

***IMPRIMIS***

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**FIXED STORAGE DRIVE  
(300/340/515 MB)**

**PA5XX**

**ILLUSTRATED PARTS BREAKDOWN  
ACCESSORIES  
RECOMMENDED SPARE PARTS**

## WARNING

Do not attempt to install, operate, or repair the unit, before you read the important safety information located directly after the table of contents in this manual. Failure to follow that and other safety precautions in this manual could cause injury to yourself or others.

## WARNING

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of the FCC Rules which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

**IMPRIMIS**

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## REVISION RECORD

REVISION	DESCRIPTION
A (6-1-88)	Original release documenting series codes 01 thru 23 units. This publication and publication 83327120 replace publications 83324760 and 83325220. This publication and publication 83327130 replace publications 83324790 and 83325170. This publication and publication 83327140 replace publication 83325600.
B (08-17-88)	Incorporated the following series code 24 changes: ECOs DJ30840, DJ30854, technical changes, and editorial changes.
C (11-30-88)	Incorporated the following series code 25 changes: ECOs DJ30881, DJ30883, DJ30867, FCO DJ30883, technical changes, and editorial changes.
D (06-01-89)	Incorporated the following series codes 26 and 27 changes: ECO DJ30923, technical changes, and editorial changes.
E (07-20-89)	Incorporated series code 27 technical and editorial changes.

REVISION LETTERS I, O, Q AND X ARE NOT USED.

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We value your comments. A Comment Sheet is provided at the back of this manual.

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## MANUAL USAGE

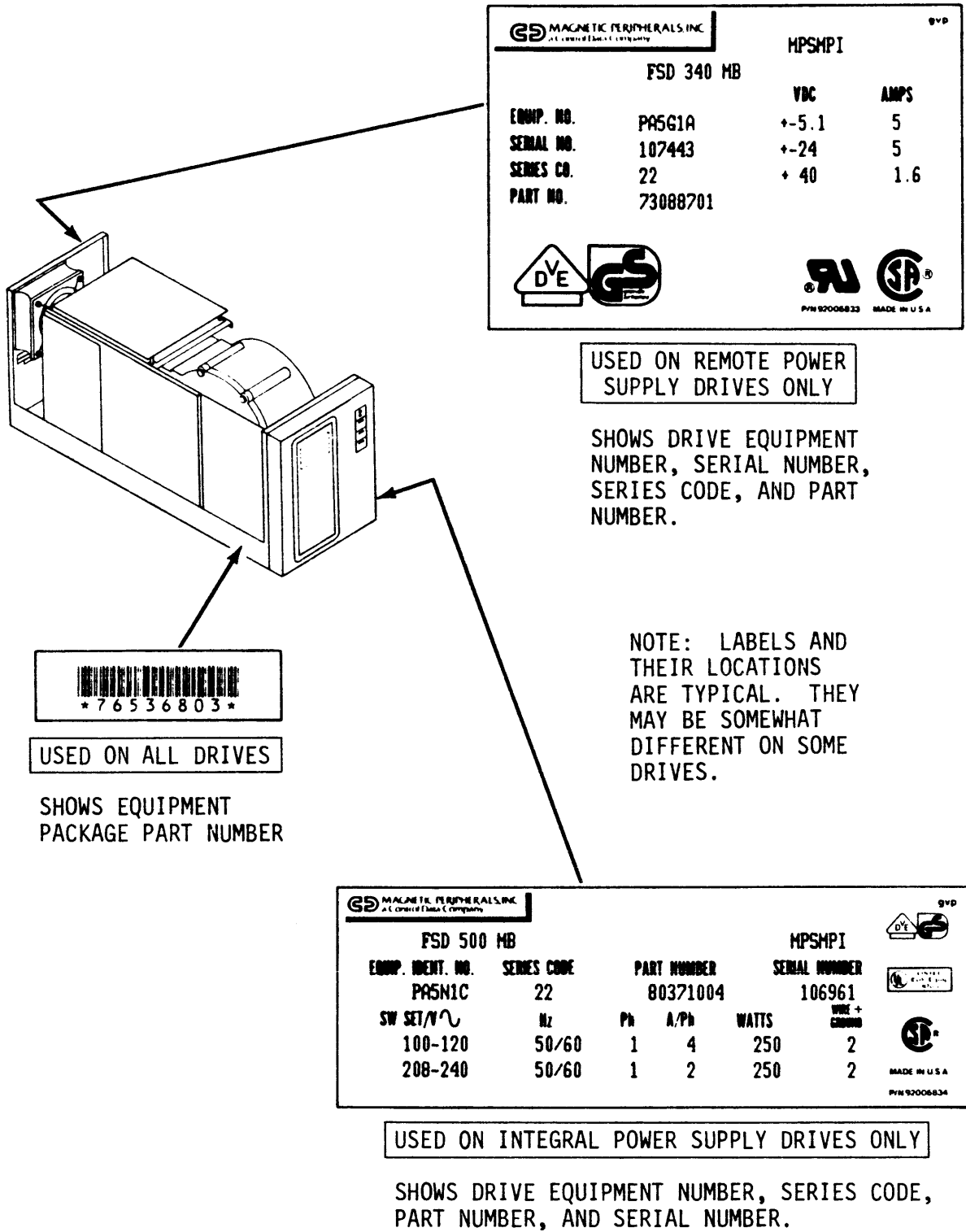
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This manual applies to the equipments listed in table f-1. The field change orders (FCOs) listed in table f-2 have been included in this manual.

To determine if this manual matches your equipment, you need to know the following:

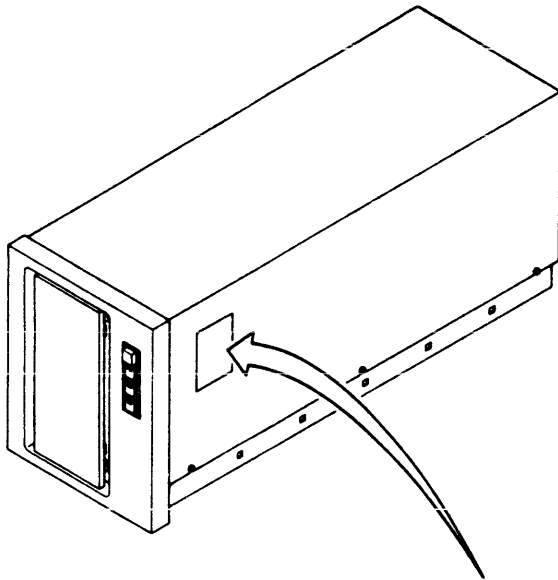
- Your equipment package part number. Ensure that this part number is included in table 1-1 of this manual.
- Your equipment number. Ensure that this number is included in table f-1.
- Your equipment series code. Series codes are assigned in manufacturing to aid in identifying part differences between drives. Check the revision record (page f-2) to ensure that a particular series code is included in this manual.
- All FCOs that have been installed in your drive. FCOs are listed on the drive's Equipment Configuration Log. Compare with the FCOs listed in table f-2 (disregard those that do not affect your equipment).


Refer to figure f-1 for typical labels and their locations. Refer to figure f-2 for typical equipment configuration log and its location.



11D667

Figure f-1. Drive Identification Labels



 MAGNETIC PERIPHERALS INC. <small>a Hewlett-Packard Company</small>		EQUIPMENT CONFIGURATION LOG	
PAGE NO. _____ OF _____			
BASE EQUIP. ID NO. _____		S/N _____	
INSTALLED OPTIONS			
EQUIPMENT ID NO.	SERIAL NO.	EQUIPMENT ID NO.	SERIAL NO.
* KEY FOR CHANGE NO PREFIXES: F=FCO E=ECO D=DA(DEVIAION)			
FIELD HISTORY			
EQUIPMENT ID NO.	SERIAL NO.	* CHANGE NO.	DATE & INST BY

SHOWS THE CHANGES MADE TO THIS MACHINE DURING OR AFTER MANUFACTURE. ECO'S ARE MADE DURING MANUFACTURE, AND FCO'S ARE MADE AFTER MANUFACTURE.

11D668

Figure f-2. Equipment Configuration Log

TABLE f-1. EQUIPMENT LIST

Equipment Number	Interface	Power Supply	Other Characteristics
PA5G1A	SMD-0, S Ch	Remote	340 MB
PA5G1B	SMD-0, S Ch	Remote	340 MB
PA5G1C	SMD-0, S Ch	Remote	340 MB
PA5G1D	SMD-0, S Ch	Integral	340 MB
PA5G1F	SMD-0, S Ch	Integral	340 MB
PA5G1G	SMD-0, S Ch	Integral	340 MB
PA5G1K	SMD-0, S Ch	Remote	340 MB
PA5G1L	SMD-0, S Ch	Integral	340 MB
PA5G1M	SMD-0, S Ch	Integral	340 MB
PA5G1N	SMD-0, S Ch	Integral	340 MB
PA5G1R	SMD-0, S Ch	Integral	340 MB
PA5G1S	SMD-0, S Ch	Integral	340 MB
PA5G1T	SMD-0, S Ch	Integral	340 MB
PA5G1U	SMD-0, S Ch	Integral	340 MB
PA5G2A	SMD-0, D Ch	Remote	340 MB
PA5G2B	SMD-0, D Ch	Remote	340 MB
PA5G2C	SMD-0, D Ch	Integral	340 MB
PA5G2D	SMD-0, D Ch	Integral	340 MB
PA5G2E	SMD-0, D Ch	Integral	340 MB
PA5G2G	SMD-E, D Ch	Integral	340 MB
PA5G2J	SMD-0, S Ch	Integral	340 MB
PA5G2K	SMD-0, D Ch	Remote	340 MB
PA5G2M	SMD-0, D Ch	Integral	340 MB
PA5J1A	SMD-0, S Ch	Remote	300 MB
PA5J1B	SMD-0, S Ch	Integral	300 MB
PA5J1C	SMD-0, S Ch	Integral	300 MB
PA5J1D	SMD-0, S Ch	Integral	300 MB
PA5J2A	SMD-0, D Ch	Remote	300 MB
PA5J2B	SMD-0, D Ch	Integral	300 MB
PA5J2C	SMD-0, D Ch	Integral	300 MB
PA5K1A	SDI, S Ch	Remote	340 MB
PA5K1B	SDI, S Ch	Integral	340 MB
PA5N1A	SMD-0, S Ch	Remote	515 MB
PA5N1B	SMD-0, S Ch	Integral	515 MB
PA5N1C	SMD-0, S Ch	Integral	515 MB

Continued on Next Page



TABLE f-1. EQUIPMENT LIST (Contd)

Equipment Number	Interface	Power Supply	Other Characteristics
PA5N1D	SMD-0, S Ch	Integral	515 MB
PA5N1E	SMD-0, S Ch	Integral	515 MB
PA5N1F	SMD-0, S Ch	Remote	515 MB
PA5N1G	SMD-0, S Ch	Integral	515 MB
PA5N1H	SMD-0, S Ch	Integral	515 MB
PA5N1K	SMD-0, S Ch	Integral	515 MB
PA5N2A	SMD-0, D Ch	Remote	515 MB
PA5N2B	SMD-0, D Ch	Integral	515 MB
PA5N2C	SMD-E, D Ch	Integral	515 MB
PA5N2D	SMD-E, D Ch	Integral	515 MB
PA5N2E	SMD-0, D Ch	Integral	515 MB
PA5N2F	SMD-0, D Ch	Remote	515 MB
PA5N2G	SMD-0, D Ch	Integral	515 MB
PA5N2K	SMD-0, D Ch	Integral	515 MB
PA5R2A	IPI, Dual-Port	Integral	515 MB, 512 Byte Sector
PA5R2B	IPI, Dual-Port	Integral	515 MB, 1024 Byte Sector
PA5R2C	IPI, Dual-Port	Integral	515 MB, 288 Byte Sector
PA5R2D	IPI, Dual-Port	Integral	515 MB, 2304 Byte Sector
PA5R2E	IPI, Dual-Port	Integral	515 MB, 504 Byte Sector
PA5R2F	IPI, Dual-Port	Integral	515 MB, 2048 Byte Sector
PA5R2G	IPI, Dual-Port	Integral	515 MB, 512 Byte Sector
PA5R2H	IPI, Dual-Port	Integral	515 MB, 1024 Byte Sector
PA5R2J	IPI, Dual-Port	Integral	515 MB, 512 Byte Sector
PA5S1A	SDI, S Ch	Remote	515 MB
PA5S1B	SDI, S Ch	Integral	515 MB
PA5S2B	SDI, D Ch	Integral	515 MB
PA5S2C	SDI, D Ch	Integral	515 MB
PA5Z1A	SMD-E, S Ch	Remote	515 MB
PA5Z1B	SMD-E, D Ch	Integral	515 MB
PA5Z1C	SMD-E, S Ch	Integral	515 MB
PA5Z2A	SMD-E, D Ch	Remote	515 MB
PA5Z2B	SMD-E, D Ch	Integral	515 MB
PA5Z2C	SMD-E, D Ch	Integral	515 MB
PA5Z2D	SMD-E, D Ch	Integral	515 MB
PA506A	SDI, D Ch	Remote	515 MB

TABLE f-2. FCO LIST

FCO Number	Equipments Affected	Series Codes	Comments
DJ05751	340/515 MB	01-02	Add magnet support bracket
DJ05989	340 MB	01-08	To EUGX board
DJ30014	PA5G1A-D/G/K, PA5G2A/B/D/E/G/K, PA5N1A-C/E/F/G, PA5N2A-C/F/G	01-09	To EVCX or WVCX
DJ30102	PA5N1D, PA5N2D/E	01-09	To EVCX or WVCX
DJ30197	340/515 MB except PA5N1D, PA5N2D/E	08-11	Remove AVUX
DJ30199	PA5N1D, PA5N2D/E	08-11	Remove AVUX
DJ30294	PA5S1/PA5S2	01-09	To EVCX or WVCX
DJ30295	PA506A	01-09	To EVCX or WVCX
DJ30518	PA5R2	01-18	To AHVCX or BWLX
DJ30727	All except PA5N1D/E, PA5N2D/E, PA5R2, PA5Z1C, PA5Z2C, PA506A	07-19	EPROM change
DJ30728	PA5R2A/B/E/G/H	07-19	EPROM change
DJ30729	PA5R2F	07-19	EPROM change
DJ30730	PA5R2C/D	07-19	EPROM change
DJ30731	300 MB	07-19	EPROM change
DJ30732	PA5Z2C	07-19	EPROM change
DJ30733	PA506A	07-19	EPROM change
DJ30734	PA5N1D/E, PA5N2D/E, PA5Z1C, PA5Z2D	07-19	EPROM change
DJ30736	All except PA5N1D/E, PA5N2D/E, PA5R2, PA5Z1C, PA5Z2C, PA506A	01-11	EPROM change
DJ30737	PA506A	01-11	EPROM change
DJ30738	PA5N1D/E, PA5N2D/E	01-11	EPROM change
DJ30883	PA5R2C/D	01-24	Add Diagnostics

## LIST OF EFFECTIVE PAGES

This manual is at revision E. Each page in your manual should be at the revision level listed below. The "Div" is a colored divider page.

PAGE/REV		PAGE/REV		PAGE/REV		PAGE/REV		PAGE/REV	
Cover	-	f-20	A	1-19	E	1-40	A	S-3 Div	-
Warnings	-	S-1 Div	-	1-20	A	1-41	A	Blank	-
Title P	-	Blank	-	1-21	A	1-42	A	3-1	D
f-2	E	1-1	D	1-22	A	1-43	A	3-2	C
f-3	A	1-2	A	1-23	A	1-44	A	3-3	C
f-4	A	1-3	A	1-24	A	1-45	A	3-4	C
f-5	A	1-4	A	1-25	A	1-46	B	3-5	B
f-6	A	1-5	A	1-26	A	1-47	B	3-6	D
f-7	A	1-6	D	1-27	A	1-48	A	3-7	C
f-8	C	1-7	D	1-28	C	1-49	A	3-8	D
f-9	E	1-8	A	1-29	C	1-50	A	3-9	C
Blank	-	1-9	A	1-30	A	1-51	E	3-10	D
f-11	D	1-10	A	1-31	A	1-52	E	3-11	C
f-12	D	1-11	C	1-32	C	1-53	E	3-12	D
f-13	A	1-12	A	1-33	C	1-54	E	Cmt Sht	-
Blank	-	1-13	A	1-34	A	S-2 Div	-	Rtn Env	-
f-15	A	1-14	A	1-35	A	Blank	-	Blank	-
f-16	D	1-15	A	1-36	A	2-1	A	Cover	-
f-17	D	1-16	C	1-37	A	2-2	A		
f-18	A	1-17	A	1-38	A	2-3	A		
f-19	D	1-18	E	1-39	A	Blank	-		

## PREFACE

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This manual contains parts ordering information for the Imprimis PA5XX 300/340/515 MB Fixed Storage Drives (FSDs). Refer to table f-1 in Manual Usage for a list of equipment numbers that this manual applies to.

Within the continental U.S., parts may be ordered from:

Imprimis Technology Incorporated  
Customer Services  
5950 Clearwater Drive  
Minnetonka, MN 55343

Phone: 1-800-382-6060  
Fax: (612) 931-8817

Changes to this manual are indicated in the following ways:

- A vertical bar in the outer margin of a page marks a changed area.
- A dot by the page number indicates the entire page contains new or changed information.
- A vertical bar by the page number indicates the information was moved from another page, but there were no technical or editorial changes.

This manual is arranged into the following sections:

- Section 1 -- Illustrated Parts Breakdown. Provides exploded-view illustrations and part numbers of field-replaceable parts.
- Section 2 -- Accessories. Provides a list of accessories that are available for the drive.
- Section 3 -- Recommended Spare Parts. Provides a list of replaceable parts that the manufacturer recommends should be readily available as spares.

The following manuals apply to the FSD and are available from:

Imprimis Technology Incorporated  
Customer Services  
5950 Clearwater Drive  
Minnetonka, MN 55343

Phone: (612) 931-8612  
Fax: (612) 931-8817

<u>Publication Number</u>	<u>Title</u>
	PA5XX 300/340/515 MB Users Manuals (contains general description, operation, and installation/checkout information)
83327120	SMD Interface
83327130	SDI Interface
83327140	IPI Interface
83327110	PA5XX 300/340/515 MB Parts Data Manual
83327340	PA5XX 300/340/515 MB Maintenance Manual (contains general maintenance, trouble analysis, and repair/replacement information)
	PA5XX 300/340/515 MB Theory Manuals
83327250	SMD Interface
83327260	SDI Interface
83327270	IPI Interface
83327020	PA5XX 300/340/515 MB Diagrams Manual
83325450	PA5Z2C Special Supplement
83325320	A Guide for the Disk Drive Operator
83325360	Reference Card (provides status code and diagnostics information)

The following manuals that did apply to the FSD have been  
obsoleted and replaced: 83324760, 83324770, 83324780,  
83324790, 83324800, 83324810, 83325170, 83325180, 83325190,  
83325220, 83325230, 83325240, 83325480, 83325530, 83325540,  
83325600, 83325610, and 83325620.

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## IMPORTANT SAFETY INFORMATION AND PRECAUTIONS

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Use of proper safety and repair techniques is important for safe, reliable operation of this unit. Service should be done only by qualified persons. We recommend the procedures in this manual as effective ways of servicing the unit. Some procedures require the use of special tools. For proper maintenance and safety, you must use these tools as recommended.

The procedures in this manual and labels on the unit contain warnings and cautions that must be carefully read and followed to minimize or eliminate the risk of personal injury. The warnings point out conditions or practices that may endanger you or others. The cautions point out conditions or practices that may damage the unit, possibly making it unsafe for use.

You must also understand that these warnings and cautions are not exhaustive. We cannot possibly know, evaluate, and advise you of all the ways in which maintenance might be performed or the possible risk of each technique. Consequently, we have not completed any such broad evaluation. If you use a non-approved procedure or tool, first ensure that the method you choose will not risk either your safety or unit performance.

For the safety of yourself and others, observe the following warnings and precautions.

- Perform all maintenance by following the procedures in this manual.
- Follow all cautions and warnings in the procedures and on unit labels.
- Use the special tools called out in the procedures.
- Use sound safety practices when operating or repairing the unit.
- Use caution when troubleshooting a unit that has voltages present. Remove power from unit before servicing or replacing parts.
- Wear safety glasses when servicing units.
- Wear safety shoes when removing or replacing heavy parts.

(continued on next page)

- Use only designated Imprimis replacement parts. Non-Imprimis replacement parts can adversely affect safety in addition to degrading reliability, increasing maintenance downtime, and voiding warranty coverage.
- Use care while working with the power supply because line voltages are present. For complete safety, remove the ac power plug from the site power outlet.
- In case of fire or other emergency, isolate the drive from main power by removing the drive power plug from the ac outlet. In situations where pulling the plug is not possible or practical, use the system main power disconnect to isolate the drives from main power.
- When the drive is mounted in an equipment rack or cabinet, ensure that the internal temperature of the rack or cabinet will not exceed the limits defined for the drive. Where units are stacked vertically, pay special attention to the top where temperatures are usually highest.
- Follow the precautions listed under Electrostatic Discharge Protection.
- Do not attempt to disassemble the module. It is not field repairable. Replace the entire module assembly if it is defective.
- Do not operate the drive over an extended period of time without the top cover installed.
- Always deenergize drive before removing or installing circuit boards, cables, or any other electrical components.
- This drive is designed to be installed and operated in accordance with IEC380, IEC435, VDE805, and VDE806.
- This drive must be connected to a power distribution system that has a direct connection to earth ground (TT network).



## ABBREVIATIONS

---

A	Ampere	CLK	Clock
ABV	Above	CLR	Clear
ac	Alternating Current	cm	Centimetre
ADD	Address	CNTR	Counter
ADDR	Address	COMP	Comparator
ADJ	Adjust	CONT	Control
ADRS	Address	CONTD	Continued
AGC	Automatic Gain Control	CT	Center Tap
ALT	Alternate	CYL	Cylinder
AM	Address Mark	D/A	Digital to Analog
AME	Address Mark Enable	dc	Direct Current
AMP	Amplifier, Ampere	DET	Detect
ASSY	Assembly	DIFF	Differential
BLW	Below	DIV	Division
C	Celsius	DLY	Delay
CB	Circuit Breaker	DRVR	Driver
CDA	Complete Drive Assembly	ECL	Emitter Coupled Logic
CH	Channel	ECO	Engineering Change Order
CHK	Check		
CIC	Card Interchangeability Chart		

## ABBREVIATIONS (Contd)

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EN	Enable	IC	Integrated Circuit
ENBL	Enable	IDENT	Identification
EXT	External	in	Inch
F	Fahrenheit, Fuse	IND	Index
FCO	Field Change Order	INTRPT	Interrupt
FDBK	Feedback	I/O	Input/Output
FIG	Figure	IPB	Illustrated Parts Breakdown
FLT	Fault	IPS	Inches per Second
Fr	Front	kg	Kilogram
FRU	Field Replaceable Unit	kPa	Kilopascal
FSD	Fixed Storage Drive	kW	Kilowatt
ft	Foot	lb	Pound
FTU	Field Test Unit	lbf	Pounds-Force
FWD	Forward	LED	Light Emitting Diode
GND	Ground	LH	Left-Hand
HD	Head	LSI	Large Scale Integration
HEX	Hexagon	LTD	Lock to Data
Hg	Mercury	m	Metre
HR	High Resolution	MAX	Maximum
HYST	Hysteresis	MB	Megabyte
Hz	Hertz		

## ABBREVIATIONS (Contd)

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MEM	Memory	PHH	Phillips Head
MHz	Megahertz	PLO	Phase Lock Oscillator
mm	Millimetre	P/N	Part Number
MOT	Motor	Pr	Product
MPU	Microprocessor Unit	PROC	Procedure
MRK	Mark	PROG	Programmable
ms	Millisecond	PROT	Protect
MTR	Motor	PS	Power Supply
mV	Millivolt	PWR	Power Supply
N	Newton	RCVR	Receiver
NC	No Connection	RD	Read
NORM	Normal	RDY	Ready
NRZ	Non Return to Zero	REF	Reference
ns	Nanosecond	REQ	Request
OC	On Cylinder	RES	Resolution
OS	One-Shot	REV	Reverse, Revision
OSC	Oscillator	RGTR	Register
P	Plug	RH	Right-Hand
PD	Peak Detect	r/min	Revolutions Per Minute
pF	Picofarad	RTZ	Return to Zero
PG	Page		

## ABBREVIATIONS (Contd)

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R/W	Read/Write	Vbb	Bias Voltage
s	Second	VCC	Bias Voltage
S/C	Series Code	VCO	Voltage Controlled Oscillator
SEC	Second	W	Watts
SEL	Select	W/	With
SEQ	Sequence	W/O	Without
SPD	Speed	W PROT	Write Protect
SS	Sector Switch	W+R	Write or Read
T	Tracks to go	W·R	Write and Read
TF	Thread Forming	WRT	Write
TIM	Timer	XFR	Transfer
TP	Test Point	Ω	Ohms
TSP	Troubleshooting Procedure	\$	Hexadecimal Address
TTL	Transistor-Transistor Logic	uF	Microfarad
V	Volts, Voltage	us	Microsecond

## **SECTION 1**

### **ILLUSTRATED PARTS BREAKDOWN**

# ILLUSTRATED PARTS BREAKDOWN

1

---

## INTRODUCTION

This section contains listings of field replaceable parts (including FRUs). Use only Imprimis replacement parts. Using non-Imprimis parts can adversely affect safety. Using other manufacturers' parts could also degrade reliability, increase maintenance downtime, and void warranty coverage.

### NOTE

ORDER AND REPLACE LOGIC BOARDS BY PART NUMBER ONLY.

Logic boards have an alpha card type designator stamped on them. In the past, ECOs that changed a board part number also changed the first letter of the designator (AWXY to BWXY). Effective 1 August 1987, only the part number changes. The card type does not change.

## FIELD REPLACEABLE PARTS LIST

This listing is divided into four columns:

- INDEX NO - The numbers in this column correspond to the numbers shown within the facing page illustration.
- PART NUMBER - Contains one of the following:
  1. Eight digit part number - use this number to order a replacement part.
  2. Optional - parts which are not used in all applications. To determine usage in a particular equipment, you must first know the Equipment Package part number and then refer to table 1-1. Table 1-1 contains the Equipment Package part number (the first 6 digits are on line 1, and the last 2 digits are on line 2) and a list of optional parts. If an optional part is used in a particular Equipment Package, "XX" will appear in that column.

3. Spare - indicates that the item is a manufacturer's recommended spare part. Refer to table 3-1 for replacement part number information.
  4. CIC - refers to Card Interchangeability Chart in section 3. Items listed in the CIC are also manufacturer's recommended spare parts.
- PART DESCRIPTION - Contains part nomenclature/description. If an item is indented more than the previous item, it indicates it is part of the previous item (assembly).
  - NOTE - Usually contains entries to define differences between machine configurations (i.e., model differences, older units vs newer units, etc.).

# LOCATOR

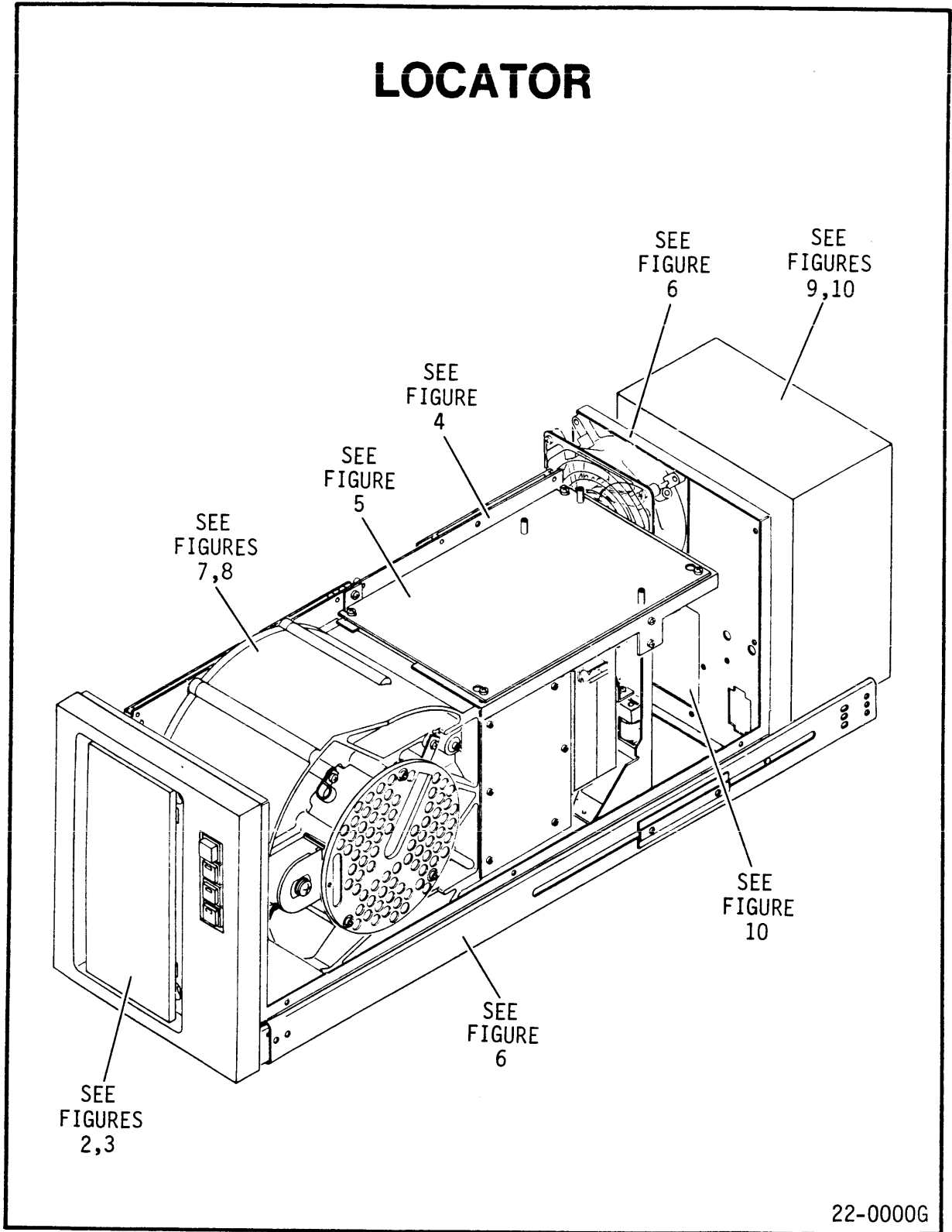
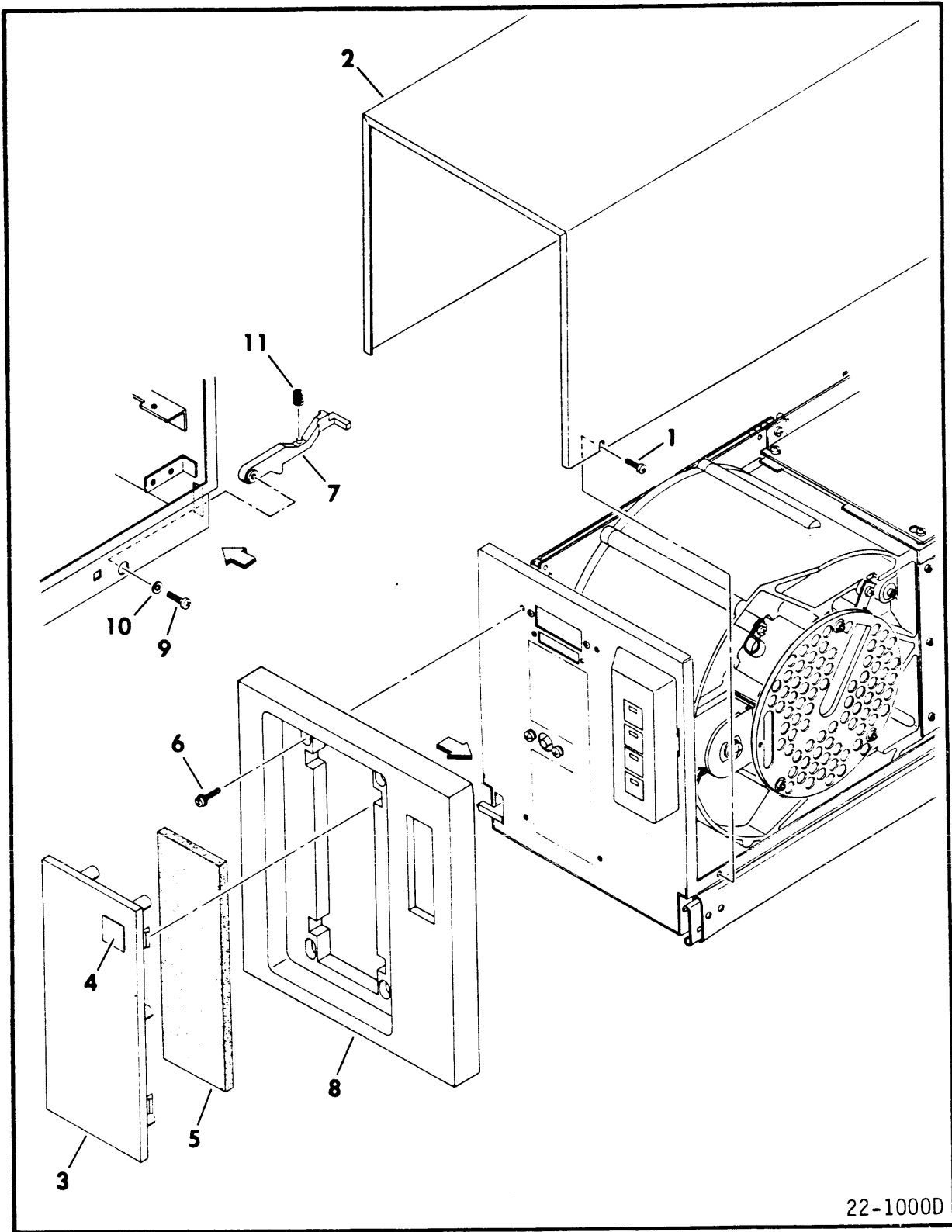


Figure 1-1

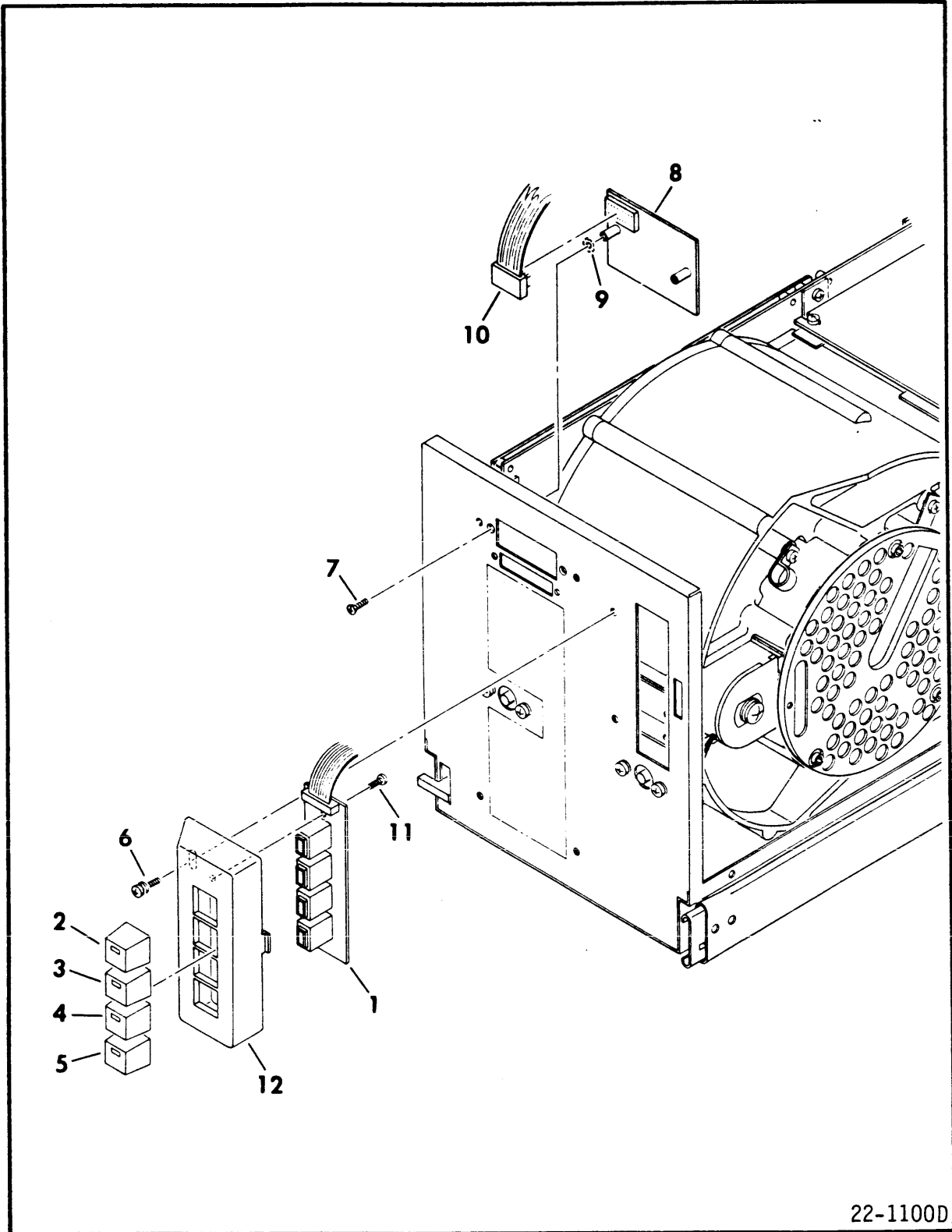




22-1000D

Figure 1-2

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	92743156	SCREW, PHH, 6-32 x 3/16	
2	72852546	COVER	
3	Optional	INSERT, Front Panel	
4	Optional	EMBLEM, Product Ident	
5	Spare	FILTER, Primary	Except PA5N1C
5	45070750	FILTER ASSEMBLY	PA5N1C only
6	53879414	SCREW, W/WASHER, 6-32 x 1/2	
7	Optional	LATCH, Cabinet	
8	Optional	PANEL, Front	
9	Optional	SCREW, PHH, 8-32 x 1/4	
10	Optional	WASHER, #8	
11	Optional	SPRING	



22-1100D

Figure 1-3

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	OPERATOR PANEL	
2		LOGIC PLUG	See Note 4
	Spare	LOGIC PLUG KIT (PA5N1C only)	See Note 2
3	94394255	LENS, "START"	See Note 1
3	15181644	LENS, "START"	See Note 2
3	15181647	LENS, "MARCHE"	See Note 3
4	94394256	LENS, "FAULT"	See Note 1
4	15181643	LENS, "FAULT"	See Note 2
4	15181646	LENS, "FAUTE"	See Note 3
5	94394257	LENS, "WRITE PROTECT"	See Note 1
5	15181645	LENS, "WRITE PROTECT"	See Note 2
5	15181648	LENS, "PROT. ECRIT"	See Note 3
6	92001710	SCREW W/WASHER, 6-32 x 5/16	
7	70523811	SCREW, Flat Hd, 6-32 x 5/16	
8	Spare	FAULT DISPLAY BOARD	
9	10126401	LOCKWASHER, #6	
10	Spare	FAULT STATUS CABLE	
11	10127102	SCREW, PHH, 4-40 x 1/4	See Note 2
12	81903870	BRACKET, Switch	See Note 2

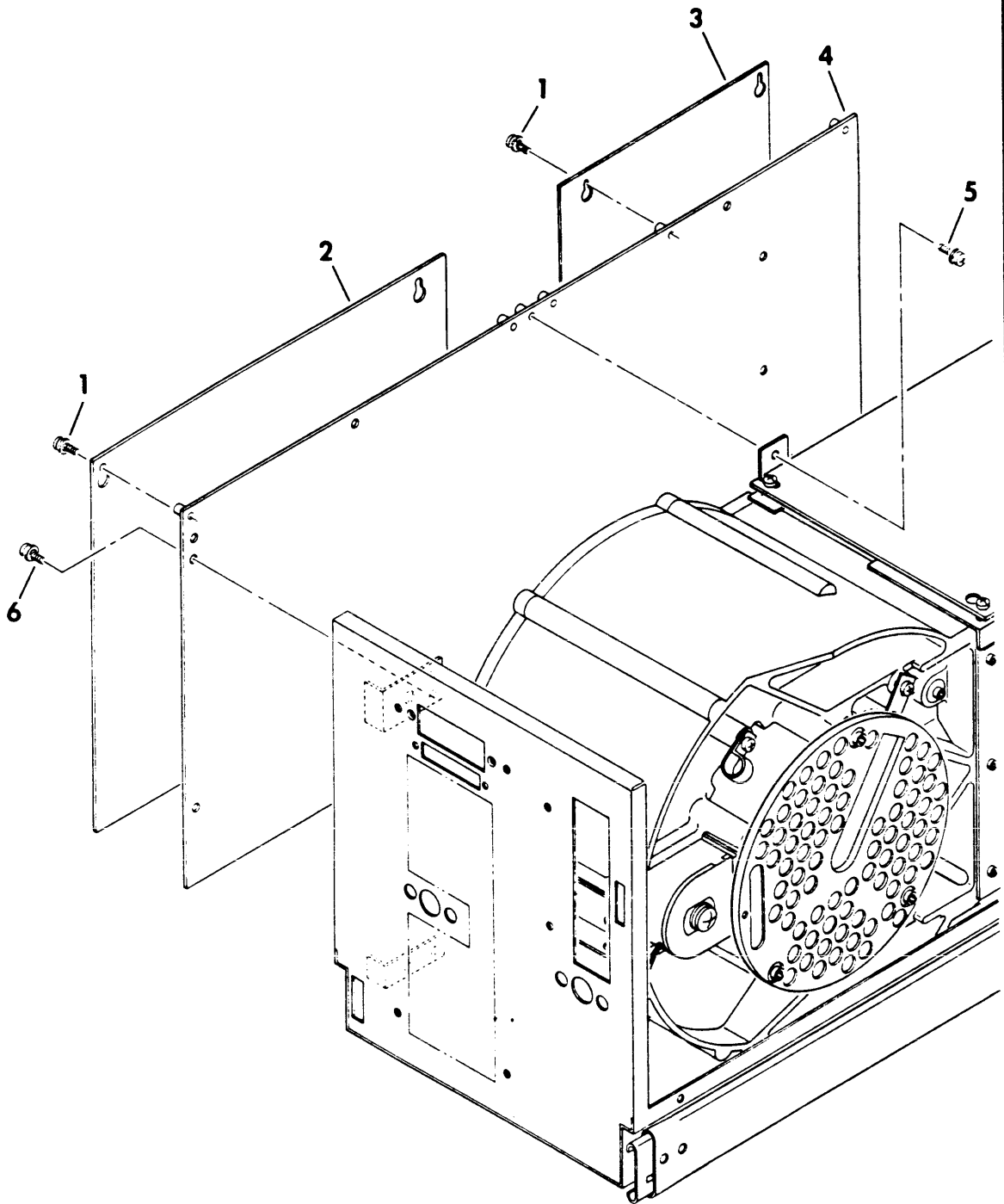
Note 1: Used on older operator panels, which have logic plugs without indicator lights.

Note 2: Used on newer operator panels, which have logic plugs with indicator lights.

Note 3: Used on PA5N1E, PA5N2D drives only.

Note 4: Refer to table 2-1 (Accessories) for listing of available logic plugs.

APPLIES TO ALL EXCEPT SDI DUAL-CHANNEL DRIVES

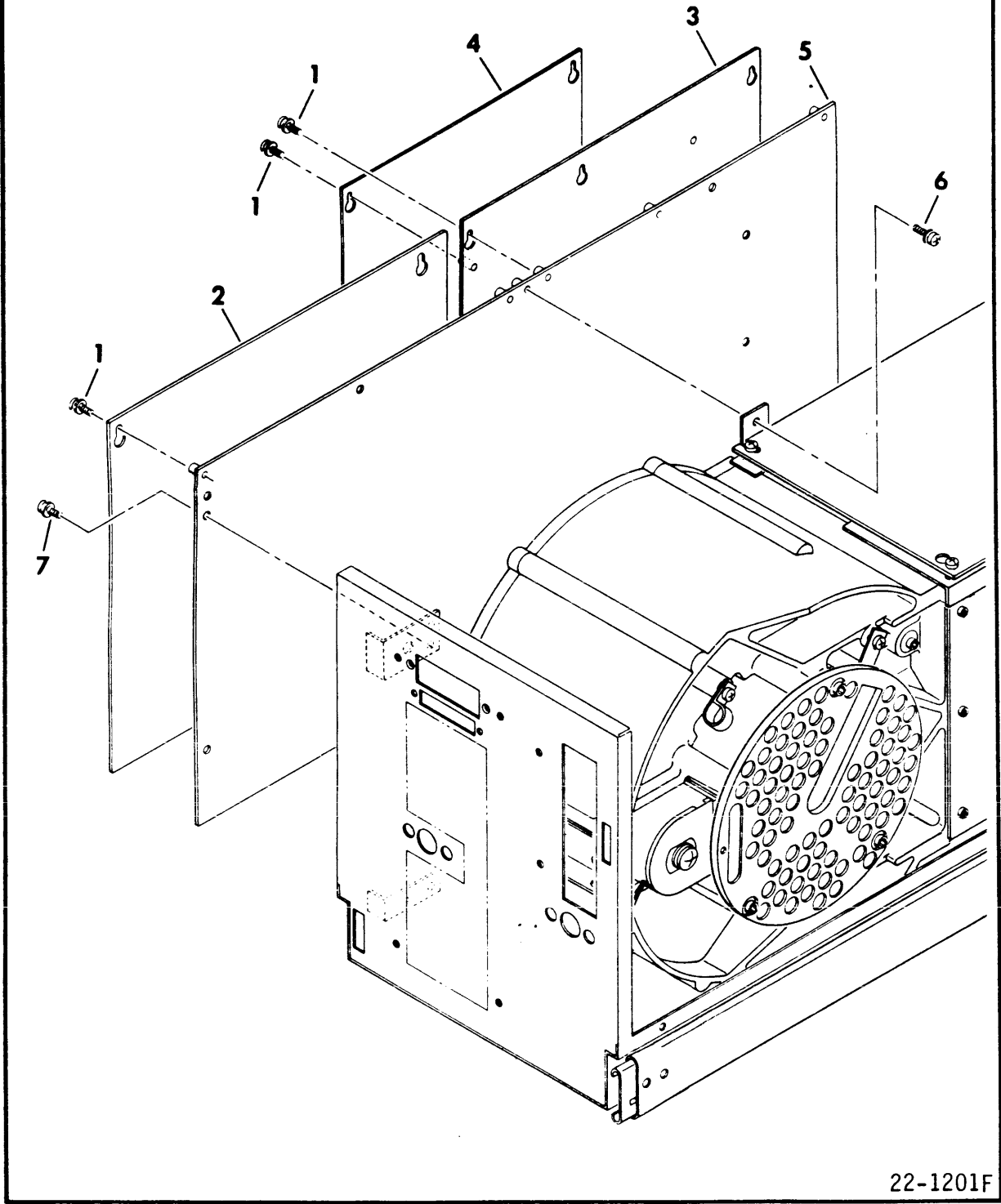


22-1202A

Figure 1-4 (Sheet 1 of 2)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	92001710	SCREW W/WASHER, 6-32 x 5/16	
2	Spare	CONTROL BOARD	
3	Spare	I/O BOARD	
4	Spare	MOTHER BOARD	
5	92001704	SCREW W/WASHER, 6-32 x 3/8	
6	10127111	SCREW, PHH, 6-32 x 1/4	

APPLIES TO SDI DUAL-CHANNEL DRIVES ONLY



22-1201F

Figure 1-4 (Sheet 2)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	92001710	SCREW W/WASHER, 6-32 x 5/16	
2	Spare	CONTROL BOARD	
3	Spare	I/O (_VFX) BOARD	
4	Spare	SDI ARRAYS (_VGX) BOARD	
5	Spare	MOTHER BOARD	
6	92001704	SCREW W/WASHER, 6-32 x 3/8	
7	10127111	SCREW, PHH, 6-32 x 1/4	



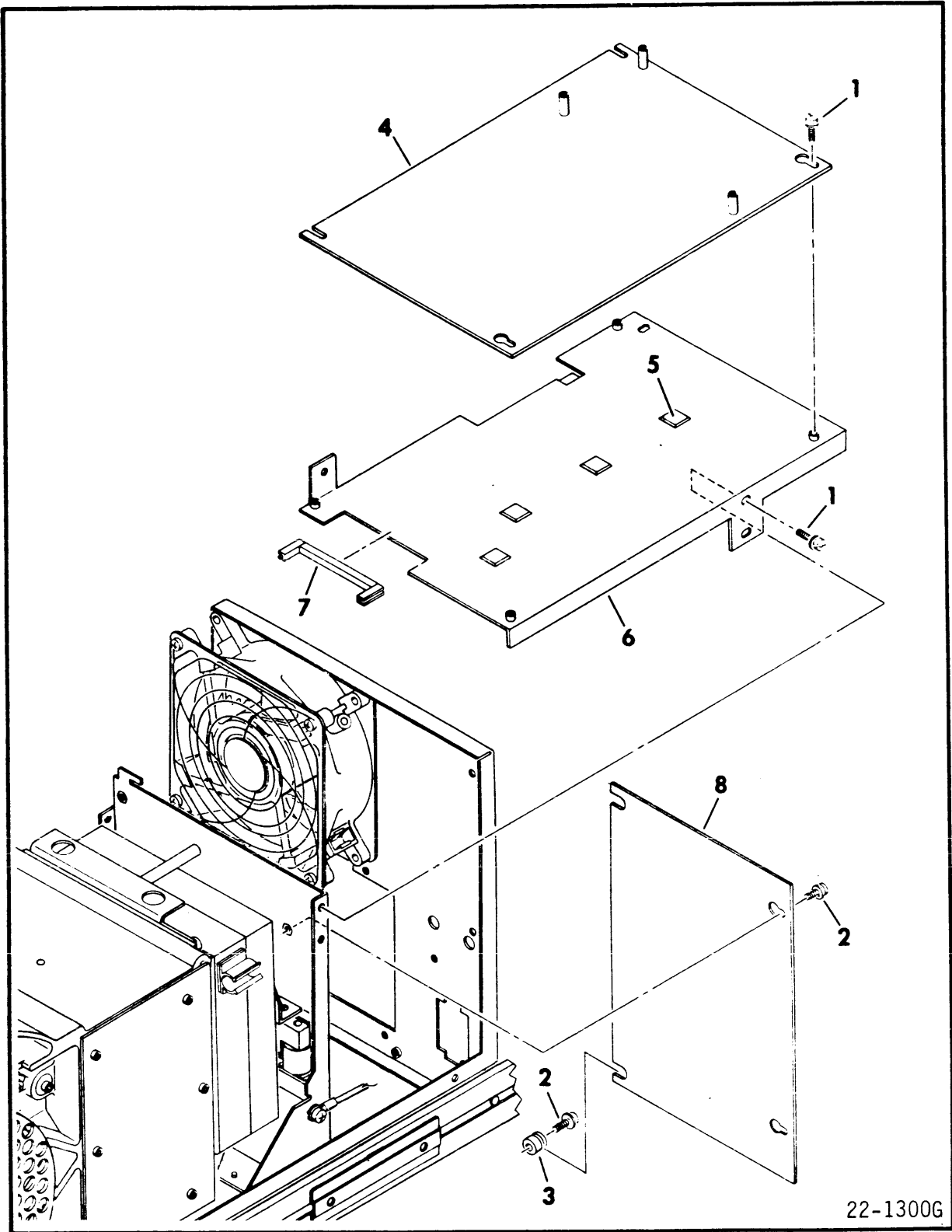


Figure 1-5

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	92001710	SCREW W/WASHER, 6-32 x 5/16	
2	92001705	SCREW W/WASHER, 6-32 x 1/2	
3	92723601	SPACER	
4	Spare	READ/WRITE BOARD	
5	51805802	BUMPER	
6	72857460	BRACKET, R/W Board	See Note 1
6	72857462	BRACKET, R/W Board	See Note 2
6	72857463	BRACKET, R/W Board	See Note 3
7	94385500	CHANNEL, Rubber	
8	Spare	MOT SPD & PWR AMP BOARD	

Note 1: Used on S/C 06 and below (O/C 10 and below on PA5G1F/PA5G2C) drives.

Note 2: Used on S/C 07 thru 12 (O/C 11 thru 30 on PA5G1F/PA5G2C) drives without ECO DJ30240 installed.

Note 3: Used on S/C 13 and above (O/C 31 and above on PA5G1F/PA5G2C) drives, and on drives with ECO DJ30240 installed.

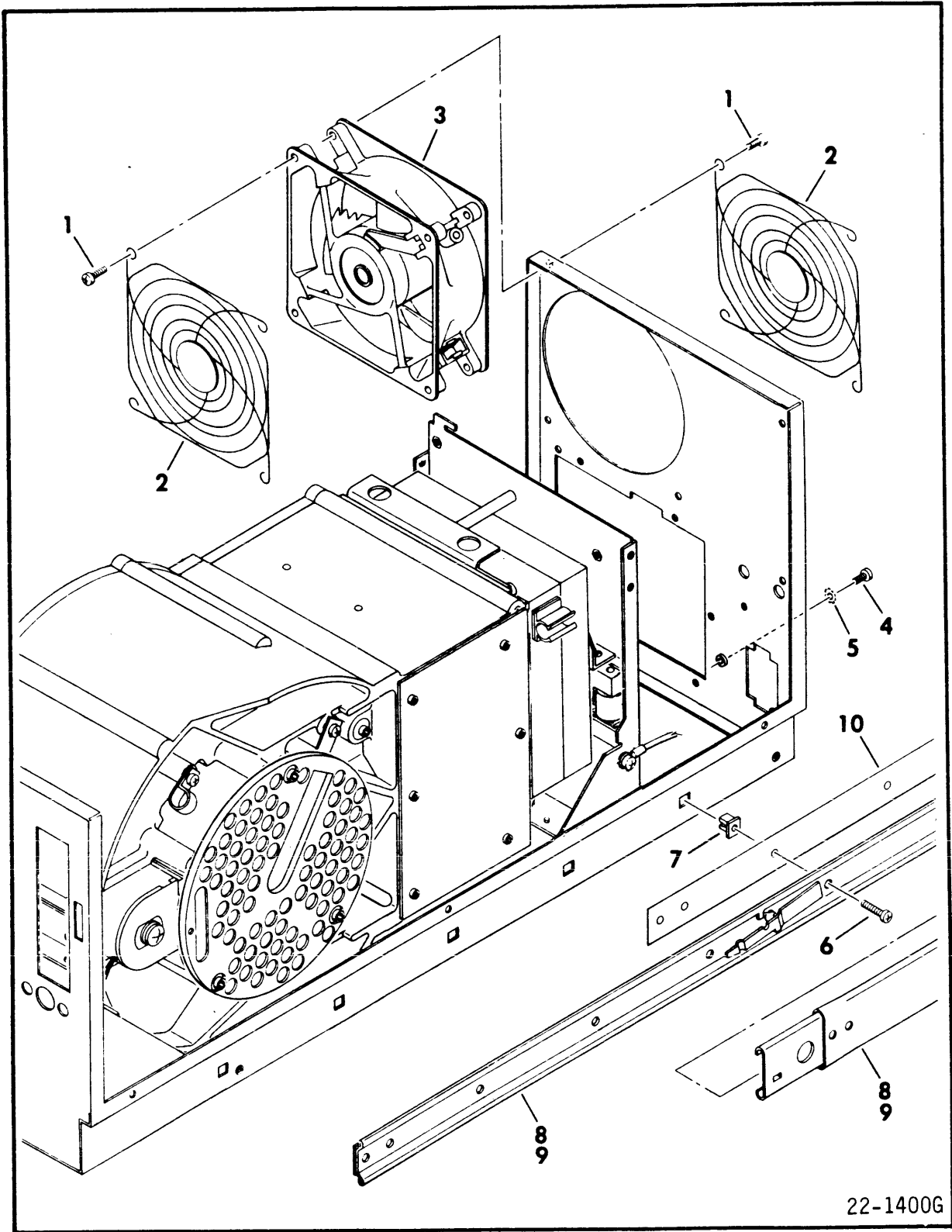
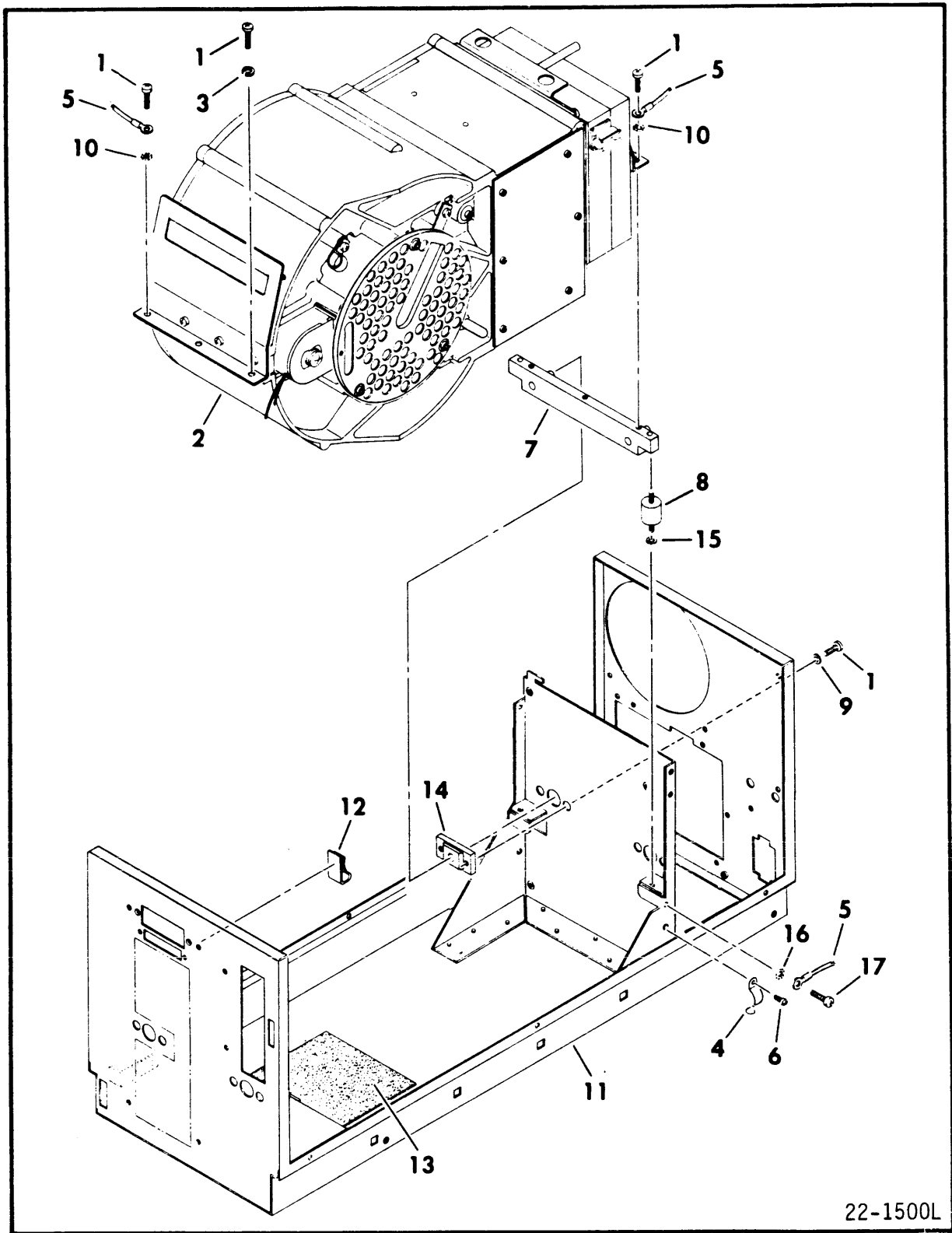


Figure 1-6

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127123	SCREW, PHH, 8-32 x 1/2	See Note 1
2	94375408	GUARD, Finger	
3	Spare	FAN ASSEMBLY	
4	10127141	SCREW, PHH, 10-32 x 5/16	
5	10126403	LOCKWASHER, #10	
6	94375825	SCREW, PHH, 8-16 x 1/2	
7	72854290	NUT, Square	
8	Optional	SLIDE ASSEMBLY, LH	
9	Optional	SLIDE ASSEMBLY, RH	
10	93265870	BRACKET, Support	See Note 2

Note 1: Older fans with untapped holes use self-tapping screws, p/n 17901518.

Note 2: Used on integral power supply drives only.



22-1500L

Figure 1-7

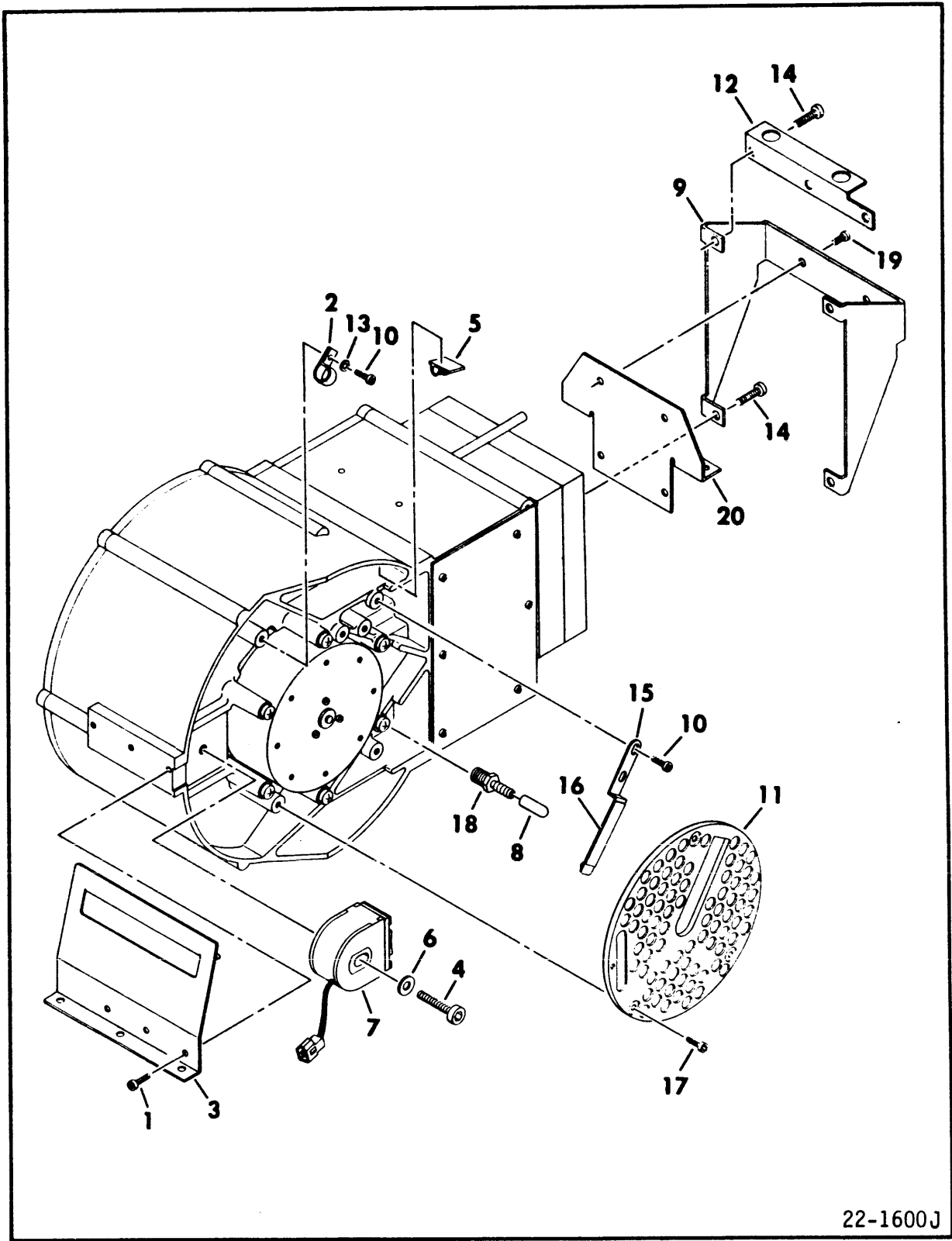
INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127141	SCREW, PHH, 10-32 x 5/16	
2	Spare	MODULE ASSEMBLY	
3	10125805	LOCKWASHER, #10	
4	93148609	CLIP, Tension	
5	94281477	GROUND CABLE	
6	92001710	SCREW, PHH, 6-32 x 5/16	
7	72859942	BAR, Retaining	
8	93568017	SHOCK MOUNT	
9	10125607	WASHER, #10	
10	10126403	LOCKWASHER, #10	
11	72857451	BASE	See Note 1
11	72857452	BASE	See Note 2
11	72857453	BASE	See Note 3
11	72857454	BASE	See Note 4
12	94241019	CLIP, Cable	
13	41286580	PAD, Rubber	
14	41286510	DAMPER, Vibration	
15	94047052	WASHER, Special	
16	10126402	LOCKWASHER, #8	
17	10127120	SCREW, PHH, 8-32 x 1/4	

Note 1: Used on S/C 06 and below drives.

Note 2: Used on S/C 07 thru 09 (O/C 22 and below on PA5G1F/PA5G2C) drives.

Note 3: Used on S/C 10 thru 12 (O/C 23 thru 30 on PA5G1F/PA5G2C) drives without ECO DJ30240 installed.

Note 4: Used on S/C 13 & above (O/C 31 and above on PA5G1F/PA5G2C) drives, and on drives with ECO DJ30240 installed.



22-1600J

Figure 1-8

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10126233	SCREW, Socket Hd, 10-24 x 3/8	
2	92602004	CLAMP, Cable	
3	72855730	SUPPORT	
4	70526950	SCREW, Socket Hd, 1/4-20 x 1 1/2	
5	94241019	CLIP	
6	92039213	WASHER, Special	
7	Spare	BRAKE ASSEMBLY	
8	95796513	CLOSURE, Vinyl	On newer modules
9	95138481	SUPPORT, Cover	On older modules
10	70512727	SCREW, Socket Hd, 6-32 x 3/8	
11	72856001	SHIELD, Motor	
12	46618990	HANDLE, Module	See Note 3
13	10125605	WASHER #6	
14	70526946	SCREW, Socket Hd, 1/4-20 x 3/4	
15	Spare	GROUND SPRING ASSEMBLY	
16	73157960	TAPE	
17	70527614	SCREW, Socket Hd, 6-32 x 3/8	
18	94915601	FITTING, Miniature	On newer modules
19	92727238	SCREW, Socket Hd, 8-32 x 3/8	See Note 1
19	10127131	SCREW, PHH, 10-24 x 3/8	See Note 2
20	72855770	SUPPORT, Cover	See Note 1
20	95259411	SUPPORT, Cover	See Note 2
21	15390204	SCREW W/WASHER, 6-32 x 3/8	

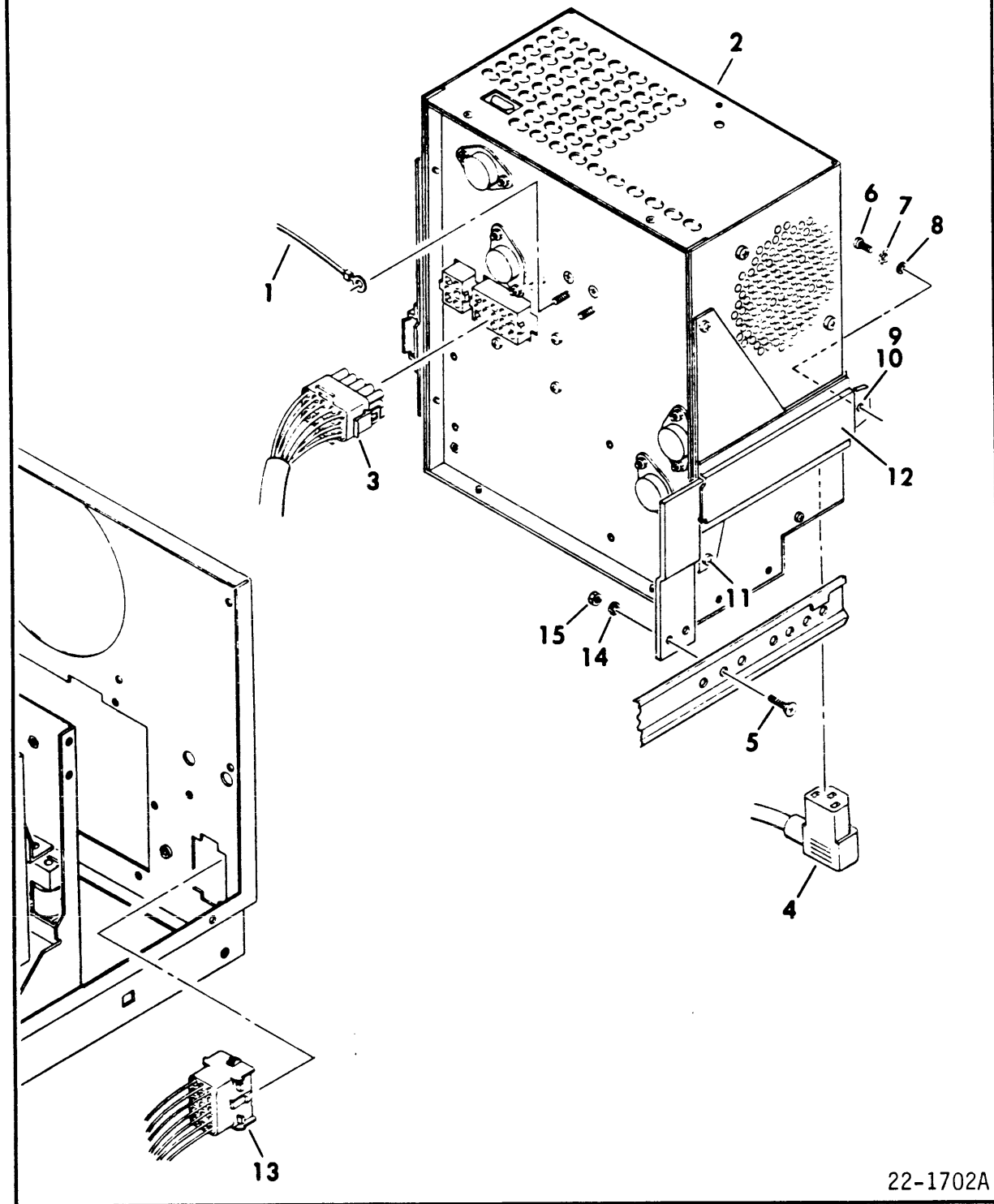
Note 1: Used only on S/C 03 & Blw drives without ECO 05752 installed.

Note 2: Used only on S/C 04 & Abv drives, and on drives with ECO 05752 installed.

Note 3: Not used on early model drives.



APPLIES TO DRIVES WITH REMOTE POWER SUPPLY



22-1702A

Figure 1-9 (Sheet 1 of 2)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	94369549	GROUND CABLE	See Note 1
2	Spare	POWER SUPPLY, Remote	See Note 5
3	Spare	DC POWER CABLE (P15/P40)	See Note 5
4	Optional	AC POWER CABLE (P01)	
5	92905077	SCREW, PHH, 8-32 x 1/2	See Note 2
6	10127121	SCREW, PHH, 8-32 x 5/16	See Note 2
7	10126402	LOCKWASHER, #8	See Note 2
8	10125606	WASHER, #8	See Note 2
9	92723680	MOUNT, LH	See Note 2
10	92723681	MOUNT, RH	See Note 2
11	17901509	SCREW, PHH, 6-32 x 3/8	See Note 2
12	93402700	BRACKET, Mounting	See Note 2
13	80547300	DC POWER CABLE (P35/J40)	See Note 3
13	80547301	DC POWER CABLE (P35/J40)	See Note 4
14	10125804	LOCKWASHER, #8	See Note 2
15	10125106	NUT, 8-32	See Note 2

Note 1: Supplied with PA5G1C/K, PA5G2K, PA5N1F, PA5N2F, PA506 drives only.

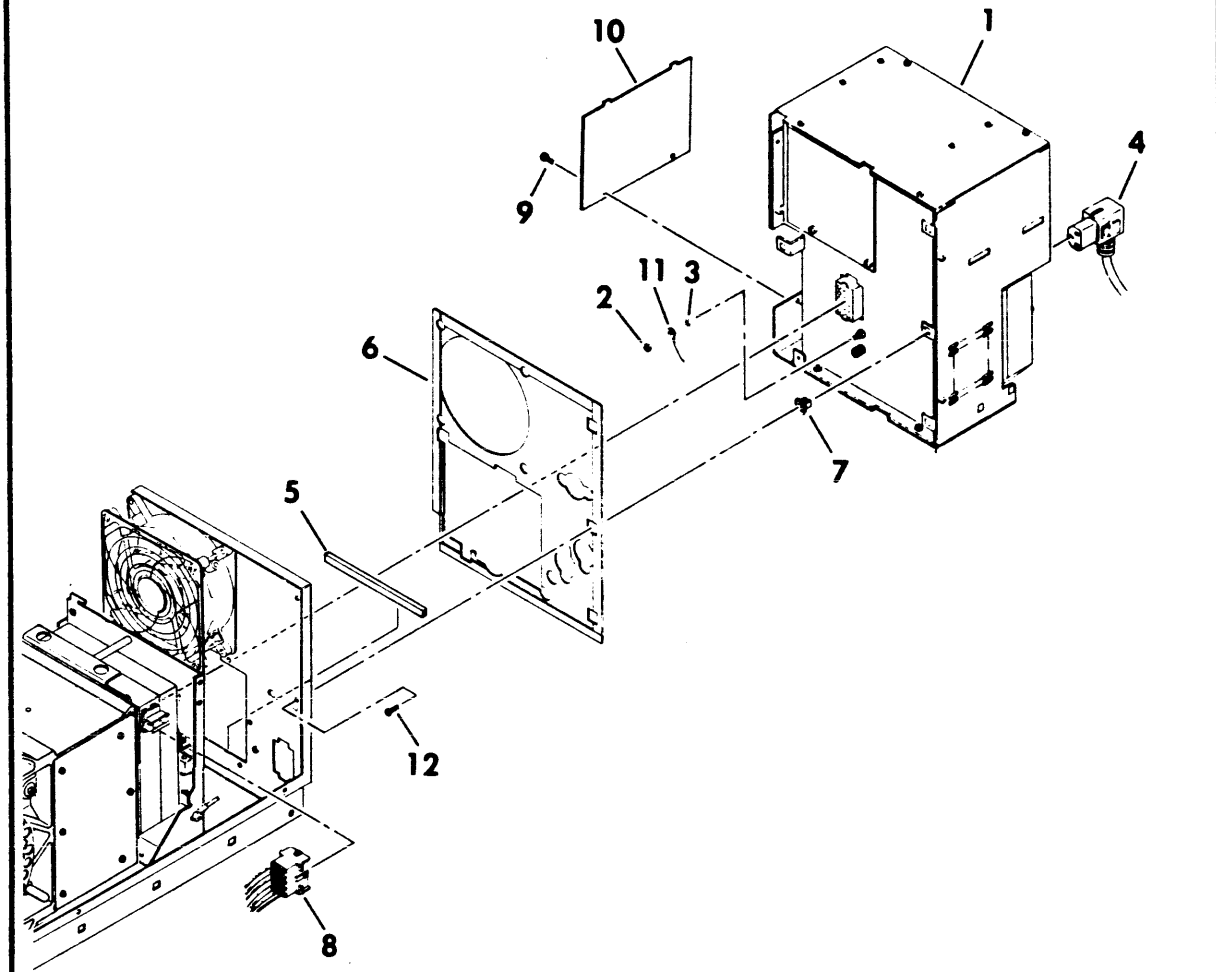
Note 2: Not supplied with PA5G1K, PA5G2K, PA5N1F, PA5N2F, PA506 drives.

Note 3: Applies to all except PA5K1/PA5S1 drives.

Note 4: Applies to PA5K1/PA5S1 drives only.

Note 5: Not supplied with PA506 drives.  
Not supplied with equipment packages  
73089917/73089921.

APPLIES TO DRIVES WITH INTEGRAL POWER SUPPLY



22-1701G

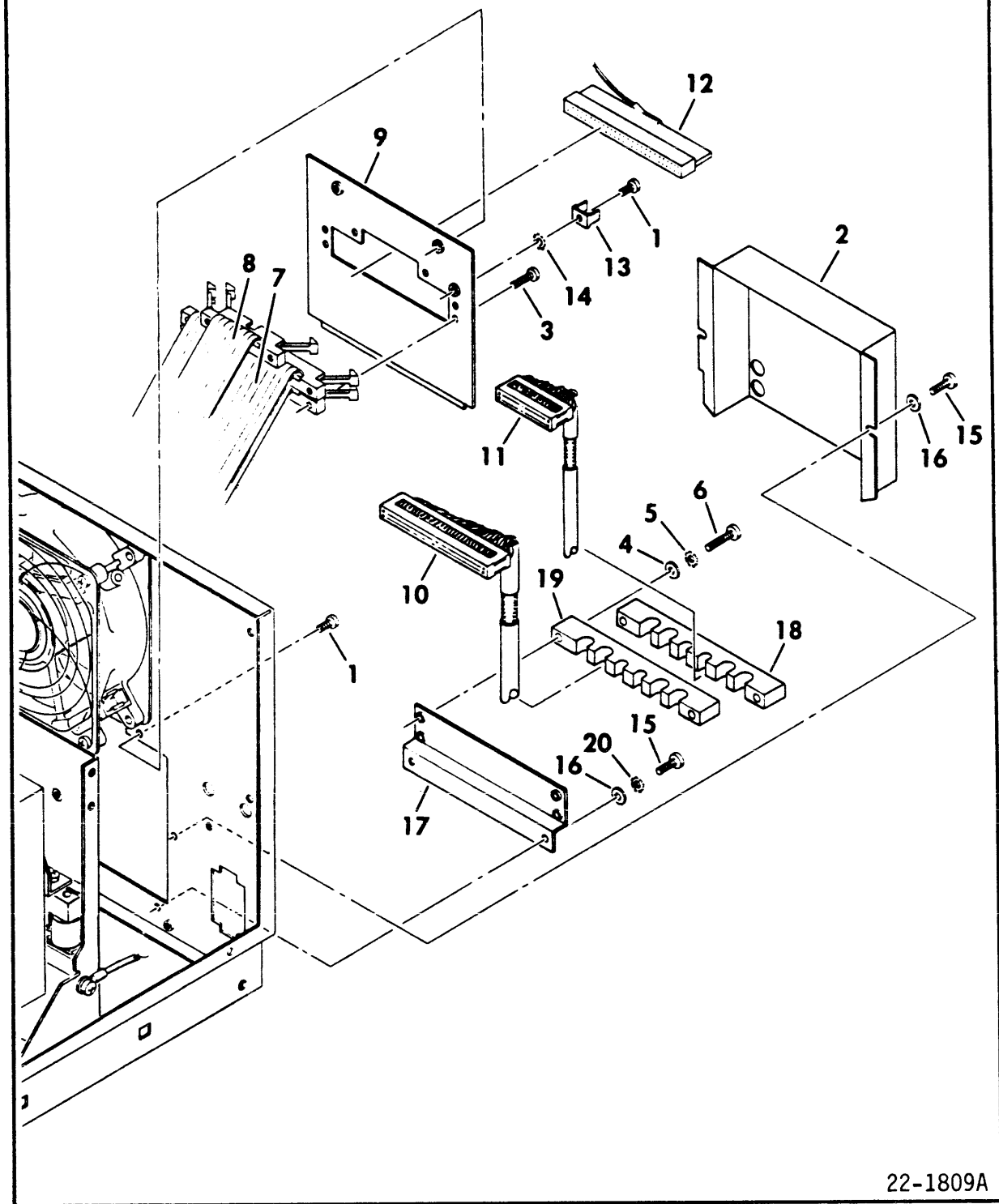
Figure 1-9 (Sheet 2)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	POWER SUPPLY, Integral	
2	10125108	NUT, Hex, 10-32	
3	10126403	LOCKWASHER, #10	
4	Optional	AC POWER CABLE (P01)	
5	94385500	CHANNEL, Rubber	
6	92475850	GASKET, RF	
7	72854290	NUT, Square	
8	Spare	DC POWER CABLE (P15/P35)	
9	10127111	SCREW, PHH, 6-32 x 1/4	
10	76376370	PLATE, Cover	See Note 1
10	76376371	PLATE, Cover	See Note 2
11	94281437	GROUND CABLE	
12	94375825	SCREW, PHH, 8-16 x 1/2	

Note 1: Used on longer type (p/n 81542300) power supplies.

Note 2: Used on shorter type power supplies.

APPLIES TO SMD INTERFACE DRIVES WITH REMOTE POWER SUPPLY ONLY

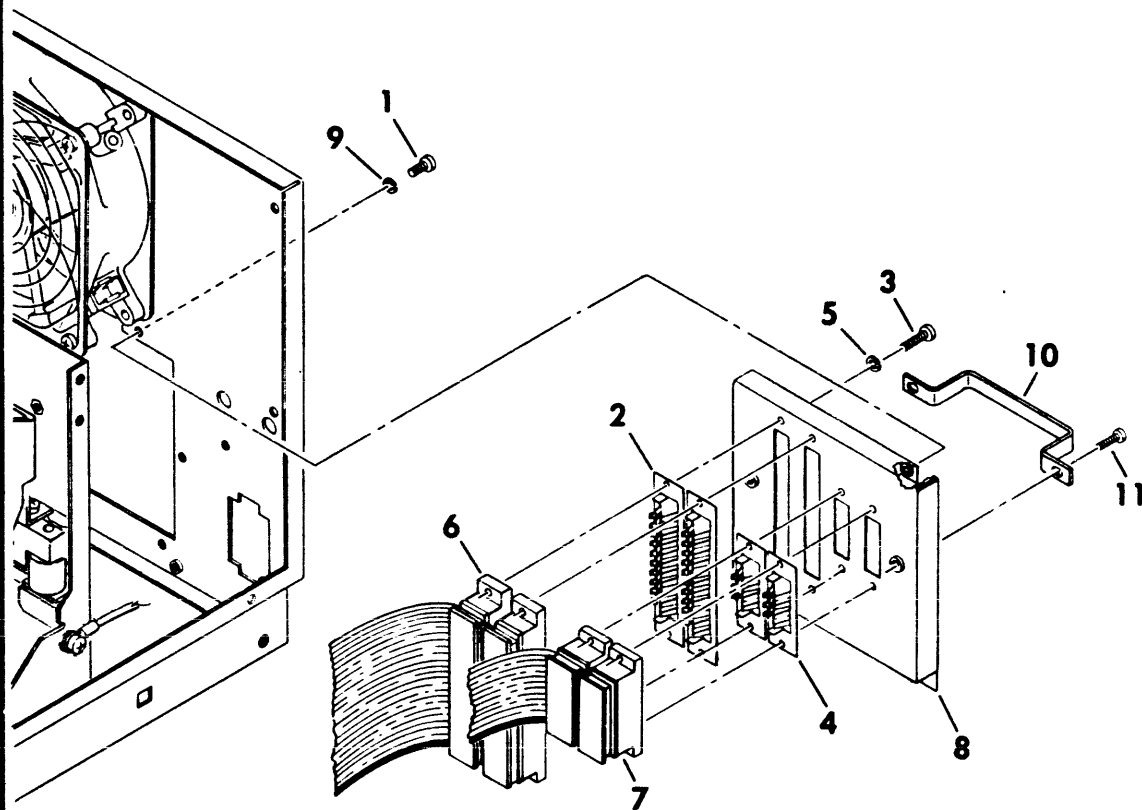


22-1809A

Figure 1-10 (Sheet 1 of 9)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127111	SCREW, PHH, 6-32 x 1/4	
2	92070380	SHIELD, I/O	
3	10127102	SCREW, PHH, 4-40 x 1/4	
4	10125607	WASHER, #10	
5	10126403	LOCKWASHER, #10	
6	10127146	SCREW, PHH, 10-32 x 7/8	
7	Spare	A CABLE, Internal	
8	Spare	B CABLE, Internal	
9	72856550	PLATE, I/O (Single Ch)	
9	72856551	PLATE, I/O (Dual Ch)	
10		NOT SUPPLIED	
11		NOT SUPPLIED	
12	Optional	TERMINATOR	
13	94274116	TERMINAL	
14	10126401	LOCKWASHER, #6	
15	10127113	SCREW, PHH, 6-32 x 3/8	
16	10125605	WASHER, #6	
17	72851240	BRACKET, Cable	
18	72851231	CLAMP, Strain Relief	
19	72851230	CLAMP, Grounding	
20	10126401	LOCKWASHER, #6	
	93920481	CLAMP (for flat cables)	

APPLIES TO PA5K1A/PA551A DRIVES ONLY



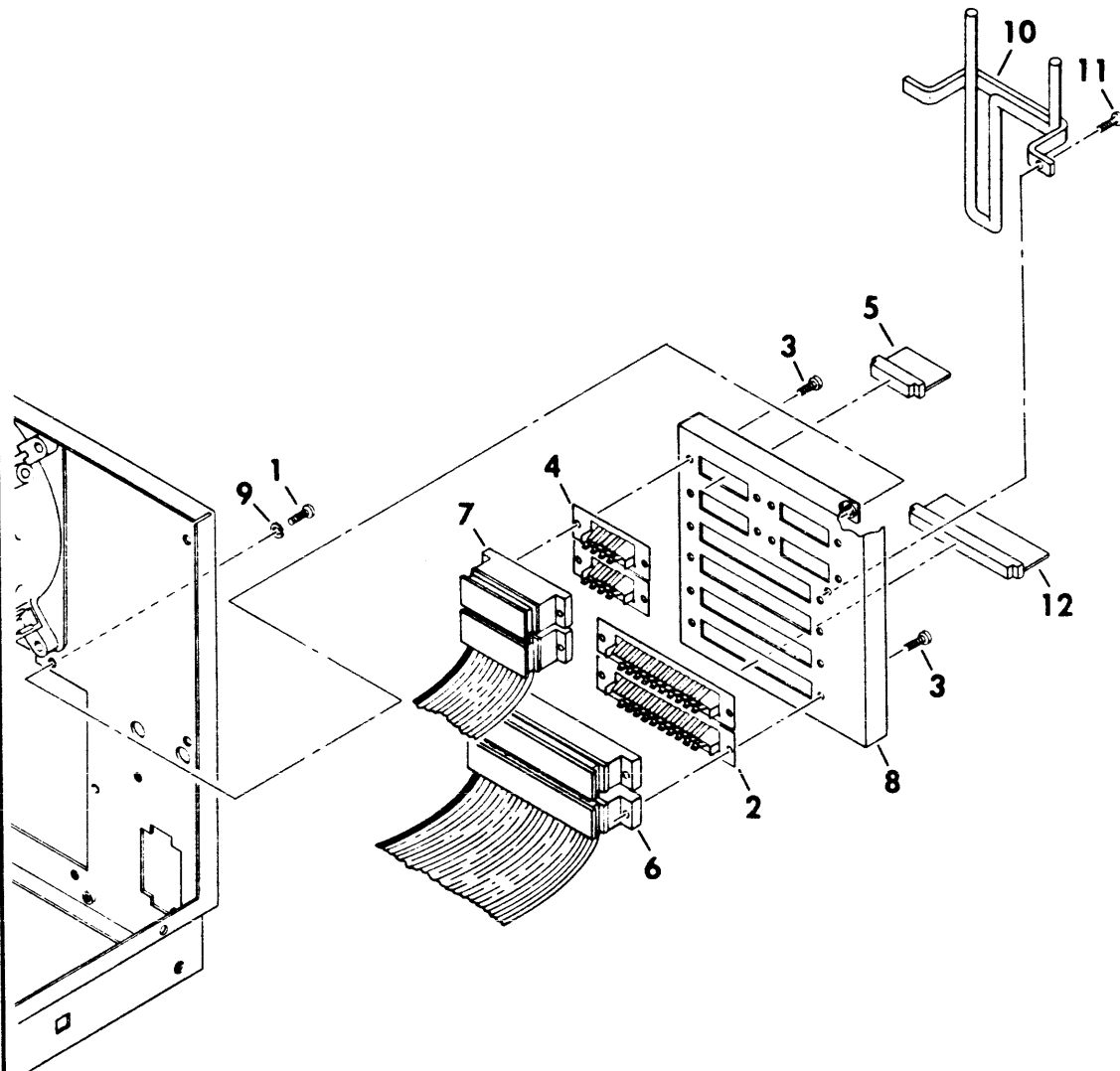
22-1801E

Figure 1-10 (Sheet 2)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127111	SCREW, PHH, 6-32 x 1/4	
2	15183359	GROUND PLANE	
3	10127104	SCREW, PHH, 4-40 x 3/8	
4	15183360	GROUND PLANE	
5	10125801	LOCKWASHER, #4	
6	Spare	A CABLE, Internal	
7	Spare	B CABLE, Internal	
8	72856590	PLATE, I/O	
9	10125803	LOCKWASHER, #6	
10	95259481	STRAIN RELIEF	
11	10127113	SCREW, PHH, 6-32 x 3/8	



APPLIES TO PA506 DRIVES ONLY

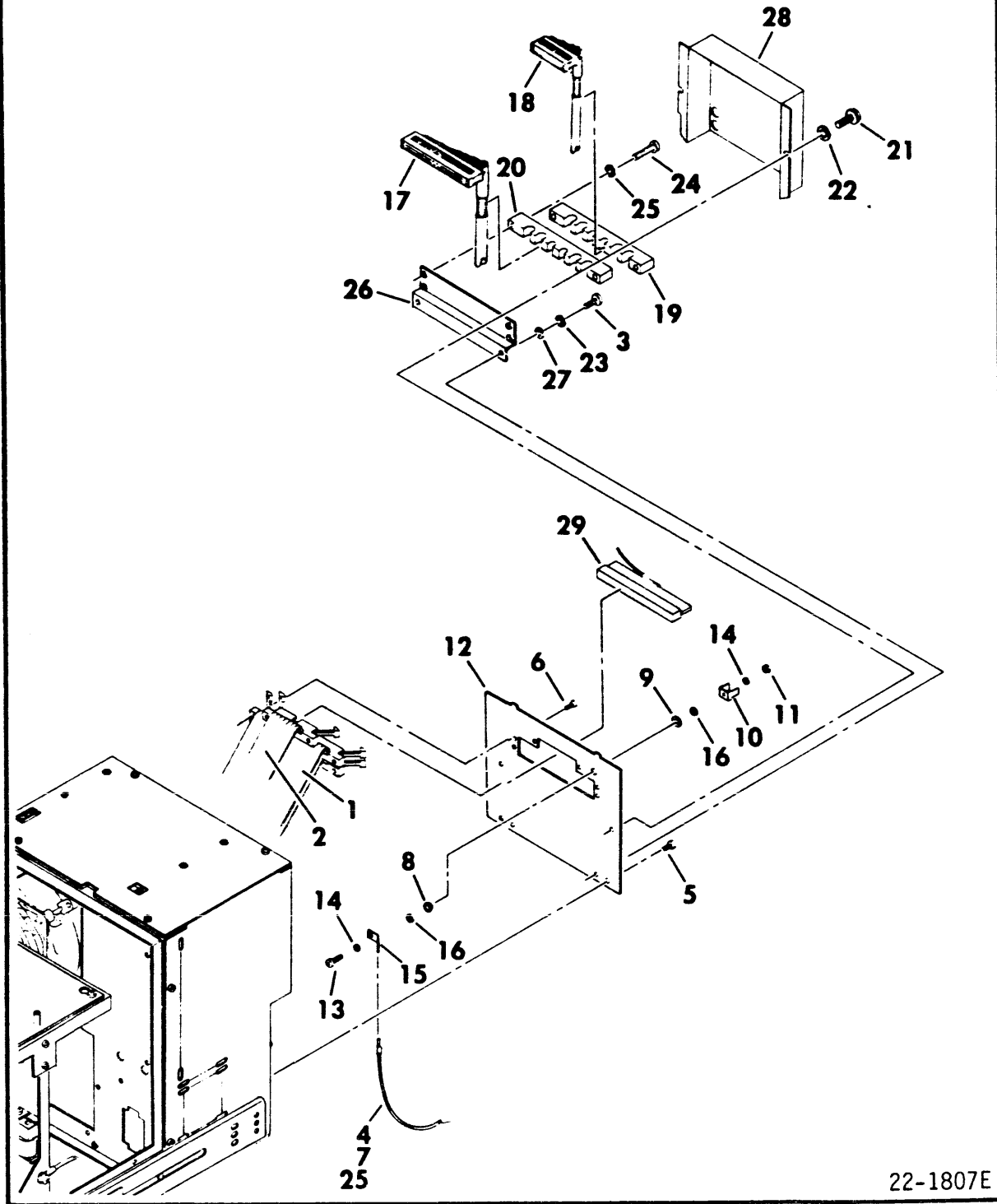


22-1806D

Figure 1-10 (Sheet 3)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127111	SCREW, PHH, 6-32 x 1/4	
2	15183359	GROUND PLANE	
3	10127104	SCREW, PHH, 4-40 x 3/8	
4	15183360	GROUND PLANE	
5	93920491	TERMINATOR, 20-pin	
6	Spare	A CABLE, Internal	
7	Spare	B CABLE, Internal	
8	72856595	PLATE, I/O	
9	10125803	LOCKWASHER, #6	
10	95259483	CABLE RELIEF	
11	10127113	SCREW, PHH, 6-32 x 3/8	
12	75209300	TERMINATOR, 50-pin	

APPLIES TO SMD INTERFACE DRIVES (EXCEPT PA5NIC)  
WITH LONGER INTEGRAL POWER SUPPLY, P/N 81542300 ONLY



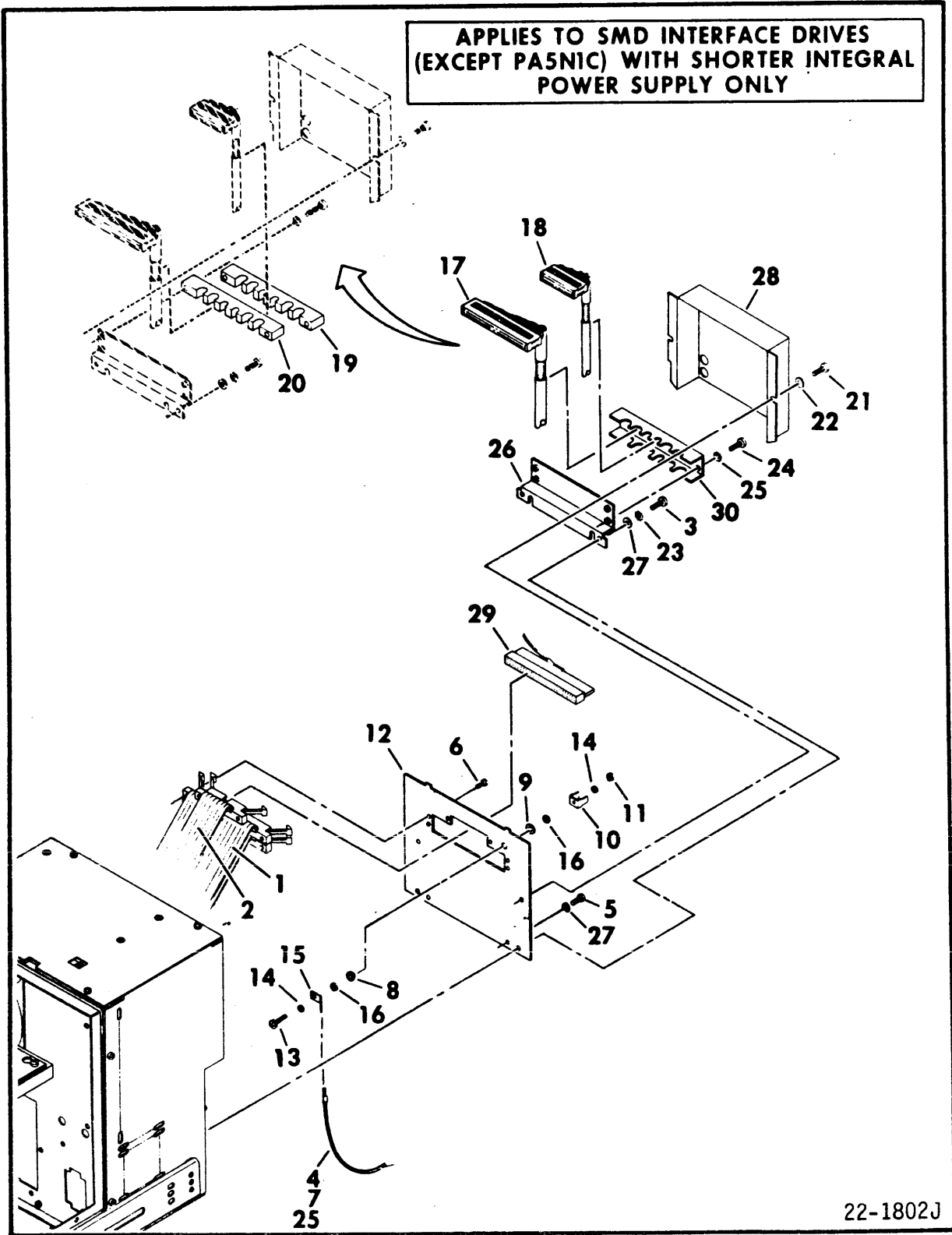
22-1807E

Figure 1-10 (Sheet 4)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	A CABLE, Internal	
2	Spare	B CABLE, Internal	
3	10127113	SCREW, PHH, 6-32 x 3/8	
4	76376380	GROUND CABLE	
5	17901508	SCREW, PHH, 6-32 x 1/4	
6	10127102	SCREW, PHH, 4-40 x 1/4	
7	10125108	NUT, Hex, 10-32	
8	95643808	WASHER, Insulated	
9	95797301	WASHER, Phenolic	
10	94274116	TERMINAL	
11	95510030	NUT, Hex, 6-32	
12	72855611	PLATE, I/O (Single Ch)	
12	72855613	PLATE, I/O (Dual Ch)	
13	92751168	SCREW, PHH, 6-32 x 3/4	
14	95524401	LOCKWASHER, #6	
15	94274104	TERMINAL	
16	94047078	WASHER, Special	
17	Optional	A CABLE, External	
18	Optional	B CABLE, External	
19	72851231	CLAMP, Strain Relief	See Note 1
19	45419021	CLAMP, Strain Relief	See Note 2
20	72851230	CLAMP, Grounding	See Note 1
20	45419020	CLAMP, Grounding	See Note 2
21	93660043	SCREW W/WASHER, 6-32 x 3/8	
22	10125605	WASHER, #6	
23	10126401	LOCKWASHER, #6	
24	10127146	SCREW, PHH, 10-32 x 7/8	
25	10126403	LOCKWASHER, #10	
26	72851240	BRACKET, Cable	
27	10125605	WASHER, #6	
28	92070380	SHIELD, I/O	
29	Optional	TERMINATOR	
	93920481	CLAMP (for flat cables)	See Note 1

Note 1: Not used on PA5N1D/PA5N2E drives.

Note 2: Used on PA5N1D/PA5N2E drives only.



22-1802J

Figure 1-10 (Sheet 5)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	A CABLE, Internal	
2	Spare	B CABLE, Internal	
3	10127122	SCREW, PHH, 8-32 x 3/8	
4	76376381	GROUND CABLE	
5	10127121	SCREW, PHH, 8-32 x 5/16	
6	10127102	SCREW, PHH, 4-40 x 1/4	
7	10125108	NUT, Hex, 10-32	
8	95643808	WASHER, Insulated	
9	95797301	WASHER, Phenolic	
10	94274116	TERMINAL	
11	95510030	NUT, Hex, 6-32	
12	95131791	PLATE, I/O (Single Ch)	
12	95131795	PLATE, I/O (Dual Ch)	
13	92751168	SCREW, PHH, 6-32 x 3/4	
14	95524401	LOCKWASHER, #6	
15	94274104	TERMINAL	
16	94047078	WASHER, Special	
17	Optional	A CABLE, External	
18	Optional	B CABLE, External	
19	72851232	CLAMP, Strain Relief	See Notes 1,3
19	45419023	CLAMP, Strain Relief	See Note 2
20	72851233	CLAMP, Grounding	See Notes 1,3
20	45419022	CLAMP, Grounding	See Note 2
21	93660043	SCREW W/WASHER, 6-32 x 3/8	
22	10125605	WASHER, #6	
23	10126402	LOCKWASHER, #8	
24	10127146	SCREW, PHH, 10-32 x 7/8	
25	10126403	LOCKWASHER, #10	
26	72851241	BRACKET, Cable	
27	10125606	WASHER, #8	
28	92070381	SHIELD, I/O	
29	Optional	TERMINATOR	
30	70523542	CLAMP, I/O Cables	See Notes 1,3
	93920483	CLAMP (for flat cables)	

Note 1: Not used on PA5N1D/E, PA5N2E drives.

Note 2: Used on PA5N1D/E, PA5N2E drives only.

Note 3: Items 19 and 20 are used in dual clamp (older) configurations. Item 30 is used in single clamp (newer) configurations.



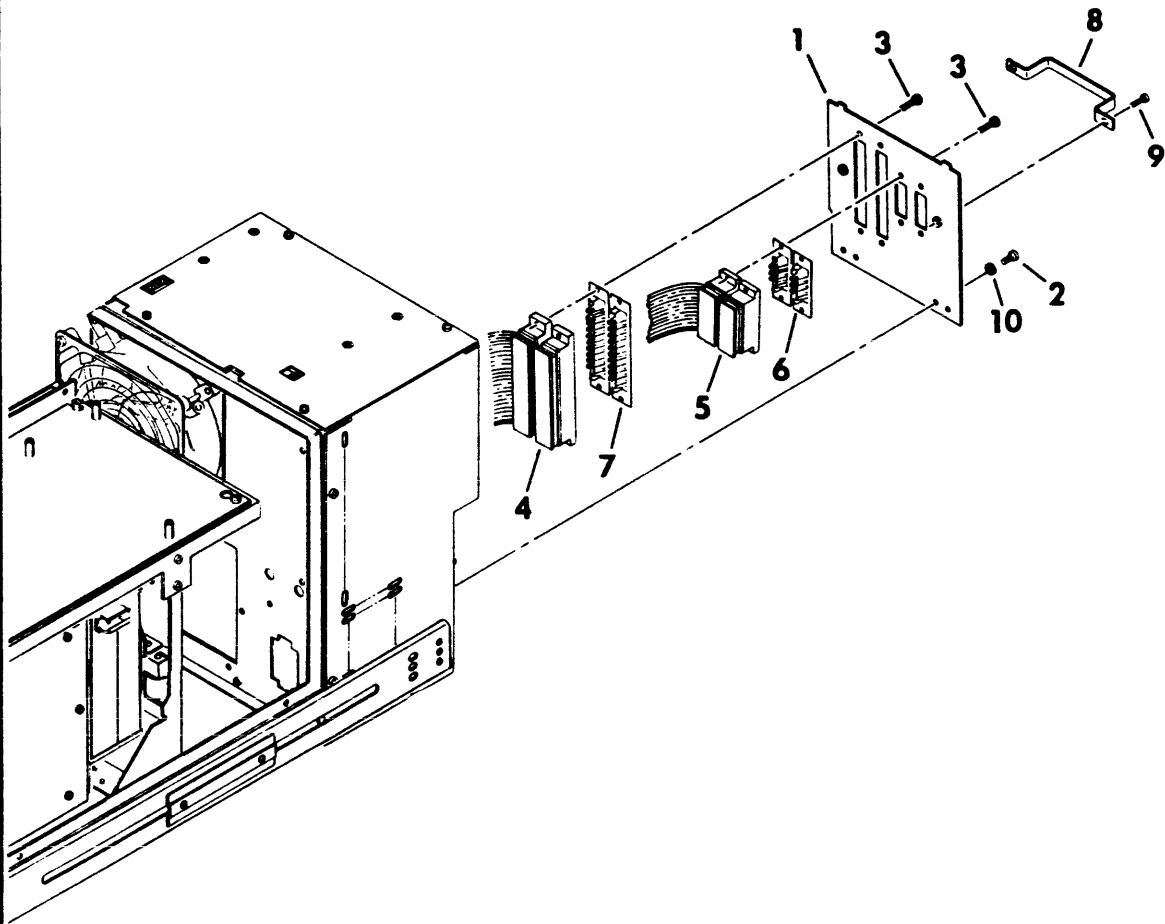
INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	A CABLE, Internal	
2	Spare	B CABLE, Internal	
3	95752260	PLATE, I/O	See Note 1
3	95752261	PLATE, I/O	See Note 2
4	95524401	LOCKWASHER, #6	
5	94274104	TERMINAL	
6	94047078	WASHER, Special	
7	95643808	WASHER, Insulated	
8	95797301	WASHER, Phenolic	
9	94274116	TERMINAL	
10	95510030	NUT, Hex, 6-32	
11	92751164	SCREW, PHH, 6-32 x 1/2	
12	10127104	SCREW, PHH, 4-40 x 3/8	
13	15183357	GROUND PLANE	
14	15183358	GROUND PLANE	
15	17901508	SCREW, PHH, 6-32 x 1/4	See Note 1
15	10127121	SCREW, PHH, 8-32 x 5/16	See Note 2
16	Optional	TERMINATOR	
17	45071901	BOOT, Ground Lug	
18	76376381	GROUND CABLE	See Note 2
19	10126403	LOCKWASHER, #6	See Note 2
20	10125108	NUT, 10-32	See Note 2
	81308300	CLAMP ASSEMBLY	See Note 2
21	45070640	RESTRAINT, A Cable	See Note 2
22	45070641	RESTRAINT, B Cable	See Note 2
23	17901509	SCREW, PHH, 6-32 x 3/8	See Note 2

Note 1: Used on longer type (p/n 81542300) power supplies.

Note 2: Used on shorter type power supplies.



APPLIES TO PA5K1B/PA5S1B DRIVES ONLY

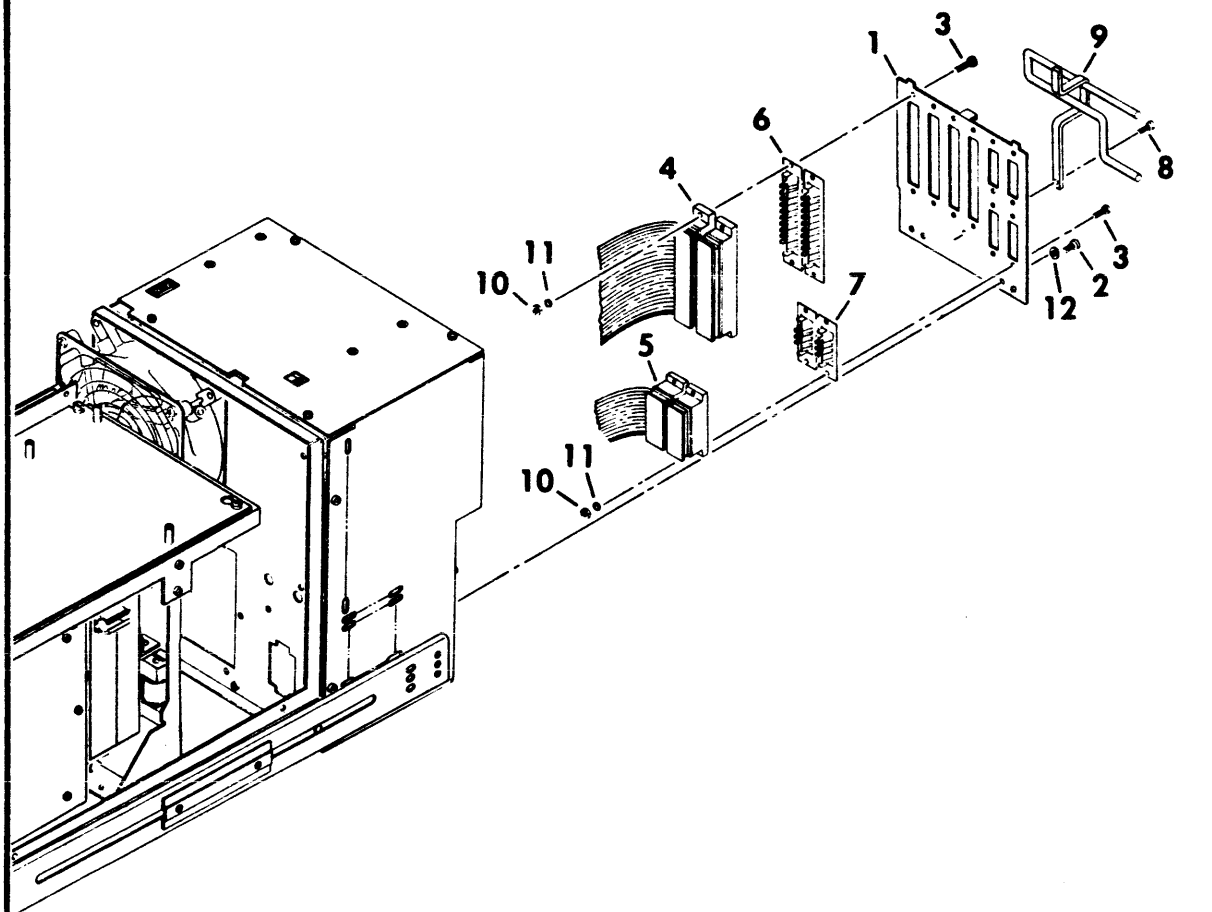


22-1803K

Figure 1-10 (Sheet 7)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	95131790	PLATE, I/O	
2	10127121	SCREW, PHH, 8-32 x 5/16	
3	10127104	SCREW, PHH, 4-40 x 3/8	
4	Spare	A CABLE, Internal	
5	Spare	B CABLE, Internal	
6	15183360	GROUND PLANE	
7	15183359	GROUND PLANE	
8	95259481	STRAIN RELIEF	
9	10127113	SCREW, PHH, 6-32 x 3/8	
10	10125606	WASHER, #8	

APPLIES TO PA552 DRIVES ONLY



22-1804J

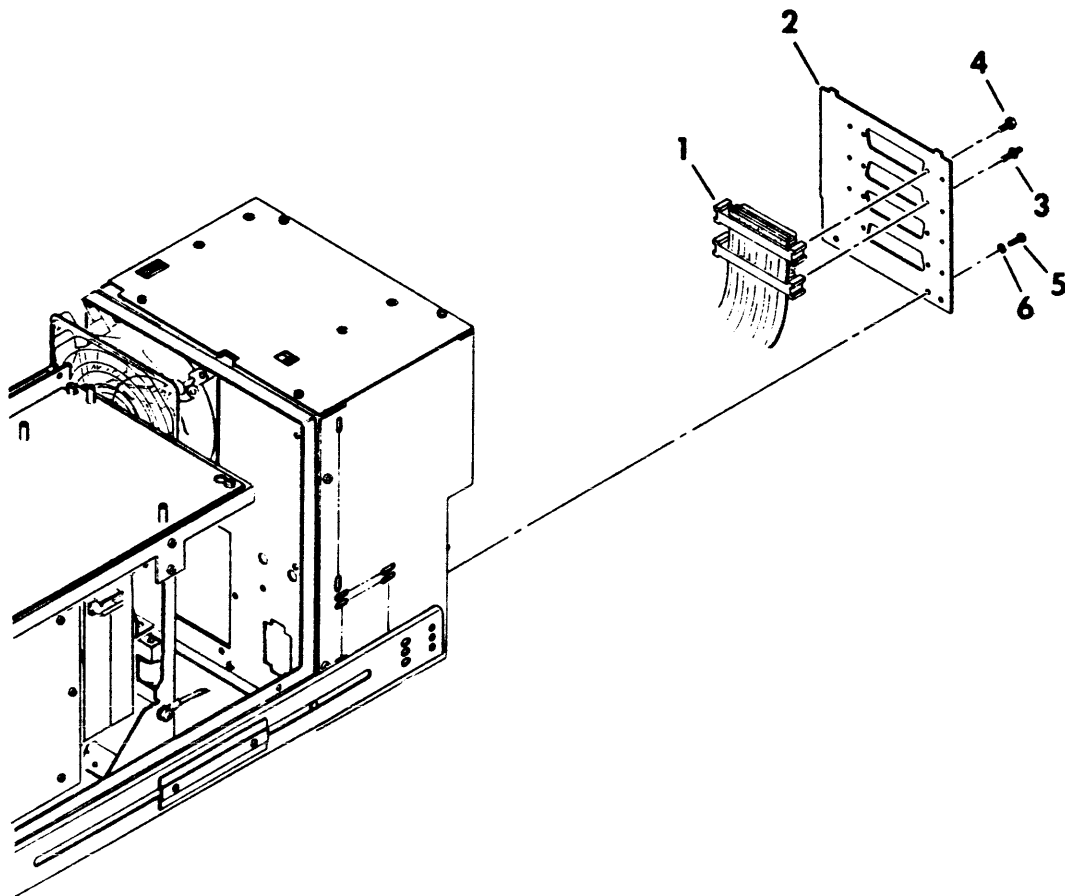
Figure 1-10 (Sheet 8)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	72855614	PLATE, I/O (PA5S2B)	See Note 1
1	95131793	PLATE, I/O (PA5S2B)	See Note 2
1	72855616	PLATE, I/O (PA5S2C)	See Note 1
1	95131796	PLATE, I/O (PA5S2C)	See Note 2
2	17901508	SCREW, PHH, 6-32 x 1/4	See Note 1
2	10127121	SCREW, PHH, 8-32 x 5/16	See Note 2
3	10127104	SCREW, PHH, 4-40 x 3/8	
4	Spare	A CABLE, Internal	
5	Spare	B CABLE, Internal	
6	15183359	GROUND PLANE	PA5S2B only
7	15183360	GROUND PLANE	PA5S2B only
8	10127113	SCREW, PHH, 6-32 x 3/8	
9	95259482	STRAIN RELIEF	
10	10125103	NUT, Hex, 4-40	PA5S2C only
11	94047000	WASHER, Special	PA5S2C only
12	10125606	WASHER, #8	

Note 1: Used on older type (p/n 81542300) power supplies.

Note 2: Used on newer (shorter) type power supplies.

APPLIES TO PA5R2 DRIVES ONLY



22-1808D

Figure 1-10 (Sheet 9)

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	Spare	I/O CABLE, Internal	
2	95131797	PLATE, I/O	
3	94288025	STANDOFF, Male	
4	94288027	STANDOFF, Female	
5	10127121	SCREW, PHH, 8-32 x 5/16	
6	10125606	WASHER, #8	

TABLE 1-1. OPTIONAL PARTS

PART NO.	PART DESCRIPTION	300 MB* EQUIPMENT PACKAGE 956778xx							
		01	02	03	04	05	06	07	08
80385201	PA5J1B DRIVE	XX		XX					
80385202	PA5J2B DRIVE		XX		XX		XX		
80385203	PA5J1C DRIVE					XX			
80385204	PA5J1D DRIVE							XX	
80385205	PA5J2C DRIVE								XX
72858101	INSERT, Fr Pan	XX	XX	XX	XX			XX	XX
72858111	INSERT, Fr Pan						XX		
72858116	INSERT, Fr Pan					XX			
94397022	EMBLEM	XX	XX	XX	XX			XX	XX
72854001	PANEL, Front	XX	XX	XX	XX			XX	XX
72854011	PANEL, Front						XX		
72854018	PANEL, Front					XX			
10127120	SCREW, 8-32x1/4	XX	XX	XX	XX	XX	XX	XX	
10125606	WASHER, #8	XX	XX	XX	XX	XX	XX	XX	
94205567	SPRING	XX	XX	XX	XX	XX	XX	XX	
72857411	LATCH, Cabinet	XX	XX	XX	XX	XX	XX	XX	
73157938	SLIDE ASSY, LH	XX	XX	XX	XX	XX	XX	XX	XX
73157939	SLIDE ASSY, RH	XX	XX	XX	XX	XX	XX	XX	XX
75168323	AC CABLE (P01)	XX	XX						XX
75168324	AC CABLE (P01)			XX	XX		XX	XX	
75168348	AC CABLE (P01)					XX			

\*Integral Power Supply Drives

Table Continued on Next Page











TABLE 1-1. OPTIONAL PARTS (Contd)

PART NO.	PART DESCRIPTION	340 MB* EQUIPMENT PACKAGE 929178xx												
		15	16	17	18	19	20	21	24	27	28	29	30	31
94041201	PA5G1D DRIVE	XX			XX					XX			XX	
94041202	PA5G2D DRIVE		XX											
94041209	PA5G1S DRIVE										XX			
94041210	PA5G1L DRIVE			XX										
94041211	PA5G1M DRIVE					XX								
94041212	PA5G2M DRIVE						XX							
94041213	PA5G1N DRIVE							XX						
94041216	PA5G1R DRIVE								XX					
94041220	PA5G1T DRIVE											XX		
94041221	PA5G2J DRIVE												XX	
72858101	INSERT, Fr Pan									XX			XX	
72858108	INSERT, Fr Pan											XX		
72858113	INSERT, Fr Pan	XX												
72858114	INSERT, Fr Pan		XX											
72858115	INSERT, Fr Pan					XX	XX							
72858117	INSERT, Fr Pan				XX					XX				
72858119	INSERT, Fr Pan							XX				XX		
72858120	INSERT, Fr Pan								XX					
94397022	EMBLEM, Pr Id										XX			
72854001	PANEL, Front				XX					XX	XX		XX	
72854008	PANEL, Front												XX	
72854014	PANEL, Front	XX												
72854016	PANEL, Front		XX											
72854017	PANEL, Front					XX	XX							
72854020	PANEL, Front							XX				XX		
72854021	PANEL, Front								XX					
72854222	PANEL, Front			XX										
10127120	SCREW, 8-32x1/4	XX	XX	XX	XX			XX	XX	XX	XX	XX	XX	
10125606	WASHER, #8	XX	XX	XX	XX			XX	XX	XX	XX	XX	XX	
94205567	SPRING	XX	XX	XX	XX			XX	XX	XX	XX	XX	XX	
72857411	LATCH, Cabinet	XX	XX	XX	XX			XX	XX	XX	XX	XX	XX	
73157938	SLIDE ASSY, LH	XX	XX	XX					XX		XX		XX	
73157939	SLIDE ASSY, RH	XX	XX	XX					XX		XX		XX	
75168323	AC CABLE (P01)					XX	XX				XX		XX	
75168324	AC CABLE (P01)		XX					XX				XX		
75168334	AC CABLE (P01)			XX	XX					XX				
75168347	AC CABLE (P01)	XX												
70504401	A CABLE, Ext										XX		XX	
70504402	A CABLE, Ext			XX							XX		XX	
70505001	B CABLE, Ext										XX		XX	
70505002	B CABLE, Ext										XX		XX	
70505003	B CABLE, Ext			XX										
93270700	TERMINATOR		XX	XX							XX		XX	
92678806	FILLER PANEL	XX												
81244508	BAR KIT	XX												

\*Integral Power Supply Drives

Table Continued on Next Page



TABLE 1-1. OPTIONAL PARTS (Contd)

PART NO.	PART DESCRIPTION	515 MB* EQUIPMENT PACKAGE 730888xx												
		00	01	02	03	04	05	06	07	08	09	10	11	12
73089401	PA5N1A DRIVE	XX			XX			XX					XX	
73089402	PA5N2A DRIVE		XX			XX								
73089403	PA5S1A DRIVE			XX										
73089405	PA5N1F DRIVE								XX	XX				
73089406	PA5N2F DRIVE										XX	XX		
73089407	PA5Z2A DRIVE													XX
73089404	PA506A DRIVE						XX							
72858101	INSERT, Fr Pan	XX	XX	XX	XX	XX							XX	XX
72858103	INSERT, Fr Pan							XX						
72858107	INSERT, Fr Pan									XX		XX		
94397022	EMBLEM, Pr Id	XX	XX	XX	XX	XX							XX	XX
72854001	PANEL, Front	XX	XX	XX	XX	XX							XX	XX
72854002	PANEL, Front							XX						
72854007	PANEL, Front									XX		XX		
72854222	PANEL, Front						XX		XX		XX			
10127120	SCREW, 8-32x1/4	XX	XX	XX	XX	XX	XX	XX					XX	XX
10125606	WASHER, #8	XX	XX	XX	XX	XX	XX	XX					XX	XX
94205567	SPRING	XX	XX	XX	XX	XX	XX	XX					XX	XX
72857411	LATCH, Cabinet	XX	XX	XX	XX	XX	XX	XX					XX	XX
73157938	SLIDE ASSY, LH	XX	XX	XX	XX	XX		XX						
73157939	SLIDE ASSY, RH	XX	XX	XX	XX	XX		XX						
75168323	AC CABLE (P01)	XX	XX	XX										XX
75168324	AC CABLE (P01)													
75168347	AC CABLE (P01)				XX	XX		XX					XX	
93270700	TERMINATOR							XX						
75209300	TERMINATOR-50P						XX							
93920491	TERMINATOR-20P						XX							

\*Remote Power Supply Drives

Table Continued on Next Page







TABLE 1-1. OPTIONAL PARTS (Contd)

PART NO.	PART DESCRIPTION	515 MB* EQUIPMENT PACKAGE 805088xx											
		14	15	16	17	18	19	20	21	22	25	26	27
80371001	PA5N1B DRIVE											XX	
80371002	PA5N2B DRIVE				XX						XX		
80371007	PA5N2D DRIVE					XX							
80371009	PA5N2E DRIVE	XX											
80371010	PA5N1G DRIVE		XX										
80371011	PA5N2G DRIVE			XX									
80371014	PA5S2C DRIVE						XX						
80371015	PA5Z2B DRIVE							XX					
80371016	PA521B DRIVE								XX				
80371017	PA5N1H DRIVE									XX			
80371020	PA5Z2C DRIVE											XX	XX
72858101	INSERT, Fr Pan							XX	XX				
72858103	INSERT, Fr Pan					XX							
72858114	INSERT, Fr Pan				XX								
72858115	INSERT, Fr Pan		XX	XX									
72858117	INSERT, Fr Pan						XX				XX	XX	
72858118	INSERT, Fr Pan	XX				XX							
72858121	INSERT, Fr Pan											XX	XX
94397022	EMBLEM							XX	XX				
72854001	PANEL, Front						XX	XX	XX		XX	XX	
72854002	PANEL, Front					XX							
72854016	PANEL, Front				XX								
72854017	PANEL, Front		XX	XX									
72854019	PANEL, Front	XX				XX							
72854023	PANEL, Front											XX	XX
72854222	PANEL, Front									XX			
10127120	SCREW, 8-32x1/4				XX	XX	XX	XX	XX	XX	XX	XX	XX
10125606	WASHER, #8				XX	XX	XX	XX	XX	XX	XX	XX	XX
94205567	SPRING				XX	XX	XX	XX	XX	XX	XX	XX	XX
72857411	LATCH, Cabinet				XX	XX	XX	XX	XX	XX	XX	XX	XX
73157938	SLIDE ASSY, LH	XX			XX			XX	XX	XX		XX	XX
73157939	SLIDE ASSY, RH	XX			XX			XX	XX	XX		XX	XX
75168323	AC CABLE (P01)	XX	XX	XX				XX	XX				XX
75168324	AC CABLE (P01)				XX		XX						XX
75168334	AC CABLE (P01)									XX	XX	XX	
70504402	A CABLE, Ext									XX			
70505003	B CABLE, Ext									XX			
93270700	TERMINATOR	XX	XX	XX	XX	XX				XX			XX
92678808	FILLER PANEL											XX	XX
81244510	BAR KIT											XX	XX
81244512	BAR KIT											XX	XX

\*Integral Power Supply Drives

Table Continued on Next Page





## **SECTION 2**

### **ACCESSORIES**

## ACCESSORIES

2

Table 2-1 is a list of accessories that are available for the 300/340/515 MB Fixed Storage Drives. It contains the following information:

- PART NUMBER - Use this number to order this part.
- DESCRIPTION - Contains the part nomenclature/description.

TABLE 2-1. ACCESSORIES

PART NUMBER	DESCRIPTION
	DC POWER CABLE (P35/J40) FOR REMOTE POWER SUPPLY
93991802	1 foot (0.3 metre) long
92081500	5 foot (1.5 metre) long
92081510	5 foot (1.5 metre) long with right-angle connectors
92081501	8 foot (3.0 metre) long
81244502	DRIVE MOUNTING KIT (for mounting drive in a standard rack)
	GROUNDING ACCESSORIES, SMD/SDI INTERFACE
24534808	GROUND STRAP, 9/16 inch wide (specify length)
40125601	GROUND LUG
10126403	LOCKWASHER, #10
	I/O CABLES, IPI INTERFACE
47191101	10 foot (3.0 metre) long
47191102	25 foot (7.6 metre) long
47191103	50 foot (15.2 metre) long
47191104	75 foot (22.9 metre) long
47191105	100 foot (30.5 metre) long
47191106	150 foot (45.7 metre) long
Table Continued on Next Page	

TABLE 2-1. ACCESSORIES (Contd)

PART NUMBER	DESCRIPTION
	I/O CABLES, SDI INTERFACE
47191276	A CABLE, 5 foot (1.5 metre) long
47191277	A CABLE, 10 foot (3.0 metre) long
47191278	A CABLE, 15 foot (4.5 metre) long
47191279	A CABLE, 20 foot (6.1 metre) long
47191280	A CABLE, 25 foot (7.6 metre) long
47191281	A CABLE, 30 foot (9.1 metre) long
47191282	A CABLE, 40 foot (12.2 metre) long
47191283	A CABLE, 50 foot (15.3 metre) long
47191284	A CABLE, 100 foot (30.6 metre) long
70504426	B CABLE, 5 foot (1.5 metre) long
70504427	B CABLE, 10 foot (3.0 metre) long
70504428	B CABLE, 15 foot (4.5 metre) long
70504429	B CABLE, 20 foot (6.1 metre) long
70504430	B CABLE, 25 foot (7.6 metre) long
70504431	B CABLE, 30 foot (9.1 metre) long
70504432	B CABLE, 40 foot (12.2 metre) long
70504433	B CABLE, 50 foot (15.3 metre) long
70504434	B CABLE, 100 foot (30.6 metre) long
	I/O CABLES, SMD INTERFACE
70504401	A CABLE, 5 foot (1.5 metre) long
70504402	A CABLE, 10 foot (3.0 metre) long
70504403	A CABLE, 15 foot (4.5 metre) long
70504404	A CABLE, 20 foot (6.1 metre) long
70504405	A CABLE, 25 foot (7.6 metre) long
70504406	A CABLE, 30 foot (9.1 metre) long
70504407	A CABLE, 40 foot (12.2 metre) long
70504408	A CABLE, 50 foot (15.3 metre) long
70504409	A CABLE, 100 foot (30.6 metre) long
70505001	B CABLE, 5 foot (1.5 metre) long
70505002	B CABLE, 10 foot (3.0 metre) long
70505003	B CABLE, 15 foot (4.5 metre) long
70505004	B CABLE, 20 foot (6.1 metre) long
70505005	B CABLE, 25 foot (7.6 metre) long
70505006	B CABLE, 30 foot (9.1 metre) long
70505007	B CABLE, 40 foot (12.2 metre) long
70505008	B CABLE, 50 foot (15.3 metre) long
15458851	I/O TERMINATOR, IPI INTERFACE
	I/O TERMINATOR, SDI INTERFACE
75209300	A Cable
93920490	B Cable
93270700	I/O TERMINATOR, SMD INTERFACE

Table Continued on Next Page

TABLE 2-1. ACCESSORIES (Contd)

PART NUMBER	DESCRIPTION
94398817	LOGIC PLUG "0" (See Note 1)
94398818	LOGIC PLUG "1" (See Note 1)
94398819	LOGIC PLUG "2" (See Note 1)
94398820	LOGIC PLUG "3" (See Note 1)
94398821	LOGIC PLUG "4" (See Note 1)
94398822	LOGIC PLUG "5" (See Note 1)
94398823	LOGIC PLUG "6" (See Note 1)
94398824	LOGIC PLUG "7" (See Note 1)
15181751	LOGIC PLUG "0" (See Note 2)
15181752	LOGIC PLUG "1" (See Note 2)
15181753	LOGIC PLUG "2" (See Note 2)
15181754	LOGIC PLUG "3" (See Note 2)
15181755	LOGIC PLUG "4" (See Note 2)
15181756	LOGIC PLUG "5" (See Note 2)
15181757	LOGIC PLUG "6" (See Note 2)
15181758	LOGIC PLUG "7" (See Note 2)
15181663	LOGIC PLUG "8" (See Note 3)
15181664	LOGIC PLUG "9" (See Note 3)
15181665	LOGIC PLUG "10" (See Note 3)
15181666	LOGIC PLUG "11" (See Note 3)
15181667	LOGIC PLUG "12" (See Note 3)
15181668	LOGIC PLUG "13" (See Note 3)
15181669	LOGIC PLUG "14" (See Note 3)
15181670	LOGIC PLUG "15" (See Note 3)
12263496	STATIC GROUND WRIST STRAP, 6 1/2 to 8 inch wrist
12263623	STATIC GROUND WRIST STRAP, up to 6 1/2 inch wrist
12263624	STATIC SHIELDING BAG, 5 x 8 inch
12263625	STATIC SHIELDING BAG, 8 x 12 inch
12263626	STATIC SHIELDING BAG, 10 x 12 inch
12263499	STATIC SHIELDING BAG, 14 x 18 inch
12263627	STATIC SHIELDING BAG, 16 x 24 inch
Note 1:	Used on older operator panels, which have logic plugs without indicator lights.
Note 2:	Used on newer operator panels, which have logic plugs with indicator lights.
Note 3:	Cannot be used with BSYX, DSYX, ESYX, BTQX, or DTQX I/O boards on SMD interface. Cannot be used on SDI or IPI interface.

## **SECTION 3**

### **RECOMMENDED SPARE PARTS**



---

## INTRODUCTION

Table 3-1 is a list of manufacturer's recommended spare parts. Use only Imprimis replacement parts. Using non-Imprimis replacement parts can adversely affect safety. Using other manufacturers' parts could also degrade reliability, increase maintenance downtime, and void warranty coverage.

## SPARE PARTS LIST

This listing is divided into three columns:

- DESCRIPTION/NOTES - Contains the part nomenclature/description and other pertinent information.
- PART NUMBER - Contains the part number of the part when the unit was manufactured or as a result of the latest FCO. This part can be used as a replacement on the series code and types of units indicated in the Description/Notes column. However, always use Replacement Part Number when ordering new parts or spares.
- REPLACEMENT PART NUMBER - Contains the interchangeable replacement part number. Use this number for ordering replacement or spare parts.

## CARD INTERCHANGEABILITY CHART

The card interchangeability chart (CIC) provides the latest revision level of a board, its title, and its part number for ordering purposes. Prior to attempting to use the chart, be sure to read and understand the rules for interpreting the CIC as given on sheet 1.

### NOTE

ORDER AND REPLACE LOGIC BOARDS BY PART NUMBER ONLY.

Logic boards have an alpha card type designator stamped on them. In the past, ECOs that changed a board part number also changed the first letter of the designator (AWXY to BWXY). Effective 1 August 1987, only the part number changes. The card type does not change.

TABLE 3-1. MANUFACTURER'S RECOMMENDED SPARE PARTS

DESCRIPTION/NOTES	PART NUMBER	REPLACE-MENT PART NUMBER
<b>BRAKE ASSEMBLY</b>		
Older type (has 30-inch wires that connect directly to Motor Speed/Power Amp board).	72856100	72856100
Newer type (has 3-inch wires that connect to Motor Wiring harness).	72856101	72856101
<b>DC POWER CABLE (P15/P40)(Remote P/S Drives)</b>		
1 foot (0.3 metre) long	93991802	93991802
5 foot (1.5 metre) long	92081500	92081500
5 foot (1.5 metre) long with right-angle connectors	92081510	92081510
<b>DC POWER CABLE(P15/35)(Integral P/S Drives)</b>	80547301	80547301
<b>FAN ASSEMBLY</b>	81235102	81235102
<b>FAULT STATUS CABLE</b>		
SMD-0/SDI Interface Drives (P13/P19)	47002001	47002001
SMD-E/IPI Interface Drives (P13/P17/P19)	47002002	47002002
<b>FILTER, Primary (except PA5N1C)</b>	72852571	72852571
<b>GROUND SPRING ASSEMBLY</b>	72854201	72854201
<b>I/O CABLE, Internal</b>		
<b>PA5G1A/B/C/K, PA5J1A, PA5N1A/F, PA5Z1A</b>		
A Cable	92439622	92439622
B Cable	92246321	92246321
<b>PA5G1D/F/L/M/N/R/S/T/U, PA5J1B/C/D, PA5N1B/E/G/H/K, PA5Z1B/C</b>		
A Cable	92439625	92439625
B Cable	92246324	92246324
<b>PA5G2A/B/K, PA5J2A, PA5N2A/F, PA5Z2A</b>		
A Cable, Channel 1	92439622	92439622
A Cable, Channel 2	92439623	92439623
B Cable, Channel 1	92246321	92246321
B Cable, Channel 2	92246322	92246322
<b>PA5G2C/D/J/M, PA5J2B, PA5N2B/D/G/K, PA5Z2B/C/D</b>		
A Cable, Channel 1	92439625	92439625
A Cable, Channel 2	92439626	92439626
B Cable, Channel 1	92246324	92246324
B Cable, Channel 2	92246325	92246325
<b>PA5K1A/PA5S1A</b>		
A Cable	73089200	73089200
B Cable	73089300	73089300
Table Continued on Next Page		



TABLE 3-1. MANUFACTURER'S RECOMMENDED SPARE PARTS (Contd)

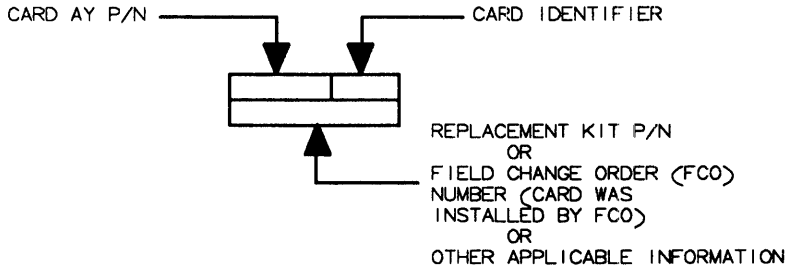
DESCRIPTION/NOTES	PART NUMBER	REPLACE- MENT PART NUMBER
MODULE ASSEMBLY (contd)		
PA5J1D <i>300 MB</i>	92104303	92104303
PA5K1A/B <i>5.15 MB</i>	73090400	73090411
PA5N1A/B/H/K, PA5N2A/B/C, PA5Z1A/B, PA5Z2A/B-----S/C 17 & Blw	73089100	73089118
S/C 18 & Abv	73089118	73089118
PA5N1C-----S/C 17 & Blw	73089116	73089133
S/C 18 & Abv	73089133	73089133
PA5N1D, PA5N2E, PA5Z1C, PA5Z2D-----S/C 17 & Blw	73089102	73089119
S/C 18 & Abv	73089119	73089119
PA5N1E, PA5N2D-----S/C 17 & Blw	73089106	73089123
S/C 18 & Abv	73089123	73089123
PA5N1F, PA5N2F-----S/C 17 & Blw	73089103	73089121
S/C 18 & Abv	73089120	73089121
PA5N1G, PA5N2G-----S/C 17 & Blw	73089107	73089124
S/C 18 & Abv	73089124	73089124
PA5N2K-----S/C 17 & Blw	73089109	73089126
S/C 18 & Abv	73089126	73089126
PA5R2A-----S/C 17 & Blw	73089117	73089134
S/C 18 & Abv	73089134	73089134
PA5R2B/H-----S/C 17 & Blw	73089114	73089131
S/C 18 & Abv	73089131	73089131
PA5R2C-----S/C 17 & Blw	73089110	73089127
S/C 18 & Abv	73089127	73089127
PA5R2D-----S/C 17 & Blw	73089111	73089128
S/C 18 & Abv	73089128	73089128
PA5R2E-----S/C 17 & Blw	73089112	73089129
S/C 18 & Abv	73089129	73089129
PA5R2F-----S/C 17 & Blw	73089115	73089132
S/C 18 & Abv	73089132	73089132
PA5R2G/J-----S/C 17 & Blw	73089113	73089130
S/C 18 & Abv	73089130	73089130
PA5S1A/B, PA5S2B/C, PA506A---S/C 07 & Blw	73089100	73089122
S/C 08-17	73089105	73089122
S/C 18 & Abv	73089122	73089122
PA5Z2C-----S/C 17 & Blw	73089108	73089125
S/C 18 & Abv	73089125	73089125
POWER SUPPLY, Remote		
S/C 03 & Blw	72896502	72896504
S/C 04-06	72896503	72896504
S/C 07-12 (All except PA5G1K/PA5G2K/ PA5J1A/PA5J2A/PA5N1F/PA5N2F)	72896503	72896504
Table Continued on Next Page		

TABLE 3-1. MANUFACTURER'S RECOMMENDED SPARE PARTS (Contd)

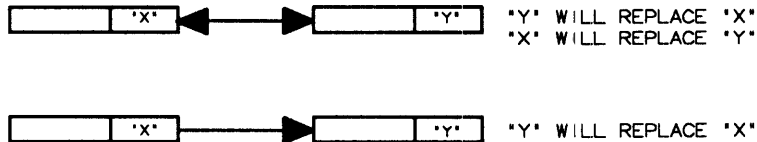
DESCRIPTION/NOTES	PART NUMBER	REPLACE- MENT PART NUMBER
POWER SUPPLY, Remote (contd)		
S/C 07-12 (PA5G1K/PA5G2K/PA5J1A/PA5J2A PA5N1F/PA5N2F)	72896504	72896504
S/C 13 & Abv	72896504	72896504
POWER SUPPLY, Integral		
Longer Type	81542300	81542304*
DC Backup (PA5R2F only)	81542303	81542303
Shorter Type (Older-w/circuit breakers)	81542301	81542304
Shorter Type (Newer-w/o circuit breakers)	81542304	81542304
*Power Supply Conversion Kit, P/N 45776800 (45776801 for PA5G1F/PA5G2C, 45776802 for PA5N1C, 45776804 for PA5S2C) is also required. A conversion kit with power supply included, P/N 45776807 (45776808 for PA5G1U/PA5N1K), is also available.		

THIS CHART SHOWS THE LOGIC BOARDS THAT ARE USED, OR HAVE BEEN USED, ON THE 300/340/515 MB FIXED STORAGE DRIVES

THE INFORMATION IN EACH BLOCK IS:



THE INTERCHANGEABILITY OF ONE BOARD WITH ANOTHER BOARD IS INDICATED AS FOLLOWS:



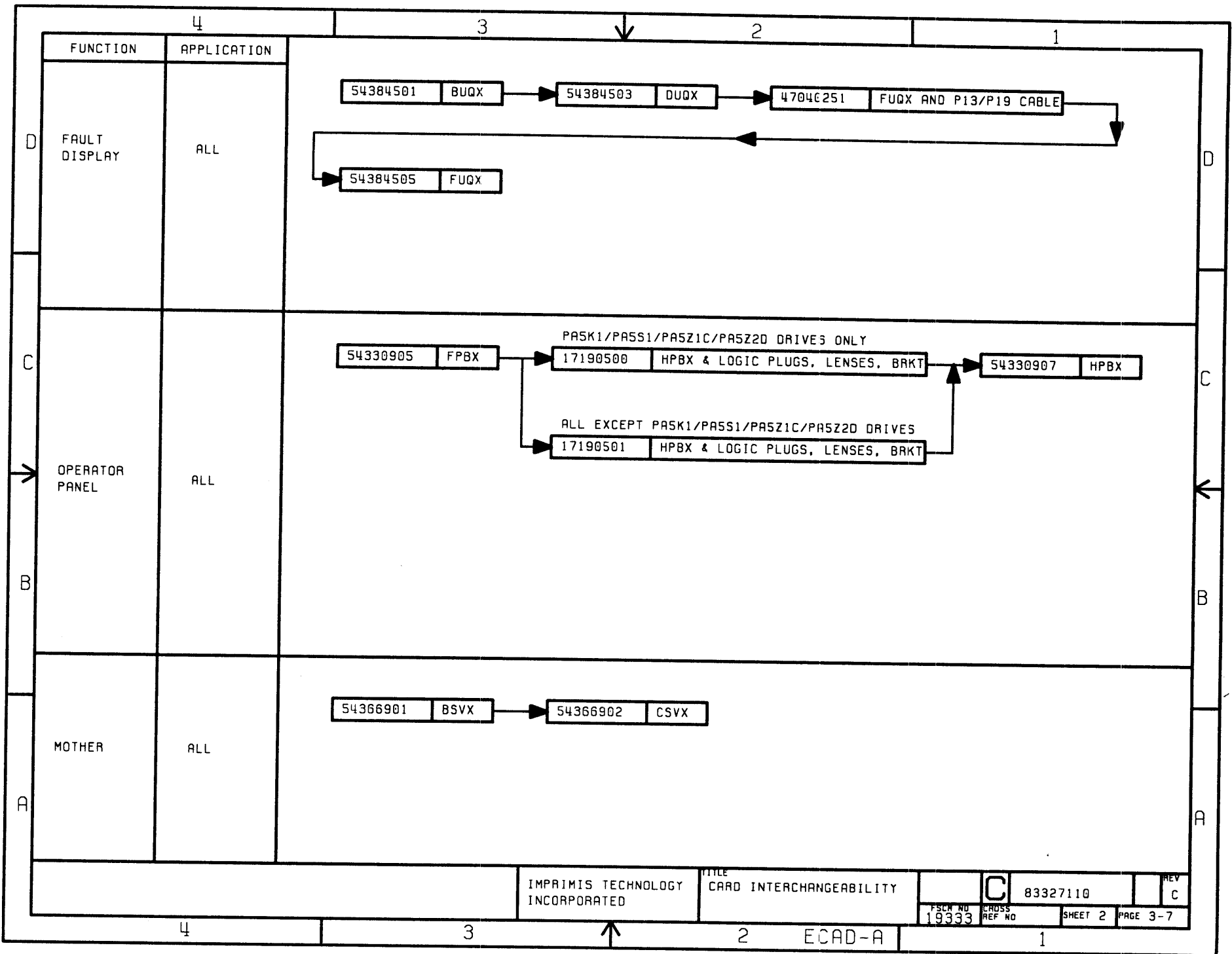
PART NO RANGE	REVISION RECORD					
	REV	ECO	DESCRIPTION	DRFT	DATE	CARD APP
THRU	A	DJ23000	EQUIVALENT TO 81442400 REVISION CJ	SLP	5-25-88	
	B	DJ30840	NEW _VCX BOARD	DN	9-1-88	/
	C	DJ30854	NEW DWLX BOARD	DN	9-1-88	/
	D	DJ30867	NEW _VCX BOARD	DN	9-7-88	/
	E	DJ30881	NEW DWLX BOARD	SKJ	1-4-89	/
	F	DJ30883	NEW DWLX BOARD	SKJ	1-4-89	/
	G	DJ30867	NEW EPROM ON VCX	SKJ	1-4-89	/
	H	DJ30888	VCX KIT P/N CHANGE	SKJ	1-4-89	/

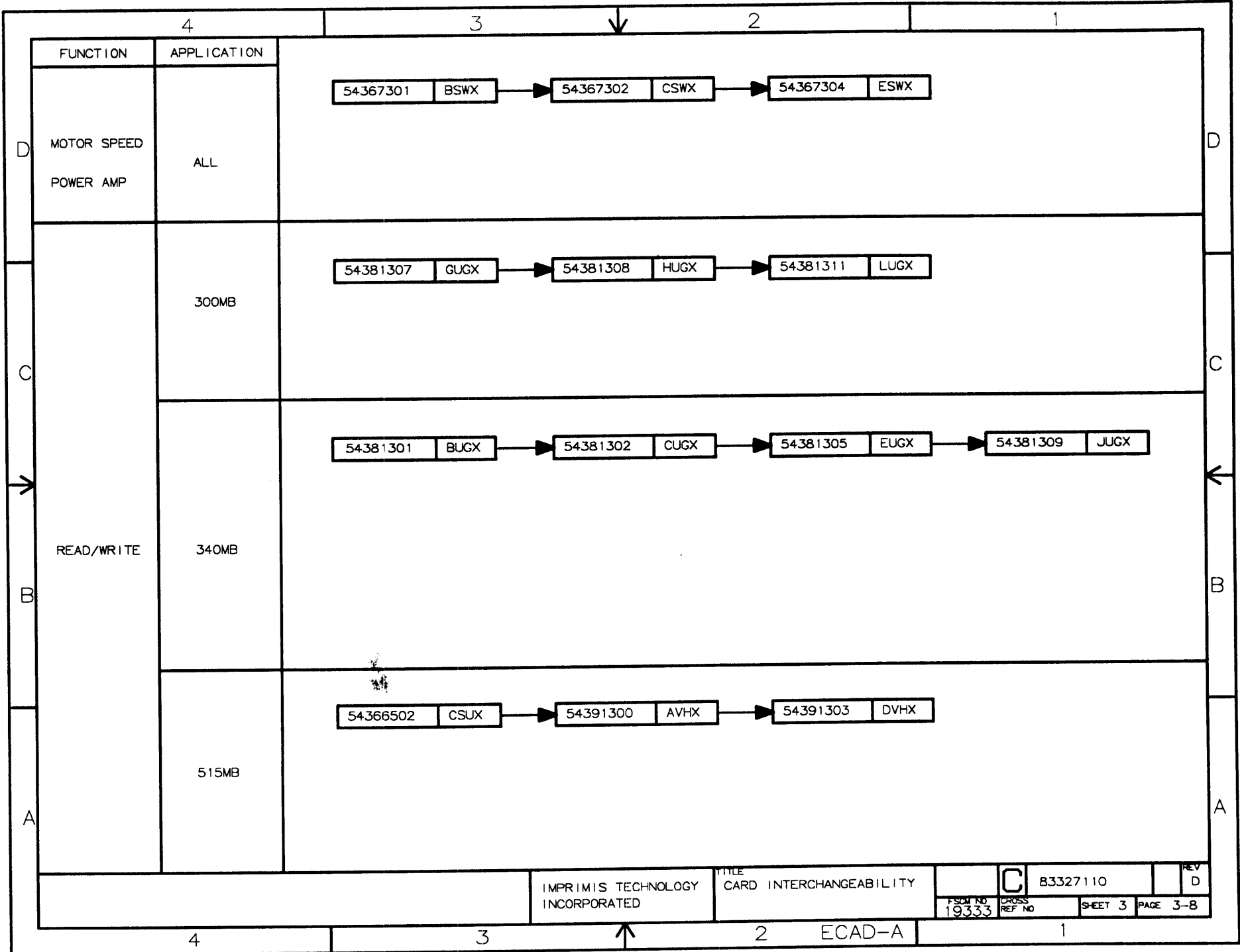
- NOTES:
- ON SINGLE-CHANNEL SDI INTERFACE UNITS, EVCX CONTROL BOARD IS COMPATIBLE WITH CSZX I/O BOARD ONLY.
  - KIT PART NUMBER WHICH INCLUDES BOARD SHOWN PLUS INSTRUCTIONS FOR PROGRAMMING THE BOARD VIA THE MAINTENANCE PANEL.
  - CSZX I/O BOARD IS COMPATIBLE WITH EVCX CONTROL BOARD ONLY.
  - IF THE DRIVE HAS AN ACVCX, AHVCX, OR APVCX CONTROL BOARD, USE 54402007 OR HIGHER DWLX I/O BOARD.

REFERENCE DOCUMENTS		IMPRIMIS TECHNOLOGY INCORPORATED		TITLE	
		FIRST USED ON		CARD INTERCHANGEABILITY CHART	
		NEXT ASSEMBLY			
COMPONENTS, EXCEPT AS NOTED		DWN	SUE PARSON	5-25-88	
TOLERANCE	VALUE	RATING	CHKD		
RES			ENGR	C. BERTSCH	5-25-88
CAP			MFG		
			QA		
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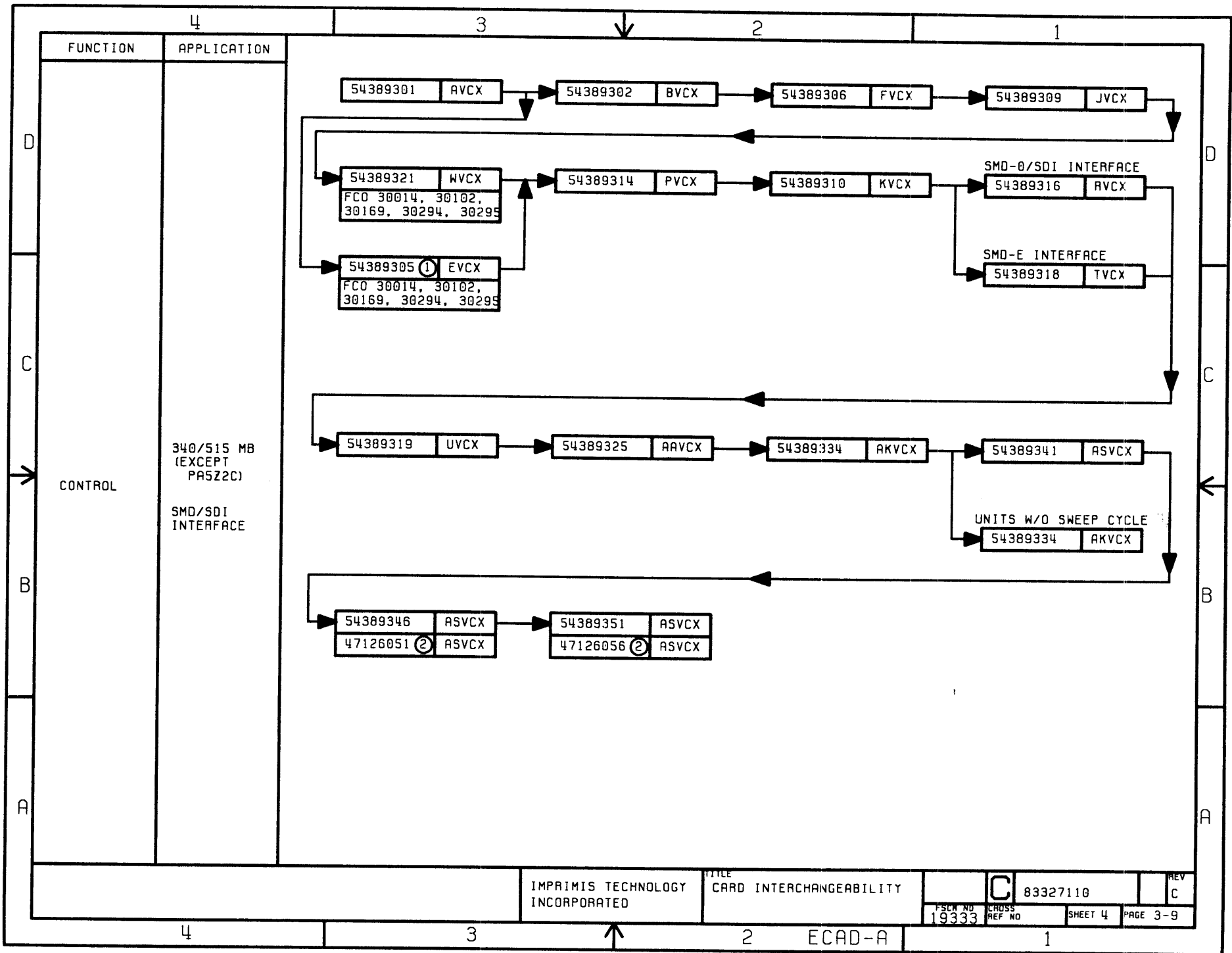
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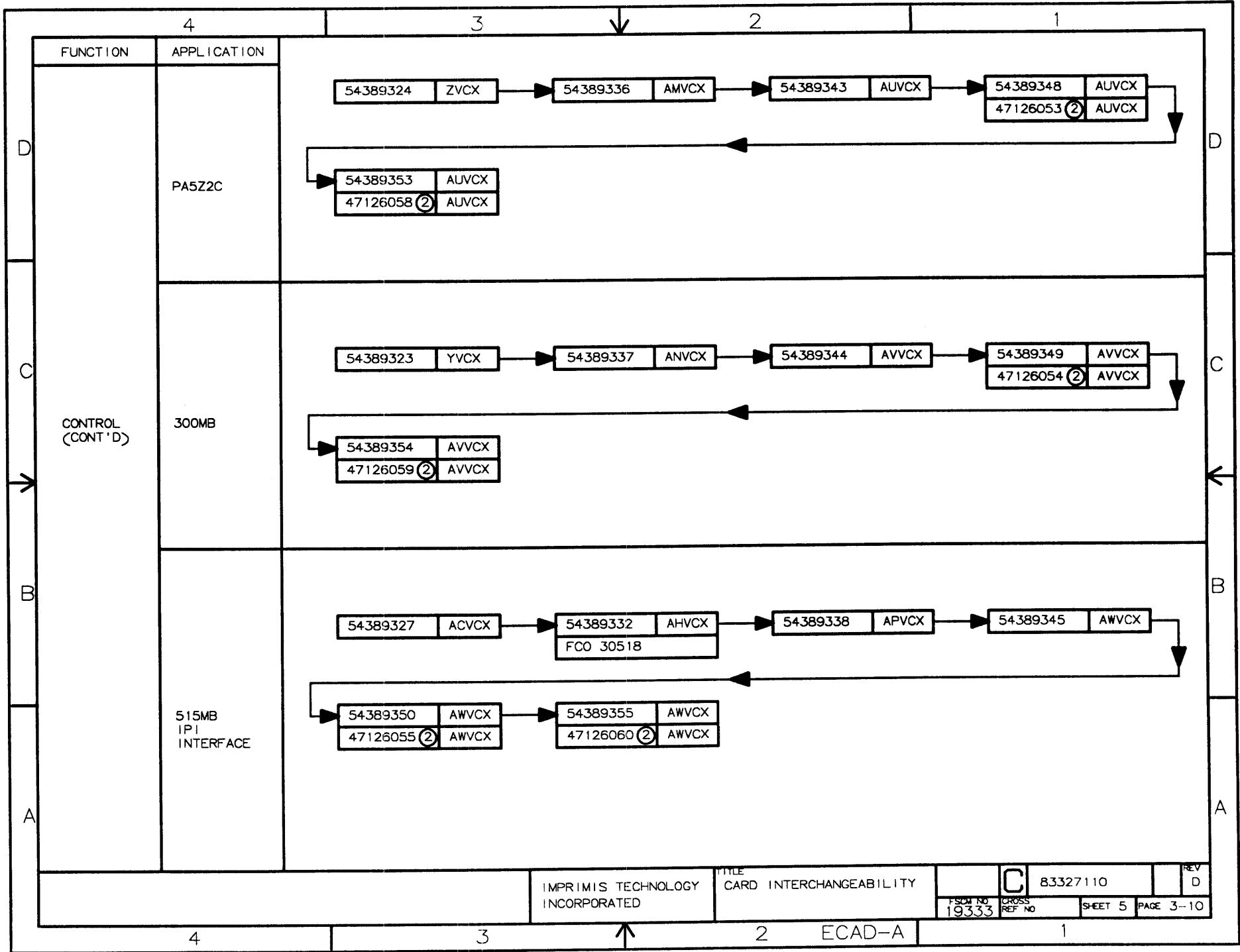
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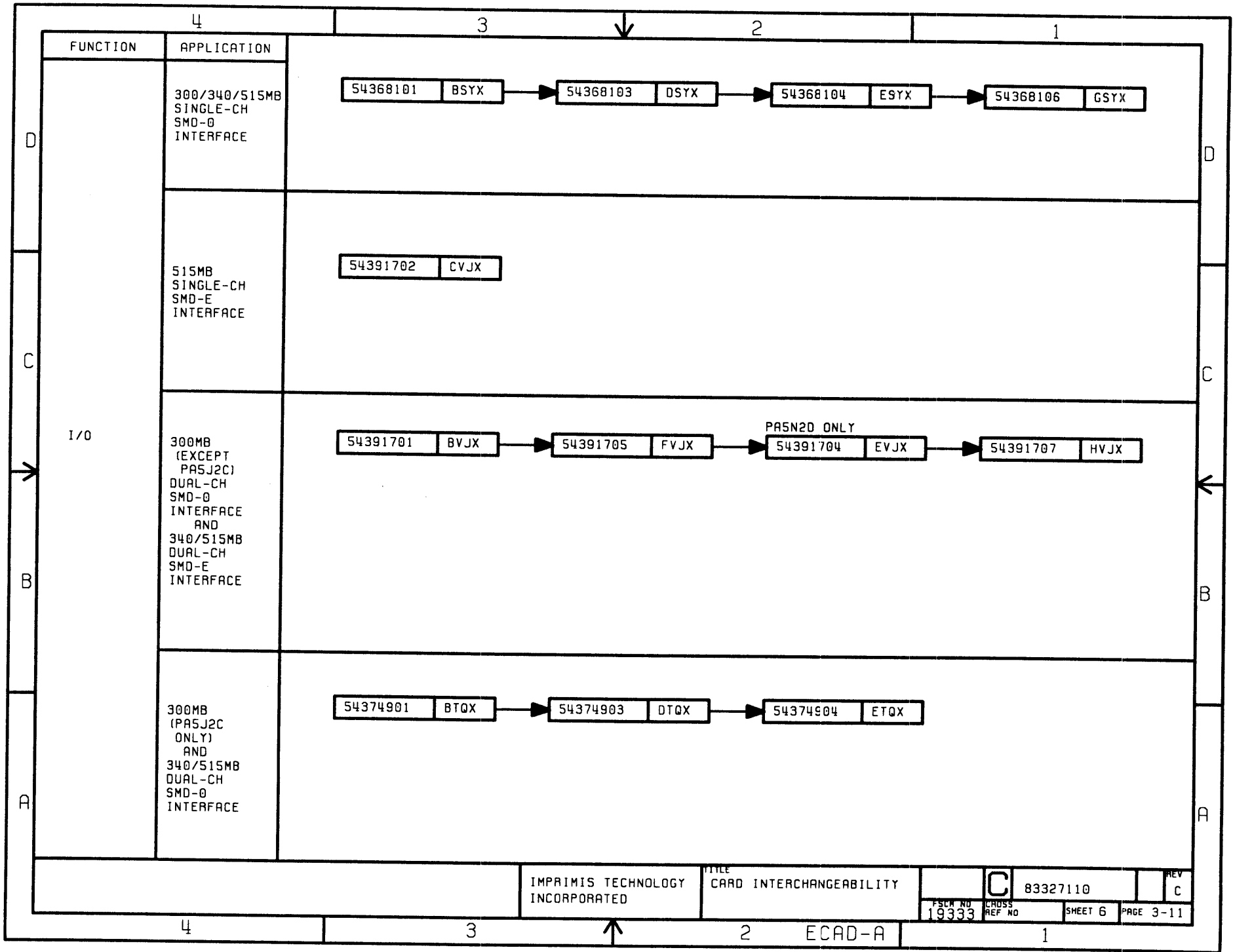
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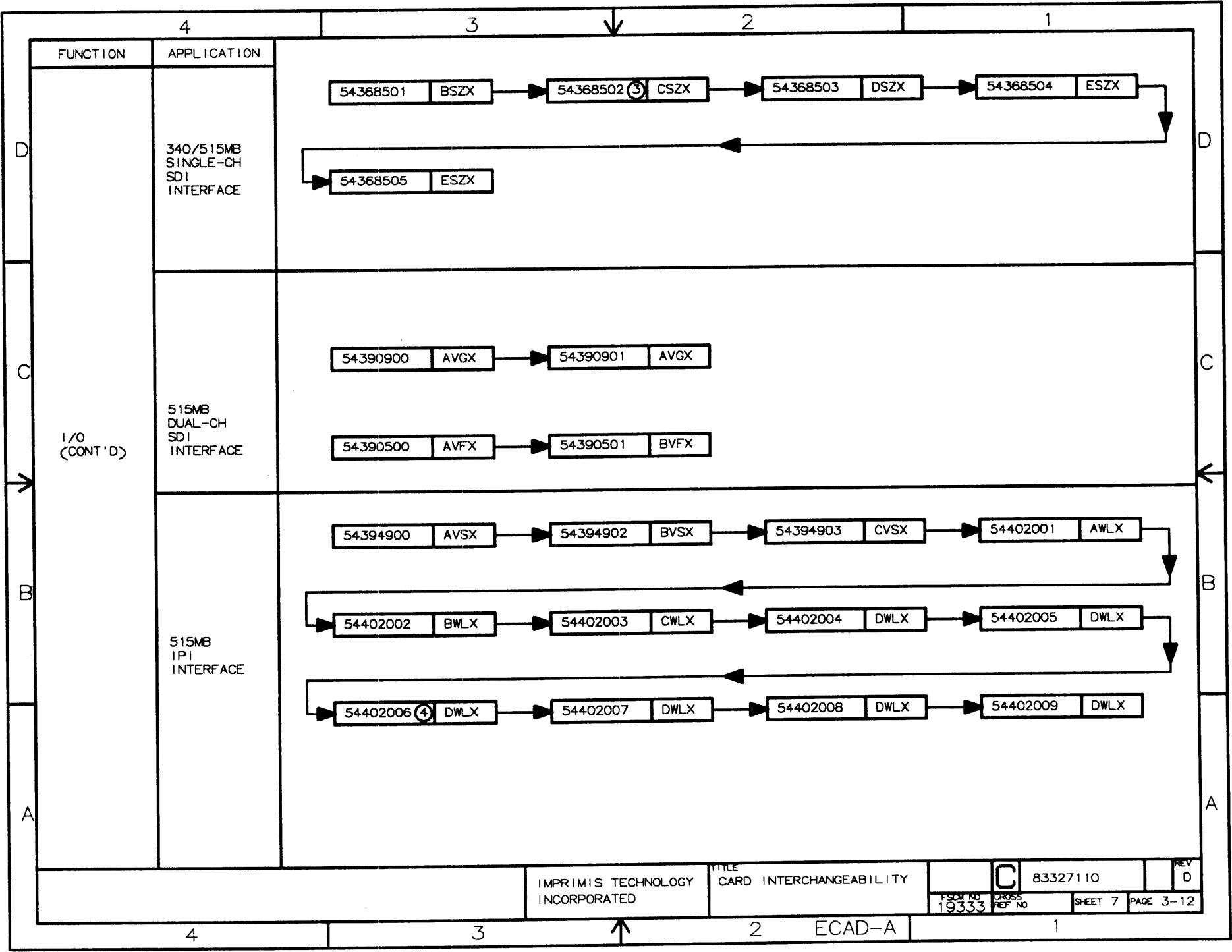


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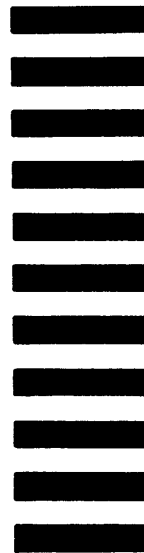
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