

ALTERNATING CURRENT POWER DISTRIBUTION MAP

MAP 1471-1

PAPER ONLY MAP

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ENTRY POINTS

FROM	ENTER THIS MAP		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
NO ENTRIES IN THIS TABLE			

EXIT POINTS

EXIT THIS MAP		TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3	021	1470	A
4	045	1470	A

001
(ENTRY POINT A)

THE DEVICE OR ENCLOSURE WITH THE POWER PROBLEM MAY NOT BE CONNECTED TO AN IBM 4997 RACK. IT MAY BE CONNECTED DIRECTLY TO A CUSTOMER OUTLET OR AN OEM RACK UNIT.

- SEE IF THE DEVICE OR ENCLOSURE WITH THE POWER PROBLEM IS INSTALLED IN AN IBM 4997.
- SEE IF A 4997 RACK IS INSTALLED.

IS THERE A 4997 INSTALLED?

Y N

002
- SEE IF THE SUSPECT DEVICE OR ENCLOSURE AC POWER CABLE IS CONNECTED TO THE OEM OR CUSTOMER AC POWER OUTLET.

IS IT CONNECTED AS NOTED ABOVE?

Y N

003
- SEE IF THE SUSPECT DEVICE OR ENCLOSURE AC POWER CABLE IS CONNECTED TO AN OEM OR CUSTOMER RACK.

IS IT CONNECTED AS NOTED ABOVE?

Y N

004
THE SUSPECT DEVICE OR ENCLOSURE AC POWER CABLE IS NOT CONNECTED TO AN OEM OR CUSTOMER AC POWER OUTLET OR TO AN OEM OR CUSTOMER RACK. IT MUST BE CONNECTED TO AN AC POWER SOURCE.

IS IT CONNECTED TO ANY AC POWER SOURCE?

Y N

005
- CONNECT THE AC POWER CABLE TO AN AC POWER SOURCE.
- VERIFY THE REPAIR.

006
IF ALTERNATE CURRENT VOLTAGE IS 110:
- SEE IF THERE IS 90 - 136 VOLTS ALTERNATE CURRENT AT THE AC POWER.
IF ALTERNATE CURRENT VOLTAGE IS 220:
- SEE IF THERE IS 180 - 256 VOLTS ALTERNATE CURRENT AT THE AC POWER.

IS THERE 90 - 136 VOLTS OR 180 - 256 VOLTS AS NOTED ABOVE?

Y N

007
THE PROBLEM IS AT THE AC POWER.
- HAVE THE PROBLEM REPAIRED.
- VERIFY THE REPAIR.

008
- RETURN TO THE MAP THAT SENT YOU HERE.

009
IF ALTERNATE CURRENT VOLTAGE IS 110:
- SEE IF THERE IS 90 - 136 VOLTS ALTERNATE CURRENT AT THE OEM OR CUSTOMER RACK.
IF ALTERNATE CURRENT VOLTAGE IS 220:
- SEE IF THERE IS 180 - 256 VOLTS ALTERNATE CURRENT AT THE OEM OR CUSTOMER RACK.

IS THERE 90 - 136 VOLTS OR 180 - 256 VOLTS AS NOTED ABOVE?

Y N

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2 2 2 2
A B C D

010
THE PROBLEM IS AT THE CUSTOMER'S OUTLET.
- HAVE THE PROBLEM REPAIRED.
- VERIFY THE REPAIR.

011
- RETURN TO THE MAP THAT SENT YOU HERE.

012
IF ALTERNATE CURRENT VOLTAGE IS 110:
- SEE IF THERE IS 90 - 136 VOLTS ALTERNATE CURRENT AT THE OEM OR CUSTOMER OUTLET.
IF ALTERNATE CURRENT VOLTAGE IS 220:
- SEE IF THERE IS 180 - 256 VOLTS ALTERNATE CURRENT AT THE OEM OR CUSTOMER OUTLET.

IS THERE 90 - 136 VOLTS OR 180 - 256 VOLTS AS NOTED ABOVE?

Y
N
013
THE PROBLEM IS AT THE OEM OR CUSTOMER OUTLET.

- HAVE THE PROBLEM REPAIRED.
- VERIFY THE REPAIR.

014
- RETURN TO THE MAP THAT SENT YOU HERE.

015
CIRCUIT BREAKER ONE (1) IS THE CIRCUIT BREAKER THAT IS ATTACHED AT THE REAR OF THE 4997. THE EMERGENCY PULL SWITCH CABLE IS CONNECTED TO IT.

- SEE IF CIRCUIT BREAKER ONE (1) IS SWITCHED ON.

IS CIRCUIT BREAKER ONE (1) SWITCHED ON AS NOTED?

Y
N
016
- SEE THE FRONT OF THE 4997.
- SEE IF THE 'EMERGENCY PULL' IS PULLED OUT TO THE OFF POSITION.

IS THE 'EMERGENCY PULL' AS NOTED ABOVE?

Y
N
017
- SWITCH CIRCUIT BREAKER ONE (1) LEVER TO THE ON POSITION.

DOES SWITCH CIRCUIT BREAKER ONE (1) REMAIN ON?

Y
N
018
(ENTRY POINT GR)
- DISCONNECT ALL DEVICES AND ENCLOSURES FROM THE 4997 AC POWER OUTLETS.
- SWITCH ON CIRCUIT BREAKER ONE (1).

DOES SWITCH CIRCUIT BREAKER ONE (1) REMAIN ON?

Y
N
019
THE PROBLEM IS IN THE 4997 RACK POWER CONNECTORS, CABLES OR CIRCUIT BREAKER ONE (1).
GO TO PAGE 3, STEP 029,
ENTRY POINT B.

020
(ENTRY POINT LA)

THE PROBLEM IS IN ONE OF THE DEVICES OR ENCLOSURES THAT IS NOT CONNECTED.

- SWITCH OFF CIRCUIT BREAKER ONE (1).
- CONNECT A DEVICE OR ENCLOSURE TO A 4997 AC POWER OUTLET.
- SWITCH ON CIRCUIT BREAKER ONE (1).

DOES SWITCH CIRCUIT BREAKER ONE (1) REMAIN ON?

Y
N
3 3 3 3
E F G H J

2 2 2 2 2

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021 THE POWER SUPPLY OF THE DEVICE OR ENCLOSURE JUST CONNECTED IS SUSPECT.
GO TO MAP 1470, ENTRY POINT A.

022 - SEE IF ALL DEVICES AND ENCLOSURES ARE CONNECTED TO THE 4997 AC POWER OUTLET.

ARE ALL DEVICES AND ENCLOSURES CONNECTED?
Y
N

023 GO TO PAGE 2, STEP 020, ENTRY POINT LA.

024 THE PROBLEM IS CORRECTED.
- VERIFY THE REPAIR.

025 GO TO STEP 029, ENTRY POINT B.

026 - PRESS THE EMERGENCY POWER OFF PUSHBUTTON.
- SWITCH CIRCUIT BREAKER ONE (1) ON.

DOES SWITCH CIRCUIT BREAKER ONE (1) REMAIN ON?
Y
N

027 GO TO PAGE 2, STEP 018, ENTRY POINT GR.

028 GO TO STEP 029, ENTRY POINT B.

029 (ENTRY POINT B)

IF ALTERNATE CURRENT VOLTAGE IS 110:
- SEE IF THERE IS 90 - 136 VOLTS ALTERNATE CURRENT AT THE CUSTOMER OUTLET.

IF ALTERNATE CURRENT VOLTAGE IS 220:
- SEE IF THERE IS 180 - 256 VOLTS ALTERNATE CURRENT AT THE CUSTOMER OUTLET.

IS THERE 90 - 136 VOLTS OR 180 - 256 VOLTS AS NOTED ABOVE?
Y
N

030 THE PROBLEM IS AT THE CUSTOMER'S OUTLET.

- HAVE THE PROBLEM REPAIRED.
- VERIFY THE REPAIR.

031 (ENTRY POINT C)

- MEASURE THE VOLTAGE AT THE 4997 POWER OUTLET CONNECTORS.

IS THIS VOLTAGE EQUAL TO THE VOLTAGES AT THE CUSTOMER'S POWER OUTLET?
Y
N

032 - CHECK THE FUSES (CANADA ONLY).

ARE THE FUSES GOOD OR ARE NO FUSES USED?
Y
N

033 - INSTALL A NEW FUSE.
GO TO STEP 031, ENTRY POINT C.

034 - CONNECT THE POWER CABLE TO THE CUSTOMER'S POWER OUTLET.
- SWITCH CIRCUIT BREAKER ONE (1) LEVER TO THE OFF POSITION.
- REMOVE THE REAR COVER FROM THE CIRCUIT BREAKER ONE (1) HOUSING.
- INSPECT THE INTERNAL CABLES FOR ANY LOOSE CONNECTIONS OR SHORT CIRCUITS.

IS EVERYTHING O.K?
Y
N

5 4 4
K L M

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035

- MAKE THE REPAIR.
- VERIFY THE REPAIR.

036

(ENTRY POINT D)

- SWITCH CIRCUIT BREAKER ONE (1) LEVER TO THE ON POSITION.
- MEASURE THE VOLTAGE AT THE INPUT TO THE CIRCUIT BREAKER.
- SEE IF THE VOLTAGE AT CIRCUIT BREAKER ONE (1) IS EQUAL TO THE VOLTAGE AT THE POWER CABLE CONNECTOR.

IS THE VOLTAGE AS NOTED ABOVE?

Y
N

037

- SEE IF THE POWER CABLE IS CORRECTLY CONNECTED AND IF THE TERMINAL SCREWS ARE TIGHT.

IS THE POWER CABLE CONNECTED AND THE TERMINAL SCREWS TIGHT?

Y
N

038

- CONNECT THE POWER CABLE TO CIRCUIT BREAKER ONE (1).
 - ENSURE THE CONNECTION IS TIGHT.
- GO TO STEP 036,
ENTRY POINT D.

039

THERE IS A POWER CABLE CONTINUITY PROBLEM.

- REMOVE THE POWER CABLE AND INSTALL A NEW ONE.
- INSTALL CIRCUIT BREAKER ONE (1) HOUSING COVER.
- VERIFY THE REPAIR.

040

- MEASURE THE VOLTAGE AT OUTPUT FROM CIRCUIT BREAKER 1.

IS THE VOLTAGE THE EQUAL TO THE VOLTAGE AT THE CUSTOMER POWER OUTLET?

Y
N

041

- SEE IF THE CIRCUIT BREAKER IS IN THE OFF POSITION.

IS THE CIRCUIT BREAKER IN THE OFF POSITION?

Y
N

042

THE CIRCUIT BREAKER IS BAD.

- REMOVE THE CIRCUIT BREAKER AND INSTALL A NEW ONE.
- VERIFY THE REPAIR.

043

- DISCONNECT ONE DEVICE FROM THE 4997 POWER OUTLET CONNECTORS.
- POWER ON CIRCUIT BREAKER ONE (1).
- SEE IF CIRCUIT BREAKER ONE (1) REMAINS ON.

DOES CIRCUIT BREAKER ONE (1) REMAIN ON?

Y
N

044

- CONTINUE REMOVAL UNTIL THE PROBLEM IS ISOLATED.
- POWER ON CIRCUIT BREAKER ONE (1) EACH TIME.

AFTER ALL DEVICES ARE REMOVED IF THE PROBLEM REMAINS, THE CIRCUIT BREAKER IS BAD.

- REMOVE THE CIRCUIT BREAKER AND INSTALL A NEW ONE.
- VERIFY THE REPAIR.

045

THE DEVICE JUST REMOVED IS THE PROBLEM. IF IT IS AN IBM UNIT GO TO MAP 1470, ENTRY POINT A.

IF THE DEVICE JUST REMOVED IS NOT AN IBM UNIT, NOTIFY THE CUSTOMER.

046
- INSTALL THE REAR COVER OF CIRCUIT BREAKER ONE (1) HOUSING.

IS THE COVER INSTALLED?

Y
N

047
- INSTALL THE REAR COVER AND CONTINUE ON THE YES LEG

048
(ENTRY POINT E)

- MEASURE THE VOLTAGE AT THE 4997 POWER OUTLETS.
- SEE IF THE VOLTAGE IS EQUAL TO THE VOLTAGE AT THE CUSTOMER POWER OUTLET.

IS THE VOLTAGE AS NOTED ABOVE?

Y
N

049
- SEE IF THE CABLE FROM CIRCUIT BREAKER 1 TO THE POWER OUTLET IS TIGHTLY CONNECTED.

IS THE CABLE TIGHT AS NOTED ABOVE?

Y
N

050
- TIGHTEN LOOSE CONNECTIONS.
GO TO STEP 048,
ENTRY POINT E.

051
- PLACE CIRCUIT BREAKER ONE (1) LEVER IN THE OFF POSITION.
- REMOVE REAR COVER(S) FROM THE POWER OUTLET HOUSING(S).
- INSPECT INTERNAL CABLES FOR ANY LOOSE CONNECTIONS OR SHORT CIRCUITS. REPAIR IF NECESSARY.
- SWITCH CIRCUIT BREAKER ONE (1) TO THE ON POSITION.
- MEASURE THE VOLTAGE ACROSS THE 4997 POWER OUTLET CONNECTOR.

IS THE VOLTAGE EQUAL TO THE CUSTOMER'S POWER OUTLET VOLTAGE?

Y
N

052
- THE 4997 POWER OUTLET CONNECTOR IS BAD.
- REMOVE THE POWER OUTLET CONNECTOR AND INSTALL A NEW ONE.
- INSTALL REAR COVER(S).
- VERIFY THE REPAIR.

053
- INSTALL REAR COVER(S).
- VERIFY THE REPAIR.

054
- INSTALL REAR COVER(S).
- VERIFY THE REPAIR.

055
NO ERRORS FOUND OR PROBLEM REPAIRED.
- GO TO THE SYSEM ENTRY MAP.