017
The feature power supply D is bad.
Reconnect the AC cable to TB8.
Reconnect J24.
Reconnect the minibus connectors.
Remove jumper.

018
-Set Power to 0 (operator panel).
Connect the CE multimeter from J23-1, J23-2, J23-3 (05-210), and J24-9(+) to PDTB2-7 and PDTB2-8(-) (05-360).
Does the CE multimeter read less than 1 ohm for each connection?
Y N

019
The cable from J23 to J24 is bad.
Reconnect the minibus connectors to the A-A1 board.
Remove jumper.

020
-Set Power to 0 (operator panel).
Connect the CE multimeter from J23-4, J23-5, J23-6 (05-210), and J24-10(+) to DC ground(-) (05-360).
Does the CE multimeter read less than 1 ohm for each connection?
Y N

021
The cable from J23 to J24 is bad.
Reconnect the minibus connectors to the A-A1 board.
Remove jumper.

022
-Set Power to 0 (operator panel).
Connect the CE multimeter from PDTB2-7(+) to DC ground(-) (05-360).
Does the CE multimeter read more than 10 k ohms?
Y N

023
The cable from J23 to J24 is bad.
Reconnect the minibus connectors to the A-A1 board.
Remove jumper.

024
The feature power supply D is bad.
Reconnect J23.
Reconnect J24.
Reconnect the minibus connectors.
Remove jumper.

025
-Set Power to 0 (operator panel).
Reconnect the minibus connectors to the A-A1 board.
-Set Power to 1 (operator panel).
Connect the CE multimeter from J24-9(+) to J24-10(-) on the cable.
Does the CE multimeter read more than 4.5 Vdc?
Y N

026
-Set Power to 0 (operator panel).
Reconnect J24 (05-240).
Remove jumper.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

027
Probe from C-A1B2S08(+) to ground(-) (see Note 4).
-Set the Latch switch to the Down position (General logic probe II).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).

```
Up   Light: On
Down Light: On
```

(Step 027 continues)

Note 4: Connect the power leads to any D03(+) and D08(-) on the C-A1 power logic board for probe power.

(Step 027 continued)
Are the lights correct?
Y N

028
Remove J24.
Connect the CE multimeter from J24-7 on the cable (05-210) to ground (-).

Does the CE multimeter read more than +4 Vdc?
Y N

029
Connect the CE multimeter from C-A1B2S04(+) to ground(-).
Does the CE multimeter read more than +4 Vdc?
Y N

030
Bad protect card C-A1B2.

031
Check for an open or short circuit in net YA142AA05 (see FSL Vol D).

032
The feature power supply D is bad.

033
Bad protect card C-A1B2.

034
A loose cable was the only problem.

035
-Set Power to 0 (operator panel).
Reconnect J24 (05-240).
Remove jumper.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

When this problem is fixed, you may determine the OC error.

036
The feature power supply D is bad.

037
A loose cable was the only problem.

FEATURE POWER SUPPLY D OV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

001
(Entry Point A)
Jumper C-A1A4B09 to C-A1A4B11.
Remove J23 (05-240).
Remove J24 (05-240).
-Set Power to 1 (operator panel).

MAP DESCRIPTION:
This MAP locates the failing FRU that causes the OV error.

ENTRY CONDITIONS:
The error data was recorded. Control Supply Status indicator lights on Lamp test. An OV error is indicated on feature power supply D.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

Does the machine power on?
Y N

002
Remove C-A1B2.
Connect the CE multimeter from C-A1A4B10(+) to C-A1A4D08(-).
Does the CE multimeter read more than 1 k ohms?
Y N

003
The YA142AA06 net has a short circuit.
Reconnect J23 and J24.
Remove jumper.

FEATURE D

5340 SYSTEMS UNIT

004
Bad protect card C-A1B2.
Remove jumper.
Reconnect J23 and J24.

005
-Set Power to 0 (operator panel).
Reconnect J23.
Remove the 3 minibus connectors from the left side of the A-A1 board.
Connect the CE multimeter from J24-9(+) to J24-10(-) on the cable (05-210).
-Set Power to 1 (operator panel).
Does the CE multimeter read more than 6.2 Vdc?
Y N

006
-Set Power to 0 (operator panel).
Reconnect the 3 minibus connectors to the left side of the A-A1 board.
-Set Power to 1 (operator panel).
Connect the CE multimeter from J24-9(+) to J24-10(-) on the cable (05-210).
Does the CE multimeter read between 4.5 Vdc and 5.5 Vdc?
Y N

007
-Set Power to 0 (operator panel).
Connect the CE multimeter from J23-4, J23-5, J23-6 (05-210), and J24-10(+) to DC ground(-) (05-360).
Does the CE multimeter read less than 1 ohm for each connection?
Y N

008
The cable from J23 to J24 is bad.
Remove jumper.

009
The feature power supply D is bad.
Remove jumper.

010
-Set Power to 0 (operator panel).
Reconnect J24.
Remove jumper.
-Set Power to 1 (operator panel).
Does the machine power up?
Y N

011
The feature power supply D is bad.

012
A loose cable was the only problem.

013
The feature power supply D is bad.
Remove jumper.
Reconnect the minibus connectors.

FEATURE POWER SUPPLY D OC

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0519	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	007	0586	A

001
(Entry Point A)
Jumper C-A1A4B09 to C-A1A4B11.
Disconnect J23 (05-240).
Disconnect J24 (05-240).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).

MAP DESCRIPTION:
This MAP determines the cause of an OC power check.

ENTRY CONDITIONS:
An OC error is indicated of feature power supply D with the load disconnected.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

Does the machine power on?
Y N

002
Remove card C-A1B2.
Connect the CE multimeter from C-A1A4B12(+) to C-A1A4D08(-).

Does the CE multimeter read more than 1 ohm?
Y N

003
The YA142AA05 net has a short circuit.
Reconnect J23.
Reconnect J24.
Remove jumper.

2 2
A B

004
Bad protect card C-A1B2.
Reconnect J23.
Reconnect J24.
Remove jumper.

005
-Set Power to 0 (operator panel).
Connect the CE multimeter from PDTB2-7 to ground (05-360).
Does the CE multimeter read more than 1 k ohm?
Y N

006
The cable from J23 to J24 is bad.
Remove jumper.

007
Reconnect J23.
Remove jumper.
Go To Map 0586, Entry Point A.

STORAGE CARD OC ISOLATION

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0519	A	1	001

001
(Entry Point A)
Remove A-A1M4, A-A1N4, A-A1P4 and A-A1Q4.
-Set Power to 1 (operator panel).

Does the machine power on?
Y N

002
Remove A-A1R4 and A-A1S4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

003
Remove A-A1T4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

2A 2B 2C 2D

MAP DESCRIPTION:
This MAP isolates a short circuit in the load.

ENTRY CONDITIONS:
The cables are connected. The problem is isolated to 8 storage cards.

START CONDITIONS:
Before starting this MAP, perform the operations in MAP 0519.

LOGIC CARDS TESTED:
A-A1M4, A-A1N4, A-A1P4, A-A1Q4, A-A1R4, A-A1S4, A-A1T4, A-A1U4

OC ISOLATION

5340 SYSTEMS UNIT

004
Remove A-A1U4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

005
Bad board.
A-A1.

006
Bad card
A-A1U4.

007
Bad card
A-A1T4.

008
Reinstall card A-A1S4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

009
Bad card
A-A1S4.

010
Bad card
A-A1R4.

011
Reinstall cards A-A1P4 and A-A1Q4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

012
Remove A-A1P4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

E F G

013
Bad card
A-A1Q4.

014
Bad card
A-A1P4.

015
Reinstall card A-A1N4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

016
Bad card
A-A1N4.

017
Bad card
A-A1M4.

FEATURE PWR SUPPLY B +5V LEVEL OV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	003	0580	A

001
(Entry Point A)
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
JUMPER FROM C-A1B2G13 TO C-A1B2J08 (SEE NOTE 1).
DISCONNECT THE LOADS FROM PDTB1-1.
CONNECT THE CE MULTIMETER FROM PDTB1-1 (+) TO THE GROUND PLATE (-) (05-360) ON THE DISTRIBUTION ASSEMBLY (05-220).
-SET THE 'IPO' SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER (SEE NOTE 2).

DOES THE CE MULTIMETER READ BETWEEN 4.6 AND 5.8 VDC (IF THE LINE IS OPEN A -5 VDC APPEARS)?

Y N

2 2
A B

MAP DESCRIPTION:
THIS MAP LOCATES A FAILING FRU FOR FEATURE POWER SUPPLY B (+5V LEVEL OV) OR GOES TO THE PROTECTION MAP IF NO FAULT EXISTS.

ENTRY CONDITIONS:
FAULT DATA WAS RECORDED.
OV FAULT WAS INDICATED ON THE +5V LEVEL.
CONTROL SUPPLY STATUS INDICATOR LIGHTS WITH LAMP TEST.

START CONDITIONS:
NONE
LOGIC CARDS TESTED:
NONE

NOTE 1:
THIS JUMPER PERMITS RELAY K1 TO BE CONTROLLED BY THE IPO SWITCH.

NOTE 2:
MOMENTARILY IS FROM 3 TO 5 SECONDS OR JUST LONG ENOUGH TO GET A READING.

POWER SUPPLY B

5340 SYSTEMS UNIT

002

FEATURE POWER SUPPLY B IS BAD (05-230, 05-600).
-SET THE IPO SWITCH TO '0' (LEFT SIDE) AND REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
RECONNECT LOADS TO PDTB1-1.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

003

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
RECONNECT LOADS TO PDTB1-1.
WITH A +5V LEVEL OV ON FEATURE POWER SUPPLY B,
Go To Map 0580, Entry Point A.

FEATURE PWR SUPPLY A ALL LEVELS UV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0514	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	009	0580	A

001
(Entry Point A)
-SET 'POWER' TO '0' (OPERATOR PANEL).
-SET THE IPO SWITCH TO '0' (LEFT SIDE) (05-230).
JUMPER FROM C-A1B2G13 TO C-A1B2J08 (SEE NOTE 1).
CONNECT THE CE MULTIMETER FROM PDTB1-3 (+) TO THE GROUND PLATE (-) (05-360) ON THE DISTRIBUTION ASSEMBLY (05-220).
-SET THE IPO SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER (SEE NOTE 2).

DOES THE CE MULTIMETER READ FROM 11.0 TO 13.5 VDC?

Y N

2 A 2 B

MAP DESCRIPTION:
THIS MAP LOCATES A FAILING FRU FOR FEATURE POWER SUPPLY A (ALL LEVELS UV) OR GOES TO THE PROTECTION MAP IF NO FAULT EXISTS.

UV FAULT INDICATED FOR ALL FEATURE POWER SUPPLY A LEVELS.

START CONDITIONS:
BEFORE STARTING THIS MAP, PERFORM THE OPERATIONS IN MAP 0514.

LOGIC CARDS TESTED:
NONE

NOTE 1:
THIS JUMPER PERMITS RELAY K1 TO BE CONTROLLED BY THE IPO SWITCH.
NOTE 2:
MOMENTARILY IS FROM 3 TO 5 SECONDS OR JUST LONG ENOUGH TO GET A READING.

POWER SUPPLY A

5340 SYSTEMS UNIT

002
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
DISCONNECT J8 (05-240) FROM THE DISTRIBUTION ASSEMBLY.
CONNECT THE CE MULTIMETER FROM J8-1 (+) TO J8-3 (-) ON THE CABLE FROM FEATURE POWER SUPPLY A (05-210).
-SET THE IPO SWITCH TO '1' (LEFT SIDE).
DOES THE CE MULTIMETER READ FROM 11.0 TO 13.5 VDC?
Y N

003
FEATURE POWER SUPPLY A IS BAD (05-220, 05-600).
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

004
J8 WAS LOOSE
---OR---
THE DISTRIBUTION PC BOARD ASSEMBLY IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

005
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
CONNECT THE CE MULTIMETER FROM PDTB1-5 (-) TO THE GROUND PLATE (+) ON THE DISTRIBUTION ASSEMBLY.
-SET THE IPO SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER.
DOES THE CE MULTIMETER READ FROM 11.0 TO 13.5 VDC?
Y N

C D

C D

006
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
DISCONNECT J8 (05-240) FROM THE DISTRIBUTION ASSEMBLY.
CONNECT THE CE MULTIMETER FROM J8-4 (+) TO J8-2 (-) ON THE CABLE FROM FEATURE POWER SUPPLY A (05-210).
DOES THE CE MULTIMETER READ FROM 11.0 TO 13.5 VDC?
Y N

007
FEATURE POWER SUPPLY A IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

008
J8 WAS LOOSE
---OR---
THE DISTRIBUTION PC BOARD ASSEMBLY IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

009
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
WITH THE +12V LEVEL UV AND -12V LEVEL UV ON THE FEATURE POWER SUPPLY A,
Go To Map 0580, Entry Point A.

FEATURE PWR SUPPLY B +5V LEVEL UV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0516	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	007	0580	A

001
(Entry Point A)

MAP DESCRIPTION:
This MAP locates a failing FRU for feature power supply B (+5V level UV) or goes to the Protection MAP if no fault exists.

ENTRY CONDITIONS:
Fault data was recorded.
A UV fault was indicated on the +5V level.
Control supply status indicator lights with lamp test.

START CONDITIONS:
None

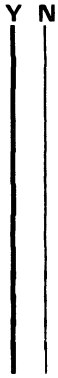
LOGIC CARDS TESTED:
None

Note 1: This jumper permits relay K1 to be controlled by the IPO switch.

Note 2: Momentarily is from 3 to 5 seconds or just long enough to get a reading.

-Set Power to 0 (operator panel).
-Set the IPO switch to 0 (left side) (05-230).
Jumper from C-A1B2G13 to C-A1B2J08 (see Note 1).
Connect the CE multimeter from PDTB1-1 (+) to the ground plate (-) (05-360) on the distribution assembly (05-220).
-Set the IPO switch to 1 (left side) momentarily while observing the CE multimeter (see Note 2).
Does the CE multimeter read between +4.6 and +5.6 Vdc? (if the line is open a -5 Vdc appears.)

Y N



3 2
A B

002

-Set the IPO switch to 0 (left side).
Disconnect J7 (05-240) from the distribution assembly.
Connect the CE multimeter between J7-2 (+) and J7-3 (-) of the cable from feature power supply B (05-210).
-Set the IPO switch to 1 (left side).
Does the CE multimeter read between 4.65 and 5.8 Vdc?
Y N

003

Feature power supply B is bad.
-Set the IPO switch to 0 (left side).
Remove the jumper from C-A1B2G13 to C-A1B2J08.
-Set the IPO switch to 1 (left side).

004

-Set the IPO switch to 0 (left side).
Remove the plastic insulators from the AC capacitor C4 (05-600) (see Note 4).

DANGER

Voltages up to 660 Vac are present on the AC capacitor when power is at the ferroresonant transformer. Verify that power was removed and short circuit the capacitor terminals together before touching the terminals.

Disconnect the leads from the AC capacitor.
Using the CE multimeter on the 'R X 1K' scale, check the capacitor by placing probes across the terminals.
Is the AC capacitor C4 good (see Note 3)?
Y N

005

Feature power supply B is bad.
Remove the jumper from C-A1B2G13 to C-A1B2J08.
-Set the IPO switch to 1 (left side).

Note 3: If the capacitor is good, the CE multimeter should deflect to or near 0 ohms and then return to a high resistance.

Note 4: If feature power supply A is also installed, do one of the following to permit access to C4:
Loosen the mounting screws on feature power supply A and slide it toward the center of the machine if space permits.
---or---
Loosen the mounting screws on feature power supply B and slide it half way out of the machine.

006

J7 was loose

---or---

The distribution PC board assembly is bad.

-Set the IPO switch to 0 (left side).

Remove the jumper from C-A1B2G13 to C-A1B2J08.

-Set the IPO switch to 1 (left side).

007

-Set the IPO switch to 0 (left side).

With +5V level UV on feature power supply B,

Go To Map 0580, Entry Point A.

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0515	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	007	0580	A

001
(Entry Point A)
-SET 'POWER' TO '0' (OPERATOR PANEL).
-SET THE IPO SWITCH TO '0' (LEFT SIDE) (05-230).
JUMPER FROM C-A1B2G13 TO C-A1B2J08 (SEE NOTE 1).
CONNECT THE CE MULTIMETER FROM PDTB1-3 (+) TO THE GROUND PLATE (-) (05-360) ON THE DISTRIBUTION ASSEMBLY (05-220).
-SET THE IPO SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER (SEE NOTE 2).

DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?

Y N

3 2
A B

MAP DESCRIPTION:
THIS MAP LOCATES A FAILING FRU FOR FEATURE POWER SUPPLY A (+12V LEVEL UV) OR GOES TO THE PROTECTION MAP IF NO FAULT EXISTS.

ENTRY CONDITIONS:
FAULT DATA HAS BEEN RECORDED.
UV FAULT WAS INDICATED ON +12V LEVEL. UV FAULTS ARE NOT INDICATED FOR ALL FEATURE POWER SUPPLY A LEVELS.
CONTROL SUPPLY STATUS INDICATOR LIGHTS WITH LAMP TEST.

START CONDITIONS:
NONE

LOGIC CARDS TESTED:
NONE

NOTE 1:
THIS JUMPER PERMITS RELAY K1 TO BE CONTROLLED BY THE IPO SWITCH.

NOTE 2:
MOMENTARILY IS FROM 3 TO 5 SECONDS OR JUST LONG ENOUGH TO GET A READING.

002

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
DISCONNECT J8 (05-240) FROM THE DISTRIBUTION ASSEMBLY.
CONNECT THE CE MULTIMETER FROM J8-1 (+) TO J8-3 (-) ON THE CABLE FROM FEATURE POWER SUPPLY A. (05-210)
-SET THE IPO SWITCH TO '1' (LEFT SIDE).
DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?
Y N

003

FEATURE POWER SUPPLY A IS BAD (05-220, 05-600.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

004

J8 WAS LOOSE
---OR---
THE DISTRIBUTION PC BOARD ASSEMBLY IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

005

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE ALL WIRES FROM THE C1+ TERMINAL OF FEATURE POWER SUPPLY A (05-600, 05-230) (SEE NOTE 3).
SET THE CE MULTIMETER ON THE TIMES ONE SCALE.
CONNECT THE CE MULTIMETER BETWEEN C1+ (+) AND C1- (-) TERMINALS.

IS THE CAPACITOR GOOD (SEE NOTE 4)?
Y N

006

FEATURE POWER SUPPLY A IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

007

RECONNECT ALL WIRES JUST REMOVED FROM C1 + TERMINAL.
WITH +12V LEVEL UV ON FEATURE POWER SUPPLY A,
Go To Map 0580, Entry Point A.

NOTE 3:
IF FEATURE POWER SUPPLY B IS ALSO INSTALLED, DO ONE OF THE FOLLOWING TO PERMIT ACCESS TO C1:
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY B AND SLIDE IT TOWARD THE CENTER OF THE MACHINE IF SPACE PERMITS.
---OR---
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY A AND SLIDE IT HALF WAY OUT OF THE MACHINE.

NOTE 4:
IF THE CAPACITOR IS GOOD, THE CE MULTIMETER SHOULD DEFLECT TO OR NEAR 0 OHMS AND THEN RETURN TO A HIGH RESISTANCE.

FEATURE PWR SUPPLY A -12V LEVEL UV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0515	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	007	0580	A

001
(Entry Point A)
-SET 'POWER' TO '0' (OPERATOR PANEL).
-SET THE IPO SWITCH TO '0' (LEFT SIDE) (05-230).
JUMPER FROM C-A1B2G13 TO C-A1B2J08 (SEE NOTE 1.
CONNECT THE CE MULTIMETER FROM PDTB1-5 (-) TO THE GROUND PLATE (+) (05-360) ON THE DISTRIBUTION ASSEMBLY (05-220).
-SET THE IPO SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER (SEE NOTE 2).

MAP DESCRIPTION:
THIS MAP LOCATES A FAILING FRU FOR FEATURE POWER SUPPLY A, (-12V LEVEL UV) OR GOES TO THE PROTECTION MAP IF NO FAULT EXISTS.

ENTRY CONDITIONS:
FAULT DATA HAS BEEN RECORDED.
UV FAULT WAS INDICATED ON -12V LEVEL. UV FAULTS ARE NOT INDICATED FOR ALL FEATURE POWER SUPPLY A LEVELS.
CONTROL SUPPLY STATUS INDICATOR LIGHTS WITH LAMP TEST.

START CONDITIONS:
NONE

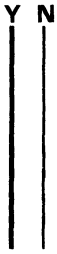
LOGIC CARDS TESTED:
NONE

NOTE 1:
THIS JUMPER PERMITS RELAY K1 TO BE CONTROLLED BY THE IPO SWITCH.

NOTE 2:
MOMENTARILY IS FROM 3 TO 5 SECONDS OR JUST LONG ENOUGH TO GET A READING.

DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?

Y N



3 2
A B

002

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
DISCONNECT J8 (05-240) FROM THE DISTRIBUTION ASSEMBLY.
CONNECT THE CE MULTIMETER FROM J8-4 (+) TO J8-2 (-) ON THE CABLE FROM FEATURE POWER SUPPLY A (05-210)
-SET THE IPO SWITCH TO '1' (LEFT SIDE).
DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?
Y N

003

FEATURE POWER SUPPLY A IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

004

J8 WAS LOOSE
---OR---
THE DISTRIBUTION PC BOARD ASSEMBLY IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

005

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE ALL WIRES FROM THE C2+ TERMINAL OF FEATURE POWER SUPPLY A (05-600) (SEE NOTE 3).
SET THE CE MULTIMETER ON THE 'R X 1' SCALE.
CONNECT THE CE MULTIMETER BETWEEN C2+ (+) AND C2- (-) TERMINALS.

NOTE 3:
IF FEATURE POWER SUPPLY B IS ALSO INSTALLED, DO ONE OF THE FOLLOWING TO PERMIT ACCESS TO C2:
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY B AND SLIDE IT TOWARD THE CENTER OF THE MACHINE IF SPACE PERMITS.
---OR---
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY A AND SLIDE IT HALF WAY OUT OF THE MACHINE.

NOTE 4:
IF THE CAPACITOR IS GOOD, THE CE MULTIMETER SHOULD DEFLECT TO OR NEAR 0 OHMS AND THEN RETURN TO A HIGH RESISTANCE.

IS THE CAPACITOR GOOD (SEE NOTE 4)?
Y N

006

FEATURE POWER SUPPLY A IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

007

RECONNECT LEADS TO C2+.
WITH -12V LEVEL UV ON FEATURE POWER SUPPLY A,
Go To Map 0580, Entry Point A.

FEATURE PWR SUPPLY A -12V LEVEL OV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	007	0580	A

001
(Entry Point A)
-SET 'POWER' TO '0' (OPERATOR PANEL).
-SET THE IPO SWITCH TO '0' (LEFT SIDE) (05-230).
JUMPER FROM C-A1B2G13 TO C-A1B2J08 (SEE NOTE 1).
DISCONNECT LOADS FROM PDTB1-4 AND PDTB1-5.
CONNECT THE CE MULTIMETER FROM PDTB1-5 (-) TO THE GROUND PLATE (+) (05-360) ON THE DISTRIBUTION ASSEMBLY (05-220).
-SET THE CE MULTIMETER ON THE 15 VDC RANGE.
-SET THE IPO SWITCH TO '1' (LEFT SIDE) MOMENTARILY WHILE OBSERVING THE CE MULTIMETER (SEE NOTE 2).

MAP DESCRIPTION:
THIS MAP LOCATES A FAILING FRU FOR FEATURE POWER SUPPLY A, (-12V LEVEL OV) OR GOES TO THE PROTECTION MAP IF NO FAULT EXISTS.

ENTRY CONDITIONS:
FAULT DATA WAS RECORDED.
OV FAULT INDICATED ON -12V LEVEL.
CONTROL SUPPLY STATUS INDICATOR LIGHTS WITH LAMP TEST.

START CONDITIONS:
NONE

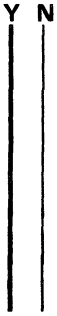
LOGIC CARDS TESTED:
NONE

NOTE 1:
THIS JUMPER PERMITS RELAY K1 TO BE CONTROLLED BY THE IPO SWITCH.

NOTE 2:
MOMENTARILY IS FROM 3 TO 5 SECONDS OR JUST LONG ENOUGH TO GET A READING.

DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?

Y N



3 2
A B

002

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
DISCONNECT J8 FROM THE DISTRIBUTION ASSEMBLY (05-240).
CONNECT THE CE MULTIMETER FROM J8-4 (+) TO J8-2 (-) ON THE CABLE FROM FEATURE POWER SUPPLY A (05-210).
-SET THE IPO SWITCH TO '1' (LEFT SIDE).
DOES THE CE MULTIMETER READ BETWEEN 11.0 AND 13.5 VDC?
Y N

003

FEATURE POWER SUPPLY A IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
RECONNECT LOADS TO PDTB1-4 AND PDTB1-5.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

004

THE DISTRIBUTION PC BOARD ASSEMBLY IS BAD.
-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE THE JUMPER FROM C-A1B2G13 TO C-A1B2J08.
RECONNECT LOADS TO PDTB1-4 AND PDTB1-5.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

005

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
REMOVE ALL WIRES FROM C2+ TERMINAL ON FEATURE POWER SUPPLY A (05-600, 05-220) (SEE NOTE 3).
-SET THE CE MULTIMETER ON THE 'R X 1' SCALE.
-CONNECT THE CE MULTIMETER FROM TERMINAL C2+ TO TERMINAL C2-.

IS THE CAPACITOR GOOD (SEE NOTE 4)?
Y N

006

FEATURE POWER SUPPLY A IS BAD.
REMOVE THE JUMPER C-A1B2G13 TO C-A1B2J08.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).

007

RECONNECT LEADS TO C2+.
WITH -12V LEVEL OV,
Go To Map 0580, Entry Point A.

NOTE 3:
IF FEATURE POWER SUPPLY B IS ALSO INSTALLED, DO ONE OF THE FOLLOWING TO PERMIT ACCESS TO C2:
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY B AND SLIDE IT TOWARD THE CENTER OF THE MACHINE IF SPACE PERMITS.
---OR---
LOOSEN THE MOUNTING SCREWS ON FEATURE POWER SUPPLY A AND SLIDE IT HALF WAY OUT OF THE MACHINE.

NOTE 4:
IF THE CAPACITOR IS GOOD, THE CE MULTIMETER SHOULD DEFLECT TO OR NEAR 0 OHMS AND THEN RETURN TO A HIGH RESISTANCE.

CONTROLLED -12V LEVEL UV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0515	A	1	001

001
(Entry Point A)
-SET 'CB1' TO 'OFF'.
REMOVE FEATURE REGULATOR CARD C-A1C4 (05-370) FROM THE POWER LOGIC BOARD (05-220).
-SET 'CB1' TO 'ON'.
-SET 'POWER' TO '1' (OPERATOR PANEL).

MAP DESCRIPTION:
THIS MAP DETERMINES IF THE BOARD OR CARD C-A1C4 IS BAD.

ENTRY CONDITIONS:
POWER CHECK WITH UV INDICATION ONLY ON -12V LEVEL (-24V LEVEL INDICATES GOOD).

START CONDITIONS:
NONE

LOGIC CARDS TESTED:
C-A1B2 AND C-A1C4

DOES THE MACHINE POWER ON?
Y N

002
BAD PROTECT CARD C-A1B2.

003
-SET 'POWER' TO '0' (OPERATOR PANEL).
CONNECT THE CE MULTIMETER FROM C-A1C4B03 (-) TO GROUND (+).
-SET 'POWER' TO '1' (OPERATOR PANEL).
DOES THE CE MULTIMETER READ MORE THAN 20 VDC?
Y N

004
NET YA080DD12 IS OPEN (SEE FSL, VOL D).

005

-SET 'POWER' TO '0' (OPERATOR PANEL).
CHECK NET YA080BB13 FOR OPEN (SEE FSL, VOL D)
IS NET YA080BB13 OPEN (SEE FSL, VOL D)?
Y N

006

BAD FEATURE REGULATOR CARD C-A1C4.

007

POWER LOGIC BOARD C-A1 IS BAD.

MISSING FEATURE SENSE CARD C4

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:
This MAP verifies that the sense card C-A1C4 is missing or repairs the problem.

ENTRY CONDITIONS:
Power check with X'99'

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2 and C-A1C4

Is feature sense card C-A1C4 installed?
Y N

002
Install feature sense card C-A1C4.

003
-Set CB1 to 0 (AC distribution box).
Jumper from C-A1B2M11 to C-A1B2P08.
-Set CB1 to 1 (AC distribution box).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).
Does the machine power up?
Y N

004
Bad protect card C-A1B2.

005

Net YA220AE1 is open (see FSL, VOL D)

---or---

Bad feature sense card C-A1C4.

MISSING FEATURE SENSE CARD C5

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:
This MAP verifies that the sense card C-A1C5 is missing or repairs the problem.

ENTRY CONDITIONS:
Power check with X'9A'

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2 and C-A1C5

Is feature sense card C-A1C5 installed?
Y N

002
Install feature sense card C-A1C5.

003
-Set CB1 to 0 (AC distribution box).
Jumper from C-A1B2G07 to C-A1B2J08.
-Set CB1 to 1 (AC distribution box).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).
Does the machine power up?
Y N

004
Bad protect card C-A1B2.

005

Net YA240AE1 is open (see FSL, VOL D)

---or---

Bad feature sense card C-A1C5.

CONTROL SUPPLY STATUS INDICATOR

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0501	A	1	001
0502	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	012	0585	A
4	014	0586	A
4	016	0594	A

001
(Entry Point A)
Remove protect card C-A1B2.
Remove cable C-A1A4T and C-A1A4B, if present.
Remove cable C-A1Z1, if present.
-Set CB1 to 1 (AC distribution box) at AC box (05-230).

MAP DESCRIPTION:
This MAP determines the cause of the control supply status indicator not working when lamp test is pressed.

ENTRY CONDITIONS:
The machine does not power up.
All control supply fuses are good.
CB is set to 0.
The power switch is set to 0.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2 and C-A1C2

Is the control supply status indicator on at the power logic board C-A1 (05-220)?

Y N

3 2
A B

002

-Set CB1 to 0 (AC distribution box).
Remove base sense card C-A1C2.
Remove feature sense or regulator card C-A1C4, if present.
Remove feature sense card C-A1C5, if present.
-Set CB1 to 1 (AC distribution box).
Connect the CE multimeter from the C-A1 board pin to ground on board C-A1 as indicated in Note 1 and compare the reading to the range as indicated in Note 2 for each level.

Note 1:

Power logic board C-A1 voltage pins

Level	Pins	Ground
+5V	C2D03	C2D08
+24V	C2D11	C2D08
-24V	C2D06	C2D08
-5V	C2J06	C2D08

Note 2:

Control supply table
See FSL VOL D

LEV	Low Range	Net
+5Vdc	+4.6Vdc	YA020JJ09
+24Vdc	+22.0Vdc	YA020JJ04
-24Vdc	-22.0Vdc	YA020JJ12
-5Vdc	-4.6Vdc	YA020JJ08

Does every level read above the low range?
Y N

003

Isolate the failing FRU (see Note 2 for net).

A C
1 2

STATUS INDICATOR

5340 SYSTEMS UNIT

PAGE 3 OF 4

004
-Set CB1 to 0 (AC distribution box).
Reinstall feature sense or regulator card C-A1C4, if present.
Reinstall feature sense card C-A1C5, if present.
Reinstall protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).
Connect the CE multimeter from C-A1B2G10 (+) to ground (-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read from 4.6 to 5.2 Vdc?
Y N

005
-Set CB1 to 0 (AC distribution box).
Reinstall base sense card C-A1C2.
The YA303BC3 net has an open circuit or short circuit to ground (see FSL, Vol D).
-Set CB1 to 1 (AC distribution box).

006
Bad base sense card C-A1C2.

007
-Set CB1 to 0 (AC distribution box).
Reinstall protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08(-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than +4 Vdc?
Y N

008
-Set CB1 to 0 (AC distribution box).
Remove the protect card C-A1B2.
Use the CE multimeter on the 'R X 1' scale.
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08(-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than 1 ohm?
Y N

D E F

D E F

MAP 0571-3

009
Bad lamp test switch
---or---
The CE140AA72 net has a short circuit to ground (see FSL, Vol D).
Isolate the bad FRU.
-Set CB1 to 1 (AC distribution box).

010
Bad protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).

011

CAUTION

-Set CB1 to 0 (AC distribution box)
If C-A1A4T is connected incorrectly with control power on, the logic of feature power supply C will be destroyed.

Reconnect cable C-A1A4T, if present.
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08(-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than +4 Vdc?
Y N

012
Go To Map 0585, Entry Point A.

013
-Set CB1 to 0 (AC distribution box).
Reconnect cable C-A1A4B, if present.
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08(-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than +4 Vdc?
Y N

4 4
G H

014
Go To Map 0586, Entry Point A.

015
-Set CB1 to 0 (AC distribution box).
Reconnect cable C-A1Z1, if present.
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08(-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than +4 Vdc?
Y N

016
Go To Map 0594, Entry Point A.

017
Bad protect card C-A1B2.

BAD FUSE ON CONTROL SUPPLY

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0501	A	1	001
0502	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
6	030	0500	A
3	005	0533	A
6	024	0585	A
6	026	0586	A
6	028	0594	A

001
(Entry Point A)
Remove J21 (05-240) from the control supply (see Note 1).
Read Note 2.
-Set CB1 to 1 (AC distribution box) at AC box (05-230).
Connect the CE multimeter from the J21 voltage pin to the J21 ground pin on the control supply PC board (05-210) as indicated in Note 3 and compare the reading to the range in Note 4 for each level (05-320).

Does every level read above the low range?
Y N

002
The control supply is bad.

MAP DESCRIPTION:
This MAP isolates the cause of a bad fuse.

ENTRY CONDITIONS:
-CB1 is Off.
Fuse is bad for the second time.

START CONDITIONS:
Before starting this MAP, perform the operations in MAP 0502.

LOGIC CARDS TESTED:
C-A1B2, C-A1C2, C-A1C4 and C-A1C5

Note 1: Removal of cable J21 or cable C-A1A3 isolates the control supply ground from DC ground or AC frame ground.

Note 2: Removals and connections may be done with CB1 set to 1 (ON) when done in order.

003

Remove the cable from C-A1A3 (see Note 1).
Connect J21.
Connect the CE multimeter from the voltage pin to the ground pin on cable C-A1A3 as indicated in Note 5 and compare the reading to the range as indicated in Note 4 for each level.

Note 3:
Control supply voltage pins
(05-210 for pin locations)

Level	Pins	Ground
+5V	J21-10	J21-6
+24V	J21-4	J21-6
-24V	J21-12	J21-6
-5V	J21-8	J21-6

Note 4:
Control supply table
See FSL VOL D

LEV	Low Range	Net
+5Vdc	+4.6Vdc	YA020JJ09
+24Vdc	+22.0Vdc	YA020JJ04
-24Vdc	-22.0Vdc	YA020JJ12
-5Vdc	-4.6Vdc	YA020JJ08

Note 5:
Control supply voltage cable
(C-A1A3)

Level	Pins	Ground
+5V	D02	D08
+24V	B05	D08
-24V	B07	D08
-5V	D06	D08

Does every level read above the low range?

Y **N**

3 3
B C

004

-Set CB1 to 0 (AC distribution box).
Install a new fuse for any fuse that is bad on the control supply.

Did the +24V level read good in the last step?

Y N

005

Go To Map 0533, Entry Point A.

006

Cable C-A1A3 is bad.
-Set CB1 to 1 (AC distribution box).
-Set the IPO switch to 1 (left side).

007

Remove card C-A1C2 and if present C4, C5.
Remove card C-A1B2.
Remove cable C-A1A2.
Remove cable C-A1A4T and C-A1A4B, if present.
Remove cable C-A1Z1, if present.
Connect cable C-A1A3.
Connect the CE multimeter from the voltage pin to the ground pin on board C-A1 as indicated in Note 6 and compare the reading to the range as indicated in Note 4 for each level.

Note 6:

Power logic board C-A1 voltage pins

Level	Pins	Ground
+5V	C2D03	C2D08
+24V	C2D11	C2D08
-24V	C2D06	C2D08
-5V	C2J06	C2D08

Note 4:

Control supply table See FSL VOL D

LEV	Low Range	Net
+5Vdc	+4.6Vdc	YA020JJ09
+24Vdc	+22.0Vdc	YA020JJ04
-24Vdc	-22.0Vdc	YA020JJ12
-5Vdc	-4.6Vdc	YA020JJ08

Does every level read above the low range?

Y N

008
Power logic board C-A1 is bad.

009
Connect cable C-A1A2.
Connect the CE multimeter from C-A1A2D03 (+) to C-A1A2D08 (-).
Does the CE multimeter read more than 4.6Vdc?
Y N

010
The YA320AA01 net has an open circuit or a short circuit to ground (see FSL, Vol D).

011
With the CE multimeter still connected from C-A1A2D03 (+) to C-A1A2D08 (-),
-Press and hold Dply Pwr Chk (CE panel).
Does the CE multimeter read more than 4.6Vdc?
Y N

012
The YA320AA01 net has a short circuit to ground (see FSL, Vol D).

013
-Set CB1 to 0 (AC distribution box) (05-230).
Install protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).
Connect the CE multimeter from C-A1B2D03 (+) to C-A1B2D08 (-).
Does the CE multimeter read more than 4.6Vdc?
Y N

014
Bad protect card C-A1B2.

015

-Set CB1 to 0 (AC distribution box).
Install base sense card C-A1C2.
-Set CB1 to 1 (AC distribution box).
-Press and hold Lamp Test (CE panel).
Is the control supply status indicator on (05-370) at the power logic board (05-220)?
Y N

016

-Set CB1 to 0 (AC distribution box).
Install a new fuse for any fuse that is bad on the control supply.
-Set CB1 to 1 (AC distribution box).
Remove protect card C-A1B2.
Is the control supply status indicator on?
Y N

017

Bad base sense card C-A1C2.
Install a new fuse for any fuse that is bad on the control supply.
Reinstall all cards removed earlier from power logic board C-A1.

018

Bad protect card C-A1B2.
Reinstall all cards removed earlier from power logic board C-A1.

019

-Set CB1 to 0 (AC distribution box)
Install card C-A1C4, if present.
-Set CB1 to 1 (AC distribution box)
-Press and hold Lamp Test (CE panel).
Is the control supply status indicator on?
Y N

020

Bad feature card C-A1C4.

The control supply status indicator checks all four voltage levels.

021

-Set CB1 to 0 (AC distribution box)
Install card C-A1C5, if present.
-Set CB1 to 1 (AC distribution box)
-Press and hold Lamp Test (CE panel).

Is the control supply status indicator on?

Y N

022

Bad feature sense card C-A1C5.

023

CAUTION

-Set CB1 to 0 (AC distribution box)
Note: If C-A1A4T is connected incorrectly with control power on, the logic of feature power supply C will be destroyed.
Reconnect cable C-A1A4T, if present.
-Set CB1 to 1 (AC distribution box)
-Press and hold Lamp Test (CE panel).

Is the control supply status indicator on?

Y N

024

-Set CB1 to 0 (AC distribution box)
Install a new fuse for any fuse that is bad on the control supply.
Go To Map 0585, Entry Point A.

025

-Set CB1 to 0 (AC distribution box).
Reconnect cable C-A1A4B, if present.
-Set CB1 to 1 (AC distribution box).
-Press and hold Lamp Test (CE panel).

Is the control supply status indicator on?

Y N

H J

H J

026

-Set CB1 to 0 (AC distribution box).
Install a new fuse for any fuse that is bad on the control supply.
Go To Map 0586, Entry Point A.

027

-Set CB1 to 0 (AC distribution box).
Reconnect cable C-A1Z1, if present.
-Set CB1 to 1 (AC distribution box).
-Press and hold Lamp Test (CE panel).

Is the control supply status indicator on?

Y N

028

-Set CB1 to 0 (AC distribution box).
Install a new fuse for any fuse that is bad on the control supply.
Go To Map 0594, Entry Point A.

029

-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).

Does the machine power on?

Y N

030

Go To Map 0500, Entry Point A.

031

The preceding problem was a loose cable or card.

PREVIOUS SWITCH

5340 SYSTEMS UNIT

PAGE 1 OF 1

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001
0517	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	002	0500	A
1	003	0500	A

001
(Entry Point A)
PROBE C-A1B2D12 (+) (SEE NOTE 1).
-OPERATE AND HOLD 'PWR FAULT DPLY' TO 'PREV' (CE PANEL).

UP LIGHT: OFF
DOWN LIGHT: ON

ARE THE LIGHTS CORRECT?
Y N

002
NET CE140AA36 IS OPEN (SEE FSL, VOL D)
---OR---
PREVIOUS SWITCH IS BAD.
Go To Map 0500, Entry Point A.

003
BAD PROTECT CARD C-A1B2.
Go To Map 0500, Entry Point A.

MAP DESCRIPTION:
THIS MAP DETERMINES THE CAUSE OF A PREVIOUS DISPLAY FAILURE.

ENTRY CONDITIONS:
OPERATE AND HOLD 'PWR FAULT DPLY' TO 'PREV' DOES NOT CHANGE 'BYTE 0' DATA.

START CONDITIONS:
NONE

LOGIC CARDS TESTED:
C-A1B2

NOTE 1:
CONNECT TO ANY D03 (+) AND D08 (-) ON POWER LOGIC BOARD C-A1 FOR PROBE POWER.

K1 CONTACTOR CONTROL CIRCUIT

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0512	A	1	001

001
(Entry Point A)
Connect the CE multimeter from C-A1B2G13 (+) to C-A1B2D08 (-).

Does the CE multimeter read from 20 and 30 Vdc?
Y N

002
Net YA301DA4 is open (see FSL, VOL D).

003
Bad protect card C-A1B2 (see note)

Does the card replacement fix the problem?
Y N

004
Bad diode on K1 (05-300).
Bad protect card C-A1B2.

005
The protect card was the only problem.

MAP DESCRIPTION:
This MAP checks the contactor control line for an open before assuming the module is bad.

ENTRY CONDITIONS:
No signal to contactor.

START CONDITIONS:
Before starting this MAP, perform the operations in MAP 0512.

LOGIC CARDS TESTED:
C-A1B2

Note: A bad diode on K1 may have caused the card to go bad.

NO RESPONSE TO SEARCH SWITCH

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001
0515	A	1	001
0517	A	1	001
0518	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	003	0500	A
2	005	0500	A
2	009	0500	A
2	011	0500	A
2	014	0500	A

001
(Entry Point A)
PROBE C-A1B2B11 (+).
CONNECT THE PROBE GROUND LEAD TO C-A1B2B10 (-) (SEE NOTE 1).

UP LIGHT: ON
DOWN LIGHT: OFF

ARE THE LIGHTS CORRECT?
Y N

002
PROBE C-A1B2B10 (+).

UP LIGHT: OFF
DOWN LIGHT: ON

ARE THE LIGHTS CORRECT?
Y N

MAP DESCRIPTION:
THIS MAP CHECKS FOR A CONNECTION TO A WORKING SWITCH.

ENTRY CONDITIONS:
POWER CHECK.

START CONDITIONS:
NONE

LOGIC CARDS TESTED:
C-A1B2

NOTE 1:
CONNECT TO ANY D03 (+) AND D08 (-) ON POWER LOGIC BOARD C-A1 FOR PROBE POWER.

2A 2B 2C

003
NET CE140AA78 IS OPEN (SEE FSL VOL D).
ISOLATE THE BAD FRU.
Go To Map 0500, Entry Point A.

004
CONNECT THE CE MULTIMETER FROM C-A1B2B11 (+) TO C-A1B2D08 (-).
DOES THE CE MULTIMETER READ MORE THAN 1 VDC?
Y N

005
NET CE140AA77 HAS A SHORT CIRCUIT TO GROUND (SEE FSL VOL D).
ISOLATE THE BAD FRU.
Go To Map 0500, Entry Point A.

006
Go to Step 013, Entry Point B.

007
PROBE C-A1B2B10 (+).
CONNECT THE PROBE GROUND LEAD TO C-A1B2B11 (-).
-OPERATE AND HOLD 'PWR FAULT DPLY' TO 'SEARCH' (CE PANEL).

UP LIGHT: ON
DOWN LIGHT: OFF

ARE THE LIGHTS CORRECT?
Y N

008
PROBE C-A1B2B11 (+).
-OPERATE AND HOLD 'PWR FAULT DPLY' TO 'SEARCH' (CE PANEL).

UP LIGHT: OFF
DOWN LIGHT: ON

ARE THE LIGHTS CORRECT?
Y N

009
NET CE140AA77 IS OPEN (SEE FSL VOL D).
ISOLATE THE BAD FRU.
Go To Map 0500, Entry Point A.

010
CONNECT THE CE MULTIMETER FROM C-A1B2B10 (+) TO C-A1B2D08 (-).
-OPERATE AND HOLD 'PWR FAULT DPLY' TO 'SEARCH' (CE PANEL).
DOES THE CE MULTIMETER READ MORE THAN 1 VDC?
Y N

011
NET CE140AA78 HAS A SHORT CIRCUIT TO GROUND (SEE FSL VOL D).
ISOLATE THE BAD FRU.
Go To Map 0500, Entry Point A.

012
Go to Step 013, Entry Point B.

013
(Entry Point B)
BAD PROTECT CARD C-A1B2.
-SET 'POWER' TO '0' (OPERATOR PANEL).
-SET 'POWER' TO '1' (OPERATOR PANEL).
DOES THE MACHINE POWER ON?
Y N

014
Go To Map 0500, Entry Point A.

015

THE CARD WAS THE ONLY PROBLEM.

NO RESPONSE TO POWER SWITCH

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0500	A	1	001
0577	B	4	019

001
(Entry Point A)
Probe C-A1B2B03 (+) (see Note 1).

Up Light: On
Down Light: On

Are the lights correct?
Y N

002
Probe C-A1B2B02 (+) (see Note 1).

Up Light: On
Down Light: On

Are the lights correct?
Y N

003
Bad protect card C-A1B2.

MAP DESCRIPTION:
This MAP checks the power on reset to card C-A1B2, then checks for a connection to a working switch.

ENTRY CONDITIONS:
Machine off.
Lamp test works.
No check lights.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2 and C-A1C2

Note 1: Connect to any D03 (+) and D08 (-) on board C-A1 for probe power.

2 2
A B

004
The YA302EG3 net has an open circuit (see FSL Vol D).
Bad power logic board C-A1.

005
Probe C-A1B2J06 (+) (see Note 1).

Up Light: Off
Down Light: On

Are the lights correct?
Y N

006
Remove base sense card C-A1C2.
Connect the CE multimeter from C-A1C2B02 (+) to C-A1C2D08 (-).
Does the CE multimeter read more than 4 Vdc?
Y N

007
Connect the CE multimeter from C-A1B2J06 (+) to C-A1B2D08 (-).
Does the CE multimeter read more than 4 Vdc?
Y N

008
Connect the CE multimeter from C-A1B2D03 (+) to C-A1B2D08(-).
Does the CE multimeter read more than 4.6 Vdc?
Y N

009
Bad control supply.
Install base sense card C-A1C2.

010
Bad protect card C-A1B2.
Install base sense card C-A1C2.

Note 1: Connect to any D03 (+) and D08 (-) on board C-A1 for probe power.

011
The YA200AA1 net has an open circuit (see FSL Vol D).
Install base sense card C-A1C2.

012
Connect the CE multimeter from C-A1C2D04 (+) to C-A1C2D08 (-).
Does the CE multimeter read more than 4 Vdc?
Y N

013
The YA320AA03 net has an open circuit (see FSL Vol D).
Install base sense card C-A1C2.

014
Connect the CE multimeter from C-A1C2G11 to C-A1C2G12.
Does the CE multimeter read more than 35 Vac?
Y N

015
Remove J21 (05-240) from the control supply.
Install base sense card C-A1C2.
Connect the CE multimeter from J21-1 to J21-3 on the control supply PC board (05-210, 05-320).
Does the CE multimeter read more than 35 Vac?
Y N

016
The control supply is bad.

017
The YA020JJ01 net has an open circuit (see FSL Vol D).
---or---
YA020JJ03 net has an open circuit (see FSL Vol D).

018
Bad base sense card C-A1C2.

019

(Entry Point B)

-Set Power to 0 (operator panel).
Probe C-A1B2B13(+) (see Note 1).
Connect the probe ground to C-A1B2D10 (-).

```
Up   Light: On
Down Light: Off
```

Are the lights correct?

Y N

020

Probe C-A1B2D10 (+) (see Note 1).

```
Up   Light: Off
Down Light: On
```

Are the lights correct?

Y N

021

The OP110AA31 net has an open circuit (see FSL Vol D).

022

Connect the CE multimeter from C-A1B2B13 (+) to C-A1B2D08 (-).

Does the CE multimeter read more than 1 Vdc?

Y N

023

The OP110AA32 net has a short circuit to ground (see FSL Vol D).

024

Bad protect card C-A1B2.

Note 1:
Connect to any D03 (+) and D08 (-) on board C-A1 for probe power.

025
-Set Power to 1 (operator panel).
Probe C-A1B2D10 (+) (see Note 1).
Connect the probe ground to C-A1B2B13 (-).

```
Up   Light: On
Down Light: Off
```

Are the lights correct?
Y N

026
Probe C-A1B2B13 (+) (see Note 1).
Connect the probe ground to C-A1B2D08 (-).

```
Up   Light: Off
Down Light: On
```

Are the lights correct?
Y N

027
The OP110AA32 net has an open circuit (see FSL Vol D).

028
Connect the CE multimeter from C-A1B2D10 (+) to C-A1B2D08 (-).
Does the CE multimeter read more than 1 Vdc?
Y N

029
The OP110AA31 net has a short circuit to ground (see FSL Vol D).

030
Bad protect card C-A1B2.

031
-Set Power to 0 (operator panel).
Bad protect card C-A1B2.

Note 1: Connect to any D03 (+) and D08 (-) on board C-A1 for probe power.

IPO SWITCH NEEDED TO POWER OFF

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0500	A	1	001
0502	A	1	001
0512	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	002	0576	B

001
(Entry Point A)
-Set the IPO switch to 1 (left side) (05-230).

MAP DESCRIPTION:
This MAP checks for a short circuit.

ENTRY CONDITIONS:
Ipo switch is off.
Machine is off.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

Does the machine power on?
Y N

002
Go To Map 0576, Entry Point B.

003
-Set CB1 to 0 (AC distribution box) (05-230).
Remove protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).
Does the machine power on?
Y N

004
Bad protect C-A1B2.

005
-Set CB1 to 0 (AC distribution box).
Install protect card C-A1B2.
Remove cable C-A1Y1.
Remove cable C-A1A2 (see NOTE 1).
-Set CB1 to 1 (AC distribution box).
Does the machine power on?
Y N

006
Net YA301DA4 has a short circuit to ground inside the AC box (see FSL, VOL D) (05-230).
Reconnect cable C-A1Y1.
Reconnect cable C-A1A2.

007
-Set CB1 to 0 (AC distribution box).
Reconnect cable C-A1Y1.
Reconnect cable C-A1A2.
Remove cable C-A1A3.
-Set CB1 to 1 (AC distribution box).
Does the machine power on?
Y N

008
Net YA301DA4 has a short circuit to ground on board C-A1 (see FSL, VOL D and see NOTE 2).
Reconnect cable C-A1A3.

009
Bad cable C-A1A3.

NOTE 1:
Removing cables C-A1Y1 and C-A1A2 isolates the control supply ground from AC ground.

NOTE 2:
Ensure the jumper was removed from power logic board C-A1.

CONTROL SUPPLY STATUS INDICATOR

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0500	A	1	001
0501	A	1	001

001
(Entry Point A)
-Set CB1 to 0 (AC distribution box) (05-230).
Jumper from C-A1B2D11 to C-A1B2D08.
-Set CB1 to 1 (AC distribution box).

MAP DESCRIPTION:
This MAP checks the lamp test circuit.

ENTRY CONDITIONS:
Control supply status indicator is on.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2 and C-A1C2

Is the control supply status indicator Off?
Y N

002
-Set CB1 to 0 (AC distribution box).
Remove jumper.
Jumper from C-A1B2G10 to C-A1B2D08.
-Set CB1 to 1 (AC distribution box).
Is the control supply status indicator Off?
Y N

003
-Set CB1 to 0 (AC distribution box).
Remove jumper.
Jumper from C-A1C2B06 to C-A1C2D08.
-Set CB1 to 1 (AC distribution box).
Is the control supply status indicator Off?
Y N

2A 2B 2C 2D

004
Remove jumper.
Bad base sense card C-A1C2.

005
Remove jumper.
Net YA303BC3 is open on power logic board C-A1 (see FSL, VOL D).

006
Remove jumper.
Bad protect card C-A1B2.

007
Remove jumper.
Net CE140AA72 is open (see FSL, VOL D)
---or---
The lamp test switch is failing.

PRINTER POWER SIGNAL LINES

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:
This MAP checks the printer power signal line between the cards on the power logic board to determine which card is bad.

ENTRY CONDITIONS:
The problem is in the power area.
The machine powers up.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1C2

Is the printer power on?
Y N

002
Connect the CE multimeter from C-A1C2B03 (+) to C-A1C2D08 (-).
Does the CE multimeter read less than 1 Vdc?
Y N

003
Connect the CE multimeter from C-A1C2J13 (+) to C-A1C2D08 (-).
Does the CE multimeter read less than 1 Vdc?
Y N

004
Net YA301CD4 is open (see FSL VOL D).

2A 2B 2C

005
Bad base sense card C-A1C2.

006
Net YA200BN3 is open (see FSL VOL D).

007
-Set Power to 0 (operator panel).
(The problem is assumed to be that the printer will not power off.)

Remove base sense card C-A1C2.
Does the printer power off?
Y N

008
Net YA200BN3 has a short circuit to ground (see FSL VOL D).
Install base sense card C-A1C2.

009
Bad base sense card C-A1C2.

VOLTAGE SENSE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	2	001
0540	A	2	001
0541	A	2	001
0543	A	2	001
0544	A	2	001
0545	A	2	001
0546	A	2	001
0547	A	2	001
0548	A	2	001
0549	A	2	001
0551	A	2	001
0552	A	2	001
0553	A	2	001
0554	A	2	001
0562	A	2	001
0563	A	2	001
0564	A	2	001
0565	A	2	001
0566	A	2	001
0567	A	2	001

001

(Entry Point A)

-SET THE IPO SWITCH TO '1' (LEFT SIDE) (05-230). CONNECT THE CE MULTIMETER FROM THE 'C-A1 PIN' CORRESPONDING TO THE 'FAILING VOLTAGE LEVEL' (SEE TABLE 1) TO C-A1B2D08.

DOES THE CE MULTIMETER READ THE 'FAILING VOLTAGE LEVEL'?

Y **N**

3A 3B

MAP DESCRIPTION:
THIS MAP TRACES THE VOLTAGE SENSE LINES TO THE POWER LOGIC BOARD.

ENTRY CONDITIONS:
VOLTAGE FAULT INDICATION COULD NOT BE VERIFIED OR VERIFIED VOLTAGE FAULT WAS NOT INDICATED. THE IPO SWITCH IS OFF.

START CONDITIONS:
BEFORE STARTING THIS MAP, PERFORM THE OPERATIONS IN MAP 0510.

LOGIC CARDS TESTED:
C-A1B2 AND C-A1C2

TABLE 1:

VOLTAGE SENSE TEST POINTS
SEE FSL, VOL D

FAILING VOLTAGE LEVEL	C-A1 PIN	NET
+5	C2B09	YA080DD04
+5 **	C5B10	YA080BB09
+6	C2D09	YA080BB07
+8.5	C2B05	YA080DD10
+12*	C4D02	YA080BB11
+24	C2D02	YA080DD09
-4	C2D13	YA080BB05
-5	C2B08	YA080BB04
-12*	C4B13	YA080BB13
-24	C2D05	YA080DD12

* FEATURE POWER SUPPLY A
** FEATURE POWER SUPPLY B

002
REMOVE THE JUMPER FROM C-A1B2G13.
THE 'NET' IN TABLE 1 CORRESPONDING TO THE 'FAILING VOLTAGE LEVEL' IS OPEN.

003
IS THE 'FAILING SIGNAL' A UV?
Y N

004
PROBE THE 'C-A1B2 PIN' CORRESPONDING TO THE 'FAILING SIGNAL' (SEE TABLE 3, SEE NOTE 1).

TABLE 3:

OV TEST POINTS (C-A1)
SEE FSL VOL D

FAILING SIGNAL	B2 PIN	C-A1 CARD	NET
+5	P12	C2	YA200AF4
+5**	J11	C5	YA240AC1
+6	M10	C2	YA200AF2
-4	P10	C2	YA200AK1
-5	M12	C2	YA200AK3
-12*	P09	C4	YA220AD2

* FEATURE POWER SUPPLY A
** FEATURE POWER SUPPLY B

Go to Page 5, Step 009, Entry Point B.

005

-SET THE IPO SWITCH TO '0' (LEFT SIDE).
PROBE THE 'C-A1B2 PIN' CORRESPONDING TO THE 'FAILING SIGNAL' (SEE TABLE 2, SEE NOTE 1).
THE PROBE SHOULD INDICATE:

UP LIGHT: OFF
DOWN LIGHT: ON

ARE THE LIGHTS CORRECT?

Y N

006

REMOVE THE JUMPER FROM C-A1B2G13.
-SET THE IPO SWITCH TO '1' (LEFT SIDE).
CHECK THE 'NET' CORRESPONDING TO THE 'FAILING SIGNAL' FOR AN OPEN (SEE TABLE 2).
IS THE NET OPEN?

Y N

007

THE 'C-A1 CARD' CORRESPONDING TO THE 'FAILING SIGNAL' IS BAD (SEE TABLE 2).

008

ISOLATE THE FAILING FRU.

NOTE 1:
CONNECT TO ANY D03 (+) AND D08 (-) ON THE POWER LOGIC BOARD C-A1 FOR PROBE POWER.

TABLE 2:

UV TEST POINTS (C-A1)
SEE FSL VOL D

FAILING SIGNAL	B2 PIN	C-A1 CARD	NET
+5	P06	C2	YA200AF5
+5**	U07	C5	YA240AC2
+6	M06	C2	YA200AF3
+8.5	P04	C2	YA200AF1
+12*	M13	C4	YA220AC2
+24	P07	C2	YA200AF6
-4	M05	C2	YA200AK2
-5	P05	C2	YA200AK4
-12*	M02	C4	YA220AD1
-24	M07	C2	YA200AK5

* FEATURE POWER SUPPLY A
** FEATURE POWER SUPPLY B

009
-SET THE IPO SWITCH TO '1' (LEFT SIDE) WITH PROBE STILL CONNECTED.

(Entry Point B)
THE PROBE SHOULD INDICATE:

UP LIGHT: ON
DOWN LIGHT: OFF

ARE THE LIGHTS CORRECT?
Y N

010
REMOVE THE JUMPER FROM C-A1B2G13.
CHECK THE 'NET' CORRESPONDING TO THE 'FAILING SIGNAL' FOR A SHORT TO GROUND (TABLE 2 OR 3).
IS THE NET FAILING?
Y N

011
THE 'C-A1 CARD' CORRESPONDING TO THE 'FAILING SIGNAL' IS BAD (SEE TABLE 2 OR TABLE 3).

012
ISOLATE THE FAILING FRU.

013
REMOVE THE JUMPER FROM C-A1B2G13.
BAD PROTECT CARD C-A1B2.

CABLE CHECK FEATURE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

001
(Entry Point A)
Connect the CE multimeter from C-A1B2J13(+) to C-A1B2J08(-).

Does the CE multimeter read more than 1 Vdc?
Y N

002
Bad protect card C-A1B2.

003
Connect the CE multimeter from C-A1A4B04(+) to C-A1A4D08(-).
Does the CE multimeter read more than 1 Vdc?
Y N

004
Is feature power supply C installed (05-220)?
Y N

MAP DESCRIPTION:
This MAP verifies that the cables are connected or repairs the problem.

ENTRY CONDITIONS:
A cable check error is indicated for feature power supply.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

2A 2B 2C

CABLE CHECK FEATURE

5340 SYSTEMS UNIT

005
The jumper from C-A1A4B02 to C-A1A4B04 is installed incorrectly.
---or---
The jumper is missing.
---or---
Bad board.
C-A1.

006
The cable from C-A1A4T to J11 (05-240) is installed incorrectly.
---or---
Bad cable.
---or---
Bad board.
C-A1
---or---
Feature power supply C is bad.

007
Connect the CE multimeter from C-A1A4B11(+) to C-A1A4D08(-).
Does the CE multimeter read more than 1 Vdc?
Y N

008
Is feature power supply D installed (05-220)?
Y N

009
The jumper from C-A1A4B09 to C-A1A4B11 is installed incorrectly.
---or---
The jumper is missing.
---or---
Bad board.
C-A1.

010
The cable from C-A1A4B to J24 (05-240) is installed incorrectly.
---or---
Bad cable.
---or---
Bad board.
C-A1
---or---
Feature power supply D is bad.

011
Connect the CE multimeter from C-A1A5B04(+) to C-A1A5D08(-).
Does the CE multimeter read more than 1 Vdc?
Y N

012
The jumper from C-A1A5B02 to C-A1A5B04 is installed incorrectly.
---or---
The jumper is missing.
---or---
Bad board.
C-A1.

013
Connect the CE multimeter from C-A1A5B11(+) to C-A1A5D08(-).
Does the CE multimeter read more than 1 Vdc?
Y N

014
The jumper from C-A1A5B09 to C-A1A5B11 is installed incorrectly.
---or---
The jumper is missing.
---or---
Bad board.
C-A1.

015

Connect the CE multimeter from C-A1A6D04(+) to C-A1A5D08(-).

Does the CE multimeter read more than 1 Vdc?

Y N

016

Is feature power G installed (05-250)?

Y N

017

The jumper from C-A1A6B04 to C-A1A6D04 is installed incorrectly.

---or---

The jumper is missing.

---or---

Bad board.

C-A1.

018

The cable from C-A1Z1 to C-B1J7 and C-B1J5 (05-260) is installed incorrectly.

---or---

Bad cable.

---or---

Bad board.

C-A1

---or---

Bad board.

C-B1

---or---

The C-B1J3 cable (05-260) is installed incorrectly.

---or---

Bad cable.

C-B1J3

---or---

Bad card

C-B1J6

019

Bad board.

C-A1.

THERMAL CHECK

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0500	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	011	0500	B
2	008	0524	A

001
(Entry Point A)
-Set CB1 to 0 (AC distribution box) (05-230).
Jumper from C-A1B2D13 to C-A1B2D08.
-Set CB1 to 1 (AC distribution box).
-Set Power to 0 (operator panel).

MAP DESCRIPTION:
This MAP verifies the thermal sensor.

ENTRY CONDITIONS:
Thermal check.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

Is Thermal Check light off (operator panel)?
Y N

002
-Set CB1 to 0 (AC distribution box).
Remove the jumper.
Remove protect card C-A1B2.
-Set CB1 to 1 (AC distribution box).
Is Thermal Check light off (operator panel)?
Y N

003
Net YA303FD3 has a short circuit to ground (see FSL, VOL D).

004
Bad protect card C-A1B2.

005
When the power compartment thermal sensor (05-220) and the A-gate thermal sensors are cool to touch, Remove jumper.
Is Thermal Check light off (operator panel)?
Y N

006
Check net YA320AD01 for open (see FSL, VOL D):

Bad thermal sensor
---or---
Bad cable
---or---
Bad power logic board C-A1.

007
Listen for the power compartment fan (05-220) and the A-gate fan to start while you:
-Set Power to 1 (operator panel).
-Set Power to 0 (operator panel).
Did both fans start?
Y N

008
Go To Map 0524, Entry Point A.

009
-Set Power to 1 (operator panel).
Is the Thermal Check light (operator panel) On after a few minutes?
Y N

010
Does the machine power On?
Y N

011
Go To Map 0500, Entry Point B.

012
The heat source was removed.

The A-gate fan should be turning before you hear the power compartment fan.

013

-Set Power to 0 (operator panel).
Jumper across the power compartment thermal sensor (05-220).
-Set Power to 1 (operator panel).
Is the Thermal Check light (operator panel) on after a few minutes?
Y N

014

Remove jumper.
Is Thermal Check light on (operator panel)?
Y N

015

The heat source was removed.

016

The multilevel filter assembly is bad.

017

Remove jumper.
The A-gate thermal sensor is activated.
Too much heat is being generated in the gate.
Remove gate cards until the heat source is removed.

K2 CONTACTOR CONTROL CIRCUIT

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001
1080	C	5	024
1090	C	5	024

001
(Entry Point A)
-Set Power to 0 (operator panel).
Connect the CE multimeter from C-A1B2G11 (+) to C-A1B2J08 (-).

Does the CE multimeter read more than 20 Vdc?
Y N

002
The YA301DC4 net has an open circuit (see FSL, Vol D)

003
Are any wires connected to E11 (05-220) on the DC distribution assembly?
Y N

2 2
A B

MAP DESCRIPTION:
This MAP checks the drive circuit for the K2 relay.

ENTRY CONDITIONS:
For Entry Point A:
K1 is on.
K2 is not on.

For Entry Point C:
K1 is on.
K2 will not open.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

K2 CIRCUIT

5340 SYSTEMS UNIT

004
-Set Power to 1 (operator panel).
Probe C-A1B2J10 (see note 1).

```
Up   Light: Off
Down Light: On
```

Are the lights correct?
Y N

005
Check the CH009AG3 net (+Disk Brake Fault) for an open circuit (see FSL, Vol D).
Does the net have an open circuit?
Y N

006
Run MDI program for disk.

007
Isolate the failing FRU.

008
Go to Page 4, Step 021, Entry Point B.

009
Probe C-A1B2S09 (+) (see note 1).

```
Up   Light: Off
Down Light: On
```

Are the lights correct?
Y N

010
Check the YA080BB02 net (+Brake Fault A) for an open circuit (see FSL Vol D).
Does the net have an open circuit?
Y N

011
Run MDI program for disk.

Note 1: Connect to any D03 (+) and D08 (-) on power logic board C-A1 for probe power.

012
Isolate the failing FRU.

013
Probe C-A1B2U09 (+).

```
Up   Light: Off
Down Light: On
```

Are the lights correct?
Y N

014
Are two disks installed in the machine?
Y N

015
Is the jumper installed from E12 to E13 (05-220) on the DC distribution assembly?
Y N

016
Install a jumper from E12 to E13.

017
The YA080BB03 net has an open circuit (see FSL Vol D).

018
Check the YA080BB02 net (+Brake Fault B) for an open circuit (see FSL Vol D).
Does the net have an open circuit?
Y N

019
Run MDI program for disk.

020
Isolate the failing FRU.

021

(Entry Point B)

Bad protect card C-A1B2 (see note 2).

Does the card replacement eliminate the problem?

Y N

022

Bad diode on K2 or bad K2 (05-300).

Bad protect card C-A1B2.

023

The protect card was the only problem.

Note 2: A bad diode on K2 may have caused the bad card.

024
(Entry Point C)
-Set Power to 0 (operator panel).
Remove E13 (05-360) from the base distribution assembly (05-220).
Connect the CE multimeter from E13(+) to ground(-) (05-360).
Does the CE multimeter read more than +4 Vdc?
Y N

025
Remove C-A1B2.
Connect the CE multimeter from E13(+) to ground(-).
Does the CE multimeter read more than 1 ohm?
Y N

026
The YA080BB03 net has a short circuit to ground (see FSL Vol D).

027
Bad protect card C-A1B2.

028
Remove E12 (05-220).
Connect the CE multimeter from E12(+) to ground(-).
Does the CE multimeter read more than 4 Vdc?
Y N

029
Remove C-A1B2.
Connect the CE multimeter from E12(+) to ground(-).
Does the CE multimeter read more than 1 ohm?
Y N

030
The YA080BB02 net has a short circuit to ground (see FSL Vol D).

031
Bad protect card C-A1B2.

F

F MAP 0583-5

032
Connect the CE multimeter from C-A1B2G11(+) to C-A1B2J08(-).
Does the CE multimeter read more than 20 Vdc?
Y N

033
Remove C-A1B2.
Connect the CE multimeter from C-A1B2G11(+) to C-A1B2J08(-).
Does the CE multimeter read more than 20 Vdc?
Y N

034
Net YA301DC42 is short circuited to ground.

The YA301DC42 net has a short circuit to ground (see FSL Vol D).

035
Bad protect card C-A1B2.

036
Bad K2 (05-300).

LAMP CIRCUIT MAP

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0500	A	1	001
0510	A	1	001
0511	A	1	001

001
(Entry Point A)
Connect the CE multimeter from C-A1B2D11 (+) to C-A1B2D08 (-).
-Press and hold Lamp Test (CE panel).

Does the CE multimeter read more than 1 Vdc?
Y N

002
Net CE140AA72 has a short circuit to ground (see FSL, VOL D)
---or---
Bad lamp test switch.

003
Connect the CE multimeter from C-A1B2G10 (+) to C-A1B2D08 (-).
-Press and hold Lamp Test (CE panel).
Does the CE multimeter read more than 4 Vdc?
Y N

004
Bad protect card C-A1B2.

MAP DESCRIPTION:
This MAP tests for a failing lamp test switch or lamp circuit.

ENTRY CONDITIONS:
At least one lamp does not come on when lamp test is pressed.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2

LAMP CIRCUIT MAP

5340 SYSTEMS UNIT

PAGE 2 OF 2

005

-Press and hold Dply Pwr Chk and Lamp Test (CE panel).

Is byte 0 Data X'00'?

Y N

006

(Entry Point B)

-Press and hold Dply Pwr Chk and Lamp Test (CE panel).

For each lamp that is not on, jumper from the source pin to ground (see Chart 1).

Chart 1:
Lamp Circuit Tables

Lamp	Source Pin
Power Check	C-A1B2B05
Thermal Chk	C-A1B2D09
Byte 0 Bit 0	C-A1B2B08
Byte 0 Bit 1	C-A1B2D07
Byte 0 Bit 2	C-A1B2B07
Byte 0 Bit 3	C-A1B2D06
Byte 0 Bit 4	C-A1B2B06
Byte 0 Bit 5	C-A1B2D05
Byte 0 Bit 6	C-A1B2B04
Byte 0 Bit 7	C-A1B2D04

Is the failing lamp On?

Y N

B C D

B C D

007

Lamp net is open (see Chart 2).

---or---

Lamp is bad.

Chart 2:
See FSL, VOL D

Lamp	Net
Power Check	YA303FB3
Thermal Chk	YA303FD3
Byte 0 Bit 0	YA303FA3
Byte 0 Bit 1	YA303FA31
Byte 0 Bit 2	YA303FA32
Byte 0 Bit 3	YA303FA33
Byte 0 Bit 4	YA303FA34
Byte 0 Bit 5	YA303FA35
Byte 0 Bit 6	YA303FA36
Byte 0 Bit 7	YA303FA37

008

Bad protect card C-A1B2.

009

Connect the CE multimeter from C-A1B2B12 (+) to C-A1B2D08 (-).

Does the CE multimeter read more than 1 Vdc?

Y N

010

Net CE140AA83 has a short circuit to ground (see FSL, VOL D)

---or---

Bad Dply Pwr Check switch.

011

Go to Step 006, Entry Point B.

FEATURE C CABLE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001
0513	A	1	001
0557	A	1	001
0571	A	1	001
0572	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:
This MAP determines if the cause of the failure is in the cable to feature power supply C or in the supply.

ENTRY CONDITIONS:
An error is indicated when the J11 cable is connected to feature power supply C.

START CONDITIONS:
None

LOGIC CARDS TESTED:
None

(Step 001 continues)

(Step 001 continued)

-Set CB1 to 0 (AC distribution box).
Disconnect J11 (if not already disconnected) (05-240).
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from the pin on the J11 cable as indicated in Note 1 to J11-D02 (ground) (05-210) and compare the reading to the low limit as indicated in Note 2 for each level.

Note 1:
J11 cable voltage pin
(05-210 for pin locations)

Level	Pins	Ground
+5 V	D03	D02
+24 V	D04	D02
-24 V	D06	D02
-5 V	D05	D02

Note 2:
Control supply table
(See the FSL Vol D)

Level	Low	High	Net
+5 V	+4.6	+5.5	YA320AA04
+24 V	+22.0	+26.4	YA020JJ04
-24 V	-22.0	-26.4	YA020JJ12
-5 V	-4.6	-5.5	YA020JJ08

Does each level read above the low limit?
Y N

002
The net for the bad level has an open circuit or a short circuit or a short circuit to ground.

003
The feature power supply C is bad.

FEATURE D CABLE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001
0513	A	1	001
0560	A	1	001
0571	A	1	001
0572	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	002	0572	A

001
(Entry Point A)

MAP DESCRIPTION:
This MAP determines if the cause of the failure is in the cable to feature power supply D or in the supply.

ENTRY CONDITIONS:
An error is indicated anytime the J24 cable is connected to feature power supply D.

START CONDITIONS:
None

LOGIC CARDS TESTED:
None

(Step 001 continues)

(Step 001 continued)

-Set CB1 to 0 (AC distribution box).
Disconnect J24 (if not already disconnected) (05-240).
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from the pin on the J24 cable as indicated in Note 1 to J24-3 (ground) (05-210) and compare the reading to the range as indicated in Note 2 for each level.

Note 1:
J24 cable voltage pin
(05-210 for pin locations)

Level	Pins	Ground
+5 V	J24-1	J24-3
-5 V	J24-4	J24-3

Note 2:
Control Supply Table
(See the FSL Vol D)

Level	Low	High	Net
+5 V	+4.6	+5.5	YA320AA04
-5 V	-4.6	-5.5	YA020JJ08

Does each level read above the low range?
Y N

002
The net for the bad level is open or has a short circuit to ground.
Go To Map 0572, Entry Point A.

003
The feature power supply D is bad.

FEATURE AC BOX

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0591	A	1	001

001
(Entry Point A)
-Set Power to 0 (operator panel).
-Set CB1 to 0 (AC distribution box) (05-230).

Disconnect the feature power G AC cable from ACTB7-4 and ACTB7-7 (05-250).
Remove the F207 fuse (05-670).
Connect the CE multimeter between the cable removed from ACTB7-4 and the frame (see Note 1).

Does the CE multimeter read less than 100 ohms?
Y N

002
Connect the CE multimeter between the cable removed from ACTB7-4 and the cable removed from ACTB7-7.
Does the CE multimeter read less than 100 ohms?
Y N

2A 2B 2C

MAP DESCRIPTION:
This MAP guides the CE to the failing FRU (inside or on the feature AC box) that caused a feature G UV indication on the CE panel.

ENTRY CONDITIONS:
The F207 fuse is bad. The feature power G ferroresonant transformer is disconnected.

START CONDITIONS:
Perform the operations in MAP 0591.

LOGIC CARDS TESTED:
None

Note 1: Use a CE multimeter to perform the measurements in this MAP. Perform all measurements on the R X 10 scale.

003
Connect the CE multimeter from the cable removed from TB9-1 to the other cable removed from TB9 on the feature power G ferroresonant transformer.
Does the CE multimeter read less than 100 ohms?
Y N

004
The cable from ACTB7-4 to the feature power G ferroresonant transformer is bad (short circuit to ground).

005
The cable from the feature power G ferroresonant transformer to ACTB7 is bad.

006
The F207 fuse holder assembly is bad.

007
The F207 fuse holder assembly is bad (short circuit to ground).

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	007	0500	B
2	005	0590	A

001
(Entry Point A)
Remove the F207 fuse from the feature AC box (05-670).

MAP DESCRIPTION:
This MAP determines if the cause of the failure is in the feature AC box, the controller, or the supply.

ENTRY CONDITIONS:
A UV error is indicated on feature power G.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2, C-B1J6

Is the F207 fuse good?
Y N

002
Install a good fuse in F207.
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

003
Remove the F207 fuse.
Is the F207 fuse good?
Y N

3A 2B 2C 2D

004

-Set CB1 to 0 (AC distribution box).
Disconnect AC from TB9 (05-680) at the feature power G ferroresonant transformer (05-250) (see Note 1).
Install a good fuse in F207 (feature AC box).
-Set CB1 to 1 (AC distribution box).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).
Remove the F207 fuse.

Is the F207 fuse good?

Y N

005

Install a good fuse in F207.

Go To Map 0590, Entry Point A.

006

Reinstall the F207 fuse.
The feature power G ferro is bad.
Reconnect AC to TB9.

007

Reinstall the F207 fuse.
The blown fuse was caused by another problem.
Go To Map 0500, Entry Point B.

008

The blown fuse was the only problem.

Note 1: The CE multimeter may read as high as 235 Vac.

XFMR TB	Line voltage 50 HZ	Line voltage 60 HZ
1	Common	Common
2	200 Vac	200 Vac
3	220 Vac	208 Vac
4	235 Vac	230 Vac
5	Ground	Ground

When the supply is isolated, check for bad fuse..

009

Reinstall the F207 fuse.
Jumper C-A1A6B04 to C-A1A6D04.
Disconnect C-B1J3 and C-B1J4 (05-680).
Remove card C-B1J6.
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

010

Connect the CE multimeter from C-A1B6A04(+) to C-A1B5D08(-).
Does the CE multimeter read more than +4 Vdc?
Y N

011

The YA184AC4 net has a short circuit (see FSL, Vol D).
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

012

Bad protect card C-A1B2.
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

013

While the machine power is on, connect the CE multimeter from the C-B1J3 or C-B1J4 pins to the return on the feature power G filter assembly board as indicated in Note 2 and compare the reading to the low limit.

Does the CE multimeter read more than the low limit for every level?

Y N

014

DANGER

While the machine power is on, connect the CE multimeter across the AC cable at TB9 (05-680) (see Note 1).

(Step 014 continues)

Note 2: Feature power G filter assembly board C-B1J3/J4 power pins (05-210 for pin locations)

Level	Low Limit	Pin	Rtn
+24 V	21.6 Vdc	B06 D06	B05 D05
+12 V	11.0 Vdc	B02	B12 D12
+5 V	4.5 Vdc	B03 B04 D03	B12 D12
-4 V	-3.6 Vdc	B13 D13	B12 D12
-12 V	-11.0 Vdc	D02	B12 D12

Note 1: The CE multimeter may read as high as 235 Vac.

XFMR TB	Line voltage 50 HZ	Line voltage 60 HZ
1	Common	Common
2	200 Vac	200 Vac
3	220 Vac	208 Vac
4	235 Vac	230 Vac
5	Ground	Ground

(Step 014 continued)
Is any line voltage present at TB9?
Y N

015
-Set Power to 0 (operator panel).
Remove the AC cable at TB9. Connect the CE multimeter across the AC cable (see Note 1).

DANGER

High voltage will be present at the AC cable when the machine power is on.
-Set Power to 1 (operator panel).

Is any line voltage present at the cable?
Y N

016
-Set Power to 0 (operator panel).
Connect the CE multimeter from ACTB7-2 to ACTB7-5 (see Note 1).

DANGER

High voltage will be present at ACTB7 when the machine power is on.
-Set Power to 1 (operator panel).
Is any line voltage present at ACTB7?
Y N

017
-Set Power to 0 (operator panel).
The cable from the AC box to the feature AC box is bad.
Reconnect the AC cable to TB9.
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

Note 1: The CE multimeter may read as high as 235 Vac.

XFMR TB	Line voltage 50 HZ	Line voltage 60 HZ
1	Common	Common
2	200 Vac	200 Vac
3	220 Vac	208 Vac
4	235 Vac	230 Vac
5	Ground	Ground

018

-Set Power to 0 (operator panel).
Connect the CE multimeter from ACTB7-7 to ACTB7-5 (see Note 1).

DANGER

High voltage will be present at ACTB7 when the machine power is on.
-Set Power to 1 (operator panel).
Is any line voltage present at ACTB7?
Y N

019

-Set Power to 0 (operator panel).
The F207 fuse holder assembly is bad.
Reconnect the AC cable to TB9.
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

020

-Set Power to 0 (operator panel).
The AC cable to TB9 is bad.
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

021

The feature power G ferro is bad.
Reconnect the AC cable to TB9.
Reconnect C-B1J3.
Reconnect C-B1J4.
Reinstall C-B1J6.
Remove jumper.

022

-Set Power to 0 (operator panel).
Remove C-B1J1 & C-B1J2 (05-680).
-Set Power to 1 (operator panel).

Connect the CE multimeter from voltage pins to the common pins on the cable from the ferroresonant transformer as indicated in Note 3 and compare the voltage to the low limit.

Note 3: Feature power G
Transformer voltage pins
(05-210 for pin locations)

Pin	Common	Low limit
J2-1	J2-3	22 Vac
J2-2	J2-3	22 Vac
J1-1	J1-4	11 Vac
J1-5	J1-4	11 Vac
J1-3	J1-2	11 Vac
J1-6	J1-2	11 Vac
J1-7	J1-9	4.5 Vac
J1-8	J1-9	4.5 Vac
J2-4	J2-6	3.6 Vac
J2-5	J2-6	3.6 Vac

Does the CE multimeter read more than the low limit for every reading?

Y N

023

-Set Power to 0 (operator panel).
Remove the plastic insulators from the AC capacitor C1 (05-680).

DANGER

Voltages up to 550 Vac are present on the AC capacitor when the power is at the ferroresonant transformer. Verify that the power was removed and short circuit capacitor terminals together before touching the terminals.

Disconnect the leads from the AC capacitor.
Using the CE multimeter on the 'R X 1K' scale, check the capacitor by placing probes across the terminals.

Is the AC capacitor good (see Note 4)?

Y N

Note 4: If the capacitor is good, the CE multimeter will deflect to or near 0 ohms and then return to a high resistance.

024
The feature power G AC capacitor is bad.
Reconnect C-B1J1 & C-B1J2.
Reconnect C-B1J3 & C-B1J4.
Reinstall C-B1J6.
Remove jumper.

025
The feature power G ferro is bad.
Reconnect C-B1J1 & C-B1J2.
Reconnect C-B1J3 & C-B1J4.
Reinstall C-B1J6.
Remove jumper.

026
-Set Power to 0 (operator panel).
Reconnect C-B1J1 & C-B1J2.
Reconnect C-B1J3 & C-B1J4.
Reinstall C-B1J6.
Remove jumper.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

027
The feature power G filter assembly board C-B1 is bad.

028
A loose cable was the only problem.

029

Remove card C-B1J6.

Connect the CE multimeter from the C-B1J6 voltage sense pins to the common sense pin as indicated in Note 5 and compare the voltage to the low limit.

Does the CE multimeter read more than the low limit for each level?

Y N

Note 5:

Feature power G filter assembly board C-B1J6 sense pins (05-210 for pin locations)

Level	Low Limit	Pin	Com
+24 V	21.6 Vdc	D13	J10
+12 V	11.0 Vdc	D10	J07
+5 V	4.5 Vdc	J04	J07
-4 V	-3.6 Vdc	J05	J07
-12 V	-11.0 Vdc	D07	J07

030

The feature power G filter assembly board C-B1 is bad.

Reconnect C-B1J3.

Reconnect C-B1J4.

Reinstall C-B1J6.

Remove jumper.

031

-Set Power to 0 (operator panel).

Reinstall C-B1J6.

-Set Power to 1 (operator panel).

Does the machine power on?

Y N

032

Bad sense card C-B1J6.

Reconnect C-B1J3 & C-B1J4.

033

-Set Power to 0 (operator panel).
Reconnect C-B1J3 & C-B1J4.
-Set Power to 1 (operator panel).
Does the machine power on?
Y N

034

-Set Power to 0 (operator panel).
Remove card C-B1J6.
-Set Power to 1 (operator panel).
Connect the CE multimeter from the C-B1J6 voltage sense pins to the common sense pin indicated in Note 5 and compare the voltage to the low limit.
Does the CE multimeter read more than the low limit for each level?
Y N

035

Record the level or levels that read less than the low limit.
Does the CE multimeter read less than the low limit for more than one level?
Y N

Note 5: Feature power G filter assembly board C-B1J6 sense pins (05-210 for pin locations)

Level	Low Limit	Pin	Com
+24 V	21.6 Vdc	D13	J10
+12 V	11.0 Vdc	D10	J07
+5 V	4.5 Vdc	J04	J07
-4 V	-3.6 Vdc	J05	J07
-12 V	-11.0 Vdc	D07	J07

036

-Set Power to 0 (operator panel).
Disconnect C-B1J1 & C-B1J2.
Connect the CE multimeter from the voltage pins to the common pin on the cable from the ferroresonant transformer as indicated in Note 6 for the recorded level.

Does the CE multimeter read less than 1 ohm for both voltage pins?

Y N

037

The feature power G ferroresonant transformer is bad.
Reinstall C-B1J6.
Remove jumper.

Note 6: Feature power G Transformer cable pins (05-210 for pin locations)

Level	Voltage	Common
24 V	J2-1	J2-3
	J2-2	J2-3
12 V	J1-6	J1-2
	J1-3	J1-2
5 V	J1-7	J1-9
	J1-8	J1-9
-4 V	J2-4	J2-6
	J2-5	J2-6
-12 V	J1-5	J1-4
	J1-1	J1-4

038

Disconnect C-B1J3 & C-B1J4.

Connect the CE multimeter from the AC input pin(+) to the DC output pin(-) on the filter assembly board as indicated in Note 7 for the recorded level.

Does the CE multimeter read less than 1 k ohm for all three input pins?

Y N

039

The feature power G filter assembly board C-B1 is bad.

Remove jumper.

Note 7: Feature power G
Filter assembly board
C-B1 pins
(05-210 for pin locations)

Level	AC Input	DC Output
24 V	J2-1	J3B06
24 V	J2-2	J3B06
24 V Rtn	J2-3	J3B05
12 V	J1-6	J3B02
12 V	J1-3	J3B02
12 V Rtn	J1-2	J3B12
5 V	J1-7	J3B03
5 V	J1-8	J3B03
5 V Rtn	J1-9	J3B12
-4 V Rtn	J2-4	J3B12
-4 V Rtn	J2-5	J3B12
-4 V	J2-6	J3B13
-12 V Rtn	J1-5	J3B12
-12 V Rtn	J1-1	J3B12
-12 V	J1-4	J3D02

040

Probe from C-A1B2S02(+) to C-A1B2U08(-) (see Note 8).
-Set the Latch switch to the Down position (General logic probe II).
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).

```
Up   Light: On
Down Light: On
```

Are the lights correct?
Y N

041

Remove C-B1J5.
Connect the CE multimeter from C-B1J5B11(+) to C-B1J5D08(-) on the cable (05-210).

Does the CE multimeter read more than +4 Vdc?
Y N

042

Connect the CE multimeter from C-A1B2S02(+) to C-A1B2U08(-).
Does the CE multimeter read more than +4 Vdc?
Y N

043

Bad protect card C-A1B2.

044

The YA184AB4 net has an open circuit (see FSL Vol D).

045

The feature power G ferro is bad.
---or---
Bad sense card C-B1J6.

046

Bad protect card C-A1B2.

Note 8: This is to check for an OC that is causing the UV. Connect the power leads to any D03(+) and D08(-) on the C-A1 power logic board for probe power.

When this problem is fixed, you may determine the OC error.

047

-Set Power to 0 (operator panel).
Remove the plastic insulators from the AC capacitor C1 (05-680).

DANGER

Voltages up to 550 Vac are present on the AC capacitor when the power is at the ferroresonant transformer. Verify that the power was removed and short circuit capacitor terminals together before touching the terminals.

Disconnect the leads from the AC capacitor.
Connect the CE multimeter across the red leads from the ferroresonant transformer.
Does the CE multimeter read less than 10 ohms?
Y N

048

The feature power G ferro is bad.

049

The feature power G AC capacitor is bad.

050

The feature power G filter assembly board C-B1 is bad.
Check for loose screws.

051

Remove jumper.
Loose cable was the only problem.

FEATURE POWER SUPPLY G OV

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0510	A	1	001

001
(Entry Point A)
Jumper C-A1A6B04 to C-A1A6D04.
Remove C-B1J3 & C-B1J4 (05-680).
Remove C-B1J5 & C-B1J7 (05-680).
-Set Power to 1 (operator panel).

MAP DESCRIPTION:
This MAP locates the failing FRU that causes the OV error.

ENTRY CONDITIONS:
The error data was recorded. Control Supply Status indicator lights on Lamp test. An OV error is indicated on feature power G.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2, C-B1J6

Does the machine power on?
Y N

002
Remove C-A1B2.
Connect the CE multimeter from C-A1A6C04(+) to C-A1B5D08(-).
Does the CE multimeter read more than 1 ohm?
Y N

003
The YA182BB1 net has a short circuit (see FSL, Vol D).
Remove jumper.

004
Bad protect card C-A1B2.
Remove jumper.

005
With machine power on, connect the CE multimeter from C-B1J3B12(+) to C-B1J3D02(-) on the feature power G filter assembly board (05-680).
Does the CE multimeter read more than 13.5 Vdc?
Y N

006
Remove card C-B1J6.
While the machine power is on, connect the CE multimeter from C-B1J6J07(+) to C-B1J6D05(-).
Does the CE multimeter read between 10.8 Vdc and 13.5 Vdc?
Y N

007
The feature power G filter assembly board C-B1 is bad.
Remove jumper.

008
Remove C-B1J1 (05-680).
With machine power on, connect the CE multimeter from J1-1 to J1-4 (05-210) on the cable from the ferroresonant transformer.
Does the CE multimeter read more than 13.5 Vac?
Y N

009
The feature power G filter assembly board is bad.
Remove jumper.

010
The feature power G ferroresonant transformer is bad.
Remove jumper.

011
Bad sense card C-B1J6.
Remove jumper.

The -12 Vdc level is the only level sensed for over voltage.

FEATURE POWER G OC

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0519	A	1	001

001
(Entry Point A)
Remove card C-B1J6 (05-680).
Jumper C-A1A6B04 to C-A1A6D04.
-Set Power to 0 (operator panel).
-Set Power to 1 (operator panel).

Does the machine power up?
Y N

002
Remove card C-A1B2.
Connect the CE multimeter from C-A1A6E04(+) to ground(-).

Does the CE multimeter read more than 1 ohm?
Y N

003
The YA184AB4 net has a short circuit to ground.
Reconnect C-B1J3 & C-B1J4.
Reinstall C-B1J6.
Reinstall C-A1B2.
Remove jumper.

MAP DESCRIPTION:
This MAP determines the cause of an OC power check.

ENTRY CONDITIONS:
An OC error is indicated of feature power G with the load disconnected at C-B1J3 and C-B1J4.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2, C-B1J6

004

Bad protect card C-A1B2.
Reconnect C-B1J3 & C-B1J4.
Reinstall C-B1J6.
Remove jumper.

005

Bad sense card C-B1J6.
---or---
The feature power G filter assembly board C-B1 is bad.
Reconnect C-B1J3 and C-B1J4.

FEATURE G CABLE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001
0513	A	1	001
0571	A	1	001
0572	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:
This MAP determines if the cause of the failure is in the cable to feature power G or in the supply.

ENTRY CONDITIONS:
An error is indicated when the C-B1J7 cable is connected to feature power G.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-B1J6

(Step 001 continues)

(Step 001 continued)

-Set CB1 to 0 (AC distribution box).
Disconnect C-B1J7 (if not already disconnected) (05-680).
-Set CB1 to 1 (AC distribution box)
Connect the CE multimeter from the pin on the C-B1J7 cable as indicated in Note 1 to C-B1J7-5 (ground) (05-210) and compare the reading to the range as indicated in Note 2 for each level.

Note 1:
C-B1J7 cable voltage pin
(05-210 for pin locations)

Level	Pins	Ground
+5 V	11,13,14	5
+24 V	4	5
-24 V	15	5
-5 V	2	5

Note 2:
Control Supply Table
(See the FSL Vol D)

Level	Low	High	Net
+5 V	+4.6	+5.2	YA020JJ09
+24 V	+22.0	+26.4	YA020JJ04
-24 V	-22.0	-26.4	YA020JJ12
-5 V	-4.6	-5.5	YA020JJ08

Does each level read above the low range?
Y N

002
The net for the bad level has an open circuit or short circuit to ground.

003

Remove C-B1J6 card.
Reconnect C-B1J7.
Connect the CE multimeter from the voltage pin as indicated in Note 3 to D08 (ground) and compare the reading to the range as indicated in Note 2 for each level.

Note 3:
C-B1J6 card voltage pin

Level	Pins	Ground
+5 V	D03	D08
+24 V	D11	D08
-24 V	D06	D08
-5 V	J06	D08

Does each level read above the low range?
Y N

004
The feature power G filter assembly board C-B1 is bad.

005
Bad sense card C-B1J6.

RELAY K4 DRIVE

5340 SYSTEMS UNIT

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0511	A	1	001
1020	A	1	001
1020	B	6	028
1030	A	1	001
1030	B	6	028

001
(Entry Point A)

MAP DESCRIPTION:
This MAP checks the drive circuit for relay K4.

ENTRY CONDITIONS:
Entry Point A:
K1 and K2 are on.
K4 is not on.

Entry Point B:
K1 and K2 are on.
K4 will not open.

START CONDITIONS:
None

LOGIC CARDS TESTED:
C-A1B2, C-B1J6

With power on, connect the CE multimeter from C-B1J5D07(+) (05-210, 05-260, Note 2) on the probe side of the cable to frame ground(-).
Does the CE multimeter read more than 20 Vdc?

Y N

Note 2: For C-B1J5, B02 is on the bottom.

2 2
A B

002
-Set Power to 0 (operator panel).
Remove C-B1J6.
Connect the CE multimeter from D13 to B12 on the C-B1J6 card.
Does the CE multimeter read less than 1 ohm?
Y N

003
Bad sense card C-B1J6.

004
The feature power G filter assembly board C-B1 is bad.

005
With power on, connect the CE multimeter from C-B1J5B02(+) on the probe side of the cable (05-210, Note 2) to frame ground(-).
Does the CE multimeter read more than 20 Vdc?
Y N

006
-Set Power to 0 (operator panel).
Disconnect C-B1J5.
Connect the CE multimeter from C-B1J5D07(+) to C-B1J5B02(-).
Does the CE multimeter read more than 320 ohms?
Y N

007
The AC cable in the feature AC box has an open circuit.
---or---
Relay K4 is bad.

008
Relay K4 is bad.
---or---
The DC cable in the feature AC box has an open circuit.

Note 2: For C-B1J5, B02 is on the bottom.

009

Connect the CE multimeter from C-B1J5D02(+) on the probe side of the cable (05-210) to frame ground(-).

Does the CE multimeter read more than 4 Vdc?

Y N

010

-Set Power to 0 (operator panel).

Remove C-A1B2.

Connect the CE multimeter from C-A1B2G04(+) to C-A1B2J08(-).

Does the CE multimeter read more than 4 Vdc?

Y N

011

-Set CB1 to 0 (AC distribution box)

Remove C-B1J6.

Connect the CE multimeter from C-A1B2G04(+) to C-B1J6B07(-).

Does the CE multimeter read less than 1 ohm?

Y N

012

The YA301DD4 net has an open circuit.

013

Bad sense card C-B1J6.

014

Bad protect card C-A1B2.

015

Connect the CE multimeter from C-B1J3D04(+) on the probe side of the cable (05-210) to frame ground(-).

Does the CE multimeter read less than 1 Vdc?

Y N

016

-Set Power to 0 (operator panel).

The YA181AC2 net has an open circuit.

017

Connect the CE multimeter from C-B1J4D04(+) on the probe side of the cable (05-210) to frame ground(-).

Does the CE multimeter read less than 1 Vdc?

Y N

018

-Set Power to 0 (operator panel).

The YA181BA2 net has an open circuit.

019

-Set Power to 0 (operator panel).

Remove C-B1J6.

Disconnect C-B1J5 and C-B1J7.

Disconnect C-B1J3 and C-B1J4.

Connect the CE multimeter from C-B1J3D04(+) to C-B1J6B08(-).

Does the CE multimeter read less than 1 ohm?

Y N

020

The feature power G filter assembly board C-B1 is bad.

021

Connect the CE multimeter from C-B1J4D04 to C-B1J6B10.

Does the CE multimeter read less than 1 ohm?

Y N

022

The feature power G filter assembly board C-B1 is bad.

023

Connect the CE multimeter from C-B1J5B02 (note 2) to C-B1J6B02.

Note 2: For C-B1J5, B02 is on the bottom.

Does the CE multimeter read less than 1 ohm?

Y N

024

The feature power G filter assembly board C-B1 is bad.