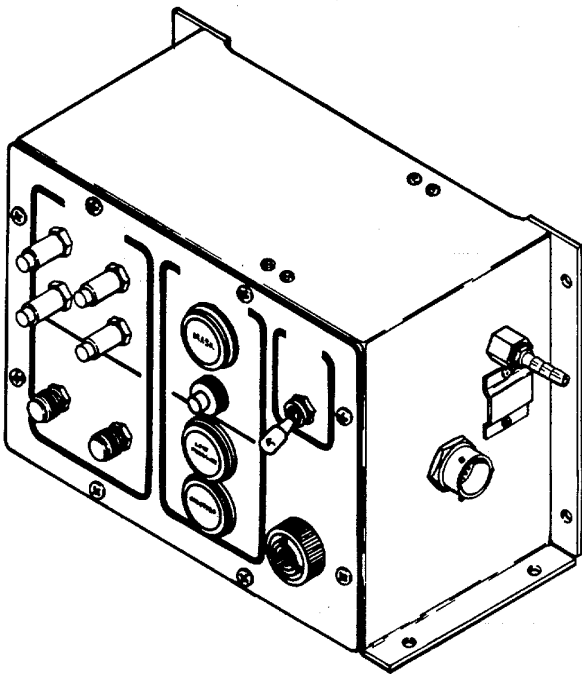


TECHNICAL MANUAL
 DIRECT SUPPORT MAINTENANCE MANUAL
 (INCLUDING REPAIR PARTS AND
 SPECIAL TOOLS LIST)
 FOR



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COMPARTMENT CONTROL MODULE
 (NSN 4240-01-057-3378)

HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1986

WARNINGS



HIGH VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions when performing troubleshooting and maintenance procedures on the compartment control module.

DISCONNECT POWER SUPPLIES BEFORE PERFORMING MAINTENANCE TO PREVENT DEATH OR POSSIBLE SERIOUS PERSONAL INJURY.

TOXIC HAZARD

Do not remove covers to service components after toxic exposure without observing proper handling procedures.

For electrical shock or toxic environment first aid, refer to FM21-11 (TEST).

TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC
2 July 1986

No. 3-4240-302-30&P-1

DIRECT SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR
COMPARTMENT CONTROL MODULE,
(NSN 4240-01-057-3378)

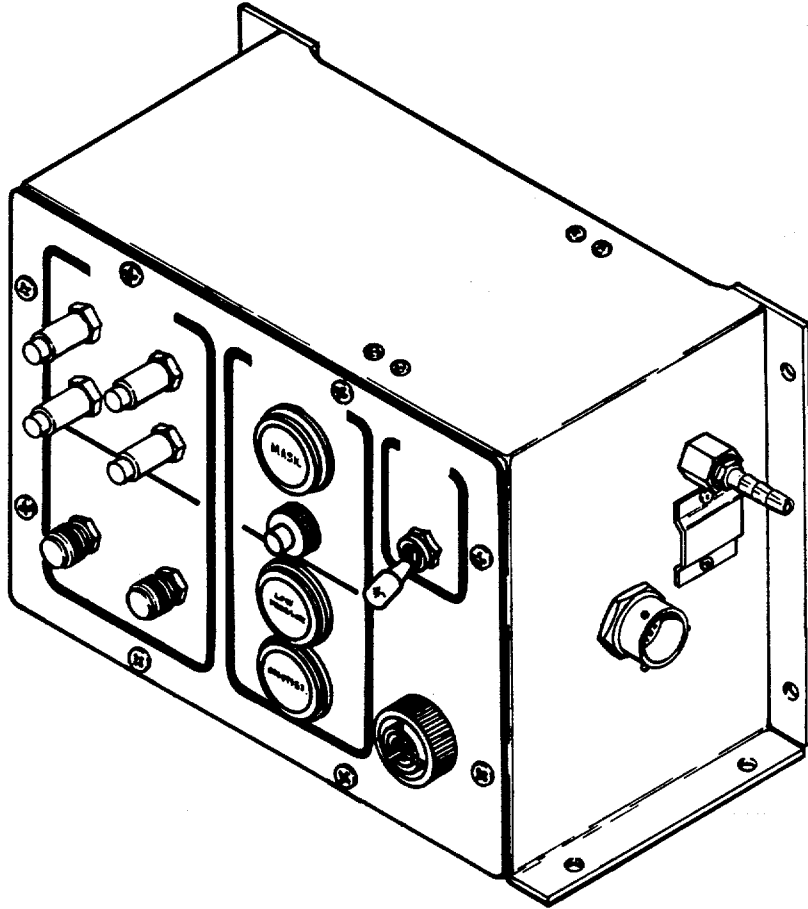
Current as of 15 April 1986

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAR-T(A), Aberdeen Proving Ground, MD 21010-5423. A reply will be furnished to you.

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COMPARTMENT CONTROL MODULE

(iii blank)/1-0

CHAPTER 1 INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

a. *Type of Manual.* This manual provides direct support maintenance instructions for the compartment control module including repair parts and special tools list (RPSTL).

b. *Equipment Name and Number.*

Compartment Control Module (CCM) (NSN 4240-01-057-3378)

c. *Purpose of Equipment.* The CCM controls pressurization of the shelter on which the collective protection equipment (CPE) is installed.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS. Department of the Army (DA) forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, The Army Maintenance Management System (TAMMS) as contained in Maintenance Management Update.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Refer to TM 43-0002-31, Destruction of Chemical Weapons and Defense Equipment to Prevent Enemy Use.

1-4. NOMENCLATURE CROSS-REFERENCE LIST. Nomenclature cross-reference used in this manual include the following:

<i>Common Name</i>	<i>Official Nomenclature</i>
Diode	Semiconductor device, diode
Tubing	Nonmetallic tubing
Waterproof boot	Dust and moisture seal boot
MASK switch/indicator light	Push switch
LOW PRESSURE switch/indicator light	Push switch
OCCUPIED switch/ indicator light	Push switch
Lamp	Incandescent lamp
Warning horn LS1	Buzzer
Male hose adapter	Straight pipe to hose adapter
Female hose adapter	Straight pipe to hose adapter

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). If the collective protection equipment needs improvement, let us know. Send an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to the Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD(R), Rock Island, IL 61299-6000. We will send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-6. DESCRIPTION AND DATA

a. *Organizational Maintenance Manual.* Refer to appendix A for the applicable organizational maintenance manual.

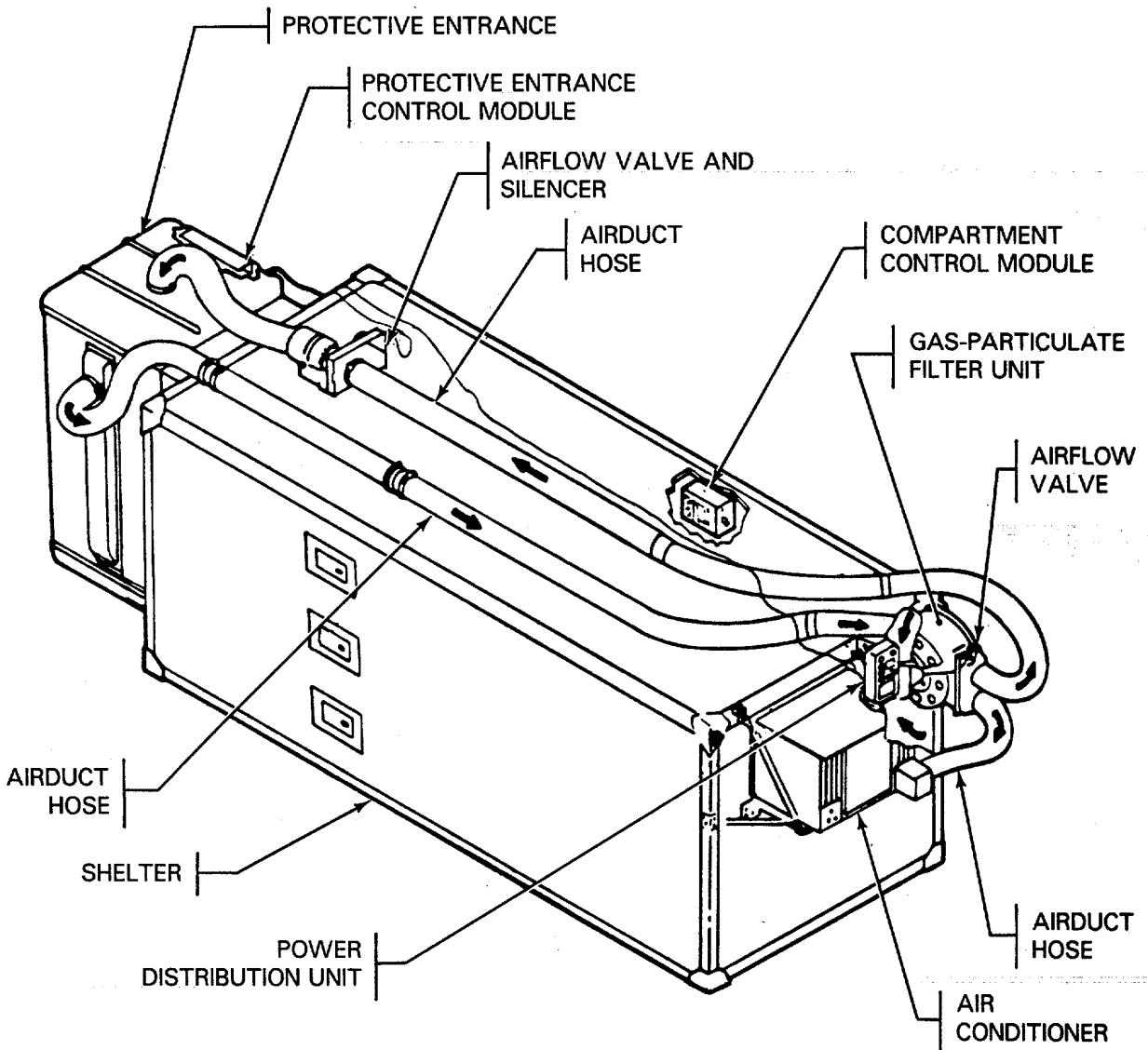
b. *Characteristics.* The CCM controls shelter pressurization and warns crew of low shelter pressure.

c. *Typical CPE System Description.*

(1) The gas-particulate filter unit (GPFU) removes toxic gases and dust from the air supplied to the protective entrance and shelter. Outside and return air is drawn by the main fan through the air inlet of the filter unit. From the main fan, the air is pushed through the particulate and gas filters to the airflow valve. The filtered air passes through the airflow valve and is carried by air duct hoses to the protective entrance (PE) through the airflow valve and silencer and to the shelter through the air conditioner. Pressure sensing components in the compartment control module (CCM) automatically adjust the airflow valve to maintain a positive pressure in the shelter.

(2) The protective entrance provides a pressurized transition area between the shelter and the outside contaminated zone. Personnel entering from the outside must wait 5 minutes within the protective entrance before entering the shelter. Contamination is purged by the flow of filtered air. The PECM automatically adjusts the airflow valve and silencer assembly to maintain the proper air pressure inside the protective entrance.

d. *CPE System Configurations.* Collective protection equipment is configured to fit the needs of a specific application and may differ from the typical system discussed above.

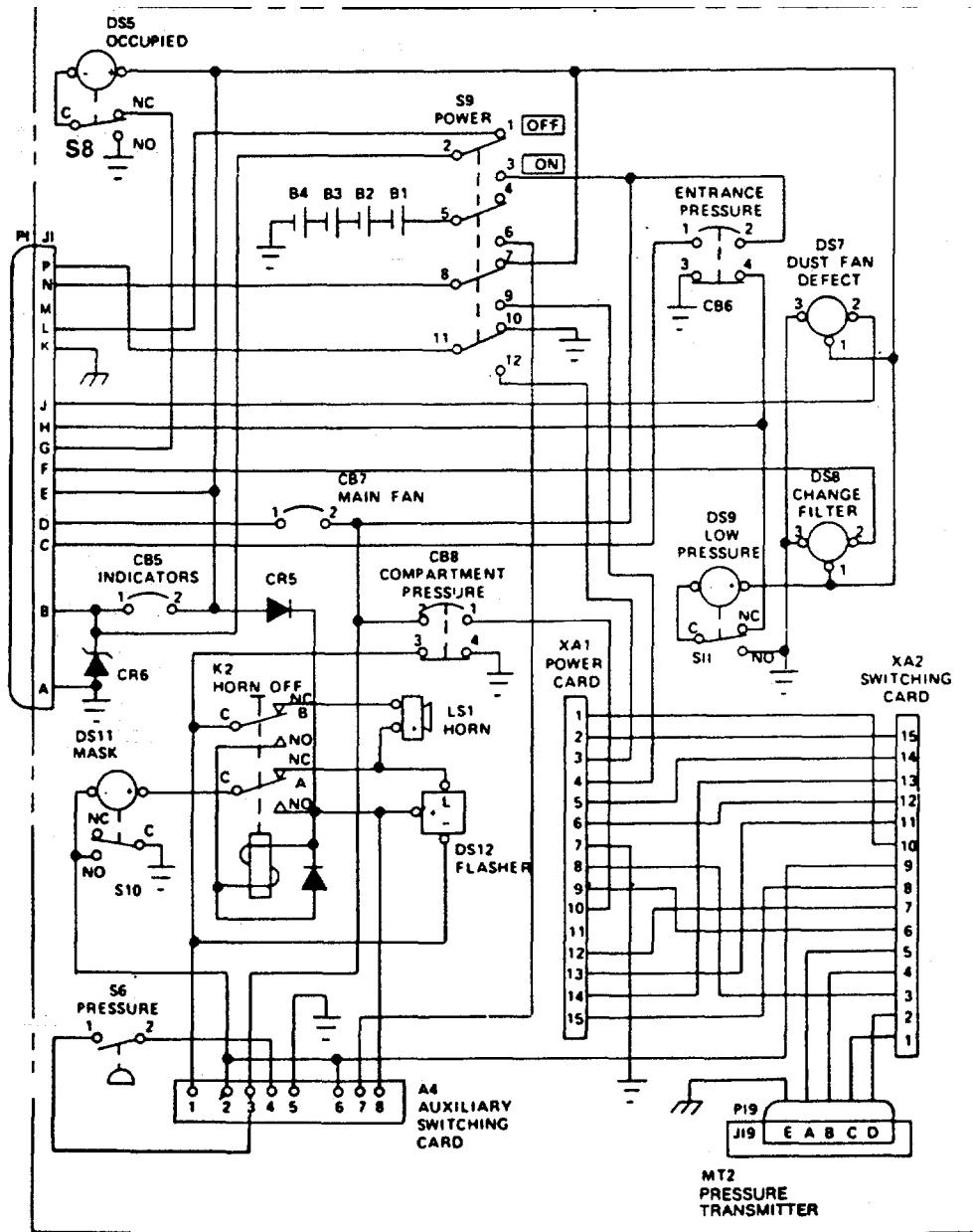


TYPICAL CPE CONFIGURATION

CHAPTER 2 MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE), AND SUPPORT EQUIPMENT

- 2-1. **COMMON TOOLS AND EQUIPMENT.** For authorized common tools and equipment, refer to the modified table of organization and equipment (MTOE) applicable to your unit.
- 2-2. **SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.** No special tools, TMDE, or support equipment are required.
- 2-3. **REPAIR PARTS.** Repair parts are listed and illustrated in appendix B of this manual.

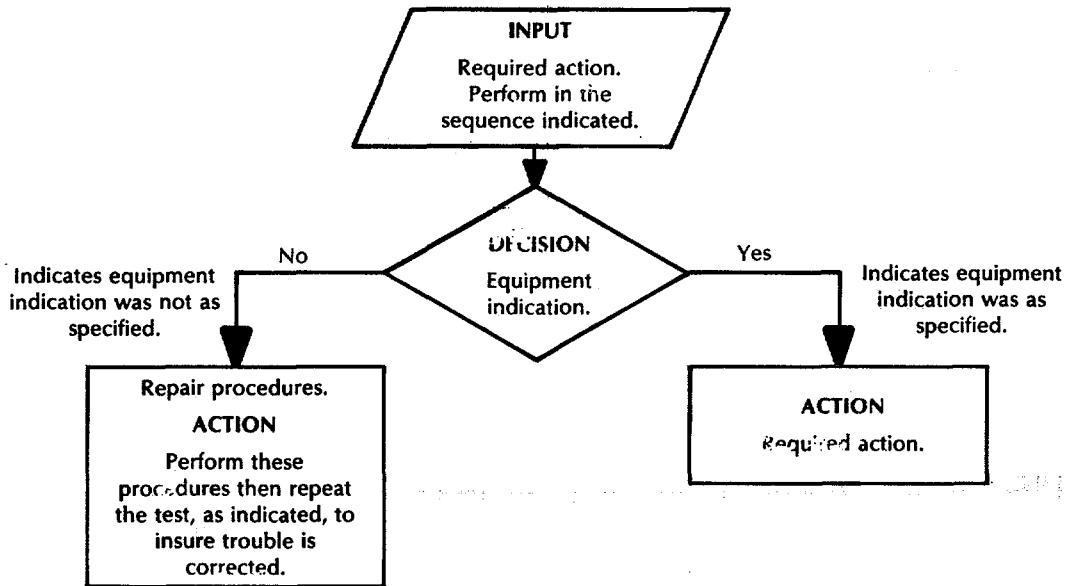


COMPARTMENT CONTROL MODULE SCHEMATIC

Section II. TROUBLESHOOTING

2-4. SCOPE. This section provides information for locating and correcting problems in the collective protection equipment. Use the following flow charts to isolate component problems and to locate repair instructions.

2-5. FLOW CHART PROCEDURES. This troubleshooting procedure is set up so that you actually are performing a module functional checkout. For example, if you have a good compartment control module, you perform only the functional checkout (yes path). If the compartment control module is defective (no path), the procedure directs you step-by-step to locate a defective component or a wiring problem. After module repair, you repeat the functional checkout at the point in the troubleshooting procedure where you originally dropped out. The following describes the troubleshooting chart symbols.

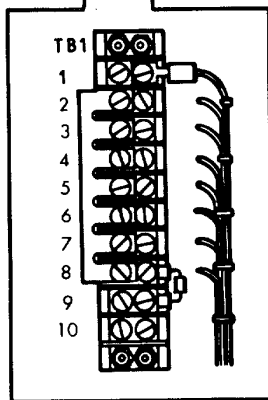
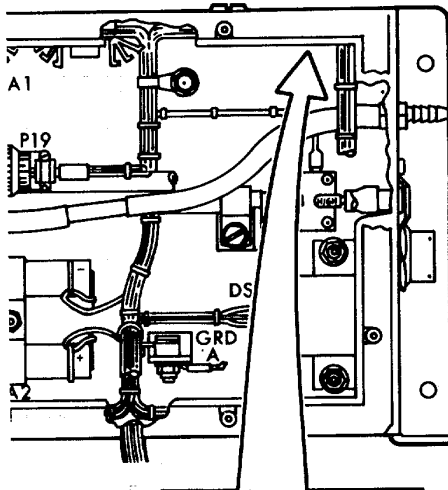
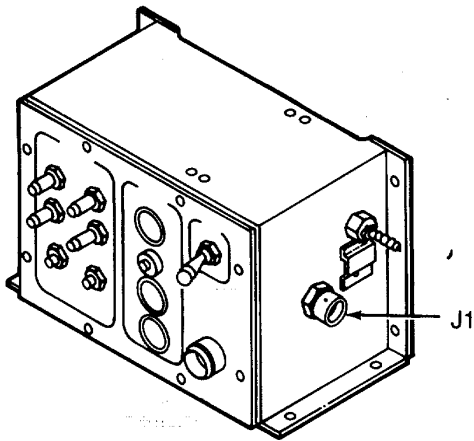


WARNING

High voltage is used to power this equipment. Before removing or installing power cable, be sure that POWER switch on control module is set to OFF and power source is shutdown to avoid personal injury or loss of life.

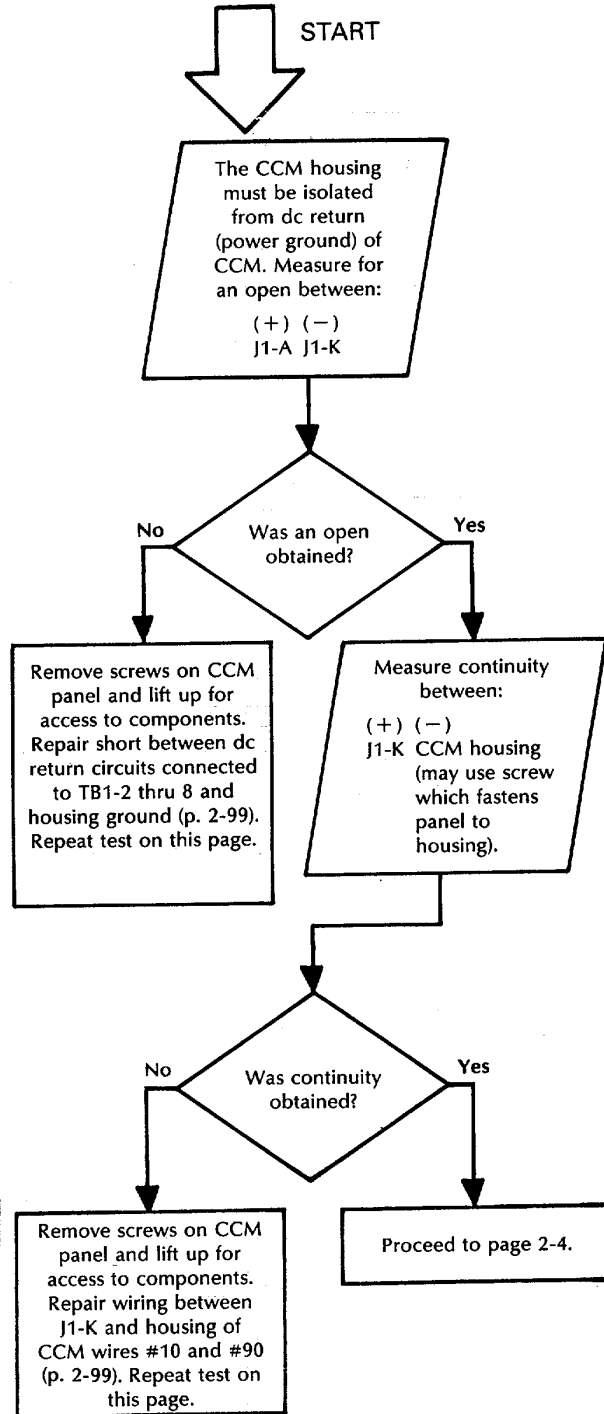
INDEX	PAGE
TRUBLESHOOTING PROCEDURE	
Compartment Control Module	2-3
TEST EQUIPMENT	↓
Multimeter 6625-01-092-1197	●
Power Supply 6130-00-408-4962 (or equiv)	●
Differential Pressure Gage 6685-00-087-6331	●
Hypodermic Syringe 6515-00-754-0412	●
Hose Tee 4730-00-082-5402	●
Tubing 4720-00-059-5819	●
Resistor 5905-00-782-6460 (100 ohm, 10 W)	●

2-6. TROUBLESHOOTING PROCEDURES.

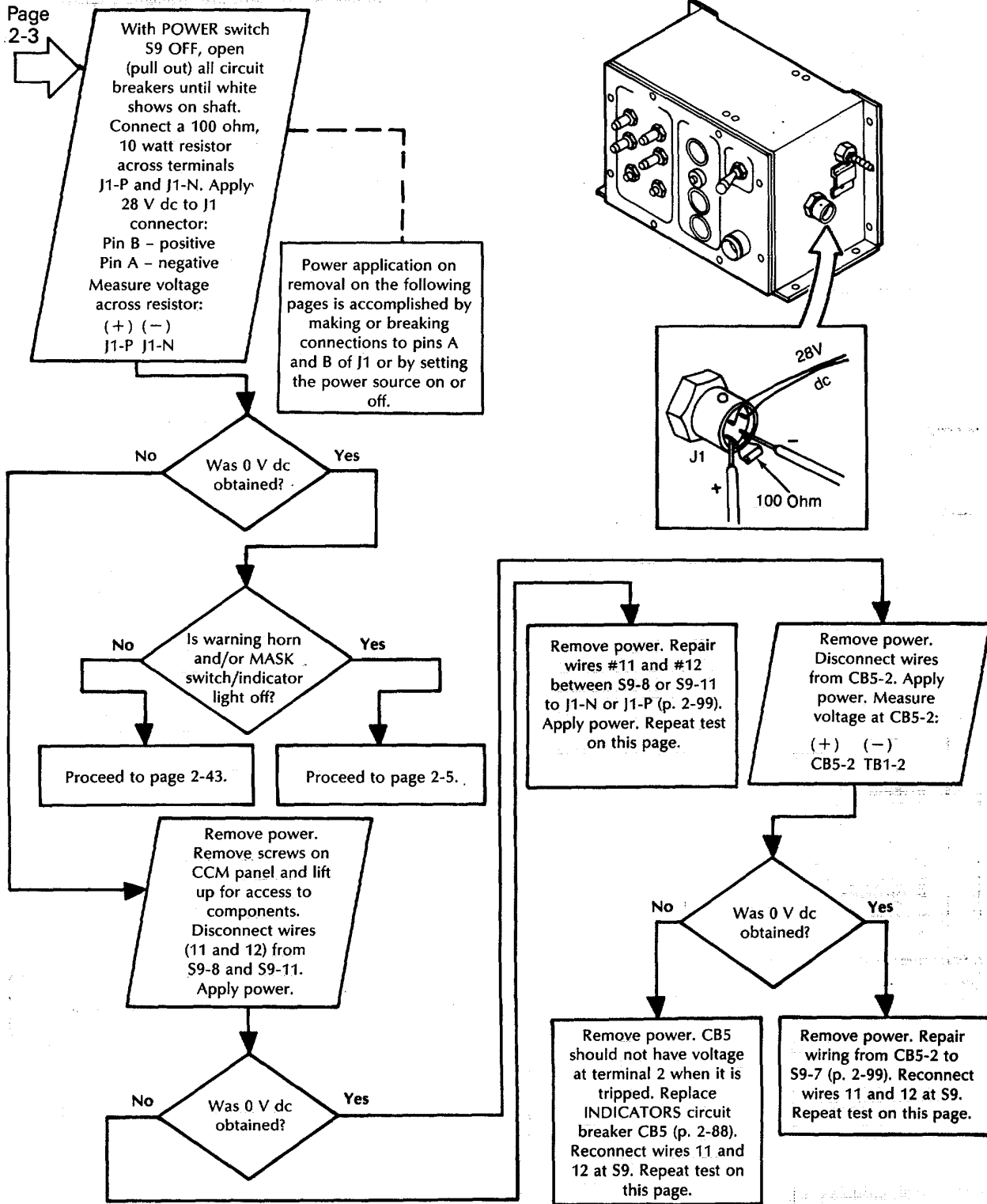


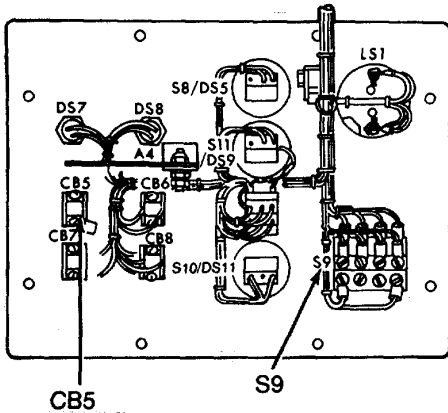
NOTE

All voltages are dc and are measured with respect to dc return (TB1-2 thru 8) unless otherwise specified.



2-6. TROUBLESHOOTING PROCEDURES (CONT).

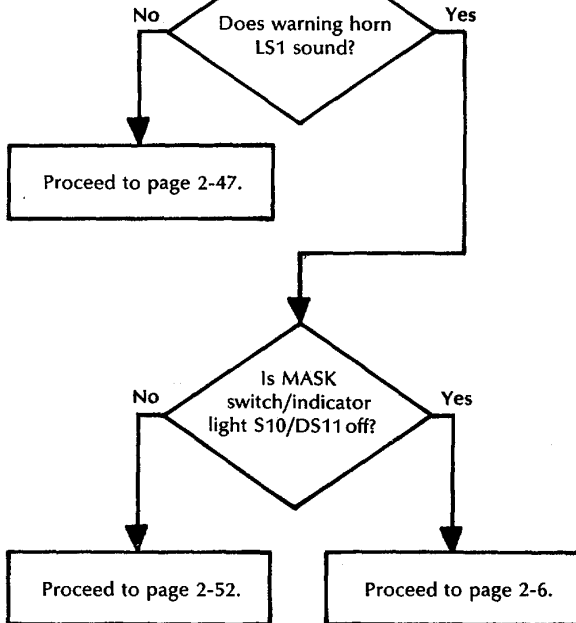
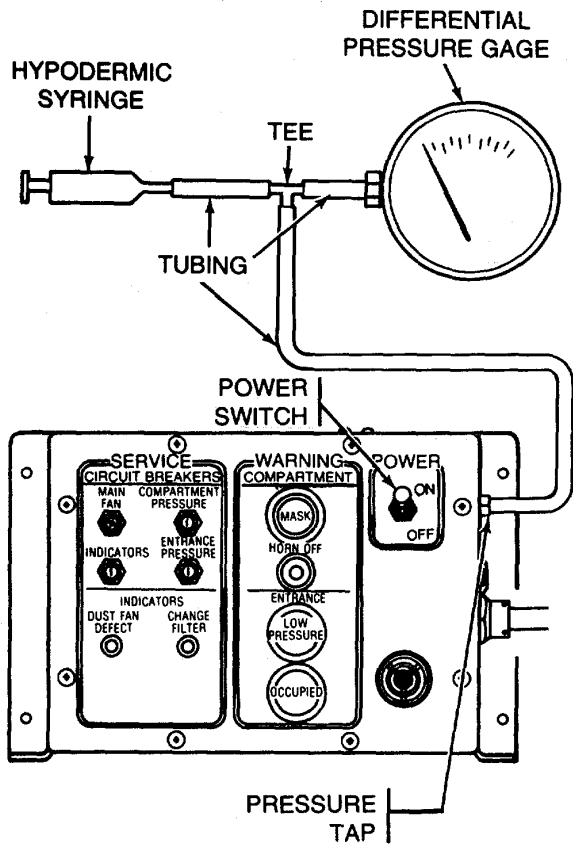




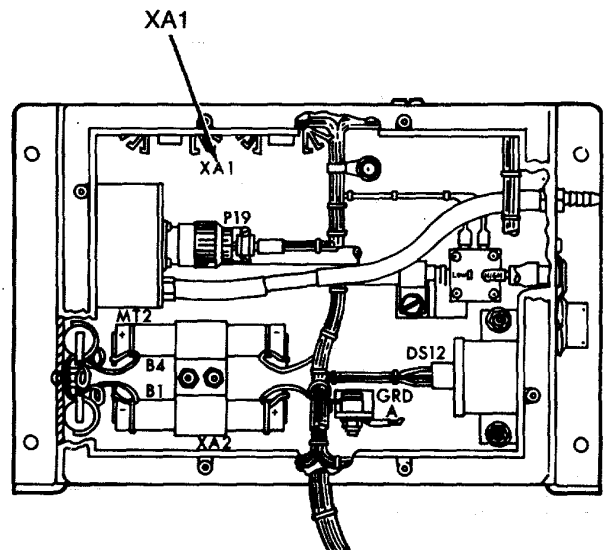
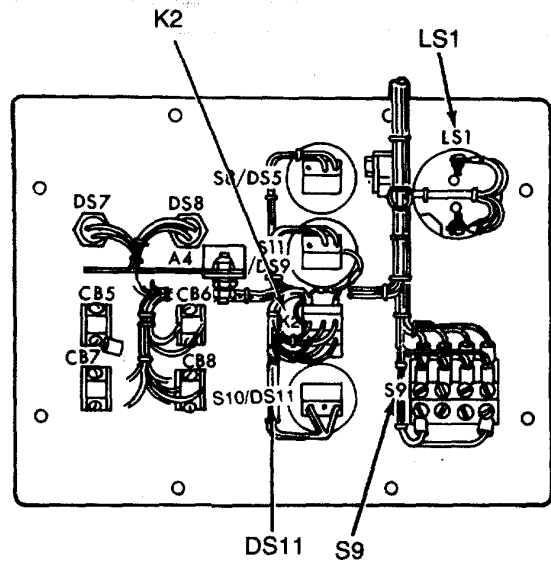
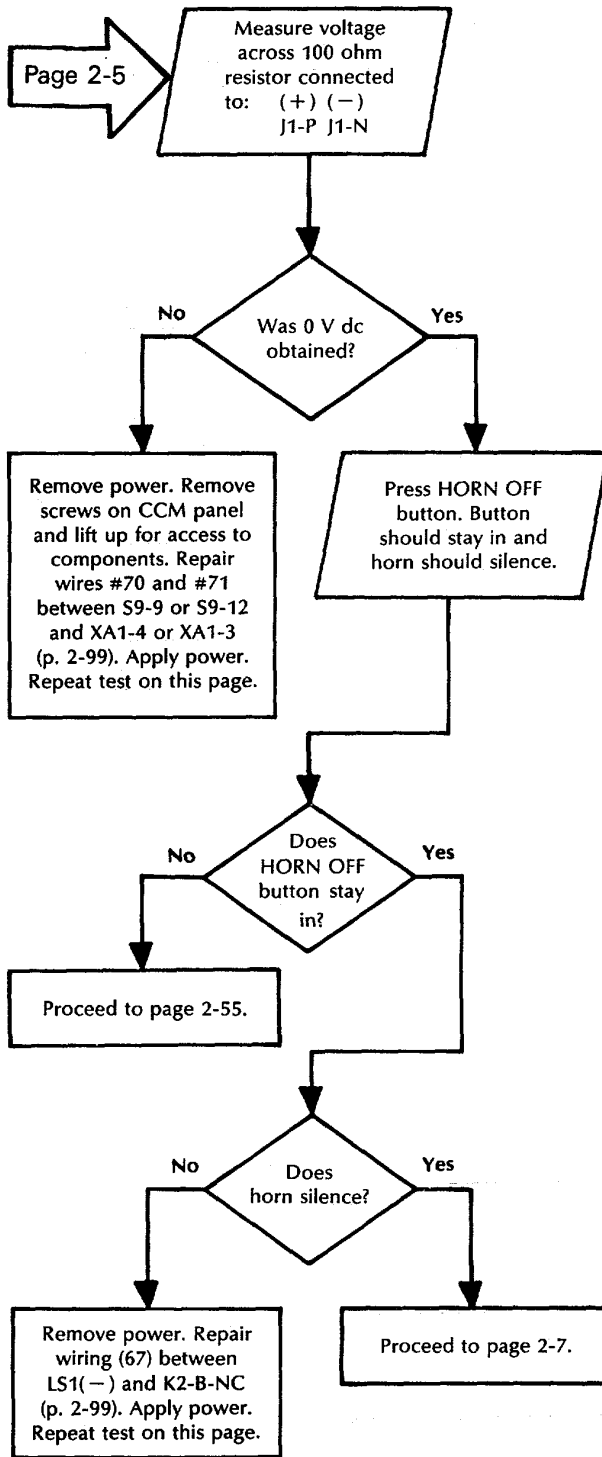
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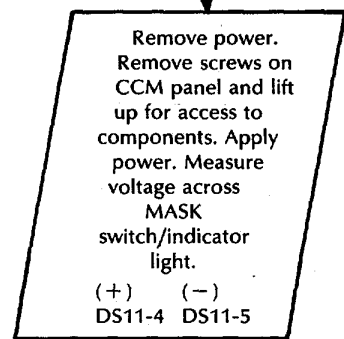
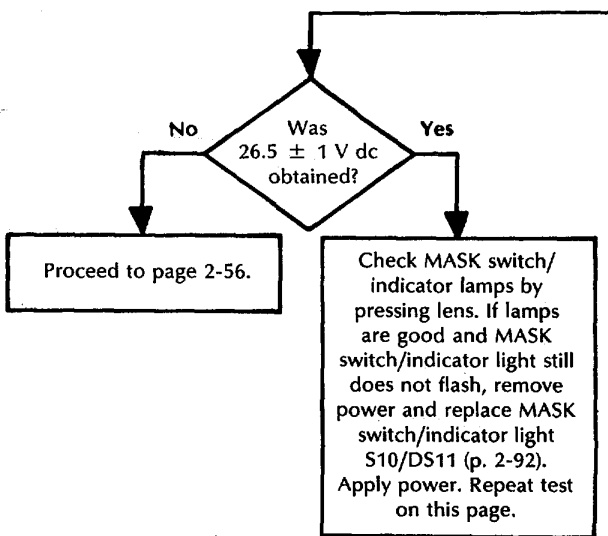
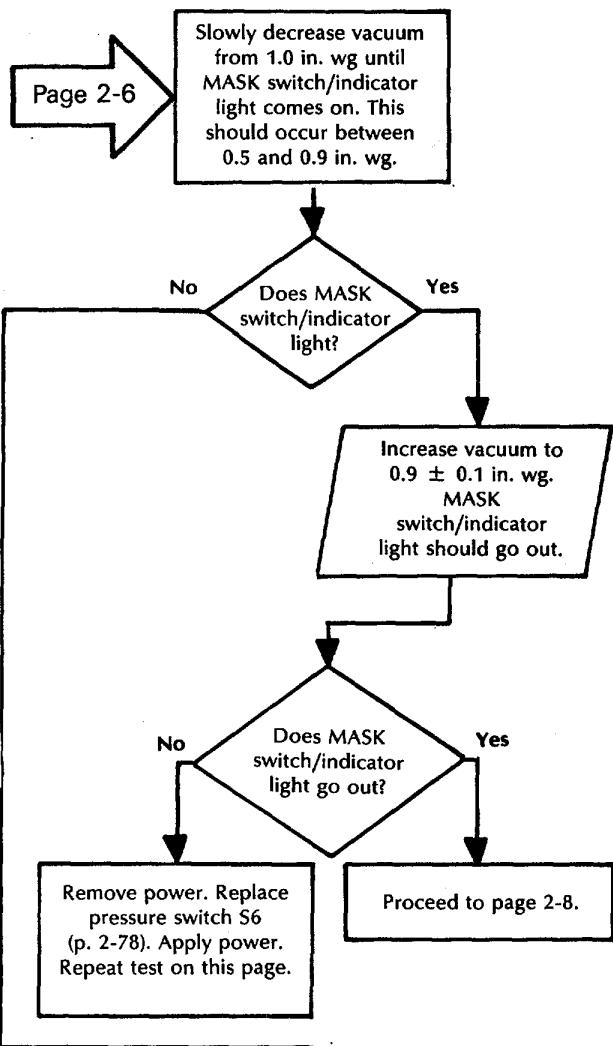
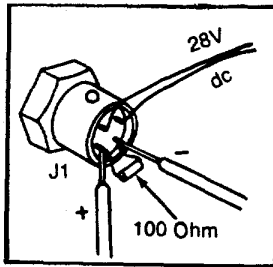
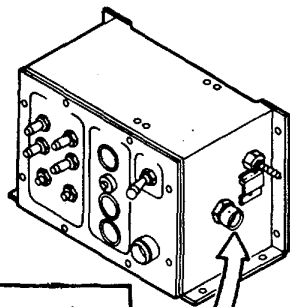
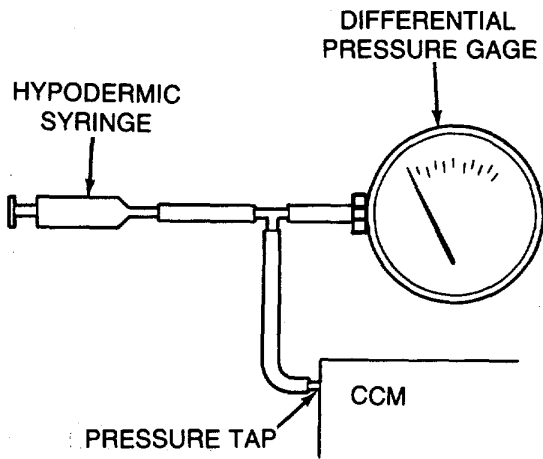
Connect low pressure side of a differential pressure gage (0-3 in. wg minimum) to a vacuum source and to CCM pressure tap. Adjust vacuum source to obtain 1.0 in. wg indicator on gage.

Set POWER switch to ON. Warning horn LS1 should sound. MASK switch/indicator light S10/DS11 should remain off.

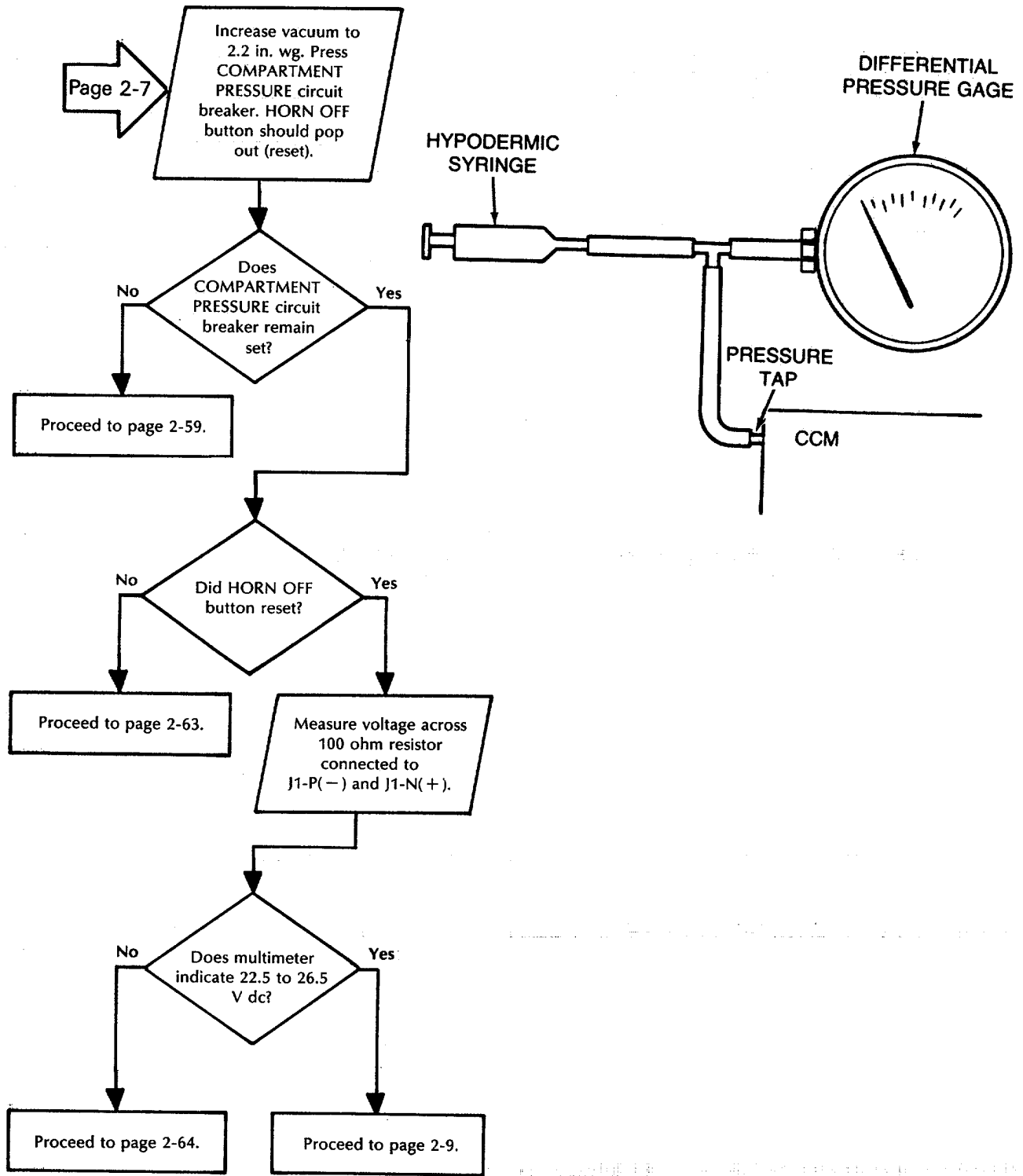


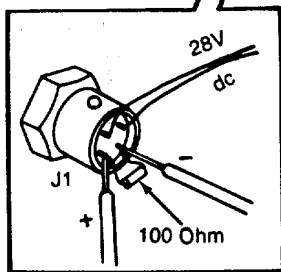
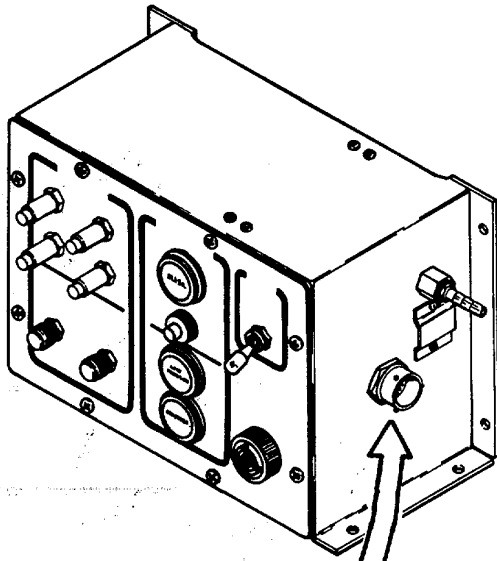
2-6. TROUBLESHOOTING PROCEDURES (CONT).



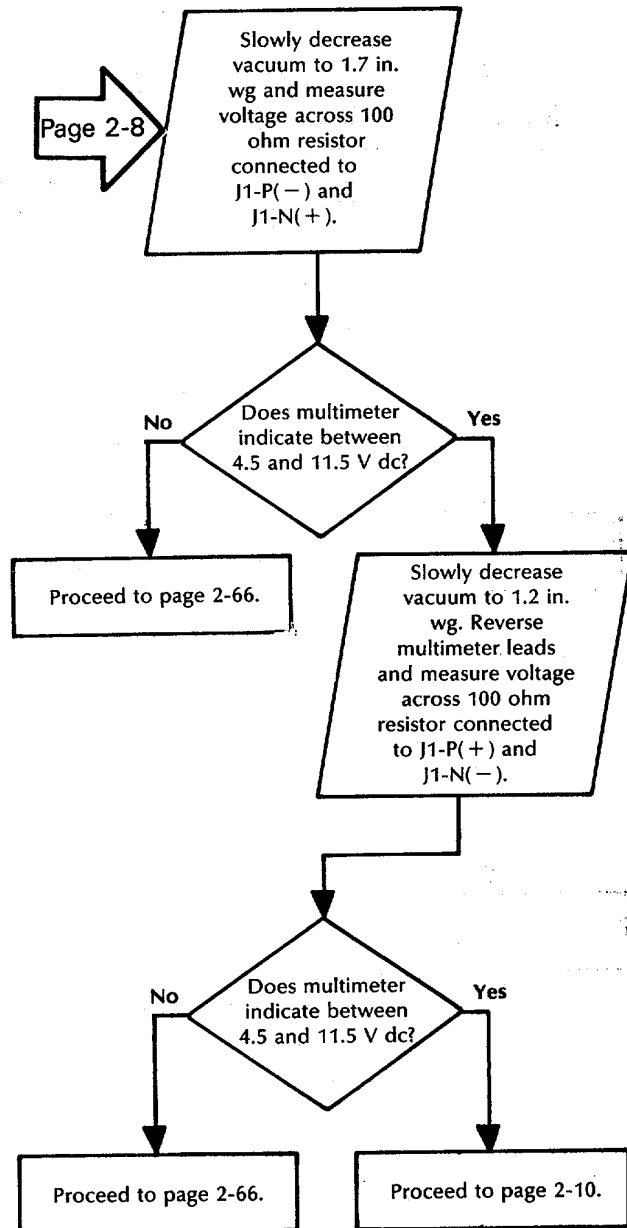


2-6. TROUBLESHOOTING PROCEDURES (CONT).

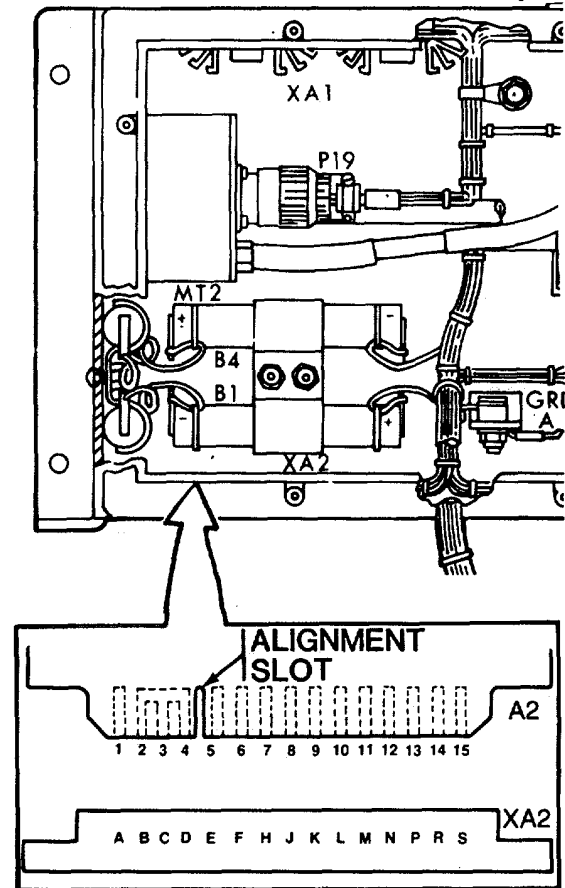
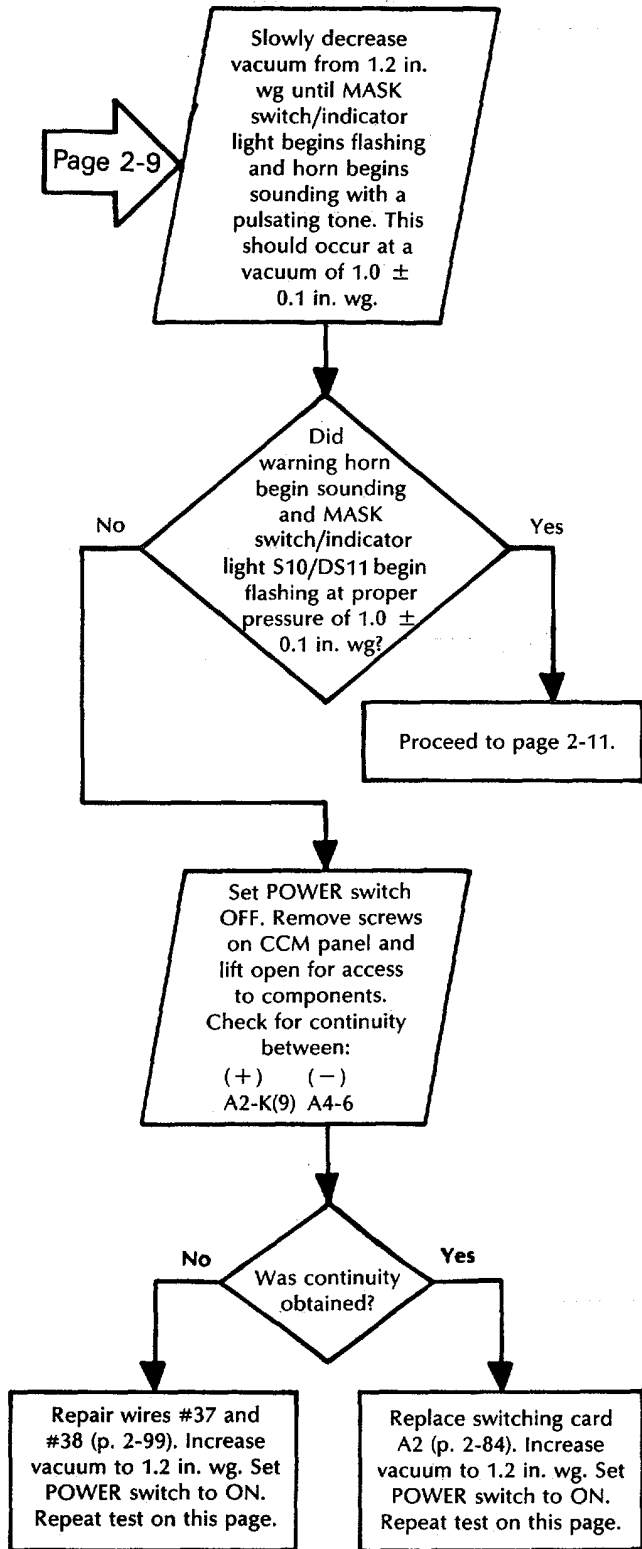


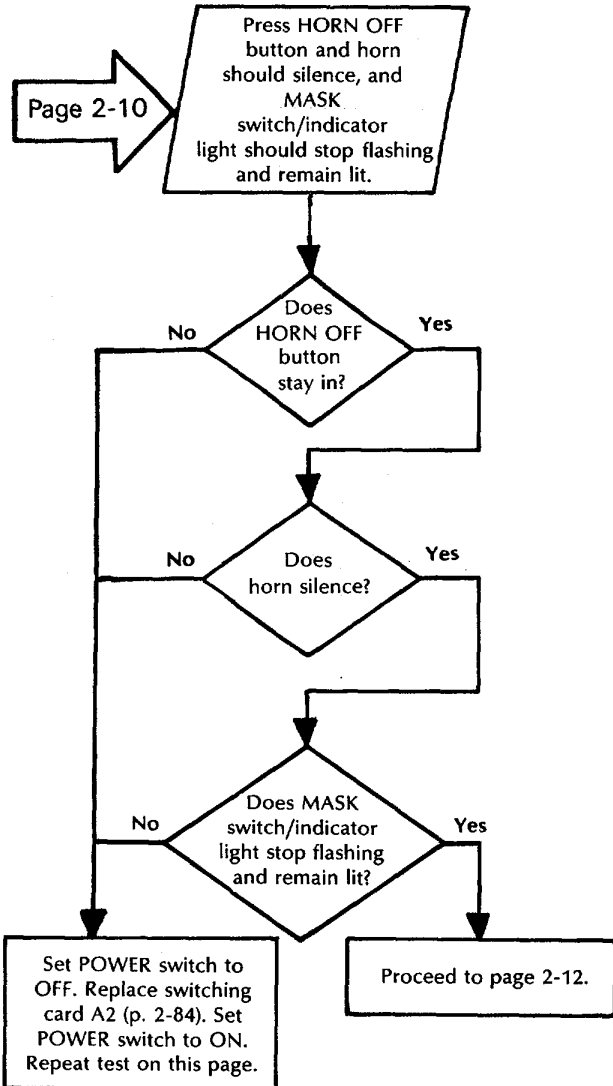
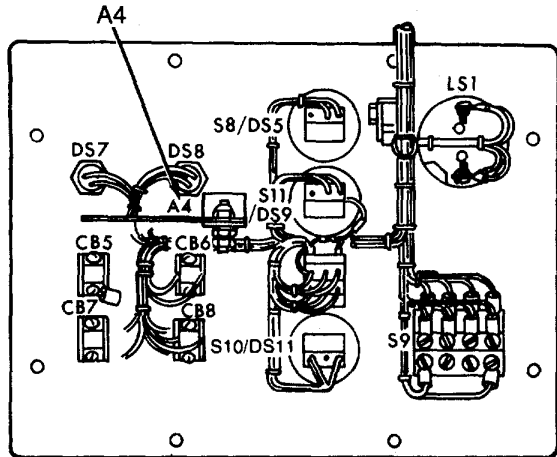


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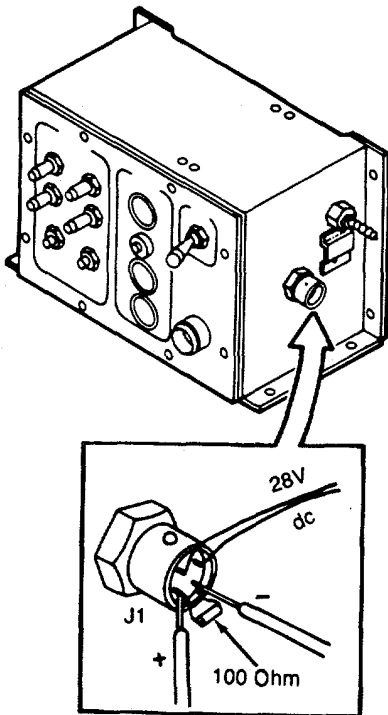
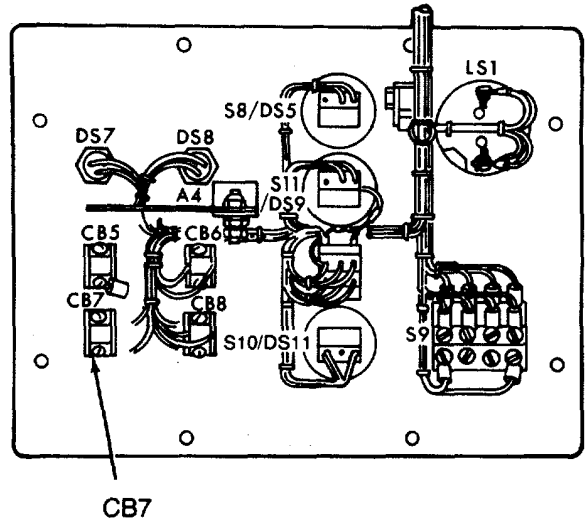
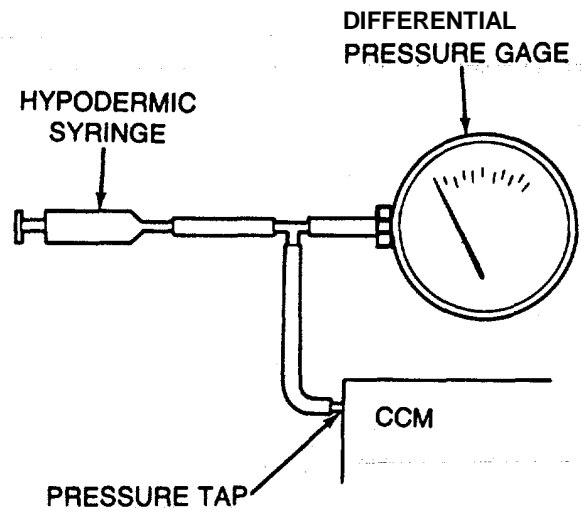
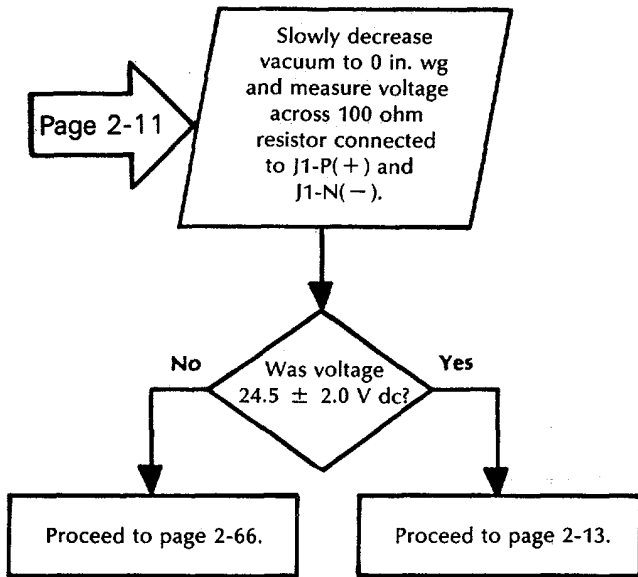


2-6. TROUBLESHOOTING PROCEDURES (CONT).



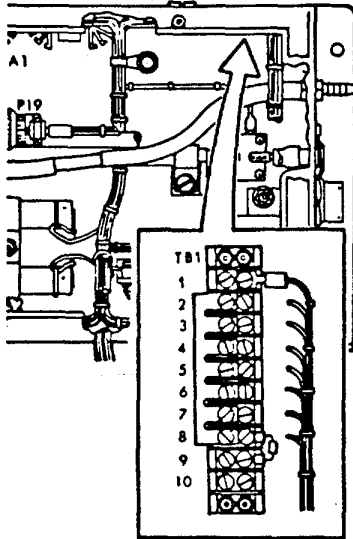


2-6. TROUBLESHOOTING PROCEDURES (CONT)



NOTE

Reapplying power on the following pages will probably cause the horn to sound. Press the HORN OFF button to silence horn.



Page 2-12

Connect multimeter between:
(+) (-)
J1-D J1-A
Push in MAIN FAN circuit breaker. Voltmeter should indicate 28 ± 1 V dc when circuit breaker is pushed in.

No Yes
Does circuit breaker remain set?

No Yes
Was 28 V dc obtained?

Remove power. Set POWER switch to OFF. Remove screws on CCM panel and lift open for access. Disconnect wire 4 at CB7-1. Measure continuity between:
(+) (-)
Wire 4 at TB1-2 CB7-1

No Yes
Was continuity obtained?

Move (+) lead of multimeter from J1-D to J1-E. Push in INDICATORS circuit breaker. When circuit breaker is pushed in, voltmeter should read 28 ± 1 V dc and LOW PRESSURE switch/indicator light shall come on.

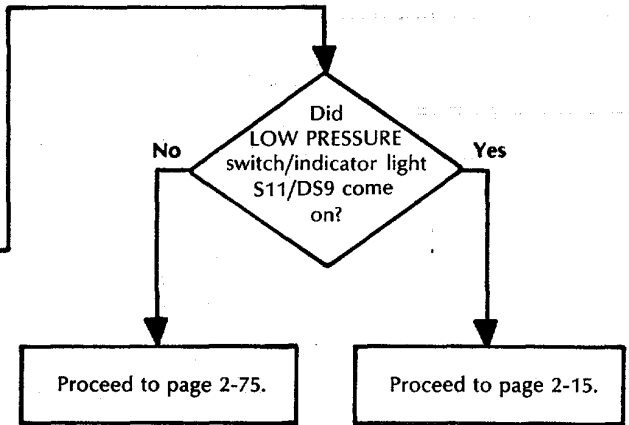
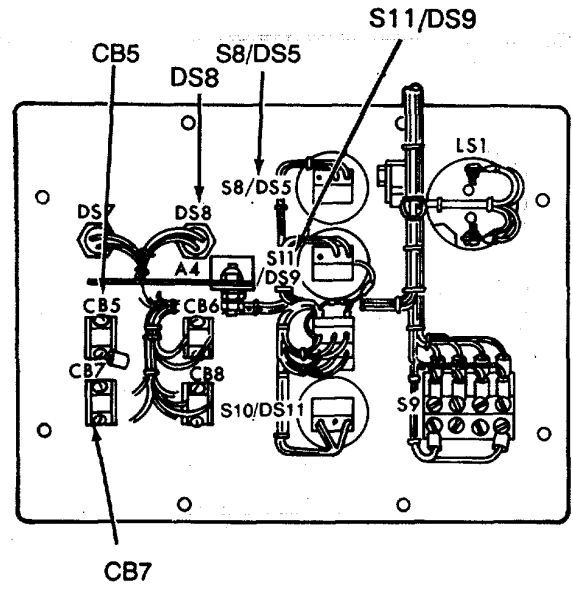
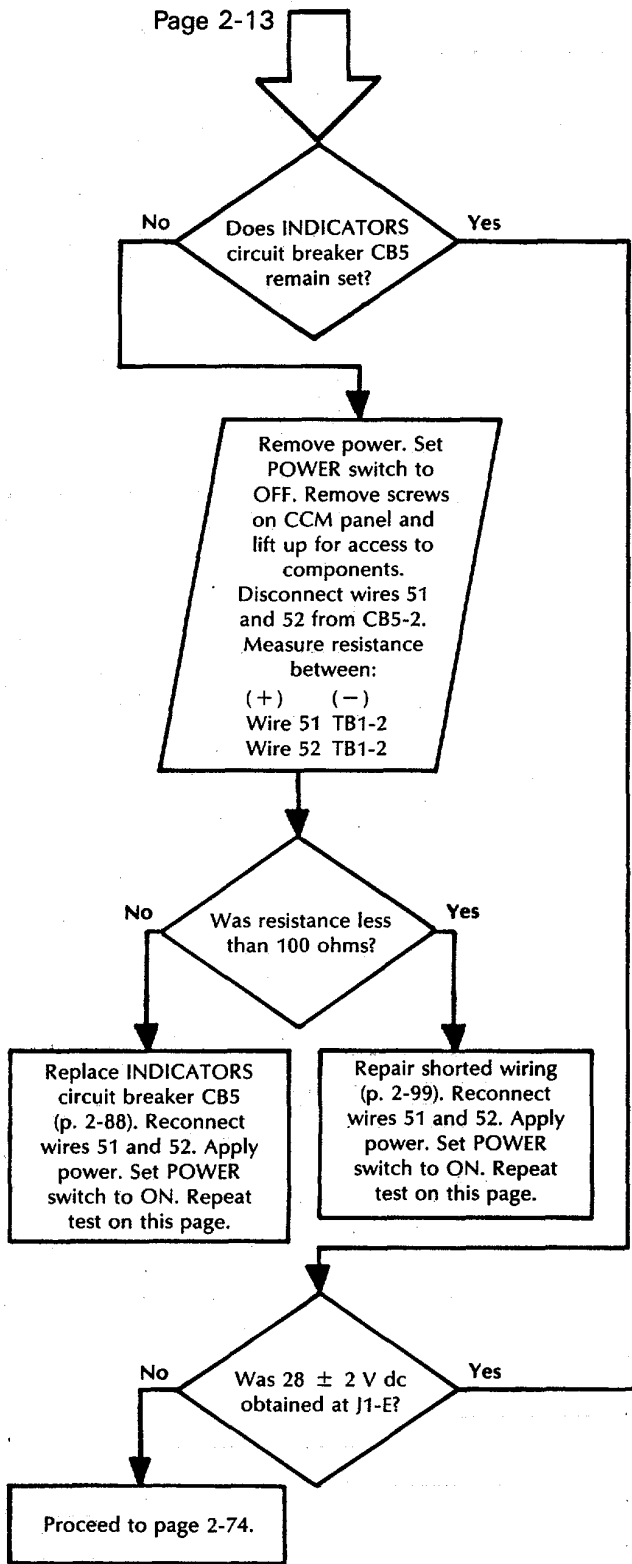
Replace MAIN FAN circuit breaker (p. 2-91). Apply power. Set POWER switch to ON. Repeat test on this page.

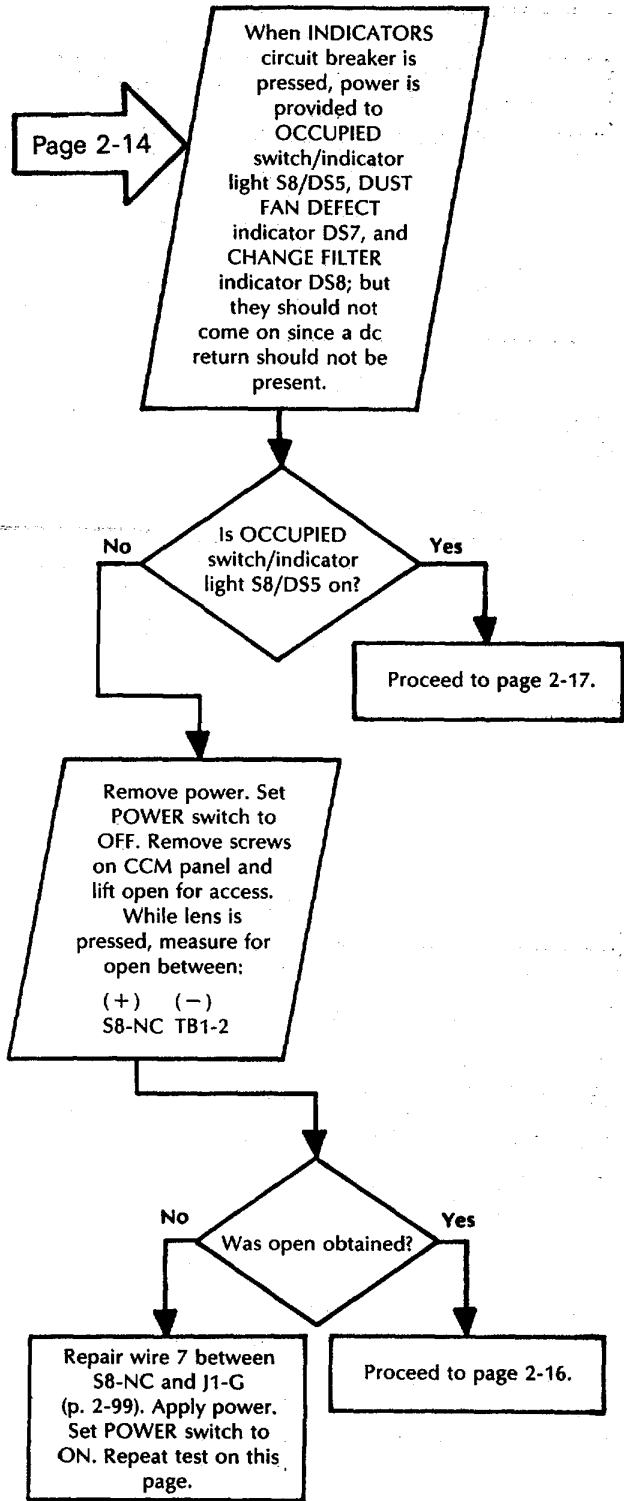
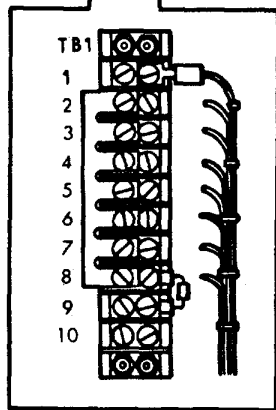
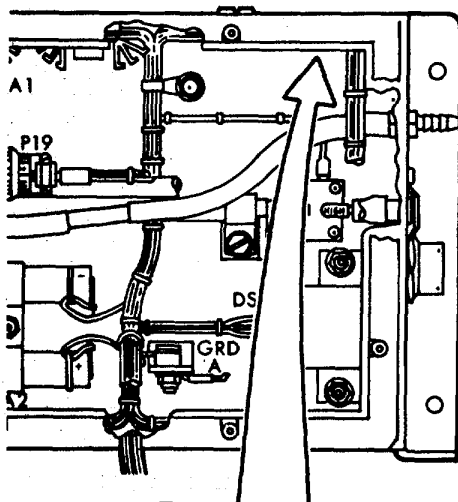
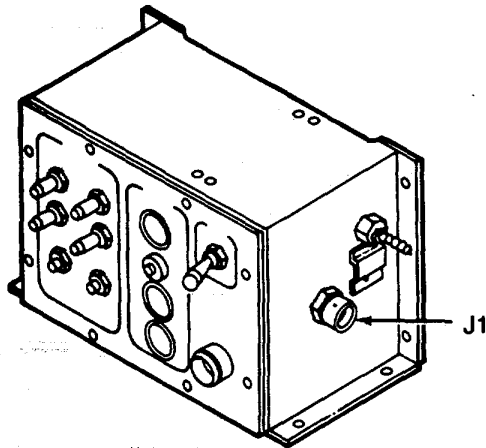
Repair wire 4 (p. 2-99). Wire is shorted to ground or chassis. Apply power. Set POWER switch to ON. Repeat test on this page.

Proceed to page 2-73.

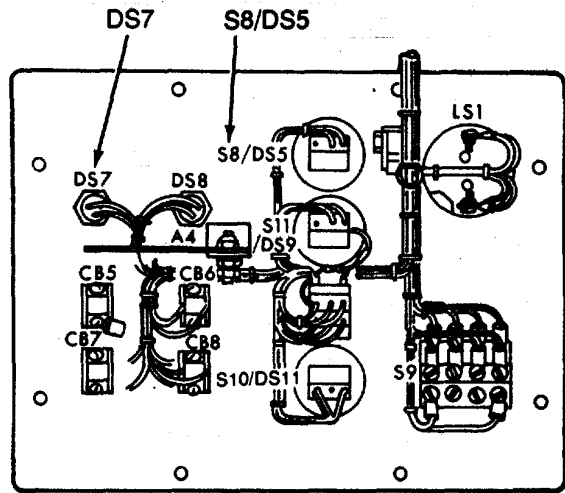
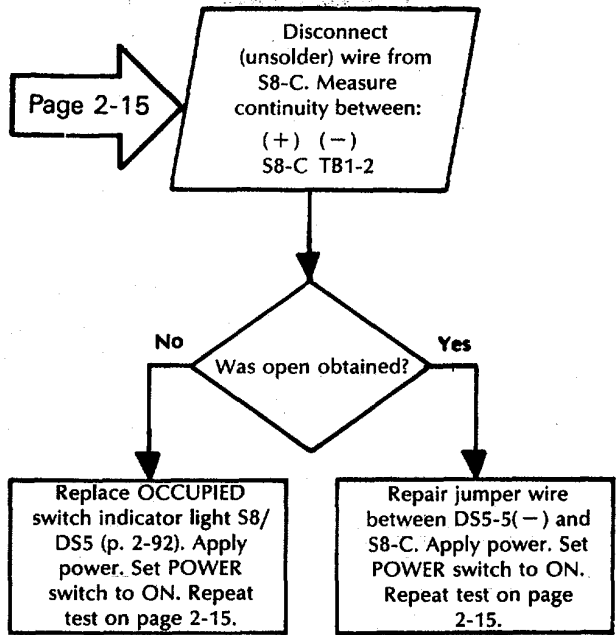
Proceed to page 2-14.

2-6. TROUBLESHOOTING PROCEDURES (CONT.)

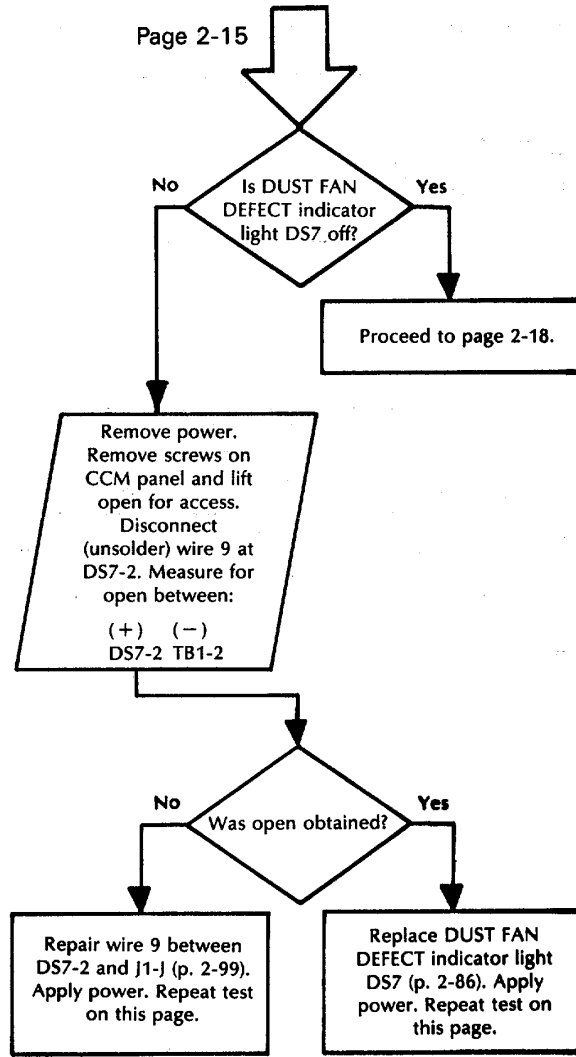
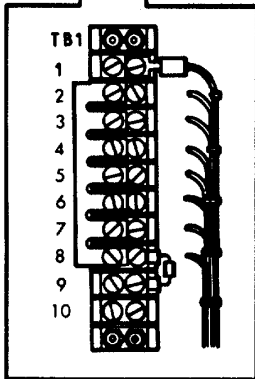
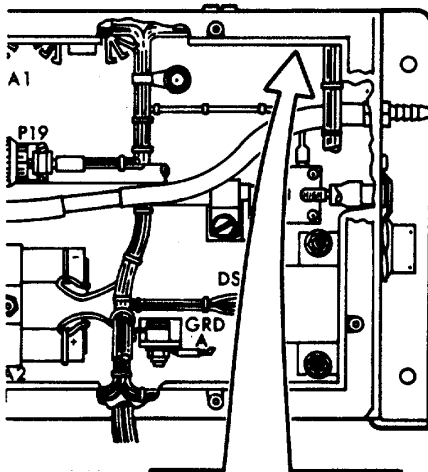
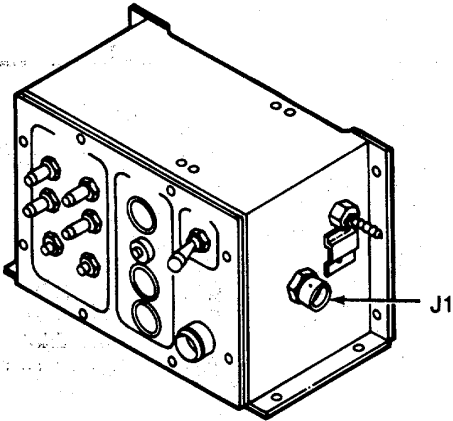




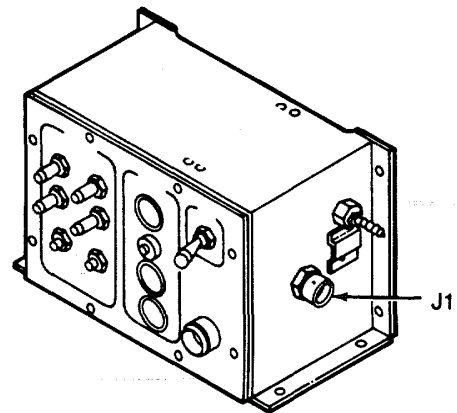
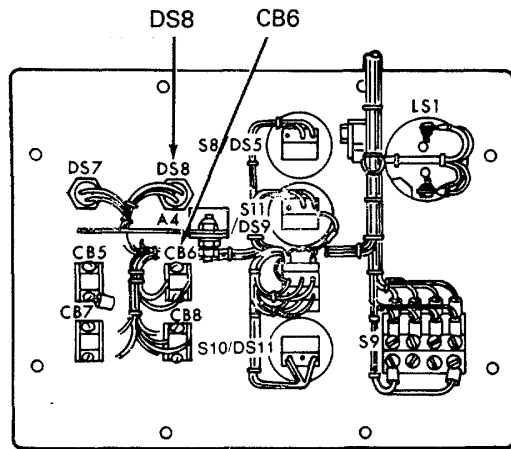
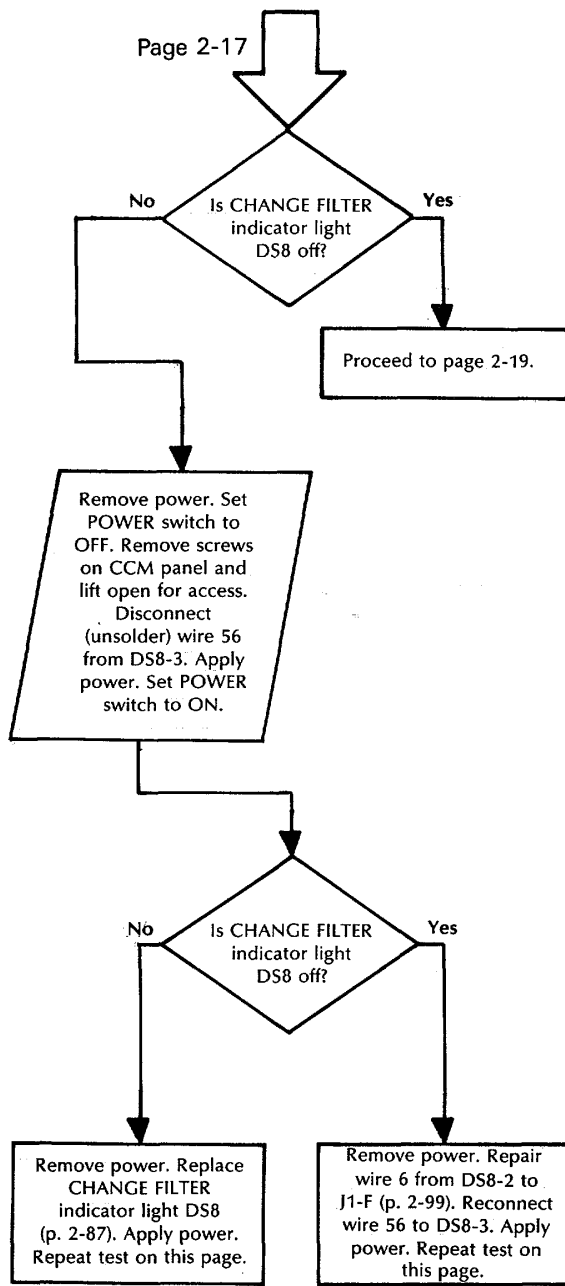
2-6. TROUBLESHOOTING PROCEDURES (CONT).

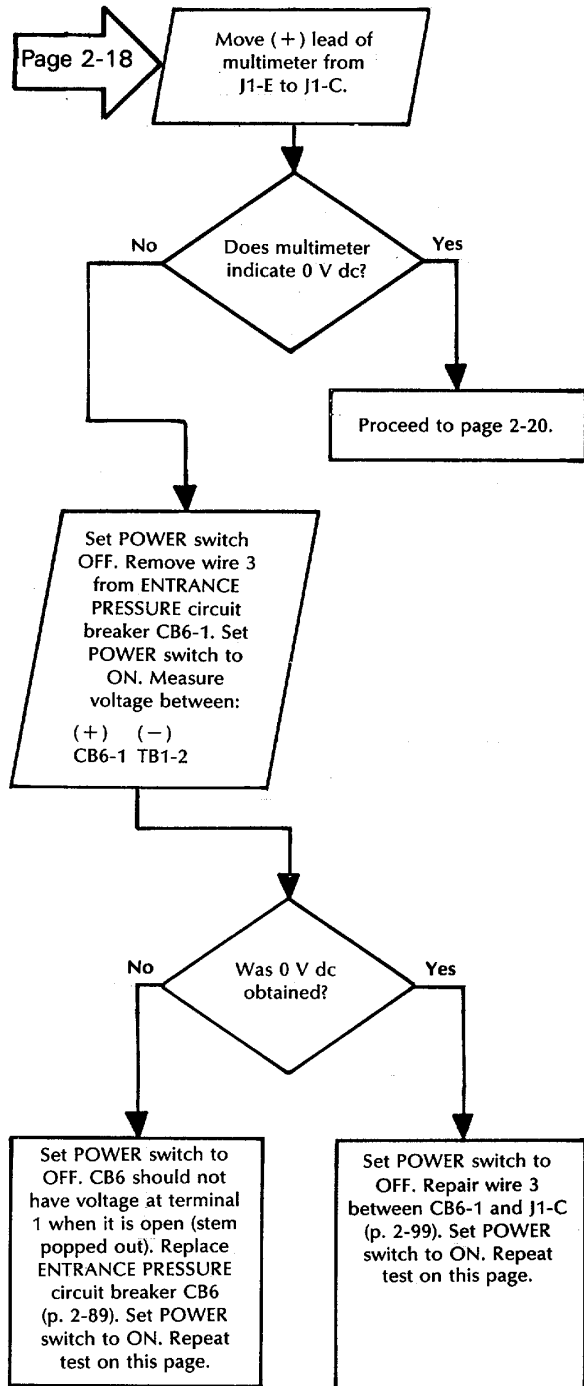
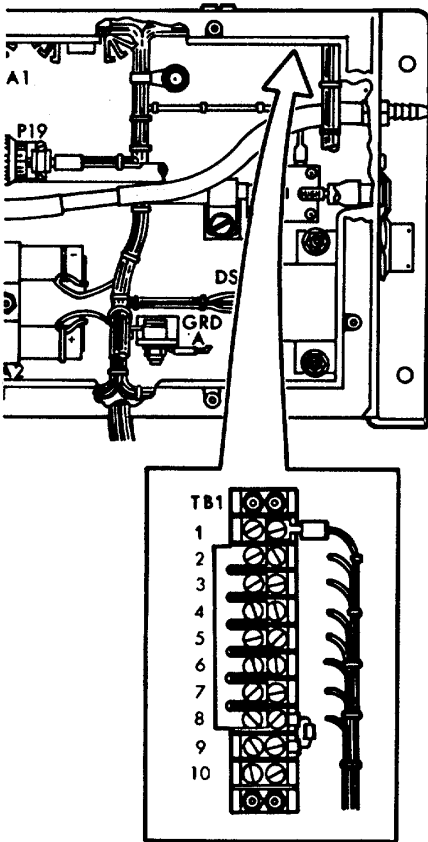


Page 2-15

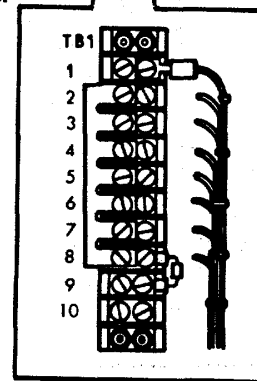
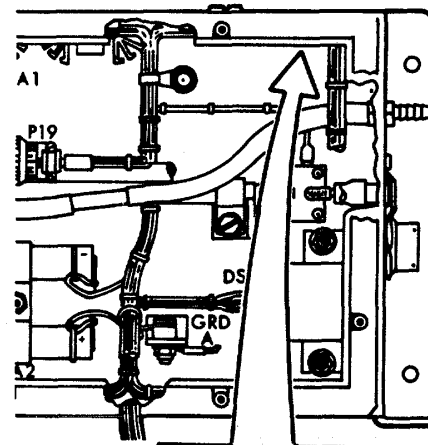
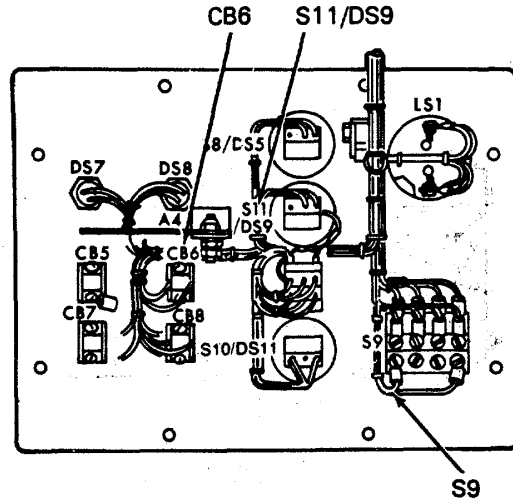
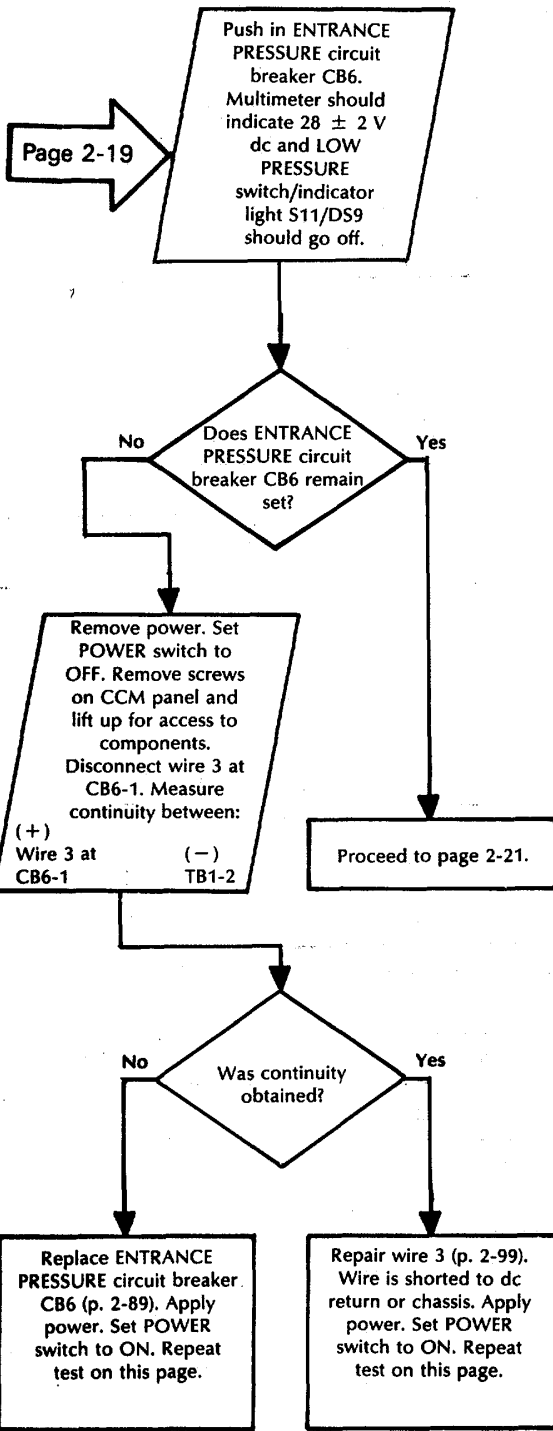


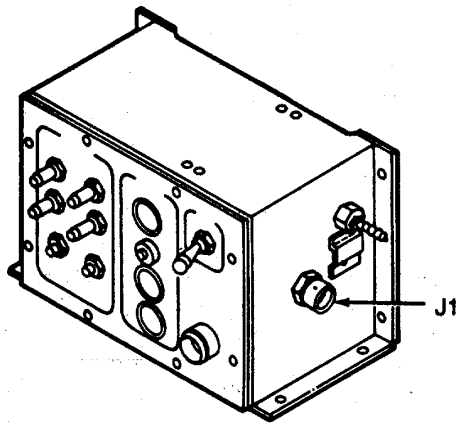
2-6. TROUBLESHOOTING PROCEDURES (CONT).





2-6. TROUBLESHOOTING PROCEDURES (CONT).





Page 2-20

No Yes
Does multimeter indicate 28 ± 2 V dc?

Set POWER switch to OFF. Remove screws on CCM panel and lift up for access to components. Set POWER switch to ON. Measure voltage between:

(+) (-)
CB6-1 TB1-2

Proceed to page 2-22.

No Yes
Was 28 V dc obtained?

Measure voltage between:
(+) (-)
CB6-2 TB1-2

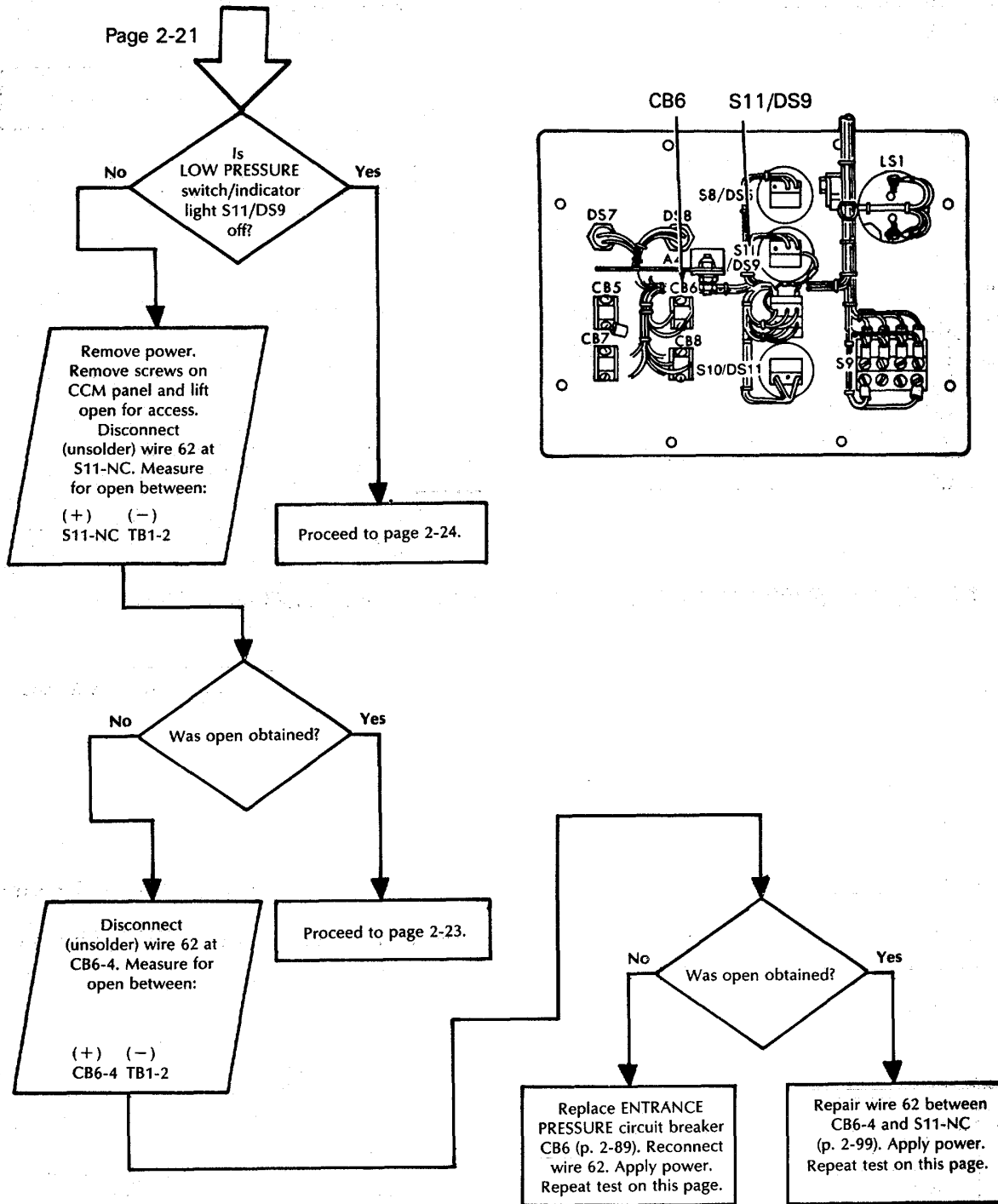
Set POWER switch to OFF. Repair wire 3 between CB6-1 and J1-C (p. 2-99). Set POWER switch to ON. Repeat test on page 2-19.

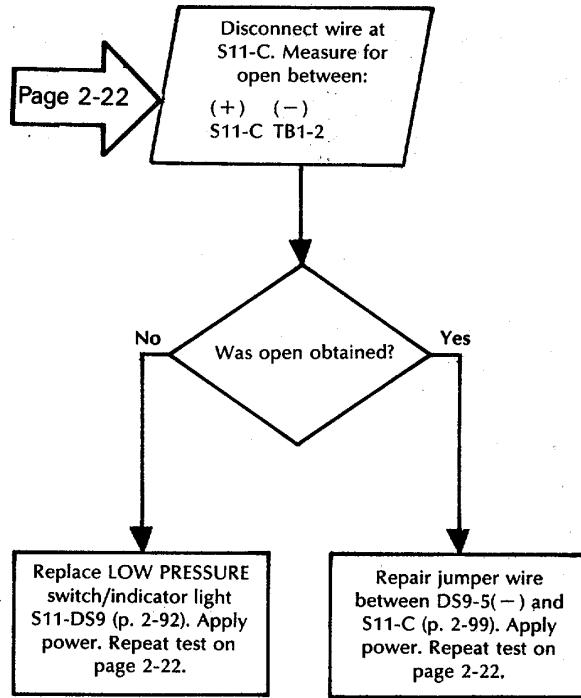
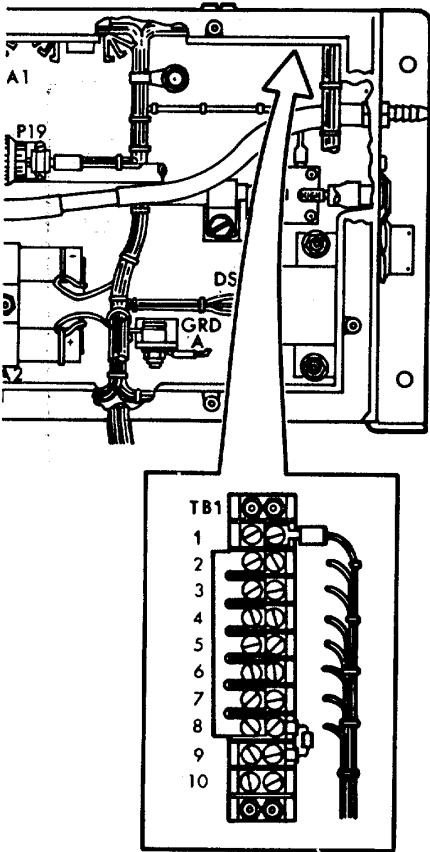
No Yes
Was 28 V dc obtained?

Remove power. Repair wiring between S9-3 and CB6-2 (p. 2-99). Apply power. Repeat test on this page.

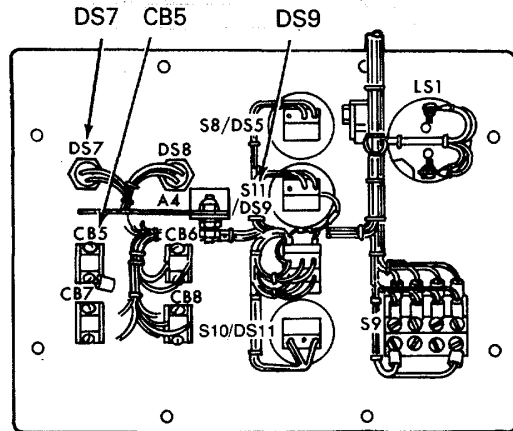
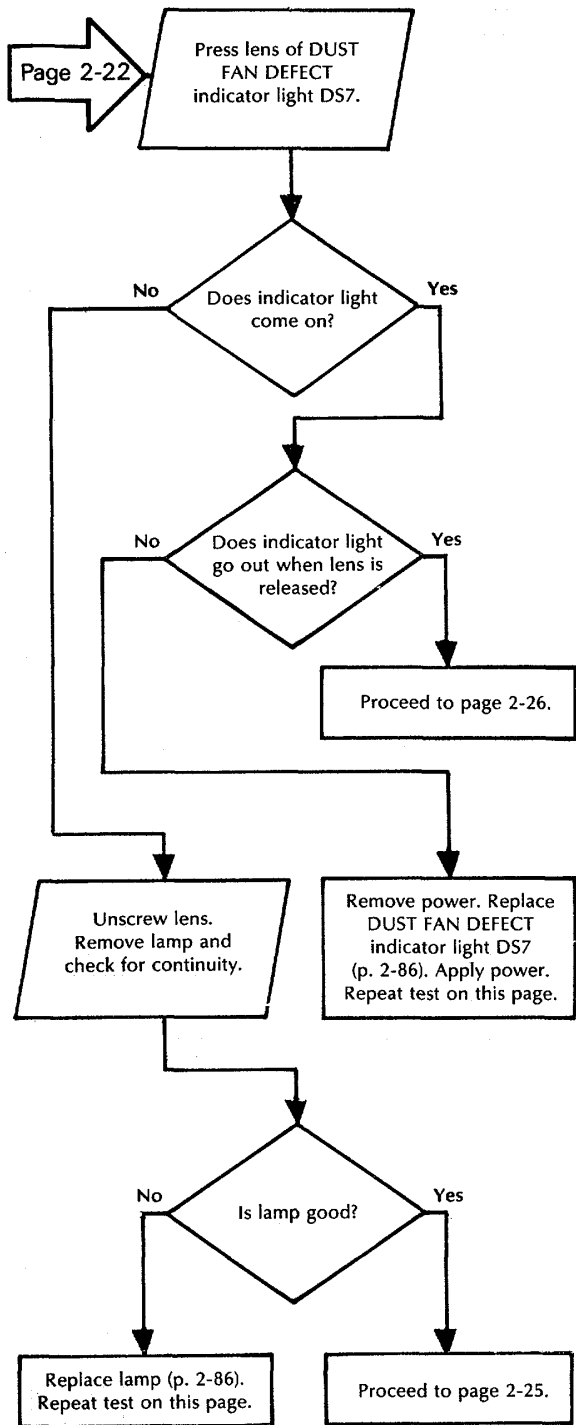
Remove power. Replace ENTRANCE PRESSURE circuit breaker CB6 (p. 2-89). Apply power. Repeat test on page 2-20.

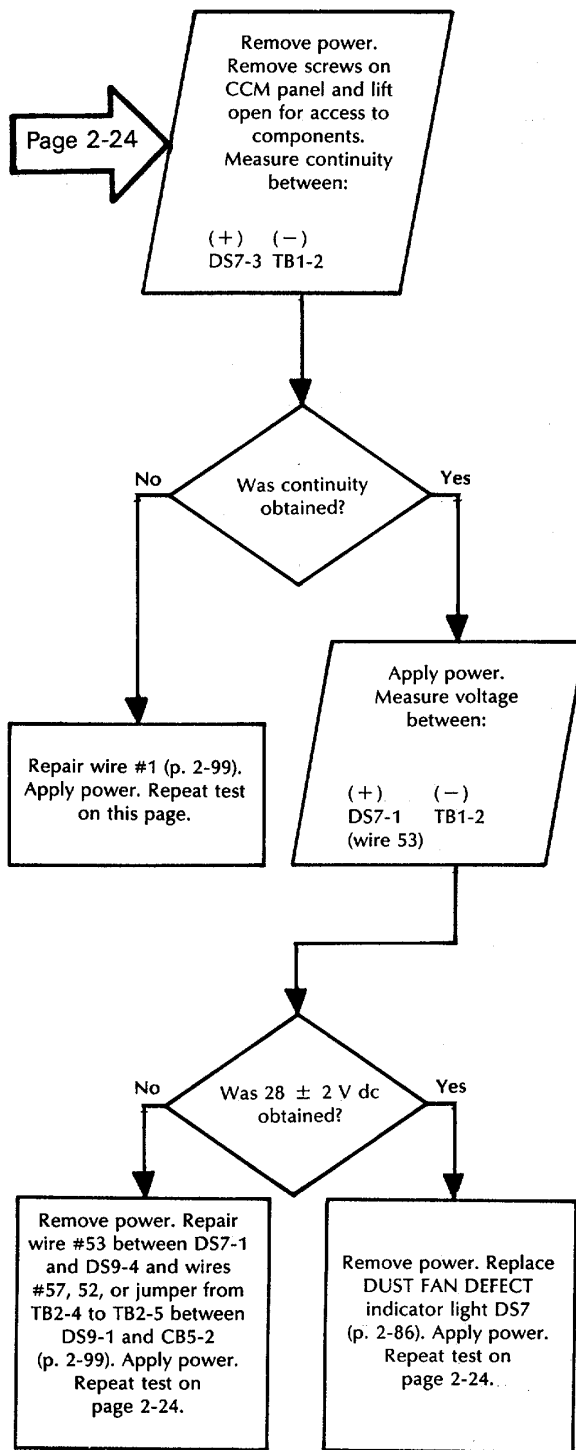
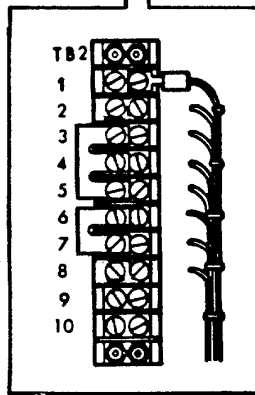
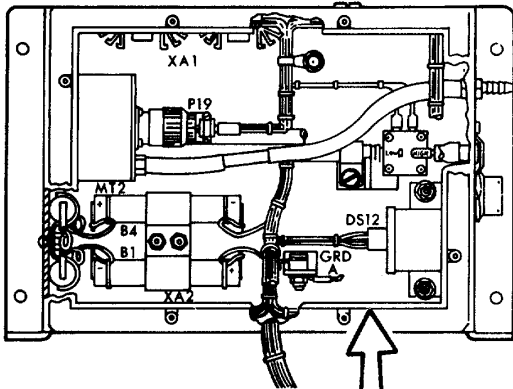
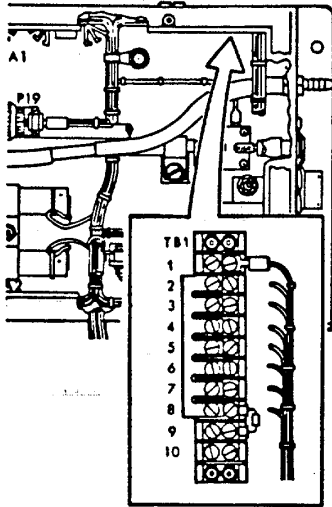
2-6. TROUBLESHOOTING PROCEDURES (CONT).



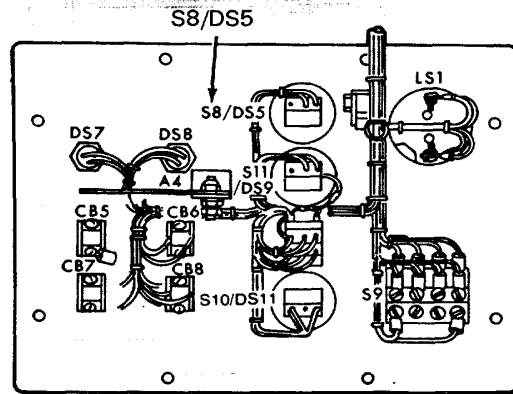
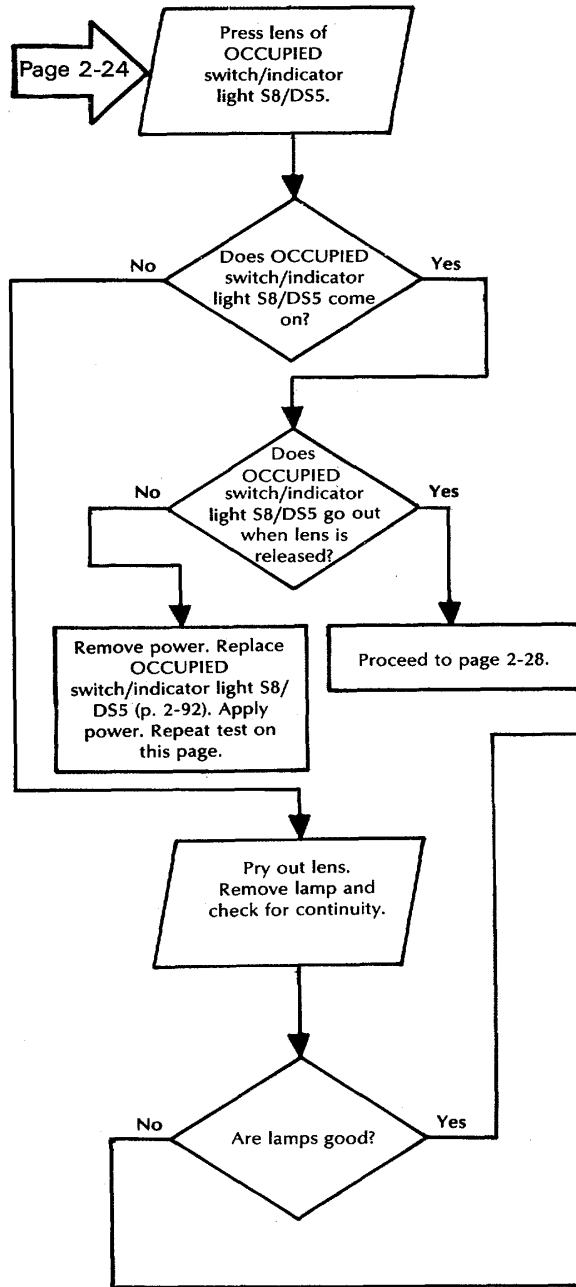


2-6. TROUBLESHOOTING PROCEDURES (CONT).

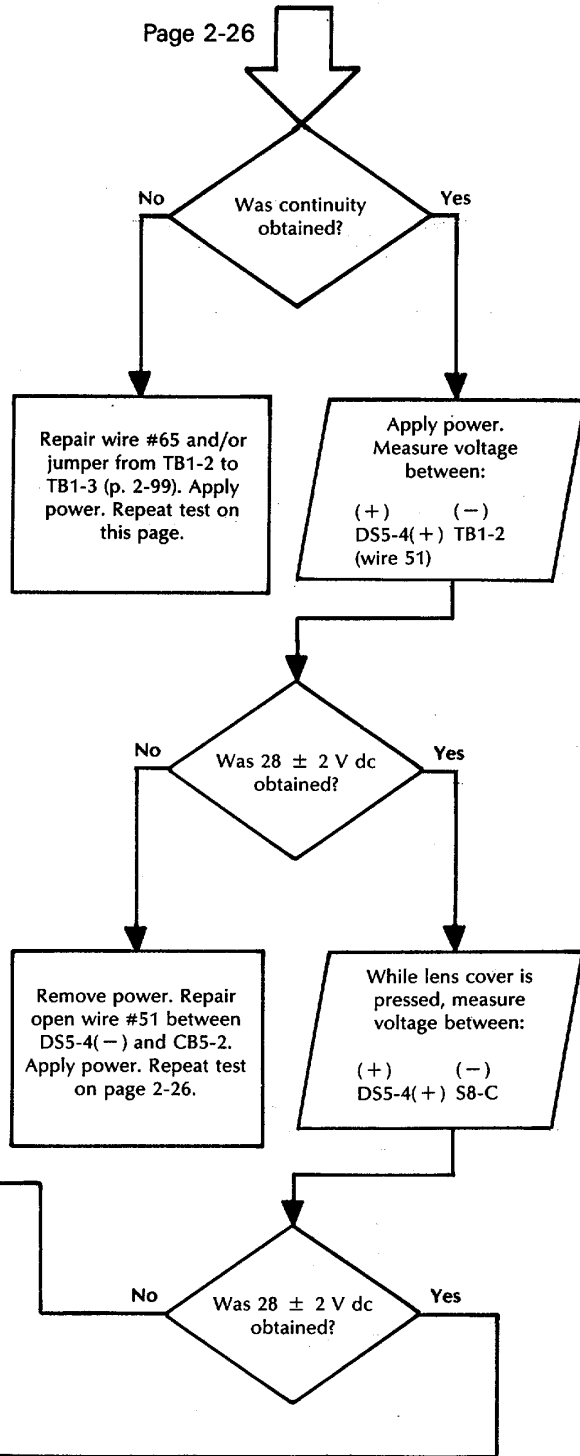
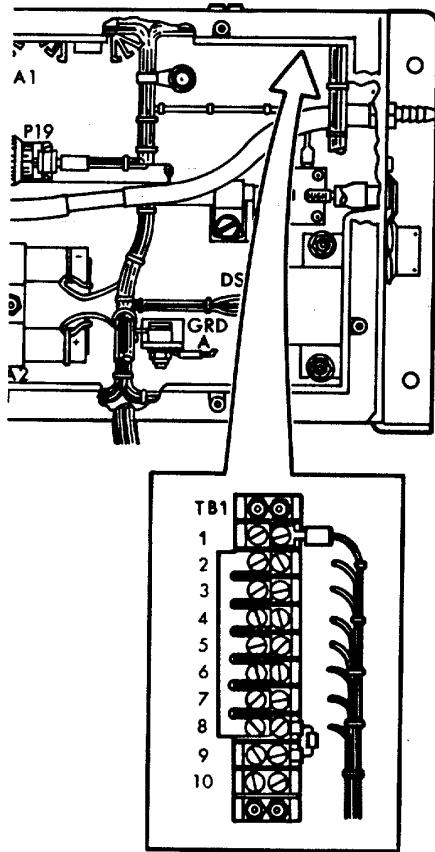




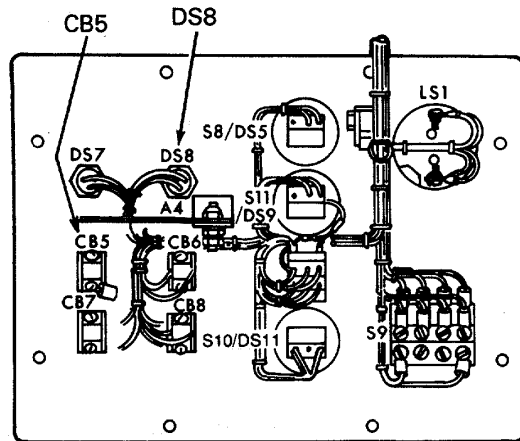
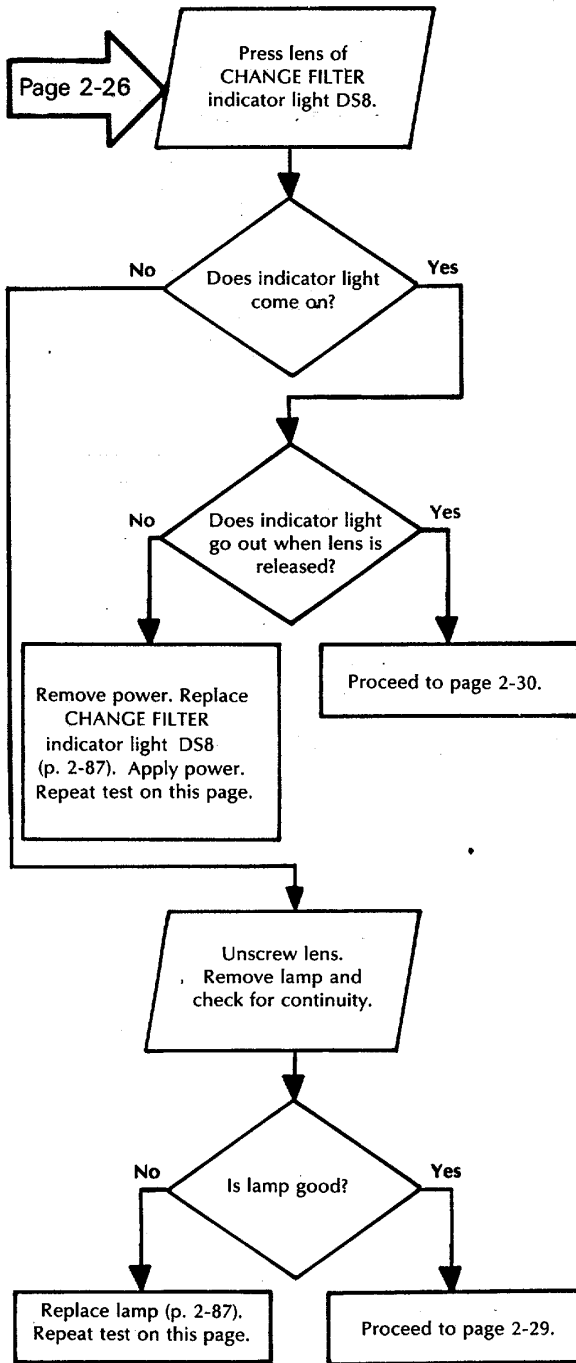
2-6. TROUBLESHOOTING PROCEDURES (CONT).

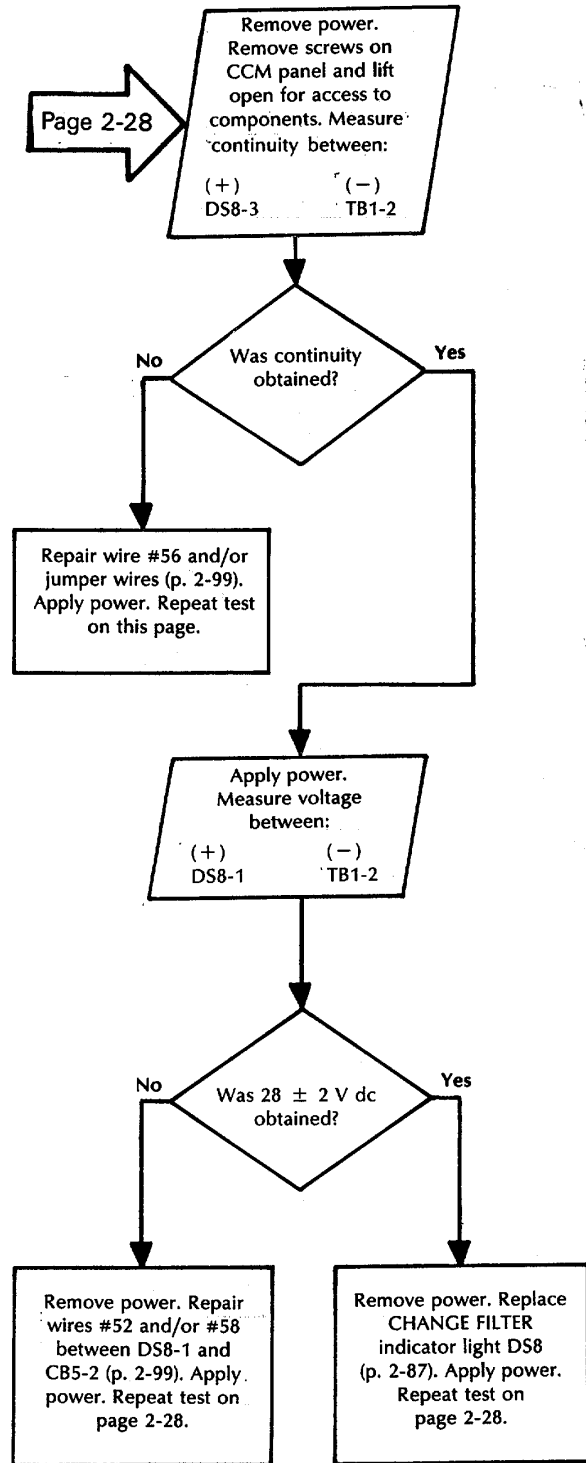
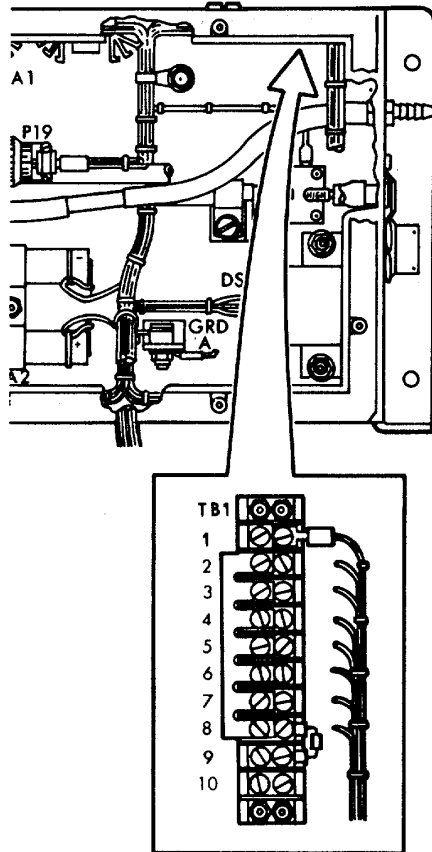


Page 2-26

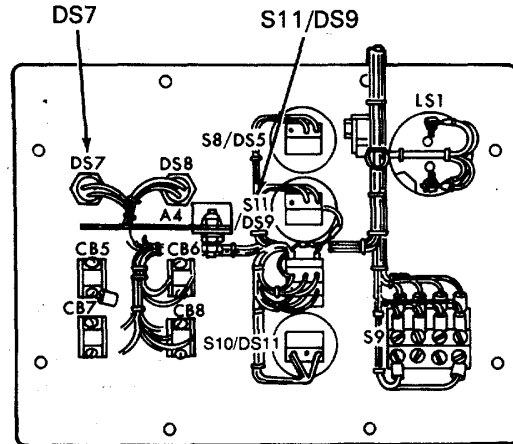
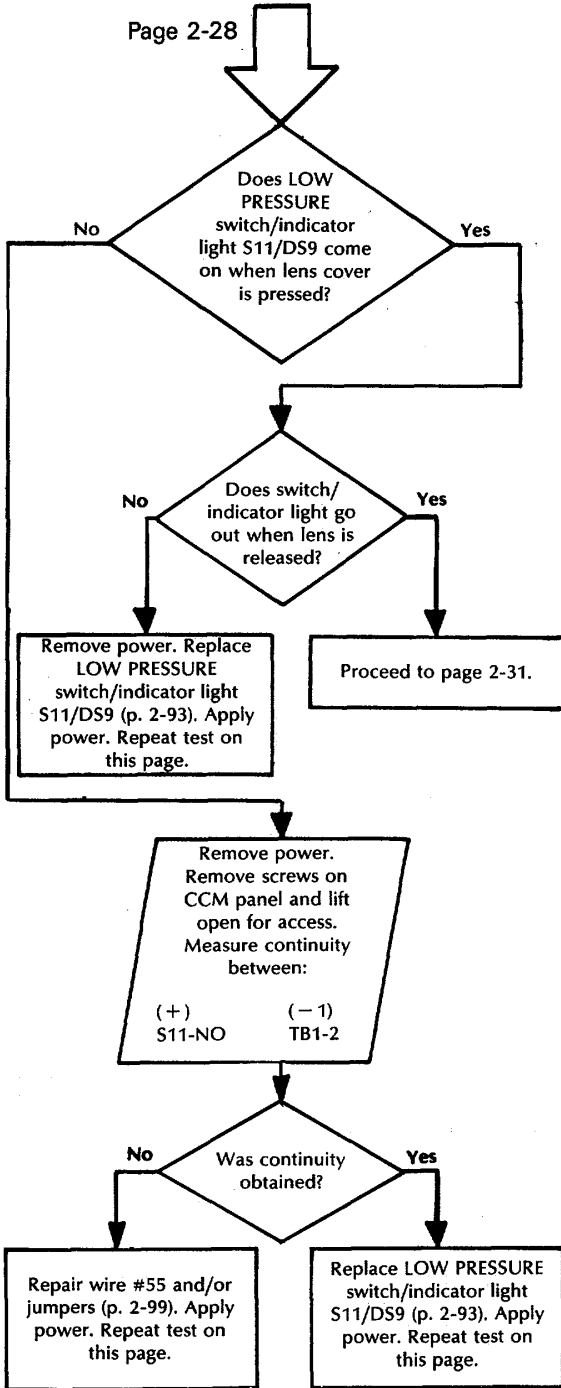


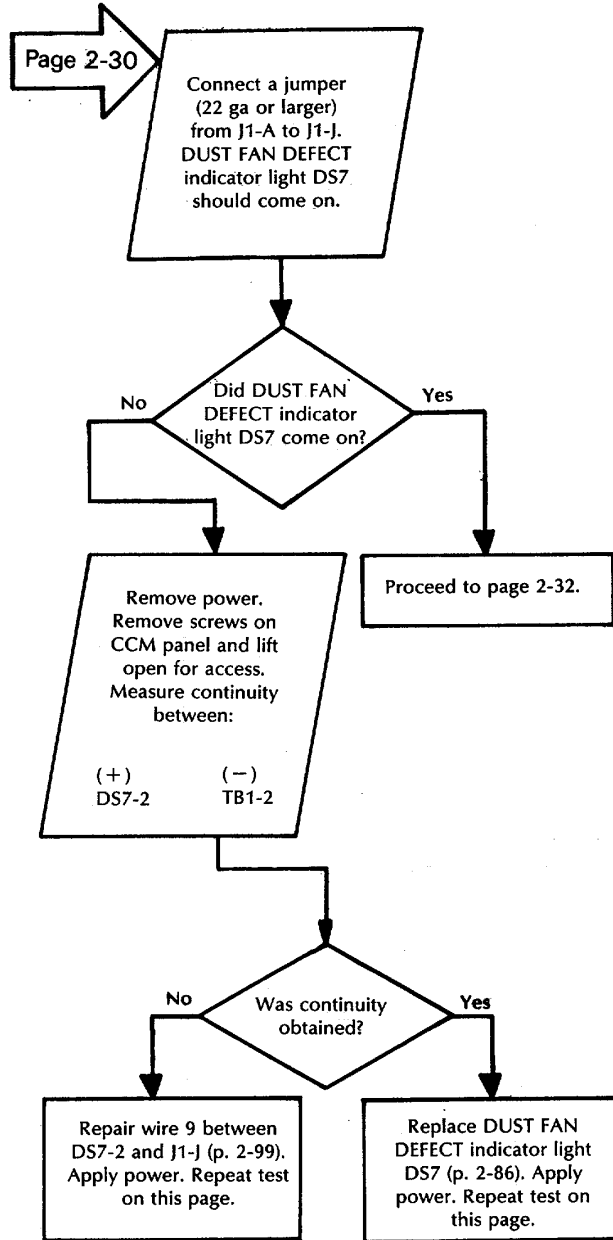
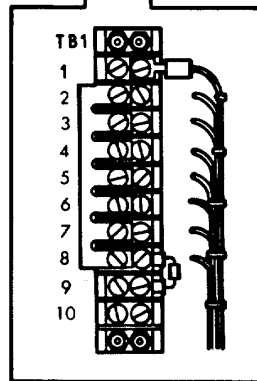
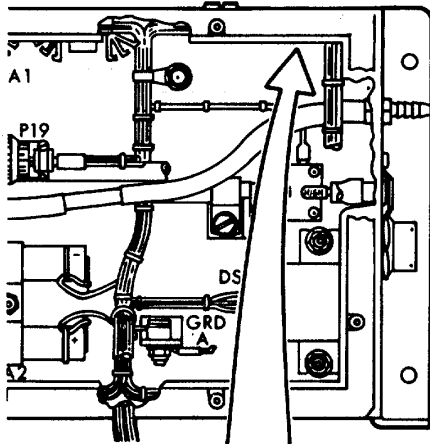
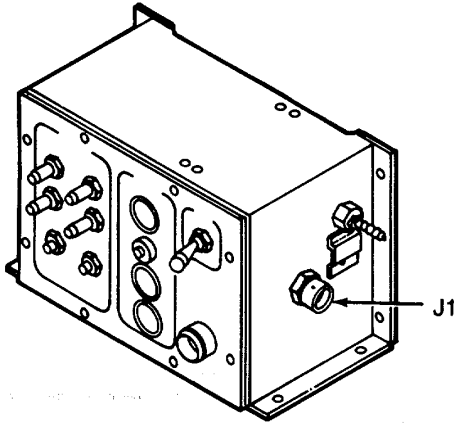
2-6. TROUBLESHOOTING PROCEDURES (CONT).





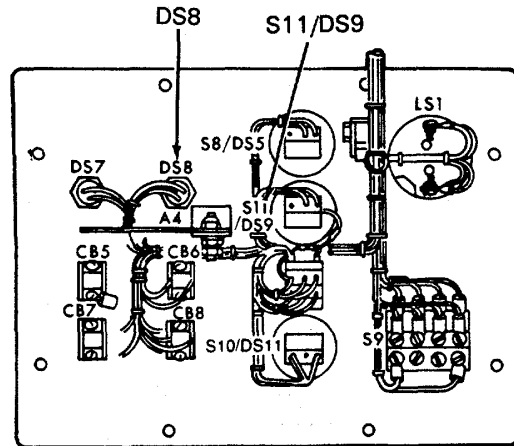
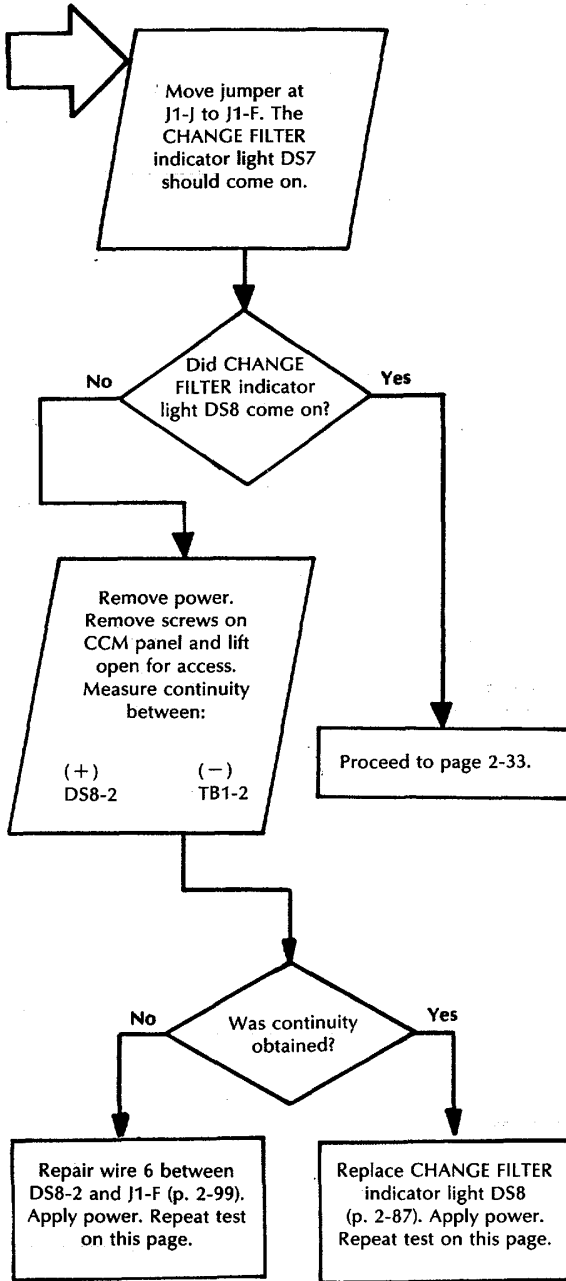
2-6. TROUBLESHOOTING PROCEDURES (CONT).

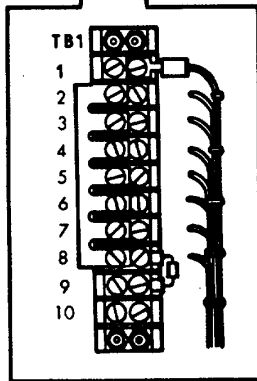
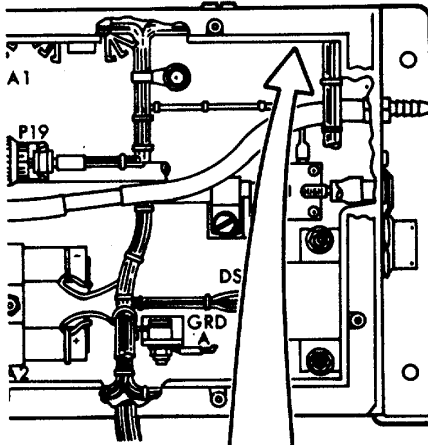
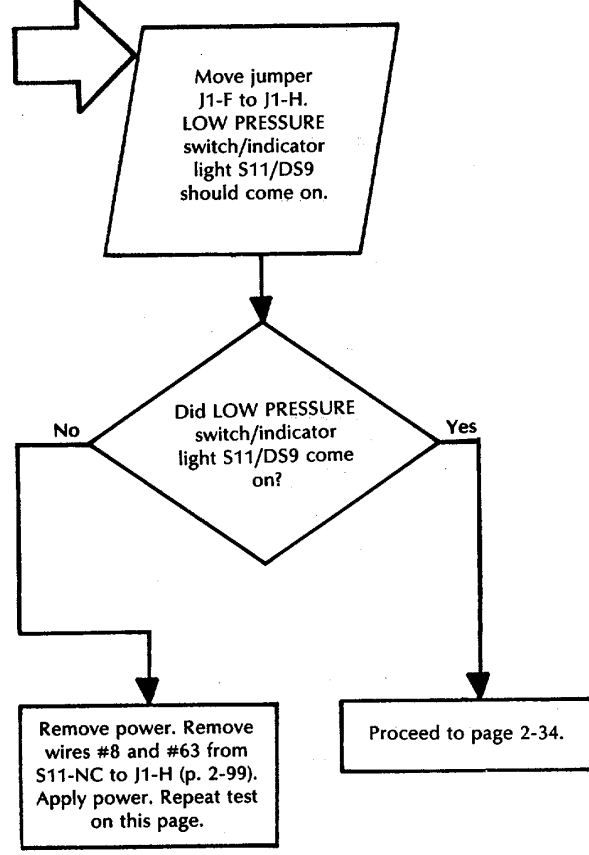
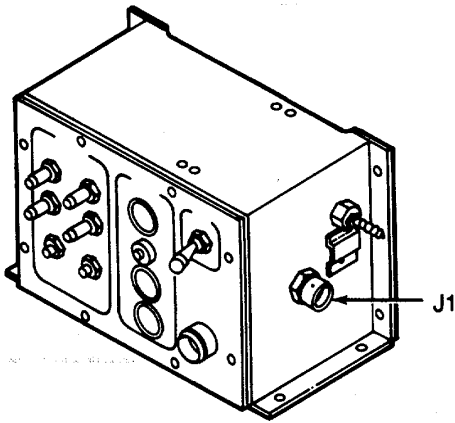




2-6. TROUBLESHOOTING PROCEDURES (CONT).

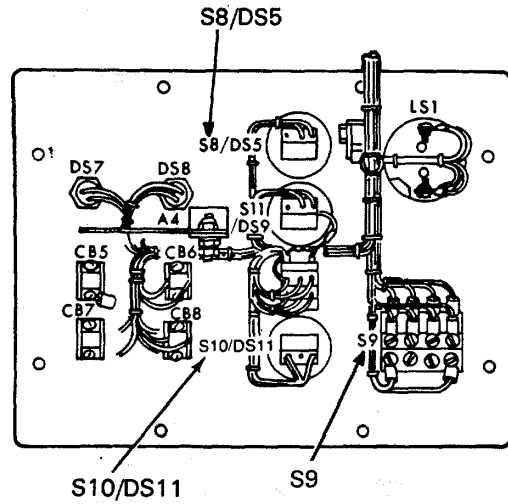
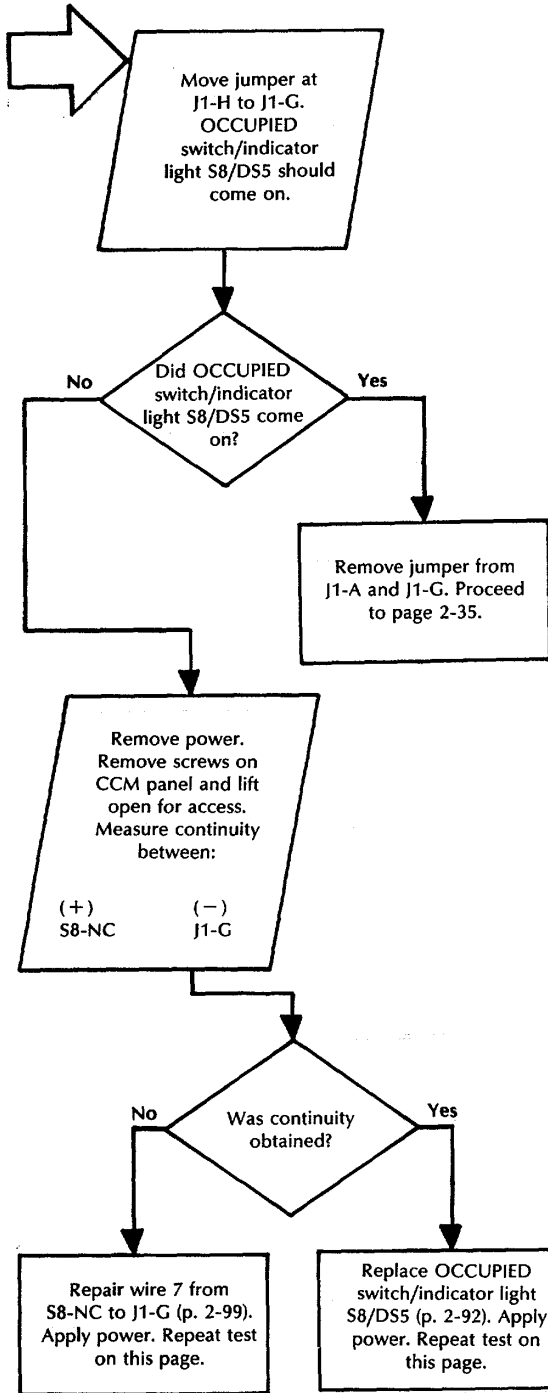
Page 2-31

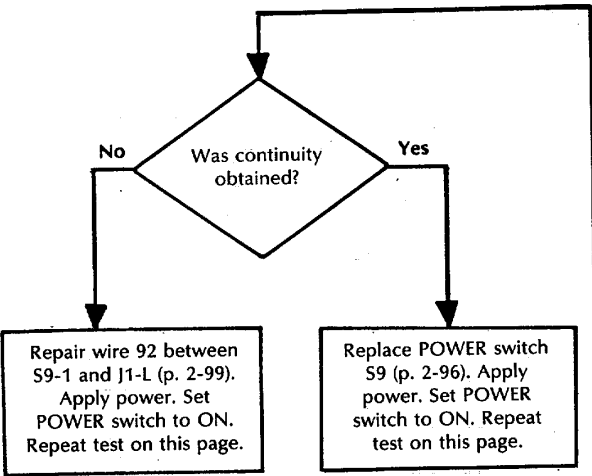
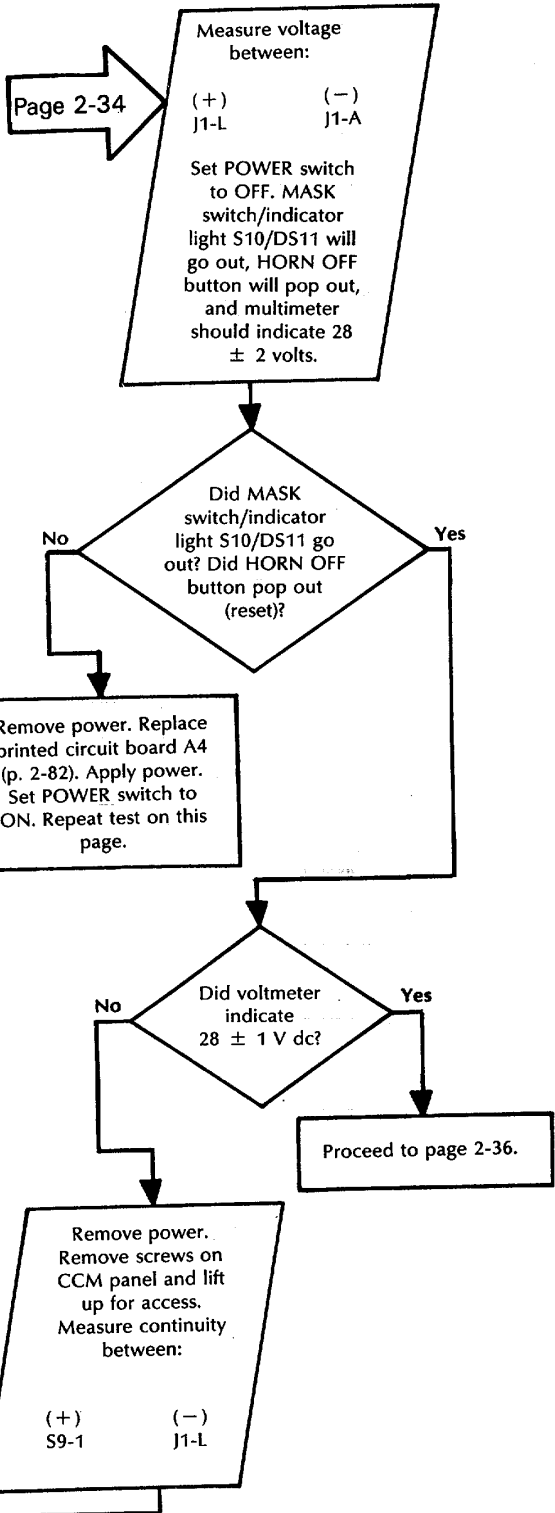
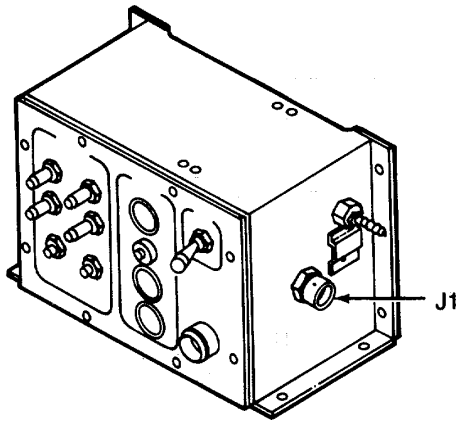




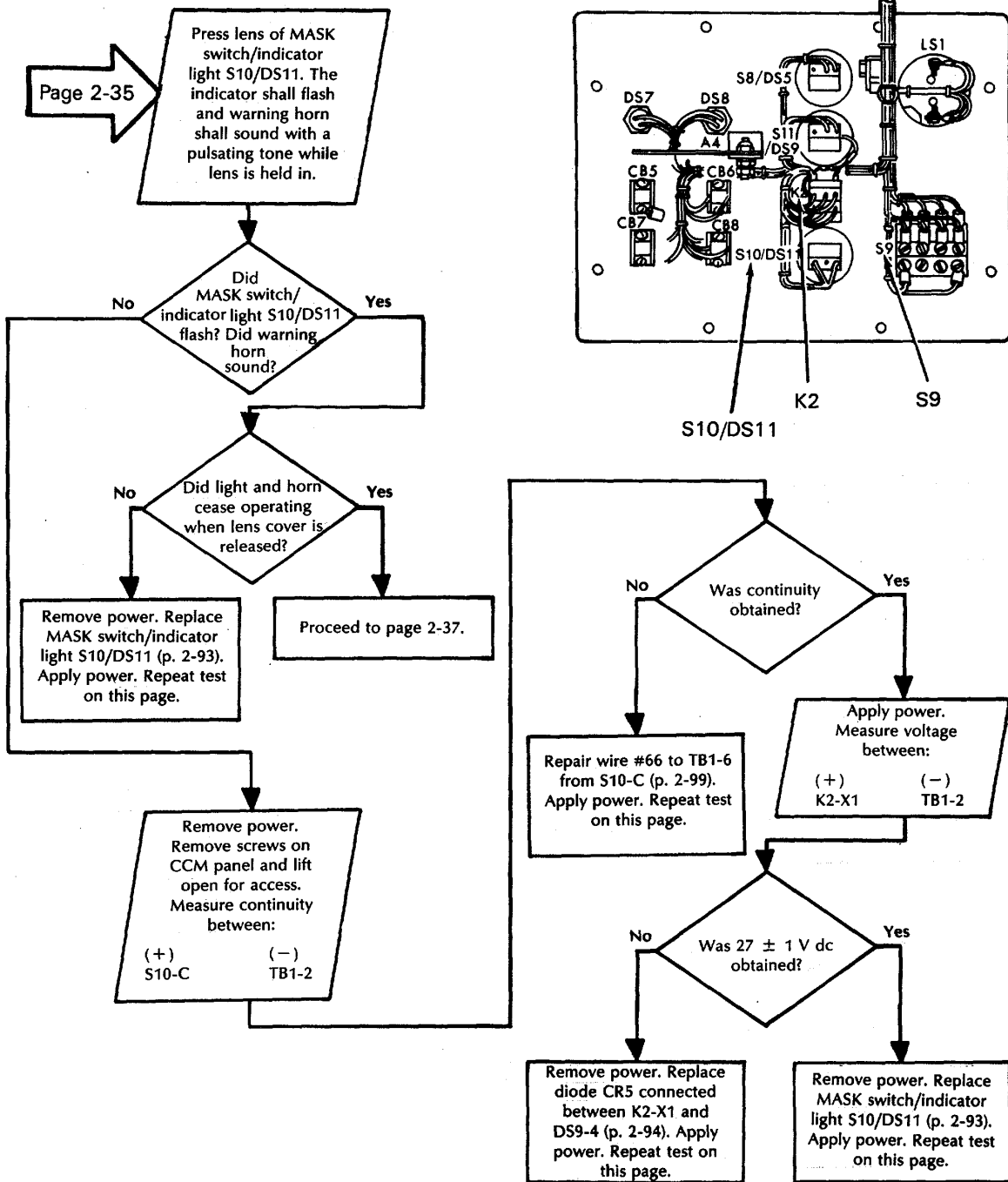
2-6. TROUBLESHOOTING PROCEDURES (CONT).

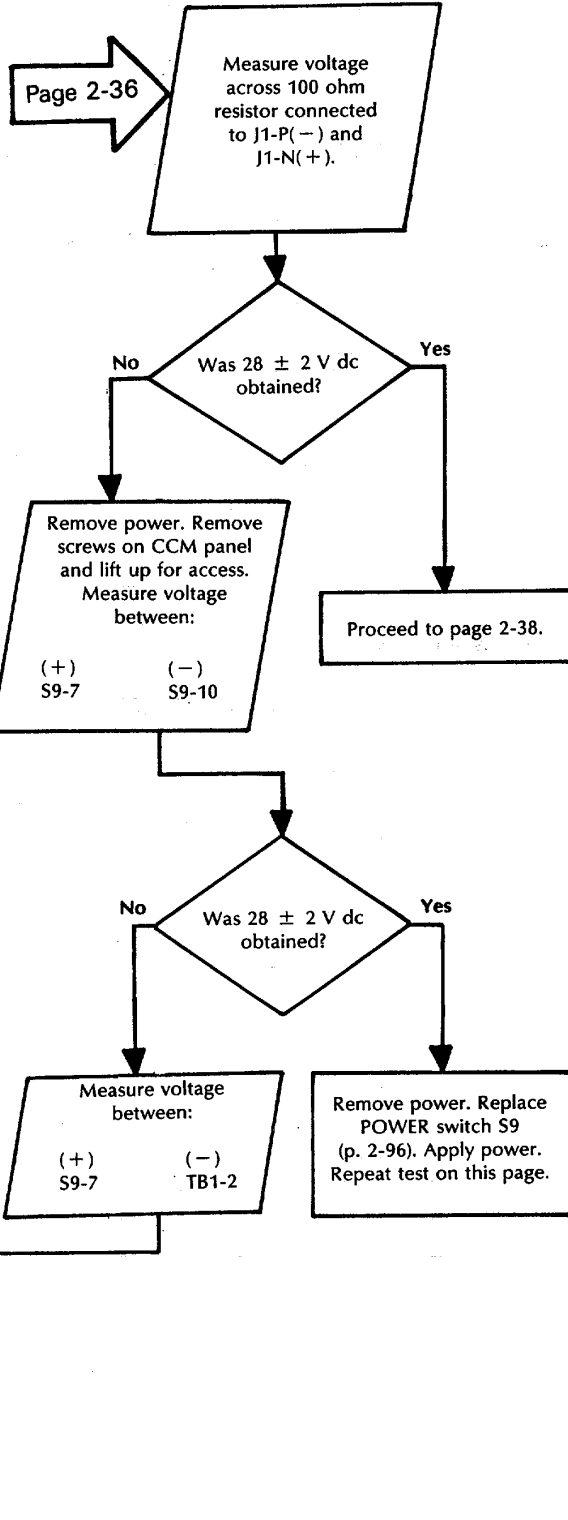
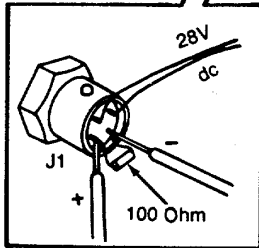
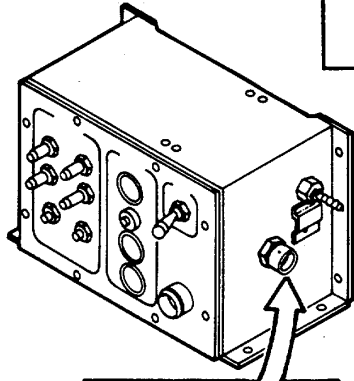
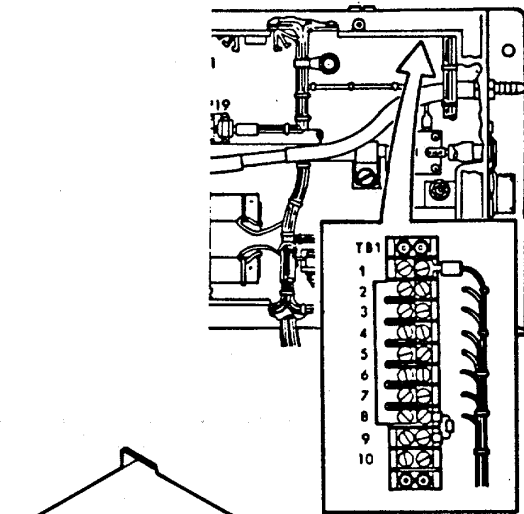
Page 2-33



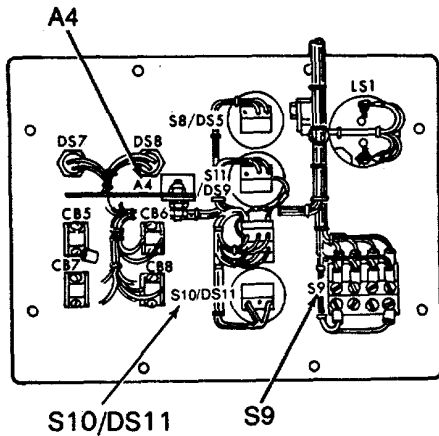


2-6. TROUBLESHOOTING PROCEDURES (CONT).



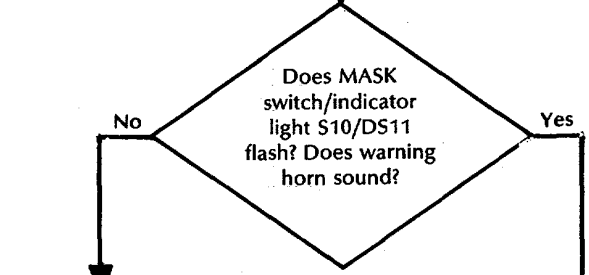


2-6. TROUBLESHOOTING PROCEDURES (CONT).

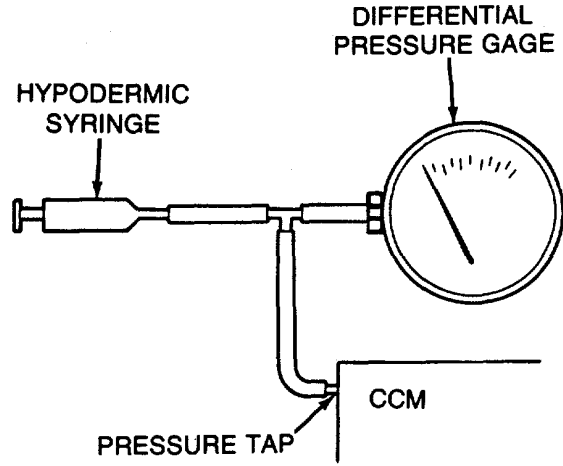


Page 2-37

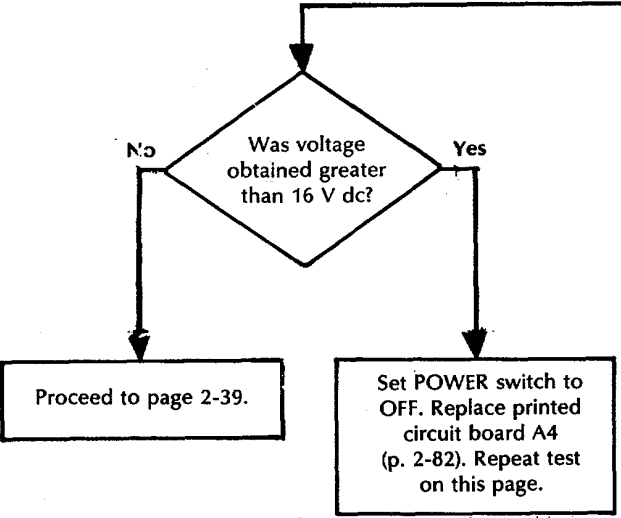
Adjust vacuum source to 1.0 in. wg. Set POWER switch to ON. Turn off 28 V dc power source. Decrease vacuum to zero. MASK switch/indicator light S10/DS11 shall flash and warning horn shall sound with a pulsating tone.



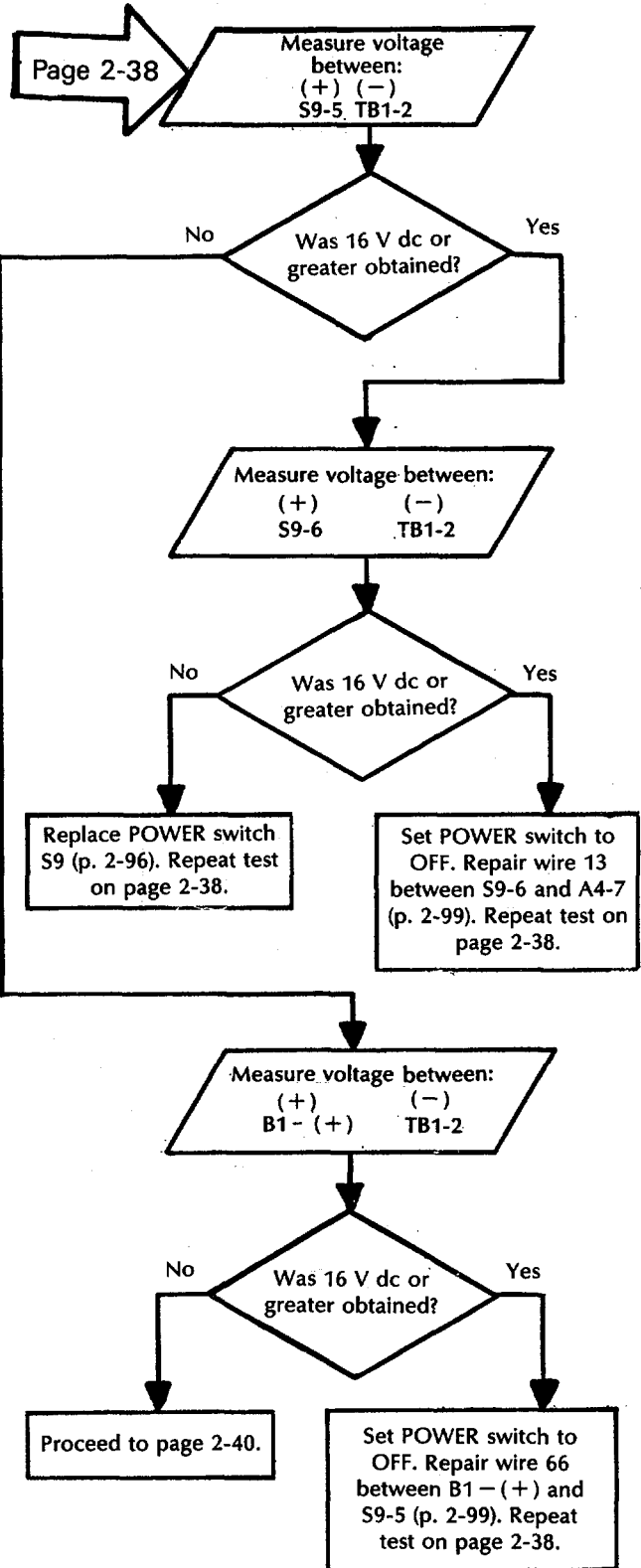
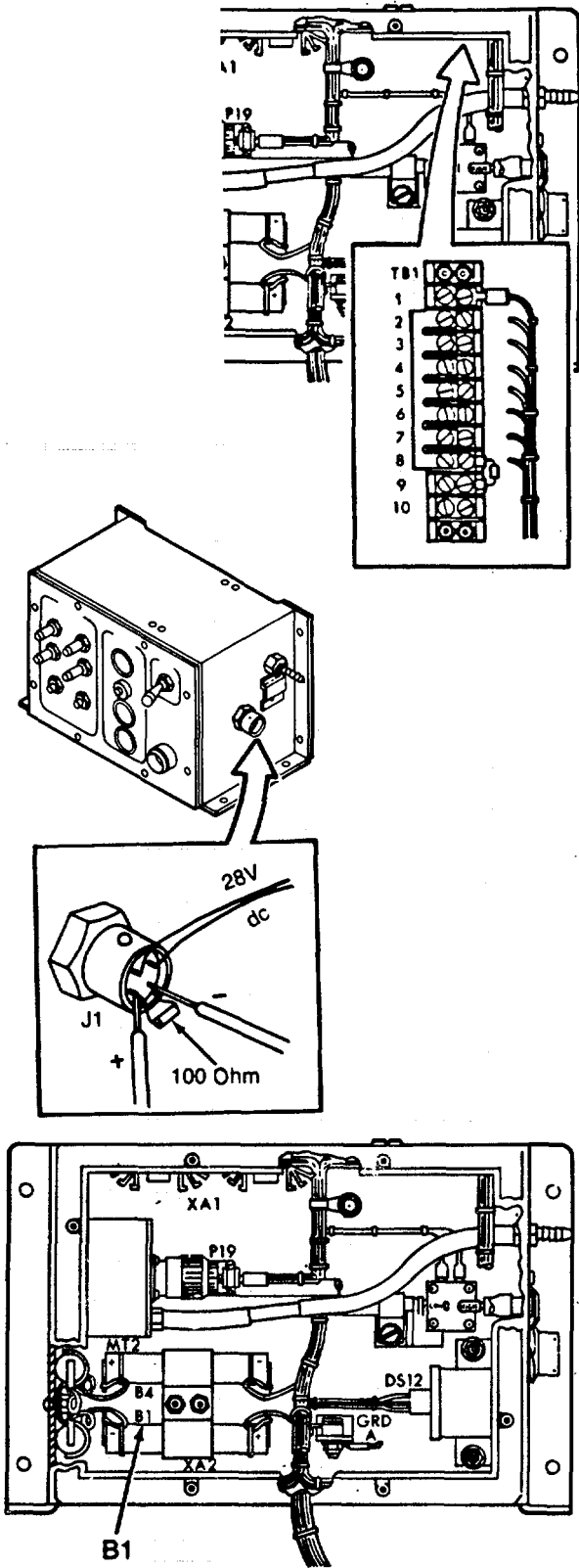
Remove screws on CCM panel and lift up panel for access to components. Measure voltage between:
 (+) A4-7
 (-) TB1-2



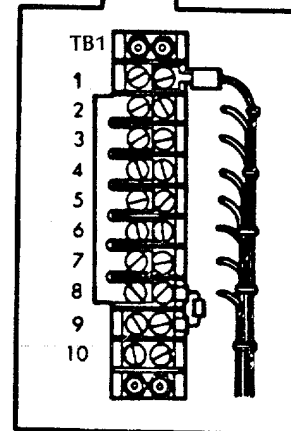
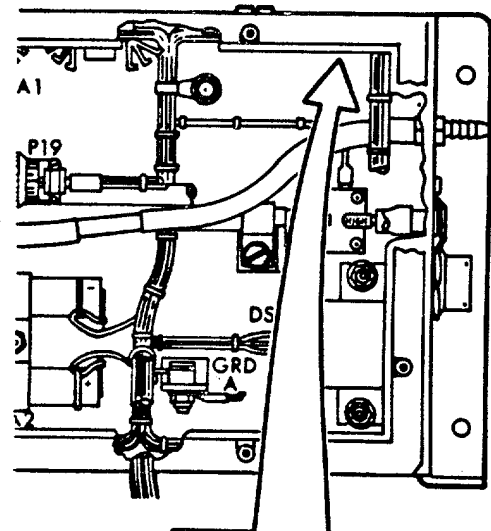
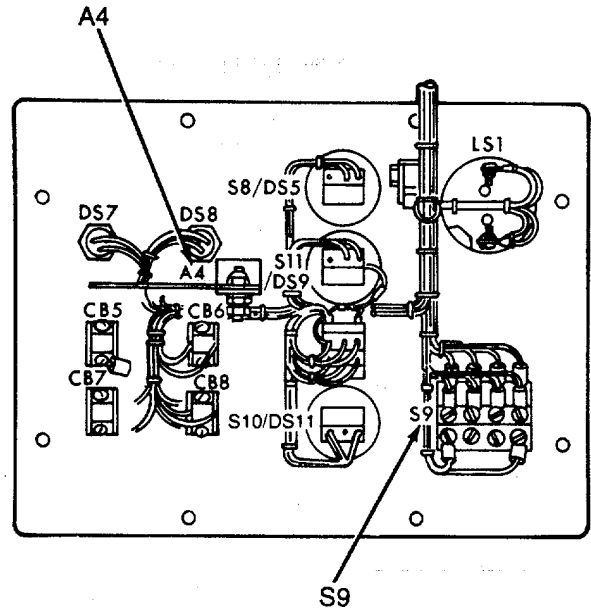
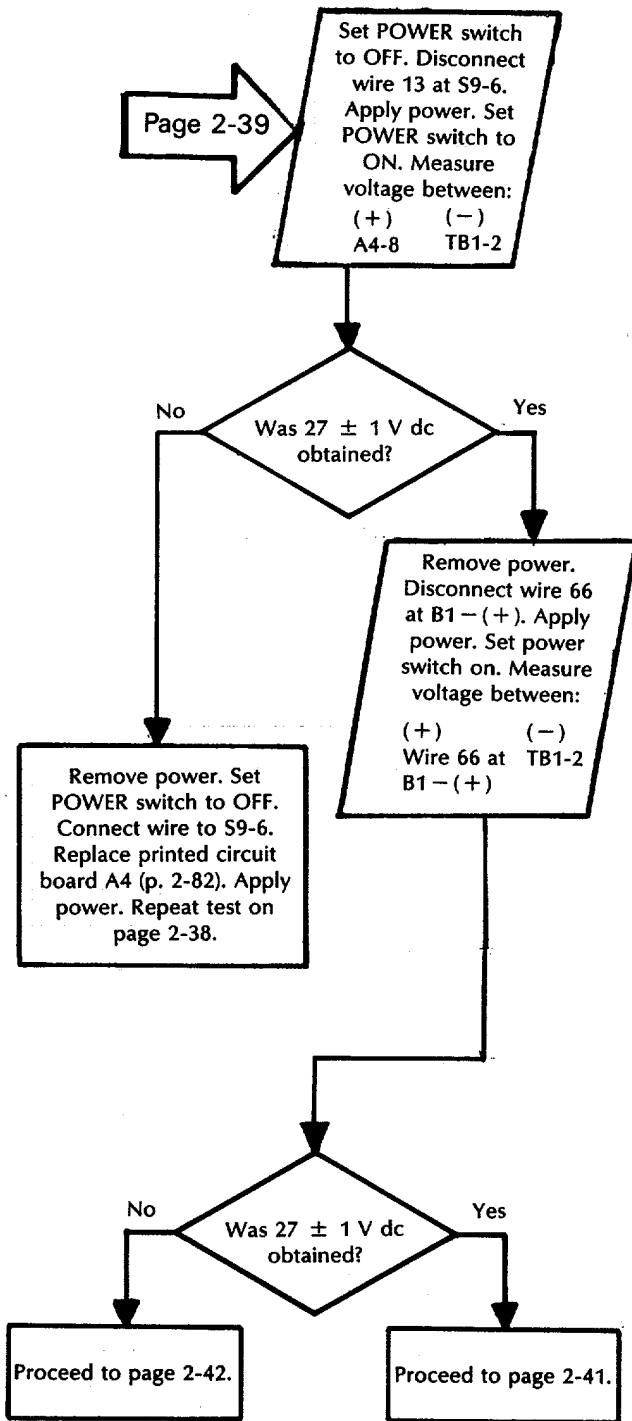
WARNING
 Resistor connected to J1 may be hot. Let the resistor cool before removing it to avoid injury to fingers.

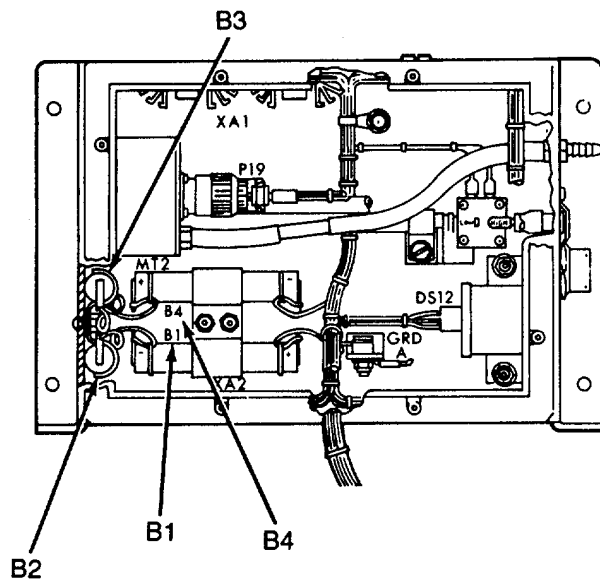


Set POWER switch OFF. This completes test. Remove power and vacuum source connections. Install panel on housing if removed.



2-6. TROUBLESHOOTING PROCEDURES (CONT).





Page 2-40

Remove power. Set POWER switch to OFF. Measure continuity between:

(+)	(-)
B1(-)	B2(+)
B2(-)	B3(+)
B3(-)	B4(+)
B4(-)	TB1-2

Was continuity obtained for all measurements?

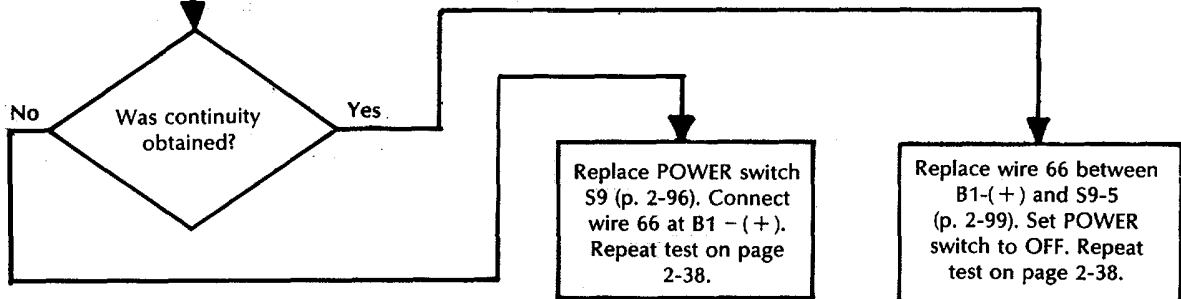
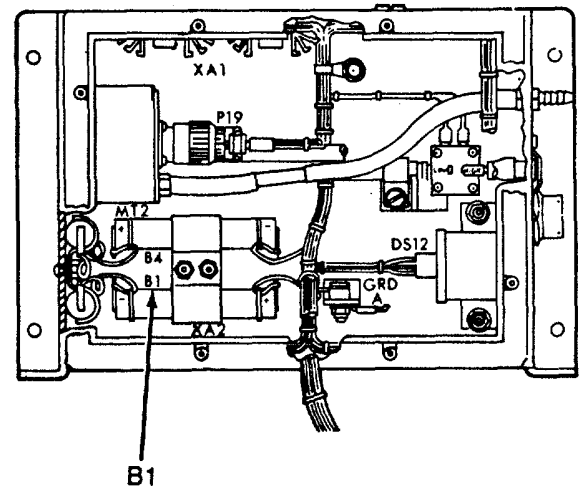
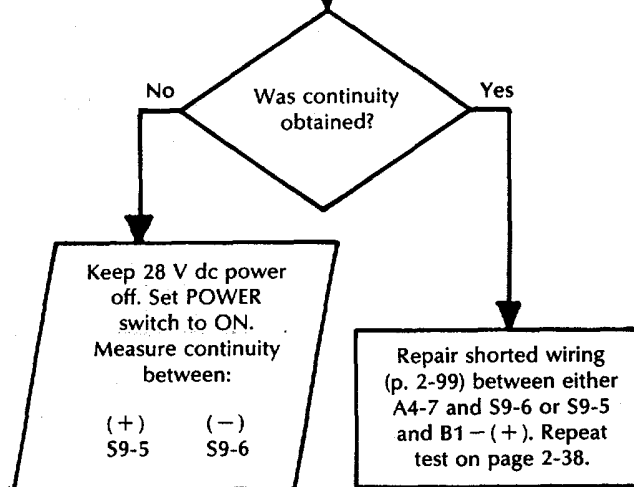
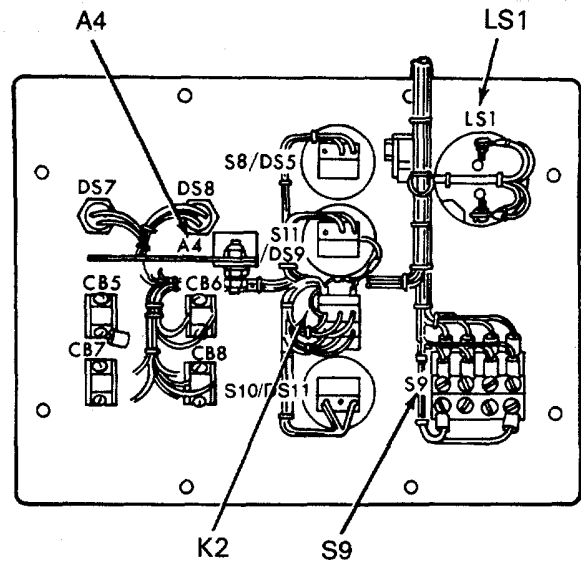
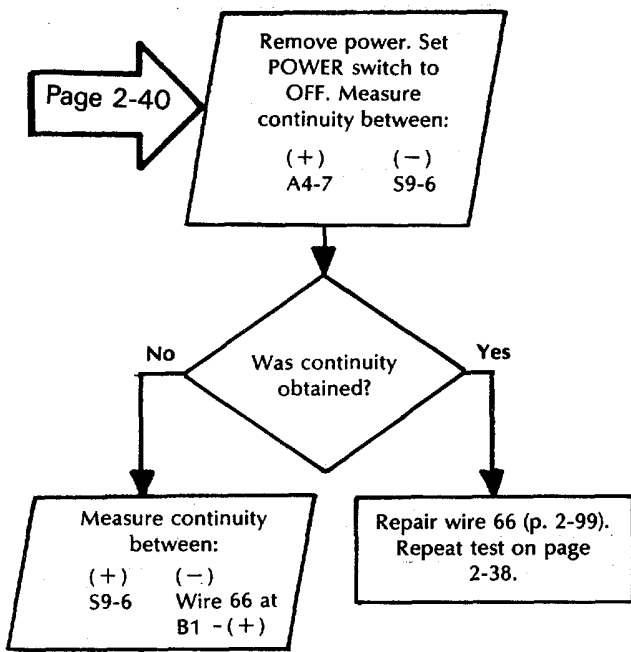
Repair wiring (p. 2-99). Connect wire 66 at B1(+). Repeat test on page 2-38.

Measure as indicated to obtain specified voltage:

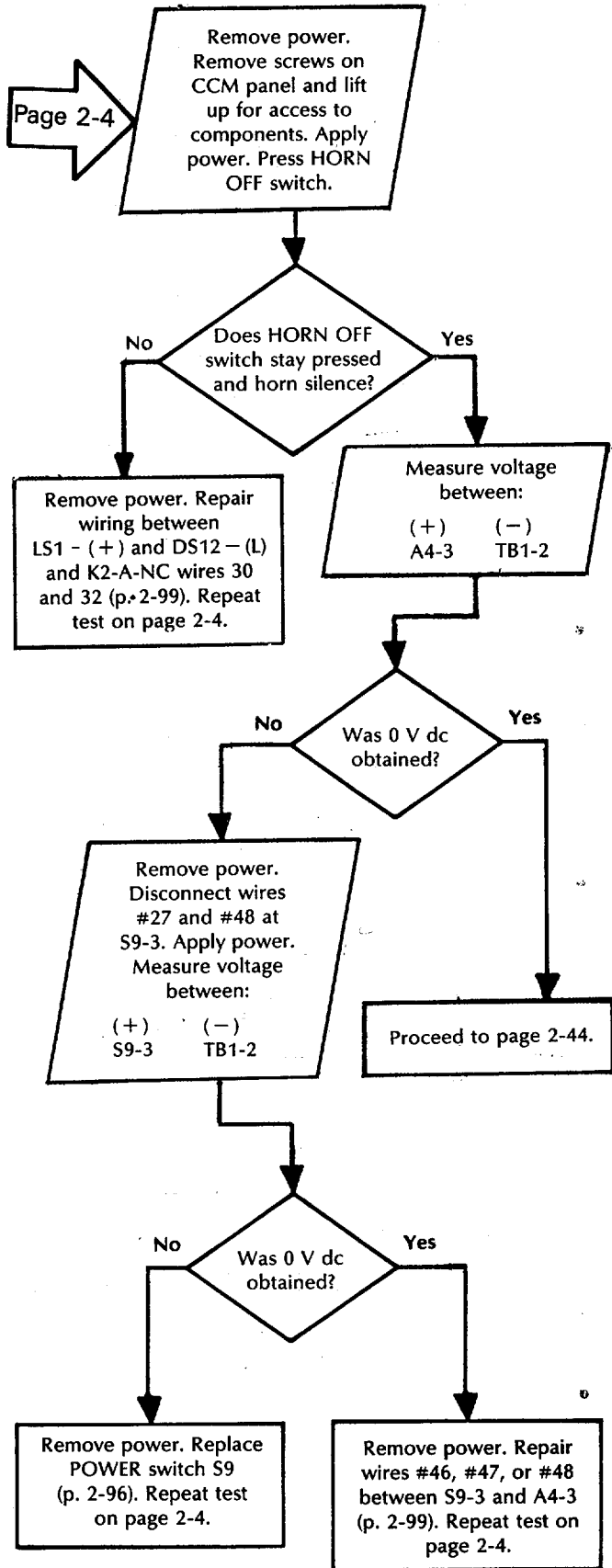
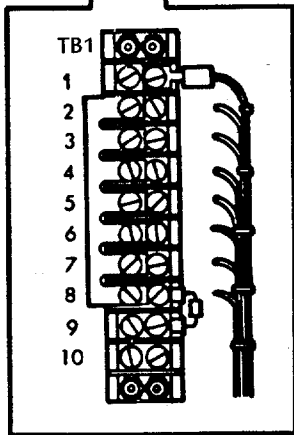
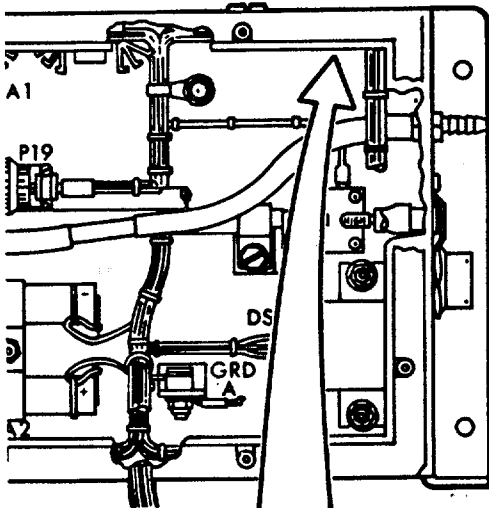
(+)	(-)	Voltage (volts)
B1(+)	B1(-)	4.2
B2(+)	B2(-)	3.3
B3(+)	B3(-)	3.3
B4(+)	B4(-)	4.2

Replace defective batteries as required (p. 2-81). Repeat test on page 2-38.

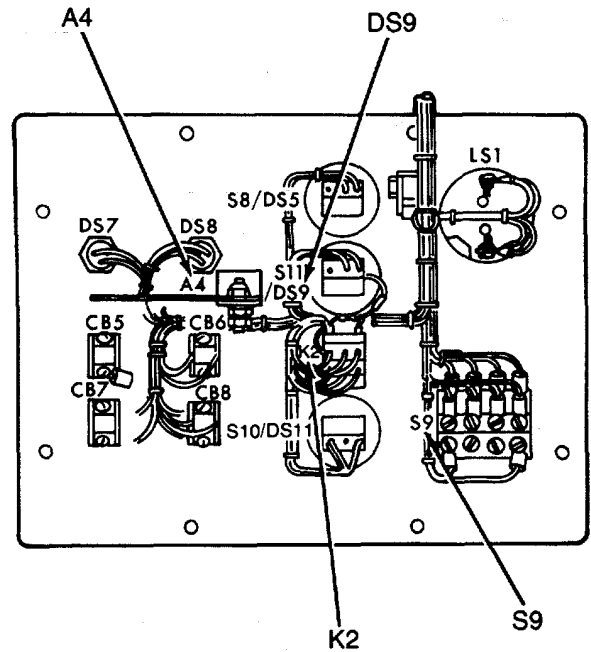
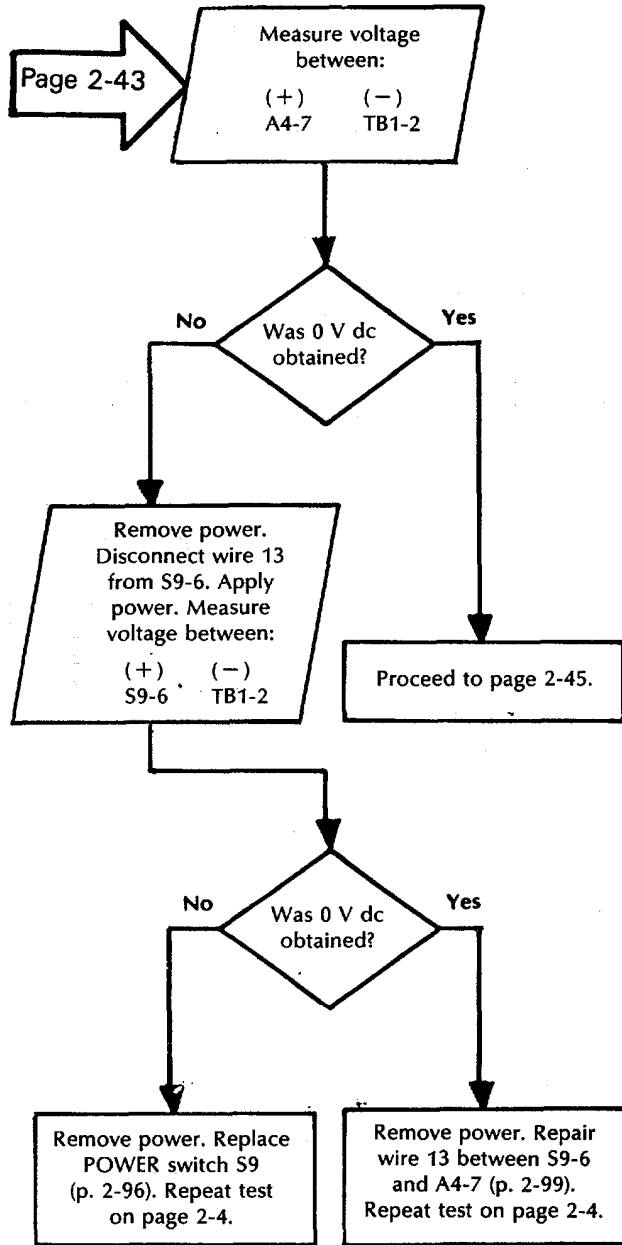
2-6. TROUBLESHOOTING PROCEDURES (CONT).

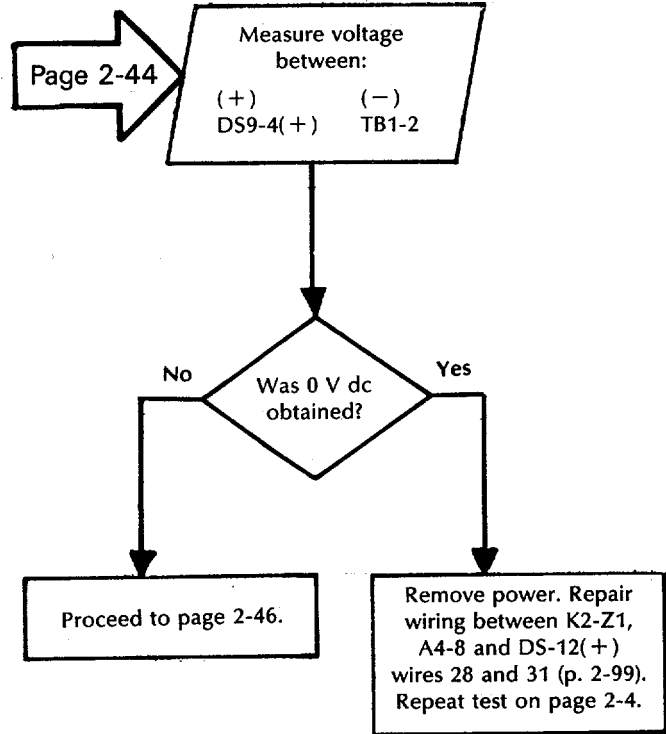
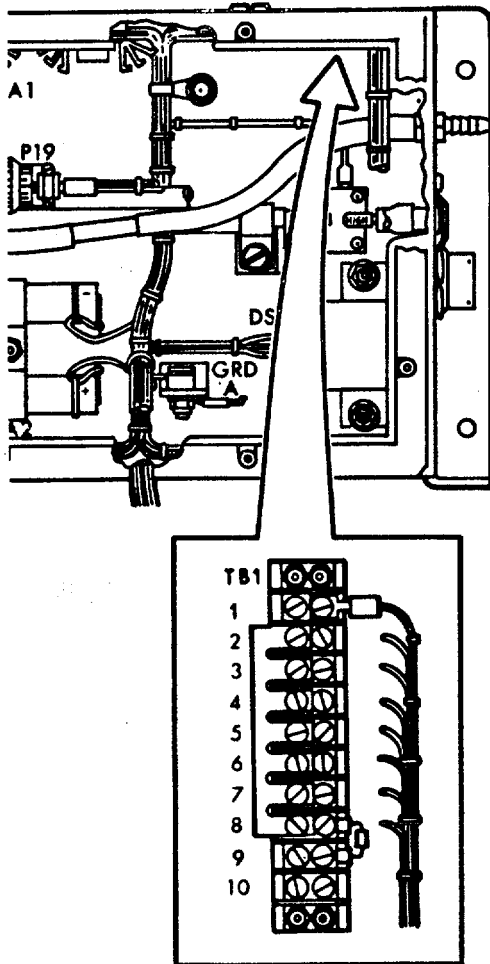


Page 2-4

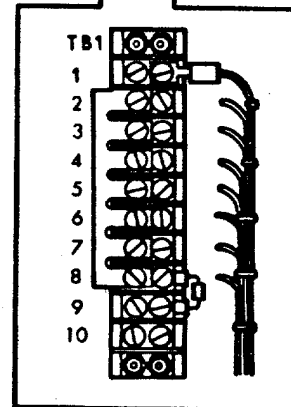
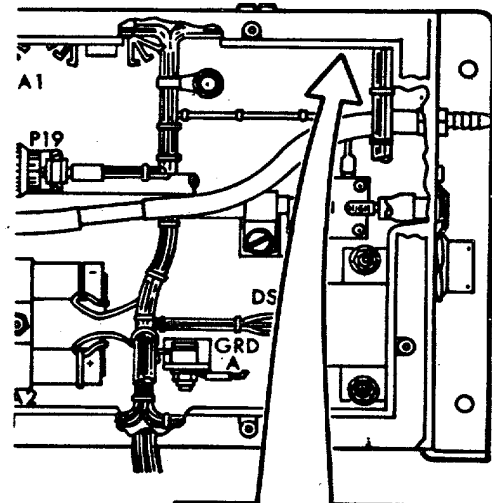
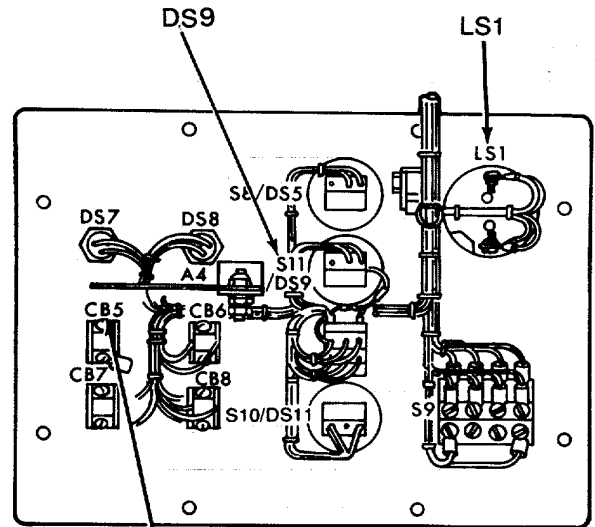
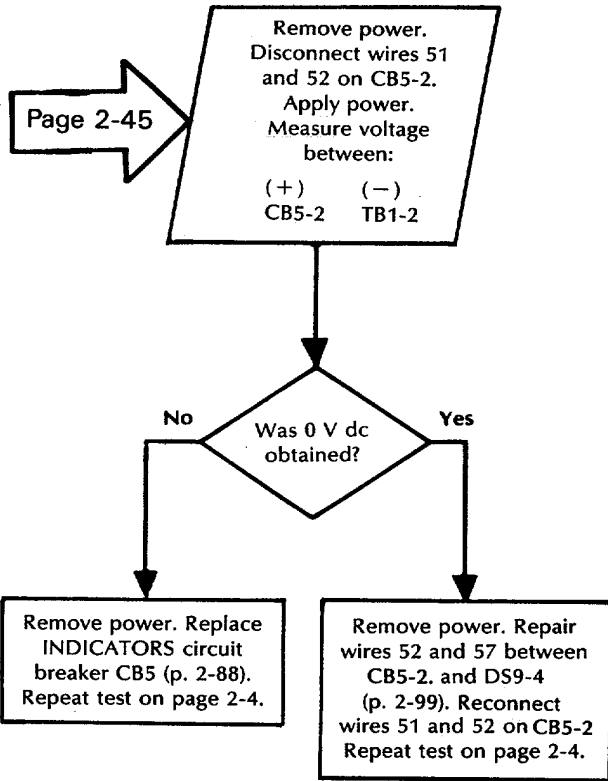


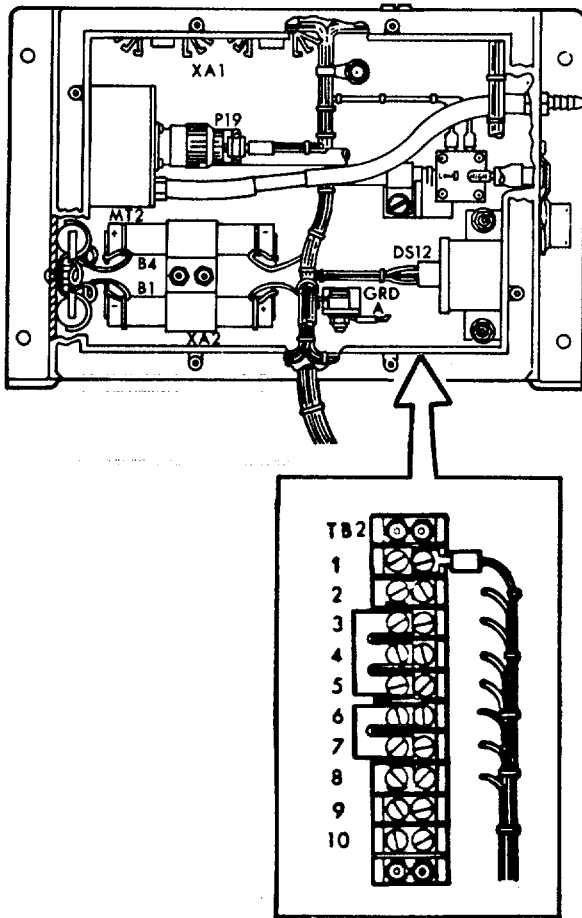
2-6. TROUBLESHOOTING PROCEDURES (CONT).





2-6. TROUBLESHOOTING PROCEDURES (CONT).

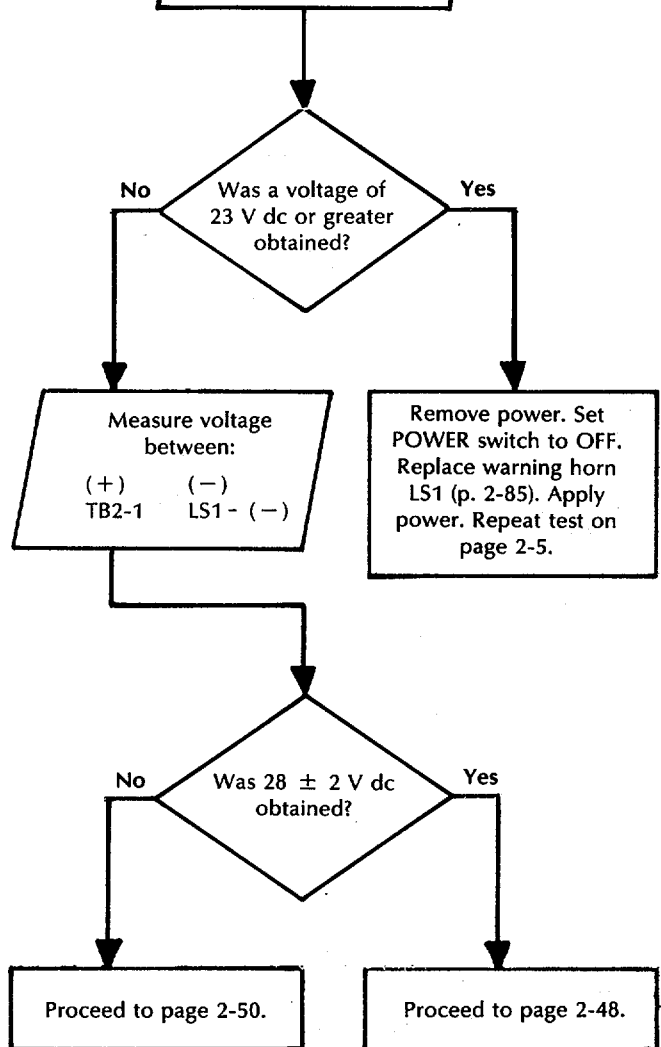




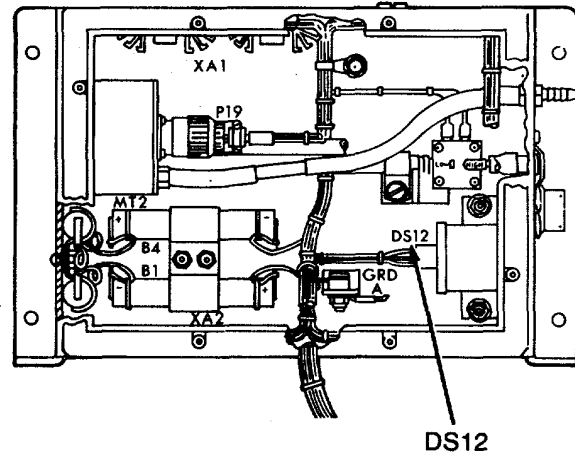
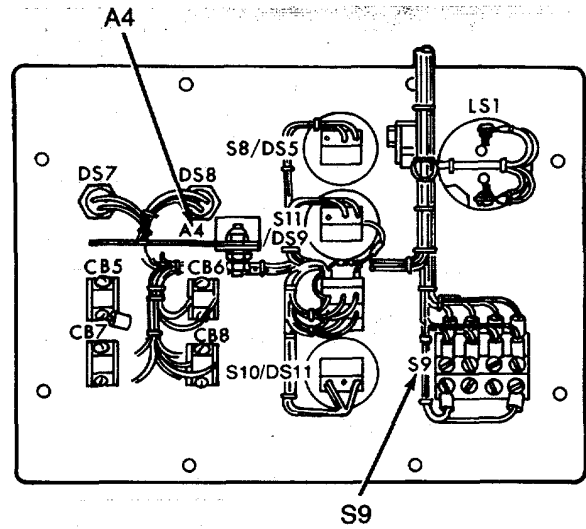
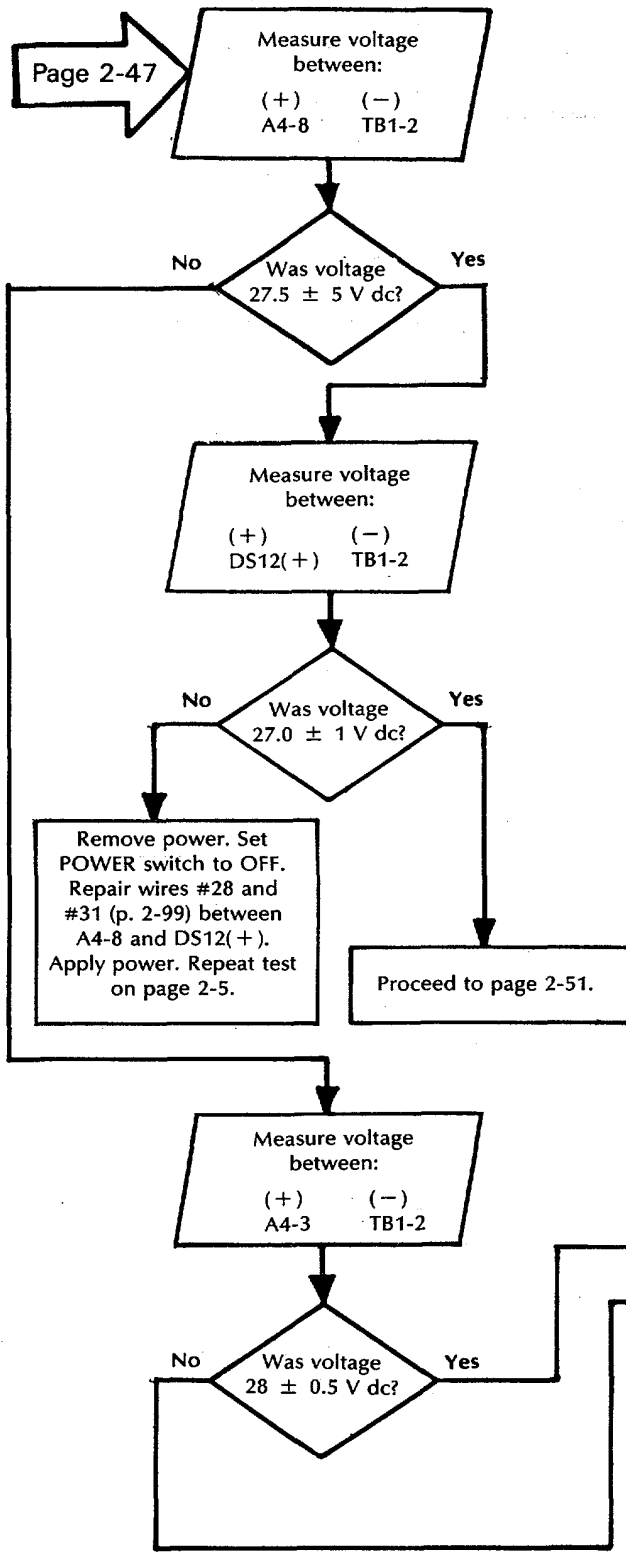
Page 2-5

Warning horn LS1 does not come on.
 Remove power.
 Remove screws on CCM panel and lift panel for access.
 Apply power.
 Conditions are the same as described on page 2-5.
 Measure voltage between:

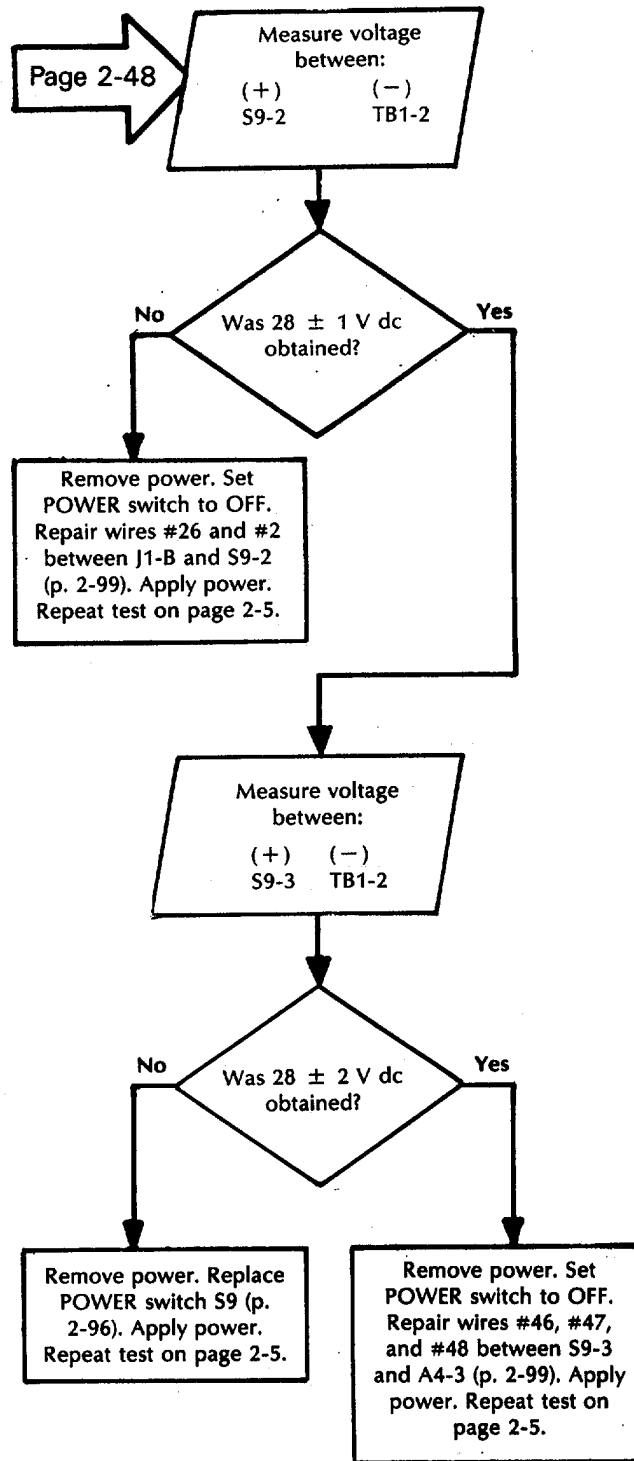
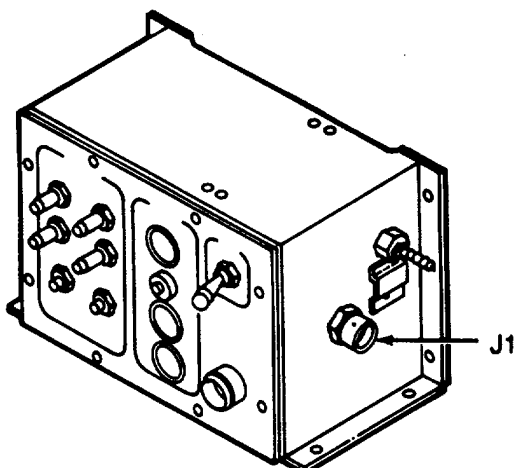
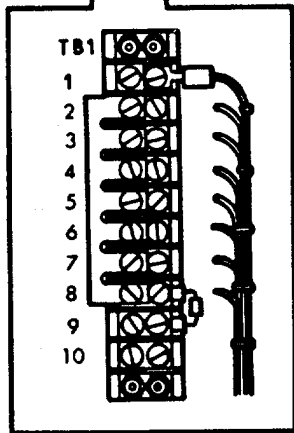
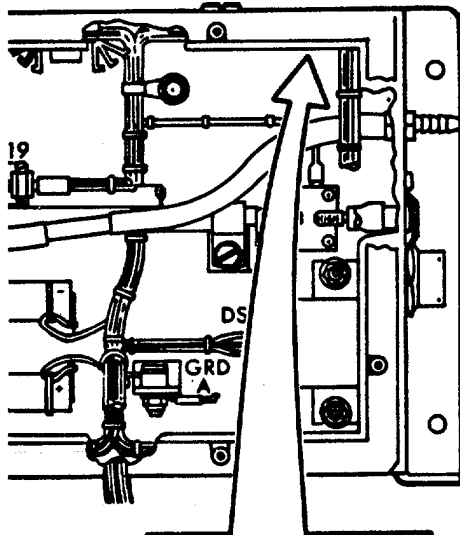
(+) (-)
 LS1- (+) LS1- (-)



2-6. TROUBLESHOOTING PROCEDURES (CONT.)



2-6. TROUBLESHOOTING PROCEDURES (CONT).

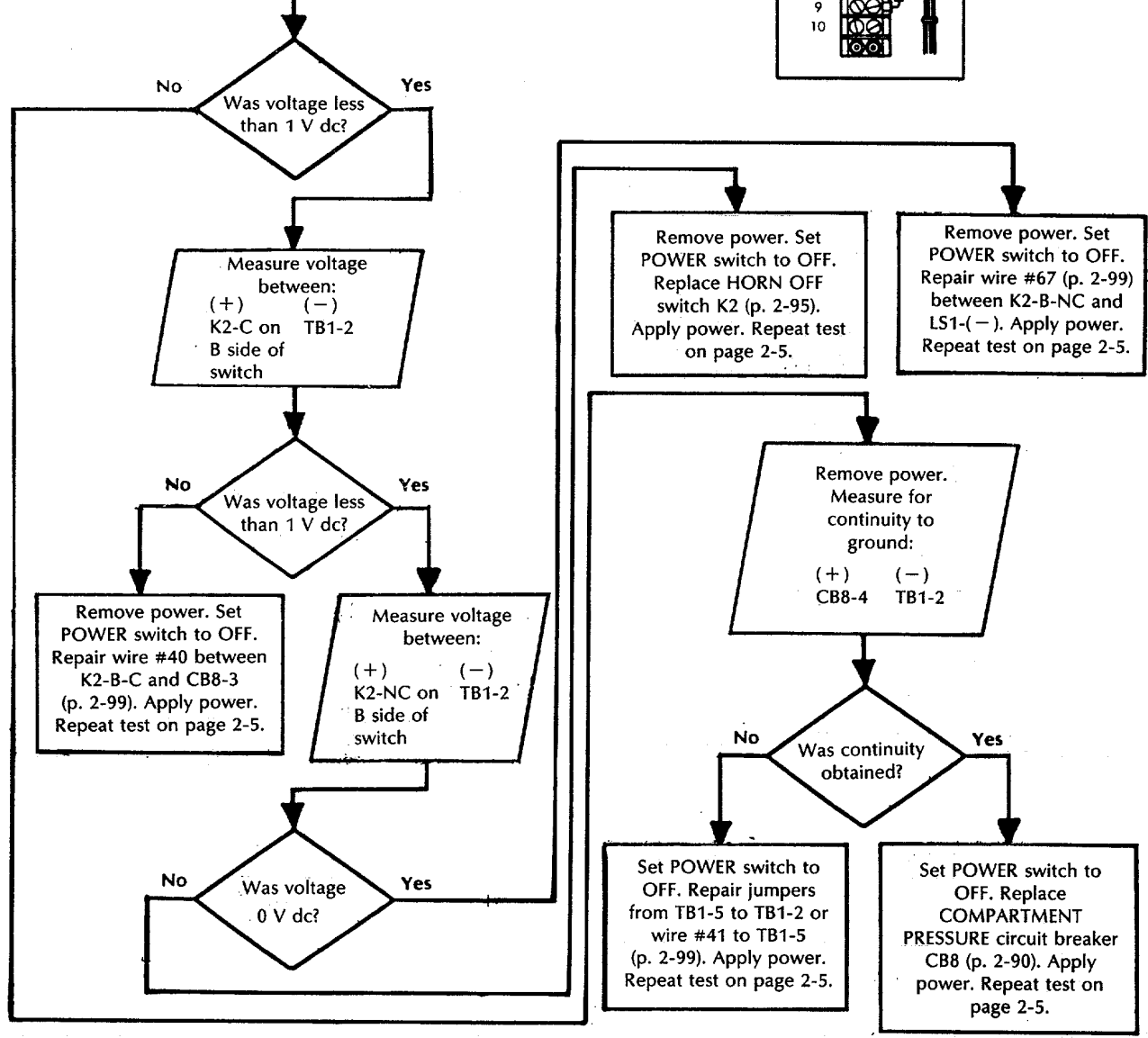
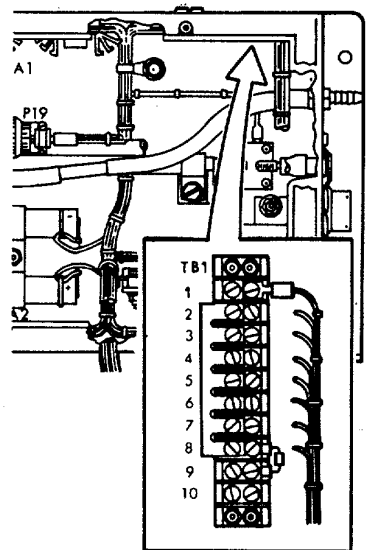


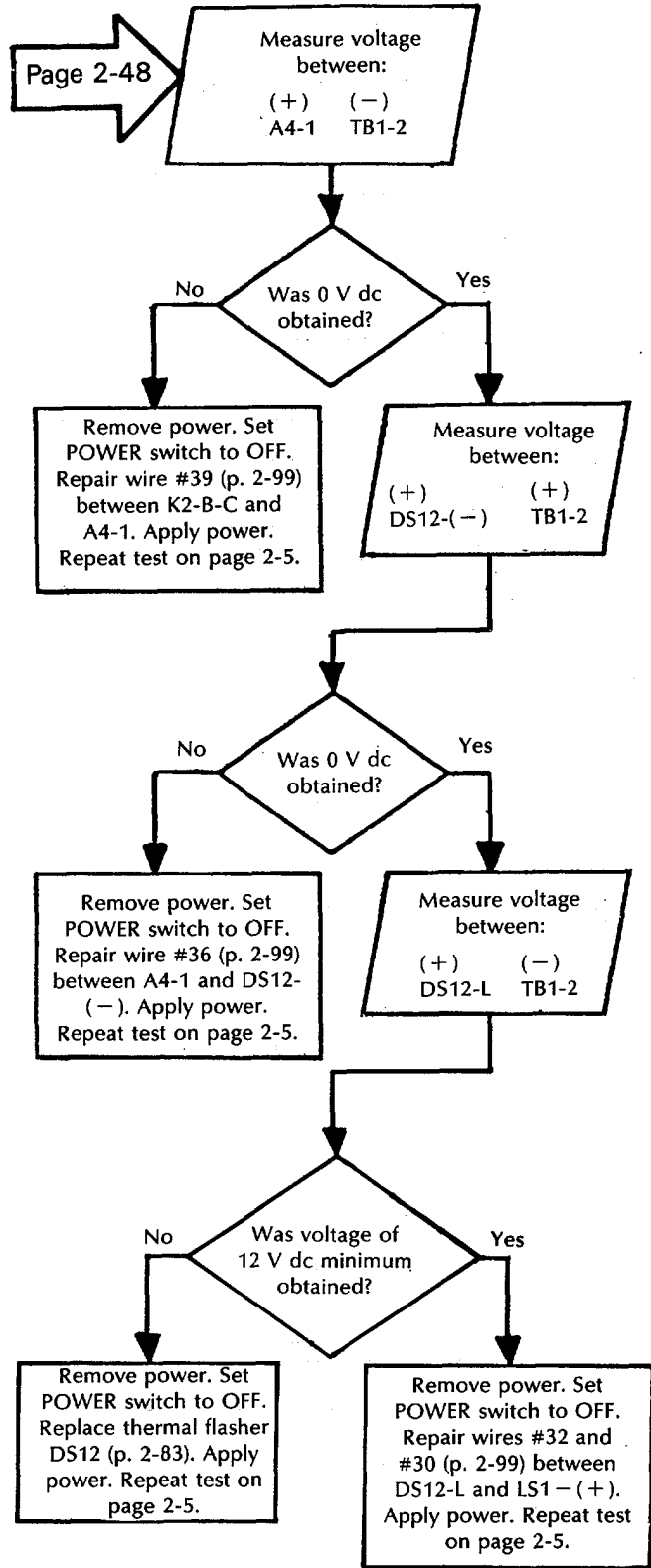
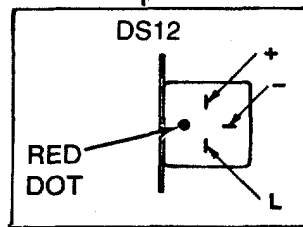
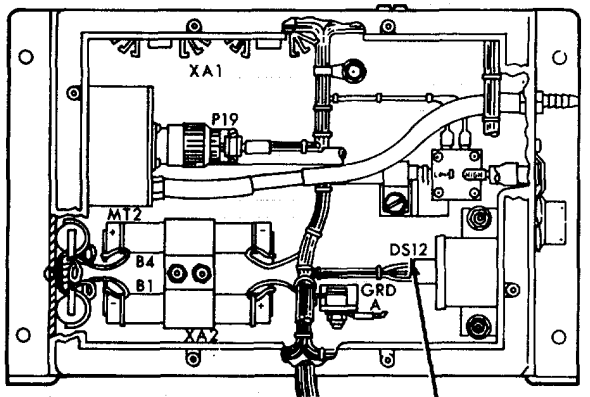
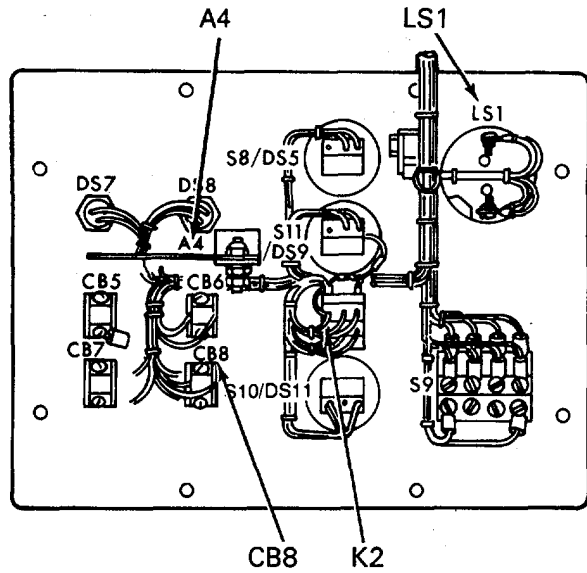
2-6. TROUBLESHOOTING PROCEDURES (CONT).

Page 2-47

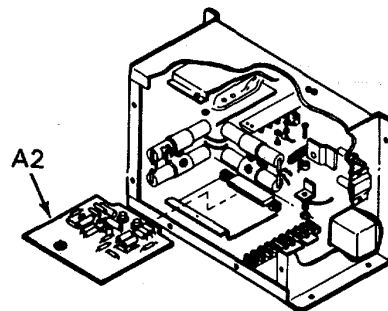
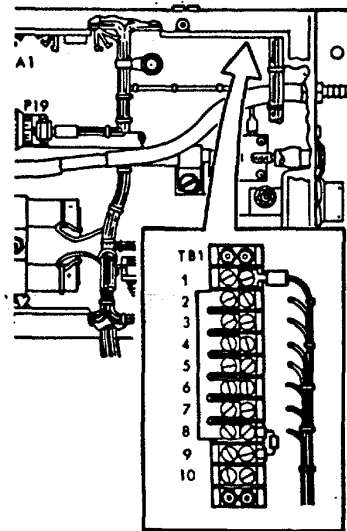
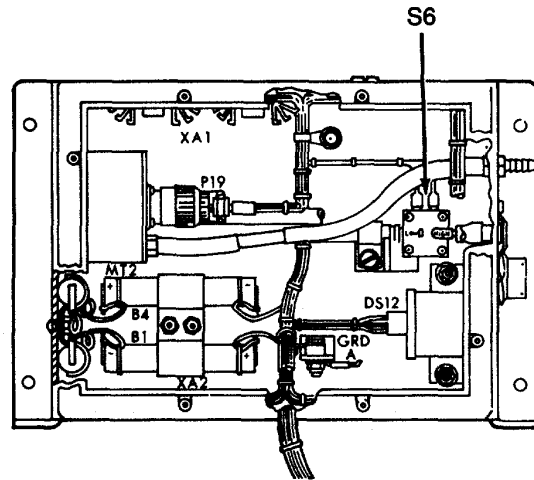
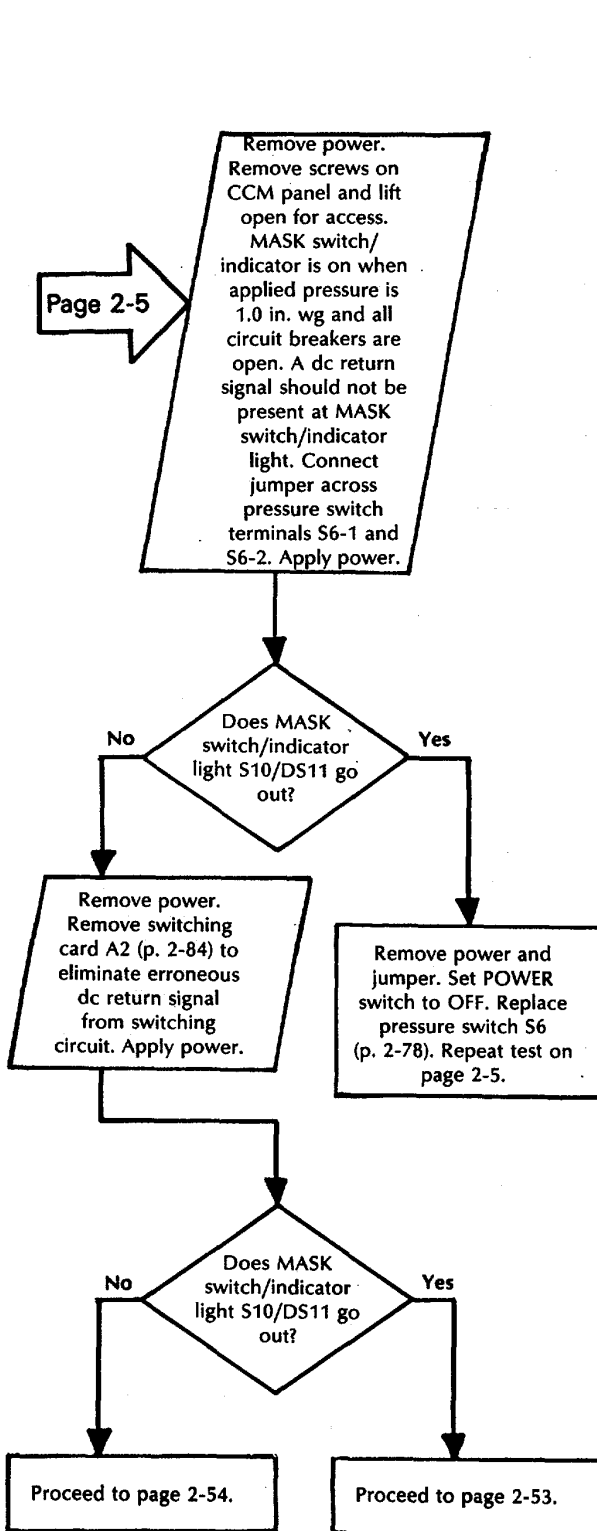
Compartment PRESSURE circuit breaker CB8 provides dc return signal on its auxiliary contacts to actuate warning horn LS1 when CB8 is open or tripped. Measure voltage at auxiliary terminal CB8-3 (soldered terminal) with respect to dc return.

(+)	(-)
CB8-3	TB1-2

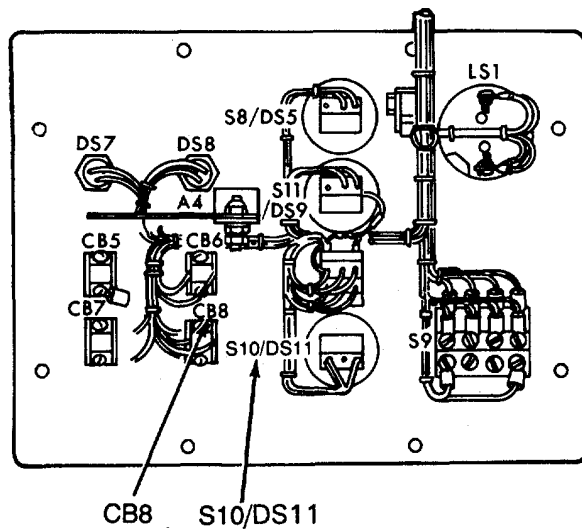
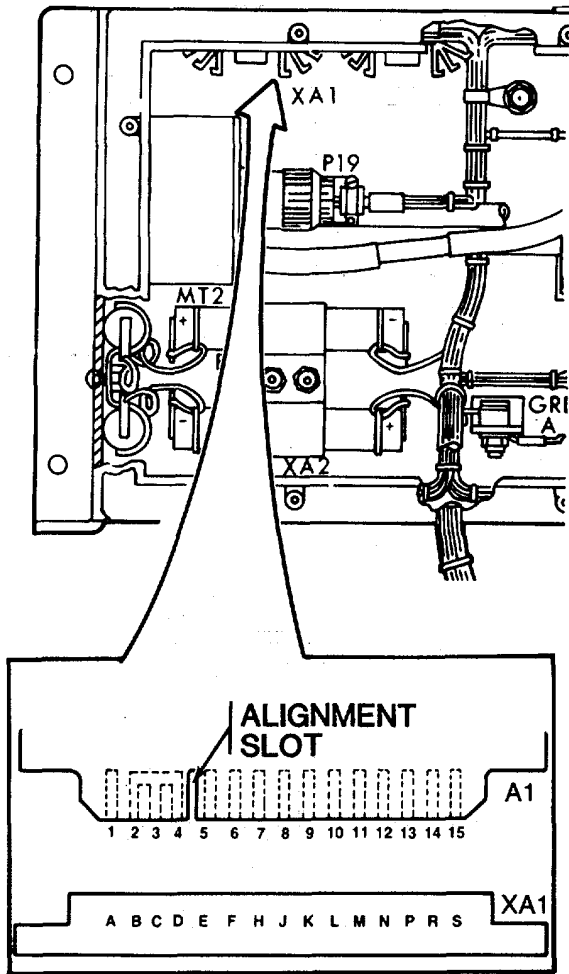




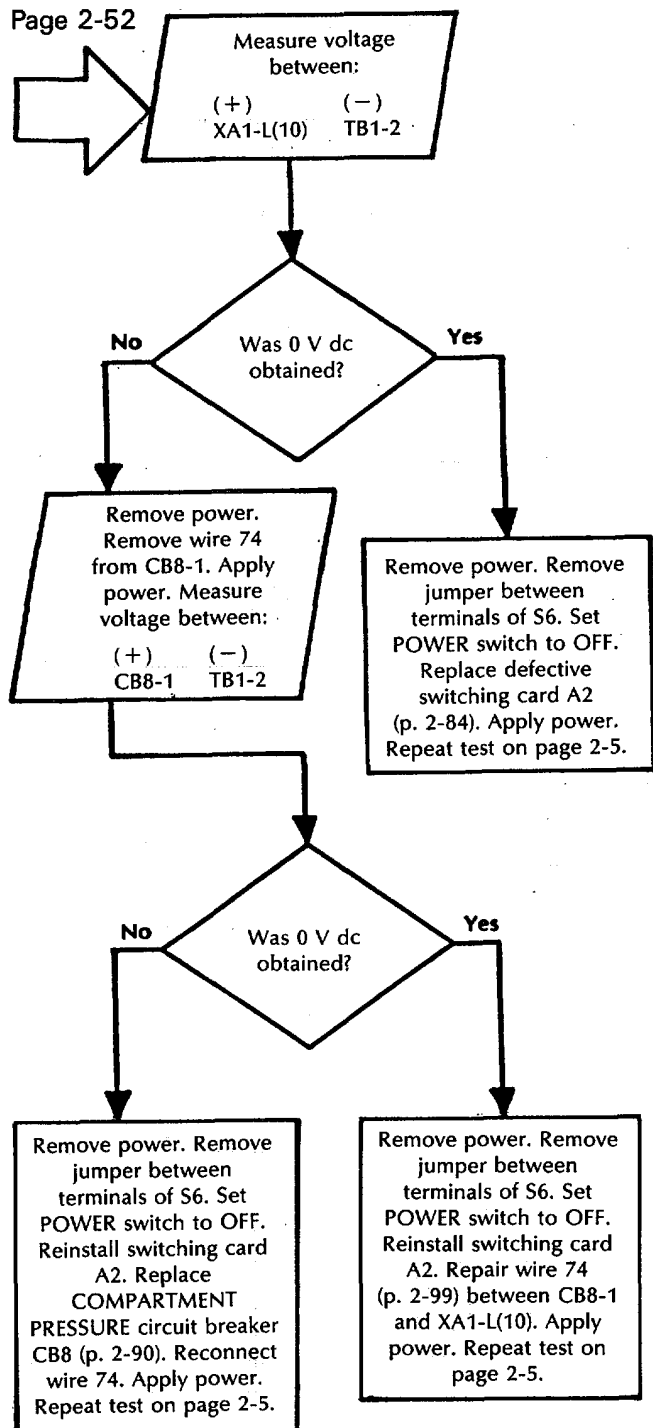
2-6. TROUBLESHOOTING PROCEDURES (CONT).



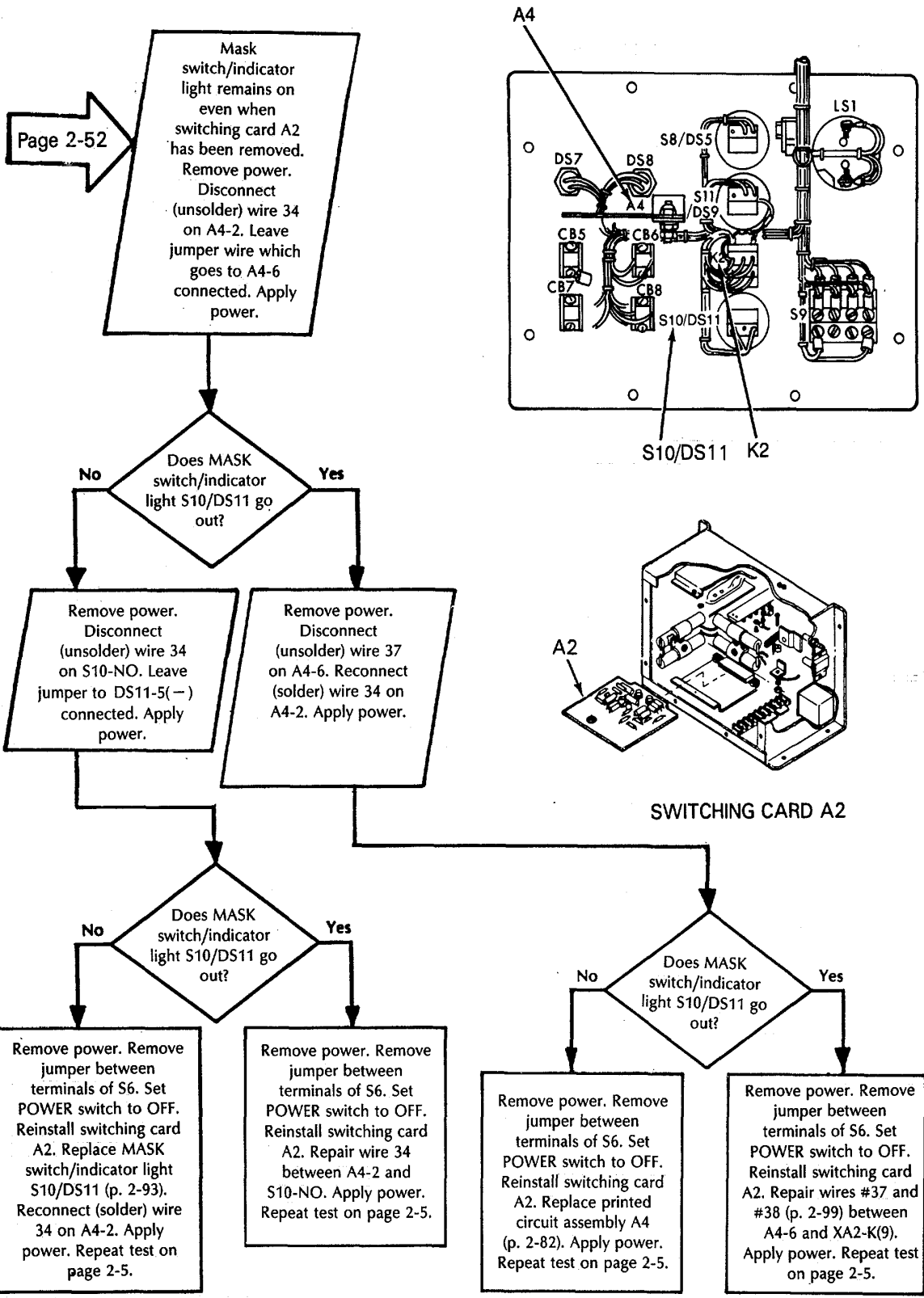
SWITCHING CARD A2

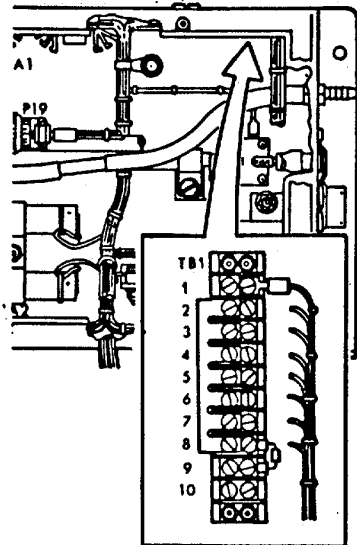
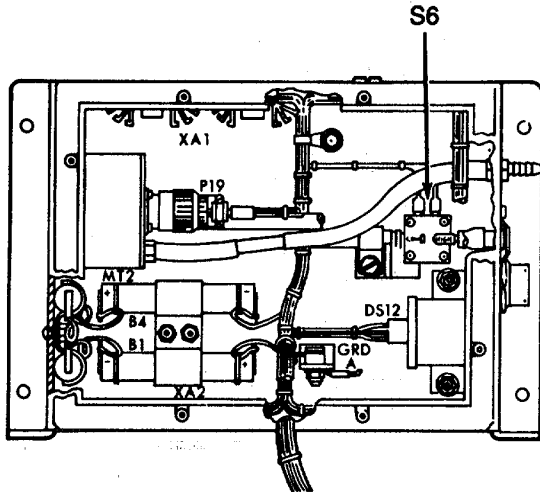


Page 2-52



2-6. TROUBLESHOOTING PROCEDURES (CONT).





Page 2-6

Remove power. Set POWER switch to OFF. Remove screws on CCM panel and lift up for access. HORN OFF button does not stay in when pressed. Apply power. Set POWER switch to ON. While HORN OFF button is being pressed, measure voltage between:

(+)	(-)
K2-X1	K2-X2

Was $27 \pm V$ dc obtained?

Measure voltage between:

(+)	(-)
K2-X1	TB1-2

Remove power. Replace HORN OFF switch K2 (p. 2-95). Apply power. Repeat test on page 2-6.

Was $27 \pm V$ dc obtained?

Remove power. Repair wire 28 between K2-X1 and A4-8 (p. 2-99). Apply power. Repeat test on page 2-6.

Measure voltage between:

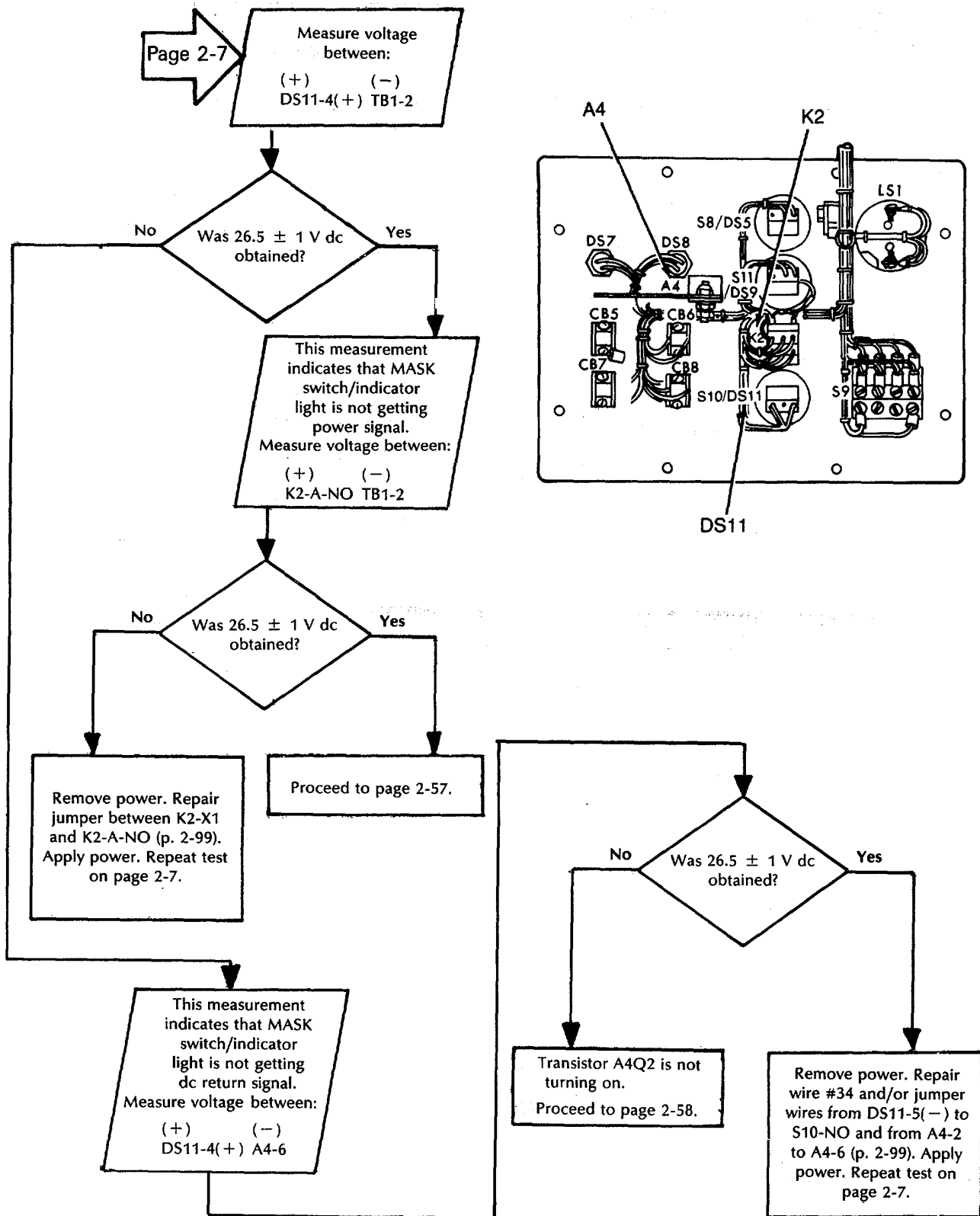
(+)	(-)
K2-B-NO	K2-B-C

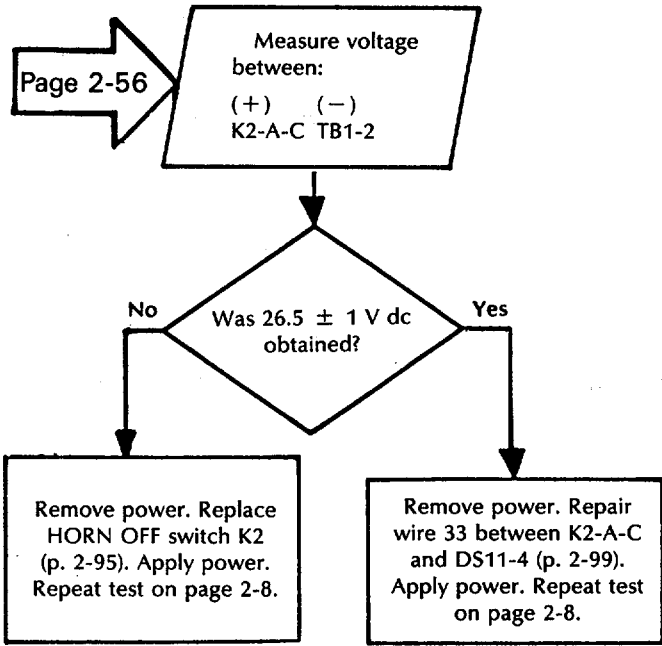
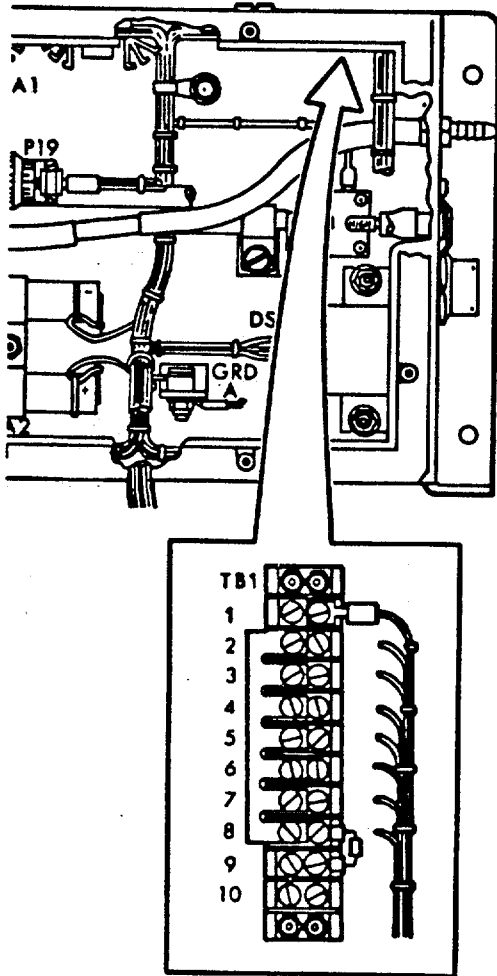
Was 0 V dc obtained when HORN OFF button is pressed?

Remove power. Replace HORN OFF switch K2 (p. 2-95). Apply power. Repeat test on page 2-6.

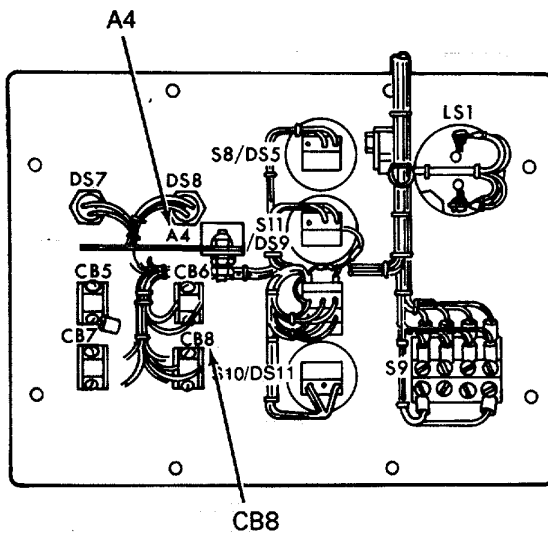
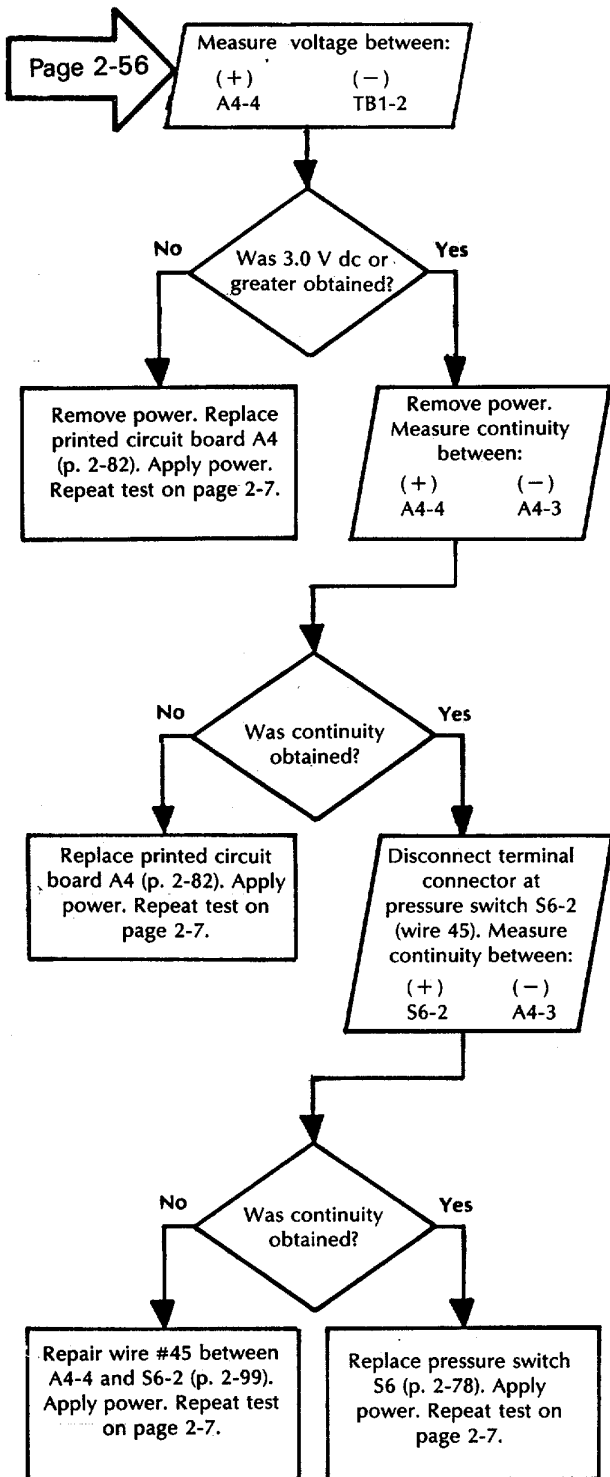
Remove power. Repair jumper from K2-X2 to K2-B-NO (p. 2-99). Apply power. Repeat test on page 2-6.

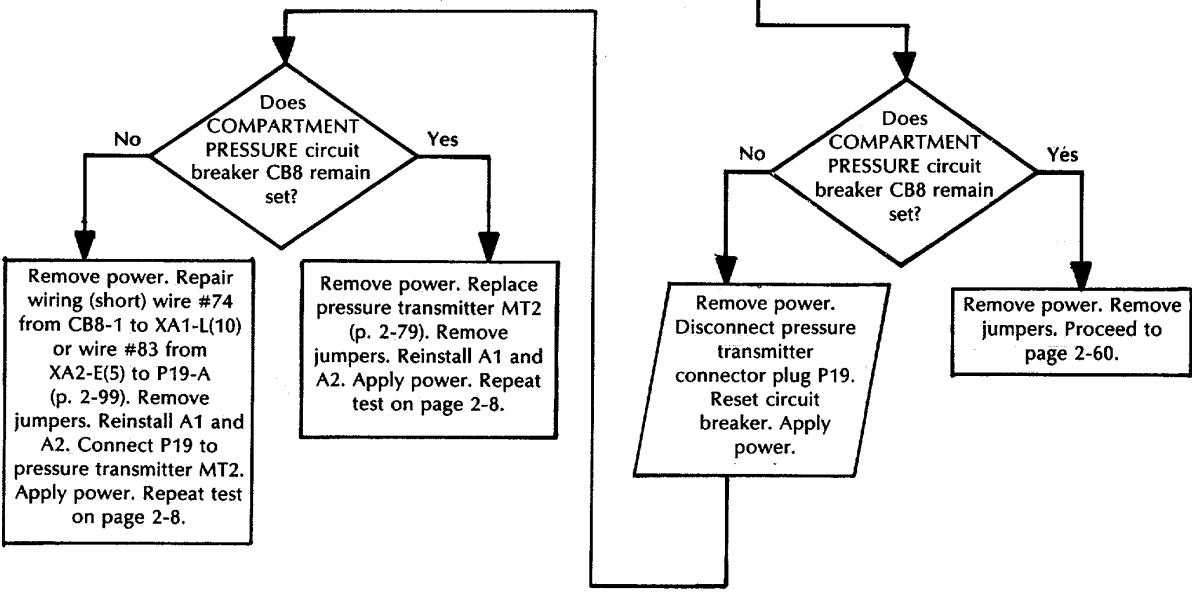
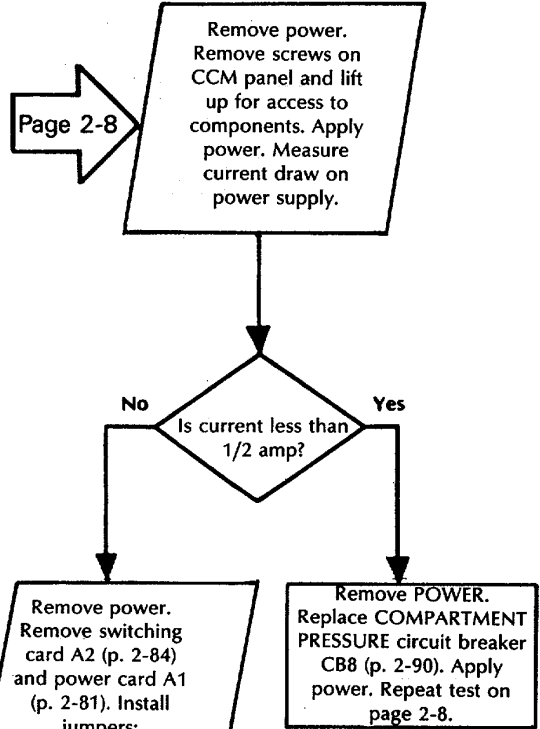
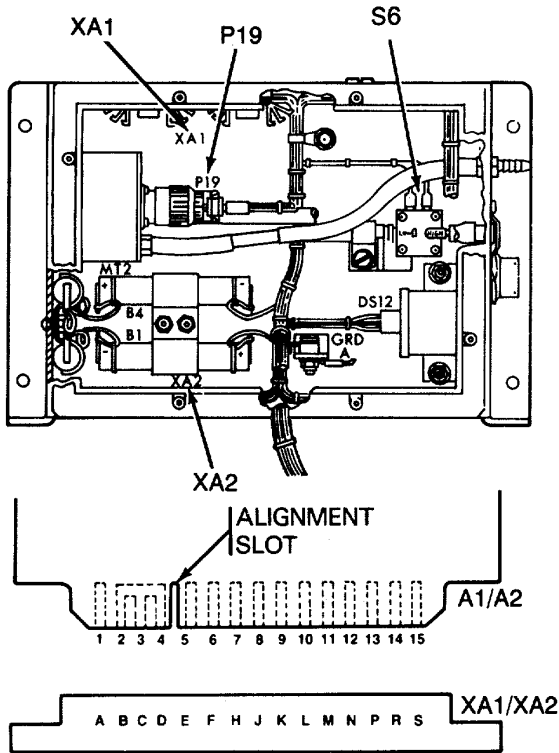
2-6. TROUBLESHOOTING PROCEDURES (CONT).



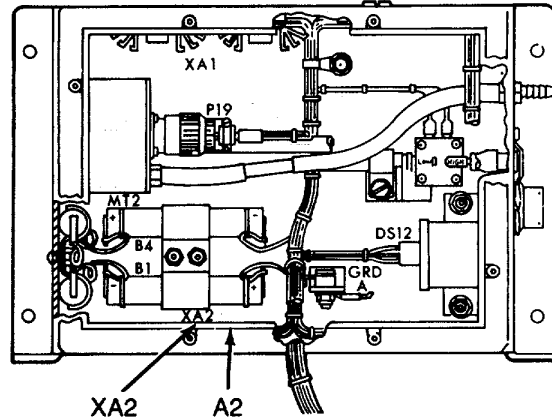
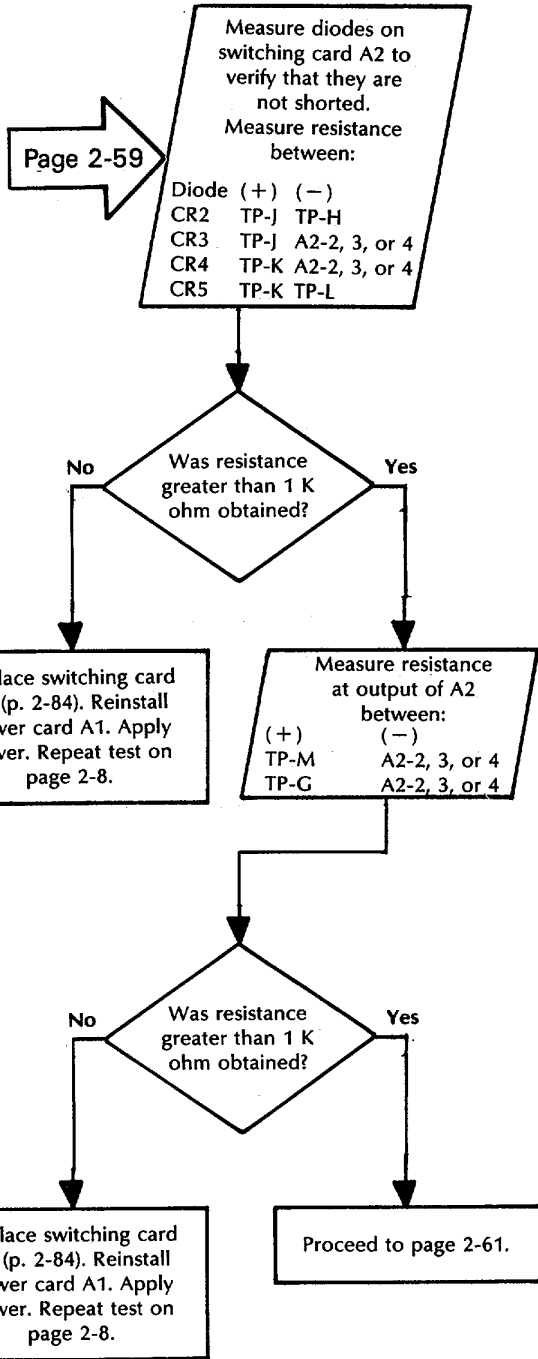


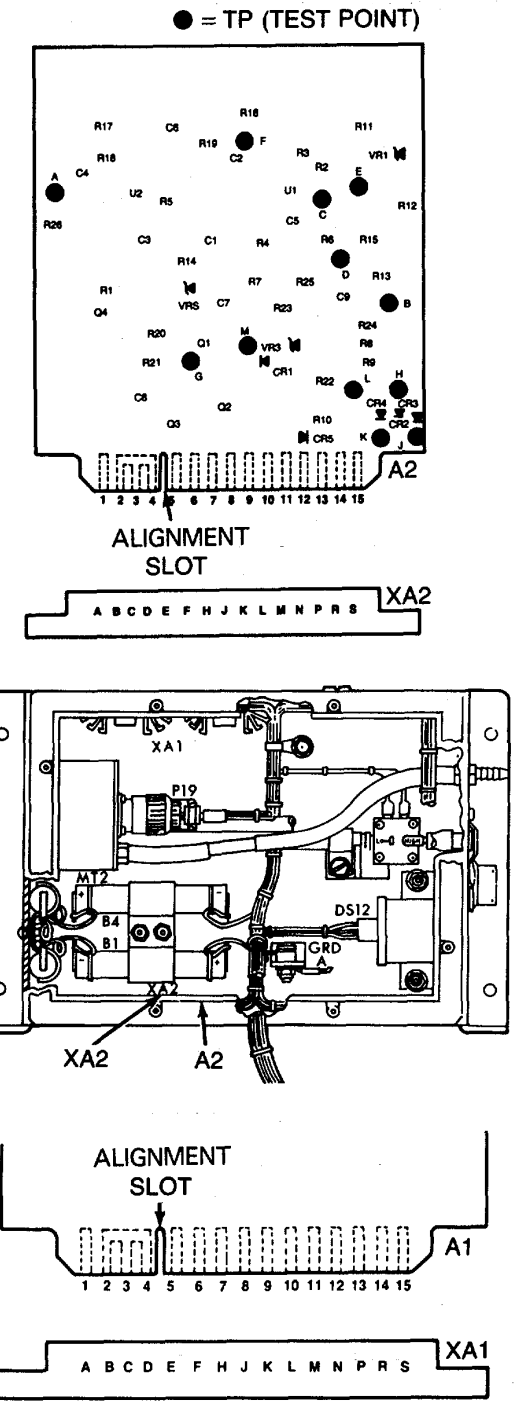
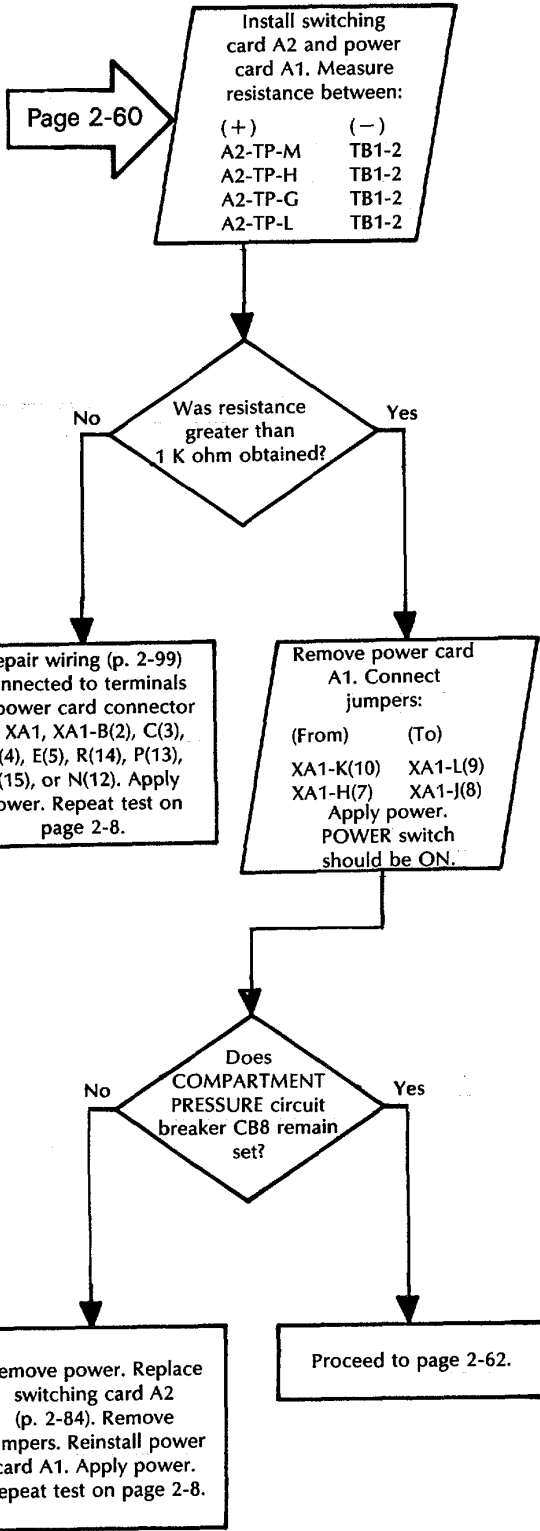
2-6. TROUBLESHOOTING PROCEDURES (CONT).



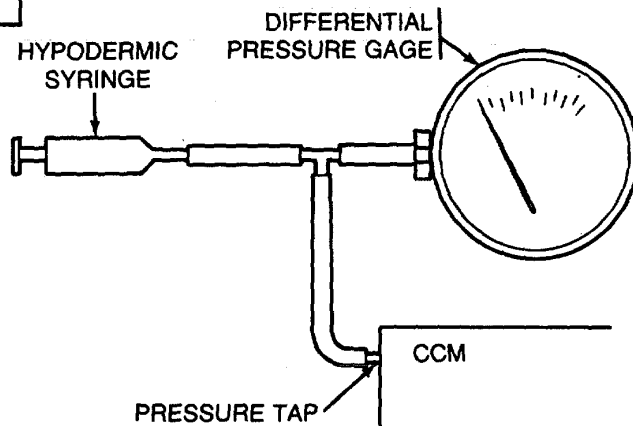
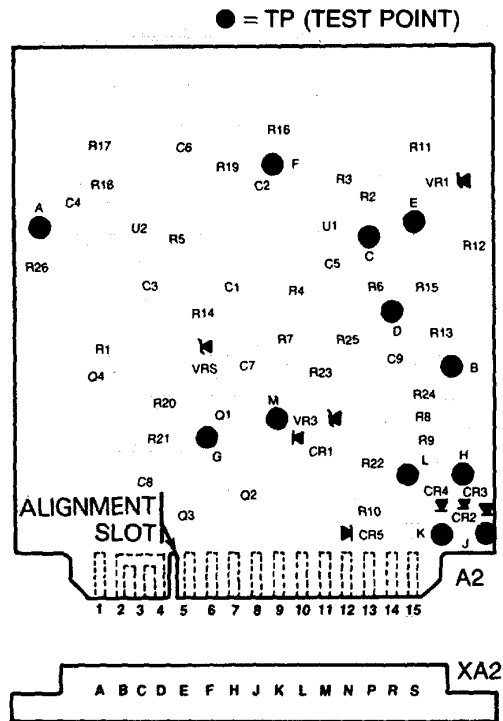
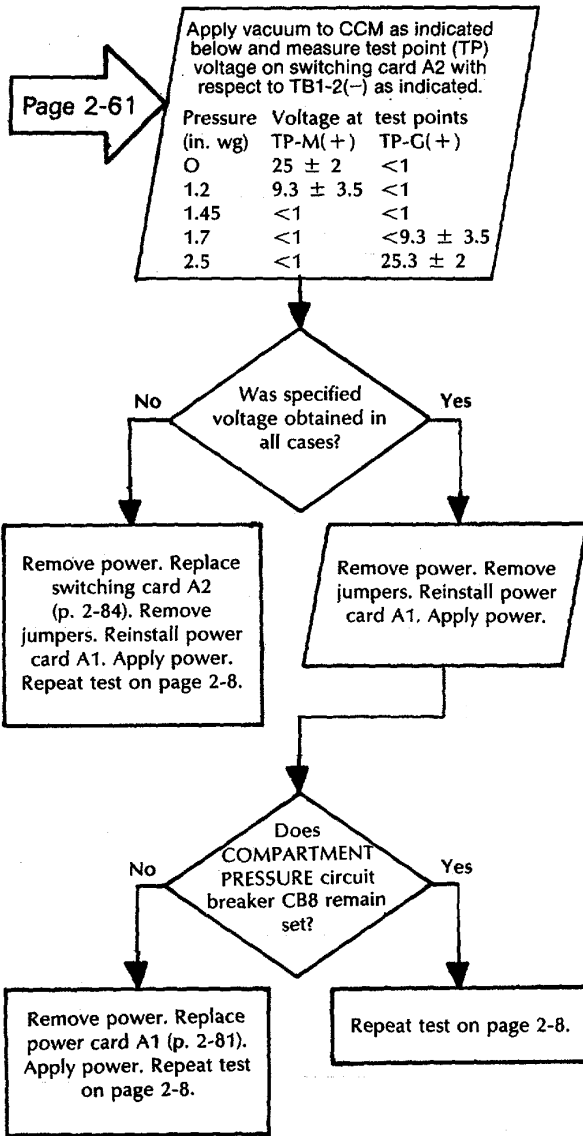


2-6. TROUBLESHOOTING PROCEDURES (CONT).

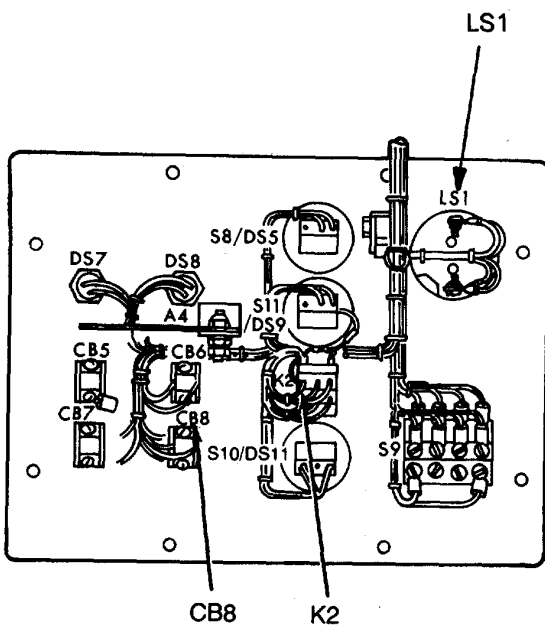




2-6. TROUBLESHOOTING PROCEDURES (CONT).



Page 2-8



HORN OFF button does NOT reset when COMPARTMENT PRESSURE circuit breaker CB8 is pressed and applied vacuum to CCM is 2.2 in. wg.

Is MASK switch/indicator light S10/DS11 on?

No
Set POWER switch to OFF and then back ON again to remove electrical latch on HORN OFF switch.

Yes
Remove power. Replace switching card A2 (p. 2-84). Apply power. Repeat test on page 2-8.

Does warning horn LS1 sound?

No
Remove power. Remove screws on CCM panel and lift open for access to components. Disconnect jumper wire at K2-B-NO. Apply power.

Yes
Remove power. Remove screws on CCM panel and lift open for access to components. Remove wire 40 at CB8-3. Apply power.

Does HORN OFF button stay popped out?

No
Remove power. Replace HORN OFF switch K2 (p. 2-95). Apply power. Repeat test on page 2-8.

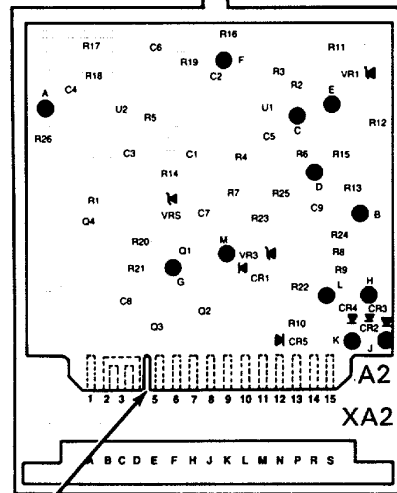
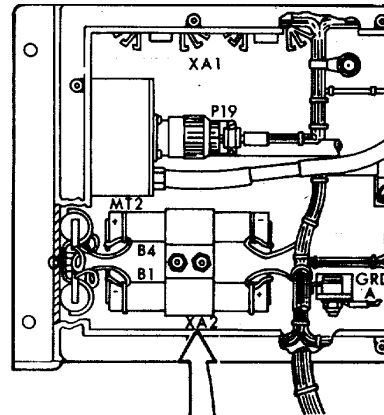
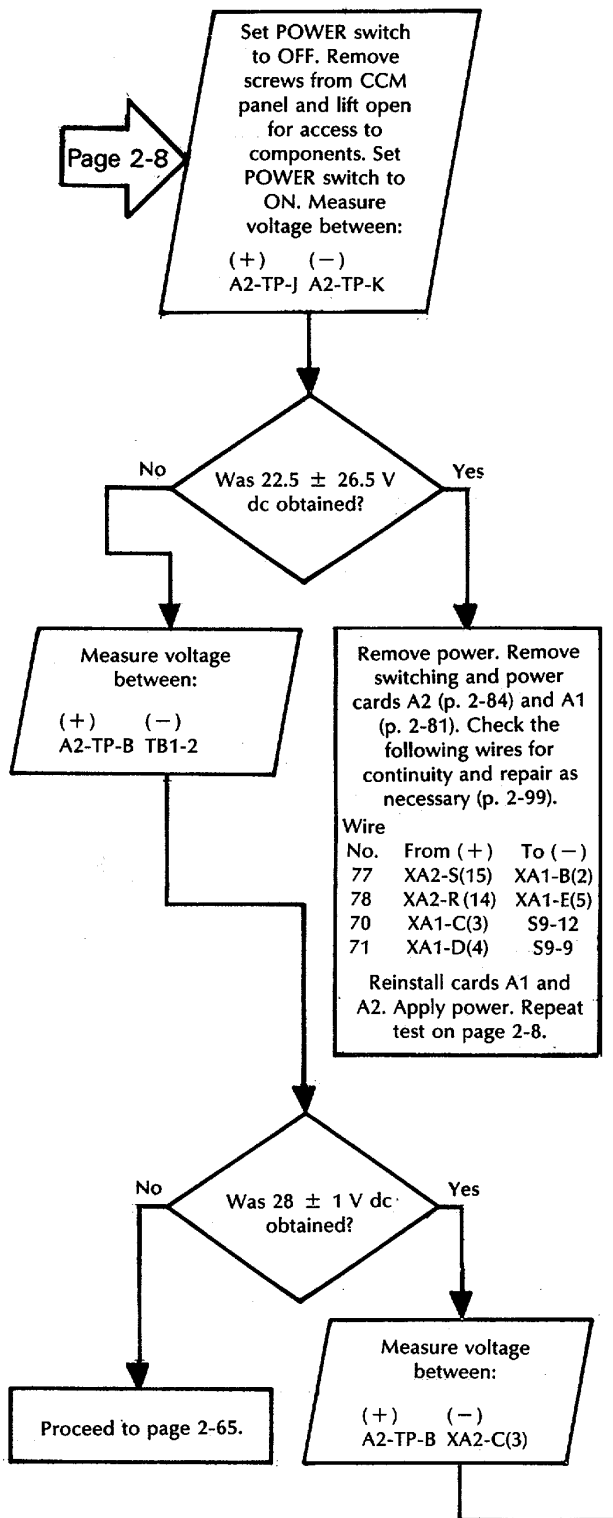
Yes
Remove power. Repair jumper wire from K2-X2 to K2-B-NO (p. 2-99). Apply power. Repeat test on page 2-8.

Does warning horn LS1 sound?

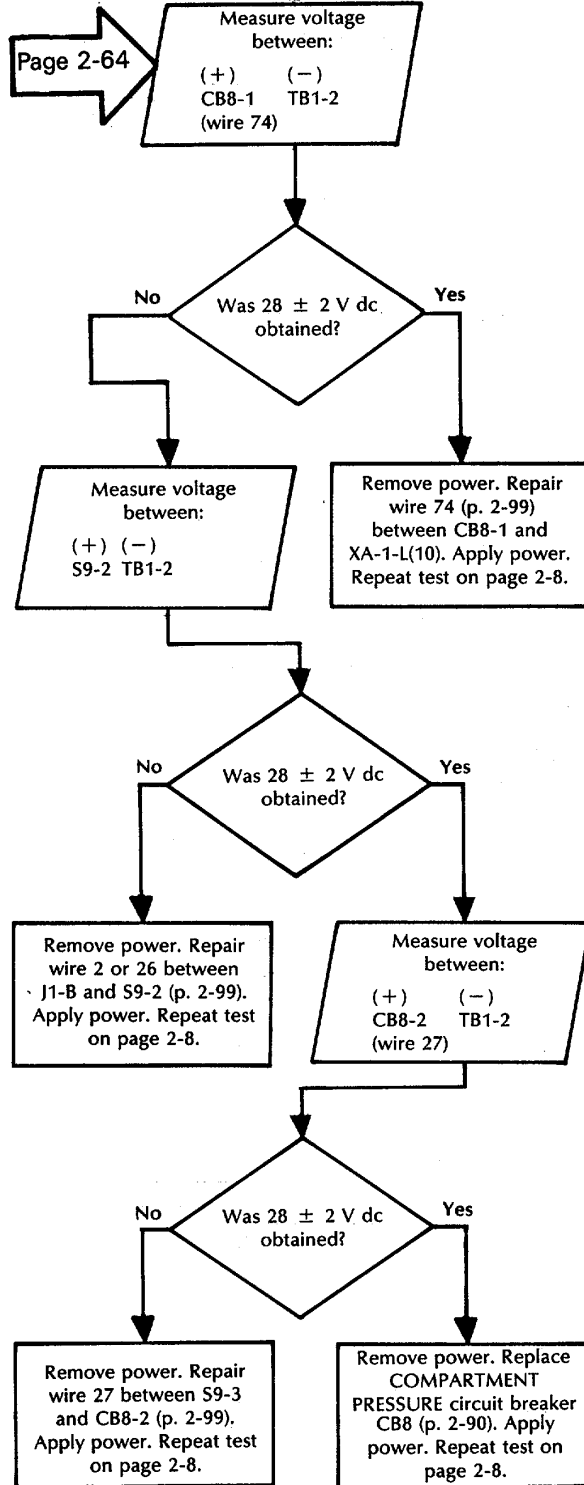
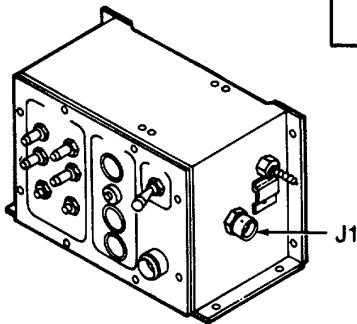
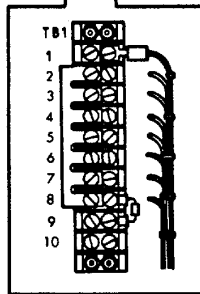
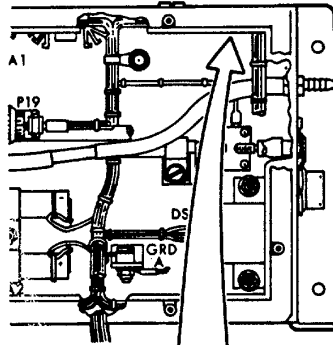
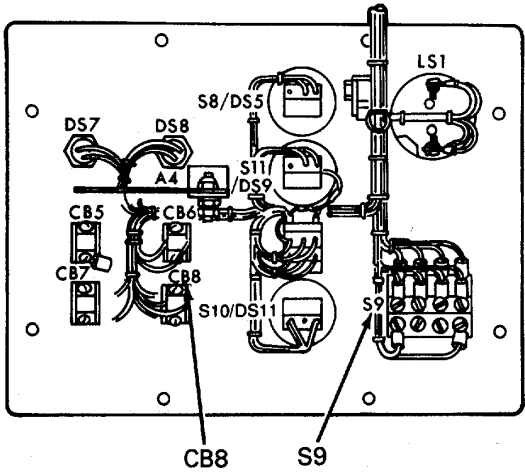
No
Remove power. Replace COMPARTMENT PRESSURE circuit breaker CB8 (p. 2-90). Apply power. Repeat test on page 2-8.

Yes
Remove power. Repair wiring 40 and/or 39 between K2-B-C and A4-1 and CB8-3 (p. 2-99). Apply power. Repeat test on page 2-8.

2-6. TROUBLESHOOTING PROCEDURES (CONT).



ALIGNMENT SLOT ● = TP (TEST POINT)



2-6. TROUBLESHOOTING PROCEDURES (CONT).

Page 2-9, 2-12, or 2-64

Remove power. Disconnect (plug connector) P19 at transmitter. Apply power. Measure voltage at pressure transmitter plug sockets.

(+) (-)
P19-A P19-B

Was 27 ± 2 V dc obtained?

No

Yes

Measure voltage between:

(+) (-)
XA2-E(5) TB1-2

Remove power. Connect plug P19. Apply power. Measure A2-TP-A voltage with respect to TB1-2(-) at indicated vacuum.

CCM vacuum (in. wg)	A2-TP-A(+) (volts)
0.00	$0.00 \pm .15$
1.2	$2.46 \pm .15$
1.45	$2.90 \pm .15$
1.7	$3.40 \pm .15$
2.5	$5.0 \pm .15$

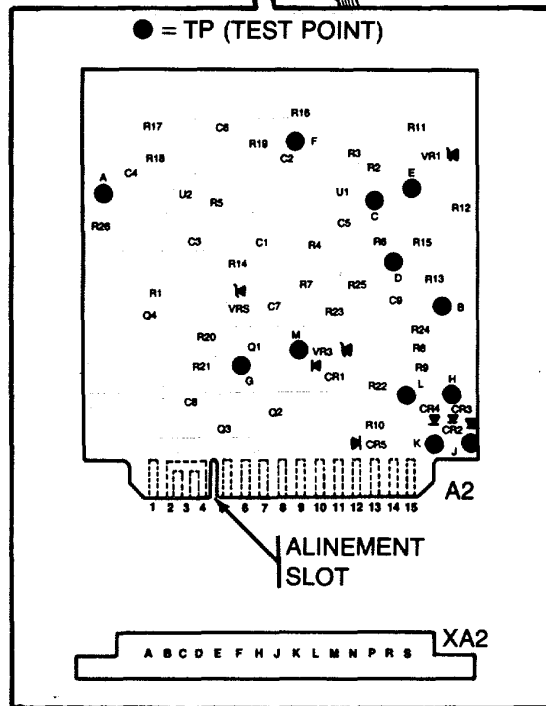
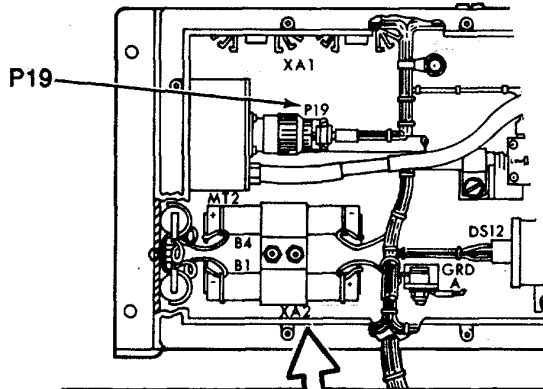
Was voltage within proper limits?

No

Yes

Proceed to page 2-67.

Proceed to page 2-68.



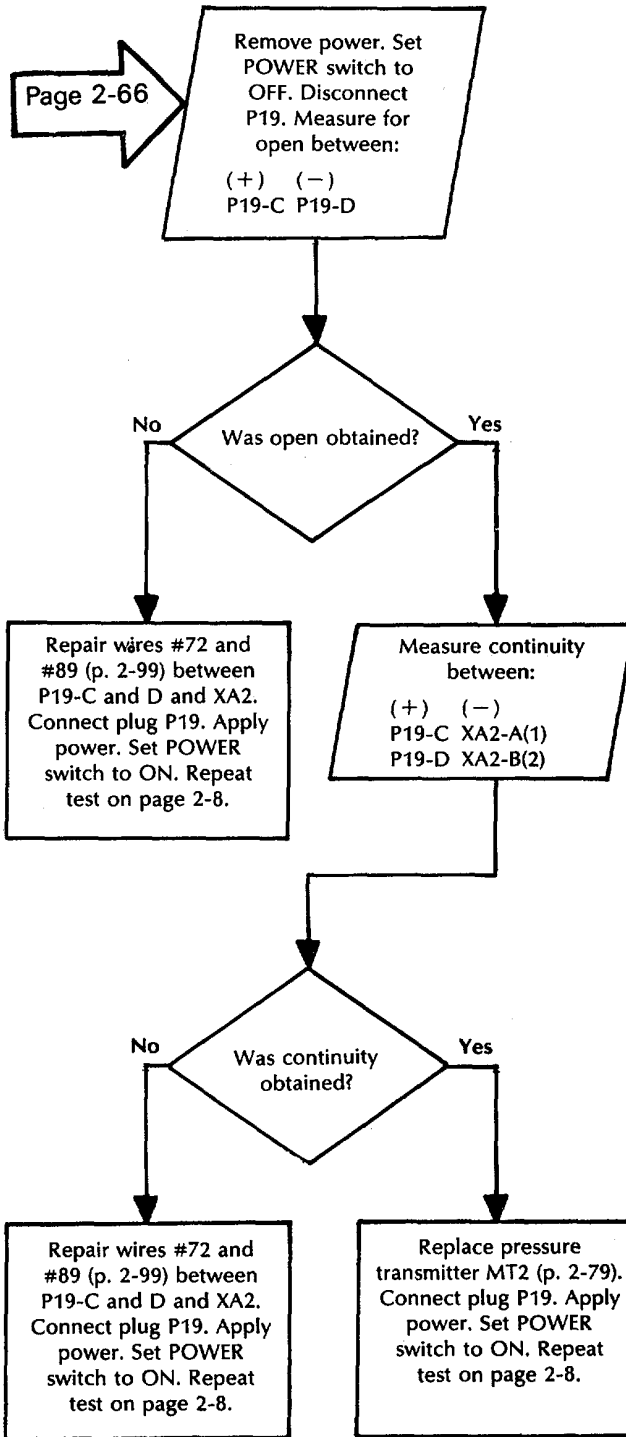
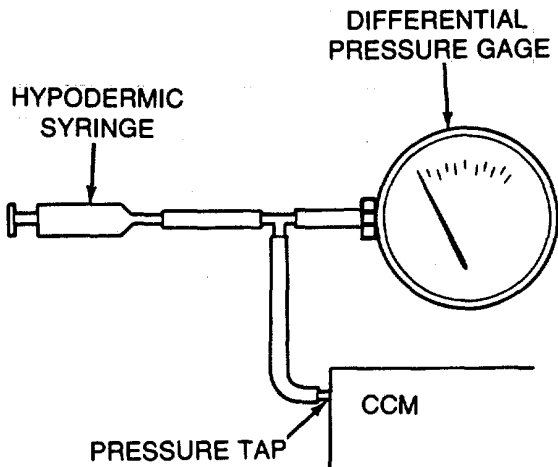
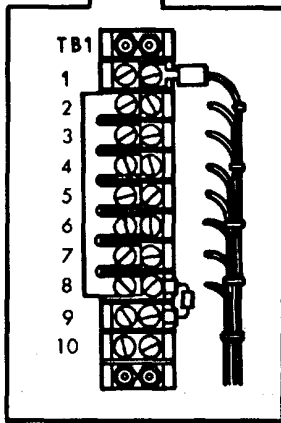
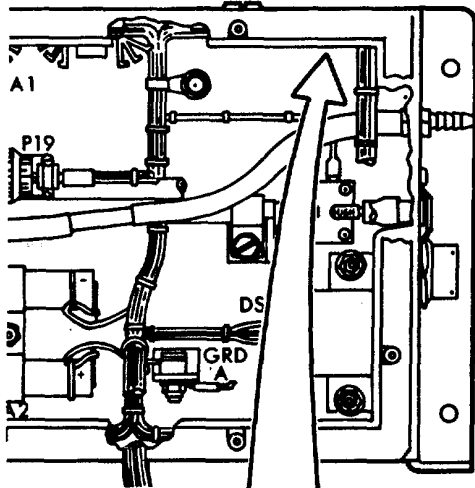
Was 27 ± 2 V dc obtained?

No

Yes

Remove power. Replace switching card A2 (p. 2-84). Connect plug P19. Apply power. Repeat test on page 2-8.

Remove power. Repair wires #81 and #83 to P19-A and P19-B (p.2-99). Connect P19 to transmitter. Apply power. Repeat test on page 2-8.



2-6. TROUBLESHOOTING PROCEDURES (CONT).

Page 2-66

Set POWER switch to OFF. Remove power. Remove switching card A2 (p. 2-84). Measure diodes on switching card to verify that they are not shorted. Measure resistance between:

Diode	(+)	(-)
CR2	TP-J	TP-H
CF3	TP-J	A2-2, 3, or 4
CR4	TP-K	A2-2, 3, or 4
CR5	TP-K	TP-L

Was resistance greater than 1 K for all measurements?

Replace switching card A2 (p. 2-84). Apply power. Set POWER switch to ON. Repeat test on page 2-8.

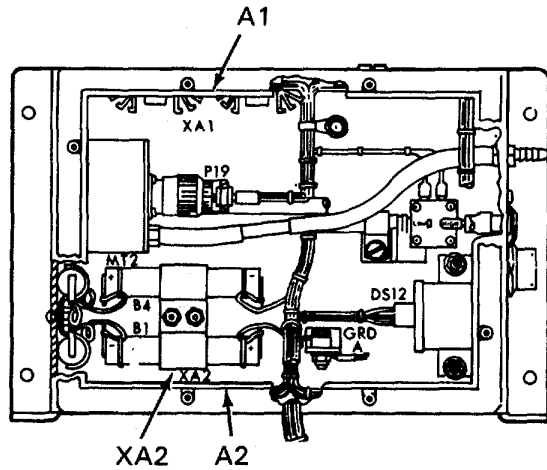
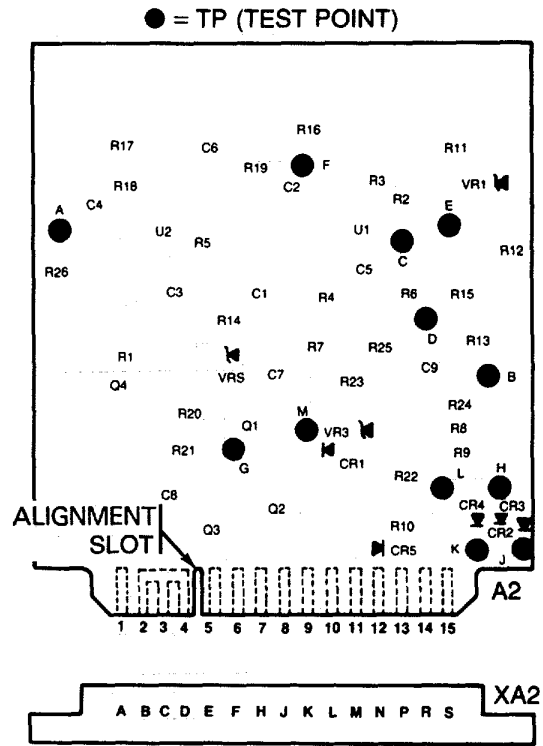
Measure resistance at output of switching card A2 between:

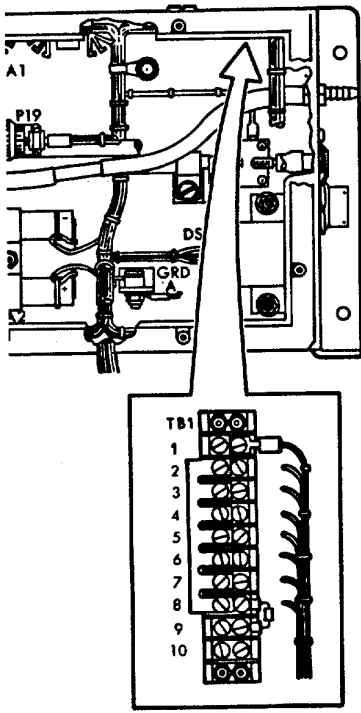
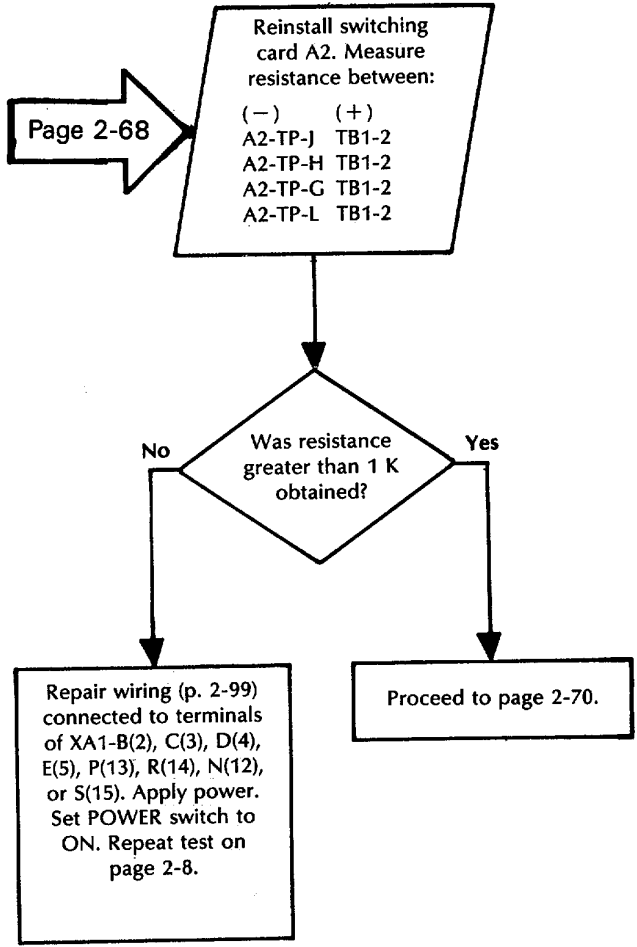
(+)	(-)
A2-TP-M	A2-2, 3, or 4
A2-TP-G	A2-2, 3, or 4

Was resistance greater than 1 K obtained?

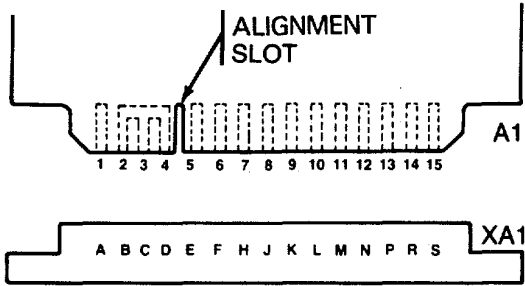
Replace switching card A2 (p. 2-84). Apply power. Set POWER switch to ON. Repeat test on page 2-8.

Proceed to page 2-69.

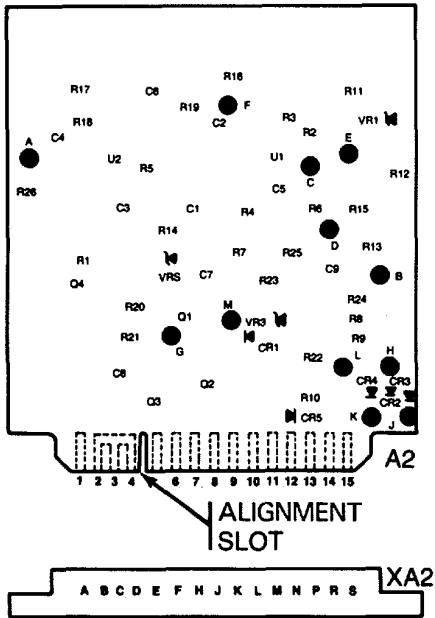




2-6. TROUBLESHOOTING PROCEDURES (CONT).



● = TP (TEST POINT)



Page 2-69



Remove power card A1 (p. 2-81). Connect jumpers:

(From)	(To)
XA1-L(10)	XA1-K(9)
XA1-H(7)	XA1-J(8)

This connection completes the power to the switching card A2 which is normally provided when the power card is installed. The power card A1 is removed so that the switching card is not electrically loaded by a defective power card. Apply power. Set POWER switch to ON and apply vacuum to CCM as indicated below and measure test point (TP) voltage on switching card A2 with respect to TB1-2(-) as indicated:

Vacuum (in. wg)	Voltage at test points TP-M(+)	TP-G(+)
0	25 ± 2	< 1
1.2	9.3 ± 3.5	< 1
1.45	< 1	< 1
1.70	< 1	9.3 ± 3.5
2.5	< 1	25.3 ± 2

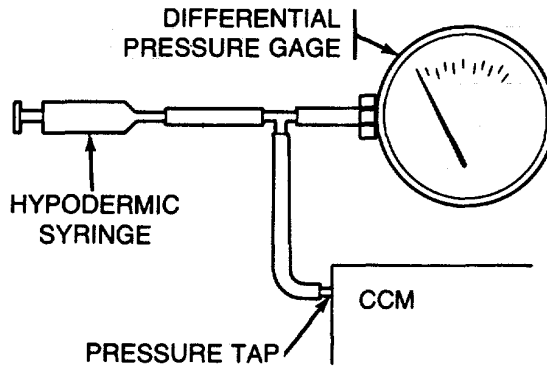
Was the specified voltage obtained in all cases?

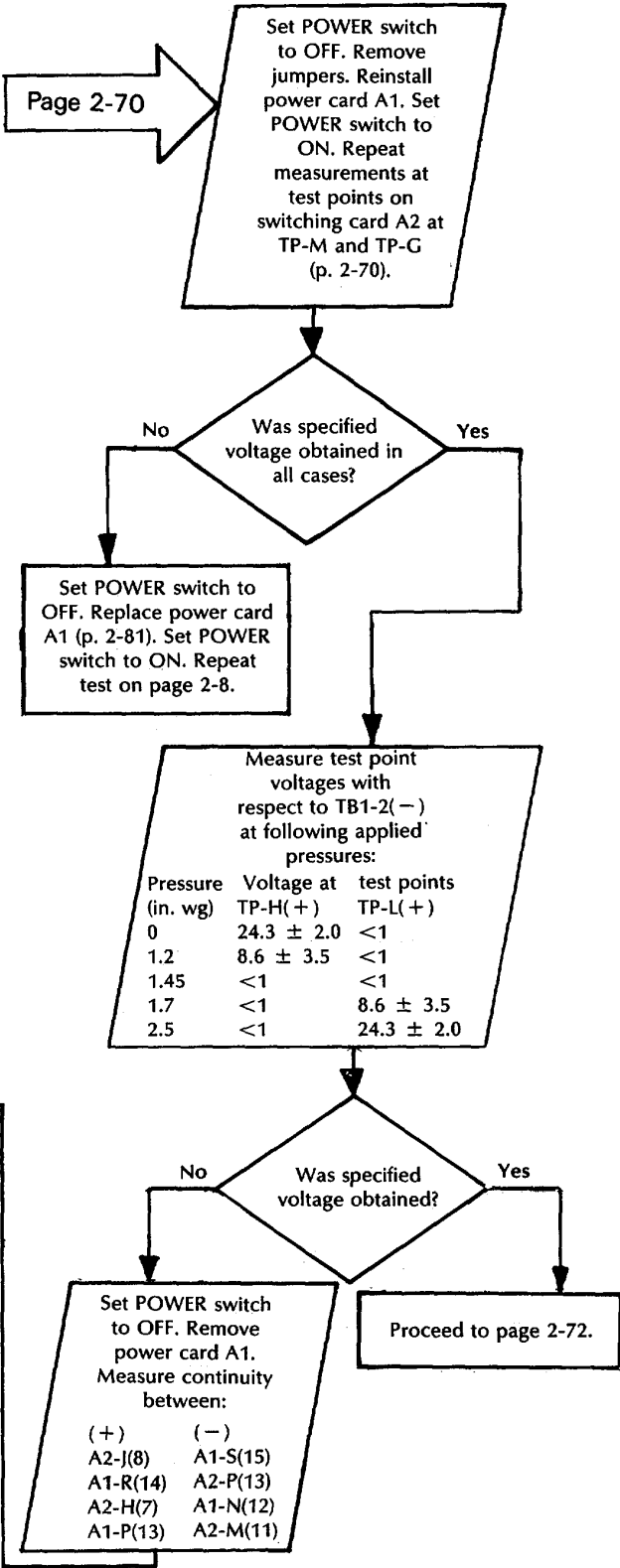
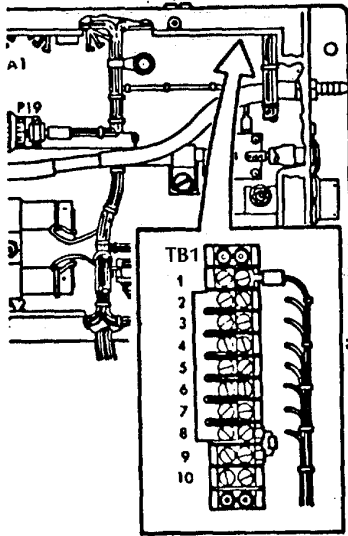
No

Set POWER switch to OFF. Replace the switching card A2 (p. 2-84). Remove jumpers. Reinstall power card A1. Set POWER switch to ON. Repeat test on page 2-8.

Yes

Proceed to page 2-71.



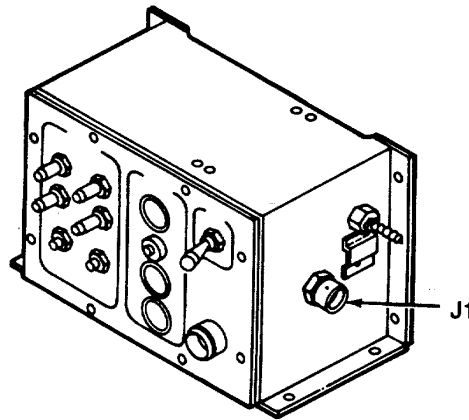
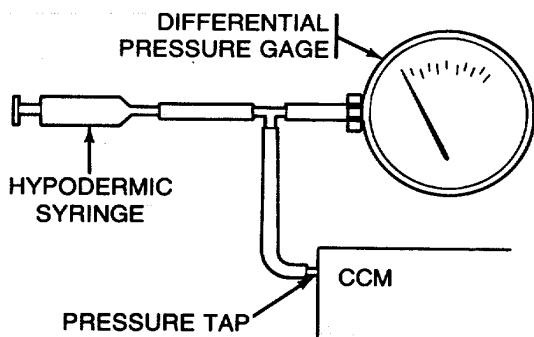
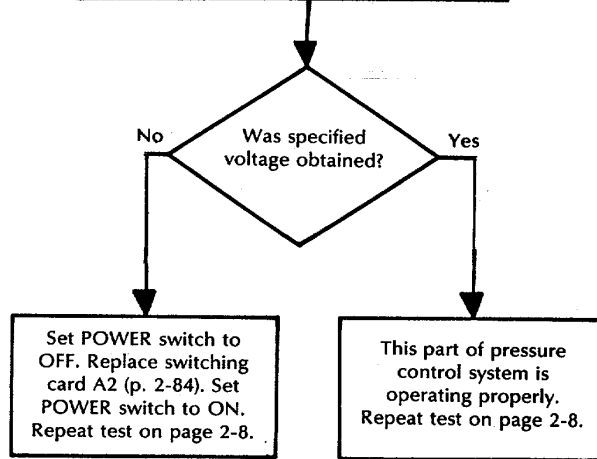
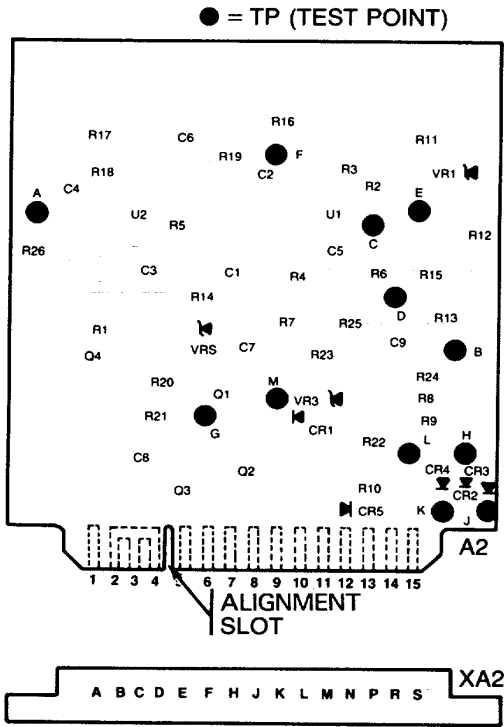


2-6. TROUBLESHOOTING PROCEDURES (CONT).

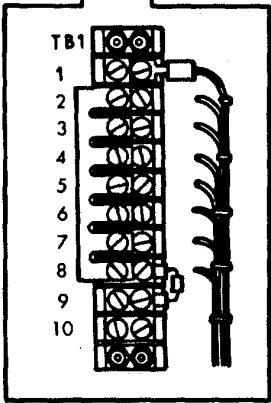
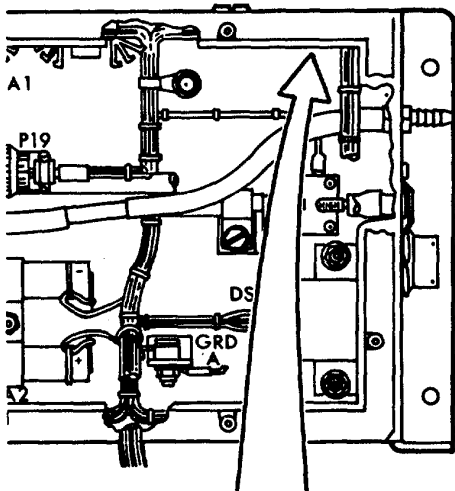
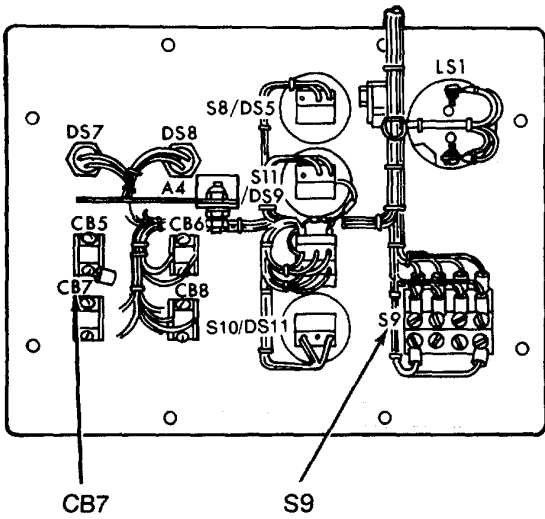
Page 2-71

Measure test point voltages on switching card A2 with respect to TB1-2(-) at following applied pressures:

Pressure (in. wg)	Voltage at test points TP-J(+)	TP-K(+)
0	23.7 ± 2.0	<1
1.2	8.0 ± 3.5	<1
1.45	<1	<1
1.7	<1	8.0 ± 3.5
2.5	<1	23.7 ± 2.0



Page 2-13



28 V dc was not obtained at connector jack J1-D. Set POWER switch to OFF. Remove screws on the CCM panel and lift open for access. Set POWER switch to ON. Measure voltage between:
 (+) CB7-2 (-) TB1-2
 Fan circuit breaker (CB7) terminal 2 has 2 wires on it.

Was 28 ± 2 V dc obtained?

Set POWER switch to OFF. Repair wires #47 and #48 between CB7-2 and S9-3 (p. 2-99). Set POWER switch ON. Repeat test on page 2-13.

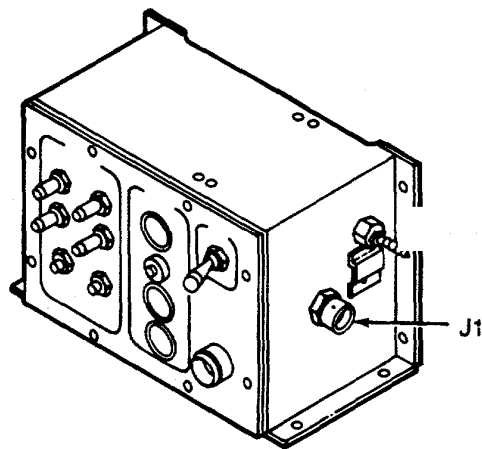
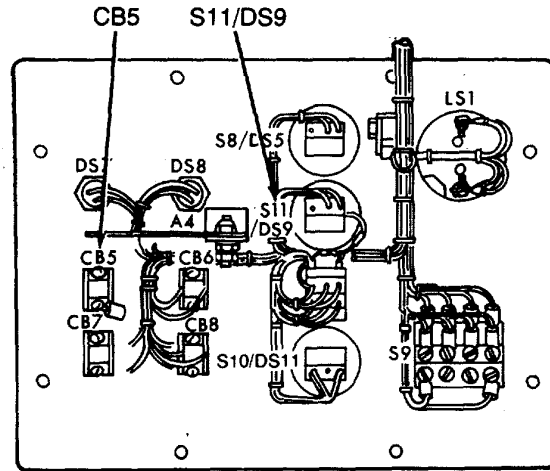
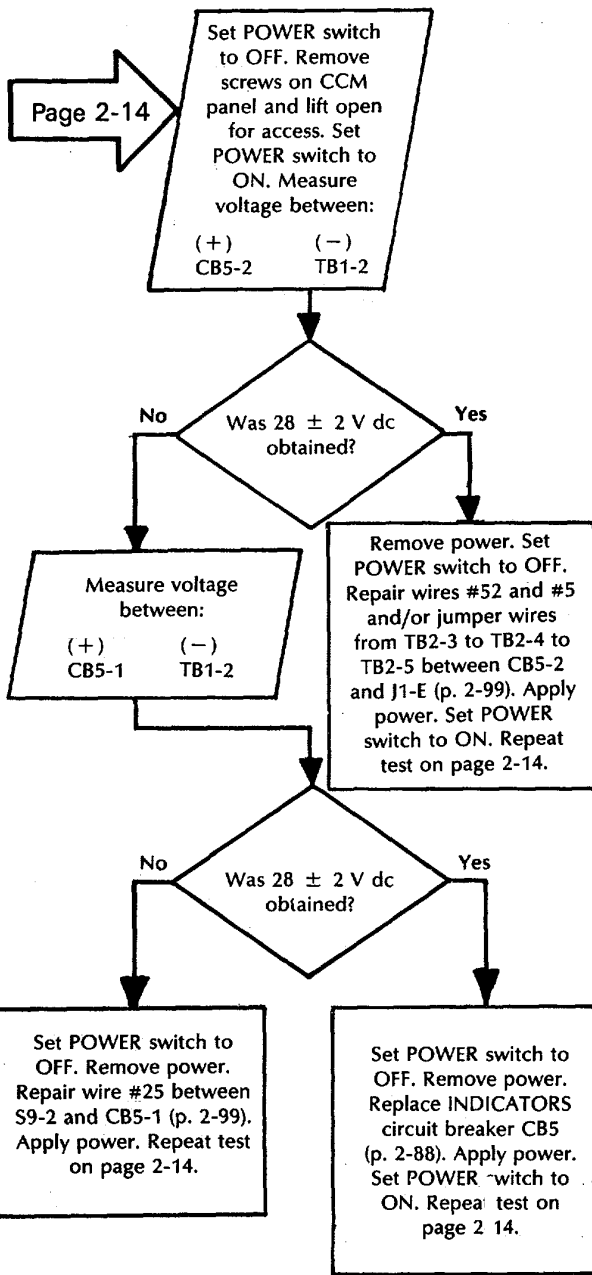
Measure voltage between:
 (+) CB7-1 (-) TB1-2

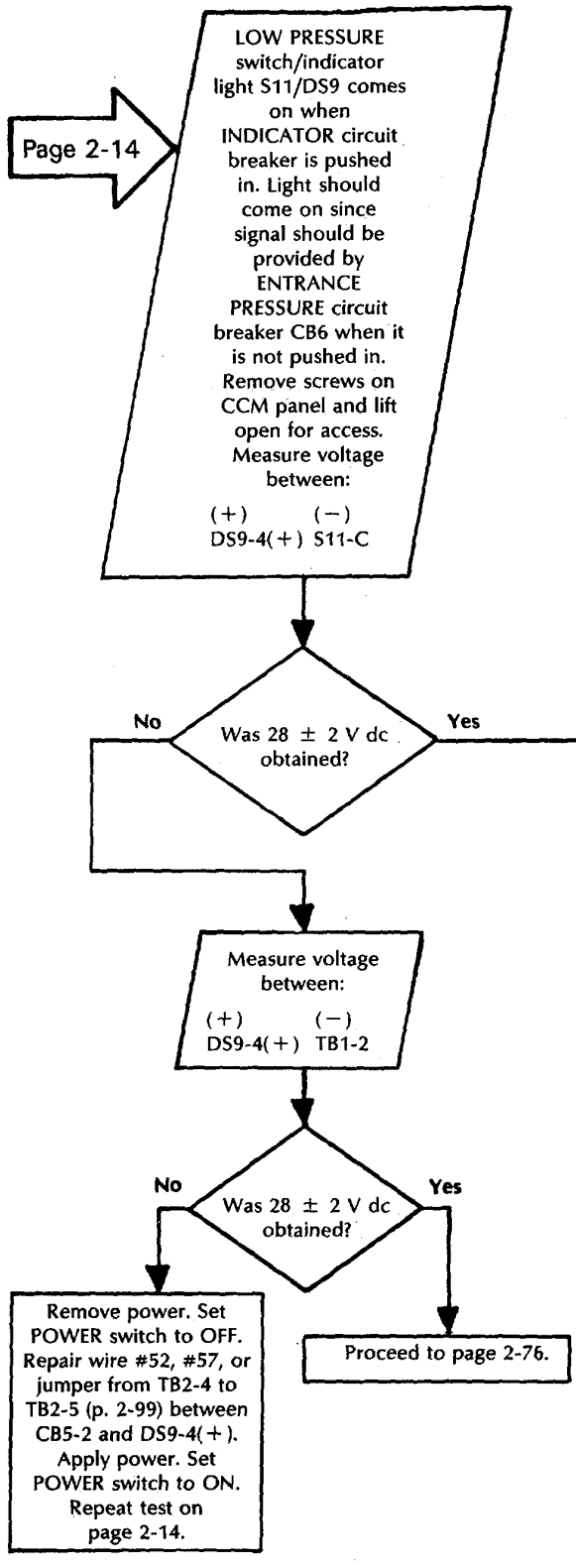
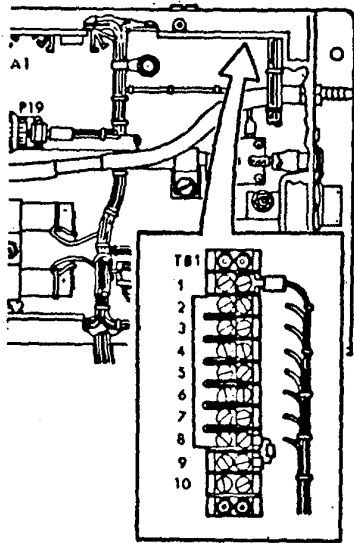
Was 28 ± 2 V dc obtained?

Set POWER switch to OFF. Replace MAIN FAN circuit breaker CB7 (p. 2-91). Set POWER switch to ON. Repeat test on page 2-13.

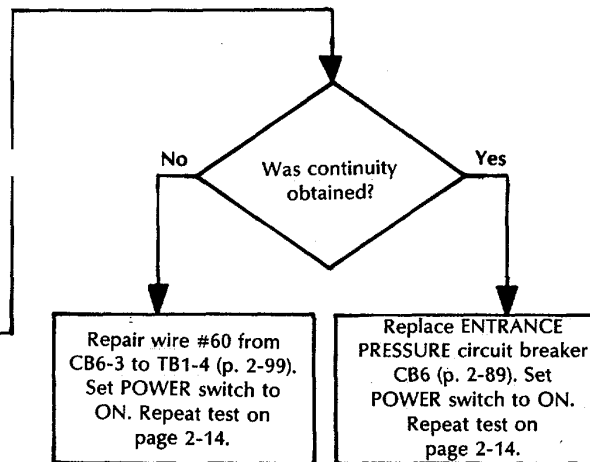
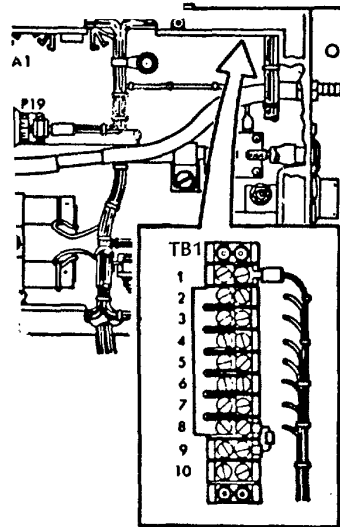
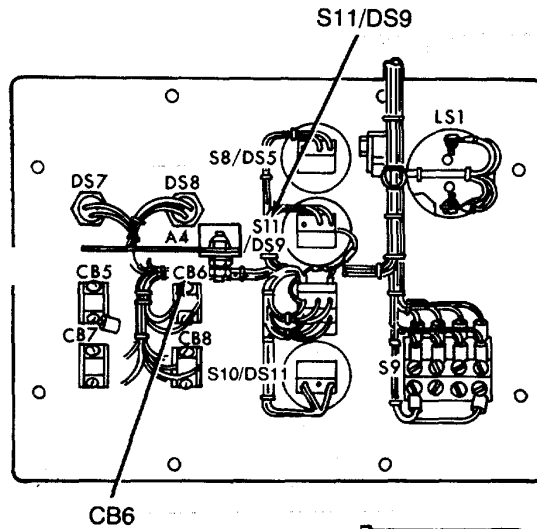
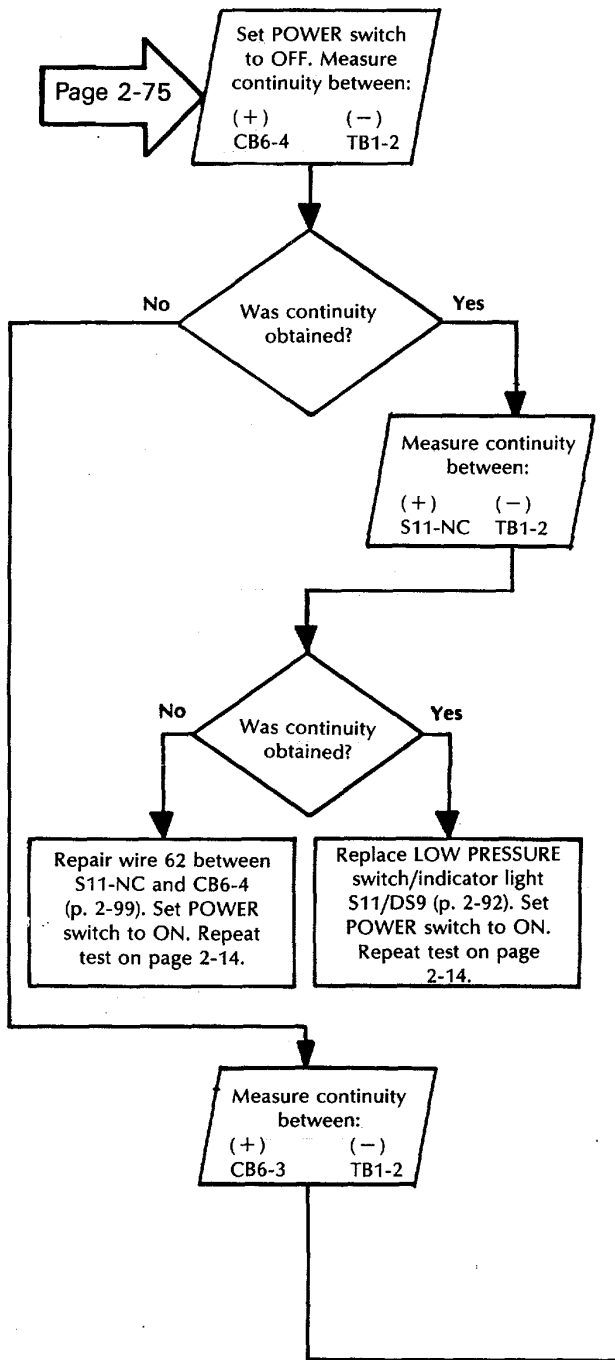
Set POWER switch to OFF. Repair wire #4 between J1-D and CB7-1 (p. 2-99). Set POWER switch to ON. Repeat test on page 2-13.

2-6. TROUBLESHOOTING PROCEDURES (CONT).





2-6. TROUBLESHOOTING PROCEDURES (CONT).



Section III. MAINTENANCE PROCEDURES

2-7. COMPARTMENT CONTROL MODULE.

This task covers the removal, disassembly, repair, reassembly and installation of the following:

- a. Housing/panel (p. 2-77)
- b. Pressure switch S6 (p. 2-78)
- c. Pressure transmitter MT2 (p. 2-79)
- d. Loop clamp (p. 2-80)
- e. Power card A1 (p. 2-81)
- f. Batteries (warning system) (p. 2-81)
- g. Printed circuit assembly A4 (p. 2-82)
- h. Thermal flasher DS12 (p. 2-83)
- i. Switching card A2 (p. 2-84)
- j. Warning horn LS1 (p. 2-85)
- k. DUST FAN DEFECT indicator light DS7 (p. 2-86)
- l. CHANGE FILTER indicator light DS8 (p. 2-87)
- m. INDICATORS circuit breaker CB5 (p. 2-88)
- n. ENTRANCE PRESSURE circuit breaker CB6 (p. 2-89)
- o. COMPARTMENT PRESSURE circuit breaker CB8 (p. 2-90)
- p. MAIN FAN circuit breaker CB7 (p. 2-91)
- q. OCCUPIED switch/indicator light S8/DS5 (p. 2-92, 2-93)
- r. LOW PRESSURE switch/indicator light S11/DS9 (p. 2-93)
- s. MASK switch/indicator light S10/DS11 (p. 2-93)
- t. Diodes CR4 and CR5 (p. 2-94)
- u. HORN OFF switch K2 (p. 2-95)
- v. POWER toggle switch S9 (p. 2-96)
- w. Female hose adapter (p. 2-97)
- x. Male hose adapter (p. 2-98)
- y. Wiring (p. 2-97, 2-99)

INITIAL SETUP

Troubleshooting References

Refer to page 2-3

Equipment Condition

Compartment control module removed from shelter

Materials/Parts

Insulation sleeving (item 1, app C)

Lacing - Tape (item 2, app C)

Tools

Electronic Equipment Tool Kit TK-105/G

References

TB SIG 222

LOCATION	ITEM	ACTION
DISASSEMBLY		
Compartment Control Module CCM	Housing/panel	<ol style="list-style-type: none"> 1. Remove eight screws (1). 2. Pull panel (2) away from housing (3).
<p>Replace gasket (4) if torn or broken.</p>		
REASSEMBLY		
<p>Position panel (2) on housing (3) and secure with eight screws (1).</p>		

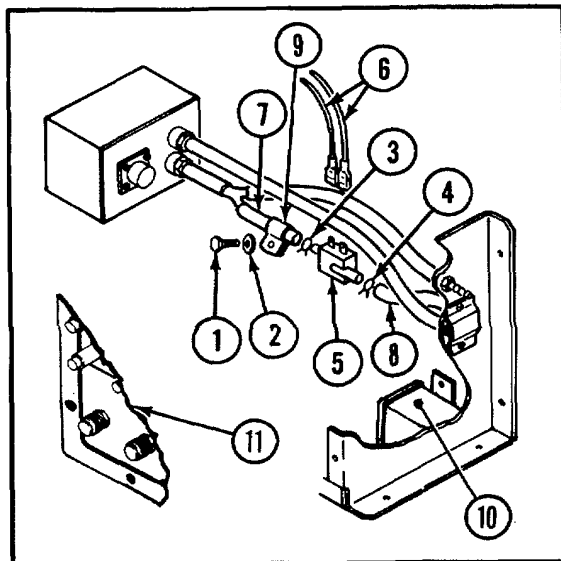
2-7 COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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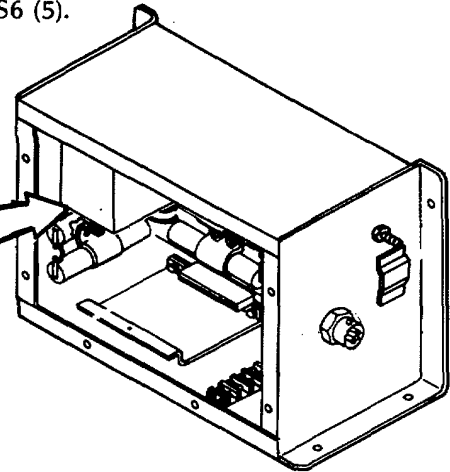
REMOVAL

Housing

Pressure switch S6



1. Disassemble CCM (p. 2-77).
2. Remove screw (1) and washer (2).
3. Remove loop clamp (9).
4. Pinch ears of clamps (3 and 4) and pull tubes from pressure switch S6 (5).
5. Carefully remove connectors (6) from pressure switch S6 (5).

**REPAIR**

Nonmetallic tubing

Replace tubing if torn or broken (item 2, App B, bulk materials). Fabricate replacement tubing (3) (item 2, app B, bulk materials). Cut to same length as tubing being replaced.

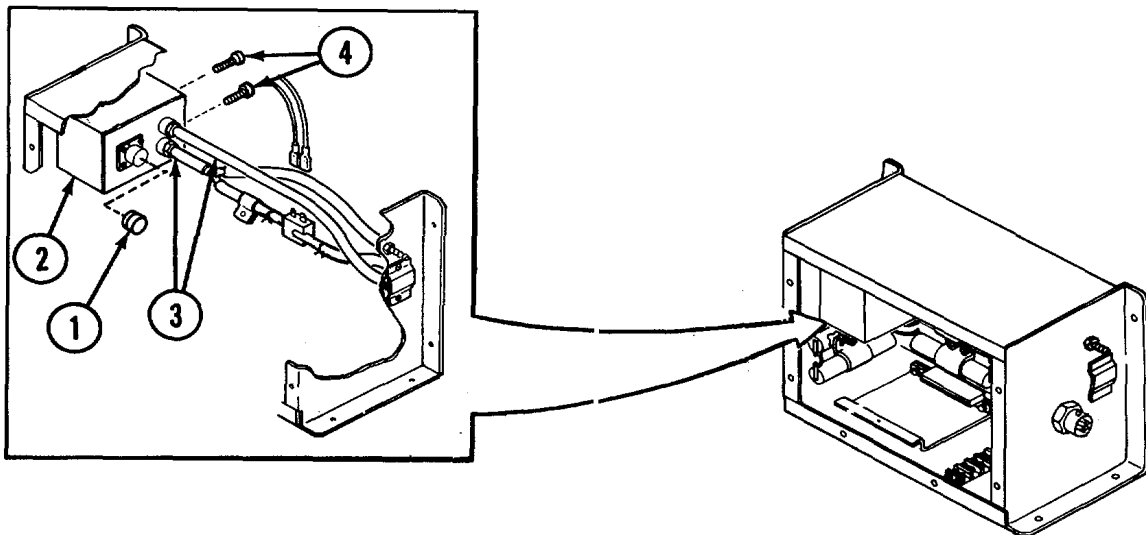
INSTALLATION

1. Install loop clamp (9) on tube (7) if removed.
2. Install hose clamps (3 and 4) on tubes (7 and 8) if removed.
3. Position pressure switch S6 (5) between tubing (7 and 8) with switch terminals pointing away from the thermal flasher DS12 (10) and low and high markings toward the front panel (11).
4. Install tube (7) on low side of switch and tube (8) on high side.
5. Slide hose clamps (3 and 4) over tube connections. Install electrical connectors (6). Refer to wiring diagram (p. 2-99).
6. Install washer (2) and screw (1).
7. Reassemble CCM (p. 2-77).

LOCATION	ITEM	ACTION
REMOVAL		
Housing	Pressure transmitter MT2	<ol style="list-style-type: none"> 1. Disassemble CCM (p. 2-77). 2. Remove connector (1) from pressure transmitter (2). 3. Pull tubing (3) from pressure transmitter (2). 4. Remove two screws (4) and remove pressure transmitter (2).
REPAIR		
	Nonmetallic tubing	<p>Replace tubing if torn or broken (item 2, app B, bulk materials). Fabricate replacement tubing (3) (item 2, app B., bulk materials). Cut to same length as tubing being replaced.</p>
INSTALLATION		
	Pressure transmitter	<ol style="list-style-type: none"> 1. Install pressure transmitter (2) using two screws (4). 2. Connect tubing (3) to pressure transmitter (2). Connect connector (1) to pressure transmitter (2). 4. Reassemble CCM (p. 2-77).

NOTE

When installing rubber tubes, be sure that tube (3) from pressure switch (5) is connected to hose connector marked LOW on pressure transmitter (2) and that other tube (3) is connected to hose connector marked HIGH on pressure transmitter (2).



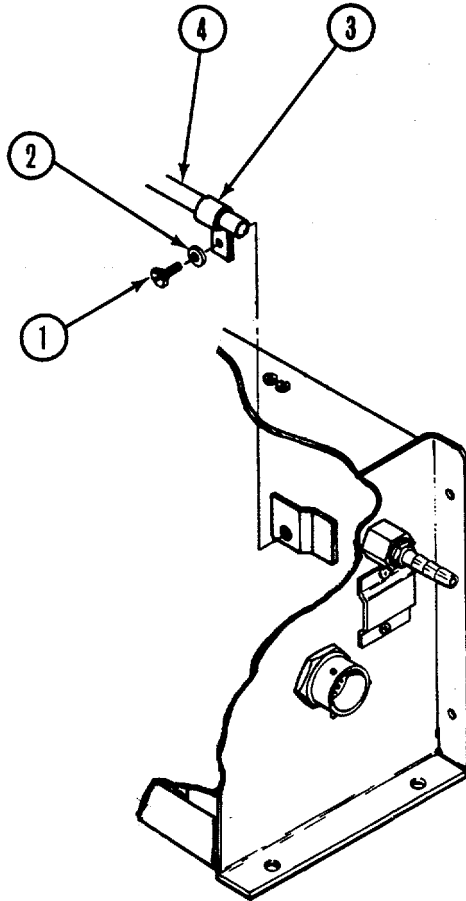
2-7. COMPARTMENT CONTROL MODULE (CONT).

<i>LOCATION</i>	<i>ITEM</i>	<i>ACTION</i>
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REMOVAL

Loop clamp

1. Disassemble CCM (p. 2-77).
2. Remove screw (1) and washer (2) from loop clamp (3).
3. Spread ends of loop clamp (3) and slip over tube (4).
4. Discard loop clamp (2).



INSTALLATION

Loop clamp

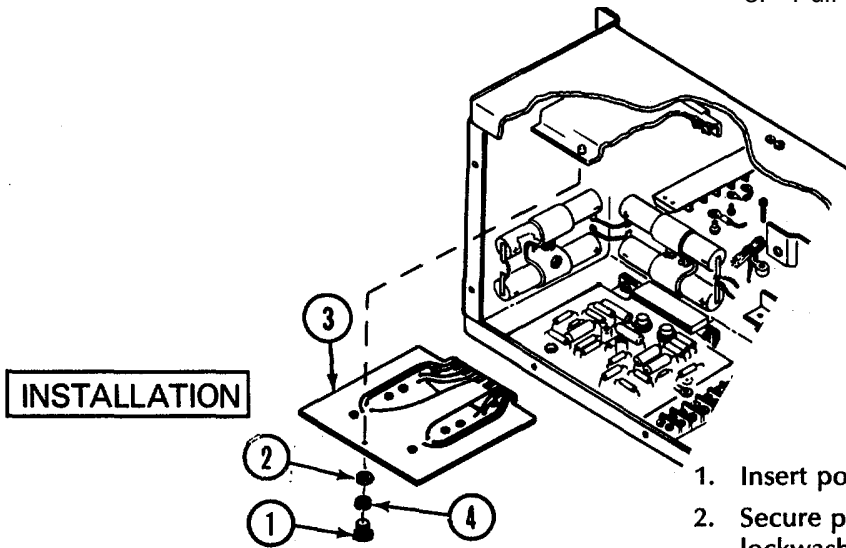
1. Spread ends of replacement loop clamp (3).
2. Slip loop clamp (3) over tube (4).
3. Secure loop clamp (3) with screw (1) and washer (2).

LOCATION	ITEM	ACTION
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REMOVAL
Housing

Power Card A1

1. Disassemble CCM (p. 2-77).
2. Remove screw (1), lockwasher (4), and washer (2)
3. Pull power card A1 (3) from its socket.



INSTALLATION

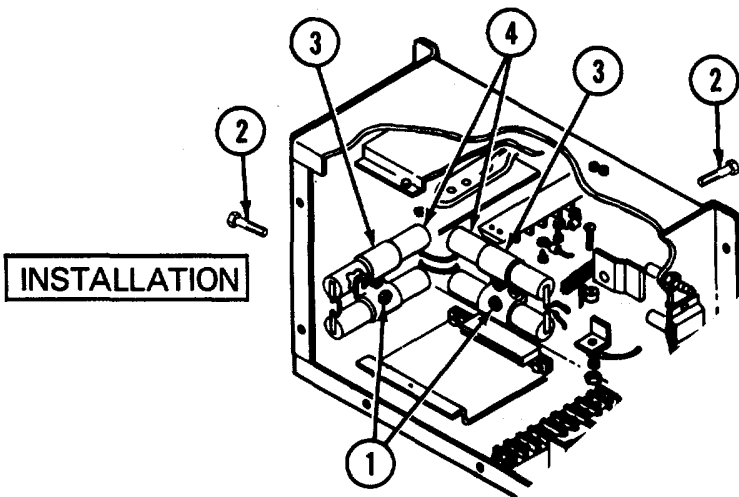
1. Insert power card A1 (3) into connector.
2. Secure power card A1 (3) with screw (1), lockwasher (4), and washer (2).
3. Reassemble CCM (p. 2-77).

REMOVAL

Housing

Batteries (warning system)

1. Disassemble CCM (p. 2-77).
2. Remove four nuts (1) and screws (2).
3. Remove two batter retainers (3).
4. Unsolder and remove four batteries (4).



INSTALLATION

1. Solder connections on four warning system batteries (4). Refer to wiring diagram (p. 2-99).
2. Install and secure the four batteries (4) using two retainers (3), four screws (2), and four nuts (1).
3. Reassemble CCM (p. 2-77).

NOTE

Observe location of batteries for correct installation.

2-7. COMPARTMENT CONTROL MODULE (CONT).

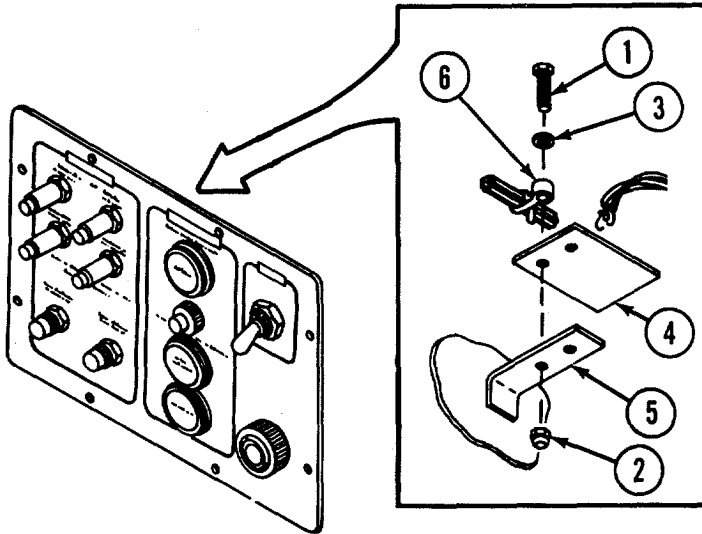
LOCATION	ITEM	ACTION
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REMOVAL

Panel

Printed circuit board A4

1. Disassemble CCM (p. 2-77).
2. Remove two screws (1), nuts (2), and washers (3).
3. Unsolder and tag wires and remove printed circuit board A4 (4).



INSTALLATION

CAUTION

Apply heat sink pliers to leads of diodes when soldering terminals. This action prevents heat damage. Use care to apply only enough heat to form a good solder joint. This applies to all terminals.

1. Connect and solder wires to auxiliary switching printed circuit board A4 (4). Refer to wiring diagram (p. 2-99).
2. Place printed circuit board A4 (4) on bracket (5) and attach using screws (1), washers (3), cable strap (6), and nuts (2).
3. Reassemble CCM (p. 2-77).

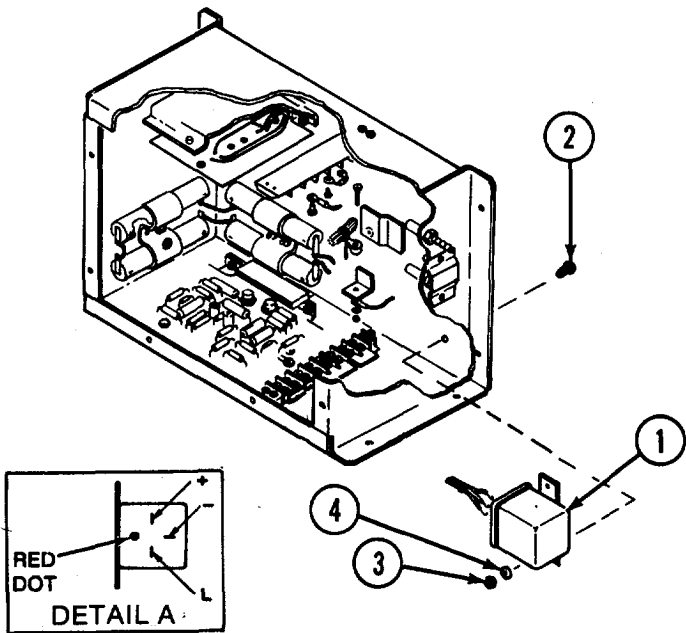
LOCATION	ITEM	ACTION
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REMOVAL

Housing

Thermal flasher DS12

1. Disassemble CCM (p. 2-77).
2. Unsolder and tag wires from thermal flasher DS12 (1).
3. Remove two screws (2), nuts (3), and washers (4).
4. Remove thermal flasher DS12 (1).



INSTALLATION

1. Install thermal flasher DS12 (1) using two screws (2), washers (4), and nuts (3).
2. Connect and solder wires. Refer to detail A and wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

2-7. COMPARTMENT CONTROL MODULE (CONT).

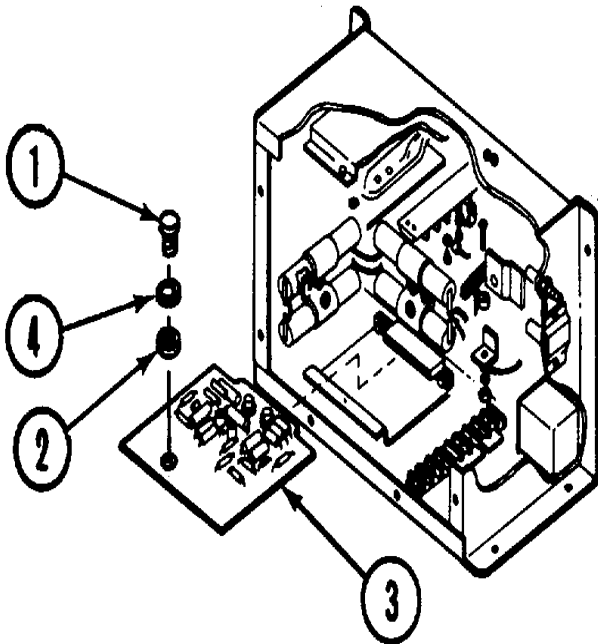
LOCATION	ITEM	ACTION
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REMOVAL

Housing

Switching card A2

1. Disassemble CCM (p. 2-77).
2. Remove screw (1), lockwasher (4), and washer (2).
3. Pull out switching card A2 (3).

**INSTALLATION**

1. Insert switching card (3) into connector.
2. Secure switching card A2 (3) with screw (1), lockwasher (4), and washer (2).
3. Reassemble CCM (p. 2-77).

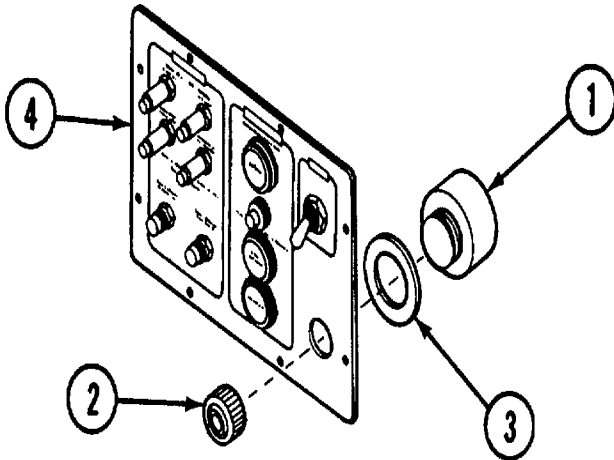
LOCATION	ITEM	ACTION
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REMOVAL

Panel

Warning horn LS1

1. Disassemble CCM (p. 2-77).
2. Remove and tag wires from warning horn LS1 (1).
3. Unscrew bezel (2) and remove warning horn LS1 (1) and gasket (3).



REPAIR

Gasket

Replace gasket if torn or broken. Fabricate replacement gasket (fig D-1, app D).

INSTALLATION

Warning horn LS1

1. Insert warning horn LS1 (1) with gasket (3) in panel (4) and secure with bezel (2).
2. Connect wire leads. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

2-7. COMPARTMENT CONTROL MODULE (CONT).

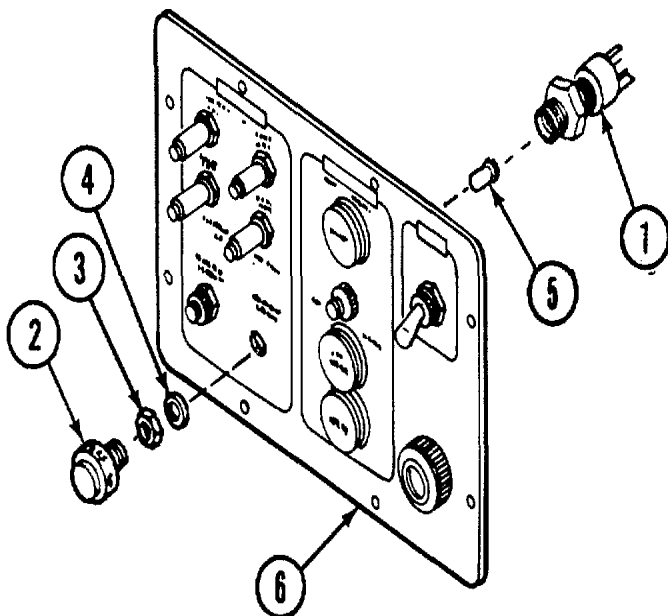
LOCATION	ITEM	ACTION
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REMOVAL

Panel

DUST FAN DEFECT
indicator light DS7

1. Disassemble CCM (p. 2-77).
2. Remove insulation and unsolder and tag wires from terminals on DUST FAN DEFECT indicator light DS7 (1).
3. Unscrew knurled lens (2) and nut (3). Remove washer (4) and indicator light DS7 (1).
4. Remove lamp (5) from lens (2).



INSTALLATION

1. Install lamp (5) in lens (2).
2. Insert DUST FAN DEFECT indicator light DS7 (1) in panel (6) and secure with washer (4) and nut (3).
3. Install knurled lens (2).
4. Slide insulation sleeving (item 1, app C) over wires.
5. Connect and solder wire leads. Refer to wiring diagram (p. 2-99).
6. Slide insulation sleeving over connections and shrink.
7. Reassemble CCM (p. 2-77).

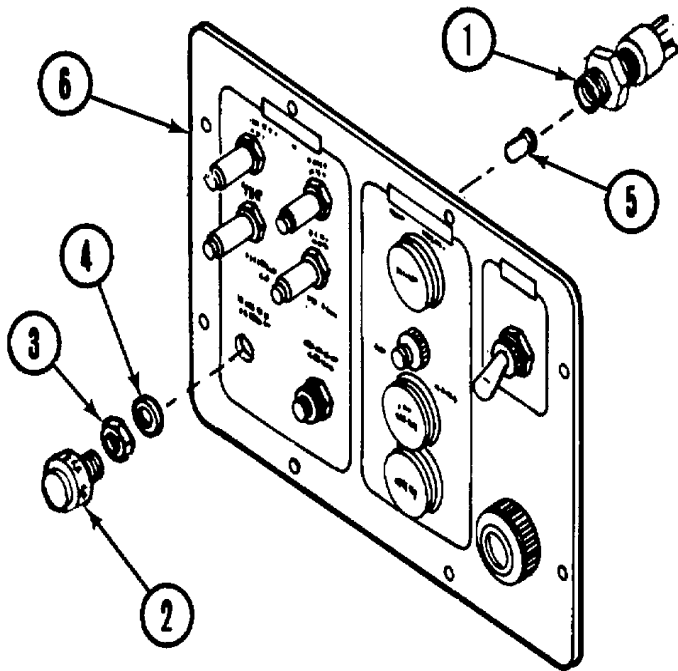
LOCATION	ITEM	ACTION
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REMOVAL

Panel

CHANGE FILTER
indicator light DS8

1. Disassemble CCM (p. 2-77).
2. Remove insulation and unsolder and tag wires from terminals on CHANGE FILTER indicator light DS8 (1).
3. Unscrew knurled lens (2) and nut (3). Remove washer (4) and indicator light DS8 (1).
4. Remove lamp (5) from lens (2).



INSTALLATION

1. Install lamp (5) in lens (2).
2. Insert CHANGE FILTER indicator light DS8 (1) in panel (6) and secure with washer (4) and nut (3).
3. Install knurled lens (2).
4. Slide insulation sleeving (item 1, app C) over wires.
5. Connect and solder wire leads. Refer to wiring diagram (p. 2-99).
6. Slide insulation sleeving over connections and shrink.
7. Reassemble CCM (p. 2-77).

2-7. COMPARTMENT CONTROL MODULE (CONT).

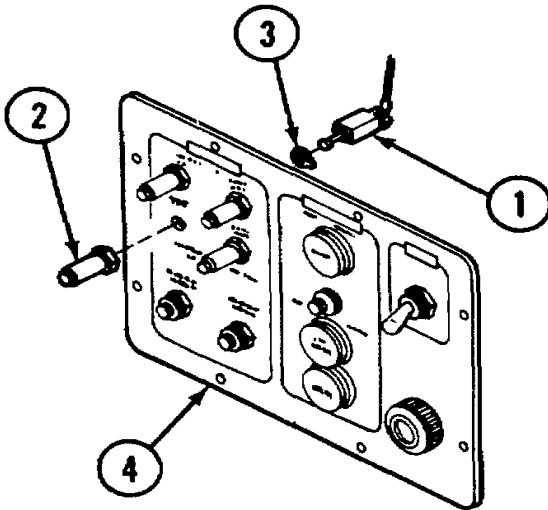
<i>LOCATION</i>	<i>ITEM</i>	<i>ACTION</i>
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REMOVAL

Panel

INDICATORS circuit breaker CB5

1. Disassemble CCM (p. 2-77).
2. Remove and tag wire leads from INDICATORS circuit breaker CB5 (1).
3. Unscrew and remove waterproof boot (2), if present.
4. Remove INDICATORS circuit breaker CB5 (1) and keying washer (3).



INSTALLATION

1. Insert INDICATORS circuit breaker CB5 (1) with keying washer (3) in panel (4) and secure with waterproof boot (2), if necessary.
2. Connect wire leads. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

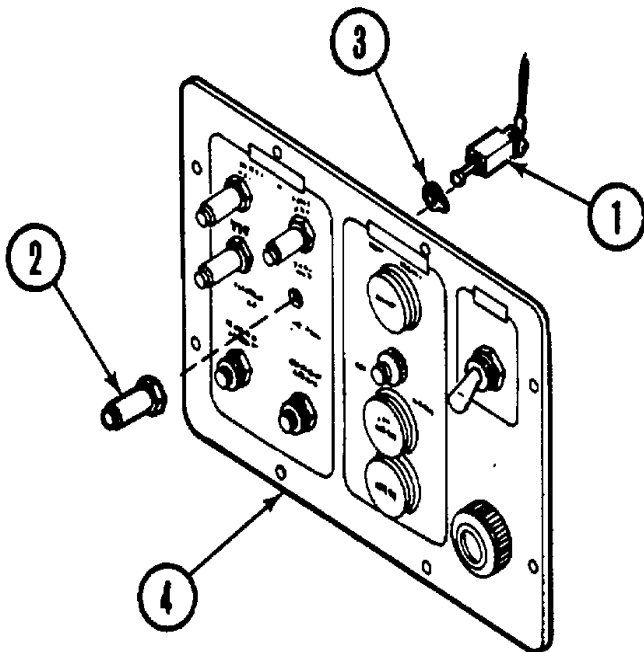
LOCATION	ITEM	ACTION
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REMOVAL

Panel

ENTRANCE PRESSURE
circuit breaker CB6

1. Disassemble CCM (p. 2-77).
2. Remove and tag wire leads from ENTRANCE PRESSURE circuit breaker CB6 (1).
3. Unscrew and remove waterproof boot (2), if present.
4. Remove circuit breaker CB6 (1) and keying washer (3).



INSTALLATION

1. Insert ENTRANCE PRESSURE circuit breaker CB6 (1) with keying washer (3) in panel (4) and secure with waterproof boot (2), if necessary.
2. Connect wire leads. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

2-7. COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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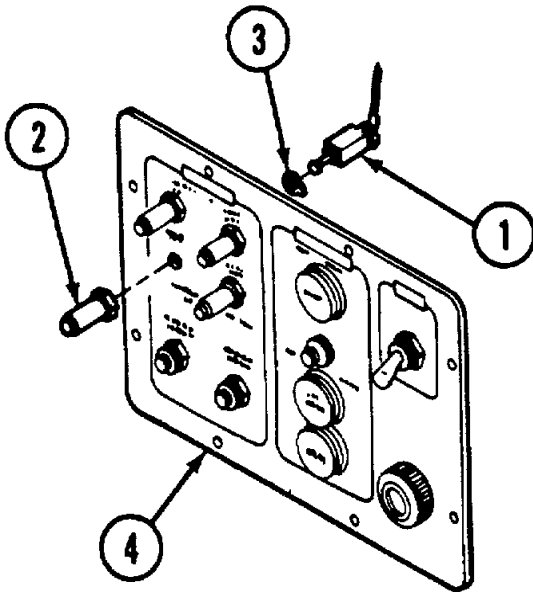
REMOVAL

Panel

COMPARTMENT
PRESSURE
circuit breaker

CB8

1. Disassemble CCM (p. 2-77).
2. Remove and tag wire leads from COMPARTMENT PRESSURE circuit breaker CB8 (1).
3. Unscrew and remove waterproof boot (2), if present.
4. Remove COMPARTMENT PRESSURE circuit breaker CB8 (1) and keying washer (3).



INSTALLATION

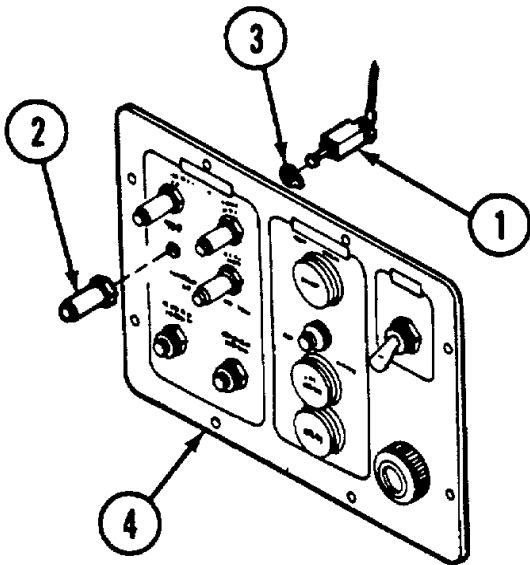
1. Insert COMPARTMENT PRESSURE circuit breaker CB8 (1) with keying washer (3) in panel (4) and secure with waterproof boot (2), if necessary.
2. Connect wire leads. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

LOCATION	ITEM	ACTION
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REMOVAL

MAIN FAN circuit
breaker CB7

1. Disassemble CCM (p. 2-77).
2. Remove and tag wire leads from MAIN FAN circuit breaker CB7 (1).
3. Unscrew and remove waterproof boot (2), if present.
4. Remove MAIN FAN circuit breaker CB7 (1) and keying washer (3).



INSTALLATION

1. Insert MAIN FAN circuit breaker CB7 (1) with keying washer (3) in panel (4) and secure with waterproof boot (2), if necessary.
2. Connect wire leads. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

2-7. COMPARTMENT CONTROL MODULE (CONT).

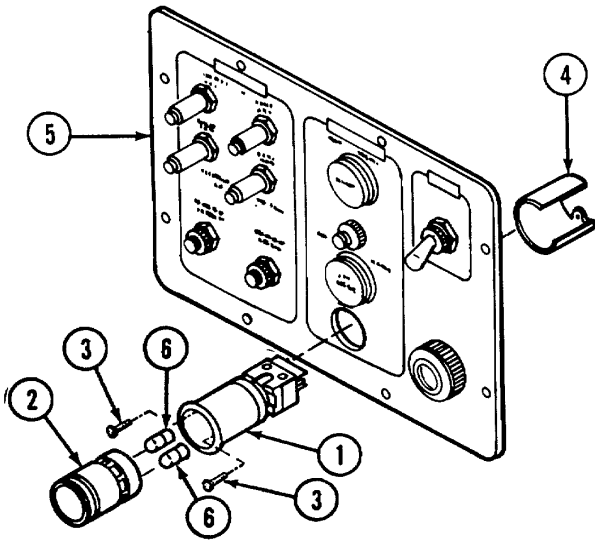
LOCATION	ITEM	ACTION
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REMOVAL

Panel

OCCUPIED
switch/indicator
light S8/DS5

1. Disassemble CCM (p. 2-77).
2. Unsolder and tag wire leads from OCCUPIED switch/indicator light S8/DS5. Remove lacing tape
3. Pry out and remove lamp module (2).
4. Remove two screws (3).
5. Remove sleeve (4) and housing (1).
6. Remove lamps (6) from module.



LOW PRESSURE
switch/indicator
light S11/DS9

Same as OCCUPIED switch/indicator light S8/DS5.

MASK switch/indicator
light S10/DS11

Same as OCCUPIED switch/indicator light S8/DS5.

LOCATION	ITEM	ACTION
INSTALLATION		
Panel	OCCUPIED switch/indicator light S8/DS5	<ol style="list-style-type: none"> 1. Remove module (2), screws (3), and sleeve (4) from switch/indicator light S8/DS5 2. Insert housing (1) in panel (5). 3. Place sleeve (4) over housing and install but do not tighten screws (3). <p style="text-align: center;">NOTE</p> <p>Lamp module is keyed into housing at only one rotational position. It may be necessary to turn the lamp module within the housing to find the keyway.</p>
	LOW PRESSURE switch/indicator light S11/DS9	Same as OCCUPIED switch/indicator light S8/DS5.
	MASK switch/indicator light S100/DS11	Same as OCCUPIED switch/indicator light S8/DS5.

4. Place module (2) in housing (1) and position housing in panel (5) with the word OCCUPIED right side up and horizontal.
5. Remove module (2) and tighten screws (3).
6. Install lamps (6) in module.
7. Reinstall module (2) in housing.
8. Connect and solder wires. Refer to wiring diagram (p. 2-99). Replace lacing tape (item 2, app C).
9. Reassemble CCM (p. 2-77)

2-7. COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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REMOVAL

HORN OFF switch K2

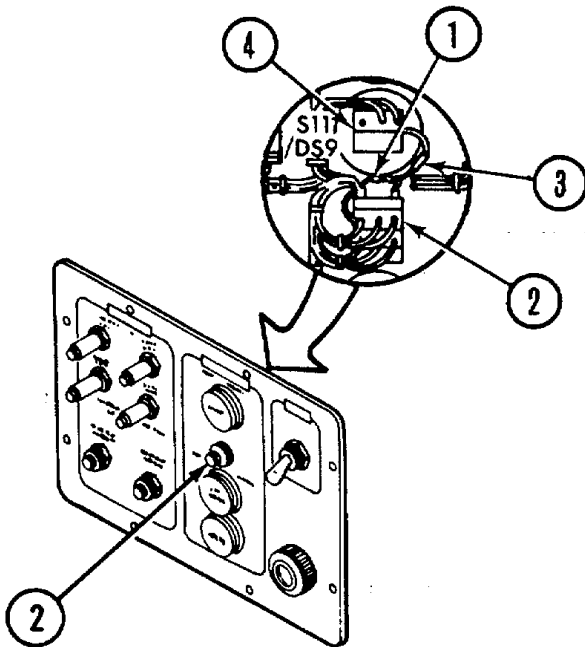
Diodes CR4 and CR5

1. Disassemble CCM (p. 2-77).

CAUTION

Apply heat sink pliers to leads of diodes when unsoldering. Excessive heat will damage the diodes.

2. Unsolder diode CR4 (1) from HORN OFF switch K2 (2).
3. Unsolder diode CR5 (3) connected between HORN OFF switch K2 (2) and DS9 (4).



INSTALLATION

CAUTION

Diodes must be connected properly or damage to circuitry will result. Observe the banded end of the diodes.

CAUTION

Apply heat sink pliers to leads of diodes when soldering. Excessive heat will damage the diodes.

1. Solder diodes CR4 (1) and CR5 (3). Refer to wiring diagram (p. 2-99).
2. Reassemble CCM (p. 2-77).

LOCATION	ITEM	ACTION
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REMOVAL

Panel

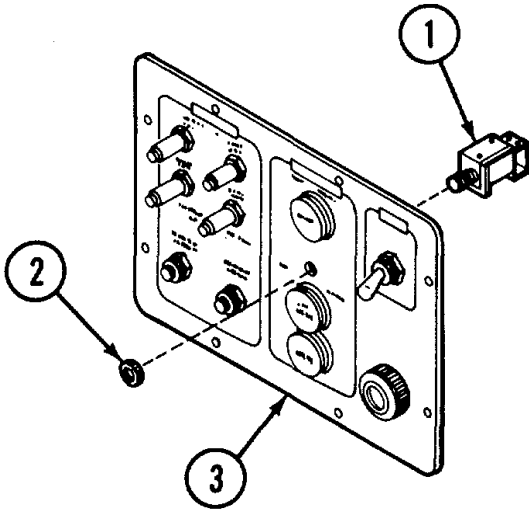
HORN OFF switch K2

1. Disassemble CCM (p. 2-77).

CAUTION

Apply heat sink pliers to leads of diodes when unsoldering. Excessive heat will damage the diodes.

2. Unsolder and tag wire leads and diodes from HORN OFF switch (1).
3. Remove nut (2) and switch (1).



INSTALLATION

1. Insert HORN OFF switch (1) in panel (3) and secure with nut (2).

CAUTION

Apply heat sink pliers to leads of diodes when soldering. Excessive heat will damage the diodes.

CAUTION

Diodes must be connected properly or damage to circuitry will result. Observe the banded end of the diodes.

2. Connect and solder wires and diodes to HORN OFF switch. Refer to wiring diagram (p. 2-99).
3. Reassemble CCM (p. 2-77).

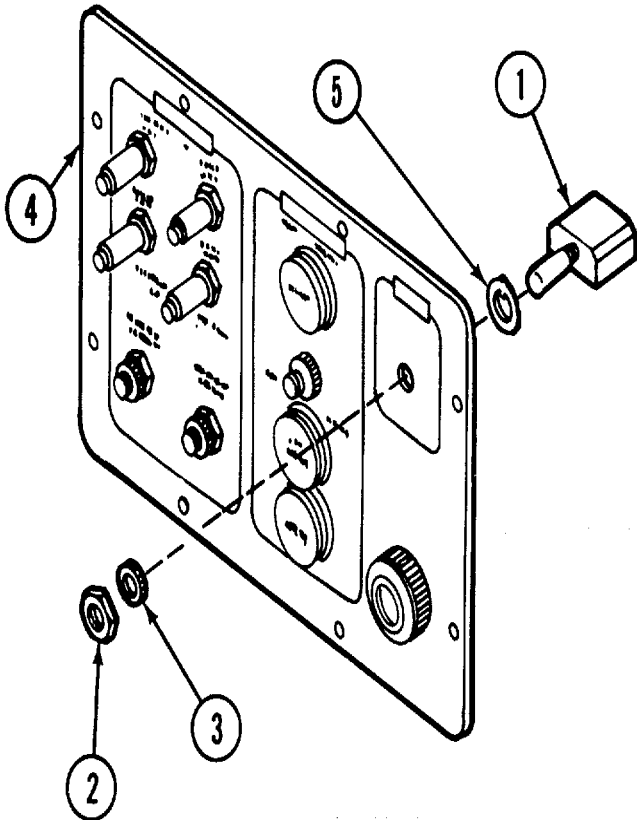
2-7. COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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REMOVAL

POWER toggle switch S9

1. Disassemble CCM (p. 2-77).
2. Remove and tag wire leads from POWER toggle switch S9 (1).
3. Remove nut (2), washer (3), and POWER toggle switch S9 (1).



INSTALLATION

1. Insert POWER toggle switch S9 (1) with keying washer (5) in panel (4).
2. Secure with washer (3) and nut (2).
3. Connect electrical wires. Refer to wiring diagram (p. 2-99).
4. Reassemble CCM (p. 2-77).

LOCATION

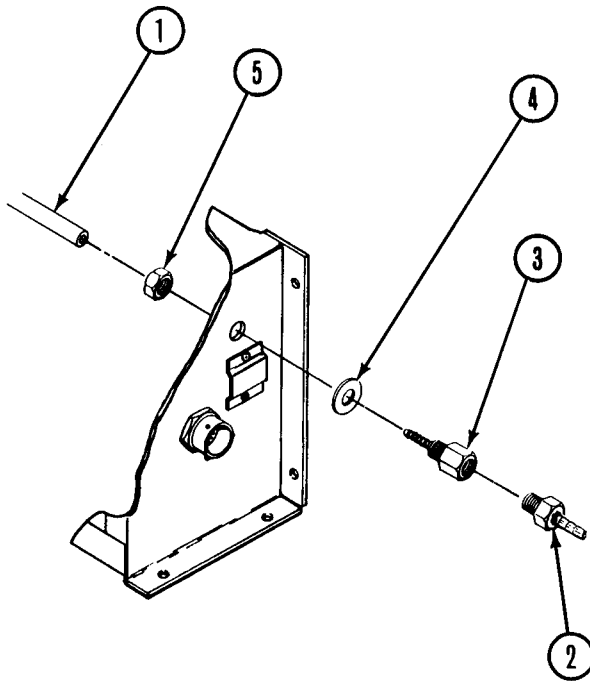
ITEM

ACTION

REMOVAL

Female hose adapter

1. Secure female hose adapter (3) with wrench and use second wrench to loosen male hose adapter (2) from female hose adapter (3).
2. Unscrew male hose adapter (2). Retain for further use.
3. Disassemble compartment control module (p. 2-77).
4. Remove tubing (1) from female hose adapter (3).
5. Secure nut (5) with wrench and use second wrench to loosen female hose adapter (3).
6. Unscrew female hose adapter (3) from nut (5) and discard female hose adapter (3) and packing (4).



INSTALLATION

Female hose adapter

1. Place replacement packing (4) over barbed end of replacement female hose adapter (3).
2. Insert female hose adapter (3) through hole in compartment control module housing (6).
3. Secure nut (5) to female hose adapter (3) by hand. Tighten finger tight.
4. Secure nut (5) with wrench and use second wrench to tighten female hose adapter (3) to nut (5). Take care not to over tighten.
5. Connect tubing (1) to female hose adapter (3).
6. Reinstall compartment control module panel (p. 2-77).
7. Insert previously removed male hose adapter (2) into female hose adapter (3). Hand tighten.
8. Secure female hose adapter (3) with wrench and use second wrench on male hose adapter (2). Tighten, taking care not to over tighten.

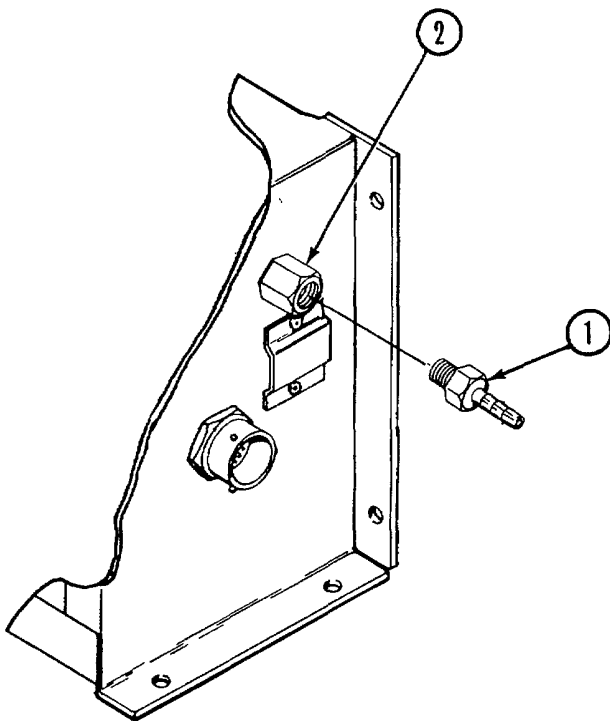
2-7. COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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REMOVAL

Male hose adapter

1. Secure female hose adapter (2) with wrench and use second wrench to loosen male hose adapter (1) from female hose adapter (2).
2. Unscrew male hose adapter (1) from female hose adapter (2).
3. Examine threads of both adapter (1, 2).
4. If threads of female hose adapter (2) are stripped, replace (p. 2-97).
5. If threads of male hose adapter (1) are stripped, install replacement.

**INSTALLATION**

Male hose adapter

1. Secure female hose adapter (2) with wrench.
2. Insert replacement male hose adapter (1) into female hose adapter (2). Hand tighten.
3. Using second wrench on male hose adapter (1), tighten, taking care not to over tighten.

LOCATION

ITEM

ACTION

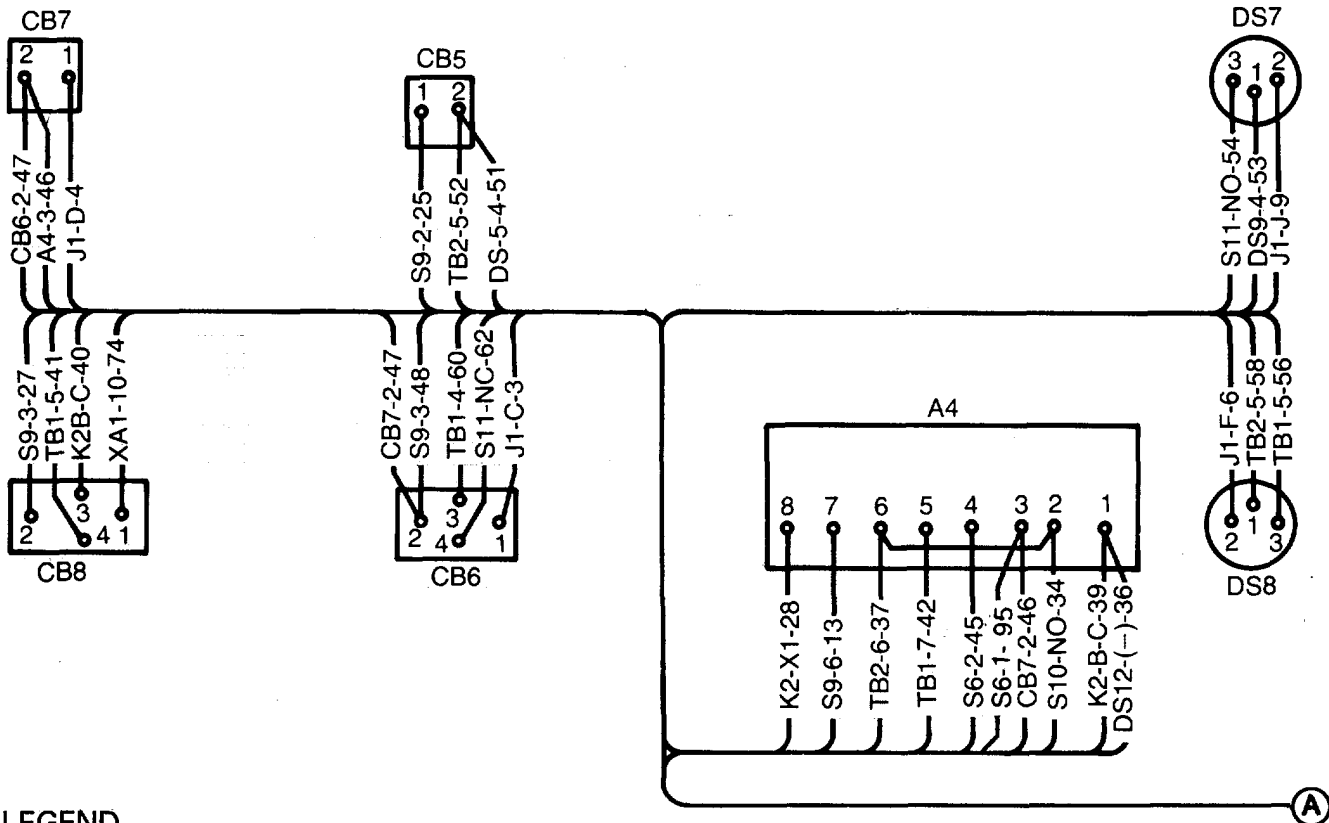
REPAIR

Compartment Control Module

Wiring

NOTE

Wires 1 and 90 are 20 AWG. All other wires are 22 AWG.



LEGEND

- | | |
|-----------------------|----------------------|
| CB5 - CIRCUIT BREAKER | CR6 - DIODE |
| CB6 - CIRCUIT BREAKER | CR4 - DIODE |
| CB7 - CIRCUIT BREAKER | A4 - CIRCUIT BOARD |
| CB8 - CIRCUIT BREAKER | LS1 - HORN |
| DS5 - INDICATOR | J1 - CONNECTOR |
| DS7 - INDICATOR | P19 - CONNECTOR |
| DS8 - INDICATOR | XA1 - CONNECTOR |
| DS9 - INDICATOR | XA2 - CONNECTOR |
| CR5 - DIODE | TB1 - TERMINAL BOARD |
| DS11 - INDICATOR | TB2 - TERMINAL BOARD |
| DS12 - INDICATOR | K2 - RELAY |
| S6 - SWITCH | GRD - GROUND |
| S8 - SWITCH | B1 - BATTERY |
| S9 - SWITCH | B2 - BATTERY |
| S10 - SWITCH | B3 - BATTERY |
| S11 - SWITCH | B4 - BATTERY |

CONT. ON PAGE 2-100

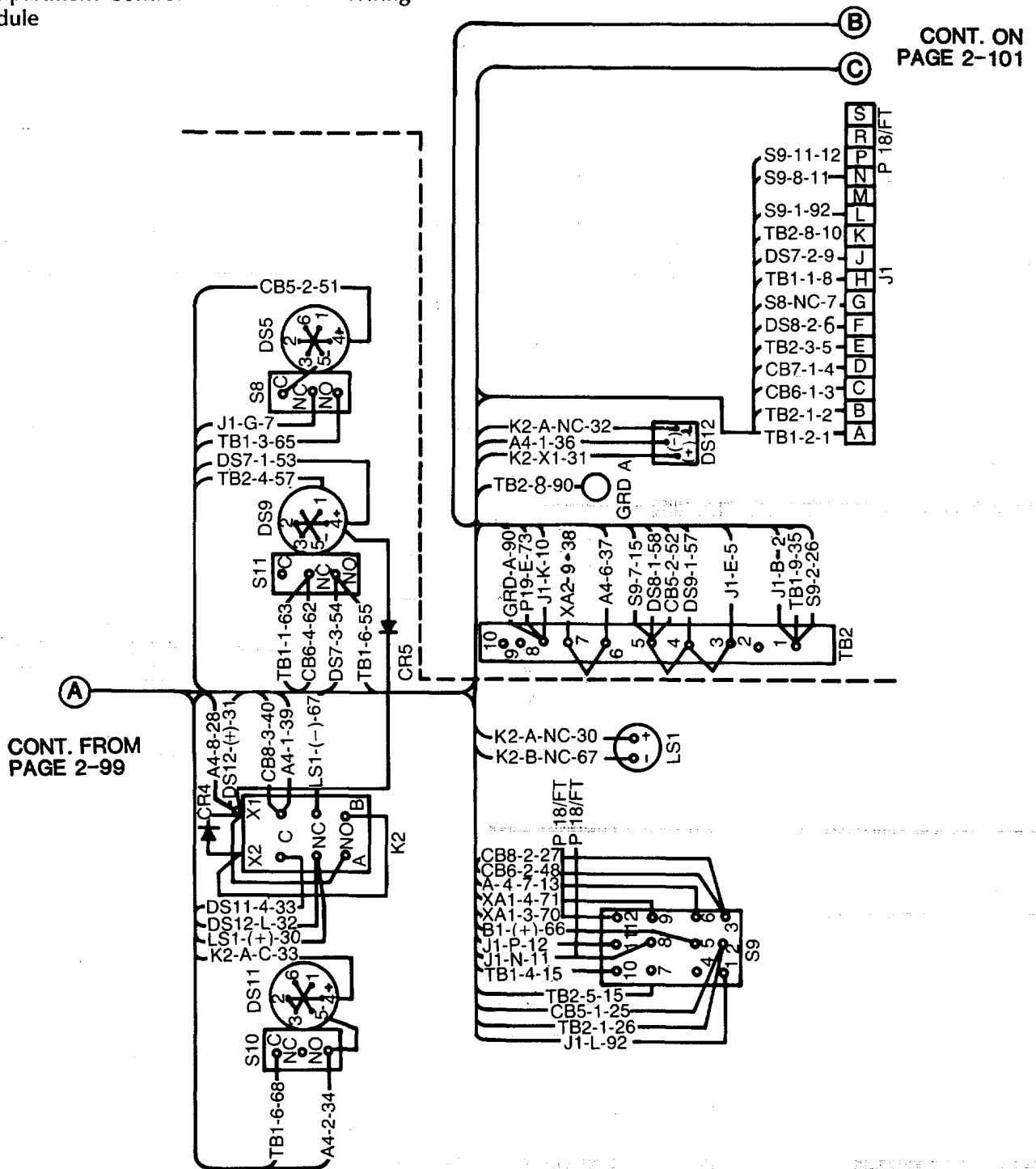
2-7. COMPARTMENT CONTROL MODULE (CONT).

LOCATION	ITEM	ACTION
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REPAIR (CONT)

Compartment Control Module

Wiring

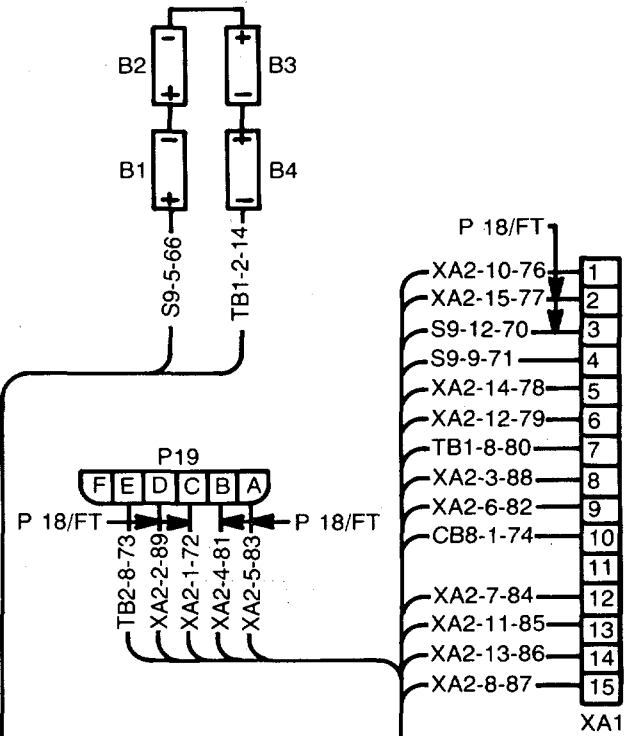
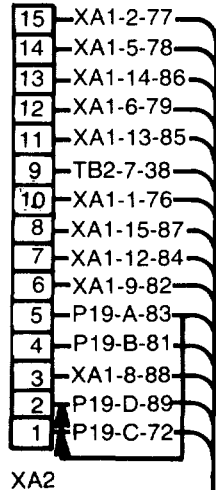


LOCATION	ITEM	ACTION
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REPAIR (CONT)

Compartment Control Module

Wiring

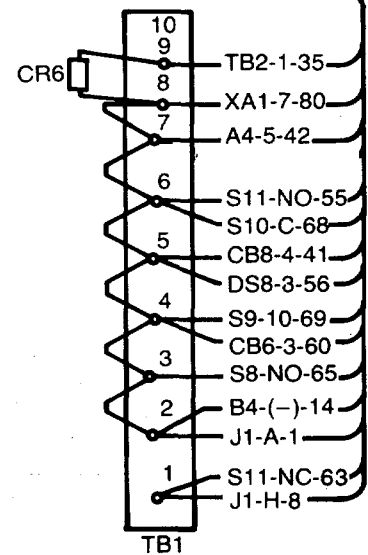


CONT. FROM PAGE 2-100

LEGEND

- CB5 - CIRCUIT BREAKER
- CB6 - CIRCUIT BREAKER
- CB7 - CIRCUIT BREAKER
- CB8 - CIRCUIT BREAKER
- DS5 - INDICATOR
- DS7 - INDICATOR
- DS8 - INDICATOR
- DS9 - INDICATOR
- CR5 - DIODE
- DS11 - INDICATOR
- DS12 - INDICATOR
- S6 - SWITCH
- S8 - SWITCH
- S9 - SWITCH
- S10 - SWITCH
- S11 - SWITCH
- CR6 - DIODE
- CR4 - DIODE
- A4 - CIRCUIT BOARD
- LS1 - HORN
- J1 - CONNECTOR

- P19 - CONNECTOR
- XA1 - CONNECTOR
- XA2 - CONNECTOR
- TB1 - TERMINAL BOARD
- TB2 - TERMINAL BOARD
- K2 - RELAY
- GRD - GROUND
- B1 - BATTERY
- B2 - BATTERY
- B3 - BATTERY
- B4 - BATTERY



**APPENDIX A
REFERENCES**

The following publications are related to information contained in this manual.

A-1. TECHNICAL MANUALS.

TM 3-4240-285-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, Air Defense System, PATRIOT
TM 3-4240-286-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, Air Defense System, AN/TSQ-73
TM 3-4240-284-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, Air Defense System, TACFIRE
TM 3-4240-308-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, TACFIRE UCE
TM 3-4240-309-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, GUARDRAIL
TM 3-4240-311-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Collective Protection Equipment, TRAILBLAZER

A-2. COMMON TABLE OF ALLOWANCES.

CTA 50-970	Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items)
CTA 8-100	Army Medical Department Expendable/Durable Items

A-3. SUPPLY BULLETIN.

SB 708-41/42	Federal Supply Code for Manufacturers; United States and Canada - Code to Name and Name to Code
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A-4. SUPPLY CATALOGS.

SC 5180-91-CL-R07	Tool Kit, Electronic Equipment TK- 105/G
SC 5180-90-CL-N26	Tool Kit, General Mechanics; Automotive

A-5. TECHNICAL BULLETIN.

TB SIG 222	Solder and Soldering
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A-6. FIELD MANUAL.

FM 21-11 (TEST)	First Aid for Soldiers
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A-7. DA PAMPHLET.

DA Pam 738-750	The Army Maintenance Management System (TAMMS) as Contained in Maintenance Management Update
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**APPENDIX B
REPAIR PARTS AND SPECIAL TOOLS LIST**

Section I. INTRODUCTION

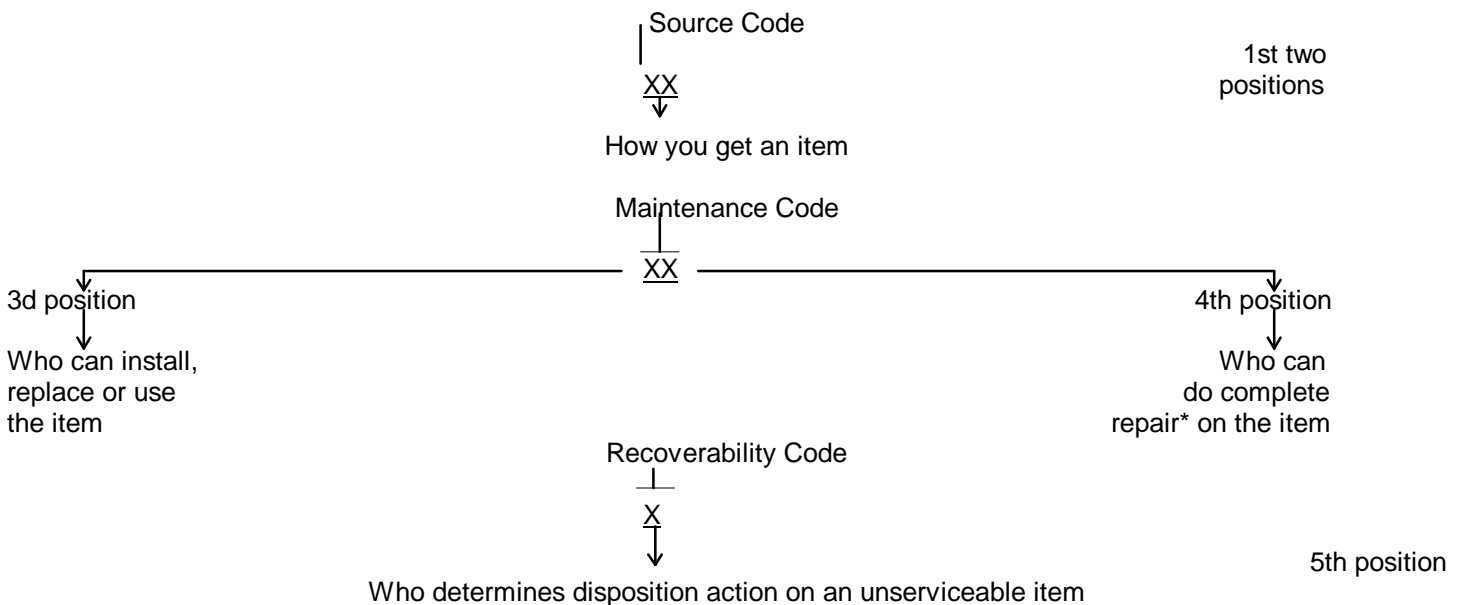
B-1. SCOPE. This RPSTL lists and authorizes spares and repair parts, special tools, special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of direct support maintenance of the compartment control module. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

B-2. GENERAL. In addition to Section I, Introduction, this Repair Parts and Special Tools List is divided into the following sections:

- a. *Section II. Repair Parts List.* A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name in FIG BULK at the end of the section.
- b. *Section III. Special Tools List.* Not applicable.
- c. *Section IV. National Stock Number and Part Number Index.* A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listing. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

B-3. EXPLANATION OF COLUMNS (SECTION II).

- a. *ITEM NO. [Column (1)].* Indicates the number used to identify items called out in the illustration.
- b. *SMR CODE [Column (2)].* The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

B-3. EXPLANATION OF COLUMNS (SECTION II) (CONT).

(1) *Source Code.* The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

<i>Code</i>	<i>Explanation</i>
PA	Stocked items; use the applicable NSN to request/requisition items with these source codes They are authorized to the category indicated by the code entered in the 3d position of the SMR. code
PB	
PC**	
PD	
PE	
PF	
PG	

****NOTE**

Items coded PC are subject to deterioration.

KD	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied
KF	
KB	

MO - (Made at Org/AVUM Level)	Items with these codes are not to be requested/requisitioned individually They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance
MF - (Made at DS/AVUM Level)	
MH - (Made at GS Level)	
ML - (Made at Specialized Repair Act)	
(SRA)	
MD - (Made at Depot)	

<i>Code</i>	<i>Explanation</i>
AO - (Assembled by Org/AVUM Level)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
AF - (Assembled by DS/AVIM Level)	
AH - (Assembled by GS Category)	
AL - (Assembled by SRA)	
AD - Assembled by Depot)	

XA Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)

XB If an "XB" item is not available from salvage, order it using the FSCM and part number given.

XC Installation drawing, diagram, instruction sheet, field service drawings, that is identified by manufacturer's part number.

XD Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded XA.

B-3. EXPLANATION OF COLUMNS (SECTION II) (CONT).

(2) *Maintenance Code.* Maintenance codes tells you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

<i>Code</i>	<i>Application/Explanation</i>
C	Crew or operator maintenance done within organizational maintenance.
O	Organizational category can remove, replace, and use the item.
F	Direct support level can remove, replace, and use the item.
H	General support level can remove, replace, and use the item.
L	Specialized repair activity can remove, replace, and use the item.
D	Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). [NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.] This position will contain one of the following maintenance codes.

<i>Code</i>	<i>Application/Explanation</i>
O	Organizational is the lowest level that can do complete repair of the item.
F	Direct support is the lowest level that can do complete repair of the item.
H	General support is the lowest level that can do complete repair of the item.
L	Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item.
D	Depot is the lowest level that can do complete repair of the item.
Z	Non-repairable, no repair is authorized
B	No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) *Recoverability Code.* Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

<i>Recoverability Codes</i>	<i>Application/Explanation</i>
Z	Non-repairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR code.
O	Reparable item. When uneconomically repairable, condemn and dispose of the item at organizational level.
F	Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support level.
H	Reparable item. When uneconomically repairable, condemn and dispose of the item at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.

B-3. EXPLANATION OF COLUMNS (SECTION II) (CONT).

<i>Recoverability Codes</i>	<i>Application/Explanation</i>
L	Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., content, high dollar value, critical precious metal material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. *FSCM [Column (3)]*. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. *PART NUMBER [Column (4)]*. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity) which controls the design and Characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE

When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. *DESCRIPTION AND USABLE ON CODE (UOC) [Column (5)]*. This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
- (3) The statement "END OF FIGURE" appears just below the last item description in column (5) for a given figure in section II.

f. *QTY[Column (6)]*. The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, sub-functional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

B-4. EXPLANATION OF COLUMNS (SECTION IV).

a. *NATIONAL STOCK NUMBER (NSN) INDEX.*

(1) *STOCK NUMBER Column*. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN

NSN
 (i.e., 5305-01-674-1467).
NIIN

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) *FIG. Column*. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in section II.

(3) *ITEM Column*. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. *PART NUMBER INDEX*. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

(1) *FSCM Column*. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) *PART NUMBER Column*. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity) which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items

B-4. EXPLANATION OF COLUMNS (SECTION IV).

(3) *STOCK NUMBER Column.* This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left.

(4) *FIG. Column.* This column lists the number of the figure where the item is identified/located in section II.

(5) *ITEM Column.* The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

B-5. SPECIAL INFORMATION.

a. *Fabrication Instructions.* Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated.

b. *Index Numbers.* Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in section II.

B-6. HOW TO LOCATE REPAIR PARTS.

a. *When National Stock Number or Part Number is Not Known.*

(1) *First.* Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) *Second.* Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) *Third.* Identify the item on the figure and note the item number.

(4) *Fourth.* Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) *Fifth.* Refer to the Part Number Index to find the NSN, if assigned.

b. *When National Stock Number or Part Number is Known.*

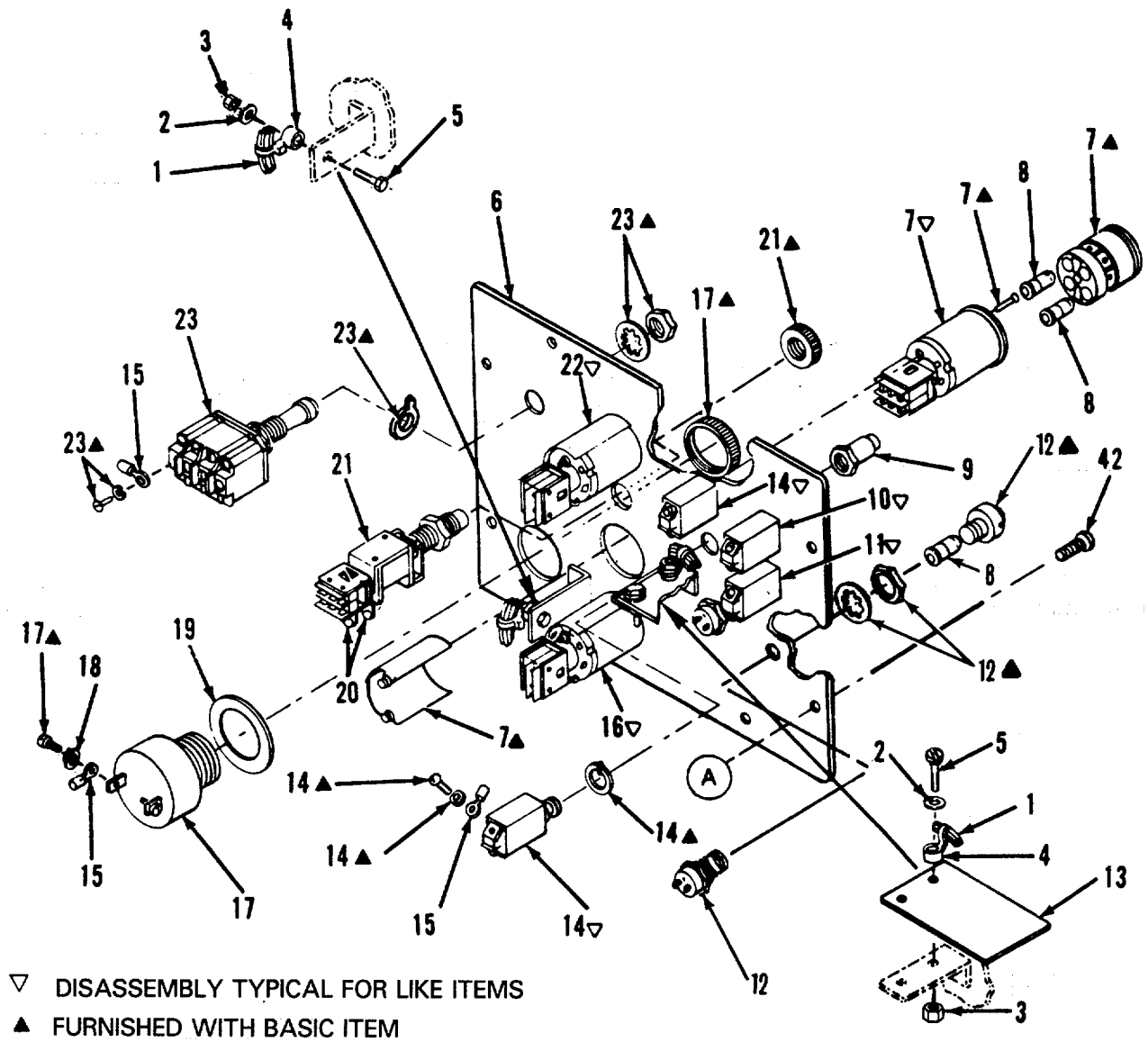
(1) *First.* Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence [see B-4.a.(1)]. The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see B-4.b.). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) *Second.* After finding the figure and item number, verify that the item is the one you are looking for, then locate the item number in the repair parts list for the figure.

B-7. ABBREVIATIONS.

(Not Applicable)

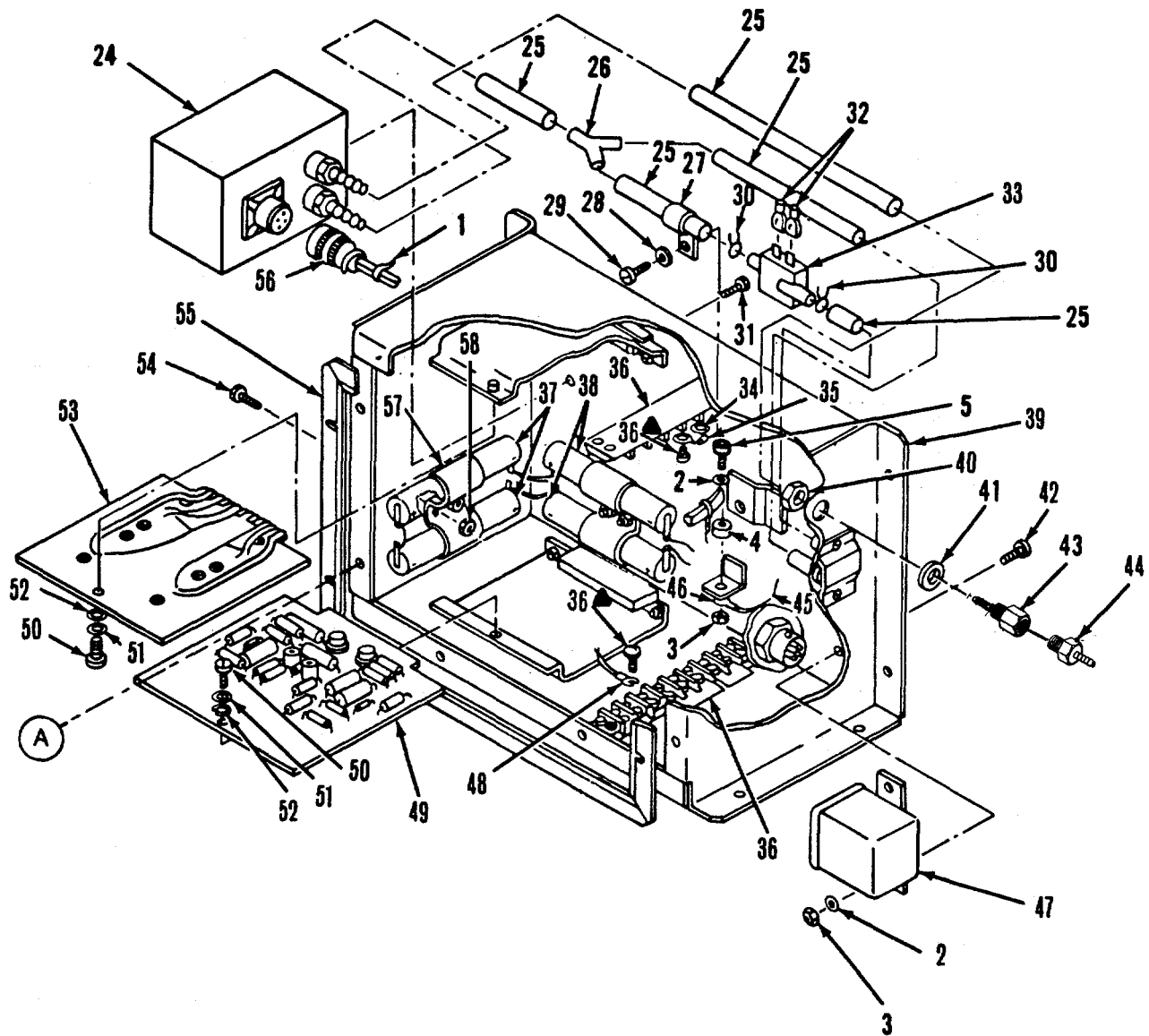
Section II. REPAIR PARTS LIST



▽ DISASSEMBLY TYPICAL FOR LIKE ITEMS
 ▲ FURNISHED WITH BASIC ITEM

Figure B-1. Compartment Control Module (Sheet 1 of 2)

Section II



▲FURNISHED WITH BASIC ITEM

Figure B-1. Compartment Control Module (Sheet 2 of 2)

Section II

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 01 COMPARTMENT CONTROL MODULE E5-19-6376 FIG. B-1 COMPARTMENT CONTROL MODULE					
1	MFFZZ	81349	M5806/1-22-9	WIRE, ELECTRICAL MAKE FROM WIRE P/VN M5086/1-22-9.....	
2	PAFZZ	96906	MS27183-42	WASHER, FLAT.....	7
3	PAFZZ	96906	MS21044N3	NUT, SELF-LOCKING, HEXAGON.....	7
4	PAFZZ	09922	TF-5H	STRAP, TIEDOWN, ELECTRICAL.....	4
5	PAFZZ	96906	MS51849-66	SCREW, MACHINE.....	4
6	XAFZZ	81361	D5-19-6378	PANEL, LETTERED.....	1
7	PAFZZ	81361	E5-19-6376-155	SWITCH, PUSH.....	1
8	PAOZZ	81348	W-L-00111/7	LAMP, INCANDESCENT.....	8
9	PAFZZ	82647	14500-1	BOOT, DUST AND MOISTURE SEAL.....	4
10	PAFZZ	82647	7274-34-3/4	CIRCUIT BREAKER.....	1
11	PAFZZ	82647	7274-12-1	CIRCUIT BREAKER.....	1
12	PAFZZ	99993	Z17L76765-1842	LIGHT, INDICATOR.....	2
13	PAFZZ	81361	C5-19-6688	PRINTED CIRCUIT BOARD.....	1
14	PAFZZ	96906	MS26574-1	CIRCUIT BREAKER.....	2
15	PAFZZ	96906	MS25036-101	TERMINAL, LUG.....	29
16	PAFZZ	04426	44-580151AAAA	SWITCH, PUSH.....	1
17	PAFZZ	37942	SC628M	BUZZER.....	1
18	PAFZZ	96906	MS35333-37	WASHER, LOCK.....	2
19	MFFZZ	81361	B5-19-5710	GASKET MAKE FROM RUBBER SHEET, P/N MIL-R-3065/ NSN 9320-00-249-6166,.....	1
20	PAFZZ	81349	JAN1N4245	SEMICONDUCTOR DEVICE, DIODE.....	2
21	PAFZZ	18876	9745533	SWITCH, PUSH.....	1
22	PAFZZ	81361	E5-19-6376-159	SWITCH, PUSH.....	1
23	PAFZZ	96906	MS24660-23D	SWITCH, TOGGLE.....	1
24	PAFZZ	81361	D5-19-6411	TRANSMITTER, PRESSURE.....	1
25	MFFZZ	81361	E5-19-6376-46	TUBING, NONMETALLIC MAKE FROM TUBING, P/N ZZ-R-765/NSN 9330-01-073-1011.....	18
26	PAFZZ	05178	6152	CONNECTOR, ELASTIC TUBING, BRANCHED.....	1
27	PAFZZ	96906	MS25281R6	CLAMP, LOOP.....	1
28	PAFZZ	96906	MS27183-41	WASHER, FLAT.....	1
29	PAFZZ	96906	MS51849-54	SCREW, MACHINE.....	1
30	PAFZZ	70494	A5S	CLAMP, HOSE.....	2
31	PAFZZ	96906	MS3213-11	SCREW, MACHINE.....	2
32	PAFZZ	56501	B-187-020	TERMINAL.....	2
33	PAFZZ	81361	5-19-8926	SWITCH, PRESSURE.....	1
34	PAFZZ	96906	MS35430-4	TERMINAL, LUG.....	2
35	PAFZZ	81349	JANIN5557	SEMICONDUCTOR DEVICE, DIODE.....	1
36	XAFZZ	81349	37TB10	TERMINAL BOARD.....	2
37	PAFZZ	09052	402037-4	BATTERY, STORAGE.....	2
38	PAFZZ	58414	402037-5	BATTERY, STORAGE.....	2
39	XAFZZ	81361	E5-19-6377	HOUSING, COMPARTMENT CONTROL.....	1
40	PAFZZ	96906	MS35650-3385	NUT, PLAIN, HEXAGON.....	1
41	PAFZZ	80205	NAS1523-6Y	PACKING WITH RETAINER.....	1
42	PAFZZ	96906	MS3213-33	SCREW, MACHINE.....	10
43	PAFZZ	81361	B5-19-6362	ADAPTER, STRAIGHT, PIPE TO HOSE.....	1
44	PAFZZ	30327	KF03-02PS	ADAPTER, STRAIGHT, PIPE TO HOSE.....	1

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
45	MFFZZ	81349	M5086/1-20-9	WIRE, ELECTRICAL MAKE FROM WIRE, P/ V N M5086/1-20-9.....	
46	PAFZZ	96906	MS25036-103	TERMINAL, LUG	1
47	PAFZZ	81361	C5-19-6383	FLASHER, THERMAL	1
48	PAFZZ	96906	MS17143-10	TERMINAL, LUG	43
49	PAFZZ	81361	D5-19-6193-10	PRINTED CIRCUIT BOARD.....	1
50	PAFZZ	96906	MS51849-33	SCREW, MACHINE.....	2
51	PAFZZ	96906	MS35338-41	WASHER, LOCK.....	2
52	PAOZZ	96906	MS27183-5	WASHER, FLAT.....	2
53	PAFZZ	81361	C5-19-6197	PRINTED CIRCUIT BOARD.....	1
54	PAFZZ	96906	MS3213-15	SCREW, MACHINE.....	4
55	PAFZZ	81361	C5-19-6382	SHIELDING GASKET, ELECTRONIC	1
56	XDFZZ	96906	MS3126F10-6S	CONNECTOR, PLUG, ELECTRICAL	1
57	PAFZZ	81361	B5-19-6659	RETAINER, BATTERY	2
58	PAFZZ	96906	MS21044N06	NUT, SELF-LOCKING, HEXAGON.....	4

END OF FIGURE

Section II

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 99 BULK MATERIALS FIG. BULK					
1	PAFZZ	81349	MIL-R-3065	RUBBER SHEET, SOLID	1.....
2	PAFZZ	81348	ZZ-R-765	TUBING, NONMETTALIC.....	4.....
3	PAFZZ	81349	M5086/1-20-9	WIRE, ELECTRICAL	24.....
4	PAFZZ	81349	M5086/1-22-9	WIRE, ELECTRICAL	213.....

END OF FIGURE

Section III. SPECIAL TOOLS LIST

(Not Applicable)

Section IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5330-00-003-9302	B-1	41	5930-01-108-2588	B-1	22
5310-00-014-5850	B-1	2	5930-01-163-3722	B-1	33
5925-00-045-1704	B-1	11			
5310-00-045-4007	B-1	51			
5310-00-081-8087	B-1	58			
4730-00-116-2969	B-1	30			
5961-00-139-9812	B-1	35			
5940-00-143-4771	B-1	46			
5305-00-179-8946	B-1	5			
5310-00-199-1056	B-1	40			
5305-00-211-8193	B-1	29			
5305-00-227-1543	B-1	50			
9320-00-249-6166	BULK	1			
6350-00-267-0442	B-1	17			
6640-00-494-0527	B-1	26			
6145-00-578-7519	BULK	3			
6145-00-578-7520	BULK	4			
5310-00-579-0079	B-1	18			
6210-00-635-4700	B-1	12			
5940-00-681-8185	B-1	34			
6240-00-763-7744	B-1	8			
5310-00-765-3197	B-1	28			
5940-00-813-0698	B-1	15			
*5940-00-825-3699	B-1	48			
5930-00-854-7864	B-1	21			
5310-00-877-5797	B-1	3			
5961-00-924-6981	B-1	20			
5925-00-929-7716	B-1	14			
5975-00-958-6451	B-1	9			
5310-00-983-8483	B-1	52			
5340-00-989-9224	B-1	27			
5305-01-006-8952	B-1	54			
4730-01-017-5119	B-1	44			
5305-01-031-5092	B-1	42			
5999-01-048-9866	B-1	13			
5999-01-048-9867	B-1	49			
5930-01-050-4362	B-1	16			
5999-01-050-4635	B-1	53			
6135-01-052-3744	B-1	57			
5930-01-052-7684	B-1	7			
6140-01-053-0564	B-1	37			
4730-01-053-5923	B-1	43			
5975-01-053-6294	B-1	4			
5305-01-054-2488	B-1	31			
5925-01-054-3453	B-1	10			
6140-01-055-9627	B-1	38			
6685-01-056-5283	B-1	24			
5945-01-059-7074	B-1	47			
5999-01-070-8434	B-1	55			
9330-01-073-1011	BULK	2			
*5930-001847-2599	B-1	23			

NATIONAL STOCK NUMBER AND PART NUMBER INDEX
PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
70494	A5S	4730-00-116-2969	B-1	30
56501	B-187-020	NSN APPLIED FOR	B-1	32
81361	B5-19-5710		B-1	19
81361	B5-19-6362	4730-01-053-5923	B-1	43
81361	B5-19-6659	6135-01-052-3744	B-1	57
81361	C5-19-6197	5999-01-050-4635	B-1	53
81361	C5-19-6382	5999-01-070-8434	B-1	55
81361	C5-19-6383	5945-01-059-7074	B-1	47
81361	C5-19-6688	5999-01-048-9866	B-1	13
81361	D5-19-6193-10	5999-01-048-9867	B-1	49
81361	D5-19-6378		B-1	6
81361	D5-19-6411	6685-01-056-5283	B-1	24
81361	E5-19-6376-155	5930-01-052-7684	B-1	7
81361	E5-19-6376-159	5930-01-108-2588	B-1	22
81361	E5-19-6376-46		B-1	25
81361	E5-19-6377		B-1	39
81349	JAN1N4245	5961-00-924-6981	B-1	20
81349	JAN1N5557	5961-00-139-9812	B-1	35
30327	KF03-02PS	4730-01-017-5119	B-1	44
81349	MIL-R-3065	9320-00-249-6166	BULK	1
96906	MS17143-10	5940-00-825-3699	B-1	48
96906	MS21044N06	5310-00-081-8087	B-1	58
96906	MS21044N3	5310-00-877-5797	B-1	3
96906	MS25036-101	5940-00-813-0698	B-1	15
96906	MS25036-103	5940-00-143-4771	B-1	46
96906	MS25281R6	5340-00-989-9224	B-1	27
96906	MS26574-1	5925-00-929-7716	B-1	14
96906	MS27183-41	5310-00-765-3197	B-1	28
96906	MS27183-42	5310-00-014-5850	B-1	2
96906	MS27183-5	5310-00-983-8483	B-1	52
96906	MS3126F10-6S		B-1	56
96906	MS3213-11	5305-01-054-2488	B-1	31
96906	MS3213-15	5305-01-006-8952	B-1	54
96906	MS3213-33	5305-01-031-5092	B-1	42
96906	MS35333-37	5310-00-579-0079	B-1	18
96906	MS35338-41	5310-00-045-4007	B-1	51
96906	MS35430-4	5940-00-681-8185	B-1	34
96906	MS35650-3385	5310-00-199-1056	B-1	40
96906	MS51849-33	5305-00-227-1543	B-1	50
96906	MS51849-54	5305-00-211-8193	B-1	29
96906	MS51849-66	5305-00-179-8946	B-1	5
96906	MS24660-23D	5930-00-847-2599	B-1	23
81349	M5086/1-20-9		B-1	45
		6145-00-578-7519	BULK	3
81349	M5086/1-22-9		B-1	1
		6145-00-578-7520	BULK	4
80205	NAS1523-6Y	5330-00-003-9302	B-1	41
37942	SC628M	6350-00-267-0442	B-1	17
09922	TF-5H	5975-01-053-6294	B-1	4
81348	W-L-00111/7	6240-00-763-7744	B-1	8
81348	ZZ-R-765	9330-01-073-1011	BULK	2

SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX
PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
99993	Z17L76765-1842	6210-00-635-4700	B-1	12
82647	14500-1	5975-00-958-6451	B-1	9
81349	37TB10		B-1	36
09052	402037-4	6140-01-053-0564	B-1	37
58414	402037-5	6140-01-055-9627	B-1	38
04426	44-580151AAAA	5930-01-050-4362	B-1	16
81361	5-19-8926	5930-01-163-3722	B-1	33
05178	6152	6640-00-494-0527	B-1	26
82647	7274-12-1	5925-00-045-1704	B-1	11
82647	7274-34-3/4	5925-01-054-3453	B-1	10
18876	9745533	5930-00-854-7864	B-1	21

**APPENDIX C
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST**

Section I. INTRODUCTION

C-1. SCOPE. This appendix lists expendable/durable supplies and materials you will need to maintain the Compartment Control Module. This listing is for information purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, expendable/durable items (except medical, class V, repair parts and heraldic items) or CTA 8-100, Army Medical Department expendable/durable items.

C-2. EXPLANATION OF COLUMNS.

- a. *Column (1) - Item Number.* This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., Use fibrous twine, item s, app C).
- b. *Column (2) - Level.* This column identifies the lowest level of maintenance that requires the listed item.

F - Direct Support Maintenance

- c. *Column (3) - National Stock Number.* This is the National stock number assigned to the item; use it to request or requisition the item.

- d. *Column (4) - Description.* Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

- e. *Column (5) - Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two character alphabetical abbreviation (e.g., ea. in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

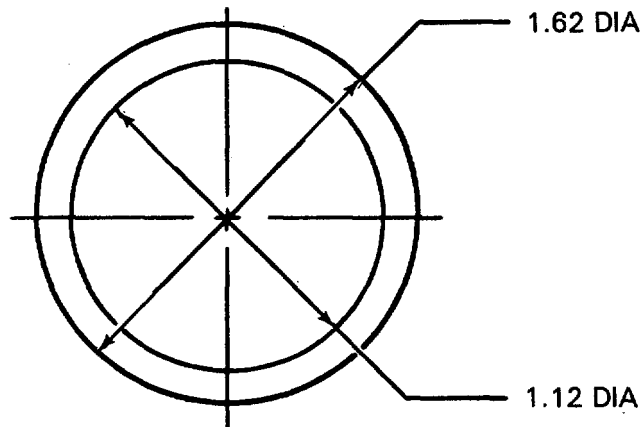
(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	F	5970-00-812-2969	INSULATION SLEEVING: 1/8 X 1 ft lg.	FT
2	F	4020-00-656-1125	(06090) RNF100-1-8-black Tape, Lacing & Typing: Type 1, Finish B, Size 3 (81349) MIL-T-43435	YD

APPENDIX D
ILLUSTRATED LIST OF MANUFACTURED ITEMS

D-1. INTRODUCTION.

a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at direct support maintenance level.

b. All bulk materials needed for manufactures of an item are listed by National Stock Number in a tabular list on the illustration.

**NOTES:**

1. Fabricate from NSN 9320-00-249-6166 stock.
2. All dimensions are in inches.
3. Part number B5-19-5710.

Figure D-1. Gasket

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