

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1083 SERIES, 5-TON, 6 X 6,
MEDIUM TACTICAL VEHICLES (MTV)
VOLUME NO. 2 OF 5

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Unit Maintenance Manual
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TRK, CHAS, MTV, LWB, M1096	2320-01-354-4527	BR6

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HOW TO USE THIS MANUAL

OVERVIEW

This Technical Manual (TM) is provided to help you maintain the MTV at the Unit Maintenance level. Because of its size, it is divided into five volumes. Volume 2 contains the following major sections in order of appearance:

- **WARNING SUMMARY.** Provides a summary of the most important warnings that apply throughout the manual.
- **CHAPTER 2, VEHICLE MAINTENANCE.** This chapter contains the continuation of the troubleshooting tables.
- **APPENDIX A, REFERENCES.** Lists publications used with the MTV.
- **APPENDIX B, MAINTENANCE ALLOCATION CHART.** The maintenance allocation chart denotes the level of maintenance which performs specific maintenance tasks and the time required. It also lists tools and special tools required for each task.

- **APPENDIX C, TOOLS IDENTIFICATION LIST.** Lists equipment used in the performance of maintenance and references publications which contain information regarding the equipment.
- **APPENDIX D, EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.** Lists expendable and durable items used in the performance of maintenance.
- **APPENDIX E, ILLUSTRATED LIST OF MANUFACTURED ITEMS.** Illustrates and describes items that must be fabricated from bulk materials for repair of the MTV.
- **APPENDIX F, TORQUE LIMITS.** Lists the standard torque values for specific attaching hardware.
- **APPENDIX G, MANDATORY REPLACEMENT PARTS.**
- **APPENDIX H, LUBRICATION ORDER.**
- **APPENDIX J, ADDITIONAL AUTHORIZATION LIST (AAL).**
- **APPENDIX K, TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART.** Lists actions required to mate different transmission configurations with WTEC II or WTEC III controls.
- **SUBJECT INDEX.** Lists important subjects contained in volume 2 in alphabetical order and gives the associated paragraph number.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

- **FRONT COVER INDEX.** The front cover index contains a list of the most important topics contained in each volume. It features a black box at the right edge of the cover which corresponds with a black box on the page containing the topic. The topics listed on the front cover are highlighted in the table of contents with a box.
- **TABLE OF CONTENTS.** Lists chapters, sections, appendixes, and indexes with page numbers in order of appearance.
- **CHAPTER INDEXES.** List paragraphs contained in the individual chapters with paragraph and page numbers in order of appearance.
- **SYMPTOM INDEX.** Lists malfunctions contained in the troubleshooting table with page numbers in order of appearance.

TROUBLESHOOTING

Troubleshooting is contained in chapter 2. When a malfunction occurs, look at the symptom index for the vehicle troubleshooting table in chapter 2. Find the malfunction in the index. Turn to the page number listed for the malfunction in the troubleshooting table. Perform the steps required to correct the malfunction. If you can't find the malfunction, or the malfunction is not corrected, notify your supervisor.

MAINTENANCE

- **SCHEDULED MAINTENANCE.** Your scheduled maintenance is located in table 2-1, PMCS. These checks and services are mandatory at the intervals listed. Always follow the WARNINGS and CAUTIONS.

MAINTENANCE (CONT)

- **UNSCHEDULED MAINTENANCE.** Unscheduled maintenance is located in chapters 3 through 24. The PMCS and troubleshooting tables often reference you to these procedures. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always follow the **WARNINGS** and **CAUTIONS**.

FOLLOW THESE GUIDELINES WHEN USING THIS MANUAL:

- Become familiar with the entire maintenance procedure before beginning a maintenance task.
- Read all **WARNINGS** and **CAUTIONS** before performing any procedures.

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INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-366-10-1).

Materials/Parts

Wire, Elect, 50 ft (Item 71, Appendix D)

Tools and Special Tools

Tool Kit, Genl Mech (Item 46, Appendix C)
 STE/ICE-R (Item 41, Appendix C)
 Multimeter, Digital (Item 22, Appendix C)

Personnel Required

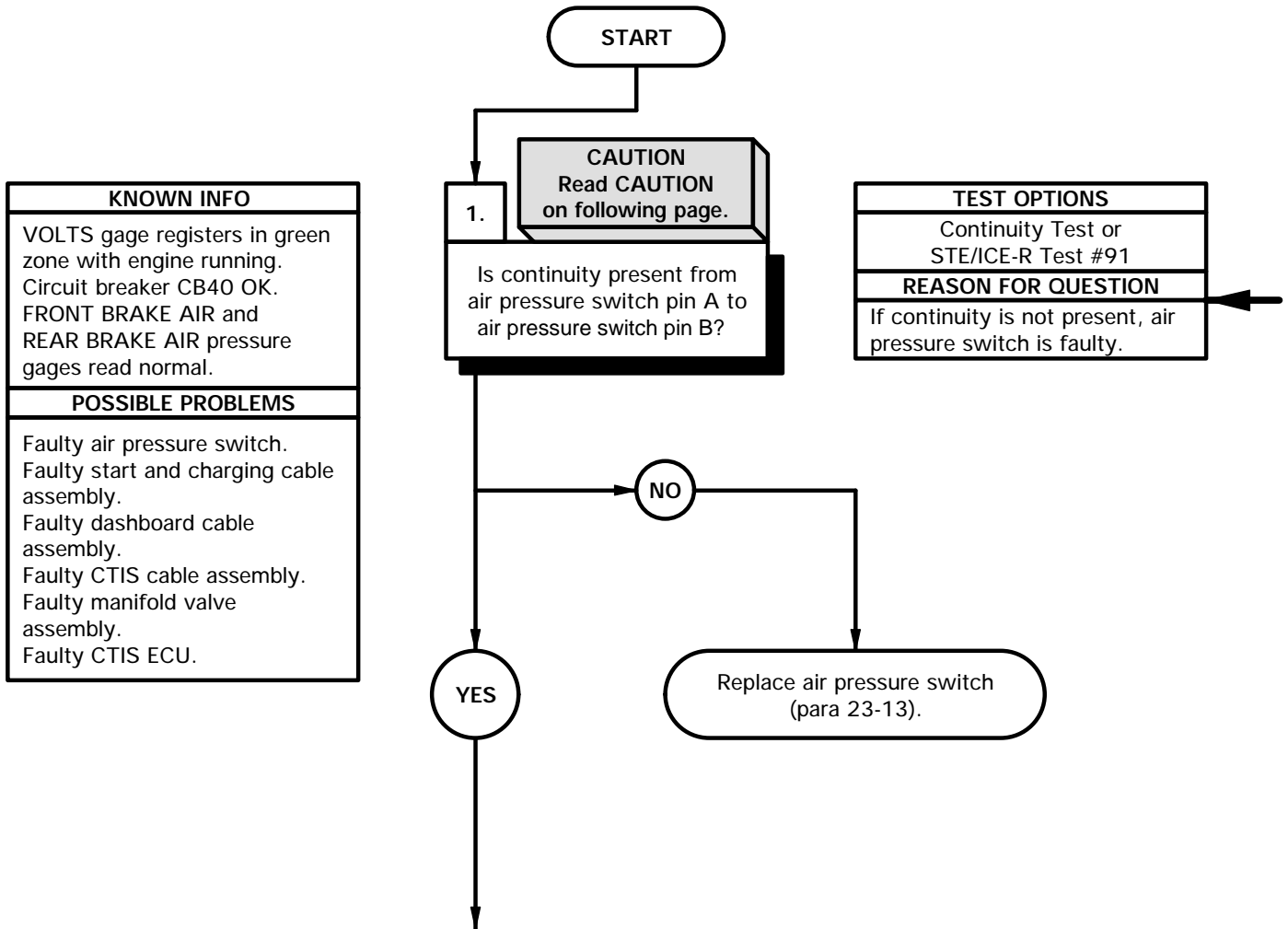
(2)

References

TM 9-4910-571-12&P

NOTE

Perform Electrical System Troubleshooting e1. Circuit Breaker Does Not Operate on circuit breaker CB40 prior to beginning this task.



CAUTION

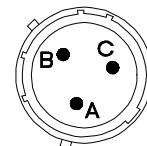
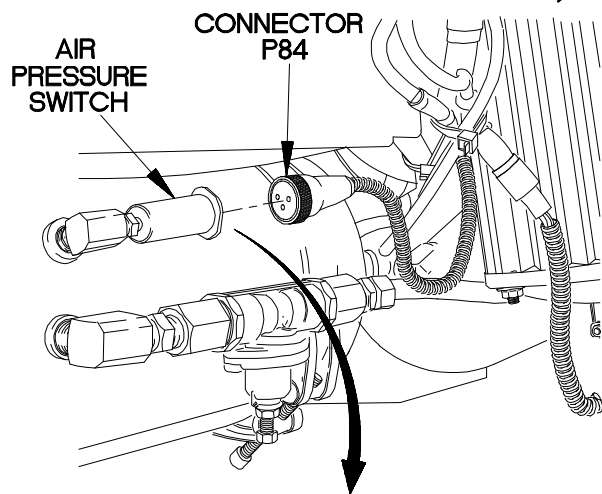
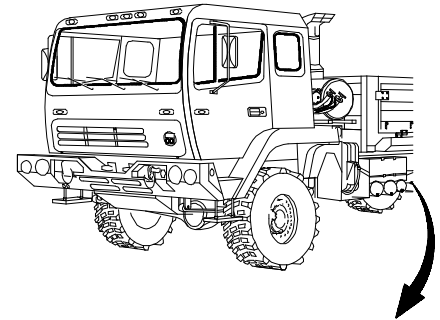
Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Inspect connector pins/sockets for damage, corrosion, and serviceability. Check that connector pins are not pushed back and are capable of making good contact.

CONTINUITY TEST

- (1) Start engine (TM 9-2320-366-10-1).
- (2) Allow air pressure to build until FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read approximately 120 psi.
- (3) Shut down engine (TM 9-2320-366-10-1).
- (4) Disconnect connector P84 from air pressure switch.
- (5) Set multimeter to ohms.
- (6) Connect positive (+) probe of multimeter to air pressure switch pin A.
- (7) Connect negative (-) probe of multimeter to air pressure switch pin B and note reading on multimeter.
- (8) If continuity is not present, replace air pressure switch (para 23-13).



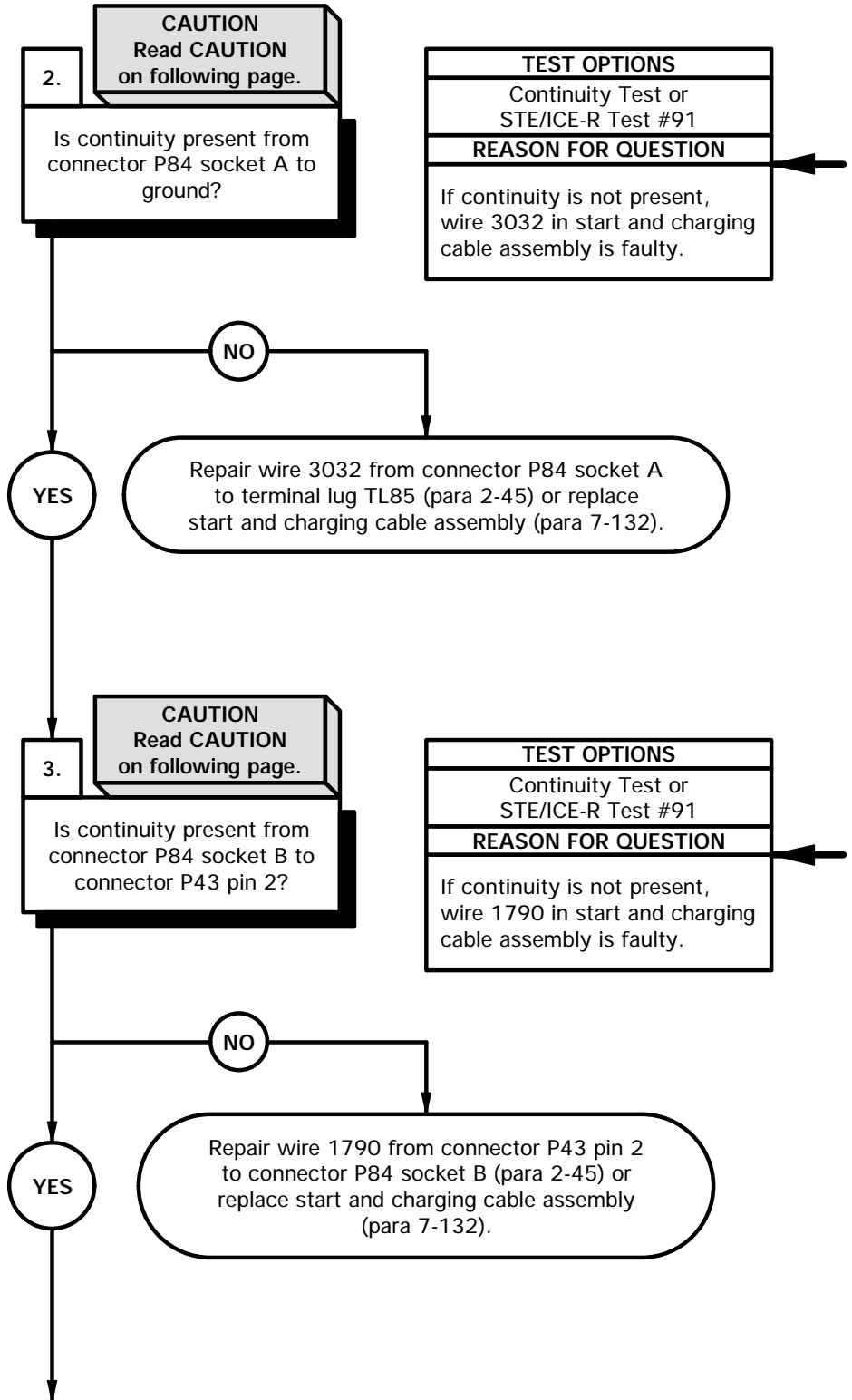
AIR PRESSURE SWITCH

XBE8501B

e85. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE (CONT)

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK.
POSSIBLE PROBLEMS
Faulty start and charging cable assembly. Faulty dashboard cable assembly. Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK.
POSSIBLE PROBLEMS
Faulty start and charging cable assembly. Faulty dashboard cable assembly. Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

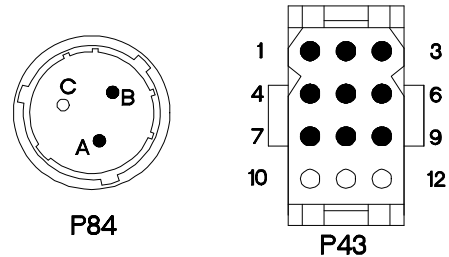
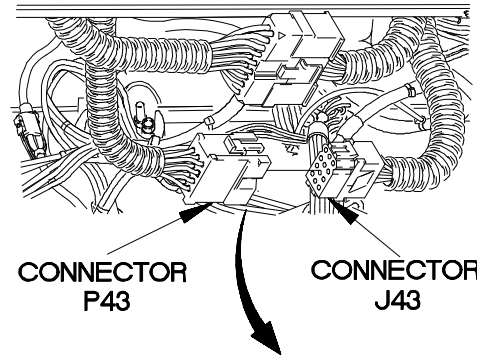


CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

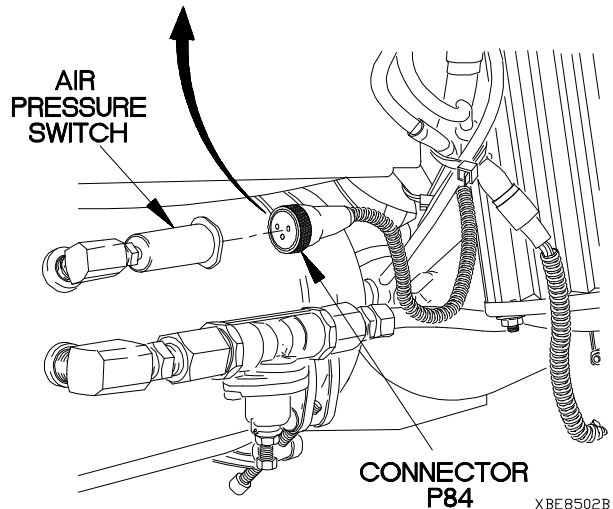
CONTINUITY TEST

- (1) Set multimeter to ohms.
- (2) Connect positive (+) probe of multimeter to connector P84 socket A.
- (3) Connect negative (-) probe of multimeter to ground and note reading on multimeter.
- (4) If continuity is not present, repair wire 3032 from connector P84 socket A to terminal lug TL85 (para 2-45) or replace start and charging cable assembly (para 7-132).



CONTINUITY TEST

- (1) Remove instrument panel assembly for access (para 7-15).
- (2) Disconnect connector J43 from connector P43.
- (3) Set multimeter to ohms.
- (4) Connect positive (+) probe of multimeter to connector P43 pin 2.
- (5) Connect negative (-) probe of multimeter to connector P84 socket B and note reading on multimeter.
- (6) If continuity is not present, repair wire 1790 from connector P43 pin 2 to connector P84 socket B (para 2-45) or replace start and charging cable assembly (para 7-132).
- (7) Connect connector P84 to air pressure switch.



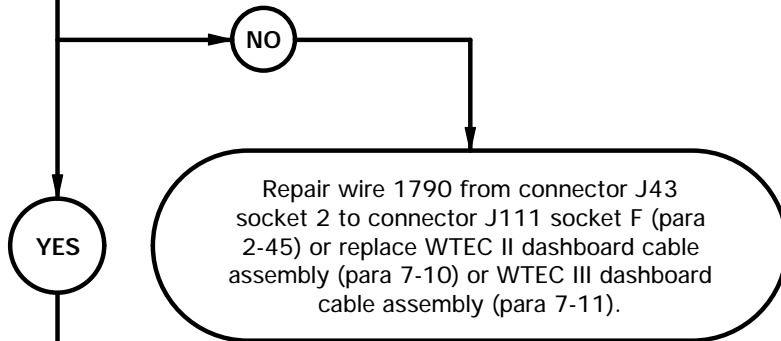
e85. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE (CONT)

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK.
POSSIBLE PROBLEMS
Faulty dashboard cable assembly. Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

4. **CAUTION**
Read CAUTION on following page.

Is continuity present from connector J43 socket 2 to connector J111 socket F?

TEST OPTIONS
Continuity Test or STE/ICE-R Test #91
REASON FOR QUESTION
If continuity is not present, wire 1790 in dashboard cable assembly is faulty.

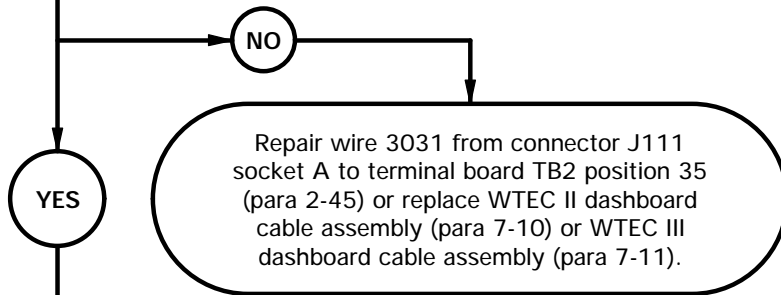


KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK.
POSSIBLE PROBLEMS
Faulty dashboard cable assembly. Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

5. **CAUTION**
Read CAUTION on following page.

Is continuity present from connector J111 socket A to terminal board TB2 position 35?

TEST OPTIONS
Continuity Test or STE/ICE-R Test #91
REASON FOR QUESTION
If continuity is not present, wire 3031 in dashboard cable assembly is faulty.

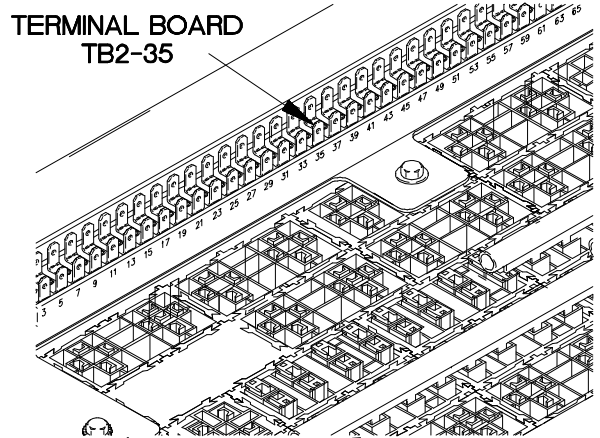
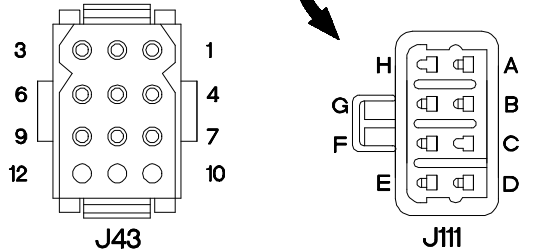
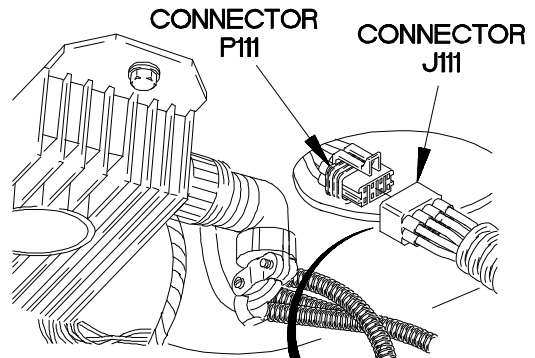


CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

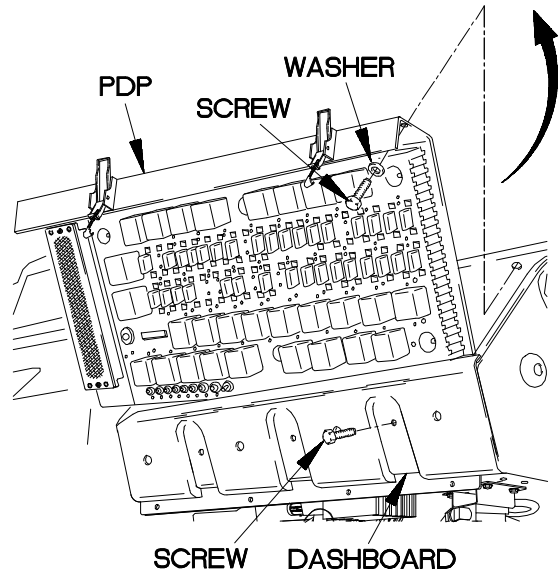
NOTE

Inspect connector pins/sockets for damage, corrosion, and serviceability. Check that connector pins are not pushed back and are capable of making good contact.



- CONTINUITY TEST**
- (1) Remove kick panel (para 16-3).
 - (2) Disconnect connector P111 from connector J111.
 - (3) Set multimeter to ohms.
 - (4) Connect positive (+) probe of multimeter to connector J43 socket 2.
 - (5) Connect negative (-) probe of multimeter to connector J111 socket F and note reading on multimeter.
 - (6) If continuity is not present, repair wire 1790 from connector J43 socket 2 to connector J111 socket F (para 2-45) or replace WTEC II dashboard cable assembly (para 7-10) or WTEC III dashboard cable assembly (para 7-11).
 - (7) Connect connector P43 to connector J43.
 - (8) Install instrument panel assembly (para 7-15).

- CONTINUITY TEST**
- (1) Remove three screws and washers from PDP.
 - (2) Remove three screws from PDP.
 - (3) Set multimeter to ohms.
 - (4) Connect positive (+) probe of multimeter to connector J111 socket A.
 - (5) Lift PDP out to gain access.
 - (6) Connect negative (-) probe of multimeter to terminal board TB2 position 35 and note reading on multimeter.
 - (7) If continuity is not present, repair wire 3031 from connector J111 socket A to terminal board TB2 position 35 (para 2-45) or replace WTEC II dashboard cable assembly (para 7-10) or WTEC III dashboard cable assembly (para 7-11).
 - (8) Install PDP on dashboard with three screws.
 - (9) Install three washers and screws in PDP.

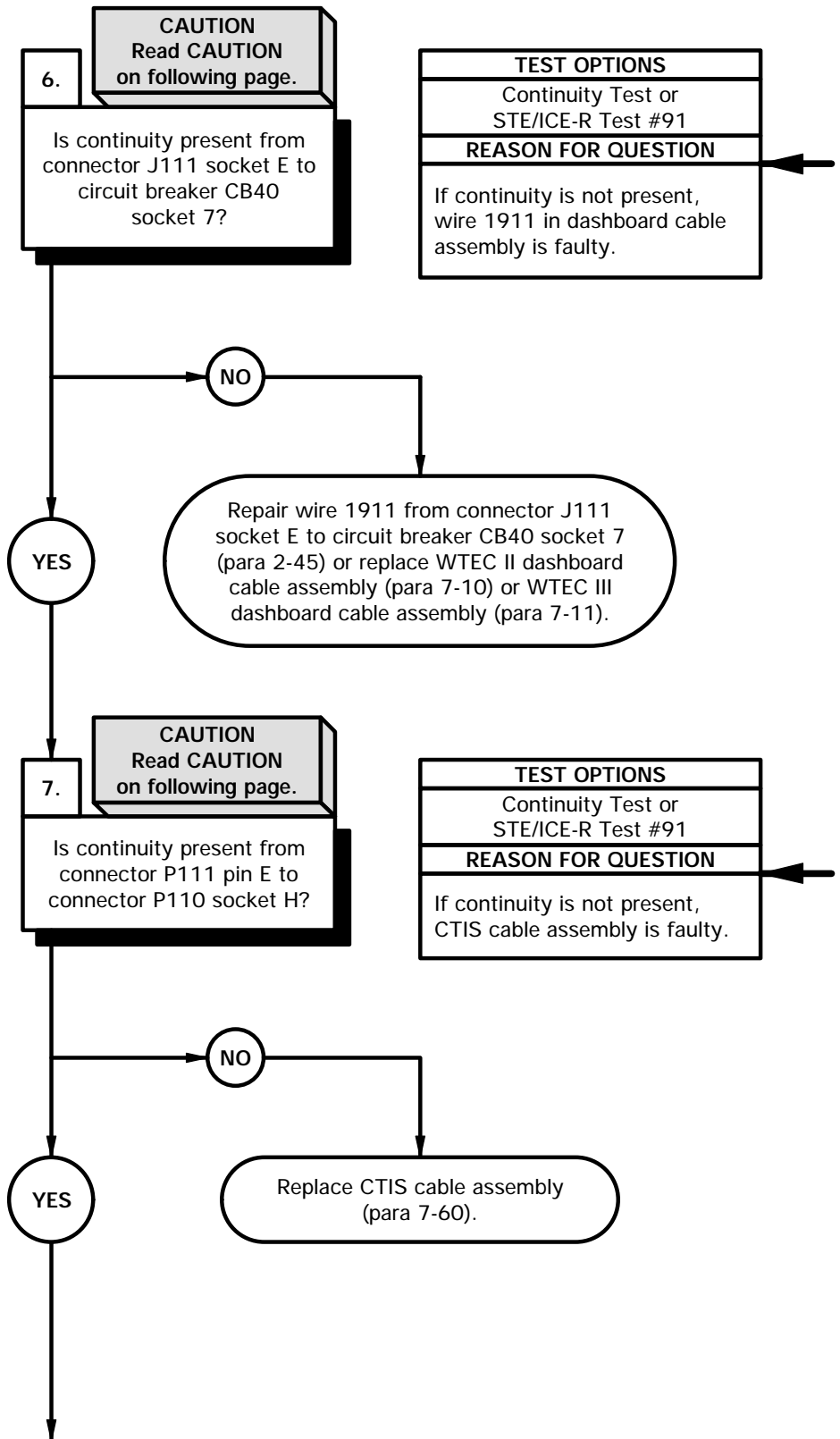


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e85. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE (CONT)

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK.
POSSIBLE PROBLEMS
Faulty dashboard cable assembly. Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK. Dashboard cable assembly OK.
POSSIBLE PROBLEMS
Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

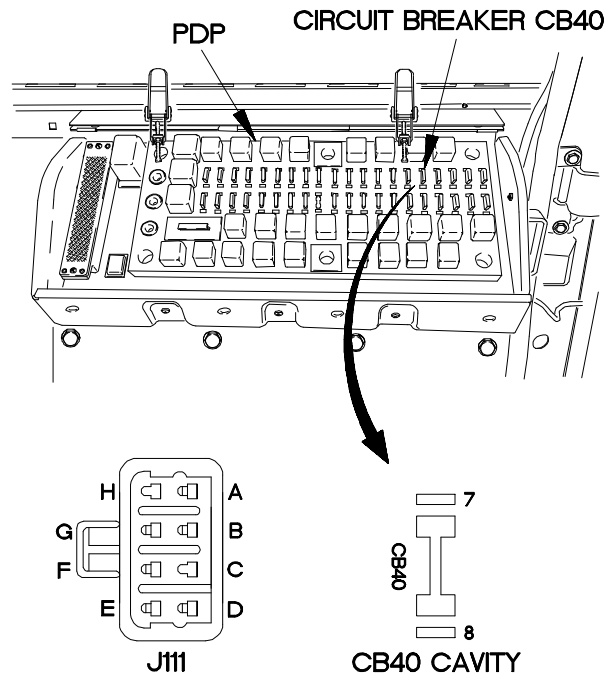


CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

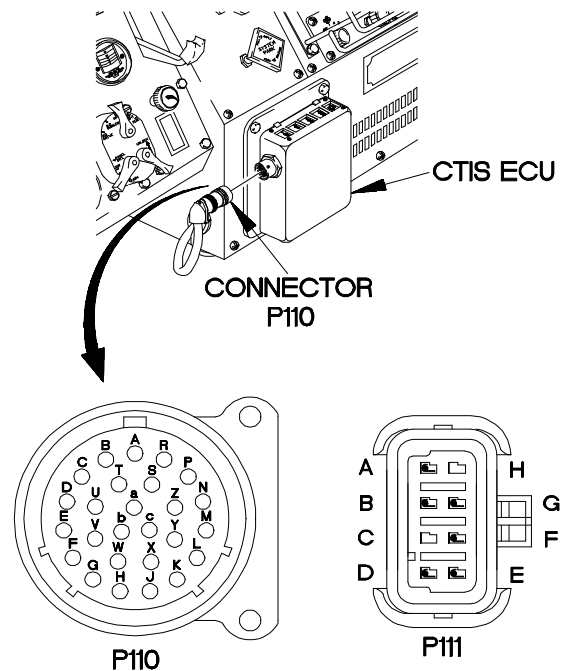
CONTINUITY TEST

- (1) Remove circuit breaker CB40 from PDP.
- (2) Set multimeter to ohms.
- (3) Connect positive (+) probe of multimeter to connector J111 socket E.
- (4) Connect negative (-) probe of multimeter to circuit breaker CB40 socket 7 and note reading on multimeter.
- (5) If continuity is not present, repair wire 1911 from connector J111 socket E to circuit breaker CB40 socket 7 (para 2-45) or replace WTEC II dashboard cable assembly (para 7-10) or WTEC III dashboard cable assembly (para 7-11).
- (6) Install circuit breaker CB40 on PDP.



CONTINUITY TEST

- (1) Disconnect connector P110 from CTIS ECU.
- (2) Set multimeter to ohms.
- (3) Connect positive (+) probe of multimeter to connector P111 pin E.
- (4) Connect negative (-) probe of multimeter to connector P110 socket H and note reading on multimeter.
- (5) If continuity is not present, replace CTIS cable assembly (para 7-60).



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e85. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE (CONT)

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK. Dashboard cable assembly OK.
POSSIBLE PROBLEMS
Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

KNOWN INFO
VOLTS gage registers in green zone with engine running. Circuit breaker CB40 OK. FRONT BRAKE AIR and REAR BRAKE AIR pressure gages read normal. Air pressure switch OK. Start and charging cable assembly OK. Dashboard cable assembly OK.
POSSIBLE PROBLEMS
Faulty CTIS cable assembly. Faulty manifold valve assembly. Faulty CTIS ECU.

