 X 5/8				1
- 63	404154603	.	CARD ASSEMBLY, FAULT CODE				1
- 64	404154703	.	ASSEMBLY, TAPEPATH/LEADER POSITION				1
- 65	404156002	.	BRACKET, CARD GUIDE				1
- 66	10028059	.	NUT, KEPS, W/WASHER, PS, 8-32				4
- 67	00109751	.	GASKET				AR
- 68	10075105	.	CA-CLP, FLAT, ADH BACK, 1.0" MAX				4
- 69	10308222	.	SPRING, COM, 11 LB/IN, FL, .687 SS				2
- 70	404153503	.	LATCH, WINDOW RELEASE				1
- 71	404153801	.	PIN, WINDOW RELEASE				1
- 72	10308221	.	SPR, CPRSN, 4.4 LB/IN, FL, .562 SS				1
- 73	404200601	.	PLUNGER, WINDOW RELEASE				1
- 74	10007039	.	SCREW, MACHINE, SHC, 8-32 X 1/2, PS				1
- 74A	404211501	.	GUIDE, PLUNGER				1
- 75	10023008	.	SCREW, SET, SCP, 4-40 X 1/8				1
- 76	404157803	.	BLOCK, WINDOW RELEASE				1
- 77	10028058	.	NUT, KEPS, W/WASHER, PX, 8-32				2
- 78	404159102	.	GROUND CABLE ASSEMBLY				2
- 79	10030515	.	WASHER, LOCK, INT, MED, PS, 8				4
- 80	10028059	.	NUT, KEPS, W/WASHER, PS, 8-32				4
- 81	404087201	.	HINGE WELDMENT ASSY (TOP COVMD)				2
- 82	10310430	.	SCRW, TXPH, C/SEMS, ZP, 8-32 X 5/8				4
- 83	10030515	.	WASHER, LOCK, INT, MED, PS, 8				4



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FIGURE 11. 30 INCH AND 1 METER HORIZONTAL CABINETS (SHEET 3 OF 3)

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION	USEABLE ON CODE	QTY PER ASM
11- 84	404 55801	. GUIDE, LATCH		1
- 85	404210701	. ROD, LATCH GUIDE		1
- 85A	10310531	. SCREW, TXPH, C/SEMS, ZP, 4-40 X 1/2		1
- 85B	10206024	. SCREW, MACHINE, TXPH, ZP, 6-32 X 2.0		1
- 85C	10027020	. WASHER, FLAT, B, NO. 6, R		1
- 85D	10092086	. WASHER, NY, .20 ID, .50 OD, .031 THK		1
- 86	100280057	. NUT, KEPS, W/WASHER, PS, 4-40		2
- 87	404153403	. LATCH		1
- 88	402227601	. SPACER, LATCH		1
- 89	33002113	. TORSION SPRING		1
- 90	33001887	. PIN, PIVOT		1
- 91	10090027	. RG, RET, EXT, .188, S/ST		2
- 92	403786001	. BRACKET, U, DECK LOCK		1
- 93	10310405	. SCRW, TXPH, C/SEMS, ZP, 6-32 X 3/8		2
- 94	404155303	. BLOCK, LATCH		1
- 95	10310430	. SCRW, TXPH, C/SEMS, ZP, 8-32 X 5/8		2
- 96	403493901	. DAMPER, VERTICAL		1
- 97	404155702	. STANDOFF, AIR CYLINDER		1
- 98	10029502	. NUT, HEX, 5/16-18, ZP		1
- 99	10075020	. CA-CLP, T, 3/4		6
- 100	404089102	. BALLAST	E, F, G, H	1
- 101	10029502	. NUT, HEX, 5/16-18, ZP	E, F, G, H	2
- 102	404154302	. CLAMP, CABLE ANGLE		1
- 103	10310405	. SCRW, TXPH, C/SEMS, ZP, 6-32 X 3/8		2
- 104	404154201	. CABLE, HOOD		1
- 105	10310405	. SCRW, TXPH, C/SEMS, ZP, 6-32 X 3/8		4
- 106	404090302	. PANEL CLIP		4
- 107	10310405	. SCRW, TXPH, C/SEMS, ZP, 6-32 X 3/8		8
- 108	404155103	. HARNESS, POWER, 1 MTR		1
- 109	10310531	. SCREW, TXPH, C/SEMS, ZP, 4-40 X 1/2		2
- 110	10030515	. WASHER, LOCK, INT, MED, PS, 8		2
- 111	10028059	. NUT, KEPS, W/WASHER, PS, 8-32		2
- 112	403022301	. ROCKER, BUTTON		1
- 113	403022202	. SWITCH, ROCKER		1
-113A	10041170	. CONN, RE, PWB, M, 3, C, .84, .250		1
-113B	10073171	. CONT, RND, M, 14-20, AWR, .084, TIN		3
- 114	404144703	. GUARD, SWITCH		1
- 115	404145503	. ROD, PROP		1
- 116	10310470	. SCREW, TXPH, C/SEMS, ZP, 10-32 X 1/2		1
-116A	10027024	. WASHER, FLAT, B, NO. 8, W		1
- 117	404155601	. GUIDE, PROP ROD		1
- 118	10028059	. NUT, KEPS, W/WASHER, PS, 8-32		1
- 119	404089002	. SPACER		2
- 120	404192501	. RETAINER		2
- 121	10310493	. SCREW, TXPH, C/SEM, ZP, 1/4-20 X 3/4		2
- 122	10501001	. BUMP, RUB, SWI, .9375 OD		1
- 123	10310470	. SCREW, TXPH, C/SEMS, ZP, 10-32 X 1/2		1
- 124	404090204	. DECK STOP		1
- 125	10310430	. SCRW, TXPH, C/SEMS, ZP, 8-32 X 5/8		2
- 126	403540901	. SW, PB, SPDT, MO, 1A, 250 VAC		1
- 127	403376203	. ACTUATOR SWITCH OVERRIDE		1
- 128	10109411	. O-RING, .237 ID X .103 H		2
- 129	403376102	. SWITCH PLATE		1
- 130	10310430	. SCRW, TXPH, C/SEMS, ZP, 8-32 X 5/8		2
- 131	404153602	. SPACER, INTERLOCK SWITCH		1
- 132	10310430	. SCRW, TXPH, C/SEMS, ZP, 8-32 X 5/8		2
- 133	404155202	. HARNESS, INTERLOCK		1
- 134	404144303	. WELDMENT FRAME KIT, 1 METER	A, B, C, D	1
	404144103	. WELDMENT FRAME KIT, 30 INCH	E, F, G, H	1
- 135	10310470	. SCRW, TXPH, C/SEMS, ZP, 10-32 X 1/2		16
- 136	10310405	. SCRW, TXPH, C/SEMS, ZP, 6-32 X 3/8		8
- 137	10186063	. SCREW, THF, TT, PS, SHWH, 10-32 X 1/2		16

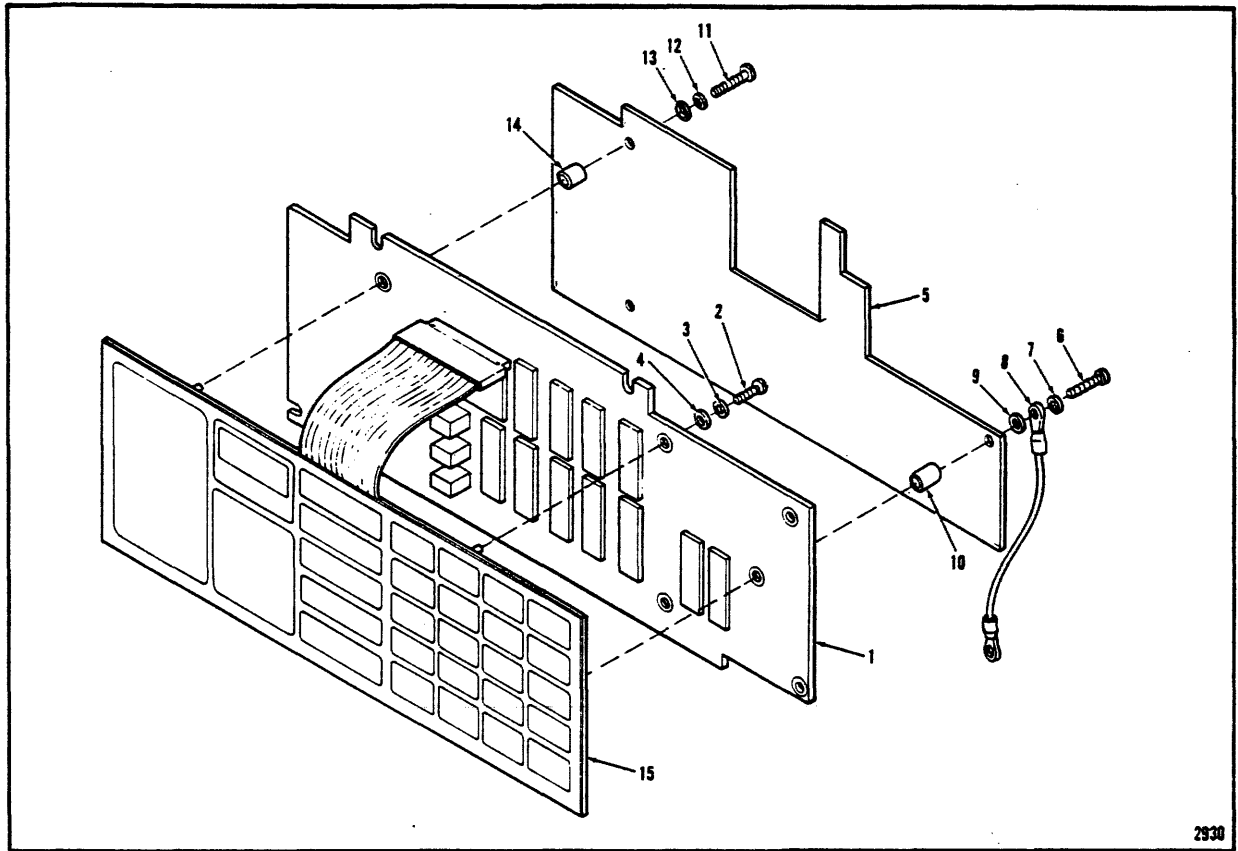


FIGURE 12. HORIZONTAL MOUNT OPERATOR PANEL

FIGURE INDEX NUMBER	PART NUMBER	DESCRIPTION				USEABLE ON CODE	QTY PER ASM
		1	2	3	4		
12-BKD	403953601	OP PANEL, HORIZONTAL MOUNT (SEE FIGURE 10-19 FOR NHA)					1
- 1	(PN COMP)	. CKT. CARD DG. PC ASSEMBLY					1
- 2	10005014	. SCREW, MACH. SPH. 4-40 X 3/8, PS					2
- 3	10030502	. WASHER, LOCK, HEL. MED. PS. 4					2
- 4	10092019	. WASHER, NYLON, NO. 4R					2
- 5	403949901	. COVER, REAR, OP PANEL					1
- 6	10005016	. SCREW, MACH. SPH. 4-40 X 3/8, PS					1
- 7	10030513	. WASHER, LOCK, INT. MED. PS. 4					1
- 8	403495701	. CABLE, GROUND, OP PANEL TO DOOR					1
- 9	10027013	. WASHER, FLAT, B. NO. 4 N					1
- 10	10097252	. SPACER, CH. R. .140 ID X 1/4 L. FIBRE					1
- 11	10005016	. SCREW, MACH. SPH. 4-40 X 5/8, PS					2
- 12	10030502	. WASHER, LOCK, HEL. MED. PS. 4					2
- 13	10027013	. WASHER, FLAT, B. NO. 4 N					2
- 14	10097252	. SPACER, CH. R. .140 ID X 1/4 L. FIBRE					2
- 15	403457301	. OPERATOR PANEL SUBASSEMBLY C/G M					1

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SEPARATOR SET PN 83464

THIS SEPARATOR SET CONTAINS 19
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 2. OPERATION
 3. INSTALLATION
 4. STORAGETEK INTERFACE
 5. INDUSTRY INTERFACE
 6. SCSI INTERFACE
 7. VS INTERFACE
 8. FUNCTIONAL DESCRIPTION
 9. MAINTENANCE
 10. REMOVAL/REPLACEMENT
 11. DIAGNOSTICS
- APPENDICES

IPC

PN COMPATIBILITY

MMLL

21/22/25 STD & 25 IND STD FCD

21/22 IND STD FCD

2925 SCSI FCD

PN
COMPATIBILITY

AVALANCHE 292X TAPE UNIT

PN COMPATIBILITY LISTING

PN 95523

LIST OF EFFECTIVE PAGES

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 ORIGINAL ISSUE DATE: 06/06/83
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 CURRENT ISSUE DATE: 11/01/88

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INTRODUCTION

THIS MANUAL CONTAINS TWO PARTS:

1. INTRODUCTION - WHICH DEFINES THE CONTENT OF THE MANUAL AND EXPLAINS HOW TO USE IT.
2. COMPATIBILITY IS DEFINED AS FOLLOWS:

DOWNWARD COMPATIBLE: A NEW ASSEMBLY (USUALLY A HIGHER PN) IS DIRECT REPLACEMENT (DOWNWARD COMPATIBLE FOR AN OLD ASSEMBLY (USUALLY A LOWER PN) WHEN IT DOES NOT DEGRADE MACHINE PERFORMANCE. DOWNWARD COMPATIBILITY IS INDICATED WHEN BOTH ASSEMBLIES HAVE THE SAME COMPATIBILITY NUMBER.

UPWARD COMPATIBLE: AN OLD ASSEMBLY (USUALLY A LOWER PN) IS EQUIVALENT TO (UPWARD COMPATIBLE) AND MAY DIRECTLY REPLACE A NEW ASSEMBLY (USUALLY HIGHER PN) IF ITS USE DOES NOT AFFECT MACHINE PERFORMANCE. UPWARD COMPATIBILITY IS INDICATED WHEN ASSEMBLIES HAVING THE SAME COMPATIBILITY NUMBER ARE ALSO INDICATED AS "EQUIVALENT" IN THE "DESCRIPTION OF EC" FIELD.

EACH PAGE IN THE COMPATIBILITY SECTION CONTAINS THE COMPATIBILITY INFORMATION FOR A SINGLE CARD TYPE. IT SHOWS THE HISTORY OF ENGINEERING CHANGES (EC'S) THAT RESULTED IN PART NUMBER CHANGES FOR THAT CARD. IT ALSO SHOWS WHICH PART NUMBERS ARE OBSOLETE AND WHAT PART NUMBERS CAN BE USED TO REPLACE THEM.

FOR SOME CARDS, THE FUNCTIONAL CHANGES THAT RESULTED IN NEW PART NUMBERS WILL NOT FUNCTION WITHOUT CORRESPONDING MACHINE REWORK. THIS USUALLY RESULTS IN A COMPATIBILITY NUMBER CHANGE FOR THE NEW ASSEMBLY. THE "DESCRIPTION OF EC" FIELD WILL SUMMARIZE THE CHANGES. THE FIELD APL DEFINING THE REQUIRED REWORK WILL BE LISTED IN SEPARATE COLUMN NEXT TO THE EC NUMBER.

IF THE COMPATIBILITY NUMBER DOES NOT CHANGE, THE NEW CARD WILL PERFORM AT LEAST THE SAME FUNCTIONS AS THE OLDER CARD.

COMPATIBILITY AND OBSOLESCENCE

ANY PART NUMBER THAT IS PREFIXED WITH AN ASTERISK (*) IS AN OBSOLETE PART NUMBER. OBSOLETE MEANS THAT THE PART WILL NO LONGER BE SUPPLIED. IF AN OBSOLETE PART IS ORDERED, THE FIELD PARTS CRIB WILL SUBSTITUTE A PART THAT IS DOWNWARD COMPATIBLE OR EQUIVALENT TO THE PART NUMBER ORDERED.

FOR SOME CIRCUIT CARDS, ALL PART NUMBERS OF THE CARD AT A PARTICULAR COMPATIBILITY NUMBER HAVE BEEN OBSOLETE, LEAVING NO AVAILABLE REPLACEMENTS AT THAT COMPATIBILITY NUMBER. THIS SITUATION OCCURS WHEN A CARD IS OBSOLETE BY A MANDATORY EC. IF A REPLACEMENT IS ORDERED FOR AN OBSOLETE CARD FOR WHICH THERE IS NO REPLACEMENT AT THE COMPATIBILITY NUMBER, IT IS POSSIBLE THAT ONE OR MORE MANDATORY EC'S ARE MISSING FROM THE MACHINE. CHECK THE EC HISTORY LOG FOR THAT MACHINE, AND THE COMPATIBILITY PAGE FOR THAT CARD FOR "DESCRIPTION OF EC" AND THE APPLICABLE APL NUMBERS. UPDATE THE MACHINE SUCH THAT A REPLACEMENT CARD OF A HIGHER COMPATIBILITY NUMBER CAN BE USED. (IT MAY BE NECESSARY TO ORDER THE INDICATED APL WHICH WILL PRODUCE THE CORRECT CARD NEEDED).

DOWNWARD COMPATIBILITY IS DESIGNATED BY THE COMPATIBILITY NUMBER TO THE RIGHT OF THE PART NUMBER. A CARD OF A GIVEN PART NUMBER IS DOWNWARD COMPATIBLE WITH ALL THOSE LOWER PART NUMBER CARDS THAT HAVE THE SAME COMPATIBILITY NUMBER. THIS MEANS IT CAN BE USED TO REPLACE ANY OF THE LOWER PART NUMBER CARDS HAVING THE SAME COMPATIBILITY NUMBER WITHOUT REQUIRING REWORK TO THE CARD OR MACHINE.

FOR EXAMPLE:

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL
*42150101	1	IR - W/W BOARD	40020	NONE
*42150102	1	ADD REWORK	40030	NONE
42150202	1	IMBED REWORK - EQUIV TO 102	40040	8612
*42150203	2	ADD REWORK.	40050	8619
		REQUIRED MBD AT LEVEL _____		
42150204	2	ADD REWORK	40060	NONE

IN THE ABOVE EXAMPLE:

P/N 42150 101 CAN REPLACE ONLY ITSELF.

P/N 42150 102 CAN REPLACE ITSELF OR P/N 42150101 (OR -202 BECAUSE IT IS EQUIVALENT).

P/N 42150 202 CAN REPLACE ITSELF, P/N 42150101 OR P/N 42150102.

P/N 42150 203 CAN REPLACE ONLY ITSELF. (CAN NOT REPLACE LOWER LEVEL CARDS UNLESS MBD CHANGE OR OTHER PREREQUISITE IS INSTALLED).

P/N 42150 204 CAN REPLACE ITSELF AND -203. (CAN NOT REPLACE LOWER LEVEL CARDS UNLESS MBD CHANGE OR OTHER PREREQUISITE IS INSTALLED).

* THE ASTERISK TO THE LEFT OF A PART NUMBER INDICATES THAT THE PART IS OBSOLETE AND IS NO LONGER SUPPORTED BY MANUFACTURING. THE HIGHEST LEVEL PART FOR EACH COMPATIBILITY LEVEL SHOULD NOT CARRY AN ASTERISK BECAUSE MANUFACTURING MUST SUPPORT FIELD SPARES UNTIL ALL MACHINES HAVE BEEN BROUGHT TO THE NEXT COMPATIBILITY LEVEL.

CAUTION

UPWARD COMPATIBILITY EXISTS ONLY IF TWO CARDS WITH THE SAME COMPATIBILITY NUMBER ARE DESCRIBED AS "EQUIVALENT" IN THE "DESCRIPTION OF EC" FIELD. ANY OTHER SUBSTITUTION OF A LOWER PART NUMBER CARD FOR A HIGHER PART NUMBER CARD REQUIRES A GREAT DEAL OF CAUTION. SUCH PRACTICE MAY RESULT IN NOISE PROBLEMS, TIMING PROBLEMS, DIAGNOSTIC ERRORS, ETC. ANY ATTEMPT TO UTILIZE SUCH LOWER PART NUMBER CARD REQUIRES ENSURING THAT FUNCTIONAL CHANGES OR IMPROVEMENTS MISSING FROM THE LOWER PART NUMBER CARD WILL NOT RESULT IN CUSTOMER SYSTEM OPERATION DEGRADATION. REFERENCE THE DESCRIPTION OF EACH CHANGE MISSING FROM THE CARD AND ENSURE THAT NO MACHINE WIRING CHANGES OR COMPANION CHANGES TO OTHER CARDS WERE REQUIRED AT THE TIME THE HIGHER PART NUMBER WAS INSTALLED ORIGINALLY. USAGE IN THIS MANNER IS NOT RECOMMENDED AND SHOULD BE AVOIDED IF POSSIBLE.

UPDATING THE MANUAL

TO UPDATE THE MANUAL, INSERT THE NEW PAGES ACCORDING TO THE NEW LIST OF EFFECTIVE PAGES. REMOVE AND DISCARD ANY PAGES THAT ARE REPLACED BY A LATER EC LEVEL, OR ARE SHOWN AS DELETED FROM THE LIST OF EFFECTIVE PAGES.

COMMENTS CONCERNING THE CONTENT OF THIS MANUAL SHOULD BE DIRECTED TO TAPE PUBLICATIONS SERVICES AT THE ADDRESS BELOW. IN CASE OF ERRORS PLEASE GIVE SPECIFIC PAGE AND LINE REFERENCES, WHERE APPROPRIATE. FOR A REPLY INCLUDE NAME AND ADDRESS.

REQUESTS FOR ADDITIONAL COPIES OF THIS MANUAL SHOULD BE DIRECTED TO THE FIELD CRIB VIA FIELD INVENTORY SYSTEM (FIS) TERMINALS.

THIS PUBLICATION WAS PREPARED BY STORAGE TECHNOLOGY CORPORATION, 2271 SOUTH 88TH, LOUISVILLE, COLORADO 80028-001.

CD TYPE: MBD
 CD LOC :
 MACHINE: 2921, 2922
 DESCRIPTION - MOTHERBOARD
 PG EC LEVEL - 23979A DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402637103	1	INITIAL RELEASE TO ENGINEERING.	49240	NONE
		RELEASE OF COMPATIBILITY	49291	NONE
*402637104	2	REMOVE RELAY	49294	NONE
*402637105	2	ADD A JUMPER BRAID BETWEEN DC RETURN AND CHASSIS AT THE MBD.	49439	NONE
*402637106	2	REMOVE CAPACITOR. ADD CABLE CLAMPS.	49830	NONE
402637107	2	ADD ADDITIONAL CLAMP TO RELIEVE STRESS ON THE EXISTING CLAMPS.	22578	NONE
		DESCRIPTION OF ORIGINAL EC CLARIFIED.	22578A	NONE
		EQUIVALENT TO 404183501.		
404183501	2	INITIAL RELEASE OF IMBED. IMPROVE TRACE PATH UNDER EPO RELAY. EQUIVALENT TO 402637107.	23979A	NONE

CD TYPE: MBD, INTERLOCK DISABLE
CD LOC :
MACHINE: 2921, 2922
DESCRIPTION - MOTHERBOARD WITH INTERLOCK DISABLED
PG EC LEVEL - 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
403469901	1	INITIAL RELEASE OF MBD (P/N 402637105 WITH INTERLOCK DISABLE JUMPER INSTALLED), TO BE USED IN EARLY 2921 AND 2922 TAPE UNITS WITHOUT DOOR INTERLOCK SWITCHES.	49464	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE

CD TYPE: MBD
 CD LOC :
 MACHINE: 2925 EXCEPT SCSI INTERFACE
 DESCRIPTION - MOTHERBOARD, CACHE
 PG EC LEVEL - 23979 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403875201	1	INITIAL RELEASE OF MOTHERBOARD FOR CACHE BUFFER.	50513	NONE
403875202	1	ADD ADDITIONAL CLAMP TO RELIEVE STRESS ON THE EXISTING CLAMPS.	22578	NONE
		DESCRIPTION OF ORIGINAL EC CLARIFIED.	22578A	NONE
		EQUIVALENT TO 403875302.	23979	NONE
403875302	1	INITIAL RELEASE OF IMBED. IMPROVE TRACE PATH UNDER EPO RELAY. EQUIVALENT TO 403875202.	23979	NONE

CD TYPE: MBD, SCSI
CD LOC :
MACHINE: 2925 WITH SCSI INTERFACE
DESCRIPTION -MOTHERBOARD, SCSI
PG EC LEVEL - 23979 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL -APL.
403960201	1	INITIAL RELEASE.	23435	NONE
		EQUIVALENT TO 403960301.	23979	NONE
403960301	1	INITIAL RELEASE OF IMBED. IMPROVE TRACE PATH UNDER EPO RELAY. EQUIVALENT TO 403950201.	23979 23979	NONE NONE

CD TYPE: AK-50
 CD LOC : POWER SUPPLY
 MACHINE: 2921
 DESCRIPTION - VOLTAGE REGULATOR
 PG EC LEVEL - 23928 DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402214303	1	INITIAL RELEASE TO ENGINEERING	49245	NONE
		RELEASE OF COMPATIBILITY	49291	
*402214304	1	SCR TRIG CIRCUIT IS IMPROVED (+/- 38VDC) +/- 26VDC BLEEDER CURRENT IS INCREASED. +5VDC PERFORMANCE IS IMPROVED. EQUIVALENT TO 402214404.	49367	NONE
*402214404	1	INITIAL RELEASE OF IMBED. EQUIVALENT TO 402214304.	49367	NONE
*402214305	1	REROUTE HOLES AND TRACE EQUIV. TO 402214405.	49556	NONE
		NO LONGER BUILT. USE PN 403839201. (REF. PAGE 3-2.1)	23928	NONE
*402214405	1	REROUTE HOLES AND TRACE EQUIV. TO 402214305.	49556	NONE
		NO LONGER BUILT. USE PN 403839201. (REF. PAGE 3-2.1)	23928	NONE

CD TYPE: AK-100
CD LOC : POWER SUPPLY
MACHINE: 2922, 2925
DESCRIPTION - VOLTAGE REGULATOR
PG EC LEVEL - 49975 DATE: 09/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
403839201	1	INITIAL RELEASE FOR 100 IPS. CHANGES VALUE OF CURRENT SENSE RESISTOR TO ALLOW ADDITION OF CACHE BUFFER.	49975	NONE

CD TYPE: CB
 CD LOC : A2
 MACHINE: 2925 WITH STORAGETEK INTERFACE
 DESCRIPTION: CACHE BUFFER STORAGETEK INTERFACE
 PG EC LEVEL: 23172 DATE: 10/86

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403855303	1	INITIAL RELEASE TO PRODUCTION FOR CACHE BUFFER MACHINES.	50522	NONE
*403855304	1	REWORK LAYOUT ERRORS AND UPDATE PROMS TO CB02 LEVEL.	22640	NONE
*403855305	1	ADD REWORK FOR CARD TEST USE ONLY. NO FUNCTIONAL CHANGE. CONSISTS OF CONNECTING THE OE OF 11 PALS AND THE DMC TO PULLDOWN RESISTORS. F/B RELEASED EXCEPTIONAL.	22655	*69039
*403855306	1	VARIOUS DIAGNOSTIC AND POSITIONING PROBLEMS WERE DISCOVERED IN THE MICROCODE. CHANGE MICROCODE TO CB03 LEVEL. F/B RELEASED EXCEPTIONAL.	22689	*69114
*403855307	1	ADD REWORK TO BE COMPATIBLE WITH MOSTEK XIB CHIP. CHANGE MICROCODE CB04 LEVEL. EQUIVALENT TO 403855407. F/B RELEASED EXCEPTIONAL.	22832	*69139
*403855407	1	INITIAL RELEASE OF IMBED. ADD REWORK TO BE COMPATIBLE WITH MOSTEK XIB CHIP. CHANGE MICROCODE CB04 LEVEL. EQUIVALENT TO 403855307. F/B RELEASED EXCEPTIONAL.	22832	*68139
403855308	1	RELEASE OF CB05 LEVEL MICROCODE. EQUIVALENT TO 403955408. F/B RELEASED EXCEPTIONAL.	23172	69187
403855408	1	RELEASE OF CB05 LEVEL MICROCODE. EQUIVALENT TO 403855308. F/B RELEASED EXCEPTIONAL.	23172	69187

CD TYPE: CP
 CD LOC : A2
 MACHINE: 2925
 DESCRIPTION: CACHE BUFFER, INDUSTRY STANDARD INTERFACE
 PG EC LEVEL: 23770 DATE: 12/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403864202	1	INITIAL RELEASE TO PRODUCTION FOR CACHE BUFFER.	22536	NONE
*403864203	1	HARDWARE CHANGE FOR LONG CABLES AND BLOCKING WRITE STROBES WHEN DOING A SENSE TYPE COMMAND. RELEASE PROGRAMMED PROMS FOR MICRO-CODE LEVEL CD01.	22691	NONE
		EQUIVALENT TO 403864303.	22805	NONE
*403864303	1	INITIAL RELEASE OF IMBED. EQUIVALENT TO 403864203.	22805	NONE
*403864304	1	RELEASE PROGRAMMED PROMS TO UPGRADE TO CD02 CODE LEVEL. CHANGE TO GO OFF LINE IMMEDIATELY AFTER RECEIVING AN OFFLINE/ UNLOAD COMMAND (FOFL).	22868	NONE
*403864305	1	RELEASE OF CD03 LEVEL MICRO-CODE TO FIX VARIOUS SYSTEM HANGS AND MACHINE CHECK CONDITIONS. F/B RELEASED EXCEPTIONAL.	23253	*691
403864306	1	RELEASE OF CD04 LEVEL MICRO-CODE TO FIX VARIOUS SYSTEM HANGS AND MACHINE CHECK CONDITIONS. PROVIDES ENHANCE SENSE BYTE INFORMATION. FIELD BILL RELEASED EXCEPTIONAL.	23770	6932

CD TYPE: CP-HIGH
 CD LOC : A2
 MACHINE: 2925 WITH IND. STD. INTERFACE
 DESCRIPTION: CACHE BUFFER, IND. STD. WITH PARITY GENERATOR
 PG EC LEVEL: 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404071201	1	INITIAL RELEASE OF CP CARD WITH PARITY GENERATOR FOR USE WITH CONTROLLERS THAT DO NOT USE PARITY ON THE INTERFACE.	23534	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
404071202	1	RELEASE OF CD04 LEVEL MICRO-CODE TO FIX VARIOUS SYSTEM HANGS AND MACHINE CHECK CONDITIONS. PROVIDES ENHANCE SENSE BYTE INFORMATION. FIELD BILL RELEASED EXCEPTIONAL.	23770	69328

CD TYPE: .CP-LOW
 CD LOC : A2
 MACHINE: 2925 WITH IND. STD. INTERFACE
 DESCRIPTION: CACHE BUFFER, IND. STD., LOW DATA RATE
 PG EC LEVEL: 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404070201	1	INITIAL RELEASE OF CP CARD WITH PARITY GENERATOR FOR USE WITH CONTROLLERS THAT DO NOT USE PARITY ON THE INTERFACE.	23534	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
404070202	1	RELEASE OF CD04 LEVEL MICRO-CODE TO FIX VARIOUS SYSTEM HANGS AND MACHINE CHECK CONDITIONS. PROVIDES ENHANCE SENSE BYTE INFORMATION. FIELD BILL RELEASED EXCEPTIONAL.	23770	6932

CD TYPE: CS DIFFERENTIAL
 CD LOC : A2
 MACHINE: 2925 WITH SCSI INTERFACE
 DESCRIPTION: SCSI INTERFACE, DIFFERENTIAL DRIVERS
 PG EC LEVEL: 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404039201	1	INITIAL RELEASE.	23475	NONE
*404039202	1	TAB PINS REVERSED.	23627	NONE
*404039203	1	INITIAL RELEASE OF MICROCODE LEVEL CS01.	23659	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
*404039204	1	INITIAL RELEASE OF BUFFERED MICROCODE LEVEL CS02.	23732	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
*404039205	1	MICROCODE RELEASE CS03.	26031	NONE
404039206	1	REFRESH CIRCUITRY WAS NOT REFRESHING ALL THE ROWS OF THE RAM. F/B RELEASED MANDATORY.	26344	69409

CD TYPE: CS, SINGLE-ENDED
 CD LOC : A2
 MACHINE: 2925 WITH SCSI INTERFACE
 DESCRIPTION: SCSI INTERFACE, SINGLE-ENDED DRIVERS
 PG EC LEVEL: 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NG.	FIELD APL.
*404006201	1	INITIAL RELEASE.	23475	NONE
*404006202	1	INITIAL RELEASE OF MICROCODE LEVEL CS01.	23659	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
*404006203	1	INITIAL RELEASE OF BUFFERED MICROCODE LEVEL CS02.	23732	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
*404006204	1	MICROCODE RELEASE CS03.	26031	NONE
404006205	1	REFRESH CIRCUITRY WAS NOT REFRESHING ALL THE ROWS OF THE RAM. F/B RELEASED MANDATORY.	26344	6940

CD TYPE: CS, DIFFERENTIAL
 CD LOC :
 MACHINE: 2925 SCSI INTERFACE
 DESCRIPTION: SCSI INTERFACE FOR NRSK DIFF
 PG EC LEVEL: 26627 DATE: 08/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404188205	1	INITIAL RELEASE	26216	NONE
*404188206	1	REFRESH CIRCUITRY WAS NOT REFRESHING ALL THE ROWS OF THE RAM. F/B RELEASED MANDATORY.	26344	69409
*404188207	1	COMPONENT CHANGES TO CORRECT WRONG TIMING FROM BUSY TO OWN ID DURING ARBITRATION. THE 'DIFF SENSE' LINE ON THE SCSI BUS IS PULLED DOWN WHEN POWER IS TURNED OFF. NEED TO REMOVE POWER TO THE TERMINATORS. F/B UPDATE ONLY.	26311	69409
*404188208	1	CORRECTED WRONG VALUE RESISTOR. RELEASED IN EC 26311	26518	69432
		FB RELEASED MANDATORY	69432	
		FB UPDATE	69409	
*404188209	1	PAL CHANGES TO MODIFY CS CARD. ADDED REWORK TO ASCERTAIN +ACK SIGNAL WILL BE ASSERTED AFTER 280 NS EVEN IF HOST +ACK SIGNAL COMES BEFORE. FB 69441 RELEASED MANDATORY. FB 69409 AND 69432 ARE FIELD BILL UPDATE ONLY.	26564	69441 69409 *69432
404188210	1	RESISTOR CHANGE FOR POWER-ON FIX. FB'S 69409 AND 69441 ARE FIELD BILL UPDATE ONLY. FB 69466 RELEASED MANDATORY.	26627	69466

CD TYPE: CW
CD LOC : A2
MACHINE: 2925 WITH VS INTERFACE
DESCRIPTION: VS INTERFACE CARD
PG EC LEVEL: 26007 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*404078201	1	INITIAL RELEASE.	23600	NONE
404078202	1	PAL TIMING CHANGE	26007	NONE

CD TYPE: DG
CD LOC :
MACHINE: 2921, 2922, 2925
DESCRIPTION - EXTERNAL OPERATOR CONTROL
PG EC LEVEL - 49810 DATE: 06/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403378201	1	INITIAL RELEASE OF NEW LAYOUT.	49449	NONE
*403378202	1	CHANGE 10UF CAP TO 6.8UF	49603	NONE
403378203	1	CHANGE J01 CONNECTOR TO POLARIZED CONNECTOR.	49810	NONE

CD TYPE: DP-50
 CD LOC : A5
 MACHINE: 2921
 DESCRIPTION - DATA PATH CARD
 PG EC LEVEL - 50517 DATE: 11/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402252304	1	INITIAL RELEASE TO ENGINEERING.	49203	NONE
		RELEASE OF COMPATIBILITY	49291	NONE
*403118201	1	I.R. OF DP CARD USING 68 PIN LSI CHIPS.EQUIVALENT TO 403118301.	49307	NONE
*403118301	1	I.R. OF EMBED TO ELIMINATE BUS BARS AND TO USE 4 LAYERS. EQUIVALENT TO 403118201.	49403	NONE
*403118202	1	THE XTM CMOS CHIP REQUIRES Z3 ALL OUT. Z2 AND ANY TRACK IN Z3. THE MINIMUM PE TAPE MARK IS Z3 ALL OUT AND Z2. EQUIV. TO 403118302.	49501	NONE
*403118302	1	THE XTM CMOS CHIP REQUIRES Z3 ALL OUT. Z2 AND ANY TRACK IN Z3. THE MINIMUM PE TAPE MARK IS Z3 ALL OUT AND Z2. EQUIV. TO 403118202.	49501	NONE
*403118203	2	LATCH "+BLOCK" LINE FOR READ OF PE ID WITH CREASE. F/B RELEASED AS REWORK AND FIELD MANDATORY. EQUIVALENT TO 403118303. EC 50520 IS A PREREQUISITE.	50517	68949
*403118303	2	LATCH "+BLOCK" LINE FOR READ OF PE ID WITH CREASE. F/B RELEASED AS REWORK AND FIELD MANDATORY. EQUIVALENT TO 403118203. EC 50520 IS A PREREQUISITE.	50517	68949

CD TYPE: DP-50
 CD LOC : A5
 MACHINE: 2921
 DESCRIPTION - DATA PATH CARD
 PG EC LEVEL - 23707 DATE: 05/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403118203	2	CHANGED FROM FIELD MANDATORY TO FIELD EXCEPTIONAL. EC22577 IS A PREREQUISITE.	50517A	68949
		EQUIVALENT TO 403118303/403 AND 403807303.	22810	NONE
		EQUIVALENT TO 403118303/403 AND 403807304.	23065	NONE
*403118303	2	CHANGED FROM FIELD MANDATORY TO FIELD EXCEPTIONAL. EC22577 IS A PREREQUISITE.	50517A	68949
		EQUIVALENT TO 403118203/403 AND 403807303.	22810	NONE
		EQUIVALENT TO 403118203/403 AND 403807304.	23065	NONE
*403118403	2	INITIAL RELEASE OF IMBED. EQUIVALENT TO 403118203/303 AND 403807303.	22810	NONE
		EQUIVALENT TO 403118203/303 AND 403807304.	23065	NONE
*403118204	2	REMOVE ALTERNATE SOURCE FROM APL. EQUIVALENT TO 403118304/404/403807305.	23707	NONE
*403118304	2	REMOVE ALTERNATE SOURCE FROM APL. EQUIVALENT TO 403118204/404/403807305.	23707	NONE
*403118404	2	REMOVE ALTERNATE SOURCE FROM APL. EQUIVALENT TO 403118204/304/403807305.	23707	NONE

CD TYPE: DP-50
CD LOC : A5
MACHINE: 2921
DESCRIPTION - DATA PATH CARD
PG EC LEVEL - 23694 DATE: 07/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
403118205	2	LATCH INTERFACE STOP FOR USE WITH ALTERNATE XBR. EQUIVALENT TO 403118305/ 405/403807305.	23694	NONE
403118305	2	LATCH INTERFACE STOP FOR USE WITH ALTERNATE XBR. EQUIVALENT TO 403118205/ 405/403807305.	23694	NONE
403118405	2	LATCH INTERFACE STOP FOR USE WITH ALTERNATE XBR. ALENT TO 403118205/ 305/403807305.	23694	NONE

CD TYPE: DP-50
 CD LOC : A5
 MACHINE: 2921
 DESCRIPTION - DATA PATH 50IPS
 PG EC LEVEL - 23694 DATE: 07/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403807302	1	THIS CARD IS AN INTERIM CARD FOR A GIVEN NUMBER OF BOARDS. EQUIVALENT TO 403118302 .	49916	NONE
*403807303	2	LATCH "+BLOCK" LINE FOR READ OF PE ID WITH CREASE. F/B RELEASED AS REWORK AND FIELD MANDATORY. EC 50520 IS A PREREQUISITE.	50517	68949
		CHANGED FROM FIELD MANDATORY TO FIELD EXCEPTIONAL. EC22577 IS A PREREQUISITE.	50517A	68949
		EQUIVALENT TO 403118203/303/403.	22810A	NONE
*403807304	2	REDUCE "TREQ" DELAY TO PREVENT OVERRUNS. EQUIVALENT TO 403118203/303/403.	23065	NONE
403807305	2	REMOVE ALTERNATE SOURCE FROM APL. EQUIVALENT TO 403118204/304/404.	23707	NONE
		EQUIVALENT TO 403118205/305/405.	23694	NONE

CD TYPE: DP-100
 CD LOC : A5
 MACHINE: 2922, 2925
 DESCRIPTION - DATA PATH 100IPS
 PG EC LEVEL - 23977 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403499201	1	INITIAL RELEASE OF 100 IPS DP CARD.	49655	NONE
*403499202	1	DELAY TREQ TO IF CARD BY CHANGING LS74 TO S74 AND USE A +B OR C CLK IN PLACE OF -B CLK.	49841	*681
		INACTIVE. REPLACED BY 403633301.	49916	NONE
*403633301	1	INITIAL RELEASE OF EMBED FOR 100IPS.	49916	*688
*403633302	2	LATCH "+BLOCK" LINE FOR READ OF PE ID WITH CREASE. F/B RELEASED AS REWORK AND FIELD MANDATORY. EC 50520 IS A PREREQUISITE.	50517	6894
		CHANGED FROM FIELD MANDATORY TO FIELD EXCEPTIONAL. EC22577 IS A PREREQUISITE.	50517A	6894
*403633303	2	REMOVE ALTERNATE SOURCE FROM APL.	23707	NONE
*403633304	2	CHANGE CLOCK USED TO LATCH HOST TRAK AND STOP FOR USE WITH ALTERNATE XBR.	23695	NONE
*403633305	2	CHANGE + BUPER CLOCK TO PREVENT FALSE ERRORS CAUSED BY + PARITY ERROR ASYNC NOISE. ALSO CORRECT TRAK/CARRY TIMING IN GCR 100 IPS TO PREVENT OVERRUN.	23977	NONE

CD TYPE: DP
CD LOC : A5
MACHINE: 2920 TAPE UNIT
DESCRIPTION - DATA PATH 100IPS
PG EC LEVEL - 26237 DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403633306	2	ADD INVERTOR TO PRODUCE CARRY FROM AND CARRY TO AVOID 16D DAIGNOSTIC FAILURE ON POWER UP.	26108	NONE
403633307	2	ADD 100PFD CAPACITOR TO OUT- PUT OF KA27. THIS CORRECTS A FACTORY PROBLEM ON SUPPLIER 74LS74 DATE CODES 8731 & 8739. INDUSTRY STANDARDS DIAG FAIL 126202 FRAME LENGTH ERRORS. F/B UPDATE ONLY.	26237	68949

CD TYPE: DP, SSI
CD LOC : A5
MACHINE: 2920 TAPE UNIT
DESCRIPTION - DATA PATH
PG EC LEVEL - 26237 DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404171201	1	INITIAL RELEASE OF SLOW SPEED INTERFACES.	26059	NONE
404171202	1	ADD 100PFD CAPACITOR TO OUT- PUT OF KA27. THIS CORRECTS A FACTORY PROBLEM ON SUPPLIER 74LS74 DATE CODES 8731 & 8739. INDUSTRY STANDARDS DIAG FAIL 126202 FRAME LENGTH ERRORS.	26237	NONE

CD TYPE: EOT/BOT
CD LOC : DECK
MACHINE: 2921, 2922, 2925
DESCRIPTION - EOT/BOT SENSOR
PG EC LEVEL - 49826 DATE: 02/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403081201	1	INITIAL RELEASE	49204	NONE
*403081202	1	ADD NOSE TO HOUSING TO ASSURE PROPER TAPE-SENSOR DISTANCE.	49376	NONE
*403081303	2	INITIAL RELEASE OF IMBED.	49471	68356
*403081304	2	ADD HOLE FOR LOCATING PIN AND GROOVE TO REDUCE INTERNAL REFLECTION TO HOUSING. MUST BE INSTALLED CONCURRENTLY WITH EC 49563. F/B 68451.	49504	68441
403081404	2	CHANGED LENGTH OF THE CARD .080 TO AVOID INTERFERENCE BETWEEN CARD AND CONNECTOR.	49826	NONE

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 49444 DATE: 01/84

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*402042202	1	INITIAL RELEASE	49168	NONE
*402042203	2	REWORK TO IF CARD. PUT NEW CODE IN E PROMS TO ACCOMPANY BLOWER, RETRACTOR AND SERVO CARD CHANGES. CONCURRENT WITH EF49269 ENG TO UPDATE PRODUCT TEST. ENG TO UPDATE FIELD. LEVEL A1.05 MICROCODE.	49275	
		RELEASE OF COMPATIBILITY	49291	NONE
*402042204	3	CHANGING WRITE CORRECTION REPORTING ELIMINATING F-81 AND 'NO TRAK' PROBLEMS. LEVEL A1.06 MICROCODE CONCURRENT WITH EC49301 RD CARD 402261304.	49306	NONE
*402042205	3	CHANGES SERVO ALGORythM MICROCODE. LEVEL A1.07 MICROCODE.	49318	NONE
*403222201	3	INITIAL RELEASE OF XIF CARD WHICH USES 68 PIN CMOS.	49287	NONE
*403222202	3	CHANGES MICROCODE, ADDED DIAGNOSTICS-LEVEL 1.09. MAKE POWER-ON RESET TRIGGER ONLY AFTER 4 VOLTS IS REACHED.	49383	NONE
*403222203	3	CHANGE MICROCODE A1-10 LEVEL CODE. RELEASES A MANDATORY FIELD BILL.	49423 49423A	*6829
*403222204	3	CHANGE MICROCODE A1-11 LEVEL. RELEASES A MANDATORY FIELD BILL. EQUIVALENT TO 403222304.	49444	*6829

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 49569 DATE: 04/84

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403222304	3	RELEASE OF 4 LAYERS XIF EQUIVALENT TO 40222204.	49392	NONE
*403222205	3	CHANGE MICRO-CODE A1-12 EQUIVALENT TO 403222305. RELEASES A MANDATORY F/B.	49477	68352
*403222305	3	CHANGE MICRO-CODE A1-12 EQUIVALENT TO 403222205. RELEASES A MANDATORY F/B.	49477	68352
*403222206	3	CHANGE MICROCODE A1-13 EQUIV. TO 403222306. RELEASES MANDATORY F/B.	49543	68418
*403222306	3	CHANGE MICROCODE A1-13 EQUIV. TO 403222206. RELEASES MANDATORY F/B.	49543	68418
*403222207	3	CHANGE MICROCODE A1-14 EQUIV. TO 403222307. RELEASES MANDATORY F/B.	49569	68449
*403222307	3	CHANGE MICROCODE A1-14 EQUIV. TO 403222207. RELEASES MANDATORY F/B.	49569	68449

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 49649 DATE: 07/84

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403222208	3	CHANGE MICROCODE A1-15 EQUIV. TO 403222308. RELEASES MANDATORY F/B.	49576	*684
*403222308	3	CHANGE MICROCODE A1-15 EQUIV. TO 403222208. RELEASES MANDATORY F/B.	49576	*684
*403222209	3	CHANGE MICROCODE A1-16 EQUIV. TO 403222309. RELEASES MANDATORY F/B.	49582	*684
*403222309	3	CHANGE MICROCODE A1-16 EQUIV. TO 403222209. RELEASES MANDATORY F/B.	49582	*684
*403222210	3	REWORK DIAGNOSTICS MICROCODE TO RETIGGER WATCHDOG TIMER. EQUIV. TO 403222310.	49598	*684
*403222310	3	REWORK DIAGNOSTICS MICROCODE TO RETIGGER WATCHDOG TIMER. EQUIV. TO 403222210.	49598	*684
*403222211	3	IMPROVE LOCK-OUT DETECTION OF Z80. EQUIV. TO 403222311. RELEASES MANDATORY F/B.	49626	*685
*403222311	3	IMPROVE LOCK-OUT DETECTION OF Z80. EQUIV. TO 403222211. RELEASES MANDATORY F/B.	49626	*685
*403222212	3	CHANGE M-CODE A1-17. EQUIV. TO 403222312. MANDATORY F/B.	49649	*685
*403222312	3	CHANGE M-CODE A1-17. EQUIV. TO 403222212. MANDATORY F/B.	49649	*685

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 50518 DATE: 11/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403222213	3	CHANGE M-CODE A1-18 EQUIV TO 403222313 MANDATORY F/B.	49709	*68576
*403222313	3	CHANGE M-CODE A1-18 EQUIV TO 403222213 MANDATORY F/B.	49709	*68576
*403222214	3	CHANGE M-CODE A1-19 EQUIV TO 4032223-14 MANDATORY F/B.	49755	*68626
*403222314	3	CHANGE M-CODE A1-19 EQUIV TO 403222214 MANDATORY F/B.	49755	*68626
*403222215	3	CHANGE 74S240 TO 74LS240 TO SOLVE CLOCK NOISE PROBLEM. EQUIVALENT TO 403222315.	49806	NONE
*403222315	3	CHANGE 74S240 TO 74LS240 TO SOLVE CLOCK NOISE PROBLEM. EQUIVALENT TO 403222215.	49806	NONE
*403222216	3	RELEASE M-CODE A220 EQUIVALENT TO 403222316. MANDATORY F/B.	49781	*68851
*403222316	3	RELEASE M-CODE A220 EQUIVALENT TO 403222216. MANDATORY F/B.	49781	*68851
*403222217	3	CHANGE MCODE A221. EQUIVALENT TO 403222317. F/B RELEASED MANDATORY.	50520	*68953
*403222317	3	CHANGE MCODE A221. EQUIVALENT TO 403222217. F/B RELEASED MANDATORY.	50520	*68953
*403222218	3	WIRE CHANGE TO HOLD START LATCH RESET WHILE SUBSYSTEM IS OFFLINE. EQUIVALENT TO 403222318. F/B RELEASED EXCEPTIONAL.	50518	*68957

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 26239 DATE: 07/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403222318	3	WIRE CHANGE TO HOLD START LATCH RESET WHILE SUBSYSTEM IS OFFLINE. EQUIVALENT TO 403222218. F/B RELEASED EXCEPTIONAL.	50518	*6895
*403222218	3	F/B 68953 (MANDATORY) COMBINED WITH F/B 68957 (EXCEPTIONAL) TO CREATE NEW F/B 68987. NEW F/B INCLUDES ALL CHANGES IN PREVIOUS F/B'S. EQUIVALENT TO 403222318. F/B RELEASED EXCEPTIONAL.	22577	68987
		EQUIVALENT TO 403222318/418.	22811	NONE
*403222318	3	F/B 68953 (MANDATORY) COMBINED WITH F/B 68957 (EXCEPTIONAL) TO CREATE NEW F/B 68987. NEW F/B INCLUDES ALL CHANGES IN PREVIOUS F/B'S. EQUIVALENT TO 403222218. F/B RELEASED EXCEPTIONAL.	22577	68987
		EQUIVALENT TO 403222218/418.	22811	NONE
*403222418	3	INITIAL RELEASE OF IMBED. EQUIVALENT TO 403222218/318. F/B UPDATE ONLY.	22811	68963
*403222219	3	FIXES SIGNAL DEGRADATION ON 2.5 MHZ OSCILLATOR TO HOST IN DAISY CHAIN CONFIGURATION. EQUIVALENT TO 403222319/419. F/B RELEASED EXCEPTIONAL.	22948	69168

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 26239 DATE: 07/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403222319	3	FIXES SIGNAL DEGRADATION ON 2.5 MHZ OSCILLATOR TO HOST IN DAISY CHAIN CONFIGURATION. EQUIVALENT TO 403222219/419. F/B RELEASED EXCEPTIONAL.	22948	69168
*403222419	3	FIXES SIGNAL DEGRADATION ON 2.5 MHZ OSCILLATOR TO HOST IN DAISY CHAIN CONFIGURATION. EQUIVALENT TO 403222219/319. F/B 69168 RELEASED EXCEPTIONAL. F/B 68963 UPDATE ONLY.	22948	69168 68963
403222220	3	RELEASE OF MICROCODE A222 WHICH FIXES REJECT 35 (UNABLE TO FIND BLOCK AFTER BACK SPACE BLOCK) AFTER WRITE OVERRUN, AND DEPRESSION OF ON-LINE SWITCH WILL CAUSE THE NEXT HOST COMMAND TO BE IGNORED. FB UPDATE ONLY, EQUIV TO 403222320 AND 403222420.	26239	69168 68987 68963

CD TYPE: IF-50
 CD LOC : A3
 MACHINE: 2921 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 26239 DATE: 07/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
403222320	3	RELEASE OF MICROCODE A222 WHICH FIXES REJECT 35 (UNABLE TO FIND BLOCK AFTER BACK SPACE BLOCK) AFTER WRITE OVERRUN, AND DEPRESSION OF ON-LINE SWITCH WILL CAUSE THE NEXT HOST COMMAND TO BE IGNORED. FB UPDATE ONLY, EQUIV TO 403222220 AND 403222420.	26239	69168 68987 68963
403222420	3	RELEASE OF MICROCODE A222 WHICH FIXES REJECT 35 (UNABLE TO FIND BLOCK AFTER BACK SPACE BLOCK) AFTER WRITE OVERRUN, AND DEPRESSION OF ON-LINE SWITCH WILL CAUSE THE NEXT HOST COMMAND TO BE IGNORED. FB UPDATE ONLY, EQUIV TO 403222220 AND 403222320.	26239	69168 68987 68963

CD TYPE: IF-100
 CD LOC : A3
 MACHINE: 2922 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 23266 DATE: 11/86

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403486201	1	INITIAL RELEASE	49653	NONE
*403486202	1	CHANGE PROMS TO B1.02 LEVEL. REWORK FOR TREQ/TRAK DIAGNOSTIC TIMING.	49772	NONE
*403486203	1	CHANGE PROMS TO B1.03 LEVEL. CHANGE CLOCK DRIVER CHIP	49790	NONE
*403486204	1	CHANGE PROMS TO B1.04 LEVEL. WIRE SPEED CONTROL SWITCHES DISABLE WHEN NOT BUSY.	49908	*68813
*403486205	1	CHANGE PROMS TO B1.05 LEVEL. F/B RELEASED MANDATORY.	50521	*68951 *68965
*403486206	1	WIRE CHANGE TO HOLD START LATCH RESET WHILE SUBSYSTEM IS OFFLINE. F/B RELEASED EXCEPTIONAL.	22503	*68959
		F/B 68951 (MANDATORY) COM- BINED WITH F/B 68959 (EX- CEPTIONAL) TO CREATE NEW F/B 68991. F/B INCLUDES ALL CHANGES IN PREVIOUS F/B'S. F/B RELEASED AS EXCEPTIONAL.	22579	*68991
*403486207	1	CHANGE PROMS TO B1.06 LEVEL F/B 69000 RELEASED AS EXCEP- TIONAL. F/B 68965 IS UPDATE ONLY.	22594	*69000 *68965
*403486208	1	FIXES SIGNAL DEGRADATION ON 2.5 MHZ OSCILLATOR TO HOST IN DAISY CHAIN CONFIGURATION. F/B 69168 RELEASED EXCEPTIONAL. F/B 68965 UPDATE ONLY.	22948	69168 *68965
403486209	1	CHANGE PROMS TO B1.07 LEVEL TO IMPROVE OPERATION RELIA- BILITY. F/B RELEASED EXCEP- TIONAL.	23266	69199

CD TYPE: IF-100
 CD LOC : A3
 MACHINE: 2922 WITH STORAGETEK INTERFACE
 DESCRIPTION - STORAGETEK INTERFACE
 PG EC LEVEL - 23828 DATE: 09/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403486209	1	EQUIVALENT TO 403486310.	22997	NONE
*403486310	1	INITIAL RELEASE OF IMBED WITH REWORK. CHANGED TO TRI-STATE OUTPUT BUFFERS. EQUIVALENT TO 403486209	22997	NONE
403486210	1	RELEASE B108 LEVEL MICRO- CODE TO FIX LOOP OUTS AND RUNNING OFF END OF TAPE. F/B RELEASED EXCEPTIONAL. EQUIVALENT TO 403486311.	23828	6932
403486311	1	RELEASE B108 LEVEL MICRO- CODE TO FIX LOOP OUTS AND RUNNING OFF END OF TAPE. F/B RELEASED EXCEPTIONAL. EQUIVALENT TO 403486210.	23828	6932

CD TYPE: IF, CACHE
 CD LOC : A3
 MACHINE: 2925 EXCEPT SCSI INTERFACE
 DESCRIPTION - CACHE BUFFER DRIVE INTERFACE
 PG EC LEVEL - 26240 DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403923201	1	INITIAL RELEASE TO PRODUCTION FOR CACHE BUFFER.	22602	NONE
*403923202	1	CACHE RESET IMPROVEMENTS WILL NOW ALWAYS DISPLAY VALID MACHINE CHECK CODES AND CACHE CODE. CHANGE MICROCODE LEVEL TO CA02. F/B RELEASED EXCEPTIONAL.	22690	*69116
*403923203	1	RELEASES THE CA03 LEVEL MICROCODE TO IMPROVE DATA RELIABILITY, TAPE POSITIONING AND ERROR CODE DISPLAY. F/B RELEASED EXCEPTIONAL.	22865	*69141
		CLARIFICATION OF DESCRIPTION FOR PREVIOUS EC.	22865A	NONE
*403923204	1	RELEASES THE CA04 LEVEL MICROCODE. F/B RELEASED EXCEPTIONAL.	23173	*69185
*403923205	1	RELEASES THE CA05 LEVEL MICROCODE TO PREVENT SYSTEM HANGS OF VARIOUS MACHINE CHECKS. F/B RELEASED EXCEPTIONAL.	23275	*69201
		EQUIVALENT TO 403923306	22997	NONE
*403923306	1	INITIAL RELEASE OF IMBED WITH REWORK. CHANGED TO TRI-STATE OUTPUT BUFFERS. EQUIVALENT TO 403923205.	22997	NONE
*403923206	1	NONE BUILT FOR PRODUCTION.	23656	NONE
*403923307	1	NONE BUILT FOR PRODUCTION.	23656	NONE

CD TYPE: IF, CACHE SCSI
 CD LOC : A3
 MACHINE: 2925 WITH SCSI INTERFACE
 DESCRIPTION - CACHE BUFFER DRIVE INTERFACE (SCSI)
 PG EC LEVEL - 26559 DATE: 09/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403923207	1	RELEASE CA08 LEVEL MICRO-CODE, RUN OFF EOT, F98, ADD FS1 AND FS2. EQUIVALENT TO 403923308. F/B RELEASED EXCEPTIONAL.	26240	*6939
*403923308	1	RELEASE CA08 LEVEL MICRO-CODE, RUN OFF EOT, F98, ADD FS1 AND FS2. EQUIVALENT TO 403923207. F/B RELEASED EXCEPTIONAL.	26240	*6939
403923208	1	RELEASE CA09 LEVEL MICROCODE. DENSITY SELECT DISABLE OPTION AND LOAD RELIABILITY. EQUIVALENT TO 403923309. F/B RELEASED EXCEPTIONAL.	26559	69486
403923309	1	RELEASE CA09 LEVEL MICROCODE. DENSITY SELECT DISABLE OPTION AND LOAD RELIABILITY. EQUIVALENT TO 403923208. F/B RELEASED EXCEPTIONAL.	26559	69486

CD TYPE: IF, CACHE SCSI
 CD LOC : A3
 MACHINE: 2925 WITH SCSI INTERFACE
 DESCRIPTION - CACHE BUFFER DRIVE UNTERFACE (SCSI)
 PG EC LEVEL - 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404095201	1	INITIAL RELEASE.	23742	NONE
		EQUIVALENT TO 404095301.	26319	NONE
*404095301	1	INITIAL RELEASE OF IF CACHE CARD WITH LEVEL CA07 MICROCODE FOR USE IN SCSI INTERFACE 2925S.	23742	NONE
		DESCRIPTION CLARIFICATION.	26319	NONE
*404095201	1	NOT BUILT ANYMORE. REWORK TO 403923207. F/B RELEASED EXCEPTIONAL.	26240	69393
*404095301	1	NOT BUILT ANYMORE. REWORK TO 403923308. F/B RELEASED EXCEPTIONAL.	26240	69393

CD TYPE: IFP-50
 CD LOC : A3
 MACHINE: 2921 WITH IND. STD. INTERFACE
 DESCRIPTION - IND. STD. INTERFACE
 PG EC LEVEL - 50501N DATE: 11/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403459201	1	INITIAL RELEASE	49650	NONE
*403459202	1	ADD LATCH AND UPDATE PROMS TO LEVEL C1.02	49763	NONE
*403459203	1	LENGTHEN POWER-ON RESET BY CHANGING TIMING CAP IN CIRCUIT.	49777	NONE
*403459204	1	FIX DENSITY SELECT PROBLEM AND FIX HANG AT BOT WITH CODE CHANGE LEVEL C1.03.	49793	NONE
*403459205	1	FIXES TEST 12 AND 34C, F99 IN DIAGNOSTICS, BUS PARITY ERROR IN PE, PE ID BURST LENGTH, FEN RESET LINE, ADJUSTS SERVO TO 50 IPS, RESETS FBV AFTER A REWIND, CORRECTS ADDRESS LINES, WITH CODE CHANGE LEVEL C1.04.	49808	*6867
*403459206	1	WIRE CHANGE TO HANDLE FASTER DATA IF CHANGED TO 100 IPS.	49831	*6871
*403459207	1	CHANGE M-CODE LEVEL C1.05 FIXES FBT HANG HER RESET WITH THE RESET OF DBY, HAND SYSTEM WHEN A RESET IS ISSUED. HARDWARE CHANGE FOR HER AND FBV HANG. REW UNLOAD OFF BOT.	49937	*6885
		INACTIVATE F/B'S IN EC 50501A. EC 50501N UPDATES COMPATIBILITY PAGE.	50501N	NONE
*403459208	1	HARDWARE CHANGE TO IMPROVE READ/WRITE STROBE TIMINGS. THIS CHANGE ALLOWS A GREATER MARGIN FOR VALID DATA ON THE INTERFACE.	50501	*6892

CD TYPE: IFP-50
 CD LOC : A3
 MACHINE: 2921 WITH IND. ST. INTERFACE
 DESCRIPTION - IND. STD. INTERFACE
 PG EC LEVEL - 26395 DATE: 06/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403459209	1	CHANGE M-CODE LEVEL TO C1.06. IMPROVE READING CREASED LEADERS AT BOT (PE ID BURST).	50529	68967
		NOT UPWARD COMPATIBLE	23585	NONE
*403459310	1	INITIAL RELEASE OF IMBED AND ADDITION OF PARITY GENERATOR AND SWITCHABLE GCR STATUS.	23585	NONE
*403459311	1	CORRECT TRI-STATE BUFFER DRIVER.	26069	NONE
403459312		CORRECT ADDRESS SWITCH LINES. CORRECT F70 ERRORS DUE TO LAST WORD TIMING. FIELD BILL UPDATE	26395	68967

CD TYPE: IFP-100
 CD LOC : A3
 MACHINE: 2922 WITH IND. STD. INTERFACE
 DESCRIPTION - IND. STD. INTERFACE
 PG EC LEVEL - 26395 DATE: 06/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403595201	1	INITIAL RELEASE	49791	NONE
*403595202	1	CORRECT ADDRESS LINES:	49808	*6868
*403595203	1	WIRE CHANGE TO HANDLE FASTER DATA FOR 100 IPS INCLUDED ALL THE FIXES IN CODE C1.04 (EC 49808) ALLOW 100 IPS STREAMING M-CODE LEVEL D1.02	49831	NONE
*403595204	1	CHANGE M-CODE LEVEL D1.03 FIXES MOTOR BURN OUT, LEAVES HARD ERROR ASSERTED AFTER "TAPE LOST POSITION" ERROR RESET HARD ERROR AFTER REWIND OR BACKSPACE FILE. EQUIVALENT TO 403595203.	49849	*6873
*403595205	1	CHANGE M-CODE LEVEL D1.04, FIXES F71 ERRORS HARDWARE CHANGE TO WORK WITH LATEST LEVEL OP CARDS FASTER TRAK TIMING TO DP CARD BY 50NS. ADD GAP AND SPEED SELECTION VIA SWITCH.	49869	*6876
*403595206	1	CHANGE M-CODE LEVEL D1.05 FIXES FBY HANG, ADDS VARIABLE ERASE AND SECURITY ERASE AT 100IPS, HER RESET, WITH THE RESET OF DBY, HANG SYSTEM WHEN A RESET IS ISSUED. HARDWARE CHANGE FOR HER AND FBY HANG. REW UNLOAD AWAY FROM BOT. FIELD BILL RELEASED AS MANDATORY.	49938	*6885
		INACTIVATE F/B'S IN EC 50501A. EC 50501N UPDATES COMPATIBILITY PAGE.	50501N	NONE

CD TYPE: IFP-100
 CD LOC : A3
 MACHINE: 2922 WITH INDUSTRY STD. INTERFACE
 DESCRIPTION - IND. STD. INTERFACE
 PG EC LEVEL - 26395 DATE: 06/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403595207	1	HARDWARE CHANGE TO IMPROVE READ/WRITE STROBE TIMINGS. THIS CHANGE ALLOWS A GREATER MARGIN FOR VALID DATA ON THE INTERFACE.	50501	*68927
*403595208	1	CHANGE M-CODE LEVEL TO D1.06. IMPROVE READING CREASED LEADERS AT BOT (PE ID BURST).	50529	*68969
*403595209	1	CHANGE M-CODE LEVEL TO D1.07. ADD NEW OPTION SWITCH, IMPROVE OPERATIONS ON INTERFACE. OPTIONS ADDED: 1. LOAD ONLINE FEATURE 2. PARITY GENERATION 3. SWITCHABLE DENSITY STATUS LINE 4. SWITCHABLE RESET ON A MISPOSITION	22926	*69189
		EQUIVALENT TO 403595310.	23585	NONE
		EQUIVALENT TO 403595311	26069	NONE
*403595310	1	INITIAL RELEASE OF IMBED WITH REWORK TO THE CARD LAYOUT. EQUIVALENT TO 403595209.	23585	NONE
*403595311	1	CORRECT TRI-STATE BUFFER DRIVER. EQUIVALENT TO 403595209. F/B UPDATE ONLY.	26069	*69189
*403595210	1	RELEASE D108 MICRO-CODE, FIX F98, F05, RUN OFF EOT. EQUIVALENT TO 403595312. F/B RELEASED EXCEPTIONAL.	26140	69395
403595211		CORRECT ADDRESS SWITCH LINES. CORRECT F70 ERRORS DUE TO LAST WORD TIMING. EQUIVALENT TO 403595313. FIELD BILL UPDATE ONLY.	26395	69395

CD TYPE: IFP-100
CD LOC : A3
MACHINE: 2922 WITH IND. STD. INTERFACE
DESCRIPTION - IND. STD. INTERFACE
PG EC LEVEL - 26395 DATE: 06/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403595312	1	RELEASE D108 MICRO-CODE, FIX F98, F05, RUN OFF EOT. EQUIVALENT TO 403595210. F/B RELEASED EXCEPTIONAL.	26140	69395
403595313		CORRECT ADDRESS SWITCH LINES. CORRECT F70 ERRORS DUE TO LAST WORD TIMING. EQUIVALENT TO 403595211. FIELD BILL UPDATE ONLY.	26395	69395

CD TYPE: IF7.
CD LOC :
MACHINE: 2920 TAPE UNIT
DESCRIPTION:
PG EC LEVEL: 49978 DATE: 10/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403860201	1	DELAY OF 15 MSEC BEFORE INITIATION OF DATA PRE- FETCH ON ALL 50 IPS WRITES/LWR. REPLACING PROM #2 WITH RPQ CHANGE.	49978	NONE

CD TYPE: IFP-DC
CD LOC : A3
MACHINE: 2920 TAPE UNIT
DESCRIPTION:DC- 48 VOLT INTERFACE
PG EC LEVEL: 26140 DATE: 02/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*404152201	1	INITIAL RELEASE	23969	NONE
*404152202	1	CORRECT TRI-STATE BUFFER DRIVER.	26069	NONE
		INITIAL RELEASE OF STRUCTURE.	26055	NONE
*404152203	1	RELEASE D208 MICRO-CODE.	26044	NONE
404152204	1	RELEASE D108 MICRO-CODE, FIX F98, F05, RUN OFF EOT. F/B RELEASED EXCEPTIONAL.	26140	6939

CD TYPE: KK
CD LOC : OP PANEL
MACHINE: 2920 TAPE UNIT
DESCRIPTION - OP PANEL
PG EC LEVEL - 49810 DATE: 06/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402051301	1	INITIAL RELEASE TO ENGINEERING.	49031	NONE
		RELEASE OF COMPATIBILITY	49291	
*402051302	1	CORRECT MOUNTING HOLE POSITION	49630	NONE
*402051402	1	CHANGE ARTWORK TO NEW HOLE LOCATIONS.	49657M	NONE
402051303	1	CHANGE J35 CONNECTOR TO POLARIZED CONNECTOR.	49810	NONE
402051403	1	CHANGE J35 CONNECTOR TO POLARIZED CONNECTOR.	49810	NONE

CD TYPE: NK
 CD LOC : POWER SUPPLY
 MACHINE: 2920 TAPE UNIT
 DESCRIPTION - VOLTAGE REGULATOR
 PG EC LEVEL - 22917 DATE: 07/86

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*402213301	1	DARLINGTON DR XSTR-INT CONFIG	49223	NONE
*402213302	1	CHANGED TRANSISTOR FROM TIP120 TO D44H11 SWITCHING XSTR INITIAL RELEASE.	49223	NONE
		RELEASE OF COMPATIBILITY	49291	NONE
*402213402	1	CHANGED FILM TO PLACE FEED THROUGH PADS ON HOLES 1-5 ON COMPONENT SIDE. INITIAL RELEASE.	49414	NONE
402213303	1	INCREASED LENGTH OF CABLE FROM NK TO AK CARD. EQUIVALENT TO 402213403.	22917	NONE
402213403	1	INCREASED LENGTH OF CABLE FROM NK TO AK CARD. EQUIVALENT TO 402213303.	22917	NONE

CD TYPE: PK
 CD LOC : POWER SUPPLY
 MACHINE: 2921, 2922, 2925
 DESCRIPTION - SHORT CIRCUIT DETECT
 PG EC LEVEL - 49985 DATE: 10/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402055304	1	INITIAL RELEASE TO ENGINEERING.	49241	NONE
		RELEASE OF COMPATIBILITY.	49291	NONE
*402055305	1	TIMING CONSTANT C4 INCREASED. GAIN CHANGED AND TRANSFORMER NOTES CLARIFIED. MAGNETIC SHIELD ADDED TO DIP RELAY TO PREVENT OPERATION DUE TO TRANSFORMER LEAKAGE FLUX.	49255	NONE
*402055306	1	MOUNTING HOLES CHANGED TO SLOTTED HOLES TO ALLOW EASIER MOUNTING TO TRANSFORMER.	49368	NONE
*402055307	2	CUT TRACE RUNNING UNDER TB1 ON PK CARD. TRACE IS CUT IN 5 PLACES TO ELIMINATE ALL POSSIBLE SHORT CIRCUITS. REWORK WIRE IS ADDED TO RESTORE ORIGINAL CONNECTION.	49545	68416
402055308	2	ADDING A CAPACITOR TO FORCE CB TO TRIP WHEN FERRO CAP WINDING IS SHORTED: REPLACING READ REPLAY WITH MECHANICAL RELAY TO IMPROVE IMMUNITY TO STRAY FIELDS FROM TRANSFORMER. EQUIVALENT TO 402055409.	49195	NONE
		EQUIVALENT TO 402055409/509.	49985	NONE
*402055408	2	ADDING A CAPACITOR TO FORCE CB TO TRIP WHEN FERRO CAP WINDING IS SHORTED: REPLACING READ REPLAY WITH MECHANICAL RELAY TO IMPROVE IMMUNITY TO STRAY FIELDS FROM TRANSFORMER.	49195	NONE

CD TYPE: PK
CD LOC : POWER SUPPLY
MACHINE: 2921, 2922, 2925
DESCRIPTION - SHORT CIRCUIT DETECT
PG EC LEVEL - 49985 DATE: 10/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
402055409	2	ELIMINATE FALSE TRIP BY ADDING DIODE (CR12). REMOVES RACE CONDITION BY REVERSING SENSE OF OUTPUT RELAY. EQUIVALENT TO 402055308.	49818	6867
		EQUIVALENT TO 402055308/509.	49985	NONE
402055509	2	RELEASE OF IMBED. EQUIV- ALENT TO 402055308/409.	49985	NONE

CD TYPE: RD-50
 CD LOC : A6
 MACHINE: 2921
 DESCRIPTION - READ CARD
 PG EC LEVEL - 49923 DATE: 06/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402261303	1	INITIAL RELEASE TO ENGINEERING	49225	NONE
		RELEASE OF COMPATIBILITY	49291	
*402261304	2	REDUCE WRITE AMP SENSE THRESHOLD FROM 25% TO 15%. CONCURRENT WITH EC40306 IF CARD 402042204.	49301	NONE
*402261305	2	ALLOWS REAR CABLE TO BE LOCKED.	49422	NONE
*402261306	2	ENABLES READ CABLE TO BE LOCKED TO RD CARD. CONCURRENT WITH EC 49389A, F/B 68340.	49499	68338
*402261307	2	DELETE 10UF CAP(C31) FROM-8V REGULATOR CIRCUIT.	49769	NONE
402261308	2	CHANGE VCO GAIN DURING DATA AND LOWER VR MINIMUM THRESHOLD IN WRITE MODE. CHANGE PLL FILTER VALUES TO INCREASE BAND WIDTH. FIELD BILL RELEASED AS EXCEPTIONAL.	49923	68837

CD TYPE: RD-100
 CD LOC : A6
 MACHINE: 2922, 2925
 DESCRIPTION - READ CARD
 PG EC LEVEL - 49981 DATE: 12/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403504201	1	INITIAL RELEASE OF RD 100 IPS CARD.	49692	NONE
*403504202	1	CORRECT 100 IPS PE ANALOG SIGNAL DISTORTIUN BY GAIN ADJUSTMENT.	49882	*687
403504203	1	REDUCE AMP SENSE MINIMUM VOLTAGE IN WRITE FOR LOW OUTPUT SIGNAL TAPES. CHANGE HIGH GAIN CURRENT AND PLL FILTER VALVES IMPROVES VELOCITY TRACKING CAPABILITY IN GCR. FUNCTIONALLY EQUIVALENT TO 403504202. FIELD BILL RELEASED AS EXCEPTIONAL.	49936	6883
		EQUIVALENT TO 403504303.	49981	6883
403504303	1	IMBED REWORK AND ELIMINATE GAIN RESISTOR SELECTION. CHANGE BUFFER AMP GAIN, BANDPASS GAIN AND BAND-PASS FILTER CONFIGURATION. EQUIVALENT TO 403504203.	49981	6883

CD TYPE: SV
 CD LOC : A1
 MACHINE: 2921, 2922, 2925
 DESCRIPTION - SERVO CARD
 PG EC LEVEL - 49863 DATE: 01/85

CARD PN	COMP. NC.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402239203	1	INITIAL RELEASE RELEASE OF COMPATIBILITY	49227 49387 49291	NONE
*402239307	1	RELEASE OF 300 LEVEL	49269	NONE
*402239308	1	ADD RESISTOR TO EPO DRIVER THRESHOLD.	49336	NONE
*402239309	2	ADD "DOOR AJAR" INTERLOCK CIRCUITRY. MACHINES WITHOUT INTERLOCK SWITCH MUST HAVE MOTHERBOARD JUMPER (B02 TO A02) INSTALLED.	49250 49250A	NONE 68360
*402239310	2	DISABLE BOTH REEL MOTOR DRIVERS WHEN REELS SHOULD BE STILL. COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49510 49863	68437 NONE
*402239311	2	TRIM FILE REEL DAC OFFSET VOLTAGE. COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49658 49863	NONE NONE
*402239312	2	ALLOWS EVEN EXTREME VALVES AT FILE REEL DAC OFFSET VOLTAGE TO BE TRIMMED, IMPROVING FILE REEL SPEED DRIVING LOAD. COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49770 49863	NONE NONE
*402239413	2	RELEASE OF 400 LEVEL EMBED OF 300 LEVEL. EQUIVALENT TO 402239312. COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49715 49863	NONE NONE

CD TYPE: SV
 CD LOC : A1
 MACHINE: 2921,2922, 2925
 DESCRIPTION - SERVO CARD
 PG EC LEVEL - 26319 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*402239313	2	INCREASE GAIN OF AMPLIFIER TO HANDLE INERTIA AT EOT, EQUIVALENT TO 402239414.	49925	*688
*402239414	2	INCREASE GAIN OF AMPLIFIER TO HANDLE INERTIA AT EOT, EQUIVALENT TO 402239313.	49925	*688
		2925 TAPE UNITS REQUIRE LEVEL 402239314 OR ABOVE. 2921 AND 2922 MAY USE LOWER LEVEL.	26319	NONE
*402239314	2	CHANGES MADE TO MAINTAIN COMMONALITY BETWEEN CACHE BUFFER AND STANDARD 2920 PRODUCTS. EQUIVALENT TO 402239415. F/B UPDATE ONLY.	22528	*688
*402239415	2	CHANGES MADE TO MAINTAIN COMMONALITY BETWEEN CACHE BUFFER AND STANDARD 2920 PRODUCTS. EQUIVALENT TO 402239314. F/B UPDATE ONLY.	22528	*688
*402239315	2	APPLY THERMAL COMPOUND TO Q17 AND Q30. CHANGE 2 RESISTORS. EQUIVALENT TO 402239416.	22648	NONE
*402239416	2	APPLY THERMAL COMPOUND TO Q17 AND Q30. CHANGE 2 RESISTORS. EQUIVALENT TO 402239315.	22648	NONE

CD TYPE: SV
 CD LOC : A1
 MACHINE: 2921, 2922, 2925
 DESCRIPTION - SERVO CONTROL
 PG EC LEVEL - 23769 DATE: 01/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
402239316	2	CHANGE METERING AND COLLECTOR LOAN RESISTOR TO PROVIDE COOLER OPERATION AND CORRECT AMPLIFIER GAIN. EQUIVALENT TO 402239417.	23114	NONE
		EQUIVALENT TO 402239418.	23769	NONE
*402239417	2	CHANGE METERING AND COLLECTOR LOAN RESISTOR TO PROVIDE COOLER OPERATION AND CORRECT AMPLIFIER GAIN. EQUIVALENT TO 402239316.	23114	NONE
402239418	2	CHANGE OUTPUT TRANSISTORS AND ANTI-PUMP UP CIRCUIT ON SV CARD. EQUIVALENT TO 402239316.	23769	NONE

CD TYPE: SV-DC
CD LOC : A1
MACHINE: 2920 TAPE UNIT
DESCRIPTION - DC- 48 VOLT SERVO CONTROL
PG EC LEVEL - 26055 DATE: 12/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
404124201	1	INITIAL RELEASE	23900	NONE
		INITIAL RELEASE OF STRUCTURE	26055	NONE

CD TYPE: WR-50
 CD LOC : A4
 MACHINE: 2921
 DESCRIPTION - WRITE CARD
 PG EC LEVEL - 49799 DATE: 11/84

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*402273203	1	INITIAL RELEASE 200 LEVEL. EQUIV TO 402273304	49200	NONE
*402273304	1	IR 300 LEVEL. FUNC EQUIV TO 402273203	49262	NONE
		RELEASE OF COMPATIBILITY	49291	
*402273305	1	CHANGE U18 TO A SCHMITT- TRIGGER DEVICE TO ACCOMODATE ALL VENDORS OF U3. ALL 402273304 CARDS SHIPPED ARE OK.	49357	NONE
*402273306	1	REDUCE RFI RADIATION THROUGH REDUCED PE AC BIAS IN GCR MODE.	49416	NONE
*402273307	1	BY-PASS "WRITE CURRENT ON" ELIMINATES NOISE PROBLEMS DURING WRITE OPERATION WHICH CAUSES F91 FAILURES. REPLACED WITH "ENABLE WRITE CURRENT".	49474	NONE
402273308	2	CHANGE OUTPUT TIMING OF WR CARD TRIANGLE GENERATOR BY CHANGING VALUE OF ONE CAPACITOR, MUST BE INSTALLED CONCURRENTLY WITH EC49504 F/B 68441.	49563	68451
*402273309	2	ADD 120 HZ FILTER TO LEADER SENSE ADD 1 CAP & 1 RESISTOR. IMPROVE FREQUENCY RESPONSE OF BOT-TAPE PRESENT CIRCUIT BY CHANGING R39, R44,R45. CHANGE TIMING OF TRIANGLE GENERATOR. TURN ON TAPE-PRESENT LED WITH A SQUARE WAVE INSTEAD OF A RAMP. EC49504 F/B68441 IS A PREREQUISITE.	49611	68514

CD TYPE: WR-50
 CD LOC : A4
 MACHINE: 2921
 DESCRIPTION - WRITE CARD
 PG EC LEVEL - 23930 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*402273310	2	CHANGE THRESHOLD ON FILE PROTECT DETECTION CIRCUIT FROM 200MV TO 440MV.	49673	685E
		COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49863	NONE
*402273311	2	REMOVE C14 TO ELIMINATE POWER UP PROBLEMS WITH SOME 2.5 VOLT REGULATORS.	49741	NONE
		COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49863	NONE
*402273312	2	ADD CAPACITOR TO ELIMINATE NOISE ON RAMP GENERATOR.	49799	NONE
		THIS FACTORY ONLY CHANGE WAS MADE TO IMPROVE CARD TEST YIELDS.	49799M	NONE
		COMPATIBILITY NUMBER ROLLED BACK. NO COMPATIBILITY BREAK.	49863	NONE
*402273313	2	INCREASE WRITE CURRENT TO 90MA IN GCR THIS WILL DECREASE TEMPORARY WRITE ERRORS. FIELD BILL RELEASED AS EXCEPTIONAL.	49934	6884
402273314	2	INCREASE THRESHOLD LEVEL OF COMPARATORS TO IMPROVE CIRCUIT STABILITY. FACTORY ONLY CHANGE TO IMPROVE MANUFACTURING TEST YIELDS.	22658	NONE
		EQUIVALENT TO 402273414.	23930	NONE

CD TYPE: WR-50
CD LOC : A4
MACHINE: 2921
DESCRIPTION - WRITE CARD
PG EC LEVEL - 23930 DATE: 11/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
402273414	2	INITIAL RELEASE OF IMBED. EQUIVALENT TO 402273314.	23930	NONE

CD TYPE: WR-100
 CD LOC : A4
 MACHINE: 2922, 2925
 DESCRIPTION - WRITE CARD
 PG EC LEVEL - 26931 DATE: 10/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403503201	1	INITIAL RELEASE 100IPS WRITE DRIVER CARD	49573	NONE
*403503202	1	INCREASE WRITE CURRENT TO 90MA GCR THIS WILL DECREASE TEMPORARY WRITE ERRORS. EQUIVALENT TO 403503201.	49935	6884
		2925 TAPE UNITS REQUIRE LEVEL 203 OR ABOVE. 2922 MAY USE LEVEL 201 AND 202.		
403503203	1	CHANGE FILE PROTECT SENSOR TIMING FOR USE WITH CACHE BUFFER. F/B UPDATE ONLY.	22527	6884
		EQUIVALENT TO 403503303 LEVEL	23931	NONE
403503303	1	INITIAL RELEASE IMBED. FIELD BILL UPDATE ONLY. EQUIVALENT TO 403503203 LEVEL.	23931	6884

CD TYPE: PA
CD LOC : SIDE OF CARD CAGE
MACHINE: 2920 TAPE UNIT
DESCRIPTION - INDUSTRY STANDARD TO STC ADAPTOR
PG EC LEVEL - 49918 DATE: 05/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*403497201	1	INITIAL RELEASE	49574	NONE
*403497202	1	ELIMINATE INTERFERANCE WHEN CLOSING CLAMPS. EQUIVALENT TO 403497201.	49703	NONE
403497302	1	INITIAL RELEASE OF EMBED TO PROVIDE NECESSARY GROUNDING.	49918	NONE

CD TYPE: PA-DC
CD LOC : SIDE OF CARD CAGE
MACHINE: 2920 TAPE UNIT
DESCRIPTION - CONNECTOR CARD
PG EC LEVEL - 23998 DATE: 01/88

CARD PN	COMP. NG.	DESCRIPTION OF EC	EC NO.	FIELD APL.
404168201	1	INITIAL RELEASE.	23998	NONE

CD TYPE: PB-DC
CD LOC : SIDE OF CARD CAGE
MACHINE: 2920 TAPE UNIT
DESCRIPTION - CONNECTOR CARD
PG EC LEVEL - 26364 DATE: 05/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404169201	1	INITIAL RELEASE.	23998	NONE
404169202	1	MODIFY FOR THE 48 VOLT DC POWER SUPPLY TO ISOLATE GROUND AND FRAME FB RELEASED EXCEPTIONAL	26364	69423

CD TYPE: PB
CD LOC : SIDE OF CARD CAGE
MACHINE: 2920 TAPE UNIT
DESCRIPTION - INDUSTRY STANDARD TO STC ADAPTOR
PG EC LEVEL - 49918 DATE: 06/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIEL APL.
*403498201	1	INITIAL RELEASE	49575	NONE
403498301	1	INITIAL RELEASE OF IMBED TO PROVIDE NECESSARY GROUNDING.	49918	NONE

CD TYPE: PW
CD LOC :
MACHINE: 2920 VS INTERFACE
DESCRIPTION -
PG EC LEVEL - 26144 DATE: 08/88

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
404055201	1	INITIAL RELEASE. EQUIVALENT TO 404055301.	23612	NONE
404055301	1	IMPROVE MANUFACTURABILITY BY INCREASING CIRCUIT SIDE PAD SIZE. EQUIVALENT TO 404055201.	26144	NONE

CD TYPE: EXTERNAL DIAGNOSTICS DISKETTE
CD LOC :
MACHINE: 2921, 2922, 2925 WITH STK INTERFACE
DESCRIPTION: 3910 DIAGNOSTICS
PG EC LEVEL: 49984 DATE: 10/85

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
403842801	1	INITIAL RELEASE OF 3910 DIAGNOSTICS FOR USE WITH 2921, 2922 AND 2925. TAPE UNITS WITH STORAGETEK IN- TERFACE.	49984	NONE

CD TYPE: DC POWER SUPPLY
CD LOC : POWER SUPPLY
MACHINE: 2920 TAPE UNIT
DESCRIPTION: DC POWER SUPPLY
PG EC LEVEL: 26055 DATE: 12/87

CARD PN	COMP. NO.	DESCRIPTION OF EC	EC NO.	FIELD APL.
*404042901	1	INITIAL RELEASE	23543	NONE
404042902	1	SPECIFICATION CHANGES.	23543E	NONE
		INITIAL RELEASE OF STRUCTURE.	26055	NONE

LIST OF EFFECTIVE PAGES (CONT.)

TITLE	DESCRIPTION	PAGE NO.	PAGE LEVEL	EC DATE
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IFP-50	INTERFACE/CONTROLLER (CONT)	3-25A	26395	06/88
IFP	INTERFACE/CONTROLLER	3-26	26395	06/88
	(CONT.)	3-26A	26395	06/88
	(CONT.)	2-26B	26395	06/88
IF7	INTERFACE/CONTROLLER	3-27	49978	10/85
IFP-DC	48 VOLT INTERFACE	3-28	26140	02/88
KK	OP PANEL CD	3-29	49810	06/85
NK	VOLTAGE REGULATOR	3-30	22917	07/86
PK	SHORT CIRCUIT DETECT	3-31	49985	10/85
	(CONT.)	3-31A	49985	10/85
RD-50	AMPLIFY & DETECT READ	3-32	49923	06/85
RD-100	READ A/D, CLOCKING & DETECT.	3-33	49981	12/85
SV	SERVO CONTROL	3-34	49863	01/85
	(CONT.)	3-34A	26319	05/88
	(CONT.)	3-34B	23769	01/88
SV-DC	48 VOLT SERVO CONTROL	3-35	26055	12/87
WR-50	WR DRIVERS SENSOR CKTRY	3-36	49799	11/84
	(CONT.)	3-36A	22930	11/87
	(CONT.)	3-36B	23930	11/87
WR-100	WR DRIVERS SENSOR CKTRY	3-37	23931	10/87
PA	SIDE OF CARD CAGE	3-38	49918	05/85
PA-DC	SIDE OF CARD CAGE	3-39	23998	01/88
PB-DC	SIDE OF CARD CAGE	3-40	26364	05/88
PB	SIDE OF CARD CAGE	3-41	49918	05/85
PW	2925 VS INTERFACE	3-42	23612	06/87
DIAG	DIAGNOSTICS FOR 3910	3-43	49984	10/85
POWER SUPPLY	48 VOLT-DC	3-44	26055	12/87