

5340

VOLUME

A

MAINTENANCE
ANALYSIS
PROCEDURES

S/N _____

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C

THEORY -
DIAGRAMS

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	27 JUN 80 835000	VOL A 2 OF 2 MLM OVERVIEW
	02 DEC 80 835116	MACH 5340
	04 DEC 81 835201	PART NO. 4237996
	CLASSIFICATION	
	JLC	01 Dec 77
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 WCXXX WORK STATION (IDEOGRAPHIC)
 WSXXX WORK STATION CONTROLLER
 YAXXX POWER

4237996

**WSC SERIAL INTERFACE FAILURE
5340 SYSTEMS UNIT**

MAP 1160-1

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1117	A	1	001
1161	A	1	001
1162	A	1	001
1163	A	1	001
1164	A	1	001
1180	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	016	1161	A
3	018	1162	A
3	015	1163	A
2	009	1164	A
2	010	1180	A

001

(Entry Point A)

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR TRANSMIT FAILURE

START CONDITIONS:

ENTRY IS THROUGH MAP 1198

MAP DESCRIPTION:

THIS IS A HARD COPY OF A MDI MAP TO BE REFERENCED FROM THE CE PANEL WHEN USING THE SPECIAL TUSELECT DESCRIBED IN THE DIAGNOSTIC SERVICE GUIDE 99-064

LOGIC CARDS TESTED:

- A-A2M2 CARD (WORK STATION ATTACHMENT)
- A-A2N2 CARD (WORK STATION CONTROLLER)
- A-A2R2 CARD (DRIVER RECEIVER CARD)

DID THE TEST FAIL?

Y N

002

RUN TC0A4 W/S CONSOLE POLL.
TEST GO LATCH. DID IT FAIL TO RESET?

DID THE TEST FAIL?

Y N

Y N

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MAP 1160-1

3 3 2
A B C

C

**SERIAL INTRFCE TEST
5340 SYSTEMS UNIT
PAGE 2 OF 3**

003

RUN TC0A4 W/S CONSOLE POLL.
TEST RECEIVE LATCH
DID THE TEST FAIL?

Y N

004

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR NO RESPONSE FROM SYSTEM
CONSOLE
DID THE TEST FAIL?

Y N

005

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR PARITY CHECK ON RESPONSE
DID THE TEST FAIL?

Y N

006

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR NO END OF MESSAGE
DID THE TEST FAIL?

Y N

007

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR RECEIVE NOT DISABLED
AFTER EOM
DID THE TEST FAIL?

Y N

3 3 3
D E F G H J

G H J

MAP 1160-2

008

RUN TC0A4 W/S CONSOLE POLL.
TEST FOR MULTIPLE FRAME RESPONSE
DID THE TEST FAIL?

Y N

009

THE TERMINAL HAS RESPONDED BUT IS IN
THE WRONG STATE
Go To Map 1164, Entry Point A.

010

FAILURE IS INTERMITTENT

GO TO THE NETWORK MAPS TO SORT IT OUT
Go To Map 1180, Entry Point A.

011

RECEIVE IS NOT DISABLED AFTER EOM.

Bad card

A-A2M2 CARD (WORK STATION ATTACHMENT)

012

RUN TEST C0A4
TEST IF TERMINAL HAS TRANSMITTED AN EOM
DID THE TEST COMPLETE WITHOUT ERROR?

Y N

013

TERMINAL FAILURE

TERMINAL IS NOT TRANSMITTING END OF
MESSAGE AS LAST FRAME OF RESPONSE

GO TO THE TERMINAL MAINTAINENCE PACKAGE
AND PERFORM THE REPAIRS

3
K

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MAP 1160-2

A B D E F K SERIAL INTRFCE TEST
1 1 2 2 2 2 5340 SYSTEMS UNIT

MAP 1160-3

PAGE 3 OF 3

014

THE TERMINAL HAS RESPONDED
CORRECTLY BUT THE WORKSTATION
CONTROLLER HAS FAILED TO
RECOGNIZE THIS

Bad card

A-A2M2 CARD (WORK STATION
ATTACHMENT)

015

A PARITY CHECK HAS BEEN DETECTED
ON THE TERMINAL RESPONSE
Go To Map 1163, Entry Point A.

016

NO RESPONSE HAS BEEN RECEIVED FROM
THE TERMINAL
Go To Map 1161, Entry Point A.

017

RECEIVE HAS FAILED TO SET.

Bad card

A-A2M2 CARD (WORK STATION
ATTACHMENT)

018

THE GO LATCH HAS FAILED TO RESET
Go To Map 1162, Entry Point A.

019

THE WORKSTATION CONTROLLER HAS FAILED TO
TRANSMIT A POLL TO THE TERMINAL.

Bad card

A-A2M2 CARD (WORK STATION ATTACHMENT)

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MAP 1160-3

CONSOLE NO RESPONSE

MAP 1161-1

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1160	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	012	1181	A
1	002	1198	A
1	004	1198	A
2	006	1198	A

001

(Entry Point A)

MAP DESCRIPTION:

The console has failed to respond to a poll command from the work station controller.

START CONDITIONS:

The good machine path has failed (Entry is through MAP 1198).

LOGIC CARDS TESTED:

A-A2M2 card (work station attachment).
A-A2R2 card (driver receiver card)

Is the console power on?

Y N

002

Turn the console power on.

Verify with MDI.

Go To Map 1198, Entry Point A.

003

Is the test/normal switch set to normal.
On the system console?

Y N

004

Set the test/normal switch to normal.

Verify with MDI.

Go To Map 1198, Entry Point A.

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MAP 1161-1

2
A

A

CONSOLE NO RESPONSE
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005

Is the console cable plugged into the system?

Y N

006

Plug the console cable into the system at the connector labeled C.

Verify with MDI.

Go To Map 1198, Entry Point A.

007

Using the TU select program reference Diagnostic Service Guide 99-064. Loop test X'COA4'.

Probe

A-A2M2U13 (+delayed transmit enable).

A-A2M2P07 (-transmit clock).

A-A2M2M08 (+transmit data).

Up Light: On

Down Light: On

Are the lights correct?

Y N

008

Remove

A-A2R2 card (driver receiver card)

Connect a jumper from

A-A1T6E04 (10MHZ oscillator).

to

A-A2R2D05 (16MHZ oscillator).

-Set Power to 1 (operator panel).

Using the TU select program

reference Diagnostic Service Guide 99-064.

Loop test 'COA4'.

(Step 008 continues)

B

B

MAP 1161-2

(Step 008 continued)

Probe

A-A2M2U13 (+delayed transmit enable).

A-A2M2S13 (transmit clock).

A-A2M2M08 (+transmit data).

Up Light: On

Down Light: On

Are the lights correct?

Y N

009

Bad card

A-A2M2 card (work station attachment).

010

Bad card

A-A2R2 card (driver receiver card)

011

Probe setup.

+Gate connects to

A-A2M2Y32 (+receive enable).

Probe

A-A2M2S10 (+receive data).

Up Light: On

Down Light: On

A jumper maybe necessary to allow +Gate to reach

A-A2M2Y32 (+Receive enable).

Check to ensure that the switches on the CE probe are as follows:

Technology: Multi

Latch: None

Gate Ref: +1.4V

(Step 011 continues)

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PEC 832999

MAP 1161-2

CONSOLE NO RESPONSE

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PAGE 3 OF 3

(Step 011 continued)

Are the lights correct?

Y N

012

A cable or terminal problem is suspected.

Be sure that the above measurement was done properly.

Go To Map 1181, Entry Point A.

013

Probe

A-A2M2S09 (+receive clock).

Up Light: On

Down Light: On

Are the lights correct?

Y N

014

Bad card

A-A2R2 card (driver receiver card)

---or---

A-A2M2 card (work station attachment).

015

-Set Power to 0 (operator panel).

Disconnect cable A-A2V2.

Set the CE multimeter to ohms x 1.

Measure the resistance between A-A2R2D02 (port 0 phase Y0 and A-A2R2B02 (port 0, phase B).

Does the CE multimeter read between 100 and 130 ohms?

Y N

016

Bad card

A-A2R2 card (driver receiver card)

C

MAP 1161-3

017

A problem is suspected with the port 0 cable, with the terminal, or with the port 0 driver. You will be sent to the port 0 cable MAP to attempt to find the problem. Record this MAP and step number and be sure to return to this point when you reach the ending point in the cable MAP. Reinstall all cards and cables. Go to MAP 1181, Entry Point A.

Did the cable MAP find the problem?

Y N

018

A terminal problem or a work station attachment card problem is suspected. You will be sent to the 5250 terminal MAP's to attempt to find the problem. Record this MAP and step and be sure to return to this point when you reach the ending point in the terminal MAP's. Go to 5250 Terminal Entry MAP 0100, Entry Point A.

Did the terminal MAP's find the problem?

Y N

019

Bad card

A-A2M2 card (work station attachment).

020

Problem fixed.

021

Problem fixed.

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MAP 1161-3

C

GO LATCH FAILED TO RESET

MAP 1162-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1160	A	1	001

001

(Entry Point A)

Using the TU select program reference Diagnostic Service Guide 99-064.

Loop test X'COA4'.

Probe
A-A2M2W26 (-sense strobe).

Up Light: On
Down Light: On

Are the lights correct?

Y N

002

Probe
A-A2M2W26 (-sense strobe).

Up Light: Off
Down Light: Off

Are the lights correct?

Y N

003

Bad card
A-A2N2 card (work station controller).
---or---
A-A2M2 card (work station attachment).

MAP DESCRIPTION:

The synchronization between the work station controller and the serializer/deserializer has failed.

START CONDITIONS:

The good machine path has failed (Entry is through MAP 1198).

LOGIC CARDS TESTED:

A-A2M2 card (work station attachment).
A-A2N2 card (work station controller).

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MAP 1162-1

2 2
A B

A B

GO LATCH
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PAGE 2 OF 2

MAP 1162-2

004

Bad card
A-A2N2 card (work station controller).

005

Bad card
A-A2M2 card (work station attachment).

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EC 832999 PEC 832850
MAP 1162-2

PARITY CHECK ON RESPONSE

MAP 1163-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1160	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	004	1180	A

001

(Entry Point A)

USING THE TU SELECT PROGRAM
REFERENCE DIAGNOSTIC SERVICE GUIDE 99-064

RUN TEST X'COA4'

COUNT THE NUMBER OF BITS THAT ARE ON
(LIGHTS ON) IN THE LAST TWO RESULT BYTES
(WR7).

IS YOUR COUNT AN EVEN NUMBER?

Y N

002

THE TERMINAL IS TRANSMITTING BAD PARITY

GOTO THE TERMINAL MAPS AND PERFORM ALL
NECESSARY REPAIRS

003

IS BIT0 OF BYTE 1 ON IN WR6?

Y N

004

THE PARITY PROBLEM IS INTERMITTENT.

GOTO THE NETWORK MAPS
Go To Map 1180, Entry Point A.

MAP DESCRIPTION:

THE WORK STATION CONTROLLER HAS SENSED
BAD PARITY OR A TRANSMISSION FROM THE
TERMINAL IN RESPONSE TO A POLL.

START CONDITIONS:

THE GOOD MACHINE PATH HAS FAILED (ENTRY IS
THROUGH MAP 1198)

LOGIC CARDS TESTED:

A-A2M2 CARD (WORK STATION ATTACHMENT)

A
1

PARITY CHECK
5340 SYSTEMS UNIT
PAGE 2 OF 2

MAP 1163-2

005

THE WORKSTATION ATTACHMENT IS FAILING TO
CALCULATE PARITY CORRECTLY

BAD CARD

A-A2M2 CARD (WORK STATION ATTACHMENT)

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EC 832850

PEC 832742C

MAP 1163-2

MULTIPLE FRAME RESPONSE

MAP 1164-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1160	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	002	1198	A
2	007	1198	A

001
(Entry Point A)

MAP DESCRIPTION:
THE WORK STATION CONTROLLER HAS SENSED A MULTIPLE FRAME RESPONSE TO A POLL WHEN THE TERMINAL SHOULD BE RESET.

START CONDITIONS:
THE GOOD MACHINE PATH HAS FAILED (ENTRY IS THROUGH MAP 1198)

LOGIC CARDS TESTED:
A-A2M2 CARD (WORK STATION ATTACHMENT)

IS THE 'TEST/NORMAL' SWITCH SET TO 'NORMAL'?

Y N

002
SET THE SWITCH TO NORMAL AND VERIFY WITH THE MDI'S
Go To Map 1198, Entry Point A.

003
THE TERMINAL IS NOT GOING TO THE POWER ON TRANSITION STATE

RESET THE TERMINAL BY TURNING IT OFF AND BACK ON
DOES THE TERMINAL HAVE ITS CURSOR IN THE UPPER RIGHT SECTION OF THE SCREEN?

Y N

|
|

2 2
A B

A B

MULTIPLE FRAME RESP
5340 SYSTEMS UNIT
PAGE 2 OF 2

004

THE TERMINAL HAS FAILED ITS INTERNAL DIAGNOSTICS

GOTO THE TERMINAL MAPS AND PERFORM THE REPAIR

005

USING THE TU SELECT PROGRAM
REFERENCE DIAGNOSTIC SERVICE GUIDE 99-064
RUN TEST X'COA4'

THE TEST IS COMPLETE WHEN ALL LIGHTS ON THE CE PANEL ARE OFF EXECEPT P1

TO OBTAIN THE RESULTS OF THE TEST SEE THE DIAGNOSTIC SERVICE GUIDE 99-064

IS THE RESULT OF THE TEST EQUAL TO X'0000XXXX'

Y N

006

THE TEST IS COMPLETE WHEN ALL LIGHTS ON THE CE PANEL ARE OFF EXECEPT P1

TO OBTAIN THE RESULTS OF THE TEST SEE THE DIAGNOSTIC SERVICE GUIDE 99-064

IS THE RESULT OF THE TEST EQUAL TO X'0100XXXX'

Y N

007

YOU STILL HAVE A PROBLEM BUT IT HAS CHANGED

GO BACK THE BEGINNING AND RUN THE MDI'S AGAIN TO ISOLATE THIS PROBLEM
Go To Map 1198, Entry Point A.

C D

C D

MAP 1164-2

008

THE TERMINAL IS STILL RESPONDING WITH MULTIPLE FRAMES

GO TO THE TERMINAL MAINTAINENCE PACKAGE TO PERFORM THE REPAIRS

009

THE TERMINAL IS NOW RESPONDING CORRECTLY--- REPAIR COMPLETE

03OCT77

PN 4237573

EC 832850

PEC 832742C

MAP 1164-2

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PAGE 1 OF 6

ENTRY POINTS

FROM	ENTRY THIS MAP		

MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER

1160	A	1	001
1163	A	1	001
1194	A	1	001
1199	A	1	001

001
(Entry Point A)

MAP DESCRIPTION:

This MAP supplies you with the information necessary to run and interpret the local network analysis program (COC1). This program is designed to present you with the status of the network as it is, and to permit you to compare this with your knowledge of the way it should be. Because there is no way for the MAP writer to know your specific terminal configuration, your knowledge and interpretation of results are the primary ingredients of this MAP.

START CONDITIONS:

The work station attachment MDI's should have been run.
Entry to the work station attachment MDI's is through MAP 1198.

To start the local network analysis program, see the diagnostic service guide, Section 99-064, and run TU X'COC1'.

The network analysis program displays a matrix on the system console. Along the horizontal axis and cable and station addresses, and along the vertical axis are the various conditions that have been sensed at the terminal.

An 'X' is placed at the intersection of the terminal's cable-station address and the appropriate condition when that condition occurs. Once a given condition occurs for a terminal, that condition is never erased. Only new information is added.

LOCAL NETWORK ANALYSIS PGM USAGE

MAP 1180-2

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PAGE 2 OF 6

Cable Address	0000000	1111111	2222222	3333333
Station Address	0123456	0123456	0123456	0123456
Single Frame	X	X	XX	
Go Latch Fail				
XMIT Fail				
Receive Fail				
No Response	XXXXXXXX	X X	XXXXXXXX	XXXXXXXX
No EOM				
RCV After EOM				
MULTI Frame	X	X	X	
Parity Check				

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EC 835000 PEC 832999

MAP 1180-2

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PAGE 3 OF 6

The first thing to check is that the addresses of the responding terminals are correct.

If a terminal is on the right cable but has the wrong address change, the station address switches on the terminals as described in the terminal documentation.

```
*****  
* Correct Responses *  
*****
```

Single Frame

If a terminal is supposed to respond from this address, a single frame response is a correct response. The single frame response indicates that the terminal is in the reset state.

No Response

If no terminal is supposed to respond at this address, a no response is correct. (The easiest way to count the number of responding terminals is to count the number of blank no responses.)

Multi Frame

This is a correct response for a terminal that is not in the reset state. This is true for the system console (not reset because it displays the matrix to you) and may be true for terminal printers. If this condition exists for a terminal printer, it should not have any other indicator on.

In the example given above, there are six terminals responding correctly on two cables. Cable 0 has the system console at station address 0 and no other terminals. Cable 1 has five terminals, two printers and three displays. Note that the system console has two conditions displayed, single frame and multi frame. This is because the first time the test polled, the console was in the reset state (no display), then subsequent polls get the multi frame response because the console now has a display.

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MAP 1180-3

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* Incorrect Responses *

Single Frame

A terminal is responding from the reset state at an address where no terminal should be.
Possible Causes:

- 1 The terminal is on the wrong cable.
- 2 The cable is connected to the wrong port in the system.
- 3 The terminal has its address switches set up incorrectly.

Go Latch Failure

The synchronization circuitry between the work station controller and the serial interface hardware has failed.
Possible Causes:

- 1 Bad card A-A2M2 (work station attach).
- 2 Bad card A-A2N2 (work station controller).
- 3 Top card connectors A-A2N2, W connector or A-A2N2, X connector.

XMIT Failure

The work station controller has attempted to transmit a poll to the terminal and failed.
Possible Causes:

Bad card A-A2M2 (work station attach).

Receive Failure

The work station controller has attempted to go into receive mode and failed.
Possible Causes:

Bad card A-A2M2 (work station attach).

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No Response

A terminal was expected to respond and did not.

Possible Causes:

- 1 The terminal is not turned on.
- 2 The terminal has not completed its internal diagnostics (the cursor is in the upper right corner of the screen if the terminal has completed its diagnostics).
- 3 The terminal is not connected to the cable (see MAPs 1181- cable 0, 1182-cable 1, 1183-cable 2, 1184-cable 3).
- 4 The cable is not connected to the system (see MAPs 1181- cable 0, 1182-cable 1, 1183-cable 2, 1184-cable 3).
- 5 There is a broken cable in the system (see MAPs 1181- cable 0, 1182-cable 1, 1183-cable 2, 1184-cable 3).
- 6 Bad driver receiver card A-A2R2.
- 7 Bad attachment card A-A2M2.

RCV after EOM

The terminal has responded but failed to terminate its transmission with station address 7 (end of message).

Possible Causes:

- 1 A terminal failure.
- 2 Bad attachment card A-A2M2.
- 3 Bad driver receiver card A-A2R2.

Multi Frame

The terminal is responding but is not in the reset state. Displays should go to the reset state after not being polled for 3 seconds. Printers will not go to the reset state except when first powered up.

Possible cause:

Terminal Failure

LOCAL NETWORK ANALYSIS PGM USAGE

MAP 1180-6

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Parity Check

The terminal transmission had a parity check.

Possible causes:

- 1 Terminal failure.
- 2 Two terminals responding on the same address.
- 3 Bad cable (see MAPs 1181, 1182, 1183, 1184).
- 4 Bad driver receiver card A-A2R2.
- 5 Bad attachment card A-A2M2.

```
*****  
*   Exit   *  
*****
```

To exit this program, press Reset and CE Start .

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EC 835000 PEC 832999
MAP 1180-6

CABLE 0 DIAGNOSIS

MAP 1181-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1161	A	1	001
1180	A	1	001

001

(Entry Point A)

Remove

A-A2R2 card (driver receiver card)

Set ohmmeter to ohms X 1.

Measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)

(Be sure to zero your meter.)

START CONDITIONS:

A problem is suspected with the cable going to the console.

MAP DESCRIPTION:

The MAP tests cable 0 for opens, shorts, and reversal of leads in cable D-A0 and cable A-A2V2.

The cable has two internal leads and a shield. Each internal lead is terminated at each end of the cable with a 55 ohm resistor to ground. The lead to lead resistance is 20 ohms per 1000 feet. The lead to shield resistance is 14 ohms per 1000 feet.

LOGIC CARDS TESTED:

A-A2R2 card (driver receiver card)
Cable A-A2V2.
Cable D-A0.
Board A-A2.
Terminating resistors in the terminal.

(Step 001 continues)

(Step 001 continues)

**CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT**

MAP 1181-2

PAGE 2 OF 16

(Step 001 continued)

(Step 001 continued)

Note 1: If the resistance measured in any of the following steps is greater than 130 ohms, the station protectors, if installed on this cable, will have to be removed. The procedures should then be repeated.

Is the resistance between 100 and 130 ohms (see Note 1)?

Y N

002

(Entry Point B)

Measure the resistance between A-A2R2D02 (console port phase Y) and ground.

Is the resistance between 45 and 65 ohms?

Y N

003

Is the resistance greater than 65 ohms?

Y N

004

Go to the systems cable entry tower and disconnect.

D-A0 (console port, Port 0).

Measure the resistance from A-A2R2D02 (console port phase Y)

to ground.

Is the resistance less than 100 ohms?

Y N

1
2 7 5 4 3
A B C D E

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MAP 1181-2

CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT

PAGE 4 OF 16

007

There is a short in the cable on the phase Y cable conductor to the shield on one of the terminals.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point.

Set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

008

Disconnect the cable at A-A2V2 and measure the resistance between

A-A2R2D02 (console port phase Y)
and ground.

Is the resistance less than 100 ohms?

Y N

009

The short to ground is in A-A2V2 or its connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

010

There is a short to ground of the signal

A-A2R2D02 (console port phase Y)
on the board A-A2.

Repair or install a new board.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

C
2

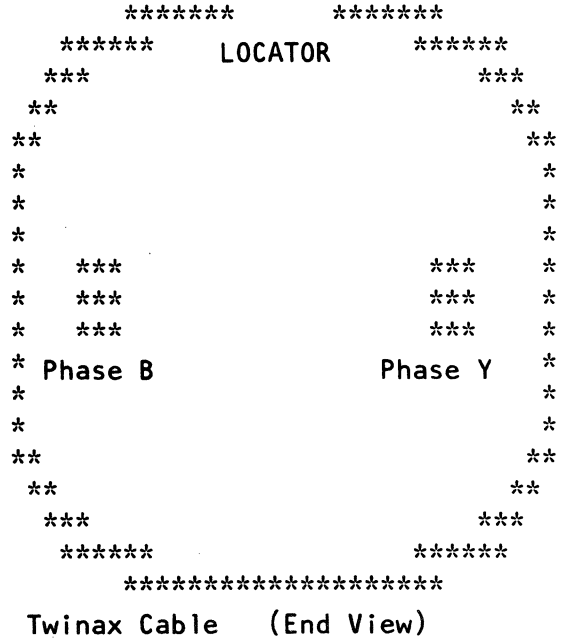
CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT
PAGE 5 OF 16

MAP 1181-5

011

Go to the cable entry tower and remove the cable
D-A0 (console port, Port 0).

Measure the resistance from phase Y of the cable to
the shield.



Is the resistance less than 65 ohms?

Y N

012

The open is not in the system.

Reinstall the cable into the cable tower

D-A0 (console port, Port 0).

Reinstall the A-A2R2 card (driver receiver card).

Go to the last terminal on that cable and remove
the cable from that terminal.

Measure the resistance from phase Y of the cable
to the shield.

Is the resistance greater than 65 ohms?

Y N

6 6 6
G H J

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MAP 1181-5

G H J
5 5 5

CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1181-6

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013

The open is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

014

The open is in the cable between the system and the terminal.
The most likely place for this failure is in the cable connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

015

Install a jumper from
A-A2V2D02 Twinax input phase Y cable 0.
to
A-A2V2B02 Twinax input phase B cable 0.

Measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)
Is the resistance less than 10 ohms?
Y N

016

The open is on the board wiring.

Either
A-A2R2D02 (console port phase Y)
to
A-A2V2D02 Twinax input phase Y cable 0.

or
A-A2R2B02 (console port phase B)
to
A-A2V2B02 Twinax input phase B cable 0.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

7
K

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MAP 1181-6

B K
2 6

CABLE 0 DIAGNOSIS

MAP 1181-7

5340 SYSTEMS UNIT

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017

The open is in cable V2 to cable entry tower.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

018

Measure the resistance between
A-A2R2B02 (console port phase B)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

019

Is the resistance greater than 65 ohms?

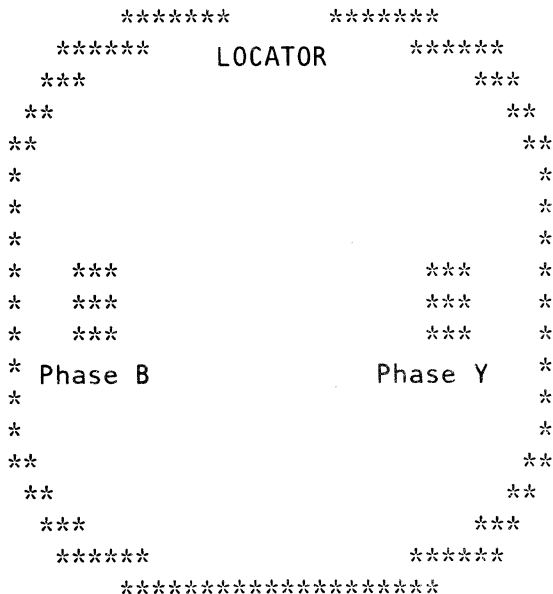
Y N

020

Go to the systems cable entry tower and
disconnect
D-A0 (console port, Port 0).

Measure the resistance from
A-A2R2B02 (console port phase B)

to ground.



Twinax Cable (End View)

The last terminal on any given cable will have only one
input cable and no output cables.

Those terminals that are not the last on that cable will
(Step 020 continues)

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MAP 1181-7

1 1
L O
L M

(Step 020 continues)

CABLE 0 DIAGNOSIS

MAP 1181-8

5340 SYSTEMS UNIT

PAGE 8 OF 16

(Step 020 continued)

(Step 020 continued)
have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

021

Reconnect
D-A0 (console port, Port 0).
go to the last terminal on port 0.

Remove the cable from that terminal.

Measure the resistance between phase B of the
cable and the shield back to the system.

Is the resistance less than 100 ohms?

Y N

022

There is a short to ground in the cable inside the
terminal or on the board inside the terminal.
Remove all the jumpers that were installed
earlier.
Reinstall all cables.
Reinstall all cards.

023

There is a short in the cable on phase B of the
cable to the shield.

The most likely place this will happen is at the
connectors.

Reinstall the A-A2R2 card (driver receiver card) on
the first time through this point

Set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set
another terminal cable through switch to 1 until bad
cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through
switches changed back to 2.

9
N

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MAP 1181-8

M
7

CABLE 0 DIAGNOSIS

5340 SYSTEMS UNIT

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027

Go to the cable entry tower and remove the cable D-A0 (console port, Port 0).

Measure the resistance from phase B of the cable to the shield.

Is the resistance less than 65 ohms?

Y N

028

The open is not in the system.

Reinstall the cable into the cable tower D-A0 (console port, Port 0).
Reinstall the A-A2R2 card (dirver receiver card).

Go to the last terminal on that cable and remove the cable from that terminal.

Measure the resistance from phase B of the cable to the shield.

Is the resistance greater than 65 ohms?

Y N

029

The open is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

030

The open is in the cable between the system and the terminal.

The most likely place for this failure is in the cable connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

P

MAP 1181-10

031

Install a jumper from A-A2V2D02 Twinax input phase Y cable 0. to A-A2V2B02 Twinax input phase B cable 0.

Measure the resistance between A-A2R2D02 (console port phase Y) and A-A2R2B02 (console port phase B)

Is the resistance less than 10 ohms?

Y N

032

The open is on the board wiring

Either A-A2R2D02 (console port phase Y) to A-A2V2D02 Twinax input phase Y cable 0.

or A-A2R2B02 (console port phase B) to A-A2V2B02 Twinax input phase B cable 0.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

033

The open is in cable V2 to cable entry tower.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

P

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EC 835169

PEC 835000

MAP 1181-10

L
7

CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT

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034

Measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)

(be sure to zero your meter).

Is the resistance between 100 and 130 ohms?

Y N

035

The problem is between the two phases.

We shall assume it is a short because any open
would have been caught when we measured each
phase to ground.

This means that the resistance measured is
assumed to be less than 100 ohms.

Disonnnect the cable at
D-A0 (console port, Port 0).

Measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)

Is the resistance less than 100 ohms?

Y N

036

Reconnect the cable at
D-A0 (console port, Port 0).

Go to the last terminal on that cable and
disconnect it from the system.

Measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)
(Step 036 continues)

1
2
Q R

R

MAP 1181-11

(Step 036 continued)
Is the resistance less than 100 ohms?

Y N

037

The short is in the terminal itself.
Remove all the jumpers that were installed
earlier.
Reinstall all cables.
Reinstall all cards.

038

The short is in the cable between the terminal and
the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

039

Disconnect the cable at A-A2V2 and measure the
resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)

Is the resistance less than 100 ohms?

Y N

040

The short is on cable A-A2V2 or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

041

The short is on board A-A2.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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MAP 1181-11

A Q
2 1
1

CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1181-12

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042

Either your measurement in step 034 was not correct

---or---

your first measurement in step 001 was not correct.

Go to Page 1, Step 001, Entry Point A.

043

The cable connection is continuous and the terminal is properly terminated.

Measure the resistance between
A-A2R2D02 (console port phase Y)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

044

The shield is not continuous.

Is the resistance greater than 65?

Y N

045

Go to the last terminal on the cable and remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield back to the system.

(Step 045 continues)

```

*****          *****
*****          LOCATOR          *****
***              ***
**              **
**              **
*               *
*               *
*               *
*               *
*   ***         ***   *
*   ***         ***   *
*   ***         ***   *
* Phase B      Phase Y *
*              *
*              *
**             **
**             **
***           ***
*****          *****
*****          *****

```

(Step 045 continues)

1 1
4 3
S T

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MAP 1181-12

T
1
2

**CABLE 0 DIAGNOSIS
5340 SYSTEMS UNIT**

MAP 1181-13

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(Step 045 continued)

Is the resistance less than 45 ohms?

Y N

046

The short is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

047

The short is in the cable or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

048

The cable shield is open.

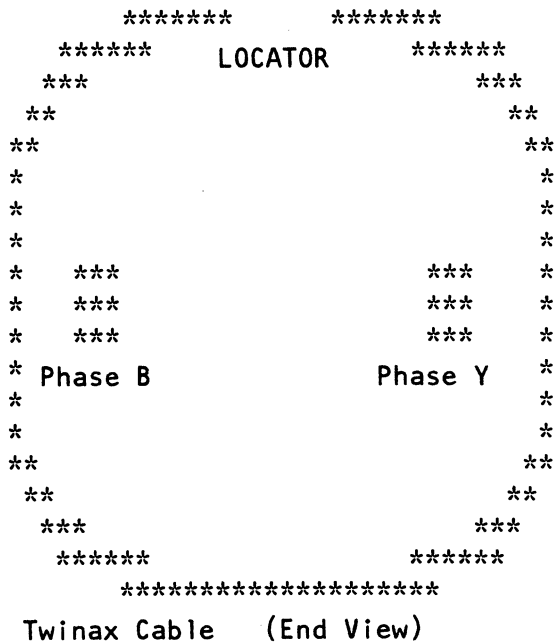
Measure the resistance from the ground pin to the cable entry tower frame.

Is the resistance less than 10 ohms?

Y N

1 1
4 4
U V

(Step 045 continued)
Twinax Cable (End View)



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MAP 1181-13

U V
1 1
3 3

CABLE 0 DIAGNOSIS
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049

There are two possibilities.

1. The pin on the board you are using as ground is not really ground.
2. The system grounding is not connected properly. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

050

Go to the last terminal on the cable remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 10 ohms?

Y N

051

The shield is broken in the cable connecting the terminal and the system.

The most likely area of failure is in the connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

052

The cable shield to ground connection is not in place in the terminal.

Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

S
1
2

MAP 1181-14

053

The shield is continuous to the terminal.

Install the
A-A2R2 card (driver receiver card)
and measure the resistance between
A-A2R2D02 (console port phase Y)
and
A-A2R2B02 (console port phase B)
Is the resistance between 45 and 65 ohms?

Y N

054

Bad card
A-A2R2 card (driver receiver card)

1
5
W

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MAP 1181-14

CABLE 0 DIAGNOSIS

MAP 1181-16

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(Step 055 continued)

Is the resistance less than 10 ohms?

Y N

056

The leads of cable A-A2V2 are reversed.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

057

Reconnect the cable to D-A0 (console port, port 0).
Go to the last terminal on the cable and disconnect the cable from that terminal.
Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 100 ohms?

Y N

058

The phase Y and phase B leads are reversed in the cable connecting the terminal and the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

059

The driver receiver card is properly terminated.

No cable problem has been found.

If the cable you are working with has terminals multi-dropped on it (cable through option used) and you are having problems with the last terminal(s) on the cable it is likely that the terminal immediately upstream of the failing terminal(s) has its cable through switch set to 1 rather than 2.

If you still suspect a cable problem use the line quality test, or go to the terminal device maintenance package.

Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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MAP 1181-16

CABLE 1 DIAGNOSIS

MAP 1182-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1180	A	1	001

001

(Entry Point A)

Remove

A-A2R2 card (driver receiver card)

Set ohmmeter to ohms X 1.

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and

A-A2R2B07 (port 1 phase B)

(Be sure to zero your meter.)

START CONDITIONS:

A problem is suspected with the cable going to the terminal.

MAP DESCRIPTION:

The MAP tests cable 1 for opens, shorts, and reversal of leads in cable D-A1 and cable A-A2V2.

The cable has two internal leads and a shield. Each internal lead is terminated at each end of the cable with a 55 ohm resistor to ground. The lead to lead resistance is 20 ohms per 1000 feet. The lead to shield resistance is 14 ohms per 1000 feet.

LOGIC CARDS TESTED:

A-A2R2 card (driver receiver card)
Cable A-A2V2.
Cable D-A1.
Board A-A2.
Terminating resistors in the terminal.

(Step 001 continues)

(Step 001 continues)

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MAP 1182-1

CABLE 1 DIAGNOSIS

MAP 1182-2

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(Step 001 continued)

(Step 001 continued)

Note 1: If the resistance measured in any of the following steps is greater than 130 ohms, the station protectors, if installed on this cable, will have to be removed. The procedures should then be repeated.

Is the resistance between 100 and 130 ohms (see Note 1)?

Y N

|

002

(Entry Point B)

Measure the resistance between A-A2R2D07 (port 1 phase Y) and ground.

Is the resistance between 45 and 65 ohms?

Y N

|

003

Is the resistance greater than 65 ohms?

Y N

|

004

Go to the systems cable entry tower and disconnect D-A1 (Port 1).

Measure the resistance from A-A2R2D07 (port 1 phase Y) to ground.

Is the resistance less than 100 ohms?

Y N

|

|

1
2 7 5 4 3
A B C D E

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PN 4237576

EC 835169

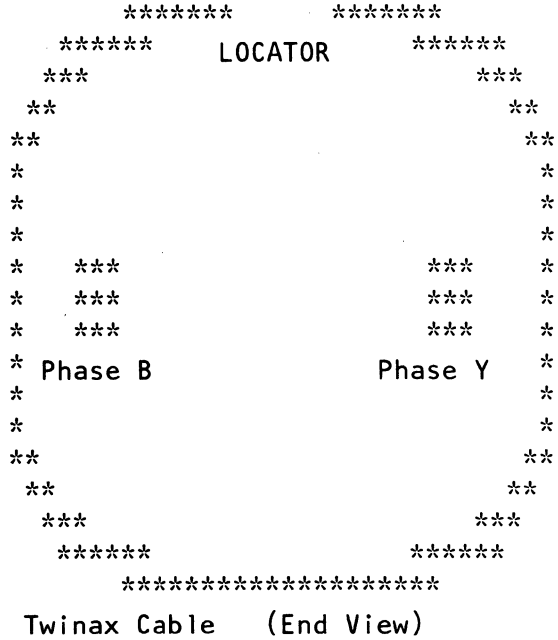
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MAP 1182-2

CABLE 1 DIAGNOSIS
5340 SYSTEMS UNIT
PAGE 3 OF 16

005

Reconnect
D-A1 (Port 1).
go to the last terminal on port 1.
Remove the cable from that terminal.
Measure the resistance between phase Y of the cable
and the shield back to the system.



The last terminal on any given cable will have only one input cable and no output cables.

Those terminals that are not the last on that cable will have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

006

There is a short to ground in the cable inside the terminal or on the board inside the terminal.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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PAGE 4 OF 16

007

There is a short in the cable on the phase Y cable conductor to the shield on one of the terminals.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

008

Disconnect the cable at A-A2V2 and measure the resistance between

A-A2R2D07 (port 1 phase Y)
and ground.

Is the resistance less than 100 ohms?

Y N

009

The short to ground is in A-A2V2 or its connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

010

There is a short to ground of the signal

A-A2R2D07 (port 1 phase Y)

on board A-A2.

Repair or install a new board.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

G H J
5 5 5

CABLE 1 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1182-6

PAGE 6 OF 16

013

The open is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

014

The open is in the cable between the system and the terminal.
The most likely place for this failure is in the cable connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

015

Install a jumper from
A-A2V2D04 Twinax input phase Y cable 1.
to
A-A2V2B04 Twinax input phase B cable 1.

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and
A-A2R2B07 (port 1 phase B)
Is the resistance less than 10 ohms?
Y N

016

The open is on the board wiring.

Either
A-A2R2D07 (port 1 phase Y)
to
A-A2V2D04 Twinax input phase Y cable 1.

or
A-A2R2B07 (port 1 phase B)
to
A-A2V2B04 Twinax input phase B cable 1.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

7
K

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MAP 1182-6

CABLE 1 DIAGNOSIS

MAP 1182-8

5340 SYSTEMS UNIT

PAGE 8 OF 16

(Step 020 continued)

(Step 020 continued)
have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

021

Reconnect

D-A1 (Port 1).

go to the last terminal on port 1.

Remove the cable from that terminal.

Measure the resistance between phase B of the cable and the shield back to the system.

Is the resistance less than 100 ohms?

Y N

022

There is a short to ground in the cable inside the terminal or on the board inside the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

023

There is a short in the cable on phase B of the cable to the shield.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until the bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

9
N

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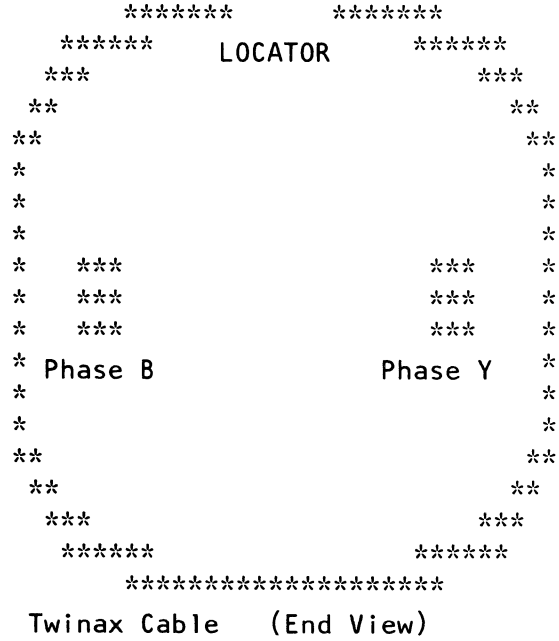
EC 835169

PEC 835000

MAP 1182-8

024

Disconnect the cable at A-A2V2 and measure the resistance between A-A2R2B07 (port 1 phase B) and ground.



Is the resistance less than 100 ohms?

Y N

025

The short to ground is in A-A2V2 or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

026

There is a short to ground of the signal A-A2R2B07 (port 1 phase B) on board A-A2.

Repair or install a new board
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

M
7

CABLE 1 DIAGNOSIS

5340 SYSTEMS UNIT

PAGE 10 OF 16

027

Go to the cable entry tower and remove cable D-A1 (Port 1).

Measure the resistance from phase B of the cable to the shield.

Is the resistance less than 65 ohms?

Y N

028

The open is not in the system.

Reinstall the cable into the cable tower D-A1 (Port 1).

Reinstall the A-A2R2 card (driver receiver card).

Go to the last terminal on that cable and remove the cable from that terminal.

Measure the resistance from phase B of the cable to the shield.

Is the resistance greater than 65 ohms?

Y N

029

The open is in the terminal itself.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

030

The open is in the cable between the system and the terminal.

The most likely place for this failure is in the cable connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

MAP 1182-10

031

Install a jumper from

A-A2V2D04 Twinax input phase Y cable 1. to

A-A2V2B04 Twinax input phase B cable 1.

Measure the resistance between

A-A2R2D07 (port 1 phase Y)

and

A-A2R2B07 (port 1 phase B)

Is the resistance less than 10 ohms?

Y N

032

The open is on the board wiring

Either

A-A2R2D07 (port 1 phase Y)

to

A-A2V2D04 Twinax input phase Y cable 1.

or

A-A2R2B07 (port 1 phase B)

to

A-A2V2B04 Twinax input phase B cable 1.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

033

The open is in cable V2 to cable entry tower.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

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PEC 835000

MAP 1182-10

CABLE 1 DIAGNOSIS

5340 SYSTEMS UNIT

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034

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and
A-A2R2B07 (port 1 phase B)

(be sure to zero your meter).

Is the resistance between 100 and 130 ohms?

Y N

035

The problem is between the two phases.

We shall assume it is a short since any open would have been caught when we measured each phase to ground.

This means that the resistance measured is assumed to be less than 100 ohms.

Disconnect the cable at
D-A1 (Port 1).

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and
A-A2R2B07 (port 1 phase B)

Is the resistance less than 100 ohms?

Y N

036

Reconnect the cable at
D-A1 (Port 1).

Go to the last terminal on that cable and disconnect it from the system.

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and
A-A2R2B07 (port 1 phase B)
(Step 036 continues)

R

MAP 1182-11

(Step 036 continued)

Is the resistance less than 100 ohms?

Y N

037

The short is in the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

038

The short is in the cable between the terminal and the system.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

039

Disconnect the cable at A-A2V2 and measure the resistance between

A-A2R2D07 (port 1 phase Y)

and

A-A2R2B07 (port 1 phase B)

Is the resistance less than 100 ohms?

Y N

040

The short is on cable A-A2V2 or its connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

041

The short is on board A-A2.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

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MAP 1182-11

1
2
Q R

A Q
2 1
1

**CABLE 1 DIAGNOSIS
5340 SYSTEMS UNIT**

MAP 1182-12

PAGE 12 OF 16

042

Either your measurements in step 034 was not correct

---or---

your first measurement in step 001 was not correct.

Go to Page 1, Step 001, Entry Point A.

043

The cable connection is continuous and the terminal is properly terminated.

Measure the resistance between
A-A2R2D07 (port 1 phase Y)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

044

The shield is not continuous.

Is the resistance greater than 65?

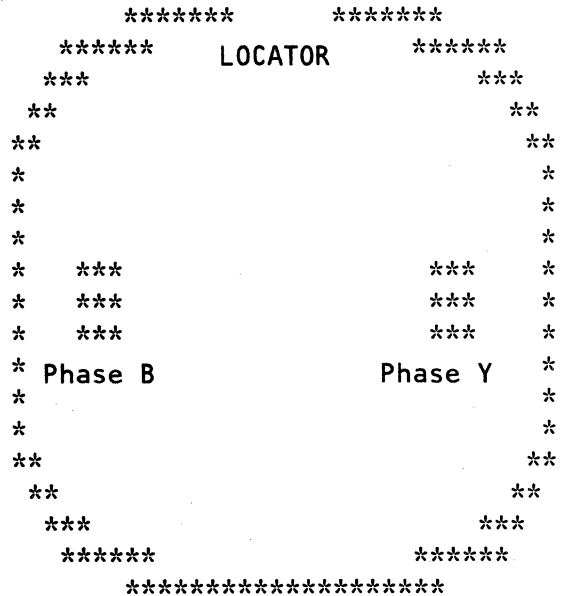
Y N

045

Go to the last terminal on the cable and remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield back to the system.

(Step 045 continues)



(Step 045 continues)

1 1
4 3
S T

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MAP 1182-12

**CABLE 1 DIAGNOSIS
5340 SYSTEMS UNIT**

PAGE 13 OF 16

(Step 045 continued)

(Step 045 continued)
Twinax Cable (End View)

Is the resistance less than 45 ohms?

Y N

046

The short is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

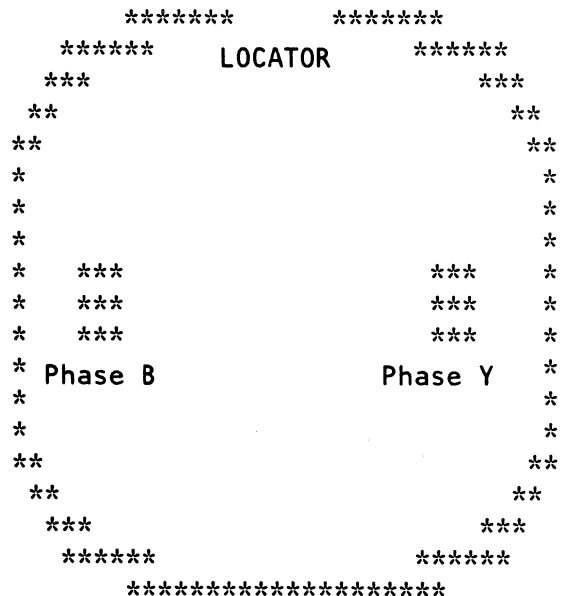
047

The short is in the cable or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

048

The cable shield is open.

Measure the resistance from the ground pin to the cable entry tower frame.



Twinax Cable (End View)

(Step 048 continues)

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**CABLE 1 DIAGNOSIS
5340 SYSTEMS UNIT**

PAGE 14 OF 16

(Step 048 continued)

Is the resistance less than 10 ohms?

Y N

049

There are two possibilities:

1. The pin on the board you are using as ground is not really ground.
2. The system grounding is not connected properly. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

050

Go to the last terminal on the cable remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 10 ohms?

Y N

051

The shield is broken in the cable connecting the terminal and the system.

The most likely area of failure is in the connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

052

The cable shield to ground connection is not in place in the terminal.

Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

S
1
2

MAP 1182-14

053

The shield is continuous to the terminal.

Install the

A-A2R2 card (driver receiver card)
and measure the resistance between
A-A2R2D07 (port 1 phase Y)
and

A-A2R2B07 (port 1 phase B)

Is the resistance between 45 and 65 ohms?

Y N

054

Bad card

A-A2R2 card (driver receiver card)

1
5
U

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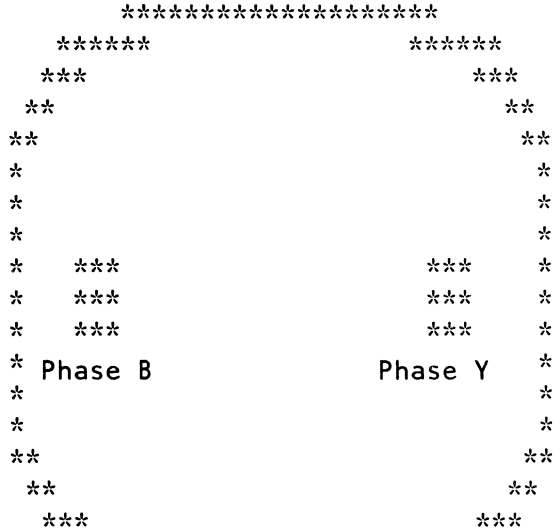
MAP 1182-14

CABLE 1 DIAGNOSIS

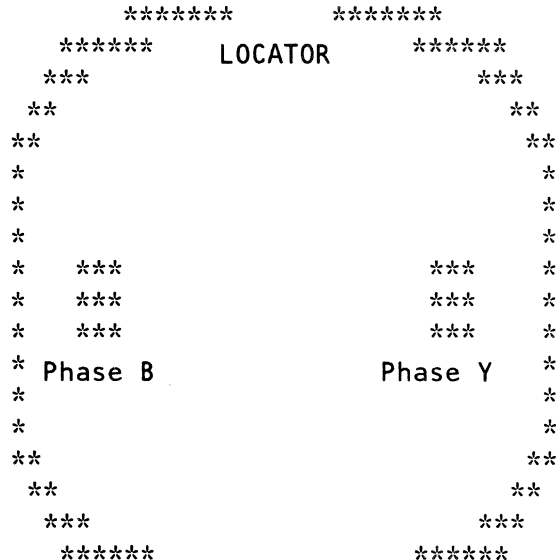
5340 SYSTEMS UNIT

055

Remove card A-A2R2 (driver receiver card). Install a jumper from A-A2V2D04 twinax input phase Y cable 1 to ground. Go to the cable entry tower and disconnect the cable from D-A1 (port 1). Measure the resistance between phase Y of port 1 to ground.



LOCATOR
Cable Entry Tower (End View)



LOCATOR
Twinax Cable (End View)

(Step 055 continues)

CABLE 1 DIAGNOSIS

MAP 1182-16

5340 SYSTEMS UNIT

PAGE 16 OF 16

(Step 055 continued)

Is the resistance less than 10 ohms?

Y N

056

The leads of cable A-A2V2 are reversed.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

057

Reconnect the cable to D-A1 (port 1). Go to the last terminal on the cable and disconnect that cable from the terminal. Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 100 ohms?

Y N

058

The phase Y and phase B leads are reversed in the cable connecting the terminal and the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

059

The driver receiver card is properly terminated.

No cable problem has been found.

If the cable you are working with has terminals multi-dropped on it (cable through option used) and you are having problems with the last terminal(s) on the cable, it is likely that the terminal immediately upstream of the failing terminal(s) has its cable through switch set to 1 rather than 2.

If you still suspect a cable problem, use the line quality test, or go to the terminal device maintenance package.

Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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MAP 1182-16

CABLE 2 DIAGNOSIS

MAP 1183-1

5340 SYSTEMS UNIT

PAGE 1 OF 16

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1180	A	1	001

001

(Entry Point A)

Remove

A-A2R2 card (driver receiver card)

Set ohmmeter to ohms X 1.

Measure the resistance between

A-A2R2D09 (port 2 phase Y)

and

A-A2R2B09 (port 2 phase B)

(Be sure to zero your meter).

START CONDITIONS:

A problem is suspected with the cable going to the terminal.

MAP DESCRIPTION:

The MAP tests cable 2 for opens, shorts, and reversal of leads in cable D-A2 and cable A-A2V2.

The cable has two internal leads and a shield. Each internal lead is terminated at each end of the cable with a 55 ohm resistor to ground. The lead to lead resistance is 20 ohms per 1000 feet. The lead to shield resistance is 14 ohms per 1000 feet.

LOGIC CARDS TESTED:

A-A2R2 card (driver receiver card)

cable A-A2V2

cable D-A2

board A-A2

Terminating resistors in the terminal.

(Step 001 continues)

(Step 001 continues)

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MAP 1183-1

CABLE 2 DIAGNOSIS

MAP 1183-2

5340 SYSTEMS UNIT

PAGE 2 OF 16

(Step 001 continued)

(Step 001 continued)

Note 1: If the resistance measured in any of the following steps is greater than 130 ohms, the station protectors, if installed on this cable, will have to be removed. The procedures should then be repeated.

Is the resistance between 100 and 130 ohms (see Note 1)?

Y N

002

(Entry Point B)

Measure the resistance between A-A2R2D09 (port 2 phase Y) and ground.

Is the resistance between 45 and 65 ohms?

Y N

003

Is the resistance greater than 65 ohms?

Y N

004

Go to the systems cable entry tower and disconnect.
D-A2 (Port 2).

Measure the resistance from A-A2R2D09 (port 2 phase Y)

to ground.

Is the resistance less than 100 ohms?

Y N

1
2 7 5 4 3
A B C D E

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EC 835169 PEC 835000

MAP 1183-2

005

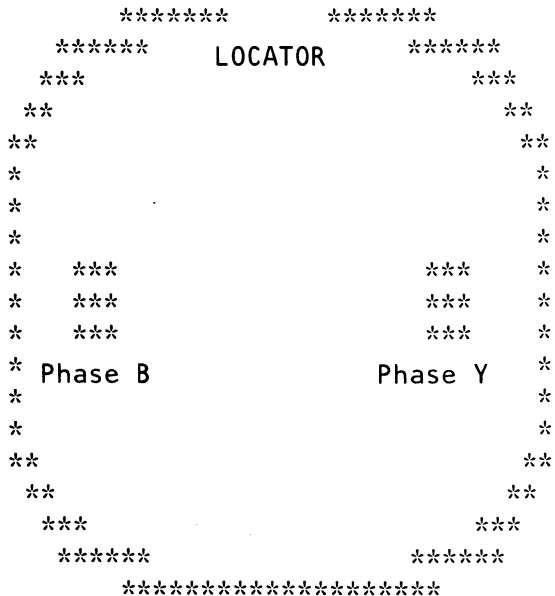
Reconnect

D-A2 (Port 2).

Go to the last terminal on port 2.

Remove the cable from that terminal.

Measure the resistance between phase Y of the cable and the shield back to the system.



Twinax Cable (End View)

The last terminal on any given cable will have only one input cable and no output cables.

Those terminals that are not the last on that cable will have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

006

There is a short to ground in the cable inside the terminal or on the board inside the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

CABLE 2 DIAGNOSIS**5340 SYSTEMS UNIT**

PAGE 4 OF 16

007

There is a short in the cable on the phase Y cable conductor to the shield on one of the terminals.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

008

Disconnect the cable at A-A2V2 and measure the resistance between A-A2R2D09 (port 2 phase Y) and ground.

Is the resistance less than 100 ohms?

Y N

009

The short to ground is in A-A2V2 or its connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

010

There is a short to ground of the signal. A-A2R2D09 (port 2 phase Y) on the board A-A2.

Repair or replace the board. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

G H J
5 5 5

CABLE 2 DIAGNOSIS

MAP 1183-6

5340 SYSTEMS UNIT

PAGE 6 OF 16

013

The open is in the terminal itself.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

014

The open is in the cable between the system and the terminal.

The most likley place for this failure is in the cable connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

015

Install a jumper from

A-A2V2D05 Twinax input phase Y cable 2.

to

A-A2V2B05 Twinax input phase B cable 2.

Measure the resistance between

A-A2R2D09 (port 2 phase Y)

and

A-A2R2B09 (port 2 phase B)

Is the resistance less than 10 ohms?

Y N

016

The open is on the board wiring

either

A-A2R2D09 (port 2 phase Y)

to

A-A2V2D05 Twinax input phase Y cable 2.

Or

A-A2R2B09 (port 2 phase B)

to

A-A2V2B05 Twinax input phase B cable 2.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

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MAP 1183-6

7
K

5340 SYSTEMS UNIT

PAGE 7 OF 16

017

The open is in cable V2 to cable entry tower.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

018

Measure the resistance between
A-A2R2B09 (port 2 phase B)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

019

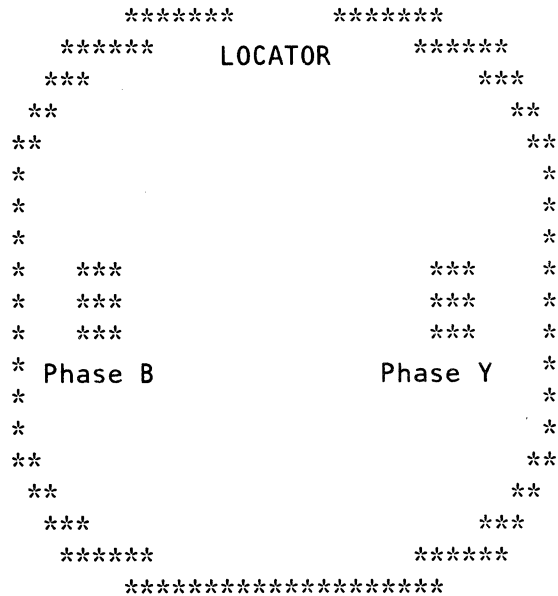
Is the resistance greater than 65 ohms?

Y N

020

Go to the systems cable entry tower and
disconnect
D-A2 (Port 2).

Measure the resistance from
A-A2R2B09 (port 2 phase B)
to ground.



Twinax Cable (End View)

The last terminal on any given cable will have only one
input cable and no output cables.

Those terminals that are not the last on that cable will
(Step 020 continues)

(Step 020 continues)

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CABLE 2 DIAGNOSIS

MAP 1183-8

5340 SYSTEMS UNIT

PAGE 8 OF 16

(Step 020 continued)

(Step 020 continued)
have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

021

Reconnect

D-A2 (Port 2).

Go to the last terminal on port 2.

Remove the cable from that terminal.

Measure the resistance between phase B of the cable and the shield back to the system.

Is the resistance less than 100 ohms?

Y N

022

There is a short to ground in the cable inside the terminal or on the board inside the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

023

There is a short in the cable on phase B of the cable to the shield.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

Is the problem is fixed, set all cable through switches changed back to 2 .

9
N

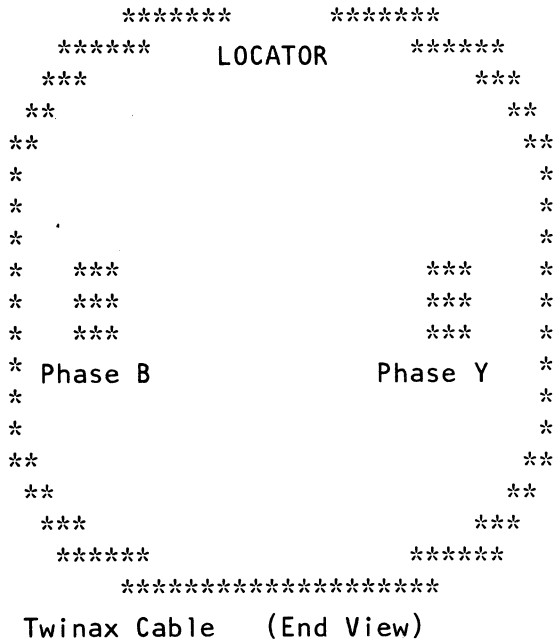
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EC 835169 PEC 835000

MAP 1183-8

024

Disconnect the cable at A-A2V2 and measure the resistance between A-A2R2B09 (port 2 phase B) and ground.



Is the resistance less than 100 ohms?

Y N

025

The short to ground is in A-A2V2 or its connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

026

There is a short to ground of the signal A-A2R2B09 (port 2 phase B) on board A-A2.

Repair or install a new board. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

M
7

CABLE 2 DIAGNOSIS

5340 SYSTEMS UNIT

PAGE 10 OF 16

027

Go to the cable entry tower and remove the cable D-A2 (Port 2).

Measure the 'resistance' from phase B of the cable to the shield.

Is the resistance less than 65 ohms?

Y N

028

The open is not in the system.

Reinstall the cable into the cable tower D-A2 (Port 2).

Reinstall the A-A2R2 card (driver receiver card).

Go to the last terminal on that cable and remove the cable from that terminal.

Measure the resistance from phase B of the cable to the shield.

Is the resistance greater than 65 ohms?

Y N

029

The open is in the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

030

The open is in the cable between the system and the terminal.

The most likely place for this failure is in the cable connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

MAP 1183-10

031

Install a jumper from

A-A2V2D05 Twinax input phase Y cable 2.
to

A-A2V2B05 Twinax input phase B cable 2.

Measure the resistance between

A-A2R2D09 (port 2 phase Y)

and

A-A2R2B09 (port 2 phase B)

Is the resistance less than 10 ohms?

Y N

032

The open is on the board wiring

Either

A-A2R2D09 (port 2 phase Y)

to

A-A2V2D05 Twinax input phase Y cable 2.

or

A-A2R2B09 (port 2 phase B)

to

A-A2V2B05 Twinax input phase B cable 2.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

033

The open is in cable V2 to cable entry tower.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

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MAP 1183-10

CABLE 2 DIAGNOSIS
5340 SYSTEMS UNIT
PAGE 11 OF 16

MAP 1183-11

L
7
034

Measure the resistance between
A-A2R2D09 (port 2 phase Y)
and
A-A2R2B09 (port 2 phase B)

(be sure to zero your meter).

Is the resistance between 100 and 130 ohms?

Y N

035

The problem is between the two phases.

We shall assume it is a short because any open
would have been caught when we measured each
phase to ground.

This means that the resistance measured is
assumed to be less than 100 ohms.

Disonnnect the cable at
D-A2 (Port 2).

Measure the resistance between
A-A2R2D09 (port 2 phase Y)
and
A-A2R2B09 (port 2 phase B)

Is the resistance less than 100 ohms?

Y N

036

Reconnect the cable at
D-A2 (Port 2).

go to the last terminal on that cable and
disconnect it from the system.

Measure the resistance between
A-A2R2D09 (port 2 phase Y)
and
A-A2R2B09 (port 2 phase B)
(Step 036 continues)

R

(Step 036 continued)
Is the resistance less than 100 ohms?

Y N

037

The short is in the terminal itself.
Remove all the jumpers that were installed
earlier.
Reinstall all cables.
Reinstall all cards.

038

The short is in the cable between the terminal and
the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

039

Disconnect the cable at A-A2V2 and measure the
resistance between
A-A2R2D09 (port 2 phase Y)
and
A-A2R2B09 (port 2 phase B)

Is the resistance less than 100 ohms?

Y N

040

The short is on cable A-A2V2 or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

041

The short is on board A-A2.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

1
2
Q R

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MAP 1183-11

A 0
2 1
1

CABLE 2 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1183-12

PAGE 12 OF 16

042

Either your measurement in step 034 was not correct
---or---
your first measurement in step 001 was not correct.
Go to Page 1, Step 001, Entry Point A.

043

The cable connection is continuous and the terminal is properly terminated.

Measure the resistance between
A-A2R2D09 (port 2 phase Y)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

044

The shield is not continuous.

Is the resistance greater than 65?

Y N

045

Go to the last terminal on the cable and remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield back to the system.

(Step 045 continues)

```

*****
***** LOCATOR *****
***
**
**
*
*
*
*
* ***
* ***
* ***
* Phase B Phase Y *
*
*
**
**
***
*****
*****
*****

```

(Step 045 continues)

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MAP 1183-12

1 1
4 3
S T

**CABLE 2 DIAGNOSIS
5340 SYSTEMS UNIT**

PAGE 13 OF 16

(Step 045 continued)

(Step 045 continued)
Twinax Cable (End View)

Is the resistance less than 45 ohms?

Y N

046

The short is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

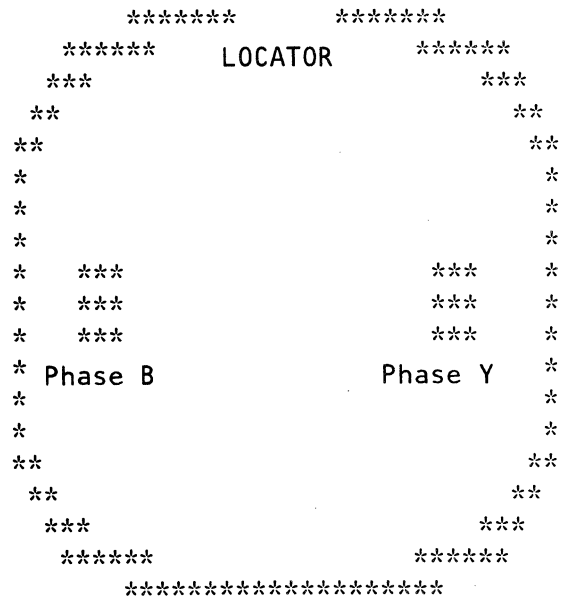
047

The short is in the cable or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

048

The cable shield is open.

Measure the resistance from the ground pin to the cable entry tower frame.



Twinax Cable (End View)

(Step 048 continues)

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CABLE 2 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1183-14

PAGE 14 OF 16

(Step 048 continued)

Is the resistance less than 10 ohms?

Y N

049

There are two possibilities:

1. The pin on the board you are using as ground is not really ground.
2. The system grounding is not connected properly. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

050

Go to the last terminal on the cable remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 10 ohms?

Y N

051

The shield is broken in the cable connecting the terminal and the system.

The most likely area of failure is in the connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

052

The cable shield to ground connection is not in place in the terminal.

Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

S
1
2

053

The shield is continuous to the terminal.

Install the

A-A2R2 card (driver receiver card)
and measure the resistance between
A-A2R2D09 (port 2 phase Y)
and

A-A2R2B09 (port 2 phase B)

Is the resistance between 45 and 65 ohms?

Y N

054

Bad card

A-A2R2 card (driver receiver card)

1
5
U

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PN 4237577

EC 835169

PEC 835000

MAP 1183-14

CABLE 2 DIAGNOSIS

MAP 1183-16

5340 SYSTEMS UNIT

PAGE 16 OF 16

(Step 055 continued)

Is the resistance less than 10 ohms?

Y N

056

The leads of cable A-A2V2 are reversed.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

057

Reconnect the cable to D-A2 (port 2). Go to the last terminal on the cable and remove that cable from the terminal. Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 100 ohms?

Y N

058

The phase Y and phase B leads are reversed in the cable connecting the terminal and the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

059

The driver receiver card is properly terminated.

No cable problem has been found.

If the cable you are working with has terminals multi-dropped on it (cable through option used) and you are having problems with the last terminal(s) on the cable it is likely that the terminal immediately upstream of the failing terminal(s) has its cable through switch set to 1 rather than 2.

If you still suspect a cable problem use the line quality test, or go to the terminal device maintenance package.

Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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MAP 1183-16

CABLE 3 DIAGNOSIS

MAP 1184-1

5340 SYSTEMS UNIT

PAGE 1 OF 16

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1180	A	1	001

001

(Entry Point A)

Remove

A-A2R2 card (driver receiver card)

Set ohmmeter to ohms X 1.

Measure the resistance between

A-A2R2J02 (port 3 phase Y)

and

A-A2R2G02 (port 3 phase B)

(be sure to zero your meter).

START CONDITIONS:

A problem is suspected with the cable going to the terminal.

MAP DESCRIPTION:

The MAP tests cable 3 for opens, shorts, and reversal of leads in cable D-A3 and cable A-A2V2.

The cable has two internal leads and a shield.

Each internal lead is terminated at each end of the cable with a 55 ohm resistor to ground.

The lead to lead resistance is 20 ohms per 1000 feet.

The lead to shield resistance is 14 ohms per 1000 feet.

LOGIC CARDS TESTED:

A-A2R2 card (driver receiver card)

Cable A-A2V2.

Cable D-A3.

Board A-A2.

Terminating resistors in the terminal.

(Step 001 continues)

(Step 001 continues)

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MAP 1184-1

CABLE 3 DIAGNOSIS

MAP 1184-2

5340 SYSTEMS UNIT

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(Step 001 continued)

(Step 001 continued)

Note 1: If the resistance measured in any of the following steps is greater than 130 ohms, the station protectors, if installed on this cable, will have to be removed. The procedures should then be repeated.

Is the resistance between 100 and 130 ohms (see Note 1)?

Y N

002

(Entry Point B)

Measure the resistance between A-A2R2J02 (port 3 phase Y) and ground.

Is the resistance between 45 and 65 ohms?

Y N

003

Is the resistance greater than 65 ohms?

Y N

004

Go to the systems cable entry tower and disconnect.

D-A3 (Port 3).

Measure the resistance from A-A2R2J02 (port 3 phase Y)

to ground.

Is the resistance less than 100 ohms?

Y N

1
2 7 5 4 3
A B C D E

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EC 835169 PEC 835000

MAP 1184-2

**CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT**

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005

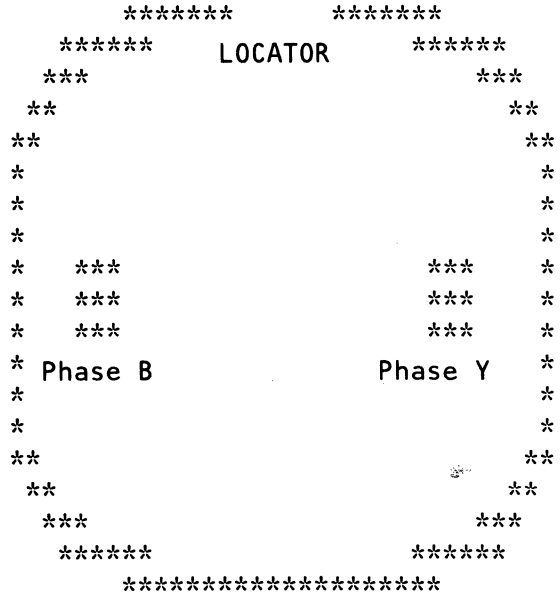
Reconnect

D-A3 (Port 3).

Go to the last terminal on port 3.

Remove the cable from that terminal.

Measure the resistance between phase Y of the cable and the shield back to the system.



Twinax Cable (End View)

The last terminal on any given cable will have only one input cable and no output cables.

Those terminals that are not the last on that cable will have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

006

There is a short to ground in the cable inside the terminal or on the board inside the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT

PAGE 4 OF 16

007

There is a short in the cable on the phase Y cable conductor to the shield on one of the terminals.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1 until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

008

Disconnect the cable at A-A2V2 and measure the resistance between A-A2R2J02 (port 3 phase Y) and ground.

Is the resistance less than 100 ohms?

Y N

009

The short to ground is in A-A2V2 or its connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

010

There is a short to ground of the signal A-A2R2J02 (port 3 phase Y) on board A-A2.

Repair or install a new board. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

C
2

CABLE 3 DIAGNOSIS

MAP 1184-5

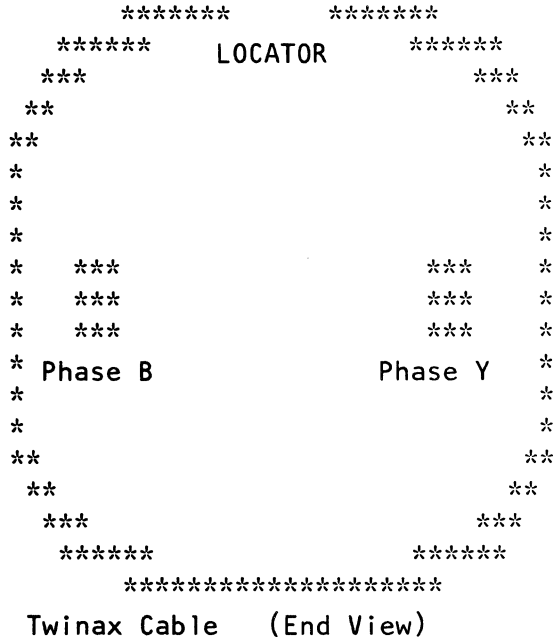
5340 SYSTEMS UNIT

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011

Go to the cable entry tower and remove the cable D-A3 (Port 3).

Measure the resistance from phase Y of the cable to the shield.



Is the resistance less than 65 ohms?

Y N

012

The open is not in the system.

Reinstall the cable into the cable tower D-A3 (Port 3).

Reinstall the A-A2R2 card (driver receiver card).

Go to the last terminal on that cable and remove the cable from that terminal.

Measure the resistance from phase Y of the cable to the shield.

Is the resistance greater than 65 ohms?

Y N

6 6 6
G H J

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MAP 1184-5

G H J
5 5 5

CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1184-6

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013

The open is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

014

The open is in the cable between the system and the terminal.
The most likley place for this failure is in the cable connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

015

Install a jumper from
A-A2V2D07 Twinax input phase Y cable 3.
to
A-A2V2B07 Twinax input phase B cable 3.

Measure the resistance between
A-A2R2J02 (port 3 phase Y)
and
A-A2R2G02 (port 3 phase B)
Is the resistance less than 10 ohms?

Y N

016

The open is on the board wiring.

Either
A-A2R2J02 (port 3 phase Y)
to
A-A2V2D07 Twinax input phase Y cable 3.

or
A-A2R2G02 (port 3 phase B)
to
A-A2V2B07 Twinax input phase B cable 3.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

7
K

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EC 835169 PEC 835000
MAP 1184-6

CABLE 3 DIAGNOSIS

MAP 1184-8

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(Step 020 continued)

(Step 020 continued)
have two cables attached to them.

Is the resistance less than 100 ohms?

Y N

021

Reconnect

D-A3 (Port 3).

go to the last terminal on port 3.

Remove the cable from that terminal.

Measure the resistance between phase B of the cable and the shield back to the system.

Is the resistance less than 100 ohms?

Y N

022

There is a short to ground in the cable inside the terminal or on the board inside the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

023

There is a short in the cable on phase B of the cable to the shield.

The most likely place this will happen is at the connectors.

Reinstall the A-A2R2 card (driver receiver card) on the first time through this point, set a terminal cable through switch to 1.

Go to Page 1, Step 001, Entry Point A.

On each succeeding time through this point, set another terminal cable through switch to 1, until bad cable or terminal is isolated.

Go to Page 1, Step 001, Entry Point A.

If the problem is fixed, set all cable through switches changed back to 2.

9
N

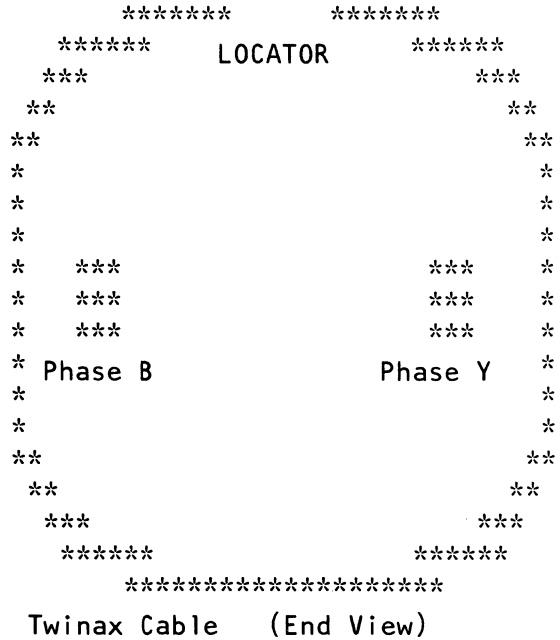
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EC 835169 PEC 835000

MAP 1184-8

024

Disconnect the cable at A-A2V2 and measure the resistance between A-A2R2G02 (port 3 phase B) and ground.



Is the resistance less than 100 ohms?

Y N

025

The short to ground is in A-A2V2 or its connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

026

There is a short to ground of the signal A-A2R2G02 (port 3 phase B) on board A-A2.

Repair or install a new board. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

M
7

CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT
PAGE 10 OF 16

027

Go to the cable entry tower and remove the cable D-A3 (Port 3).

Measure the resistance from phase B of the cable to the shield.

Is the resistance less than 65 ohms?

Y N

028

The open is not in the system.

Reinstall the cable into the cable tower D-A3 (Port 3).

Reinstall the A-A2R2 card (driver receiver card).

Go to the last terminal on that cable and remove the cable from that terminal.

Measure the resistance from phase B of the cable to the shield.

Is the resistance greater than 65 ohms?

Y N

029

The open is in the terminal.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

030

The open is in the cable between the system and the terminal.

The most likely place for this failure is in the cable connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

MAP 1184-10

031

Install a jumper from A-A2V2D07 Twinax input phase Y cable 3. to A-A2V2B07 Twinax input phase B cable 3.

Measure the resistance between A-A2R2J02 (port 3 phase Y) and

A-A2R2G02 (port 3 phase B)

Is the resistance less than 10 ohms?

Y N

032

The open is on the board wiring.

Either

A-A2R2J02 (port 3 phase Y)

to

A-A2V2D07 Twinax input phase Y cable 3.

or

A-A2R2G02 (port 3 phase B)

to

A-A2V2B07 Twinax input phase B cable 3.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

033

The open is in cable V2 to cable entry tower.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

P

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EC 835169 PEC 835000

MAP 1184-10

CABLE 3 DIAGNOSIS

5340 SYSTEMS UNIT

PAGE 11 OF 16

MAP 1184-11

L
7
034

Measure the resistance between
A-A2R2J02 (port 3 phase Y)
and
A-A2R2G02 (port 3 phase B)

(be sure to zero your meter.)

Is the resistance between 100 and 130 ohms?

Y N

035

The problem is between the two phases.

We shall assume it is a short because any open
would have been caught when we measured each
phase to ground.

This means that the resistance measured is
assumed to be less than 100 ohms.

Disconnect the cable at
D-A3 (Port 3).

measure the resistance between
A-A2R2J02 (port 3 phase Y)
and
A-A2R2G02 (port 3 phase B)

Is the resistance less than 100 ohms?

Y N

036

Reconnect the cable at
D-A3 (Port 3).

go to the last terminal on that cable and
disconnect it from the system.

Measure the resistance between
A-A2R2J02 (port 3 phase Y)
and
A-A2R2G02 (port 3 phase B)
(Step 036 continues)

R

(Step 036 continued)

Is the resistance less than 100 ohms?

Y N

037

The short is in the terminal itself.

Remove all the jumpers that were installed
earlier.

Reinstall all cables.

Reinstall all cards.

038

The short is in the cable between the terminal and
the system.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

039

Disconnect the cable at A-A2V2 and measure the
resistance between

A-A2R2J02 (port 3 phase Y)

and

A-A2R2G02 (port 3 phase B)

Is the resistance less than 100 ohms?

Y N

040

The short is on cable A-A2V2 or its connectors.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

041

The short is on board A-A2.

Remove all the jumpers that were installed earlier.

Reinstall all cables.

Reinstall all cards.

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MAP 1184-11

1
2
Q R

A Q
2 1
1 1

CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT

MAP 1184-12

PAGE 12 OF 16

042

Either your measurement in step 034 was not correct
---or---
your first measurement in step 001 was not correct.
Go to Page 1, Step 001, Entry Point A.

043

The cable connection is continuous and the terminal is properly terminated.

Measure the resistance between
A-A2R2J02 (port 3 phase Y)
and ground.

Is the resistance between 45 and 65 ohms?

Y N

044

The shield is not continuous.

Is the resistance greater than 65?

Y N

045

Go to the last terminal on the cable and remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield back to the system.

(Step 045 continues)

```

*****          *****
*****          LOCATOR          *****
***
**
**
*
*
*
*   ***
*   ***
*   ***
* Phase B
*
*
**
**
***
*****          *****
*****

```

(Step 045 continues)

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EC 835169 PEC 835000

MAP 1184-12

1 1
4 3
S T

**CABLE 3 DIAGNOSIS
5340 SYSTEMS UNIT**

PAGE 13 OF 16

(Step 045 continued)

Is the resistance less than 45 ohms?

Y N

046

The short is in the terminal itself.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

047

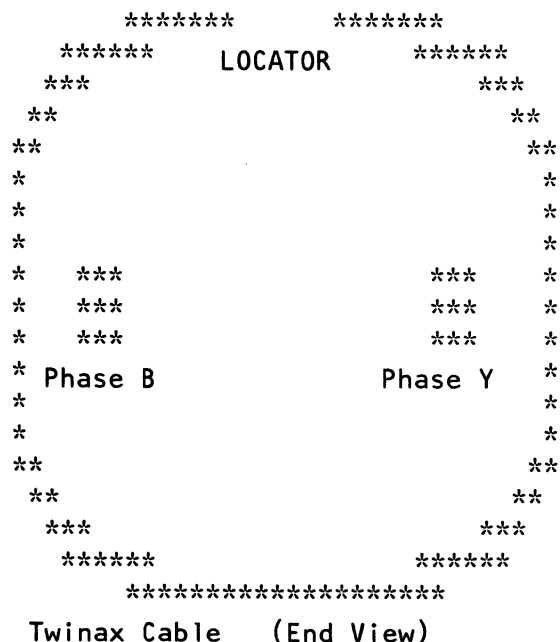
The short is in the cable or its connectors.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

048

The cable shield is open.

Measure the resistance from the ground pin to the cable entry tower frame.

(Step 045 continued)
Twinax Cable (End View)



(Step 048 continues)

CABLE 3 DIAGNOSIS

5340 SYSTEMS UNIT

PAGE 14 OF 16

(Step 048 continued)

Is the resistance less than 10 ohms?

Y N

049

There are two possibilities:

1. The pin on the board you are using as ground is not really ground.
2. The system grounding is not connected properly. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

050

Go to the last terminal on the cable and remove the cable connecting it to the system.

Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 10 ohms?

Y N

051

The shield is broken in the cable connecting the terminal and the system.

The most likely area of failure is in the connectors. Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

052

The cable shield to ground connection is not in place in the terminal.

Remove all the jumpers that were installed earlier. Reinstall all cables. Reinstall all cards.

S
1
2

MAP 1184-14

053

The shield is continuous to the terminal.

Install the

A-A2R2 card (driver receiver card)
and measure the resistance between
A-A2R2J02 (port 3 phase Y)
and

A-A2R2G02 (port 3 phase B)

Is the resistance between 45 and 65 ohms?

Y N

054

Bad card

A-A2R2 card (driver receiver card)

1
5
U

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EC 835169

PEC 835000

MAP 1184-14

CABLE 3 DIAGNOSIS

MAP 1184-16

5340 SYSTEMS UNIT

PAGE 16 OF 16

(Step 055 continued)

Is the resistance less than 10 ohms?

Y N

056

The leads of cable A-A2V2 are reversed.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

057

Reconnect the D-A3 cable. Go the last terminal on the cable and remove that cable from the terminal. Measure the resistance between phase Y of the cable and the shield.

Is the resistance less than 100 ohms?

Y N

058

The phase Y and phase B leads are reversed in the cable connecting the terminal and the system.
Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

059

The driver receiver card is properly terminated.

No cable problem has been found.

If the cable you are working with has terminals multi-dropped on it (cable through option used) and you are having problems with the last terminal(s) on the cable it is likely that the terminal immediately upstream of the failing terminal(s) has its cable through switch set to 1 rather than 2.

If you still suspect a cable problem use the line quality test, or go to the terminal device maintenance package.

Remove all the jumpers that were installed earlier.
Reinstall all cables.
Reinstall all cards.

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MAP 1184-16

TERMINAL CHECKOUT MAP

MAP 1193-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM		ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER	
0101	A	1	001	
0105	A	1	001	
0107	A	1	001	
0149	A	1	001	
0159	A	1	001	
0173	A	1	001	
0175	A	1	001	
1194	A	1	001	

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	002	1198	A
1	004	1198	A
2	006	1198	A
2	013	1198	A
2	015	1198	A
2	017	1198	A
2	018	1198	A
2	019	1198	A

001
(Entry Point A)

MAP DESCRIPTION:
This is the Entry MAP to the terminal subsystem.

START CONDITIONS:
No prior information is necessary.

LOGIC CARDS TESTED:
None

Is the console power on?

Y N

002

Turn the console power on.

Verify with MDI.

Go To Map 1198, Entry Point A.

003

Is the Test/Normal switch set to Normal on the system console?

Y N

004

Set the Test/Normal switch to Normal.

Verify with MDI.

Go To Map 1198, Entry Point A.

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MAP 1193-1

A

TERMINAL SUBSYSTEM

5340 SYSTEMS UNIT

PAGE 2 OF 2

005

Is the console cable plugged into the connector labeled Console in the system cable tower?

Y N

006

Plug the console cable into the system at the connector labeled C.

Verify with MDI

Go To Map 1198, Entry Point A.

007

An obvious terminal problem can be a blank screen (no cursor), rolling screen, terminal check indicator, stuck key, and so forth. If the terminal does not have an obvious problem it should be in the normal reset condition.

Is the terminal in the normal reset condition?

Y N

008

Go to the terminal and perform the repairs using its maintenance package.

009

Is line sync on (system console)?

Y N

010

Go to Step 012, Entry Point B.

011

Is the System Available indicator On (system console)?

Y N

012

(Entry Point B)

Does the system console have the cable through feature (see terminal documentation)?

Y N

B C D

B C D

MAP 1193-2

013

Go To Map 1198, Entry Point A.

014

Are the address switches on the terminal set to B'000' (see terminal documentation)?

Y N

015

Set the address switches to B'000'.

Verify with MDI.

Go To Map 1198, Entry Point A.

016

Is the cable through switch set to the off position (see terminal documentation)?

Y N

017

Set the cable through switch to the off position.

Verify with MDI.

Go To Map 1198, Entry Point A.

018

All switches are set correctly.

Go to the work station controller MDI for more diagnosis.

Go To Map 1198, Entry Point A.

019

The terminal appears to be all right. Now investigate the controller.

Go To Map 1198, Entry Point A.

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EC 835000

PEC 832999

MAP 1193-2

TERMINAL SUBSYSTEM ENTRY
5340 SYSTEMS UNIT

MAP 1194-1

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	006	1180	A
2	007	1193	A
2	005	1198	A

001
(Entry Point A)

MAP DESCRIPTION:
Terminal Subsystem Entry MAP.

START CONDITIONS:
There are no preceding requirements.

LOGIC CARDS TESTED:
None

Is Console Check light on (operator panel)?
Y N

002
An obvious terminal problem can be a blank screen (no cursor), rolling screen, terminal error indication, stuck key and so forth. If the terminal does not have an obvious problem it should be in the normal powered-up condition.
There should be no indication of line sync.

Is the terminal in the normal powered-up condition?
Y N

003
Go to the terminal and use the Terminal's Maintenance Package to repair the problem.

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MAP 1194-1

2 2
A B

A B

TERMINAL SUBSYSTEM

MAP 1194-2

5340 SYSTEMS UNIT

PAGE 2 OF 2

004

Is the system available indicator On on the system console?

Y N

005

Go to the work station controller MDI.
Go To Map 1198, Entry Point A.

006

The major portion of the work station controller logic is operating properly. The problem is likely in the system driver card, the cable, or the terminal.
Go To Map 1180, Entry Point A.

007

There is an apparent problem with either the system console or the work station controller.
Go To Map 1193, Entry Point A.

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EC 835000

PEC 832999

MAP 1194-2

CONSOLE CHECK LIGHT FAILURE

MAP 1195-1

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001
1198	A	1	001

001

(Entry Point A)

Probe

A-A2M2U02 (-console check driver)

Up Light: On

Down Light: Off

Are the lights correct?

Y N

002

Remove

A-A2M2 card (work station attachment).

-Set Power to 1 (operator panel).

Probe

A-A2M2U02 (-console check driver)

Up Light: On

Down Light: Off

Are the lights correct?

Y N

2 2 2
A B C

MAP DESCRIPTION:

This MAP tests the console check driver.

START CONDITIONS:

The console check light is not operating correctly.

LOGIC CARDS TESTED:

A-A2M2 card (work station attachment).

CE panel

OP panel

Cables

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PEC 832999

MAP 1195-1

C

CONSOLE CHECK LIGHT
5340 SYSTEMS UNIT
PAGE 2 OF 3

003

Is the console check light off (operator panel)?

Y N

004

Check the console check line to the light for an open or a short.

See FSL pages OP 110, OP 015.

Does the line check out OK?

Y N

005

Exchange the cable at fault.

006

The lamp assembly is bad.

007

Jumper

A-A2M2U02 (-console check driver)

to ground.

Is Console Check light on (operator panel)?

Y N

008

Remove the jumper.

Check the console check line to the light for an open or a short.

See FSL pages OP110, OP015.

Does the line check out OK?

Y N

009

Repair the line that is open or exchange the cable at fault.

010

The lamp assembly is bad.

011

Bad card

A-A2M2 card (work station attachment).

A B

MAP 1195-2

012

Bad card

A-A2M2 card (work station attachment).

013

At the same time

Probe

A-A2M2U02 (-console check driver)

and

-Press and hold Lamp Test (CE panel).

Up Light: Off

Down Light: On

Are the lights correct?

Y N

014

Probe

A-A2M2M13 (-lamp test).

Up Light: On

Down Light: Off

Are the lights correct?

Y N

015

The lamp test signal is not getting to the A-A2M2 card (work station attachment).

Wring out the line and repair or exchange the faulty component.

3 3
D E

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EC 835000

PEC 832999

MAP 1195-2

D E
2 2

CONSOLE CHECK LIGHT

MAP 1195-3

5340 SYSTEMS UNIT

PAGE 3 OF 3

016

At the same time

Probe

A-A2M2M13 (-lamp test).

and

-Press and hold Lamp Test (CE panel).

Up Light: Off

Down Light: On

Are the lights correct?

Y N

017

The lamp test signal is not getting to the
A-A2M2 card (work station attachment).

Check out the line and repair or exchange the
faulty component.

018

Bad card

A-A2M2 card (work station attachment).

019

The console check driver is OK.

The problem is in the LED (Light Emitting Diode)
assembly or the Cables/Wiring connecting the LED to
the driver.

See FSL pages OP015, OP110.

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EC 835000

PEC 832999

MAP 1195-3



ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1198	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	006	1198	A

001
(Entry Point A)

Run the work station attachment MDI (softmaps).
 See Section 99-062 of the Diagnostic Service Guide.

MAP DESCRIPTION:

This MAP is used to verify fixes made to the work station controller.

START CONDITIONS:

Map 1198 has been used.

LOGIC CARDS TESTED:

- A-A2N2 card (work station controller).
- A-A2M2 card (work station attachment).
- A-A2P4 card (base storage).
- A-A2Q4 card (expanded storage).
- A-A2R4 card (feature storage card if installed).
- A-A2R2 card (driver receiver card)
- Top card connector 'W' on card A-A2N2.
- Top card connector 'X' on card A-A2N2.
- Top card connector 'Y' on card A-A2N2.
- Top card connector 'Z' on card A-A2N2.

For instructions on running the softmap for the work station attachment, reference the Diagnostic Service Guide 99-062.

The softmaps will either fail (find the bug), or pass through to the no trouble found point. In either case the system will stop with all lights off except P1.

The contents of registers X'01' and X'02' will direct you to the stop point in your copy of the softmaps. For

(Step 001 continues)

**FIX VERIFICATION
5340 SYSTEMS UNIT**

MAP 1197-2

PAGE 2 OF 4

(Step 001 continued)

instructions on how to get the data in these registers,
see the Diagnostic Service Guide 99-062.

NOTE 1:

Work Station Attachment.
MDI (softmaps) are complete.

No trouble found.

Is the display on the system console as shown in
NOTE 1?

Y N

002

Has the machine come to a halt?

(All lights off on the CE panel except P1.)

Y N

003

The MAPs run for about 4 minutes.

Go back to the question in step 001.

004

Is Proc Chk (on the operators panel) On?

Y N

005

Read and record the values of WR1 and WR2
(instructions in Diagnostic Service Guide 99-062)
using hexadecimal notation.

Using the hexadecimal values recorded for WR1
and WR2, go to the hard copy of the softmap and
follow the instructions at that step.

An example is at the right.

(Step 005 continues)

The value recorded for WR1 is a binary
'0001000100110001'.

In hexadecimal notation this would read '1131'.

This is the MAP number you are to go to.

The value recorded for WR2 is a binary
'0000000000100101'.

In hexadecimal notation this would read '0025'.

This is the step number in the MAP referenced by WR1
that you are to go to.

4 4
A B

15DEC78 PN 4237582
EC 834777 PEC 832999
MAP 1197-2

D E
3 3

FIX VERIFICATION
5340 SYSTEMS UNIT

PAGE 4 OF 4

009

The MAPs run for about 4 minutes.

Go back to the question in step 007.

010

Is the stop point different than that which you recorded earlier in this MAP?

Y N

011

The problem is likely to be an open board wire. Single step the MAPs and find the first test that fails in the MAPs from 1101 to 1117, see the Diagnostic Service Guide (99-062) for instruction on how to do this.

Use the failing test number to determine which set of Field Service Logics are applicable.

The cross reference is found in the Diagnostic Service Guide section (99-064).

012

The problem is in the top card connectors, install a new.

Top card connector 'W' on card A-A2N2.

and

Top card connector 'X' on card A-A2N2.

and

Top card connector 'Y' on card A-A2N2.

and

Top card connector 'Z' on card A-A2N2.

A B C
2 2 3

MAP 1197-4

013

The system is now operable but it appears that the top card connectors are bad.

Install a new

Top card connector 'W' on card A-A2N2.

and

Top card connector 'X' on card A-A2N2.

and

Top card connector 'Y' on card A-A2N2.

and

Top card connector 'Z' on card A-A2N2.

014

Bad card

A-A2M2 card (work station attachment).

Go to Page 1, Step 001, Entry Point A.

015

No trouble found

Your fix was successful.

15DEC78

PN 4237582

EC 834777

PEC 832999

MAP 1197-4

5340 SYSTEMS UNIT

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0199	A	1	001
1101	A	1	001
1161	A	1	001
1164	A	1	001
1193	A	1	001
1194	A	1	001
1197	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
4	010	1195	A
3	008	1197	A

001

(Entry Point A)

Run the work station attachment MDI (softmaps).
See Section 99-062 of the Diagnostic Service Guide.

MAP DESCRIPTION:

Entry to the work station attachments MDI MAPs.

For instructions on running the softmap for the work station attachment, see the Diagnostic Service Guide 99-062.

The softmaps will either fail (find the bug), or pass through to the no trouble found point. In either case the system will stop with all lights off except P1.

The contents of registers X'01' and X'02' will direct you to the stop point in your copy of the softmaps. (For instructions on how to get the data in these registers, see the Diagnostic Service Guide 99-062).

That step in the softmaps will direct you to either perform a repair or go to another MAP. The MAP you are directed to will either direct you in further diagnosing the problem or, in the case of the no trouble found point, describe your alternatives.

START CONDITIONS:

None

(Step 001 continues)

TERMINAL SUBSYSTEM

MAP 1198-2

5340 SYSTEMS UNIT

PAGE 2 OF 4

(Step 001 continued)

LOGIC CARDS TESTED:

All cards in the work station attachment through the MDI MAPs

- A-A1L2 card (multiplex port 0 card).
- A-A2M2 card (work station attachment).
- A-A2N2 card (work station controller).
- A-A2P4 card (base storage).
- A-A2Q4 card (expanded storage).
- A-A2R4 card (feature storage card if installed).
- A-A2R2 card (driver receiver card)

Note 1:

Work Station Attachment
MDI (softmaps) are complete

No trouble found.

Is the display on the system console as shown in Note 1?

Y N

002

Has the machine come to a halt?

(All lights are Off on the CE panel except P1).

Y N

003

Probe the following:

Up Light: On
Down Light: Off

1. A-A1L2G06 (-CB1X0)
2. A-A1L2D13 (-CB1X1)

Are the lights correct?

Y N

004

Bad card
A-A1L2

4 3 3
A B C

07JUL80 PN 4237583

EC 835000 PEC 832931

MAP 1198-2

B C
2 2

TERMINAL SUBSYSTEM

MAP 1198-3

5340 SYSTEMS UNIT

PAGE 3 OF 4

005

The MAPs run for about 4 minutes.

Go back to the question in step 001.

006

Is Proc Chk (on the operators panel) On?

Y N

007

Read and record the values of WR1 and WR2 (instructions in Diagnostic Service Guide 99-062) using hexadecimal notation.

Using the hexadecimal values recorded for WR1 and WR2, go to the hard copy of the softmap and follow the instructions at that step.

(an example is at the right.)

The value recorded for WR1 is a binary '0001000100110001'.

In hexadecimal notation this would read '1131'.

This is the MAP number you are to go to.

The value recorded for WR2 is a binary '0000000000100101'.

In hexadecimal notation this would read '0025'.

This is the step number in the MAP referenced by WR1 that you are to go to.

Apply these principles to the values you have recorded.

008

Bad card

A-A2M2 card (work station attachment).

Go To Map 1197, Entry Point A.

07JUL80 PN 4237583

EC 835000 PEC 832931

MAP 1198-3

A
2

TERMINAL SUBSYSTEM

MAP 1198-4

5340 SYSTEMS UNIT

PAGE 4 OF 4

009

Is console check light off (operator panel)?

Y N

010

Go To Map 1195, Entry Point A.

011

No trouble found.

07JUL80

PN 4237583

EC 835000

PEC 832931

MAP 1198-4

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1117	A	1	001
1198	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	004	1180	A

001

(Entry Point A)

MAP DESCRIPTION:

No trouble found.
Description of options.

START CONDITIONS:

The work station attachment MDI MAPs have been run and have not found a problem (entered through MAP 1198).

LOGIC CARDS TESTED:

None

Is your problem with the system console?

Y N

|

002

Is your problem with some terminal other than the system console?

Y N

|

|

A B C
1 1 1

TERMINAL SUBSYSTEM

5340 SYSTEMS UNIT

PAGE 2 OF 3

003

This is the no trouble found termination of the good machine path.

The following areas have been tested:

1. Work station controller.
2. Work station controller storage.
3. Channel interface.
4. Serial interface.
5. External cable to system console.

The following tools are available for further diagnosis:

1. Network MAPs (1180).
2. Error log MAPs.
3. Intermittent failure list.
4. Line quality test.

If you are verifying a fix, your fix was successful.

If you are trying to diagnose a problem, either the problem is not in this area or more diagnosis is required using the tools described above.

004

Multiple terminal problems are best attacked through the network MAPs.

Go to their entry

Go To Map 1180, Entry Point A.

005

Have you used the 5250 Maintenance Package to run the diagnostics on the system console?

Y N

006

Go to the system console and use its Maintenance Package to fix the problem.

D

MAP 1199-2

007

Does the system console have a display on it now?

Y N

008

Turn the intensity up on the system console.

Does the system console have a display on it now?

Y N

009

Is a cursor displayed on the screen of the system console?

Y N

010

Definite terminal problem.

Go back to the terminal MAPs.

011

Is the cursor in the upper right portion of the screen?

Y N

012

The terminal diagnostics have detected an error.

Go to the terminal MAPs and perform the repair.

013

Is the terminal's Ready light On?

Y N

014

The terminal has a check

Go to the terminal MAPs and perform the repair.

D

3 3 3
E F G

05JUN78

PN 4237584

EC 832999

PEC 832850

MAP 1199-2

E F G
2 2 2

TERMINAL SUBSYSTEM

MAP 1199-3

5340 SYSTEMS UNIT

PAGE 3 OF 3

015

The terminal is not displaying data properly.

Your options are:

1. Go back to the terminal MAPs and try again.
2. Try another terminal as the console.
3. Use the line quality test procedure to check for impaired cables.

016

Repair complete.

017

This is the no trouble found termination of the good machine path.

The following areas have been tested:

1. Work station controller.
2. Work station controller storage.
3. Channel interface.
4. Serial interface.
5. External cable to system console.

The following tools are available for further diagnosis:

1. Network MAPs (1180).
2. Error log MAPs.
3. Intermittent failure list.
4. Line quality test.

If you are verifying a fix, your fix was successful.

If you are trying to diagnose a problem, either the problem is not in this area or more diagnosis is required using the tools described above.

05JUN78 PN 4237584

EC 832999 PEC 832850

MAP 1199-3

CE PANEL CHECK OUT--SWITCHES

MAP 1301-1

5340 SYSTEMS UNIT

PAGE 1 OF 13

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001
0105	A	1	001
0105	B	12	079
0351	A	1	001
1505	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
12	079	1303	A
12	080	1303	B

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

Answer No to the following question if:

- (1) You do not know which switch is failing.
- (2) The first time through you knew which switch was failing, but the MAPs did not find problem.

Do you know which switch is failing?

Y N

002

Answer No to the following question if:

- (1) You are not sure the switches are functioning correctly.
- (2) The first time through this MAP you knew the switches were functioning correctly but the MAPs did not find the problem.

Do you know if all the CE panel switches are functioning correctly?

Y N

1 1
3 2 2
A B C

MAP DESCRIPTION:

This MAP checks out the CE panel functions.

START CONDITIONS:

None

LOGIC CARDS TESTED:

CE panel and associated logic

Note: Section 13-000 of the Maintenance Manual has instructions on removal and/or replacement of the CE panel and CE subpanel--CE panel drawing (Vol D, CE160) and CE subpanel drawing (Vol D, OP015).

003**(Entry Point M)**

Reinstall all cables removed earlier and
 remove all jumpers.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).
 Probe the following:

Up Light: Off
 Down Light: On

- (1) A-A1A4B12 (+Mode selector Sw bit 1)
- (2) A-A1A4B13 (+Mode selector Sw bit 0)
- (3) A-A1A4D12 (+Mode selector Sw bit 3)
- (4) A-A1A4D13 (+Mode selector Sw bit 2)

Are the lights correct?

Y N

004

Check for a bad cable A-A1A4 from the CE panel to
 the failing pin on board A-A1.

---or---

Check for a failing Mode Selector switch on the CE
 panel.

005

-Turn Mode Selector (CE panel) one position
 counterclockwise.

Probe the following:

Up Light: On
 Down Light: Off

Level 1 board

- (1) A-A1G2J02 (+Mode selector Sw bit 2)
- (2) A-A1G2J04 (+Mode selector Sw bit 1)
- (3) A-A1G2J05 (+Mode selector Sw bit 3)
- (4) A-A1K2M12 (+Mode selector Sw bit 0)

---or---

Level 2 board

- (1) A-A1D2J02 (+Mode selector Sw bit 2)
 - (2) A-A1D2J04 (+Mode selector Sw bit 1)
- (Step 005 continues)

(Step 005 continued)

(3) A-A1D2J05 (+Mode selector Sw bit 3)

(4) A-A1G2M12 (+Mode selector Sw bit 0)

Are the lights correct?

Y N

006

Leave the probe on the failing pin.

Remove cable A-A1A4.

-Set Power to 1 (operator panel).

Up Light: On
 Down Light: Off

Are the lights correct?

Y N

007

Is the failing pin A-A1K2M12 (+Mode selector
 Sw bit 0)?

Y N

008

Bad card

A-A1G2 (Level 1 board)

---or---

A-A1D2 (Level 2 board).

009

Bad card

A-A1K2 (Level 1 board)

---or---

A-A1G2 (Level 2 board).

010

Check for a bad cable A-A1A4 from the CE panel to
 the failing pin on board A-A1.

---or---

Check for a failing Mode Selector switch on the CE
 panel.

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-2

D
2

CE PANEL MAP 1
5340 SYSTEMS UNIT

PAGE 3 OF 13

011

(Entry Point C)

- Set Mode Selector to Proc Run (CE panel).
- Set Add Comp to Stop (CE panel).

Probe the following:

Up Light: Off
Down Light: On

- (1) A-A1A5D05 (-Address comp stop Sw).

Are the lights correct?

Y N

012

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

013

- Set Add Comp to Run (CE panel).

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

- (1) A-A1K2J04 (-Address comp stop Sw).

---or---

Level 2 board

- (1) A-A1G2J04 (-Address comp stop Sw).

Are the lights correct?

Y N

Vertical line for Y/N response

E F

E F

• MAP 1301-3

Vertical line for E/F response

014

Leave the probe on the failing pin.

Remove cable A-A1A5.

- Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

015

Bad card

A-A1K2 (Level 1 board)

---or---

A-A1G2 (Level 2 board).

016

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

017

(Entry Point D)

- Set MSIPL to Diskette (CE panel).

Probe the following:

Up Light: Off
Down Light: On

- (1) A-A1A5D09 (+MSIPL disk).

Are the lights correct?

Y N

Vertical line for Y/N response

4
G

018

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-3

CE PANEL MAP 1
5340 SYSTEMS UNIT
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019

-Set MSIPL to Disk (CE panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board
(1) A-A1K2U13 (+MSIPL disk).
---or---

Level 2 board
(1) A-A1G2U13 (+MSIPL disk).

Are the lights correct?

Y N

020

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

021

Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board).

022

Check for a bad cable A-A1A5 from the CE panel to
the failing pin on board A-A1.
---or---
Check for a failing toggle switch on the CE panel.

023

(Entry Point E)

-Set CSIPL to Diskette (CE panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5D07 (-CSIPL diskette).

Are the lights correct?

Y N

024

Check for a bad cable A-A1A5 from the CE panel to
the failing pin on board A-A1.
---or---
Check for a failing toggle switch on the CE panel.

025

-Set CSIPL to Disk (CE panel).
Probe the following:

Up Light: On
Down Light: Off

(1) A-A1M6E04 (-CSIPL diskette).

Are the lights correct?

Y N

026

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

J K L
4 4 4

CE PANEL MAP 1
5340 SYSTEMS UNIT

PAGE 5 OF 13

027

Bad card
A-A2F2
---or---
A-A2L2
---or---
Bad cable A-A1Z4 to board A-A2.

028

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.
---or---
Check for a failing toggle switch on the CE panel.

029

(Entry Point F)
-Set Check to Run (CE panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5D13 (-Check run Sw).

Are the lights correct?

Y N

030

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.
---or---
Check for a failing toggle switch on the CE panel.

M

MAP 1301-5

031

-Set Check to Stop (CE panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1Q2U10 (-Check run Sw).

---or---

Level 2 board

(1) A-A1L2U10 (-Check run Sw).

Are the lights correct?

Y N

032

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

033

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

Level 1 board

A-A1F2

---or---

A-A1K2

---or---

A-A1Q2

---or---

Level 2 board

A-A1C2

---or---

(Step 033 continues)

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-5

M

6 6
N P

N P
5 5

CE PANEL MAP 1
5340 SYSTEMS UNIT

MAP 1301-6

PAGE 6 OF 13

(Step 033 continued)

A-A1G2

---or---

A-A1L2

034

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

035

(Entry Point G)

Press and hold CE Start (CE panel).

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1A5B08 (-CE start key pressed).

Are the lights correct?

Y N

036

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

037

Release CE Start (CE panel).

Probe the following:

Up Light: On

Down Light: Off

Level 1 board

(1) A-A1K2B03 (-CE start key pressed).

---or---

Level 2 board

(1) A-A1G2B03 (-CE start key pressed).

(Step 037 continues)

(Step 037 continued)

Are the lights correct?

Y N

038

Leave the probe on the failing pin.

Remove cable A-A1A5.

-Set Power to 1 (operator panel).

Up Light: On

Down Light: Off

Are the lights correct?

Y N

039

Bad card

A-A1K2 (Level 1 board)

---or---

A-A1G2 (Level 2 board)

040

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

041

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1A5B10 (-CE start key released).

Are the lights correct?

Y N

042

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-6

7
Q

Q
6

CE PANEL MAP 1
5340 SYSTEMS UNIT
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043

Press and hold CE Start (CE panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1K2B05 (-CE start key released).

---or---

Level 2 board

(1) A-A1G2B05 (-CE start key released).

Are the lights correct?

Y N

044

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

045

Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

046

Check for a bad cable A-A1A5 from the CE panel to
the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

R

R

MAP 1301-7

047

(Entry Point H)

-Set Force Clock to On (CE panel).

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5B08 (-CE start key pressed).

Are the lights correct?

Y N

048

Check for a bad cable A-A1A5 from the CE panel to
the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

049

-Set Force Clock to Off (CE panel).

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1K2B03 (-CE start key pressed).

---or---

Level 2 board

(1) A-A1G2B03 (-CE start key pressed).

Are the lights correct?

Y N

8 8
S T

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-7

S T
7 7

**CE PANEL MAP 1
5340 SYSTEMS UNIT**

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050

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

051

Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

052

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

053

(Entry Point I)

-Set Stor Sel to Ctl (CE panel).

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5D06 (-Control Storage Sw).

Are the lights correct?

Y N

054

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

U

U

MAP 1301-8

055

-Set Stor Sel to Main (CE panel).

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1K2B12 (-Control storage Sw).

---or---

Level 2 board

(1) A-A1G2B12 (-Control storage Sw).

Are the lights correct?

Y N

056

Leave the probe on the failing pin.

Remove cable A-A1A5.

-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

057

Bad card

A-A1G2 (Level 1 board)

---or---

A-A1K2 (Level 1 board)

---or---

A-A1D2 (Level 2 board)

---or---

A-A1G2 (Level 2 board)

058

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

9
V

05JAN81

PN 4237585

EC 835083

PEC 834777

MAP 1301-8

V
8

CE PANEL MAP 1
5340 SYSTEMS UNIT
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059

(Entry Point J)

-Operate and hold Pwr Fault Dply to Prev (CE panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5D11 (-Prev Pwr fault display).

Are the lights correct?

Y N

060

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

061

-Operate Pwr Fault Dply to Search (CE panel).

Probe the following:

Up Light: On
Down Light: Off

(1) A-A1C1A13 (-Prev Pwr fault display).

Are the lights correct?

Y N

062

Leave the probe on the failing pin.

Remove cable A-A1A5.

-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

W X Y

W X Y

MAP 1301-9

063

Check for a bad cable from the A-A1 board to the C-A1 board.

---or---

Bad card
C-A1A2.

064

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing toggle switch on the CE panel.

065

(Entry Point K)

Press and hold Reset (CE panel).

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5B12 (-Reset key pressed to Sys unit).

Are the lights correct?

Y N

066

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

05JAN81

PN 4237585

EC 835083

PEC 834777

MAP 1301-9

1
0
Z

Z
9

**CE PANEL MAP 1
5340 SYSTEMS UNIT**

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067

Release Reset (CE panel).
Probe the following:

Up Light: 0n
Down Light: Off

Level 1 board

(1) A-A1J2G04 (-Reset key pressed to Sys unit).

---or---

Level 2 board

(1) A-A1F2G04 (-Reset key pressed to Sys unit).

Are the lights correct?

Y N

068

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: 0n
Down Light: Off

Are the lights correct?

Y N

069

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

070

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

A
A

A
A

MAP 1301-10

071

(Entry Point L)

-Press and hold Lamp Test (CE panel).

Probe the following:

Up Light: Off
Down Light: 0n

(1) A-A1A5B04 (-System unit lamp test).

Are the lights correct?

Y N

072

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

073

Release Lamp Test (CE panel).

Probe the following:

Up Light: 0n
Down Light: Off

Level 1 board

(1) A-A1L2D06 (-System unit lamp test).

---or---

Level 2 board

(1) A-A1H2D06 (-System unit lamp test).

Are the lights correct?

Y N

1 1
2 1
A A
B C

05JAN81

PN 4237585

EC 835083

PEC 834777

MAP 1301-10

074

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

075

Leave the probe on the failing pin.
Remove cable A-A1Z4 to board A-A2.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

076

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

- Bad card
- Level 1 board
- A-A1F2
- or---
- A-A1J2
- or---
- A-A1K2
- or---
- A-A1L2
- Level 2 board
- A-A1C2
- or---
- A-A1F2
- or---
- A-A1G2
- (Step 076 continues)

B
1
A
B
1
A
D
1
A
E
1

CE PANEL MAP 1
5340 SYSTEMS UNIT

MAP 1301-12

PAGE 12 OF 13

(Step 076 continued)

---or---

A-A1H2

077

Check for a bad A-A1Z4 cable to the A-A2 board.

---or---

A bad card on the A-A2 board that uses -System unit lamp test signal, use FSL (Vol D).

078

Check for a bad cable A-A1A5 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

079

(Entry Point B)

Go To Map 1303, Entry Point A.

080

Chart A

Switch	Entry Point
Mode Selector	1301,M
Add Comp	1301,C
CSIPL	1301,D
MSIPL	1301,E
Check Run	1301,F
CE Start	1301,G
Force Clock	1301,H
Stor Sel	1301,I
Power Fault Dply	1301,J
Reset	1301,K
Lamp Test	1301,L
Dply Pwr Chk	1303,A
Comm Display	1303,C
Comm 1/Comm 2	1303,C
Addr Sw 1-2	1303,B
Addr Sw 3-4	1303,D

Go To Map 1303, Entry Point B.

05JAN81 PN 4237585

EC 835083 PEC 834777

MAP 1301-12

A

CE PANEL MAP 1
5340 SYSTEMS UNIT

MAP 1301-13

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081

Find the failing switch and go to its corresponding entry point (see chart A).

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EC 835083 PEC 834777
MAP 1301-13

B

CE PANEL MAP 2.

MAP 1303-2

5340 SYSTEMS UNIT

PAGE 2 OF 16

002

-Press and hold Dply Pwr Chk (CE panel).
Probe the following:

Up Light: Off
Down Light: On

1. A-A1A5D12 (+Enable Pwr check display).

Are the lights correct?

Y N

003

Check for a bad cable A-A1A5 on the CE panel to the failing pin on board A-A1.

---or---

Check for a failing push switch on the CE panel.

004

Release Dply Pwr Chk (CE panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

1. A-A1J2P11 (+Enable Pwr check display).

---or---

Level 2 board

1. A-A1F2P11 (+Enable Pwr check display).

Are the lights correct?

Y N

Vertical lines for Y and N columns.

3 3
C D

05JAN81 PN 4237586

EC 835083 PEC 835000

MAP 1303-2

C D
2 2

CE PANEL MAP 2.
5340 SYSTEMS UNIT
PAGE 3 OF 16

005

Leave the probe on the failing pin.
Remove cable A-A1A5.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?
Y N

006

Bad card
A-A1J2 (LEV1)
---or---
A-A1F2 (Level 2 board)

007

Check for a bad cable A-A1A5 from the switch on the CE panel to the failing pin on board A-A1.
---or---
Check for a failing switch on the CE panel.
---or---
Check for a failing Comm Dply and Comm 1/Comm2 switch if installed on the CE panel.

008

Probe the following:

Up Light: Off
Down Light: On

1. A-A1A5B06 (-Power display inhibit).

Are the lights correct?
Y N

009

Check for a bad cable A-A1A5 on the CE panel to the failing pin on board A-A1.
---or---
Check for a failing push switch on the CE panel.

E

E

MAP 1303-3

010

-Press and hold Dply Pwr Chk (CE panel).
Probe the following:

Up Light: On
Down Light: Off

1. A-A1C1C13 (-Power display inhibit).

Are the lights correct?
Y N

011

Check for a bad cable A-A1A5 from the switch on the CE panel to the failing pin on board A-A1.
---or---
Check for a failing switch on the CE panel.
---or---
Check for a bad cable A-A1Y1.
---or---
Bad card
C-A1B2.

012

Release Dply Power Chk.

Are data communications used or configured in the system?

Y N

013

Go to Page 4, Step 019, Entry Point B.

014

Is MLCA installed?

Y N

1
5 4
F G

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EC 835083 PEC 835000

MAP 1303-3

CE PANEL MAP 2.
5340 SYSTEMS UNIT
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015**(Entry Point C)**

Probe the following:

Up Light: On or Off
 Down Light: Off

1. A-A1C6A02 (-Comm display #1).
2. A-A1F6B06 (Comm display #2).

Are the lights correct?

Y N

016

Leave the probe on the failing pin.
 Remove cable A-A1Z2 from board A-A1 to board A-A2.
 -Set Power to 1 (operator panel).

Up Light: On
 Down Light: Off

Are the lights correct?

Y N

017

Check for a bad cable A-A1A5 from the CE panel to board A-A1.
 ---or---
 Check for a failing Comm Dply and Comm 1/Comm 2 switch if installed on the CE panel.

018

Check for a bad cable A-A1Z2 from board A-A1 to board A-A2.
 ---or---
 Bad card
 A-A2J2
 ---or---
 A-A2K2

H

019**(Entry Point B)**

-Set Mode Selector to Alter Stor (CE panel).
 -Set the Address/Data switches to '00XX' (CE panel).

Are Display lights byte 0 X'00' ?

Y N

020

Probe the following:

Up Light: Off
 Down Light: On

1. A-A1A4D02 (+Addr Sw 1-2 bit 3)
2. A-A1A4D04 (+Addr Sw 1-2 bit 1)
3. A-A1A4D05 (+Addr Sw 1-2 bit 0)
4. A-A1A4D07 (+Addr Sw 1-2 bit 7)
5. A-A1A4D09 (+Addr Sw 1-2 bit 5)
6. A-A1A4D10 (+Addr Sw 1-2 bit 4)
7. A-A1A4B03 (+Addr Sw 1-2 bit 2)
8. A-A1A4B08 (+Addr Sw 1-2 bit 6)

Are the lights correct?

Y N

021

Check for a bad cable A-A1A4 from the switch on the CE panel to the failing pin on board A-A1.
 ---or---
 Check for a failing switch on the CE panel.

6 5
J K

K
4

CE PANEL MAP 2.
5340 SYSTEMS UNIT
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022

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A3B03 (-Display Comm bit 1)
2. A-A1A3B04 (-Display Comm bit 5)
3. A-A1A3B10 (-Display Comm bit 0)
4. A-A1A3D02 (-Display Comm bit 3)
5. A-A1A3D03 (-Display Comm bit 2)
6. A-A1A3D04 (-Display Comm bit 4)

Are the lights correct?

Y N

023

Leave the probe on the failing pin.
Remove cable A-A1Z2 from board A-A1 (if installed).
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

024

-Set the IPO switch to 0 (left side)
Leave the probe on the failing pin.
Remove cable A-A1Y1 from board A-A1.
Jumper from C-A1B2G13 to ground.
-Set the IPO switch to 1 (left side)

Up Light: On
Down Light: Off

Are the lights correct?

Y N

6
L M N P

M N P

MAP 1303-5

025

The net you have the probe connected to has a short to ground. Look in the table below to find the net name for the failing pin. Look in the FSLs for this net name to determine other pins in this net.

Probe On Pin	Net Name
A-A1A3B03	PA120CD1
A-A1A3B04	PA120CP1
A-A1A3B05	PA120EV1
A-A1A3B10	PA120BA1
A-A1A3D02	PA120EJ1
A-A1A3D03	PA120DG1
A-A1A3D04	PA120BM1
A-A1A3D05	PA120DS1

026

Check for a bad cable A-A1Y1 from board A-A1 to board C-A1.

---or---

Bad card
C-A1B2

Remove jumper

027

Check for a bad cable A-A1Z2

---or---

for 2-line communications,

A bad card A-A2J2

A bad card A-A2K2

---or---

for multiline communications (MLCA),

A bad card A-B3F2

A bad card A-B3G2

A bad card A-B3H2

A bad card A-B3J2

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MAP 1303-5

J L
4 5

CE PANEL MAP 2.
5340 SYSTEMS UNIT

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028

Check for a failing LED on the CE panel.

---or---

Check for a bad cable A-A1A3 from board A-A1 to CE panel.

029

Is Display Light P0 '1'?

Y N

030

Probe the following:

Up Light: Off

Down Light: On

1. A-A1A3B12 (-Display HI bit P).

Are the lights correct?

Y N

031

Leave the probe on the failing pin.

Remove cable A-A1Z2 from board A-A1 (if installed).

-Set Power to 1 (operator panel).

Up Light: Off

Down Light: On

Are the lights correct?

Y N

Q R S T

Q R S T

MAP 1303-6

032

Bad card

Level 1 board

A-A1J2

---or---

A-A1G2

---or---

Level 2 board

A-A1F2

---or---

A-A1D2

---or---

Check for a bad cable A-A1A3 from the failing pin on board A-A1 to the LED display on the CE panel.

---or---

Check for a failing LED on the CE panel.

033

Check for a bad cable A-A1Z2

---or---

for 2-line communications,

A bad card A-A2J2

A bad card A-A2K2

---or---

for multiline communications (MLCA),

A bad card A-B3F2

A bad card A-B3G2

A bad card A-B3H2

A bad card A-B3J2

034

Check for a failing LED on the CE panel.

---or---

Check for a bad cable A-A1A3 from the failing pin on board A-A1 to the LED display on the CE panel.

035

-Set the Address/Data switches to '01XX' (CE panel).

Is Display Light P0 '0'?

Y N

7 7
U V

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EC 835083 PEC 835000

MAP 1303-6

V
6

CE PANEL MAP 2.
5340 SYSTEMS UNIT
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036

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A3B12 (-Display Hl bit P).

Are the lights correct?

Y N

037

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

Level 1 board

A-A1J2

---or---

A-A1F2

---or---

A-A1H2

---or---

A-A1L2

---or---

A-A1G2

---or---

Level 2 board

A-A1F2

---or---

A-A1C2

---or---

A-A1E2

---or---

A-A1H2

---or---

A-A1D2

---or---

Check for bad cable A-A1A3 from board A-A1 to CE panel.

---or---

(Step 037 continues)

W

U
6

MAP 1303-7

(Step 037 continued)
Bad LED on CE panel.

038

Check for bad cable A-A1A3 from board A-A1 to CE panel.

---or---

Bad LED on CE panel.

039

-Set the Address/Data switches to 'FFXX' (CE panel).

Are Display lights byte 0 X'FF' and P0 '1' (CE panel)?

Y N

040

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A4D02 (+Addr Sw 1-2 bit 3)
2. A-A1A4D04 (+Addr Sw 1-2 bit 1)
3. A-A1A4D05 (+Addr Sw 1-2 bit 0)
4. A-A1A4D07 (+Addr Sw 1-2 bit 7)
5. A-A1A4D09 (+Addr Sw 1-2 bit 5)
6. A-A1A4D10 (+Addr Sw 1-2 bit 4)
7. A-A1A4B03 (+Addr Sw 1-2 bit 2)
8. A-A1A4B08 (+Addr Sw 1-2 bit 6)

Are the lights correct?

Y N

8 8 8
X Y Z

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EC 835083 PEC 835000
MAP 1303-7

Y Z
7 7

CE PANEL MAP 2.
5340 SYSTEMS UNIT
PAGE 8 OF 16

041

Leave the probe on the failing pin.
Remove cable A-A1A4 from the board A-A1.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

042

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

043

Check for a bad cable A-A1A4 from the switch on
the CE panel to the failing pin on board A-A1.
---or---
Check for a failing switch on the CE panel.

044

Probe the following:

Up Light: Off
Down Light: On

1. A-A1A3B03 (-Display Comm bit 1)
2. A-A1A3B04 (-Display Comm bit 5)
3. A-A1A3B10 (-Display Comm bit 0)
4. A-A1A3B12 (-Display HI bit P)
5. A-A1A3D02 (-Display Comm bit 3)
6. A-A1A3D03 (-Display Comm bit 2)
7. A-A1A3D04 (-Display Comm bit 4)

Are the lights correct?

Y N

A A
A B

X A A
7 A B

MAP 1303-8

045

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

046

Check for a bad cable A-A1A3 from the failing pin
on board A-A1 to the LED display on the CE panel.
---or---
Check for a failing LED on the CE panel.

047

(Entry Point D)

-Set Mode Selector to Alter Stor (CE panel).
-Set the Address/Data switches to 'XX00' (CE panel).

Are Display lights byte 1 X'00' (CE panel)?

Y N

048

Probe the following:

Up Light: Off
Down Light: On

1. A-A1A4D06 (+Addr Sw 3-4 bit 0)
2. A-A1A4D11 (+Addr Sw 3-4 bit 4)
3. A-A1A4B02 (+Addr Sw 3-4 bit 3)
4. A-A1A4B04 (+Addr Sw 3-4 bit 2)
5. A-A1A4B05 (+Addr Sw 3-4 bit 1)
6. A-A1A4B07 (+Addr Sw 3-4 bit 7)
7. A-A1A4B09 (+Addr Sw 3-4 bit 6)
8. A-A1A4B10 (+Addr Sw 3-4 bit 5)

Are the lights correct?

Y N

049

Check for a bad cable A-A1A4 from the switch on
the CE panel to the failing pin on board A-A1.
---or---
Check for a failing switch on the CE panel.

1
0 9
A A
C D

05JAN81 PN 4237586

EC 835083 PEC 835000

MAP 1303-8

050

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A3B06 (-Display SB0 bit 9)
2. A-A1A3B07 (-Display SB0 bit 15)
3. A-A1A3B08 (-Display SB0 bit 14)
4. A-A1A3B09 (-Display SB0 bit 12)
5. A-A1A3D06 (-Display SB0 bit 8)
6. A-A1A3D07 (-Display SB0 bit 10)
7. A-A1A3D09 (-Display SB0 bit 13)
8. A-A1A3D10 (-Display SB0 bit 11)

Are the lights correct?

Y N

051

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

1. A-A1L2P09 (-Sys bus in bit 8)
2. A-A1L2M07 (-Sys bus in bit 12)
3. A-A1L2M08 (-Sys bus in bit 13)
4. A-A1L2M09 (-Sys bus in bit 11)
5. A-A1L2M10 (-Sys bus in bit 15)
6. A-A1L2M11 (-Sys bus in bit 10)
7. A-A1L2M12 (-Sys bus in bit 9)
8. A-A1L2M13 (-Sys bus in bit 14)

---or---

Level 2 board

1. A-A1H2P09 (-Sys bus in bit 8)
2. A-A1H2M07 (-Sys bus in bit 12)
3. A-A1H2M08 (-Sys bus in bit 13)
4. A-A1H2M09 (-Sys bus in bit 11)
5. A-A1H2M10 (-Sys bus in bit 15)
6. A-A1H2M11 (-Sys bus in bit 10)
7. A-A1H2M12 (-Sys bus in bit 9)
8. A-A1H2M13 (-Sys bus in bit 14)

(Step 051 continues)

(Step 051 continued)

Are the lights correct?

Y N

052

Leave the probe on the failing pin.
Remove card A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

053

Leave the probe on the failing pin.
Remove card A-A1H2 (Level 1 board)
---or---
A-A1E2 (Level 2 board)
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

054

Bad card
Level 1 board
A-A1K2
---or---
A-A1L2
---or---
Level 2 board
A-A1G2
---or---
A-A1H2

A A A
F G H
9 9 9

CE PANEL MAP 2.
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MAP 1303-10

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055

Bad card
A-A1H2 (Level 1 board)
---or---
A-A1E2 (Level 2 board)

056

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

057

Probe the following:

Up Light: Off
Down Light: On

Level 1 board

1. A-A1H2U02 (+System bus out bit 8)
2. A-A1H2U04 (+System bus out bit 9)
5. A-A1H2U09 (+System bus out bit 12)
6. A-A1H2U10 (+System bus out bit 13)
3. A-A1H2S02 (+System bus out bit 10)
4. A-A1H2S04 (+System bus out bit 11)
7. A-A1H2S08 (+System bus out bit 14)
8. A-A1H2S10 (+System bus out bit 15)

---or---

Level 2 board

1. A-A1E2U02 (+System bus out bit 8)
2. A-A1E2U04 (+System bus out bit 9)
5. A-A1E2U09 (+System bus out bit 12)
6. A-A1E2U10 (+System bus out bit 13)
3. A-A1E2S02 (+System bus out bit 10)
4. A-A1E2S04 (+System bus out bit 11)
7. A-A1E2S08 (+System bus out bit 14)
8. A-A1E2S10 (+System bus out bit 15)

Are the lights correct?

Y N

||
||

A A
J K

A A A A
C E J K
8 9

058

Bad card
A-A1H2 (Level 1 board)
---or---
A-A1E2 (Level 2 board)

059

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2 (Level 1 board)
---or---
A-A1C2 (Level 2 board)

---or---

A bad cable A-A1A3 from board A-A1 to the CE panel.

060

Check for a bad cable A-A1A3 from the failing pin on board A-A1 to the LED display on the CE panel.

---or---

Check for a failing LED on the CE panel.

061

Is Display Light P1 '1'?

Y N

||
||

062

Probe the following:

Up Light: Off
Down Light: On

1. A-A1A3B08 (-Display SB0 bit P).

Are the lights correct?

Y N

||
||

||
||
||
A A A
L M N

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PEC 835000

MAP 1303-10

A
N
O

**CE PANEL MAP 2.
5340 SYSTEMS UNIT**

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063

Leave the probe on the failing pin.
Level 1 board
Remove cards A-A1N2, A-A1P2
---or---
Level 2 board
cards A-A1J2, A-A1K2 and the control storage
cards. -Set Power to 1 (operator panel).

Up Light: Off
Down Light: On

Are the lights correct?

Y N

064

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

- Bad card
- Level 1 board
- A-A1K2
- or---
- A-A1H2
- or---
- A-A1F2
- or---
- A-A1L2
- or---
- A-A1G2
- or---
- Level 2 board
- A-A1G2
- or---
- A-A1E2
- or---
- A-A1C2
- or---
- A-A1H2
- or---
- A-A1D2

A
P

MAP 1303-11

A
L
O
A
M
O
A
P

065

Level 1 board
Install cards A-A1N2, A-A1P2
---or---
Level 2 board
cards A-A1J2, A-A1K2, and the control storage
cards one at a time to find the bad card.
The bad card is found when the lights do not
meet the following indication.

Up Light: Off
Down Light: On

066

Check for a bad cable A-A1A3 from the failing pin
on board A-A1 to the LED display on the CE panel.
---or---
Check for a failing LED on the CE panel.

067

-Set the Address/Data switches to 'XX01' (CE panel).
Is Display Light P1 '0'?

Y N

068

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A3D11 (-Display SBO bit P).

Are the lights correct?

Y N

1 1 1
4 3 2
A A A
Q R S

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EC 835083 PEC 835000

MAP 1303-11

A
S
I
|

CE PANEL MAP 2.
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MAP 1303-12

069

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

1. A-A1H2B08 (-Sys bus in bit P).
---or---

Level 2 board

1. A-A1E2B08 (-Sys bus in bit P).

Are the lights correct?

Y N

070

Bad card

Level 1 board

A-A1K2

---or---

A-A1L2

---or---

A-A1H2

---or---

A-A1J2

---or---

A-A1G2

---or---

Level 2 board

A-A1G2

---or---

A-A1H2

---or---

A-A1E2

---or---

A-A1F2

---or---

A-A1D2

|
3
A
|

05JAN81

PN 4237586

EC 835083

PEC 835000

MAP 1303-12

A
R
T
I
C
L
E

CE PANEL MAP 2.
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MAP 1303-13

071

Probe the following:

Up Light: Off
Down Light: On

Level 1 board

1. A-A1H2B04 (+ System bus out bit P).

---or---

Level 2 board

1. A-A1E2B04 (+ System bus out bit P).

Are the lights correct?

Y N

072

Bad card A-A1H2

073

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1F2 (Level 1 board)

---or---

A-A1C2 (Level 2 board)

---or---

A bad A-A1A3 cable from board A-A1 to the CE panel.

074

Check for bad cable A-A1A3 from board A-A1 to the CE panel.

---or---

Bad LED on the CE panel.

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PN 4237586

EC 835083

PEC 835000

MAP 1303-13

A
Q
T

**CE PANEL MAP 2.
5340 SYSTEMS UNIT**

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075

-Set the Address/Data switches to 'XXFF' (CE panel).

Are Display lights byte 1 X'FF' and P1 '1' (CE panel)?

Y N

076

Probe the following:

Up Light: On
Down Light: Off

1. A-A1A4D06 (+Addr Sw 3-4 bit 0)
2. A-A1A4D11 (+Addr Sw 3-4 bit 4)
3. A-A1A4B02 (+Addr Sw 3-4 bit 3)
4. A-A1A4B04 (+Addr Sw 3-4 bit 2)
5. A-A1A4B05 (+Addr Sw 3-4 bit 1)
6. A-A1A4B07 (+Addr Sw 3-4 bit 7)
7. A-A1A4B09 (+Addr Sw 3-4 bit 6)
8. A-A1A4B10 (+Addr Sw 3-4 bit 5)

Are the lights correct?

Y N

077

Leave the probe on the failing pin.
Remove cable A-A1A4.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

1 1
5 5
A A A A
U V W X

MAP 1303-14

A A A
V W X

078

Bad card
Level 1 board
A-A1K2
---or---
A-A1G2
---or---
Level 2 board
A-A1G2
---or---
A-A1D2

079

Check for a bad cable A-A1A4 from the switch on the CE panel to the failing pin on board A-A1.

---or---

Check for a failing switch on the CE panel.

080

Probe the following:

Up Light: Off
Down Light: On

1. A-A1A3B06 (-Display SB0 bit 9)
2. A-A1A3B07 (-Display SB0 bit 15)
3. A-A1A3B08 (-Display SB0 bit 14)
5. A-A1A3B09 (-Display SB0 bit 12)
6. A-A1A3D06 (-Display SB0 bit 8)
7. A-A1A3D07 (-Display SB0 bit 10)
8. A-A1A3D09 (-Display SB0 bit 13)
9. A-A1A3D10 (-Display SB0 bit 11)
4. A-A1A3D11 (-Display SB0 bit P)

Are the lights correct?

Y N

1 1
5 5
A A
Y Z

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MAP 1303-14

A
Z
1
4

**CE PANEL MAP 2.
5340 SYSTEMS UNIT**

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081

Leave the probe on the failing pin.
Level 1 board
Remove cards A-A1N2, A-A1P2
---or---
Level 2 board
cards A-A1J2, A-A1K2.
-Set Power to 1 (operator panel).

Up Light: Off
Down Light: On

Are the lights correct?

Y N

082

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.
Bad card
Level 1 board
A-A1K2
---or---
A-A1H2
---or---
A-A1F2
---or---
A-A1L2
---or---
A-A1G2
---or---
Level 2 board
A-A1G2
---or---
A-A1E2
---or---
A-A1C2
---or---
A-A1H2
---or---
A-A1D2

B
A

MAP 1303-15

F A A B
3 U Y A
4 1 1
4 4

083

Level 1 board
Install cards A-A1N2, A-A1P2
---or---
Level 2 board
Install cards A-A1J2, A-A1K2 and the control storage cards one at a time to find the bad card.
The bad card is found when the lights do not meet the following indication.

Up Light: Off
Down Light: On

084

Check for a bad cable A-A1A3 from the failing pin on board A-A1 to the LED display on the CE panel.
---or---
Check for a failing LED on the CE panel.

085

The CE panel is OK.
Go to the Error Log MAPs for the CP.
Go To Map 8201, Entry Point A.

086

Probe the following:

Up Light: Off
Down Light: Ignore

- 1. A-B3A1D13 (Comm Display Line #1)
- 2. A-B3A1E13 (Comm Display Line #2)
- 3. A-B3B1A13 (Comm Display Line #3)
- 4. A-B3B1B13 (Comm Display Line #4)

Are the lights correct?

Y N

1 1
6 6
B B
B C

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EC 835083 PEC 835000

MAP 1303-15

A B B
1 B C
5 1 5

CE PANEL MAP 2.
5340 SYSTEMS UNIT
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MAP 1303-16

087

Leave the probe on the failing pin. Remove the adapter card from the failing line.

Line 1 - A-B3F2

Line 2 - A-B3G2

Line 3 - A-B3H2

Line 4 - A-B3J2

-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

088

Check for a bad cable A-B3Y2 from board A-B3 to the 'Comm Select' switch on CE panel
---or---

Check for a failing 'Comm Select' and 'Comm Dply' switch.

See FSL's FB055, FB095, etc.

089

The adapter card you have removed is bad.

090

Go to Page 4, Step 019, Entry Point B.

091

Go to Page 8, Step 047, Entry Point D.

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MAP 1303-16

CE PANEL MAP 3.
5340 SYSTEMS UNIT

MAP 1305-1

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001
0105	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	002	1307	A
4	017	1307	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

-Press Reset (CE panel).

MAP DESCRIPTION:

This MAP checks out the CE panel lamp test

START CONDITIONS:

None

LOGIC CARDS TESTED:

CE panel lamp test and associated logic

Note: Section 13-000 of the Maintenance Manual has instructions on removal and/or replacement of the CE panel and CE subpanel--CE panel drawing (VOL D, CE160) and CE subpanel drawing (VOL D, OP015).

Is Display light P1 on (CE panel)?

Y N

002

Go To Map 1307, Entry Point A.

003

Are there any lights on other than Display light P1 (CE panel and CE subpanel)?

Y N

004

-Press and hold Lamp Test (CE panel).

Are all Display lights Off (CE panel)?

Y N

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MAP 1305-1

4 3 2
A B C

LAMP TEST.
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MAP 1305-2

005

-Press and hold Lamp Test (CE panel).
Are all Display lights except P1 Off (CE panel)?
 Y N

006

-Press and hold Lamp Test (CE panel).
 Find the wrong indicator in the Wrong Indicator column of chart A.
 Probe the comparable pin indicated in the Probe LOC A-A1 column of chart A.

Up Light: Off
 Down Light: On

(Step 006 continued)

Byte0 Bit5	J2D13	A3B04	A-A1J2
Byte0 Bit6	J2D11	A3D05	A-A1J2
Byte0 Bit7	J2B13	A3B05	A-A1J2
Byte1 P1	F2M02	A3D11	A-A1F2*
Byte1 Bit0	F2M03	A3D06	A-A1F2*
Byte1 Bit1	F2S12	A3B06	A-A1F2*
Byte1 Bit2	F2M09	A3D07	A-A1F2*
Byte1 Bit3	F2P09	A3D10	A-A1F2*
Byte1 Bit4	F2G08	A3B09	A-A1F2*
Byte1 Bit5	F2G10	A3D09	A-A1F2*
Byte1 Bit6	F2G11	A3B08	A-A1F2*
Byte1 Bit7	F2G13	A3B07	A-A1F2*

POWR Light | Go To VOL D, OP110

Chart A
 (Level 1 board)

Wrong Indicator	Probe LOC A-A1	Board Cable LOC A-A1	Bad Card
Cons Check	A-A2	L6E02 OR A2D12	A-A2M2
Proc Check System In Use	J2S09	A2B12	A-A1J2
Load Light	K2J07	A2D06	A-A1K2
Stop Light	F2B04	A2B10	A-A1F2*
MSP	K2J06	A2B09	A-A1K2
Running	F2U05	A2D09	A-A1F2*
Clk Light	J2B12	A3B11	A-A1J2
Proc Intr4	L2B05	A3B13	A-A1L2
Proc Intr2	L2D04	A3D13	A-A1L2
Proc Intr1	L2D05	A3D12	A-A1L2
Byte0 P0	J2B04	A3B12	A-A1J2
Byte0 Bit0	J2D12	A3B10	A-A1J2
Byte0 Bit1	J2J05	A3B03	A-A1J2
Byte0 Bit2	J2B02	A3D03	A-11J2
Byte0 Bit3	J2B09	A3D02	A-A1J2
Byte0 Bit4	J2G03	A3D04	A-A1J2

(Step 006 continues)

Chart A
 (Level 2 board)

Wrong Indicator	Probe LOC A-A1	Board Cable LOC A-A1	Bad Card
Cons Check	A-A2	L6E02 OR A2D12	A-A2M2
Proc Check System In Use	J2S09	A2B12	A-A1F2
Load Light	K2J07	A2D06	A-A1G2
Stop Light	F2B04	A2B10	A-A1C2*
MSP	K2J06	A2B09	A-A1G2
Running	F2U05	A2D09	A-A1C2*
Clk Light	J2B12	A3B11	A-A1F2
Proc Intr4	L2B05	A3B13	A-A1H2
Proc Intr2	L2D04	A3D13	A-A1H2
Proc Intr1	L2D05	A3D12	A-A1H2
Byte0 P0	J2B04	A3B12	A-A1F2
Byte0 Bit0	J2D12	A3B10	A-A1F2
Byte0 Bit1	J2J05	A3B03	A-A1F2
Byte0 Bit2	J2B02	A3D03	A-A1F2
Byte0 Bit3	J2B09	A3D02	A-A1F2
Byte0 Bit4	J2G03	A3D04	A-A1F2

(Step 006 continues)

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MAP 1305-2

LAMP TEST.
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MAP 1305-3

(Step 006 continued)

Byte0 Bit5	J2D13	A3B04	A-A1F2
Byte0 Bit6	J2D11	A3D05	A-A1F2
Byte0 Bit7	J2B13	A3B05	A-A1F2
Byte1 P1	F2M02	A3D11	A-A1C2*
Byte1 Bit0	F2M03	A3D06	A-A1C2*
Byte1 Bit1	F2S12	A3B06	A-A1C2*
Byte1 Bit2	F2M09	A3D07	A-A1C2*
Byte1 Bit3	F2P09	A3D10	A-A1C2*
Byte1 Bit4	F2G08	A3B09	A-A1C2*
Byte1 Bit5	F2G10	A3D09	A-A1C2*
Byte1 Bit6	F2G11	A3B08	A-A1C2*
Byte1 Bit7	F2G13	A3B07	A-A1C2*

|POWR Light| Go To VOL D, OP110 |

*
Note: Before you install an A-A1J2 (Level 1 board) card or an A-A1F2 (Level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Are the lights correct?

Y N

007

The bad card is the card specified in the Bad Card A-A1 column of chart A.

008

-Press and hold Lamp Test (CE panel).
Probe the comparable pin indicated in the Board Cable LOC A-A1 column of chart A.

Up Light: Off
Down Light: On

Are the lights correct?

Y N

009

Bad board
A-A1

E

B D E
1 2

010

Check for a bad cable (the one that was just probed) from board A-A1 to the CE panel that was probed.

---or---

Check for a failing indicator on the CE panel/operator panel.

---or---

Check for missing voltage or ground on the CE panel/operator panel.

011

-Press and hold Lamp Test (CE panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5B04 (-Lamp test).

Are the lights correct?

Y N

012

Check for a bad cable A-A1A5 from the CE panel to board A-A1.

---or---

Check for a failing push switch on the CE panel.

013

Check for missing ground to the CE Panel/Operator panel.

014

Probe the following:

Up Light: On
Down Light: Off

(1) A-A1A5D04 (+5 Vdc to CE panel)

Are the lights correct?

Y N

4 4
F G

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MAP 1305-3

A F G
1 3 3

LAMP TEST.

MAP 1305-4

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015

Check for missing +5 Vdc on board A-A1.

016

Check for a bad cable A-A1A5 from the CE panel to board A-A1.

017

Go To Map 1307, Entry Point A.

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MAP 1305-4

CE PANEL MAP 4
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MAP 1307-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1305	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

-Set Mode Selector to Proc Run (CE panel).
 Probe the following:

Up Light: Off
 Down Light: On

- (1) A-A1A4B12 (+Mode selector Sw bit 1)
- (2) A-A1A4B13 (+Mode selector Sw bit 0)
- (3) A-A1A4D12 (+Mode selector Sw bit 3)
- (4) A-A1A4D13 (+Mode selector Sw bit 2)

Are the lights correct?

Y N

002

Check for a bad cable A-A1A4 from the CE panel to the failing pin on board A-A1.

----or----

Check for a failing Mode Selector switch on the CE panel.

MAP DESCRIPTION:

This MAP determines why CE Reset (CE panel) does not initialize the CE panel, CE subpanel, and operator panel correctly.

START CONDITIONS:

None

LOGIC CARDS TESTED:

CE Reset Logic

Note: Section 13-000 of the Maintenance Manual has instructions on removal and/or replacement of the CE panel and CE subpanel--CE panel drawing (VOL D, CE160) and CE subpanel drawing (VOL D, OP015).

A

**CE RESET
5340 SYSTEMS UNIT**

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003

-Turn Mode Selector (CE panel) one position counterclockwise.

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

- (1) A-A1G2J02 (+Mode selector Sw bit 2)
- (2) A-A1G2J04 (+Mode selector Sw bit 1)
- (3) A-A1G2J05 (+Mode selector Sw bit 3)
- (4) A-A1K2M12 (+Mode selector Sw bit 0)

---or---

Level 2 board

- (1) A-A1D2J02 (+Mode selector Sw bit 2)
- (2) A-A1D2J04 (+Mode selector Sw bit 1)
- (3) A-A1D2J05 (+Mode selector Sw bit 3)
- (4) A-A1G2M12 (+Mode selector Sw bit 0)

Are the lights correct?

Y N

004

Leave the probe on the failing pin.
Remove cable A-A1A4.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

005

Is the failing pin A-A1K2M12 (+Mode selector Sw bit 0)?

Y N

006

Bad card
A-A1G2 (Level 1 board)
---or---
A-A1D2 (Level 2 board)

B C D

B C D

MAP 1307-2

007

Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

008

Check for a bad cable A-A1A4 from the CE panel to the failing pin on board A-A1.

---or---

Check for a failing Mode Selector switch on the CE panel.

009

-Press and hold Reset (CE panel).

Is Display light P0 on (CE panel)?

Y N

010

Are any lights other than Display light P1 (CE panel and CE subpanel) on?

Y N

011

Probe the following:

Up Light: Off
Down Light: On

Level 1 board

- (1) A-A1F2M02 (-Display SBO bit P).

---or---

Level 2 board

- (1) A-A1C2M02 (-Display SBO bit P).

Are the lights correct?

Y N

9 3 3 3
E F G H

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MAP 1307-2

F G H
2 2 2

CE RESET
5340 SYSTEMS UNIT

MAP 1307-3

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012

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Check for a bad cable A-A1A3 from the CE panel to board A-A1.

---or---

Bad card

A-A1F2 (Level 1 board)

---or---

A-A1C2 (Level 2 board)

013

Check for a bad cable to the CE panel.

---or---

Check for a failing indicator on the CE panel.

014

Are any Display Lights byte 1 on (CE panel) ?

Y N

7 4
J K

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MAP 1307-3

015

Find the wrong indicator in the wrong indicator column of chart A.

Probe the comparable pin indicated in the probe loc. A-A1 column of chart A.

Up Light: Off

Down Light: On

Chart A
(level 1 board)

Wrong indicat	Probe loc A-A1	Board cable loc A-A1	Bad card
Cons chk	A2D12	L6E02	A-A2M2
Proc chk	J2S09	A2B12	A-A1J2
System in use	K2J07	A2D06	A-A1K2
Load light	F2B04	A2B10	A-A1F2*
Stop light	K2J06	A2B09	A-A1K2
MSP running	F2U05	A2D09	A-A1F2*
Clk light	J2B12	A3B11	A-A1J2
Proc intr4	L2B05	A3B13	A-A1L2
Proc intr2	L2D04	A3D13	A-A1L2
Proc intr1	L2D05	A3D12	A-A1L2
Byte0- P0	J2B04	A3B12	A1A1J2
Byte0- Bit0	J2D12	A3B10	A-A1J2
Byte0 Bit1	J2J05	A3B03	A-A1J2
Byte0 Bit2	J2B02	A3D03	A-A1J2
Byte0 Bit3	J2B09	A3D02	A-A1J2
Byte0 Bit4	J2G03	A3D04	A-A1J2
Byte0 Bit5	J2D13	A3B04	A-A1J2
Byte0- Bit6	J2D11	A3D05	A-A1J2
Byte0-			

(Step 015 continues)

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MAP 1307-5

(Step 015 continued)

Bit7	J2B13 A3B05 A-A1J2

Power light	Go to Vol D, OP110

Chart A
 (level 2 board)

	Board	Board	Bad
Wrong indicat	Probe loc A-A1	cable loc A-A1	card

Cons chk	A2D12	L6E02	A-A2M2
Proc chk	J2S09	A2B12	A-A1F2
System in use	K2J07	A2D06	A-A1G2
Load light	F2B04	A2B10	A-A1C2*
Stop light	K2J06	A2B09	A-A1G2
MSP running	F2U05	A2D09	A-A1C2*
Clk light	J2B12	A3B11	A-A1F2
Proc intr4	L2B05	A3B13	A-A1H2
Proc intr2	L2D04	A3D13	A-A1H2
Proc intr1	L2D05	A3D12	A-A1H2
Byte0-P0	J2B04	A3B12	A1A1F2
Byte0-Bit0	J2D12	A3B10	A-A1F2
Byte0-Bit1	J2J05	A3B03	A-A1F2
Byte0-Bit2	J2B02	A3D03	A-A1F2
Byte0-Bit3	J2B09	A3D02	A-A1F2
Byte0-Bit4	J2G03	A3D04	A-A1F2

(Step 015 continues)

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 MAP 1307-5

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MAP 1307-6

(Step 015 continued)

Byte0			
Bit5	J2D13	A3B04	A-A1F2
Byte0-			
Bit6	J2D11	A3D05	A-A1F2
Byte0-			
Bit7	J2B13	A3B05	A-A1F2

Power			
light	Go to Vol D, 0P110		

*

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Are the lights correct?

Y N

016

The bad card is the card specified in the Bad Card A-A1 column of chart A.

017

Probe the comparable pin indicated in the board cable loc A-A1 column of chart A.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

018

Bad board
A-A1

7
L

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MAP 1307-6

J L
3 6

CE RESET
5340 SYSTEMS UNIT

MAP 1307-7

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019

Check for a bad cable from board A-A1 to the CE panel that was probed.

---or---

Check for a failing indicator on the CE panel/operator panel.

---or---

Check for missing voltage or ground on the CE panel/operator panel.

020

Probe the following:

Up Light: On
Down Light: Off

- (1) A-A1A3B06 (-Display SBO bit 9)
- (2) A-A1A3B07 (-Display SBO bit 15)
- (3) A-A1A3B08 (-Display SBO bit 14)
- (4) A-A1A3B09 (-Display SBO bit 12)
- (5) A-A1A3D06 (-Display SBO bit 8)
- (6) A-A1A3D07 (-Display SBO bit 10)
- (7) A-A1A3D09 (-Display SBO bit 13)
- (8) A-A1A3D10 (-Display SBO bit 11)

Are the lights correct?

Y N

021

Probe the following:

Up Light: On
Down Light: Off

Level 1 board

- (1) A-A1H2P09 (-Sys bus in bit 8)
- (2) A-A1H2M07 (-Sys bus in bit 12)
- (3) A-A1H2M08 (-Sys bus in bit 13)
- (4) A-A1H2M09 (-Sys bus in bit 11)
- (5) A-A1H2M10 (-Sys bus in bit 15)
- (6) A-A1H2M11 (-Sys bus in bit 10)
- (7) A-A1H2M12 (-Sys bus in bit 9)
- (8) A-A1H2M13 (-Sys bus in bit 14)

---or---

(Step 021 continues)

(Step 021 continued)

Level 2 board

- (1) A-A1E2P09 (-Sys bus in bit 8)
- (2) A-A1E2M07 (-Sys bus in bit 12)
- (3) A-A1E2M08 (-Sys bus in bit 13)
- (4) A-A1E2M09 (-Sys bus in bit 11)
- (5) A-A1E2M10 (-Sys bus in bit 15)
- (6) A-A1E2M11 (-Sys bus in bit 10)
- (7) A-A1E2M12 (-Sys bus in bit 9)
- (8) A-A1E2M13 (-Sys bus in bit 14)

Are the lights correct?

Y N

022

Leave the probe on the failing pin.

Remove card A-A1J2 (Level 1 board)

---or---

A-A1F2 (Level 2 board)

-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

023

Leave the probe on the failing pin.

Remove card A-A1H2 (Level 1 board)

---or---

A-A1E2 (Level 2 board)

-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

8 8 8 8
N P Q R

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MAP 1307-7

8
M

N P Q R
7 7 7 7

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024

Bad card
Level 1 board
A-A1K2
---or---
A-A1L2
Level 2 board
A-A1G2
---or---
A-A1H2

025

Bad card
A-A1H2 (Level 1 board)
---or---
A-A1E2 (Level 2 board)

026

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

027

Probe the following:

Up Light: Off
Down Light: On

Level 2 board

- (1) A-A1H2U02 (+System bus out bit 8)
- (2) A-A1H2U04 (+System bus out bit 9)
- (5) A-A1H2U09 (+System bus out bit 12)
- (6) A-A1H2U10 (+System bus out bit 13)
- (3) A-A1H2S02 (+System bus out bit 10)
- (4) A-A1H2S04 (+System bus out bit 11)
- (7) A-A1H2S08 (+System bus out bit 14)
- (8) A-A1H2S10 (+System bus out bit 15)

---or---

Level 2 board

- (1) A-A1E2U02 (+System bus out bit 8)
 - (2) A-A1E2U04 (+System bus out bit 9)
 - (5) A-A1E2U09 (+System bus out bit 12)
 - (6) A-A1E2U10 (+System bus out bit 13)
- (Step 027 continues)

M
7

MAP 1307-8

(Step 027 continued)

- (3) A-A1E2S02 (+System bus out bit 10)
- (4) A-A1E2S04 (+System bus out bit 11)
- (7) A-A1E2S08 (+System bus out bit 14)
- (8) A-A1E2S10 (+System bus out bit 15)

Are the lights correct?

Y N

028

Bad card
A-A1H2 (Level 1 board)
---or---
A-A1E2 (Level 2 board)

029

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1F2 (Level 1 board)
---or---
A-A1C2 (Level 2 board)

---or---

A bad cable A-A1A3 from board A-A1 to the CE panel.

030

Check for bad cable A-A1A3 from the failing pin on board A-A1 to the LED

---or---

Check for a failing LED on the CE panel.

05JAN81 PN 4237588

EC 835083 PEC 832850

MAP 1307-8

CE RESET
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031

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

Level 1 board

- A-A1L2
- or---
- A-A1J2
- or---
- A-A1K2
- or---
- A-A1G2
- or---
- A-A1F2
- or---

Level 2 board

- A-A1H2
- or---
- A-A1F2
- or---
- A-A1G2
- or---
- A-A1D2
- or---
- A-A1C2

5340 SYSTEMS UNIT

PAGE 1 OF 5

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
5	025	1303	D
5	024	1505	D

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP determines why Display light P1 (CE panel) did not turn on when the machine was powered on.

START CONDITIONS:

None

LOGIC CARDS TESTED:

Level 1 board

A-A1J2, A-A1K2, A-A1F2, A-A1G2, A-A1H2, A-A1J2, A-A1K2, A-A1L2, A-A1N2, A-A1P2, A-A1Q2

---or---

Level 2 board

A-A1F2, A-A1G2, A-A1C2, A-A1D2, A-A1E2, A-A1F2, A-A1G2, A-A1H2, A-A1J2, A-A1K2, A-A1L2

stop light, cable from operator panel to board A-A1, C-A1A2.

Note: Section 13-000 of the Maintenance Manual has instructions on removal and/or replacement of the CE panel and CE subpanel--CE panel drawing (VOL D, CE160) and CE subpanel drawing (VOL D, OP015).

Is the Display light P1 byte 1 on (CE panel)?

Y	N

5 2
A B

B
1

POWER ON RESET MAP
5340 SYSTEMS UNIT
PAGE 2 OF 5

002

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1L6E04 (-Disk block processor clock).

Are the lights correct?

Y N

003

-Set Power to 0 (operator panel).
Change the CE probe to pick up +5V at A-A1A2B02
and ground at A-A1A2D08.
Probe the following:

Up Light: On
Down Light: Off

Level 1 board
(1) A-A1J2D06 (+System power on reset).
---or---
Level 2 board
(1) A-A1F2D06 (+System power on reset).

Are the lights correct?

Y N

004

Leave the probe on the failing pin.
Remove cable A-A1A2 from the operator panel
to board A-A1.

Up Light: On
Down Light: Off

Are the lights correct?

Y N

5 3
C D E F

E F

MAP 1309-2

005

Leave the probe on the failing pin.
Remove cable A-A1Z4 from board A-A1 to board
A-A2.

Up Light: On
Down Light: Off

Are the lights correct?

Y N

006

Bad card
Level 1 board
A-A1J2
---or---
A-A1K2
---or---
Level 2 board
A-A1F2
---or---
A-A1G2.

007

Check for a bad cable A-A1Z4
---or---
A bad card on boards A-A2 or A-A3 that use
System Power On Reset.

008

Check for a bad cable A-A1Y1
---or---
Bad card
C-A1B2.

D
2

POWER ON RESET MAP

5340 SYSTEMS UNIT

PAGE 3 OF 5

009

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1B1A11 (+System power on reset).

-Set Power to 1 (operator panel).

Are the lights correct?

Y N

010

Check for a bad cable A-A1Y1 from board C-A1 to board A-A1

---or---

Bad card
C-A1B2.

011

Probe the following:

Up Light: Off

Down Light: On

Level 1 board

(1) A-A1J2M02 (-Display SBO bit P).

---or---

Level 2 board

(1) A-A1F2M02 (-Display SBO bit P).

Are the lights correct?

Y N

4
G H

H

MAP 1309-3

012

Remove Level 1 board A-A1N2, A-A1P2, A-A1Q2 and all control storage cards

---or---

Level 2 board A-A1J2, A-A1K2, A-A1L2 and all control storage cards.

-Set Power to 1 (operator panel).

Leave the probe on the failing pin.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

013

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

Level 1 board

A-A1J2

---or---

A-A1F2

---or---

A-A1H2

---or---

A-A1L2

---or---

A-A1G2

---or---

A-A1K2

---or---

Level 2 board

A-A1F2

---or---

A-A1C2

---or---

A-A1E2

---or---

A-A1H2

(Step 013 continues)

08DEC81 PN 4237589

EC 835083F PEC 835201

MAP 1309-3

4
J

J
3

**POWER ON RESET MAP
5340 SYSTEMS UNIT**

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(Step 013 continued)

---or---
A-A1D2
---or---
A-A1G2.

014

Install card A-A1N2 (Level 1 board)

---or---

A-A1J2 (Level 2 board)

-Set Power to 1 (operator panel).

Leave the probe on the failing pin.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

015

Bad card

A-A1N2 (Level 1 board)

A-A1J2 (Level 2 board).

016

Install card A-A1P2 (Level 1 board)

---or---

A-A1K2 (Level 2 board)

-Set Power to 1 (operator panel).

Leave the probe on the failing pin.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

017

Bad card

A-A1P2 (Level 1 board)

---or---

A-A1K2 (Level 2 board).

K

G K
3

MAP 1309-4

018

Install card A-A1Q2 (Level 1 board)

---or---

A-A1L2 (Level 2 board)

-Set Power to 1 (operator panel).

Leave the probe on the failing pin.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

019

Bad card

A-A1Q2 (Level 1 board)

---or---

A-A1L2 (Level 2 board)

020

(Entry Point B)

Reinstall the control storage cards one at a time.

-Set Power to 1 (operator panel).

Leave the probe on the failing pin.

Up Light: Off

Down Light: On

Are the lights correct?

Y N

021

The last control storage card installed is bad.

022

Go to Step 020, Entry Point B.

023

Check for a bad cable A-A1A3 from board A-A1 to the CE panel

---or---

Check for a failing indicator on the CE panel.

08DEC81 PN 4237589

EC 835083F PEC 835201

MAP 1309-4

A C
1 2

**POWER ON RESET MAP
5340 SYSTEMS UNIT**

MAP 1309-5

PAGE 5 OF 5

024

Go To Map 1505, Entry Point D.

025

Go To Map 1303, Entry Point D.

08DEC81 PN 4237589

EC 835083F PEC 835201

MAP 1309-5

CTL STORE CARD SWAP

MAP 1501-1

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1505	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP swaps control storage cards with main storage cards attempting to find a bad control storage card.

START CONDITIONS:

The starting conditions are set up by MAP 1505. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1E2, A-A1D4, A-A1F2, A-A1G2, A-A1H2, A-A1J2, A-A1K2

Level 2 board:

A-A1B2, A-A1B4, A-A1C2, A-A1D2, A-A1E2, A-A1F2, A-A1G2

Is there a card in the A-A1B2 position?

Y N

002

Remove cards A-A1E2 and A-A1D4 and set them aside temporarily. Now remove the cards from A-A1R2 and A-A1S2 and install them in A-A1E2 and A-A1D4.

Do not put the original control storage cards into the main storage locations.

- Set Power to 1 (operator panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down positions.
- (Step 002 continues)

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PN 4237590

EC 835083

PEC 832999

MAP 1501-1

**CTL STORE CARD SWAP
5340 SYSTEMS UNIT**

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(Step 002 continued)

- Set the Address/Data switches to '0000' (CE panel). Insert diskette DIAGB1 and close the cover.
- Set Mode Selector to Proc Run (CE panel).
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

003

The original control storage cards are not causing the problem.
Return all storage cards to their original socket locations.

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

- Bad card
- A-A1F2
- or---
- A-A1G2
- or---
- A-A1H2
- or---
- A-A1J2
- or---
- A-A1K2

004

One of the original control storage cards is causing the problem.

To determine which one is at fault, do the following:

Remove card A-A1E2 and reinstall it in A-A1R2. Now reinstall one of the control store cards, removed earlier, in A-A1E2.

- Set Power to 1 (operator panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down positions.
- (Step 004 continues)

MAP 1501-2

A
1

(Step 004 continued)

- Set the Address/Data switches to '0000' (CE panel). Insert diskette DIAGB1 and close the cover.
- Set Mode Selector to Proc Run (CE panel).
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

005

The control storage card now in A-A1E2 is the bad card.

006

The remaining control storage card is the bad card. Remove the A-A1D4 card and reinstall it in A-A1S2.

007

Remove cards A-A1B2 and A-A1B4 and set them aside temporarily. Now remove the cards from A-A1M2 and A-A1N2 and install them in A-A1B2 and A-A1B4.

Do not put the original control storage cards into the main storage locations.

- Set Power to 1 (operator panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down positions.
- Set the Address/Data switches to '0000' (CE panel). Insert diskette DIAGB1 and close the cover.
- Set Mode Selector to Proc Run (CE panel).
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

3 3
B C

05JAN81 PN 4237590

EC 835083 PEC 832999

MAP 1501-2

B C
2 2

CTL STORE CARD SWAP

5340 SYSTEMS UNIT

PAGE 3 OF 3

008

The original control storage cards are not causing the problem.

Return all storage cards to their original socket locations.

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1C2

---or---

A-A1D2

---or---

A-A1E2

---or---

A-A1F2

---or---

A-A1G2

009

One of the original control storage cards is causing the problem.

To determine which one is at fault, do the following:

Remove card A-A1B2 and reinstall it in A-A1M2. Now reinstall one of the control store cards, removed earlier, in A-A1B2.

-Set Power to 1 (operator panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

-Set the Address/Data switches to '0000' (CE panel).

Insert diskette DIAGB1 and close the cover.

-Set Mode Selector to Proc Run (CE panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

D E

D E

MAP 1501-3

010

The control storage card now in A-A1B2 is the bad card.

011

The remaining control storage card is the bad card. Remove the A-A1B4 card and reinstall it in A-A1N2.

05JAN81 PN 4237590

EC 835083 PEC 832999

MAP 1501-3

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM		ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER	
0149	A	1	001	
0173	A	1	001	
0175	A	1	001	
1309	D	10	052	

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
16	072	1013	B
26	110	1013	B
3	006	1301	A
7	031	1301	A
4	011	1501	A
5	020	1501	A
8	036	1501	A
9	045	1501	A
4	010	1507	A
17	080	1507	A
5	019	1507	A
8	035	1507	A
27	118	1507	A
9	044	1507	A
3	005	1511	A
7	030	1511	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP uses Display lights byte 0 bits 2,3, and 4 and Display lights byte 1 (CE panel) to determine why CSIPL did not complete correctly.

START CONDITIONS:

The starting conditions are set up by MAP 0149. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Cards on boards A-A1, A-A2, A-A3, and A-B3.

Is there a card in the A-A1B2 position?

Y	N

6 2
A B

B
1

CP PROBLEM MAP
5340 SYSTEMS UNIT
PAGE 2 OF 29

MAP 1505-2

002

Remove cards A-A1N2, A-A1P2, and A-A1Q2.
Jumper the following pins to ground:

A-A1N2G10 (-MSP clocks stopped)
A-A1Q2S05 (+MS CSY trigger)

Jumper A-A1Q2P09 to A-A1Q2M13.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set the Address/Data switches to 0000 (CE panel).
- Leave the CSIPL and MSIPL switches (CE panel) as they were when you entered this MAP.
Insert diskette DIAGB1 and close the cover.
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
- Are only Display lights byte 0, bits 6 and 7 on (CE panel)?**

Y N

003

- Reinstall all cards removed earlier.
Remove all jumpers installed earlier.
- Set Power to 1 (operator panel).
 - Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
 - Set Mode Selector to Insn Step/Dply LSR (CE panel).
 - Set Mode Selector to Proc Run (CE panel).
- Is Display light byte 0 bit 2 off (CE panel)?**

Y N

5 3 3
C D E

05JAN81 PN 4237591
EC 835083 PEC 835000
MAP 1505-2

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

PAGE 3 OF 29

004

Check if the CE panel is causing the problem.
Remove cables from locations A-A1A4 and A-A1A5.
Jumper the following pins to ground:

- A-A1G2B13 (+single cycle)
- A-A1K2M12 (+mode SEL SW bit 0)
- A-A1A5D07 (-CSIPL diskette)

When cable A-A1A5 is removed, the thermal check light and power check light may come on.

Ignore these indicators.

- Set Power to 1 (operator panel).
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete correctly?

(See note 1)

Y N

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

005

Reinstall all cables removed earlier and
Remove all jumpers installed earlier.
Go To Map 1511, Entry Point A.

006

A CE panel problem is affecting CP.
Reinstall all cables removed earlier and
Remove all jumpers installed earlier.

-Set Power to 1 (operator panel).

Go To Map 1301, Entry Point A.

007

Is Display light byte 0 bit 3 off (CE panel)?

Y N

CP PROBLEM MAP
5340 SYSTEMS UNIT

PAGE 4 OF 29

008

Display WR3 as follows:

- Set the Display/Data switches to 03 (CE panel).
- Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1**X'19'**

--or--

X'62'

--or--

X'90' (CE panel) ?**Y N****009****Are Display lights byte 1****X'15'**

--or--

X'16'

--or--

X'17'

--or--

X'18' (CE panel)?**Y N****010****Go To Map 1507, Entry Point A.****011****Go To Map 1501, Entry Point A.****012****(Entry Point E)**

Record the socket locations containing storage cards in the control storage area of board A-A1.

Exchange the control storage cards with as many main storage cards as necessary.

Do not put the original control storage cards in the main storage locations that were vacated.

Set them aside temporarily.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set the Address/Data switches to 0000 (CE panel).

Insert diskette DIAGB1 and close the cover.

- Press Load (operator panel) and wait for about 45 (Step 012 continues)

(Step 012 continued)

seconds for disk and diskette to load programs.

Look at the Display lights.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?**Y N****013**

The original control storage cards are not causing the problem.

Return all cards that have been exchanged to their original socket positions.

Go to Page 10, Step 052, Entry Point D.**014****(Entry Point B)**

The original control storage cards are causing the problem.

Exchange the control storage cards back one at a time with the swapped main storage cards as follows:

Swap a control storage card with a main storage card in a control storage location.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set CS IPL to Diskette (CE panel).
 - Set all other CE panel switches to their down positions.
 - Set the Address/Data switches to 0000 (CE panel).
- Insert diskette DIAGB1 and close the cover.
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
- Look at the Display lights.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?**Y N****015**

The control storage card last exchanged is the bad card.

05JAN81 PN 4237591

EC 835083 PEC 835000

MAP 1505-4

CP PROBLEM MAP
5340 SYSTEMS UNIT

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016

The control storage card last exchanged is not the bad card.

Repeat the last step with another control storage card.

Go to Page 4, Step 014, Entry Point B.

017

Display WR3 as follows:

-Set the Display/Data switches to 03 (CE panel).

-Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1 X'61' or X'62' (CE panel)?

Y N

018

Are Display lights byte 1

X'48'

--or--

X'57'

--or--

X'63'

--or--

X'64' (CE panel)?

Y N

019

Need more CP analysis.

Go To Map 1507, Entry Point A.

020

The control storage test failed.

Go To Map 1501, Entry Point A.

021

Go to Page 10, Step 052, Entry Point D.

022

The MSP is causing the CSIPL problem.

Remove all jumpers installed earlier.

Install cards A-A1N2 and A-A1Q2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?

Y N

023

Card A-A1P2 is not causing the problem.

Remove card A-A1Q2.

Install card A-A1P2.

Jumper the following pin to ground:

A-A1Q2S05 (+MS CSY trigger)

Jumper A-A1Q2P09 to A-A1Q2M13.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?

Y N

024

Bad card

A-A1N2.

Remove all jumpers

025

Bad card

A-A1Q2.

Remove all jumpers

026

Bad card

A-A1P2.

A
↑
|

CP PROBLEM MAP
5340 SYSTEMS UNIT
PAGE 6 OF 29

MAP 1505-6

027

Remove cards A-A1J2, A-A1K2, and A-A1L2.
Jumper the following pins to ground:

- A-A1J2G10 (-MSP clocks stopped)
- A-A1L2S05 (+ MS CSY trigger)

Jumper A-A1L2P09 to A-A1L2M13.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set the Address/Data switches to 0000 (CE panel).
- Leave the CSIPL and MSIPL switches (CE panel) as they were when you entered this MAP.
Insert diskette DIAGB1 and close the cover.
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
- Are only Display lights byte 0, bits 6 and 7 on (CE panel)?**

Y N

028

- Reinstall all cards removed earlier.
Remove all jumpers installed earlier.
- Set Power to 1 (operator panel).
 - Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
 - Set Mode Selector to Insn Step/Dply LSR (CE panel).
 - Set Mode Selector to Proc Run (CE panel).
- Is Display light byte 0 bit 2 off (CE panel)?**

Y N

9 7 7
J K L

05JAN81 PN 4237591
EC 835083 PEC 835000
MAP 1505-6

K L
6 6

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

MAP 1505-7

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029

Check if the CE panel is causing the problem.
Remove cables from locations A-A1A4 and A-A1A5.
Jumper the following pins to ground:

A-A1D2B13 (+single cycle)
A-A1G2M12 (+mode SEL SW bit 0)
A-A1A5D07 (-CSIPL diskette)

When cable A-A1A5 is removed, the thermal check
light and power check light may come on.
Ignore these indicators.

-Set Power to 1 (operator panel).
-Press Load (operator panel) and wait for about 45
seconds for disk and diskette to load programs.
Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete correctly?
(See note 1)

Y N

Note 1: When the CSIPL completes normally from
diskette, the system console should display the DCP
Main Menu.

030

Reinstall all cables removed earlier and
Remove all jumpers installed earlier.
Go To Map 1511, Entry Point A.

031

A CE panel problem is affecting CP.
Reinstall all cables removed earlier and
Remove all jumpers installed earlier.
-Set Power to 1 (operator panel).
Go To Map 1301, Entry Point A.

032

Is Display light byte 0 bit 3 off (CE panel)?

Y N

9 8
M N

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MAP 1505-7

CP PROBLEM MAP
5340 SYSTEMS UNIT

PAGE 8 OF 29

033

Display WR3 as follows:

- Set the Display/Data switches to 03 (CE panel).
- Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1

X'19'

--or--

X'62'

--or--

X'90' (CE panel) ?

Y N

034

Are Display lights byte 1

X'15'

--or--

X'16'

--or--

X'17'

--or--

X'18' (CE panel)?

Y N

035

Go To Map 1507, Entry Point A.

036

Go To Map 1501, Entry Point A.

037

(Entry Point EE)

Record the socket locations containing storage cards in the control storage area of board A-A1.

Exchange the control storage cards with as many main storage cards as necessary.

Do not put the original control storage cards in the main storage locations that were vacated.

Set them aside temporarily.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set the Address/Data switches to 0000 (CE panel).

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 (Step 037 continues)

(Step 037 continued)

seconds for disk and diskette to load programs.

Look at the Display lights.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

038

The original control storage cards are not causing the problem.

Return all cards that have been exchanged to their original socket positions.

Go to Page 20, Step 090, Entry Point DD.

039

(Entry Point BB)

The original control storage cards are causing the problem.

Exchange the control storage cards back one at a time with the swapped main storage cards as follows:

Swap a control storage card with a main storage card in a control storage location.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

-Set the Address/Data switches to 0000 (CE panel).

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Look at the Display lights.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?

Y N

040

The control storage card last exchanged is the bad card.

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MAP 1505-8

M P
7 8

CP PROBLEM MAP
5340 SYSTEMS UNIT
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041

The control storage card last exchanged is not the bad card.

Repeat the last step with another control storage card.

Go to Page 8, Step 039, Entry Point BB.

042

Display WR3 as follows:

-Set the Display/Data switches to 03 (CE panel).

-Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1 X'61' or X'62' (CE panel)?

Y N

043

Are Display lights byte 1

X'48'

--or--

X'57'

--or--

X'63'

--or--

X'64' (CE panel)?

Y N

044

Need more CP analysis.

Go To Map 1507, Entry Point A.

045

The control storage test failed.

Go To Map 1501, Entry Point A.

046

Go to Page 20, Step 090, Entry Point DD.

J
6

MAP 1505-9

047

The MSP is causing the CSIPL problem.

Remove all jumpers installed earlier.

Install cards A-A1J2 and A-A1L2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?

Y N

048

Card A-A1K2 is not causing the problem.

Remove card A-A1L2.

Install card A-A1K2.

Jumper the following pin to ground:

A-A1L2S05 (+MS CSY trigger)

Jumper A-A1L2P09 to A-A1L2M13.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0, bits 6 and 7 on (CE panel)?

Y N

049

Bad card

A-A1J2.

Remove all jumpers

050

Bad card

A-A1L2.

Remove all jumpers

051

Bad card

A-A1K2.

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MAP 1505-9

CP PROBLEM MAP
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MAP 1505-10

052

(Entry Point D)

Remove card A-A2L2.

- Set Power to 1 (operator panel).
- Set the Address/Data switches to F800 (CE panel).
- Set Mode Selector to Proc Run (CE panel).
- Set all CE panel switches to their down position.
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Note: If the CS IPL sequence stopped with a display on the system console follow instructions on display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CS IPL sequence complete normally?
(See note 1)

Note 1: When the CS IPL completes normally from diskette, the system console should display the DCP Main Menu.

Adapter interface card
 reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A1	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2
Diskette 72MD	D1	A-A2L2

(Step 052 continues)

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MAP 1505-10

CP PROBLEM MAP
5340 SYSTEMS UNIT
 PAGE 11 OF 29

MAP 1505-11

(Step 052 continued)

Y N

5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*
2-line Comm adapters	80 or 20	A-A2J2 A-A2K2
MLCA Con- troller	10	A-B3C2
1255	52	A-A3R2* A-A3T2
Term resistor card	--	** A-A3U3

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

1 1
6 2
Q R

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 EC 835083 PEC 835000
 MAP 1505-11

053

Install card A-A2L2.

Remove the following cards depending on your system configuration:

A-A2E2

A-A2F2

A-A2G2

if 62EH Disk is installed.

---or---

A-A2E2

if 62PC Disk is installed.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FFO0 (CE panel).

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Note: If the CSIPL sequence stopped with a display on the system console follow instructions on display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

(See note 1)

Y N

054

Install the following cards depending on your system configuration:

A-A2E2

A-A2F2

A-A2G2

if 62EH Disk is installed.

---or---

A-A2E2

if 62PC Disk is installed.

(Step 054 continues)

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

MAP 1505-13

PAGE 13 OF 29

(Step 054 continued)

Is this system configured for a line printer?

Y N

055

Go to Page 14, Step 059, Entry Point J.

056

Remove top card connectors between logic cards A-A2T2, A-A2S2 and A-A2U2 if installed.

Remove card A-A2T2 and A-A2U2.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FF00 (CE panel).

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Did the CSIPL sequence stop with the message 'Loading system printer functional microcode. If a proc chk occurs, do system reset start.' displayed on the system console screen?

Y N

057

Go to Page 14, Step 059, Entry Point H.

058

Follow instructions on the display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

(See note 1)

Y N

1 1
6 4
T U

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

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EC 835083 PEC 835000

MAP 1505-13

059

(Entry Point H)

Install card A-A2T2 and A-A2U2 if removed earlier.
Reinstall top card connectors between A-A2T2,
A-A2S2 and A-A2U2 logic cards.

(Entry Point J)

Remove top card connectors between logic cards
A-A2M2 and A-A2N2.

Remove card A-A2M2.

- Set Power to 1 (operator panel).
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
- Press Reset (CE panel).

Display WR3 as follows:

- Set the Display/Data switches to '03' (CE panel).
- Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1

X'19'

--or--

X'62'

--or--

X'90' (CE panel)?

Y N

060

Bad card
A-A2M2

061

Install card A-A2M2.
Reinstall top card connectors between A-A2M2 and
A-A2N2 logic cards.

- Set the Address/Data switches to X'FF00' (CE panel).
- Set Mode Selector to Proc Run (CE panel).

Does this system have an A-A3 board installed?

Y N

062

Go to Page 17, Step 078, Entry Point F.

V
4

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

MAP 1505-15

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063

Remove card A-A3U3

---or---

A-B3U3 if A-B3 board (MLCA) is installed.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

Y N

064

Install card A-A3U3

---or---

A-B3U3 if A-B3 board (MLCA) is installed.

Is this system configured for 1255?

Y N

065

Go to Page 17, Step 077, Entry Point K.

066

Remove top card connectors between A-A3R2 and A-A3S2.

Remove cards A-A3R2 and A-A3T2.

-Set Power to 1 (operator panel).

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?
(See note 1)

Y N

067

Go to Page 17, Step 077, Entry Point G.

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

1 1
6 6
W X

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MAP 1505-15

Q S T W X
1 2 3 5 5

CP PROBLEM MAP
5340 SYSTEMS UNIT

Y

MAP 1505-16

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068

Bad card

A-A3R2

---or---

A-A3T2

076

Bad card

A-A2L2

069

Bad card

A-A3U3

---or---

A-B3U3 if A-B3 board (MLCA) is installed.

070

Bad card

A-A2T2

---or---

A-A2U2

071

Does this system have a 62EH disk installed?

Y N

072

Go To Map 1013, Entry Point B.

073

Bad card

A-A2E2

---or---

A-A2F2

---or---

A-A2G2

074

Is the Printer Ready indicator on (printer console)?

Y N

075

Bad card

A-A2T2

---or---

A-A2U2

Y

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MAP 1505-16

CP PROBLEM MAP

MAP 1505-17

5340 SYSTEMS UNIT

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077

(Entry Point G)

Install cards A-A3R2 and A-A3T2.

Install top card connectors between A-A3R2 and A-A3S2.

(Entry Point K)

Is this system configured for 62EH disk B?

Y N

078

(Entry Point F)

Is this system configured for 2-line data communications (Answer 'NO' if MLCA is installed)?

Y N

079

Is this system configured for multi-line communications (MLCA)?

Y N

080

(Entry Point C)

Need more CP analysis.

Go To Map 1507, Entry Point A.

081

Remove A-B3C2.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FF00.

-Set CSIPL to Diskette (CE panel).

-Set MSIPL to Diskette (CE panel).

-Press Load (operator panel) and wait for about 45 seconds for diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally

(See Note 1)?

Y N

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

1 1 1
1 8 8 8
9 A A A
Z A B C

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MAP 1505-17

A A A
A B C
1 1 1
7 7 7

CP PROBLEM MAP
5340 SYSTEMS UNIT

MAP 1505-18

PAGE 18 OF 29

082

Install A-B3C2.

Go to Page 17, Step 080, Entry Point C.

083

Bad card

A-B3C2

---or---

Bad cable

A-B3A2

---or---

Bad cable

A-B3A3.

084

Remove A-A2J2 and A-A2K2 if installed.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CS IPL sequence complete normally?

(See note 1)

Y N

Note 1: When the CS IPL completes normally from diskette, the system console should display the DCP Main Menu.

085

Install A-A2J2 and A-A2F2.

Go to Page 17, Step 080, Entry Point C.

086

Bad card

A-A2J2

---or---

A-A2K2

Install one of these cards at a time to see which one is bad. Only one of these cards should prevent CS IPL from completing.

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PEC 835000

MAP 1505-18

Z
1
7

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

MAP 1505-19

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087

Remove

A-A3E2

A-A3F2

A-A3G2

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CS IPL sequence complete normally?

(See note 1)

Y N

088

Install

A-A3E2

A-A3F2

A-A3G2

Go to Page 17, Step 078, Entry Point F.

089

Bad card

A-A3E2

---or---

A-A3F2

---or---

A-A3G2

Note 1: When the CS IPL completes normally from diskette, the system console should display the DCP Main Menu.

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MAP 1505-19

CP PROBLEM MAP
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MAP 1505-20

090

(Entry Point DD)

Remove card A-A2L2.

- Set Power to 1 (operator panel).
- Set the Address/Data switches to F800 (CE panel).
- Set Mode Selector to Proc Run (CE panel).
- Set all CE panel switches to their down position.
- Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Note: If the CSIPL sequence stopped with a display on the system console follow instructions on display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?
(See note 1)

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

Adapter interface card
 reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A1	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2
Diskette 72MD	D1	A-A2L2

(Step 090 continues)

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MAP 1505-20

CP PROBLEM MAP
5340 SYSTEMS UNIT
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MAP 1505-21

(Step 090 continued)

Y N

5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*
2-line Comm adapters	80 or 20	A-A2J2 A-A2K2
MLCA Con- troller	10	A-B3C2
1255	52	A-A3R2* A-A3T2
Term resistor card	--	** A-A3U3

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

2 2
6 2
A A
D E

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EC 835083 PEC 835000

MAP 1505-21

CP PROBLEM MAP
5340 SYSTEMS UNIT

PAGE 22 OF 29

091

Install card A-A2L2.

Remove the following cards depending on your system configuration:

A-A2E2

A-A2F2

A-A2G2

if 62EH Disk is installed.

---or---

A-A2E2

if 62PC Disk is installed.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FFO0 (CE panel).

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Note: If the CSIPL sequence stopped with a display on the system console follow instructions on display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?**(See note 1)**

Y N

092

Install the following cards depending on your system configuration:

A-A2E2

A-A2F2

A-A2G2

if 62EH Disk is installed.

---or---

A-A2E2

if 62PC Disk is installed.

(Step 092 continues)

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

CP PROBLEM MAP

MAP 1505-23

5340 SYSTEMS UNIT

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(Step 092 continued)

Is this system configured for a line printer?

Y N

093

Go to Page 24, Step 097, Entry Point JJ.

094

Remove top card connectors between logic cards A-A2T2, A-A2S2 and A-A2U2 if installed.

Remove card A-A2T2 and A-A2U2.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FF00 (CE panel).

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

Insert diskette DIAGB1 and close the cover.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Did the CSIPL sequence stop with the message 'Loading system printer functional microcode. If a proc chk occurs, do system reset start.' displayed on the system console screen?

Y N

095

Go to Page 24, Step 097, Entry Point HH.

096

Follow instructions on the display.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

(See note 1)

Y N

2 2
6 4
A A
G H

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

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PEC 835000

MAP 1505-23

**CP PROBLEM MAP
5340 SYSTEMS UNIT**

097

(Entry Point HH)

Install card A-A2T2 and A-A2U2 if removed earlier.
Reinstall top card connectors between A-A2T2,
A-A2S2 and A-A2U2 logic cards.

(Entry Point JJ)

Remove top card connectors between logic cards
A-A2M2 and A-A2N2.
Remove card A-A2M2.
-Set Power to 1 (operator panel).
-Press Load (operator panel) and wait for about 45
seconds for disk and diskette to load programs.
-Press Reset (CE panel).
Display WR3 as follows:
-Set the Display/Data switches to '03' (CE panel).
-Set Mode Selector to Insn Step/Dply LSR (CE panel).

Are Display lights byte 1

X'19'

--or--

X'62'

--or--

X'90' (CE panel)?

Y N

098

Bad card
A-A2M2

099

Install card A-A2M2.
Reinstall top card connectors between A-A2M2 and
A-A2N2 logic cards.
-Set the Address/Data switches to X'FF00' (CE panel).
-Set Mode Selector to Proc Run (CE panel).

Does this system have an A-A3 board installed?

Y N

100

Go to Page 27, Step 116, Entry Point FF.

A
J
2
4

CP PROBLEM MAP
5340 SYSTEMS UNIT
PAGE 25 OF 29

MAP 1505-25

101

Remove card A-A3U3

---or---

A-B3U3 if A-B3 board (MLCA) is installed.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

Y N

102

Install card A-A3U3

---or---

A-B3U3 if A-B3 board (MLCA) is installed.

Is this system configured for 1255?

Y N

103

Go to Page 27, Step 115, Entry Point KK.

104

Remove top card connectors between A-A3R2 and A-A3S2.

Remove cards A-A3R2 and A-A3T2.

-Set Power to 1 (operator panel).

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally?

(See note 1)

Y N

105

Go to Page 27, Step 115, Entry Point GG.

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

2 2
6 6
A A
K L

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MAP 1505-25

A
D
2
1

A
F
2
2

A
G
2
3

A
K
2
5

A
L
2
5

CP PROBLEM MAP
5340 SYSTEMS UNIT
PAGE 26 OF 29

A
M

MAP 1505-26

106

Bad card
A-A3R2
---or---
A-A3T2

114

Bad card
A-A2L2

107

Bad card
A-A3U3
---or---
A-B3U3 if A-B3 board (MLCA) is installed.

108

Bad card
A-A2T2
---or---
A-A2U2

109

Does this system have a 62EH disk installed?
Y N

110

Go To Map 1013, Entry Point B.

111

Bad card
A-A2E2
---or---
A-A2F2
---or---
A-A2G2

112

Is the Printer Ready indicator on (printer console)?
Y N

113

Bad card
A-A2T2
---or---
A-A2U2

A
M

05JAN81

PN 4237591

EC 835083

PEC 835000

MAP 1505-26

CP PROBLEM MAP
5340 SYSTEMS UNIT
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MAP 1505-27

115

(Entry Point GG)

Install cards A-A3R2 and A-A3T2.

Install top card connectors between A-A3R2 and A-A3S2.

(Entry Point KK)

Is this system configured for 62EH disk B?

Y N

116

(Entry Point FF)

Is this system configured for 2-line data communications (Answer 'NO' if MLCA is installed)?

Y N

117

Is this system configured for multi-line communications (MLCA)?

Y N

118

(Entry Point CC)

Need more CP analysis.

Go To Map 1507, Entry Point A.

119

Remove A-B3C2.

-Set Power to 1 (operator panel).

-Set the Address/Data switches to FF00.

-Set CSIPL to Diskette (CE panel).

-Set MSIPL to Diskette (CE panel).

-Press Load (operator panel) and wait for about 45 seconds for diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CSIPL sequence complete normally

(See Note 1)?

Y N

2 2 2 2
9 8 8 8
A A A A
N P Q R

Note 1: When the CSIPL completes normally from diskette, the system console should display the DCP Main Menu.

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MAP 1505-27

A A A
P O R
2 2 2
7 7 7

CP PROBLEM MAP
5340 SYSTEMS UNIT
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MAP 1505-28

120

Install A-B3C2.

Go to Page 27, Step 118, Entry Point CC.

121

Bad card

A-B3C2

---or---

Bad cable

A-B3A2.

122

Remove A-A2J2 and A-A2K2 if installed.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CS IPL sequence complete normally?

(See note 1)

Y N

123

Install A-A2J2 and A-A2F2.

Go to Page 27, Step 118, Entry Point CC.

124

Bad card

A-A2J2

---or---

A-A2K2

Install one of these cards at a time to see which one is bad. Only one of these cards should prevent CS IPL from completing.

Note 1: When the CS IPL completes normally from diskette, the system console should display the DCP Main Menu.

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PEC 835000

MAP 1505-28

A
N
2
7

CP PROBLEM MAP
5340 SYSTEMS UNIT

MAP 1505-29

PAGE 29 OF 29

125

Remove

A-A3E2

A-A3F2

A-A3G2

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Check for an error indication (operator panel)

---or---

A display on the system console.

Did the CS IPL sequence complete normally?

(See note 1)

Y N

126

Install

A-A3E2

A-A3F2

A-A3G2

Go to Page 27, Step 116, Entry Point FF.

127

Bad card

A-A3E2

---or---

A-A3F2

---or---

A-A3G2

Note 1: When the CS IPL completes normally from diskette, the system console should display the DCP Main Menu.

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MAP 1505-29

CP CARD CALL OUT
5340 SYSTEMS UNIT

MAP 1507-1

PAGE 1 OF 9

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1505	A	1	001
1511	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
5	004	1515	A
5	008	1515	A
9	013	1515	A
9	017	1515	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP uses Display lights byte 0 bits 2, 3, and 4 and WR3(L) to determine why CSIPL stops with Display lights byte 0 bits 2, 3, and 4 still on.

START CONDITIONS:

The starting conditions are set up by MAP 1505. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1F2, A-A1G2, A-A1H2, A-A1J2, A-A1K2, A-A1L2

Level 2 board:

A-A1C2, A-A1D2, A-A1E2, A-A1F2, A-A1G2, A-A1H2

Is there a card in the A-A1B2 position?

Y N

Y | N

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MAP 1507-1

6 2
A B

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

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002

Reinstall all cards and cables removed earlier if not done so already.

Remove all jumpers installed earlier if not done so already.

Return any swapped cards to their original positions if not done so already.

-Set Power to 1 (operator panel).

Leave the CSIPL and MSIPL switches (CE panel) as they were when you entered this MAP.

-Set the Address/Data switches to '0000'.

-Set Mode Selector to Proc Run (CE panel).

-Insert DIAGB1 diskette and close cover.

Wait about 30 seconds.

-Press Load (operator panel).

Wait about 45 seconds.

-Set Mode Selector to Insn Step/Dply Chks (CE panel).

The Display lights byte 0 (CE panel) is the CP error byte. The Display lights byte 1 (CE panel) is the port error byte.

Record the CP and port error byte.

Look in chart A and B for a particular bit combination of the CP error byte and/or port error byte recorded above.

These charts will indicate the most probable cause of the failure.

Chart A

Display Byte 0	Bad Card
04, 08	A-A1G2, A-A1F2* A-A1H2
02, 01, 03	A-A1F2*, A-A1G2 A-A1H2, A-A1K2
10, 30	A-A1H2, A-A1G2, A-A1K2, A-A1J2, A-A1L2, A-A1F2*
22, 21, 23	A-A1H2, A-A1G2
32, 31, 33	A-A1H2, A-A1G2
40	A-A1G2
80, A0	A-A1H2, A-A1G2
90, C0, D0	A-A1H2, A-A1G2,
B0	Control Storage Cards, A-A1H2

*

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Chart B

Display Byte 1	Bad Card
-------------------	-------------

(Step 002 continues)

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EC 835083 PEC 832931

MAP 1507-2

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

MAP 1507-3

PAGE 3 OF 9

(Step 002 continued)

04,06	A-A1L2
01,02,08, 10,20,22, 40,80,82	A-A1L2 Or I/O Attachment Card Indicated
C0,C8	By The Device Address In WRO(L)**

** See Chart C For
The Cross Reference Between
Device Address and Inter-
card(S).

Chart C

Adapter interface card
reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A1	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2

(Step 002 continues)

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MAP 1507-3

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

MAP 1507-4

PAGE 4 OF 9

(Step 002 continued)

Diskette 72MD	D1	A-A2L2
5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*
2-line Comm adapters	80 or 20	A-A2J2 A-A2K2
MLCA Con- troller	10	A-B3C2
1255	52	A-A3R2* A-A3T2
Term resistor card	--	** A-A3U3

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

(Step 002 continues)

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PEC 832931

MAP 1507-4

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

PAGE 5 OF 9

(Step 002 continued)

Was a bit combination found for the CP and/or port error byte that was recorded?

Y N

003

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1H2

---or---

A-A1G2

---or---

A-A1F2

---or---

A-A1L2

---or---

A-A1K2

---or---

A-A1J2

---or---

Bad cables

A-A1Z4

---Or---

A-A1Z5

---Or---

A-A1Z6.

Did the fix solve the problem?

Y N

004

Go To Map 1515, Entry Point A.

005

Verify that the system is fixed by running SYSTST.

006

Attempt the fix as indicated in the table.

Did the fix solve the problem?

Y N

C D

C D

MAP 1507-5

007

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1H2

---or---

A-A1G2

---or---

A-A1F2

---or---

A-A1L2

---or---

A-A1K2

---or---

A-A1J2

---or---

Bad cables

A-A1Z4

---Or---

A-A1Z5

---Or---

A-A1Z6.

Did the fix solve the problem?

Y N

008

Go To Map 1515, Entry Point A.

009

Verify that the system is fixed by running SYSTST.

010

Verify that the system is fixed by running SYSTST.

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MAP 1507-5

A
↑
|

CP CARD CALL OUT
5340 SYSTEMS UNIT
PAGE 6 OF 9

MAP 1507-6

011

Reinstall all cards and cables removed earlier if not done so already.

Remove all jumpers installed earlier if not done so already.

Return any swapped cards to their original positions if not done so already.

-Set Power to 1 (operator panel).

Leave the CSIPL and MSIPL switches (CE panel) as they were when you entered this MAP.

-Set the Address/Data switches to '0000'.

-Set Mode Selector to Proc Run (CE panel).

-Insert DIAGB1 diskette and close cover.

Wait about 30 seconds.

-Press Load (operator panel).

Wait about 45 seconds.

-Set Mode Selector to Insn Step/Dply Chks (CE panel).

The Display lights byte 0 (CE panel) is the CP error byte.
The Display lights byte 1 (CE panel) is the port error byte.

Record the CP and port error byte.

Look in chart A and B for a particular bit combination of the CP error byte and/or port error byte recorded above.

These charts will indicate the most probable cause of the failure.

Chart A

Display Byte 0	Bad Card
04, 08	A-A1D2, A-A1C2* A-A1E2
02, 01, 03	A-A1C2*, A-A1D2 A-A1E2, A-A1G2
10, 30	A-A1E2, A-A1D2, A-A1G2, A-A1F2, A-A1H2, A-A1C2*
22, 21, 23,	A-A1E2, A-A1D2
32, 31, 33	A-A1E2, A-A1D2
40	A-A1D2
80, A0	A-A1E2, A-A1D2
90, C0, D0	A-A1E2, A-A1D2,
B0	Control Storage Cards, A-A1E2

*

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Chart B

Display Byte 1	Bad Card
-------------------	-------------

(Step 011 continues)

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EC 835083 PEC 832931
MAP 1507-6

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

MAP 1507-7

PAGE 7 OF 9

(Step 011 continued)

04,06	A-A1H2
01,02,08, 10,20,22, 40,80,82 C0,C8	A-A1H2 Or I/O Attachment Card Indicated By The Device Address In WRO(L)**

** See Chart C For
The Cross Reference Between
Device Address and Inter-
card(S).

Chart C

Adapter interface card
reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A1	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2

(Step 011 continues)

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MAP 1507-7

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

MAP 1507-8

PAGE 8 OF 9

(Step 011 continued)

Diskette 72MD	D1	A-A2L2
5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*
2-line Comm adapters	80 or 20	A-A2J2 A-A2K2
MLCA Con- troller	10	A-B3C2
1255	52	A-A3R2* A-A3T2
Term resistor card	--	** A-A3U3

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

(Step 011 continues)

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EC 835083 PEC 832931
MAP 1507-8

**CP CARD CALL OUT
5340 SYSTEMS UNIT**

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(Step 011 continued)

Was a bit combination found for the CP and/or port error byte that was recorded?

Y N

012

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1E2

---or---

A-A1D2

---or---

A-A1C2

---or---

A-A1H2

---or---

A-A1G2

---or---

A-A1F2

---or---

Bad cables

A-A1Z4

---Or---

A-A1Z5

---Or---

A-A1Z6.

Did the fix solve the problem?

Y N

013

Go To Map 1515, Entry Point A.

014

Verify that the system is fixed by running SYSTST.

015

Attempt the fix as indicated in the table.

Did the fix solve the problem?

Y N

E F

E F

MAP 1507-9

016

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1E2

---or---

A-A1D2

---or---

A-A1C2

---or---

A-A1H2

---or---

A-A1G2

---or---

A-A1F2

---or---

Bad cables

A-A1Z4

---Or---

A-A1Z5

---Or---

A-A1Z6.

Did the fix solve the problem?

Y N

017

Go To Map 1515, Entry Point A.

018

Verify that the system is fixed by running SYSTST.

019

Verify that the system is fixed by running SYSTST.

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MAP 1507-9

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1505	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	003	1507	A
2	008	1507	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP swaps control storage cards with main storage cards attempting to find a bad control storage card.

START CONDITIONS:

The starting conditions are set up by MAP 1505. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1E2, A-A1D4.

Level 2 board:

A-A1B2, A-A1B4.

Is there a card in the A-A1B2 position?

Y N

002

Remove cards A-A1E2 and A-A1D4 and set them aside temporarily. Now remove the cards from A-A1R2 and A-A1S2 and install them in A-A1E2 and A-A1D4.

Do not put the original control storage cards into the main storage locations.

- Set Power to 1 (operator panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down positions.
- Set the Address/Data switches to '0000' (CE (Step 002 continues)

CTL STG CARD SWAP
5340 SYSTEMS UNIT

PAGE 2 OF 3

(Step 002 continued)
panel).

Insert diskette DIAGB1 and close the cover.
-Set Mode Selector to Proc Run (CE panel).
-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

003

The original control storage cards are not causing the problem.

Return all cards that have been swapped to their original socket locations.

-Set Power to 1 (operator panel).

Go To Map 1507, Entry Point A.

004

One of the original control storage cards is causing the problem.

To determine which one is at fault, do the following:

Remove card A-A1E2 and reinstall it in A-A1R2. Now reinstall one of the control storage cards removed earlier in A-A1E2.

-Set Power to 1 (operator panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

-Set the Address/Data switches to '0000' (CE panel).

Insert diskette DIAGB1 and close the cover.

-Set Mode Selector to Proc Run (CE panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

005

The control storage card now in A-A1E2 is the bad card.

B

A B

↑

006

The remaining control storage card is the bad card. Remove card A-A1D4 and reinstall it in A-A1S2.

007

Remove cards A-A1B2 and A-A1B4 and set them aside temporarily. Now remove the cards from A-A1M2 and A-A1N2 and install them in A-A1B2 and A-A1B4.

Do not put the original control storage cards into the main storage locations.

-Set Power to 1 (operator panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down positions.

-Set the Address/Data switches to '0000' (CE panel).

Insert diskette DIAGB1 and close the cover.

-Set Mode Selector to Proc Run (CE panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N

008

The original control storage cards are not causing the problem.

Return all cards that have been swapped to their original socket locations.

-Set Power to 1 (operator panel).

Go To Map 1507, Entry Point A.

3
C

MAP 1511-2

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PN 4237594

EC 835083

PEC 832999

MAP 1511-2

CTL STG CARD SWAP**5340 SYSTEMS UNIT**

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009

One of the original control storage cards is causing the problem.

To determine which one is at fault, do the following:

Remove card A-A1B2 and reinstall it in A-A1M2. Now reinstall one of the control storage cards removed earlier in A-A1B2.

- Set Power to 1 (operator panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down positions.
 - Set the Address/Data switches to '0000' (CE panel).
- Insert diskette DIAGB1 and close the cover.
- Set Mode Selector to Proc Run (CE panel).
 - Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Are only Display lights byte 0 bits 6 and 7 on (CE panel)?

Y N**010**

The control storage card now in A-A1B2 is the bad card.

011

The remaining control storage card is the bad card.
Remove card A-A1B4 and reinstall it in A-A1N2.

A B C

PROCESSOR CHECKS

5340 SYSTEMS UNIT

PAGE 2 OF 2

MAP 1513-2

D

003

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1J2

---or---

A-A1H2

---or---

A-A1F2

---or---

A-A1Q2

---or---

A-A1K2

(Step 006 continued)

A-A1G2

007

A-A1F2

---or---

A-A1L2

---or---

A-A1E2

004

A-A1J2

---or---

A-A1Q2

---or---

A-A1H2

005

-Set Mode Selector to Insn Step/Dply Chks (CE panel).

Are Display lights byte 0 bit 6 or 7 on (CE panel)?

Y N

006

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1F2

---or---

A-A1E2

---or---

A-A1C2

---or---

A-A1L2

---or---

(Step 006 continues)

D

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PN 4237595

EC 835083

PEC 832850

MAP 1513-2

CSIPL ATTACHMENT PROBLEM

MAP 1515-1

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0149	A	1	001
1507	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
8	042	0500	A
7	037	0900	A
7	036	1000	A
6	027	1013	B

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP isolates which I/O attachment is causing the CSIPL problem.

START CONDITIONS:

None

LOGIC CARDS TESTED:

Attachment cards on boards A-A2, A-A3 and A-B3.

(Step 001 continues)

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MAP 1515-1

CSIPL ATTACH. PROBLEM

MAP 1515-2

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(Step 001 continued)

Remove all cards in chart except A-A2L2 and A-A2M2.

- Set Power to 1 (operator panel).
 - Set the Address/Data switches to 'FF00' (CE panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set MSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down positions.
 - Insert DIAGB1 diskette and close the cover.
 - Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.
- Wait about an additional 30 seconds.
- Note 1: If the CSIPL sequence stops with a display on the system console follow instructions on the display.

Chart
Adapter interface card
reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A1	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2
Diskette 72MD	D1	A-A2L2
5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*
2-line Comm adapters	80 or 20	A-A2J2 A-A2K2
MLCA Con- troller	10	A-B3C2

(Step 001 continues)

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MAP 1515-2

CSIPL ATTACH. PROBLEM

MAP 1515-3

5340 SYSTEMS UNIT

PAGE 3 OF 10

(Step 001 continued)

1255	52	A-A3R2*
		A-A3T2
Term		**
resistor	--	A-A3U3
card		

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

Is the System Available indicator Off at the system console?

Y N

Two vertical lines for marking the answer.

6 4
A B

05JAN81 PN 4237880
EC 835083 PEC 835000
MAP 1515-3

B
3

**CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT**

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002

Install the following cards depending on your system configuration:

A-A2E2

A-A2F2

A-A2G2

if 62EH Disk is installed

---or---

A-A2E2

if 62PC Disk is installed

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

See Adapter interface card reference chart note.

Is the System Available indicator Off at the system console?

Y N

003

Install card A-A2T2 and A-A2U2 if removed earlier. Reinstall top card connectors between A-A2T2, A-A2S2 and A-A2U2 logic cards.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

Did the CSIPL sequence stop with the message 'loading system printer functional microcode. If a proc chk occurs do system reset start.' displayed on system console?

Y N

004

Is the System Available indicator Off at the system console?

Y N

005

Go to Step 009, Entry Point F.

6
C D E

D E

MAP 1515-4

006

Bad card

A-A2T2

---or---

A-A2U2

007

Follow instructions on display. Did the Printer Ready indicator come on (printer console)?

Y N

008

Bad card

A-A2T2

---or---

A-A2U2

009

(Entry Point F)

Does this system have board A-A3 installed?

Y N

010

Go to Page 6, Step 031, Entry Point B.

011

Does the system also have an A-B3 board (MLCA) installed?

Y N

012

Install card A-A3U3.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Is the System Available indicator Off at the system console?

Y N

5 5 5
F G H

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MAP 1515-4

G H
4 4

CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT
PAGE 5 OF 10

013

(Entry Point E)

Is this system configured for 1255?

Y N

014

Go to Page 6, Step 030, Entry Point D.

015

Install A-A3R2,A-A3T2.

Reinstall top card connectors between logic cards
A-A3R2 and A-A3S2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45
seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

Is the System Available indicator Off at the
system console?

Y N

016

Go to Page 6, Step 030, Entry Point D.

017

Bad card

A-A3R2

---or---

A-A3T2

018

Bad card

A-A3U3

---or---

Bad cables

A-A3A2

---or---

A-A3A3

---or---

A-A3Y2.

F
4

MAP 1515-5

019

Install A-B3U3.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45
seconds for disk and diskette to load programs.

Is the System Available indicator Off at the system
console?

Y N

020

Install A-B3C2 and top card connectors.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45
seconds for disk and diskette to load programs.

Is the System Available indicator Off at the
system console?

Y N

021

Does this system have board A-A3 installed?

Y N

022

Go to Page 6, Step 031, Entry Point B.

023

Go to Step 013, Entry Point E.

024

Bad card

A-B3C2

025

Bad card

A-B3U3

---or---

Bad cables

A-B3A2

---or---

A-B3A3

---or---

A-B3A4.

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PEC 835000

MAP 1515-5

A C
3 4

**CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT**

MAP 1515-6

PAGE 6 OF 10

026

Does this system have a 62EH disk installed?

Y N

027

Go To Map 1013, Entry Point B.

028

Bad card

A-A2E2

---or---

A-A2F2

---or---

A-A2G2

029

Bad card

A-A1L2 (Level 1 board)

---or---

A-A2H2 (Level 2 board)

A-A2L2

---or---

A-A2M2

---or---

Bad cables

A-A1Z4

---or---

A-A1Z5

---or---

A-A1Z6

030

(Entry Point D)

Is this system configured for 62EH disk B?

Y N

031

(Entry Point B)

Is this system configured for 2-line data communications (Answer 'NO' if MLCA is installed)?

Y N

032

Does this system have an A-B3 board (MLCA) installed?

Y N

033

(Entry Point C)

Check for faulty crossover cables A-A1Z4, A-A1Z5, A-A1Z6.

If board A-A3 is installed, check for faulty crossover cables A-A3A2, A-A3A3, A-A3Y2.

Go to the FSL plug charts and check that all the cards are plugged into the right location.

Make sure that all the cards and cables are plugged in tightly on all the boards.

-Set Power to 1 (operator panel).

A-D-XXXX 'FF00' (CE panel).

-Set Mode Selector to Proc Run (CE panel).

-Set all other CE panel switches to their down positions.

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Is the system available indicator Off (system console)?

Y N

034

The system is OK.

1
0 9 7 7
J K L M

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MAP 1515-6

L M
6 6

**CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT**

MAP 1515-7

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035

Does this system have a 62EH disk installed.

Y N

036

Go To Map 1000, Entry Point A.

037

Go To Map 0900, Entry Point A.

038

-Set Power to 0 (operator panel).

Install A-B3C2 card and top connectors.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Is the System Available indicator Off at the system console?

Y N

039

Go to Page 6, Step 033, Entry Point C.

040

(Entry Point G)

-Set Power to 1 (operator panel).

Connect the CE multimeter from the pins in Chart A of this MAP to return (A-B3L2D08) and compare the readings to the low limits in Chart A.

Chart A

Voltage	A-B3 board Pin	Low Limit
+5V	A-B3L2D03	+4.5V
+8.5V	A-B3L2B11	+7.6V
+12V	A-B3E2B11	+10.8V
-5V	A-B3L2B06	-4.5V
-12V	A-B3L2D07	-10.8V
Return	A-B3L2D08	X

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

Y N

8 8
N P

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MAP 1515-7

**CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT**

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041

-Set Power to 1 (operator panel).
Connect the CE multimeter from the pins in Chart B of this MAP to ground () and compare the readings to the low limits in Chart B.

Chart B

Voltage	PDTB-2 Pin	Low Limit
+5V	1,2	+4.5V
+8.5V	3	+7.6V
+12V	4	+10.8V
-5V	5	-4.5V
-12V	6	-10.8V

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

Y N

042

Go To Map 0500, Entry Point A.

043

Refer to FSL page YA460.

Are all the minibus connectors correctly installed on the A-B3 board?

Y N

044

-Set Power to 0 (operator panel).
Check all connectors for proper location and connection.

045

Bad power distribution cabling or bad connection at PDTB-2. Tighten all screws at PDTB-2. Return to Entry Point G and repeat measurements after fix.

046

All communications power supply voltages are OK.
Bad card
A-B3C2

K
6

CSIPL ATTACH. PROBLEM

MAP 1515-9

5340 SYSTEMS UNIT

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047

Install card A-A2J2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

Is the System Available indicator Off at the system console?

Y N

048

Is data communications line 2 installed?

Y N

049

Go to Page 6, Step 033, Entry Point C.

050

Install card A-A2K2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

Is the System Available indicator Off at the system console?

Y N

051

Go to Page 6, Step 033, Entry Point C.

052

Bad card
A-A2K2

053

Bad card
A-A2J2

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MAP 1515-9

J
6

CSIPL ATTACH. PROBLEM
5340 SYSTEMS UNIT

MAP 1515-10

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054

Install cards A-A3E2, A-A3F2, and A-A3G2.

-Set Power to 1 (operator panel).

-Press Load (operator panel) and wait for about 45 seconds for disk and diskette to load programs.

Wait about an additional 30 seconds.

Is the System Available indicator Off at the system console?

Y N

055

Go to Page 6, Step 031, Entry Point B.

056

Bad card

A-A3E2

---or---

A-A3F2

---or---

A-A3G2

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PEC 835000

MAP 1515-10

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Sense the PSR expecting a machine check.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2

Level 2 board:

A-A1J2, A-A1K2

Is there a card in the A-A1B2 position?

Y N

002

Remove card A-A1P2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE55' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. (Step 002 continues)

A
1

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

MAP 1550-2

PAGE 2 OF 2

(Step 002 continued)

Probe the following:

Up Light: 0n

Down Light: 0n

- (1) A-A1N2B06 (-CTRGT bit 15)
- (2) A-A1N2B09 (-CTRGT bit 12)
- (3) A-A1N2B10 (-CTRGT bit 11)
- (4) A-A1N2G05 (-CTRGT bit P)
- (5) A-A1N2G06 (-CTRGT bit 8)
- (6) A-A1N2D09 (-CTRGT bit 14)
- (7) A-A1N2D10 (-CTRGT bit 10)
- (8) A-A1N2J04 (-CTRGT bit 9)
- (9) A-A1N2J09 (-CTRGT bit 13)

Are the lights correct?

Y N

003

Bad card
A-A1N2.

004

Bad card
A-A1P2.

005

Remove card A-A1K2.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press

Reset (CE panel).

-Set the Address/Data switches to

'EE55' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n
(Step 005 continues)

(Step 005 continued)

Down Light: 0n

- (1) A-A1J2B06 (-CTRGT bit 15)
- (2) A-A1J2B09 (-CTRGT bit 12)
- (3) A-A1J2B10 (-CTRGT bit 11)
- (4) A-A1J2G05 (-CTRGT bit P)
- (5) A-A1J2G06 (-CTRGT bit 8)
- (6) A-A1J2D09 (-CTRGT bit 14)
- (7) A-A1J2D10 (-CTRGT bit 10)
- (8) A-A1J2J04 (-CTRGT bit 9)
- (9) A-A1J2J09 (-CTRGT bit 13)

Are the lights correct?

Y N

006

Bad card
A-A1J2.

007

Bad card
A-A1K2.

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MAP 1550-2

SENSE AND LOAD MSP REGISTER MAP 2

MAP 1551-1

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Write X'AA' into OP1(H), X'55' into XR1(H) and sense OP1(H).

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2

Level 2 board:

A-A1J2, A-A1K2

Is there a card in the A-A1B2 position?

Y N

002

Remove card A-A1P2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Jumper to ground:

A-A1N2M10
(Step 002 continues)

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MAP 1551-1

**MINI=MDI MSP MAP
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(Step 002 continued)

A-A1N2P10

A-A1N2P11

-Set the Address/Data switches to
'EE39' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1N2M12 (+LSR SEL bit 2)

(2) A-A1N2M13 (+LSR SEL bit 3)

(3) A-A1N2P12 (+LSR SEL bit 1)

Are the lights correct?

Y N

003

Bad card

A-A1N2.

Remove all jumpers

004

Probe the following:

Up Light: On

Down Light: On

A-A1N2S06 (-write LSRH)

Are the lights correct?

Y N

005

Bad card

A-A1N2.

Remove all jumpers

B

A B

MAP 1551-2

006

-Press Reset (CE panel).

Remove the jumpers from:

A-A1N2M10

A-A1N2P10

A-A1N2P11

-Set the Address/Data switches to
'EE39' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: Off

(1) A-A1N2M12 (+LSR SEL bit 2)

(2) A__A1N2M13 (+LSR SEL bit 3)

(3) A-A1N2P12 (+LSR SEL bit 1)

Are the lights correct?

Y N

007

Bad card

A-A1N2

008

Bad card

A-A1P2

009

Remove card A-A1K2.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press
Reset (CE panel).

Jumper to ground:
(Step 009 continues)

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MAP 1551-2

**MINI=MDI MSP MAP
5340 SYSTEMS UNIT**

PAGE 3 OF 3

(Step 009 continued)

A-A1J2M10
A-A1J2P10
A-A1J2P11

-Set the Address/Data switches to
'EE39' (CE panel)
-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

- (1) A-A1J2M12 (+LSR SEL bit 2)
- (2) A-A1J2M13 (+LSR SEL bit 3)
- (3) A-A1J2P12 (+LSR SEL bit 1)

Are the lights correct?

Y N

010

Bad card
A-A1J2.
Remove all jumpers

011

Probe the following:

Up Light: On
Down Light: On

A-A1J2S06 (-write LSRH)

Are the lights correct?

Y N

012

Bad card
A-A1J2.
Remove all jumpers

C

MAP 1551-3

013

-Press Reset (CE panel).
Remove the jumpers from:

A-A1J2M10
A-A1J2P10
A-A1J2P11

-Set the Address/Data switches to
'EE39' (CE panel)
-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: Off

- (1) A-A1J2M12 (+LSR SEL bit 2)
- (2) A_A1J2M13 (+LSR SEL bit 3)
- (3) A-A1J2P12 (+LSR SEL bit 1)

Are the lights correct?

Y N

014

Bad card
A-A1J2

015

Bad card
A-A1K2

C

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MAP 1551-3

SENSE AND LOAD MSP REGISTER MAP 3.

MAP 1552-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Load OP1 with X'55', OP2 with X'AA', and sense OP1

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2

Level 2 board:

A-A1J2, A-A1K2

Is there a card in the A-A1B2 position?

Y N

002

Remove card A-A1P2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Jumper A-A1N2M03 to ground.

- Set the Address/Data switches to 'EE58' (CE panel)
 - Press CE Start (CE panel).
- (Step 002 continues)

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MAP 1552-1

A

**MINI-MDI MSP MAP
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(Step 002 continued)

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1N2P05 (+MSGT SEL bit 3)

Are the lights correct?

Y N

003

Bad card

A-A1N2.

004

Bad card

A-A1P2.

005

Remove card A-A1K2.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press

Reset (CE panel).

Jumper A-A1J2M03 to ground.

-Set the Address/Data switches to

'EE58' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1J2P05 (+MSGT SEL bit 3)

Are the lights correct?

Y N

||

B C

B C

006

Bad card

A-A1J2.

007

Bad card

A-A1K2.

MAP 1552-2

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EC 835083

PEC 832850

MAP 1552-2

B
1

MINI=MDI MSP MAP

5340 SYSTEMS UNIT

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002

-Press Reset (CE panel).
-Set the Address/Data switches to EE03 (CE panel)
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1N2P06 (+MSP Clock MSAR)
Are the lights correct?

Y N

003

Bad card
A-A1N2
---or---
A-A1K2.

004

Probe the following:

Up Light: On
Down Light: On

(1) A-A1G2D05 (+Sense/Load MSP Regs)
Are the lights correct?

Y N

005

Did this pin have the up light Off and the down light on?

Y N

006

Bad card
A-A1G2.

C D

C D

MAP 1555-2

007

Bad card
A-A1G2
---or---
A-A1N2
---or---
A-A1Q2.

008

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B08 (+MSAR low bit P)
- (2) A-A1U2B13 (+MSAR bit 10)
- (3) A-A1U2G12 (+MSAR bit 9)
- (4) A-A1U2D05 (+MSAR bit 8)
- (5) A-A1U2D06 (+MSAR bit 11)
- (6) A-A1U2D11 (+MSAR bit 14)
- (7) A-A1U2J02 (+MSAR bit 13)
- (8) A-A1U2J10 (+MSAR bit 12)
- (9) A-A1U2J13 (+MSAR bit 15)

Are the lights correct?

Y N

009

Did any of the above cause the Up light off and the Down light on?

Y N

010

Bad card
A-A1P2.

5 3
E F

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PEC 835083

MAP 1555-2

F
2

MINI=MDI MSP MAP
5340 SYSTEMS UNIT
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011

Remove card A-A1Q2.
Jumper A-A1Q2S05 to ground.
Jumper A-A1Q2P09 to A-A1Q2M13.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to EE03 (CE panel)
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B08 (+MSAR low bit P)
- (2) A-A1U2B13 (+MSAR bit 10)
- (3) A-A1U2G12 (+MSAR bit 9)
- (4) A-A1U2D05 (+MSAR bit 8)
- (5) A-A1U2D06 (+MSAR bit 11)
- (6) A-A1U2D11 (+MSAR bit 14)
- (7) A-A1U2J02 (+MSAR bit 13)
- (8) A-A1U2J10 (+MSAR bit 12)
- (9) A-A1U2J13 (+MSAR bit 15)

Are the lights correct?

Y N

5
G H

H

MAP 1555-3

012

Reinstall card A-A1Q2.
Remove the jumper from:
A-A1Q2S05

Remove jumper from A-A1Q2P09 to A-A1Q2M13.

Remove card A-A1N2.
Jumper to ground:

- A-A1N2G10
- A-A1N2M06
- A-A1N2M11

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to EE03 (CE panel)
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B08 (+MSAR low bit P)
 - (2) A-A1U2B13 (+MSAR bit 10)
 - (3) A-A1U2G12 (+MSAR bit 9)
 - (4) A-A1U2D05 (+MSAR bit 8)
 - (5) A-A1U2D06 (+MSAR bit 11)
 - (6) A-A1U2D11 (+MSAR bit 14)
 - (7) A-A1U2J02 (+MSAR bit 13)
 - (8) A-A1U2J10 (+MSAR bit 12)
 - (9) A-A1U2J13 (+MSAR bit 15)
- (Step 012 continues)

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EC 835159 PEC 835083

MAP 1555-3

MINI=MDI MSP MAP

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(Step 012 continued)
Are the lights correct?

Y N

013

Reinstall card A-A1N2.
Remove the jumper from:

- A-A1N2G10
- A-A1N2M06
- A-A1N2M11

Remove the following cards:

- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4
- A-A1T4
- A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE60 (CE panel)

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

5 5
J K L

L

MAP 1555-4

014

One of the storage cards removed above is bad. The card socket A-A1R2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed earlier, in A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE60 (CE panel)

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

015

(Entry Point B)

The storage card now in A-A1R2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to
(Step 015 continues)

5
M

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MAP 1555-4

G J K M
3 4 4 4

**MINI=MDI MSP MAP
5340 SYSTEMS UNIT**

MAP 1555-5

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(Step 015 continued)
EE60 (CE panel)
-Press CE Start (CE panel).
Look at the system console for flashing information.

Is the received results 80?

Y N

016

Is this the last storage card to be tested?

Y N

017

Go to Page 4, Step 015, Entry Point B.

018

Bad card
A-A1Q2
---or---
A-A1P2.

019

Bad card
A-A1R2.

020

Bad card
A-A1R2.

021

Bad card
A-A1P2.

022

Bad card
A-A1N2.
Remove all jumpers

023

Bad card
A-A1Q2.
Remove all jumpers

A E
1 2

024

Bad card
A-A1Q2
---or---
A-A1P2.

025

-Press Reset (CE panel).
-Set the Address/Data switches to EE03 (CE panel)
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1J2P06 (+MSP Clock MSAR)

Are the lights correct?

Y N

026

Bad card
A-A1J2
---or---
A-A1G2.

027

Probe the following:

Up Light: On
Down Light: On

(1) A-A1D2D05 (+Sense/Load MSP Regs)

Are the lights correct?

Y N

028

Did this pin have the up light Off and the down light On?

Y N

6 6 6
N P Q

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MAP 1555-5

N P Q
5 5 5

MINI=MDI MSP MAP

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029

Bad card
A-A1D2.

030

Bad card
A-A1D2
---or---
A-A1J2
---or---
A-A1L2.

031

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1L2B08 (+MSAR low bit P)
- (2) A-A1Q2G12 (+MSAR bit 9 0-128K)
- (3) A-A1Q2D05 (+MSAR bit 8 0-128K)

Are the lights correct?

Y N

032

Did any of the above cause the Up light Off and the down light On?

Y N

033

Bad card
A-A1K2.

9
R S

S

MAP 1555-6

034

Remove card A-A1L2.
Jumper A-A1L2S05 to ground.
Jumper A-A1L2P09 to A-A1L2M13.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE03 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1L2B08 (+MSAR low bit P)
- (2) A-A1Q2G12 (+MSAR bit 9 0-128K)
- (3) A-A1Q2D05 (+MSAR bit 8 0-128K)

Are the lights correct?

Y N

035

Reinstall card A-A1L2.
Remove the jumper from:
A-A1L2S05

Remove jumper from A-A1L2P09 to A-A1L2M13.

Remove card A-A1J2.

Jumper to ground:

- A-A1J2G10
- A-A1J2M06
- A-A1J2M11
- (Step 035 continues)

9
T

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PEC 835083

MAP 1555-6

5340 SYSTEMS UNIT

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(Step 035 continued)

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE03 (CE panel)

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1L2B08 (+MSAR low bit P)
- (2) A-A1Q2G12 (+MSAR bit 9 0-128K)
- (3) A-A1Q2D05 (+MSAR bit 8 0-128K)

Are the lights correct?

Y N

036

Reinstall card A-A1J2.
Remove the jumper from:

- A-A1J2G10
- A-A1J2M06
- A-A1J2M11

Remove the following cards:

- A-A1M2 A-A1M4
 - A-A1N2 A-A1N4
 - A-A1P2 A-A1P4
 - A-A1Q2 A-A1Q4
 - A-A1R2 A-A1R4
 - A-A1S2 A-A1S4
 - A-A1T2 A-A1T4
- (Step 036 continues)

9
U

(Step 036 continued)
A-A1U2 A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE60 (CE panel)
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

037

One of the storage cards removed above is bad. The card socket A-A1M2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed earlier, in A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE60 (CE panel)
- Press CE Start (CE panel).

(Step 037 continues)

8
V

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MAP 1555-7

MINI=MDI MSP MAP

5340 SYSTEMS UNIT

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MAP 1555-8

(Step 037 continued)

Look at the system console for flashing information.

Is the received results 80?

Y N

038

(Entry Point C)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE60 (CE panel)

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

039

Is this the last storage card to be tested?

Y N

040

Go to Step 038, Entry Point C.

V W X Y
7

041

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

042

- Bad card
- A-A1L2
- or---
- A-A1K2

043

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

044

- Bad feature power supply D DC power cable to A-A1 board.
- or---
- Bad A-A1 board.

045

Go To Map 0558, Entry Point A.

046

- Bad card
- A-A1M2.

047

- Bad card
- A-A1M2.

048

- Bad card
- A-A1K2.

W X Y

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EC 835159

PEC 835083

MAP 1555-8

R T U
6 6 7

MINI=MDI MSP MAP
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049

Bad card
A-A1J2.
Remove all jumpers

050

Bad card
A-A1L2.
Remove all jumpers

051

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B13 (+MSAR bit 10 0-128K)
- (2) A-A1Q2D06 (+MSAR bit 11 0-128K)
- (3) A-A1Q2J10 (+MSAR bit 12 0-128K)
- (4) A-A1Q2J02 (+MSAR bit 13 0-128K)
- (5) A-A1Q2D11 (+MSAR bit 14 0-128K)
- (6) A-A1Q2J13 (+MSAR bit 15 0-128K)
- (7) A-A1Q4B13 (+MSAR bit 10 128-256K)
- (8) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (9) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (10) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (11) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (12) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

052

Did any of the above cause the Up light Off and the down light On?

Y N

1
2 A A
Z A B

A A
A B

MAP 1555-9

053

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1V2B02 (+MSAR bit 10)
- (2) A-A1V2D02 (+MSAR bit 11)
- (3) A-A1V2B03 (+MSAR bit 12)
- (4) A-A1V2B05 (+MSAR bit 13)
- (5) A-A1V2D05 (+MSAR bit 14)
- (6) A-A1V2D06 (+MSAR bit 15)

Are the lights correct?

Y N

054

Bad card
A-A1K2.

055

Bad card
A-A1V2.

056

Remove card A-A1L2.
Jumper A-A1L2S05 to ground.
Jumper A-A1L2P09 to A-A1L2M13.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE03 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

(Step 056 continues)

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MAP 1555-9

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MAP 1555-10

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(Step 056 continued)

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B13 (+MSAR bit 10 0-128K)
- (2) A-A1Q2D06 (+MSAR bit 11 0-128K)
- (3) A-A1Q2J10 (+MSAR bit 12 0-128K)
- (4) A-A1Q2J02 (+MSAR bit 13 0-128K)
- (5) A-A1Q2D11 (+MSAR bit 14 0-128K)
- (6) A-A1Q2J13 (+MSAR bit 15 0-128K)
- (7) A-A1Q4B13 (+MSAR bit 10 128-256K)
- (8) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (9) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (10) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (11) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (12) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

057

Reinstall card A-A1L2.
Remove the jumper from:
A-A1L2S05

Remove jumper from A-A1L2P09 to A-A1L2M13.

Remove card A-A1J2.
Jumper to ground:

A-A1J2G10
A-A1J2M06
A-A1J2M11

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 057 continues)

1
2
A
C

(Step 057 continued)

-Set the Address/Data switches to EE03 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B13 (+MSAR bit 10 0-128K)
- (2) A-A1Q2D06 (+MSAR bit 11 0-128K)
- (3) A-A1Q2J10 (+MSAR bit 12 0-128K)
- (4) A-A1Q2J02 (+MSAR bit 13 0-128K)
- (5) A-A1Q2D11 (+MSAR bit 14 0-128K)
- (6) A-A1Q2J13 (+MSAR bit 15 0-128K)
- (7) A-A1Q4B13 (+MSAR bit 10 128-256K)
- (8) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (9) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (10) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (11) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (12) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

058

Reinstall card A-A1J2.
Remove the jumper from:

A-A1J2G10
A-A1J2M06
A-A1J2M11

Remove the following cards:

A-A1M2 A-A1M4
A-A1N2 A-A1N4
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2 A-A1T4
A-A1U2 A-A1U4

Note: Some of these cards may not be installed
(Step 058 continues)

1
2
A
D

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MAP 1555-10

5340 SYSTEMS UNIT

(Step 058 continued) because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE60 (CE panel)

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

059

One of the storage cards removed above is bad. The card socket A-A1M2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed earlier, in A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE60 (CE panel)

- Press CE Start (CE panel).

Look at the system console for flashing information. (Step 059 continues)

1
2
A
E

(Step 059 continued) Is the received results 80?

Y N

060

(Entry Point D)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE60 (CE panel)

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

061

Is this the last storage card to be tested?

Y N

062

Go to Step 060, Entry Point D.

063

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

1 1 1 1
2 2 2 2
A A A A
F G H J

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MAP 1555-11

A A A A A
E F G H J
1 1 1 1 1
1 1 1 1 1

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064
Bad card
A-A1L2
---or---
A-A1K2

065
-Measure for +5 Vdc
PDTB2-7 (pos)
DC ground (neg) (05-360)
Does the CE multimeter read less than 4.5V?
Y N

066
Bad feature power supply D DC power cable to A-A1 board.
---or---
Bad A-A1 board.

067
Go To Map 0558, Entry Point A.

068
Bad card
A-A1M2.

069
Bad card
A-A1M2.

070
-Press Reset (CE panel).
-Set the Address/Data switches to EE03 (CE panel)
-Press CE Start (CE panel).
Note: Ignore any messages.
Probe the following:

Up Light: 0n or flashing
Down Light: 0n or flashing

- (1) A-A1V2B02 (+MSAR bit 10)
 - (2) A-A1V2D02 (+MSAR bit 11)
- (Step 070 continues)

Z A A
9 C D
1 1
0 0

MAP 1555-12

- (Step 070 continued)
(3) A-A1V2B03 (+MSAR bit 12)
(4) A-A1V2B05 (+MSAR bit 13)
(5) A-A1V2D05 (+MSAR bit 14)
(6) A-A1V2D06 (+MSAR bit 15)

Are the lights correct?

Y N

071
Bad card
A-A1K2.

072
Bad card
A-A1V2.

073
Bad card
A-A1J2.
Remove all jumpers

074
Bad card
A-A1L2.
Remove all jumpers

075
Bad card
A-A1L2
---or---
A-A1K2.

SENSE AND LOAD MSP REGISTER MAP 5

MAP 1557-1

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Sense the PSR.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2

Level 2 board:

A-A1J2, A-A1K2

Is there a card in the A-A1B2 position?

Y N

002

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE32' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1N2M06 (+CPGT SEL bit 1)

Are the lights correct?

Y N

Y	N

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PN 4237601

EC 835083

PEC 832850

MAP 1557-1

2 2 2
A B C

C

**MINI-MDI MSP MAP
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003

Did this pin cause the Up light to go Off and the Down light to come On?

Y N

004

Bad card
A-A1N2.

005

Remove card A-A1P2.
-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to 'EE32' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1N2M06 (+CPGT SEL bit 1)

Are the lights correct?

Y N

006

Bad card
A-A1N2.

007

Bad card
A-A1P2.

A B

MAP 1557-2

008

Bad card
A-A1P2
---or---
A-A1N2.

009

-Press Reset (CE panel).
-Set the Address/Data switches to 'EE32' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1J2M06 (+CPGT SEL bit 1)

Are the lights correct?

Y N

010

Did this pin cause the Up light to go Off and the Down light to come On?

Y N

011

Bad card
A-A1J2.

012

Remove card A-A1K2.
-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to (Step 012 continues)

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MAP 1557-2

3
D

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

PAGE 3 OF 3

(Step 012 continued)

'EE32' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1J2M06 (+CPGT SEL bit 1)

Are the lights correct?

Y N

013

Bad card

A-A1J2.

014

Bad card

A-A1K2.

015

Bad card

A-A1K2

---or---

A-A1J2.

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Load and sense OP2(H) with X'00'.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2

Level 2 board:

A-A1J2, A-A1K2

Is there a card in the A-A1B2 position?

Y N

002

Probe the following:

Up Light: Off
Down Light: Off

- (1) A-A1N2B08 (+ALUGT SEL bit 1)
- (2) A-A1N2G13 (+MSGT SEL bit 1)
- (3) A-A1N2S06 (-write LSR H)
- (4) A-A1N2S07 (-write LSR L)
- (5) A-A1N2D05 (+ALUGT SEL bit 0)
- (6) A-A1N2P04 (+MSGT SEL bit 0)

Are the lights correct for any of the above?

Y N

C

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003

- Remove card A-A1P2.
 - Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE35' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2M11 (+CPGT SEL bit 0)

Are the lights correct?

Y N

004

Bad card
A-A1N2.

005

Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2S06 (-write LSR H)

Are the lights correct?

Y N

006

Bad card
A-A1N2.

D

A B D

MAP 1558-2

007

Bad card
A-A1P2.

008

Bad card
A-A1N2.

009

Probe the following:

Up Light: Off
Down Light: Off

- (1) A-A1J2B08 (+ALUGT SEL bit 1)
- (2) A-A1J2G13 (+MSGT SEL bit 1)
- (3) A-A1J2S06 (-write LSR H)
- (4) A-A1J2S07 (-write LSR L)
- (5) A-A1J2D05 (+ALUGT SEL bit 0)
- (6) A-A1J2P04 (+MSGT SEL bit 0)

Are the lights correct for any of the above?

Y N

010

Remove card A-A1K2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE35' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On
(Step 010 continues)

ET3

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MAP 1558-2

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(Step 010 continued)

(1) A-A1J2M11 (+CPGT SEL bit 0)

Are the lights correct?

Y N

011

Bad card
A-A1J2.

012

Probe the following:

Up Light: On

Down Light: On

(1) A-A1J2S06 (-write LSR H)

Are the lights correct?

Y N

013

Bad card
A-A1J2.

014

Bad card
A-A1K2.

015

Bad card
A-A1J2.

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1586	A	1	001
1588	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Load and sense OP2(L) with X'FF'.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1Q2, A-A1F2

Level 2 board:

A-A1J2, A-A1L2, A-A1C2

Is there a card in the A-A1B2 position?

Y N

002

Remove card A-A1Q2.

Jumper A-A1Q2S05 to ground.

Jumper A-A1Q2P09 to A-A1Q2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to (Step 002 continues)

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MAP 1560-1

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(Step 002 continued)

EE57 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1F2G09 (+write MSP registers)

Are the lights correct?

Y N

003

Remove cards A-A1N2 and A-A1P2.

Jumper A-A1N2G10 to ground.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE57 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1F2G09 (+write MSP registers)

Are the lights correct?

Y N

B C D

MAP 1560-2

A B C D

004

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1F2.

Remove all jumpers

005

Bad card

A-A1N2.

Remove all jumpers

006

Bad card

A-A1Q2.

Remove all jumpers

007

Remove card A-A1L2.

Jumper A-A1L2S05 to ground.

Jumper A-A1L2P09 to A-A1L2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE57 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1C2G09 (+write MSP registers)

(Step 007 continues)

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MAP 1560-2

MINI-MDI MSP MAP

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E

MAP 1560-3

(Step 007 continued)

Are the lights correct?

Y N

008

Remove cards A-A1J2 and A-A1K2.

Jumper A-A1J2G10 to ground.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE57 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1C2G09 (+write MSP registers)

Are the lights correct?

Y N

009

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1C2.

Remove all jumpers

010

Bad card

A-A1J2.

Remove all jumpers

011

Bad card

A-A1L2.

Remove all jumpers

E

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MAP 1560-3

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1584	A	1	001
1589	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Sense the PSR expecting a machine check.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1G2, A-A1N2, A-A1Q2

Level 2 board:

A-A1D2, A-A1J2, A-A1L2

Is there a card in the A-A1B2 position?

Y N

002

Remove card A-A1Q2.

Jumper A-A1Q2S05 to ground.

Jumper A-A1Q2P09 to A-A1Q2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to (Step 002 continues)

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MAP 1562-1

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(Step 002 continued)

EE55 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1G2D05 (+Sense/Load MSP Regs)

Are the lights correct?

Y N

003

Reinstall A-A1Q2.

Remove jumper from:

A-A1Q2S05

Remove jumper from A-A1Q2P09 to A-A1Q2M13.

Remove card A-A1N2.

Jumper to ground:

A-A1N2G10

A-A1N2M06

A-A1N2M11

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE55 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(Step 003 continues)

B

MAP 1562-2

A B

(Step 003 continued)

(1) A-A1G2D05 (+Sense/Load MSP Regs)

Are the lights correct?

Y N

004

Bad card

A-A1G2.

Remove all jumpers

005

Bad card

A-A1N2.

Remove all jumpers

006

Bad card

A-A1Q2.

Remove all jumpers

007

Remove card A-A1L2.

Jumper A-A1L2S05 to ground.

Jumper A-A1L2P09 to A-A1L2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE55 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1D2D05 (+Sense/Load MSP Regs)

(Step 007 continues)

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MAP 1562-2

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MAP 1562-3

(Step 007 continued)

Are the lights correct?

Y N

008

Reinstall A-A1L2.

Remove jumper from:

A-A1L2S05

Remove jumper from A-A1L2P09 to A-A1L2M13.

Remove card A-A1J2.

Jumper to ground:

A-A1J2G10

A-A1J2M06

A-A1J2M11

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE55 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1D2D05 (+Sense/Load MSP Regs)

Are the lights correct?

Y N

009

Bad card

A-A1D2.

Remove all jumpers

C D

010

Bad card

A-A1J2.

Remove all jumpers

011

Bad card

A-A1L2.

Remove all jumpers

C D

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MAP 1562-3

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

Determines why the MSAR parity checker on the A-A1Q2 card can not detect bad parity.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1F2, A-A1N2, A-A1P2, A-A1Q2 and A-A1J2

Level 2 board:

A-A1C2, A-A1J2, A-A1K2, A-A1L2 and A-A1F2

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to EE61 (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1F2G04 (+CP CLK SAR Gated)
(Step 002 continues)

MINI-MDI MSP MAP.

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(Step 002 continued)

Are the lights correct?

Y N

003

Did this pin have the Up light off and the Down light on?

Y N

004

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2.

005

Remove A-A1P2 card.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE61 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1F2G04 (+CP CLK SAR Gated)

Are the lights correct?

Y N

3 3
B C D

D

MAP 1569-2

006

Reinstall card A-A1P2.

Remove card A-A1Q2.

Jumper to ground:

A-A1Q2S05

Jumper A-A1Q2P09 to A-A1Q2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE61 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1F2G04 (+CP CLK SAR Gated)

Are the lights correct?

Y N

007

Reinstall card A-A1Q2.

Remove jumper from:

A-A1Q2S05

Remove jumper from A-A1Q2P09 to A-A1Q2M13.

Remove card A-A1N2.

Jumper to ground:

A-A1N2G10

A-A1N2M06

A-A1N2M11

(Step 007 continues)

3
E

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MAP 1569-2

MINI-MDI MSP MAP.

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(Step 007 continued)

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE61 (CE panel).

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1F2G04 (+CP CLK SAR Gated)

Are the lights correct?

Y N

008

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2.

Remove all jumpers

009

Bad card
A-A1N2.

Remove all jumpers

010

Bad card
A-A1Q2.

Remove all jumpers

011

Bad card
A-A1P2.

012

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1Q2S05 (+MS CSY Trig)

Are the lights correct?

Y N

013

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1Q2
---or---
A-A1F2.

014

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1Q2G04 (-check bit 2)
(2) A-A1Q2G06 (-check bit 1)

Are the lights correct?

Y N

015

Bad card
A-A1Q2
---or---
A-A1P2.

A F
1 3

MINI-MDI MSP MAP.

5340 SYSTEMS UNIT

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016

Bad card
A-A1J2.

017

-Press Reset (CE panel).
-Set the Address/Data switches to EE61 (CE panel)
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1C2G04 (+CP CLK SAR Gated)
Are the lights correct?

Y N

018

Did this pin have the Up light Off and the Down light On?

Y N

019

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.
Bad card
A-A1C2.

5
G H

H

MAP 1569-4

020

Remove A-A1K2 card.
-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to EE61 (CE panel)
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1C2G04 (+CP CLK SAR Gated)
Are the lights correct?

Y N

021

Reinstall card A-A1K2.
Remove card A-A1L2.
Jumper to ground:
A-A1L2S05

Jumper A-A1L2P09 to A-A1L2M13.

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
(Step 021 continues)

5
J

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MAP 1569-4

MINI-MDI MSP MAP.

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MAP 1569-5

(Step 021 continued)

-Set the Address/Data switches to EE61 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1C2G04 (+CP CLK SAR Gated)

Are the lights correct?

Y N

022

Reinstall card A-A1L2.

Remove jumper from:

A-A1L2S05

Remove jumper from A-A1L2P09 to A-A1L2M13.

Remove card A-A1J2.

Jumper to ground:

A-A1J2G10

A-A1J2M06

A-A1J2M11

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE61 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

(Step 022 continues)

G J K
4 4

(Step 022 continued)

Down Light: 0n

(1) A-A1C2G04 (+CP CLK SAR Gated)

Are the lights correct?

Y N

023

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1C2.

Remove all jumpers

024

Bad card

A-A1J2.

Remove all jumpers

025

Bad card

A-A1L2.

Remove all jumpers

026

Bad card

A-A1K2.

027

Probe the following:

Up Light: 0n

Down Light: 0n

(1)A-A1L2S05 (+MS CSY Trig)

Are the lights correct?

Y N

6 6
L M

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EC 835083 PEC 832871

MAP 1569-5

K

L M
5 5

MINI-MDI MSP MAP.

MAP 1569-6

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028

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1L2

---or---

A-A1C2.

029

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1L2G04 (-check bit 2)

(2) A-A1L2G06 (-check bit 1)

Are the lights correct?

Y N

030

Bad card

A-A1L2

---or---

A-A1K2.

031

Bad card

A-A1F2.

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002

Did either of these pins cause the Up light to go
Off and the Down light to come On?

Y N

003

Bad card
A-A1Q2 (Level 1 board)
---or---
A-A1L2 (Level 2 board).

004

Remove the following cards:

Level 1 board

A-A1R2
A-A1S2
A-A1T2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

Level 2 board

A-A1M2 A-A1M4
A-A1N2 A-A1N4
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2 A-A1T4
A-A1U2 A-A1U4

Note: Some of these cards may not be installed
because of the configured size of the machine.

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down
position.
(Step 004 continues)

(Step 004 continued)
Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).-Set the Address/Data switches to
'EE69' (CE panel).

-Press CE Start (CE panel).

Probe the following:

Up Light: On

Down Light: On

Level 1 board

(1) A-A1Q2S03 (+MS data strobe LO)

(2) A-A1Q2S04 (+MS data strobe HI)

---or---

Level 2 board

(1) A-A1L2S03 (+MS data strobe LO)

(2) A-A1L2S04 (+MS data strobe HI)

(3) A-A1V2B04
(+MS write pulse L0 (0-128K))(4) A-A1V2M07
(+MS write pulse L0 (128-256K))

Are the lights correct?

Y N

005

Bad card
A-A1Q2 (Level 1 board)
---or---
A-A1L2 (Level 2 board)
---or---
A-A1V2 (Level 2 board).

006

Go to Page 3, Step 008, Entry Point C.

A
1

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007

Remove the following cards:

Level 1 board

- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4
- A-A1T4
- A-A1U4

Level 2 board

- A-A1N2 A-A1M4
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2 A-A1R4
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

|
|

4
C D

D

MAP 1571-3

008

(Entry Point C)

One of the storage cards removed earlier is faulty. To determine which one, do as follows:
(Entry Point D)

Swap one of the storage cards removed earlier with the card in A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

|
|

009

Is this the last storage card to be tested?

Y N

|
|

010

Go to Step 008, Entry Point D.

011

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc

A-A1M4J03 (pos)

A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

|
|

4 4 4
E F G

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MAP 1571-3

C E F G
3 3 3 3

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MAP 1571-4

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012

Bad card
A-A1L2
---or---
A-A1K2

013

-Measure for +5 Vdc
PDTB2-7 (pos)
DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

014

Bad feature power supply D DC power cable
to A-A1 board.
---or---
Bad A-A1 board.

015

Go To Map 0558, Entry Point A.

016

The storage card just removed from A-A1M2 is
bad.

017

Remove card A-A1M2 and swap it with one of the
storage cards removed above (step 001).

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down
position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).

-Set the Address/Data switches to
'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

(Step 017 continues)

(Step 017 continued)

Is the received results 80?

Y N

018

The storage card just removed from A-A1M2 is
bad.

019

Reinstall the following cards:

Level 1 board

A-A1S2
A-A1T2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

Level 2 board

A-A1M4
A-A1N2 A-A1N4
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2 A-A1T4
A-A1U2 A-A1U4

Note: Some of these cards may not be installed
because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down
position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).

-Set the Address/Data switches to

(Step 019 continues)

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(Step 019 continued)
'EE69' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Does this machine have a Level 2 board?

Y N

020

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1P2B09 (+MS GT out bit P)
- (2) A-A1P2G02 (+MS GT out bit 12)
- (3) A-A1P2G03 (+MS GT out bit 13)
- (4) A-A1P2G04 (+MS GT out bit 14)
- (5) A-A1P2G06 (+MS GT out bit 15)
- (6) A-A1P2G07 (+MS GT out bit 10)
- (7) A-A1P2J02 (+MS GT out bit 8)
- (8) A-A1P2J04 (+MS GT out bit 9)
- (9) A-A1P2J07 (+MS GT out bit 11)

Are the lights correct?

Y N

021

Bad card
A-A1P2.

022

Bad card
A-A1N2
---or---
A-A1P2
---or---
A-A1Q2.

H

MAP 1571-5

H

023

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1V2G02 (+MS storage bus bit 8)
- (2) A-A1V2G03 (+MS storage bus bit 10)
- (3) A-A1V2G04 (+MS storage bus bit 11)
- (4) A-A1V2G05 (+MS storage bus bit 13)
- (5) A-A1V2G06 (+MS storage bus bit 15)
- (6) A-A1V2G07 (+MS storage bus bit P)
- (7) A-A1V2J02 (+MS storage bus bit 9)
- (8) A-A1V2J04 (+MS storage bus bit 12)
- (9) A-A1V2J05 (+MS storage bus bit 14)

Are the lights correct?

Y N

024

Bad card
A-A1V2.

025

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1K2B09 (+MS GT out bit P)
- (2) A-A1K2G02 (+MS GT out bit 12)
- (3) A-A1K2G03 (+MS GT out bit 13)
- (4) A-A1K2G04 (+MS GT out bit 14)
- (5) A-A1K2G06 (+MS GT out bit 15)
- (6) A-A1K2G07 (+MS GT out bit 10)
- (7) A-A1K2J02 (+MS GT out bit 8)
- (8) A-A1K2J04 (+MS GT out bit 9)
- (9) A-A1K2J07 (+MS GT out bit 11)

Are the lights correct?

Y N

026

Bad card
A-A1K2.

6
J

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PEC 835083

MAP 1571-5

027

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1V2G08 (+MS GT out bit P 0-128K)
- (2) A-A1V2G09 (+MS GT out bit 15 0-128K)
- (3) A-A1V2G10 (+MS GT out bit 13 0-128K)
- (4) A-A1V2G11 (+MS GT out bit 12 0-128K)
- (5) A-A1V2G12 (+MS GT out bit 10 0-128K)
- (6) A-A1V2G13 (+MS GT out bit 8 0-128K)
- (7) A-A1V2J09 (+MS GT out bit 14 0-128K)
- (8) A-A1V2J11 (+MS GT out bit 11 0-128K)
- (9) A-A1V2J12 (+MS GT out bit 9 0-128K)

Are the lights correct?

Y N

028

Bad card
A-A1V2.

029

Bad card
A-A1J2
---or---
A-A1K2
---or---
A-A1L2
---or---
A-A1V2.

030

(Entry Point B)

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE6A' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Note: Connect red and black power leads of probe on the A-A2 board.

Up Light: On
Down Light: On

- (1) A-A1L2S03 (+MS data strobe LO) (128-256K)
- (2) A-A1L2S04 (+MS data strobe HI) (128-256K)

Are the lights correct?

Y N

031

Did either of these pins cause the Up light to go Off and the Down light to come On?

Y N

032

Bad card
A-A1L2

033

Remove the following cards:

- A-A1M2 A-A1M4
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2 A-A1R4
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to 'EE00'.
- (Step 033 continues)

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(Step 033 continued)

- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE6A' (CE panel).

- Press CE Start (CE panel).

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1L2S03 (+MS data strobe LO)

(2) A-A1L2S04 (+MS data strobe HI)

Are the lights correct?

Y N

034

Bad card
A-A1L2

035

Go to Step 037, Entry Point E.

036

Remove the following cards:

- A-A1M2
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2 A-A1R4
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).

(Step 036 continues)

(Step 036 continued)

- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE6A' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

037

(Entry Point E)

One of the storage cards removed earlier is faulty. To determine which one, do as follows:

(Entry Point F)

Swap one of the storage cards removed earlier with the card in A-A1M4.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE6A' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

8 8 8
L M N

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MAP 1571-7

M N
7 7

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038

Is this the last storage card to be tested?

Y N

039

Go to Page 7, Step 037, Entry Point F.

040

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

041

- Bad card
 - A-A1L2
 - or---
 - A-A1K2

042

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

043

- Bad feature power supply D DC power cable to A-A1 board.
 - or---
 - Bad A-A1 board.

044

Go To Map 0558, Entry Point A.

045

The storage card just removed from A-A1M4 is bad.

L
7

MAP 1571-8

046

Remove card A-A1M4 and swap it with one of the storage cards removed above (step 001).

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

047

The storage card just removed from A-A1M4 is bad.

048

Reinstall the following cards:

A-A1M2	
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
A-A1U2	A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

(Step 048 continues)

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MAP 1571-9

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(Step 048 continued)
Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).

-Set the Address/Data switches to
'EE6A' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1V2G02 (+MS storage bus bit 8)
- (2) A-A1V2G03 (+MS storage bus bit 10)
- (3) A-A1V2G04 (+MS storage bus bit 11)
- (4) A-A1V2G05 (+MS storage bus bit 13)
- (5) A-A1V2G06 (+MS storage bus bit 15)
- (6) A-A1V2G07 (+MS storage bus bit P)
- (7) A-A1V2J02 (+MS storage bus bit 9)
- (8) A-A1V2J04 (+MS storage bus bit 12)
- (9) A-A1V2J05 (+MS storage bus bit 14)

Are the lights correct?

Y N

049

Bad card
A-A1V2.

050

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1K2B09 (+MS GT out bit P)
- (2) A-A1K2G02 (+MS GT out bit 12)
- (3) A-A1K2G03 (+MS GT out bit 13)
- (4) A-A1K2G04 (+MS GT out bit 14)
- (5) A-A1K2G06 (+MS GT out bit 15)
- (6) A-A1K2G07 (+MS GT out bit 10)
- (7) A-A1K2J02 (+MS GT out bit 8)
- (8) A-A1K2J04 (+MS GT out bit 9)
- (9) A-A1K2J07 (+MS GT out bit 11)

(Step 050 continues)

(Step 050 continued)
Are the lights correct?

Y N

051

Bad card
A-A1K2.

052

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1V2S03 (+MS GT out bit P 128-256K)
- (2) A-A1V2U04 (+MS GT out bit 15 128-256K)
- (3) A-A1V2U05 (+MS GT out bit 13 128-256K)
- (4) A-A1V2S05 (+MS GT out bit 12 128-256K)
- (5) A-A1V2U07 (+MS GT out bit 10 128-256K)
- (6) A-A1V2S09 (+MS GT out bit 8 128-256K)
- (7) A-A1V2S04 (+MS GT out bit 14 128-256K)
- (8) A-A1V2S07 (+MS GT out bit 11 128-256K)
- (9) A-A1V2S10 (+MS GT out bit 9 128-256K)

Are the lights correct?

Y N

053

Bad card
A-A1V2.

054

Measure for +5Vdc.

A-A1M4J03 (pos)
A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

1 1
0 0
P Q

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MAP 1571-9

P 0
9 9

MINI-MDI MSP MAP

MAP 1571-10

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055

Bad card

A-A1J2

---or---

A-A1K2

---or---

A-A1L2

---or---

A-A1V2.

056

Measure for +5Vdc.

PDTB2-7 (pos)

DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

057

Bad feature power supply D DC power cable to
A-A1 board.

---or---

Bad A-A1 board.

058

Go To Map 0558, Entry Point A.

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MAP 1571-10

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	011	0558	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI found a main storage addressing problem. This can be caused by a faulty main storage card or card A-A1Q2.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:
A-A1Q2 and all main storage cards

Level 2 board:
A-A1L2 and all main storage cards

Is there a card in the A-A1B2 position?

Y N

002

Note: Record the message displayed on the system console.

Remove the main storage card called out on the system console and swap it with one immediately to the right or left.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.
(Step 002 continues)

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MAP 1572-1

A
1

**MINI-MDI MSP MAP
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(Step 002 continued)

-Press Load (operator panel).

Look at the system console for information.

**Is the message displayed on the system console
the same as recorded in step 001?**

Y N

003

Follow the instructions on the system console.

004

Bad card
A-A1Q2.

005

Note: Record the message displayed on the system console.

Remove the main storage card called out on the system console and swap it with one immediately to the right or left.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

Look at the system console for information.

**Is the message displayed on the system console
the same as recorded in step 001?**

Y N

006

Follow the instructions on the system console.

007

Measure for +5Vdc.

A-A1M4J03 (pos)

A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

B C

B C

MAP 1572-2

008

Bad card
A-A1L2.

009

Measure for +5Vdc.

PDTB2-7 (pos)

DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

010

Bad feature power supply D DC power cable to
A-A1 board.

---or---

Bad A-A1 board.

011

Go To Map 0558, Entry Point A.

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MAP 1572-2

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The control processor is unable to sense proper data from card A-A1Q2. Some of the control logic is located on cards A-A1F2 and A-A1N2.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1F2, A-A1N2, A-A1Q2.

Level 2 board:

A-A1C2, A-A1J2, A-A1L2.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE01' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1N2M05 (-check reset)

Are the lights correct?

Y N

Y N

B C

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003

Did this pin cause the Up light to go Off and the Down light to come On?

Y N

004

Bad card
A-A1N2.

005

Bad card
A-A1N2
---or---
A-A1Q2.

006

-Press Reset (CE panel).
-Set the Address/Data switches to 'EE05' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1N2M11 (+CPGT SEL bit 0)

Are the lights correct?

Y N

007

Look at the system console for flashing information.
Is the received results 007

Y N

008

Go to Step 009, Entry Point B.

3
D E

E

MAP 1573-2

009

-Press Reset (CE panel).
-Set the Address/Data switches to 'EE06' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.

(Entry Point B)

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1Q2J04 (+write main store)

Are the lights correct?

Y N

010

Probe the following:

Up Light: 0ff
Down Light: 0n

(1) A-A1F2D12 (+MSP WRT main STG)

Are the lights correct?

Y N

011

Bad card
A-A1N2.

012

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1Q2
---or---
A-A1F2.

3
F

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EC 835083 PEC 832850

MAP 1573-2

A D F
1 2 2

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013
Bad card
A-A1Q2.

014
Bad card
A-A1N2.

015
-Press Reset (CE panel).
-Set the Address/Data switches to 'EE01' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1J2M05 (-check reset)
Are the lights correct?

Y N

016
Did this pin cause the Up light to go Off and the Down light to come On?

Y N

017
Bad card
A-A1J2.

018
Bad card
A-A1J2
---or---
A-A1L2.

G

G

MAP 1573-3

019
-Press Reset (CE panel).
-Set the Address/Data switches to 'EE05' (CE panel).
-Press CE Start (CE panel).
NOTE: ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1J2M11 (+CPGT SEL bit 0)
Are the lights correct?

Y N

020
Look at the system console for flashing information.
Is the received results 00?

Y N

021
Go to Step 022, Entry Point C.

022
-Press Reset (CE panel).
-Set the Address/Data switches to 'EE06' (CE panel).
-Press CE Start (CE panel).
NOTE: ignore any messages on the system console.

(Entry Point C)

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1L2J04 (+write main store)
Are the lights correct?

Y N

4 4 4
H J K

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EC 835083 PEC 832850

MAP 1573-3

H J K
3 3 3

MINI-MDI MSP MAP

MAP 1573-4

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023

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1C2D12 (+MSP WRT main STG)

Are the lights correct?

Y N

024

Bad card
A-A1J2.

025

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1L2
---or---
A-A1C2.

026

Bad card
A-A1L2.

027

Bad card
A-A1J2.

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PEC 832850

MAP 1573-4

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	009	1576	A
5	018	1576	A
4	015	1576	A
4	012	1576	A
6	021	1576	A
7	027	1576	A
6	024	1576	A
8	037	1576	A
10	046	1576	A
9	043	1576	A
9	040	1576	A
11	049	1576	A
12	055	1576	A
11	052	1576	A
13	065	1576	A
18	089	1576	A
15	074	1576	A
14	071	1576	A
14	068	1576	A
16	077	1576	A
17	083	1576	A
16	080	1576	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

(Step 001 continues)

MAP DESCRIPTION:

A machine check occurred while attempting to store into a main storage card. This fault can be caused by either a bad bit in one of the storage cards or an addressing problem. This MAP determines which fault occurred and corrects the fault if it is a bad bit. If not, you are instructed to go to MAP 1576.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

(Step 001 continues)

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5340 SYSTEMS UNIT
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MAP 1574-2

(Step 001 continued)

(Step 001 continued)

LOGIC CARDS TESTED:

All main storage cards (Level 1 board), A-A1V2 and all main storage cards (Level 2 board)

Is there a card in the A-A1B2 position?

Y N

002

-Press Reset (CE panel).

-Set the Address/Data switches to

'EE66' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 01?

Y N

003

Is the received results 02?

Y N

004

Is the received results 03?

Y N

005

Is the received results 04?

Y N

7 6 6 5 4 3
A B C D E F

20APR81

PN 4237615

EC 835159

PEC 835083

MAP 1574-2

F
2

**MINI-MDI MSP MAP
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006

Is the received results 05?

Y N

007

Is the received results 06?

Y N

008

Remove cards A-A1U4 and A-A1R2. Reinstall the card removed from A-A1U4 into the A-A1R2 socket. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4
- A-A1T4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

4
G H J K

H J K

MAP 1574-3

009

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

010

Storage card in location A-A1R2 is bad.

011

Remove cards A-A1T4 and A-A1R2. Reinstall the card removed from A-A1T4 into the A-A1R2 socket. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4
- A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

(Step 011 continues)

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MAP 1574-3

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(Step 011 continued)

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

012

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.**013**

Storage card in location A-A1R2 is bad.

014

Remove cards A-A1S4 and A-A1R2. Reinstall the card removed from A-A1S4 into socket A-A1R2. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

A-A1S2

A-A1T2

A-A1U2

A-A1R4

A-A1T4

A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

(Step 014 continues)

(Step 014 continued)

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

015

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.**016**

Storage card in location A-A1R2 is bad.

017

Remove cards A-A1R4 and A-A1R2. Reinstall the card removed from A-A1R4 into socket A-A1R2. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

A-A1S2

A-A1T2

A-A1U2

A-A1S4

A-A1T4

A-A1U4

(Step 017 continues)

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MAP 1574-4

**MINI-MDI MSP MAP
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(Step 017 continued)

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE69' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

018

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

019

Storage card in location A-A1R2 is bad.

D
2

MAP 1574-5

020

Remove cards A-A1U2 and A-A1R2. Reinstall the card removed from A-A1U2 into the A-A1R2 socket. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

- A-A1S2
- A-A1T2
- A-A1R4
- A-A1S4
- A-A1T4
- A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE69' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

20APR81 PN 4237615

EC 835159 PEC 835083

MAP 1574-5

6 6
L M

021

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

022

Storage card in location A-A1R2 is bad.

023

Remove cards A-A1T2 and A-A1R2. Reinstall the card removed from A-A1T2 into the A-A1R2 socket. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

A-A1S2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, (Step 023 continues)

(Step 023 continued)
press Reset (CE panel).

- Set the Address/Data switches to 'EE69' (CE panel)
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

024

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

025

Storage card in location A-A1R2 is bad.

026

Remove cards A-A1S2 and A-A1R2. Reinstall the card removed from A-A1S2 into the A-A1R2 socket. Do not reinstall the card removed from A-A1R2.

Now remove the following cards:

A-A1T2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
- (Step 026 continues)

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EC 835159 PEC 835083

MAP 1574-6

A
2

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(Step 026 continued)

- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE69' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

027

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

028

Storage card in location A-A1R2 is bad.

029

- Press Reset (CE panel).
 - Set the Address/Data switches to 'EE66' (CE panel).
 - Press CE Start (CE panel).
- Look at the system console for flashing information.

Is the received results > or = 08?

Y N

1
2
N P

P

MAP 1574-7

030

Is the received results 01?

Y N

031

Is the received results 02?

Y N

032

Is the received results 03?

Y N

033

Is the received results 04?

Y N

034

Is the received results 05?

Y N

1
2
Q R S T U V

20APR81

PN 4237615

EC 835159

PEC 835083

MAP 1574-7

V
7

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035

Is the received results 06?

Y N

036

Remove cards A-A1U2 and A-A1M2. Reinstall the card removed from A-A1U2 into the A-A1M2 socket. Do not reinstall the card removed from A-A1M2.

Now remove the following cards:

	A-A1M4
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
	A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to 'EE69' (CE panel).
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

W X Y

W X Y

MAP 1574-8

037

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

038

Storage card in location A-A1M2 is bad.

039

Remove cards A-A1T2 and A-A1M2. Reinstall the card removed from A-A1T2 into the A-A1M2 socket. Do not reinstall the card removed from A-A1M2.

Now remove the following cards:

	A-A1M4
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
	A-A1T4
A-A1U2	A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 039 continues)

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EC 835159 PEC 835083

MAP 1574-8

**MINI-MDI MSP MAP
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(Step 039 continued)

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

040

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

041

Storage card in location A-A1M2 is bad.

042

Remove cards A-A1S2 and A-A1M2. Reinstall the card removed from A-A1S2 into socket A-A1M2. Do not reinstall the card removed from A-A1M2.

Now remove the following cards:

- A-A1M4
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2 A-A1R4
- A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

-Set Power to 1 (operator panel).

(Step 042 continues)

(Step 042 continued)

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

043

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

044

Storage card in location A-A1M2 is bad.

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(Step 048 continued)

-Press Load (operator panel)

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

049

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.**050**

Storage card in location A-A1M2 is bad.

051

Remove cards A-A1P2 and A-A1M2. Reinstall the card removed from A-A1P2 into the A-A1M2 socket.

Do not reinstall the card removed from A-A1M2.

Now remove the following cards:

	A-A1M4
A-A1N2	A-A1N4
	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
A-A1U2	A-A1U4

Note: Some of these cards may not be installed
(Step 051 continues)

(Step 051 continued)

because of the configured size of the machine.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

052

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.**053**

Storage card in location A-A1M2 is bad.

Q
7

**MINI-MDI MSP MAP
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054

Remove cards A-A1N2 and A-A1M2. Reinstall the card removed from A-A1N2 into the A-A1M2 socket. Do not reinstall the card removed from A-A1M2. Now remove the following cards:

- A-A1M4
- A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2 A-A1R4
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE69' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

| |

A A
B C

N A A
7 B C

MAP 1574-12

055

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

056

Storage card in location A-A1M2 is bad.

057

Is the received results 08?

Y N

| |

1 1
7 7
A A
D E

058

Is the received results 09?

Y N

| |

059

Is the received results 0A?

Y N

| |

060

Is the received results 0B?

Y N

| |

061

Is the received results 0C?

Y N

| |

1 1 1 1 1 1
7 7 6 5 5 3
A A A A A A
D E F G H J

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MAP 1574-12

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062

Is the received results 0D?

Y N

063

Is the received results 0E?

Y N

064

Remove cards A-A1U4 and A-A1M4. Reinstall the card removed from A-A1U4 into the A-A1M4 socket. Do not reinstall the card removed from A-A1M4.

Now remove the following cards:

A-A1M2
A-A1N2 A-A1N4
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2 A-A1T4
A-A1U2

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

065

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.**066**

Storage card in location A-A1M4 is bad.

067

Remove cards A-A1T4 and A-A1M4. Reinstall the card removed from A-A1T4 into the A-A1M4 socket. Do not reinstall the card removed from A-A1M4.

Now remove the following cards:

A-A1M2
A-A1N2 A-A1N4
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2
A-A1U2 A-A1U4

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 067 continues)

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PEC 835083

MAP 1574-13

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MAP 1574-14

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(Step 067 continued)

-Set the Address/Data switches to
'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

068

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down
position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system
console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

069

Storage card in location A-A1M4 is bad.

070

Remove cards A-A1S4 and A-A1M4. Reinstall the
card removed from A-A1S4 into socket A-A1M4. Do
not reinstall the card removed from A-A1M4.

Now remove the following cards:

A-A1M2

A-A1N2 A-A1N4

A-A1P2 A-A1P4

A-A1Q2 A-A1Q4

A-A1R2 A-A1R4

A-A1S2

A-A1T2 A-A1T4

A-A1U2 A-A1U4

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

(Step 070 continues)

(Step 070 continued)

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down
position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).

-Set the Address/Data switches to

'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

071

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down
position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console,
press Reset (CE panel).

Go To Map 1576, Entry Point A.

072

Storage card in location A-A1M4 is bad.

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MAP 1574-14

A
H
1
2

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073

Remove cards A-A1R4 and A-A1M4. Reinstall the card removed from A-A1R4 into socket A-A1M4. Do not reinstall the card removed from A-A1M4. Now remove the following cards:

- A-A1M2
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2 A-A1Q4
- A-A1R2
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE6A' (CE panel).
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

A A
P Q

MAP 1574-15

A A A
G P Q
1 2

074

Reinstall the cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

075

Storage card in location A-A1M4 is bad.

076

Remove cards A-A1Q4 and A-A1M4. Reinstall the card removed from A-A1Q4 into the A-A1M4 socket. Do not reinstall the card removed from A-A1M4.

Now remove the following cards:

- A-A1M2
- A-A1N2 A-A1N4
- A-A1P2 A-A1P4
- A-A1Q2
- A-A1R2 A-A1R4
- A-A1S2 A-A1S4
- A-A1T2 A-A1T4
- A-A1U2 A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 076 continues)

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MAP 1574-15

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MAP 1574-16

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(Step 076 continued)

-Set the Address/Data switches to 'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

077

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

078

Storage card in location A-A1M4 is bad.

079

Remove cards A-A1P4 and A-A1M4. Reinstall the card removed from A-A1P4 into the A-A1M4 socket.

Do not reinstall the card removed from A-A1M4.

Now remove the following cards:

A-A1M2

A-A1N2 A-A1N4

A-A1P2

A-A1Q2 A-A1Q4

A-A1R2 A-A1R4

A-A1S2 A-A1S4

A-A1T2 A-A1T4

A-A1U2 A-A1U4

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

(Step 079 continues)

(Step 079 continued)

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

080

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

081

Storage card in location A-A1M4 is bad.

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MAP 1574-16

A
E
1
2

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082

Remove cards A-A1N4 and A-A1M4. Reinstall the card removed from A-A1N4 into the A-A1M4 socket. Do not reinstall the card removed from A-A1M4. Now remove the following cards:

A-A1M2
A-A1N2
A-A1P2 A-A1P4
A-A1Q2 A-A1Q4
A-A1R2 A-A1R4
A-A1S2 A-A1S4
A-A1T2 A-A1T4
A-A1U4 A-A1U4

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE6A' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results **80**?

Y N

A A
R S

MAP 1574-17

A
D
1
2**083**

Reinstall the cards removed earlier.

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

Go To Map 1576, Entry Point A.

084

Storage card in location A-A1M4 is bad.

085

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE6A' (CE panel)

-Press CE Start (CE panel).

Note: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing

Down Light: On

- (1) A-A1V2S03 (+MSGT out bit P 128-256K)
- (2) A-A1V2U07 (+MSGT out bit 10 128-256K)
- (3) A-A1V2S07 (+MSGT out bit 11 128-256K)
- (4) A-A1V2S05 (+MSGT out bit 12 128-256K)
- (5) A-A1V2U05 (+MSGT out bit 13 128-256K)
- (6) A-A1V2S04 (+MSGT out bit 14 128-256K)
- (7) A-A1V2U04 (+MSGT out bit 15 128-256K)
- (8) A-A1V2S09 (+MSGT out bit 8 128-256K)
- (9) A-A1V2S10 (+MSGT out bit 9 128-256K)

Are the lights correct?

Y N

086

Bad card

A-A1V2.

1
8
A
T

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PEC 835083

MAP 1574-17

A
1
7

MINI-MDI MSP MAP

MAP 1574-18

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087

Probe the following:

Up Light: On or flashing

Down Light: Off

- (1) A-A1V2M02 (+MS storage bus bit P 128-256K)
- (2) A-A1V2P06 (+MS storage bus bit 8 128-256K)
- (3) A-A1V2M06 (+MS storage bus bit 9 128-256K)
- (4) A-A1V2P05 (+MS storage bus bit 10 128-256K)
- (5) A-A1V2M05 (+MS storage bus bit 11 128-256K)
- (6) A-A1V2P04 (+MS storage bus bit 12 128-256K)
- (7) A-A1V2M04 (+MS storage bus bit 13 128-256K)
- (8) A-A1V2M03 (+MS storage bus bit 14 128-256K)
- (9) A-A1V2P02 (+MS storage bus bit 15 128-256K)

Are the lights correct?

Y N

088

Bad card

A-A1V2.

089

Go To Map 1576, Entry Point A.

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MAP 1574-18

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
9	054	0558	A
7	038	0558	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI found a main storage addressing problem. This can be caused by a faulty storage card or card A-A1Q2.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1Q2 and all main storage cards.

Level 2 board:

A-A1L2, A-A1K2, A-A1V2 and all main storage cards.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE46' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1U2B05 (+MS CSX 3)
 - (2) A-A1U2B08 (+MS CSX 1)
 - (3) A-A1U2B09 (+MSAR bit 6)
- (Step 002 continues)

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MAP 1575-1

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MAP 1575-2

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(Step 002 continued)

- (4) A-A1U2G02 (+MS CSY 2)
- (5) A-A1U2G08 (+MS CSY 1)
- (6) A-A1U2D02 (+MS CSX 4)
- (7) A-A1U2D07 (+MS CSX 2)
- (8) A-A1U2D10 (-MS 8K GRP SEL LO)
- (9) A-A1U2K06 (+MSAR bit 7)

Are the lights correct?

Y N

003

Did any of these pins cause the Up light to go Off and the Down light to come On?

Y N

004

Bad card
A-A1Q2.

005

Remove the following cards:

- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4
- A-A1T4
- A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 005 continues)

(Step 005 continued)

-Set the Address/Data switches to 'EE46' (CE panel)

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing

Down Light: On or flashing

(1) A-A1U2B05 (+MS CSX 3)

(2) A-A1U2B08 (+MS CSX 1)

(3) A-A1U2B09 (+MSAR bit 6)

(4) A-A1U2G02 (+MS CSY 2)

(5) A-A1U2G08 (+MS CSY 1)

(6) A-A1U2D02 (+MS CSX 4)

(7) A-A1U2D07 (+MS CSX 2)

(8) A-A1U2D10 (-MS 8K GRP SEL LO)

(9) A-A1U2J06 (+MSAR bit 7)

Are the lights correct?

Y N

006

Bad card
A-A1Q2.

007

One of the storage cards removed earlier is bad. To determine which one is bad, continue as follows:

(Entry Point B)

Reinstall one of the storage cards removed in step 004 into A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

(Step 007 continues)

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MAP 1575-2

A B
1 2

**MINI-MDI MSP MAP
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(Step 007 continued)

-Set the Address/Data switches to 'EE46', (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing

Down Light: On or flashing

- (1) A-A1U2B05 (+MS CSX 3)
- (2) A-A1U2B08 (+MS CSX 1)
- (3) A-A1U2B09 (+MSAR bit 6)
- (4) A-A1U2G02 (+MS CSY 2)
- (5) A-A1U2G08 (+MS CSY 1)
- (6) A-A1U2D02 (+MS CSX 4)
- (7) A-A1U2D07 (+MS CSX 2)
- (8) A-A1U2D10 (-MS 8K GRP SEL LO)
- (9) A-A1U2J06 (+MSAR bit 7)

Are the lights correct?

Y N

008

Storage card A-A1R2 is bad.

009

Go to Page 2, Step 007, Entry Point B.

010

Bad card
A-A1R2.

011

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE66' (CE panel)

-Press CE Start (CE panel).

Is the received result 08?

Y N

5
C D

D

MAP 1575-3

012

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE46' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing

Down Light: On or flashing

- (1) A-A1Q2B05 (+MS CSX 3 0-128K)
- (2) A-A1Q2B08 (+MS CSX 1 0-128K)
- (3) A-A1Q2B09 (+MSAR bit 6 0-128K)
- (4) A-A1Q2G02 (+MS CSY 2 0-128K)
- (5) A-A1Q2G08 (+MS CSY 1 0-128K)
- (6) A-A1Q2D02 (+MS CSX 4 0-128K)
- (7) A-A1Q2D07 (+MS CSX 2 0-128K)
- (8) A-A1Q2D10 (-MS 8K GRP SEL LO 0-128K)
- (9) A-A1Q2J06 (+MSAR bit 7 0-128K)

Are the lights correct?

Y N

013

Did any of these pins cause the Up light to go Off and the Down light to come On?

Y N

014

Bad card
A-A1L2.

5 4
E F

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EC 835159

PEC 835083

MAP 1575-3

015

Remove the following cards:

A-A1M2
A-A1N2
A-A1P2
A-A1Q2
A-A1R2
A-A1S2
A-A1T2
A-A1U2

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE46' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B05 (+MS CSX 3 0-128K)
 - (2) A-A1Q2B08 (+MS CSX 1 0-128K)
 - (3) A-A1Q2B09 (+MSAR bit 6 0-128K)
 - (4) A-A1Q2G02 (+MS CSY 2 0-128K)
 - (5) A-A1Q2G08 (+MS CSY 1 0-128K)
 - (6) A-A1Q2D02 (+MS CSX 4 0-128K)
 - (7) A-A1Q2D07 (+MS CSX 2 0-128K)
 - (8) A-A1Q2D10 (-MS 8K GRP SEL LO 0-128K)
 - (9) A-A1Q2J06 (+MSAR bit 7 0-128K)
- (Step 015 continues)

(Step 015 continued)
Are the lights correct?

Y N

016

Bad card
A-A1L2.

017

One of the storage cards removed earlier is bad. To determine which one is bad, continue as follows:

(Entry Point D)

Reinstall one of the storage cards removed in step 004 into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE46', (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2B05 (+MS CSX 3 0-128K)
 - (2) A-A1Q2B08 (+MS CSX 1 0-128K)
 - (3) A-A1Q2B09 (+MSAR bit 6 0-128K)
 - (4) A-A1Q2G02 (+MS CSY 2 0-128K)
 - (5) A-A1Q2G08 (+MS CSY 1 0-128K)
 - (6) A-A1Q2D02 (+MS CSX 4 0-128K)
 - (7) A-A1Q2D07 (+MS CSX 2 0-128K)
 - (8) A-A1Q2D10 (-MS 8K GRP SEL LO 0-128K)
 - (9) A-A1Q2J06 (+MSAR bit 7 0-128K)
- (Step 017 continues)

E
3

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

PAGE 5 OF 9

(Step 017 continued)
Are the lights correct?

Y N

018

Storage card A-A1M2 is bad.

019

Go to Page 4, Step 017, Entry Point D.

020

Probe the following:

Up Light: 0n
Down Light: 0n

- (1) A-A1Q4B13 (+MSAR bit 10 128-256K)
- (2) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (3) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (4) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (5) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (6) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

021

Probe the following:

Up Light: 0n
Down Light: 0n

- (1) A-A1V2B02 (-MSAR bit 10)
- (2) A-A1V2D02 (-MSAR bit 11)
- (3) A-A1V2B03 (-MSAR bit 12)
- (4) A-A1V2B05 (-MSAR bit 13)
- (5) A-A1V2D05 (-MSAR bit 14)
- (6) A-A1V2D06 (-MSAR bit 15)

Are the lights correct?

Y N

022

Bad card
A-A1K2.

G H

MAP 1575-5

C G H
3

023

Bad card
A-A1V2.

024

Bad card
A-A1M2.

025

-Press Reset (CE panel).

-Set the Address/Data switches to
'EE46' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n or flashing
Down Light: 0n or flashing

- (1) A-A1Q4B05 (+MS CSX 3 128K-256K)
- (2) A-A1Q4B08 (+MS CSX 1 128K-256K)
- (3) A-A1Q4B09 (+MSAR bit 6 128K-256K)
- (4) A-A1Q4G02 (+MS CSY 2 128K-256K)
- (5) A-A1Q4G08 (+MS CSY 1 128K-256K)
- (6) A-A1Q4D02 (+MS CSX 4 128K-256K)
- (7) A-A1Q4D07 (+MS CSX 2 128K-256K)
- (8) A-A1Q4D10 (-MS 8K GRP SEL LO 128K-256K)
- (9) A-A1Q4J06 (+MSAR bit 7 128K-256K)

Are the lights correct?

Y N

026

**Did any of these pins cause the Up light to go
Off and the Down light to come On?**

Y N

027

Bad card
A-A1L2.

7 6
J K

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MAP 1575-5

MINI-MDI MSP MAP
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028

Remove the following cards:

A-A1M2	A-A1M4
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
A-A1U2	A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE46' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q4B05 (+MS CSX 3 128K-256K)
 - (2) A-A1Q4B08 (+MS CSX 1 128K-256K)
 - (3) A-A1Q4B09 (+MSAR bit 6 128K-256K)
 - (4) A-A1Q4G02 (+MS CSY 2 128K-256K)
 - (5) A-A1Q4G08 (+MS CSY 1 128K-256K)
 - (6) A-A1Q4D02 (+MS CSX 4 128K-256K)
 - (7) A-A1Q4D07 (+MS CSX 2 128K-256K)
 - (8) A-A1Q4D10 (-MS 8K GRP SEL LO 128K-256K)
 - (9) A-A1Q4J06 (+MSAR bit 7 128K-256K)
- (Step 028 continues)

(Step 028 continued)
Are the lights correct?

Y N

029

Bad card
A-A1L2.

030

One of the storage cards removed earlier is bad. To determine which one is bad, continue as follows:

(Entry Point C)

Reinstall one of the storage cards removed in earlier step into A-A1M4.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE46', (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q4B05 (+MS CSX 3 128K-256K)
 - (2) A-A1Q4B08 (+MS CSX 1 128K-256K)
 - (3) A-A1Q4B09 (+MSAR bit 6 128K-256K)
 - (4) A-A1Q4G02 (+MS CSY 2 128K-256K)
 - (5) A-A1Q4G08 (+MS CSY 1 128K-256K)
 - (6) A-A1Q4D02 (+MS CSX 4 128K-256K)
 - (7) A-A1Q4D07 (+MS CSX 2 128K-256K)
 - (8) A-A1Q4D10 (-MS 8K GRP SEL LO 128K-256K)
 - (9) A-A1Q4J06 (+MSAR bit 7 128K-256K)
- (Step 030 continues)

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MAP 1575-6

**MINI-MDI MSP MAP
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(Step 030 continued)
Are the lights correct?

Y N

031

Storage card A-A1M4 is bad.

032

Is this the last storage card to be tested?

Y N

033

Go to Page 6, Step 030, Entry Point C.

034

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

035

Bad card
A-A1L2
---or---
A-A1K2

036

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

037

Bad feature power supply D DC power cable to
A-A1 board.
---or---
Bad A-A1 board.

038

Go To Map 0558, Entry Point A.

J
5

MAP 1575-7

039

Up Light: On
Down Light: On

Probe:

- (1) A-A1Q4D05 (MSAR bit 8 128-256K)
- (2) A-A1Q4G12 (MSAR bit 9 128-256K)

Are the lights correct?

Y N

040

Bad card
A-A1K2.

041

Probe the following:

Up Light: On
Down Light: On

- (1) A-A1Q4B13 (+MSAR bit 10 128-256K)
- (2) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (3) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (4) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (5) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (6) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

042

Probe the following:

Up Light: On
Down Light: On

- (1) A-A1V2B02 (-MSAR bit 10)
- (2) A-A1V2D02 (-MSAR bit 11)
- (3) A-A1V2B03 (-MSAR bit 12)
- (4) A-A1V2B05 (-MSAR bit 13)
- (5) A-A1V2D05 (-MSAR bit 14)
- (6) A-A1V2D06 (-MSAR bit 15)

(Step 042 continues)

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MAP 1575-7

9
L

MINI-MDI MSP MAP
5340 SYSTEMS UNIT

MAP 1575-8

PAGE 8 OF 9

(Step 042 continued)
Are the lights correct?

Y N

043

Bad card
A-A1K2.

044

Remove the following cards:

A-A1M2	A-A1M4
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
A-A1U2	A-A1U4

Note: Some of these cards may not be installed because of the configured size of the machine.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to 'EE46' (CE panel).
 - Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

- (1) A-A1Q4B13 (+MSAR bit 10 128-256K)
 - (2) A-A1Q4D06 (+MSAR bit 11 128-256K)
- (Step 044 continues)

(Step 044 continued)

- (3) A-A1Q4J10 (+MSAR bit 12 128-256K)
- (4) A-A1Q4J02 (+MSAR bit 13 128-256K)
- (5) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (6) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

045

Bad card
A-A1V2.

046

One of the storage cards removed earlier is bad. To determine which one is bad, continue as follows:

(Entry Point E)

Reinstall one of the storage cards removed in earlier step into A-A1M4.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to 'EE46' (CE panel).
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

- (1) A-A1Q4B13 (+MSAR bit 10 128-256K)
 - (2) A-A1Q4D06 (+MSAR bit 11 128-256K)
 - (3) A-A1Q4J10 (+MSAR bit 12 128-256K)
 - (4) A-A1Q4J02 (+MSAR bit 13 128-256K)
 - (5) A-A1Q4D11 (+MSAR bit 14 128-256K)
- (Step 046 continues)

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MAP 1575-8

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(Step 046 continued)
(6) A-A1Q4J13 (+MSAR bit 15 128-256K)

Are the lights correct?

Y N

047

Bad card
A-A1M4.

048

Is this the last storage card to be tested?

Y N

049

Go to Page 8, Step 046, Entry Point E.

050

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

051

Bad card
A-A1L2
---or---
A-A1K2

052

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

053

Bad feature power supply D DC power cable to
A-A1 board.
---or---
Bad A-A1 board.

L M
7

MAP 1575-9

054

Go To Map 0558, Entry Point A.

055

Bad card
A-A1M4.

M

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MAP 1575-9

SENSE AND LOAD MAIN STORAGE MAP 5
5340 SYSTEMS UNIT

MAP 1576-1

PAGE 1 OF 30

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001
1574	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
29	182	0558	A
3	016	1579	A
6	031	1579	A
8	046	1579	A
11	061	1579	A
14	076	1579	A
16	096	1579	A
19	113	1579	A
21	130	1579	A
24	147	1579	A
27	164	1579	A
30	187	1579	A

001
(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

A main storage addressing test failed. This can be caused by card A-A1Q2 or any bad main storage cards. This MAP determines exactly which card is bad. Card A-A1R2 location is used as a card test location. The main storage cards are inserted into this location one at a time and tested. If it is determined that they are all good, card A-A1Q2 is bad.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:
A-A1Q2 and all main storage cards.

Level 2 board:
A-A1L2, A-A1V2 and all main storage cards.

Is there a card in the A-A1B2 position?

Y N
| |
1 2
4 A B

B
1

MINI-MDI MSP MAP
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002

In order to go on from here, you have to determine the configured size of the machine.

Is there a card installed in A-A1U4?

Y N

003

Is there a card installed in A-A1S4?

Y N

004

Is there a card installed in A-A1U2?

Y N

005

Is there a card installed in A-A1T2?

Y N

006

This machine is configured for 32K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B04 (+MS data strobe HI)
- (5) A-A1U2B08 (+MS CSX 1)
- (6) A-A1U2G02 (+MS CSY 2)
- (7) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

1
1
C D E F G H

H

MAP 1576-2

007

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

008

Bad card
A-A1Q2.

009

Remove the following cards:

A-A1R2
A-A1S2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
 - (2) A-A1T2B04 (+MS data strobe LO)
 - (3) A-A1T2D04 (+MS WRT pulse LO)
 - (4) A-A1U2B04 (+MS data strobe HI)
 - (5) A-A1U2B08 (+MS CSX 1)
 - (6) A-A1U2G02 (+MS CSY 2)
 - (7) A-A1U2D04 (+MS WRT pulse HI)
- (Step 009 continues)

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MAP 1576-2

**MINI-MDI MSP MAP
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(Step 009 continued)
Are the lights correct?

Y N

010

Bad card
A-A1Q2

011

One of the storage cards removed earlier is bad. Card socket A-A1R2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed in the preceding step into A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B04 (+MS data strobe HI)
- (5) A-A1U2B08 (+MS CSX 1)
- (6) A-A1U2G02 (+MS CSY 2)
- (7) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

J K

MAP 1576-3

G J K
2

012

Bad card
A-A1R2.

013

The storage card now in A-A1R2 is a good card. Since this machine is only configured for 32K, the remaining storage card removed in an earlier step is bad.

014

Remove the following cards:

A-A1S2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received result 80?

Y N

015

Is the received result 40?

Y N

016

Go To Map 1579, Entry Point A.

017

Bad card
A-A1R2.

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EC 835159 PEC 835083

MAP 1576-3

4
L

F L
2 3

MINI-MDI MSP MAP
5340 SYSTEMS UNIT

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018

Bad card
A-A1R2.

019

This machine is configured for 48K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

020

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

021

Bad card
A-A1Q2.

6
M N

N

MAP 1576-4

022

Remove the following cards:

- A-A1R2
- A-A1S2
- A-A1T2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

023

Bad card
A-A1Q2

5
P

20APR81

PN 4237617

EC 835159

PEC 835083

MAP 1576-4

P
4

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

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024

One of the storage cards removed earlier is bad. Card socket A-A1R2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed in the preceding step into A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

025

Bad card
A-A1R2.

Q

Q

MAP 1576-5

026

(Entry Point D)

The storage card now in A-A1R2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

027

Bad card
A-A1R2.

028

Go to Step 026, Entry Point D.

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EC 835159 PEC 835083

MAP 1576-5

M
4

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029

Remove the following cards:

A-A1S2
A-A1T2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

030

Is the received results 40?

Y N

031

Go To Map 1579, Entry Point A.

032

Bad card
A-A1R2.

033

Bad card
A-A1R2.

E
2

MAP 1576-6

034

This machine is configured for 64K of main storage.

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

035

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

036

Bad card
A-A1Q2.

8 7
R S

20APR81

PN 4237617

EC 835159

PEC 835083

MAP 1576-6

S
6

MINI-MDI MSP MAP
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037

Remove the following cards:

- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

038

Bad card
A-A1Q2

T

T

MAP 1576-7

039

One of the storage cards removed earlier is bad. Card socket A-A1R2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

040

Bad card
A-A1R2.

8
U

20APR81 PN 4237617

EC 835159 PEC 835083

MAP 1576-7

U
7

**MINI-MDI MSP MAP
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041

(Entry Point E)

The storage card now in A-A1R2 is a good card. Remove this card and reinstall one of the remaining storage cards removed above.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)

Are the lights correct?

Y N

042

Bad card
A-A1R2.

043

Go to Step 041, Entry Point E.

R
6

MAP 1576-8

044

Remove the following cards:

A-A1S2
A-A1T2
A-A1U2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE65' (CE panel).
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

045

Is the received results 40?

Y N

046

Go To Map 1579, Entry Point A.

047

Bad card
A-A1R2.

048

Bad card
A-A1R2.

20APR81

PN 4237617

EC 835159

PEC 835083

MAP 1576-8

D
2

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
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049

This machine is configured for 96K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)
- (9) A-A1S4B02 (+MS CD select 64-96K)

Are the lights correct?

Y N

050

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

051

Bad card
A-A1Q2.

1 1
V W

W

MAP 1576-9

052

Remove the following cards:

- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)
- (9) A-A1S4B02 (+MS CD select 64-96K)

Are the lights correct?

Y N

1 1
0 0
X Y

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EC 835159 PEC 835083

MAP 1576-9

V A A
9 B C
| 1 1
| 0 0

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057

Bad card
A-A1R2.

058

Go to Page 10, Step 056, Entry Point F.

059

Remove the following cards:

- A-A1S2
- A-A1T2
- A-A1U2
- A-A1R4
- A-A1S4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to 'EE65' (CE panel).
- Press CE Start (CE panel).
- Look at the system console for flashing information.

Is the received results 80?

Y N

060

Is the received results 40?

Y N

061

Go To Map 1579, Entry Point A.

062

Bad card
A-A1R2.

A
D

C A
2 D

MAP 1576-11

063

Bad card
A-A1R2.

064

This machine is configured for 128K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
- Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MS WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MS WRT pulse HI)
- (9) A-A1S4B02 (+MS CD select 64-96K)
- (10) A-A1U4B02 (+MS CD select 96-128K)

Are the lights correct?

Y N

065

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

066

Bad card
A-A1Q2.

1 1
3 2
A A
E F

20APR81 PN 4237617
EC 835159 PEC 835083
MAP 1576-11

067

Remove the following cards:

A-A1R2
A-A1S2
A-A1T2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
 - (2) A-A1T2B04 (+MS data strobe LO)
 - (3) A-A1T2D04 (+MS WRT pulse LO)
 - (4) A-A1U2B02 (+MS CD select 32-64K)
 - (5) A-A1U2B04 (+MS data strobe HI)
 - (6) A-A1U2B08 (+MS CSX 1)
 - (7) A-A1U2G02 (+MS CSY 2)
 - (8) A-A1U2D04 (+MS WRT pulse HI)
 - (9) A-A1S4B02 (+MS CD select 64-96K)
 - (10) A-A1U4B02 (+MS CD select 96-128K)
- (Step 067 continues)

(Step 067 continued)
Are the lights correct?

Y N

068

Bad card
A-A1Q2

069

One of the storage cards removed earlier is bad. Card socket A-A1R2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1R2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
 - (2) A-A1T2B04 (+MS data strobe LO)
 - (3) A-A1T2D04 (+MW WRT pulse LO)
 - (4) A-A1U2B02 (+MS CD select 32-64K)
 - (5) A-A1U2B04 (+MS data strobe HI)
 - (6) A-A1U2B08 (+MS CSX 1)
 - (7) A-A1U2G02 (+MS CSY 2)
 - (8) A-A1U2D04 (+MS WRT pulse HI)
 - (9) A-A1S4B02 (+MS CD select 64-96K)
 - (10) A-A1U4B02 (+MS CD select 96-128K)
- (Step 069 continues)

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MAP 1576-12

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(Step 069 continued)
Are the lights correct?

Y N

070
Bad card
A-A1R2.

071
(Entry Point G)

The storage card now in A-A1R2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1S2B02 (+MS CD select 0-32K)
- (2) A-A1T2B04 (+MS data strobe LO)
- (3) A-A1T2D04 (+MW WRT pulse LO)
- (4) A-A1U2B02 (+MS CD select 32-64K)
- (5) A-A1U2B04 (+MS data strobe HI)
- (6) A-A1U2B08 (+MS CSX 1)
- (7) A-A1U2G02 (+MS CSY 2)
- (8) A-A1U2D04 (+MW WRT pulse HI)
- (9) A-A1S4B02 (+MS CD select 64-96K)
- (10) A-A1U4B02 (+MS CD select 96-128K)

(Step 071 continues)

MAP 1576-13

A
E
I
I

(Step 071 continued)
Are the lights correct?

Y N

072
Bad card
A-A1R2.

073
Go to Step 071, Entry Point G.

074
Remove the following cards:

A-A1S2
A-A1T2
A-A1U2
A-A1R4
A-A1S4
A-A1T4
A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE65' (CE panel).
- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

075
Is the received results 40?

Y N

1 1 1
4 4 4
A A A
G H J

20APR81 PN 4237617

EC 835159 PEC 835083

MAP 1576-13

A
1
A
1
A
1
A
1

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076
Go To Map 1579, Entry Point A.

077
Bad card
A-A1R2.

078
Bad card
A-A1R2.

079
In order to go on from here, you have to determine the configured size of the machine.

Is there a card installed in A-A1U4?

Y N

080
Is there a card installed in A-A1U2?

Y N

081
Is there a card installed in A-A1S2?

Y N

082
Is there a card installed in A-A1Q2?

Y N

083
Is there a card installed in A-A1P2?

Y N

2 2 2 1 1
7 4 1 9 6
A A A A A
K L M N P Q

A
Q

MAP 1576-14

084
This machine is configured for 32K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B08 (+MS CSX 1)
- (3) A-A1Q2G02 (+MS CSY 2)
- (4) A-A1V2U09 (+MS WRT pulse LO)
- (5) A-A1V2S08 (+MS WRT pulse HI)
- (6) A-A1P2B04 (+MS data strobe LO 0-128K)
- (7) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

085
Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

086
Bad card
A-A1L2.

1 1
6 5
A A
R S

20APR81 PN 4237617

EC 835159 PEC 835083

MAP 1576-14

A
S
1
4

MINI-MDI MSP MAP
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087

Remove the following cards:

A-A1M2
A-A1N2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B08 (+MS CSX 1)
- (3) A-A1Q2G02 (+MS CSY 2)
- (4) A-A1V2U09 (+MS WRT pulse LO)
- (5) A-A1V2S08 (+MS WRT pulse HI)
- (6) A-A1P2B04 (+MS data strobe LO 0-128K)
- (7) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

088

Bad card
A-A1L2

A
T

A
T

MAP 1576-15

089

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B08 (+MS CSX 1)
- (3) A-A1Q2G02 (+MS CSY 2)
- (4) A-A1V2U09 (+MS WRT pulse LO)
- (5) A-A1V2S08 (+MS WRT pulse HI)
- (6) A-A1P2B04 (+MS data strobe LO 0-128K)
- (7) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

090

Bad card
A-A1M2.

1
6
A
U

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EC 835159 PEC 835083
MAP 1576-15

A A
R U
1 1
4 5

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091

The storage card now in A-A1M2 is a good card. Since this machine is only configured for 32K, the remaining storage card removed in an earlier step is bad.

092

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1P2D04 (+MS WRT pulse LO 0-128K)

Are the lights correct?

Y N

093

Bad card
A-A1V2

094

Remove the following cards:

A-A1N2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received result 80?

Y N

A A
V W

MAP 1576-16

A A A
P V W
1 1 1
4 4 4

095

Is the received result 40?

Y N

096

Go To Map 1579, Entry Point A.

097

Bad card
A-A1M2.

098

Bad card
A-A1M2.

099

This machine is configured for 48K of main storage.

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)
- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

1 1
8 7
A A
X Y

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PEC 835083

MAP 1576-16

100

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

101

Bad card
A-A1L2.

102

Remove the following cards:

A-A1M2
A-A1N2
A-A1P2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1Q2B08 (+MS CSX 1)
 - (4) A-A1Q2G02 (+MS CSY 2)
 - (5) A-A1V2U09 (+MS WRT pulse LO)
 - (6) A-A1V2S08 (+MS WRT pulse HI)
 - (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (Step 102 continues)

(Step 102 continued)

(8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

103

Bad card
A-A1L2

104

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is bad.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1Q2B08 (+MS CSX 1)
 - (4) A-A1Q2G02 (+MS CSY 2)
 - (5) A-A1V2U09 (+MS WRT pulse LO)
 - (6) A-A1V2S08 (+MS WRT pulse HI)
 - (7) A-A1P2B04 (+MS data strobe LO 0-128K)
 - (8) A-A1Q2B04 (+MS data strobe HI 0-128K)
- (Step 104 continues)

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(Step 104 continued)
Are the lights correct?

Y N

105
Bad card
A-A1M2.

106
(Entry Point DD)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)
- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

A B
Z A

MAP 1576-18

A A B
X Z A
1
6

107
Bad card
A-A1M2.

108
Go to Step 106, Entry Point DD.

109
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1P2D04 (+MS WRT pulse LO 0-128K)

Are the lights correct?

Y N

110
Bad card
A-A1V2

111
Remove the following cards:

A-A1N2
A-A1P2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.
(Step 111 continues)

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MAP 1576-18

A
N
1
4

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(Step 111 continued)
Is the received results 80?

Y N

112

Is the received results 40?

Y N

113

Go To Map 1579, Entry Point A.

114

Bad card
A-A1M2.

115

Bad card
A-A1M2.

116

This machine s configured for 64K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)
- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

2
1
B
B
B
B
C

B
C

MAP 1576-19

117

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

118

Bad card
A-A1L2.

119

Remove the following cards:

- A-A1M2
- A-A1N2
- A-A1P2
- A-A1Q2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)

(Step 119 continues)

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MAP 1576-19

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MAP 1576-20

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(Step 119 continued)

- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

120

Bad card
A-A1L2

121

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)
- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

(Step 121 continues)

(Step 121 continued)

Are the lights correct?

Y N

122

Bad card
A-A1M2.

123

(Entry Point EE)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed above.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1Q2B08 (+MS CSX 1)
- (4) A-A1Q2G02 (+MS CSY 2)
- (5) A-A1V2U09 (+MS WRT pulse LO)
- (6) A-A1V2S08 (+MS WRT pulse HI)
- (7) A-A1P2B04 (+MS data strobe LO 0-128K)
- (8) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

2 2
1 1
B B
D E

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PEC 835083

MAP 1576-20

B B B
B D E
1 2 2
9 0 0

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124
Bad card
A-A1M2.

125
Go to Page 20, Step 123, Entry Point EE.

126
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1P2D04 (+MS WRT pulse LO 0-128K)

Are the lights correct?
Y N

127
Bad card
A-A1V2

128
Remove the following cards:

A-A1N2
A-A1P2
A-A1Q2

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MS IPL to Diskette (CE panel).
- Set CS IPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.
(Step 128 continues)

A
M
1
4

MAP 1576-21

(Step 128 continued)
Is the received results 80?
Y N

129
Is the received results 40?
Y N

130
Go To Map 1579, Entry Point A.

131
Bad card
A-A1M2.

132
Bad card
A-A1M2.

133
This machine is configured for 96K of main storage.

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1Q2B08 (+MS CSX 1)
- (5) A-A1Q2G02 (+MS CSY 2)
- (6) A-A1V2U09 (+MS WRT pulse LO)
- (7) A-A1V2S08 (+MS WRT pulse HI)
- (8) A-A1P2B04 (+MS data strobe LO 0-128K)
- (9) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

2 2
3 2
B B
F G

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MAP 1576-21

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134

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

135

Bad card
A-A1L2.

136

Remove the following cards:

A-A1M2
A-A1N2
A-A1P2
A-A1Q2
A-A1R2
A-A1S2

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
 - Insert diskette DIAGB1.
 - Press Load (operator panel).
 - When a message appears on the system console, press Reset (CE panel).
 - Set the Address/Data switches to 'EE42' (CE panel).
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1S2B02 (+MS CD select 64-96K)
 - (4) A-A1Q2B08 (+MS CSX 1)
- (Step 136 continues)

(Step 136 continued)

- (5) A-A1Q2G02 (+MS CSY 2)
- (6) A-A1V2U09 (+MS WRT pulse LO)
- (7) A-A1V2S08 (+MS WRT pulse HI)
- (8) A-A1P2B04 (+MS data strobe LO 0-128K)
- (9) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

137

Bad card
A-A1L2

138

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
 - Insert diskette DIAGB1.
 - Press Load (operator panel).
 - When a message appears on the system console, press Reset (CE panel).
 - Set the Address/Data switches to 'EE42' (CE panel).
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1S2B02 (+MS CD select 64-96K)
 - (4) A-A1Q2B08 (+MS CSX 1)
 - (5) A-A1Q2G02 (+MS CSY 2)
- (Step 138 continues)

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(Step 138 continued)

- (6) A-A1V2U09 (+MS WRT pulse LO)
- (7) A-A1V2S08 (+MS WRT pulse HI)
- (8) A-A1P2B04 (+MS data strobe LO 0-128K)
- (9) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

139

Bad card
A-A1M2.

140

(Entry Point FF)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1S2B02 (+MS CD select 64-96K)
 - (4) A-A1Q2B08 (+MS CSX 1)
 - (5) A-A1Q2G02 (+MS CSY 2)
 - (6) A-A1V2U09 (+MS WRT pulse LO)
 - (7) A-A1V2S08 (+MS WRT pulse HI)
- (Step 140 continues)

B
F
2
1

MAP 1576-23

(Step 140 continued)

- (8) A-A1P2B04 (+MS data strobe LO 0-128K)
- (9) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

141

Bad card
A-A1M2.

142

Go to Step 140, Entry Point FF.

143

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1P2D04 (+MS WRT pulse LO 0-128K)

Are the lights correct?

Y N

144

Bad card
A-A1V2

145

Remove the following cards:

A-A1N2
A-A1P2
A-A1Q2
A-A1R2
A-A1S2

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
(Step 145 continues)

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(Step 145 continued)
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to 'EE65' (CE panel).
-Press CE Start (CE panel).
Look at the system console for flashing information.

Is the received results 80?

Y N

146

Is the received results 40?

Y N

147

Go To Map 1579, Entry Point A.

148

Bad card
A-A1M2.

149

Bad card
A-A1M2.

150

This machine is configured for 128K of main storage.

-Press Reset (CE panel).
-Set the Address/Data switches to 'EE42' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
 - (2) A-A1Q2B02 (+MS CD select 32-64K)
 - (3) A-A1S2B02 (+MS CD select 64-96K)
 - (4) A-A1U2B02 (+MS CD select 96-128K)
 - (5) A-A1Q2B08 (+MS CSX 1)
 - (6) A-A1Q2G02 (+MS CSY 2)
- (Step 150 continues)

- (Step 150 continued)
(7) A-A1V2U09 (+MS WRT pulse LO)
(8) A-A1V2S08 (+MS WRT pulse HI)
(9) A-A1P2B04 (+MS data strobe LO 0-128K)
(10) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

151

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

152

Bad card
A-A1L2.

153

Remove the following cards:

- A-A1M2
- A-A1N2
- A-A1P2
- A-A1Q2
- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2

-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to 'EE42' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
(Step 153 continues)

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(Step 153 continued)
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1Q2B08 (+MS CSX 1)
- (6) A-A1Q2G02 (+MS CSY 2)
- (7) A-A1V2U09 (+MS WRT pulse LO)
- (8) A-A1V2S08 (+MS WRT pulse HI)
- (9) A-A1P2B04 (+MS data strobe LO 0-128K)
- (10) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

154

Bad card
A-A1L2

155

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

(Step 155 continues)

(Step 155 continued)
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1Q2B08 (+MS CSX 1)
- (6) A-A1Q2G02 (+MS CSY 2)
- (7) A-A1V2U09 (+MS WRT pulse LO)
- (8) A-A1V2S08 (+MS WRT pulse HI)
- (9) A-A1P2B04 (+MS data strobe LO 0-128K)
- (10) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

156

Bad card
A-A1M2.

157

(Entry Point GG)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

(Step 157 continues)

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(Step 157 continued)

Up Light: 0n or flashing
Down Light: 0n or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1Q2B08 (+MS CSX 1)
- (6) A-A1Q2G02 (+MS CSY 2)
- (7) A-A1V2U09 (+MS WRT pulse LO)
- (8) A-A1V2S08 (+MS WRT pulse HI)
- (9) A-A1P2B04 (+MS data strobe LO 0-128K)
- (10) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

158
Bad card
A-A1M2.

159

Go to Page 25, Step 157, Entry Point GG.

160

Remove the following cards:

- A-A1M2
- A-A1N2
- A-A1P2
- A-A1Q2
- A-A1R2
- A-A1S2
- A-A1T2
- A-A1U2

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
 - Insert diskette DIAGB1.
- (Step 160 continues)

(Step 160 continued)

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: 0n or flashing
Down Light: 0n or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1P2D04 (+MS WRT pulse LO 0-128K)

Are the lights correct?

Y N

161
Bad card
A-A1V2

162

Replace any one of the memory cards into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

2 2
7 7
B B
J K

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EC 835159 PEC 835083

MAP 1576-26

A B B
K J K
1 2 2
4 6 6

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MAP 1576-27

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163

Is the received results 40?

Y N

164

Go To Map 1579, Entry Point A.

165

Bad card

A-A1M2.

166

Bad card

A-A1M2.

167

This machine is configured for 256K of main storage.

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Note: Connect red and black power leads of probe on the A-A2 board.

Up Light: On or flashing

Down Light: On or flashing

(1) A-A1N2B02 (+MS CD select 0-32K)

(2) A-A1Q2B02 (+MS CD select 32-64K)

(3) A-A1S2B02 (+MS CD select 64-96K)

(4) A-A1U2B02 (+MS CD select 96-128K)

(5) A-A1N4B02 (+MS CD select 128-160K)

(6) A-A1Q4B02 (+MS CD select 160-192K)

(7) A-A1S4B02 (+MS CD select 192-224K)

(8) A-A1U4B02 (+MS CD select 224-256K)

(9) A-A1Q2B08 (+MS CSX 1 0-128K)

(10) A-A1Q2G02 (+MS CSY 2 0-128K)

(11) A-A1Q4B08 (+MS CSX 1 128-256K)

(12) A-A1Q4G02 (+MS CSY 2 128-256K)

(13) A-A1V2U09 (+MS WRT pulse LO)

(Step 167 continues)

(Step 167 continued)

(14) A-A1V2S08 (+MS WRT pulse HI)

(15) A-A1P2B04 (+MS data strobe LO 0-128K)

(16) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

168

Did any of the above pins have the following steady state conditions: Up Light: Off, Down Light: On?

Y N

169

Bad card

A-A1L2.

170

Remove the following cards:

A-A1M2 A-A1M4

A-A1N2 A-A1N4

A-A1P2 A-A1P4

A-A1Q2 A-A1Q4

A-A1R2 A-A1R4

A-A1S2 A-A1S4

A-A1T2 A-A1T4

A-A1U2 A-A1U4

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

'EE42' (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

(Step 170 continues)

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3
0
B
L

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(Step 170 continued)

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1N4B02 (+MS CD select 128-160K)
- (6) A-A1Q4B02 (+MS CD select 160-192K)
- (7) A-A1S4B02 (+MS CD select 192-224K)
- (8) A-A1U4B02 (+MS CD select 224-256K)
- (9) A-A1Q2B08 (+MS CSX 1 0-128K)
- (10) A-A1Q2G02 (+MS CSY 2 0-128K)
- (11) A-A1Q4B08 (+MS CSX 1 128-256K)
- (12) A-A1Q4G02 (+MS CSY 2 128-256K)
- (13) A-A1V2U09 (+MS WRT pulse LO)
- (14) A-A1V2S08 (+MS WRT pulse HI)
- (15) A-A1P2B04 (+MS data strobe LO 0-128K)
- (16) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

171

Bad card
A-A1L2

172

One of the storage cards removed earlier is bad. Card socket A-A1M2 is used as a test socket to aid in determining which storage card is failing.

Reinstall one of the storage cards removed in the preceding step into A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, (Step 172 continues)

(Step 172 continued)
press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1N4B02 (+MS CD select 128-160K)
- (6) A-A1Q4B02 (+MS CD select 160-192K)
- (7) A-A1S4B02 (+MS CD select 192-224K)
- (8) A-A1U4B02 (+MS CD select 224-256K)
- (9) A-A1Q2B08 (+MS CSX 1 0-128K)
- (10) A-A1Q2G02 (+MS CSY 2 0-128K)
- (11) A-A1Q4B08 (+MS CSX 1 128-256K)
- (12) A-A1Q4G02 (+MS CSY 2 128-256K)
- (13) A-A1V2U09 (+MS WRT pulse LO)
- (14) A-A1V2S08 (+MS WRT pulse HI)
- (15) A-A1P2B04 (+MS data strobe LO 0-128K)
- (16) A-A1Q2B04 (+MS data strobe HI 0-128K)

Are the lights correct?

Y N

173

Bad card
A-A1M2.

208B M

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EC 835159 PEC 835083
MAP 1576-28

174

(Entry Point H)

The storage card now in A-A1M2 is a good card. Remove this card and reinstall one of the remaining storage cards removed earlier.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1N2B02 (+MS CD select 0-32K)
- (2) A-A1Q2B02 (+MS CD select 32-64K)
- (3) A-A1S2B02 (+MS CD select 64-96K)
- (4) A-A1U2B02 (+MS CD select 96-128K)
- (5) A-A1N4B02 (+MS CD select 128-160K)
- (6) A-A1Q4B02 (+MS CD select 160-192K)
- (7) A-A1S4B02 (+MS CD select 192-224K)
- (8) A-A1U4B02 (+MS CD select 224-256K)
- (9) A-A1Q2B08 (+MS CSX 1 0-128K)
- (10) A-A1Q2G02 (+MS CSY 2 0-128K)
- (11) A-A1Q4B08 (+MS CSX 1 128-256K)
- (12) A-A1Q4G02 (+MS CSY 2 128-256K)
- (13) A-A1V2U09 (+MS WRT pulse LO)
- (14) A-A1V2S08 (+MS WRT pulse HI)
- (15) A-A1P2B04 (+MS data strobe LO 0-128K)
- (16) A-A1Q2B04 (+MS data strobe HI 0-128K)

(Step 174 continues)

(Step 174 continued)

Are the lights correct?

Y N

- 175
Bad card
A-A1M2.

176

Is this the last storage card to be tested?

Y N

- 177
Go to Step 174, Entry Point H.

178

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

- 179
Bad card
A-A1L2
---or---
A-A1K2

180

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

- 181
Bad feature power supply D DC power cable to
A-A1 board.
---or---
Bad A-A1 board.

182

Go To Map 0558, Entry Point A.

B
L
2
7

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183

Remove the following cards:

A-A1M2	A-A1M4
A-A1N2	A-A1N4
A-A1P2	A-A1P4
A-A1Q2	A-A1Q4
A-A1R2	A-A1R4
A-A1S2	A-A1S4
A-A1T2	A-A1T4
A-A1U2	A-A1U4

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE42' (CE panel).

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On or flashing
Down Light: On or flashing

- (1) A-A1Q2D04 (+MS WRT pulse HI 0-128K)
- (2) A-A1Q4D04 (+MS WRT pulse HI 128-256K)
- (3) A-A1P2D04 (+MS WRT pulse LO 0-128K)
- (4) A-A1P4D04 (+MS WRT pulse LO 128-256K)
- (5) A-A1Q4B04 (+MS data strobe HI 128-256K)
- (6) A-A1P4B04 (+MS data strobe LO 128-256K)

Are the lights correct?

Y N

184

Bad card
A-A1V2

B
N

B
N

MAP 1576-30

185

Replace any one of the memory cards in A-A1M2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE65' (CE panel).

- Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

186

Is the received results 40?

Y N

187

Go To Map 1579, Entry Point A.

188

Bad card
A-A1M2.

189

Bad card
A-A1M2.

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MAP 1576-30

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1576	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
4	028	0558	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The Mini-MDI found a bad A-A1Q2 or main storage card. This MAP determines exactly which card is bad. The card A-A1R2 location is used as a card test location. The main storage cards are inserted into this location one at a time and tested. If it is determined that they are all good, then the bad card is card A-A1Q2.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:
A-A1Q2 and all main storage cards.

Level 2 board:
A-A1L2 and all main storage cards.

Is there a card in the A-A1B2 position?

Y N

002

Note: Record the received results displayed on the system console.

Jumper A-A1Q2U11 (+MS card select 0-32K) to ground.

Are the received results displayed on the system console the same as recorded in step 001?

Y N

Y N

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MAP 1579-1

3 2 2
A B C

C
1

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003

Remove the jumper from A-A1Q2U11.
Jumper A-A1Q2S03 (+MS data strobe LO) to ground.
Are the received results displayed on the system console the same as recorded in step 001?

Y N

004

Remove the jumper from A-A1Q2S03.
-Press Reset (CE panel).
-Set the Address/Data switches to 'EE71' (CE panel).
-Press CE Start (CE panel).
-Press Reset (CE panel).
Jumper A-A1Q2S10 to ground.
-Set the Address/Data switches to 'EE65' (CE panel).
-Press CE Start (CE panel).

Are the received results displayed on the system console the same as recorded in step 001?

Y N

005

Remove the jumper from A-A1Q2S10.
Was this the last storage card to be tested?

Y N

006

Swap the storage card in A-A1R2 with the next card to be tested.
-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to 'EE65' (CE panel).
(Step 006 continues)

D E F

B D E F
1

MAP 1579-2

(Step 006 continued)
-Press CE Start (CE panel).
Look at the system console for flashing information.

Is the received result 80?

Y N

007

Is the received result 40?

Y N

008

Go to Page 1, Step 001, Entry Point A.

009

Bad card
A-A1R2, remove any jumpers previously installed.

010

Bad card
A-A1R2, remove any jumpers previously installed.

011

Bad card
A-A1Q2, remove any jumpers previously installed.

012

Bad card
A-A1R2, remove any jumpers previously installed.

013

Bad card
A-A1R2, remove any jumpers previously installed.

014

Bad card
A-A1R2, remove any jumpers previously installed.

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MAP 1579-2

A
1

MINI-MDI MSP MAP
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015

Note: Record the received results displayed on the system console.

Jumper A-A1L2U11 (+MS card select 0-32K) to ground.

Are the received results displayed on the system console the same as recorded in step 001?

Y N

016

Remove the jumper from A-A1L2U11.

Jumper A-A1L2S03 (+MS data strobe LO) to ground.

Are the received results displayed on the system console the same as recorded in step 001?

Y N

017

Remove the jumper from A-A1L2S03.

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE71' (CE panel).

-Press CE Start (CE panel).

-Press Reset (CE panel).

Jumper A-A1L2S10 to ground.

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Are the received results displayed on the system console the same as recorded in step 001?

Y N

018

Remove the jumper from A-A1L2S10.

Was this the last storage card to be tested?

Y N

4 4 4 4
G H J K L

L

MAP 1579-3

019

Swap the storage card in A-A1M2 with the next card to be tested.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to 'EE65' (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received result 80?

Y N

020

Is the received result 40?

Y N

021

Go to Page 1, Step 001, Entry Point A.

022

Bad card

A-A1M2, remove any jumpers previously installed.

023

Bad card

A-A1M2, remove any jumpers previously installed.

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EC 835159 PEC 835083

MAP 1579-3

G H J K
3 3 3 3

MINI-MDI MSP MAP

MAP 1579-4

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024

- Reinstall all storage cards.
- Set power to 1 (operator panel).
- Measure for +5 Vdc
 - A-A1M4J03 (pos)
 - A-A1M4J08 (neg)

Does the CE multimeter read less than 4.5V?

Y N

025

- Bad card
- A-A1L2, remove any jumpers previously installed.

026

- Measure for +5 Vdc
 - PDTB2-7 (pos)
 - DC ground (neg) (05-360)

Does the CE multimeter read less than 4.5V?

Y N

027

- Bad feature power supply D DC power cable to A-A1 board.
- or---
- Bad A-A1 board.

028

Go To Map 0558, Entry Point A.

029

- Bad card
- A-A1M2, remove any jumpers previously installed.

030

- Bad card
- A-A1M2, remove any jumpers previously installed.

031

- Bad card
- A-A1M2, remove any jumpers previously installed.

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EC 835159 PEC 835083

MAP 1579-4

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

T0292,T0293,T0294 and T0295 execute a MVC command in various translate modes. These same commands have been executed in non-translated mode and worked OK. This means translate is not working properly.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2,A-A1Q2

Level 2 board:

A-A1J2,A-A1L2

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE95' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On
Down Light: On

- (1) A-A1Q2B12 (+Cycle Tag Line 2)
 - (2) A-A1Q2D12 (+Cycle Tag Line 1)
- (Step 002 continues)

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MAP 1581-1

A

**MINI-MDI MSP MAP
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(Step 002 continued)

Are the lights correct?

Y N

003

**Did either of the above have the Up light Off
and the Down light On?**

Y N

004

Bad card
A-A1N2.

005

Bad card
A-A1N2
---or---
A-A1Q2.

006

Bad card
A-A1Q2.

007

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE95' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1L2B12 (+Cycle Tag Line 2)

(2) A-A1L2D12 (+Cycle Tag Line 1)

Are the lights correct?

Y N

008

**Did either of the above have the Up light Off and
the Down light On?**

Y N

B C D

B C D

009

Bad card
A-A1J2.

010

Bad card
A-A1J2
---or---
A-A1L2.

011

Bad card
A-A1L2.

MAP 1581-2

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PEC 832850

MAP 1581-2

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MAP determines why an incorrect value is being sensed from the Q register.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2, A-A1P2, A-A1F2, A-A1G2, A-A1Q2.

Level 2 board:

A-A1J2, A-A1K2, A-A1C2, A-A1D2, A-A1L2.

Is there a card in the A-A1B2 position?

Y N

002

-Press Reset (CE panel).

-Set the Address/Data switches to 'EE34' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1F2D04 (+Sense Load MSP REG)

Are the lights correct?

Y N

Y N

B C

**MINI-MDI MSP MAP
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003

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

- Bad card
- A-A1F2
- or---
- A-A1G2
- or---
- A-A1N2
- or---
- A-A1Q2.

004

Probe the following:

Up Light: Off or On
Down Light: Off

- (1) A-A1N2B06 (-MSP CTRL GT bit 15)
- (2) A-A1N2B09 (-MSP CTRL GT bit 12)
- (3) A-A1N2B10 (-MSP CTRL GT bit 11)
- (4) A-A1N2G05 (-MSP CTRL GT bit P)
- (5) A-A1N2G06 (-MSP CTRL GT bit 8)
- (6) A-A1N2D09 (-MSP CTRL GT bit 14)
- (7) A-A1N2D10 (-MSP CTRL GT bit 10)
- (8) A-A1N2J04 (-MSP CTRL GT bit 9)
- (9) A-A1N2J09 (-MSP CTRL GT bit 13)

Are the lights correct for any of the above?

Y N

005

- Bad card
- A-A1P2.

006

- Bad card
- A-A1N2.

A

MAP 1582-2

007

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE34' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On
Down Light: On

(1) A-A1C2D04 (+Sense Load MSP REG)
Are the lights correct?

Y N

008

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

- Bad card
- A-A1C2
- or---
- A-A1D2
- or---
- A-A1J2
- or---
- A-A1L2.

009

Probe the following:

Up Light: Off or On
Down Light: Off

- (1) A-A1J2B06 (-MSP CTRL GT bit 15)
 - (2) A-A1J2B09 (-MSP CTRL GT bit 12)
 - (3) A-A1J2B10 (-MSP CTRL GT bit 11)
 - (4) A-A1J2G05 (-MSP CTRL GT bit P)
 - (5) A-A1J2G06 (-MSP CTRL GT bit 8)
 - (6) A-A1J2D09 (-MSP CTRL GT bit 14)
 - (7) A-A1J2D10 (-MSP CTRL GT bit 10)
 - (8) A-A1J2J04 (-MSP CTRL GT bit 9)
- (Step 009 continues)

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MAP 1582-2

MINI-MDI MSP MAP

MAP 1582-3

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(Step 009 continued)

(9) A-A1J2J09 (-MSP CTRL GT bit 13)

Are the lights correct for any of the above?

Y N

010

Bad card

A-A1K2

---or---

A-A1J2.

011

Bad card

A-A1J2.

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EC 835083 PEC 832850

MAP 1582-3

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	004	1562	A
3	013	1562	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This MAP determines why an incorrect value is being sensed from the PSR.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1G2, A-A1N2 and A-A1P2.

Level 2 board:

A-A1D2, A-A1J2 and A-A1K2.

Is there a card in the A-A1B2 position?

Y N

002

-Press Reset (CE panel).

-Set the Address/Data switches to

'EE38' (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1G2D05 (+Sense/Load MSP REGS)

Are the lights correct?

Y N

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MAP 1584-1

2 2 2
A B C

B C
1 1

**MINI-MDI MSP MAP
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003

Probe the following:

Up Light: Off or On
Down Light: Off

(1) A-A1G2D05 (+Sense/Load MSP REGS)

Are the lights correct?

Y N

004

Go To Map 1562, Entry Point A.

005

Bad card
A-A1G2.

006

-Press Reset (CE panel).
-Set the Address/Data switches to
'EE56' (CE panel).
-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1N2D04 (+LSR SEL bit 0)

Are the lights correct?

Y N

007

Bad card
A-A1N2.

D

A D
1 1

MAP 1584-2

008

Remove A-A1P2 card.
-Set Power to 1 (operator panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1N2D04 (+LSR SEL bit 0)

Are the lights correct?

Y N

009

Bad card
A-A1P2.

010

Bad card
A-A1N2.

011

-Press Reset (CE panel).
-Set the Address/Data switches to
'EE38' (CE panel).
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1D2D05 (+Sense/Load MSP REGS)

Are the lights correct?

Y N

3 3
E F

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MAP 1584-2

E F
2 2

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
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012

Probe the following:

Up Light: Off or On
Down Light: Off

(1) A-A1D2D05 (+Sense/Load MSP REGS)

Are the lights correct?

Y N

013

Go To Map 1562, Entry Point A.

014

Bad card
A-A1D2.

015

-Press Reset (CE panel).
-Set the Address/Data switches to
'EE56' (CE panel)
-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1J2D04 (+LSR SEL bit 0)

Are the lights correct?

Y N

016

Bad card
A-A1J2.

G

MAP 1584-3

017

Remove A-A1K2 card.
-Set Power to 1 (operator panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1J2D04 (+LSR SEL bit 0)

Are the lights correct?

Y N

018

Bad card
A-A1K2.

019

Bad card
A-A1J2.

G

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MAP 1584-3

INSTRUCTION EXECUTION TEST 2

MAP 1585-1

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP is unable to execute an MSP instruction properly.

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1K2, A-A1N2, A-A1P2 and A-A1Q2.

Level 1 board:

A-A1G2, A-A1J2, A-A1K2 and A-A1L2.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE75' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1K2G06 (-Start MSP)

Are the lights correct?

Y N

Y	N

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MAP 1585-1

2 2 2
A B C

A B C

MINI-MDI MSP MAP
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D E F

MAP 1585-2

003

Did this pin have the Up light Off and the Down light On?

Y N

004

Bad card
A-A1K2.

005

Bad card
A-A1K2
---or---
A-A1N2.

006

Bad card
A-A1N2
---or---
A-A1P2
---or---
A-A1Q2.

007

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE75' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1G2G06 (-Start MSP)

Are the lights correct?

Y N

008

Did this pin have the Up light Off and the Down light On?

Y N

D E F

009

Bad card
A-A1G2.

010

Bad card
A-A1G2
---or---
A-A1J2.

011

Bad card
A-A1J2
---or---
A-A1K2
---or---
A-A1L2.

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MAP 1585-2

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	005	1560	A
4	020	1560	A
3	016	1587	A
5	031	1587	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI has detected an error while loading and sensing the registers on cards A-A1N2 and A-A1P2 (part 1).

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1F2, A-1A1N2, A-A1P2 and A-A1Q2.

Level 2 board:

A-A1C2, A-1A1J2, A-A1K2 and A-A1L2.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to EE35 (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console. Probe the following:

Up Light: On
Down Light: On

(1) A-A1F2G09 (+write MSP registers)
(Step 002 continues)

MINI-MDI MSP MAP

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PAGE 2 OF 5

C

MAP 1586-2

(Step 002 continued)
Are the lights correct?

Y N

003

Did this pin have the Up light off and the Down light on?

Y N

004

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2.

005

Go To Map 1560, Entry Point A.

006

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1N2S06 (-write LSRH)

Are the lights correct?

Y N

007

Did this pin have the Up light off and the Down light on?

Y N

008

Bad card
A-A1N2.

009

Remove card A-A1P2.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE39 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1N2S06 (-write LSR high)

Are the lights correct?

Y N

010

Bad card
A-A1N2.

011

Bad card
A-A1P2.

3
B C

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PEC 835083

MAP 1586-2

B
2

**MINI-MDI MSP MAP
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012

- Press Reset (CE panel).
 - Set the Address/Data switches to EE36 (CE panel)
 - Press CE Start (CE panel).
- Probe the following:

Up Light: On
Down Light: On or Off

- (1) A-A1Q2B09 (+MSP LSR bit P)
- (2) A-A1Q2B10 (+MSP LSR bit 6)
- (3) A-A1Q2B11 (+MSP LSR bit 2)
- (4) A-A1Q2M02 (+MSP LSR bit 3)
- (5) A-A1Q2D09 (+MSP LSR bit 5)
- (6) A-A1Q2D11 (+MSP LSR bit 7)
- (7) A-A1Q2J02 (+MSP LSR bit 4)
- (8) A-A1Q2P02 (+MSP LSR bit 1)
- (9) A-A1Q2P05 (+MSP LSR bit 0)

Are the lights correct?

Y N

013

- Remove A-A1Q2 card.
- Jumper A-A1Q2S05 to ground.
- Jumper A-A1Q2P09 to A-A1Q2M13.
- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE36 (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up On
(Step 013 continues)

D

A D
1

MAP 1586-3

(Step 013 continued)
Down On or Off

- (1) A-A1Q2B09 (+MSP LSR bit P)
- (2) A-A1Q2B10 (+MSP LSR bit 6)
- (3) A-A1Q2B11 (+MSP LSR bit 2)
- (4) A-A1Q2M02 (+MSP LSR bit 3)
- (5) A-A1Q2D09 (+MSP LSR bit 5)
- (6) A-A1Q2D11 (+MSP LSR bit 7)
- (7) A-A1Q2J02 (+MSP LSR bit 4)
- (8) A-A1Q2P02 (+MSP LSR bit 1)
- (9) A-A1Q2P05 (+MSP LSR bit 0)

Are the lights correct?

Y N

014

- Bad card
- A-A1P2.
- Remove all jumpers

015

- Bad card
- A-A1Q2.
- Remove all jumpers

016

Go To Map 1587, Entry Point A.

017

- Press Reset (CE panel).
- Set the Address/Data switches to EE35 (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

- (1) A-A1C2G09 (+write MSP registers)

Are the lights correct?

Y N

4 4
E F

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MAP 1586-3

E F
3 3

MINI-MDI MSP MAP
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H

MAP 1586-4

018

Did this pin have the Up light off and the Down light on?
Y N

019

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.
Bad card
A-A1C2.

020

Go To Map 1560, Entry Point A.

021

Probe the following:

Up Light: On
Down Light: On

(1) A-A1J2S06 (-write LSRH)

Are the lights correct?

Y N

022

Did this pin have the Up light off and the Down light on?
Y N

023

Bad card
A-A1J2.

024

Remove card A-A1K2.
-Set Power to 1 (operator panel).
-Set Mode Selector to Proc Run (CE panel).
-Set Address/Data to X'EE00'.
-Set MSIPL to Diskette (CE panel).
-Set CSIPL to Diskette (CE panel).
-Set all other CE panel switches to their down position.
Insert diskette DIAGB1.
-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).
-Set the Address/Data switches to EE39 (CE panel)
-Press CE Start (CE panel).
NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1J2S06 (-write LSR high)

Are the lights correct?

Y N

025

Bad card
A-A1J2.

026

Bad card
A-A1K2.

5 G
H

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EC 835159 PEC 835083
MAP 1586-4

G
4

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
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027

-Press Reset (CE panel).
-Set the Address/Data switches to EE36 (CE panel)
-Press CE Start (CE panel).
Probe the following:

Up Light: 0n
Down Light: 0n or 0ff

- (1) A-A1L2B09 (+MSP LSR bit P)
- (2) A-A1L2B10 (+MSP LSR bit 6)
- (3) A-A1L2B11 (+MSP LSR bit 2)
- (4) A-A1L2M02 (+MSP LSR bit 3)
- (5) A-A1L2D09 (+MSP LSR bit 5)
- (6) A-A1L2D11 (+MSP LSR bit 7)
- (7) A-A1L2J02 (+MSP LSR bit 4)
- (8) A-A1L2P02 (+MSP LSR bit 1)
- (9) A-A1L2P05 (+MSP LSR bit 0)

Are the lights correct?

Y N

028

Remove A-A1L2 card.
 Jumper A-A1L2S05 to ground.
 Jumper A-A1L2P09 to A-A1L2M13.
 -Set Power to 1 (operator panel).
 -Set Mode Selector to Proc Run (CE panel).
 -Set Address/Data to X'EE00'.
 -Set MSIPL to Diskette (CE panel).
 -Set CSIPL to Diskette (CE panel).
 -Set all other CE panel switches to their down position.
 Insert diskette DIAGB1.
 -Press Load (operator panel).
 When a message appears on the system console, press Reset (CE panel).
 -Set the Address/Data switches to EE36 (CE panel)
 -Press CE Start (CE panel).
 NOTE: Ignore any messages on the system console.
 Probe the following:

Up 0n
(Step 028 continues)

J

MAP 1586-5

(Step 028 continued)
Down 0n or 0ff

- (1) A-A1L2B09 (+MSP LSR bit P)
- (2) A-A1L2B10 (+MSP LSR bit 6)
- (3) A-A1L2B11 (+MSP LSR bit 2)
- (4) A-A1L2M02 (+MSP LSR bit 3)
- (5) A-A1L2D09 (+MSP LSR bit 5)
- (6) A-A1L2D11 (+MSP LSR bit 7)
- (7) A-A1L2J02 (+MSP LSR bit 4)
- (8) A-A1L2P02 (+MSP LSR bit 1)
- (9) A-A1L2P05 (+MSP LSR bit 0)

Are the lights correct?

Y N

029

Bad card
A-A1K2.
Remove all jumpers

030

Bad card
A-A1L2.
Remove all jumpers

031

Go To Map 1587, Entry Point A.

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 MAP 1586-5

J

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1586	A	1	001
1588	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	008	1589	A
3	015	1589	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI has detected an error while loading and sensing the register on cards A-A1N2 and A-A1P2 (part 2).

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1N2 and A-A1P2.

Level 2 board:

A-A1J2 and A-A1K2.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE56' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2S07 (-Write LSRL)

Are the lights correct?

Y N

2 2 2
A B C

C

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
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003

Did this pin have the Up light Off and the Down light on?

Y N

004

Bad card
A-A1N2.

005

Remove card A-A1P2.

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.

-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE57' (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2S07 (-Write LSRL)
Are the lights correct?

Y N

006

Bad card
A-A1N2.

007

Bad card
A-A1P2.

A B

MAP 1587-2

008

Go To Map 1589, Entry Point A.

009

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE56' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1J2S07 (-Write LSRL)
Are the lights correct?

Y N

010

Did this pin have the Up light Off and the Down light on?

Y N

011

Bad card
A-A1J2.

012

Remove card A-A1K2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).
When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to 'EE57' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
(Step 012 continues)

05JAN81 PN 4237625

EC 835083 PEC 832999

MAP 1587-2

3
D

D
2

MINI-MDI MSP MAP

MAP 1587-3

5340 SYSTEMS UNIT

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(Step 012 continued)

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1J2S07 (-Write LSRL)

Are the lights correct?

Y N

013

Bad card

A-A1J2.

014

Bad card

A-A1K2.

015

Go To Map 1589, Entry Point A.

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EC 835083 PEC 832999

MAP 1587-3

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	005	1560	A
2	010	1560	A
2	006	1587	A
2	011	1587	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI has detected an error while loading and sensing the registers on cards A-A1N2 and A-A1P2 (part 3).

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:
A-A1F2.

Level 2 board:
A-A1C2.

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE35' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1F2G09 (+write MSP registers)
(Step 002 continues)

A

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
PAGE 2 OF 2

(Step 002 continued)

Are the lights correct?

Y N

003

Did this pin have the Up light Off and the Down light on?

Y N

004

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2.

005

Go To Map 1560, Entry Point A.

006

Go To Map 1587, Entry Point A.

007

- Press Reset (CE panel).
- Set the Address/Data switches to 'EE35' (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1C2G09 (+write MSP registers)

Are the lights correct?

Y N

008

Did this pin have the Up light Off and the Down light on?

Y N

B C D

B C D

MAP 1588-2

009

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1C2.

010

Go To Map 1560, Entry Point A.

011

Go To Map 1587, Entry Point A.

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PN 4237626

EC 835083

PEC 832850

MAP 1588-2

5340 SYSTEMS UNIT

PAGE 1 OF 11

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0190	A	1	001
1587	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	011	1562	A
7	048	1562	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

The MSP MDI has detected an error while loading and sensing the registers on cards A-A1N2 and A-A1P2 (part 4).

START CONDITIONS:

The starting conditions are set up by MAP 0190. If you did not go through that MAP, return to it.

LOGIC CARDS TESTED:

Level 1 board:

A-A1F2, A-A1G2, A-A1K2, A-A1N2, A-A1P2, A-A1Q2, A-A1J2

Level 2 board:

A-A1C2, A-A1D2, A-A1G2, A-A1J2, A-A1K2, A-A1L2, A-A1F2

Is there a card in the A-A1B2 position?

Y N

002

- Press Reset (CE panel).
- Set the Address/Data switches to EE32 (CE panel)
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1K2G07 (+SYS RST or RST MSP)

(Step 002 continues)

MINI-MDI MSP MAP
5340 SYSTEMS UNIT
PAGE 2 OF 11

MAP 1589-2

(Step 002 continued)

Are the lights correct?

Y N

003

Did this pin have the Up light off and the Down light on?

Y N

004

Bad card
A-A1K2.

005

Remove card A-A1N2.
Jumper to ground:

A-A1N2G10
A-A1N2M06
A-A1N2M11

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE32 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1K2G07 (+SYS RST or RST MSP)

Are the lights correct?

Y N

B C D

B C D

006

Bad card
A-A1K2
---or---
A-A1G2
---or---
A-A1J2.
Remove all jumpers

007

Bad card
A-A1N2.
Remove all jumpers

008

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1G2D05 (+Sense/Load MSP registers)

Are the lights correct?

Y N

009

Did this pin have the Up light off and the Down light on?

Y N

010

Bad card
A-A1G2.

011

Go To Map 1562, Entry Point A.

3
E

05JAN81

PN 4237627

EC 835083

PEC 832871

MAP 1589-2

012

Probe the following:

Up Light: On

Down Light: On

(1) A-A1F2G04 (+CP clock SAR)

Are the lights correct?

Y N

013

Did this pin have the Up light off and the Down light on?

Y N

014

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2.

015

Remove card A-A1P2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE55 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On
(Step 015 continues)

(Step 015 continued)

Down Light: On

(1) A-A1F2G04 (+CP clock SAR gated)

Are the lights correct?

Y N

016

Reinstall card A-A1P2.

Remove card A-A1Q2.

Jumper A-A1Q2S05 to ground.

Jumper A-A1Q2P09 to A-A1Q2M13.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to

EE55 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1F2G04 (+CP clock SAR gated)

Are the lights correct?

Y N

4 4 4
G H J

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EC 835083 PEC 832871

MAP 1589-3

N
4

MINI-MDI MSP MAP
5340 SYSTEMS UNIT

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023

Probe the following:

UP Light: Off or On
Down Light: Off

(1) A-A1N2M04 (+MSGT SEL bit 2)

Are the lights correct?

Y N

024

Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2M04 (+MSGT SEL bit 2)

Are the lights correct?

Y N

025

Remove card A-A1P2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE56 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On
Down Light: On

(1) A-A1N2M04 (+MSGT SEL bit 2)
(Step 025 continues)

6
P Q

Q

MAP 1589-5

(Step 025 continued)

Are the lights correct?

Y N

026

Bad card
A-A1N2.

027

Bad card
A-A1P2.

028

-Press Reset (CE panel).

-Set the Address/Data switches to EE32 (CE panel).

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1N2G05 (-CTR GT bit P)

Are the lights correct?

Y N

029

-Press Reset (CE panel).

-Set the Address/Data switches to EE43 (CE panel).

-Press CE Start (CE panel).

Look at the system console for flashing information.

Is the received results 80?

Y N

6
R S T

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EC 835083 PEC 832871

MAP 1589-5

T
5

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

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030

- Press Reset (CE panel).
- Set the Address/Data switches to EE32 (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1K2G06 (-start MSP)

Are the lights correct?

Y N

031

Bad card
A-A1N2
---or---
A-A1P2

032

- Remove card A-A1N2.
 - Set Power to 1 (operator panel).
 - Press Reset (CE panel).
- Probe the following:

Up Light: Off
Down Light: On

(1) A-A1K2G06 (-start MSP)

Are the lights correct?

Y N

033

Bad card
A-A1N2

034

Bad card
A-A1K2

A M P R S
1 4 5 5 5

MAP 1589-6

035

Bad card
A-A1N2

036

Bad card
A-A1N2
---or---
A-A1P2

037

Bad card
A-A1N2

038

Bad card
A-A1N2

039

- Press Reset (CE panel).
 - Set the Address/Data switches to EE32 (CE panel))
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1G2G07 (+SYS RST or RST MSP)

Are the lights correct?

Y N

040

Did this pin have the Up light off and the Down light on?

Y N

041

Bad card
A-A1G2.

7 7
U V

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EC 835083 PEC 832871

MAP 1589-6

V
6

MINI-MDI MSP MAP
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042

Remove card A-A1J2.
Jumper to ground:

A-A1J2G10
A-A1J2M06
A-A1J2M11

- Set Power to 1 (operator panel).
 - Set Mode Selector to Proc Run (CE panel).
 - Set Address/Data to X'EE00'.
 - Set MSIPL to Diskette (CE panel).
 - Set CSIPL to Diskette (CE panel).
 - Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to EE32 (CE panel).
 - Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1G2G07 (+SYS RST or RST MSP)

Are the lights correct?

Y N

043

Bad card
A-A1G2
---or---
A-A1D2
---or---
A-A1F2.
Remove all jumpers

044

Bad card
A-A1J2.
Remove all jumpers

U
6

MAP 1589-7

045

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1D2D05 (+Sense/Load MSP registers)

Are the lights correct?

Y N

046

Did this pin have the Up light off and the Down light on?

Y N

047

Bad card
A-A1D2.

048

Go To Map 1562, Entry Point A.

049

Probe the following:

Up Light: 0n
Down Light: 0n

(1) A-A1C2G04 (+CP clock SAR)

Are the lights correct?

Y N

050

Did this pin have the Up light off and the Down light on?

Y N

9 8 8
W X Y

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EC 835083 PEC 832871

MAP 1589-7

X Y
7 7

MINI-MDI MSP MAP

5340 SYSTEMS UNIT

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051

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1C2.

052

Remove card A-A1K2.

- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE55 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1C2G04 (+CP clock SAR gated)

Are the lights correct?

Y N

9 A
Z A

MAP 1589-8

A
A

053

Reinstall card A-A1K2.

Remove card A-A1L2.

Jumper A-A1L2S05 to ground.

Jumper A-A1L2P09 to A-A1L2M13.

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

-Set Address/Data to X'EE00'.

-Set MSIPL to Diskette (CE panel).

-Set CSIPL to Diskette (CE panel).

-Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

-Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

-Set the Address/Data switches to EE55 (CE panel)

-Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: 0n

Down Light: 0n

(1) A-A1C2G04 (+CP clock SAR gated)

Are the lights correct?

Y N

054

Reinstall card A-A1L2.

Remove jumper from:

A-A1L2S05

Remove jumper from A-A1L2P09 to A-A1L2M13.

Remove card A-A1J2.

Jumper to ground:

A-A1J2G10

A-A1J2M06

A-A1J2M11

-Set Power to 1 (operator panel).

-Set Mode Selector to Proc Run (CE panel).

(Step 054 continues)

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EC 835083 PEC 832871

MAP 1589-8

9
A
B

**MINI-MDI MSP MAP
5340 SYSTEMS UNIT**

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(Step 054 continued)

- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.

Insert diskette DIAGB1.

- Press Load (operator panel).

When a message appears on the system console, press Reset (CE panel).

- Set the Address/Data switches to EE55 (CE panel)

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: On

Down Light: On

(1) A-A1C2G04 (+CP clock SAR gated)

Are the lights correct?

Y N

055

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1C2.

Remove all jumpers

056

Bad card

A-A1J2.

Remove all jumpers

057

Bad card

A-A1L2.

Remove all jumpers

058

Bad card

A-A1K2.

059

- Press Reset (CE panel).

- Set the Address/Data switches to EE56 (CE panel)

- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.

Probe the following:

Up Light: Off or On

Down Light: Off

(1) A-A1J2P05 (+MSGT SEL bit 3)

Are the lights correct?

Y N

060

Probe the following:

UP Light: Off or On

Down Light: Off

(1) A-A1J2M04 (+MSGT SEL bit 2)

Are the lights correct?

Y N

061

Probe the following:

Up Light: On

Down Light: On

(1) A-A1J2M04 (+MSGT SEL bit 2)

Are the lights correct?

Y N

1	1	1	1
1	1	0	0
A	A	A	A
C	D	E	F

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EC 835083 PEC 832871

062

- Remove card A-A1K2.
- Set Power to 1 (operator panel).
- Set Mode Selector to Proc Run (CE panel).
- Set Address/Data to X'EE00'.
- Set MSIPL to Diskette (CE panel).
- Set CSIPL to Diskette (CE panel).
- Set all other CE panel switches to their down position.
- Insert diskette DIAGB1.
- Press Load (operator panel).
- When a message appears on the system console, press Reset (CE panel).
- Set the Address/Data switches to EE56 (CE panel).
- Press CE Start (CE panel).

NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: On
Down Light: On

(1) A-A1J2M04 (+MSGT SEL bit 2)

Are the lights correct?

Y N

063

Bad card
A-A1J2.

064

Bad card
A-A1K2.

065

- Press Reset (CE panel).
 - Set the Address/Data switches to EE32 (CE panel).
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1J2G05 (-CTR GT bit P)

Are the lights correct?

Y N

066

- Press Reset (CE panel).
 - Set the Address/Data switches to EE43 (CE panel).
 - Press CE Start (CE panel).
- Look at the system console for flashing information.

Is the received results 80?

Y N

067

- Press Reset (CE panel).
 - Set the Address/Data switches to EE32 (CE panel).
 - Press CE Start (CE panel).
- NOTE: Ignore any messages on the system console.
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1G2G06 (-start MSP)

Are the lights correct?

Y N

1 1 1 1
1 1 1 1
A A A A
G H J K

05JAN81 PN 4237627

EC 835083 PEC 832871

MAP 1589-10

A A A A A A
C D G H J K
9 9 1 1 1 1
0 0 0 0 0 0

MINI-MDI MSP MAP
5340 SYSTEMS UNIT

MAP 1589-11

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068

Bad card
A-A1J2
---or---
A-A1K2

069

Remove card A-A1J2.
-Set Power to 1 (operator panel).
-Press Reset (CE panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1G2G06 (-start MSP)

Are the lights correct?

Y N

070

Bad card
A-A1J2

071

Bad card
A-A1G2

072

Bad card
A-A1J2

073

Bad card
A-A1J2
---or---
A-A1K2

074

Bad card
A-A1J2

075

Bad card
A-A1J2

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EC 835083 PEC 832871

MAP 1589-11

OP PANEL MAP 1
5340 SYSTEMS UNIT

MAP 2101-1

PAGE 1 OF 12

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001
0105	A	1	001
0351	A	1	001
0351	B	7	016

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
12	035	0500	A

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

MAP DESCRIPTION:

This is an operator and CE subpanel check out MAP.

START CONDITIONS:

None

LOGIC CARDS TESTED:

Operator panel and associated logic

Note: Section 21-000 of the Maintenance Manual has instructions on removal and/or replacement of the operator panel--Operator Panel Drawing (Vol D, OP015).

Did you come to this MAP because Power Check and/or Thermal Check are bad (operator panel)?

Y N

002

-Press Reset (CE panel).

Are all lights, except the Power On Light, Off (operator panel and CE subpanel) (ignore P0 and P1)?

Y N

C
1

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 2 OF 12

MAP 2101-2

003

Use Chart A to repair the wrong indicator.

Chart A
(Level 1 board)

Wrong indicator	Bad card
Load	A-A1F2* card ---or--- A-A1A2 cable
System in use	A-A1K2 card ---or--- A-A1A2 cable
MSP running	A-A1F2* card ---or--- A-A1A2 cable
Stop	A-A1K2 card ---or--- A-A1A2 cable
Proc check	A-A1J2 card ---or--- A-A1K2 card ---or--- A-A1A2 cable
Power check	Go to MAP 0500,A
Thermal check	Go to MAP 0500,A

*

Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

(Step 003 continues)

Chart A

05JAN81 PN 4237629
EC 835083 PEC 832999
MAP 2101-2

OP PANEL MAP 1
5340 SYSTEMS UNIT

MAP 2101-3

PAGE 3 OF 12

(Step 003 continued)

(Level 2 board)

Wrong indicator	Bad card
Load	A-A1C2* card ---or--- A-A1A2 cable
System in use	A-A1G2 card ---or--- A-A1A2 cable
MSP running	A-A1C2* card ---or--- A-A1A2 cable
Stop	A-A1G2 card ---or--- A-A1A2 cable
Proc check	A-A1F2 card ---or--- A-A1G2 card ---or--- A-A1A2 cable
Power check	Go to MAP 0500,A
Thermal check	Go to MAP 0500,A

*

Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

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EC 835083 PEC 832999

MAP 2101-3

B

**OP PANEL MAP 1
5340 SYSTEMS UNIT**

MAP 2101-4

PAGE 4 OF 12

004

-Press Reset (CE panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1J2J04 (-Load Key Pressed)

---or---

Level 2 board

(2) A-A1F2J04 (-Load Key Pressed)

Are the lights correct?

Y N

005

Leave the probe on the failing pin.
Remove cable A-A1A2 from board A-A1.
Jumper from C-A1B2B13 to C-A1B2D08.
Remove the jumper (see Note 1).

Note 1: Installing and removing this jumper simulates setting Power to 1.

Up Light: On
Down Light: Off

Are the lights correct?

Y N

006

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board).

Note 2: Installing and removing this jumper simulates setting Power to 0.

007

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Check for a bad cable A-A1A2 from the CE panel to Board A-A1.
---or---
Check for a failing key on the operator/CE subpanel.

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MAP 2101-4

5
D

D
4

**OP PANEL MAP 1
5340 SYSTEMS UNIT**

MAP 2101-5

PAGE 5 OF 12

008

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A2B07 (-Load Key Released)

Are the lights correct?

Y N

009

Check for a bad cable A-A1A2 from the CE panel to the Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

010

Press and hold Load (operator panel).

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A2B06 (-Load Key Pressed)

Are the lights correct?

Y N

011

Check for a bad cable A-A1A2 from the CE panel to the Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

E
6

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MAP 2101-5

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 6 OF 12

012

Press and hold Load (operator panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1F2J09 (-Load Key Released)

---or---

Level 2 board

(2) A-A1C2J09 (-Load Key Released)

Are the lights correct?

Y N

013

Release Load (operator panel).
Leave the probe on the failing pin.
Remove cable A-A1A2 from Board A-A1.
Jumper from C-A1B2B13 to C-A1B2D08.
Remove the jumper (see Note 1).
Press and hold load (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

014

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Note: Before you install an A-A1F2 (Level 1 board) or an A-A1C2 (Level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2 (Level 1 board)
---or---
A-A1C2 (Level 2 board)

Note 1: Installing and removing this jumper simulates setting Power to 1.

Note 2: Installing and removing this jumper simulates setting Power to 0.

F G
6 6

OP PANEL MAP 1

MAP 2101-7

5340 SYSTEMS UNIT

PAGE 7 OF 12

015

Jumper from C-A1B2D10 to C-A1B2D08.

Remove the jumper (see Note 2).

Check for a bad cable A-A1A2 from the CE panel to Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

Note 2: Installing and removing this jumper simulates setting Power to 0.

016

(Entry Point B)

Release Load (operator panel).

-Press Reset (CE panel).

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1A2B08 (+Stop Key Pressed)

Are the lights correct?

Y N

017

Check for a bad cable A-A1A2 from the CE panel to the Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

018

-Press Reset (CE panel).

Probe the following:

Up Light: On

Down Light: Off

Level 1 board

(1) A-A1K2D12 (-OP Start Key Pressed)

---or---

Level 2 board

(2) A-A1G2D12 (-OP Start Key Pressed)

(Step 018 continues)

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EC 835083

PEC 832999

MAP 2101-7

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 8 OF 12

MAP 2101-8

(Step 018 continued)

Are the lights correct?

Y N

019

Leave the probe on the failing pin.
Remove cable A-A1A2 from board A-A1.
Jumper from C-A1B2B13 to C-A1B2D08.
Remove the jumper (see Note 1).

Note 1: Installing and removing this jumper simulates setting Power to 1.

Up Light: 0n
Down Light: 0ff

Are the lights correct?

Y N

020

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

Note 2: Installing and removing this jumper simulates setting Power to 0.

021

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Check for a bad cable A-A1A2 from the CE panel to Board A-A1.
Check for a failing key on the operator/CE subpanel.

022

-Press Reset (CE panel).
Probe the following:

Up Light: 0ff
Down Light: 0n

(1) A-A1A2B05 (-OP Start Key Released)

Are the lights correct?

Y N

9 9
H J

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EC 835083 PEC 832999
MAP 2101-8

H J
8 8

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 9 OF 12

MAP 2101-9

023

Check for a bad cable A-A1A2 from the CE panel to the Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

024

Press and hold Start (CE subpanel).

Probe the following:

Up Light: Off

Down Light: On

(1) A-A1A2B04 (-OP Start Key Pressed)

Are the lights correct?

Y N

025

Check for a bad cable A-A1A2 from the CE panel to the Board A-A1.

---or---

Check for a failing key on the operator/CE subpanel.

026

Press and hold Start (CE subpanel).

Probe the following:

Up Light: On

Down Light: Off

Level 1 board

(1) A-A1K2D04 (-OP Start Key Released)

---or---

Level 2 board

(2) A-A1G2D04 (-OP Start Key Released)

Are the lights correct?

Y N

1 1
0 0
K L

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EC 835083 PEC 832999

MAP 2101-9

K L
9 9

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 10 OF 12

MAP 2101-10

027

Leave the probe on the failing pin.
Remove cable A-A1A2 from Board A-A1.
Jumper from C-A1B2B13 to C-A1B2D08.
Remove the jumper (see Note 1).

Note 1: Installing and removing this jumper simulates setting Power to 1.

Up Light: On
Down Light: Off

Are the lights correct?

Y N

028

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

Note 2: Installing and removing this jumper simulates setting Power to 0.

029

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Check for a bad cable A-A1A2 from the CE panel to Board A-A1.
Check for a failing key on the operator/CE subpanel.

030

Press and hold Stop (CE subpanel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1K2D06 (+Stop Key Pressed)

---or---

Level 2 board

(2) A-A1G2D06 (+Stop Key Pressed)

Are the lights correct?

Y N

1 1
2 1
M N

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EC 835083

PEC 832999

MAP 2101-10

N
1
0

OP PANEL MAP 1
5340 SYSTEMS UNIT

MAP 2101-11

PAGE 11 OF 12

031

Leave the probe on the failing pin.
Remove cable A-A1A2 from Board A-A1.
Jumper from C-A1B2B13 to C-A1B2D08.
Remove the jumper (see Note 1).

Note 1: Installing and removing this jumper simulates setting Power to 1.

Up Light: On
Down Light: Off

Are the lights correct?

Y N

032

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Bad card
A-A1K2 (Level 1 board)
---or---
A-A1G2 (Level 2 board)

Note 2: Installing and removing this jumper simulates setting Power to 0.

033

Jumper from C-A1B2D10 to C-A1B2D08.
Remove the jumper (see Note 2).
Check for a bad cable A-A1A2 from the CE panel to Board A-A1.
Check for a failing key on the operator/CE subpanel.

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EC 835083 PEC 832999

MAP 2101-11

A M
1
0

OP PANEL MAP 1
5340 SYSTEMS UNIT
PAGE 12 OF 12

MAP 2101-12

034

Release Stop (CE subpanel).
-Press Reset (CE panel).

Operator panel and CE subpanel function correctly.
See Chart A to right for next Entry Point.

Chart A

use the MAP number this MAP (2101) was entered from to find next entry point.	
From MAP	Go To MAP
0101	0101-2, Entry Point B
0105	0101-2, Entry Point B
0351	0351-4, Entry Point D

035

Go To Map 0500, Entry Point A.

OP PANEL MAP 2
5340 SYSTEMS UNIT

MAP 2103-1

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0105	A	1	001

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	013	0311	A

001

(Entry Point A)

-Set CSIPL to Diskette (CE panel).
 Open the diskette drive cover.

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

-Press Reset (CE panel).

Probe the following:

Up Light: On
 Down Light: Off

Level 1 board

(1) A-A1J2J04 (-Load Key Pressed)

---or---

Level 2 board

(2) A-A1F2J04 (-Load Key Pressed)

Are the lights correct?

Y N

002

Leave the probe on the failing pin.
 Remove cable A-A1A2 from the CE panel to board A-A1.
 -Set Power to 1 (operator panel).

Up Light: On
 Down Light: Off

Are the lights correct?

Y N

2 2 2
 A B C

MAP DESCRIPTION:

This MAP determines why Load (operator panel) does not turn on during CSIPL.

START CONDITIONS:

None

LOGIC CARDS TESTED:

Level 1 board
 A-A1J2, A-A1F2
 Level 2 board
 A-A1F2, A-A1C2
 load key stop light, cable from OP panel to board A-A1.

Note: Section 21-000 of the Maintenance Manual has instructions on removal and/or replacement of the operator panel.

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MAP 2103-1

A B C
1 1 1

OP PANEL MAP 2
5340 SYSTEMS UNIT
PAGE 2 OF 3

003

Bad card
A-A1J2 (Level 1 board)
---or---
A-A1F2 (Level 2 board)

004

Check for a bad cable A-A1A2 from the CE panel to board A-A1.
---or---
Check for a failing key on the operator panel.

005

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A2B07 (-Load Key Released)

Are the lights correct?

Y N

006

Check for a bad cable A-A1A2 from the CE panel to board A-A1.
---or---
Check for a failing key on the operator panel.

007

Press and hold Load (operator panel).
Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A2B06 (-Load Key Pressed)

Are the lights correct?

Y N

D E

D E

MAP 2103-2

008

Check for a bad cable A-A1A2 from the CE panel to board A-A1.
---or---
Check for a failing key on the operator panel.

009

Press and hold Load (operator panel).
Probe the following:

Up Light: On
Down Light: Off

Level 1 board

(1) A-A1F2J09 (-Load Key Released)

---or---

Level 2 board

(2) A-A1C2J09 (-Load Key Released)

Are the lights correct?

Y N

010

Leave the probe on the failing pin.
Remove cable A-A1A2 from the CE panel to board A-A1.
-Set Power to 1 (operator panel).

Up Light: On
Down Light: Off

Are the lights correct?

Y N

011

Note: Before you install an A-A1F2 (level 1 board)/A-A1C2 (level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card

A-A1F2 (Level 1 board)

---or---

A-A1C2 (Level 2 board)

3 3
F G

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EC 835083 PEC 832850

MAP 2103-2

F G
2 2

OP PANEL MAP 2
5340 SYSTEMS UNIT

MAP 2103-3

PAGE 3 OF 3

012

Check for a bad cable A-A1A2 from the CE panel to board A-A1.

---or---

Check for a failing key on the operator panel.

013

The Load key functions correctly.

Go To Map 0311, Entry Point A.

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PEC 832850

MAP 2103-3

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
0101	A	1	001

001

(Entry Point A)

Note: Level 1 board does not have a card in the A-A1B2 position.

Level 2 board has a card in the A-A1B2 position.

-Set Power to 1 (operator panel).

Connect CE probe +V to C-A1B2D03 and ground to C-A1B2D08.

Probe the following:

Up Light: Off

Down Light: On

(1) C-A1B2G12 (+System Power on Reset)

MAP DESCRIPTION:

This MAP determines why Stop (CE subpanel) does not turn on when the machine is on and why the MSP (CE subpanel) does not stay off when the machine is on.

START CONDITIONS:

None

LOGIC CARDS TESTED:

Level 1 board

A-A1J2, A-A1K2, A-A1F2, C-A1B2

Level 2 board

A-A1F2, A-A1G2, A-A1C2, C-A1B2, stop light, MSP run light, cable from OP panel to board A-A1, cable from C-A1 to A-A1Y1.

Note: Section 21-000 of the Maintenance Manual has instructions on removal and/or replacement of the operator panel.

Are the lights correct?

Y N

002

Did this pin have the up light On and the down light Off?

Y N

003

Bad card
C-A1B2

B
1

POWER ON RESET MAP
5340 SYSTEMS UNIT
PAGE 2 OF 3

004

Is this system configured for 62PC disks?

Y N

005

Bad card
C-A1B2

006

Leave the probe on the failing pin.

Remove cards:

E-A1F2

E-B1F2 (if installed)

E-C1F2 (if installed)

E-D1F2 (if installed) (10-160)

-Set Power to 1 (operator panel).

Up Light: Off

Down Light: On

Are the lights correct?

Y N

007

Bad card
C-A1B2

008

Bad card

E-A1F2

---or---

E-B1F2

---or---

E-C1F2

---or---

E-D1F2 (10-160).

A
1

MAP 2105-2

009

Level 1 board

Change CE probe +V to A-A1K2D03 and ground to A-A1K2D08.

---or---

Level 2 board

Change CE probe +V to A-A1G2D03 and ground to A-A1G2D08.

Probe the following:

Up Light: Off

Down Light: On

Level 1 board

(1) A-A1K2B07 (+System Power on Reset)

---or---

Level 2 board

(2) A-A1G2B07 (+System Power on Reset)

Are the lights correct?

Y N

010

Net YA301CD4 (+System Power on Reset) is open between C-A1B2 and A-A1K2 (Level 1 board)

---or---

A-A1G2 (Level 2 board) (see FSL, Vol D).

011

Is the Stop light Off?

Y N

012

Probe the following:

Up Light: On

Down Light: Off

Level 1 board

(1) A-A1F2U05 (-MSP Run IND)

---or---

Level 2 board

(2) A-A1C2U05 (-MSP Run IND)

(Step 012 continues)

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EC 835201

PEC 835083

3
C

MAP 2105-2

C
2

**POWER ON RESET MAP
5340 SYSTEMS UNIT**

PAGE 3 OF 3

(Step 012 continued)
Are the lights correct?

Y N

013

Note: Before you install an A-A1F2 (Level 1 board) or an A-A1C2 (Level 2 board) card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See Vol D (FSL, PC024) for the location of the jumpers.

Bad card
A-A1F2 (Level 1 board)
---or---
A-A1C2 (Level 2 board)

014

Check for bad cable A-A1A2 from board A-A1 to operator panel
---or---
check for a failing MSP Run light on CE subpanel.

015

Probe the following:

Up Light: Off
Down Light: On

Level 1 board
(1) A-A1K2J06 (-Stop Indicator)
---or---
Level 2 board
(2) A-A1G2J06 (-Stop Indicator)

Are the lights correct?

Y N

D E

D E

MAP 2105-3

016

Probe the following:

Up Light: Off
Down Light: On

(1) A-A1A5B12 (- Reset Key Pressed to Processor).

Are the lights correct?

Y N

017

Bad card
Level 1 board
A-A1K2
---or---
A-A1J2
---or---
Level 2 board
A-A1G2
---or---
A-A1F2.

018

Bad card
A-A1J2 (Level 1 board).
---or---
A-A1F2 (Level 2 board)
---or---
Bad cable.
A-A1A5
---or---
Bad reset key on CE panel.

019

Check for bad cable A-A1A2 from board A-A1 to operator panel
---or---
check for a failing Stop light on CE subpanel.

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EC 835201 PEC 835083

MAP 2105-3

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
2704	A	1	001
2705	A	1	001

001

(Entry Point A)

Disconnect the carriage bed stepper motor cable plug J4 from the drive board (location aid 27-805). Check that the carriage bed does not bind.

MAP DESCRIPTION:

This MAP isolates the carriage bed failures (72MD).

START CONDITIONS:

MAP entry should be as a result of diskette MDI direction.

LOGIC CARDS TESTED:

File the control card.

Is the carriage bed free to move?

Y N

002

Locate the bind or the obstruction. Perform bed to drive bezel adjustment(27-305). Perform picker/cam bezel to carriage bed service check(27-415).

003

Connect plug J4. If the carriage bed motion is unstable or if the carriage bed fails to reach the orient switch (location aid 27-260) while moving to the right during an orient operation, the carriage bed stepper motor or its control circuitry may be failing.

During an orient operation, the carriage bed will move to the right until the carriage bed orient switch is activated. Then there is movement to the left until the switch is deactivated and I/O slot 1 aligns with the diskette guide.

Press the Reset switch (CE panel) to orient the carriage bed.

Observe the carriage bed motion.

Is the carriage bed movement smooth?

Y N

Y N

A B
| |

BED ERRORS
5340 SYSTEMS UNIT
PAGE 2 OF 3

004

The stepper motor control is failing.
Go to Step 009, Entry Point B.

005

The carriage bed while moving to the right during an orient operation must activate the Orient switch.

Does the bed carriage move to the switch?

Y N

006

The stepper motor control is failing.
Go to Step 009, Entry Point B.

007

Perform the orient switch service check(27-260).
If no adjustment or replacement is necessary, perform the bed orient service check(27-290) and the bed stop service check(27-230).

Is the carriage bed oriented?

Y N

008

Perform the bed orient adjustment(27-295).
If unable to orient the carriage bed after adjustment is made the stepper motor or its control circuitry is failing.

Go to Step 009, Entry Point B.

009

(Entry Point B)

Test the signals from the file control card to the driver board(27-845).

Are the levels correct?

Y N

010

The driver board or the file control card is failing.

C

C

MAP 2718-2

011

Test the voltage levels from the driver board to the bed motor(27-805).

Are the levels correct?

Y N

012

Disconnect the bed motor from the driver board and measure the resistance of each stepper coil (27-275).

Are the coils OK?

Y N

013

The stepper motor is bad (27-245).

014

Check the +5 Vdc and the +24 Vdc at the file control card test points(27-820). If there is a power problem see 05-240 and 05-360 for power distribution.

If the voltages are OK, the driver board or the cable from the control card is failing.

015

Disconnect the bed motor from the driver board and measure the resistance of each stepper coil (27-275).

Are the coils OK?

Y N

016

The stepper motor is bad (27-245).

017

Check that the stepper motor pulley is clamped tight on the motor shaft and that the motor and nut plate are tight.

Are the parts tight?

Y N

018

Adjust and tighten(27-295)

3
D

15DEC78

PN 4238258

EC 833174

PEC -----

MAP 2718-2

D
2

BED ERRORS
5340 SYSTEMS UNIT
PAGE 3 OF 3

MAP 2718-3

019

Check the carriage bed belt. If the belt is off, attach it.
If the belt is stretched or damaged exchange it with a
good one (27-255).
If the belt is OK, the file control card is bad.

15DEC78 PN 4238258
EC 833174 PEC -----
MAP 2718-3



1000

1000
1000
1000



72MD AUTOLOADER PICKER ERRORS

MAP 2719-1

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
2704	A	1	001
2705	A	1	001

001

(Entry Point A)

Disconnect the picker stepper motor cable plug J3 from the driver board (location aid 27-805). Check that the picker/cam assembly does not bind.

MAP DESCRIPTION:

This MAP isolates the picker failures (72MD).

START CONDITIONS:

MAP entry should be as a result of diskette MDI direction (72MD).

LOGIC CARDS TESTED:

File the control card.

Is the picker free to move?

Y N

002

Locate the bind or the obstruction. Adjust or replace as required. See 27-410 or 27-400).

003

Connect the J3 plug. Perform the picker finger assembly service check (27-455).

First make sure that the collar on the picker/cam stepper motor shaft is tight (location aid 27-420).

Perform the picker rest sensor service check (27-465).

Perform the picker extend service check (27-480).

If no adjustment or replacement is necessary check the +5 Vdc and the +24 Vdc test pins (location aid 27-820). (Step 003 continues)

PICKER ERROR
5340 SYSTEMS UNIT

PAGE 2 OF 2

(Step 003 continued)

Are the voltages OK?

Y N

004

The failure is in the DC distribution. see 05-240 and 05-360 (Vol B) and 27-825.

005

Test the signals from the control card.(27-850)

Is each line at the proper level?

Y N

006

The driver board or the file control card is failing.

007

Test the voltages from the driver board to the motor(27-800).

Are the voltage levels correct?

Y N

008

Disconnect the picker motor cable at the driver board.

Measure the resistance of each stepper motor coil (27-490).

Are the coils OK?

Y N

009

The stepper motor is bad.

010

The driver board is failing or the cable from the the file control card is bad.

011

Disconnect the picker motor cable at the driver board.

Measure the resistance of each stepper motor coil (27-490).

Are the coils OK?

Y N

A B

A B

012

The stepper motor is bad.

013

Perform the picker/cam timing service check(27-405). If no problem is found, the file control card is bad.

MAP 2719-2

15DEC78

PN 4238259

EC 833174

PEC -----

MAP 2719-2

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		

MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER

0175	A	001	001
0190	A	001	001
0199	A	001	001
0701	A	001	001
0705	A	001	001
0771	A	001	001
0801	A	001	001
0802	A	001	001
0897	A	001	001
0990	A	001	001
0998	A	001	001

MAP DESCRIPTION:

This MAP contains an index of all Intermittent Failure Replacement Lists and procedures of how to use them.

START CONDITIONS:

None

LOGIC CARDS TESTED:

None

(Entry Point A)
001

INTERMITTENT FAILURE REPLACEMENT LIST

The following MAPS (from MAP 5002 to MAP 5010) are represented in a matrix form. These matrices are used to aid the CE in quickfixing a problem. By identifying the symptoms and the area in which the problem exists, the CE can go to that area's Matrix and install the cards in the column under the symptom. The cards should be installed in the order that they are listed. After each card is installed, the CE should verify if the replacement has fixed the

IFRL INDEX
5340 SYSTEMS UNIT

MAP 5001-2

PAGE 2 OF 2

problem. Continue this process until locating the problem or completing the cards listed in that column. If all fail, see the System Entry MAP or attempt another method.

EXAMPLE:

For symptom S2 in the work station area (MAP 5003), first install A-A2P4 and see if it repairs the problem. If not, then install A-A2Q4 and attempt it again. Continue until you have installed all four cards listed for this symptom (for an area that does not have any symptoms, there is no order of card to be installed).

Note 1: These matrices are not intended to be used in place of the MAPs. They are used as supplemental information to the MAPs.

TABLE OF CONTENTS

<u>MAP Number</u>	<u>Description</u>
5001	Introduction--How To Use
5002	CS and MS Processor
5003	Work Station (without Work Station Control Expansion 'C')
5004	Diskette
5005	Data Communication
5006	62EH Disk
5007	5211 Line Printer
5008	Power
5009	62PC Disk
5010	3262 Line Printer
5011	MLCA Data Communication IFRL
5012	Work Station (with Work Station Control Expansion 'C')

07JUL80 PN 4237670
EC 835000 PEC 834824
MAP 5001-2

5340 SYSTEMS UNIT

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
5001	A	001	001

MAP DESCRIPTION:

This MAP attempts to quickfix a problem in the CS and MS processor by identifying the symptom in the symptom list and installing the appropriate cards.

START CONDITIONS:

Must come from MAP 5001

LOGIC CARDS TESTED:

All cards on board A-A1 and attachment cards on I/O boards.

001

(Entry Point A)

Does the system have a card in the A-A1B2 position?

Y N

|

| 002

| Go to Page 5, Step 004, Entry Point B.

|

003

Failure Replacement List for 'byte 0'.

Sympton description (to see this, set 'Mode selector' Sw to 'Insn Step/Dply Chks' and observe the 'byte 0').

Sympton Number Processor Error Byte 0

S1	1	0	0	0	0	0	0	0	0
S2	1	1	0	0	0	0	0	0	0
S3	0	1	0	0	0	0	0	0	0
S4 ***	1	0	0	1	0	0	0	0	0

CS AND MS PROCESSOR IFRL

MAP 5002-2

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S5	1	1	0	1	0	0	0	0
S6	1	0	1	1	0	0	0	0
S7	1	1	1	1	0	0	0	0
S8	0	0	1	X	1	0	0	0
S9	0	0	1	X	0	0	X	X
S10	0	0	1	X	0	0	0	0
S11	0	0	0	0	1	X	0	0
S12	0	0	0	0	X	1	0	0
S13	0	1	0	0	0	0	X	1
S14	0	0	0	0	0	0	1	X

1 = Bit 'On'
 0 = Bit 'Off'
 X = Bit 'On' or 'Off' (don't care)

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
A-A1B4						2	1							
A-A1B2						3	2							
A-A1C2**							6			6	1	1		
A-A1D2	3	2	1	2	2	14	5	2		2	2	2		
A-A1E2	1	1		1	1	1	4	1	1	1	3	3		
A-A1F2	2	3	2	3	3	15	3	3	3	4	4	4	4	4
A-A1G2										3				
A-A1H2										5				
A-A1J2													3	3
A-A1K2						12							2	2
A-A1L2						13			2				1	1
A-A1M2						4								
A-A1N2						5								
A-A1P2*						6								

20APR81 PN 4237671
 EC 835159 PEC 835083
 MAP 5002-2

5340 SYSTEMS UNIT

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A-A1Q2*	7
A-A1R2*	8
A-A1S2*	9
A-A1T2*	10
A-A1U2*	11
A-A1M4	4
A-A1N4	4
A-A1P4*	4
A-A1Q4*	4
A-A1R4*	4
A-A1S4*	4
A-A1T4*	4
A-A1U4*	4
A-A1V2*	16

* May not be installed in your specific configuration.

** Note: Before an A-A1C2 card is installed, jumpers must be added to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL,PC024) for the location of the jumpers.

*** Note: This symptom (S4) may be caused by an undervoltage condition on the +5Vdc supplied by the feature power supply D. Check pin A-A1M4J03 for +4.5V to +5.5V if this power supply is installed.

5340 SYSTEMS UNIT

Failure Replacement List of 'byte 1'.

Symptom Number	Processor Error Byte 1							
S1	0	0	0	0	0	1	0	0
S2	0	0	0	0	0	1	1	0
S3	0	0	0	0	0	0	0	1
S4	0	0	0	0	1	0	0	0
S5	0	0	0	1	0	0	0	0
S6	0	0	1	0	0	0	0	0
S7	0	0	1	0	0	0	1	0
S8	0	1	0	0	0	0	0	0
S9	1	0	0	0	0	0	0	0
S10	1	0	0	0	0	0	1	0

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
A-A1G2	2	2	2	2	2	2	2	2	2	2
A-A1H2	1	1	+	+	+	+	+	+	+	+
A-A1H2**	+	+	1	1	1	1	1	1	1	1

** Fault may also be associated with an attachment cards. Look in WRO (L) (set 'Mode selector' to 'Insn Step/Dply LSR' and Address/Data to X'0000') for device address and Reference Table, page 8 for corresponding card location.

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004

(Entry Point B)

Failure Replacement List for 'byte 0'.

Symptom description (to see this, set 'Mode selector' Sw to 'Insn Step/Dply Chks' and observe the 'byte 0').

Symptom Number Processor Error Byte 0

S1	1	0	0	0	0	0	0	0
S2	1	1	0	0	0	0	0	0
S3	0	1	0	0	0	0	0	0
S4	1	0	0	1	0	0	0	0
S5	1	1	0	1	0	0	0	0
S6	1	0	1	1	0	0	0	0
S7	1	1	1	1	0	0	0	0
S8	0	0	1	X	1	0	0	0
S9	0	0	1	X	0	0	X	X
S10	0	0	1	X	0	0	0	0
S11	0	0	0	0	1	X	0	0
S12	0	0	0	0	X	1	0	0
S13	0	1	0	0	0	0	X	1
S14	0	0	0	0	0	0	1	X

1 = Bit 'On'
 0 = Bit 'Off'
 X = Bit 'On' or 'Off' (don't care)

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
A-A1D4														
A-A1E2														
A-A1F2**														
A-A1G2														
A-A1H2														
A-A1J2														
A-A1K2														

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A-A1L2	---	5	---
A-A1N2	---	3	---
A-A1P2	---	12	---
A-A1Q2	---	13	---
A-A1R2	---	4	---
A-A1S2	---	5	---
A-A1T2*	---	6	---
A-A1U2*	---	7	---
A-A1R4*	---	8	---
A-A1S4*	---	9	---
A-A1T4*	---	10	---
A-A1U4*	---	11	---

* May not be installed in your specific configuration.

** Note: Before an A-A1F2 card is installed, jumpers must be added to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL,PC024) for the location of the jumpers.

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Failure Replacement List of 'byte 1'.

Symptom Descriptions: (To see this, set 'Mode selector' SW to 'Insn Step/Dply Chks' and observe 'byte 1').

Symptom Number	Processor Error Byte 1							
S1	0	0	0	0	0	1	0	0
S2	0	0	0	0	0	1	1	0
S3	0	0	0	0	0	0	0	1
S4	0	0	0	0	1	0	0	0
S5	0	0	0	1	0	0	0	0
S6	0	0	1	0	0	0	0	0
S7	0	0	1	0	0	0	1	0
S8	0	1	0	0	0	0	0	0
S9	1	0	0	0	0	0	0	0
S10	1	0	0	0	0	0	1	0

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
A-A1K2	2	2	2	2	2	2	2	2	2	2
A-A1L2	1	1	+	+	+	+	+	+	+	+
A-A1L2**	+	+	1	1	1	1	1	1	1	1

** Fault may also be associated with an attachment cards. Look in WRO (L) (set 'Mode selector' to 'Insn Step/Dply LSR' and Address/Data to X'0000') for device address and Reference Table, page 8 for corresponding card location.

5340 SYSTEMS UNIT

Adapter Attachment Card Reference

Device	Device Address	Inter-face Cards
Disk A	A0	A-A2E2 A-A2F2 A-A2G2
Disk B	B0	A-A3E2 A-A3F2 A-A3G2
Work Station	C0	A-A2M2*
Diskette	D0	A-A2L2
Printer	E0	A-A2T2*
Comm Adapter	80	A-A2J2
1255	52	A-A3R2* A-A3T2
Term Resistor Card		A-A3U3

Note: Some of the preceding devices may not be installed in your specific configuration.

* Remove top card connectors W,X, Y, and Z before removing this card and reinstall them after installing this card.

5340 SYSTEMS UNIT

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
5001	A	001	001

MAP DESCRIPTION:

This MAP attempts to quickfix a problem in the Work Station attachment when Work Station Control Expansion 'C' is not installed.

START CONDITIONS:

Must come from MAP 5001.

LOGIC CARDS TESTED:

A-A2M2	A-A2P4	A-A2R2
A-A2N2	A-A2Q4	A-A2R4

(Entry Point A)
001

Work Station Intermittent Failure Replacement List

	S1	S2	S3	S4	S5
A-A2M2	2		2	1	6
A-A2N2		4	1		5
A-A2P4		1		2	1
A-A2Q4		2			2
A-A2R2	1				4
A-A2R4		3			3

Symptom Description:

S1: Receive Parity Checks

S2: Storage Parity Checks

S3: DBI/DBO Parity Checks

S4: Long Time-Out Checks

S5: Default

07JUL80

PN 4237672

EC 835000

PEC 832999

MAP 5003-2

DISKETTE IFRL
5340 SYSTEMS UNIT

MAP 5004-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
5001	A	001	001

MAP DESCRIPTIONS:

This MAP attempts to quickfix a problem in the diskette logic cards area.

START CONDITIONS:

Must come from MAP 5001.

LOGIC CARDS TESTED:

A-A2L2 , A-A2P2 , diskette file control card.

Diskette Intermittent Failure Replacement List

For any symptoms other than mechanical symptoms, the following order of FRU's should be used in repairing the problem.

Any Diskette Logical Symptom

A-A2L2	-----	1
A-A2P2	-----	2
Diskette File Control Card	-----	3

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
5001	A	001	001

MAP DESCRIPTION:

This MAP lists all the cards that pertain to the Data Communication area as well as the modem and their configurations. Since there is no specific symptom to be listed, the user can install the cards in any order he wants.

START CONDITIONS:

None

LOGIC CARDS TESTED:

- LINE 1 ----- A-A2J2, A-A2H2 and all the cards on board B-A1.
- LINE 2 ----- A-A2K2, A-A2H4 and all the cards on board B-A2.

Data Communication Intermittent Failure Replacement List

There will not be any specific symptoms or specific FRU listed for data communications. The following list shows the cards pertaining to that area.

For possible microcode problems reload the communication microcode.

DATA COMMUNICATION IFRL

MAP 5005-2

5340 SYSTEMS UNIT

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-- LINE 1 HARDWARE --

Board A-A2 -----> A-A2H2 ----- If EIA, 1200 I.M., or DDSA Only
 A-A2J2

Board B-A1 -----> B-A1D2 -----|
 B-A1E2 -----| 2400 I.M. Switched Only
 B-A1G2 -----|
 B-A1H3 -----|
 B-A1J4
 B-A1K2
 B-A1K4
 B-A1N4
 B-A1Q2
 B-A1Q4
 B-A1R2 -----| 2400 I.M. Switched
 B-A1S3 -----| or SNBU With AA Only
 B-A1T2

15DEC78 PN 4237674
EC 834777 PEC 832999
MAP 5005-2

DATA COMMUNICATION IFRL

MAP 5005-3

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-- LINE 2 HARDWARE --

Board A-A2 -----> A-A2H2 ----- If EIA, 1200 I.M., or DDSA Only
A-A2K2

Board B-A1 -----> B-A2D2 -----|
B-A2E2 -----| 2400 I.M. Switched Only
B-A2G2 -----|
B-A2H3 -----|
B-A2J4
B-A2K2
B-A2K4
B-A2N4
B-A2Q2
B-A2Q4
B-A2R2 -----| 2400 I.M. Switched
B-A2S3 -----| or SNBU With AA Only
B-A2T2

15DEC78 PN 4237674

EC 834777 PEC 832999

MAP 5005-3

62EH DISK IFRL
5340 SYSTEMS UNIT

MAP 5006-1

PAGE 1 OF 1

ENTRY POINTS

----- -----			
FROM	ENTER THIS MAP		
----- -----			
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
----- -----			
5001	A	001	001

MAP DESCRIPTION:

This MAP attempts to quickfix a problem in the 62 EH Disk area. Because there is no specific symptom listed, there is no order of cards to be installed.

START CONDITIONS:

Must come from MAP 5001.

LOGIC CARDS TESTED:

All cards listed below.

Disk Intermittent Failure Replacement List

Disk A0

Disk B0

(62EH)

A-A2B2

A-A2B4

A-A2C2

A-A2C4

A-A2D2

A-A2E2

A-A2F2

A-A2G2

D-W1A5

D-W1B3

(62EH)

A-A3B2

A-A3B4

A-A3C2

A-A3C4

A-A3D2

A-A3E2

A-A3F2

A-A3G2

D-W1A5

D-W1B3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
5001	A	001	001

MAP DESCRIPTION:

This MAP attempts to quickfix a problem in the 5211 Line Printer Attachment area.

START CONDITIONS:

Must come from MAP 5001.

LOGIC CARDS TESTED:

A-A2S2, A-A2T2

Printer Intermittent Failure Replacement List

	S1	S2
A-A2S2	1	2
A-A2T2	2	1

S1: Control unit check.

S2: All other printer errors.

POWER IFRL
5340 SYSTEMS UNIT

MAP 5008-1

PAGE 1 OF 1

ENTRY POINTS

FROM	ENTER THIS MAP		

MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER

5001	A	001	001

MAP DESCRIPTION:

This MAP attempts to quickfix a problem in the power logic area.

START CONDITIONS:

Must come from MAP 5001.

LOGIC CARDS TESTED:

C-A1B2, C-A1C2, C-A1C4

Power Intermittent Failure Replacement List

There is no specific power symptom listed. A power check display byte needs much more diagnostics before any decision can be reached. The following list shows the cards pertaining to the power area.

C-A1B2
C-A1C2
C-A1C4

MSP ERROR INDEX
5340 SYSTEMS UNIT

MAP 8101-1

PAGE 1 OF 2

001

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

Now run ERAP for the MSP.

Check the status byte 2 information that was recorded.

Look in chart A for a specific bit combination that was recorded the most in status byte 2. Chart A indicates the most probable cause of the failure.

Note: Level 1 board has no card in the A-A1B2 socket position.

Level 2 board has a card in the A-A1B2 socket position.

CHART A (Level 1 board)

MSP Status Byte 2 Bits	FRU
0 1 2 3 4 5 6 7	
X 1 0 0 X X 0 X	A-A1N2*
X 0 1 0 X X 0 X	A-A1P2*
X 0 0 1 X X 0 X	A-A1P2
X 1 1 0 X X 0 X	**
	--OR--
	A-A1N2
	--OR--
	A-A1Q2
X X X X X X 1 X	A-A1Q2
	--OR--
	A-A1P2
	--OR--
	A-A1N2

MAP DESCRIPTION:

This MAP finds the most probable causes of error logs recorded for the MSP.

LOGIC CARDS TESTED:

Level 1 board
A-A1N2, A-A1P2, A-A1Q2

Level 2 board

A-A1J2, A-A1K2, A-A1L2, A-A1V2
Main storage cards

START CONDITIONS:

No problem was found on the system and the SYSTST program was run.

CHART A (Level 2 board)

MSP Status Byte 2 Bits	FRU
0 1 2 3 4 5 6 7	
X 1 0 0 X X 0 X	A-A1J2*
X 0 1 0 X X 0 X	A-A1K2*
X 0 0 1 X X 0 X	A-A1K2
X 1 1 0 X X 0 X	**
	--OR--
	A-A1J2
	--OR--
	A-A1L2
X X X X X X 1 X	A-A1L2
	--OR--
	A-A1K2
	--OR--
	A-A1J2

A-A1V2 may be bad for any of the error indications in the above chart.

*OR main storage card. To determine the bad storage card, see Chart B.

*OR main storage card. To determine the bad storage (Step 001 continues)

MSP ERROR INDEX
5340 SYSTEMS UNIT

MAP 8101-2

PAGE 2 OF 2

(Step 001 continued)
 card, see Chart B.

**Main storage card. To determine the bad storage
 card, see Chart B.

CHART B (Level 1 board)

Address Range	Main Storage Card
000000 - 003FFF	A-A1R2
004000 - 007FFF	A-A1S2
008000 - 00BFFF	A-A1T2
00C000 - 00FFFF	A-A1U2
010000 - 013FFF	A-A1R4
014000 - 017FFF	A-A1S4
018000 - 01BFFF	A-A1T4
01C000 - 01FFFF	A-A1U4

**Main storage card. To determine the bad storage
 card, see Chart B.

CHART B (Level 2 board)

Address Range	Main Storage Card
000000 - 003FFF	A-A1M2
004000 - 007FFF	A-A1N2
008000 - 00BFFF	A-A1P2
00C000 - 00FFFF	A-A1Q2
010000 - 013FFF	A-A1R2
014000 - 017FFF	A-A1S2
018000 - 01BFFF	A-A1T2
01C000 - 01FFFF	A-A1U2
020000 - 023FFF	A-A1M4
024000 - 027FFF	A-A1N4
028000 - 02BFFF	A-A1P4
02C000 - 02FFFF	A-A1Q4
030000 - 033FFF	A-A1R4
034000 - 037FFF	A-A1S4
038000 - 03BFFF	A-A1T4
03C000 - 03FFFF	A-A1U4

A-A1V2 may be bad for any of
 the above indications.

Look in failing address column of the error history table.

To determine the bad main storage card compare the
 failing address to the address range in chart B.

05JAN81

PN 4237678

EC 835083

PEC 835000

MAP 8101-2

CP ERROR INDEX
5340 SYSTEMS UNIT

MAP 8201-1

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1303	A	1	001

001

(Entry Point A)

Now run ERAP for the CP.

See 82-000 for control Proc error recording information.

Check the Error History Table for the control processor for information that was recorded.

If bit information is in both bytes use both charts A and B. Otherwise, use specific byte chart.

These charts indicate the most probable cause of the failure.

Note: Level 1 board does not have a card in the A-A1B2 socket position.
 Level 2 board has a card in the A-A1B2 socket position.

CHART A (Level 1 board)

Byte 0	Bad Card
04,08	A-A1G2, A-A1F2* A-A1H2
02,01,03	A-A1F2*, A-A1G2 A-A1H2, A-A1Q2 A-A1P2, A-A1K2
10,30	A-A1H2, A-A1G2,

(Step 001 continues)

MAP DESCRIPTION:

This MAP finds the most probable causes of error logs recorded for the CP.

LOGIC CARDS TESTED:

Level 1 board

A-A1F2, A-A1G2, A-A1H2, A-A1J2, A-A1K2, A-A1L2, A-A1P2, A-A1Q2

Level 2 board

A-A1C2, A-A1D2, A-A1E2, A-A1F2, A-A1G2, A-A1H2, A-A1K2, A-A1L2

Control storage cards.

Main storage cards.

START CONDITIONS:

No problem was found on the system and the SYSTST program was run.

CHART A (Level 2 board)

Byte 0	Bad Card
04,08	A-A1D2, A-A1C2* A-A1E2
02,01,03	A-A1C2*, A-A1D2 A-A1E2, A-A1L2 A-A1K2, A-A1G2
10,30	A-A1E2, A-A1D2, A-A1G2, A-A1F2,

(Step 001 continues)

CP ERROR INDEX
5340 SYSTEMS UNIT

MAP 8201-2

PAGE 2 OF 4

(Step 001 continued)

	A-A1K2, A-A1J2, A-A1L2, A-A1F2*
22,21,23	A-A1H2, A-A1G2 A-A1Q2, A-A1P2
32,31,33	A-A1H2, A-A1G2
40	A-A1G2
80,A0	A-A1H2, A-A1G2
90,C0,D0	A-A1H2, A-A1G2
B0	A-A1H2, Control Storage Cards and Main Storage Cards

(Step 001 continued)

	A-A1H2, A-A1C2*
22,21,23	A-A1E2, A-A1D2 A-A1L2, A-A1K2
32,31,33	A-A1E2, A-A1D2
40	A-A1D2
80,A0	A-A1E2, A-A1D2
90,C0,D0	A-A1E2, A-A1D2
B0	A-A1E2, Control Storage Cards and Main Storage Cards

*
 Note: Before you install an A-A1F2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

*
 Note: Before you install an A-A1C2 card, you must add jumpers to configure it for the correct control storage size. Use the jumper(s) from the bad card. See VOL D (FSL, PC024) for the location of the jumpers.

CHART B (Level 1 board)

Byte 1	Bad Card
04,06	A-A1L2, Control Storage and Main Storage Cards.
01,08,10, 20,22,40, 80,82,C0	A-A1L2 or I/O Attachment Card Indicated By Device Address In WRO(L). See Chart C.

(Step 001 continues)

CHART B (Level 2 board)

Byte 1	Bad Card
04,06	A-A1H2, Control Storage and Main Storage Cards.
01,08,10, 20,22,40, 80,82,C0	A-A1H2 or I/O Attachment Card Indicated By Device Address In WRO(L). See Chart C.

(Step 001 continues)

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 EC 835201 PEC 835083
 MAP 8201-2

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MAP 8201-3

(Step 001 continued)

(Step 001 continued)

CHART C
 Adapter interface card
 reference

Device	Device ID	Inter- face cards
Disk A (62EH)	A0	A-A2E2 A-A2F2 A-A2G2
Disk B (62EH)	B0	A-A3E2 A-A3F2 A-A3G2
Disk (62PC)	A0	A-A2E2
Work station	C0	A-A2M2*
Diskette 33/53FD	D0	A-A2L2
Diskette 72MD	D1	A-A2L2
5211 Printer	E0	A-A2T2*
3262 Printer	E2	A-A2T2* A-A2U2*

(Step 001 continues)

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MAP 8201-4

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(Step 001 continued)

2-line	80	A-A2J2
Comm adapters	or 20	A-A2K2
MLCA Con- troller	10	A-B3C2
1255	52	A-A3R2* A-A3T2
Term resistor card	--	** A-A3U3

NOTE:

Some of the preceding devices might not be installed in the machine's specific configuration.

*Remove the top card connectors W, X, Y, and Z before removing this card and reinstall them after installing this card.

**If Data Communications MLCA is installed (A-B3 board), this will be located in A-B3U3.

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DISK ERROR LOG MAP

MAP 8300-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

There is no analysis made in this MAP.
Go to Disk Error Index, Maintenance Manual Section 83-000 for more information.

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

This MAP finds the most probable causes of the error logs recorded for the diskette (Part 1).

No problem was found on the system and the Diskette MDI MAPs and the SYSTST programs were run.

Now run ERAP for the diskette.

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* (84-000) DISKETTE ERROR INDEX *

<u>Paragraph</u>	<u>Description</u>
010	How To Use Diskette Error Information
105	Error Counter Table Cross Reference
200	Error History Information
210	Error History Information Decoded
300	Diskette Sense Bytes - General Information
305	Diskette Byte 0 Decoded
310	Diskette Byte 1 Decoded
320	Diskette Byte 2 Decoded
330	Diskette Byte 3 Decoded
400	Command Code
411	Command Change
421	Current Cylinder
431	Preceding Cylinder
461	Cylinder Address
471	Head Address
481	Sector Address
491	Retry Count

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* (84-010) HOW TO DIAGNOSE DISKETTE PROBLEMS *

Two sets of diskette MAPs are used to aid in diagnose solid and intermittent hardware failures. The MDI MAPs (softmaps) are used for all solid failures while the hard MAPs are used for intermittent failures. The MDI MAPs include a group of device exercisers that test all parts of the diskette drive.

The ERAP information with the hard MAPs, are used to diagnose intermittent failures. Sections 84-105 to 84-491 of this manual describe each status bit in the diskette ERAP and which circuit parts could cause the problem. The theory of the operation manual also contains a detailed description of the check circuit, which generates the status bits.

Because the ERAP information is stored on the fixed disk, only intermittent errors can be stored. A solid error causes the system to fail CSIPL or causes a Proc check during program execution. In the case of a Proc check, the Operator Manual describes the procedure for displaying and decoding the error information.

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-4

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In cases where the ERAP MAP FRU callout(s) will not repair the intermittent failures, other external or internal things should be suspected:

1. System grounding or unstable power supplies.
2. Excess static that will increase with low humidity.
3. Power line transient changes.

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MAP 8401-4

 * (84-105) ERROR COUNTER TABLE CROSS REFERENCE *

	DESCRIPTION	MAP
	-----	---
Missing Data Address Marks.....	84-310	8402
ID Cyclic Redundancy Checks.....	84-310	8402
Data Cyclic Redundancy Checks.....	84-310	8402
Head Mismatches.....	84-310	8402
Record Mismatches.....	84-310	8402
Record Length Mismatches.....	84-310	8402
No Op Conditions.....	84-320	
Not Valid Control Record Checks....	84-320	8403
Write Verify Mismatches.....	84-320	8403
Fast Checks.....	84-330	8403
Write Errors.....	84-330	8403
ID Not Found.....	84-330	8403
Read Overrun Checks.....	84-330	8403
Unexpected Erase Current Present...	84-340	8403

* (84-200) ERROR HISTORY INFORMATION *

The CE evaluates error history information using the references indicated under Error History Information Decoded (84-210).

The Error Recording Analysis Procedure (ERAP) describes the Error History Generation (80-111).

 * (84-210) ERROR HISTORY INFORMATION DECODED *

Error history table for diskette.

Volume ID	Command Code	MDR.	Sense	Bytes	Retry Count	Cylinder Prev.	Cylinder Start	Control Cyl	Field HD	Field Rec	Field SZ
					HEX.....						
Load	5	0	21 20	04 7F	00	00	00	00 00	03	00	
	5	0	21 20	04 7F	00	00	00	00 00	03	00	
	5	0	21 20	04 7F	00	00	00	00 00	03	00	

SEE NEXT PAGE FOR WHICH SECTIONS TO GO TO.

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-8

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1	Record Size	(84-411)	6	Previous Cylinder	(84-431)
2	Record Number	(84-481)	7	Retry Count	(84-491)
3	Head Address	(84-471)	8	Sense Bytes	(84-300)
4	Cylinder Address	(84-461)	9	Command Modifier	(84-400)
5	Current Cylinder	(84-421)	10	Command Code	(84-400)

* (84-300) DISKETTE SENSE BYTE GENERAL INFORMATION *

The diskette status (RD status) transmits current diskette status to the assigned work registers.

Work register (WR) assignments:

WR1 (High-order bits)	-	Sense Byte 0
WR1 (Low-order bits)	-	Sense Byte 1
WR3 (High-order bits)	-	Sense Byte 2
WR3 (Low-order bits)	-	Sense byte 3

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DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-9

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 * (84-310) DISKETTE SENSE BYTE 0 DECODED *

Byte	Bit	Description
0	0	Missing Data Address Mark * ----- Data record not found after an ID field.
	1	ID Cyclic Redundancy Check * ----- Cyclic redundancy check miscompare was found in the ID field.
	2	Data Cyclic Redundancy Check * ----- Cyclic redundancy check miscompare was found in the data field.
	3	Cylinder Not Compare ----- Mismatch was found between the cylinder portion of the ID field and the CS cylinder byte during ID search.
	4	Head Mismatch * ----- Mismatch was found between the head address protion of the ID field and the CS head byte during ID search.
	5	Record Mismatches * ----- Mismatch was found between the record address portion of any ID field and the CS record number during an ID search.
	6	Record Length Mismatches * ----- Mismatch was found between the

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 MAP 8401-9

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-10

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		record length portion of the ID field and the CS N byte during an ID search.
	7	Seek Reverse

* Bits in error recording table.

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MAP 8401-10

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-11

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 * (84-320) DISKETTE SENSE BYTE 1 DECODED *

Byte	Bit	Description
1	0	No Operation * ----- Command could not be executed because of outstanding status.
	1	Not Valid Control Record Check * ----- The leftmost byte of a control record contained other than an F or an R.
	2	Write Verify Mismatch * ----- Compare of the data record just written to the MS data buffer failed.
1	3	Control Address Mark Record Not Found ----- Control address marker was found when performing a read data operation.
	4	End Of Record ----- Physical end of the diskette was reached with a seek still pending.
	5	Write Error ----- Indicates that either a write overrun, write parity check, missing erase current or a data unsafe error was found.

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MAP 8401-11

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-12

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6	End Of Track ----- Last record on the track was processed with some records still pending.
7	File Busy ----- Data transmit in progress.

* Bits in error recording table.

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MAP 8401-12

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 * (84-330) DISKETTE SENSE BYTE 2 DECODED *

Byte	Bit	Description
2	0	Fast Check * Rotational speed quicker than the maximum speed of 376 RPM.
	1	Diskette Not Ready Not ready.
	2	Write Errors * Erase current failed to turn on during a write operation.
	3	ID Not Found * CHRN address could not be found.
	4	Read Overrun Checks * Minimum data send rate was not maintained during a data transmit.
	5	FM Mode FM data mode.
	6	Write Overrun Minimum data send rate was not maintained during a data transmit.

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-14

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	7	Write Parity Check Mismatch between the DB0 parity and the generated serial write data parity was found during a write operation.
--	---	---

* Bits in error recording table.

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MAP 8401-14

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-15

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 * (84-340) DISKETTE SENSE BYTE 3 DECODED *

Byte	Bit	Description
3	0	Unexpected Erase Current Present * Erase current was on while not in write operation.
	1	Block Proc Clock Off Diagnostic use only.
	2	Head 2 Drive Installed drive is a 53FD.
	3	Erase Current Off Diagnostic use only.
	4	Head 0 Active Diagnostic use only.
	5	Single-Surface Disk Single-surface media.
	6	I/O Working Off No device is busy.
	7	Diskette Working Off Diskette is not busy.

* Bits in error recording table.

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MAP 8401-15

DISKETTE ERROR MAP INDEX (PART 1).

MAP 8401-16

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 * (84-400) DISKETTE COMMAND WORD *

	R-Byte				Q-Byte			
	0	1	2	3	4	5	6	7
Control Seek	M			C	0	0	0	0
Read Data	F			N				
Read ID	M			T	0	0	0	1
AD Data and Control Record	D			L	0	0	1	1
Reserved	A			S	0	0	1	0
Write Data/Verify	T			T	0	1	0	0
Write Cam/Verify	A			O	0	1	0	1
Write ID/Verify	O			R	0	1	1	0
	P			E	0	1	1	1
	E			R				
	R			E				
	A			A				
	T			D				
	I							
	O							
	N							

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 MAP 8401-16

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* (84-411) RECORD SIZE *

A 1 byte record length indicator is used in the record length algorithm.

- N is HEX 00 - 128--Byte Records
- 01 - 256--Byte Records
- 02 - 512--Byte Records
- 03 - 1024--Byte Records

* (84-421) CURRENT CYLINDER *

Address of the cylinder the recorded error occurred on.

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 * (84-431) PRECEDING CYLINDER *

Address of the cylinder earlier than the recorded
 error.

 * (84-461) CYLINDER ADDRESS *

A 1 byte logical binary address is needed.

Valid CC addresses are: HEX 00-4C
 Decimal 00-76

The diskette surface is divided into 77 cylinders.
 Cylinder 00 is the outside cylinder and cylinder 76 is
 the inside cylinder. Of the 77 cylinders, only 75 are
 normally used. Cylinder 00 contains the volume label,
 cylinders 1-74 are the primary cylinders, and cylinders
 75 and 76 are available for data storage in the event
 that one or two of the primary cylinders are
 damaged.

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* (84-471) HEAD ADDRESS *

A 1 byte binary address is needed to address the desired head by all SIO commands.

Valid head addresses for diskette 2 are HEX 00-01.

A valid head address for diskette 1 is HEX 00,

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* (84-481) RECORD NUMBER *

1 byte record address.

Valid addresses are decimals 01-26 or 01-08.

Each track is divided into either 8 or 26 sectors
 in frequency modulation mode, the 8 sectors each have
 512-byte records and the 26 sectors each have 128-byte
 records. In changing frequency modulation mode, the 8
 sectors each have 1,024-byte records and the 26 sectors
 each have 256-byte records.

* (84-491) RETRY COUNT *

This field records the number of times this retry was attempted.

DISKETTE ERROR LOG MAP 1 (LEVEL 1)

MAP 8402-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

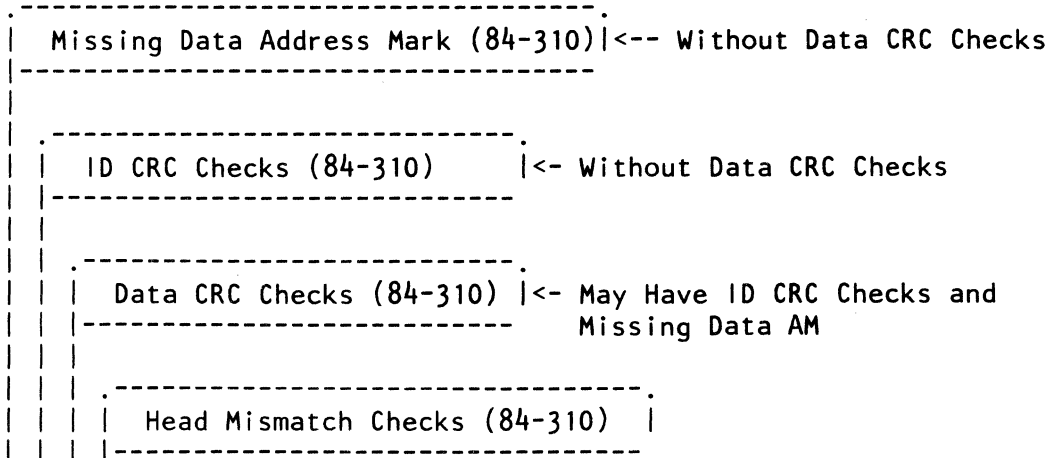
This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 1).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 1 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

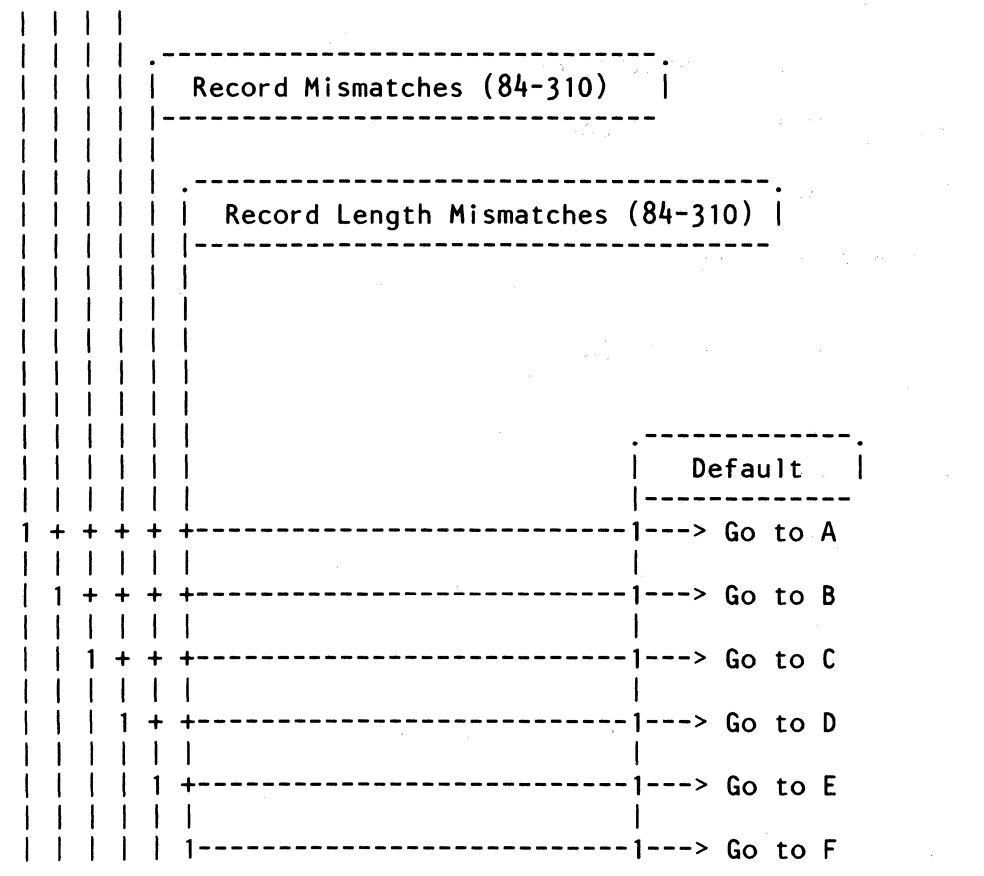


DISKETTE ERROR MAP

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MAP 8402-2



A - Check for: 1. Failing Diskette Media

B - Check for: 1. Failing Diskette Media

C - Check for: 1. Failing Diskette Media. See Diskette Quality Service Check (23-310/33FD, 25-995/53FD).

2. Head Alignment

3. Head Load Mechanism

4. Dirty Head

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EC 834824

PEC 832999

MAP 8402-2

DISKETTE ERROR MAP

MAP 8402-3

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5. Failing Data Separator Card
6. Failing File Control Card
7. Failing Attachment Card
8. Unseated/Failing Cable

- D - Check for:
1. Failing File Control Card
 2. Failing Attachment Card
 3. Programming Problem
 4. U-Code Problem

- E - Check for: 1. Failing Diskette Media

- F - Check for:
1. Not Correct Diskette Media In Drive
 2. Programming Problem
 3. U-Code Problem

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MAP 8402-3

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 1).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 1 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

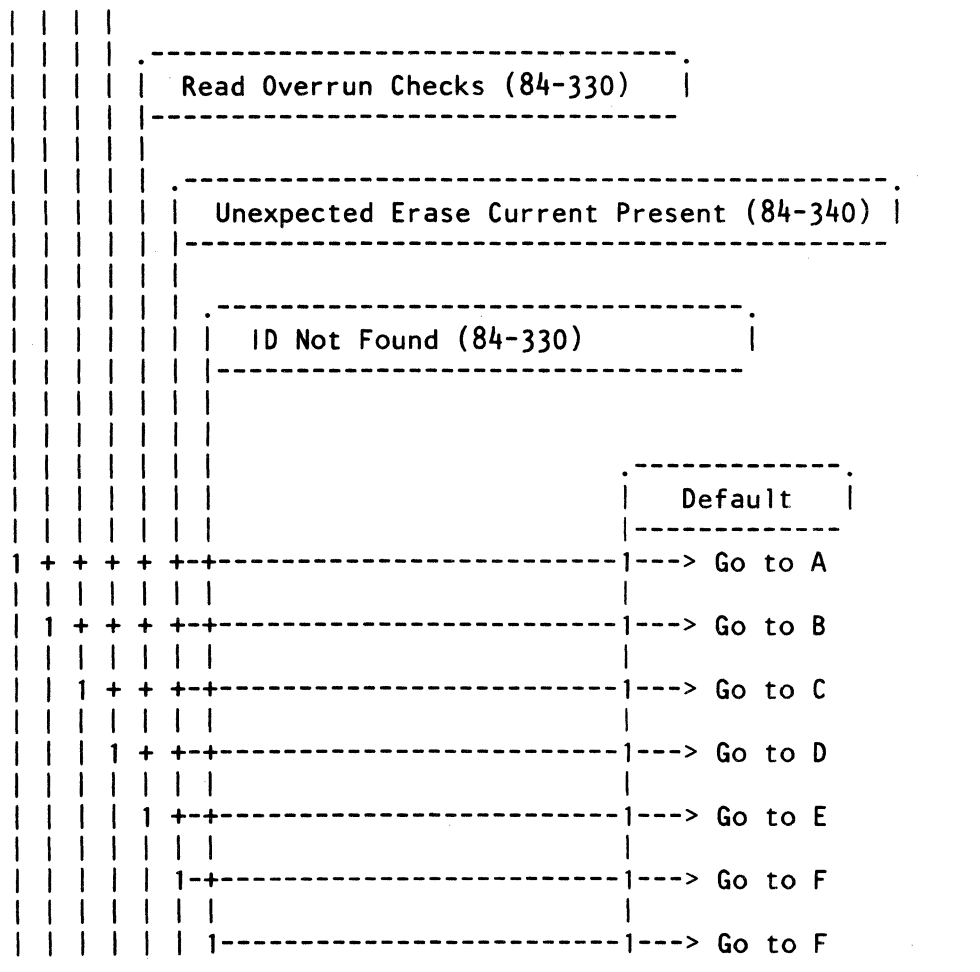
Not Valid Control Record Check (84-320)
Write/Verify Mismatch (84-320)
Fast Check (84-330)
Write Errors (84-320)

DISKETTE ERROR MAP

MAP 8403-2

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A - Check for: 1. Failing Diskette Media
(No Basic Interchange)

B - Check for: 1. Failing Diskette Media. See Diskette Quality
Service Check (23-310/33FD, 25-995/53FD).

2. Head Aligment

3. Head Load Mechanism

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EC 834824

PEC 832999

MAP 8403-2

DISKETTE ERROR MAP

MAP 8403-3

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4. Dirty Head
5. Failing Data Separator Card
6. Failing File Control Card
7. Failing Attachment Card
8. Unseated/Failing Cable

C - Check for: 1. Failing Diskette Media (Shine Through)

2. Failing File Control Card
3. Failing Attachment Card

D - Check for: 1. Failing File Control Card

2. Failing Attachment Card
3. Unseated/Failing Cable

E - Check for: 1. Failing Attachment Card

2. Failing Data Separator Card
3. Failing Diskette Media

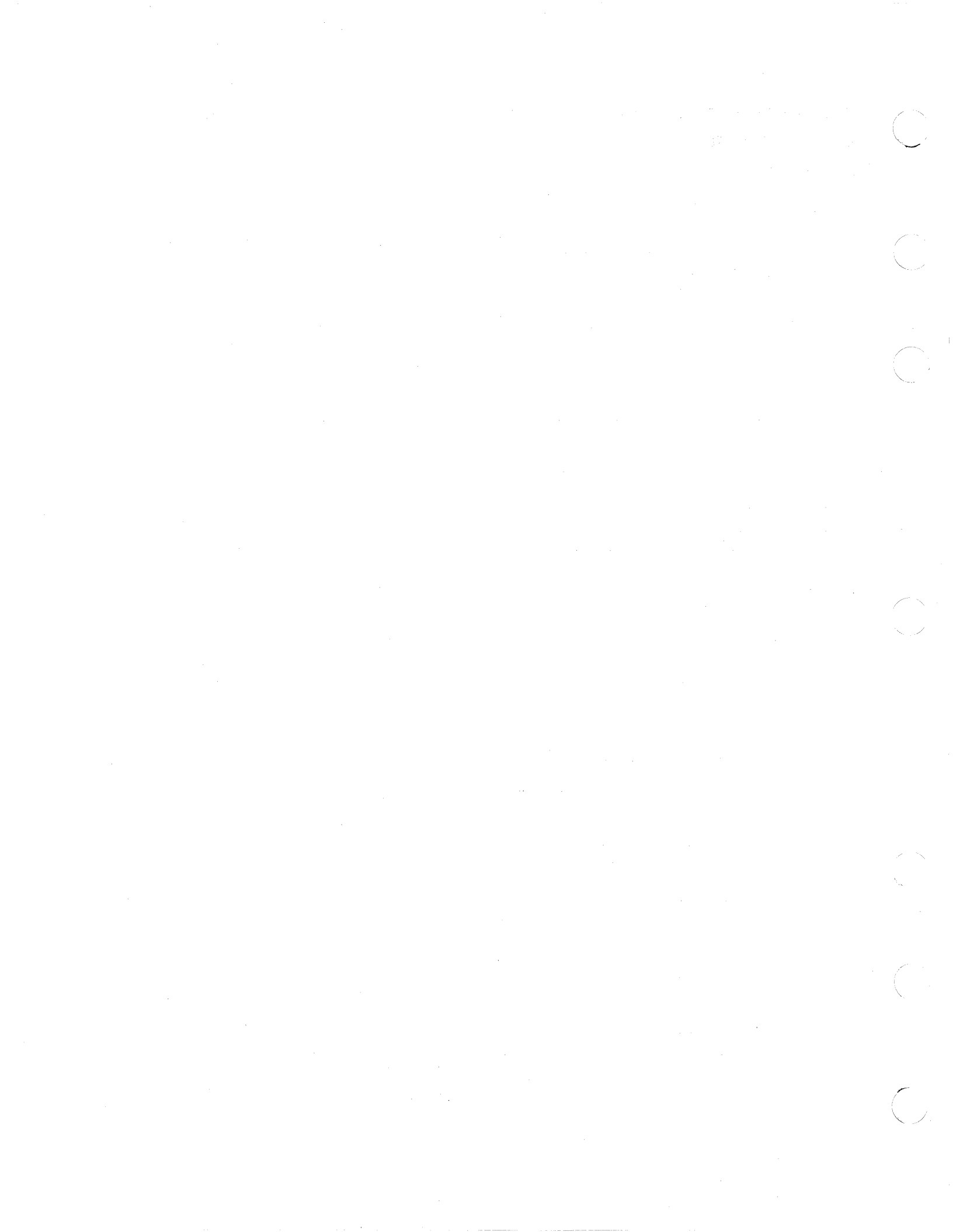
F - Check for: 1. Failing File Control Card

2. Failing Attachment Card
3. Failing/Unseated Cable

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EC 834824 PEC 832999

MAP 8403-3



DISKETTE ERROR LOG MAP 1 (LEVEL 2)

MAP 8450-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 2).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 2 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

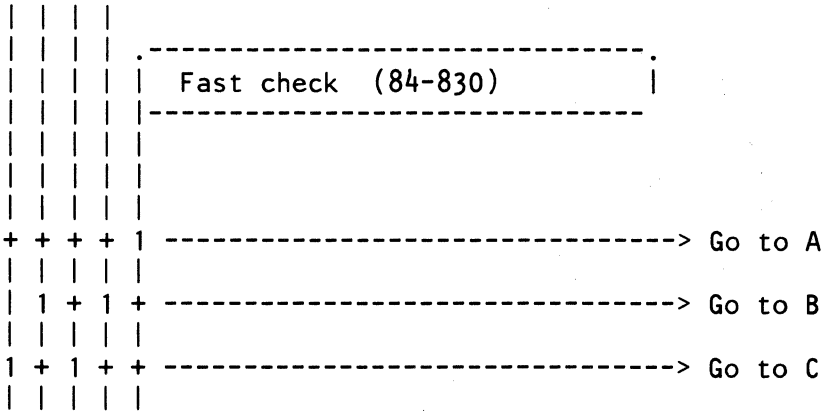
Missing data address mark (84-810)
Data CRC checks (84-810)
Invalid control record check (84-820)
Write verify mismatch (84-820)

DISKETTE ERROR LOG MAP 1 (LEVEL 2)

MAP 8450-2

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A - Check for: 1. Failing diskette media (shine through)

2. Failing file control card

3. Failing attachment card (A-A2L2)

B - Check for: 1. Failing diskette media. See Diskette Quality Service Check (23-310/33FD, 25-995/53FD, 27-900/72MD).

2. Head alignment

3. Head load mechanism

4. Dirty head

5. Failing file control card

6. Failing attachment card (A-A2L2)

7. Failing data separator card (A-A2P2)

8. Unseated/failing head cable

C - Check for: 1. Failing diskette media. See Diskette Quality Service Check (23-310/33FD, 25-995/53FD, 27-900/72MD).

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EC 834824

PEC 833174

MAP 8450-2

DISKETTE ERROR LOG MAP 2 (LEVEL 2)

MAP 8451-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 2).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 2 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

SYMPTOMS

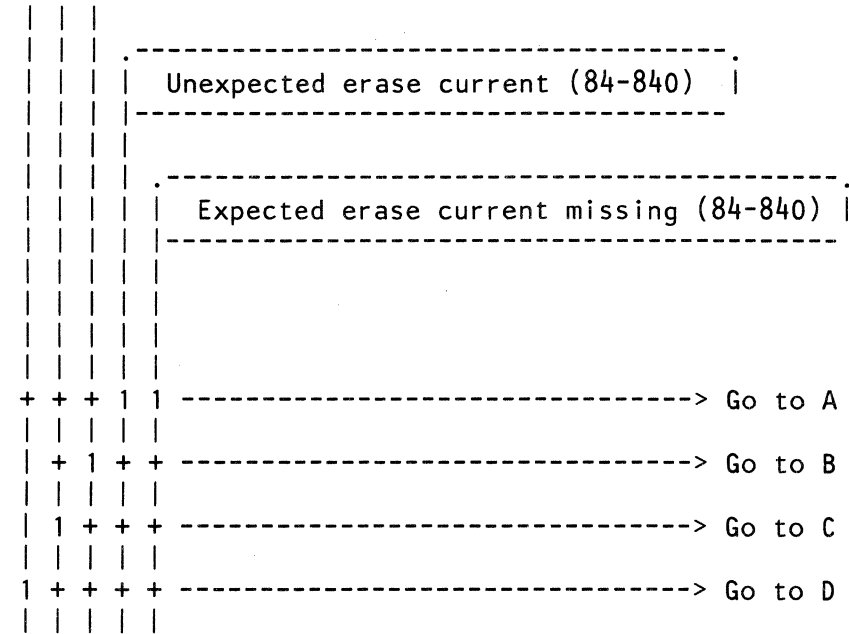
Record not found (84-830)
Read overrun (84-830)
Write underrun (84-830)

DISKETTE ERROR LOG MAP 2 (LEVEL 2)

MAP 8451-2

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- A - Check for:
- 1. Failing file control card
 - 2. Failing attachment card (A-A2L2)
 - 3. Failing cable (A-A2Z6 to file control card A2)

- B - Check for:
- 1. Attachment card (A-A2L2)

- C - Check for:
- 1. Failing attachment card (A-A2L2)
 - 1. Failing data separator (A-A2P2)

- D - Check for:
- 1. Failing diskette media. See Diskette Quality Service Check (23-310/33FD, 25-995/53FD, 27-900/72MD).
 - 2. Failing attachment card (A-A2L2)

DISKETTE ERROR LOG MAP 3 (LEVEL 2)

MAP 8452-1

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ENTRY POINTS

FROM	ENTER THIS MAP
MAP NUMBER	ENTRY POINT PAGE NUMBER STEP NUMBER

No entry in this table

MAP DESCRIPTION:

This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 2).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 2 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

SYMPTOMS

Autoloader parity error (84-842)
Invalid autoloader command (84-842)
Autoloader timeout check (84-842)

DISKETTE ERROR LOG MAP 4 (LEVEL 2)

MAP 8453-1

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP lists the most probable causes of failure for diskette errors recorded in the ERAP table (level 2).

START CONDITIONS:

- Diskette MDI should be run first.
- This MAP supports a level 2 diskette attachment card only. Refer to diskette plug chart AC300 for level determination.
- Run ERAP for the diskette.

ERROR DESCRIPTION:

See the error log description paragraph listed for the recorded error. The Theory Diagrams Manual contains a detailed description of error conditions.

SYMPTOMS

Carriage bed failures (84-844)
Picker failures (84-844)
Fail to pick (84-844)

DISKETTE ERROR LOG MAP 4 (LEVEL 2)

MAP 8453-2

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						Fail to eject (84-844)					

						Window magnet failures (84-844)					

					+	+	+	+	1	----->	Go to A
						+	1	1	+	----->	Go to B
						1	+	+	+	----->	Go to C
						1	+	+	+	----->	Go to D

A - Check for: 1. Failing or misadjusted stripper magnet switch

- 2. Failing stripper magnet
- 3. Failing file control card
- 4. Unseated/failing cable (from file card A3 connector to stripper magnet/switch)

B - Check for: 1. Failing picker finger assembly

- 2. Failing or misadjusted diskette in switch
- 3. Failing or misadjusted picker rest sensor
- 4. Picker/cam timing
- 5. Failing file control card

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PN 4238263

EC 833174

PEC -----

MAP 8453-2

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6. Unseated/failing cable (from file control card A3 socket to diskette in switch or A1 socket to picker rest sensor)

C - Check for: 1. Failing picker finger assembly

2. Failing picker rest sensor
3. Picker extend adjustment
4. Picker/cam timing
5. Binding picker/cam assembly
6. Failing file control card
7. Failing 72MD driver board
8. Failing picker stepper motor
9. Unseated/failing cable (file card A3 socket to driver board to picker motor)
10. Loose picker belt

D - Check for: 1. Failing/misadjusted orient switch

2. Loose carriage bed pulley
3. Loose carriage bed belt
4. Failing carriage bed stepper motor
5. Binding carriage bed
6. Failing file control card
7. Failing 72MD driver board
8. Unseated/failing cable (from file control card A3 socket to the bed motor)

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EC 833174 PEC -----
MAP 8453-3

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WORK STATION CTRL ERROR HISTORY

MAP 8600-1

5340 SYSTEMS UNIT

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP gives you the information necessary to interpret the Error History Table for the work controller when work station control expansion 'C' is not installed.

START CONDITIONS:

None

Be aware that all controller errors are not contained in this log. Only those errors which are catastrophic in nature and cannot be identified to a specific terminal are in this log. See that each terminal logs for other possible errors.

The errors occur on a bit effect basis in the Controller/Host status byte. The WSC return status byte is valid only when the OP check bit (bit 4) is on by itself in the Controller/Host status byte. The OP check bit will be on for all controller checks. Any combination of bits in the Controller/Host status byte is allowed.

Controller/1 Host Status	WSC Return Status	Description
-----------------------------	----------------------	-------------

08	01	OP Check
----	----	----------

serdes timeout.

The serdes failed to go to the not busy status in a specified length of time.

Cards Involved: A-A2N2, A-A2M2

MAP: 1117

CTRL ERROR HISTORY

MAP 8600-2

5340 SYSTEMS UNIT

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08 02 0P Check.

 Timeout on cycle steal transmit.

 The command controller has failed to
 respond to a cycle steal request in
 a given amount of time.

 Cards Involved: A-A2M2, A-A1L2,
 Cables between boards A-A1, A-A2

 MAP: 1116

 Tests Involved: All those in 1116

08 05 0P check.

 No controller interrupts.

 There has not been a controller
 interrupt in a specified
 length of time.

 Cards Involved: A-A2N2, A-A2M2

 MAPs Involved: 1111

 Tests Involved: C053, C054, C051,
 C052

18 XX WSC DBI/DB0 parity error.

 A parity check occurred on the
 work station controller data bus in
 or a data bus out.

 Cards Involved: A-A2N2, A-A2M2,
 A-A2P4, A-A2Q4

 MAPs Involved: 1103

 Tests Involved: C00B, C011

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MAP 8600-2

CTRL ERROR HISTORY

MAP 8600-3

5340 SYSTEMS UNIT

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0C XX WSC storage parity check

 a parity check has occurred on the
 storage output bus of the work
 station controller.

 Cards Involved: A-A2N2, A-A2P4,
 A-A2Q4, A-A2 board, A-A2N2YXX top
 card conn, A-A2N2ZXX top card conn

 MAPs Involved: 1109

 Tests Involved: C047, C048, C04B

09 XX Long time out check.

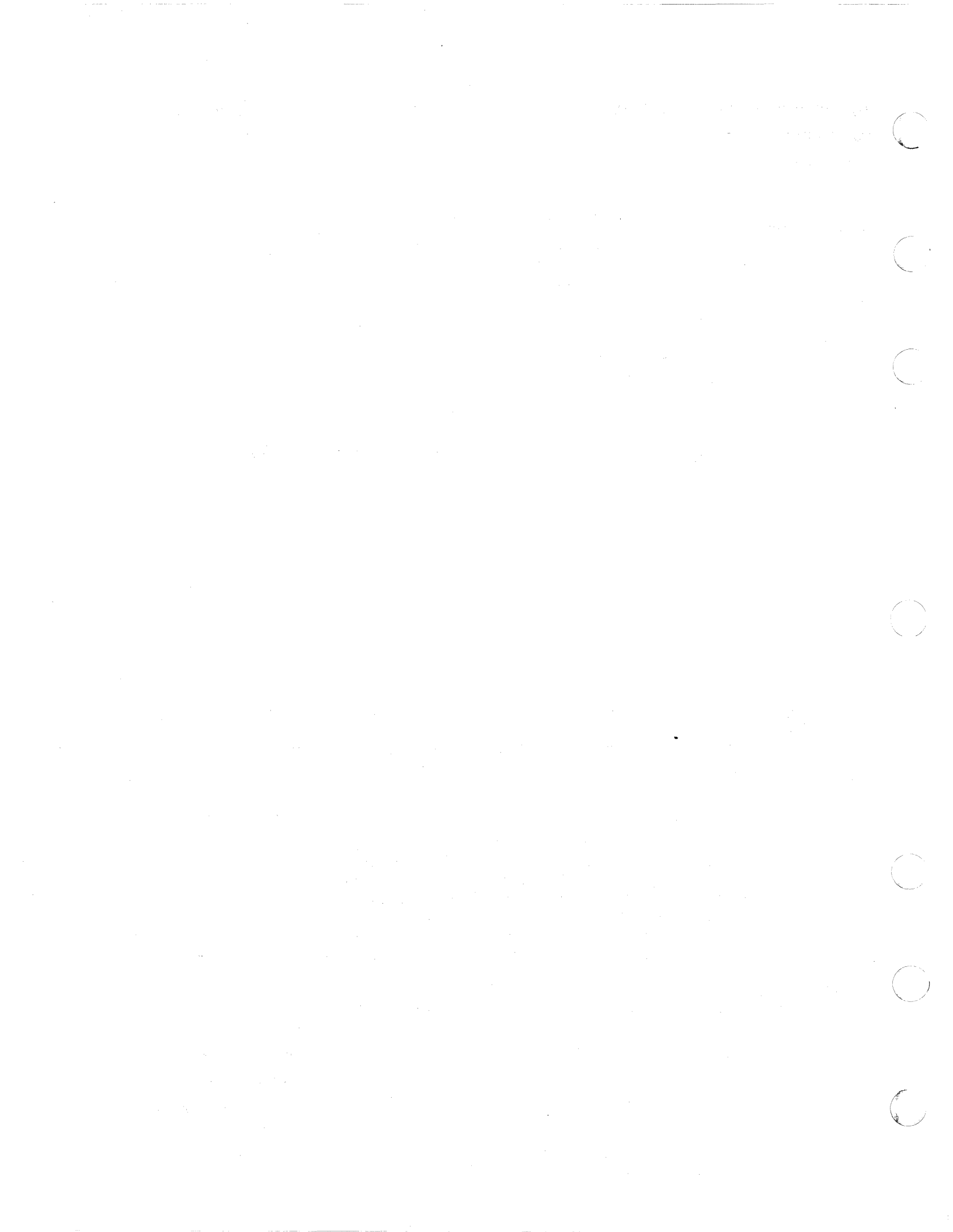
 The work station controller must
 keep resetting a 7 second timer to
 prevent this error from occurring.
 If the microcode gets lost, this
 will not occur. If this error is
 combined with some other error, the
 other error is the cause. If it is
 a line, it is probably a microcode
 problem.

 Attempt to reproduce it by identifying
 the user programs that were running
 at the time. Take a dump when
 reproduced to determine proc
 status.

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MAP 8600-3



WS KBD/DISPL ERROR HISTORY

MAP 8700-1

5340 SYSTEMS UNIT

PAGE 1 OF 6

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP supplies you with the information necessary to interpret the Error History Table for the Keyboard/ Display when work station control expansion 'C' is not installed.

START CONDITIONS:

None

Example:

	Controller/ Host Status		Cable Status Cont		Device		Device Status 0		1	
	0123	4567	0123	4567	0123	4567	0123	4567	0123	4567
EX A:	0000	0000	0000	0000	0000	1000	0000	0000	0000	0000
EX B:	0000	0000	0000	0000	0000	0101	0000	0000	0000	0000
EX C:	0000	0000	1000	0000	0000	1110	0000	0000	0000	0000

SPECIFICATION OF ERRORS:

Controller/Host Status:

- (0) = (Not Logged) Data Stream Reject
- (1) = (Not Logged) Work Station Control Field Error
- (2) = (Not Logged) Resources Temporarily Not Available
- (3) = (Logged in Controller Log) Work Station Controller DB0/I Parity Check
- (4) = (Logged in Controller Log) Operation Check
- (5) = (Logged in Controller Log) Work Station Control Storage Parity Check
- (6) = Not Used
- (7) = (Logged in Controller Log) Long Time Out Check

WS KBD/DISPL ERROR HISTORY

MAP 8700-2

5340 SYSTEMS UNIT

PAGE 2 OF 6

Cable Status, Controller:

(0) = (Not Logged) Screen Format Error

(1) = (Not Logged) No Response Time Out

(2) = Transmit process check
hardware failure in system.

Cards Involved: A-A2M2, A-A2R2

(3) = Activate Command Failure - Controller did not receive
busy status after first poll following an activate
command.

(4) = Receive Parity Check

The Work Station controller has sensed a parity check
on the work station response. All retries have been
exhausted.

Possible Causes:

1) Noise bursts on cable.

2) Failure of clock to remove circuit on card A-A2R2.

3) Failure of parity checking logic on card A-A2M2.

4) DC voltage outside the permit range.

5) Terminal failure.

(5) = Receive Length Check

The Work Station has responded with an wrong length
of frames to a command.

Possible Causes:

1) Noise on cable.

2) Terminal failure.

(6) = Reserved

(7) = Even Odd Time Out

This error is an indication that the microprocessor in the
Work Station is no longer operational.

Probable Cause:

Work station failure.

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MAP 8700-2

Cable Status, Device:

- (0) = Device Busy Time Out
The terminal is hung busy in executing a set of commands.
Probable Cause:
1) Terminal failure.
- (1) = Line P check
The terminal has sensed a line parity check--all recovery attempts have failed.
- (2) = Reserved
- (3) = Outstanding Status - Not An Error.
- (4, 5, 6) = Exception Status
 - 001 = Null or Attribute Error
A null field was encountered at an inappropriate time.
Probable Cause:
User Program Error
 - 010 = Illegal Activate
Protocal violation on serial interface sensed by the terminal.
 - 011 = Reserved
 - 100 = Invalid Command or Device ID
 - 101 = Input Q or Storage Overrun
 - 110 = Invalid Reg Value
 - 111 = Power On Transition
Normal when terminal first powers up--should go away when terminal is modeset.
- (7) = Level Switching Bit
--Not An Error

5340 SYSTEMS UNIT

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Device Status 0:

This byte does not assign a single meaning to each bit. It should be interpreted as a hexadecimal code whose meaning is dependent on the controller/host status byte and the controller/cable status byte. These meanings are listed below.

Data Stream Reject (Controller/Host Status Byte Bit 0)

Device Status 0 Byte:

- Code
- 01 Premature end of data stream.
- 02 Row or column address not valid for set buffer address, insert cursor, or repeat to address end.
Orders:
-Row = 0 or > 24 (12)
-Column = 0 or > 80
- 03 Repeat-to-address end address is less than present address counter.
- 04 Escape character missing or invalid command code.
- 05 Field length specified was zero.
- 06 Input field specified out of sequence.
- 07 Invalid Restore command data (Restore data sent to wrong device).
- 08 Input field was past end of screen.
- 09 Format table overflow
- 0A Data written past end of screen.
- 0B Start of Header Byte count is not equal to 3.
- 0C Roll command parameter error:
-Roll size = 0
-Top line = 0
-Bottom line > 24 (12)
-Roll Size > bottom line minus top line
-Top line > = bottom line
- 0D Too many field control words specified for input field.
- 0E, 0F Not assigned.

Work Station Control Field Error (controller/Host Status Byte Bit 1)

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MAP 8700-4

5340 SYSTEMS UNIT

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Device Status 0 Byte:

- Code
- 01 Command modifier not valid in work station control field.
- 02 Byte count not valid in work station control field.
- 03 Device address not found in system parameter list.
- 04 -Byte count decreased past zero on Data Transmit.
-Byte count is not zero after read input field command executed.
-Read input field sent to work station with no format table.
- 05-0F Not assigned.

Resources temporarily not available (Controller/Host Status Byte Bit 2)

Device Status 0 Byte:

- Code
- 01 Not used.
- 02 Work station specified as not operational by work station controller (hung busy, response not valid to poll).
- 03 Device offline (not in session).
- 04 Not used.
- 05 Display in operator error mode.
- 06 Keyboard not locked on Read command.
- 07 Terminal not powered on.
- 08 Not used.
- 09 -Save or Restore Screen command is not preceded by Save or Restore Table command.
-Commands other than Clear Unit, Save/Restore Table, Save or Restore Screen are sent after Save or Restore Table is executed.
- 0A-0F Not assigned.

Screen Format Error (Controller/Cable Status Byte Bit 0)

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MAP 8700-5

WS KBD/DISPL ERROR HISTORY

MAP 8700-6

5340 SYSTEMS UNIT

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Device Status 0 Byte:

- Code
- 01 Read Input Fields command sensed one of the following:
 - Field was 0 bytes in length
 - Field has no ending attribute
 - Signed numeric field was 1 byte in length
 - Field was > 80 characters when specified, but < 80 characters when read
 - Field was = > 80 characters when specified, but > 80 characters when read
 - 02 Resequence error in format table
 - Resequence number = 0
 - Resequence number specified a field larger than number of fields on screen
 - 03 Check digit processing sensed errors
 - Field > 32 characters long
 - 04-0F Not assigned.

Device Status 1:

- (0123) = Device Scan Code
- (4) = Master Modified Data Tag
 - Not An Error
- (567) = Reserved

EXAMPLE A:

An exception condition has occurred. The error is an invalid command or device ID.

EXAMPLE B:

An exception condition has occurred. The error is an invalid activate.

EXAMPLE C:

Two Errors Are Indicated:

- 1) Device Busy Time Out
- 2) Power On Transition Exception Condition

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MAP 8700-6

WS MATRIX PRTR ERROR HISTORY

MAP 8800-1

5340 SYSTEMS UNIT

PAGE 1 OF 5

ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
No entry in this table			

MAP DESCRIPTION:

This MAP supplies you with the information necessary to interpret the Error History Table for the matrix printers when work station control expansion 'C' is not installed.

START CONDITIONS:

None

LOGIC CARDS TESTED:

None

EXAMPLE:

	Error Code	Cont/Host Status		Cable Status				Device Status			
		Status		Cont		Device		0		1	
		0123	4567	0123	4567	0123	4567	0123	4567	0123	4567
EX A:	0220	0000	0000	0000	0000	0000	1000	0000	0000	0000	0000
EX B:	0224	0000	0000	0000	0000	0000	0101	0000	0000	0000	0000
EX C:	0291	0000	0000	1000	0000	0000	1110	0000	0000	0000	0000
EX D:	0238	0000	0000	0000	0000	0010	0001	0000	0000	0011	1000

SPECIFICATION OF ERRORS:

Controller/Host Status:

- (0) = (Not Logged) Data Stream Reject
- (1) = (Not Logged) WSCF Error
- (2) = (Not Logged) Resources Temporarily Not Available
- (3) = (Logged in Controller Log) WSC DB0/I PCHK
- (4) = (Logged in Controller Log) Operation Check
- (5) = (Logged in Controller Log) Storage Parity Check
- (6) = Not Used
- (7) = (Logged in Controller Log) Long Time Out Check

WS MATRIX PRTR ERROR HISTORY

MAP 8800-2

5340 SYSTEMS UNIT

PAGE 2 OF 5

Cable Status, Controller:

- (0) = (Not Logged) Reserved
- (1) = No Response Time Out - The printer failed to respond after a specified number of poll commands.
- (2) = Transmit Activity Check
Hardware failure in system cards.
Cards Involved: A-A2M2, A-A2R2
- (3) = Activate Command Failure - Controller did not receive busy status after first poll following an activate command.
- (4) = Receive Parity Check
The work station controller has sensed a parity check on the work station response. All retries have been exhausted.
Possible Causes:
 - 1) Noise bursts on cable.
 - 2) Failure of clock removal circuit on card A-A2R2.
 - 3) Failure of parity checking Logic on card A-A2M2.
 - 4) DC voltage is outside a permissible range.
 - 5) Terminal failure.
- (5) = Receive Length Check
The work station has responded with an incorrect length of frames to a command.
Possible Causes:
 - 1) Noise on cable.
 - 2) Printer failure.
- (6) = Reserved
- (7) = Even Odd Time Out
This error is an indication that the microprocessor in the printer is no longer operational.
Probable Cause:
Printer failure.

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MAP 8800-2

5340 SYSTEMS UNIT

PAGE 3 OF 5

Cable Status, Device:

- (0) = Device Busy Time Out
The printer has hung busy in executing a set of commands.
Probable Cause:
1) Printer Failure.
- (1) = Line P Check
The printer has sensed a line parity check--all recovery attempts have failed.
- (2) = Unit Not Available (Printer Not Ready - This check is on for all hard errors).
- (3) = Outstanding Status
(More information will be contained in device status 0,1)
- (4, 5, 6) = Exception Status
Protocol violation on serial interface sensed by the terminal.
 - 001 = Activate Lost/Discarded without a line check
 - 010 = Not Valid Activate
 - 011 = Reserved
 - 100 = Not Valid Command or Device ID
 - 101 = Input Q or Storage Overrun
 - 110 = Not Valid Exception Status
 - 111 = Power On Transition
Normal when terminal first powers up--should go away when terminal is modeset.
- (7) = Level Switching Bit
--Not An Error

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MAP 8800-3

WS MATRIX PRTR ERROR HISTORY

MAP 8800-4

5340 SYSTEMS UNIT

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Device Status 0:

- (0) = Not Valid SCS Command
- (1) = Not Valid SCS Parameter
- (2,3,4) = Reserved
- (5) = Printer Mechanism Not Ready (5256 only)
- (6) = End of Forms
- (7) = Unprintable Character

Device Status 1 (5256):

- (0) = Wire Check
- (1) = Slow Speed Check
- (2) = Fast Speed Check
- (3) = Emitter Seq Check
- (4) = No Emitters
- (5) = Emitter Overrun Check
- (6) = Forms Stopped
- (7) = Forms Position Check

Device Status 1 (5225):

(This byte is encoded for 5225 printers)

- 0001 0001 Printer Processor Check
- 0011 0001 Control/Sense Card Check
- 0011 0010 Servo Power Amp Check
- 0011 0100 Servo Amp Card/Servo Power Amp/Actuator Carrier Motor Check
- 0011 0101 Actuator Carrier Overcurrent
- 0011 0110 Actuator Carrier Emitters Check
- 0011 1000 Actuator Carrier Speed Check
- 0011 1001 Undetermined
- 0100 0001 Control/Sense Card Check
- 0100 0010 Servo Power Amp Check
- 0100 0011 Servo Amp Card/Servo Power Amp/Forms Motor Check
- 0100 0101 Forms Overcurrent
- 0100 0110 Forms Emitters Check
- 0100 1000 Forms Speed Check Check
- 1000 0001 High Voltage Check Check
- 1000 0011 Dot Image Generator Check
- 1000 0100 Wire Latch Card Check
- 1000 0101 Pedestal Check
- 1000 0110 Actuator Group Jumpers Check
- 1000 0111 Timer Check
- 1000 1000 Ribbon Jam

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EC 835000 PEC 832999

MAP 8800-4

1000 1001 Ribbon Card Check

EXAMPLE A:

An exception condition has occurred. Error is not valid command or device ID.

EXAMPLE B:

An exception condition has occurred. Error is not valid activate.

EXAMPLE C:

Two errors are indicated:

- 1) Device Busy Time Out
- 2) Power On Transition Exception Condition

EXAMPLE D:

A Hard Actuator Carrier Speed Check has occurred on a 5225 printer.

