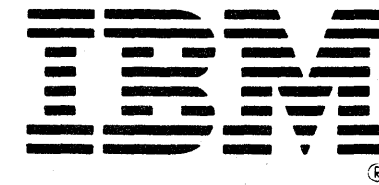


VOLUME A03 MACHINE 4381- -0010900 MODEL R03 SYSTEM 0000LBH MODE SCHED SHIP 84/10/30

LOGIC TYPE -0- SYSTEMS DIAGRAMS DOC COUNTER

PAGE NUM	SH	TITLE	PART NUM	EC NUM	FEATURE B/M OR B/MS
CA001			0006169374	A20558	.W. 0002676380
CA005		PR 1001	0006169116	A20562	.W. 0002676380
CA010		PR 1011	0006169117	A20562	.W. 0002676380
CA015		PR 1015	0006169118	A20562	.W. 0002676380
CA020		PR 1021	0006169119	A20562	.W. 0002676380
CA025		PR 1031	0006169120	A20558	.W. 0002676380
CA030		PR1041	0006169121	A20558	.W. 0002676380
CA035		PR1051	0006169122	A20558	.W. 0002676380
CA040		FR1061	0006169123	A20558	.W. 0002676380
CA045		FR1071	0006169124	A20559	.W. 0002676380
CA050		FR1091	0006169125	A20558	.W. 0002676380
CA055		FR1101	0006169126	A20558	.W. 0002676380
CA060		FR1111	0006169127	A20558	.W. 0002676380
CA065		FR1121	0006169128	A20562	.W. 0002676380
CA070		FR1131	0006169129	A20562	.W. 0002676380
CA075		FR1141	0006169130	A20562	.W. 0002676380
CA080		FR1151	0006169131	A20562	.W. 0002676380
CA085		FR1161	0006169132	A20560	.W. 0002676380
CA090		FR1171	0006169133	A20558	.W. 0002676380
CA095		FR1181	0006169134	A20558	.W. 0002676380
CA100		FR1191	0006169135	A20558	.W. 0002676380
CA105		FR1201	0006169136	A20558	.W. 0002676380
CA110		FR1211	0006169137	A20558	.W. 0002676380
CA115		FR1221	0006169138	A20558	.W. 0002676380
CA120		FR1231	0006169139	A20558	.W. 0002676380
CA125		FR1241	0006169140	A20558	.W. 0002676380
CA130		FR1251	0006169141	A20558	.W. 0002676380
CA135		FR1261	0006169142	A20558	.W. 0002676380
CA140		FR1271	0006169143	A20558	.W. 0002676380
CA145		FR1281	0006169144	A20558	.W. 0002676380
CA150		FR1291	0006169145	A20558	.W. 0002676380
CA155		FR1301	0006169146	A20558	.W. 0002676380
CA160		FR1311	0006169147	A20558	.W. 0002676380
CA165		FR1321	0006169148	A20558	.W. 0002676380
CA170		FR1331	0006169149	A20558	.W. 0002676380
CA175		FR1341	0006169150	A20558	.W. 0002676380
CA180		FR1351	0006169151	A20558	.W. 0002676380
CA185		FR1361	0006169152	A20558	.W. 0002676380
CA190		FR1371	0006169153	A20558	.W. 0002676380
CA195		FR1381	0006169154	A20558	.W. 0002676380
CA200		FR1391	0006169155	A20558	.W. 0002676380

TOTAL PART NUMBERS THIS VOLUME 41



Maintenance Information

4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>	4381-3 S/N <b>MI</b>
MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION	MAINTENANCE INFORMATION
SAFETY INDEX TERMS/ABBREVIATIONS INTRODUCTION <b>START</b> PU REPAIR CHNL REPAIR MSS REPAIR END OF REPAIR	PWR REPAIR (HWS AND MBC) PR 001 THRU PR 999	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

4381  
B/M 2676380

MI Seq CA001	PN 6169374 1 of 2	EC A20558 01 Oct 84				
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MI  
Seq CA001

PN 6169374  
2 of 2

EC A20558  
01 Oct 84

# Processing Unit Power Repair Procedure

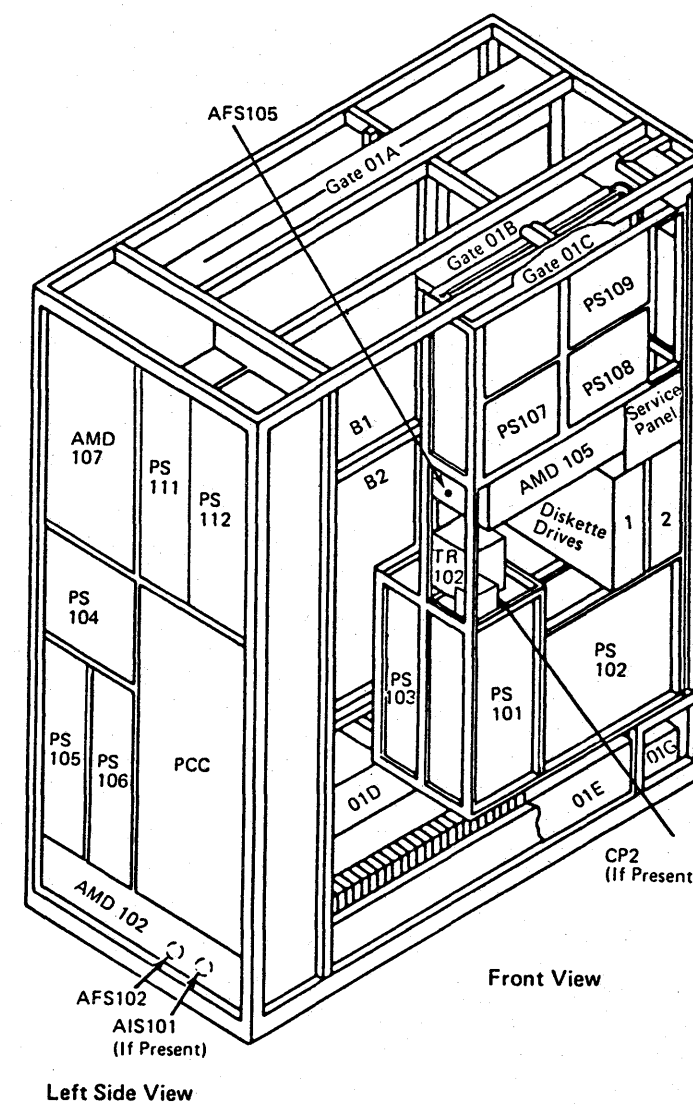
PR 1001

You are here because of a Ref Code in the format UU RRRR IS with the UU field equal to 1x (x not significant).

## DO NOT REPAIR DEFECTIVE FRUS.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Ensure CE Mode switch is set to Normal.</li> <li>Ensure I/O Power Hold switch is set to Normal.</li> <li>Ensure FUNC1 diskette is in diskette drive 1.</li> <li>Press OCP Power On and enter the time and date when requested.</li> <li>Allow time for the I/O units to complete their Power-On sequence.</li> </ol>
2	Do you have a voltage warning message or is the Ref Code (1X RRRR IS) with the S field equal to C?	<p>A voltage is out of tolerance.</p> <p>Go to page PR 1021.</p>
3	Do you have a temperature warning message or is Ref Code (1X RRRR IS) with the RRRR field equal to A38X?	<p>Use RC 11 A38X XX.</p> <p>Go to step 14.</p>
4	Is the Partial Power Up/Down (QWW) screen displayed?	Go to step 10.
5	Is power complete?	Go to step 13.
6	Is Ref Code with UU equal to F6 displayed?	Go to page MSS 001.
7	Is Ref Code (1X RRRR IS) with the S field equal to 8 or do you have an intermittent 1X Ref Code?	<p>A power failure retry was successful.</p> <p>Go to step 13.</p>
8	Is Ref Code with UU equal to 1X displayed?	Go to step 14.
9	Is there any other Ref Code or failure indication?	Go to page START 001.
10	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select the Power Controller Diagnostics (QWP) screen and run the diagnostics.</li> </ol>
11	Is Ref Code with UU equal to F6 displayed?	Go to page MSS 001.
12	Go to Instructions column.	Go to page PR 441 (CE or Normal Mode switch).

Step	Conditions	Instructions
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>Use the Ref Code and Ref Code list on PR 1002 to determine your PR XXXX (write it down) page for use on PR 1011.</li> <li>Go to page PR 1011.</li> </ol>
14	Go to Instructions column.	<p>Match the 1X Ref Code with the Ref Code list on PR 1002, and go to the PR entry page.</p> <p>Note: If the Ref Code is not listed, invoke your support system.</p>



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PR 1001

Ref Codes

(Where XX equals OE or O8.)

PWR START	Go to PR 1001 Power Entry	11 1435 XX	Go to PR 1851	11 5154 XX	Go to PR 1521
FIX VERIF	Go to PR 5001 PU Fix Verification	11 1505 XX	Go to PR 1821	11 5164 XX	Go to PR 1531
INTMIT AID	Go to PR 1011 Intermittent Exchange	11 1525 XX	Go to PR 1821	11 5184 XX	Go to PR 1541
VOLT ADJ	Go to PR 1021 Source 1 Memory	11 1585 XX	Go to PR 1941	11 5185 XX	Go to PR 1541
VOLT ADJ	Go to PR 1025 Source 2 Memory	11 1604 XX	Go to PR 1181	11 5194 XX	Go to PR 1551
11 1015 XX	Go to PR 1031	11 1605 XX	Go to PR 1181	11 5204 XX	Go to PR 1561
11 1024 XX	Go to PR 1031	11 1614 XX	Go to PR 1181	11 5214 XX	Go to PR 2301
11 1025 XX	Go to PR 1031	11 1624 XX	Go to PR 1181	11 5215 XX	Go to PR 2301
11 1035 XX	Go to PR 1041	11 1634 XX	Go to PR 1181	11 5254 XX	Go to PR 1581
11 1044 XX	Go to PR 1041	11 1643 0C	Go to PR 1021	11 5264 XX	Go to PR 1591
11 1045 XX	Go to PR 1041	11 1643 XX	Go to PR 1701	11 5274 XX	Go to PR 1601
11 1114 XX	Go to PR 1051	11 1684 XX	Go to PR 1181	11 5284 XX	Go to PR 1611
11 1115 XX	Go to PR 1051	11 1704 XX	Go to PR 1191	11 5294 XX	Go to PR 1621
11 1124 XX	Go to PR 1061	11 1705 XX	Go to PR 1191	11 5314 XX	Go to PR 1631
11 1125 XX	Go to PR 1061	11 1714 XX	Go to PR 1201	11 5324 XX	Go to PR 1641
11 1134 XX	Go to PR 1071	11 1715 XX	Go to PR 1201	11 5344 XX	Go to PR 1651
11 1135 XX	Go to PR 1071	11 1724 XX	Go to PR 1211	11 5354 XX	Go to PR 1661
11 1154 XX	Go to PR 1091	11 1725 XX	Go to PR 1211	11 5364 XX	Go to PR 1671
11 1155 XX	Go to PR 1091	11 1FF4 XX	Go to PR 1231	11 5374 XX	Go to PR 1681
11 1164 XX	Go to PR 2321	11 1FF5 XX	Go to PR 1231	11 5384 XX	Go to PR 2311
11 1165 XX	Go to PR 2321	11 2424 XX	Go to PR 1221	11 5385 XX	Go to PR 2311
11 1204 XX	Go to PR 1101	11 3054 XX	Go to PR 1241	11 5394 XX	Go to PR 2331
11 1205 XX	Go to PR 1101	11 3064 XX	Go to PR 1251	11 5395 XX	Go to PR 2331
11 1214 XX	Go to PR 1111	11 3084 XX	Go to PR 1261	11 A014 XX	Go to PR 1691
11 1215 XX	Go to PR 1111	11 3114 XX	Go to PR 1271	11 A015 0C	Go to PR 1021
11 1225 XX	Go to PR 1481	11 3134 XX	Go to PR 1281	11 A015 XX	Go to PR 1691
11 1234 XX	Go to PR 1121	11 3144 XX	Go to PR 1291	11 A024 XX	Go to PR 1701
11 1235 XX	Go to PR 1121	11 3164 XX	Go to PR 1301	11 A025 XX	Go to PR 1701
11 1254 XX	Go to PR 1131	11 3184 XX	Go to PR 1311	11 A025 0C	Go to PR 1021
11 1255 XX	Go to PR 1131	11 3194 XX	Go to PR 1321	11 A074 XX	Go to PR 1711
11 1265 XX	Go to PR 1531	11 3224 XX	Go to PR 1331	11 A075 XX	Go to PR 1711
11 1274 XX	Go to PR 1141	11 3254 XX	Go to PR 1341	11 A075 0C	Go to PR 1021
11 1275 XX	Go to PR 1141	11 3264 XX	Go to PR 1351	11 A085 0C	Go to PR 1025
11 1285 XX	Go to PR 1161	11 3284 XX	Go to PR 1361	11 A094 XX	Go to PR 1731
11 1295 XX	Go to PR 1071	11 3294 XX	Go to PR 1371	11 A095 XX	Go to PR 1731
11 1304 XX	Go to PR 1151	11 3314 XX	Go to PR 1381	11 A095 0C	Go to PR 1021
11 1305 XX	Go to PR 1151	11 3344 XX	Go to PR 1391	11 A104 XX	Go to PR 1741
11 1315 XX	Go to PR 1621	11 3354 XX	Go to PR 1401	11 A105 XX	Go to PR 1741
11 1325 XX	Go to PR 1221	11 3374 XX	Go to PR 1411	11 A105 0C	Go to PR 1021
11 1335 XX	Go to PR 1221	11 3574 XX	Go to PR 1421	11 A124 XX	Go to PR 1751
11 1345 XX	Go to PR 1221	11 3584 XX	Go to PR 1431	11 A125 XX	Go to PR 1751
11 1354 XX	Go to PR 1161	11 3594 XX	Go to PR 1441	11 A125 0C	Go to PR 1021
11 1355 XX	Go to PR 1161	11 5054 XX	Go to PR 1451	11 A144 XX	Go to PR 2271
11 1404 XX	Go to PR 1171	11 5055 XX	Go to PR 1451	11 A145 XX	Go to PR 2271
11 1425 XX	Go to PR 1841	11 5064 XX	Go to PR 1461	11 A145 0C	Go to PR 1021
		11 5074 XX	Go to PR 1471	11 A184 XX	Go to PR 2281
		11 5084 XX	Go to PR 1481	11 A185 XX	Go to PR 2281
		11 5114 XX	Go to PR 1491	11 A185 0C	Go to PR 1021
		11 5134 XX	Go to PR 1501	11 A264 XX	Go to PR 1761
		11 5144 XX	Go to PR 1511	11 A265 XX	Go to PR 1761

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11 A265 0C Go to PR 1021  
 11 A294 XX Go to PR 1781  
 11 A295 XX Go to PR 1781  
 11 A295 0C Go to PR 1021  
 11 A304 XX Go to PR 1791  
 11 A305 XX Go to PR 1791  
 11 A305 0C Go to PR 1021  
 11 A314 XX Go to PR 1801  
 11 A315 0C Go to PR 1021  
 11 A315 XX Go to PR 1801  
 11 A384 XX Go to PR 1811  
 11 A385 XX Go to PR 1811  
 11 A385 0C Go to PR 1811  
 11 A424 XX Go to PR 1821  
 11 A425 XX Go to PR 1821  
 11 A433 XX Go to PR 1831  
 11 A444 XX Go to PR 1841  
 11 A445 XX Go to PR 1841  
 11 A454 XX Go to PR 1851  
 11 A455 XX Go to PR 1851  
 11 A584 XX Go to PR 1861  
 11 A585 XX Go to PR 1861  
 11 A585 0C Go to PR 1811  
 11 A614 XX Go to PR 1871  
 11 A615 XX Go to PR 1871  
 11 A615 0C Go to PR 1811  
 11 A624 XX Go to PR 1881  
 11 A625 XX Go to PR 1881  
 11 A625 0C Go to PR 1021  
 11 A644 XX Go to PR 2291  
 11 A645 XX Go to PR 2291  
 11 A645 0C Go to PR 1021  
 11 D023 XX Go to PR 2151  
 11 D064 XX Go to PR 1901  
 11 D065 XX Go to PR 1901  
 11 D074 XX Go to PR 1911  
 11 D075 XX Go to PR 1911  
 11 D084 XX Go to PR 1481  
 11 D085 XX Go to PR 1481  
 11 D094 XX Go to PR 1921  
 11 D095 XX Go to PR 1921  
 11 D113 XX Go to PR 1931  
 11 D114 XX Go to PR 1941  
 11 D115 XX Go to PR 1941  
 11 D116 XX Go to PR 1941  
 11 D123 XX Go to PR 1771  
 11 D144 XX Go to PR 1961  
 11 D145 XX Go to PR 1961  
 11 D154 XX Go to PR 1971  
 11 D155 XX Go to PR 1971

11 D164 XX Go to PR 1531  
 11 D165 XX Go to PR 1531  
 11 D194 XX Go to PR 1991  
 11 D195 XX Go to PR 1991  
 11 D204 XX Go to PR 2001  
 11 D205 XX Go to PR 2001  
 11 D264 XX Go to PR 2021  
 11 D265 XX Go to PR 2021  
 11 D274 XX Go to PR 2031  
 11 D275 XX Go to PR 2031  
 11 D284 XX Go to PR 1031  
 11 D285 XX Go to PR 1031  
 11 D294 XX Go to PR 2041  
 11 D295 XX Go to PR 2041  
 11 D314 XX Go to PR 2051  
 11 D315 XX Go to PR 2051  
 11 D324 XX Go to PR 2061  
 11 D325 XX Go to PR 2061  
 11 D354 XX Go to PR 2081  
 11 D355 XX Go to PR 2081  
 11 D364 XX Go to PR 2091  
 11 D365 XX Go to PR 2091  
 11 D374 XX Go to PR 1041  
 11 D375 XX Go to PR 1041  
 11 D574 XX Go to PR 2101  
 11 D575 XX Go to PR 2101  
 11 D584 XX Go to PR 2111  
 11 D585 XX Go to PR 2111  
 11 D594 XX Go to PR 2121  
 11 D595 XX Go to PR 2121  
 11 D644 XX Go to PR 2131  
 11 D645 XX Go to PR 2131  
 11 FFF4 XX Go to PR 1231  
 11 FFF5 XX Go to PR 1231  
 12 1204 XX Go to PR 2501  
 12 1205 XX Go to PR 2501  
 12 1214 XX Go to PR 2511  
 12 1215 XX Go to PR 2511  
 12 1464 XX Go to PR 2521  
 12 1465 XX Go to PR 2521  
 12 1474 XX Go to PR 2531  
 12 1475 XX Go to PR 2531  
 12 1524 XX Go to PR 2541  
 12 1525 XX Go to PR 2541  
 12 1604 XX Go to PR 2551  
 12 1605 XX Go to PR 2551  
 12 1634 XX Go to PR 2561  
 12 1635 XX Go to PR 2561  
 12 2424 XX Go to PR 1221  
 12 3454 XX Go to PR 2581

12 3464 XX Go to PR 2591  
 12 3474 XX Go to PR 2601  
 12 3484 XX Go to PR 2611  
 12 3504 XX Go to PR 2621  
 12 3514 XX Go to PR 2631  
 12 3524 XX Go to PR 2641  
 12 3604 XX Go to PR 2651  
 12 3614 XX Go to PR 2661  
 12 3634 XX Go to PR 2671  
 12 5454 XX Go to PR 2681  
 12 5455 XX Go to PR 2681  
 12 5464 XX Go to PR 2691  
 12 5465 XX Go to PR 2691  
 12 5474 XX Go to PR 2701  
 12 5475 XX Go to PR 2701  
 12 5484 XX Go to PR 2711  
 12 5485 XX Go to PR 2711  
 12 5504 XX Go to PR 2721  
 12 5505 XX Go to PR 2721  
 12 5514 XX Go to PR 2731  
 12 5515 XX Go to PR 2731  
 12 5524 XX Go to PR 2741  
 12 5525 XX Go to PR 2741  
 12 5634 XX Go to PR 2751  
 12 5635 XX Go to PR 2751  
 12 A114 XX Go to PR 2761  
 12 A115 XX Go to PR 2761  
 12 A115 XC Go to PR 1021  
 12 A134 XX Go to PR 2771  
 12 A135 XX Go to PR 2771  
 12 A135 XC Go to PR 1021  
 12 A254 XX Go to PR 2781  
 12 A255 XX Go to PR 2781  
 12 A255 XC Go to PR 1021  
 12 A324 XX Go to PR 2791  
 12 A325 XX Go to PR 2791  
 12 A325 XC Go to PR 1021  
 12 A424 XX Go to PR 1821  
 12 A425 XX Go to PR 1821  
 12 A574 XX Go to PR 2801  
 12 A575 XX Go to PR 2801  
 12 A575 XC Go to PR 1021  
 12 A634 XX Go to PR 2811  
 12 A635 XX Go to PR 2811  
 12 A635 XC Go to PR 1021  
 12 D033 XX Go to PR 2151  
 12 D043 XX Go to PR 2161  
 12 D134 XX Go to PR 1951  
 12 D135 XX Go to PR 1951  
 12 D254 XX Go to PR 2011

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12 D255 XX	Go to PR 2011	1D D513 XX	Go to PR 2211
12 D344 XX	Go to PR 2071	1D D523 XX	Go to PR 2211
12 D345 XX	Go to PR 2071	1D D533 XX	Go to PR 2141
12 D454 XX	Go to PR 2821	1D D553 XX	Go to PR 2181
12 D455 XX	Go to PR 2821	1D D563 XX	Go to PR 2181
12 D514 XX	Go to PR 2831	1D D603 XX	Go to PR 2221
12 D515 XX	Go to PR 2831	1D D613 XX	Go to PR 2221
12 D544 XX	Go to PR 2571	1D D623 XX	Go to PR 2141
12 D545 XX	Go to PR 2571	1D D633 XX	Go to PR 2211
12 D604 XX	Go to PR 2841	1F FFF4 XX	Go to PR 1231
12 D605 XX	Go to PR 2841	1F FFF5 XX	Go to PR 1231
12 D614 XX	Go to PR 2851		
12 D615 XX	Go to PR 2851		
14 A154 XX	Go to PR 2231		
14 A155 XX	Go to PR 2231		
14 A155 XC	Go to PR 1021		
14 A164 XX	Go to PR 2241		
14 A165 XX	Go to PR 2241		
14 A165 XC	Go to PR 1021		
14 A174 XX	Go to PR 2251		
14 A175 XX	Go to PR 2251		
14 A175 XC	Go to PR 1021		
14 A484 XX	Go to PR 2261		
14 A485 XX	Go to PR 2261		
17 A433 XX	Go to PR 1831		
1D 1733 XX	Go to PR 2171		
1D D013 XX	Go to PR 2141		
1D D103 XX	Go to PR 2141		
1D D173 XX	Go to PR 2141		
1D D183 XX	Go to PR 2171		
1D D193 XX	Go to PR 2171		
1D D203 XX	Go to PR 2171		
1D D213 XX	Go to PR 2141		
1D D223 XX	Go to PR 2171		
1D D233 XX	Go to PR 2191		
1D D243 XX	Go to PR 2191		
1D D303 XX	Go to PR 2141		
1D D333 XX	Go to PR 2141		
1D D383 XX	Go to PR 2181		
1D D393 XX	Go to PR 2181		
1D D403 XX	Go to PR 2181		
1D D413 XX	Go to PR 2181		
1D D423 XX	Go to PR 2141		
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1D D453 XX	Go to PR 2211		
1D D463 XX	Go to PR 2211		
1D D473 XX	Go to PR 2211		
1D D483 XX	Go to PR 2211		
1D D493 XX	Go to PR 2141		
1D D503 XX	Go to PR 2211		

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## Intermittent Power Failure Procedure

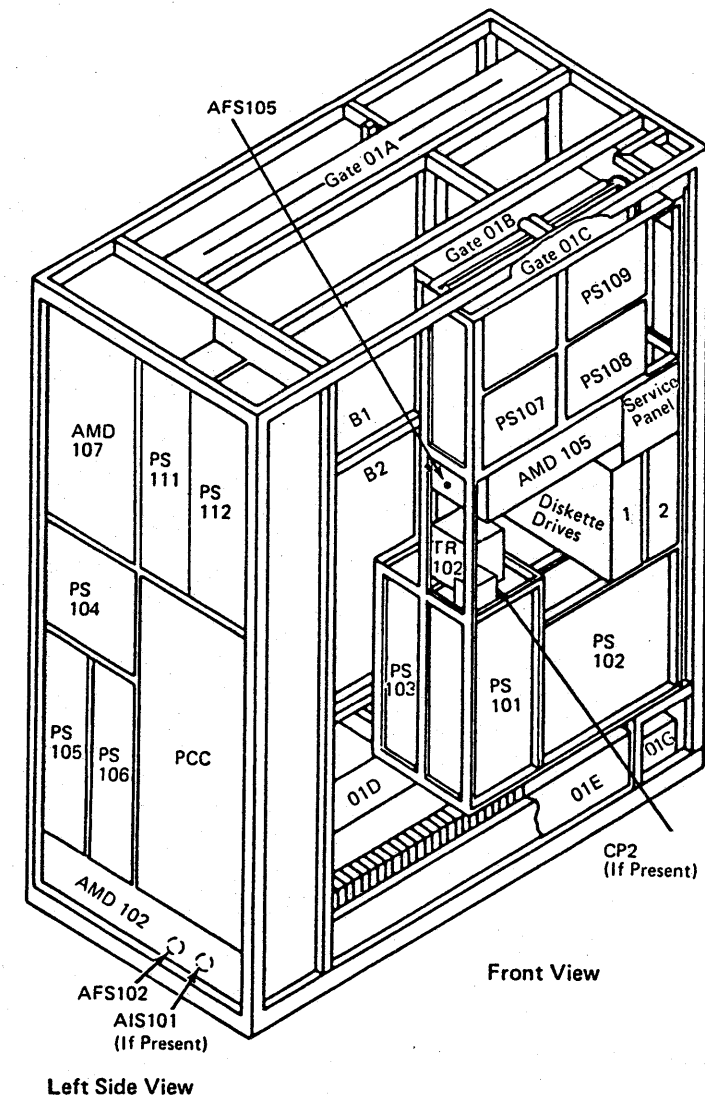
PR 1011

You are here because of an intermittent power failure or a Ref Code (1X RRRR IS) with the S field equal to an 8.

Possible causes:

- Voltage Levels—any voltage out of tolerance, excessive ripple
- Cables—not seated or pushed in pins
- Cards—not seated
- Top Card Connectors—not seated
- Board—bent pins either side
- Loose Wires—on TBs, contactors, CBs, and bus bars
- Filters—dirty
- Airflow Sensors—not aligned for correct airflow
- Defective FRUS.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set the CE Mode switch to CE Mode.</li> <li>2. Select the Analog/Temperature Display (QWA) screen.</li> <li>3. Check for any sensor that is more than three + or - characters.</li> </ol>
2	Is any sensor level more than three + or - characters?	<ol style="list-style-type: none"> <li>1. Go to page PR 1021 and perform the voltage check for that power supply.</li> <li>2. After completing the voltage check, return here and continue with step 3.</li> </ol>
3	Go to Instructions column.	<p>Perform the following:</p> <ol style="list-style-type: none"> <li>1. Use the Ref Code list on page PR 1002 to find the PR associated with this Ref Code.</li> <li>2. Attempt to find the failure by vibrating the cables, cards, contactors, CBs, and power supplies shown in the wiring diagram located in the PR.</li> <li>3. If you are not successful in finding the failure, exchange the PA FRUS.</li> </ol>
4	Go to Instructions column. *	Go to page PR 5001.







# Current Setting

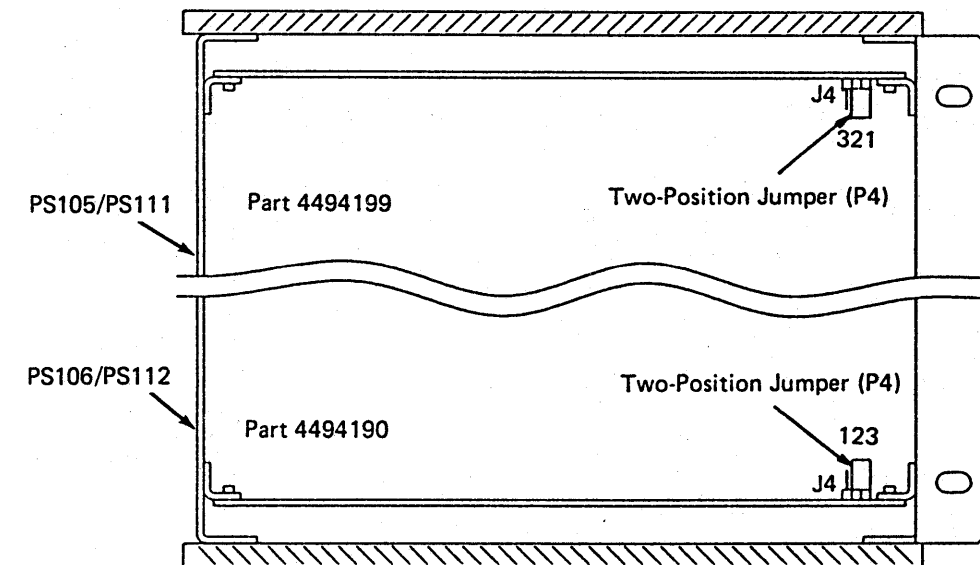
This procedure ensures that the power supply current jumpers in PS105, PS106, PS111, and PS112 are correctly installed and that the PS105 load resistor is disconnected.

Step	Conditions	Instructions
1	Go to Instructions column.	A torque wrench and 1/4 to 3/8 drive adapter are needed. For tool part numbers, see Volume A07, "Tools."
2	Are you installing part 4494199 (PS105, PS111)?	Go to step 5.
3	Are you installing part 4494190 (PS106, PS112)?	Go to step 8.
4	Go to Instructions column.	1. Install power supply. 2. Go to page PR 1021, step 2.
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. Use table <b>A</b> , and ensure that PS105 and/or PS111 current jumper is set to the correct current setting. 4. Install PS105 and/or PS111.
6	Are you installing PS105?	Ensure the red and black wire from the load resistor to 01A-B2TB1 A and B bus is cut or disconnected at the bus bars and tied back.  (See references <b>A</b> and <b>B</b> .)
7	Go to Instructions column.	1. Set PCC CB1 and CB2 on. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Go to page PR 1021, step 2.
8	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. Use table <b>A</b> , and ensure that PS106 and/or PS112 current jumper is set to the correct current setting. 4. Install PS106 and/or PS112. 5. Set PCC CB1 and CB2 on. 6. Set CE Mode switch to CE Mode. 7. Press service panel Power On. 8. Go to page PR 1021, step 2.

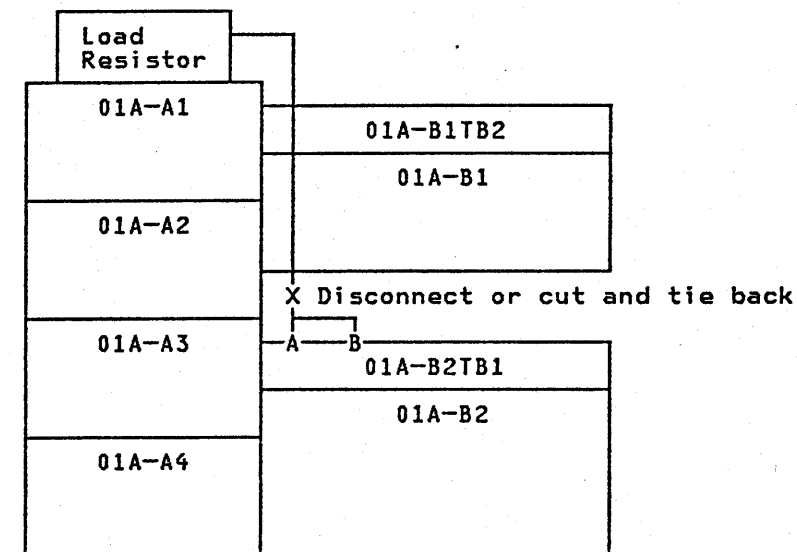
**A**

Power Supply	Model Group 1	Model Group 2	Model Group 3	Load Resistor
PS105	1-2	1-2	1-2	Remove
PS106	2-3	2-3	2-3	N/A
PS111	N/A	N/A	1-2	N/A
PS112	N/A	N/A	2-3	N/A

Note: See QFO screen for Model Group.



**B**



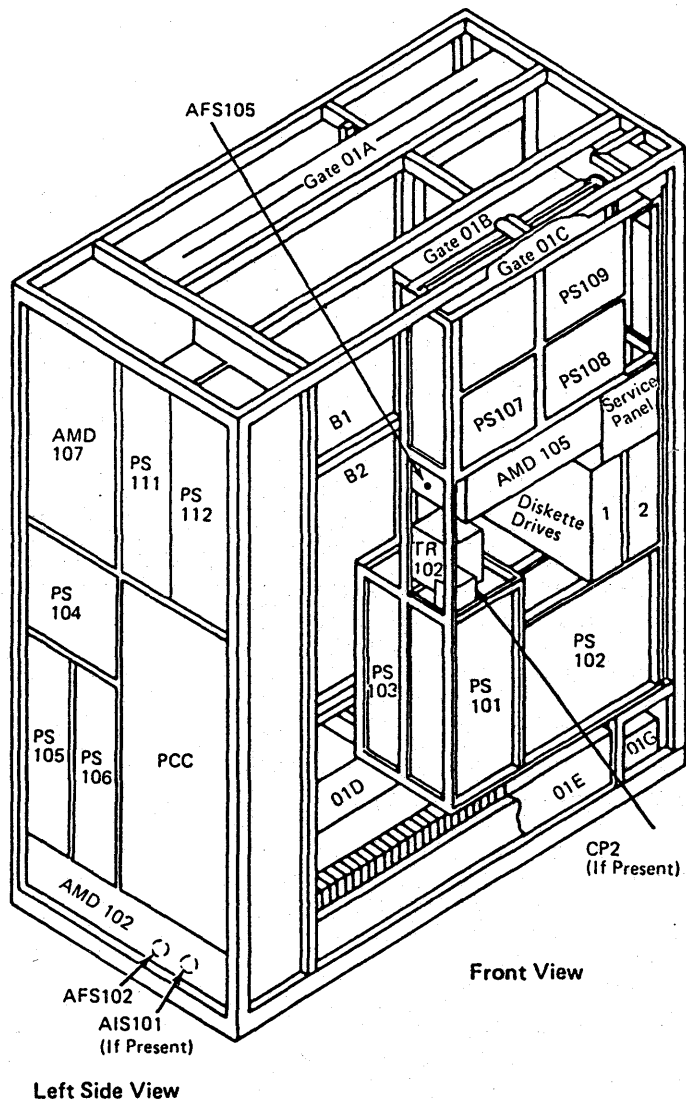


Voltage Adjust

This procedure checks and adjusts voltage levels.

ALL POWER SUPPLY ADJUSTMENTS MUST BE DONE WITH A METER.

Step	Conditions	Instructions
1	Are you installing one of the following?  PS105, PS111 (part 4494199)  PS106, PS112 (part 4494190)	<ol style="list-style-type: none"> <li>Before installing the power supply, go to page PR 1015 and verify that the power supply current jumper is installed correctly and that the load resistor for PS105 is removed.</li> <li>After completing PR 1015, return here and continue with step 2.</li> </ol>
2	Are you here because the S field of the Ref Code (RC=UURRRRIS) is equal to C or are you checking power supply voltages?	<ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select the Analog Voltage/Temperature Display (QWA) screen.</li> <li>Any sensor more than three + or - characters should be adjusted or checked for the proper voltage level.</li> <li>Use table <b>A</b> and your sensor number or 1X RRRR number to determine the power supply and step number.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol>
3	Are you here to adjust or did you just exchange PS101?	<p>PS101 voltages are not adjustable. If any voltage level is out of range, exchange the power supply.</p> <ol style="list-style-type: none"> <li>Measure for +5 Vdc at the following points: - lead at 01A-A1V2J08 + lead at 01A-A1V2J03.</li> <li>Exchange PS101 if voltage is not between +4.5 and +5.5 Vdc.</li> <li>Measure for +24 Vdc at the following points: - lead at 01A-A1V2J08 + lead at 01A-A1V2B11.</li> <li>Exchange PS101 if voltage is not between +22 and +26 Vdc.</li> <li>If all voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

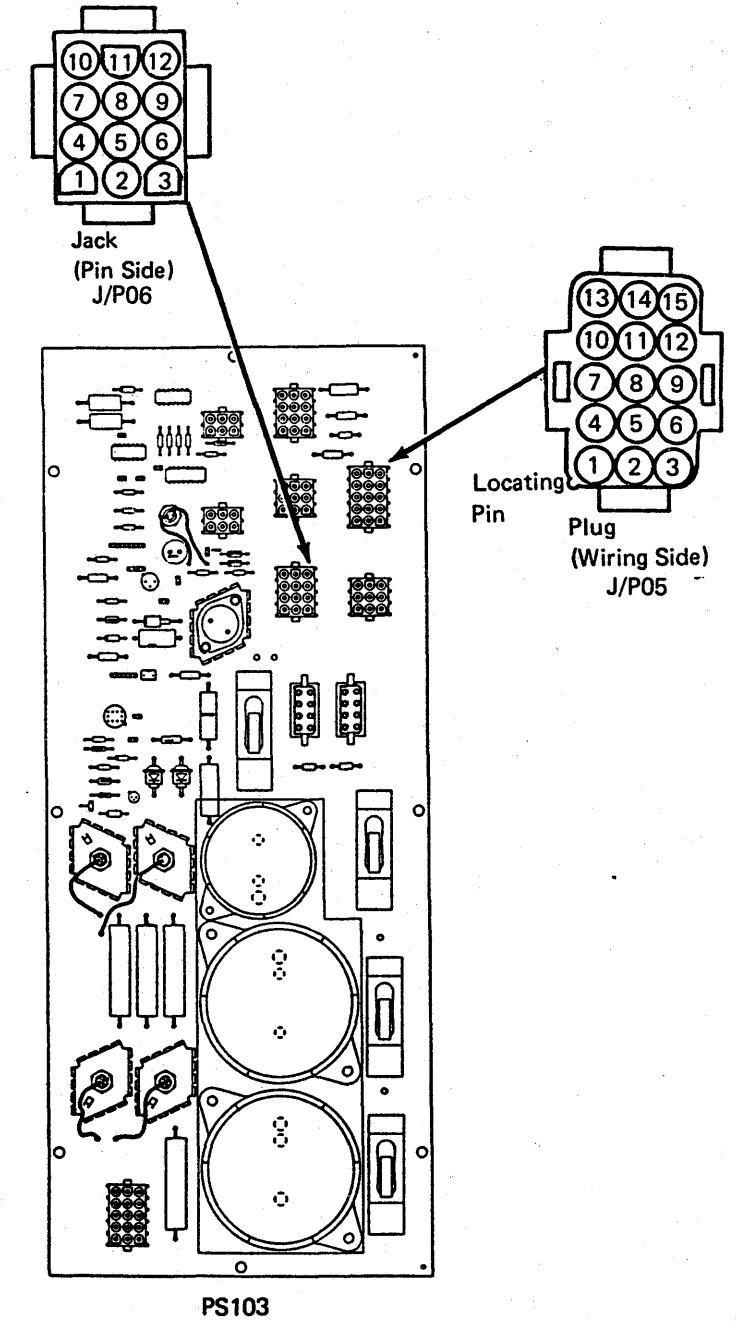


**A**

RRRR	Power Supply	Voltage	Go to
1643	PS103	+5 Vdc	Step 5
A01X	PS103	+24 Vdc	Step 5
A02X	PS103	+5 Vdc	Step 5
A07X	PS102	+5 Vdc	Step 4
A08X	PS108	+5 Vdc	Step 10
A09X	PS109	+5 Vdc	Step 11
A10X	PS103	+5 Vdc	Step 5
A11X	PS103	+5 Vdc	Step 5
A12X	PS107	+6 Vdc	Step 9
A13X	PS107	+6 Vdc	Step 9
A14X	PS108	+8.5 Vdc	Step 10
A15X	PS102	+5 Vdc	Step 4
A16X	PS107	+6 Vdc	Step 9
A17X	PS105	-1.5 Vdc	Step 7
A18X	PS103	-2.2 Vdc	Step 5
A21X	PS102	-5 Vdc	Step 4
A25X	PS111	-1.5 Vdc	Step 12
A26X	PS105	-1.5 Vdc	Step 7
A29X	PS105	-1.5 Vdc	Step 7
A30X	PS105	-1.5 Vdc	Step 7
A31X	PS105	-1.5 Vdc	Step 7
A32X	PS105	-1.5 Vdc	Step 7
A54X	PS102	-5 Vdc	Step 4
A57X	PS112	-4.3 Vdc	Step 13
A58X	PS106	-4.3 Vdc	Step 8
A61X	PS106	-4.3 Vdc	Step 8
A62X	PS106	-4.3 Vdc	Step 8
A63X	PS106	-4.3 Vdc	Step 8
A64X	PS106	-4.3 Vdc	Step 8

Step	Conditions	Instructions
4	Are you here to adjust or did you just exchange PS102?	<p>PS102 voltages are not adjustable. If any voltage level is out of range, exchange the power supply.</p> <ol style="list-style-type: none"> <li>If power will not stay up, press Check Reset and service panel Power On for each voltage check.</li> <li>Measure for +5 Vdc at the following points: - lead at O1A-A2K2D08 + lead at O1A-A2K2D03.</li> <li>Exchange PS102 if voltage is not between +4.5 and +5.5 Vdc.</li> <li>Measure for +8.5 Vdc at the following points: - lead at O1A-A2K2D08 + lead at O1A-A2K2B11.</li> <li>Exchange PS102 if voltage is not between +7.65 and +9.35 Vdc.</li> <li>Measure for +12 Vdc at the following points: - lead at O1A-A2J2D08 + lead at O1A-A2J2B11.</li> <li>Exchange PS102 if voltage is not between +10.8 and +13.2 Vdc.</li> <li>Measure for -5 Vdc at the following points: - lead at O1A-A2K2D08 + lead at O1A-A2K2B06.</li> <li>Exchange PS102 if voltage is not between -4.5 and -5.5 Vdc.</li> <li>Measure for -12 Vdc at the following points: - lead at O1A-A2Q2P08 + lead at O1A-A2Q2P07.</li> <li>Exchange PS102 if voltage is not between -10.8 and -13.2 Vdc.</li> <li>If voltages are correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

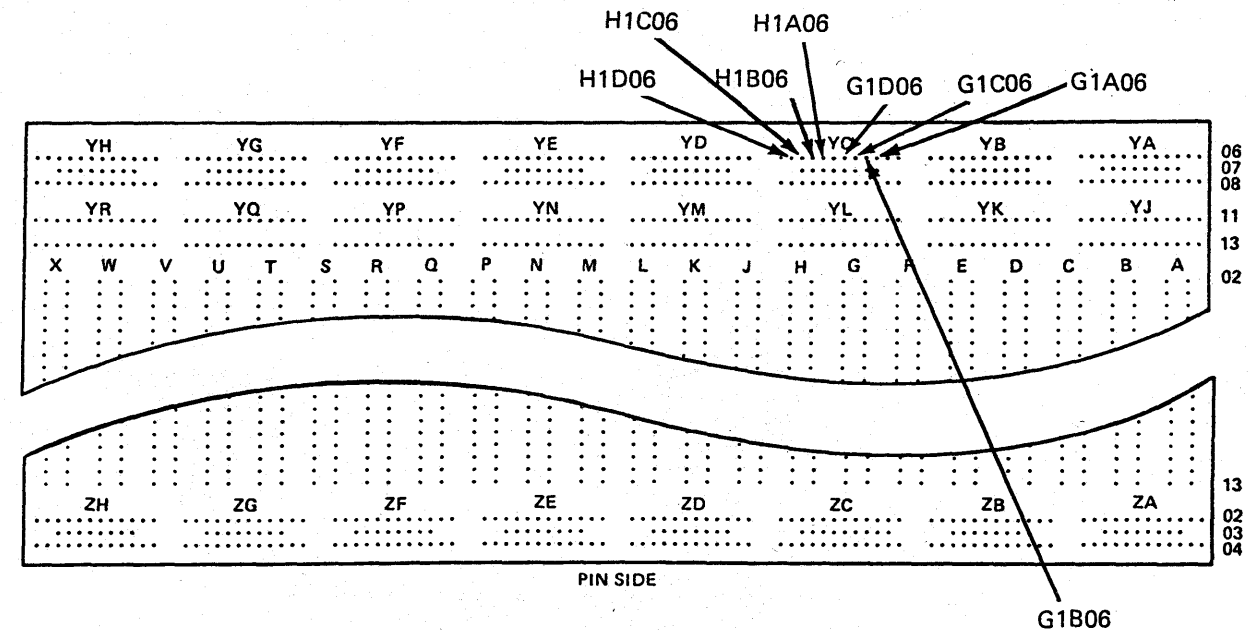
Step	Conditions	Instructions
5	Are you here to adjust or did you just exchange PS103?	<p>PS103 +5 and +24 voltage levels are not adjustable. The -2.2V level is adjustable. Exchange the power supply if any voltage level is out of range or does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option C (stop after -2.2V start).</li> <li>Measure for +5 Vdc at the following points: - lead at PS103 P06-1 + lead at PS103 P06-2.</li> <li>Exchange PS103 if voltage is not between +4.5 and +5.5 Vdc.</li> <li>Measure for +24 Vdc at the following points: - lead at PS103 P05-1 + lead at PS103 P05-3.</li> <li>Exchange PS103 if voltage is not between +22 and +26 Vdc.</li> <li>Measure for -2.2 Vdc at the following points: - lead at O1A-A4K2D08 + lead at O1A-A4K2D03.</li> <li>Adjust PS103 to -2.20V if voltage is not between -2.13 and -2.27 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS103 if voltage fails to adjust.</li> <li>If voltages are correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>
6	Are you here to adjust or did you just exchange PS104?	<ol style="list-style-type: none"> <li>PS104 is not adjustable.</li> <li>Go to page PR 5001.</li> </ol>



4381-3	MI	PN 6169119	EC A20558	EC A20559	EC A20560	EC A20562	
B/M 2676380	Seq CA020	2 of 5	01 Oct 84	03 Dec 84	18 Feb 85	30 Aug 85	

Step	Conditions	Instructions
7	<p>Are you here to adjust or did you just exchange PS105?</p> <p><b>Warning:</b> If you are installing part 4494199, go to PR 1015 before continuing.</p>	<p>PS105 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> <li>Measure for -1.5 Vdc at the following points: - lead at 01A-A2G1B06 + lead at 01A-A2G1A06.</li> <li>Adjust PS105 to -1.50V if voltage is not between -1.47 and -1.53 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS105 if voltage fails to adjust.</li> </ol> <p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
8	<p>Are you here to adjust or did you just exchange PS106?</p> <p><b>Warning:</b> If you are installing part 4494190, go to PR 1015 before continuing.</p>	<p>PS106 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> <li>Measure for -4.3 Vdc at the following points: - lead at 01A-A2G1D06 + lead at 01A-A2G1C06.</li> <li>Adjust PS106 to -4.33V if voltage is not between -4.25 and -4.42 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS106 if voltage fails to adjust.</li> </ol> <p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>If voltages are correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>



4381-3	MI	PN 6169119	EC A20558	EC A20559	EC A20560	EC A20562
B/M 2676380	Seq CA020	3 of 5	01 Oct 84	03 Dec 84	18 Feb 85	30 Aug 85

Step	Conditions	Instructions
9	Are you here to adjust or did you just exchange PS107?	<p>PS107 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option H (stop after +6V start).</li> <li>Measure for +6 Vdc at the following points: - lead at 01A-A3K2J08 + lead at 01A-A3K2G11.</li> <li>Adjust PS107 to +6.0V if voltage is not between +5.82 and +6.18 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS107 if voltage fails to adjust.</li> <li>If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>
10	<p>Are you here to adjust or did you just exchange PS108?</p> <p><b>Note:</b> If PS108 is a +5V power supply, use PR 1025.</p>	<p>PS108 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option G (stop after +8.5V start).</li> <li>Measure for +8.5 Vdc at the following points: - lead at 01A-A4K2J08 + lead at 01A-A4K2J12.</li> <li>Adjust PS108 to +8.50V if voltage is not between +8.24 and +8.76 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS108 if voltage fails to adjust.</li> <li>If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If all voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
11	Are you here to adjust or did you just exchange PS109?	<p>PS109 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option F (stop after +5V start).</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A4K2J08 + lead at 01A-A4K2J13 (source 1 storage) + lead at 01A-A4C2J03 (source 2 storage).</li> </ol> <p><b>Note:</b> For source 1 storage, PS108 is a 8.5V power supply.</p> <ol style="list-style-type: none"> <li>Adjust PS109 to +5.0V if voltage is not between +4.85 and +5.15 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS109 if voltage fails to adjust.</li> <li>If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

MI Seq CA020	PN 6169119 4 of 5	EC A20558 01 Oct 84	EC A20559 03 Dec 84	EC A20560 18 Feb 85	EC A20562 30 Aug 85	
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Step	Conditions	Instructions
12	<p>Are you here to adjust or did you just exchange PS111?</p> <p><b>Warning:</b> If you are installing part 4494199, go to PR 1015 before continuing.</p>	<p>PS111 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option E (stop after -1.5/-4.3V start).</li> <li>Measure for -1.5 Vdc at the following points: - lead at O1A-A2H1B06 + lead at O1A-A2H1A06.</li> <li>Adjust PS111 to -1.50V if voltage is not between -1.47 and -1.53 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS111 if voltage fails to adjust.</li> </ol> <p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
13	<p>Are you here to adjust or did you just exchange PS112?</p> <p><b>Warning:</b> If you are installing part 4494190, go to PR 1015 before continuing.</p>	<p>PS112 is adjustable. Exchange the power supply if the voltage level is out of range and does not adjust.</p> <ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option E (stop after -1.5/-4.3V start).</li> <li>Measure for -4.3 Vdc at the following points: - lead at O1A-A2H1D06 + lead at O1A-A2H1C06.</li> <li>Adjust PS112 to -4.33V if voltage is not between -4.25 and -4.42 Vdc.</li> </ol> <p><b>Note:</b> Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> <li>Exchange PS112 if voltage fails to adjust.</li> </ol> <p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>If voltages are correct and you still have a 1X Ref Code with the S field equal to C, go to step 14.</li> <li>If voltage checks or adjustments are done, go to page PR 5001.</li> </ol>
14	Do you have a 1X Ref Code with the S field equal to C?	<ol style="list-style-type: none"> <li>Change the S field to an E.</li> <li>Use table <b>B</b> and your 1X Ref Code to determine the correct PR XXXX repair entry page.</li> <li>Go to PR XXXX.</li> </ol>
15	Go to Instructions column.	Go to page PR 5001.

**B**

RRRR	Ref Code	PR Page
1643	11-164X-OE	PR 1701
A01X	11-A01X-OE	PR 1691
A02X	11-A02X-OE	PR 1701
A07X	11-A07X-OE	PR 1711
A08X	11-A08X-OE	PR 1721
A09X	11-A09X-OE	PR 1731
A10X	11-A10X-OE	PR 1741
A11X	12-A11X-OE	PR 2761
A12X	11-A12X-OE	PR 1751
A13X	12-A13X-OE	PR 2771
A14X	11-A14X-OE	PR 2271
A15X	14-A15X-OE	PR 2231
A16X	14-A16X-OE	PR 2241
A17X	14-A17X-OE	PR 2251
A18X	11-A18X-OE	PR 2281
A21X	N/A	N/A
A25X	12-A25X-OE	PR 2781
A26X	11-A26X-OE	PR 1761
A29X	11-A29X-OE	PR 1781
A30X	11-A30X-OE	PR 1791
A31X	11-A31X-OE	PR 1801
A32X	12-A32X-OE	PR 2791
A54X	N/A	N/A
A57X	12-A57X-OE	PR 2801
A58X	11-A58X-OE	PR 1861
A61X	11-A61X-OE	PR 1871
A62X	11-A62X-OE	PR 1881
A63X	12-A63X-OE	PR 2811
A64X	11-A64X-OE	PR 2291



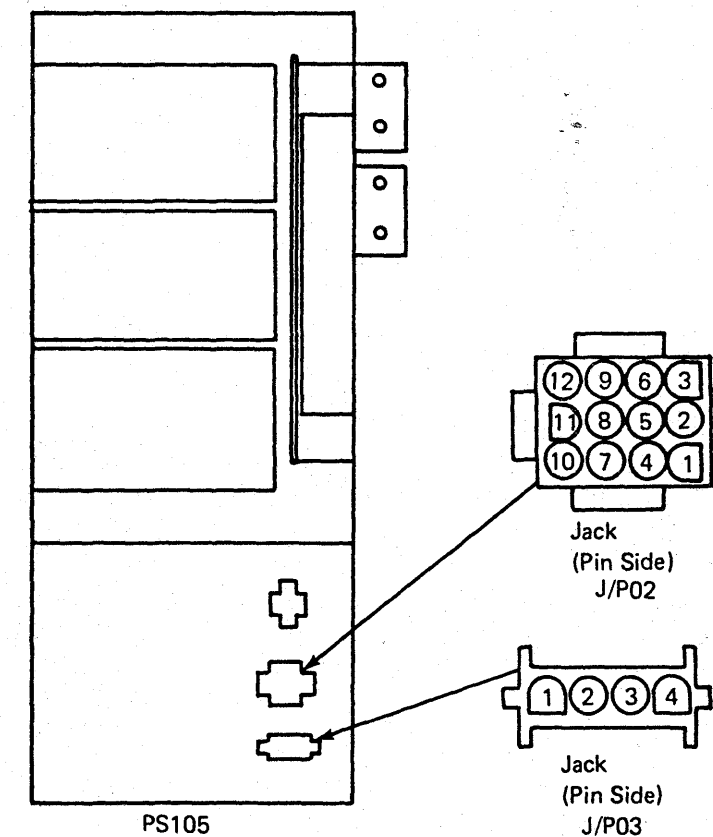
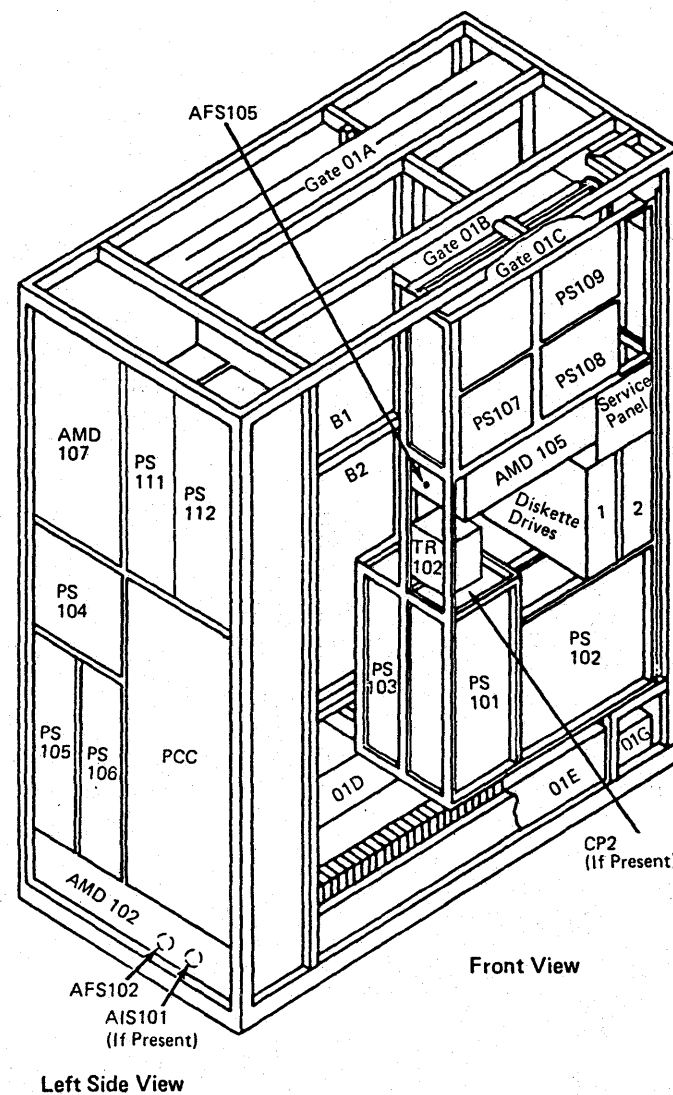


These Ref Codes indicate PS105 failed to turn on because of a failure in the start line, remote sense return line, or +24V bias to PS105.

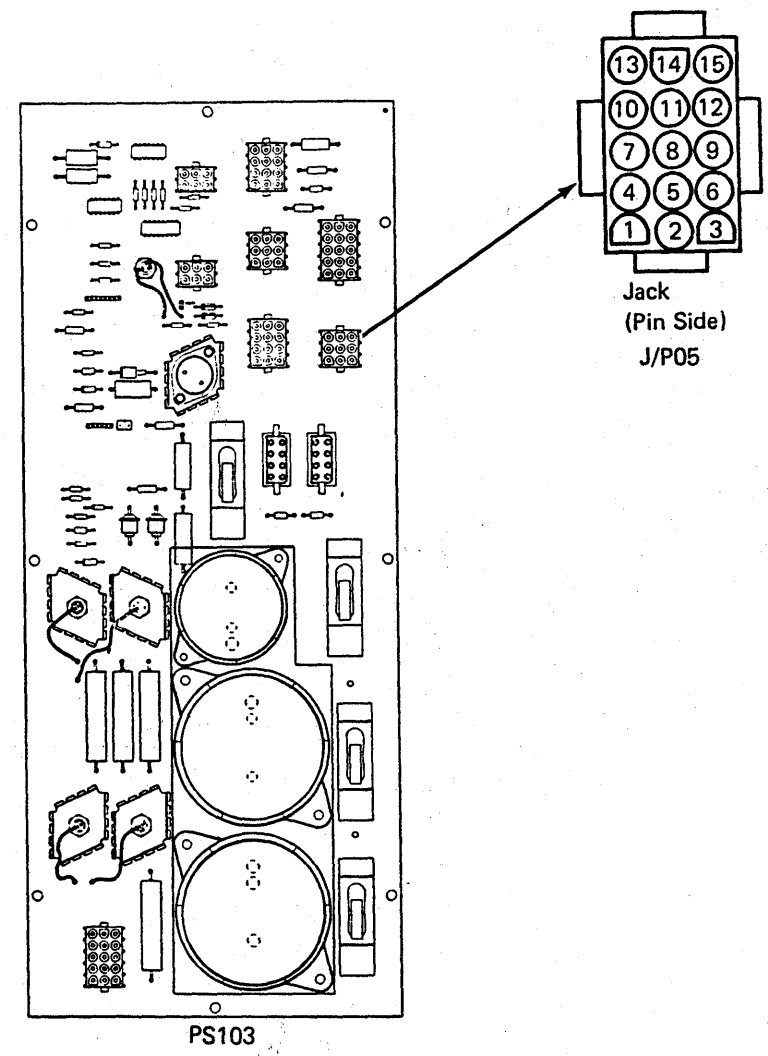
Possible causes:

- PS105 start line grounded
- 01A-A2E2 sense card
- 01A-A2 board
- PS105
- PS105 remote sense return line open.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> <li>6. Measure for +24 Vdc at the following points: - lead at PS105 J/P03-2 + lead at PS105 J/P03-1.</li> </ol>
2	Is voltage less than +22 Vdc?	Go to step 10.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS105 J/P02-8.
4	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB 1 and CB2 off.</li> <li>3. Exchange cable from PS105 J/P02 to 01A-B2 TB1 sense capacitors.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 20.</li> </ol>



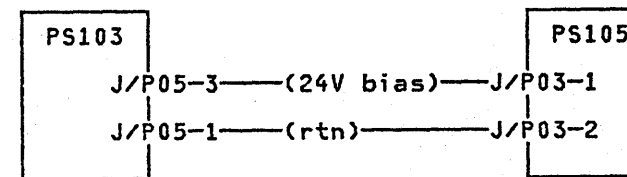
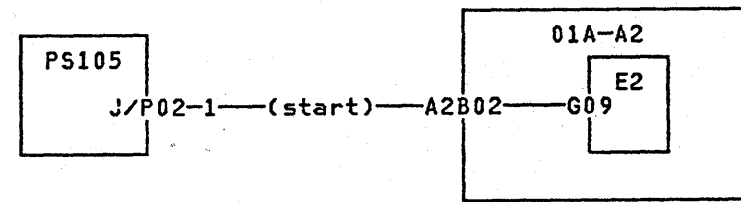
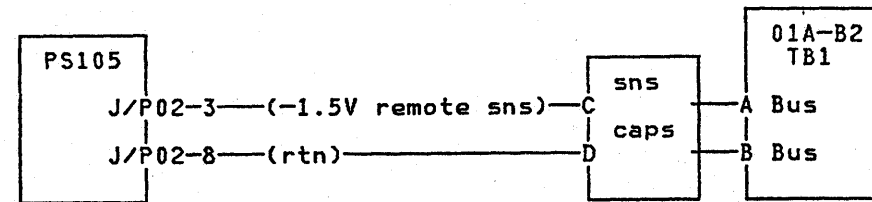
Step	Conditions	Instructions
5	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS105 J/P02-1.
6	Is voltage less than +2.5 Vdc?	Go to step 13.
7	Go to Instructions column.	1. Press ENTER to end the Diagnostic Stop. 2. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS105 J/P02-1.  3. The 01A-B2 plenum door must be closed. 4. Select Partial Power Up/Down (QWW) screen. 5. Select UP (power-up processor only).
8	Is voltage greater than +2.5 Vdc?	A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS105.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  4. Go to step 20.



Step	Conditions	Instructions
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2E2 card.</li> </ol> <p><b>Note:</b> Check TCCs for proper seating before exchanging card.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>
10	Go to Instructions column.	<p>Measure for +24 Vdc at the following points:</p> <p>- lead at PS103 J/P05-1 + lead at PS103 J/P05-3.</p>
11	Is voltage greater than +22 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 J/P05 to PS105 J/P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>

Step	Conditions	Instructions
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Disconnect PS105 J/P02.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G09.</li> </ol>
14	Is voltage greater than +2.5 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS105 J/P02.</li> <li>Swap 01A-A2E2 and 01A-A2D2 cards.</li> </ol> <p><b>Note:</b> Ensure TCCs are reinstalled.</p> <ol style="list-style-type: none"> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G09.</li> </ol>
16	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange card swapped into the 01A-A2D2 position.</li> <li>Go to step 20.</li> </ol>

Step	Conditions	Instructions
17	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB 1 and CB2 off.</li> <li>Disconnect cable 01A-A2A2.</li> <li>Set PCC CB 1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G09.</li> </ol>
18	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB 1 and CB2 off.</li> <li>Exchange cable from PS105 J/P02 to 01A-A2A2.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>
19	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB 1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> </ol>
20	Go to Instructions column.	<ol style="list-style-type: none"> <li>Ensure PCC CB 1 and CB2 are off.</li> <li>Reinstall and check all cables and cards for proper seating in the following areas:  PS103 PS105 01A-B2 TB1 01A-A2 board.</li> <li>Reset any tripped CPs.</li> <li>Set PCC CB 1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

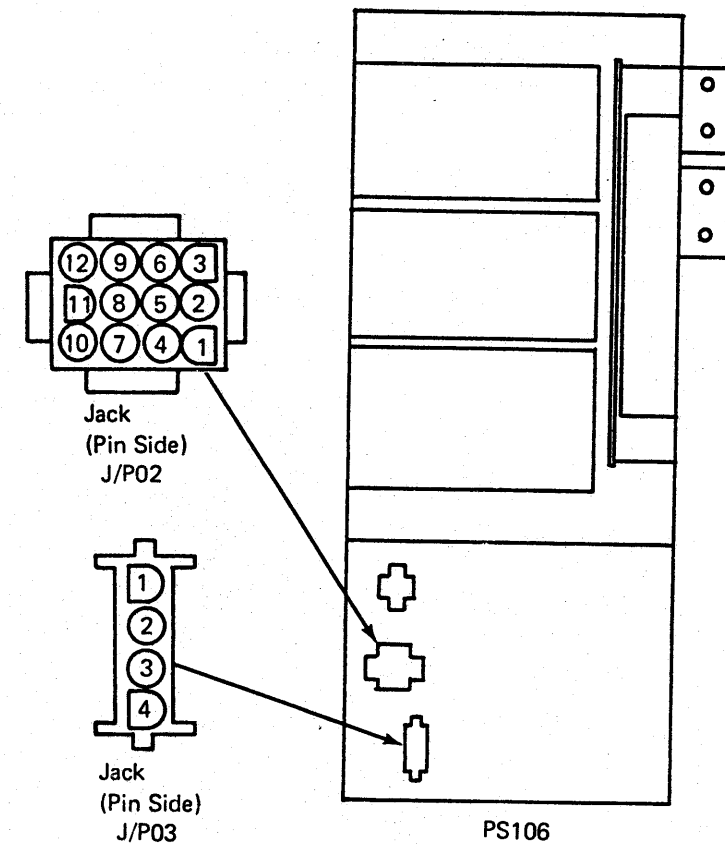
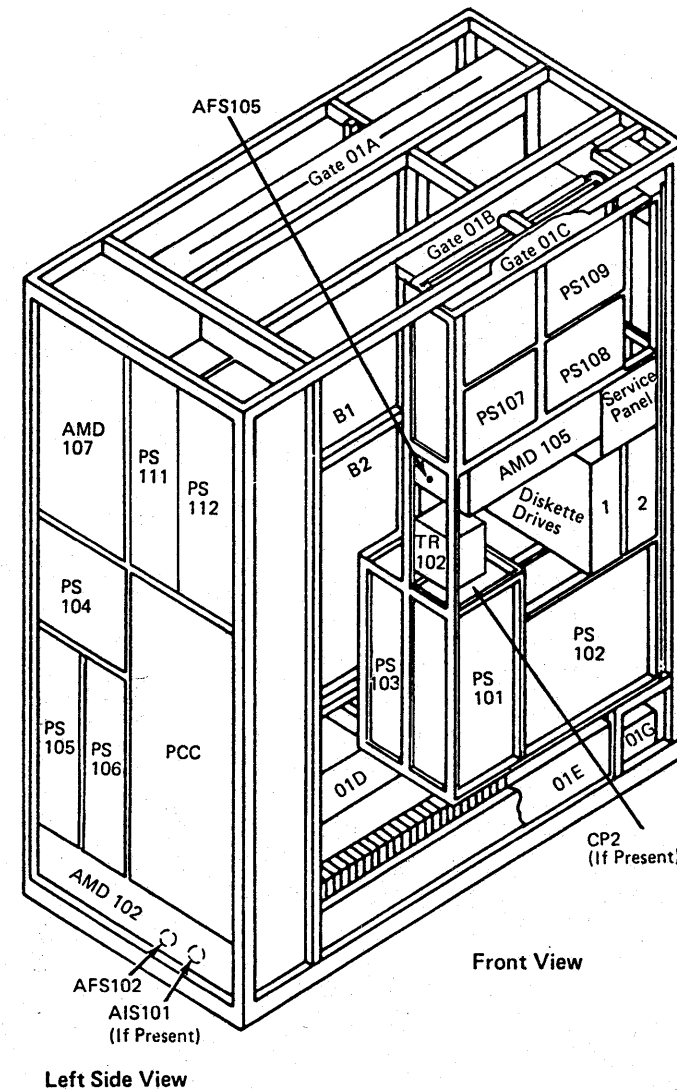


These Ref Codes indicate PS106 failed to turn on because of a failure in the start line, remote sense return line, or +24V bias to PS106.

Possible causes:

- PS106 start line grounded
- 01A-A2E2 sense card
- 01A-A2 board
- PS106
- PS103
- PS106 remote sense return line open.

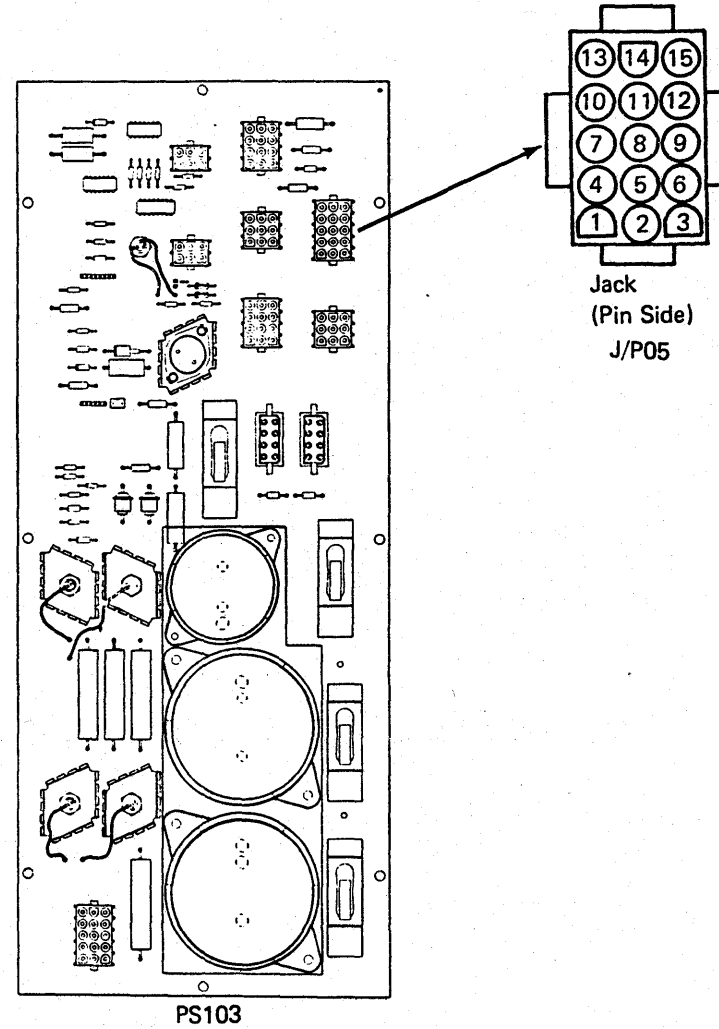
Step	Conditions	Instructions
1	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> <li>6. Measure for +24 Vdc at the following points: - lead at PS106 J/P03-2 + lead at PS106 J/P03-1.</li> </ol>
2	Is voltage less than +22 Vdc?	Go to step 10.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS106 J/P02-8.
4	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from PS106 J/P02 to 01A-B2 TB1 C/B sense capacitors.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 20.</li> </ol>



Step	Conditions	Instructions
5	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS106 J/P02-1.
6	Is voltage greater than +2.5 Vdc?	Go to step 13.
7	Go to Instructions column.	1. Press ENTER to end the Diagnostic Stop. 2. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS106 J/P02-1.  3. The 01A-B2 plenum door must be closed. 4. Select Partial Power Up/Down (QWW) screen. 5. Select UP (power-up processor only).
8	Is voltage greater +2.5 Vdc?	A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS106.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  4. Go to step 20.

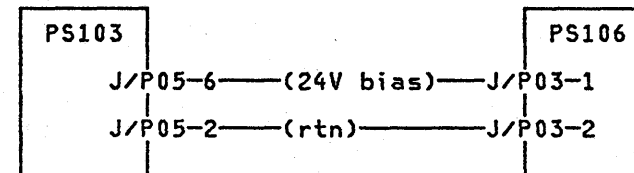
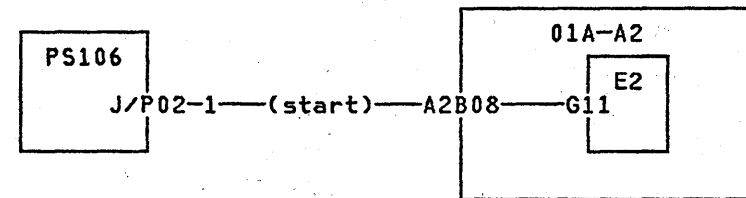
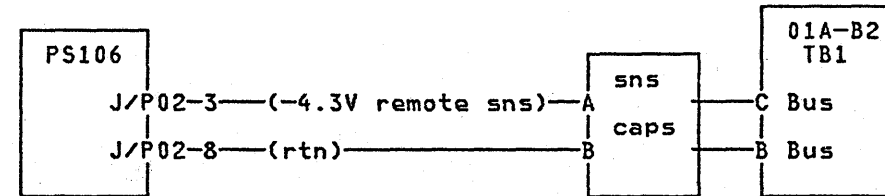
Step	Conditions	Instructions
9	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2E2 card.  <b>Note:</b> Check TCCs for proper seating before exchanging card.  4. Go to step 20.
10	Go to Instructions column.	Measure for +24 Vdc at the following points:  - lead at PS103 J/P05-2 + lead at PS103 J/P05-6.
11	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 cable from PS103 J/P05 to PS106 J/P03.  <b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.  4. Go to step 20.
12	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 PS103.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  4. Go to step 20.

Step	Conditions	Instructions
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Disconnect PS106 J/P02.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G11.</li> </ol>
14	Is voltage greater than +2.5 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Go to step 20.</li> </ol>
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Reconnect PS106 J/P02.</li> <li>3. Swap 01A-A2E2 and 01A-A2D2 cards.</li> </ol> <p><b>Note:</b> Ensure TCCs are reinstalled.</p> <ol style="list-style-type: none"> <li>4. Press service panel Power On.</li> <li>5. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G11.</li> </ol>
16	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange card swapped into the 01A-A2D2 position.</li> <li>4. Go to step 20.</li> </ol>





Step	Conditions	Instructions
17	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable 01A-A2A2.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:                      - lead at 01A-A2E2D08                      + lead at 01A-A2E2G11.</li> </ol>
18	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS106 J/P02 to 01A-A2A2.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 20.</li> </ol>
19	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> </ol>
20	Go to Instructions column.	<ol style="list-style-type: none"> <li>Ensure PCC CB1 and CB2 are off.</li> <li>Reinstall and check all cables and cards for proper seating in the following areas:                      PS103                      PS106                      01A-B2 TB1                      01A-A2 board.</li> <li>Reset any tripped CPs.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

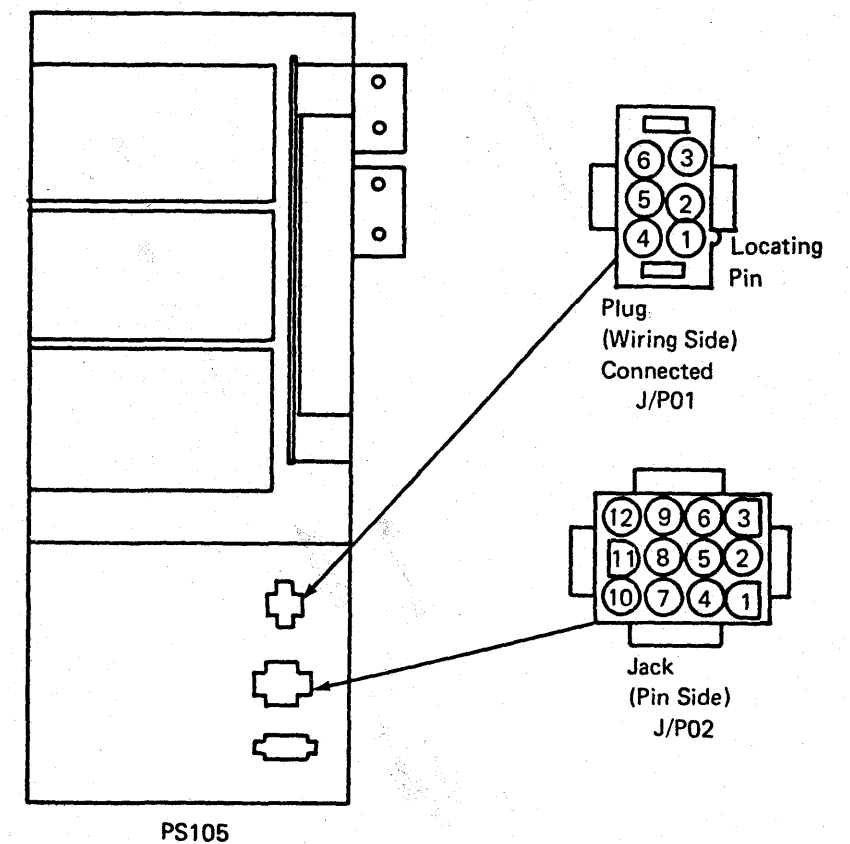
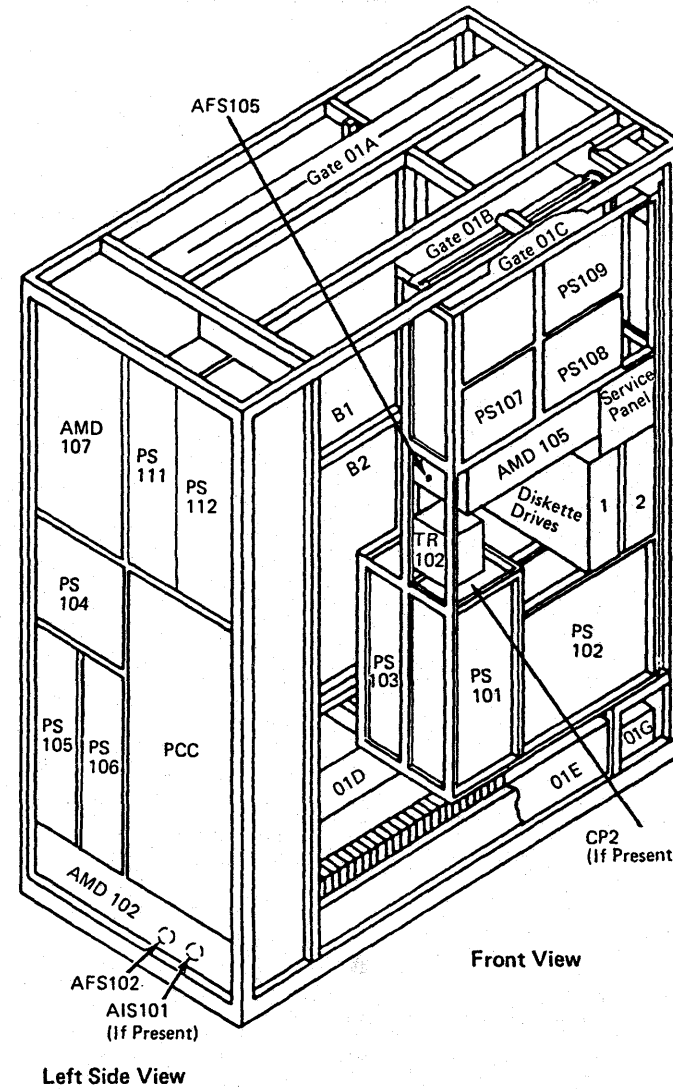


These Ref Codes indicate that PS105 failed to turn on after the start line was set on.

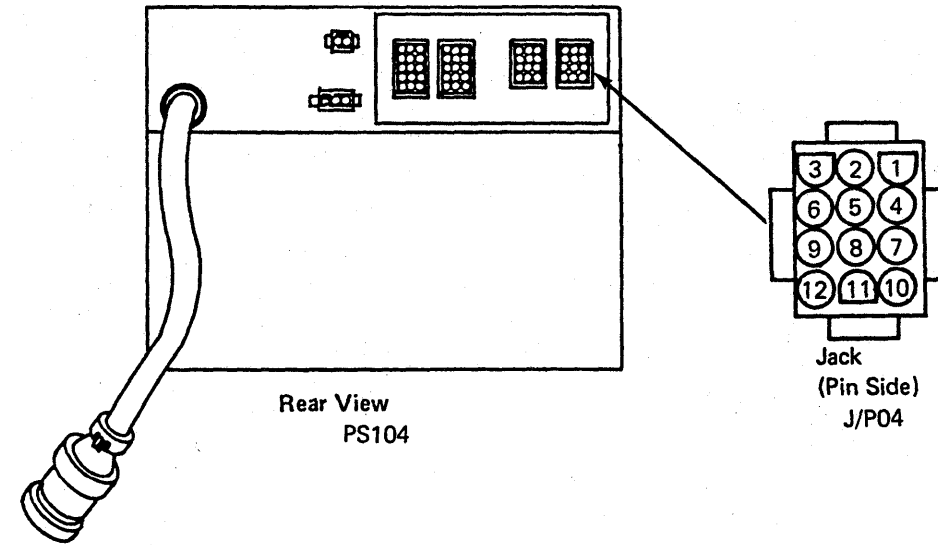
Possible causes:

- PS105
- 01A-A2E2 sense card
- PS105 start line
- +5 Vdc from MSS
- +300 Vdc from PS104.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Disconnect PS105 P01.</li> <li>4. Press service panel Power On.</li> <li>5. Select Diagnostic Power Up (QWD) screen.</li> <li>6. Select option B (stop after K04 picked).</li> <li>7. Measure for +5.0 Vdc at the following points: - lead at frame ground + lead at PS105 J/P02-12.</li> </ol>
2	Is voltage +4.5 to +5.5 Vdc?	Go to step 6.
3	Go to Instructions column.	Measure for +5.0 Vdc at the following points:  - lead at 01A-A2A2D08 + lead at 01A-A2A2D03.
4	Is voltage +4.5 to +5.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from PS105 J/P02 to 01A-A2A2.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



Step	Conditions	Instructions
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange O1A-A2 board.</li> <li>3. Go to page PR 5001.</li> </ol>
6	Go to Instructions column.	Measure for +300 Vdc at the following points:  <b>DANGER</b> <b>300 Vdc.</b>  - lead at PS105 J/P01-3 + lead at PS105 J/P01-1 (cable end).
7	Is voltage greater than +225 Vdc?	Go to step 11.
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Press ENTER to end Diagnostic Stop.</li> <li>2. Reconnect PS105 J/P01.</li> <li>3. Disconnect PS104 J/P04.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option B (stop after K04 picked).</li> <li>6. Measure for +300 Vdc at the following points: <b>DANGER</b> <b>300 Vdc.</b>                               - lead at PS104 J/P04-7                              + lead at PS104 J/P04-9 (on power supply).</li> </ol>
9	Is voltage greater than +225 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable PS104 J/P04 to PS105 J/P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



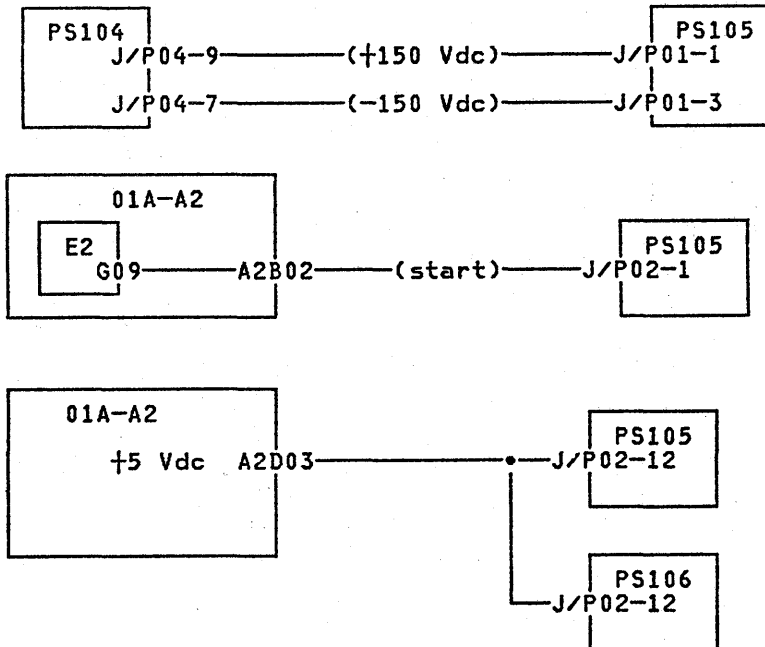
4381	MI	PN 6169122	EC A20558				
B/M 2676380	Seq CA035	2 of 4	01 Oct 84				



Step	Conditions	Instructions
10	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Press ENTER to end Diagnostic Stop.</li> <li>Reconnect PS105 J/P01.</li> <li>Measure for +5.0 Vdc at the following points:                     <ul style="list-style-type: none"> <li>- lead at 01A-A2E2D08</li> <li>+ lead at 01A-A2E2G09.</li> </ul> </li> </ol> <p><b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</p> <ol style="list-style-type: none"> <li>The 01A-B2 plenum door must be closed.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>
12	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange 01A-A2E2 card.</li> <li>Go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>Measure for +5.0 Vdc at the following points:                     <ul style="list-style-type: none"> <li>- lead at 01A-A2E2D08</li> <li>+ lead at 01A-A2A2B02.</li> </ul> </li> </ol> <p><b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</p> <ol style="list-style-type: none"> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>

Step	Conditions	Instructions
14	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>Measure for +5.0 Vdc at the following points:  - lead at frame ground. + lead at PS105 P02-1.  <b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>
16	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS105 J/P02 to 01A-A2A2.  <b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
17	Go to Instructions column.	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

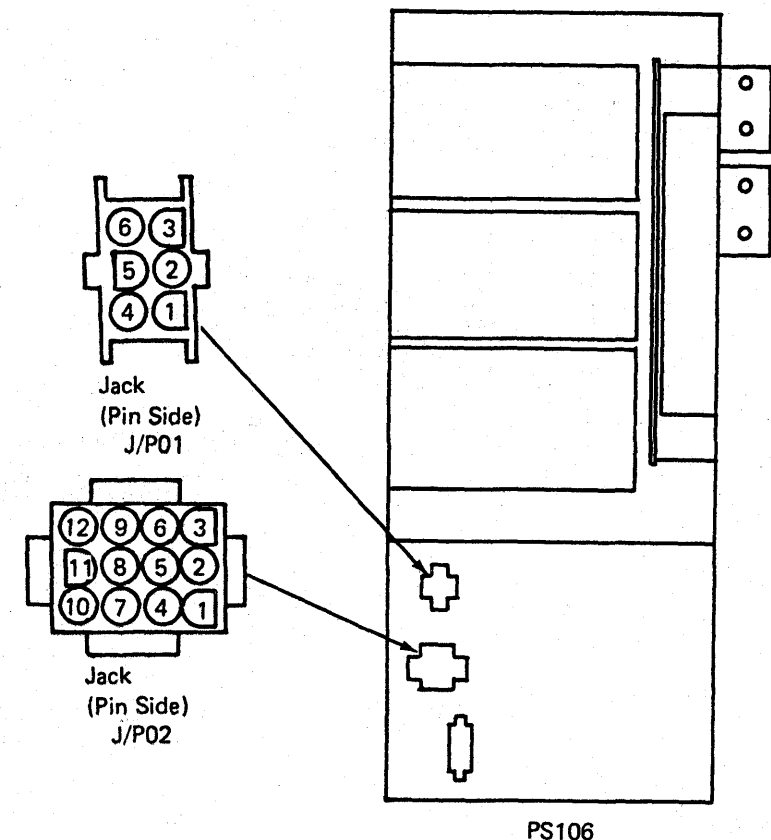
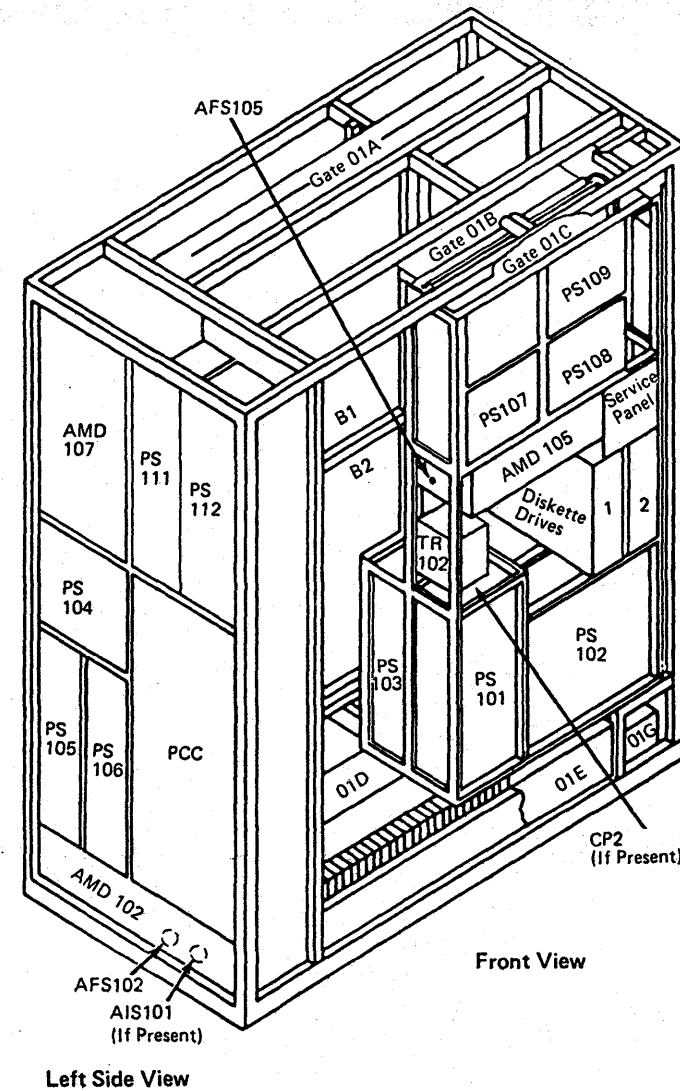


These Ref Codes indicate that PS106 failed to turn on after the start line was set on.

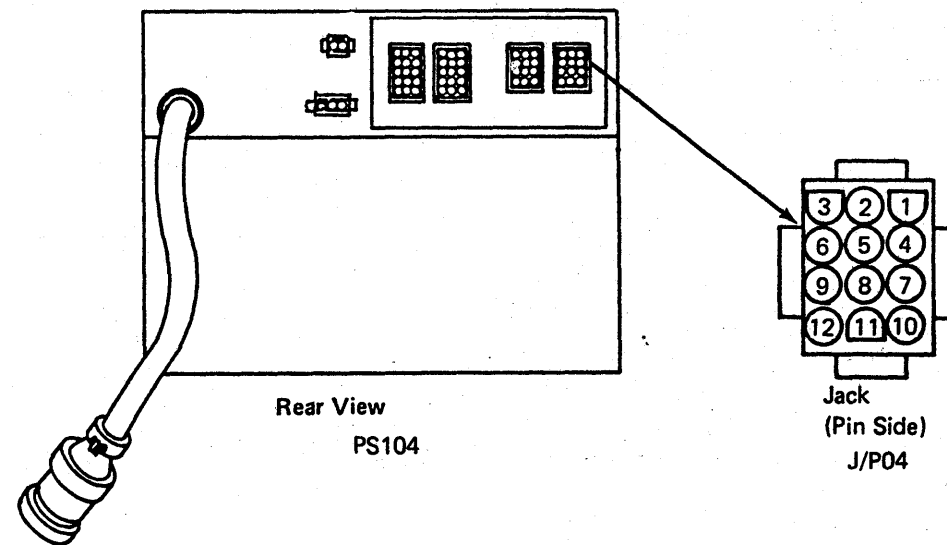
Possible causes:

- PS106
- 01A-A2E2 sense card
- PS106 start line
- +5 Vdc from MSS
- +300 Vdc from PS104.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Disconnect PS106 P01.</li> <li>4. Press service panel Power On.</li> <li>5. Select Diagnostic Power Up (QWD) screen.</li> <li>6. Select option B (stop after K04 picked).</li> <li>7. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS106 J/P02-12.</li> </ol>
2	Is voltage +4.5 to +5.5 Vdc?	Go to step 6.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc on the following point:  - lead at 01A-A2A2D08 + lead at 01A-A2A2D03.
4	Is voltage +4.5 to +5.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from PS106 J/P02 to 01A-A2A2.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



Step	Conditions	Instructions
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
6	Go to Instructions column.	<p>Measure for +300 Vdc at the following points:</p> <p><b>DANGER</b> <b>300 Vdc.</b></p> <p>- lead at PS106 J/P01-3 + lead at PS106 J/P01-1 (cable end).</p>
7	Is voltage greater than +225 Vdc?	Go to step 11.
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Press ENTER to end Diagnostic Stop.</li> <li>2. Reconnect PS106 J/P01.</li> <li>3. Disconnect PS104 J/P04.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option B (stop after K04 picked).</li> <li>6. Measure for +300 Vdc at the following points:</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <p>- lead at PS104 J/P04-10 + lead at PS104 J/P04-12 (on power supply).</p>
9	Is voltage greater than +225 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from PS104 J/P04 to PS106 J/P01.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



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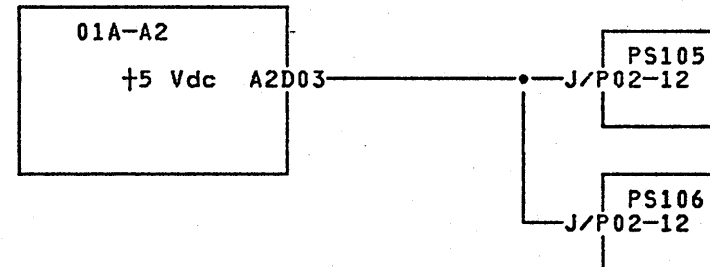
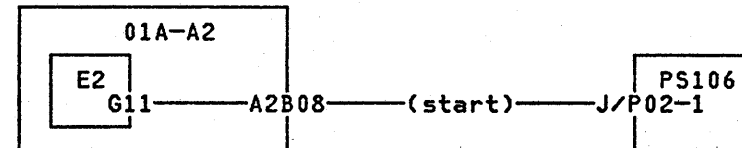
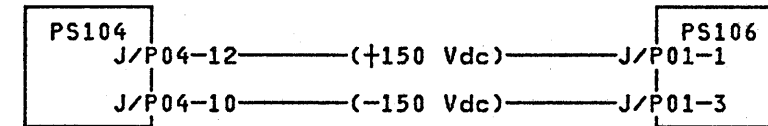


Step	Conditions	Instructions
10	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Press ENTER to end Diagnostic Stop.</li> <li>Reconnect PS106 J/PO1.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G11.</li> </ol> <p><b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</p> <ol style="list-style-type: none"> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>
12	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange 01A-A2E2 card.</li> <li>Go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2A2B08.</li> </ol> <p><b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</p> <ol style="list-style-type: none"> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>



Step	Conditions	Instructions
14	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>Measure for +5 Vdc at the following points:  - lead at frame ground. + lead at PS106 P02-1.  <b>Note:</b> The voltage level is expected to go to 0V for about two seconds.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option D (stop after -1.5/-4.3V start).</li> </ol>
16	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS106 J/P02 to 01A-A2A2.  <b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
17	Go to Instructions column.	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



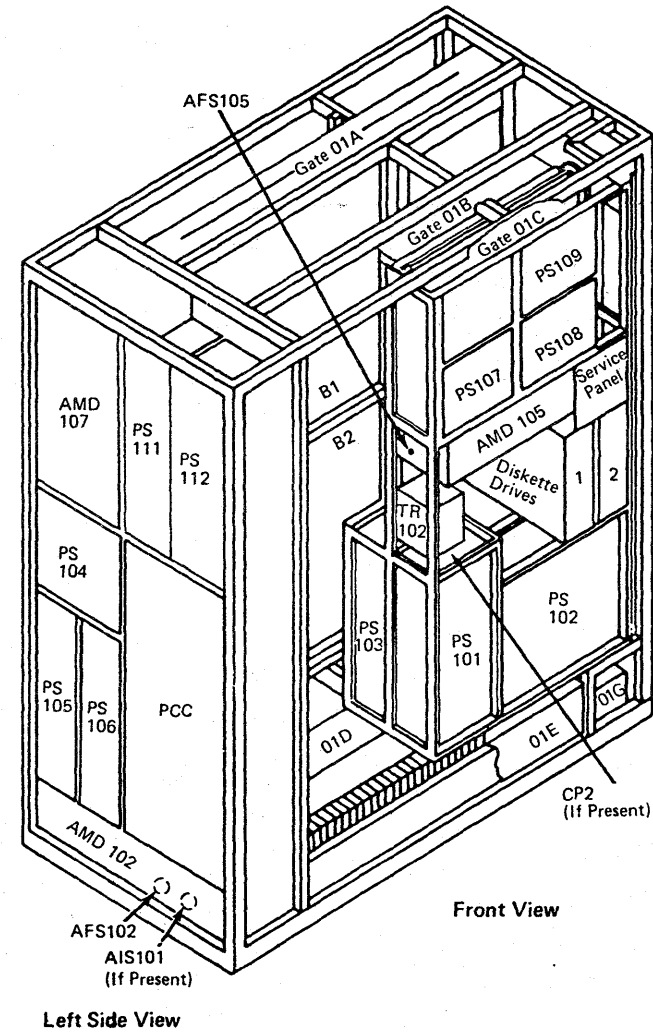
Ref Codes 1111340E, 1111350E, 1112950E

These Ref Codes indicate that PS109 failed to turn on after the start line was set on.

Possible causes:

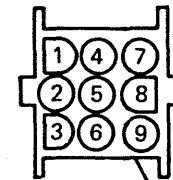
- 01A-A2E2 card
- PS109 start line
- PS104 F5, F6
- PS107 to PS109
- +5V from MSS
- +300V from PS104.

Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal.  <b>DANGER</b> <b>300 Vdc.</b>  2. Check for open PS104 F5 or F6.
2	Are F5 and F6 good?	1. Set CE Mode switch to CE Mode. 2. Press service panel Power On. 3. Go to step 7.
3	Is F5 or F6 open?	1. Exchange F5 or F6. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Select the Partial Power Up/Down (QWW) screen. 5. Select UP (power-up processor only).
4	Does processor status equal power is on?	Go to page PR 5001.
5	Do you have the same 1X Ref Code?	Go to step 12.

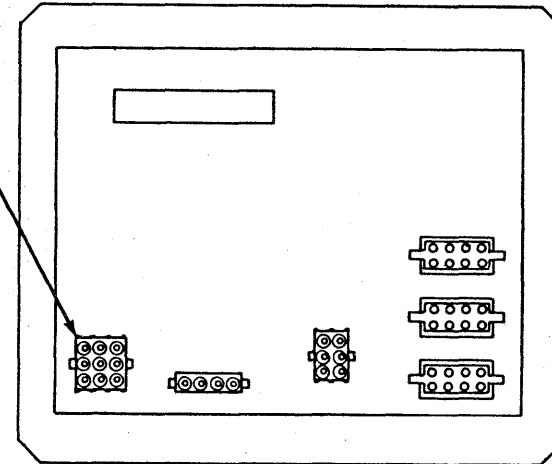


4381	MI	PN 6169124	EC A20558	EC A20559			
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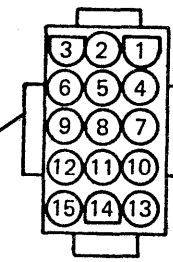
Step	Conditions	Instructions
6	Do you have a different Ref Code?	Go to page PR 1001.
7	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS109 P01-2.
8	Is voltage greater than +4.5 Vdc?	Go to step 45.
9	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points: - lead at 01A-A2A4D08 + lead at 01A-A2A4D03.
10	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from 01A-A2A4 to PS107 P01, PS108 P01, and PS109 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 57.</li> </ol>
11	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Go to step 57.</li> </ol>
12	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Disconnect PS104 P06.</li> <li>4. Measure resistance at the following points: - lead at frame ground + lead at PS104 P06-13 + lead at PS104 P06-15.</li> </ol>



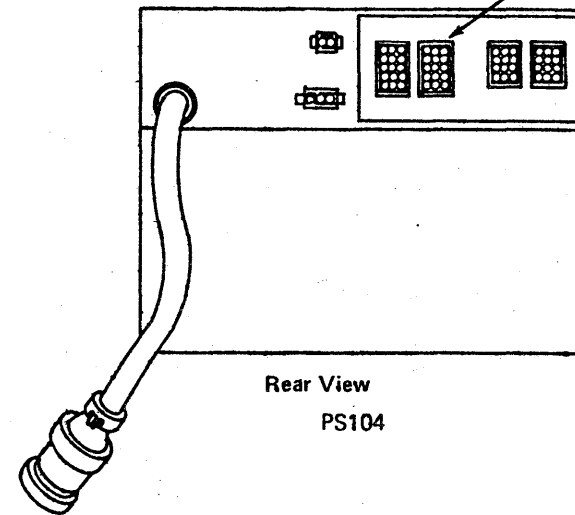
Jack  
(Pin Side)  
J/P01



PS109



Jack  
J/P06



Rear View  
PS104

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Step	Conditions	Instructions
13	Is an open indicated at both points?	Go to step 17.
14	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Disconnect PS109 P03.</li> <li>2. Measure resistance at the following points:                       - lead at frame ground                      + lead at PS104 P06-13                      + lead at PS104 P06-15.                 </li> </ol>
15	Is an open indicated at both points?	<ol style="list-style-type: none"> <li>1. Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>2. Go to step 57.</li> </ol>
16	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Exchange cable from PS104 P06 to PS107 P03, PS108 P03, and PS109 P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>2. Go to step 57.</li> </ol>
17	Go to <b>Instructions</b> column.	Measure resistance at the following points:  - lead at frame ground + lead at PS104 P06-10 + lead at PS104 P06-12.
18	Is an open indicated at both points?	Go to step 22.
19	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Disconnect PS108 P03.</li> <li>2. Measure resistance at the following points:                       - lead at frame ground                      + lead at PS104 P06-10                      + lead at PS104 P06-12.                 </li> </ol>

Step	Conditions	Instructions
20	Is an open indicated at both points?	<ol style="list-style-type: none"> <li>1. Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>2. Go to step 57.</li> </ol>
21	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set PCC CB1 and CB2 off.</li> <li>2. Exchange cable from PS104 P06 to PS107 P03, PS108 P03, and PS109 P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>3. Go to step 57.</li> </ol>
22	Go to <b>Instructions</b> column.	Measure resistance at the following points:  - lead at frame ground + lead at PS104 P06-7 + lead at PS104 P06-9.
23	Is an open indicated at both points?	Go to step 27.
24	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Disconnect PS107 P03.</li> <li>2. Measure resistance at the following points:                       - lead at frame ground                      + lead at PS104 P06-7                      + lead at PS104 P06-9.                 </li> </ol>
25	Is an open indicated at both points?	<ol style="list-style-type: none"> <li>1. Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>2. Go to step 57.</li> </ol>

MI Seq CA045	PN 6169124 3 of 7	EC A20558 01 Oct 84	EC A20559 03 Dec 84			
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Step	Conditions	Instructions
26	Go to Instructions column.	<ol style="list-style-type: none"> <li>Exchange cable from PS104 P06 to PS107 P03, PS108 P03, and PS109 P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>
27	Go to Instructions column.	<ol style="list-style-type: none"> <li>Ensure PS104 F5 and F6 are good.</li> <li>Disconnect the following:  PS104 P06 PS107 P03 PS108 P03 PS109 P03.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
28	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F5 or F6.</li> </ol>
29	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>

Step	Conditions	Instructions
30	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS104 P06.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
31	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F5 or F6.</li> </ol>
32	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS104 P06 to PS107 P03, PS108 P03, and PS109 P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>
33	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS109 P03.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>

Step	Conditions	Instructions
34	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> 300 Vdc.</p> <ol style="list-style-type: none"> <li>Check for open PS104 F5 or F6.</li> </ol>
35	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>
36	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Disconnect PS109 P03.</li> <li>Reconnect PS108 P03.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
37	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> 300 Vdc.</p> <ol style="list-style-type: none"> <li>Check for open PS104 F5 or F6.</li> </ol>
38	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>

Step	Conditions	Instructions
39	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Disconnect PS108 P03.</li> <li>Reconnect PS107 P03.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
40	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> 300 Vdc.</p> <ol style="list-style-type: none"> <li>Check for open PS104 F5 or F6.</li> </ol>
41	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 57.</li> </ol>
42	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS107 P03.</li> <li>Reconnect PS108 P03.</li> <li>Reconnect PS109 P03.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>

Step	Conditions	Instructions
43	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Select the Partial Power Up/Down (QWW) screen.</li> <li>2. Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Check for open PS104 F5 or F6.</li> </ol>
44	Is F5 or F6 open?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Go to step 57.</li> </ol>
45	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Select the Partial Power Up/Down (QWW) screen.</li> <li>2. Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Disconnect PS109 P03.</li> <li>4. Select the Diagnostic Power Up (QWD) screen.</li> <li>5. Select option B (stop after K04 picked).</li> <li>6. Measure for +300 Vdc at the following points:  - lead at PS109 P03-3 + lead at PS109 P03-1 (cable end).</li> </ol>
46	Is voltage greater than 225 Vdc?	Go to step 50.

Step	Conditions	Instructions
47	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Press ENTER to end Diagnostic Stop.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>2. Reconnect PS109 P03.</li> <li>3. Disconnect PS104 P06.</li> <li>4. Select the Diagnostic Power Up (QWD) screen.</li> <li>5. Select option B (stop after K04 picked).</li> <li>6. Measure for +300 Vdc at the following points:  - lead at PS104 J06-13 + lead at PS104 J06-15 (on power supply).</li> </ol>
48	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Exchange cable from PS104 P06 to PS109 P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 57.</li> </ol>
49	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Go to step 57.</li> </ol>

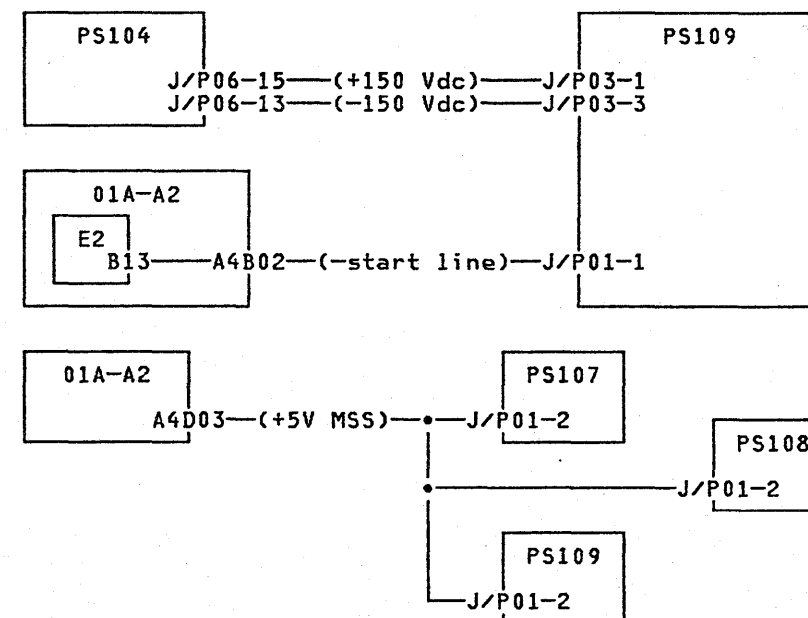
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Step	Conditions	Instructions
50	Go to Instructions column.	1. Press ENTER to end Diagnostic Stop.  <b>DANGER</b> <b>300 Vdc.</b>  2. Reconnect PS109 P03. 3. Select the Diagnostic Power Up (QWD) screen. 4. Select option F (stop after +5V start). 5. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS109 J/P01-1.
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 PS109.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  4. Go to step 57.
52	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2A4D08 + lead at 01A-A2A4B02.
53	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 cable from 01A-A2A4 to PS109 P01.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  4. Go to step 57.
54	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2B13.

Step	Conditions	Instructions
55	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 the 01A-A2 board. 4. Go to step 57.
56	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-A2E2 card.
57	Go to Instructions column.	1. Ensure PCC CB1 and CB2 are off. 2. Reinstall check all cables and cards for proper seating in the following areas:  PS104 PS107 PS108 PS109 01A-A2 board.  3. Ensure PS104 F5 and F6 are good. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.





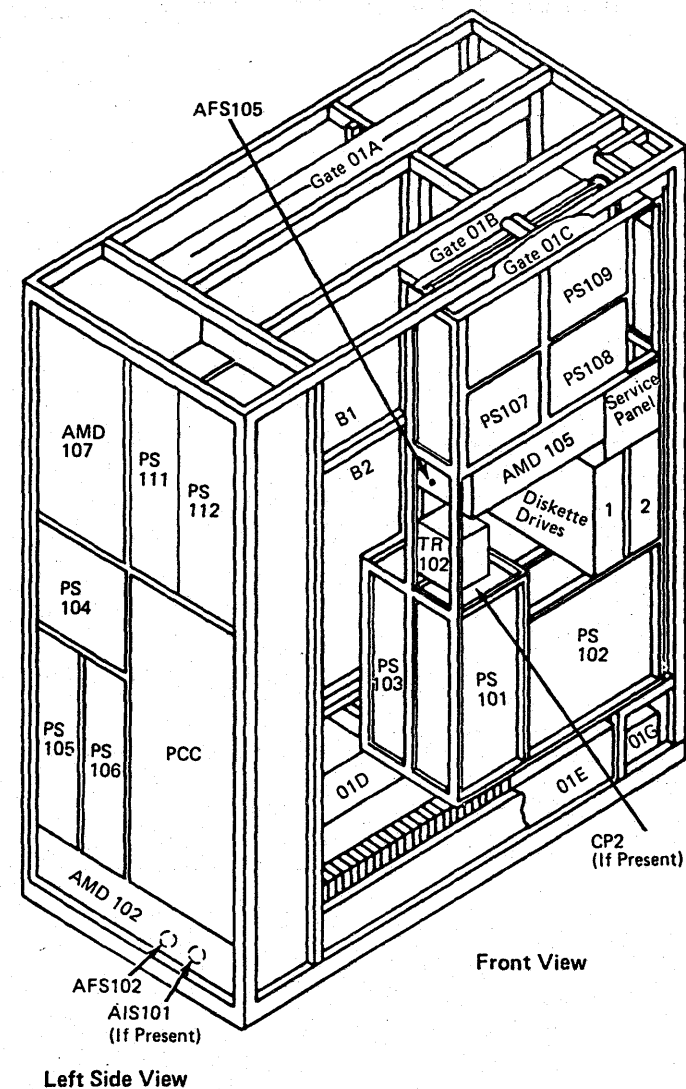


Ref Codes 1111540E, 1111550E

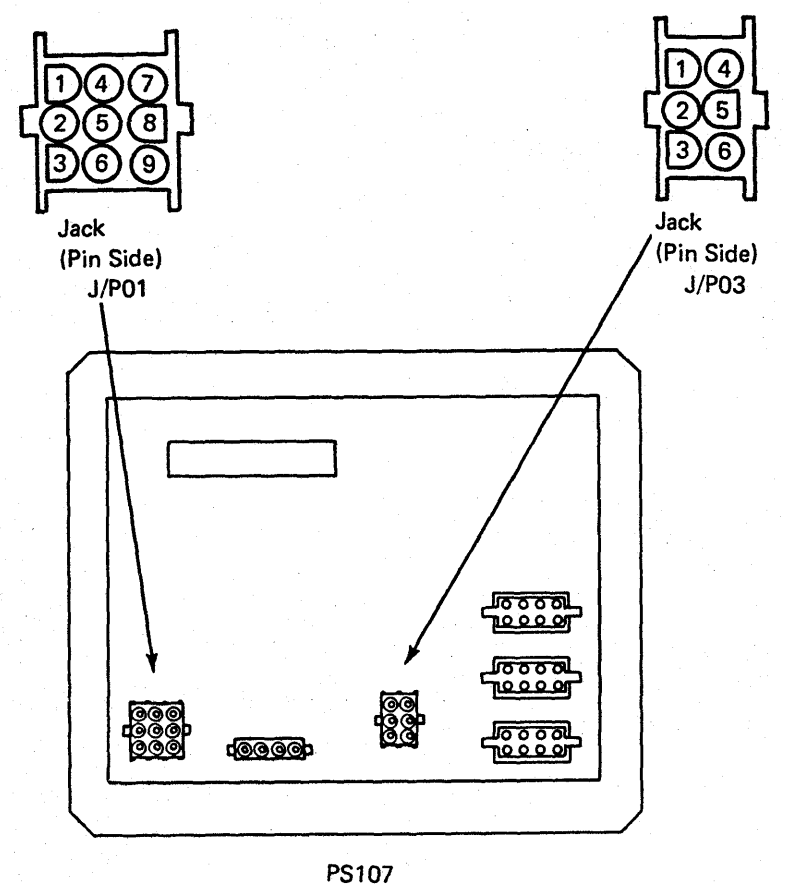
These Ref Codes indicate PS107 failed to turn on after the start line was set on.

Possible causes:

- 01A-A2E2 card
- PS107 missing +5 Vdc from MSS
- PS107 missing +300 Vdc from PS104
- PS107.



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 CE Mode switch to CE Mode. 3. Disconnect PS107 J/P03. 4. Press service panel Power On. 5. Select Diagnostic Power Up (QWD) screen. 6. Select option B (stop after K04 picked). 7. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS107 J/P01-2.
2	Is voltage less than +4.5 Vdc?	Go to step 12.
3	Go to Instructions column.	<b>DANGER</b> <b>300 Vdc.</b> Measure for +300 Vdc at the following points: - lead at PS107 J/P03-3 + lead at PS107 J/P03-1 (cable end).
4	Is voltage less than 225 Vdc?	Go to step 15.



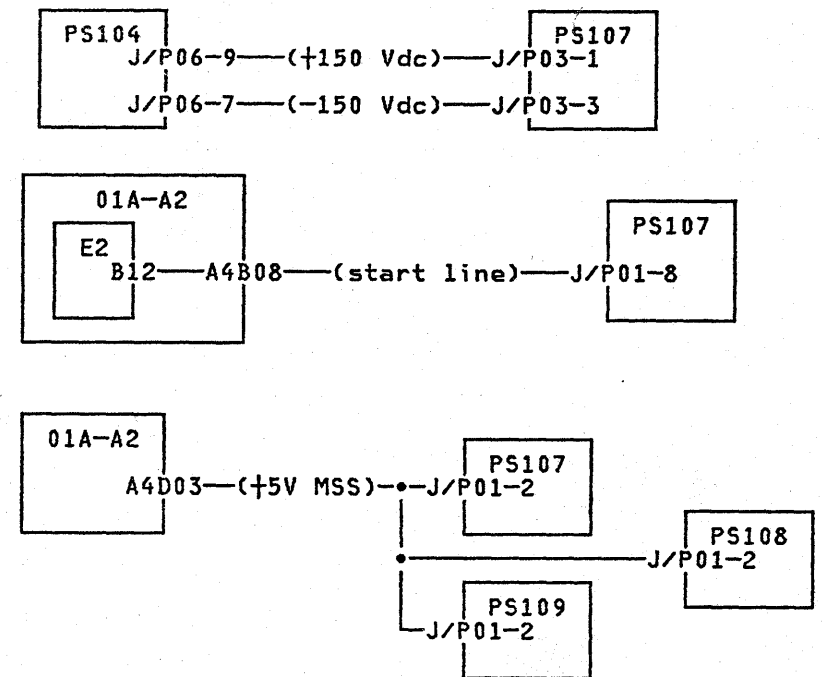
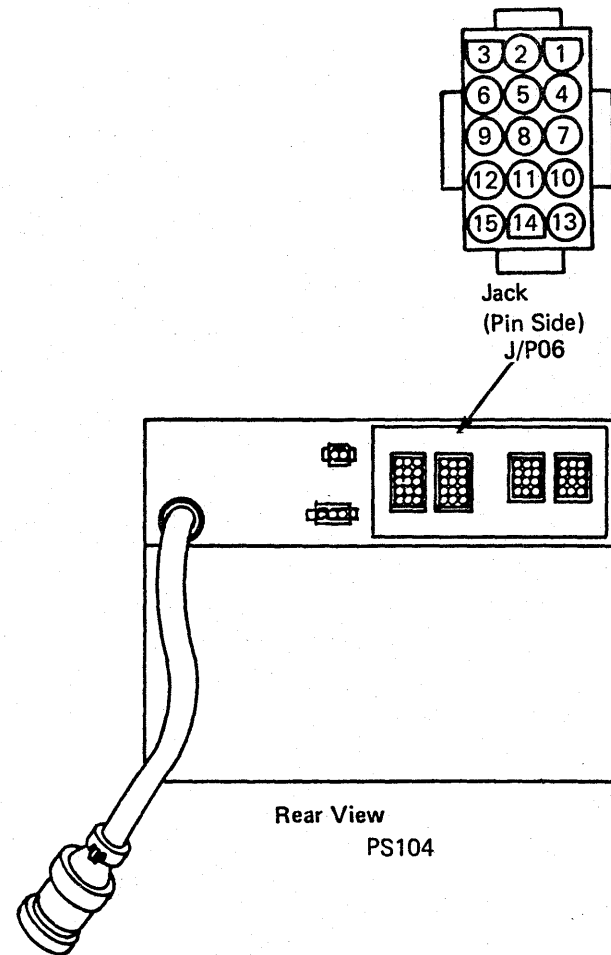
4381	MI	PN 6169125	EC A20558				
B/M 2676380	Seq CA050	1 of 3	01 Oct 84				

Step	Conditions	Instructions
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Press ENTER to end Diagnostic Stop.</li> <li>2. Reconnect PS107 J/P03.</li> <li>3. Select Diagnostic Power Up (QWD) screen.</li> <li>4. Select option H (stop after +6V start).</li> <li>5. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS107 J/P01-8.</li> </ol>
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Go to step 18.</li> </ol>
7	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2A4D08 + lead at 01A-A2A4B08.
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from 01A-A2A4 to PS107 J/P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 18.</li> </ol>
9	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2B12.

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Go to step 18.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2E2 card.</li> <li>4. Go to step 18.</li> </ol>
12	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2A4D08 + lead at 01A-A2A4D03.
13	Is voltage is greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from 01A-A2A4 to PS107 J/P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 18.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Go to step 18.</li> </ol>



Step	Conditions	Instructions
15	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>Press ENTER to end Diagnostic Stop.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Disconnect PS104 J/P06.</li> <li>Select Diagnostic Power Up (QWD) screen.</li> <li>Select option B (stop after KO4 picked).</li> <li>Measure for +300 Vdc at the following points:  - lead at PS104 J/P06-7 + lead at PS104 J/P06-9 (on power supply).</li> </ol>
16	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS104 J/P06 to PS107 J/P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 18.</li> </ol>
17	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p>
18	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>Ensure PCC CB1 and CB2 are off.</li> <li>Reinstall and check all cables and cards for proper seating in the following areas:  PS107 PS104 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



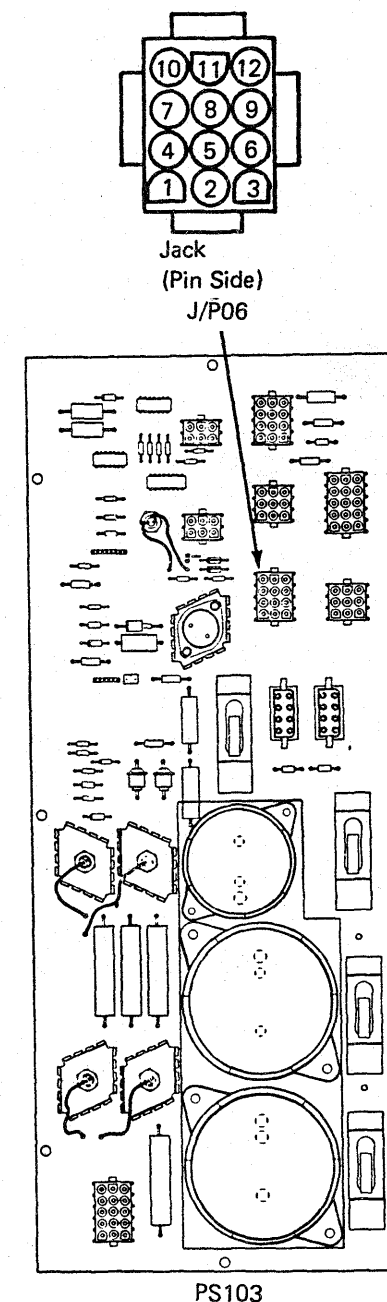
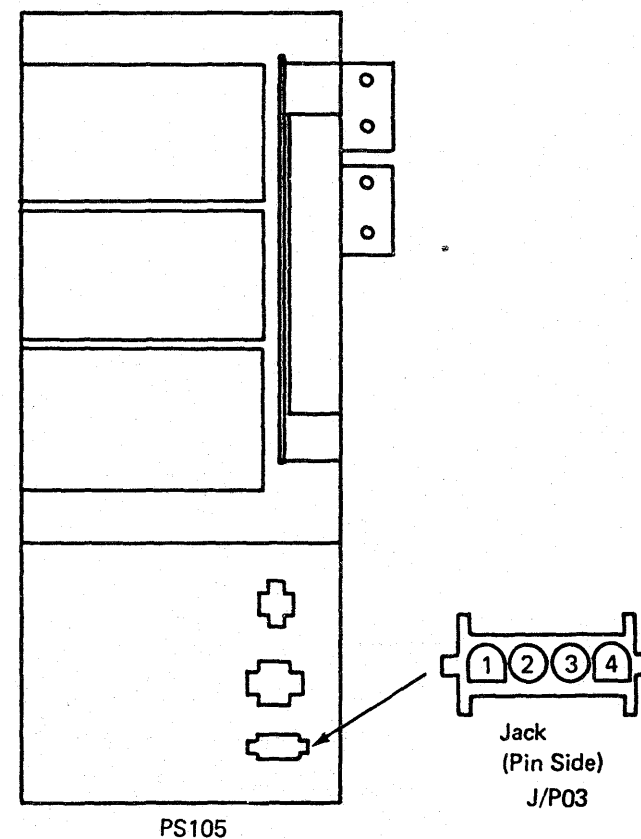
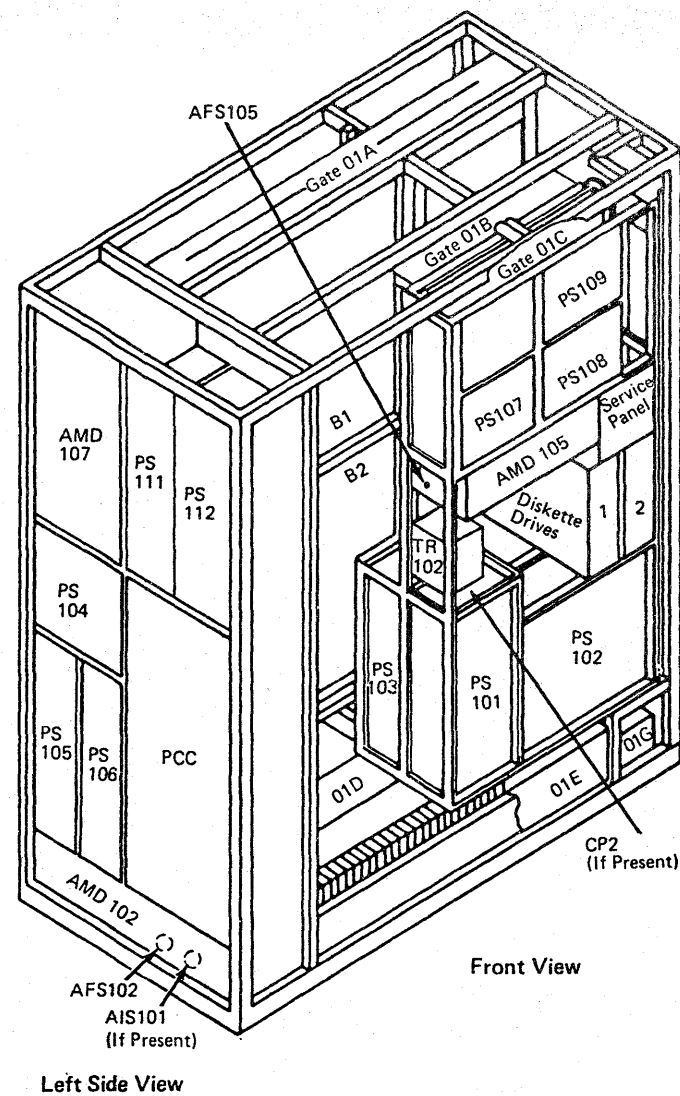


These Ref Codes indicate that the +5 Vdc bias voltage is missing at PS105.

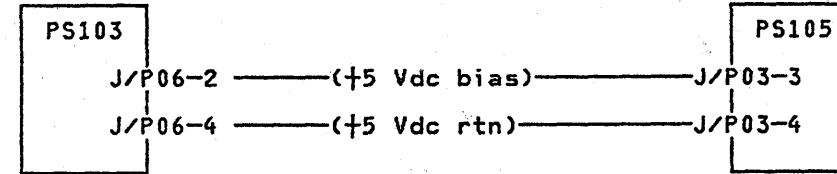
Possible causes:

- PS105
- PS103.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> </ol> <p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS105 J/P03-4 + lead at PS105 J/P03-3.</p>
2	Is voltage greater than +4.5 Vdc?	<p>A torque wrench and 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, See Volume A07, "Removals and Replacements."</p> <ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS103 J/P06-4 + lead at PS103 J/P06-2.</p>



Step	Conditions	Instructions
4	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange the cable from PS103 J/P06 to PS105 J/P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



4381  
B/M 2676380

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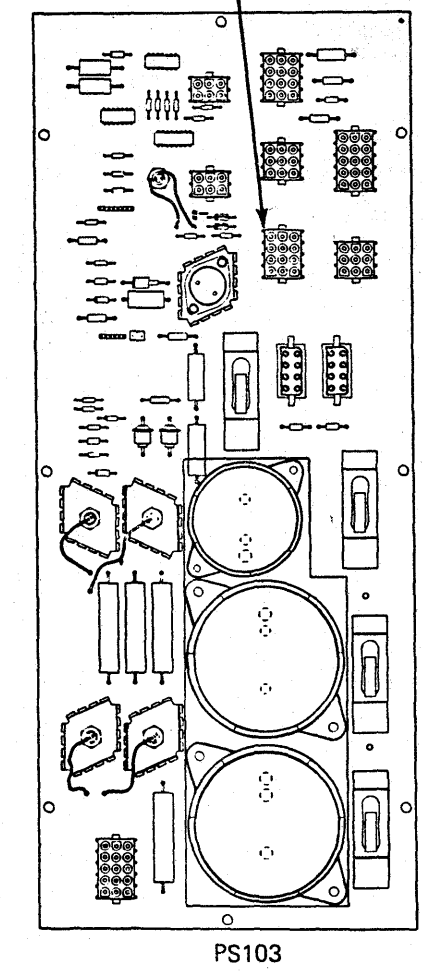
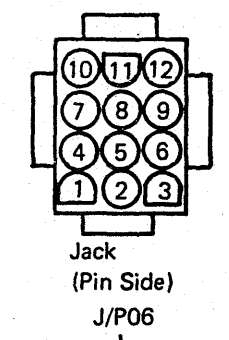
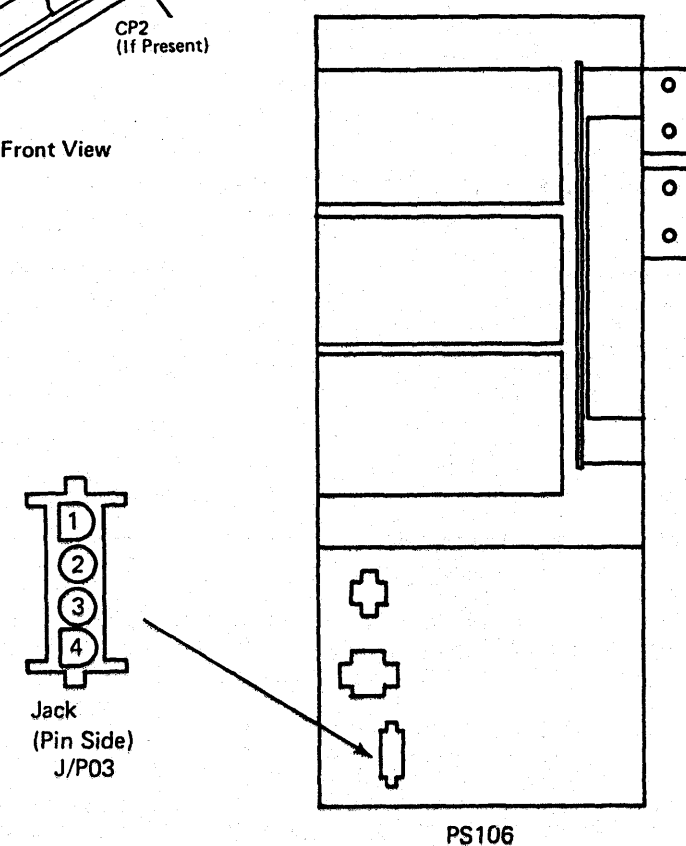
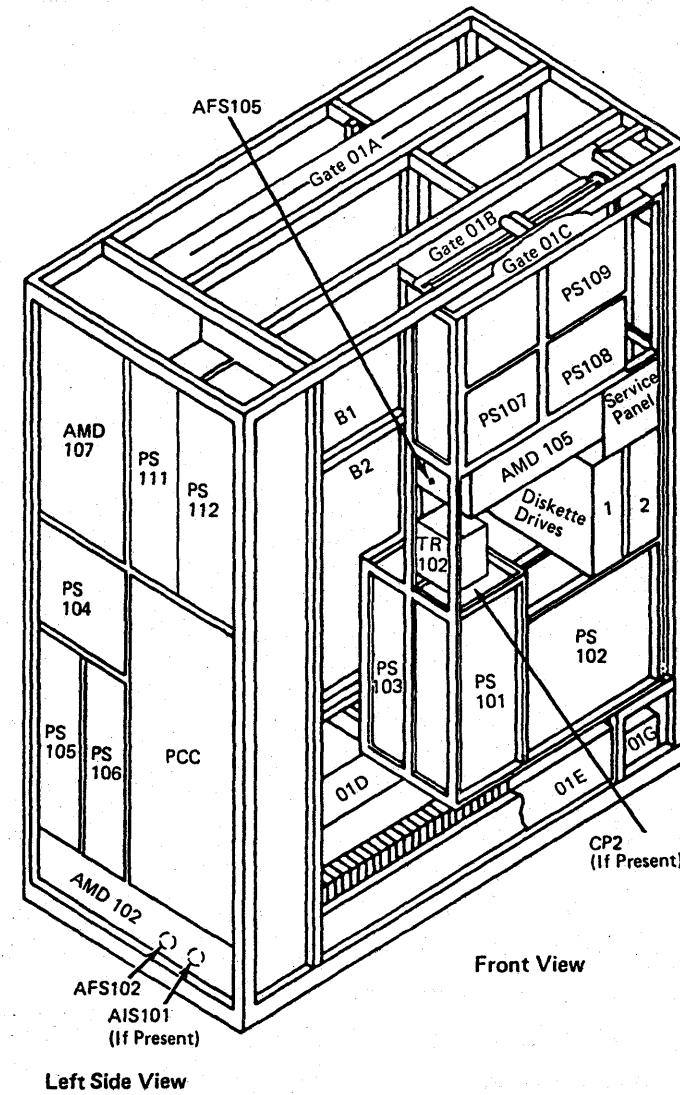


These Ref Codes indicate that the +5 Vdc bias voltage is missing at PS106.

Possible causes:

- PS106
- PS103.

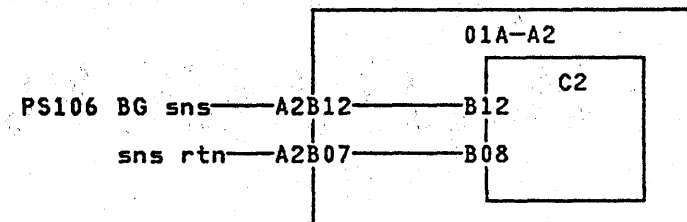
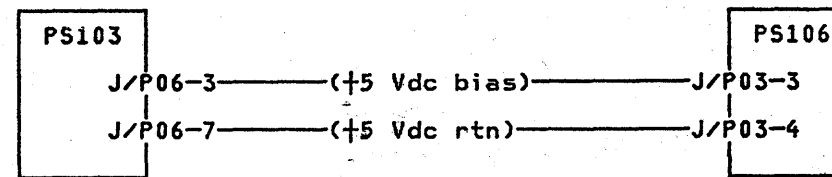
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Select Diagnostic Power Up (QWD) screen. 5. Select option A (stop after K03 picked).  Measure for +5 Vdc at the following points: - lead at PS106 J/P03-4 + lead at PS106 J/P03-3.
2	Is voltage greater than +4.5 Vdc?	Go to step 6.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at PS103 J/P06-7 + lead at PS103 J/P06-3.





Step	Conditions	Instructions
4	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the cable from PS103 J/P06 to PS106 J/P03.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
6	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at 01A-A2C2D08 + lead at 01A-A2C2B12.</p>
7	Is voltage less than +0.8 Vdc?	<p>A torque wrench and 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, See Volume A07, "Removals and Replacements."</p> <ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the 01A-A2C2 card.</li> </ol> <p><b>Note:</b> Also check for continuity from 01A-A2C2B08 to 01A-A2A2B07, if open exchange the 01A-A2 board.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



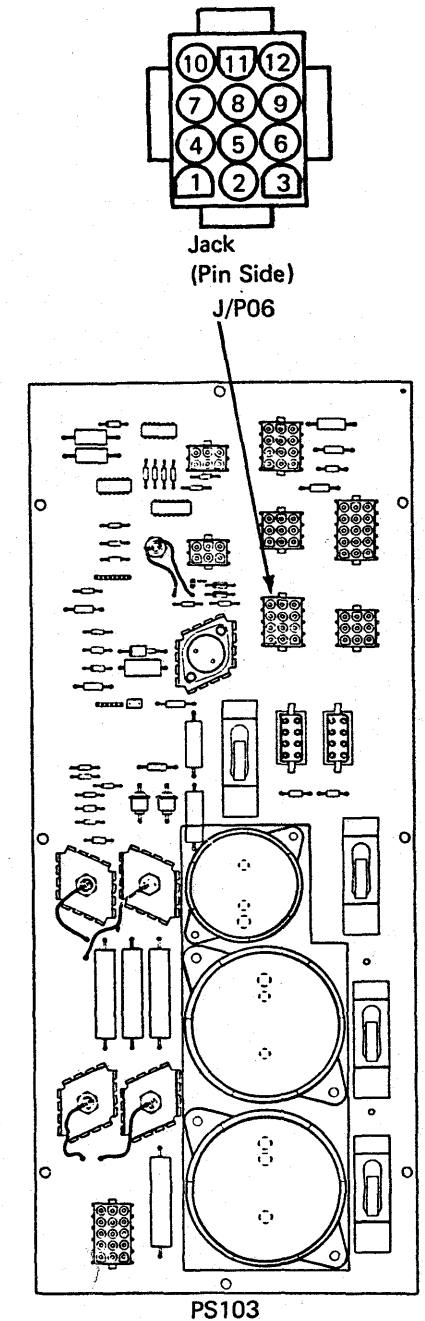
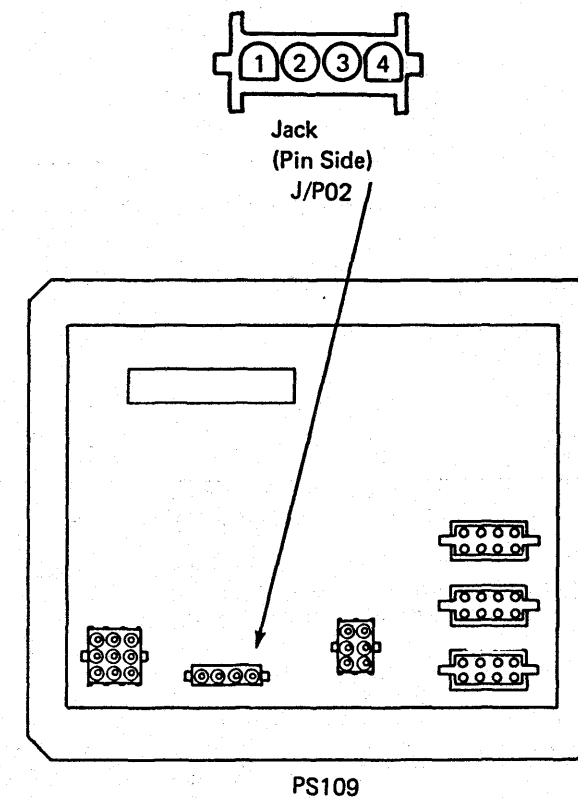
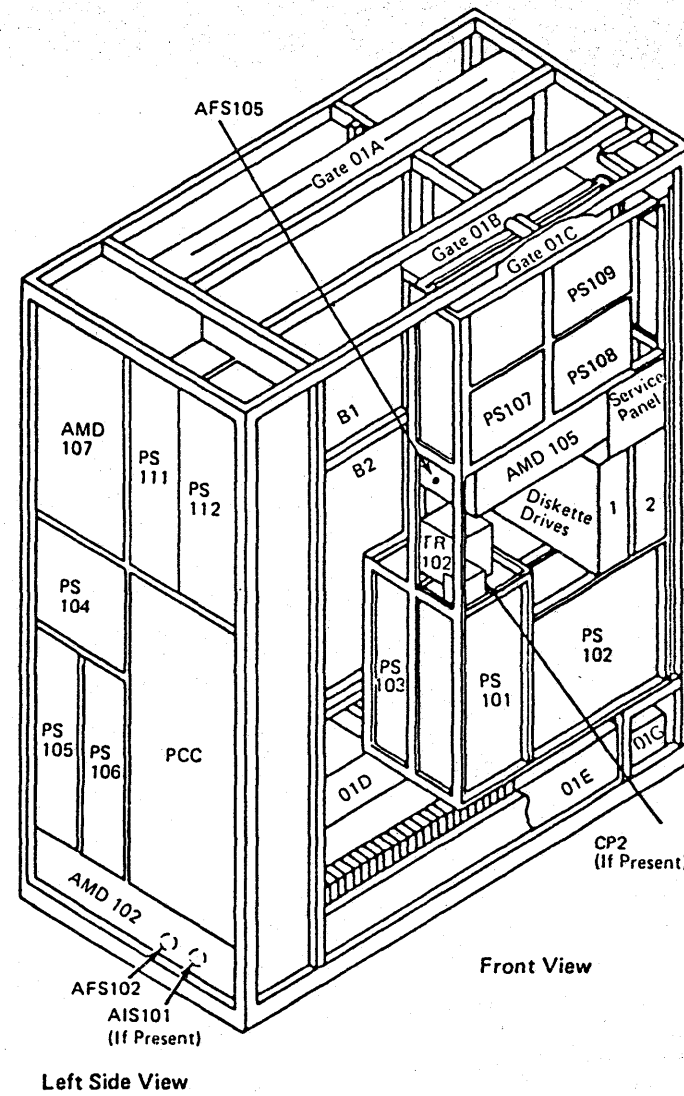
# Ref Codes 1112340E, 1112350E

These Ref Codes indicate that the +5 Vc bias voltage is missing at PS109.

Possible causes:

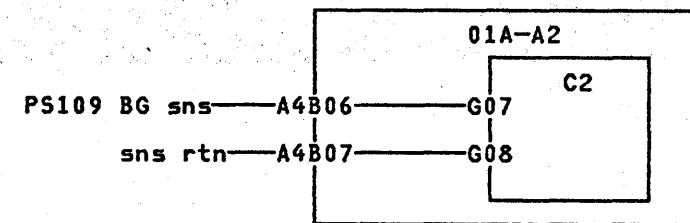
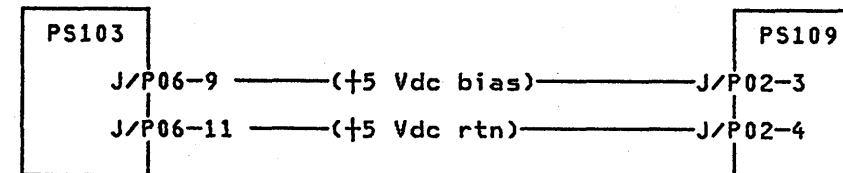
- PS109
- PS103.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> </ol> <p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS109 J/P02-4 + lead at PS109 J/P02-3.</p>
2	Is voltage greater than +4.5 Vdc?	Go to step 6.
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS103 J/P06-11 + lead at PS103 J/P06-9.</p>



Step	Conditions	Instructions
4	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 J/P06 to PS109 J/P02.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
6	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at 01A-A2C2D08 + lead at 01A-A2C2G07.</p>
7	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange the 01A-A2C2 card.</li> </ol> <p><b>Note:</b> Also check for continuity from 01A-A2C2G08 to 01A-A2A4B07, if open exchange the 01A-A2 board.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



# Ref Codes 1112540E, 1112550E

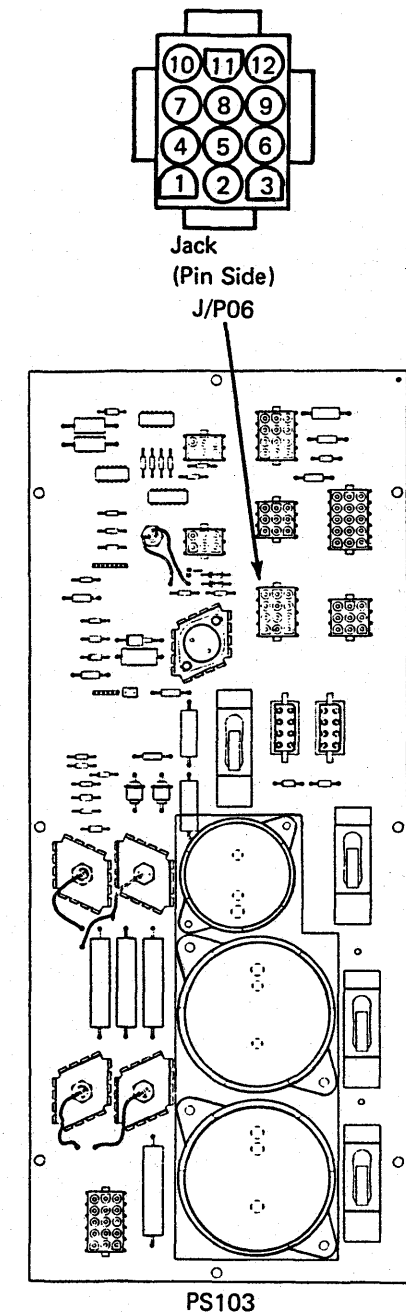
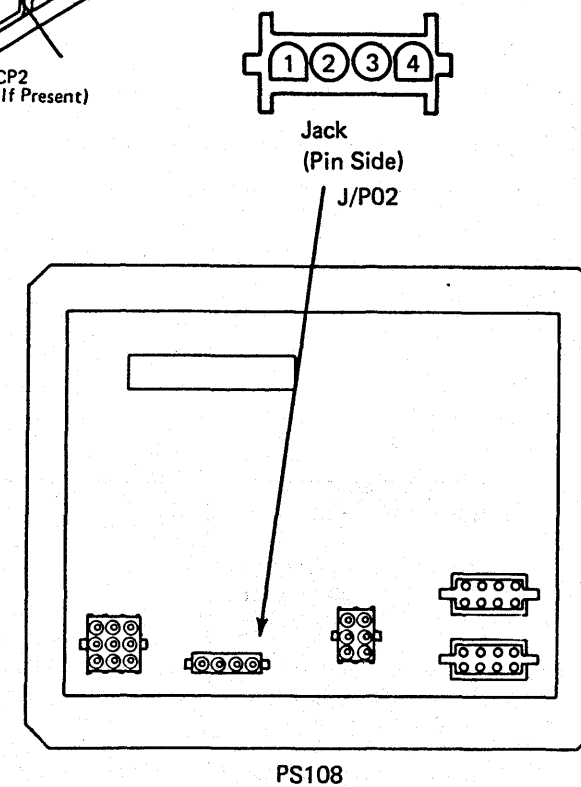
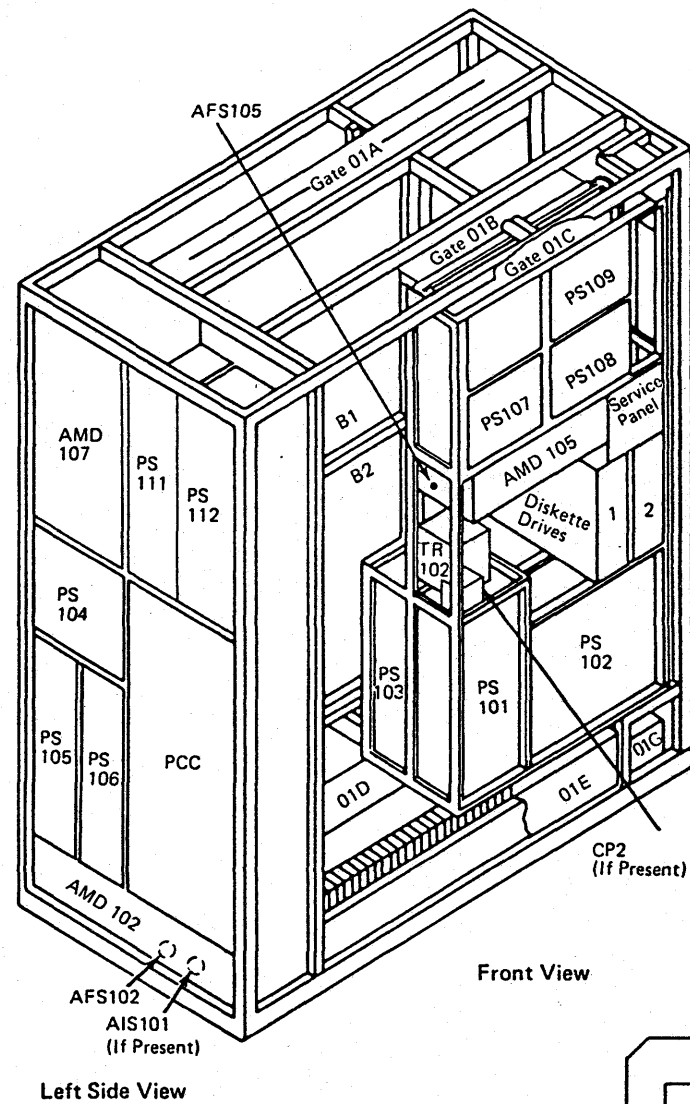
PR 1131

These Ref Codes indicate that the +5 Vdc bias voltage is missing at PS108.

Possible causes:

- PS108
- PS103.

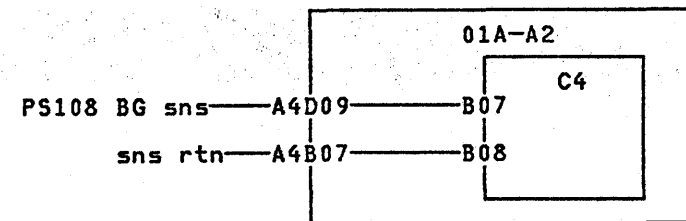
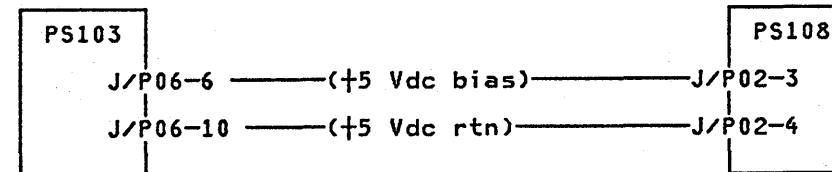
Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> </ol> <p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS108 J/P02-4 + lead at PS108 J/P02-3.</p>
2	Is voltage greater than +4.5 Vdc?	Go to step 6.
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS103 J/P06-10 + lead at PS103 J/P06-6.</p>



PR 1131

Step	Conditions	Instructions
4	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange the cable from PS103 J/P06 to PS108 J/P02.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
6	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B07.
7	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

Step	Conditions	Instructions
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange the 01A-A2C4 card.</li> </ol> <p><b>Note:</b> Also check for continuity from 01A-A2C4B08 to 01A-A2A4B07, if open exchange the 01A-A2 board.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



# Ref Codes 1112740E, 1112750E

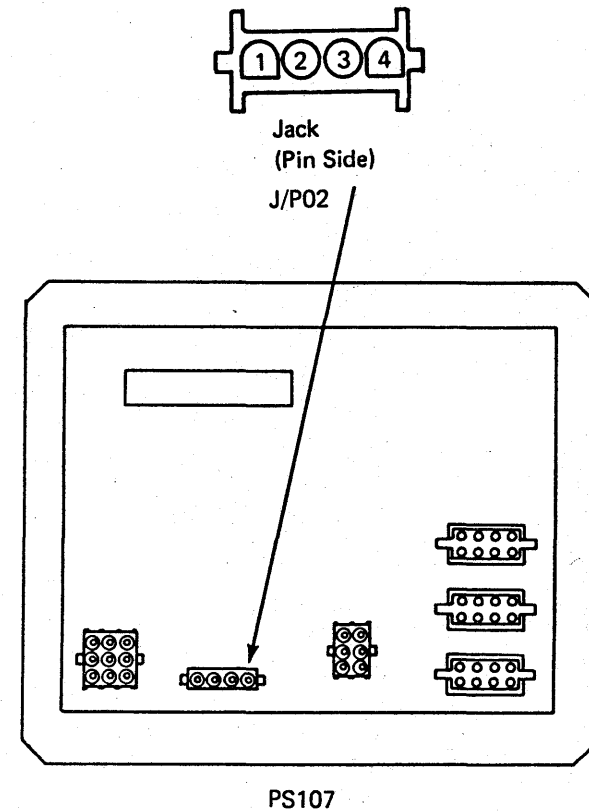
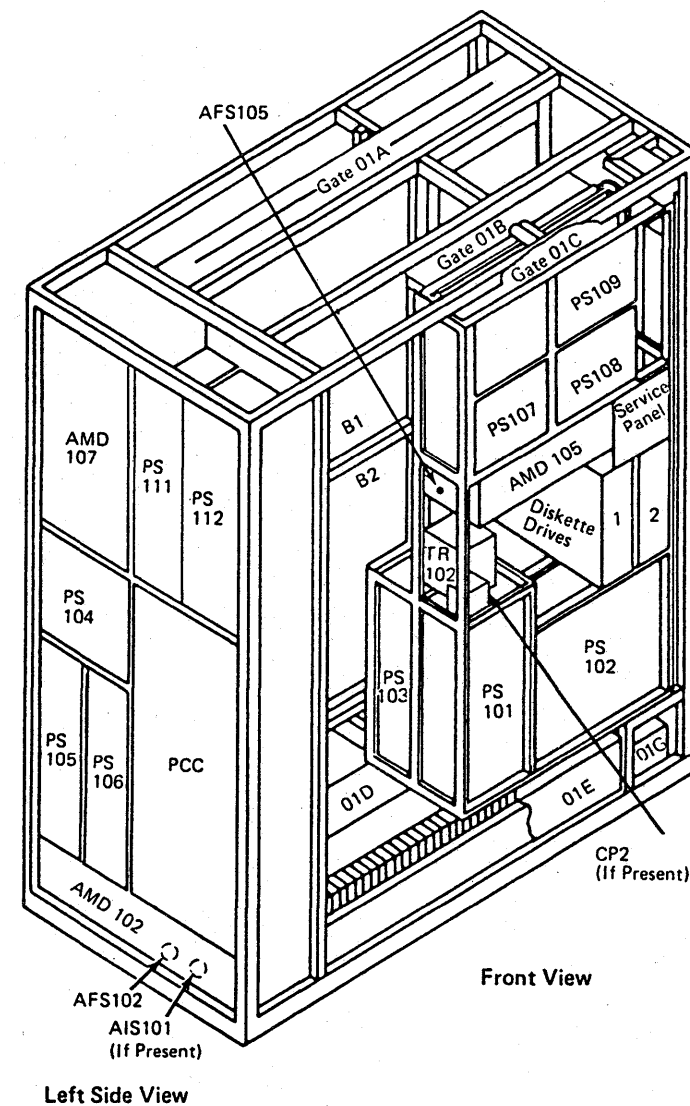
PR 1141

These Ref Codes indicate that the +5 Vdc bias voltage is missing at PS107.

Possible causes:

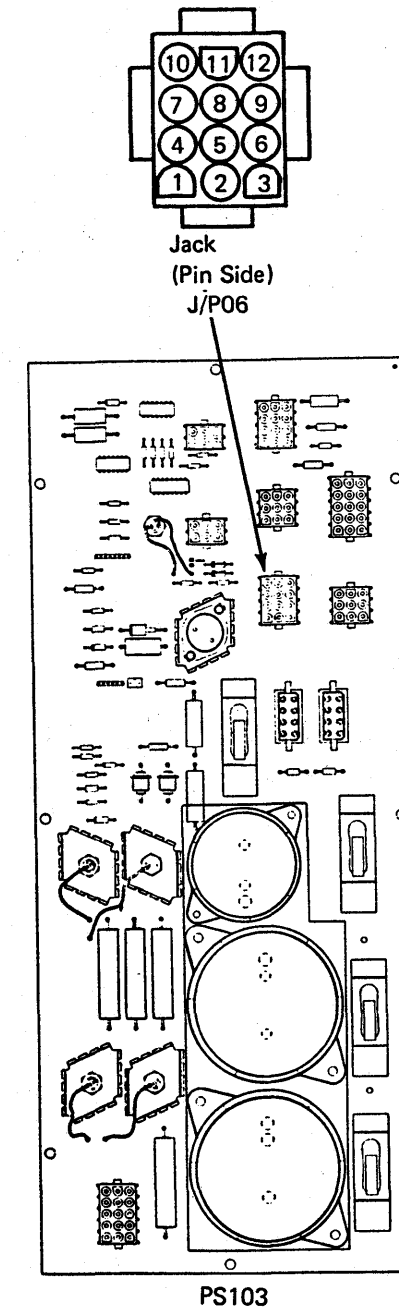
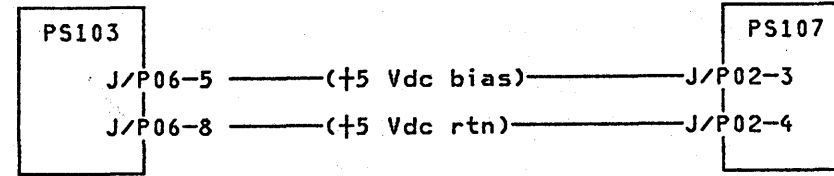
- PS107
- PS103.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Select Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> </ol> <p>Measure for +5 Vdc between the following points:</p> <p>- lead at PS107 J/P02-4 + lead at PS107 J/P02-3.</p>
2	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



PR 1141

Step	Conditions	Instructions
3	Go to Instructions column.	Measure for +5 Vdc between the following points:  - lead at PS103 J/P06-8 + lead at PS103 J/P06-5.
4	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the cable between PS103 J/P06 and PS107 J/P02.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



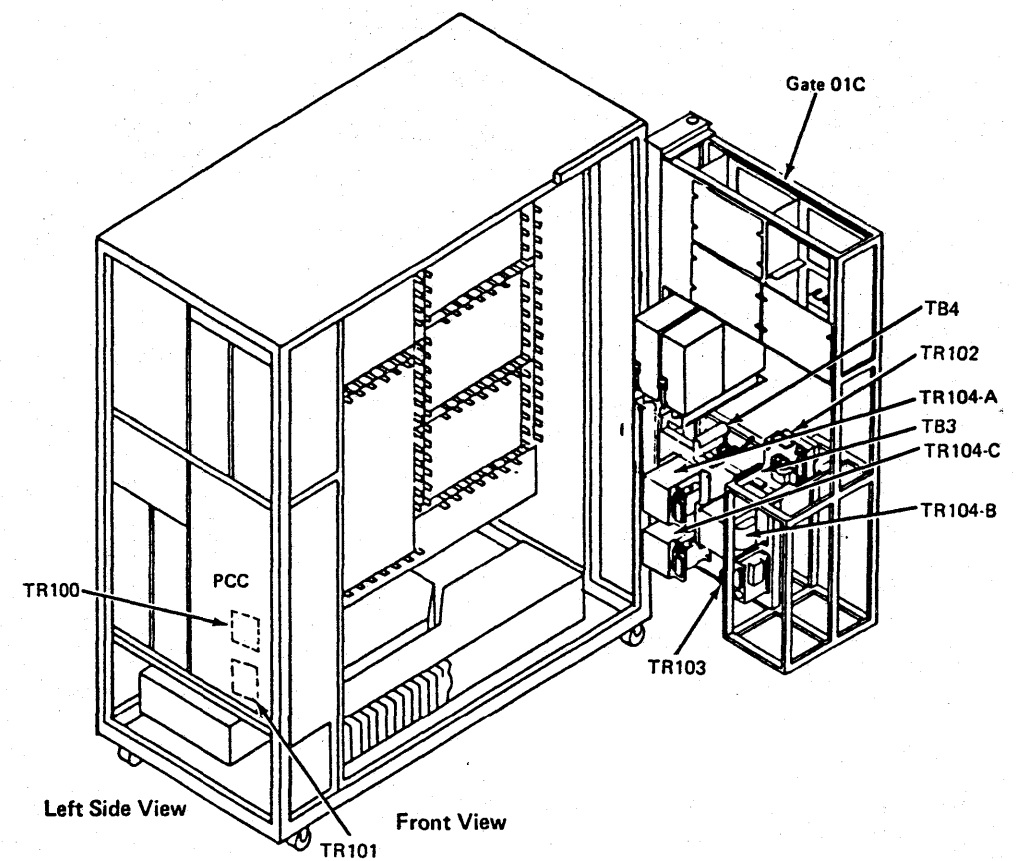
4381-3 B/M 2676380	MI Seq CA075	PN 6169130 2 of 2	EC A20558 01 Oct 84	EC A20562 30 Aug 85			
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These Ref Codes indicate that the line voltage is missing at PS103.

Possible causes:

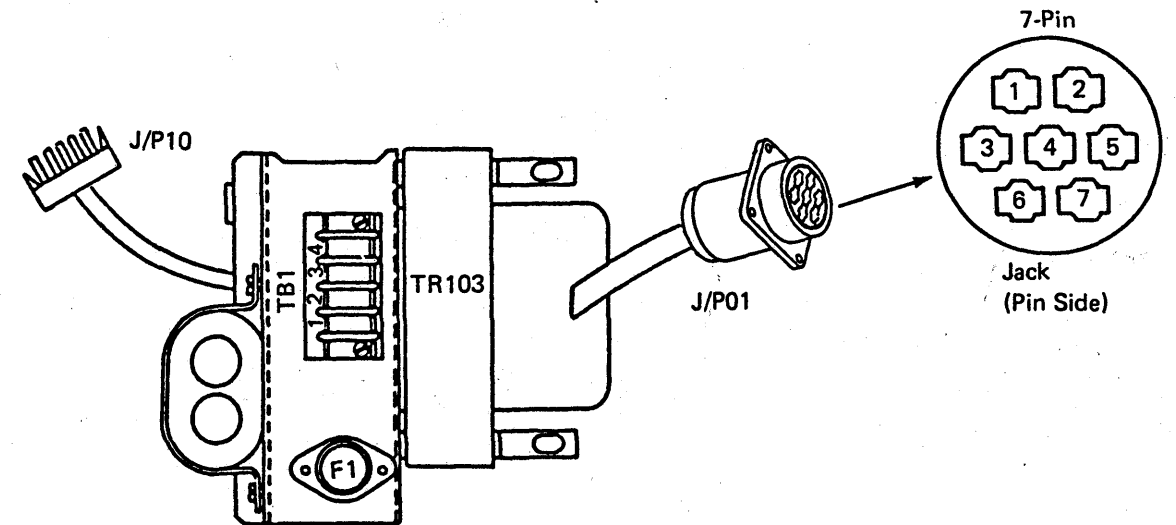
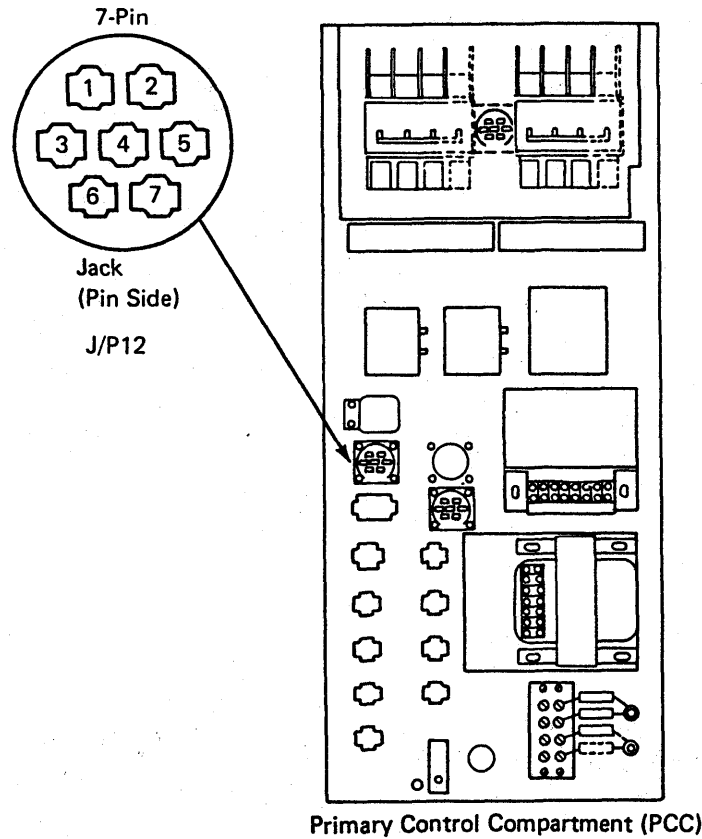
- TR103 F1
- PCC K03
- PCC CB2.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Check for tripped PCC CB2.</li> <li>3. If CB2 is tripped, reset CB and press power on.</li> <li>4. Check for open TR103 F1.</li> <li>5. If F1 is open, exchange F1 and press power on.</li> <li>6. If CB2 trips or the same Ref Code displays, go to step 2.</li> <li>7. If power is complete, go to page END 001.</li> </ol>
2	Is PCC CB2 tripped?	Go to page PR 011.
3	Is F1 good?	Go to step 7.
4	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Exchange F1.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Select the Partial Power Up/Down (QWW) screen.</li> <li>4. Select UP (power-up processor only).</li> </ol>
5	Does the processor status equal power is on?	Go page PR 5001.
6	Is a different Ref Code displayed?	Go to page START 001.
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set CE Mode switch to CE Mode.</li> <li>2. Select the Partial Power Up/Down (QWW) screen.</li> <li>3. Select DP (power-down processor only).</li> <li>4. Disconnect TR103 J/P01.</li> <li>5. Select the Diagnostic Power Up (QWD) screen.</li> <li>6. Select option A (stop after K03 picked).</li> <li>7. Measure for line voltage at the following points:                       - lead at TR103 P01-6                      + lead at TR103 P01-1 (cable end).</li> </ol> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>





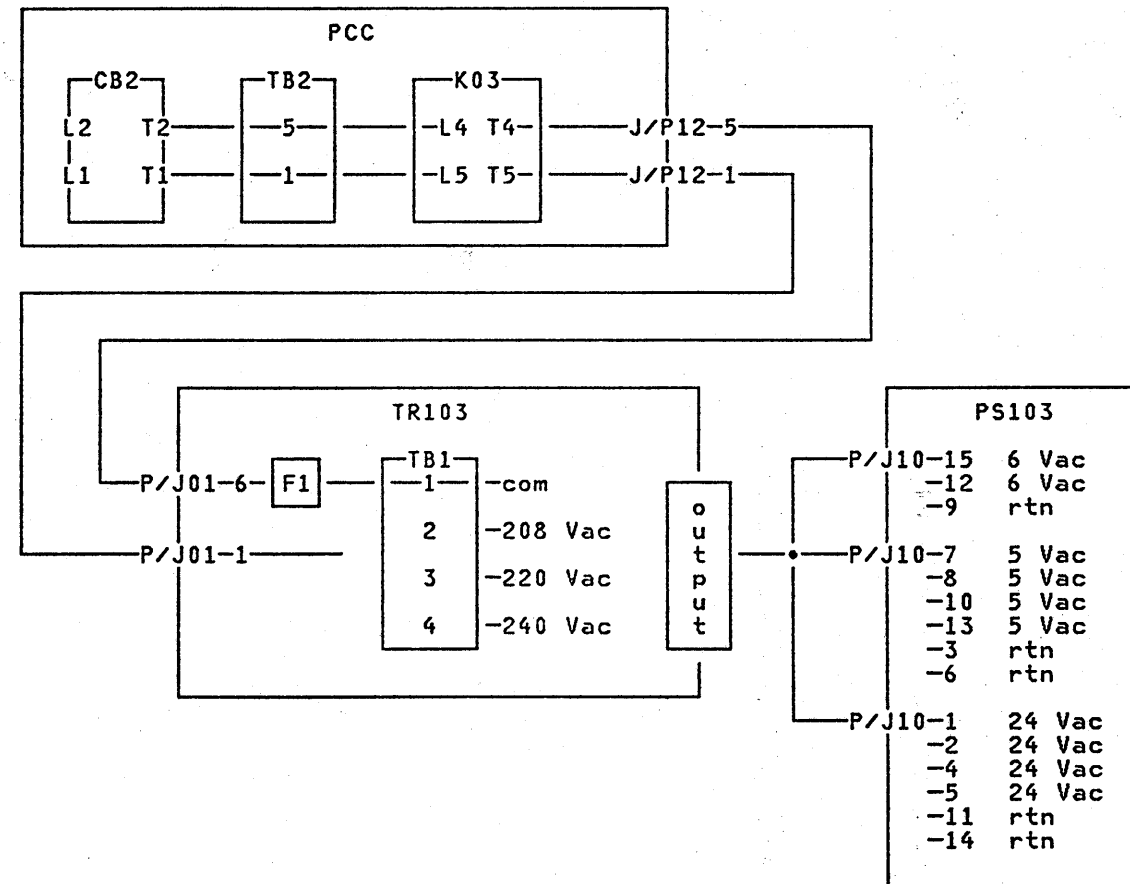
Step	Conditions	Instructions
8	Is line voltage present?	Go to step 25.
9	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC P12-5 + lead at PCC P12-1.  <b>Note:</b> For line voltage value, see label on PCC box.
10	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange cable from PCC J/P12 to TR103 J/P01.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  4. Go to step 28.
11	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC K03-T4 + lead at PCC K03-T5.  <b>Note:</b> For line voltage value, see label on PCC box.
12	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange cable from PCC J/P12 to PCC K03.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  4. Go to step 28.
13	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC K03-L4 + lead at PCC K03-L5.  <b>Note:</b> For line voltage value, see label on PCC box.
14	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PCC K03. 4. Go to step 28.



Step	Conditions	Instructions
15	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC TB2-5 + lead at PCC TB2-1.  <b>Note:</b> For line voltage value, see label on PCC box.
16	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange cable from PCC TB2 to PCC K03.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  4. Go to step 28.
17	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC TB2-2 + lead at PCC TB2-1.  <b>Note:</b> For line voltage value, see label on PCC box.
18	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Check jumper from PCC TB2-2 to PCC TB2-5. 4. Go to step 28.
19	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC CB2-T2 + lead at PCC CB2-T1.  <b>Note:</b> For line voltage value, see label on PCC box.
20	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange cable from PCC TB2 to PCC CB2.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  4. Go to step 28.

Step	Conditions	Instructions
21	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC CB2-L2 + lead at PCC CB2-L1.  <b>Note:</b> For line voltage value, see label on PCC box.
22	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off.  <b>DANGER</b> <i>Disconnect line cord before exchanging CB2.</i>  3. Exchange PCC CB2. 4. Go to step 28.
23	Go to Instructions column.	Measure for line voltage at the following points:  - lead at PCC CB1-L2 + lead at PCC CB1-L1.  <b>Note:</b> For line voltage value, see label on PCC box.
24	Is line voltage present?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off.  <b>DANGER</b> <i>Disconnect line cord before exchanging CB2.</i>  3. Exchange cable from PCC CB1 to PCC CB2. 4. Go to step 28.

Step	Conditions	Instructions
25	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Select the Partial Power Up/Down (QWW) screen.</li> <li>2. Select DP (power-down processor only).</li> <li>3. Reconnect TR103 P01.</li> <li>4. Select the Diagnostic Power Up (QWD) screen.</li> <li>5. Select option A (stop after K03 picked).</li> <li>6. Measure for line voltage at the following points:  - lead at TR103 TB1-2 + lead at TR103 TB1-1.</li> </ol> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>
26	Is line voltage present?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging PS103, also suspect TR103.</p> <ol style="list-style-type: none"> <li>4. Go to step 28.</li> </ol>
27	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange TR103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging TR103.</p>
28	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Ensure PCC CB1 and CB2 are off.</li> <li>2. Reinstall and check all cables and cards for proper seating in the following areas:  PS103 TR103 PCC box.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Go to page PR 5001.</li> </ol>



4381-3	MI	PN 6169131	EC A20558	EC A20562			
B/M 2676380	Seq CA080	4 of 4	01 Oct 84	30 Aug 85			

# Ref Codes 1112850E, 1113540E, 1113550E

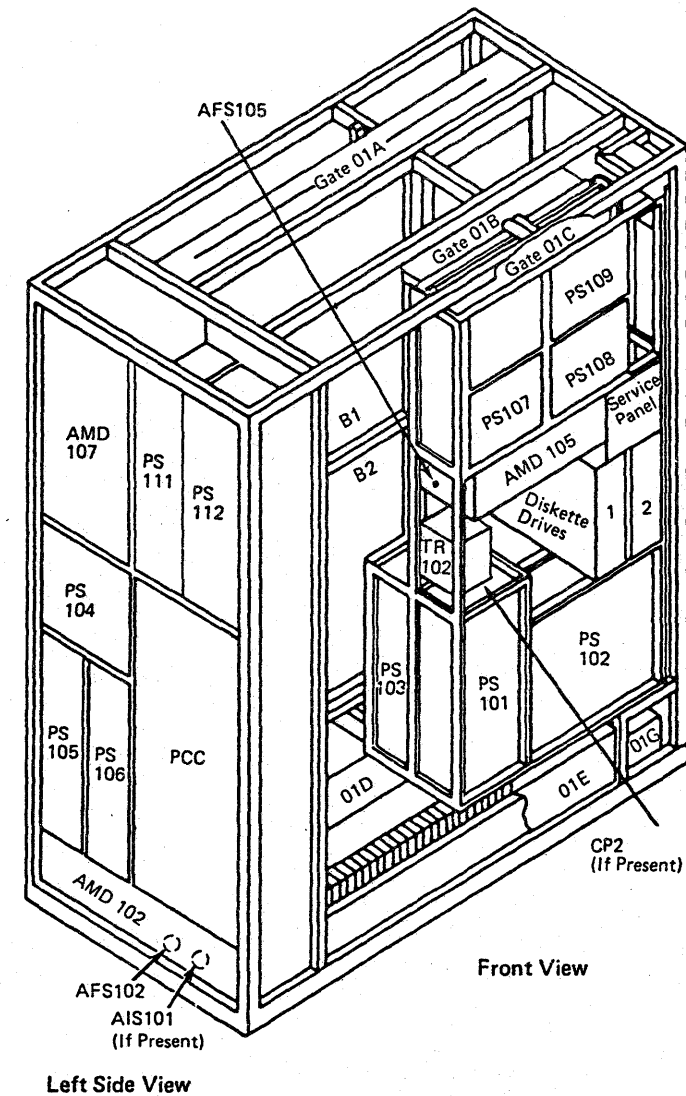
PR 1161

These Ref Codes indicate the 300 Vdc, +24V bias, or +5 Vdc is missing at PS105, PS106.

Possible causes:

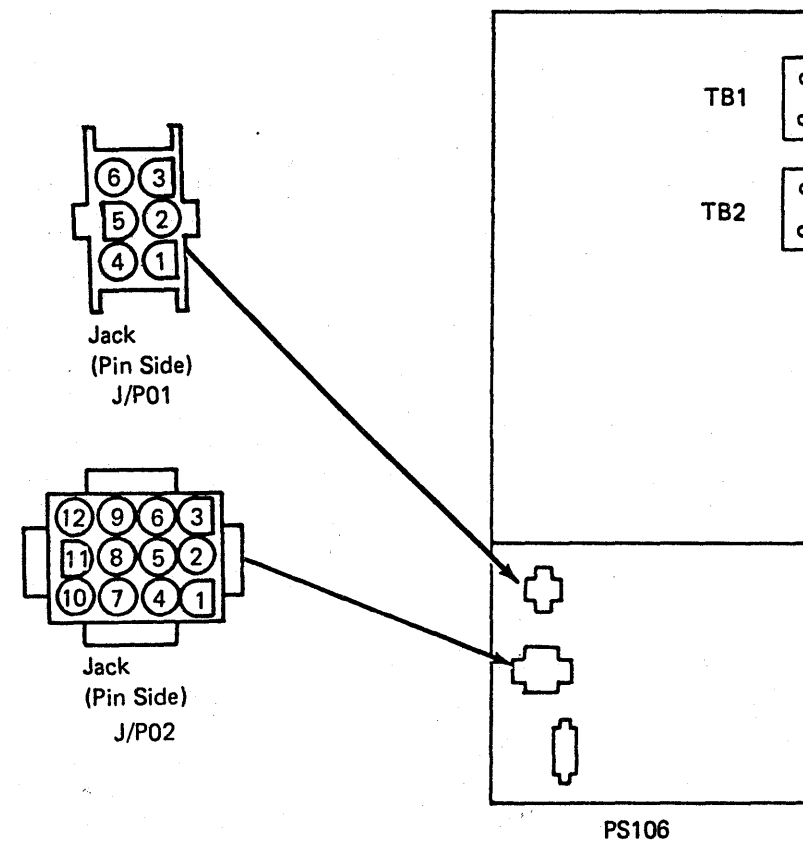
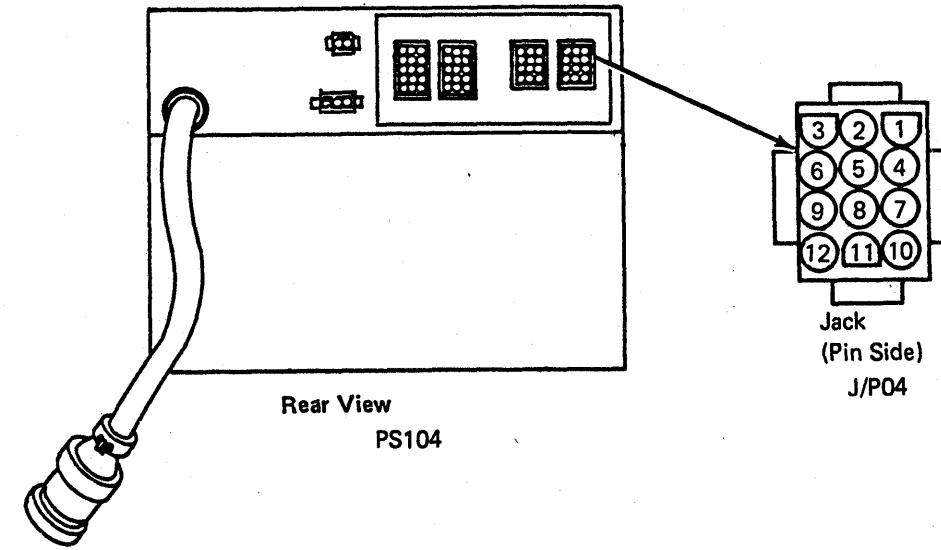
- PS103
- PS104
- PS104 F1
- PS104 F2
- PS105
- PS106.

Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal.  <b>DANGER</b> <b>300 Vdc.</b>  2. Check for open PS104 F1 or F2.
2	Are F1 and F2 good?	1. Set CE Mode switch to CE Mode. 2. Press service panel Power On. 3. Go to step 7.
3	Is F1 or F2 open?	1. Exchange F1 or F2. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Select the Partial Power Up/Down (QWW) screen. 5. Select UP (power-up processor only).
4	Does the processor status equal power is on?	Go to page PR 5001.
5	Is the same 1X Ref Code displayd?	Go to step 12.
6	Is a different Ref Code displayed?	Go to page PR 1001.



PR 1161

Step	Conditions	Instructions
7	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS106 J/P02-12.
8	Is voltage greater than +4.5 Vdc?	Go to step 37.
9	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A1V2D08 + lead at 01A-A2A2D03.
10	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from 01A-A2A2 to PS105 J/P02 and PS106 J/P02.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 44.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set PCC CB1 and CB2 off.</li> <li>2. Exchange 01A-A2 board.</li> <li>3. Go to step 44.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Disconnect PS104 J/P04.</li> <li>4. Measure resistance at the following points:  - lead at frame ground + lead at PS104 P04-10 + lead at PS104 P04-12 (cable end).</li> </ol>
13	Is an open indicated at both points?	Go to step 17.



Step	Conditions	Instructions
14	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Disconnect PS106 J/P01.</li> <li>2. Measure resistance at the following points:                       - lead at frame ground                      + lead at PS104 P04-10                      + lead at PS104 P04-12 (cable end).</li> </ol>
15	Is an open indicated at both points?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>1. Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>2. Go to step 44.</li> </ol>
16	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Exchange cable from PS104 J/P04 to PS105 J/P01 and PS106 J/P01.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>2. Go to step 44.</li> </ol>
17	Go to <b>Instructions</b> column.	<p>Measure resistance at the following points:</p> <p>- lead at frame ground                      + lead at PS104 P04-7                      + lead at PS104 P04-9 (cable end).</p>
18	Is an open indicated at both points?	Go to step 22.
19	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Disconnect PS105 J/P01.</li> <li>2. Measure resistance at the following points:                       - lead at frame ground                      + lead at PS104 P04-7                      + lead at PS104 P04-9 (cable end).</li> </ol>

Step	Conditions	Instructions
20	Is an open indicated at both points?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>1. Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>2. Go to step 44.</li> </ol>
21	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Exchange cable from PS104 J/P04 to PS105 J/P01 and PS106 J/P01.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>2. Go to step 44.</li> </ol>
22	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Ensure PS104 F1 and F2 are good.</li> <li>2. Disconnect the following:                       PS104 J/P04                      PS105 J/P01                      PS106 J/P01.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Press service panel Power On.</li> <li>5. Select the Partial Power Up/Down (QWW) screen.</li> <li>6. Select UP (power-up processor only).</li> </ol>
23	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Select the Partial Power Up/Down (QWW) screen.</li> <li>2. Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b>  <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>3. Check for open PS104 F1 or F2.</li> </ol>

Step	Conditions	Instructions
24	Is F1 or F2 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
25	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS104 P04.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
26	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F1 or F2.</li> </ol>
27	Is F1 or F2 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS104 J/P04 to PS105 J/P01 and PS106 J/P01.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>

Step	Conditions	Instructions
28	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS105 P01.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
29	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F1 or F2.</li> </ol>
30	Is F1 or F2 open?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
31	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Disconnect PS105 J/P01.</li> <li>Reconnect PS106 P01.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>

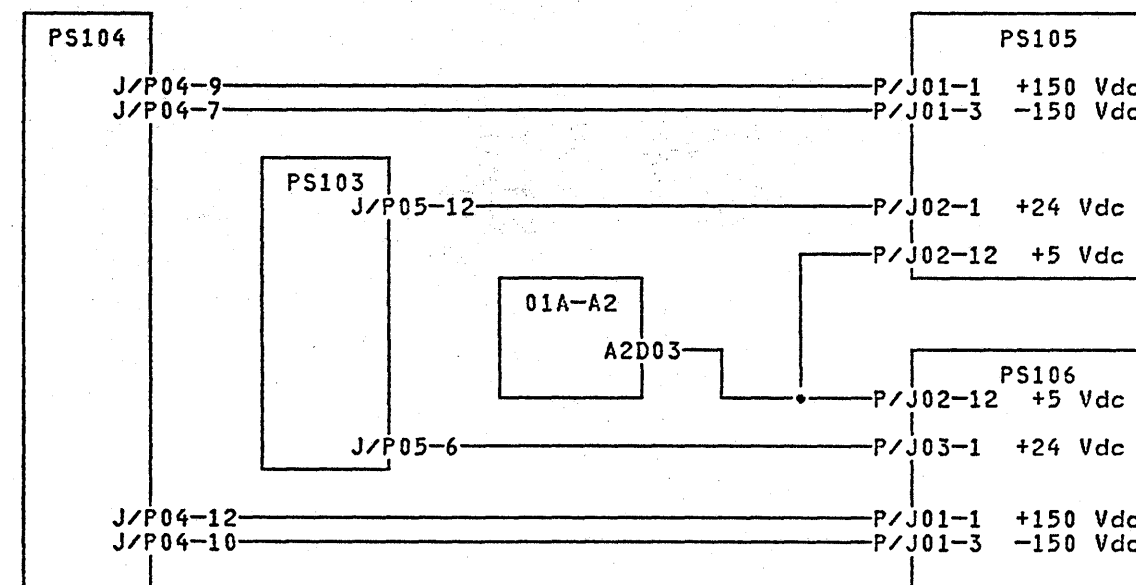
Step	Conditions	Instructions
32	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F1 or F2.</li> </ol>
33	Is F1 or F2 open?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
34	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> <li>Reconnect PS105 P01.</li> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select UP (power-up processor only).</li> </ol>
35	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Partial Power Up/Down (QWW) screen.</li> <li>Select DP (power-down processor only).</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Check for open PS104 F1 or F2.</li> </ol>

Step	Conditions	Instructions
36	Is F1 or F2 open?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
37	Go to Instructions column.	<ol style="list-style-type: none"> <li>Select the Diagnostic Power Up (QWD) screen.</li> <li>Select option A (stop after KO3 picked).</li> <li>Measure for +24 Vdc at the following points:  - lead at frame ground + lead at PS103 J/P05-12.</li> </ol>
38	Is voltage less than +22 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
39	Go to Instructions column.	<ol style="list-style-type: none"> <li>Press ENTER to end diagnostic stop.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Disconnect PS106 J/P01.</li> <li>Select the Diagnostic Power Up (QWD) screen.</li> <li>Select option B (stop after KO4 picked).</li> <li>Measure for +300 Vdc at the following points:  - lead at PS106 P01-3 + lead at PS106 P01-1 (cable end).</li> </ol>



Step	Conditions	Instructions
40	Is voltage greater than 225 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>
41	Go to Instructions column.	<ol style="list-style-type: none"> <li>Press ENTER to end Diagnostic Stop.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Reconnect PS106 P01.</li> <li>Disconnect PS104 J/P04.</li> <li>Select the Diagnostic Power Up (QWD) screen.</li> <li>Select option B (stop after KO4 picked).</li> <li>Measure for +300 Vdc at the following points: - lead at PS104 J04-10 + lead at PS104 J04-12 (on power supply).</li> </ol>
42	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Exchange cable from PS104 J/P04 to PS106 J/P01.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 44.</li> </ol>

Step	Conditions	Instructions
43	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> </ol> <p><b>DANGER</b> <b>300 Vdc.</b></p> <ol style="list-style-type: none"> <li>Exchange PS104.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p>
44	Go to Instructions column.	<ol style="list-style-type: none"> <li>Ensure PCC CB1 and CB2 are off.</li> <li>Reinstall and check all cables and cards for proper seating in the following areas:  PS103 PS104 PS105 PS106 01A-A2 board.</li> <li>Ensure PS104 F1 and F2 are good.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



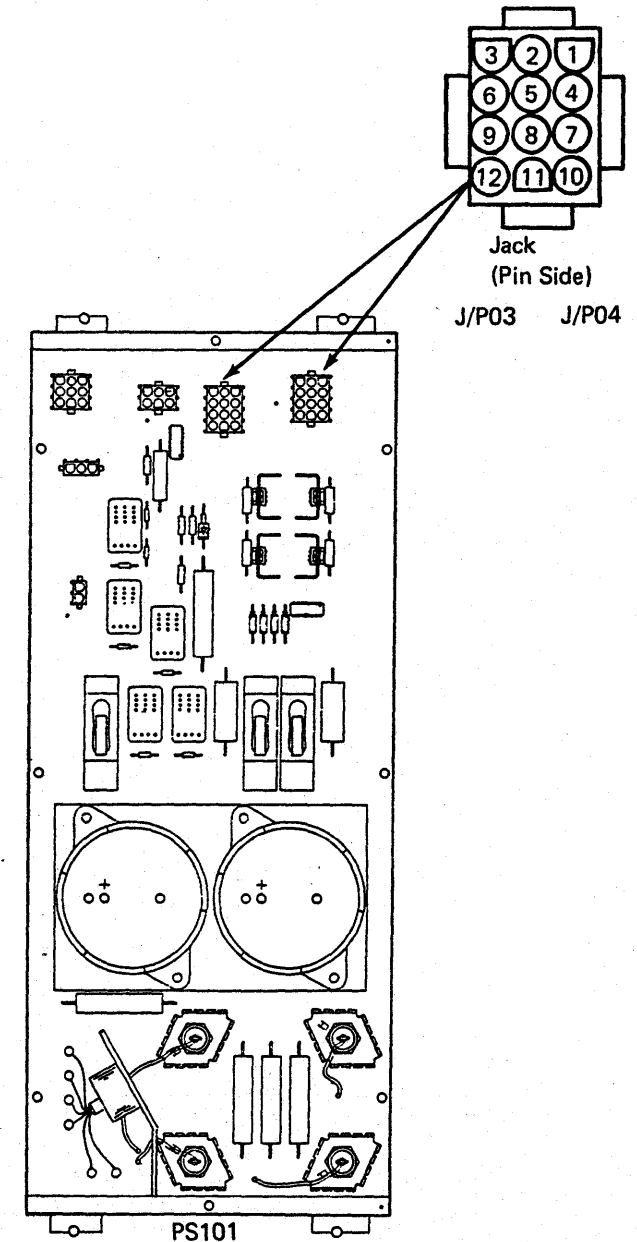
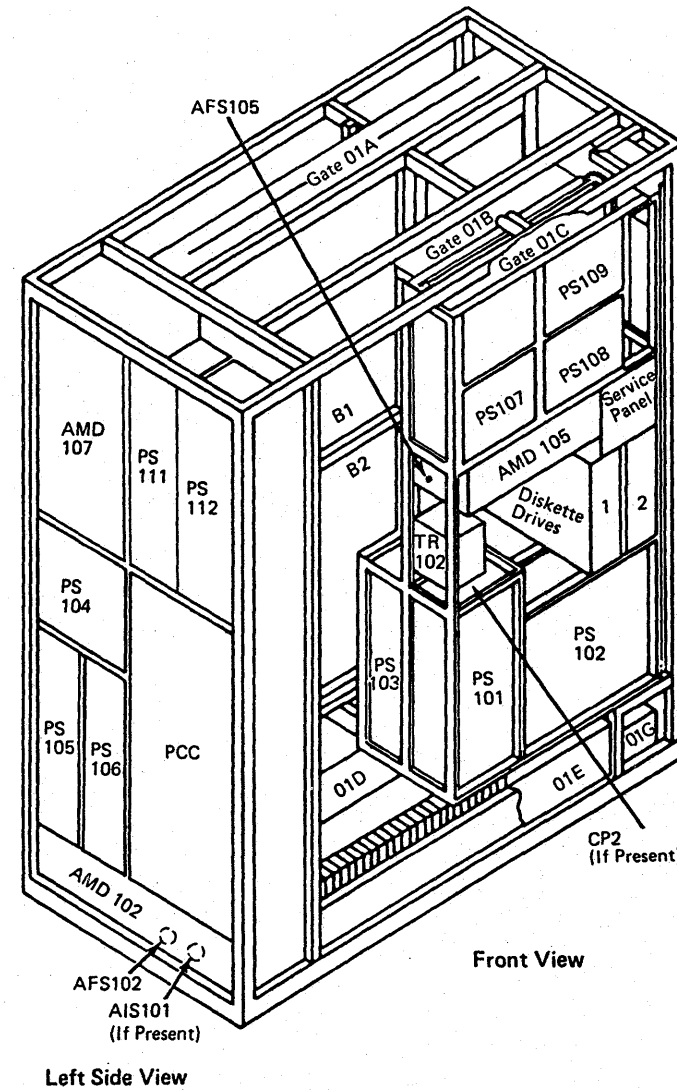
4381-3	MI	PN 6169132	EC A20559	EC A20560			
B/M 2676380	Seq CA085	6 of 6	01 Oct 84	18 Feb 85			

This Ref Code indicates the outputs of PS103 are active before the start line was turned on or the aux point sense line is failing.

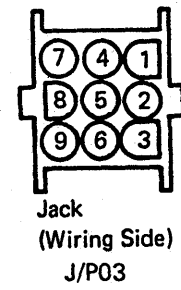
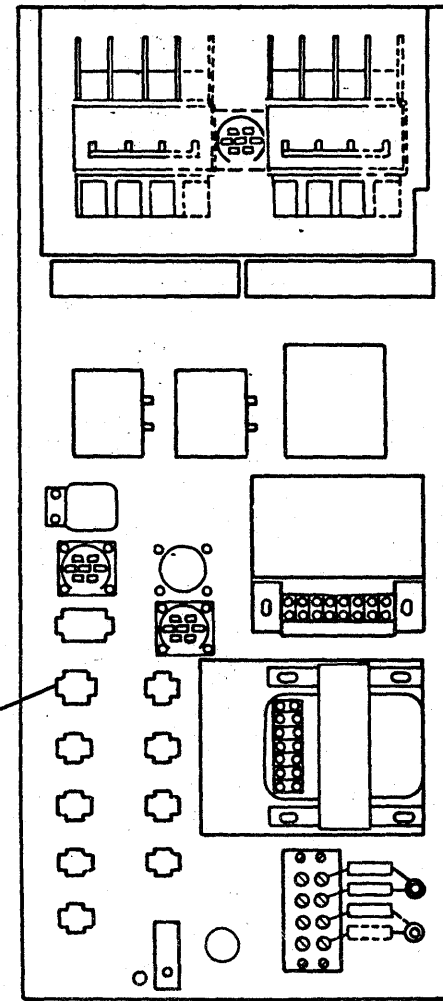
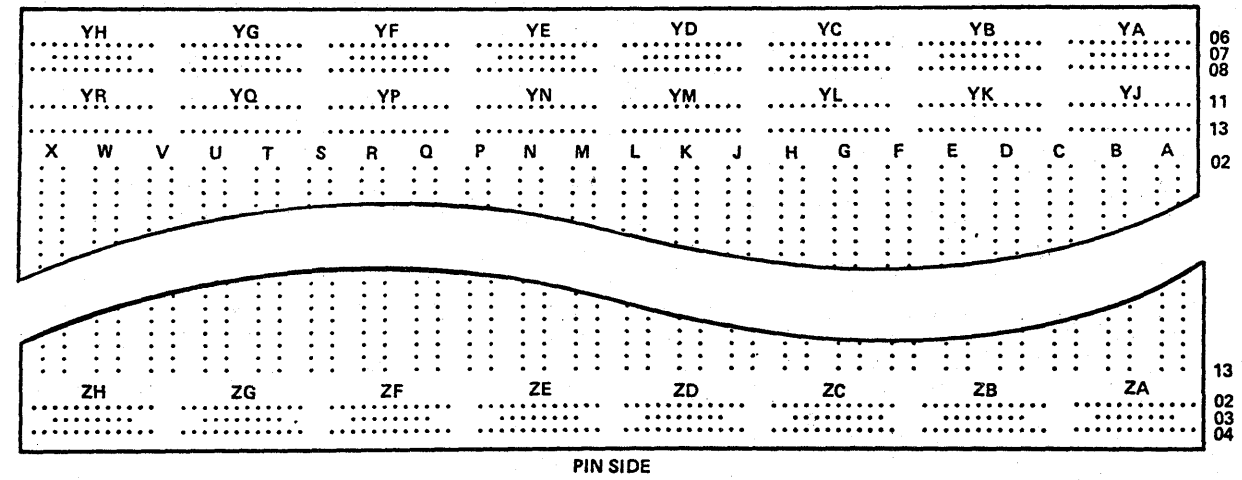
Possible causes:

- 01A-A2D2 sense card
- PS101
- PCC K03 contactor.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> 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. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS101 P03-10.
2	Is the voltage less than +0.8 Vdc?	Go to step 6.
3	Go to <b>Instructions</b> column.	Measure for +24 Vdc at the following points:  - lead at PS101 P04-11 + lead at PS101 P04-8.
4	Is the voltage less than +0.8 Vdc?	Go to step 19.
5	Go to <b>Instructions</b> column.	Go to step 24.
6	Go to <b>Instructions</b> column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Remove 01A-A2D2 card and TCCs. 4. Set PCC CB1 and CB2 on. 5. Measure for +5 Vdc at the following points:  - lead at frame-ground + lead at PS101 P03-10.



Step	Conditions	Instructions
7	Is the voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange O1A-A2D2 card.</li> <li>4. Go to step 29.</li> </ol>
8	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Disconnect cable at PS101 J/P03.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Measure for +5 Vdc at the following points (on power supply):  - lead at frame ground + lead at PS101 J03-10.</li> </ol>
9	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS101.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Go to step 29.</li> </ol>
10	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Reconnect cable at PS101 P03.</li> <li>4. Disconnect cable at O1A-A1YG (card side).</li> <li>5. Set PCC CB1 and CB2 on.</li> <li>6. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS101 P03-10.</li> </ol>



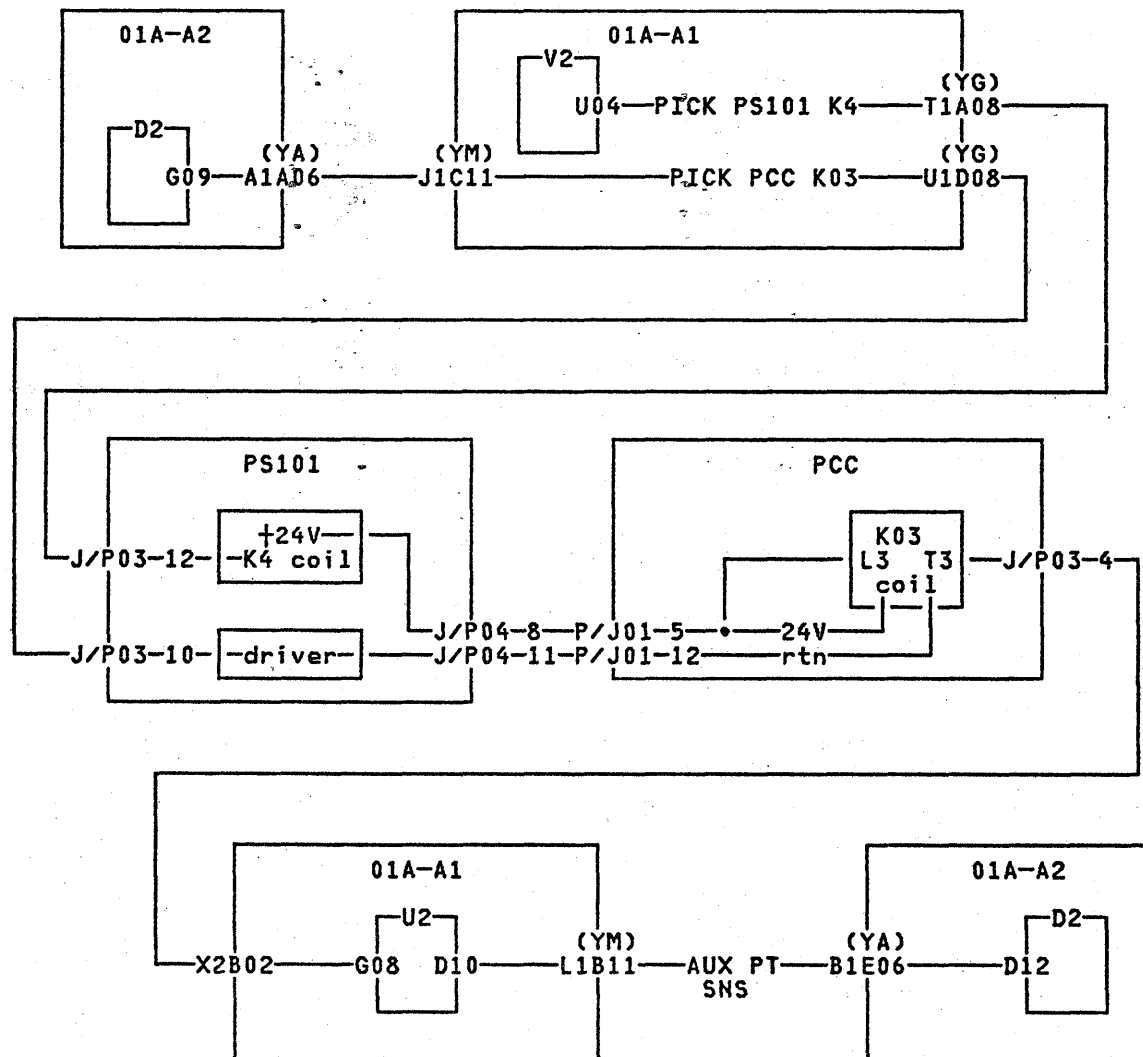
Primary Control Compartment (PCC)

Step	Conditions	Instructions
11	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS101 P03 to 01A-A1YG (card side).</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 29.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A1YG.</li> <li>Disconnect cable at 01A-A1YM (card side).</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.</li> </ol>
13	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A1 board.</li> <li>Go to step 29.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A1YM.</li> <li>Disconnect cable at 01A-A2YA (card side).</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.</li> </ol>

Step	Conditions	Instructions
15	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2YA (card side) to 01A-A1YM (card side).</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable .</p> <ol style="list-style-type: none"> <li>Go to step 29.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A2YA.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.</li> </ol>
17	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Go to step 29.</li> </ol>
18	Is the voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reinstall 01A-A2D2 card and TCCs.</li> <li>Go to step 29.</li> </ol>
19	Go to Instructions column.	<p>Measure for +24 Vdc at the following points: - lead at frame ground + lead at PCC P03-4.</p>
20	Is the voltage greater than +22 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PCC K03.</li> <li>Go to step 29.</li> </ol>

Step	Conditions	Instructions
21	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2D2D08 + lead at 01A-A2D2D12.
22	Is the 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-A2U2 card. 4. Go to step 29.
23	Is the voltage less 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-A2D2 card. 4. Go to step 29.
24	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 PS101 J/P04. 4. Check resistance at the following points:  - lead at frame ground + lead at PS101 P04-11 (cable end).
25	Is an open indicated?	1. Exchange RS101.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  2. Go to step 29.
26	Go to Instructions column.	1. Disconnect cable at PCC J/P01. 2. Check resistance at the following points:  - lead at frame ground + lead at PS101 P04-11 (cable end).
27	Is a short indicated?	1. Exchange cable from PS101 P04 to PCC P01.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  2. Go to step 29.
28	Go to Instructions column.	1. Exchange cable from PCC K03 to PCC P01.  <b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.

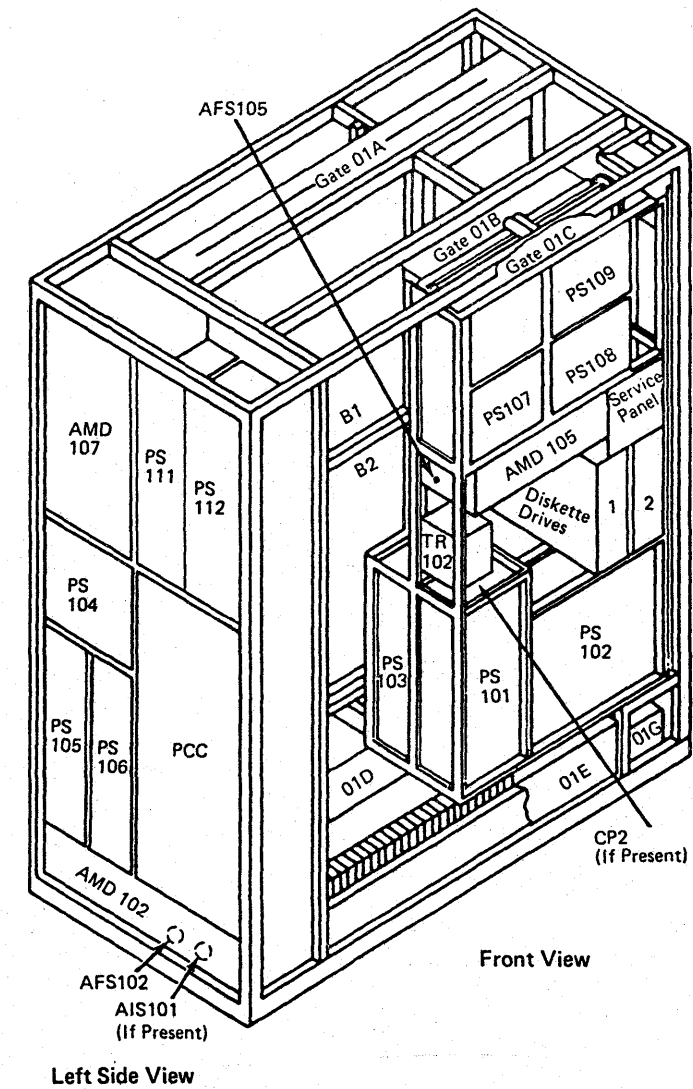
Step	Conditions	Instructions
29	Go to Instructions column.	1. Ensure PCC CB1 and CB2 are off. 2. Reinstall and check all cables and cards for proper seating in the following areas:  PCC box 01A-A1 board 01A-A2 board 01A-A2 board TCCs PS101.  3. Set PCC CB1 and CB2 on. 4. Go to page PR 5001.



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These Ref Codes indicate that a specific connector or paddle card is disconnected.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> </ol>
2	Was the displayed Ref Code 1116140E?	<p>This Ref Code indicates that PS103 J/P01 is disconnected.</p> <ol style="list-style-type: none"> <li>1. Check PS103 J/P01 for poor seating and pushed in pins.</li> <li>2. Ensure PS103 J/P01 is connected.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Go to page PR 5001.</li> </ol>
3	Was the displayed Ref Code 1116240E?	<p>This Ref Code indicates that PS103 J/P05 is disconnected.</p> <ol style="list-style-type: none"> <li>1. Check PS103 J/P05 for poor seating and pushed in pins.</li> <li>2. Ensure PS103 J/P05 is connected.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Go to page PR 5001.</li> </ol>
4	Was the displayed Ref Code 1116340E?	<p>This Ref Code indicates that PS103 J/P06 is disconnected.</p> <ol style="list-style-type: none"> <li>1. Check 01A-A2C2 for proper seating.</li> <li>2. Check PS103 J/P06 for poor seating and pushed in pins.</li> <li>3. Ensure PS103 J/P06 is connected.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
5	Was the displayed Ref Code 1116840E?	<p>This Ref Code indicates that 01A-A2B2 paddle card is disconnected.</p> <ol style="list-style-type: none"> <li>1. Check 01A-A2B2 paddle card for poor seating and bent in pins.</li> <li>2. Ensure 01A-A2B2 paddle card is seated.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Go to page PR 5001.</li> </ol>



Step	Conditions	Instructions
6	Was the displayed Ref Code 1116040E?	<ol style="list-style-type: none"> <li>1. Disconnect PCC connector J/P08.</li> <li>2. Set PCC CB1 and CB2 on.</li> <li>3. Set CE Mode switch to CE Mode.</li> <li>4. Press service panel Power On.</li> <li>5. Select Diagnostic Power Up (QWD) screen.</li> <li>6. Select option A (stop after K03 picked).</li> <li>7. Measure for line voltage between the following points:  - lead at PCC J08-3 + lead at PCC J08-4 (on PCC box).</li> </ol> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>
7	Is line voltage present?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the cable from PCC J/P08 to AMD102 and AMD105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cables.</p> <p>4. Go to step 15.</p>
8	Go to Instructions column.	<p>Measure for line voltage between the following points:</p> <p>- lead at PCC K03-T1 + lead at PCC K03-T2.</p> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>

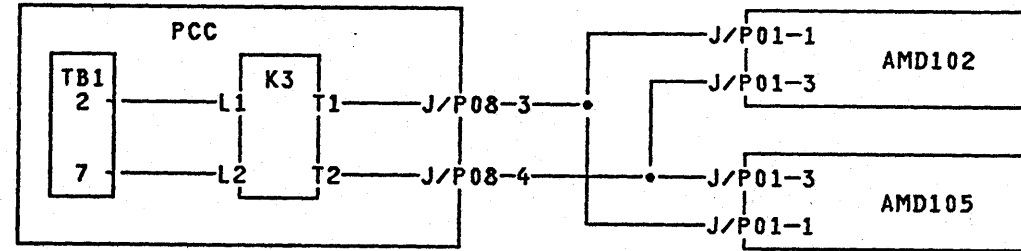
Step	Conditions	Instructions
9	Is line voltage present?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the cable from PCC K3 to PCC J/P08 and J/P10.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <p>4. Go to step 15.</p>
10	Go to Instructions column.	<p>Measure for line voltage between the following points:</p> <p>- lead at PCC K03-L1 + lead at PCC K03-L2.</p> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>
11	Is line voltage present?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PCC K03.</li> </ol> <p><b>Note:</b> Check K03 for loose wires before exchanging.</p> <p>4. Go to step 15.</p>
12	Go to Instructions column.	<p>Measure for line voltage between the following points:</p> <p>- lead at PCC TB1-2 + lead at PCC TB1-7.</p> <p><b>Note:</b> For line voltage value, see label on PCC box.</p>

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Step	Conditions	Instructions
13	Is line voltage present?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange the cable from PCC K3 to PCC TB1.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Go to step 15.</li> </ol>
14	Go to Instructions column.	If line voltage is missing on TB1, use the YA pages to verify the voltage jumpers are installed on TB1.
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Ensure PCC CB1 and CB2 are off.</li> <li>2. Reinstall and check all cables and cards for proper seating in the following areas:  PCC box AMD102 AMD105.</li> <li>3. Set PCC CB1 and CB2 on.</li> <li>4. Set CE Mode switch to Normal.</li> <li>5. Press service panel Power On.</li> <li>6. Go to page PR 5001.</li> </ol>







Ref Codes 1117040E, 1117050E

PR 1191

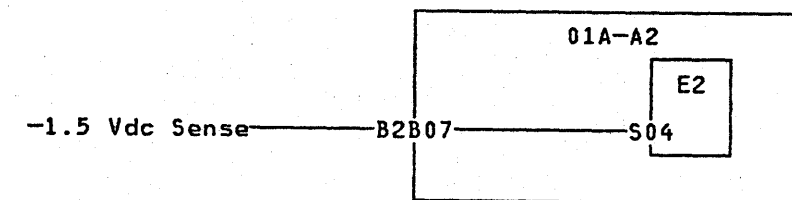
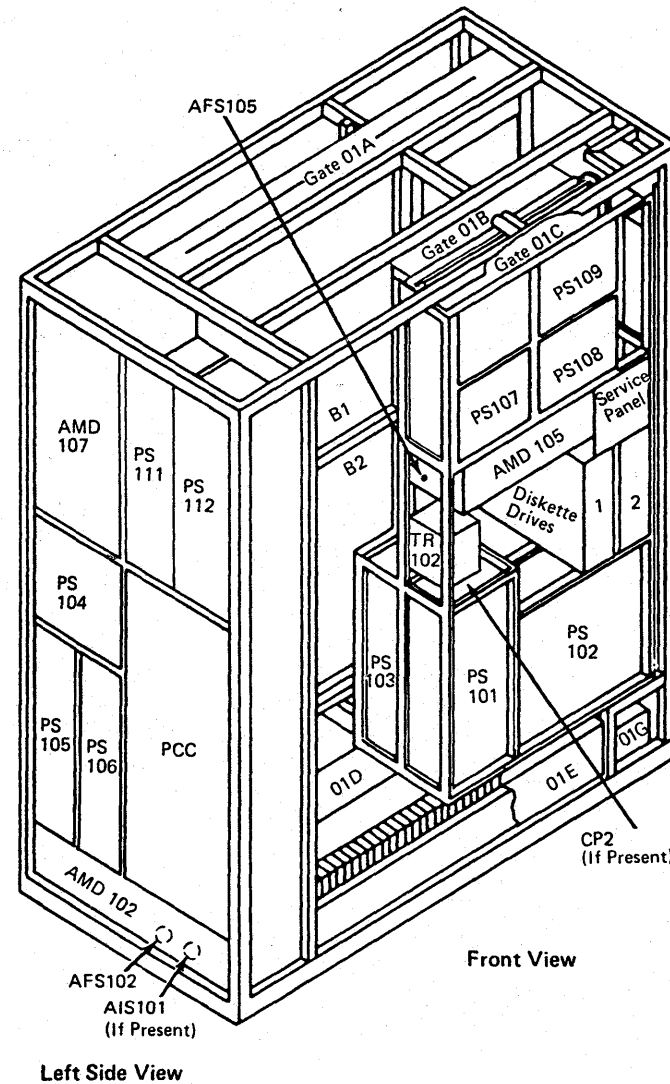
These Ref Codes indicate -1.5 Vdc was missing from all PS105 analog sensors.

Possible causes:

- PS105
- 01A-B2 TB1 bus bar
- 01A-A2E2 card.

Step	Conditions	Instructions
1	Go to Instructions column.	A torque wrench and a 1/4 to 3/8 drive adapter are needed. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Check the 01A-B2 TB1 distribution bus and PS105 for loose bolts, screws, and cables. 4. Press service panel Power On. 5. Select Power Up/Down (QWW) screen. 6. Select UP (power-up processor only).
2	Does the processor power up?	Go to page PR 1021 and verify PS105 voltage adjustment.
3	Go to Instructions column.	1. Measure for -1.5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2S04.  2. Select Power Up/Down (QWW) screen. 3. Select UP (power-up processor only).
4	Is voltage -1.44 to -1.56 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.

Step	Conditions	Instructions
5	Go to Instructions column.	A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS105.  <b>Note:</b> Check cable connectors for pushed in pins and seating or power supply adjustment before exchanging power supply.  4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.





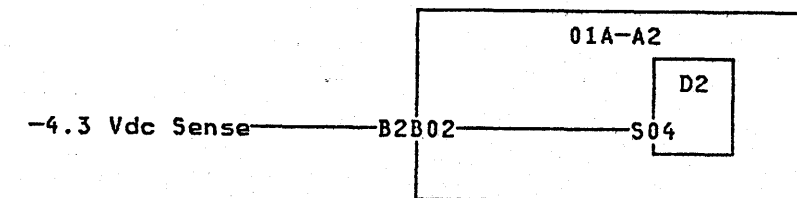
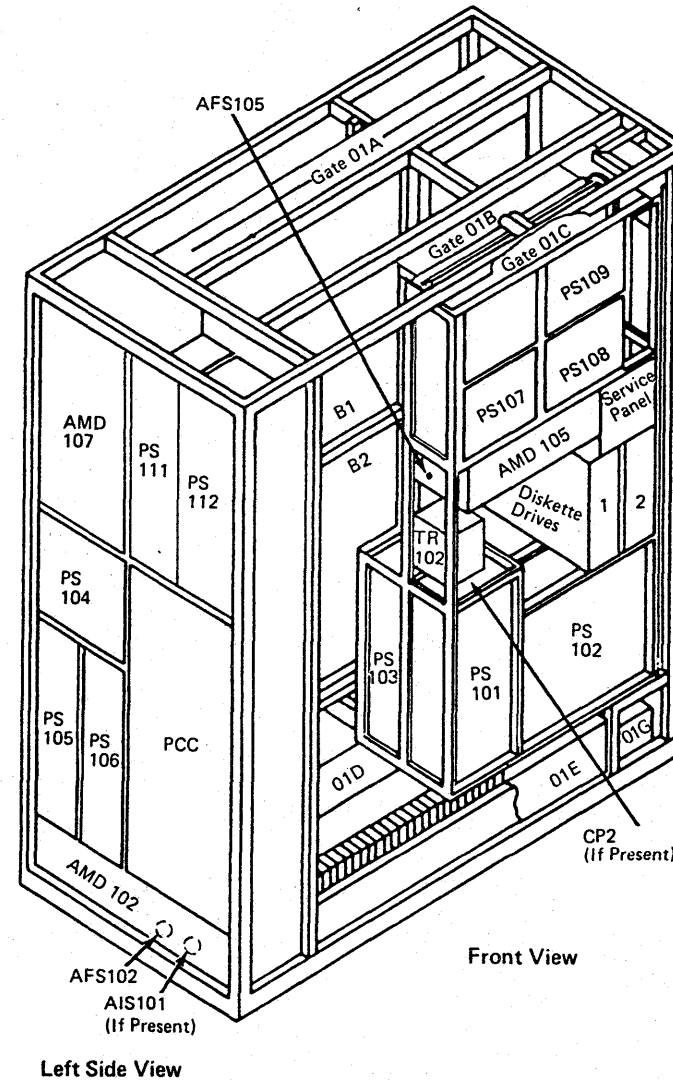
These Ref Codes indicate -4.3 Vdc was missing from all PS106 analog sensors.

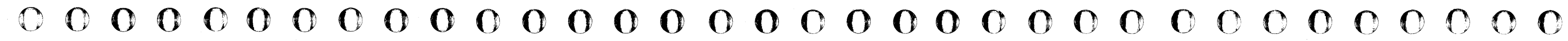
Possible causes:

- PS106
- 01A-B2 TB1 bus bar
- 01A-A2D2 card.

Step	Conditions	Instructions
1	Go to Instructions column.	A torque wrench and 1/4 to 3/8 drive adapter are needed. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Check the 01A-B2 TB1 distribution bus and PS106 for loose bolts, screws, and cables. 4. Press service panel Power On. 5. Select Power Up/Down (QWW) screen. 6. Select UP (power-up processor only).
2	Does the processor power up?	Go to page PR 1021 and verify PS106 voltage adjustment.
3	Go to Instructions column.	1. Measure for -1.5 Vdc at the following points.  - lead at 01A-A2D2D08 + lead at 01A-A2D2S04.  2. Select Power Up/Down (QWW) screen. 3. Select UP (power-up processor only).
4	Is voltage -1.44 to -1.56 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2D2 card. 3. Go to page PR 5001.

Step	Conditions	Instructions
5	Go to Instructions column.	A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.  1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS106.  <b>Note:</b> Check cable connectors for pushed in pins and seating or power supply adjustment before exchanging power supply.  4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



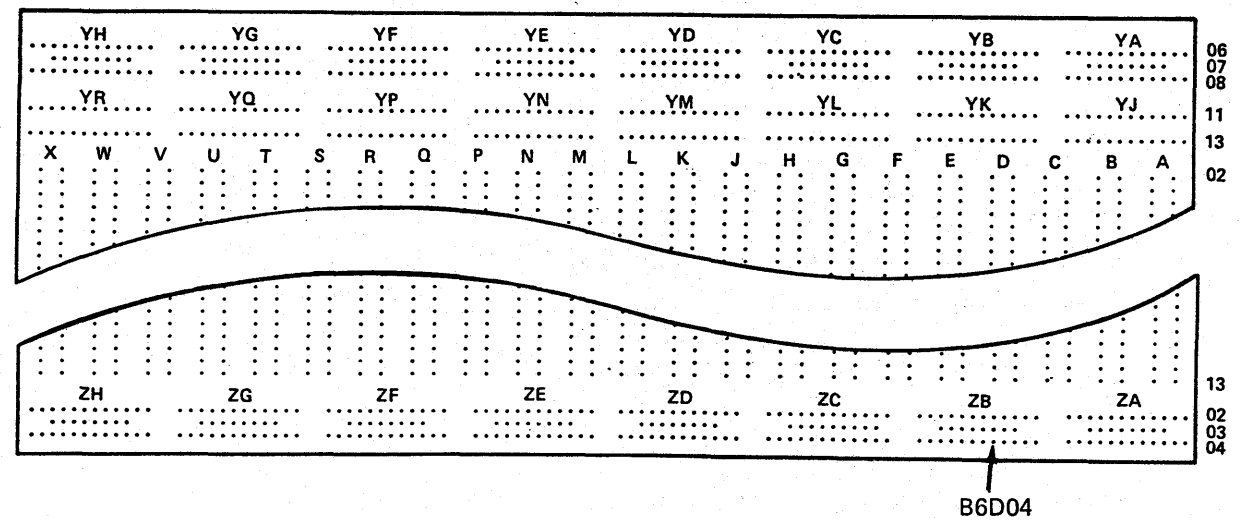
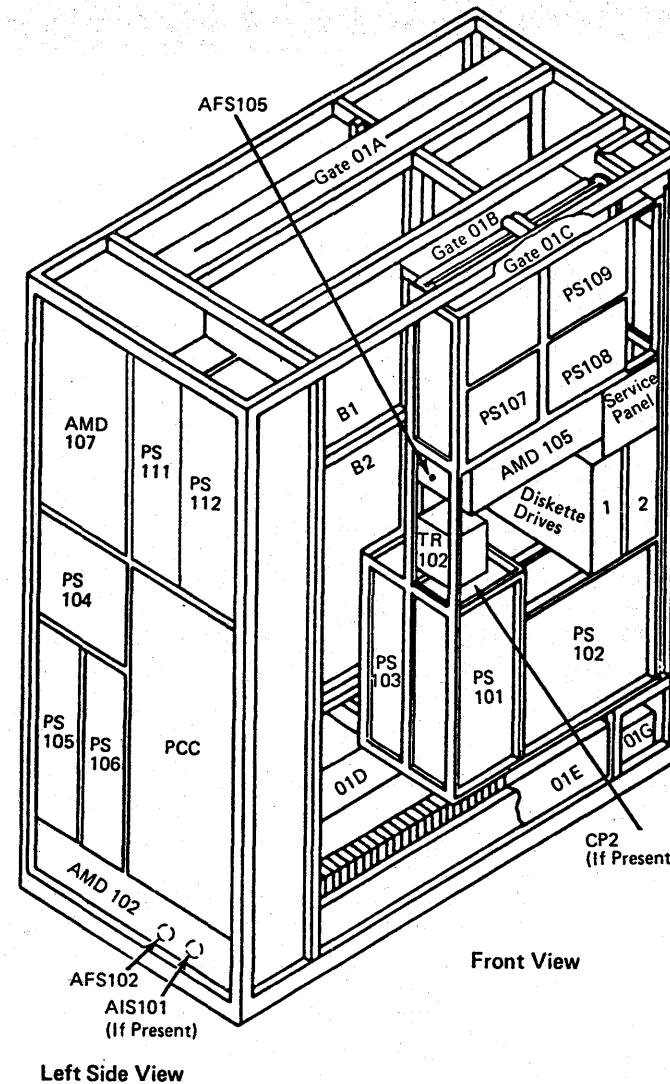


These Ref Codes indicate the +5V from PS109 is missing at the 01A-A4 board.

Possible causes:

- PS109
- 01A-A2E2 sense card.

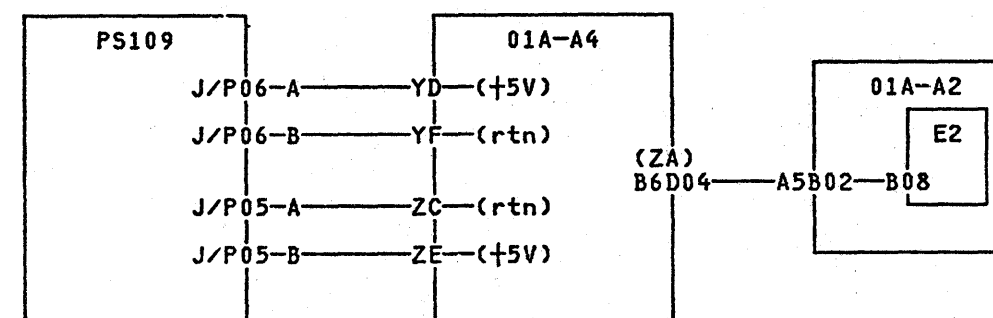
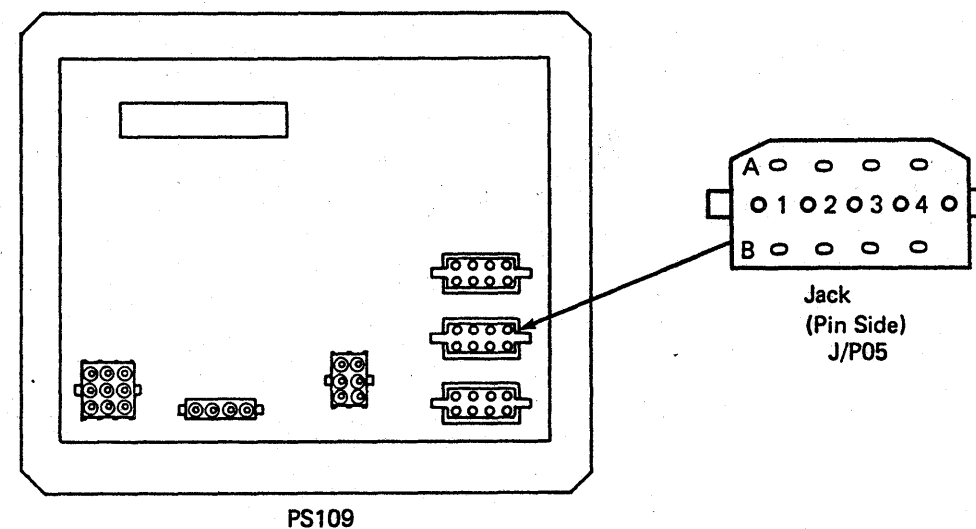
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode 3. Press service panel Power On. 4. Select Diagnostic Power Up (QWD) screen. 5. Select option F (stop after +5V start). 6. Measure for +1.5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2B08.
2	Is voltage greater 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-A2E2 card. 4. Go to step 12.
3	Go to Instructions column.	Measure for +1.5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2A5B02.
4	Is voltage greater 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 12.
5	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A4C5D08 + lead at 01A-A4B6D04.



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Step	Conditions	Instructions
6	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A4ZA to 01A-A2A5.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 12.</li> </ol>
7	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A4C2D08 + lead at 01A-A4C2J03.
8	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A4 board.</li> <li>Go to step 12.</li> </ol>
9	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at PS109 P05-A + lead at PS109 P05-B.
10	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cables from PS109 P05, P06 to 01A-A4YD, YF, ZC, and ZE.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 12.</li> </ol>

Step	Conditions	Instructions
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Ensure PCC CB1 and CB2 are off.</li> <li>Reinstall and check all cables and cards for proper seating in the following areas:  PS109 01A-A2 board 01A-A4 board.</li> <li>Reset any tripped CPs.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



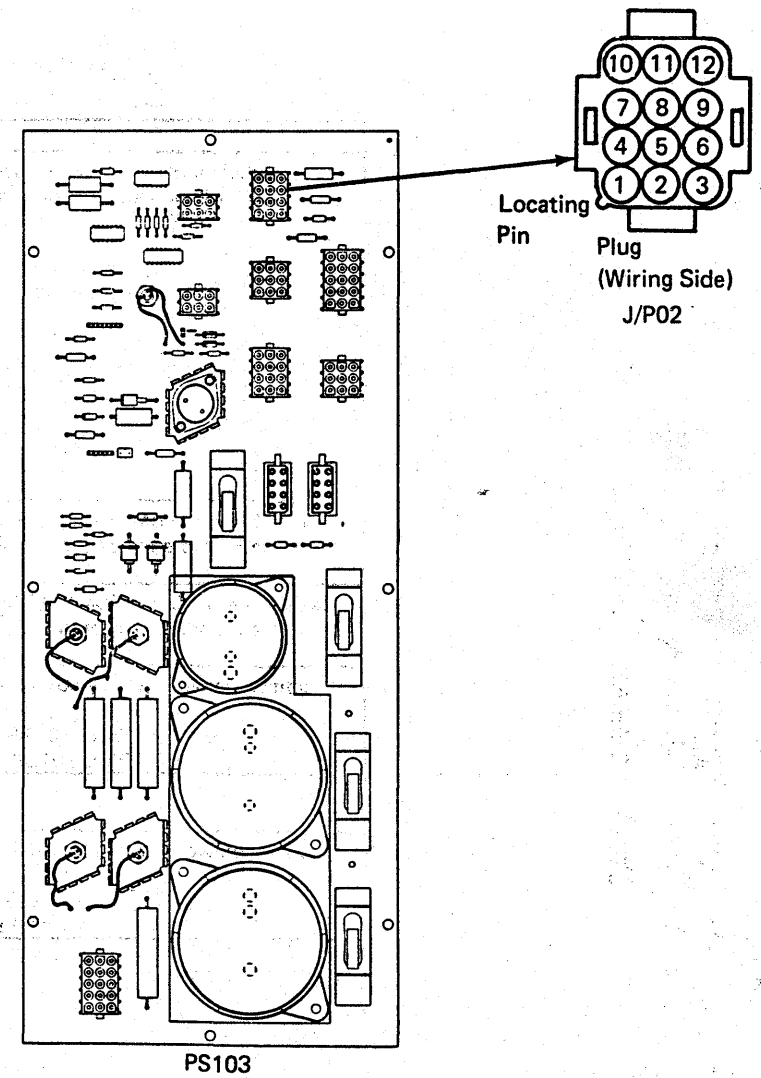
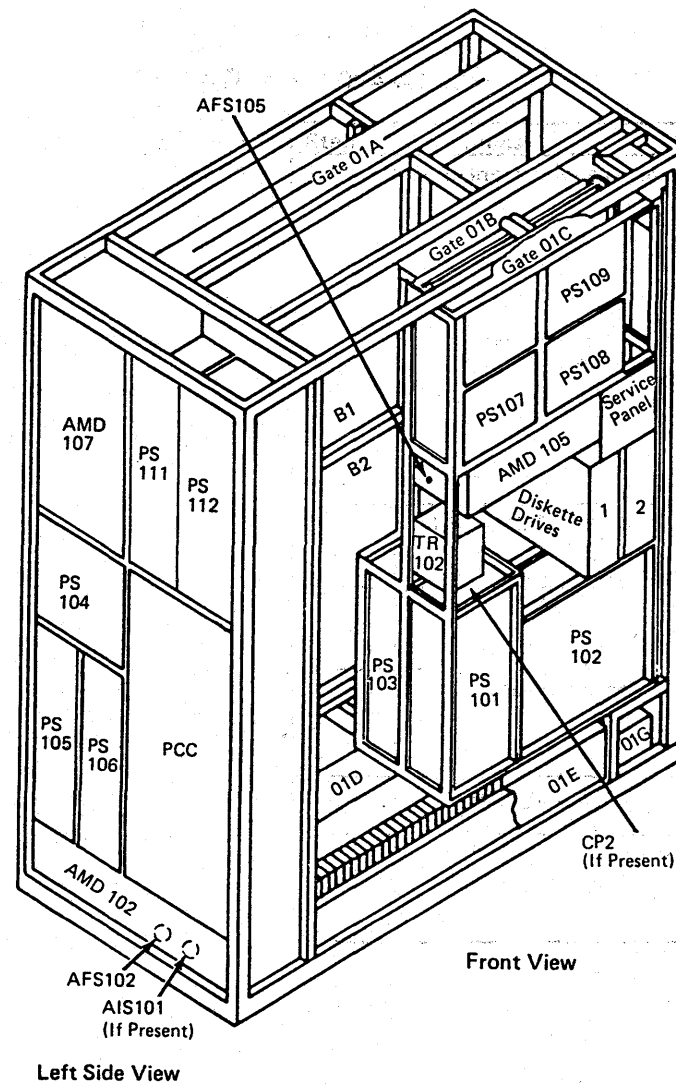
4381 B/M 2676380 MI Seq CA110 PN 6169137 2 of 2 EC A20558 01 Oct 84

These Ref Codes indicate a tripped CP in PS103.

Possible causes:

- 01A-A2D2 sense card
- PS103
- 01A-A2 board.

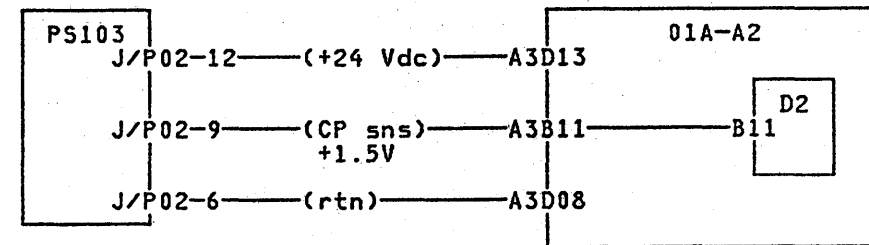
Step	Conditions	Instructions
1	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Reset any tripped CP in PS103.</li> <li>3. Press service panel Power On.</li> <li>4. If power is complete, go to page END 001.</li> <li>5. Set CE Mode switch to CE Mode.</li> </ol>
2	Is PS103 CP1 tripped?	Use Ref Code 11D2940E and the Ref Code list on page PR 1001 to determine the PR entry page.
3	Is PS103 CP2 tripped?	Use Ref Code 12A4240E and the Ref Code list on page PR 1001 to determine the PR entry page.
4	Is PS103 CP3 tripped?	Use Ref Code 12A4240E and the Ref Code list on page PR 1001 to determine the PR entry page.
5	Is PS103 CP4 tripped?	Use Ref Code 12A4240E and the Ref Code list on page PR 1001 to determine the PR entry page.
6	Go to <b>Instructions</b> column.	Measure for +24 Vdc at the following points: - lead at PS103 J/P02-6 + lead at PS103 J/P02-12.
7	Is voltage less than +22 Vdc?	Go to step 15.
8	Go to <b>Instructions</b> column.	Measure for +1.5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2B11.





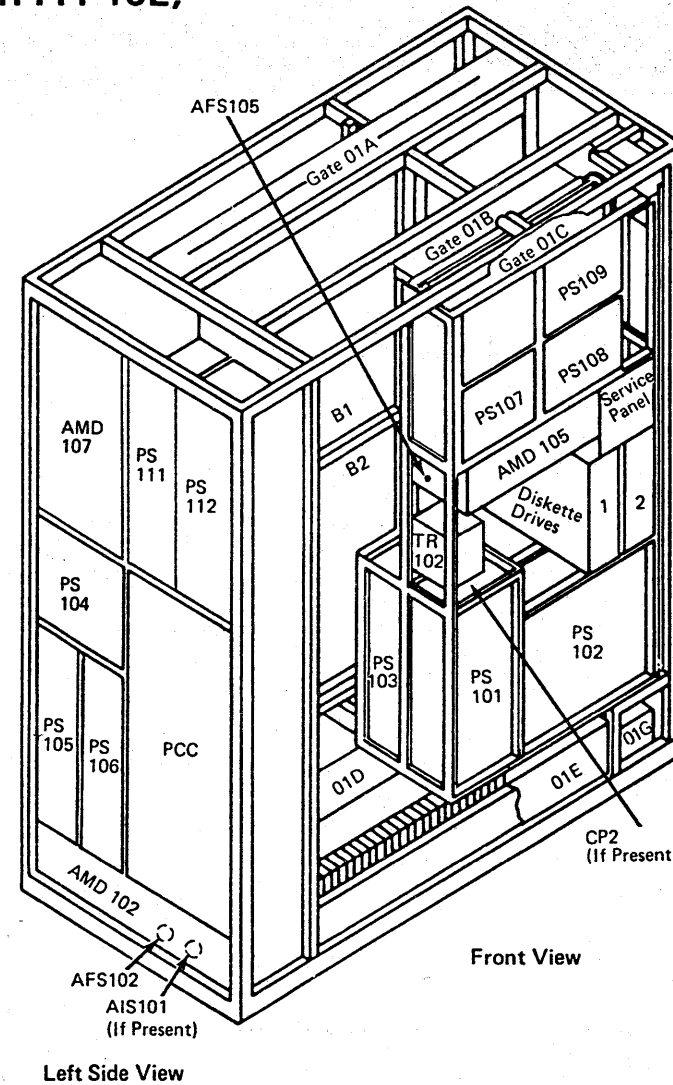
Step	Conditions	Instructions
9	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange 01A-A2D2 card.</li> <li>Go to step 18.</li> </ol>
10	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2D2D08 + lead at 01A-A2A3B11.
11	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Go to step 18.</li> </ol>
12	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at PS103 P02-6 + lead at PS103 P02-9.
13	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 P02 to 01A-A2A3.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 18.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 18.</li> </ol>

Step	Conditions	Instructions
15	Go to Instructions column.	Measure for -24 Vdc at the following points:  - lead at 01A-A2A3D08 + lead at 01A-A2A3D13.
16	Is voltage greater than -22 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 P02 to 01A-A2A3.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 18.</li> </ol>
17	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> </ol>
18	Go to Instructions column.	<ol style="list-style-type: none"> <li>Reinstall and check all cables and cards for proper seating in the following areas:                           PS103                          01A-A2 board.</li> <li>Reset any tripped CPs.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



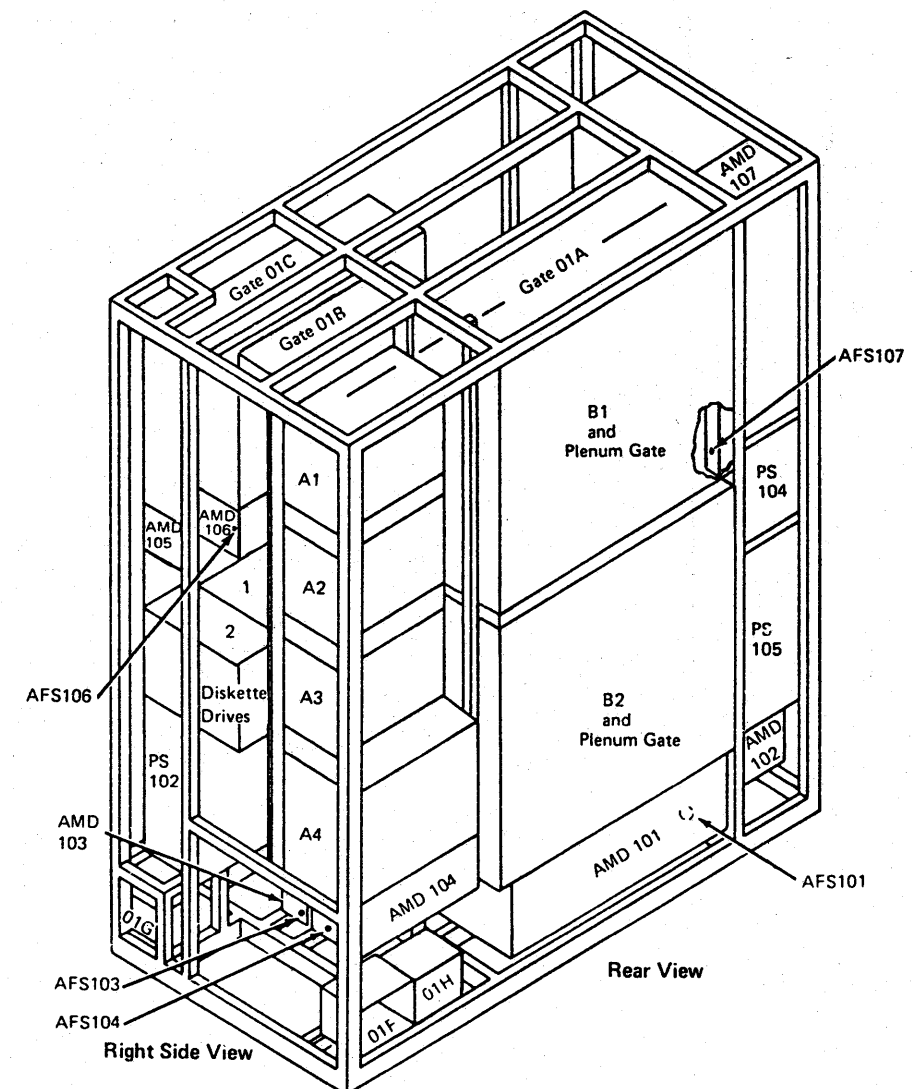
These Ref Codes indicate that the cause of the failure is unknown.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Check all power supply plugs for pushed in pins and proper seating.</li> <li>Check PCC K03, K04 for loose wires.</li> <li>Check all cables in 01A-A1 and 01A-A2 boards for seating.</li> <li>Check 01A-A1U2, 01A-A1V2, and 01A-A1W2 cards and top card connectors for seating.</li> <li>Check 01A-A2C2, 01A-A2C4, 01A-A2D2, 01A-A2E2, and 01A-A2F2 cards and top card connectors for proper seating.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> </ol>
2	Is power complete?	Go to page PR 5001.
3	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Measure for line voltage at the following points:  PCC CB1 L1 to L2 PCC CB1 L2 to L3 PCC CB1 L3 to L1.  <b>Note:</b> For line voltage value, see label on PCC box.</li> <li>Set PCC CB1 and CB2 on.</li> </ol>
4	Is voltage out of range? (+/- 10 percent)	<p>Isolate to one of the following: Customer supplied power Defective line cord.</p> <p>Go to page PR 5001.</p>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set CE Mode switch to CE Mode.</li> <li>Press service panel power on.</li> <li>Measure the voltages in table <b>A</b> to 01A-A1V2D08.</li> <li>If any voltage is out of range, exchange the power supply or go to the PR page listed in table <b>A</b>.</li> <li>Go to page PR 5001.</li> </ol>



**A**

Point	Power Supply	Voltage Range	Go to PR page
01A-A1V2B11	PS101	+21.6 to 26.4V	PR 021
01A-A1V2D03	PS101	+ 4.5 to 5.5V	PR 031
01A-A1V2D04	PS102	- 4.55 to 5.55V	PR 261
01A-A1V2D02	PS102	-10.92 to 13.32V	PR 271
01A-A1V2D05	PS102	+ 4.55 to 5.55V	PR 281
01A-A1V2D06	PS102	+ 7.74 to 9.44V	PR 291
01A-A1V2B13	PS102	+10.92 to 13.32V	PR 301
01A-A1V2D13	PS102	+21.6 to 26.4V	PR 311



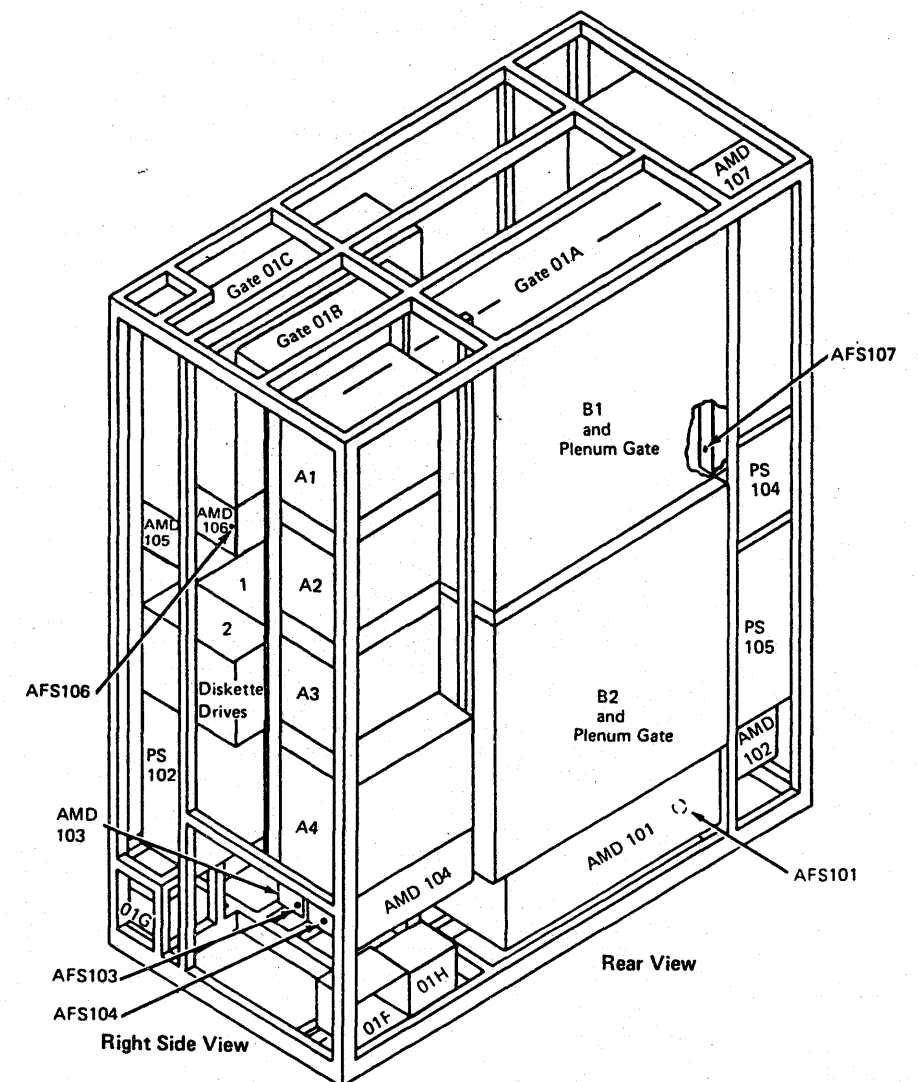
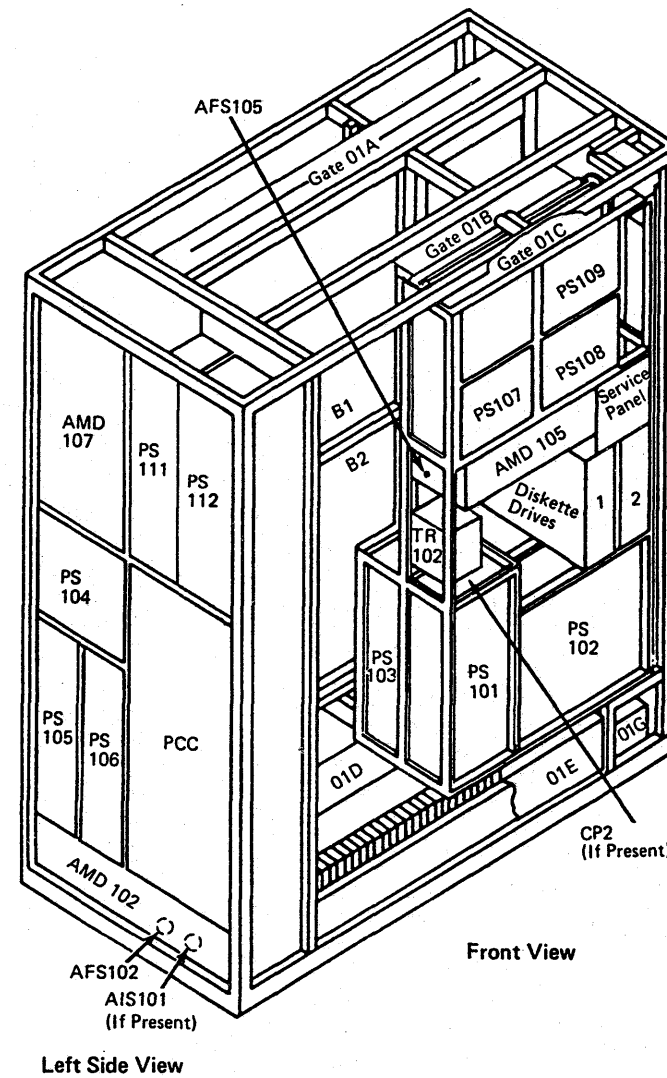


This Ref Code indicates the PS109 OC sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

- PS109
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

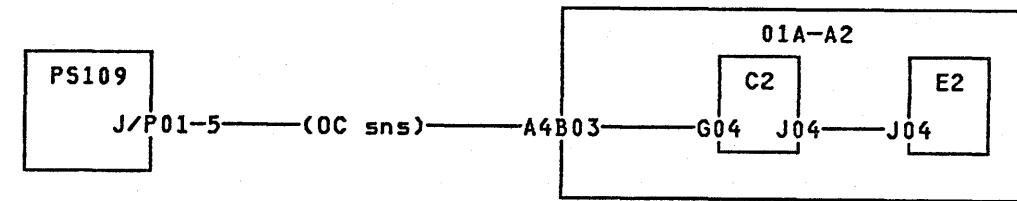
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2J04.
2	Is voltage less than +2.5 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G04.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS109 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G04.



Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS109 P01.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G04.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G04.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS109 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2J04.</li> </ol>
13	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2J04.</li> </ol>

Step	Conditions	Instructions
15	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>





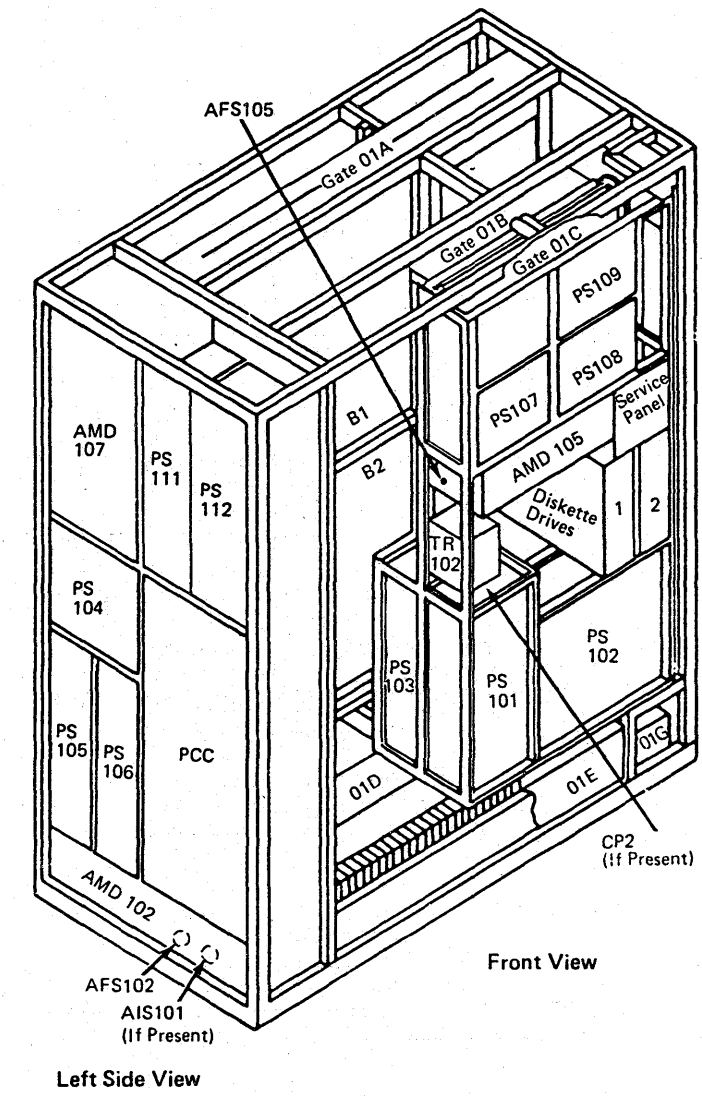
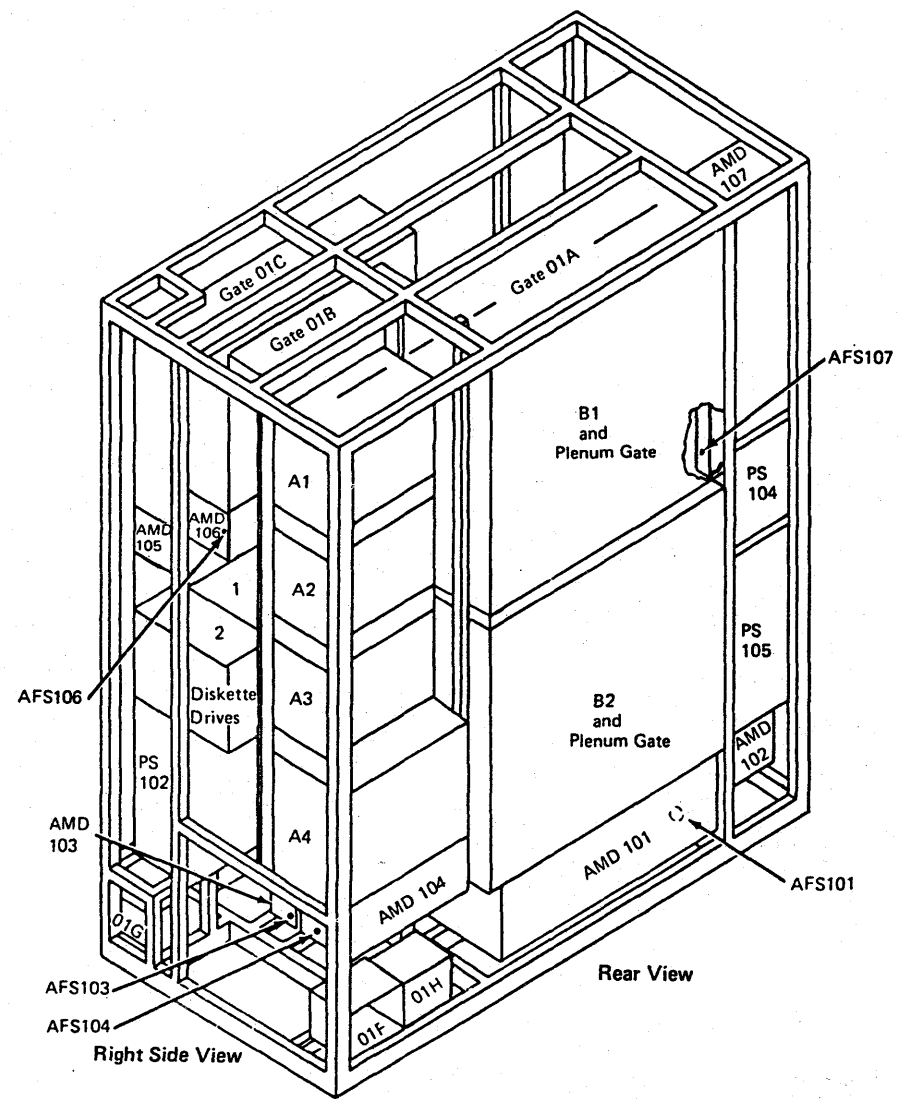
Ref Code 1130640E

This Ref Code indicates the PS109 OV sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

- PS109
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G03.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G05.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS109 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G05.



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Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS109 P01.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G05.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G05.</li> </ol>

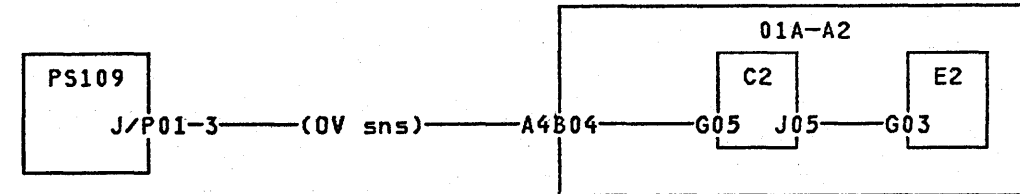
Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS109 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G03.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>

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Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Press service panel Power On.</li> <li>3. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G03.</li> </ol>
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>





# Ref Code 1130840E

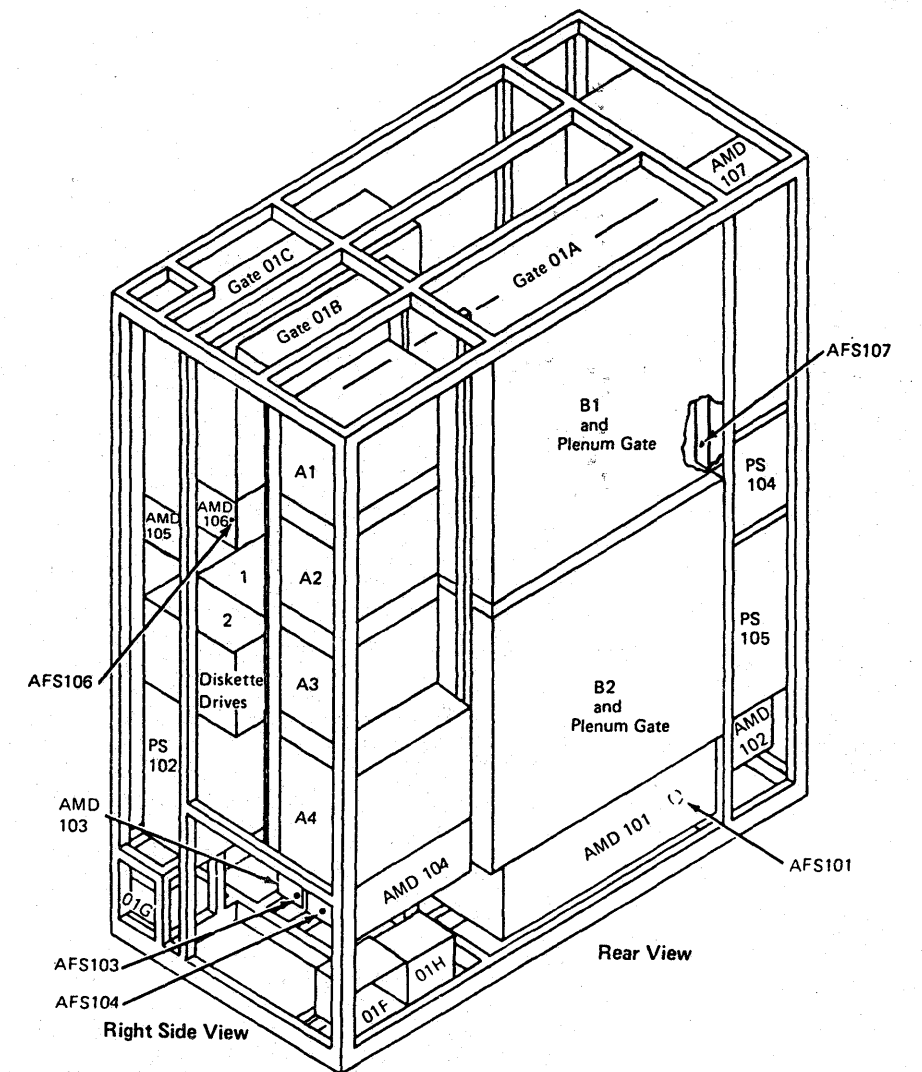
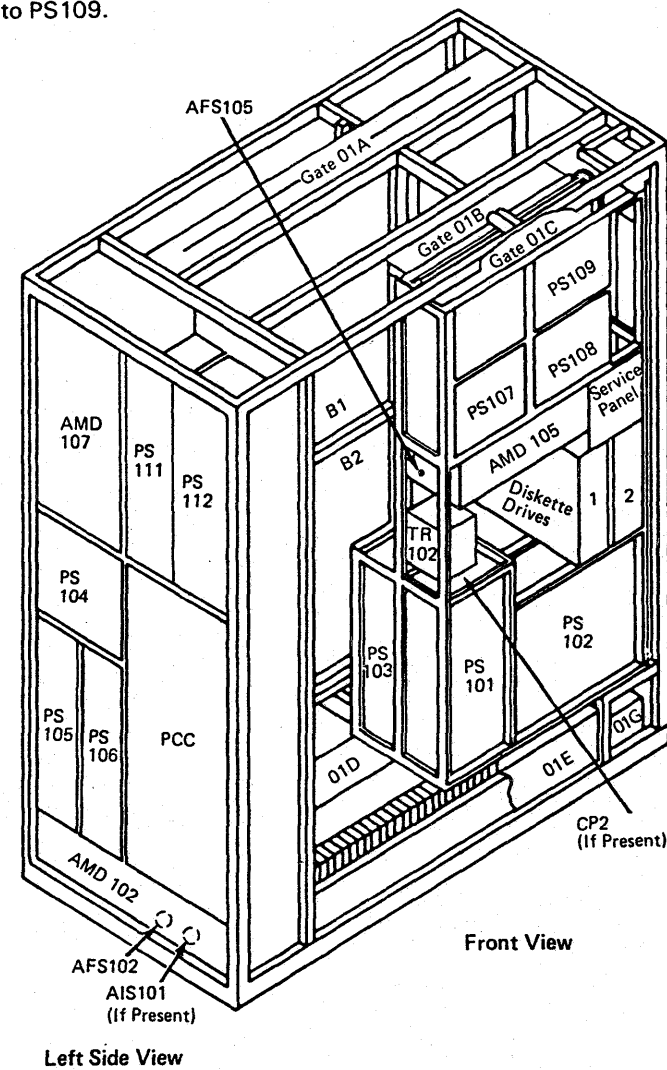
PR 1261

This Ref Code indicates the PS109 BG sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

- PS109
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G05.</li> </ol>
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange 01A-A2E2 card.</li> <li>3. Go to page PR 5001.</li> </ol>
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G07.
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Disconnect PS109 P01.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G07.</li> </ol>



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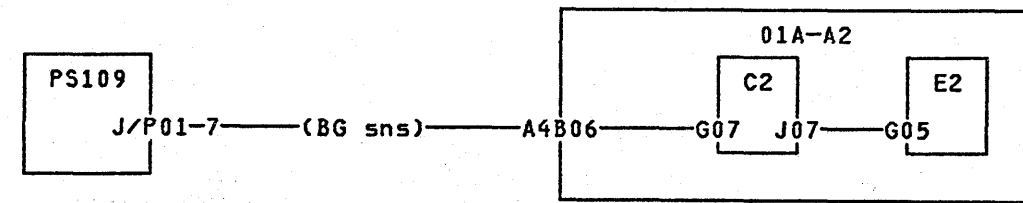
PR 1261

Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange PS109.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Reconnect PS109 P01.</li> <li>3. Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>4. Press service panel Power On.</li> <li>5. Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G07.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2C2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Disconnect cable at 01A-A2A4.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G07.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange cable from 01A-A2A4 to PS109 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G05.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2C2 position.</li> <li>3. Go to page PR 5001.</li> </ol>

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Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G05.</li> </ol>
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



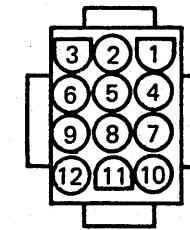
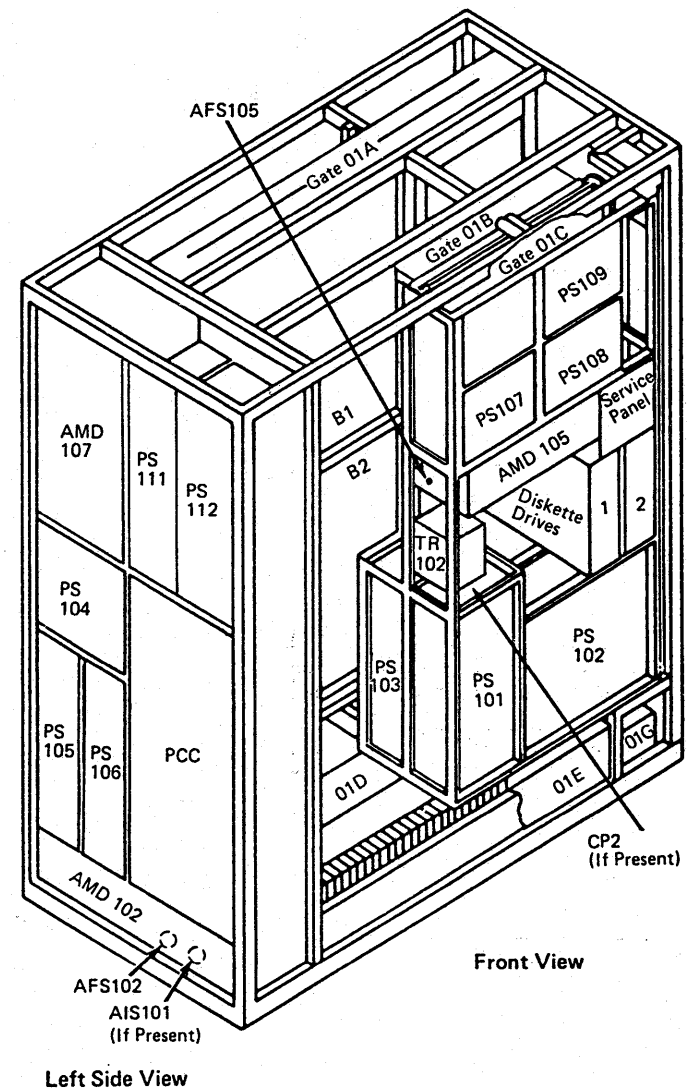


This Ref Code indicates the outputs of PS104 are active before the start line was turned on or the auxiliary point sense line is failing.

Possible causes:

- 01A-A2D2 sense card
- PS101
- PS104
- PCC K04 contactor.

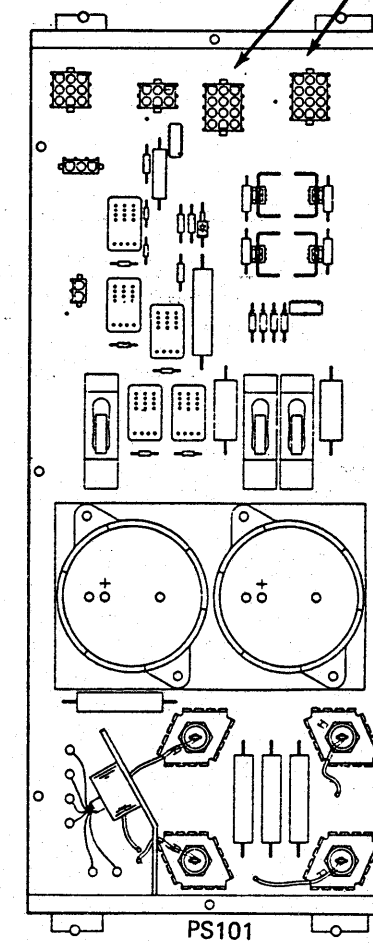
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +24 Vdc at the following points:  - lead at PS101 J/P04-12 + lead at PS101 J/P04-9.
2	Is the voltage less than +0.8 Vdc?	Go to step 18.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS101 J/P03-7.
4	Is the voltage greater than +2.5 Vdc?	Go to step 23.
5	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Remove 01A-A2D2 card. 3. Measure for +5 Vdc at the following points:  - lead at frame ground + lead at PS101 J/P03-7.



Jack (Pin Side)

J/P03

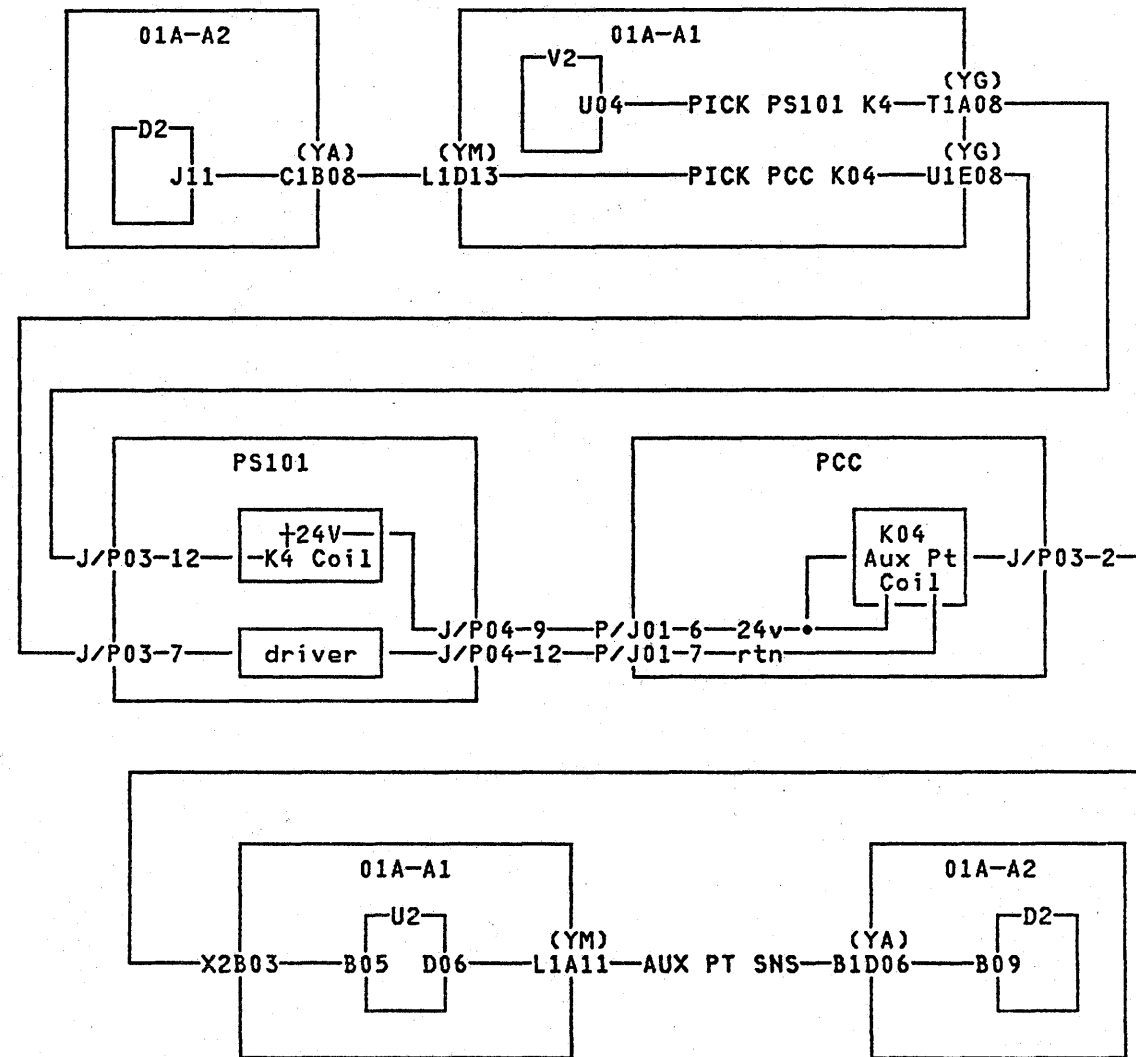
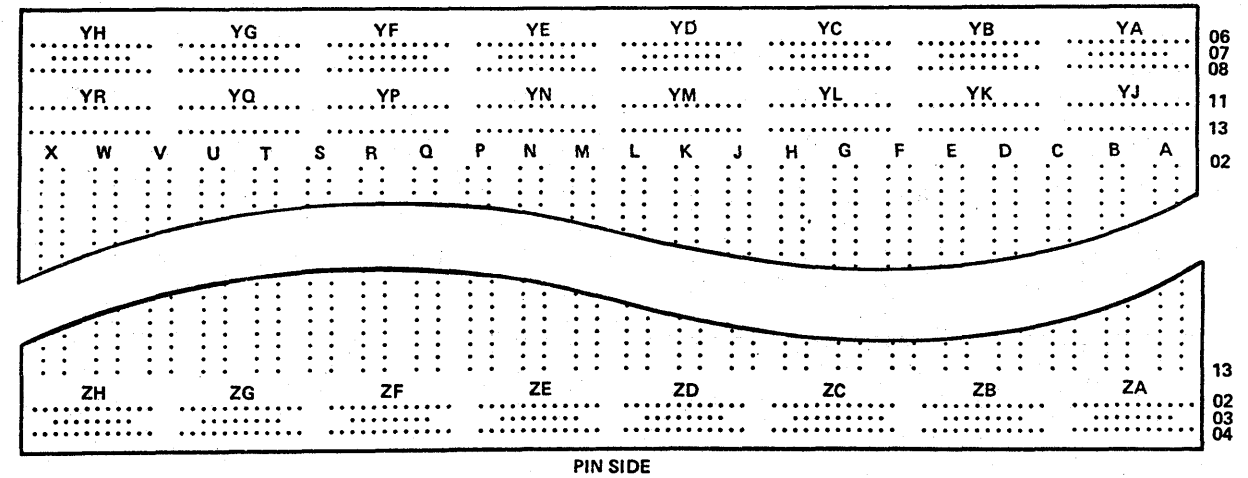
J/P04



PS101



Step	Conditions	Instructions
6	Is the voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2D2 card.</li> <li>Go to step 31.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at PS101 J/P03.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points (on power supply):  - lead at frame ground + lead at PS101 J03-7.</li> </ol>
8	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS101.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Go to step 31.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at PS101 J03.</li> <li>Disconnect cable at 01A-A1YG (card side).</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points (on power supply):  - lead at frame ground + lead at PS101 J03-7.</li> </ol>



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Step	Conditions	Instructions
10	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS101 P03 to 01A-A1YG (card side).</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 31.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A1YG.</li> <li>Disconnect cable at 01A-A1YM (card side).</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points (on power supply):</li> </ol> <p>- lead at frame ground + lead at PS101 J03-7.</p>
12	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A1 board.</li> <li>Go to step 31.</li> </ol>
13	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A1YM.</li> <li>Disconnect cable at 01A-A2YA (card side).</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points (on power supply):</li> </ol> <p>- lead at frame ground + lead at PS101 J03-7.</p>

Step	Conditions	Instructions
14	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2YA to 01A-A1YM (card side).</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Go to step 31.</li> </ol>
15	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reconnect cable at 01A-A2YA.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Measure for +5 Vdc at the following points (on power supply):</li> </ol> <p>- lead at frame ground + lead at PS101 J03-7.</p>
16	Is the voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Go to step 31.</li> </ol>
17	Is the voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Reinstall 01A-A2D2 card.</li> <li>Go to step 31.</li> </ol>
18	Go to Instructions column.	Measure for +24 Vdc at the following points:
		- lead at frame ground + lead at PCC P03-2.
19	Is the voltage greater than +22 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PCC K04.</li> <li>Go to step 31.</li> </ol>

Step	Conditions	Instructions
20	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2D2D08 + lead at 01A-A2D2B09.
21	Is the voltage greater than +2.5 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-A2D2 card. 4. Go to step 31.
22	Go to <b>Instructions</b> column.	Go to step 28.
23	Go to <b>Instructions</b> 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 PS101 J/P04. 4. Check resistance at the following points:  - lead at frame ground + lead at PS101 P04-12 (cable end).
24	Is an open indicated?	1. Exchange PS101.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.  2. Go to step 31.
25	Go to <b>Instructions</b> column.	1. Disconnect cable at PCC J/P01. 2. Check resistance at the following points:  - lead at frame ground + lead at PS101 P04-12 (cable end).

Step	Conditions	Instructions
26	Is a short indicated?	1. Exchange cable from PS101-P4 to PCC-P01.  <b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging cable.  2. Go to step 31.
27	Go to <b>Instructions</b> column.	1. Exchange cable from PCC K04 to PCC P01.  <b>Note:</b> Check cable connector for pushed in pins and seating before exchanging cable.
28	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at 01A-A1U2D08 + lead at 01A-A1U2D06.
29	Is the 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 PS104.  <b>Note:</b> Check cable connector for pushed in pins and seating before exchanging power supply.  4. Go to step 31.
30	Go to <b>Instructions</b> 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-A1U2 card.
31	Go to <b>Instructions</b> column.	1. Ensure PCC CB1 and CB2 are off. 2. Reinstall and check all cables and cards for proper seating in the following areas.  PCC box 01A-A1 board 01A-A2 board PS101.  3. Set PCC CB1 and CB2 on. 4. Go to page PR 5001.

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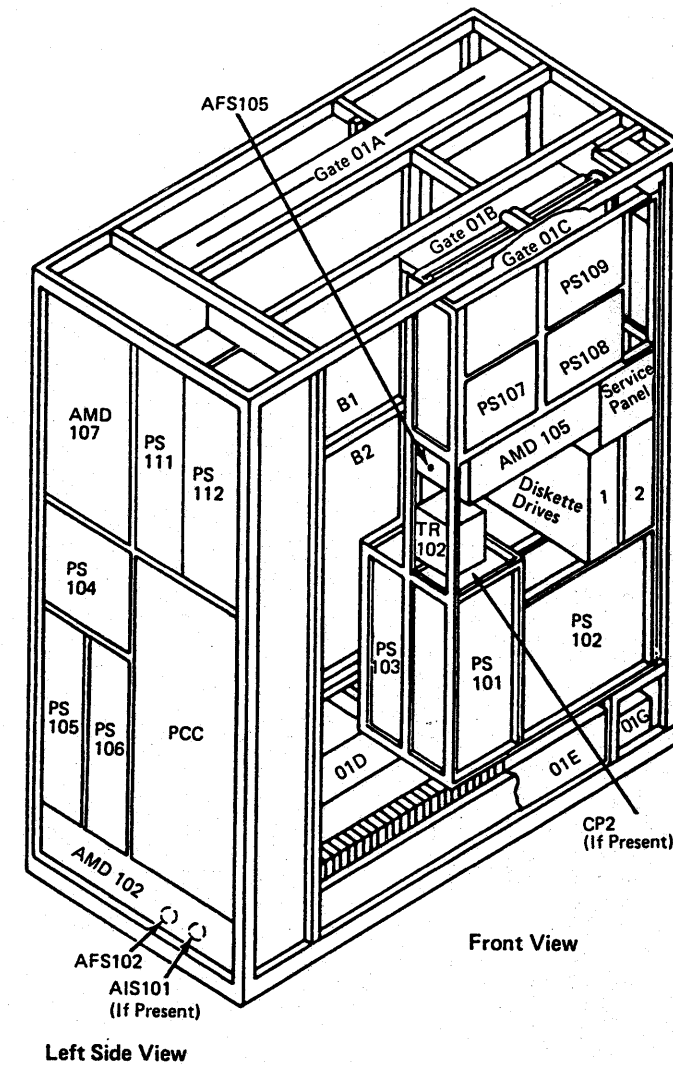


This Ref Code indicates the PS107 OC sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

- PS107
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

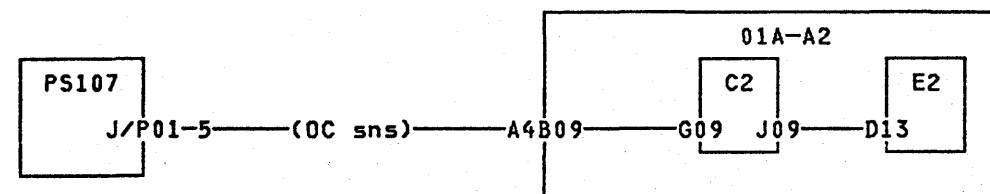
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2D13.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G09.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS107 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G09.



Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS107 P01.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G09.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G09.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS107 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2D13.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2D13.</li> </ol>

Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



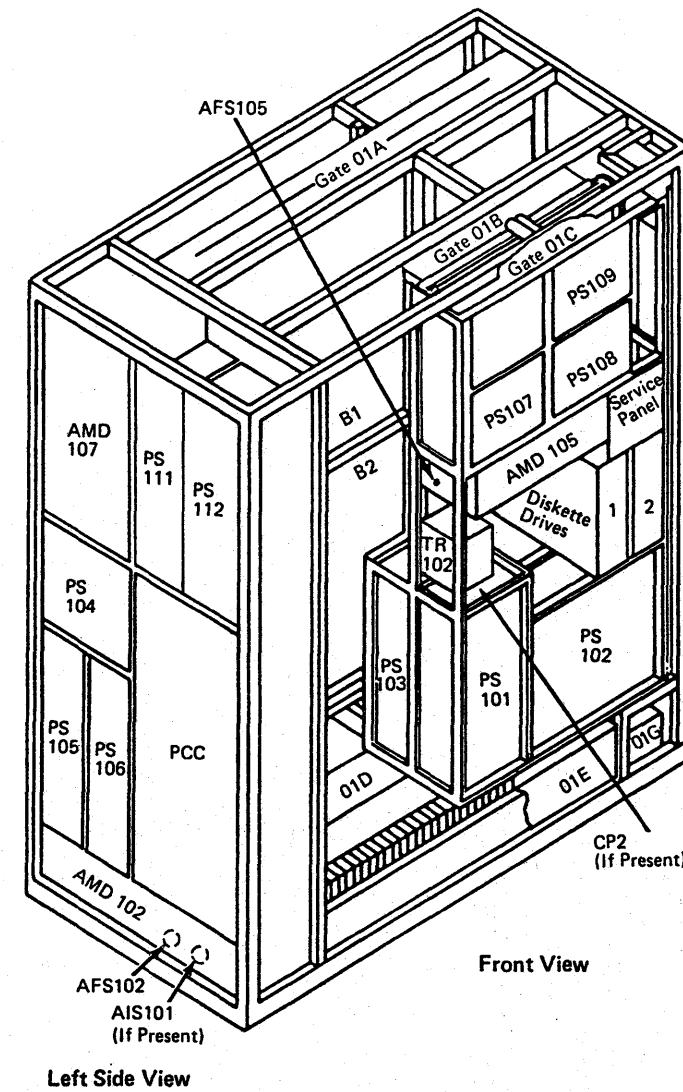


This Ref Code indicates the PS107 OV sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

- PS107
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> 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. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G07.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G10.
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to <b>Instructions</b> column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect PS107 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G10.



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Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS107 P01.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G10.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G10.</li> </ol>

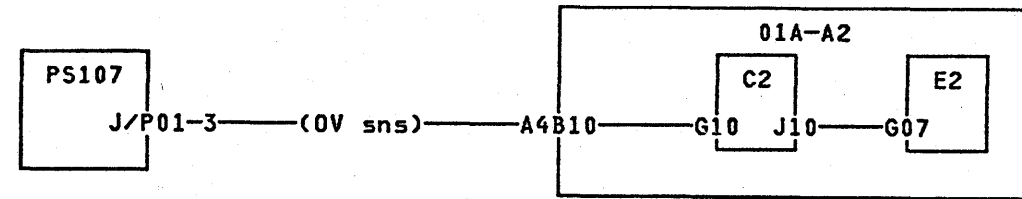
Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS107 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G07.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>

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Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2G07.</li> </ol>
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card just swapped into the 01A-A2D2 position.</li> <li>Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>



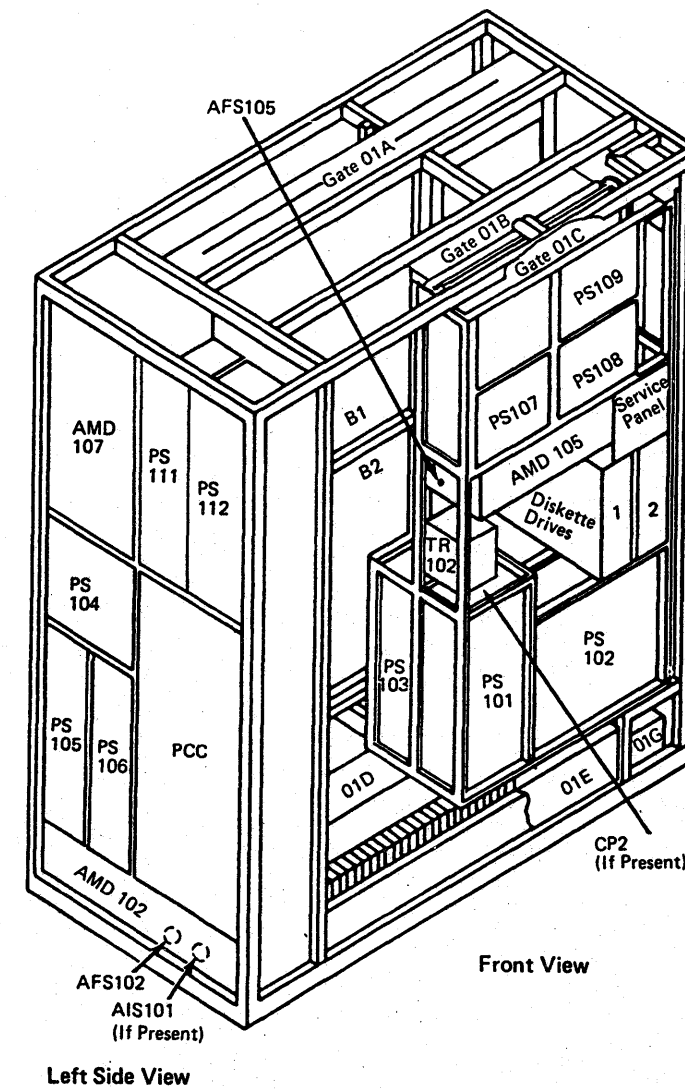


This Ref Code indicates the PS107 BG sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

- PS107
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel power on. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2D09.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G12.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS107 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2G12.



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Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS107.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS107 P01.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power on.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G12.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2G12.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS107 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2D09.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2D09.</li> </ol>

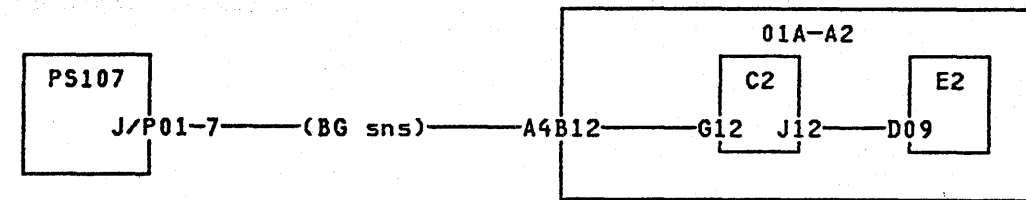
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EC A20558  
01 Oct 84

Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to PR 5001.</li> </ol>



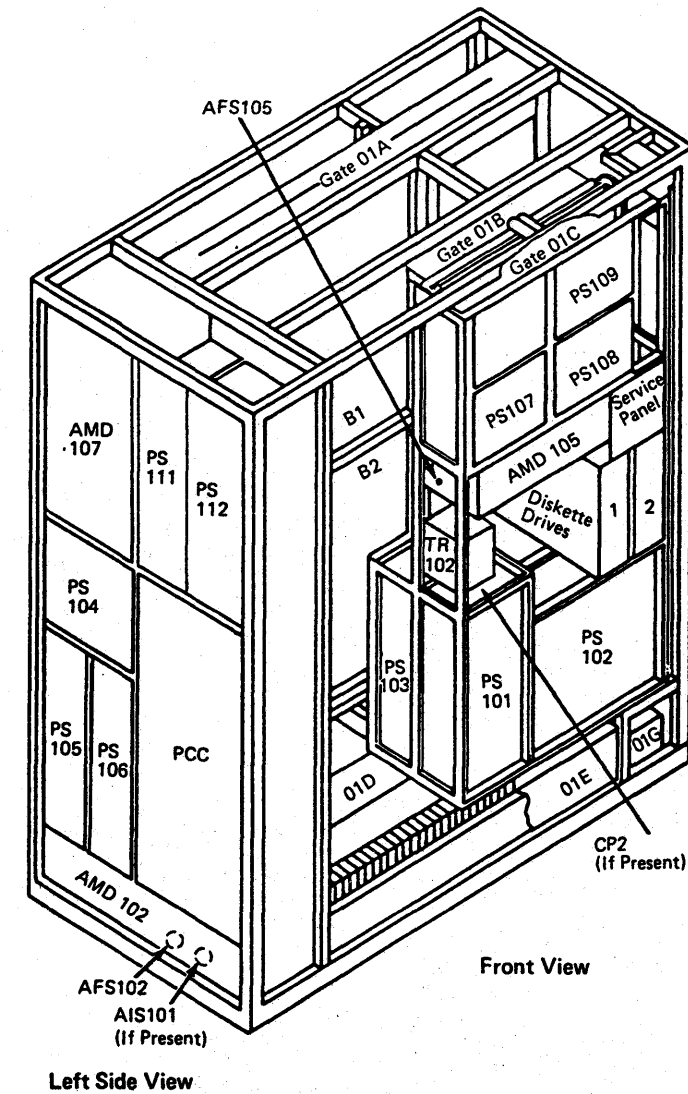


This Ref Code indicates the PS108 OC sense line was above +0.8 Vdc before bias voltages were applied to PS108.

Possible causes:

- PS108
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C4 optoisolator card.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> 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. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P04.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C4D08 + lead at 01A-A2C4B04.
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to <b>Instructions</b> column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect PS108 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C4D08 + lead at 01A-A2C4B04.



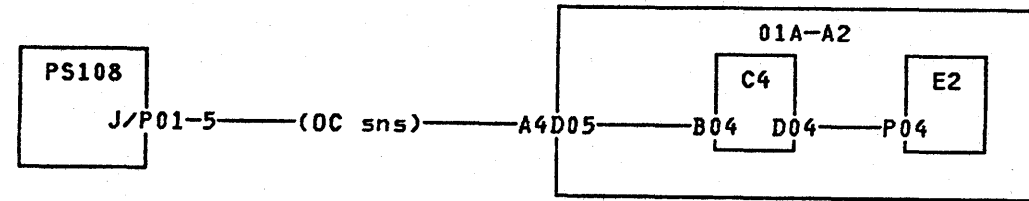


Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS108 P01.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B04.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B04.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS108 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P04.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange 01A-A2C4 card.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P04.</li> </ol>

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Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



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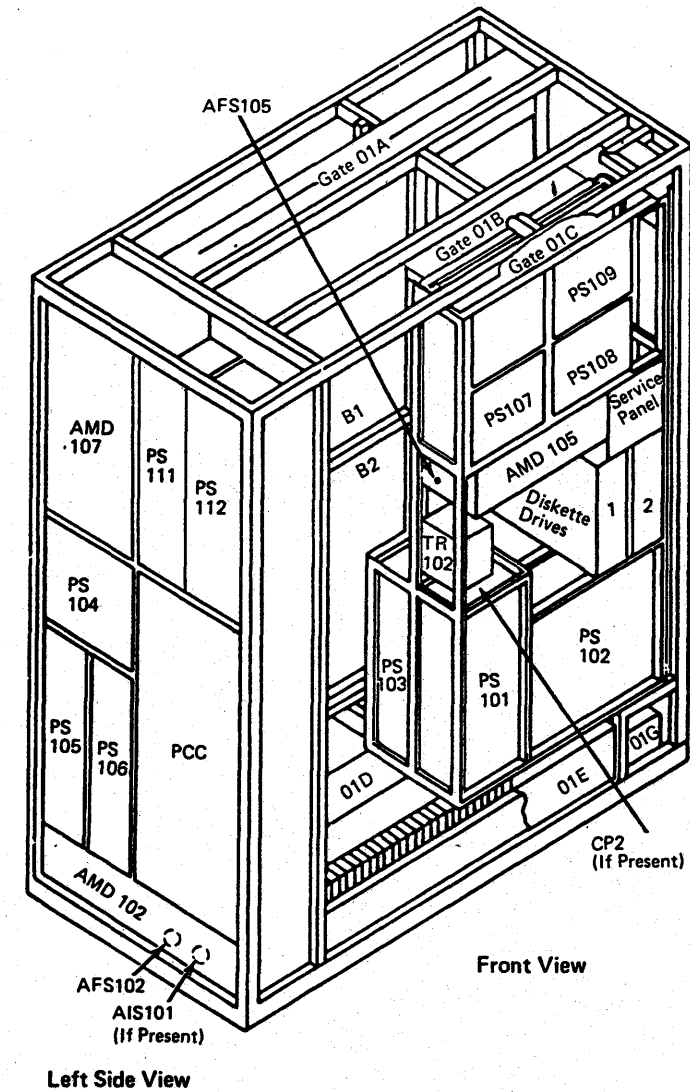


This Ref Code indicates the PS108 OV sense line was above +0.8 Vdc before bias voltages were applied to PS108.

Possible causes:

- PS108
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C4 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P05.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C4D08 + lead at 01A-A2C4B05.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS108 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C4D08 + lead at 01A-A2C4B05.

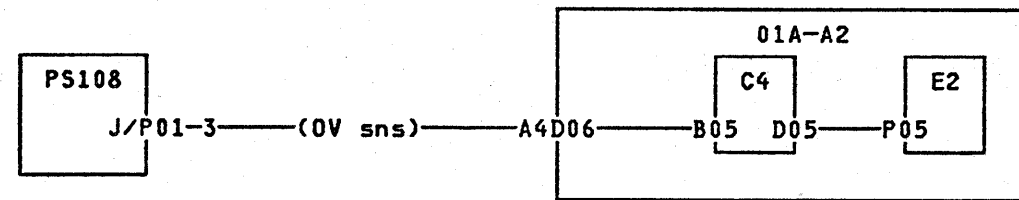


Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS108 P01.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B05.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B05.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS108 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P05.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P05.</li> </ol>



Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



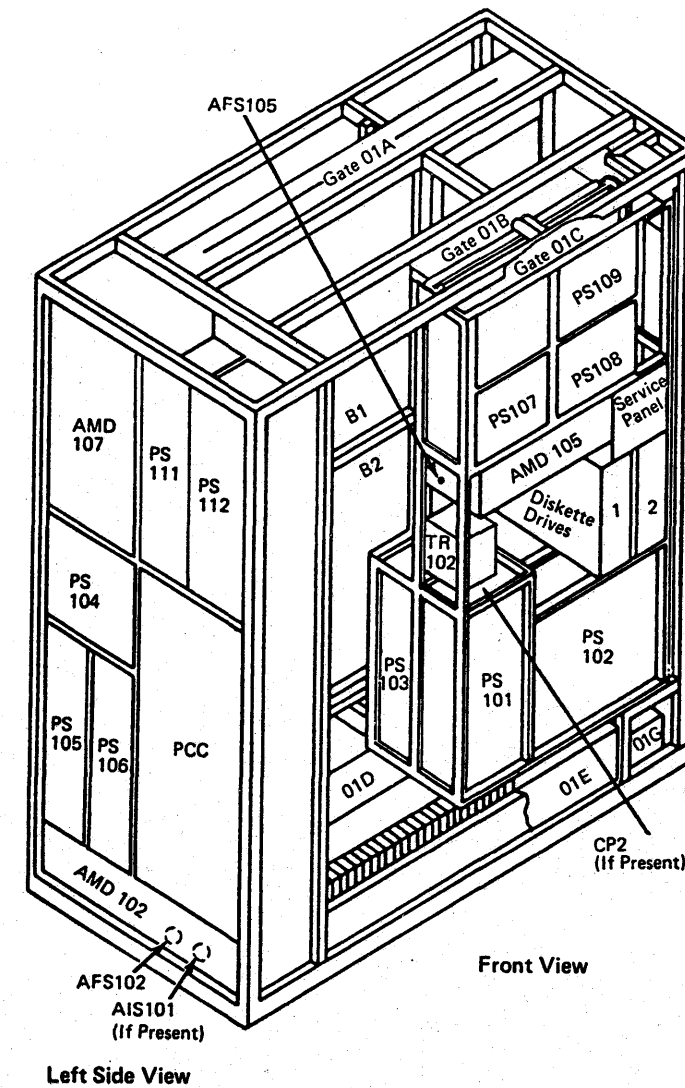


This Ref Code indicates the PS108 BG sense line was above +0.8 Vdc before bias voltages were applied to PS108.

Possible causes:

- PS108
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C4 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2M04.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B07.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS108 P01. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B07.



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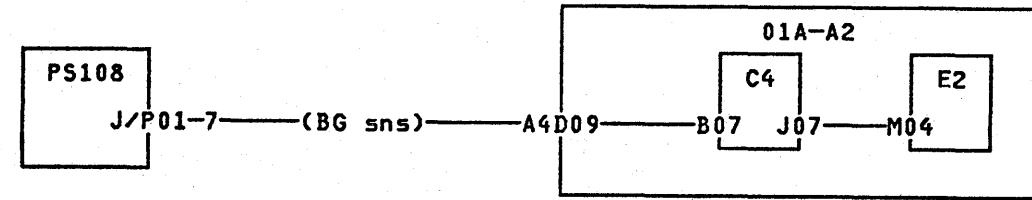
Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS108.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS108 P01.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B07.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A4.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 + lead at 01A-A2C4B07.</li> </ol>

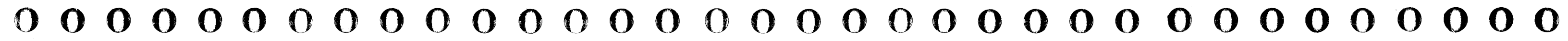
Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A4 to PS108 P01.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2M04.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>

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Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M04.</li> </ol>
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card just swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



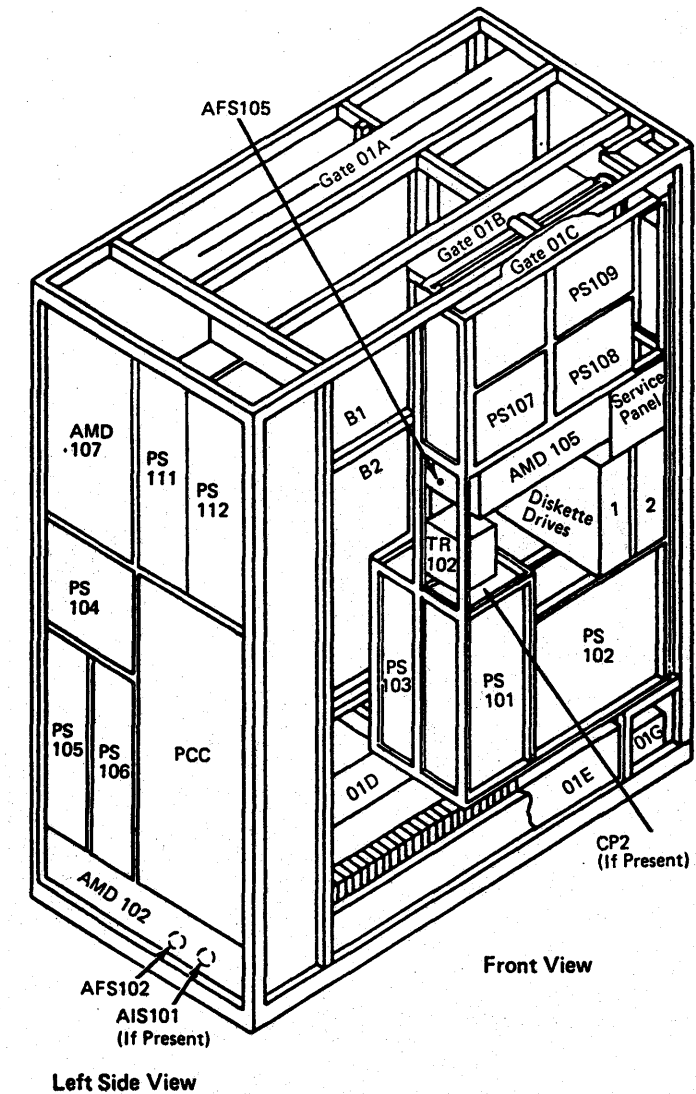


This Ref Code indicates the PS105 OC sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

- PS105
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> 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. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P07.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to <b>Instructions</b> column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B04.
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to <b>Instructions</b> column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Disconnect PS105 P02. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B04.



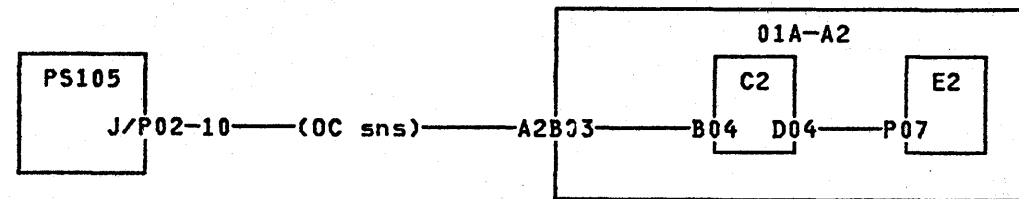
Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS105 P02.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B04.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A2.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B04.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A2 to PS105 P02.</li> </ol> <p><b>Note:</b> Check board for bent pins and connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P07.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P07.</li> </ol>

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Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



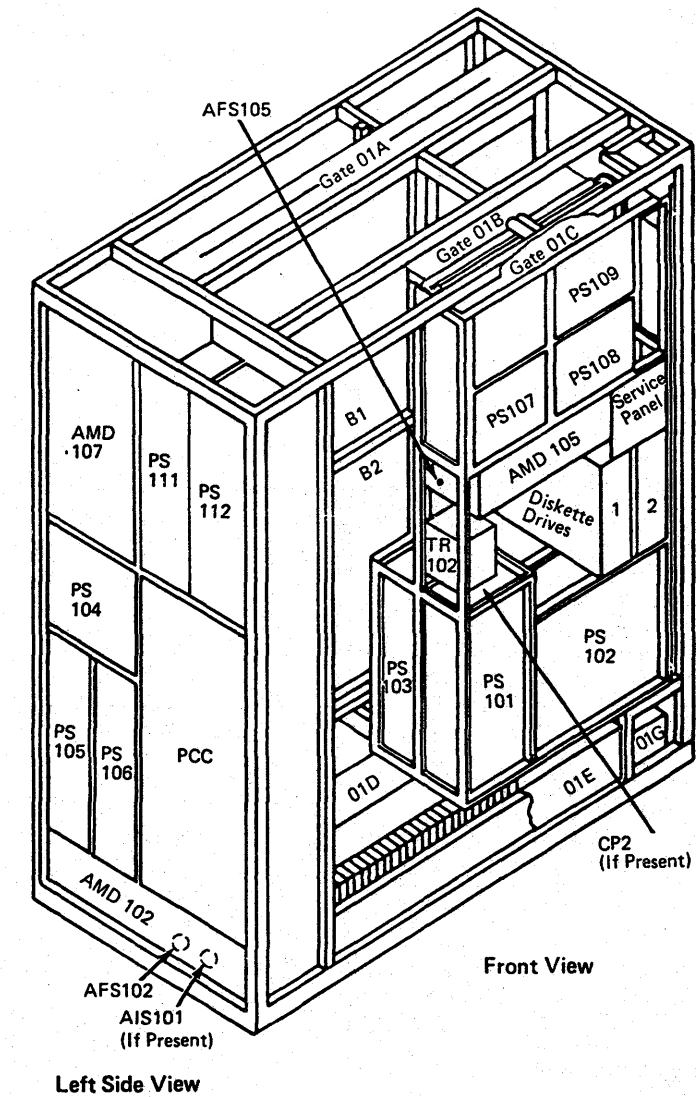


This Ref Code indicates the PS105 OV sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

- PS105
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M08.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B05.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS105 P02. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B05.





Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS105 P02.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B05.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A2.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B05.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A2 to PS105 P02.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M08.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M08.</li> </ol>

4381  
B/M 2676380

MI  
Seq CA180

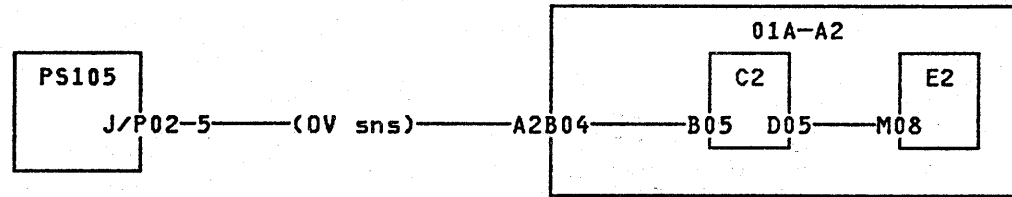
PN 6169151  
2 of 3

EC A20558  
01 Oct 84

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Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



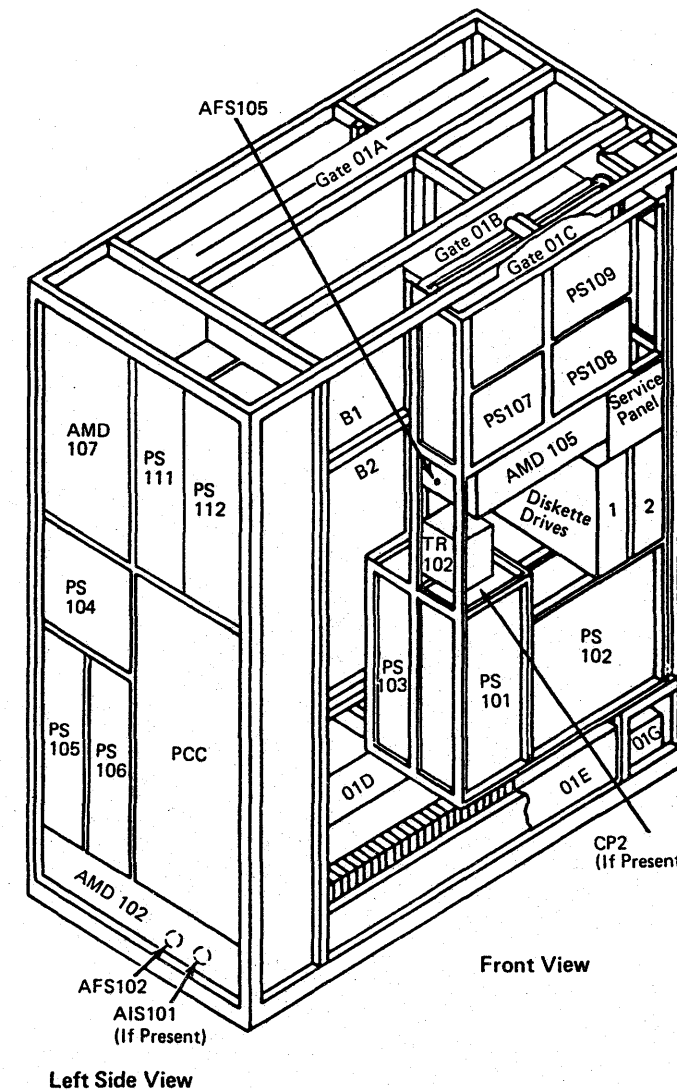


This Ref Code indicates the PS105 BG sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

- PS105
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M09.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B07.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS105 P02. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B07.



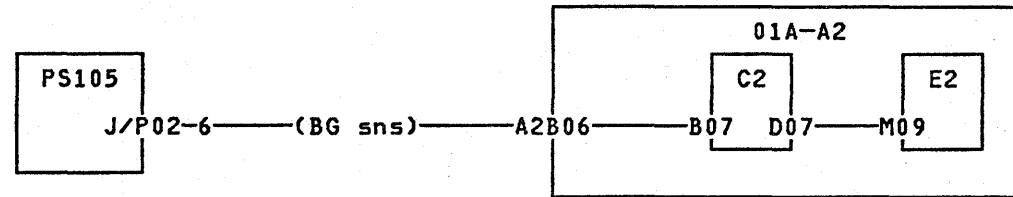
4381	MI	PN 6169152	EC A20558				
B/M 2676380	Seq CA185	1 of 3	01 Oct 84				

Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS105.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS105 P02.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2B07.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A2.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2B07.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A2 to PS105 P02.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C4 and 01A-A2C2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2M09.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C2 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2M09.</li> </ol>



Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2D2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



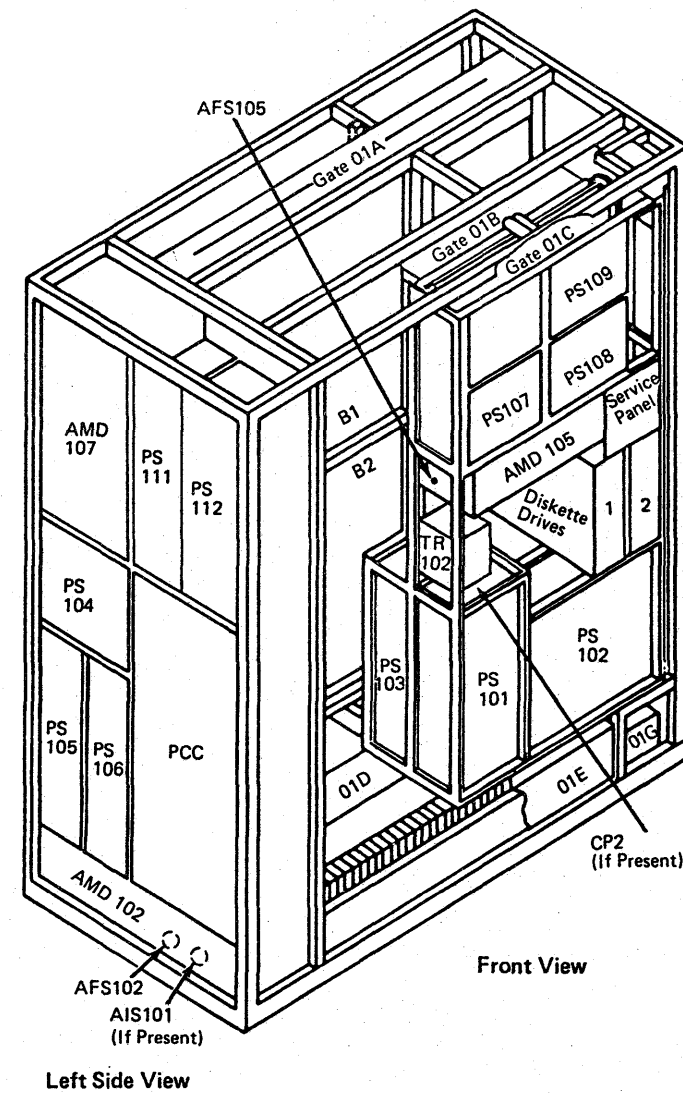


This Ref Code indicates that PS103 -2.2V OC sense line was above +0.8V before ac voltage was applied to PS103.

Possible causes:

- 01A-A2E2 sense card
- PS103
- 01A-A2 board.

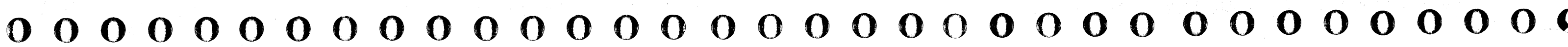
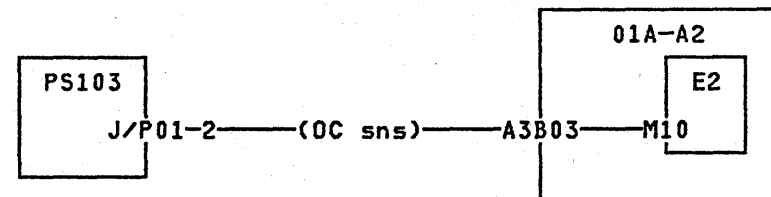
Step	Conditions	Instructions
1	Go to Instructions column.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +4 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M10.
2	Is voltage +0.8 Vdc or less.	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Go to page PR 5001.
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. Disconnect PS103 J/P01. 4. Set PCC CB1 and CB2 on. 5. Press service panel Power On. 6. Measure for +4 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M10.





Step	Conditions	Instructions
4	Is voltage +0.8 Vdc or less?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS103 J/P01.</li> <li>Swap the 01A-A2E2 and 01A-A2D2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +4 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M10.</li> </ol>
6	Is voltage +0.8 Vdc or less?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2D2 position.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A3.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +4 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2M10.</li> </ol>

Step	Conditions	Instructions
8	Is voltage +0.8 Vdc or less?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 P01 to 01A-A2A3.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

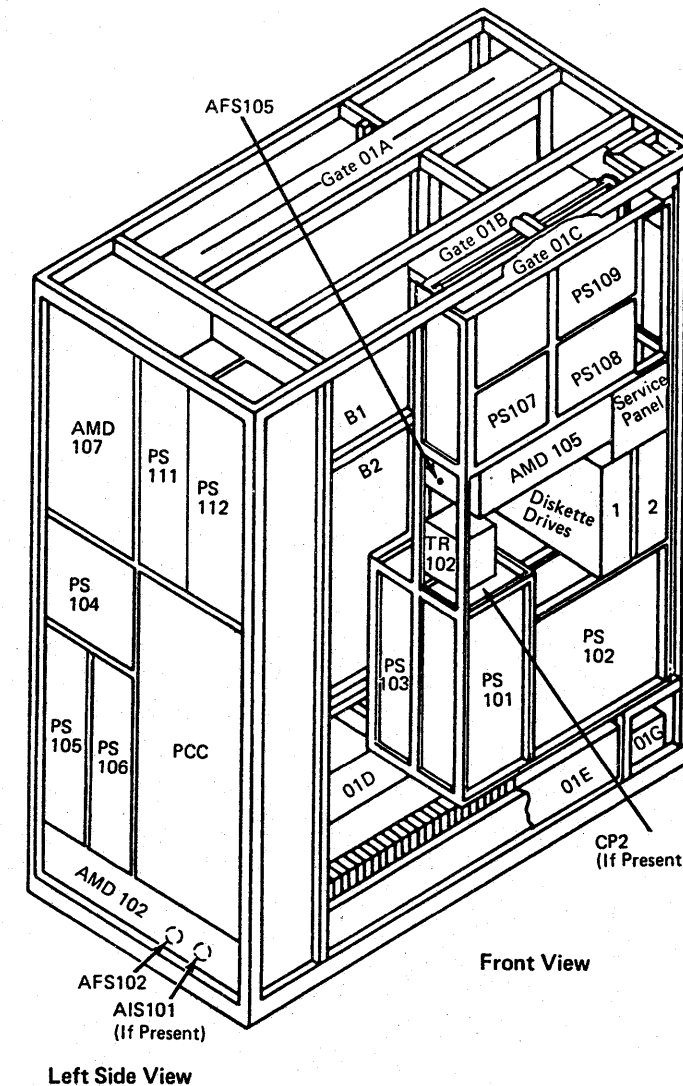


This Ref Code indicates that PS103 -2.2V OV sense line was above +0.8V before ac voltage was applied to PS103.

Possible causes:

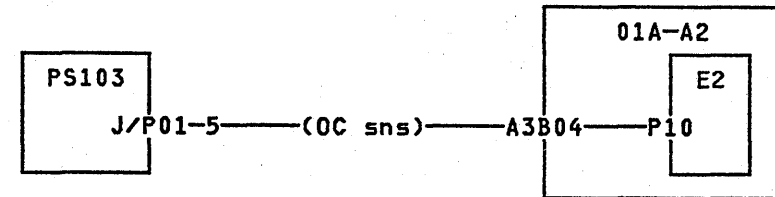
- 01A-A2E2 sense card
- PS103
- 01A-A2 board.

Step	Conditions	Instructions
1	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set CE Mode switch to CE Mode.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P10.</li> </ol>
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange 01A-A2E2 card.</li> <li>3. Go to page PR 5001.</li> </ol>
3	Go to <b>Instructions</b> column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Disconnect PS103 J/P01.</li> <li>3. Press service panel Power On.</li> <li>4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P10.</li> </ol>



Step	Conditions	Instructions
4	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS103.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
5	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS103 J/P01.</li> <li>Swap 01A-A2E2 and 01A-A2D2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P10.</li> </ol>
6	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2D2 position.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A3.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points:  - lead at 01A-A2E2D08 + lead at 01A-A2E2P10.</li> </ol>

Step	Conditions	Instructions
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from PS103 P01 to 01A-A2A3.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>

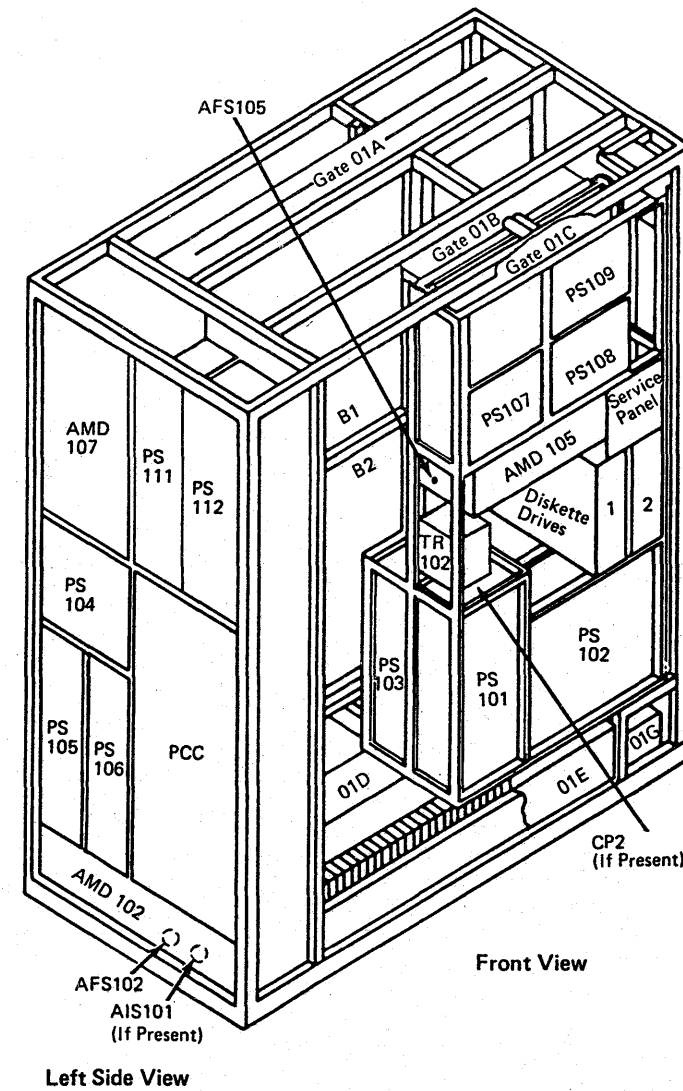


This Ref Code indicates the PS106 OC sense line was above +0.8 Vdc before bias voltages were applied to PS106.

Possible causes:

- PS106
- 01A-A2 board
- 01A-A2D2 sense card
- 01A-A2C2 optoisolator 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. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2D2D08 + lead at 01A-A2D2J06.
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2D2 card. 3. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08 + lead at 01A-A2C2B09.
4	Is voltage less than +0.8 Vdc?	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. Disconnect PS106 P02. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points:  - lead at 01A-A2C2D08- + lead at 01A-A2C2B09.



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Step	Conditions	Instructions
6	Is voltage less than +0.8 Vdc?	<p>A torque wrench and a 1/4 to 3/8 drive adapter are needed to exchange the power supply. For tool part numbers, see Volume A07, page REM 001.</p> <ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange PS106.</li> </ol> <p><b>Note:</b> Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
7	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Reconnect PS106 P02.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2B09.</li> </ol>
8	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
9	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Disconnect cable at 01A-A2A2.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 + lead at 01A-A2C2B09.</li> </ol>

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange cable from 01A-A2A2 to PS106 P02.</li> </ol> <p><b>Note:</b> Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
11	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Set PCC CB1 and CB2 off.</li> <li>Exchange 01A-A2 board.</li> <li>Set PCC CB1 and CB2 on.</li> <li>Go to page PR 5001.</li> </ol>
12	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2C2 and 01A-A2C4 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2J06.</li> </ol>
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Exchange card swapped into the 01A-A2C4 position.</li> <li>Go to page PR 5001.</li> </ol>
14	Go to Instructions column.	<ol style="list-style-type: none"> <li>Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>Swap 01A-A2D2 and 01A-A2E2 cards.</li> <li>Press service panel Power On.</li> <li>Measure for +5 Vdc at the following points: - lead at 01A-A2D2D08 + lead at 01A-A2D2J06.</li> </ol>

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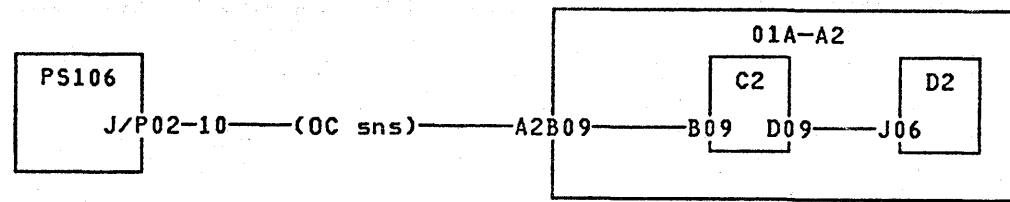
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Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Exchange card swapped into the 01A-A2E2 position.</li> <li>3. Go to page PR 5001.</li> </ol>
16	Go to Instructions column.	<ol style="list-style-type: none"> <li>1. Set service panel Power Off switch to Power Off and then back to Normal.</li> <li>2. Set PCC CB1 and CB2 off.</li> <li>3. Exchange 01A-A2 board.</li> <li>4. Set PCC CB1 and CB2 on.</li> <li>5. Go to page PR 5001.</li> </ol>



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