ARMY TM 9-2320-366-20-4
AIR FORCE T.O. 36A12-1C-1102-4

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1083 SERIES, 5-TON, 6 X 6,
MEDIUM TACTICAL VEHICLES (MTV)
VOLUME NO. 4 OF 5

MODEL	NSN	EIC
TRK, CAR., MTV, M1083		
W/WN	2320-01-360-1895	BT3
W/O WN	2320-01-354-3386	BR2
TRK, CAR., MTV, W/MATL HDLG EQPT (MHE), M1084	2320-01-354-3387	BR3
TRK, CAR., MTV, LWB, M1085		
W/WN	2320-01-360-1897	BT5
W/O WN	2320-01-354-4530	BR7
TRK, CAR., MTV, LWB, W/MATL HDLG EQPT (MHE), M1086	2320-01-354-4531	BR8
TRK, TRACTOR, MTV, M1088		
W/WN	2320-01-360-1892	BTY
W/O WN	2320-01-355-4332	BTJ
TRK, WKR, MTV, M1089	2320-01-354-4528	BR4
TRK, DUMP, MTV, M1090		
W/WN	2320-01-360-1893	BTZ
W/O WN	2320-01-354-4529	BR5
TRK, CHAS, MTV, M1092	2320-01-354-3382	BRZ
TRK, CAR., MTV, AIR DROP, M1093		
W/WN	2320-01-360-1896	BT4
W/O WN	2320-01-355-3063	BR9
TRK, DUMP, MTV, AIR DROP, M1094		
W/WN	2320-01-360-1984	BT2
W/O WN	2320-01-355-3062	BTK
TRK, CHAS, MTV, LWB, M1096	2320-01-354-4527	BR6

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PROPELLER SHAFT MAINTENANCE PAGE 9-1

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BODY AND CAB MAINTENANCE PAGE 16-1

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SEPTEMBER 1998

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NO. 9-2320-366-20-4

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NO. 36A12-1C-1102-4

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE

Washington, D.C., 15 September 1998

Unit Maintenance Manual

M1083 SERIES, 5-TON, 6 x 6, MEDIUM TACTICAL VEHICLES (MTV)

VOLUME NO. 4 OF 5

MODEL	NSN	EIC
TRK, CAR., MTV, M1083		
W/WN	**2320-01-360-1895**	**BT3**
W/O WN	**2320-01-354-3386**	**BR2**
TRK, CAR., MTV, W/MATL HDLG EQPT (MHE), M1084	**2320-01-354-3387**	**BR3**
TRK, CAR., MTV, LWB, M1085		
W/WN	**2320-01-360-1897**	**BT5**
W/O WN	**2320-01-354-4530**	**BR7**
TRK, CAR., MTV, LWB, W/MATL HDLG EQPT (MHE), M1086	**2320-01-354-4531**	**BR8**
TRK, TRACTOR, MTV, M1088		
W/WN	**2320-01-360-1892**	**BTY**
W/O WN	**2320-01-355-4332**	**BTJ**
TRK, WKR, MTV, M1089	**2320-01-354-4528**	**BR4**
TRK, DUMP, MTV, M1090		
W/WN	**2320-01-360-1893**	**BTZ**
W/O WN	**2320-01-354-4529**	**BR5**
TRK, CHAS, MTV, M1092	**2320-01-354-3382**	**BRZ**
TRK, CAR., MTV, AIR DROP, M1093		
W/WN	**2320-01-360-1896**	**BT4**
W/O WN	**2320-01-355-3063**	**BR9**
TRK, DUMP, MTV, AIR DROP, M1094		
W/WN	**2320-01-360-1984**	**BT2**
W/O WN	**2320-01-355-3062**	**BTK**
TRK, CHAS, MTV, LWB, M1096	**2320-01-354-4527**	**BR6**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or Email your letter or DA Form 2028 direct to: AMSTA-LC-CI/TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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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 4 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 7, ELECTRICAL SYSTEM MAINTENANCE (CONT)**
- **CHAPTER 8, TRANSMISSION MAINTENANCE**
- **CHAPTER 9, PROPELLER SHAFT MAINTENANCE**
- **CHAPTER 10, FRONT AND REAR AXLE MAINTENANCE**
- **CHAPTER 11, BRAKE SYSTEM MAINTENANCE**
- **CHAPTER 12, WHEELS, TIRES, AND HUBS MAINTENANCE**
- **CHAPTER 13, STEERING SYSTEM MAINTENANCE**
- **CHAPTER 14, FRAME, TOWING ATTACHMENTS, AND DRAWBARS MAINTENANCE**
- **CHAPTER 15, SUSPENSION MAINTENANCE**
- **CHAPTER 16, BODY AND CAB MAINTENANCE**

- **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 4 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 Volume 1, table 2-1, PMCS. These checks and services are mandatory at the intervals listed. Always follow the WARNINGS and CAUTIONS.

- **UNSCHEDULED MAINTENANCE.** Unscheduled maintenance is located in chapters 3 thru 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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7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-57).
Instrument panel assembly removed for access (para 7-15).

Tools and Special Tools
Tool Kit, Genl Mech (Item 46, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 59, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 20, Appendix D)
Ties, Cable, Plastic (Item 69, Appendix D)
Lockwasher (2) (Item 93, Appendix G)
Lockwasher (Item 103, Appendix G)
Nut, Self-Locking (2) (Item 143, Appendix G)
Nut, Self-Locking (Item 144, Appendix G)
Nut, Self-Locking (5) (Item 128, Appendix G)

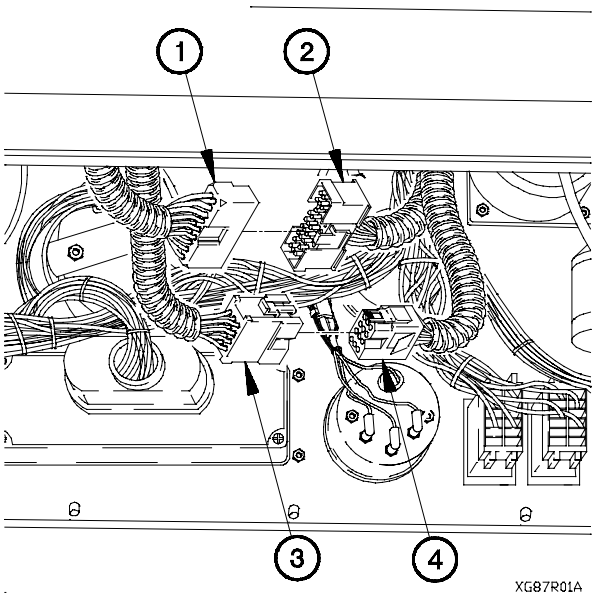
a. Removal.

NOTE

- Remove plastic cable ties as required.
- Note routing of engine control cable assembly prior to removal.
- Tag connectors and connection points prior to disconnecting.

(1) Disconnect connector P31 (1) from connector J31 (2).

(2) Disconnect connector P31X (3) from connector J31X (4).



7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)

(3) Raise cab (TM 9-2320-366-10-1).

(4) Disconnect connector clamp (5) from connector P38 (6).

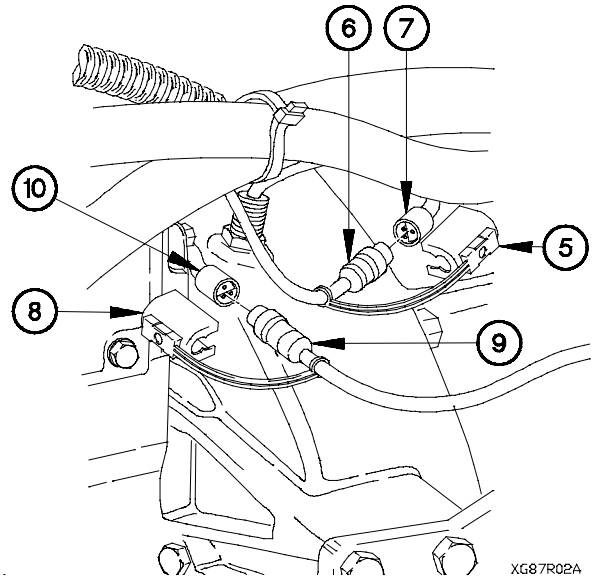
(5) Disconnect connector P38 (6) from engine speed sensor connector J38 (7).

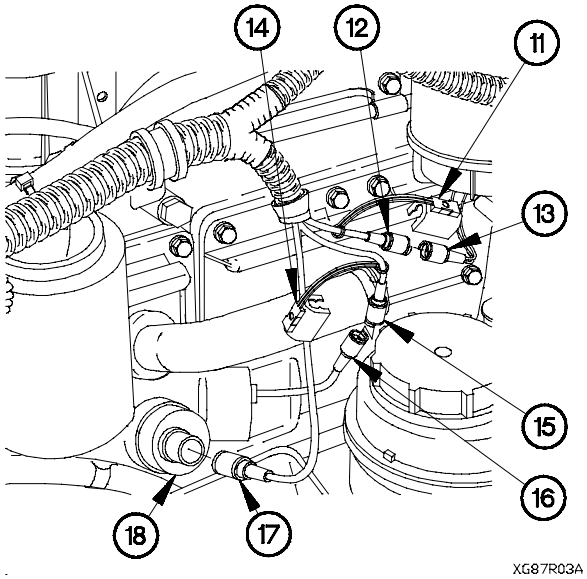
NOTE

Perform steps (6) and (7) on vehicles equipped with troopseats.

(6) Disconnect connector clamp (8) from connector P39 (9).

(7) Disconnect connector P39 (9) from connector J39 (10).





(8) Disconnect connector clamp (11) from connector P33 (12).

(9) Disconnect connector P33 (12) from fuel/water separator connector (13).

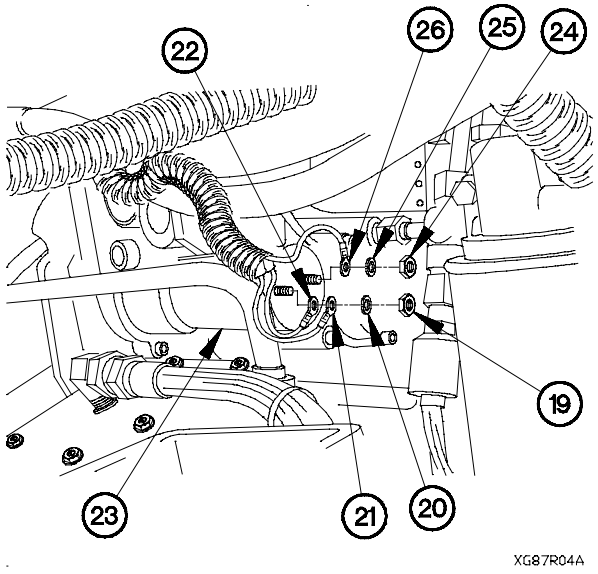
(10) Disconnect connector clamp (14) from connector P34 (15).

(11) Disconnect connector P34 (15) from oil pressure switch connector (16).

(12) Disconnect connector P32 (17) from oil pressure transducer (18).

(13) Remove nut (19), lockwasher (20), and terminal lugs TL29 (21) and TL66 (22) from fuel shutoff solenoid (23). Discard lockwasher.

(14) Remove nut (24), lockwasher (25), and terminal lug TL28 (26) from fuel shutoff solenoid (23). Discard lockwasher.



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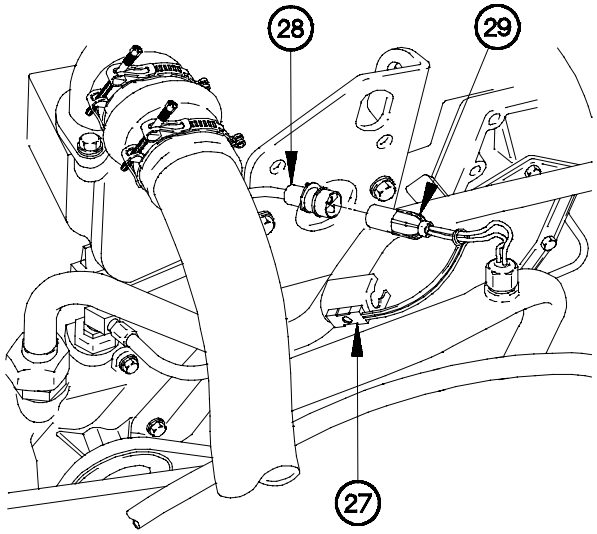

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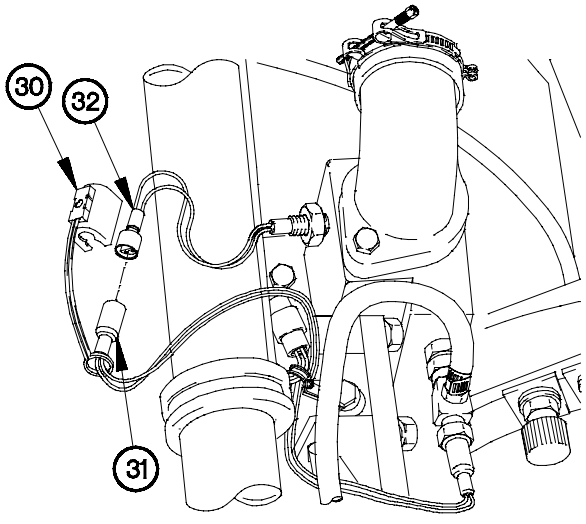
(15) Disconnect connector clamp (27) from connector P42 (28).

(16) Disconnect connector P42 (28) from ether sensor connector (29).

(17) Disconnect connector clamp (30) from connector P37 (31).

(18) Disconnect connector P37 (31) from coolant temperature light switch connector (32).



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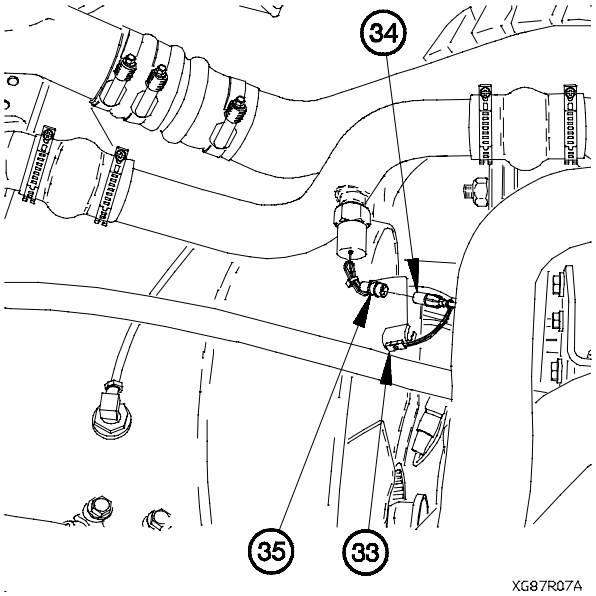
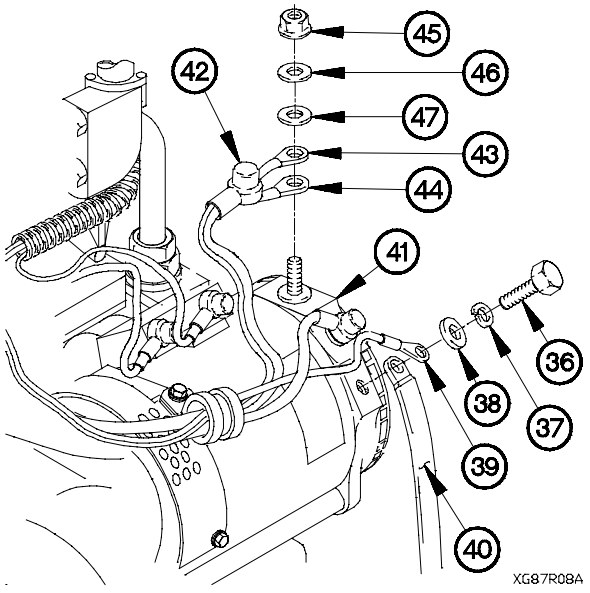
7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)

(19) Disconnect connector clamp (33) from connector P36 (34).

(20) Disconnect connector P36 (34) from water temp-erature switch connector (35).





(21) Remove screw (36), lockwasher (37), washer (38), terminal lugs TL5 (39) and TL8 (40) from alternator (41). Discard lockwasher.

(22) Lift dust boot (42) on terminal lugs TL6 (43) and TL2 (44).

(23) Remove self-locking nut (45), washer (46), insulation washer (47), and terminal lugs TL6 (43) and TL2 (44) from alternator (41). Discard self-locking nut.

(24) Remove terminal lug TL6 (43) from dust boot (42).

(25) Lift dust boot (48) on terminal lug TL35 (49).

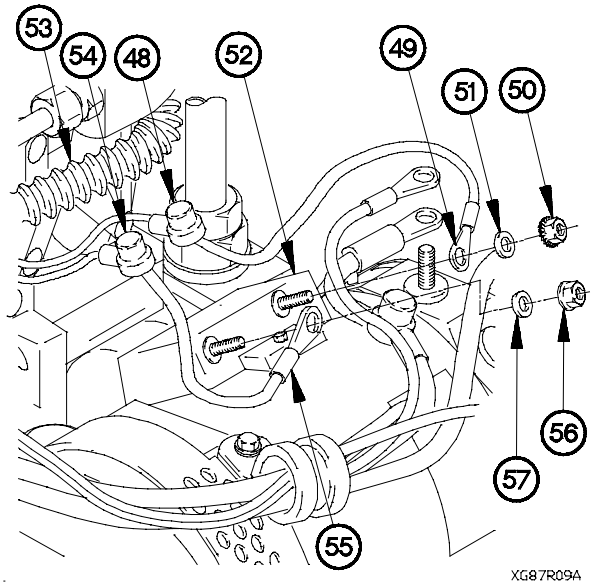
(26) Remove self-locking nut (50), washer (51), and terminal lug TL35 (49) from voltage regulator (52). Discard self-locking nut.

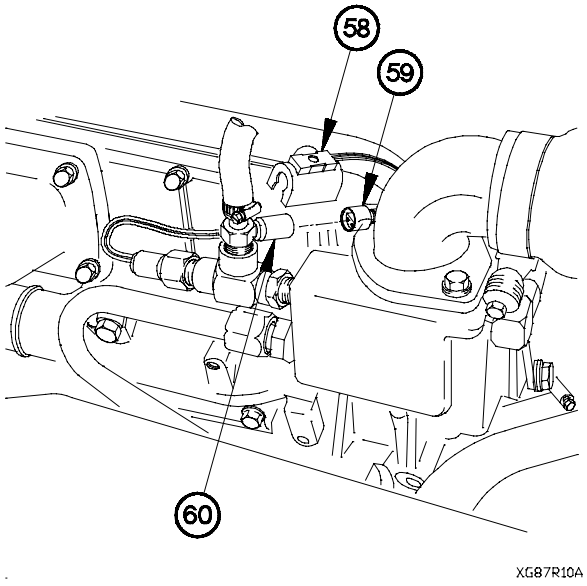
(27) Remove dust boot (48) from engine control cable assembly (53).

(28) Lift dust boot (54) on terminal lug TL110 (55).

(29) Remove self-locking nut (56), washer (57), and terminal lug TL110 (55) from voltage regulator (52). Discard self-locking nut.

(30) Remove dust boot (54) from engine control cable assembly (53).



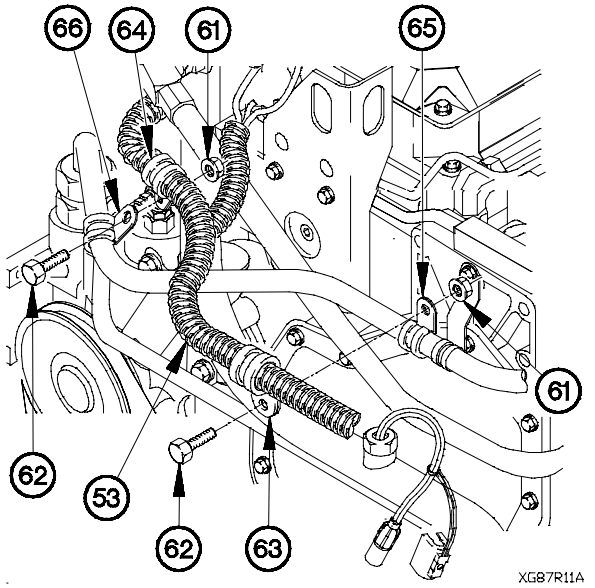


(31) Disconnect connector clamp (58) from connector P41 (59).

(32) Disconnect connector P41 (59) from coolant temperature gage sensor connector (60).

(33) Remove two self-locking nuts (61), screws (62), and clamps (63 and 64) from clamps (65 and 66). Discard self-locking nuts.

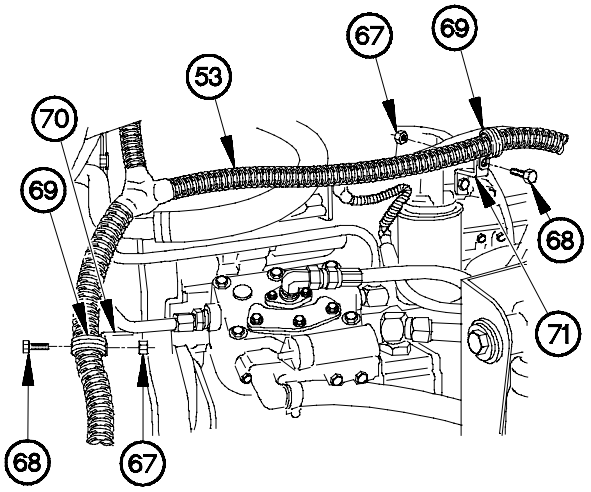
(34) Remove clamps (63 and 64) from engine control cable assembly (53).



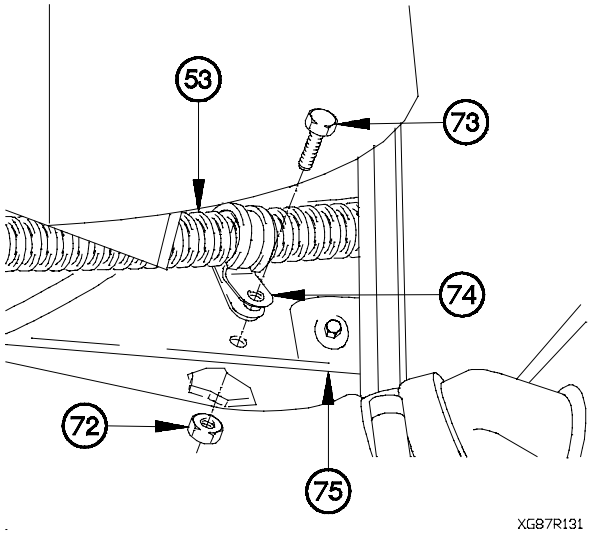
7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)

(35) Remove two self-locking nuts (67), screws (68), and clamps (69) from brackets (70 and 71). Discard self-locking nuts.

(36) Remove two clamps (69) from engine control cable assembly (53).



XG87R121



XG87R131

(37) Remove self-locking nut (72), screw (73), and clamp (74) from left frame rail (75).

(38) Remove clamp (74) from engine control cable assembly (53).

(39) Remove engine control cable assembly (53) from vehicle.

b. Installation.

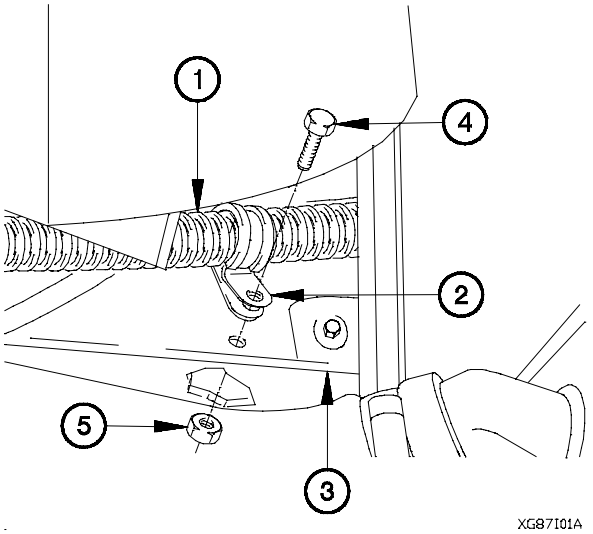
NOTE

Install plastic cable ties as required.

(1) Position engine control cable assembly (1) in vehicle.

(2) Install clamp (2) on engine control cable assembly (1).

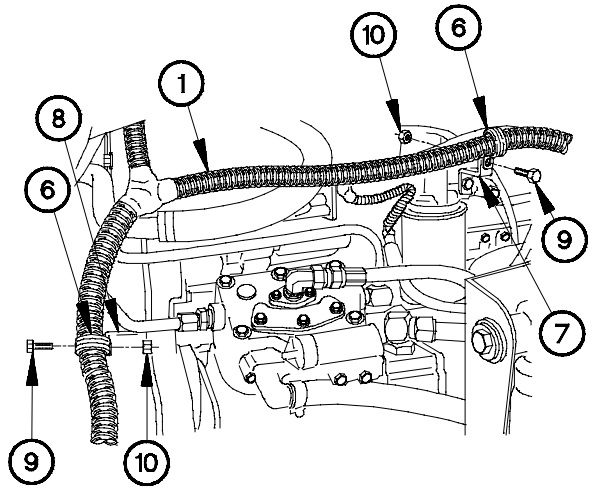
(3) Install clamp (2) on left frame rail (3) with screw (4) and self-locking nut (5).



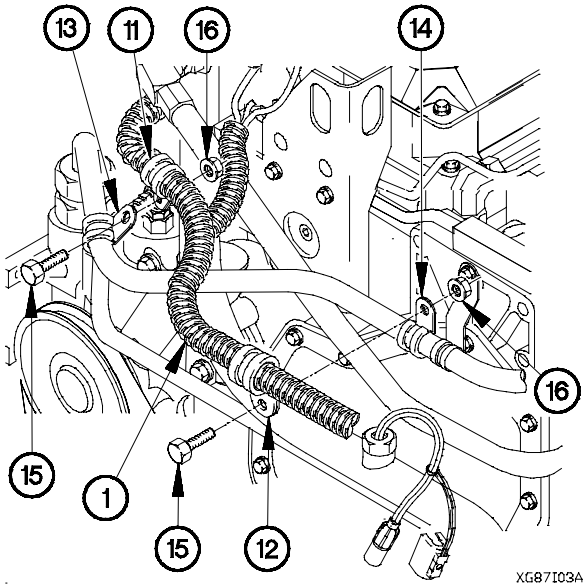
XG87I01A

(4) Install two clamps (6) on engine control cable assembly (1).

(5) Install two clamps (6) on brackets (7 and 8) with two screws (9) and self-locking nuts (10).



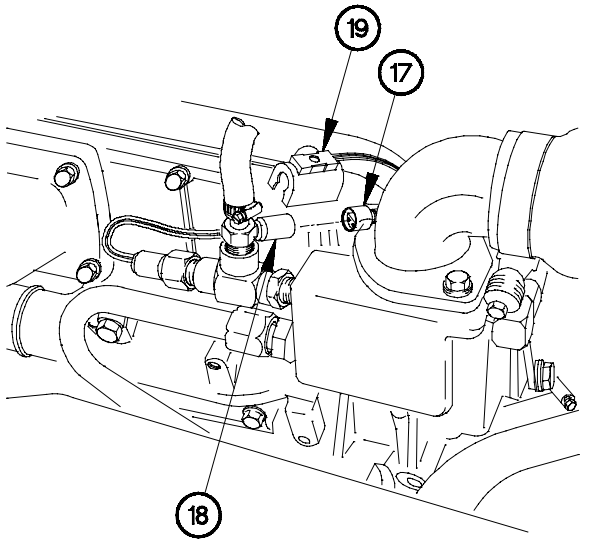
XG87I02A



XG87I03A

(6) Install clamps (11 and 12) on engine control cable assembly (1).

(7) Install clamps (11 and 12) on clamps (13 and 14) with two screws (15) and self-locking nuts (16).



XG87I04A

(8) Connect connector P41 (17) to coolant temperature gage sensor connector (18).

(9) Connect connector clamp (19) on connector P41 (17).

7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)

(10) Install dust boot (20) on engine control cable assembly (1).

(11) Position terminal lug TL110 (21) on voltage regulator (22) with washer (23) and self-locking nut (24).

(12) Tighten self-locking nut (24) to 25 lb-in. (3 N·m).

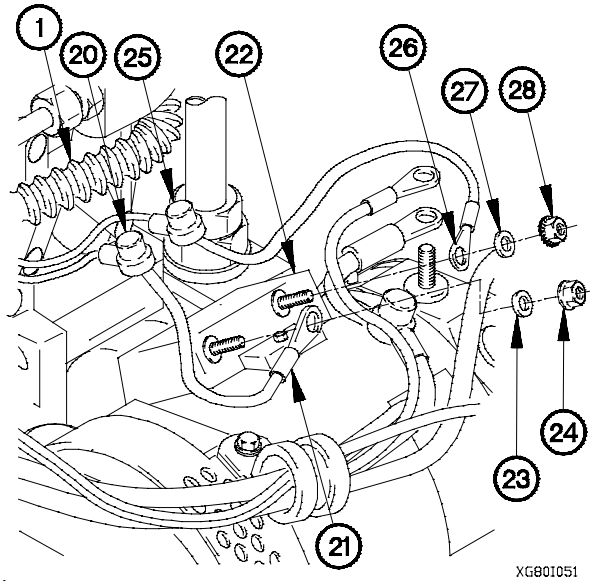
(13) Position dust boot (20) on terminal lug TL110 (21).

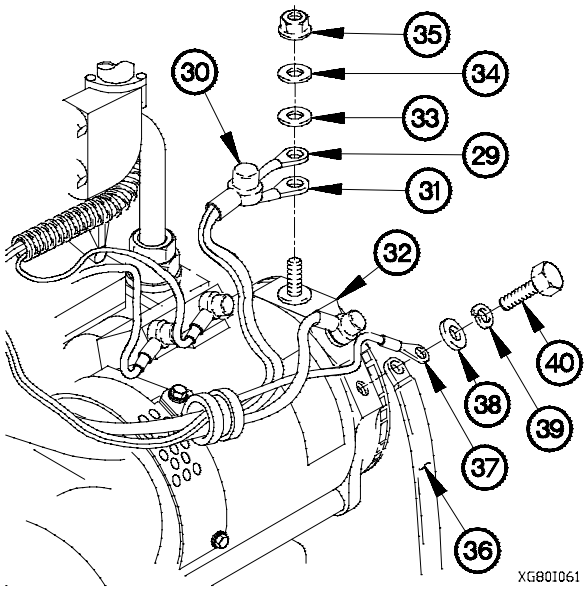
(14) Install dust boot (25) on engine control cable assembly (1).

(15) Position terminal lug TL35 (26) on voltage regulator (22) with washer (27) and self-locking nut (28).

(16) Tighten self-locking nut (28) to 25 lb-in. (3 N·m).

(17) Position dust boot (25) on terminal lug TL35 (26).





(18) Install terminal lug TL6 (29) in dust boot (30).

CAUTION

Insulation washer must be installed with flat side up. Failure to comply may result in damage to equipment.

(19) Position terminal lugs TL2 (31) and TL6 (29) on alternator (32) with insulation washer (33), washer (34), and self-locking nut (35).

(20) Tighten self-locking nut (35) to 40 lb-in. (5 N·m).

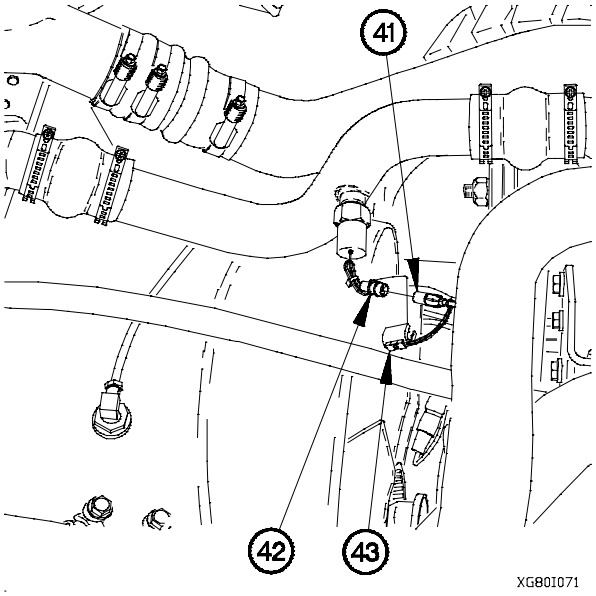
(21) Position dust boot (30) on terminal lugs TL6 (29) and TL2 (31).

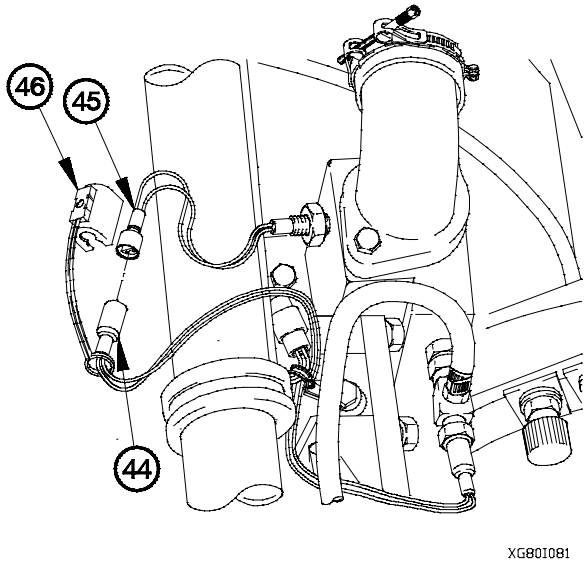
(22) Position terminal lugs TL8 (36) and TL5 (37) on alternator (32) with washer (38), lockwasher (39), and screw (40).

(23) Tighten screw (40) to 40 lb-in. (5 N·m).

(24) Connect connector P36 (41) to water temperature switch connector (42).

(25) Connect connector clamp (43) on connector P36 (41).



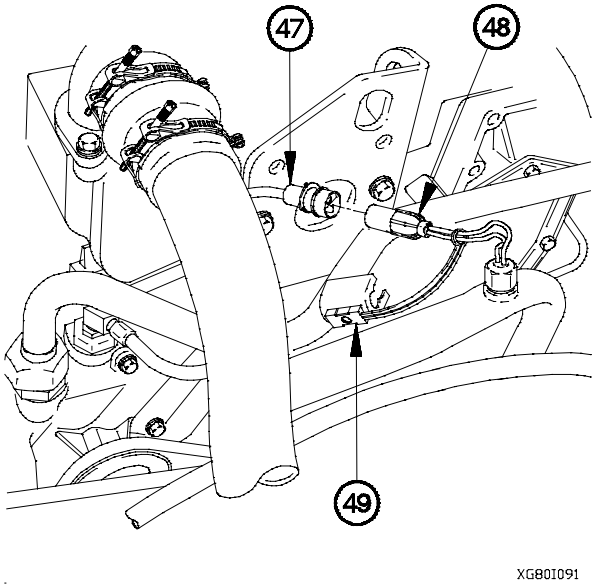


(26) Connect connector P37 (44) to coolant temperature light switch connector (45).

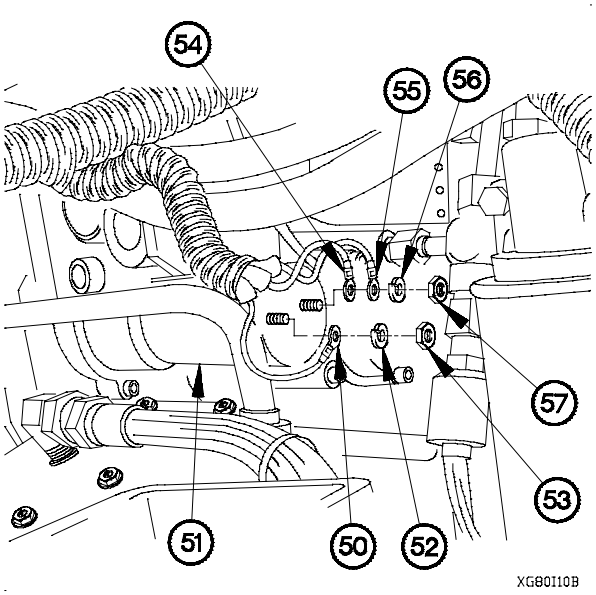
(27) Connect connector clamp (46) on connector P37 (44).

(28) Connect connector P42 (47) to ether sensor connector (48).

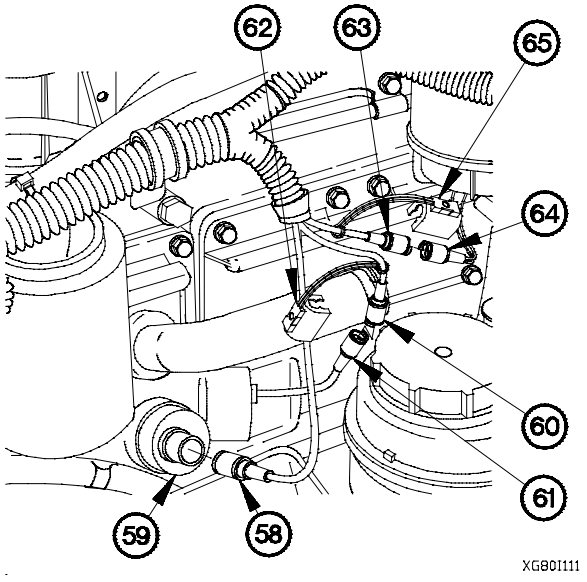
(29) Connect connector clamp (49) on connector P42 (47).



7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)



- (30) Position terminal lug TL28 (50) on fuel shutoff solenoid (51) with lockwasher (52) and nut (53).
- (31) Position terminal lugs TL66 (54) and TL29 (55) on fuel shutoff solenoid (51) with lockwasher (56) and nut (57).
- (31.1) Tighten nuts (53 and 57) to 23-27 lb-in. (3·m).



(32) Connect connector P32 (58) to oil pressure transducer (59).

(33) Connect connector P34 (60) to oil pressure light switch connector (61).

(34) Connect connector clamp (62) on connector P34 (60).

(35) Connect connector P33 (63) to fuel/water separator connector (64).

(36) Connect connector clamp (65) on connector P33 (63).

7-80. ENGINE CONTROL CABLE ASSEMBLY REPLACEMENT (CONT)

(37) Connect connector P38 (66) to engine speed sensor connector J38 (67).

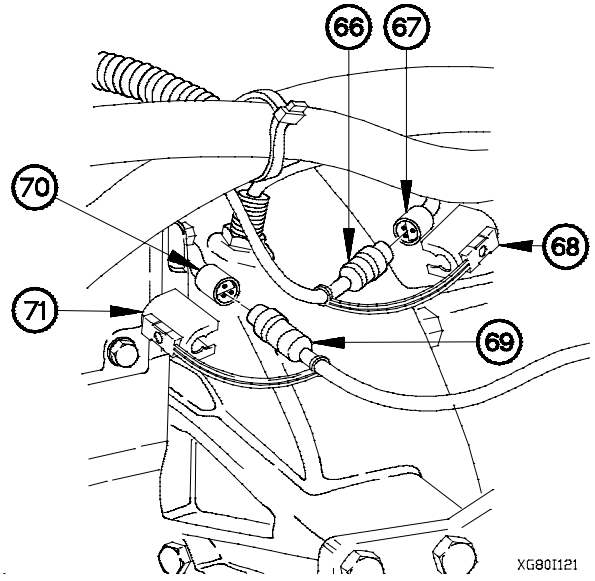
(38) Connect connector clamp (68) on connector P38 (66).

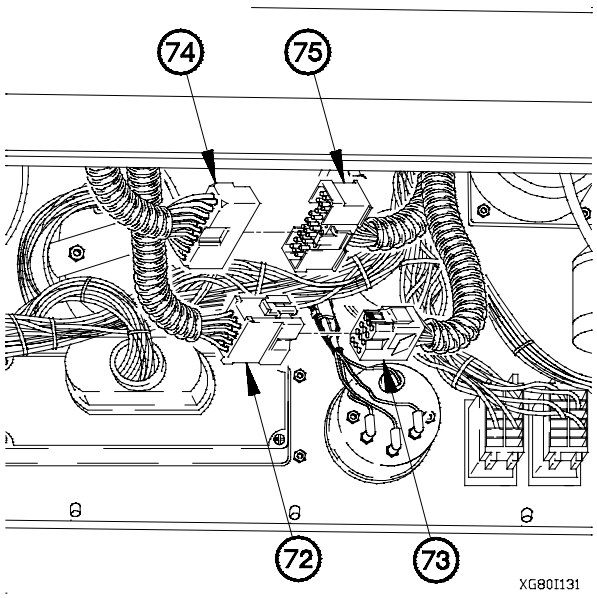
NOTE

Perform steps (39) and (40) on vehicles equipped with troopseats.

(39) Connect connector P39 (69) to connector J39 (70).

(40) Connect connector clamp (71) on connector P39 (69).





(41) Lower cab (TM 9-2320-366-10-1).

(42) Connect connector P31X (72) to connector J31X (73).

(43) Connect connector P31 (74) to connector J31 (75).

c. Follow-On Maintenance.

(1) Install instrument panel assembly (para 7-15).

(2) Connect batteries (para 7-57).

(3) Start engine (TM 9-2320-366-10-1).

(4) Check VOLTS gage for charge indication (TM 9-2320-366-10-1).

(5) Shut down engine (TM 9-2320-366-10-1).

End of Task.