

ILLUSTRATED PARTS BREAKDOWN

RA81 DISK DRIVE

HOW TO USE THE IPB

GENERAL

This IPB is compiled following the organization and nomenclature of the engineering drawing structure.

MAJOR ASSEMBLY LOCATOR

The Major Assembly Locator (first illustration) is an index that provides a description and a figure reference for all illustrations used in this manual.

INDENTED PARTS LIST

This manual identifies each assembly being broken down (figure reference callout), and all parts of that assembly. Further breakdown of an assembly is shown by an asterisk (*) preceding the item callouts in the Description Column. The number of asterisks preceding an item is used to denote the subordination of that item with respect to the Major Assembly. A single asterisk preceding an item description indicates that the item is part of the major assembly being illustrated. Items that are subordinate to single asterisks items, are denoted by two asterisks (**) and immediately follow the related single asterisk item. Additional asterisks are used, as required, to denote further subordination. This system of part identification, provides a means for the user to identify the next higher assembly item and make alternate selections for parts when the required replacement part or assembly is not immediately available.

COLUMN CALLOUT DESCRIPTION

Figure & Item — Indicates the figure number and item number of each part.

Description — Lists the name of the part and pertinent specifications (when required). Asterisks preceding the description denote the subordination of the part to the next higher assembly.

DEC Part No. — Lists the DEC part ordering number. A blank in this column indicates a DEC part number was not assigned at the time of publication.

ECO Cut-In — The notation at the top of this column indicates the ECO level of the system (option), at which the IPB was initially prepared. Subsequent ECO level designations, that modify existing parts or add new parts to the device, are inserted in the ECO Cut-In column next to the part that is added or modified. A bracket ([]) preceding the item description is used to indicate the parts affected by ECO's.

Vendor Code/Part No. — Indicates vendor parts that are not stocked by DEC. Refer to the Field Service Spares Catalog (vendor part number to DEC part number) for the vendor code cross-reference.

Used On Code — Letters in this column correspond to the variation codes assigned in Figure 1. Parts with an Alpha notation(s) are used only in those option variations. A blank indicates that the part is used on all option variations.

Ref Fig No. — A cross reference between illustrations. For each Major Assembly, the number in this column denotes the figure of the next higher assembly. For all subassemblies, the number in this column denotes the figure showing additional detailed breakdown.

SYMBOL USAGE

Hardware Designators — Alpha designators for screws (S), washers (W), nuts (N), and retaining rings (R) are inserted after the item number callouts on the illustration when stacked item numbers are used.

Attaching Hardware — The @ symbol is inserted before any part that is used as attaching hardware. Attaching hardware is denoted as those parts that are not an integral part of the referenced assembly.

(NFR) Not Field Repairable — The (NFR) symbol is inserted after any assembly that is not to be field dismantled.

Other Symbols — Any other symbols that are required for kits, accessories, etc., will be explained and appear as part of the item description.

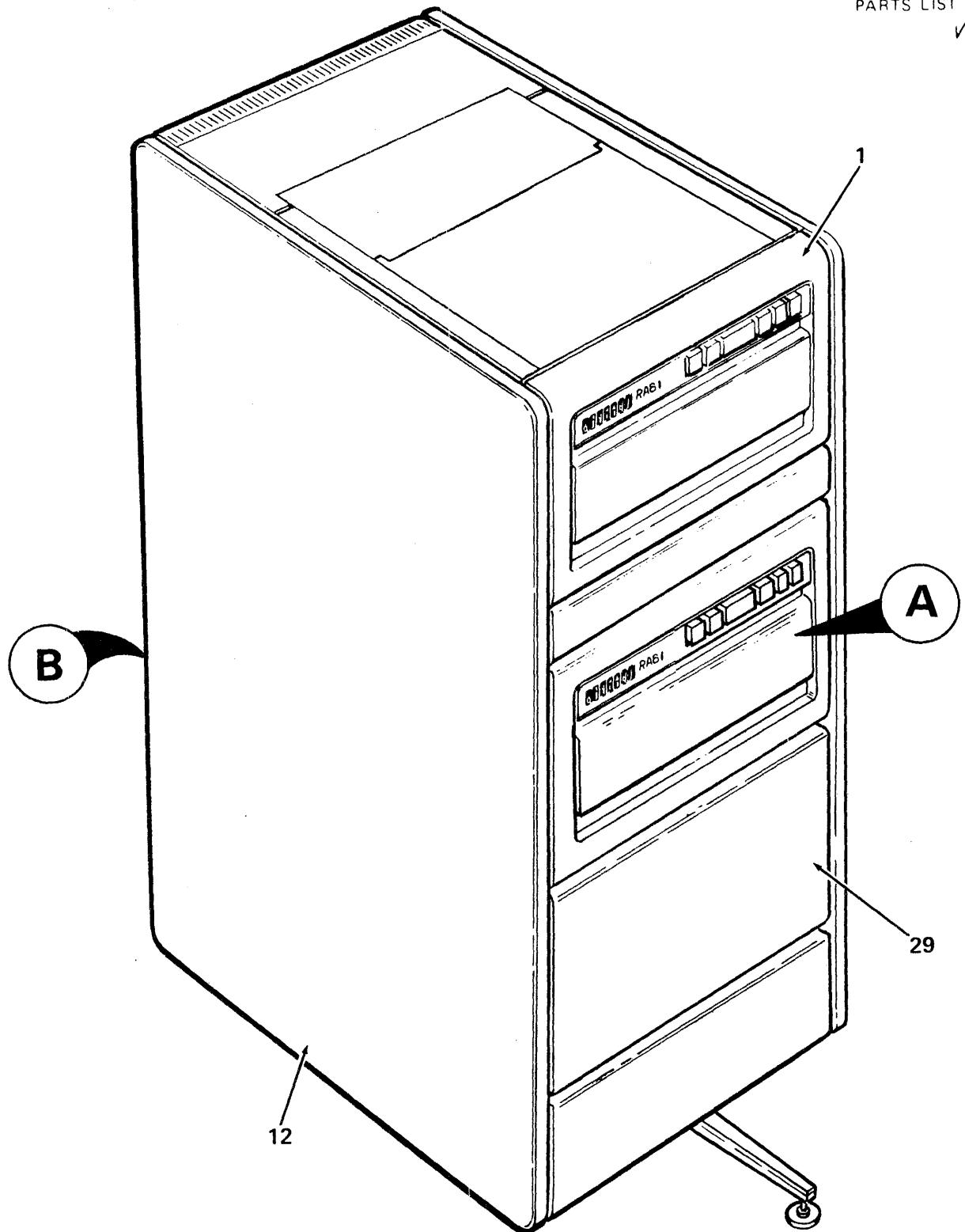
REVISION HISTORY					OTHER IPB MANUALS REQUIRED TO SUPPORT THIS OPTION
PRINTING	ECO LEVEL			DATE	
1st Printing	RA81	00002-00002	70-16723	00003-00003	EK-H7660-IP EK-00874-IP
	70-19062	RA81-00002	H9544-H	00003-00003	
	70-18446	00006-00006	H9544-C	00007-00007	
	70-19044	70-19062-00002	H9544-B	00006-00006	
	H9642-A	00002-00002	H9544-DA	00005-00005	
	H9504-U	74-15314-00002	H9544-DB	00005-00005	
	70-16741	R80-00014	H9544-A	00005-00005	
	70-16773	R80-00014	70-16980	R80-00004	
	70-19687	00001-00001	70-18331	70-19062-00002	
	70-19695	00005-00005	70-16733	00005-00005	
	70-17340	R80-00014			
	70-18324	00000-00000			
	70-19045	00001-00001			
	70-19046	00000-00000			
	70-16724	00002-00002			

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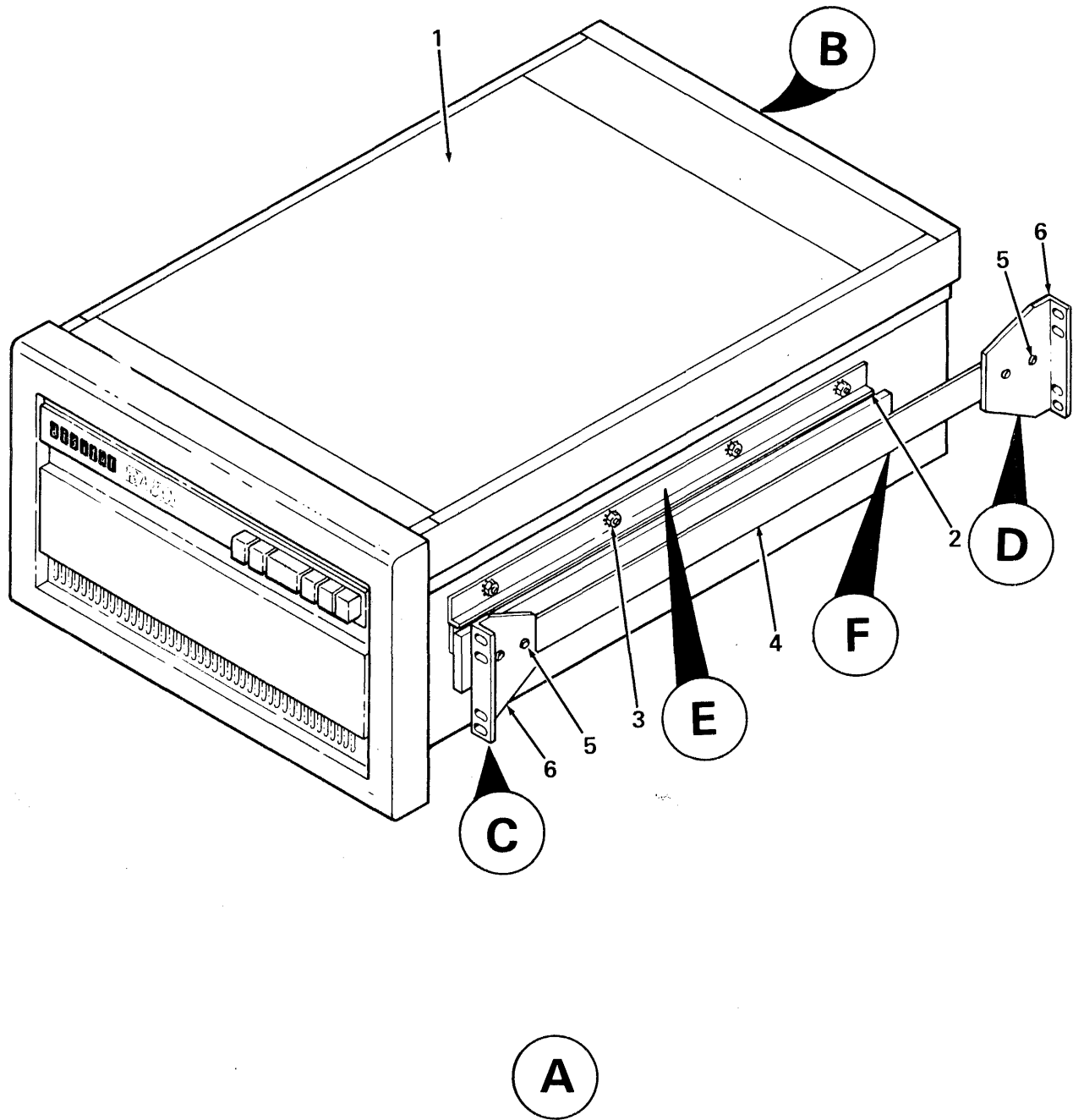
DEC is not responsible for errors which may appear in the technical description (including illustrations and photographs) of the products covered by this manual.

None of the descriptions contained in this manual imply the granting of any license whatsoever to make, use or sell equipment constructed in accordance therewith.



RA81-01

Figure 1. RA81 Disk Drive Assembly (Sheet 1 of 5)



RA81-01A

Figure 1. RA81 Disk Drive Assembly (Sheet 2 of 5)

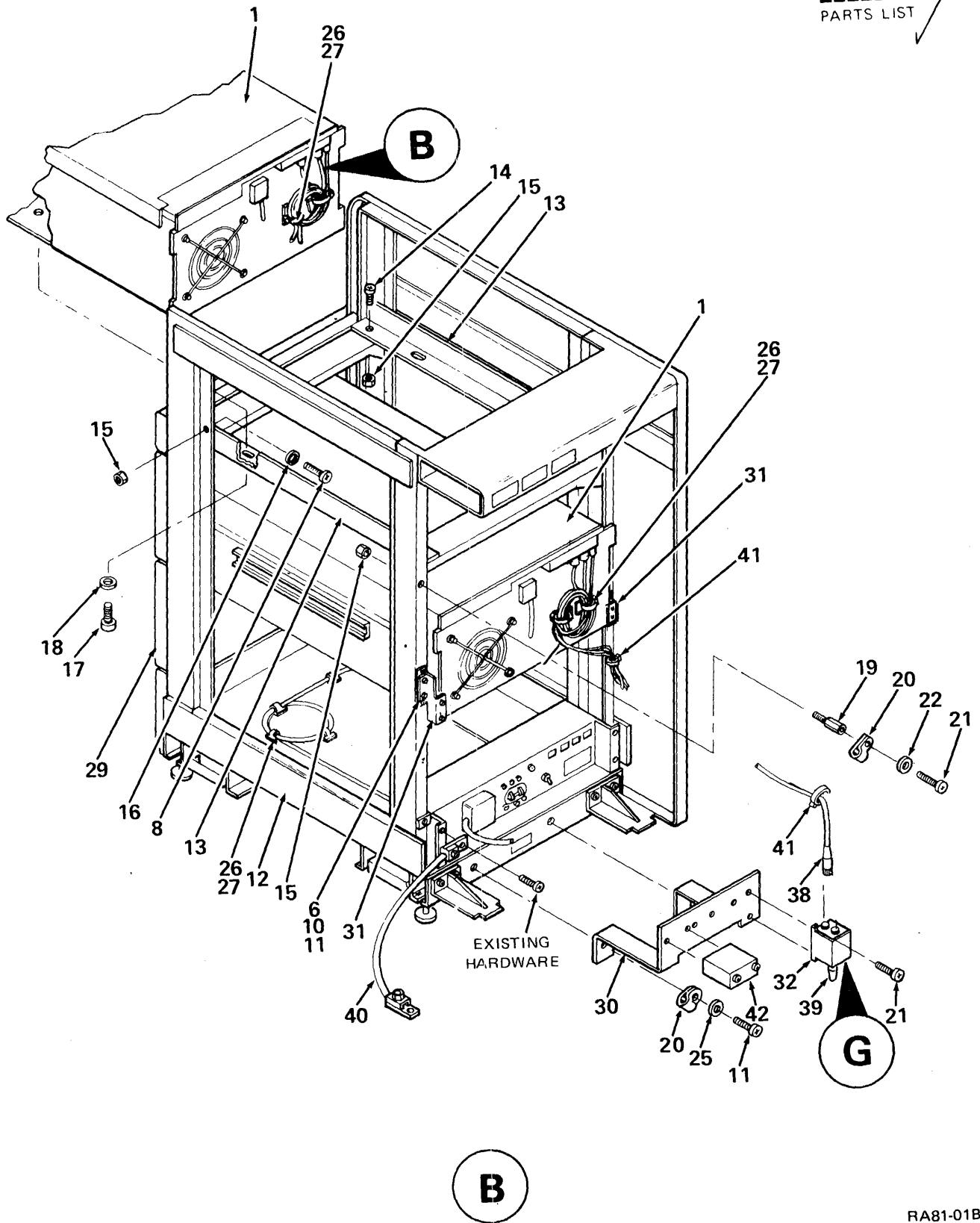
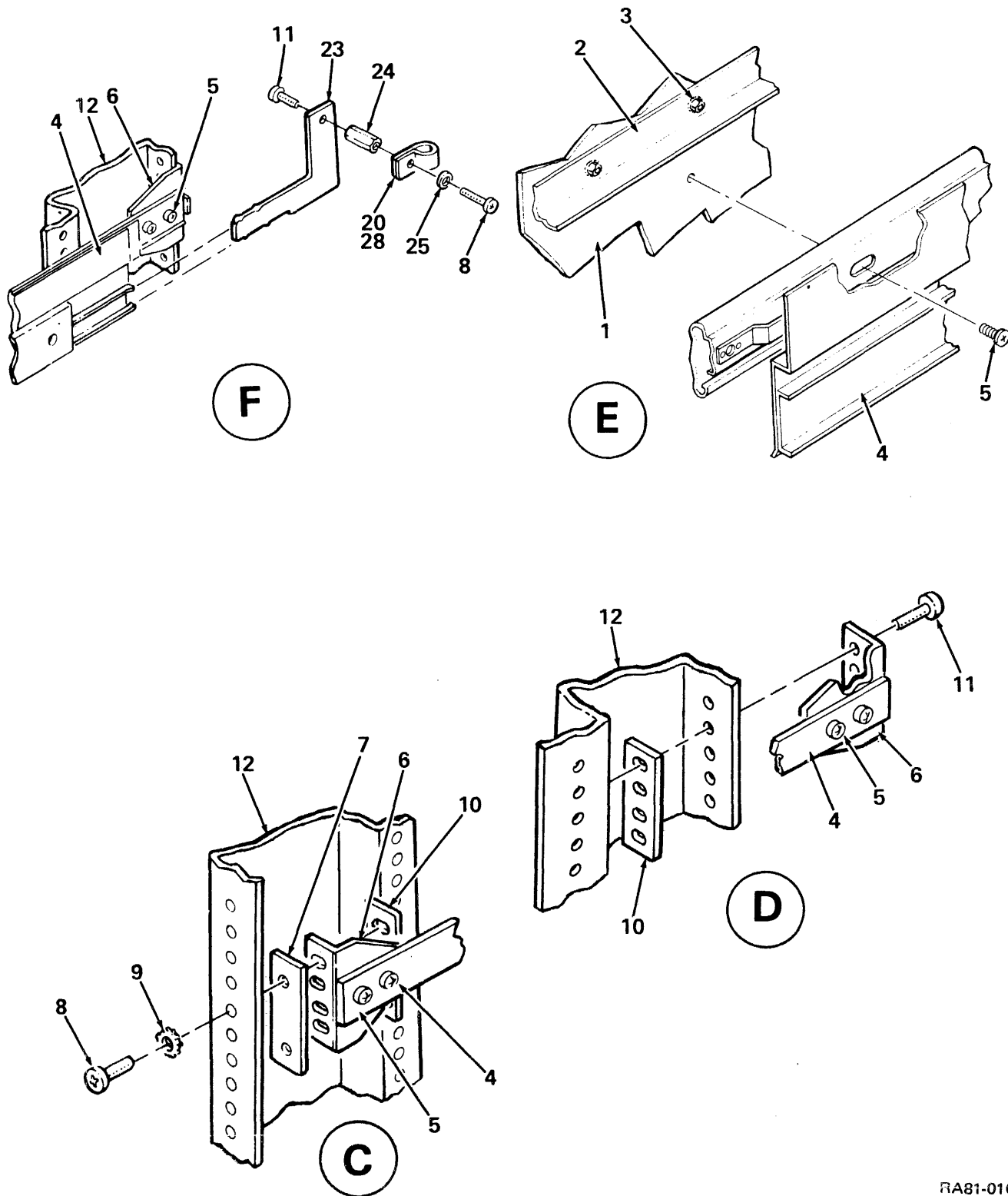


Figure 1. RA81 Disk Drive Assembly (Sheet 3 of 5)

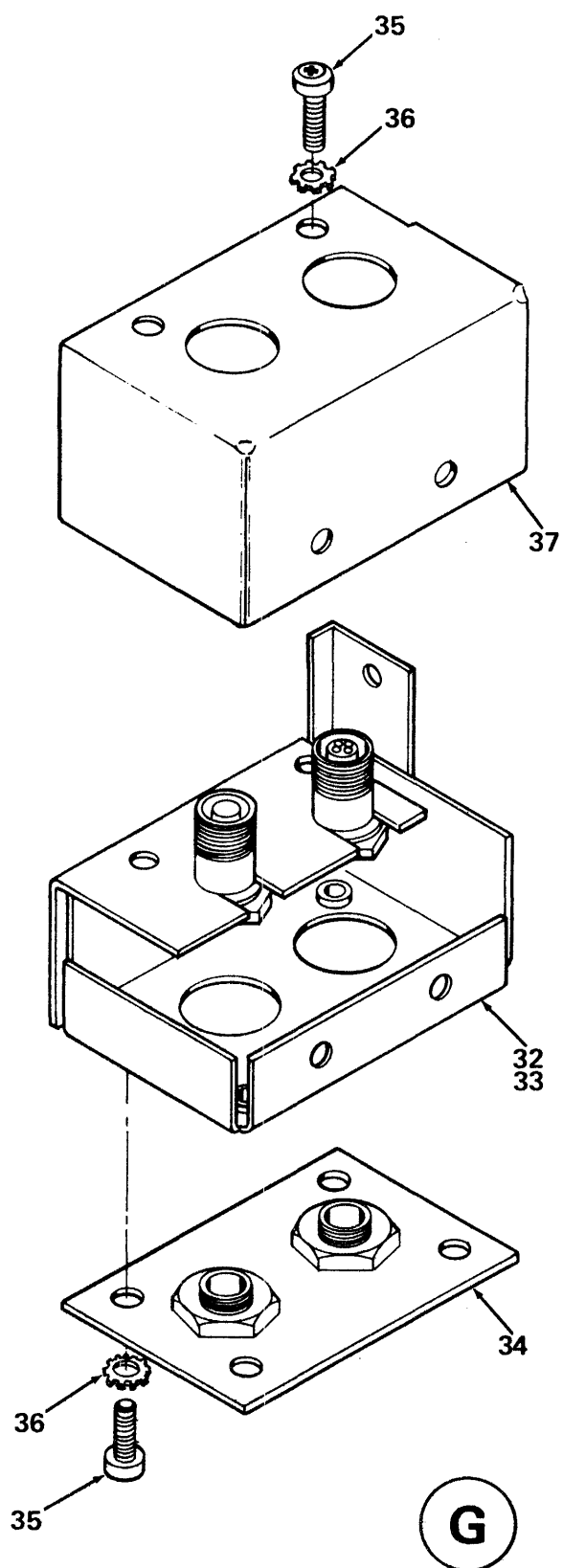
RA81-01B

IPB-RA81



RA81-01C

Figure 1. RA81 Disk Drive Assembly (Sheet 4 of 5)



G

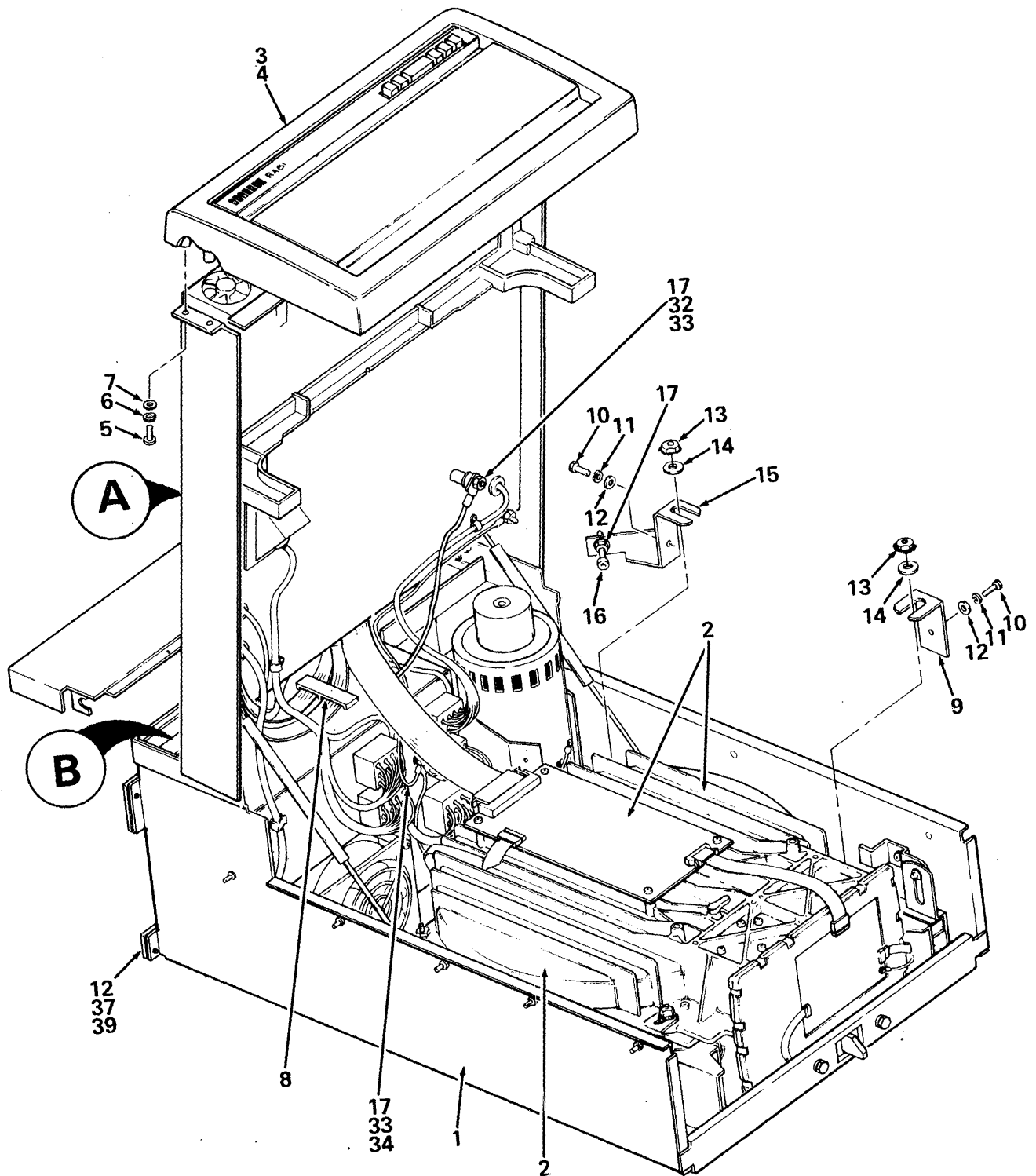
RA81-01D

Figure 1. RA81 Disk Drive Assembly (Sheet 5 of 5)

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN RA81 00002	USED ON CODE	REF FIG NO.
1-	RA81 DISK DRIVE ASSEMBLY				
	Code A – Used on Model RA81-AA 16 BIT 120V 60 Hz (RACK MOUNT)	RA81-AA		A	
	Code B – Used on Model RA81-AD 16 BIT 240V 50 Hz (RACK MOUNT)	RA81-AD		B	
	Code C – Used on Model RA81-AE 18 BIT 120V 60 Hz (RACK MOUNT)	RA81-AE		C	
	Code D – Used on Model RA81-AJ 18 BIT 240V 50 Hz (RACK MOUNT)	RA81-AJ		D	
	Code E – Used on Model RA81-CA 16 BIT 120V 60 Hz (IN H9642 CAB)	RA81-CA		E	
	Code F – Used on Model RA81-CD 16 BIT 240V 50 Hz (IN H9642 CAB)	RA81-CD		F	
	Code G – Used on Model RA81-CE 18 BIT 120V 60 Hz (IN H9642 CAB)	RA81-CE		G	
	Code H – Used on Model RA81-CJ 18 BIT 240V 50 Hz (IN H9642 CAB)	RA81-CJ		H	
	Code J – Used on Model RA81-DA 16 BIT 120V 60 Hz (IN H9642 CAB)	RA81-DA		J	
	Code K – Used on Model RA81-DD 16 BIT 240V 50 Hz (IN H9642 CAB)	RA81-DD		K	
	Code L – Used on Model RA81-DE 18 BIT 120V 60 Hz (IN H9642 CAB)	RA81-DE		L	
	Code M – Used on Model RA81-DJ 18 BIT 240V 50 Hz (IN H9642 CAB)	RA81-DJ		M	
	Code N – Used on Model RA81-EA 16 BIT 120V 60 Hz (IN H9642 CAB)	RA81-EA		N	
	Code P – Used on Model RA81-ED 16 BIT 240V 50 Hz (IN H9642 CAB)	RA81-ED		P	
	Code Q – Used on Model RA81-EE 18 BIT 120V 60 Hz (IN H9642 CAB)	RA81-EE		Q	
	Code R – Used on Model RA81-EJ 18 BIT 240V 50 Hz (IN H9642 CAB)	RA81-EJ		R	
1	*DISK DRIVE ASSEMBLY 120V 60 Hz	70-19062-01		AEJN	2
	*DISK DRIVE ASSEMBLY 240V 50 Hz	70-19062-02		BFKP	2
	*DISK DRIVE ASSEMBLY 120V 60 Hz	70-19062-03		CGLO	2
	*DISK DRIVE ASSEMBLY 240V 50 Hz	70-19062-04		DHMR	2
2	*Rail, Mounting	12-13686-01		ABCD JKLM NPQR	
3	*Nut, Kep No. 6-32 x 5/16	90-06560-00		ABCD JKLM NPQR	

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN RA81 00002	USED ON CODE	REF FIG NO.
1-					
4	*Chassis Slide	12-13686-00		ABCD JKLM NPQR	
5	*Screw, Phl Pan Hd No. 8-32 x 5/16	90-10174-01		ABCD JKLM NPQR	
6	*Bracket, Chassis Slide	74-19261-00		ABCD JKLM NPQR	
7	*Spacer, Slide Mount	74-25167-01		ABCD JKLM NPQR	
8	*Screw, Phl Pan Hd No. 10-32 x 5/8	90-06074-01			
9	*Washer, Ext Tooth Lock No. 10	90-07651-00			
10	*Bar, Nut	74-25168-01		ABCD JKLM NPQR	
11	*Screw, Phl Truss Hd No. 10-32 x 1/2	90-09700-00			
12	*TOP LOADING CABINET ASSEMBLY 120V 60 Hz	H9642-AS		EGJLNQ	5
	*TOP LOADING CABINET ASSEMBLY 240V 50 Hz	H9642-AT		FHKMPR	5
13	*Angle, Mounting	74-25325-00		E - R	
14	*Screw, Phl Flat Hd No. 10-32 x 1/2	90-06073-02		E - R	
15	*Nut, Kep No. 10-32 x 3/8	90-06565-00			
16	*Washer, Int Tooth Lock	90-06636-00		E - R	
17	*Screw, Sems Slotted Hex Hd No. 1/4-20 x 1/2	90-09988-00		E - R	
18	*Washer, Flat	90-06646-00		E - R	
19	*Standoff, Hex Male/Female No. 10-32, 6-32 x 1	90-00001-05			
20	*Cable Clamp (11/16")	90-07088-00			
21	*Screw, Sems Phl Pan Hd No. 6-32 x 3/8	90-09984-00			
22	*Washer, Flat	90-06659-00			
23	*Spring, Retainer Cable	74-25326-00		ABCD JKLM NPQR	
24	*Spacer, Hex No. 10-32, 3/8 x 3/4	90-07662-00		ABCD JKLM NPQR	
25	*Washer, Flat	90-06664-00			
26	*Cable Tie	90-07032-00			
27	*Mount, Cable Tie	90-08264-00		E - R	
28	*Cable Clamp	90-07083-00		ABCD JKLM NPQR	
29	*FILLER PANEL ASSEMBLY	H9504-UA		E-M	6

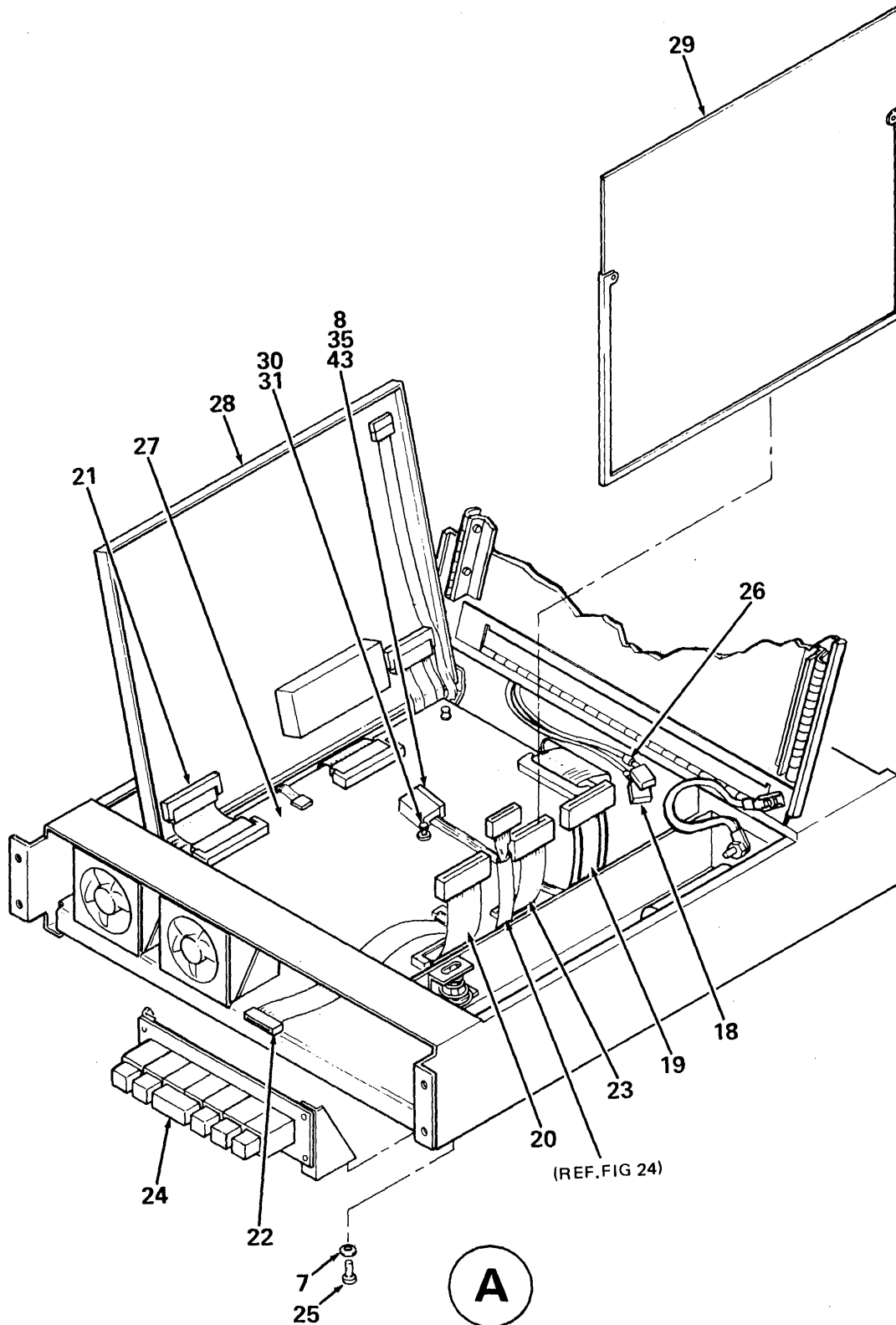
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN RA81 00002	USED ON CODE	REF FIG NO.
1-					
30	*Bulkhead Mounting Weldment Assembly	70-20016-01		E - R	
31	*Bracket, ESD	74-28330-01		ABCD JKLM NPQR	
32	*SEQUENCE BOX ASSEMBLY	70-19713-01		E - R	
33	**Sequence Box Weldment Assembly	70-20017-01		E - R	
34	**Sequence Box Harness Assembly	70-20019-01		E - R	
35	**Screw, Phi Pan Hd No. 6-32 x 3/8	90-06022-01		E - R	
36	**Washer, Ext Tooth Lock No. 6	90-07649-00		E - R	
37	**Cover, Sequence Box	74-27510-01		E - R	
38	*Shielded Drive Sequence Cable Assembly	70-19690-08		E - R	
39	*Plug Assembly	70-19692-01		E - R	
40	*Ground Strap	74-12827-25		E - R	
41	*Cable Tie	90-09350-01		E - R	
42	*I/O Bulkhead Drive Module	70-18340-02			
43	*S.I. Cable Assembly (12') (Not Shown See Note.)	BC26V-12			
	Labels/Decals (Not Shown)				
	*Decal, "UL"	74-16197-02		E - R	
	*Label, "Serial/Power"	36-17674-00			
	*Label, "Caution Stability RA81"	36-20554-01		E - R	
	*Decal, "CSA"	36-13211-00		FHKMPR	
	*Label, "Assy, 04, 01"	36-18307-05		E - R	
	*Label, "FCC Class"	36-17880-03		E - R	
	Note: Item 43 is shipped as a loose piece with unit.				



RA81-02

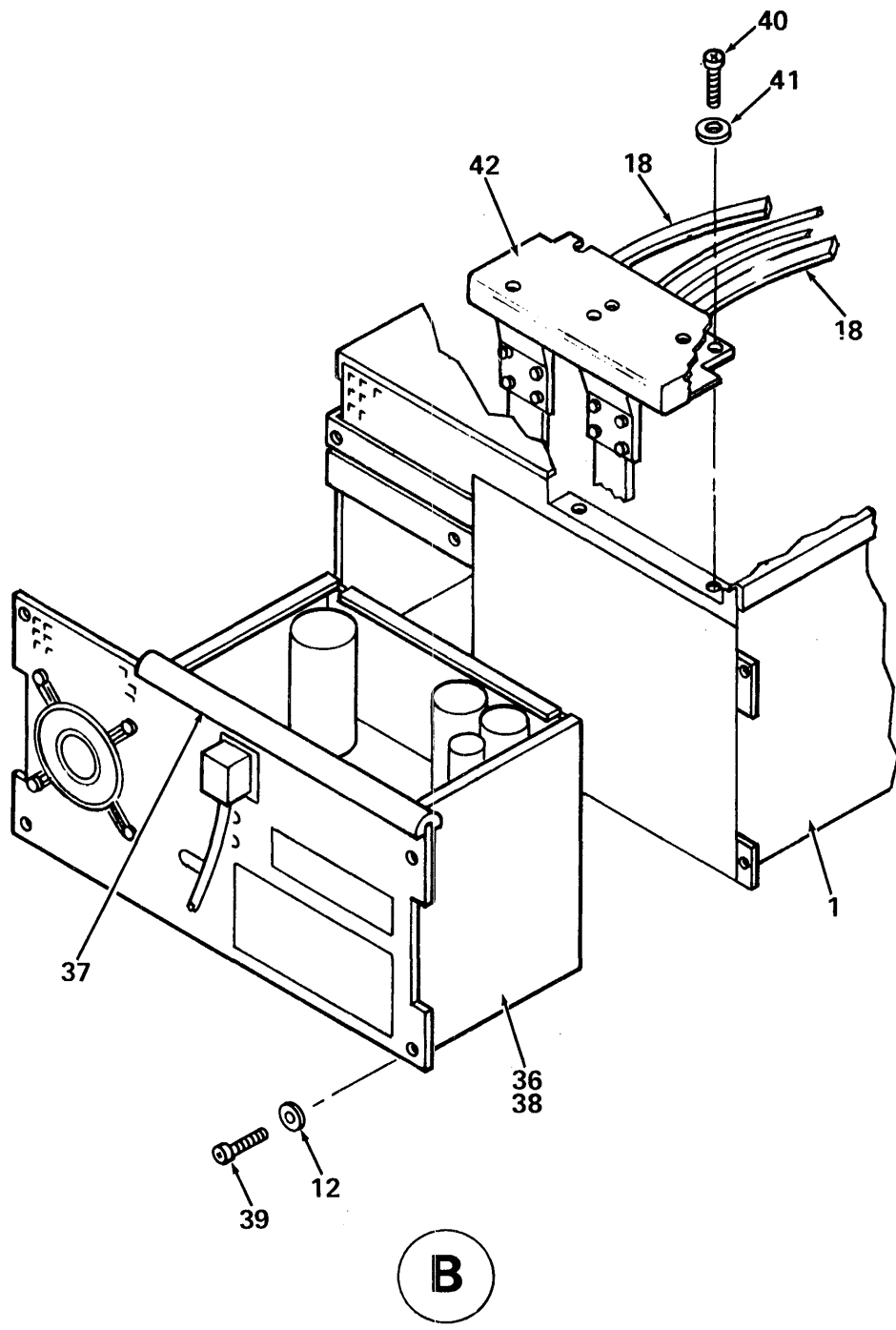
Figure 2. Disk Drive Assembly (Sheet 1 of 3)

IPB-RA81



RA81-02A

Figure 2. Disk Drive Assembly (Sheet 2 of 3)



B

RA81-02B

Figure 2. Disk Drive Assembly (Sheet 3 of 3)

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN RA81 00002	USED ON CODE	REF FIG NO.
2-	DISK DRIVE ASSEMBLY 120V 60 Hz	70-19062-01		AEJN	1
	DISK DRIVE ASSEMBLY 240V 50 Hz	70-19062-02		BFKP	1
	DISK DRIVE ASSEMBLY 120V 60 Hz	70-19062-03		CGLO	1
	DISK DRIVE ASSEMBLY 240V 50 Hz	70-19062-04		DHMR	1
1	*BASIC DISK DRIVE ASSEMBLY 120V 60 Hz	70-18446-04		AEJN	3
	*BASIC DISK DRIVE ASSEMBLY 240V 50 Hz	70-18446-05		CGLO	3
				BFKP	3
				DHMR	3
2	*HDA-R/W MODULE ASSEMBLY (16 BIT HDA)	70-19044-01		AEJN	4
	*HDA-R/W MODULE ASSEMBLY (18 BIT HDA)	70-19044-02		BFKP	4
				CGLO	4
				DHMR	4
3	*BEZEL ASSEMBLY	70-17340-02			11
4	*Filter, Foam	74-22816-00			
5	*Screw, Phi Pan Hd No. 6-32 x 5/16	90-06021-01			
6	*Washer, Split Lock No. 6	90-07801-00			
7	*Washer, Flat No. 6	90-06659-00			
8	*Cable Clamp	90-09636-00			
9	*Bracket, Shipping	74-23897-00			
10	*Screw, Hex Hd No. 10-32 x 1/2	90-06231-09			
11	*Washer, Split Lock No. 10	90-07906-00			
12	*Washer, Flat	90-06664-00			
13	*Nut, Kep No. 1/4-20 x 7/16	90-18203-00			
14	*Washer, Flat	90-07983-00			
15	*Shipping Bracket	74-23898-00			
16	*Screw, Socket Cap No. 10-32 x 1-1/2	90-06352-08			
17	*Nut, Kep No. 10-32 x 3/8	90-06565-00			
18	*Internal Sequence Cable Assembly	70-19689-6B			
19	*Drive Sequence Cable Assembly	70-19691-1J			
20	*R80 Data 40 Cable Assembly (P204, P303)	70-16737-00			
21	*R80 Data 40 Cable Assembly (P305, P402)	70-16737-01			
22	*Control Panel Cable Assembly	70-16740-00			
23	*Data 20 Cable Assembly	70-16738-00			
24	*OPERATOR CONTROL PANEL ASSEMBLY	70-18324-00			12
25	*Screw, Phi Pan Hd No. 6-32 x 5/16	90-09708-00			
26	*Cable Tie	90-10266-00			
27	*RA81 Microprocessor Module	54-15247-00			
28	*SERVO BOARD/STIFFENER ASSEMBLY	70-19045-01			13
29	*PERSONALITY BOARD/STIFFENER ASSEMBLY	70-19046-01			14
30	*Grommet, Snap-in	90-09966-00			
31	*Plunger	90-09963-00			
32	*Ground Strap (9'')	12-13756-09			

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN RA81 00002	USED ON CODE	REF FIG NO.
2-					
33	*Washer, Ext Tooth Lock No. 10	90-07651-00			
34	*Ground Strap (3")	12-13756-03			
35	*HHT Cable and Bracket Assembly	70-20018-01			
36	*H7660 POWER SUPPLY ASSEMBLY 120V 60 Hz	H7660-A		AEJN	
			See H7660 IPB.	CGLO	
	*H7660 POWER SUPPLY ASSEMBLY 240V 50 Hz	H7660-B		BFKP	
				DHMR	
37	*Gasket, Power Supply	12-20320-01			
38	*Mount, Cable Tie	90-08264-00			
39	*Screw, Hex Washer Hd Self Tap No. 8-32 x 3/8	90-10075-00			
40	*Screw, Phi Pan Hd No. 4-40 x 3/8	90-06011-01			
41	*Washer, Int Tooth Lock	90-06032-00			
42	*Bracket, Drive Bulkhead	74-27189-01			
43	*Clip, "U"	90-09748-00			
	Labels/Decals (Not Shown)				
	*Label, "RA81"	36-17314-01			
	*Label, "Serial/Power"	36-17674-00			
	*Decal, "CSA"	36-13211-00			
	*Decal, "UL"	74-16197-02			
	*Label, "Switch Marker"	36-18940-01			

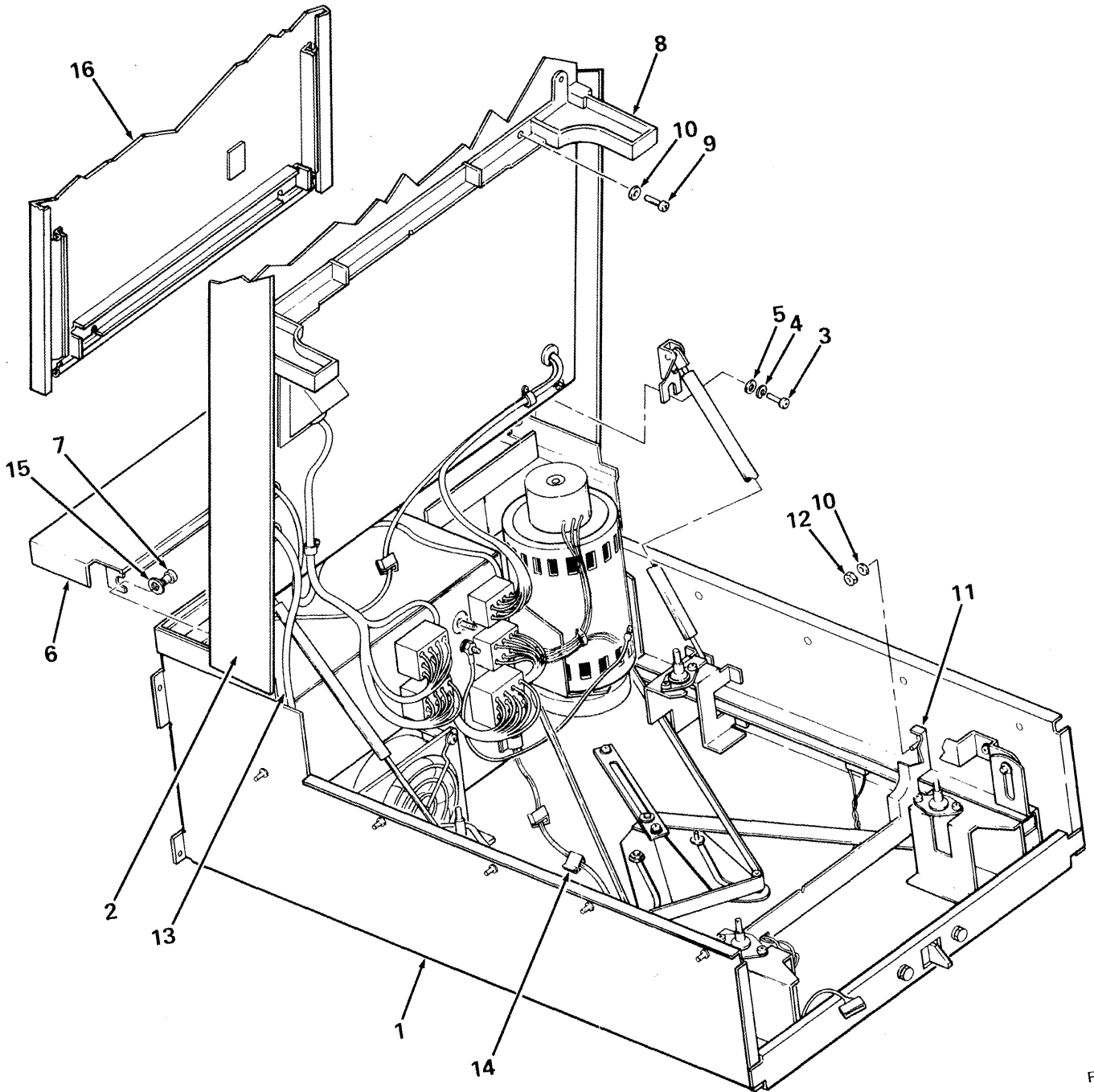
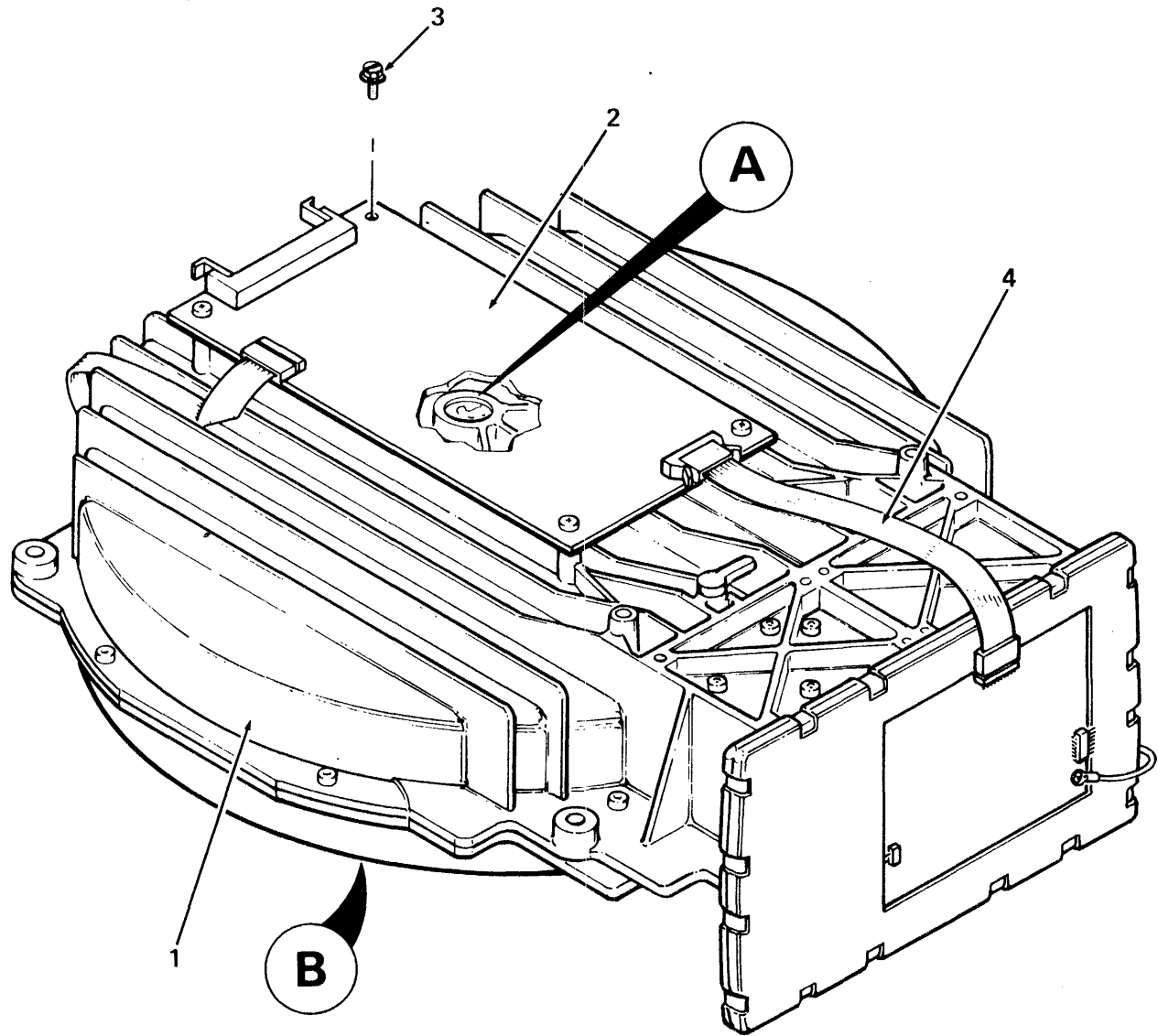


Figure 3. Basic Disk Drive Assembly

RA81-03

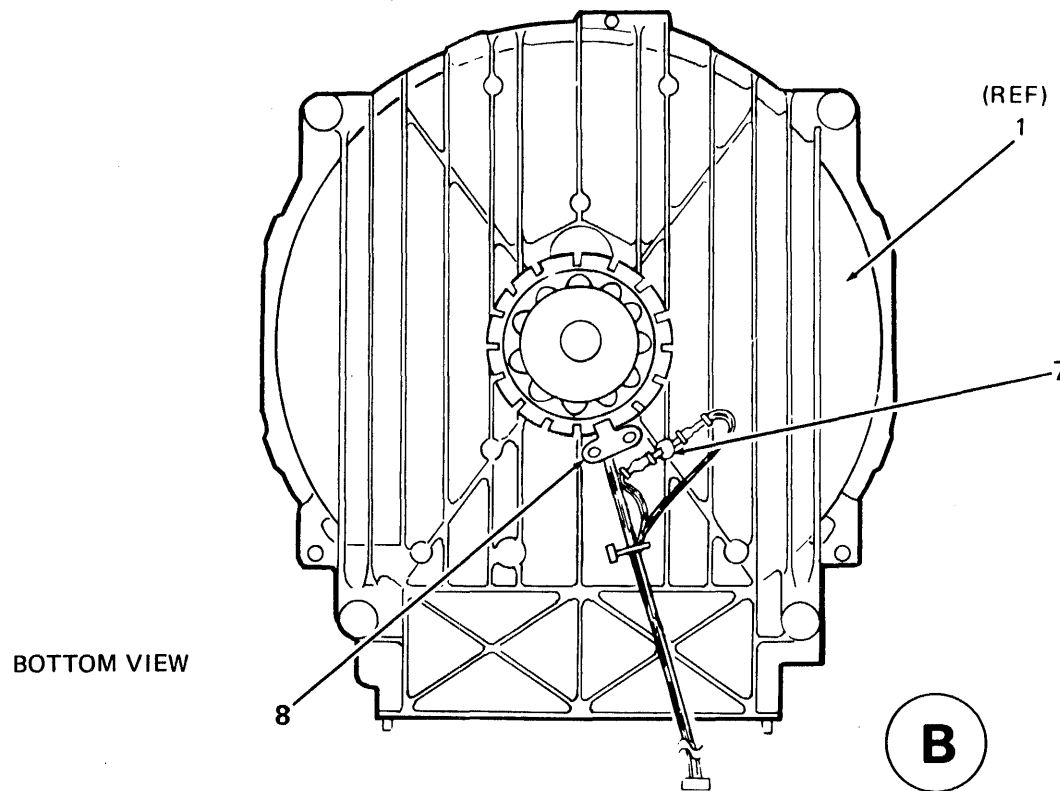
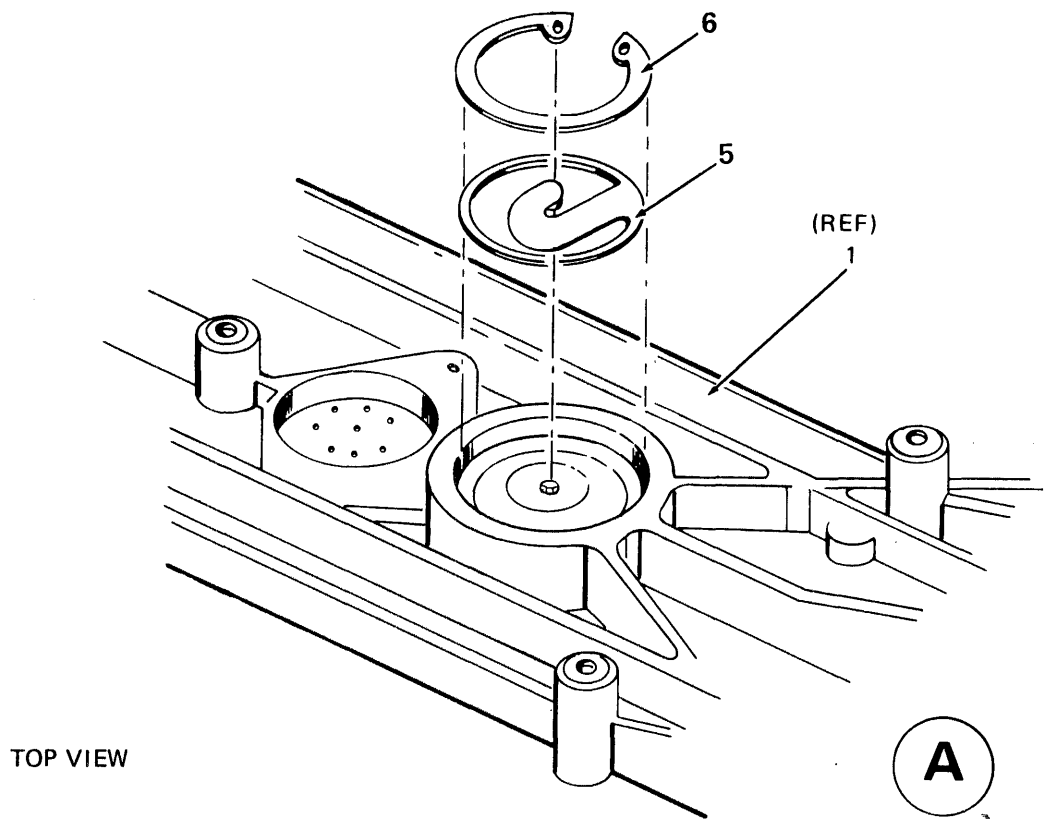
IPB-RA81

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO. ^M	ECO CUT-IN 70-18446 00006	USED ON CODE	REF FIG NO.
3-	BASIC DISK DRIVE ASSEMBLY 120V 60 Hz	70-18446-04		AEJN	2
	BASIC DISK DRIVE ASSEMBLY 240V 50 Hz	70-18446-05		CGLO	
1	* LOWER CHASSIS ASSEMBLY 120V 60 Hz	70-16741-00		BFKP	2
	* LOWER CHASSIS ASSEMBLY 240V 50 Hz	70-16741-01		DHMR	
2	* LOGIC CHASSIS ASSEMBLY 120V 60 Hz	70-16773-04		AEJN	7
	* LOGIC CHASSIS ASSEMBLY 240V 50 Hz	70-16773-05		CGLO	
3	*Screw, Phl Pan Hd No. 8-32 x 5/16	90-06036-01		BFKP	7
4	*Washer, Split Lock No. 8	90-06690-00		DHMR	
5	*Washer, Flat	90-06664-00		AEJN	8
6	* REAR COVER ASSEMBLY	70-19687-01		CGLO	
7	*Screw, Pivot	74-22822-00		BFKP	7
8	*Top Baffle Assembly	70-17616-00		DHMR	
9	*Screw, Phl Pan Hd Self Tap No. 6-32 x 3/8	90-09514-01		AEJN	8
10	*Washer, Flat No. 6	90-06659-00		CGLO	
11	*Bottom Baffle Assembly	70-17615-00		BFKP	8
12	*Nut, Kep No. 6-32	90-06560-00		DHMR	
13	*PRE-AMP Servo Cable Assembly	70-16735-00		AEJN	8
14	*Cable Clamp	90-09636-00		CGLO	
15	*Washer, Flat (Nylon)	90-06710-00		BFKP	8
16	* LOGIC COVER ASSEMBLY	70-19695-02		DHMR	



RA81-04

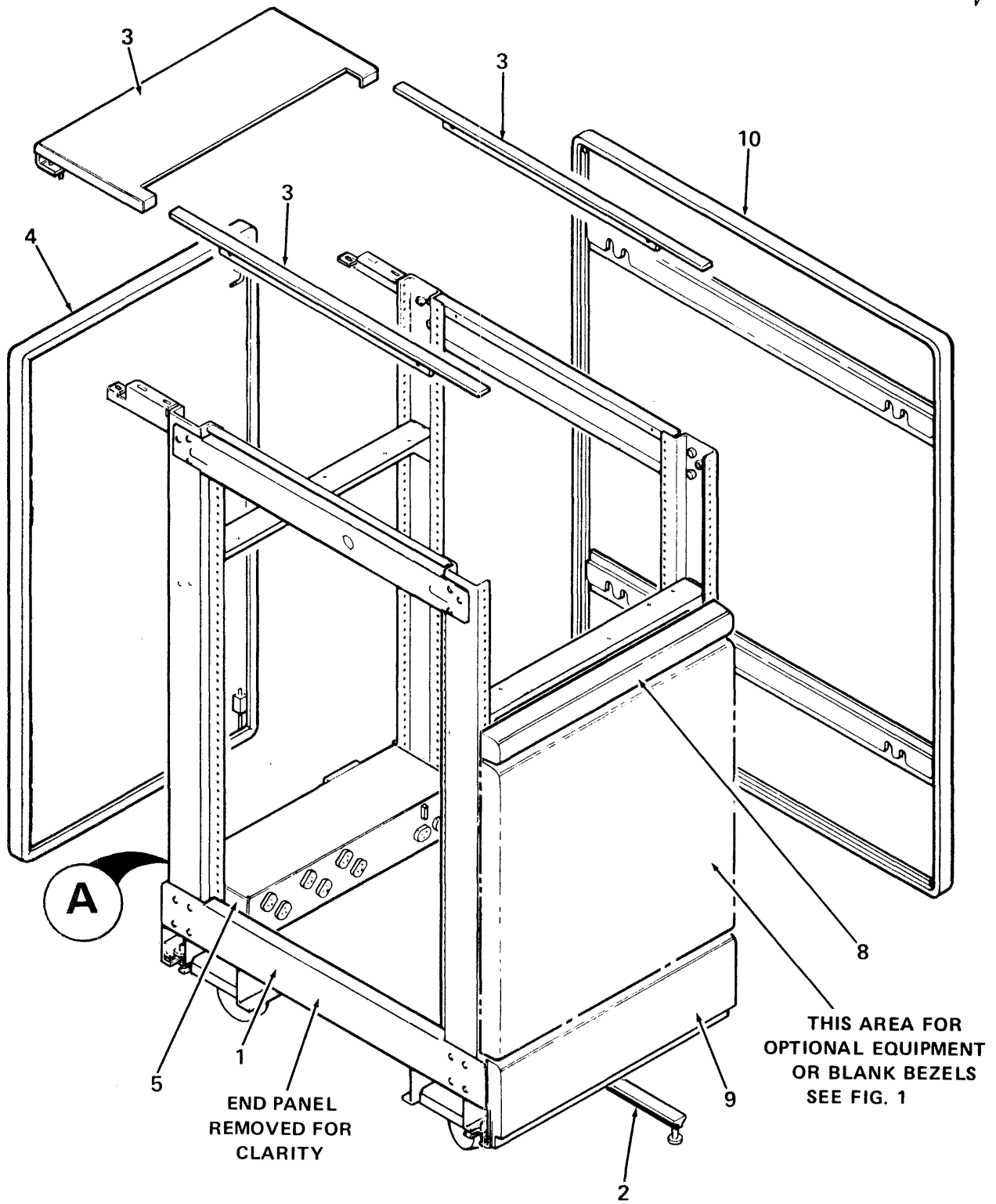
Figure 4. HDA-R/W Module Assembly (Sheet 1 of 2)



RA81-04A

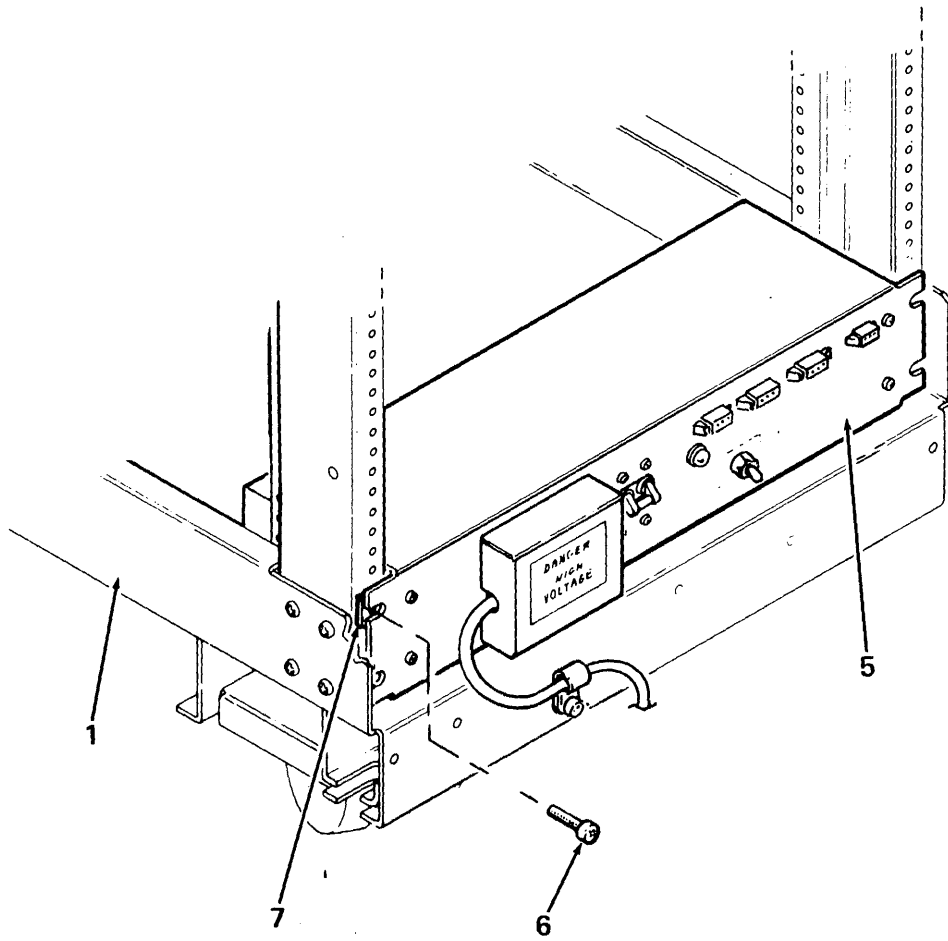
Figure 4. HDA-R/W Module Assembly (Sheet 2 of 2)

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19062 00001	USED ON CODE	REF FIG NO.
4-	HDA-R/W MODULE ASSEMBLY (16 BIT HDA)	70-19044-01		AEJN	2
	HDA-R/W MODULE ASSEMBLY (18 BIT HDA)	70-19044-02		BFKP CGLQ DHMR	2
1	*Head/Disk Assembly (16 BIT)	70-18491-01		AEJN	
	*Head/Disk Assembly (18 BIT)	70-18491-02		BFKP CGLQ DHMR	
2	*Read/Write Module	54-15253-00			
3	*Screw, Hex Washer Hd No. 8-32 x 3/8	90-10075-00			
4	*Data Cable Assembly	70-16738-01			
5	*Ground Brush Assembly	70-16215-00			
6	*Ring, Retaining	90-10168-00			
7	*HDA Thermal Switch	12-16870-01			
8	*HDA Speed Sensor	12-16817-00			



RA81-05

Figure 5. Top Loading Cabinet Assembly (Sheet 1 of 2)



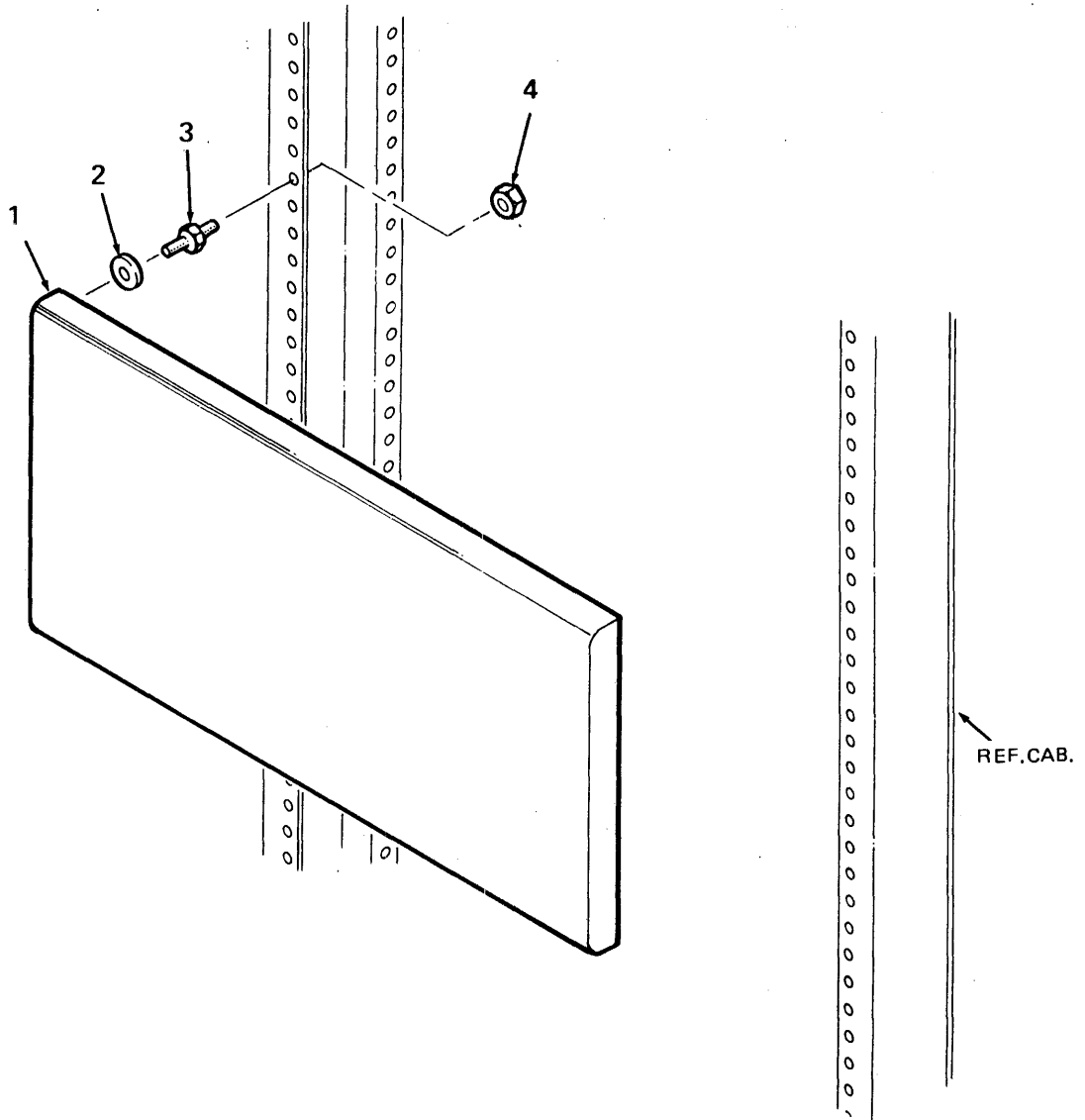
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RA81-05A

Figure 5. Top Loading Cabinet Assembly (Sheet 2 of 2)

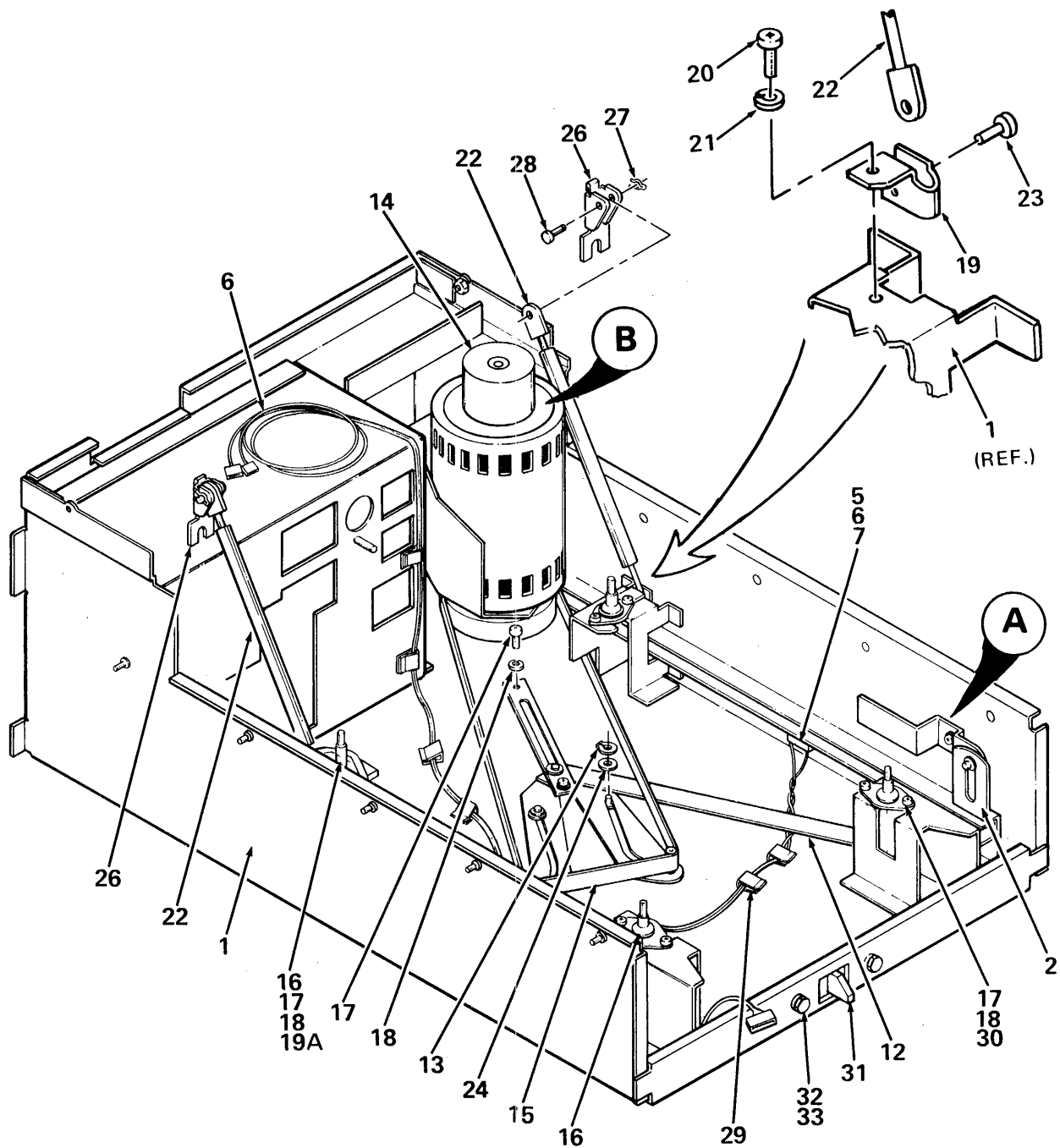
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9642-A 00002	USED ON CODE	REF FIG NO.
5-	TOP LOADING CABINET ASSEMBLY 120V 60 Hz TOP LOADING CABINET ASSEMBLY 240V 50 Hz	H9642-AS H9642-AT		EGJLNO FHKMPR	1 1
1	* Frame Assembly	H9542-FB			
2	* CABINET ACCESSORY KIT	H9544-HA			17
3	* RA81 TRIM ASSEMBLY	H9544-CF			18
4	* SHIELDED REAR DOOR ASSEMBLY	H9544-BM			19
5	* POWER CONTROLLER ASSEMBLY 120V 60 Hz	874-D	See 874 IPB.	EGJLNO	
	* POWER CONTROLLER ASSEMBLY 240V 50 Hz	874-E		FHKMPR	
6	* Screw, Sems Phl Truss Hd No. 10-32 x 1/2	90-09700-00			
7	* Retainer, U-Nut No. 10	90-07786-00			
8	* BLANK BEZEL ASSEMBLY	H9544-DA			20
9	* BOTTOM COVER ASSEMBLY	H9544-DB			21
10	* END PANEL ASSEMBLY (W/Lock Bracket)	H9544-AG			22

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 74-15314 00002	USED ON CODE	REF FIG NO.
6--	FILLER PANEL ASSEMBLY	H9504-UA		E - M	1
1	* Bezel, (10 1/2")	74-15314-02			
2	* Washer, Flat	90-06664-00			
3	* Pin, Pilot	74-15711-00			
4	* Nut, Kep No. 10-32	90-06565-00			



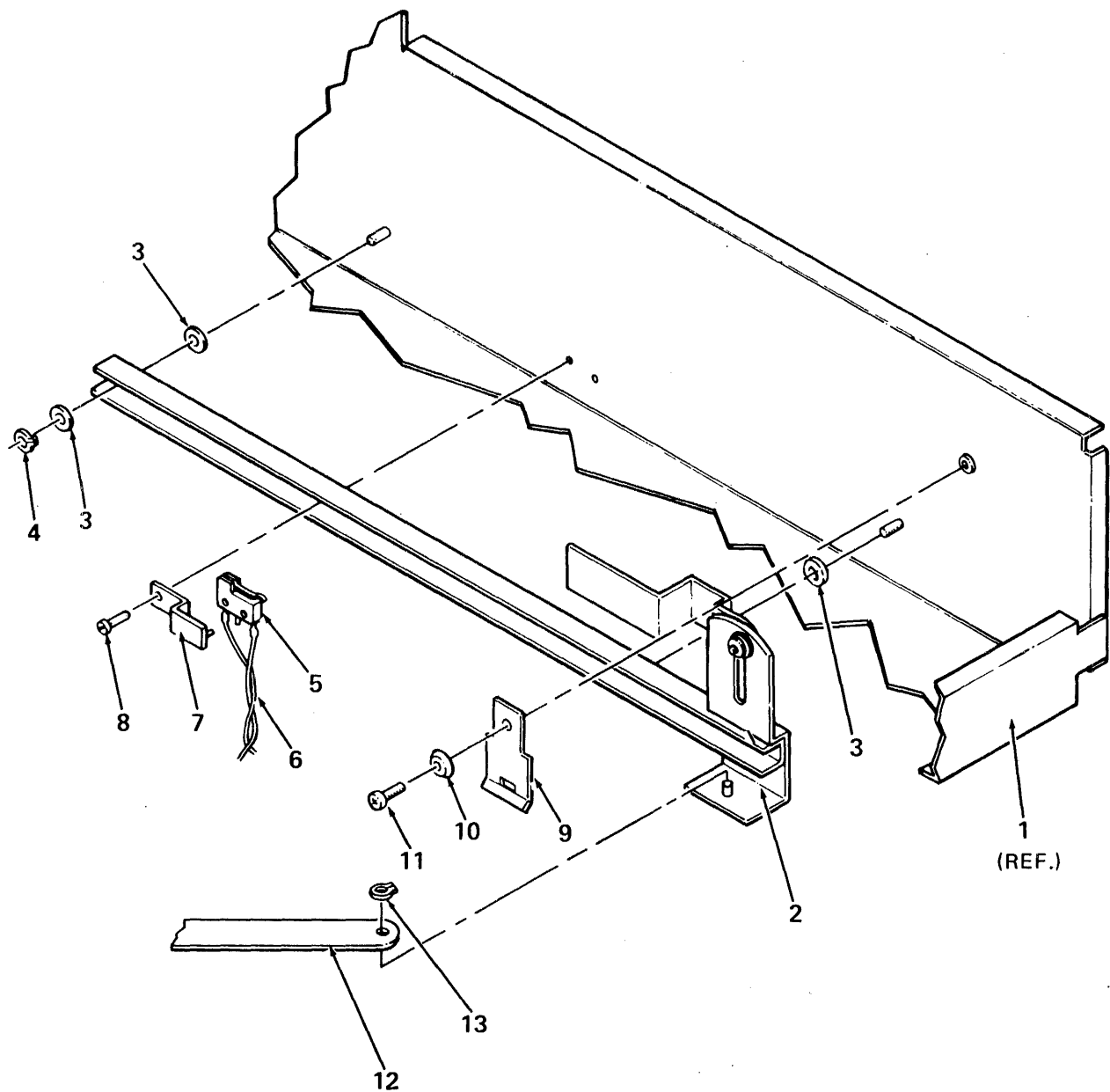
RA80-21

Figure 6. Filler Panel Assembly



RA81-07

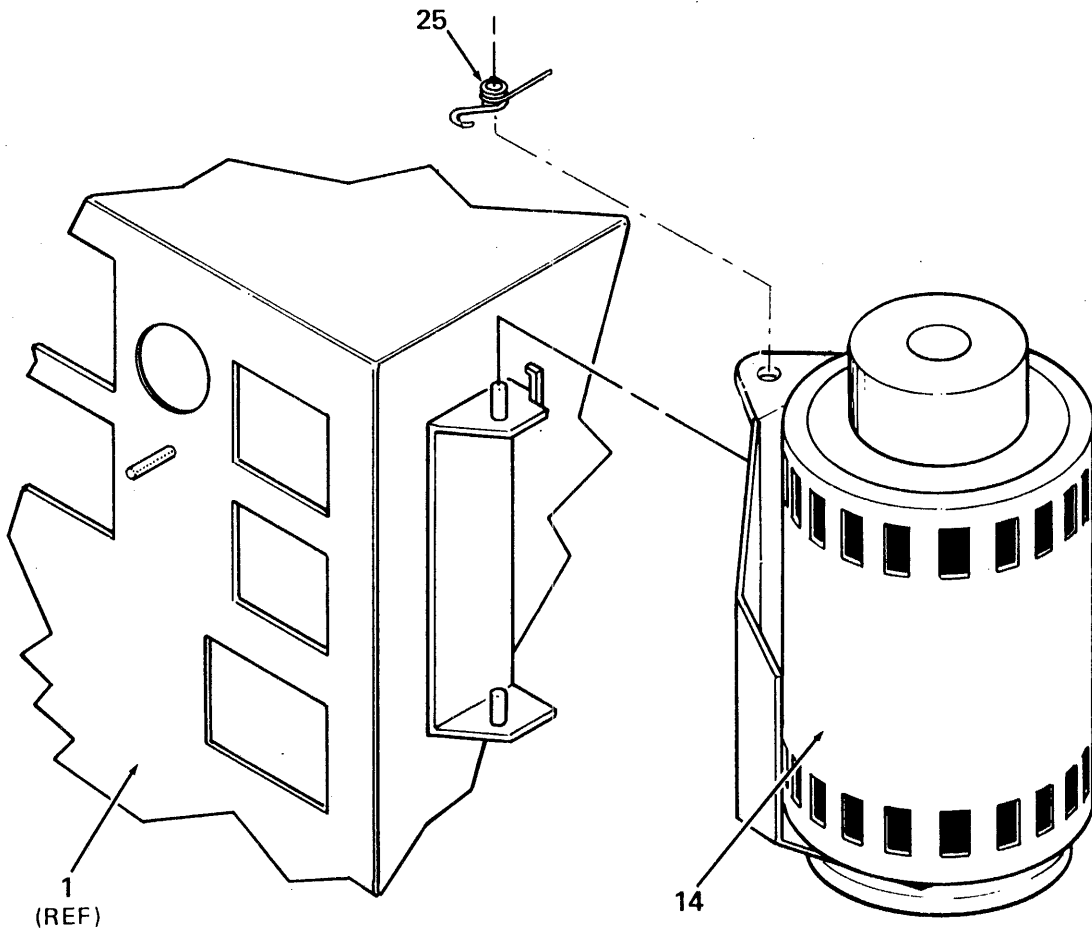
Figure 7. Lower Chassis Assembly (Sheet 1 of 3)



A

RA81-07A

Figure 7. Lower Chassis Assembly (Sheet 2 of 3)



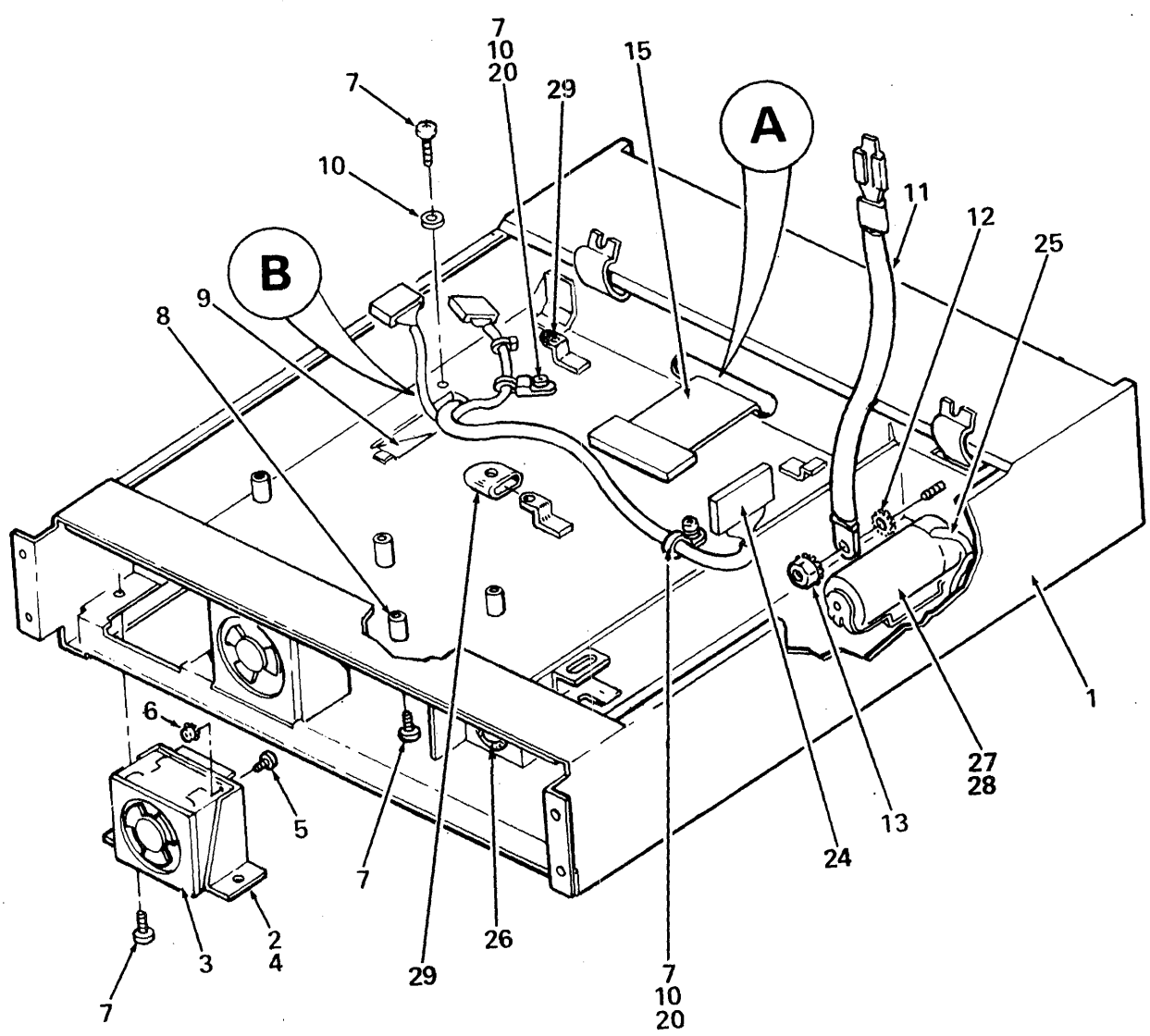
B

RA81-07B

Figure 7. Lower Chassis Assembly (Sheet 3 of 3)

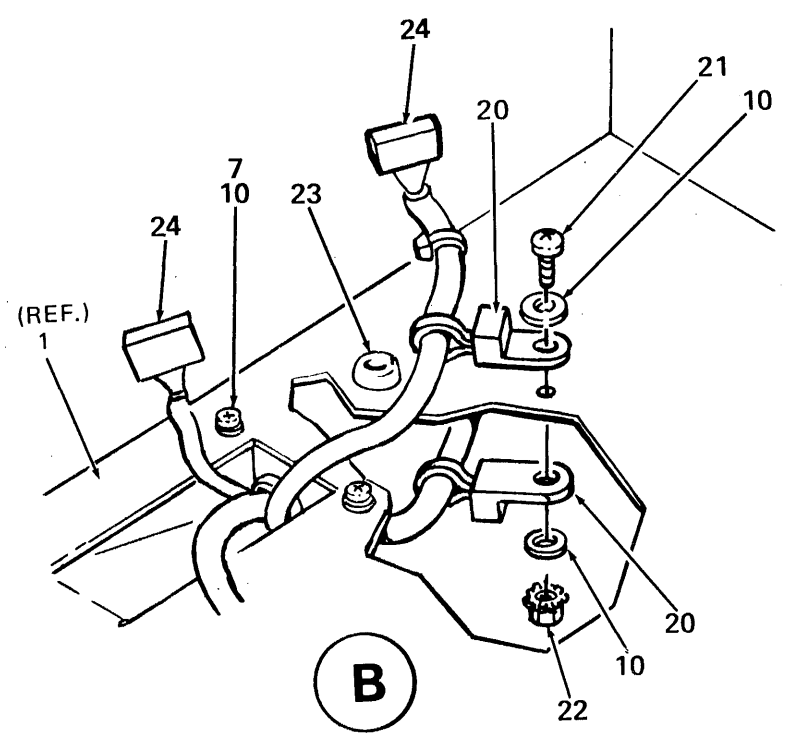
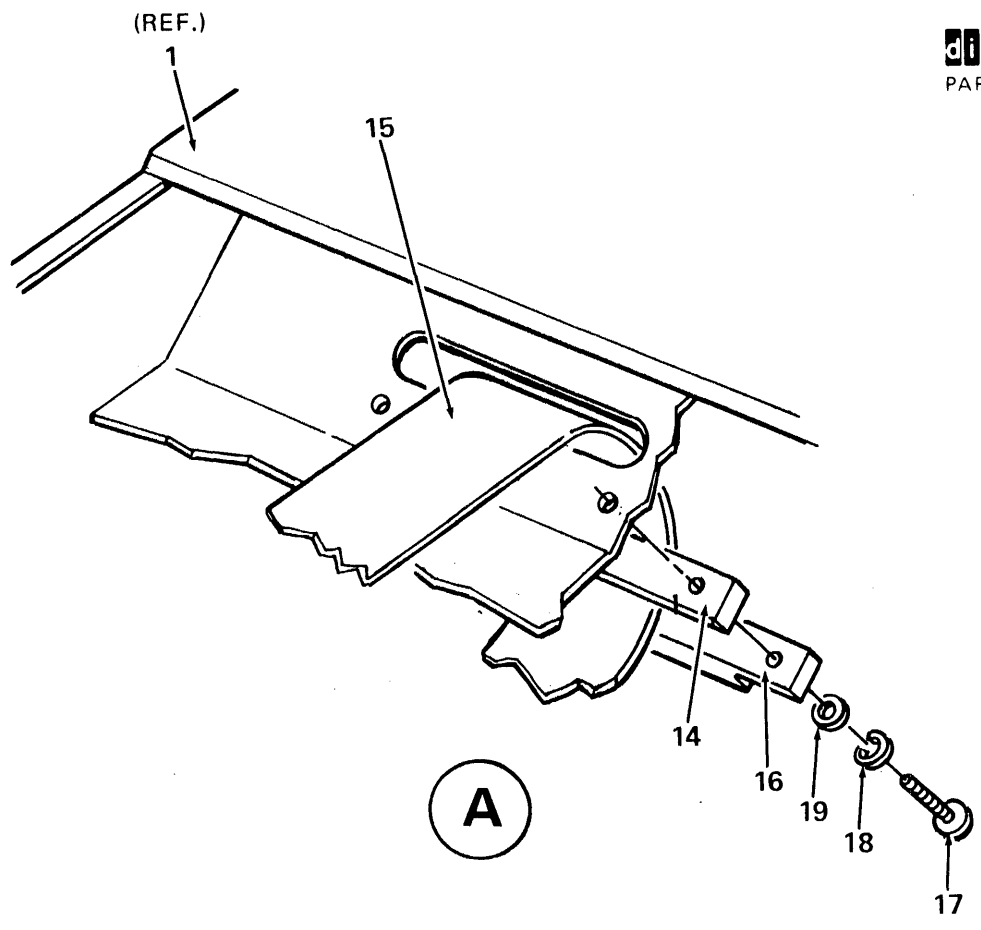
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN R80 00014	USED ON CODE	REF FIG NO.
7-	LOWER CHASSIS ASSEMBLY 120V 60 Hz	70-16741-00		AEJN CGLO	3
	LOWER CHASSIS ASSEMBLY 240V 50 Hz	70-16741-01		BFKP DHMR	3
1	*Baseplate Weldment Assembly	70-16234-00			
2	*ACTUATOR ASSEMBLY	70-16724-00			15
3	*Washer, Shoulder (Nylon)	90-08990-00			
4	*Ring, Retaining (External)	90-07784-00			
5	*Switch, Micro (IP5A)	12-14011-00			
6	*BELT TENSION SWITCH HARNESS ASSEMBLY	70-16980-00			23
7	*Bracket, Switch	74-25943-01			
8	*Screw, Phl Pan Hd No. 6-32 x 1/4	90-09905-00			
9	*Spring, Handle Lock	74-21993-00			
10	*Washer, Spring	90-10204-00			
11	*Screw, Phl Truss Hd No. 8-32 x 1/4	90-09836-00			
12	*Wing Pivot Assembly	70-16230-00			
13	*Ring, Retaining (External)	90-08137-00			
14	*MOTOR ASSEMBLY 120V 60 Hz	70-16723-00		AEJN CGLO	16
	*MOTOR ASSEMBLY 240V 50 Hz	70-16723-01		BFKP DHMR	16
15	*Belt, Pulley (Woven) 120V 60 Hz	12-12635-03		AEJN CGLO	
	*Belt, Pulley (Woven) 240V 50 Hz	12-12635-04		BFKP DHMR	
16	*Mount, Shock, Rubber	12-16902-01			
17	*Screw, Phl Pan Hd No. 6-32 x 1/2	90-09514-01			
18	*Washer, Lock No. 6	90-07801-00			
19	*Pivot, Gas Spring (L.H.)	74-22795-00			
19A	*Pivot, Gas Spring (R.H.)	74-22795-01			
20	*Screw, Phl Pan Hd No. 8-32 x 5/16	90-06036-01			
21	*Washer, Lock No. 8	90-06690-00			
22	*Spring, Gas (45 lbs)	12-17072-00			
23	*Pin, Clevis	90-10210-00			
24	*Washer, Flat Nylon No. 10	90-06714-00			
25	*Spring, Belt Release	74-22440-00			
26	*Bracket, Gas Spring Pivot	74-22694-00			
27	*Clip, Hitch Pin	90-10211-00			
28	*Pin, Clevis	90-10210-01			
29	*Cable Clamp	90-09636-00			
30	*Spacer	74-25746-01		BFKP DHMR	

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN R80 00014	USED ON CODE	REF FIG NO.
7- 31 32 33	*Detent, Latch *Screw, Hex Hd No. 10-32 x 1/2 *Washer, Flat No. 10 Label (Not Shown) *Label, "Lock Information"	74-28319-01 90-06231-09 90-06666-00 36-18804-01			



RA81-08

Figure 8. Logic Chassis Assembly (Sheet 1 of 2)

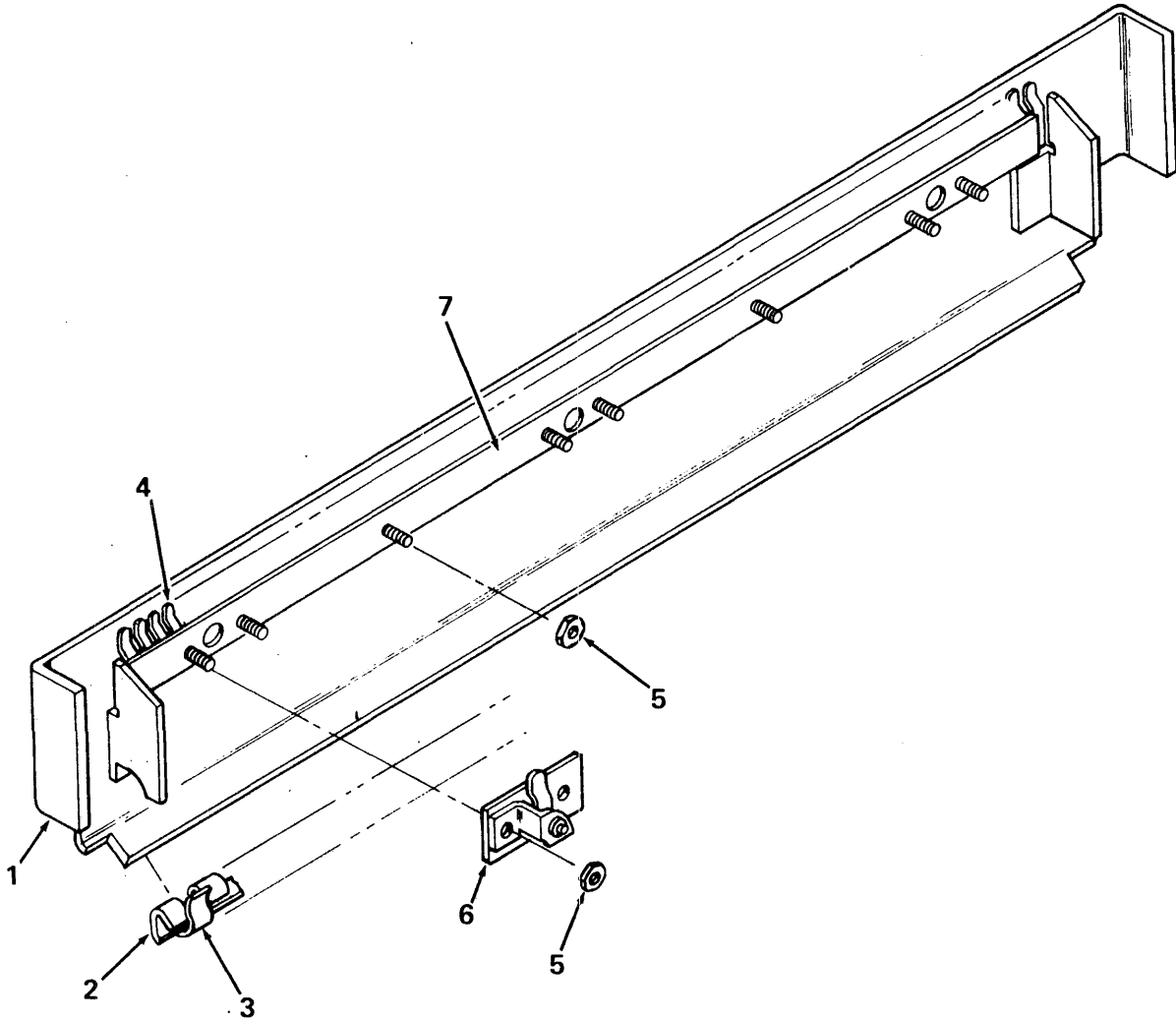


RA81-08A

Figure 8. Logic Chassis Assembly (Sheet 2 of 2)

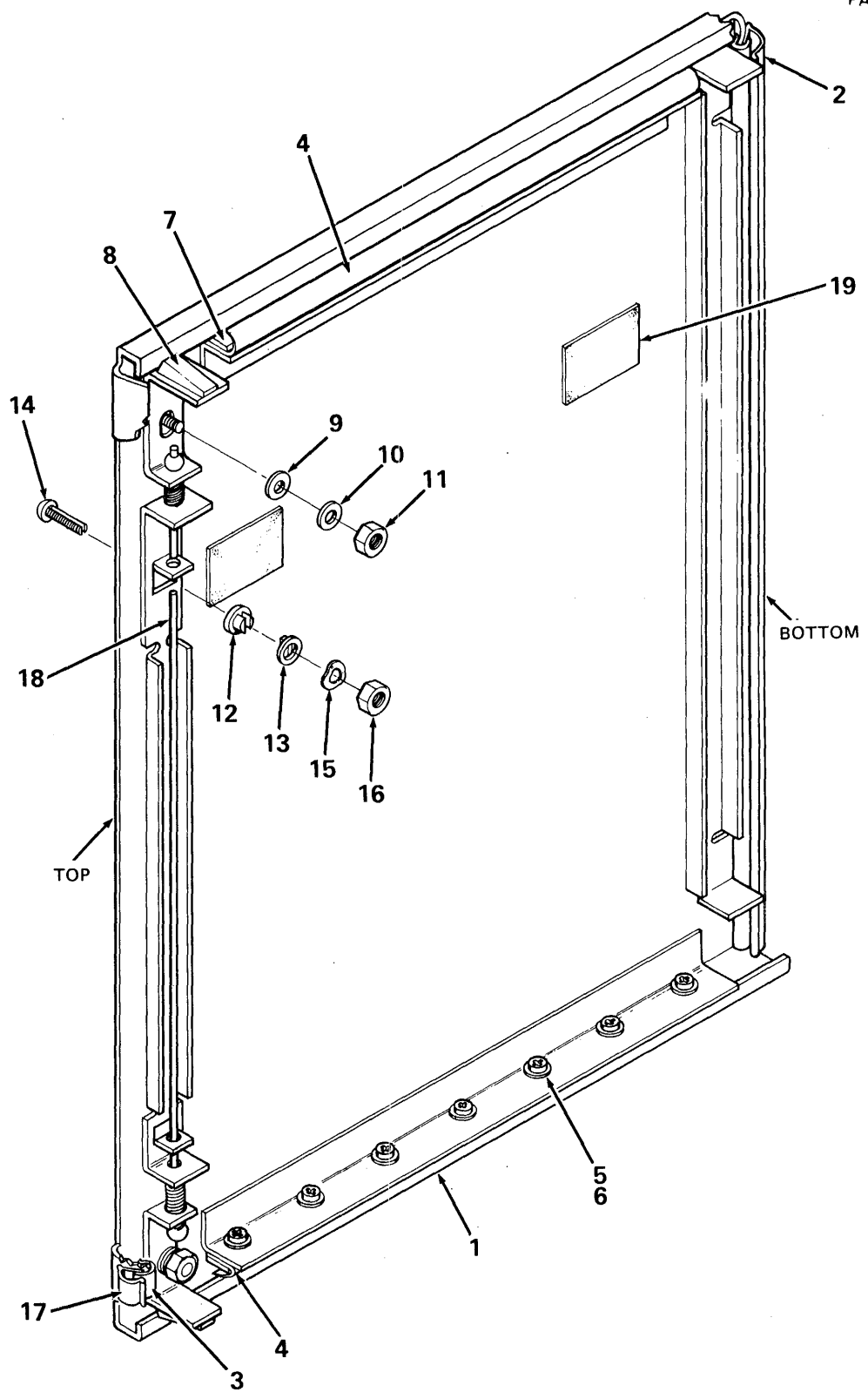
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN R80 00014	USED ON CODE	REF FIG NO.
8-	LOGIC CHASSIS ASSEMBLY 120V 60 Hz	70-16773-04		AEJN CGLQ	3
	LOGIC CHASSIS ASSEMBLY 240V 50 Hz	70-16773-05		BFKP DHMR	3
1	* Logic Weldment Assembly	70-16778-01			
2	* FAN AND BRACKET ASSEMBLY	70-16745-00			
3	** Fan, Tube Axial 115V	12-10719-03			
4	** Bracket, Fan	74-21978-00			
5	** Screw, Phl Pan Hd No. 6-32 x 3/8	90-06022-01			
6	** Nut, Kep No. 6-32 x 1/4	90-08185-00			
7	* Screw, Phl Pan Hd Self Tap No. 6-32 x 5/16	90-09708-00			
8	* Spacer, Fiber Round No. 6-32	90-09556-00			
9	* Retainer, Logic Cable	74-22702-00			
10	* Washer, Flat	90-06659-00			
11	* Strap, Grounding (5")	70-17610-0E			
12	* Washer, Ext Tooth Lock No. 10	90-07651-00			
13	* Nut, Kep No. 10-32 x 3/8	90-06565-00			
14	* Strain Relief (Top)	74-21465-00			
15	* Read/Write Cable Assembly	70-16739-00			
16	* Strain Relief (Bottom)	74-22445-00			
17	* Screw, Phl Pan Hd No. 4-40 x 3/4	90-06015-01			
18	* Washer, Lock No. 4	90-06688-00			
19	* Washer, Flat	90-06655-00			
20	* Cable Tie	90-07033-00			
21	* Screw, Phl Pan Hd No. 6-32 x 1/2	90-06024-01			
22	* Nut, Kep No. 6-32 x 5/16	90-06560-00			
23	* Grommet, Rubber	90-07018-00			
24	* D.C. LOGIC POWER HARNESS ASSEMBLY	70-18331-01			24
25	* A.C. LOGIC POWER HARNESS ASSEMBLY	70-16733-00			25
26	* Grommet	90-07035-00			
27	* Capacitor, 297 MFD 165V	10-16924-00		AEJN CGLQ	
	* Capacitor, 53-64 MFD 330 Vac	10-19003-01		BFKP DHMR	
28	* Screw, Phl Flat Hd No. 8-32 x 3/8	90-06037-02			
29	* Insulator	74-25331-00			

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19687 00001	USED ON CODE	REF FIG NO.
9-	REAR COVER ASSEMBLY	70-19687-01			3
1	*Rear Cover Weldment Assembly	70-19699-01			
2	*Plate, Clamp	74-27112-01			
3	*Clip, U-Type	90-10390-04			
4	*Strip, EMI Filler Rear	74-26915-01			
5	*Nut, Kep No. 4-40	90-06557-00			
6	*Latch, Slotted Adjustable Grip	12-20197-01			
7	*Strip, EMI Filler Front	74-27115-01			



RA81-09

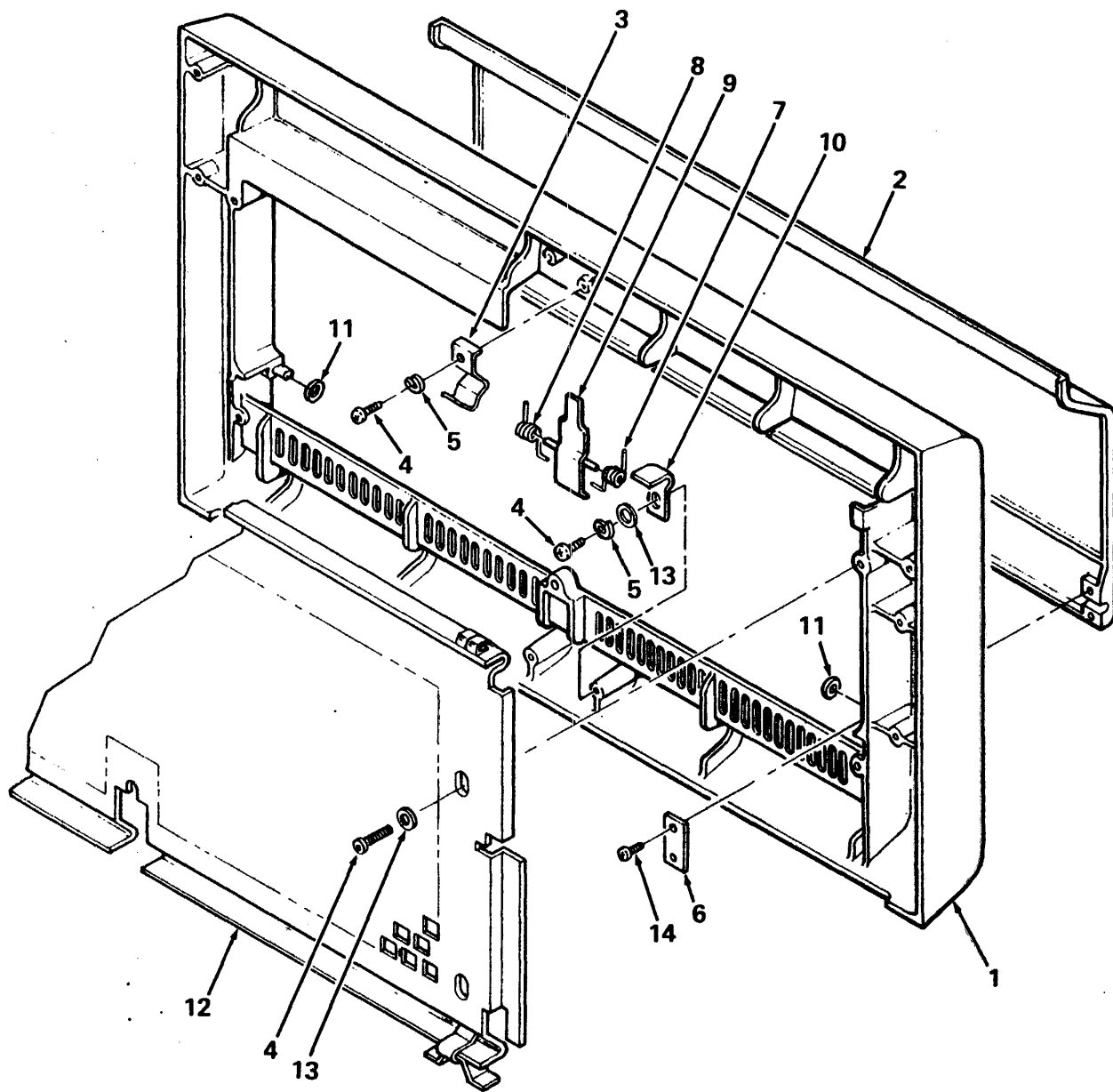
Figure 9. Rear Cover Assembly



RA81-10

Figure 10. Logic Cover Assembly

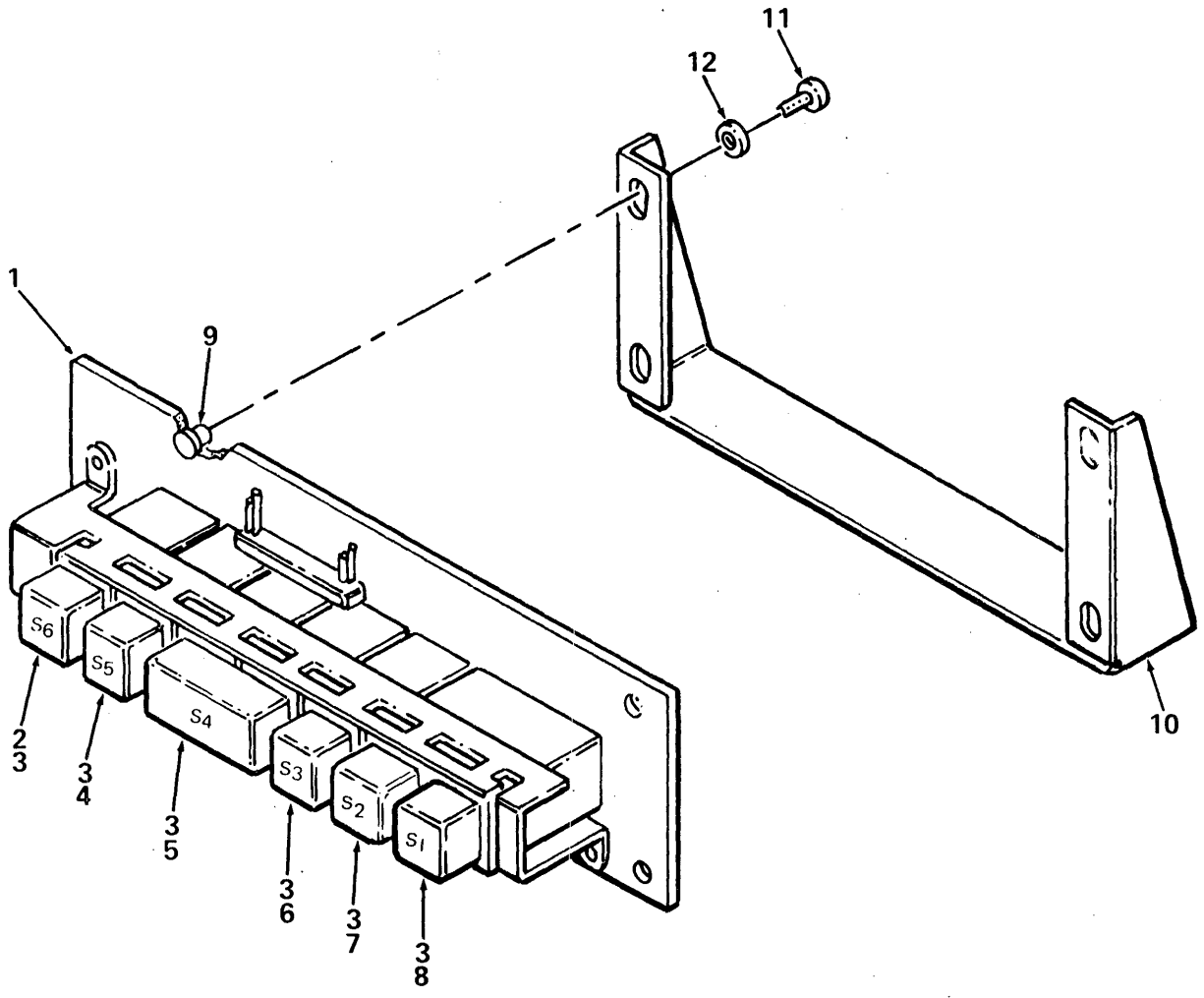
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19695 00005	USED ON CODE	REF FIG NO.
10-	LOGIC COVER ASSEMBLY	70-19695-02			3
1	*Logic Cover Weldment Assembly	70-19694-01			
2	*Strip, EMI Shielded, Bottom	74-27193-01			
3	*Clip, U-Type	90-10390-05			
4	*Strip, EMI Filler, Right	74-27179-01			
5	*Screw, Socket Cap Hd No. 4-40 x 3/16	90-00042-09			
6	*Washer, Split Lock	90-06688-00			
7	*Bar, Right Threaded	74-27181-01			
8	*Link	74-27124-01			
9	*Washer, Flat (Brass)	12-20317-01			
10	*Washer, Flat (Nylon)	90-08992-00			
11	*Nut, Kep No. 6-32	90-08055-00			
12	*Pivot, Drive	74-27123-01			
13	*Disk, Pivot	74-27192-01			
14	*Screw, Reworked	74-27120-01			
15	*Washer, Spring	90-09962-00			
16	*Nut, Kep No. 10-32	90-06565-00			
17	*Contact Strip	12-19638-09			
18	*Latch Cable Assembly	70-19693-01			
19	*Foam, Tape	90-08214-02			
	Label (Not Shown)				
	Label, "Fans Warning"	36-18173-01			



RA81-11

Figure 11. Bezel Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN R80 00014	USED ON CODE	REF FIG NO.
11-	BEZEL ASSEMBLY	70-17340-02			2
1	*Bezel	74-24469-01			
2	*Door, Access	74-24470-00			
3	*Spring, Door Retention	74-24183-00			
4	*Screw, Phi Pan Hd Self Tap No. 6-32 x 3/8	90-09514-01			
5	*Washer, Lock No. 6	90-07801-00			
6	*Bracket, Access Door	74-24179-00			
7	*Spring, Latch (L.H.)	74-24177-00			
8	*Spring, Latch (R.H.)	74-24177-01			
9	*Latch	70-17614-00			
10	*Clamp, Latch Pivot	74-24180-00			
11	*Washer, Flat (Nylon)	90-00003-01			
12	*Screen, EMI Bezel Assembly	70-19703-01			
13	*Washer, Flat	90-06653-00			
14	*Screw, Phi Pan Hd No. 4-40 x 1/4	90-08301-00			

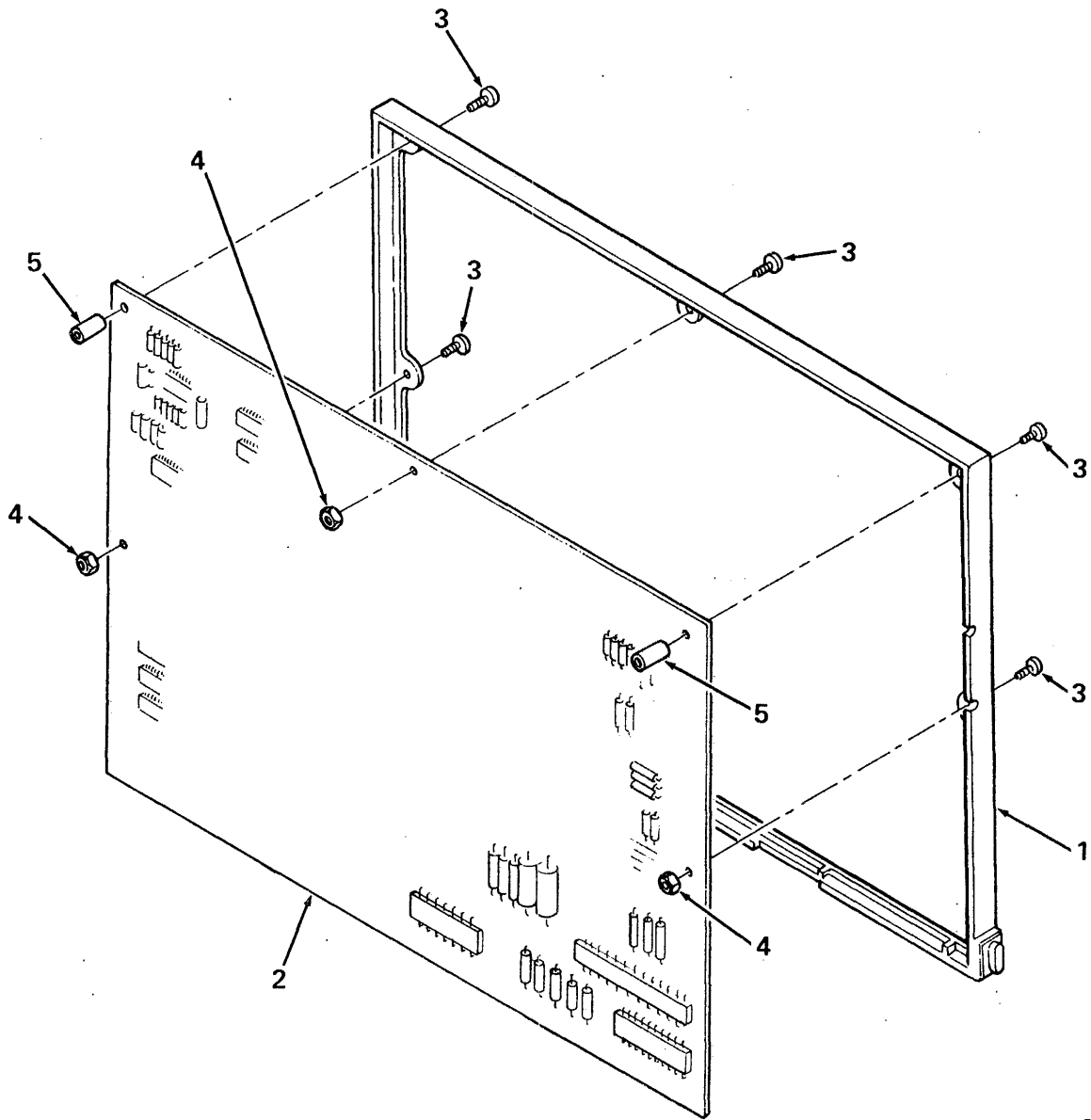


RA80-13

Figure 12. Operator Control Panel Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-18324 00000	USED ON CODE	REF FIG NO.
12-	OPERATOR CONTROL PANEL ASSEMBLY	70-18324-00			2
1	*OPERATOR CONTROL PANEL MODULE ASSEMBLY	54-14927-00			
2	**Switch, Push Button Cap, Yel/Blk, "Run Stop" (S6)	12-12174-00			
3	**Lamp, Wedge, 6.3V, 2A MSCP	12-12716-00			
4	**Switch, Push Button Cap, Red/Blk "Fault" (S5)	12-12714-02			
5	**Switch, Encoder Button (S4)	12-18199-01			
6	**Switch, Push Button Cap, Yel/Blk, "Write Prot" (S3)	12-12714-01			
7	**Switch, Push Button Cap, Wht/Blk, "A" (S2)	12-12714-03			
8	**Switch, Push Button Cap, Wht/Blk "B" (S1)	12-12714-04			
9	**Standoff, P.C. Board No. 4-40 x .125	90-09113-01			
10	*Bracket, Control Panel	74-22814-00			
11	*Screw, Phl Pan Hd No. 4-40 x 3/8	90-09546-00			
12	*Washer, Flat	90-06655-00			

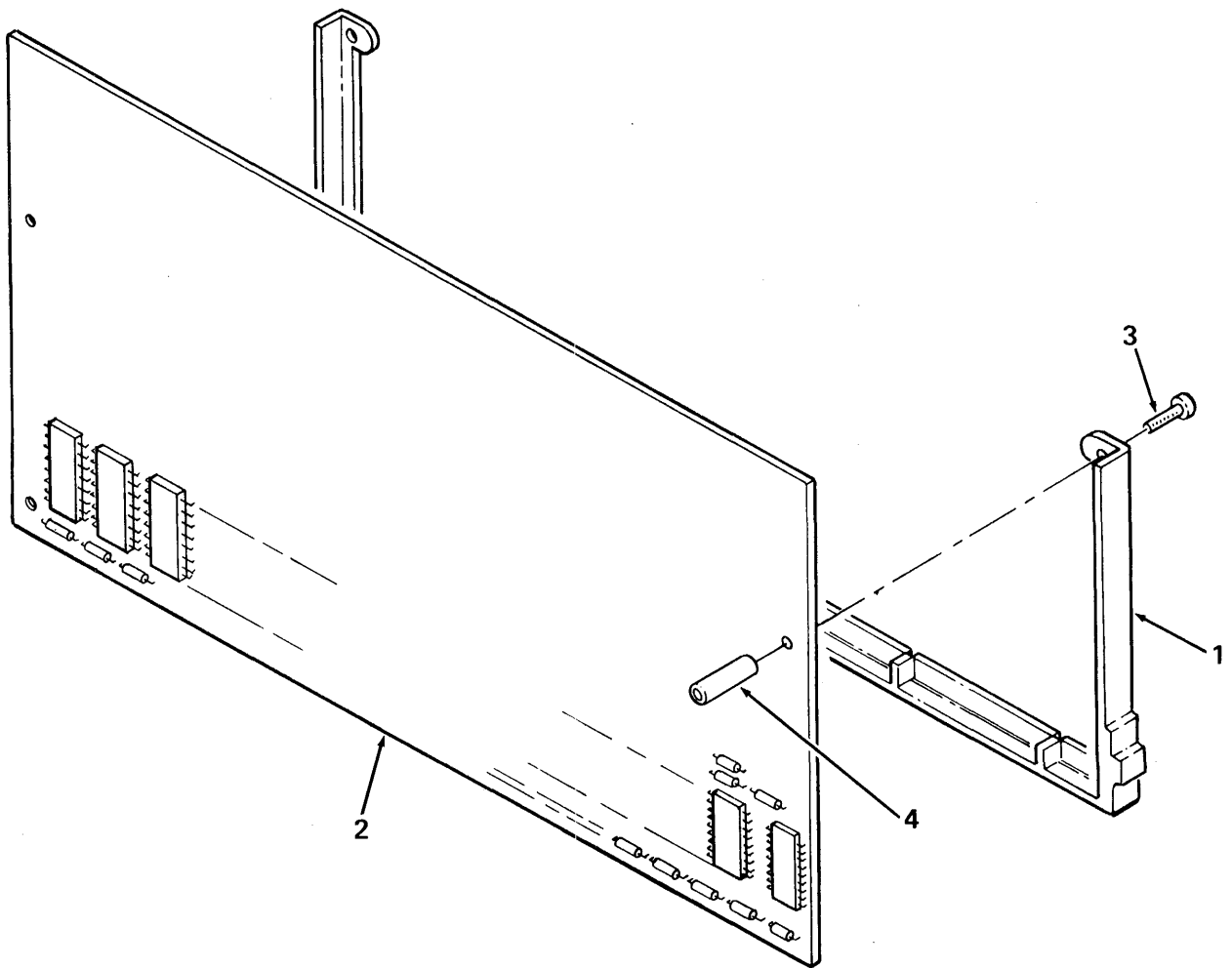
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19045 00001	USED ON CODE	REF FIG NO.
13-	SERVO BOARD/STIFFENER ASSEMBLY	70-19045-01			2
1	*Tray, Extended Hex Support	74-21976-01			
2	*Servo Control Module	54-15251-00			
3	*Screw, Slotted Pan Hd No. 6-32 x 7/16	90-08212-00			
4	*Nut, Hex Hd No. 6-32 x 5/16	90-07883-00			
5	*Spacer, Fiber Round.No. 6-32	90-00035-04			



RA81-13

Figure 13. Servo Board/Stiffener Assembly

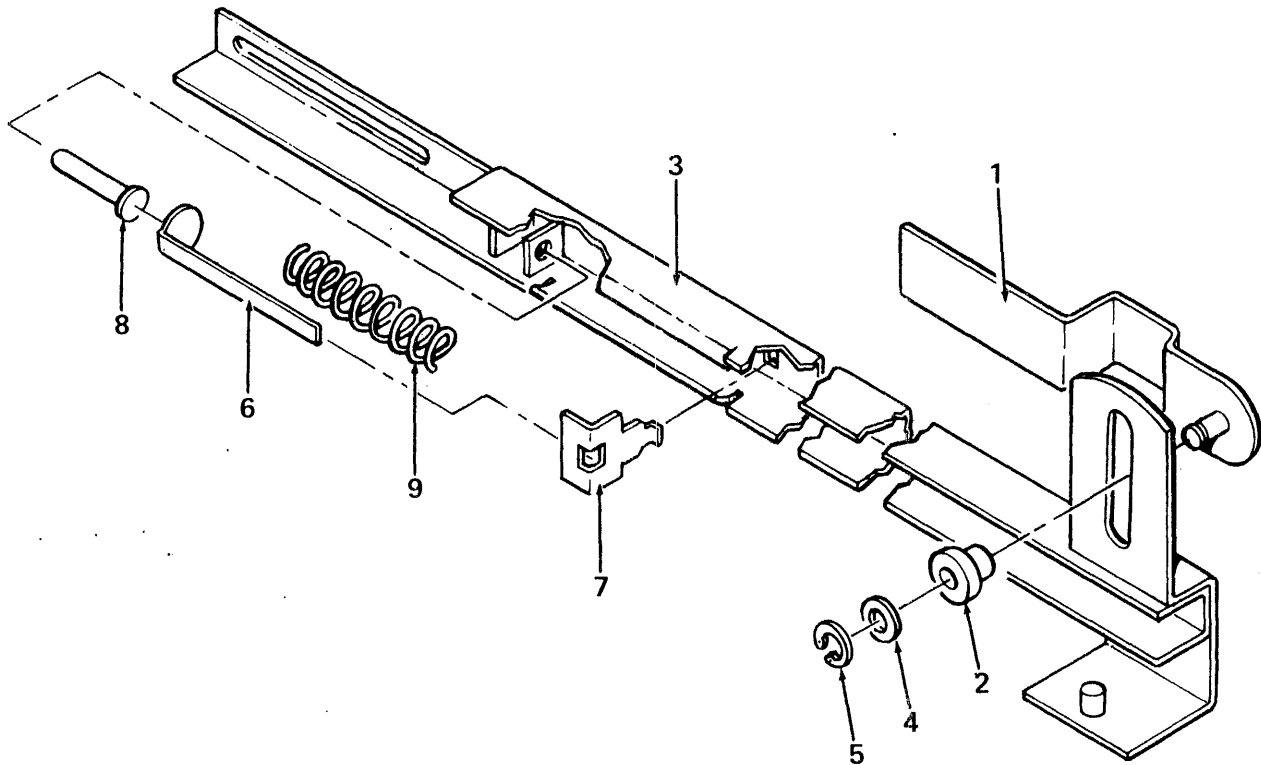
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19046 00000	USED ON CODE	REF FIG NO.
14---	PERSONALITY BOARD/STIFFENER ASSEMBLY	70-19046-01			2
1	*Stiffener, Board	74-22798-00			
2	*R81 Personality Module	54-15248-00			
3	*Screw, Slotted Pan Hd No. 6-32 x 7/16	90-08212-00			
4	*Spacer, Round Fiber No. 6-32 x 1/4 x 1"	90-06967-00			



RA81-14

Figure 14. Personality Board/Stiffener Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-16724 00002	USED ON CODE	REF FIG NO.
15-	ACTUATOR ASSEMBLY	70-16724-00			7
1	*Handle, Actuator	70-16229-00			
2	*Bushing, Bronze	12-16567-00			
3	*Actuator, Weldment	70-16231-00			
4	*Washer, Flat	90-06664-00			
5	*Ring, Retaining	90-07784-00			
6	*Indicator, Belt Tension	74-22818-00			
7	*Retainer, Spring	74-21989-00			
8	*Shaft, Pressure	74-21997-00			
9	*Spring, Compression	74-21998-00			



R80-11

Figure 15. Actuator Assembly

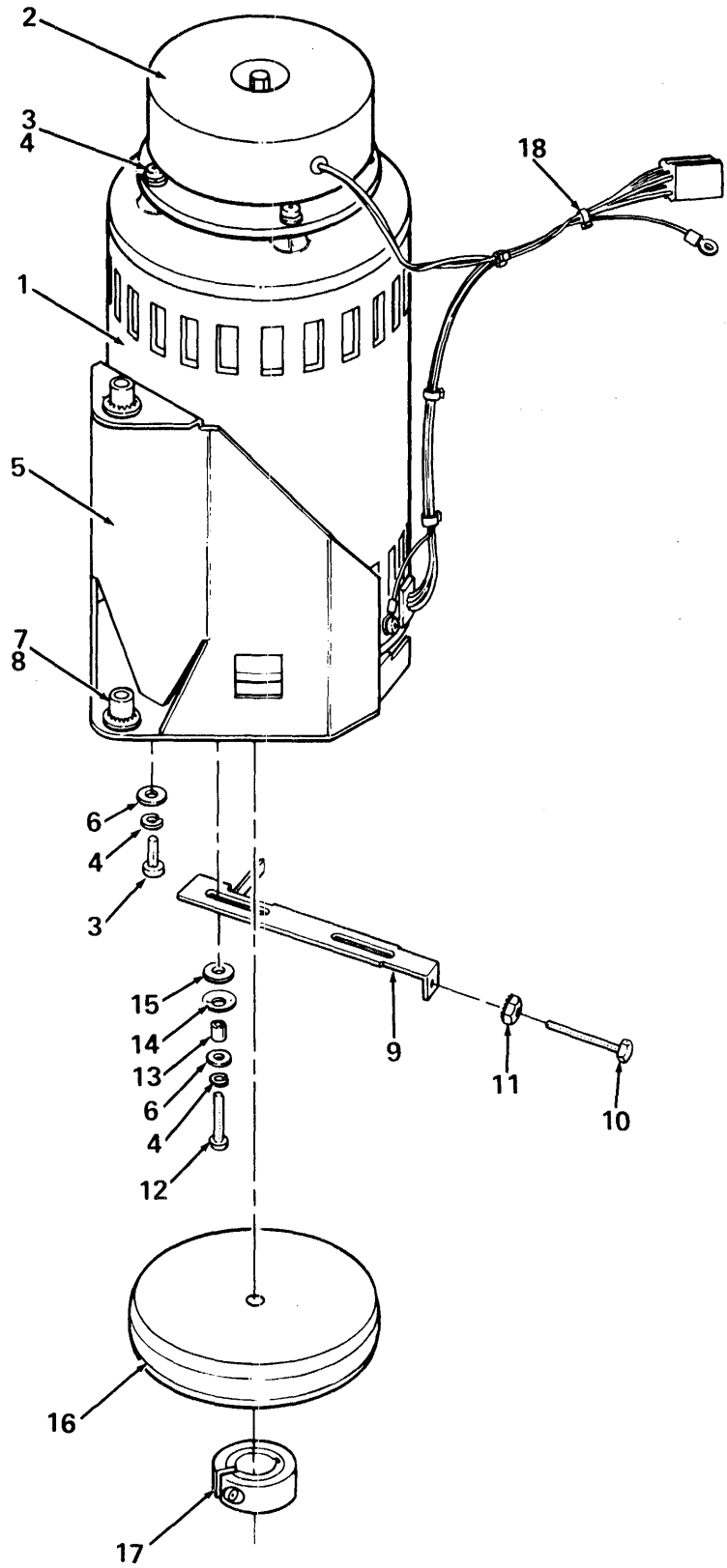
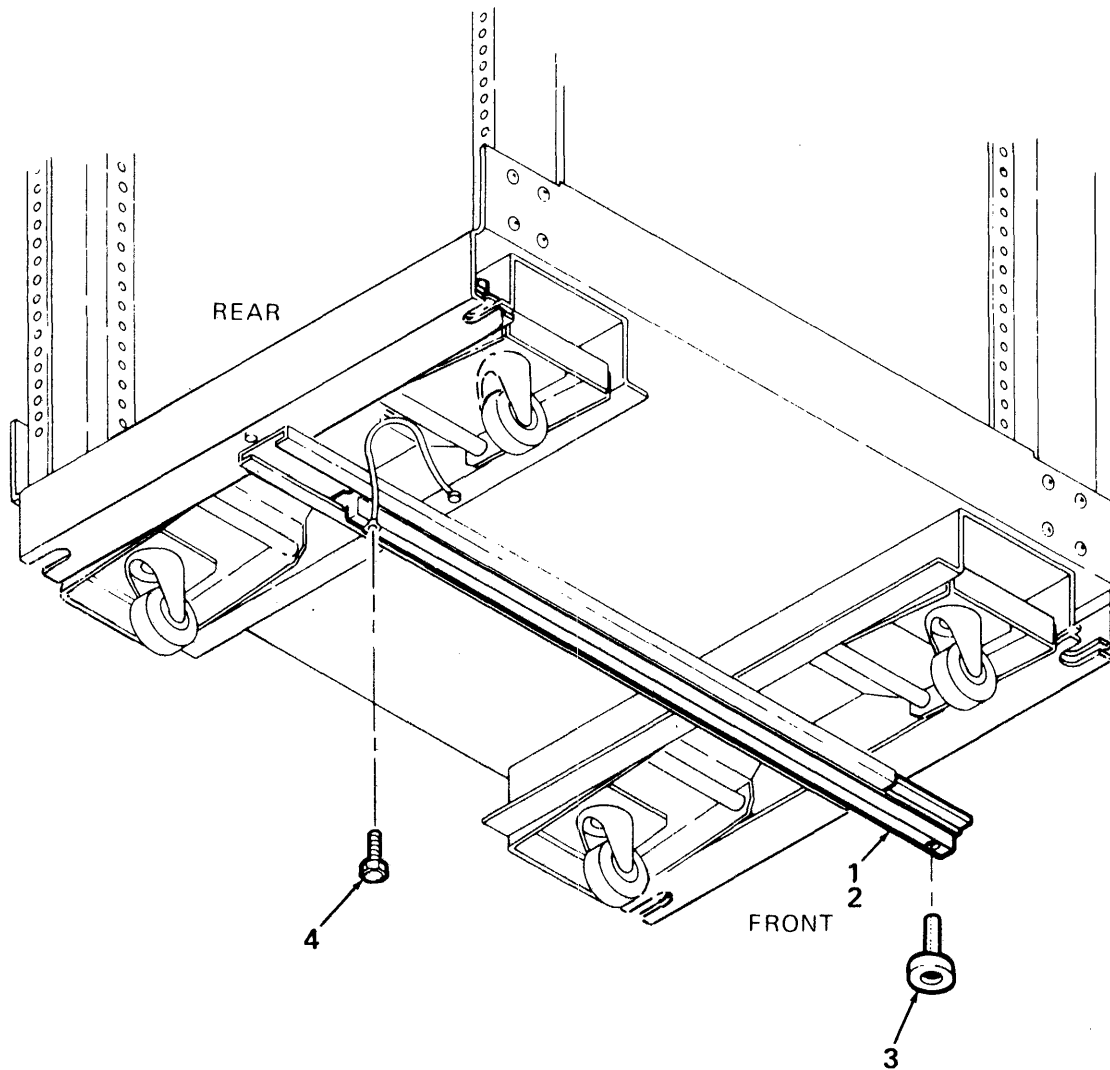


Figure 16. Motor Assembly

R80-10

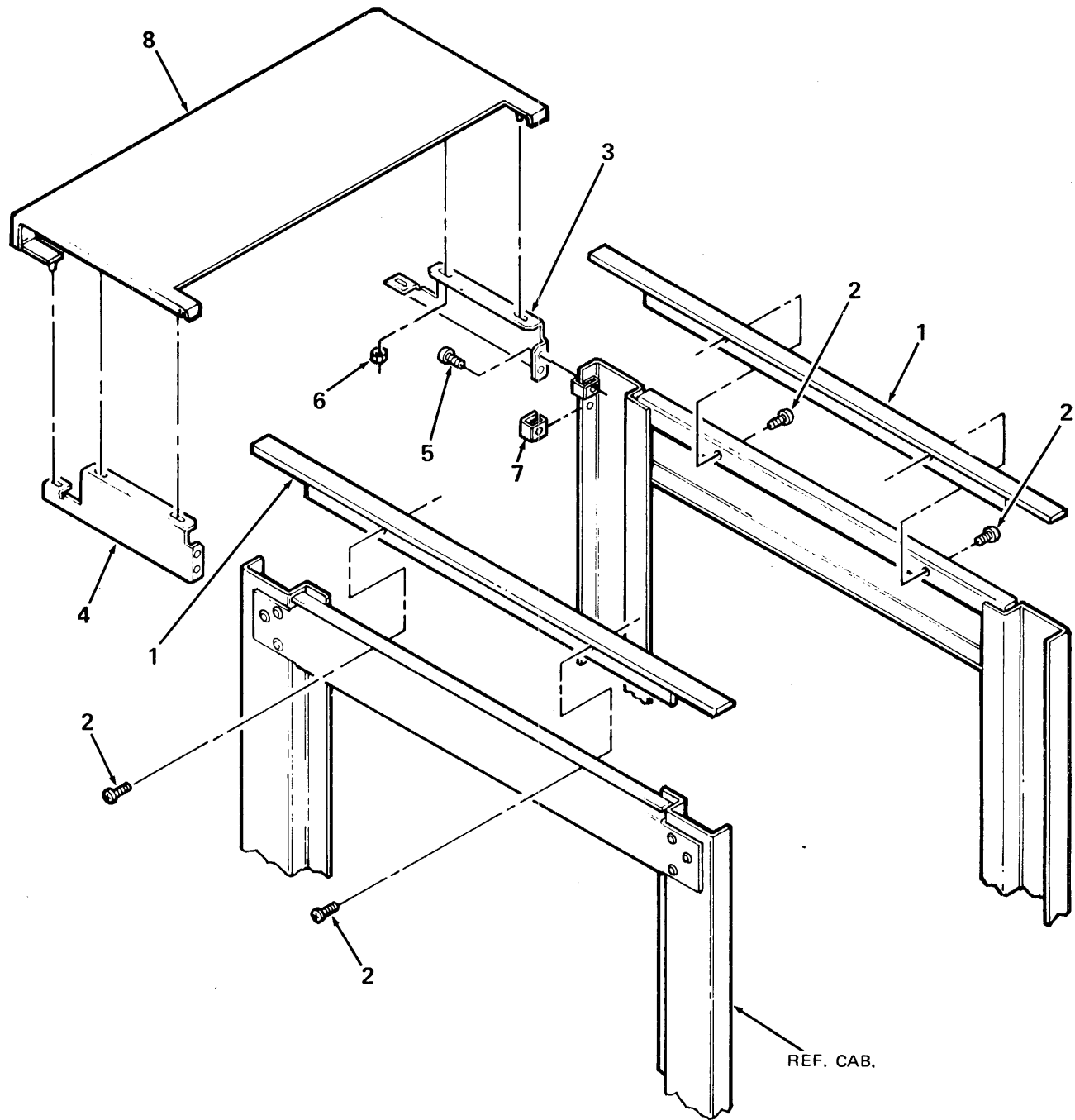
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-16723 00003	USED ON CODE	REF FIG NO.
16-	MOTOR ASSEMBLY 120V 60 Hz <i>New mtr/brake</i>	70-16723- 00 ⁰²		AEJN	7
	MOTOR ASSEMBLY 240V 50 Hz	70-21173-01 70-16723-01		CGLO BFKP DHMR	7
1	*Motor, Cap Start 120V 60 Hz	12-16578-00		AEJN CGLO	
	*Motor, Cap Start 240V 50 Hz	12-16578-02		BFKP DHMR	
2	*Brake, Electromagnetic	12-16577-00			
3	*Screw, Phi Pan Hd No. 8-32 x 3/8	90-06037-01			
4	*Washer, Lock No. 8	90-06690-00			
5	*Motor Mount Weldment	70-16232-00			
6	*Washer, Flat	90-06666-00			
7	*Bearing, Bronze	12-16880-00			
8	*Ring, Retaining	90-09890-00			
9	*Slide, Tension Adjust	74-22826-00			
10	*Screw, Hex Hd No. 10-32 x 1-1/4	90-06235-09			
11	*Nut, Kep No. 10-32 x 3/8	90-06565-00			
12	*Screw, Phi Pan Hd No. 8-32 x 9/16	90-07854-01			
13	*Spacer, Sleeve	12-17229-00			
14	*Washer, Spring	90-10203-00			
15	*Washer, Flat (Nylon)	90-00003-01			
16	*Pulley, Motor 120V 60 Hz	74-21455-00		AEJN CGLO	
	*Pulley, Motor 240V 50 Hz	74-21455-01		BFKP DHMR	
17	*Clamp, Spindle Pulley	12-16830-01			
18	*Cable Tie	90-07031-00			
	Label (Not Shown)				
	*Label, "P708 Motor Brake"	36-16923-15			

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9544-H 00003	USED ON CODE	REF FIG NO.
17-	CABINET ACCESSORY KIT	H9544-HA			5
1	*STABILIZER LEG ASSEMBLY	H9544-HC			
2	**Foot, Extension	74-22204-00			
3	**Leveler, Foot	12-16373-02			
4	**Screw, Hex Hd	74-24417-00			



RA60-10

Figure 17. Cabinet Accessory Kit



RA81-18

Figure 18. RA81 Trim Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9544-C 00007	USED ON CODE	REF FIG NO.
18-	RA81 TRIM ASSEMBLY	H9544-CF			5
1	*Trim, Top	12-16400-00			
2	*Screw, Sems Phl Pan Hd No. 8-32 x 1/2	90-09545-01			
3	*Bracket, Rear Vent R.H.	74-27786-01			
4	*Bracket, Rear Vent L.H.	74-27786-02			
5	*Screw, Sems Phl Truss Hd No. 10-32 x 1/2	90-09700-00			
6	*Retainer,U-Nut No.10 x 32	90-07786-00			
7	*Nut, Bar	74-19262-00			
8	*Vent, Rear	74-27520-01			

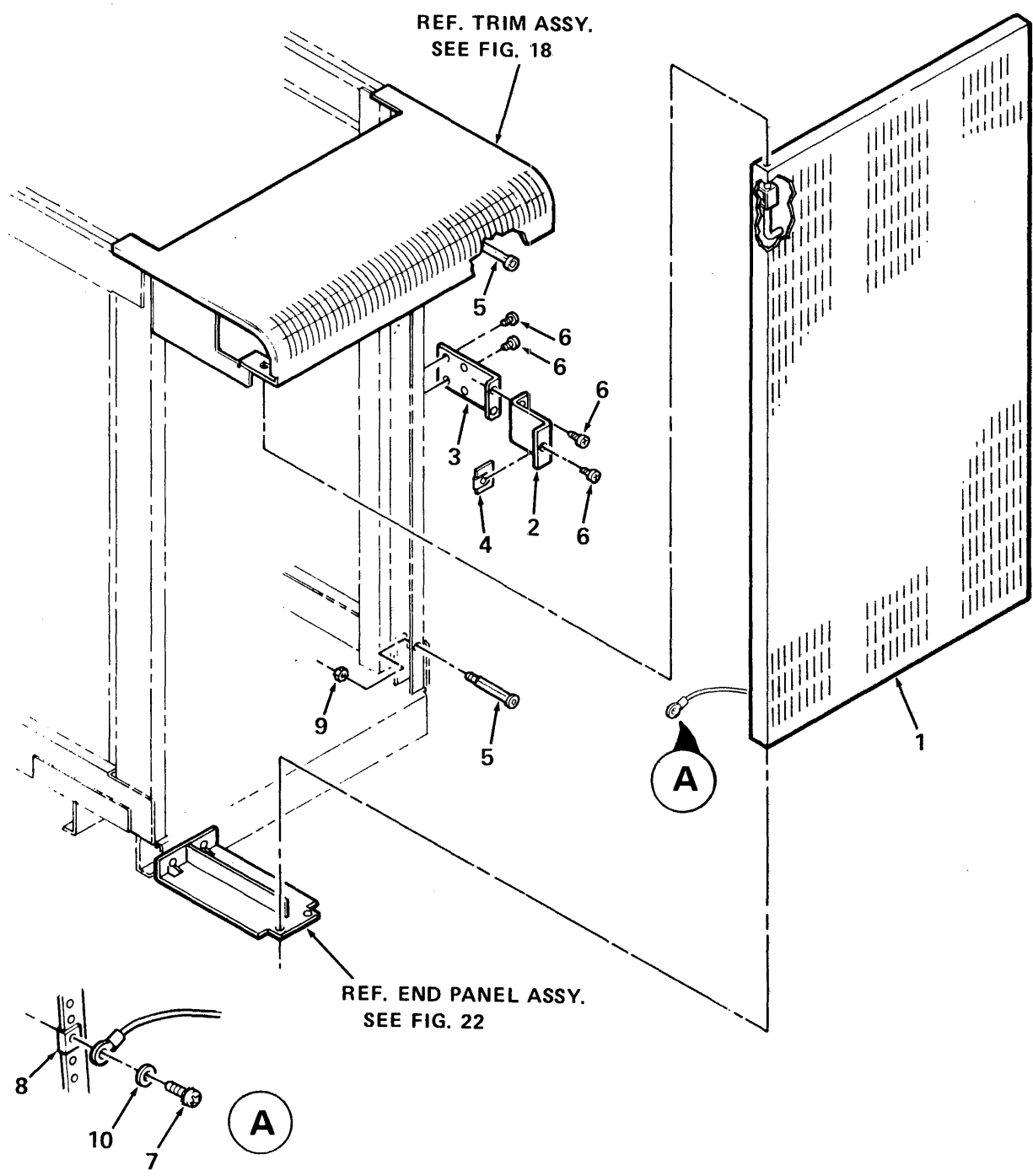
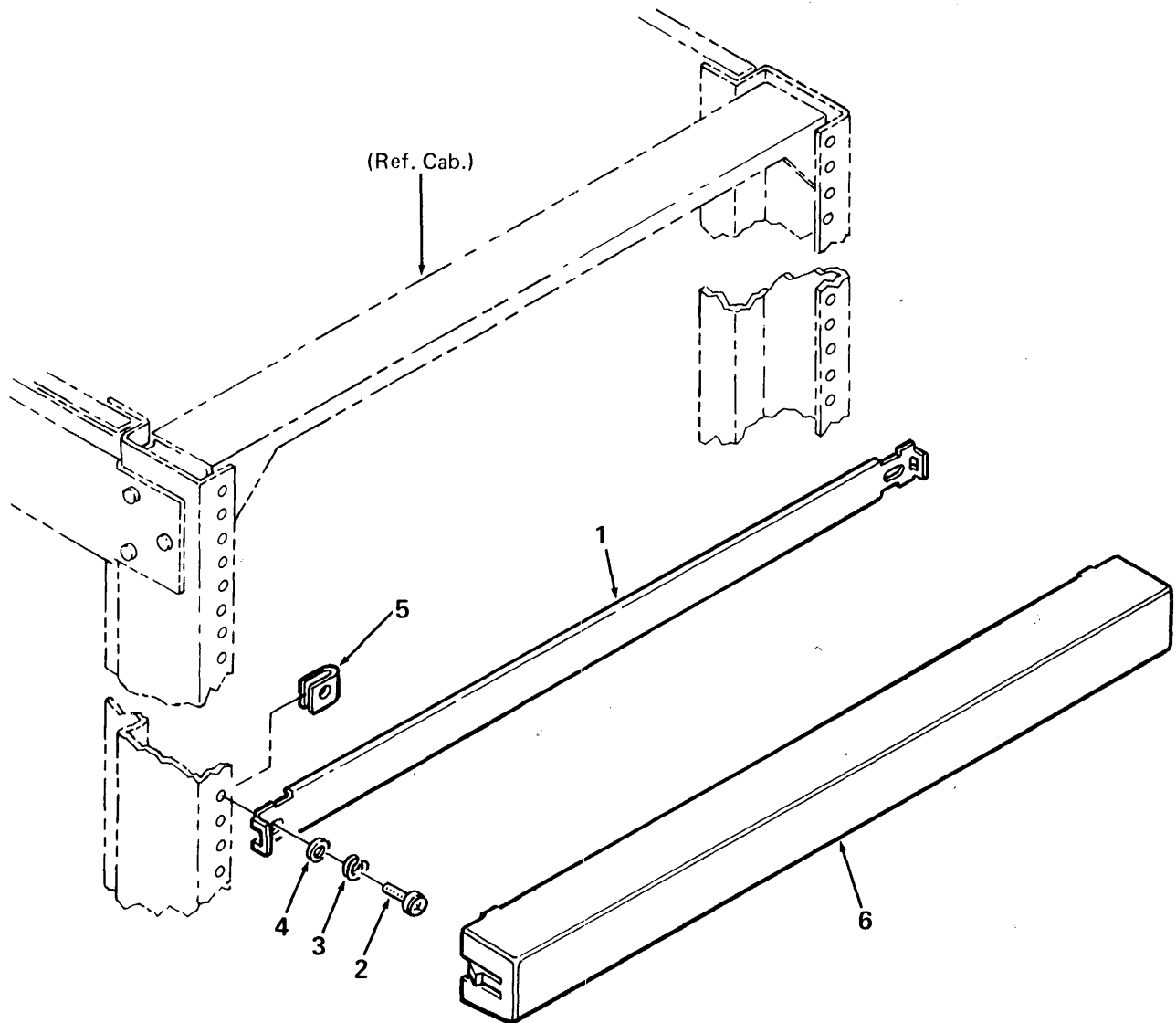


Figure 19. Shielded Rear Door Assembly

RA81-19

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	H ECO CUT-IN H9544-B 00006	USED ON CODE	REF FIG NO.
19-	SHIELDED REAR DOOR ASSEMBLY	H9544-BM			5
1	*Rear Door Assembly (40")	70-16533-00			
2	*Bracket, Door Lock	74-22222-00			
3	*Bracket, Door Lock Mounting	74-26256-01			
4	*Spring, Receptacle Fastener	12-12972-02			
5	*Stop, Rear Door	70-19088-01			
6	*Screw, Sems Phi Truss Hd No. 10-32 x 1/2	90-09700-00			
7	*Screw, Sems Slotted Hex Hd No. 10-32 x 1/2	90-10156-00			
8	*Retainer, U-Nut No. 10-32	90-07786-00			
9	*Nut, Kep No. 10-32	90-06565-00			
10	*Washer, Flat	90-06664-00			

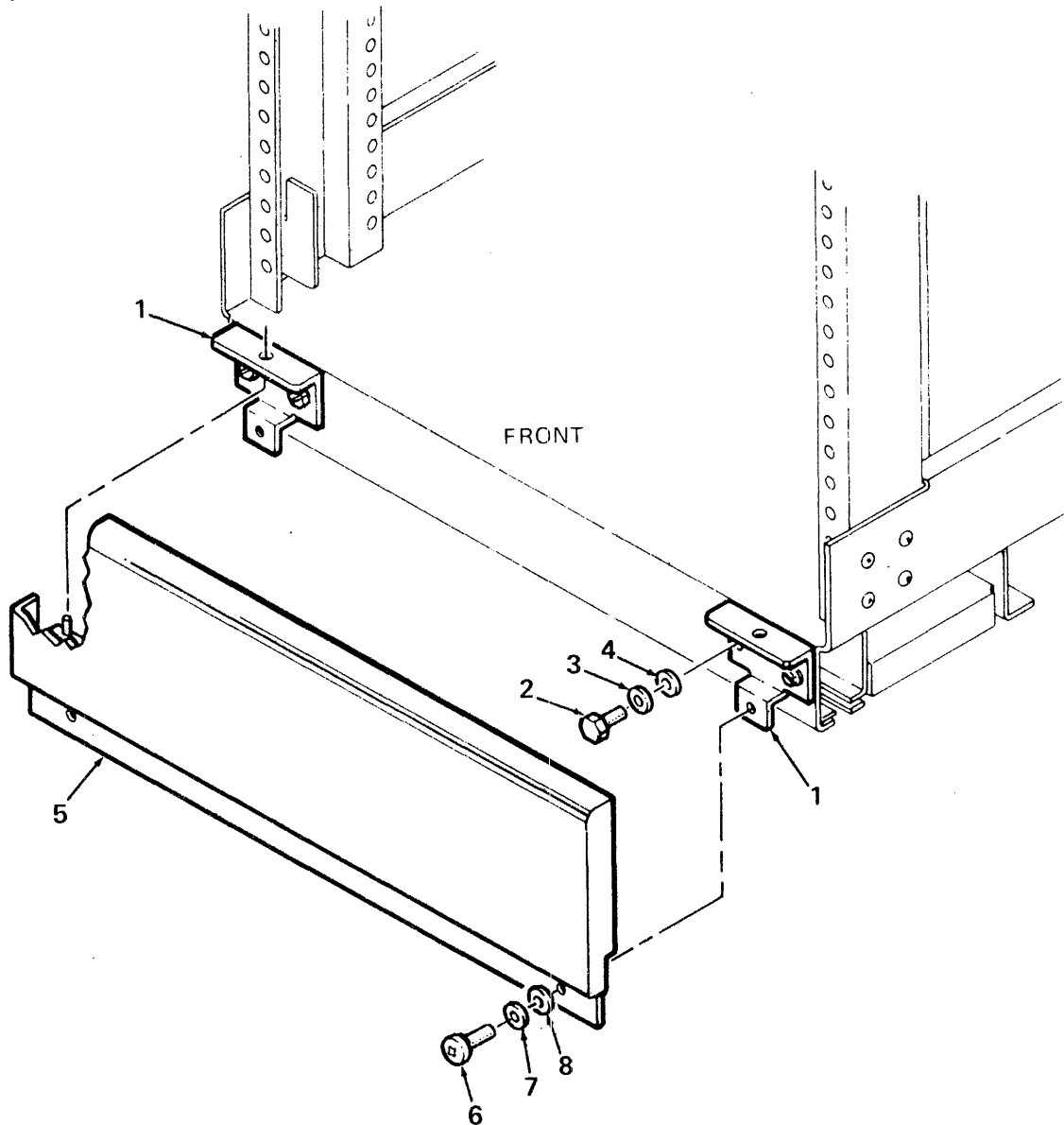
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9544-D 00005	USED ON CODE	REF FIG NO.
20-	BLANK BEZEL ASSEMBLY	H9544-DA			5
1	*Backplate, 1-3/4" W/Cutout	74-24369-00			
2	*Screw, Phi Pan Hd No. 10-32 x 5/8	90-06074-01			
3	*Washer, Lock No. 10	90-07906-00			
4	*Washer, Flat	90-06664-00			
5	*Retainer, "U"-Nut No. 10-32	90-07786-00			
6	*Bezel, Plastic Molded	12-17098-00			



RA80-20

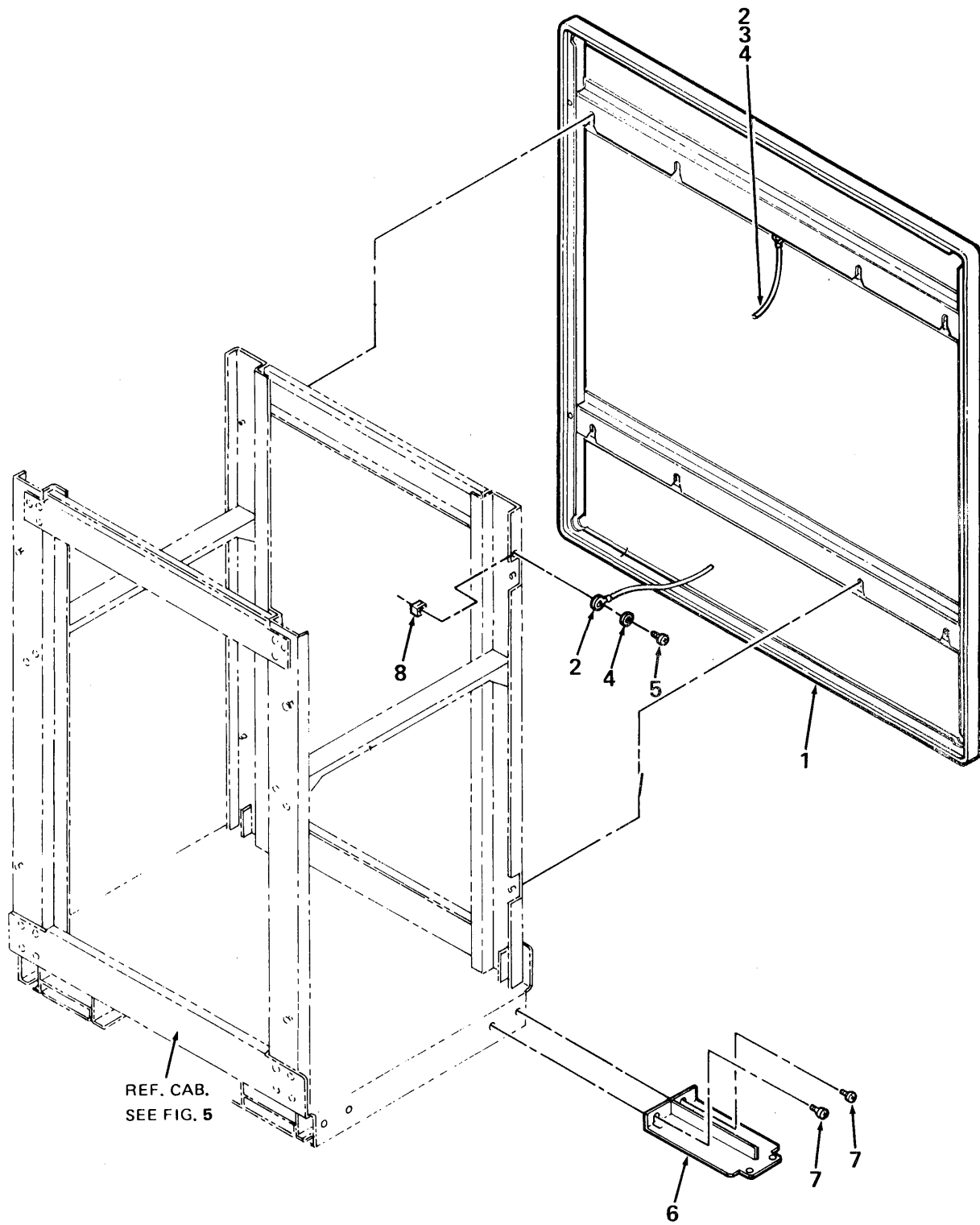
Figure 20. Blank Bezel Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9544-B 00005	USED ON CODE	REF FIG NO.
21-	BOTTOM COVER ASSEMBLY	H9544-DB			5
1	*Bracket, Retaining Trim	74-21903-00			
2	*Screw, Hex Hd No. 1/4-20 x 3/4	90-06243-09			
3	*Washer, Lock No. 1/4	90-07797-00			
4	*Washer, Flat	90-06676-00			
5	*Trim Assembly	70-16407-00			
6	*Screw, Phi Pan Hd No. 10-32 x 5/8	90-06074-01			
7	*Washer, Lock No. 10	90-07906-00			
8	*Washer, Flat	90-06664-00			



RA80-22

Figure 21. Bottom Cover Assembly

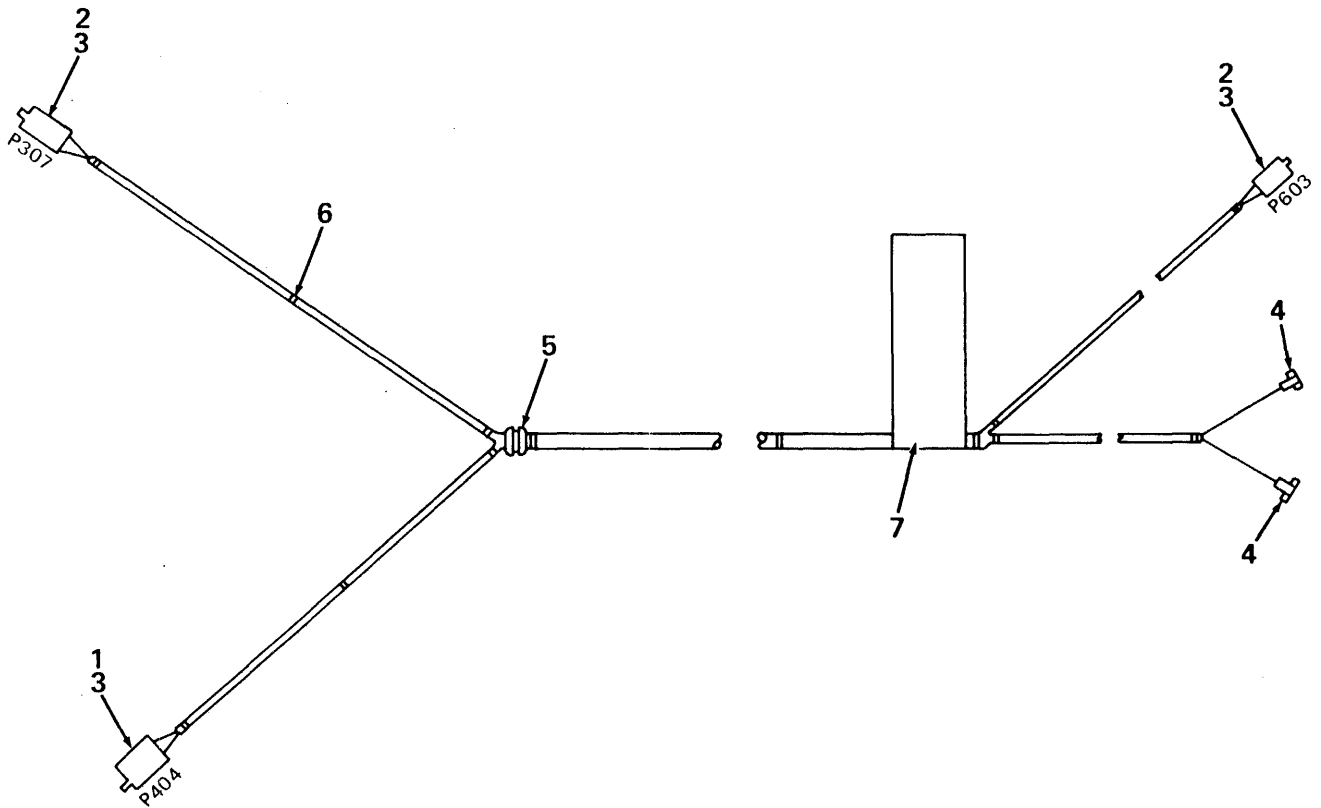


RA60-15

Figure 22. End Panel Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H9544-A 00005	USED ON CODE	REF FIG NO.
22-	END PANEL ASSEMBLY (W/Lock Bracket)	H9544-AG			5
1	*END PANEL ASSEMBLY (40")	70-19083-01			
2	** Ground Strap	12-13756-20			
3	**Screw, Sems Slotted Plain Hd No. 10-32 x 3/8	90-00049-38			
4	**Washer, Flat	90-06664-00			
5	*Screw, Sems Slotted Hex Hd No. 10-32 x 1/2	90-10156-00			
6	*Bracket, Door Hinge	70-19076-06			
7	*Screw, Sems Slotted Hex Hd No. 1/4-20 x 3/4	90-09988-14			
8	*Nut, U-Nut Retainer No. 10-32	90-07786-00			

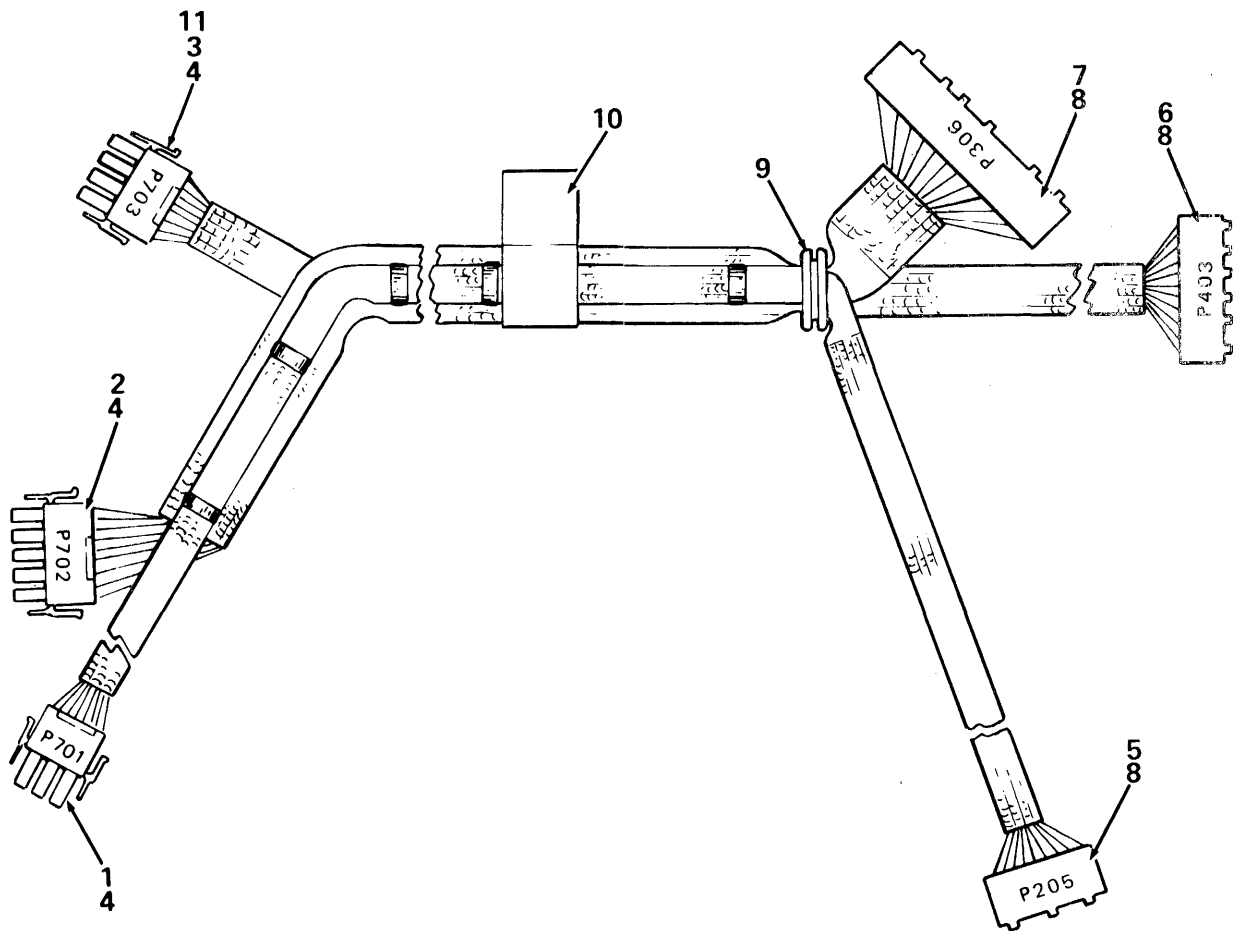
FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN R80 00004	USED ON CODE	REF FIG NO.
23-	BELT TENSION SWITCH HARNESS ASSEMBLY	70-16980-00			7
1	*Connector, (P404) Pin Housing 3 Pin	12-12620-04			
2	*Connector, (P307, P603) Pin Housing 2 Pin	12-12620-03			
3	*Terminal, (P404, P307, P603) Pin Contact	12-12203-01			
4	*Terminal, Receptacle Contact (Right Angle)	12-13546-00			
5	*Grommet	90-07015-00			
6	*Cable Tie	90-07031-00			
7	*Label, Plain	36-15710-00			



R80-14

Figure 23. Belt Tension Switch Harness Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-19062 00002	USED ON CODE	REF FIG NO.
24-	DC LOGIC POWER HARNESS ASSEMBLY	70-18331-01			8
1	*Connector, (P701) Universal (Socket Housing) 9 Pin Mate-N-Lok	12-12167-04			
2	*Connector, (P702) Universal (Socket Housing) 12 Pin Mate-N-Lok	12-12167-03			
3	*Connector, (P703) Universal (Socket Housing) 15 Pin Mate-N-Lok	12-12167-10			
4	*Terminal, (P701, P702, P703) Socket Contact	12-12170-00			
5	*Connector, (P205) (Pin Housing) 9-Pin	12-12620-08			
6	*Connector, (P403) (Pin Housing) 12 Pin	12-12620-01			
7	*Connector, (P306) (Pin Housing) 18 Pin	12-12620-10			
8	*Terminal, (P205, P403, P306) Pin Contact	12-12203-01			
9	*Grommet	90-07018-00			
10	*Label, Plain	90-15710-00			
11	*Terminal, (P703) Socket Contact	12-12169-00			

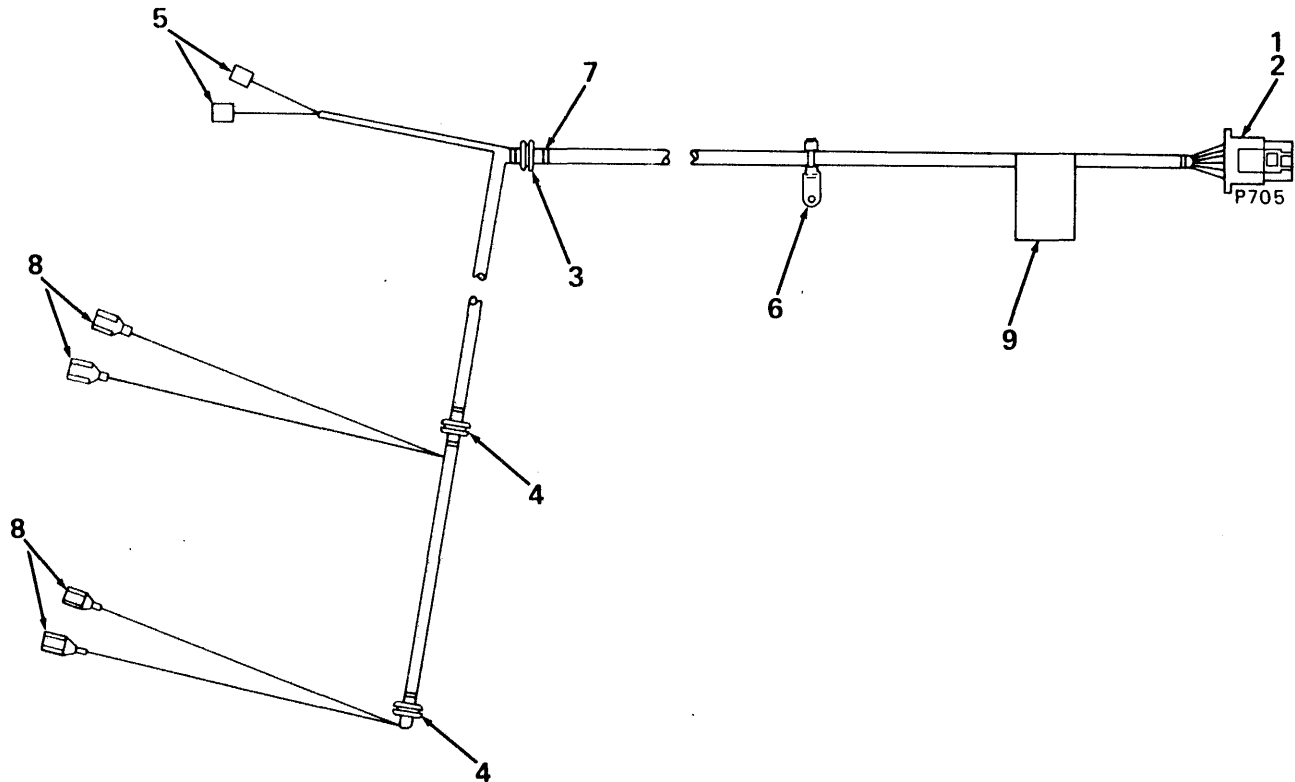


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Figure 24. D.C. Logic Power Harness Assembly

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 70-16773 00005	USED ON CODE	REF FIG NO.
25-	A.C. LOGIC POWER HARNESS ASSEMBLY	70-16733-00			8
1	*Connector, (P705) Universal (Socket Housing) 6 Pin Mate-N-Lok	12-12167-06			
2	*Terminal, (P705) Socket Contact	12-12169-00			
3	*Grommet, Rubber	90-07015-00			
4	*Grommet, Rubber	90-07013-00			
5	*Terminal, Flag	90-06998-01			
6	*Cable Tie	90-07033-00			
7	*Cable Tie	90-07031-00			
8	*Terminal, Quick Connect (Female)	90-09106-04			
9	*Label, "Cable Identification"	36-16073-00			

09/01/01



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Figure 25. A.C. Logic Power Harness Assembly

**ILLUSTRATED PARTS BREAKDOWN
COMMENT SHEET**

Any and all comments and suggestions for correcting errors and/or additional information to improve this manual will be reviewed and researched for possible use when this manual is revised and/or reprinted. Enter your comments and suggestions in the form provided below and return to Technical Documentation.

MODEL RA81 DISK DRIVE

PUBLICATION NO. EK-0RA81-IP-001

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____
CHANGE FROM _____
CHANGE TO _____

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