

PAGE 1 OF 97

ENTRY POINTS

FROM ENTER THIS MAP			
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
1470	A	1	001

EXIT POINTS

EXIT THIS MAP TO			
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
37	102	0020	A
20	057	0020	A
32	078	0020	A
32	080	0020	A
54	153	0020	A
80	208	0020	A
86	223	0020	A
97	235	0020	A
51	139	1471	A
51	142	1471	A

001

(ENTRY POINT A)

DANGER

IF THE COVERS ARE REMOVED, WEAR SAFETY GLASSES WHEN THE POWER SUPPLY IS POWERED ON. THIS IS TO (STEP 001 CONTINUES)

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POWER SUPPLY MAP

MAP 1480-3

PAGE 3 OF 97

002

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.

DISCONNECT CONNECTOR P6 FROM J6.
SET THE MULTIMETER TO THE RX1
OHMS SETTING.

ON THE CABLE, NOT THE PC CARD,
CONNECT THE TEST LEAD OF THE
METER TO PIN 3 OF CONNECTOR P6
AND THE OTHER TEST LEAD OF THE
METER TO PIN 4 OF CONNECTOR P6.

NOTE THE INDICATED RESISTANCE.
IS THE INDICATED RESISTANCE LESS
THAN 0.5 OHMS?

Y N

003

CONNECT CONNECTOR P6 TO J6.
DISCONNECT CONNECTOR P4 FROM
J4.

CONNECT ONE TEST LEAD OF THE
METER TO PIN 3 OF CONNECTOR P4
AND THE OTHER TEST LEAD OF THE
METER TO PIN 4 OF CONNECTOR P4.
NOTE THE INDICATED RESISTANCE.

IS THE RESISTANCE LESS THAN 0.5
OHMS?

Y N

004

CONNECT CONNECTOR P4 TO J4.
DISCONNECT CONNECTOR P1 FROM
J1.

CONNECT ONE TEST LEAD OF THE
METER TO PIN 10 OF CONNECTOR
P1 AND THE OTHER TEST LEAD OF
THE METER TO PIN 11 OF
CONNECTOR P1.

NOTE THE INDICATED
RESISTANCE.

(STEP 004 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

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MAP 1480-3

(STEP 004 CONTINUED)

IS THE RESISTANCE LESS THAN 0.5
OHMS?

Y N

|

| 005

| CONNECT CONNECTOR P1 TO J1.
| DISCONNECT THE WIRES FROM THE
| TERMINALS OF THE THERMAL
| SWITCH.

| CONNECT ONE TEST OF THE METER
| TO ONE TERMINAL OF THE THERMAL
| SWITCH AND THE OTHER TEST LEAD
| OF THE METER TO THE OTHER
| TERMINAL OF THE THERMAL SWITCH.
| NOTE THE INDICATED RESISTANCE.

| (SEE MIM SECTIONS 4-82 AND
| 4-83, PARAGRAPH 4.26 AND LOGIC
| PAGE YA200).

| IS THE RESISTANCE LESS THAN 0.5
| OHMS?

| Y N

|

| 006

| RECONNECT THE WIRES TO THE
| THERMAL SWITCH.
| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.

| NOTE IF THE FAN IS WORKING
| CORRECTLY.

| IS THE FAN WORKING?

| Y N

|

| 007

| GO TO PAGE 57,
| STEP 161,
| ENTRY POINT D.

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29JUL83 PN6838626

ECA08003 PEC375384

PAGE 5 OF 97

008

REMOVE THE THERMAL SWITCH
AND INSTALL A NEW SWITCH.
(SEE MIM SECTIONS 4-82 AND
4-83, PARAGRAPH 4.26).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.

009

REMOVE THE FAN CABLE AND
INSTALL A NEW FAN CABLE.
(SEE MIM SECTIONS 4-82 AND
4-83, PARAGRAPH 4.25).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.

010

REMOVE THE REAR UNIT AND
INSTALL A NEW REAR UNIT.
(SEE MIM SECTION 4-69,
PARAGRAPH 4.21.2).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.

011

REMOVE THE FRONT UNIT AND INSTALL
A NEW FRONT UNIT.
(SEE MIM SECTIONS 4-66 AND 4-67,
PARAGRAPH 4.21.1).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

PAGE 7 OF 97

015

REMOVE THE REAR UNIT AND
INSTALL A NEW UNIT.
(SEE MIM SECTION 4-69,
PARAGRAPH 4.21.2).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.
GO TO PAGE 1,
STEP 001,
ENTRY POINT A.

016

REMOVE THE FAN CABLE AND
INSTALL A NEW CABLE.
(SEE MIM SECTION 4-67).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

017

REMOVE THE FRONT UNIT AND
INSTALL A NEW UNIT.
(SEE MIM SECTIONS 4-66 AND
4-67, PARAGRAPH 4.21.1).
CONNECT ALL CONNECTIONS.
VERIFY THE REPAIR.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

018

SWITCH ON THE POWER SUPPLY
SERVICE SWITCH.
CONNECT ONE TEST LEAD OF THE
METER TO PIN 5 OF CONNECTOR P6.
CONNECT THE OTHER TEST LEAD OF
THE METER TO GROUND.
NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE MORE THAN 5K
OHMS?

Y N

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M N

29JUL83 PN6838626

ECA08003 PEC375384

019

DISCONNECT CONNECTOR P4 FROM
J4.

CONNECT ONE TEST LEAD OF THE
METER TO PIN 5 OF CONNECTOR P4.
CONNECT THE OTHER TEST LEAD OF
THE METER TO GROUND.

NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE MORE THAN 5K
OHMS?

Y N

020

REMOVE THE FRONT UNIT AND
INSTALL A NEW UNIT.

(SEE MIM SECTIONS 4-66 AND
4-67, PARAGRAPH 4.21.1.

CONNECT ALL CONNECTORS.

GO TO PAGE 1, STEP 001,
ENTRY POINT A.

021

REMOVE THE REAR UNIT AND
INSTALL A NEW UNIT.

(SEE MIM SECTION 4-69,
PARAGRAPH 4.21.2.

CONNECT ALL CONNECTORS.

GO TO PAGE 1, STEP 001,
ENTRY POINT A.

022

CONNECT ONE TEST LEAD OF THE
METER TO PIN 1 OF CONNECTOR P6.
CONNECT THE OTHER TEST LEAD OF
THE METER TO GROUND.

NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE MORE THAN 5K
OHMS?

Y N

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29JUL83 PN6838626

ECA08003 PEC375384

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POWER SUPPLY MAP

MAP 1480-9

PAGE 9 OF 97

023

DISCONNECT CONNECTOR P4 FROM J4.
CONNECT ONE TEST LEAD OF THE
METER TO PIN 1 OF CONNECTOR P4.
CONNECT THE OTHER TEST LEAD OF
THE METER TO GROUND.
NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE MORE THAN 5K
OHMS?

Y N

024

DISCONNECT TERMINALS 3 AND 4
FROM CIRCUIT BREAKER, CB-1.
CONNECT ONE TEST LEAD OF THE
METER TO TERMINAL 3 OF CIRCUIT
BREAKER, CB-1. CONNECT THE
OTHER TEST LEAD OF THE METER TO
GROUND.
NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE MORE THAN 5K
OHMS?

Y N

025

REMOVE CIRCUIT BREAKER, CB-1
AND INSTALL A NEW UNIT.
(SEE MIM SECTION 4-72,
PARAGRAPH 4.22.2.
CONNECT ALL CONNECTORS.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

026

REMOVE THE REAR UNIT AND
INSTALL A NEW UNIT.
(SEE MIM SECTION 4-69,
PARAGRAPH 4.21.2.
CONNECT ALL CONNECTORS.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-9

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PAGE 10 OF 97

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| 027
| REMOVE THE FRONT UNIT AND
| INSTALL A NEW UNIT.
| (SEE MIM SECTIONS 4-66 AND
| 4-67, PARAGRAPH 4.21.1.
| CONNECT ALL CONNECTORS.
| GO TO PAGE 1, STEP 001,
| ENTRY POINT A.

|
| 028
| SET THE MULTIMETER TO THE RX1
| OHMS SETTING.
| CONNECT ONE TEST LEAD OF THE
| METER TO PIN 1 OF CONNECTOR P6.
| CONNECT THE OTHER TEST LEAD OF
| THE METER TO PIN 2 OF CONNECTOR
| P6.
| NOTE THE INDICATED RESISTANCE.
| IS THE RESISTANCE LESS THAN 50
| OHMS?

Y N

|
| 029
| CONNECT CONNECTOR P6 TO J6.
| DISCONNECT CONNECTOR P4 FROM
| J4.
| CONNECT ONE TEST LEAD OF THE
| METER TO PIN 1 OF CONNECTOR P4.
| CONNECT THE OTHER TEST LEAD OF
| THE METER TO PIN 2 OF CONNECTOR
| P4.
| NOTE THE INDICATED RESISTANCE.
| IS THE RESISTANCE LESS THAN 50
| OHMS?

Y N

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29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-10

T U POWER SUPPLY MAP
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MAP 1480-11

 PAGE 11 OF 97

| |
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| 030
| CONNECT CONNECTOR P4 TO J4.
| CONNECT ONE TEST LEAD OF THE
| METER TO TERMINAL 3 OF CIRCUIT
| BREAKER, CB-1.
| CONNECT THE OTHER TEST LEAD OF
| THE METER TO TERMINAL 4 OF
| CIRCUIT BREAKER, CB-1.
| NOTE THE INDICATED RESISTANCE.
| IS THE RESISTANCE LESS THAN 50
| OHMS?

| Y N

| |
| | 031
| | REMOVE CIRCUIT BREAKER, CB-1
| | AND INSTALL A NEW CIRCUIT
| | BREAKER.
| | (SEE MIM SECTION 4-72,
| | PARAGRAPH 4.22.2).
| | CONNECT ALL CONNECTORS.
| | VERIFY THE REPAIR.

| |
| 032
| REMOVE THE REAR UNIT AND
| INSTALL A NEW REAR UNIT.
| (SEE MIM SECTION 4-69,
| PARAGRAPH 4.21.2).
| CONNECT ALL CONNECTORS.
| GO TO PAGE 1, STEP 001,
| ENTRY POINT A.

|
033
REMOVE THE FRONT UNIT AND INSTALL
A NEW FRONT UNIT.
(SEE MIM SECTIONS 4-66 AND 4-67,
PARAGRAPH 4.21.1).
CONNECT ALL CONNECTORS.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-11

034
CONNECT ONE TEST LEAD OF THE
METER TO PIN 5 OF CONNECTOR P6.
CONNECT THE OTHER TEST LEAD OF
THE METER TO PIN 6 OF CONNECTOR
P6.

NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE LESS THAN 2.0
OHMS?

Y N

035
CONNECT CONNECTOR P6 TO J6.
DISCONNECT CONNECTOR P4 FROM
J4.
CONNECT ONE TEST LEAD OF THE
METER TO PIN 5 OF CONNECTOR P4.
CONNECT THE OTHER TEST LEAD OF
THE METER TO PIN 6 OF CONNECTOR
P4.

NOTE THE INDICATED RESISTANCE.
IS THE RESISTANCE LESS THAN 1.8
OHMS?

Y N

036
REMOVE THE REAR UNIT AND
INSTALL A NEW REAR UNIT.
(SEE MIM SECTION 4-69,
PARAGRAPH 4.21.2).
CONNECT ALL CONNECTORS.
GO TO PAGE 14, STEP 040,
ENTRY POINT C.

037
REMOVE THE FRONT UNIT AND
INSTALL A NEW FRONT UNIT.
(SEE MIM SECTIONS 4-66 AND
4-67, PARAGRAPH 4.21.1).
CONNECT ALL CONNECTORS.
GO TO PAGE 1, STEP 001,
ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

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MAP 1480-12

A V POWER SUPPLY MAP
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MAP 1480-13

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| | PAGE 13 OF 97
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| 038
| GO TO PAGE 14, STEP 040,
| ENTRY POINT C.

|
039
SWITCH OFF THE AC POWER TO THE
PROCESSING UNIT AC POWER CABLE
CONNECTOR.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE CONNECTOR FROM ITS AC
POWER OUTLET.
REMOVE THE PROCESSING UNIT AC
POWER SWITCH AND INSTALL A NEW
SWITCH. (SEE MIM SECTIONS 4-52
AND 4-53, PARAGRAPH 4.14.2).
CONNECT THE PROCESSING UNIT AC
POWER CABLE CONNECTOR TO THE AC
POWER OUTLET.
SWITCH ON THE AC POWER TO THE AC
POWER OUTLET.
VERIFY THE REPAIR.

29JUL83 PN6838626

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MAP 1480-13

040

(ENTRY POINT C)

ENSURE THAT ALL CONNECTORS AND
TERMINALS ARE CORRECTLY
CONNECTED.

ENSURE THAT ALL TERMINAL SCREWS
ARE INSTALLED TIGHTLY. (SEE MIM
SECTIONS 3-12 AND 3-13,
PARAGRAPHS 3.11 AND 3.12).

SET THE MULTIMETER TO THE RX1
OHMS SETTING.

REMOVE EACH FUSE AND MEASURE ITS
RESISTANCE.

IF THE INDICATED RESISTANCE OF
THE FUSE IS LESS THAN 0.25 OHMS,
REINSTALL THE FUSE IN THE POWER
SUPPLY. IF THE RESISTANCE OF THE
FUSE IS MORE THAN 0.25 OHMS,
INSTALL A NEW FUSE. (SEE
SECTIONS 4-62 AND 4-63, PARAGRAPH
4.19.2).

ENSURE THAT THE PROCESSING UNIT
AC POWER CABLE IS CONNECTED TO
THE AC POWER OUTLET AND THAT THE
POWER OUTLET IS SWITCHED ON.

SWITCH ON CIRCUIT BREAKER CB-1
AND CIRCUIT BREAKER CB-2.

IF THERE ARE FOUR OR LESS THAN
FOUR LOGIC CARDS IN THE CARD
(STEP 040 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-14

PAGE 15 OF 97

(STEP 040 CONTINUED)

FILE, SWITCH THE SERVICE SWITCH TO "1" POSITION. IF THERE ARE MORE THAN FOUR LOGIC CARDS IN THE CARD FILE, SWITCH THE SERVICE SWITCH TO "0" POSITION.

SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.

SET THE MULTIMETER SETTING TO MEASURE APPROXIMATELY 15 VOLTS DC.

CONNECT ONE TEST LEAD OF THE METER TO THE TEST POINT INDICATED ON THE CHART AND THE OTHER TEST LEAD OF THE METER TO TEST POINT 8. (INDICATED ON THE CHART AS GROUND). ENSURE THAT THE POSITIVE TEST LEAD OF THE METER IS CONNECTED TO TEST POINT 8 WHEN THE CHART INDICATES NEGATIVE VOLTAGES AND THAT THE NEGATIVE TEST LEAD OF THE METER IS CONNECTED TO TEST POINT 8 WHEN THE CHART INDICATES POSITIVE VOLTAGES.

ENSURE THAT THE VOLTAGES INDICATED BY THE METER ARE BETWEEN THE MINIMUM AND MAXIMUM VALUES INDICATED BY THE CHART

SET THE METER SETTING TO A LOWER VOLTAGE IF NECESSARY.

TEST POINT	MINIMUM READING	MAXIMUM READING
1	+4.6 V	+5.9 V
2	+7.6 V	+9.4 V
3	-11.0 V	- 13,2 V

(STEP 040 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-15

(STEP 040 CONTINUED)

4	-4.6 V	-5.5 V
5	+11.0 V	+13.2 V
6	+2.6 V	+5.9 V
(POWER ON RESET)		
7	+2.6 V	+5.9 V
POWER THERMAL WARNING		
8	GROUND	GROUND

ARE ALL OF THE VOLTAGES MISSING?

Y N

| 041

| IS ONE OR MORE VOLTAGE MISSING?

| Y N

| | 042

| | IS EACH OF THE VOLTAGES ABOVE
| | THE INDICATED MINIMUM VALUE?

| | Y N

| | | 043

| | | GO TO PAGE 74,
| | | STEP 195,
| | | ENTRY POINT B.

| | | 044

| | | IS THERE A PROBLEM WITH THE
| | | FAN?

| | | Y N

| | | 045

| | | IS THE PROCESSING UNIT
| | | POWER ON INDICATOR LIGHTED?

| | | Y N

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29JUL83 PN6838626

ECA08003 PEC375384

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PAGE 17 OF 97

|
|
046
INSPECT THE FRONT CONSOLE CABLE
TO ENSURE THAT IT IS CONNECTED TO
THE P.C. CARD CONNECTOR, J8.
(SEE LOGIC PAGE YA200).
IS THE FRONT CONSOLE CABLE
CONNECTED TO CONNECTOR J8?

Y N

|
| 047
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| CONNECT THE CONSOLE CABLE TO
| THE P.C. CARD AT CONNECTOR J8.
| (SEE LOGIC PAGE YA200).
| VERIFY THE REPAIR.

|
048
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
INSPECT THE CONNECTIONS TO THE
POWER ON INDICATOR.
ARE THE CONNECTIONS GOOD?

Y N

|
| 049
| CORRECTLY CONNECT THE POWER ON
| INDICATOR. VERIFY THE REPAIR.

|
050
SET THE METER TO THE RX1 OHMS
SETTING.
DISCONNECT THE CONSOLE CABLE
CONNECTOR, P8 FROM J8.
CONNECT THE POSITIVE TEST LEAD OF
THE METER TO PIN 1 OF CONNECTOR
P8 AND THE NEGATIVE TEST LEAD OF
THE METER TO PIN 6 OF CONNECTOR
P8. NOTE THE RESISTANCE
INDICATED ON THE METER.
THEN CONNECT THE NEGATIVE TEST
LEAD OF THE METER TO PIN 1 OF
(STEP 050 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

(STEP 050 CONTINUED)
CONNECTOR P8 AND THE POSITIVE TEST LEAD OF THE METER TO PIN 6 OF CONNECTOR P8. NOTE THE RESISTANCE INDICATED RESISTANCE ON THE METER.

IF THE INDICATOR LIGHT CIRCUIT IS GOOD, ONE OF THE TWO RESISTANCES METER SHOULD BE LESS THAN 30 OHMS AND THE OTHER RESISTANCE SHOULD BE MORE THAN 1K OHMS. (SEE MIM SECTION 4-50, PARAGRAPH 4.13).

IS THE INDICATOR LIGHT CIRCUIT GOOD?

Y N

|
| 051
| SET THE METER TO THE RX1 OHMS
| SETTING.
| DISCONNECT THE CABLE FROM THE
| POWER ON INDICATOR LIGHT.
| CONNECT THE POSITIVE TEST LEAD
| OF THE METER TO ONE TERMINAL OF
| THE POWER ON INDICATOR LIGHT
| AND THE NEGATIVE TEST LEAD OF
| METER TO THE OTHER TERMINAL OF
| THE POWER ON INDICATOR.
| NOTE THE INDICATED RESISTANCE.
| REVERSE THE TEST LEADS OF THE
| METER.
| NOTE THE INDICATED RESISTANCE.
| IF ONE OF THE TWO INDICATIONS
| ON THE METER IS LESS THAN 30
| OHMS AND THE OTHER INDICATION
| IS MORE THAN 1K OHMS, THE POWER
| ON INDICATOR LIGHT IS GOOD.
| (SEE MIM SECTION 4-50,
| PARAGRAPH 4.13).
| IS THE POWER ON INDICATOR LIGHT
| GOOD?

| Y N

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29JUL83 PN6838626

ECA08003 PEC375384

Z A A A POWER SUPPLY MAP
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MAP 1480-19

PAGE 19 OF 97

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| | | 052
| | | REMOVE THE BASIC CONSOLE
| | | CARD AND INSTALL A NEW
| | | CARD. (SEE MIM SECTIONS
| | | 4-54 AND 4-55, PARAGRAPH
| | | 4.15). VERIFY THE REPAIR.

| | | |
| | | 053
| | | REMOVE THE BASIC CONSOLE
| | | CABLE AND INSTALL A NEW
| | | CABLE. (SEE MIM SECTIONS
| | | 4-54 AND 4-55, PARAGRAPH
| | | 4.15). VERIFY THE REPAIR.

| | | |
| | | 054
| | | REMOVE THE PC CARD AND INSTALL
| | | A NEW CARD. (SEE MIM SECTIONS
| | | 4-70 AND 4-71, PARAGRAPH
| | | 4.22.1). CONNECT ALL
| | | CONNECTORS.
| | | VERIFY THE REPAIR.

| | | |
| | | 055
| | | NOTE IF THE DATA INDICATOR LIGHTS
| | | INDICATE HEXADECIMAL FFFF WITH
| | | THE STOP INDICATOR LIGHTED AND
| | | WITH LEVEL 0 INDICATOR LIGHTED.
| | | THESE CONDITIONS INDICATE THAT
| | | THE PROCESSING UNIT IS IN ITS
| | | PREPARATORY RESET CONDITION.
| | | SWITCH OFF THE PROCESSING UNIT AC
| | | POWER SWITCH.
| | | AFTER A FEW SECONDS, SWITCH ON
| | | THE PROCESSING UNIT AC POWER
| | | SWITCH.
| | | DOES THE PROCESSING UNIT RESET TO
| | | A PREPARATORY CONDITION WHEN
| | | POWER IS SWITCHED ON? (POWER ON
| | | RESET GOOD?).

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-19

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POWER SUPPLY MAP

MAP 1480-20

PAGE 20 OF 97

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056

CAUTION

BE CAREFUL NOT TO CONNECT ANY OTHER PROCESSING UNIT LOGIC BOARD PIN TO GROUND.

REMOVE A TEST LEAD FROM THE METER.
WITH THE PROCESSING UNIT SWITCHED ON, CONNECT ONE END OF THE TEST LEAD TO GROUND AND THE OTHER END OF THE TEST LEAD TO PIN S05 OF SOCKET F2 OF THE PROCESSING UNIT LOGIC BOARD, ENSURE A GOOD ELECTRICAL CONNECTION, THEN REMOVE THE TEST LEAD FROM THE SOCKET PIN AND FROM GROUND.
DID THE PROCESSING UNIT RESET TO ITS NORMAL PREPARATORY CONDITION?

Y N

|
| 057
| THE POWER ON RESET FAILURE IS
| IN THE PROCESSING UNIT LOGIC
| BOARD.
| GO TO MAP 0020, ENTRY POINT A.

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29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-20

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POWER SUPPLY MAP

MAP 1480-21

PAGE 21 OF 97

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058

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

INSTALL THE METER TEST LEAD ON THE METER.

DISCONNECT THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE FROM SOCKET, H4 OF THE PROCESSING UNIT LOGIC BOARD. (SEE MIM SECTION 4-67).

SET THE MULTIMETER TO THE RX1 OHMS SETTING.

CONNECT ONE TEST LEAD OF THE METER TO TERMINAL 3 OF TERMINAL BLOCK, TB-B AND THE OTHER TEST LEAD OF THE METER TO PIN B04 OF THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE.

NOTE THE INDICATED RESISTANCE. IS THE RESISTANCE LESS THAN 0.5 OHMS?

Y N

|

| 059

REMOVE THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE AND INSTALL A NEW CABLE. (SEE MIM SECTION 4-67).

VERIFY THE REPAIR.

|

060

DISCONNECT CONNECTOR P7 FROM J7.

CONNECT ONE TEST LEAD OF THE METER TO TERMINAL 3 OF TERMINAL BLOCK TB-B AND THE OTHER TEST LEAD OF THE METER TO PIN 5 OF CONNECTOR P7. NOTE THE INDICATED RESISTANCE.

IS THE INDICATED RESISTANCE LESS THAN 0.5 OHMS?

Y N

| |

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-21

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| | |
| | 061
| | REMOVE THE FRONT UNIT AND
| | INSTALL A NEW FRONT UNIT.
| | (SEE MIM SECTIONS 4-66 AND
| | 4-67, PARAGRAPH 4.21.1).
| | VERIFY THE REPAIR.

| |
| | 062
| | REMOVE THE PC CARD AND INSTALL
| | A NEW CARD.
| | (SEE MIM SECTIONS 4-70 AND
| | 4-71, PARAGRAPH 4.22.1).
| | VERIFY THE REPAIR.

|
063
DISCONNECT CONNECTOR P4 FROM J4.
SET THE MULTIMETER TO MEASURE
APPROXIMATELY 5.0 VOLTS ON THE DC
VOLTS SETTING.
CONNECT ONE THE POSITIVE TEST
LEAD OF THE METER TO TEST POINT 7
AND THE NEGATIVE TEST LEAD OF THE
METER TO TEST POINT 8 ON THE PC
CARD.
NOTE THE INDICATED VOLTAGE.
IS THE INDICATED VOLTAGE LESS
THAN 2.5 VOLTS?

Y N
|
| 064
| REMOVE THE PC CARD AND INSTALL
| A NEW CARD.
| VERIFY THE REPAIR.

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POWER SUPPLY MAP

MAP 1480-23

PAGE 23 OF 97

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065

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

DISCONNECT THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE FROM SOCKET, H4 OF THE PROCESSING UNIT LOGIC BOARD. (SEE MIM SECTION 4-67).

SET THE MULTIMETER TO THE RX1 OHMS SETTING.

CONNECT ONE TEST LEAD OF THE METER TO TEST POINT 7 OF THE PC CARD AND THE OTHER TEST LEAD OF THE METER TO PIN B05 OF THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE.

NOTE THE INDICATED RESISTANCE. IS THE RESISTANCE LESS THAN 0.5 OHMS?

Y N

|

| 066

| SET THE MULTIMETER TO THE RX1 OHMS SETTING.

| CONNECT ONE TEST LEAD OF THE METER TO TERMINAL 4 OF TERMINAL BLOCK TB-B AND THE OTHER TEST LEAD OF THE METER TO PIN B05 OF THE POWER ON RESET/POWER THERMAL WARNING OUTPUT CABLE.

| NOTE THE INDICATED RESISTANCE. (THE POWER THERMAL WARNING CIRCUIT IS BEING TESTED).

| IS THE RESISTANCE LESS THAN 0.5 OHMS?

| Y N

2 2 2
5 4 4
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L M N

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-23

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| |
| 067
| REMOVE THE POWER ON RESET/POWER
| THERMAL WARNING OUTPUT CABLE
| AND INSTALL A NEW CABLE. (SEE
| MIM SECTION 4-67).
| VERIFY THE REPAIR.

|
068
DISCONNECT CONNECTOR P7 FROM J7.
CONNECT ONE TEST LEAD OF THE
METER TO TERMINAL 4 OF TERMINAL
BLOCK TB-B AND THE OTHER TEST
LEAD OF THE METER TO PIN 6 OF
CONNECTOR P7. NOTE THE INDICATED
RESISTANCE.
IS THE INDICATED RESISTANCE LESS
THAN 0.5 OHMS?

Y N
|
| 069
| REMOVE THE FRONT UNIT AND
| INSTALL A NEW FRONT UNIT. (SEE
| MIM SECTIONS 4-66 AND 4-67,
| PARAGRAPH 4.21.1).
| VERIFY THE REPAIR.

|
070
REMOVE THE PC CARD AND INSTALL A
NEW CARD.
(SEE MIM SECTIONS 4-70 AND 4-71,
PARAGRAPH 4.22.1).
VERIFY THE REPAIR.

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071

CONNECT ALL CONNECTORS. SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.

MEASURE THE VOLTAGES ON THE PROCESSING UNIT LOGIC BOARD. THE VOLTAGES SHOULD BE BETWEEN THE VALUES INDICATED ON THE CHART BELOW.

(SEE ALD A2100).

CONNECT ONE TEST LEAD OF THE METER TO THE TEST POINT INDICATED ON THE CHART AND THE OTHER TEST LEAD OF THE METER TO TEST POINT D08. (INDICATED ON THE CHART AS GROUND). ENSURE THAT THE POSITIVE TEST LEAD OF THE METER IS CONNECTED TO TEST POINT D08 WHEN THE CHART INDICATES NEGATIVE VOLTAGES AND THAT THE NEGATIVE TEST LEAD OF THE METER IS CONNECTED TO TEST POINT D08 WHEN THE CHART INDICATES POSITIVE VOLTAGES.

ENSURE THAT THE VOLTAGES INDICATED BY THE METER ARE BETWEEN THE MINIMUM AND MAXIMUM VALUES INDICATED BY THE CHART SET THE METER SETTING TO A LOWER VOLTAGE IF NECESSARY.

SOCKET AND PIN	MINIMUM READING	MAXIMUM READING
E2 D03	+4.6 V	+5.9 V
E2 G11	+7.6 V	+9.4 V
E2 B06	-11.0 V	- 13,2 V

(STEP 071 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

(STEP 071 CONTINUED)

E2 G06	-4.6 V	-5.5 V
E2 B11	+11.0 V	+13.2 V
F2 S05 (POWER ON RESET)	+2.6 V	+5.9 V
F2 M13 (POWER THERMAL WARNING)	+2.6 V	+5.9 V
E2 D08	GROUND	GROUND

ARE ALL OF THE VOLTAGES GOOD?

Y N

| 072
| SET THE MULTIMETER TO MEASURE
| APPROXIMATELY 15 VOLTS DC.
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SWITCH ON THE POWER SUPPLY
| SERVICE SWITCH. (SEE MIM
| SECTION 3-13, PARAGRAPH 3.12).
| DISCONNECT CONNECTOR P7.
| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.
| CONNECT THE METER TEST LEADS TO
| CONNECTOR J7 (ON THE PC CARD)
| AS INDICATED ON THE CHART BELOW
| AND NOTE THE INDICATED VOLTAGES
| ON THE METER.
| THE VOLTAGES MAY BE HIGHER THAN
| THE INDICATED MAXIMUM BECAUSE
| OF THE DISCONNECTED CABLE.

CONNECTOR VOLTAGE VALUES AND METER POLARITY

J7

PIN NO.	NOMINAL VOLTAGE	MINIMUM VOLTAGE	MAXIMUM VOLTAGE	METER TEST
(STEP 072 CONTINUES)				

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-26

(STEP 072 CONTINUED)

				LEAD
2	+12V	+11.0V	+13.2V	POSITIVE
3	- 5V	- 4.6V	- 5.5V	NEGATIVE
1	-12V	-11.0V	-13.2V	NEGATIVE
4	+8.5V	+ 7.6V	+ 9.4V	POSITIVE
5	POWER ON RESET	+ 2.6V	+ 5.9V	POSITIVE
6	POWER THERMAL WARNING	+ 2.6V	+ 5.9V	POSITIVE
7	GROUND	GROUND	GROUND	NEGATIVE POSITIVE

ARE ALL VOLTAGES GOOD?

Y N

073

SWITCH OFF THE PROCESSING UNIT
AC POWER SWITCH.

SWITCH OFF THE POWER SUPPLY
SERVICE SWITCH.

REMOVE THE PC CARD AND INSTALL
A NEW CARD. (SEE MIM SECTIONS
4-70 AND 4-71, PARAGRAPHS 4.22
AND 4.22.1).

VERIFY THE REPAIR.

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-27

A POWER SUPPLY MAP
Q
2 -----
7
PAGE 28 OF 97

MAP 1480-28

|
|
074
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
CONNECT CONNECTOR P7 TO J7.
DISCONNECT THE DC OUTPUT VOLTAGE
FLAT BUS CABLES AND THE POWER ON
RESET/POWER THERMAL WARNING CABLE
FROM TERMINAL BLOCK, TB-B,
TERMINALS 1, 2, 3 AND 4 AND FROM
TERMINAL BLOCK, TB-A, TERMINALS 1
AND 2.
SEE LOGIC PAGE YA200.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
MEASURE THE VOLTAGES ON TERMINAL
BLOCK TB-B, TERMINALS 1, 2, 3 AND
4 AND ON TERMINAL BLOCK TB-A,
TERMINALS 1 AND 2.
THE VOLTAGES MAY BE HIGHER THAN
THE INDICATED MAXIMUM VALUES
BECAUSE OF THE DISCONNECTED
CABLES.
CHART WITH TERMINAL BLOCK TB-B
TERMINAL LOCATIONS AND VOLTAGE
VALUES IS SHOWN BELOW.

TERMINAL BLOCK TB-B WITH VOLTAGE VALUES AND TEST LEAD POLARITY
(STEP 074 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-28

(STEP 074 CONTINUED)

TERMINAL POSITION	NOMINAL VOLTAGE	MINIMUM VOLTAGE	MAXIMUM VOLTAGE	METER TEST LEAD
1	-12V	-11.0V	-13.2V	NEGATIVE
2	+8.5V	+ 7.6V	+ 9.4V	POSITIVE
3	POWER ON RESET	+02.6V	+05.9V	POSITIVE
4	POWER THERMAL WARNING	+02.6V	+05.9V	POSITIVE
5	GROUND	GROUND	GROUND	NEGATIVE POSITIVE
6				
7				
8				
9				
10	NO CONN.*	NO CONN.*	NO CONN.*	NO CONN.*

(* NO CONNECTION)

TERMINAL BLOCK TB-A WITH VOLTAGE VALUES AND TEST LEAD POLARITY

TERMINAL POSITION	NOMINAL VOLTAGE	MINIMUM VOLTAGE	MAXIMUM VOLTAGE	METER TEST LEAD
1	+12V	+11.0V	+13.2V	POSITIVE
2	- 5V	- 4.6V	- 5.5V	NEGATIVE

(STEP 074 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-29

(STEP 074 CONTINUED)

3	-----	-----	-----	-----
4	-----	-----	-----	-----
5	+ 5V	+ 4.6V	+5.9V	POSITIVE
6				
7				
8				
9	GROUND	GROUND	GROUND	POSITIVE NEGATIVE
10	NO CONN.*	NO CONN.*	NO CONN.*	NO CONN.*

(* NO CONNECTION)

ARE ALL OF THE VOLTAGES GOOD?

Y N

|
| 075
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SWITCH OFF THE POWER SUPPLY
| SERVICE SWITCH.
| REMOVE THE FRONT UNIT AND
| INSTALL A NEW FRONT UNIT. (SEE
| MIM SECTIONS 4-66 AND 4-67,
| PARAGRAPHS 4.21 AND 4.21.1).
| VERIFY THE REPAIR.

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-30

A A POWER SUPPLY MAP
P S
2 3 -----
6 1

MAP 1480-32

PAGE 32 OF 97

| |
| |
| 078
| CAUSE OF FAILURE IS IN THE
| PROCESSING UNIT LOGIC BOARD OR
| CARDS.
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SWITCH OFF THE POWER SUPPLY
| SERVICE SWITCH.
| CONNECT ALL CONNECTORS.
| GO TO MAP 0020, ENTRY POINT A.
|

079
NOTE IF THE POWER ON RESET IS
INTERMITTENT OR IF THE SYSTEM
HALTS NOT ALWAYS AT THE SAME
POINT OR IF THE SYSTEM SOMETIMES
RESETS WHEN POWERED ON BUT HALTS
AFTER IPL OR IF THE SYSTEM FAILS
TO IPL.
DOES ONE OR MORE OF THESE
CONDITIONS OCCUR?

Y N
|
| 080
| THERE IS NO FAILURE IN THE
| POWER SUPPLY.
| GO TO MAP 0020, ENTRY POINT A.
|

081
SWITCH OFF THE PROCESSING UNIT AC
POWER.
REMOVE THE PC CARD AND INSTALL A
NEW CARD.
(SEE MIM SECTIONS 4-70 AND 4-71,
PARAGRAPH 4.22.1).
SWITCH ON THE PROCESSING UNIT
POWER SWITCH.
DOES THE PROCESSING UNIT WORK
CORRECTLY?

Y N
| |
| |
| |
| |

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-32

A A POWER SUPPLY MAP
V W
3 3
3 3

MAP 1480-34

PAGE 34 OF 97

| |
| |
| 090
| IS THE +12 VOLTAGE GOOD?
| Y N
| |
| | 091
| | GO TO PAGE 74, STEP 195,
| | ENTRY POINT B.
| |
| 092
| REMOVE THE PC CARD AND INSTALL
| A NEW CARD. (SEE MIM SECTIONS
| 4-70 AND 4-71, PARAGRAPH
| 4.22.1).
| CONNECT ALL CONNECTORS.
| GO TO PAGE 14, STEP 040,
| ENTRY POINT C.
|

093
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
REMOVE THE -12 VOLT FUSE. (SEE
MIM SECTIONS 4-62 AND 4-63
PARAGRAPHS 4.19.1 AND 4.19.2).
SET THE MULTIMETER TO THE RX1
OHMS SETTING.
MEASURE THE RESISTANCE OF THE
FUSE.
A GOOD FUSE WILL HAVE A
RESISTANCE OF LESS THAN 0.25
OHMS.
IS THE FUSE GOOD?

Y N
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| |
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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-34

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4

POWER SUPPLY MAP

MAP 1480-35

PAGE 35 OF 97

|
|
094
INSTALL A NEW FUSE. SWITCH ON
THE PROCESSING UNIT AC POWER
SWITCH.
SET THE MULTIMETER TO
APPROXIMATELY 15 VOLTS ON THE DC
VOLTS SETTING.
MEASURE THE -12 VOLTAGE.
IS THE VOLTAGE VALUE CORRECT?

Y N

|
| 095
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| REMOVE THE -12 VOLT FUSE. (SEE
| MIM SECTIONS 4-62 AND 4-63
| PARAGRAPHS 4.19.1 AND 4.19.2).
| SET THE MULTIMETER TO THE RX1
| OHMS SETTING.
| MEASURE THE RESISTANCE OF THE
| FUSE.
| A GOOD FUSE WILL HAVE A
| RESISTANCE OF LESS THAN 0.25
| OHMS.
| IS THE FUSE GOOD?

Y N

|
| | 096
| | DISCONNECT CONNECTOR P7 FROM
| | J7. (SEE MIM SECTION 3-12,
| | PARAGRAPH 3.11).
| | INSTALL A NEW FUSE. SWITCH
| | ON THE PROCESSING UNIT AC
| | POWER SWITCH.
| | SET THE MULTIMETER TO
| | APPROXIMATELY 15 VOLTS ON THE
| | DC VOLTS SETTING.
| | MEASURE THE -12 VOLTAGE.
| | IS THE VOLTAGE VALUE CORRECT?

| | Y N

3 3 3 3
8 8 6 6
A B B B
Z A B C

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-35

B B POWER SUPPLY MAP

MAP 1480-37

D E

3 3

6 6

PAGE 37 OF 97

| |
| |
| 099
| DISCONNECT THE DC OUTPUT
| VOLTAGE FLAT BUS CABLE FROM
| TERMINALS 1 AND 2 OF THE
| TERMINAL BLOCK, TB-B.
| CONNECT ONE TEST LEAD OF THE
| METER TO TERMINAL 1 OF TERMINAL
| BLOCK TB-B AND THE OTHER TEST
| LEAD OF THE METER TO TERMINAL 7
| OF TERMINAL BLOCK TB-B. (SEE
| MIM SECTION 3-12, PARAGRAPH
| 3.11. ALSO SEE LOGIC PAGE
| YA200).
| NOTE THE INDICATED RESISTANCE.
| IS THE RESISTANCE MORE THAN 1K
| OHMS?
| Y N
| |
| | 100
| | REMOVE THE FRONT UNIT AND
| | INSTALL A NEW FRONT UNIT.
| | (SEE MIM SECTIONS 4-66 AND
| | 4-67, PARAGRAPH 4.21.1).
| | CORRECTLY CONNECT ALL
| | CONNECTORS.
| | VERIFY THE REPAIR.
| |
| 101
| REMOVE THE OUTPUT CABLE TO
| SOCKET H2 AND INSTALL A NEW
| CABLE.
| CORRECTLY CONNECT ALL
| CONNECTORS.
| VERIFY THE REPAIR.
|
102
THERE IS NO FAILURE IN THE POWER
SUPPLY.
THE FAILURE IS IN THE PROCESSING
UNIT.
GO TO MAP 0020, ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-37

W A A B POWER SUPPLY MAP
1 X Z A
6 3 3 3 -----
4 5 5

MAP 1480-38

PAGE 38 OF 97

| | |
| | |
| | | 103
| | | GO TO PAGE 74,
| | | STEP 195,
| | | ENTRY POINT B.
| | |
| | | 104
| | | VERIFY THE REPAIR.
| | |
| | | 105
| | | GO TO PAGE 74, STEP 195,
| | | ENTRY POINT B.
| | |
| | | 106
| | | IS THE CIRCUIT BREAKER, CB-1
| | | SWITCHED OFF?
| | | Y N
| | |
| | | 107
| | | IS THE FAN WORKING?
| | | Y N
| | |
| | | 108
| | | NOTE IF THE PROCESSING UNIT
| | | AC POWER CABLE IS CONNECTED
| | | TO A 4997.
| | | IS A 4997 USED?
| | | Y N
| | |
| | | 109
| | |
| | | (ENTRY POINT K)
| | | *****
| | |
| | | SWITCH OFF THE PROCESSING
| | | UNIT AC POWER SWITCH.
| | | (STEP 109 CONTINUES)
| | |

5 5 5
2 2 0
B B B
F G H

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-38

(STEP 109 CONTINUED)
SEE LOGIC PAGES YA200, YA210,
YA215, YA220 AND MIM PARAGRAPHS
3.10 THROUGH 3.12 AND 4.19
THROUGH 4.26 PARAGRAPHS 3.10
THROUGH 3.12 SHOW PART
LOCATIONS).

DANGER

ENSURE THAT YOUR BODY DOES NOT
TOUCH ANY NOT INSULATED
CONDUCTOR.

DISCONNECT THE PROCESSING UNIT AC
POWER CABLE CONNECTOR FROM THE
CUSTOMER'S AC POWER OUTLET.

MEASURE THE POWER SUPPLY AC INPUT
VOLTAGE AT THE CUSTOMER'S AC
POWER OUTLET TO ENSURE THAT THE
VOLTAGE IS APPROXIMATELY THE
SPECIFIED AC POWER SUPPLY INPUT
VOLTAGE.

IS THE VOLTAGE GOOD?

Y N

|
| 110
| REQUEST THE CUSTOMER TO SWITCH
| ON POWER TO HIS AC POWER
| OUTLET.
| DO NOT CONNECT THE PROCESSING
| UNIT AC POWER CABLE CONNECTOR
| TO THE CUSTOMER'S AC POWER
| OUTLET.
| SWITCH OFF CIRCUIT BREAKER,
| CB-1.
| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.
| SET THE MULTIMETER TO THE RX10K
| OHMS SETTING.
| (STEP 110 CONTINUES)
|

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29JUL83 PN6838626

ECA08003 PEC375384

(STEP 110 CONTINUED)
CONNECT ONE TEST LEAD OF THE
METER TO ONE INPUT TERMINAL OF
CIRCUIT BREAKER, CB-1 AND THE
OTHER TEST LEAD OF THE METER TO
THE OTHER INPUT TERMINAL OF THE
CIRCUIT BREAKER.

NOTE THE INDICATED RESISTANCE.
DISCONNECT THE METER TEST LEAD
FROM ONE OF THE TWO INPUT
TERMINALS OF THE CIRCUIT BREAKER
AND CONNECT THE TEST LEAD TO
GROUND.

NOTE THE INDICATED RESISTANCE.
DISCONNECT THE TEST LEAD OF THE
METER FROM THE INPUT TERMINAL OF
THE CIRCUIT BREAKER AND CONNECT
THE TEST LEAD OF THE METER TO THE
OTHER INPUT TERMINAL OF THE
CIRCUIT BREAKER.

NOTE THE INDICATED RESISTANCE.
(SEE LOGIC PAGE YA200 FOR CIRCUIT
BREAKER TERMINAL IDENTIFICATION).
ARE ALL OF THE RESISTANCES MORE
THAN 5K OHMS?

Y N

|
| 111
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| CONNECT ONE TEST LEAD OF THE
| METER TO ONE INPUT TERMINAL OF
| CIRCUIT BREAKER, CB-1 AND THE
| OTHER TEST LEAD OF THE METER TO
| THE OTHER INPUT TERMINAL OF THE
| CIRCUIT BREAKER.
| NOTE THE INDICATED RESISTANCE.
| DISCONNECT THE METER TEST LEAD
| FROM ONE OF THE TWO INPUT
| TERMINALS OF THE CIRCUIT
| BREAKER AND CONNECT THE TEST
| LEAD TO GROUND.
| NOTE THE INDICATED RESISTANCE.
| (STEP 111 CONTINUES)

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K

29JUL83 PN6838626

ECA08003 PEC375384

(STEP 111 CONTINUED)

DISCONNECT THE TEST LEAD OF THE METER FROM THE INPUT TERMINAL OF THE CIRCUIT BREAKER AND CONNECT THE TEST LEAD OF THE METER TO THE OTHER INPUT TERMINAL OF THE CIRCUIT BREAKER.

NOTE THE INDICATED RESISTANCE. ARE ALL OF THE RESISTANCES MORE THAN 5K OHMS?

Y N

|
| 112
| DISCONNECT THE PROCESSING UNIT
| AC POWER SWITCH TERMINALS FROM
| CIRCUIT BREAKER, CB-1 INPUT
| TERMINALS.

| CONNECT ONE TEST LEAD OF METER
| TO ONE INPUT TERMINAL OF THE
| CIRCUIT BREAKER AND CONNECT THE
| OTHER TEST LEAD OF THE METER TO
| THE OTHER INPUT TERMINAL OF THE
| CIRCUIT BREAKER.

| NOTE THE INDICATED RESISTANCE.
| DISCONNECT ONE TEST LEAD FROM
| ONE INPUT TERMINAL OF THE
| CIRCUIT BREAKER AND CONNECT THE
| TEST LEAD OF THE METER TO
| GROUND.

| NOTE THE INDICATED RESISTANCE.
| DISCONNECT THE TEST LEAD OF THE
| METER FROM THE INPUT TERMINAL
| OF THE CIRCUIT BREAKER AND
| CONNECT THE TEST LEAD TO THE
| OTHER INPUT TERMINAL OF THE
| CIRCUIT BREAKER.

| NOTE THE INDICATED RESISTANCE.
| ARE ALL OF THE RESISTANCES MORE
| THAN 5K OHMS?

| Y N
| |
| |
| |
| |
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| |

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B B B
L M N

B B B POWER SUPPLY MAP
L M N
4 4 4 -----
1 1 1

MAP 1480-42

PAGE 42 OF 97

| | |
| | |
| | 113
| | REMOVE THE CIRCUIT BREAKER
| | AND INSTALL A NEW CIRCUIT
| | BREAKER.
| | (SEE MIM SECTION 4-72,
| | PARAGRAPH 4.22.2).
| | CONNECT ALL CONNECTORS.
| | VERIFY THE REPAIR.

| |
| 114
| REMOVE THE PROCESSING UNIT AC
| POWER SWITCH AND INSTALL A NEW
| NEW SWITCH.
| (SEE MIM SECTIONS 4-52 AND
| 4-53, PARAGRAPH 4.14.2 AND
| LOGIC PAGES YA200 AND YA210).
| CONNECT ALL TERMINALS AND
| CONNECTORS.
| VERIFY THE REPAIR.

|
115
REMOVE THE COVER FROM THE
PROCESSING UNIT AC POWER TERMINAL
BLOCK HOUSING. (SEE MIM SECTIONS
4-52, AND 4-53, PARAGRAPHS 4.14,
4.14.1 AND 4.14.2).
DISCONNECT THE WIRES OF THE
PROCESSING UNIT AC POWER CABLE
FROM THE PROCESSING UNIT AC POWER
TERMINAL BLOCK. (SEE MIM
SECTIONS 4-78 AND 4-79, PARAGRAPH
4.23).
CONNECT ONE TEST LEAD OF THE
METER TO TERMINAL 1 OF THE AC
POWER TERMINAL BLOCK.
CONNECT THE OTHER TEST LEAD OF
THE METER TO TERMINAL 2 OF THE AC
POWER TERMINAL BLOCK.
NOTE THE INDICATED RESISTANCE.
DISCONNECT THE METER TEST LEAD
FROM TERMINAL 1 OF THE AC POWER
TERMINAL BLOCK AND CONNECT THE
(STEP 115 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-42

(STEP 115 CONTINUED)
 TEST LEAD TO GROUND.
 NOTE THE INDICATED RESISTANCE.
 DISCONNECT THE TEST LEAD OF THE
 METER FROM TERMINAL 2 OF THE AC
 POWER TERMINAL BLOCK AND CONNECT
 THE TEST LEAD TO TERMINAL 1 OF
 THE AC POWER TERMINAL BLOCK.
 NOTE THE INDICATED RESISTANCE.
 ARE ALL OF THE RESISTANCES MORE
 THAN 5K OHMS?

Y N

|
 | 116
 | DISCONNECT THE PROCESSING UNIT
 | AC POWER SWITCH CABLE FROM THE
 | AC POWER TERMINAL BLOCK.
 | CONNECT ONE TEST LEAD OF THE
 | METER TO ONE TERMINAL OF THE
 | PROCESSING UNIT AC POWER SWITCH
 | CABLE.
 | CONNECT THE OTHER TEST LEAD OF
 | THE METER TO THE OTHER TERMINAL
 | OF THE PROCESSING UNIT AC POWER
 | SWITCH CABLE.
 | NOTE THE INDICATED RESISTANCE.
 | DISCONNECT ONE TEST LEAD OF THE
 | METER FROM ONE OF THE TERMINALS
 | OF THE AC POWER SWITCH CABLE
 | AND CONNECT THE TEST LEAD OF
 | THE METER TO GROUND.
 | NOTE THE INDICATED RESISTANCE.
 | DISCONNECT THE TEST LEAD OF THE
 | METER FROM THE AC POWER SWITCH
 | CABLE TERMINAL AND CONNECT THE
 | TEST LEAD OF THE METER TO THE
 | OTHER TERMINAL OF THE
 | PROCESSING UNIT AC POWER SWITCH
 | CABLE.
 | NOTE THE INDICATED RESISTANCE.
 | (STEP 116 CONTINUES)

|
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PAGE 44 OF 97

(STEP 116 CONTINUED)

ARE ALL OF THE RESISTANCES MORE
THAN 5K OHMS?

Y N

|

| 117

| REMOVE THE PROCESSING UNIT AC
| POWER SWITCH AND INSTALL A NEW
| SWITCH.| (SEE MIM SECTIONS 4-52 AND
| 4-53, PARAGRAPH 4.14.2 AND
| LOGIC PAGES YA200 AND YA210)| CONNECT ALL TERMINALS AND
| CONNECTORS.

| VERIFY THE REPAIR.

|

118

DISCONNECT THE CAPACITORS FROM
TERMINAL 1 AND TERMINAL 2 OF THE
AC POWER TERMINAL BLOCK.CONNECT ONE TEST LEAD OF THE
METER TO GROUND AND THE OTHER
TEST LEAD OF THE METER TO THE
TERMINAL OF THE CAPACITOR WHICH
WAS CONNECTED TERMINAL 1 OF THE
AC POWER TERMINAL BLOCK.IF THE CAPACITOR IS GOOD, THE
METER SHOULD INDICATE 0 OHMS AND
THEN SHOULD INDICATE AN INCREASE
IN RESISTANCE UNTIL THE INDICATED
RESISTANCE IS MORE THAN 5K OHMS.

IS THE CAPACITOR GOOD?

Y N

|

| 119

| REMOVE THE CAPACITOR AND
| INSTALL A NEW CAPACITOR.| (SEE MIM SECTIONS 4-78 AND
| 4-79, PARAGRAPH 4.23 AND LOGIC
| PAGE YA200).| CONNECT ALL TERMINALS AND
| CONNECTORS.

| VERIFY THE REPAIR.

|

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-44

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POWER SUPPLY MAP

MAP 1480-45

PAGE 45 OF 97

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|

120

CONNECT ONE TEST LEAD OF THE METER TO GROUND AND THE OTHER TEST LEAD OF THE METER TO THE TERMINAL OF THE CAPACITOR WHICH WAS CONNECTED TERMINAL 2 OF THE AC POWER TERMINAL BLOCK.

A GOOD CAPACITOR SHOULD INDICATE 0 OHMS AND THEN SHOULD INDICATE AN INCREASE IN RESISTANCE UNTIL THE INDICATED RESISTANCE IS MORE THAN 5K OHMS.

IS THE CAPACITOR GOOD?

Y N

|

| 121

| REMOVE THE CAPACITOR AND
| INSTALL A NEW CAPACITOR.

| (SEE MIM SECTIONS 4-78 AND
| 4-79, PARAGRAPH 4.23 AND LOGIC
| PAGE YA200).

| CONNECT ALL TERMINALS AND
| CONNECTORS.

| VERIFY THE REPAIR.

|

122

REMOVE THE AC POWER TERMINAL BLOCK AND INSTALL A NEW TERMINAL BLOCK.

(SEE MIM SECTIONS 4-78 AND 4-79, PARAGRAPH 4.23 AND LOGIC PAGE YA200).

CONNECT ALL TERMINALS AND CONNECTORS.

VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-45

B B B POWER SUPPLY MAP
J K P
3 4 4 -----
9 0 3
PAGE 46 OF 97

MAP 1480-46

| | |
| | |
| | 123
| | REMOVE THE PROCESSING UNIT AC
| | POWER CABLE AND INSTALL A NEW
| | POWER CABLE. (SEE MIM
| | SECTIONS 4-78 AND 4.79
| | PARAGRAPH 4.23).
| | VERIFY THE REPAIR.
| |
| | 124
| | CONNECT THE PROCESSING UNIT AC
| | POWER CABLE TO THE AC POWER
| | OUTLET.
| | VERIFY THE REPAIR.
| |
125

DANGER

ENSURE THAT YOUR BODY DOES NOT TOUCH ANY NOT INSULATED CONDUCTOR WHEN AC POWER IS SWITCHED ON. SET THE MULTIMETER TO MEASURE AT LEAST 25 VOLTS MORE THAN THE SPECIFIED PROCESSING UNIT AC INPUT VOLTAGE ON THE AC VOLTS SETTING. ENSURE THAT THE PROCESSING UNIT AC POWER CABLE IS CONNECTED TO THE AC POWER OUTLET, THAT THE PROCESSING UNIT AC POWER SWITCH IS SWITCHED ON AND THAT CIRCUIT BREAKER, CB-1 IS SWITCHED ON. CONNECT ONE TEST LEAD OF THE METER TO ONE TERMINAL OF CIRCUIT BREAKER, CB-1, OUTPUT TERMINALS (TERMINALS 2) AND THE OTHER TEST LEAD OF THE METER TO THE OTHER (STEP 125 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-46

B
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4
7

|
|
127

POWER SUPPLY MAP

MAP 1480-48

PAGE 48 OF 97

DANGER

ENSURE THAT YOUR BODY DOES NOT TOUCH ANY NOT INSULATED CONDUCTOR WHEN THE AC POWER IS SWITCHED ON. SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

DISCONNECT THE PROCESSING UNIT AC POWER CABLE FROM ITS AC POWER OUTLET.

REMOVE THE COVER FROM THE PROCESSING UNIT AC POWER TERMINAL BLOCK. (SEE MIM SECTIONS 4-78 AND 4-79, PARAGRAPH 4.23).

SET THE MULTIMETER TO MEASURE APPROXIMATELY 25 VOLTS MORE THAN THE PROCESSING UNIT SPECIFIED AC INPUT VOLTAGE ON THE AC VOLTS SETTING.

CONNECT THE PROCESSING UNIT AC POWER CABLE CONNECTOR TO THE AC POWER OUTLET.

SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.

CONNECT ONE TEST LEAD OF THE METER TO TERMINAL 2 OF THE PROCESSING UNIT AC POWER TERMINAL BLOCK AND THE OTHER TEST LEAD OF THE METER TO TERMINAL 1 OF THE PROCESSING UNIT AC POWER TERMINAL BLOCK. (SEE LOGIC PAGE YA200 AND MIM SECTION 4-79).

NOTE IF THE VOLTAGE IS APPROXIMATELY THE SPECIFIED POWER SUPPLY INPUT VOLTAGE.

(STEP 127 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-48

B
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4
7

POWER SUPPLY MAP

MAP 1480-49

PAGE 49 OF 97

| (STEP 127 CONTINUED)
| IS THE VOLTAGE GOOD?
| Y N
| |
| | 128
| | SWITCH OFF THE PROCESSING
| | UNIT AC POWER SWITCH.
| | DISCONNECT THE PROCESSING
| | UNIT AC POWER CABLE FROM THE
| | AC POWER OUTLET.
| | REMOVE THE PROCESSING UNIT AC
| | POWER CABLE AND INSTALL A NEW
| | CABLE. (SEE MIM SECTIONS
| | 4-78 AND 4-79, PARAGRAPH
| | 4.23).
| | VERIFY THE REPAIR,
| |
| 129
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE AC
| POWER OUTLET.
| REMOVE PROCESSING UNIT AC POWER
| SWITCH AND INSTALL A NEW SWITCH
| (SEE MIM SECTIONS 4-52 AND
| 4-53, PARAGRAPHS 4.14, 4.14.1
| AND 4.14.2).
| VERIFY THE REPAIR.
|
130
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE AC POWER
OUTLET.
REMOVE CIRCUIT BREAKER, CB-1 AND
INSTALL A NEW CIRCUIT BREAKER. (SEE MIM SECTION 4-72, PARAGRAPH 4.22.2).
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-49

B B POWER SUPPLY MAP
H R
3 4 -----
8 7

MAP 1480-50

PAGE 50 OF 97

| |
| |
| 131
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE AC
| POWER OUTLET.
| REMOVE THE REAR UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTION 4-69, PARAGRAPH
| 4.21.2).
| VERIFY THE REPAIR.

|
132
IS THE 4997 CONNECTED TO THE
CUSTOMER'S AC POWER OUTLET?
Y N

|
| 133
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| CONNECT THE 4997 TO THE
| CUSTOMER'S AC POWER OUTLET.
| VERIFY THE REPAIR.

|
134
IS THE 4997 IPO SWITCH SWITCHED
ON?
Y N

|
| 135
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SWITCH ON THE 4997 IPO SWITCH.
| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.
| DID THE 4997 IPO SWITCH SWITCH
| OFF?
| Y N

| |
| | 136
| | VERIFY THE REPAIR

| |
| |
| |
| |
5 5
1 1
B B
U V

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-50

B B POWER SUPPLY MAP
U V
5 5 -----
0 0

MAP 1480-51

PAGE 51 OF 97

| |
| |
| 137
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE 4997 AC
| POWER OUTLET AND CONNECT IT TO
| THE CUSTOMER'S AC POWER OUTLET.
| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.
| DID THE PROCESSING UNIT POWER
| UP?
| Y N
| |
| | 138
| | GO TO PAGE 38, STEP 109,
| | ENTRY POINT K.
| |
| 139
| GO TO MAP 1471, ENTRY POINT A.
|
140
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE 4997 AC
POWER OUTLET AND CONNECT IT TO
THE CUSTOMER'S AC POWER OUTLET.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID THE PROCESSING UNIT POWER UP?
Y N
|
| 141
| GO TO PAGE 38, STEP 109,
| ENTRY POINT K.
|
142
GO TO MAP 1471, ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-51

B POWER SUPPLY MAP
X
5 -----
2

MAP 1480-53

PAGE 53 OF 97

|
|
145
REMOVE THE BAD FUSE(S) AND
INSTALL (A) GOOD FUSE(S) OR/AND
SWITCH ON CIRCUIT BREAKER CB-2.
(SEE MIM SECTIONS 4-62 AND 4-63,
PARAGRAPH 4.19.2).
SWITCH ON CIRCUIT BREAKER, CB-1.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID THE CIRCUIT BREAKER, CB-1
SWITCH OFF?

Y N

|
| 146
| VERIFY THE REPAIR.

|
147
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
SWITCH ON CIRCUIT BREAKER, CB-1.
SET THE MULTIMETER TO THE RX1
OHMS SETTING.
REMOVE EACH FUSE AND MEASURE ITS
RESISTANCE. A GOOD FUSE WILL
HAVE A RESISTANCE OF NOT MORE
THAN 0.25 OHMS
ARE ALL THE FUSES GOOD?

Y N

|
| 148
| GO TO PAGE 89, STEP 229,
| ENTRY POINT L.

|
149
INSPECT CIRCUIT BREAKER, CB-2.
IS CIRCUIT BREAKER, CB-2 SWITCHED
ON?

Y N

| |
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5 5
6 4
B B
Y Z

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-53

B
Z
5
3

POWER SUPPLY MAP

MAP 1480-54

PAGE 54 OF 97

|
|
150
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
SWITCH ON CIRCUIT BREAKER, CB-2.
DISCONNECT CONNECTOR P5 FROM J5.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CIRCUIT BREAKER, CB-2 SWITCH
OFF?
Y N

|
| 151
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| REMOVE THE PC CARD AND INSTALL
| A NEW PC CARD. (SEE MIM
| SECTIONS 4-70 AND 4-71,
| PARAGRAPH 4.22.1)
| VERIFY THE REPAIR.

|
152
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
SWITCH ON CIRCUIT BREAKER, CB-2.
DISCONNECT THE FLAT BUS DC OUTPUT
CABLES FROM SOCKETS H2 AND H5 OF
THE PROCESSING UNIT LOGIC BOARD.
(SEE LOGIC PAGE YA200).
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CIRCUIT BREAKER, CB-2 SWITCH
OFF?
Y N

|
| 153
| THERE IS A SHORT CIRCUIT IN THE
| PROCESSING UNIT LOGIC CIRCUIT.
| CONNECT ALL TERMINALS AND
| CONNECTORS.
| GO TO MAP 0020, ENTRY POINT A.

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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-54

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5 -----

4
PAGE 55 OF 97

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|
154
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
SWITCH ON CIRCUIT BREAKER, CB2.
DISCONNECT THE FLAT BUS DC OUTPUT
CABLE, H2, FROM TERMINALS 5 AND 6
OF TERMINAL BLOCK TB-A.
(SEE LOGIC PAGE YA200).
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CIRCUIT BREAKER, CB-2 SWITCH
OFF?

Y N
|
| 155
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| REMOVE THE FLAT BUS DC OUTPUT
| CABLE AND INSTALL A NEW CABLE.
| (THE CABLE WHICH CONNECTS TO
| TERMINALS 5 AND 6 OF TB-A AND
| SOCKET H2 OF THE PROCESSING
| UNIT LOGIC BOARD).
| CONNECT ALL TERMINALS AND
| CONNECTORS.
| VERIFY THE REPAIR.

|
156
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE FLAT BUS DC OUTPUT
CABLE FROM TERMINAL 7 AND
TERMINAL 8 OF TERMINAL BLOCK
TB-A.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CIRCUIT BREAKER, CB-2 SWITCH
OFF?

Y N
| |
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| |

5 5
6 6
C C
B C

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-55

B B C C POWER SUPPLY MAP
W Y B C
5 5 5 5 -----
2 3 5 5

MAP 1480-56

PAGE 56 OF 97

| | | |
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| | | 157
| | | SWITCH OFF THE PROCESSING
| | | UNIT AC POWER SWITCH.
| | | REMOVE THE FLAT BUS DC
| | | OUTPUT CABLE AND INSTALL A
| | | NEW CABLE.
| | | (THE CABLE WHICH CONNECTS
| | | TO TERMINALS 7 AND 8 OF
| | | TB-A AND SOCKET H5 OF THE
| | | PROCESSING UNIT LOGIC
| | | BOARD).
| | | CONNECT ALL TERMINALS AND
| | | CONNECTORS.
| | | VERIFY THE REPAIR.
| | |
| | | 158
| | | SWITCH OFF THE PROCESSING
| | | UNIT AC POWER SWITCH.
| | | SWITCH ON CIRCUIT BREAKER,
| | | CB-2.
| | | REMOVE THE FRONT UNIT AND
| | | INSTALL A NEW FRONT UNIT.
| | | (SEE MIM SECTIONS 4-66 AND
| | | 4-67, PARAGRAPH 4.21.1).
| | | VERIFY THE REPAIR.
| | |
| | | 159
| | | GO TO PAGE 61, STEP 170,
| | | ENTRY POINT F.
| | |
| | | 160
| | | GO TO PAGE 61, STEP 170,
| | | ENTRY POINT F.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-56

161

(ENTRY POINT D)

SEE LOGIC PAGES YA200, YA210,
YA215, YA220 AND MIM PARAGRAPHS
3.10 THROUGH 3.12 AND 4.19
THROUGH 4.26 (MIM PARAGRAPHS 3.10
THROUGH 3.12 SHOW PART
LOCATIONS).

SWITCH OFF THE PROCESSING UNIT
POWER SWITCH.
DISCONNECT CONNECTOR P1 FROM J1.
SET THE MULTIMETER TO THE RX1
OHMS SETTING.
CONNECT ONE TEST LEAD OF THE
METER TO PIN 1 OF CONNECTOR P1
AND THE OTHER TEST LEAD OF THE
METER TO PIN 5 OF CONNECTOR P1.
(SEE LOGIC PAGE YA200 AND MIM
SECTION 3-13, PARAGRAPH 3.12).
NOTE THE INDICATED RESISTANCE.
A GOOD CIRCUIT WILL INDICATE A
RESISTANCE BETWEEN 150 TO 215
OHMS.
IS THE CIRCUIT GOOD?

Y N
| |
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9 8
C C
D E

29JUL83 PN6838626

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MAP 1480-57

C
E
5
7

POWER SUPPLY MAP

MAP 1480-58

PAGE 58 OF 97

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162

DISCONNECT THE FAN CONNECTOR.
TO THE CONNECTOR OF THE FAN
ASSEMBLY, NOT THE FAN CABLE,
CONNECT ONE TEST LEAD OF THE
METER TO PIN 1 OF THE FAN
CONNECTOR AND THE OTHER TEST LEAD
OF THE METER TO PIN 4 OF THE FAN
CONNECTOR. (SEE LOGIC PAGE YA200
AND MIM SECTIONS 4-82 AND 4-83,
PARAGRAPH 4.25).

NOTE THE INDICATED RESISTANCE.
A GOOD CIRCUIT WILL INDICATE A
RESISTANCE BETWEEN 150 TO 215
OHMS.

IS THE CIRCUIT GOOD?

Y N

|

| 163

| REMOVE THE FAN ASSEMBLY AND
| INSTALL A NEW FAN ASSEMBLY.
| (SEE MIM SECTIONS 4-82 AND
| 4-83, PARAGRAPH 4.25).

| CONNECT ALL CONNECTORS.

| VERIFY THE REPAIR.

|

164

REMOVE THE FAN CABLE AND INSTALL
A NEW FAN CABLE. (SEE MIM
SECTIONS 4-82 AND 4-83, PARAGRAPH
4.25 AND MIM SECTIONS 4-82 AND
4-83, PARAGRAPH 4.25).

CONNECT ALL CONNECTORS.

VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-58

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D
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7

POWER SUPPLY MAP

MAP 1480-59

PAGE 59 OF 97

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165

CONNECT ONE TEST LEAD OF THE
METER TO PIN 4 OF CONNECTOR P1
AND THE OTHER TEST LEAD OF THE
METER TO PIN 3 OF CONNECTOR P1.
(SEE LOGIC PAGE YA200 AND MIM
SECTION 3-13, PARAGRAPH 3.12).
NOTE THE INDICATED RESISTANCE.
A GOOD CIRCUIT WILL INDICATE A
RESISTANCE BETWEEN 150 TO 215
OHMS.
IS THE CIRCUIT GOOD?

Y N

|

| 166

| DISCONNECT THE FAN CONNECTOR.
| CONNECT ONE TEST LEAD OF THE
| METER TO PIN 6 OF THE FAN
| CONNECTOR AND THE OTHER TEST
| LEAD OF THE METER TO PIN 3 OF
| THE FAN CONNECTOR (THE
| CONNECTOR OF THE FAN ASSEMBLY,
| NOT THE FAN CABLE CONNECTOR).
| (SEE LOGIC PAGE YA200 AND MIM
| SECTIONS 4-82 AND 4-83,
| PARAGRAPH 4.25).
| NOTE THE INDICATED RESISTANCE.
| A GOOD CIRCUIT WILL INDICATE A
| RESISTANCE BETWEEN 150 OHMS TO
| 215 OHMS.
| IS THE CIRCUIT GOOD?

| Y N

| |

| | 167

| | REMOVE THE FAN ASSEMBLY AND
| | INSTALL A NEW FAN ASSEMBLY.
| | (SEE MIM SECTIONS 4-82 AND
| | 4-83, PARAGRAPH 4.25).
| | CONNECT ALL CONNECTORS.
| | VERIFY THE REPAIR.

| |

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C C

F G

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-59

C C POWER SUPPLY MAP
F G
5 5 -----
9 9

PAGE 60 OF 97

MAP 1480-60

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| |
| 168
| REMOVE THE FAN CABLE AND
| INSTALL A NEW FAN CABLE.
| (SEE MIM SECTIONS 4-82 AND
| 4-83, PARAGRAPHS 4.25 AND
| 4.26)..
| CONNECT ALL CONNECTORS.
| VERIFY THE REPAIR.
|

169
REMOVE THE REAR UNIT AND INSTALL
A NEW REAR UNIT.
(SEE MIM SECTION 4-69, PARAGRAPH
4.21.2).
CONNECT ALL CONNECTORS.
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-60

170

(ENTRY POINT F)

SEE LOGIC PAGES YA200, YA210,
YA215, YA220 AND MIM PARAGRAPHS
3.10 THROUGH 3.12 AND 4.19
THROUGH 4.26 (MIM PARAGRAPHS 3.10
THROUGH 3.12 SHOW PART
LOCATIONS).

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
SWITCH ON CIRCUIT BREAKER, CB-1.
DISCONNECT CONNECTOR P4 FROM J4
AT THE BACK OF THE FRONT UNIT.
(SEE MIM SECTIONS 3-11 AND 3-12,
PARAGRAPH 3.10 AND 3.11-).
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.

DID CB-1 REMAIN SWITCHED ON?

Y N
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1 2
C C
H J

29JUL83 PN6838626
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6
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171

POWER SUPPLY MAP

MAP 1480-62

PAGE 62 OF 97

CAUTION

BEFORE THE PROCESSING UNIT AC POWER SWITCH IS SWITCHED ON, INSULATE THE DISCONNECTED TERMINAL OF TRANSFORMER WIRES 9 OR 10 (THE DISCONNECTED WIRE) WITH ELECTRICAL TAPE.

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC POWER CABLE FROM THE AC POWER OUTLET.
DISCONNECT CONNECTOR P3 FROM J3 AT THE FRONT UNIT.
DISCONNECT CAPACITOR, C1 AT TRANSFORMER TERMINALS 9 OR 10.
DISCONNECT TRANSFORMER TERMINALS 11, 12 AND 13 AT TB-A (SEE MIM SECTION 3-12, PARAGRAPH 3.11 AND LOGIC PAGE YA200). SWITCH ON CIRCUIT BREAKER, CB-1.
ENSURE THAT EACH NOT INSULATED TERMINAL OF THE TRANSFORMER DOES NOT TOUCH ANY OTHER CONDUCTOR.
CONNECT THE PROCESSING UNIT AC POWER SWITCH TO THE AC POWER OUTLET.
SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.
(STEP 171 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-62

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6
3

POWER SUPPLY MAP

MAP 1480-64

PAGE 64 OF 97

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173

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.

CONNECT THE TRANSFORMER, TI
PRIMARY CONDUCTORS TO TERMINAL
BLOCK, TB-2 (TERMINALS 1, 2, 3,
4, 5, 6, 7 AND 8).

DISCONNECT THE 6 POSITION FAN
CONNECTOR. (SEE MIM SECTIONS
3-13, 4-64 AND 4-65, PARAGRAPH
3.12 AND 4.20)

SWITCH ON CIRCUIT BREAKER, CB-1.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.

DID CB-1 SWITCH OFF?

Y N

|

| 174

| REMOVE THE FAN AND INSTALL A
| NEW FAN.

| VERIFY THE REPAIR.

|

175

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.

SWITCH ON CIRCUIT BREAKER, CB-1.
CONNECT THE FAN CONNECTOR.

DISCONNECT CONNECTOR P1 FROM J1.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH. (SEE MIM SECTION
3-13, PARAGRAPH 3.12).

DID CB-1 SWITCH OFF?

Y N

|

| 176

| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.

| REMOVE THE FAN CABLE AND
| INSTALL A NEW CABLE. (SEE MIM
| SECTIONS 4-82 AND 4-83,
| PARAGRAPH 4.25).

|

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N

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-64

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177
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE AC POWER
OUTLET.
DISCONNECT THE "CIRCUIT BREAKER
CB-1 TO TERMINAL BLOCK TB-1"
CABLE AT THE CB-1 TERMINALS, 2.
(SEE MIM SECTION 3-13, PARAGRAPH
3.12).
SWITCH ON CIRCUIT BREAKER, CB-1.
CONNECT THE PROCESSING UNIT AC
POWER CABLE TO THE AC POWER
OUTLET.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CB-1 SWITCH OFF?

Y N
|
| 178
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE AC
| POWER OUTLET.
| REMOVE THE REAR UNIT AND
| INSTALL A NEW REAR UNIT.

|
179
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE AC POWER
OUTLET.
REMOVE CIRCUIT BREAKER, CB-1 AND
INSTALL A NEW CIRCUIT BREAKER.
(SEE MIM SECTIONS 3-13 AND 4-72
PARAGRAPHS 3.12 AND 4.22.2).
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

C C POWER SUPPLY MAP
K L
6 6 -----
3 3

MAP 1480-66

PAGE 66 OF 97

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| 180
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE AC
| POWER OUTLET.
| REMOVE THE REAR UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTION 4-69, PARAGRAPH
| 4.21.2).
| VERIFY THE REPAIR.

|
181
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE AC POWER
OUTLET.
CONNECT CAPACITOR, C1 TO
TRANSFORMER TERMINALS 9 OR 10.
(THE TERMINAL WHICH IS
DISCONNECTED).
(SEE MIM SECTION 4-77, PARAGRAPH
4.22.5).
CONNECT THE PROCESSING UNIT AC
POWER CABLE TO THE AC POWER
OUTLET.
ENSURE THAT EACH TRANSFORMER
TERMINAL (TERMINALS 11, 12 AND 13
DOES NOT TOUCH ANY OTHER
CONDUCTOR.
SWITCH ON CIRCUIT BREAKER CB-1.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CB-1 REMAIN SWITCHED ON?

Y N
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6 6
7 7
C C
P Q

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-66

C C POWER SUPPLY MAP
P Q
6 6 -----
6 6

MAP 1480-67

PAGE 67 OF 97

| |
| |
| 182
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| DISCONNECT THE PROCESSING UNIT
| AC POWER CABLE FROM THE AC
| POWER OUTLET.
| REMOVE THE CAPACITOR, C1 AND
| INSTALL A NEW CAPACITOR. (SEE
| MIM SECTION 4-77, PARAGRAPH
| 4.22.5).
| VERIFY THE REPAIR.

|
183
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC
POWER CABLE FROM THE AC POWER
OUTLET.
DISCONNECT CONNECTOR P5 FROM J5.
CONNECT CONNECTOR P3 TO J3.
CONNECT THE PROCESSING UNIT AC
POWER CABLE TO THE AC POWER
OUTLET.
ENSURE THAT EACH TRANSFORMER
TERMINAL (TERMINALS 11, 12 AND 13
DOES NOT TOUCH ANY OTHER
CONDUCTOR.
SWITCH ON CIRCUIT BREAKER CB-1.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.
DID CB-1 REMAIN SWITCHED ON?

Y N
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29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-67

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188

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POWER SUPPLY MAP

MAP 1480-69

PAGE 69 OF 97

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.
DISCONNECT THE PROCESSING UNIT AC POWER CABLE FROM THE AC POWER OUTLET.
CONNECT TRANSFORMER TERMINALS 11, 12 AND 13 TO TERMINALS 3, 9 AND 4 OF TERMINAL BLOCK TB-A.
REMOVE THE HEAT SINK ASSEMBLY AND INSTALL A NEW ASSEMBLY BUT DO NOT CONNECT THE JUMPERS TO THE HEAT SINK ASSEMBLY. (SEE MIM SECTIONS 4-74 AND 4-75, PARAGRAPH 4.22.4).
DISCONNECT CONNECTOR J5 AT THE FRONT UNIT. (SEE MIM SECTION 3-12 3-12, PARAGRAPH 3.11).
SET THE MULTIMETER TO THE RX10K OHMS SETTING.
CONNECT ONE TEST LEAD OF THE METER TO PIN 11 OF CONNECTOR P5 AND THE OTHER TEST LEAD OF THE METER TO PIN 12 OF CONNECTOR P5. NOTE THE INDICATED RESISTANCE.
DISCONNECT THE TEST LEAD OF THE METER FROM PIN 11 OF CONNECTOR P5 AND CONNECT THE TEST LEAD TO PIN 10 OF CONNECTOR P5. NOTE THE INDICATED RESISTANCE.
ARE ALL OF THE RESISTANCES MORE THAN 5K OHMS?

Y N

REMOVE THE FRONT UNIT AND INSTALL A NEW FRONT UNIT.
INSTALL THE JUMPERS ON THE HEAT SINK ASSEMBLY. (SEE MIM SECTIONS 4-66 AND 4-67, PARAGRAPHS 4.21.1).
VERIFY THE REPAIR.

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-69

C
U
6
9

POWER SUPPLY MAP

MAP 1480-70

PAGE 70 OF 97

|
|
| 189

CONNECT ONE TEST LEAD OF THE METER TO PIN 10 OF CONNECTOR J5 AND THE OTHER TEST LEAD OF THE METER TO PIN 11 OF CONNECTOR J5. NOTE THE INDICATED RESISTANCE. DISCONNECT THE TEST LEAD OF THE METER FROM PIN 11 OF CONNECTOR J5 AND CONNECT THE TEST LEAD TO PIN 12 OF CONNECTOR J5. NOTE THE INDICATED RESISTANCE. DISCONNECT THE TEST LEAD OF THE METER FROM PIN 10 OF CONNECTOR J5 AND CONNECT THE TEST LEAD TO PIN 11 OF CONNECTOR J5. NOTE THE INDICATED RESISTANCE. ARE ALL OF THE RESISTANCES MORE THAN 5K OHMS?

Y N

|
| 190

REMOVE THE PC CARD AND INSTALL A NEW CARD. CONNECT ALL TERMINALS AND CONNECTORS. INSTALL THE JUMPERS ON THE HEAT SINK ASSEMBLY. (SEE MIM SECTIONS 4-66 AND 4-67, PARAGRAPHS 4.21.1). VERIFY THE REPAIR.

|
| 191

INSTALL THE JUMPERS ON THE HEAT SINK ASSEMBLY. (SEE LOGIC PAGE YA200). VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-70

C
H
6
1

POWER SUPPLY MAP

MAP 1480-71

PAGE 71 OF 97

|
|
192

SEE LOGIC PAGES YA200, YA210, YA215, YA220 AND MIM PARAGRAPHS 3.10 THROUGH 3.12 AND 4.19 THROUGH 4.26 (MIM PARAGRAPHS 3.10 THROUGH 3.12 SHOW PART LOCATIONS).

SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.
MEASURE THE POWER SUPPLY OUTPUT VOLTAGES AT THE TEST POINTS.
NOTE IF THE VOLTAGES ARE HIGHER THAN THE MINIMUM VOLTAGES INDICATED ON THE CHART FOR TEST POINTS 1, 2, 3, 4, AND 5.
(SEE MIM SECTION 4-62, PARAGRAPH 4.19.1 AND MIM SECTION 4-63, PARAGRAPH 4.19.2. ALSO SEE LOGIC PAGE YA200).

TEST POINT	MINIMUM READING	MAXIMUM READING
1	+4.6 V	-----
2	+7.6 V	-----
3	-11.0 V	-----
4	-4.6 V	-----
5	+11.0 V	-----
6 (POWER ON RESET)	+2.6 V	-----
7 (POWER THERMAL WARNING)	-----	-----

(STEP 192 CONTINUES)

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-71

(STEP 192 CONTINUED)

8	GROUND	GROUND
---	--------	--------

ARE ANY VOLTAGES 0 VOLTS?

Y N

|

| 193

| IS EACH OF THE VOLTAGES ABOVE
| ITS MINIMUM VALUE?

| Y N

|

| 194

| SWITCH OFF THE PROCESSING
| UNIT AC POWER SWITCH.

| SWITCH ON THE POWER SUPPLY
| SERVICE SWITCH.

| DISCONNECT THE POWER SUPPLY
| OUTPUT FLAT BUS CABLES FROM
| SOCKETS H2, H3, H4 AND H5 OF
| THE PROCESSING UNIT LOGIC
| BOARD.

| SWITCH ON THE PROCESSING UNIT
| AC POWER SWITCH.

| MEASURE THE POWER SUPPLY
| OUTPUT VOLTAGES AT THE TEST
| POINTS.

| NOTE IF THE VOLTAGES ARE
| HIGHER THAN THE MINIMUM
| VOLTAGES INDICATED ON THE
| CHART FOR TEST POINTS 1, 2,
| 3, 4, AND 5.

| (SEE MIM SECTION 4-62,
| PARAGRAPH 4.19.1 AND MIM
| SECTION 4-63, PARAGRAPH
| 4.19.2. ALSO SEE LOGIC PAGE
| YA200).

|

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|

(STEP 194 CONTINUES)

8 8
1 1
C C
V W

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-72

(STEP 194 CONTINUED)

TEST POINT	MINIMUM READING	MAXIMUM READING
1	+4.6 V	-----
2	+7.6 V	-----
3	-11.0 V	-----
4	-4.6 V	-----
5	+11.0 V	-----
6 (POWER ON RESET)	+2.6 V	-----
7 (POWER THERMAL WARNING)	-----	-----
8	GROUND	GROUND

IS EACH VOLTAGE HIGHER THAN ITS MINIMUM VALUE?

Y N
| |
| |
| |
| |

8 7
0 4
C C
X Y

29JUL83 PN6838626

ECA08003 PEC375384

C POWER SUPPLY MAP
Y
7 -----
3
PAGE 74 OF 97
|
|
195

MAP 1480-74

(ENTRY POINT B)

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH,
DISCONNECT CONNECTOR P3 FROM J3. DO NOT DISCONNECT THE TRANSFORMER WIRES FROM TERMINAL BLOCK TB-A. DISCONNECT THE WIRES FROM TERMINAL 3 AND TERMINAL 4 OF TERMINAL BLOCK TB-A WHICH CONNECT THE +5 VOLT HEAT SINK DIODES TO TERMINAL 3 AND TERMINAL 4 OF TERMINAL BLOCK DIODES TB-A). SET THE MULTIMETER TO APPROXIMATELY 30 VOLTS ON THE AC VOLTS SETTING. SWITCH ON THE PROCESSING UNIT AC POWER SWITCH. CONNECT THE TEST LEADS OF THE METER TO THE PINS OF CONNECTOR P3 AS INDICATED ON THE CHART. THE METER SHOULD INDICATE THE VOLTAGES INDICATED BY THE CHART.

AC VOLTAGES

|-----|-----|
(STEP 195 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-74

(STEP 195 CONTINUED)

P3 PIN LOCATION		APPROXIMATE AC VOLTAGE
1	3	9.25 VOLTS
2	3	9.25 VOLTS
4	6	5.50 VOLTS
5	6	5.50 VOLTS
7	9	12.5 VOLTS
8	9	12.5 VOLTS
TB-A TERMINAL		APPROXIMATE AC VOLTAGE
3	9	06.0 VOLTS
4	9	06.0 VOLTS

ARE THE VOLTAGES APPROXIMATELY AS
INDICATED BY THE CHART?

Y N
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

7 7
9 6
C D
Z A

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-75

D
A
7
5

POWER SUPPLY MAP

MAP 1480-76

PAGE 76 OF 97

|
|
196

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH. INSPECT THE CONNECTIONS AT THE CAPACITOR, C1. (SEE LOGIC PAGE YA200 AND MIM SECTION 4-77, PARAGRAPH 4.22.5). ARE WIRES 9 AND 10 CONNECTED TO THE CAPACITOR?

Y N

|
| 197

CORRECTLY RECONNECT THE CONDUCTORS TO THE CAPACITOR. VERIFY THE REPAIR.

|
198

INSPECT THE JUMPER CONDUCTORS ON TERMINAL BLOCK, TB-2. USE THE "PRIMARY TERMINAL CONNECTIONS" CHART ON LOGIC PAGE YA200. (SEE MIM SECTION 3-13, PARAGRAPH 3.12)

NOTE IF THE JUMPERS ARE IN THE CORRECT POSITION FOR THE SPECIFIED AC INPUT VOLTAGE OF THE PROCESSING UNIT.

DISCONNECT ONE END OF EACH JUMPER CONDUCTOR.

SET THE MULTIMETER TO APPROXIMATELY THE RX1 OHMS SETTING.

MEASURE THE RESISTANCE OF THE JUMPER CONDUCTORS. NOTE IF THE RESISTANCE IS OF EACH JUMPER CONDUCTOR IS APPROXIMATELY 0 OHMS.

IS THE RESISTANCE APPROXIMATELY 0 OHMS AND ARE THE JUMPERS IN THE CORRECT POSITIONS?

Y N
| |
| |
| |
| |

7 7
7 7
D D
B C

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-76

D D POWER SUPPLY MAP
B C
7 7 -----
6 6

MAP 1480-77

PAGE 77 OF 97

| |
| |
| 199
| CORRECTLY CONNECT THE JUMPER
| CONDUCTORS AND/OR REPAIR OR
| REMOVE ANY BROKEN CONDUCTORS
| AND INSTALL NEW CONDUCTORS.
| RECONNECT ALL THE REMAINING
| JUMPER CONDUCTORS.
| VERIFY THE REPAIR.
|

200
REMOVE THE CAPACITOR, C1 AND
INSTALL A NEW CAPACITOR.
CONNECT ALL CONDUCTORS.
SWITCH ON THE PROCESSING UNIT
SWITCH.
MEASURE THE DC VOLTAGES AT THE
TEST POINTS ON THE PC CARD.
NOTE IF THE VOLTAGE VALUES ARE
BETWEEN THE MINIMUM AND MAXIMUM
VALUES INDICATED ON THE CHART
BELOW.

TEST POINT	MINIMUM READING	MAXIMUM READING
1	+4.6 V	+5.9 V
2	+7.6 V	+9.4 V
3	-11.0 V	-13.2 V
4	-4.6 V	-5.5 V
5	+11.0 V	+13.2 V
6	+2.6 V	+5.9 V
(POWER ON RESET)		

(STEP 200 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-77

PAGE 78 OF 97

(STEP 200 CONTINUED)

7	+2.6 V	+5.9 V
(POWER THERMAL WARNING)		
8	GROUND	GROUND

ARE THE VOLTAGES GOOD?

Y N

|

| 201

| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.| REMOVE THE REAR UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTION 4-69, PARAGRAPH
| 4.21.2). VERIFY THE REPAIR.

|

202

DOES THE POWER SUPPLY OPERATE
CORRECTLY?

Y N

|

| 203

| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.| REMOVE THE REAR UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTION 4-69, PARAGRAPH
| 4.21.2). VERIFY THE REPAIR.

|

204

VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-78

C
Z
7
5

POWER SUPPLY MAP

MAP 1480-79

PAGE 79 OF 97

|
|
205

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.
CONNECT CONNECTOR P3 TO J3.
DISCONNECT CONNECTOR P5 FROM J5.
SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.
CONNECT THE TEST LEADS OF THE METER TO THE PINS OF CONNECTOR P5 AS INDICATED ON THE CHART BELOW. THE METER SHOULD INDICATE THE VOLTAGES INDICATED BY THE CHART.

P5 PIN LOCATION	APPROXIMATE AC VOLTAGE
1 3	9.25 VOLTS
2 3	9.25 VOLTS
4 6	5.50 VOLTS
5 6	5.50 VOLTS
7 9	12.5 VOLTS
8 9	12.5 VOLTS

(STEP 205 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-79

C
X
7
3

POWER SUPPLY MAP

MAP 1480-80

PAGE 80 OF 97

(STEP 205 CONTINUED)

P5 PIN	LOCATION	APPROXIMATE DC VOLTAGES
10	12	05.0 VOLTS
11	12	05.0 VOLTS

ARE THE VOLTAGES APPROXIMATELY AS INDICATED BY THE CHART?

Y N

206

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

REMOVE THE FRONT UNIT AND INSTALL A NEW FRONT UNIT.

(SEE MIM SECTIONS 4-66 AND 4-67, PARAGRAPH 4.21.1 AND LOGIC PAGE YA200).

CONNECT ALL CONNECTORS.

VERIFY THE REPAIR.

207

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

REMOVE THE PC CARD AND INSTALL A NEW CARD. (SEE LOGIC PAGE YA200 AND MIM SECTIONS 4-70 AND 4-71, PARAGRAPH 4.22.1).

CONNECT ALL CONNECTORS.

VERIFY THE REPAIR.

208

THE FAILURE IS IN THE PROCESSING UNIT LOGIC BOARD.

GO TO MAP 0020, ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-80

C C POWER SUPPLY MAP
V W
7 7 -----
2 2

MAP 1480-81

PAGE 81 OF 97

| |
| |
| 209
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| REMOVE THE PC CARD AND INSTALL
| A NEW CARD.
| VERIFY THE REPAIR.

|
210
IS THE VOLTAGE AT TEST POINT 1
GOOD?

Y N
|
| 211
| SET THE MULTIMETER TO
| APPROXIMATELY 10 VOLTS ON THE
| AC VOLTS SETTING.
| CONNECT ONE TEST LEAD OF THE
| METER TO TERMINAL 3 OF TERMINAL
| BLOCK TB-A.
| CONNECT THE OTHER TEST LEAD OF
| THE METER TO TERMINAL 9 OF
| TERMINAL BLOCK TB-A.
| NOTE THE INDICATED VOLTAGE.
| DISCONNECT THE TEST LEAD FROM
| TERMINAL 3 OF TERMINAL BLOCK
| TB-A AND CONNECT THE TEST LEAD
| TO TERMINAL 4 OF TERMINAL BLOCK
| TB-A.
| NOTE THE INDICATED VOLTAGE.
| IS EACH INDICATED VOLTAGE AT
| LEAST 6 VOLTS?

Y N
| |
| | 212
| | SWITCH OFF THE PROCESSING
| | UNIT AC POWER SWITCH.
| | REMOVE THE REAR UNIT AND
| | INSTALL A NEW UNIT.
| | (SEE MIM SECTION 4-69,
| | PARAGRAPH 4.21.2).
| | VERIFY THE REPAIR.

| |
| |
| |
8 8
3 2
D D
D E

29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-81

D
E
8
1

POWER SUPPLY MAP

MAP 1480-82

PAGE 82 OF 97

|
|

213

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.

DISCONNECT CONNECTOR P5 FROM J5.
SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.

CONNECT ONE TEST LEAD OF THE
METER TO PIN 10 OF CONNECTOR P5.
CONNECT THE OTHER TEST LEAD OF
THE METER TO PIN 12 OF CONNECTOR
P5.

NOTE THE INDICATED VOLTAGE.
THE VOLTAGE VALUE SHOULD BE MORE
THAN 4.6 VOLTS.

IS THE VOLTAGE GOOD?

Y N

|

| 214

| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.

| REMOVE THE HEAT SINK ASSEMBLY
| AND INSTALL A NEW HEAT SINK
| ASSEMBLY.

| (SEE MIM SECTIONS 4-74 AND
| 4-75, PARAGRAPH 4.22.4).

| VERIFY THE REPAIR.

|

215

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.

REMOVE THE PC CARD AND INSTALL A
NEW PC CARD.

(SEE MIM SECTIONS 4-70 AND 4-71,
PARAGRAPH 4.22.1).

VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-82

D
8
1

|
|
216

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.
DISCONNECT CONNECTOR P3 FROM J3.
SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.
SET THE MULTIMETER TO APPROXIMATELY 30 VOLTS ON THE AC VOLTS SETTING.
CONNECT THE TEST LEADS OF THE VOLTMETER TO THE PINS OF CONNECTOR P3 AS INDICATED ON THE CHART, BELOW.
THE METER SHOULD INDICATE THE VOLTAGES INDICATED ON THE CHART.

P3 PIN LOCATION	APPROXIMATE VOLTAGE
1 2	18.5 VOLTS
4 5	11.0 VOLTS
7 8	25.0 VOLTS

TB-A TERMINAL	APPROXIMATE AC VOLTAGE
3 4	12.0 VOLTS

(STEP 216 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

(STEP 216 CONTINUED)

ARE THE VOLTAGES APPROXIMATELY AS
INDICATED ON THE CHART?

Y N

|

| 217

| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.| REMOVE THE REAR UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTION 4-69, PARAGRAPH
| 4.21.2).

| VERIFY THE REPAIR.

|

218

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.DISCONNECT THE POWER SUPPLY DC
OUTPUT CABLES FROM SOCKETS H2,
H3, H4 AND H5 OF THE PROCESSING
UNIT LOGIC BOARD. (SEE LOGIC
PAGE YA200 AND MIM SECTION 3-11,
PARAGRAPH 3.10, MIM SECTION 3-13,
PARAGRAPH 3.12 AND MIM SECTION
4-67). SWITCH ON THE SERVICE
SWITCH.SWITCH ON THE PROCESSING UNIT AC
POWER SWITCH.SET THE MULTIMETER TO THE DC
VOLTS SETTING TO INDICATE
APPROXIMATELY 15 VOLTS.MEASURE THE VOLTAGE AT TEST
POINTS 2, 3, 4, AND 5.SEE THE CHART BELOW. (SEE MIM
SECTIONS 4-62 AND 4-63, PARAGRAPH
4.19.1 AND LOGIC PAGE YA200).
TEST POINT 8 IS GROUND.

(STEP 218 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-84

(STEP 218 CONTINUED)

TEST POINT	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
1	+04.6 V	-----
2	+07.6 V	-----
3	-11.0 V	-----
4	-04.6 V	-----
5	+11.0 V	-----
6 (POWER ON RESET)	+02.6 V	-----
7 (POWER THERMAL WARNING)	-----	-----
8	GROUND	GROUND

IS ONE OR MORE VOLTAGE BAD?

Y N

| 219
| MEASURE THE VOLTAGE AT TEST
| POINT 1.
| IS THE VOLTAGE BAD?

Y N

8 8 8
8 7 6
D D D
F G H

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-85

D D POWER SUPPLY MAP
G J
8 8 -----
5 6

MAP 1480-87

PAGE 87 OF 97

| |
| |
| 224
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| REMOVE THE P.C. CARD AND
| INSTALL A NEW CARD. (SEE MIM
| SECTION SECTIONS 4-70 AND 4-71,
| PARAGRAPH 4.22.1). VERIFY THE
| REPAIR.

|
225
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
DISCONNECT THE +5V DIODE
ASSEMBLY. (SEE MIM SECTIONS 4-74
AND 4-75. ALSO SEE LOGIC PAGE
YA200).
SET THE MULTIMETER TO THE RX1K
SETTING.
CONNECT THE POSITIVE TEST LEAD OF
THE METER TO THE CATHODE
(NEGATIVE) OF ONE OF THE TWO
DIODES AND THE NEGATIVE TEST LEAD
OF THE METER TO THE ANODE
(POSITIVE) OF THE SAME DIODE.
NOTE THE INDICATED RESISTANCE.
CONNECT THE NEGATIVE TEST LEAD OF
THE METER TO THE CATHODE
(NEGATIVE) OF ONE OF THE TWO
DIODES AND THE POSITIVE TEST LEAD
OF THE METER TO THE ANODE
(POSITIVE) OF THE SAME DIODE.
NOTE THE INDICATED RESISTANCE.
CONNECT THE POSITIVE TEST LEAD OF
THE METER TO THE CATHODE
(NEGATIVE) OF THE OTHER DIODE AND
THE NEGATIVE TEST LEAD OF THE
METER TO THE ANODE (POSITIVE) OF
THE DIODE.
NOTE THE INDICATED RESISTANCE.
CONNECT THE NEGATIVE TEST LEAD OF
THE METER TO THE CATHODE
(NEGATIVE) OF THE OTHER DIODE AND
(STEP 225 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-87

D
F
8
5

POWER SUPPLY MAP

MAP 1480-88

PAGE 88 OF 97

|
| (STEP 225 CONTINUED)
| THE POSITIVE TEST LEAD OF THE
| METER TO THE ANODE (POSITIVE)
| OF THE DIODE.
| NOTE THE INDICATED RESISTANCE.
| A GOOD DIODE SHOULD INDICATE
| ONE RESISTANCE OF LESS THAN 10
| OHMS AND ANOTHER RESISTANCE OF
| MORE THAN 1K OHMS.
| SEE LOGIC PAGE YA200). MEASURE
| THE DIODES FOR OPEN CIRCUITS OR
| SHORT CIRCUITS.
| ARE THE DIODES GOOD?
| Y N
| |
| | 226
| | REMOVE THE DIODE ASSEMBLY AND
| | INSTALL A NEW ASSEMBLY (SEE
| | MIM SECTIONS 4-74 AND 4-75,
| | PARAGRAPH 4.22.4). VERIFY
| | THE REPAIR.
| |
| 227
| REMOVE THE FRONT UNIT AND
| INSTALL A NEW UNIT. (SEE MIM
| SECTIONS 4-66 AND 4-67,
| PARAGRAPH 4.21.1). VERIFY THE
| REPAIR.
|
228
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
REMOVE THE P.C. CARD AND INSTALL
A NEW CARD. (SEE MIM SECTIONS
4-70 AND 4-71, PARAGRAPH 4.22.1).
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-88

229

(ENTRY POINT L)

SEE LOGIC PAGES YA200, YA210,
YA215, YA220 AND MIM PARAGRAPHS
3.10 THROUGH 3.12 AND 4.19
THROUGH 4.26 (MIM PARAGRAPHS 3.10
THROUGH 3.12 SHOW PART
LOCATIONS).

SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
ENSURE THAT CIRCUIT BREAKER, CB-2
IS SWITCHED ON.
SWITCH ON THE POWER SUPPLY
SERVICE SWITCH.
DISCONNECT THE FLAT BUS DC POWER
SUPPLY OUTPUT CABLES FROM SOCKETS
H2, H3, H4 AND H5 OF THE
PROCESSING UNIT LOGIC BOARD.
SET THE MULTIMETER TO THE RX1
OHMS SETTING.
REMOVE EACH FUSE FROM THE POWER
SUPPLY AND MEASURE ITS
RESISTANCE.
IF THE INDICATED RESISTANCE OF
THE FUSE IS LESS THAN 0.25 OHMS,
REINSTALL THE FUSE IN THE POWER
SUPPLY.
IF THE INDICATED RESISTANCE IS
MORE THAN 0.25 OHMS, INSTALL A
(STEP 229 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-89

 PAGE 90 OF 97

(STEP 229 CONTINUED)
 NEW FUSE IN THE POWER SUPPLY.
 SWITCH ON THE PROCESSING UNIT AC
 POWER SWITCH.
 MEASURE THE VOLTAGES ON CONNECTOR
 THE TERMINALS OF TB-A AND TB-B.
 THE VOLTAGE VALUES ARE INDICATED
 ON THE CHART BELOW.

TB-B TERMINAL	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
1	-11.0V	-13.2V
2	-07.6V	-09.4V
3	+02.6V	+05.9V
4	+02.6V	+05.9V
5	GROUND	GROUND
6		
7		
8	GROUND	GROUND
9		
10	NO CONN.*	NO CONN.*

(* NO CONNECTION)

(STEP 229 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-90

230
 SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.
 ENSURE THAT CIRCUIT BREAKER, CB-2 IS SWITCHED ON.
 SWITCH ON THE POWER SUPPLY SERVICE SWITCH.
 DISCONNECT CONNECTOR P7 FROM J7.
 REMOVE EACH FUSE FROM THE POWER SUPPLY AND MEASURE ITS RESISTANCE.
 IF THE INDICATED RESISTANCE IS LESS THAN 0.25 OHMS, REINSTALL THE FUSE IN THE POWER SUPPLY.
 IF THE INDICATED RESISTANCE IS MORE THAN 0.25 OHMS, INSTALL A NEW FUSE IN THE POWER SUPPLY.
 (SEE MIM SECTIONS 4-62 AND 4-63, PARAGRAPHS 4.19.1 AND 4.19.2).
 SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.
 MEASURE THE VOLTAGES ON CONNECTOR J7 AT THE PC CARD.
 THE VOLTAGE VALUES ARE INDICATED ON THE CHART BELOW.

CONNECTOR J7 PINS	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
2	+11.0V	+13.2V
3	-04.6V	-05.5V
1	-11.0V	-13.2V
4	+07.6V	+09.4V
5	+02.6V	+05.9V

POWER ON RESET
 (STEP 230 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-92

(STEP 230 CONTINUED)

6	+02.6V	+05.9V
POWER THERMAL WARNING		
7	GROUND	GROUND

IS EACH VOLTAGE AS INDICATED ON THE CHART?

Y N

|
| 231
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SET THE MULTIMETER TO THE RX1
| OHMS SETTING.
| REMOVE EACH FUSE FROM THE POWER
| SUPPLY AND MEASURE ITS
| RESISTANCE.
| IF THE INDICATED RESISTANCE IS
| LESS THAN 0.25 OHMS, REINSTALL
| THE FUSE IN THE POWER SUPPLY.
| IF THE INDICATED RESISTANCE IS
| MORE THAN 0.25 OHMS, INSTALL A
| NEW FUSE IN THE POWER SUPPLY.
| (SEE MIM SECTIONS 4-62 AND
| 4-63, PARAGRAPHS 4.19.1 AND
| 4.19.2).
| ENSURE THAT CIRCUIT BREAKER,
| CB-2, IS SWITCHED ON.
| REMOVE THE PC CARD AND INSTALL
| A NEW CARD. (SEE MIM SECTIONS
| 4-70 AND 4-71, PARAGRAPH
| 4.22.1).
| VERIFY THE REPAIR.

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POWER SUPPLY MAP

MAP 1480-94

PAGE 94 OF 97

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232

SWITCH OFF THE PROCESSING UNIT AC POWER SWITCH.

CONNECT CONNECTOR P7 TO J7.

DISCONNECT THE FLAT BUS DC POWER OUTPUT CABLES FROM TERMINAL BLOCKS TB-B AND TB-A.

SWITCH ON THE PROCESSING UNIT AC POWER SWITCH.

MEASURE THE VOLTAGES ON THE TERMINALS AT TERMINAL BLOCKS TB-B AND TB-A. THE VOLTAGE VALUES ARE INDICATED ON THE CHART BELOW.

TB-B TERMINAL	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
1	-11.0V	-13.2V
2	-07.6V	-09.4V
3	+02.6V	+05.9V
4	+02.6V	+05.9V
5		
6	GROUND	GROUND
7		
8		
9	GROUND	GROUND
10	NO CONN.**	NO CONN.**

(STEP 232 CONTINUES)

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-94

(STEP 232 CONTINUED)
(* NO CONNECTION)

TB-A TERMINAL	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
1	+11.0V	+13.2V
2	-04.6V	-05.5V
3	-----	-----
4	-----	-----
5	GROUND	GROUND
6		
7		
8		
9	AC GROUND	AC GROUND
10	NO CONN.*	NO CONN.*

(* NO CONNECTION)

IS EACH VOLTAGE AS INDICATED ON
THE CHART?

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29JUL83 PN6838626
ECA08003 PEC375384
MAP 1480-95

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| 233
| SWITCH OFF THE PROCESSING UNIT
| AC POWER SWITCH.
| SET THE MULTIMETER TO THE RX1
| OHMS SETTING.
| REMOVE EACH FUSE FROM THE POWER
| SUPPLY AND MEASURE ITS
| RESISTANCE.
| IF THE INDICATED RESISTANCE IS
| LESS THAN 0.25 OHMS, REINSTALL
| THE FUSE IN THE POWER SUPPLY.
| IF THE INDICATED RESISTANCE IS
| MORE THAN 0.25 OHMS, INSTALL A
| NEW FUSE IN THE POWER SUPPLY.
| SEE MIM SECTIONS 4-62 AND 4-63,
| PARAGRAPHS 4.19.1 AND 4.19.2.
| ENSURE THAT THE CIRCUIT
| BREAKER, CB-2 IS SWITCHED ON.
| REMOVE THE POWER SUPPLY FRONT
| UNIT AND INSTALL A NEW FRONT
| UNIT.
| (SEE MIM SECTIONS 4-66 AND
| 4-67, PARAGRAPH 4.21.1 AND
| LOGIC PAGE YA200).
| VERIFY THE REPAIR.

|
234
SWITCH OFF THE PROCESSING UNIT AC
POWER SWITCH.
REMOVE THE POWER SUPPLY DC OUTPUT
FLAT BUS CABLE OF THE VOLTAGE
WHICH IS BAD AND INSTALL A NEW
FLAT BUS CABLE.
(SEE MIM SECTION 3-12, PARAGRAPH
3.11 AND LOGIC PAGE YA200).
VERIFY THE REPAIR.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-96

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POWER SUPPLY MAP

MAP 1480-97

PAGE 97 OF 97

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|

235

THE FAILURE IS NOT IN THE POWER
SUPPLY.

GO TO MAP 0020, ENTRY POINT A.

29JUL83 PN6838626

ECA08003 PEC375384

MAP 1480-97