VOLUME A02 MACHINE 4381- -0011647 MODEL M02 SYSTEM 0000JYP MODE SCHED SHIP 00/00/00

LOGIC TYPE -0- SYSTEMS DIAGRAMS DGC COUNTER

PAGE NUM	SH	TITLE	PART NUM	EC NUM	FEATURE B/M OR B/MS
BA005		FNT COV/ED NOT	0000445791	A02220	.W. 0004473536
BA010		BASIC POWER	0000445792	A02217	.W. 0004473536
BA015		MAINLINE CB TRIP	0000445793	A02217	.W. 0004473536
BA020		MAINLINE CB TRIP	0000445794	A02217	.W. 0004473536
BA025		MAINLINE CB TRIP	0000445795	A02217	.W. 0004473536
BA030		24 VOLT INDC	0000445796	A02217	.W. 0004473536
BA035		24 VOLT INDC	0000445797	A02217	.W. 0004473536
BA040		5 VOLT INDC	0000445798	A02217	.W. 0004473536
BA045		5 VOLT INDC	0000445799	A02217	.W. 0004473536
BA050		MBC INDC	0000445800	A02220	.W. 0004473536
BA055		PS101 ANY CP	0000445801	A02220	.W. 0004473536
BA060		PS101 ANY CP	0000445802	A02217	.W. 0004473536
BA065		PS101 ANY CP	0000445803	A02214	.W. 0004473536
BA070		PS101 CP2 TRIP	0000445804	A02220	.W. 0004473536
BA075		PS101 CP2 TRIP	0000445805	A02214	.W. 0004473536
BA080		PS101 CP2 TRIP	0000445806	A02220	.W. 0004473536
BA085		AFS FAULT	0000445807	A02214	.W. 0004473536
BA090		AFS FAULT	0000445808	A02214	.W. 0004473536
BA095		PS101 PCC INTER	0000445809	A02217	.W. 0004473536
BA100		PS101 CP2 P02	0000445810	A02220	.W. 0004473536
BA105		PS101 CP2 P02	0000445811	A02214	.W. 0004473536
BA110		PS101 CP2 P04	0000445812	A02217	.W. 0004473536
BA115		PS101 CP2 P05	0000445813	A02217	.W. 0004473536
BA120		PS101 CP2 P05	0000445814	A02220	.W. 0004473536
BA125		PS101 CP3 TRIP	0000445815	A02214	.W. 0004473536
BA130		PWR CODE 0A,A0	0000445816	A02214	.W. 0004473536
BA135		PS102 CP1 TRIP	0000445817	A02217	.W. 0004473536
BA140		PS102 CP1 TRIP	0000445818	A02220	.W. 0004473536
BA145		PS102 CP2 TRIP	0000445819	A02214	.W. 0004473536
BA150		PS102 CP3 TRIP	0000445820	A02217	.W. 0004473536
BA155		PS102 CP4 TRIP	0000445821	A02217	.W. 0004473536
BA160		PS102 CP4 TRIP	0000445822	A02214	.W. 0004473536
BA165		PS102 CP5 TRIP	0000445823	A02220	.W. 0004473536
BA170		PS102 CP5 TRIP	0000445824	A02214	.W. 0004473536
BA172		PS102 CP6 TRIP	0000446118	A02217	.W. 0004473536
BA175		PS102 CP7 TRIP	0000445825	A02217	.W. 0004473536
BA180		FAULT CP TRIP	0000445826	A02217	.W. 0004473536
BA185		SHORT IN 01AA1	0000445827	A02215	.W. 0004473536
BA190		SHORT IN 01AA2	0000445828	A02214	.W. 0004473536
BA195		PC 1A A1 2A A2	0000445829	A02217	.W. 0004473536
BA200		PC 1A A1 2A A2	0000445830	A02217	.W. 0004473536
BA205		PC 3A A3 4A A4	0000445831	A02220	.W. 0004473536
BA210		PC 3A A3 4A A4	0000445832	A02217	.W. 0004473536
BA215		PC 5A A5 6A A6	0000445833	A02217	.W. 0004473536
BA220		PC 5A A5 6A A6	0000445834	A02217	.W. 0004473536
BA225		PC 7A A7 0B B0	0000445835	A02217	.W. 0004473536
BA230		PC 7A A7 0B B0	0000445836	A02215	.W. 0004473536
BA235		PC 1B B1 2B B2	0000445837	A02217	.W. 0004473536
BA240		PC 1B B1 2B B2	0000445838	A02214	.W. 0004473536
BA245		PC 3B B3	0000445839	A02217	.W. 0004473536
BA250		PC 3B B3	0000445840	A02217	.W. 0004473536
BA255		PC 4B B4	0000445841	A02219	.W. 0004473536
BA260		PC 4B B4	0000445842	A02217	.W. 0004473536
BA265		PC 5B B5	0000445843	A02219	.W. 0004473536
BA270		PC 5B B5	0000445844	A02217	.W. 0004473536
BA275		AFS FAILURE	0000445845	A02217	.W. 0004473536
BA280		AFS FAILURE	0000445846	A02214	.W. 0004473536
BA285		PC W/PWR OFF	0000445847	A02219	.W. 0004473536
BA290		MISSING	0000445848	A02217	.W. 0004473536
BA295		MISSING V PS102	0000445849	A02217	.W. 0004473536
BA300		LAMP TEST	0000445850	A02220	.W. 0004473536
BA305		LAMP TEST	0000445851	A02217	.W. 0004473536
BA310		LAMP TEST	0000445852	A02217	.W. 0004473536
BA315		HEX DISPLAY	0000445853	A02220	.W. 0004473536
BA320		HEX DISPLAY	0000445854	A02220	.W. 0004473536
BA325		OCP	0000445855	A02220	.W. 0004473536
BA330		OCP	0000445856	A02217	.W. 0004473536
BA335		CONVEN OUTLET	0000445857	A02217	.W. 0004473536
BA337		CONVEN OUTLET	0000447362	A02214	.W. 0004473536
BA340		PWR ON FAIL	0000445858	A02220	.W. 0004473536
BA345		PWR ON FAIL	0000445859	A02220	.W. 0004473536
BA350		PWR ON FAIL	0000445860	A02220	.W. 0004473536
BA355		PWR OFF	0000445861	A02220	.W. 0004473536
BA360		PWR OFF FAIL	0000445862	A02214	.W. 0004473536
BA365		MBC RESET	0000445863	A02220	.W. 0004473536
BA370		MBC RESET	0000445864	A02214	.W. 0004473536
BA375		SERVICE PANEL	0000445865	A02220	.W. 0004473536
BA380		SERVICE PANEL	0000445866	A02214	.W. 0004473536
BA385		SERVICE PANEL	0000445867	A02217	.W. 0004473536
BA390		SERVICE PANEL	0000445868	A02217	.W. 0004473536
BA395		SERVICE PANEL	0000445869	A02217	.W. 0004473536
BA400		SERVICE PANEL	0000445870	A02217	.W. 0004473536
BA405		SERVICE PANEL	0000445871	A02217	.W. 0004473536
BA410		MISC INDC FAIL	0000445872	A02217	.W. 0004473536
BA415		PWR REPAIR VER	0000445873	A02214	.W. 0004473536

TOTAL PART NUMBERS THIS VOLUME 85

IBM®

Maintenance Information

S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION	S/N MI MAINTENANCE INFORMATION
SAFETY INDEX TERMS/ ABBREVIATIONS INTRODUCTION START PU REPAIR CHNL REPAIR MSS REPAIR END OF REPAIR	PWR REPAIR (HWS AND MBC)	PWR REPAIR (PROC) PR 1001 THRU PR 13 XX	PWR REPAIR (PROC) PR 1401 THRU PR 18 XX	PWR REPAIR (PROC) PR 1901 THRU PR 5001	SERVICE AIDS	LOCATIONS TOOLS REMOVAL/ REPLACEMENT PREVENTIVE MAINTENANCE DIAGNOSTICS LOGS SYSTEM TEST INSTALLATION SAFETY INSP	CONSOLE FUNCTIONS MESSAGES
VOL A01	VOL A02	VOL A03	VOL A04	VOL A05	VOL A06	VOL A07	VOL A08

4381

Processor Maintenance Information

Seq BA005	PN 0445791 Pg 1 of 2	EC A02214 15 SEP 83	EC A02220 06 JUN 84			

The drawings and specifications contained herein shall not be reproduced in whole or in part without written permission.

IBM has prepared this maintenance manual for you in the use for installation, maintenance, or repair of the specific machine indicated. IBM makes no representation that it is suitable for any other purpose.

Information contained in this manual is subject to change from time to time. Any such change will be reported in subsequent revisions or Technical Newsletters.

It is possible that this material may contain reference to, or information about IBM products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that IBM intends to announce such IBM products, programming, or services in your country.

Publications are not stocked at the address below; requests for IBM publications should be made to your IBM representative or to the IBM branch office serving your locality.

A form for reader's comments is provided in Volume A01 of this publication. If the form has been removed, comments may be addressed to IBM Corporation, Processor Maintenance Information Development, Department X65, P.O. Box 6, Endicott, NY, U.S.A. 13760. IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

Basic Power (Hardwire Sequence) Repair Procedure

You have been directed to this repair procedure because you have a basic power problem.

DO NOT REPAIR DEFECTIVE FRUS

Step	Conditions	Instructions	Comments
1	Is PCC CB1 or CB2 tripped?	Go to page PR 011.	
2	Is the 24 Volt indicator off?	Go to page PR 021.	
3	Is the 5 Volt indicator off?	Go to page PR 031.	
4	Is the MBC On indicator off?	Go to page PR 041.	
5	Are you here to fix a convenience outlet problem?	Go to page PR 401 (Convenience Outlet).	
6	Are you here to fix a OCP or service panel indicator failure?	Go to page PR 371 (Lamp Test). Go to page PR 481 (Miscellaneous Indicator Failures).	Go to Lamp Test first.
7	Are you here to fix a hex display indicator failure?	Go to page PR 381 (see note). **Note:** A two digit power code is not an indicator failure.	
8	Are you here to fix an OCP or service panel failure? or Does CE Mode fail to turn on the test indicator on console line twenty-two?	OCP: Go to page PR 391. Service panel: Go to page PR 441. **Note:** MSS or PU power must be on for the test indicator to display.	Any switch or pushbutton failure.
9	Are you here to fix a power off problem?	Go to page PR 421.	Processor fails to power off.
10	Go to **Instructions** column.	1. Record the service panel indicators. 2. Record the service panel hex display. 3. Press Check Reset.	
11	Do you have a A0 or 0A power code displayed?	Go to page PR 151.	PS102 CP tripped.
12	Do you have a 1A, A1, 2A, or A2 power code displayed?	Go to page PR 261.	-5V UV 01A-A2 board.
13	Do you have a 3A, A3, 4A, or A4 power code displayed?	Go to page PR 271.	-12V UV 01A-A2 board.
14	Do you have a 5A, A5, 6A, or A6 power code displayed?	Go to page PR 281.	+5V UV 01A-A2 board.
15	Do you have a 7A, A7, 0B, or B0 power code displayed?	Go to page PR 291.	+8.5V UV 01A-A2 board.
16	Do you have a 1B, B1, 2B, or B2 power code displayed?	Go to page PR 301.	+12V UV 01A-A2 board.
17	Do you have a 3B or B3 power code displayed?	Go to page PR 311.	+24V to 01A-A2 board.
18	Do you have a 4B or B4 power code displayed?	Go to page PR 321.	AFS103 Failure.
19	Do you have a 5B or B5 power code displayed?	Go to page PR 331.	AFS104 Failure.
20	Go to **Instructions** column.	Press the operator control panel Lamp Test switch; the following indicators should be on: **Service Panel** Power In Process Power Complete I/O Power Hold MBC On. **OCP** Power In Process Power Complete Basic Check.	
21	Did lamp test fail?	Go to page PR 371 (Lamp Test).	
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on.	
23	Is hex display other than 00000?	Go to page PR 381.	
24	Is hex display 00000?	1. Trip PS102 CP1. 2. Reset PS102 CP1.	
25	Is hex display other than 0A or A0?	Go to page PR 381.	

Step	Conditions	Instructions	Comments
26	Is hex display 0A or A0?	1. Press the Check Reset. 2. Ensure FUNC1 is installed in diskette drive 1. 3. Set the CE Mode switch to CE Mode. 4. Press service panel Power On. 5. Wait 30 seconds.	
27	Do you have a A0 or 0A power code displayed?	Go to page PR 151.	PS102 CP tripped.
28	Do you have a 1A, A1, 2A, or A2 power code displayed?	Go to page PR 261.	-5V UV 01A-A2 board.
29	Do you have a 3A, A3, 4A, or A4 power code displayed?	Go to page PR 271.	-12V UV 01A-A2 board.
30	Do you have a 5A, A5, 6A, or A6 power code displayed?	Go to page PR 281.	+5V UV 01A-A2 board.
31	Do you have a 7A, A7, 0B, or B0 power code displayed?	Go to page PR 291.	+8.5V UV 01A-A2 board.
32	Do you have a 1B, B1, 2B, or B2 power code displayed?	Go to page PR 301.	+12V UV 01A-A2 board.
33	Do you have a 3B or B3 power code displayed?	Go to page PR 311.	+24V to 01A-A2 board.
34	Do you have a 4B or B4 power code displayed?	Go to page PR 321.	AFS103 Failure.
35	Do you have a 5B or B5 power code displayed?	Go to page PR 331.	AFS104 Failure.
36	Do you have a two-digit power code that is not listed in the steps 28 through 36?	Go to hex display on page PR 381.	
37	Is the Partial Power Up/Down (QWW) screen displayed?	Go to step 40.	MBC and MSS power is OK.
38	Do you have a five-digit MSS Code of '00000'?	Go to page PR 411 (Power On Failure).	
39	Go to **Instructions** column.	Go to page START 001.	

Step	Conditions	Instructions	Comments
40	Go to **Instructions** column.	1. Select Partial Power Up/Down (QWW) screen. 2. Select UC (power-up processor and I/O).	
41	Do you have a 1x Ref Code displayed?	Go to page PR 1001.	
42	Do you have a Ref Code other than 1x?	Go to page START 001.	
43	Is power complete?	Go to Volume 1, page END 001.	Power is OK.
44	Go to **Instructions** column.	Invoke your support structure.	

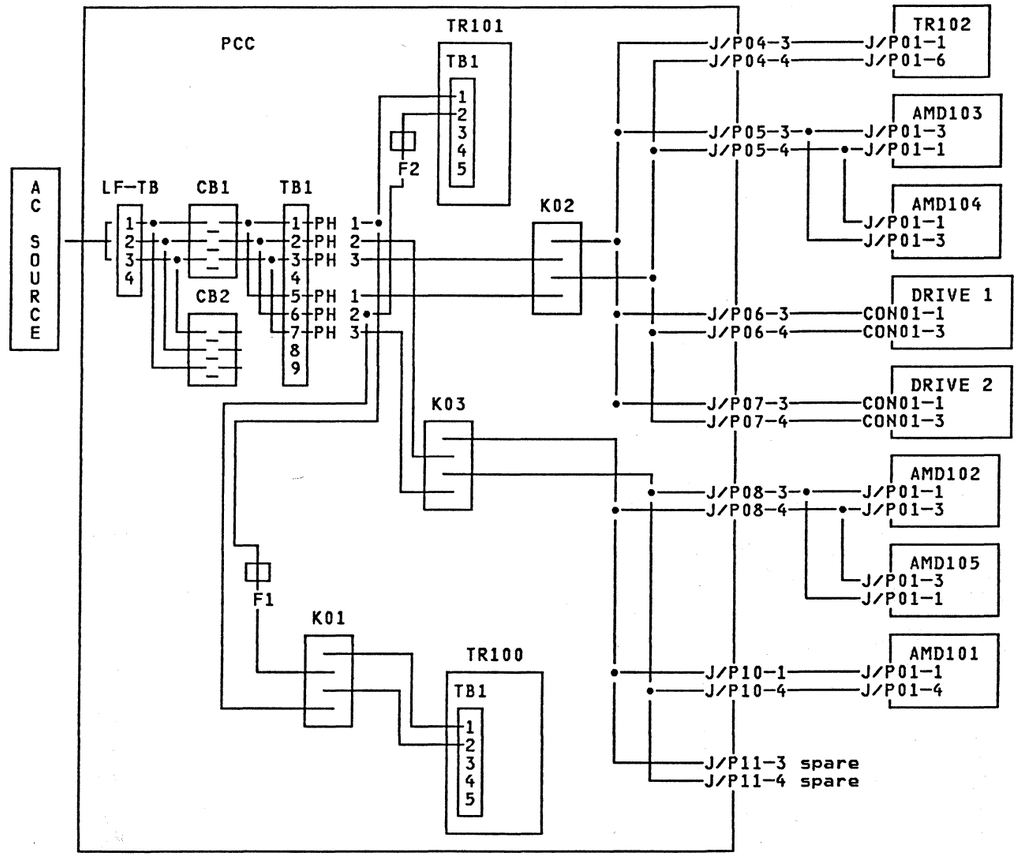
Mainline CB Tripped

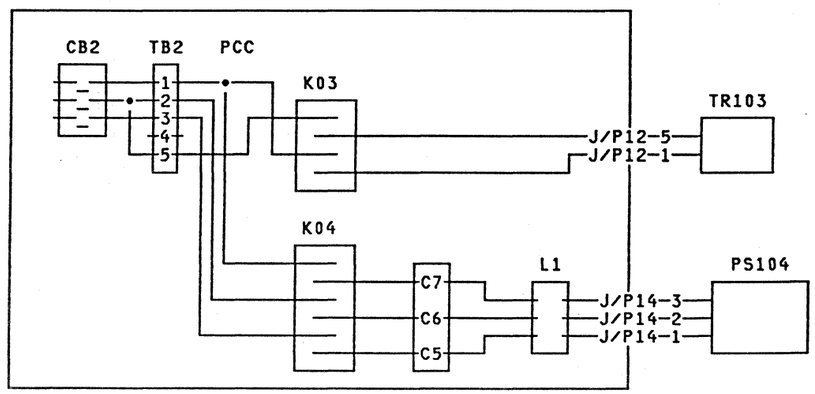
You are here because PCC CB1 or CB2 is tripped indicating a short in the AC distribution.

Possible causes:

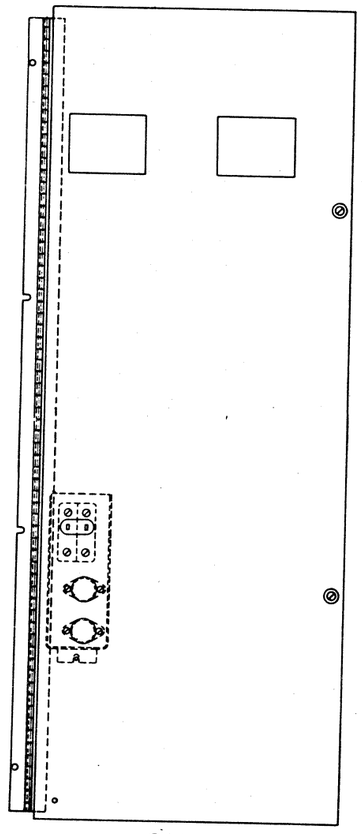
- PS101
- PS102
- PS104
- AMD101 through AMD107
- TR100 through TR103
- PCC CB1
- PCC CB2
- Diskette drive 1 or 2.

Step	Conditions	Instructions
1	Is CB2 tripped?	1. Reset CB2. 2. Ensure CE Mode is set to Normal. 3. Press service panel Power On. 4. If power complete, go to page END 001. 5. If CB2 trips, go to step 44.
2	Is CB1 tripped?	1. Reset CB1. 2. Press service panel Power On. 3. If power complete, go to page END 001. 4. Set CE Mode switch to CE Mode. 5. Set PCC CB1 and CB2 off. 6. Disconnect cables at PCC J/P02, J/P04, J/P05, J/P06, J/P07, J/P08, and J/P10. 7. Set PCC CB1 and CB2 on.

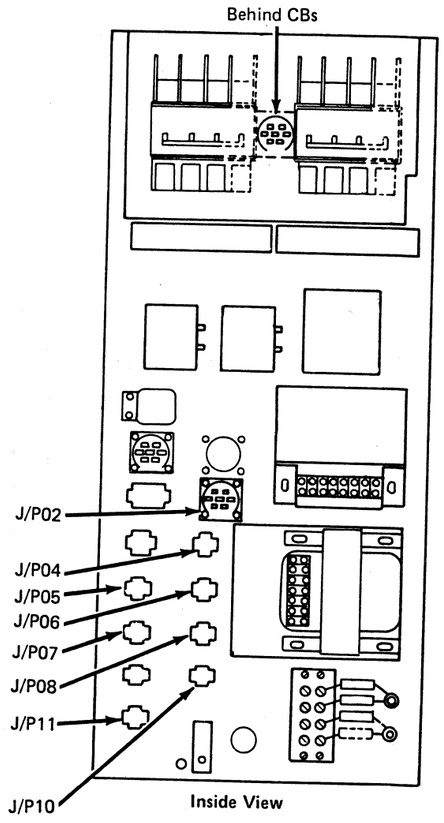




Step	Conditions	Instructions
3	Is CB1 tripped?	Short in PCC. 1. Use YA pages to isolate the short to one of the following nets: PCC TB1 to F1 and K01 PCC TB1 to F2 and TR101 PCC TB1 to K02 and K03 PCC CB1 to TB1 PCC CB1. 2. Exchange defective FRU. 3. Go to step 56.
4	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P02. 3. Set PCC CB1 and CB2 on.
5	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Also suspect shorted cable from PCC J/P02 to PS101 J/P07. 4. Go to step 56.
6	Go to **Instructions** column.	Press service panel Power On.
7	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC K02 to PCC J/P04, J/P05, J/P06, and J/P07. 3. Go to step 56.
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P04. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
9	Is CB1 in the On position?	Go to step 13.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS102 J/P02. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.



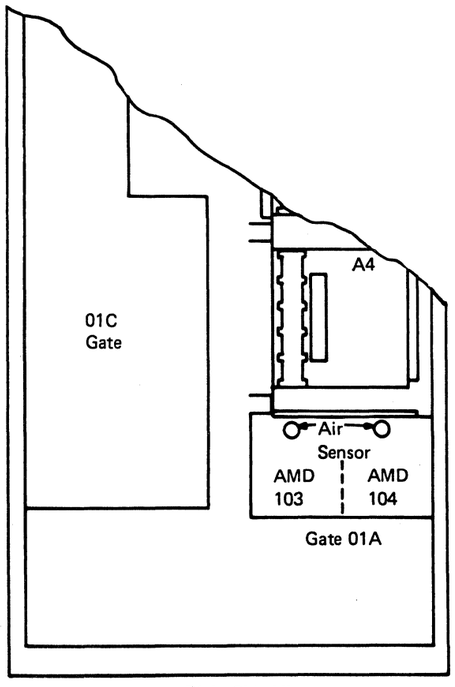
Cover



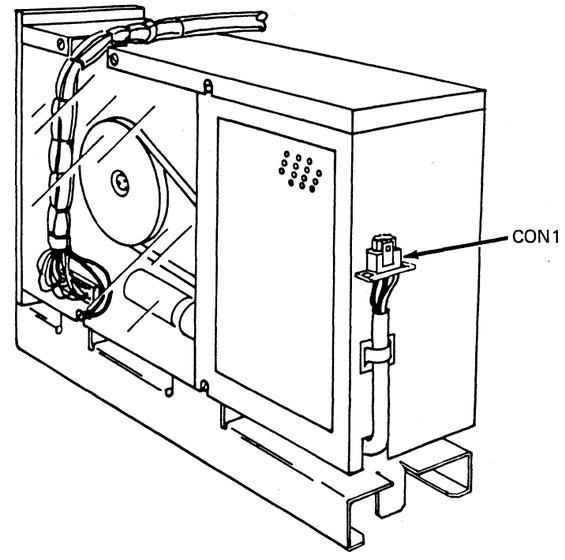
Inside View

Primary Control Compartment (PCC)

Step	Conditions	Instructions
11	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Also suspect short in cable from PCC J/P04 to TR102. 4. Go to step 56.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 56.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P05. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
14	Is CB1 in the On position?	Go to step 20.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AMD103 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
16	Is CB1 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD103. 3. Go to step 56.
17	Go to **Instructions** column,	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AMD104 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
18	Is CB1 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD104. 3. Go to step 56.



Right Side View



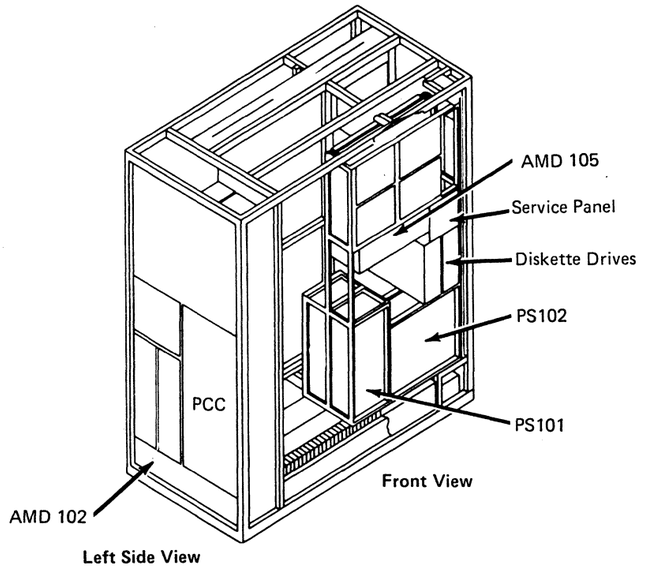
Diskette Drive

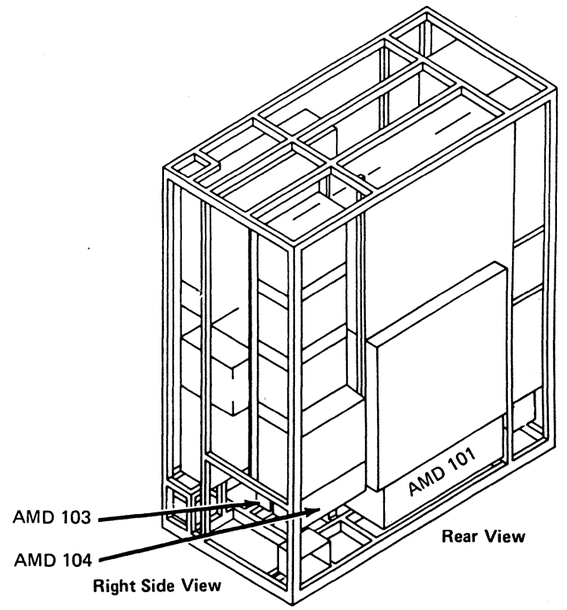
Step	Conditions	Instructions
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC J/P05 to AMD103 and AMD104. 3. Go to step 56.
20	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P06. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
21	Is CB1 in the On position?	Go to step 25.
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect AC cable at diskette drive 1. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
23	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC J/P06 to diskette drive 1. 3. Go to step 56.
24	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange diskette drive 1. 3. Go to step 56.
25	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P07. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
26	Is CB1 in the On position?	Go to step 30.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect AC cable at diskette drive 2. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
28	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC J/P07 to diskette drive 2. 3. Go to step 56.
29	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange diskette drive 2. 3. Go to step 56.
30	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to Normal. 3. Press service panel Power On.
31	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC K03 to PCC J/P08, J/P10, and J/P11. 3. Go to step 56.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P10. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
33	Is CB1 in the On position?	Go to step 37.
34	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AMD101 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
35	Is CB1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC J/P10 to AMD101 J/P01. 3. Go to step 56.
36	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange shorted AMD101. 3. Go to step 56.
37	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P08. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
38	Is CB1 in the On position?	Go to step 56.

Step	Conditions	Instructions
39	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AMD102 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
40	Is CB1 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD102. 3. Go to step 56.
41	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AMD105 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
42	Is CB1 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD105. 3. Go to step 56.
43	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PCC J/P08 to AMD102 and AMD105. 3. Go to step 56.
44	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PCC J/P12 and J/P14. 3. Set PCC CB1 and CB2 on.
45	Is CB2 tripped?	Short in the PCC. 1. Set PCC CB1 and CB2 off. 2. Use YA pages to isolate short to one of the following nets: PCC CB2 to PCC TB2 PCC TB2 to PCC K03 PCC TB2 to PCC K04 PCC CB2. 3. Exchange defective FRU. 4. Go to step 56.
46	Go to **Instructions** column.	Press service panel Power On.

Step	Conditions	Instructions
47	Is CB2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC K03 to PCC J/P12. 3. Go to step 56.
48	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PCC J/P12. 3. Disconnect cable at TR103 J/P01. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
49	Is CB2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P12 to TR103 J/P01. 3. Go to step 56.
50	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at TR103 J/P01. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to CE Mode. 5. Press service panel Power On. 6. Select Diagnostic Power Up (QWD) screen. 7. Select option A (stop after K03 picked).
51	Is CB2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange TR103. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR103. 3. Go to step 56.
52	Go to **Instructions** column.	1. Press ENTER to end Diagnostic Stop. 2. Select Diagnostic Power Up (QWD) screen. 3. Select option B (stop after K04 picked).

Step	Conditions	Instructions
53	Is CB2 tripped?	Short in the PCC. 1. Set PCC CB1 and CB2 off. 2. Use YA pages to isolate to one of the following nets: PCC K04 to C5, C6, and C7 PCC J/P14 to inductor L1 PCC C5, C6, and C7 to inductor L1. 3. Exchange defective FRU. 4. Go to step 56.
54	Go to **Instructions** column.	1. Press ENTER to end Diagnostic Stop. 2. Reconnect cable at PCC J/P14. 3. Select Diagnostic Power Up (QWD) screen. 4. Select option B (stop after K04 picked).
55	Is CB2 tripped?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS104. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 4. Go to step 56.
56	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101, PS102 AMD101, AMD102, AMD105 AMD103, AMD104 Diskette drive 1 Diskette drive 2 PS103, TR103 PS104. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
57	Is CB1 or CB2 tripped?	Invoke your support structure.
58	Go to **Instructions** column.	Go to page PR 901.





+24 Volt Indicator

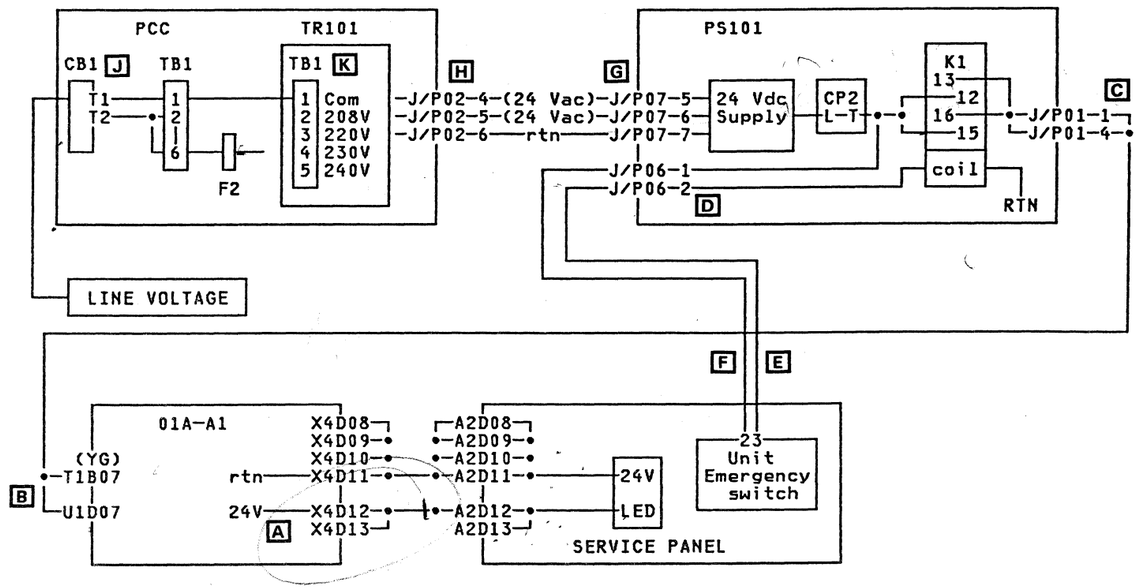
The service panel +24 Volt indicator not on indicates +24 Vdc missing at 01A-A1 board.

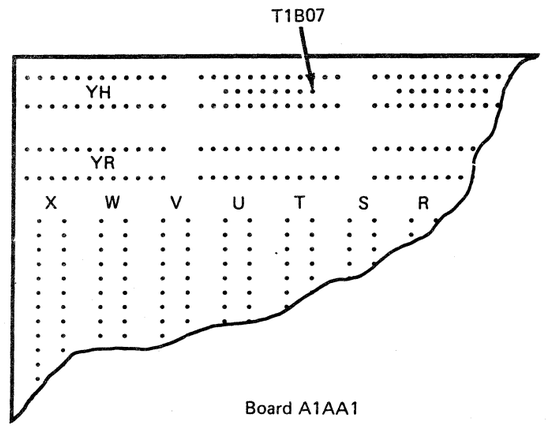
Possible causes:

- PS101
- Open in +24 Vdc distribution
- PCC F2
- PCC TR101
- Service panel.

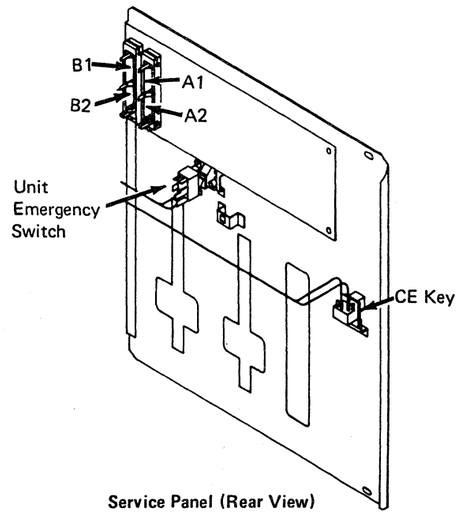
Some PS101 outputs are active when PCC CB1 and CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Ensure the Unit Emergency switch is in the Power Enable position. 3. Check for open PCC F2. 4. Reset any tripped PS101 CP.
2	Is PCC F2 good?	1. Set PCC CB1 and CB2 on. 2. Go to step 4.
3	Is PCC F2 open?	1. Exchange F2. 2. Set PCC CB1 and CB2 on.
4	Is the 24 Volt indicator on?	Go to step 32.
5	Is PS101 CP1 tripped?	Go to page PR 051.
6	Is PS101 CP2 tripped?	Go to page PR 051.
7	Is PS101 CP3 tripped?	Go to page PR 141.
8	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1X4D12. [A]





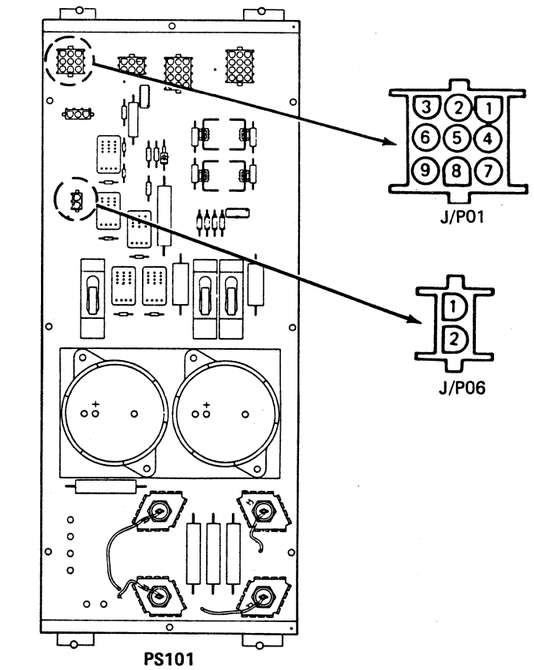
Board A1AA1

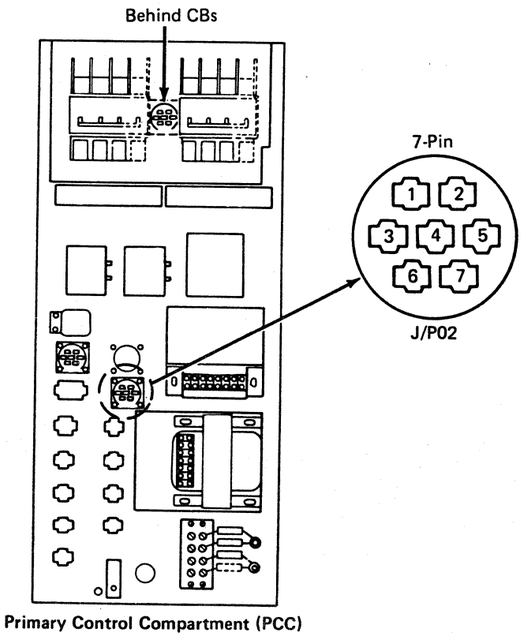


Service Panel (Rear View)

Seq BA030	PN 0445796 Pg 1 of 2	EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84		

Step	Conditions	Instructions
9	Is voltage greater than 22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check for open cable from 01A-A1X4D12 and D13 to service panel connector A1D12 and D13 before exchanging service panel. 3. Go to step 32.
10	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1T1B07. B
11	Is voltage greater than 22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
12	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P01-1 or C + lead at PS101 J/P01-4.
13	Is voltage greater than 22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS101 J/P01 to 01A-A1YG. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 32.
14	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P06-1.
15	Is voltage less than +22 Vdc?	Go to step 23.
16	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P06-2. D



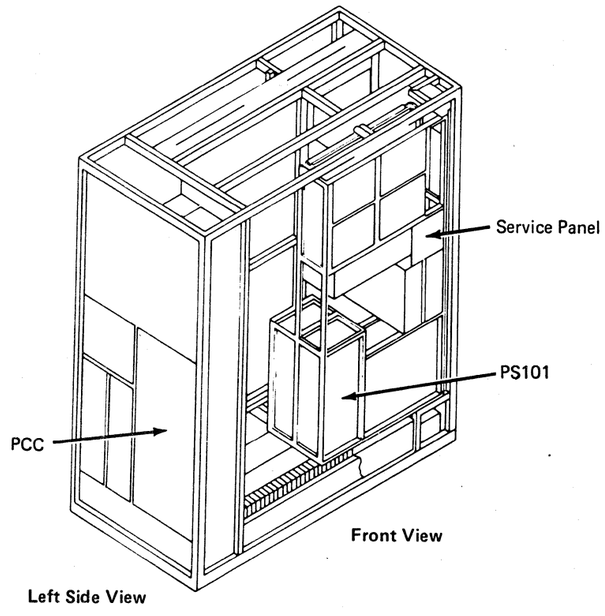


Primary Control Compartment (PCC)

Step	Conditions	Instructions
17	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 32.
18	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at Unit Emergency switch pin 3. [E]
19	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P06 to Unit Emergency switch. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 32.
20	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at Unit Emergency switch pin 2. [F]
21	Is voltage less than 22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange Unit Emergency switch. 3. Go to step 32.
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P06 to Unit Emergency switch. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 32.
23	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS101 J/P07. 3. Set PCC CB1 and CB2 on. 4. Measure for +24 **Vac** at the following points: PS101 P07-5 to 7 [G] PS101 P07-6 to 7 (cable end).
24	Is voltage greater than 22 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 32.
25	Is voltage less than 22 **Vac** at either point?	Measure for 24 **Vac** at the following points: PCC J/P02-4 to 6 [H] PCC J/P02-5 to 6.
26	Is voltage greater than 22 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PCC J/P02 to PS101 J/P07. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 32.
27	Is voltage less than 22 **Vac** at either point?	Measure for line voltage at the following points: - lead at PCC CB1 T1 + lead at PCC CB1 T2. [J] **Note:** For line voltage value, see label on PCC box.

Step	Conditions	Instructions
28	Is line voltage missing?	1. Isolate to one of the following: Customer supplied power Defective line cord Defective PCC CB1 2. Exchange defective FRU. 3. Go to step 32.
29	Is line voltage present?	Measure for line voltage at the following points: PCC TR101 TB1-1 to 2 (208) PCC TR101 TB1-1 to 3 (220) [K] PCC TR101 TB1-1 to 4 (230) PCC TR101 TB1-1 to 5 (240). **Note:** For line voltage value, see label on PCC box.
30	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange PCC TR101. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR103. 3. Go to step 32.
31	Is line voltage missing?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PCC TB1 and PCC TR101 TB1. **Note:** Check wiring at PCC TB1 and PCC TR101 TB1 before exchanging cable. 3. Go to step 32.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101 01A-A1 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
33	Is machine still failing?	Invoke your support structure.
34	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



+5 Volt Indicator

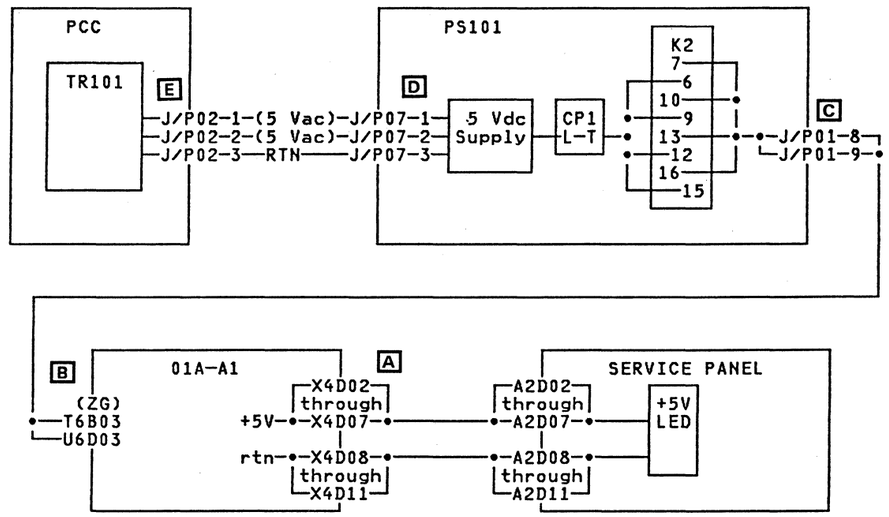
The service panel +5 Volt indicator not on indicates +5 Vdc missing at 01A-A1 board.

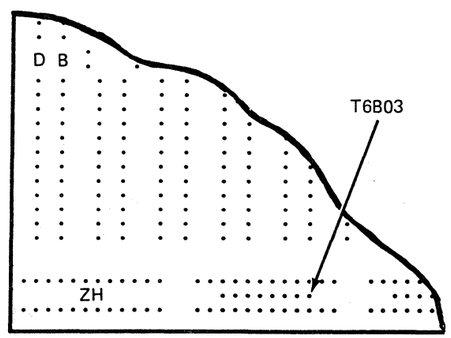
Some PS101 outputs are active when PCC CB1 and CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

Possible causes:

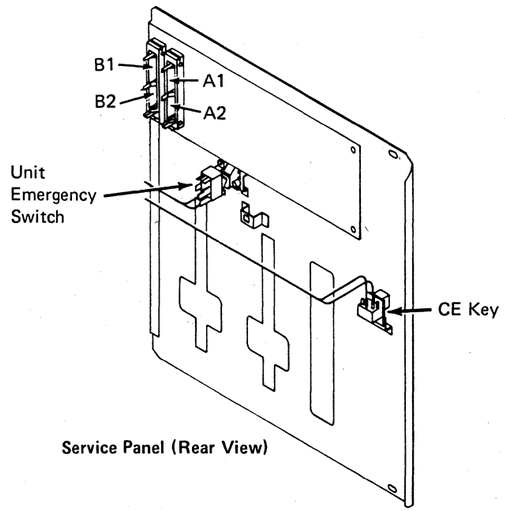
- PS101
- Open in +5 Vdc distribution
- Service panel.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset any tripped PS101 CP. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
2	Is power complete?	Go to page END 001.
3	Is PS101 CP1 or CP2 tripped?	Go to page PR 051.
4	Is PS101 CP3 tripped?	Go to page PR 141.
5	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 GND + lead at 01A-A1X4D02 [A] +5 Volts
6	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check for open cable from 01A-A1X4D02 through D07 to service panel connector A2D02 through D07 before exchanging service panel. 3. Go to step 16.
7	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1T6B03. [B]



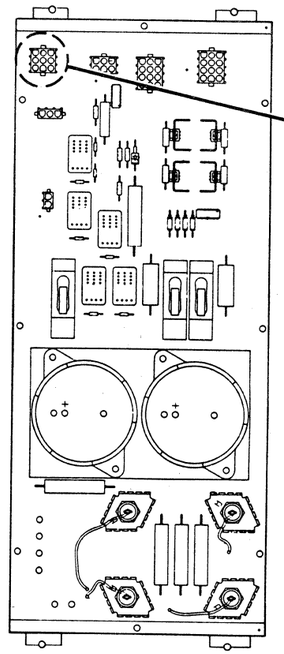


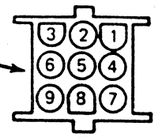
Board 01AA1



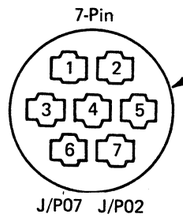
Service Panel (Rear View)

Step	Conditions	Instructions
8	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.
9	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P01-8 + lead at PS101 J/P01-9. [C]
10	Is voltage greater than +4.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS101 J/P01 to 01A-A1ZG. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 16.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS101 J/P07. 3. Set PCC CB1 and CB2 on. Measure for 5 **Vac** at the following points: PS101 P07-1 to 3 PS101 P07-2 to 3 (cable end). [D]
12	Is voltage greater than +4.5 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 16.
13	Go to **Instructions** column.	Measure for 5 **Vac** at the following points: PCC J/P02-1 to 3 PCC J/P02-2 to 3. [E]
14	Is voltage greater than +4.5 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS101 J/P07 to PCC J/P02. 3. Go to step 16.

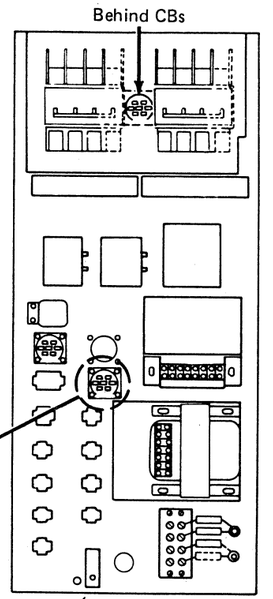

PS101



J/P01



J/P07 J/P02



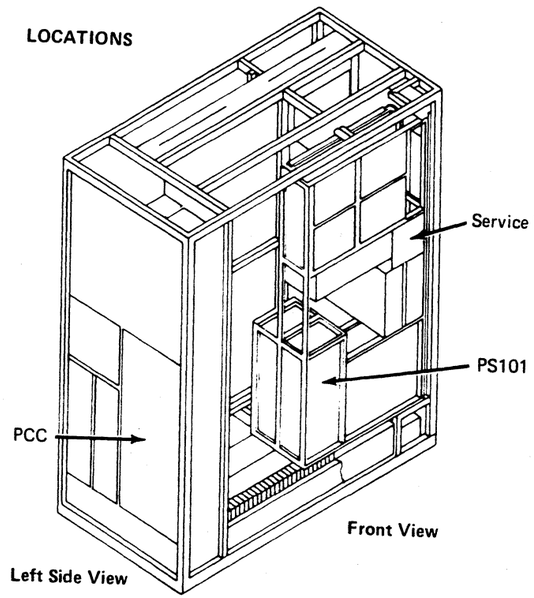
Primary Control Compartment (PCC)

Seq BA040	PN 0445798 Pg 2 of 2

EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84		

Step	Conditions	Instructions
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PCC TR101. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR101. 3. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101 01A-A1 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
17	Is machine still failing?	Invoke your support structure.
18	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



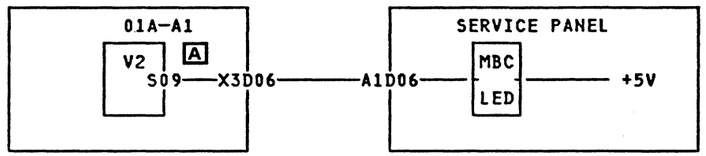
MBC On Indicator

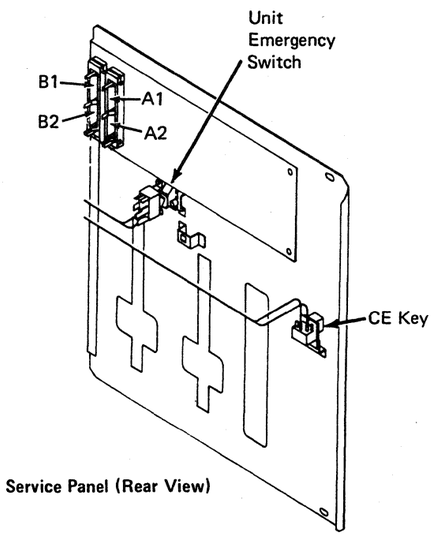
The service panel MBC On indicator not on indicates a failure of the MBC card at 01A-A1V2.

Possible causes:

- 01A-A1V2 card
- Service panel.

Step	Conditions	Instructions
1	Go to **Instructions** column.	Press Lamp Test on service panel.
2	Is the MBC On indicator off?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 12.
3	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B03 + lead at 01A-A1V2B04 + lead at 01A-A1V2B11.
4	Is voltage less than +22 Vdc at any point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 12.
5	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D03 + lead at 01A-A1V2J03 + lead at 01A-A1V2P03 + lead at 01A-A1V2U03.
6	Is voltage less than +4.5 Vdc at any point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 12.
7	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2S09. [A]

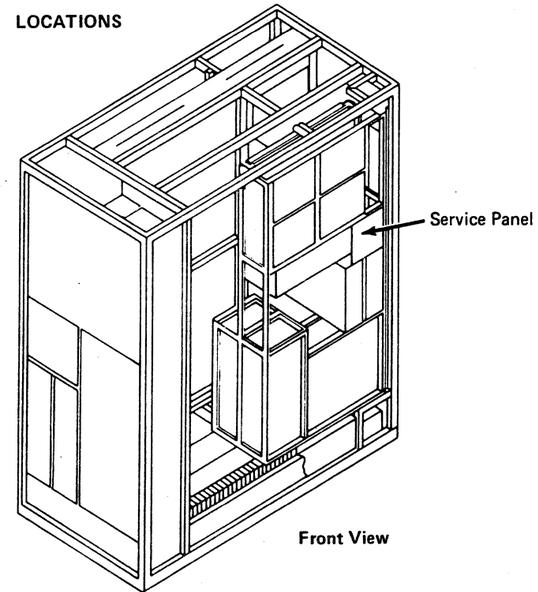




Service Panel (Rear View)

Step	Conditions	Instructions
8	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. **Note:** A TCC could be defective. Ensure TCCs are seated and the TCC arrow is pointing up. 3. Go to step 12.
9	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3D06.
10	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 12.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check for open cable 01A-A1X3D06 to service panel A1D06 before exchanging service panel. 3. Go to step 12.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel PS101. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On. 5. Go to page PR 901.

LOCATIONS



PS101 CP Tripped

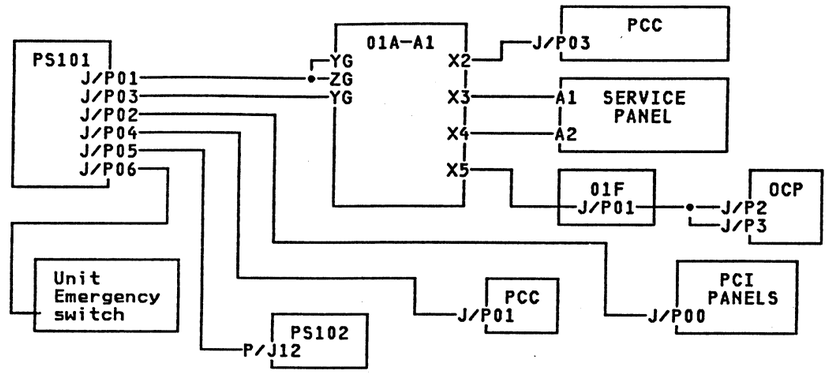
You are here to isolate the cause of a tripped CP on PS101.

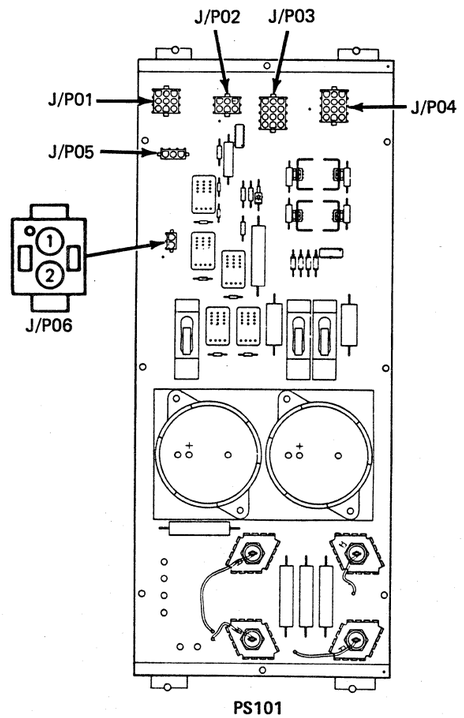
Possible causes:

- PS101
- Short in +5 Vdc distribution
- Short in +24 Vdc distribution
- PCC relays K01 through K04
- Diskette drive 1 or 2
- Service panel.

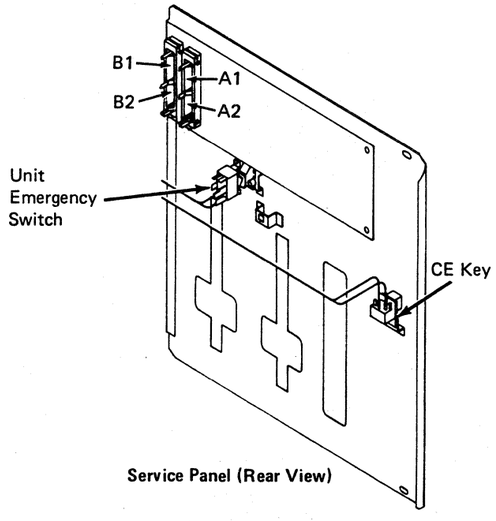
Some PS101 outputs are active when PCC CB1 and CB2 and Unit Emergency switch are on and customer line voltage is present at the PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cables at PS101 J/P01 through J/P05. 3. Record and reset tripped CP. 4. Set PCC CB1 and CB2 on.
2	Is CP1 or CP3 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 21.
3	Is CP2 in the On position?	Go to step 7.
4	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS101 J/P06. 3. Check resistance from P06-1 to frame ground.



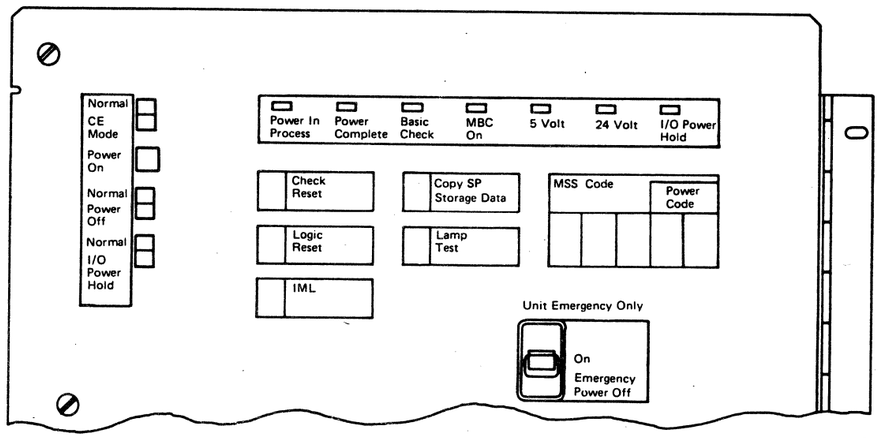


PS101



Service Panel (Rear View)

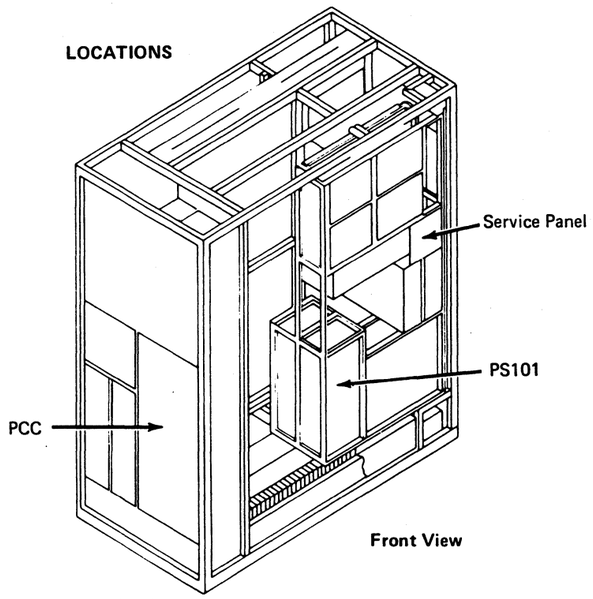
Step	Conditions	Instructions
5	Is P06-1 shorted to ground?	1. Check Unit Emergency switch. 2. Exchange cable from PS101 J/P06 to Unit Emergency switch. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 21.
6	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 21.
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS101 J/P01. 3. Ensure CE Mode switch is set to Normal. 4. Set PCC CB1 and CB2 on. 5. Operate each of the OCP and service panel switches. 6. Ignore any power codes that may appear at this time.
8	Is CP1 tripped?	Go to page PR 061.
9	Is CP2 tripped?	Go to page PR 071.
10	Go to **Instructions** column.	1. Set CB1 and CB2 off. 2. Reconnect cable at PS101 J/P03. 3. Set CB1 and CB2 on.
11	Is CP2 tripped?	Go to page PR 111.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS101 J/P04. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to CE Mode. 5. Press service panel Power On.
13	Is CP2 tripped?	Go to page PR 121.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS101 J/P05. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.



Service Panel (Front View)

Step	Conditions	Instructions
15	Is CP2 tripped?	Go to page PR 131.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS101 J/P02. 3. Set PCC CB1 and CB2 on.
17	Is CP2 tripped?	Go to page PR 101.
18	Go to **Instructions** column.	1. Press service panel Power On. 2. Select the Partial Power Up (QWW) screen. 3. Select UI (power-up I/O only).
19	Is CP2 tripped?	Go to page PR 101.
20	Is Ref Code 17A4330E displayed?	Go to page PR 101.
21	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box101 PS101 01A-A1 board OCP Service panel. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
23	Is any PS101 CP tripped?	Invoke your support structure.
24	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Seq BA060	PN 0445802 Pg 1 of 1	EC A02214 15 SEP 83	EC A02217 10 JAN 84			

PS101 CP1 Tripped

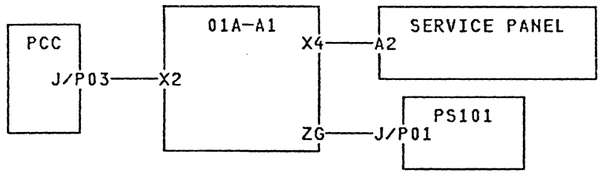
PS101 CP1 tripped indicates a short in the +5 Vdc distribution to the 01A-A1 board and service panel.

Possible causes:

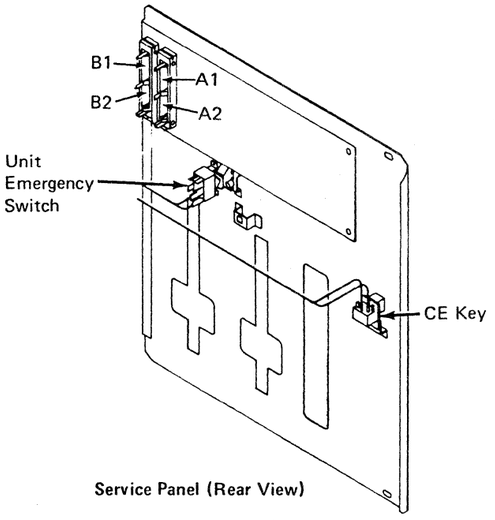
- Short in +5 Vdc distribution
- PS101
- Service panel.

Some PS101 outputs are active when PCC CB1 and CB2 and Unit Emergency switch are on and customer line voltage is present at the PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset CP1. 3. Disconnect cable at 01A-A1ZG. 4. Set PCC CB1 and CB2 on.
2	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J01 to 01A-A1ZG. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 17.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1ZG. 3. Remove all cards from 01A-A1 board. 4. Set PCC CB1 and CB2 on.
4	Is CP1 tripped?	Go to step 8.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reinstall one card that was removed in step 3. 3. Set PCC CB1 and CB2 on.
6	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange card. 3. Repeat steps 5, 6, and 7 until all cards are reinstalled, then go to step 17.

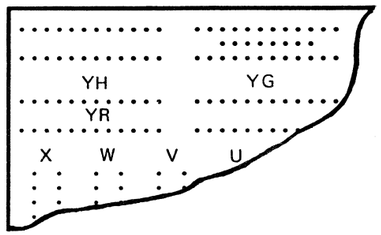


PS101

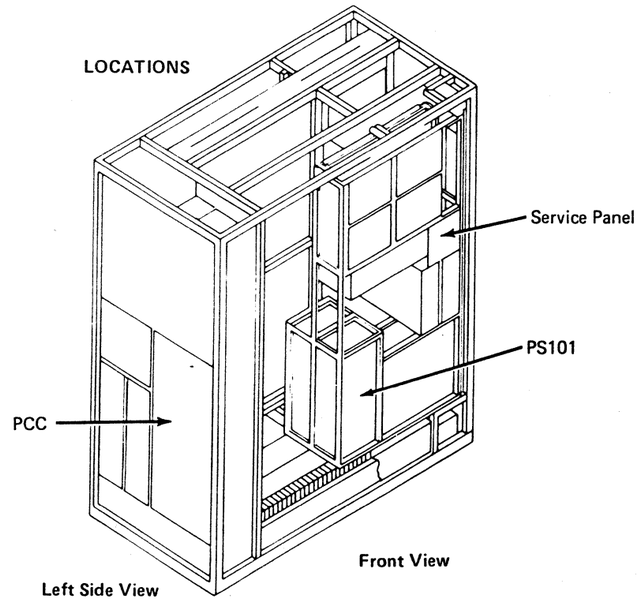


Service Panel (Rear View)

Step	Conditions	Instructions
7	Go to **Instructions** column.	1. Repeat steps 5, 6, and 7 until all cards are reinstalled, then go to step 17.
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset CP1. 3. Disconnect cables at 01A-A1X2 and X4. 4. Set PCC CB1 and CB2 on.
9	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 17.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X2. 3. Set PCC CB1 and CB2 on.
11	Is CP1 in the On position?	Go to step 14.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PCC J03. 3. Reset CP1. 4. Set PCC CB1 and CB2 on.
13	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1X2 to PCC J03. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 17.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X4. 3. Disconnect cable at service panel connector A2. 4. Set PCC CB1 and CB2 on.
15	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1X4 to service panel connector A2. 3. Go to step 17.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 17.
17	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101 01A-A1 board Service panel. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
18	Is machine still failing?	Invoke your support structure.
19	Go to **Instructions** column.	Go to page PR 901.



Board 01AA1



PS101 CP2 Tripped (P01)

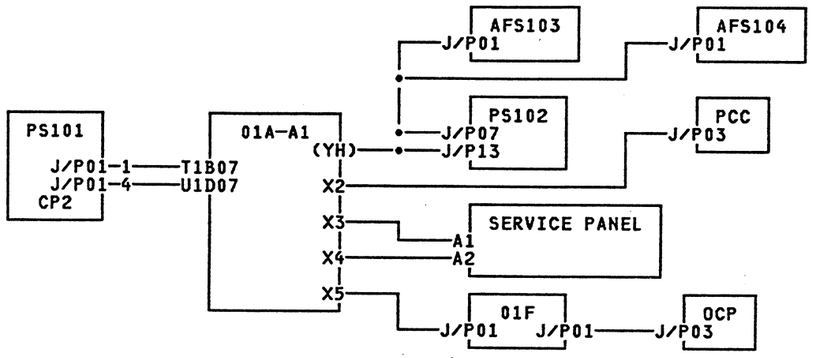
You are here because PS101 CP2 trips when the +24 Vdc distribution cable is connected to PS101 J01.

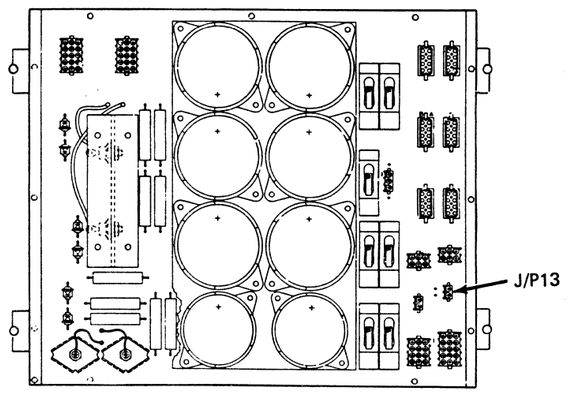
Possible causes:

- AFS103 or 104
- PS102 CP tripped sense loop
- Service panel
- OCP
- PCC interlock.

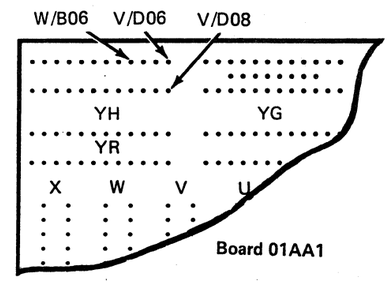
Some PS101 outputs are active when PCC CB1, CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A1YG (pin side). 3. Reset PS101 CP2. 4. Set PCC CB1 and CB2 on.
2	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P01 to 01A-A1YG. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 62.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1YG (pin side). 3. Disconnect cable at 01A-A1X2, X3, X4, and X5. 4. Set PCC CB1 and CB2 on.
4	Is CP2 in the On position?	Go to step 12.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove all cards from 01A-A1. 3. Disconnect cable from 01A-A1YH (card side). 4. Reset CP2. 5. Set PCC CB1 and CB2 on.



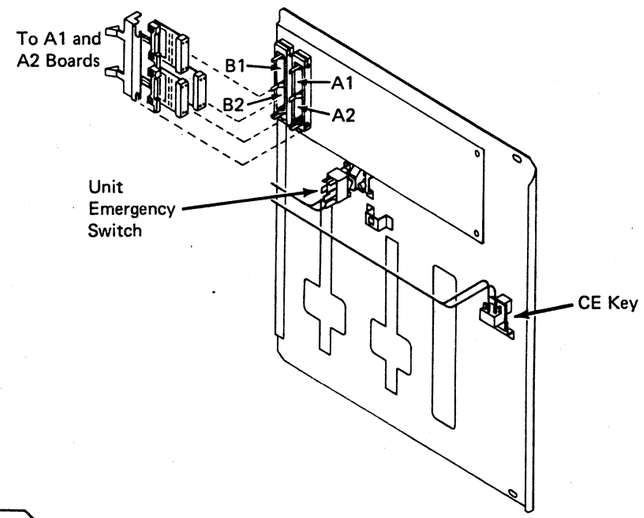


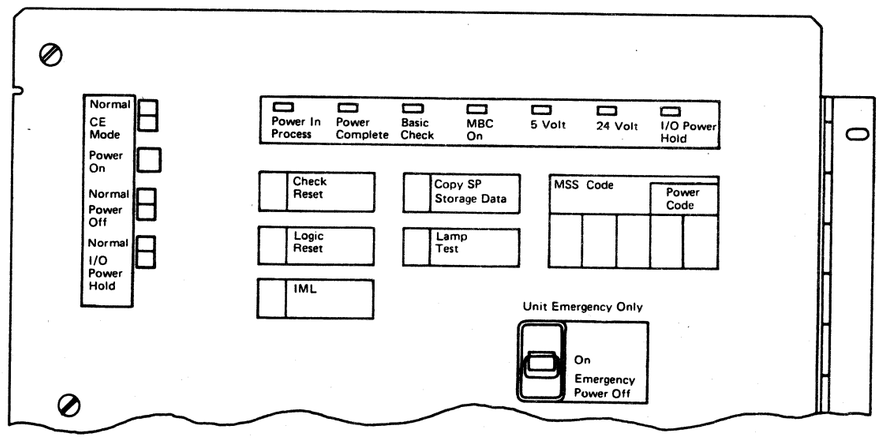
PS102



Board 01AA1

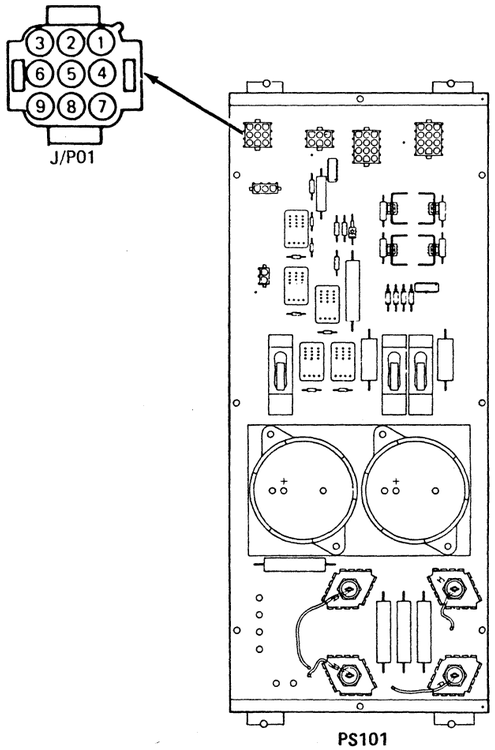
Step	Conditions	Instructions
6	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 62.
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1YH (card side). 3. Set PCC CB1 and CB2 on.
8	Is CP2 tripped?	Go to page PR 081.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reinstall one card removed from 01A-A1 board. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
10	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange card. 3. Repeat steps 9, 10, and 11 until all cards are reinstalled. 4. Go to step 62.
11	Go to **Instructions** column.	1. Repeat steps 9, 10, and 11 until all cards are reinstalled. 2. Go to step 62.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X2. 3. Set PCC CB1 and CB2 on.
13	Is CP2 tripped?	Go to page PR 091.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X3. 3. Set PCC CB1 and CB2 on. 4. Set I/O Power Hold switch to I/O Power Hold. 5. Set I/O Power Hold switch to Normal.
15	Is CP2 in the On position?	Go to step 25.



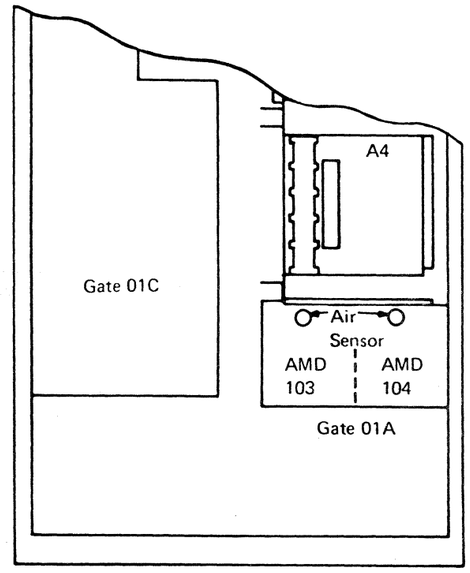


Service Panel (Front View)

Step	Conditions	Instructions
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at service panel connector A1. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
17	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from 01A-A1X3 to service panel connector A1. 3. Go to step 62.
18	Go to **Instructions** column.	Short in service panel or I/O Power Hold sense line to 01A-A1U2. 1. Set PCC CB1 and CB2 off. 2. Measure resistance to ground at the following points: 01A-A1X3-B10. Leave meter connected.
19	Is resistance greater than 500 ohms?	1. Exchange service panel. 2. Go to step 62.
20	Go to **Instructions** column.	1. Remove 01A-A1U2 card. 2. Check meter reading.
21	Is resistance greater than 500 ohms?	1. Exchange 01A-A1U2 card. 2. Go to step 62.
22	Go to **Instructions** column.	1. Disconnect cable at 01A-A1X3. 2. Check meter reading.
23	Is resistance greater than 500 ohms?	1. Exchange cable from 01A-A1X3 to service panel connector A1. 2. Go to step 62.
24	Go to **Instructions** column.	1. Exchange 01A-A1 board. 2. Go to step 62.



PS101



Right Side View

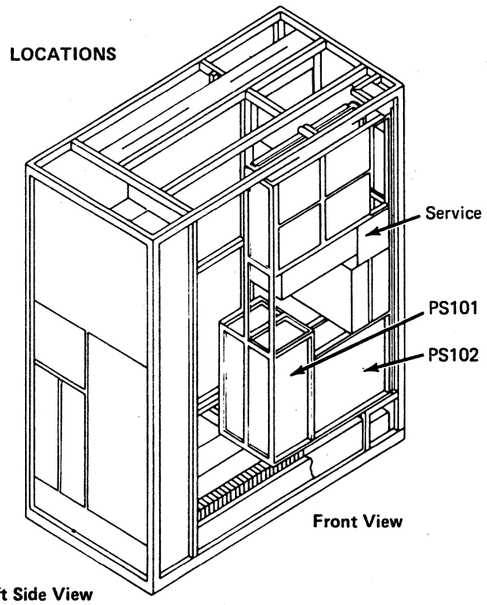
Step	Conditions	Instructions
25	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X4. 3. Set CE Mode switch to CE Mode. 4. Set PCC CB1 and CB2 on.
26	Is CP2 in the On position?	Go to step 30.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at service panel connector A2. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
28	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 62.
29	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1X4 to service panel connector A1. 3. Reset CP2. 4. Go to step 62.
30	Go to **Instructions** column.	1. Press Logic Reset. 2. Set CE Mode switch to Normal.
31	Is CP2 in the On position?	Go to step 48.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at service panel connector A1 (connectors A2 and B2 remain plugged). 3. Reset CP2. 4. Set PCC CB1 and CB2 on. 5. Press Logic Reset.
33	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Reset CP2. 4. Go to step 62.
34	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Measure resistance to ground at the following points: 01A-A1V2-B05. Leave meter connected.
35	Is resistance greater than 500 ohms?	Go to step 41.
36	Go to **Instructions** column.	1. Remove 01A-A1V2 card. 2. Check meter reading.
37	Is resistance greater than 500 ohms?	1. Exchange 01A-A1V2 card. 2. Go to step 62.
38	Go to **Instructions** column.	1. Remove cable 01A-A1X3. 2. Check meter reading.
39	Is resistance greater than 500 ohms?	1. Exchange cable from 01A-A1X3 to service panel connector A1. 2. Go to step 62.
40	Go to **Instructions** column.	1. Exchange 01A-A1 board. 2. Go to step 62.
41	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check resistance to ground at the following points: 01A-A1U2-D05. Leave meter connected.
42	Is resistance greater than 500 ohms?	Go to step 47.
43	Go to **Instructions** column.	1. Remove 01A-A1U2 card. 2. Check meter reading.
44	Is resistance greater than 500 ohms?	1. Exchange 01A-A1U2 card. 2. Go to step 62.
45	Go to **Instructions** column.	1. Remove cable 01A-A1X3. 2. Check meter reading.
46	Is resistance greater than 500 ohms?	1. Exchange cable from 01A-A1X3 to service panel connector A1. 2. Go to step 62.

Step	Conditions	Instructions
47	Go to **Instructions** column.	1. Exchange 01A-A1 board. 2. Go to step 62.
48	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X5. 3. Disconnect cable at 01A-A1X3. 4. Set PCC CB1 and CB2 on. 5. Operate all OCP switches.
49	Is CP2 in the On position?	Go to step 60.
50	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at OCP J/P3. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
51	Is CP2 in the On position?	Go to step 53.
52	Go to **Instructions** column.	1. Isolate short and exchange cable from OCP J/P3 to 01F J/P01 or 01F J/P01 to 01A-A1X5. 2. Go to step 62.
53	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Measure resistance to ground at the following points (record values): 01A-A1X5D10 01A-A1X5D11 01A-A1X5D12 01A-A1X5B03 01A-A1X5B02 01A-A1X5D13 01A-A1X5D09.
54	Is resistance greater than 100 ohms at all points?	1. Exchange OCP. 2. Go to step 62.
55	Go to **Instructions** column.	1. Disconnect cable at 01A-A1X5. 2. Repeat step 53.
56	Is resistance greater than 100 ohms at all points?	1. Isolate short and exchange cable from 01A-A2 X5 to 01F J/P01 or 01F J/P01 to OCP J/P03. 2. Go to step 62.

PR 075

Step	Conditions	Instructions
57	Go to **Instructions** column.	1. Remove 01A-A1V2 and U2 cards. 2. Repeat step 53.
58	Is resistance less than 100 ohms at any point?	1. Exchange 01A-A1 board. 2. Go to step 62.
59	Is resistance greater than 100 ohms at any point?	1. Isolate short and exchange 01A-A1V2 card or 01A-A1U2 card. 2. Go to step 62.
60	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1X3. 3. Repeat step 53.
61	Is resistance less than 100 ohms at any point?	1. Exchange service panel. 2. Also suspect cable from 01A-A1X3 to service panel connector A1. 3. Go to step 62.
62	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101, PS102 01A-A1 board Service panel 01F J/P, OCP AFS103, AFS104. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On. 5. Go to page PR 901.

LOCATIONS



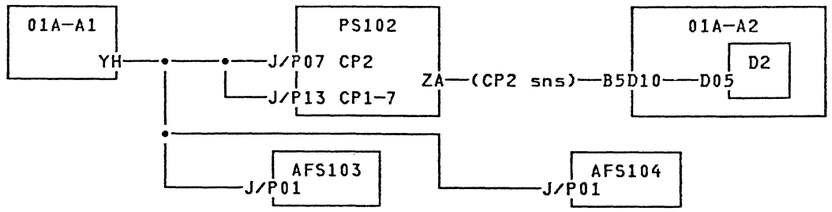
PS101 CP2 Tripped (AFS)

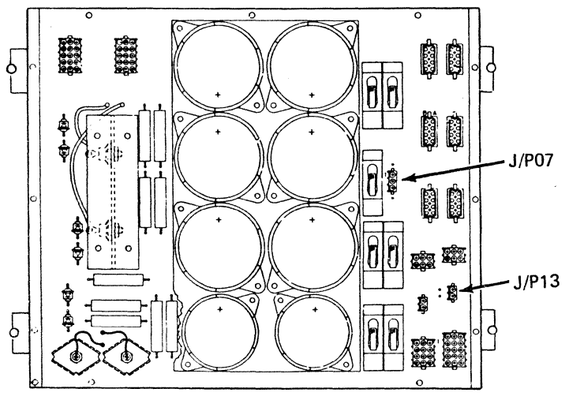
You are here because of a short in the +24 Vdc distribution from 01A-A1YH to PS102 or AFS103 and AFS104.

Possible causes:

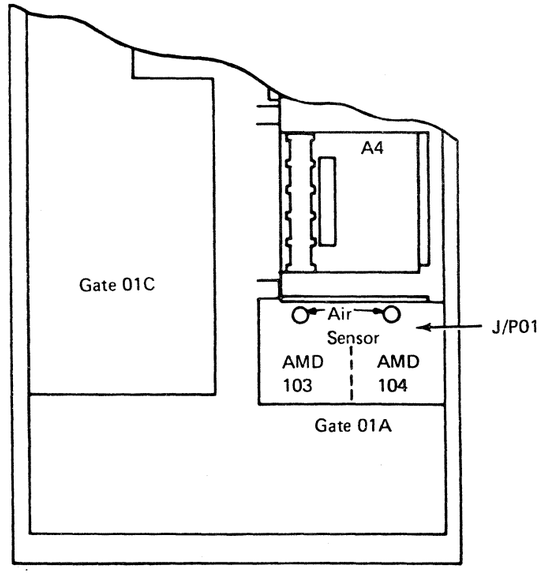
- AFS103
- AFS104
- PS102.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cables at AFS103 P01, AFS104 P01, and PS102 J13 and J07. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
2	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YH to AFS103, AFS104, and PS102. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 29.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J07. 3. Set PCC CB1 and CB2 on.
4	Is CP2 in the On position?	Go to step 16.
5	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A2D2 card. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
6	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2D2 card. 3. Go to step 29.





PS102

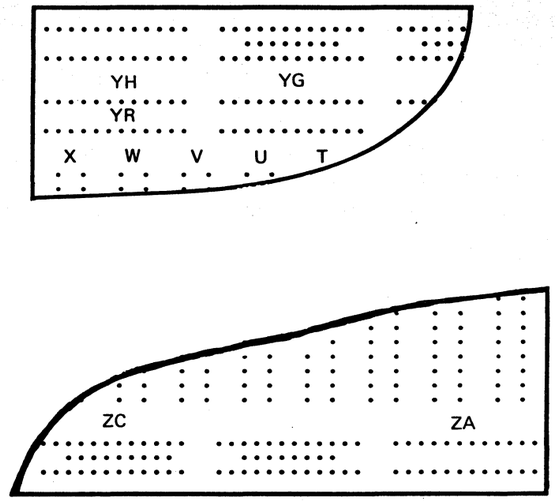


Right Side View

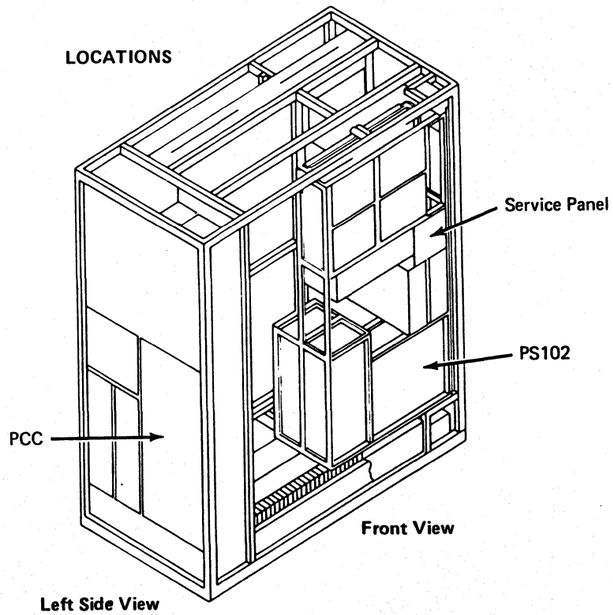
Step	Conditions	Instructions
7	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A2B5. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
8	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 29.
9	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A1ZC. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
10	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1ZC to 01A-A2B5. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 29.
11	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS102 J07. 3. Measure resistance to ground at the following points: 01A-A1X1E08. 4. Leave meter connected.
12	Is an open indicated?	1. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 2. Go to step 29.
13	Is a short indicated?	1. Disconnect 01A-A1YH. 2. Set service panel Power Off switch to Power Off and then back to Normal. 3. Check meter reading.

Step	Conditions	Instructions
14	Is an open indicated?	1. Exchange cable from 01A-A1YH to PS102 J07. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 29.
15	Is a short indicated?	1. Exchange 01A-A1 board. 2. Go to step 29.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J13. 3. Set PCC CB1 and CB2 on.
17	Is CP2 in the On position?	Go to step 25.
18	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A1V2 card. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
19	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 29.
20	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS101-J13. 3. Measure resistance to ground at the following points: 01A-A1V2B02. 4. Leave meter connected.
21	Is an open indicated?	1. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 2. Go to step 29.
22	Is a short indicated?	1. Disconnect 01A-A1YH. 2. Check meter reading.

Step	Conditions	Instructions
23	Is a short indicated?	1. Exchange 01A-A1 board. 2. Go to step 29.
24	Is an open indicated?	1. Exchange cable from PS102-J13 to 01A-A1YH. 2. Go to step 29.
25	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at AFS103 J01. 3. Set PCC CB1 and CB2 on.
26	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange AFS103. 3. Go to step 29.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at AFS104 J01. 3. Set PCC CB1 and CB2 on.
28	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange AFS104. 3. Go to step 29.
29	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board PS102 AFS103 AFS104. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
30	Is CP2 tripped?	Invoke your support structure.
31	Go to **Instructions** column.	Go to page PR 901.



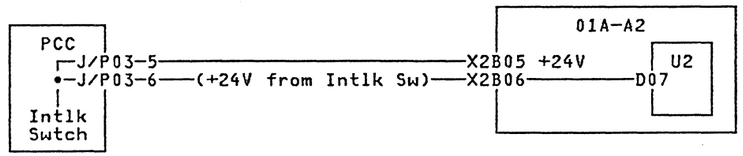
Board 01AA1



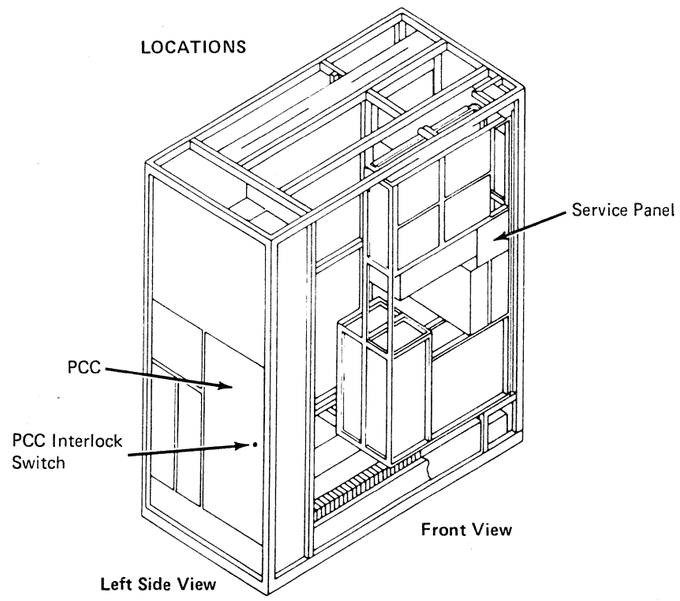
PS101 CP2 Tripped (PCC Interlock)

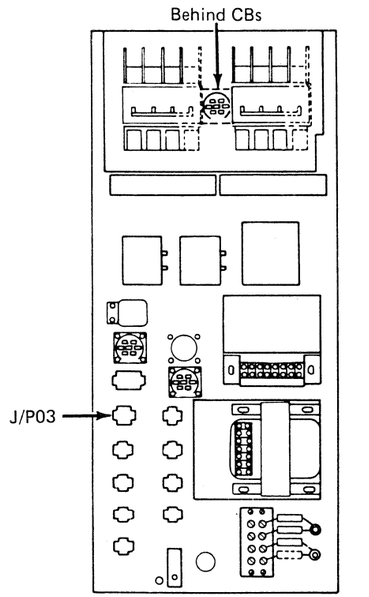
You are here because of a short in the PCC Interlock switch sense circuit.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A1U2 card. 3. Reset CP2. 4. Set PCC CB1 and CB2 on.
2	Is CP2 in the On position?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Go to step 8.
3	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Disconnect PCC-P03. 3. Measure resistance to ground at the following points: 01A-A1U2D07. 4. Leave meter connected.
4	Is an open indicated?	1. Exchange cable from PCC-J03 to PCC Interlock switch. 2. Also suspect PCC Interlock switch. 3. Go to step 8.
5	Is a short indicated?	Disconnect cable at 01A-A1X2.
6	Is an open indicated?	1. Exchange cable from PCC J03 to 01A-A1X2. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 8.
7	Is a short indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 8.



Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
9	Is CP2 tripped?	Invoke your support structure.
10	Go to **Instructions** column.	Go to page PR 901.





Primary Control Compartment (PCC)

PS101 CP2 Tripped (P02)

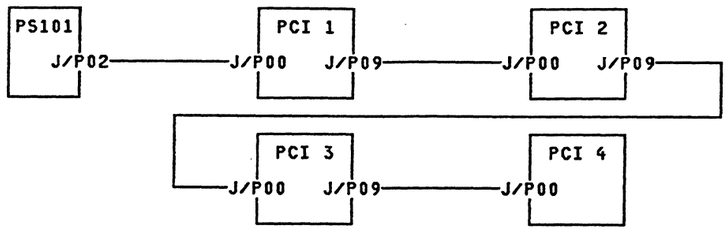
You are here because CP2 trips when the +24 Vdc distribution cable is connected to PS101 J02 or when the I/O is powered on.

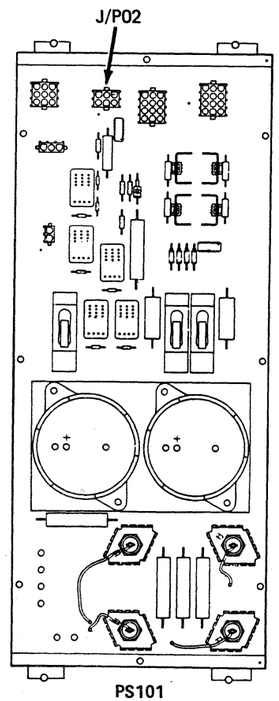
Possible causes:

- PCI card
- PCI cable
- Control unit.

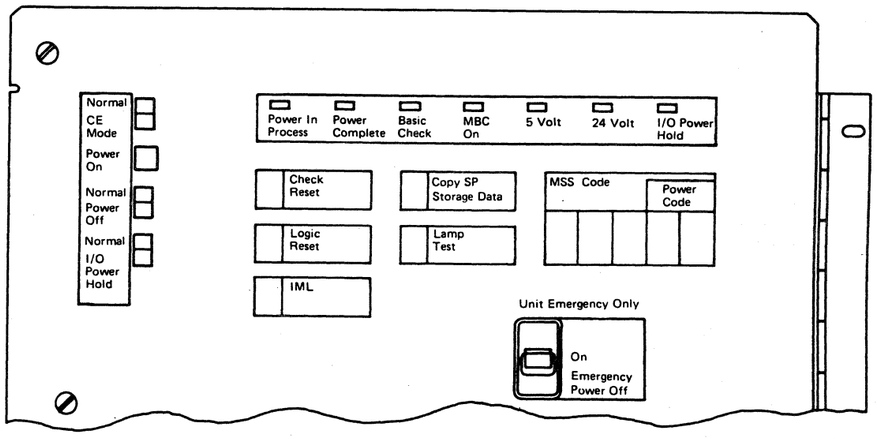
Some PS101 outputs are active when PCC CB1, CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set CE Mode switch to CE Mode. 3. Set I/O Power Hold switch to Normal. 4. Disconnect PCI dummy plug. 5. Disconnect cable at PCI card No. 1 J/P00. 6. Reset CP2. 7. Set PCC CB1 and CB2 on. 8. Press service panel Power On. 9. Select Partial Power Up/Down (QWW) screen. 10. Select UI (power-up I/O only).
2	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P02 to PCI card No. 1 J/P00. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Reset CP2. 4. Go to step 12.





PS101

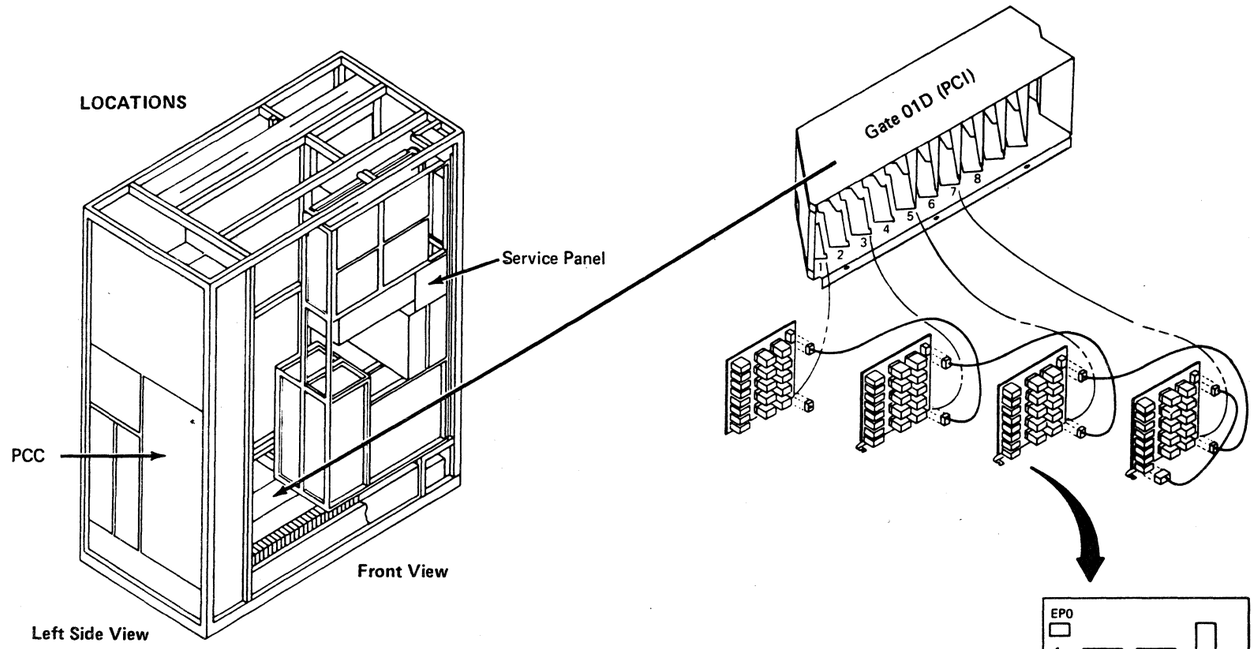


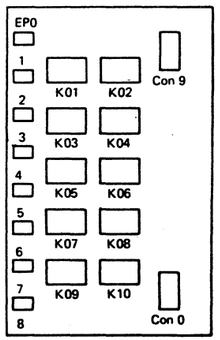
Service Panel (Front View)

Step	Conditions	Instructions
3	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reset CP2. 4. Reconnect cable at PCI card No. 1 J/P00. 5. Disconnect cable at PCI card No. 2 J/P00. 6. Set PCC CB1 and CB2 on. 7. Press service panel Power On. 8. Select Partial Power Up/Down (QWW) screen. 9. Select UI (power-up I/O only).
4	Is CP2 tripped?	Isolate short to the following: PCI card No. 1 PCI cables 1 through 8 Control unit Cable from PCI panel No. 1 J/P09 to PCI panel No. 2 J/P00. Go to step 12.
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reset CP2. 4. Reconnect cable at PCI card No. 2 J/P00. 5. Disconnect cable at PCI card No.3 J/P00. 6. Set PCC CB1 and CB2 on. 7. Press service panel Power On. 8. Select Partial Power Up/Down (QWW) screen. 9. Select UI (power-up I/O only).
6	Is CP2 tripped?	Isolate short to the following: PCI card No. 2 PCI cables 1 through 8 Control unit Cable from PCI panel No. 2 J/P09 to PCI panel No.3 J/P00. Go to step 12.

Step	Conditions	Instructions
7	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reset CP2. 4. Reconnect cable at PCI card No.3 J/P00. 5. Disconnect cable at PCI card No.4 J/P00. 6. Set PCC CB1 and CB2 on. 7. Press service panel Power On. 8. Select Partial Power Up/Down (QWW) screen. 9. Select UI (power-up I/O only).
8	Is CP2 tripped?	Isolate short to the following: PCI card No.3 PCI cables 1 through 8 Control unit Cable from PCI panel No.3 J/P09 to PCI panel No.4 J/P00. Go to step 12.
9	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reset CP2. 4. Reconnect cable at PCI card No.4 J/P00. 5. Disconnect cable at the next PCI panel J/P00 or reconnect PCI dummy plug. 6. Set PCC CB1 and CB2 on. 7. Press service panel Power On. 8. Select Partial Power Up/Down (QWW) screen. 9. Select UI (power-up I/O only).
10	Is CP2 tripped?	Isolate short to the following: PCI card No.4 PCI cables 1 through 8 Control unit Cable from PCI panel No.4 J/P09 to next PCI panel J/P00 or dummy plug. Go to step 12.

Step	Conditions	Instructions
11	Go to **Instructions** column.	1. Repeat steps 9 and 10 if any additional PCI panels are installed. 2. Go to step 12.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101 PCI panels. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Select Partial Power Up/Down (QWW) screen. 7. Select UI (power-up I/O only).
13	Go to **Instructions** column.	Go to page PR 901.





Gate 01D PCI Panel

PS101 CP2 Tripped (P03)

You are here because PS101 CP2 trips when the +24 Vdc distribution is connected to PS101 J03.

Possible causes:

- PS101
- PS101 cable P03.

Step	Instructions	Conditions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset CP2. 3. Disconnect cable at 01A-A1YG (card side). 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
2	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J03 to 01A-A1YG (card side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to page PR 901.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101 01A-A1 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
4	Is CP2 tripped?	Invoke your support structure.
5	Go to **Instructions** column.	Go to page PR 901.

PS101 CP2 Tripped (P04)

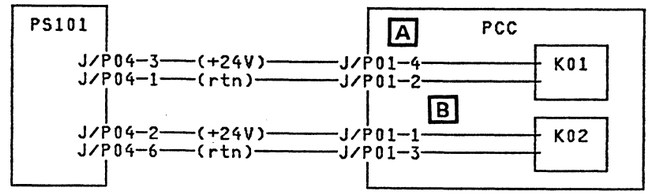
You are here because PS101 CP2 trips when the +24 Vdc distribution cable is connected at J04.

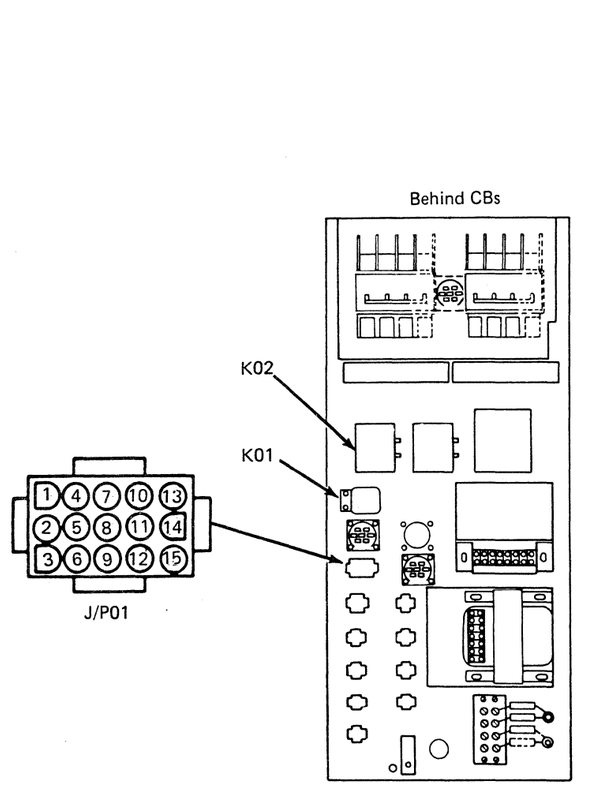
Possible causes:

- PCC K01 or CR1
- PCC K02 or CR2.

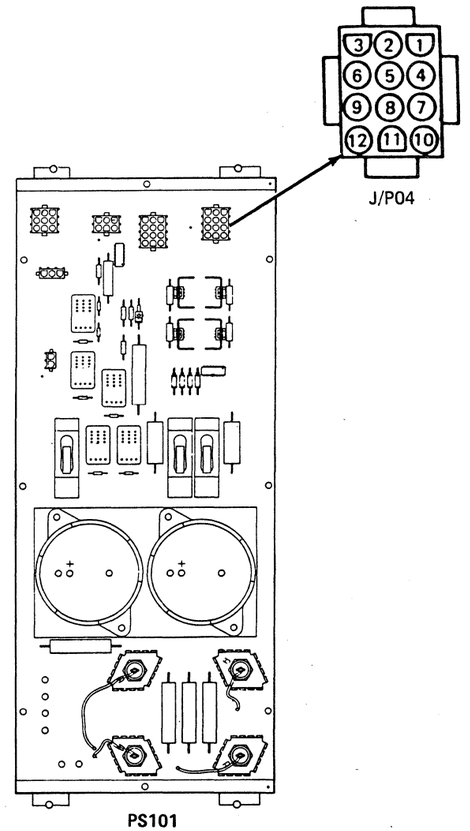
Some PS101 outputs are active when PCC CB1, CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Disconnect cable at PCC J01. 4. Measure resistance at the following points: - lead at PCC J01-4 + lead at PCC J01-2. [A]
3	Is resistance greater than 400 ohms?	Go to step 6.
4	Go to **Instructions** column.	1. Disconnect diode PCC CR1. 2. Measure resistance at the - lead at PCC J01-4 + lead at PCC J01-2.
4	Is resistance greater than 400 ohms?	1. Exchange diode PCC CR1. 2. Go to step 19.
5	Go to **Instructions** column.	1. Exchange PCC K01. 2. Go to step 19.
6	Go to **Instructions** column.	Measure resistance at the following points: - lead at frame ground + lead at PCC P01-4.





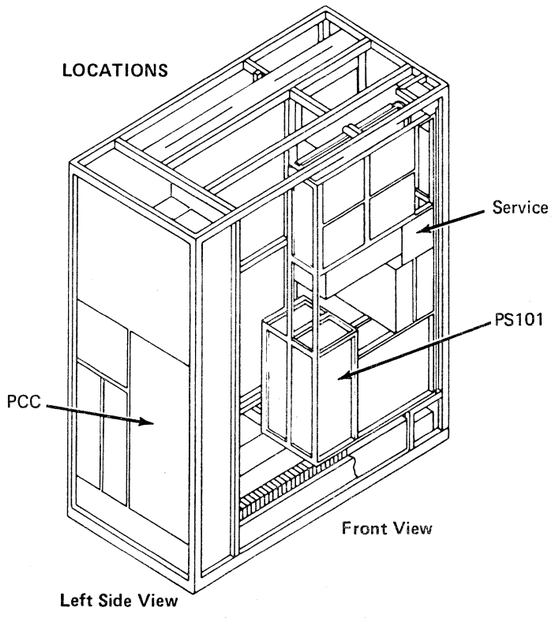
Primary Control Compartment (PCC)



PS101

Step	Conditions	Instructions
7	Is a short indicated?	1. Exchange cable from PCC P01 to PCC K01. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
8	Go to **Instructions** column.	1. Reconnect PCC P01. 2. Measure resistance at the following points: - lead at frame ground + lead at PCC P01-1.
9	Is a short indicated?	1. Exchange cable from PCC J01 to PS101 J04. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
10	Go to **Instructions** column.	1. Disconnect cable at PCC J01. 2. Measure resistance at the following points: - lead at PCC J01-1 + lead at PCC J01-3. B
11	Is resistance greater than 100 ohms?	Go to step 15.
12	Go to **Instructions** column.	1. Disconnect diode PCC CR2. 2. Measure resistance at the following points: - lead at PCC J01-1 + lead at PCC J01-3.
13	Is resistance greater than 100 ohms?	1. Exchange diode PCC CR2. 2. Go to step 19.

LOCATIONS



Left Side View

Step	Conditions	Instructions
14	Go to **Instructions** column.	1. Exchange PCC K02. 2. Go to step 19.
15	Go to **Instructions** column.	Measure resistance at the following points: - lead at frame ground + lead at PCC J01-3.
16	Is a short indicated?	1. Exchange cable from PCC J01 to PCC K02. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
17	Go to **Instructions** column.	1. Reconnect PCC P01. 2. Measure resistance at the following points: - lead at frame ground + lead at PCC P01-3.
18	Is a short indicated?	1. Exchange cable from PCC J01 to PS101 J04. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC PS101. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
20	Is CP2 tripped?	Invoke your support structure.
21	Go to **Instructions** column.	Go to page PR 901.

PS101 CP2 Tripped (P05)

You are here because PS101 CP2 trips when the +24 Vdc distribution cable is connected to J05.

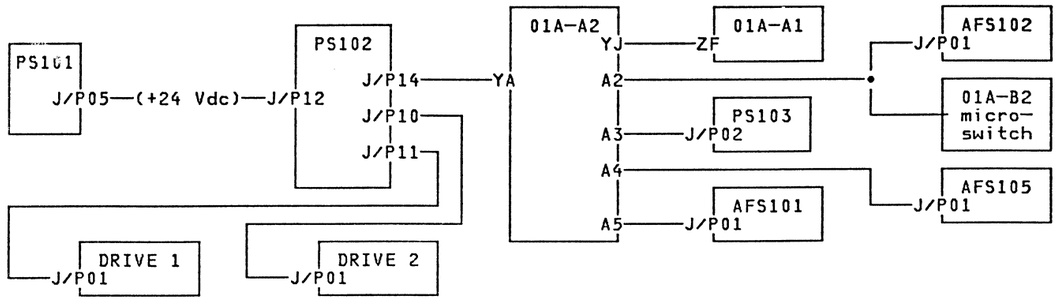
Possible causes:

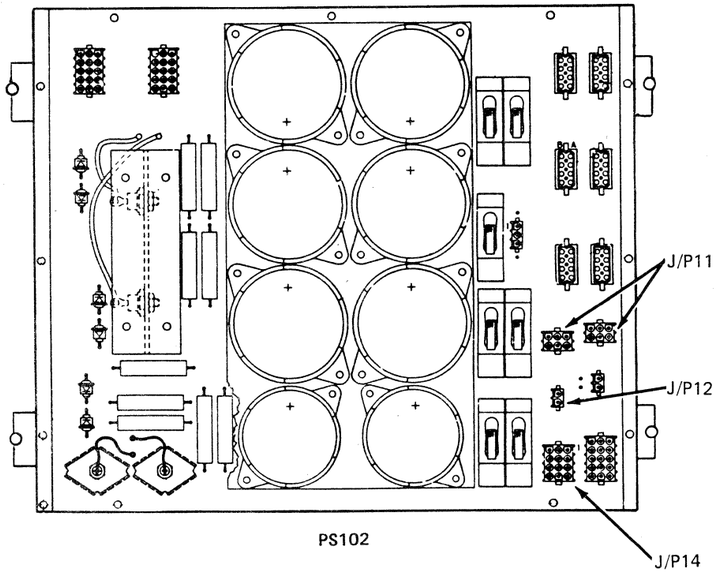
- AFS101, 102, 105
- Diskette drive 1 or 2
- 01A-A1 board
- 01A-A2 board
- 01A-B2 microswitch
- PS102
- 01A-A1V2 card.

Some PS101 outputs are active when PCC CB1, CB2 and Unit Emergency switch are on and customer line voltage is present at PCC.

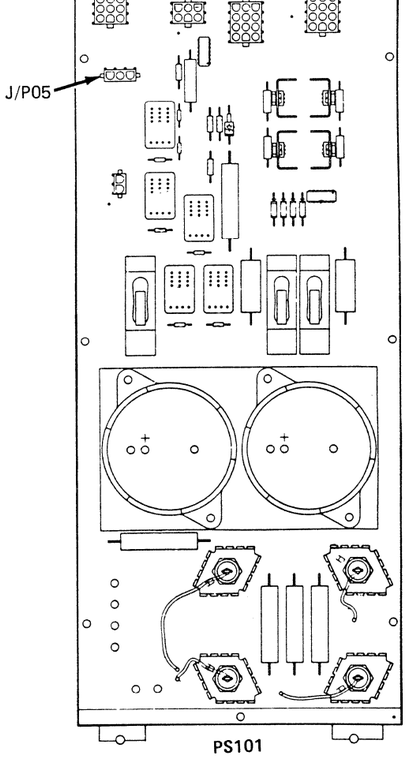
Ignore any power codes that may appear while using this repair procedure.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset CP2. 3. Disconnect cable at PS102 J/P12. 4. Press Check Reset. 5. Set PCC CB1 and CB2 on. 6. Press service panel Power On.
2	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PS101 J/P05 to PS102 J/P12. 3. Go to step 44.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J12. 3. Disconnect cables at PS102 J/P10, J/P11, and J/P14. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.





PS102

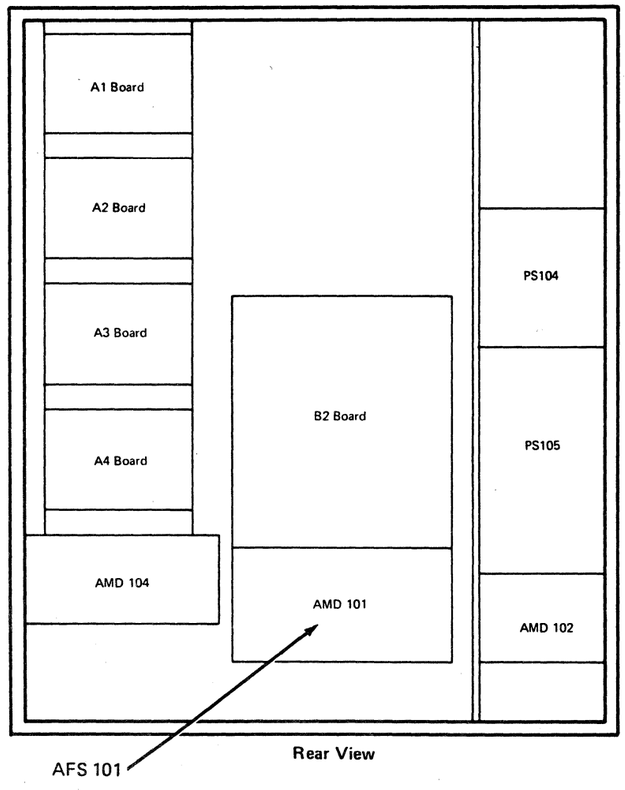


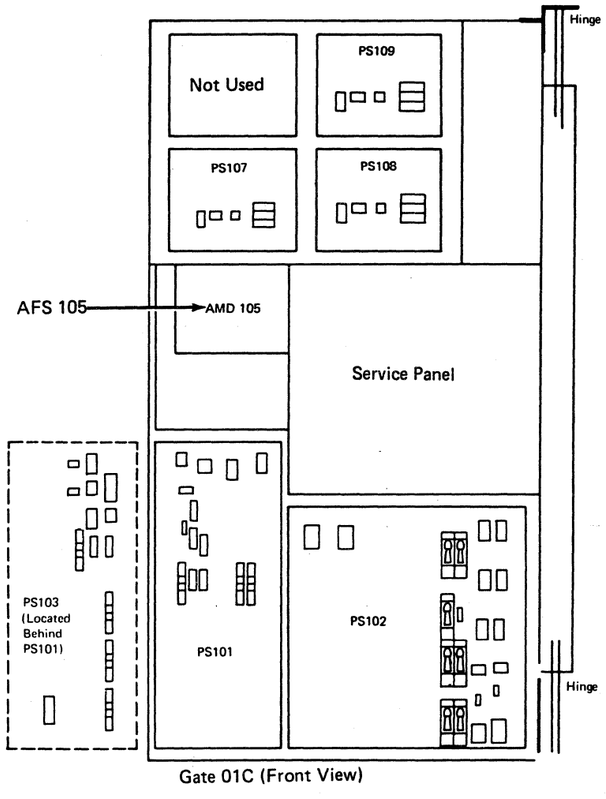
PS101

Step	Conditions	Instructions
4	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 44.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J10. 3. Press Check Reset. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
6	Is CP2 tripped?	1. Short in diskette drive 1. 2. Go to step 10.
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J11. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
8	Is CP2 in the On position?	Go to step 13.
9	Go to **Instructions** column.	1. Short in diskette drive 2. 2. Go to step 10.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at failing diskette drive connector J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
11	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PS102 to failing diskette drive. 3. Go to step 44.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange failing diskette drive. 3. Go to step 44.

Step	Conditions	Instructions
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS102 J/P14. 3. Disconnect cable at 01A-A2YA and 01A-A1ZF. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
14	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from PS102 J/P14 to 01A-A2YA. 3. Go to step 44.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2YA. 3. Disconnect cables at 01A-A2A2, A3, A4, A5 and B2. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
16	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 44.
17	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A2. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
18	Is CP2 in the On position?	Go to step 22.
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AFS102 J/P01. 3. Reset CP2. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
20	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2A2 to 01A-B2 microswitch. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 44.

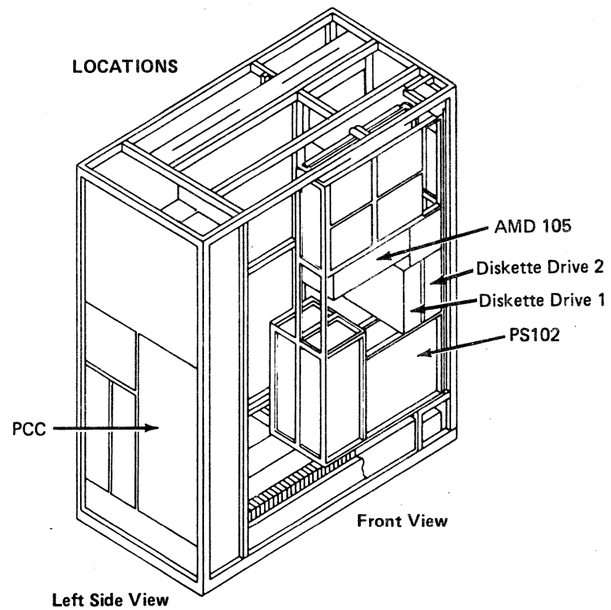
Step	Conditions	Instructions
21	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange AFS102. 3. Go to step 44.
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A3. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
23	Is CP2 in the On position?	Go to step 27.
24	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS103 J/P02. 3. Reset CP2. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
25	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange shorted cable from 01A-A2A3 to PS103 J/P02. 3. Go to step 44.
26	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS103. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 44.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A4. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
28	Is CP2 in the On position?	Go to step 32.
29	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AFS105 J/P01. 3. Set on PCC CB1 and CB2 on. 4. Press service panel Power On.





Step	Conditions	Instructions
30	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2A4 to AFS105. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 44.
31	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange AFS105. 3. Go to step 44.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A5. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
33	Is CP2 in the On position?	Go to step 37.
34	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at AFS101 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
35	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2A5 to AFS101. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 44.
36	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange AFS101. 3. Go to step 44.
37	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2B2. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.

LOCATIONS



Step	Conditions	Instructions
38	Is CP2 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange spare cable at 01A-A2B2. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 44.
39	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1ZF. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
40	Is CP2 in the On position?	Go to step 44.
41	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A1V2 card. 3. Measure resistance at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D13.
42	Is a short indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 44.
43	Is an open indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 44.
44	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101, PS102, PS103 01A-A1 board 01A-A2 board AFS101, AFS102, AFS105 01A-B2 microswitch Diskette drive 1 Diskette drive 2. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Go to page PR 901.

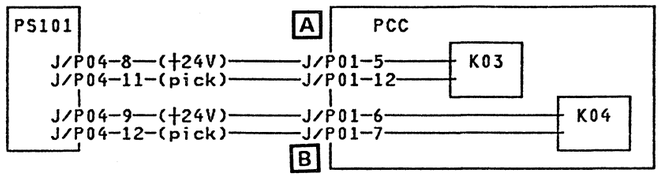
PS101 CP3 Tripped

PS101 CP3 tripped indicates a short in the 24 Vdc distribution from PS101 to the PCC contactors K03 or K04.

Possible causes:

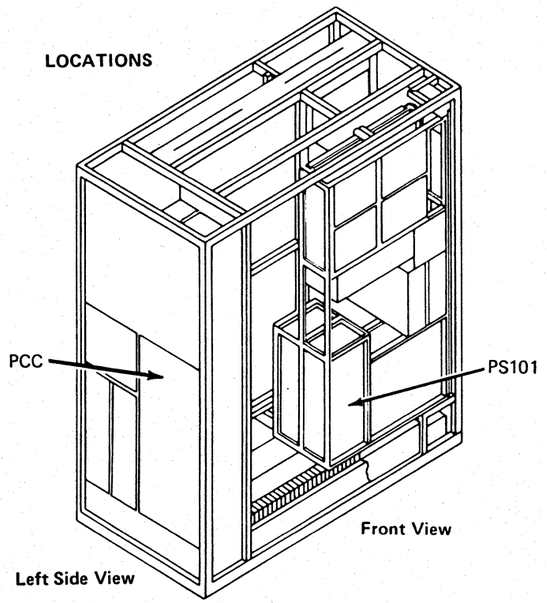
- PCC K03 contactor
- PCC K04 contactor
- PCC CR3 diode
- PCC CR4 diode
- PS101.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Disconnect cable at PCC J01. 4. Measure resistance at the following points: - lead at PCC J01-12 + lead at PCC J01-5. [A]
2	Is resistance greater than 100 ohms?	Go to step 6.
3	Go to **Instructions** column.	1. Disconnect diode PCC CR3 (across PCC K03 coil). 2. Measure resistance at the following points: - lead at PCC J01-12 + lead at PCC J01-5.
4	Is resistance greater than 100 ohms?	1. Exchange diode PCC CR3. 2. Go to step 19.
5	Go to **Instructions** column.	1. Exchange PCC K03. 2. Go to step 19.
6	Go to **Instructions** column.	Measure resistance at the following points: - lead at frame ground + lead at PCC P01-5.



Step	Conditions	Instructions
7	Is a short indicated?	1. Exchange cable from PCC P01 to PCC K03. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
8	Go to **Instructions** column.	1. Reconnect PCC P01. 2. Measure resistance at the following points: - lead at frame ground + lead at PCC P01-5.
9	Is a short indicated?	1. Exchange cable from PCC J01 to PS101 J04. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
10	Go to **Instructions** column.	1. Disconnect cable at PCC J01. 2. Measure resistance at the following points: - lead at PCC J01-7 + lead at PCC J01-6. B
11	Is resistance greater than 5 ohms?	Go to step 15.
12	Go to **Instructions** column.	1. Disconnect diode PCC CR4 (across PCC K04 coil). 2. Measure resistance of the following points: - lead at PCC J01-7 + lead at PCC J01-6.
13	Is resistance greater than 5 ohms?	1. Exchange diode PCC CR4. 2. Go to step 19.

LOCATIONS



Step	Conditions	Instructions
14	Go to **Instructions** column.	1. Exchange PCC K04. 2. Go to step 19.
15	Go to **Instructions** column.	Measure resistance at the following points: - lead at frame ground + lead at PCC J01-6.
16	Is a short indicated?	1. Exchange cable from PCC J01 to PCC K04. 2. Go to step 19.
17	Go to **Instructions** column.	1. Reconnect PCC P01. 2. Measure resistance at the following points: - lead at frame ground + lead at PCC P01-6.
18	Is a short indicated?	1. Exchange cable from PCC J01 to PS101 J04. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 2. Go to step 19.
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
20	Is CP3 tripped?	Invoke your support structure.
21	Go to **Instructions** column.	Go page to PR 901.

Power Codes 0A, A0

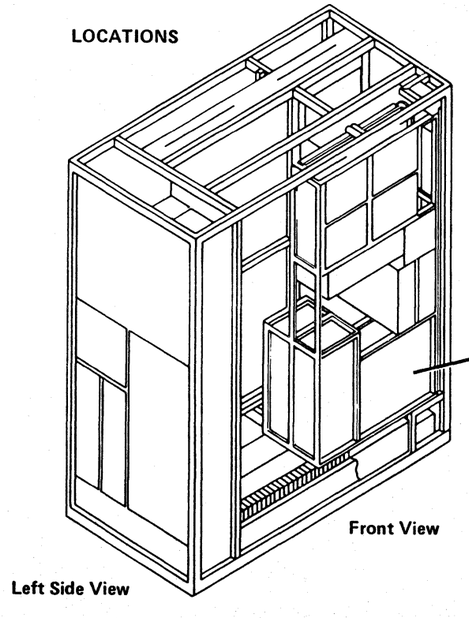
Power code indicates a tripped CP in PS102.

Possible causes:

- PS102
- Short in PS102 dc distribution
- 01A-A1V2 card.

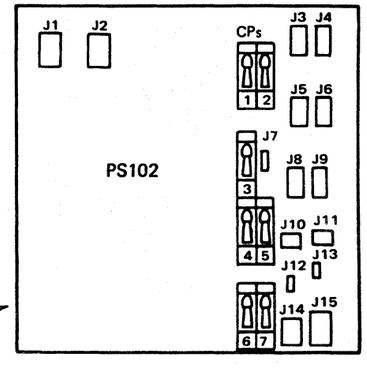
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Record and reset any tripped CP. 3. Set PCC CB1 and CB2 on.
2	Is any CP tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Set PCC CB1 and CB2 on. 4. Go to page PR 901.
3	Do you have a power code of 0A or A0?	Go to page PR 231.
4	Is no power code displayed?	1. Press Check Reset. 2. Press service panel Power On. 3. Check PS102 for any tripped CP.
5	Is CP1 tripped?	Go to page PR 161.
6	Is CP2 tripped?	Go to page PR 171.
7	Is CP3 tripped?	Go to page PR 181.
8	Is CP4 tripped?	Go to page PR 191.
9	Is CP5 tripped?	Go to page PR 201.
10	Is CP6 tripped?	Go to page PR 211.
11	Is CP7 tripped?	Go to page PR 221.
12	Are all CPs in the On position and 0A or A0 power code displayed?	Go to page PR 231.
13	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Left Side View

Front View



Seq BA130	PN 0445816 Pg 1 of 1	EC A02214 15 SEP 83				

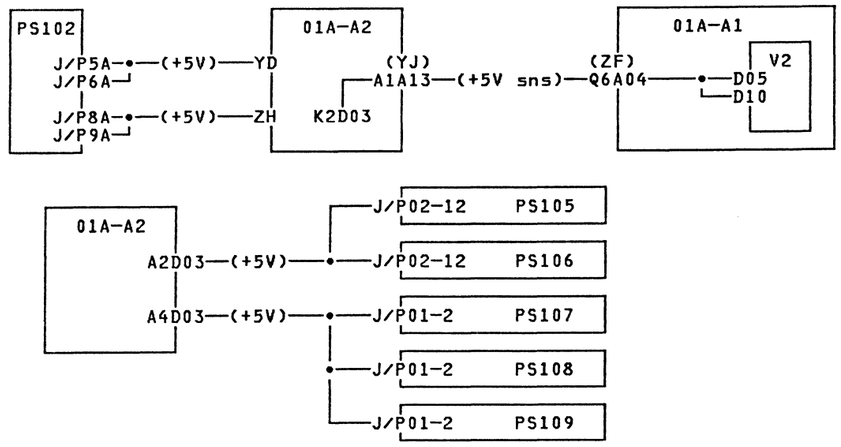
PS102 CP1 Tripped

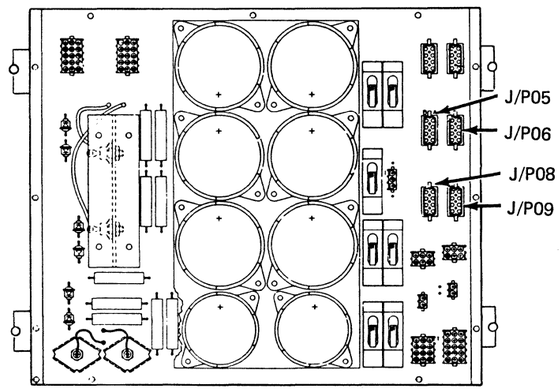
PS102 CP1 tripped indicates a short in the +5 Vdc distribution to the 01A-A2 board.

Possible causes:

- PS102
- Short in dc distribution
- 01A-A1V2 card.

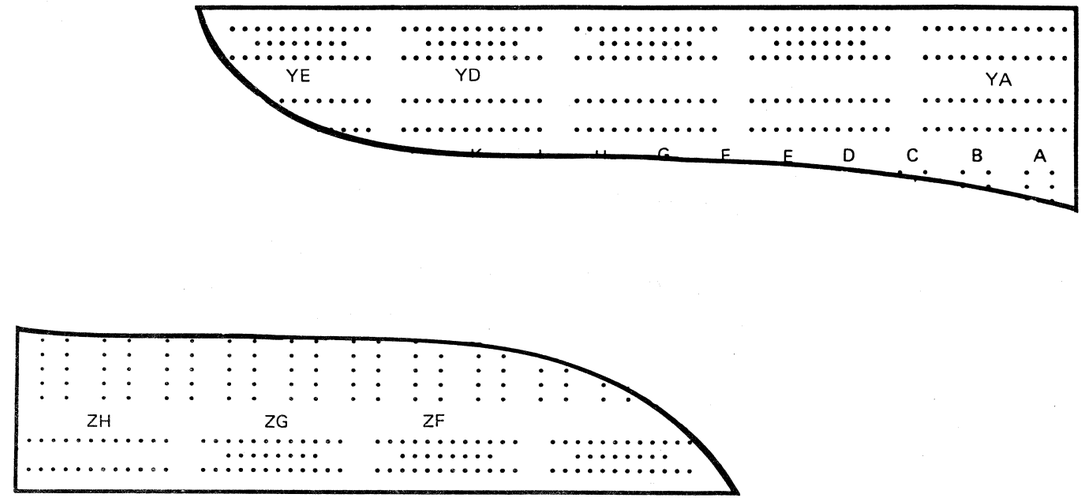
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cables at PS102 J/P05, J/P06, J/P08, and J/P09. 3. Reset CP1. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
2	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cables at PS102 J05, J06, J08, and J09. 3. Disconnect cables at 01A-A2YD, YE, ZG, and ZH (pin side). 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
4	Is CP1 in the on position?	Go to step 9.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cables at PS102 J/P05 and J/P06. 3. Reset CP1. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.





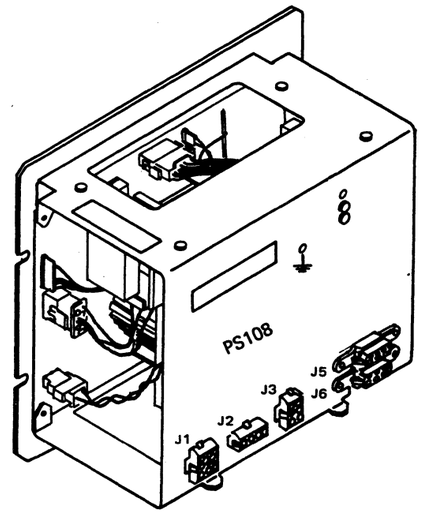
PS102

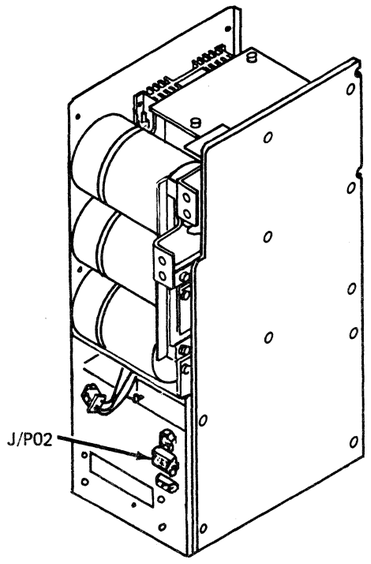
Step	Conditions	Instructions
6	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS102 J/P08 and J/P09 to 01A-A2ZG and ZH (pin side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cables at PS102 J05 and J06. 3. Disconnect cables at PS102 J/P08 and J/P09. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
8	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS102 J/P05 and J/P06 to 01A-A2YD and YE (card side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cables at 01A-A2YD, YE, ZG, and ZH (pin side). 3. Disconnect cables at 01A-A1ZF, 01A-A2A2, A3, A4, A5, B2, and B5 (card side). 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
10	Is CP1 tripped?	1. Short in 01A-A2 board or cards. 2. Go to page PR 251.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1ZF (card side). 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.



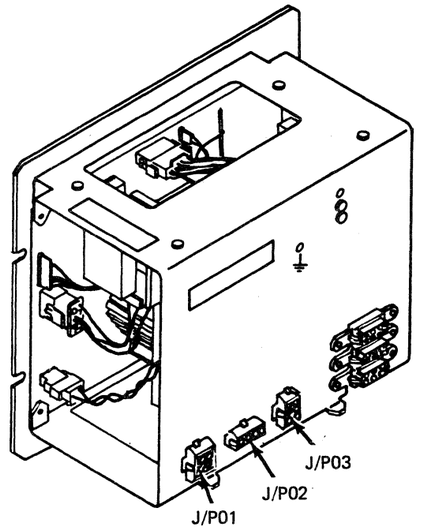
Board 01AA1 or Board 01AA2

Step	Conditions	Instructions
12	Is CP1 tripped?	1. Short in 01A-A1 board or cards. 2. Go to page PR 241.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A5. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
14	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable at 01A-A2A5. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A4. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
16	Is CP1 in the on position?	Go to step 24.
17	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS107 J/P02. 3. Reset CP1. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
18	Is CP1 in the on position?	1. Set PCC CB1 and CB2 off. 2. Exchange PS107. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS107 J02. 3. Disconnect cable at PS108 J/P02. 4. Reset CP1. 5. Set PCC CB1 and CB2 on. 6. Press service panel Power On.





Typical PS105/106

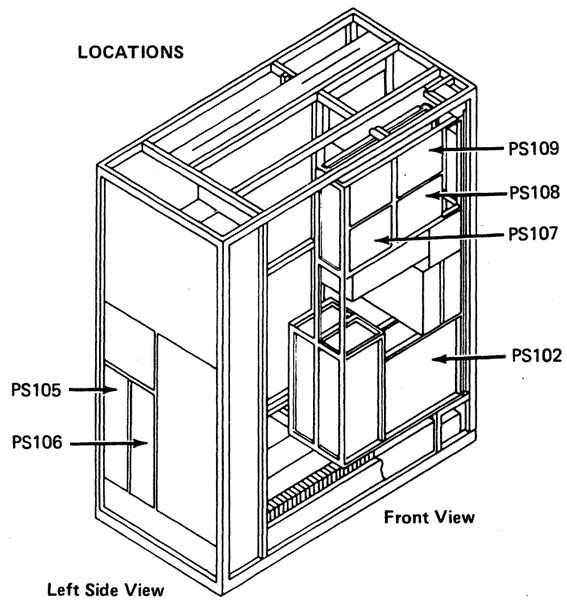


Typical PS107/109

Step	Conditions	Instructions
20	Is CP1 in the on position?	1. Set PCC CB1 and CB2 off. 2. Exchange PS108. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.
21	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at PS108 J02. 3. Disconnect cable at PS109 J/P02. 4. Reset CP1. 5. Set PCC CB1 and CB2 on. 6. Press service panel Power On.
22	Is CP1 tripped.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2A4 to PS107, PS108, and PS109. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Also suspect PS102 CP1. 4. Go to step 37.
23	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS109. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.
24	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A3. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
25	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable at 01A-A2A3. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.
26	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2A2. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
27	Is CP1 in the on position?	Go to step 33.
28	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS105 J/P02. 3. Reset CP1. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
29	Is CP1 in the on position?	1. Set PCC CB1 and CB2 off. 2. Exchange PS105. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.
30	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS106 J/P02. 3. Reset CP1. 4. Set PCC CB1 and CB1 on. 5. Press service panel Power On.
31	Is CP1 in the on position?	1. Set PCC CB1 and CB2 off. 2. Exchange PS106. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 37.

Step	Conditions	Instructions
32	Go to **Instructions** column.	1. Exchange cable from 01A-A2A2 to PS105 and PS106. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 37.
33	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A2B2. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
34	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable at 01A-A2B2. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.
35	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect 01A-A2B5. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
36	Is CP1 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable at 01A-A2B5. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 37.

Step	Conditions	Instructions
37	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A2 board 01A-A1 board PS102, PS105 PS106, PS107 PS108, PS109. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Go to page PR 901.



PS102 CP2 Tripped

PS102 CP2 tripped indicates a short in the +5 Vdc distribution to the 01A-A1 and 01A-A3 boards or sense line.

PS102 CP2 tripped is sensed and repaired by an 1xxxxxxx Ref Code.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reset PS102 CP2. 3. Set PCC CB1 and CB2 on. 4. Press Power On switch on OCP. 5. Allow time for I/O to sequence on.
2	Is power complete?	Go to page PR 451.
3	Is CP2 tripped?	1. Do not reset CP2. 2. Press OCP Power On. 3. Allow time for I/O to sequence up.
4	Is there an eight-digit Ref Code displayed?	Go to page PR 1001.
5	Is there any other indication?	Go to page PR 001.

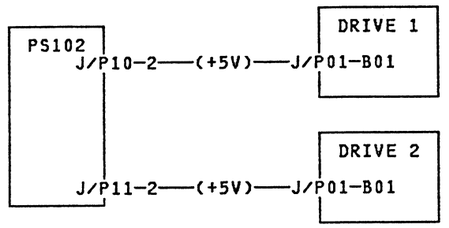
PS102 CP3 Tripped

PS102 CP3 tripped indicates a short in the +5 Vdc distribution to the diskette drives.

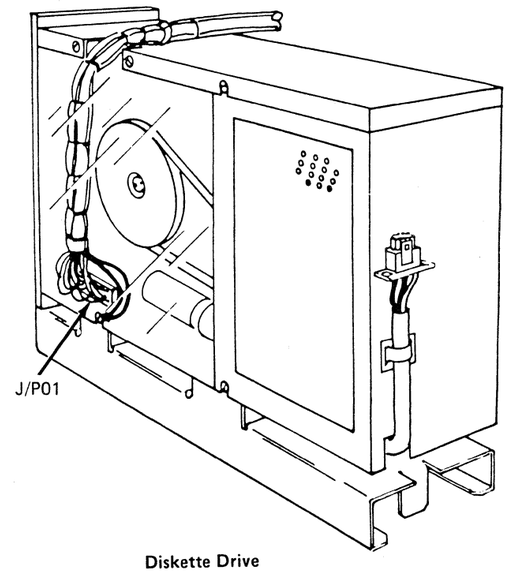
Possible causes:

- PS102
- Short in dc distribution cable
- Diskette drive 1 or diskette drive 2 shorted.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect cables at PS102 J/P10 and J/P11. 3. Reset CP3. 4. Press Check Reset. 5. Press service panel Power On.
2	Is CP3 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 11.
3	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at PS102 J10. 3. Press Check Reset. 4. Press service panel Power On.
4	Is CP3 tripped?	Short in diskette drive 1. Go to step 8.
5	Go to **Instructions** column.	1. Reconnect cable at PS102 J11. 2. Press Check Reset. 3. Press service panel Power On.
6	Is CP3 tripped?	Short in diskette drive 2. Go to step 8.
7	Go to **Instructions** column.	Go to step 11.



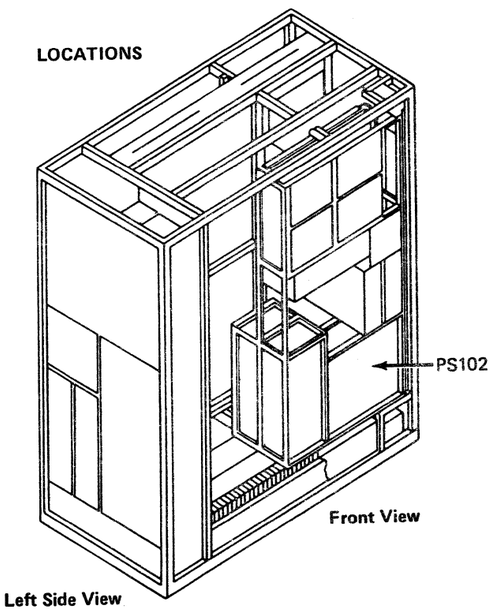
PS102

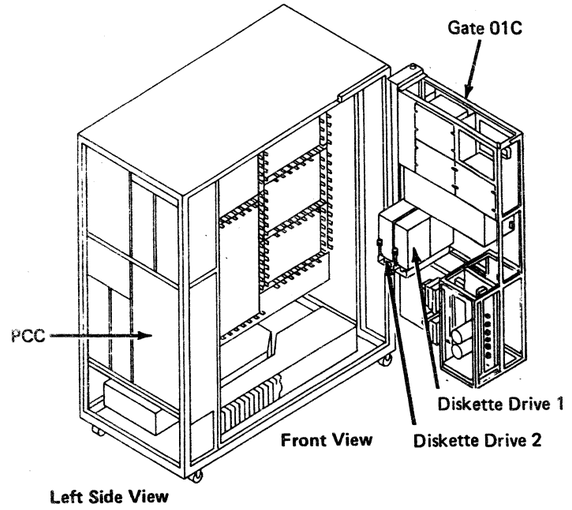


Diskette Drive

Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Ensure cables are reconnected at PS102 J/P10 and J/P11. 3. Disconnect cable at the failing diskette drive connector J/P01. 4. Press Check Reset. 5. Press service panel Power On.
9	Is CP3 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS102 to diskette drive. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 11.
10	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange diskette drive. 4. Go to step 11.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 Diskette drive 1 Diskette drive 2. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
12	Is CP3 tripped?	Invoke your support structure.
13	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS





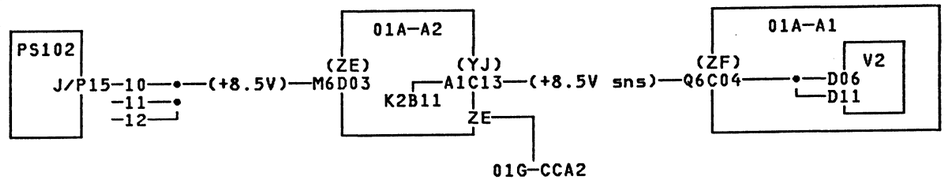
PS102 CP4 Tripped

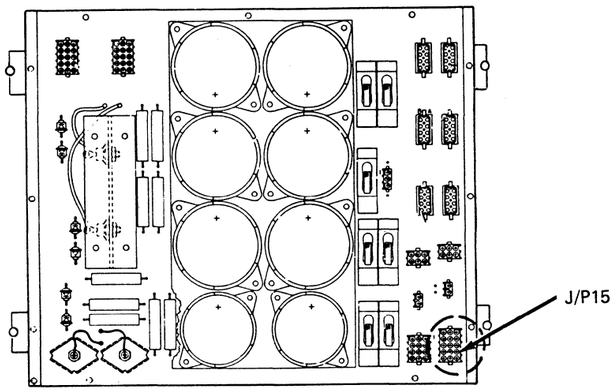
PS102 CP4 tripped indicates a short in the +8.5 Vdc distribution to the 01A-A2 board.

Possible causes:

- PS102
- Short in dc distribution
- 01A-A1V2 card.

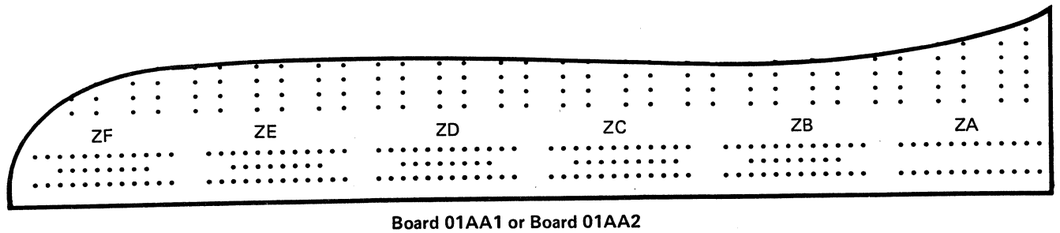
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect cable at PS102 J/P15. 3. Reset CP4. 4. Press Check Reset. 5. Press service panel Power On.
2	Is CP4 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 14.
3	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at PS102 J15. 3. Disconnect cable at 01A-A2ZE (pin side). 4. Press Check Reset. 5. Press service panel Power On.
4	Is CP4 tripped?	Short in dc distribution between PS102 J/P15 and 01A-A2ZE. 1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS102 J/P15 to 01A-A2ZE (pin side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 14.



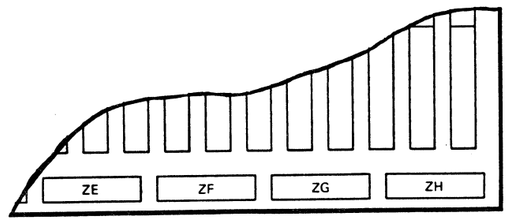


PS102

Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2ZE (pin side). 3. Disconnect cable at 01A-A1ZF (card side). 4. Disconnect cable at 01A-A2ZD (card side). 5. Press Check Reset. 6. Press service panel Power On.
6	Is CP4 tripped?	Go to page PR 251.
7	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A1ZF (pin side). 3. Press Check Reset. 4. Press service panel Power On.
8	Is CP4 tripped?	Go to page PR 241.
9	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2ZD (card side). 3. Press Check Reset. 4. Press service panel Power On.
10	Is CP4 in the On position?	Go to step 14.
11	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect RSF cable at 01G-CCA2. 3. Reset CP4. 4. Set service panel Power Off switch to Power Off and then back to Normal. 5. Press Check Reset. 6. Press service panel Power On.
12	Is CP4 tripped?	1. Exchange cable from 01A-A2ZE (card side) to 01G-CCA2. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 14.



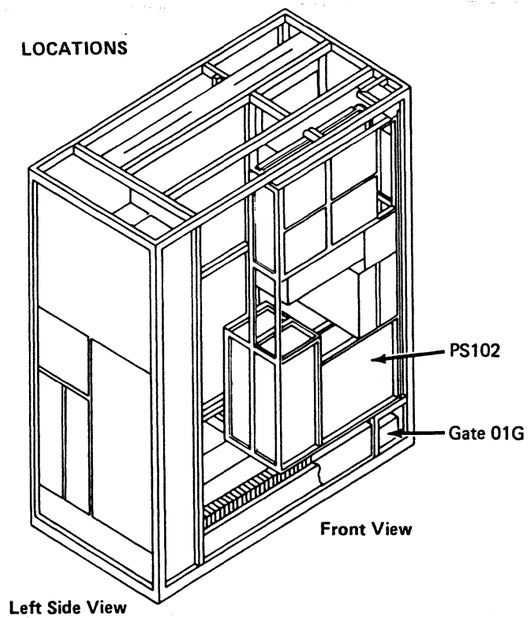
Board 01AA1 or Board 01AA2



Board 01AA2

Step	Conditions	Instructions
13	Go to **Instructions** column.	Failure in modem or modem cable external to the processor. 1. Correct or exchange failing device. 2. Go to step 14.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board 01G. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
15	Is CP4 tripped?	Invoke your support structure.
16	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



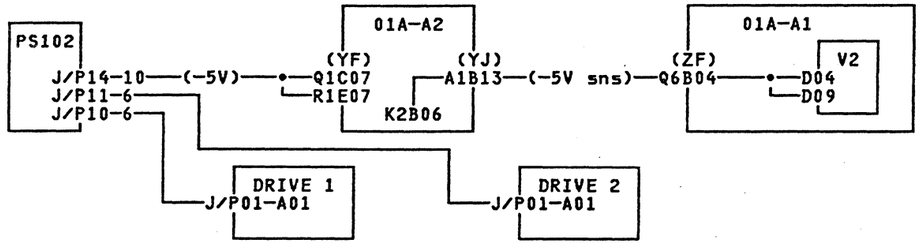
PS102 CP5 Tripped

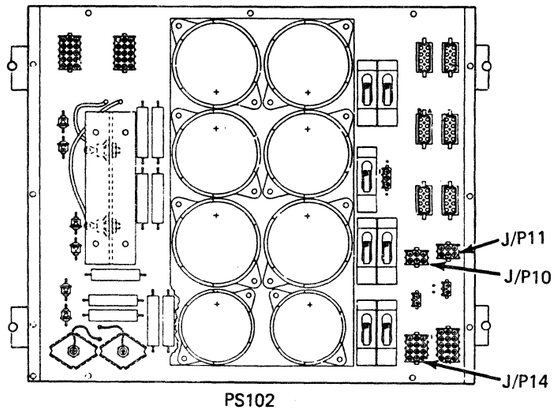
PS102 CP5 tripped indicates a short in the -5 Vdc distribution to the diskette drives, 01A-A1, and 01A-A2.

Possible causes:

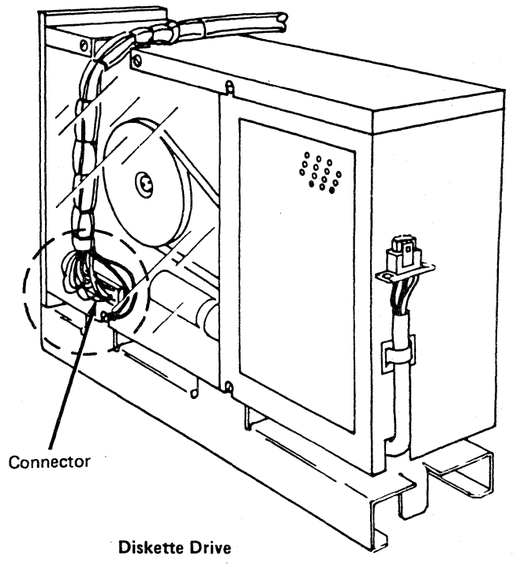
- PS102
- Short in diskette drive 1 or diskette drive 2.
- Short in DC distribution
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect cables at PS102 J/P10, J/P11, and J/P14. 3. Reset CP5. 4. Press Check Reset. 5. Press service panel Power On.
2	Is CP5 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 18.
3	**Go to Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at PS102 J10 (diskette drive 1). 3. Press Check Reset. 4. Press service panel Power On.
4	Is CP5 tripped?	Go to step 8.
5	**Go to Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at PS102 J11 (diskette drive 2). 3. Press Check Reset. 4. Press service panel Power On.
6	Is CP5 tripped?	Go to step 8.
7	**Go to Instructions** column.	Go to step 11.



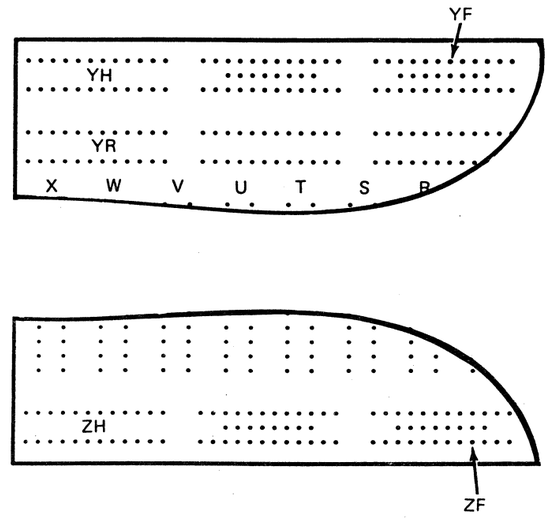


PS102



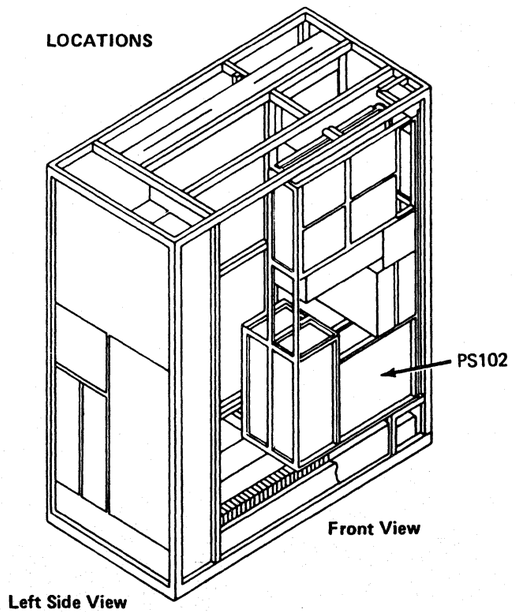
Diskette Drive

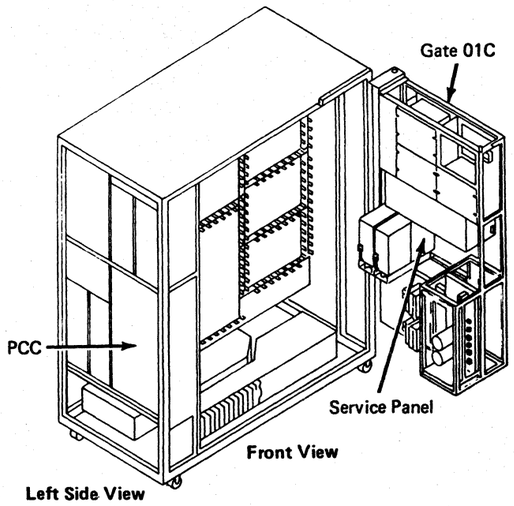
Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect cable at failing diskette drive connector J/P01. 3. Ensure cables are reconnected at PS102 J10 and J11. 4. Reset CP5. 5. Press Check Reset. 6. Press service panel Power On.
9	Is CP5 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange the dc distribution cable to the diskette drive. 3. Go to step 18.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange diskette drive. 3. Go to step 18.
11	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at PS102 J14. 3. Disconnect cable at 01A-A2YF (pin side). 4. Press Check Reset. 5. Press service panel Power On.
12.	Is CP5 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from RS102 J/P14 to 01A-A2YF (pin side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 18.
13	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2YF (pin side). 3. Disconnect cable at 01A-A1ZF (card side). 4. Press Check Reset. 5. Press service panel Power On.
14	Is CP5 tripped?	Go to page PR 251.



Step	Conditions	Instructions
15	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A1ZF (card side). 3. Press Check Reset. 4. Press service panel Power On.
16	Is CP5 tripped?	Go to page PR 241.
17	Go to **Instructions** column.	Go to step 18.
18	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board Diskette drive 1 Diskette drive 2. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
19	Is CP5 tripped?	Invoke your support structure.
20	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS





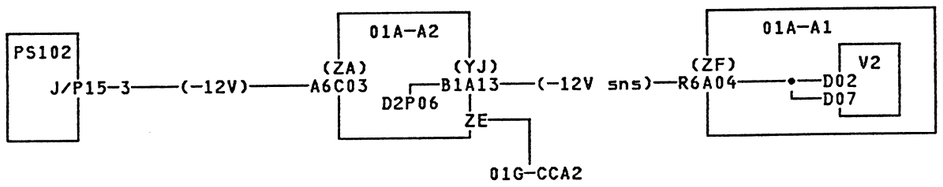
PS102 CP6 Tripped

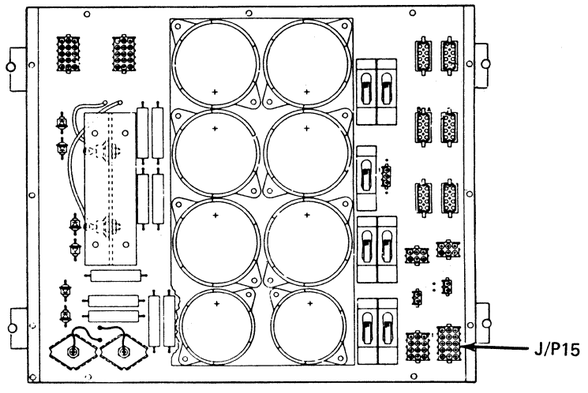
PS102 CP6 tripped indicates a short in the -12 Vdc distribution to the 01A-A2 board.

Possible causes:

- PS102
- Short in dc distribution
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Press service panel Power Off. 2. Disconnect cables at PS102 J/P15. 3. Reset CP6. 4. Set service panel Power Off switch to Power Off and then back to Normal. 5. Press Check Reset. 6. Press service panel Power On.
2	Is CP6 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 14.
3	Go to **Instructions** column.	1. Press service panel Power Off. 2. Reconnect cable at PS102 J15. 3. Disconnect cable at 01A-A2ZA. 4. Set service panel Power Off switch to Power Off and then back to Normal. 5. Press Check Reset. 6. Press service panel Power On.
4	Is CP6 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable between PS102 J/P15 and 01A-A2ZA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 14.

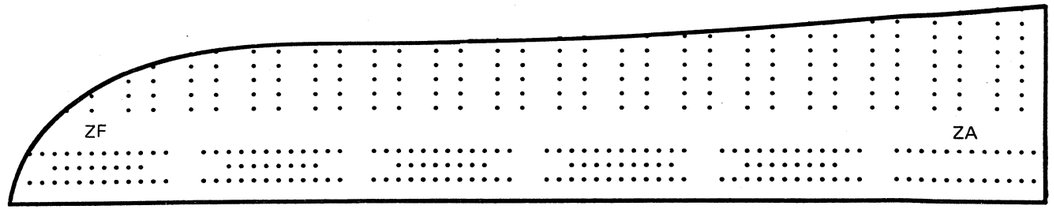




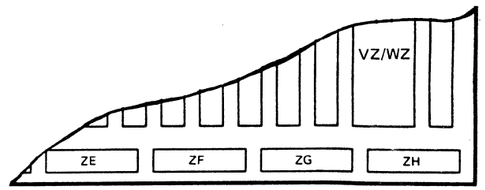
PS102

Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2ZA. 3. Disconnect cable at 01A-A1ZF. 4. Disconnect cable at 01A-A2ZE (card side). 5. Press Check Reset. 6. Press service panel Power On.
6	Is CP6 tripped?	Go to page PR 251.
7	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A1ZF. 3. Press Check Reset. 4. Press service panel Power On.
8	Is CP6 tripped?	Go to page PR 241.
9	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2ZE (card side). 3. Press Check Reset. 4. Press service panel Power On.
10	Is CP6 in the On position?	Go to step 14.
11	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect RSF cable at 01G-CCA2. 3. Reset CP6. 4. Press Check Reset. 5. Press service panel Power On.
12	Is CP6 tripped?	1. Exchange cable from 01A-A2ZE (card side) to 01G-CCA2. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 14.
13	Go to **Instructions** column.	Failure in modem or modem cable external to the processor. 1. Repair or exchange failing device. 2. Go to step 14.

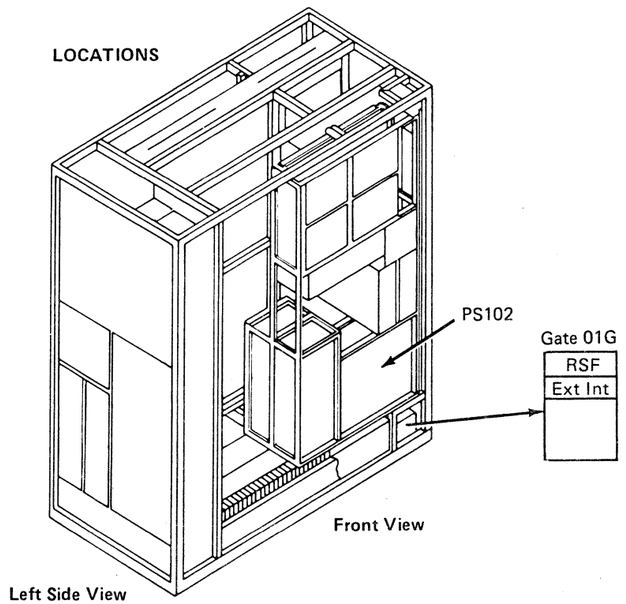
Step	Conditions	Instructions
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board 01G gate. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
15	Is CP6 tripped?	Invoke your support structure.
16	Go to **Instructions** column	Go to page PR 901.



Board 01AA1 or Board 01AA2



Board 01AA2



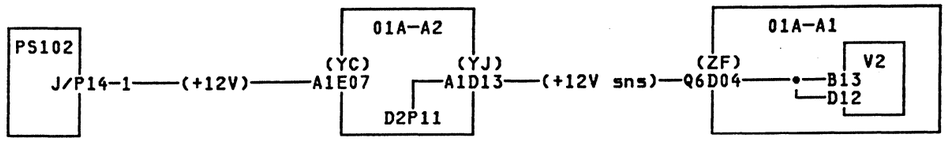
PS102 CP7 Tripped

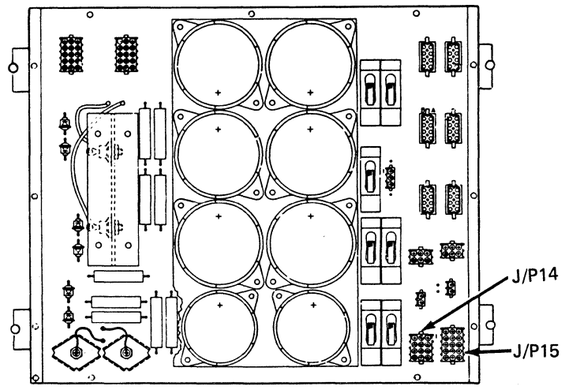
PS102 CP7 tripped indicates a short in the +12 Vdc distribution to the 01A-A2 board.

Possible causes:

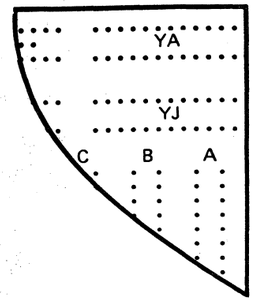
- PS102
- Short in dc distribution
- 01A-A1V2 card.

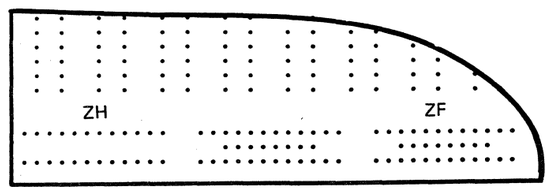
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect cables at PS102 J/P14 and J/P15. 3. Reset CP7. 4. Press Check Reset. 5. Press service panel Power On.
2	Is CP7 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 9.
3	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cables at PS102 J14 and J15. 3. Disconnect cables at 01A-A2YA and YC (pin side). 4. Press Check Reset. 5. Press service panel Power On.
4	Is CP7 tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable between PS102 J/P14, J/P15 and 01A-A2YA, YC. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 9.

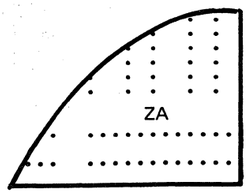




PS102







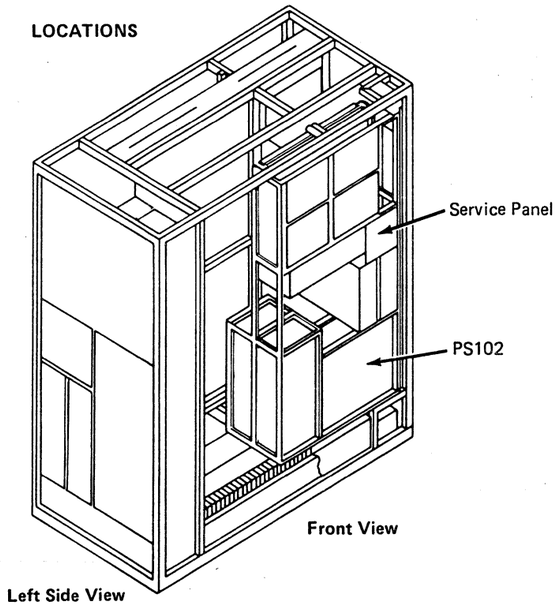
Board 01AA1 or Board 01AA2

Seq BA175	PN 0445825 Pg 1 of 2

EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84		

Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A2YA and YC (pin side). 3. Disconnect cable at 01A-A1ZF (card side). 4. Press Check Reset. 5. Press service panel Power On.
6	Is CP7 tripped?	Go to page PR 251
7	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reconnect cable at 01A-A1ZF. 3. Press Check Reset. 4. Press service panel Power On.
8	Is CP7 tripped?	Go to page PR 241.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
10	Is CP7 tripped?	Invoke your support structure.
11	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



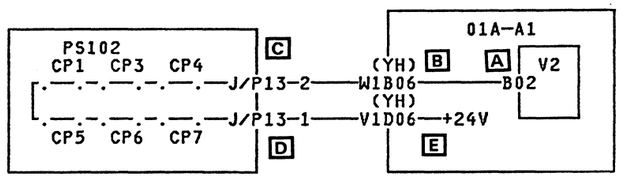
False CP Tripped Indication

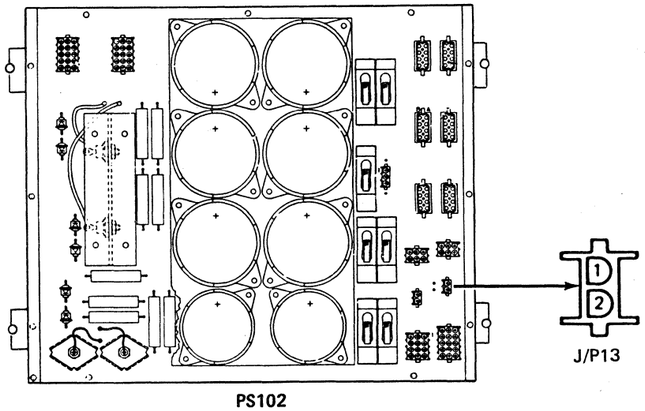
Power code 0A or A0 with no CPs tripped indicates a false PS102 CP tripped condition.

Possible causes:

- PS102
- Open CP tripped sense loop
- 01A-A1V2 card.

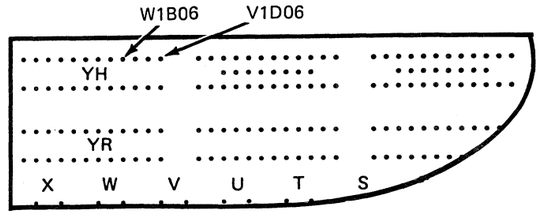
Step	Conditions	Instructions
1	Go to **Instructions** column	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B02. [A]
2	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 12.
3	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [B] + lead at 01A-A1W1B06.
4	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 12.
5	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J/P13-2. [C]
6	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YH to PS102 J/P13. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 12.





PS102

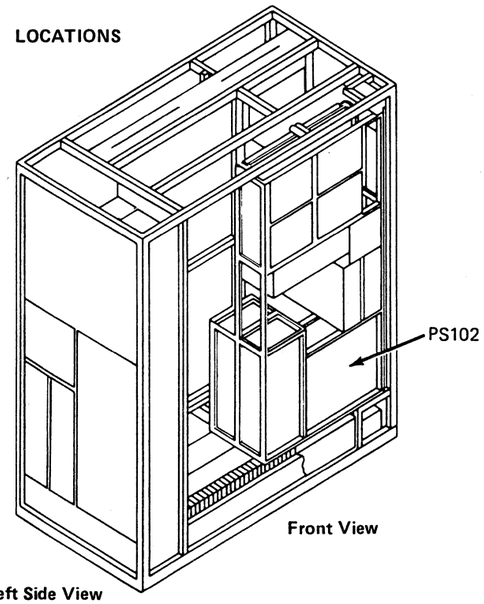
J/P13



Board 01AA1

Step	Conditions	Instructions
7	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at PS102 J/P13-1.
8	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 12.
9	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [E] + lead at 01A-A1V1D06.
10	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P13 to 01A-A1YH. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 12.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 12.
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on.
13	Is the indicated power code 0A or A0?	Invoke your support structure.
14	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Short In 01A-A1 Board

You are here because a short is indicated in the 01A-A1 board.

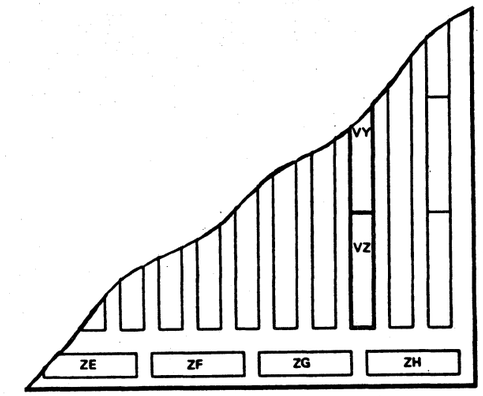
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove cards from the 01A-A1 board. 3. Disconnect cable at 01A-A1ZF (card side). 4. Measure resistance at the pin location in table A for the failing CP. With V2 removed, all readings should indicate an open.
2	Is a short indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 5.
3	Go to **Instructions** column.	1. Reinstall 01A-A1V2 card. 2. Measure resistance at the pin location in table B for the failing CP. The meter should indicate more than 100 ohms.
4	Is resistance less than 100 ohms?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 5.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reinstall 01A-A1 cards. 3. Reconnect cable at 01A-A1ZF (card side). 4. Check that all cables and cards are seated at 01A-A1 board. 5. Reset any tripped CPs. 6. Set PCC CB1 and CB2 on. 7. Press service panel Power On.
6	Is any PS102 CP tripped?	Invoke your support structure.
7	Go to **Instruction** column.	Go to page PR 901.

A

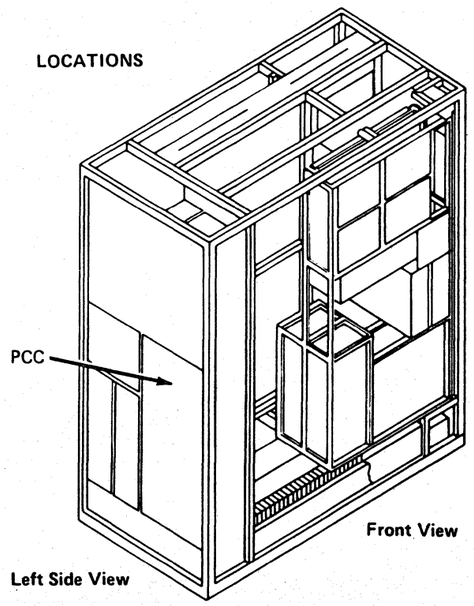
Failing CP	Measuring Points	With V2 Removed
CP1	01A-A1V2D05 to D08	Open
CP4	01A-A1V2D06 to D08	Open
CP5	01A-A1V2D04 to D08	Open
CP6	01A-A1V2D02 to D08	Open
CP7	01A-A1V2D12 to D08	Open

B

Failing CP	Measuring Points	With V2 Installed
CP1	01A-A1V2D05 to D08	> 100 Ohms
CP4	01A-A1V2D06 to D08	> 100 Ohms
CP5	01A-A1V2D04 to D08	> 100 Ohms
CP6	01A-A1V2D02 to D08	> 100 Ohms
CP7	01A-A1V2D12 to D08	> 100 Ohms



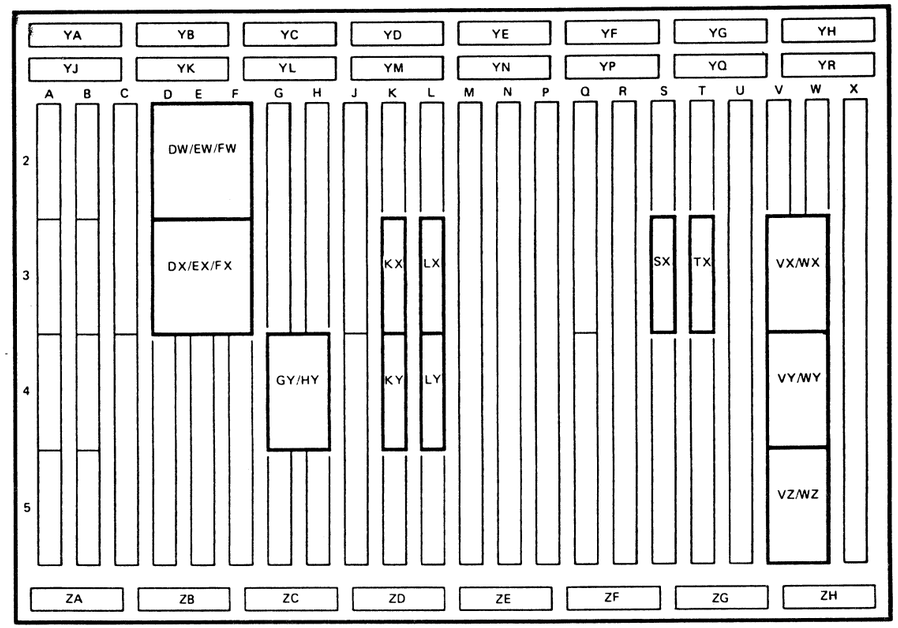
Board 01AA1



Short In 01A-A2 Board

You are here because an indication of a short in the 01A-A2 board.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove all cards from the 01A-A2 board. 3. Remove the cable from 01A-A2YJ (card side). 4. Set PCC CB1 and CB2 on. 5. Press Check Reset. 6. Press service panel Power On.
2	Is any PS102 CP tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Reset tripped CP. 4. Go to step 8.
3	Go to **Instructions** column.	1. Reconnect dc sense cable at 01A-A2YJ (card side). 2. Press Check Reset. 3. Press service panel Power On.
4	Is any PS102 CP tripped?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2YJ to 01A-A1ZF (card side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Reinstall cards. 4. Reset tripped CP. 5. Go to step 8.
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reinstall one card in 01A-A2 board. 3. Press Check Reset. 4. Press service panel Power On.
6	Is any PS102 CP tripped?	1. Exchange shorted card. 2. Repeat steps 5, 6, and 7 until all cards have been reinstalled, then go to step 8.



Board 01AA2

Step	Conditions	Instructions
7	Go to **Instructions** column.	1. Repeat steps 5, 6, and, 7 until all cables have been reinstalled, then go to step 8.
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating at the 01A-A1 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
9	Is the indicated power code 0A or A0?	Invoke your support structure.
10	Go to **Instructions** column.	Go to page PR 901.

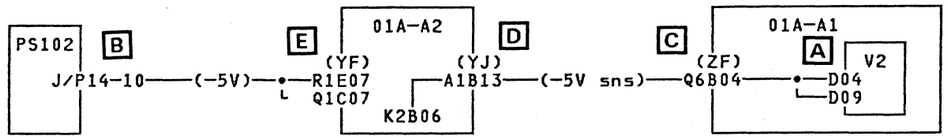
Power Codes 1A ,A1, 2A, A2

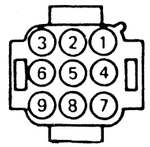
Power codes 1A, A1, 2A, and A2 indicate -5 Vdc missing at the 01A-A2 board.

Possible causes:

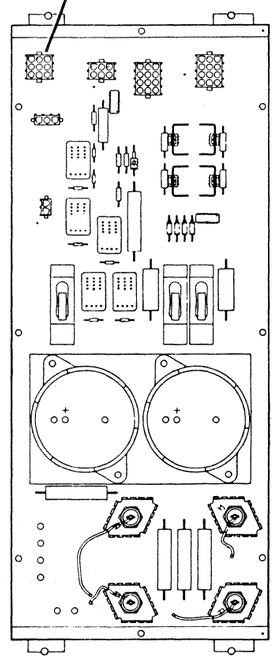
- Open in -5 Vdc distribution
- Open in -5 Vdc sense line
- 01A-A1V2 card
- PS102.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds. This will ensure an accurate power code.
2	Is no power code displayed?	Go to step 6.
3	Is a power code displayed?	Measure for -5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D04. [A]
4	Is voltage 0.0 to -0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 27.
5	Go to **Instructions** column.	Go to page PR 351.
6	Go to **Instructions** column.	1. Press Check Reset. 2. Press service panel Power On. 3. Wait 10 seconds.
7	Is there a 1A, A1, 2A, or A2 power code?	1. Set PCC CB1 and CB2 off. 2. Check TR102 F1 for an open condition.
8	Is TR102 F1 good?	1. Set PCC CB1 and CB2 on. 2. Go to step 11.

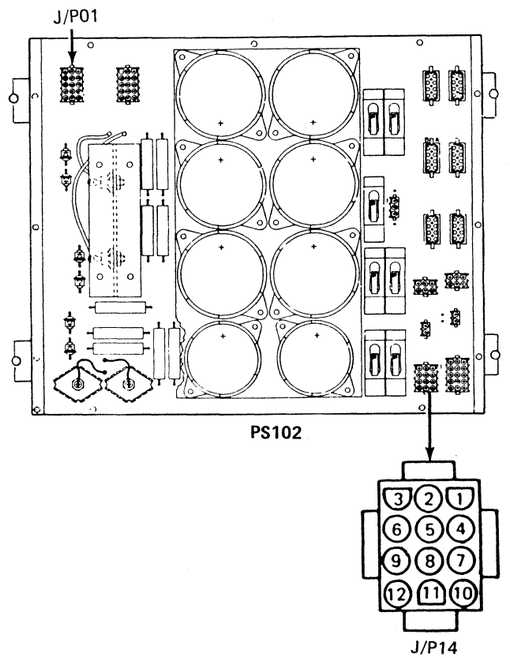




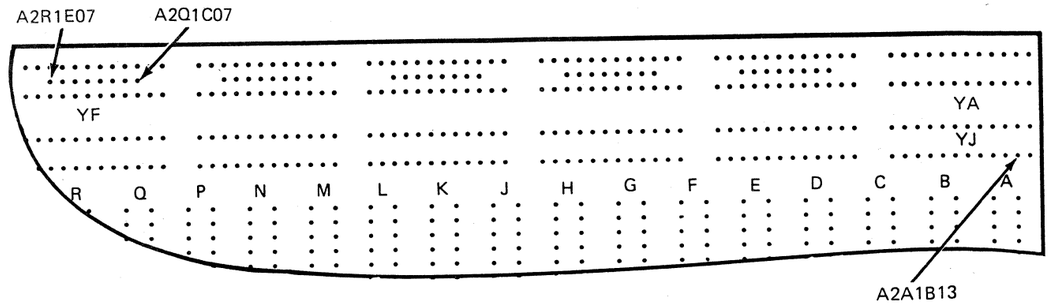
J/P01

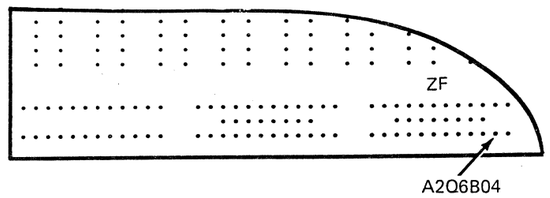


PS101



Step	Conditions	Instructions
9	Go to **Instructions** column.	1. Exchange F1. 2. Set PCC CB1 and CB2 on. 3. Press service panel Power On.
10	Is no power code displayed?	Go to step 27.
11	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at PS102 J/P14-11 [B] + lead at PS102 J/P14-10. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present for 2 to 5 seconds.
12	Is voltage -4.5 to -5.5 Vdc?	Go to step 17.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS102 P01. 3. Set PCC CB1 and CB2 on. 4. Measure for 5 **Vac** at the following points: PS102 P01-7 to P01-1 PS102 P01-4 to P01-1 (cable end). To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present for 2 to 5 seconds.
14	Is voltage greater than 4.5 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 27.
15	Is voltage less than 4.5 **Vac** at both points?	Go to page PR 361.





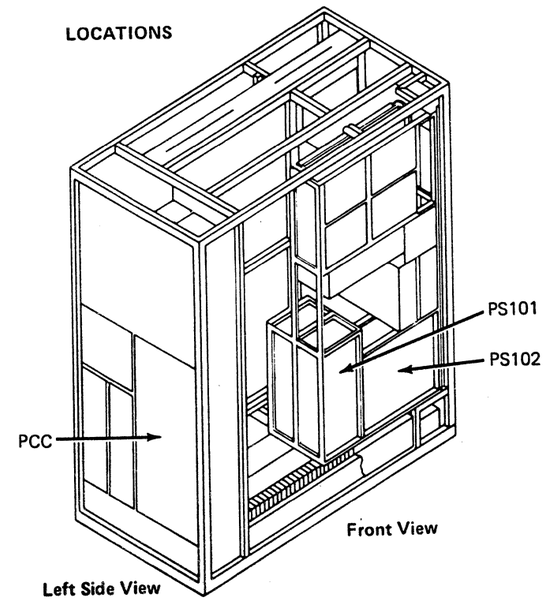
Board 01AA1 or Board 01AA2

Step	Conditions	Instructions
16	Is voltage less than 4.5 **Vac** at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 27.
17	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at 01A-A2V2D08 + lead at 01A-A1V2D04 + lead at 01A-A1V2D09. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
18	Is voltage -4.5 to -5.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 27.
19	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at 01A-A1V2D08 [C] + lead at 01A-A1Q6B04. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
20	Is voltage -4.5 to -5.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 27.

Step	Conditions	Instructions
21	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at 01A-A2A1B13. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
22	Is voltage -4.5 to 5.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from 01A-A2YJ to 01A-A1ZF. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 27.
23	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2Q1C07 [E] + lead at 01A-A2R1E07. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
24	Is voltage -4.5 to -5.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 27.

Step	Conditions	Instructions
25	Go to **Instructions** column.	Measure for -5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J/P14-10. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
26	Is voltage -4.5 to -5.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS102-J/P14 to 01A-A2YF. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 27.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
28	Is machine still failing?	Invoke your support structure.
29	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



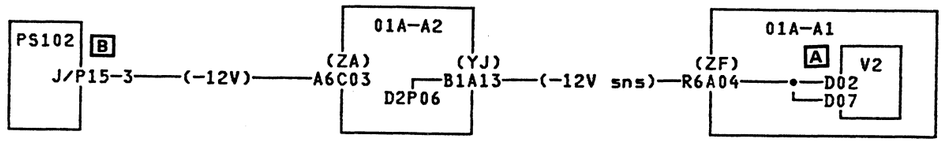
Power Codes 3A, A3, 4A, A4

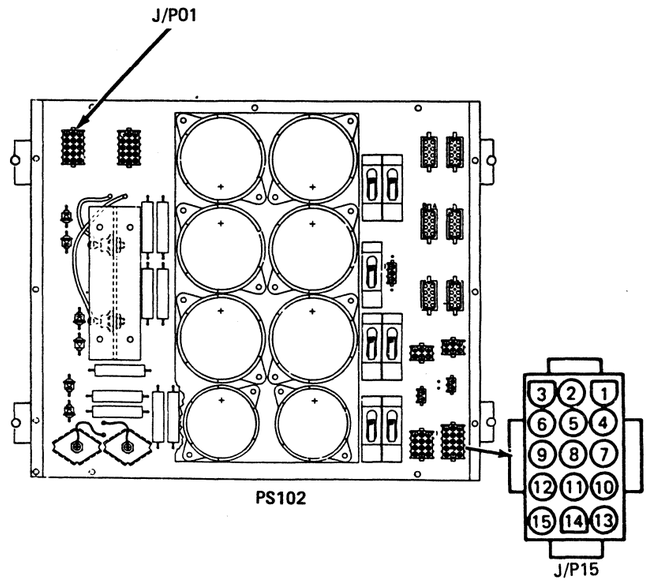
Power codes 3A, A3, 4A, and A4 indicate -12 Vdc missing at the 01A-A2 board.

Possible causes:

- Open in -12 Vdc distribution
- Open in -12 Vdc sense line
- 01A-A1V2 card
- PS102.

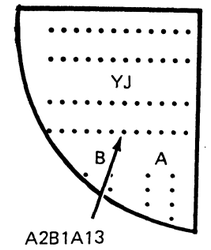
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds.
2	Is no power code displayed?	Go to step 6.
3	Is a power code displayed?	Measure for -12 Vdc at the following points: - lead at 01A-A1V2D02 + lead at 01A-A1V2D08. [A]
4	Is voltage 0.0 to -0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 23.
5	Go to **Instructions** column.	Go to page PR 351.
6	Go to **Instructions** column.	Measure for -12 Vdc at the following points: - lead at PS102 J/P15-3 [B] + lead at PS102 J/P15-1. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
7	Is voltage -11.5 to -12.5 Vdc?	Go to step 12.

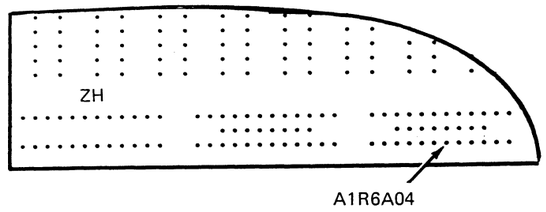


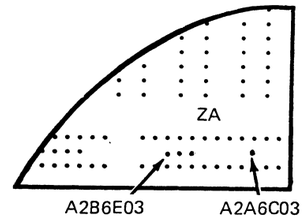


Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS102 P01. 3. Set PCC CB1 and CB2 on. Measure for -12 Vac at the following points: PS102 P01-15 to 2 PS102 P01-14 to 2 (cable end). To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
9	Is voltage greater than -11.5 Vac at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 23.
10	Is voltage less than -11.5 Vac at both points?	Go to page PR 361.
11	Go to **Instructions** column.	Set PCC CB1 and CB2 off. 1. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 2. Go to step 23.
12	Go to **Instructions** column.	Measure for -12 Vdc at the following points. - lead at 01A-A1V2D08 + lead at 01A-A1V2D07 + lead at 01A-A1V2D02. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
13	Is voltage -11.5 to -12.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 23.
14	Is voltage -11.5 to -12.5 Vdc at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 23.
15	Go to **Instructions** column.	Measure for -12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1R6A04. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds..
16	Is voltage -11.5 to -12.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 23.
17	Go to **Instructions** column.	Measure for -12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2B1A13. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
18	Is voltage -11.5 to -12.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from 01A-A2YJ to 01A-A1ZF (card side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 23.

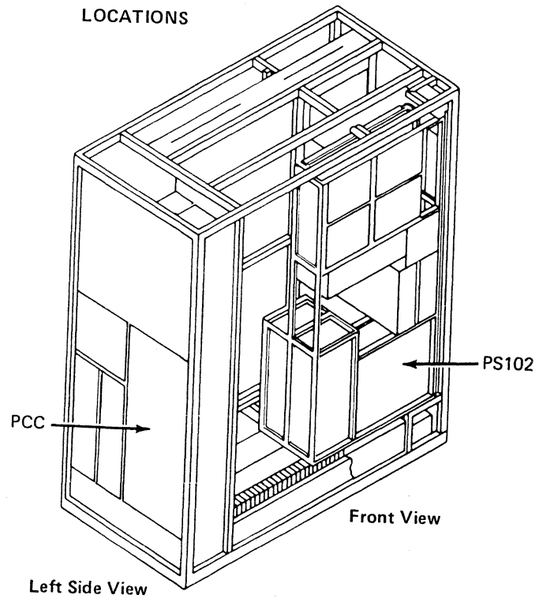
Step	Conditions	Instructions
19	Go to **Instructions** column	Measure for -12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2A6C03 + lead at 01A-A2B6E03. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
20	Is voltage -11.5 to -12.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 23.
21	Go to **Instructions** column.	Measure for -12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J/P15-3. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
22	Is voltage -11.5 to -12.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS102 J15 to 01A-A2ZA (pin side). 3. Go to step 23.
23	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
24	Is machine still failing?	Invoke your support structure.
25	Go to **Instructions** column.	Go to page PR 901.







Board 01AA1 or Board 01AA2



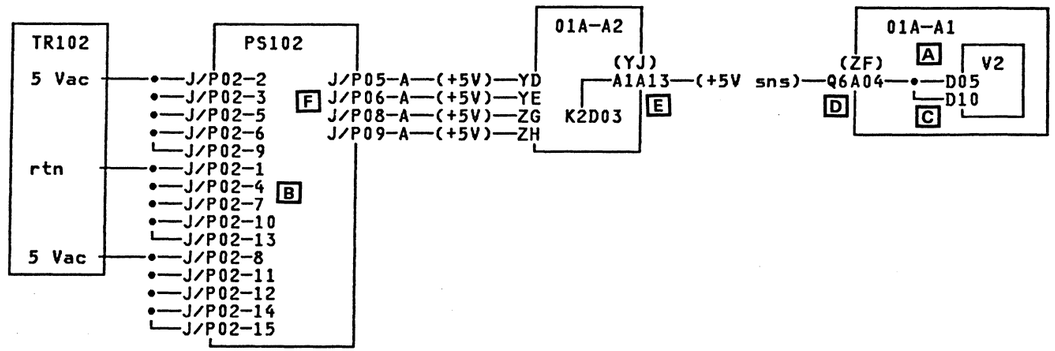
Power Codes 5A, A5, 6A, A6

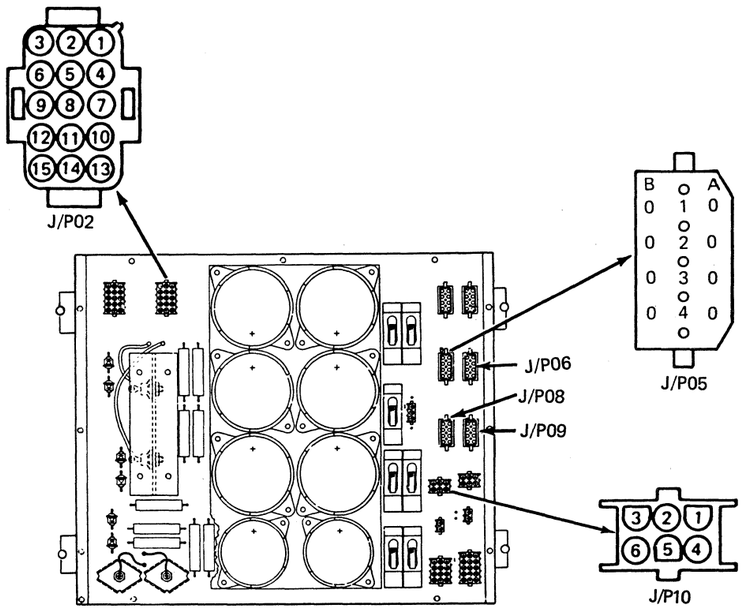
Power codes 5A, A5, 6A, and A6 indicate +5 Vdc missing at the 01A-A2 board.

Possible causes:

- Open in +5 Vdc distribution
- Open in +5 Vdc sense line
- 01A-A1V2 card
- PS102
- Short in 01A-A1 board.

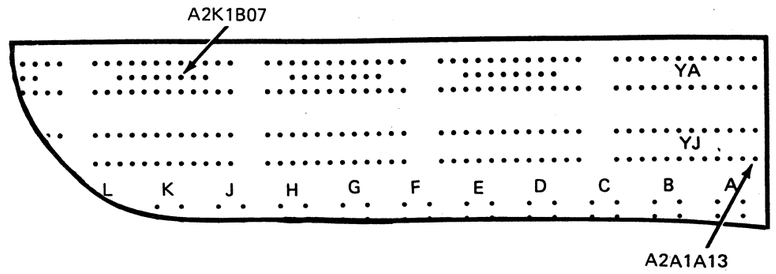
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds. This ensures a valid power code.
2	Is no power code displayed?	Go to step 6.
3	Is a power code displayed?	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D05. [A]
4	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 28.
5	Go to **Instructions** column.	Go to page PR 351.
6	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at PS102 J/P10-1 + lead at PS102 J/P10-2. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
7	Is voltage greater than +4.5 Vdc?	Go to step 12.

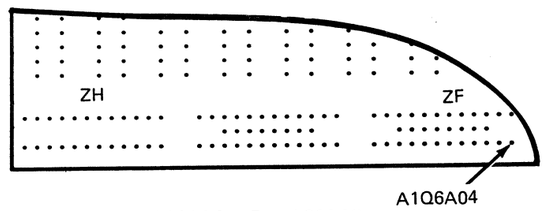




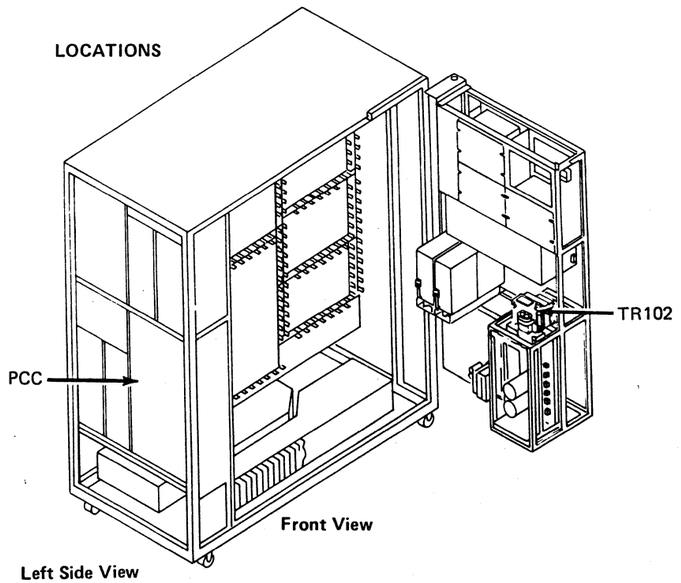
Seq BA215	PN 0445833 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84			

Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS102 P02. 3. Set PCC CB1 and CB2 on. Measure for 5 **Vac** at the following points: PS102 P02- 2 to 1 PS102 P02- 3 to 1 PS102 P02- 5 to 4 PS102 P02- 6 to 4 [B] PS102 P02- 9 to 7 PS102 P02- 8 to 7 PS102 P02-11 to 10 PS102 P02-12 to 10 PS102 P02-14 to 13 PS102 P02-15 to 13 (cable end). To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
9	Is voltage greater than 4.5 **Vac** at all points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 28.
10	Is voltage less than 4.5 **Vac** at all points?	Go to page PR 361.
11	Is voltage less than 4.5 **Vac** at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 28.





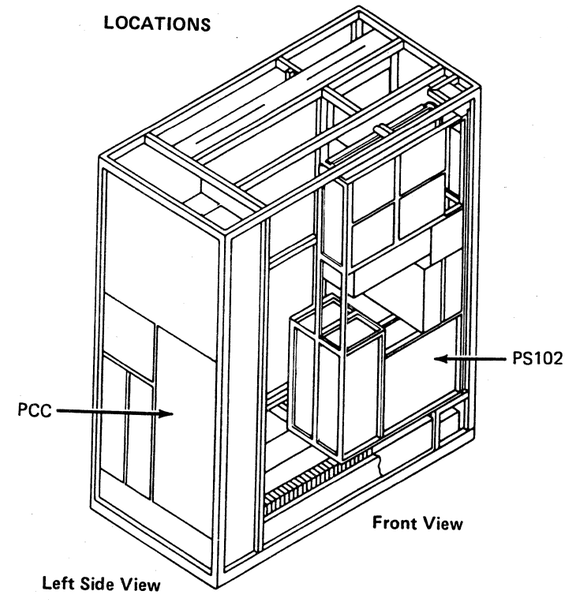
Board 01AA1 or Board 01AA2



Step	Conditions	Instructions
12	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D10 [C] + lead at 01A-A1V2D05. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
13	Is voltage greater than +4.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 28.
14	Is voltage less than +4.5 Vdc at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. **Note:** Invoke your support structure before exchanging board. 3. Go to step 28.
15	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1Q6A04. [D] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
16	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. **Note:** Invoke your support structure before exchanging board. 3. Go to step 28.
17	Is voltage less than +0.8 Vdc?	Go to step 22.
18	Is +1 to +4 Vdc present at either point.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A1ZF (card side). 3. Measure resistance to ground at the following points: + lead at 01A-A1Q6A04.
19	Is a short indicated?	1. Leave meter connected to 01A-A1Q6A04. 2. Remove 01A-A1V2 card. 3. Observe meter reading.
20	Is an open indicated?	1. Exchange 01A-A1V2 card. 2. Go to step 28.
21	Is a short indicated.	1. Exchange 01A-A1 board. 2. Go to step 28.
22	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 [E] + lead at 01A-A2A1A13. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
23	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from 01A-A2YJ to 01A-A1ZF. 3. Go to step 28.
24	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2K1B07. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.

Step	Conditions	Instructions
25	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 28.
26	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J/P05-A + lead at PS102 J/P06-A [F] + lead at PS102 J/P08-A + lead at PS102 J/P09-A. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
27	Is voltage greater than +4.5 Vdc at all points?	+5 Vdc present at these points indicates that both distribution cables are open from PS102 to 01A-A2. 1. Check cable plugging. 2. Check PS102 output voltages. 3. Go to step 28.
28	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
29	Is machine still failing	Invoke your support structure.
30	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



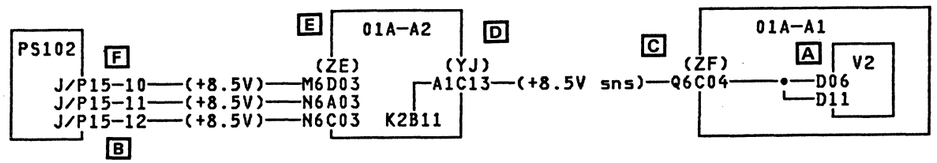
Power Codes 7A, A7, 0B, B0

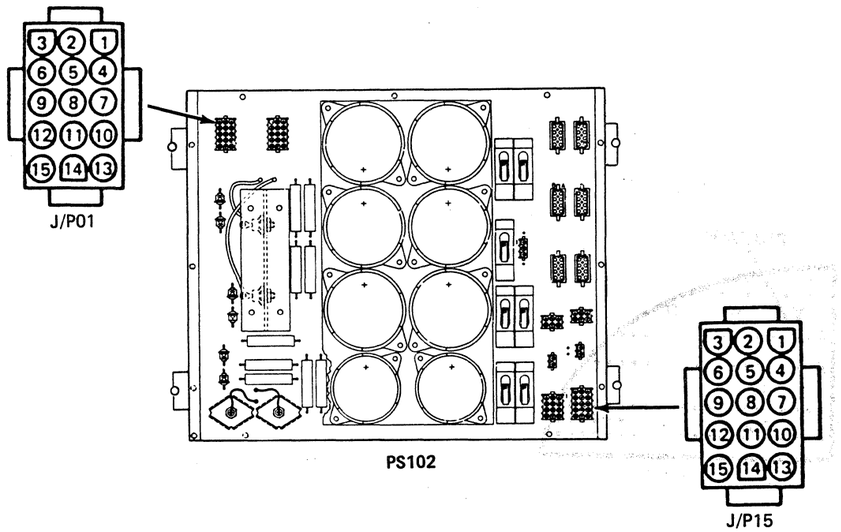
Power codes 7A, A7, 0B, and B0 indicate +8.5 Vdc missing at the 01A-A2 board.

Possible causes:

- Oper. in +8.5 Vdc distribution
- Open in +8.5 Vdc sense line
- 01A-A1V2 card
- PS102.

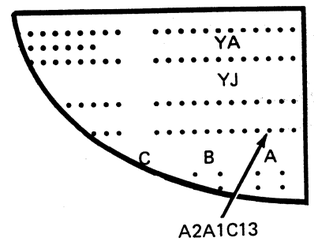
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds. This ensures a valid power code.
2	Is no power code displayed?	Go to step 6.
3	Is a power code displayed?	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D06. [A]
4	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 23.
5	Go to **Instructions** column.	Go to page PR 351.
6	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at PS102 J/P15-9 + lead at PS102 J/P15-12. [B] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
7	Is voltage greater than +8 Vdc?	Go to step 12.

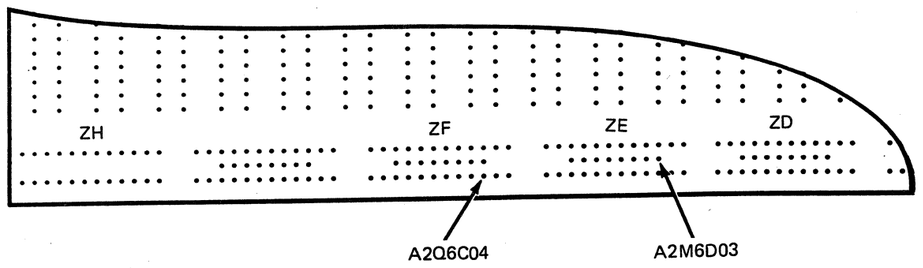




Seq BA225	PN 0445835 Pg 1 of 2	EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84		

Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect PS102 P01. 3. Set PCC CB1 and CB2 on. Measure for +8.5 **Vac** at the following points: PS102 P01-6 to 12 PS102 P01-9 to 12 (cable end). To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
9	Is voltage greater than 8 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 23.
10	Is voltage less than 8 **Vac** at both points?	Go to page PR 361.
11	Is voltage less than 8 **Vac** at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 23.



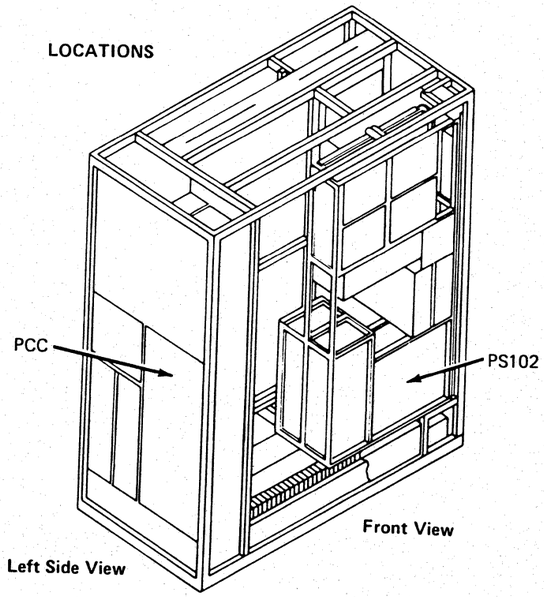


Step	Conditions	Instructions
12	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D06 + lead at 01A-A1V2D11. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
13	Is voltage greater than +8 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 23.
14	Is voltage less than +8 Vdc at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 23.
15	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 [C] + lead at 01A-A1Q6C04. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
16	Is voltage greater than +8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 23.

Step	Conditions	Instructions
17	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at 01A-A2A1C13. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds
18	Is voltage greater than +8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from 01A-A2YJ to 01A-A1ZF. 3. Go to step 23.
19	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 [E] + lead at 01A-A2M6D03. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
20	Is voltage greater than +8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 23.
21	Go to **Instructions** column.	Measure for +8.5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J/P15-10 [F] + lead at PS102 J/P15-11. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.

Step	Conditions	Instructions
22	Is voltage greater than +8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS102 J/P15 to 01A-A2ZD and ZE. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 23.
23	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
24	Is machine still failing?	Invoke your support structure.
25	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



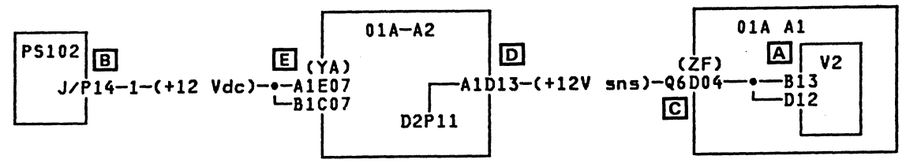
Power Codes 1B, B1, 2B, B2

Power codes 1B, B1, 2B, and B2 indicate +12 Vdc missing at the 01A-A2 board.

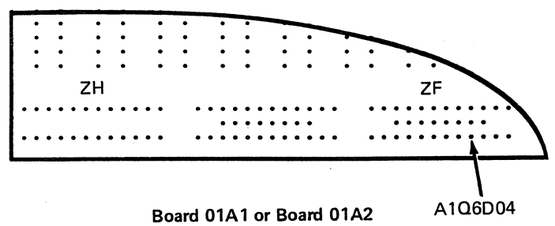
Possible causes:

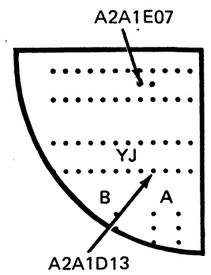
- Open in +12 Vdc distribution
- Open in +12 Vdc sense line
- 01A-A1V2 card
- PS102.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds. This ensures a valid power code.
2	Is no power code displayed?	Go to step 6.
3	Is a power code displayed?	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1V2B13. [A]
4	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A1-A1V2 card. 3. Go to step 23.
5	Go to **Instructions** column.	Go to page PR 351.
6	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at PS102 J/P14-9 + lead at PS102 J/P14-1. [B] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
7	Is voltage greater than +11.5 Vdc?	Go to step 12.



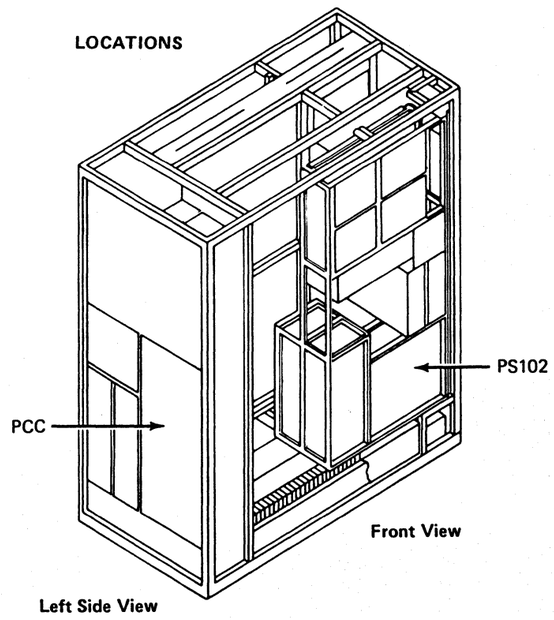
Step	Conditions	Instructions
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS102 J01. 3. Set PCC CB1 and CB2 on. 4. Measure for 12 **Vac** at the following points: PS102 P01-10 to P01-3 PS102 P01-13 to P01-3 (cable end). To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
9	Is voltage greater than 11 **Vac** at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 23.
10	Is voltage less than 11 **Vac** at both points?	Go to page PR 361.
11	Is voltage less than 11 **Vac** at only one point?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 23.
12	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B13 + lead at 01A-A1V2D12. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present for 2 to 5 seconds.





Step	Conditions	Instructions
13	Is voltage greater than +11.5 Vdc at both points?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 23.
14	Is voltage less than +11.5 Vdc at one point?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board 3. Go to step 23.
15	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1Q6D04. [C] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
16	Is voltage greater than +11.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 23.
17	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2A1D13. [D] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
18	Is voltage greater than +11.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from 01A-A2YJ to 01A-A1ZF (card side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 23.

LOCATIONS



Step	Conditions	Instructions
19	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2A1E07. [E] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
20	Is voltage greater than +11.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 23.
21	Go to **Instructions** column.	Measure for +12 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS102 J14-1. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
22	Is voltage greater than +11.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange open cable from PS102 J15 and J14 to 01A-A2YA and ZA (pin side). **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 23.
23	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS102 01A-A1 board 01A-A2 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
24	Is machine still failing?	Invoke your support structure.
25	Go to **Instructions** column.	Go to page PR 901.

Power Codes 3B, B3

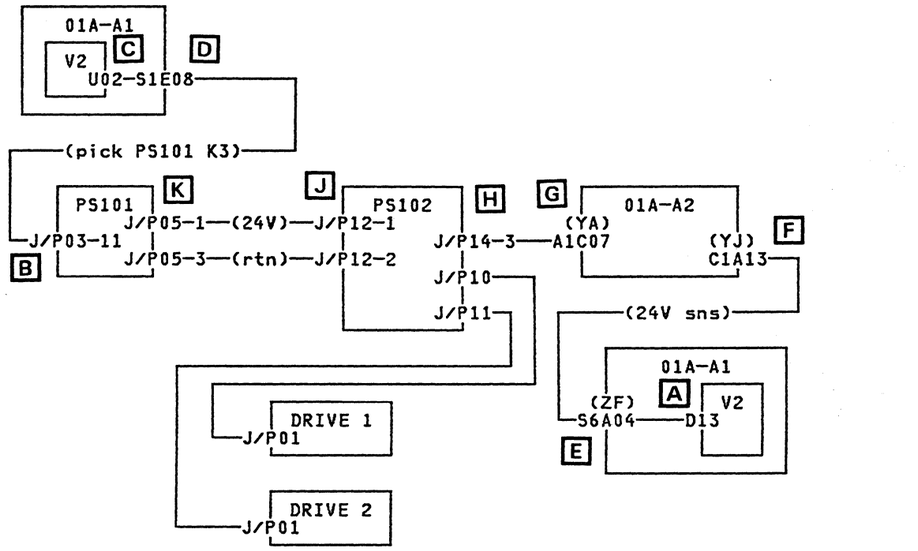
Power codes 3B and B3 indicate +24 Vdc missing at the 01A-A2 board.

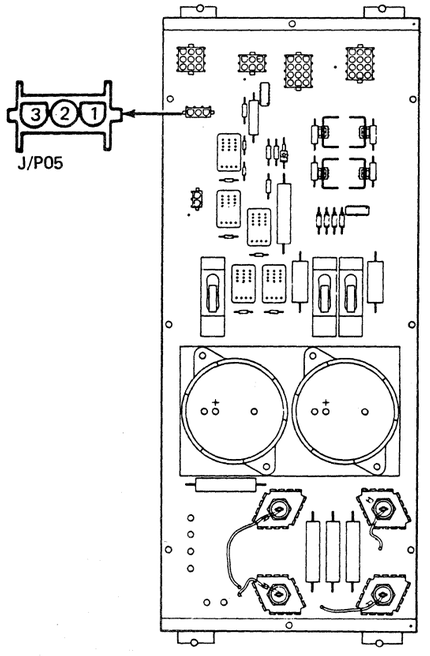
A 3B or B3 power code does not cause the processor to power down.

Possible causes:

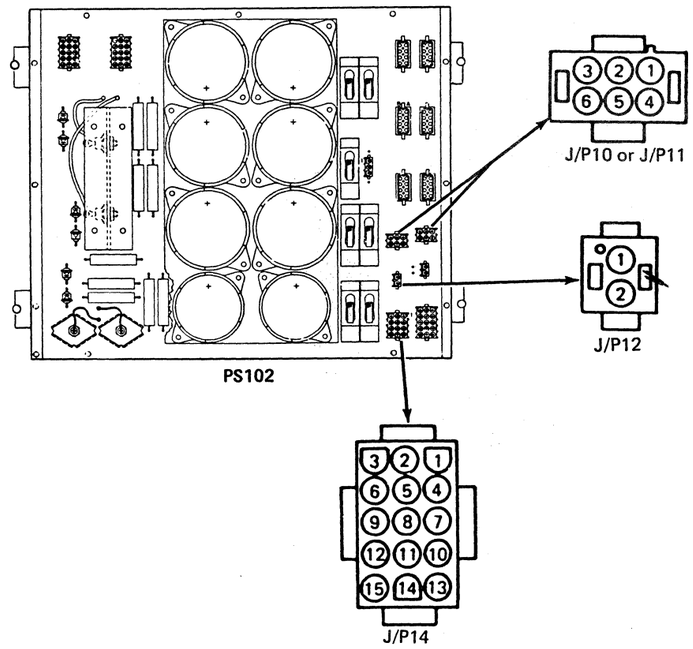
- PS101
- PS102
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. Wait 30 seconds.
2	Is no power code displayed?	Go to step 14.
3	Is a power code displayed?	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2D13. [A]
4	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 29.
5	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P03-11. [B]
6	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 29.

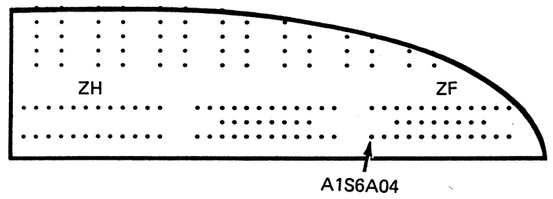


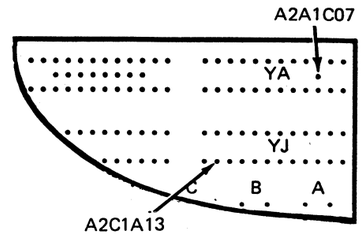


PS101



Step	Conditions	Instructions
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A1V2 card. 3. Set PCC CB1 and CB2 on. 4. Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U02. C
8	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 29.
9	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1S1E08. D
10	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 29.
11	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS101 J/P03. 3. Set PCC CB1 and CB2 on. 4. Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 P03-11 (cable end).
12	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P03 to 01A-A1YG. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 29.

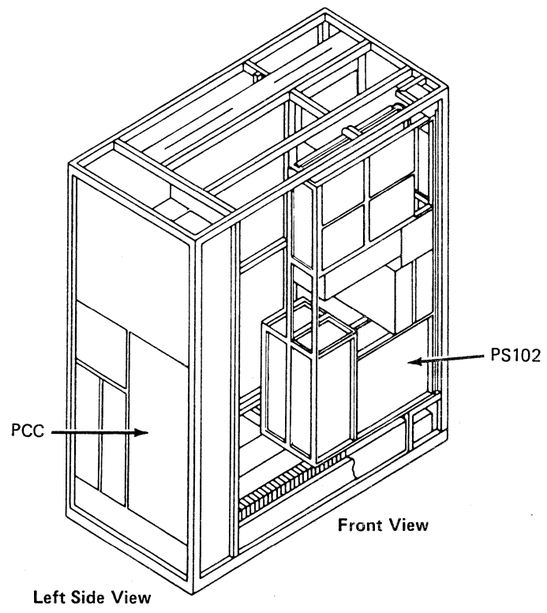




Board 01AA1 or Board 01AA2

Step	Conditions	Instructions
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 29.
14	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at 01A-A1V2D13. To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present for 2 to 5 seconds.
15	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card (see note). **Note:** If still failing, exchange PS101. 3. Go to step 29.
16	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at 01A-A1S6A04. [E] To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present 2 to 5 seconds.
17	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 29.
18	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at 01A-A2C1A13. [F] To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present 2 to 5 seconds.
19	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2YJ to 01A-A1ZF. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 29.
20	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at 01A-A2A1C07. [G] To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present 2 to 5 seconds.
21	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 29.

Step	Conditions	Instructions
22	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at PS102 J/P14-3. To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present 2 to 5 seconds.
23	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS102 J/P14 to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 29.
24	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A2V2D08 + lead at PS102 J/P12-1. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On. Voltage is present 2 to 5 seconds.
25	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange PS102. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 29.



Step	Conditions	Instructions
26	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at PS101 J/P05-1. To make a voltage check: 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Press Check Reset. 3. Press service panel Power On. Voltage is present 2 to 5 seconds.
27	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P05 to PS102 J/P12. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 29.
28	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 29.
29	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101 PS102 01A-A1 board 01A-A2 board Diskette drive 1 Diskette drive 2. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
30	Is machine still failing?	Invoke your support structure.
31	Go to **Instructions** column.	Go to page PR 901.

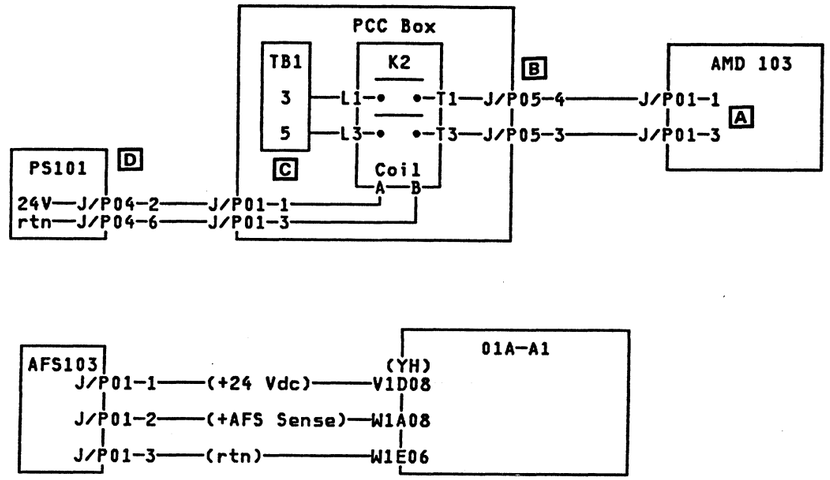
Power Codes 4B, B4

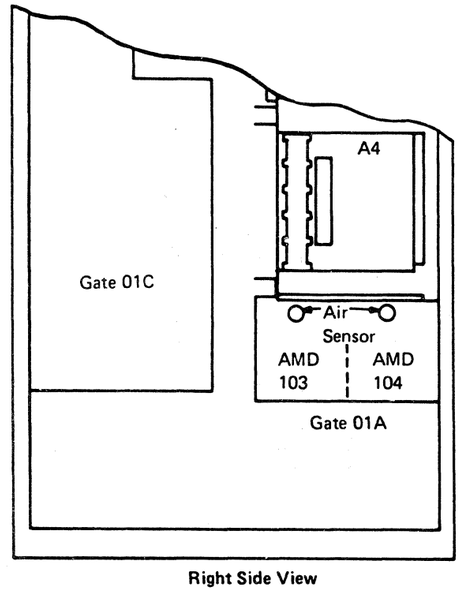
Power codes 4B and B4 indicate AFS103 or AMD103 has failed.

Possible causes:

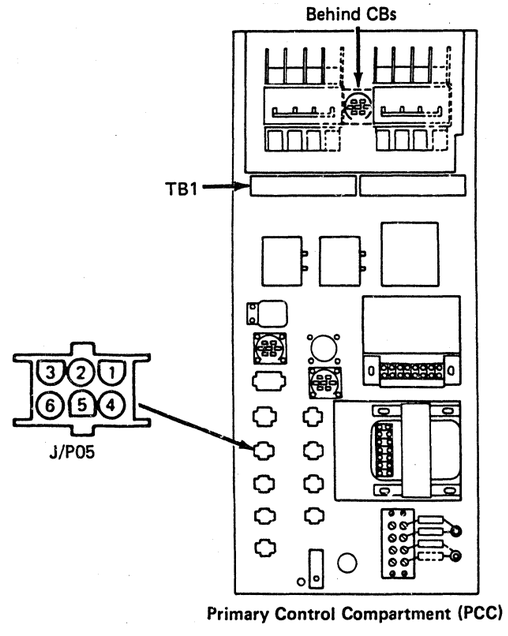
- AFS103
- AMD103
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. After MBC On indicator turns on, allow 30 seconds for AFS103 sensor to heat to a fault condition. A 4B or B4 power code at this time indicates AFS103 failed to heat to a fault condition.
2	Is a power code displayed?	Go to page PR 341.
3	Is no power code displayed?	1. Check that the AFS is aligned for proper air flow. 2. Press Check Reset. 3. Press service panel Power On. 4. Visually check that AMD103 and AMD104 are turning. **Note:** AMDs will turn for approximately 5 seconds.
4	Is AMD103 turning?	Go to page PR 341 (AFS103 Failure).
5	Is AMD104 not turning?	Go to step 9.
6	Go to **Instructions** column.	Measure for line voltage at the following points: AMD103 J/P01-1 to 3. [A] **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.





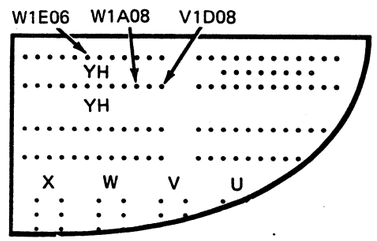
Right Side View



Primary Control Compartment (PCC)

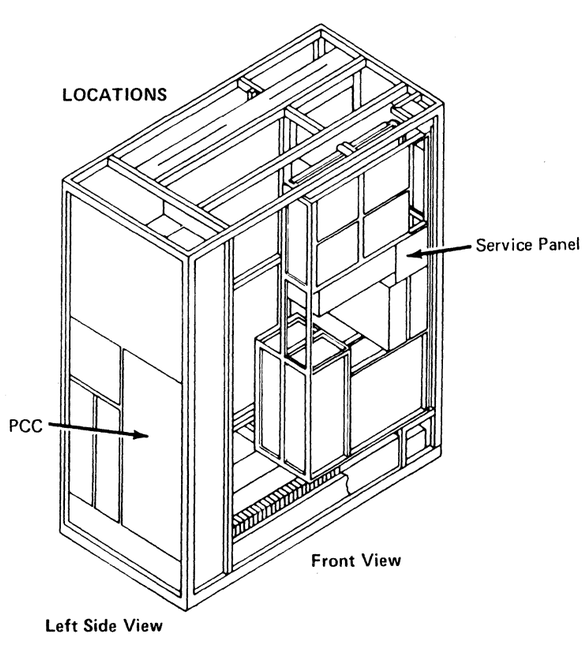
Seq BA255	PN 0445841 Pg 1 of 2	EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84	EC A02219 29 FEB 84	

Step	Conditions	Instructions
7	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD103. 3. Go to step 16.
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P05 to AMD103. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.
9	Go to **Instructions** column.	Measure for line voltage at the following points: PCC J/P05-3 to 4. [B] **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
10	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P05 to AMD103. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.
11	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PCC J/P01-3 + lead at PCC J/P01-1. [C] To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.



Board 01AA1

Step	Conditions	Instructions
12	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Isolate to one of the following: PCC K02 Cable from PCC K02 coil to PCC J/P01 AC distribution from PCC TB1 through K02 to PCC J/P05. 3. Go to step 16.
13	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PS101 J/P04-6 [D] + lead at PS101 J/P04-2. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
14	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P04 to PCC J/P01. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101 AFS103 AMD103 01A-A1 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
17	In machine still failing?	Invoke your support structure.
18	Go to **Instructions** column.	Go to page PR 901.



Seq BA260	PN 0445842 Pg 1 of 1

EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84		

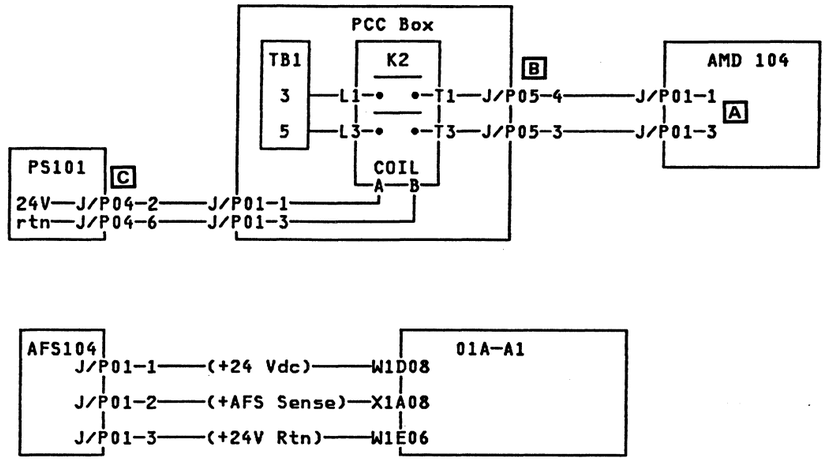
Power Codes 5B, B5

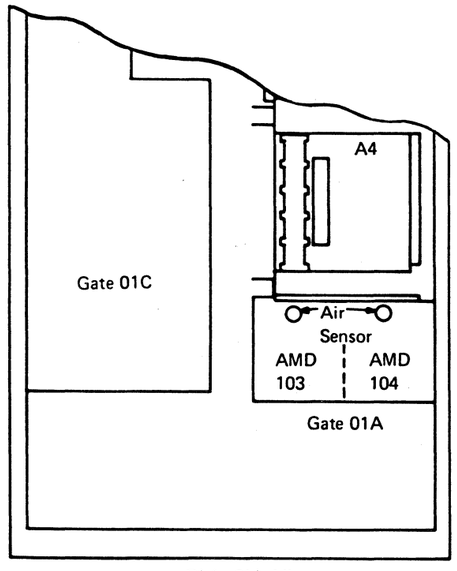
Power codes 5B and B5 indicate AFS104 or AMD104 failed.

Possible causes:

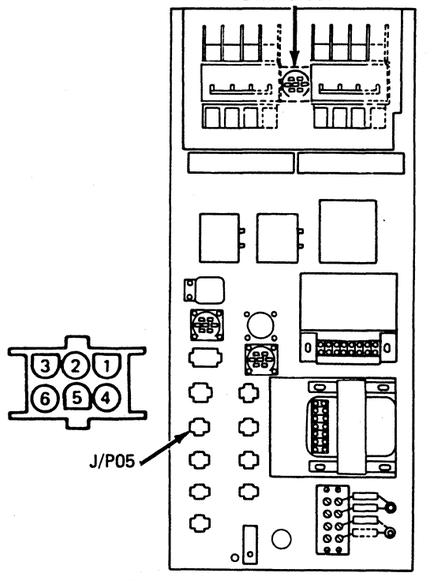
- AFS104
- AMD104
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Set PCC CB1 and CB2 on. 3. After MBC On indicator turns on, allow 30 seconds for AFS104 sensor to heat to a fault condition. A 5B or B5 power code at this time indicates AFS104 failed to heat to a fault condition.
2	Is a power code displayed?	Go to page PR 341.
3	Go to **Instructions** column.	1. Check that AFS is aligned for proper air flow. 2. Press Check Reset 3. Press service panel Power On. 4. Visually check that AMD103 and AMD104 are turning. **Note:** AMDs will turn for approximately 5 seconds.
4	Is AMD104 turning?	Go to page PR 341. (AFS104 Failure).
5	Is AMD103 not running?	Go to step 9.



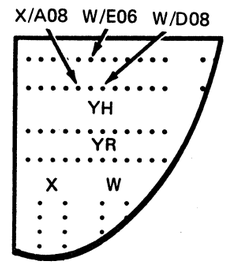


Right Side View



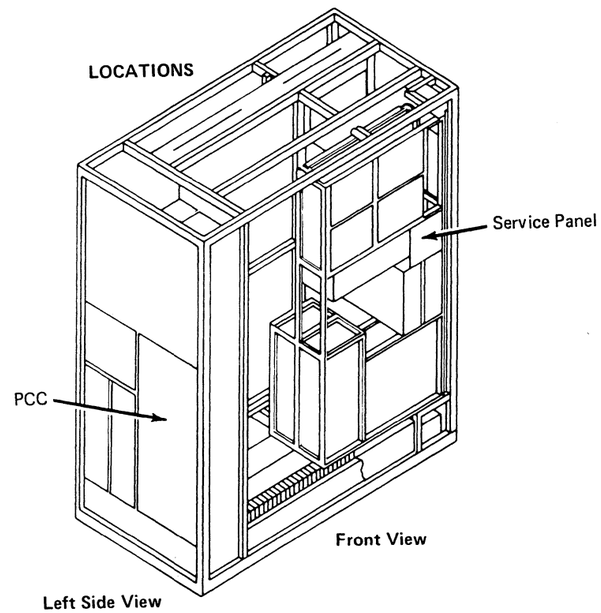
Primary Control Compartment (PCC)

Step	Conditions	Instructions
6	Is AMD103 running?	Measure for ac line voltage at the following points: AMD104 J/P01-1 to 3. A **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
7	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange AMD104. 3. Go to step 16.
8	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P05 to AMD104. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.
9	Go to **Instructions** column.	Measure for line voltage at the following points: PCC J/P05-3 to 4. B **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
10	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P05 to AMD104. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.



Board 01AA1

Step	Conditions	Instructions
11	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PCC J/P01-3 + lead at PCC J/P01-1. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
12	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Isolate to one of the following: PCC K02 Cable from PCC K02 coil to PCC J/P01 AC distribution from PCC TB1 through K02 to PCC J/P05. 3. Go to step 16.
13	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PS101 J/P04-6 [C] + lead at PS101 J/P04-2. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
14	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P04 to PCC J/P01. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 16.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101 PCC box AMD104. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
17	Is machine still failing?	Invoke your support structure.
18	Go to **Instructions** column.	Go to page PR 901.

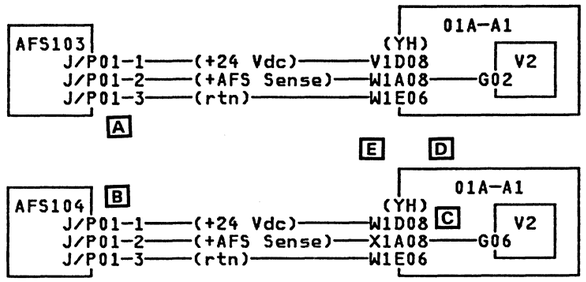


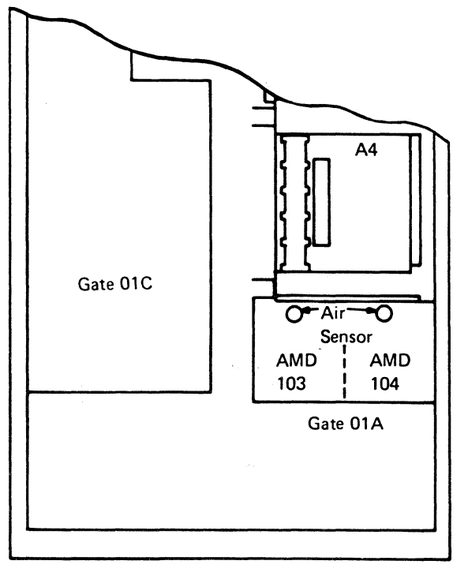
Air Flow Sensor (AFS) Failure

You are here to isolate an indication of an AFS103 or AFS104 failure.

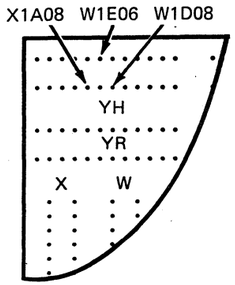
The AFS must heat to a fault condition within 30 seconds after +24 Vdc and +5 Vdc become active from PS101 to 01A-A1 board. After power-on action, AFS must cool to a no-fault condition.

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at the failing AFS: AFS103 J/P01 AFS104 J/P01. 3. Set PCC CB1 and CB2 on. 4. Measure for +24 Vdc at the failing AFS at the following points (- lead at pin 3): AFS103 P01-1 to 3 AFS104 P01-1 to 3. [A] Meter must be connected to the 'P' connector (cable end).
2	Is voltage less than +22 Vdc?	Go to step 13.
3	Go to **Instructions** column.	Measure for +3.3 Vdc at the failing AFS at the following points (- lead to pin 3): AFS103 P01-2 to 3 AFS104 P01-2 to 3. [B] Meter must be connected to the 'P' connector (cable end).
4	Is voltage greater than +3 Vdc?	Go to step 10.
5	Go to **Instructions** column.	Measure for +3.3 Vdc at the failing AFS at the following points (- lead at 01A-A1V2D08): AFS103 01A-A1W1A08 AFS104 01A-A1X1A08. [C]



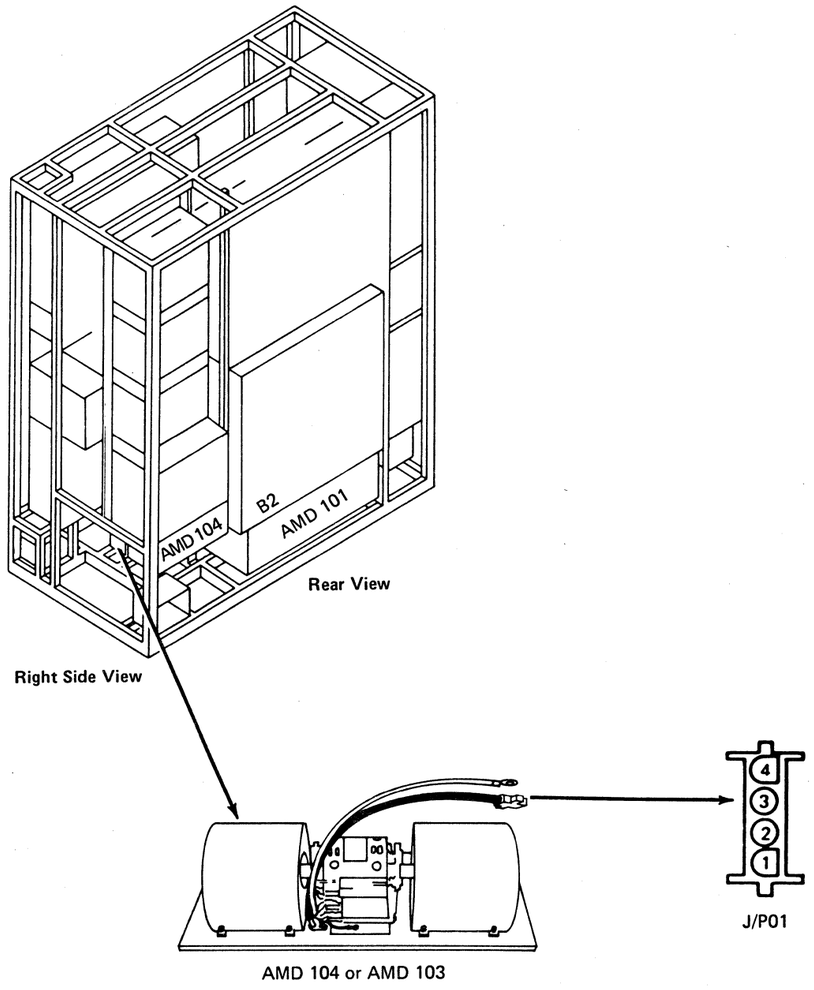


Right Side View



Board 01AA1

Step	Conditions	Instructions
6	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YH (card side) to AFS103 and AFS104. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 16.
7	Go to **Instructions** column.	Measure for +3.3 Vdc at the failing AFS at the following points (- lead at 01A-A1V2D08): AFS103 01A-A1V2G02 AFS104 01A-A1V2G06. [D]
8	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 16.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at the failing AFS: AFS103 J01 AFS104 J01. 3. Measure for a voltage change from 3.3 to 0 Vdc for the failing AFS at the following points (- lead at pin 3): AFS103 J/P01-2 to 3 AFS104 J/P01-2 to 3. 4. Set PCC CB1 and CB2 on. Voltage is present for 1 second.
11	Did voltage level change?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 16.



Step	Conditions	Instructions
12	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange failing AFS103 or AFS104. 3. Go to step 16.
13	Go to **Instructions** column.	Measure for +24 Vdc at the failing AFS at the following points (- lead at 01A-A1V2D08): AFS103 01A-A1V1D08 [E] AFS104 01A-A1W1D08.
14	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YH (card side) to AFS103 and AFS104. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 16.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board AFS103 AFS104. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
17	Is there an AFS failure power code?	Invoke your support structure.
18	Go to **Instructions** column.	Go to page PR 901.

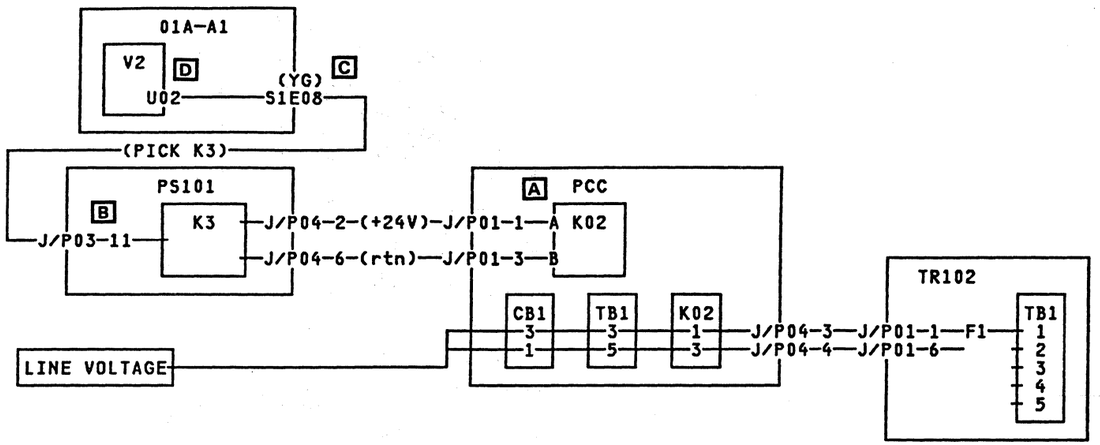
Power Code Displayed With Power Off

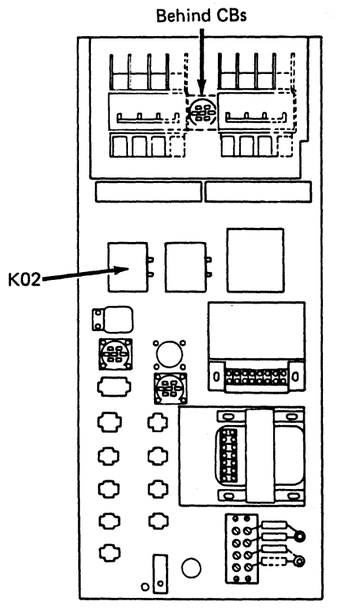
You are here because a two-digit power code displayed before power on. DC voltages are present at the 01A-A2 board before power on.

Possible causes:

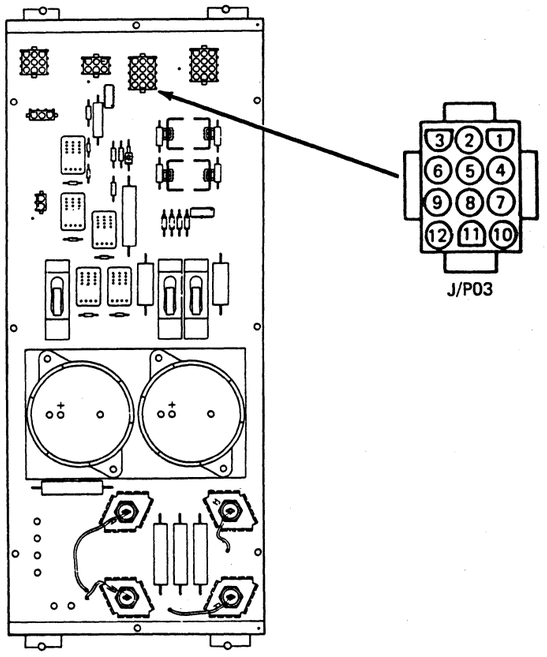
- PCC K02
- PS101
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PCC J/P01-3 [A] + lead at PCC J/P01-1.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Disconnect the line voltage plug. 4. Exchange PCC K02. 5. Reconnect the line voltage plug. 6. Set PCC CB1 and CB2 on. 7. Go to step 10.
3	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 [B] + lead at PS101 J/P03-11.
4	Is voltage greater than +4.5 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 4. Go to step 10.
5	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 [C] + lead at 01A-A1S1E08.



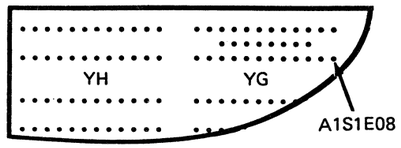


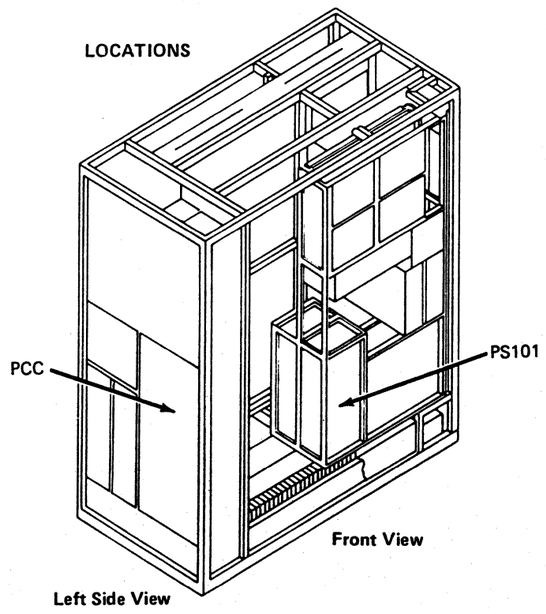
Primary Control Compartment (PCC)



PS101

Step	Conditions	Instructions
6	Is voltage greater than +4.5 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange the cable from 01A-A1YG to PS103 J/P03. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 4. Go to step 10.
7	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at 01A-A1V2U02.
8	Is voltage greater than +4.5 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 10.
9	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1V2 card. 4. Go to step 10.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box TR102 PS101 01A-A1 board. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
11	Go to **Instructions** column.	Go to page PR 901.





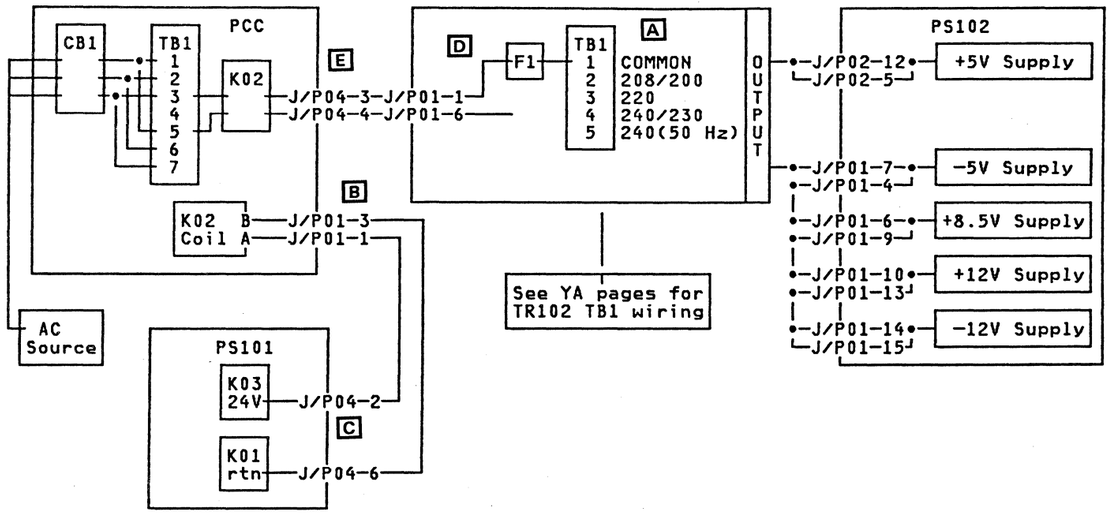
Missing Voltage At PS102

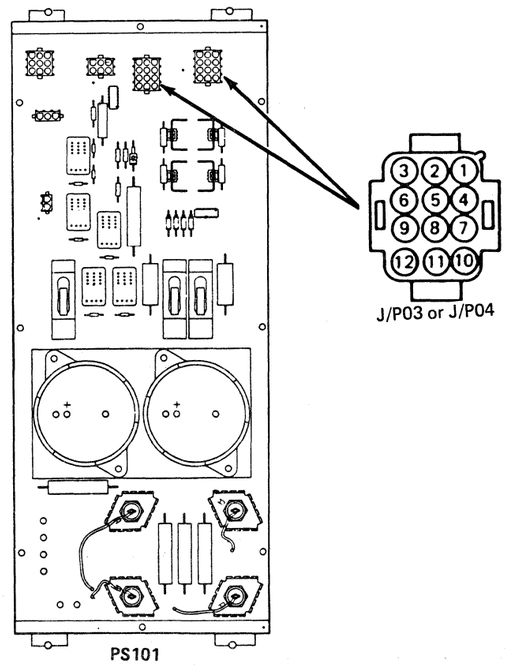
You are here because voltage is missing at PS102.

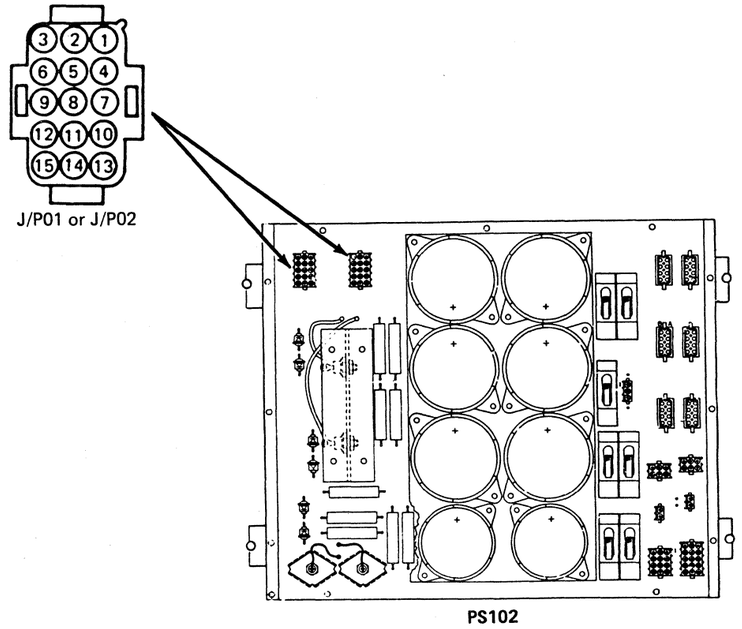
Possible causes:

- TR102
- PCC K02
- PS101 K3
- 01A-A1V2 card.

Step	Conditions	Instructions
1	Go to **Instructions** column.	Measure for line voltage at the following points: TR102 TB1-1 to 2 (208V) TR102 TB1-1 to 3 (220V) [A] TR102 TB1-1 to 4 (240V). **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
2	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 28.
3	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check TR102 F1.
4	Is F1 open?	1. Exchange F1. 2. Set PCC CB1 and CB2 on. 3. Press Check Reset. 4. Press service panel Power On. 5. If power complete, go to page END 001.

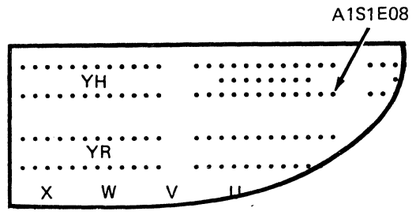




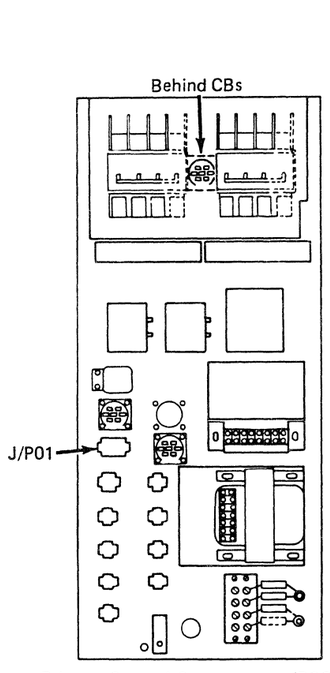


Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 on. 2. Measure for +24 Vdc at the following points: - lead at PCC J/P01-3 [B] + lead at PCC J/P01-1. 3. Press Check Reset. 4. Press service panel Power On.
6	Is voltage greater than +22 Vdc?	Go to step 16.
7	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PS101 J/P04-6 [C] + lead at PS101 J/P04-2. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
8	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS101 J/P04 to PCC J/P01. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 28.
9	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 J/P03-11. **Note:** Voltage level should change from +4 to 0 Vdc. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
10	Did voltage level change?	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 28.
11	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1S1E08. **Note:** Voltage level should change from +4 Vdc to 0 Vdc. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
12	Did voltage level change?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YG to PS101 J/P03. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 28.
13	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U02. **Note:** Voltage level should change from +4 to 0 Vdc. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
14	Did voltage level change?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 28.

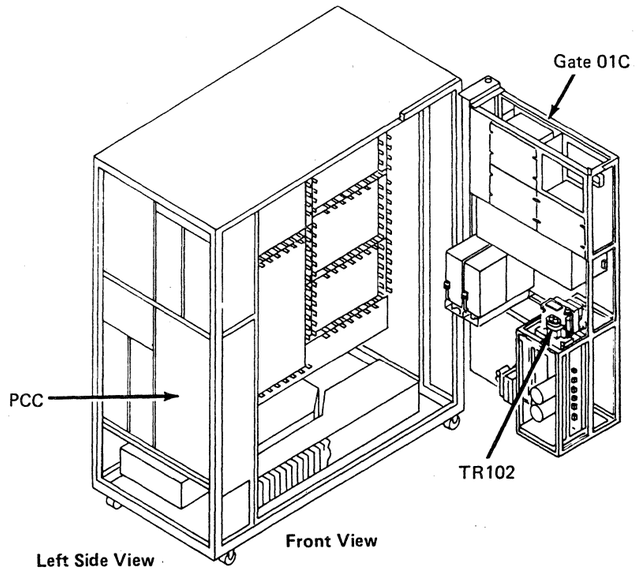
Step	Conditions	Instructions
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 28.
16	Go to **Instructions** column.	1. Open PCC box, and visually check PCC K02. 2. Press Check Reset. 3. Press service panel Power On.
17	Does PCC K02 fail to pick?	1. Set PCC CB1 and CB2 off. 2. Disconnect wall plug. 3. Exchange PCC K02 or cable from PCC K02 to PCC J/P01. 4. Go to step 28.
18	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at TR102 J/P01. 3. Set PCC CB1 and CB2 on. 4. Measure for line voltage at the following points: - lead at TR102 P01-1 [D] + lead at TR102 P01-6 (cable end). **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
19	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR102. 3. Go to step 28.



Board 01AA1



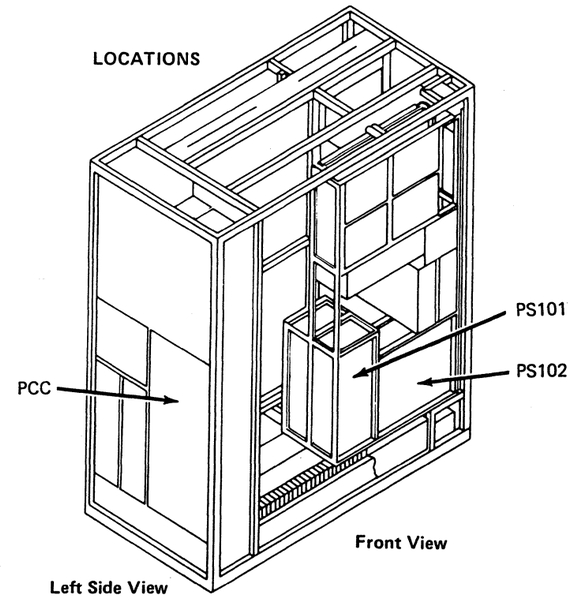
Primary Control Compartment (PCC)



Step	Conditions	Instructions
20	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PCC J/P04. 3. Set PCC CB1 and CB2 on. 4. Measure for line voltage at the following points: - lead at PCC J04-3 + lead at PCC J04-4. [E] **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
21	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P04 to TR102. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 28
22	Go to **Instructions** column.	Measure for line voltage at the following points: - lead at PCC K02-T1 + lead at PCC K02-T3. **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
23	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P04 to PCC K02. **Note:** Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 28.

Step	Conditions	Instructions
24	Go to **Instructions** column.	Measure for line voltage at the following points: - lead at PCC K02-L1 + lead at PCC K02-L3. **Note:** For line voltage value, see label on PCC box. To make a voltage check: 1. Press Check Reset. 2. Press service panel Power On.
25	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange PCC K02. 3. Go to step 28.
26	Go to **Instructions** column.	1. Isolate line voltage distribution problem to one of the following and exchange: CB1 T1, 2, 3 to TB2-1, 2, 3 TB2-1 to TB2-5 TB2-3, 5 to K02-L1 and L3. **Note:** Check for loose wires before exchanging cable. 2. Go to step 28.
27	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101 TR102 PS102. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
28	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Seq BA295	PN 0445849 Pg 3 of 3	EC A02214 15 SEP 83	EC A02217 10 JAN 84		

Lamp Test

You are here because the Lamp Test fails to light the following indicators:

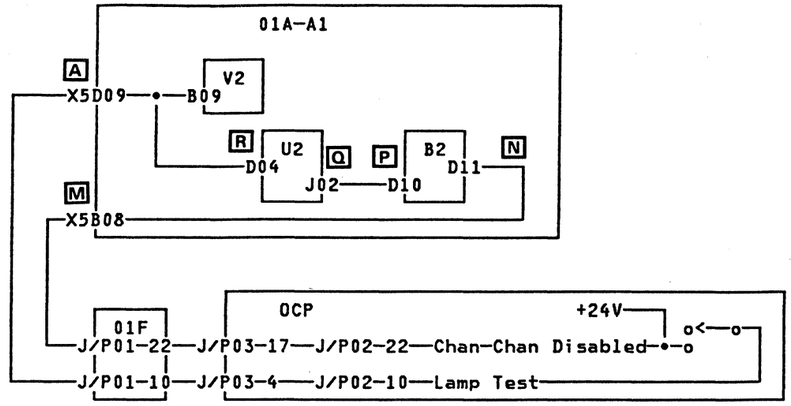
Service panel
- Power In Process
- Power Complete
- Basic Check
- MBC On
- I/O Power Hold.

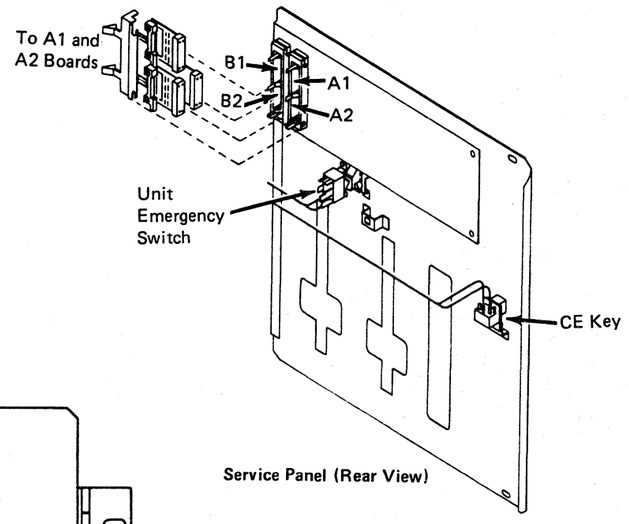
OCP
- Power In Process
- Power Complete
- Basic Check
- System
- Wait
- Chan-Chan Disabled.

Possible causes:

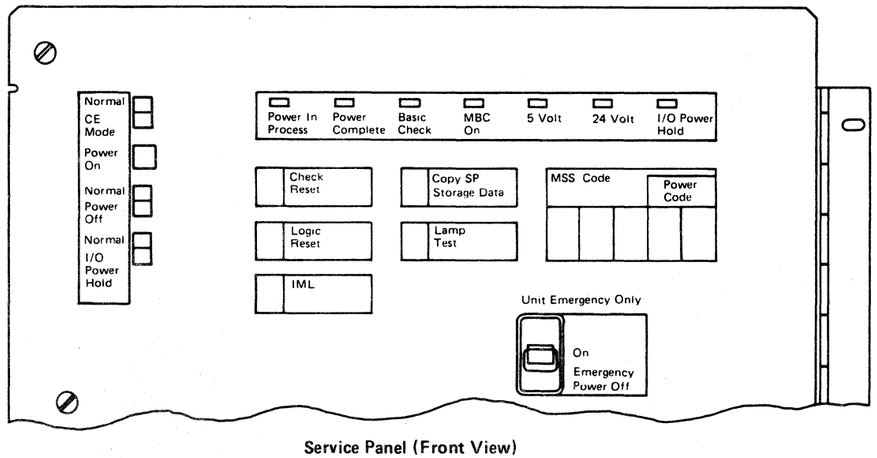
- 01A-A1V2 card
- Service panel
- OCP
- 01A-A1B2 (CTCA) card
- 01A-A1U2 reset card
- 01A-A2T2 (system or wait).

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set I/O Power Hold to Normal. 2. Press Lamp Test on the service panel.
2	Does I/O Power Hold or MBC On indicator fail to light?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 52.
3	Do only the MBC On and I/O Power Hold indicators light?	Go to step 14.
4	Do OCP indicators Basic Check or Power In Process or Power Complete fail to light?	Go to step 17.
5	Do service panel indicators Basic Check or Power In Process or Power Complete fail to light?	Go to step 20.
6	Go to **Instructions** column.	Press OCP Lamp Test.



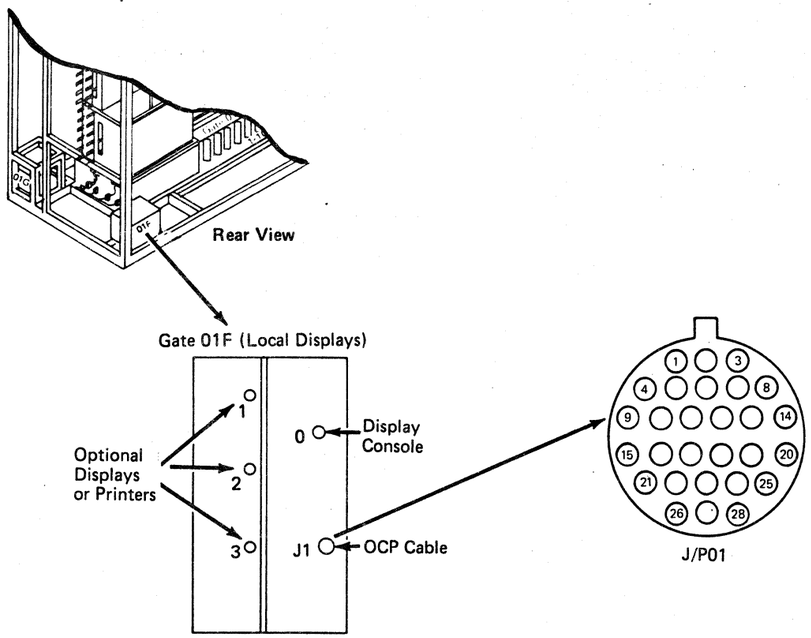


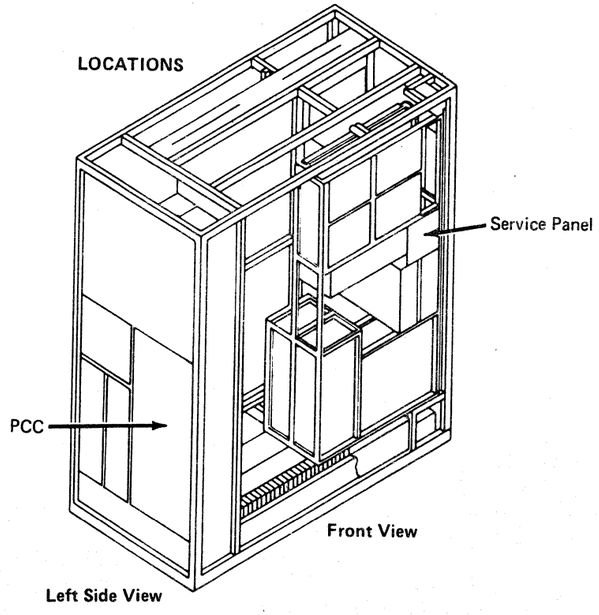
Service Panel (Rear View)



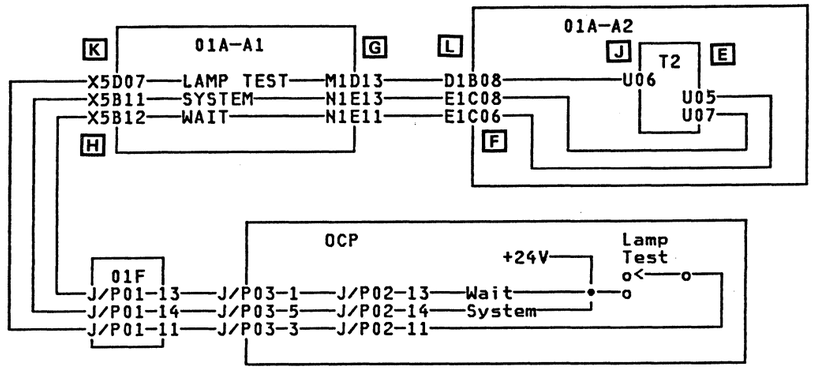
Service Panel (Front View)

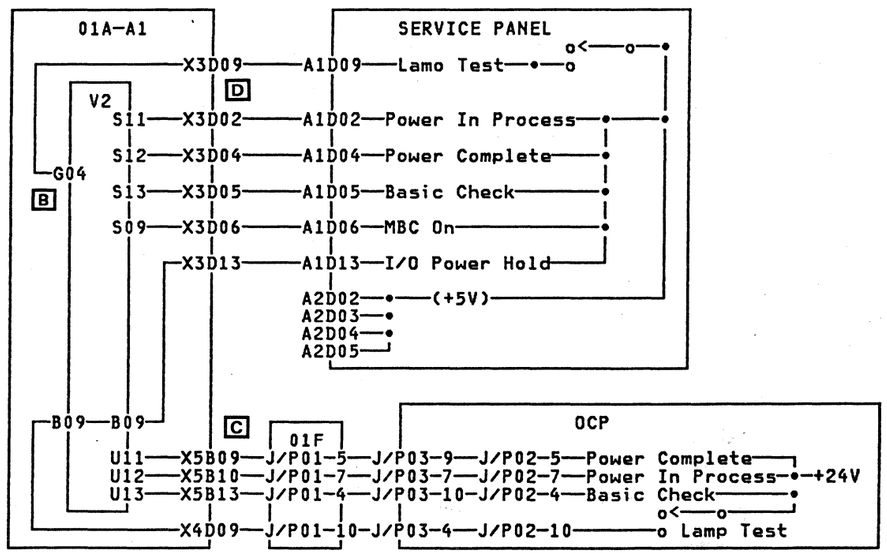
Step	Conditions	Instructions
7	Do System or Wait indicators fail to light?	Go to step 23. **Note:** MSS or processor power must be on.
8	Does Chan-Chan Disabled indicator fail to light?	Go to step 41. **Note:** MSS or processor power must be on.
9	Do only the MBC On and I/O Power Hold indicators light?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 52.
10	Do all indicators light except MBC On and I/O Power Hold?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 52.
11	Do all indicators fail?	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D09. [A] 2. Press OCP Lamp Test. 3. Voltage must now be +24 Vdc.
12	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 52.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check cable connectors for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging OCP. 3. Go to step 52.





Step	Conditions	Instructions
14	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2G04. [B] 2. Press Lamp Test on the service panel. 3. Voltage must now be +5 Vdc.
15	Is voltage greater than +4.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 52.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connectors at 01A-A1X3 and service panel connector A1 for pushed in pins and seating before exchanging service panel. Also suspect failure of 01A-A1 board. 3. Go to step 52.
17	Go to **Instructions** column.	1. Measure OCP indicators for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5B10 (Power Complete) [C] + lead at 01A-A1X5B09 (Power In Process) + lead at 01A-A1X5B13 (Basic Check). 2. Press and hold Lamp Test. 3. Measure for 0 Vdc at the above points.
18	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. **Note:** Also suspect 01A-A1 board. 3. Go to step 52.





Step	Conditions	Instructions
19	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging cable. 3. Go to step 52.
20	Go to **Instructions** column.	1. Measure service panel indicators for +3.5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3D04 (Power Complete). + lead at 01A-A1X3D02 [D] (Power In Process). + lead at 01A-A1X3D05 (Basic Check). 2. Press and hold Lamp Test. 3. Measure for 0 Vdc at the above points.
21	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Also suspect 01A-A1 board. 4. Go to step 52.
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. Also suspect 01A-A1 board. 3. Go to step 52.
23	Go to **Instructions** column.	Measure for +24 Vdc at the following points for the failing indicator: - lead at 01A-A2T2D08 + lead at 01A-A2T2U05 (Wait) + lead at 01A-A2T2U07 (Sys). [E]

Step	Conditions	Instructions
24	Is voltage greater than +22 Vdc?	Go to step 32.
25	Go to **Instructions** column.	Measure for +24 Vdc at the following points for the failing indicator: - lead at 01A-A2T2D08 + lead at 01A-A2E1C06 (Wait) [F] + lead at 01A-A2E1C08 (Sys).
26	Is voltage greater than +22 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2 board. 4. Go to step 52.
27	Go to **Instructions** column.	Measure for +24 Vdc at the following points for the failing indicator: - lead at 01A-A1T2D08 + lead at 01A-A1N1E11 (Wait) [G] + lead at 01A-A1N1E13 (Sys).
28	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YN to 01A-A2YB. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 52.
29	Go to **Instructions** column.	Measure for +24 Vdc at the following points for the failing indicator: - lead at 01A-A1T2D08 + lead at 01A-A1X5B12 (Wait) [H] + lead at 01A-A1X5B11 (Sys).
30	Is voltage greater than +22 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 52.

Step	Conditions	Instructions
31	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging cable. 3. Go to step 52.
32	Go to **Instructions** column.	1. Measure for +1.6 Vdc at the following points: - lead at 01A-A2T2D08 + lead at 01A-A2T2U06. [J] 2. Press Lamp Test on OCP. 3. Voltage must now be 0 Vdc.
33	Is voltage less than +1.2 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2T2 card. 3. Go to step 52.
34	Go to **Instructions** column.	1. Measure for +1.6 Vdc at the following points: - lead at 01A-A2T2D08 + lead at 01A-A1X5D07. [K] 2. Press OCP Lamp Test. 3. Voltage must now be 0 Vdc.
35	Is voltage greater than +1.2 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging cable. 3. Go to step 52.

Step	Conditions	Instructions
36	Go to **Instructions** column.	1. Measure for +1.6 Vdc at the following points: - lead at 01A-A2T2D08 + lead at 01A-A1M1D13. 2. Press OCP Lamp Test. 3. Voltage must now be 0 Vdc.
37	Is voltage greater than +1.2 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 52.
38	Go to **Instructions** column.	1. Measure for +1.6 Vdc at the following points: - lead at 01A-A2T2D08 + lead at 01A-A2D1B08. [L] 2. Press OCP Lamp Test. 3. Voltage must now be 0 Vdc.
39	Is voltage greater than +1.2 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YN to 01A-A2YB. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 52.
40	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2 board. 4. Go to step 52.
41	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1U2D08 + lead at 01A-A1X5B08. [M]

Step	Conditions	Instructions
42	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging OCP. 3. Go to step 52.
43	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1U2D08 [N] + lead at 01A-A1B2D11.
44	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 52.
45	Go to **Instructions** column.	1. Measure for +4 Vdc at the following points: - lead at 01A-A1U2D08 [P] + lead at 01A-A1B2D10. 2. Press Lamp Test on OCP. 3. Voltage must now be 0 Vdc.
46	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1B2 card. 4. Go to step 52.
47	Go to **Instructions** column.	1. Measure for +4 Vdc at the following points: - lead at 01A-A1U2D08 [Q] + lead at 01A-A1U2J02. 2. Press OCP Lamp Test. 3. Voltage must now be 0 Vdc.
48	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 52.
49	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1U2D08 [R] + lead at 01A-A1U2D04. 2. Press OCP Lamp Test. 3. Voltage must now be +24 Vdc.
50	Is voltage greater than +22 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2U2 card. 4. Go to step 52.
51	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 52.
52	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel 01F-J/P1 OCP. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press Lamp Test on OCP and observe indicators. 6. Press Lamp Test on service panel and observe indicators.
53	Is there any indicator failure?	Invoke your support structure.
54	Go to **Instructions** column.	Go to page PR 901.

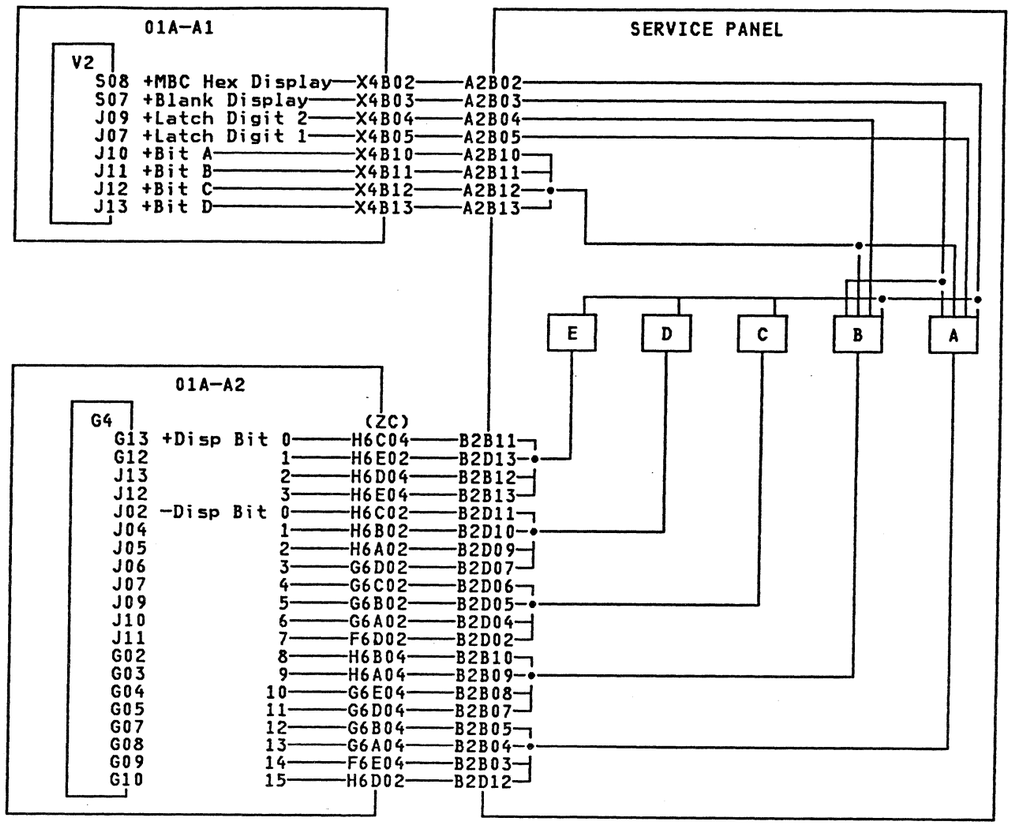
Hex Display

You are here because the hex display fails to indicate properly. Possible causes:

- 01A-A1V2 card
- Service panel
- 01A-A2G4 card.

Note: MBC to hex display is a functional check only. MSS Diagnostic Option 90 is a MSS to hex display check only.

Step	Conditions	Instructions
1	Is the hex display blank?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 13.
2	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check the following for proper seating: 01A-A2G4 card 01A-A2ZC cable Service panel connectors A1, A2, and B2 01A-A1X4 cable. 3. Set PCC CB1 and CB2 on. 4. Trip PS102 CP1 (power code 0A or A0 should be displayed). 5. Reset PS102 CP1.
3	Does the hex display equal 0A or A0?	Go to step 9.
4	Go to **Instructions** column.	1. Measure for dc voltages indicated in table A: - lead at 01A-A1V2D08 + lead at pin location. 2. Record voltages measured.



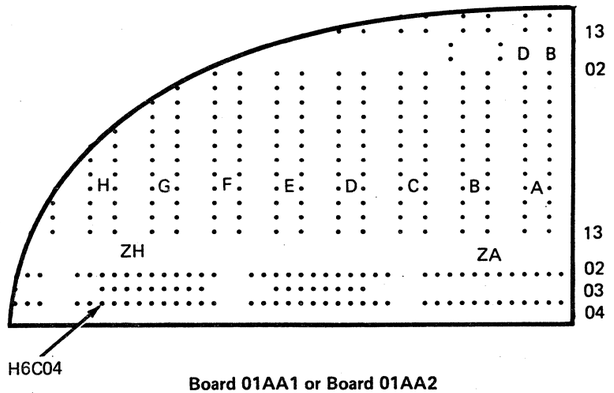
A

Pin Location	Line Name	Voltage
01A-A1X4B02	+ MBC Hex Display	> +5V
01A-A1X4B03	+ Blank Display	< +0.8V
01A-A1X4B04	+ Latch Digit 2	> +5V
01A-A1X4B05	+ Latch Digit 1	> +5V

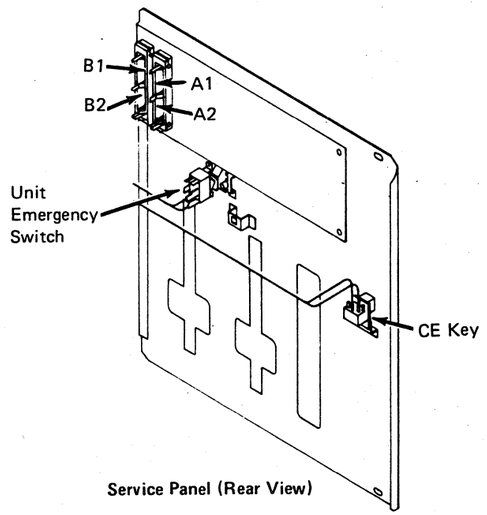
B

Pin Location	Line Name	Voltage After Check Reset
01A-A1X4B02	+ MBC Hex Display	< +0.8V
01A-A1X4B03	+ Blank Display	< +0.8V
01A-A1X4B04	+ Latch Digit 2	< +0.8V
01A-A1X4B05	+ Latch Digit 1	< +0.8V

Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Press Check Reset. 2. Measure for dc voltages indicated in table [B]: - lead at 01A-A1V2D08 + lead at pin location. 3. Record voltages measured.
6	Is any voltage not correct?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Check board nets: 01A-A1X4B02 to V2S08 01A-A1X4B03 to V2S07 01A-A1X4B04 to V2J09 01A-A1X4B05 to V2J07. 4. Set PCC CB1 and CB2 on. 5. Go to step 9.
7	Are all voltages correct and the hex display does not equal 0A or A0?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Set PCC CB1 and CB2 on. 4. Trip PS102 CP1. 5. Reset PS102 CP1.
8	Is the hex display not equal to 0A or A0?	1. Set PCC CB1 and CB2 off. 2. Exchange the following FRUs in the order given: 01A-A1V2 card Cable from 01A-A1X4 to the service panel connector A2 01A-A1 board. 3. Set PCC CB1 and CB2 on. 4. Go to step 9.
9	Go to **Instructions** column.	1. Insert DIAG1 in diskette drive 1. 2. Press service panel Power On.
10	Is MSS Diagnostic screen displayed?	1. Run MSS Diagnostic Option 90. For instructions to run Diagnostic 90, see Volume A06, Service Aids, "Service Panel Checkout Procedure."



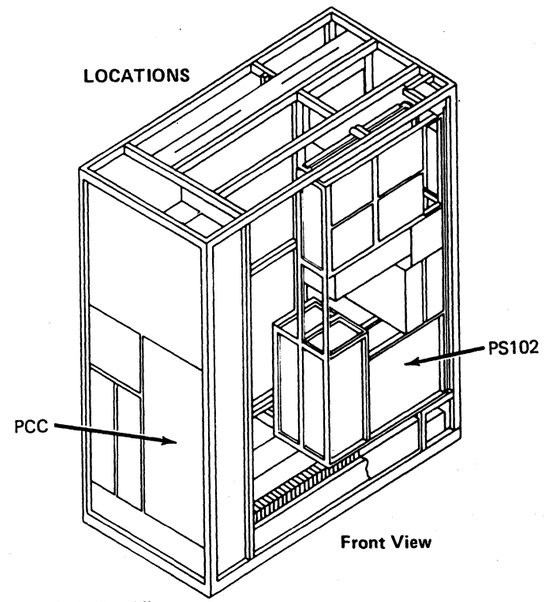
Board 01AA1 or Board 01AA2



Service Panel (Rear View)

Step	Conditions	Instructions
11	Does the hex display equal 80000?	Diagnostic Option 90 failed to start, press Logic Reset again. 1. If 80000 is still displayed, go to "Logic Reset" checkout procedure on page PR 451. **Note:** FUNC1 required for switch checkout procedure.
12	Does Diagnostic Option 90 visual checkout fail?	1. Exchange the following FRUs one at a time in the order given, and rerun MSS Diagnostic Option 90. 01A-A2G4 card Service panel Cable from 01A-A2ZC (card side) to service panel connector B2 01A-A2 board. 2. Go to step 13.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board Service panel. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Set CE Mode switch to Normal. 6. Press service panel Power On. 7. Go to page PR 901.

LOCATIONS



Operator Control Panel (OCP)

You are here because of a failing OCP pushbutton or to verify console pushbutton operations.

Use the following chart to locate the repair actions.

Pushbutton	Go to
Power On/IML	Step 1
Power Off	Step 15
Lamp Test	PR 371
Channel To Channel	Step 16

Power On/IML

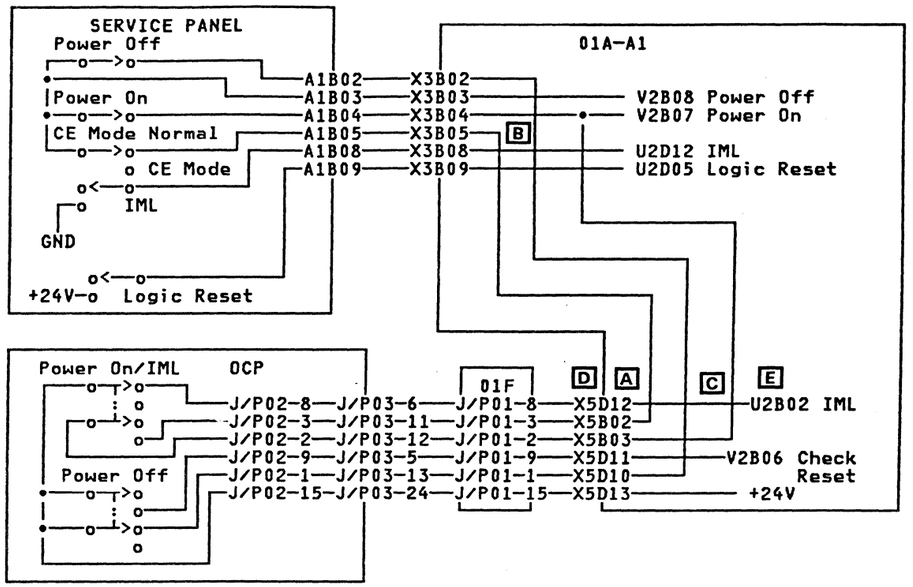
- With power complete and CE Mode switch set to Normal:

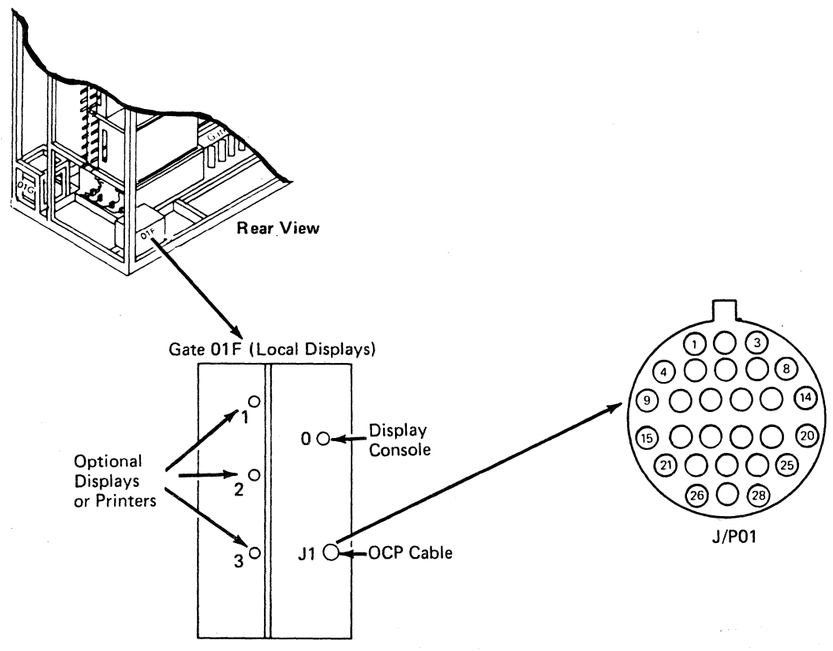
  Pressing Power On/IML with power complete will IML the processor and display the General Selection (Q) screen.

- With power incomplete and CE Mode switch set to Normal:

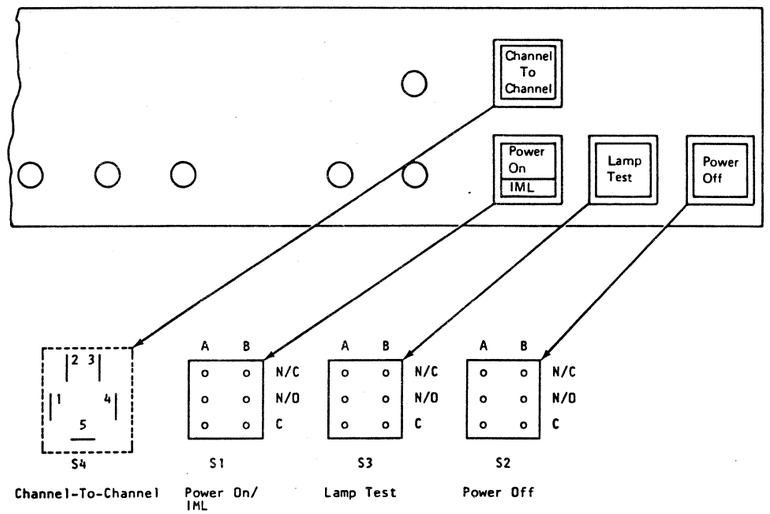
  Pressing Power On/IML with power incomplete will power up the complete system and display the Program Load (QL) screen.

Step	Conditions	Instructions
1	Does OCP IML fail?	Go to step 10.
2	Does OCP Power On fail?	1. Set CE Mode switch to Normal. 2. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1X5B02.
3	Is voltage greater than +22 Vdc?	Go to step 7.
4	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [B] + lead at 01A-A1X3B05.
5	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 37.

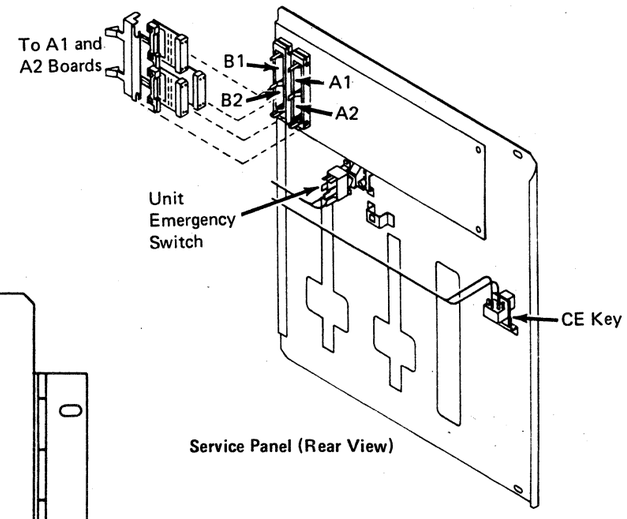




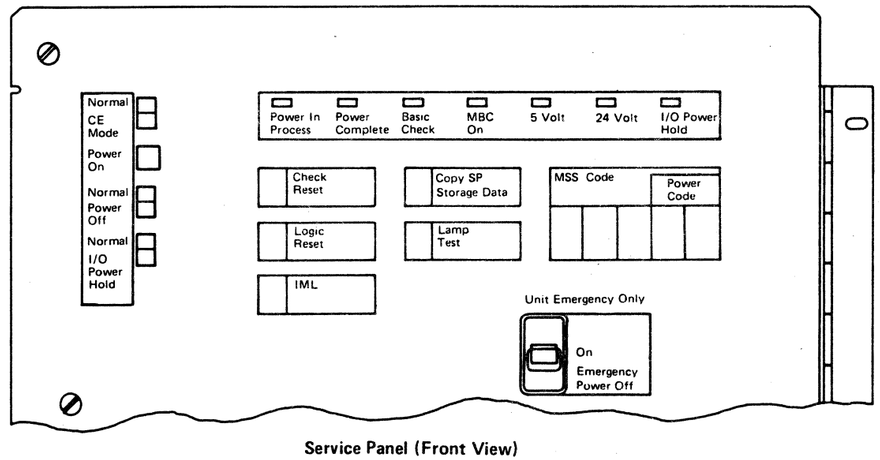
Step	Conditions	Instructions
6	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 37.
7	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5B03. [C] Press Power On/IML on the OCP.
8	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 37.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange OCP (see note). **Note:** Check for open cable, board for bent pins, and cable connector for pushed in pins and seating at the following points before exchanging OCP. 01A-A1X5B02 to 01F J/P1-3 01A-A1X5B03 to 01F J/P1-2 01F J/P1-3 to OCP J/P3-11 01F J/P1-2 to OCP J/P3-12. 3. Go to step 37.
10	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at 01A-A1X5D12. Press Power On/IML on the OCP.



Operator Control Panel



Service Panel (Rear View)



Service Panel (Front View)

Step	Conditions	Instructions
11	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F J/P1, and OCP before exchanging OCP. 3. Go to step 37.
12	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [E] + lead at 01A-A1U2B02. Press Power On/IML on the OCP.
13	Is 0 Vdc present?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Also suspect open in board net from 01A-A1X5D12 to 01A-A1U2B02. 4. Go to step 37.
14	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 37.

Power Off

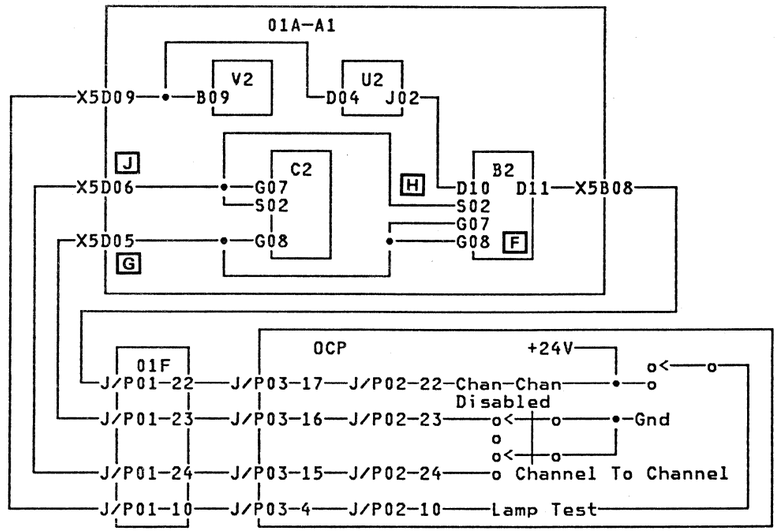
Pressing OCP Power Off causes the complete system to power down.

15	Does OCP Power Off fail?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. 3. Go to step 37.

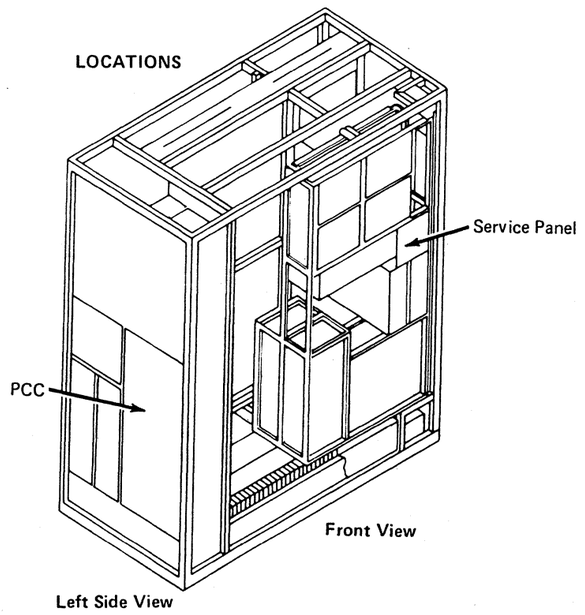
Channel To Channel

Pressing Channel To Channel on the OCP causes the Chan-Chan Disabled indicator to light and CTCA interfaces to be disabled.

Step	Conditions	Instructions
16	Is operation correct?	Go to page PR 901.
17	Go to **Instructions** column.	Press Lamp Test on the OCP.
18	Does Chan-Chan Disabled indicator fail to light?	Go to page PR 371.
19	Go to **Instructions** column.	Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 [F] + lead at 01A-A1B2G08. **Note:** The CTCA is assumed to be enabled at this time.
20	Is voltage less than +0.8 Vdc?	Go to step 24.
21	Go to **Instructions** column.	Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 [G] + lead at 01A-A1X5D05.
22	Is voltage greater than +0.8 Vdc?	Go to step 36.
23	Go to **Instructions** column.	Go to step 35
24	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 [H] + lead at 01A-A1B2S02.
25	Is voltage greater than +3.5 Vdc?	Go to step 27.
26	Go to **Instructions** column.	Go to step 34.



Step	Conditions	Instructions
27	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1B2G08. Press Channel To Channel.
28	Is voltage less than +3.5 Vdc?	Go to step 34.
29	Go to **Instructions** column.	Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1B2S02.
30	Is voltage less than +0.8 Vdc?	Go to step 34.
31	Go to **Instructions** column.	Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D06. [J]
32	Is voltage less than +0.8 Vdc?	Go to step 35.
33	Go to **Instructions** column.	Go to step 36.
34	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A1B2 and C2 CTCA cards. 3. Go to step 37.
35	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2 board. 4. Go to step 37.
36	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F J/P1, and OCP before exchanging OCP. 3. Go to step 37.
37	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel OCP. 3. Go to page PR 901.



Convenience Outlet

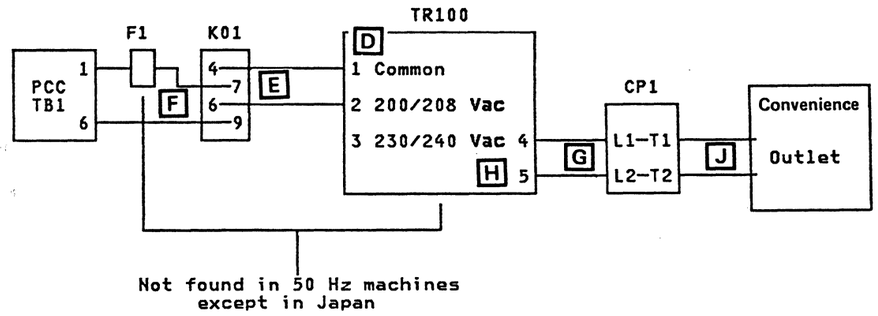
You are here because there is a failure of the convenience outlet.

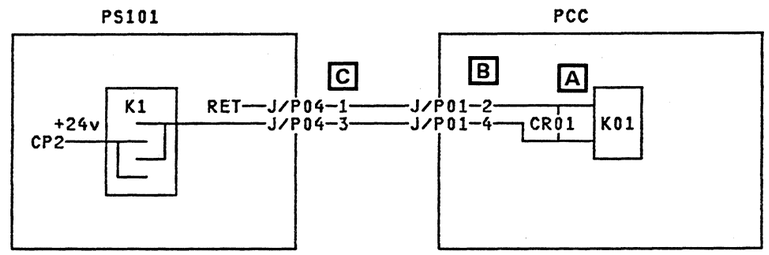
Possible causes:

- Fuse F1
- K01
- TR100
- CP1.

The convenience outlet is active when PCC CB1, PCC CP1, and Unit Emergency switch are all on and customer line voltage is present at the PCC.

Step	Conditions	Instructions
1	Is the service panel 24 Volt indicator off?	Go to page PR 021.
2	Go to **Instructions** column.	1. Check for tripped PCC CP1. 2. Check PCC F1. 3. If necessary, reset CP, or exchange PCC F1. 4. If convenience outlet is OK, go to page END 001.
3	Does CP1 continue to trip or does PCC F1 continue to blow?	Go to step 25.
4	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PCC K01-B + lead at PCC K01-A. [A]
5	Is voltage greater than +22 Vdc?	Go to step 11.
6	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PCC J/P01-2 + lead at PCC J/P01-4. [B]
7	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P01 to PCC K01. 3. Go to step 36.





Seq BA335	PN 0445857 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84			

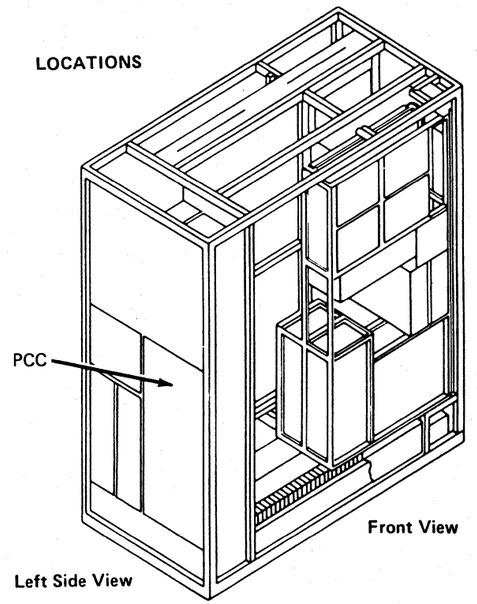
Step	Conditions	Instructions
8	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at PS101 J/P04-1 + lead at PS101 J/P04-3. C
9	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC J/P01 to PS101 J/P04. 3. Go to step 36.
10	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 3. Go to step 36.
11	Go to **Instructions** column.	1. If 50 Hz, go to step 27. 2. Measure for line voltage at the following points: TR100 TB1-1 to 2 (200/208 **Vac**) TR100 TB1-1 to 3 (220/240 **Vac**). D **Note:** For line voltage value, see label on PCC box.
12	Is line voltage present?	Go to step 18.
13	Go to **Instructions** column.	Measure for line voltage at the following points: PCC K01-4 to 6. E
14	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC K01 to TR100 TB1. **Note:** Check cable for loose wires before exchanging cable. 3. Go to step 36.

Step	Conditions	Instructions
15	Go to **Instructions** column.	Measure for line voltage at the following points: PCC K01-7 to 9. F **Note:** For line voltage value, see label on PCC box.
16	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange PCC K01. 3. Go to step 36.
17	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC TB1 to PCC K01. **Note:** Check cable for loose wires at K01, F1, and TB1 before exchanging cable. 3. Go to step 36.
18	Go to **Instructions** column.	Measure for 115 **Vac** at the following points: PCC CP1 T1 to T2.
19	Is ac voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange convenience outlet and cable from PCC CP1 to convenience outlet. **Note:** Check cable for loose wires before exchanging cable. 3. Go to step 36.
20	Go to **Instructions** column.	Measure for 115 **Vac** at the following points: PCC CP1-L1 to L2. G
21	Is ac voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange CP1. 3. Go to step 36.

Step	Conditions	Instructions
22	Go to **Instructions** column.	Measure for 115 **Vac** at the following points: TR100 TB1-4 to 5. [H]
23	Is ac voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from TR100 to PCC CP1. **Note:** Check cable for loose wires before exchanging cable. 3. Go to step 36.
24	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange TR100. **Note:** Check cable connectors for pushed in pins and seating before exchanging TR100. 3. Go to step 36.
25	Is CP1 tripped?	1. Isolate to the following: Convenience outlet PCC CP1 Cable from CP1 to outlet. 2. Go to step 36.
26	Is PCC F1 open?	1. Isolate to one of the following: PCC K01 PCC TR100 PCC CP1 Cable from CP1 to TR100 Cable from K01 to TR100 Cable from F1 to K01. 2. Go to step 36.
27	Go to **Instructions** column.	Measure for line voltage at the following points: PCC CP1 T1 to T2. [J]
28	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange convenience outlet and cable from PCC CP1 to convenience outlet. **Note:** Check cable for loose wires before exchanging cable. 3. Go to step 36.
29	Go to **Instructions** column.	Measure for line voltage at the following points: PCC CP-L1 to L2.
30	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange CP1. 3. Go to step 36.
31	Go to **Instructions** column.	Measure for line voltage at the following points: PCC K01-4 to 6.
32	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC K01 to PCC CP1. **Note:** Check cable for loose wires before exchanging cable. 3. Go to step 36.
33	Go to **Instructions** column.	Measure for line voltage at the following points: PCC K01-7 to 9. **Note:** For line voltage value, see label on PCC box.
34	Is line voltage present?	1. Set PCC CB1 and CB2 off. 2. Exchange PCC K01. 3. Go to step 36.

Step	Conditions	Instructions
35	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange cable from PCC TB1 to PCC K01. **Note:** Check cable for loose wires at K01, F1, and TB1 before exchanging cable. 3. Go to step 36.
36	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box PS101. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Retry convenience outlet.
37	Is convenience outlet still failing?	Invoke your support structure.
38	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



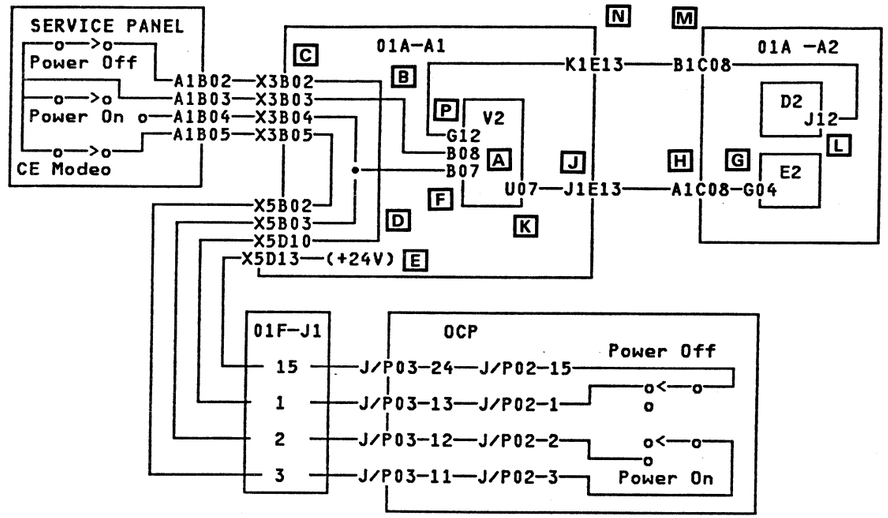
Power On Failure

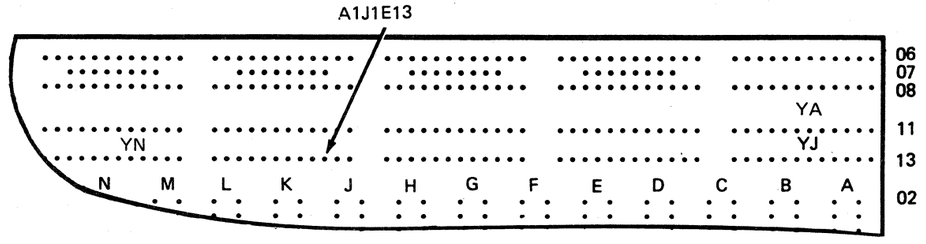
You are here because the system fails to power on and there is no error indication.

Possible causes:

- 01A-A1V2 card
- 01A-A1U2 card
- 01A-A2D2 card
- 01A-A2E2 card
- Top card connectors—misplugged or missing.

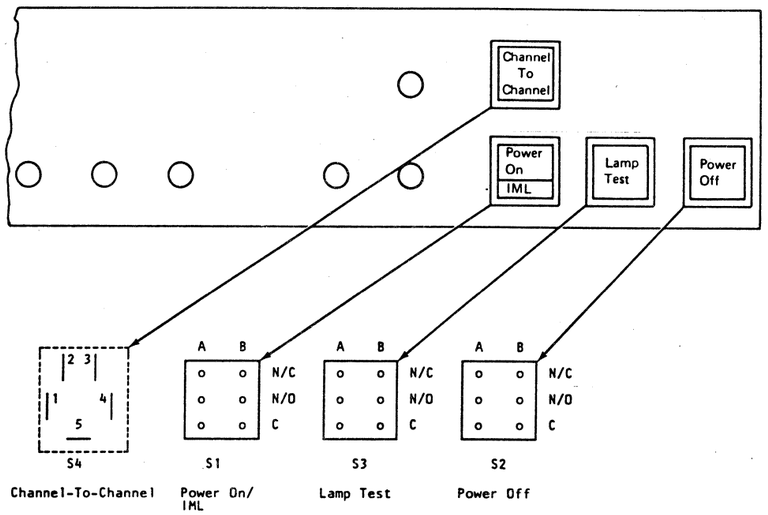
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Verify that the console is connected (01F-J/P1, OCP-J/P3). 3. Set PCC CB1 and CB2 on. 4. Press OCP Power On/IML. If power is complete, go to page PR 901. 5. Set CE Mode switch to Normal. 6. Insert DIAG1 in diskette drive 1.
2	Is the Basic Check indicator on?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 43.
3	Only fails to power on from OCP?	Go to page PR 391.
4	Only fails to power on from service panel?	Go to page PR 441.
5	Fails to power on from both panels?	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1V2B08.
6	Is voltage greater than +22 Vdc?	Go to step 21.
7	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [B] + lead at 01A-A1X3B03.



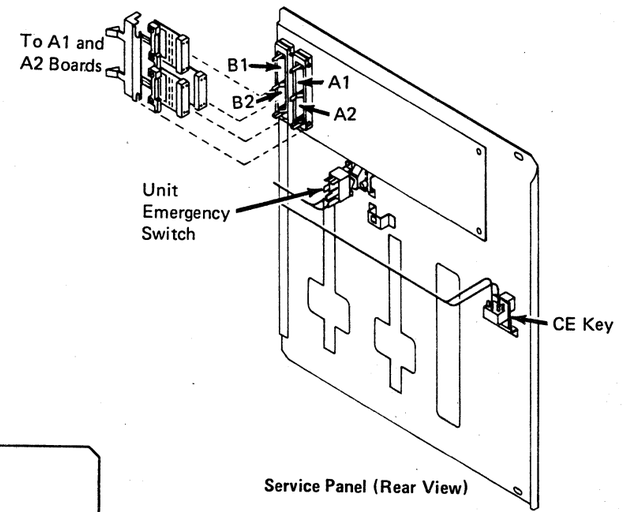


Board 01A1 or Board 01A2

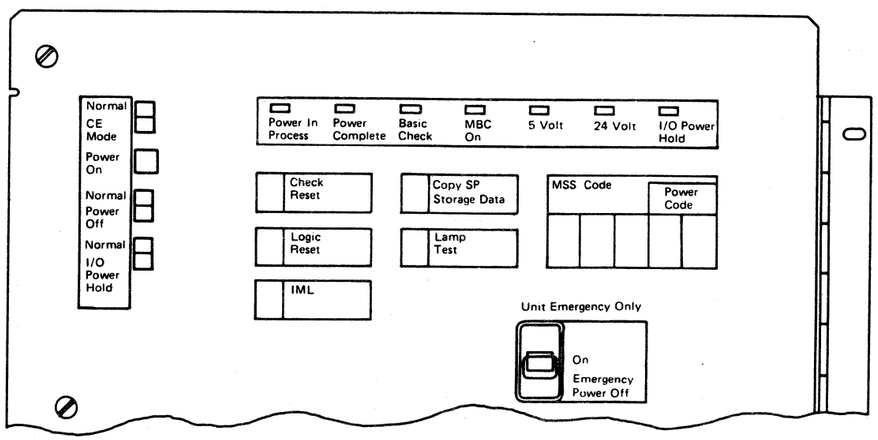
Step	Conditions	Instructions
8	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 43.
9	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead to 01A-A1V2D08 [C] + lead to 01A-A1X3B02.
10	Is voltage less than 22 Vdc?	Go to step 14.
11	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at service panel connector A1. 3. Check seating and continuity between the following points: 01A-A1X3B02 to service panel connector A1B02. 01A-A1X3B03 to service panel connector A1B03.
12	Is an open indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1X3 to service panel connector A1. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 43.
13	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 43.
14	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D10. [D]



Operator Control Panel



Service Panel (Rear View)



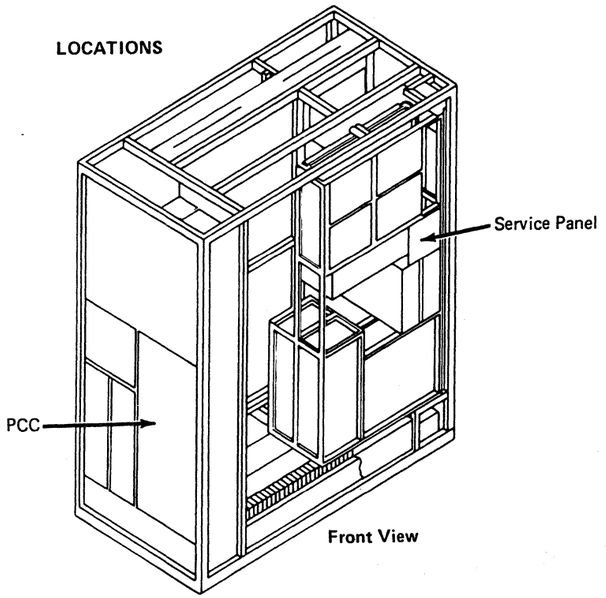
Service Panel (Front View)

Step	Conditions	Instructions
15	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 43.
16	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [E] + lead at 01A-A1X5D13.
17	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 43.
18	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Check seating and continuity at the following cable points: 01A-A1X5D13 to 01F J1-15 01A-A1X5D10 to 01F J1-1 01F P1-15 to OCP J3-24 01F P1-1 to OCP J3-13.
19	Is open indicated in either cable?	1. Exchange open cable. 2. Reconnect cable from 01F J1 to OCP J3. 3. Go to step 43.
20	Go to **Instructions** column.	1. Exchange OCP keyboard. 2. Reconnect cable from 01F J1 to OCP J3. 3. Go to step 43.
21	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [F] + lead at 01A-A1V2B07. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On.
22	Is voltage less than +22 Vdc?	Go to service panel "Power On" pushbutton checkout procedure on page PR 441.
23	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Measure for +3.3 Vdc at the following points: - lead at 01A-A2E2D08 [G] + lead at 01A-A2E2G04.
24	Is voltage greater than +3 Vdc?	Go to step 32.
25	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A2D2D08 [H] + lead at 01A-A2A1C08.
26	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 43.
27	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A1V2D08 [J] + lead at 01A-A1J1E13.
28	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YM to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 43.
29	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A1V2D08 [K] + lead at 01A-A1V2U07.

Step	Conditions	Instructions
30	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 43.
31	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 43.
32	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A2D2D08 [L] + lead at 01A-A2D2J12.
33	Is voltage greater than +3 Vdc?	Go to step 41.
34	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A2D2D08 [M] + lead at 01A-A2B1C08.
35	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 43.
36	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A1V2D08 [N] + lead at 01A-A1K1E13.
37	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YM to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 43.
38	Go to **Instructions** column.	Measure for +3.3 Vdc at the following points: - lead at 01A-A1V2D08 [P] + lead at 01A-A1V2G12.
39	Is voltage greater than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 43.
40	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 43.
41	Go to **Instructions** column.	1. Measure for +3.8 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2J12. 2. Press service panel Power On. 3. Voltage should change from +3.3 Vdc to +3.8 Vdc.
42	Is voltage less than +3 Vdc?	1. Set PCC CB1 and CB2 off. 2. Isolate to 01A-A2D2 or 01A-A1V2 card. **Note:** Check seating of top card connectors at 01A-A2D2W2, X3 and 01A-A1V2. 3. Go to step 43.
43	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board Service panel 01F J/P1 OCP. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
44	Is the MSS Diagnostic screen displayed?	Go to page PR 901.

Step	Conditions	Instructions
45	Is a MSS Ref Code displayed?	Follow instructions displayed on console screen.
46	Is there any two-digit power code or service panel indicator failure?	Go to page PR 001.
47	Does the machine still fail without error indication?	1. Set PCC CB1 and CB2 off. 2. Exchange the following cards or power supply: 01A-A1V2 card 01A-A1U2 card 01A-A2D2 card 01A-A2E2 card 01A-A2F2 card PS101 Top card connectors. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
48	Go to **Instructions** column. on console?	Go to page PR 901.

LOCATIONS



Left Side View

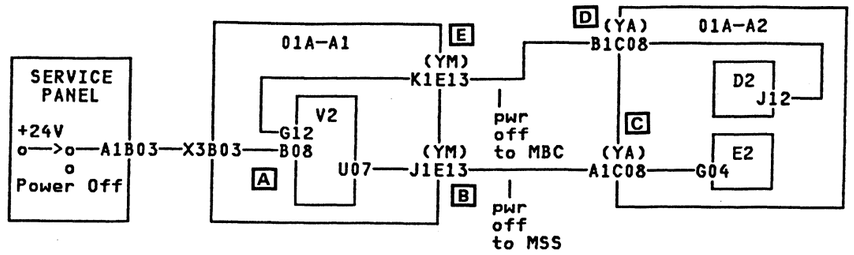
Power Off Failure

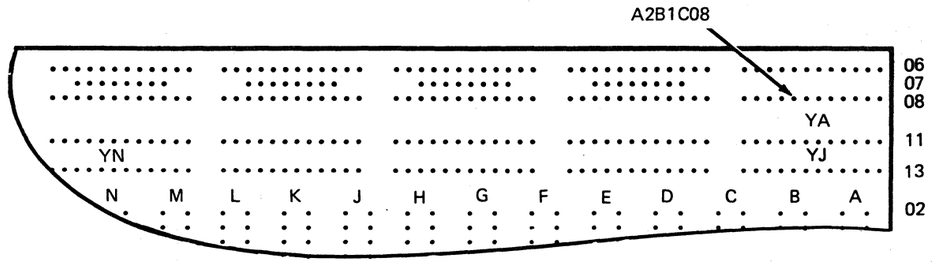
You are here because the processor fails to power off.

Possible causes:

- OCP
- Service panel
- 01A-A1V2 card
- 01A-A2D2 card
- 01A-A2E2 card.

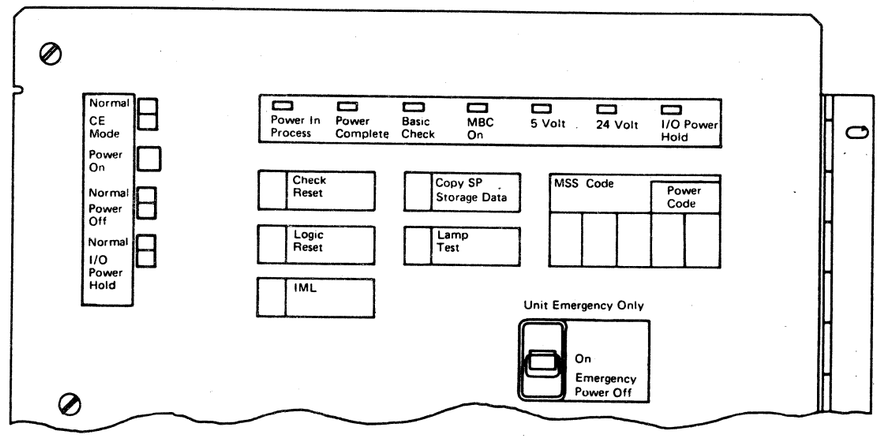
Step	Conditions	Instructions
1	Only fails to power off from service panel?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 16.
2	Only fails to power off from OCP?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. 3. Go to step 16.
3	Fails to power off from both panels?	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1V2B08. 2. Set service panel Power Off switch to Power Off and then back to Normal. 3. Voltage is expected to go from 24V to 0V.
4	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Also suspect board net from 01A-A1X3B03 to 01A-A1V2B08. 4. Go to step 16.
5	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 [B] + lead at 01A-A1J1E13.



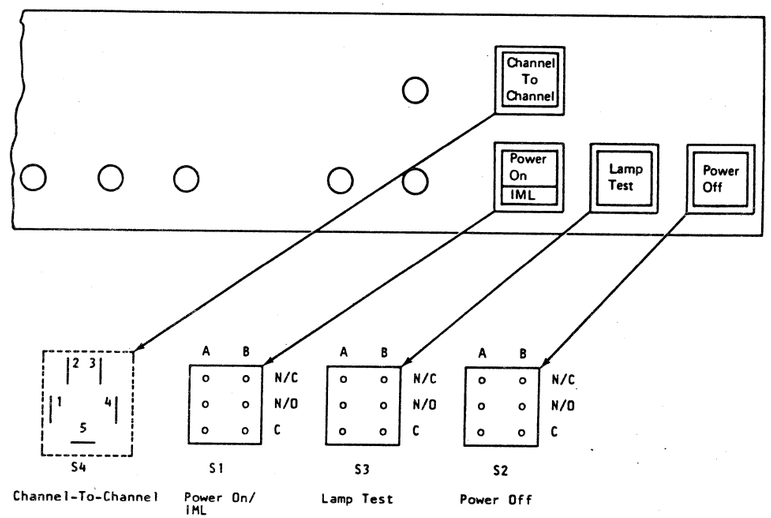


Board 01A1 or Board 01A2

Step	Conditions	Instructions
6	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. **Note:** A TCC could also be defective. Ensure TCCs are seated and the TCC arrow is pointing up. 3. Also suspect net from 01A-A1V2U07 to 01A-A1J1E13. 4. Go to step 16.
7	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 [C] + lead at 01A-A2A1C08.
8	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YM to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 16.
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2E2 card. 3. Also suspect open net from 01A-A2E2G04 to 01A-A2A1C08.
10	Is machine not failing?	Go to step 16.
11	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 [D] + lead at 01A-A2B1C08.
12	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2D2 card. 3. Also suspect open net from 01A-A2D2J12 to 01A-A2B1C08. 4. Go to step 16.



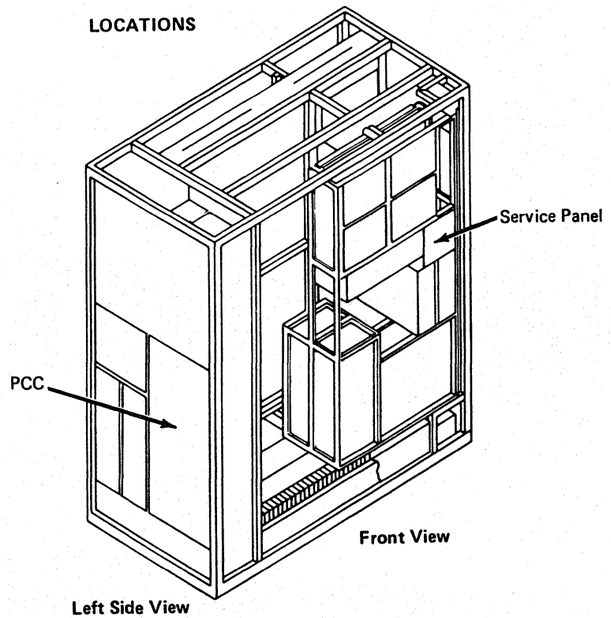
Service Panel (Front View)



Operator Control Panel

Step	Conditions	Instructions
13	Go to **Instructions** column.	Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1K1E13. [E]
14	Is voltage greater than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2YA to 01A-A1YM. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 16.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. **Note:** A TCC could also be defective. Ensure TCCs are seated and the TCC arrow is pointing up. 3. Also suspect open net from 01A-A1K1E13 to 01A-A1V2G12. 4. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board Service panel OCP. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On.
17	Is machine still failing?	Invoke your support structure.
18	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Seq BA360	PN 0445862 Pg 1 of 1	EC A02214 15 SEP 83				

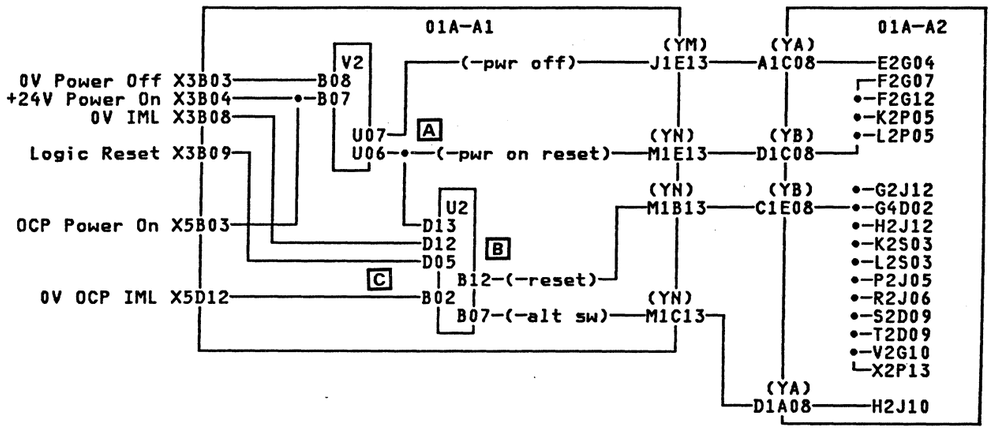
MBC Reset

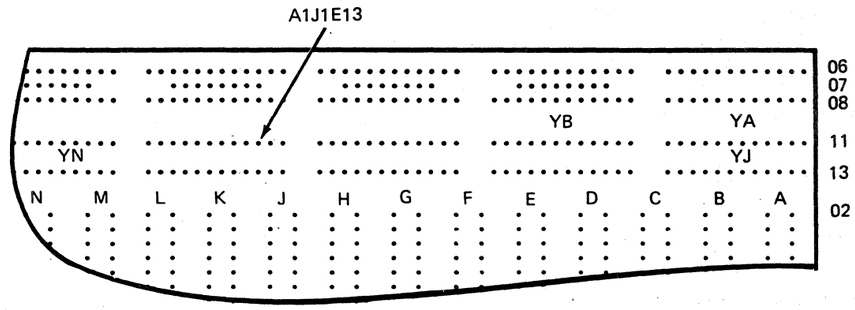
You are here because of a MBC reset line failure.

Possible causes:

- 01A-A1U2 card
- 01A-A1V2 card
- 01A-A2F2 card.

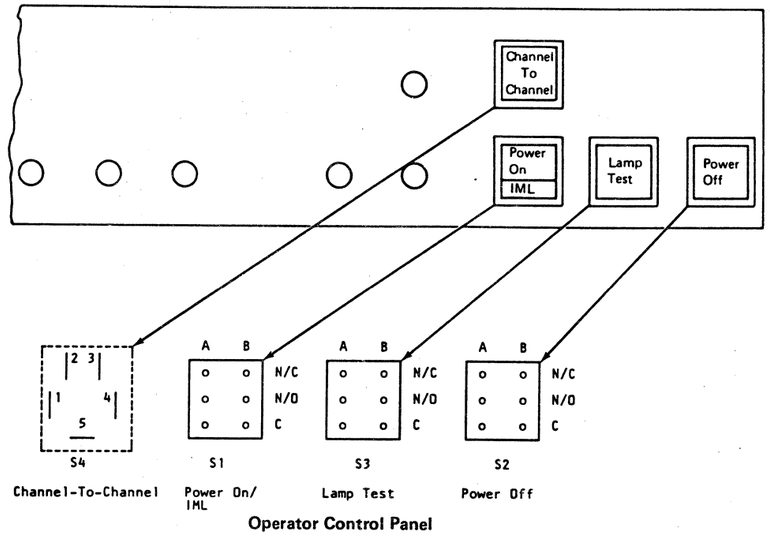
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Measure for +4 Vdc at the following points: -lead at 01A-A1V2D08 [A] +lead at 01A-A1V2U06.
2	Is voltage greater than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. **Note:** A TCC could also be defective. Ensure TCCs are seated correctly and the TCC arrow is pointing up. 3. Go to step 30.
3	Go to **Instructions** column.	Measure for +4 Vdc at the following points: -lead at 01A-A1U2D08 [B] +lead at 01A-A1U2B12.
4	Is voltage greater than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. (See note.) **Note:** If still failing, exchange 01A-A1 board. 3. Go to step 30.



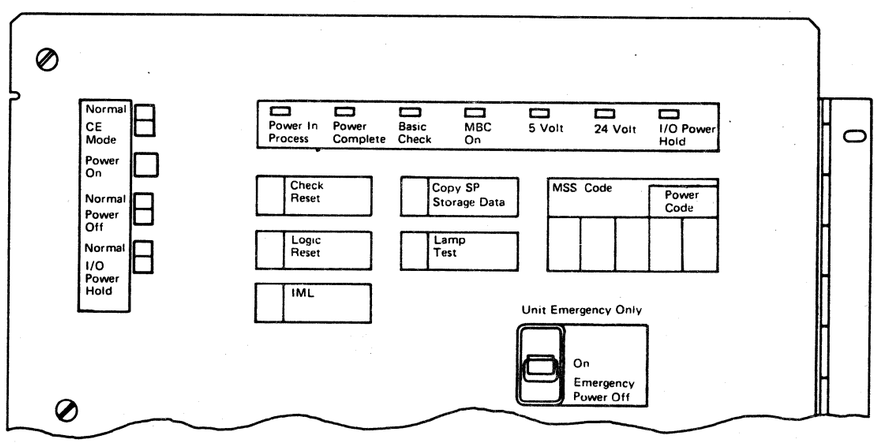


Board 01AA1 or Board 01AA2

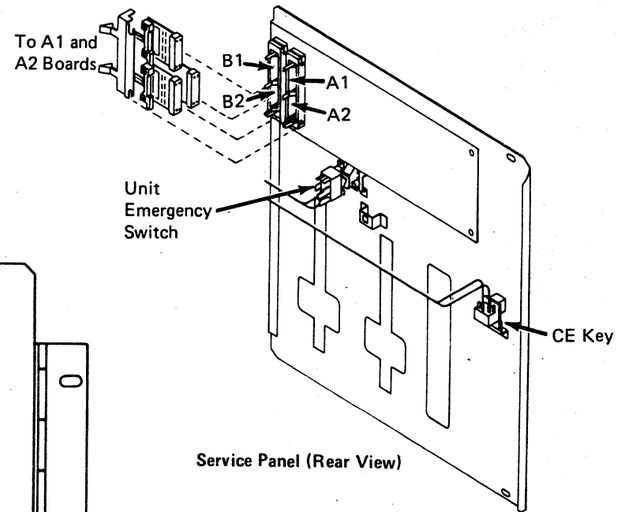
Step	Conditions	Instructions
5	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Measure for +4 Vdc at the following points: -lead at 01A-A1V2D08 +lead at 01A-A1V2U06. 3. Press service panel Power On. 4. Wait 10 seconds, and record voltage. Voltage should change from 0 to +4V.
6	Is voltage less than +0.8 Vdc?	Go to step 15.
7	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Measure for +4 Vdc at the following points: -lead at 01A-A1V2D08 +lead at 01A-A1U2B12. 3. Press service panel Power On. 4. Wait 10 seconds, and record voltage. Voltage should change from 0 to +4 Vdc.
8	Is voltage less than +0.8 Vdc?	1. Leave the CE Meter connected to 01A-A1U2B12. 2. Set PCC CB1 and CB2 off. 3. Disconnect cable at 01A-A1YN (card side). 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Wait 10 seconds before checking voltage.
9	Is voltage greater than +3.5 Vdc?	Go to step 20.
10	Go to **Instructions** column.	1. Measure and record voltages at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1U2D12 [C] + lead at 01A-A1U2D05 + lead at 01A-A1U2B02.
11	Is voltage less than +0.8 Vdc at 01A-A1U2D12?	Go to page PR 451 "IML" pushbutton failure.



Operator Control Panel



Service Panel (Front View)



Service Panel (Rear View)

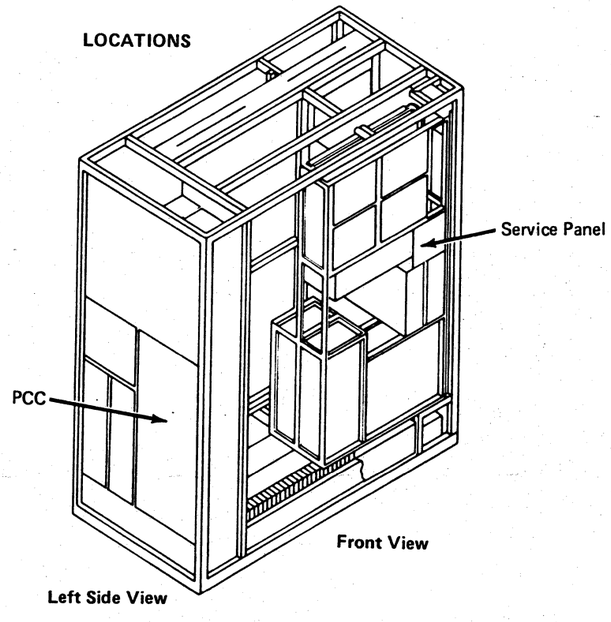
Step	Conditions	Instructions
12	Is voltage greater than +22 Vdc present at 01A-A1U2D05?	Go to page PR 451 "Logic Reset" pushbutton failure.
13	Is voltage less than +0.8 Vdc at 01A-A1U2B02?	Go to page PR 391 "Power On/IML" pushbutton failure.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Check board net for a short at 01A-A1U2B12 and 01A-A1M1B13. 4. Go to step 30.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A1YN (card side). 3. Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U06. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Wait 10 seconds and record voltage. Voltage should change from 0 to +4 Vdc.
16	Is voltage greater than +3.5 Vdc?	Go to step 20.
17	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A1U2 card. 3. Measure for +4 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U06. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Wait 10 seconds and record voltage.
18	Is voltage greater than +3.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Go to step 30.

Step	Conditions	Instructions
19	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Also suspect a short in board nets at 01A-A1V2U06, 01A-A1U2D13, or 01A-A1M1E13. 4. Go to step 30.
20	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Reconnect cable at 01A-A1YN (card side). 3. Remove the following cards from the 01A-A2 board: G2 through X2. 4. Leave meter connected to the failing pin (U2B12 or V2U06). 5. Set PCC CB1 and CB2 on. 6. Press service panel Power On. 7. Wait 10 seconds and record voltage.
21	Is voltage greater than +3.5 Vdc?	Go to step 27.
22	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at 01A-A2YB (card side). 3. Set PCC CB1 and CB2 on. 4. Leave meter connected to failing pin (U2B12 or V2U06). 5. Press service panel Power On. 6. Wait 10 seconds and record voltage.
23	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YN to 01A-A2YB. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 30.

Step	Conditions	Instructions
24	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Remove 01A-A2F2 card. 3. Measure resistance at the following points: - lead at 01A-A1V2D08 + lead at failing pin (01A-A1U2B12 or 01A-A1V2U06). **Note:** Leave meter connected.
25	Is a short indicated?	1. Exchange 01A-A2 board. 2. Go to step 30.
26	Is an open indicated?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2F2 card. 3. Go to step 30.
27	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Reinstall one of the cards removed from 01A-A2 in step 16. 3. Leave meter connected to the failing pin. 4. Press service panel Power On. 5. Wait 10 seconds and record voltage.
28	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange card just reinstalled. 3. Repeat steps 27, 28, and 29 until all cards have been reinstalled in 01A-A2, then go to step 30.
29	Is voltage greater than +3.5 Vdc?	1. Repeat steps 27, 28, and 29 until all cards have been replaced in 01A-A2, then go to step 30.

Step	Conditions	Instructions
30	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On.
31	Is machine still failing?	Invoke your support structure.
32	Go to **Instructions** column.	Go to page PR 901.

LOCATIONS



Service Panel

You are here because of a service panel switch or pushbutton failure or to verify service panel switch/pushbutton operations.

The following chart will direct you to the proper switch or pushbutton repair or repair procedure.

Switch/Pushbutton	Go To
Power On	Step 1
Power Off	Step 18
CE Mode	PR 461
Check Reset	PR 451
Logic Reset	PR 451
IML	PR 451
Copy SP Storage Data	PR 471
I/O Power Hold	PR 461
Lamp Test	PR 371

Power On

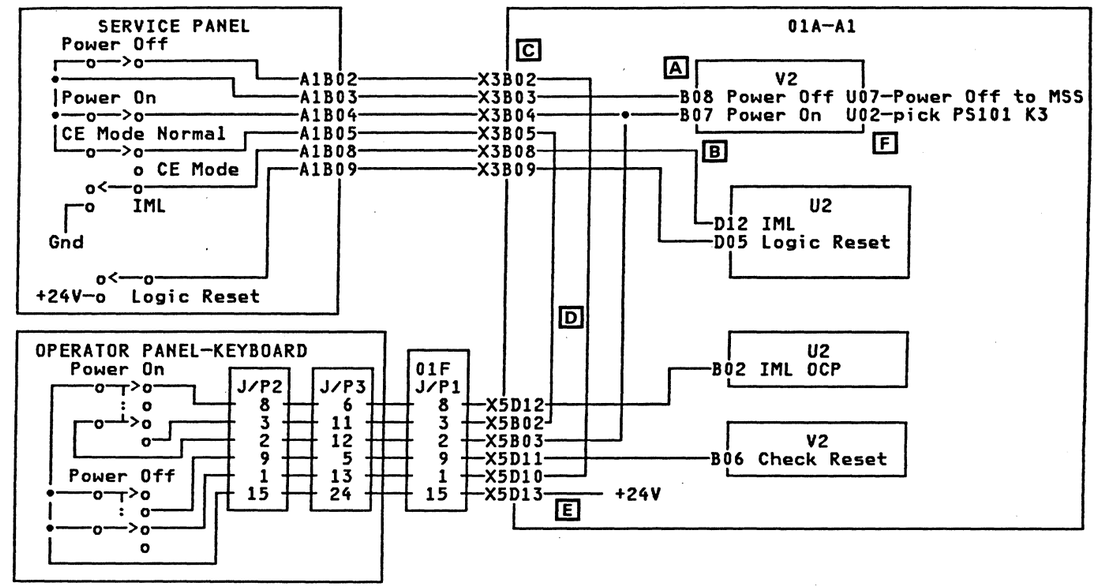
- With CE Mode switch set to Normal:

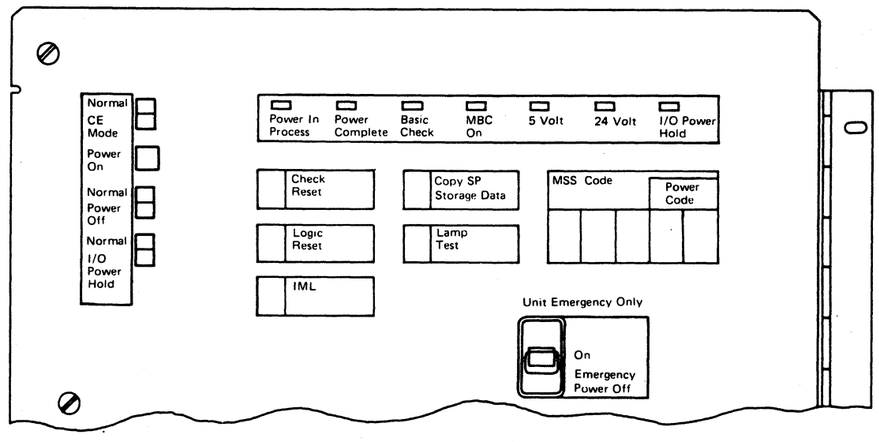
  Pressing service panel Power On causes the IPL screen to display and the Power Complete indicator on the OCP and the service panel to light.

- With CE Mode switch set to CE Mode:

  Pressing service panel Power On causes the Partial Power Up/Down screen to display and the Power In Process indicator on the OCP and the service panel to light.

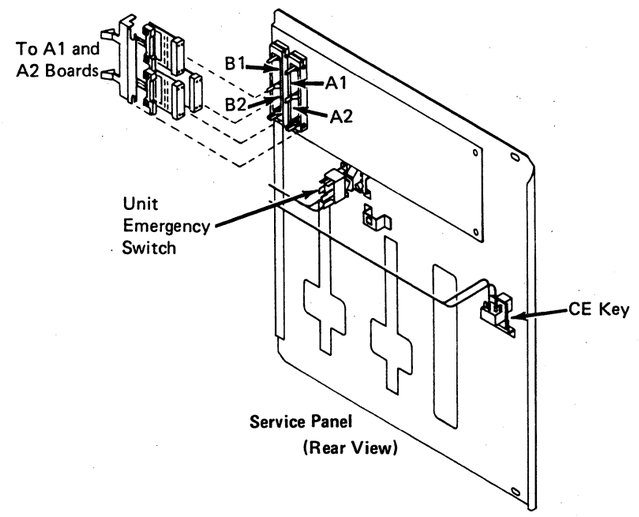
Step	Conditions	Instructions
1	Is operation correct?	Go to step 32.
2	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 [A] + lead at 01A-A1V2B08.
3	Is voltage less than +22 Vdc?	Go to step 19.





Service Panel (Front View)

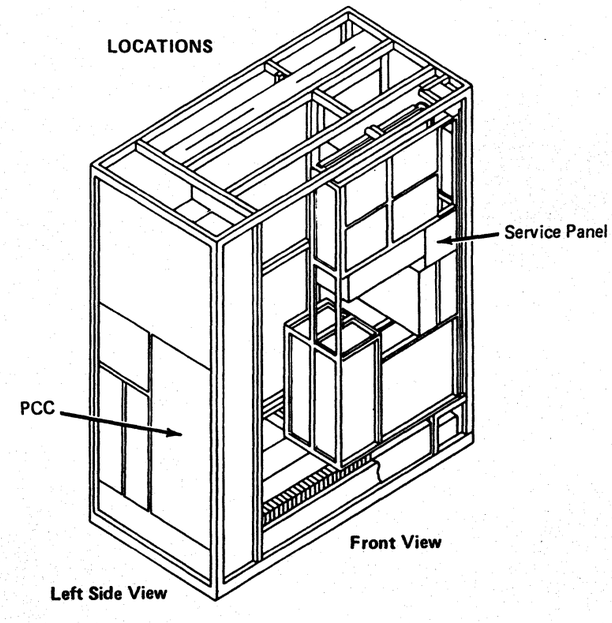
Step	Conditions	Instructions
4	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B07. [B] 2. Press and hold service panel Power On.
5	Is voltage greater than +22 Vdc?	Go to step 15.
6	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B04. [C] 2. Press and hold service panel Power On.
7	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
8	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B02. 2. Press and hold service panel Power On.
9	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 32.
10	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D10. [D]
11	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
12	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D13. [E]
13	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J/P1, and OCP before exchanging cable. 3. Go to step 32.
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
15	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U02. [F] 2. Press service panel Power On.
16	Is voltage greater than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 32
17	Go to **Instructions** column.	Power On is functioning correctly. Go to step 32.



Power Off

- Setting the service panel Power Off switch to the Power Off position causes a sequential power down of the I/O devices and processor power supplies.
- The Power Off switch must be set to the Normal position for power on operations.

Step	Conditions	Instructions
18	Is operation correct?	Go to step 32.
19	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B08.
20	Is voltage less than +0.8 Vdc?	Go to step 25.
21	Is voltage greater than +22 Vdc?	Set service panel Power Off switch to Power Off and then back to Normal.
22	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off 2. Exchange service panel. 3. Go to step 32.
23	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Normal. 2. Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U07. 3. Press service panel Power Off.
24	Is voltage less than +0.8 Vdc?	Service panel Power Off switch is operating correctly. Go to step 32.
25	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B02.
26	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 32.
27	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D10.
28	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
29	Go to **Instructions** column.	Measure for 0 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X5D13.
30	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 32.
31	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange OCP. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X5, 01F-J1, and OCP J3 before exchanging cable. 3. Go to step 32.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel 01F OCP. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to Normal. 5. Set service panel Power Off switch to Normal. 6. Press service panel Power On. 7. Go to page PR 901.



Logic Reset, Check Reset, and IML

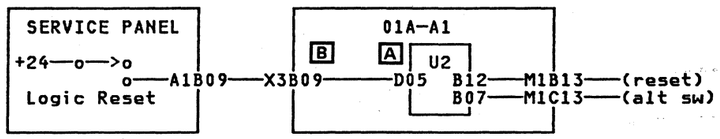
The following chart will direct you to the proper step for the pushbutton functions.

Pushbutton	Go To
Logic Reset	Step 1
Check Reset	Step 6
IML	Step 11

Logic Reset

Pressing Logic Reset causes a hardware reset of the MSS and posts an EC Ref Code on the ERD screen.

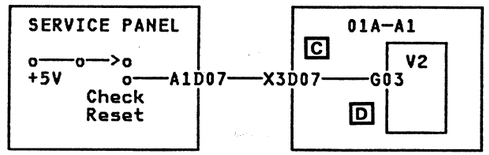
Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1U2D08 [A] + lead at 01A-A1U2D05. 2. Press and hold Logic Reset.
2	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Go to step 16.
3	Go to **Instructions** column.	1. Measure for +24 Vdc at the following points: - lead at 01A-A1U2D08 [B] + lead at 01A-A1X3B09. 2. Press and hold Logic Reset.
4	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.
5	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel or cable from 01A-A1X3 to service panel connector A1. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 16.



Check Reset

Pressing Check Reset resets 01A-A1V2 (MBC card).

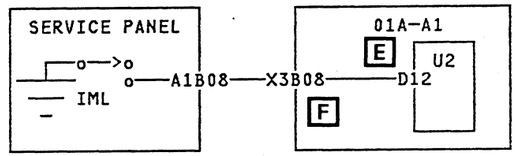
Step	Conditions	Instructions
6	Go to **Instructions** column.	1. Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 [C] + lead at 01A-A1X3D07. 2. Press Check Reset.
7	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel or cable from 01A-A1X3 to service panel connector A1. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 16.
8	Go to **Instructions** column.	1. Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08. [D] + lead at 01A-A1V2G03 2. Press Check Reset.
9	Is voltage greater than +3.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Go to step 16.
10	Is +5 Vdc present?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.



IML

Pressing IML causes an IML of the processor and the General Selection (Q) screen is displayed.

Step	Conditions	Instructions
11	Go to **Instructions** column.	1. Measure for +5 Vdc at the following points: - lead at 01A-A1U2D08 + lead at 01A-A1U2D12. [E] 2. Press and hold IML.
12	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Go to step 16.
13	Go to **Instructions** column.	1. Measure for +5 Vdc at the following points: - lead at 01A-A1U2D08 + lead at 01A-A1X3B08. [F] 2. Press and hold IML.
14	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 16.
15	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel or cable from 01A-A1X3 to service panel connector A1. **Note:** Check board for bent pins and cable connector for pushed in pins and seating at 01A-A1X3 and service panel connector A1 before exchanging service panel. 3. Go to step 16.
16	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Press Power On. 6. Go to page PR 901.



CE Mode and I/O Power Hold

The following chart will direct you to the proper step for the switch functions.

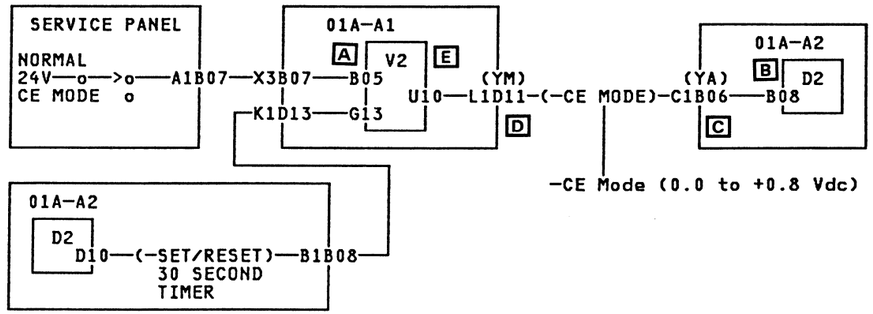
Switch	Go To
CE Mode	Step 1
Normal Mode	Step 41
I/O Power Hold	Step 15

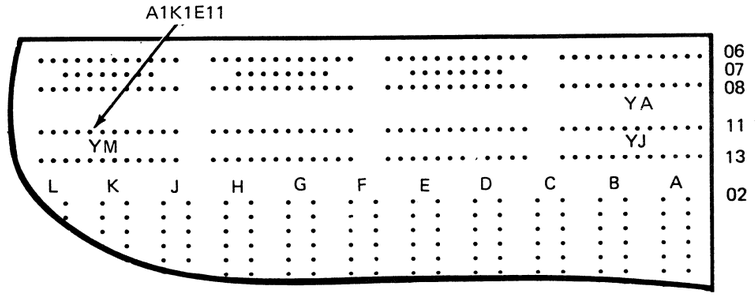
CE Mode

- CE Mode position:
  Turns Basic Check indicator on.
  Test will be displayed on console line 22.
  Allows CE screens to be displayed.
  Disables OCP Power On function.

- Normal position:
  Turns Basic Check indicator off.
  Inhibits display of CE screens.
  Enables OCP Power On function.

Step	Conditions	Instructions
1	Is operation correct?	Go to step 14.
2	Go to **Instructions** column	Set CE Mode switch to CE Mode.
3	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B05. [A]
4	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 14.
5	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2B08. [B]
6	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2D2 card. 3. Go to step 14.

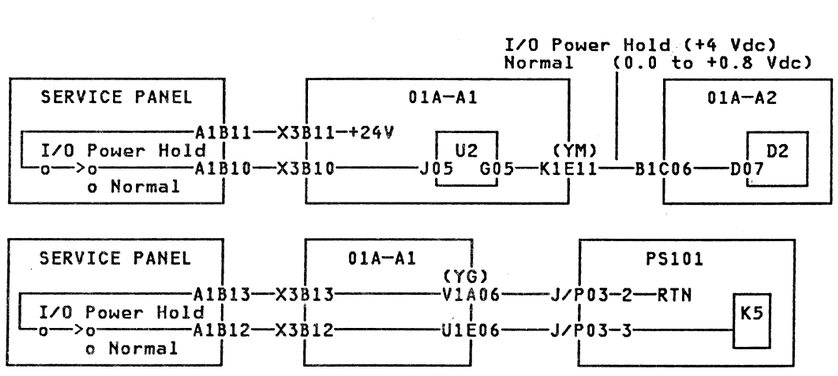




Board 01AA1

Step	Conditions	Instructions
7	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2C1B06. C
8	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 14.
9	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1L1D11. D
10	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A1YM to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 14.
11	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U10. E
12	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 14.
13	Is the Basic Check indicator off or is the console line 22 test indicator off?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Exchange 01A-A2D2 card. 4. If still failing, use second level to isolate failure. 5. Go to step 14.

Step	Conditions	Instructions
14	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to Normal. 5. Press OCP Power On/IML. 6. Go to page PR 901.



I/O Power Hold

- Normal position:
  Allows normal powering off of I/O devices when processor power off sequence is initiated.

- I/O Power Hold position:
  Allows the I/O devices to remain powered up after the processor power off sequence is complete. The I/O Power Hold indicator is on and an I/O Power Hold message is displayed on the console.

Step	Conditions	Instructions
15	Is operation correct?	Go to step 40.
16	Go to **Instructions** column.	Set the I/O Power Hold switch to the I/O Power Hold position.
17	Is the I/O Power Hold indicator on and I/O drops power?	Go to step 33.
18	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B11. F
19	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 40.
20	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B10. G
21	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. **Note:** Check for continuity between 01A-A1X3B10 to service panel connector A1B10 and 01A-A1X3B11 to service panel connector A1B11 before exchanging service panel. 3. Go to step 40.
22	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1U2J05. H
23	Is voltage less than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 40.
24	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1U2G05. J
25	Is voltage less than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1U2 card. 3. Go to step 40.
26	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1K1E11. K
27	Is voltage less than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 40.
28	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2B1C06. L
29	Is voltage less than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange cable from 01A-A2YA to 01A-A1YM. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 40.
30	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A2D2D07. M

Step	Conditions	Instructions
31	Is voltage less than +2.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 40.
32	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1D2 card. 3. Go to step 40.
33	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Disconnect cable at PS101 J/P03. 3. Measure resistance at the following points: - lead at PS101 P03-2 + lead at PS101 P03-3 [N] (cable end).
34	Is a short indicated?	1. Exchange PS101. **Note:** Check cable connectors for pushed in pins and seating before exchanging power supply. 2. Go to step 40.
35	Go to **Instructions** column.	Measure resistance at the following points: - lead at 01A-A1V1A06 + lead at 01A-A1U1E06. [P]
36	Is a short indicated?	1. Exchange the cable from 01A-A1YG to PS101 J/P03. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 2. Go to step 40.
37	Go to **Instructions** column.	Measure resistance at the following points: - lead at 01A-A1X3B13 + lead at 01A-A1X3B12. [Q]
38	Is a short indicated?	1. Exchange 01A-A1 board. 2. Go to step 40.
39	Go to **Instructions** column.	1. Exchange service panel. **Note:** Check for continuity between 01A-A1X3B12 to service panel connector A1B12 and 01A-A1X3B13 to service panel connector A1B13 before exchanging service panel. 2. Go to step 40.
40	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PS101 01A-A1 board 01A-A2 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Set I/O Power Hold to Normal. 5. Press service panel Power On. 6. Go to page PR 901.

Normal Mode

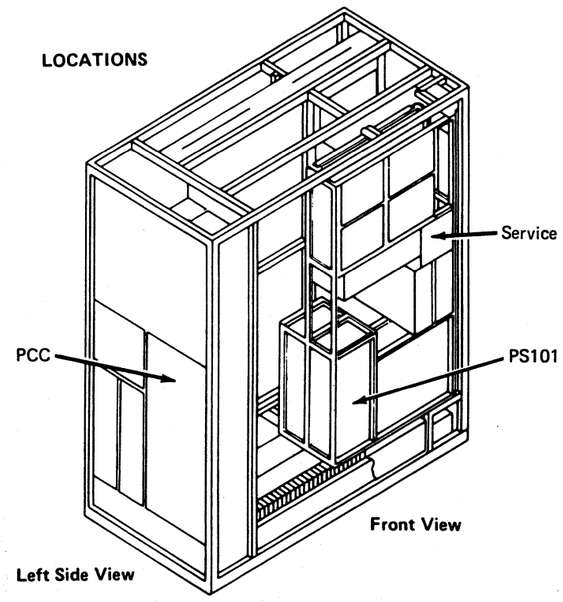
- Normal position:
  Turns Basic Check indicator off.
  Inhibits display of CE screens.
  Enables OCP Power On function.

- CE Mode position:
  Turns Basic Check indicator on.
  Test will be displayed on console line 22.
  Allows CE screens to be displayed.
  Disables OCP Power On function.

Step	Conditions	Instructions
41	Is operation correct?	Go to step 57.
42	Go to **Instructions** column	Set CE Mode switch to Normal.
43	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2B05.
44	Is voltage less than +22 Vdc?	Go to step 54.
45	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2B08.
46	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2D2 card. 3. Go to step 57.
47	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2C1B06.
48	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 57.
49	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1L1D11.
50	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange the cable from 01A-YM to 01A-A2YA. **Note:** Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable. 3. Go to step 57.
51	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1V2U10.
52	Is voltage less than +0.8 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange the 01A-A1 board. 3. Go to step 57.
53	Is the Basic Check indicator on or is the console line 22 test indicator on?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1V2 card. 3. Exchange 01A-A2D2 card. 4. If still failing, use second level to isolate failure. 5. Go to step 57.
54	Go to **Instructions** column.	Measure for +24 Vdc at the following points: - lead at 01A-A1V2D08 + lead at 01A-A1X3B07.
55	Is voltage greater than +22 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A1 board. 3. Go to step 57.
56	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 57.

Step	Conditions	Instructions
57	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to Normal. 5. Press OCP Power On/IML. 6. Go to page PR 901.

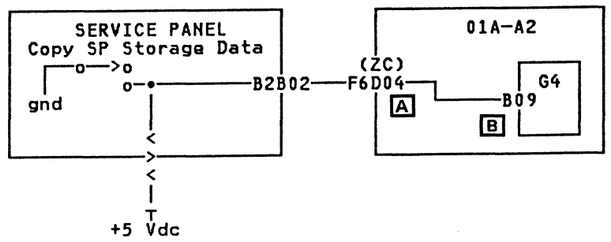
LOCATIONS



Copy SP Storage Data

Pressing Copy SP Storage Data causes 128K of service processor storage to be dumped to the FUNC2 diskette and a dump complete message displayed on the console.

Step	Conditions	Instructions
1	Is operation correct?	Go to page PR 901.
2	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 [A] + lead at 01A-A2F6D04. Press Copy SP Storage Data.
3	Is voltage greater than +3.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange service panel. 3. Go to step 7.
4	Go to **Instructions** column.	Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 [B] + lead at 01A-A2G4B09. Press Copy SP Storage Data.
5	Is voltage less than +3.5 Vdc?	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2G4 card. 3. Go to step 7.
6	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Exchange 01A-A2 board. 3. Go to step 7.
7	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board Service panel. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On. 5. Go to page PR 901.



Miscellaneous Indicator Failures

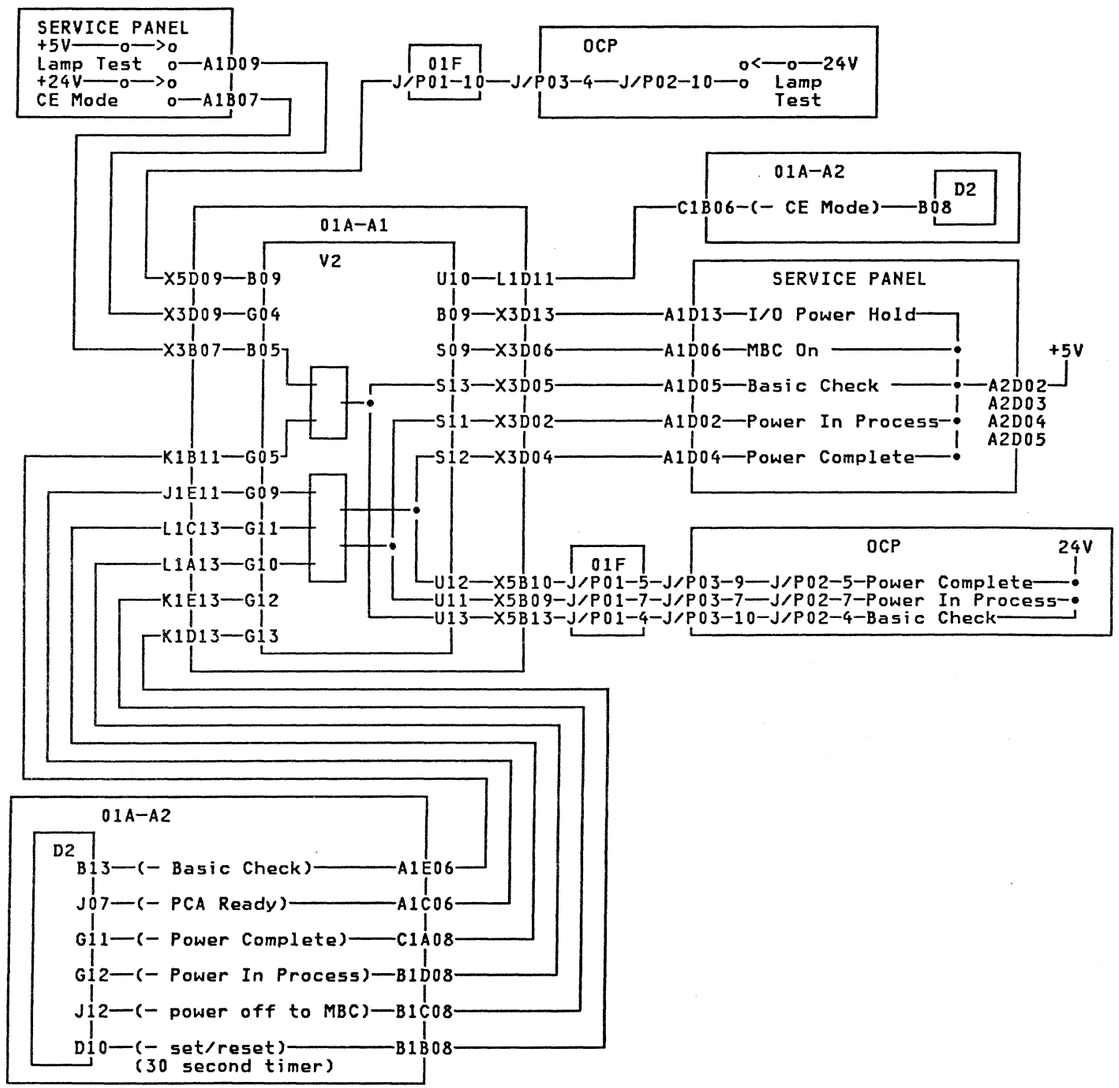
You are here because a service panel or OCP indicator is on when it should not be or off when it should be on.

Possible causes:

- 01A-A1V2 card
- 01A-A1U2 card
- 01A-A2D2 card
- Service panel
- OCP
- 01A-A1B2 (CTCA) card
- 01A-A1C2 (CTCA) card
- 01A-A2U2 (system or wait) card
- 01A-A2T2 (system or wait) card.

Step	Conditions	Instructions
1	Go to **Instruction** column.	1. MSS or PU power must be on. 2. Set I/O Power Hold to Normal. 3. Press Lamp Test on service panel. 4. The following indicators should be on: Service Panel Power In Process Power Complete Basic Check MBC On I/O Power Hold. OCP Power In Process Power Complete Basic Check System Wait Chan-Chan Disabled.
2	Does lamp test fail?	Go to page PR 001.

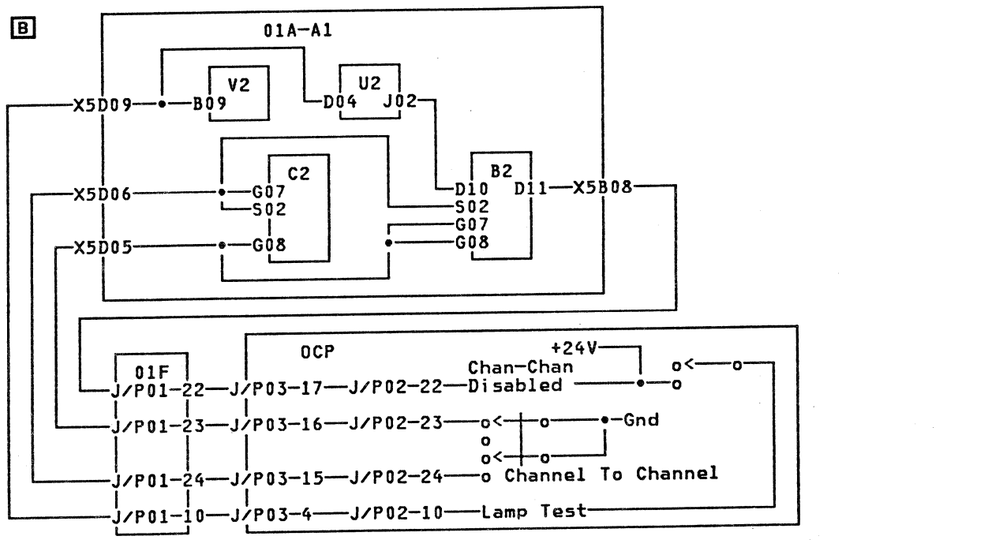
A



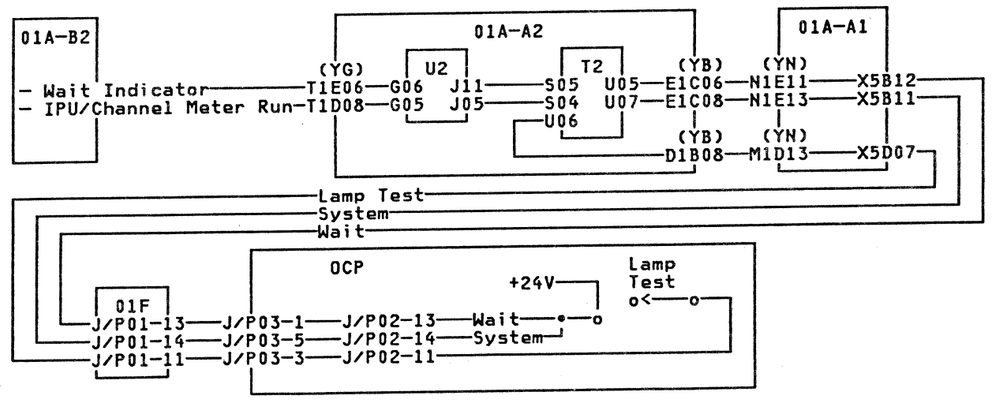
Step	Conditions	Instructions
3	Do you have a problem with the Power In Process or Power Complete indicators?	1. Isolate to one of the following FRUs: 01A-A1V2 card 01A-A2D2 card Service panel. 2. If indicators still fail, use diagram [A] to isolate failure. 3. Go to step 9.
4	Do you have a problem with the Basic Check indicator?	1. Isolate to one of the following FRUs: 01A-A1V2 card 01A-A2D2 card Service panel OCP. 2. If indicators still fail, use diagram [A] to isolate failure.
5	Do you have a problem with the Chan-Chan Disabled indicator?	1. Isolate to one of the following FRUs: 01A-A1B2 card 01A-A1C2 card 01A-A1U2 card OCP. 2. If indicators still fail, use diagram [B] to isolate failure. 3. Go to step 9.
6	Do you have a problem with the System or Wait indicators?	1. Isolate to one of the following FRUs: 01A-A2U2 card 01A-A2T2 card OCP. 2. If indicators still fail, use diagram [C] to isolate failure. 3. Go to step 9.
7	Do you have a problem with the MBC On indicator?	Go to page PR 001.
8	Do you have a problem with the I/O Power Hold indicator?	Go to page PR 001.

Step	Conditions	Instructions
9	Go to **Instructions** column.	1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: 01A-A1 board 01A-A2 board Service panel 01F-J/P01 OCP. 3. Reset any tripped CPs. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 901.

[B]



[C]



Repair Verification And Exit Procedure

Step	Conditions	Instructions
1	Go to **Instructions** column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Ensure CE Mode switch is set to Normal. 3. Ensure I/O Power Hold switch is set to Normal. 4. Ensure FUNC1 is in diskette drive 1. 5. Press service panel Power On. 6. Allow time for I/O to sequence on.
2	Is power complete?	Go to page END 001.
3	Do you have a 1X Ref Code displayed?	Go to page PR 1001.
4	Is any other Ref Code displayed?	Go to page START 001.
6	Do you have a five-digit MSS code?	Go to page MSS 001.
7	Go to **Instructions** column.	1. Invoke your support structure. 2. Go to page PR 001.