

VOLUME A03 MACHINE 4381- -0011647 MODEL M02 SYSTEM 0000JYP MODE SCHED SHIP 00/00/00

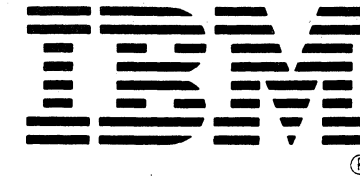
LOGIC TYPE -0- SYSTEMS DIAGRAMS

DOC COUNTER

PAGE NUM	SH	TITLE	PART NUM	EC NUM	FEATURE B/M OR B/MS
CA005		COVER	0000445875	A02220	.W. 0004473536
CA010		PU PWR REPAIR	0000445876	A02220	.W. 0004473536
CA015		PWR INTER X/EXIT	0000445877	A02219	.W. 0004473536
CA020		VOLTAGE ADJUST	0000445878	A02220	.W. 0004473536
CA025		VOLTAGE ADJUST	0000445879	A02220	.W. 0004473536
CA030		REF CODE 11 1015	0000445880	A02219	.W. 0004473536
CA035		RC 11 1024/1025	0000445881	A02214	.W. 0004473536
CA040		RC 11 1035/1044	0000445882	A02219	.W. 0004473536
CA045		RC 11 1035/1044	0000445883	A02214	.W. 0004473536
CA050		RC 11 1114/1115	0000445884	A02219	.W. 0004473536
CA055		RC 11 1114/1115	0000445885	A02219	.W. 0004473536
CA060		RC 11 1124/1125	0000445886	A02219	.W. 0004473536
CA065		RC 11 1124/1125	0000445887	A02214	.W. 0004473536
CA070		RC 11 1134/1135	0000445888	A02214	.W. 0004473536
CA075		RC 11 1134/1135	0000445889	A02219	.W. 0004473536
CA085		RC 11 1144/1145	0000445891	A02214	.W. 0004473536
CA090		RC 11 1155 OE	0000445892	A02214	.W. 0004473536
CA095		RC 11 1155 OE	0000445893	A02214	.W. 0004473536
CA100		RC 11 1204/1205	0000445894	A02214	.W. 0004473536
CA105		RC 11 1214/1215	0000445895	A02214	.W. 0004473536
CA110		RC 11 1234/1235	0000445896	A02214	.W. 0004473536
CA115		RC 11 1254/1255	0000445897	A02214	.W. 0004473536
CA120		RC 11 1274/1275	0000445898	A02214	.W. 0004473536
CA125		RC 11 1304/1305	0000445899	A02217	.W. 0004473536
CA130		RC 11 1304/1305	0000445900	A02219	.W. 0004473536
CA135		RC 11 1354/1355	0000445901	A02219	.W. 0004473536
CA140		RC 11 1354/1355	0000445902	A02219	.W. 0004473536
CA145		RC 11 1354/1355	0000445903	A02219	.W. 0004473536
CA150		RC 11 1404 OE	0000445904	A02220	.W. 0004473536
CA155		RC 11 1404 OE	0000445905	A02214	.W. 0004473536
CA160		RC 11 1604/14/24	0000445906	A02220	.W. 0004473536
CA165		RC 11 1604/14/24	0000445907	A02215	.W. 0004473536
CA170		RC 11 1704 OE	0000445908	A02220	.W. 0004473536
CA175		RC 11 1714 OE	0000445909	A02220	.W. 0004473536
CA180		RC 11 1724 OE	0000445910	A02214	.W. 0004473536
CA185		RC 11 1325/35/45	0000445911	A02214	.W. 0004473536
CA190		RC 11 1FF4/FFF4	0000445912	A02220	.W. 0004473536
CA195		RC 11 3054 OE	0000445913	A02214	.W. 0002676390
CA200		RC 11 3064 OE	0000445914	A02214	.W. 0002676390
CA205		RC 11 3064 OE	0000445915	A02214	.W. 0002676390
CA210		RC 11 3084 OE	0000445916	A02214	.W. 0002676390
CA215		RC 11 3114 OE	0000445917	A02220	.W. 0004473536
CA220		RC 11 3114 OE	0000445918	A02214	.W. 0004473536
CA225		RC 11 3134 OE	0000445919	A02214	.W. 0002676390
CA230		RC 11 3134 OE	0000445920	A02214	.W. 0002676390
CA231		RC 11 3144 OE	0000447366	A02214	.W. 0002676390
CA232		RC 11 3144 OE	0000447367	A02214	.W. 0002676390
CA235		RC 11 3164 OE	0000445921	A02214	.W. 0002676390
CA240		RC 11 3184 OE	0000445922	A02214	.W. 0002676390
CA245		RC 11 3194 OE	0000445923	A02214	.W. 0002676390
CA250		RC 11 3194 OE	0000445924	A02214	.W. 0002676390
CA255		RC 11 3224 OE	0000445925	A02214	.W. 0002676390
CA260		RC 11 3254 OE	0000445926	A02219	.W. 0002676390
CA265		RC 11 3254 OE	0000445927	A02214	.W. 0002676390
CA270		RC 11 3264 OE	0000445928	A02219	.W. 0002676390
CA275		RC 11 3264 OE	0000445929	A02214	.W. 0002676390
CA280		RC 11 3284 OE	0000445922	A02219	.W. 0002676390
CA285		RC 11 3294 OE	0000445783	A02214	.W. 0004473536
CA290		RC 11 3314 OE	0000445784	A02214	.W. 0004473536
CA295		RC 11 3344 OE	0000445785	A02219	.W. 0002676390
CA300		RC 11 3344 OE	0000445786	A02214	.W. 0002676390

TOTAL PART NUMBERS THIS VOLUME

61



Maintenance Information

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



4381

Processor
Maintenance Information

Seq CA005	PN 0445875 Pg 1 of 2	EC A02214 15 SEP 83	EC A02220 06 JUN 84			
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Processing Unit Power Repair Procedure

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"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Ensure CE Mode switch is set to Normal. 3. Ensure I/O Power Hold switch is set to Normal. 4. Ensure FUNC1 diskette is in diskette drive 1. 5. Press OCP Power On. 6. Allow time for the I/O units to complete their Power-On sequence.
2	Do you have a voltage warning message or is the Ref Code (1X RRRR IS) with 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 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 S field equal to 8 or is any other intermittent 1X Ref Code displayed?	<p>A power failure retry was successful.</p> <p>Go to step 13.</p>

Step	Conditions	Instructions
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"> 1. Set CE Mode switch to CE Mode. 2. Select the Power Controller Diagnostics (QWP) screen and run the diagnostics.
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).
13	Go to Instructions column.	<ol style="list-style-type: none"> 1. Select the CE Log (QEV) screen, and check for CE entries with the same RCs or failure descriptions or FRU replacements. 2. Use your Ref Code and the Ref Code list at the end of this procedure to determine your PR XXXX (record only) entry page. 3. Go to page PR 1011.
14	Go to Instructions column.	Match the 1X Ref Code with the Ref Code list, and go to the PR entry page.

UU RRRR IS

11 D074 XX Go to PR 1911
 11 D075 XX Go to PR 1911
 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 D135 XX Go to PR 1951
 11 D145 XX Go to PR 1961
 11 D154 XX Go to PR 1971
 11 D155 XX Go to PR 1971
 11 D165 XX Go to PR 1531
 11 D184 XX Go to PR 1981
 11 D185 XX Go to PR 1981
 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 D225 XX Go to PR 1571
 11 D254 XX Go to PR 2011
 11 D255 XX Go to PR 2011
 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 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 D344 XX Go to PR 2071
 11 D345 XX Go to PR 2071
 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 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
 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 D023 XX Go to PR 2151
 1D D033 XX Go to PR 2151
 1D D043 XX Go to PR 2161
 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
 1D D433 XX Go to PR 2201
 1D D443 XX Go to PR 2201
 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
 1D D513 XX Go to PR 2211
 1D D523 XX Go to PR 2211
 1D D533 XX Go to PR 2141
 1D D543 XX Go to PR 2161
 1D D553 XX Go to PR 2181
 1D D563 XX Go to PR 2181
 1D D603 XX Go to PR 2221
 1D D613 XX Go to PR 2221
 1D D623 XX Go to PR 2141
 1D D633 XX Go to PR 2211
 1F FFF4 XX Go to PR 1231
 1F FFF5 XX Go to PR 1231

End of list.

Power Intermittent Exchange and Exit Procedure

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
- Air Flow Sensors—not aligned for proper air flow
- Defective FRUS.

Step	Conditions	Instructions
3	Go to Instructions column.	Using the Ref Code and PR XXXX entry page from PR 1001, perform the following: <ol style="list-style-type: none"> 1. Use the repair action procedure as if you had a solid failure. 2. Attempt to recreate the failure by gently moving or vibrating cables, cards, contactors, CBs, and power supplies. 3. If you are unsuccessful in recreating or isolating the failure, see "Intermittent FRU List" on page PR 1012. 4. Go to your PR XXXX entry page.
4	Go to Instructions column.	Go to page PR 5001.

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set the CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Select the Analog/Temperature Display (QWA) screen. 5. Compare the voltage profile chart to the displayed voltage levels, or if the profile is missing, check for any sensor that is greater than three + or - characters.
2	Is any voltage level greater than one + or - division from the profile chart or is any sensor greater than three + or - characters?	Go to page PR 1021.

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 (part 4494199) PS106 (part 4494190)	<ol style="list-style-type: none"> Before installing PS105 and/or PS106, verify that the power supply current jumper is installed correctly and that the load resistor for PS105 is removed. Go to page PR 1024.5.
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"> Set CE Mode switch to CE Mode. Select the Analog Voltage/Temperature Display (QWA) screen. Any sensor greater than three + or - characters should be adjusted or checked for the proper voltage level. Use table A and your sensor number or 1X RRRR number to determine the power supply and step number.
3	Are you here to adjust or did you just replace 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"> Measure for +5 Vdc at the following points: - lead at 01A-A1V2J08 + lead at 01A-A1V2J03. Exchange PS101 if voltage is not between +4.5 and +5.5 Vdc. Measure for +24 Vdc at the following points: - lead at 01A-A1V2J08 + lead at 01A-A1V2B11. Exchange PS101 if voltage is not between +22 and +26 Vdc. If all voltage checks or adjustments are done, go to page PR 5001.

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
A09X	PS109	+5 Vdc	Step 11
A10X	PS103	+5 Vdc	Step 5
A12X	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
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
A54X	PS102	-5 Vdc	Step 4
A58X	PS106	-4.3 Vdc	Step 8
A61X	PS106	-4.3 Vdc	Step 8
A62X	PS106	-4.3 Vdc	Step 8
A64X	PS106	-4.3 Vdc	Step 8

B

RRRR	Ref Code	PR Page
1643	11-164X-0E	PR 1701
A01X	11-A01X-0E	PR 1691
A02X	11-A02X-0E	PR 1701
A07X	11-A07X-0E	PR 1711
A09X	11-A09X-0E	PR 1731
A10X	11-A10X-0E	PR 1741
A12X	11-A12X-0E	PR 1751
A14X	11-A14X-0E	PR 2271
A15X	14-A15X-0E	PR 2231
A16X	14-A16X-0E	PR 2241
A17X	14-A17X-0E	PR 2251
A18X	11-A18X-0E	PR 2281
A21X	N/A	N/A
A26X	11-A26X-0E	PR 1761
A29X	11-A29X-0E	PR 1781
A30X	11-A30X-0E	PR 1791
A31X	11-A31X-0E	PR 1801
A54X	N/A	N/A
A58X	11-A58X-0E	PR 1861
A61X	11-A61X-0E	PR 1871
A62X	11-A62X-0E	PR 1881
A64X	11-A64X-0E	PR 2291

Step	Conditions	Instructions
7	<p>Are you here to adjust or did you just replace PS105?</p> <p>Warning: If you are installing part 4494199, go to PR 1024.5 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"> Set CE Mode switch to CE Mode. Select Diagnostic Power Up (QWD) screen. Select option D (stop after -1.5/-4.3V start). Measure for -1.5 Vdc between the following points: <ul style="list-style-type: none"> - lead at 01A-A2G1B06 + lead at 01A-A2G1A06. Adjust PS105 to -1.50V if voltage is not between -1.47 and -1.53 Vdc. <p>Note: Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> Exchange PS105 if voltage fails to adjust. If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 12. If voltage checks or adjustments are done, go to page PR 5001.
8	<p>Are you here to adjust or did you just replace PS106?</p> <p>Warning: If you are installing part 4494190, go to PR 1024.5 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"> Set CE Mode switch to CE Mode. Select Diagnostic Power Up (QWD) screen. Select option D (stop after -1.5/-4.3V start). Measure for -4.3 Vdc between the following points: <ul style="list-style-type: none"> - lead at 01A-A2G1D06 + lead at 01A-A2G1C06. Adjust PS106 to -4.33V if voltage is not between -4.24 and -4.42 Vdc. <p>Note: Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> Exchange PS106 if voltage fails to adjust. If voltages are correct and you still have a 1X Ref Code with the S field equal to C, go to step 12. If voltage checks or adjustments are done, go to page PR 5001.

Step	Conditions	Instructions
9	<p>Are you here to adjust or did you just replace PS107?</p>	<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"> Set CE Mode switch to CE Mode. Select Diagnostic Power Up (QWD) screen. Select option H (stop after +6V start). Measure for +6 Vdc between the following points: <ul style="list-style-type: none"> - lead at 01A-A3K2J08 + lead at 01A-A3K2G11. Adjust PS107 to +6.0V if voltage is not between +5.82 and +6.18 Vdc. <p>Note: Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> Exchange PS107 if voltage fails to adjust. If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 12. If voltage checks or adjustments are done, go to page PR 5001.
10	<p>Are you here to adjust or did you just replace PS108?</p> <p>Note: 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"> Set CE Mode switch to CE Mode. Select Diagnostic Power Up (QWD) screen. Select option G (stop after +8.5V start). Measure for +8.5 Vdc between the following points: <ul style="list-style-type: none"> - lead at 01A-A4K2J08 + lead at 01A-A4K2J12. Adjust PS108 to +8.50V if voltage is not between +8.25 and +8.75 Vdc. <p>Note: Adjustment pot is located on power supply.</p> <ol style="list-style-type: none"> Exchange PS108 if voltage fails to adjust. If the voltage level is correct and you still have a 1X Ref Code with the S field equal to C, go to step 12. If all voltage checks or adjustments are done, go to page PR 5001.

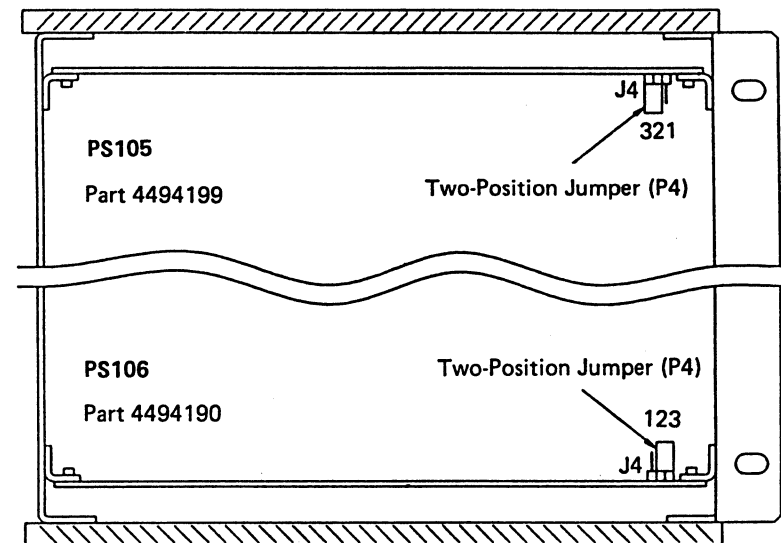
Current Setting

This procedure ensures that PS105 and PS106 power supply current jumpers are installed correctly and that PS105 load resistor is disconnected.

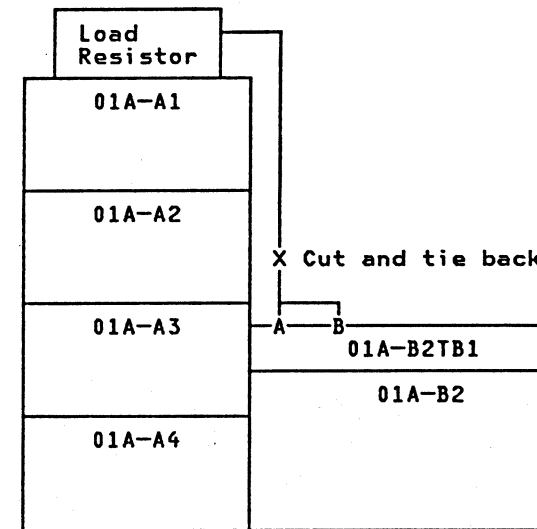
Step	Conditions	Instructions
1	Are you installing PS105 (part 4494199)?	Go to step 4.
2	Are you installing PS106 (part 4494190)?	Go to step 7.
3	Go to Instructions column.	Go to page PR 1021.
4	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Use table A, and ensure that PS105 current jumper is set to the correct current setting. Install PS105.
5	Is a load resistor installed on the back of the cover plate above board 01A-A1? (See reference B .)	Ensure the red and black wire from the load resistor to 01A-B2TB1 A and B bus is cut at the bus bars and tied back.
6	Go to Instructions column.	<ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Set CE Mode switch to CE Mode. Press service panel Power On. Go to page PR 1021.
7	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Use table A, and ensure that PS106 current jumper is set to the correct current setting. Install PS106. Set PCC CB1 and CB2 on. Set CE Mode switch to CE Mode. Press service panel Power On. Go to page PR 1021.

A

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



B



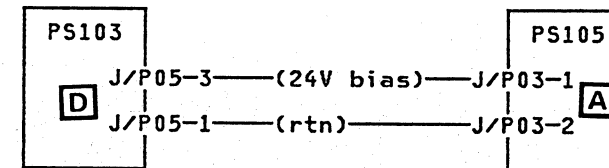
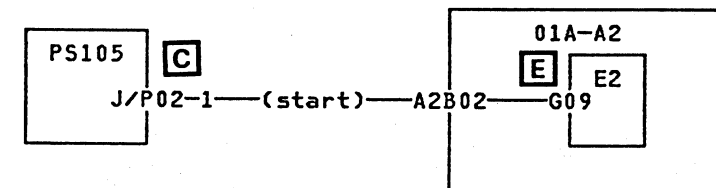
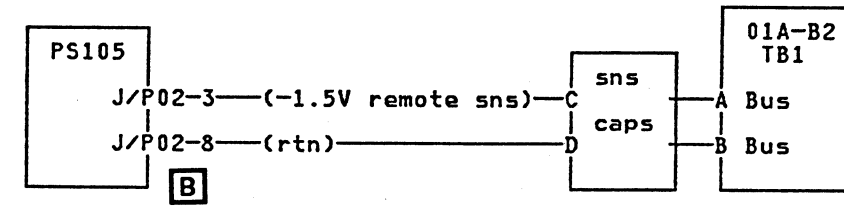
Ref Codes 1110150E, 1110240E, 1110250E, 11D2850E

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 Instructions column.	<ol style="list-style-type: none"> 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). 6. Measure for +24 Vdc at the following points: - lead at PS105 J/P03-2 A + lead at PS105 J/P03-1. A
2	Is voltage less than +22 Vdc?	Go to step 10.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at frame ground B + lead at PS105 J/P02-8. B



Step	Conditions	Instructions
8	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS105. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
9	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange 01A-A2E2 card. <p>Note: Check TCCs for proper seating before exchanging card.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
10	Go to Instructions column.	<p>Measure for +24 Vdc at the following points:</p> <p>- lead at PS103 J/P05-1 D + lead at PS103 J/P05-3.</p>
11	Is voltage greater than +22 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from PS103 J/P05 to PS105 J/P03. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.

Step	Conditions	Instructions
12	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS103. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
13	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Disconnect PS105 J/P02. Press service panel Power On. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 E + lead at 01A-A2E2G09.
14	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS105. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
15	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Reconnect PS105 J/P02. Swap 01A-A2E2 and 01A-A2D2 cards. <p>Note: Ensure TCCs are reinstalled.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Press service panel Power On. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G09.

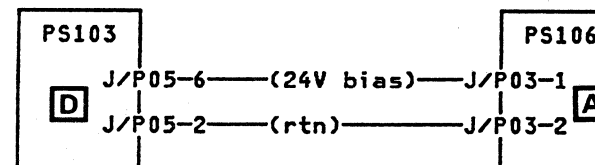
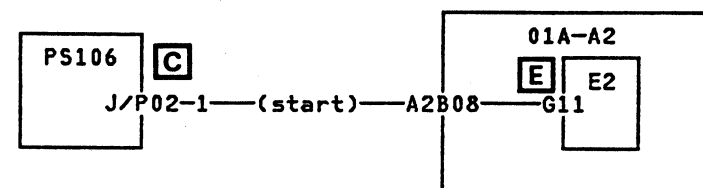
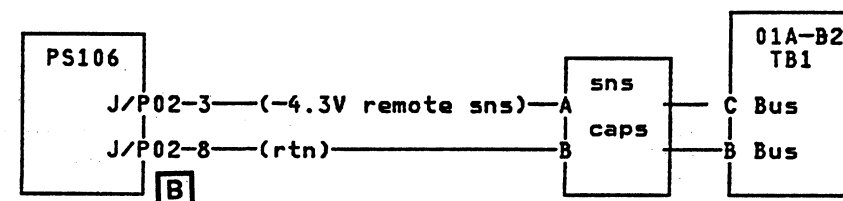
Ref Codes 1110350E, 1110440E, 1110450E, 11D3750E

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 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). 6. Measure for +24 Vdc at the following points: - lead at PS106 J/P03-2 A + lead at PS106 J/P03-1.
2	Is voltage less than +22 Vdc?	Go to step 10.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS106 J/P02-8. B



Step	Conditions	Instructions
8	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS106. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
9	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange 01A-A2E2 card. <p>Note: Check TCCs for proper seating before exchanging card.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
10	Go to Instructions column.	Measure for +24 Vdc at the following points: - lead at PS103 J/P05-2 D + lead at PS103 J/P05-6.
11	Is voltage greater than +22 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Exchange cable from PS103 J/P05 to PS106 J/P03. <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.

Step	Conditions	Instructions
12	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS103. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.
13	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Disconnect PS106 J/P02. Press service panel Power On. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 E + lead at 01A-A2E2G11.
14	Is voltage greater than +2.5 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS106. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 on. Go to step 20.

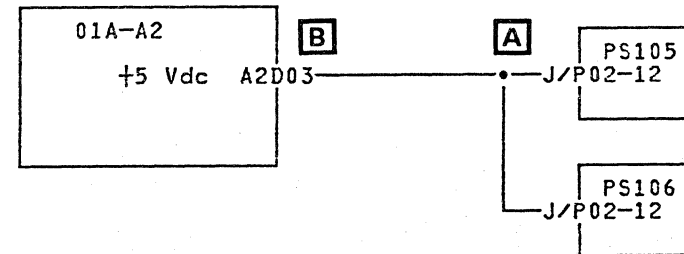
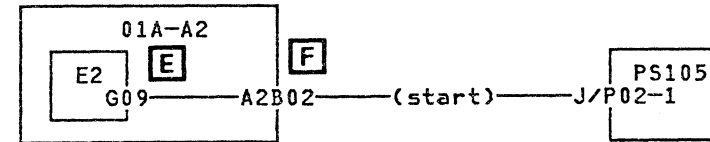
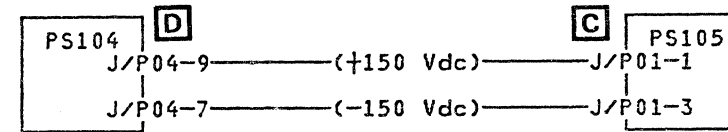
Ref Codes 1111140E, 1111150E

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

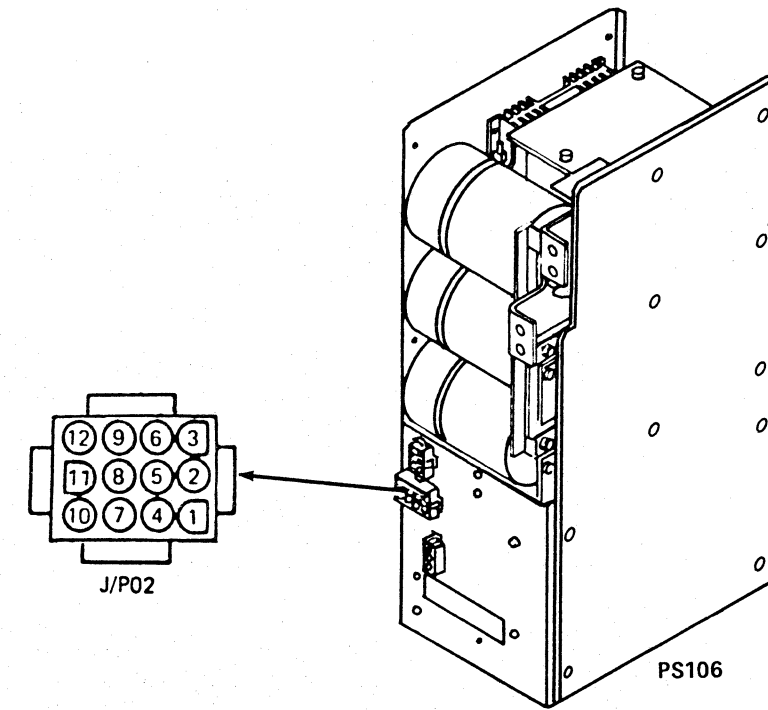
Possible causes:

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



Step	Conditions	Instructions
10	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 to off. 3. Exchange PS104. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 to on. 5. Go to page PR 5001.
11	Go to Instructions column.	<ol style="list-style-type: none"> 1. Press ENTER to end Diagnostic Stop. 2. Reconnect PS105 J/P01. 3. Measure for +5.0 Vdc at the following points: <ul style="list-style-type: none"> - lead at 01A-A2E2D08 E + lead at 01A-A2E2G09. 4. Select Diagnostic Power Up (QWD) screen. 5. Select option D (stop after -1.5/-4.3V start). <p>Note: Voltage is present for about four seconds.</p>
12	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 to off. 3. Exchange 01A-A2E2 card. 4. Set PCC CB1 and CB2 to on. 5. Go to page PR 5001.
13	Go to Instructions column.	<ol style="list-style-type: none"> 1. Measure for +5.0 Vdc at the following points: <ul style="list-style-type: none"> - lead at 01A-A2E2D08 F + lead at 01A-A2A2B02. 2. Select Diagnostic Power Up (QWD) screen. 3. Select option D (stop after -1.5/-4.3V start). <p>Note: Voltage is present for about four seconds.</p>

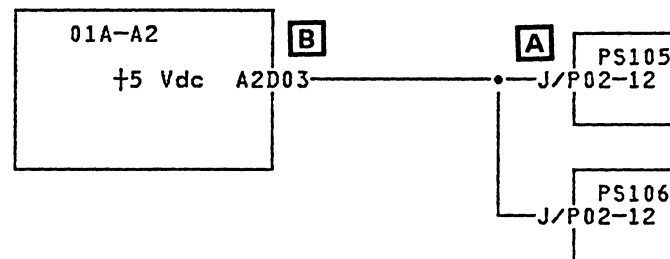
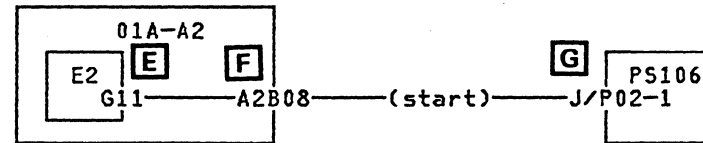
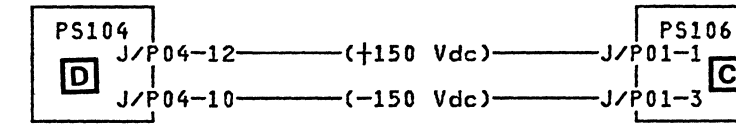


Ref Codes 111240E, 111250E

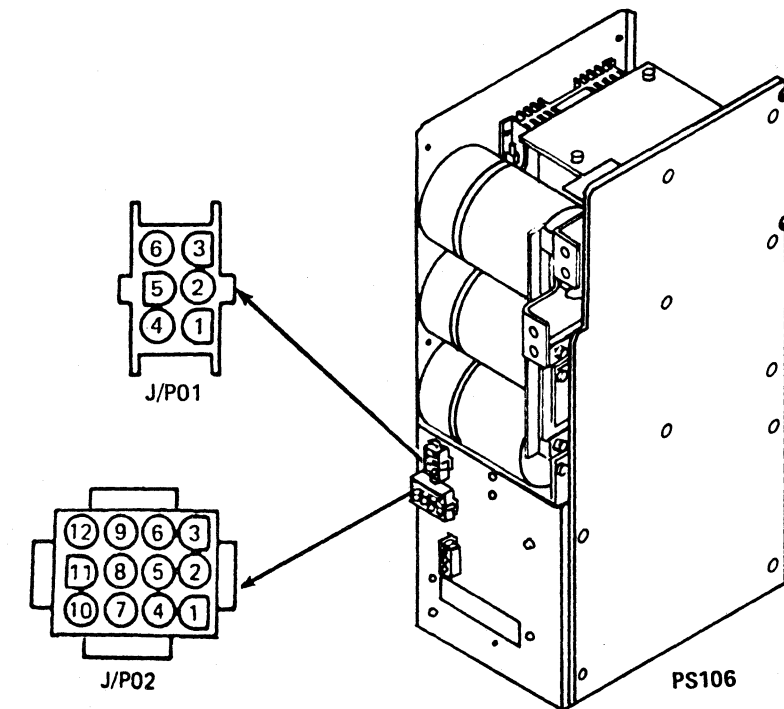
These Ref Codes indicate that PS106 failed to turn on after the start line was set on.

Possible causes:

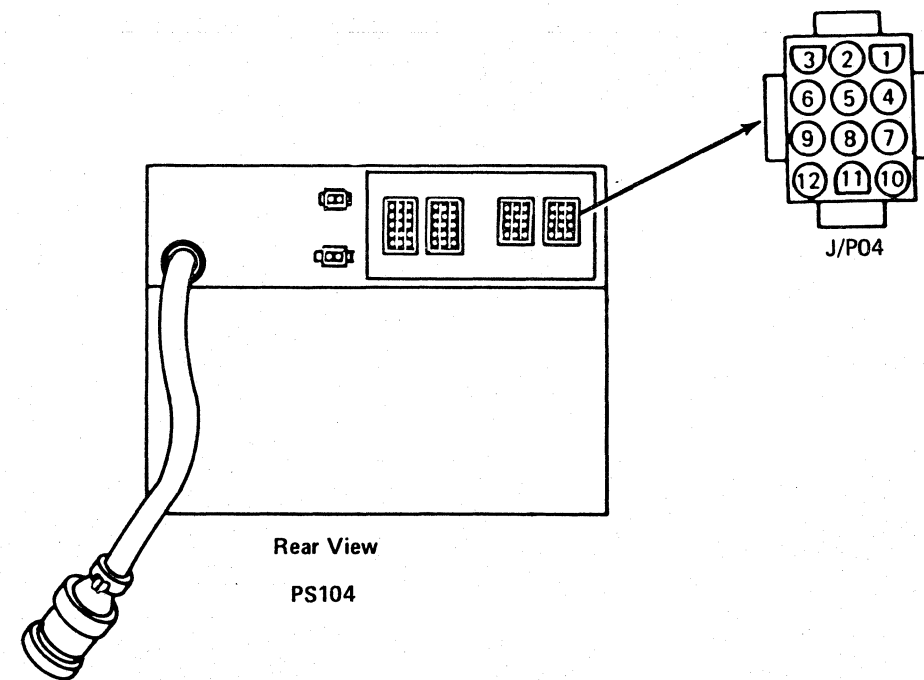
- PS106
- 01A-A2E2 sense card
- PS106 start line
- +5 Vdc from MSS
- +300 Vdc from PS104.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 PS106 P01. 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 A + lead at PS106 J/P02-12. A
2	Is voltage +4.5 to +5.5 Vdc?	Go to step 6.
3	Go to Instructions column.	Measure for +5 Vdc on the following point: - lead to 01A-A2A2D08 B + lead to 01A-A2A2D03. B
4	Is voltage +4.5 to +5.5 Vdc?	<ol style="list-style-type: none"> 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 PS106 J/P02 to 01A-A2A2. <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



Step	Conditions	Instructions
10	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 to off. Exchange PS104. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Set PCC CB1 and CB2 to on. Go to page PR 5001.
11	Go to Instructions column.	<ol style="list-style-type: none"> Press ENTER to end Diagnostic Stop. Reconnect PS106 J/P01. Measure for +5 Vdc at the following points: <ul style="list-style-type: none"> - lead at 01A-A2E2D08 E + lead at 01A-A2E2G11. E Select Diagnostic Power Up (QWD) screen. Select option D (stop after -1.5/-4.3V start). <p>Note: Voltage is present for about four seconds.</p>
12	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 to off. Exchange 01A-A2E2 card. Set PCC CB1 and CB2 to on. Go to page PR 5001.
13	Go to Instructions column.	<ol style="list-style-type: none"> Measure for +5 Vdc at the following points: <ul style="list-style-type: none"> - lead at 01A-A2E2D08 F + lead at 01A-A2A2B08. F Select Diagnostic Power Up (QWD) screen. Select option D (stop after -1.5/-4.3V start). <p>Note: Voltage is present for about four seconds.</p>

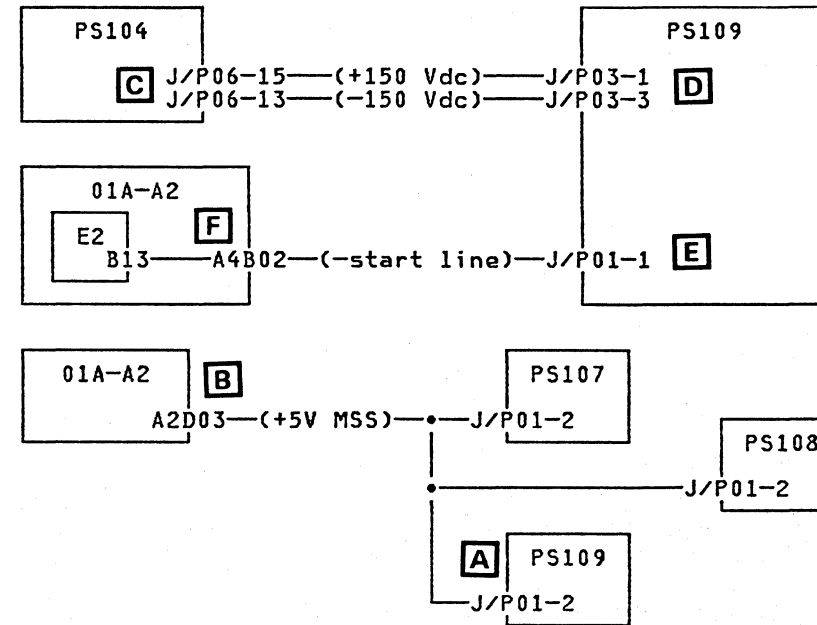


Ref Codes 1111340E, 1111350E, 1112950E

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

Possible causes:

- 01A-A2E card
- PS109 start line
- PS104 F5, F5
- PS107 to PS109
- +5V from MSS
- +300V from PS104.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> 3. Check for open PS104 F5 or F6.
2	Is F5 and F6 good?	<ol style="list-style-type: none"> 1. Set PCC CB1 and CB2 on. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Go to step 7.
3	Is F5 or F6 open?	<ol style="list-style-type: none"> 1. Exchange F5 or F6. 2. Set PCC CB1 and CB2 on. 3. Set CE Mode switch to CE Mode. 4. Press service panel Power On. 5. Select the Partial Power Up/Down (QWW) screen. 6. Select UP (power-up processor only).
4	Does processor status equal power is on?	Go to step 58.
5	Do you have the same 1X Ref Code?	Go to step 12.

Step	Conditions	Instructions
13	Is an open indicated at both points?	Go to step 17.
14	Go to Instructions column.	<ol style="list-style-type: none"> 1. Disconnect PS109 P03. 2. Measure resistance at the following points: - lead at frame ground + lead at PS104 P06-13 + lead at PS104 P06-15.
15	Is an open indicated at both points?	<ol style="list-style-type: none"> 1. Exchange PS109. Note: Check cable connectors for pushed in pins and seating before exchanging power supply. 2. Go to step 57.
16	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS104 P06 to PS107 P03, PS108 P03 and PS109 P03. Note: Check cable connectors for pushed in pins and seating before exchanging cable. 3. Go to step 57.
17	Go to Instructions 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 Instructions column.	<ol style="list-style-type: none"> 1. Disconnect PS108 P03. 2. Measure resistance at the following points: - lead at frame ground + lead at PS104 P06-10 + lead at PS104 P06-12.

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

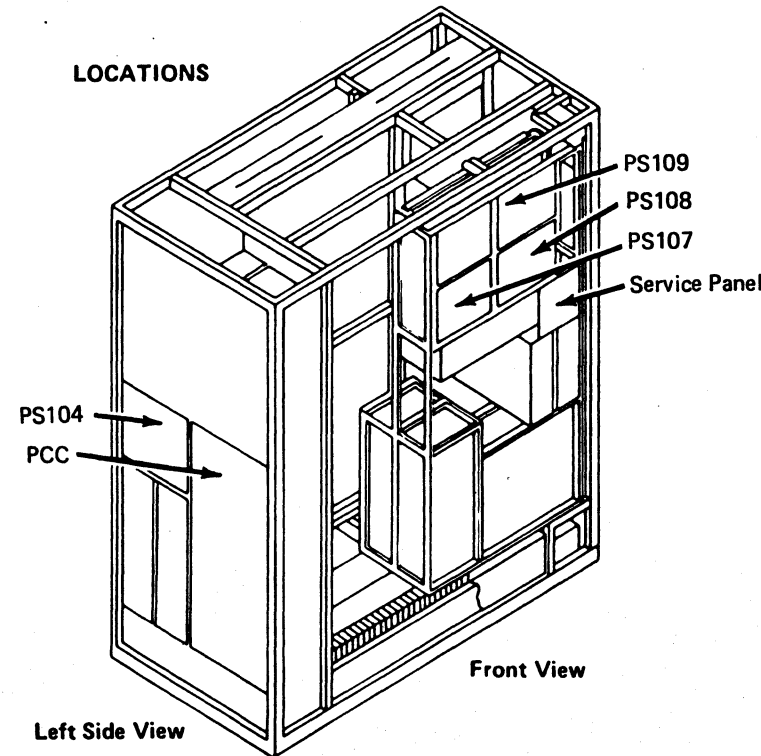
Step	Conditions	Instructions
34	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Check for open PS104 F5 or F6.
35	Is F5 or F6 open?	<ol style="list-style-type: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

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Step	Conditions	Instructions
45	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Disconnect PS109 P03. Select the Diagnostic Power Up (QWD) screen. Select option B (stop after K04 picked). Measure for +300 Vdc at the following points: - lead at PS109 P01-3 D + lead at PS109 P01-1. (cable end).
46	Is voltage greater than 225 Vdc?	Go to step 50.
47	Go to Instructions column.	<ol style="list-style-type: none"> Press ENTER to end Diagnostic Stop. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Reconnect PS109 P03. Disconnect PS104 P06. Select the Diagnostic Power Up (QWD) screen. Select option B (stop after K04 picked). Measure for +300 Vdc at the following points: - lead at PS104 J06-13 + lead at PS104 J06-15. (on power supply).

Step	Conditions	Instructions
48	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Exchange cable from PS104 P06 to PS109 P03. Note: Check cable connectors for pushed in pins and seating before exchanging cable. Go to step 57.
49	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Exchange PS104. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Go to step 57.
50	Go to Instructions column.	<ol style="list-style-type: none"> Press ENTER to end Diagnostic Stop. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Reconnect PS109 P03. Select the Diagnostic Power Up (QWD) screen. Select option F (stop after +5V start). Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS109 J/P01-1. E

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 18.
11	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Set PCC CB1 and CB2 on. 4. Go to step 18.
12	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at 01A-A2A4D08 F + lead at 01A-A2A4D03.</p>
13	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> 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 PS108 J/P01. <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 18.
14	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 18.



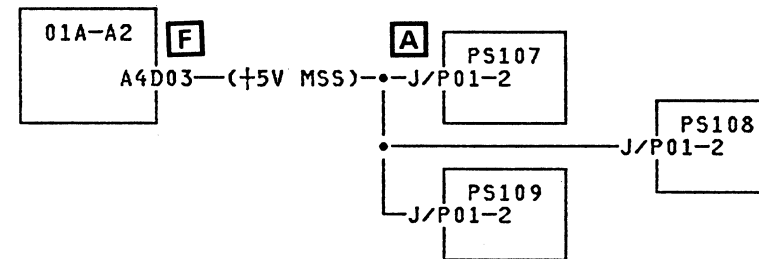
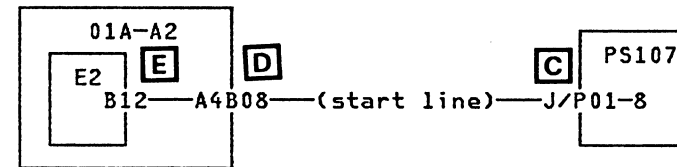
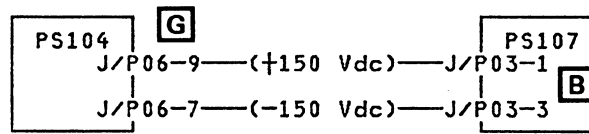
Step	Conditions	Instructions
15	Go to Instructions column.	<p>DANGER 300 VDC.</p> <ol style="list-style-type: none"> 1. Press ENTER to end Diagnostic Stop. 2. Disconnect PS104 J/P06. 3. Select Diagnostic Power Up (QWD) screen. 4. Select option B (stop after K04 picked). 5. Measure for +300 Vdc at the following points: - lead at PS104 J06-12 + lead at PS104 J06-10 (on power supply).
16	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> 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 PS104 J/P06 to PS108 J/P03. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 18.
17	Go to Instructions column.	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 18.
18	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Check all cables and cards for proper seating in the following areas: PS108 PS104 01A-A2 board. Set PCC CB1 and CB2 on. 4. 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.

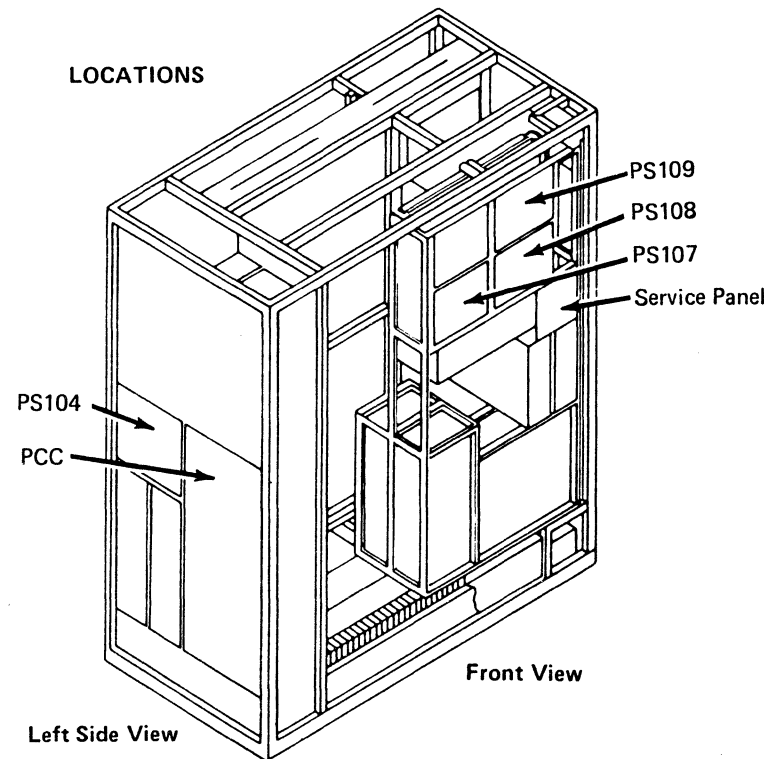
Possible causes:

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



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at PS107 J/P01-2.
2	Is voltage less than +4.5 Vdc?	Go to step 12.
3	Go to Instructions column.	<p>DANGER 300 Vdc.</p> <p>Measure for +300 Vdc at the following point: - lead at PS107 J/P03-3 B + lead at PS107 J/P03-1 (cable end).</p>
4	Is voltage less than 225 Vdc?	Go to step 15.

Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 21.
11	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Exchange 01A-A2E2 card. 3. Set PCC CB1 and CB2 on. 4. Go to step 21.
12	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2A4D08 F + lead at 01A-A2A4D03. F
13	Is voltage is greater than +4.5 Vdc?	<ol style="list-style-type: none"> 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 PS107 J/P01. <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 21.
14	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 21.



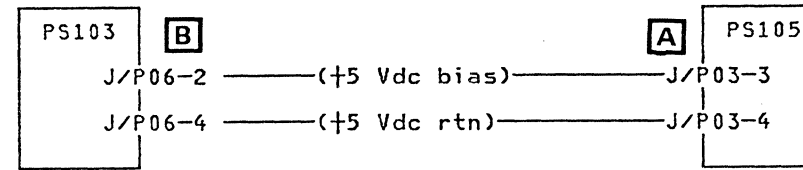
Step	Conditions	Instructions
15	Go to Instructions column.	<ol style="list-style-type: none"> 1. Press ENTER to end Diagnostic Stop. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> 2. Disconnect PS104 J/P06. 3. Select Diagnostic Power Up (QWD) screen. 4. Select option B (stop after K04 picked). 5. Measure for +300 Vdc at the following points: - lead at PS104 J/P06-7 G + lead at PS104 J/P06-9 (on power supply).
16	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> 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 PS104 J/P06 to PS107 J/P03. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 21.
17	Go to Instructions column.	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 21.
18	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Check all cables and cards for proper seating in the following areas: PS107 PS104 01A-A2 board. <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

Ref Codes 1112040E, 1112050E

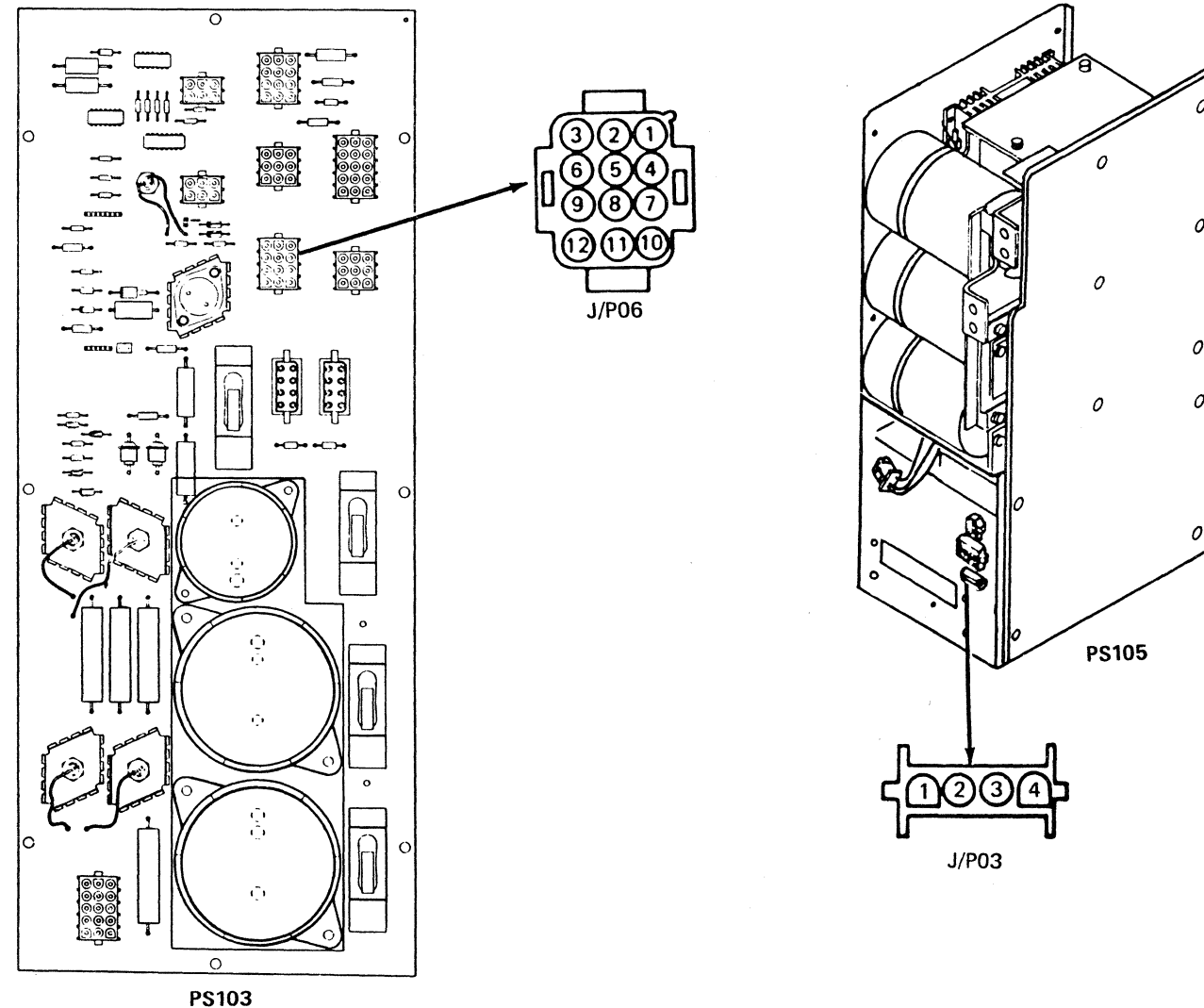
These Ref Codes indicate that PS105 is missing +5 Vdc bias voltage.

Possible causes:

- PS105
- 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 PS105 J/P03-4 A + lead at PS105 J/P03-3. A
2	Is voltage greater than +4.5 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS105. Note: Check cable connectors for pushed in pins and seating before exchanging power supply. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at PS103 J/P06-4 B + lead at PS103 J/P06-2. B

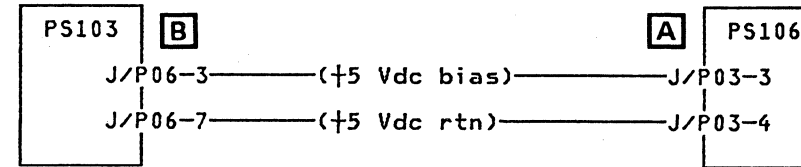


Ref Codes 1112140E, 1112150E

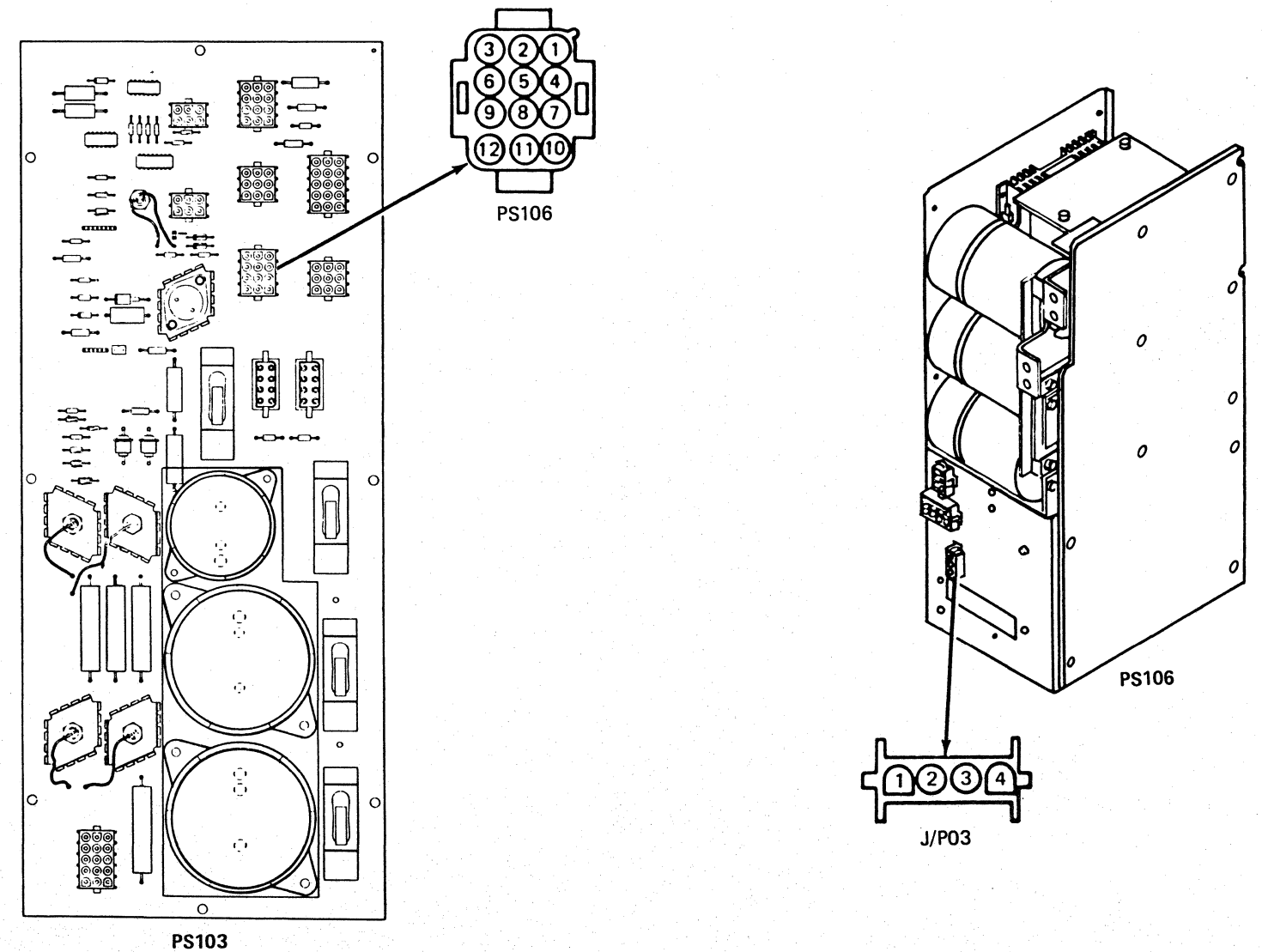
These Ref Codes indicate that PS106 is missing +5 Vdc bias voltage.

Possible causes:

- PS106
- PS103.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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). <p>Measure for +24 Vdc at the following points:</p> <p>- lead at PS106 J/P03-4 A + lead at PS106 J/P03-3. A</p>
2	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	<p>Measure for +24 Vdc at the following points:</p> <p>- lead at PS103 J/P06-7 B + lead at PS103 J/P06-3. B</p>

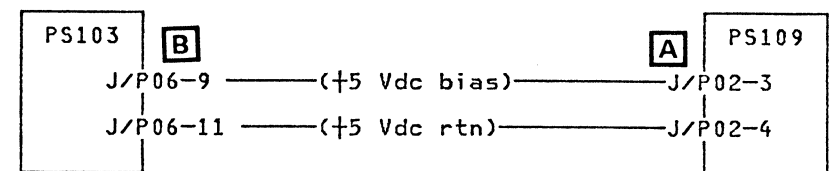


Ref Codes 1112340E, 1112350E

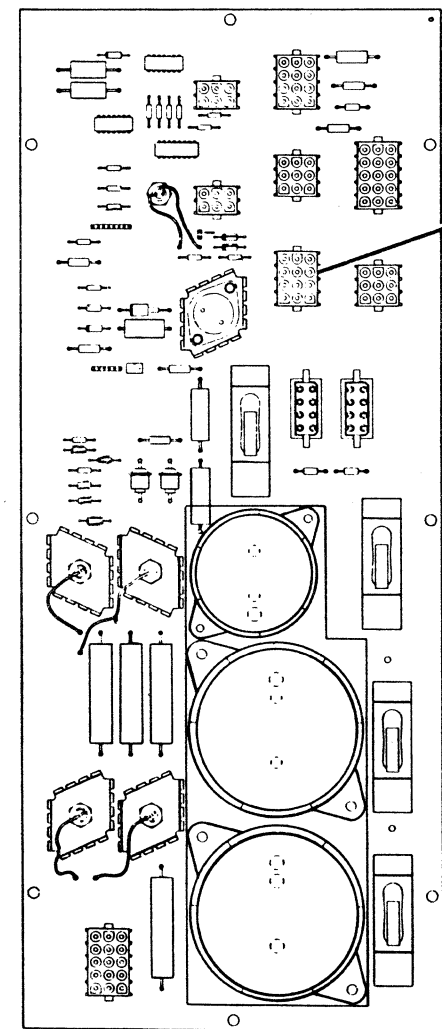
These Ref Codes indicate that PS109 is missing +5 Vdc bias voltage.

Possible causes:

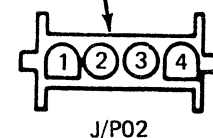
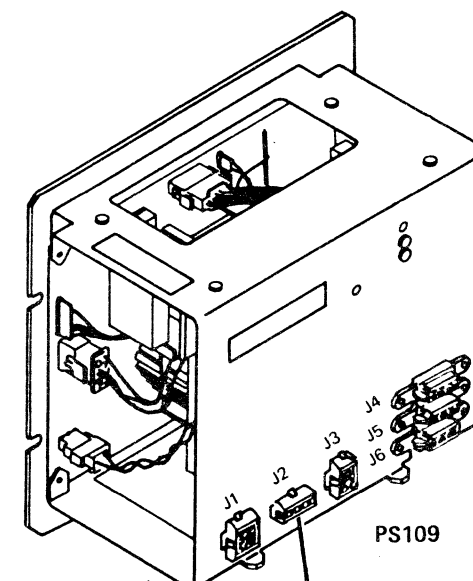
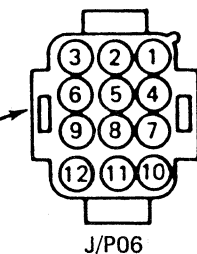
- PS109
- PS103.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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). <p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS109 J/P02-4 A + lead at PS109 J/P02-3. A</p>
2	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS103 J/P06-11 B + lead at PS103 J/P06-9. B</p>



PS103



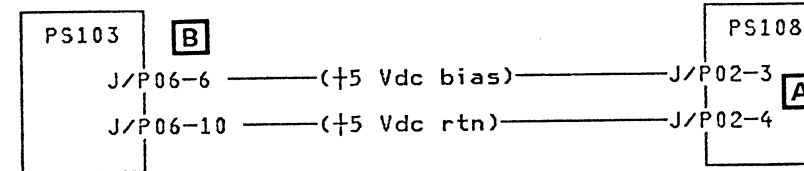
J/P02

Ref Codes 1112540E, 1112550E

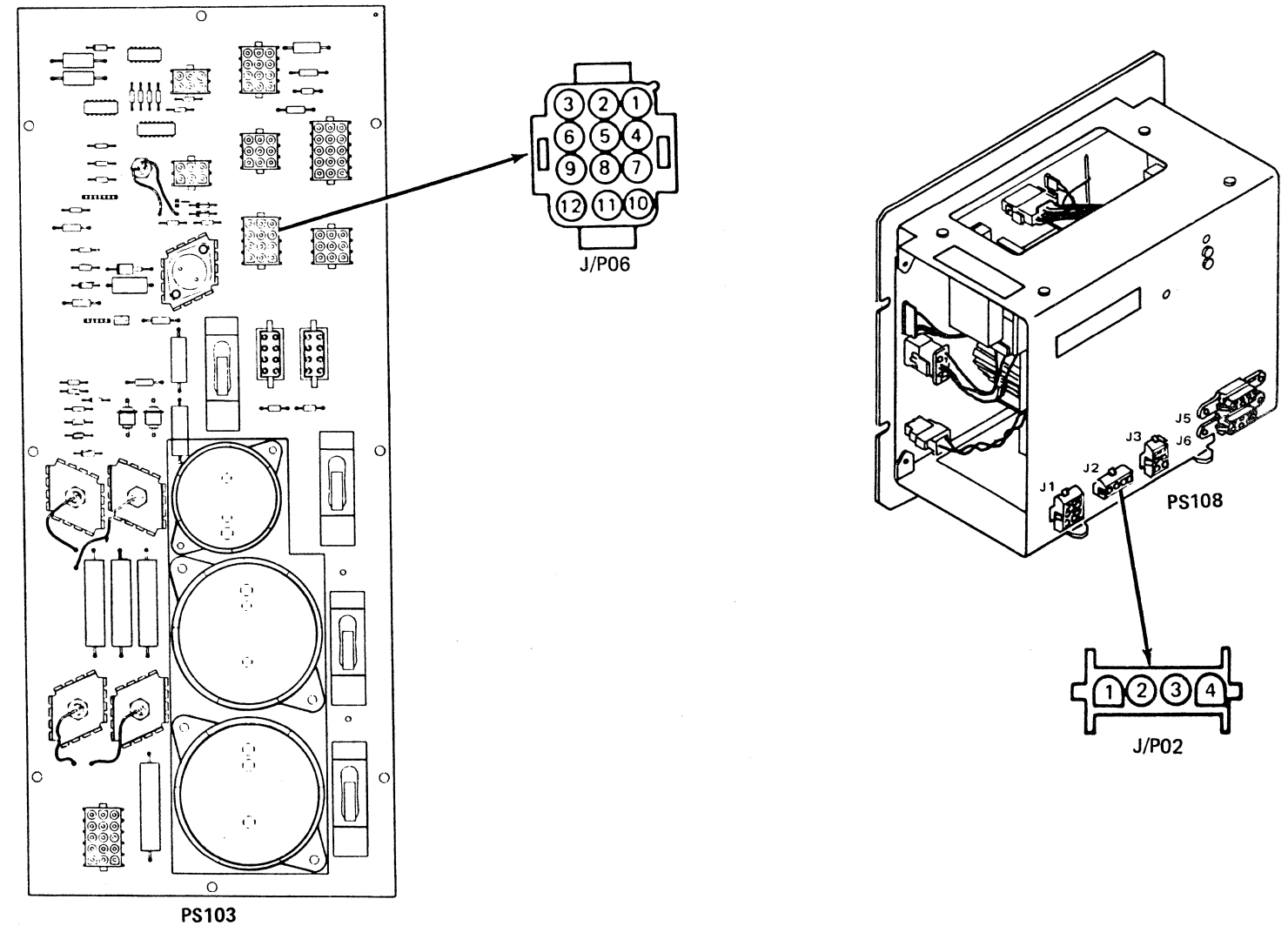
These Ref Codes indicate PS108 is missing +5 Vdc bias voltage.

Possible causes:

- PS108
- PS103.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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). <p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS108 J/P02-4 A + lead at PS108 J/P02-3. A</p>
2	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange PS108. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at PS103 J/P06-10 B + lead at PS103 J/P06-6. B</p>

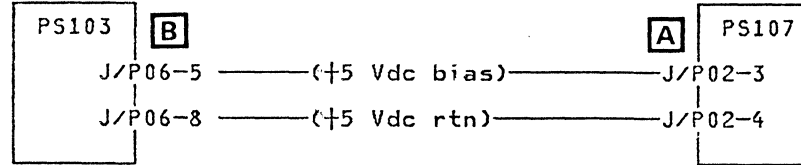


Ref Codes 1112740E, 1112750E

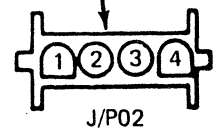
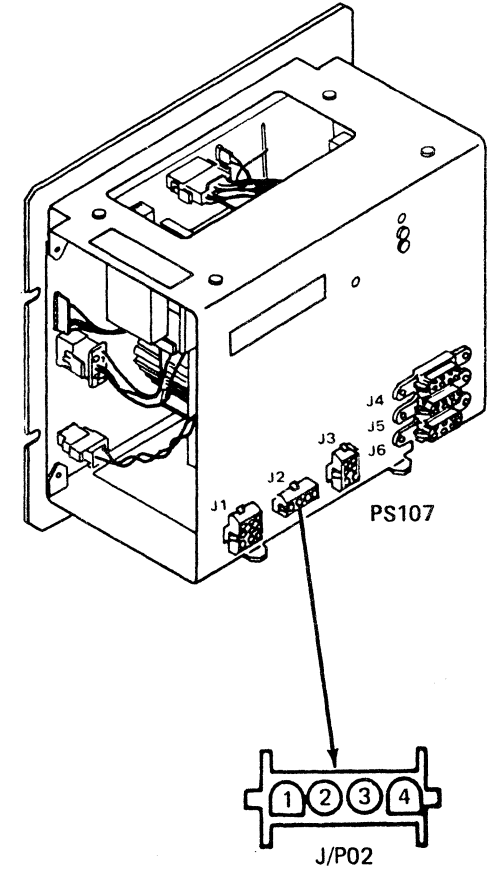
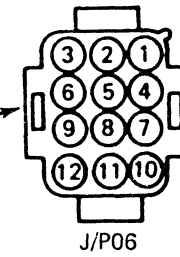
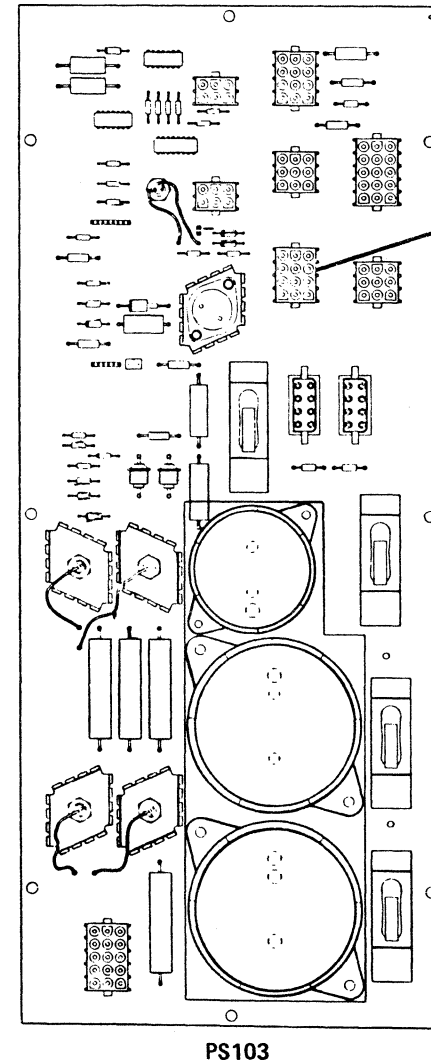
These Ref Codes indicate PS107 is missing +5 Vdc bias voltage.

Possible causes:

- PS107
- PS103



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

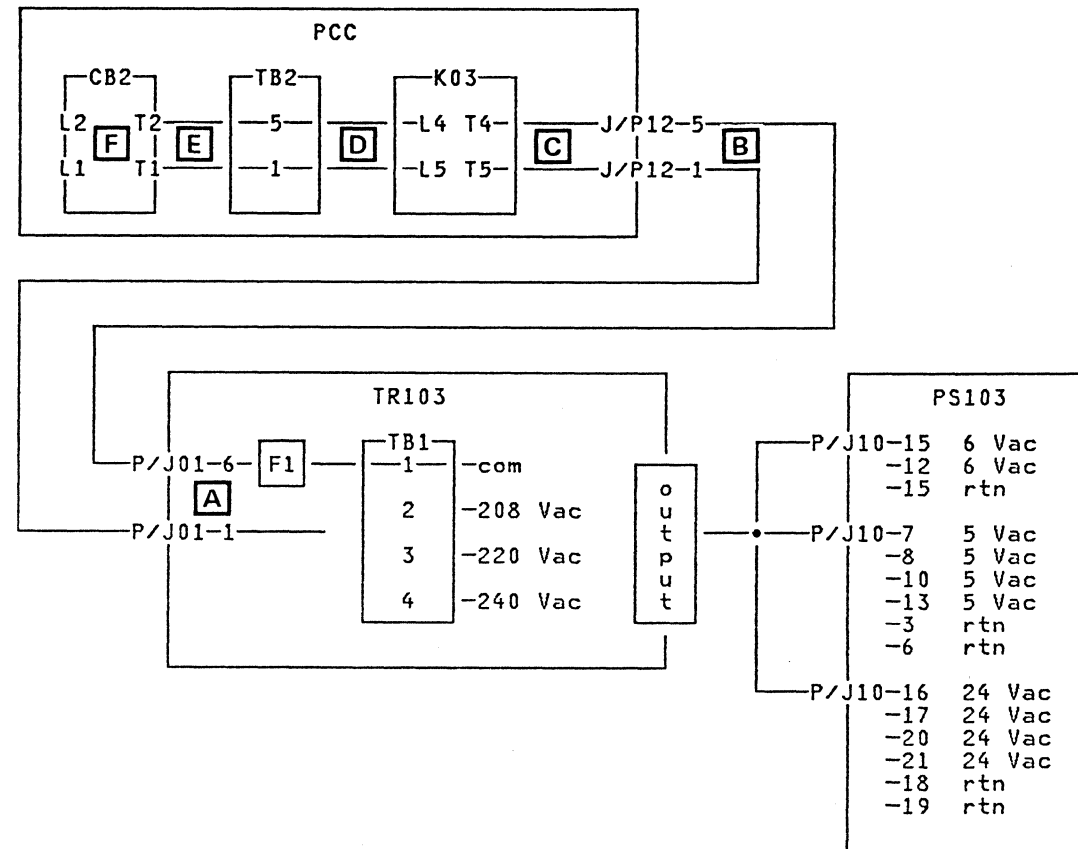


Ref Codes 1113040E, 1113050E

These Ref Codes indicate line voltage is missing to PS103.

Possible causes:

- TR103 F1
- PCC K03
- PCC CB2.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Check for tripped PCC CB2. 3. Check for open TR103 F1. 4. If CB2 tripped, reset CB and press power on. 5. If F1 is open, exchange F1 and press power on. 6. If CB2 trips or same Ref Code, go to step 2. 7. If power is complete, go to page END 001.
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"> 1. Exchange F1. 2. Set CE Mode switch to CE Mode. 3. Select the Partial Power Up/Down (QWW) screen. 4. Select UP (power-up processor only).
5	Is processor powered on?	Go to step 28.
6	Is a different Ref Code displayed?	Go to page START 001.

Step	Conditions	Instructions
12	Is line voltage present?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from PCC J/P12 to PCC K03. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 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. <p>Note: For line voltage value, see label on PCC box.</p>
14	Is line voltage present?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PCC K03. <ol style="list-style-type: none"> Go to step 28.
15	Go to Instructions column.	Measure for line voltage at the following points: - lead at PCC TB2-5 D + lead at PCC TB2-1. <p>Note: For line voltage value, see label on PCC box.</p>
16	Is line voltage present?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from PCC TB2 to PCC K03. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> Go to step 28.

Step	Conditions	Instructions
17	Go to Instructions column.	Measure for line voltage at the following points: - lead at PCC TB2-2 + lead at PCC TB2-1. <p>Note: For line voltage value, see label on PCC box.</p>
18	Is line voltage present?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Check jumper from PCC TB2-2 to PCC TB2-5. <ol style="list-style-type: none"> Go to step 28.
19	Go to Instructions column.	Measure for line voltage at the following points: - lead at PCC CB2-T2 E + lead at PCC CB2-T1. <p>Note: For line voltage value, see label on PCC box.</p>
20	Is line voltage present?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from PCC TB2 to PCC CB2. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> Go to step 28.
21	Go to Instructions column.	Measure for line voltage at the following points: - lead at PCC CB2-L2 F + lead at PCC CB2-L1. <p>Note: For line voltage value, see label on PCC box.</p>

Seq CA130	PN 0445900 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84	EC A02219 29 FEB 84		
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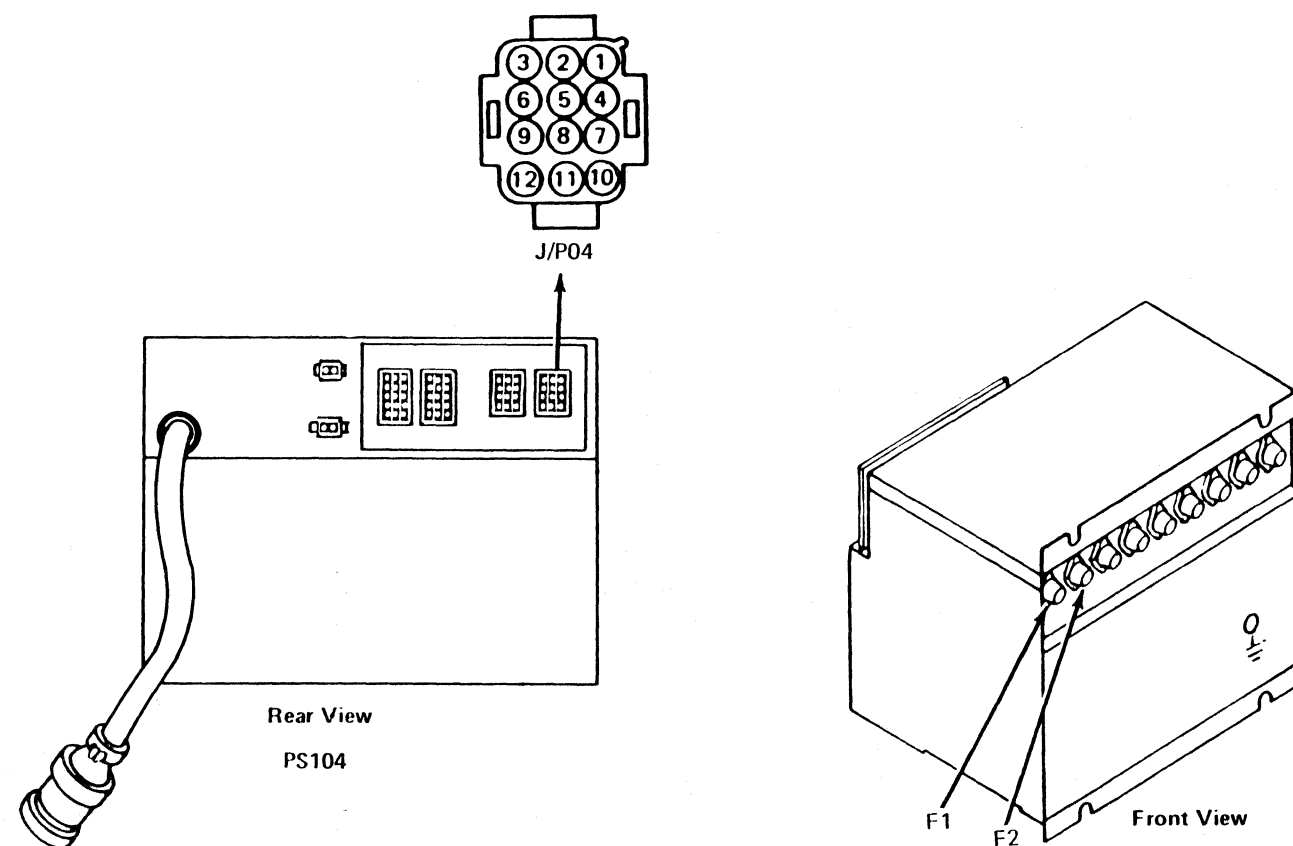
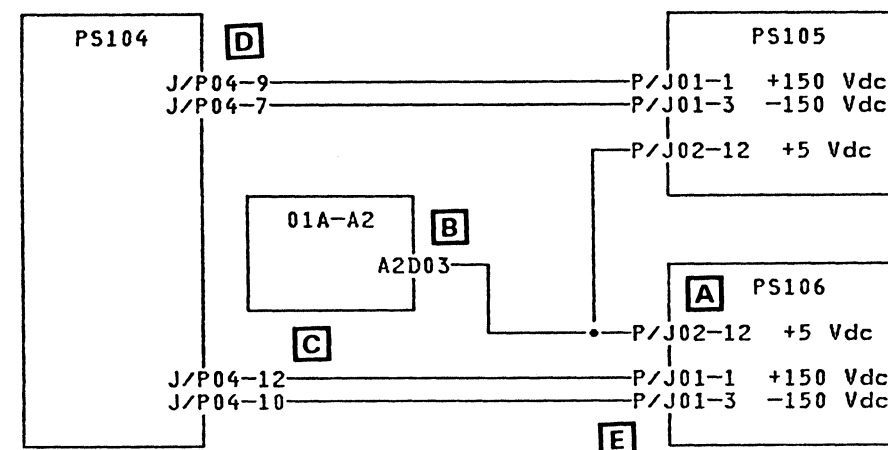
Ref Codes 1112850E, 1113540E, 1113550E

These Ref Codes indicate the 300 Vdc or +5 Vdc is missing to PS105, PS106.

Possible causes:

- 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. DANGER 300 Vdc. 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 processor status equal power is on?	Go to step 42.
5	Do you have the same 1X Ref Code?	Go to step 12.
6	Do you have a different Ref Code?	Go to page PR 1001.



Seq CA135	PN 0445901 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84	EC A02219 29 FEB 84		
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Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> 1. Disconnect PS106 J/P01. 2. Measure resistance at the following points: <ul style="list-style-type: none"> - lead at frame ground + lead at PS104 P04-10 + lead at PS104 P04-12. (cable end).
15	Is an open indicated at both points?	<ol style="list-style-type: none"> 1. Exchange PS106. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> 2. Go to step 42.
16	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS104 J/P04 to PS105 J/P01 and PS106 J/P01. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> 3. Go to step 42.
17	Go to Instructions column.	Measure resistance at the following points: <ul style="list-style-type: none"> - lead at frame ground + lead at PS104 P04-7 D + lead at PS104 P04-9. (cable end).
18	Is an open indicated at both points?	Go to step 22.
19	Go to Instructions column.	<ol style="list-style-type: none"> 1. Disconnect PS105 J/P01. 2. Measure resistance at the following points: <ul style="list-style-type: none"> - lead at frame ground + lead at PS104 P04-7 + lead at PS104 P04-9. (cable end).

Step	Conditions	Instructions
20	Is an open indicated at both points?	<ol style="list-style-type: none"> 1. Exchange PS105. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> 2. Go to step 42.
21	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set PCC CB1 and CB2 off. 2. Exchange cable from PS104 J/P04 to PS105 J/P01 and PS106 J/P01. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> 3. Go to step 42.
22	Go to Instructions column.	<ol style="list-style-type: none"> 1. Ensure PS104 F1 and F2 are good. 2. Disconnect the following: <ul style="list-style-type: none"> PS104 J/P04 PS105 J/P01 PS106 J/P01. 3. Set PCC CB1 and CB2 on. 4. Press service panel Power On. 5. Select the Partial Power Up/Down (QWW) screen. 6. Select UP (power-up processor only).
23	Go to Instructions column.	<ol style="list-style-type: none"> 1. Select the Partial Power Up/Down (QWW) screen. 2. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> 3. Check for open PS104 F1 or F2.

Step	Conditions	Instructions
32	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Check for open PS104 F1 or F2.
33	Is F1 or F2 open?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS106. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Go to step 42.
34	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). Reconnect PS105 P01. Select the Partial Power Up/Down (QWW) screen. Select UP (power-up processor only).
35	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Check for open PS104 F1 or F2.

Step	Conditions	Instructions
36	Is F1 or F2 open?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PS104. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Go to step 42.
37	Go to Instructions column.	<ol style="list-style-type: none"> Select the Partial Power Up/Down (QWW) screen. Select DP (power-down processor only). <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Disconnect PS106 J/P01. Select the Diagnostic Power Up (QWD) screen. Select option B (stop after K04 picked). Measure for +300 Vdc at the following points: - lead at PS106 P01-3 E + lead at PS106 P01-1. (cable end).
38	Is voltage greater than 225 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. <p>DANGER 300 Vdc.</p> <ol style="list-style-type: none"> Exchange PS106. <p>Note: Check cable connectors for pushed in pins and seating before exchanging power supply.</p> <ol style="list-style-type: none"> Go to step 42.

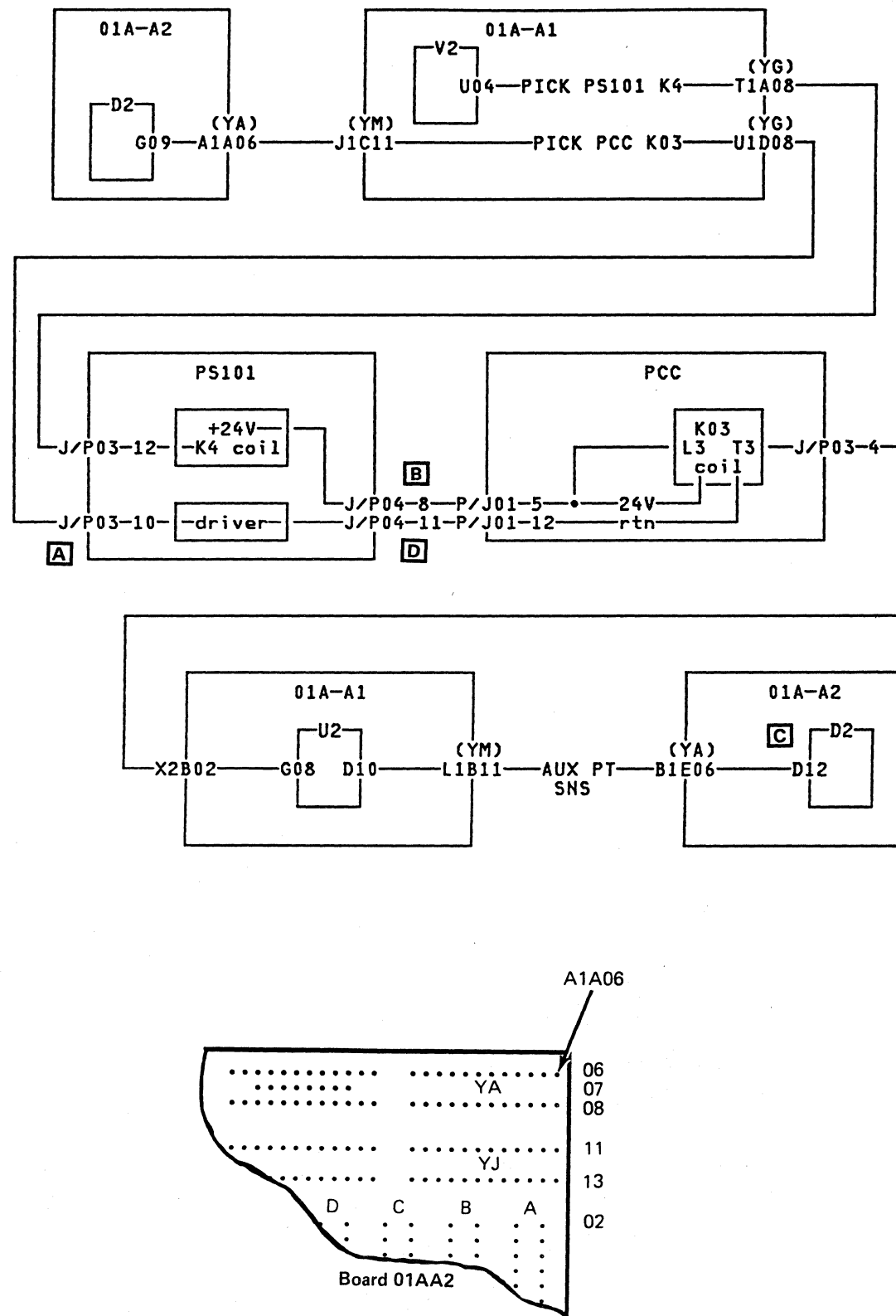
Ref Code 1114040E

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

Possible causes:

- 01A-A2D2 sense card
- PS101
- PCC K03 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 +5 Vdc at the following points: - lead at frame ground A + lead at PS101 P03-10.
2	Is the voltage less than +0.8 Vdc?	Go to step 6.
3	Go to Instructions column.	Measure for +24 Vdc at the following points: - lead at PS101 P04-11 B + lead at PS101 P04-8.
4	Is the voltage less than +0.8 Vdc?	Go to step 19.
5	Go to Instructions column.	Go to step 24.
6	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. 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.



Seq CA150	PN 0445904 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84	EC A02220 06 JUN 84		
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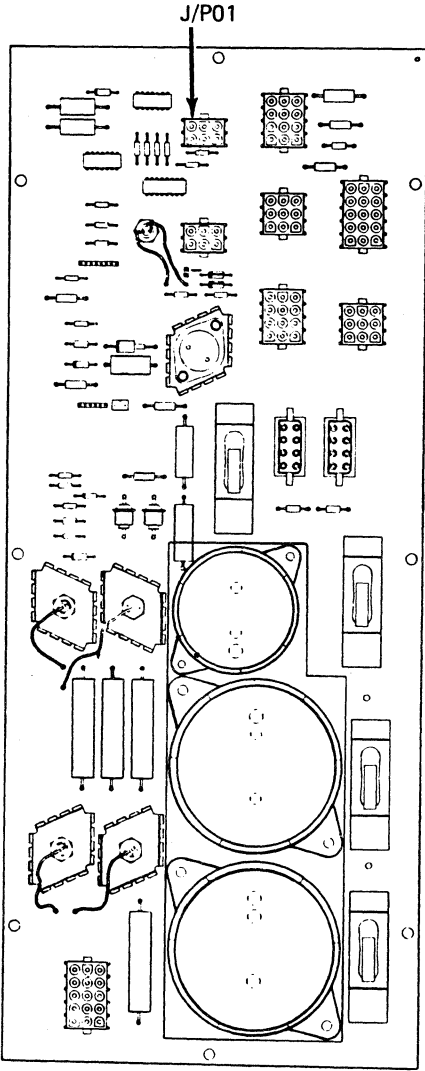
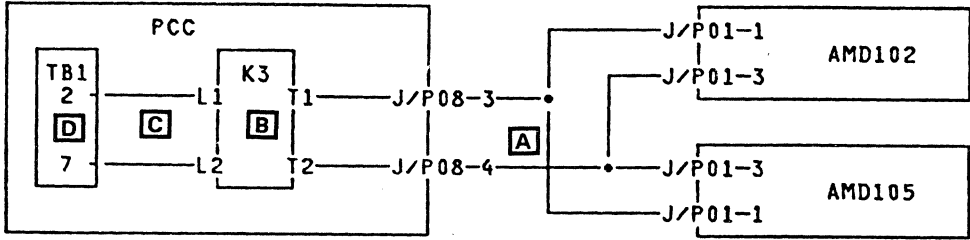
Step	Conditions	Instructions
11	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from PS101 P03 to 01A-A1YG (card side). <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> Go to step 29.
12	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Reconnect cable at 01A-A1YG. Disconnect cable at 01A-A1YM (card side). Set PCC CB1 and CB2 on. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.
13	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange 01A-A1 board. Go to step 29.
14	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Reconnect cable at 01A-A1YM. Disconnect cable at 01A-A2YA (card side). Set PCC CB1 and CB2 on. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.

Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange cable from 01A-A2YA to 01A-A1YG (card side). <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable .</p> <ol style="list-style-type: none"> Go to step 29.
16	Go to Instructions column.	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Reconnect cable at 01A-A2YA. Set PCC CB1 and CB2 on. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 P03-10.
17	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange 01A-A2 board. Go to step 29.
18	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Reinstall 01A-A2D2 card and TCCs. Go to step 29.
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 voltage greater than +22 Vdc?	<ol style="list-style-type: none"> Set service panel Power Off switch to Power Off and then back to Normal. Set PCC CB1 and CB2 off. Exchange PCC K03. Go to step 29.

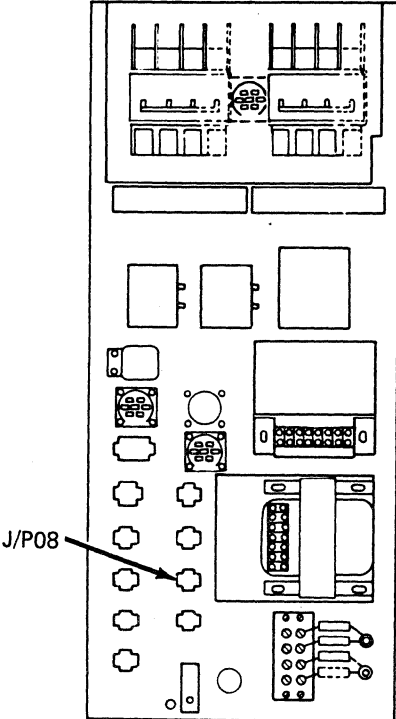
Ref Codes 1116040E, 1116050E, 1116140E, 1116240E, 1116340E, 1116840E

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



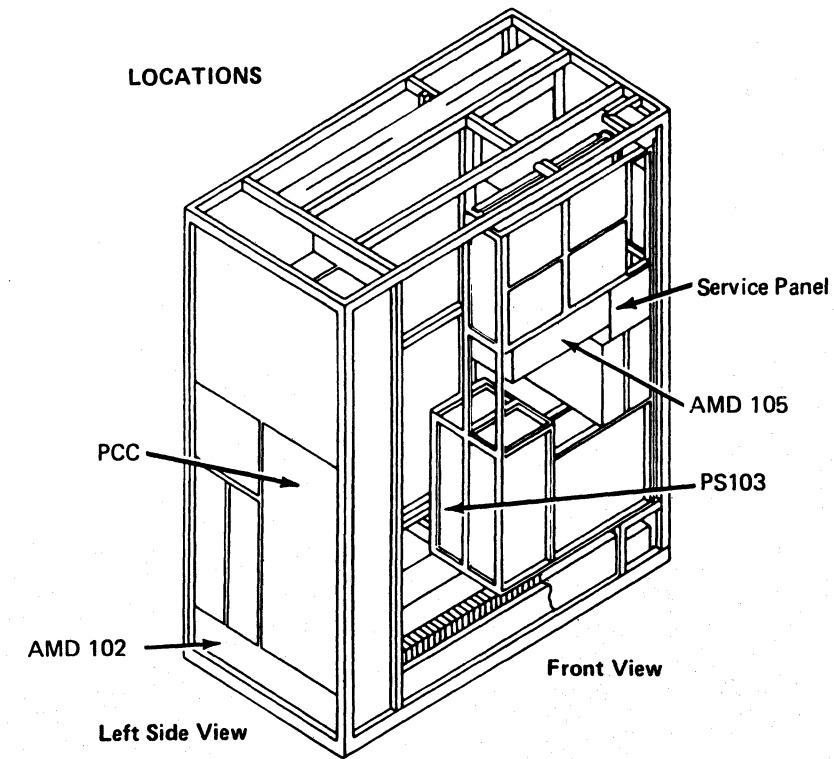
PS103



Primary Control Compartment (PCC)

Seq CA160	PN 0445906 Pg 1 of 2	EC A02214 15 SEP 83	EC A02215 01 NOV 83	EC A02217 10 JAN 84	EC A02220 06 JUN 84	
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Step	Conditions	Instructions
13	Is line voltage present?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange the cable from PCC K3 to PCC TB1. <p>Note: Check cable connectors for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to step 15.
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"> 1. Set PCC CB1 and CB2 off. 2. Check all cables and cards for proper seating in the following areas: PCC box AMD102 AMD105. 3. Set PCC CB1 and CB2 on. 4. Set CE Mode switch to Normal. 5. Press service panel Power On. 6. Go to page PR 5001.



Seq CA165	PN 0445907 Pg 1 of 1	EC A02214 15 SEP 83	EC A02215 01 NOV 83			
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Ref Codes 1117040E, 1117050E

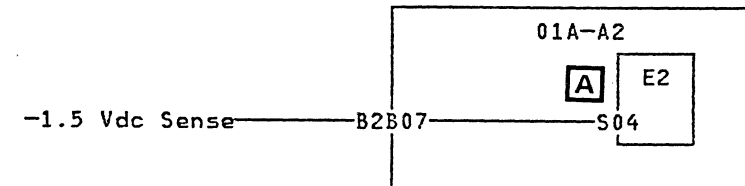
These Ref Codes indicate -1.5 Vdc was missing from all PS105 analog sensors.

Possible causes:

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

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Measure for -1.5 Vdc at the following points: <ul style="list-style-type: none"> - lead to 01A-A2E2D08 + lead to 01A-A2E2S04. A 2. Select Power Up/Down (QWW) screen. 3. Select UP (power-up processor only).
4	Is voltage -1.44 to -1.56 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

Step	Conditions	Instructions
5	Go to Instructions column.	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating or power supply adjustment before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



Ref Codes 1117140E, 1117150E

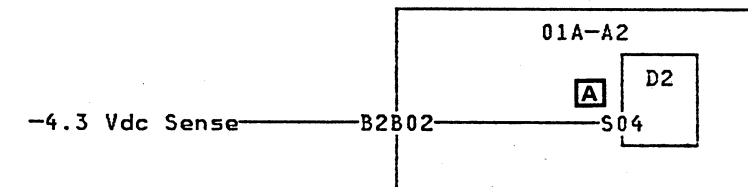
These Ref Codes indicate -4.3 Vdc was missing from all PS106 analog sensors.

Possible causes:

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

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Measure for -1.5 Vdc at the following points. - lead to 01A-A2D2D08 A + lead to 01A-A2D2S04. A 2. Select Power Up/Down (QWW) screen. 3. Select UP (power-up processor only).
4	Is voltage -1.44 to -1.56 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

Step	Conditions	Instructions
5	Go to Instructions column.	<ol style="list-style-type: none"> 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. <p>Note: Check cable connectors for pushed in pins and seating or power supply adjustment before exchanging power supply.</p> <ol style="list-style-type: none"> 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



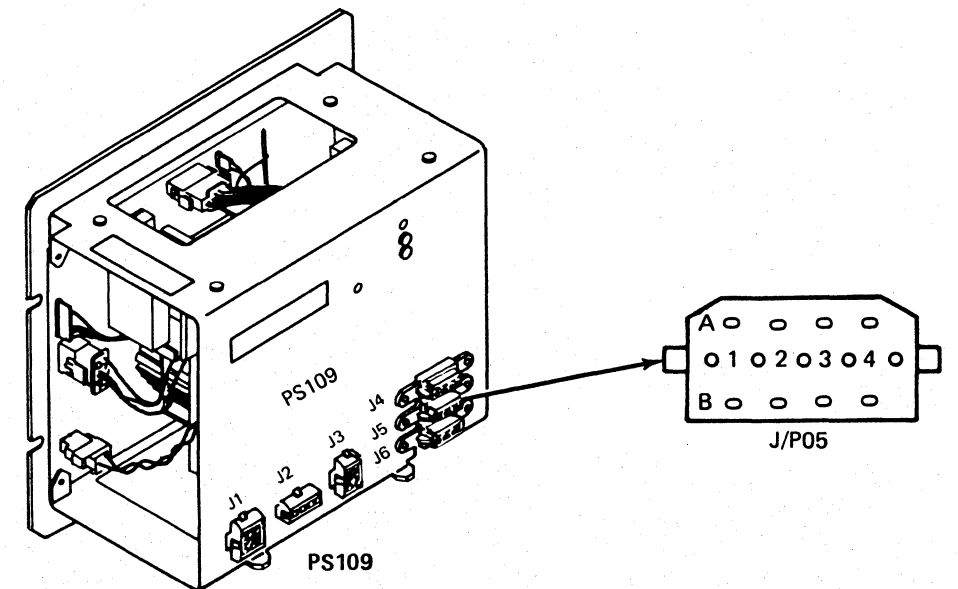
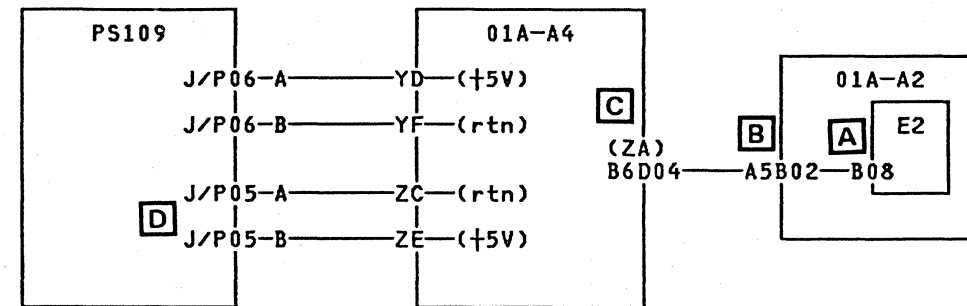
Ref Codes 1117240E, 1117250E

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.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2B08. A
2	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 12.
3	Go to Instructions column.	Measure for +1.5 Vdc at the following points: - lead at 01A-A2E2D08 B + lead at 01A-A2A5B02. B
4	Is voltage greater than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to step 12.
5	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A4C5D08 C + lead at 01A-A4B6D04. C

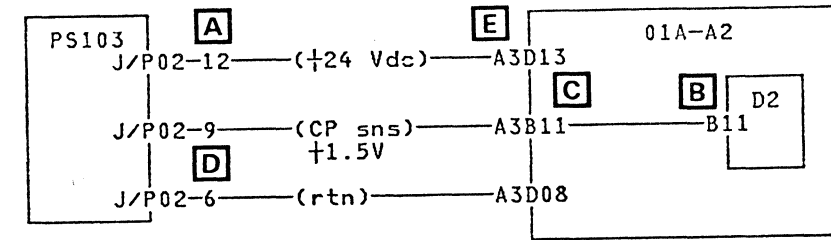


Ref Codes 1113250E, 1113350E, 1113450E, 1124240E

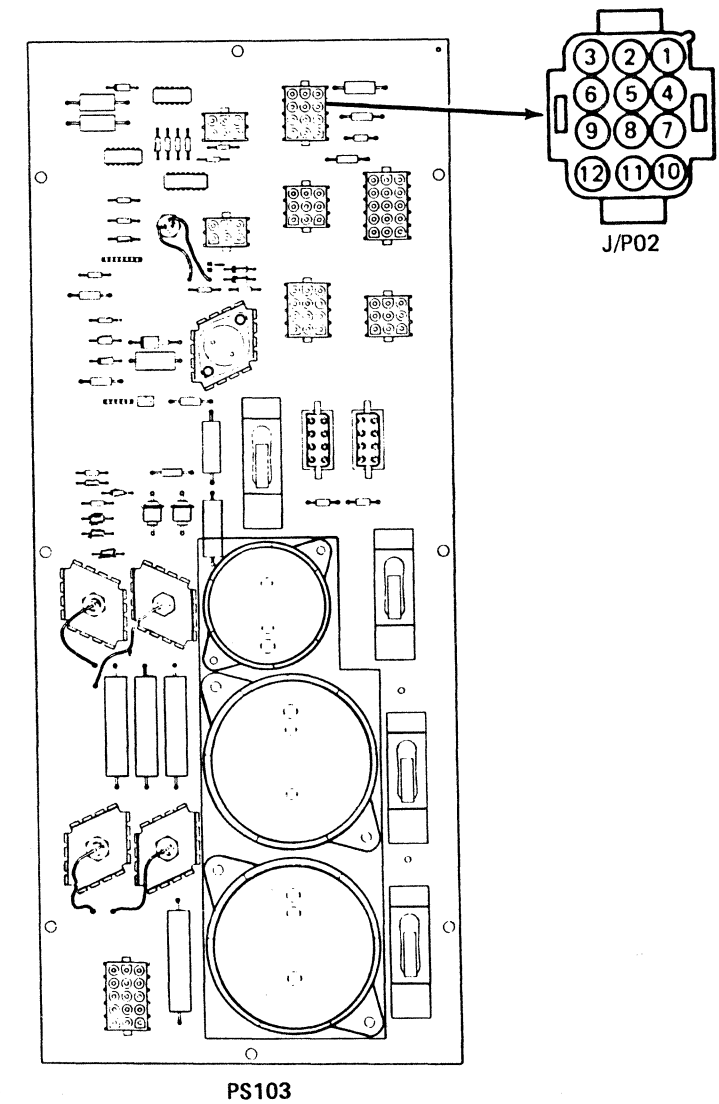
These Ref Codes indicate a tripped CP in PS103.

Possible causes:

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



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



Ref Codes 11FFF40E, 11FFF50E, 111FF40E, 111FF50E, 1FFFF40E, 1FFFF50E

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

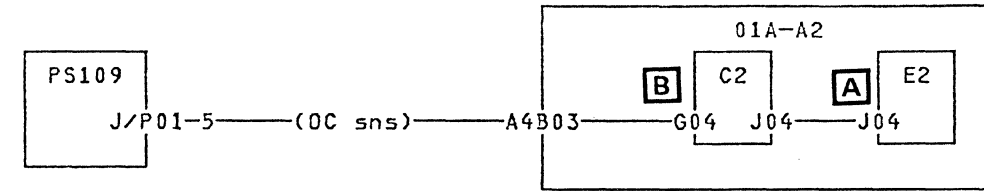
Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Check PS101, PS102, PS103, and PS104 plugs for pushed in pins and proper seating. 4. Check PCC K03, K04 for loose wires. 5. Check cables in 01A-A1 and 01A-A2 boards for seating. 6. Check 01A-A1U2, 01A-A1V2, and 01A-A1W2 cards and top card connectors for seating. 7. Check 01A-A2C2, 01A-A2C4, 01A-A2D2, 01A-A2E2, and 01A-A2F2 cards and top card connectors for proper seating. 8. Set PCC CB1 and CB2 on. 9. Press service panel Power On.
2	Is power complete?	Go to page PR 5001.
3	Go to Instructions column.	<p>The diskette may have the wrong power group defined. To check the power group, perform the following:</p> <ol style="list-style-type: none"> 1. Select System Configuration-Service (QFS) screen. 2. Ensure diskette is configured for the proper power group. 3. Go to page PR 5001.

Ref Code 1130540E

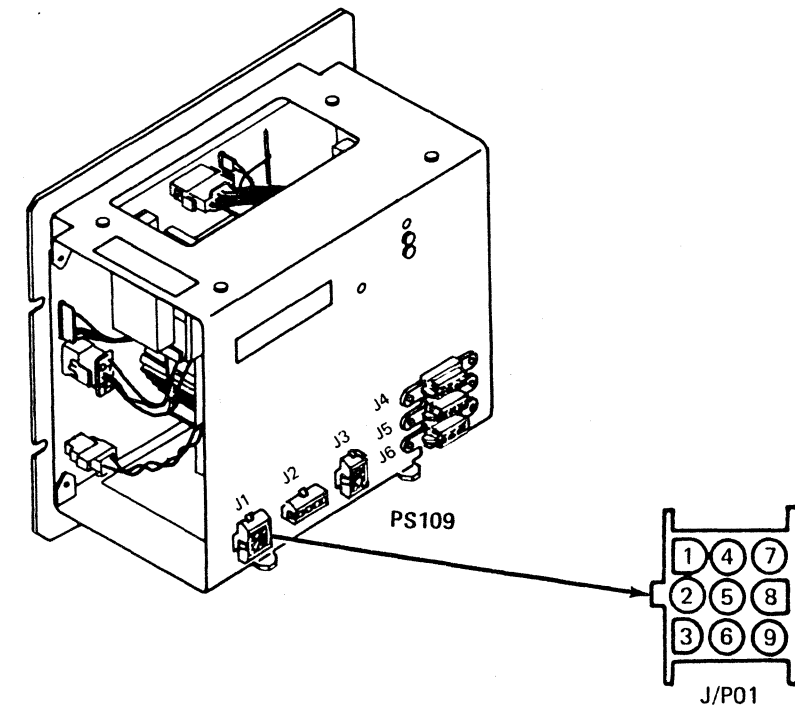
This Ref Code indicates the PS109 OC sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

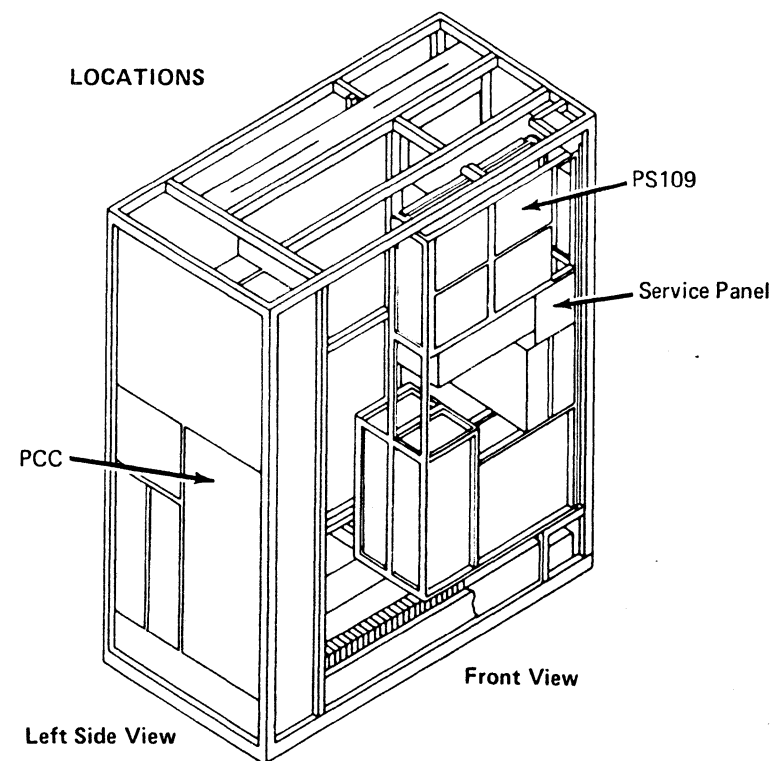
- PS109
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2J04.
2	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	<p>Measure for +5 Vdc at the following points:</p> <p>- lead at 01A-A2C2D08 B + lead at 01A-A2C2G04.</p>
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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
15	Is voltage less than +2.5 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card just swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

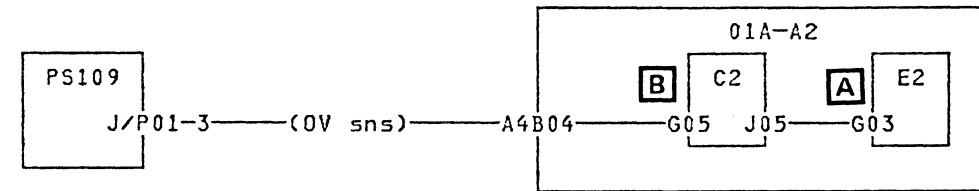


Ref Code 1130640E

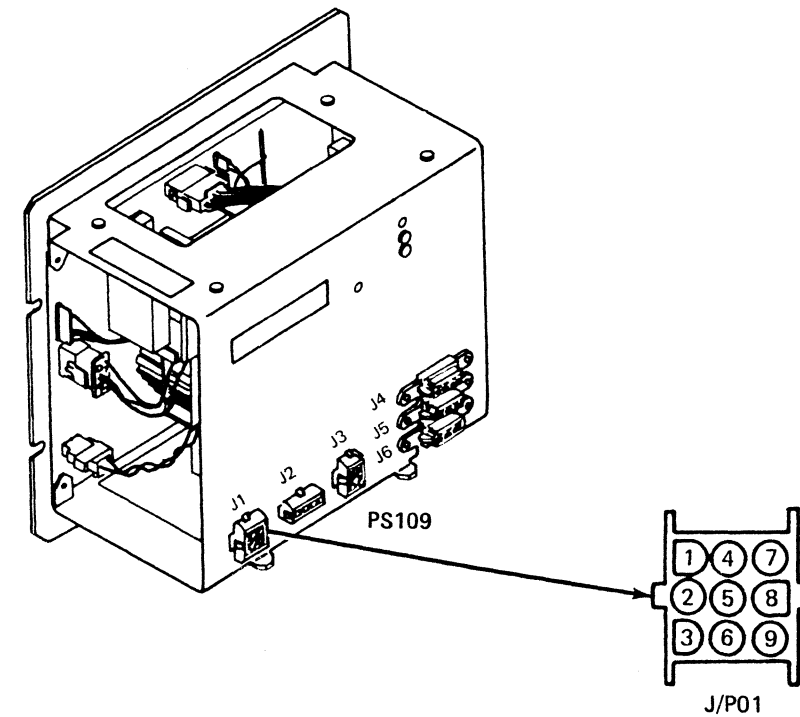
This Ref Code indicates the PS109 OV sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

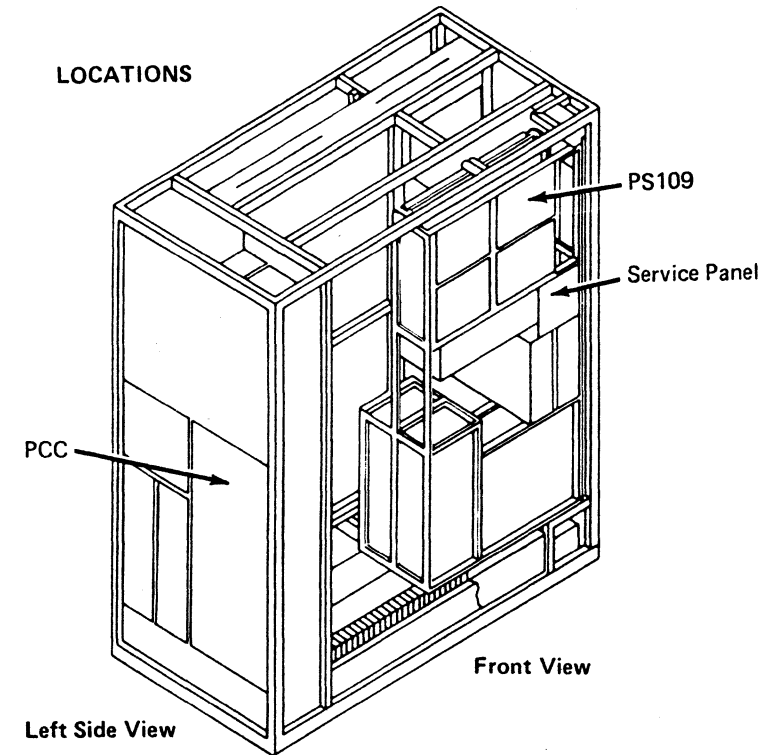
- PS109
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2G03. A
28	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2G05. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.



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

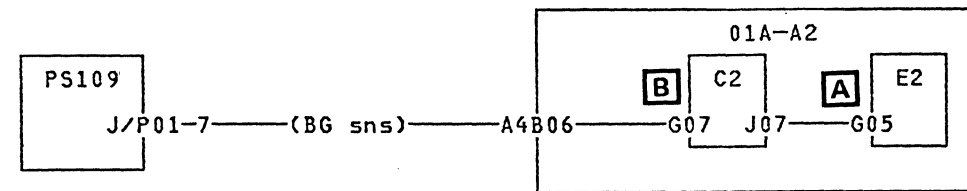


Ref Code 1130840E

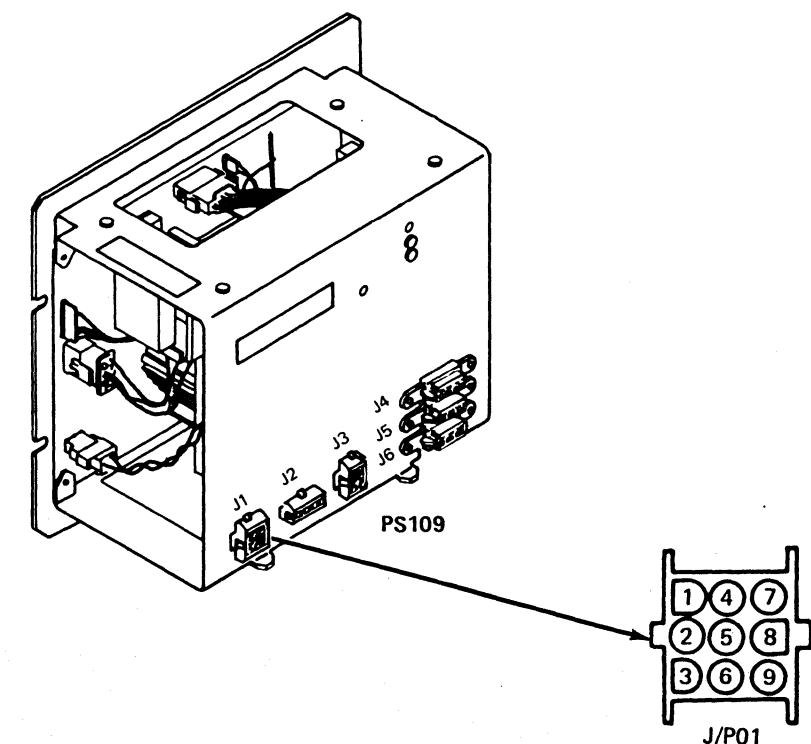
This Ref Code indicates the PS109 BG sense line was above +0.8 Vdc before bias voltages were applied to PS109.

Possible causes:

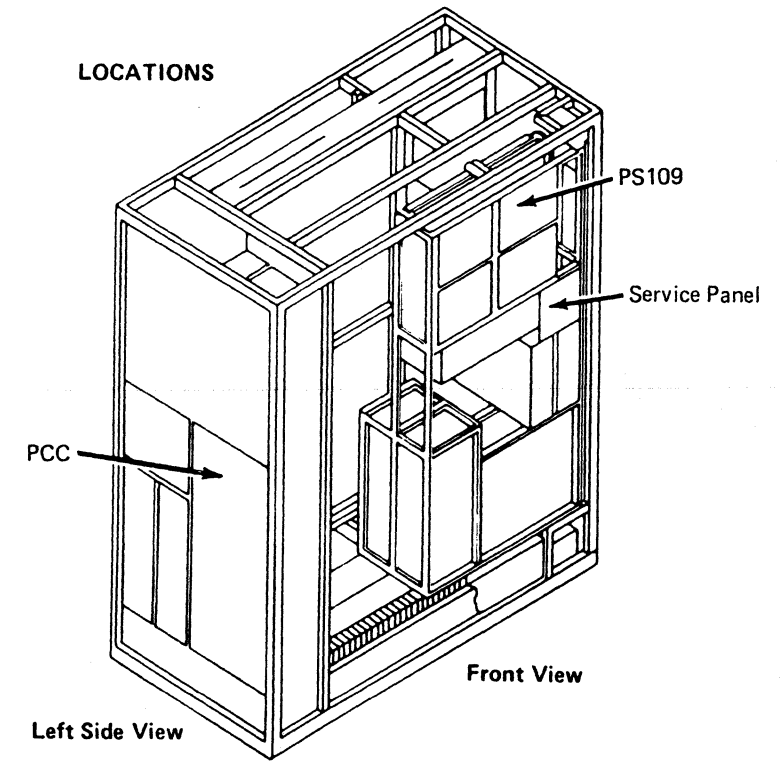
- PS109
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2G05.
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + 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"> 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-A2C2G07.



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



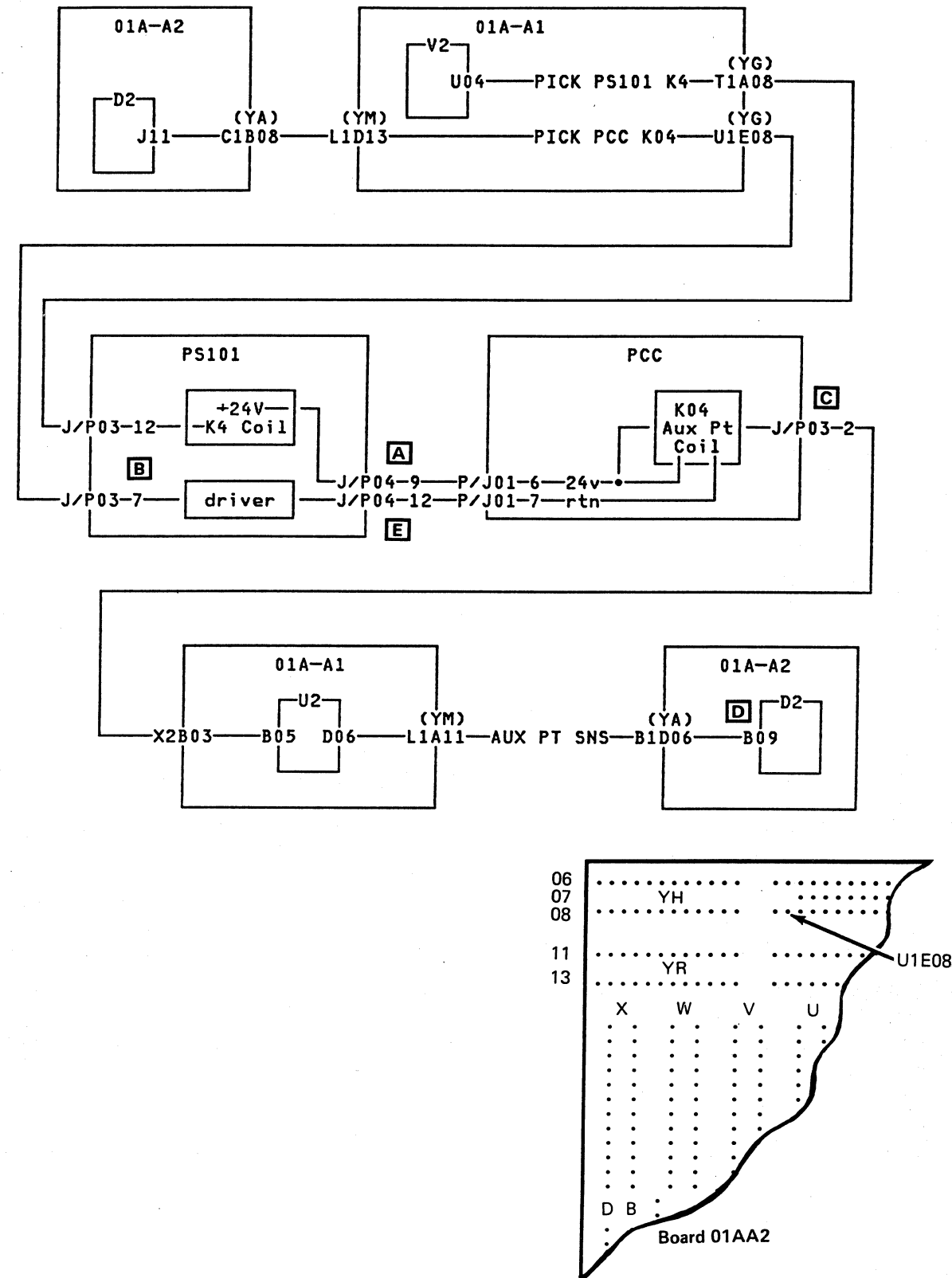
Ref Code 1131140E

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
- 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 [A] + lead at PS101 J/P04-9. [A]
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 [B] + lead at PS101 J/P03-7. [B]
4	Is the voltage greater than +4.5 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. Set PCC CB1 and CB2 off. 3. Remove 01A-A2D2 card. 4. Set PCC CB1 and CB2 on. 5. Measure for +5 Vdc at the following points: - lead at frame ground + lead at PS101 J/P03-7.



Seq CA215	PN 0445917 Pg 1 of 2	EC A02214 15 SEP 83	EC A02217 10 JAN 84	EC A02220 06 JUN 84		
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Step	Conditions	Instructions
10	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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 PS101 P03 to 01A-A1YG (card side). <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Go to step 28.
11	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reconnect cable at 01A-A1YG. 4. Disconnect cable at 01A-A1YM (card side). 5. Set PCC CB1 and CB2 on. 6. Measure for +5 Vdc at the following points (on power supply): <p>- lead at 01A-A2D2D08 + lead at PS101 J03-7.</p>
12	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A1 board. 4. Go to step 28.
13	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reconnect cable at 01A-A1YM. 4. Disconnect cable at 01A-A2YA (card side). 5. Set PCC CB1 and CB2 on. 6. Measure for +5 Vdc at the following points (on power supply): <p>- lead at 01A-A2D2D08 + lead at PS101 J03-7.</p>

Step	Conditions	Instructions
14	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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-A2YA to 01A-A1YG (card side). <p>Note: Check board for bent pins and cable connector for pushed in pins and seating before exchanging cable.</p> <ol style="list-style-type: none"> 4. Go to step 28.
15	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reconnect cable at 01A-A2YA. 4. Set PCC CB1 and CB2 on. 5. Measure for +5 Vdc at the following points (on power supply): <p>- lead at 01A-A2D2D08 + lead at PS101 J03-7.</p>
16	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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 28.
17	Is voltage greater than +4.5 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Reinstall 01A-A2D2 card. 4. Go to step 28.
18	Go to Instructions column.	<p>Measure for +24 Vdc at the following points:</p> <p>- lead at 01A-A2D2D08 C + lead at PCC P03-2.</p>
19	Is voltage greater than +22 Vdc?	<ol style="list-style-type: none"> 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 K04. 4. Go to step 28.

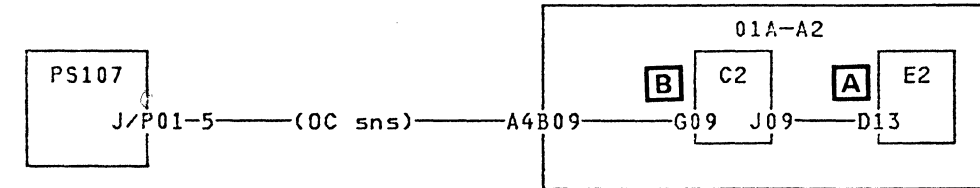
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Ref Code 1131340E

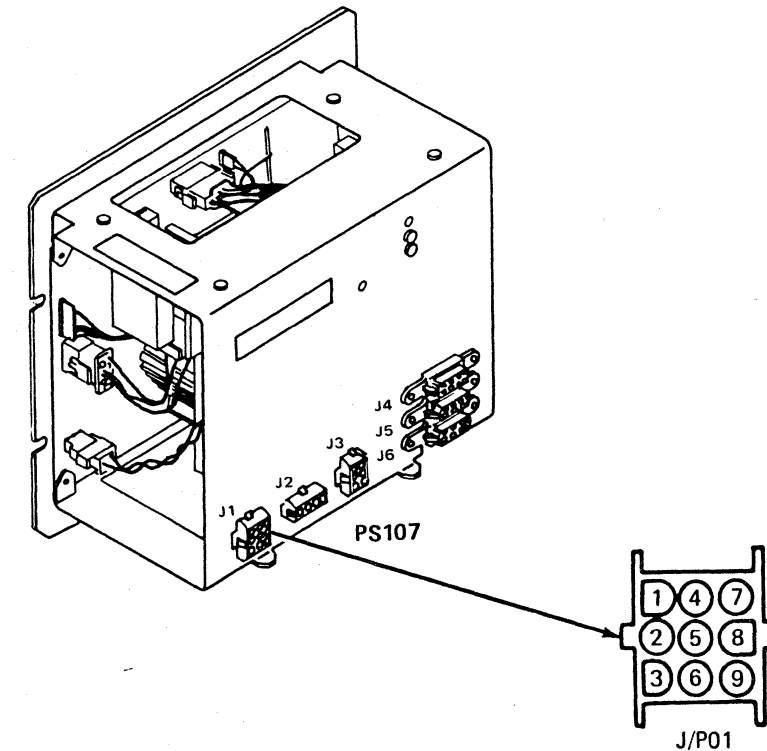
This Ref Code indicates the PS107 OC sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

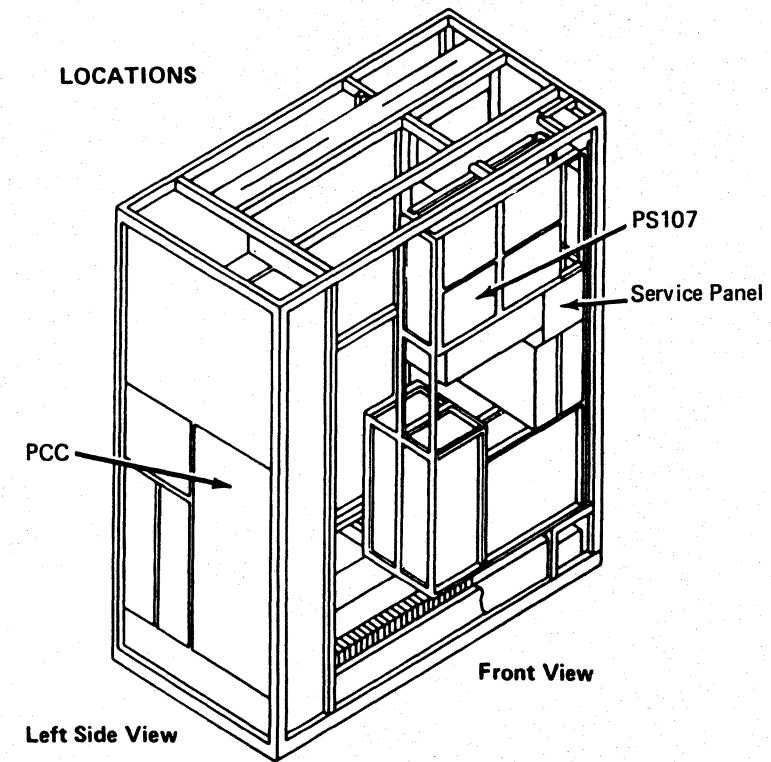
- PS107
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



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 A + lead at 01A-A2E2D13. A
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2E2 card. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2G09. B
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
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

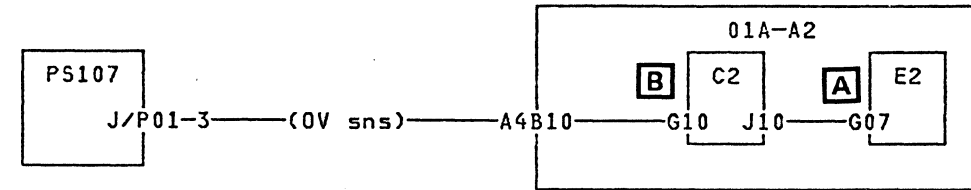


Ref Code 1131440E

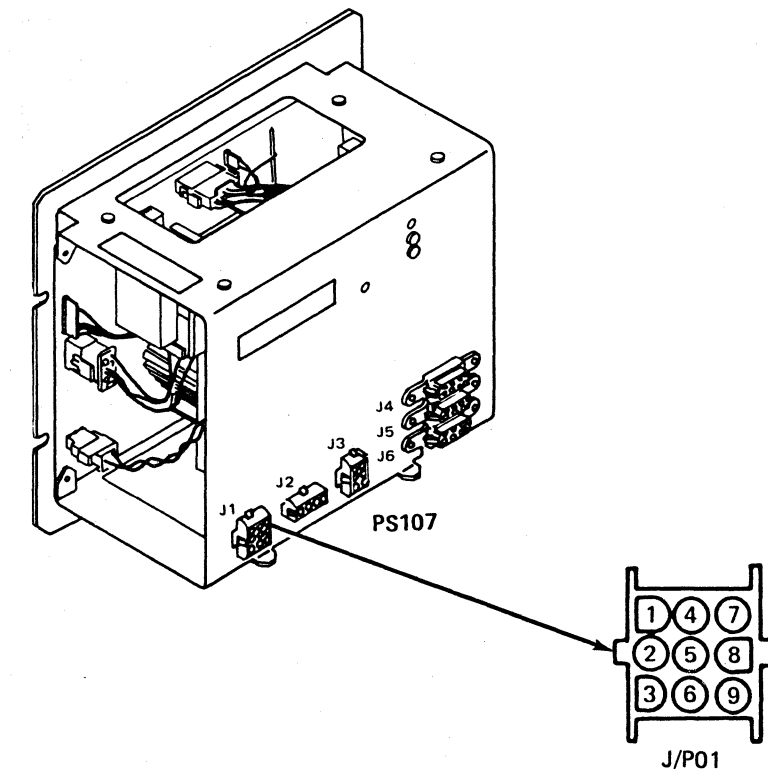
This Ref Code indicates the PS107 OV sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

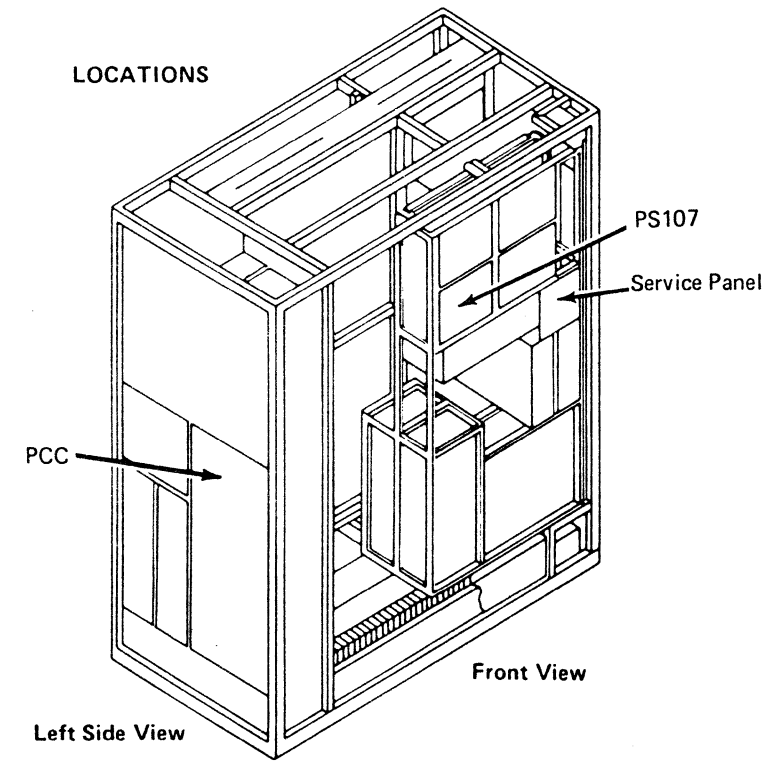
- PS107
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to 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-A2E2G07. A
2	Is voltage less than +0.8 Vdc?	1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange 01A-A2E2 card. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2G10.
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-A2C2G10.



Step	Conditions	Instructions
14	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Swap 01A-A2D2 and 01A-A2E2 cards. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2G07.
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card just swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



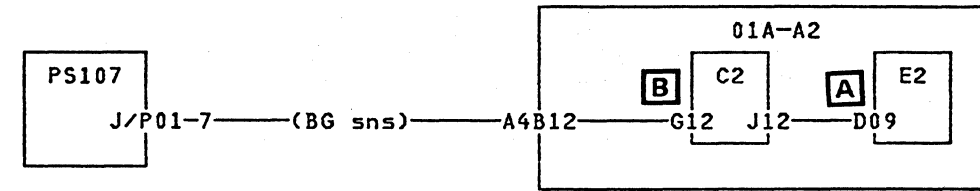
Ref Code 1131640E

PR 1301

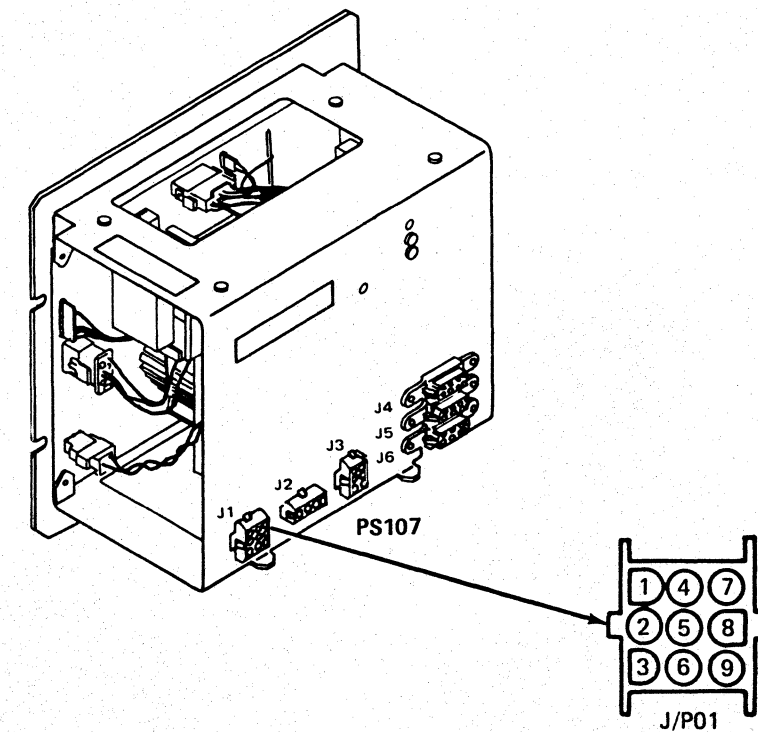
This Ref Code indicates the PS107 BG sense line was above +0.8 Vdc before bias voltages were applied to PS107.

Possible causes:

- PS107
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.

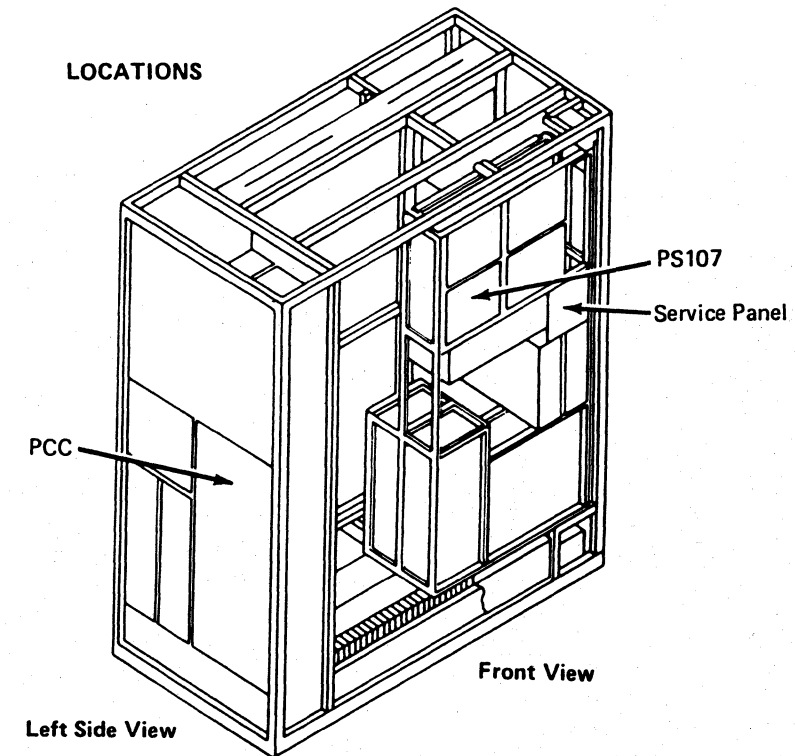


Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel power on. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2D09. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. 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. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.



PR 1301

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



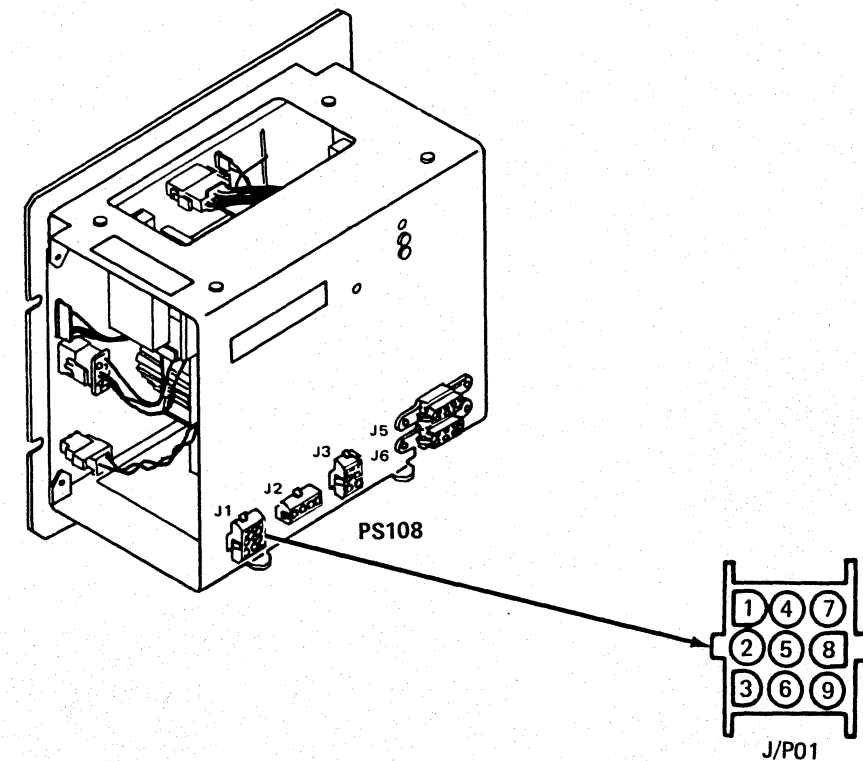
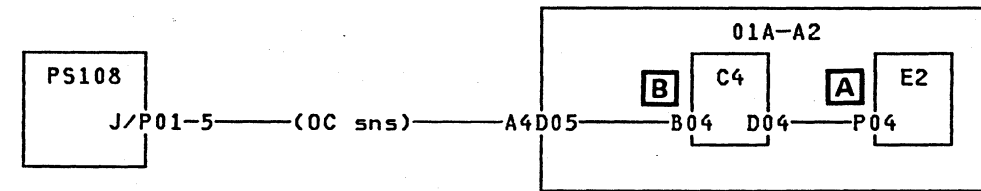
Ref Code 1131840E

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

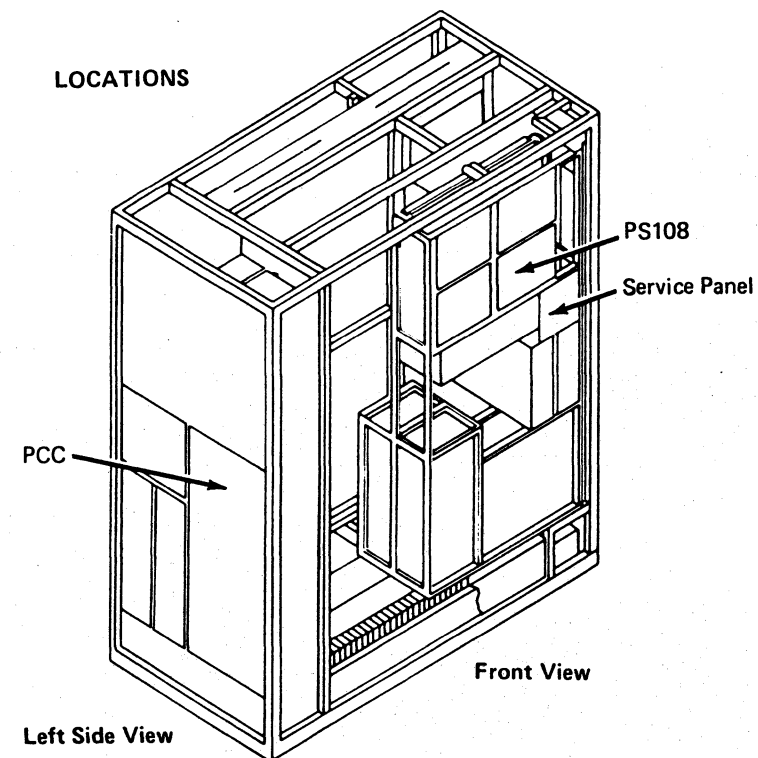
Possible causes:

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

Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2P04. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 B + lead at 01A-A2C4B04. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card just swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

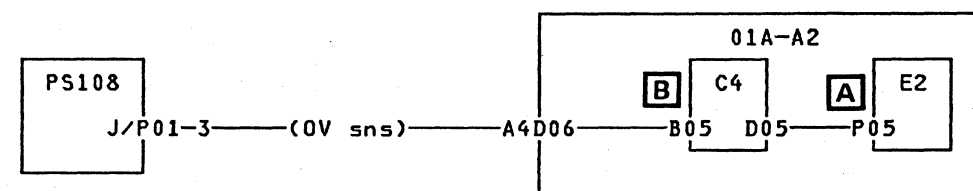


Ref Code 1131940E

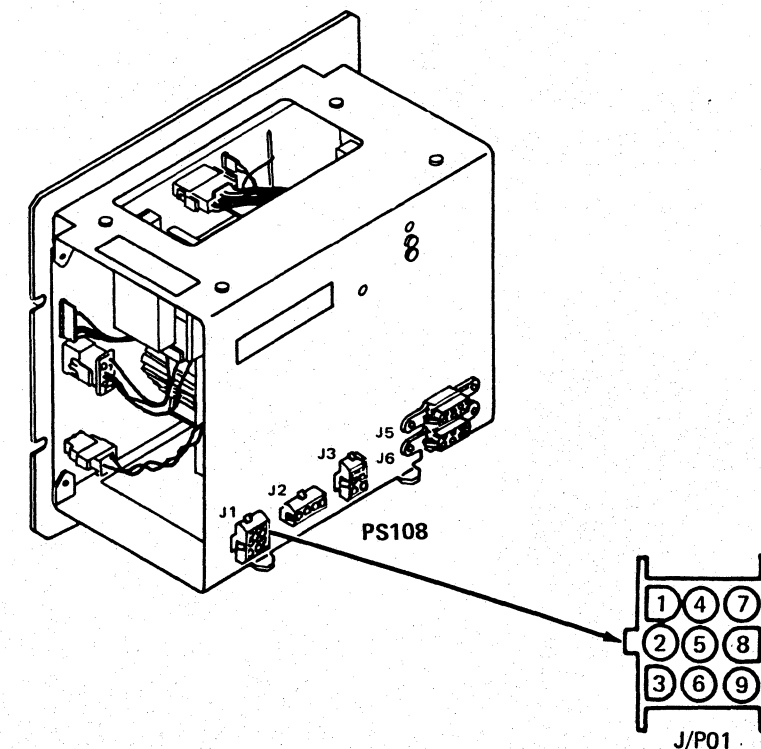
This Ref Code indicates the PS108 OV sense line was above +0.8 Vdc before bias voltages were applied to PS108.

Possible causes:

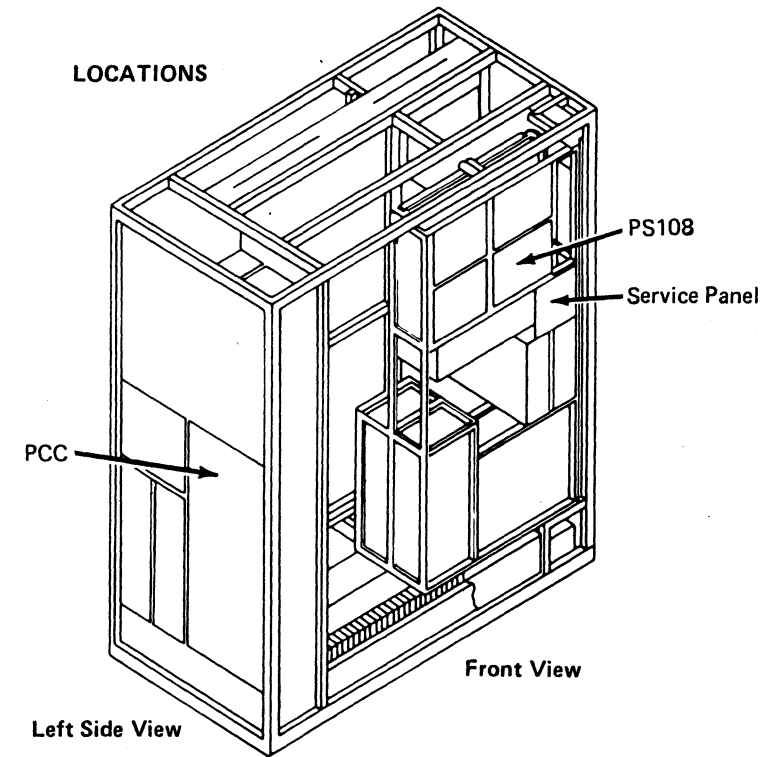
- PS108
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C4 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2P05. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 B + lead at 01A-A2C4B05. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card just swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



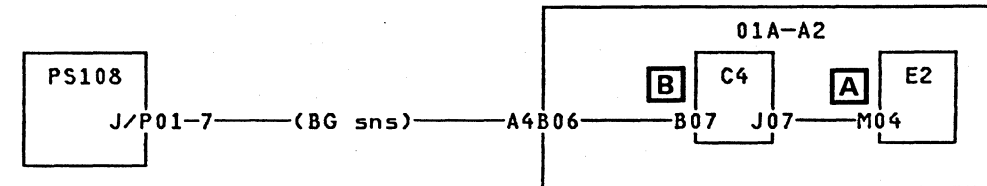
Seq CA250	PN 0445924 Pg 1 of 1	EC A02214 15 SEP 83				
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Ref Code 1132240E

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

Possible causes:

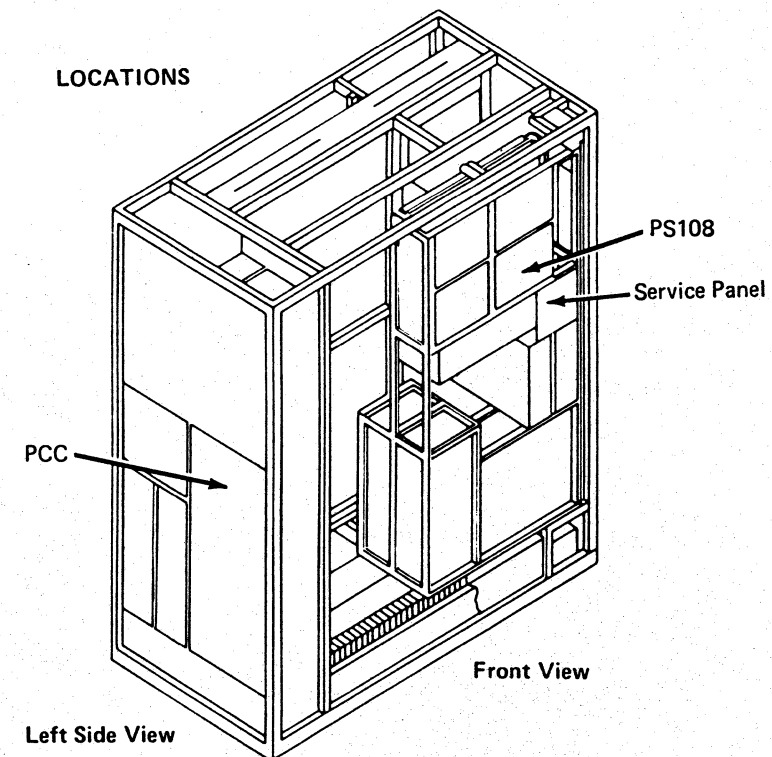
- PS108
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C4 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2M04. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C4D08 B + lead at 01A-A2C4B07. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.

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

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

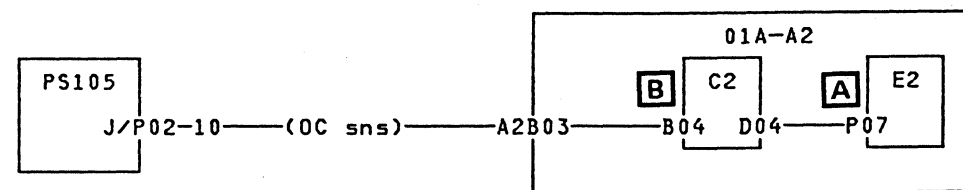


Ref Code 1132540E

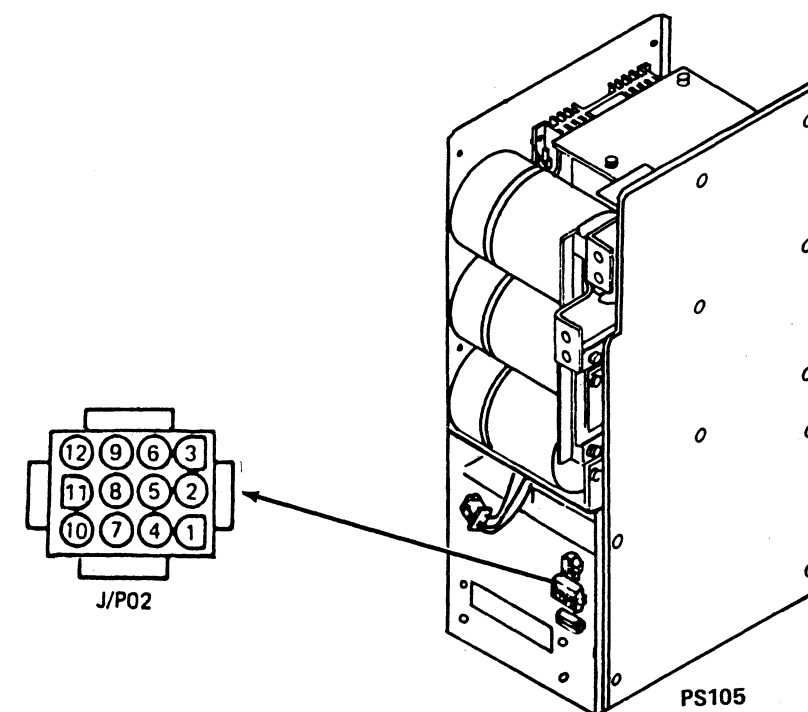
This Ref Code indicates the PS105 OC sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

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

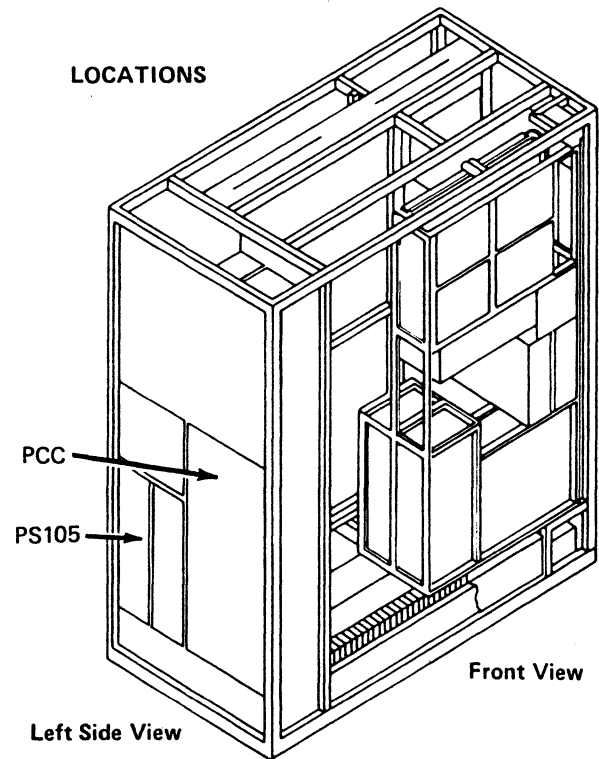


Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CE Mode switch to CE Mode. 3. Press service panel Power On. 4. Measure for +5 Vdc at the following points: - lead at 01A-A2E2D08 A + lead at 01A-A2E2P07. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set CB1 and CB2 off. 3. Exchange 01A-A2E2 card. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2B04. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.



Seq CA260	PN 0445926 Pg 1 of 2	EC A02214 15 SEP 83	EC A02219 29 FEB 84			
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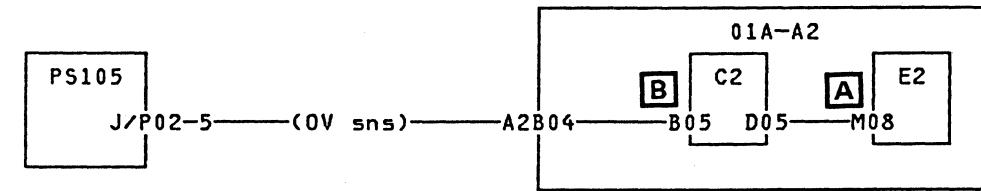
Step	Conditions	Instructions
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.



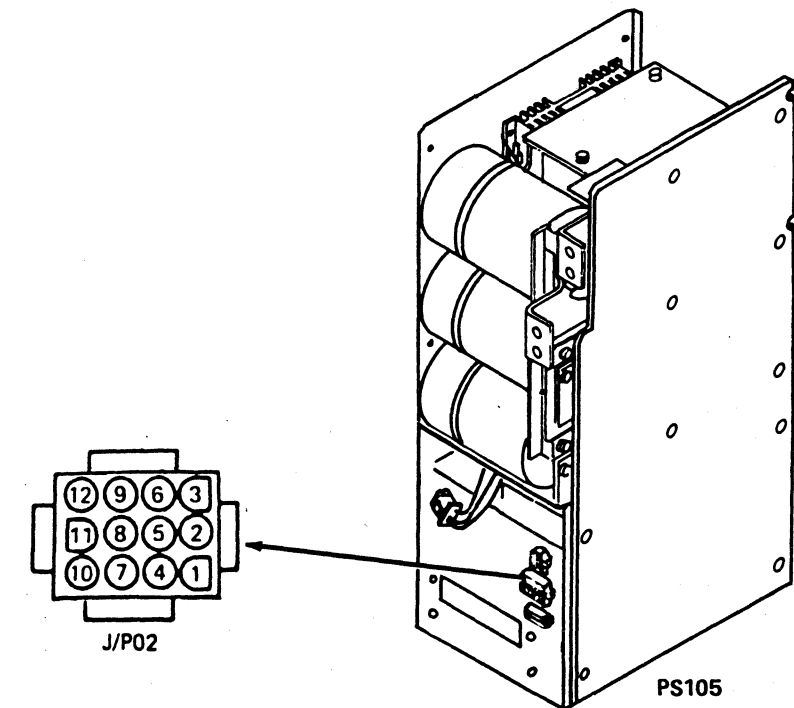
This Ref Code indicates the PS105 OV sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

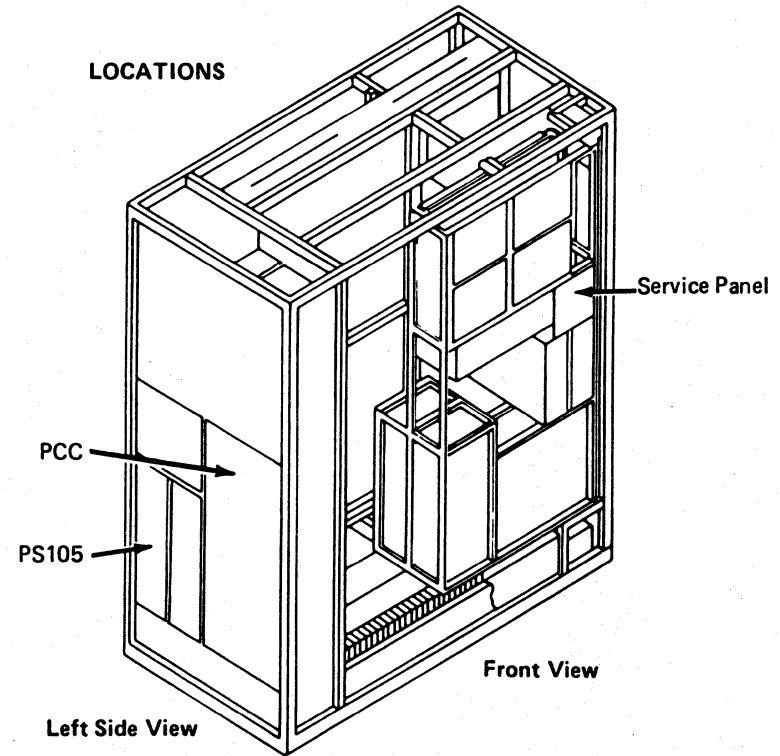
- PS105
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2M08.
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2B05.
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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
15	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 1. Set service panel Power Off switch to Power Off and then back to Normal. 2. Set PCC CB1 and CB2 off. 3. Exchange card swapped into the 01A-A2D2 position. 4. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
16	Go to Instructions column.	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.

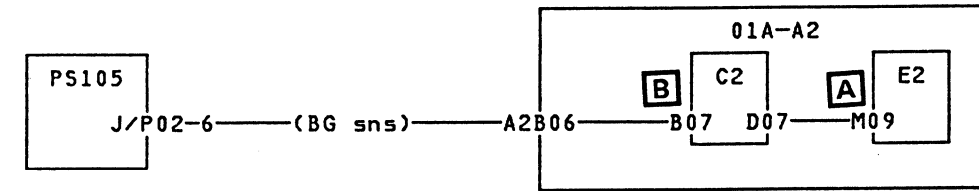


Ref Code 1132840E

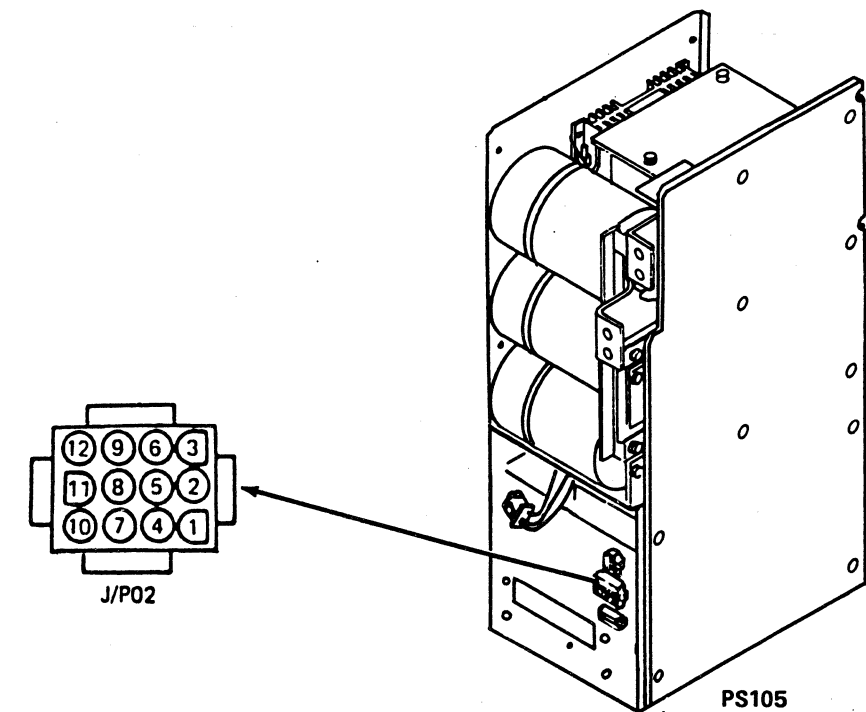
This Ref Code indicates the PS105 BG sense line was above +0.8 Vdc before bias voltages were applied to PS105.

Possible causes:

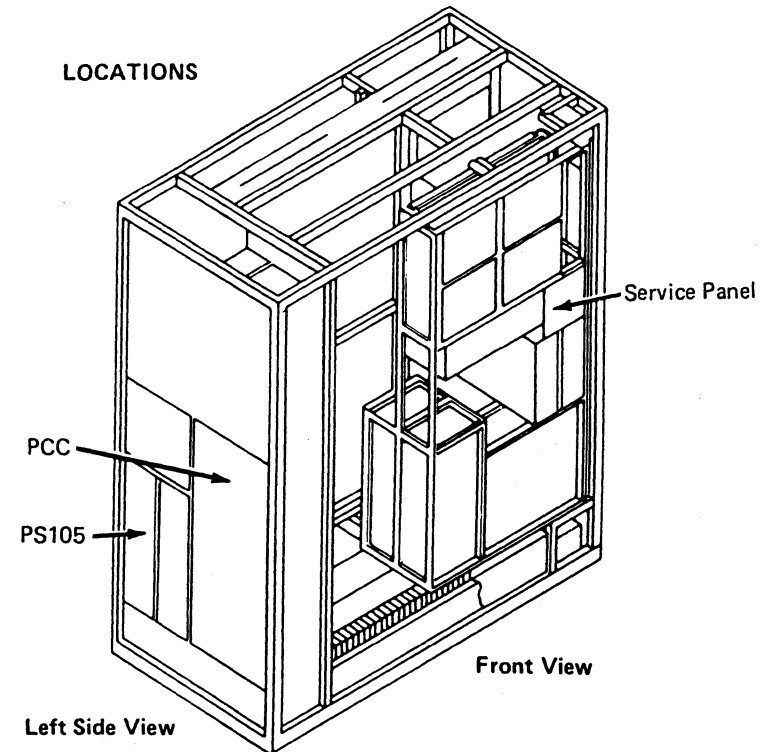
- PS105
- 01A-A2 board
- 01A-A2E2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2M09. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2B07. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.



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



Seq CA280	PN 0445722 Pg 3 of 3	EC A02214 15 SEP 83	EC A02219 29 FEB 84			
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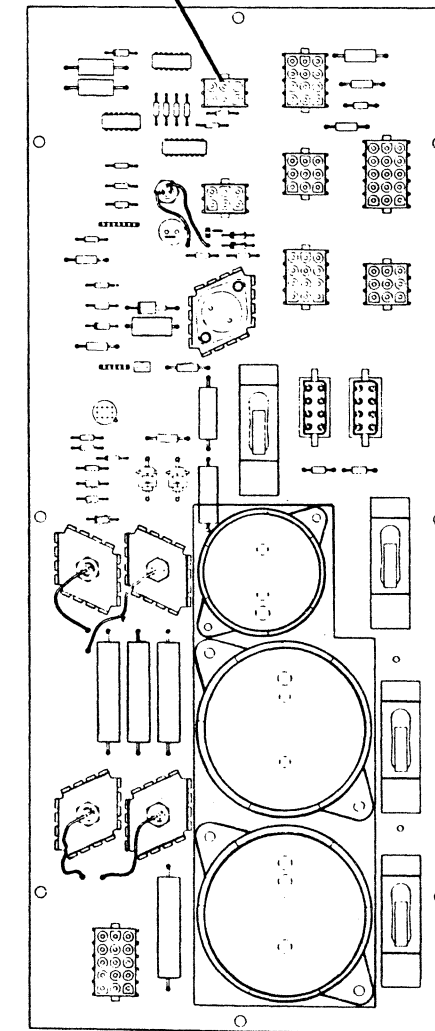
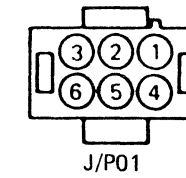
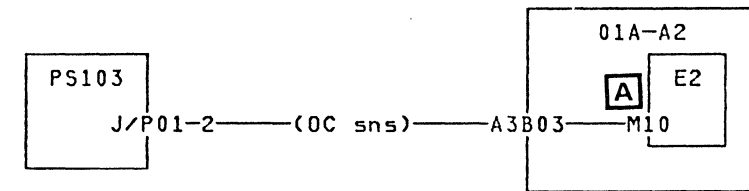
Ref Code 1132940E

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.	<ol style="list-style-type: none"> 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. A
2	Is voltage +0.8 Vdc or less.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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.



PS103

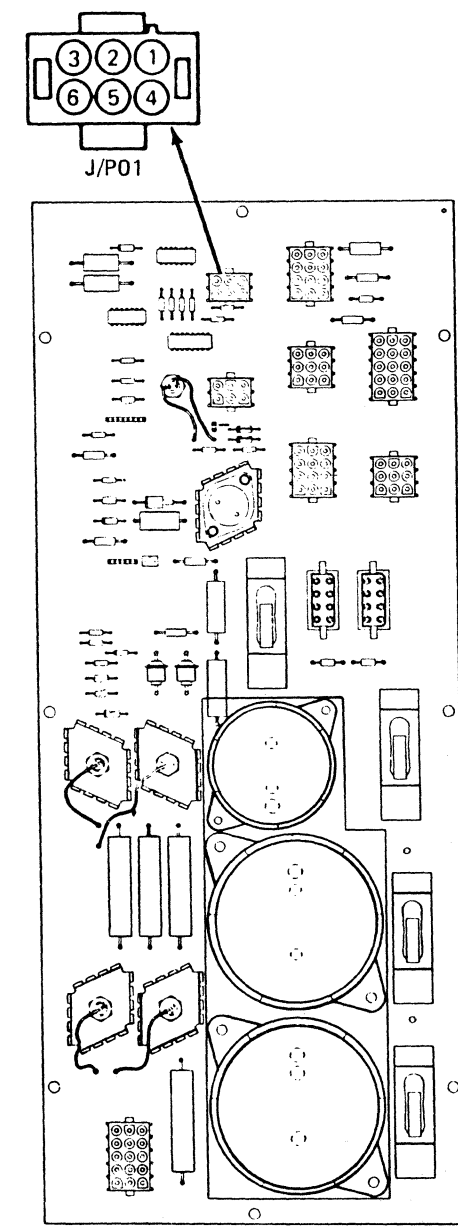
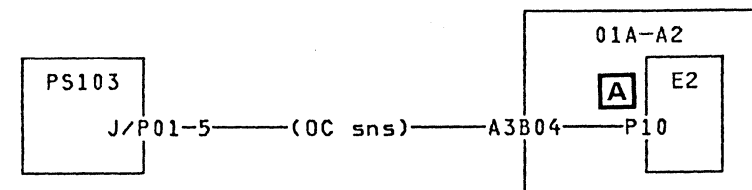
Ref Code 1133140E

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 Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2E2P10. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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 +5 Vdc at the following points: - lead at 01A-A2E2D08 + lead at 01A-A2E2P10.



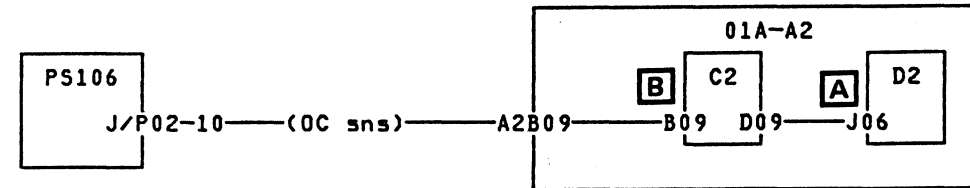
PS103

Ref Code 1133440E

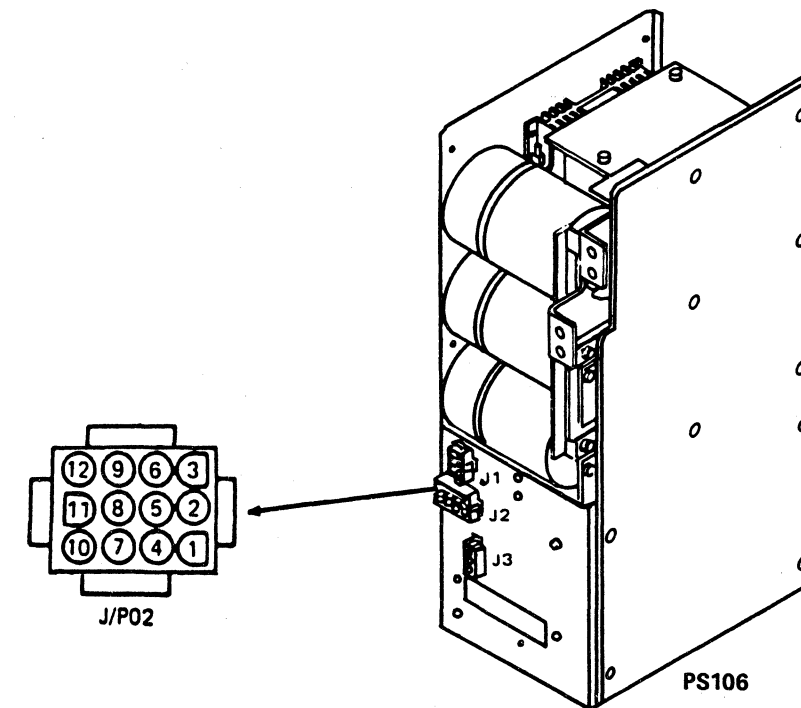
This Ref Code indicates the PS106 OC sense line was above +0.8 Vdc before bias voltages were applied to PS106.

Possible causes:

- PS106
- 01A-A2 board
- 01A-A2D2 sense card
- 01A-A2C2 optoisolator card.



Step	Conditions	Instructions
1	Go to Instructions column.	<ol style="list-style-type: none"> 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 A + lead at 01A-A2D2J06. A
2	Is voltage less than +0.8 Vdc?	<ol style="list-style-type: none"> 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. Set PCC CB1 and CB2 on. 5. Go to page PR 5001.
3	Go to Instructions column.	Measure for +5 Vdc at the following points: - lead at 01A-A2C2D08 B + lead at 01A-A2C2B09. B
4	Is voltage less than +0.8 Vdc?	Go to step 12.
5	Go to Instructions column.	<ol style="list-style-type: none"> 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.



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

