

TECHNICAL MANUAL
UNIT MAINTENANCE MANUAL
FOR
CARRIER, PERSONNEL, FULL TRACKED, ARMORED, M113A2
NSN 2350-01-068-4077

CARRIER, COMMAND POST, LIGHT TRACKED, M577A2
NSN 2350-01-068-4089

CARRIER, MORTAR, 120-MM, M121; SELF-PROPELLED, M1064
NSN 2350-01-338-3116

CARRIER, STANDARDIZED INTEGRATED COMMAND POST SYSTEM,
M1068
NSN 2350-01-354-5657

CARRIER, SMOKE GENERATOR, FULL TRACKED, M1059
NSN 2350-01-203-0188

COMBAT VEHICLE, ANTI-TANK, IMPROVED TOW VEHICLE, M901A1
NSN 2350-01-103-5641

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UNIT MAINTENANCE MANUALCARRIER, PERSONNEL, FULL TRACKED, ARMORED, M113A2
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NSN 2350-01-203-0188COMBAT VEHICLE, ANTI-TANK, IMPROVED TOW VEHICLE, M901A1
NSN 2350-01-103-5641**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

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CHAPTER 31

UNIT MAINTENANCE INSTRUCTIONS
FOR DRIVER'S WINDSHIELD KIT

WORK PACKAGE INDEX

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REPLACE DRIVER'S WINDSHIELD AND BRACKETS.....	0624 00

REPLACE DRIVER'S WINDSHIELD AND BRACKETS

0624 00

THIS WORK PACKAGE COVERS:

Removal (page 0624 00-1).
 Installation (page 0624 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanics Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

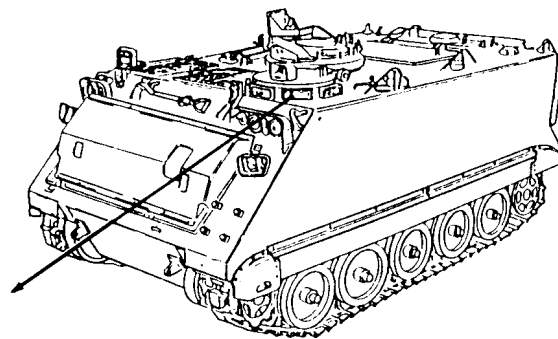
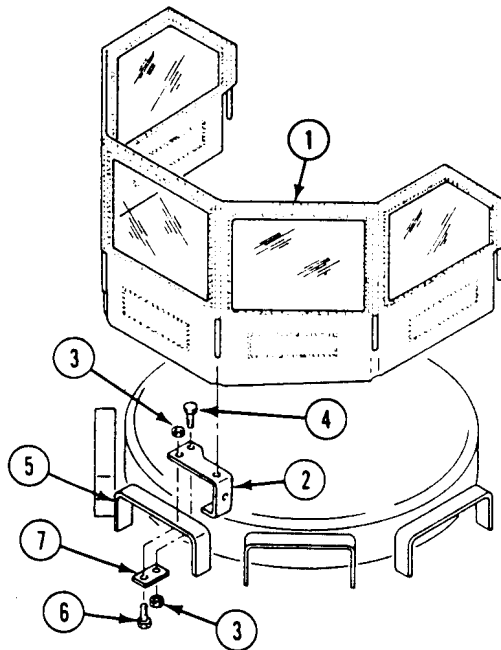
Locknut (10)

REMOVAL

CAUTION

Handle windshield carefully to avoid damage to windows. Do not fold windshield after use in extreme cold; windows will crack. Warm cold windshield slowly before folding for stowage.

1. Lift windshield (1) out of five brackets (2).
2. Remove five locknuts (3) and outside screws (toward hatch) (4) from driver's hatch periscope guards (5). Discard locknuts.
3. Remove five locknuts (3), and inside screws (away from hatch) (6), five brackets (2), and plates (7) from driver's hatch periscope guards (5). Discard locknuts.

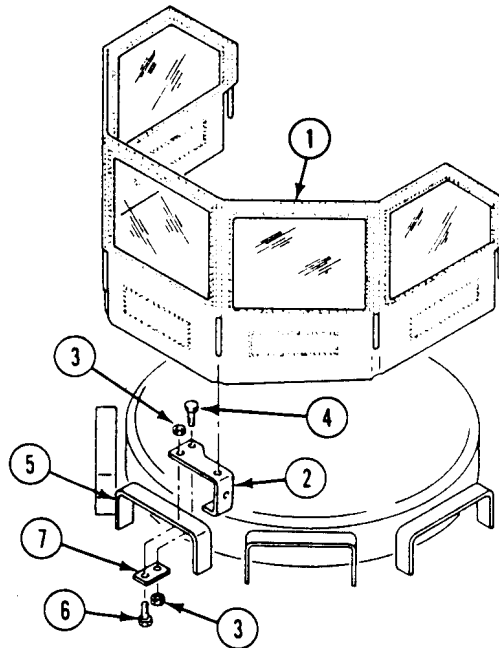


INSTALLATION

NOTE

Install the heads of outside screws (toward hatch) down and the heads of inside screws (away from hatch) up to prevent interference.

1. If windshield (1) is to be installed, secure five brackets (2) and plates (7) to driver's hatch periscope guards (5) with five outside screws (4), five inside screws (6), and ten new locknuts (3).
2. Install windshield (1) in five brackets (2).



END OF TASK

CHAPTER 32

UNIT MAINTENANCE INSTRUCTIONS
FOR ELECTRONIC EQUIPMENT HEATER KIT (M577A2 ONLY)

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ELECTRONIC EQUIPMENT HEATER KIT (M577A2 ONLY)

0625 00

INITIAL SETUP:

Maintenance Level

References

Unit

TM 9-2540-205-24&P

HEATER COMPONENT MAINTENANCE

NOTE

The M577A2 with the 5.0 KW Auxiliary Power Unit (APU) will not have the electronic equipment heater. The electronic equipment heater is removed completely.

Heater Component Maintenance (Stewart Warner Corp., Model 10560M24B1)

This section shows you how to perform maintenance on the replaceable components of the Stewart Warner Corp., Model 10560M24B1 electronic equipment heater. Only those components listed in this section may be repaired or replaced by unit maintenance.

The electronic equipment heater and the personnel compartment heater are the same. Refer to TM 9-2540-205-24&P for heater component maintenance.

Heater Component Maintenance (Hupp Corp., Model D55350-G1)

Refer to TM 9-2540-205-24&P for troubleshooting, repair tasks, and Repair Parts and Special Tools Lists (RPSTL) for the Hupp Corp., Model D55350-G1 Heater.

The electronic equipment heater and the personnel compartment heater are the same. Refer to Chapter 32 for other components of the electronic equipment heater installation.

END OF TASK

REPLACE HEATER FUEL PUMP (M577A2 ONLY)

0626 00

THIS WORK PACKAGE COVERS:

Removal (page 0626 00-2).
 Installation (page 0626 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

Battery ground lead disconnected (WP 0294 00)

Rear floor plate removed (WP 0436 00)

Heater fuel shutoff valve closed (see your -10)

Materials/Parts

Cleaning compound solvent (WP 0782 00, Item 16)

Sealing compound (WP 0782 00, Item 60)

Locknut (2)

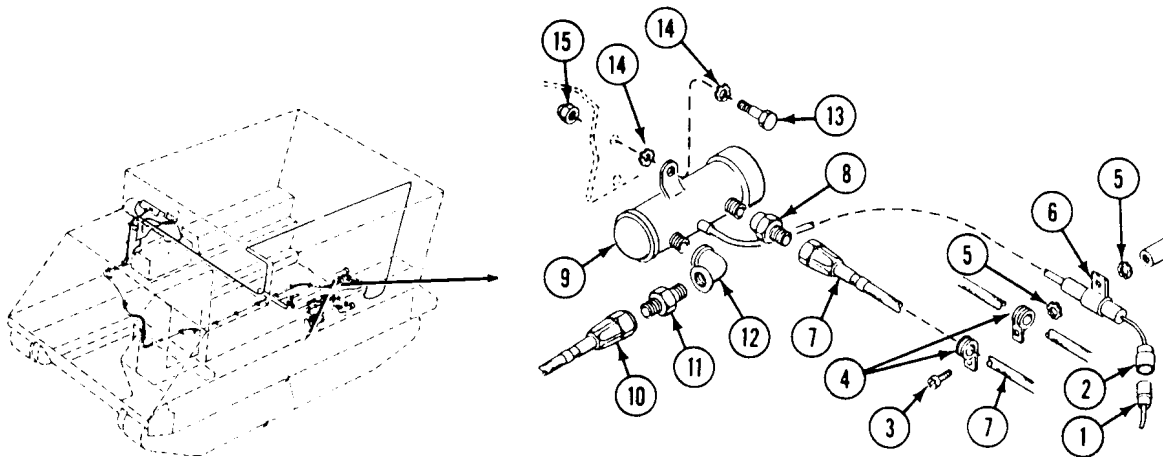
Lockwasher (6)

REMOVAL

WARNING

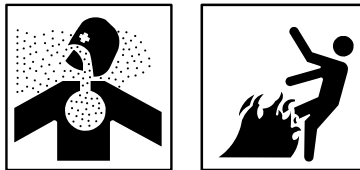
Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

1. Disconnect circuit 402A lead (1) from fuel pump lead (2).
2. Remove screw (3), two clamps (4), two lockwashers (5), and clamp (6) from hull weldnut. Discard lockwashers.
3. Remove fuel hose (7) from adapter (8). Remove adapter from fuel pump (9).
4. Remove fuel hose (10) from adapter (11). Remove adapter from elbow (12).
5. Remove elbow (12) from fuel pump (9).
6. Remove two screws (13), four lockwashers (14), two locknuts (15), and fuel pump (9) from rear floor support. Discard lockwashers and locknuts.



INSTALLATION

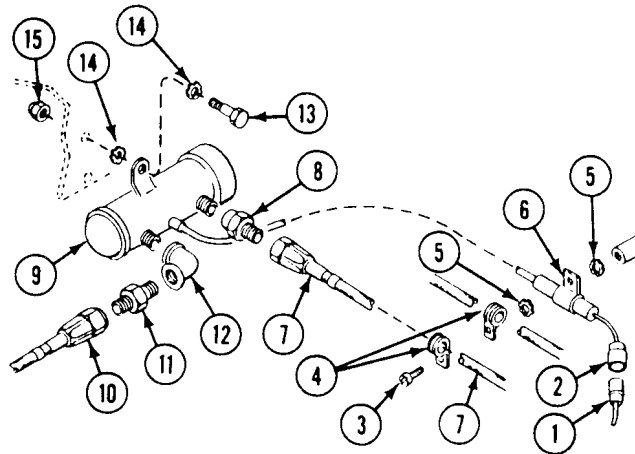
1. Place fuel pump (9) on rear floor support. Secure with two screws (13), four new lockwashers (14), and two new locknuts (15).

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

2. Apply light coat of sealing compound to all external tapered threads. Do not apply sealant beyond end of tapered threads.
3. Install elbow (12) on fuel pump (9).
4. Install adapter (11) in elbow (12). Connect fuel hose (10) to adapter (11).
5. Install adapter (8) on fuel pump (9). Connect fuel hose (7) to adapter (8).
6. Align clamp (6), two new lockwashers (5), and two clamps (4) with hull weldnut. Secure with screw (3).
7. Install fuel pump lead (2) on circuit 402A lead (1).



FOLLOW-THROUGH STEPS

1. Open heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel line (WP 0599 00).
4. Start heater (see your -10). Check pump for fuel leaks. Turn heater off.
5. Install rear floor plate (WP 0436 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

REPLACE SHUTOFF VALVE TO FUEL PUMP HOSE AND SHUTOFF VALVE (M577A2 ONLY)

0627 00

THIS WORK PACKAGE COVERS:

Removal (page 0627 00-1).
 Installation (page 0627 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)
 Rear floor plate removed (WP 0436 00)
 Fuel supply shutoff valve closed (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Sealing compound (WP 0782 00, Item 60)
 Locknut
 Lockwasher (2)

Personnel Required

Unit Mechanic

REMOVAL

WARNING

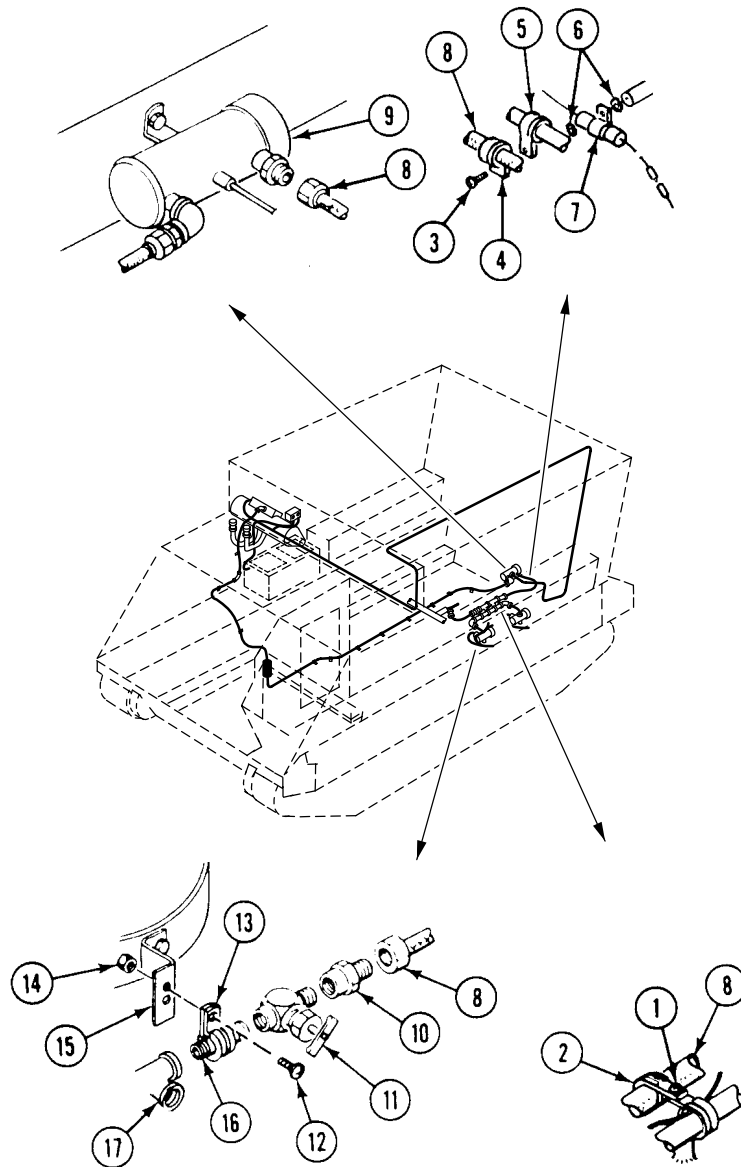


Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

REPLACE SHUTOFF VALVE TO FUEL PUMP HOSE AND SHUTOFF VALVE (M577A2 ONLY) — Continued

0627 00

1. Remove screw (1) and clamp (2) from hull weldnut.
2. Remove screw (3), two clamps (4) and (5), two lockwashers (6), and clamp (7) from hull weldnut. Discard lockwashers.
3. Disconnect hose (8) from fuel pump (9) and adapter (10). Remove clamp (2) and clamp (4) from hose.
4. Remove adapter (10) from shutoff valve (11).
5. Remove screw (12), clamp (13), and locknut (14) from bracket (15). Discard locknut.
6. Remove shutoff valve (11) from nipple (16). Remove clamp (13) from nipple. Remove nipple from tee (17).

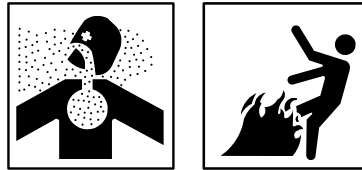


REPLACE SHUTOFF VALVE TO FUEL PUMP HOSE AND SHUTOFF VALVE (M577A2 ONLY) — Continued

0627 00

INSTALLATION

WARNING



Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

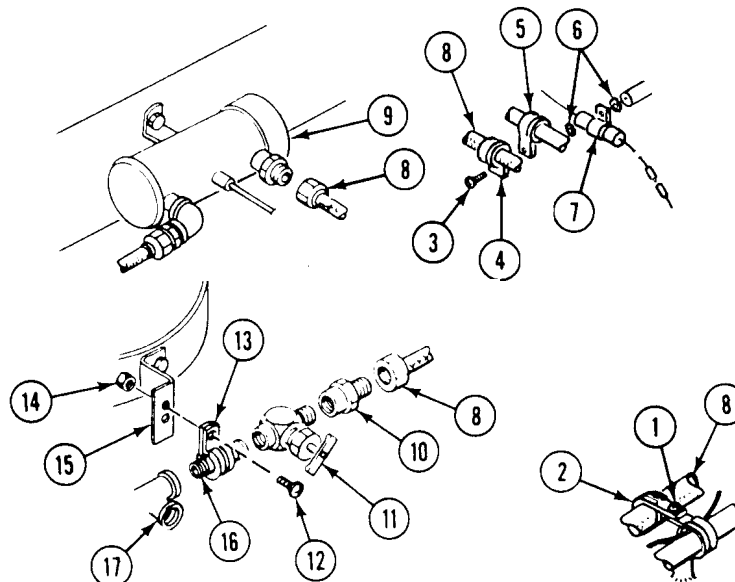
Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Apply light coat of sealing compound to all external tapered threads. Do not apply sealant beyond small end of tapered threads.

NOTE

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

2. Install nipple (16) in tee (17).
3. Place clamp (13) on nipple (16) and align with bracket (15). Secure with screw (12) and new locknut (14).
4. Install shutoff valve (11) on nipple (16). Install adapter (10) on shutoff valve.
5. Install two clamps (2) and (4) on hose (8). Connect hose to adapter (10) and fuel pump (9).
6. Align clamp (7), two new lockwashers (6), and two clamps (4) and (5) with hull weldnut. Secure with screw (3).
7. Align clamp (2) with hull weldnut. Secure with screw (1).



REPLACE SHUTOFF VALVE TO FUEL PUMP HOSE AND SHUTOFF VALVE (M577A2 ONLY) — Continued

0627 00

FOLLOW-THROUGH STEPS

1. Open heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel line (WP 0599 00)
4. Start heater (see your -10). Check pump for fuel leaks. Turn heater off.
5. Install rear floor plate (WP 0436 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

**REPLACE ELECTRONIC EQUIPMENT HEATER FUEL PUMP TO
BULKHEAD CONNECTION HOSE (M577A2 ONLY)**

0628 00

THIS WORK PACKAGE COVERS:

Removal (page 0628 00-2).
Installation (page 0628 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Ramp lowered (see your -10)
Battery ground lead disconnected (WP 0294 00)
Personnel heater duct removed (WP 0617 00)
Right front and rear floor plates removed (WP 0436 00)
Heater fuel shutoff valve closed (see your -10)

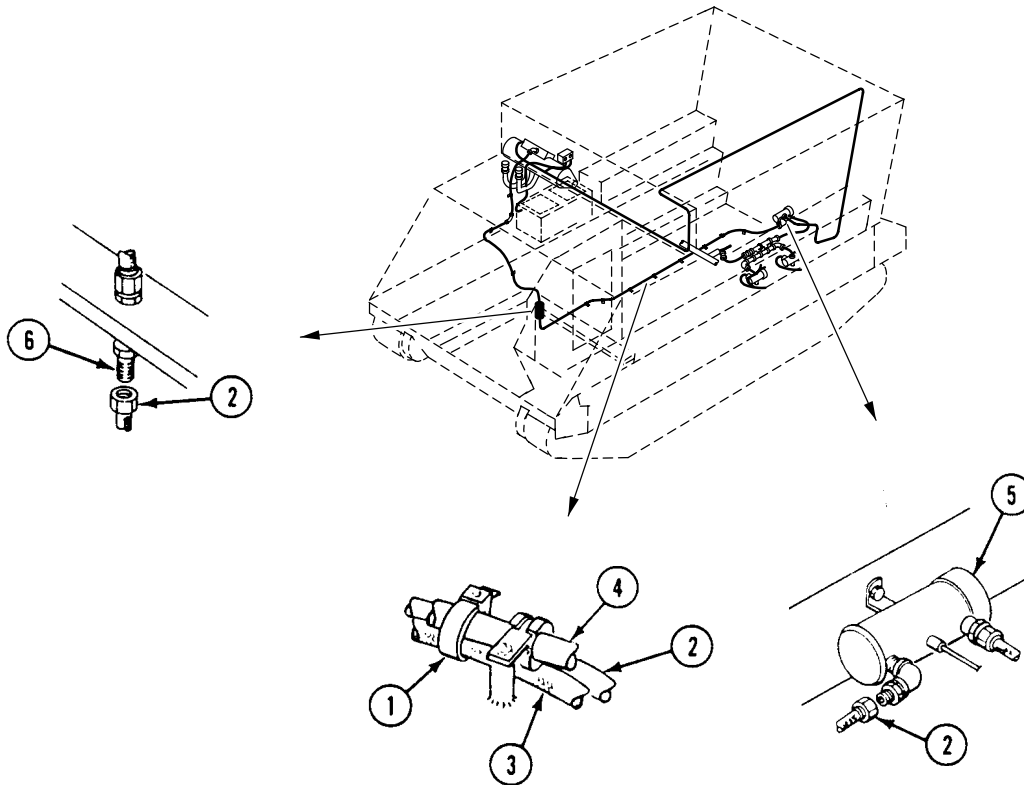
**REPLACE ELECTRONIC EQUIPMENT HEATER FUEL PUMP TO BULKHEAD
CONNECTION HOSE (M577A2 ONLY) — Continued**

0628 00

REMOVAL**WARNING**

**Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicle.
Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.**

1. Remove nine straps (1) holding fuel hose (2) to hoses (3) and (4).
2. Disconnect fuel hose (2) from fuel pump (5) and nipple (6). Remove hose from carrier.



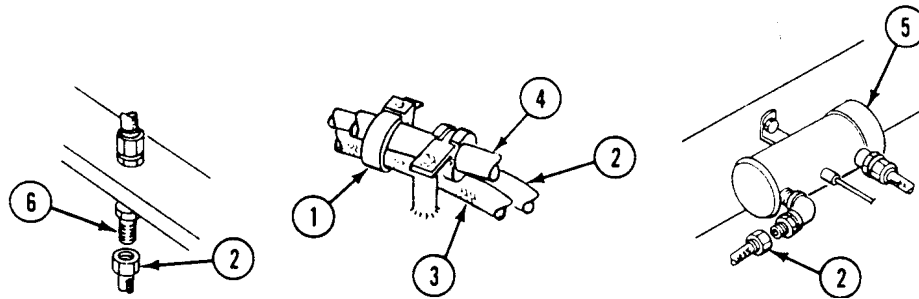
REPLACE ELECTRONIC EQUIPMENT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE (M577A2 ONLY) — Continued

0628 00

INSTALLATION**NOTE**

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

1. Connect fuel hose (2) to nipple (6) and fuel pump (5).
2. Secure hose (2) to hoses (3) and (4) with nine straps (1).

**FOLLOW-THROUGH STEPS**

1. Open heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel line (WP 0599 00).
4. Start heater (see your -10). Check pump for fuel leaks. Turn heater off.
5. Install right front and rear floor plates (WP 0436 00).
6. Install personnel heater duct (WP 0617 00).
7. Raise and lock ramp (see your -10).
8. Stop engine (see your -10).

END OF TASK

**REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO
HEATER HOSES (M577A2 ONLY)**

0629 00

THIS WORK PACKAGE COVERS:

Removal (page 0629 00-2).
Installation (page 0629 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0633 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
Pipe Wrench (WP 0780 00, Item 93)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Ramp lowered (see your -10)
Battery ground lead disconnected (WP 0294 00)
Personnel heater duct removed (WP 0617 00)
Right front floor plate removed (WP 0436 00)
Power plant rear access panel removed (WP 0433 00)
Heater fuel shutoff valve closed (see your -10)

Materials/Parts

Sealing compound (WP 0782 00, Item 62)
Locknut
Lockwasher (2)

Personnel Required

Unit Mechanic
Helper (H)

REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO HEATER
HOSES (M577A2 ONLY) — Continued

0629 00

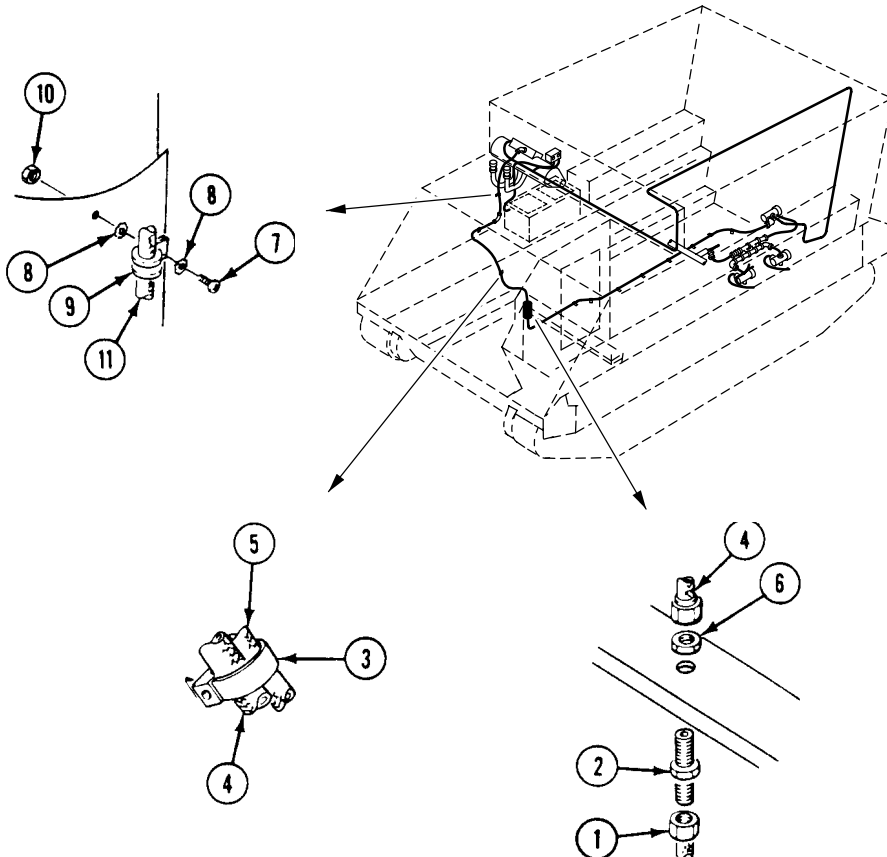
REMOVAL

WARNING



Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

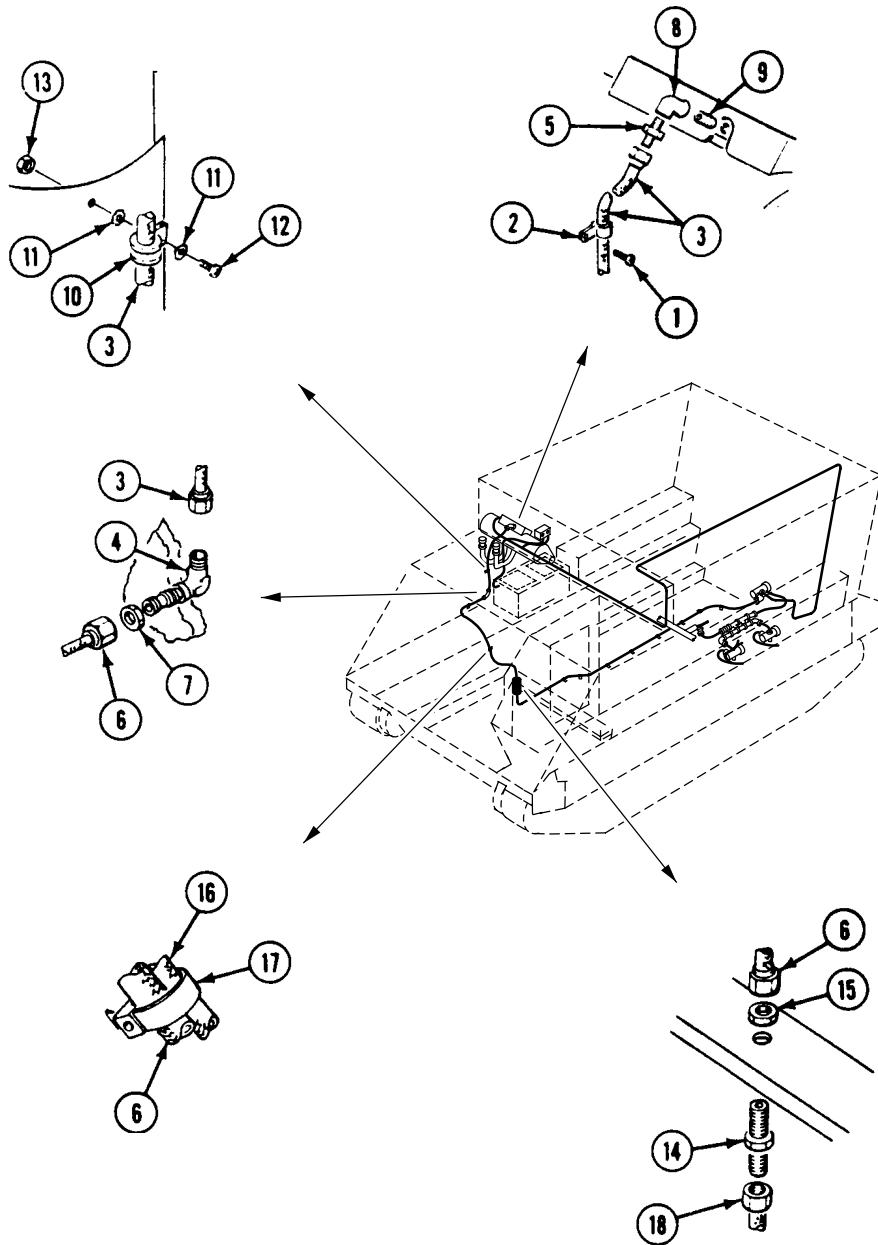
1. Remove fuel hose (1) from nipple (2).
2. Remove two straps (3) from fuel hose (4) and hose (5).
3. Remove fuel hose (4) from nipple (2).
4. Remove jamnut (6) and nipple (2) from hull.
5. Remove screw (7), two lockwashers (8), clamp (9), and locknut (10) from personnel heater heat shield. Discard lockwashers and locknut.
6. Remove clamp (9) from hose (11).
7. Lower heater from mounts (WP 0633 00). Have helper support heater.



**REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO HEATER
HOSES (M577A2 ONLY) — Continued**

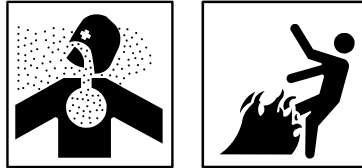
0629 00

8. Remove screw (1) and clamp (2) from bulkhead.
9. Remove clamp (2) from hose (3).
10. Remove hose (3) from elbow (4) and adapter (5).
11. Remove hose (6), jamnut (7), and elbow (4) from power plant compartment bulkhead.
12. Remove adapter (5), elbow (8), and nipple (9) from heater.
13. Raise and secure heater (WP 0633 00). Have helper assist.



**REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO HEATER
HOSES (M577A2 ONLY) — Continued**

0629 00

INSTALLATION**WARNING**

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Apply light coat of sealing compound to all external tapered threads. Do not apply sealant beyond small end of tapered threads.
2. Lower heater from mounts (WP 0633 00). Have helper support heater.

NOTE

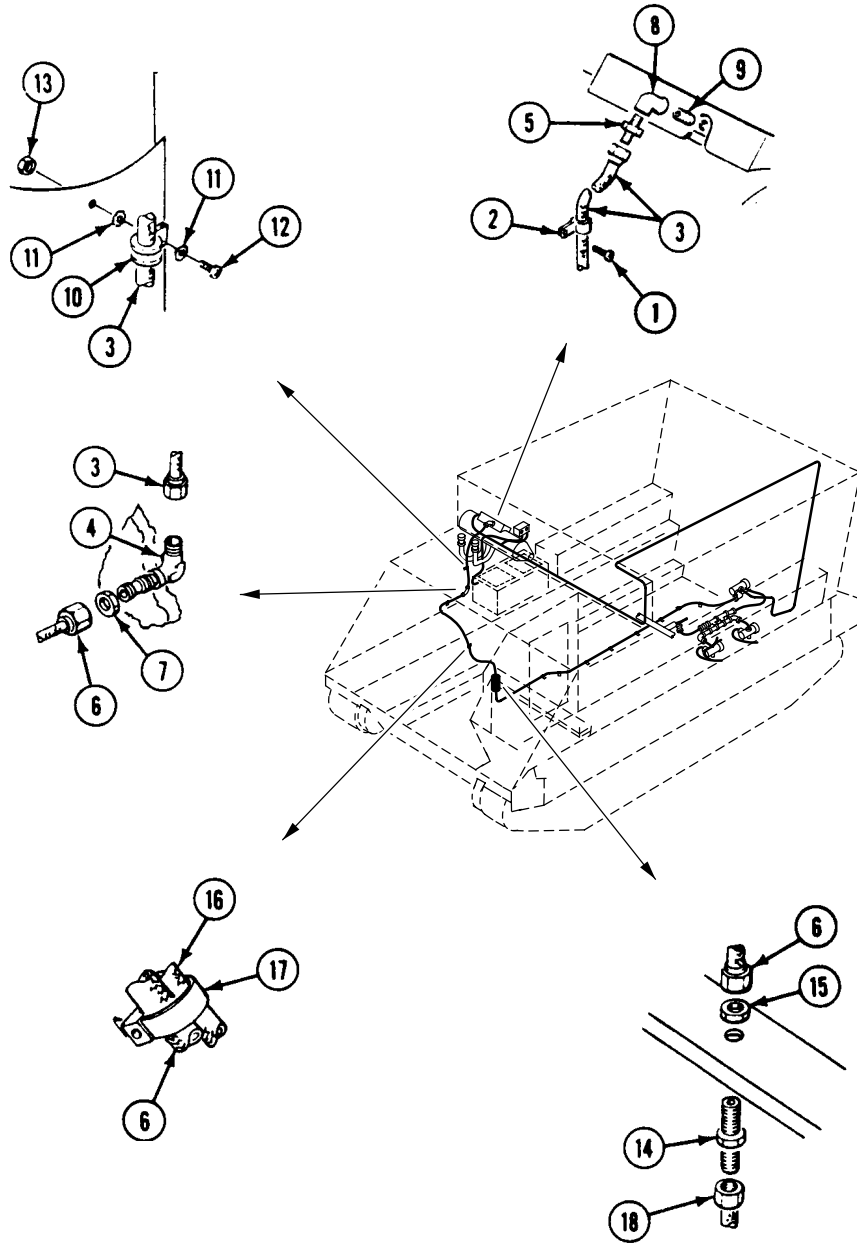
Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

3. Install nipple (9), elbow (8), and adapter (5) on heater.
4. Install elbow (4) in power plant compartment bulkhead. Secure with jamnut (7).
5. Install hose (3) on adapter (5).
6. Install clamp (2) on hose (3). Secure to bulkhead with screw (1).
7. Install clamp (10) on hose (3). Secure to heat shield with two new lockwashers (11), screw (12), and new locknut (13).
8. Raise heater and secure to mounts (WP 0633 00). Have helper assist.
9. Install hose (3) on elbow (4).
10. Install nipple (14) on hull. Secure with jamnut (15).
11. Install hose (6) on nipple (14) and elbow (4).
12. Secure hose (6) to hose (16) with two straps (17).

REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO HEATER HOSES (M577A2 ONLY) — Continued

0629 00

13. Install hose (18) on nipple (14).



**REPLACE ELECTRONIC EQUIPMENT HEATER BULKHEAD TO HEATER
HOSES (M577A2 ONLY) — Continued**

0629 00

FOLLOW-THROUGH STEPS

1. Open heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel line (WP 0599 00).
4. Start heater (see your -10). Check pump for fuel leaks. Turn heater off.
5. Install power plant rear access panel (WP 0433 00).
6. Install right front floor plate (WP 0436 00).
7. Install personnel heater duct (WP 0617 00).
8. Raise and lock ramp (see your -10).
9. Stop engine (see your -10).

END OF TASK

REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL BOX (M577A2 ONLY)

0630 00

THIS WORK PACKAGE COVERS:

- Removal (page 0630 00-1).
- Installation (page 0630 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

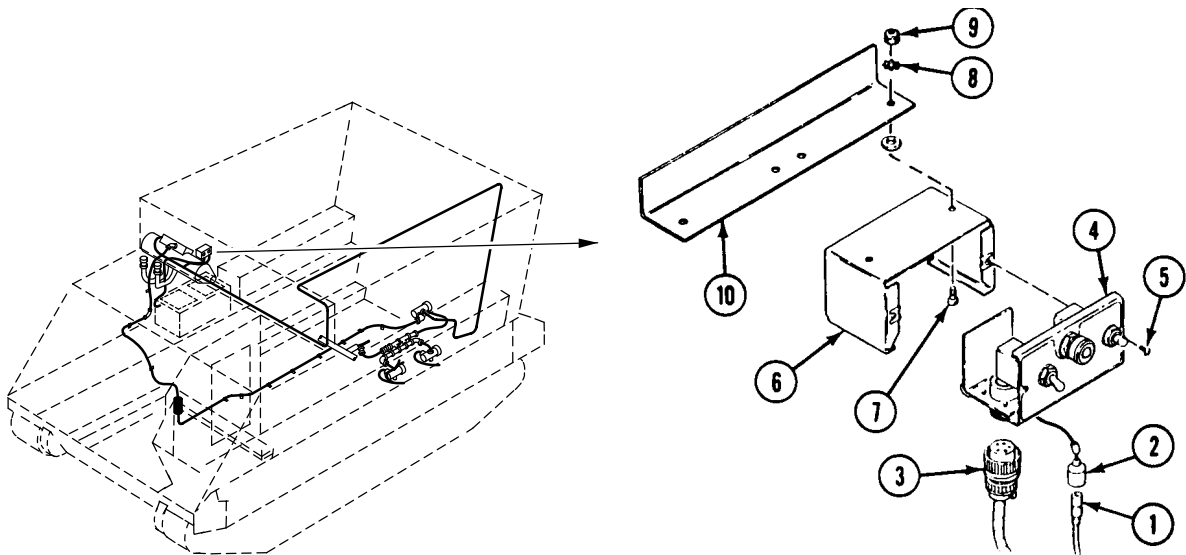
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery ground lead disconnected (WP 0294 00)

Materials/Parts

- Locknut (2)
- Lockwasher (4)

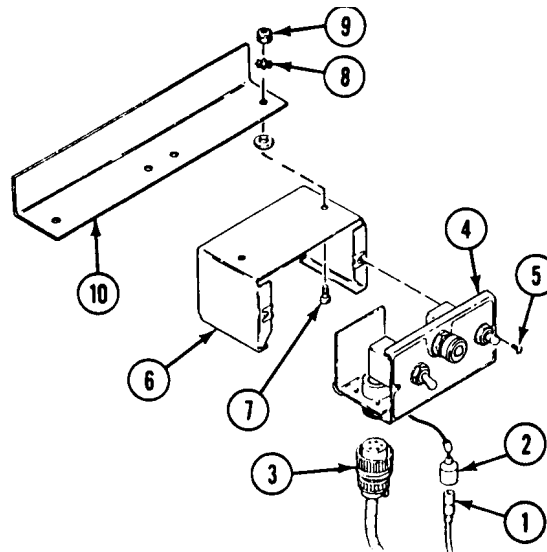
REMOVAL

1. Disconnect circuit 400A lead (1) from control box lead (2).
2. Disconnect heater wiring harness (3) from control box (4).
3. Remove two screws (5) and control box (4) from control box case (6).
4. Remove two screws (7), case (6), four lockwashers (8), and two locknuts (9) from support bracket (10). Discard lockwashers and locknuts.



REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL BOX (M577A2 ONLY) — Continued**0630 00****INSTALLATION**

1. Place four new lockwashers (8) and control box case (6) on support bracket (10). Secure with two screws (7) and two new locknuts (9).
2. Install control box (4) in control box case (6). Secure with two screws (5).
3. Connect heater wiring harness (3) to control box (4).
4. Connect control box lead (2) to circuit 400A lead (1).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Start heater (see your -10). Check that heater control box works properly. Turn heater off.

END OF TASK

**REPLACE ELECTRONIC EQUIPMENT HEATER BATTERY-TO-CONTROL
BOX LEAD (M577A2 ONLY)**

0631 00

THIS WORK PACKAGE COVERS:

Removal (page 0631 00-1).
Installation (page 0631 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

References

WP 0633 00

Materials/Parts

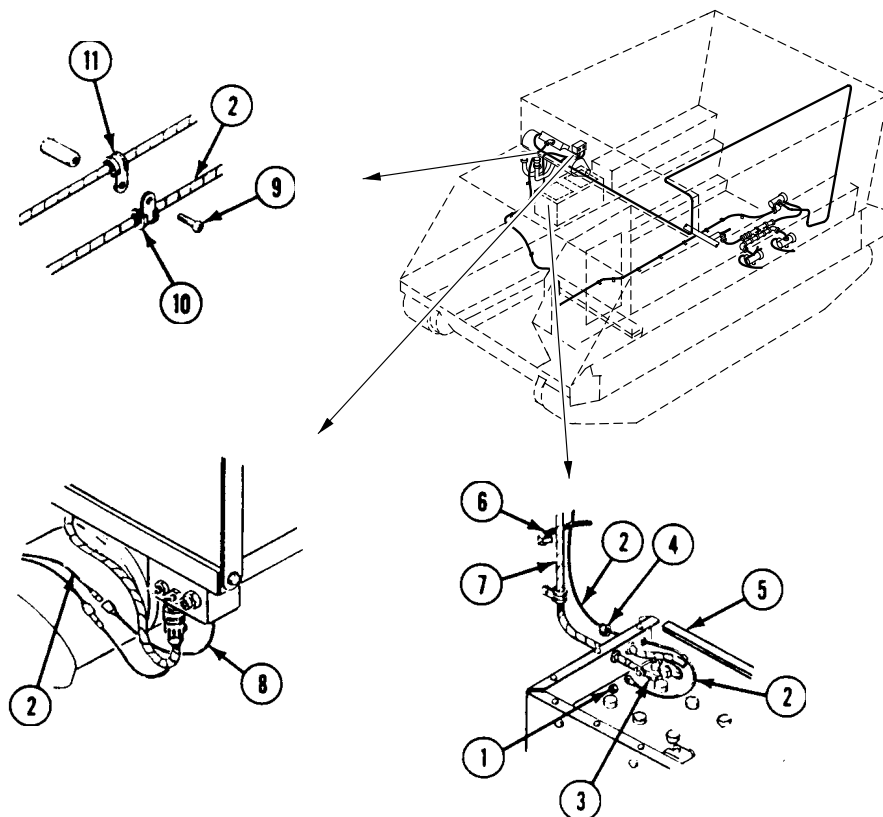
Grommet
Lockwasher (3)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery ground lead disconnected (WP 0294 00)

REMOVAL

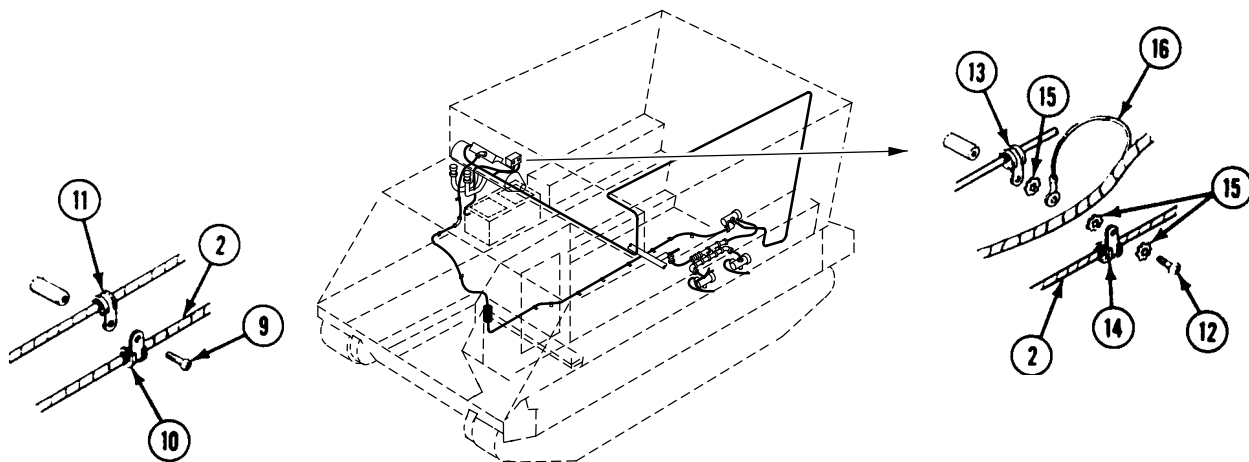
1. Remove nut (1) and circuit 400A lead (2) from front battery positive terminal (3).
2. Remove lead (2) and grommet (4) from battery box (5). Discard grommet.
3. Remove two straps (6) and lead (2) from circuit 6 lead (7).
4. Disconnect lead (2) from control box lead (8).
5. Remove heater from carrier (WP 0633 00).
6. Remove screw (9) and two clamps (10) and (11) from bulkhead weldnut.



**REPLACE ELECTRONIC EQUIPMENT HEATER BATTERY-TO-CONTROL
BOX LEAD (M577A2 ONLY) — Continued**

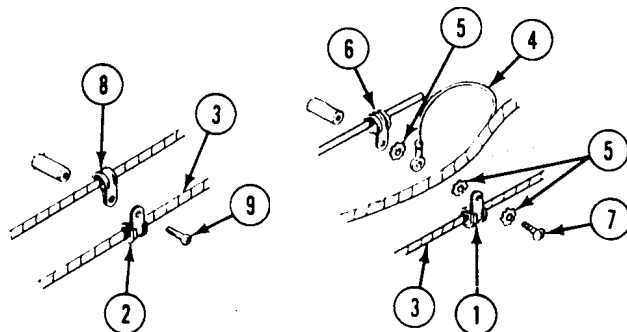
0631 00

7. Remove screw (12), two clamps (13) and (14), three lockwashers (15), and ground lead (16) from bulkhead weldnut. Discard lockwashers.
8. Remove clamp (10) and clamp (14) from lead (2). Remove lead from carrier.



INSTALLATION

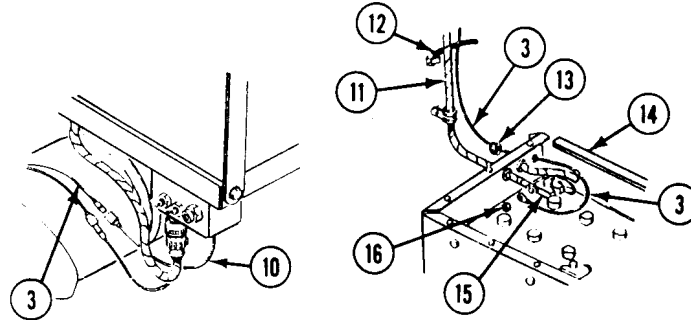
1. Install clamp (1) and clamp (2) on circuit 400A lead (3).
2. Place ground lead (4), three new lockwashers (5), and two clamps (1) and (6) on bulkhead weldnut. Secure with screw (7).
3. Place two clamps (2) and (8) on bulkhead weldnut. Secure with screw (9).



**REPLACE ELECTRONIC EQUIPMENT HEATER BATTERY-TO-CONTROL
BOX LEAD (M577A2 ONLY) — Continued**

0631 00

4. Install heater in carrier (WP 0633 00).
5. Connect lead (3) to control box lead (10).
6. Secure lead (3) to circuit 6 lead (11) with two straps (12).
7. Install new grommet (13) and lead (3) in battery box (14).
8. Install lead (3) on front battery positive terminal (15). Secure with nut (16).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Start heater (see your -10). Check that circuit 400A lead is installed properly. Turn heater off.

END OF TASK

**REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL
BOX-TO-FUEL PUMP LEAD (M577A2 ONLY)**

0632 00

THIS WORK PACKAGE COVERS:

Removal (page 0632 00-2).
Installation (page 0632 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

Battery ground lead disconnected (WP 0294 00)

Rear floor plate removed (WP 0436 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

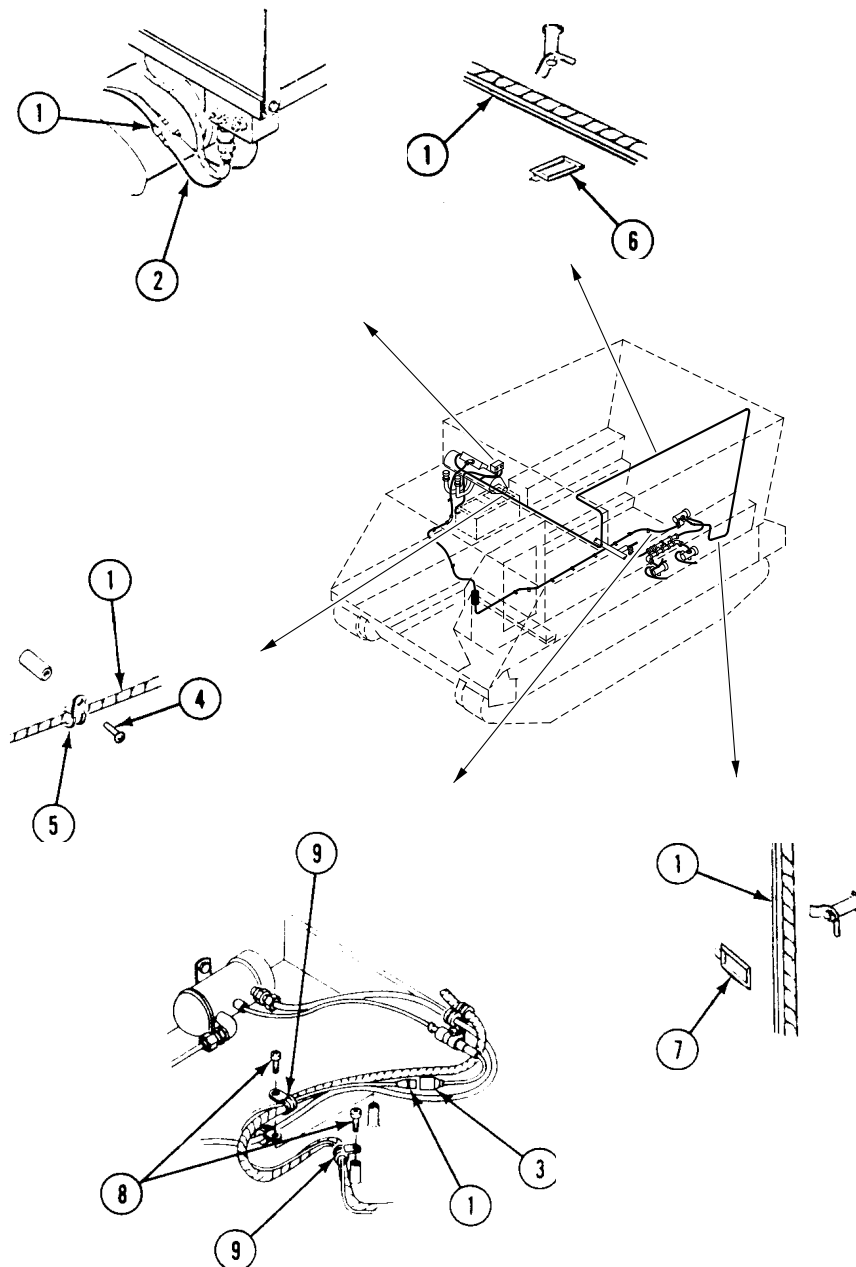
Unit Mechanic

REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL BOX-TO-FUEL PUMP LEAD (M577A2 ONLY) — Continued

0632 00

REMOVAL

1. Disconnect circuit 402A lead (1) from wiring harness lead (2).
2. Disconnect circuit 402A lead (1) from fuel pump lead (3).
3. Remove five screws (4) clamps (5), and lead (1) from forward bulkhead weldnuts.
4. Remove ten clips (6) and lead (1) from compartment roof cradles.
5. Remove six clips (7) and lead (1) from rear bulkhead cradles.
6. Remove two screws (8), clamps (9), and lead (1) from floor weldnuts.
7. Remove five clamps (5) and two clamps (9) from lead (1). Remove lead from carrier.

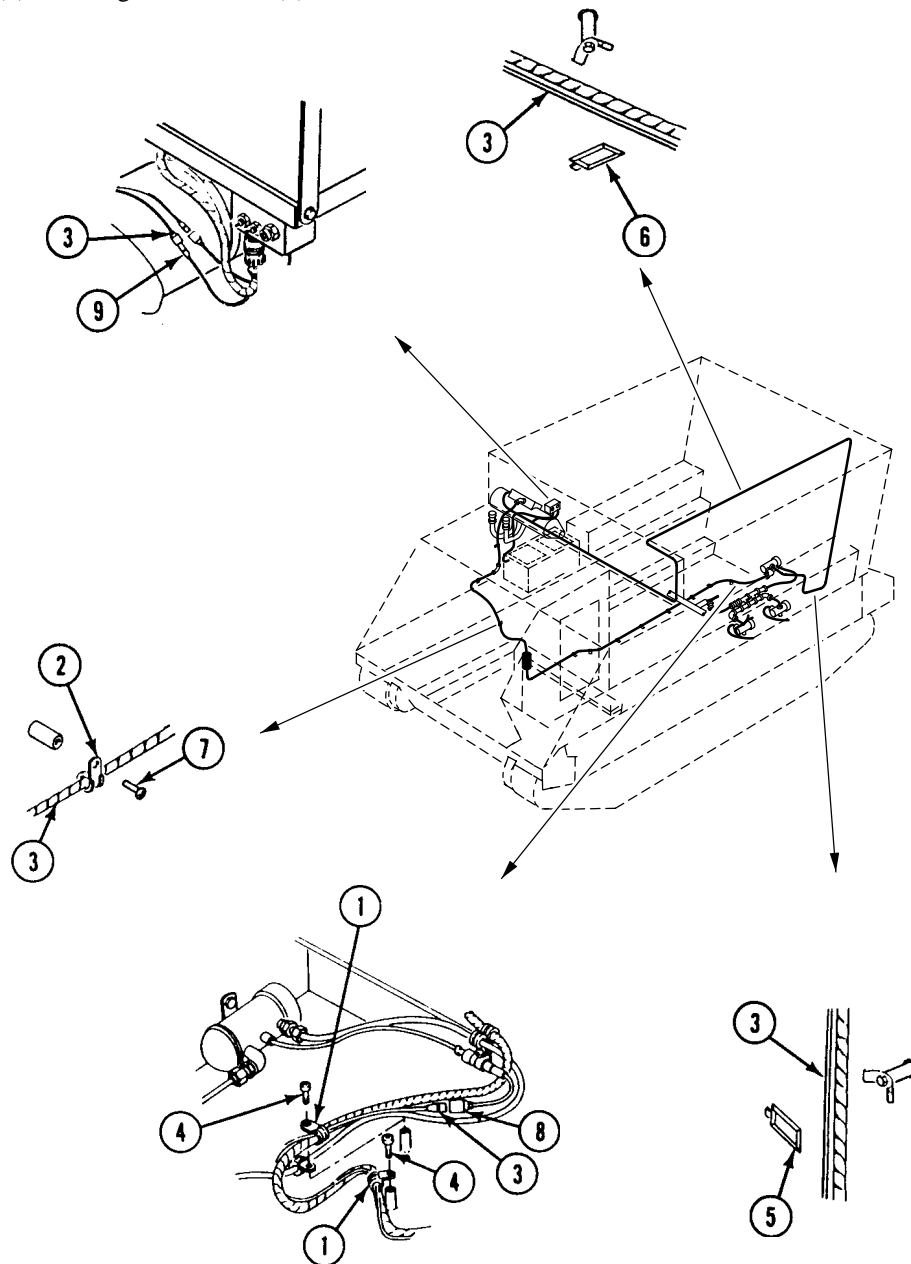


REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL BOX-TO-FUEL PUMP LEAD (M577A2 ONLY) — Continued

0632 00

INSTALLATION

1. Install two clamps (1) and five clamps (2) on circuit 402A lead (3).
2. Place two clamps (1) on two floor weldnuts. Secure with two screws (4).
3. Place lead (3) in six cradles on rear bulkhead. Secure with six clips (5).
4. Place lead (3) in ten cradles on compartment roof. Secure with ten clips (6).
5. Place five clamps (2) on forward bulkhead weldnuts. Secure with five screws (7).
6. Connect lead (3) to fuel pump lead (8).
7. Connect lead (3) to wiring harness lead (9).



**REPLACE ELECTRONIC EQUIPMENT HEATER CONTROL BOX-TO-FUEL
PUMP LEAD (M577A2 ONLY) — Continued**

0632 00

FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Start heater (see your -10). Check that lead is installed properly. Turn heater off.
3. Install rear floor plate (WP 0436 00).
4. Raise and lock ramp (see your -10).
5. Stop engine (see your -10).

END OF TASK

**REPLACE ELECTRONIC EQUIPMENT HEATER ASSEMBLY AND
MOUNTING BRACKETS (M577A2 ONLY)**

0633 00

THIS WORK PACKAGE COVERS:

Removal (page 0633 00-2).
Installation (page 0633 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0626 00
WP 0634 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery ground lead disconnected (WP 0294 00)
Heater control box removed (WP 0630 00)

Materials/Parts

Locknut (6)
Lockwasher (9)

Personnel Required

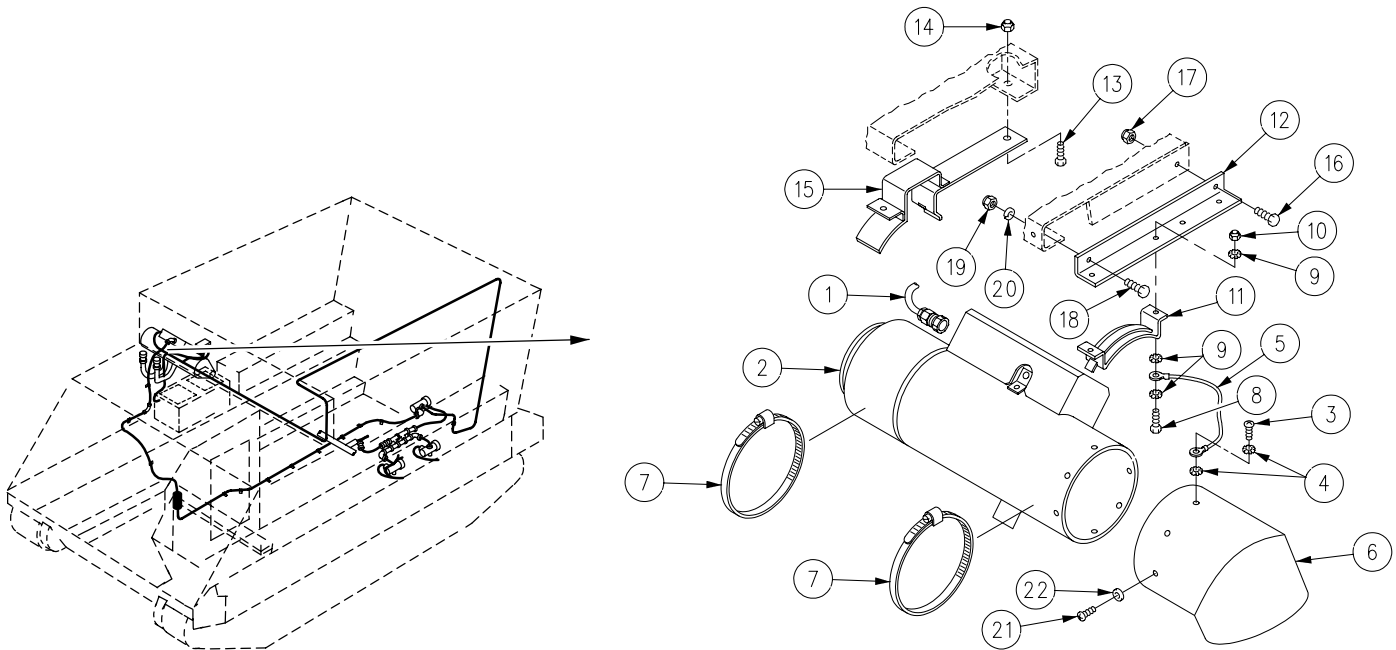
Unit Mechanic

REPLACE ELECTRONIC EQUIPMENT HEATER ASSEMBLY AND MOUNTING BRACKETS (M577A2 ONLY) — Continued

0633 00

REMOVAL

1. Disconnect wiring harness (1) from heater (2).
2. Remove screw (3), two lockwashers (4), and ground lead (5) from heater elbow (6). Discard lockwashers.
3. Remove intake and exhaust pipes from heater (WP 0634 00).
4. Open two clamps (7) and lower heater (2).
5. Remove fuel hose and fittings from heater (WP 0626 00). Remove heater (2) from carrier.
6. Remove two screws (8), three lockwashers (9), ground lead (5), two locknuts (10), and saddle (11) from bracket (12). Discard lockwashers and locknuts.
7. Remove two screws (13), locknuts (14), and rear support bracket (15) from radio mount platform. Discard locknuts.
8. Remove screw (16), locknut (17), screw (18), locknut (19), lockwasher (20), and bracket (12) from radio mount platform. Discard locknuts and lockwasher.
9. Remove three screws (21), lockwashers (22), and elbow (6) from heater (2). Discard lockwashers.

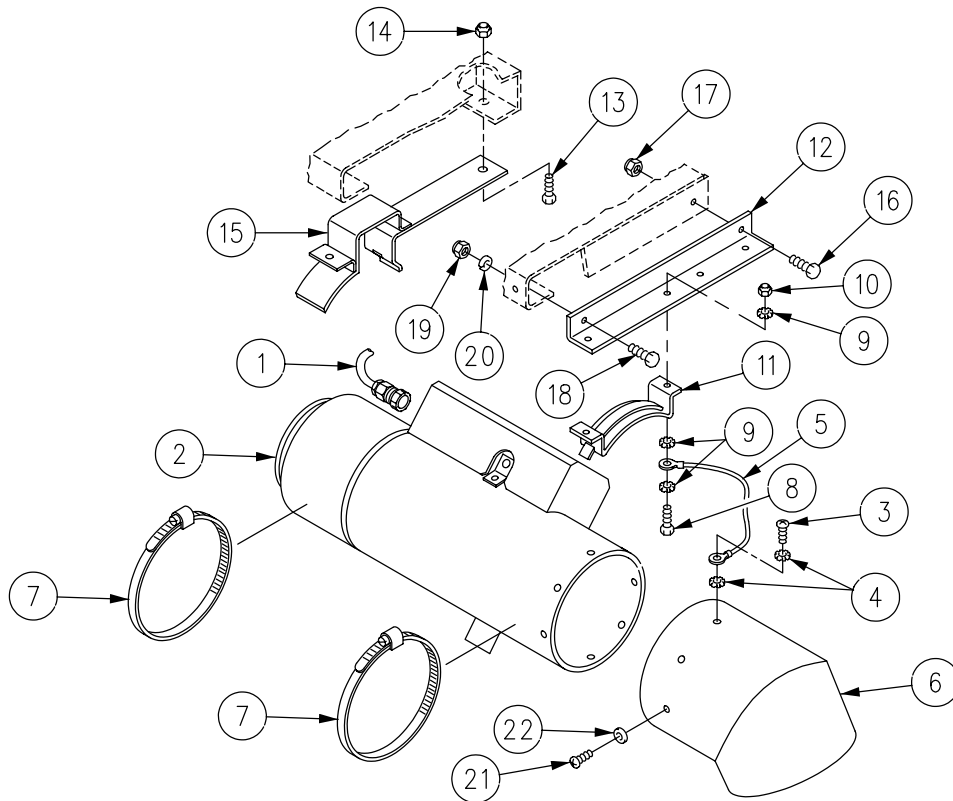


REPLACE ELECTRONIC EQUIPMENT HEATER ASSEMBLY AND MOUNTING BRACKETS (M577A2 ONLY) — Continued

0633 00

INSTALLATION

1. Install elbow (6) on heater (2). Secure with three new lockwashers (22) and screws (21).
2. Install bracket (12) on radio mount platform. Secure with screw (18), new lockwasher (20), new locknut (19), screw (16), and new locknut (17).
3. Install rear support bracket (15) on radio mount platform. Secure with two screws (13) and new locknuts (14).
4. Install saddle (11) on bracket (12). Secure with two screws (8), three new lockwashers (9), ground lead (5), and two new locknuts (10).
5. Install fuel hose and fittings on heater (WP 0626 00).
6. Install heater (2) in saddle (11) and rear support bracket (15). Secure with two clamps (7).
7. Install intake and exhaust pipes on heater (WP 0634 00).
8. Install ground lead (5) on elbow (6). Secure with two new lockwashers (4) and screw (3).
9. Connect wiring harness (1) to heater (2).



FOLLOW-THROUGH STEPS

1. Install heater control box (WP 0630 00).
2. Connect battery ground lead (WP 0294 00).
3. Start heater (see your -10). Check that it works properly. Turn heater off.

END OF TASK

REPLACE ELECTRONIC EQUIPMENT HEATER AIR INTAKE HOSE AND EXHAUST PIPE (M577A2 ONLY)

0634 00

THIS WORK PACKAGE COVERS:

Removal (page 0634 00-1).
 Installation (page 0634 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0633 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

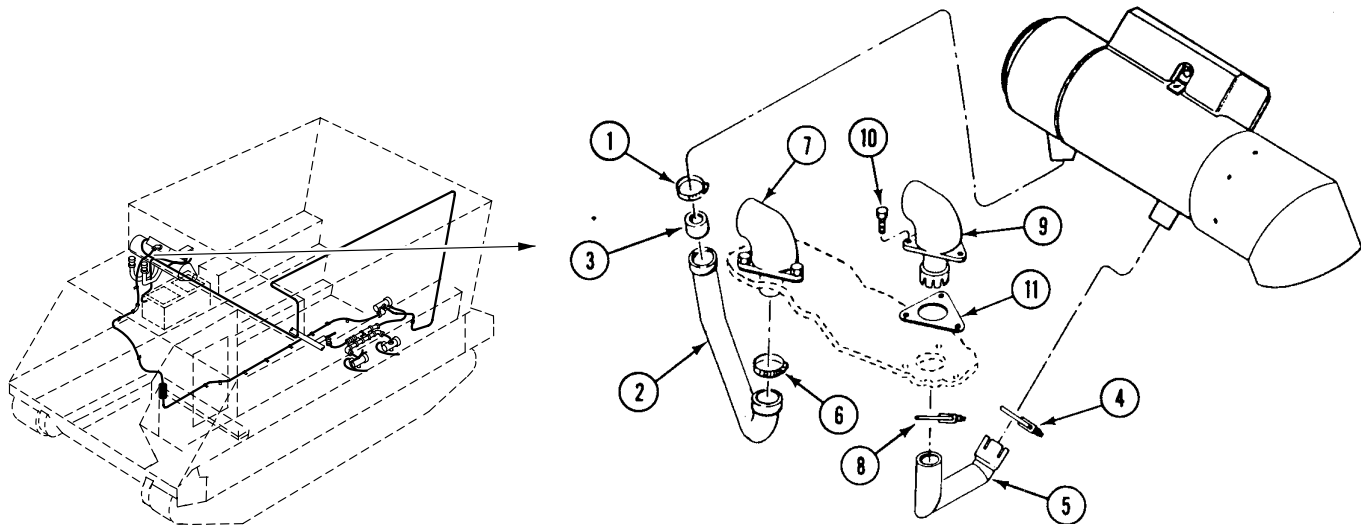
Adhesive (WP 0782 00, Item 4)
 Gasket (2)

Personnel Required

Unit Mechanic

REMOVAL

1. Loosen clamp (1). Remove hose (2) with hose (3) and clamp (1) from heater intake.
2. Loosen clamp (4) on exhaust pipe (5).
3. Remove heater from carrier (WP 0633 00).
4. Loosen clamp (6). Remove hose (2) and clamp (6) from intake elbow (7).
5. Loosen clamp (8). Remove exhaust pipe (5) and clamp (8) from exhaust elbow (9).
6. Remove six screws (10), intake elbow (7), exhaust elbow (9), and two gaskets (11) from carrier top deck. Discard gaskets.

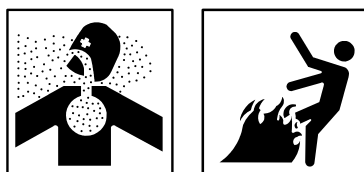


REPLACE ELECTRONIC EQUIPMENT HEATER AIR INTAKE HOSE AND EXHAUST PIPE (M577A2 ONLY) — Continued

0634 00

INSTALLATION

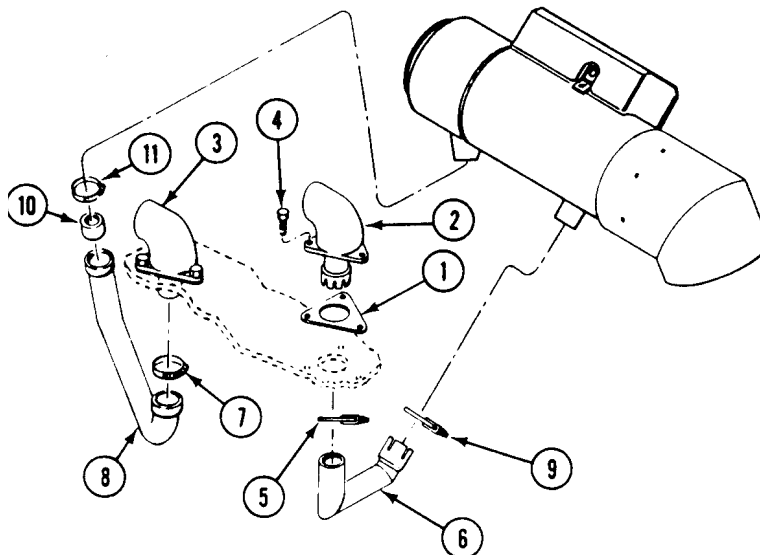
1. Place two new gaskets (1), exhaust elbow (2), and intake elbow (3) on carrier top deck. Secure with six screws (4).
2. Install clamp (5) and exhaust pipe (6) on exhaust elbow (2). Tighten clamp.
3. Install clamp (7) and hose (8) on intake elbow (3). Tighten clamp.
4. Install heater in carrier (WP 0633 00).
5. Install clamp (9) and exhaust pipe (6) on heater. Tighten clamp.

WARNING


Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

6. If hoses (8) and (10) are being replaced, apply adhesive to new hose (10). Install hose (10) in hose (8).
7. Install clamp (11) and hose (8) with hose (10) on heater intake. Tighten clamp.


FOLLOW-THROUGH STEPS

1. Connect battery ground strap (WP 0294 00).
2. Start heater (see your -10). Check for intake and exhaust leaks. Turn heater off.

END OF TASK

CHAPTER 33

UNIT MAINTENANCE INSTRUCTIONS
FOR ENGINE COOLANT HEATER KIT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
HEATER COOLANT FLOW DIAGRAM.....	.0635 00
REPLACE FLAME DETECTOR SWITCH.....	.0636 00
REPAIR FLAME DETECTOR SWITCH.....	.0637 00
REPLACE IGNITER.....	.0638 00
DRAIN AND FILL ENGINE COOLANT HEATER SYSTEM.....	.0639 00
REPLACE COOLANT HEATER FUEL PUMP (M113A2, M901A1, AND M1059 ONLY).....	.0640 00
REPLACE COOLANT HEATER FUEL PUMP (M577A2 AND M1068 ONLY).....	.0641 00
REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE (M113A2, M1059, AND M901A1 ONLY).....	.0642 00
REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE (M577A2 AND M1068 ONLY).....	.0643 00
REPLACE BULKHEAD CONNECTION TO COOLANT HEATER FUEL INLET HOSE TUBE.....	.0644 00
REPLACE COOLANT HEATER FUEL INLET HOSE.....	.0645 00
REPLACE COOLANT HOSES AND FITTINGS0646 00
REPLACE COOLANT HEATER EXHAUST ELBOW AND PIPES.....	.0647 00
REPLACE/REPAIR COOLANT HEATER CONTROL BOX.....	.0648 00
REPLACE COOLANT PUMP TO COOLANT HEATER WIRING HARNESS.....	.0649 00
REPLACE COOLANT HEATER AND PUMP UNIT.....	.0650 00
REPLACE COOLANT HEATER.....	.0651 00
REPLACE COOLANT HEATER PUMP0652 00

HEATER COOLANT FLOW DIAGRAM

0635 00

THIS WORK PACKAGE COVERS:

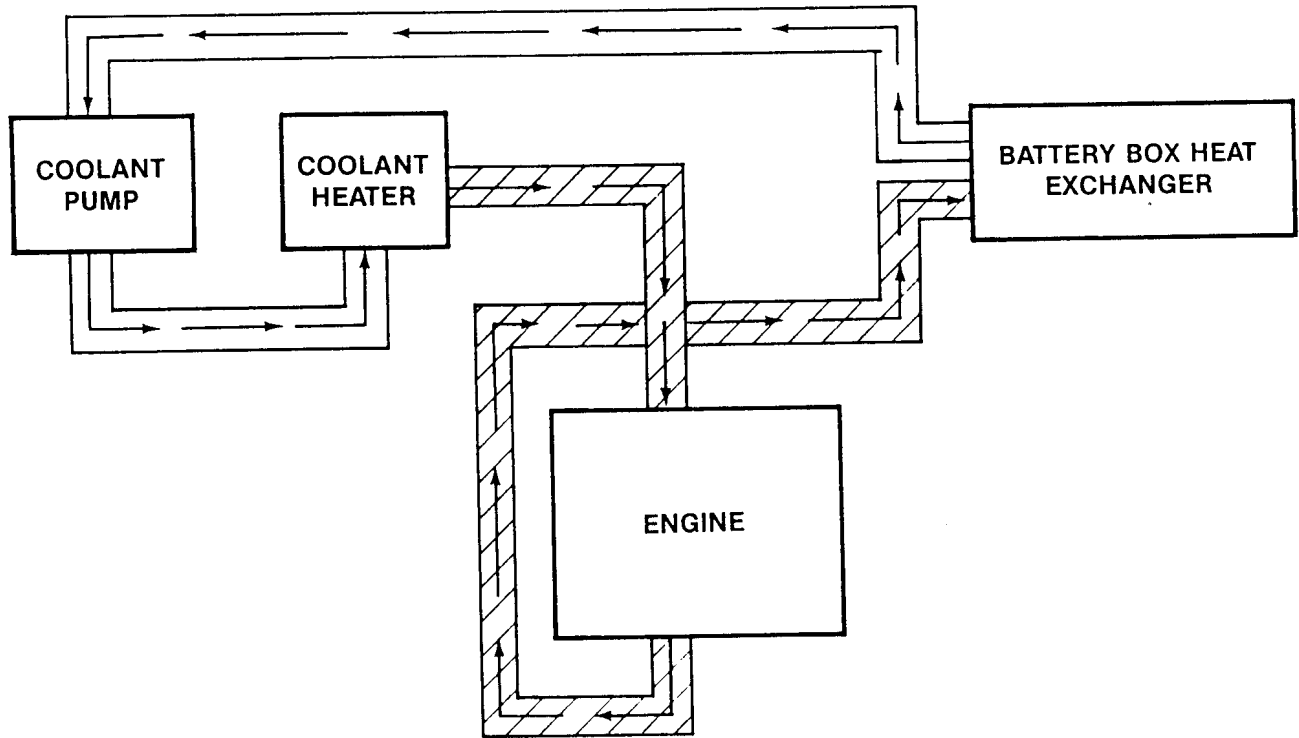
INITIAL SETUP:

Maintenance Level

Unit

INSPECTION OF INSTALLED ITEMS

This diagram shows the heater coolant flow.



- HEATED COOLANT
- RETURN COOLANT

END OF TASK

REPLACE FLAME DETECTOR SWITCH

0636 00

THIS WORK PACKAGE COVERS:

- Removal (page 0636 00-1).
- Inspection-Acceptance and Rejection Criteria (page 0636 00-1).
- Installation (page 0636 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Coolant heater and pump unit removed (WP 0650 00)

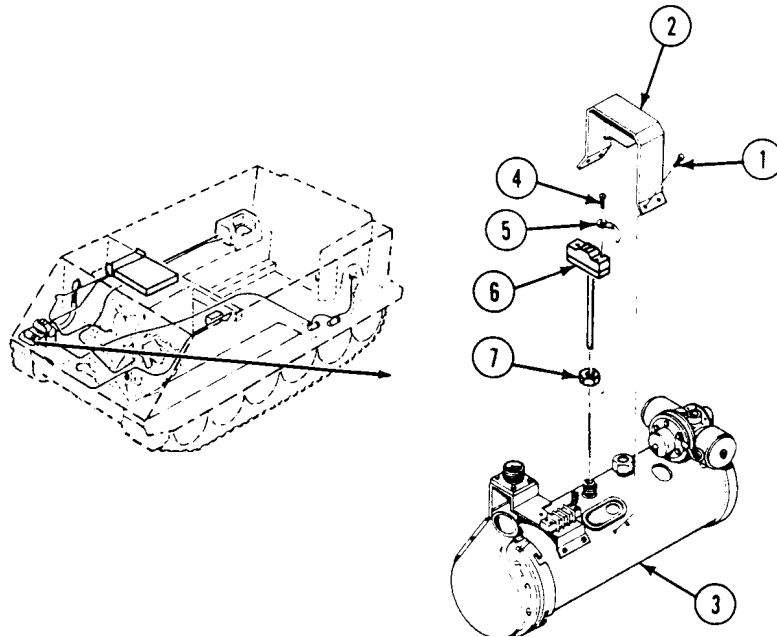
REMOVAL

1. Remove four screws (1) and guard (2) from heater (3).

NOTE

Tag all leads before removal.

2. Remove five screws (4) and leads (5) from flame detector switch (6).
3. Loosen nut (7) on switch (6). Pull switch straight out from heater (3).



INSPECTION-ACCEPTANCE AND REJECTION CRITERIA

1. Check leads and connectors. Replace worn leads and damaged connectors (WP 0312 00).

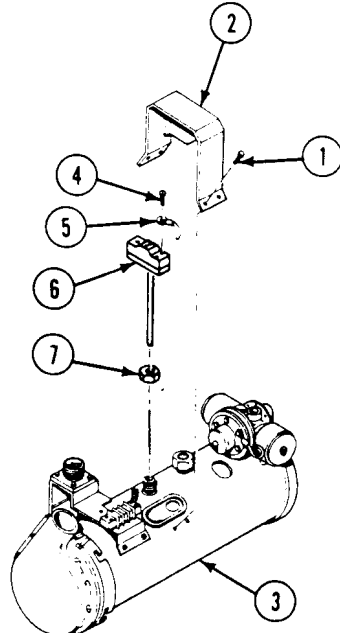
INSTALLATION

1. Install flame detector switch (6) in heater (3). Secure with nut (7) on switch.

NOTE

Check tags on leads to make sure of proper connections.

2. Place five leads (5) on switch (6). Secure with five screws (4).
3. Place guard (2) on heater (3). Secure with four screws (1).

**FOLLOW-THROUGH STEPS**

1. Install coolant heater and pump unit (WP 0650 00).
2. Start heater (see your -10). Check that flame detector switch works right. Turn heater off.

END OF TASK

REPAIR FLAME DETECTOR SWITCH

0637 00

THIS WORK PACKAGE COVERS:

- Disassembly (page 0637 00-2).
 - Clean, Inspect, and Repair (page 0637 00-2).
 - Assembly (page 0637 00-3).
 - Adjust (page 0637 00-4).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

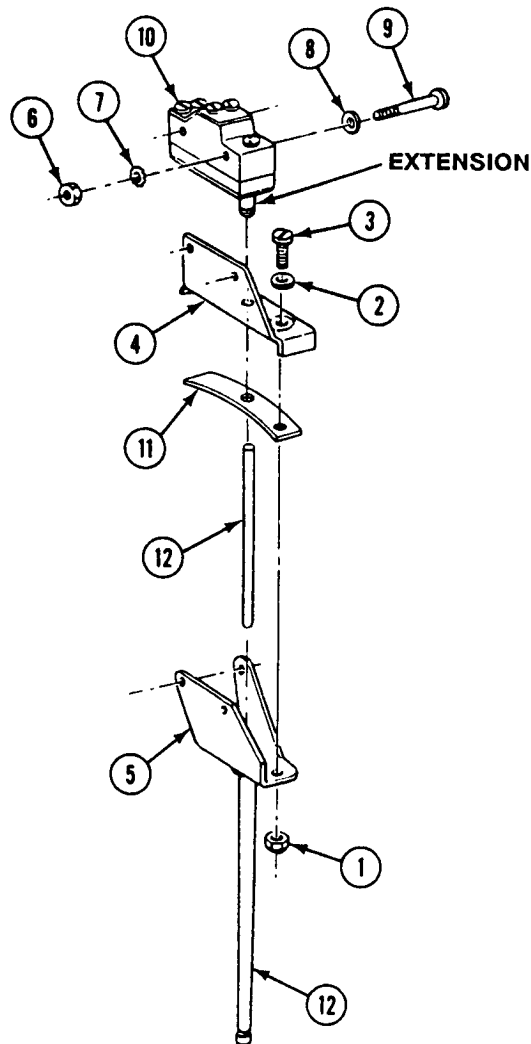
Flame detector switch removed (WP 0636 00)

Materials/Parts

Sealing compound (WP 0782 00, Item 60)

DISASSEMBLY

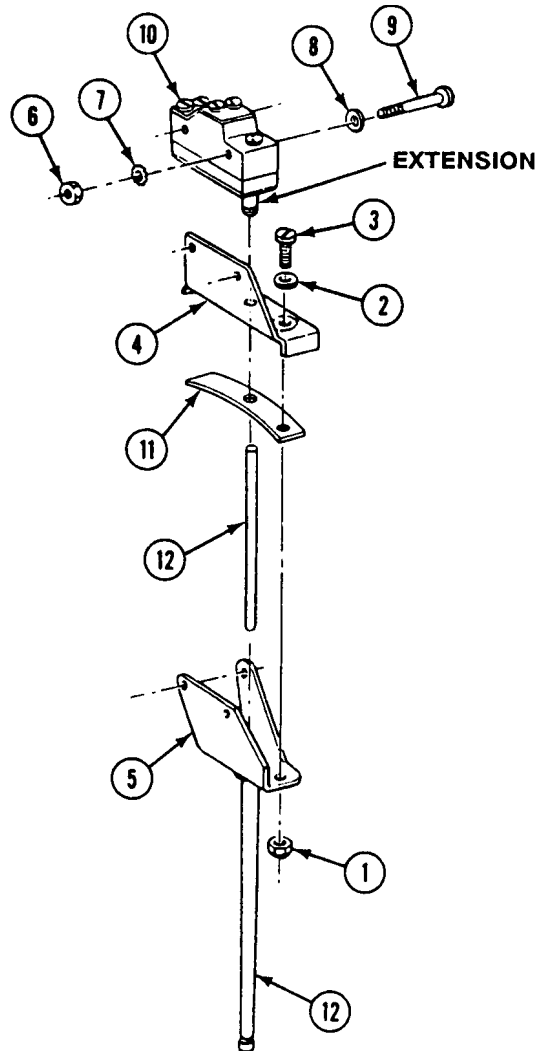
1. Remove nut (1), washer (2), and adjusting screw (3) from mount (4) and housing (5). Clean off old cement from screw (3) and mount (4).
2. Remove two nuts (6), washers (7) and (8), and screws (9) from switch (10). Remove switch from mount (4).
3. Remove housing (5) and bow spring (11).
4. Turn housing (5) over. Carefully slide ceramic rod (12) from housing.

**CLEAN, INSPECT, AND REPAIR**

1. Inspect ceramic rod. If rod is chipped, cracked, or broken, install a new rod.
2. Inspect housing. If housing is bent or cracked, install a new switch.

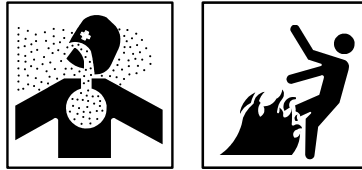
ASSEMBLY

1. Carefully insert ceramic rod (12) into housing (5).
2. Install bow spring (11) in mount (4).
3. Install switch (10) in mount (4) and housing (5). Be sure ceramic rod (12) fits into extension on switch.
4. Install switch (10) on mount (4) and housing (5). Secure with two screws (9), washers (8), washers (7), and nuts (6). Do not tighten.



ADJUST

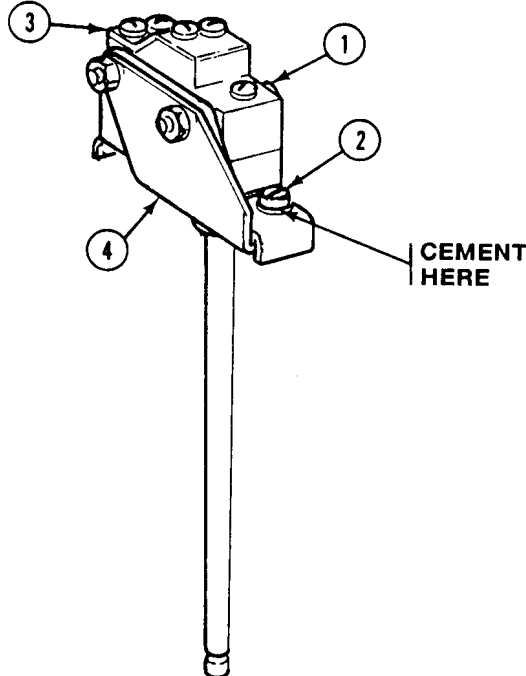
1. Loosen mounting screws (1).
2. Back off adjusting screw (2) until switch (3) clicks.
3. Slowly turn screw (2) inward until switch (3) clicks; then turn screw exactly 3/4 turn past the click point.
4. Tighten mounting screws (1).

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

5. Cement screw (2) to mount (4) with sealing compound.

**FOLLOW-THROUGH STEPS**

1. Install flame detector switch (WP 0636 00).
2. Start heater (see your -10). Check switch for proper operation. Turn heater off.

END OF TASK

REPLACE IGNITER

0638 00

THIS WORK PACKAGE COVERS:

- Removal (page 0638 00-1).
- Inspection (page 0638 00-1).
- Installation (page 0638 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

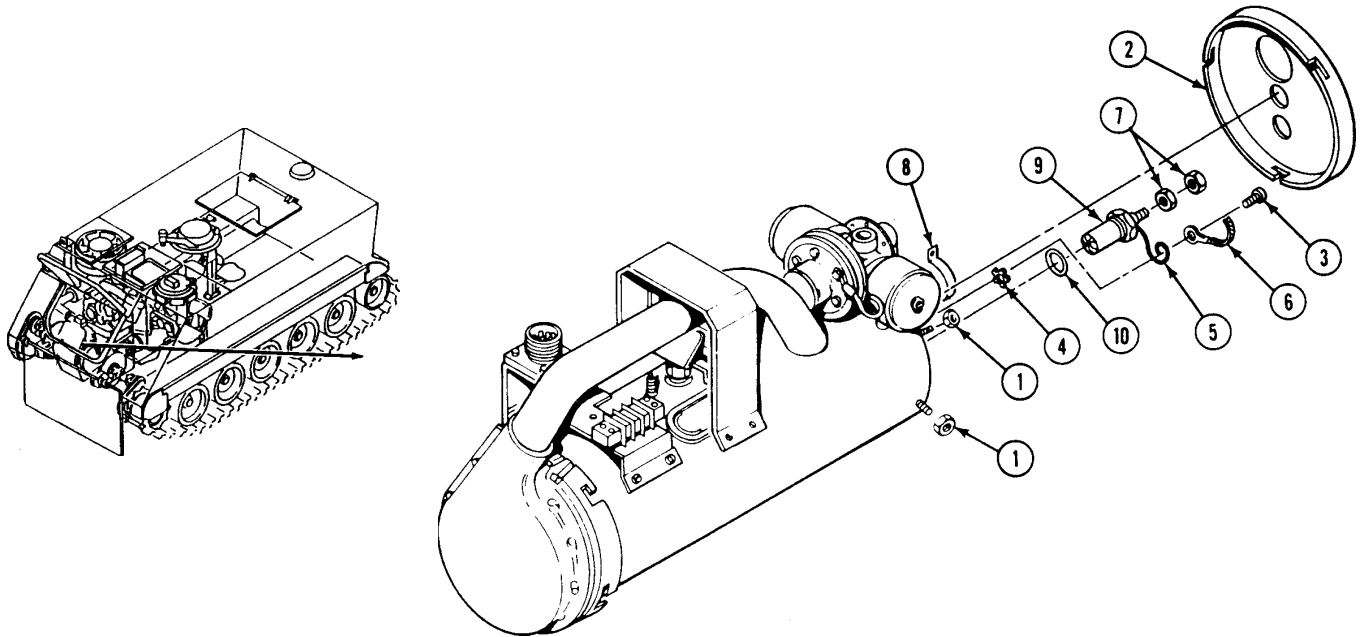
- Gasket
- Lockwasher

Personnel Required

Unit Mechanic

REMOVAL

1. Loosen four nuts (1). Turn cover plate (2) to the left and remove.
2. Remove screw (3), lockwasher (4), igniter ground lead (5), and ground strap (6) from coolant heater. Discard lockwasher.
3. Remove two nuts (7) and resistor strap (8) from igniter (9). Bend strap out of way.
4. Remove igniter (9) and gasket (10) from heater. Discard gasket.

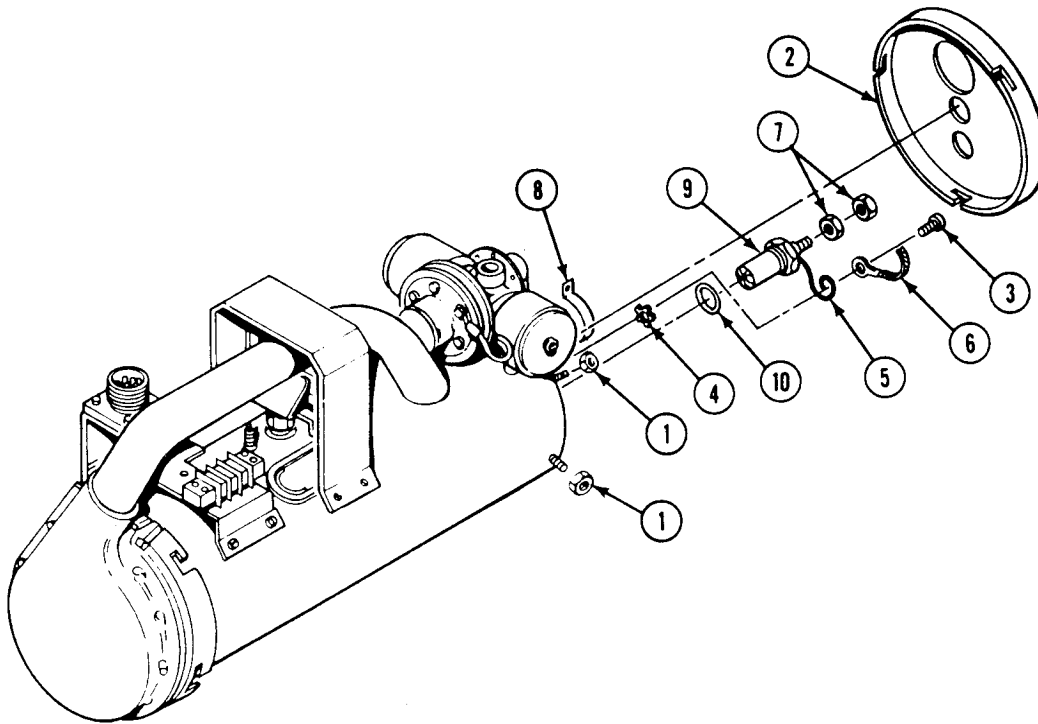


INSPECTION

1. Check ground strap. Replace igniter if strap is worn or broken.

INSTALLATION

1. Install new gasket (10) and igniter (9) in heater.
2. Place resistor strap (8) on igniter (9). Secure with two nuts (7).
3. Place ground strap (6) and igniter ground lead (5) on coolant heater. Secure with new lockwasher (4) and screw (3).
4. Place cover plate (2) on end of heater. Turn cover to right and secure with four nuts (1).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Start heater (see your -10). Check that igniter works right. Turn heater off.
3. Close power plant access door (see your -10).
4. Raise trim vane (see your -10).

END OF TASK

DRAIN AND FILL ENGINE COOLANT HEATER SYSTEM

0639 00

THIS WORK PACKAGE COVERS:

Drain (page 0639 00-2).
 Fill (page 0639 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

References

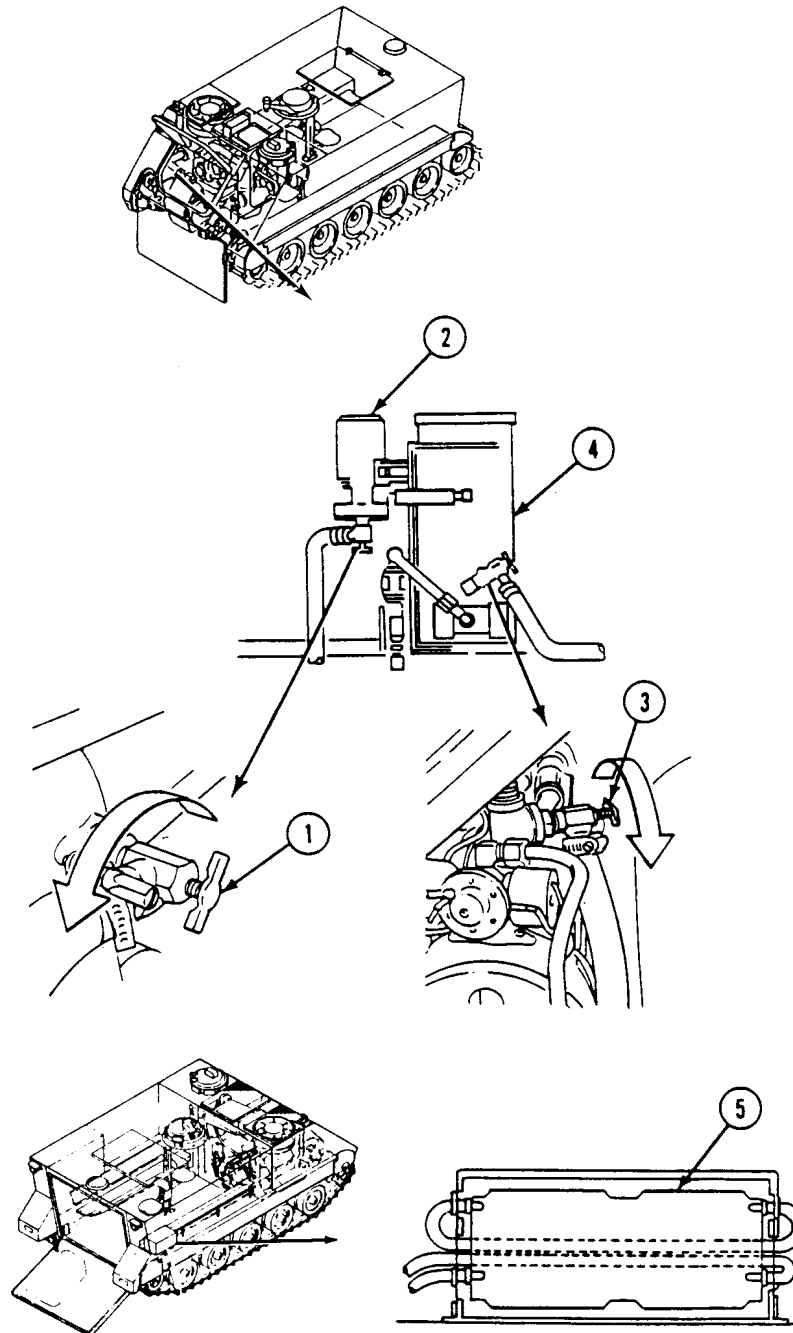
See your -10
 WP 0193 00
 WP 0194 00
 WP 0302 00
 WP 0303 00
 WP 0309 00
 WP 0310 00

Equipment Condition

Engine stopped (see your -10)
 Ramp lowered (see your -10)
 Carrier blocked (see your -10)
 Trim vane lowered (see your -10)
 Power plant access door open (see your -10)

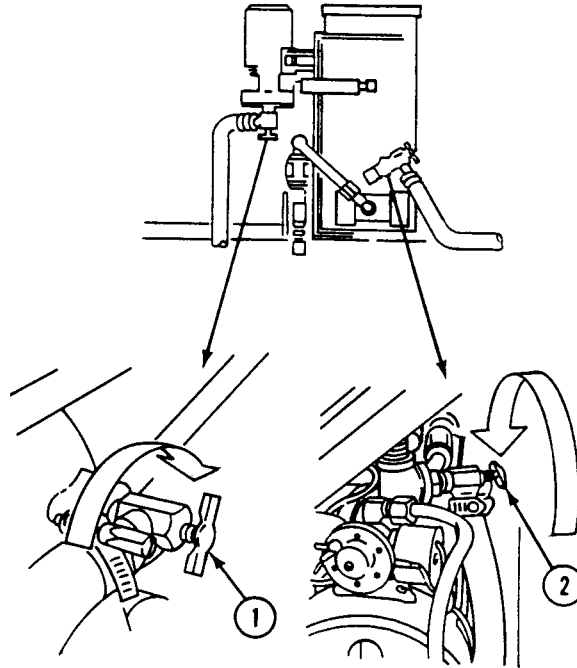
DRAIN

1. Open shutoff valve (1) at coolant pump (2) and valve (3) at heater (4).
2. Completely drain cooling system (WP 0193 00).
3. Remove batteries and retainers (WP 0302 00 or WP 0303 00).
4. Remove and drain battery box heat exchanger (5) (WP 0309 00 or WP 0310 00).
5. Install battery box heat exchanger (WP 0309 00 or WP 0310 00).
6. Install batteries and retainers (WP 0302 00 or WP 0303 00).



FILL

1. Close shutoff valves (1) and (2).



2. Fill cooling system (WP 0194 00).
3. Close heater fuel shutoff valve (see your -10).
4. Start engine (see your -10).
5. Hold RUN-OFF-START switch in START and run engine at 2,950 RPM for maximum 30 seconds to prime coolant pump.
6. Stop engine (see your -10). Refill cooling system (WP 0194 00).
7. Open heater fuel shutoff valve (see your -10).

NOTE

Hoses to and from battery box heat exchanger will gradually increase in temperature and remain warm if heater coolant system is primed and coolant heater is operating right.

8. Start heater (see your -10). Check for proper operation. If heater overheats and shuts off, repeat Steps 1 - 8. If problem persists, see WP 0070 00.

FOLLOW-THROUGH STEPS

1. Close power plant access door (see your -10).
2. Raise trim vane (see your -10).
3. Start engine (see your -10).
4. Raise and lock ramp (see your -10).
5. Stop engine (see your -10).

END OF TASK

**REPLACE COOLANT HEATER FUEL PUMP (M113A2, M901A1,
AND M1059 ONLY)**

0640 00

THIS WORK PACKAGE COVERS:

- Removal (page 0640 00-1).
- Installation (page 0640 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

- Sealing compound (WP 0782 00, Item 60)
- Locknut (2)
- Lockwasher (6)

Personnel Required

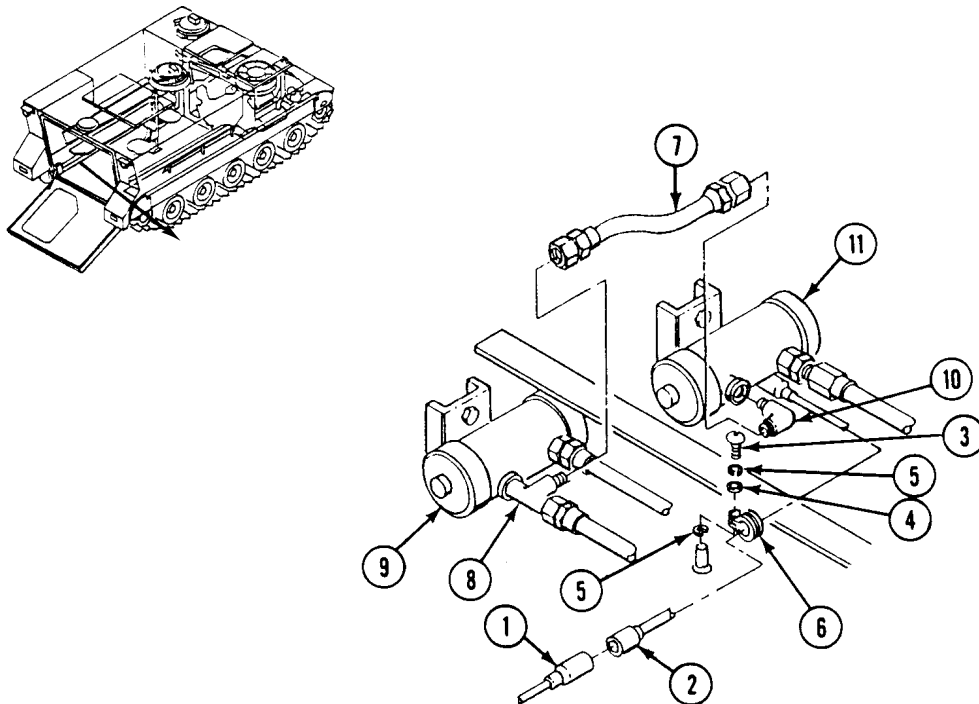
Unit Mechanic

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Ramp lowered (see your -10)
- Battery ground lead disconnected (WP 0294 00)
- Rear floor plate removed (WP 0436 00, WP 0438 00,
or WP 0441 00)
- Heater fuel shutoff valve closed (see your -10)

REMOVAL

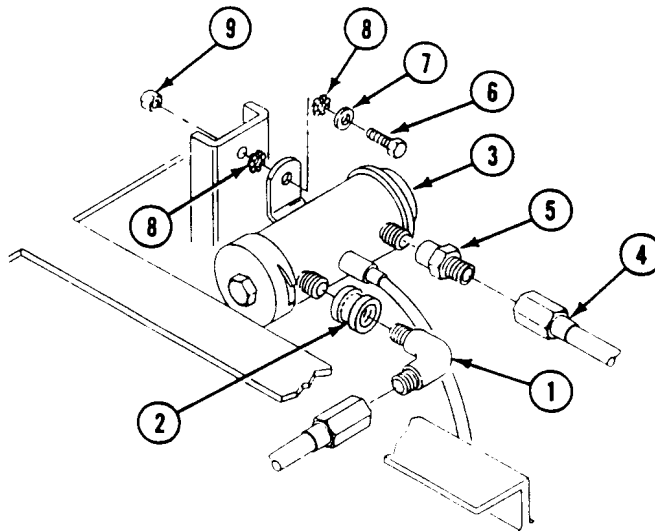
1. Disconnect circuit 402A lead (1) from fuel pump lead (2).
2. Remove screw (3), washer (4), two lockwashers (5), and clamp (6) from hull weldnut. Discard lockwashers.
3. Remove hose (7) from tee (8) on personnel heater fuel pump (9) and from elbow (10) on coolant heater fuel pump (11).



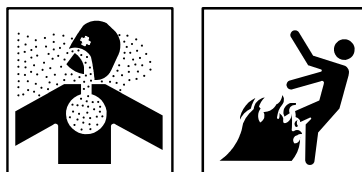
REPLACE COOLANT HEATER FUEL PUMP (M113A2, M901A1, AND M1059 ONLY) — Continued

0640 00

4. Remove elbow (1) from coupling (2).
5. Remove coupling (2) from fuel pump (3).
6. Disconnect hose (4) from adapter (5). Remove adapter from fuel pump (3).
7. Remove two screws (6), washers (7), four lockwashers (8), two locknuts (9), and fuel pump (3) from hull bracket. Discard lockwashers and locknuts.


INSTALLATION

1. Place fuel pump (3) on hull bracket. Secure with two new locknuts (9), four new lockwashers (8), two washers (7), and screws (6).

WARNING


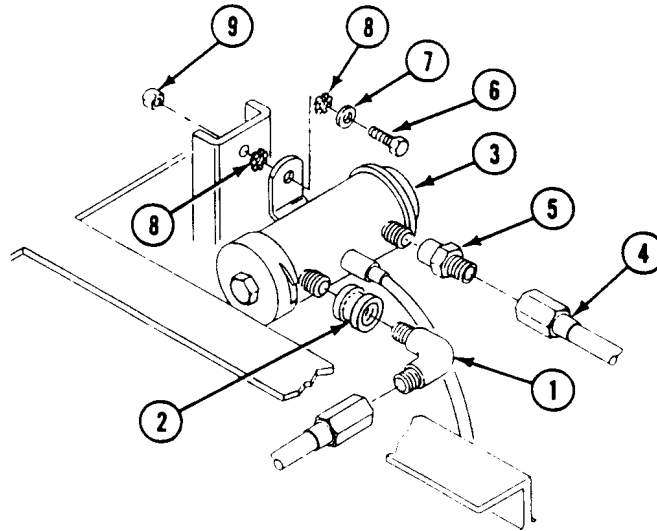
Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

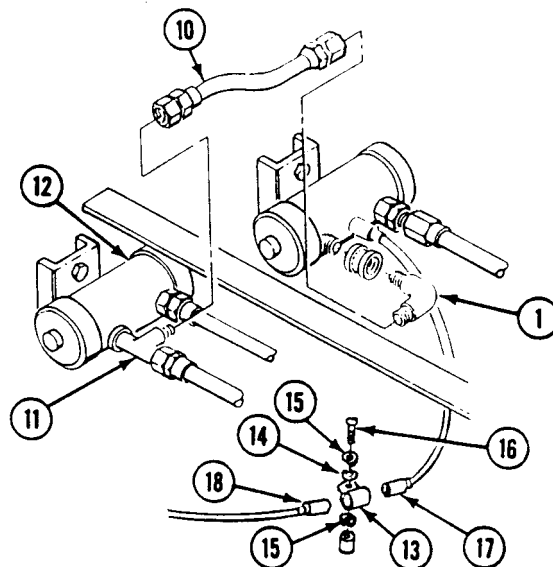
REPLACE COOLANT HEATER FUEL PUMP (M113A2, M901A1, AND M1059 ONLY) — Continued

0640 00

2. Apply light coat of sealing compound to all external tapered threads. Do not apply sealant beyond small end of tapered threads.
3. Install adapter (5) on fuel pump (3). Connect hose (4) to adapter.
4. Install coupling (2) on fuel pump (3).
5. Install elbow (1) on coupling (2).



6. Install hose (10) on elbow (1) and on tee (11) on personnel heater fuel pump (12).
7. Place clamp (13) on hull weldnut. Secure with washer (14), two new lockwashers (15), and screw (16).
8. Connect fuel pump lead (17) to circuit 402A lead (18).



**REPLACE COOLANT HEATER FUEL PUMP (M113A2, M901A1, AND
M1059 ONLY) — Continued**

0640 00

FOLLOW-THROUGH STEPS

1. Open heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel lines (WP 0599 00).
4. Start heater (see your -10). Check for fuel leaks. Turn heater off.
5. Install rear floor plate (WP 0436 00, WP 0438 00, or WP 0441 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HEATER FUEL PUMP (M577A2 AND M1068 ONLY)

0641 00

THIS WORK PACKAGE COVERS:

Removal (page 0641 00-1).
 Installation (page 0641 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Sealing compound (WP 0782 00, Item 60)

Lockwasher (7)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

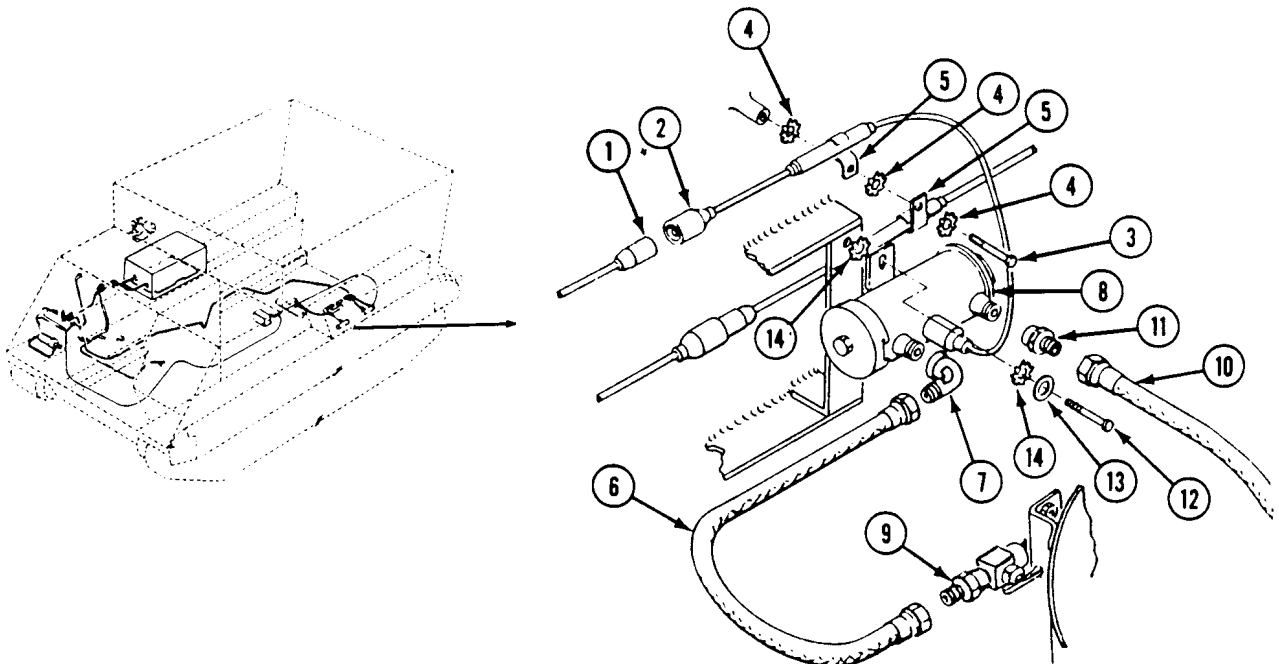
Battery ground lead disconnected (WP 0294 00).

Rear floor plate removed (WP 0436 00, WP 0438 00,
 or WP 0441 00)

Coolant heater fuel shutoff valve closed (see your -10)

REMOVAL

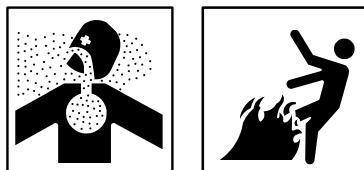
1. Disconnect circuit 402C lead (1) from coolant heater fuel pump lead (2).
2. Remove screw (3), three lockwashers (4), and two clamps (5) from bulkhead weldnut. Discard lockwashers.
3. Remove hose (6) from elbow (7) on coolant heater fuel pump (9) and from adapter (9).
4. Remove elbow (7) from coolant heater fuel pump (8).
5. Disconnect hose (10) from adapter (11). Remove adapter from coolant heater fuel pump (8).
6. Remove two screws (12), washers (13), four lockwashers (14), and coolant heater fuel pump (8) from hull bracket. Discard lockwashers.



INSTALLATION

1. Place coolant heater fuel pump (1) on hull bracket. Secure with two screws (2), washers (3), and four new lockwashers (4).

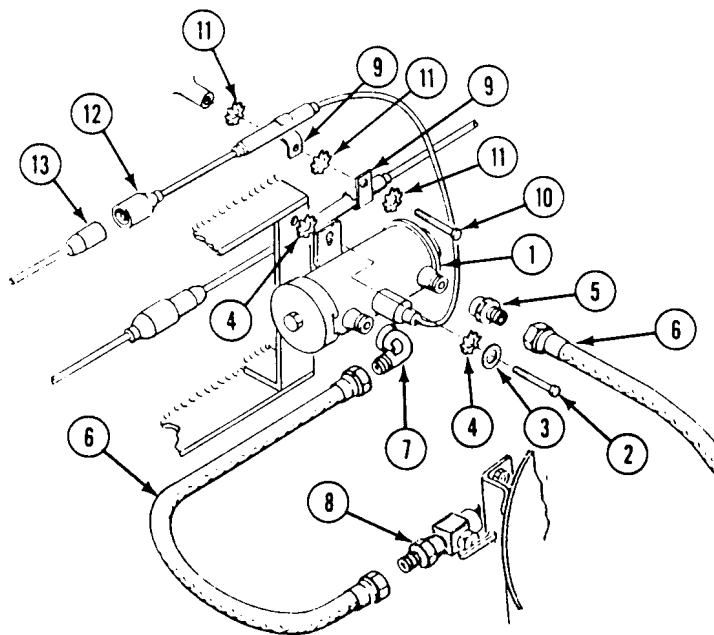
WARNING



Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

2. Apply light coat of sealing compound to all external tapered threads. Do not apply sealant beyond small end of tapered threads.
3. Install adapter (5) on coolant heater fuel pump (1). Connect hose (6) to adapter.
4. Install elbow (7) on coolant heater fuel pump (1).
5. Install hose (6) on elbow (7) and on adapter (8).
6. Place two clamps (9) on bulkhead weldnut. Secure with screw (10) and three new lockwashers (11).
7. Connect coolant heater fuel pump lead (12) to circuit 402C lead (13).



FOLLOW-THROUGH STEPS

1. Open coolant heater fuel shutoff valve (see your -10).
2. Connect battery ground lead (WP 0294 00).
3. Bleed fuel lines (WP 0599 00).
4. Start heater (see your -10). Check for fuel leaks. Turn heater off.
5. Install rear floor plate (WP 0436 00, WP 0438 00, or WP 0441 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE (M113A2, M1059, AND M901A1 ONLY)

0642 00

THIS WORK PACKAGE COVERS:

- Removal (page 0642 00-1).
- Installation (page 0642 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Ramp lowered (see your -10)
- Battery ground lead disconnected (WP 0294 00)
- Personnel heater duct removed (WP 0617 00)
- Floor plates removed (WP 0436 00, WP 0438 00, or WP 0441 00)
- Heater fuel shutoff valve closed (see your -10)

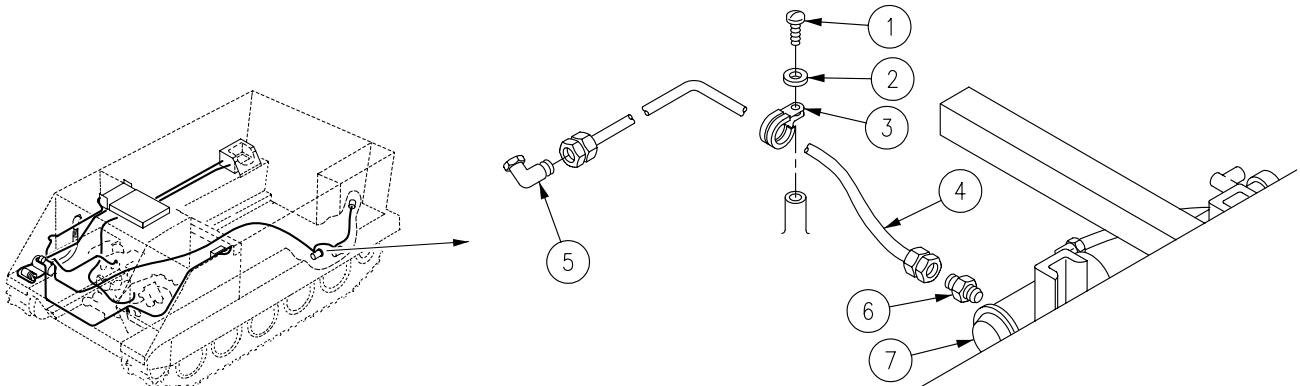
REMOVAL

WARNING



Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicle. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

1. Remove seven screws (1), washers (2), and clamps (3) from hull weldnuts.
2. Disconnect hose (4) from elbow (5) and adapter (6) on fuel pump (7).
3. Remove clamps (3) from hose (4).
4. Remove hose (4) from hull openings.
5. Remove adapter (6) from fuel pump (7).



**REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE
(M113A2, M1059, AND M901A1 ONLY) — Continued**

0642 00

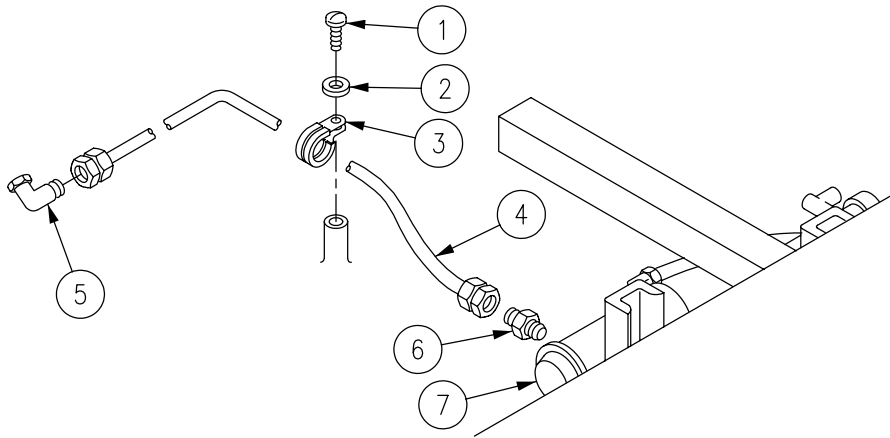
INSTALLATION

1. Install adapter (6) on fuel pump (7).

NOTE

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

2. Route hose (4) through hull openings.
3. Install seven clamps (3) on hose (4).
4. Connect hose (4) to adapter (6) on fuel pump (7) and elbow (5).
5. Align clamps (3) with hull weldnuts. Secure with seven screws (1) and washers (2).

**FOLLOW-THROUGH STEPS**

1. Open heater fuel shutoff valve (see your -10).
2. Start coolant heater (see your -10). Check for fuel leaks. Turn heater off.
3. Bleed fuel lines (WP 0599 00).
4. Install floor plates (WP 0436 00, WP 0438 00, or WP 0441 00).
5. Install personnel heater duct (WP 0617 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION HOSE (M577A2 AND M1068 ONLY)

0643 00

THIS WORK PACKAGE COVERS:

- Removal (page 0643 00-1).
- Installation (page 0643 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Personnel heater duct removed (WP 0617 00)
- Floor plates removed (WP 0436 00)
- Coolant heater fuel shutoff valve closed (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

REMOVAL

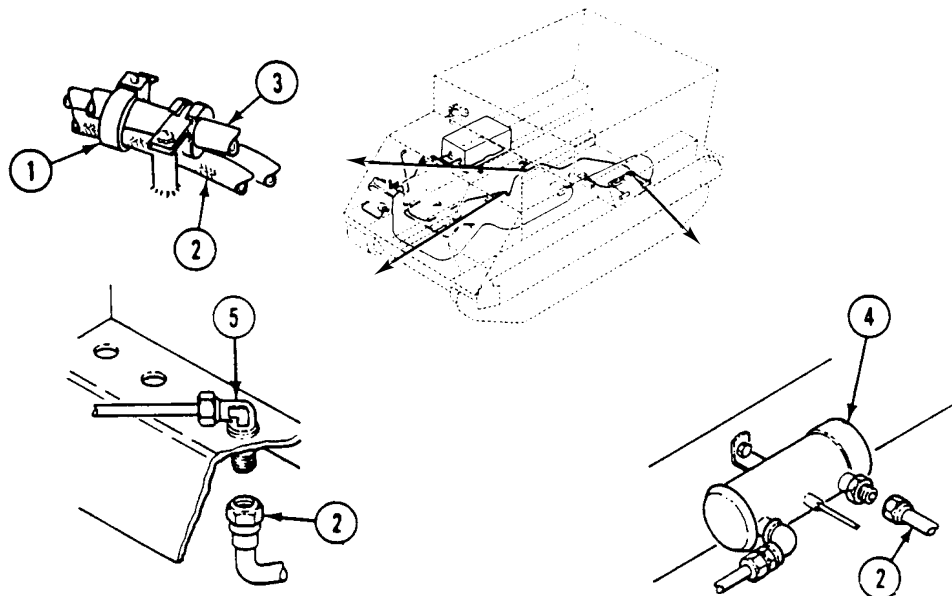
1. Remove ten straps (1) holding coolant heater hose (2) to personnel heater hose (3).

WARNING



Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicle. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

2. Remove hose (2) from coolant heater fuel pump (4) and from elbow (5).



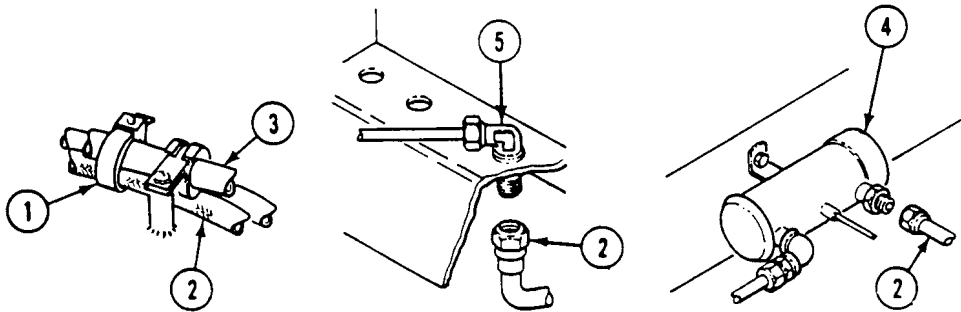
**REPLACE COOLANT HEATER FUEL PUMP TO BULKHEAD CONNECTION
HOSE (M577A2 AND M1068 ONLY) — Continued**

0643 00

INSTALLATION**NOTE**

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

1. Install hose (2) on elbow (5) and on coolant heater fuel pump (4).
2. Secure coolant heater hose (2) to personnel heater hose (3) with ten straps (1).

**FOLLOW-THROUGH STEPS**

1. Open coolant heater fuel shutoff valve (see your -10).
2. Start coolant heater (see your -10). Check for fuel leaks. Turn heater off.
3. Bleed fuel lines (WP 0599 00).
4. Install floor plates (WP 0436 00).
5. Install personnel heater duct (WP 0617 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

**REPLACE BULKHEAD CONNECTION TO COOLANT HEATER
FUEL INLET HOSE TUBE**

0644 00

THIS WORK PACKAGE COVERS:

Removal (page 0644 00-2).
Installation (page 0644 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Ramp lowered (see your -10)
Power plant rear access panel removed (WP 0431 00,
WP 0432 00, or WP 0433 00)
Personnel heater duct removed (WP 0617 00)
Front floor plate removed (WP 0437 00,
WP 0438 00, WP 0440 00, or WP 0441 00)
Trim vane lowered and power plant front access door
open (see your -10)
Heater fuel shutoff valve closed (see your -10)

REPLACE BULKHEAD CONNECTION TO COOLANT HEATER FUEL
INLET HOSE TUBE — Continued

0644 00

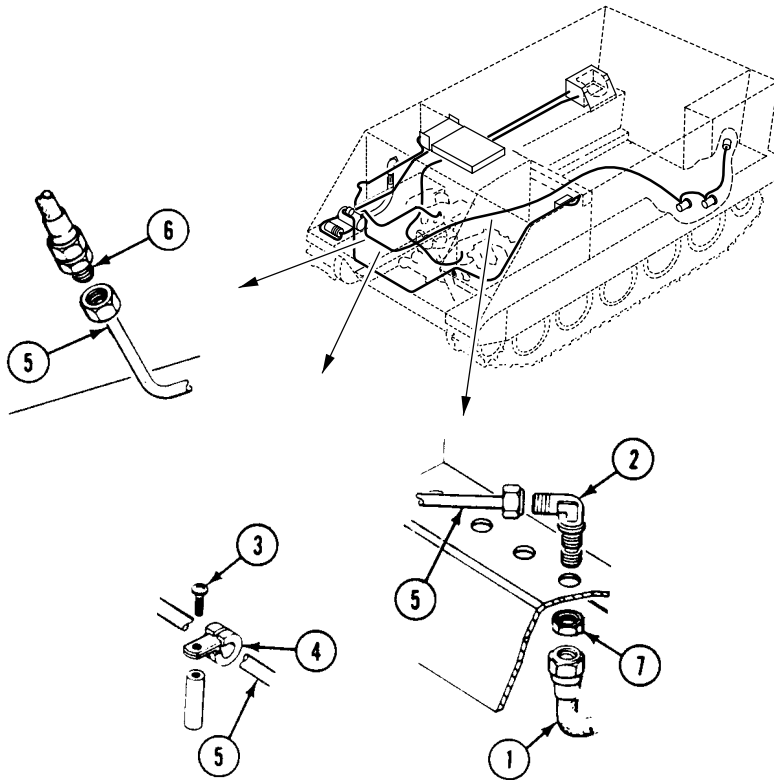
REMOVAL

WARNING



Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicle. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

1. Disconnect fuel supply hose (1) from elbow (2).
2. Remove three screws (3) and clamps (4) from three hull weldnuts.
3. Remove tube (5) from nipple (6) and elbow (2). Remove three clamps (4) from tube.
4. Remove jamnut (7) and elbow (2) from hull.



**REPLACE BULKHEAD CONNECTION TO COOLANT HEATER FUEL
INLET HOSE TUBE — Continued**

0644 00

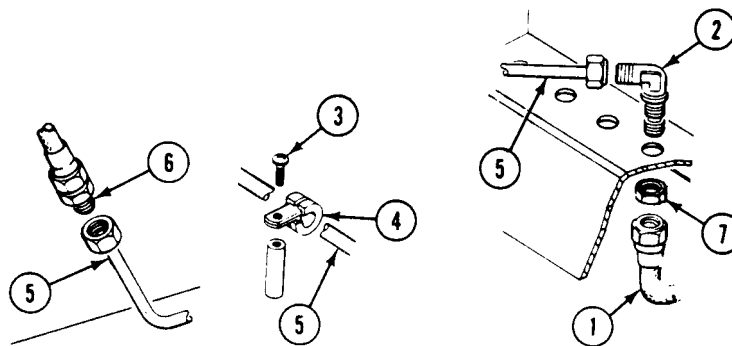
INSTALLATION

1. Install elbow (2) in hull. Secure with jamnut (7).

NOTE

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

2. Place three clamps (4) on tube (5). Install tube on elbow (2) and nipple (6).
3. Align three clamps (4) with three hull weldnuts. Secure with three screws (3).
4. Connect hose (1) to elbow (2).

**FOLLOW-THROUGH STEPS**

1. Open coolant heater fuel shutoff valve (see your -10).
2. Bleed fuel lines (WP 0599 00).
3. Start coolant heater (see your -10). Check for fuel leaks. Turn heater off.
4. Close power plant front access door and raise trim vane (see your -10).
5. Install front floor plates (WP 0437 00, WP 0438 00, WP 0440 00, or WP 0441 00).
6. Install personnel heater duct (WP 0617 00).
7. Install power plant rear access panel (WP 0431 00, WP 0432 00, or WP 0433 00).
8. Raise and lock ramp (see your -10).
9. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HEATER FUEL INLET HOSE

0645 00

THIS WORK PACKAGE COVERS:

Removal (page 0645 00-2).
 Installation (page 0645 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Sealing compound (WP 0782 00, Item 60)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)
 Trim vane lowered and power plant front access open
 (see your -10)
 Heater fuel shutoff valve closed (see your -10)

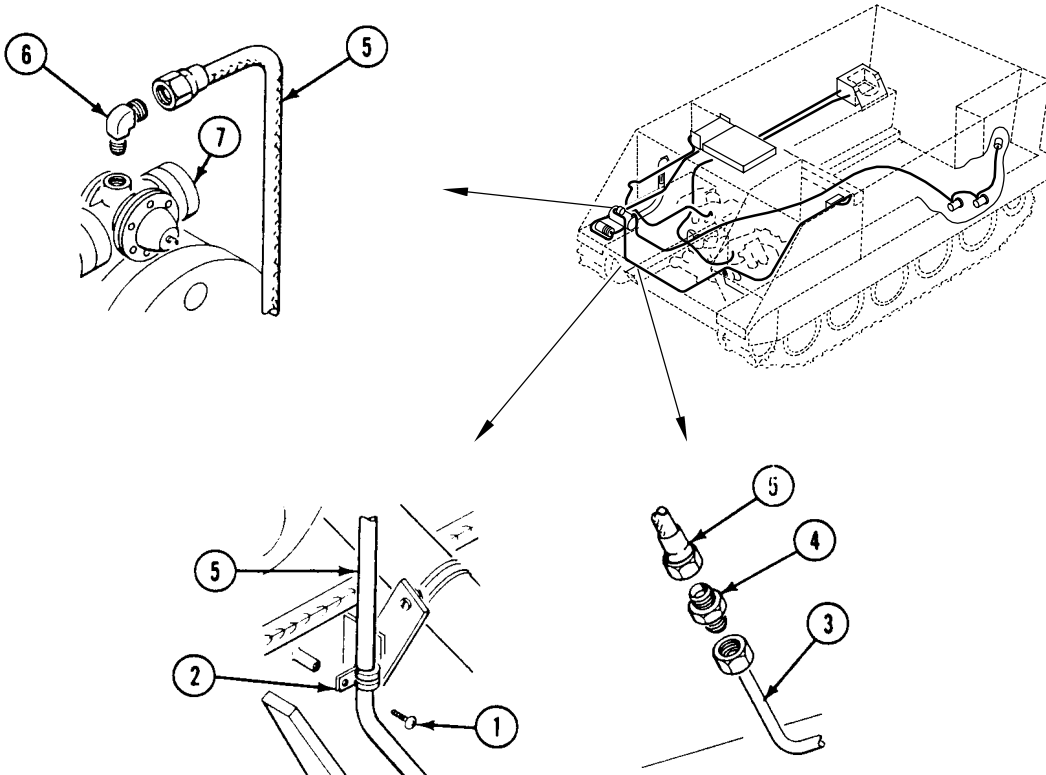
REMOVAL

WARNING

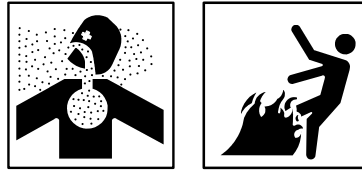


Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy vehicle. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

1. Remove screw (1) and clamp (2) from bulkhead weldnut.
2. Remove tube (3) from nipple (4).
3. Remove nipple (4) from hose (5).
4. Remove hose (5) from elbow (6). Remove clamp (2) from hose.
5. Remove elbow (6) from engine coolant heater (7).



INSTALLATION

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

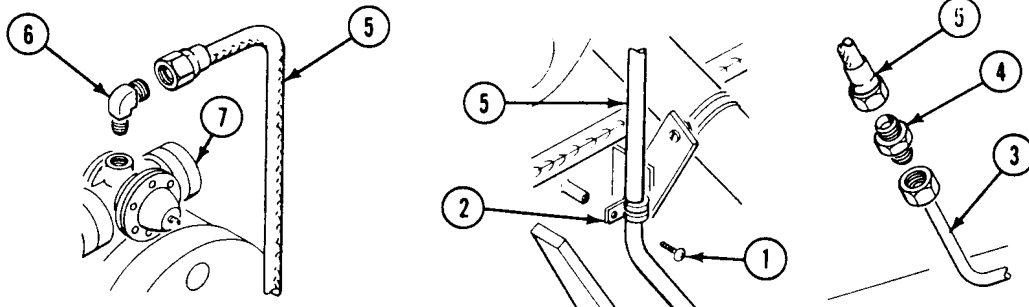
Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Apply a light coat of sealing compound to threads of elbow (6).
2. Install elbow (6) in engine coolant heater (7).

NOTE

Replacing a flareless fuel hose or tube assembly may also require new mating fittings such as a tee, elbow, or adapter.

3. Install hose (5) on elbow (6). Place clamp (2) on hose (5).
4. Install nipple (4) in hose (5).
5. Install tube (3) on nipple (4).
6. Align clamp (2) with bulkhead weldnut. Secure with screw (1).

**FOLLOW-THROUGH STEPS**

1. Open coolant heater fuel shutoff valve (see your -10).
2. Bleed fuel lines (WP 0599 00).
3. Start coolant heater (see your -10). Check for fuel leaks. Turn heater off.
4. Close power plant front access door and raise trim vane (see your -10).
5. Raise and lock ramp (see your -10).
6. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HOSES AND FITTINGS

0646 00

THIS WORK PACKAGE COVERS:

- Removal (page 0646 00-1).
- Installation (page 0646 00-7).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

- Insulation tape (WP 0782 00, Item 35)
- Sealing compound (WP 0782 00, Item 60)
- Gasket
- Grommet (2)

Personnel Required

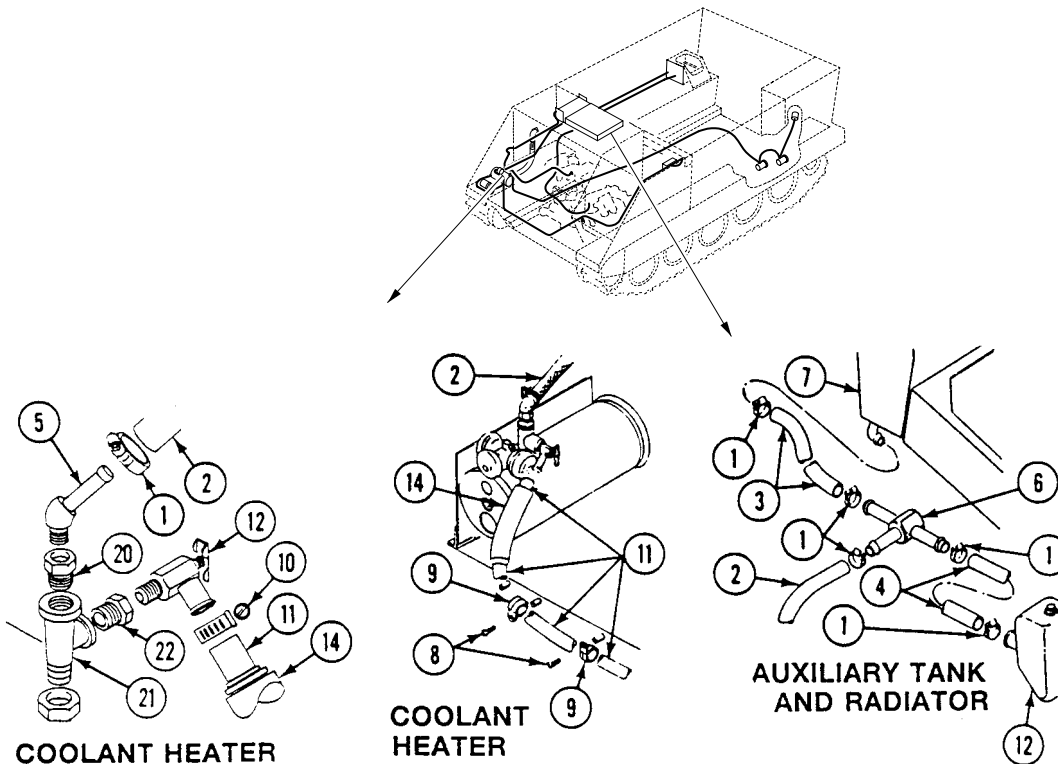
Unit Mechanic

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant front access door open (see your -10)
- Power plant rear access panel removed (WP 0431 00, WP 0432 00, or WP 0433 00)
- Carrier cooling system drained (WP 0193 00)
- Coolant heater system drained (WP 0639 00)

REMOVAL

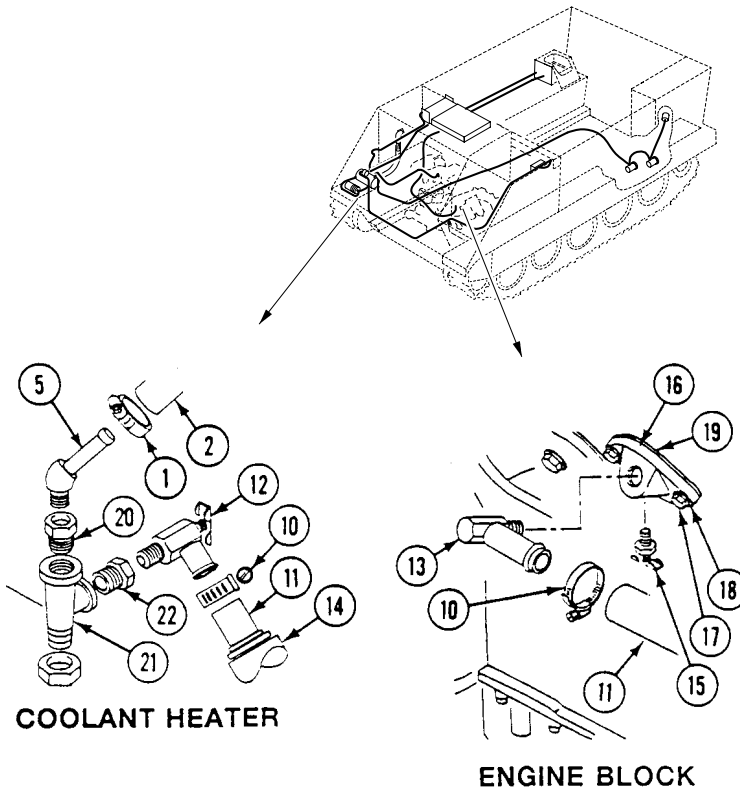
1. Loosen six clamps (1) on hoses (2), (3), and (4). Remove hose (2) from adapter (5) and tee (6). Remove hose (3) from tee (6) and radiator auxiliary tank (7). Remove hose (4) from tee (6) and thermostat housing on engine.
2. Remove six clamps (1) from hoses (2), (3), and (4).
3. Remove two screws (8) and clamps (9) from two hull weldnuts.



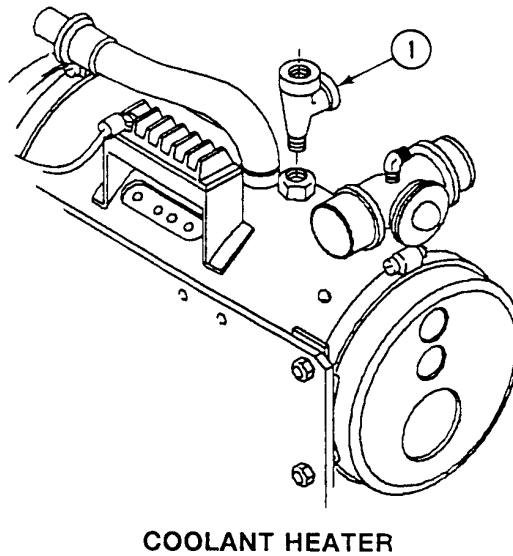
REPLACE COOLANT HOSES AND FITTINGS — Continued

0646 00

4. Loosen two clamps (10) on hose (11). Remove hose (11) from heater shutoff valve (12) and from elbow (13) on engine block. Remove clamps (9) and (10) and tubing (14) from hose (11).
5. Remove elbow (13) and draincock (15) from mount (16) on engine block.
6. Remove two screws (17), washers (18), mount (16), and gasket from engine block. Discard gasket.
7. Remove adapter (5) from bushing (20) on heater. Remove bushing from tee (21).
8. Remove shutoff valve (12) from bushing (22). Remove bushing from tee (21).



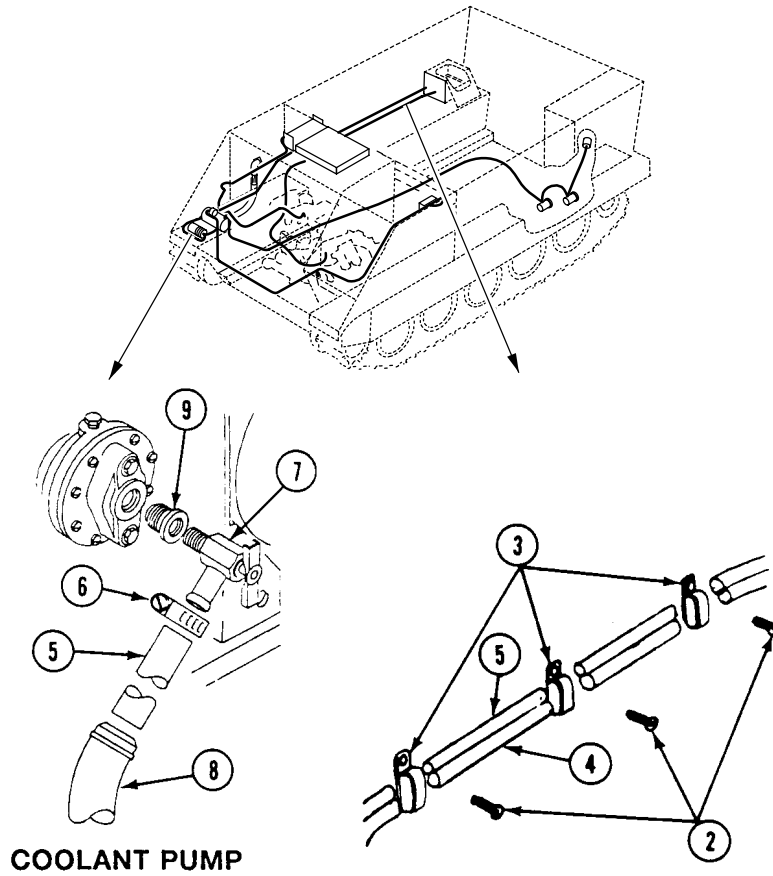
9. Remove tee (1) from coolant heater.



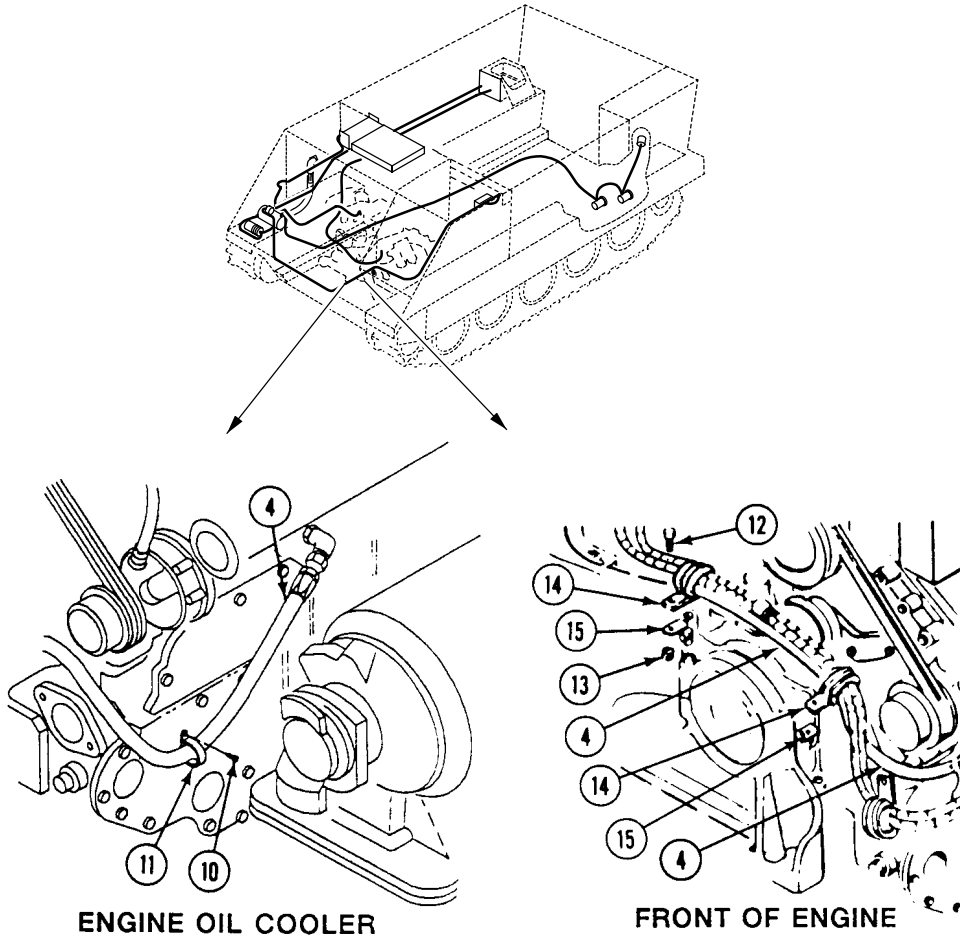
REPLACE COOLANT HOSES AND FITTINGS — Continued

0646 00

10. Remove three screws (2) and clamps (3) from sponson. Remove clamps from two hoses (4) and (5).
11. Loosen clamp (6) on hose (5). Remove hose from shutoff valve (7) on coolant pump. Remove clamp and tubing (8) from hose (5).
12. Remove shutoff valve (7) from bushing (9). Remove bushing (9) from coolant pump.



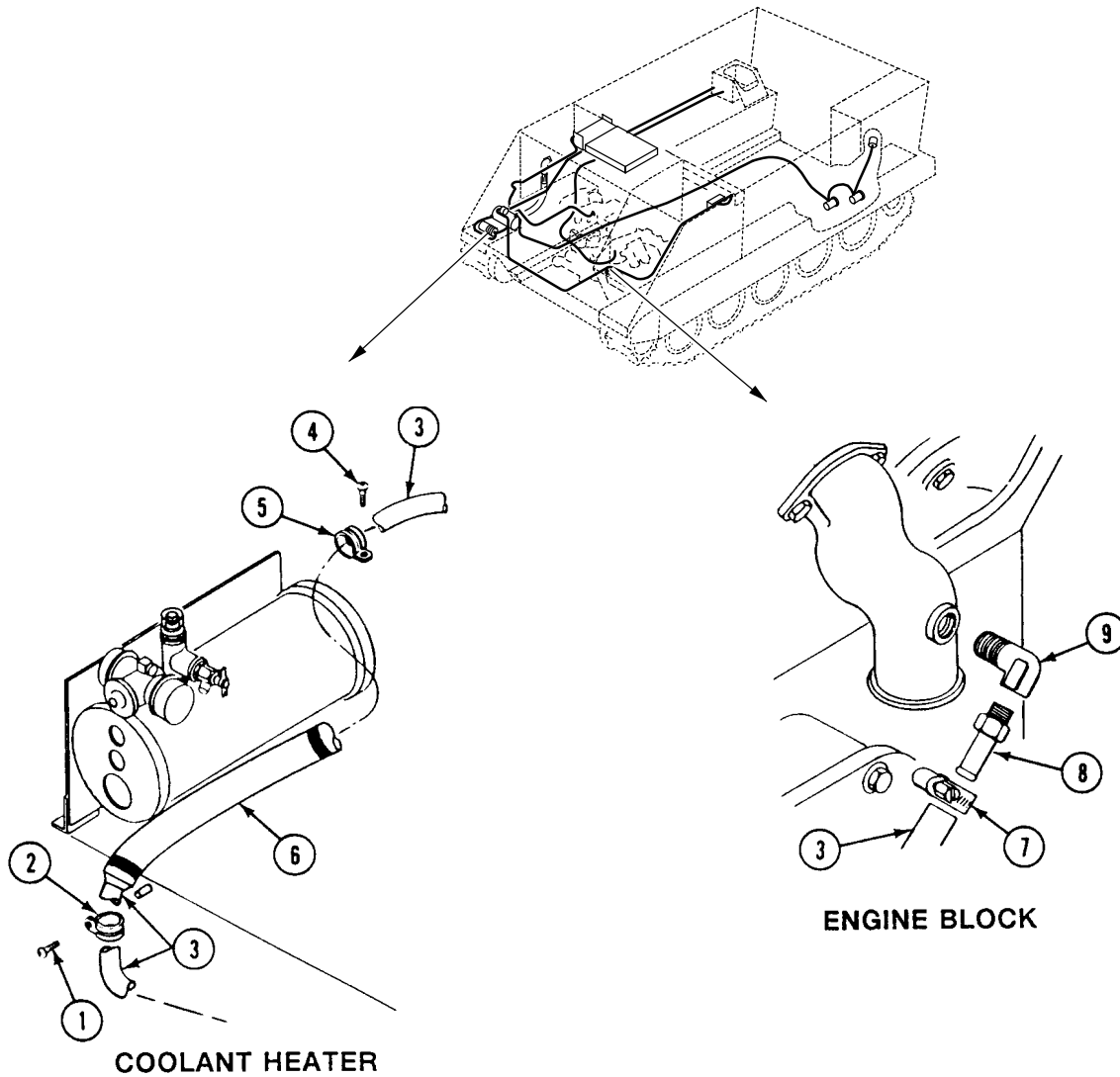
13. Remove screw (10) and clamp (11) from oil cooler housing. Remove clamp from hose (4).
14. Remove two screws (12), nuts (13), and clamps (14) from two engine brackets (15). Remove clamps from hose (4).



REPLACE COOLANT HOSES AND FITTINGS — Continued

0646 00

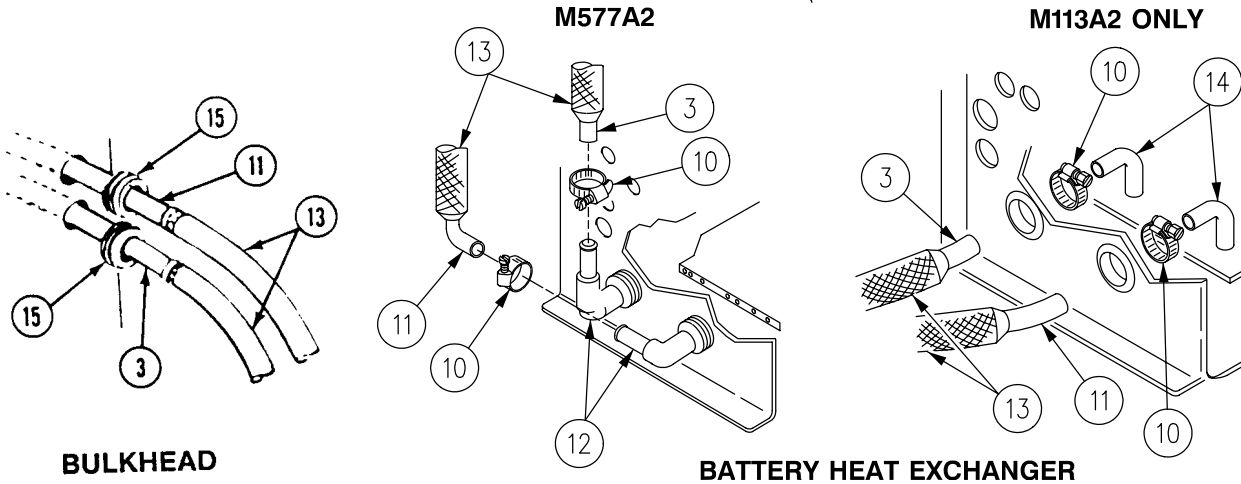
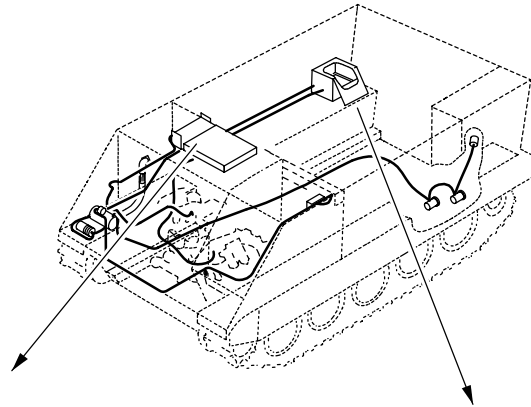
15. Remove screw (1) and clamp (2) from bulkhead weldnut. Remove clamp from hose (3).
16. Remove screw (4) and clamp (5) from sponson. Remove clamp from tube (6).
17. Loosen clamp (7) on hose (3). Remove hose from adapter (8). Remove clamp and tubing (6) from hose.
18. Remove adapter (8) from elbow (9). Remove elbow (9) from engine coolant tube.



NOTE

On M113A2 carriers, remove hoses from two tubes (14) instead of elbows (12).

19. Loosen two clamps (10). Remove two hoses (3) and (11) from two elbows (12). Remove clamps and tubing (13) from hoses.
20. Remove two hoses (3) and (11) and two grommets (15) from power plant compartment bulkhead. Discard grommets.



INSTALLATION

NOTE

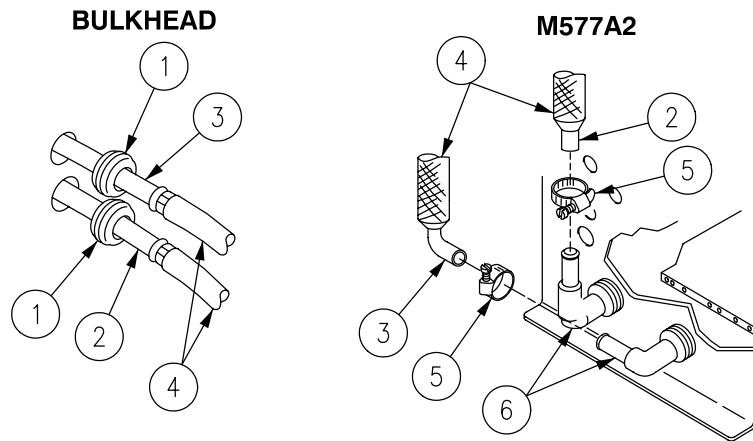
The longer hose (2) should be installed in the upper grommet.

1. Install two new grommets (1) and two hoses (2) and (3) in power plant compartment bulkhead.

NOTE

Coolant heater kit contains four pieces of insulation tubing. A short piece of tubing is installed between power plant compartment bulkhead and battery box.

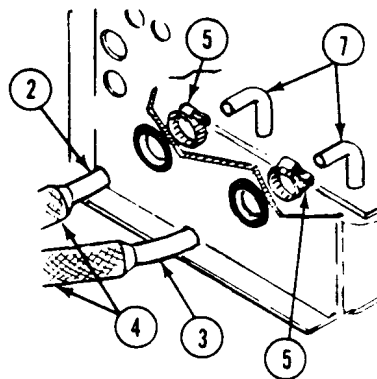
2. Slide tubing (4) and clamp (5) onto each hose (2) and (3). Install hoses on two elbows (6). Secure with clamps. Wrap ends of insulated tubing with overlapping turns of insulated tape to prevent unravelling.



NOTE

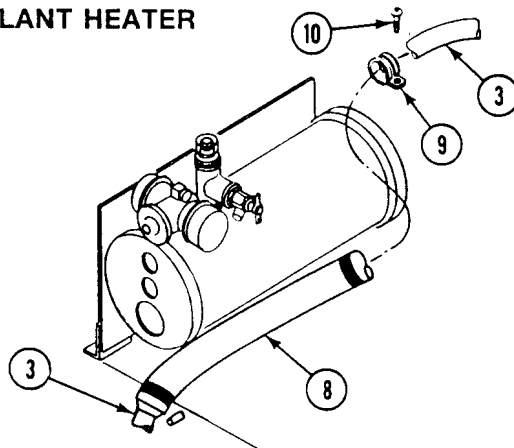
On M113A2 carriers, route hoses (2) and (3) through brackets on sponson and install on two tubes (7). Secure with clamps (5).

M113A2 ONLY



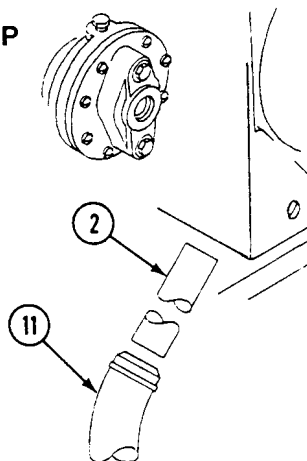
3. Install tubing (8) on hose (3). Place clamp (9) on tube (8). Align clamp with sponson hole. Secure with screw (10). Wrap ends of insulated tubing with overlapping turns of insulated tape to prevent unravelling.

COOLANT HEATER

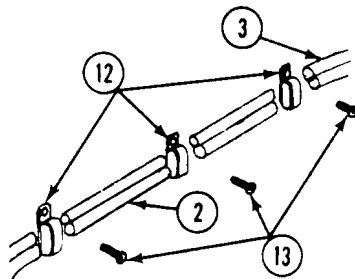


4. Install tubing (11) on hose (2). Wrap ends of insulated tubing with overlapping turns of insulation tape to prevent unravelling.

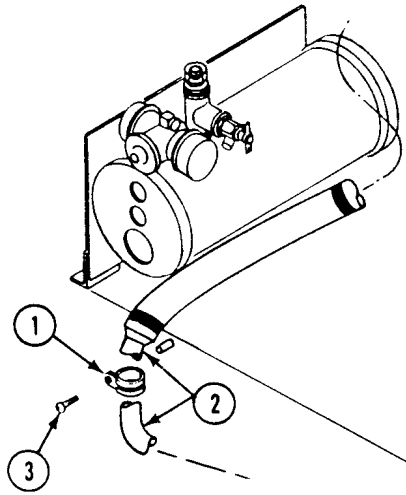
COOLANT PUMP



5. Place three clamps (12) on two hoses (2) and (3). Align clamps with bulkhead holes. Secure with three screws (13).

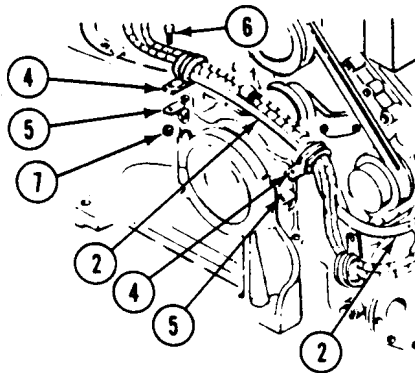


6. Place clamp (1) on hose (2). Align clamps with bulkhead weldnut. Secure with screw (3).



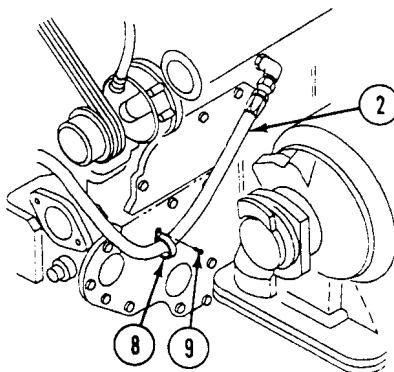
COOLANT HEATER

7. Place two clamps (4) on hose (2). Align clamps with two engine brackets (5). Secure with two screws (6) and nuts (7).

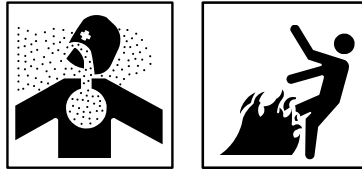


FRONT OF ENGINE

8. Place clamp (8) on hose (2). Align clamp with oil cooler housing. Secure with screw (9).



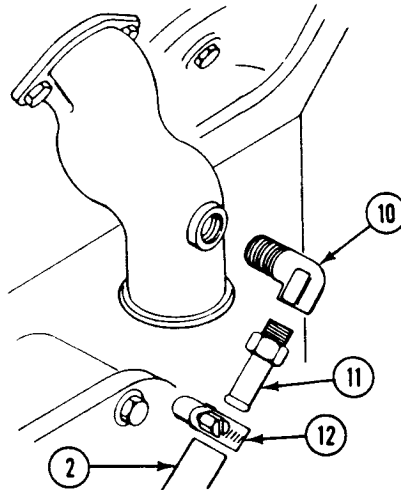
ENGINE OIL COOLER

WARNING

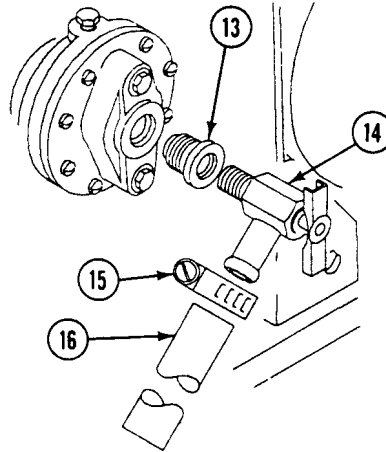
Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

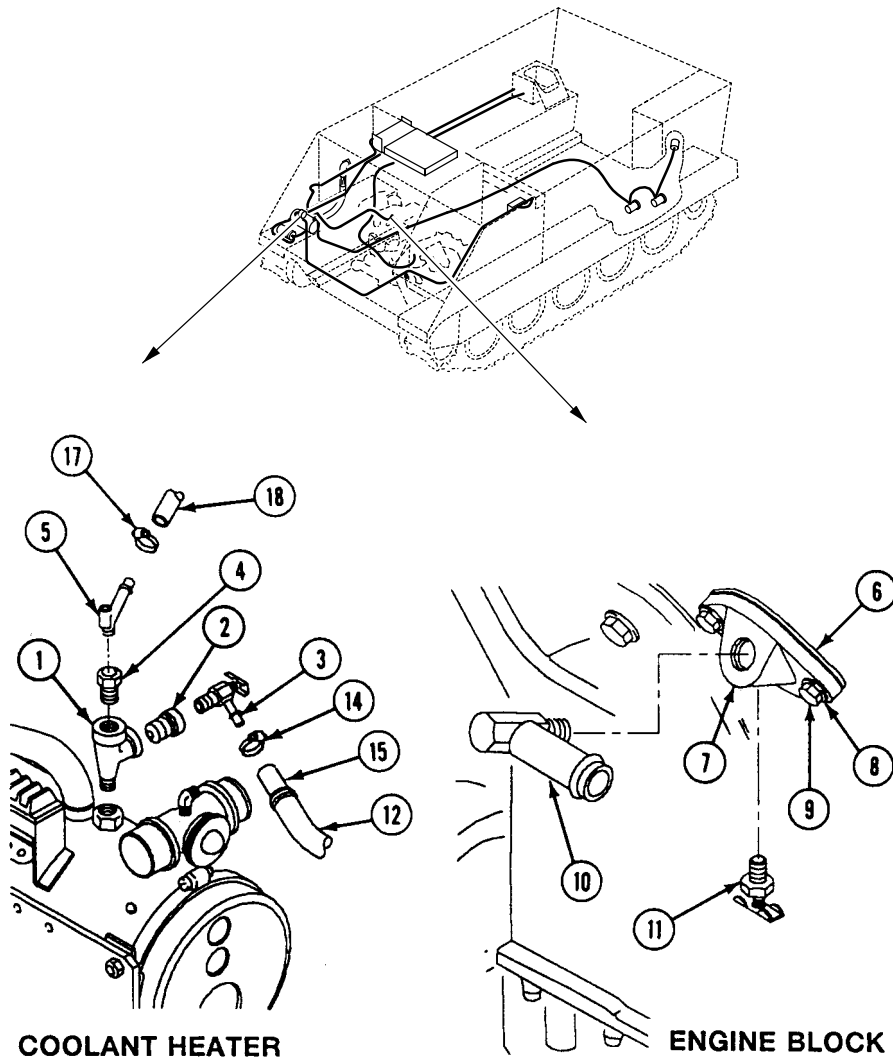
9. Apply a light coat of sealing compound to all external tapered threads.
10. Install elbow (10) in engine coolant tube. Install adapter (11) in elbow (10).
11. Place clamp (12) on hose (2). Install hose on adapter (11). Secure with clamp.

**ENGINE BLOCK**

12. Install bushing (13) in coolant pump. Install shutoff valve (14) in bushing.
13. Place clamp (15) on hose (16). Install hose on shutoff valve (14). Secure with clamp.

**COOLANT PUMP**

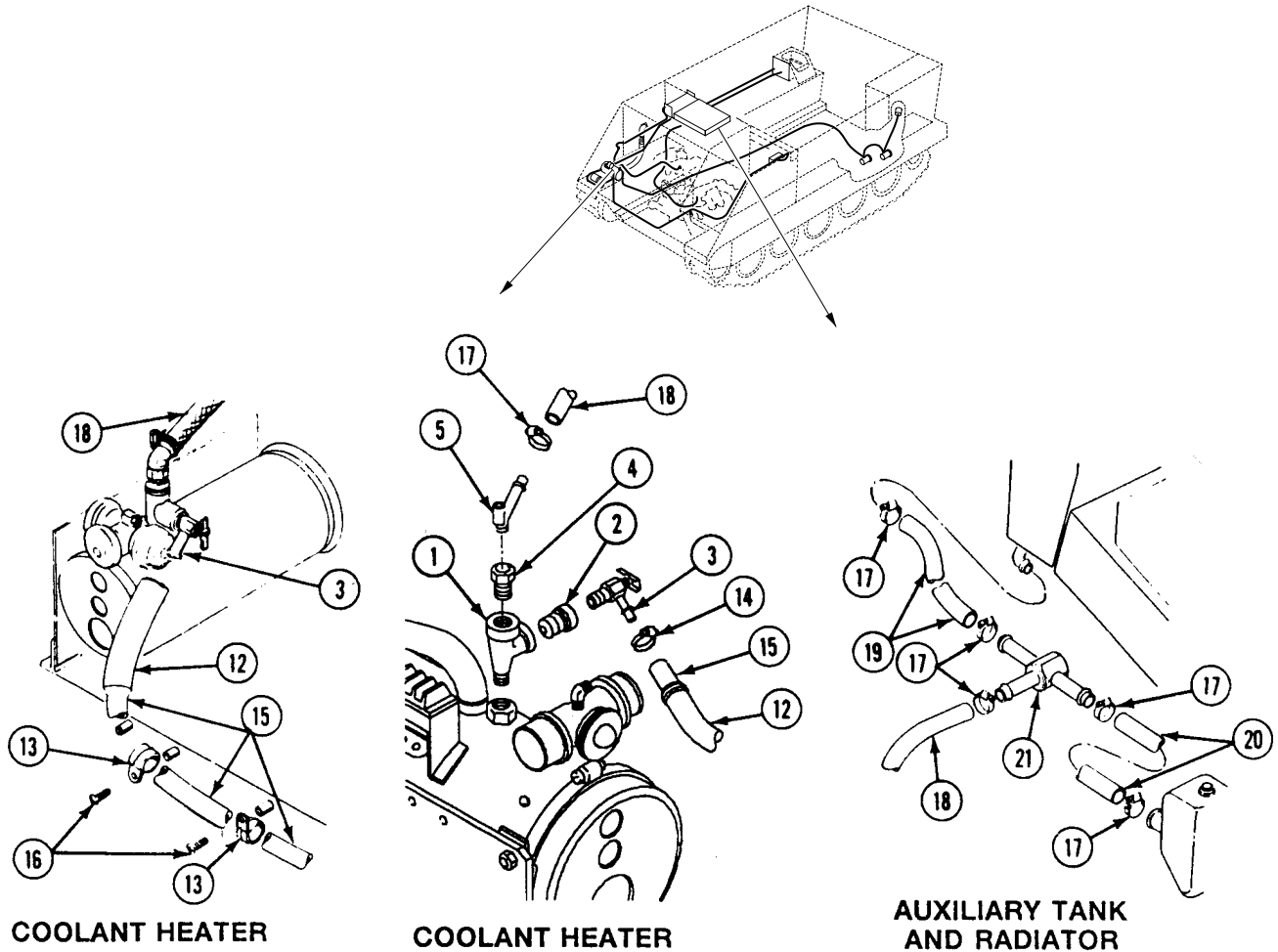
14. Install tee (1) in coolant heater.
15. Install bushing (2) in tee (1). Install shutoff valve in (3) in bushing.
16. Install bushing (4) in tee (1). Install adapter (5) in bushing.
17. Install new gasket (6) and mount (7) on engine block. Secure with two washers (8) and screws (9).
18. Install elbow (10) and draincock (11) in mount (7).



REPLACE COOLANT HOSES AND FITTINGS — Continued

0646 00

19. Place tubing (12), two clamps (13), and two clamps (14) on hoses (15).
20. Install hose (15) on shutoff valve (3) and elbow (10). Secure with two clamps (14).
21. Align two clamps (13) with hull weldnuts. Secure with two screws (16).
22. Place six clamps (17) on hoses (18), (19), and (20). Install tee (21) in hoses. Secure with three clamps (17).
23. Install hose (18) on adapter (5). Install hose (19) on radiator auxiliary tank. Install hose (20) on thermostat housing. Secure with remaining three clamps (17).



FOLLOW-THROUGH STEPS

1. Fill carrier cooling system (WP 0194 00).
2. Fill coolant heater system (WP 0639 00).
3. Start coolant heater (see your -10). Check to make sure heater is installed right. Check for leaks. Turn heater off.
4. Close power plant front access door and raise trim vane (see your -10).
5. Install power plant rear access panel (WP 0431 00, WP 0432 00, or WP 0433 00).
6. Raise and lock ramp (see your -10).
7. Stop engine (see your -10).

END OF TASK

REPLACE COOLANT HEATER EXHAUST ELBOW AND PIPES

0647 00

THIS WORK PACKAGE COVERS:

Removal (page 0647 00-2).
Installation (page 0647 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

Trim vane lowered (see your -10)

Power plant front access door open (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Gasket

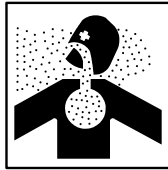
Personnel Required

Unit Mechanic

REMOVAL

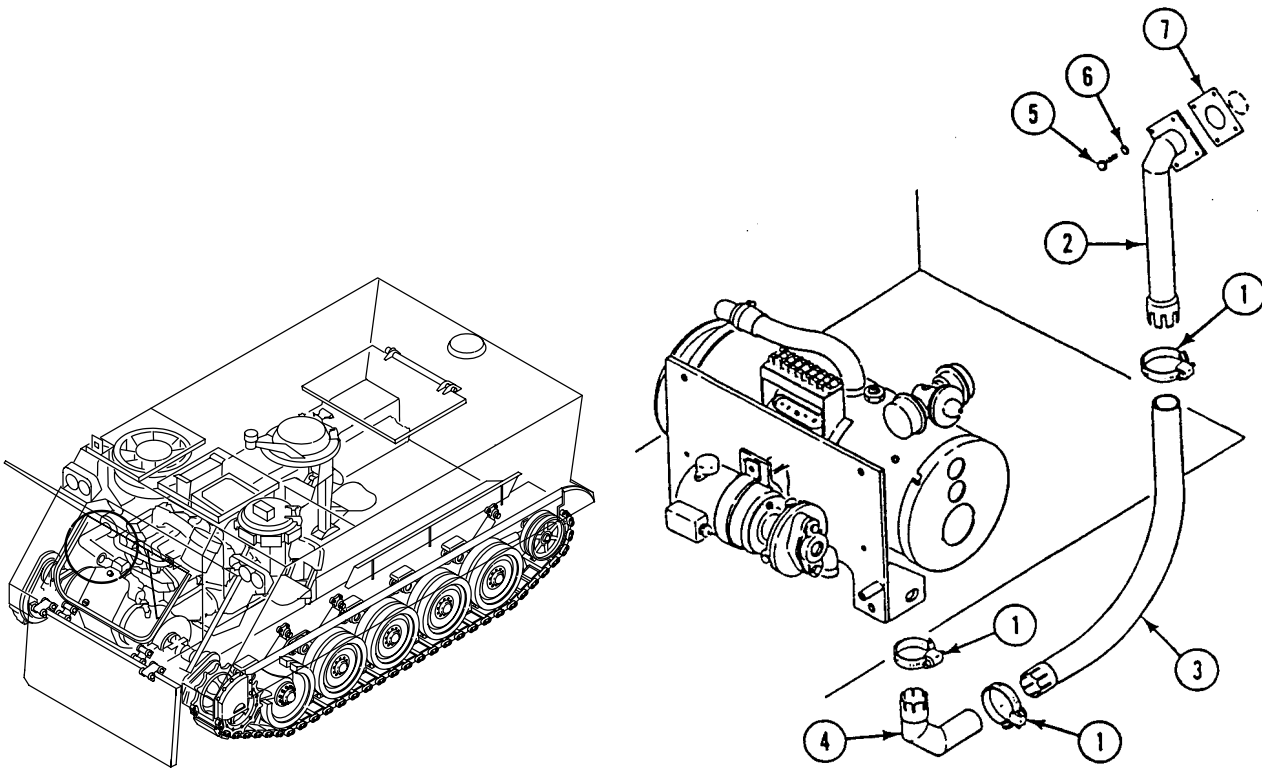
1. Loosen three clamps (1) on upper exhaust pipe (2), on lower exhaust pipe (3), and on exhaust elbow (4).

WARNING



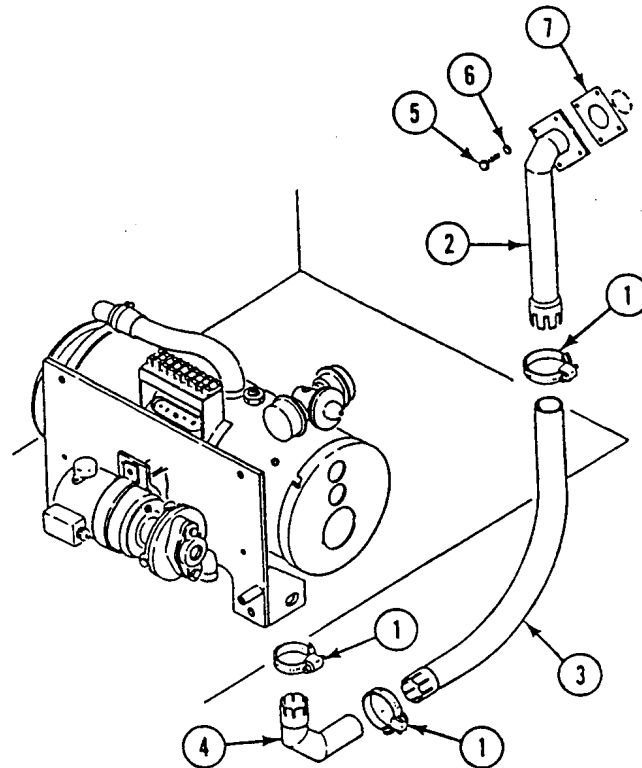
Older gaskets are made out of asbestos. Handle with care. Discard older gasket properly as a hazardous material per local standard operating procedure.

2. Remove four screws (5), washers (6), upper pipe (2), and gasket (7) from exhaust grill housing. Discard gasket.
3. Remove upper pipe (2) from lower pipe (3). Remove lower pipe (3) from elbow (4).
4. Remove elbow (4) from coolant heater.



INSTALLATION

1. Place clamp (1) on elbow (4). Install elbow on coolant heater. Tighten clamp.
2. Place clamp (1) on lower pipe (3). Install pipe in elbow (4). Tighten clamp.
3. Place clamp (1) on upper pipe (2). Install upper pipe in lower pipe (3). Tighten clamp.
4. Align new gasket (7) and upper pipe (2) with exhaust grill housing. Secure with four washers (6) and screws (5).

**FOLLOW-THROUGH STEPS**

1. Start coolant heater (see your -10). Check for exhaust leaks. Turn heater off.
2. Close power plant access door (see your -10).
3. Raise trim vane (see your -10).
4. Raise and lock ramp (see your -10).
5. Stop engine (see your -10).

END OF TASK

REPLACE/REPAIR COOLANT HEATER CONTROL BOX

0648 00

THIS WORK PACKAGE COVERS:

- Removal (page 0648 00-1).
- Inspection-Acceptance and Rejection Criteria (page 0648 00-2).
- Installation (page 0648 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0070 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

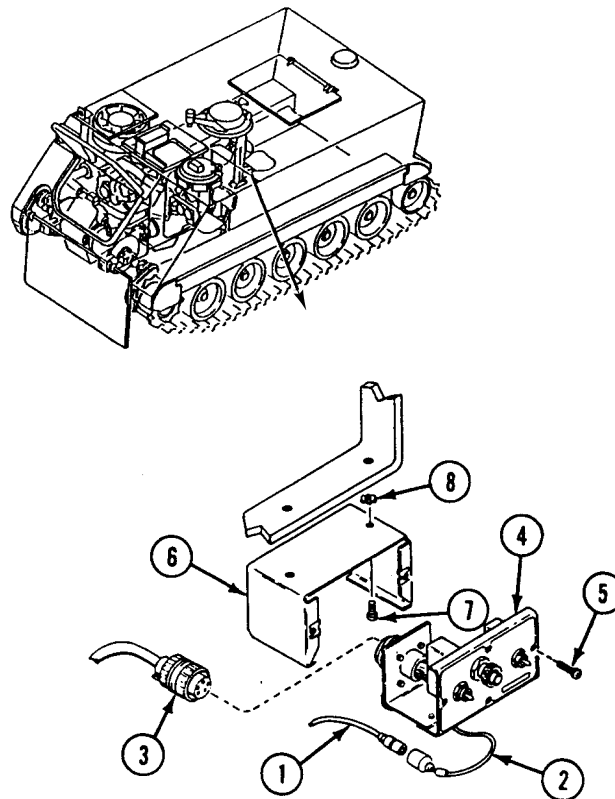
Lockwasher (2)

Personnel Required

Unit Mechanic

REMOVAL

1. Disconnect circuit 400A lead (1) from heater control box lead (2).
2. Disconnect heater wiring harness (3) from heater control box (4).
3. Remove two screws (5) and control box (4) from control box case (6).
4. Remove two screws (7), lockwashers (8), and case (6) from support bracket. Discard lockwashers.

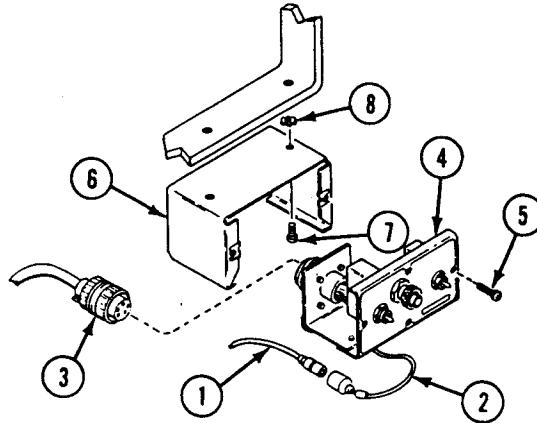


INSPECTION-ACCEPTANCE AND REJECTION CRITERIA

1. Check control box and components. See troubleshooting (WP 0070 00). Replace bad control box or components.

INSTALLATION

1. Place control box case (6) on support bracket. Secure with two new lockwashers (8) and screws (7).
2. Install heater control box (4) in case (6). Secure with two screws (5).
3. Connect heater wiring harness (3) to control box (4).
4. Connect circuit 400A lead (1) to control box lead (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Start heater (see your -10). Check that heater control box works right. Turn heater off.

END OF TASK

REPLACE COOLANT PUMP TO COOLANT HEATER WIRING HARNESS

0649 00

THIS WORK PACKAGE COVERS:

- Removal (page 0649 00-1).
- Inspection and Repair (page 0649 00-2)
- Installation (page 0649 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0780 00, Item 29)
- Multimeter (WP 0780 00, Item 43)

Equipment Condition

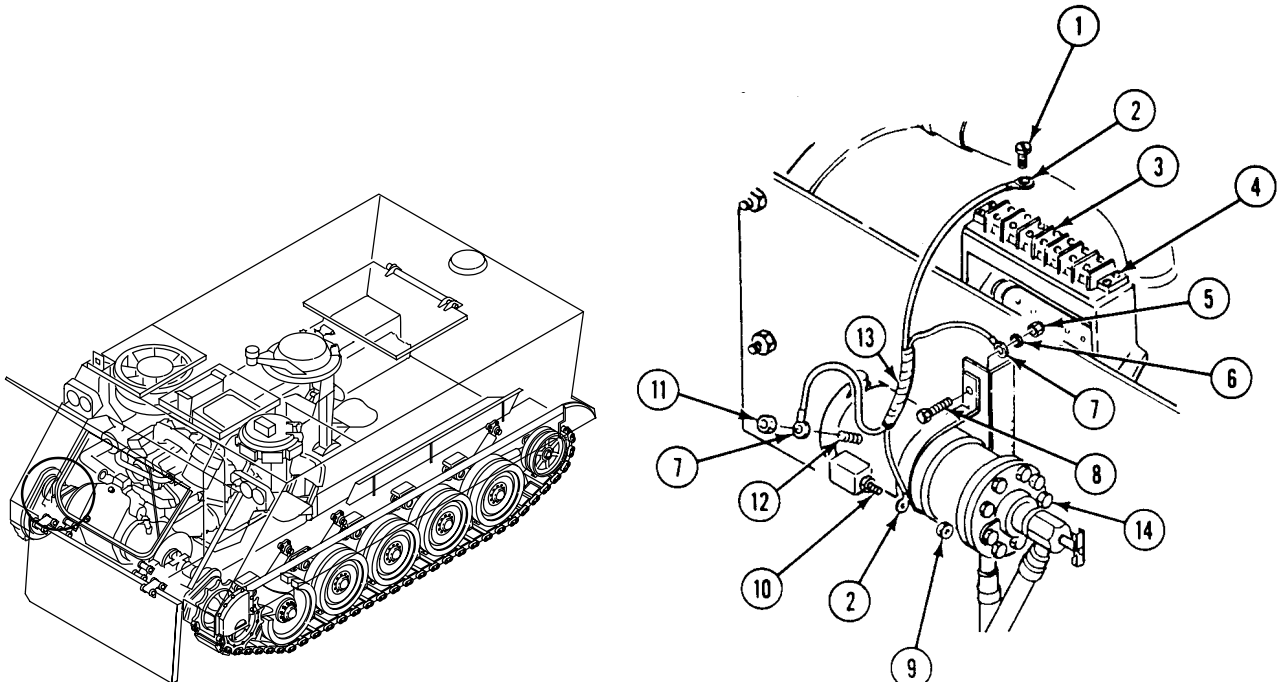
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door opened (see your -10)
- Battery ground lead disconnected (WP 0294 00)

Materials/Parts

- Locknut
- Lockwasher

REMOVAL

1. Remove screw (1) and circuit lead (2) from terminal 4 (3) of heater terminal strip (4).
2. Remove locknut (5), lockwasher (6), and ground lead (7) from coolant pump mount screw (8). Discard locknut and lockwasher.
3. Remove nut (9) and circuit 402B lead (2) from coolant pump terminal (10).
4. Remove nut (11) and ground lead (7) from coolant pump terminal (12). Remove wiring harness (13) from pump (14).

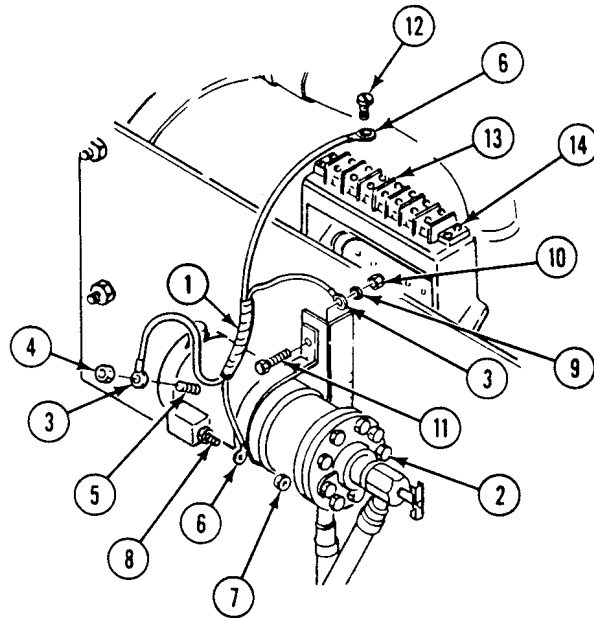


INSPECTION AND REPAIR

1. Check wiring harness continuity. Check leads for frayed or broken insulation or damaged terminal lugs. Repair harness as needed (WP 0312 00).

INSTALLATION

1. Place wiring harness (1) on coolant pump (2). Install ground lead (3) and nut (4) on pump terminal (5).
2. Install circuit 402B lead (6) and nut (7) on pump terminal (8).
3. Install ground lead (3), new lockwasher (9), and new locknut (10) on coolant pump mount screw (11).
4. Install circuit 402B lead (6) and screw (12) on terminal 4 (13) of terminal strip (14).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Start coolant heater (see your -10). Check that wiring harness is installed right. Turn heater off.
3. Close power plant access door (see your -10).
4. Raise trim vane (see your -10).

END OF TASK

REPLACE COOLANT HEATER AND PUMP UNIT

0650 00

THIS WORK PACKAGE COVERS:

- Removal (page 0650 00-1).
- Inspection and Repair (page 0650 00-5).
- Installation (page 0650 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Wiping rags (WP 0782 00, Item 76)

Lockwasher (2)

Personnel Required

Unit Mechanic

References

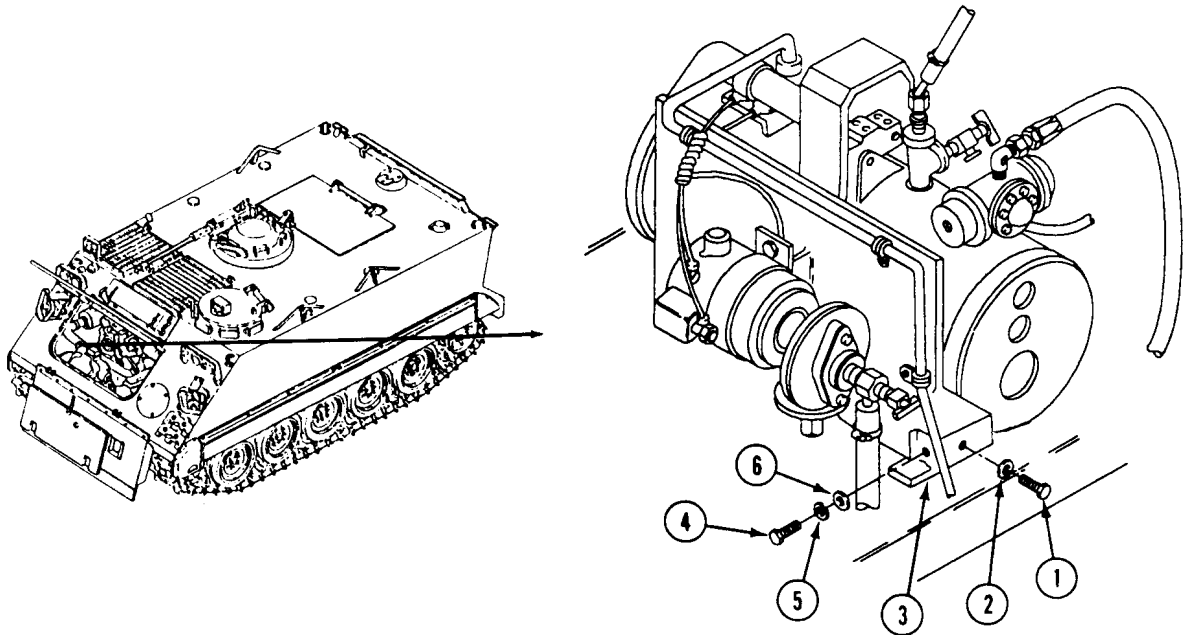
WP 0070 00

Equipment Condition

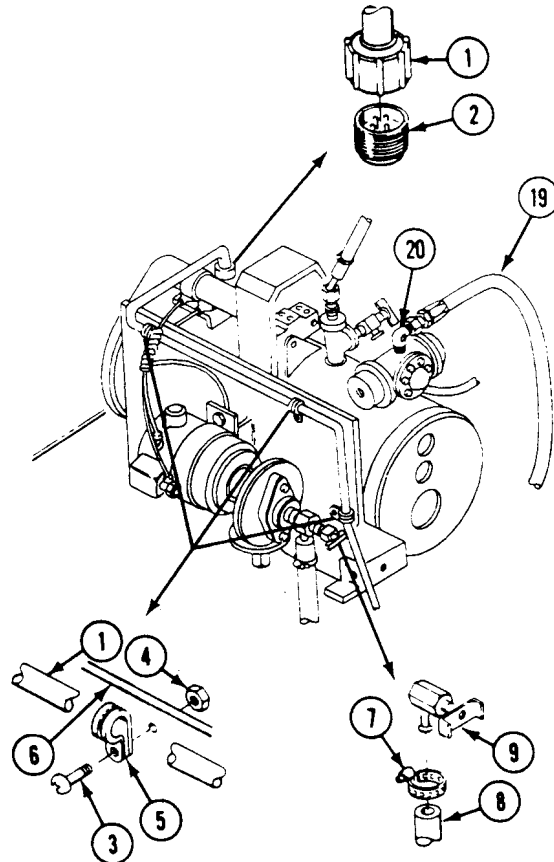
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant front access door open (see your -10)
- Fuel tank shut off valve closed (see your -10)
- Coolant heater fuel shutoff valve closed (see your -10)
- Carrier cooling system drained (WP 0193 00)
- Battery ground lead disconnected (WP 0294 00)

REMOVAL

1. Remove two screws (1) and flat washers (2) from outboard end of bracket (3).
2. Remove two screws (4), lockwashers (5), and flat washers (6) from inboard end of bracket (3). Discard lockwashers.

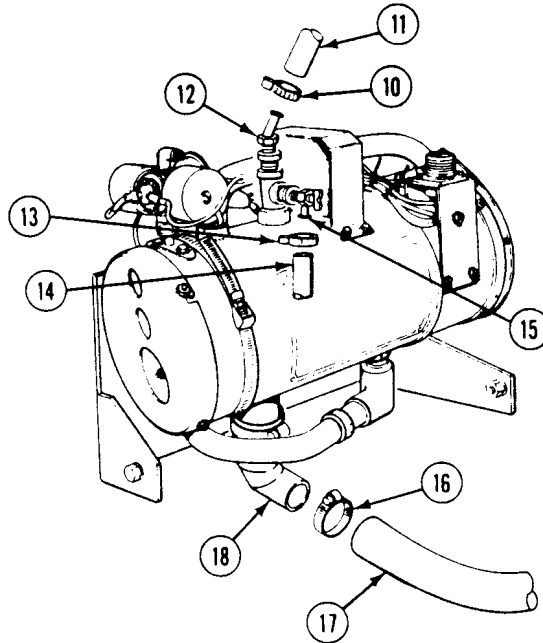


3. Disconnect wiring harness (1) from receptacle (2).
4. Remove three screws (3), nuts (4), clamps (5), and harness (1) from bracket (6).
5. Loosen clamp (7). Remove hose (8) from coolant pump (9).



REPLACE COOLANT HEATER AND PUMP UNIT — Continued**0650 00**

6. Loosen clamp (10). Disconnect hose (11) from elbow (12).
7. Loosen clamp (13). Disconnect hose (14) from shutoff valve (15).
8. Loosen clamp (16). Disconnect exhaust pipe (17) from elbow (18).

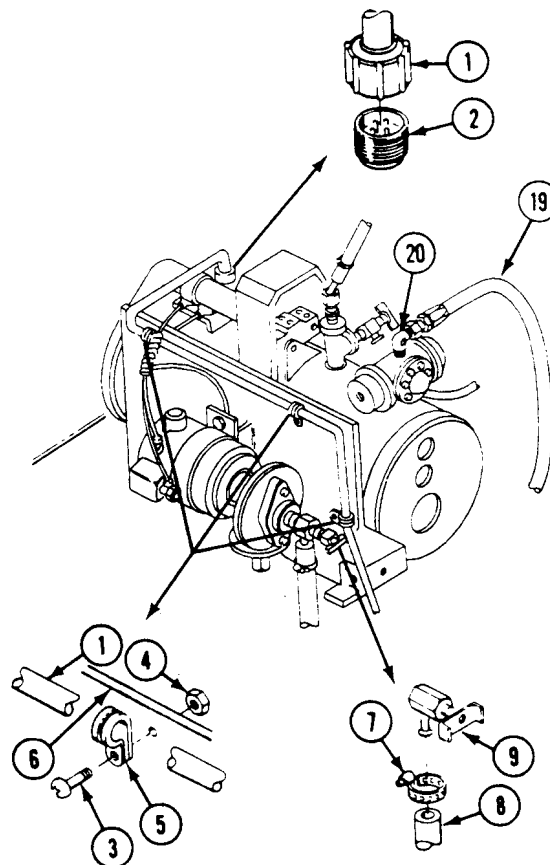


WARNING

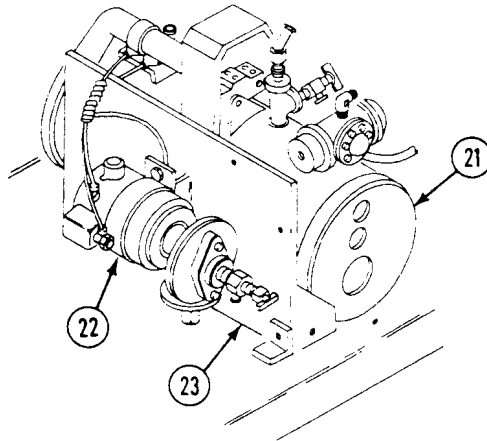


Diesel fuel can catch fire and seriously injure or kill soldiers and damage or destroy the vehicle. Wipe up fuel spills immediately. Do not smoke near fuel or when working on the fuel system.

9. Remove fuel supply hose (19) from elbow (20).



10. Remove heater (21), pump (22), and bracket (23) from carrier as an assembly.

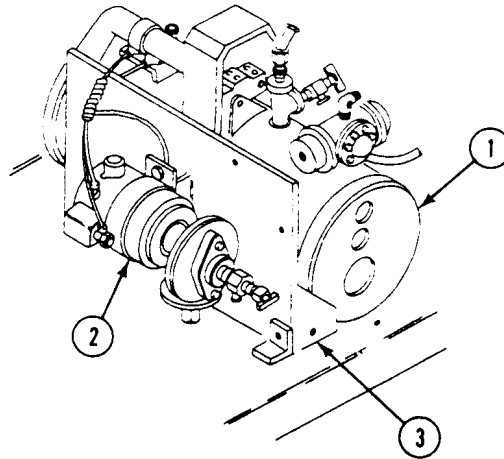


INSPECTION AND REPAIR

1. Check coolant heater and components. See troubleshooting (WP 0070 00). Replace bad heater or components.
2. Check coolant pump. See troubleshooting (WP 0070 00). Replace bad coolant pump (WP 0652 00).
3. Check heater. Replace cracked, dented, or damaged heater (WP 0651 00).

INSTALLATION

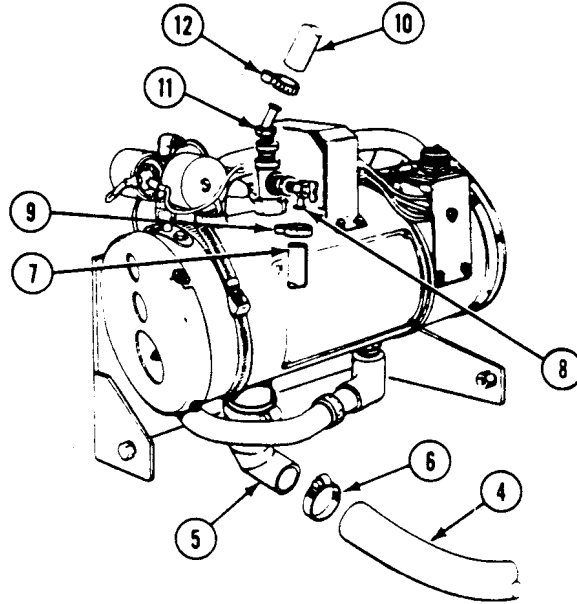
1. Install heater (1), pump (2), and bracket (3) assembly in carrier on right front sponson. Align bracket (3) with four hull brackets.



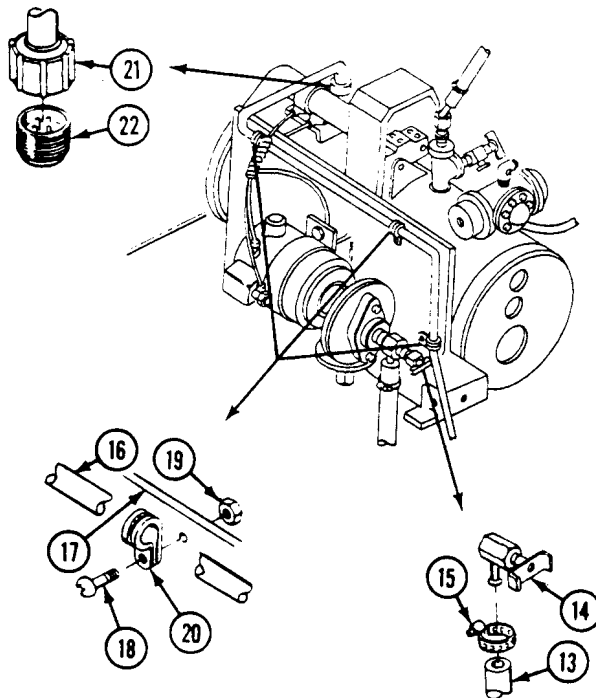
REPLACE COOLANT HEATER AND PUMP UNIT — Continued

0650 00

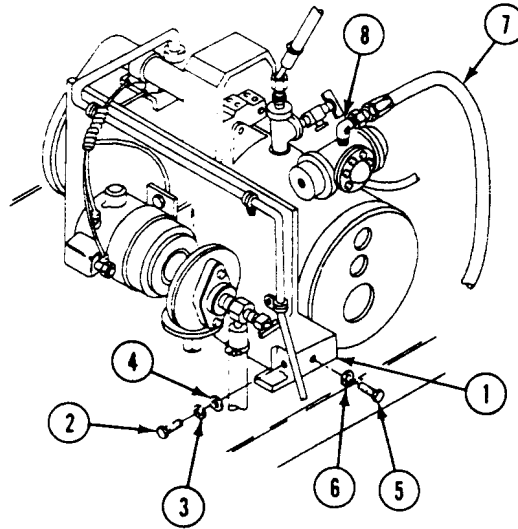
2. Connect exhaust pipe hose (4) to elbow (5). Secure with clamp (6).
3. Connect hose (7) to shutoff valve (8). Secure with clamp (9).
4. Connect hose (10) to elbow (11). Secure with clamp (12).



5. Connect hose (13) to coolant pump (14). Secure with clamp (15).
6. Install harness (16) on bracket (17). Secure with three screws (18), nuts (19), and clamps (20).
7. Connect harness (21) to receptacle (22).



8. Align bracket (1) with four hull brackets. Secure with two screws (2), new lockwashers (3), and flat washers (4) in outboard end of bracket (1) and brackets on hull.
9. Install two screws (5), and two flat washers (6) in inboard end of bracket (1) and brackets on hull.
10. Install fuel supply hose (7) on elbow (8).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Fill carrier cooling system (WP 0194 00).
3. Open personnel heater fuel shutoff valve (see your -10).
4. Start coolant heater (see your -10). Check to make sure heater is installed right. Check for leaks. Turn heater off.
5. Close power plant front access door (see your -10).
6. Raise trim vane (see your -10).

END OF TASK

REPLACE COOLANT HEATER

0651 00

THIS WORK PACKAGE COVERS:

- Removal (page 0651 00-1).
 - Inspection and Repair (page 0651 00-2).
 - Installation (page 0651 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0070 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Coolant heater and pump unit removed from carrier (WP 0650 00)

Materials/Parts

Sealing compound (WP 0782 00, Item 60)

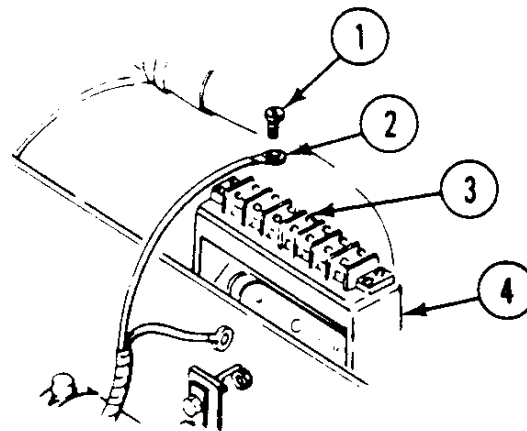
Coolant heater pump removed (WP 0652 00)

Personnel Required

Unit Mechanic

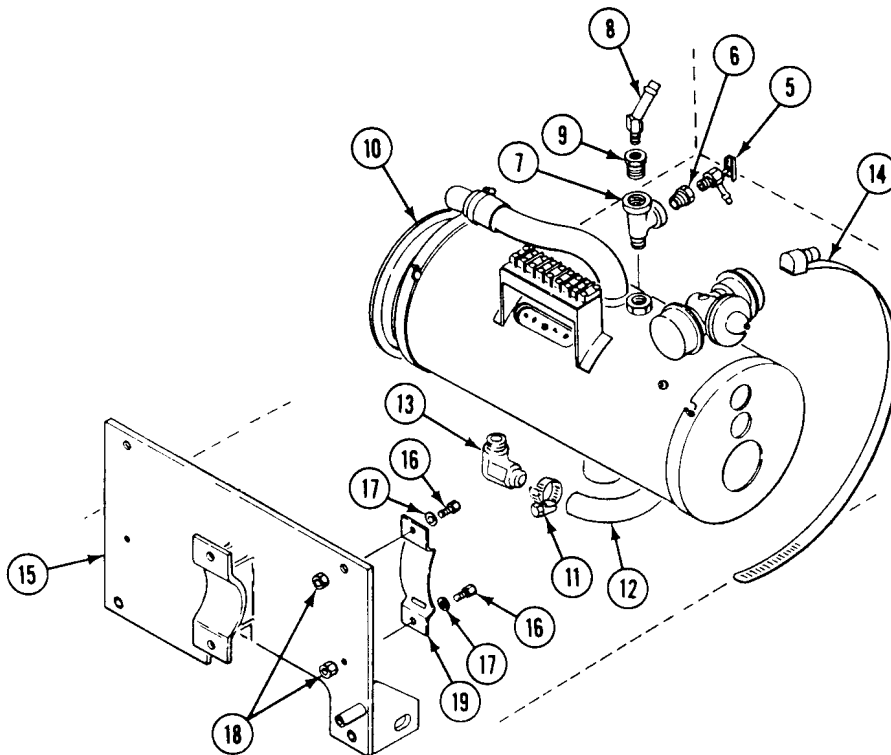
REMOVAL

1. Remove screw (1) and circuit 402B lead (2) from terminal 4 (3) of heater terminal strip (4).



REPLACE COOLANT HEATER — Continued**0651 00**

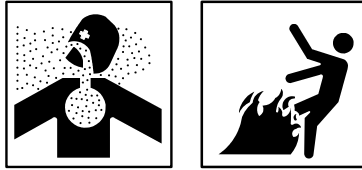
2. Remove shutoff valve (5) and bushing (6) from tee (7).
3. Remove elbow (8), bushing (9), and tee (7) from heater (10).
4. Loosen clamp (11). Remove pump-to-heater hose (12) from elbow (13).
5. Remove elbow (13) from heater (10).
6. Loosen two clamps (14). Remove heater (10) from bracket (15).
7. Remove four screws (16), washers (17), nuts (18), and two heater saddle mounts (19) from bracket (15).

**INSPECTION AND REPAIR**

1. Check coolant heater and components. See troubleshooting (WP 0070 00). Replace bad heater or components.
2. Check coolant heater. Replace cracked, damaged, or leaky heater. Replace heater that shows burn-through.

INSTALLATION

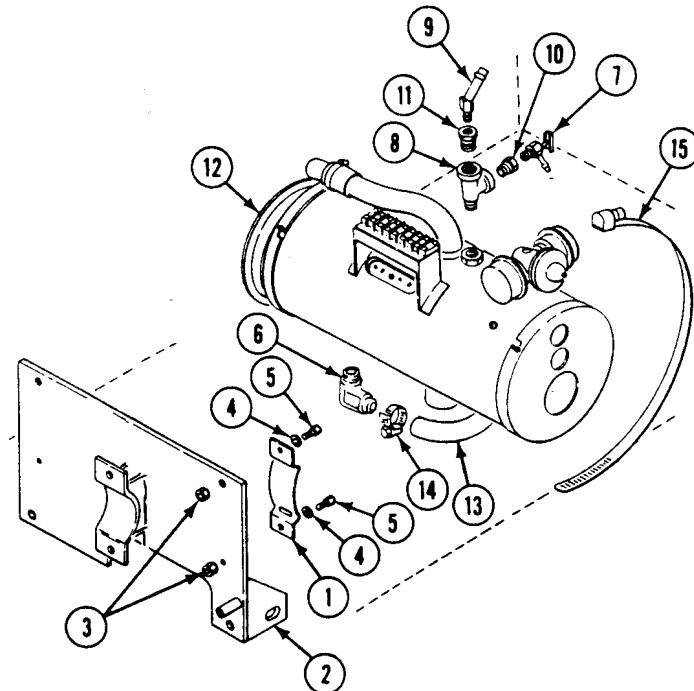
1. Install saddle mounts (1) on bracket (2). Secure with four nuts (3), washers (4), and screws (5).

WARNING

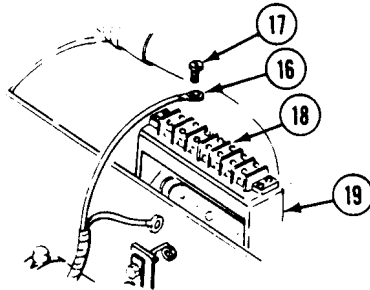
Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

2. Apply sealing compound to threads of elbow (6), shutoff valve (7), tee (8), elbow (9), and bushings (10) and (11).
3. Install elbow (6) in heater (12).
4. Install hose (13) on elbow (6). Secure with clamp (14).
5. Install heater (12) on bracket (2). Secure with two clamps (15).
6. Install tee (8) in heater (12).
7. Install bushing (10) in tee (8).
8. Install shut off valve (7) in bushing (10).
9. Install bushing (11) in tee (8).
10. Install elbow (9) in bushing (11).



11. Connect circuit 402B lead (16) and screw (17) on terminal 4 (18) of heater terminal strip (19).

**FOLLOW-THROUGH STEPS**

1. Install coolant heater pump (WP 0652 00).
2. Install coolant heater and pump unit (WP 0650 00).

END OF TASK

REPLACE COOLANT HEATER PUMP

0652 00

THIS WORK PACKAGE COVERS:

Removal (page 0652 00-1).
 Installation (page 0652 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Trim vane lowered (see your -10)
 Power plant access door open (see your -10)
 Coolant heater and pump unit removed from carrier
 (WP 0650 00)
 Wiring harness removed (WP 0649 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

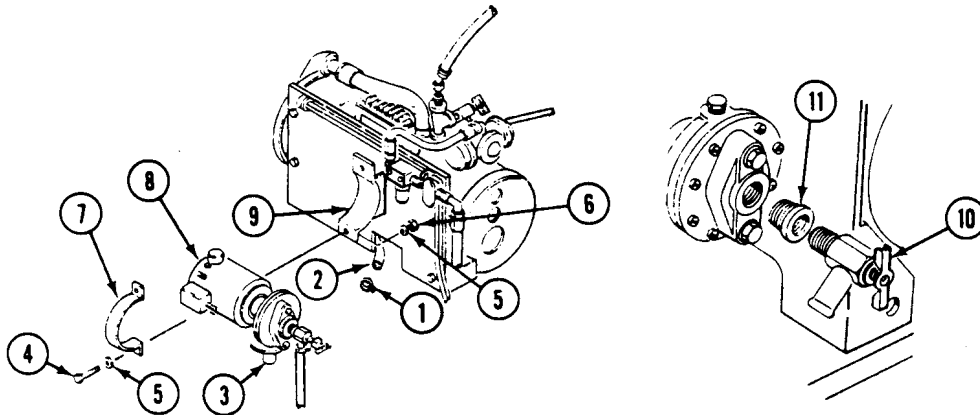
Sealing compound (WP 0782 00, Item 60)
 Locknut (2)

Personnel Required

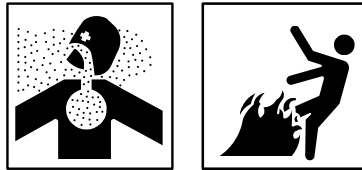
Unit Mechanic

REMOVAL

1. Loosen clamp (1). Remove hose (2) from elbow (3).
2. Remove two screws (4), four washers (5), two locknuts (6), retaining strap (7), and pump (8) from support bracket (9). Discard locknuts.
3. Remove elbow (3) from pump (8).
4. Remove shutoff valve (10) from bushing (11).
5. Remove bushing (11) from coolant pump (8).



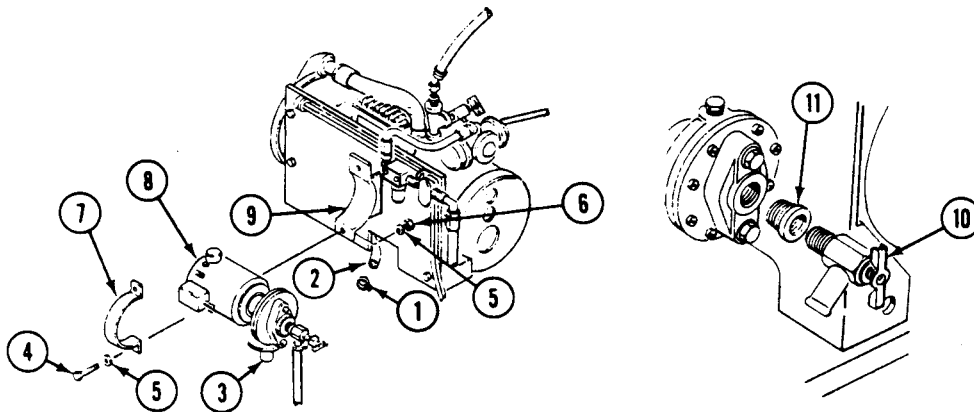
INSTALLATION

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Apply sealing compound to threads of elbow (3) and shutoff valve (10).
2. Install bushing (11) in coolant pump (8).
3. Install shutoff valve (10) in bushing (11).
4. Install elbow (3) in coolant pump (8).
5. Install pump (8) on bracket (9). Secure with retaining strap (7), two screws (4), four washers (5), and two new locknuts (6).
6. Install hose (2) on elbow (3). Secure with clamp (1).

**FOLLOW-THROUGH STEPS**

1. Install wiring harness (WP 0649 00).
2. Install coolant heater and pump unit (WP 0650 00).
3. Start coolant heater (see your -10). Check for leaks. Turn heater off.
4. Close power plant access door (see your -10).
5. Raise trim vane (see your -10).

END OF TASK

CHAPTER 34

UNIT MAINTENANCE INSTRUCTIONS
FOR CAPSTAN KIT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE DRUM ASSEMBLY (M113A2 AND M1059 ONLY).....	0653 00
REPLACE DRUM ADAPTER (M113A2 AND M1059 ONLY).....	0654 00

REPLACE DRUM ASSEMBLY (M113A2 AND M1059 ONLY)

0653 00

THIS WORK PACKAGE COVERS:

Removal (page 0653 00-1).
 Installation (page 0653 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

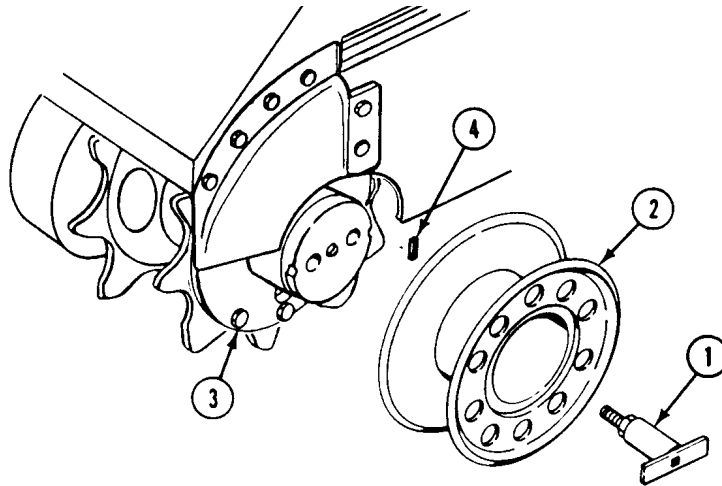
Carrier blocked (see your -10)

Materials/Parts

Spring pin

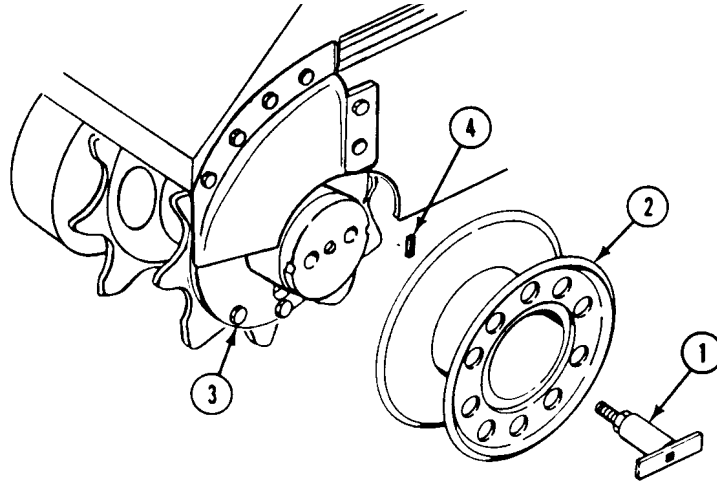
REMOVAL

1. Loosen retainer (1). Remove drum (2) from adapter (3).
2. Remove spring pin (4) and retainer (1) from drum (2). Discard spring pin.



INSTALLATION

1. Secure retainer (1) in drum (2) with new spring pin (4).
2. Install drum (2) on adapter (3). Tightly secure retainer (1).

**END OF TASK**

REPLACE DRUM ADAPTER (M113A2 AND M1059 ONLY)

0654 00

THIS WORK PACKAGE COVERS:

Removal (page 0654 00-1).
 Installation (page 0654 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Torque Wrench (WP 0780 00, Item 103)

Equipment Condition

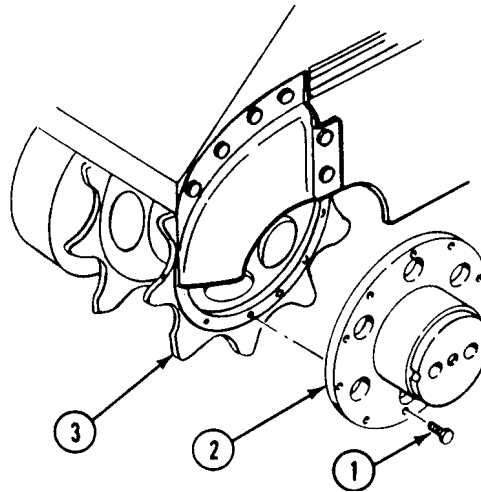
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Drum assembly removed (WP 0653 00)

Materials/Parts

Screw (10)

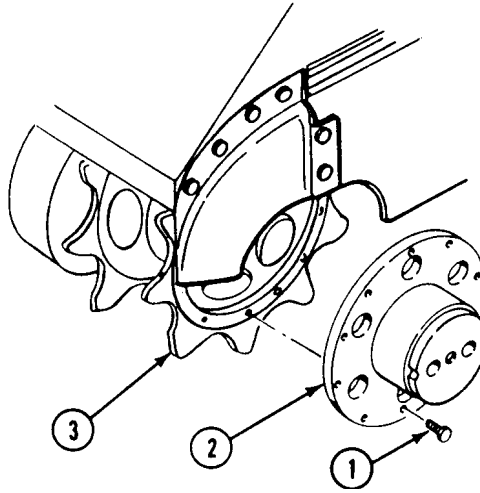
REMOVAL

1. Remove ten screws (1) and adapter (2) from drive sprocket (3). Discard screws.



INSTALLATION

1. Secure adapter (2) to drive sprocket (3) with ten new screws (1). TIGHTEN SCREWS TO 110-115 LB-FT (149-156 N·M) TORQUE. Use torque wrench.

**FOLLOW-THROUGH STEPS**

1. Install drum assembly (WP 0653 00).

END OF TASK

CHAPTER 35

UNIT MAINTENANCE INSTRUCTIONS
FOR MARINE RECOVERY KIT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE TARPAULIN AND STRAPS (M113A2 AND M1059 ONLY).....	0655 00
REPLACE STOWAGE HOOKS AND BRACKETS (M113A2 AND M1059 ONLY).....	0656 00
REPAIR TOWLINES (M113A2 AND M1059 ONLY).....	0657 00

REPLACE TARPAULIN AND STRAPS (M113A2 AND M1059 ONLY)

0655 00

THIS WORK PACKAGE COVERS:

Removal (page 0655 00-1).
 Installation (page 0655 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

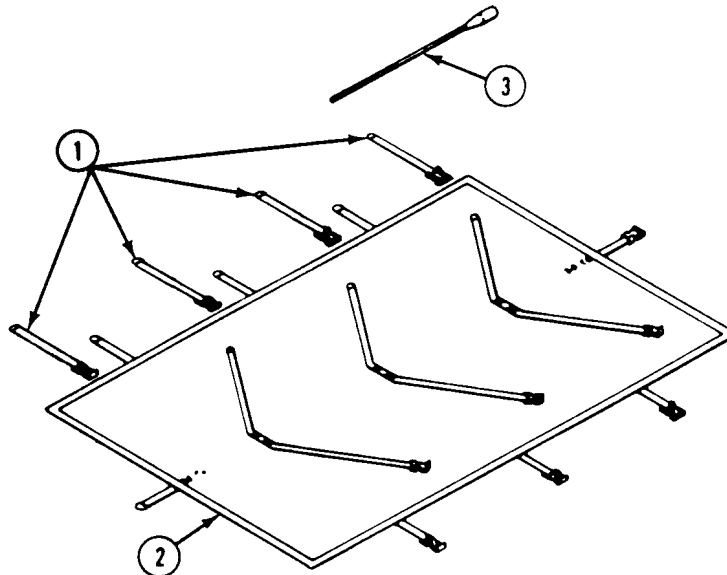
Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

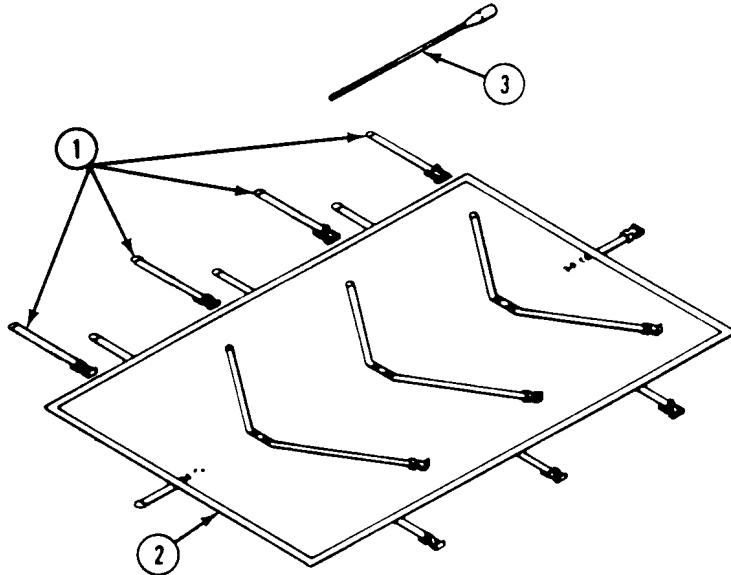
REMOVAL

1. Remove four stowage straps (1), tarpaulin (2), and fid (3) from carrier.



INSTALLATION

1. Keep tarpaulin (2), fid (3), and four stowage straps (1) in carrier until kit is stowed (see your -10).

**END OF TASK**

REPLACE STOWAGE HOOKS AND BRACKETS (M113A2 AND M1059 ONLY)

0656 00

THIS WORK PACKAGE COVERS:

- Removal (page 0656 00-1).
- Installation (page 0656 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

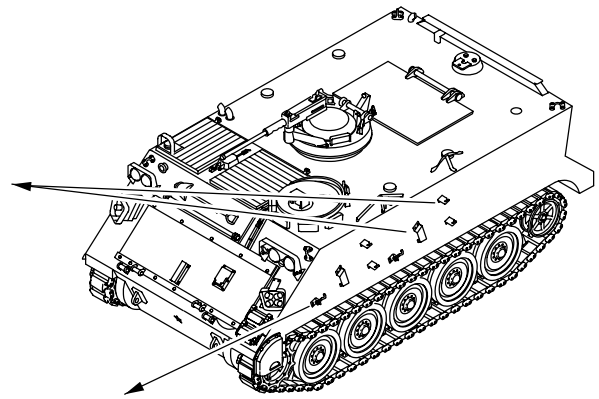
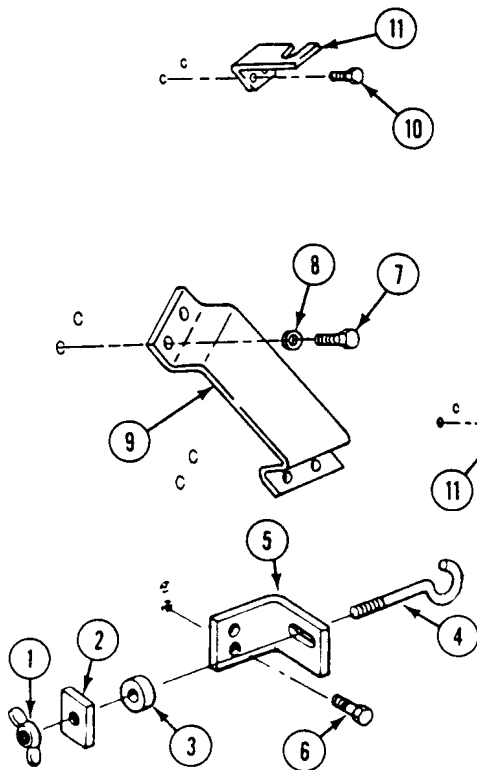
General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

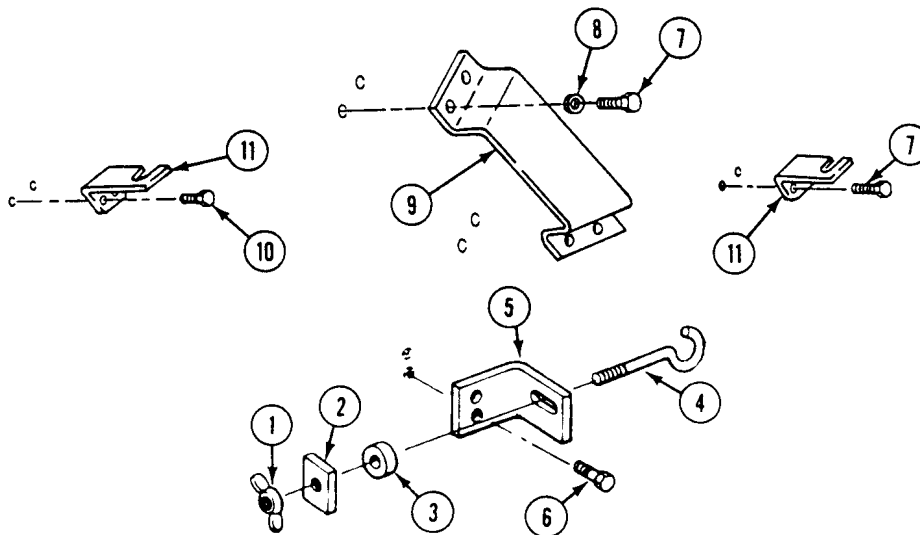
REMOVAL

1. Remove two wing nuts (1), plates (2), spacers (3), and hooks (4) from brackets (5).
2. Remove four screws (6) and two brackets (5) from carrier.
3. Remove eight screws (7), washers (8), and two brackets (9) from carrier.
4. Remove eight screws (10) and four brackets (11) from carrier.



REPLACE STORAGE HOOKS AND BRACKETS (M113A2 AND M1059 ONLY) — Continued**0656 00****INSTALLATION**

1. Install four brackets (11) on carrier. Secure with eight screws (10).
2. Install two brackets (9) on carrier. Secure with eight washers (8) and screws (7).
3. Install two brackets (5) on carrier. Secure with four screws (6).
4. Install two hooks (4) in two brackets (5). Secure with two spacers (3), plates (2), and wing nuts (1). Deform last two threads of hooks to retain wing nuts.

**END OF TASK**

REPAIR TOWLINES (M113A2 AND M1059 ONLY)

0657 00

THIS WORK PACKAGE COVERS:

- Removal (page 0657 00-1).
 - Clean, Inspect, and Repair (page 0657 00-2).
 - Installation (page 0657 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0780 00, Item 29)
- Leather Gloves (WP 0780 00, Item 30)

Equipment Condition

- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
-

REMOVAL

WARNING

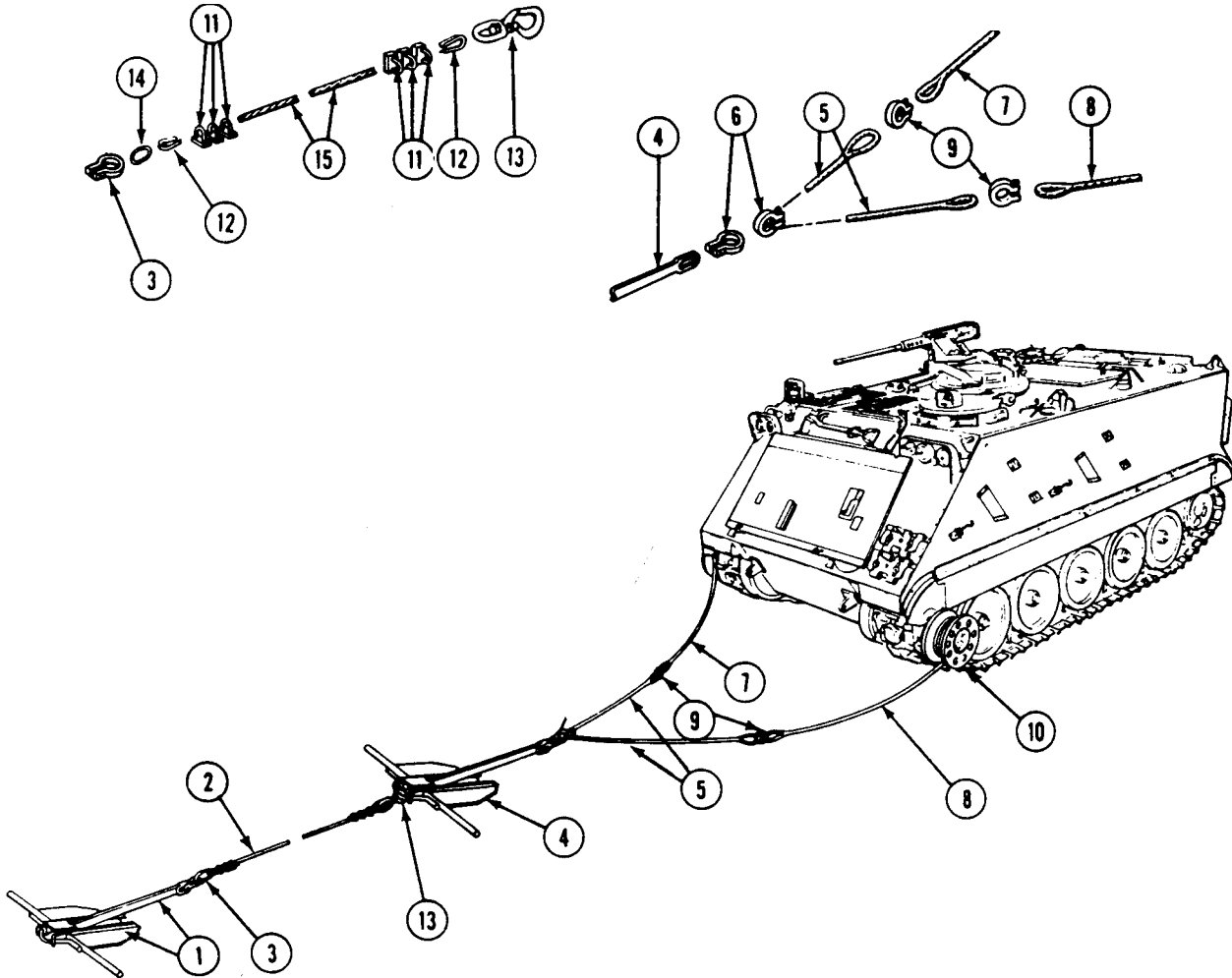


Damaged wire rope can seriously injure you. Inspect wire rope before handling it. Wear heavy gloves to protect hands from sharp broken wires.

REPAIR TOWLINES (M113A2 AND M1059 ONLY) — Continued

0657 00

1. Disconnect anchor (1) from cable assembly (2) at shackle (3).
2. Disconnect cable assembly (2) from anchor (4).
3. Disconnect anchor (4) from towline (5) at two shackles (6).
4. Disconnect towlines (7) and (8) from towlines (5) at two shackles (9).
5. Uncoil two towlines (7) and (8) from two capstan drums (10).
6. Remove six clamps (11), two thimbles (12), hook (13), and link (14) from wire cable (15).

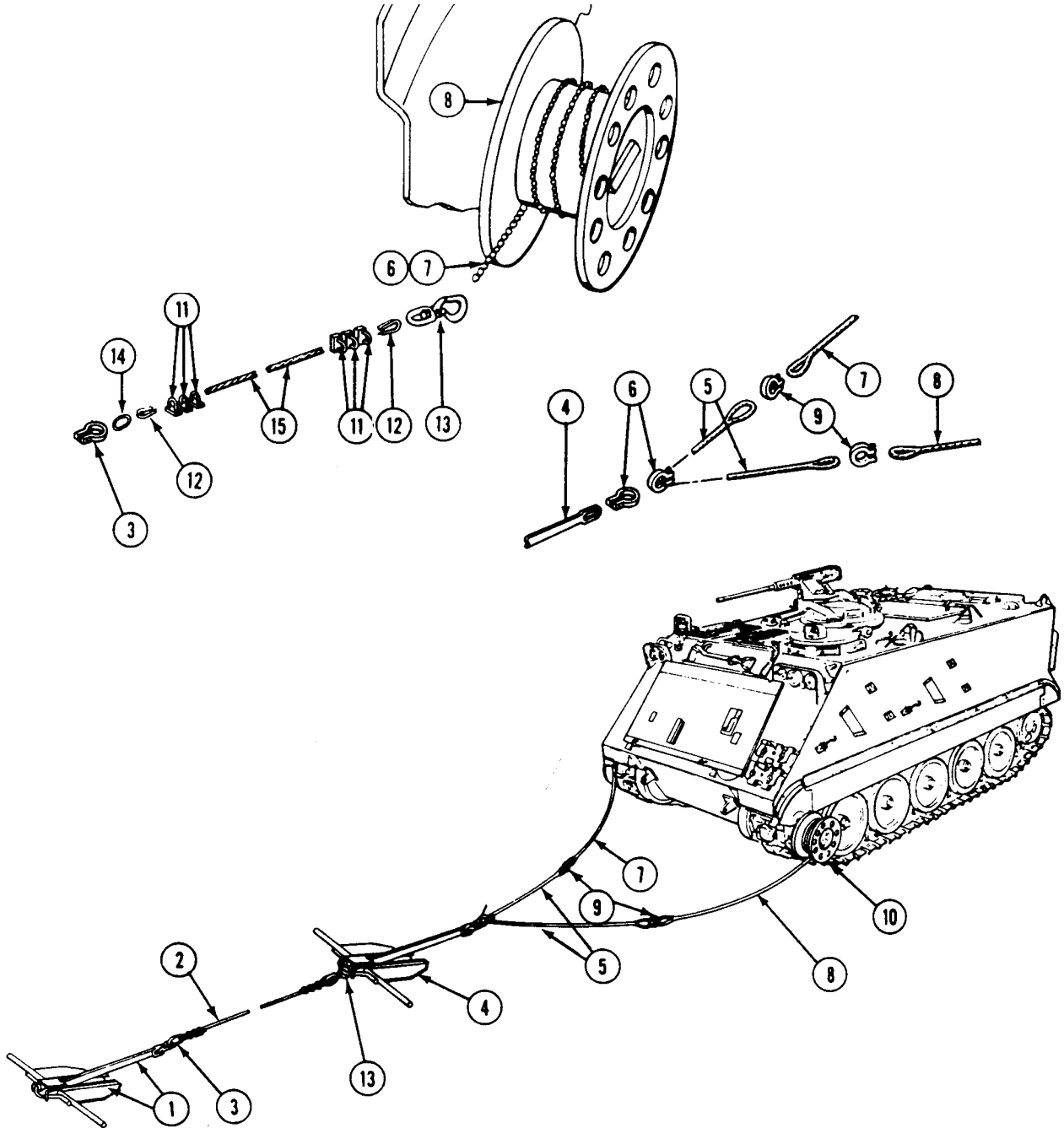


CLEAN, INSPECT, AND REPAIR

1. Clean and lubricate cables.
2. Check towlines. Replace worn or damaged towlines.
3. Check wire cable . Replace worn or damaged cable.
4. Check cable clamps. Replace clamps that have stripped threads.

INSTALLATION

1. Install wire cable (15) to two thimbles (12), hook (13), and link (14). Secure with six clamps (11).
2. Coil two towlines (7) and (8) on two capstan drums (10).
3. Connect two towlines (7) and (8) to towline (5) with two shackles (9).
4. Connect towline (5) to anchor (4) with two shackles (6).
5. Connect cable assembly (2) to two anchors (1) and (4) with hook (13) and shackles (3).



END OF TASK

CHAPTER 36

UNIT MAINTENANCE INSTRUCTIONS
FOR LITTER KIT (M113A2 ONLY)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE CHAIN ASSEMBLY (M113A2 ONLY).....	0658 00
REPAIR CHAIN ASSEMBLY (M113A2 ONLY).....	0659 00
REPLACE POST ASSEMBLY (M113A2 ONLY).....	0660 00
REPAIR POST ASSEMBLY (M113A2 ONLY).....	0661 00

REPLACE CHAIN ASSEMBLY (M113A2 ONLY)

0658 00

THIS WORK PACKAGE COVERS:

Removal (page 0658 00-1).
 Installation (page 0658 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

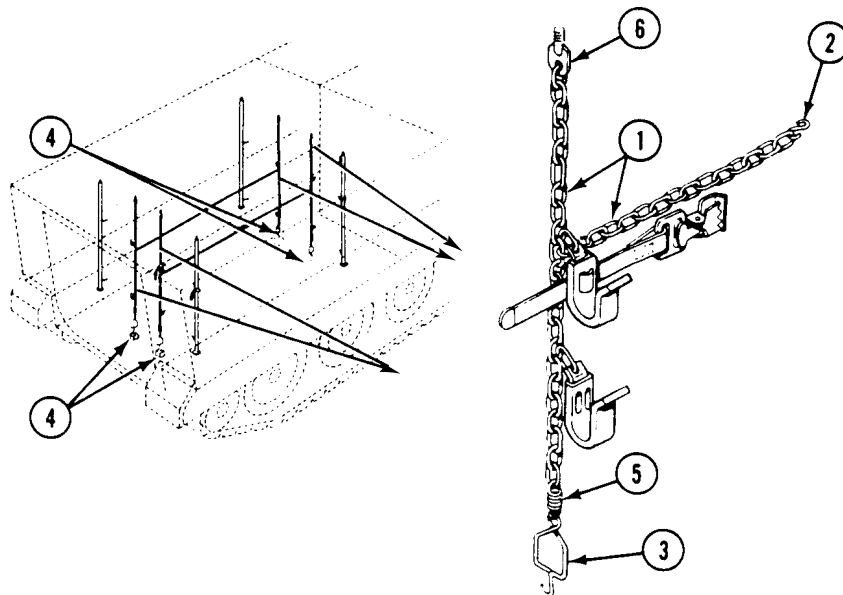
Unit Mechanic

NOTE

All four chains are removed and installed in the same way.

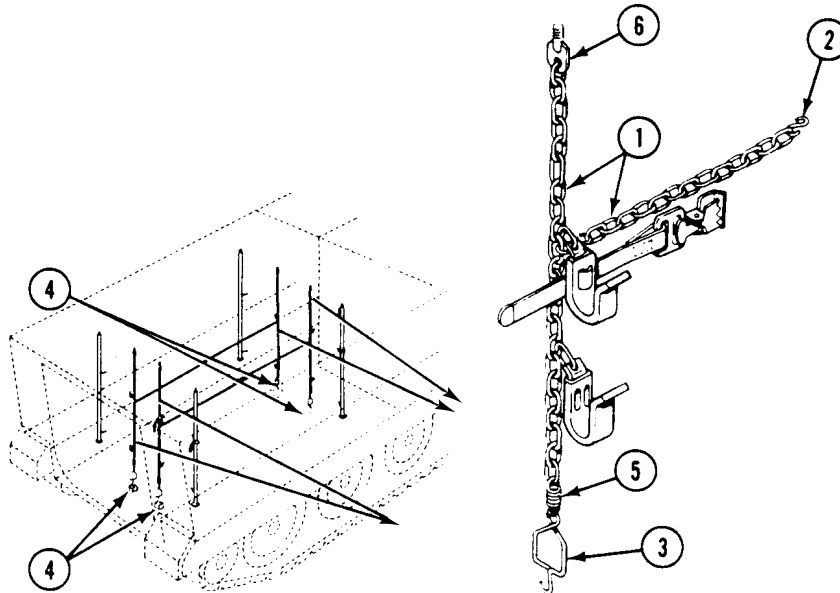
REMOVAL

1. Disconnect four chain assemblies (1) at two S-hooks (2).
2. Remove four hooks (3) from four anchors (4) by extending spring (5). Use your hand or foot to extend spring (5).
3. Remove four hangers (5) and chain assemblies (1) from hull top.



INSTALLATION

1. Suspend four chain assemblies (1) by installing four hangers (6) in hull top.
2. Attach four hooks (3) to four anchors (4) by extending four springs (5). Use your hand or foot to extend springs (5).
3. Connect four chain assemblies (1) with two S-hooks (2).

**FOLLOW-THROUGH STEPS**

1. Raise and lock ramp (see your -10).
2. Stop engine (see your -10).

END OF TASK

REPAIR CHAIN ASSEMBLY (M113A2 ONLY)

0659 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0659 00-2).
Assembly (page 0659 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Chain assembly removed (WP 0658 00)

DISASSEMBLY

NOTE

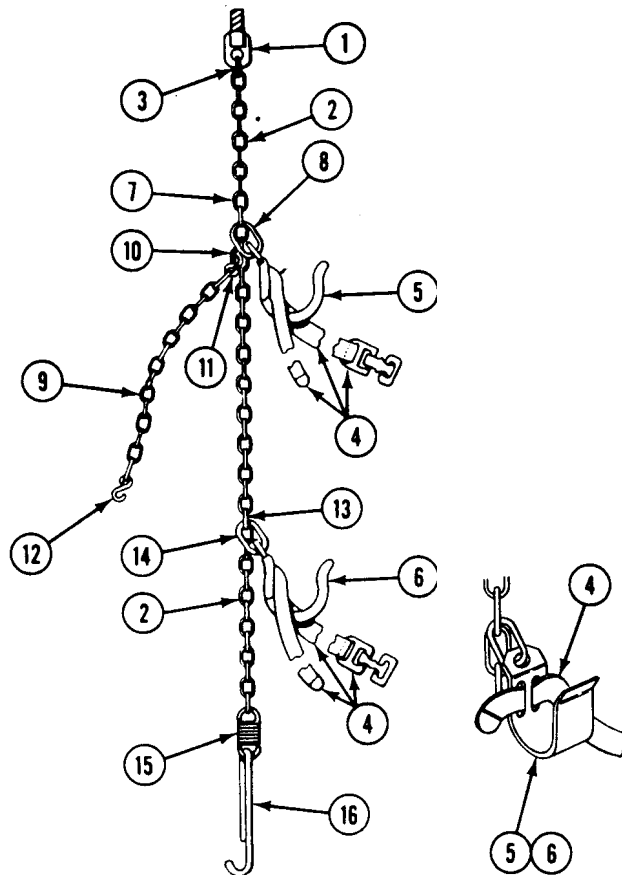
All four chains are disassembled and assembled in the same way.

1. Remove hanger (1) from chain assembly (2) by opening repair link (3).
2. Remove two straps (4) from two litter hooks (5) and (6).

NOTE

Chain link 1 is at the top.

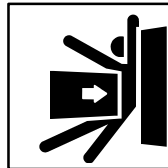
3. Remove upper litter hook (5) from chain link 18 (7) by opening repair link (8).
4. Remove chain (9) from chain link 24 (10) by opening S-hook (11).
5. Remove S-hook (12) from chain (9).
6. Remove lower litter hook (6) from chain link 47 (13) by opening repair link (14).
7. Remove spring (15) from chain assembly (2).
8. Remove hook (16) from spring (15).



ASSEMBLY

1. Install hook (16) on spring (15).
2. Install spring (15) on chain assembly (2).

WARNING

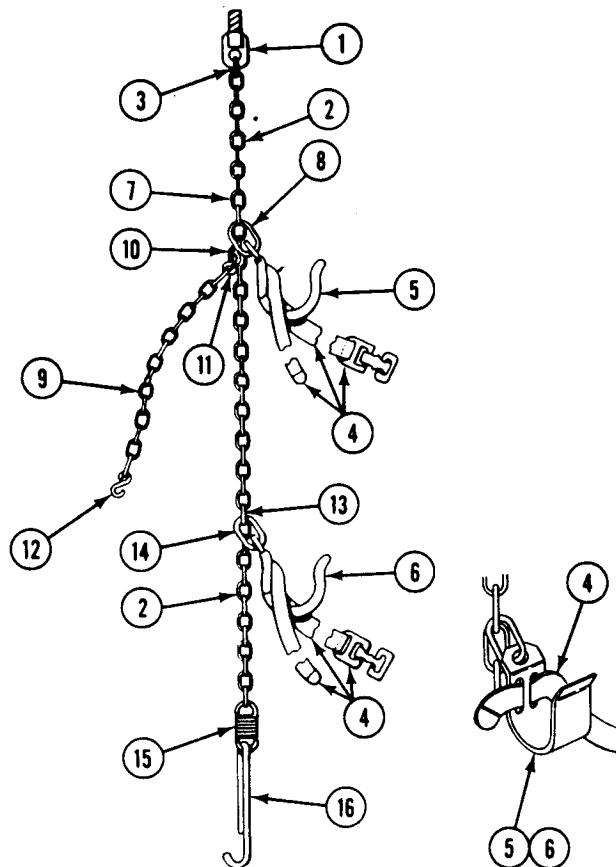


To prevent litter tilt, which could cause injury, be sure to install repair link at chain link No. 47.

NOTE

Chain link 1 is at the top.

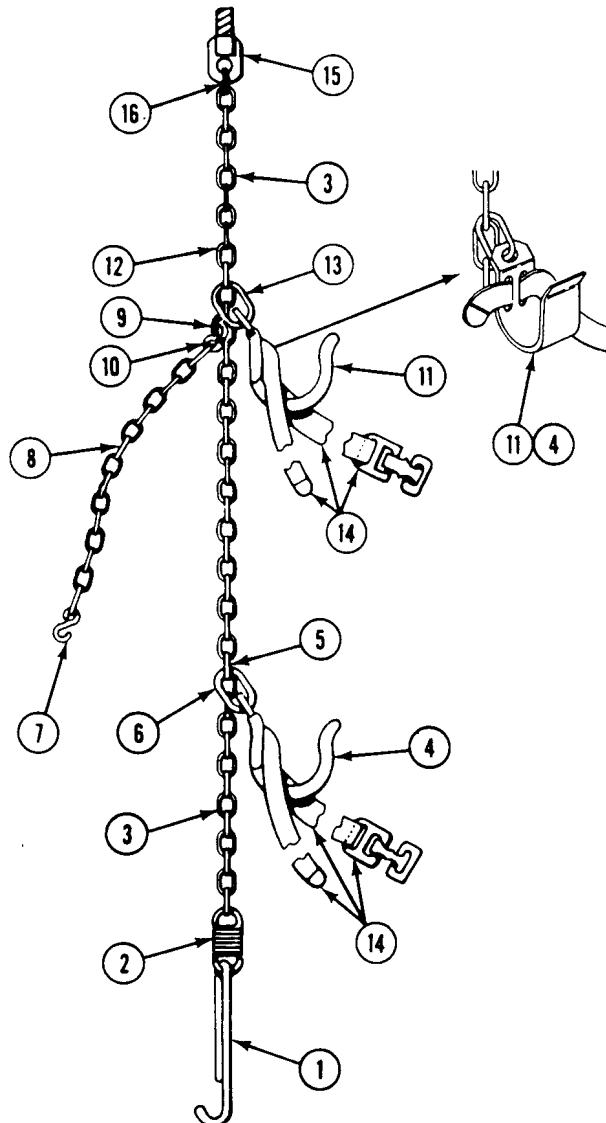
3. Install lower litter hook (6) on chain link 47 (13) with repair link (14). Crimp repair link to secure.
4. Install S-hook (12) on chain (9).



REPAIR CHAIN ASSEMBLY (M113A2 ONLY) — Continued

0659 00

5. Connect chain (8) to chain link 24 (9) with S-hook (10). Crimp S-hook to secure.
6. Connect upper litter hook (11) to chain link (12) with repair link (13). Crimp repair link to secure.
7. Install two litter straps (14) in upper and lower litter hooks (4) and (11). Install straps through both slots in litter hooks and tie straps.
8. Connect hanger (15) to top link of chain assembly (3) with repair link (16). Crimp repair link to secure.



FOLLOW-THROUGH STEPS

1. Install chain assembly (WP 0658 00).

END OF TASK

REPLACE POST ASSEMBLY (M113A2 ONLY)

0660 00

THIS WORK PACKAGE COVERS:

Removal (page 0660 00-1).
 Installation (page 0660 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

Materials/Parts

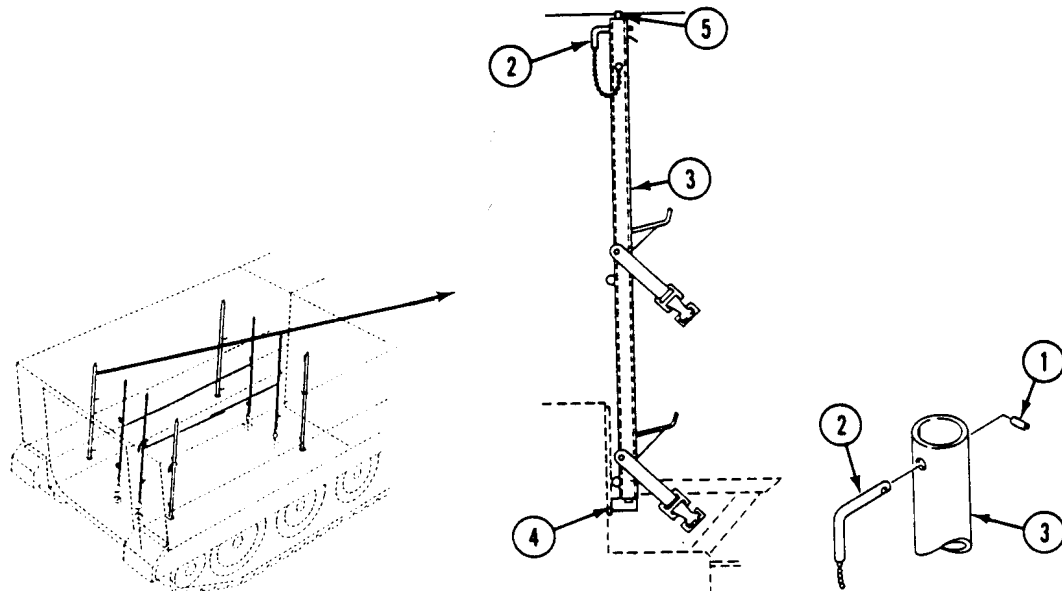
Spring pin

REMOVAL

NOTE

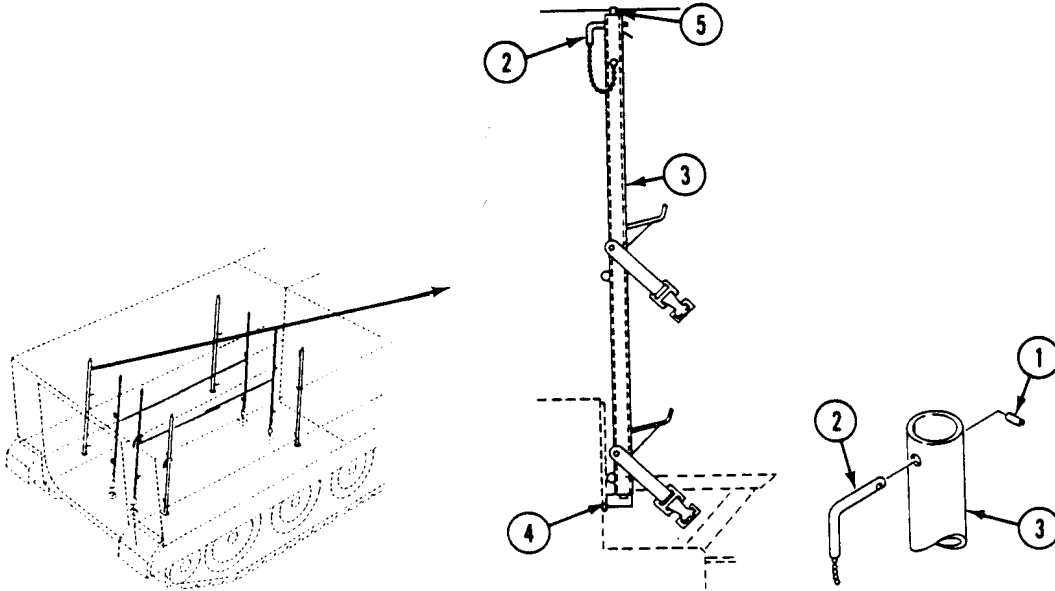
All four posts are removed and installed in the same way.

1. Remove spring pin (1) from pin (2). Discard spring pin.
2. Turn and remove pin (2) from post (3).
3. Lift bottom of post (3) until it clears personnel seat bracket (4). Then lower post until it clears stud (5) in hull top.



INSTALLATION

1. Place post (3) under stud (5) in hull top. Lift bottom of post up as far as it will go.
2. Lower bottom of post (3) into personnel seat bracket (4).
3. Insert pin (2) through post (3). Turn end of pin down.
4. Install and secure new spring pin (1) in pin (2).

**FOLLOW-THROUGH STEPS**

1. Raise and lock ramp (see your -10).
2. Stop engine (see your -10).

END OF TASK

REPAIR POST ASSEMBLY (M113A2 ONLY)

0661 00

THIS WORK PACKAGE COVERS:

- Disassembly (page 0661 00-1).
- Cleaning, Inspection, and Repair (page 0661 00-2).
- Assembly (page 0661 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Post assembly removed (WP 0660 00)

Materials/Parts

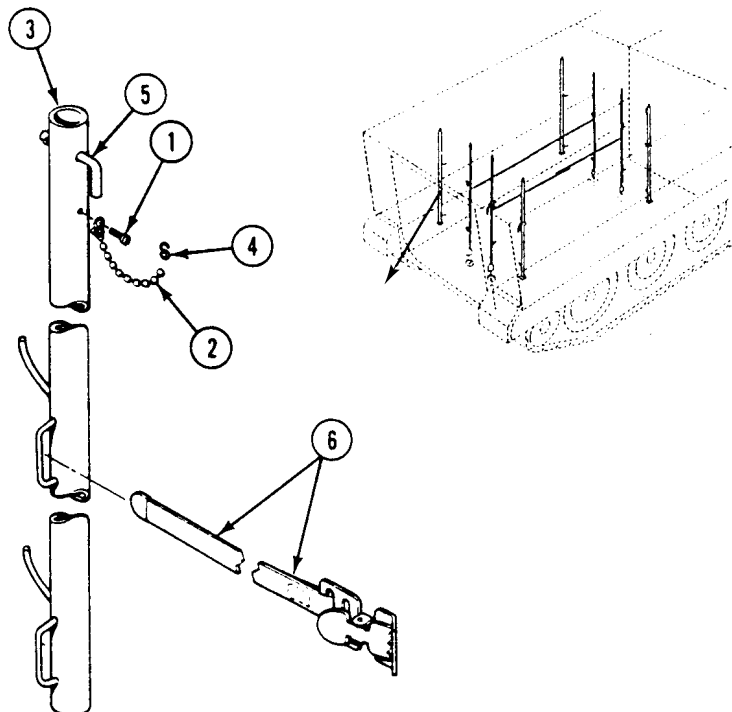
- Drive screw
- S-hook

DISASSEMBLY

NOTE

All four posts are repaired in the same way.

1. Remove drive screw (1) and bead chain (2) from post (3). Discard drive screw.
2. Open and remove S-hook (4) and bead chain (2) from pin (5). Discard S-hook.
3. Remove two straps (6) from post (3).

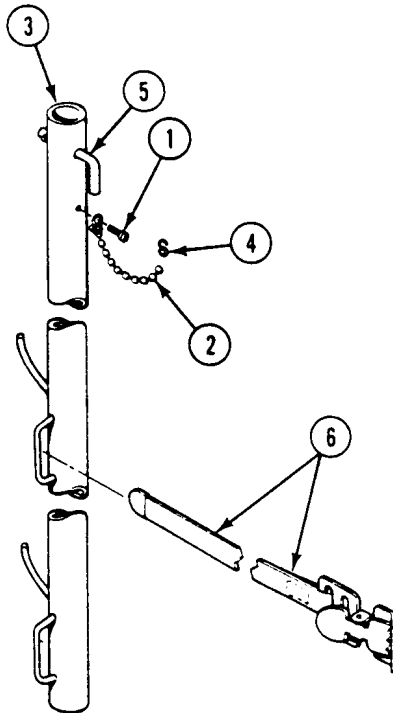


CLEANING, INSPECTION, AND REPAIR

1. Inspect parts for corrosion, distortion, cracks, breaks, and loose or missing parts. Repair or replace damaged and missing parts.

ASSEMBLY

1. Install two straps (6) on post (3).
2. Secure pin (5) to bead chain (2) with new S-hook (4). Crimp S-hook to secure.
3. Secure bead chain (2) to post (3) with new drive screw (1).

**FOLLOW-THROUGH STEPS**

1. Install post assembly (WP 0660 00).

END OF TASK

CHAPTER 37

UNIT MAINTENANCE INSTRUCTIONS
FOR ARTILLERY COMMUNICATION KIT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE ARTILLERY COMMUNICATION INSIDE CABLE (M577A2 ONLY).....	0662 00

REPLACE ARTILLERY COMMUNICATION INSIDE CABLE (M577A2 ONLY)

0662 00

THIS WORK PACKAGE COVERS:

Removal (page 0662 00-1).
 Installation (page 0662 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

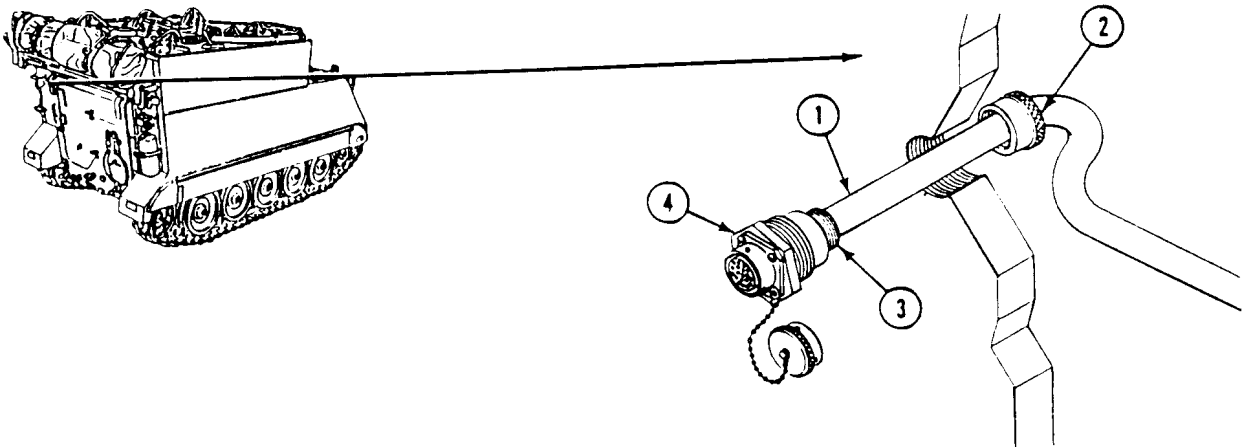
Adjustable Wrench (WP 0780 00, Item 87)
 General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

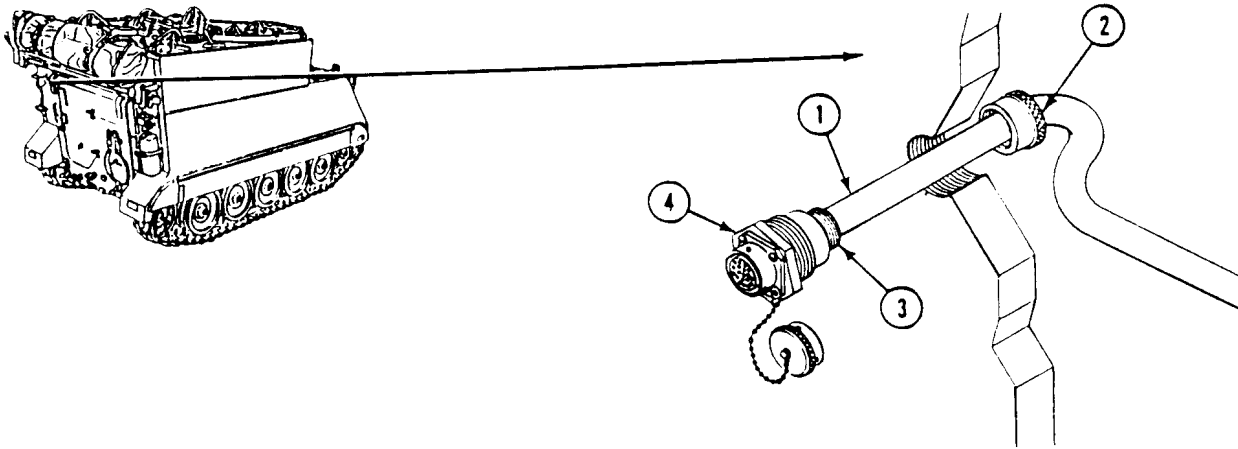
REMOVAL

1. Disconnect inside cable assembly (1) from artillery controls terminal board.
2. Remove retainer (2) from cable assembly connector (3).
3. Remove adapter (4) and cable assembly (1) from hull left rear plate threaded opening. Use adjustable wrench.



INSTALLATION

1. Install adapter (4) and cable assembly (1) in hull left rear plate threaded opening. Use adjustable wrench.
2. Install retainer (2) on cable assembly connector (3). Secure with retainer (2).
3. Connect inside cable (1) to artillery controls terminal board.

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Raise and lock ramp (see your -10).
3. Stop engine (see your -10).

END OF TASK

CHAPTER 38

UNIT MAINTENANCE INSTRUCTIONS
FOR MACHINE GUN ARMOR SHIELD KIT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE COMMANDER'S CUPOLA ARMOR SHIELDS (M113A2, M1064, AND M1059 ONLY).....	0663 00
REPLACE 7.62MM M60 MACHINE GUN PLATFORM MOUNT ASSEMBLY (M113A2 ONLY).....	0664 00
REPLACE 30 CAL. GUN MOUNT ADAPTER ASSEMBLY	0665 00
REPLACE REAR GUN PINTLE SOCKET (M113A2 ONLY).....	0666 00
REPLACE GUN TRAVERSE RESTRICTOR.....	0667 00
REPLACE REAR ARMOR SHIELDS (M113A2 ONLY).....	0668 00
REPLACE REAR ARMOR SHIELD MOUNTING ARM LOCK ASSEMBLY AND MOUNT.....	0669 00

**REPLACE COMMANDER'S CUPOLA ARMOR SHIELDS (M113A2,
M1064, AND M1059 ONLY)**

0663 00

THIS WORK PACKAGE COVERS:

- Removal (page 0663 00-2).
 - Installation (page 0663 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut

Lockwasher (4)

Traverse travel lock secured (see your -10)

REPLACE COMMANDER'S CUPOLA ARMOR SHIELDS (M113A2, M1064, AND M1059 ONLY) — Continued

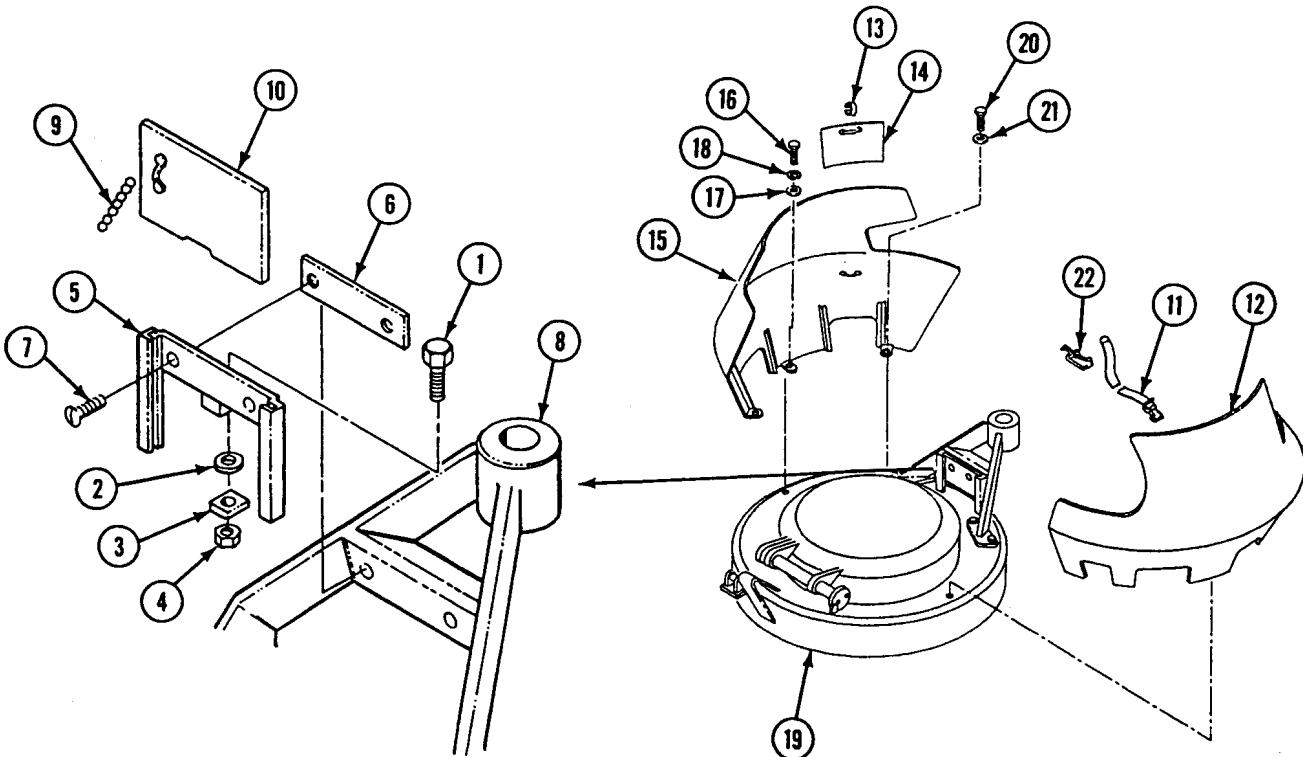
0663 00

REMOVAL

NOTE

Screws (16) and (20) are different lengths. Tag screws to ensure proper installation.

1. Remove screw (20) and washer (21) from first hole of each shield (12) and (15).
2. Remove four screws (16), washers (17), and lockwashers (18) from remaining holes in left and right shields (12) and (15). Discard lockwashers.
3. Remove two shields (12) and (15) from commander's cupola (19).
4. Release four clips (13) and remove four doors (14) from two shields (12) and (15).
5. If damaged, remove clip (13) from door (14).
6. Remove strap (11) from loop on right shield (12) and clamp (22) mounted on machine gun mount bracket.
7. Remove clamp (22) from lower bracket of machine gun handle.
8. Remove chain (9) and door (10) from bracket (5). Remove chain from door.
9. Remove two screws (7), bracket (5), and spacer (6) from gun mount (8).
10. Remove locknut (4), plate (3), washer (2), screw (1), and bracket (5). Discard locknut.



REPLACE COMMANDER'S CUPOLA ARMOR SHIELDS (M113A2, M1064, AND M1059 ONLY) — Continued

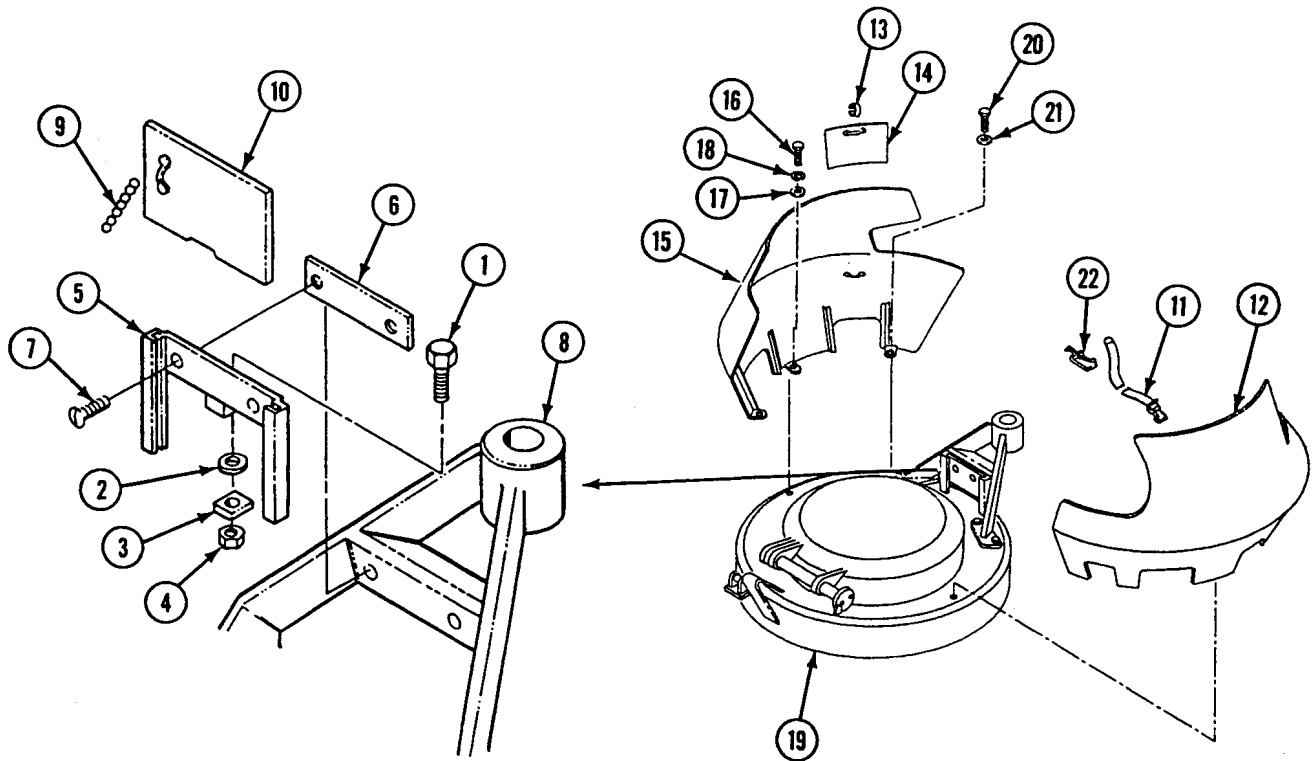
0663 00

INSTALLATION

NOTE

Plate (3) must be able to turn freely. Do not over-tighten locknut (4).

1. Install screw (1), washer (2), plate (3), and new locknut (4) on bracket (5).
2. Install spacer (6), bracket (5), and two screws (7) on gun mount (8).
3. Install chain (9) on bracket (5) and door (10). Deform ends of chain to secure chain on door and bracket.
4. Install clamp (22) on lower bracket of machine gun handle.
5. Install strap (11) through loop on right shield (12) and clamp (22) on machine gun handle. Tighten strap.
6. If removed, install clips (13) on doors (14). Deform ends of clip (13) over loops on doors (14).
7. Install four doors (14) on two shields (12) and (15).
8. Install the right and left shields (12) and (15), four screws (16), washers (17), and new lockwashers (18) on commander's cupola (19).
9. Install two screws (20) and washers (21) in first two holes of two shields (12) and (15).



FOLLOW THROUGH STEPS

1. Release traverse travel lock (see your -10).

END OF TASK

REPLACE 7.62MM M60 MACHINE GUN PLATFORM MOUNT ASSEMBLY (M113A2 ONLY)

0664 00

THIS WORK PACKAGE COVERS:

- Removal (page 0664 00-1).
- Installation (page 0664 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

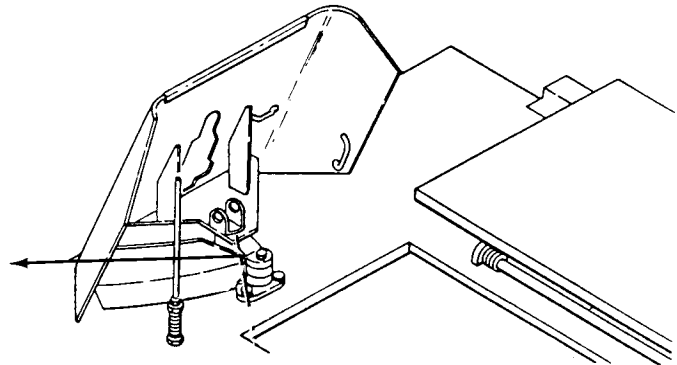
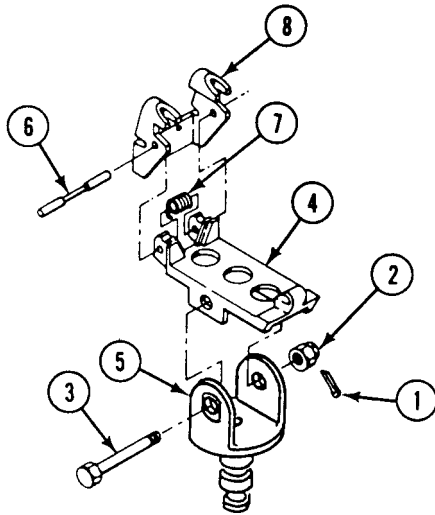
Carrier blocked (see your -10)

Materials/Parts

Cotter pin

REMOVAL

1. Remove cotter pin (1), nut (2), screw (3), and mount (4) from pintle (5). Discard cotter pin.
2. Remove pin (6), spring (7), and latch (8) from mount (4).

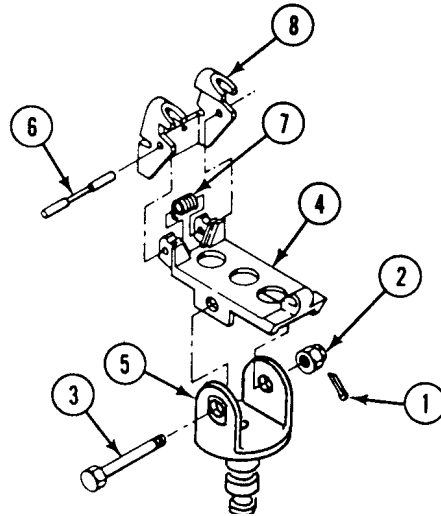


**REPLACE 7.62MM M60 MACHINE GUN PLATFORM MOUNT ASSEMBLY
(M113A2 ONLY) — Continued**

0664 00

INSTALLATION

1. Install latch (8) and spring (7) on mount (4). Secure with pin (6).
2. Install mount (4) on pintle (5). Secure with screw (3), nut (2), and new cotter pin (1).

**END OF TASK**

REPLACE 30 CAL. GUN MOUNT ADAPTER ASSEMBLY

0665 00

THIS WORK PACKAGE COVERS:

Removal (page 0665 00-1).
 Installation (page 0665 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

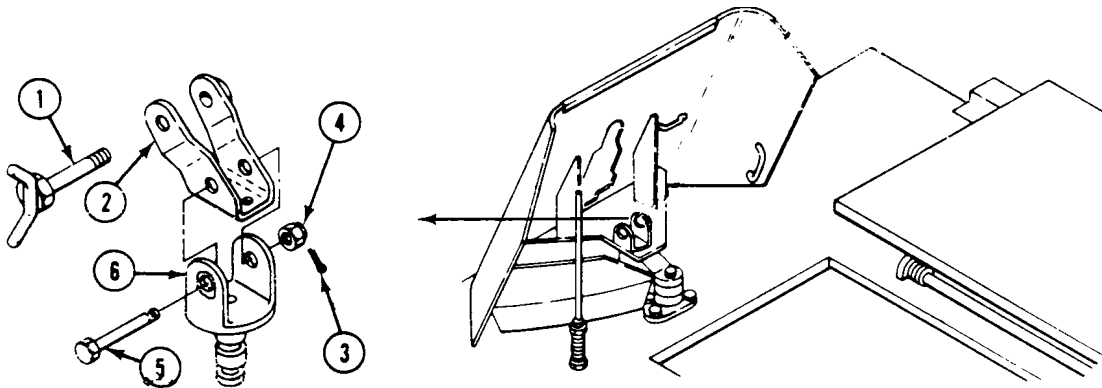
Carrier blocked (see your -10)

Materials/Parts

Cotter pin

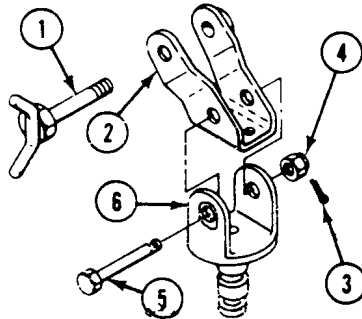
REMOVAL

1. Remove wing bolt (1) from adapter (2).
2. Remove cotter pin (3), nut (4), screw (5), and adapter (2) from pintle (6). Discard cotter pin.



INSTALLATION

1. Install adapter (2) on pintle (6). Secure with screw (5), nut (4), and new cotter pin (3).
2. Install wing bolt (1) in adapter (2).



END OF TASK

REPLACE REAR GUN PINTLE SOCKET (M113A2 ONLY)

0666 00

THIS WORK PACKAGE COVERS:

Removal (page 0666 00-1).
 Installation (page 0666 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

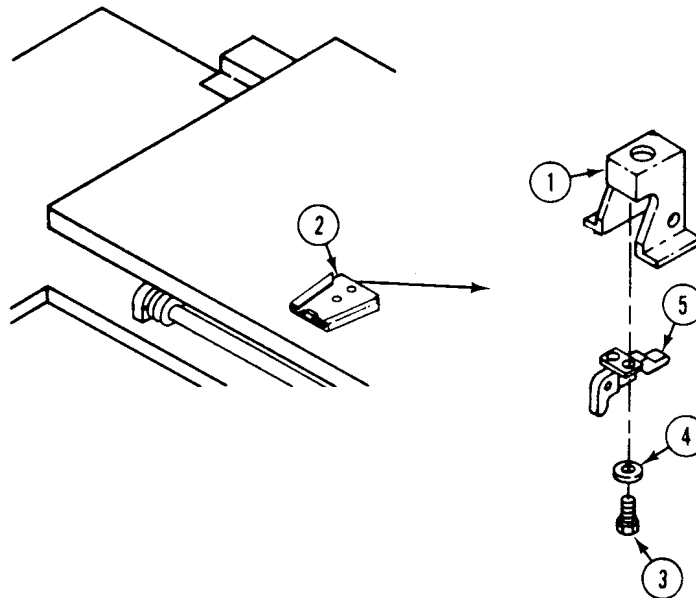
General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

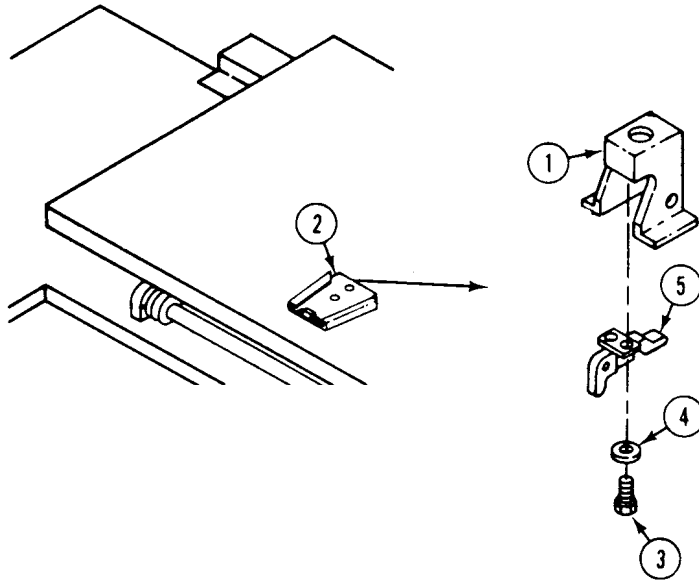
REMOVAL

1. Remove socket assembly (1) from mounting plate (2).
2. Remove two screws (3), washers (4), and lock assembly (5) from socket assembly (1).



INSTALLATION

1. Install lock assembly (5) on socket assembly (1). Secure with two washers (4) and screws (3).
2. Install socket assembly (1) in mounting plate (2).

**END OF TASK**

REPLACE GUN TRAVERSE RESTRICTOR

0667 00**THIS WORK PACKAGE COVERS:**

Removal (page 0667 00-1).
Installation (page 0667 00-2).

INITIAL SETUP:Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

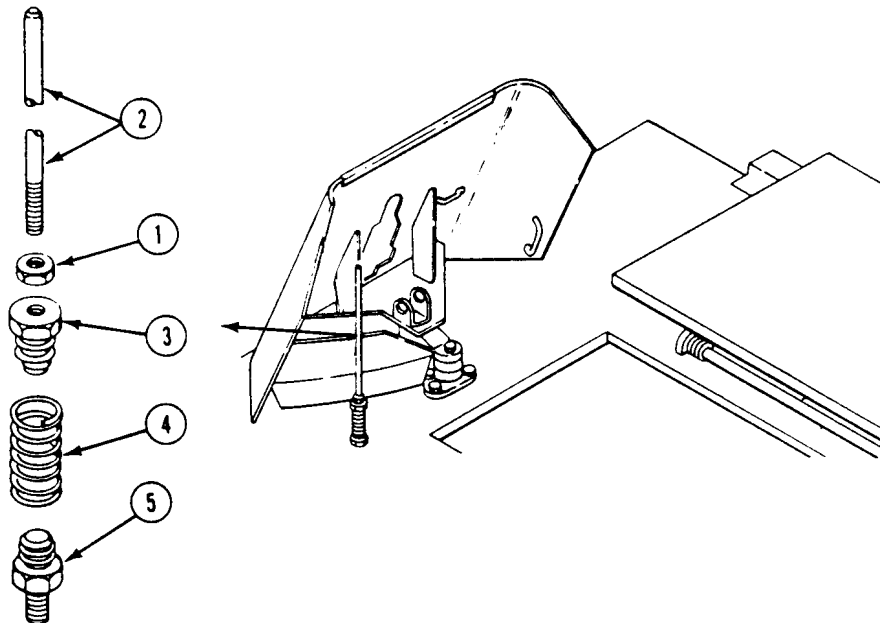
Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel RequiredUnit Mechanic

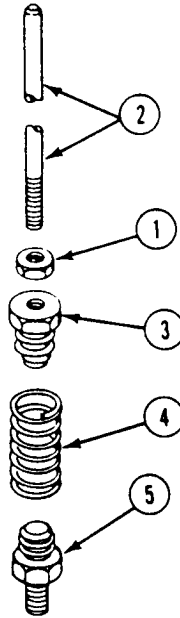
REMOVAL

1. Loosen nut (1) on rod (2). Remove rod from adapter (3).
2. Remove nut (1) from rod (2).
3. Remove adapter (3) from spring (4).
4. Remove spring (4) from adapter (5).
5. Remove adapter (5) from hull.



INSTALLATION

1. Install adapter (5) in hull.
2. Install spring (4) on adapter (5).
3. Install adapter (3) in spring (4).
4. Install nut (1) on rod (2).
5. Install rod (2) in adapter (3). Secure with nut (1).

**END OF TASK**

REPLACE REAR ARMOR SHIELDS (M113A2 ONLY)

0668 00

THIS WORK PACKAGE COVERS:

Removal (page 0668 00-1).
 Installation (page 0668 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

References

WP 0667 00

Materials/Parts

Locknut (2)

Lockwasher (7)

Equipment Condition

Engine stopped (see your -10)

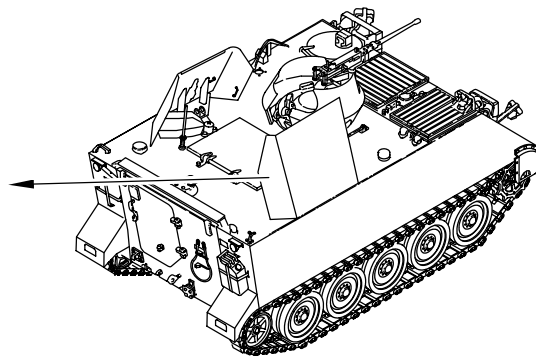
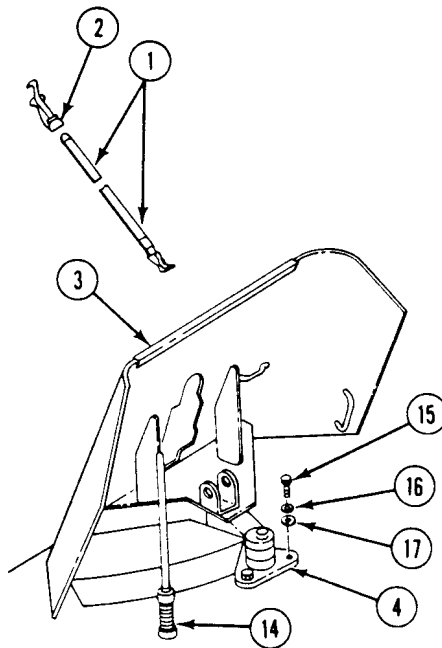
Carrier blocked (see your -10)

REMOVAL

NOTE

Both rear armor shields are removed and installed in the same way.

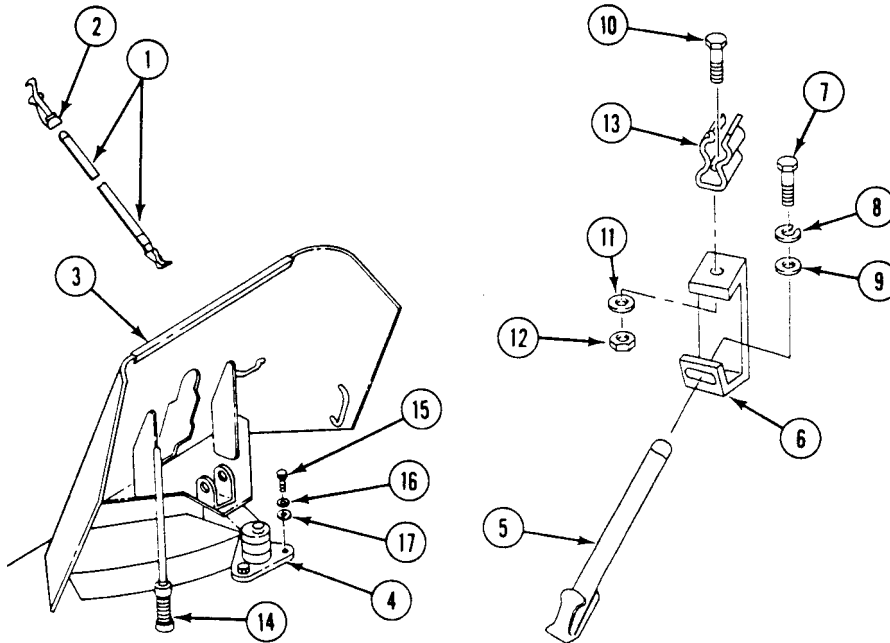
1. Remove two straps (1) and clamps (2) securing rear armor shield (3) to hull.
2. Release locking clamp on mounting arm (4). Remove rear armor shield (3) from mounting arm.



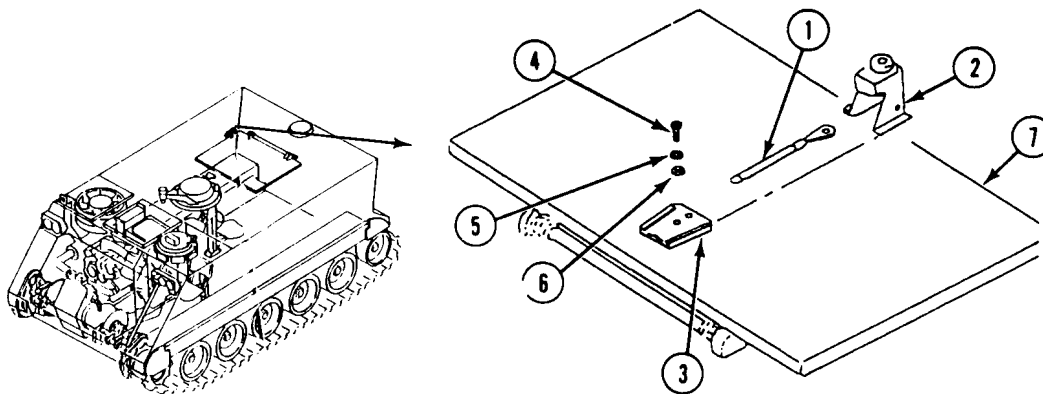
REPLACE REAR ARMOR SHIELDS (M113A2 ONLY) — Continued

0668 00

3. Remove strap (5) from bracket (6).
4. Remove two screws (7), lockwashers (8), flat washers (9), and bracket (6) from hull . Discard lockwashers.
5. If damaged, remove two screws (10), washers (11) locknuts (12), and clip (13) from bracket (6) Discard locknuts.
6. Remove gun traverse restrictor (14) from hull (WP 0667 00).
7. Remove three screws (15), lockwashers (16), flat washers (17), and mounting arm (4) from hull. Discard lockwashers.

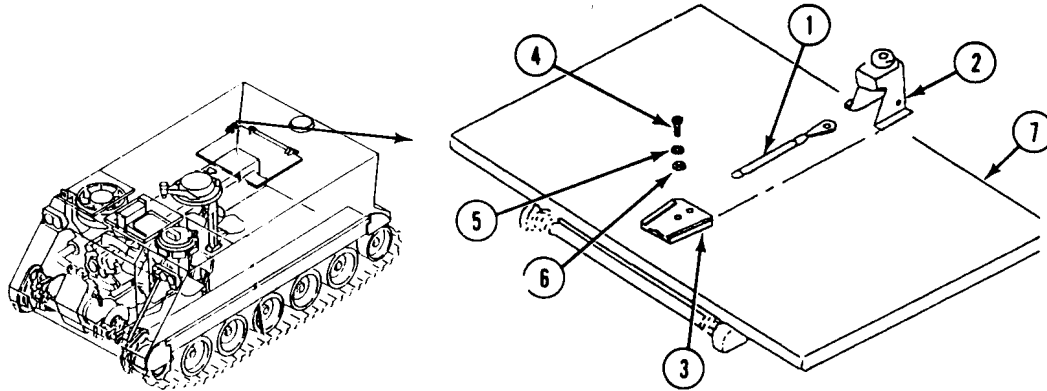


8. Remove strap (1) and pintle socket (2) from pintle mounting plate (3).
9. Remove two screws (4), lockwashers (5), flat washers (6), and pintle mounting plate (3) from cargo hatch cover (7). Discard lockwashers.

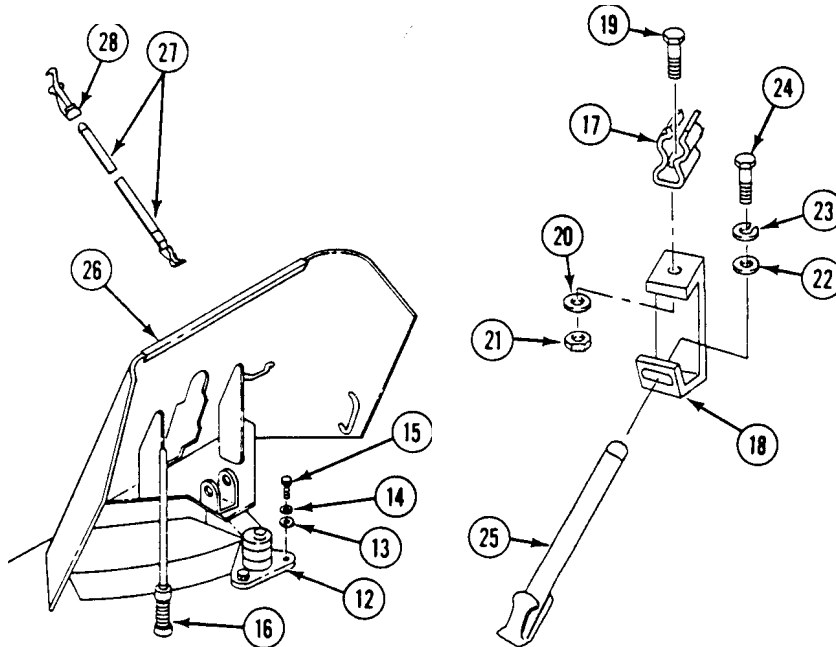


INSTALLATION

1. Install pintle mounting plate (3) on cargo hatch cover (7). Secure with two flat washers (6), new lockwashers (5), and screws (4).
2. Install pintle socket (2) on pintle mounting plate (3). Secure with strap (1).



3. Install mounting arm (12) on hull. Secure with three flat washers (13), new lockwashers (14), and screws (15).
4. Install gun traverse restrictor (16) in hull (WP 0667 00).
5. If removed, install clip (17) on bracket (18) with two screws (19), washers (20), and new locknuts (21).
6. Install bracket (18) on hull. Secure with two flat washers (22), new lockwashers (23), and screws (24).
7. Secure strap (25) to bracket (18).
8. Install rear armor shield (26) in mounting arm (12). Secure with mounting arm locking clamp.
9. Install rear armor shield (26) on hull. Secure with two straps (27) and clamps (28).



END OF TASK

REPLACE REAR ARMOR SHIELD MOUNTING ARM LOCK ASSEMBLY AND MOUNT

0669 00

THIS WORK PACKAGE COVERS:

Removal (page 0669 00-1).
 Installation (page 0669 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

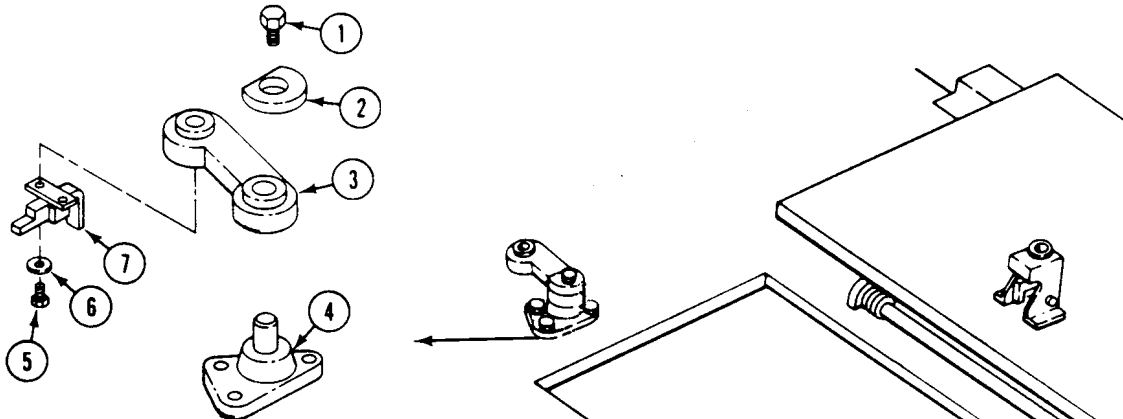
Lockwasher (2)

REMOVAL

NOTE

Mounting arm is not a repairable at unit level.

1. Remove screw (1), resilient mount (2), and mounting arm (3) from bracket (4).
2. Remove two screws (5), lockwashers (6), and lock assembly (7) from mounting arm (3). Discard lockwashers.

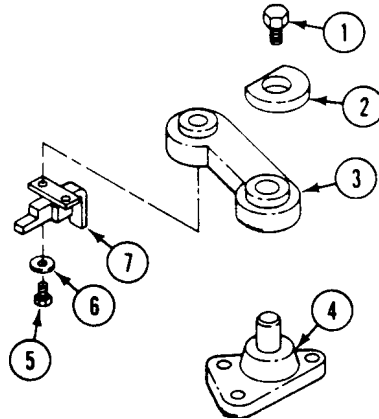


**REPLACE REAR ARMOR SHIELD MOUNTING ARM LOCK ASSEMBLY
AND MOUNT — Continued**

0669 00

INSTALLATION

1. Install lock assembly (7) on mounting arm (3). Secure with two new lockwashers (6) and screws (5).
2. Install mount (2) and mounting arm (3) on bracket (4). Secure with screw (1).

**END OF TASK**

CHAPTER 39

UNIT MAINTENANCE INSTRUCTIONS
FOR NBC KIT (ALL VEHICLES EXCEPT M1064)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE M13 NBC HEATER WIRING HARNESS (M577A2 ONLY).....	.0670 00
REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY).....	.0671 00
REPLACE M13 NBC HEATERS AND MOUNTS (M577A2 ONLY).....	.0672 00
REPLACE M13 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY).....	.0673 00
REPLACE M3 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY).....	.0674 00
REPLACE M3 NBC HEATER CONTROL BOX (M577A2 ONLY).....	.0675 00
REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND BRACKETS (M577A2 ONLY).....	.0676 00
REPLACE M8A3 NBC HOSES AND BRACKETS (M577A2 ONLY).....	.0677 00
REPLACE M8A3/M13 AIR PURIFIER/PRECLEANER AND FRAME (M577A2 ONLY).....	.0678 00
REPLACE M8A3/M13/M14 ORIFICE CONNECTOR ASSEMBLY, SUPPORT, AND QUICK COUPLING HALF (M113A2, M1059, M577A2, AND M1068 ONLY).....	.0679 00
REPLACE M13 PRECLEANER AND FRAME (M1068 ONLY).....	.0680 00
REPLACE M13 NBC FILTERS AND HOSES (M1068 ONLY).....	.0681 00
REPLACE M13 NBC HEATER HOSES (M1068 ONLY).....	.0682 00
REPLACE M3 NBC HEATER CONTROL BOX (M1068 ONLY).....	.0683 00
REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY).....	.0684 00
REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY).....	.0685 00
REPLACE M3 NBC FILTER SWITCH ASSEMBLY (M113A2 AMBULANCE ONLY).....	.0686 00
REPLACE M3 NBC HEATERS AND CONTROLLERS (M113A2 AMBULANCES ONLY).....	.0687 00
REPLACE M14 NBC HOSES AND BRACKETS (M113A2 AMBULANCE ONLY).....	.0688 00
REPLACE M8A3/M14 AIR PURIFIER AND FRAME (M113A2 ONLY).....	.0689 00
REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY (M113A2 ONLY).....	.0690 00
REPLACE M42 VENTILATED FACE MASK (VFM) HOSE ASSEMBLY0691 00
REPLACE ORIFICE CONNECTOR ASSEMBLY NBC EQUIPMENT0692 00
REPLACE M42 VENTILATED FACE MASK (VFM) GAS FILTER0693 00
REPLACE M42 VENTILATED FACE MASK (VFM) HEATER0694 00

REPLACE M13 NBC HEATER WIRING HARNESS (M577A2 ONLY)

0670 00

THIS WORK PACKAGE COVERS:

Removal (page 0670 00-1).
 Installation (page 0670 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Grommet
 Locknut
 Lockwasher (2)
 Lockwasher (4)
 Tie strap (AR)

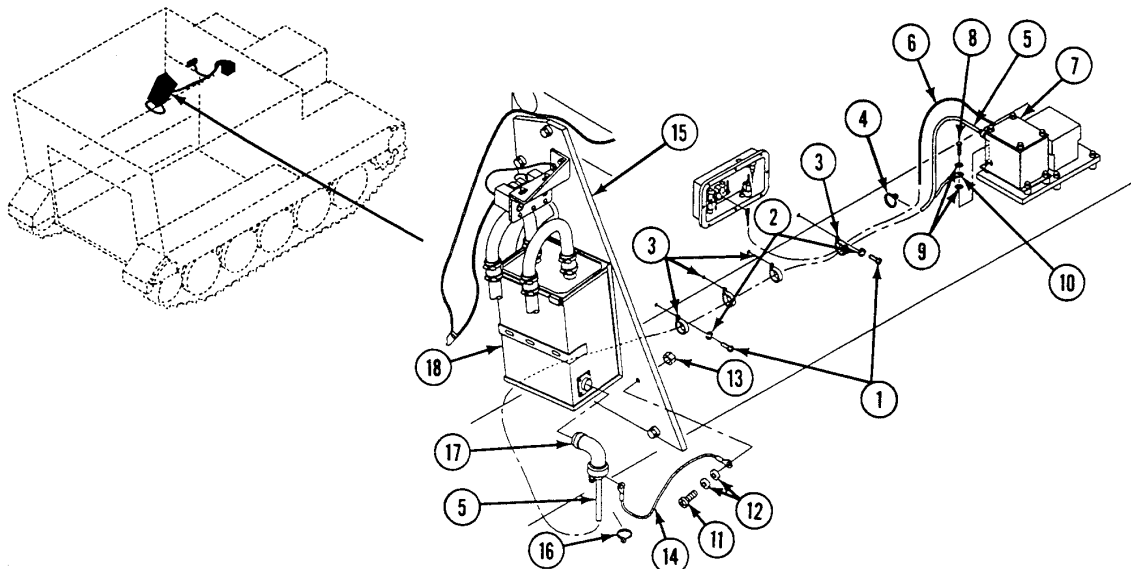
REMOVAL

1. Remove four screws (1), lockwashers (2), four clamps (3), and tie straps (4) from weldnuts in driver's compartment. Remove clamps from wiring harness (5) and cable (6). Discard lockwashers and tie straps.

NOTE

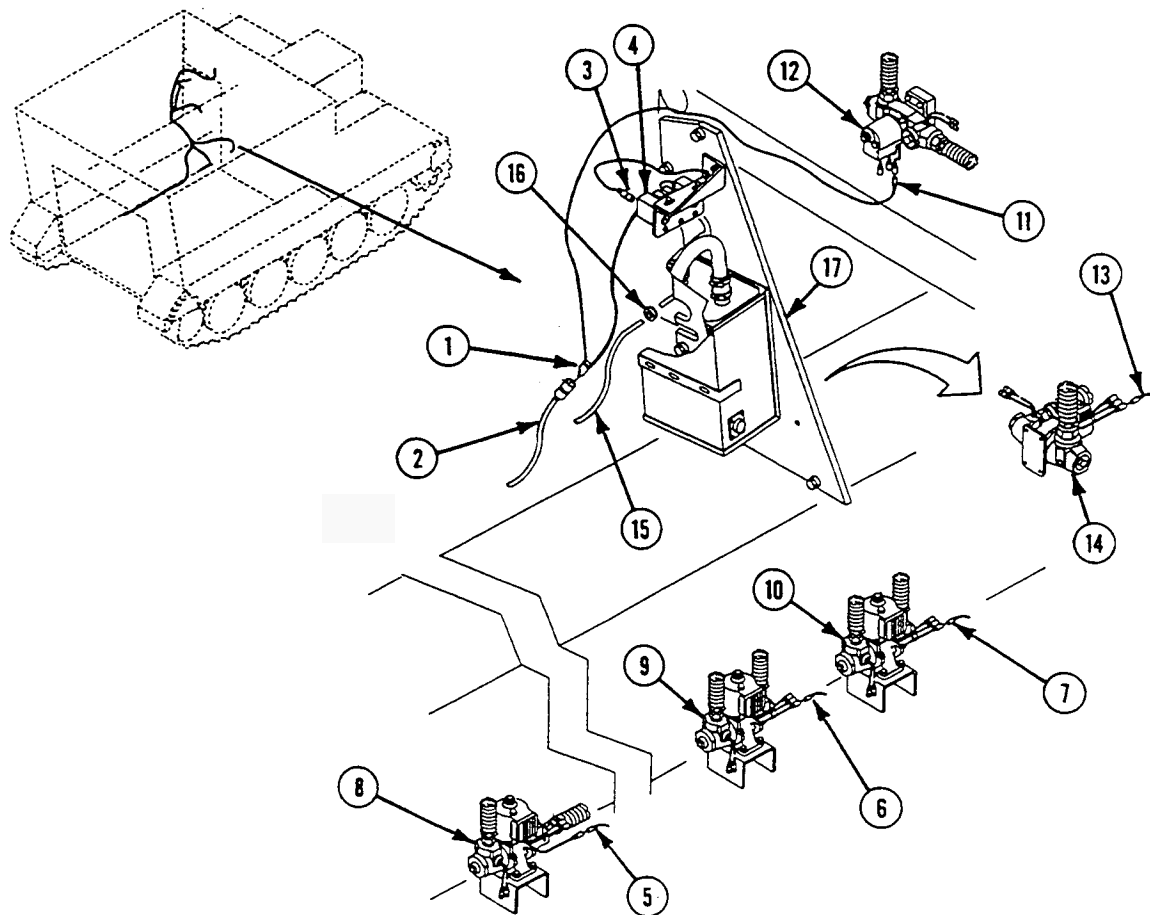
Tag all leads and cables before removing.

2. Disconnect wiring harness (5) from control box (7).
3. Remove screw (8), two lockwashers (9), and ground lead (10) from control box (7). Discard lockwashers.
4. Remove screw (11), two washers (12), locknut (13), and ground lead (14) from panel (15). Discard locknut.
5. Cut tie strap (16) from ground lead (14) and wiring harness (5). Discard tie strap.
6. Loosen screw on cable connector (17) and remove ground lead (14).
7. Remove cable connector (17) from air purifier (18).



REPLACE M13 NBC HEATER WIRING HARNESS (M577A2 ONLY) — Continued**0670 00**

8. Remove lead 537A (1) from connector (2).
9. Remove lead 537B (3) from air filter switch (4).
10. Remove leads 537C (5), 537D (6), and 537E (7) from heaters (8), (9), and (10) respectively.
11. Remove lead 537G (11) from commander's heater (12) and connector (2).
12. Remove lead 579C (13) from driver's heater (14).
13. Cut and remove all tie straps along wiring harness (15) and adjacent wiring harness. Discard tie straps.
14. Cut grommet (16) and pull wiring harness (15) through hole in frame (17). Discard grommet.

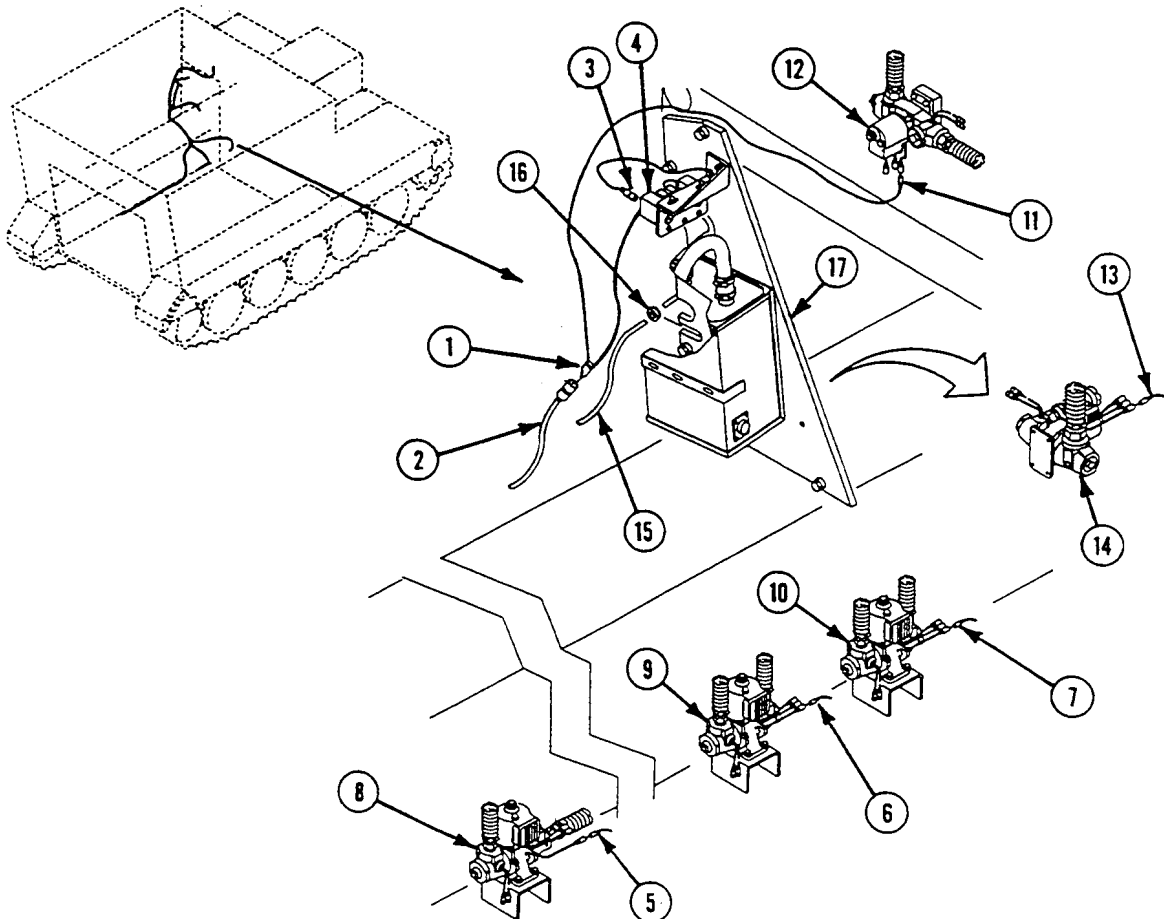


INSTALLATION

NOTE

Leads 579C and 537G must remain on driver's side of frame.

1. Install new grommet (16) on wiring harness (15). Route wiring harness through frame (17).
2. Install lead 579C (13) on driver's heater (14).
3. Install lead 537G (11) on commander's heater (12) and connector (2).
4. Install leads 537E (7), 537D (6), and 537C (5) on heaters (8), (9), and (10) respectively.
5. Install lead 537B (3) on air filter switch (4).
6. Install lead 537A (1) on connector (2).
7. Install new straps along wiring harness (15) and adjacent wiring harness as required.

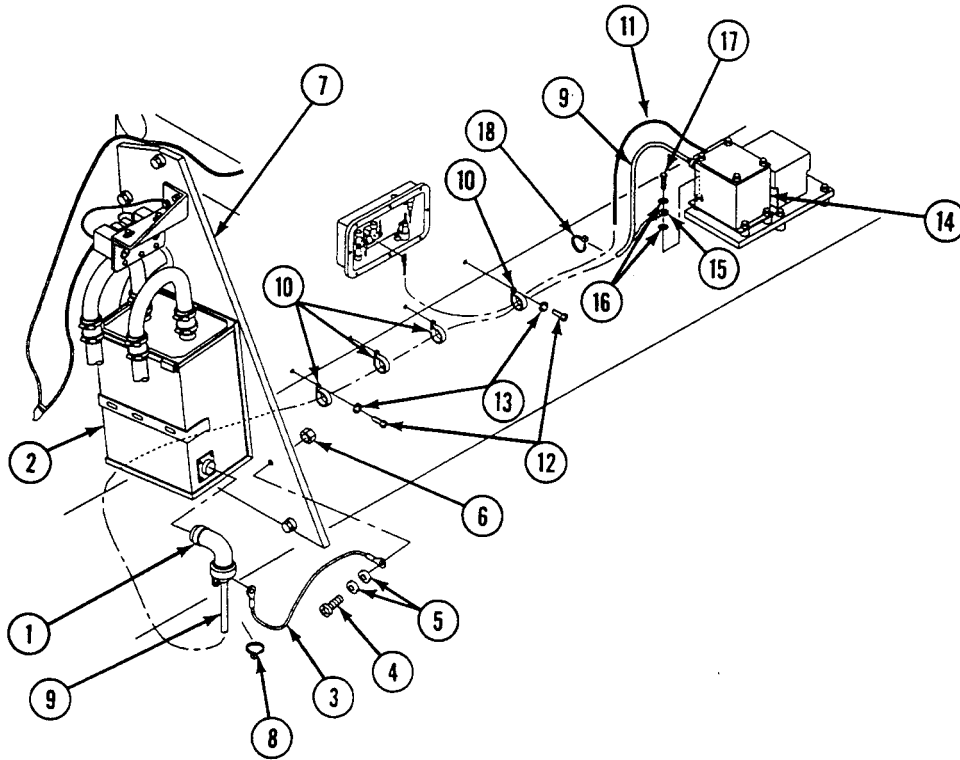


8. Install cable connector (1) on air purifier (2).
9. Install forked end of ground lead (3) on cable connector (1) and tighten screw on cable connector.

NOTE

To ensure proper grounding, remove any paint from frame at ground point.

10. Install ground lead (3), screw (4), two washers (5), and new locknut (6) on panel (7).
11. Install new tie strap (8) on ground lead (3) and wiring harness (9).
12. In driver's compartment, install four clamps (10) on cable (11) and wiring harness (9).
13. Install four screws (12), new lockwashers (13), and four clamps (10) on weldnuts.
14. Connect wiring harness (9) to control box (14).
15. Install ground lead (15), two new lockwashers (16), and screw (17) on control box (14).
16. Install new tie straps (18) along cable (11) and adjacent wiring harness (9).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY)

0671 00

THIS WORK PACKAGE COVERS:

Removal (page 0671 00-2).
 Installation (page 0671 00-8).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Ramp lowered (see your -10)

Materials/Parts

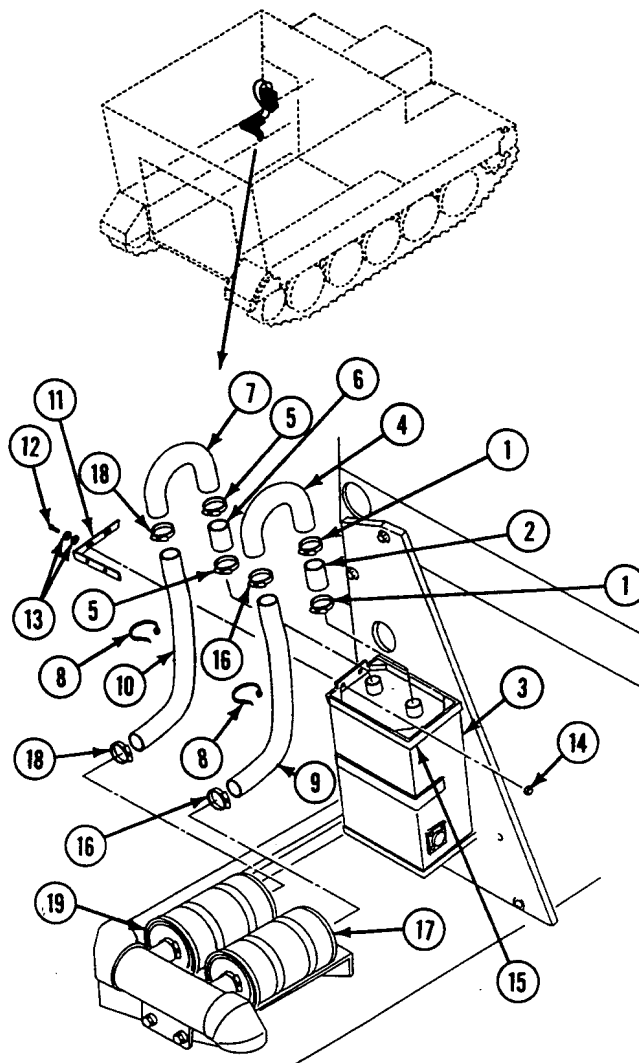
Locknut (2)

Lockwasher (3)

Tie strap (AR)

REMOVAL

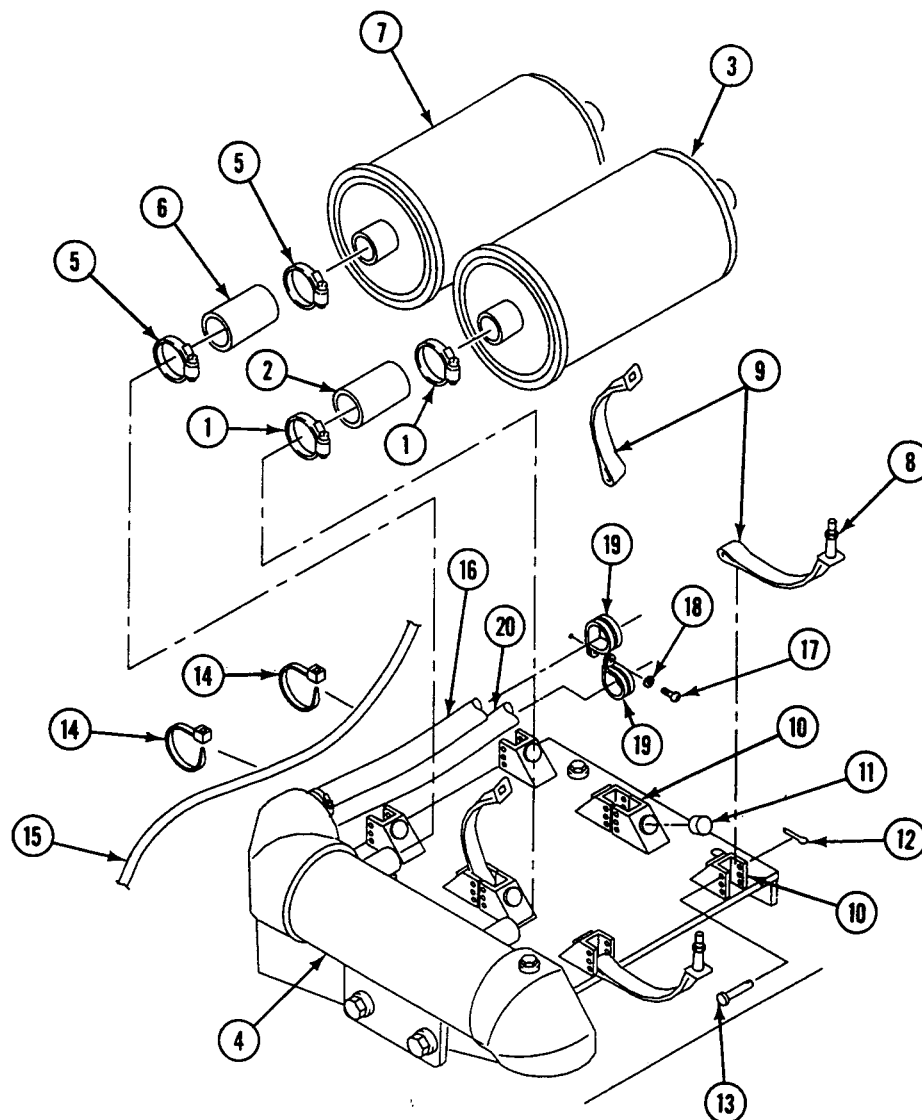
1. Loosen two clamps (1) and remove hose (2) from precleaner (3) and tube (4).
2. Loosen two clamps (5) and remove hose (6) from precleaner (3) and tube (7).
3. Cut tie straps (8) that secure hoses (9) and (10) to bracket (11). Discard tie straps.
4. If bracket (11) is damaged, remove two screws (12), four washers (13), two locknuts (14), and bracket from frame (15). Discard locknuts.
5. Loosen two clamps (16) and remove hose (9) from tube (4) and filter (17).
6. Loosen two clamps (18) and remove hose (10) from tube (7) and filter (19).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

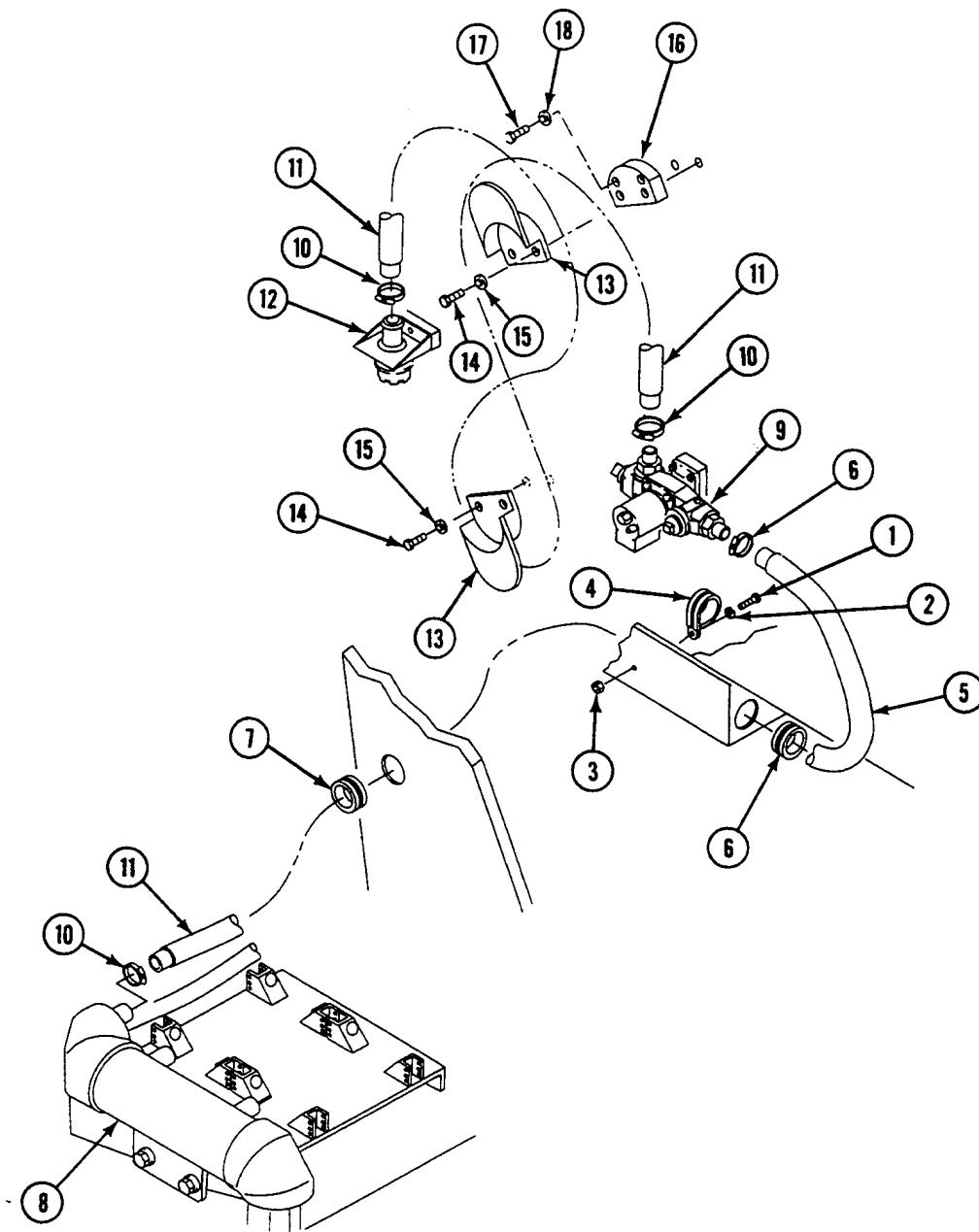
7. Loosen two clamps (1) and remove hose (2) from filter (3) and manifold (4).
8. Loosen two clamps (5) and remove hose (6) from filter (7) and manifold (4).
9. Loosen four nuts (8), open four clamps (9), and remove filters (3) and (7) from bracket (10).
10. If damaged, remove rubber bumpers (11) from bracket (10) as required. Discard rubber bumpers.
11. If any cotter pin (12) is damaged, remove cotter pin, straight pin (13), and clamps (9) from bracket (10) as required. Discard cotter pin.
12. Cut tie straps (14) that secure wiring harness (15) to hose (16) and manifold (4). Discard tie straps.
13. Remove screw (17), lockwasher (18), and two clamps (19) from side bulkhead. Remove clamps from hoses (16) and (20). Discard lockwasher.



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

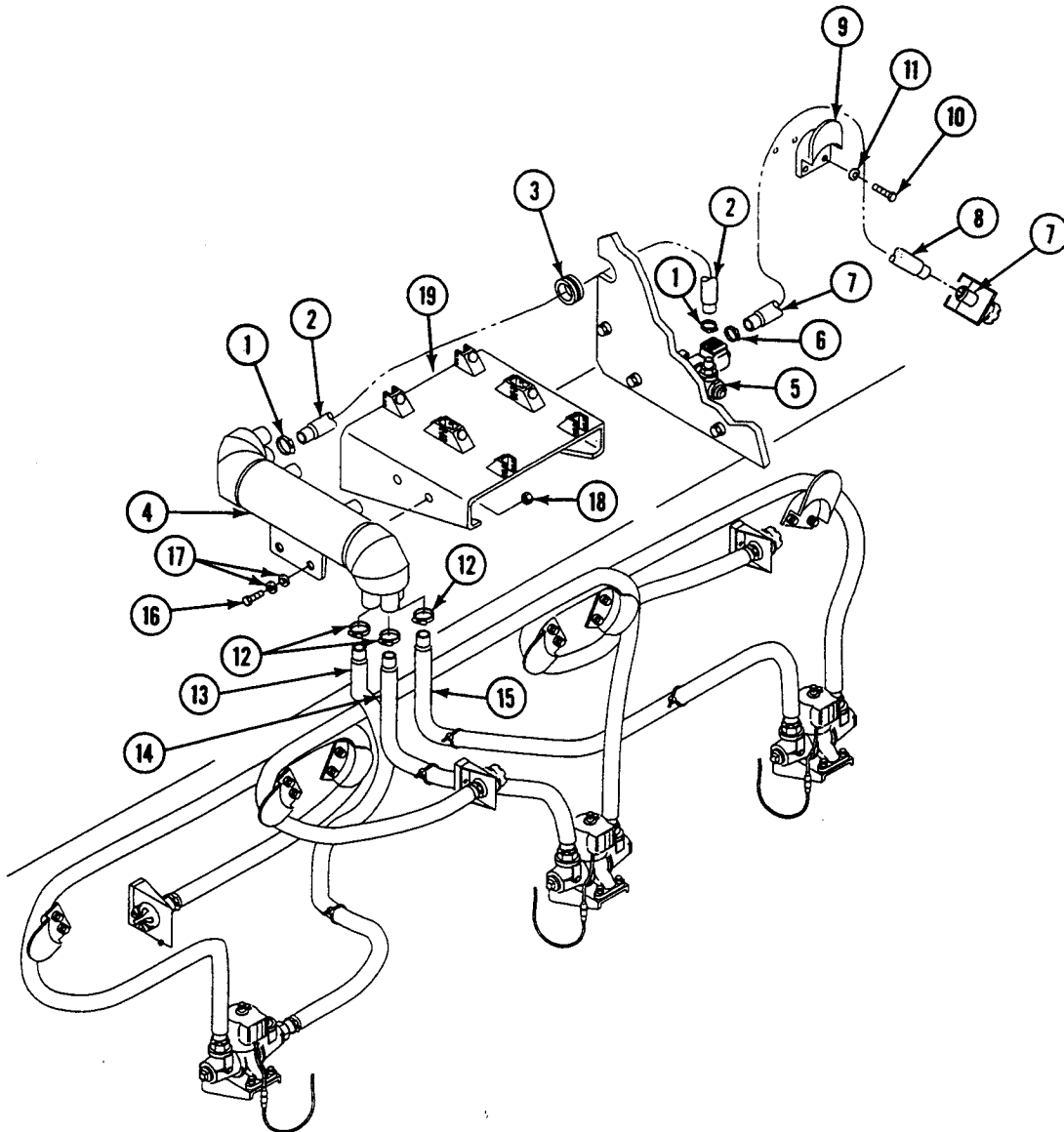
14. Remove two screws (1), lockwashers (2), nuts (3), and clamps (4) from upper bulkhead. Remove clamps from hose (5). Discard lockwashers.
15. Loosen two clamps (6) and remove hose (5) with two grommets (7) from manifold (8) and commander's heater (9).
16. If damaged, remove grommets (7) from hose (5), as required. Discard grommets.
17. Loosen two clamps (10) and remove hose (11) from commander's heater (9) and connector (12).
18. If either bracket (13) is damaged, remove two screws (14), lockwashers (15), and bracket from front bulkhead or spacer (16), as required. Discard lockwashers.
19. If spacer (16) is damaged, remove two screws (14), lockwashers (15), and bracket (13) from spacer, then remove two screws (17), lockwashers (18), and spacer from front bulkhead, as required. Discard lockwashers.



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

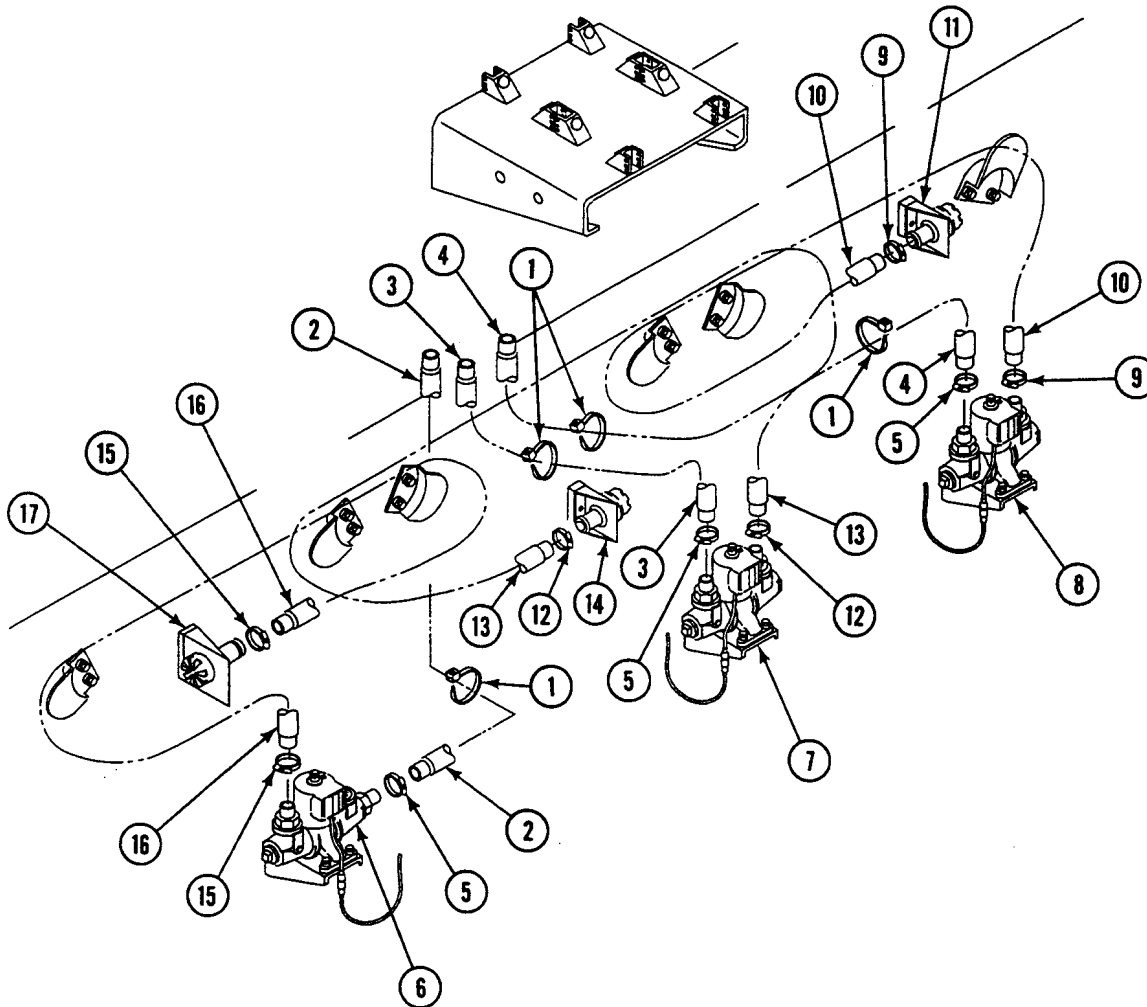
20. Loosen two clamps (1) and remove hose (2) with grommet (3) from manifold (4) and driver's heater (5).
21. If damaged, remove grommet (3) from hose (2). Discard grommet.
22. Loosen clamp (6) and remove hose (7) from driver's heater (5) and pull off connector (8).
23. If bracket (9) is damaged, remove two screws (10), washers (11), and bracket from front bulkhead.
24. Loosen three clamps (12) and remove three hoses (13), (14), and (15) from manifold (4).
25. Remove two screws (16), four washers (17), two locknuts (18), and manifold (4) from bracket (19). Discard locknuts.



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

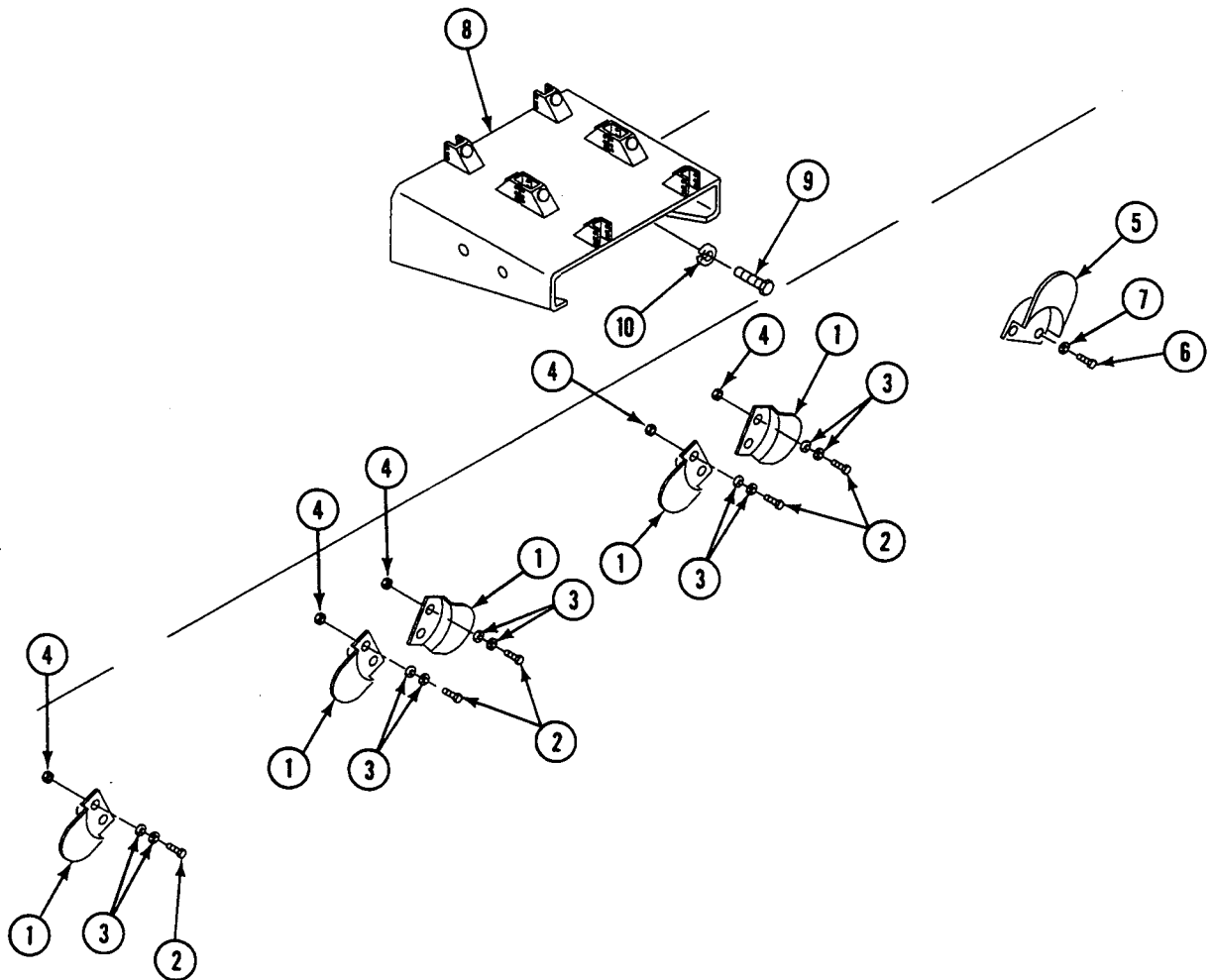
26. Cut tie straps (1) that secure wiring harness to hoses (2), (3), and (4). Discard tie straps.
27. Loosen three clamps (5) and remove three hoses (2), (3), and (4) from three heaters (6), (7), and (8) respectively.
28. Loosen two clamps (9) and remove hose (10) from heater (8) and connector (11).
29. Loosen two clamps (12) and remove hose (13) from heater (7) and connector (14).
30. Loosen two clamps (15) and remove hose (16) from heater (6) and connector (17).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

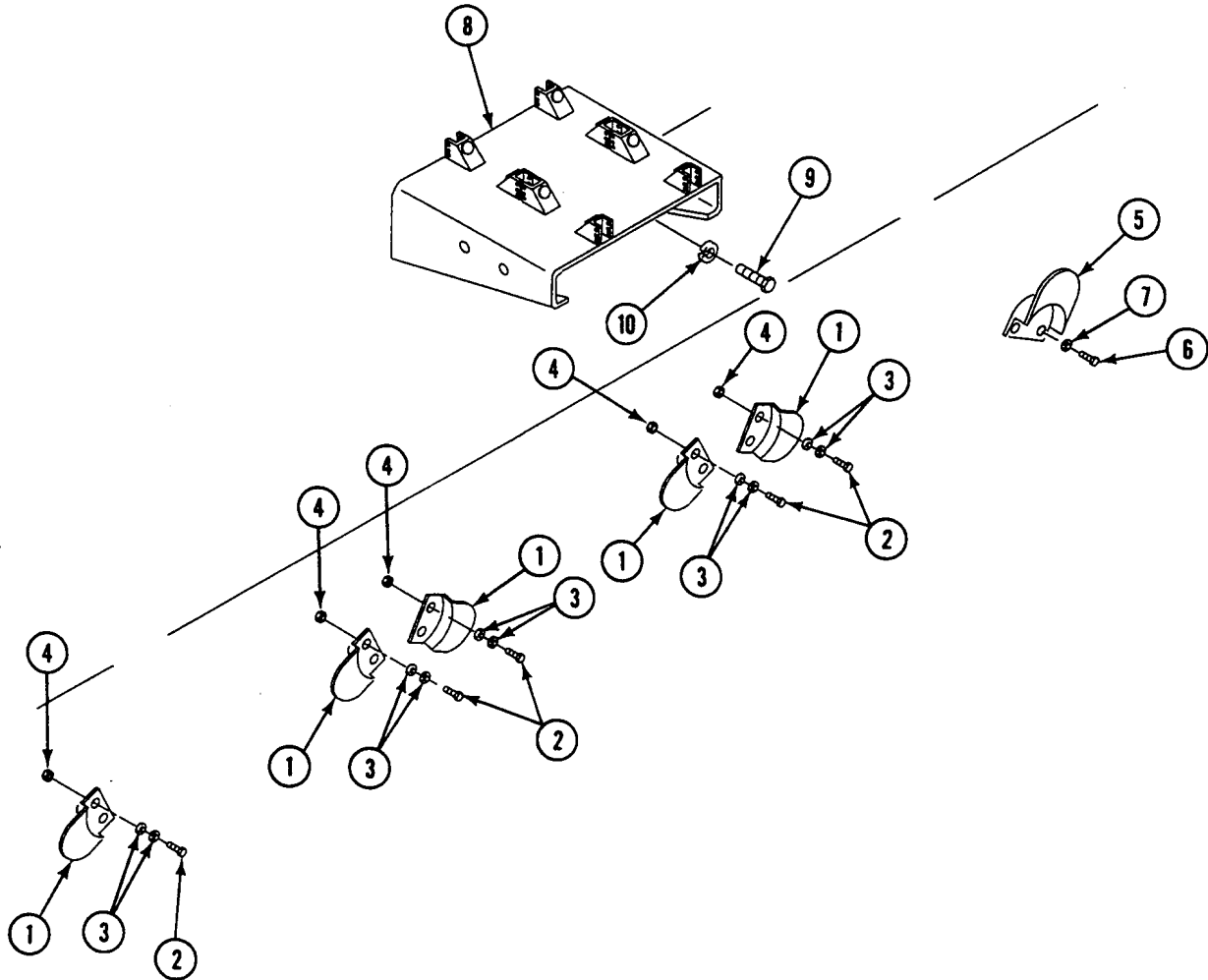
0671 00

31. If any of five brackets (1) are damaged, remove two screws (2), four washers (3), and two locknuts (4) and bracket from table support. Discard locknuts.
32. If bracket (5) is damaged, remove two screws (6), washers (7), and bracket from sponson.
33. If bracket (8) is damaged, remove four screws (9), lockwashers (10), and bracket from bulkhead. Discard lockwashers.



INSTALLATION

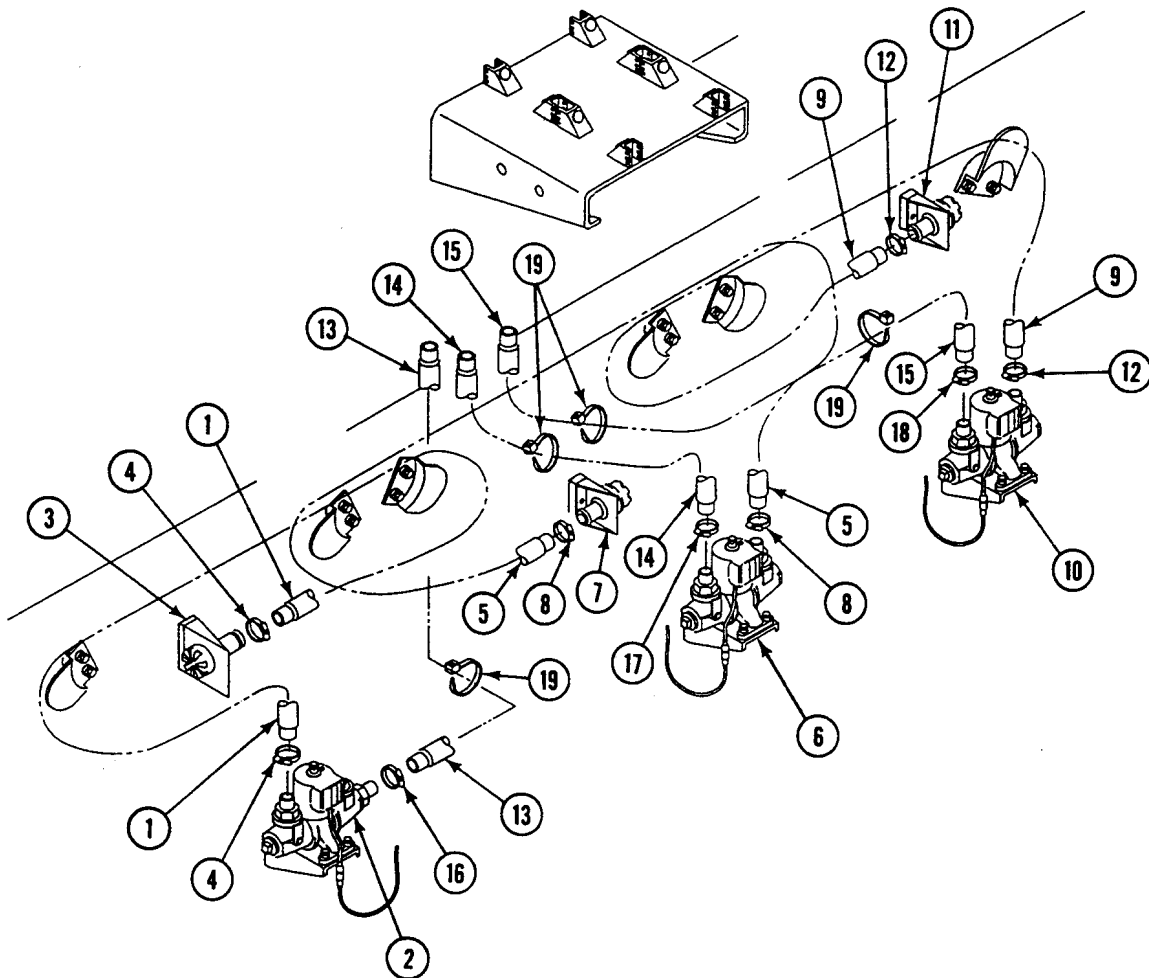
1. If bracket (8) was removed, install on bulkhead with four screws (9) and new lockwashers (10).
2. If bracket (5) was removed, install on sponson with two screws (6) and washers (7).
3. If any of five brackets (1) were removed, install on table support with two screws (2), four washers (3), and two new locknuts (4).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

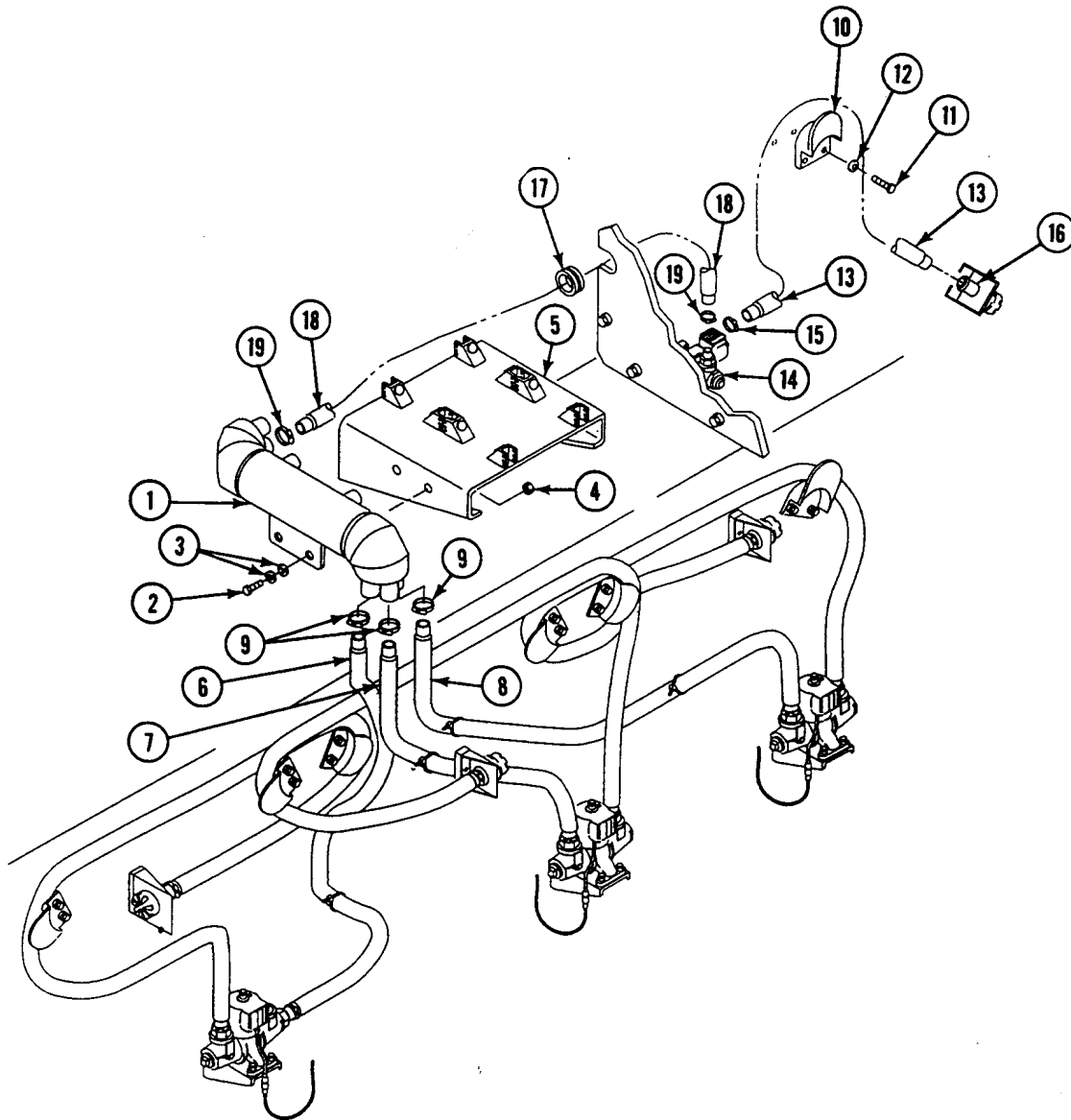
4. Install hose (1) on heater (2) and connector (3) and tighten two clamps (4).
5. Install hose (5) and on heater (6) and connector (7) and tighten two clamps (8).
6. Install hose (9) on heater (10) and connector (11) and tighten two clamps (12).
7. Install three hoses (13), (14), and (15) on heaters (2), (6) and (10) and tighten three clamps (16), (17), and (18), respectively.
8. Secure wiring harness to three hoses (13), (14), and (15) with new tie straps (19).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

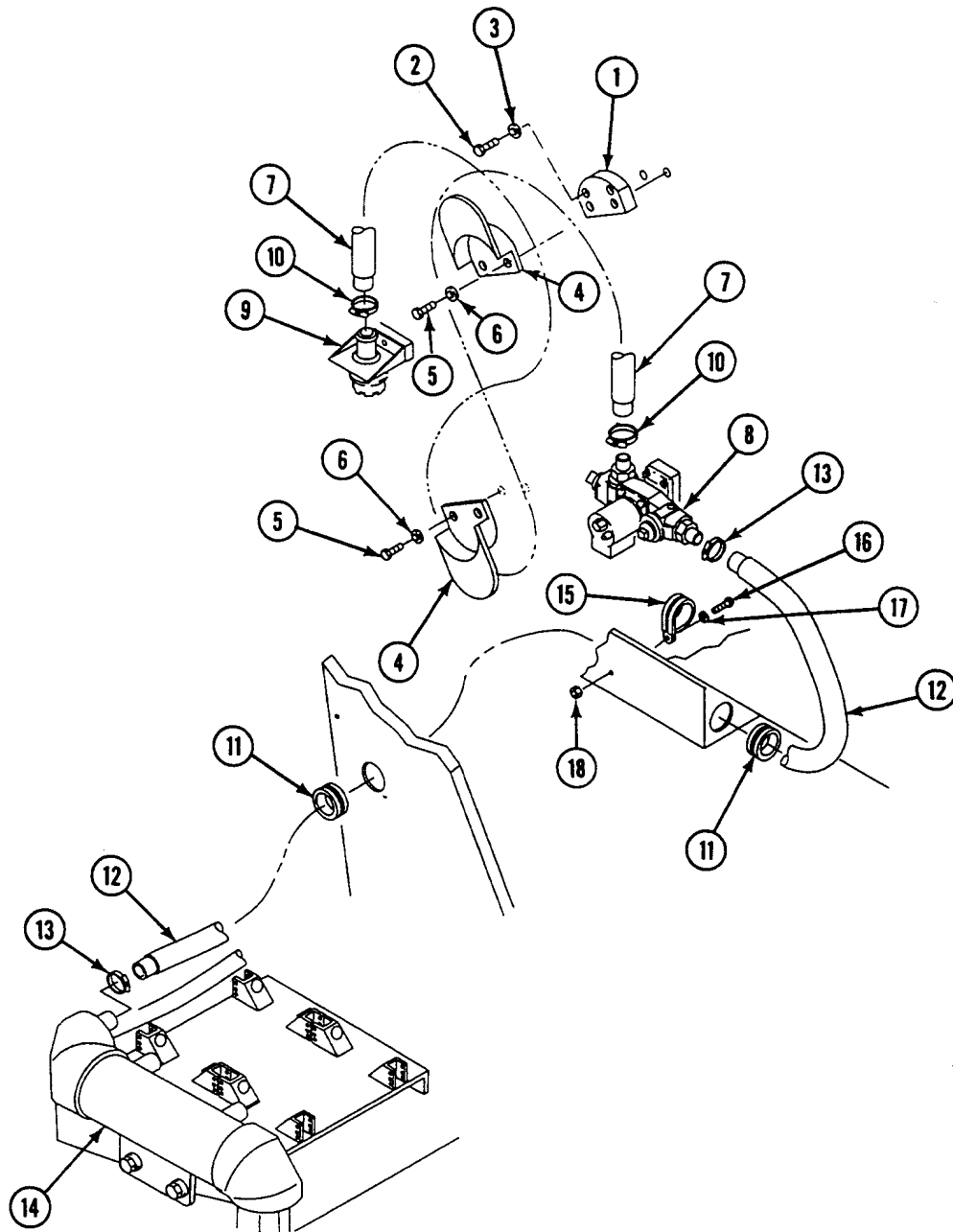
9. Install manifold (1), two screws (2), four washers (3), and two new locknuts (4) on bracket (5).
10. Install three hoses (6), (7), and (8) on manifold (1) and tighten three clamps (9).
11. If bracket (10) was removed, install on front bulkhead with two screws (11) and washers (12).
12. Install hose (13) on driver's heater (14), and tighten clamp (15), then push on connector (16).
13. If removed, install new grommet (17) on hose (18).
14. Install hose (18) and grommet (17) on manifold (1) and driver's heater (14) and tighten two clamps (19).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

0671 00

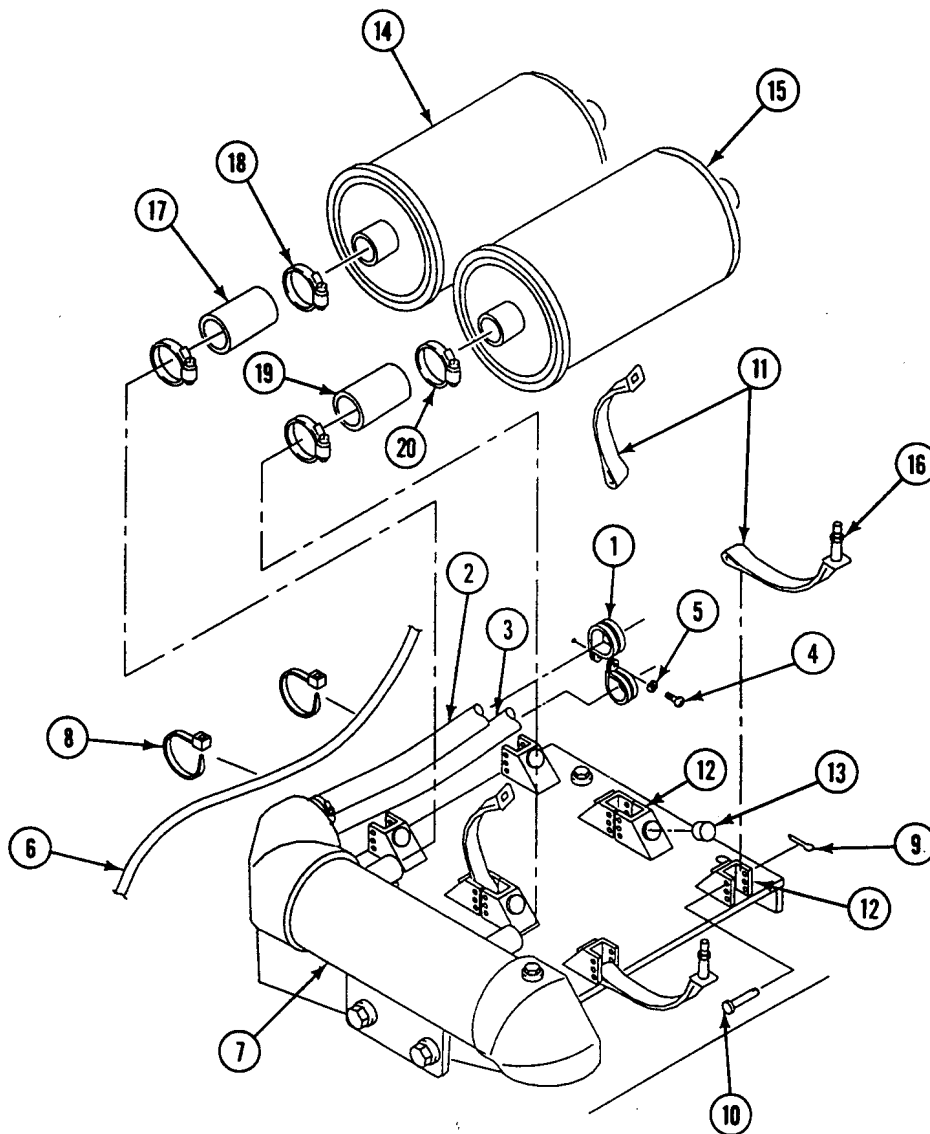
15. If spacer (1) was removed, install on front bulkhead with two screws (2) and new lockwashers (3).
16. If either bracket (4) was removed, install on front bulkhead or spacer (1), as required, with two screws (5) and new lockwashers (6).
17. Install hose (7) on commander's heater (8) and connector (9) and tighten two clamps (10).
18. If removed, install new grommets (11) on hose (12), as required.
19. Install hose (12), two clamps (13), and grommets (11) on manifold (14) and commander's heater (8). Insert grommets in frame. Tighten clamps.
20. Install two clamps (15) on hose (12). Secure clamps to upper bulkhead with two screws (16), new lockwashers (17), and two nuts (18).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued

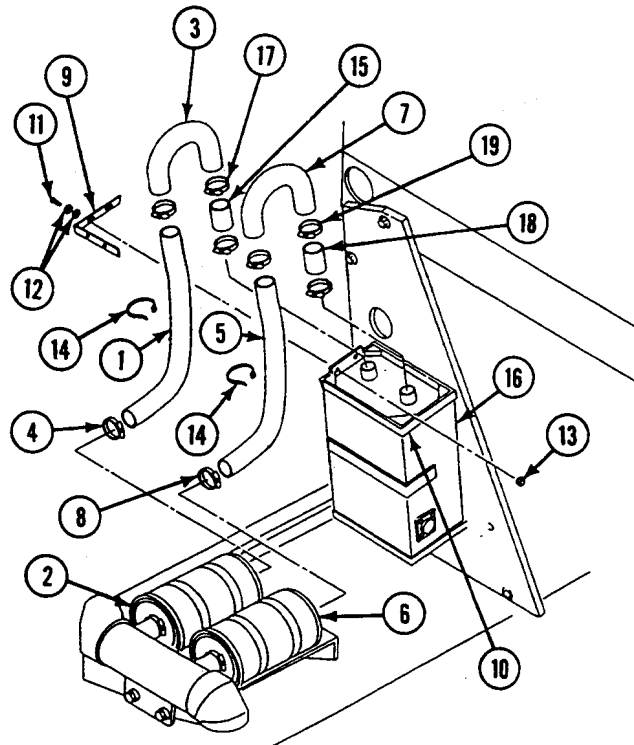
0671 00

21. Install two clamps (1) on hoses (2) and (3). Secure clamps to side bulkhead with screw (4) and new lockwasher (5).
22. Secure wiring harness (6) to hose (2) and manifold (7) with new tie straps (8).
23. If removed, install new cotter pins (9), straight pins (10), and clamps (11) on bracket (12).
24. If missing or removed, install new rubber bumpers (13) on bracket (12), as required.
25. Install filters (14) and (15) on brackets (12) and tighten nuts (16) on four clamps (11).
26. Install hose (17) on filter (14) and manifold (7) and tighten two clamps (18).
27. Install hose (19) on filter (15) and manifold (7) and tighten two clamps (20).



REPLACE M13 NBC FILTERS AND HOSES (M577A2 ONLY) — Continued**0671 00**

28. Install hose (1) on filter (2) and tube (3) and tighten two clamps (4).
29. Install hose (5) on filter (6) and tube (7) and tighten two clamps (8).
30. If bracket (9) was removed, install on frame (10). Secure with two screws (11), four washers (12), and two new locknuts (13).
31. Secure hoses (1) and (5) to bracket (9) with new tie straps (14).
32. Install hose (15) on precleaner (16) and tube (3) and tighten two clamps (17).
33. Install hose (18) on precleaner (16) and tube (9) and tighten two clamps (19).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Raise and lock ramp (see your -10).
3. Stop engine (see your -10).
4. Check air flow of NBC system. See TM 3-6680-316-10.

END OF TASK

REPLACE M13 NBC HEATERS AND MOUNTS (M577A2 ONLY)

0672 00

THIS WORK PACKAGE COVERS:

Removal (page 0672 00-2).
 Installation (page 0672 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground leads disconnected (WP 0294 00)

Materials/Parts

Locknut (2)

Locknut (4)

Locknut (2)

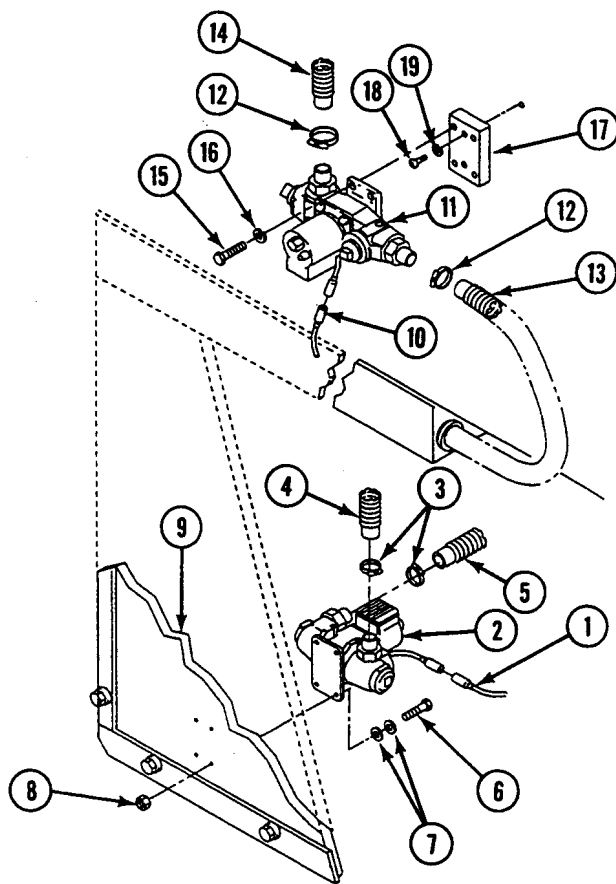
Locknut (6)

Locknut (4)

Lockwasher (4)

REMOVAL

1. Disconnect circuit 579C lead (1) from driver's heater (2).
2. Loosen two clamps (3) and remove inlet and outlet hoses (4) and (5) from driver's heater (2).
3. Remove four screws (6), eight washers (7), four locknuts (8), and driver's heater (2) from frame (9). Discard locknuts.
4. Disconnect circuit 537G lead (10) from commander's heater (11).
5. Loosen two clamps (12) and remove inlet and outlet hoses (13) and (14) from commander's heater (11).
6. Remove four screws (15), lockwashers (16), and commander's heater (11) from support bracket (17). Discard lockwashers.
7. If support bracket (17) is damaged, remove two screws (18), lockwashers (19), and support from forward bulkhead. Discard lockwashers.

**NOTE**

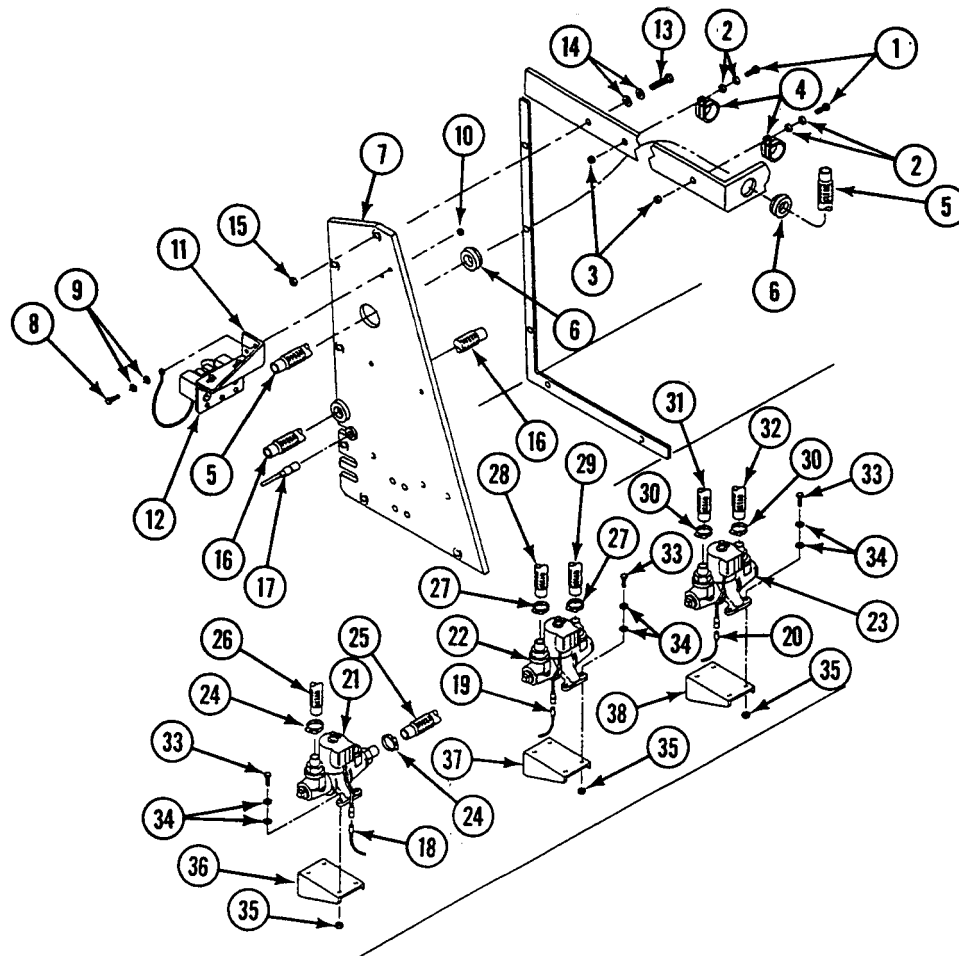
If removing frame, see WP 0678 00.

8. Remove two screws (1), four washers (2), two locknuts (3), and clamps (4) from crossbeam. Remove clamps from hose (5). Discard locknuts.
9. Remove hose (5) with two grommets (6) from frame (7).
10. If either grommet (6) is damaged, remove damaged grommet from hose (5). Discard grommet.

REPLACE M13 NBC HEATERS AND MOUNTS (M577A2 ONLY) — Continued

0672 00

11. Remove two screws (8), four washers (9), two locknuts (10), and bracket (11) with switch assembly (12) from frame (7). Discard locknuts.
12. Remove six screws (13), 12 washers (14), six locknuts (15), and frame (7) from welded molding. Discard locknuts.
13. Remove hose (16) and circuit 579C lead (17) from frame (7).
14. Remove circuit 537E, 537D, and 537C leads (18), (19), and (20) from operator's heaters (21), (22), and (23) respectively.
15. Loosen two clamps (24) and remove inlet and outlet hoses (25) and (26) from heater (21).
16. Loosen two clamps (27) and remove inlet and outlet hoses (28) and (29) from heater (22).
17. Loosen two clamps (30) and remove inlet and outlet hoses (31) and (32) from heater (23).
18. Remove four screws (33), eight washers (34), and four locknuts (35) from each operator's heater (21), (22), and (23). Discard locknuts.
19. Remove heaters from welded mounts (36), (37), and (38).



INSTALLATION

1. Install operator's heaters (1), (2), and (3) on welded mounts (4), (5), and (6). Secure each heater with four screws (7), eight washers (8), and four new locknuts (9).
2. Install inlet and outlet hoses (10) and (11) and two clamps (12) on operator's heater (1). Tighten clamps.
3. Install inlet and outlet hoses (13) and (14) and two clamps (15) on operator's heater (2). Tighten clamps.
4. Install inlet and outlet hoses (16) and (17) and two clamps (18) on operator's heater (3). Tighten clamps.
5. Install circuit 537C lead (19) on operator's heater (1), circuit 537D lead (20) on operator's heater (2), and circuit 537E lead (21) on operator's heater (3).

NOTE

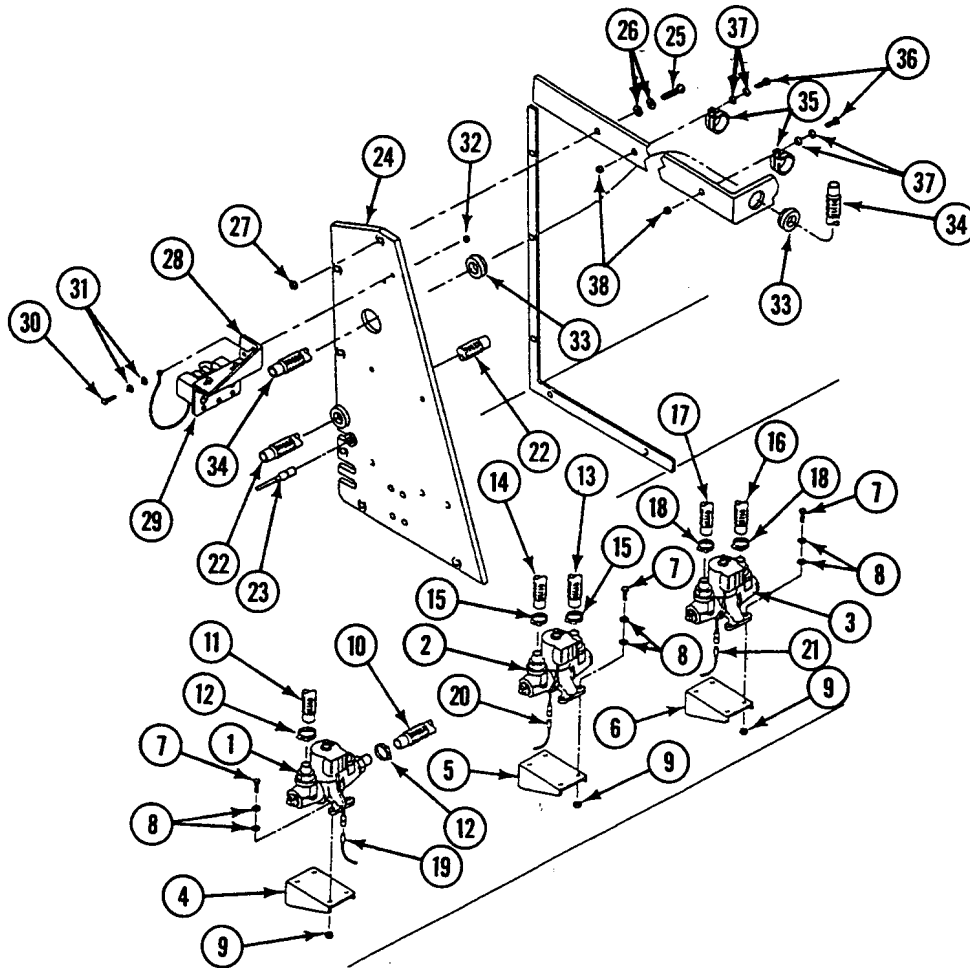
If frame was removed, see WP 0678 00.

6. Install hose (22) and circuit 579C lead (23) in frame (24).
7. Install frame on welded molding with six screws (25), 12 washers (26), and six new locknuts (27).
8. Install bracket (28) with switch assembly (29) on frame (24). Secure with two screws (30), four washers (31), and two new locknuts (32).
9. If either grommet (33) was removed, install new grommet on hose (34).
10. Install hose (34) with grommets (33) on frame (24).

REPLACE M13 NBC HEATERS AND MOUNTS (M577A2 ONLY) — Continued

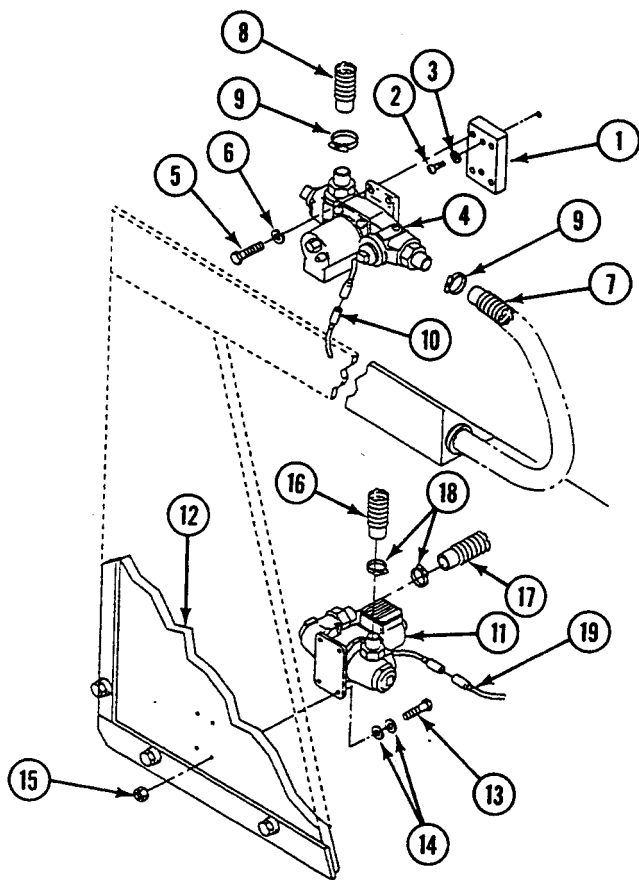
0672 00

11. Install two clamps (35) on hose (34). Secure clamps to crossbeam with two screws (36), four washers (37), and two new locknuts (38).



REPLACE M13 NBC HEATERS AND MOUNTS (M577A2 ONLY) — Continued**0672 00**

12. If support (1) was removed, install support on forward bulkhead with two screws (2) and new lockwashers (3).
13. Install commander's heater (4) on support bracket (1) with four screws (5) and new lockwashers (6).
14. Install inlet and outlet hoses (7) and (8) and two clamps (9) on commander's heater (4). Tighten clamps.
15. Install circuit 537G lead (10) on commander's heater (4).
16. Install driver's heater (11) on frame (12). Secure with four screws (13), eight washers (14), and four new locknuts (15).
17. Install inlet and outlet hoses (16) and (17) and two clamps (18) on driver's heater (11). Tighten clamps.
18. Install circuit 579C lead (19) on driver's heater (11).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Raise and lock ramp (see your -10).
3. Stop engine (see your -10).
4. Check air flow of NBC system. See TM 3-6680-316-10.

END OF TASK

**REPLACE M13 NBC FILTER SWITCH AND MOUNT BRACKET
(M577A2 ONLY)**

0673 00

THIS WORK PACKAGE COVERS:

Removal (page 0673 00-2).
Installation (page 0673 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut (4)

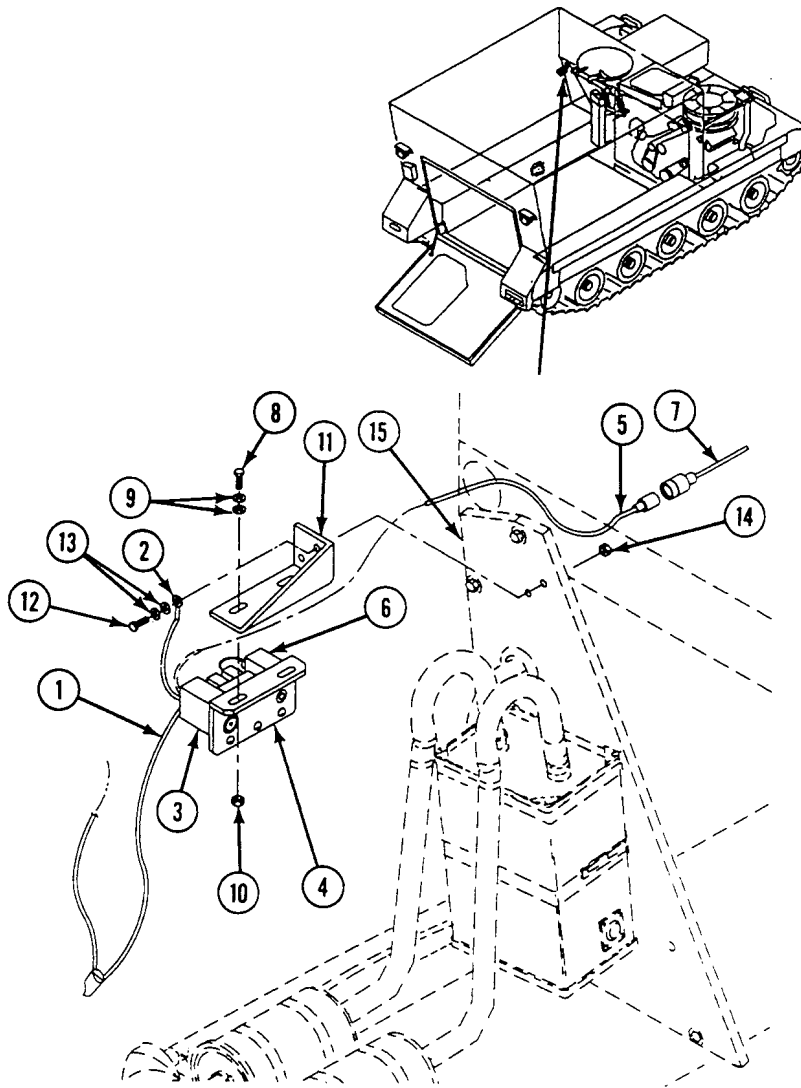
Battery ground lead disconnected (WP 0294 00)

REPLACE M13 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY) — Continued

0673 00

REMOVAL

1. Disconnect circuit 537F (1) and ground lead (2) from light (3) on switch assembly (4).
2. Disconnect circuit 579A (5) from circuit breaker (6) on switch assembly (4) and circuit lead 415 (7).
3. Remove two screws (8), four washers (9), two locknuts (10), and switch assembly (4) from bracket (11). Discard locknuts.
4. Remove two screws (12), four washers (13), two locknuts (14), ground lead (2), and bracket (11) from frame (15). Discard locknuts.

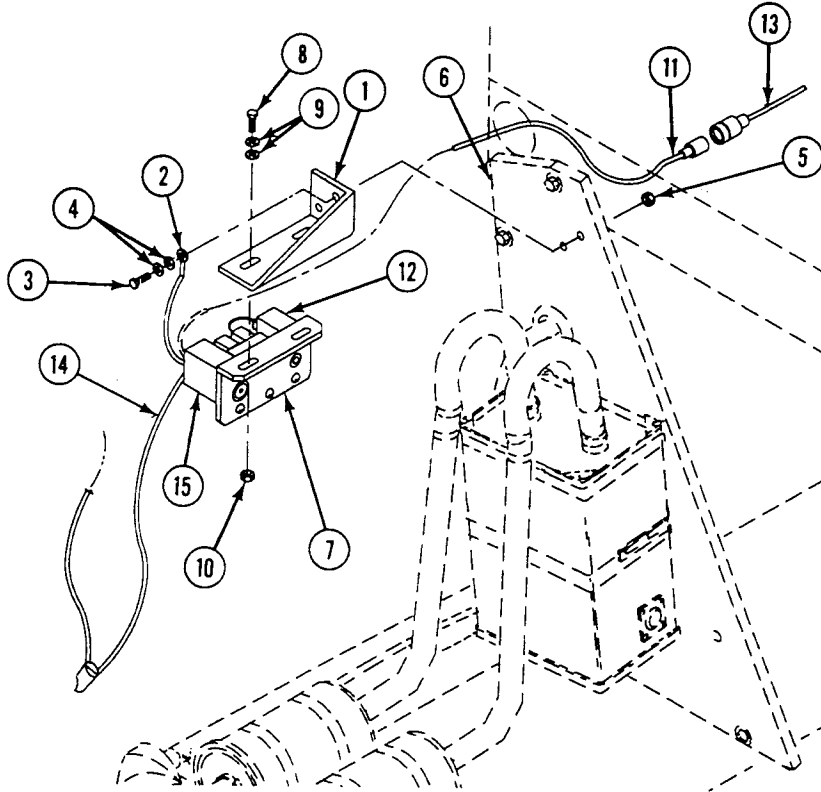


REPLACE M13 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY) — Continued

0673 00

INSTALLATION

1. Install bracket (1), ground lead (2), two screws (3), four washers (4), and two new locknuts (5) on frame (6).
2. Install switch assembly (7), two screws (8), four washers (9), and two new locknuts (10) on bracket (1).
3. Connect circuit 579A (11) to circuit breaker (12) on switch assembly (7) and circuit lead 415 (13).
4. Connect circuit 537F (14) and ground lead (2) to light (15) on switch assembly (7).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M3 NBC FILTER SWITCH AND MOUNT BRACKET
(M577A2 ONLY)**

0674 00

THIS WORK PACKAGE COVERS:

Removal (page 0674 00-2).
Installation (page 0674 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Remove instrument panel (WP 0238 00)

Materials/Parts

Locknut (4)

Lockwasher (3)

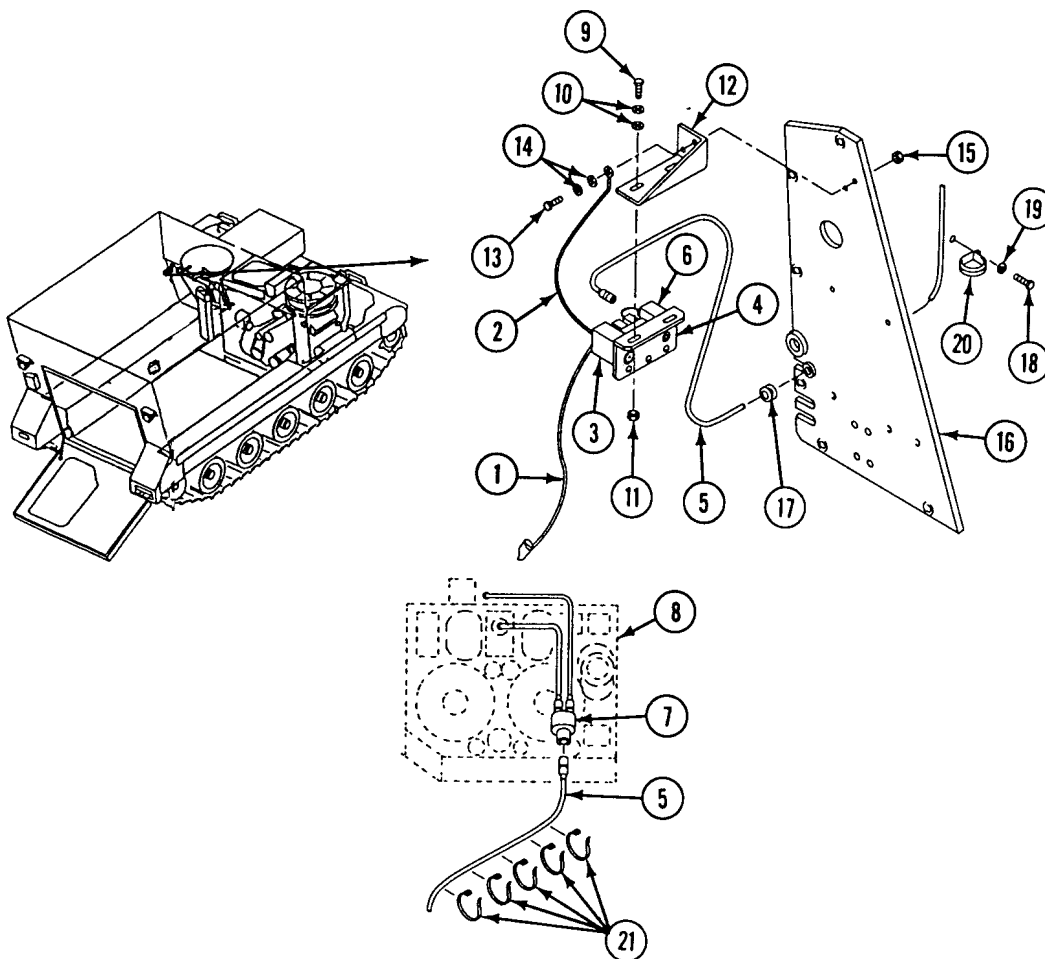
Tie strap (5)

REPLACE M3 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY) — Continued

0674 00

REMOVAL

1. Disconnect circuit 537B (1) and ground lead (2) from light (3) on switch assembly (4).
2. Disconnect circuit 579A (5) from circuit breaker (6) and connector (7) on instrument panel (8).
3. Remove two screws (9), four washers (10), two locknuts (11), ground lead (2), and bracket (12) from frame (16). Discard locknuts.
4. Remove two screws (13), four washers (14), two locknuts (15), ground lead (2), and bracket (12) from frame (16). Discard locknuts.
5. Remove circuit 579A (5) and grommet (17) from frame (16).
6. Remove three screws, lockwashers (19), and clamps (20) from circuit 579A (5). Discard lockwashers.
7. Remove five tie straps (21) from circuit 579A (5). Discard tie straps.

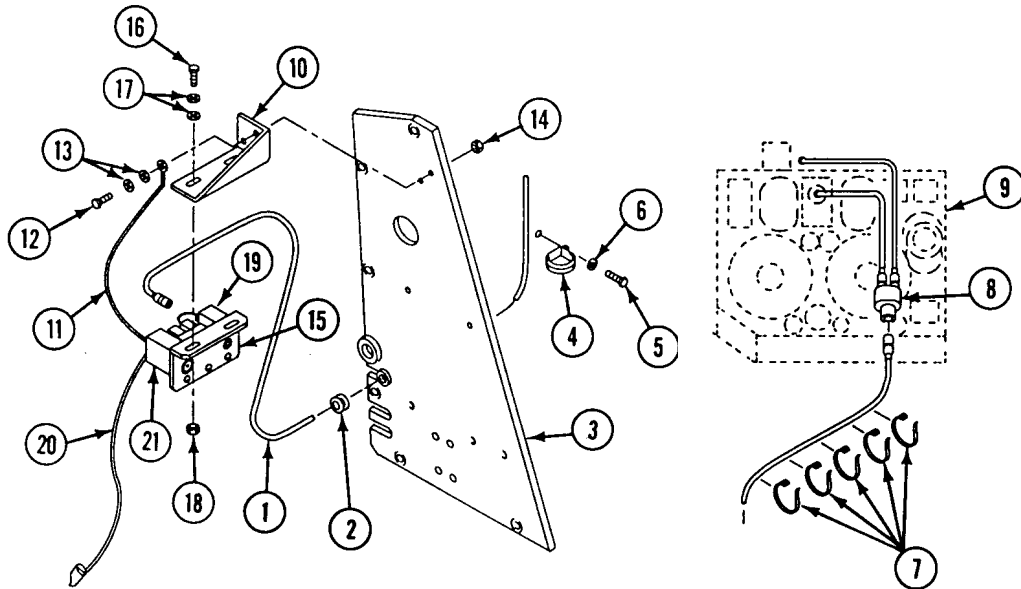


REPLACE M3 NBC FILTER SWITCH AND MOUNT BRACKET (M577A2 ONLY) — Continued

0674 00

INSTALLATION

1. Install circuit 579A (1) and grommet (2) through frame (3).
2. Install three clamps (4), screws (5), and new lockwashers (6) on circuit 579A (1).
3. Install five new tie straps (7) on circuit 579A (1).
4. Connect circuit 597A (1) to connector (8) on instrument panel (9).
5. Install bracket (10), ground lead (11), two screws (12), four washers (13), and two new locknuts (14) on frame (3).
6. Install switch assembly (15), two screws (16), four washers (17), and two new locknuts (18) on bracket (10).
7. Connect circuit 579A (1) to circuit breaker (19) on switch assembly (15) and connector (8) at instrument panel (9).
8. Connect circuit 537B (20) and ground lead (11) to light (21) on switch assembly (15).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Install instrument panel (WP 0238 00).

END OF TASK

REPLACE M3 NBC HEATER CONTROL BOX (M577A2 ONLY)

0675 00

THIS WORK PACKAGE COVERS:

Removal (page 0675 00-1).
 Installation (page 0675 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Master switch panel assembly removed (WP 0224 00)

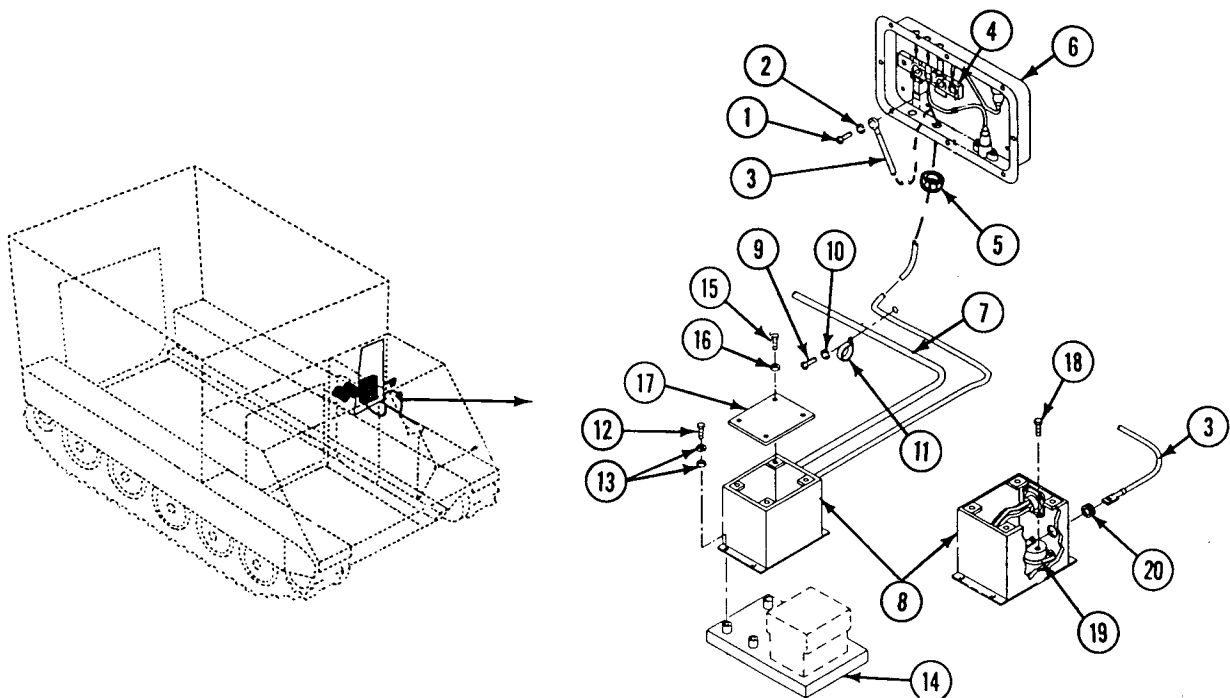
Materials/Parts

Lockwasher (8)

Lockwasher

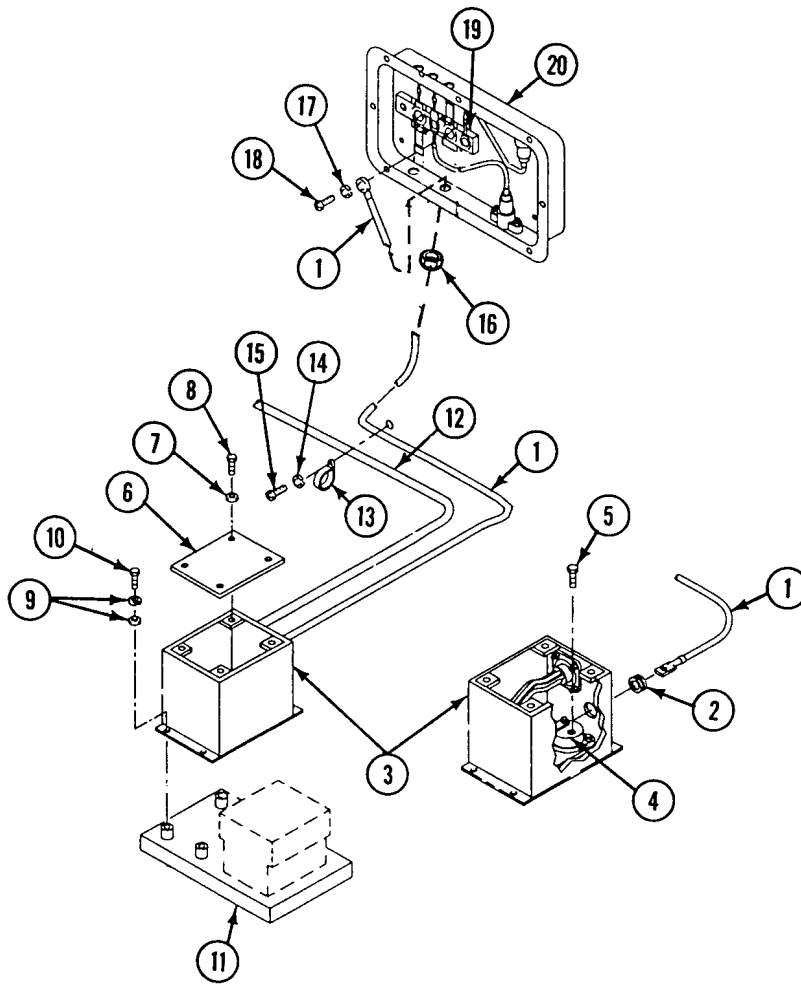
REMOVAL

1. Remove screw (1), washer (2), and cable (3) from bus bar (4) in distribution box (6).
2. Disconnect cable (7) from control box (8).
3. Remove screw (9), lockwasher (10), and clamp (11) with cables (3) and (7) from weldnut. Remove clamp from cables. Discard lockwasher.
4. Remove four screws (12), eight lockwashers (13), and control box (8) from bracket (14). Discard lockwashers.
5. Remove four screws (15), washers (16), and cover (17) from control box (8).
6. Remove screw (18) and terminal of cable (3) on circuit breaker (19). Pull cable and grommet (20) from control box (8).
7. Install cover (17), four washers (16), and screws (15) on control box (8).



INSTALLATION

1. Remove four screws (8), washers (7), and cover (6) from control box (3).
2. Install cable (1) and grommet (2) in control box (3). Position terminal of cable on circuit breaker (4). Install cable and screw (5) on circuit breaker.
3. Install cover (6), four washers (7), and screws (8) on control box (3).
4. Install control box (3), four screws (10), and eight new lockwashers (9) on bracket (11).
5. Connect cable (12) to control box (3).
6. Install clamp (13) on cables (1) and (12). Secure clamp to weldnut with screw (15) and new lockwasher (14).
7. Install cable (1), washer (17), and screw (18) on bus bar (19) in distribution box (20).



FOLLOW-THROUGH STEPS

1. Install master switch panel (WP 0224 00).
2. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND
BRACKETS (M577A2 ONLY)**

0676 00

THIS WORK PACKAGE COVERS:

Removal (page 0676 00-2).
Installation (page 0676 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Driver's instrument panel partially removed
(WP 0238 00)

Materials/Parts

Locknut (5)

Lockwasher (3)

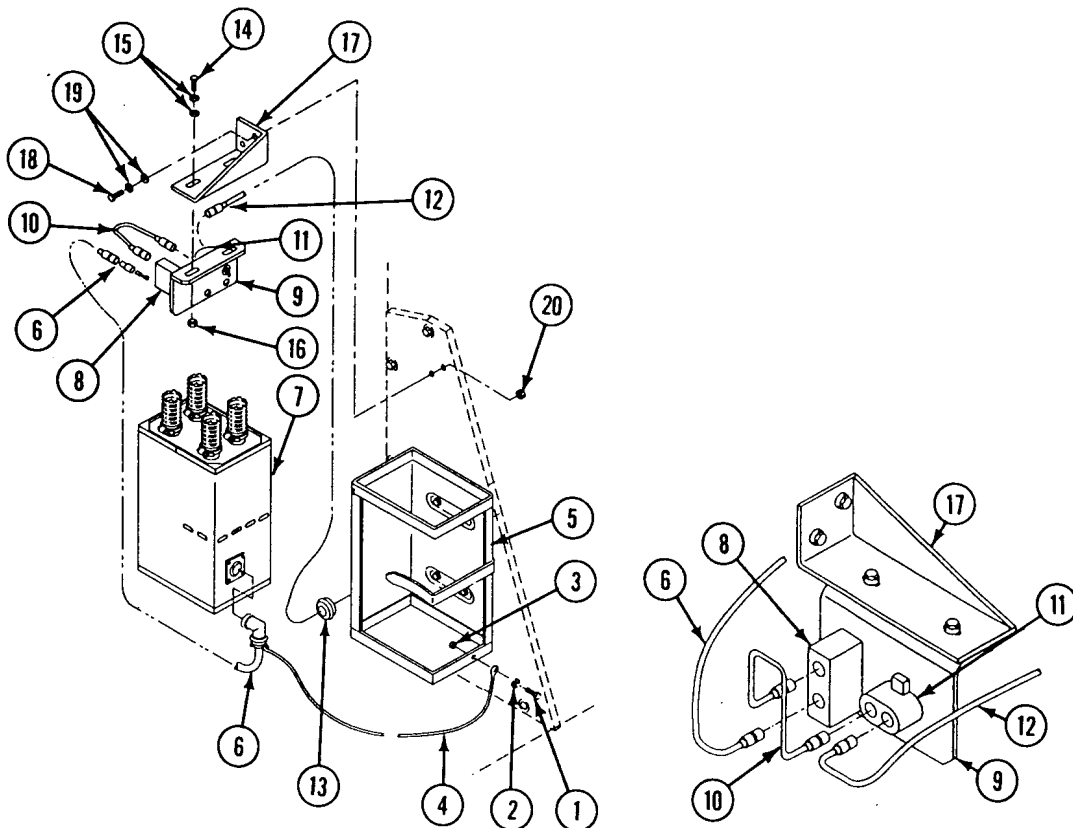
Tie strap (5)

**REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND BRACKETS
(M577A2 ONLY) — Continued**

0676 00

REMOVAL

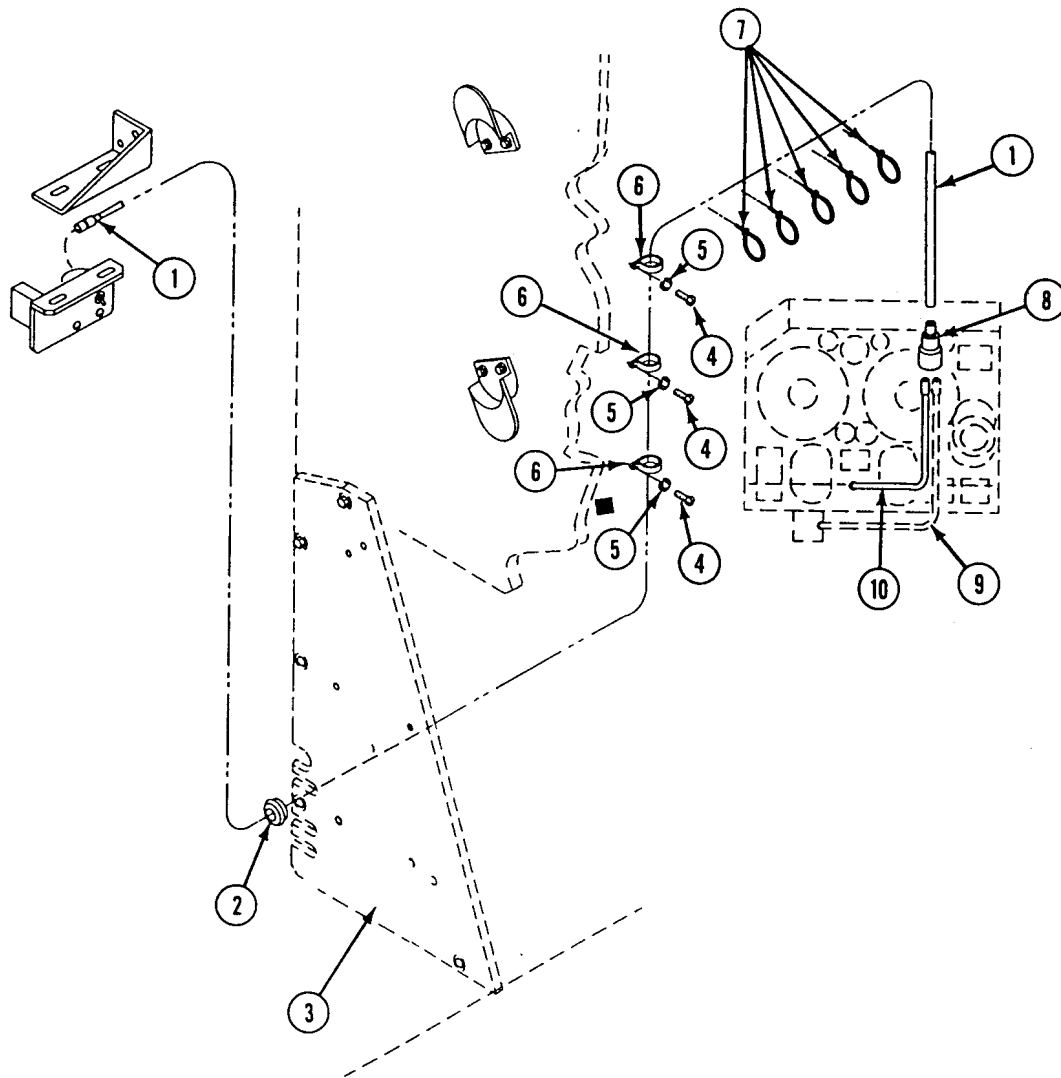
1. Remove screw (1), washer (2), locknut (3), and ground lead (4) from frame assembly (5). Discard locknut.
2. Remove power cable (6) from air purifier (7) and switch (8) on switch assembly (9).
3. Remove cable (10) from switch (8) and circuit breaker (11) on switch assembly (9).
4. Remove cable (12) with grommet (13) from circuit breaker (11) on switch assembly (9).
5. Remove two screws (14), four washers (15), two locknuts (16), and switch assembly (9) from bracket (17). Discard locknuts.
6. Remove two screws (18), four washers (19), two locknuts (20), and bracket (17) from forward bulkhead. Discard locknuts.



**REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND BRACKETS
(M577A2 ONLY) — Continued**

0676 00

7. Pull cable (1) with grommet (2) from mount plate (3). If damaged, discard grommet.
8. Remove three screws (4), lockwashers (5), and clamps (6) from driver's rear bulkhead. Remove clamps from cable (1). Discard lockwashers.
9. Cut five tie straps (7) securing cable (1) to adjacent wiring harness. Discard tie straps.
10. Remove cable (1) from connector (8).
11. Disconnect circuit 10 lead (9) and lead (10) from connector (8).

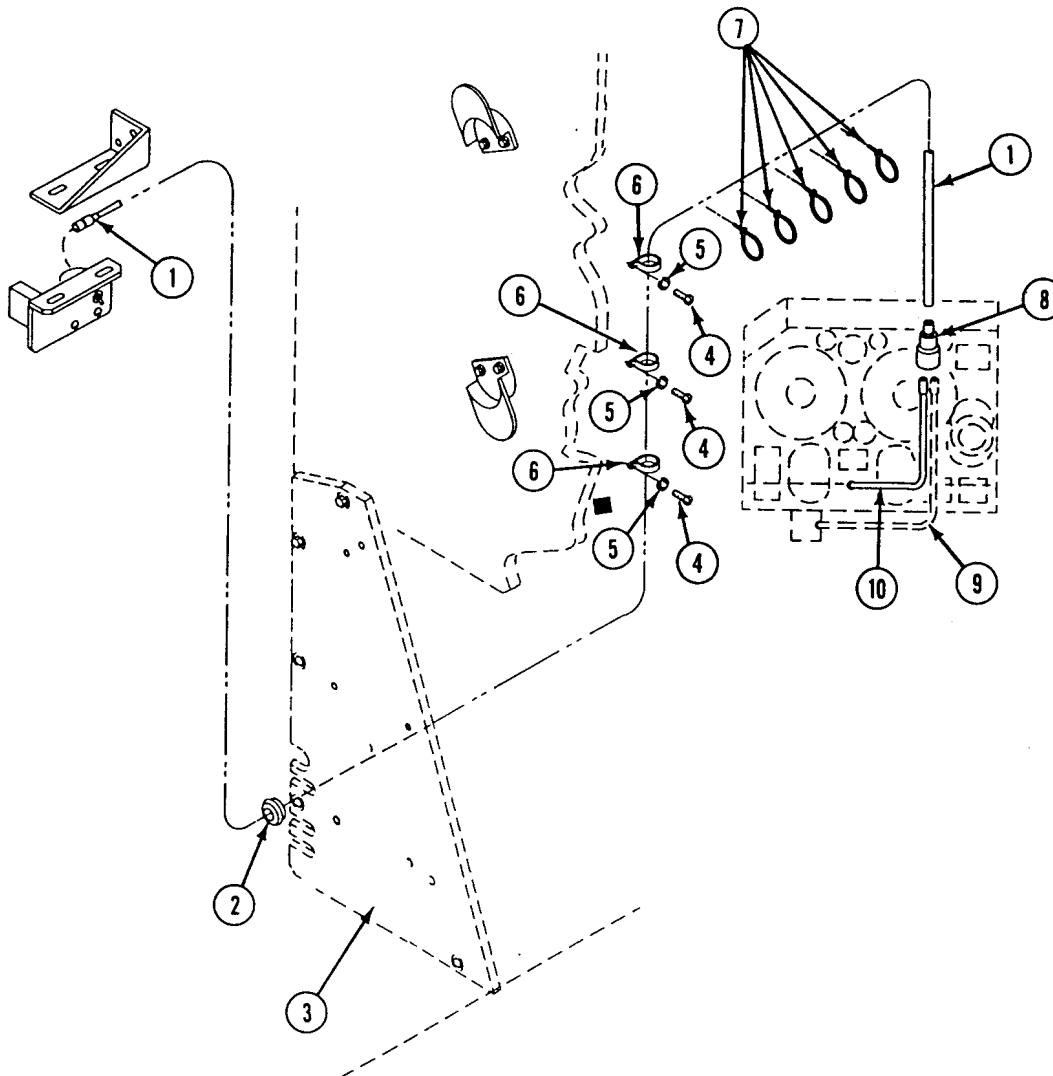


REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND BRACKETS
(M577A2 ONLY) — Continued

0676 00

INSTALLATION

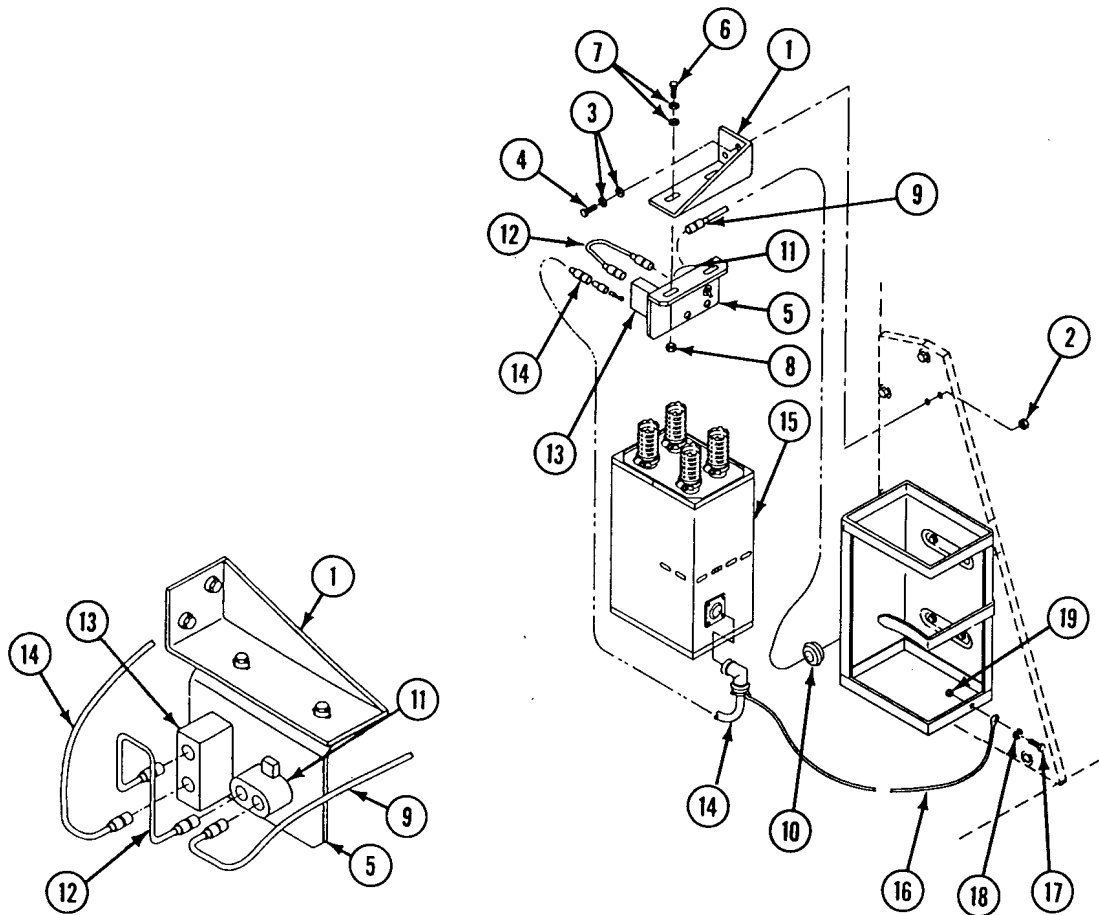
1. Install lead (10) and circuit lead 10 (9) to connector (8).
2. Install cable (1) in connector (8).
3. Route cable (1) along adjacent wiring harness. Secure with five new tie straps (7).
4. Install three clamps (6) on cable (1). Secure clamps to driver's rear bulkhead with three screws (4) and new lockwashers (5).
5. If damaged, install new grommet (2) on cable (1). Route cable through panel (3) and insert grommet.



**REPLACE M8A3 NBC CABLES, SWITCH ASSEMBLY, AND BRACKETS
(M577A2 ONLY) — Continued**

0676 00

6. Install bracket (1), two new locknuts (2), four washers (3), and two screws (4) on forward compartment bulkhead.
7. Install switch assembly (5), two screws (6), four washers (7), and two new locknuts (8) on bracket (1).
8. Install cable (9) with grommet (10) on circuit breaker (11) on switch assembly (5).
9. Install cable (12) on circuit breaker (11) and switch (13) on switch assembly (5).
10. Install power cable (14) on switch (13) on switch assembly (5) and air purifier (15).
11. Install ground lead (16), screw (17), washer (18), and new locknut (19) on frame assembly (20).



FOLLOW-THROUGH STEPS

1. Install driver's instrument panel (WP 0238 00).
2. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M8A3 NBC HOSES AND BRACKETS (M577A2 ONLY)

0677 00

THIS WORK PACKAGE COVERS:

Removal (page 0677 00-2).
Installation (page 0677 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

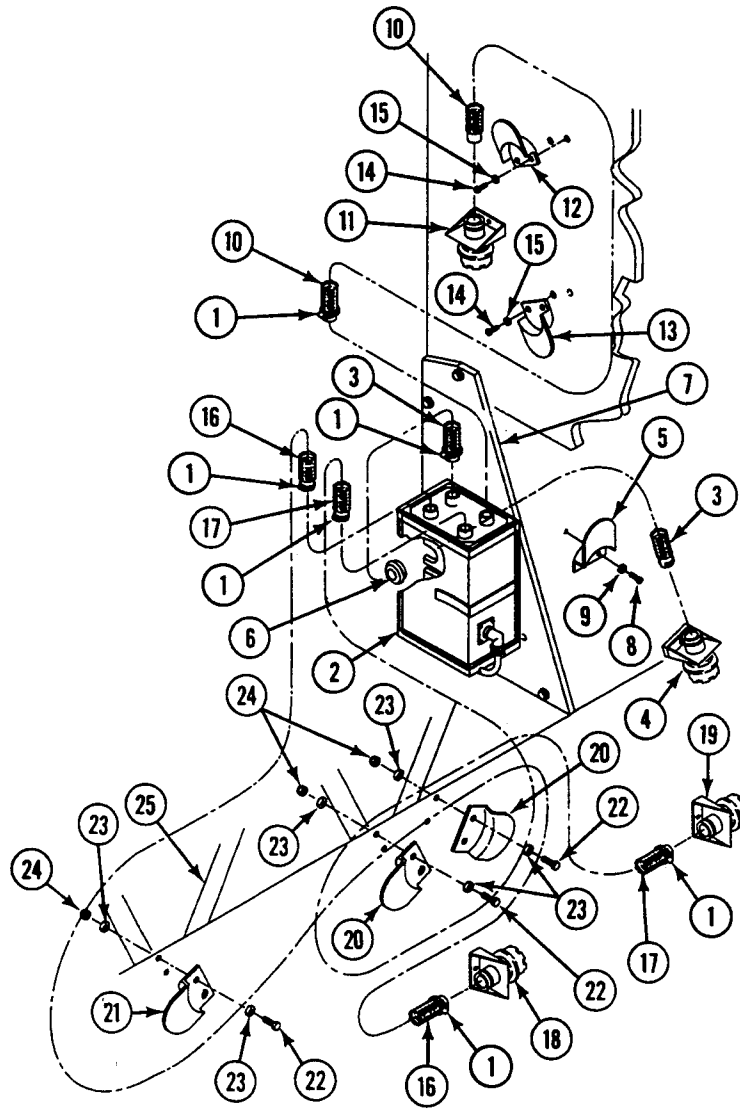
Lockwasher (6)

Locknut (6)

REMOVAL**NOTE**

Hose location may vary on air purifier.

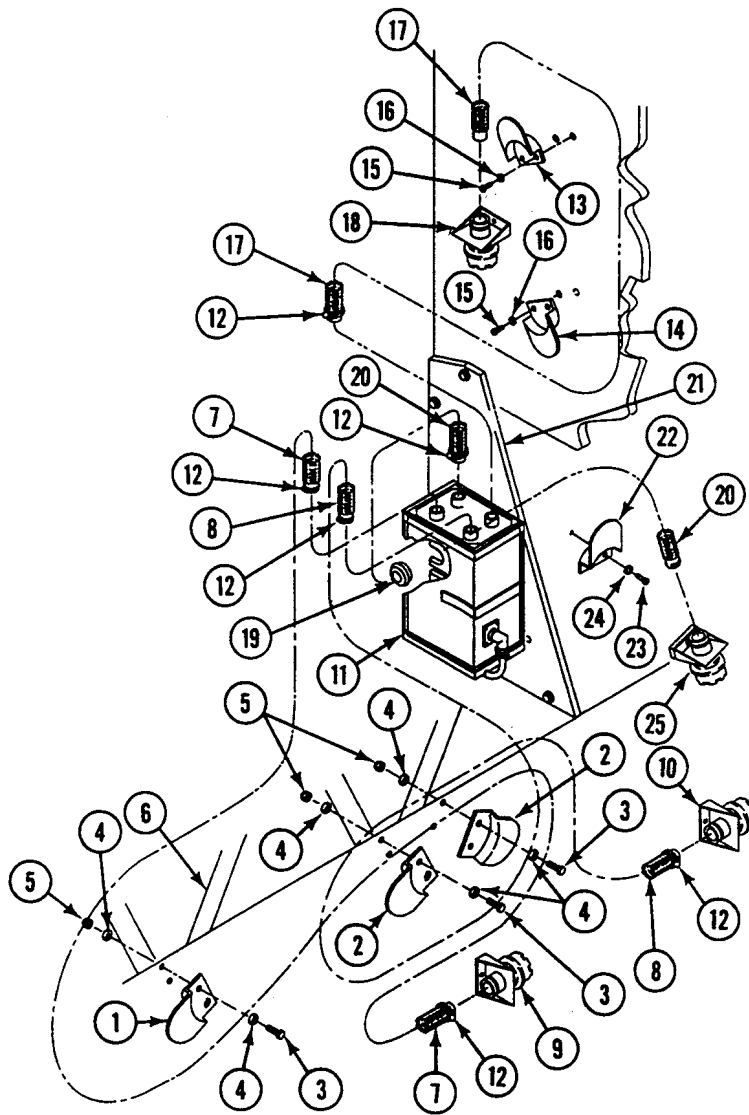
1. Loosen clamp (1) at air purifier (2) and remove driver's station hose (3) from connector (4), bracket (5), and air purifier.
2. Push hose (3) with grommet (6) through frame (7). If damaged, remove grommet.
3. Remove two screws (8), lockwashers (9), and bracket (5) from driver's bulkhead. Discard lockwashers.
4. Loosen clamp (1) at air purifier (2), and remove commander's station hose (10) from connector (11), bracket (12), bracket (13), and air purifier (2).
5. Remove four screws (14), lockwashers (15), bracket (12), and bracket (13) from forward compartment bulkhead. Discard lockwashers.
6. Loosen clamps (1) at air purifier (2), and remove two crew hoses (16) and (17) from connectors (18) and (19), two brackets (20), and bracket (21).
7. Remove six screws (22), 12 washers (23), six locknuts (24), two brackets (20), and bracket (21) from table supports (25). Discard locknuts.



INSTALLATION**NOTE**

Hose location may vary on air purifier.

1. Install bracket (1), two brackets (2), six screws (3), 12 washers (4), and six new locknuts (5) on table supports (6).
2. Install two crew hoses (7) and (8) on connectors (9) and (10).
3. Route hose (7) over bracket (2) and under bracket (1), and install in air purifier (11). Tighten clamp (12).
4. Route hose (8) over bracket (2) and under bracket (1), and install in air purifier (11). Tighten clamp (12).
5. Install bracket (13), bracket (14), four screws (15), and new lockwashers (16) on forward compartment bulkhead.
6. Install commander's station hose (17) on connector (18).
7. Install commander's station hose (17) over and under brackets (13) and (14) and install in air purifier (11). Tighten clamp (12).
8. If removed, install new grommet (19) on driver's station hose (20). Route hose through frame (21).
9. Install driver's station hose (20) on air purifier (11) and tighten clamp (12).
10. Install bracket (22), two screws (23), and new lockwashers (24) on driver's bulkhead.
11. Loop hose (20) over bracket (22) and install on connector (25).



FOLLOW-THROUGH STEPS

1. Check air flow of NBC systems. See TM 3-6680-316-10.

END OF TASK

**REPLACE M8A3/M13 AIR PURIFIER/PRECLEANER AND
FRAME (M577A2 ONLY)**

0678 00

THIS WORK PACKAGE COVERS:

Removal (page 0678 00-2).
Installation (page 0678 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

TM 3-6680-316-10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut (4)

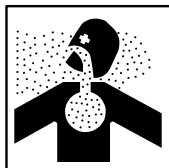
Battery ground lead disconnected (WP 0294 00)

Personnel Required

Unit Mechanic

REMOVAL

WARNING

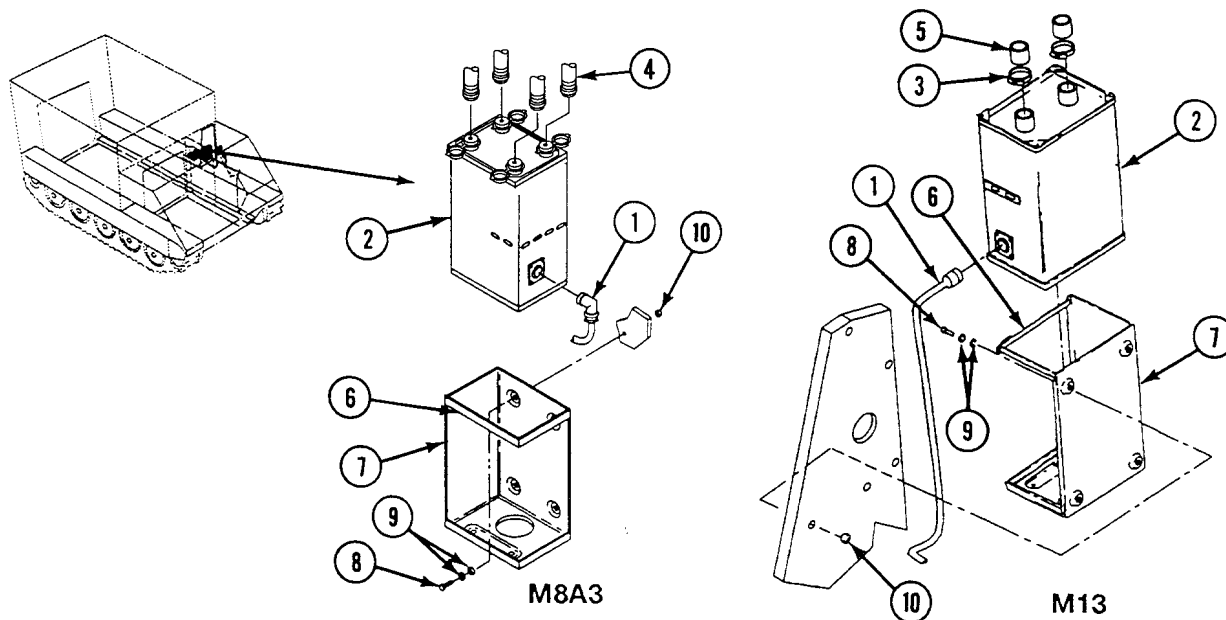


Contaminated filters are hazardous to personnel. Use precautions when handling filters. Dispose of filters using trained chemical environment personnel.

NOTE

This task covers replacement of the M8A3 and the M13 air purifier/precleaner and frame. Differences are noted in respective steps.

1. Disconnect power cable (1) from air purifier/precleaner (2).
2. For M8A3 air purifier, remove four hose quick disconnect fittings (4) from air purifier/precleaner (2). For M13 precleaner, loosen two clamps (3) and remove two couplings (5) and clamps from precleaner.
3. Unfasten latch (6) and lift air purifier/precleaner (2) from frame assembly (7).
4. Remove four screws (8), eight washers (9), four locknuts (10), and frame assembly (7) from panel. Discard locknuts.



**REPLACE M8A3/M13 AIR PURIFIER/PRECLEANER AND FRAME
(M577A2 ONLY) — Continued**

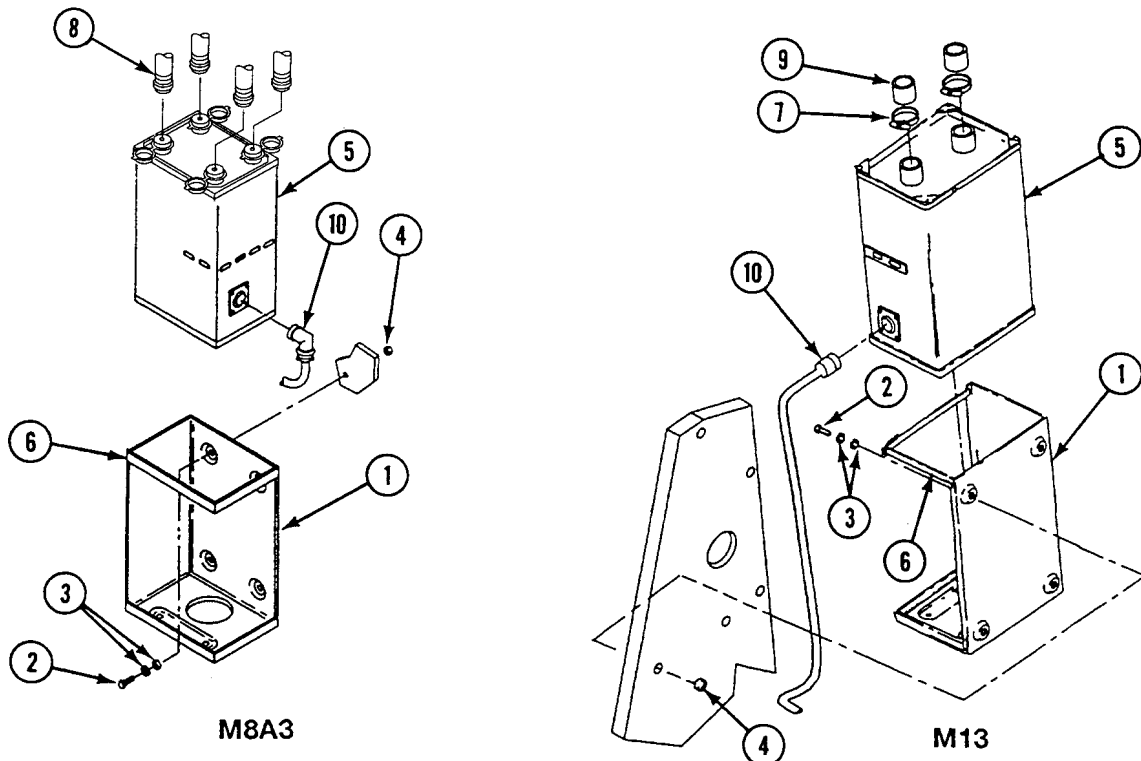
0678 00

INSTALLATION

NOTE

Air purifier/precleaner must be adjusted before installation. See TM 3-6680-316-10.

1. Install frame assembly (1), four screws (2), eight washers (3), and four new locknuts (4) on panel.
2. Place air purifier/precleaner (5) in frame assembly (1) and close latch (6).
3. For M8A3 air purifier, install four hose quick disconnect fittings (8) on air purifier (5). For M13 precleaner, install two clamps (7) and couplings (9) on precleaner and tighten clamps.
4. Connect power cable (10) to air purifier/precleaner (5).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M8A3/M13/M14 ORIFICE CONNECTOR ASSEMBLY,
SUPPORT, AND QUICK COUPLING HALF (M113A2, M1059,
M577A2, AND M1068 ONLY)**

0679 00

THIS WORK PACKAGE COVERS:

Removal (page 0679 00-2).
Installation (page 0679 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
Retaining Ring Pliers Set (WP 0780 00, Item 45)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)

Materials/Parts

Lockwasher
Lockwasher (2)

REPLACE M8A3/M13/M14 ORIFICE CONNECTOR ASSEMBLY, SUPPORT, AND QUICK COUPLING HALF (M113A2, M1059, M577A2, AND M1068 ONLY) — Continued

0679 00

REMOVAL**NOTE**

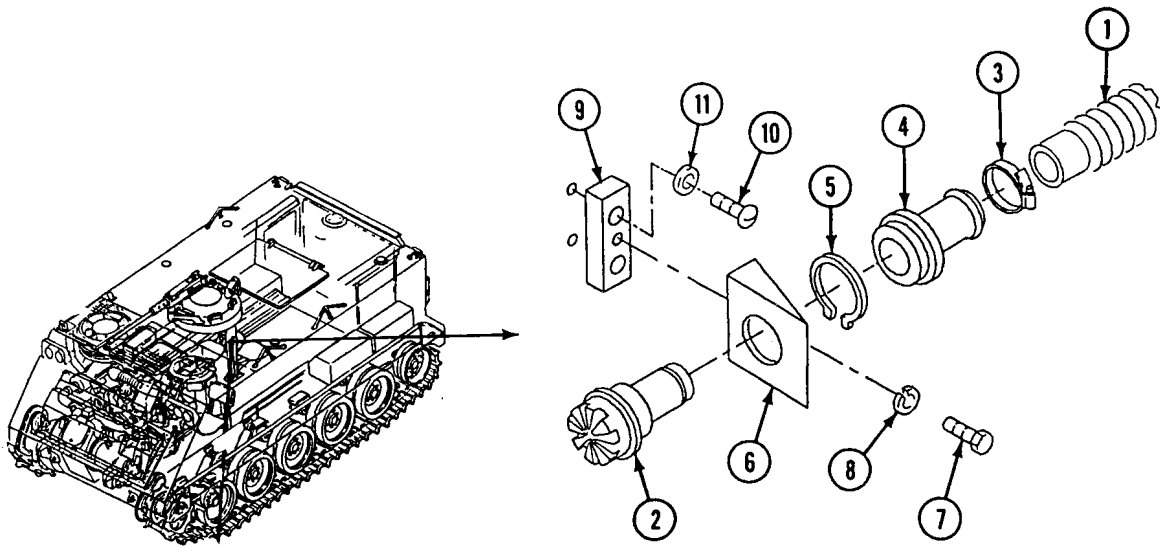
Orifice connector assembly, mounting bracket, and support are replaced in the same way in the M8A3 NBC kit and the M13 NBC kit.

1. Remove hose (1) from orifice connector assembly (2).
2. Disassemble clamp (3), quick coupling half (4), and hose (1).
3. Remove retaining ring (5) from orifice connector assembly (2).
4. Remove orifice connector assembly (2) from mounting bracket (6).

NOTE

Mounting brackets are secured directly to the carrier bulkhead or a support. Both options are covered in this task.

5. Remove screw (7), lockwasher (8), and mounting bracket (6) from bulkhead or support (9). Discard lockwasher.
6. Remove two screws (10), lockwashers (11), and support (9). Discard lockwashers.

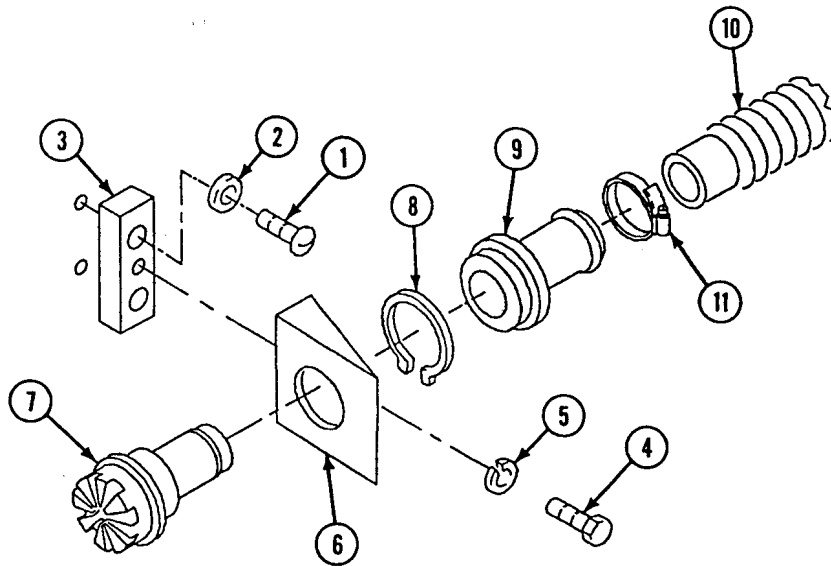


**REPLACE M8A3/M13/M14 ORIFICE CONNECTOR ASSEMBLY, SUPPORT, AND QUICK
COUPLING HALF (M113A2, M1059, M577A2, AND M1068 ONLY) — Continued**

0679 00

INSTALLATION

1. Install two screws (1), new lockwashers (2), and support (3) on bulkhead.
2. Install screw (4), new lockwasher (5), and mounting bracket (6) on support (3).
3. Install orifice connector assembly (7) into mounting bracket (6). Secure with retaining ring (8).
4. Assemble quick coupling half (9), hose (10), and clamp (11).
5. Install hose (10) on orifice connector assembly (7).

**END OF TASK**

REPLACE M13 PRECLEANER AND FRAME (M1068 ONLY)

0680 00

THIS WORK PACKAGE COVERS:

Removal (page 0680 00-1).
 Installation (page 0680 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

TM 3-6680-316-10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

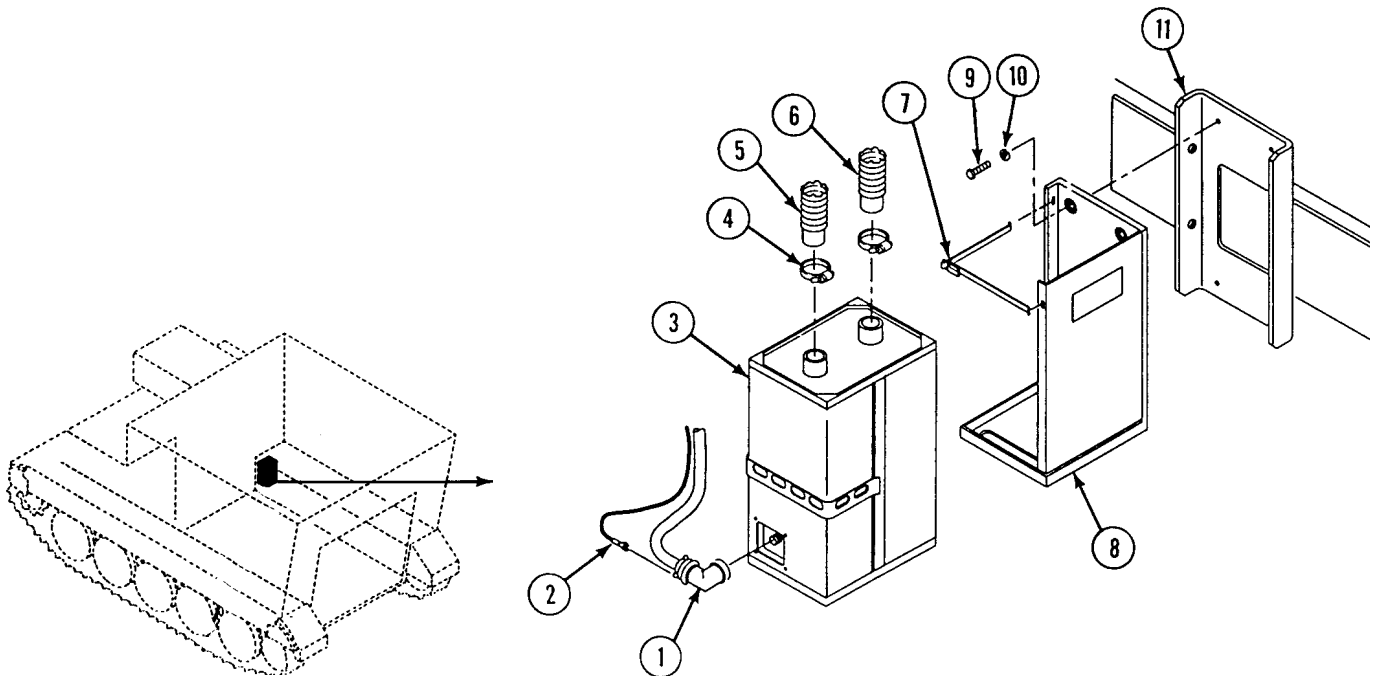
Lockwasher (4)

Personnel Required

Unit Mechanic

REMOVAL

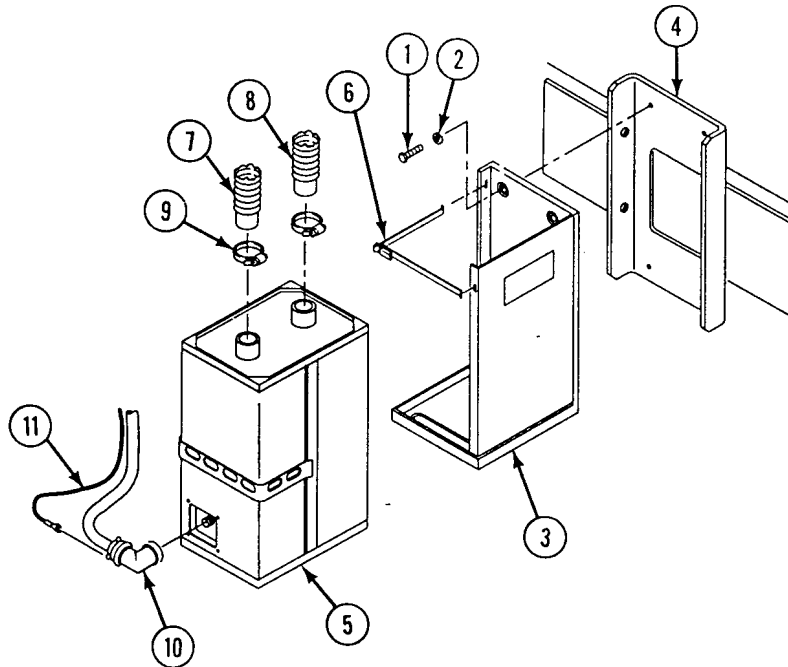
1. Remove circuit lead 538A (1) with ground lead (2) from precleaner (3).
2. Loosen two clamps (4) and remove two hoses (5) and (6) from precleaner (3).
3. Unfasten latch (7) and lift precleaner (3) from frame (8).
4. Remove four screws (9), lockwashers (10), and frame (8) from mounting bracket (11). Discard lockwashers.



INSTALLATION**NOTE**

The precleaner must be adjusted before installation. See TM 3-6680-316-10.

1. Install new lockwashers (1), four screws (2), and frame (3) on mounting bracket (4).
2. Install precleaner (5) in frame (3) and secure with latch (6).
3. Install two hoses (7) and (8) and clamps (9) on precleaner (5). Tighten clamps.
4. Install circuit lead 538A (10) with ground lead (11) on precleaner (5).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M13 NBC FILTERS AND HOSES (M1068 ONLY)

0681 00

THIS WORK PACKAGE COVERS:

Removal (page 0681 00-2).
 Installation (page 0681 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)
 Radio operator's seats removed (WP 0489 00)
 Crew compartment floor plates removed (WP 0440 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

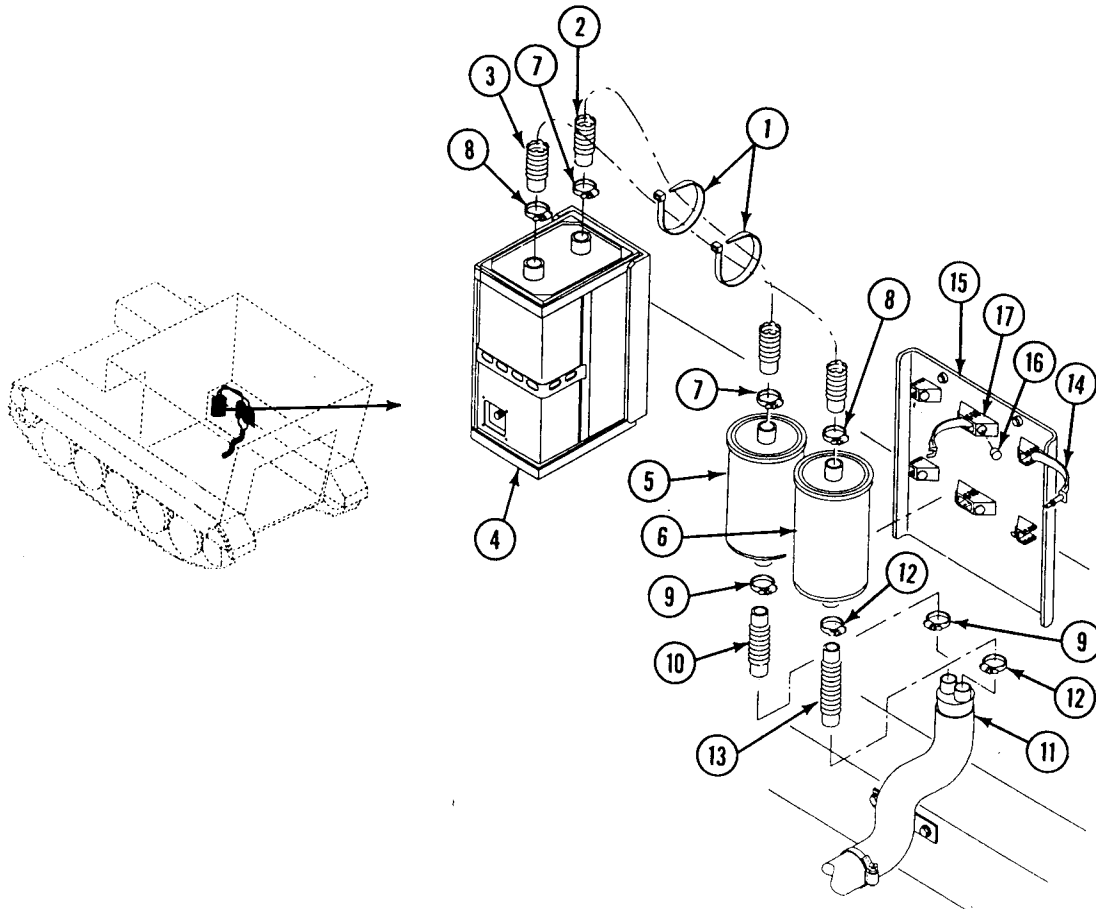
Lockwasher (4)
 Tie strap (AR)

Personnel Required

Unit Mechanic

REMOVAL

1. Cut two tie straps (1) from two hoses (2) and (3) between precleaner (4) and filters (5) and (6). Discard tie straps.
2. Loosen two clamps (7) and remove hose (2) from precleaner (4) and filter (5).
3. Loosen two clamps (8) and remove hose (3) from precleaner (4) and filter (6).
4. Loosen two clamps (9) and remove hose (10) and clamps from filter (5) and manifold (11).
5. Loosen two clamps (12) and remove hose (13) and clamps from filter (6) and manifold (11).
6. Loosen four clamps (14). Open clamps and remove filters (5) and (6) from mount (15).
7. If damaged, remove any rubber bumper (16) from bracket (17). Discard bumpers.

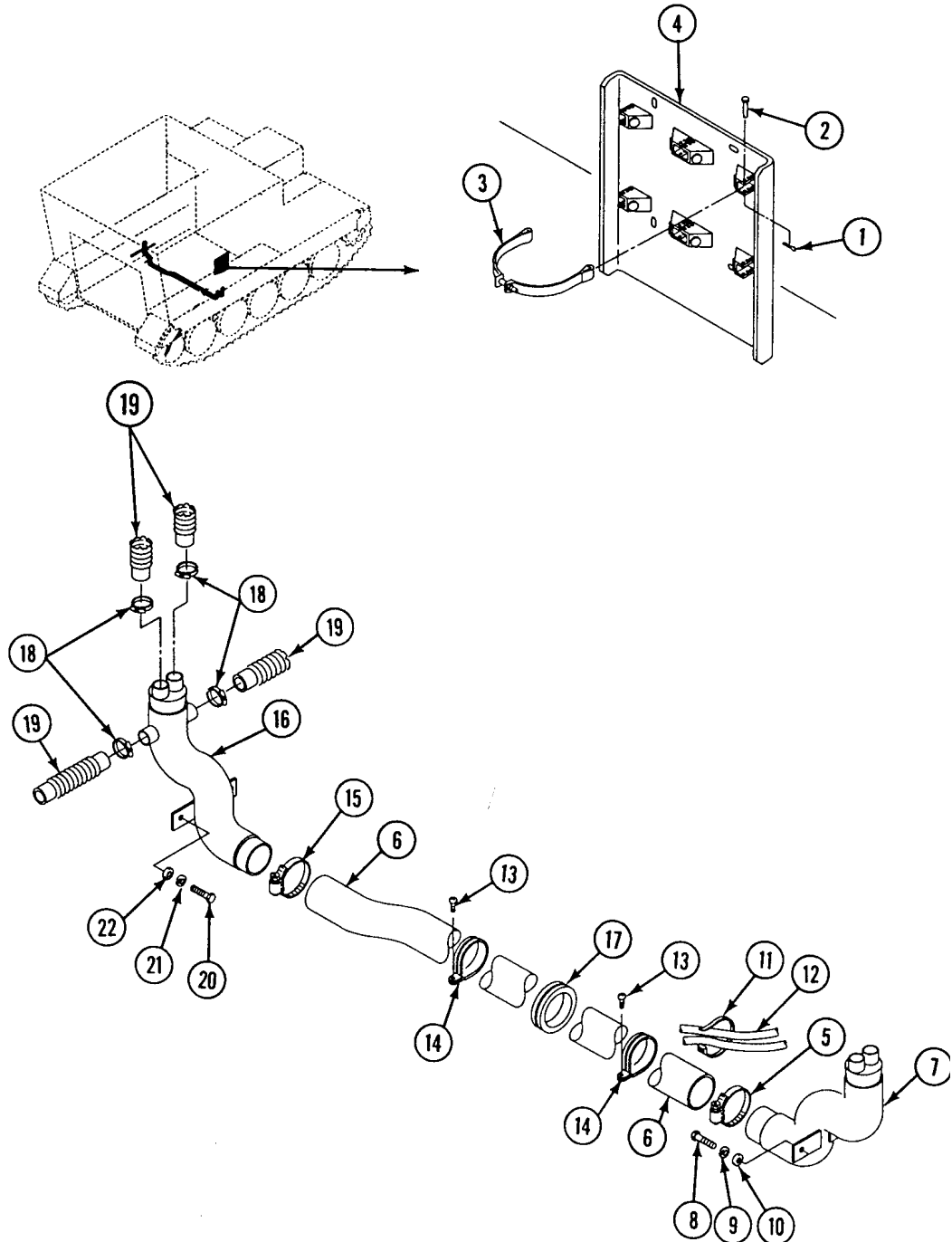


8. If damaged, remove cotter pin (1), straight pin (2), and clamp (3) from bracket (4) as required. Discard cotter pins.
9. Loosen clamp (5) and remove hose (6) from manifold (7).
10. Remove two screws (8), lockwashers (9), washers (10), and manifold (7) from sponson. Discard lockwashers.
11. Cut tie strap (11) securing two personnel heater fuel lines (12) to hose (6). Discard tie strap.
12. Remove two screws (13) and clamps (14) from hose (6).
13. Loosen clamp (15) and remove hose (6) from manifold (16).

REPLACE M13 NBC FILTERS AND HOSES (M1068 ONLY) — Continued

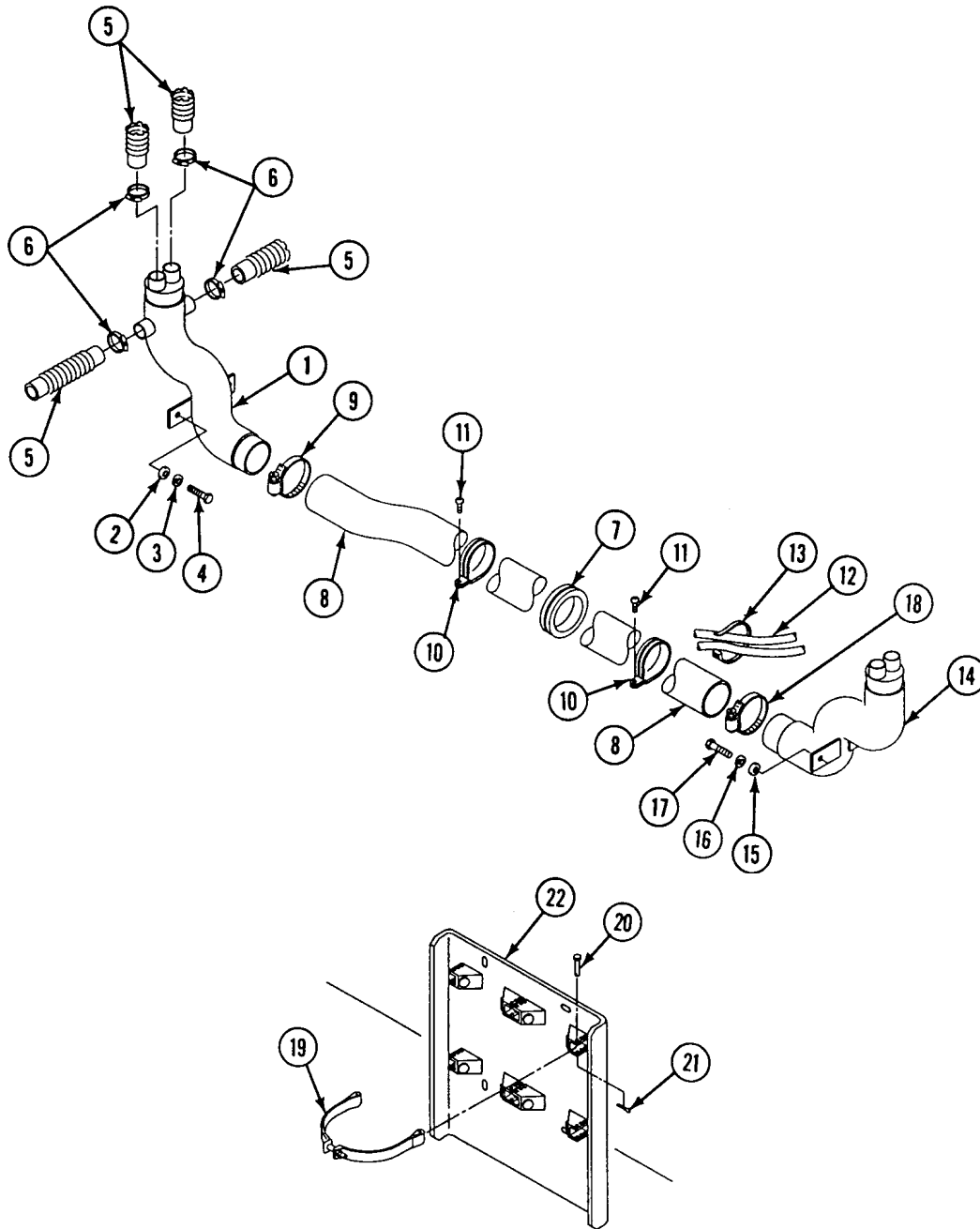
0681 00

14. Remove hose (6) with grommet (17) from hull.
15. If damaged, remove grommet (17) from hose (6). Discard grommet.
16. Loosen four clamps (18) and remove four heater inlet hoses (19) from manifold (16).
17. Remove two screws (20), lockwashers (21), washers (22), and manifold (16) from sponson. Discard lockwashers.



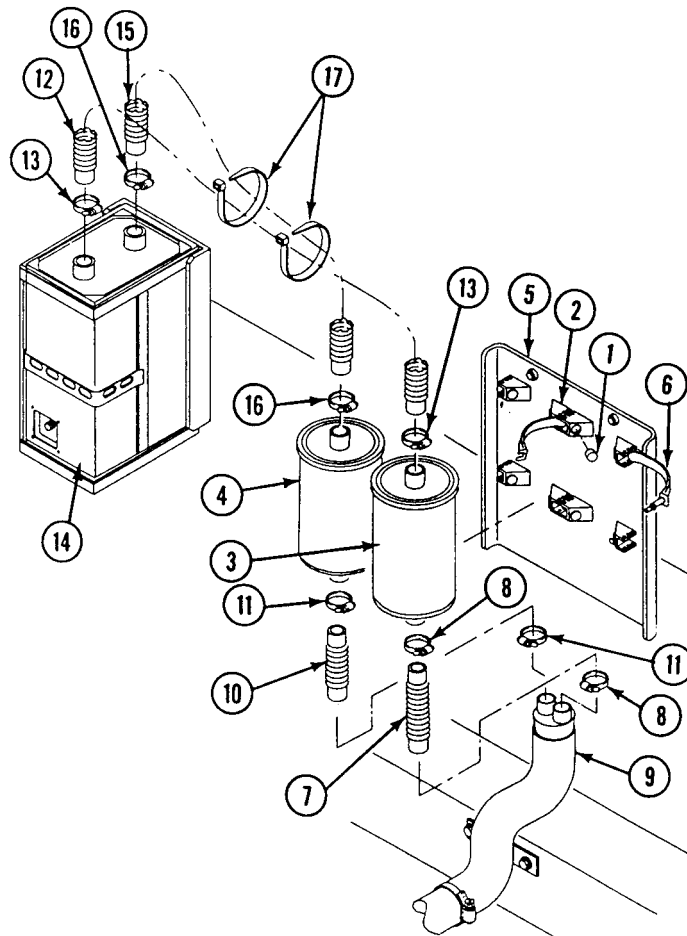
INSTALLATION

1. Install manifold (1) on sponson. Secure with new two new lockwashers (2), washers (3), and screws (4).
2. Install four heater inlet hoses (5) and clamps (6) on manifold (1). Tighten clamps.
3. If removed, install new grommet (7) on hose (8). Route hose through hull and insert grommet in hull.
4. Install hose (8) and clamp (9) on manifold (1). Tighten clamp.
5. Install two clamps (10) on hose (8). Secure clamps and hose to hull with two screws (11).
6. Secure two personnel heater fuel lines (12) to hose (8) with new tie strap (13).
7. Install manifold (14) on sponson. Secure with two washers (15), new lockwashers (16), and screws (17).
8. Install hose (8) and clamp (18) on manifold (14). Tighten clamp.
9. If removed, install clamps (19), straight pins (20), and new cotter pins (21) on bracket (22).



REPLACE M13 NBC FILTERS AND HOSES (M1068 ONLY) — Continued**0681 00**

10. If removed or missing, install new rubber bumpers (1) on bracket (2), as required.
11. Install filters (3) and (4) on mount (5). Close and tighten four clamps (6).
12. Install hose (7) and two clamps (8) on filter (3) and manifold (9). Tighten clamps.
13. Install hose (10) and two clamps (11) on filter (4) and manifold (9). Tighten clamps.
14. Install hose (12) and two clamps (13) on precleaner (14) and filter (3). Tighten clamps.
15. Install hose (15) and two clamps (16) on precleaner (14) and filter (4). Tighten clamps.
16. Install two new tie straps (17) to secure two hoses (12) and (15) together between precleaner (14) and filters (3) and (4).

**FOLLOW-THROUGH STEPS**

1. Install crew compartment floor plates (WP 0440 00).
2. Install radio operator's seats (WP 0489 00).
3. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M13 NBC HEATER HOSES (M1068 ONLY)

0682 00

THIS WORK PACKAGE COVERS:

Removal (page 0682 00-2).
 Installation (page 0682 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

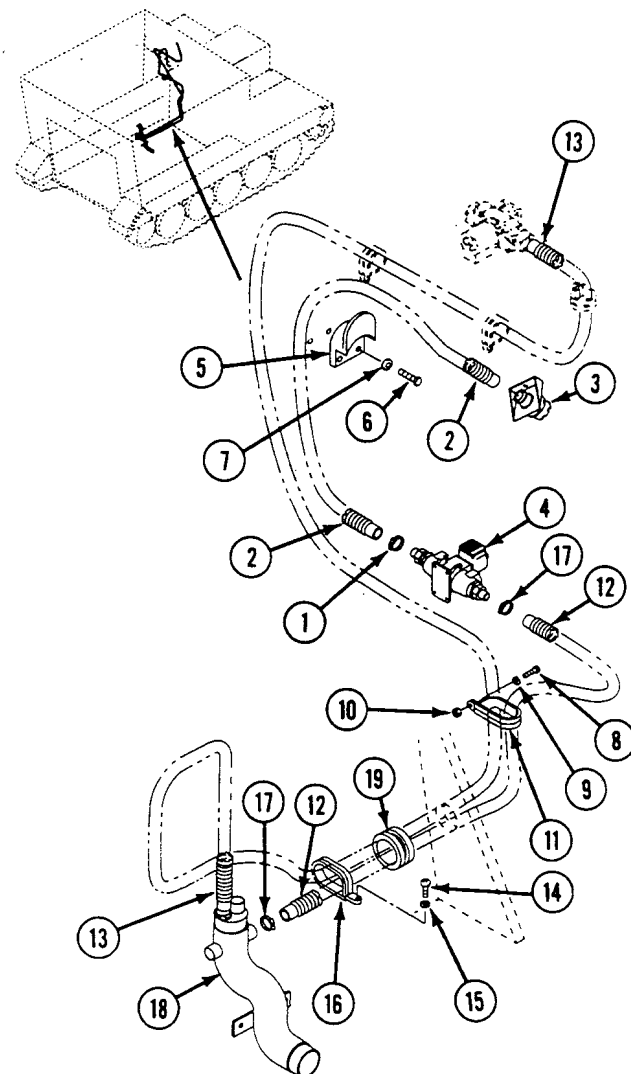
Locknut (4)

Lockwasher (4)

Tie strap (AR)

REMOVAL

1. Loosen two clamps (1) on driver's outlet hose (2). Remove hose from connector (3) and driver's heater (4).
2. If bracket (5) is damaged, remove two screws (6), lockwashers (7), and bracket from driver's bulkhead. Discard lockwashers.
3. Remove screw (8), washer (9), locknut (10), and clamp (11) from welded bracket. Remove clamp from driver's inlet hose (12) and commander's inlet hose (13). Discard locknut.
4. Remove screw (14), lockwasher (15), and clamp (16) from sponson. Remove clamp from driver's inlet hose (12) and commander's inlet hose (13). Discard lockwasher.
5. Loosen two clamps (17) on driver's inlet hose (12). Remove hose from heater (4) and manifold (18).
6. Remove driver's inlet hose (12), with grommet (19), from welded frame. Discard grommet if damaged.

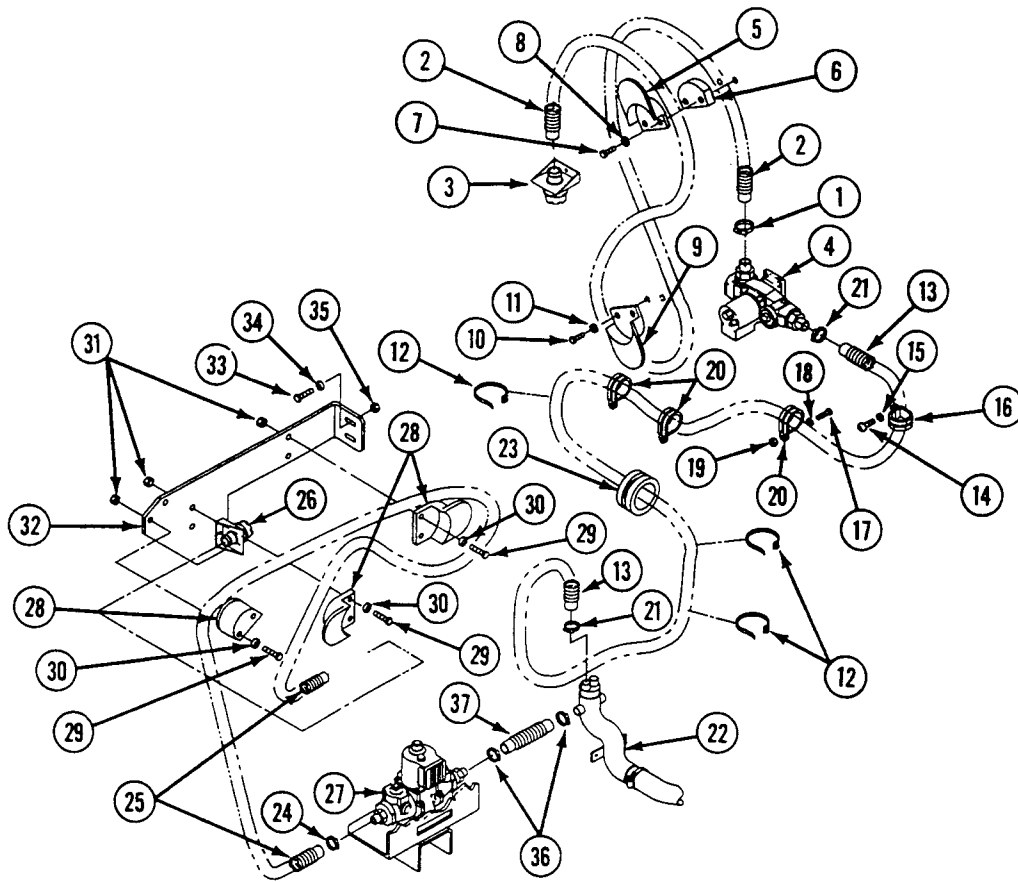


7. Loosen clamp (1) on commander's outlet hose (2). Remove hose from connector (3) and commander's heater (4).
8. If upper bracket (5) or spacer (6) are damaged, remove two screws (7), lockwashers (8), bracket, and spacer from commander's bulkhead. Discard lockwashers.
9. If lower bracket (9) is damaged, remove two screws (10), lockwashers (11), and bracket from commander's bulkhead. Discard lockwashers.

REPLACE M13 NBC HEATER HOSES (M1068 ONLY) — Continued

0682 00

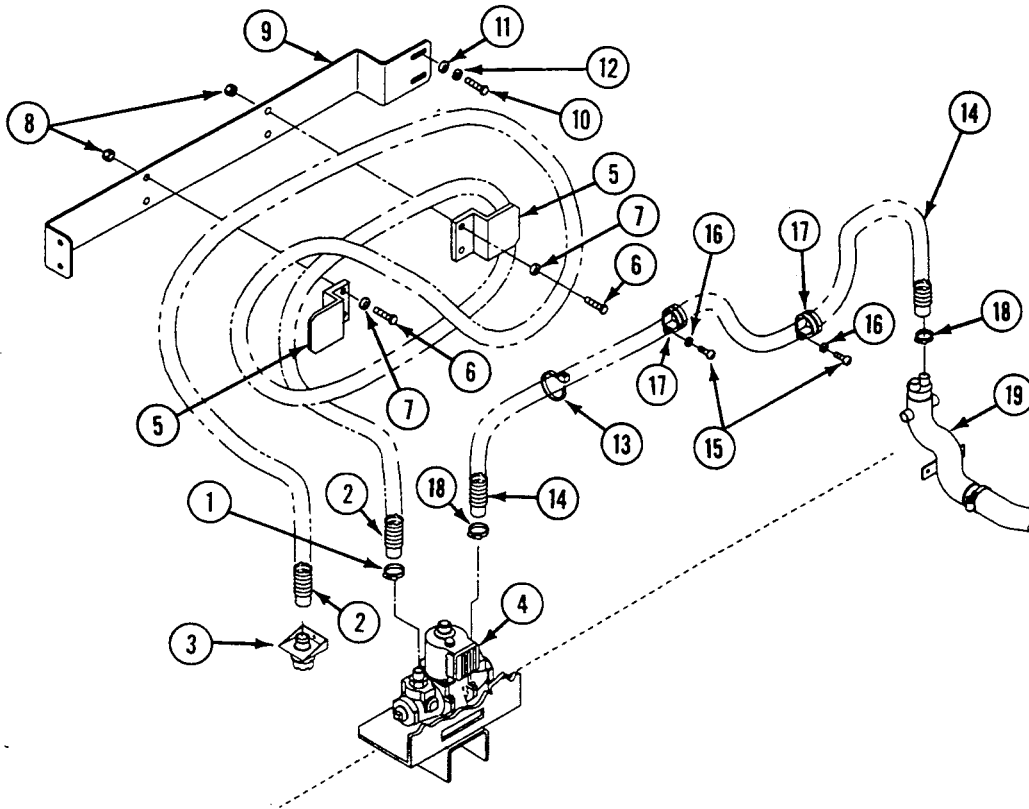
10. Cut all tie straps (12) securing commander's inlet hose (13) to electrical leads. Discard tie straps.
11. Remove screw (14), lockwasher (15), and clamp (16) from commander's bulkhead. Remove clamp from commander's inlet hose (13). Discard lockwasher.
12. Remove three screws (17), washers (18), locknuts (19), and clamps (20) from crossbeam. Remove clamps from commander's inlet hose (13). Discard locknuts.
13. Loosen two clamps (21) on commander's inlet hose (13). Remove hose from commander's heater (4) and manifold (22).
14. Remove commander's inlet hose (13), with grommet (23), from welded frame. Discard grommet if damaged.
15. Loosen clamp (24) on forward operator's outlet hose (25). Remove hose from connector (26) and forward operator's heater (27).
16. If any of three brackets (28) are damaged, remove two screws (29), washers (30), locknuts (31), and damaged bracket (28) from bracket (32). Discard locknuts.
17. If bracket (32) is damaged, remove two screws (33), washers (34), locknuts (35), and damaged bracket from table supports. Discard locknuts.
18. Loosen two clamps (36) on forward operator's inlet hose (37). Remove hose from forward operator's heater (27) and manifold (22).



REPLACE M13 NBC HEATER HOSES (M1068 ONLY) — Continued

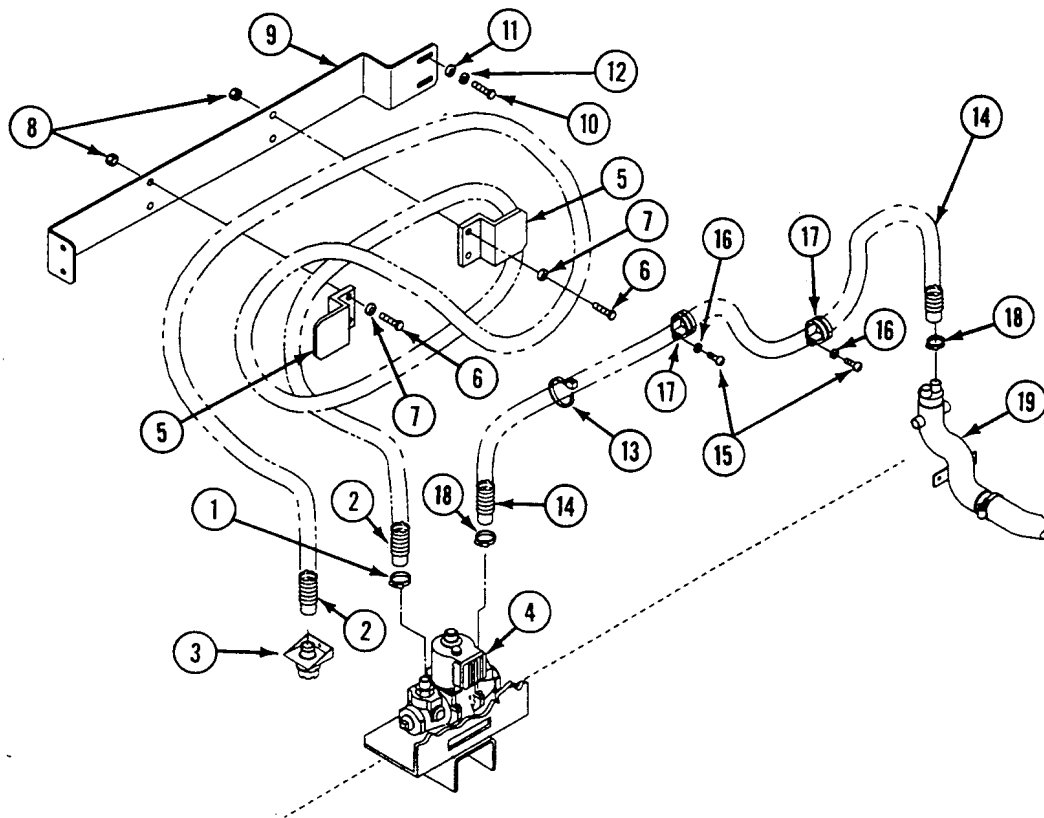
0682 00

19. Loosen clamp (1) on rear operator's outlet hose (2). Remove hose from connector (3) and rear operator's heater (4).
20. If either of two brackets (5) are damaged, remove two screws (6), washers (7), locknuts (8), and damaged bracket (5) from bracket (9). Discard locknuts.
21. If bracket (9) is damaged, remove four screws (10), washers (11), lockwashers (12), and bracket from table supports. Discard lockwashers.
22. Cut tie straps (13) securing electrical leads to rear operator's inlet hose (14). Discard tie straps.
23. Remove two screws (15), lockwashers (16), and clamps (17) from spinson. Remove clamps from rear operator's inlet hose (14). Discard lockwashers.
24. Loosen two clamps (18) on rear operator's inlet hose (14). Remove hose from rear operator's heater (4) and manifold (19).



INSTALLATION

1. Install rear operator's inlet hose (14) and two clamps (18) on rear operator's heater (4) and manifold (19). Tighten clamps.
2. Install two clamps (17) on rear operator's inlet hose (14) Secure clamps on sponson with two screws (15) and new lockwashers (16).
3. Secure electrical leads to rear operator's inlet hose (14) with new tie straps (13).
4. If bracket (9) was removed, install bracket on table supports with four screws (10), washers (11), and new lockwashers (12).
5. If either bracket (5) was removed, install bracket (5) on bracket (9) with two screws (6), washers (7), and new locknuts (8).
6. Install rear operator's outlet hose (2) and two clamps (1) on connector (3) and rear operator's heater (4). Tighten clamps.

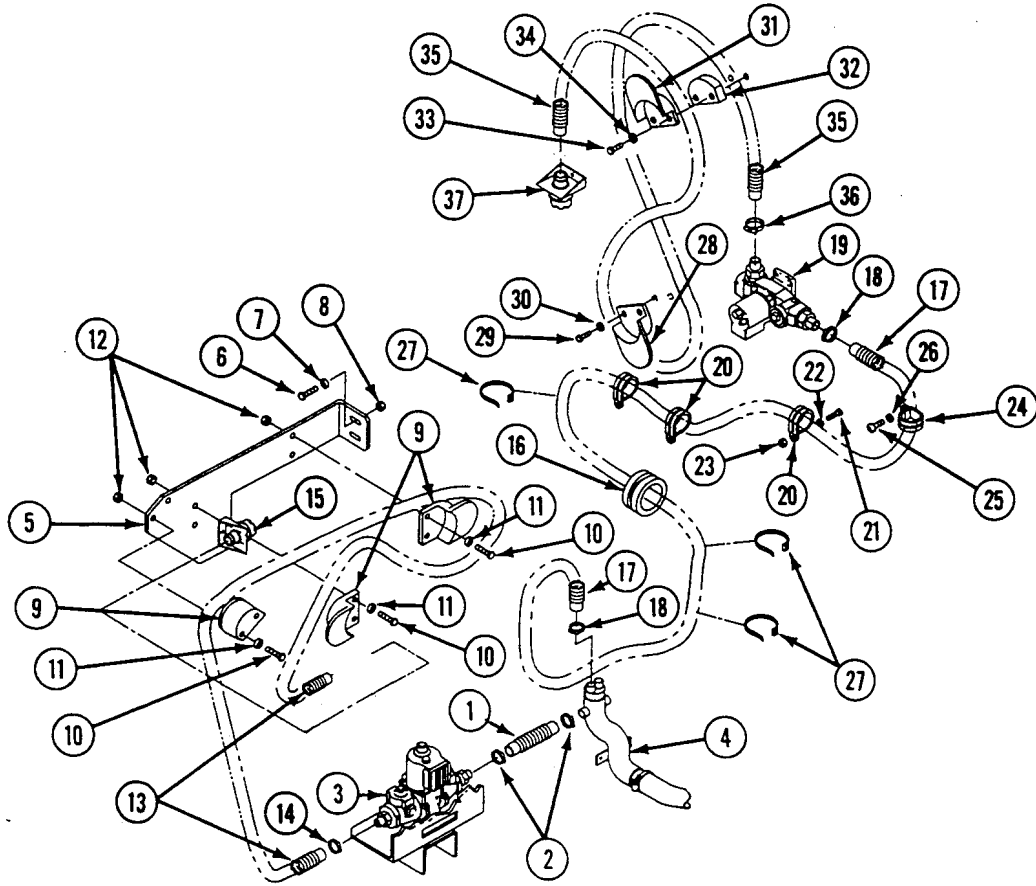


REPLACE M13 NBC HEATER HOSES (M1068 ONLY) — Continued

0682 00

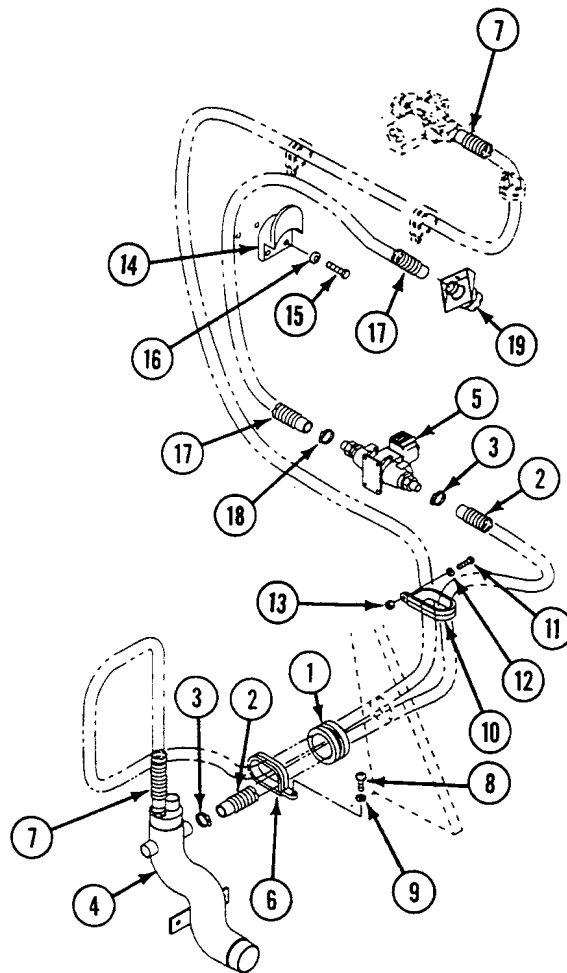
7. Install forward operator's inlet hose (1) and two clamps (2) on forward operator's heater (3) and manifold (4). Tighten clamps.
8. If bracket (5) was removed, install bracket on table supports with two screws (6), washers (7), and new locknuts (8).
9. If any of three brackets (9) was removed, install bracket (9) on bracket (5) with two screws (10), washers (11), and new locknuts (12).
10. Install forward operator's outlet hose (13) and clamp (14) on connector (15) and forward operator's heater (3). Tighten clamp.
11. If grommet (16) was removed, install new grommet on commander's inlet hose (17). Route hose through welded frame and insert grommet.
12. Install commander's inlet hose (17) and two clamps (18) on commander's heater (19) and manifold (4). Tighten clamps.
13. Install three clamps (20) on commander's inlet hose (17). Secure clamps on crossbeam with three screws (21), washers (22), and new locknuts (23).
14. Install clamp (24) on commander's inlet hose (17). Secure clamp on commander's bulkhead with screw (25) and new lockwasher (26).
15. Secure electrical leads to commander's inlet hose (17) with new tie straps (27).
16. If lower bracket (28) was removed, install bracket on commander's bulkhead with two screws (29) and new lockwashers (30).
17. If upper bracket (31) and spacer (32) were removed, install bracket and spacer on commander's bulkhead with two screws (33) and new lockwashers (34).

18. Install commander's outlet hose (35) and clamp (36) on connector (37) and commander's heater (19). Tighten clamp.



REPLACE M13 NBC HEATER HOSES (M1068 ONLY) — Continued**0682 00**

19. If grommet (1) was removed, install new grommet on driver's inlet hose (2). Route hose through welded frame and insert grommet in frame.
20. Install driver's inlet hose (2) and two clamps (3) on manifold (4) and driver's heater (5). Tighten clamps.
21. Install clamp (6) on driver's inlet hose (2) and commander's inlet hose (7). Secure clamp on sponson with screw (8) and new lockwasher (9).
22. Install clamp (10) on driver's inlet hose (2) and commander's inlet hose (7). Secure clamp on welded bracket with screw (11), washer (12), and new locknut (13).
23. If bracket (14) was removed, install bracket on driver's bulkhead with two screws (15) and new lockwashers (16).
24. Install driver's outlet hose (17) and clamp (18) on connector (19) and driver's heater (5). Tighten clamp.

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Check air flow of NBC systems. See TM 3-6680-316-10.

END OF TASK

REPLACE M3 NBC HEATER CONTROL BOX (M1068 ONLY)

0683 00

THIS WORK PACKAGE COVERS:

Removal (page 0683 00-1).
 Installation (page 0683 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

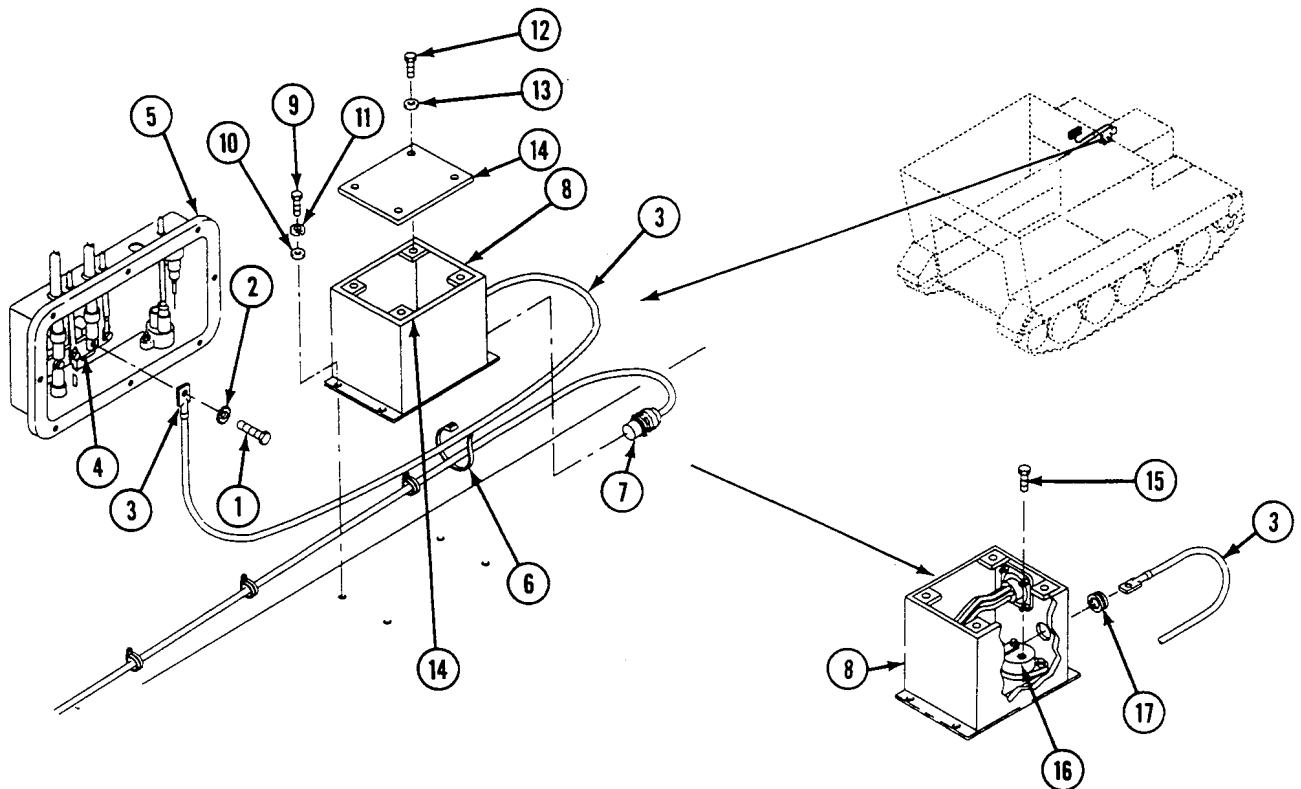
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery ground lead disconnected (WP 0294 00)
 Master switch panel assembly opened (WP 0221 00)

Materials/Parts

Lockwasher (4)
 Lockwasher
 Tie strap

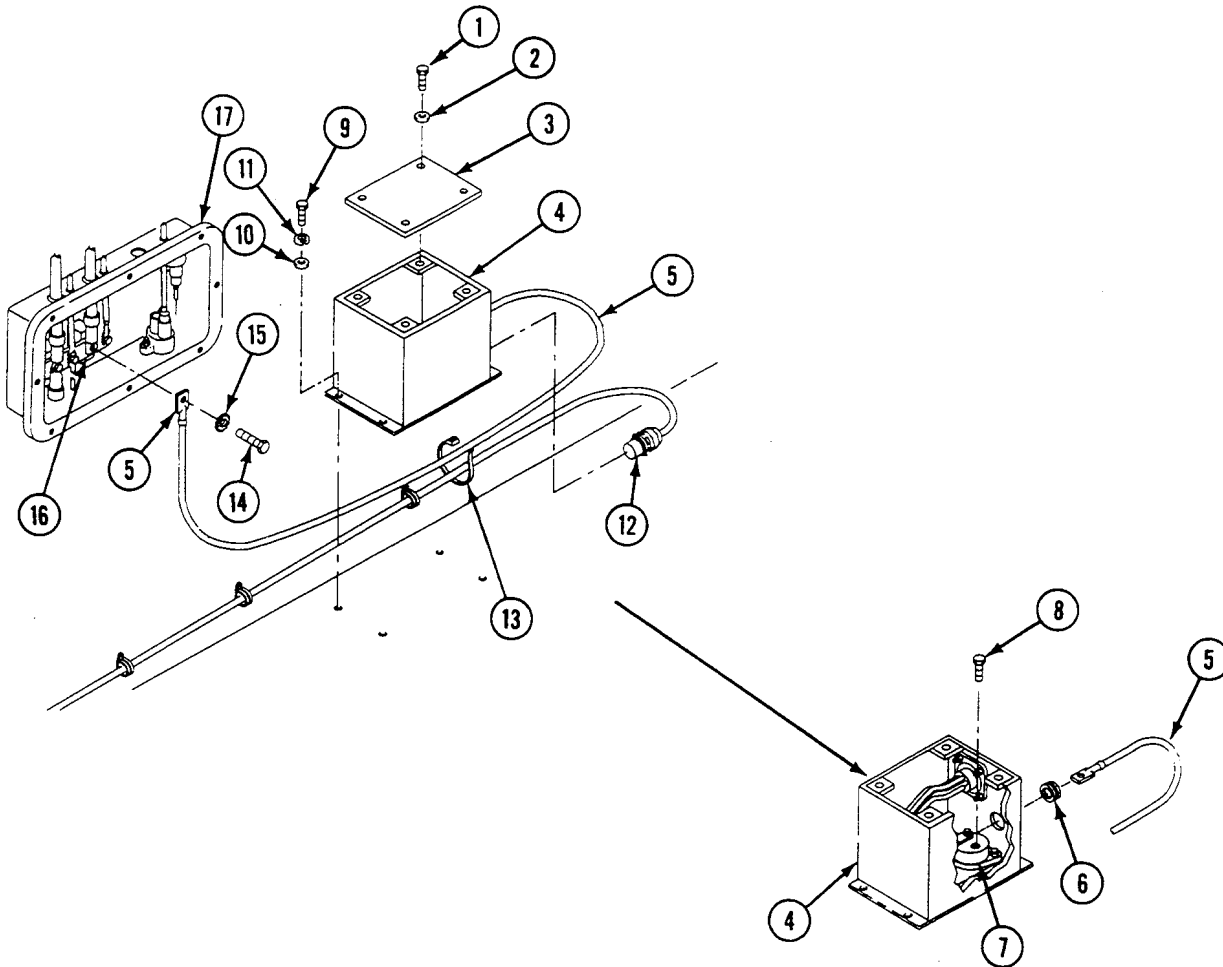
REMOVAL

1. Remove screw (1), lockwasher (2), and circuit 536 cable (3) from bus bar (4) in distribution box (5). Discard lockwasher.
2. Cut tie strap (6) that secures cable (3) to wiring harness (7). Discard tie strap.
3. Disconnect wiring harness (7) from control box (8).
4. Remove four screws (9), washers (10), lockwashers (11), and control box (8) from driver's sponson. Discard lockwashers.
5. Remove four screws (12), washers (13), and cover (14) from control box (8).
6. Remove screw (15) and terminal of cable (3) from circuit breaker (16). Pull cable and grommet (17) from control box (8).
7. Install cover (14), four washers (13), and screws (12) on control box (8).



INSTALLATION

1. Remove four screws (1), washers (2), and cover (3) from control box (4).
2. Install circuit 536 cable (5) and grommet (6) in control box (4). Position terminal of cable in circuit breaker (7). Install terminal of cable and screw (8) on circuit breaker.
3. Install cover (3), four washers (2), and screws (1) on control box (4).
4. Install four screws (9), washers (10), new lockwashers (11), and control box (4) on driver's sponson.
5. Connect wiring harness (12) to control box (4).
6. Secure cable (5) to wiring harness (12) with new tie strap (13).
7. Install cable (5), new lockwasher (15), and screw (14) on bus bar (16) in distribution box (17).



FOLLOW-THROUGH STEPS

1. Install master switch panel (WP 0221 00).
2. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY)

0684 00

THIS WORK PACKAGE COVERS:

- Removal (page 0684 00-1).
- Installation (page 0684 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Locknut (4)

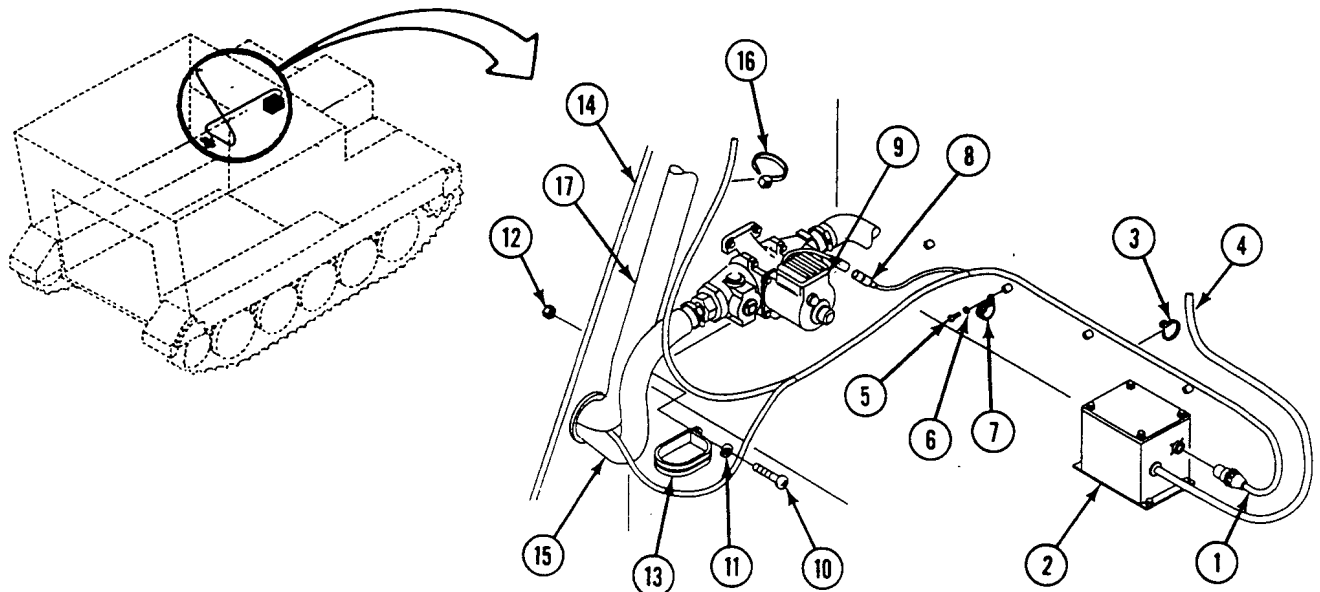
Lockwasher (10)

Lockwasher

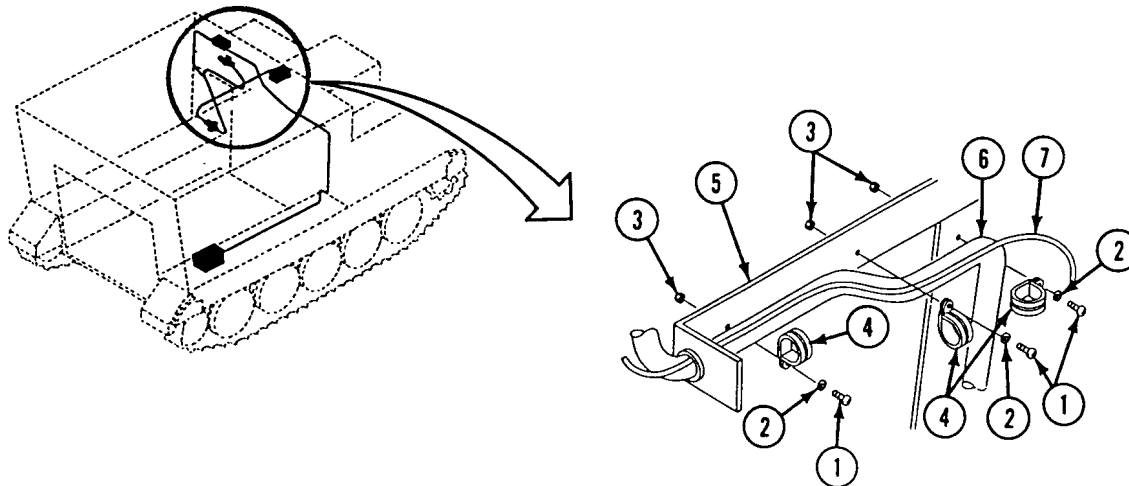
Tie strap (AR)

REMOVAL

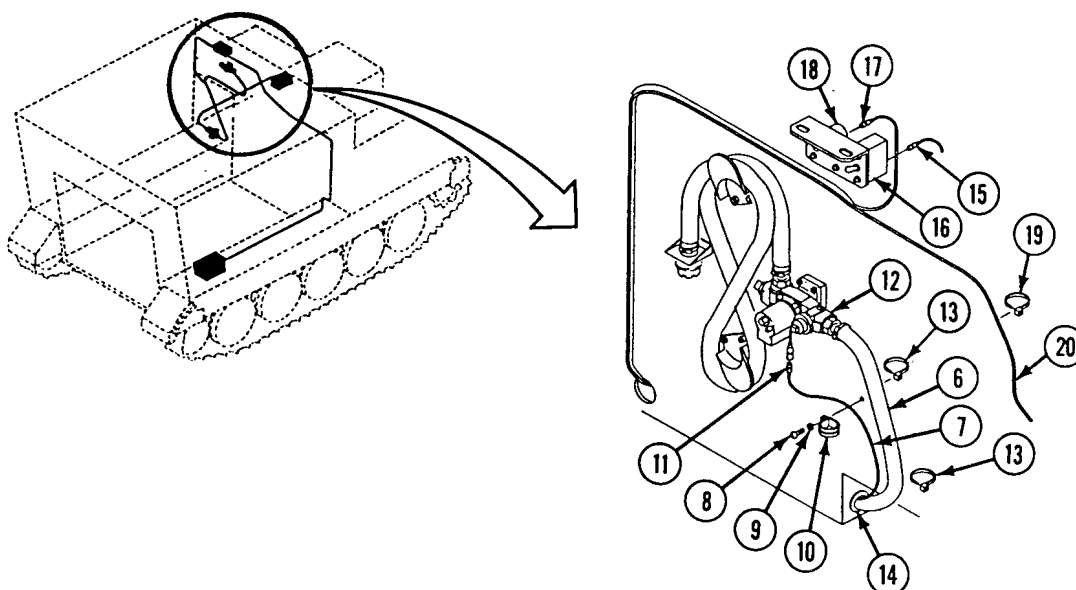
1. Disconnect wiring harness (1) from NBC control box (2).
2. Cut tie strap (3) that secures cable (4) to wiring harness (1). Discard tie strap.
3. Remove four screws (5), lockwashers (6), clamps (7), and wiring harness (1) from bulkhead weldnuts. Remove clamps from wiring harness. Discard lockwashers.
4. Remove circuit lead 537A (8) from driver's heater (9).
5. Remove screw (10), washer (11), locknut (12), and clamp (13) from frame (14). Remove clamp from driver's heater inlet hose (15) and wiring harness (1). Discard locknut.
6. Cut tie straps (16) that secure wiring harness (1) to commander's heater inlet hose (17). Discard tie straps.



7. Remove three screws (1), washers (2), locknuts (3), and clamps (4) from frame (5) and crossbeam. Remove clamps from commander's heater inlet hose (6) and wiring harness (7). Discard locknuts.



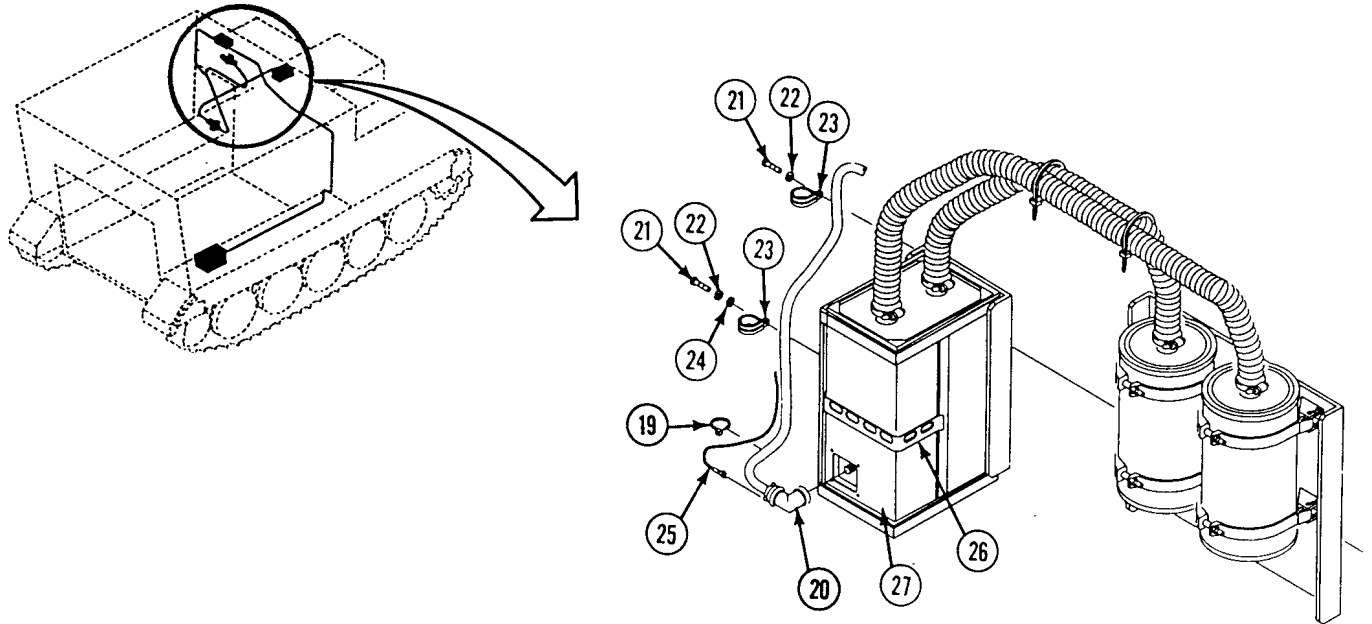
8. Remove screw (8), lockwasher (9), and clamp (10) from forward bulkhead. Remove clamp from hose (6) and wiring harness (7). Discard lockwasher.
9. Remove circuit lead 537B (11) from commander's heater (12).
10. Cut tie straps (13) that secure wiring harness (7) to adjacent wiring harnesses and hoses. Discard tie straps.
11. Pull circuit lead 537B (11) through grommet (14) on hose (6).
12. Remove circuit lead 579C (15) from air filter switch (16).
13. Remove circuit lead 537C (17) from air filter ON lamp (18).
14. Cut and remove all tie straps (19) along circuit lead 538A (20) and adjacent wiring harnesses. Discard tie straps.



REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY) — Continued

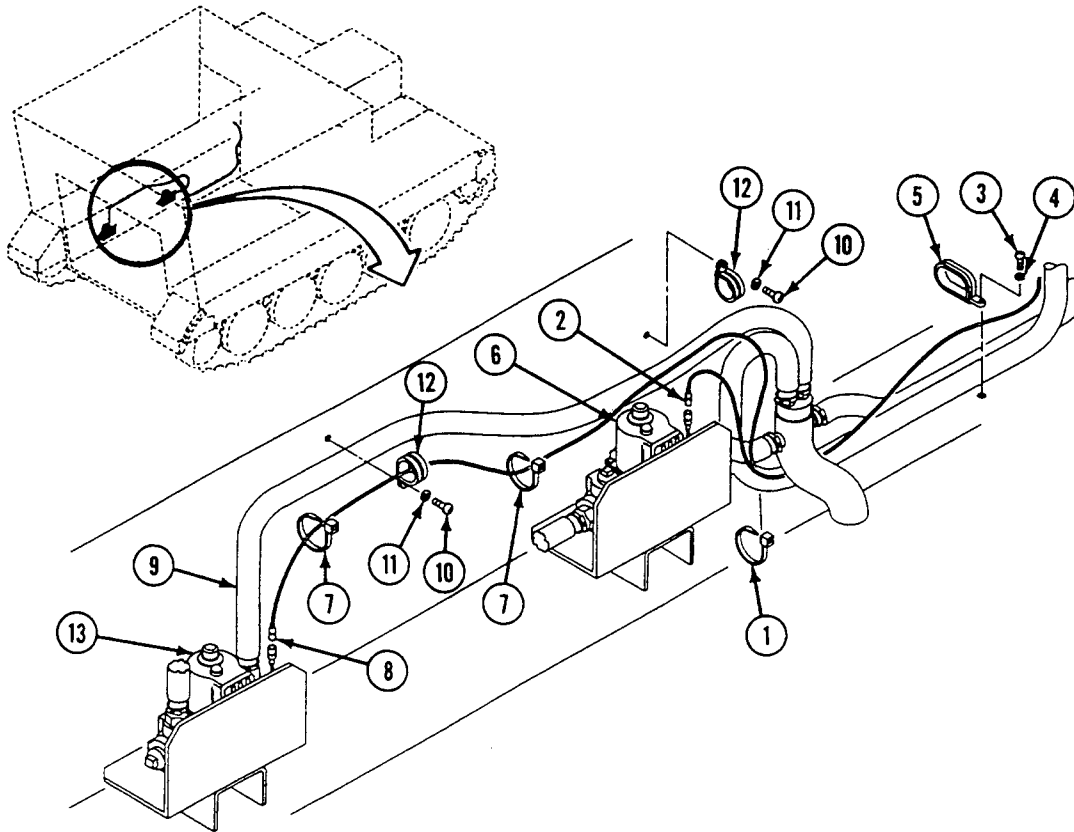
0684 00

15. Remove two screws (21), lockwashers (22), and clamps (23), one lockwasher (24), and ground lead (25) from precleaner mounting bracket (26). Discard lockwashers.
16. Remove two clamps (23) from circuit lead 538A (20).
17. Remove circuit lead 538A (20) with ground lead (25) from precleaner (27).



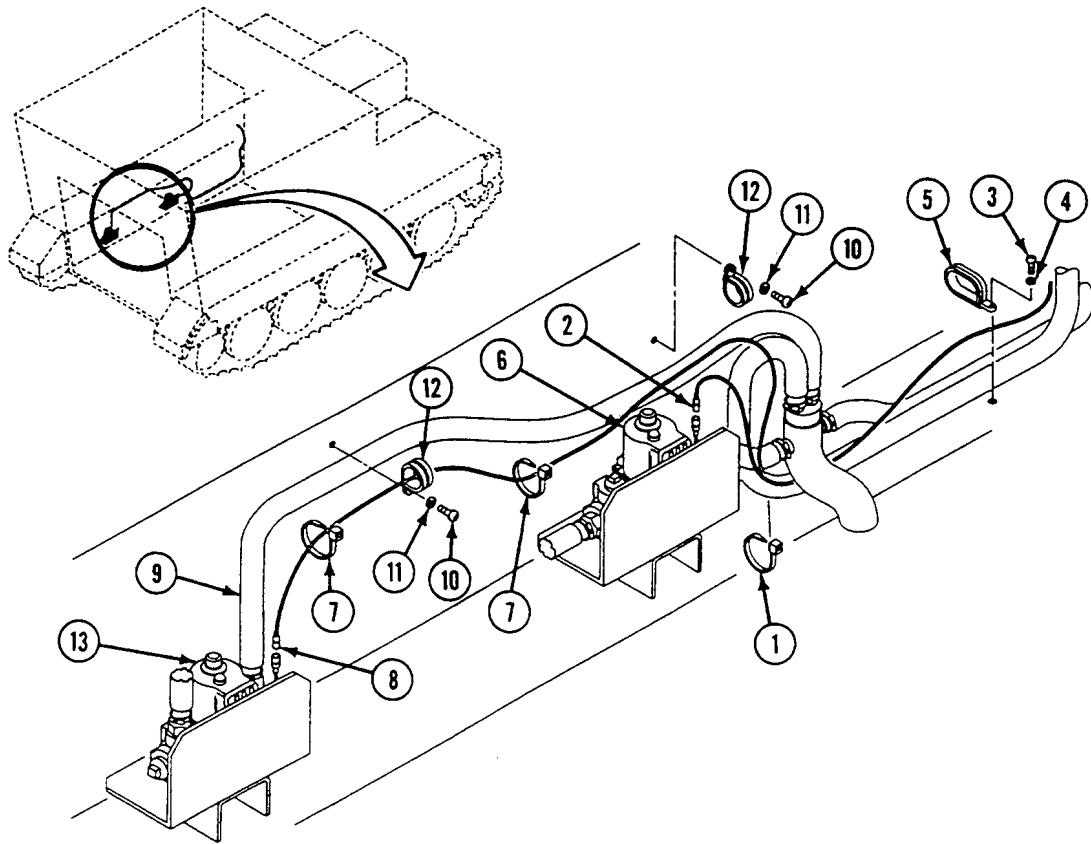
REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY) — Continued**0684 00**

18. Cut tie straps (1) that secure circuit lead 537D (2) to adjacent hoses. Discard tie straps.
19. Remove screw (3), lockwasher (4), and clamp (5) from right sponson. Remove clamp from circuit lead 537D (2) and adjacent hoses. Discard lockwasher.
20. Remove circuit lead 537D (2) from front operator's heater (6).
21. Cut tie straps (7) that secure circuit lead 537E (8) to rear operator's heater inlet hose (9). Discard tie straps.
22. Remove two screws (10), lockwashers (11), and clamps (12) from right sponson. Remove clamps from circuit lead 537E (8) and rear operator's heater inlet hose (9). Discard lockwashers.
23. Remove circuit lead 537E (8) from rear operator's heater (13).



INSTALLATION

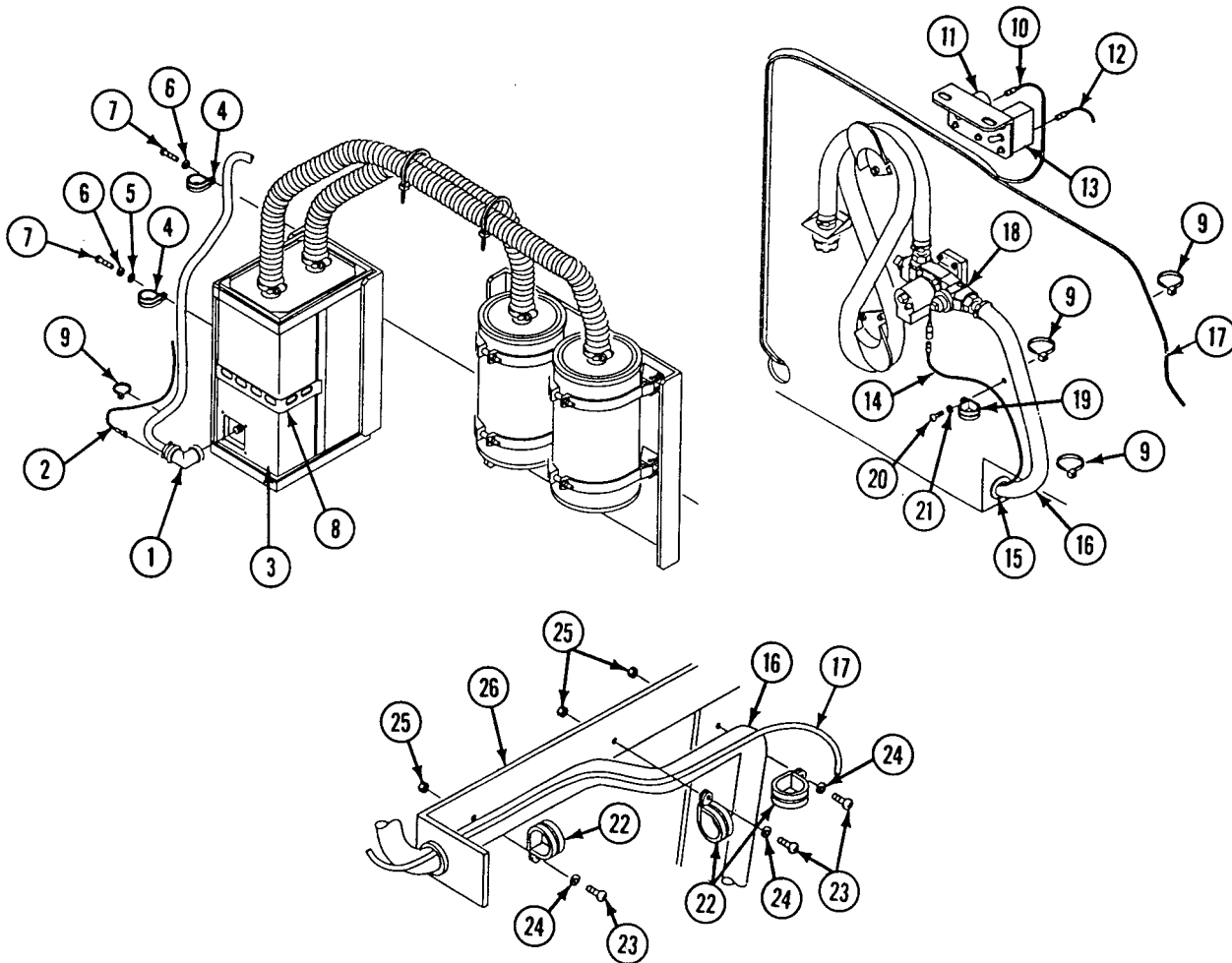
1. Install circuit lead 537E (8) on rear operator's heater (13).
2. Install two clamps (12) on circuit lead 537E (8) and rear operator's heater inlet hose (9). Secure clamps to right sponson with two screws (10) and new lockwashers (11).
3. Secure circuit lead 537E (8) to rear operator's heater inlet hose (9) with new tie straps (7).
4. Install circuit lead 537D (2) on front operator's heater (6).
5. Install clamp (5) on circuit lead 537D (2) and adjacent hoses. Secure with screw (3), new lockwasher (4), and clamp (5) on right sponson.
6. Secure circuit lead 537D (2) to adjacent hoses with new tie straps (1).



REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY) — Continued

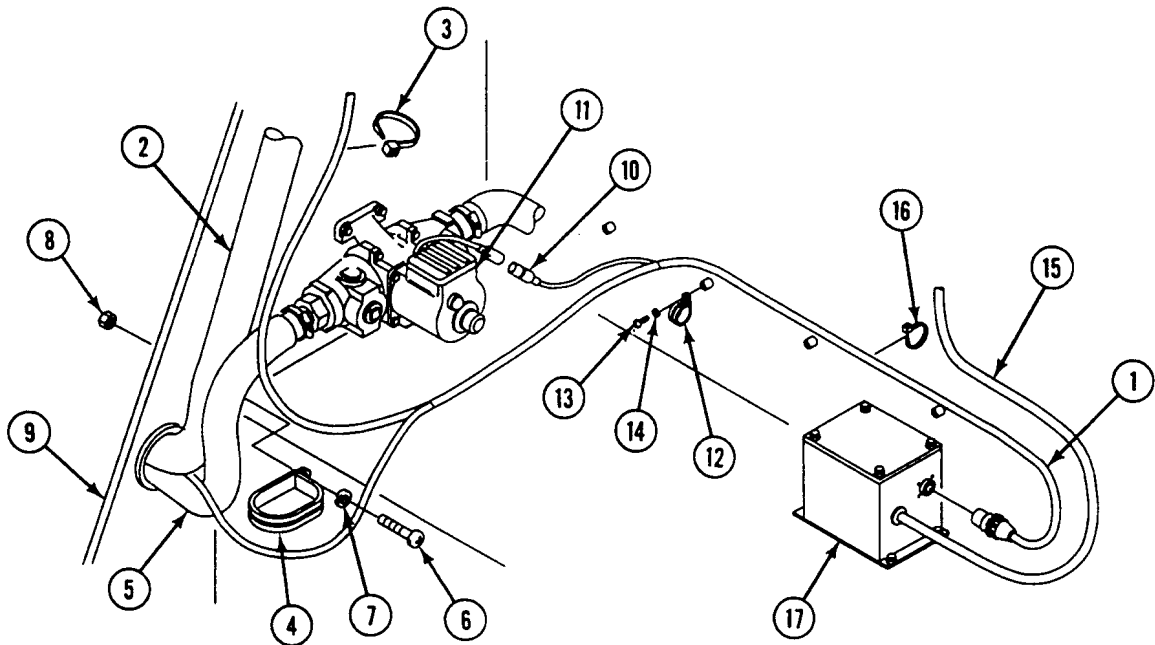
0684 00

7. Install circuit lead 538A (1) with ground lead (2) on precleaner (3).
8. Install two clamps (4) on circuit lead 538A (1).
9. Install ground lead (2), new lockwasher (5), two clamps (4), new lockwashers (6), and screws (7) on precleaner mounting bracket (8).
10. Secure lead 538A (1) to adjacent wiring harnesses with new tie straps (9).
11. Install circuit lead 579C (10) on air filter ON lamp (11).
12. Install circuit lead 537C (12) on air filter switch (13).
13. Push circuit lead 537B (14) through grommet (15) on commander's heater inlet hose (16).
14. Secure wiring harness (17) to adjacent wiring harnesses and hoses with new tie straps (9).
15. Install circuit lead 537B (14) on commander's heater (18).
16. Install clamp (19) on hose (16) and circuit lead 537B (14). Secure clamp with screw (20) and new lockwasher (21) on forward bulkhead.
17. Install three clamps (22) on hose (16) and wiring harness (17). Secure clamps with three screws (23), washers (24), and new locknuts (25) on frame (26) and crossbeam.



REPLACE M13 NBC HEATER WIRING HARNESS (M1068 ONLY) — Continued**0684 00**

18. Secure wiring harness (1) to commander's heater inlet hose (2) with new tie straps (3).
19. Install clamp (4) on driver's heater inlet hose (5) and wiring harness (1). Secure clamp with screw (6), washer (7), and new locknut (8) on frame (9).
20. Install circuit lead 537A (10) on driver's heater (11).
21. Install four clamps (12) on wiring harness (1). Secure clamps with four screws (13) and new lockwashers (14) on bulkhead weldnuts.
22. Secure cable (15) to wiring harness (1) with new tie strap (16).
23. Install wiring harness (1) on NBC control box (17).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2
AMBULANCE ONLY)**

0685 00

THIS WORK PACKAGE COVERS:

Removal (page 0685 00-2).
Installation (page 0685 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher (8)

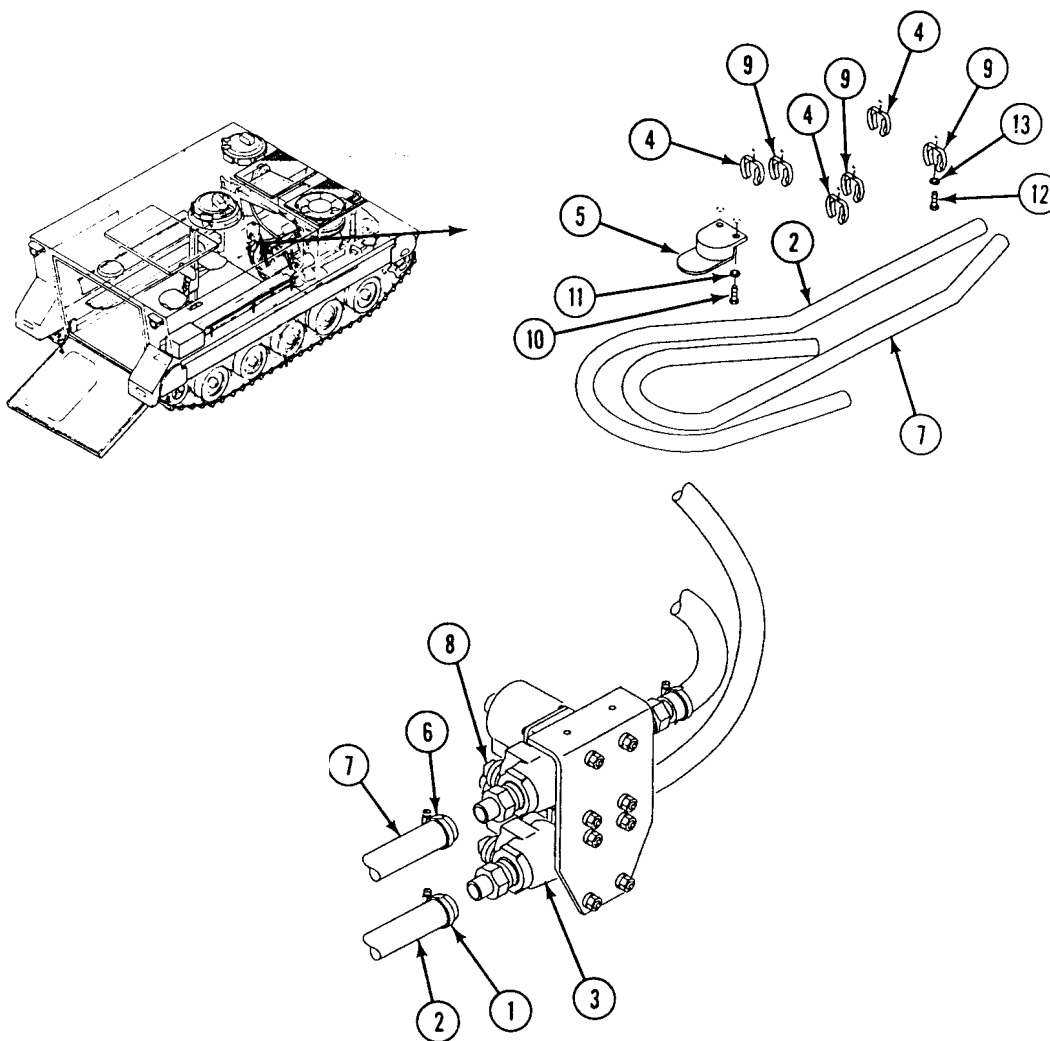
Tie strap (AR)

REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

REMOVAL

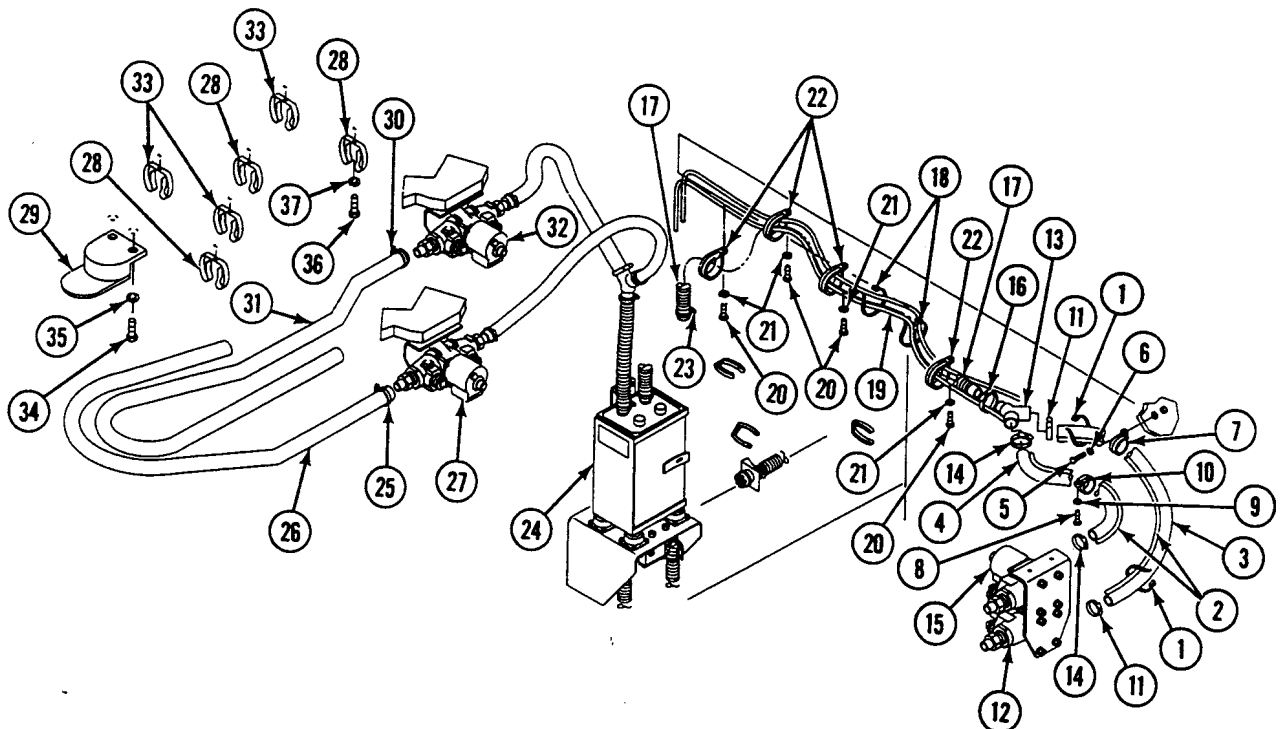
1. Loosen clamp (1) on patient's lower right outlet hose (2). Remove hose from lower right heater (3), three spring clips (4) and right bracket (5).
2. Loosen clamp (6) on patient's upper right outlet hose (7). Remove hose from upper right heater (8), three spring clips (9) and right bracket (5).
3. If right bracket (5) is damaged, remove two screws (10), lockwashers (11), and bracket from top plate. Discard lockwashers.
4. If any spring clip (4) or (9) is damaged, remove screw (12), lockwasher (13), and damaged clip from front bulkhead and top plate. Discard lockwashers.



REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

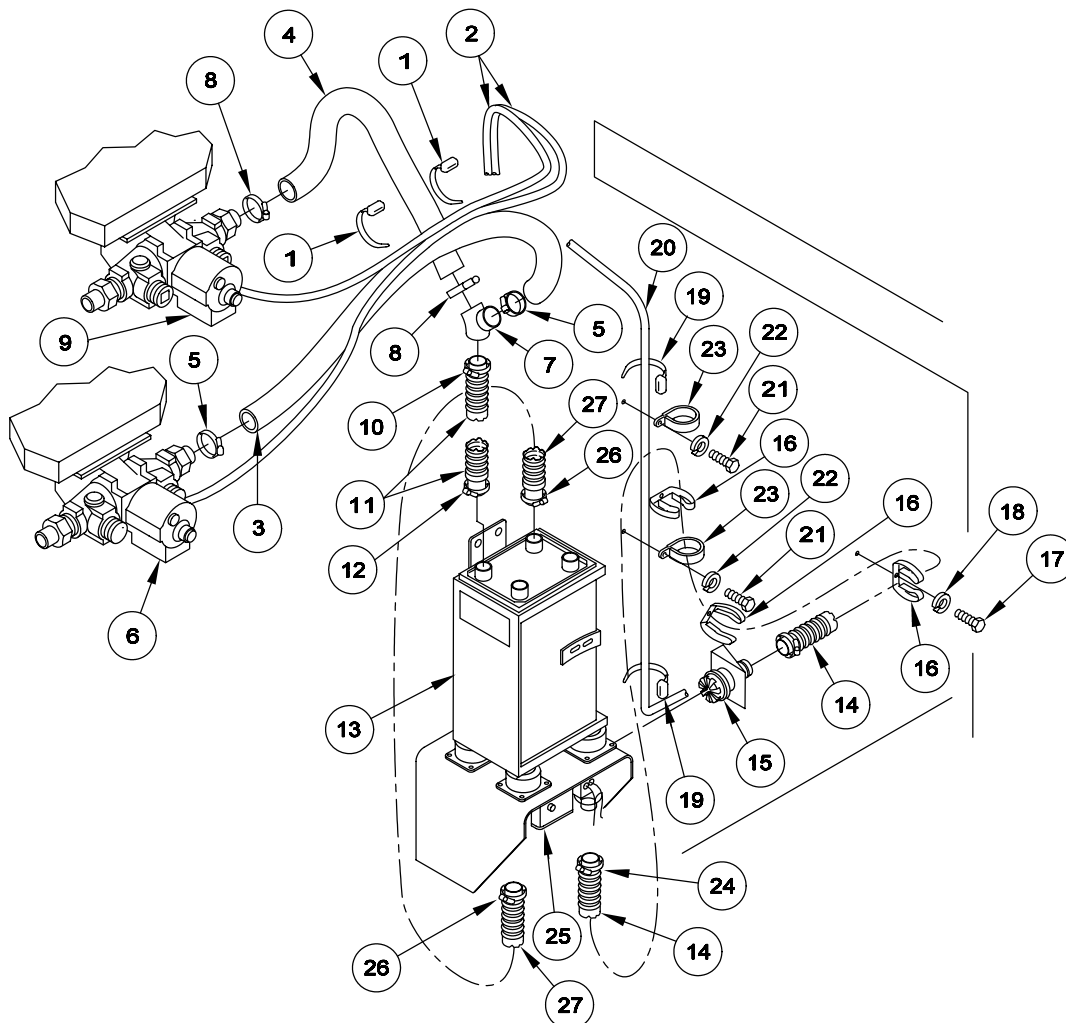
5. Cut and remove all tie straps (1) securing electrical leads (2) to right inlet hoses (3) and (4). Discard tie straps.
6. Remove screw (5), lockwasher (6), and clamp (7) from top plate. Remove clamp from patient's lower right inlet hose (3). Discard lockwasher.
7. Remove screw (8), lockwasher (9), and clamp (10) from top plate. Remove clamp from patient's upper right inlet hose (4). Discard lockwasher.
8. Loosen two clamps (11) on patient's lower right inlet hose (3). Remove hose from lower right heater (12) and Y-fitting (13).
9. Loosen two clamps (14) on patient's upper right inlet hose (4). Remove hose from upper right heater (15) and Y-fitting (13).
10. Loosen clamp (16) on right inlet hose (17). Remove hose from Y-fitting (13).
11. Cut and remove all tie straps (18) securing wiring harness (19) to right inlet hose (17). Discard tie straps.
12. Remove four screws (20), lockwashers (21), and clamps (22) from top plate. Remove clamps from right inlet hose (17). Discard lockwashers.
13. Loosen clamp (23) on right inlet hose (17). Remove hose from air purifier (24).
14. Loosen clamp (25) on patient's left rear outlet hose (26). Remove hose from left rear heater (27), three spring clips (28), and left bracket (29).
15. Loosen clamp (30) on patient's left forward outlet hose (31). Remove hose from left forward heater (32), three spring clips (33), and left bracket (29).
16. If left bracket (29) is damaged, remove two screws (34), lockwashers (35), and bracket from top plate. Discard lockwashers.
17. If any spring clip (28) or (33) is damaged, remove screw (36), lockwasher (37), and damaged clip from front bulkhead and top plate. Discard lockwashers.



REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

18. Cut and remove all tie straps (1) securing electrical leads (2) to left inlet hoses (3) and (4). Discard tie straps.
19. Loosen two clamps (5) on patient's left rear inlet hose (3). Remove hose from left rear heater (6) and Y-fitting (7).
20. Loosen two clamps (8) on patient's left forward inlet hose (4). Remove hose from left forward heater (9) and Y-fitting (7).
21. Loosen clamp (10) on left inlet hose (11). Remove hose from Y-fitting (7).
22. Loosen clamp (12) on left inlet hose (11). Remove hose from air purifier (13).
23. Remove hose (14) from connector (15) and three spring clips (16).
24. If any spring clip (16) is damaged, remove screw (17), lockwasher (18), and damaged clip from driver's bulkhead. Discard lockwashers.
25. Cut and remove all tie straps (19) securing electrical leads (20) to outlet hose (14). Discard tie straps.
26. Remove two screws (21), lockwashers (22), and clamps (23) from bulkhead. Remove clamps from outlet hose (14). Discard lockwashers.
27. Loosen clamp (24) on outlet hose (14). Remove hose from heater (25).
28. Loosen two clamps (26) on inlet hose (27). Remove hose from heater (25) and air purifier (13).

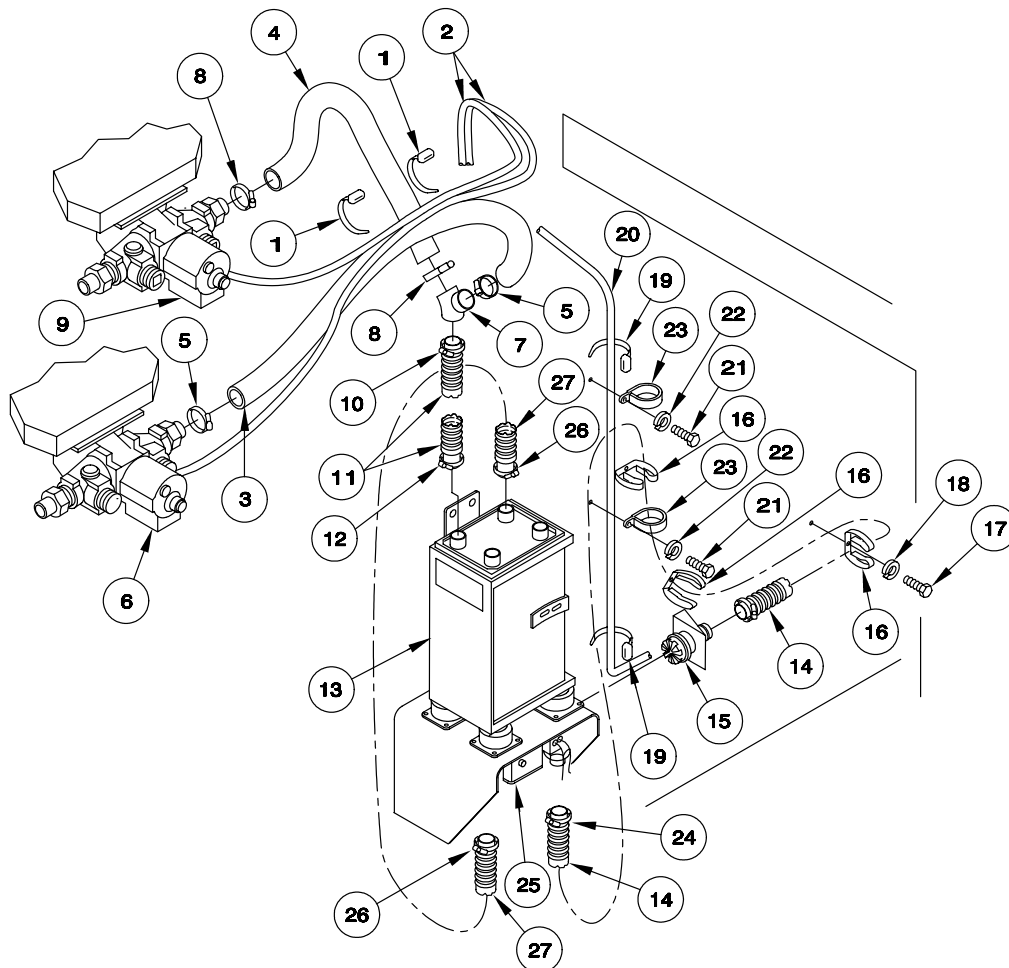


REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

INSTALLATION

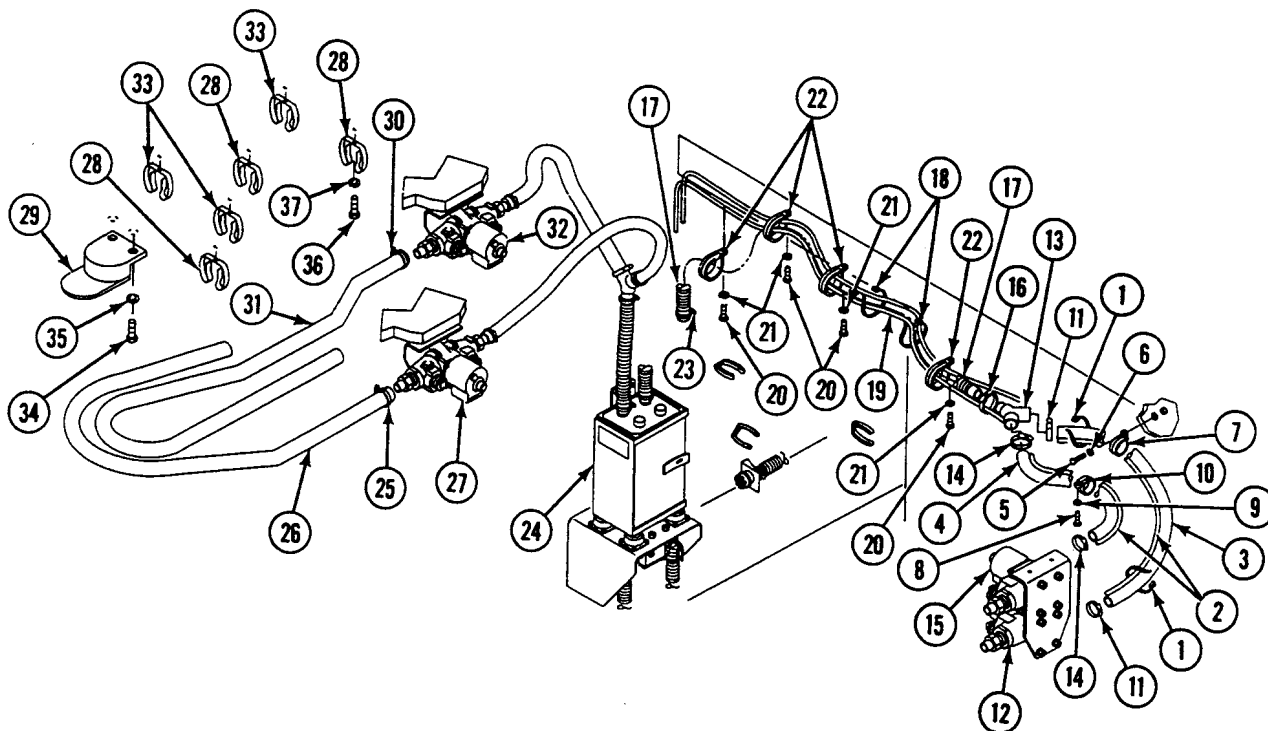
1. Install inlet hose (27) and clamp (26) on air purifier (13). Tighten clamp.
2. Install inlet hose (27) and clamp (26) on heater (25). Tighten clamp.
3. Install outlet hose (14) and clamp (24) on heater (25). Tighten clamp.
4. Install two clamps (23) on outlet hose (14). Secure clamps to bulkhead with two screws (21) and new lockwashers (22).
5. Secure electrical leads (20) to outlet hose (14) with new tie straps (19) as required.
6. If removed, install spring clips (16) on driver's bulkhead with screws (17) and new lockwashers (18).
7. Install outlet hose (14) in three spring clips (16) on driver's bulkhead.
8. Install outlet hose (14) on connector (15).
9. Install inlet hose (11) and clamp (12) on air purifier (13). Tighten clamp.
10. Install inlet hose (11) and clamp (10) on Y-fitting (7). Tighten clamp.
11. Install two clamps (8) and patient's left forward inlet hose (4) on Y-fitting (7) and left forward heater (9). Tighten clamps.
12. Install two clamps (5) and patient's left rear inlet hose (3) on Y-fitting (7) and left rear heater (6). Tighten clamps.
13. Secure wiring harness (2) to inlet hoses (4) and (3) with new tie straps (1) as required.



REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

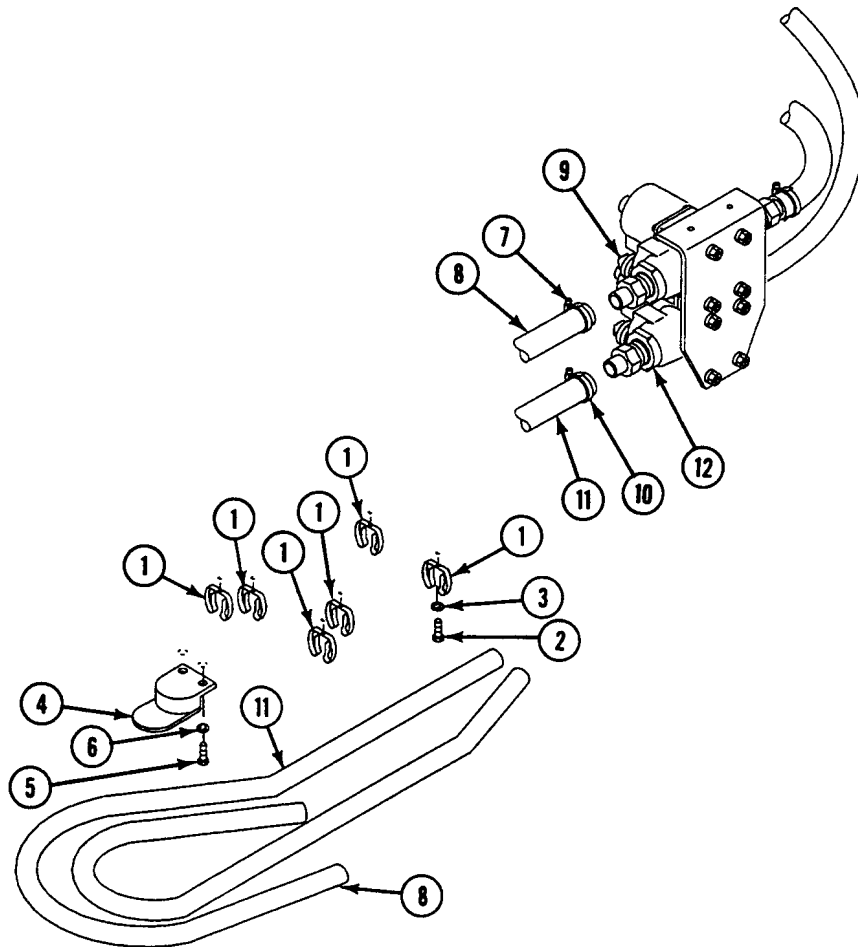
14. If removed, install spring clips (28) on top plate with screws (36) and new lockwashers (37).
15. If removed, install left bracket (29) on top plate with two screws (34) and new lockwashers (35).
16. Install clamp (30) and patient's left forward outlet hose (31) on left forward heater (32), three spring clips (33), and left bracket (29). Tighten clamp.
17. Install clamp (25) and patient's left rear outlet hose (26) on left rear heater (27), three spring clips (28), and left bracket (29). Tighten clamp.
18. Install patient's right inlet hose (17) and clamp (23) on air purifier (24). Tighten clamp.
19. Install four clamps (22) on patient's right inlet hose (17). Secure clamps to top plate with four screws (20) and new lockwashers (21).
20. Secure wiring harness (19) to right inlet hose (17) with new tie straps (18) as required.
21. Install right inlet hose (17) and clamp (16) on Y-fitting (13). Tighten clamp.
22. Install two clamps (14) and patient's upper right inlet hose (4) on Y-fitting (13) and upper right heater (15). Tighten clamps.
23. Install two clamps (11) and patient's lower right inlet hose (3) on Y-fitting (13) and lower right heater (12). Tighten clamps.
24. Install clamp (10) on patient's upper right inlet hose (4). Secure clamp to top plate with screw (8) and new lockwasher (9).
25. Install clamp (7) on patient's lower right inlet hose (3). Secure clamp to top plate with screw (5) and new lockwasher (6).
26. Secure electrical leads (2) to inlet hoses (4) and (3) with new tie straps (1) as required.



REPLACE M3 NBC HEATER HOSES AND FITTINGS (M113A2 AMBULANCE ONLY) — Continued

0685 00

27. If removed, install spring clips (1) on top plate with screws (2) and new lockwashers (3).
28. If removed, install right bracket (4) on top plate with two screws (5) and new lockwashers (6).
29. Install clamp (7) and patient's upper right outlet hose (8) on upper right heater (9), three spring clips (1), and right bracket (4). Tighten clamp.
30. Install clamp (10) and patient's lower right outlet hose (11) on lower right heater (12), three spring clips (1), and right bracket (4). Tighten clamp.

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Check air flow of NBC system. See TM 3-6680-316-10.

END OF TASK

**REPLACE M3 NBC FILTER SWITCH ASSEMBLY (M113A2
AMBULANCE ONLY)**

0686 00

THIS WORK PACKAGE COVERS:

Removal (page 0686 00-1).
Installation (page 0686 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

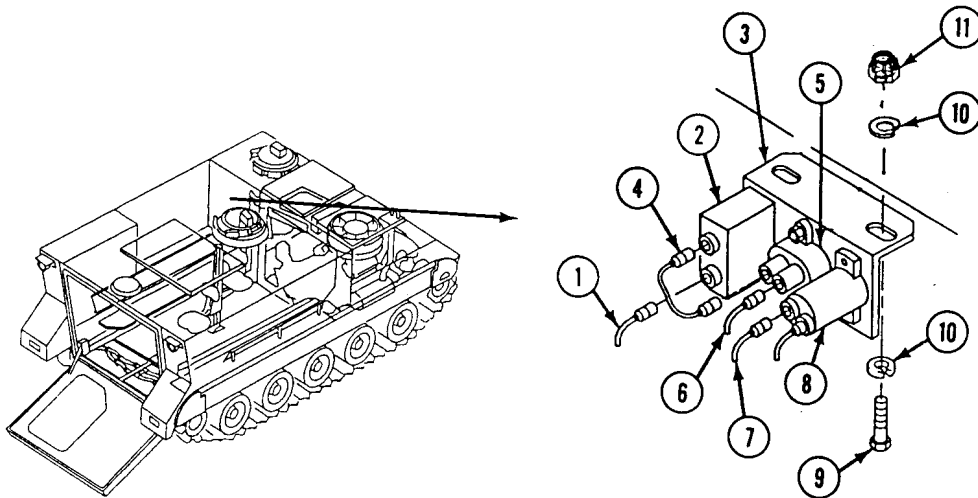
Materials/Parts

Locknut (2)

Lockwasher (4)

REMOVAL

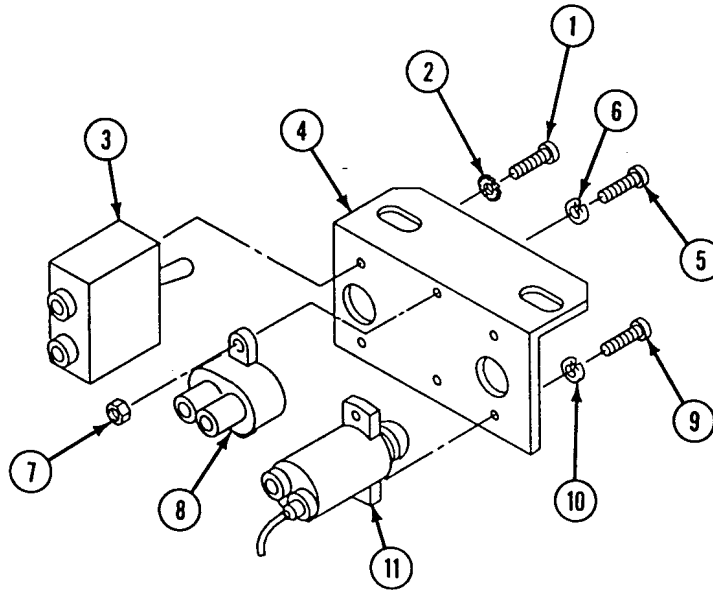
1. Remove circuit 579C lead (1) from air filter switch (2) on switch assembly (3).
2. Remove jumper lead (4) from air filter switch (2) and circuit breaker (5).
3. Remove circuit 579A lead (6) from circuit breaker (5).
4. Remove circuit 537F lead (7) from air filter ON lamp (8).
5. Remove two mounting screws (9), four lockwashers (10), two locknuts (11), and switch assembly (3) from instrument panel. Discard lockwashers and locknuts.



REPLACE M3 NBC FILTER SWITCH ASSEMBLY (M113A2 AMBULANCE ONLY) — Continued**0686 00****NOTE**

Remove following components, as needed, for repair of switch assembly.

6. Remove two screws (1), lockwashers (2), and air filter switch (3) from switch assembly (4). Discard lockwashers.
7. Remove two screws (5), lockwashers (6), nuts (7), and circuit breaker (8) from switch assembly (4). Discard lockwashers.
8. Remove two screws (9), lockwashers (10), and air filter ON lamp (11) from switch assembly (4). Discard lockwashers.



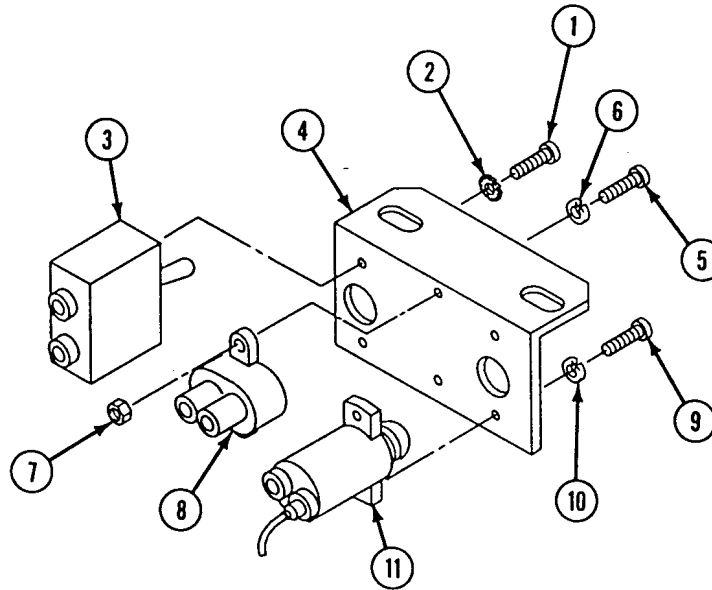
REPLACE M3 NBC FILTER SWITCH ASSEMBLY (M113A2 AMBULANCE ONLY) — Continued

0686 00

INSTALLATION**NOTE**

Install following components, as needed, for repair of switch assembly.

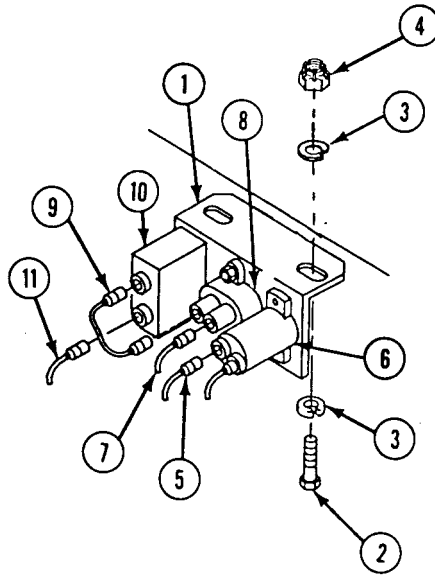
1. Install air filter ON lamp (11) on switch assembly (4). Secure with two screws (9) and new lockwashers (10).
2. Install circuit breaker (8) on switch assembly (4). Secure with two screws (5), new lockwashers (6), and nuts (7).
3. Install air filter switch (3) on switch assembly (4). Secure with two screws (1) and new lockwashers (2).



REPLACE M3 NBC FILTER SWITCH ASSEMBLY (M113A2 AMBULANCE ONLY) — Continued

0686 00

4. Install switch assembly (1) on instrument panel. Secure with two mounting screws (2), four new lockwashers (3), and two new locknuts (4).
5. Install circuit 537F lead (5) on air filter ON lamp (6).
6. Install circuit 579A lead (7) on circuit breaker (8).
7. Install jumper lead (9) on air filter switch (10) and circuit breaker (8).
8. Install circuit 579C lead (11) on air filter switch (10).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M3 NBC HEATERS AND CONTROLLERS (M113A2
AMBULANCES ONLY)**

0687 00

THIS WORK PACKAGE COVERS:

Removal (page 0687 00-1).
Installation (page 0687 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

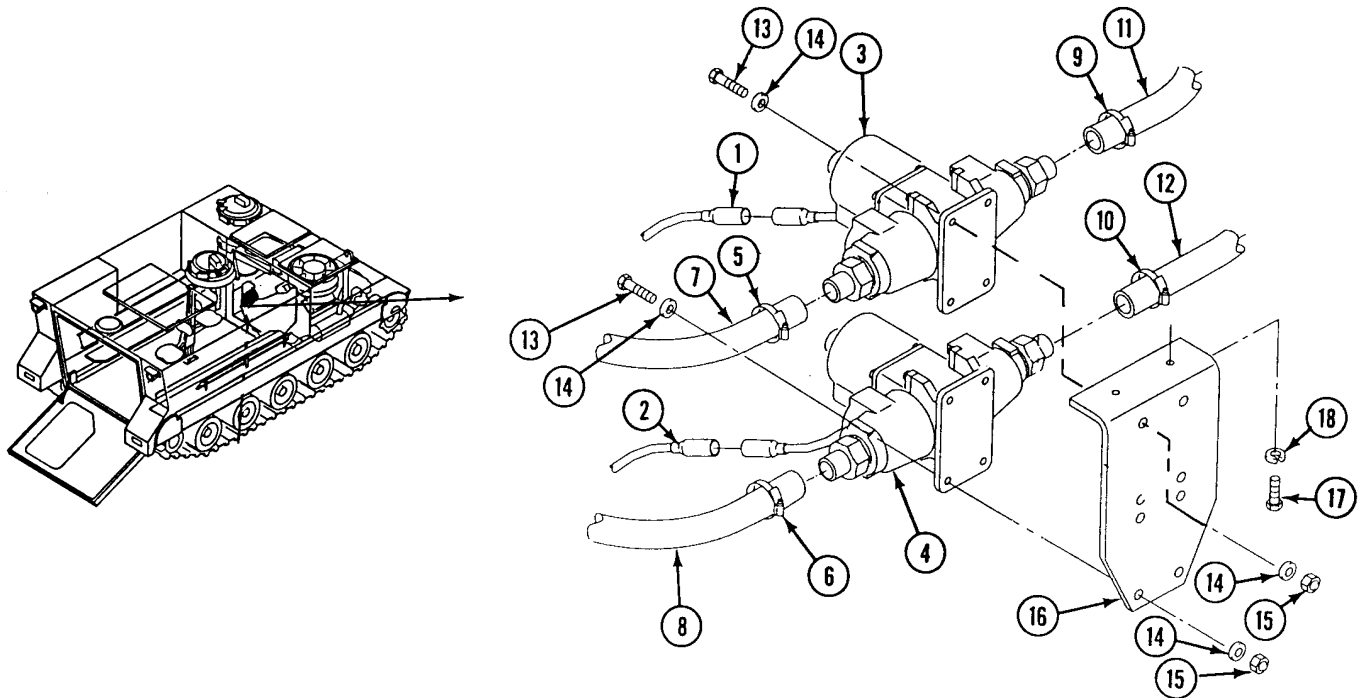
Materials/Parts

Locknut (24)

Tie strap (AR)

REMOVAL

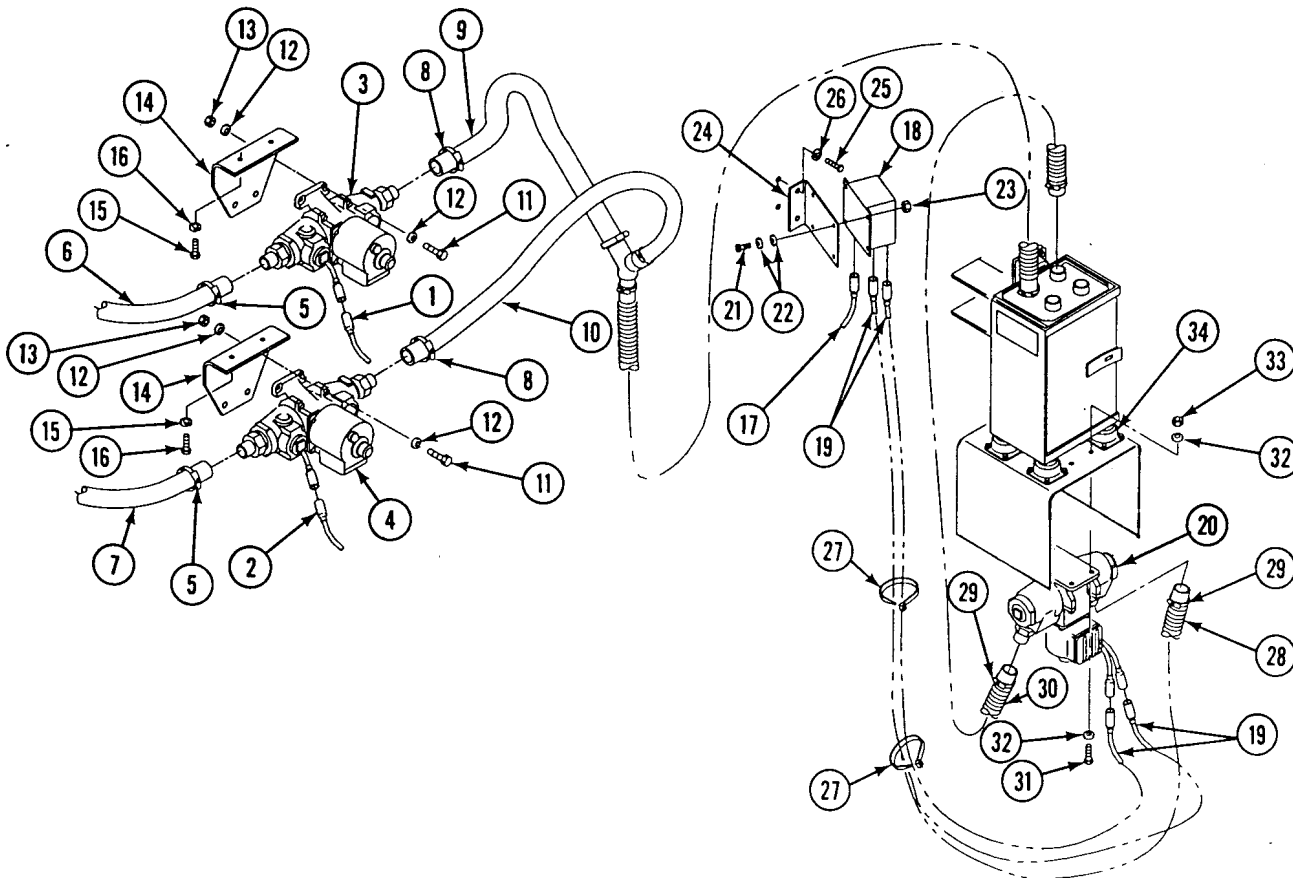
1. Disconnect circuit lead 537A (1) and circuit lead 537B (2) from upper and lower heaters (3) and (4) on right side of carrier.
2. Loosen clamps (5) and (6). Remove upper and lower outlet hoses (7) and (8) from upper and lower heater (3) and (4).
3. Loosen clamps (9) and (10). Remove upper and lower inlet hoses (11) and (12) from upper and lower heaters (3) and (4).
4. Remove eight screws (13), 16 washers (14), eight locknuts (15), and upper and lower heater (3) and (4) from bracket (16). Discard locknuts.
5. If damaged, remove two screws (17), lockwashers (18), and bracket (16) from hull top plate. Discard lockwashers.



REPLACE M3 NBC HEATERS AND CONTROLLERS (M113A2 AMBULANCES ONLY) — Continued

0687 00

6. Disconnect circuit lead 537C (1) and circuit lead 537D (2) from forward and rear heaters (3) and (4) on left side of carrier.
7. Loosen clamps (5). Remove forward and rear outlet hoses (6) and (7) from forward and rear heaters (3) and (4).
8. Loosen clamps (8). Remove forward and rear inlet hoses (9) and (10) from forward and rear heaters (3) and (4).
9. Remove eight screws (11), 16 washers (12), eight locknuts (13), and upper heater (3) and lower heater (4) from two brackets (14). Discard locknuts.
10. If damaged, remove four screws (15), lockwashers (16), and brackets (14) from bulkhead. Discard lockwashers.
11. Disconnect circuit lead 537G (17) from driver's controller (18).
12. Disconnect two leads (19) from driver's controller (18) and driver's heater (20).
13. Remove four screws (21), eight washers (22), four locknuts (23), and driver's controller (18) from bracket (24). Discard locknuts.
14. If damaged, remove two screws (25), lockwashers (26), and bracket (24) from bulkhead. Discard lockwashers.
15. Cut tie straps (27) and remove two leads (19) from adjacent driver's outlet hose (28). Discard tie straps.
16. Loosen clamps (29). Remove driver's outlet hose (28) and driver's inlet hose (30) from driver's heater (20).
17. Remove four screws (31), eight washers (32), four locknuts (33), and driver's heater (20) from welded mount (34). Discard locknuts.

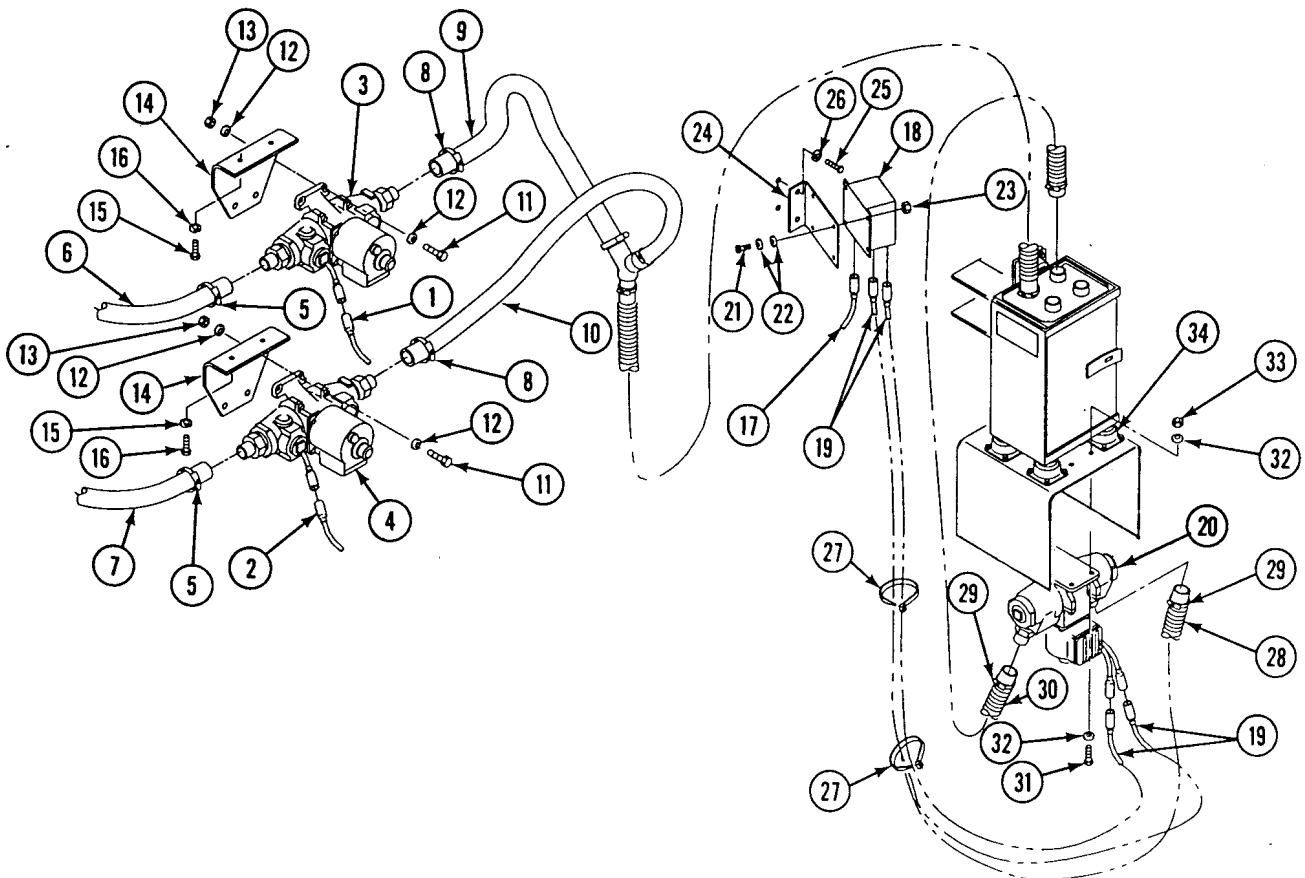


REPLACE M3 NBC HEATERS AND CONTROLLERS (M113A2 AMBULANCES ONLY) — Continued

0687 00

INSTALLATION

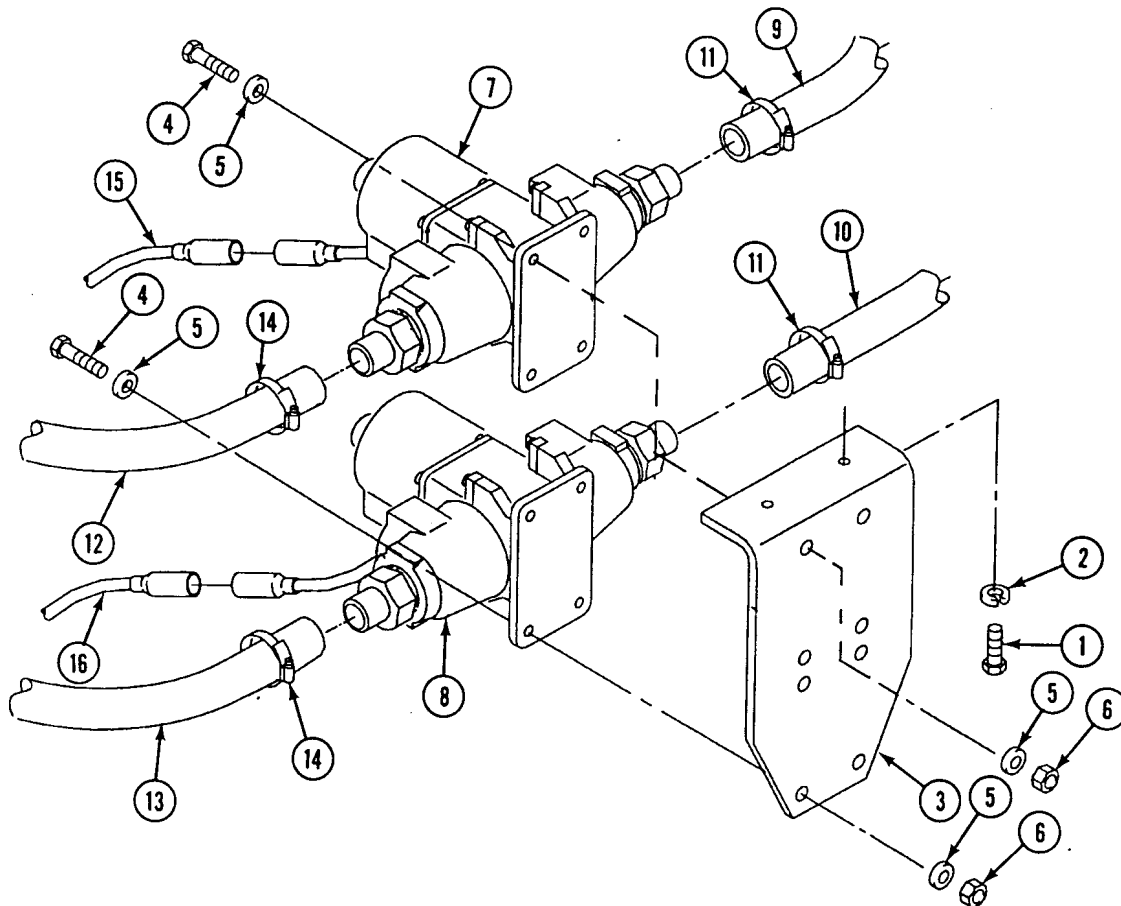
1. Install four screws (31), eight washers (32), four new locknuts (33), and driver's heater (20) on welded mount (34).
2. Install driver's outlet hose (28) and driver's inlet hose (30) on driver's heater (20). Tighten clamps (29).
3. Install new tie straps (27) on two leads (19) and adjacent heater hose (28).
4. If removed, install two screws (25), new lockwashers (26), and bracket (24) on bulkhead.
5. Install four screws (21), eight washers (22), four new locknuts (23), and driver's controller (18) on bracket (24).
6. Connect two leads (19) to driver's controller (18) and driver's heater (20).
7. Connect circuit lead 537G (17) to driver's controller (18).
8. If removed, install four screws (15), new lockwashers (16), and brackets (14) on bulkhead.
9. Install eight screws (11), 16 washers (12), eight new locknuts (13), and two heaters (3) and (4) on two brackets (14).
10. Install forward and rear inlet hoses (9) and (10) on forward and rear heaters (3) and (4). Tighten clamps (8).
11. Install forward and rear outlet hoses (6) and (7) on forward and rear heaters (3) and (4). Tighten clamps (5).
12. Connect circuit lead 537C (1) and circuit lead 537D (2) to forward and rear heaters (3) and (4) on left side of carrier.



REPLACE M3 NBC HEATERS AND CONTROLLERS (M113A2 AMBULANCES ONLY) — Continued

0687 00

13. If removed, install two screws (1), new lockwashers (2), and bracket (3) on hull top plate.
14. Install eight screws (4), 16 washers (5), eight new locknuts (6), upper and lower heater (7) and (8) on bracket (3).
15. Install upper and lower inlet hoses (9) and (10) on upper and lower heater (7) and (8). Tighten clamps (11).
16. Install upper and lower outlet hoses (12) and (13) on upper and lower heater (7) and (8). Tighten clamps (14).
17. Connect circuit lead 537A (15) and circuit lead 537B (16) to upper and lower heaters (7) and (8) on right side of carrier.


FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Check air flow of NBC system. See TM 3-6680-316-10.

END OF TASK

**REPLACE M14 NBC HOSES AND BRACKETS (M113A2
AMBULANCE ONLY)**

0688 00

THIS WORK PACKAGE COVERS:

Removal (page 0688 00-2).
Installation (page 0688 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Lockwasher (21)

Battery ground lead disconnected (WP 0294 00)

REPLACE M14 NBC HOSES AND BRACKETS (M113A2 AMBULANCE ONLY) — Continued

0688 00

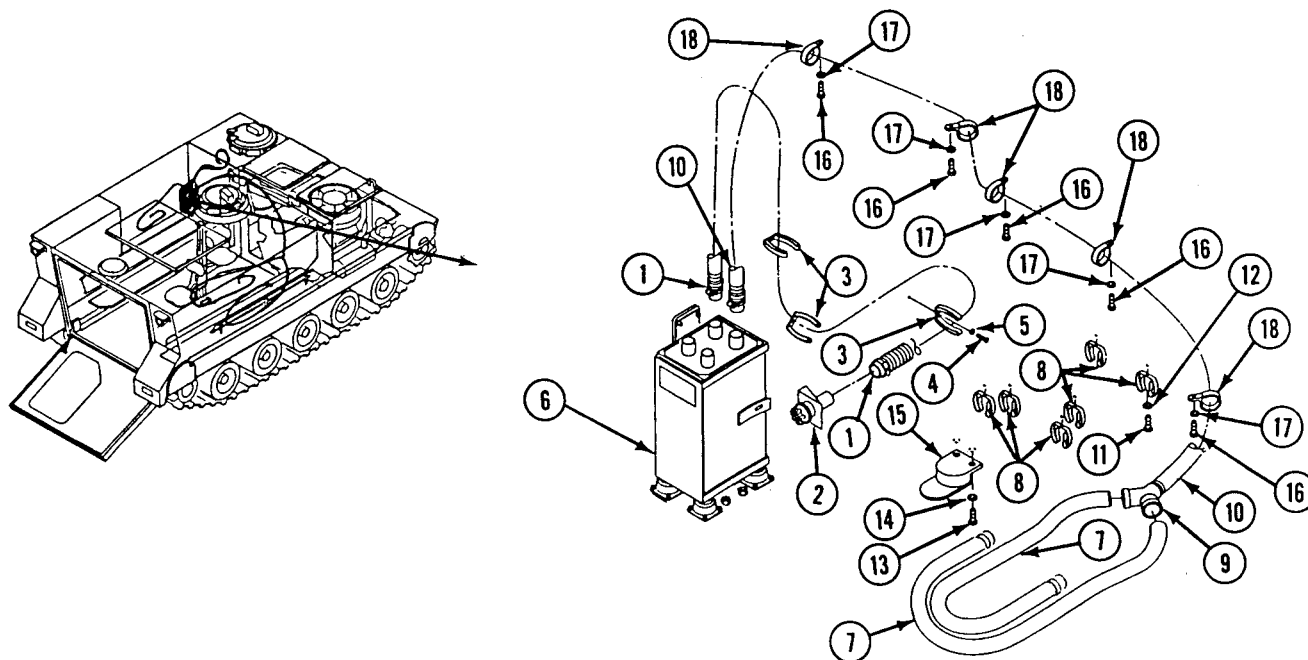
REMOVAL

1. Remove driver's hose (1) from connector (2) and three clips (3).
2. Remove three screws (4), lockwashers (5), and clips (3) from driver's bulkhead. Discard lockwashers.
3. Loosen clamp and remove hose (1) from air purifier (6).

NOTE

Hospital headpiece not shown. Remove headpiece, if connected.

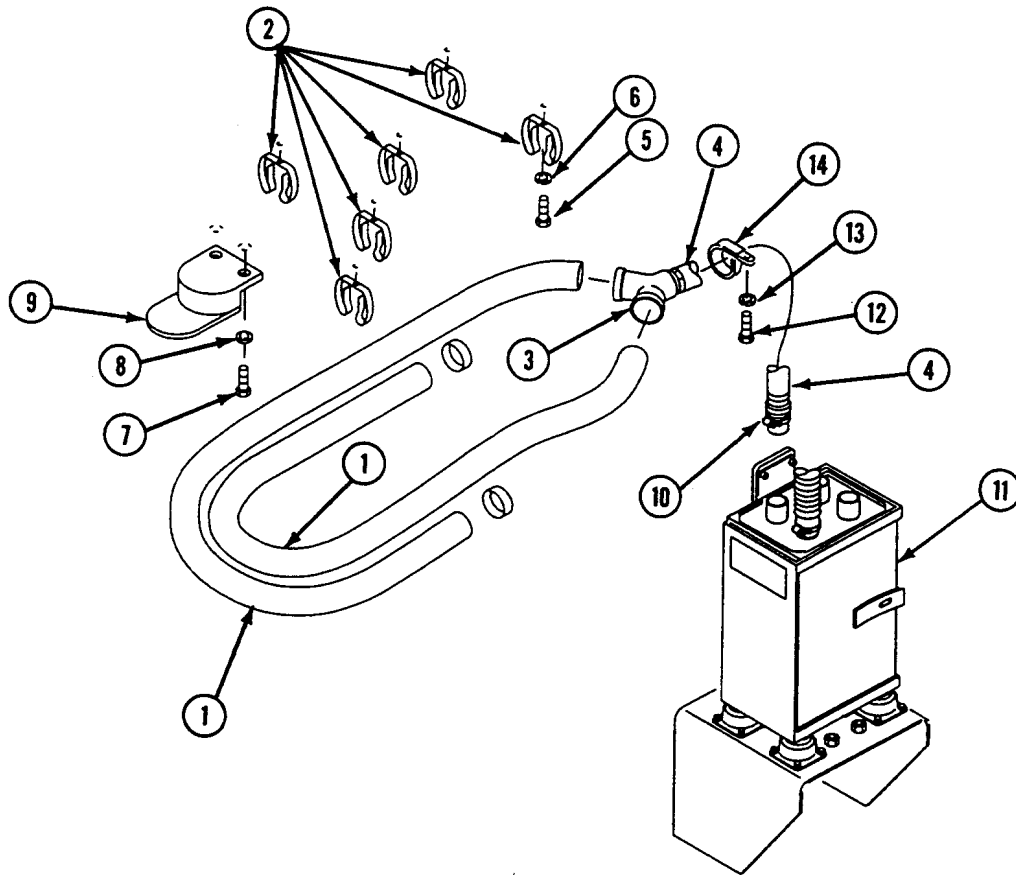
4. Remove two hoses (7) from six spring clips (8) and Y-connector (9) on hose assembly (10).
5. Remove six screws (11), lockwashers (12), and clips (8) from top plate. Discard lockwashers.
6. Remove two screws (13), washers (14), and bracket (15) from top plate.
7. Release quick-disconnect coupling and remove hose (10) from air purifier (6).
8. Remove five screws (16), lockwashers (17), and clamps (18) from top plate. Remove clamps from hose assembly (10). Discard lockwashers.



REPLACE M14 NBC HOSES AND BRACKETS (M113A2 AMBULANCE ONLY) — Continued

0688 00

9. Remove two hoses (1) from six spring clips (2) and Y-connector (3) on hose assembly (4).
10. Remove six screws (5), lockwashers (6), and clips (2) from top plate. Discard lockwashers.
11. Remove two screws (7), washers (8), and bracket (9) from top plate.
12. Release quick disconnect coupling (10) and remove hose (4) from air purifier (11).
13. Remove screw (12), lockwasher (13), and clamp (14) from top plate. Remove clamps from hose assembly (4). Discard lockwasher.

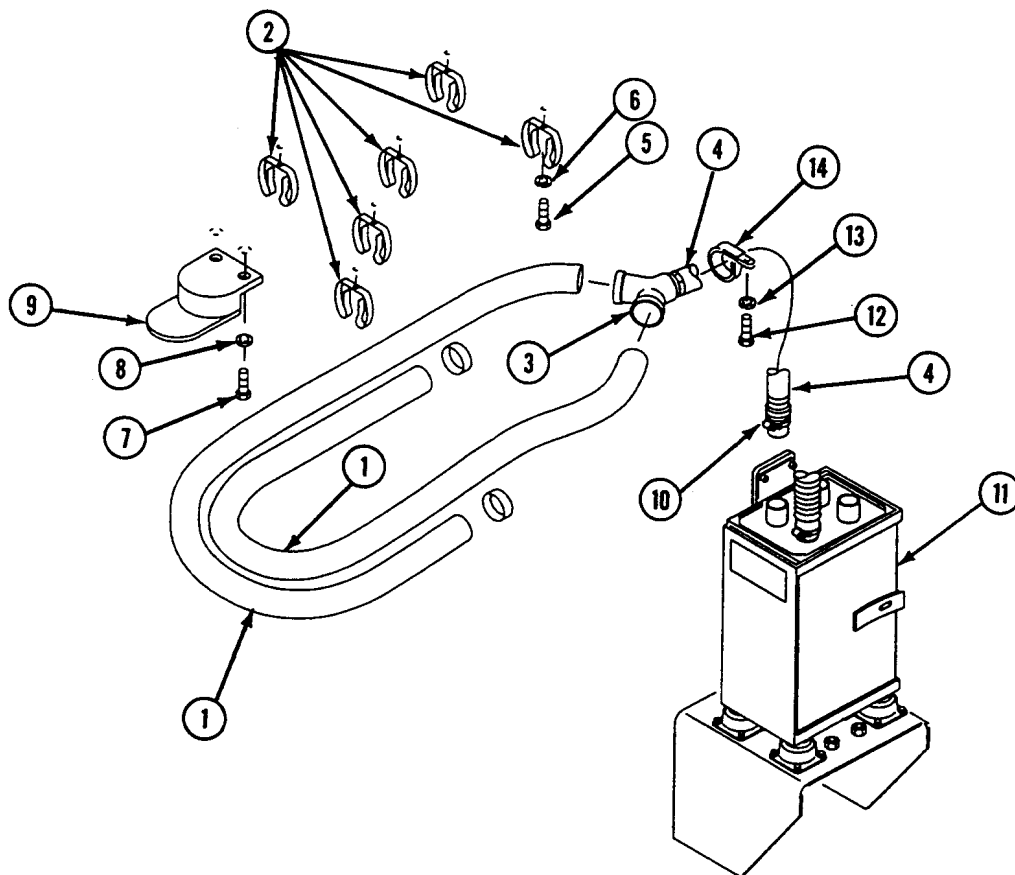


REPLACE M14 NBC HOSES AND BRACKETS (M113A2 AMBULANCE ONLY) — Continued

0688 00

INSTALLATION

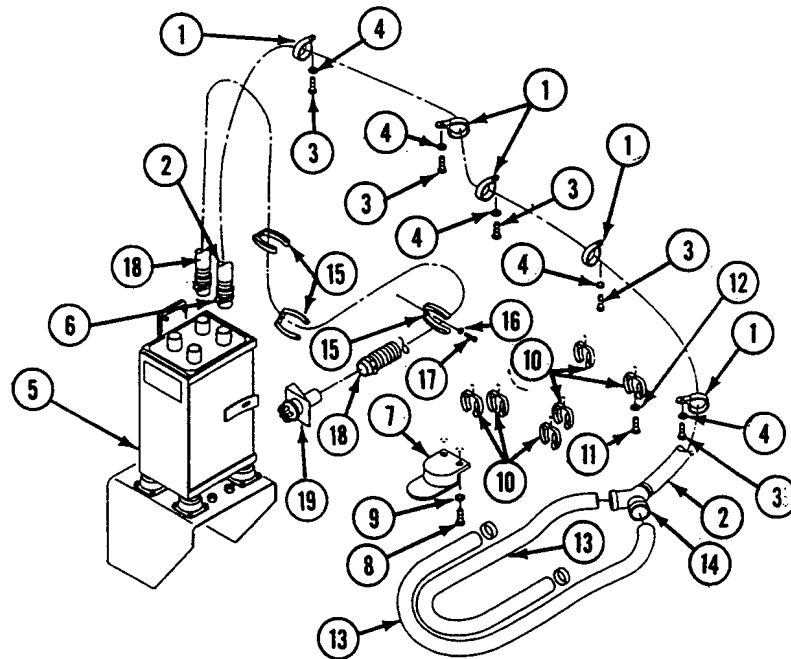
1. Install clamp (14) on hose assembly (4). Secure clamp to top plate with screw (12) and new lockwasher (13).
2. Install hose assembly (4) on air purifier (11).
3. Install bracket (9), two screws (7), and washers (8) on top plate.
4. Install six clips (2), screws (5), and new lockwashers (6) on top plate.
5. Install two hoses (1) on Y-connector (3) of hose assembly (4).
6. Route two hoses (1) around bracket (9), and insert in six clips (2).



REPLACE M14 NBC HOSES AND BRACKETS (M113A2 AMBULANCE ONLY) — Continued

0688 00

7. Install five clamps (1) on hose assembly (2). Secure clamp to top plate with five screws (3) and new lockwashers (4).
8. Install hose assembly (2) on air purifier (5).
9. Install bracket (7), two screws (8), and washers (9) on top plate.
10. Install six clips (10), screws (11), and new lockwashers (12) on top plate.
11. Install two hoses (13) on Y-connector (14) of hose assembly (2).
12. Route two hoses (13) around bracket (7) and insert in six clips (10).
13. Install three clips (15), new lockwashers (16), and screws (17) on driver's bulkhead.
14. Install driver's hose (18) on air purifier (5), three clips (15), and connector (19).


FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Check air flow of NBC system. See TM 3-6680-316-10.

END OF TASK

REPLACE M8A3/M14 AIR PURIFIER AND FRAME (M113A2 ONLY)

0689 00

THIS WORK PACKAGE COVERS:

Removal (page 0689 00-2).
Installation (page 0689 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

TM 3-6680-316-10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Locknuts (20)

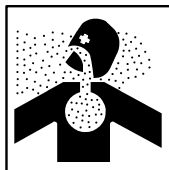
Locknuts (5)

Personnel Required

Unit Mechanic

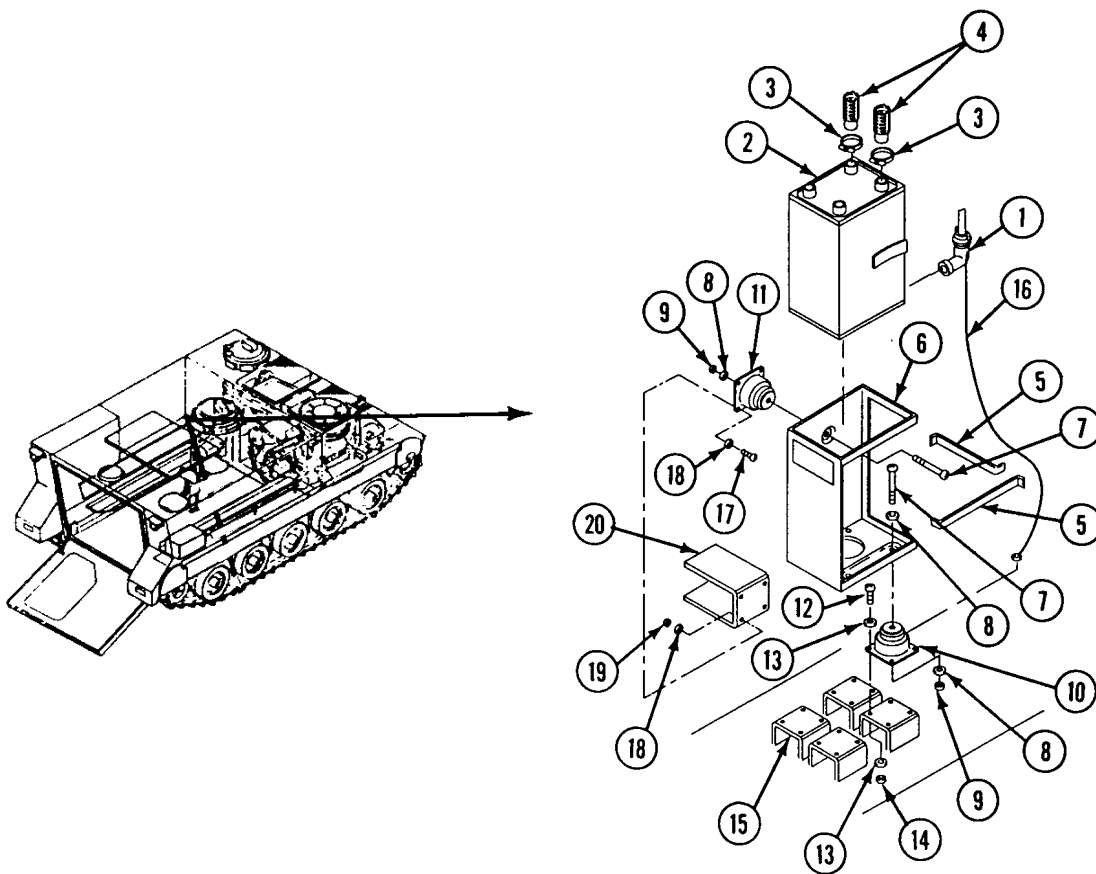
REMOVAL

WARNING



Contaminated filters are hazardous to personnel. Use precautions when handling filters. Dispose of filters using trained chemical environment personnel.

1. Disconnect power cable (1) from air purifier (2).
2. For the M8A3 purifier, loosen two clamps (3) and remove two hoses (4) and clamps from air purifier (2). For the M14 purifier, loosen three clamps (3), and remove three hoses (4) and clamps from air purifier (2).
3. Unfasten latch (5) and lift air purifier (2) from frame assembly (6).
4. Remove five screws (7), ten washers (8), five locknuts (9), and frame assembly (6) from five mounts (10) and (11). Discard locknuts.
5. Remove 16 screws (12), 32 washers (13), 16 locknuts (14), and four mounts (10) from welded frame (15). Discard locknuts.
6. Remove ground wire lead (16).
7. Remove four screws (17), eight washers (18), four locknuts (19), and mount (11) from welded frame (20). Discard locknuts.



INSTALLATION

NOTE

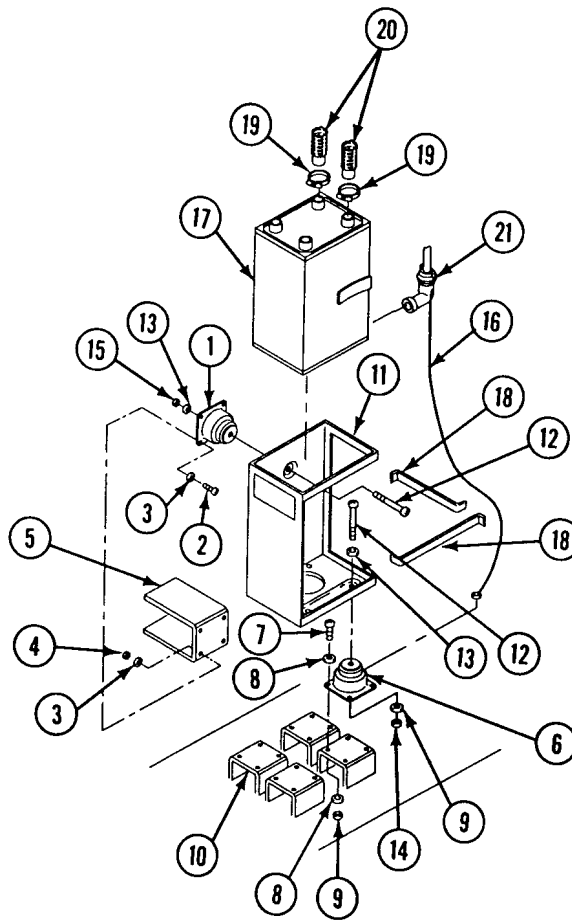
Remove 1/4 to 1/2 inch of paint around mounting hole to ensure proper grounding.

1. Install mount (1), four screws (2), eight washers (3), and four new locknuts (4) on welded frame (5).
2. Install four mounts (6), 16 screws (7), 32 washers (8), and 16 new locknuts (9) on welded frame (10).
3. Install frame assembly (11), five screws (12), ten washers (13), and five new locknuts (14) and (15) on five mounts (1) and (6). Do not tighten one outside locknut (14) for ground wire lead (16) connection.
4. Insert ground wire lead (16) and tighten locknut (14).

NOTE

The air purifier must be adjusted before installation. See TM 3-6680-316-10.

5. Place air purifier (17) in frame assembly (11) and close latch (18).
6. Install three clamps (19) and hoses (20) onto the air purifier (17) and tighten clamps.
7. Connect power cable (21) to air purifier (17).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY
(M113A2 ONLY)**

0690 00

THIS WORK PACKAGE COVERS:

- Removal (page 0690 00-2).
 - Installation (page 0690 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut (2)

Lockwasher (2)

Tie strap (3)

Battery ground lead disconnected (WP 0294 00)

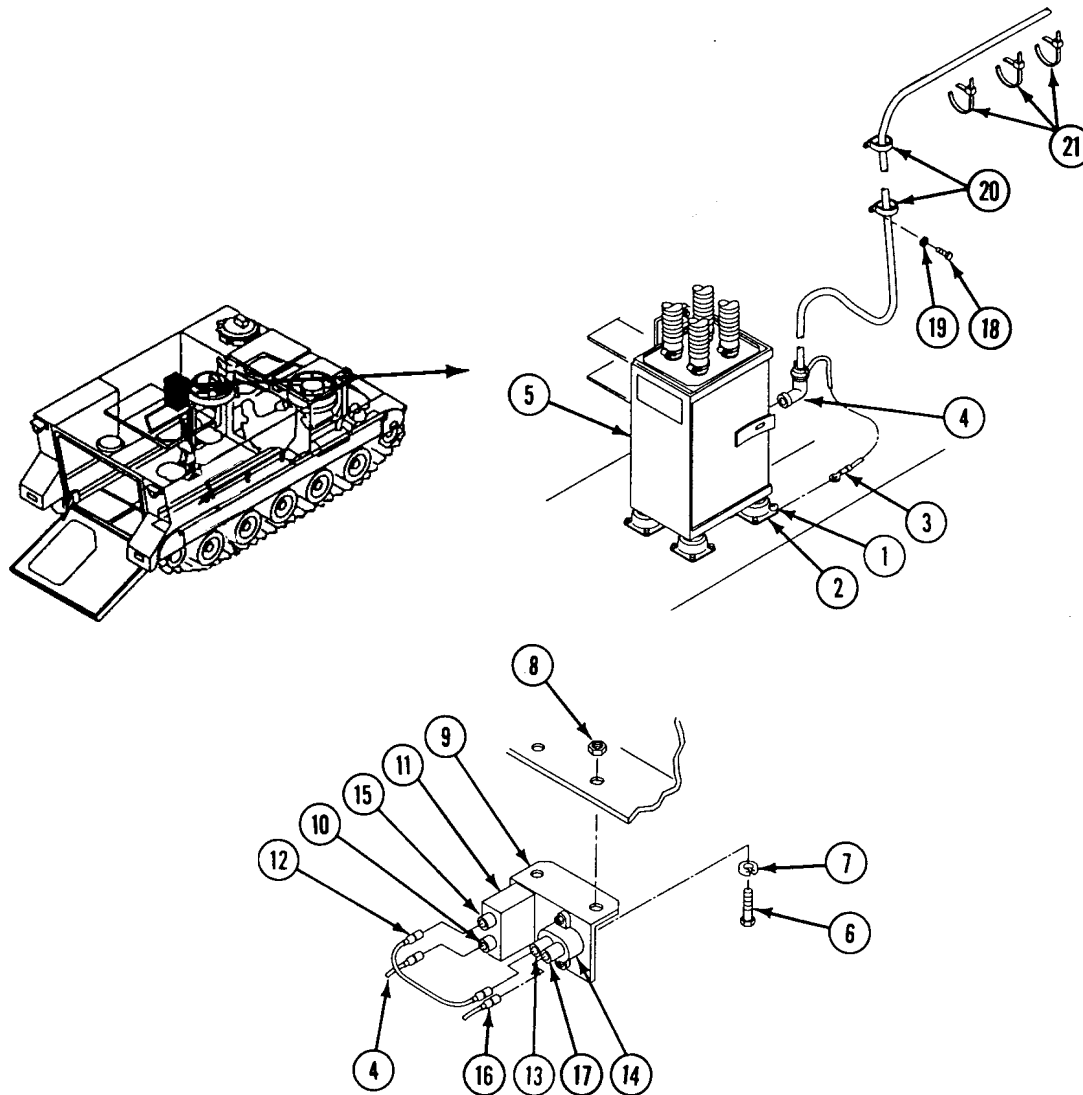
Instrument panel partially removed (WP 0238 00)

REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY (M113A2 ONLY) — Continued

0690 00

REMOVAL

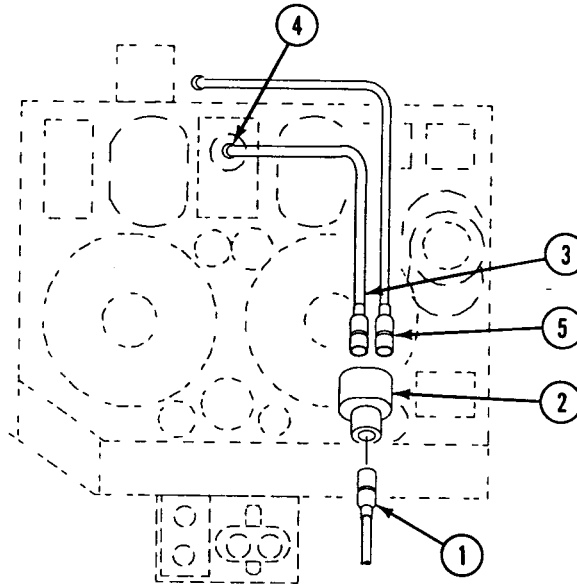
1. Loosen screw (1) on mount (2) and remove ground lead (3).
2. Remove power cable and ground assembly (4) from air purifier (5).
3. Remove two screws (6), washers (7), locknuts (8), and circuit breaker switch assembly (9) from instrument panel. Discard locknuts.
4. Remove power cable (4) from jack (10) on switch (11).
5. Remove short cable assembly (12) from jack (13) on circuit breaker (14) and jack (15) on switch (11).
6. Remove circuit 579A cable assembly (16) from jack (17) on circuit breaker (14).
7. Remove two screws (18), lockwashers (19), and clamps (20) from bulkhead. Remove clamps from circuit 579A cable assembly (16). Discard lockwashers.
8. Remove three tie straps (21) securing circuit 579A cable assembly (16) to wiring harness on side plate. Discard tie straps.



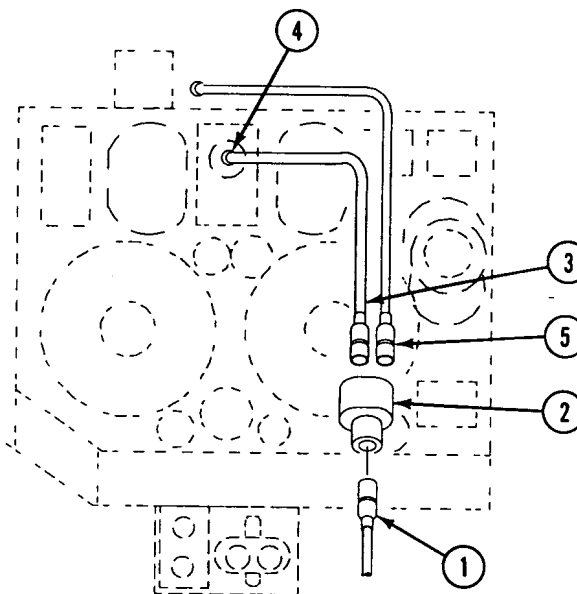
REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY (M113A2 ONLY) — Continued

0690 00

9. Remove circuit 579A lead (1) from connector (2) on back of instrument panel.
10. Remove circuit 10A lead (3) from connector (2) and circuit breaker (4).
11. Remove circuit 10 lead (5) from connector (2).

**INSTALLATION**

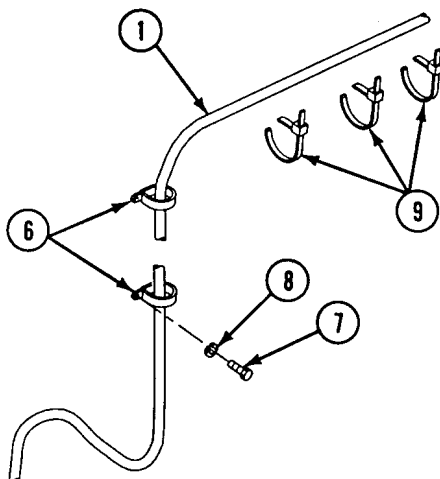
1. Install circuit 10 lead (5) on connector (2).
2. Install circuit 10A lead (3) on connector (2) and circuit breaker (4).
3. Install circuit 579A lead (1) on connector (2).



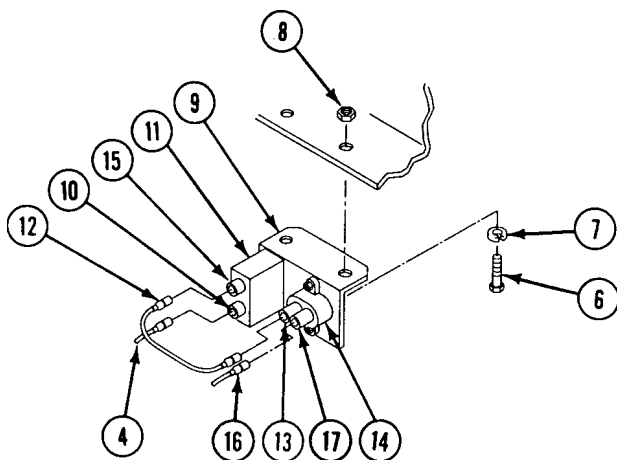
REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY (M113A2 ONLY) — Continued

0690 00

4. Install clamps (6) on circuit 579A cable (1). Secure clamps (6) to bulkhead with two screws (7) and new lockwashers (8).
5. Route circuit 579A cable (1) along existing wiring harness on side plate. Secure cable (1) to harness with three new tie straps (9).



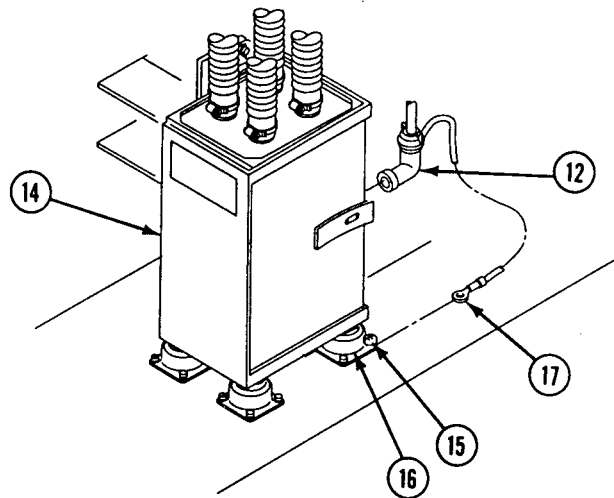
6. Align circuit breaker switch assembly (9) to threaded inserts under left side of instrument panel, with controls facing front of carrier. Secure with two screws (6), washers (7), and new locknuts (8).
7. Install circuit 579A lead (16) on jack (17) of circuit breaker (14).
8. Install short cable assembly (12) on jack (13) of circuit breaker (14) and jack (15) of switch (11).
9. Install power cable assembly (4) on jack (10) of switch (11).



REPLACE M8A3/M14 NBC CABLES AND SWITCH ASSEMBLY (M113A2 ONLY) — Continued

0690 00

10. Install power and ground cable assembly (12) on air purifier assembly (14).
11. Loosen screw (15) on shock mount insulator (16). Insert end of ground cable (17) under screw (15). Tighten screw.

**FOLLOW-THROUGH STEPS**

1. Install driver's instrument panel (WP 0238 00).
2. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE M42 VENTILATED FACE MASK (VFM) HOSE ASSEMBLY

0691 00

THIS WORK PACKAGE COVERS:

Removal (page 0691 00-1).
 Installation (page 0691 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)

Tools and Special Tools

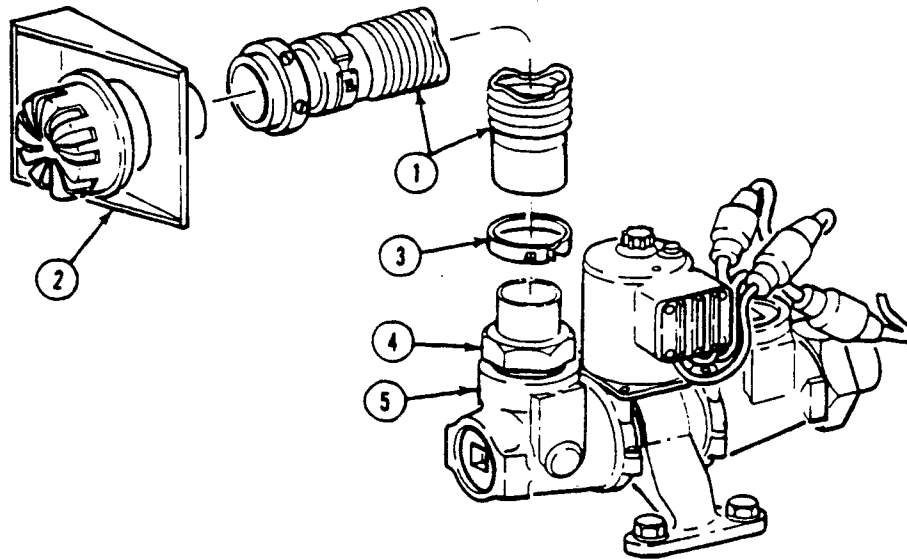
General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

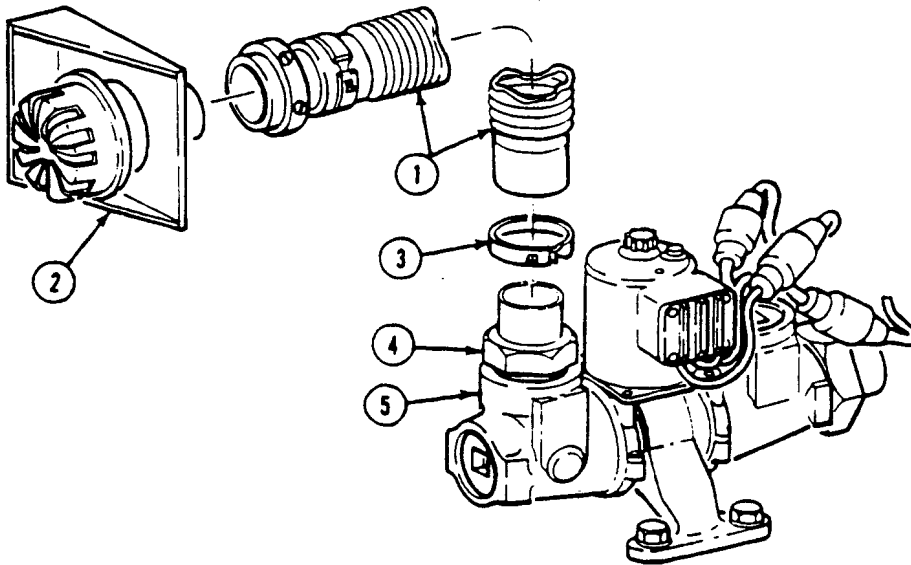
REMOVAL

1. Remove hose assembly (1) from each orifice connector assembly (2).
2. Loosen clamp (3) and remove clamp and hose assembly (1) from adapter (4) on each heater (5).



INSTALLATION

1. Install hose assembly (1) and clamp (3) on adapter (4) of each heater (5). Lock clamp (3).
2. Install hose assembly (1) on each orifice connector assembly (2).

**FOLLOW-THROUGH STEPS**

1. Raise and lock ramp (see your -10).
2. Stop engine (see your -10).

END OF TASK

REPLACE ORIFICE CONNECTOR ASSEMBLY NBC EQUIPMENT

0692 00

THIS WORK PACKAGE COVERS:

Removal (page 0692 00-1).
 Installation (page 0692 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Retaining ring pliers set (WP 0780 00, Item 45)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)

Materials/Parts

Corrosion preventive compound (WP 0782 00, Item 17)
 Lockwasher

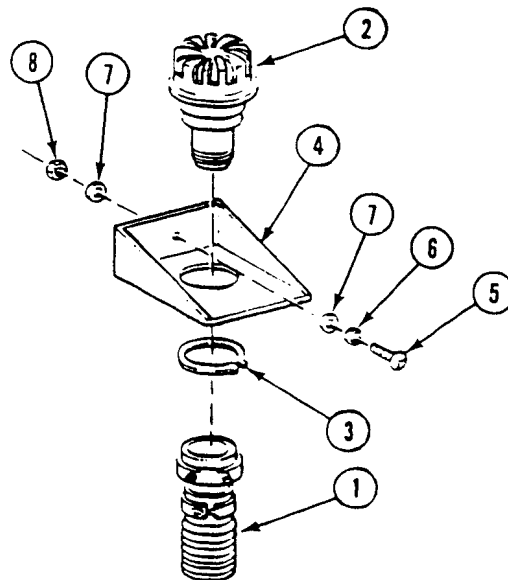
REMOVAL

1. Remove hose assembly (1) from orifice connector assembly (2).
2. Remove retaining ring (3) from orifice connector assembly (2).
3. Remove orifice connector assembly (2) from mounting bracket (4).

NOTE

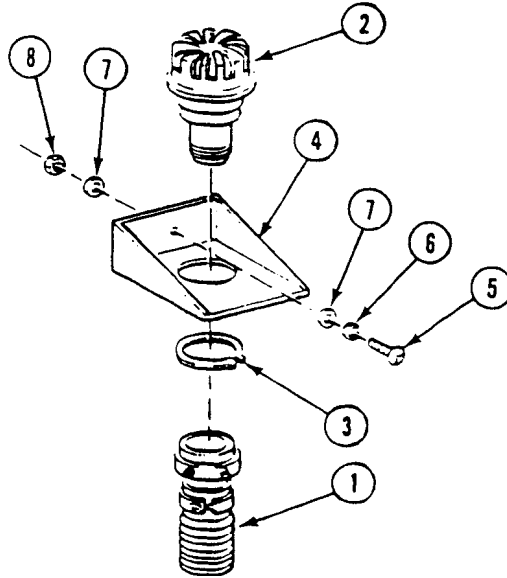
There are two methods of attaching bracket, washer, lockwasher, and nut. All parts may or may not be there, depending on mounting location.

4. Remove screw (5), lockwasher (6), two washers (7), nut (8), and mounting bracket (4). Discard lockwasher.



INSTALLATION

1. Apply corrosion preventive compound to all threaded fasteners.
2. Install mounting bracket (4) and secure with screw (5), new lockwasher (6), two washers (7), and nut (8).
3. Install orifice connector assembly (2) into mounting bracket (4) and install retaining ring (3). Use retaining ring pliers.
4. Install hose assembly (1) on orifice connector assembly (2).

**FOLLOW-THROUGH STEPS**

1. Raise and lock ramp (see your -10).
2. Stop engine (see your -10).

END OF TASK

REPLACE M42 VENTILATED FACE MASK (VFM) GAS FILTER

0693 00

THIS WORK PACKAGE COVERS:

Removal (page 0693 00-2).
Installation (page 0693 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

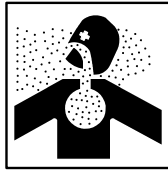
Carrier blocked (see your -10)

Ramp lowered (see your -10)

Materials/Parts

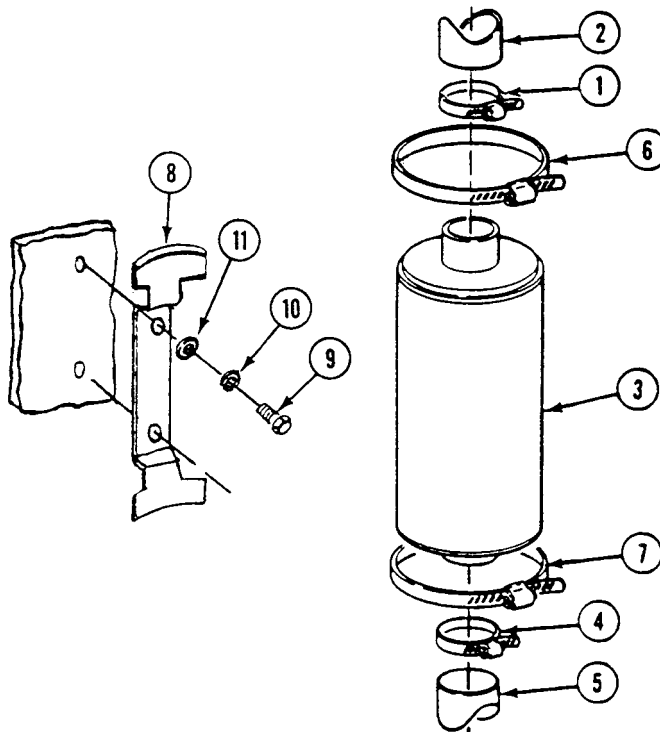
Lockwasher (2)

REMOVAL

WARNING

**Contaminated filters are hazardous to personnel. Use precautions when handling filters.
Dispose of filters using trained chemical environment personnel.**

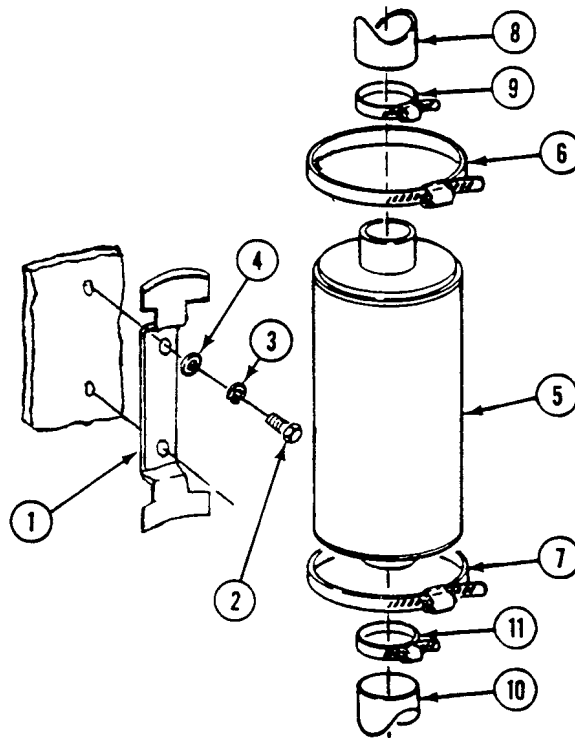
1. Loosen and remove clamp (1) and coupling (2) from gas filter (3).
2. Loosen and remove clamp (4) and coupling (5) from gas filter (3).
3. Loosen clamps (6) and (7). Slide clamps off bracket (8) and gas filter (3). Remove gas filter.
4. Remove two screws (9), lockwashers (10), washers (11), and bracket (8) from mounting position. Discard lockwashers.



INSTALLATION**NOTE**

When positioning gas filter against bracket, ensure the air flow direction, as marked on gas filter, is toward the VFM heaters.

1. Install bracket (1), two screws (2), new lockwashers (3), and washers (4) in mounting position.
2. Place gas filter (5) into position against bracket (1), slide clamps (6) and (7) over bracket and gas filter. Tighten clamps securely.
3. Install coupling (8) and clamp (9) on gas filter (5). Tighten clamp securely.
4. Install coupling (10) and clamp (11) on gas filter (5). Tighten clamp securely.

**FOLLOW THROUGH STEPS**

1. Raise and lock ramp (see your -10).
2. Stop engine (see your -10).

END OF TASK

REPLACE M42 VENTILATED FACE MASK (VFM) HEATER

0694 00

THIS WORK PACKAGE COVERS:

Removal (page 0694 00-1).
 Installation (page 0694 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Corrosion preventive compound (WP 0782 00, Item 17)

Locknut (4)

Lockwasher (4)

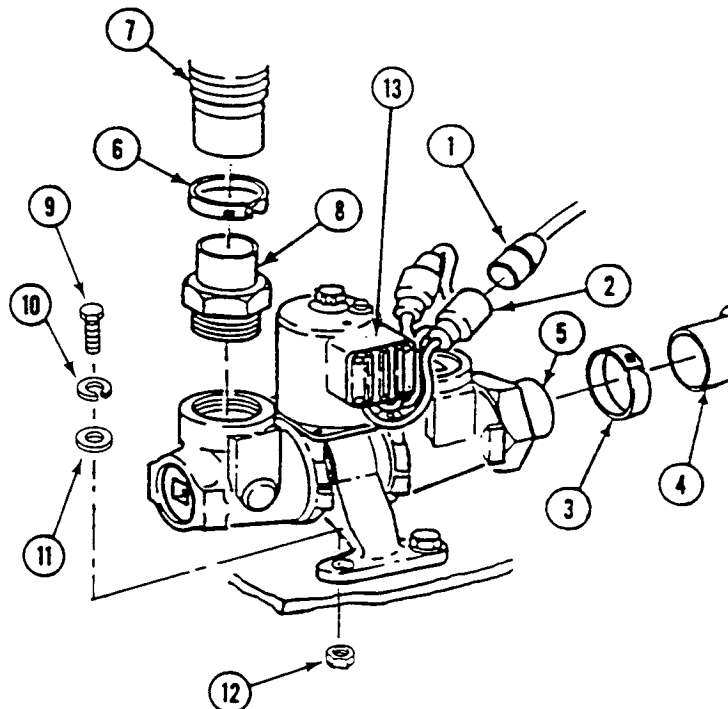
REMOVAL

1. Unplug power lead (1) from heater jack (2).
2. Loosen clamp (3) and remove clamp and hose assembly (4) from adapter (5).
3. Loosen clamp (6) and remove clamp and hose assembly (7) from adapter (8).

NOTE

Location varies for heaters. Procedures in Step 4 cover the different mounting hardware.

4. Remove four screws (9), lockwashers (10), washers (11), locknuts (12), and heater (13). Discard locknuts and lockwashers.



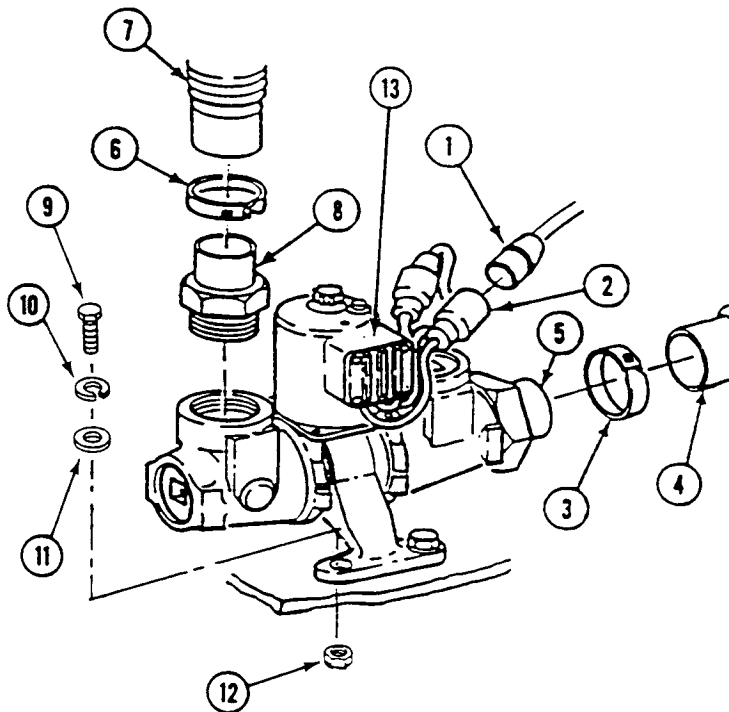
INSTALLATION**NOTE**

Location varies for heaters. Procedures in Step 1 cover the different mounting hardware.

NOTE

Apply corrosion preventive compound to all threaded fasteners.

1. Install VFM heater (13), four new locknuts (12), washers (11), new lockwashers (10), and screws (9).
2. Install hose assembly (7) and clamp (6) on adapter (8). Tighten clamp securely.
3. Install hose assembly (4) and clamp (3) on adapter (5). Tighten clamp securely.
4. Connect power lead (1) to heater jack (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

CHAPTER 40

UNIT MAINTENANCE INSTRUCTIONS
FOR M1059 SMOKE GENERATOR EQUIPMENT

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE FOG OIL TANK MODULE (M1059 ONLY).....	.0695 00
REPLACE SMOKE GENERATOR BREATHER HOSE ASSEMBLY (M1059 ONLY).....	.0696 00
REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET (M1059 ONLY).....	.0697 00
REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY (M1059 ONLY).....	.0698 00
REPLACE SMOKE GENERATOR SYSTEM POWER SUPPLY CABLE ASSEMBLY (M1059 ONLY).....	.0699 00
REPLACE AIR COMPRESSOR ELECTRICAL CABLE ASSEMBLY (M1059 ONLY).....	.0700 00
REPLACE FOG OIL PUMP ELECTRICAL CABLE ASSEMBLY (M1059 ONLY).....	.0701 00
REPLACE SMOKE GENERATOR INTERNAL CABLE ASSEMBLY (M1059 ONLY).....	.0702 00
REPLACE ADAPTER ACCESS PLATE TO GENERATOR ELECTRICAL CABLE ASSEMBLY (M1059 ONLY).....	.0703 00
REPLACE AIR COMPRESSOR ASSEMBLY (M1059 ONLY).....	.0704 00
REPLACE FOG OIL PUMP ASSEMBLY (M1059 ONLY).....	.0705 00
REPLACE SMOKE GENERATOR FUEL CAN LID ASSEMBLY (M1059 ONLY).....	.0706 00
REPLACE SMOKE GENERATOR FUEL LINES AND GUARDS (M1059 ONLY).....	.0707 00
REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE AND GASKET (M1059 ONLY).....	.0708 00
REPLACE SMOKE GENERATOR COMPRESSOR RESERVOIR TO ADAPTER ACCESS PLATE AIR HOSE (M1059 ONLY).....	.0709 00
REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE TO COVER ASSEMBLY AIR HOSE (M1059 ONLY).....	.0710 00
REPLACE FOG OIL TANK QUICK DISCONNECT TO ADAPTER ACCESS PLATE HOSE (M1059 ONLY).....	.0711 00
REPLACE COVER ASSEMBLY FOG OIL QUICK DISCONNECT TO ADAPTER ACCESS PLATE HOSE (M1059 ONLY).....	.0712 00
REPLACE SMOKE GENERATOR ARMOR (M1059 ONLY).....	.0713 00
REPLACE SMOKE GENERATOR GLOW PLUG CABLE ASSEMBLIES (M1059 ONLY).....	.0714 00
REPLACE/REPAIR SMOKE GENERATOR FUEL FILTER/WATER SEPARATOR (M1059 ONLY).....	.0715 00

REPLACE FOG OIL TANK MODULE (M1059 ONLY)

0695 00

THIS WORK PACKAGE COVERS:

Removal (page 0695 00-2).
 Installation (page 0695 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Suitable Lifting Device

Carrier blocked (see your -10)

Ramp level and blocked (see your -10)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Personnel Required

Unit Mechanic
 Helper (H)

Air pressure released from compressor reservoir (TM 3-1040-283-20&P)

Fog oil tank drained (TM 3-1040-283-20&P)

REMOVAL

WARNING



Fog oil is slippery and can cause soldiers to fall and get injured. Clean up all spillage or leakage of fog oil as soon as possible by washing the area or absorbing the fog oil with sand or other absorbent material.

WARNING



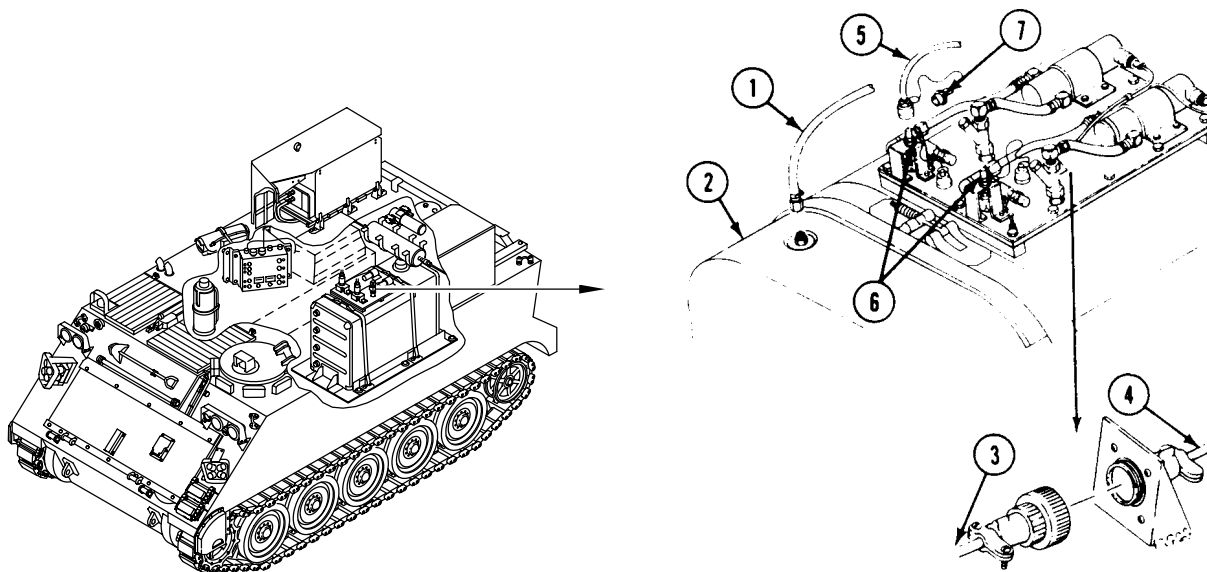
Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Remove breather hose (1) from fog oil tank (2).
2. Disconnect cable (3) from fog oil pump electrical cable assembly (4).
3. Disconnect two fog oil hoses (5) at quick disconnects (6).

NOTE

Do not install dust covers on quick disconnects until fog oil tank is clear of air compressor.

4. Install two safety caps (7) on two fog oil hoses (5).



- Remove six screws (1) and washers (2) that secure fog oil tank module (3) to hull.

WARNING

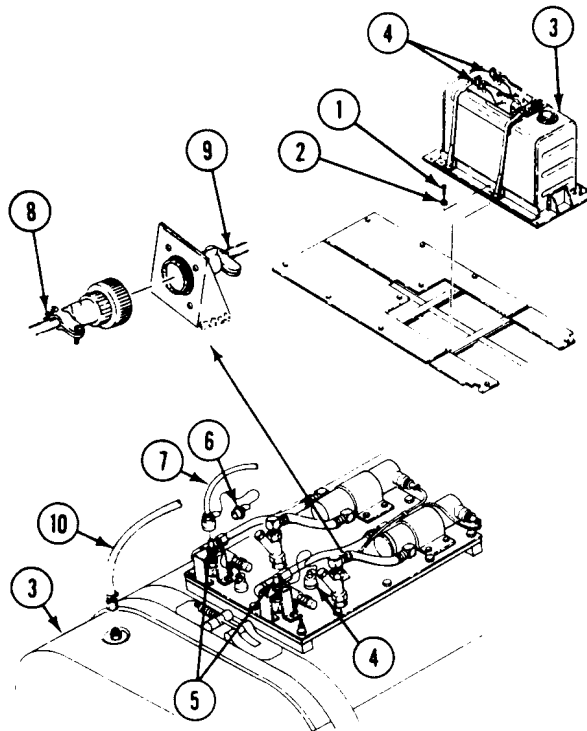


Lifting or moving objects in excess of 70 pounds could injure you. Get an assistant or use a lifting device to move heavy objects.

NOTE

Slide fog oil tank all the way to the left side of the carrier to clear air compressor for removal of tank from carrier.

- Slide fog oil tank module (3) onto ramp. Have helper assist.
- Install two dust covers (4) on quick disconnect couplings (5).



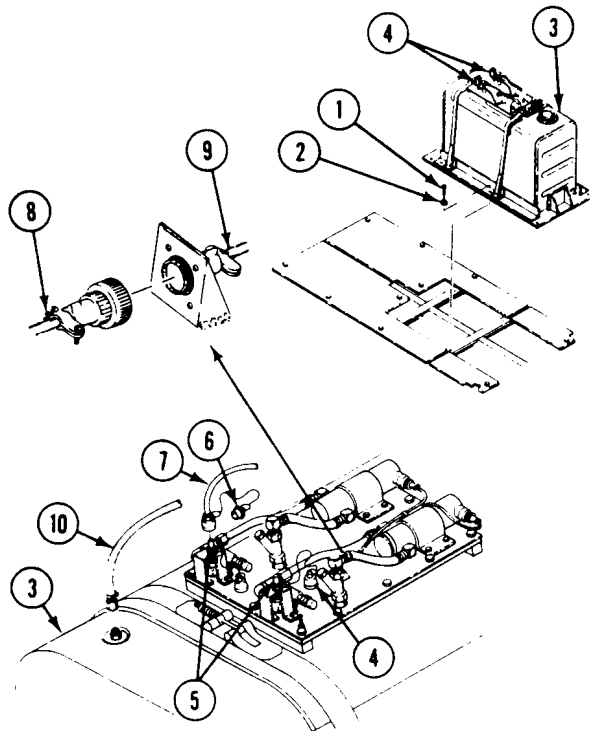
WARNING



Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

8. Using a suitable lifting device, lower fog oil tank module (3) from ramp to ground.



INSTALLATION

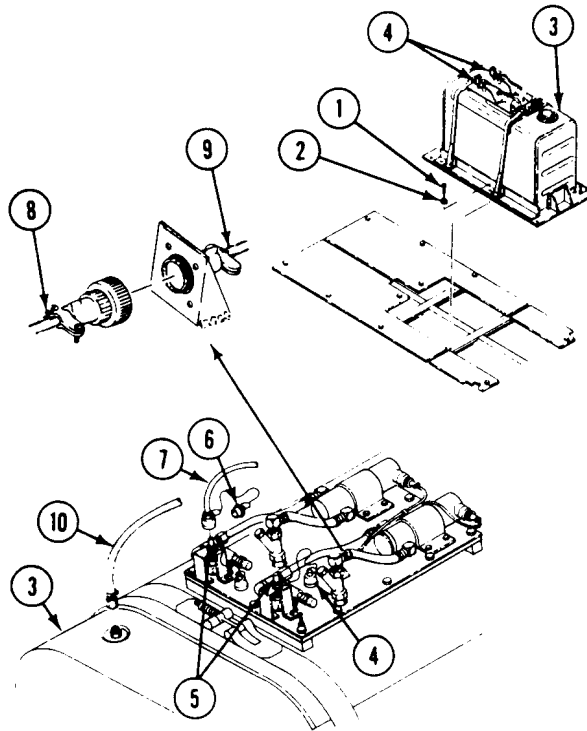
WARNING



Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

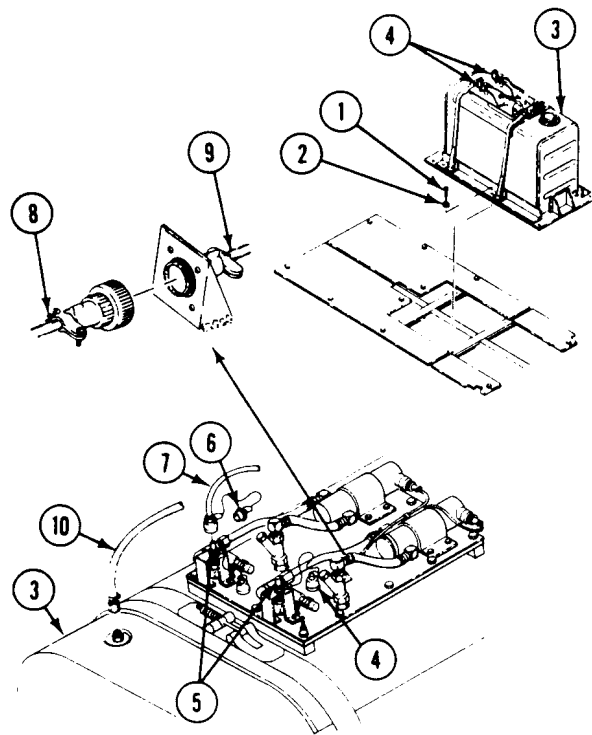
1. Using a suitable lifting device, raise fog oil tank module (3) from ground to ramp.
2. Remove two dust covers (4) from two quick disconnect couplings (5).



NOTE

Slide fog oil tank all the way to the left side of carrier to clear air compressor for installation of tank in carrier.

3. Slide fog oil tank module (3) onto hull cross members. Have helper assist. Secure to hull with six screws (1) and washers (2).
4. Remove two safety caps (6) from two fog oil hoses (7).
5. Connect two fog oil hoses (7) to two quick disconnect couplings (5).
6. Connect cable assembly (8) to fog oil pump electrical cable assembly (9).
7. Install breather hose (10) on fog oil tank (3).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.
3. Service fog oil tank as required. See TM 3-1040-283-20&P.
4. Raise and lock ramp (see your -10).
5. Stop engine (see your -10).

END OF TASK

**REPLACE SMOKE GENERATOR BREATHER HOSE ASSEMBLY
(M1059 ONLY)**

0696 00

THIS WORK PACKAGE COVERS:

Removal (page 0696 00-1).
Installation (page 0696 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

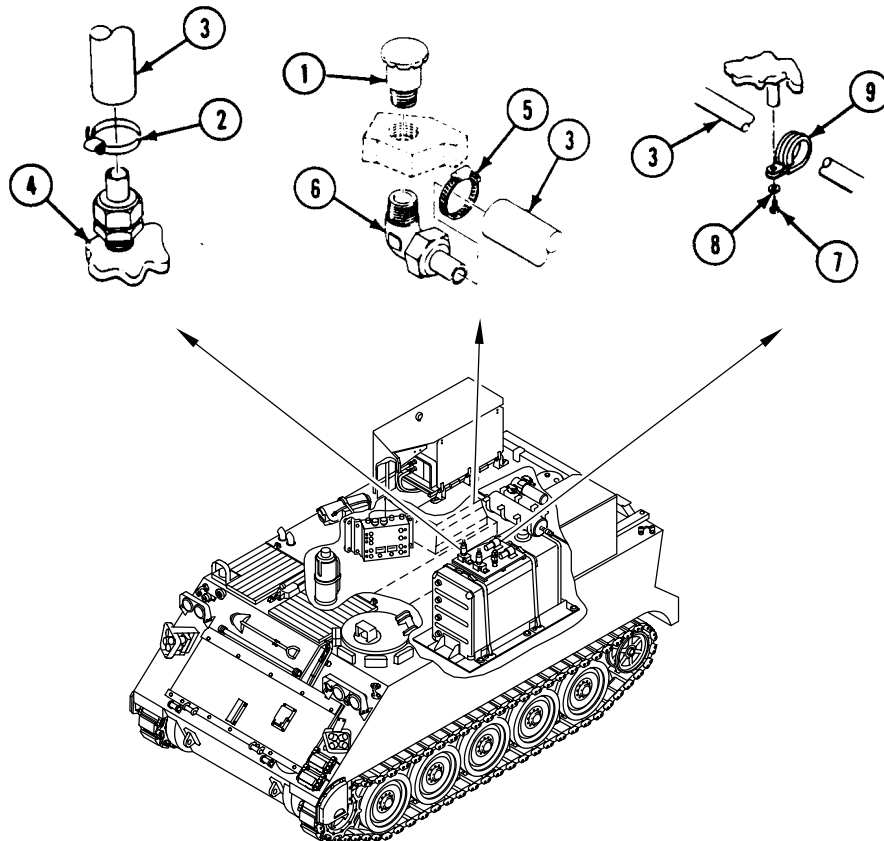
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (2)

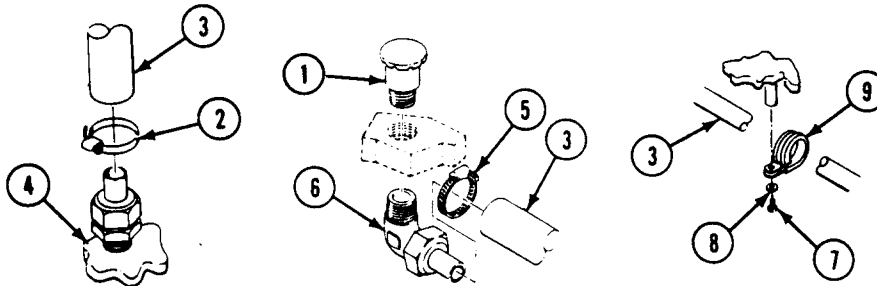
REMOVAL

1. Remove breather (1).
2. Loosen clamp (2) and remove hose assembly (3) from front of fog oil tank (4).
3. Loosen clamp (5) and remove hose assembly (3) from elbow (6) on hull ceiling.
4. Remove two screws (7), lockwashers (8), clamps (9), and hose assembly (3) from hull ceiling. Discard lockwashers.



REPLACE SMOKE GENERATOR BREATHER HOSE ASSEMBLY (M1059 ONLY) — Continued**0696 00****INSTALLATION**

1. Secure hose assembly (3) to hull ceiling with two clamps (9), screws (7), and new lockwashers (8).
2. Install hose assembly (3) on elbow (6) on hull ceiling. Tighten clamp (5).
3. Install hose assembly (3) on fog oil tank tube (4). Tighten clamp (2).
4. Install breather (1).

**END OF TASK**

**REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT
BRACKET (M1059 ONLY)**

0697 00

THIS WORK PACKAGE COVERS:

Removal (page 0697 00-2).
Installation (page 0697 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Torque Wrench (WP 0780 00, Item 103)

Suitable Lifting Device

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Air pressure released from compressor reservoir (TM
3-1040-283-20&P)

Inboard armor shield removed (WP 0713 00)

Materials/Parts

Locknut (2)

Lockwasher (4)

**REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET
(M1059 ONLY) — Continued**

0697 00

REMOVAL

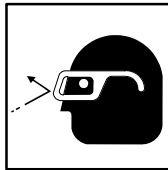
WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Remove two screws (1), four washers (2), two locknuts (3), and wedges (4) from support bracket (5) and generator (6). Discard locknuts.
2. Slide generator (6) out and onto shield. Have helper assist.
3. Disconnect electrical cable assembly (7) from cover assembly connector 5J1 (8).

WARNING



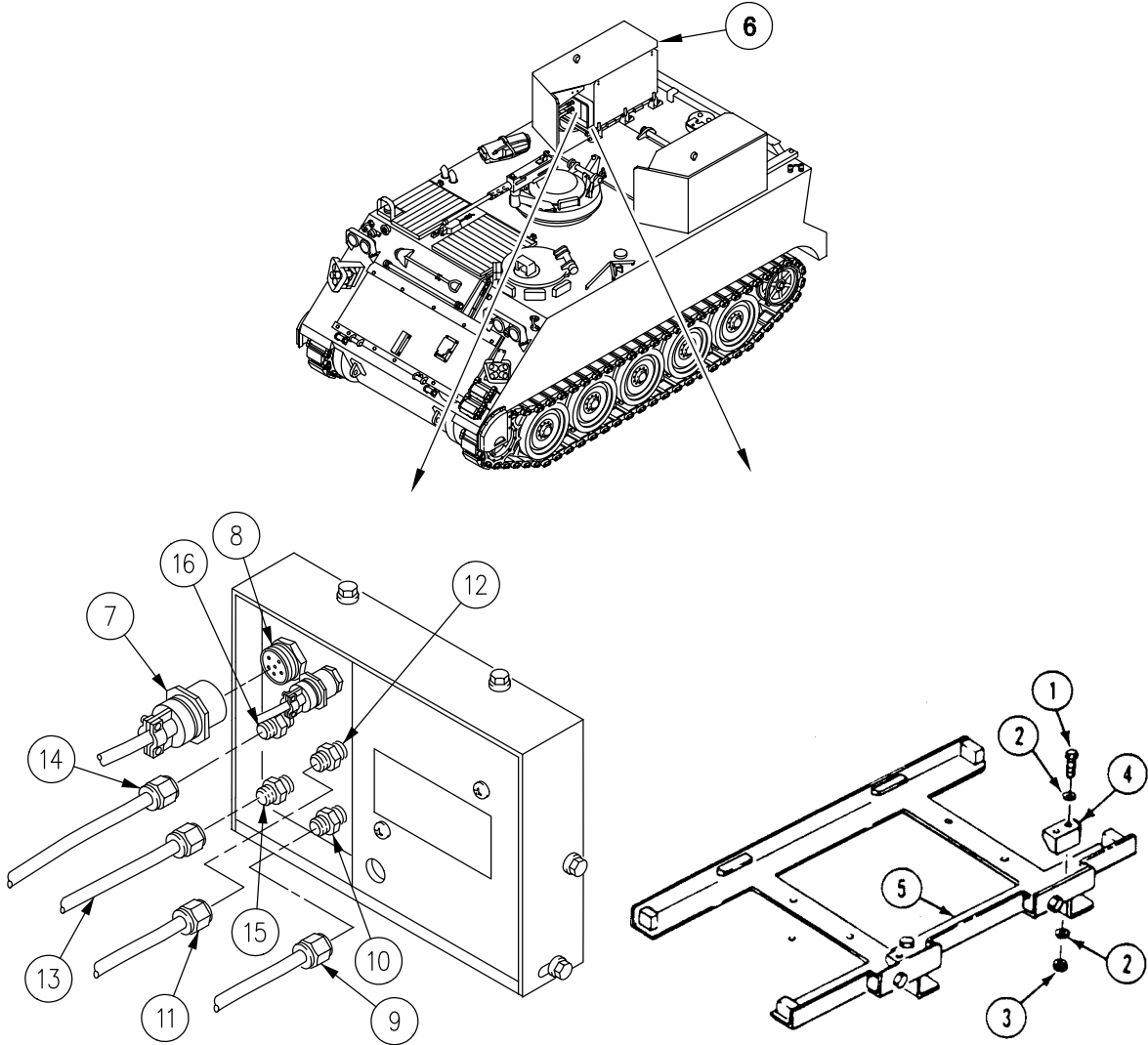
Compressed air pressure from smoke generator can cause serious injury or death. To avoid accidents, bleed air before working on air compressor assembly or disconnecting any air hose.

4. Disconnect air hose (9) from cover assembly connector (10).
5. Disconnect fog oil hose (11) from cover assembly connector (12).

**REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET
(M1059 ONLY) — Continued**

0697 00

6. Remove fuel supply hose (13) and fuel return hose (14) from fuel supply connector (15) and fuel return connector (16).



**REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET
(M1059 ONLY) — Continued**

0697 00

7. Disconnect glow plug cable (19) from preheat harness jack (20) from panel (21) on smoke generator (1).

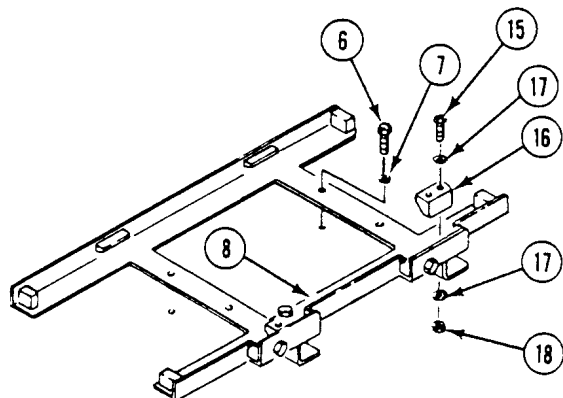
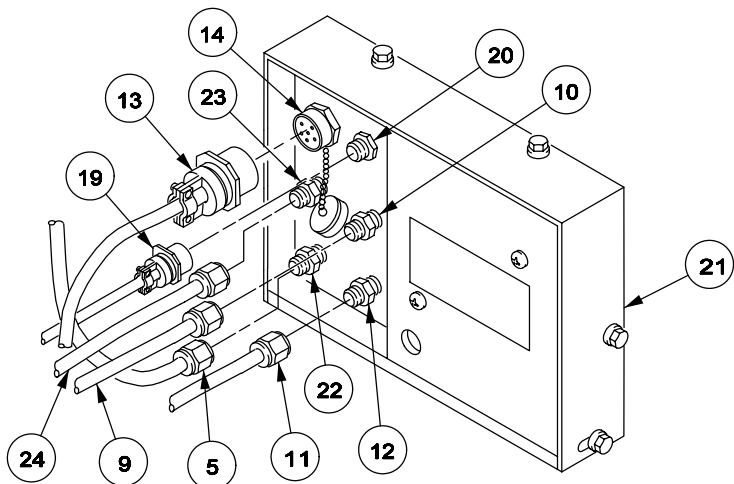
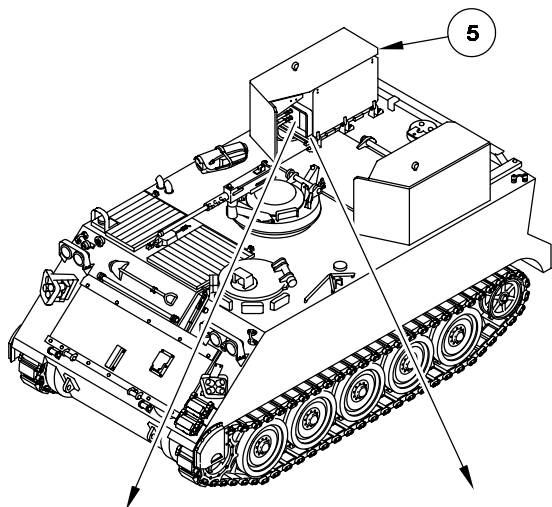
WARNING



Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

8. Using suitable lifting device, remove generator (5) from carrier.
9. Remove four screws (6), lockwashers (7), and support bracket (8) from hull top. Discard lockwashers.



REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET (M1059 ONLY) — Continued

0697 00

INSTALLATION

1. Position generator support bracket (8) on hull top. Secure with four screws (6) and new lockwashers (7). **TIGHTEN SCREWS TO 54-59 LB-FT (73-80 N·M) TORQUE.** Use torque wrench.

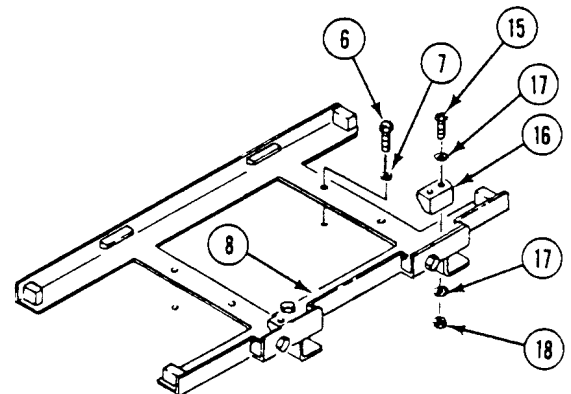
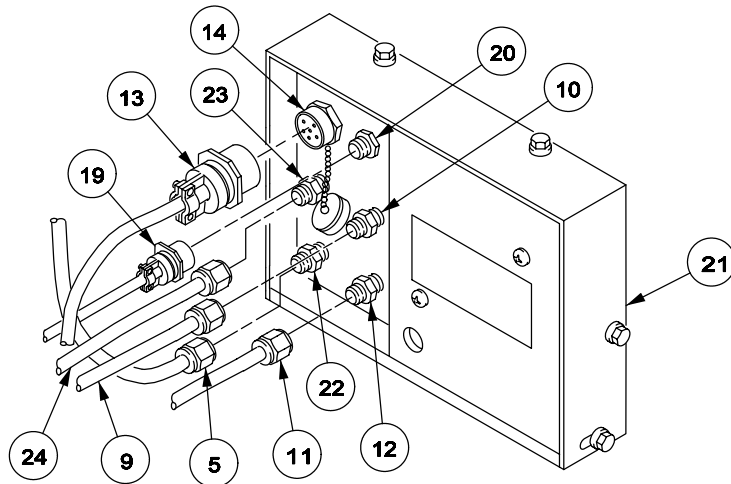
WARNING



Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

2. Using a suitable lifting device, install smoke generator on armor shield.
3. Connect glow plug cable (19) to preheat harness jack (20) to panel (21) on smoke generator.
4. Connect fuel supply hose (5) to fuel supply connector (22) and fuel return hose (24) to fuel return connector (23).
5. Connect fog oil hose (9) to cover assembly connector (10).
6. Connect air hose (11) to cover assembly connector (12).
7. Connect electrical cable assembly (13) to cover connector 5J1 (14).
8. Slide generator onto support bracket (4). Have helper assist.
9. Secure generator to support (4) with two screws (15), wedges (16), four washers (17), and two new locknuts (18).



**REPLACE SMOKE GENERATOR ASSEMBLY AND SUPPORT BRACKET
(M1059 ONLY) — Continued**

0697 00

FOLLOW-THROUGH STEPS

1. Install inboard armor shield (WP 0713 00).
2. Connect battery ground lead (WP 0294 00).
3. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY
(M1059 ONLY)**

0698 00

THIS WORK PACKAGE COVERS:

Removal (page 0698 00-2).
Installation (page 0698 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut (4)

Lockwasher (12)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY (M1059 ONLY) — Continued

0698 00

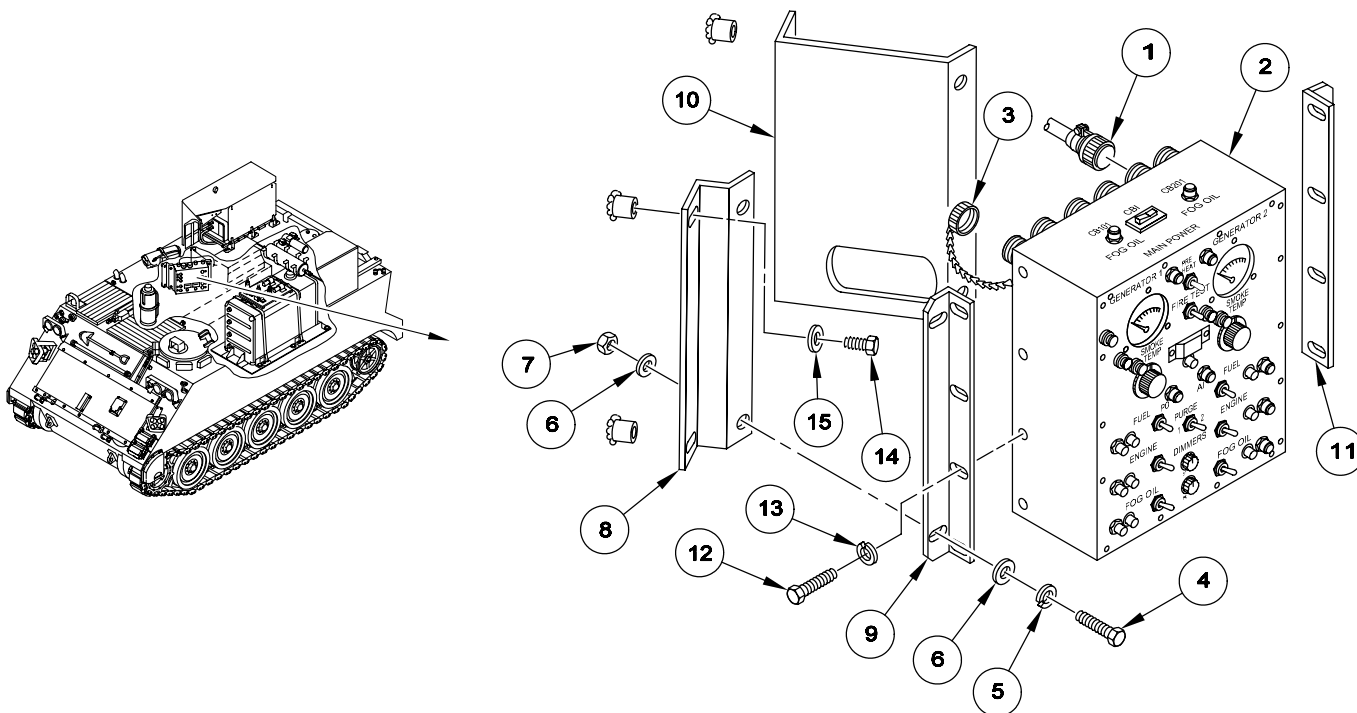
REMOVAL**WARNING**

Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

NOTE

Tag all cables to match their respective connectors before removal.

1. Disconnect six cable assembly plugs (1) from control panel (2). Install associated dust caps (3).
2. Remove four screws (4), lockwashers (5), eight washers (6), four locknuts (7), and control panel (2) with two attached brackets (9) and (11) from two brackets (8) and (10). Discard lockwashers and locknuts.
3. Remove eight screws (12), lockwashers (13) and two brackets (9) and (11) from control panel (2). Discard lockwashers.
4. Remove four screws (14), washers (15), and two brackets (8) and (10) from carrier.

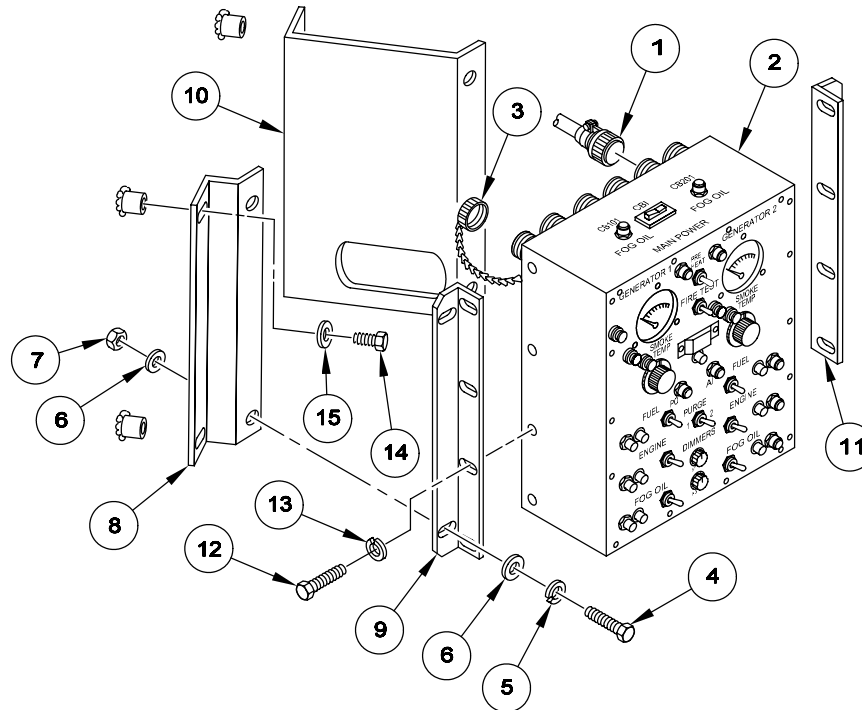


REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY (M1059 ONLY) — Continued

0698 00

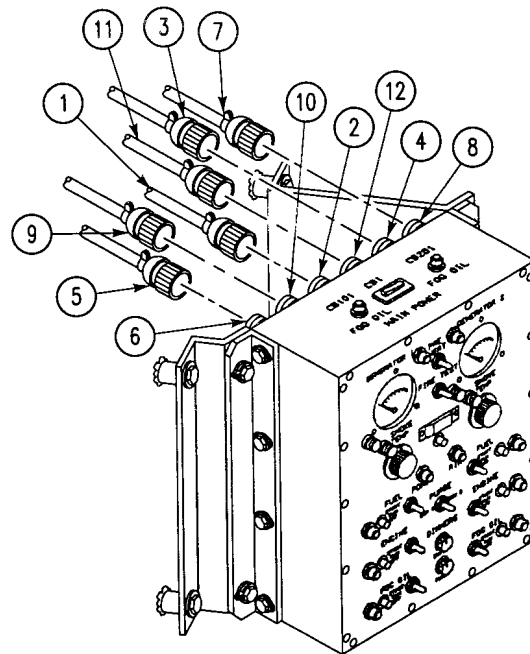
INSTALLATION

1. Install two brackets (8) and (10), four screws (14), and washers (15) on carrier.
2. Install two brackets (9) and (11), eight screws (12), and new lockwashers (13) on control panel (2).
3. Install control panel (2) with two attached brackets (9) and (11) on two brackets (8) and (10). Secure with four screws (4), new lockwashers (5), eight washers (6), and four new locknuts (7).
4. Remove dust caps (3) from six connectors.



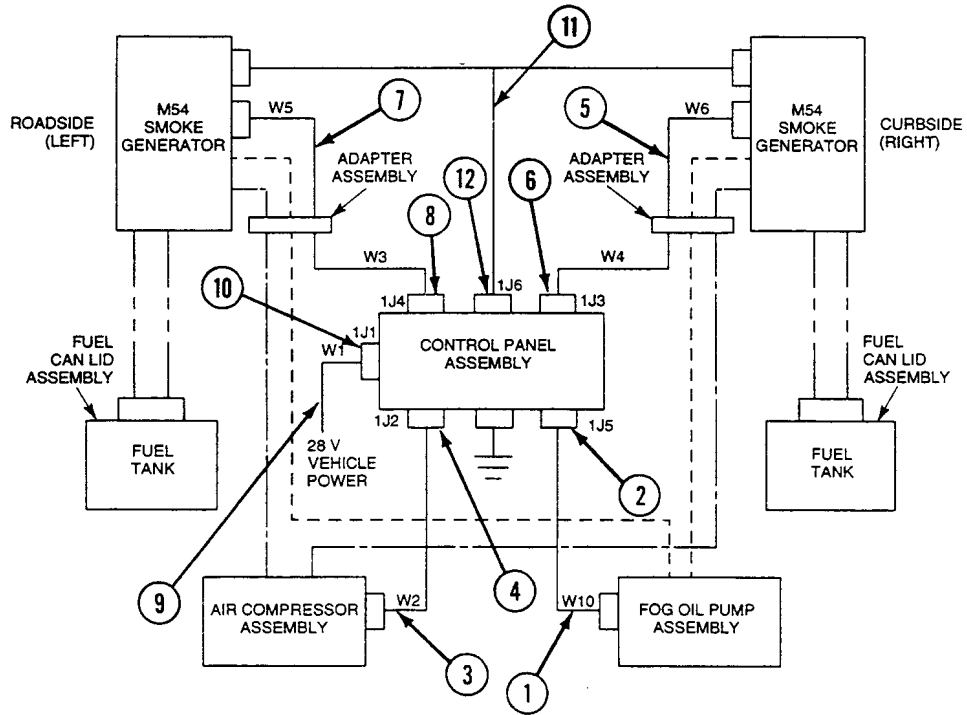
REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY (M1059 ONLY) — Continued**0698 00**

5. Connect fog oil pump cable assembly (1) to control panel assembly connector marked 1J5 (2).
6. Connect air compressor cable assembly (3) to control panel assembly connector marked 1J2 (4).
7. Connect smoke generator number 1 (right) cable assembly (5) to control panel assembly connector marked 1J3 (6).
8. Connect smoke generator number 2 (left) cable assembly (7) to control panel assembly connector marked 1J4 (8).
9. Connect main power cable assembly (9) to control panel assembly connector marked 1J1 (10).
10. Connect glow plug cable (11) to control panel assembly connector marked 1J6 (12).



REPLACE SMOKE GENERATOR CONTROL PANEL ASSEMBLY (M1059 ONLY) — Continued

0698 00



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE SMOKE GENERATOR SYSTEM POWER SUPPLY
CABLE ASSEMBLY (M1059 ONLY)**

0699 00

THIS WORK PACKAGE COVERS:

Removal (page 0699 00-1).
Installation (page 0699 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Grommet

Locknut

Lockwasher

Lockwasher (8)

REMOVAL

WARNING

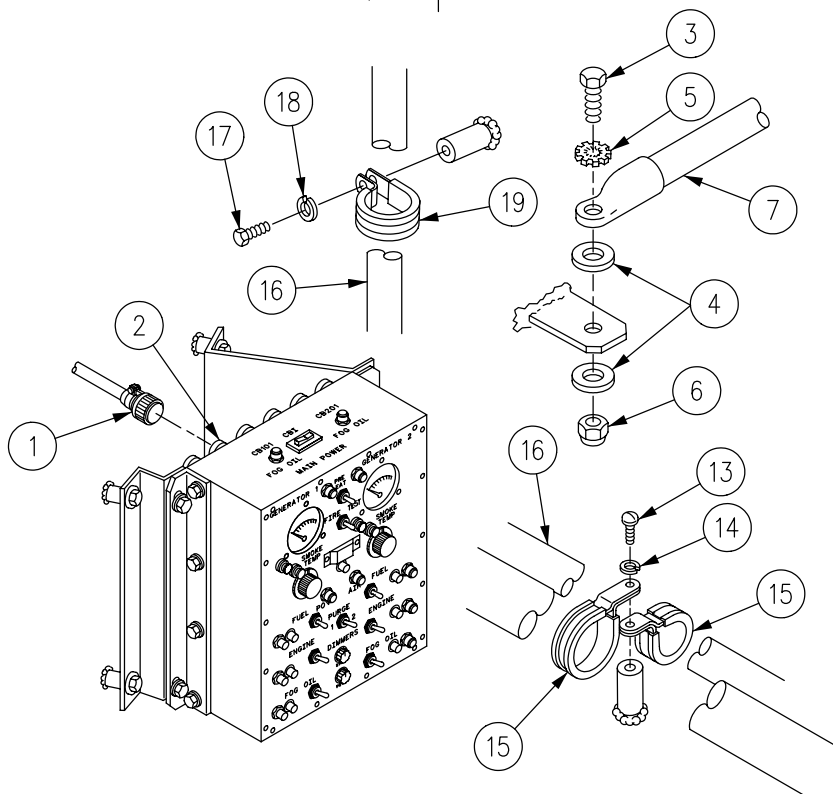
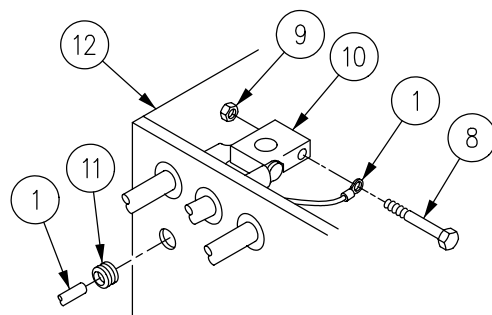
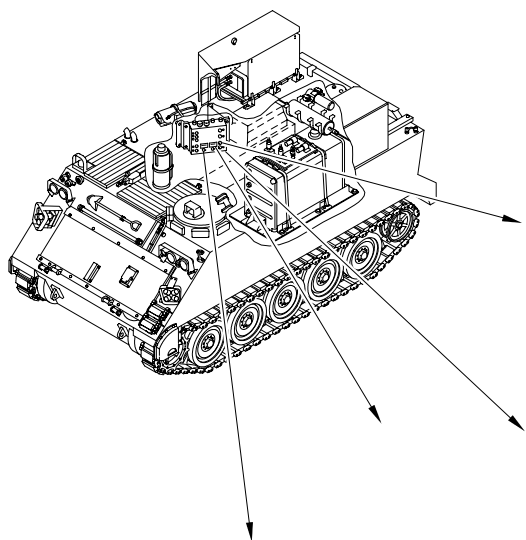


Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

REPLACE SMOKE GENERATOR SYSTEM POWER SUPPLY CABLE ASSEMBLY (M1059 ONLY) — Continued

0699 00

1. Disconnect cable assembly (1) from control panel assembly connector 1J1 (2).
2. Remove screw (3), two washers (4), lockwasher (5), locknut (6), and ground lead (7) from hull bracket. Discard lockwasher and locknut.
3. Remove screw (8), nut (9), and cable assembly (1) from positive battery terminal (10).
4. Remove cable assembly (1) and grommet (11) from battery box (12). Discard grommet.
5. Remove six screws (13), lockwashers (14), and 12 clamps (15) from cable assembly (16). Discard lockwashers.
6. Remove two screws (17), lockwashers (18), clamps (19), and cable assembly (16) from hull. Discard lockwashers.



REPLACE SMOKE GENERATOR SYSTEM POWER SUPPLY CABLE ASSEMBLY (M1059 ONLY) — Continued

0699 00

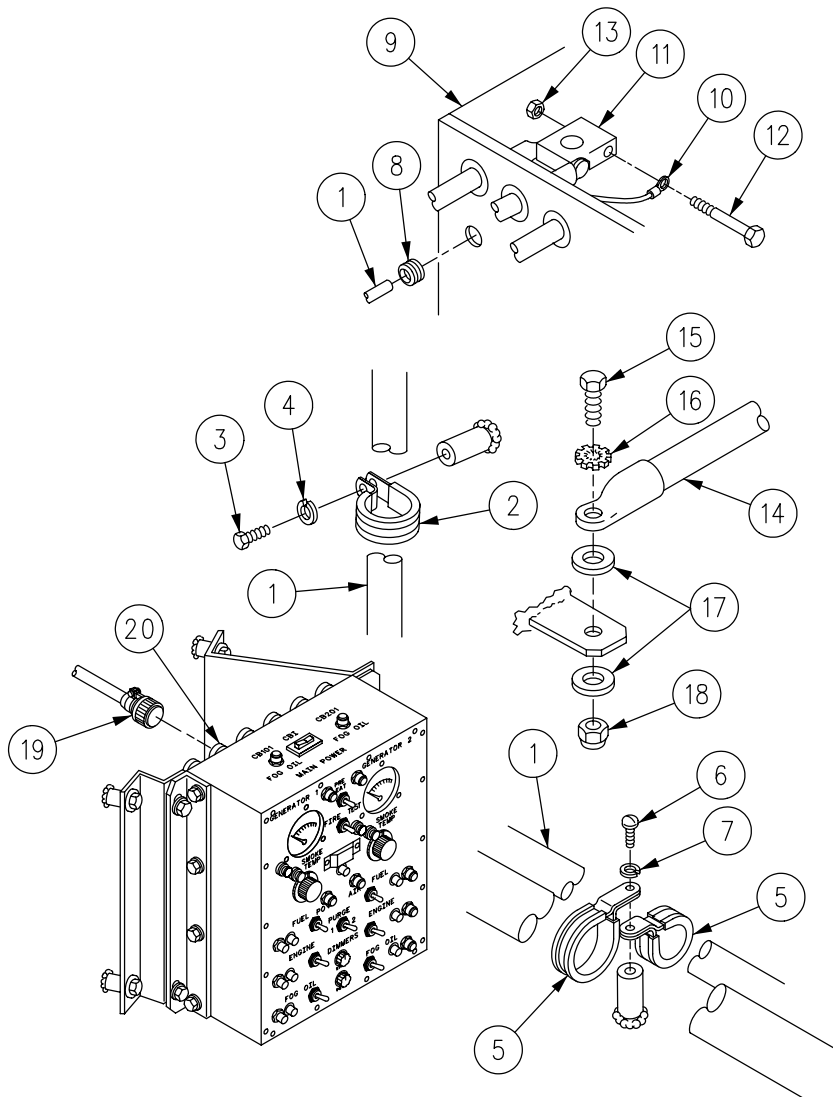
INSTALLATION

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

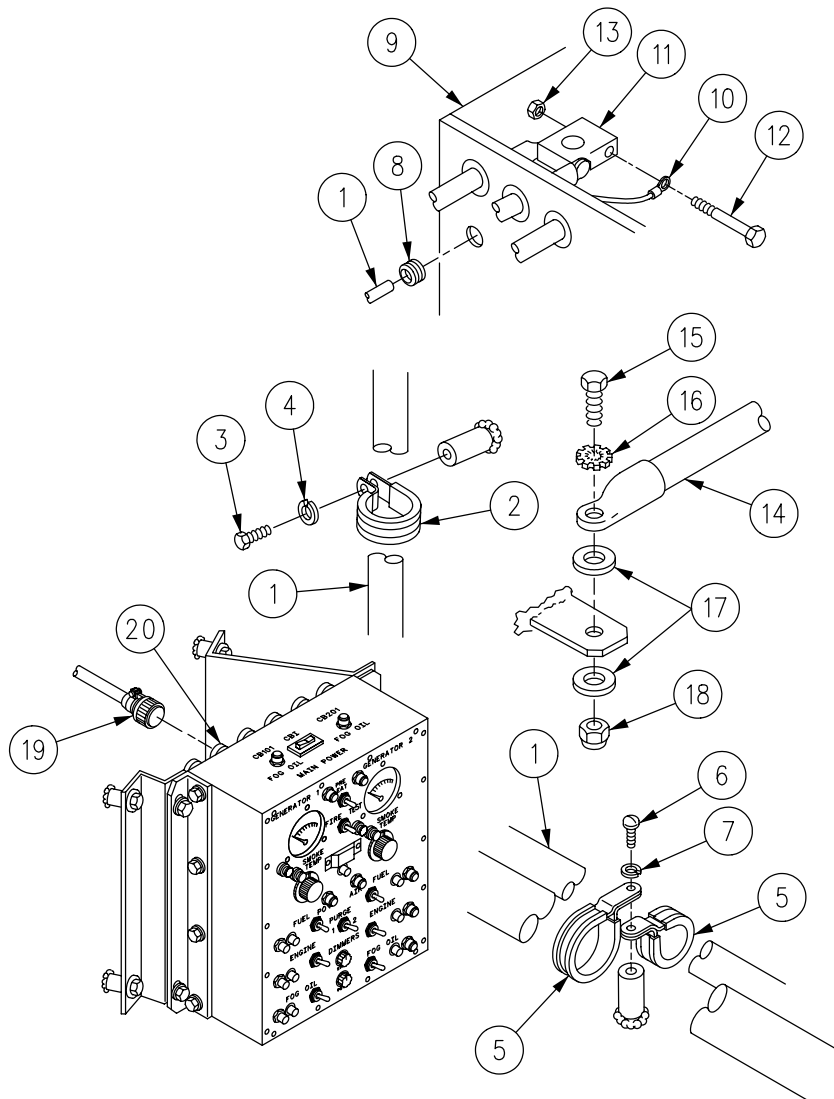
1. Secure cable assembly (1) to hull with two clamps (2), screws (3), and new lockwashers (4).
2. Secure cable assembly (1) to hull top plate with 12 clamps (5), six screws (6), and new lockwashers (7).



REPLACE SMOKE GENERATOR SYSTEM POWER SUPPLY CABLE ASSEMBLY (M1059 ONLY) — Continued

0699 00

3. Install new grommet (8) on cable assembly (1). Route cable through hole in battery box (9).
4. Install cable assembly lead (10) on positive battery terminal (11). Secure with screw (12) and nut (13).
5. Install ground lead (14) on clean, paint-free hull bracket. Secure with screw (15), new lockwasher (16), two washers (17), and new locknut (18).
6. Connect cable assembly (19) to control panel assembly connector 1J1 (20).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE AIR COMPRESSOR ELECTRICAL CABLE
ASSEMBLY (M1059 ONLY)**

0700 00

THIS WORK PACKAGE COVERS:

Removal (page 0700 00-2).
Installation (page 0700 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher (6)

Personnel Required

Unit Mechanic

REPLACE AIR COMPRESSOR ELECTRICAL CABLE ASSEMBLY (M1059 ONLY) — Continued

0700 00

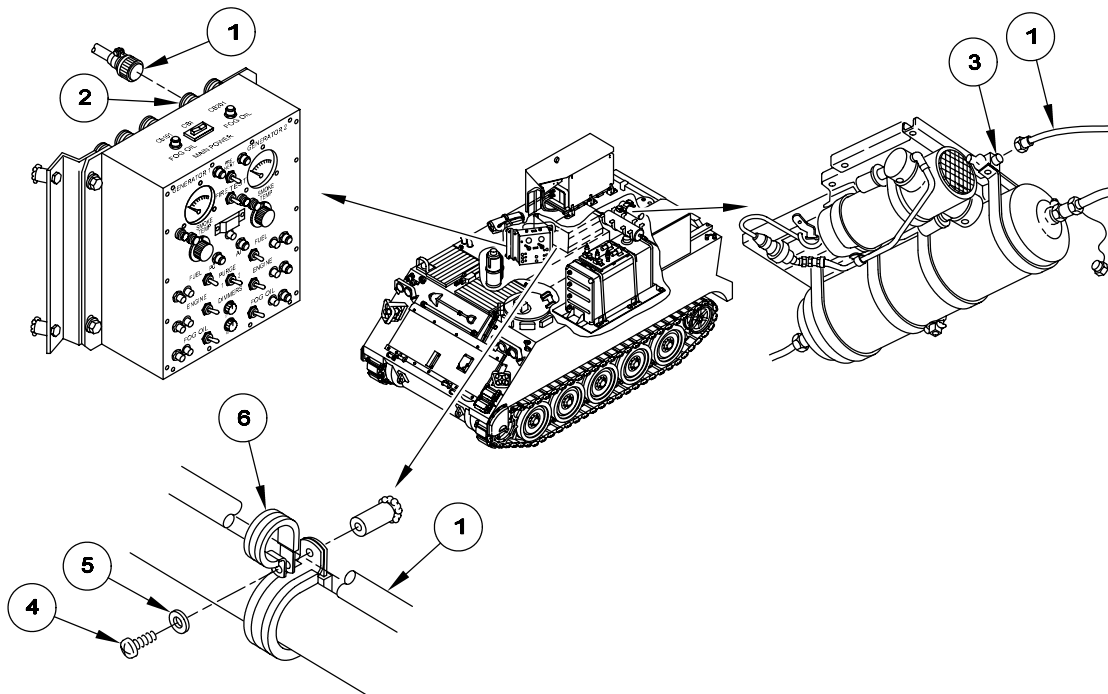
REMOVAL

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Disconnect cable assembly (1) from control panel connector 1J2 (2).
2. Disconnect cable assembly (1) from air compressor cable assembly connector (3).
3. Remove six screws (4), lockwashers (5), clamps (6), and cable assembly (1) from carrier hull. Discard lockwashers.



**REPLACE AIR COMPRESSOR ELECTRICAL CABLE ASSEMBLY
(M1059 ONLY) — Continued**

0700 00

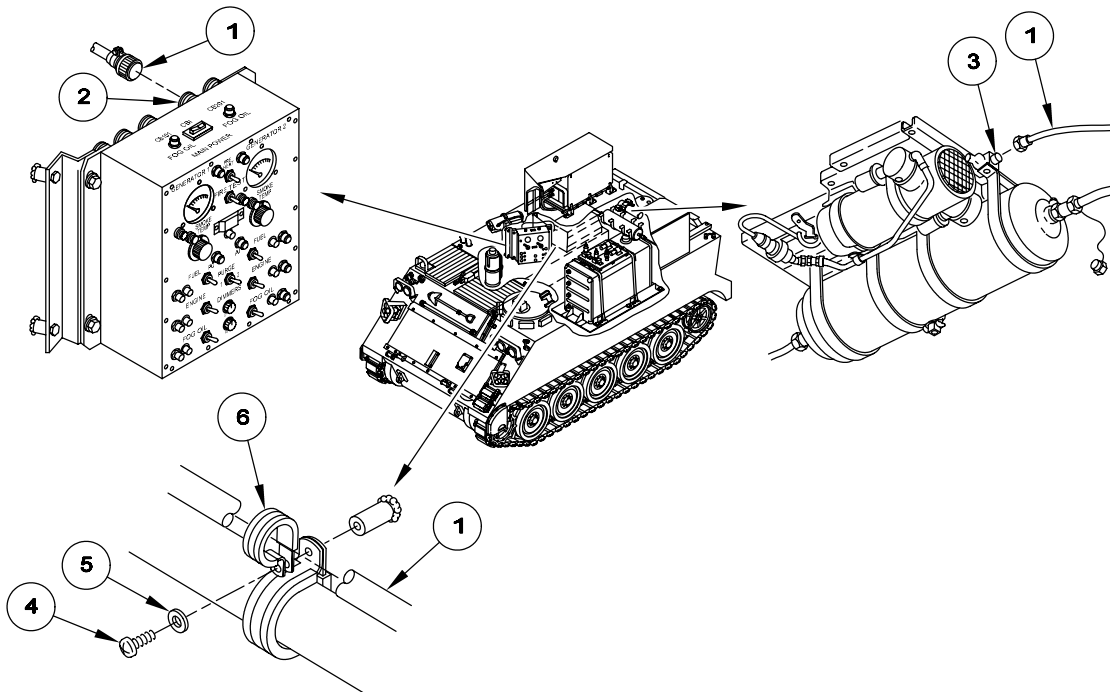
INSTALLATION

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Connect cable assembly (1) to air compressor cable assembly connector (3).
2. Connect cable assembly (1) to control panel assembly connector 1J2 (2).
3. Secure cable assembly (1) to hull with six clamps (6), screws (4), and new lockwashers (5).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

REPLACE FOG OIL PUMP ELECTRICAL CABLE ASSEMBLY (M1059 ONLY)

0701 00

THIS WORK PACKAGE COVERS:

Removal (page 0701 00-2).
Installation (page 0701 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Carrier blocked (see your -10)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher (4)

Personnel Required

Unit Mechanic

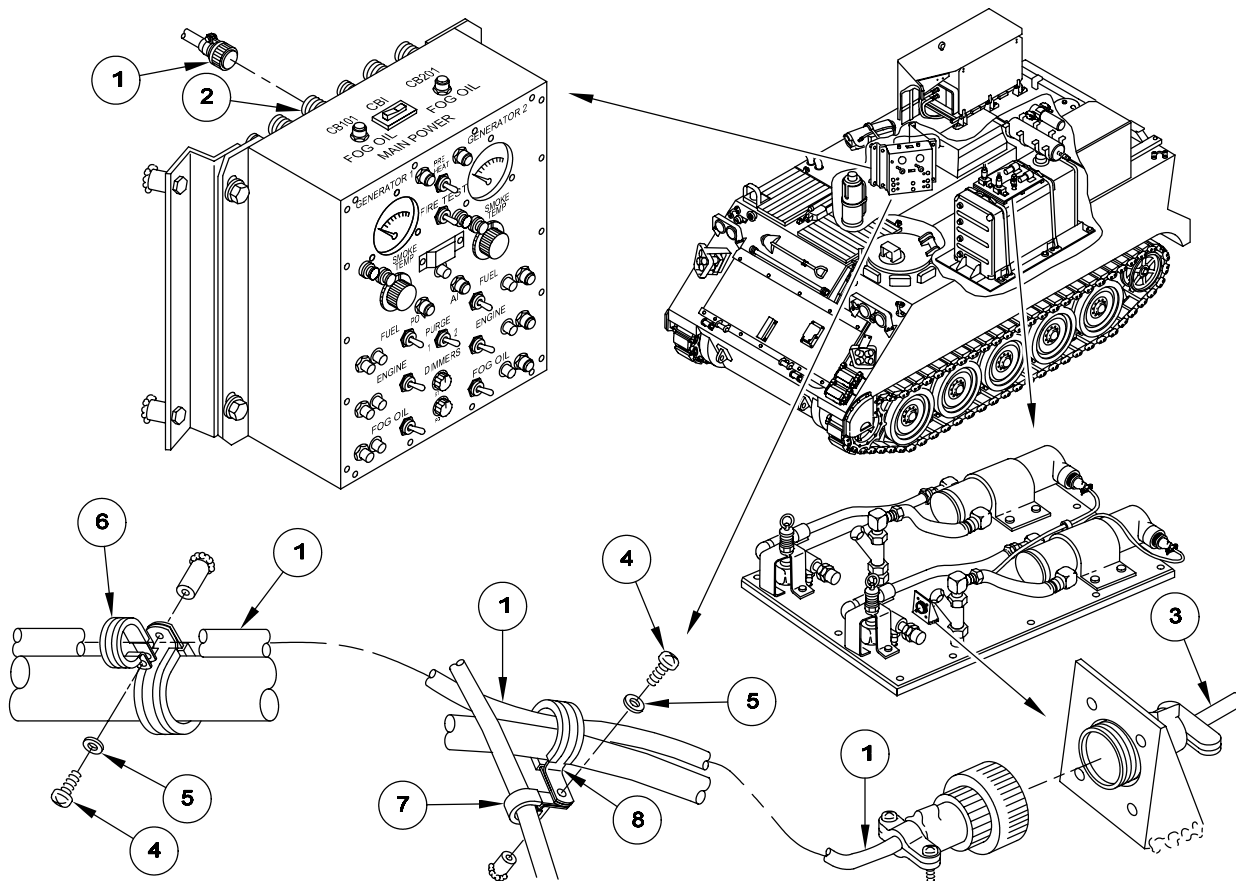
REMOVAL

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Disconnect cable assembly (1) from control panel connector 1J5 (2).
2. Disconnect cable assembly (1) from fog oil pump cable assembly (3).
3. Remove three screws (4), lockwashers (5), and clamps (6) from cable assembly (1). Discard lockwashers.
4. Remove other screw (4), lockwasher (5), clamps (6) and (7), and cable assembly (1) from carrier hull. Discard lockwasher.



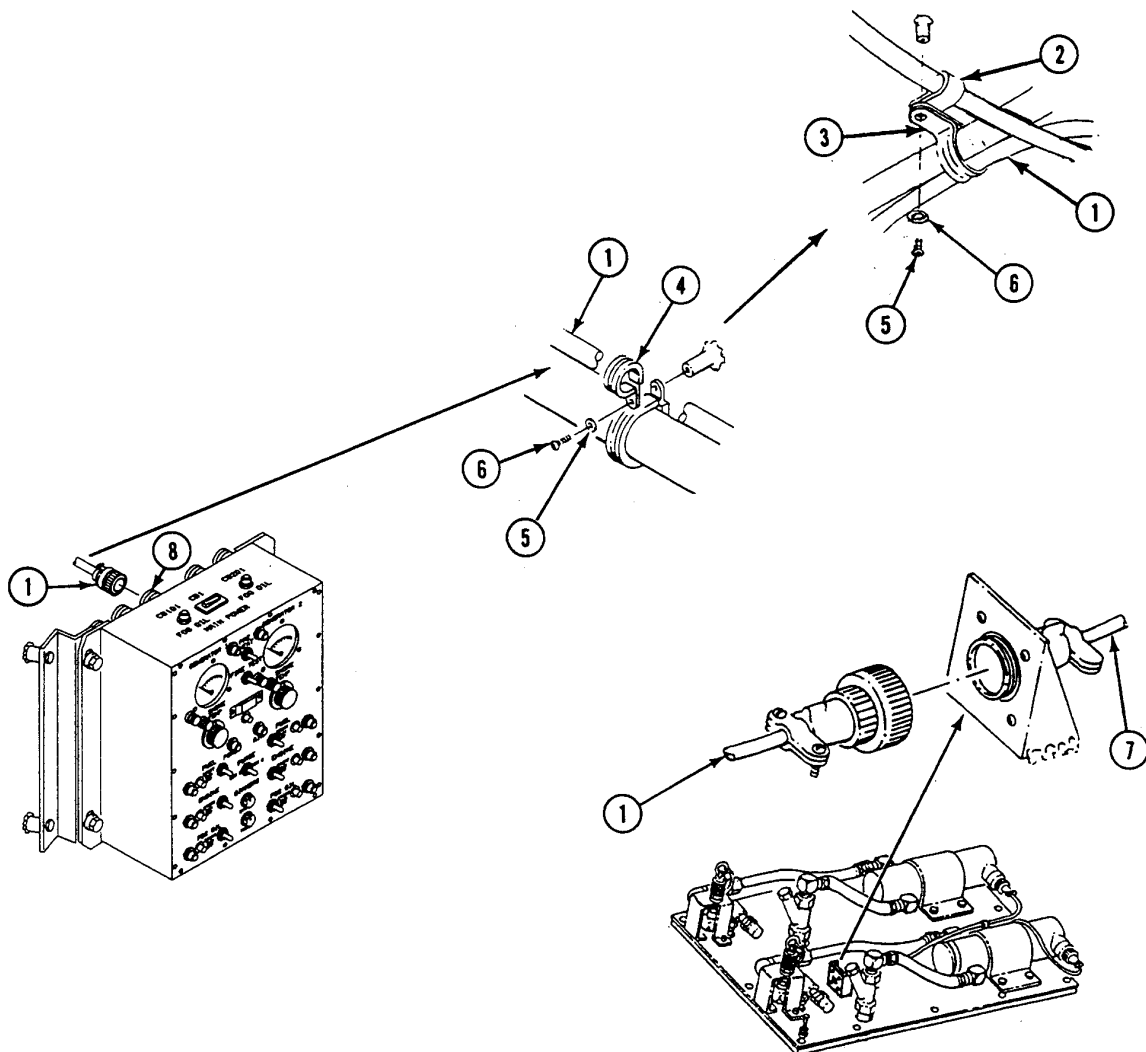
INSTALLATION

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Connect cable assembly (1) to control panel assembly connector 1J5 (8).
2. Connect cable assembly (1) to fog oil pump cable assembly (7).
3. Align cable assembly (1) on hull with clamps (2) and (3) and three clamps (4). Secure with new lockwashers (5) and screws (6).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE SMOKE GENERATOR INTERNAL CABLE ASSEMBLY
(M1059 ONLY)**

0702 00

THIS WORK PACKAGE COVERS:

- Removal (page 0702 00-2).
 - Installation (page 0702 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Locknut (4)

Lockwasher (left side) (6)

Lockwasher (right side) (1)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Air pressure released from compressor reservoir
(TM 3-1040-283-20&P)

Inboard armor shield removed (WP 0713 00)

Smoke generator assembly removed from bracket
(WP 0697 00)

REPLACE SMOKE GENERATOR INTERNAL CABLE ASSEMBLY (M1059 ONLY) — Continued

0702 00

REMOVAL

WARNING

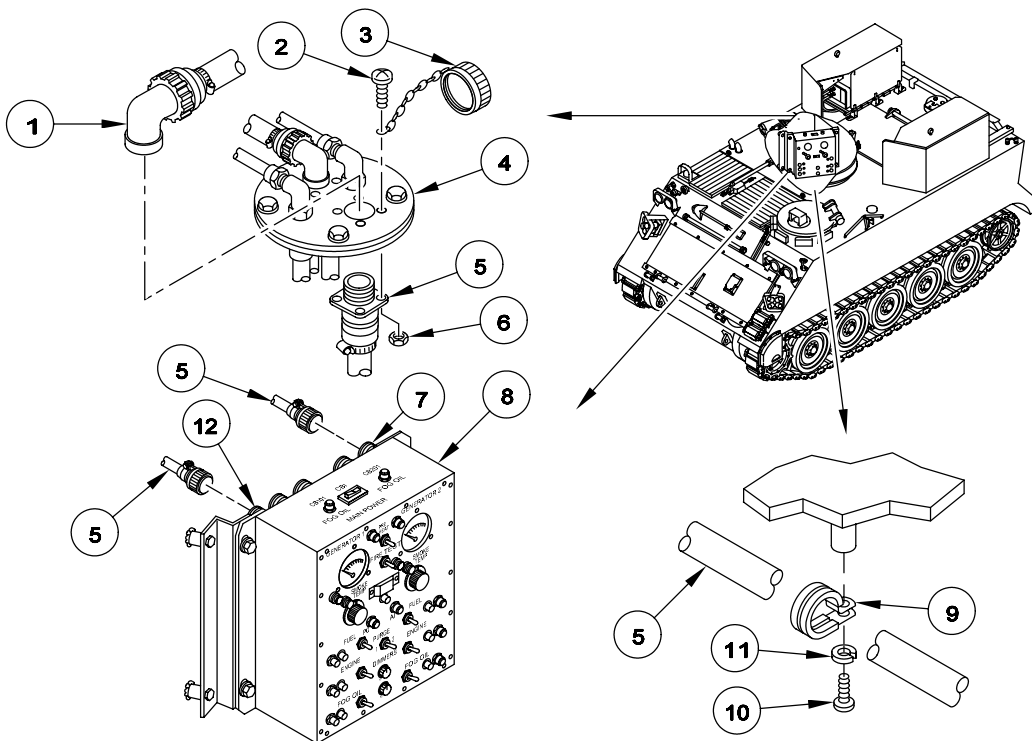


Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

NOTE

Left and right cable assemblies are replaced the same way, except left side cable assembly has six clamps and right side has only one. Left side is shown.

1. Disconnect cable (5) from jack 1J3 (left) (7) or 1J4 (right) (12) on back of control panel (8).
2. Remove six screws (10), lockwashers (11), clamps (9), and cable (5) from hull. Discard lockwashers.
3. Remove connector (1) attached to cable (5) through access plate (4).
4. Remove four screws (2), dust cap (3), locknuts (6), and cable (5) from access plate (4). Discard locknuts.



INSTALLATION

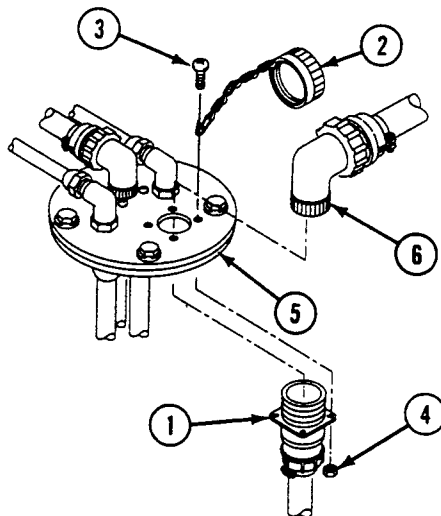
WARNING

Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

NOTE

Left and right cable assemblies are replaced the same way, except left side cable assembly has six clamps and right side has only one. Left side is shown.

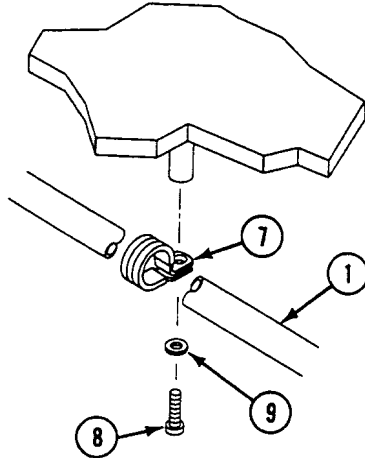
1. Install cable (1), dust cap (2), four screws (3), and new locknuts (4) on access plate (5).
2. Install connector (6) to cable (1) on access plate (5).



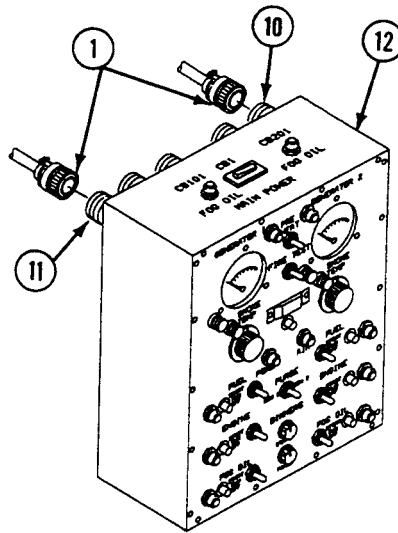
REPLACE SMOKE GENERATOR INTERNAL CABLE ASSEMBLY (M1059 ONLY) — Continued

0702 00

3. Install cable (1), six clamps (7), screws (8), and new lockwashers (9) on hull.



4. Connect cable (1) to jack 1J3 (left) (10) or 1J4 (right) (11) on back of control panel (12).



FOLLOW-THROUGH STEPS

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE ADAPTER ACCESS PLATE TO GENERATOR ELECTRICAL
CABLE ASSEMBLY (M1059 ONLY)**

0703 00

THIS WORK PACKAGE COVERS:

Removal (page 0703 00-2).
Installation (page 0703 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Circuit breaker CB1 to OFF (TM 3-1040-283-10)
Battery ground lead disconnected (WP 0294 00)
Air pressure released from compressor reservoir
(TM 3-1040-283-20&P)
Inboard armor shield removed (WP 0713 00)
Smoke generator assembly removed from bracket
(WP 0697 00)

**REPLACE ADAPTER ACCESS PLATE TO GENERATOR ELECTRICAL CABLE
ASSEMBLY (M1059 ONLY) — Continued**

0703 00

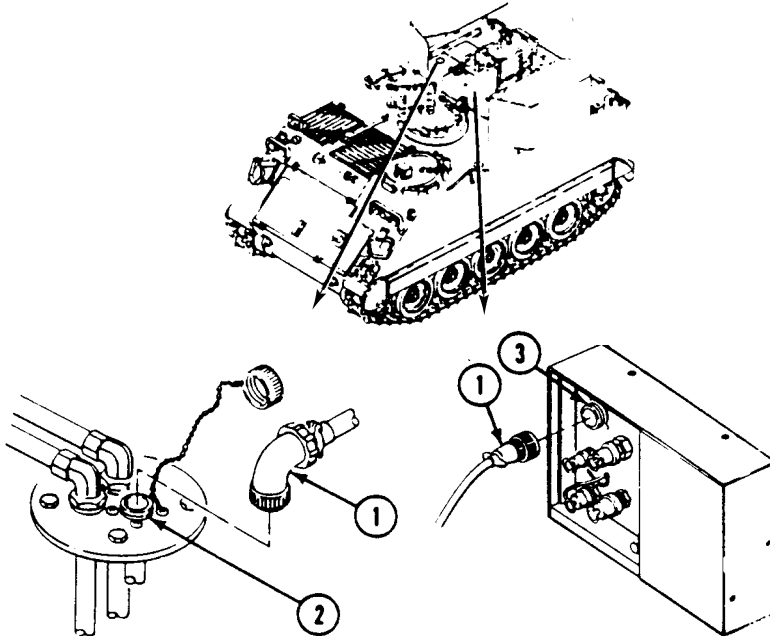
REMOVAL**WARNING**

Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

NOTE

Left and right cable assemblies are replaced the same way.

1. Disconnect cable assembly (1) from adapter access plate connector (2).
2. Disconnect cable assembly (1) from smoke generator cover assembly connector 5J1 (3).



REPLACE ADAPTER ACCESS PLATE TO GENERATOR ELECTRICAL CABLE ASSEMBLY (M1059 ONLY) — Continued

0703 00

INSTALLATION

WARNING

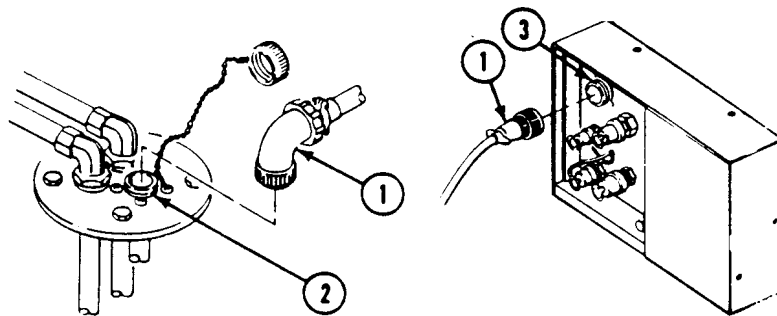


Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

NOTE

Left and right cable assemblies are replaced the same way.

1. Connect cable assembly (1) to smoke generator cover assembly connector 5J1 (3).
2. Connect cable assembly (1) to adapter access plate connector (2).

**FOLLOW-THROUGH STEPS**

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

REPLACE AIR COMPRESSOR ASSEMBLY (M1059 ONLY)

0704 00

THIS WORK PACKAGE COVERS:

Removal (page 0704 00-2).
 Installation (page 0704 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Socket Wrench Set (WP 0780 00, Item 96)
 Torque Wrench (WP 0780 00, Item 102)

Materials/Parts

Lockwasher (8)

Personnel Required

Unit Mechanic
 Helper (2)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Circuit breaker CB1 to OFF (TM 3-1040-283-10)
 Battery ground lead disconnected (WP 0294 00)
 Air pressure released from compressor reservoir (TM 3-1040-283-20&P)

REMOVAL

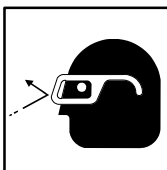
WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

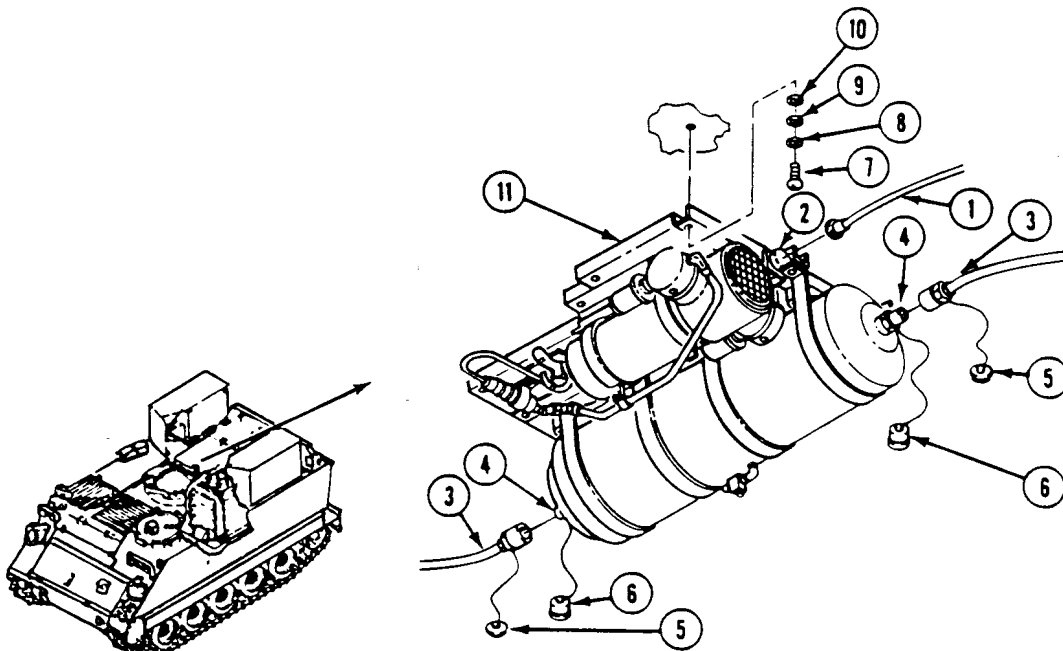
1. Disconnect air compressor electrical cable assembly (1) from compressor cable assembly connector (2).

WARNING



Compressed air pressure from smoke generator can cause serious injury or death. To avoid accidents, bleed air before working on air compressor assembly or disconnecting any air hose.

2. Disconnect two air lines (3) from two compressor air reservoir fittings (4). Install safety caps (5) on lines and dust covers (6) on fittings.
3. Remove eight screws (7), lockwashers (8), washers (9), washers (10), and compressor unit (11) from carrier. Have helpers assist. Discard lockwashers.

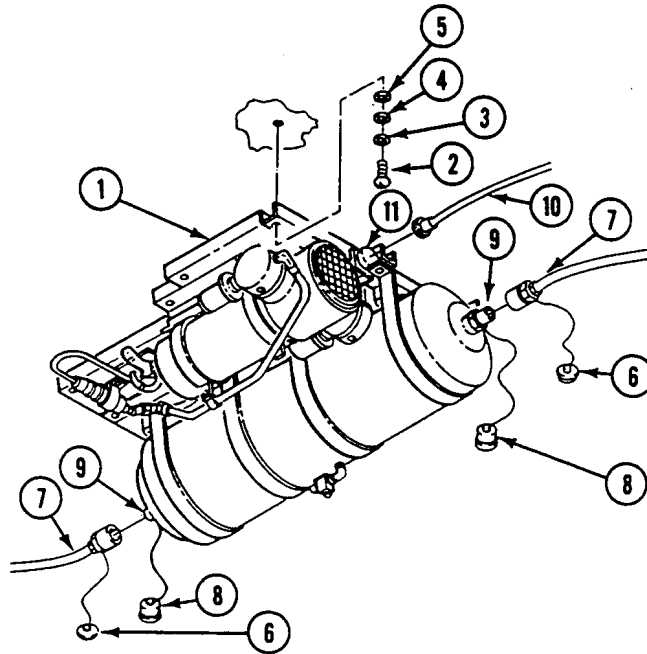


INSTALLATION

WARNING

Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Position air compressor assembly (1) on ceiling of carrier. Have helpers assist. Secure with eight screws (2), new lockwashers (3), washers (4), and washers (5). TIGHTEN SCREWS TO 264-288 LB-IN (30-33 N·M) TORQUE. Use torque wrench.
2. Remove safety caps (6) from two air lines (7) and dust covers (8) from two air compressor reservoir fittings (9). Connect lines to fittings.
3. Connect air compressor electrical cable assembly (10) to compressor cable assembly connector (11).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.
3. Raise and lock ramp (see your -10).
4. Stop engine (see your -10).

END OF TASK

REPLACE FOG OIL PUMP ASSEMBLY (M1059 ONLY)

0705 00

THIS WORK PACKAGE COVERS:

Removal (page 0705 00-1).
 Installation (page 0705 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Circuit breaker CB1 to OFF (TM 3-1040-283-10)
 Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Lockwasher (12)

Personnel Required

Unit Mechanic

REMOVAL

WARNING

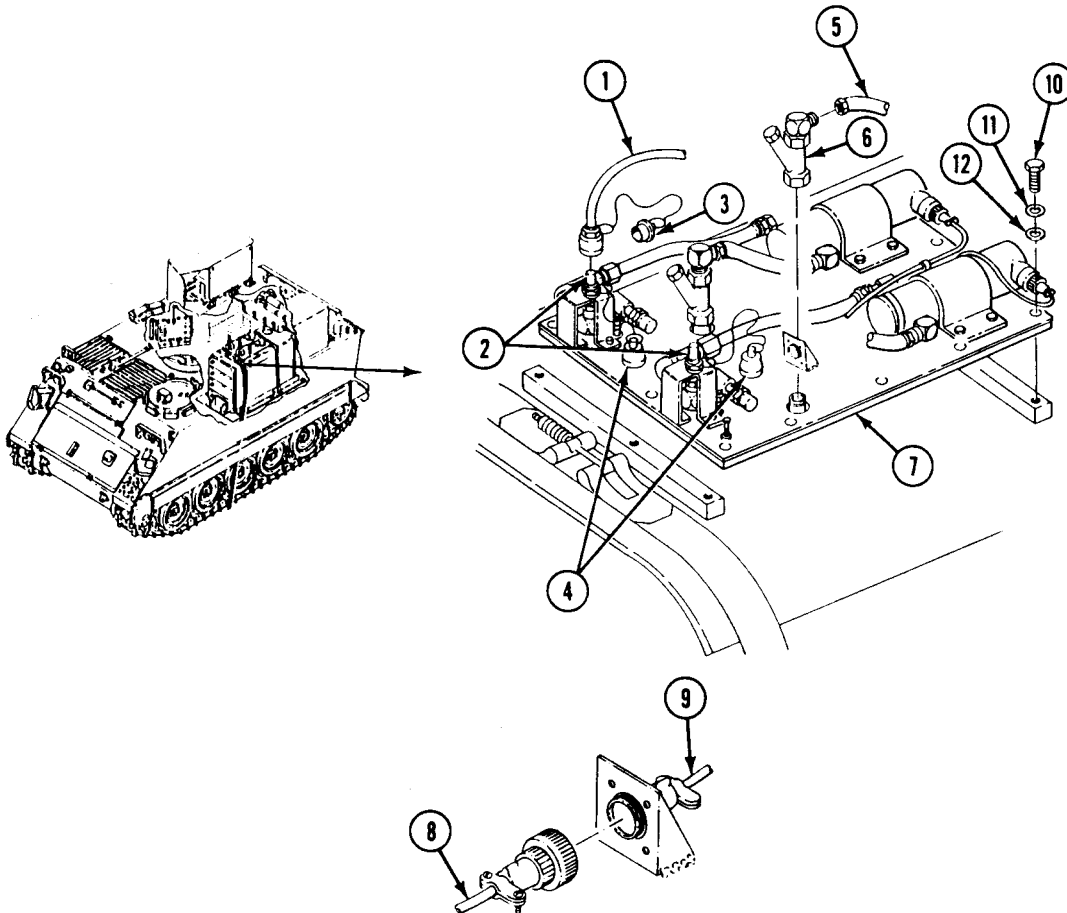


Fog oil can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up spills immediately. Fog oil is slippery and can cause soldiers to fall and get injured.

WARNING

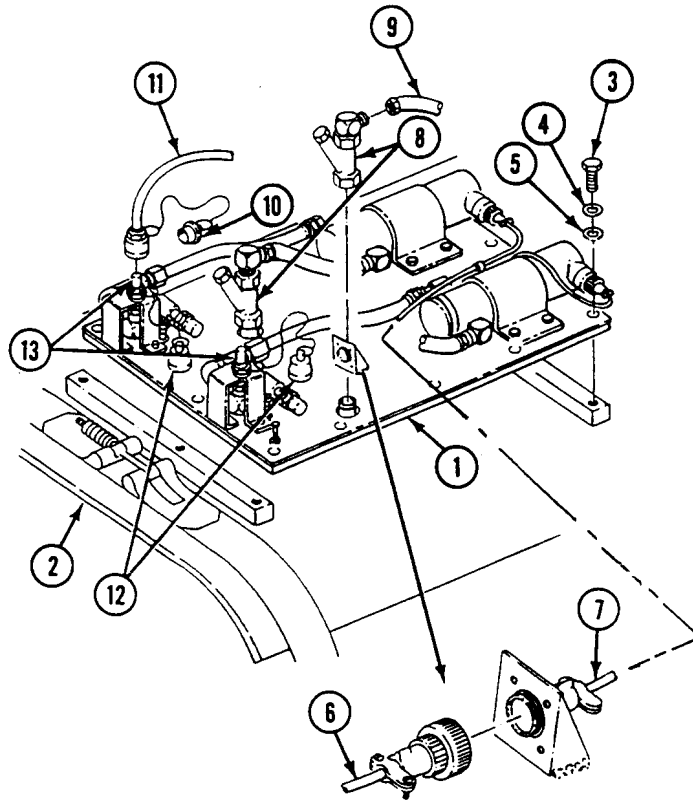
Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Disconnect two fog oil hoses (1) from two quick disconnect fittings (2). Tag hoses.
2. Install safety caps (3) on hoses (1) and dust caps (4) on fittings (2).
3. Disconnect two fog oil hoses (5) from two strainers (6).
4. Remove strainers (6) from fog oil pump assembly (7).
5. Disconnect cable assembly (8) from fog oil pump cable assembly (9).
6. Remove 12 screws (10), lockwashers (11), washers (12), and pump assembly (7) from fog oil tank. Discard lockwashers.



INSTALLATION

1. Install fog oil pump assembly (1) on fog oil tank (2). Secure with 12 screws (3), new lockwashers (4), and washers (5).
2. Connect cable assembly (6) to fog oil pump cable assembly (7).
3. Install two strainers (8) on pump assembly (1).
4. Connect two fog oil hoses (9) to two strainers (8).
5. Remove safety caps (10) from two fog oil hoses (11) and dust caps (12) from two quick disconnect couplings (13).
6. Connect two fog oil hoses (11) to two quick disconnect couplings (13).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.
3. Raise and lock ramp (see your -10).
4. Stop engine (see your -10).

END OF TASK

REPLACE SMOKE GENERATOR FUEL CAN LID ASSEMBLY (M1059 ONLY)

0706 00

THIS WORK PACKAGE COVERS:

Removal (page 0706 00-2).
Installation (page 0706 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

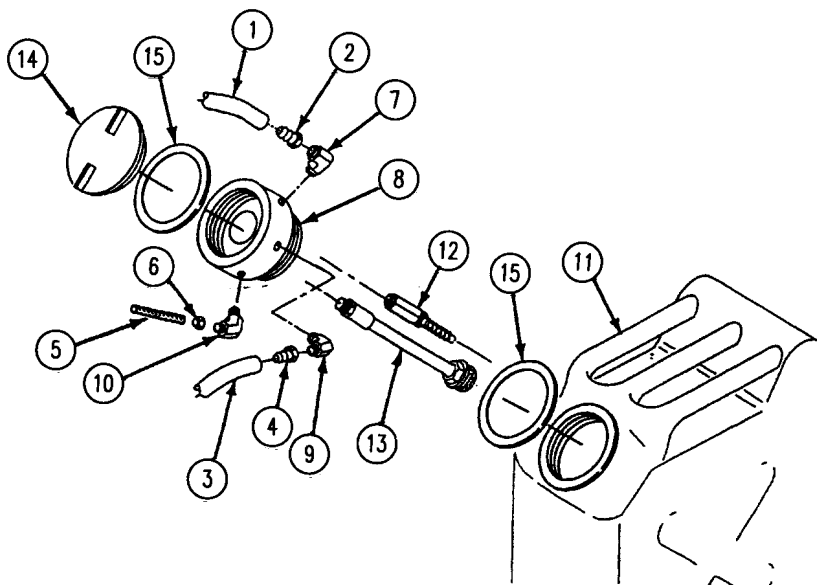
Sealing compound (WP 0782 00, Item 64)

REMOVAL

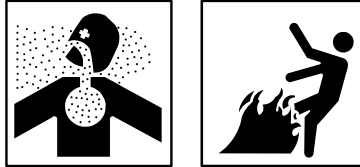
WARNING

Fog oil can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up spills immediately. Fog oil is slippery and can cause soldiers to fall and get injured.

1. Remove return hose (1) from adapter (2).
2. Remove supply hose (3) from adapter (4).
3. Remove vent hose (5) from adapter (6).
4. Remove adapter (2) from return elbow (7).
5. Remove return elbow (7) from lid (8).
6. Remove adapter (4) from supply elbow (9).
7. Remove supply elbow (9) and lid (8).
8. Remove adapter (6) from bent elbow (10).
9. Remove vent elbow (10) from lid (8).
10. Remove lid (8) from fuel can (11).
11. Remove check valve (12) from lid (8).
12. Remove fuel pipe (13) from lid (8).
13. Remove fuel lid closure (14) and two gaskets (15) from lid (8).



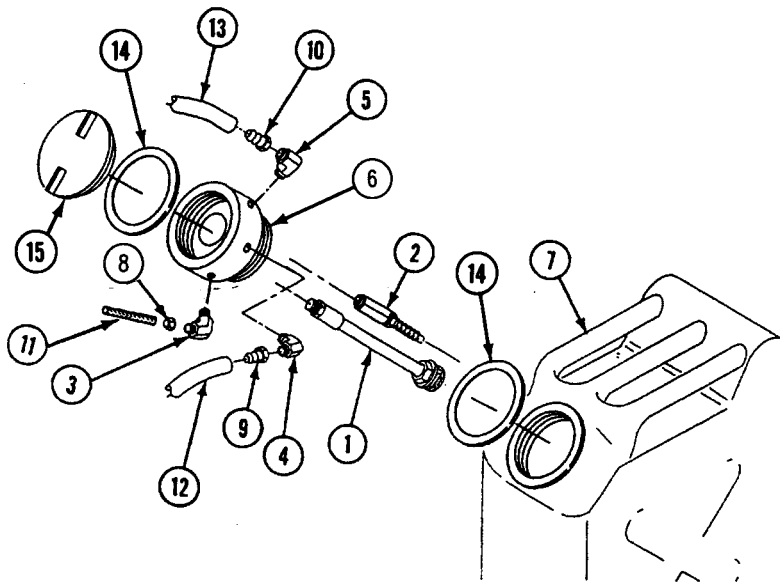
INSTALLATION

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

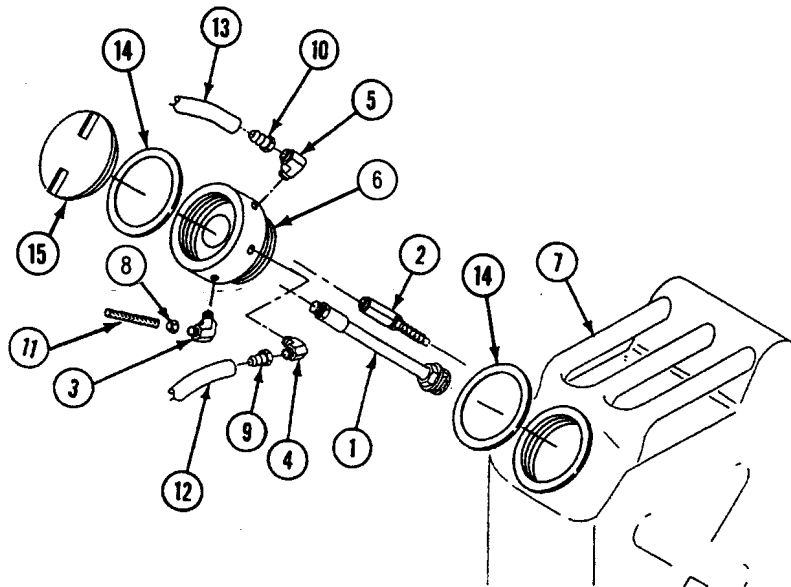
Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Coat fuel pipe (1), check valve (2), and vent, supply, and return elbows (3), (4), and (5) with sealing compound.
2. Install check valve (2) on lid (6).
3. Install fuel pipe (1) in lid (6).
4. Install two gaskets (14) and fuel lid closure (15) on lid (6).
5. Install lid (6) in fuel can (7).
6. Install vent elbow (3) in lid (6).
7. Install supply elbow (4) in lid (6).



REPLACE SMOKE GENERATOR FUEL CAN LID ASSEMBLY (M1059 ONLY) — Continued**0706 00**

8. Install return elbow (5) in lid (6).
9. Install adapter (8) on vent elbow (3).
10. Install adapter (9) on supply elbow (4).
11. Install adapter (10) on return elbow (5).
12. Install vent hose (11) on adapter (8).
13. Install supply hose (12) on adapter (9).
14. Install return hose (13) on adapter (10).

**END OF TASK**

REPLACE SMOKE GENERATOR FUEL LINES AND GUARDS (M1059 ONLY)

0707 00

THIS WORK PACKAGE COVERS:

Removal (page 0707 00-2).
 Installation (page 0707 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Torque Wrench (WP 0780 00, Item 100)

Materials/Parts

Lockwasher (14)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Circuit breaker CB1 to OFF (TM 3-1040-283-10)
 Battery ground lead disconnected (WP 0294 00)
 Air pressure released from compressor reservoir
 (TM 3-1040-283-20&P)
 Inboard armor shield removed (WP 0713 00)
 Smoke generator assembly removed from bracket
 (WP 0697 00)

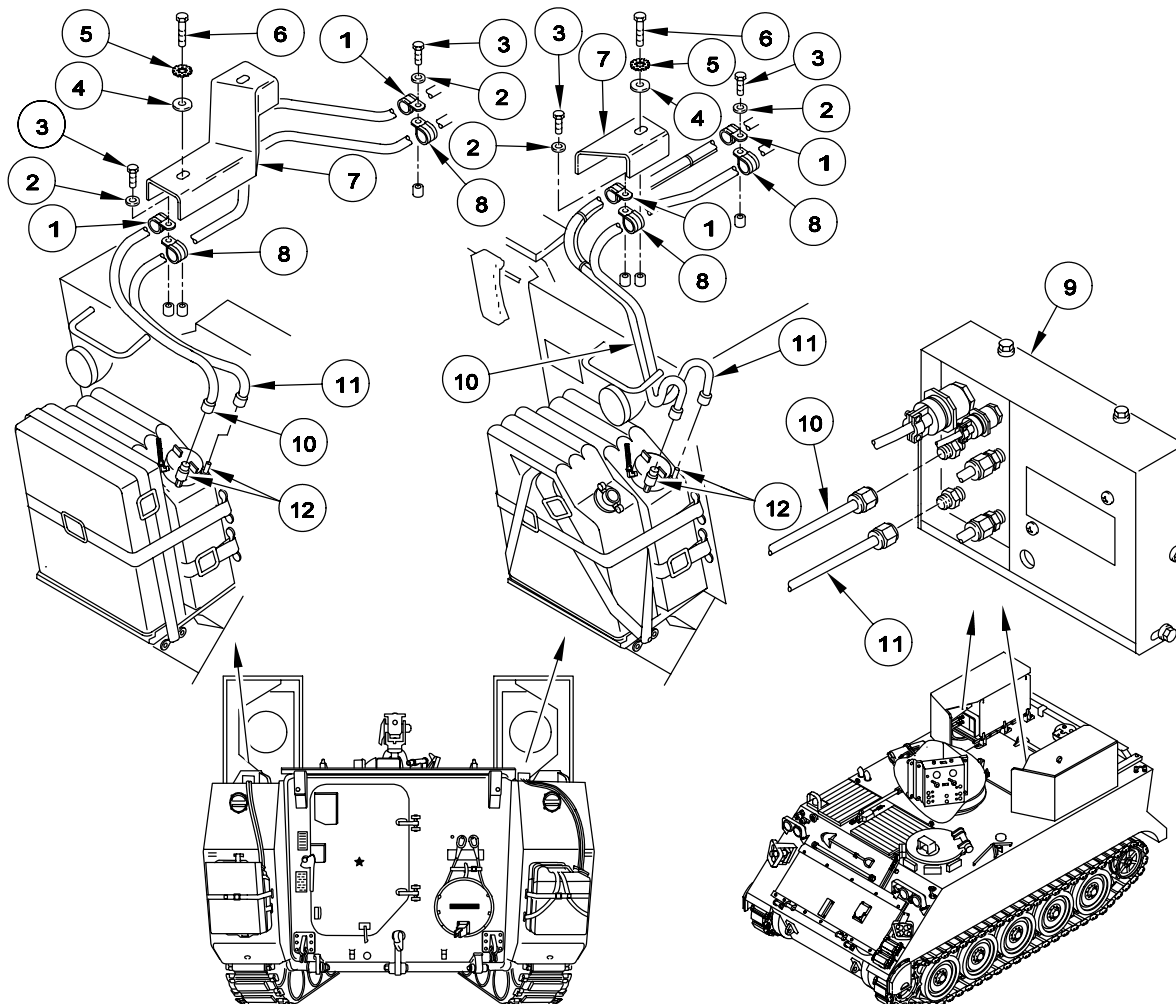
REMOVAL

WARNING



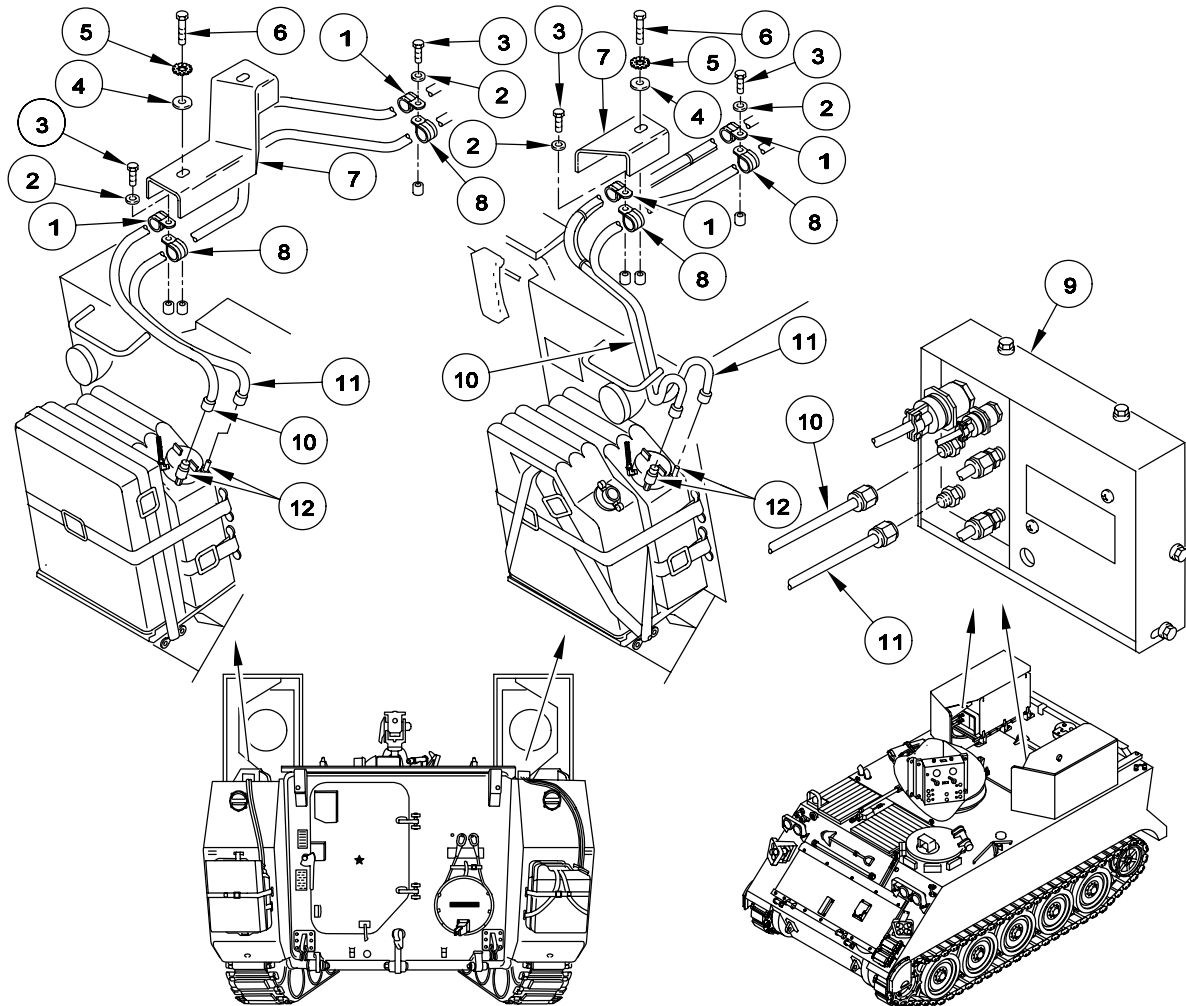
Fog oil can catch fire and seriously injure or kill soldiers and damage or destroy vehicles. Wipe up spills immediately. Fog oil is slippery and can cause soldiers to fall and get injured.

1. Remove three screws (6), lockwashers (5), washers (4), and two fuel line guards (7) from hull. Discard lockwashers.
2. Remove 11 screws (3), lockwashers (2), and clamps (7) and (8) that secure fuel supply line (10) and return line (11) to hull. Discard lockwashers.
3. Disconnect fuel supply line (10) and return line (11) from two smoke generator cover assemblies (9).
4. Disconnect fuel lines (10) and (11) from two plugs (12). Remove fuel lines from carrier.



INSTALLATION

1. Connect fuel lines (10) and (11) to two smoke generator cover assemblies (9).
2. Secure fuel supply line (10) and return line (11) to hull with 11 clamps (1) and (8), new lockwashers (5), and screws (6).
3. Connect fuel lines (10) and (11) to two fuel plugs (12).
4. Install two guards (7) on hull. Secure with three new lockwashers (5), washers (4), and screws (6). **TIGHTEN SCREWS TO 96-120 LB-IN (11-14 N·M).** Use torque wrench.



FOLLOW-THROUGH STEPS

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE AND GASKET (M1059 ONLY)

0708 00

THIS WORK PACKAGE COVERS:

- Removal (page 0708 00-1).
- Installation (page 0708 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Circuit breaker CB1 to OFF (TM 3-1040-283-10)
- Battery ground lead disconnected (WP 0294 00)
- Air pressure released from compressor reservoir (TM 3-1040-283-20&P)
- Inboard armor shield lowered (WP 0713 00)
- Smoke generator assembly removed from bracket (WP 0697 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

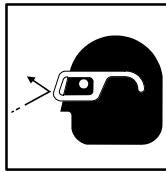
- Locknut (8)
- Lockwasher (6)

Personnel Required

Unit Mechanic

REMOVAL

WARNING



Compressed air pressure from smoke generator can cause serious injury or death. To avoid accidents, bleed air before working on air compressor assembly or disconnecting any air hose.

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE AND GASKET
(M1059 ONLY) — Continued**

0708 00

NOTE

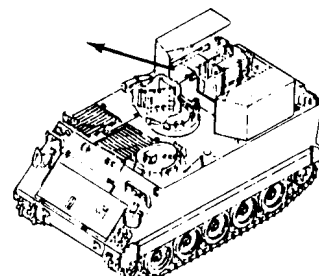
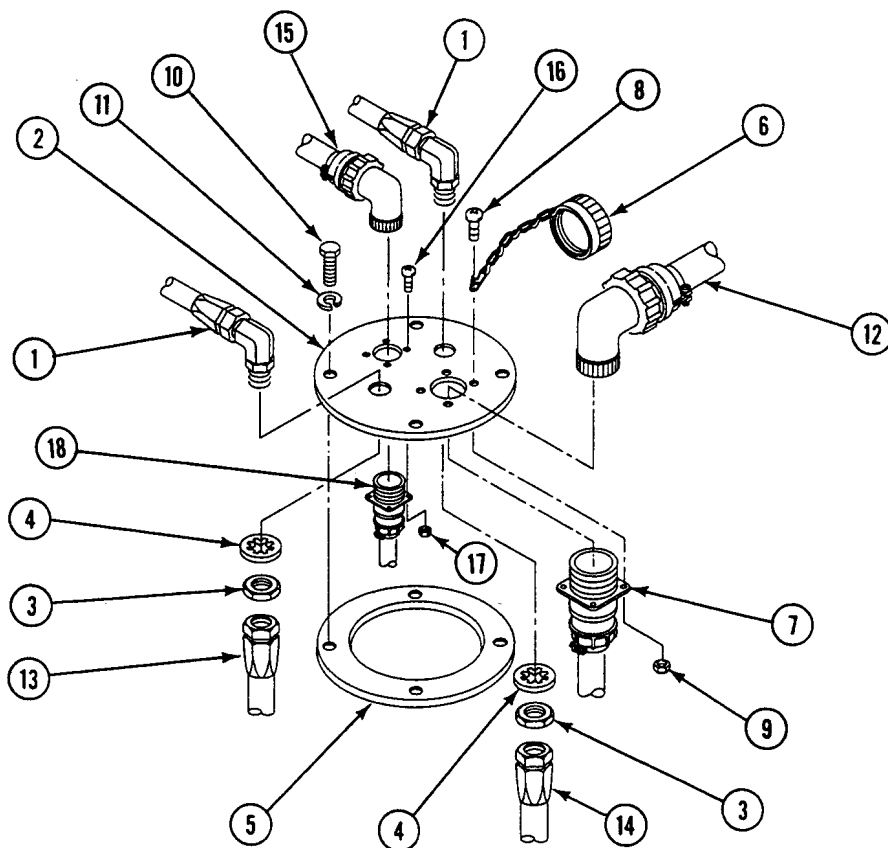
Left and right access plates and gasket are replaced the same way.

1. Disconnect air hose (13) and fog oil hose (14) from two elbows (1).
2. Disconnect electrical cable assembly (12) from adapter access plate fitting (7).
3. Remove four screws (10), lockwashers (11), and adapter access plate (2) from hull. Discard lockwashers.
4. Disconnect exterior cable (15) from interior cable (18) at adapter access plate (2).
5. Remove four screws (16), locknuts (17), and interior cable (18) from adapter access plate (2). Discard locknuts.
6. Remove dust cover (6) four screws (8), locknuts (9), and adapter access plate fitting (7) from adapter access plate (2). Discard locknuts.
7. Remove gasket (5) from plate (2). Replace if damaged.

NOTE

If only gasket is to be replaced, go to INSTALLATION Step 1.

8. Remove two jamnuts (3) and lockwashers (4) from two elbows (1). Remove elbows from plate (2). Discard lockwashers.



**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE AND GASKET
(M1059 ONLY) — Continued**

0708 00

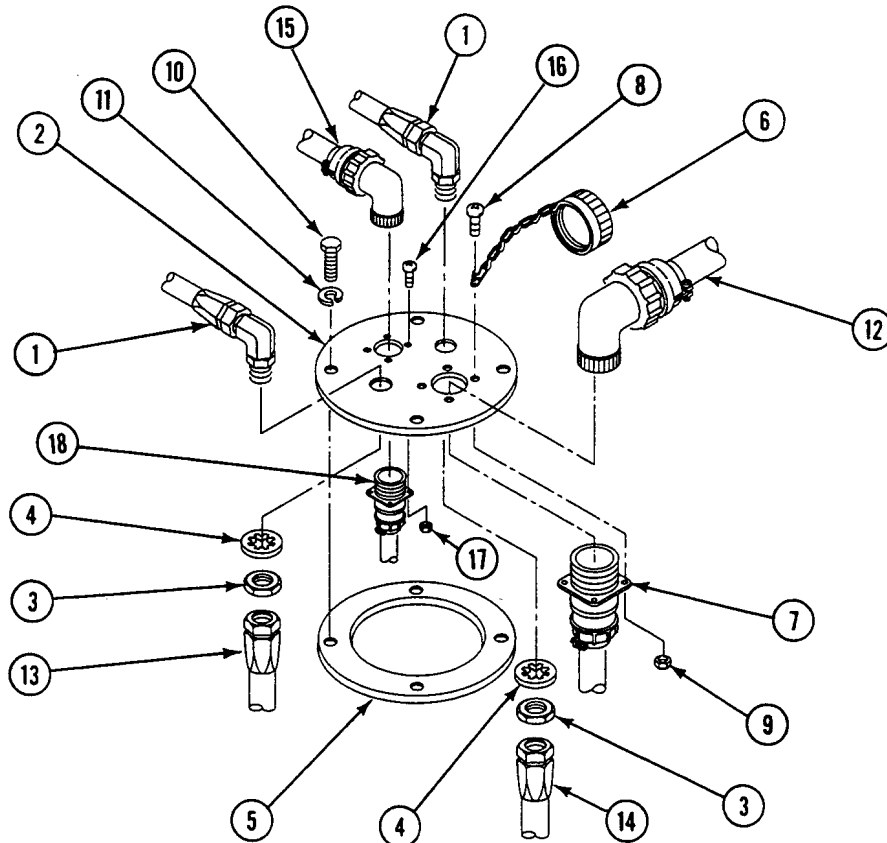
INSTALLATION

WARNING



Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

1. Install two elbows (1) on adapter access plate (2). Secure with two jamnuts (3) and new lockwashers (4).
2. Install gasket (5) on plate (2).
3. Install dust cover (6) and fitting (7) on plate (2). Secure with four screws (8) and new locknuts (9).
4. Install interior cable (18), four screws (16), and new locknuts (17) on adapter access plate (2).
5. Connect exterior cable (15) to interior cable (18) on adapter access plate (2).
6. Install plate (2) on hull. Secure with four screws (10) and new lockwashers (11).
7. Connect electrical cable assembly (12) to plate fitting (7).
8. Connect air hose (13) and fog oil hose (14) to two elbows (1).



**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE AND GASKET
(M1059 ONLY) — Continued**

0708 00

FOLLOW-THROUGH STEPS

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Raise inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE SMOKE GENERATOR COMPRESSOR RESERVOIR TO
ADAPTER ACCESS PLATE AIR HOSE (M1059 ONLY)**

0709 00

THIS WORK PACKAGE COVERS:

Removal (page 0709 00-2).
Installation (page 0709 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher (3)

Air pressure released from compressor reservoir
(TM 3-1040-283-20&P)

Personnel Required

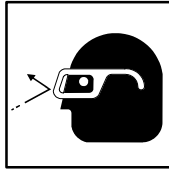
Unit Mechanic

**REPLACE SMOKE GENERATOR COMPRESSOR RESERVOIR TO ADAPTER
ACCESS PLATE AIR HOSE (M1059 ONLY) — Continued**

0709 00

REMOVAL

WARNING

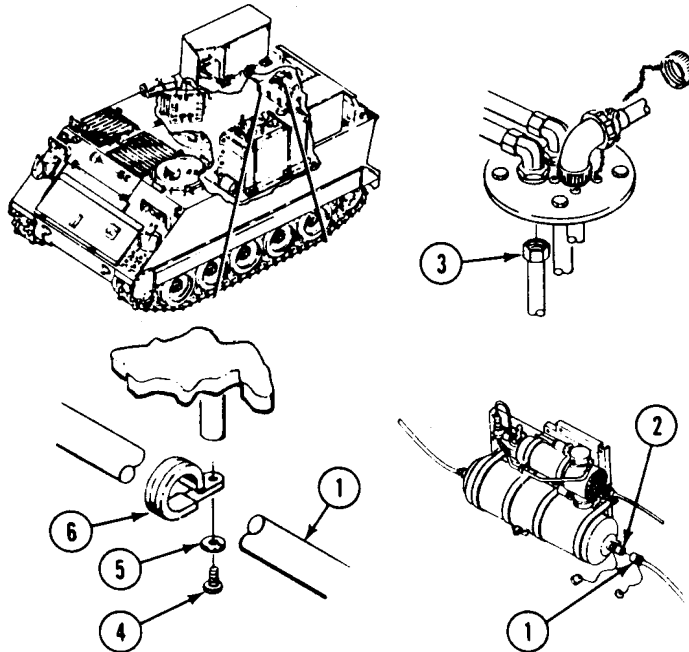


Compressed air pressure from smoke generator can cause serious injury or death. To avoid accidents, bleed air before working on air compressor assembly or disconnecting any air hose.

NOTE

Left and right hoses are replaced the same way.

1. Disconnect air hose (1) from compressor reservoir fitting (2).
2. Disconnect air hose (1) from adapter plate fitting (3).
3. Remove three screws (4), lockwashers (5), clamps (6), and air hose (1) from carrier hull. Discard lockwashers.

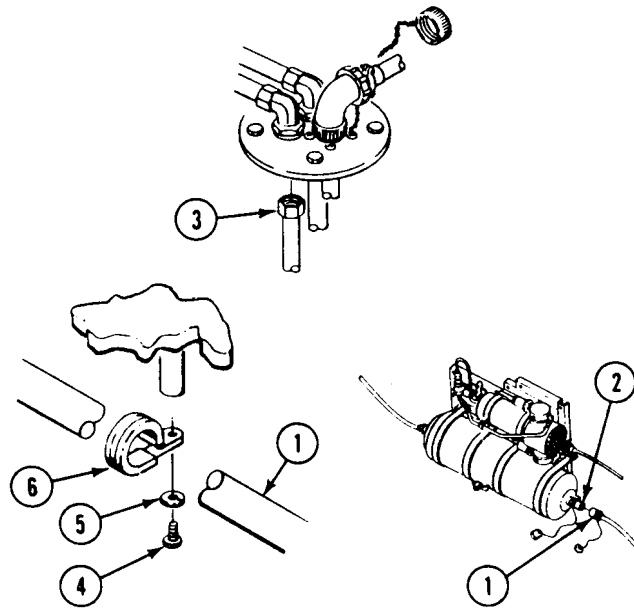


**REPLACE SMOKE GENERATOR COMPRESSOR RESERVOIR TO ADAPTER
ACCESS PLATE AIR HOSE (M1059 ONLY) — Continued**

0709 00

INSTALLATION

1. Secure air hose (1) to carrier hull with three clamps (6), new lockwashers (5), and screws (4).
2. Connect air hose (1) to adapter plate fitting (3).
3. Connect air hose (1) to compressor reservoir fitting (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE TO
COVER ASSEMBLY AIR HOSE (M1059 ONLY)**

0710 00

THIS WORK PACKAGE COVERS:

Removal (page 0710 00-2).
Installation (page 0710 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

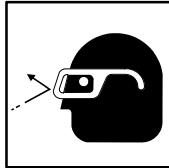
Unit Mechanic

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Circuit breaker CB1 to OFF (TM 3-1040-283-10)
Battery ground lead disconnected (WP 0294 00)
Air pressure released from compressor reservoir (TM
3-1040-283-20&P)
Inboard armor shield removed (WP 0713 00)
Smoke generator assembly removed from bracket
(WP 0697 00)

**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE TO COVER
ASSEMBLY AIR HOSE (M1059 ONLY) — Continued**

0710 00

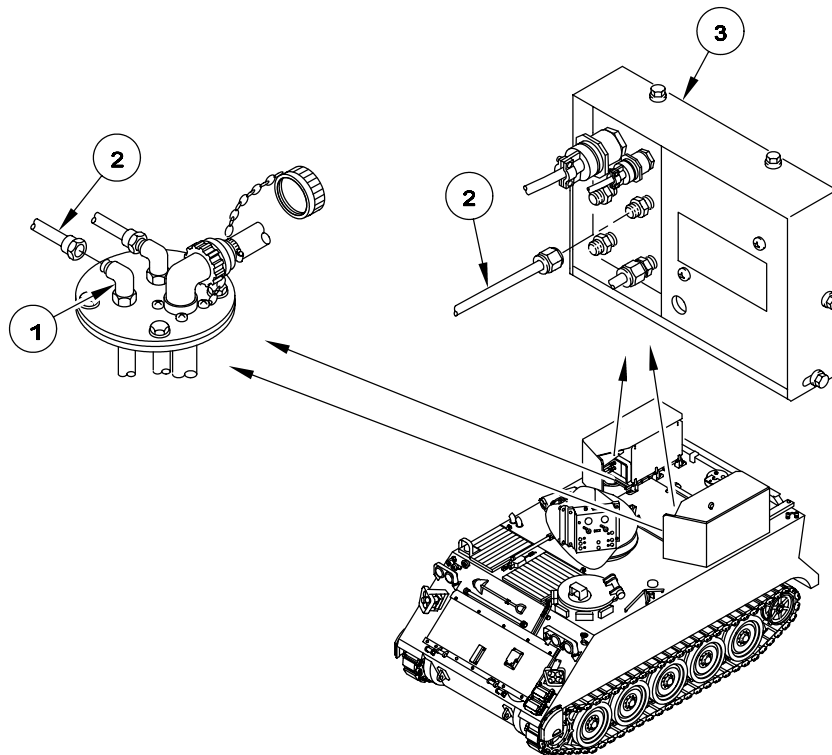
REMOVAL**WARNING**

Compressed air pressure from smoke generator can cause serious injury or death. To avoid accidents, bleed air before working on air compressor assembly or disconnecting any air hose.

NOTE

Left side and right side hoses are replaced the same way.

1. Disconnect air hose (2) from adapter plate elbow (1).
2. Disconnect air hose (2) from cover assembly quick disconnect coupling (3).

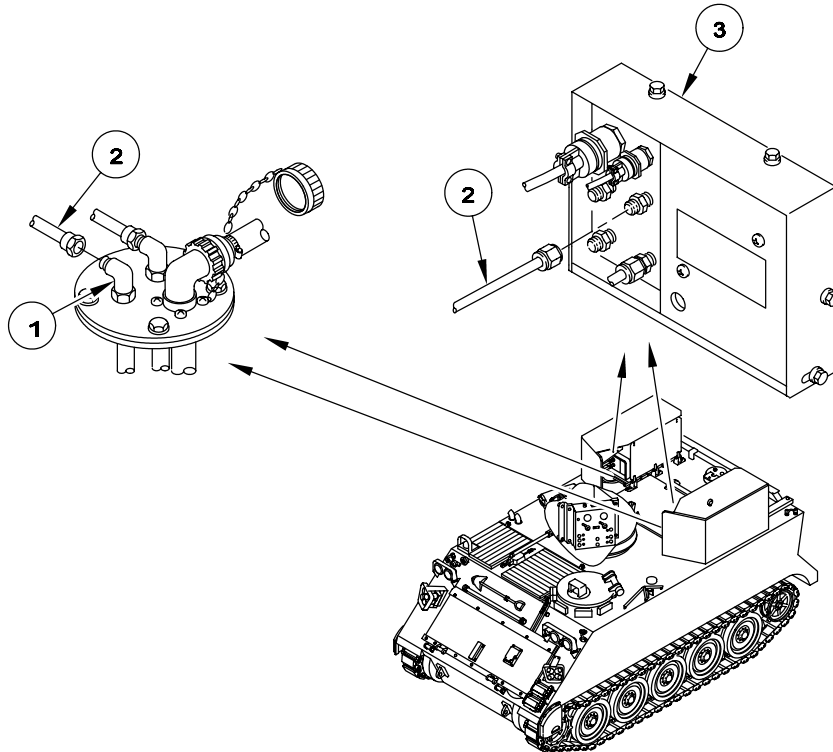


**REPLACE SMOKE GENERATOR ADAPTER ACCESS PLATE TO COVER
ASSEMBLY AIR HOSE (M1059 ONLY) — Continued**

0710 00

INSTALLATION

1. Connect air hose (2) to cover assembly quick disconnect coupling (3).
2. Connect air hose (2) to adapter assembly elbow (1).

**FOLLOW-THROUGH STEPS**

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE FOG OIL TANK QUICK DISCONNECT TO ADAPTER
ACCESS PLATE HOSE (M1059 ONLY)**

0711 00

THIS WORK PACKAGE COVERS:

Removal (page 0711 00-2).
Installation (page 0711 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher (9)

Personnel Required

Unit Mechanic

**REPLACE FOG OIL TANK QUICK DISCONNECT TO ADAPTER ACCESS
PLATE HOSE (M1059 ONLY) — Continued**

0711 00

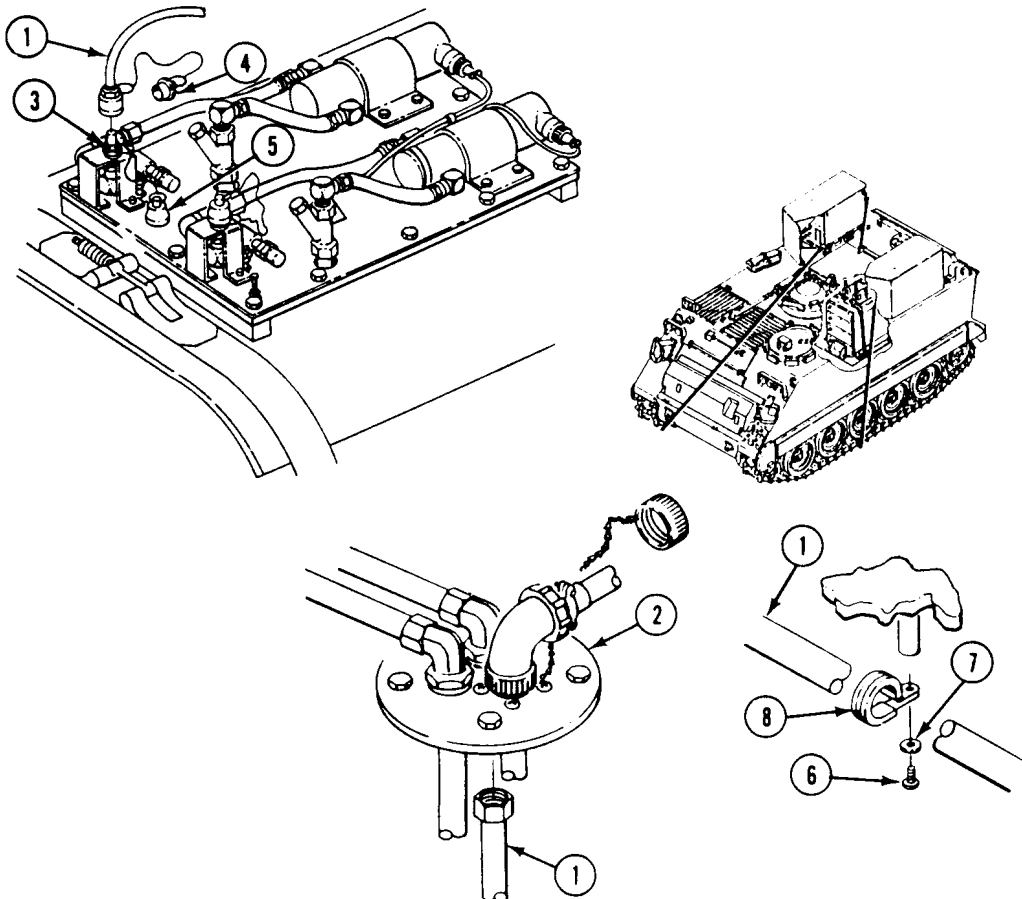
REMOVAL**WARNING**

Fog oil is slippery and can cause soldiers to fall and get injured. Clean up all spillage or leakage of fog oil as soon as possible by washing the area, or absorbing the fog oil with sand or other absorbent material.

NOTE

Left and right hoses are replaced the same way.

1. Disconnect fog oil hose assembly (1) from access plate adapter (2).
2. Disconnect fog oil hose assembly (1) from fog oil tank at quick disconnect coupling (3).
3. Install safety cap (4) on hose (1) and dust cap (5) on quick disconnect coupling (3).
4. Remove four screws (6), lockwashers (7), clamps (8), and fog oil hose assembly (1) from carrier hull (right side: remove five screws, lockwashers, and clamps). Discard lockwashers.



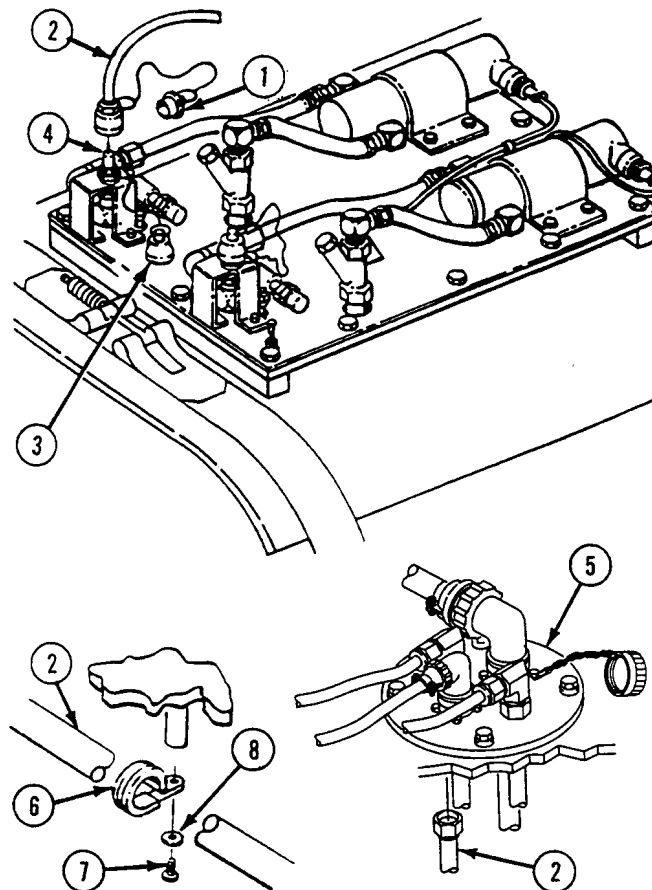
**REPLACE FOG OIL TANK QUICK DISCONNECT TO ADAPTER ACCESS
PLATE HOSE (M1059 ONLY) — Continued**

0711 00

INSTALLATION**NOTE**

Left and right hoses are replaced the same way.

1. Remove safety cap (1) from hose (2) and dust cap (3) from quick disconnect coupling (4).
2. Connect fog oil hose assembly (2) to fog oil tank quick disconnect coupling (4).
3. Connect fog oil hose assembly (2) to access plate adapter (5).
4. Secure hose assembly (2) to hull with four clamps (6), screws (7), and new lockwashers (8) (right side: secure with five clamps, screws, and new lockwashers).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

**REPLACE COVER ASSEMBLY FOG OIL QUICK DISCONNECT TO
ADAPTER ACCESS PLATE HOSE (M1059 ONLY)**

0712 00

THIS WORK PACKAGE COVERS:

Removal (page 0712 00-2).
Installation (page 0712 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Circuit breaker CB1 to OFF (TM 3-1040-283-10)

Battery ground lead disconnected (WP 0294 00)

Personnel Required

Unit Mechanic

Air pressure released from compressor reservoir (TM
(TM 3-1040-283-20&P)

Inboard armor shield removed (WP 0713 00)

Smoke generator assembly removed from bracket
(WP 0697 00)

REMOVAL

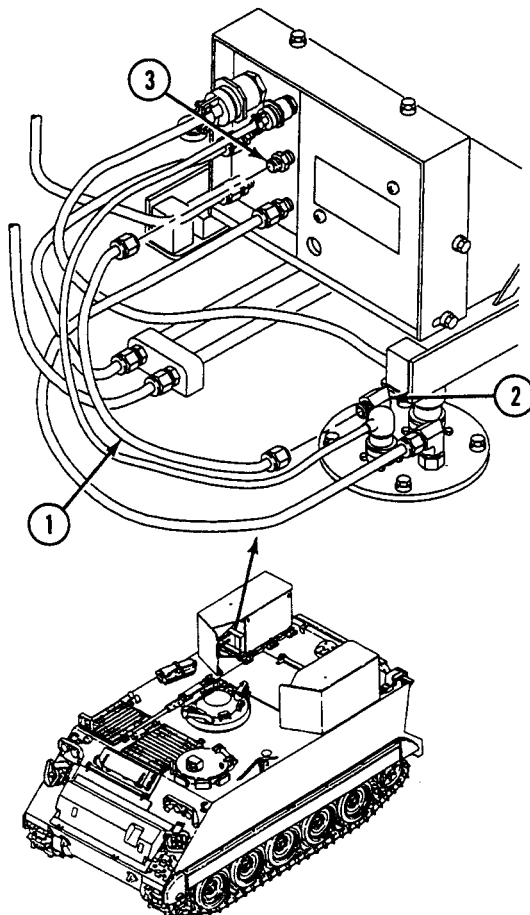
WARNING

Fog oil is slippery and can cause soldiers to fall and get injured. Clean up all spillage or leakage of fog oil as soon as possible by washing the area, or absorbing the fog oil with sand or other absorbent material.

NOTE

Left and right hoses are replaced the same way.

1. Disconnect fog oil hose assembly (1) from adapter assembly elbow (2).
2. Disconnect fog oil hose assembly (1) from cover assembly quick disconnect coupling (3).

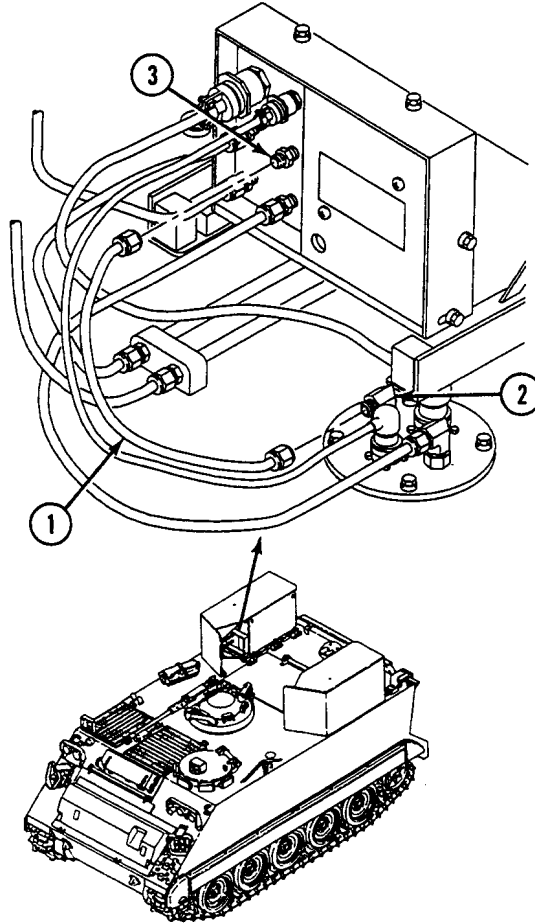


**REPLACE COVER ASSEMBLY FOG OIL QUICK DISCONNECT TO ADAPTER
ACCESS PLATE HOSE (M1059 ONLY) — Continued**

0712 00

INSTALLATION

1. Connect fog oil hose assembly (1) to adapter plate elbow (2).
2. Connect fog oil hose assembly (1) to cover assembly quick disconnect coupling (3).

**FOLLOW-THROUGH STEPS**

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install inboard armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

REPLACE SMOKE GENERATOR ARMOR (M1059 ONLY)

0713 00

THIS WORK PACKAGE COVERS:

Removal (page 0713 00-2).
 Installation (page 0713 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Torque Wrench (WP 0780 00, Item 104)

Suitable Lifting Device

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Decontamination can removed (right side only)
 (see your -10)

Smoke generator fuel filter/water separator removed
 (WP 0715 00)

Materials/Parts

Locknut (3)

Lockwasher

REMOVAL

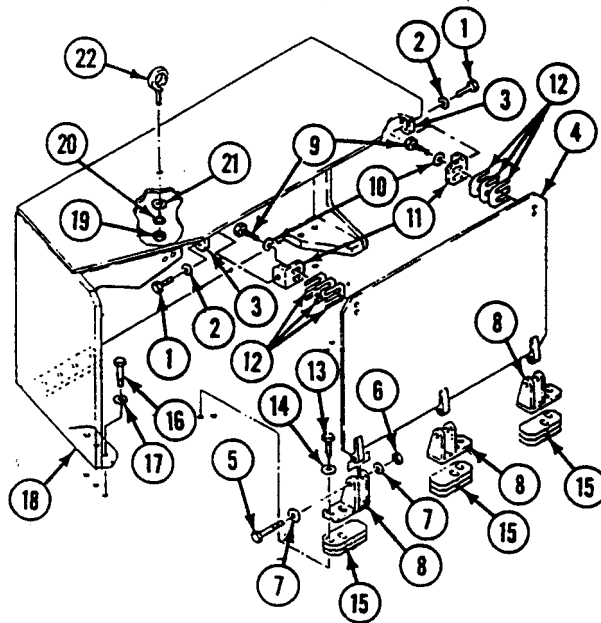
WARNING



Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

1. Remove inboard armor shield. Have helper assist.
 - a. Remove two screws (1) and washers (2) from two angle brackets (3) at top of inboard armor shield (4).
 - b. Lower shield (4).
 - c. Remove three screws (5), locknuts (6), six washers (7), and inboard shield from three hinge assemblies (8). Discard locknuts.
 - d. Remove four screws (9) and washers (10) securing two angle brackets (11) and shims (12) to shield (4).
 - e. Remove six screws (13) and flat washers (14) securing three hinges (8) and shims (15) to hull.
2. Remove outboard armor shield. Have helper assist.
 - a. Remove ten screws (16), washers (17), and outboard shield (18) from hull.
 - b. Remove nut (19), lockwasher (20), washer (21), and eyebolt (22) from outboard shield (18). Discard lockwasher.



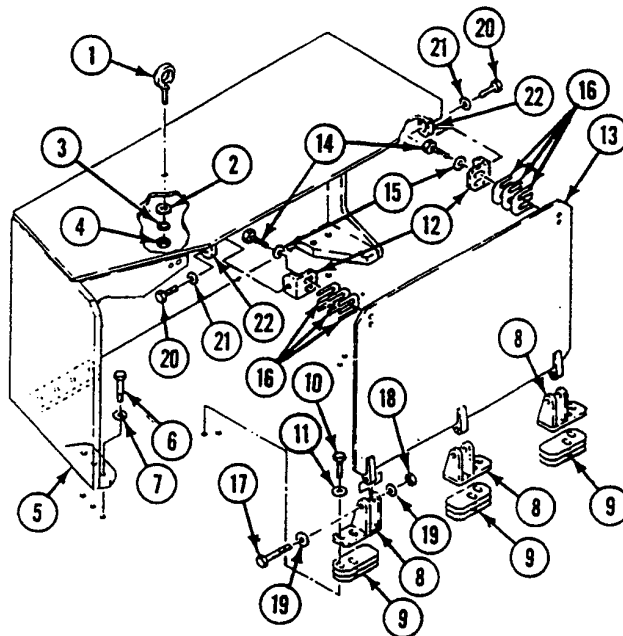
INSTALLATION

WARNING

Hanging loads, heavy parts, and overhead equipment can fall unexpectedly and kill or injure you.

Stay clear of hanging loads, heavy parts, and overhead equipment. Use correct lifting devices. Always have helper guide heavy parts and equipment.

1. Install outboard armor shield. Have helper assist.
 - a. Install eyebolt (1), washer (2), new lockwasher (3), and nut (4).
 - b. Install outboard shield (5) on hull. Secure with ten screws (6) and washers (7).
2. Install inboard armor shield. Have helper assist.
 - a. Position three hinges (8) and shims (9) on hull and secure with six screws (10) and washers (11). **TIGHTEN SCREWS TO 51-54 LB-FT (68-73 N·M) TORQUE.** Use torque wrench.
 - b. Position two angle brackets (12) on shield (13). Secure with four screws (14) and washers (15). If necessary, add shims (16). **TIGHTEN SCREWS TO 22-24 LB-FT (28-33 N·M) TORQUE.** Use torque wrench.
 - c. Install armor shield (13) in three hinge assemblies (8). Secure with three screws (17), new locknuts (18), and six washers (19).
 - d. Raise armor shield (13). Secure with two screws (20) and washers (21) to angle brackets (22). **TIGHTEN SCREWS TO 54-59 LB-FT (73-80 N·M) TORQUE.** Use torque wrench.



FOLLOW-THROUGH STEPS

1. Install decontamination can (right side only) (see your -10).
2. Install smoke generator fuel filter/water separator (WP 0715 00).

END OF TASK

**REPLACE SMOKE GENERATOR GLOW PLUG CABLE
ASSEMBLIES (M1059 ONLY)**

0714 00

THIS WORK PACKAGE COVERS:

- Removal (page 0714 00-1).
 - Installation (page 0714 00-4).
-

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Circuit breaker CB1 to OFF (TM 3-1040-283-10)
- Battery ground lead disconnected (WP 0294 00)
- Air pressure released from compressor reservoir (TM 3-1040-283-20&P)
- In-board armor shield removed (WP 0713 00)
- Smoke generator assembly removed from bracket (WP 0697 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

- Locknut (8)
- Lockwasher (7)

Personnel Required

- Unit Mechanic
 - Helper
-

REMOVAL

WARNING

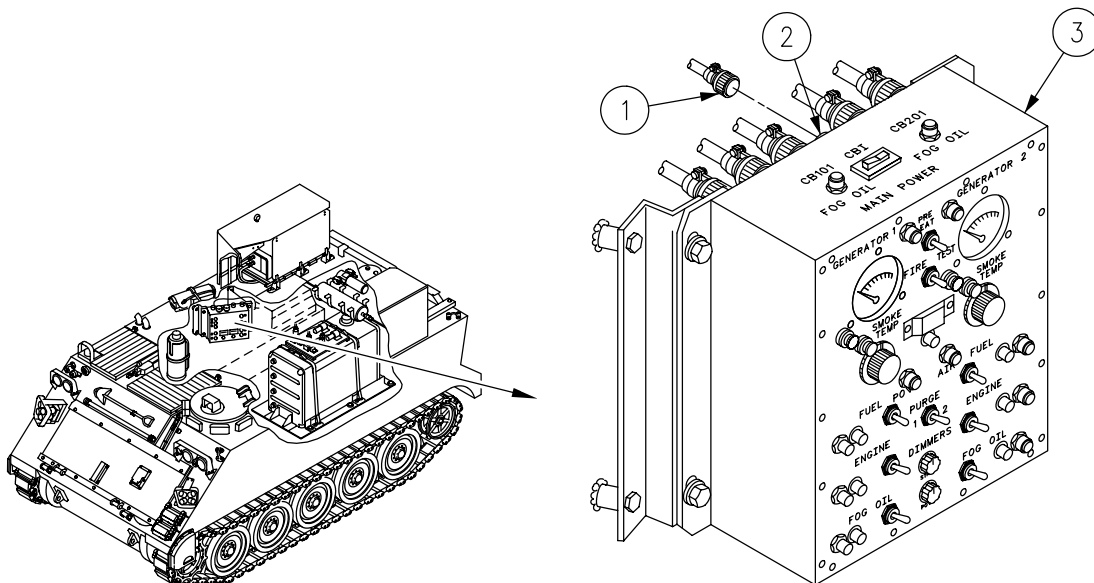


Before you do any maintenance, discharge all capacitors to ground or electrical shock could injure personnel.

**REPLACE SMOKE GENERATOR GLOW PLUG CABLE ASSEMBLIES
(M1059 ONLY) — Continued**

0714 00

1. Disconnect interior cable (1) from jack 1J6 (2) on back of control panel (3).


NOTE

There are seven clamps that bolt interior cable to hull. One is used on the right side of carrier and six on the left. All are removed the same way. Only one clamp is shown. Remove as required.

2. Remove six screws (1), lockwashers (2), clamps (3), and interior cable (4) from left side of hull. Discard lockwashers.

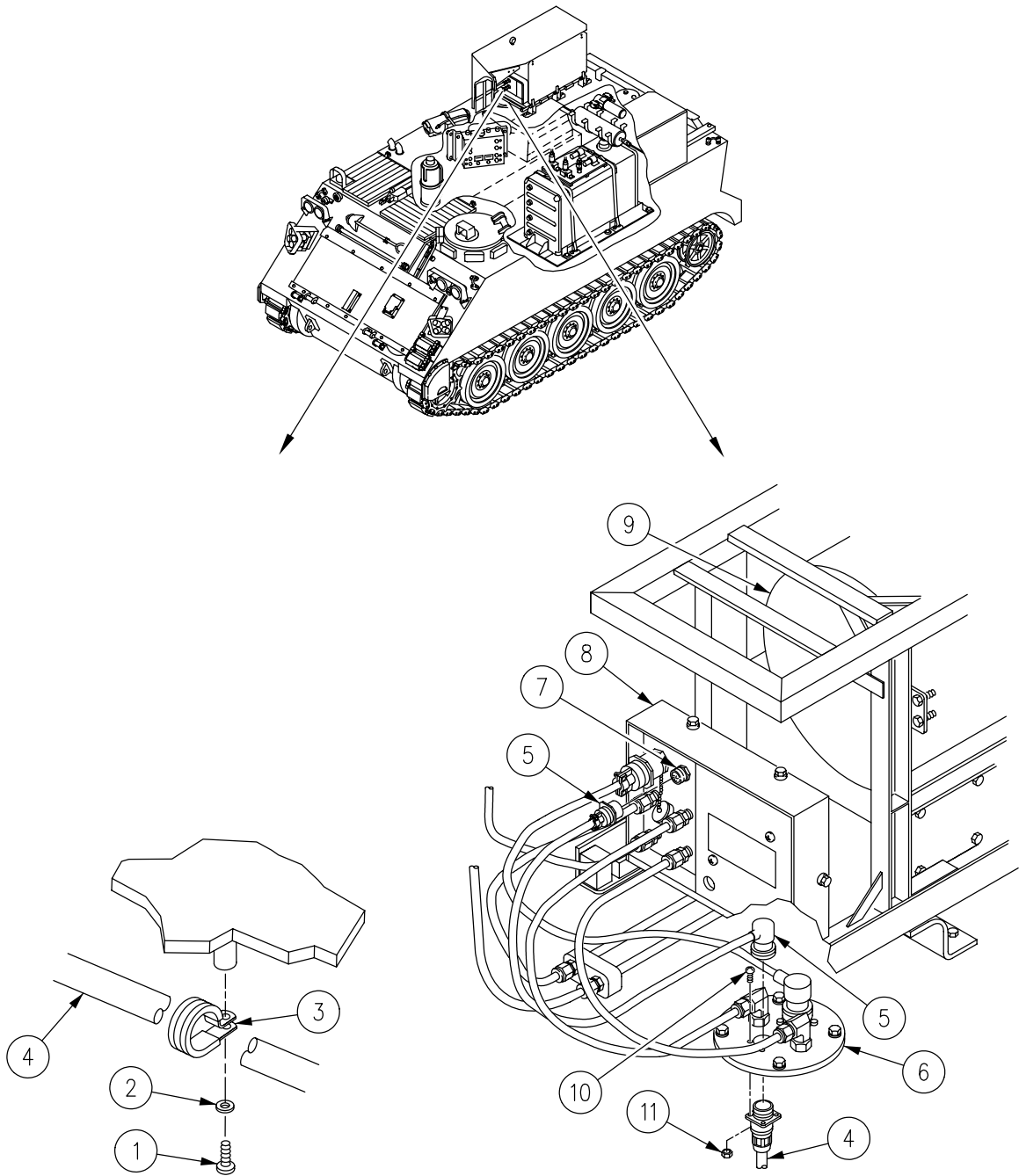
NOTE

There are two exterior cables, access plates, and smoke generators, left and right. Cables are removed from carrier the same way. Only one exterior cable, access plate, and smoke generator is shown. Remove cables as required.

3. Disconnect exterior cable (5) from interior cable (4) in left access plate (6).
4. Disconnect exterior cable (5) from preheat harness jack (7) on panel (8) of left smoke generator (9).
5. Remove screw (1), lockwasher (2), clamp (3), and interior cable (4) from right side of hull. Discard lockwasher.
6. Disconnect exterior cable (5) from interior cable (4) in right access plate (6).
7. Disconnect exterior cable (5) from preheat harness jack (7) on panel (8) of right smoke generator (9).
8. Remove four screws (10), locknuts (11), and interior cable (4) from right access plate (6). Discard locknuts.
9. Remove four screws (10), locknuts (11), and interior cable (4) from left access plate (6). Discard locknuts.

REPLACE SMOKE GENERATOR GLOW PLUG CABLE ASSEMBLIES
(M1059 ONLY) — Continued

0714 00



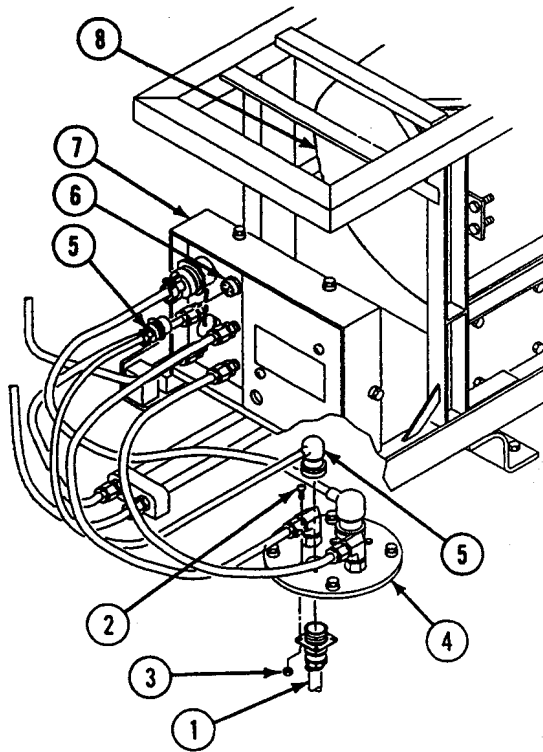
**REPLACE SMOKE GENERATOR GLOW PLUG CABLE ASSEMBLIES
(M1059 ONLY) — Continued**

0714 00

INSTALLATION**NOTE**

There are two exterior cables, access plates, and smoke generators, left and right. Cables are installed on carrier the same way. Only one exterior cable, access plate, and smoke generator is shown. Remove cables as required.

1. Install interior cable (1), four screws (2), and new locknuts (3) to right access plate (4).
2. Connect exterior cable (5) to preheat harness jack (6) on panel (7) of right smoke generator (8).
3. Connect exterior cable (5) to interior cable (1) in right access plate (4).
4. Install interior cable (1), four screws (2), and new locknuts (3) to left access plate (4).
5. Connect exterior cable (5) to interior cable (1) in left access plate (4).
6. Connect exterior cable (5) to preheat harness jack (6) on panel (7) of left smoke generator (8).



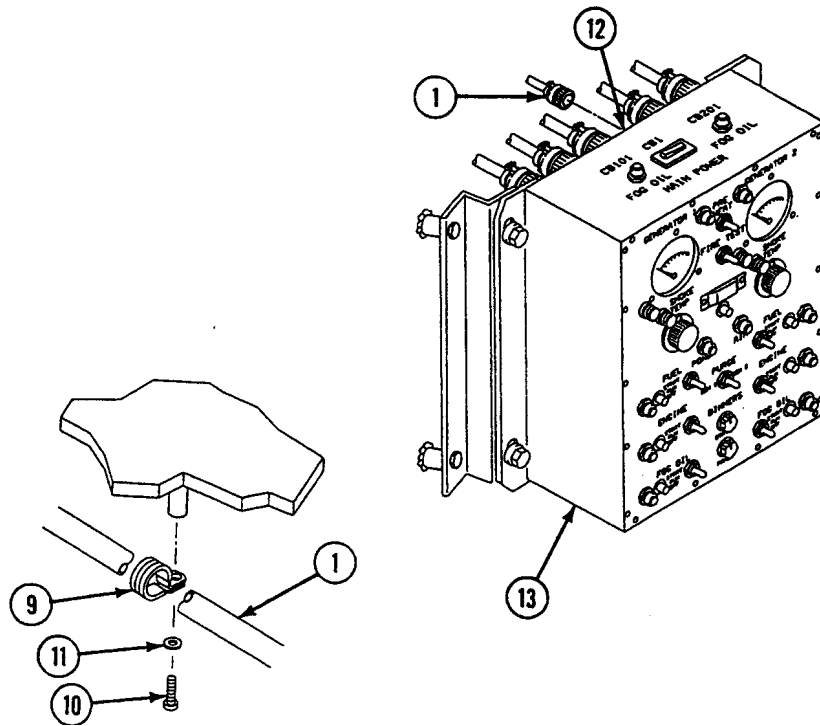
**REPLACE SMOKE GENERATOR GLOW PLUG CABLE ASSEMBLIES
(M1059 ONLY) — Continued**

0714 00

NOTE

There are seven clamps that bolt interior cable to hull. One is used on the right side of carrier and six on the left. All are installed the same way. Only one clamp is shown. Install as required.

7. Install interior cable (1), six clamps (9), screws (10), and new lockwashers (11) to hull.
8. Install interior cable (1), clamp (9), screw (10), and new lockwasher (11) to hull.
9. Connect interior cable (1) to jack 1J6 (12) on back of control panel (13).



FOLLOW-THROUGH STEPS

1. Install smoke generator assembly on bracket (WP 0697 00).
2. Install in-board armor shield (WP 0713 00).
3. Connect battery ground lead (WP 0294 00).
4. Set circuit breaker CB1 to ON. See TM 3-1040-283-10.

END OF TASK

REPLACE/REPAIR SMOKE GENERATOR FUEL FILTER/WATER SEPARATOR (M1059 ONLY)

0715 00

THIS WORK PACKAGE COVERS:

- Removal (page 0715 00-1).
- Repair (page 0715 00-2).
- Installation (page 0715 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Filter element gasket

Lockwasher (2)

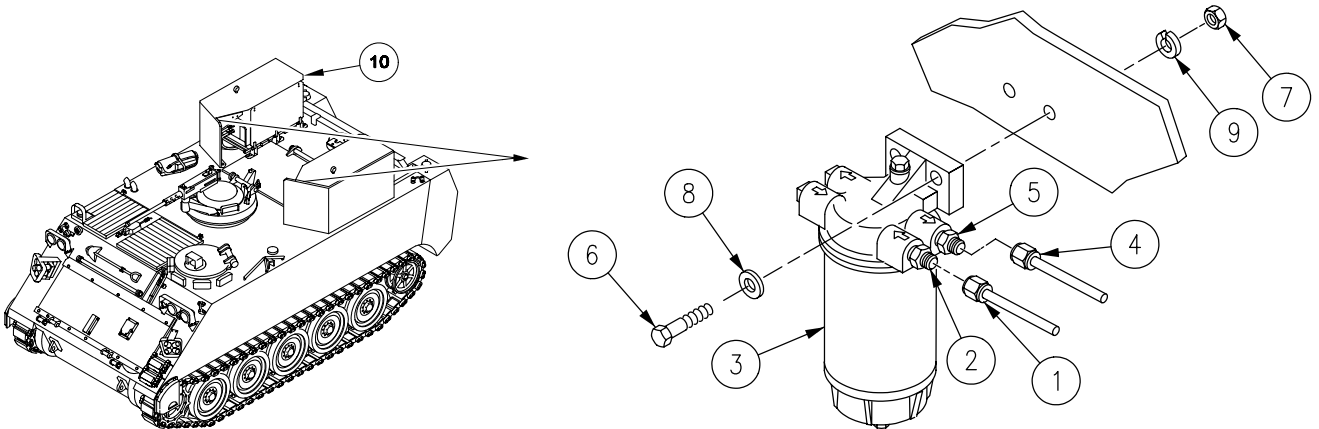
REMOVAL

NOTE

There are two fuel filter/water separators. One is located on the left side of the carrier and the other on the right. Both are removed and installed the same way. Only one is shown.

Plug fuel hoses after removing to prevent leakage.

1. Remove fuel hose (1) from inlet tube adapter (2) on fuel filter/water separator (3).
2. Remove fuel hose (4) from outlet tube adapter (5) on fuel filter/water separator (3).
3. Remove two screws (6), nuts (7), washers (8), lockwashers (9), and fuel filter/water separator (3) from armor shield (10). Discard lockwashers.

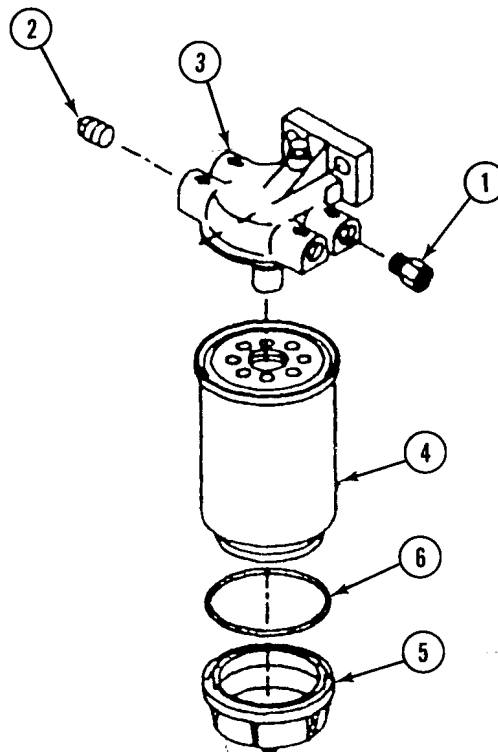


**REPLACE/REPAIR SMOKE GENERATOR FUEL FILTER/WATER SEPARATOR
(M1059 ONLY) — Continued**

0715 00

REPAIR

1. Remove two adapters (1) and plugs (2) from filter head (3).
2. Remove filter head (3) and filter element body (4).
3. Remove sediment bowl (5) from filter element body (4). Discard filter element.
4. Remove gasket (6) from sediment bowl (5). Discard gasket.
5. Coat new gasket (6) with a small amount of fluid from filter head (3). Install gasket (6) on sediment bowl (5).
6. Install sediment bowl (5) on new filter element body (4).
7. Coat threaded part on top of filter element body (4) and install on filter head (3).
8. Install two plugs (2) and adapters (1) on filter head (3).

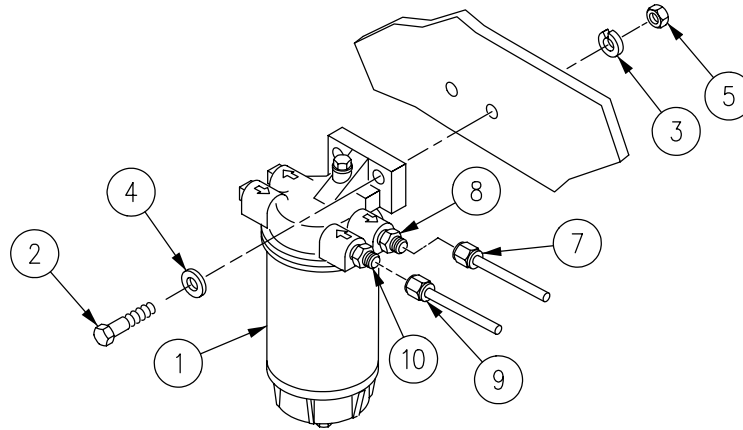


**REPLACE/REPAIR SMOKE GENERATOR FUEL FILTER/WATER SEPARATOR
(M1059 ONLY) — Continued**

0715 00

INSTALLATION

1. Install fuel filter/water separator (1), two screws (2), new lockwashers (3), washers (4), and nuts (5) on armor shield.
2. Connect fuel hose (7) to outlet tube adapter (8) on fuel filter/water separator (1).
3. Connect fuel hose (9) to inlet tube adapter (10) on fuel filter/water separator (1).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

CHAPTER 41

UNIT MAINTENANCE INSTRUCTIONS
FOR ELECTRICAL/COMMUNICATION EQUIPMENT (M1068 ONLY)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE CURBSIDE DATA PANEL ASSEMBLY A12 (M1068 ONLY).....	0716 00
REPLACE EXTERNAL COMMUNICATION BOX A11 LID AND LATCHES (M1068 ONLY).....	0717 00
REPLACE RIGHT EQUIPMENT RACK BRACKETS AND MOUNTS (M1068 ONLY).....	0718 00
REPLACE A.C. POWER EXTENSION BOX A7 (M1068 ONLY).....	0719 00
REPLACE AC POWER EXTENSION BOX A19 (M1068 ONLY).....	0720 00
REPLACE LAN GROUND BOX ASSEMBLY A15 (M1068 ONLY).....	0721 00
REPAIR LAN GROUND BOX ASSEMBLY A15 (M1068 ONLY).....	0722 00
REPLACE EXTERNAL COMMUNICATION BOX A11 (M1068 ONLY).....	0723 00
REPLACE SIGNAL PATCH PANEL BOX A10 (M1068 ONLY).....	0724 00
REPLACE APIU RACK MOUNT AND BRACKET (M1068 ONLY).....	0725 00
REPLACE AC POWER EXTENSION BOX A18 AND BRACKET (M1068 ONLY).....	0726 00
REPLACE ROADSIDE DATA PANEL ASSEMBLY A13 AND BRACKET (M1068 ONLY).....	0727 00
REPLACE INVERTER HOUSING A2 TERMINAL BLOCKS TB1 AND TB2 (M1068 ONLY).....	0728 00
REPLACE POWER CONTROL ENCLOSURE AC AND DC METERS AND LIGHT INDICATORS (M1068 ONLY).....	0729 00
REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET (M1068 ONLY).....	0730 00
REPLACE POWER CONTROL ENCLOSURE ASSEMBLY A1 (M1068 ONLY).....	0731 00
REPLACE POWER CONTROL ENCLOSURE CIRCUIT 44A LEAD (M1068 ONLY).....	0732 00
REPLACE/REPAIR POWER SUPPLY STORAGE BOX ASSEMBLY (M1068 ONLY).....	0733 00
REPLACE TENT INTERFACE PANEL BOX ASSEMBLY A5 (M1068 ONLY).....	0734 00
REPLACE AC POWER EXTENSION BOX A6 AND DC POWER EXTENSION BOX A9 AND MOUNT (M1068 ONLY).....	0735 00
REPLACE/REPAIR POWER DISTRIBUTION BOX A3 (M1068 ONLY).....	0736 00
REPLACE POWER ENTRY BOX ASSEMBLY A4 (M1068 ONLY).....	0737 00
REPLACE FLUORESCENT LIGHT ASSEMBLIES (M1068 ONLY).....	0738 00
REPLACE POWER DISTRIBUTION CABLE (W3) (M1068 ONLY).....	0739 00
REPLACE DC BATTERY CABLE (W4) (M1068 ONLY).....	0740 00
REPLACE/REPAIR INVERTER AC CABLE (W5) (M1068 ONLY).....	0741 00
REPLACE INVERTER DC CABLE (W6) (M1068 ONLY).....	0742 00
REPLACE AC POWER EXTENSION CABLE (W7) (M1068 ONLY).....	0743 00
REPLACE AC POWER EXTENSION CABLE (W8) (M1068 ONLY).....	0744 00
REPLACE CASCADE REMOTE HARNESS (M1068 ONLY).....	0745 00
REPLACE DC POWER EXTENSION CABLE (W10) (M1068 ONLY).....	0746 00
REPLACE AC LIGHT CABLE (W11) (M1068 ONLY).....	0747 00
REPLACE GROUND STRAP (W12) (M1068 ONLY).....	0748 00
REPLACE HARNESS W32 (M1068 ONLY).....	0749 00

CHAPTER 41

UNIT MAINTENANCE INSTRUCTIONS
FOR ELECTRICAL/COMMUNICATION EQUIPMENT (M1068 ONLY)

WORK PACKAGE INDEX (Continued)

<u>Title</u>	<u>Sequence No.</u>
REPLACE CABLE W35, CABLE W28, AND CABLE ADAPTER (M1068 ONLY).....	0750 00
REPLACE CABLE W38, CABLE W29, AND CABLE ADAPTER (M1068 ONLY).....	0751 00
REPLACE SINGLE POINT LAN CABLE (W40) (M1068 ONLY).....	0752 00
REPLACE CABLES W42, W43, AND W251 (M1068 ONLY).....	0753 00
REPLACE CABLE W45 (M1068 ONLY).....	0754 00
REPLACE AC CABLE ASSEMBLY (W252) (M1068 ONLY).....	0755 00
REPLACE LAN A OR B CABLE (W103/W104) (M1068 ONLY).....	0756 00
REPLACE CABLE W124 (M1068 ONLY).....	0757 00
REPLACE CABLE W126 (M1068 ONLY).....	0758 00
REPAIR CABLE ASSEMBLY (W4/W6) (M1068 ONLY).....	0759 00

REPLACE CURBSIDE DATA PANEL ASSEMBLY A12 (M1068 ONLY)

0716 00

THIS WORK PACKAGE COVERS:

Removal (page 0716 00-1).
 Installation (page 0716 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Signal Support System Specialist 31U10

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

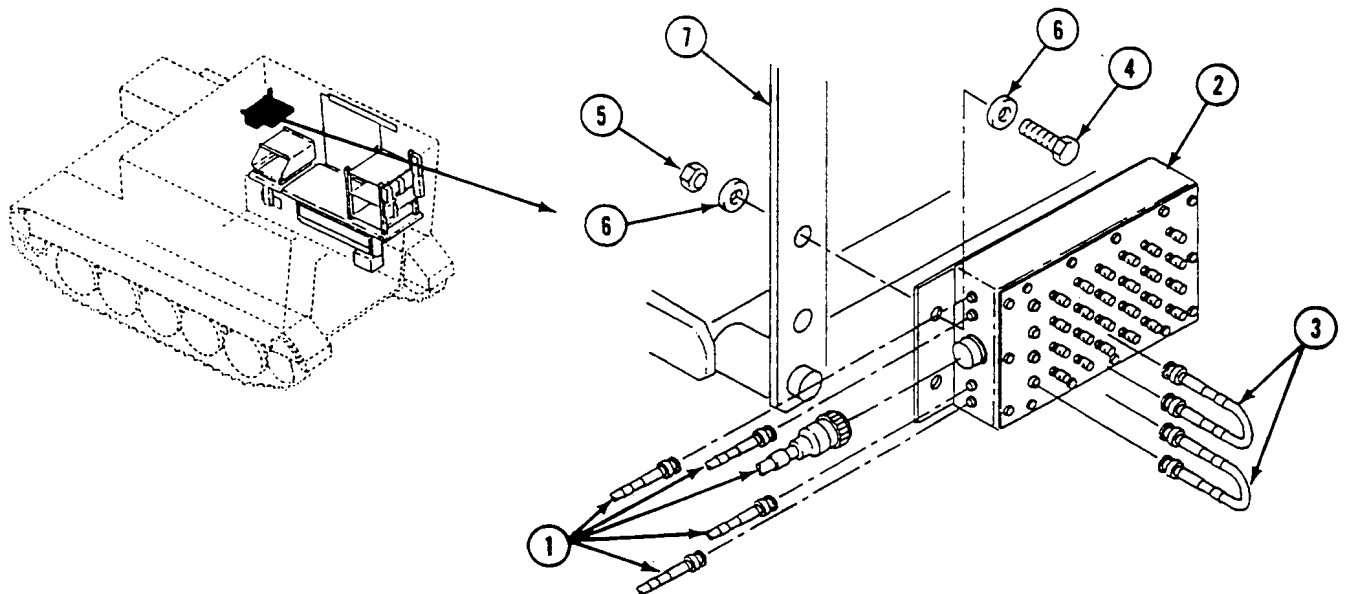
Locknut (2)

REMOVAL

NOTE

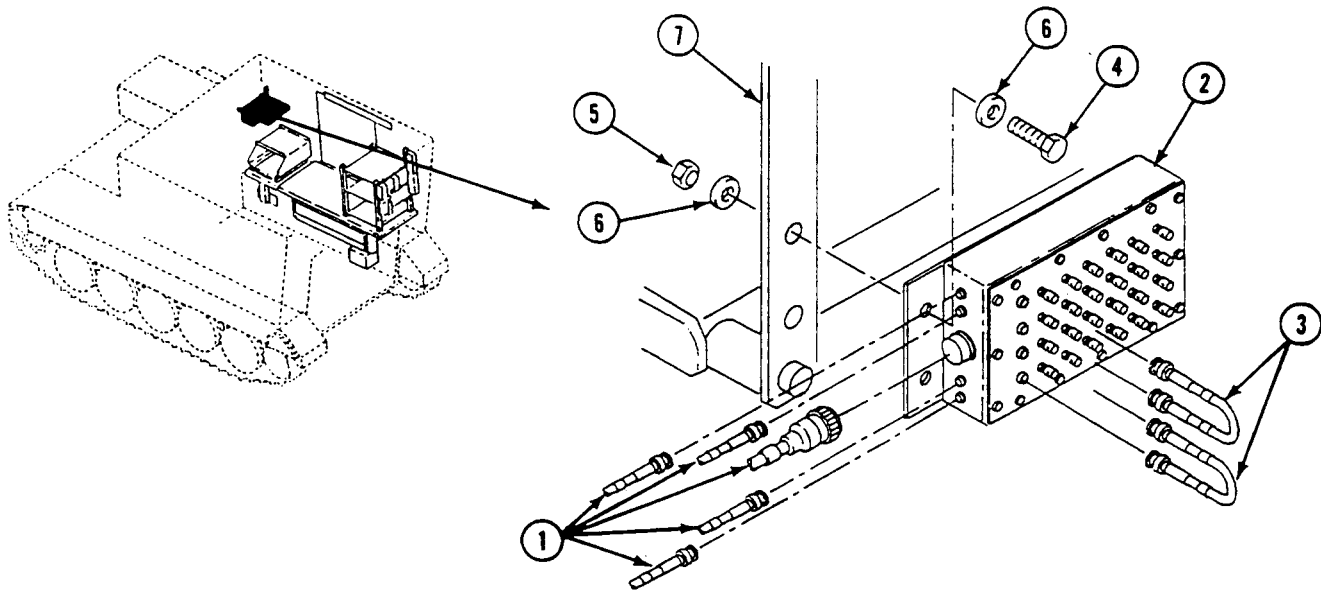
Tag all cables for reassembly.

1. Disconnect five cables (1) from curbside data panel assembly (2).
2. Remove two cables (3) from curbside data panel assembly (2).
3. Remove two screws (4), locknuts (5), four washers (6), and curbside data panel assembly (2) from hanger (7). Discard locknuts.



INSTALLATION

1. Install curbside data panel assembly (2), two screws (4), four washers (6), and two new locknuts (5) on hanger (7).
2. Install two cables (3) on curbside data panel assembly (2).
3. Connect five cables (1) to curbside data panel assembly (2).

**END OF TASK**

REPLACE EXTERNAL COMMUNICATION BOX A11 LID AND LATCHES (M1068 ONLY)

0717 00

THIS WORK PACKAGE COVERS:

- Removal (page 0717 00-1).
- Installation (page 0717 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power cables disconnected (TM 11-7010-256-12&P)

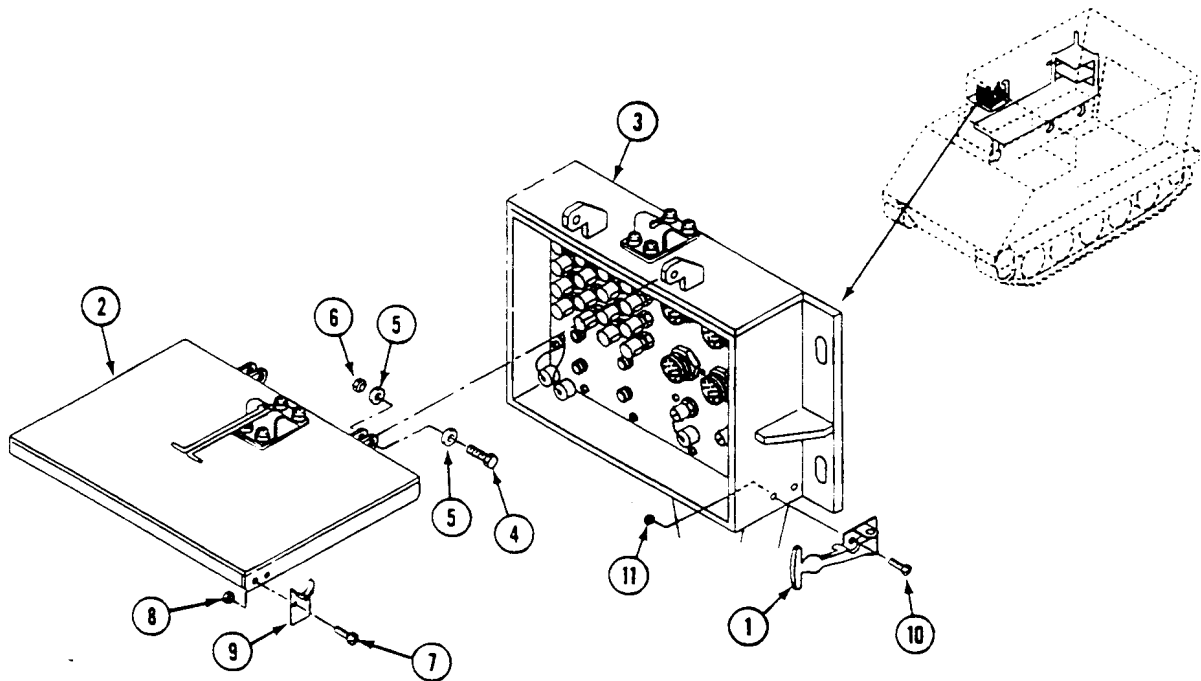
Materials/Parts

Locknut (2)

Locknut (8)

REMOVAL

1. Pull out and away two latches (1) from lid (2) on external communication box A11 (3).
2. Remove two screws (4), four washers (5), locknuts (6), and lid (2). Discard locknuts.
3. Remove four screws (7), locknuts (8), and two catches (9) from lid (2). Discard locknuts.
4. Remove four screws (10), locknuts (11), and two latches (1) from external communication box A11 (3). Discard locknuts.

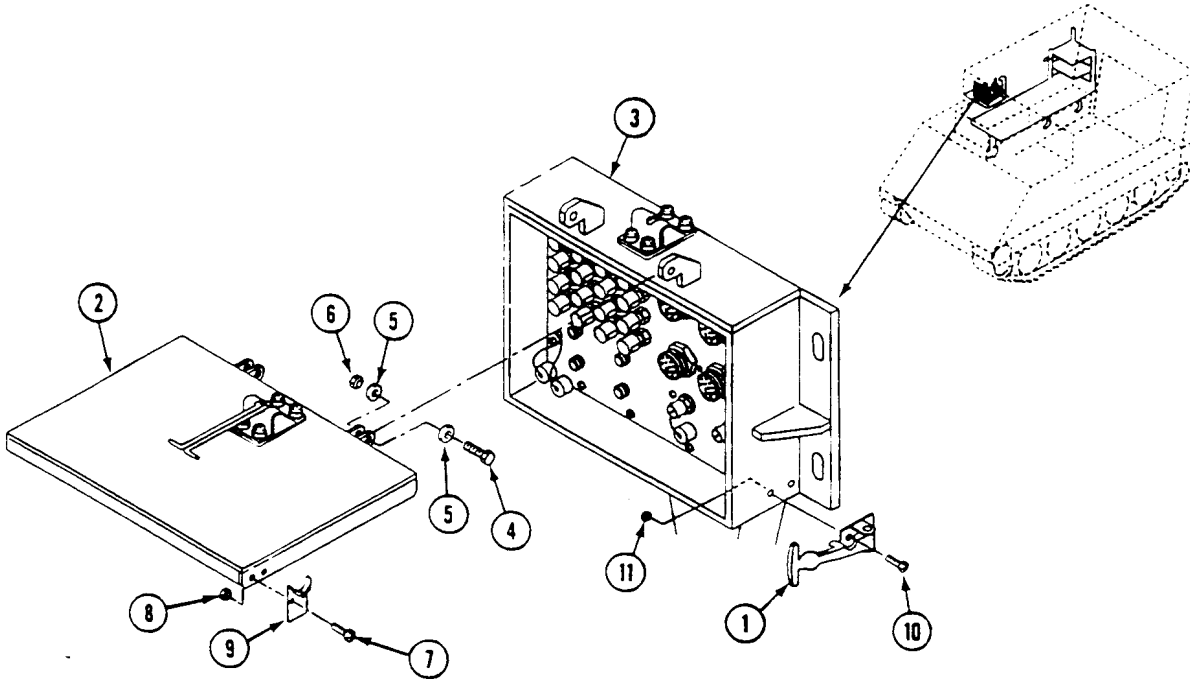


**REPLACE EXTERNAL COMMUNICATION BOX A11 LID AND LATCHES
(M1068 ONLY) — Continued**

0717 00

INSTALLATION

1. Install two latches (1), four screws (10), and new locknuts (11) on external communication box A11 (3).
2. Install two catches (9), four screws (7), and new locknuts (8) on lid (2).
3. Install lid (2), two screws (4), four washers (5), and new locknuts (6) on external communication box A11 (3).
4. Secure lid (2) on external communication box A11 (3) with latches (1).

**END OF TASK**

REPLACE RIGHT EQUIPMENT RACK BRACKETS AND MOUNTS (M1068 ONLY)

0718 00

THIS WORK PACKAGE COVERS:

Removal (page 0718 00-1).
 Installation (page 0718 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 A.C. power extension box A7 removed (WP 0719 00)
 LAN ground box assembly A15 removed (WP 0721 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

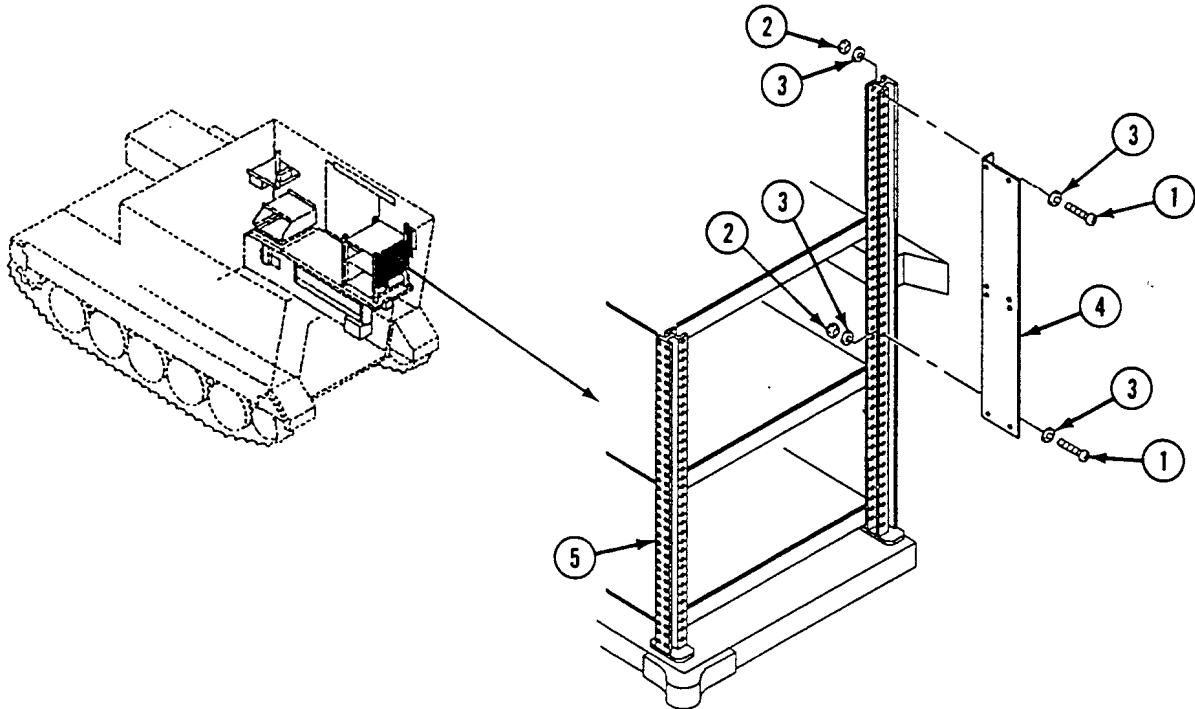
Locknut (3)

Personnel Required

Unit Mechanic

REMOVAL

1. Remove three screws (1), locknuts (2), six washers (3), and mount (4) from right equipment rack (5). Discard locknuts.

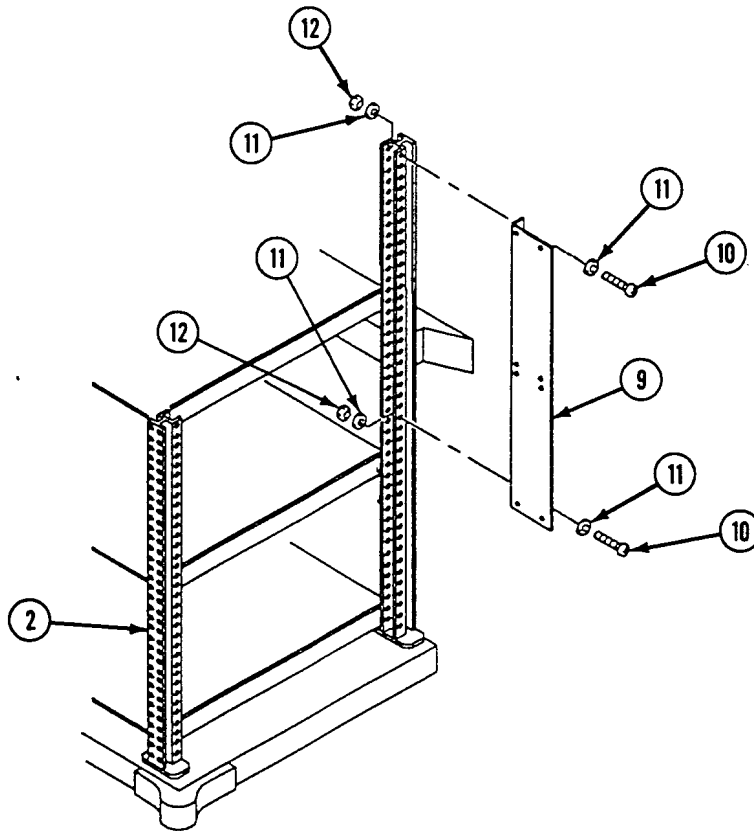


**REPLACE RIGHT EQUIPMENT RACK BRACKETS AND MOUNTS
(M1068 ONLY) — Continued**

0718 00

INSTALLATION

1. Install mount (9) on right equipment rack (2) with three screws (10), six washers (11), and three new locknuts (12).



FOLLOW-THROUGH STEPS

1. Install LAN ground box assembly A15 (WP 0721 00).
2. Install A.C. power extension box A7 (WP 0719 00).

END OF TASK

REPLACE AC POWER EXTENSION BOX A7 (M1068 ONLY)

0719 00

THIS WORK PACKAGE COVERS:

Removal (page 0719 00-1).
 Installation (page 0719 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

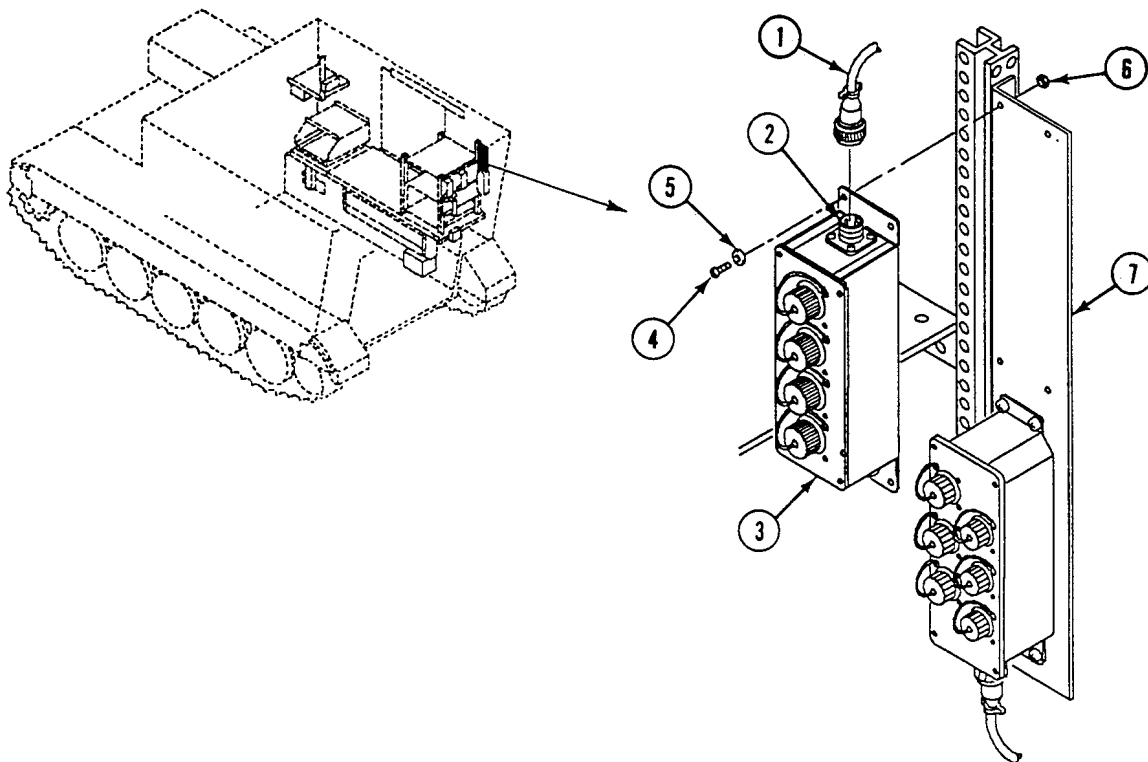
Locknut (4)

Personnel Required

Power-Generation Equipment Repairer 52D10

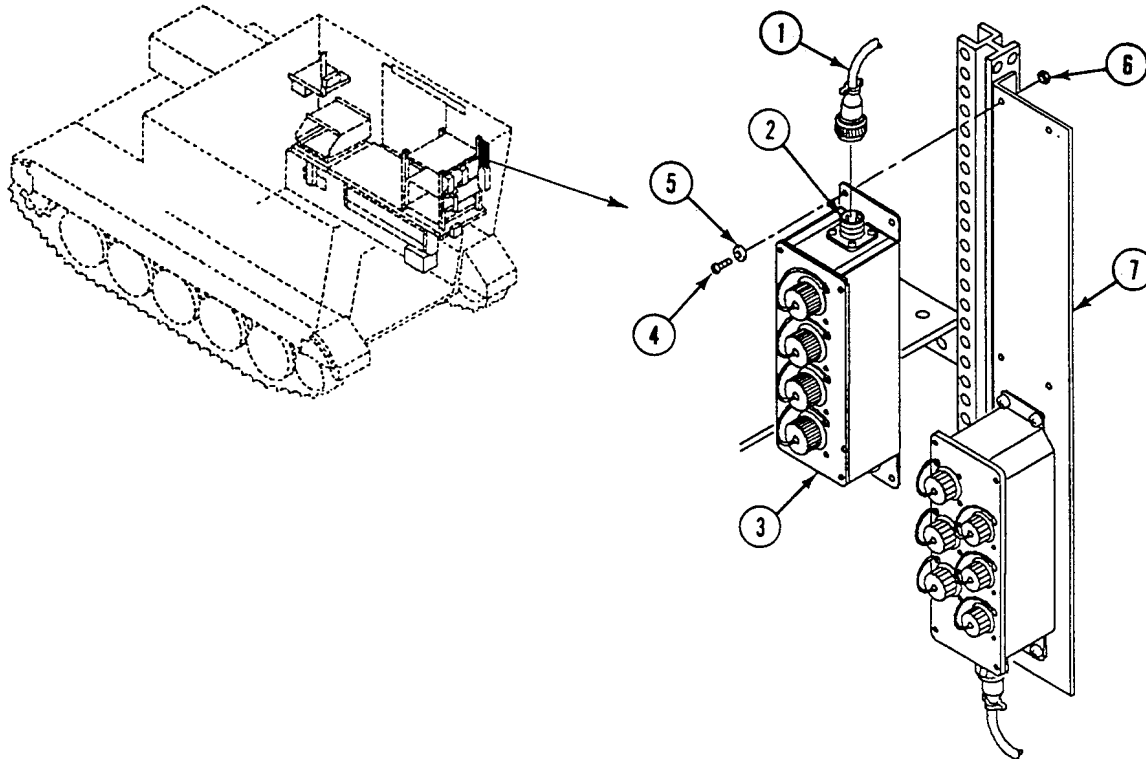
REMOVAL

1. Disconnect cable W8 (1) from connector J1 (2) on AC power extension box A7 (3).
2. Remove four screws (4), washers (5), locknuts (6), and AC power extension box A7 (3) from mount (7). Discard locknuts.



INSTALLATION

1. Install AC power extension box A7 (3), four washers (5), screws (4), and new locknuts (6) on mount (7).
2. Connect cable W8 (1) to connector J1 (2) on AC power extension box A7 (3).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE AC POWER EXTENSION BOX A19 (M1068 ONLY)

0720 00

THIS WORK PACKAGE COVERS:

Removal (page 0720 00-1).
 Installation (page 0720 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected
 (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

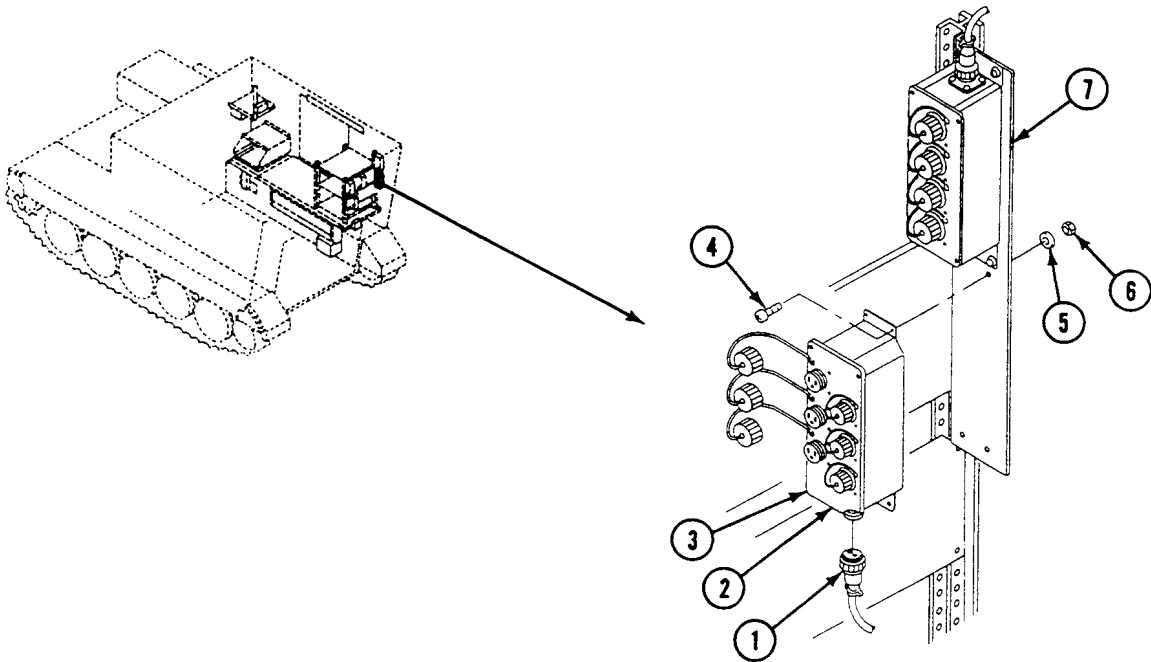
Locknut (4)

Personnel Required

Power-Generation Equipment Repairer 52D10

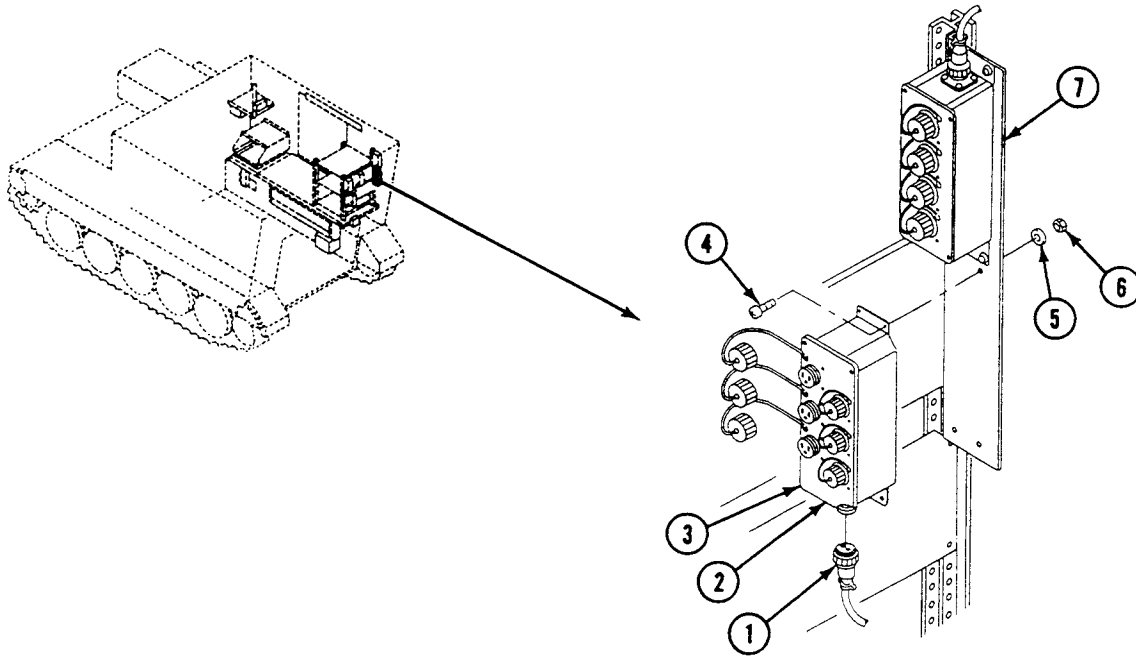
REMOVAL

1. Disconnect cable W252 (1) from connector J15 (2) on A.C. power extension box A19 (3).
2. Remove four screws (4), washers (5), locknuts (6), and A.C. power extension box A19 (3) from mount (7). Discard locknuts.



INSTALLATION

1. Install A.C. power extension box A19 (3), four washers (5), screws (4), and new locknuts (6) on mount (7).
2. Connect cable W252 (1) to connector J15 (2) on A.C. power extension box A19 (3).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE LAN GROUND BOX ASSEMBLY A15 (M1068 ONLY)

0721 00

THIS WORK PACKAGE COVERS:

- Removal (page 0721 00-1).
- Installation (page 0721 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

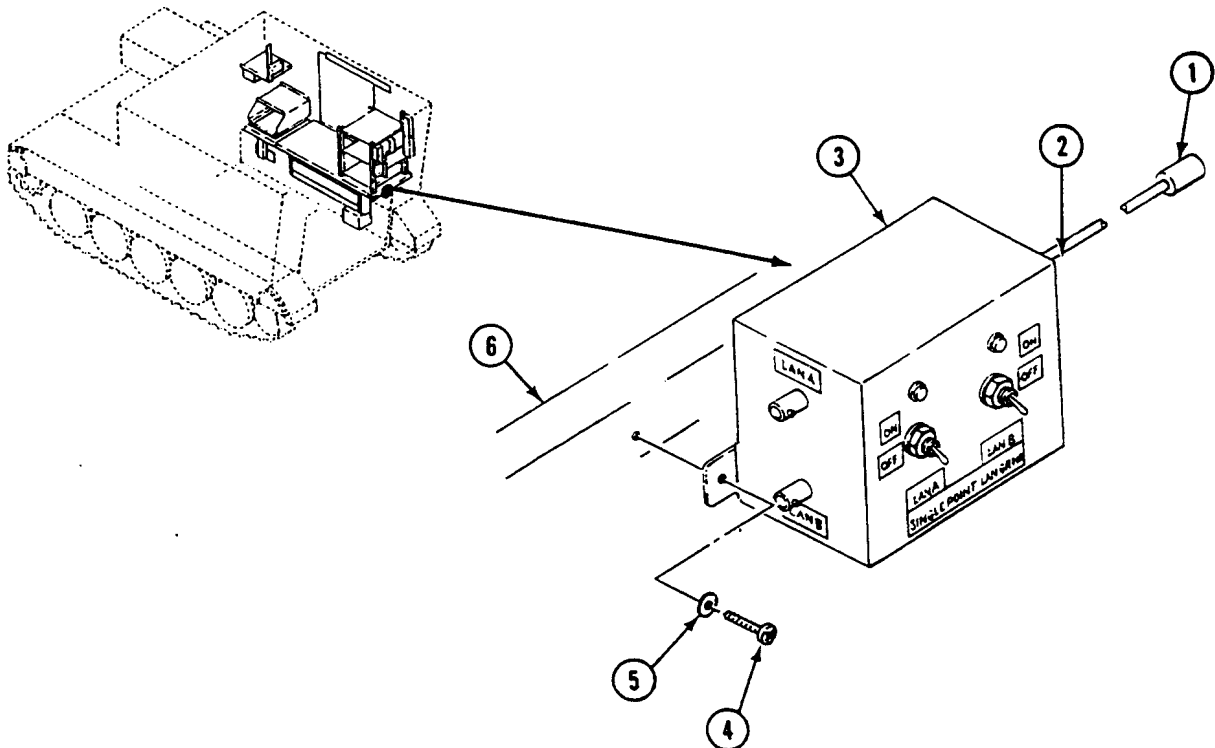
Radio Equipment Tool Kit (WP 0780 00, Item 81)

Personnel Required

Signal Support System Specialist 31U10

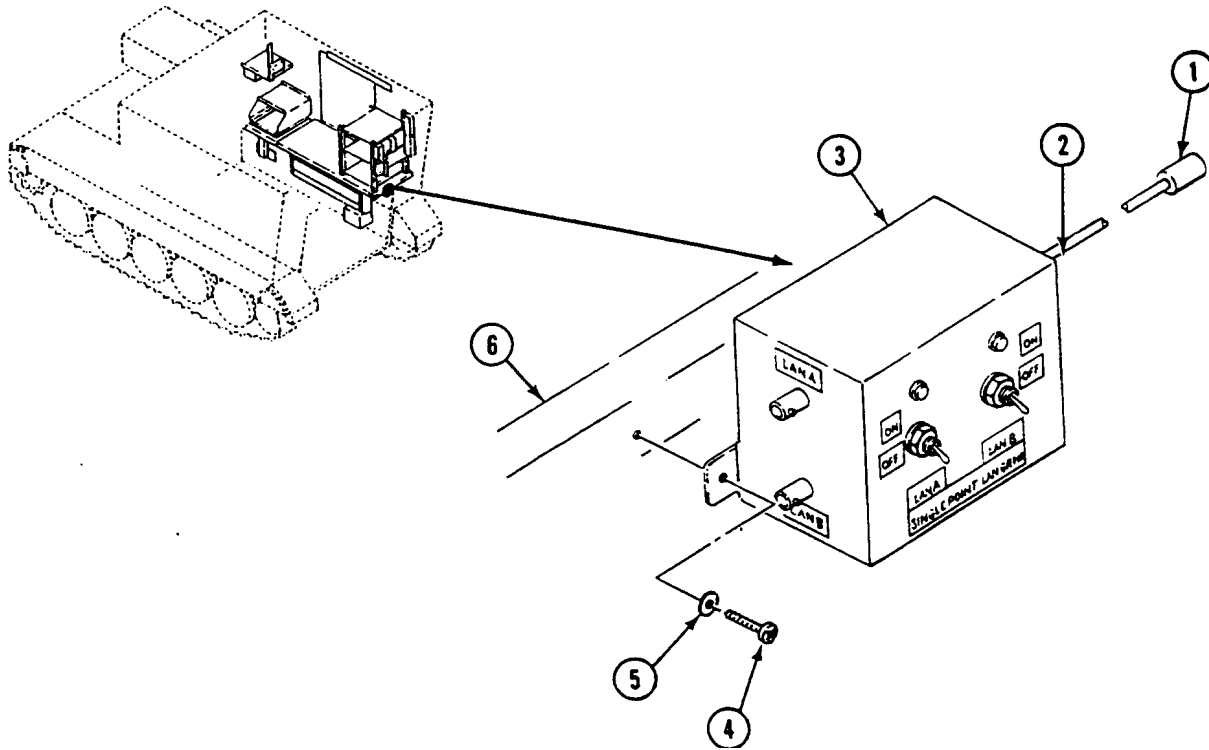
REMOVAL

1. Disconnect cable W40 (1) from connector J1 (2) on LAN ground box (3).
2. Remove two screws (4), washers (5), and LAN ground box (3) from work station rack base (6).



INSTALLATION

1. Install LAN ground box (3), two washers (5), and screws (4) on work station rack base (6).
2. Connect cable W40 (1) to connector J1 (2) on LAN ground box (3).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPAIR LAN GROUND BOX ASSEMBLY A15 (M1068 ONLY)

0722 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0722 00-1).
 Assembly (page 0722 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Signal Support System Specialist 31U10

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

Equipment Condition

LAN ground box assembly A15 removed (WP 0721 00)

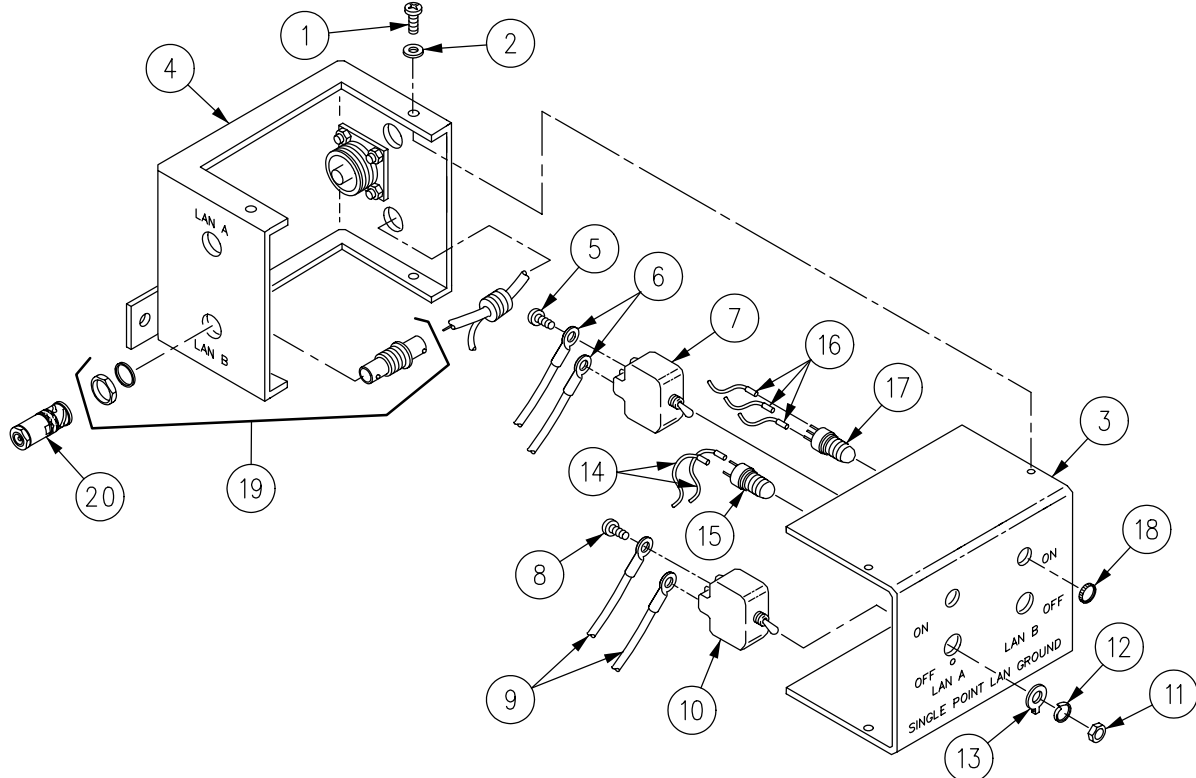
DISASSEMBLY

1. Remove four screws (1), washers (2), and box (3) from box mount (4).

NOTE

Tag all leads before removal for proper installation later.

2. Remove four screws (5) and five leads (6) from switch S2 (7).
3. Remove four screws (8) and leads (9) from switch S1 (10).
4. Remove two jamnuts (11), lockwashers (12), lockring (13), and switches (7) and (10) from box (3).
5. Disconnect two leads (14) from light DS1 (15).
6. Disconnect three leads (16) from light DS2 (17).
7. Remove two nuts (18) and lights (15) and (17) from box (3).
8. Remove any of four adapters (19) and connectors (20) from box mount (4), but only if necessary.

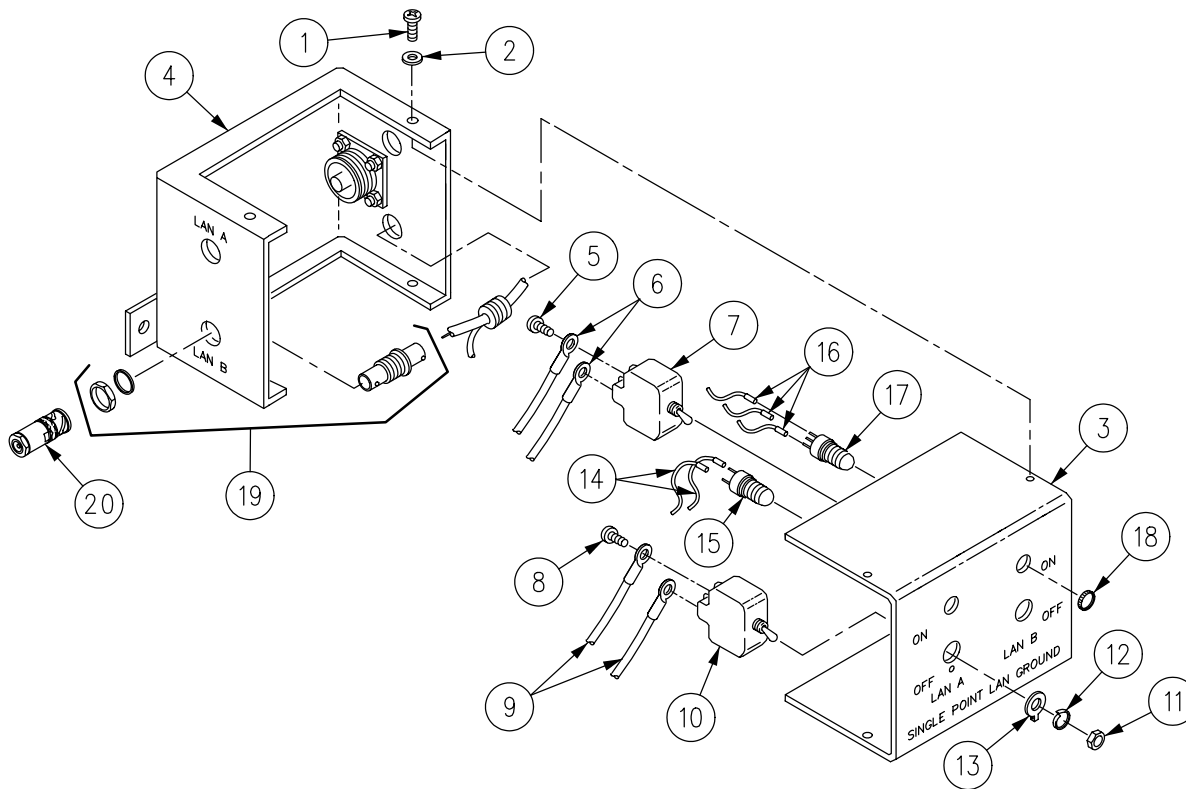


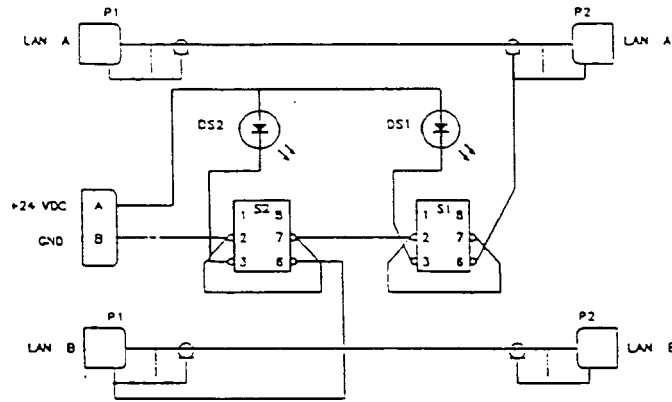
ASSEMBLY

NOTE

Use wiring diagram, page 0722 00-3.

1. If any of four connectors (20) and adapters (19) were removed from box mount (4), install as necessary.
2. Install two lights (15) and (17) and nuts (18) on box (3).
3. Connect three leads (16) to light DS2 (17).
4. Connect two leads (14) to light DS1 (15).
5. Install two switches (7) and (10), two lockrings (13), lockwashers (12), and jamnuts (11) on box (3).
6. Install four leads (9) and screws (8) on switch S1 (10).
7. Install five leads (6) and four screws (5) on switch S2 (7).
8. Install box (3), four washers (2), and screws (1) on box mount (4).





WIRING DIAGRAM

FOLLOW-THROUGH STEPS

1. Install LAN ground box assembly A15 (WP 0721 00).

END OF TASK

REPLACE EXTERNAL COMMUNICATION BOX A11 (M1068 ONLY)

0723 00

THIS WORK PACKAGE COVERS:

Removal (page 0723 00-1).
 Installation (page 0723 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

Materials/Parts

Tie strap (3)

Personnel Required

Signal Support System Specialist 31U10
 Helper (H)

Equipment Condition

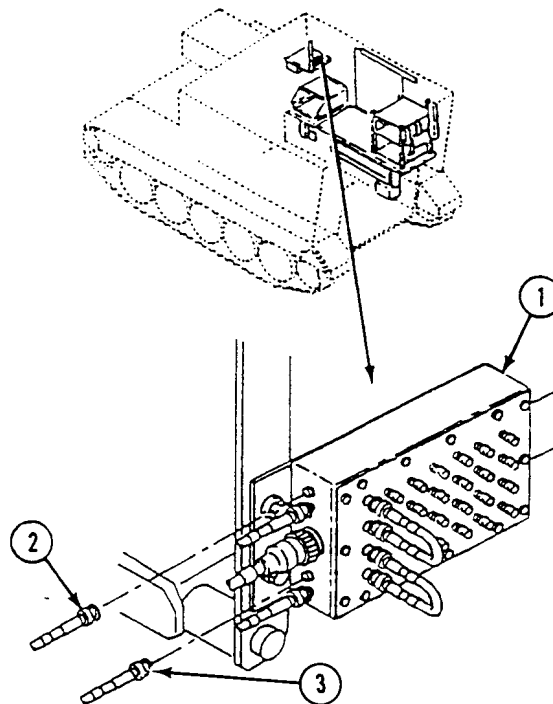
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

REMOVAL

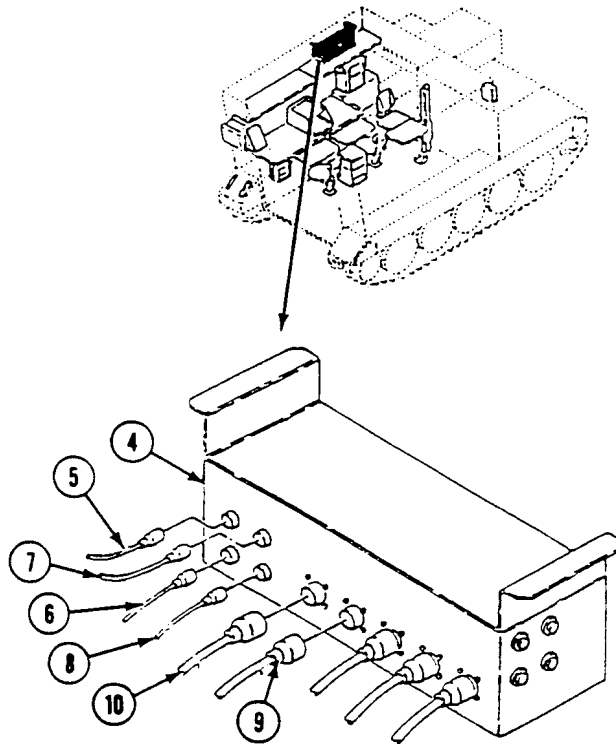
NOTE

Tag all cables for identification before removing them. Replace pads only if damaged.

1. Disconnect cable W101 (2) from J1 and cable W102 (3) from J4 and from curbside data panel assembly (1).



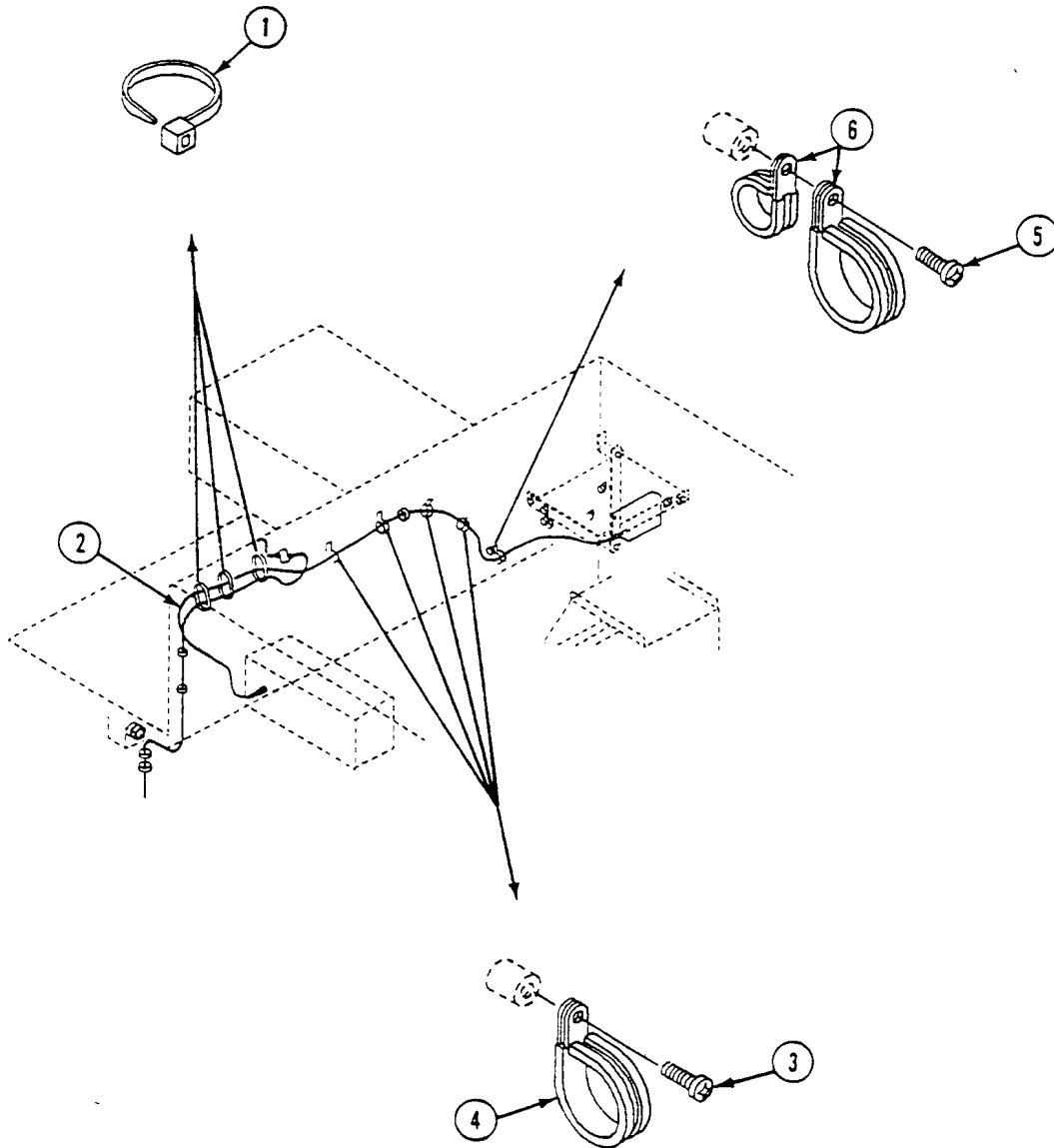
2. Disconnect cable W111 (5) from J125, cable W112 (6) from J123, cable W113 (7) from J126, cable W114 (8) from J124, cable W115 (9) from J136, and cable W118 (10) from J135 and from signal patch panel box A10 (4).



REPLACE EXTERNAL COMMUNICATION BOX A11 (M1068 ONLY) — Continued

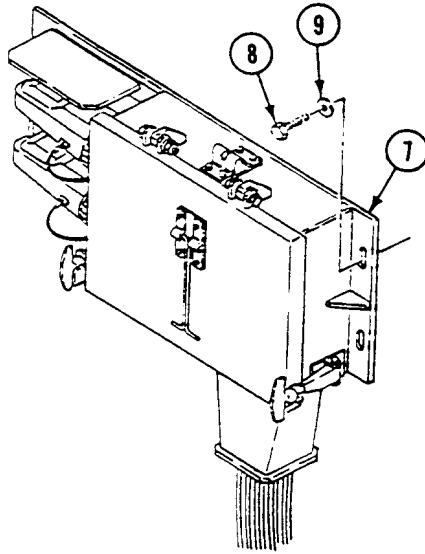
0723 00

3. Remove three tie straps (1) from cable bundle (2). Discard tie straps.
4. Remove four screws (3) and clamps (4) from cable bundle (2) and carrier.
5. Remove screw (5) and clamp (6) from cable bundle (2) and carrier.

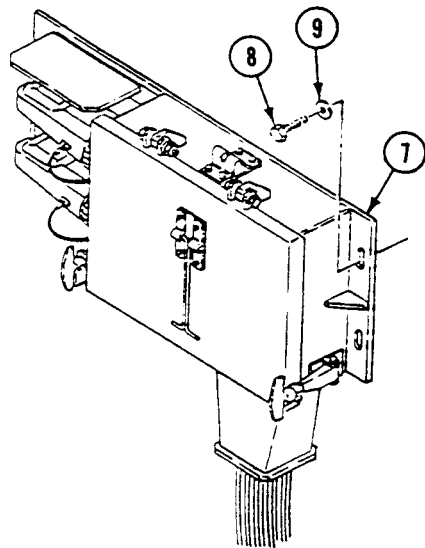


REPLACE EXTERNAL COMMUNICATION BOX A11 (M1068 ONLY) — Continued**0723 00**

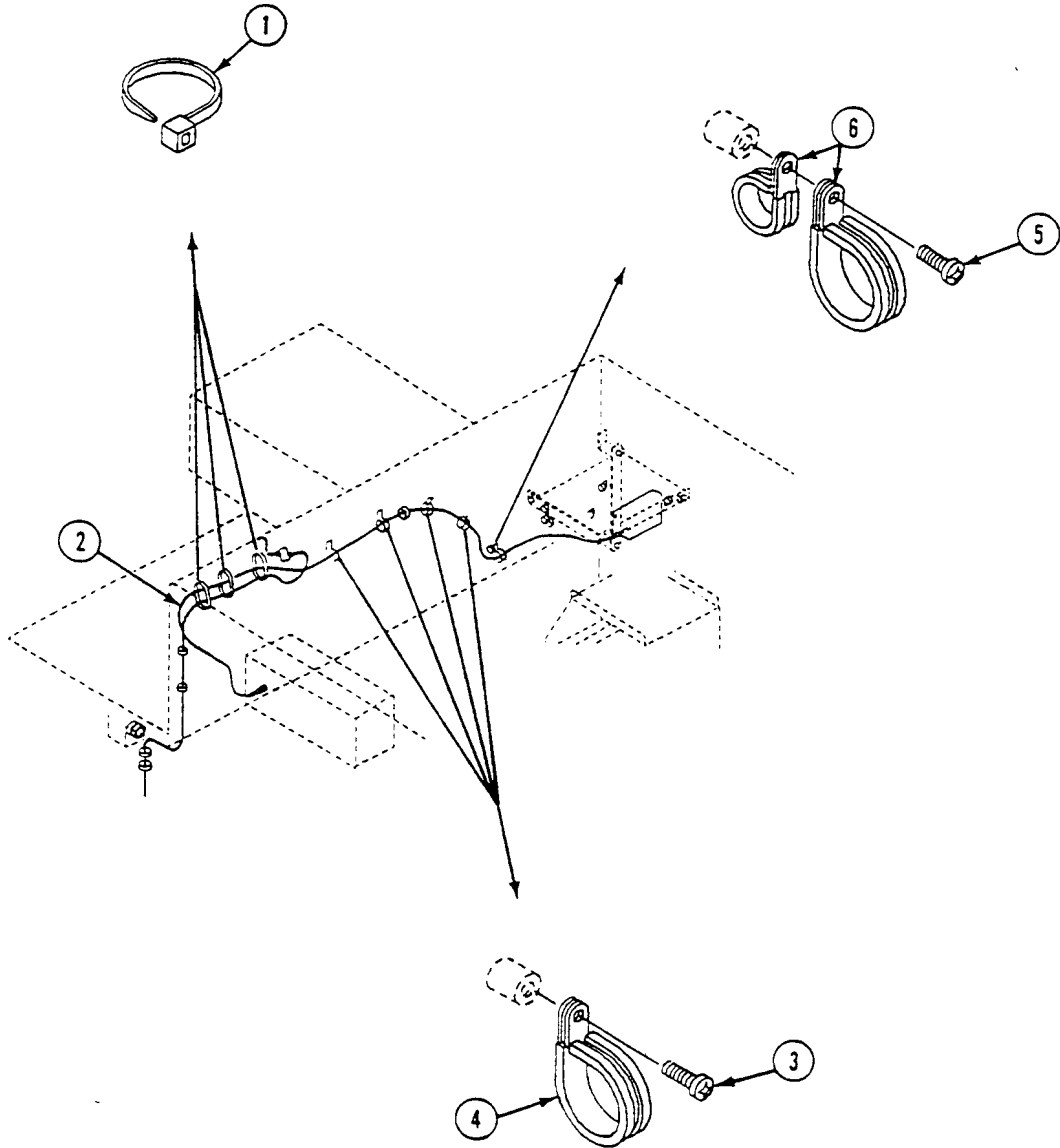
6. Have helper hold external communication box A11 (7) in place. Remove four screws (8) and washers (9) holding box to front bulkhead.
7. Remove external communication box A11 (7). Have helper guide cables through hull opening.

**INSTALLATION**

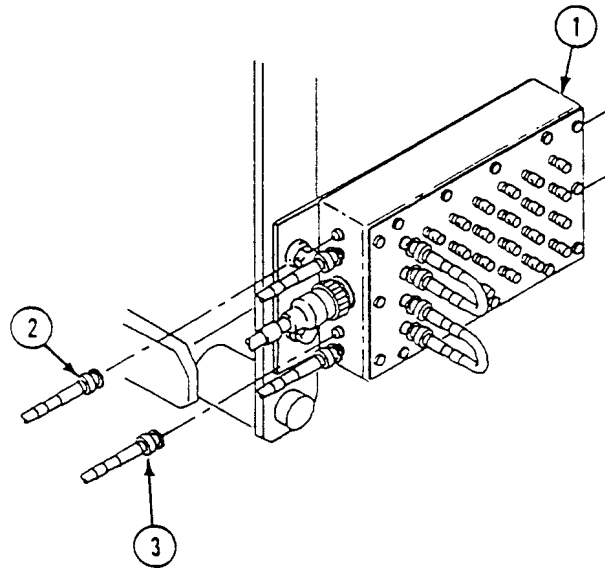
1. Position external communication box A11 (7) on front bulkhead. Have helper guide cables through hull opening.
2. Have helper hold external communication box A11 (7) in place. Secure box to front bulkhead with four screws (8) and washers (9).



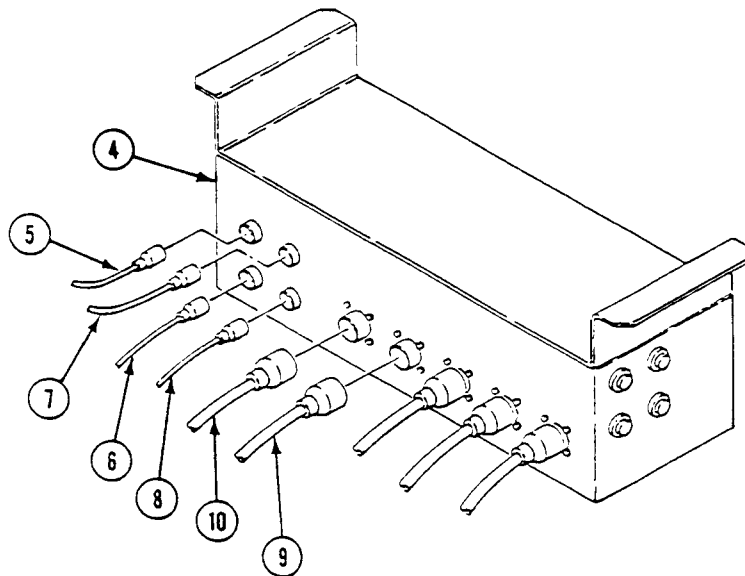
3. Route cable bundle (2) in carrier. Secure with three new tie straps (1).
4. Secure cable bundle (2) to carrier.
 - a. Use four clamps (4) and screws (3).
 - b. Use clamps (6) and screw (5).



5. Connect cable W101 (2) from J1 and cable W102 (3) from J4 to curbside data panel assembly (1).



6. Connect cable W111 (5) from J125, cable W112 (6) from J123, cable W113 (7) from J126, cable W114 (8) from J124, cable W115 (9) from J136, and cable W118 (10) from J135 and to signal patch panel box A10 (4).



FOLLOW THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE SIGNAL PATCH PANEL BOX A10 (M1068 ONLY)

0724 00

THIS WORK PACKAGE COVERS:

Removal (page 0724 00-1).
 Installation (page 0724 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

Materials/Parts

Lockwasher (4)

Personnel Required

Signal Support System Specialist 31U10

Equipment Condition

Engine stopped (see your -10)

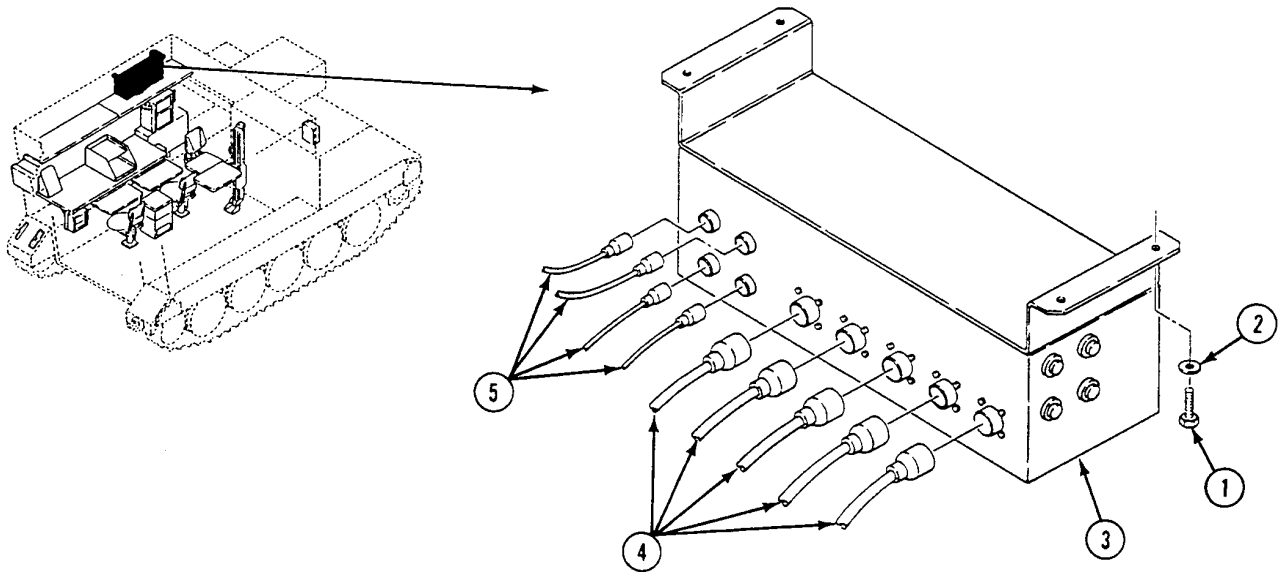
Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

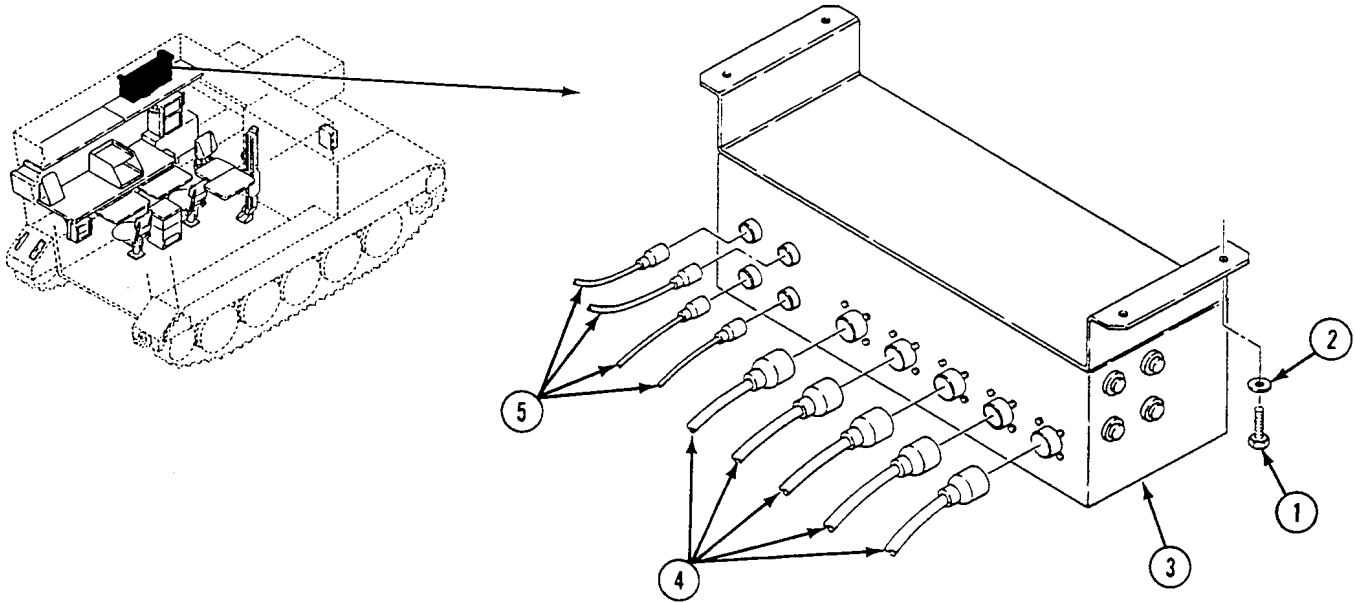
REMOVAL

1. Remove four screws (1), lockwashers (2), and patch panel box (3) from hull top. Discard lockwashers.
2. Tag and remove five cables (4) from rear of patch panel box (3).
3. Tag and remove four leads (5) from rear of patch panel box (3).



INSTALLATION

1. Install four leads (5) on rear of patch panel box (3).
2. Install five cables (4) to connectors on rear of patch panel box (3).
3. Install patch panel box (3), four new lockwashers (2), and screws (1) on hull top.

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE APIU RACK MOUNT AND BRACKET (M1068 ONLY)

0725 00

THIS WORK PACKAGE COVERS:

Removal (page 0725 00-1).
 Installation (page 0725 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Locknut (16)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected
 (TM 11-7010-256-12&P)

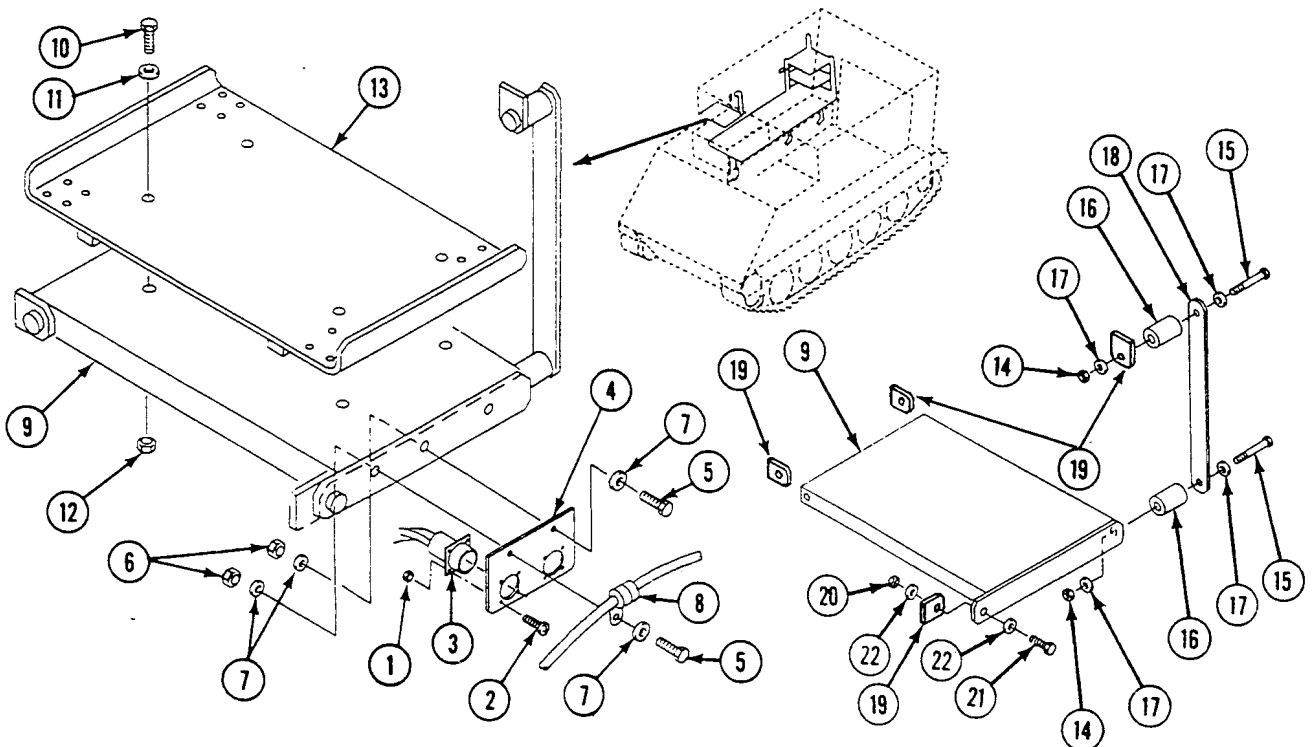
Electronic communication equipment removed
 (TM 11-7010-256-12&P)

Curbside data panel assembly A12 removed
 (WP 0716 00)

Battery ground lead disconnected (WP 0294 00)

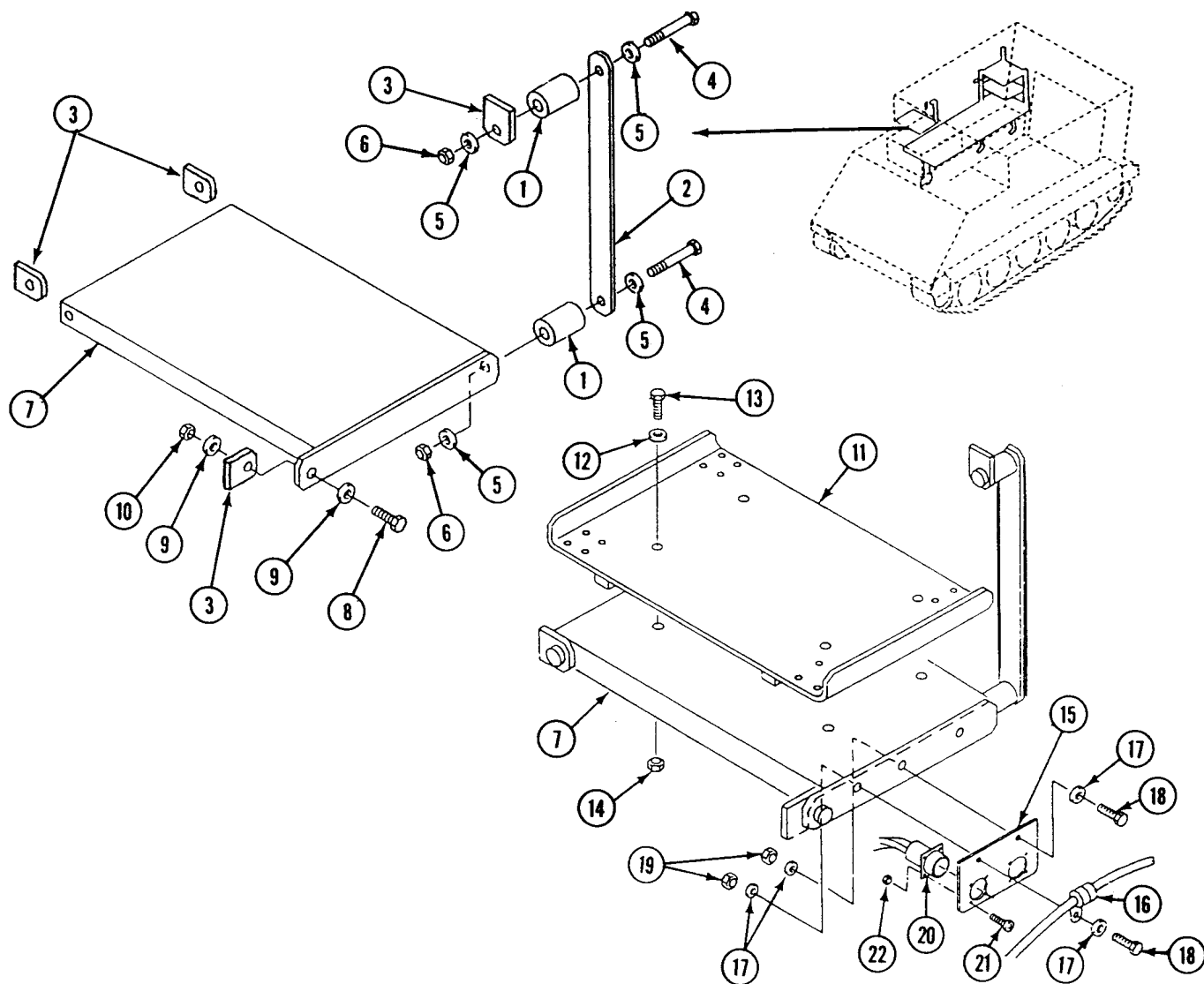
REMOVAL

1. Remove four locknuts (1), screws (2), and receptacle (3) from bracket (4). Discard locknuts.
2. Remove two screws (5), locknuts (6), four washers (7), clamp (8), and bracket (4) from APIU rack (9). Discard locknuts.
3. Remove four screws (10), washers (11), locknuts (12), and mount (13) from APIU rack (9). Discard locknuts.
4. Remove two locknuts (14), screws (15), spacers (16), washers (17), and hanger (18) from bulkhead mount (19) and rack (9). Discard locknuts.
5. Remove three locknuts (20), screws (21), six washers (22), and rack (9) from three bulkhead mounts (19). Discard locknuts.



INSTALLATION

1. Align spacer (1) and hanger (2) with bulkhead mount (3). Secure with screw (4), two washers (5), and new locknut (6).
2. Align rack (7) with three bulkhead mounts (3). Secure with three screws (8), six washers (9), and new locknuts (10).
3. Position spacer (1) between rack (7) and hanger (2). Secure with screw (4), two washers (5), and new locknut (6).
4. Install mount (11) on the Adaptive Programmable Interface Unit (APIU) rack (7). Secure with four washers (12), screws (13), and new locknuts (14).
5. Install bracket (15) and clamp (16) on the Adaptive Programmable Interface Unit (APIU) rack (7). Secure with four washers (17), two screws (18), and new locknuts (19).
6. Install receptacle (20) on bracket (15). Secure with four screws (21) and new locknuts (22).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Install electronic communication equipment. See TM 11-7010-256-12&P.
3. Install curbside data panel assembly A12 (WP 0716 00).

END OF TASK

**REPLACE AC POWER EXTENSION BOX A18 AND BRACKET
(M1068 ONLY)**

0726 00

THIS WORK PACKAGE COVERS:

- Removal (page 0726 00-1).
- Installation (page 0726 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Locknut (4)

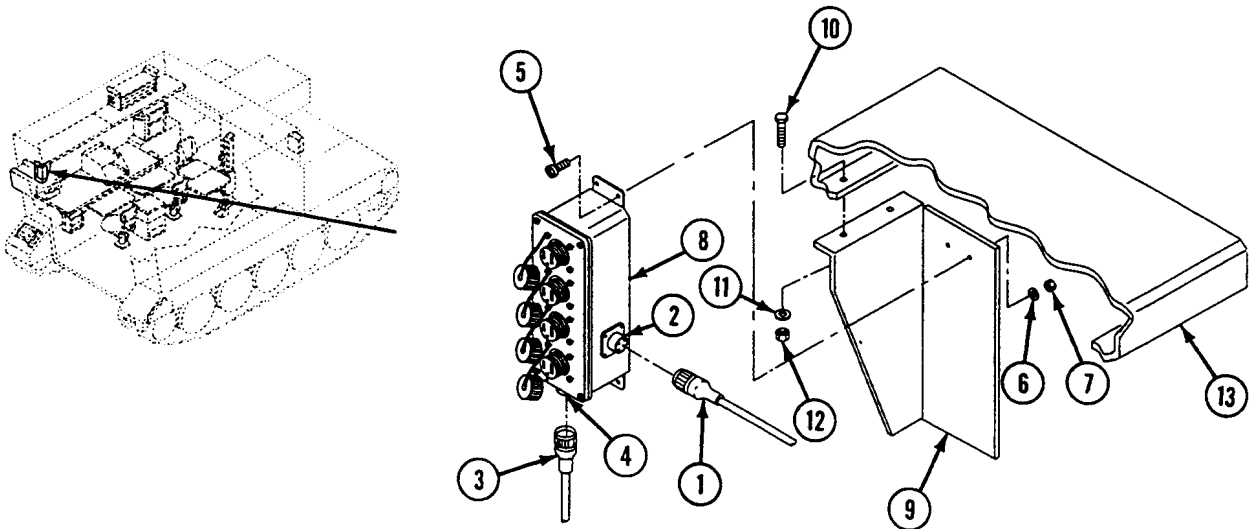
Lockwasher (2)

Personnel Required

Unit Mechanic

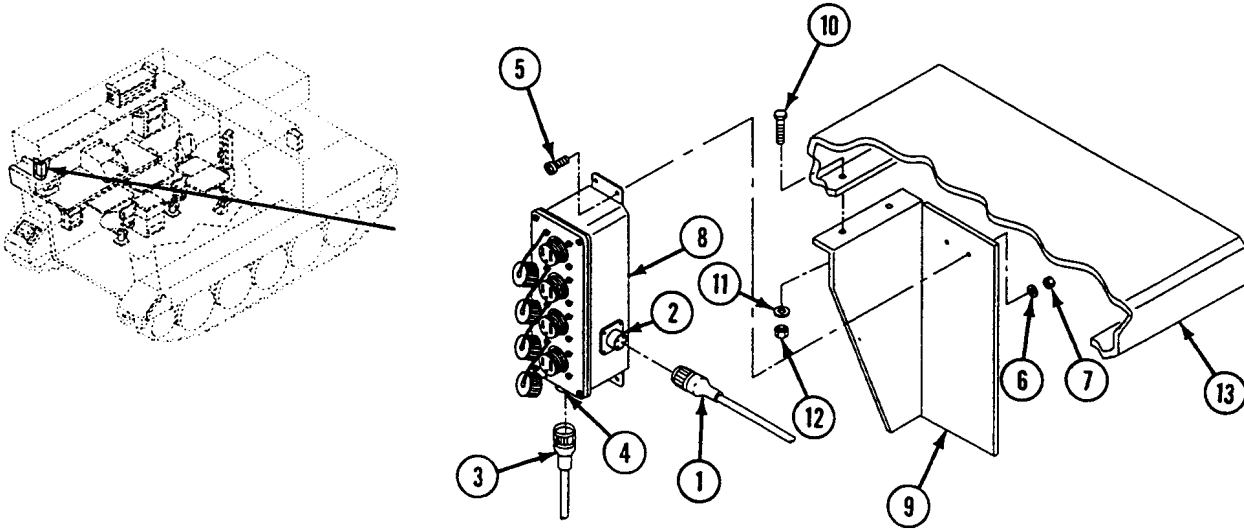
REMOVAL

1. Disconnect cable W252 plug P1 (1) from power extension box A18 jack J1 (2).
2. Disconnect cable W251 plug P2 (3) from power extension box A18 jack J6 (4).
3. Remove four screws (5), washers (6), locknuts (7), and power extension box A18 (8) from bracket (9). Discard locknuts.
4. Remove two screws (10), lockwashers (11), nuts (12), and bracket (9) from radio shelf (13). Discard lockwashers.



INSTALLATION

1. Install bracket (9) on radio shelf (13). Secure with two screws (10), new lockwashers (11), and nuts (12).
2. Install power extension box A18 (8) on bracket (9). Secure with four screws (5), washers (6), and new locknuts (7).
3. Connect cable W251 plug P2 (3) to power extension box A18 jack J6 (4).
4. Connect cable W252 plug P1 (1) to power extension box A18 jack J1 (2).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE ROADSIDE DATA PANEL ASSEMBLY A13 AND BRACKET (M1068 ONLY)

0727 00

THIS WORK PACKAGE COVERS:

- Removal (page 0727 00-1).
- Installation (page 0727 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

All external power disconnected (TM 11-7010-256-12&P)

Materials/Parts

Locknut (2)

Battery ground lead disconnected (WP 0294 00)

Personnel Required

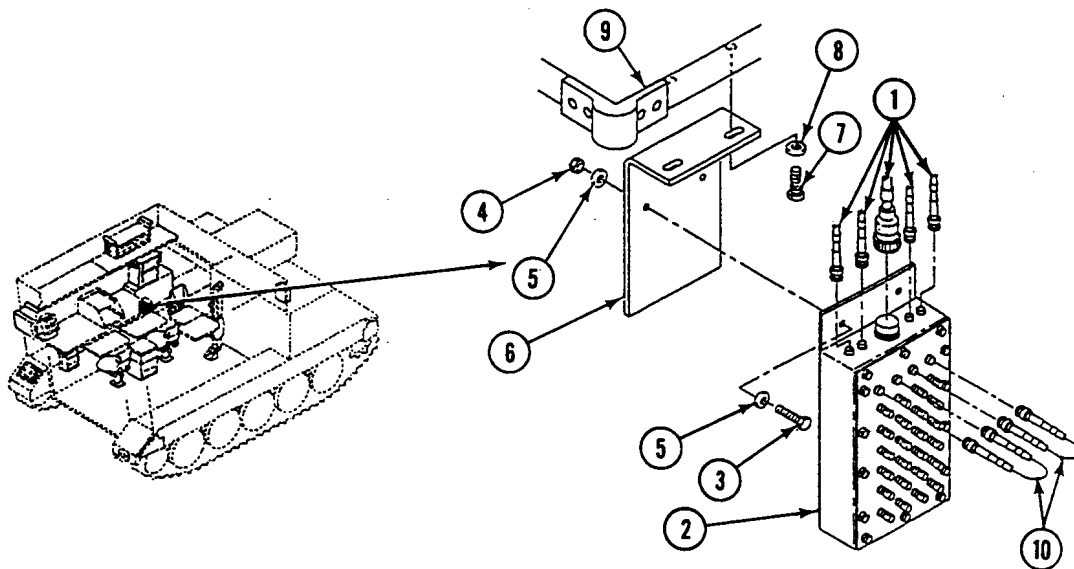
Signal Support System Specialist 31U10

REMOVAL

NOTE

Tag all cables before removal for installation later.

1. Disconnect five cables (1) from roadside data panel assembly (2).
2. Remove two screws (3), locknuts (4), four washers (5), and roadside data panel assembly (2) from mounting bracket (6). Discard locknuts.
3. Remove two screws (7), washers (8), and mounting bracket (6) from extension base (9).
4. Remove two cables (10) from roadside data panel assembly (2).

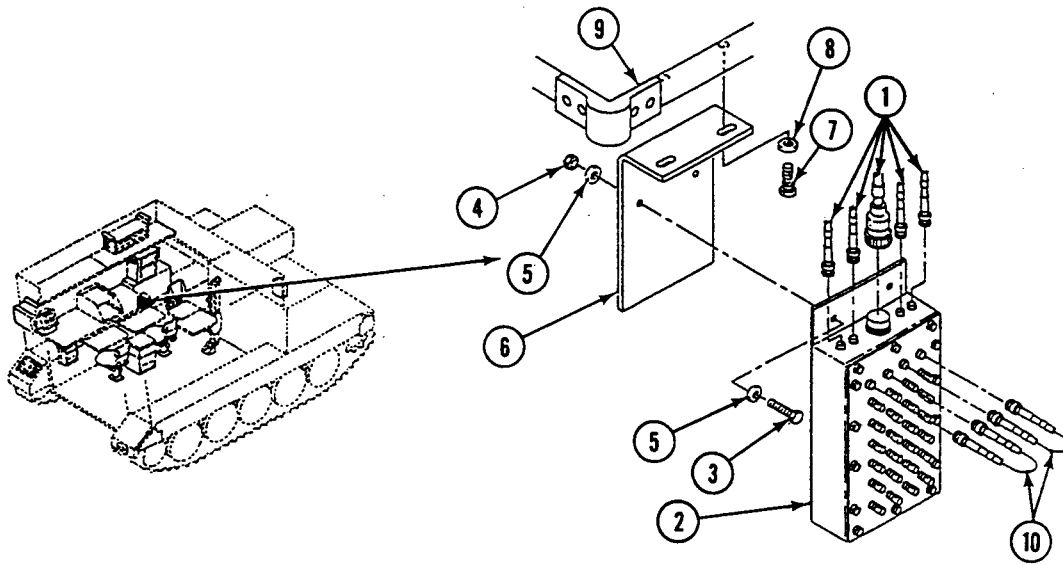


**REPLACE ROADSIDE DATA PANEL ASSEMBLY A13 AND BRACKET
(M1068 ONLY) — Continued**

0727 00

INSTALLATION

1. Install two cables (10) on roadside data panel assembly (2).
2. Install bracket (6), two washers (8), and screws (7) on extension base (9).
3. Install roadside data panel assembly (2), four washers (5), two screws (3), and new locknuts (4) on mounting bracket (6).
4. Connect five cables (1) to roadside data panel assembly (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE INVERTER HOUSING A2 TERMINAL BLOCKS
TB1 AND TB2 (M1068 ONLY)**

0728 00

THIS WORK PACKAGE COVERS:

Removal (page 0728 00-2).
Installation (page 0728 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut (2)

Locknut (4)

Lockwasher (10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

REPLACE INVERTER HOUSING A2 TERMINAL BLOCKS TB1 AND TB2 (M1068 ONLY) — Continued

0728 00

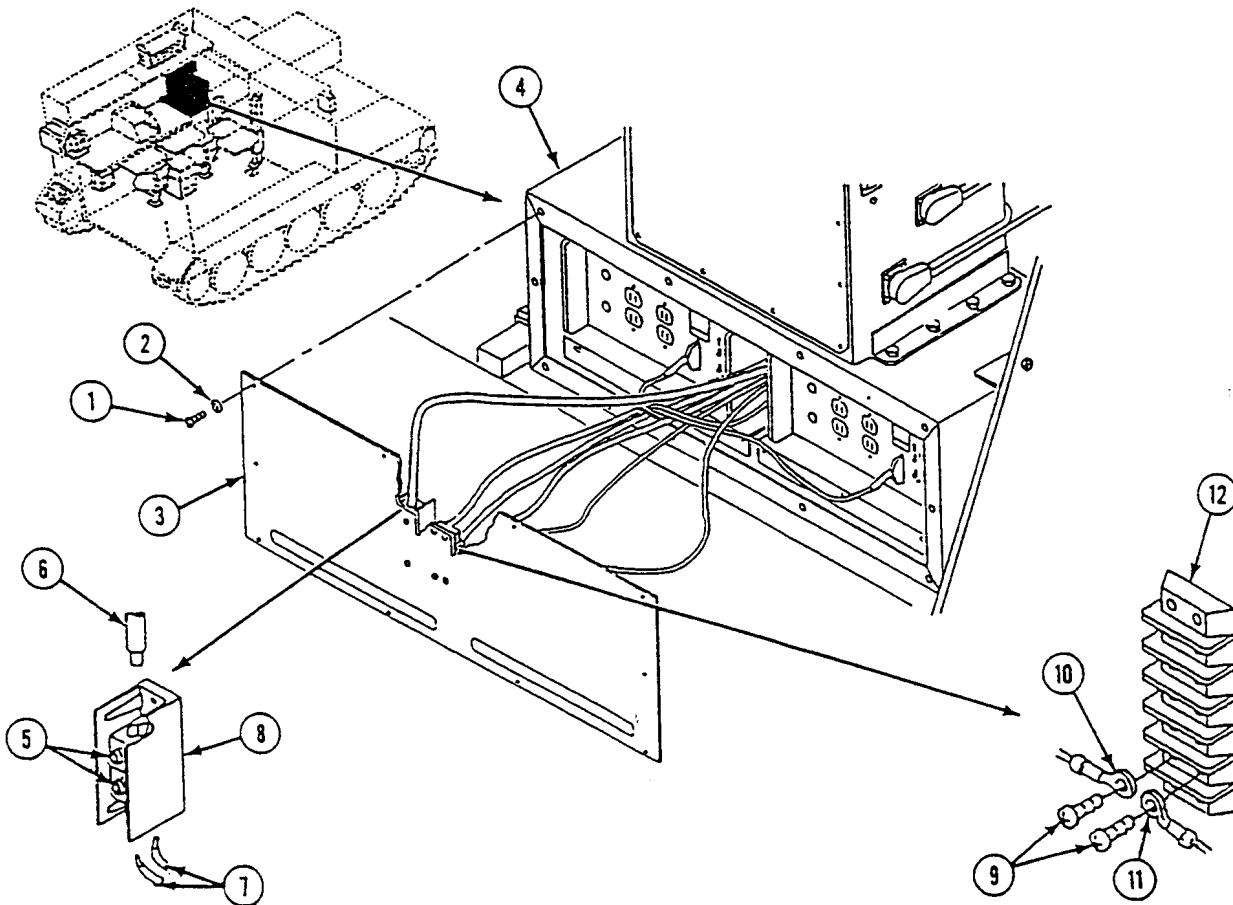
REMOVAL

1. Remove ten screws (1), lockwashers (2), and cover (3) from inverter housing (4). Discard lockwashers.

NOTE

Tag all leads before disconnecting.

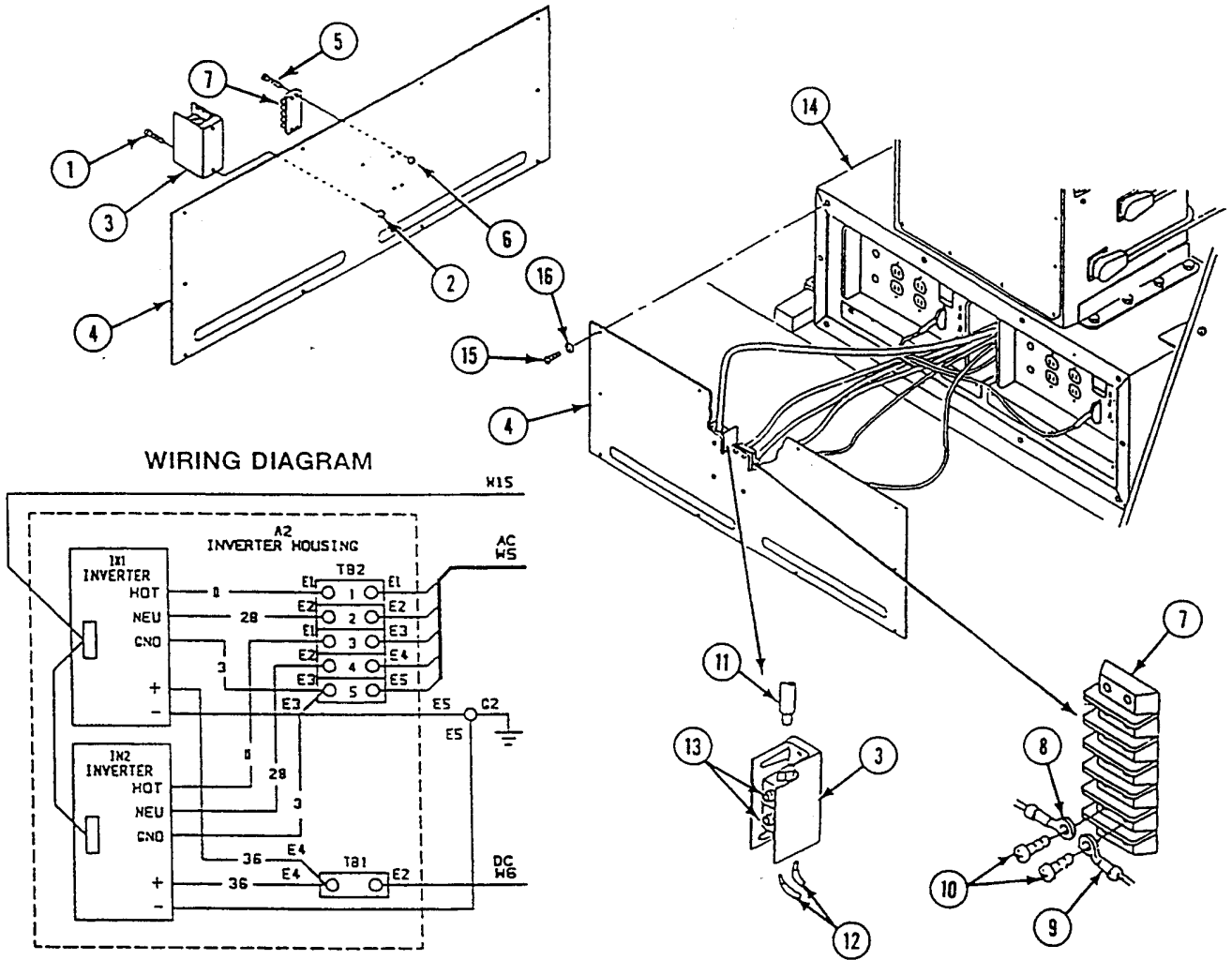
2. Loosen two set screws (5) and remove cable W6 lead E2 (6) and two inverter leads E4 (7) from terminal block TB1 (8).
3. Remove ten screws (9), cable W5 leads E1 through E5 (10), and six inverter leads (11) from terminal block TB2 (12).



REPLACE INVERTER HOUSING A2 TERMINAL BLOCKS TB1 AND TB2 (M1068 ONLY) — Continued

0728 00

4. Remove two screws (1), locknuts (2), and terminal block TB1 (3) from cover (4). Discard locknuts.
5. Remove four screws (5), locknuts (6), and terminal block TB2 (7) from cover (4). Discard locknuts.

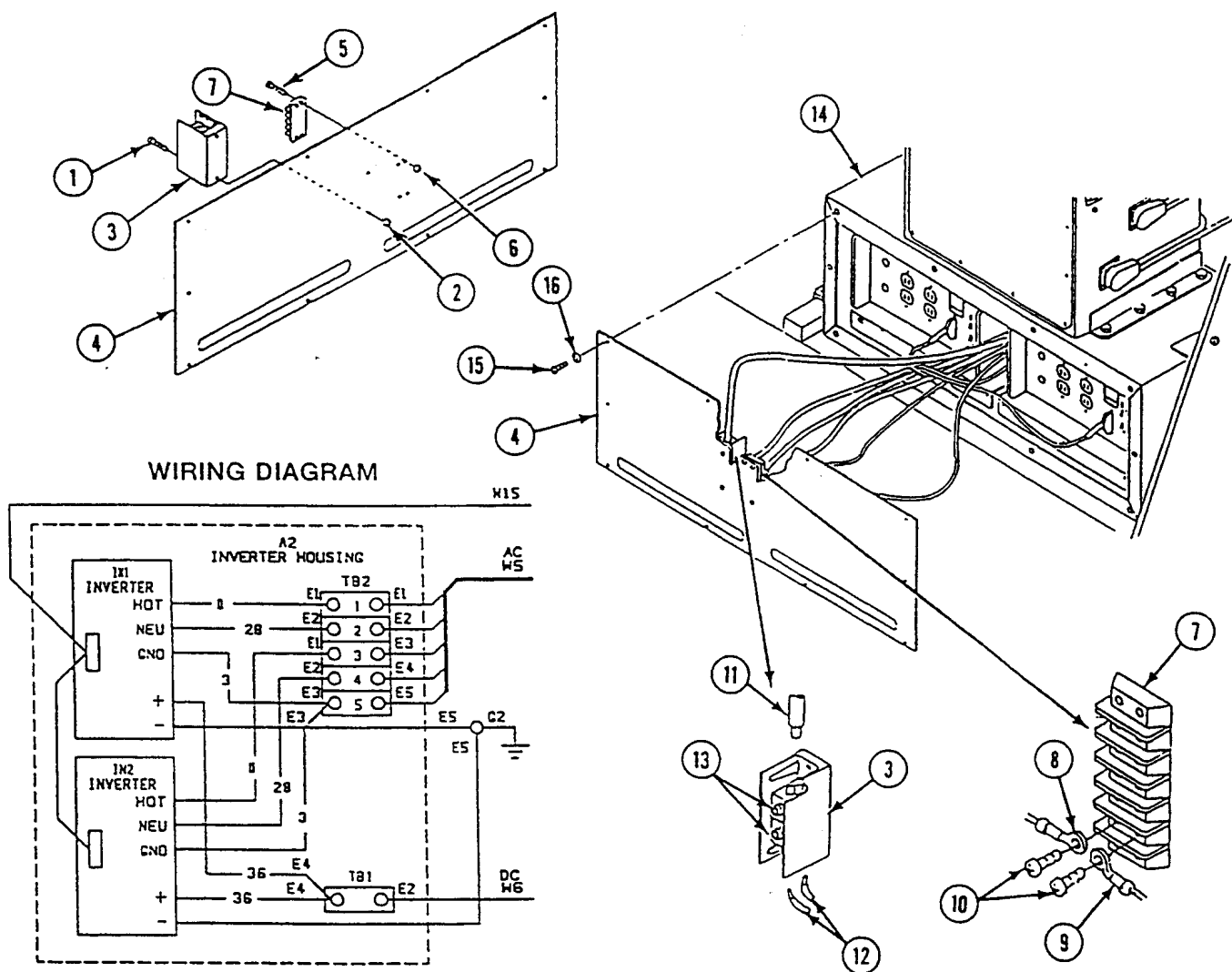


REPLACE INVERTER HOUSING A2 TERMINAL BLOCKS TB1 AND TB2 (M1068 ONLY) — Continued

0728 00

INSTALLATION

1. Install terminal block TB2 (7) on cover (4). Secure with four screws (5) and new locknuts (6).
2. Install terminal block TB1 (3) on cover (4). Secure with two screws (1) and new locknuts (2).
3. Connect cable W5 leads E1 through E5 (8) and six inverter leads (9) to terminal block TB2 (7). Use wiring diagram. Secure with ten screws (10).
4. Insert cable W6 lead E2 (11) and two inverter leads E4 (12) into terminal block TB1 (3). Use wiring diagram. Secure with two set screws (13).
5. Install cover (4) on inverter housing (14). Secure with ten screws (15) and new lockwashers (16).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE POWER CONTROL ENCLOSURE AC AND DC METERS AND LIGHT INDICATORS (M1068 ONLY)

0729 00

THIS WORK PACKAGE COVERS:

Removal (page 0729 00-1).
 Installation (page 0729 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Primer (WP 0782 00, Item 54)

Sealing compound (WP 0782 00, Item 67)

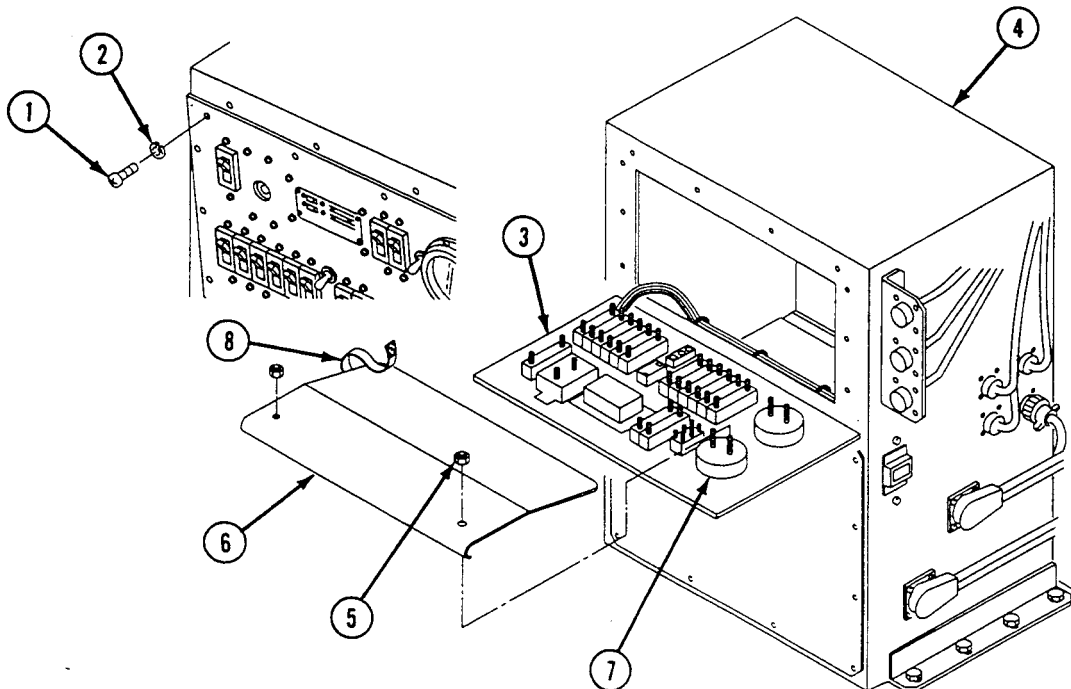
Locknut (6)

Lockwasher (10)

Lockwasher (2)

REMOVAL

1. Remove ten screws (1), lockwashers (2), and lower faceplate assembly (3) from power enclosure (4). Discard lockwashers.
2. Remove nut (5) and safety cover (6) from terminal 2 on meter M1 (7). Unwrap velcro strap (8) from around local wiring.



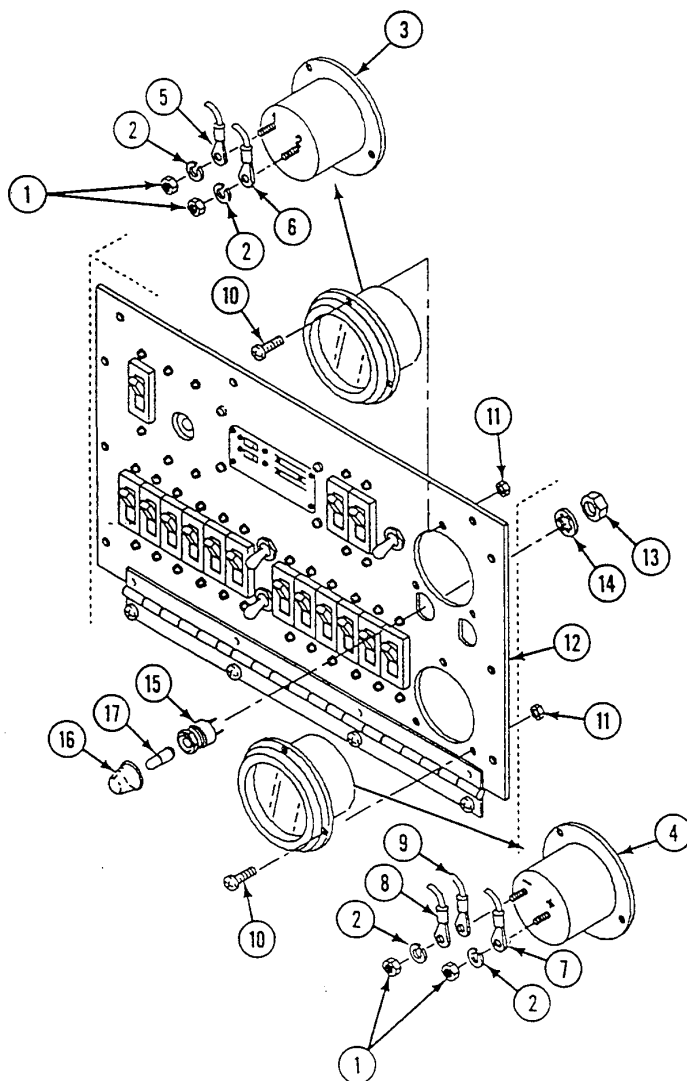
REPLACE POWER CONTROL ENCLOSURE AC AND DC METERS AND LIGHT INDICATORS (M1068 ONLY) — Continued

0729 00

NOTE

Tag all leads before removing them.

3. Remove two nuts (1) and washers (2) from meter M1 (3).
4. Remove two nuts (1) and washers (2) from meter M2 (4).
5. Remove circuits 29A lead (5) and 30A lead (6) from meter M1 (3).
6. Remove circuits 31F lead (7), 32F lead (8), and 28C lead (9) from meter M2 (4).
7. Remove three screws (10), locknuts (11), and meter M1 (3) from faceplate (12). Discard locknuts.
8. Remove three screws (10), locknuts (11), and meter M2 (4) from faceplate (12). Discard locknuts.
9. Remove two jamnuts (13) and lockwashers (14) from two indicator lights (15). Remove lights from faceplate (12). Discard lockwashers.
10. If necessary, remove lens (16) and bulb (17) from indicator light (15).

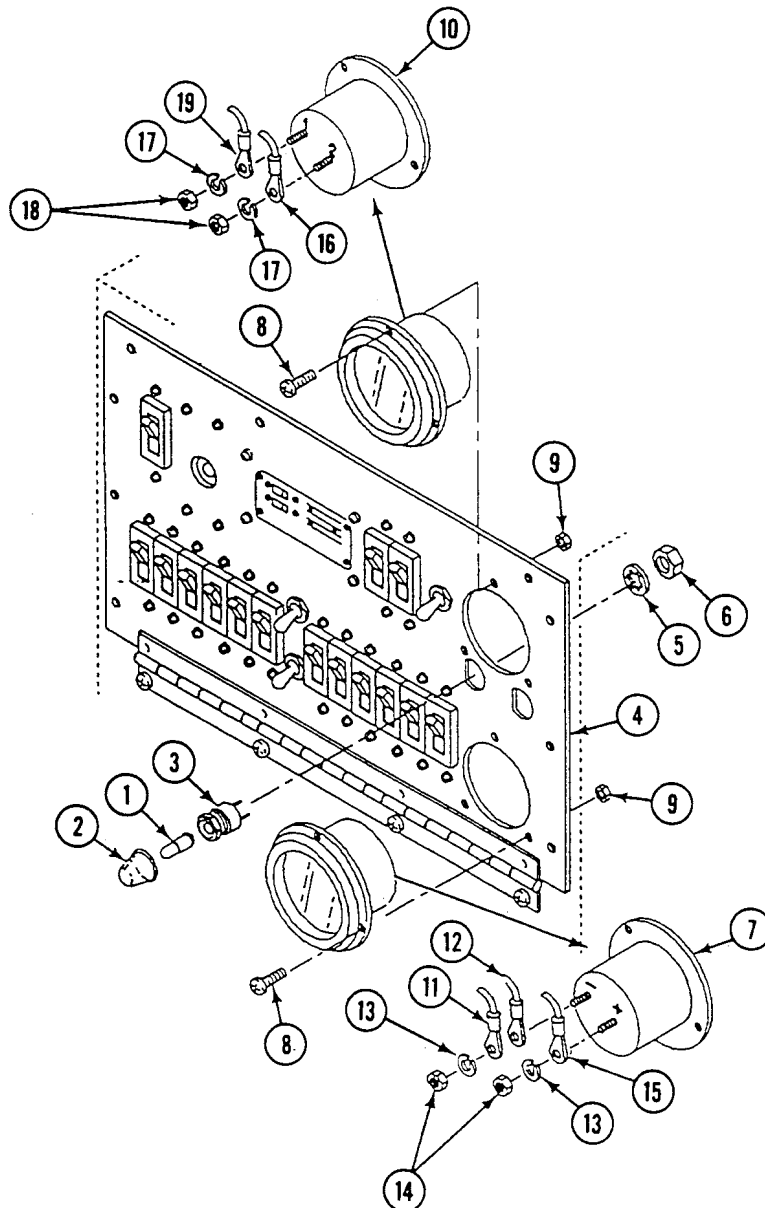


REPLACE POWER CONTROL ENCLOSURE AC AND DC METERS AND LIGHT INDICATORS (M1068 ONLY) — Continued

0729 00

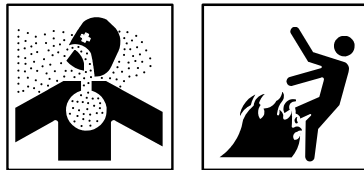
INSTALLATION

1. If bulb (1) or lens (2) was removed, install on indicator light (3).
2. Install two indicator lights (3) on faceplate (4). Secure with two new lockwashers (5) and jamnuts (6).
3. Install meter M2 (7) on faceplate (4). Secure with three screws (8) and new locknuts (9).
4. Install meter M1 (10) on faceplate (4). Secure with three screws (8) and new locknuts (9).
5. Install circuits 32F (11) and 28C leads (12), washer (13), and nut (14) on negative (-) terminal of meter M2 (7).
6. Install circuit 31F lead (15), washer (13), and nut (14) on positive (+) terminal of meter M2 (7).
7. Install circuit 30A lead (16), washer (17), and nut (18) on terminal 1 of meter M1 (10).
8. Install circuit 29A lead (19), washer (17), and nut (18) on terminal 2 of meter M1 (10).



REPLACE POWER CONTROL ENCLOSURE AC AND DC METERS AND LIGHT INDICATORS (M1068 ONLY) — Continued

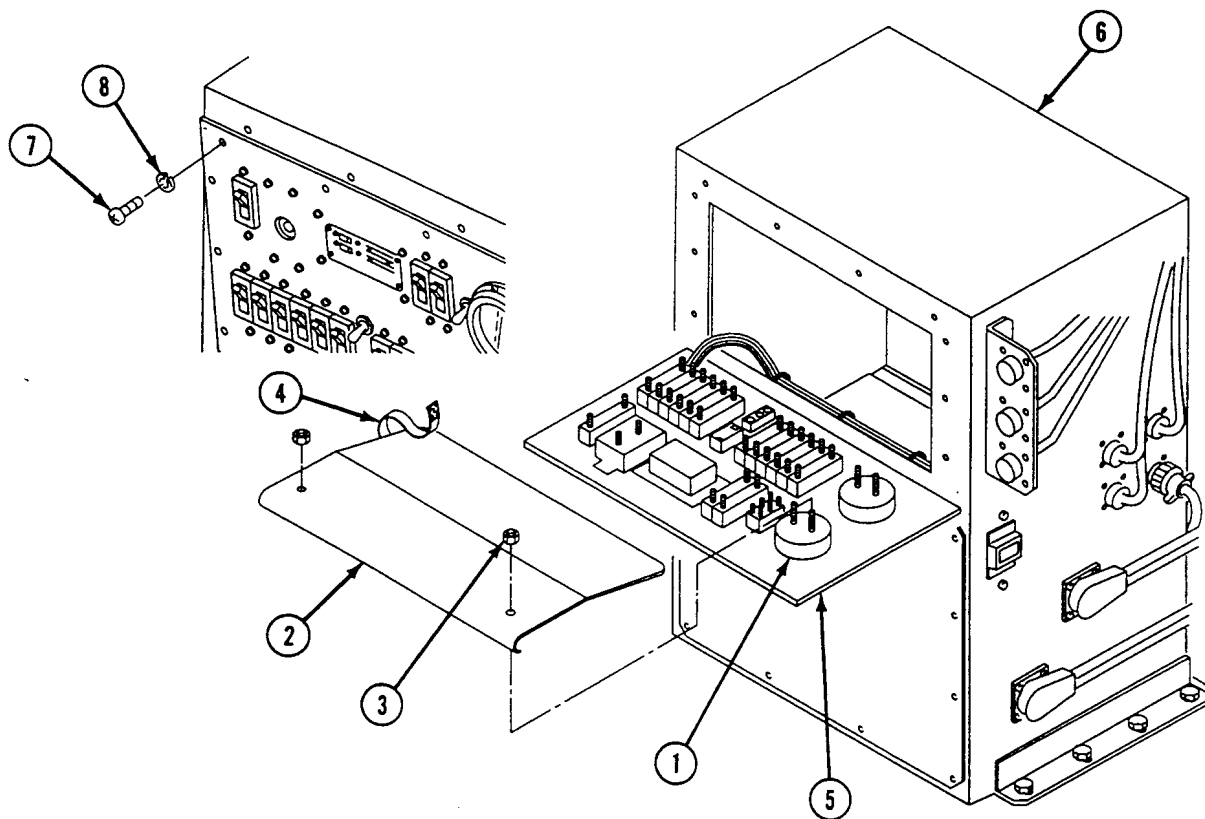
0729 00

WARNING


Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

9. Apply primer and sealing compound to threads of terminal 2 of meter M1 (1). Install safety cover (2) and nut (3) on terminal 2 of meter M1. Wrap velcro strap (4) around local wiring.
10. Install faceplate (5) on power enclosure (6). Secure with ten screws (7) and new lockwashers (8).


FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET (M1068 ONLY)

0730 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0730 00-1).
 Assembly (page 0730 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

References

Wiring Diagram (FO-7)

Materials/Parts

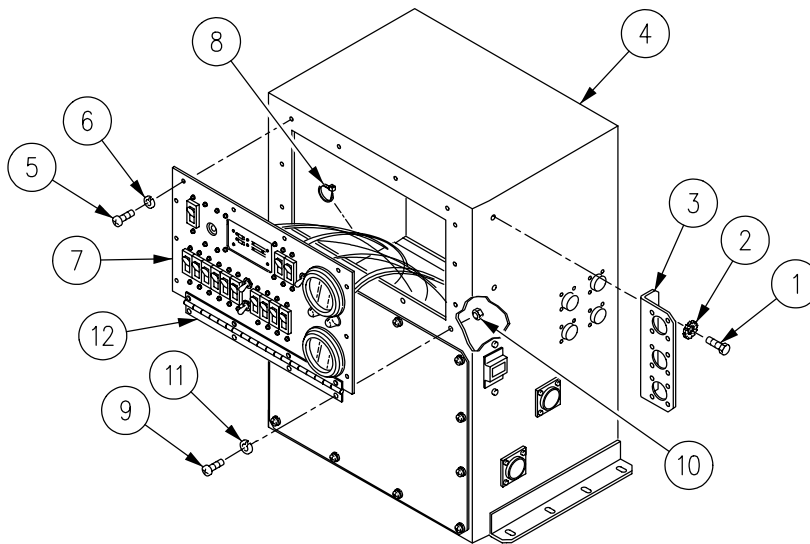
Primer (WP 0782 00, Item 54)
 Sealing compound (WP 0782 00, Item 67)
 Locknut (4)
 Locknut (4)
 Lockwasher (4)
 Lockwasher (6)
 Lockwasher (10)
 Tie strap (AR)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected
 (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

DISASSEMBLY

1. Remove two screws (1), lockwashers (2), and bracket (3) from enclosure (4). Discard lockwashers.
2. Remove ten screws (5), lockwashers (6), and faceplate assembly (7) from enclosure (4). Lower faceplate (7). Discard lockwashers.
3. Remove tie straps (8) from leads as required. Discard tie straps.
4. Remove four screws (9), locknuts (10), and washers (11) from faceplate hinge (12). Discard locknuts.



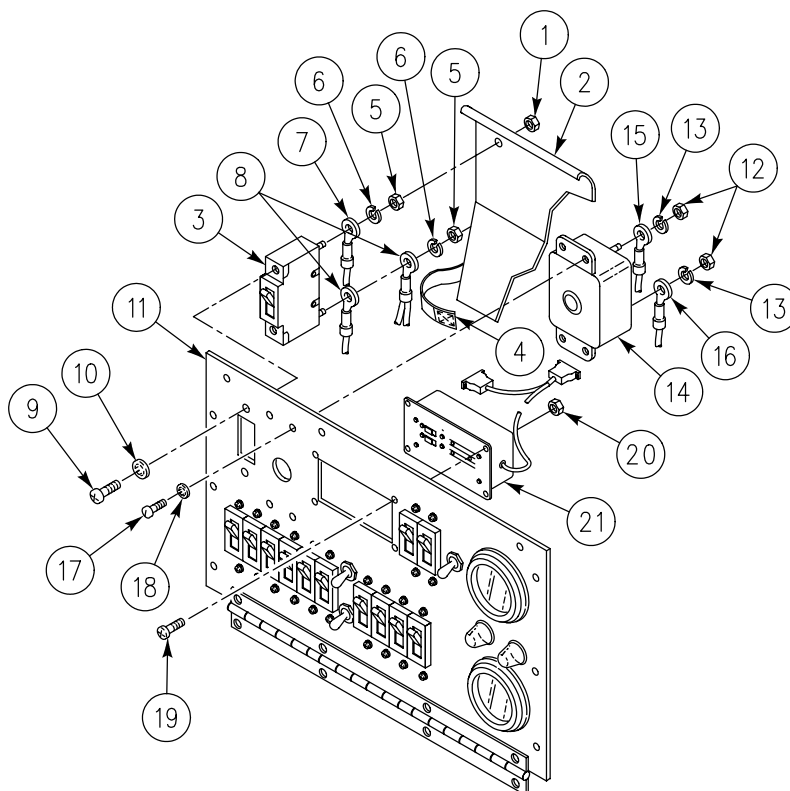
**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

NOTE

Tag all leads before removal. There are 12 circuit breakers. All circuit breakers are removed in the same way. The art work shows the removal of only one circuit breaker. Use wiring diagram (see FO-7).

5. Remove nut (1) and safety cover (2) from terminal 1 of circuit breaker CB1 (3). Unwrap velcro strap (4) from around local wiring.
6. Remove two nuts (5) and lockwashers (6) from circuit breaker CB1 (3).
7. Remove circuit 7A lead (7) from terminal 1 of circuit breaker CB1 (3).
8. Remove circuits 9A, 9E, and 9D leads (8) from terminal 2 of circuit breaker CB1 (3).
9. Remove two screws (9), lockwashers (10), and circuit breaker CB1 (3) from faceplate (11). Discard lockwashers.
10. Remove two nuts (12) and lockwashers (13) from circuit breaker CB2 (14).
11. Remove circuit 31B lead (15) from terminal 1 of circuit breaker CB2 (14).
12. Remove circuit 36C lead (16) from terminal 2 of circuit breaker CB2 (14).
13. Remove four screws (17), lockwashers (18), and circuit breaker CB2 (14) from faceplate (11). Discard lockwashers.
14. Remove four screws (19), locknuts (20), and cascade remote harness RP1 (21) from faceplate (11) and two inverters. Discard locknuts.



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

NOTE

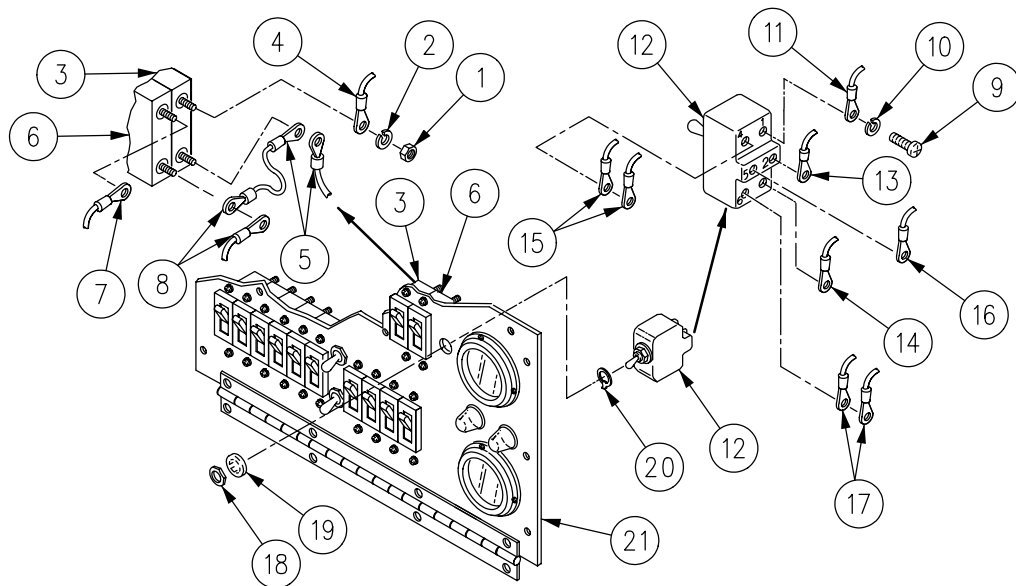
All leads for CB3 and CB4 are secured with a washer and a nut. Art work shows the removal of only one washer and one nut.

15. Remove two nuts (1) and lockwashers (2) from circuit breaker CB3 (3).
16. Remove circuit 11A lead (4) from terminal 1 of circuit breaker CB3 (3).
17. Remove circuits 13A and 13B leads (5) from terminal 2 of circuit breaker CB3 (3).
18. Remove two nuts (1) and lockwashers (2) from circuit breaker CB4 (6).
19. Remove circuit 12A lead (7) from terminal 1 of circuit breaker CB4 (6).
20. Remove circuits 13B and 13C leads (8) from CB4 (6).

NOTE

All leads are secured to S2 with a screw and a washer. The art work shows the removal of only one washer and one screw.

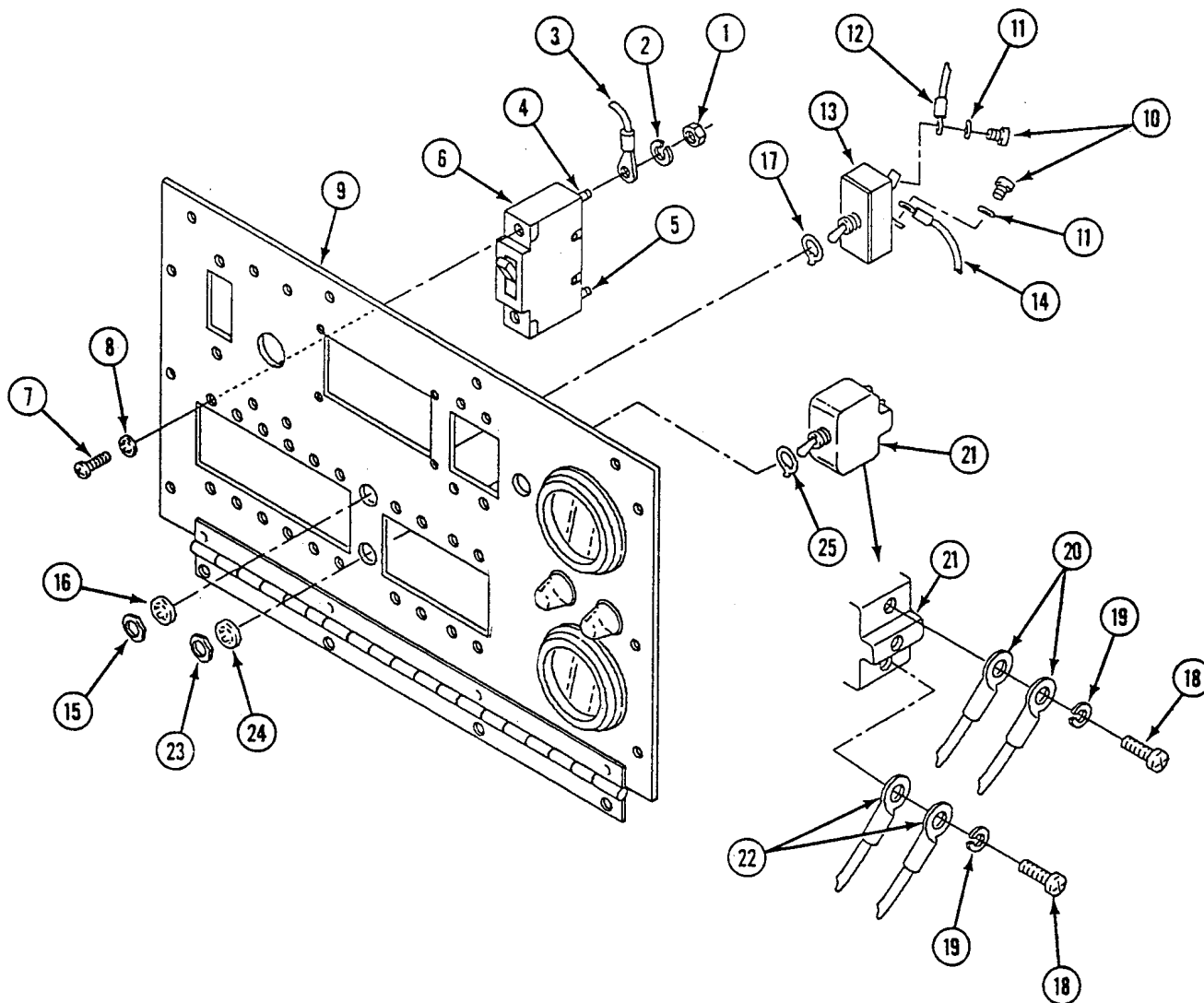
21. Remove screw (9), lockwasher (10), and circuit 9E lead (11) from terminal 1 of toggle switch S2 (12).
22. Remove screw (9), lockwasher (10), and circuit 30A lead (13) from terminal 2 of toggle switch S2 (12).
23. Remove screw (9), lockwasher (10), and circuit 13C lead (14) from terminal 3 of toggle switch S2 (12).
24. Remove screw (9), lockwasher (10), and circuit 8D and 8F leads (15) from terminal 4 of toggle switch S2 (12).
25. Remove screw (9), lockwasher (10), and circuit 29A lead (16) from terminal 5 of toggle switch S2 (12).
26. Remove screw (9), lockwasher (10), and circuit 28C and 28F leads (17) from terminal 6 of toggle switch S2 (12).
27. Remove nut (18), lockwasher (19), locking ring (20), and toggle switch S2 (12) from faceplate (21).



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

28. Remove two nuts (1) and lockwashers (2) and circuit lead(s) (3) from terminal 1 (4) and terminal 2 (5) of circuit breaker (6).
29. Remove circuit breaker (6) by removing two screws (7) and lockwashers (8) from faceplate (9). Discard lockwashers.
30. Remove screw (10), lockwasher (11), and circuit 19A lead (12) from terminal 2 of circuit breaker CB17 (13).
31. Remove screw (10), lockwasher (11), and circuit 17C lead (14) from terminal 1 of circuit breaker CB17 (13).
32. Remove nut (15), lockwasher (16), locking ring (17), and circuit breaker CB17 (13) from faceplate (9).
33. Remove screw (18), lockwasher (19), and circuits 19A and 19B leads (20) from terminal 2 of toggle switch S1 (21).
34. Remove screw (18), lockwasher (19), and circuits 20A and 20B leads (22) from terminal 3 of toggle switch S1 (21).
35. Remove nut (23), lockwasher (24), locking ring (25), and toggle switch S1 (21) from faceplate (9).



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

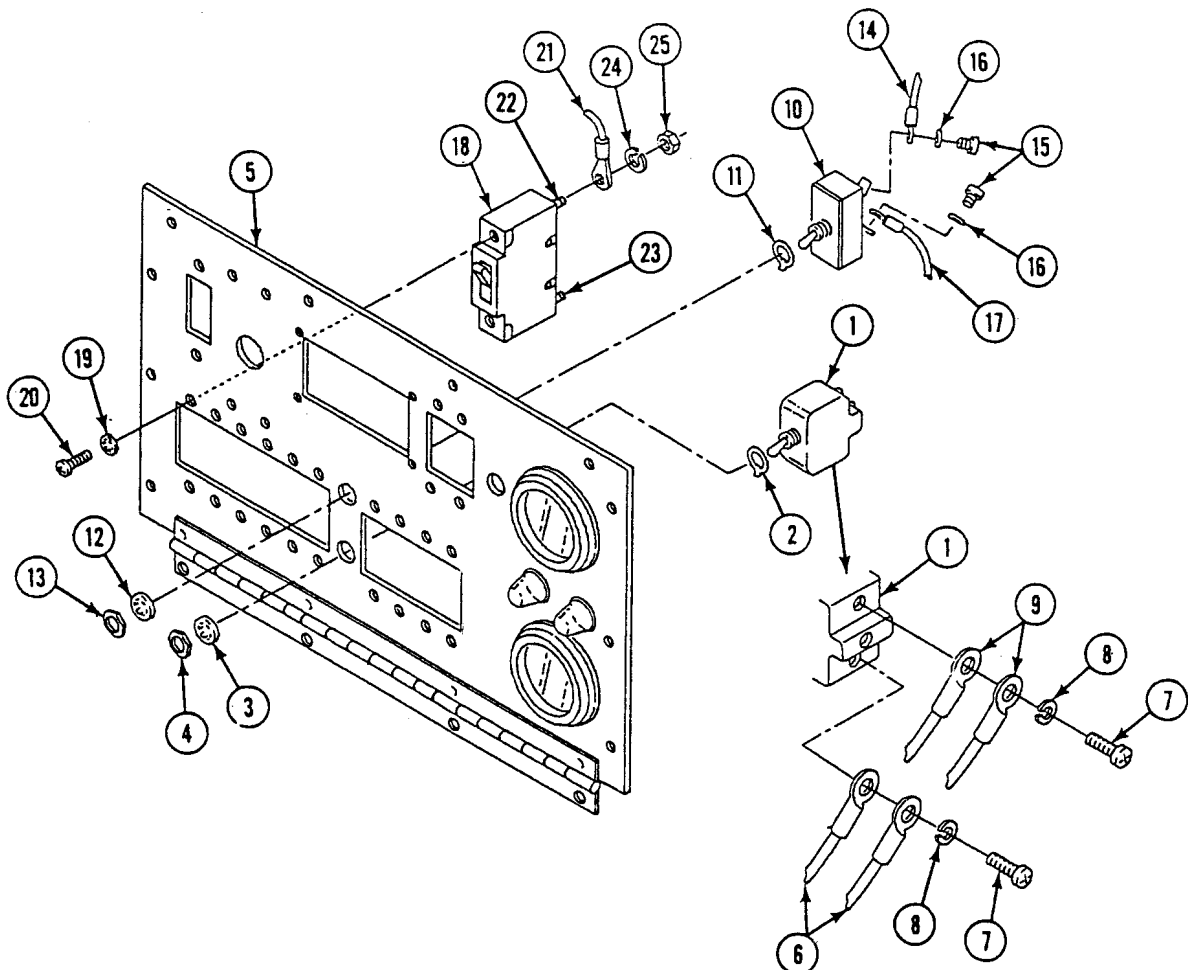
ASSEMBLY

1. Install toggle switch S1 (1), locking ring (2), lockwasher (3), and nut (4) on faceplate (5).
2. Install circuits 20A and 20B leads (6), screw (7), and lockwasher (8) on terminal 3 of toggle switch S1 (1).
3. Install circuits 19A and 19B leads (9), screw (7), and lockwasher (8) on terminal 2 of toggle switch S1 (1).

NOTE

There are 12 circuit breakers. All circuit breakers are installed in the same way. Art work shows the installation of one circuit breaker. Use wiring diagram (see FO-7).

4. Install circuit breaker CB17 (10), locking ring (11), lockwasher (12), and nut (13) on faceplate (5).
5. Install circuit 19A lead (14), screw (15), and lockwasher (16) on terminal 2 of circuit breaker CB17 (10).
6. Install circuit 17C lead (17), screw (15), and lockwasher (16) on terminal 1 of circuit breaker CB17 (10).
7. Install circuit breaker (18) on faceplate (5). Secure with two new lockwashers (19) and screws (20).
8. Install circuit lead(s) (21) to terminal 1 (22) and terminal 2 (23) with two lockwashers (24) and nuts (25).



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

NOTE

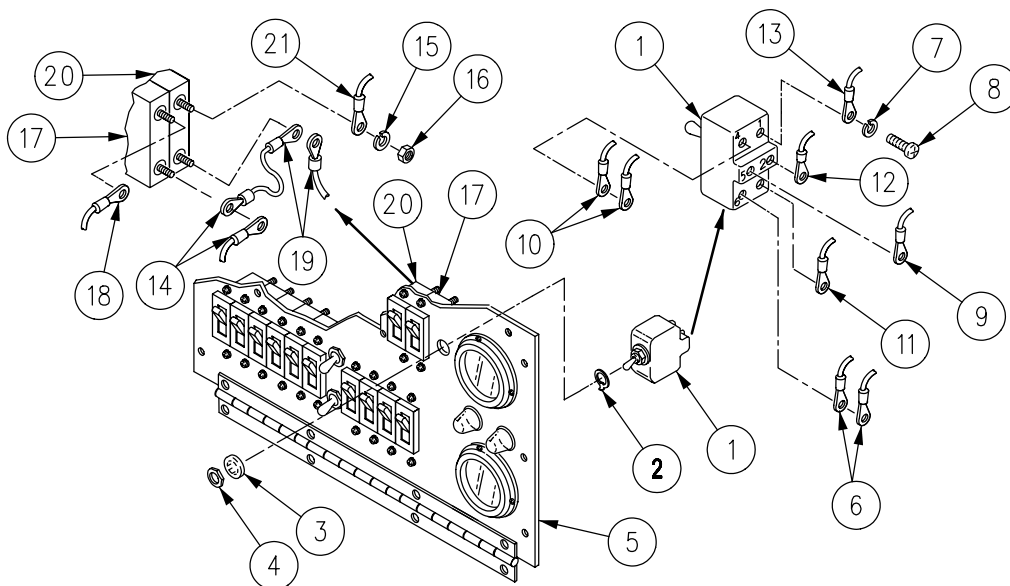
All S2 leads are secured with a washer and a screw. The art work shows the installation of only one washer and one screw.

9. Install toggle switch S2 (1), locking ring (2), lockwasher (3), and nut (4) on faceplate (5).
10. Install circuits 28C and 28F leads (6), lockwasher (7), and screw (8) on terminal 6 of toggle switch S2 (1).
11. Install circuit 29A lead (9), lockwasher (7), and screw (8) on terminal 5 of toggle switch S2 (1).
12. Install circuits 8D and 8F leads (10), lockwasher (7), and screw (8) on terminal 4 of toggle switch S2 (1).
13. Install circuit 13C lead (11), lockwasher (7), and screw (8) on terminal 3 of toggle switch S2 (1).
14. Install circuit 30A lead (12), lockwasher (7), and screw (8) on terminal 2 of toggle switch S2 (1).
15. Install circuit 9E lead (13), lockwasher (7), and screw (8) on terminal 1 of toggle switch S2 (1).

NOTE

All circuit leads for CB3 and CB4 are secured with a washer and a nut. The art work shows the installation of only one washer and one nut.

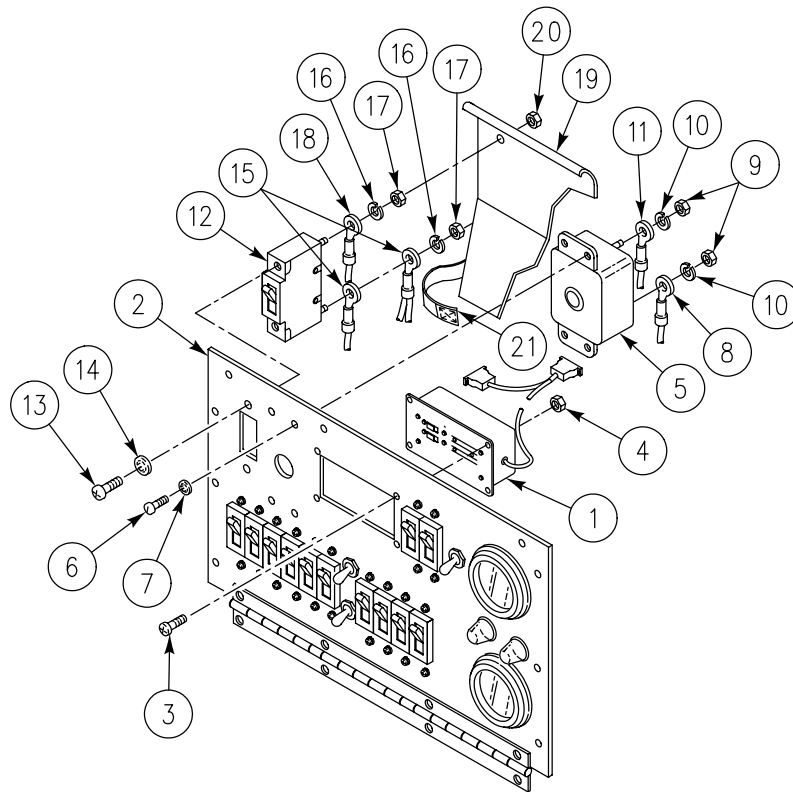
16. Install circuits 13B and 13C leads (14), lockwasher (15), and nut (16) on terminal 2 of circuit breaker CB4 (17).
17. Install circuit 12A lead (18), lockwasher (15), and nut (16) on terminal 1 of circuit breaker CB4 (17).
18. Install circuits 13B and 13A leads (19), lockwasher (15), and nut (16) on terminal 2 of circuit breaker CB3 (20).
19. Install circuit 11A lead (21), lockwasher (15), and nut (16) on terminal 1 of circuit breaker CB3 (20).



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

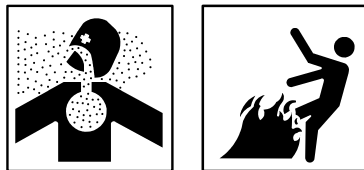
20. Install cascade remote harness RPI (1) on faceplate (2) and two inverters. Secure with four screws (3) and new locknuts (4).
21. Install circuit breaker CB2 (5), four screws (6), and new lockwashers (7) on faceplate (2).
22. Install circuit 36C lead (8), nut (9), lockwasher (10) on terminal 2 of circuit breaker CB2 (5).
23. Install circuit 31B lead (11), lockwasher (10), and nut (9) on terminal 1 of circuit breaker CB2 (5).
24. Install circuit breaker CB1 (12), two screws (13), and new lockwashers (14) on faceplate (2).
25. Install circuits 9A, 9E, and 9D leads (15), lockwasher (16), and nut (17) on terminal 2 of circuit breaker CB1 (12).
26. Install circuit 7A lead (18), lockwasher (16), and nut (17) on terminal 1 of circuit breaker CB1 (12).



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

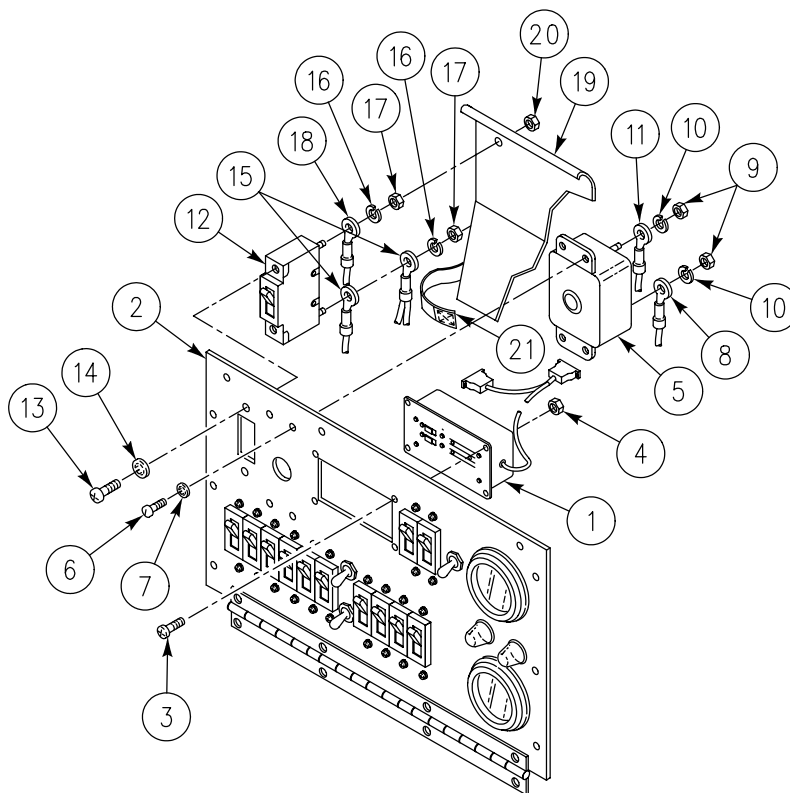
WARNING



Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

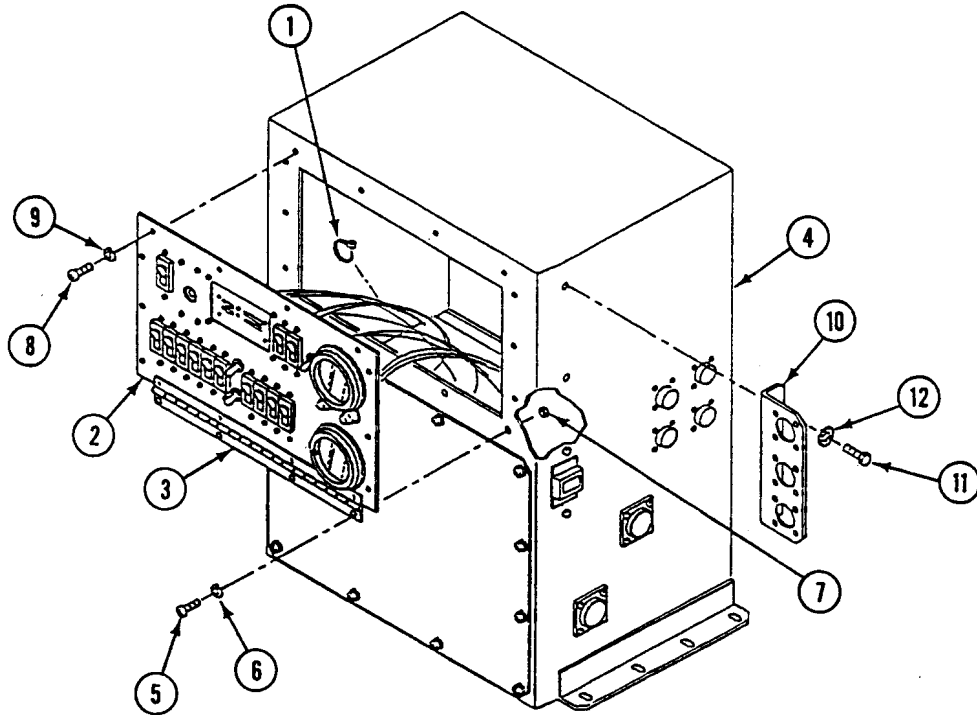
27. Apply primer and sealing compound to threads of terminal 1 of circuit breaker CB1 (12).
28. Install safety cover (19) and nut (20) on terminal 2 of circuit breaker CB1 (12). Wrap velcro strap (21) around local wiring.



**REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET
(M1068 ONLY) — Continued**

0730 00

29. Install new tie straps (1) on leads as required.
30. Lift faceplate assembly (2) into place. Secure faceplate hinge (3) to enclosure (4) with four screws (5), washers (6), and new locknuts (7).
31. Close faceplate assembly (2). Secure to enclosure (4) with ten screws (8) and new lockwashers (9).
32. Install bracket (10) on enclosure (4). Secure with two screws (11) and new lockwashers (12).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE POWER CONTROL ENCLOSURE ASSEMBLY A1 (M1068 ONLY)

0731 00

THIS WORK PACKAGE COVERS:

Removal (page 0731 00-1).
 Installation (page 0731 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Lockwasher (2)

Personnel Required

Power-Generation Equipment Repairer 52D10

Helper (H)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Roadside data panel A13 removed (WP 0727 00)

Cascade remote harness W15 removed (WP 0745 00)

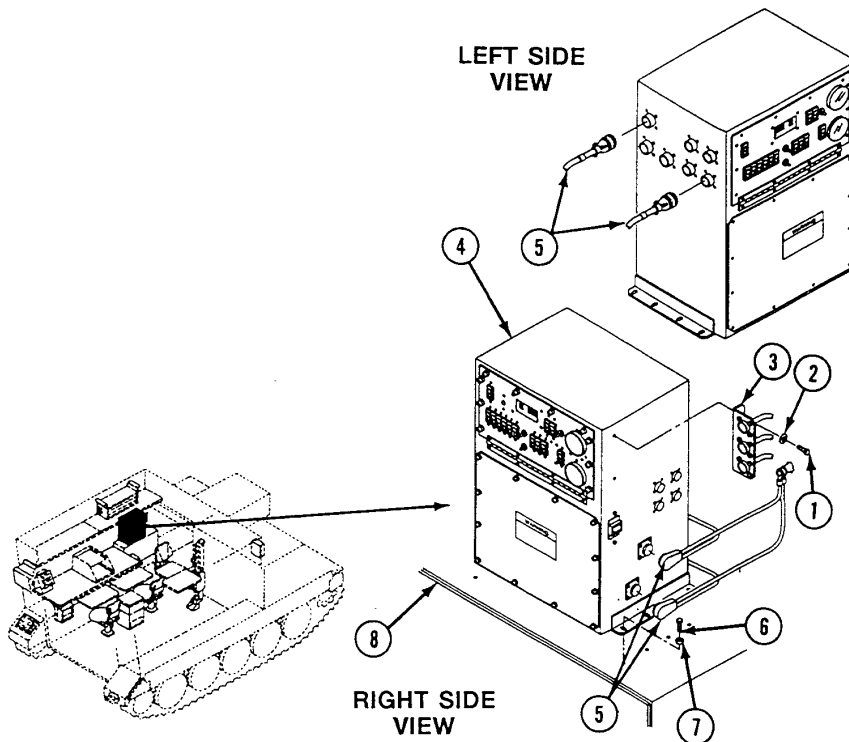
REMOVAL

1. Remove two screws (1), lockwashers (2), and bracket (3) from power control enclosure (4). Discard lockwashers.

NOTE

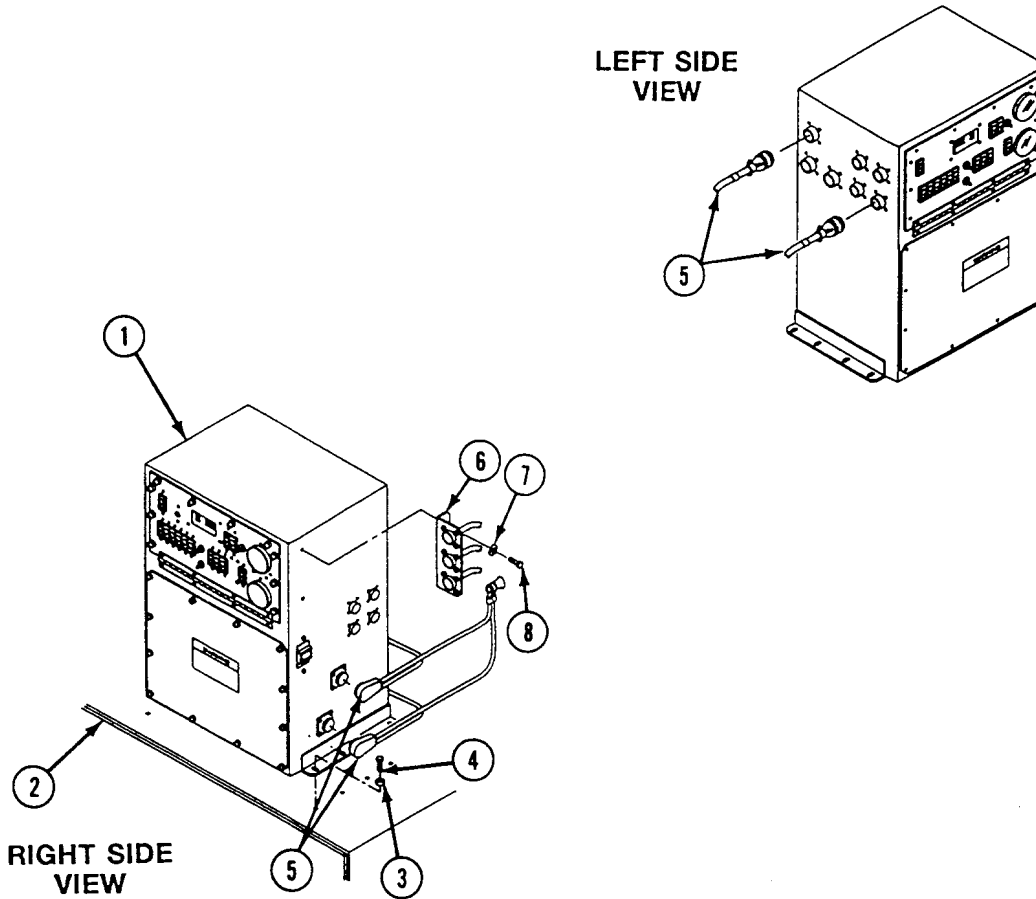
Tag all cables/connectors before removal for proper installation later.

2. Disconnect all cables/connectors (5) from left and right sides of power control enclosure (4).
3. Remove eight screws (6), washers (7), and power control enclosure (4) from inverter housing (8). Have helper assist.



INSTALLATION

1. Install power control enclosure (1) on inverter housing (2). Secure with eight washers (3) and screws (4). Have helper assist.
2. Connect all cables/connectors (5) to left/right sides of power control enclosure (1).
3. Install bracket (6) on power control enclosure (1). Secure with two new lockwashers (7) and screws (8).



FOLLOW-THROUGH STEPS

1. Install cascade remote harness W15 (WP 0745 00).
2. Install roadside data panel A13 (WP 0727 00).
3. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE POWER CONTROL ENCLOSURE CIRCUIT 44A
LEAD (M1068 ONLY)**

0732 00

THIS WORK PACKAGE COVERS:

Removal (page 0732 00-1).
Installation (page 0732 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

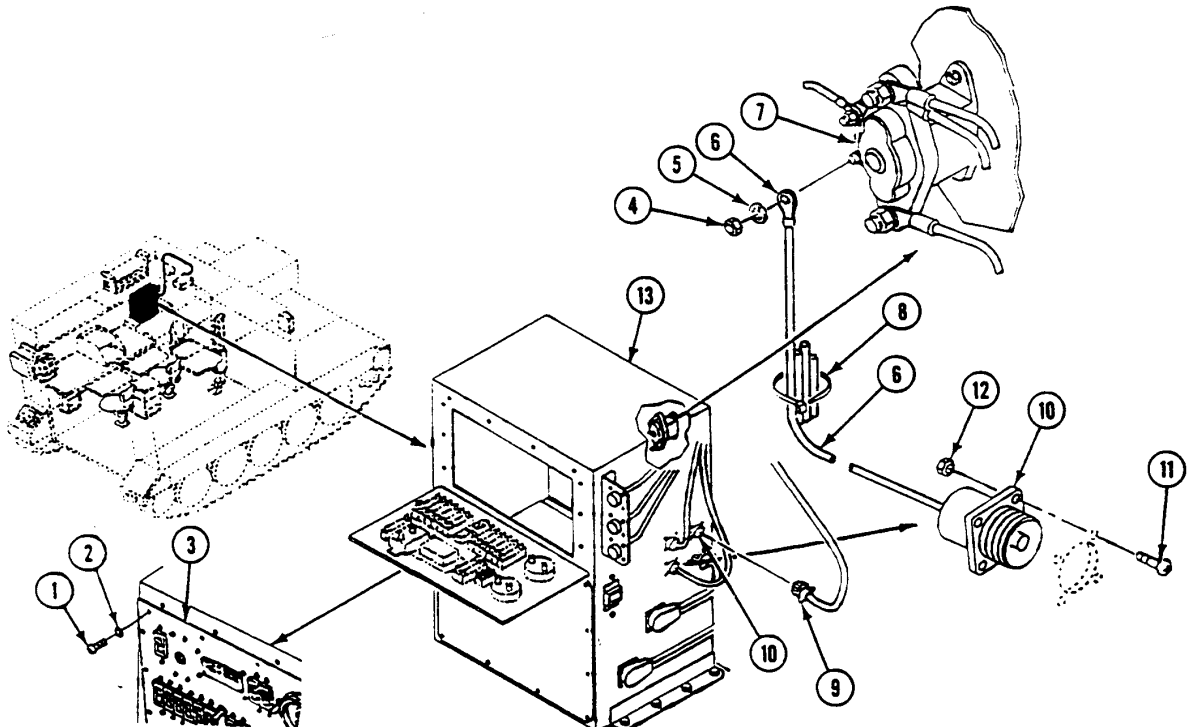
Locknut (4)

Lockwasher (10)

Tie strap (AR)

REMOVAL

1. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
2. Remove nut (4), lockwasher (5), and lead 44A (6) from terminal X1 of relay K6 (7). Do not discard lockwasher.
3. Remove tie straps (8) holding lead 44A (6) to other leads. Discard tie straps.
4. Disconnect cable plug W38 P7 (9) from power control enclosure jack J28 (10).
5. Remove four screws (11), locknuts (12), and connector J28 (10) with lead 44A (6) from power control enclosure (13). Discard locknuts.

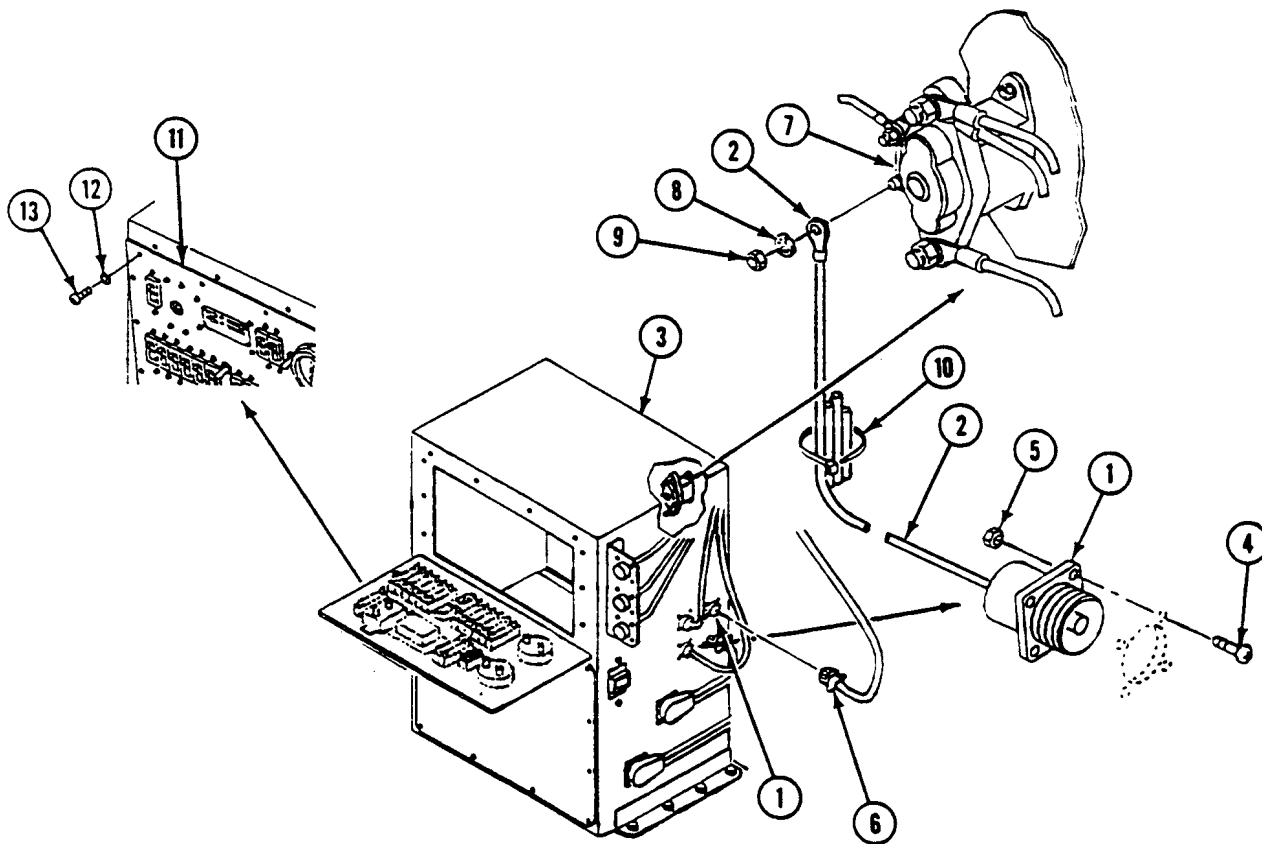


REPLACE POWER CONTROL ENCLOSURE CIRCUIT 44A LEAD (M1068 ONLY) — Continued

0732 00

INSTALLATION

1. Install connector J28 (1) with lead 44A (2) in power control enclosure (3). Secure connector to right panel with four screws (4) and new locknuts (5).
2. Connect cable plug W38 P7 (6) to power Control enclosure jack J28 (1).
3. Install lead 44A (2) on terminal X1 of relay K6 (7) and secure with retained lockwasher (8) and nut (9).
4. Secure lead 44A (2) to other leads with new tie straps (10) as required.
5. Raise faceplate (11) and secure to power control enclosure (3) with ten new lockwashers (12) and screws (13).


FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE/REPAIR POWER SUPPLY STORAGE BOX
ASSEMBLY (M1068 ONLY)**

0733 00

THIS WORK PACKAGE COVERS:

- Removal (page 0733 00-1).
- Disassembly (page 0733 00-2).
- Assembly (page 0733 00-3).
- Installation (page 0733 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- UPS power supply removed (TM 11-7010-256-12&P)
- Cables W42, W43, and W252 disconnected (WP 0753 00)
- Stowage items removed from stowage box

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

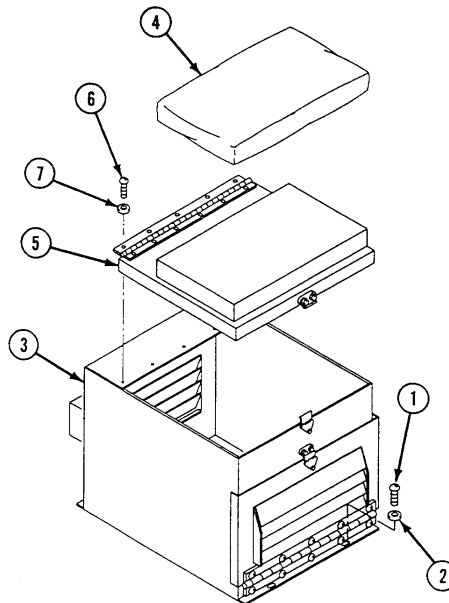
- Locknut
- Lockwasher (5)

Personnel Required

Unit Mechanic

REMOVAL

1. Remove four screws (1), washers (2), and storage box (3) from carrier.

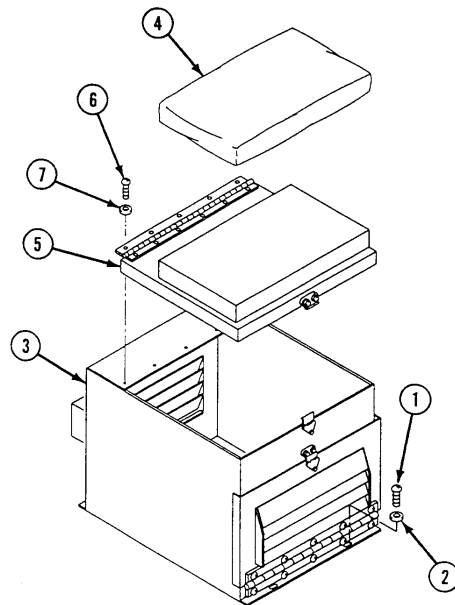


**REPLACE/REPAIR POWER SUPPLY STORAGE BOX ASSEMBLY
(M1068 ONLY) — Continued**

0733 00**DISASSEMBLY****NOTE**

Remove seat cushion pad from seat cushion cover only if necessary.

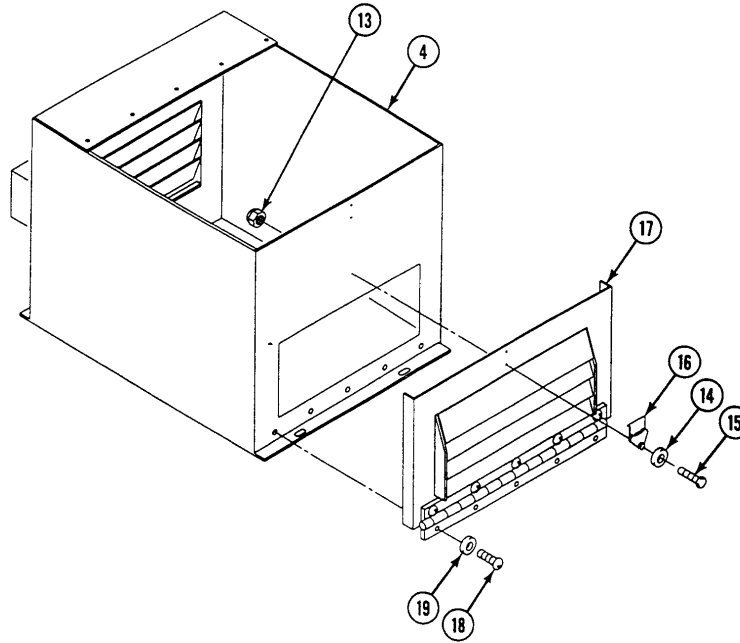
1. Remove seat cushion (4) from lid (5).
2. Remove five screws (6), lockwashers (7), and lid (5) from box (3). Discard lockwashers.



**REPLACE/REPAIR POWER SUPPLY STORAGE BOX ASSEMBLY
(M1068 ONLY) — Continued**

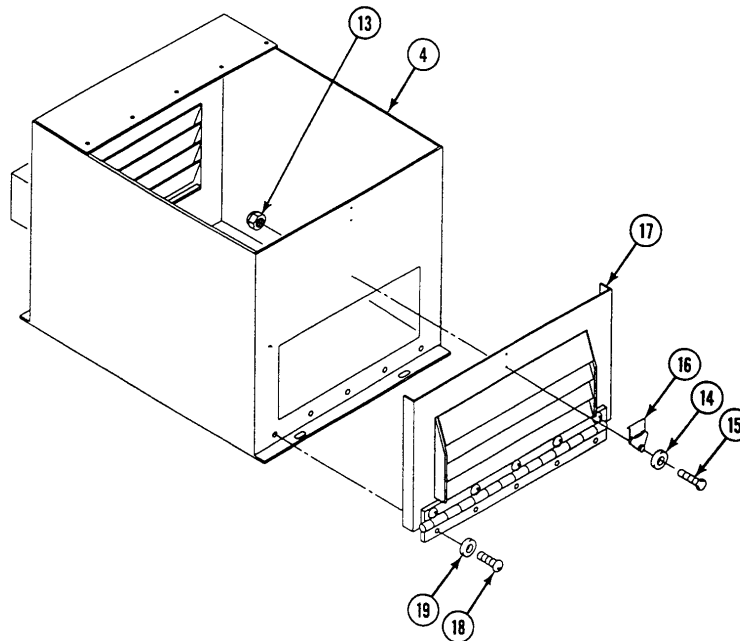
0733 00

3. Remove locknut (13), washer (14), screw (15), and catch (16) from cover (17). Discard locknut.
4. Remove four screws (18), washers (19), and cover (17) from box (4).



ASSEMBLY

1. Install cover (17) on box (4). Secure with four washers (19) and screws (18).
2. Install catch (16) on cover (17). Secure with screw (15), washer (14), and new locknut (13).



**REPLACE/REPAIR POWER SUPPLY STORAGE BOX ASSEMBLY
(M1068 ONLY) — Continued**

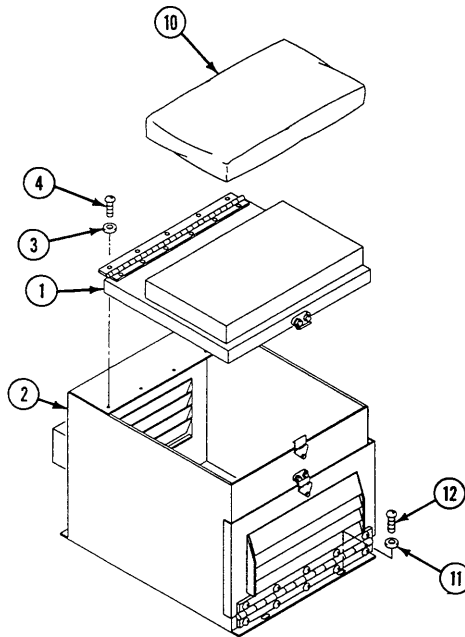
0733 00

3. Install lid (1) on box (2). Secure with five new lockwashers (3) and screws (4).

NOTE

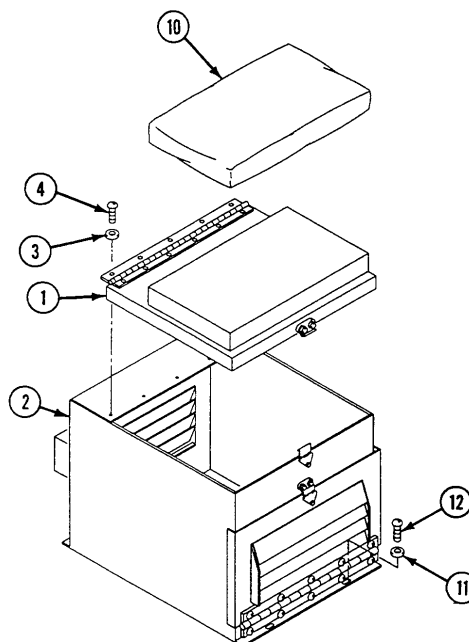
If removed, install seat cushion pad in seat cushion cover.

4. Install seat cushion (10) on lid (1).



INSTALLATION

1. Install storage box (2) in carrier. Secure with four washers (11) and screws (12).



**REPLACE/REPAIR POWER SUPPLY STORAGE BOX ASSEMBLY
(M1068 ONLY) — Continued**

0733 00

FOLLOW-THROUGH STEPS

1. Install cables W42, W43, and W252 (WP 0753 00).
2. Replace items/contents into storage box.
3. Install UPS power supply. See TM 11-7010-256-12&P.

END OF TASK

REPLACE TENT INTERFACE PANEL BOX ASSEMBLY A5 (M1068 ONLY)

0734 00

THIS WORK PACKAGE COVERS:

Removal (page 0734 00-1).
 Installation (page 0734 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Radio Equipment Tool Kit (WP 0780 00, Item 81)

Personnel Required

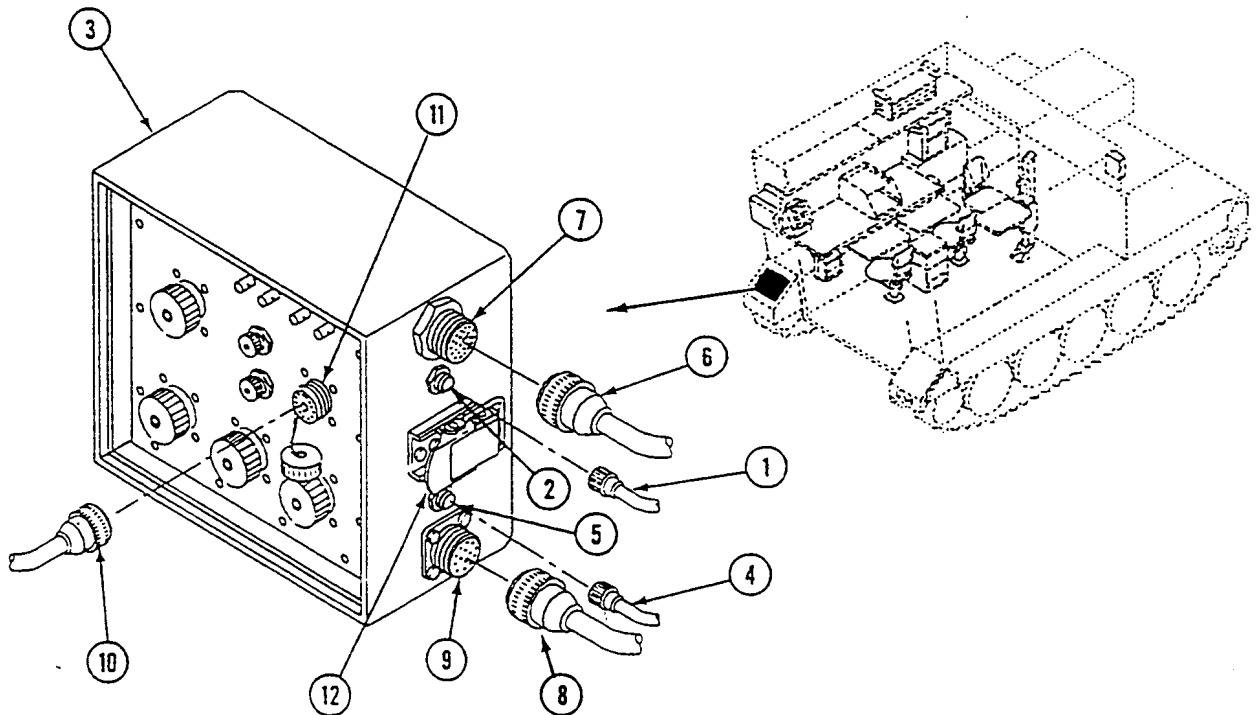
Power Generation Equipment Repairer 52D10
 Signal Support System Specialist 31U10

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

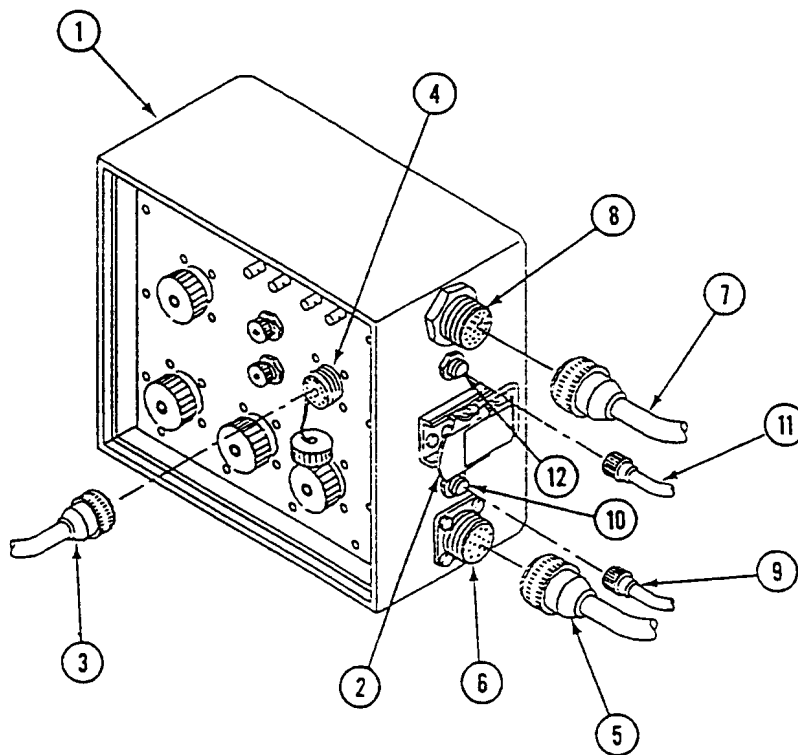
REMOVAL

1. Disconnect W32 P8 (1) from J10 (2) of tent interface panel (3).
2. Disconnect W32 P9 (4) from J9 (5) of tent interface panel (3).
3. Disconnect W32 P7 (6) from J8 (7) of tent interface panel (3).
4. Disconnect W32 P6 (8) from J7 (9) of tent interface panel (3).
5. Disconnect W129 P1 (10) from J137 (11) of tent interface panel (3).
6. Release two catches (12) and remove tent interface panel (3) from carrier.



INSTALLATION

1. Install tent interface panel (1) in carrier and secure with two catches (2).
2. Connect W129 P1 (3) to J137 (4) of tent interface panel (1).
3. Connect W32 P6 (5) to J7 (6) of tent interface panel (1).
4. Connect W32 P7 (7) to J8 (8) of tent interface panel (1).
5. Connect W32 P9 (9) to J9 (10) of tent interface panel (1).
6. Connect W32 P8 (11) to J10 (12) of tent interface panel (1).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

**REPLACE AC POWER EXTENSION BOX A6 AND DC POWER
EXTENSION BOX A9 AND MOUNT (M1068 ONLY)**

0735 00

THIS WORK PACKAGE COVERS:

Removal (page 0735 00-1).
Installation (page 0735 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

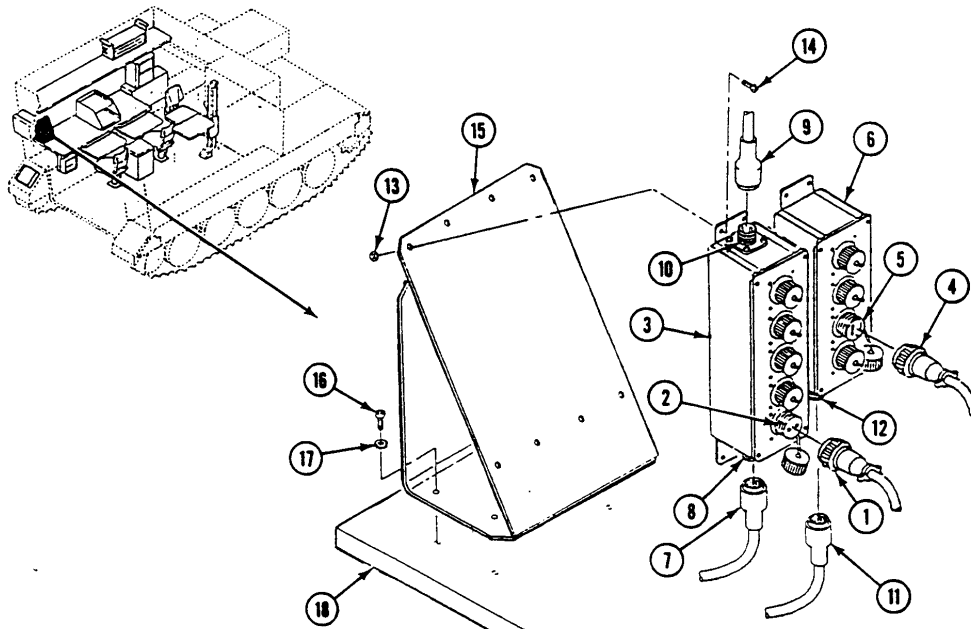
Locknut (8)

Personnel Required

Power-Generation Equipment Repairer 52D10

REMOVAL

1. Disconnect UPS cable W42 (1) from connector (2) on DC power extension box (3).
2. Disconnect UPS cable W43 (4) from connector (5) on AC power extension box (6).
3. Disconnect cable W10 (7) from connector (8) on DC power extension box (3).
4. Disconnect cable W45 (9) from connector (10) on DC power extension box (3).
5. Disconnect cable W7 (11) from connector (12) on AC power extension box (6).
6. Remove eight locknuts (13), screws (14), and two power extension boxes (3) and (6) from mount (15). Discard locknuts.
7. Remove four screws (16), washer (17), and mount (15) from work station (18).

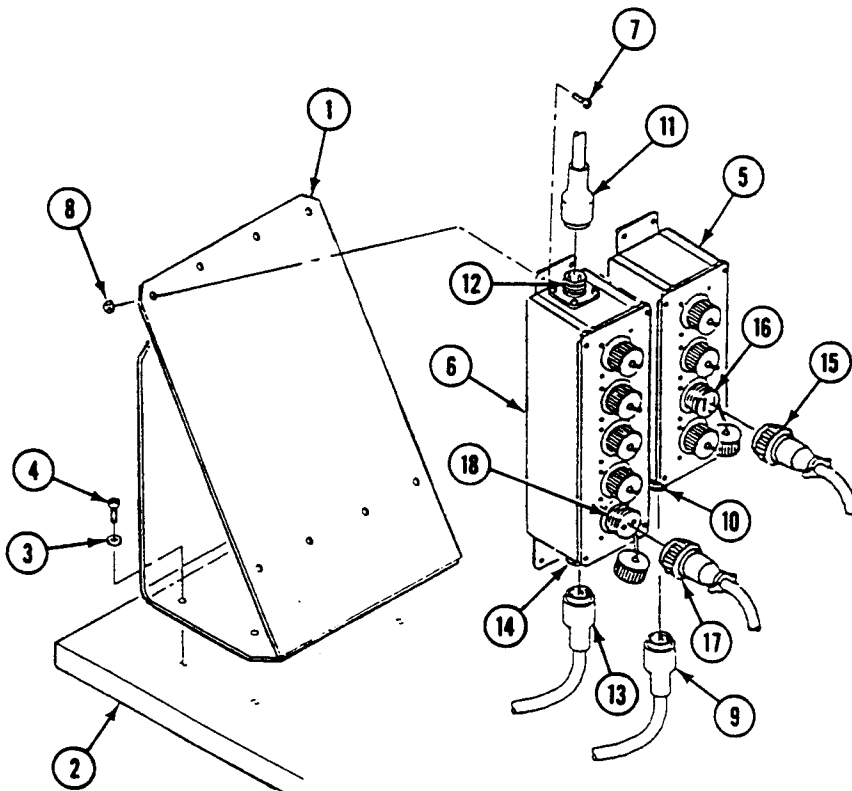


REPLACE AC POWER EXTENSION BOX A6 AND DC POWER EXTENSION BOX A9 AND MOUNT (M1068 ONLY) — Continued

0735 00

INSTALLATION

1. Install mount (1) on work station (2) with four washers (3) and screws (4).
2. Install two power extension boxes (5) and (6) on mount (1) with eight screws (7) and new locknuts (8).
3. Connect cable W7 (9) to connector (10) on AC power extension box (5).
4. Connect cable W45 (11) to connector (12) on DC power extension box (6).
5. Connect cable W10 (13) to connector (14) on DC power extension box (6).
6. Connect UPS cable W43 (15) to connector (16) on AC power extension box (5).
7. Connect UPS cable W42 (17) to connector (18) on DC power extension box (6).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE/REPAIR POWER DISTRIBUTION BOX A3 (M1068 ONLY)

0736 00

THIS WORK PACKAGE COVERS:

- Removal (page 0736 00-1).
- Disassembly (page 0736 00-2).
- Assembly (page 0736 00-3).
- Installation (page 0736 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
All external power disconnected (TM 11-7010-256-12&P)
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

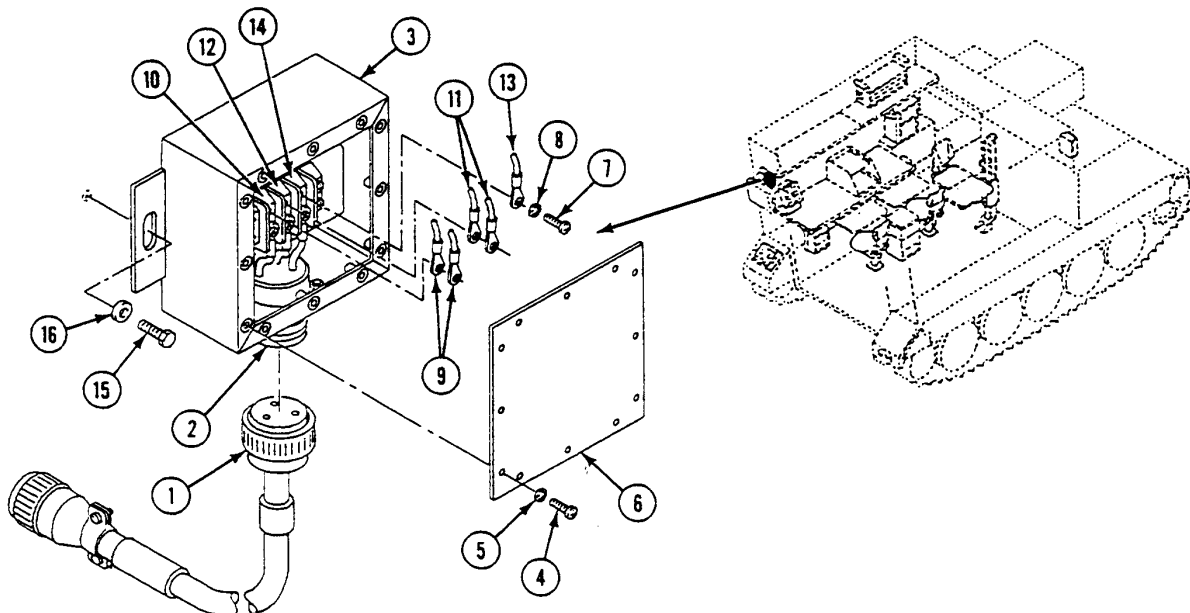
Locknut (4)
Lockwasher (12)

REMOVAL

NOTE

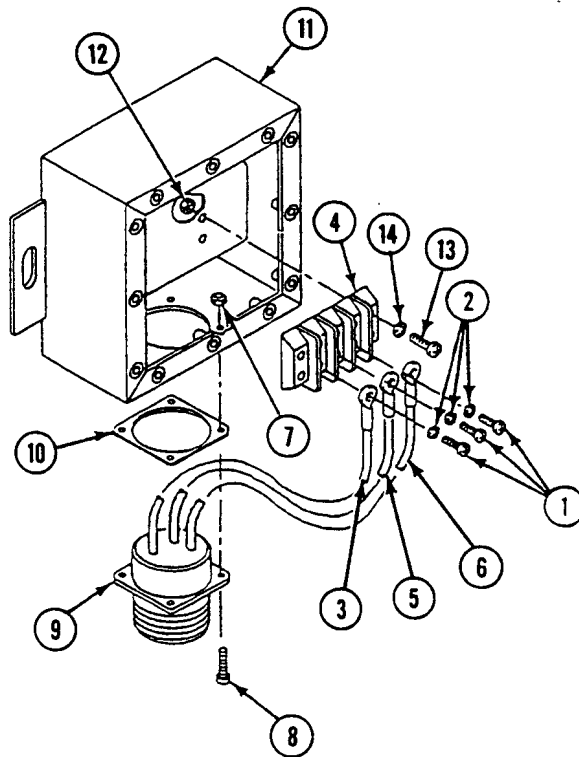
Tag all wires before removal.

1. Disconnect cable (1) from connector (2) on power distribution box (3).
2. Remove 12 screws (4), lockwashers (5), and lid (6) from power distribution box (3). Discard lockwashers.
3. Remove screw (7), washer (8), and two circuit 1 leads (9) from terminal 1 (10).
4. Remove screw (7), washer (8), and two circuit 2 leads (11) from terminal 2 (12).
5. Remove screw (7), washer (8), and circuit 3 lead (13) from terminal 3 (14).
6. Remove two screws (15), washers (16), and power distribution box (3) from bulkhead.



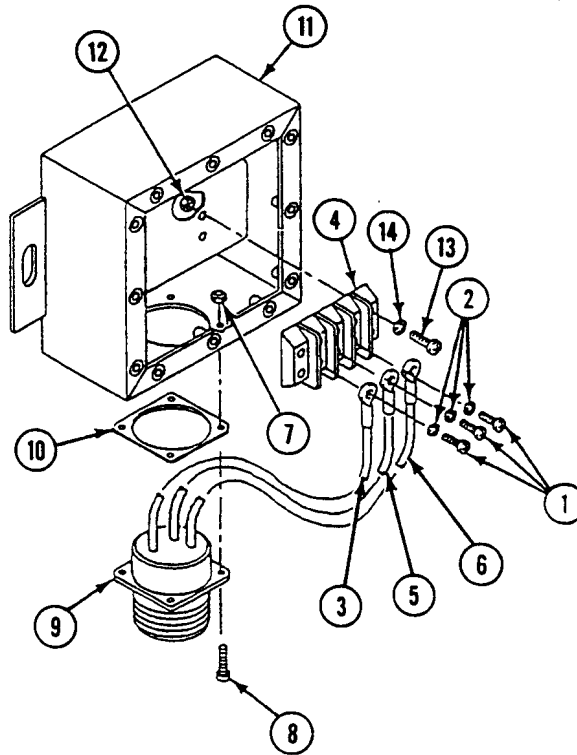
DISASSEMBLY

1. Remove screw (1), lockwasher (2), and circuit 1 lead (3) from terminal 1 of terminal block (4).
2. Remove screw (1), lockwasher (2), and circuit 2 lead (5) from terminal 2 of terminal block (4).
3. Remove screw (1), lockwasher (2), and circuit 3 lead (6) from terminal 3 of terminal block (4).
4. Remove four locknuts (7), screws (8), connector (9), and gasket (10) from power distribution box (11). Discard locknuts.
5. Remove four nuts (12), screws (13), lockwashers (14), and terminal block (4) from power distribution box (11).



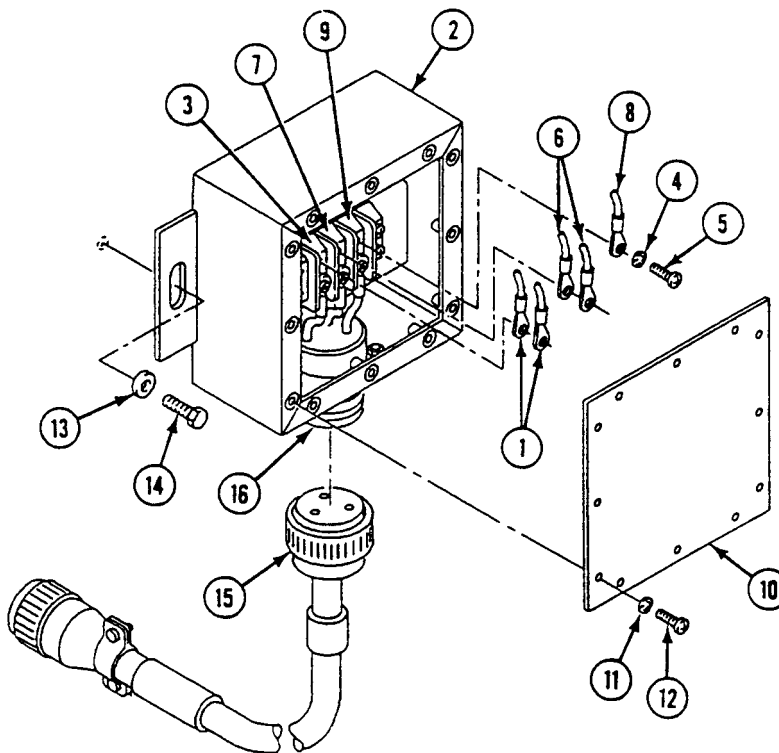
ASSEMBLY

1. Install terminal block (4), four lockwashers (14), screws (13), and nuts (12) on power distribution box (11).
2. Install gasket (10), connector (9), four screws (8), and new locknuts (7) on power distribution box (11).
3. Install circuit 3 lead (6), lockwasher (2), and screw (1) on terminal 3 of terminal block (4).
4. Install circuit 2 lead (5), lockwasher (2), and screw (1) on terminal 2 of terminal block (4).
5. Install circuit 1 lead (3), lockwasher (2), and screw (1) on terminal 1 of terminal block (4).



INSTALLATION

1. Install two circuit 1 leads (1) through back of power distribution box (2). Secure to terminal (3) with washer (4) and screw (5). Have helper assist.
2. Install two circuits 2 leads (6) through back of power distribution box (2). Secure to terminal (7) with washer (4) and screw (5). Have helper assist.
3. Install circuit 3 lead (8) through back of power distribution box (2). Secure to terminal (9) with washer (4) and screw (5). Have helper assist.
4. Install lid (10) on power distribution box (2). Secure with 12 new lockwashers (11) and screws (12).
5. Install power distribution box (2) on bulkhead. Secure with two washers (13) and screws (14).
6. Connect cable (15) to connector (16) on power distribution box (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE POWER ENTRY BOX ASSEMBLY A4 (M1068 ONLY)

0737 00

THIS WORK PACKAGE COVERS:

Removal (page 0737 00-1).
 Installation (page 0737 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10
 Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

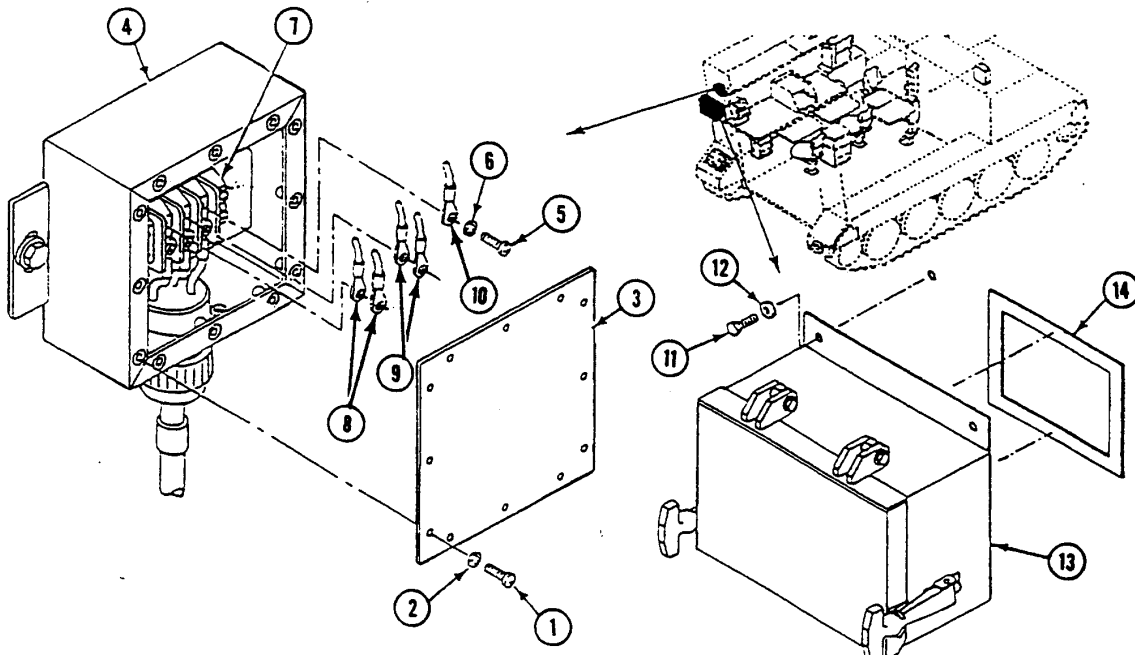
Adhesive (WP 0782 00, Item 3)
 Lockwasher (12)

REMOVAL

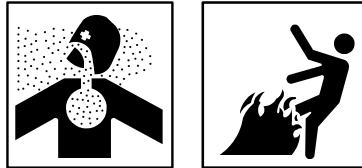
NOTE

Tag all leads during removal for proper installation later.

1. Remove 12 screws (1), lockwashers (2), and lid (3) from power distribution box (4). Discard lockwashers.
2. Remove three screws (5) and lockwashers (6) from terminal block (7).
3. Remove two cable W13 leads (8), two cable W14 leads (9), and one ground lead (10) from terminal block (7).
4. Remove three screws (11), washers (12), and power entry box (13) from external rear bulkhead. Feed leads through rear of bulkhead. Have helper assist.
5. Do not remove gasket (14) unless damaged.



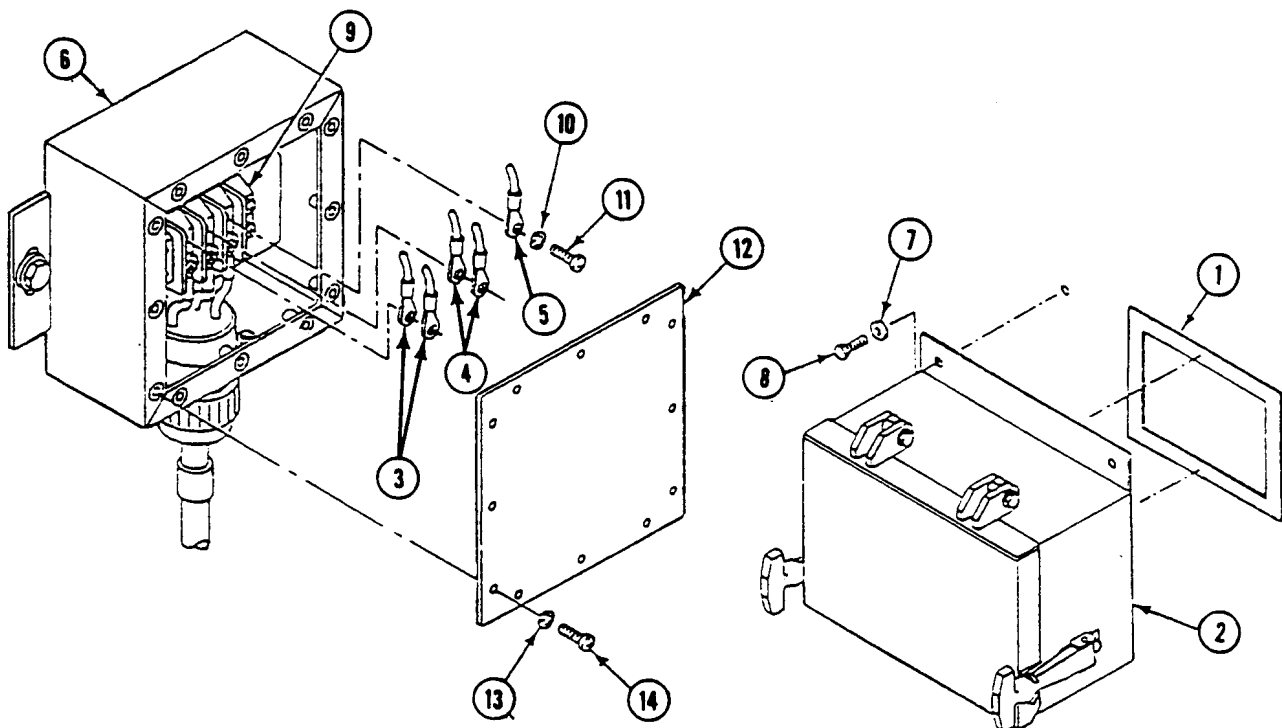
INSTALLATION

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. If gasket (1) was removed in Step 5, cement new gasket on rear of power entry box (2).
2. Insert cables W13 (3), W14 (4), and ground lead (5) into power distribution box (6). Feed leads through rear of bulkhead. Have helper assist.
3. Install power entry box (2) on external rear bulkhead. Secure with three washers (7) and screws (8).
4. Install two cable W13 leads (3) on terminal 1 of terminal block (9). Secure with lockwasher (10) and screw (11).
5. Install two cable W14 leads (4) on terminal 2 of terminal block (9). Secure with lockwasher (10) and screw (11).
6. Install ground cable lead (5) on terminal 3 of terminal block (9). Secure with lockwasher (10) and screw (11).
7. Install lid (12) on power distribution box (6). Secure with 12 new lockwashers (13) and screws (14).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE FLUORESCENT LIGHT ASSEMBLIES (M1068 ONLY)

0738 00

THIS WORK PACKAGE COVERS:

Removal (page 0738 00-1).
 Installation (page 0738 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Power-Generation Equipment Repairer 52D10

References

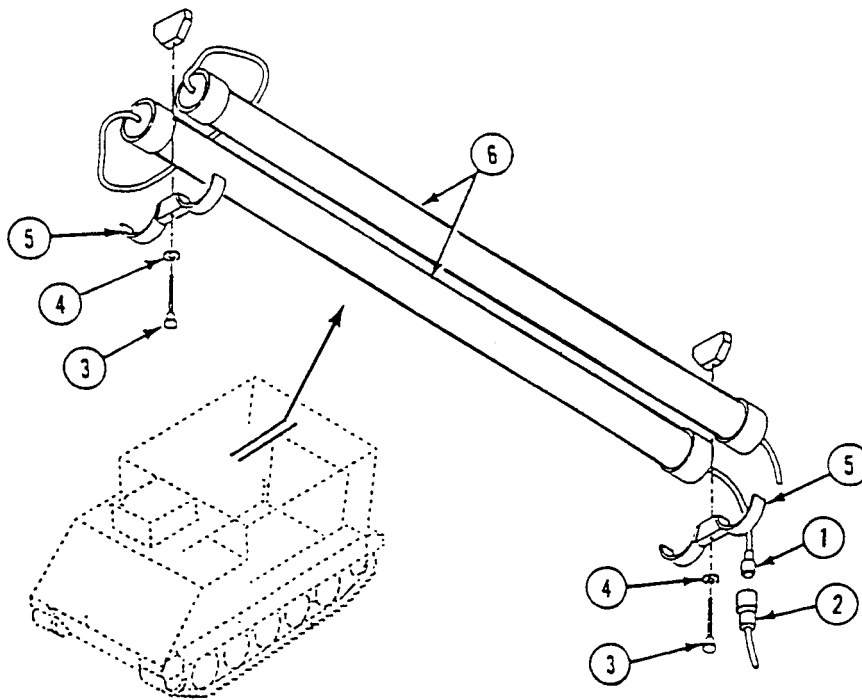
TM 10-5410-229-13&P

REMOVAL

NOTE

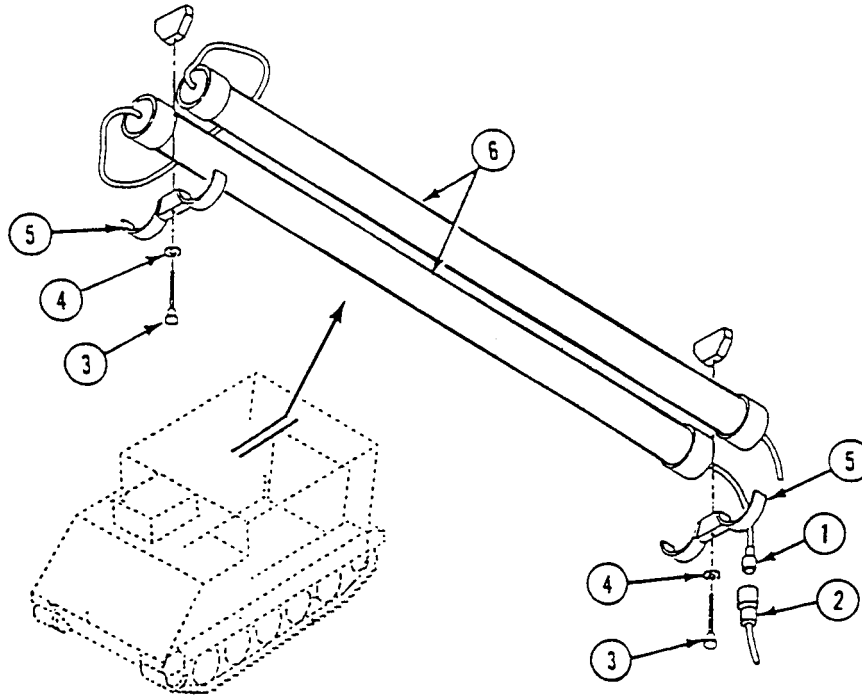
For repair of fluorescent light assemblies, see TM 10-5410-229-13&P.

1. Disconnect fluorescent light assembly electrical connector P1 (1) from cable W11 P2 (2).
2. Remove two thumbscrews (3), washers (4), light holders (5), and fluorescent light assemblies (6) from light holder mounts welded to overhead plate.



INSTALLATION

1. Install two fluorescent light assemblies (6), light holders (5), washers (4), and thumbscrews (3) on light holder mounts welded to overhead plate.
2. Connect fluorescent light assembly electrical connector P1 (1) to cable W11 P2 (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE POWER DISTRIBUTION CABLE (W3) (M1068 ONLY)

0739 00

THIS WORK PACKAGE COVERS:

Removal (page 0739 00-1).
 Installation (page 0739 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

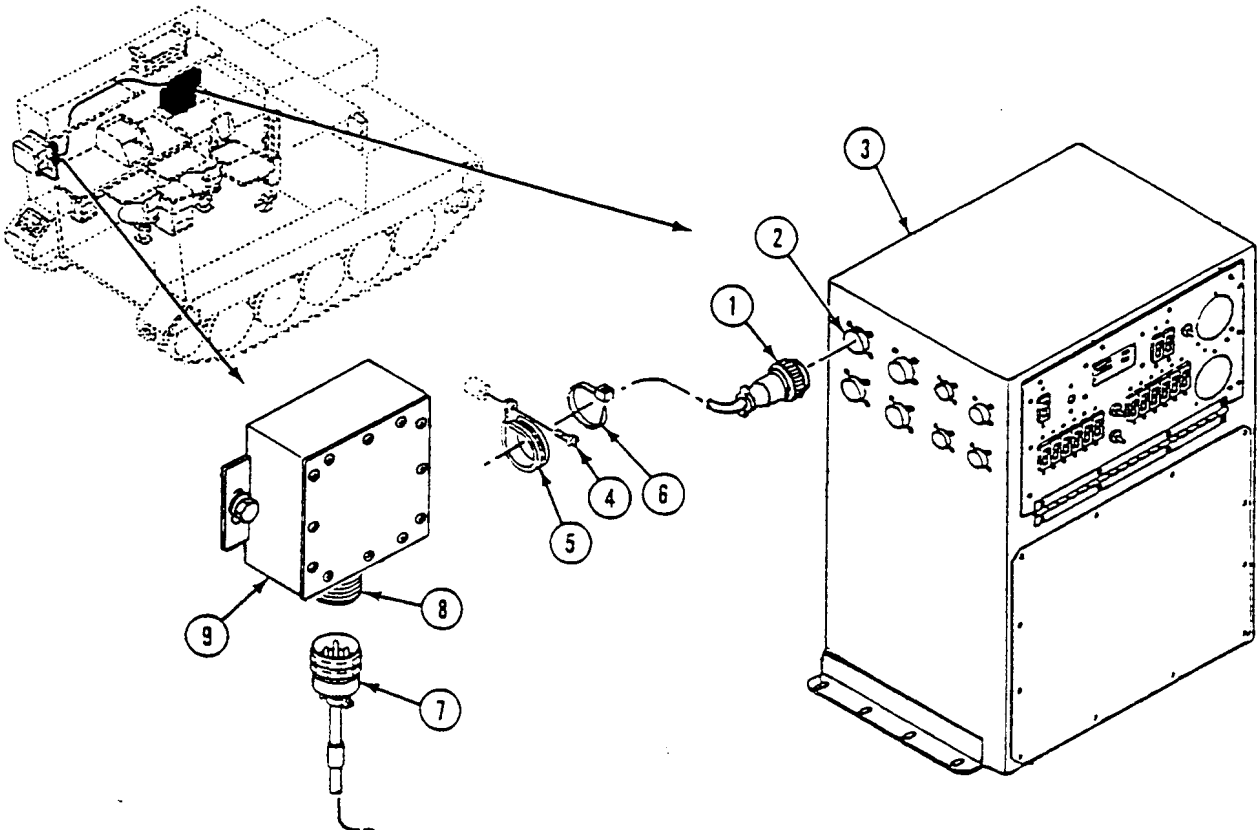
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (6)

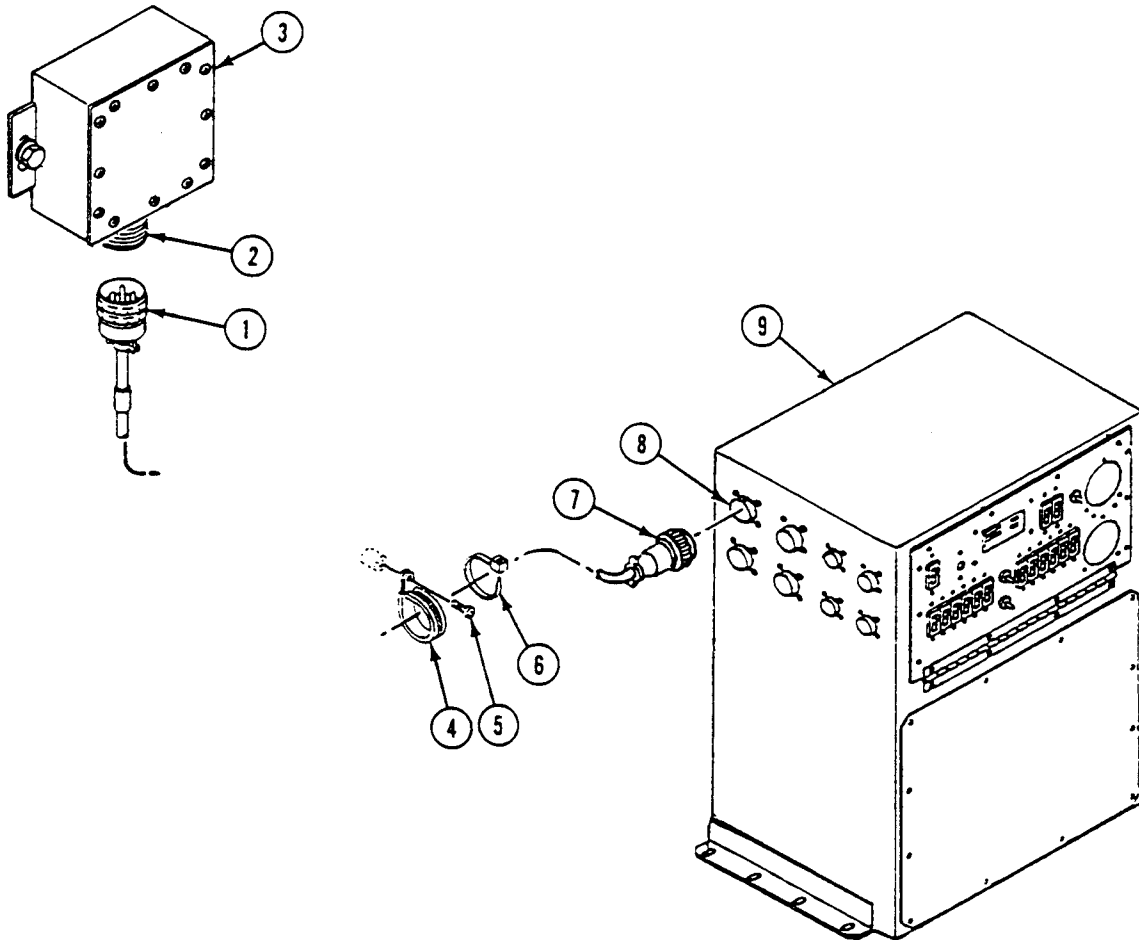
REMOVAL

1. Disconnect W3 cable plug P3 (1) from jack J24 (2) on power control enclosure A1 (3).
2. Remove four screws (4) and clamps (5) from hull weldnut. Remove clamps (5) from harness W3.
3. Cut six tie straps (6). Discard tie straps.
4. Disconnect W3 cable plug P1 (7) from jack J1 (8) on power distribution box A3 (9).
5. Remove cable W3 (7) from carrier.



INSTALLATION

1. Install new W3 cable (1) in carrier.
2. Connect cable W3 plug P1 (1) to jack J1 (2) on power distribution box A3 (3).
3. Install four clamps (4) on cable W3 and secure to hull weldnuts with screws (5).
4. Install six new tie straps (6) on cable W3.
5. Connect cable W3 plug P3 (7) to jack J24 (8) on power distribution enclosure A1 (9).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE DC BATTERY CABLE (W4) (M1068 ONLY)

0740 00

THIS WORK PACKAGE COVERS:

Removal (page 0740 00-2).
 Installation (page 0740 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Digital Multimeter (WP 0780 00, Item 43)
 Electrical Tool Kit (WP 0780 00, Item 80)

Equipment Condition

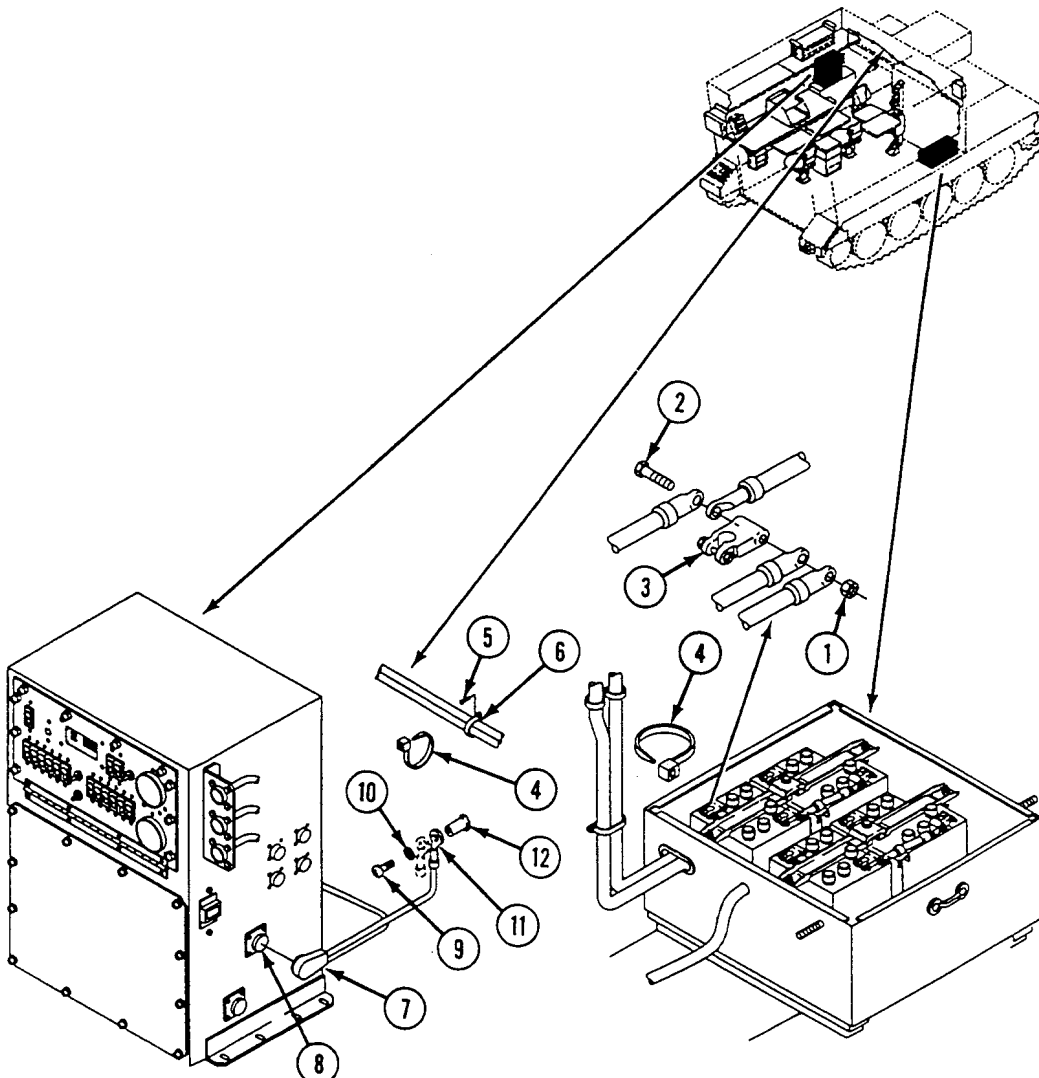
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Lockwasher
 Tie strap (8)

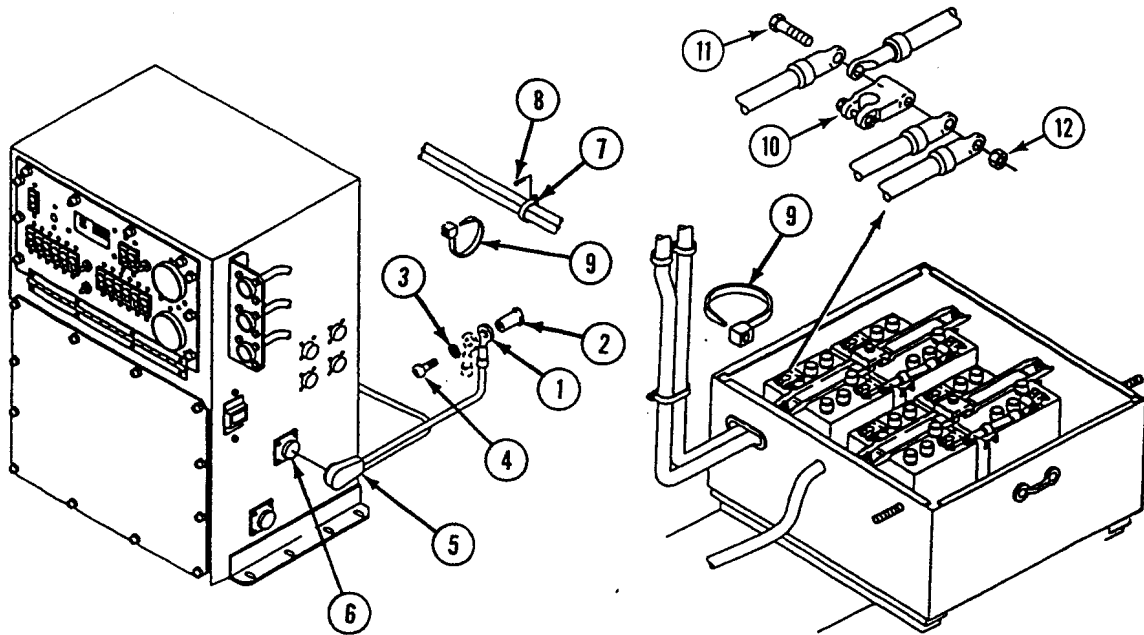
REMOVAL

1. Remove nut (1) and screw (2) and disconnect cable W4 E2 from positive battery terminal (3).
2. Remove and discard eight tie straps (4).
3. Remove six screws (5) and clamps (6).
4. Disconnect cable W4 P1 (7) from power control box A1 jack J25 (8).
5. Remove screw (9), lockwasher (10), and circuit 32 ground lead (11) from post G3 (12) on carrier hull. Discard lockwasher.
6. Remove cable W4 from carrier.



INSTALLATION

1. Install W4 cable in carrier.
2. Install circuit ground lead 32 (1) to post G3 (2) on carrier hull. Secure with new lockwasher (3) and screw (4).
3. Connect cable W4 P1 (5) to power control box jack J25 (6).
4. Route cable through six clamps (7). Secure with six screws (8).
5. Secure cable with eight new tie straps (9).
6. Connect cable W4 E2 to positive battery terminal (10) with screw (11) and nut (12).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE/REPAIR INVERTER AC CABLE (W5) (M1068 ONLY)

0741 00

THIS WORK PACKAGE COVERS:

Removal (page 0741 00-2).
 Installation (page 0741 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

Digital Multimeter (WP 0780 00, Item 43)
 Electrical Tool Kit (WP 0780 00, Item 80)
 General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 All external power disconnected (TM 11-7010-256-12&P)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

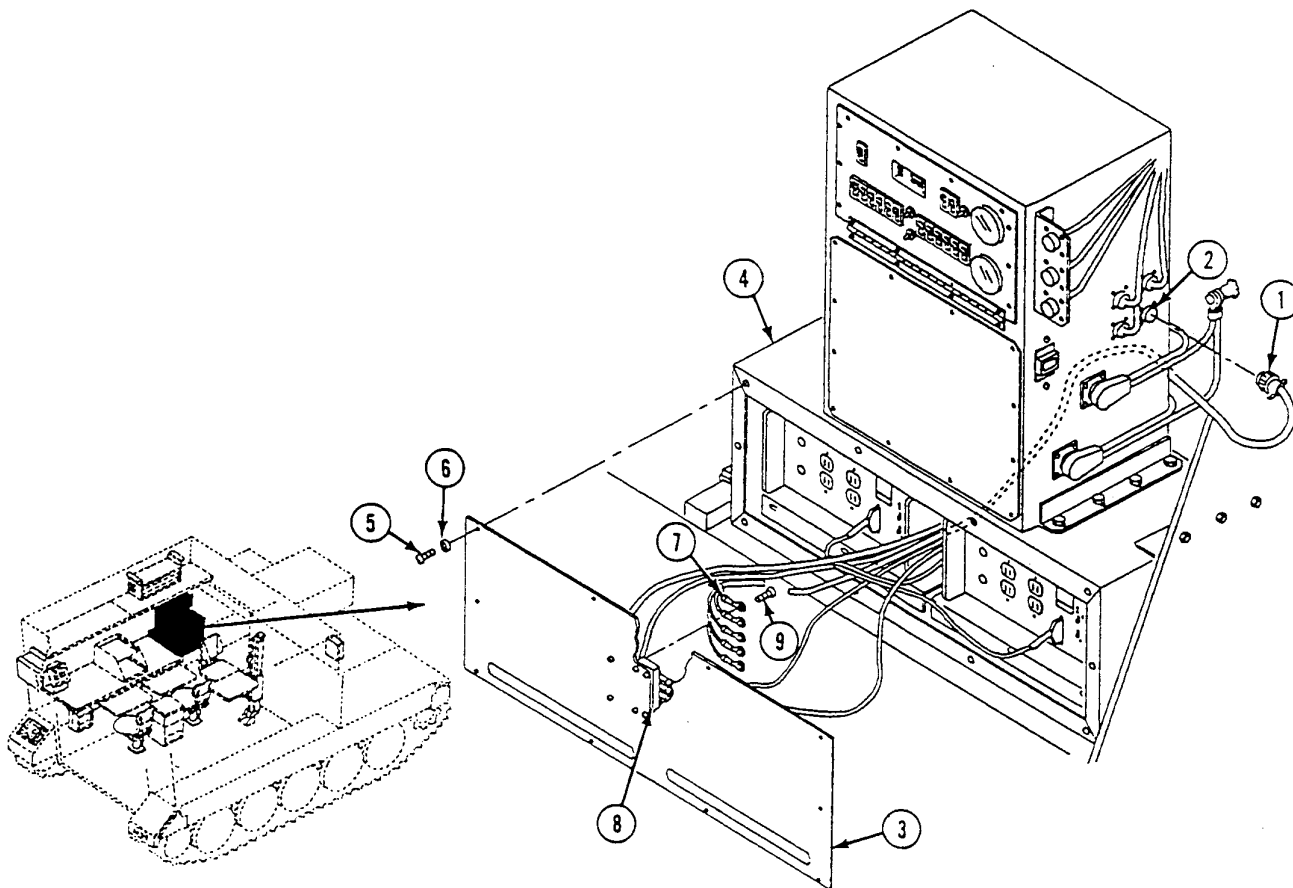
Lockwasher (10)

REMOVAL

NOTE

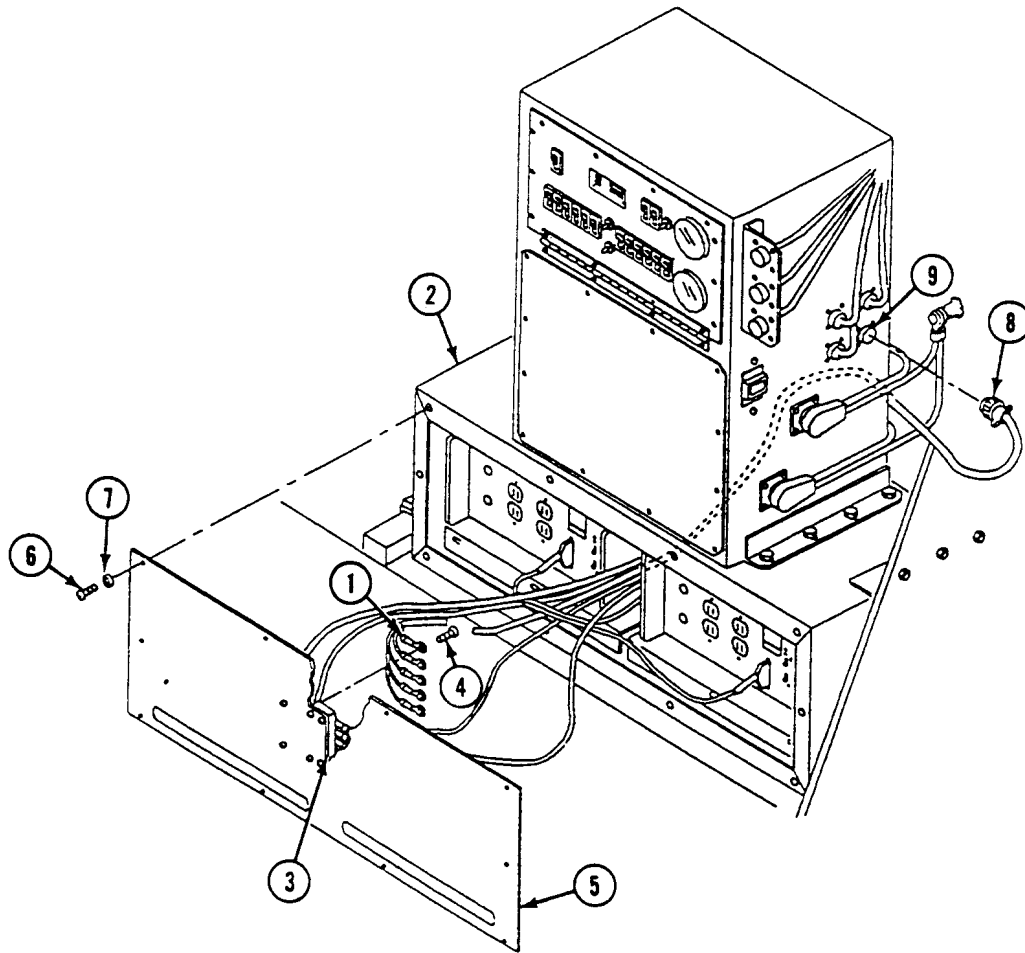
Tag all cables and leads before removal.

1. Disconnect cable W5 P6 (1) from power control box A1 jack J27 (2).
2. Remove faceplate (3) on inverter housing A2 (4) by removing ten screws (5) and lockwashers (6). Discard lockwashers.
3. Remove opposite end of W5 by disconnecting five terminals E1 through E5 (7) from inverter terminal block TB2 (8). Remove five screws (9).
4. Remove harness W5 from inverter housing A2 (4) by pulling the harness through the back of housing. Remove harness from carrier.



INSTALLATION

1. Install new or repaired harness W5 in carrier. Route terminal ends (1) of W5 through back of inverter housing A2 (2) to the front for connection.
2. Install five terminal leads E1 through E5 (1) of W5 to inverter terminal block TB2 (3) with five screws (4).
3. Attach faceplate (5) to front of inverter housing A2 (1) using ten screws (6) and new lockwashers (7).
4. Connect cable W5 P6 (8) to power control box A1 jack J27 (9).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE INVERTER DC CABLE (W6) (M1068 ONLY)

0742 00

THIS WORK PACKAGE COVERS:

- Removal (page 0742 00-1).
- Installation (page 0742 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

- Digital Multimeter (WP 0780 00, Item 43)
- Electrical Repair Kit (WP 0780 00, Item 80)
- General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- All external power disconnected (TM 11-7010-256-12&P)
- Battery ground lead disconnected (WP 0294 00)

Materials/Parts

- Lockwasher (10)
- Lockwasher (1)

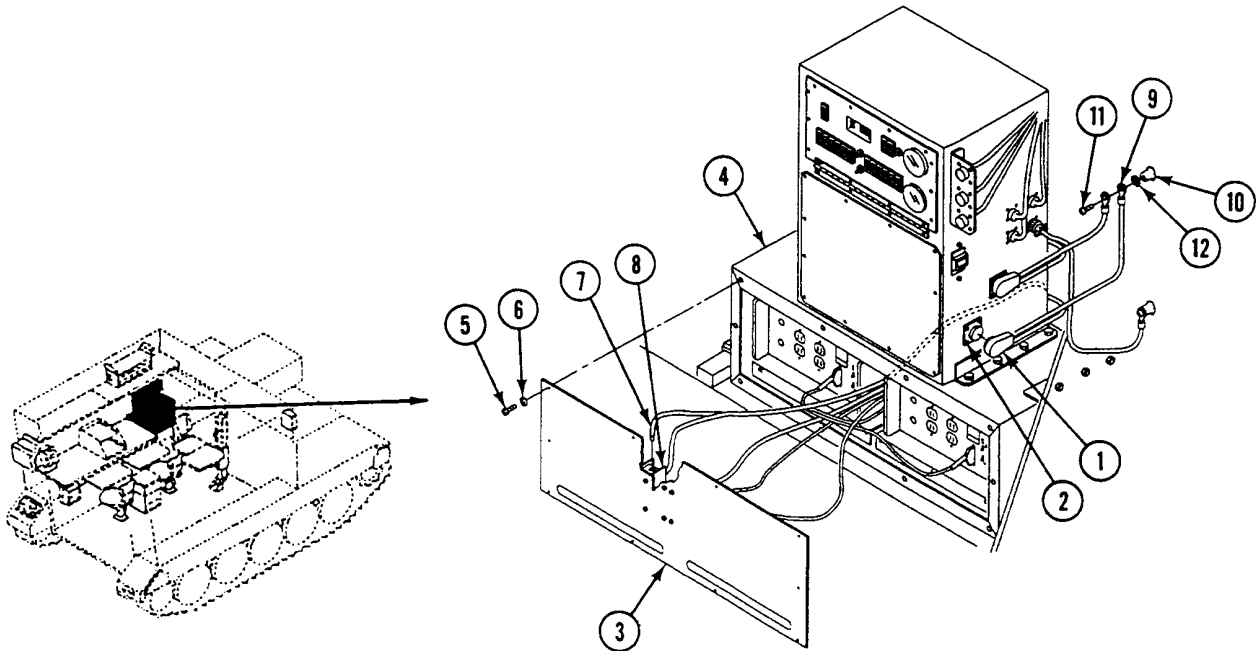
REMOVAL

1. Disconnect cable W6 plug (1) from power control box A1 jack J26 (2).
2. Remove faceplate (3) on inverter housing A2 (4) by removing ten screws (5) and lockwashers (6). Discard lockwashers.
3. Disconnect harness W6 terminal E2 (7) from terminal block TB1 (8) on inverter housing faceplate (3).

NOTE

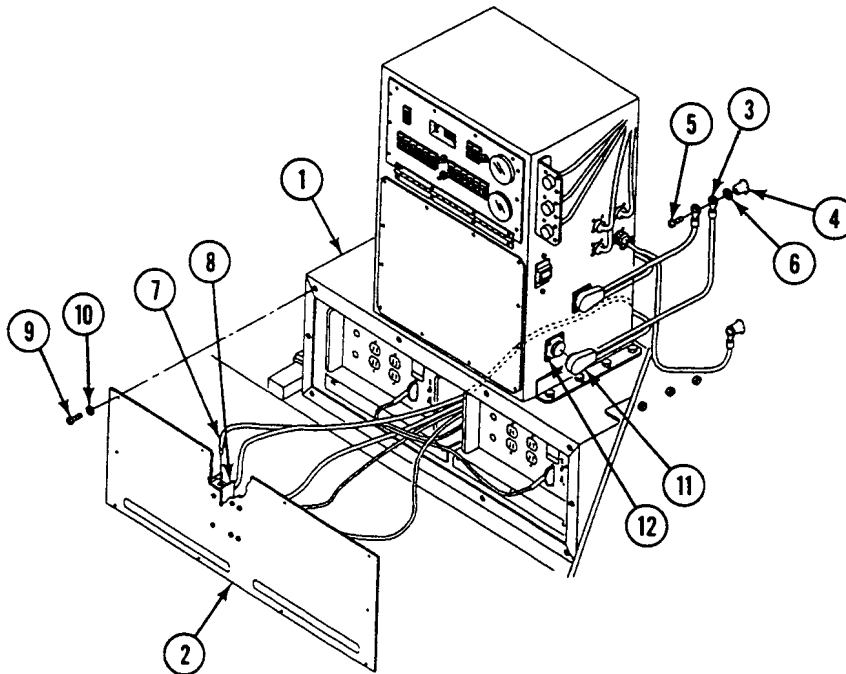
Ground post is located on hull wall between power control box A1 and driver's station.

4. Disconnect harness W6 terminal E1 (9) from ground post G3 (10). Remove screw (11) and lockwasher (12). Discard lockwasher.
5. Remove harness from carrier.



REPLACE INVERTER DC CABLE (W6) (M1068 ONLY) — Continued**0742 00****INSTALLATION**

1. Install harness W6 in carrier. Route leads behind inverter housing A2 (1) to front face plate (2).
2. Connect harness W6 terminal E1 (3) to ground post G3 (4). Use screw (5) and new lockwasher (6). Make sure there are two leads connected to ground post G3.
3. Connect harness W6 terminal E2 (7) to terminal block TB1 (8) on inverter housing faceplate (2).
4. Attach faceplate (2) to front of inverter housing A2 (1) using ten screws (9) and new lockwashers (10).
5. Connect cable W6 plug (11) to power control box A1 jack J26 (12).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE AC POWER EXTENSION CABLE (W7) (M1068 ONLY)

0743 00

THIS WORK PACKAGE COVERS:

Removal (page 0743 00-1).
 Installation (page 0743 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

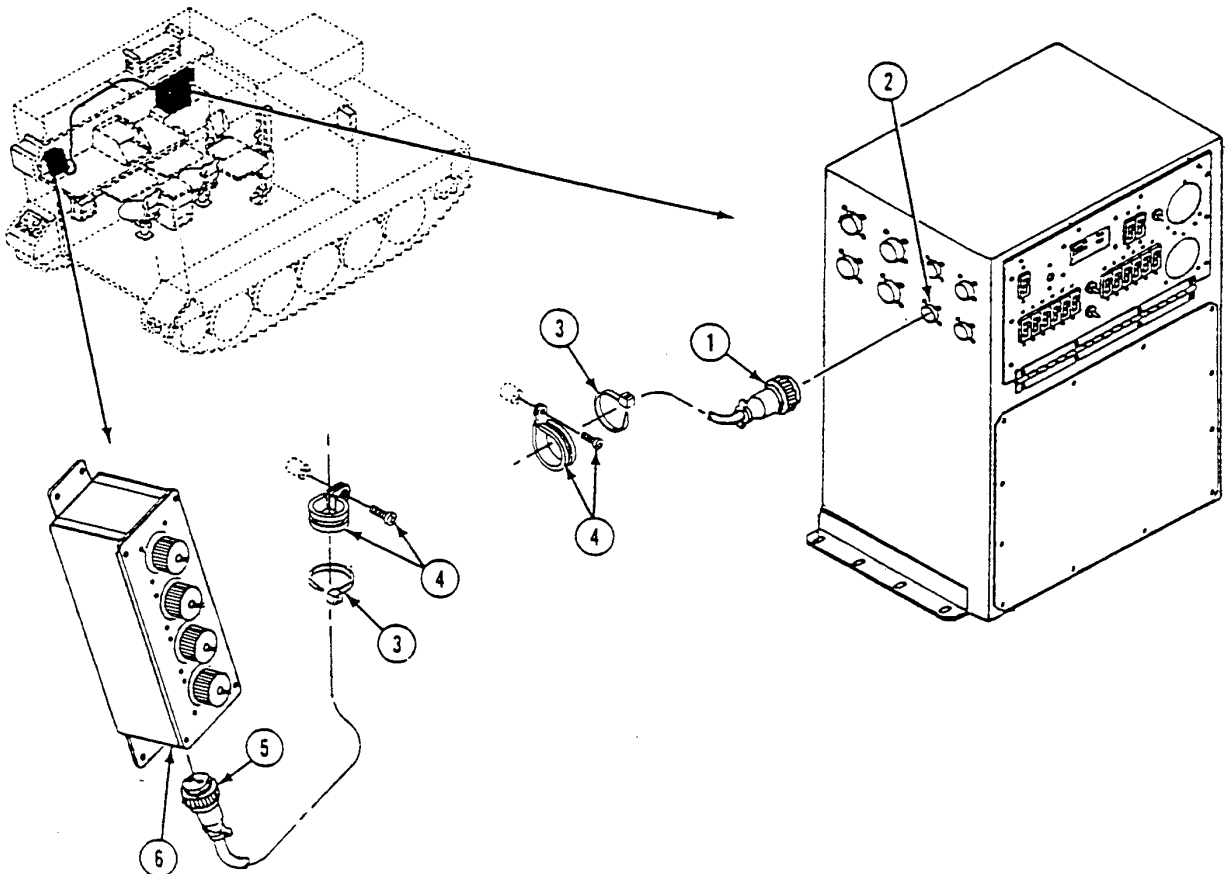
Tie strap (6)

Personnel Required

Power-Generation Equipment Repairer 52D10

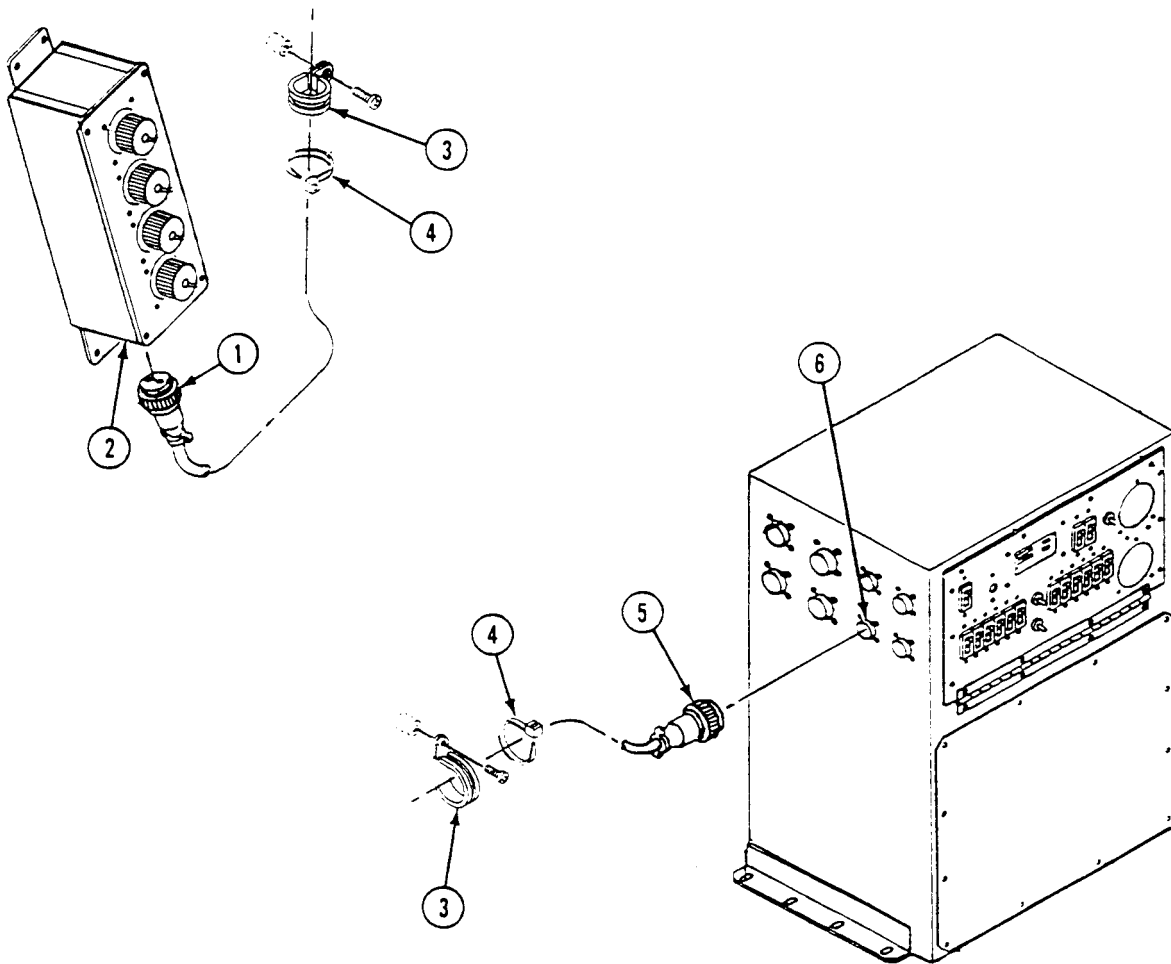
REMOVAL

1. Disconnect cable W7 plug P10 (1) from power control box A1 jack J30 (2).
2. Remove and discard six tie straps (3).
3. Remove four screws and loop clamps (4).
4. Disconnect cable W7 plug P1 (5) from roadside AC power extension box A6 jack J1 (6).
5. Remove cable from carrier.



INSTALLATION

1. Install new cable in carrier.
2. Connect cable W7 plug P1 (1) to roadside AC power extension box A6 jack J1 (2).
3. Install cable through four loop clamps (3) and secure with four screws.
4. Attach six new tie straps (4).
5. Connect cable W7 plug P10 (5) to power control box A1 jack J30 (6).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE AC POWER EXTENSION CABLE (W8) (M1068 ONLY)

0744 00

THIS WORK PACKAGE COVERS:

Removal (page 0744 00-1).
 Installation (page 0744 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

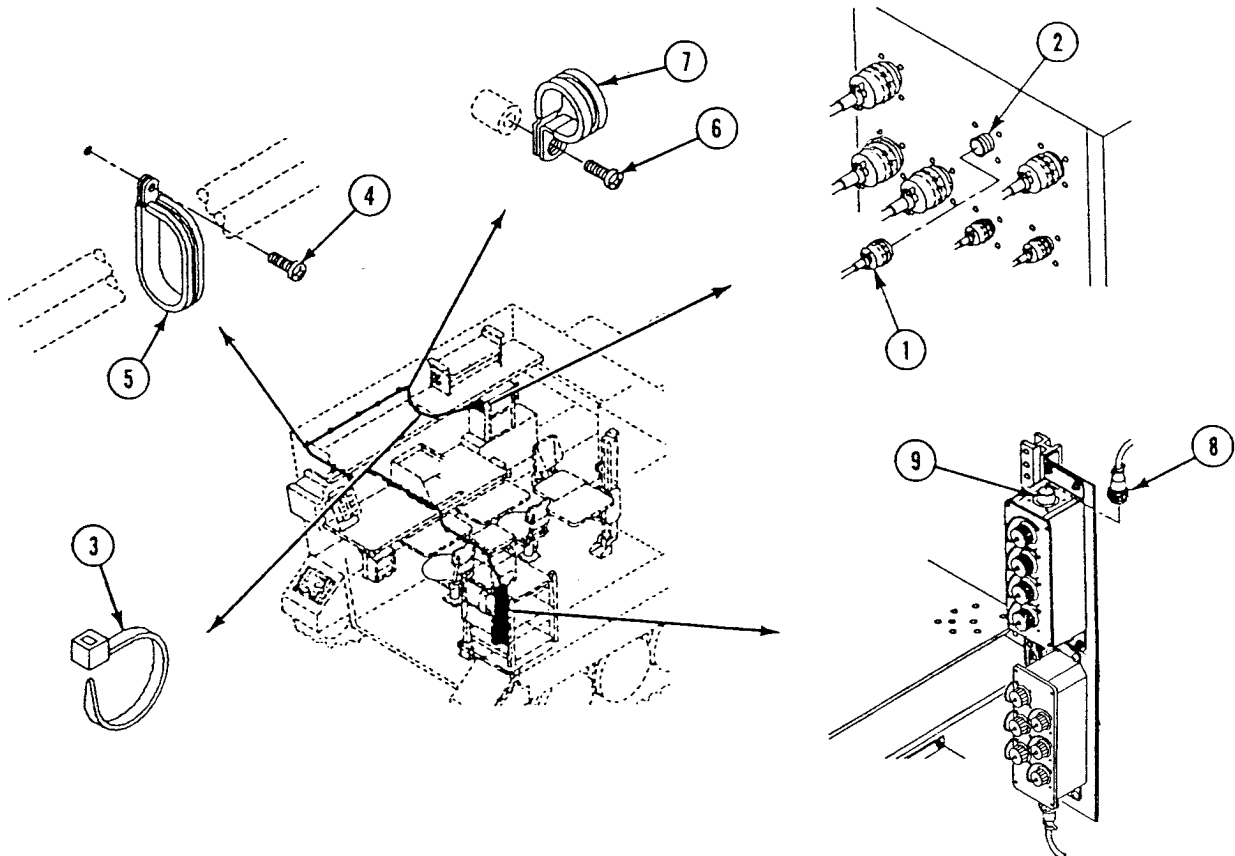
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (16)

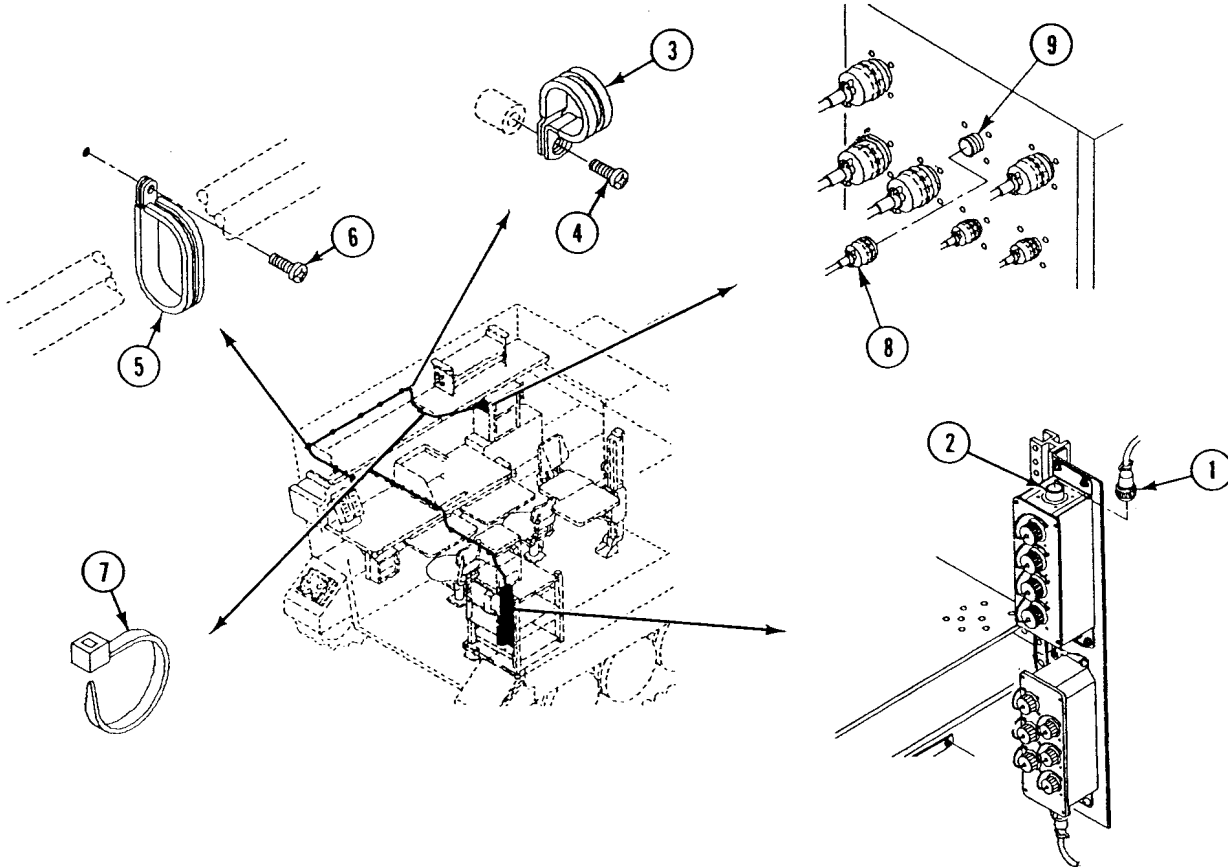
REMOVAL

1. Disconnect cable W8 plug P11 (1) from power control box A1 jack J31 (2).
2. Remove and discard 16 tie straps (3).
3. Remove five screws (4) and loop clamps (5).
4. Remove screw (6) and loop clamp (7).
5. Disconnect cable W8 plug P1 (8) from curbside power box A7 jack J1 (9).
6. Remove cable W8 from carrier.



INSTALLATION

1. Install cable W8 in carrier.
2. Connect cable W8 plug P1 (1) to curbside power box A7 jack J1 (2).
3. Install harness W8, clamp (3), and screw (4) to hull wall.
4. Install harness W8 with five loop clamps (5) and screws (6).
5. Attach 16 new tie straps (7).
6. Connect cable W8 plug P11 (8) to power control box A1 jack J31 (9).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE CASCADE REMOTE HARNESS (M1068 ONLY)

0745 00

THIS WORK PACKAGE COVERS:

Removal (page 0745 00-1).
 Installation (page 0745 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

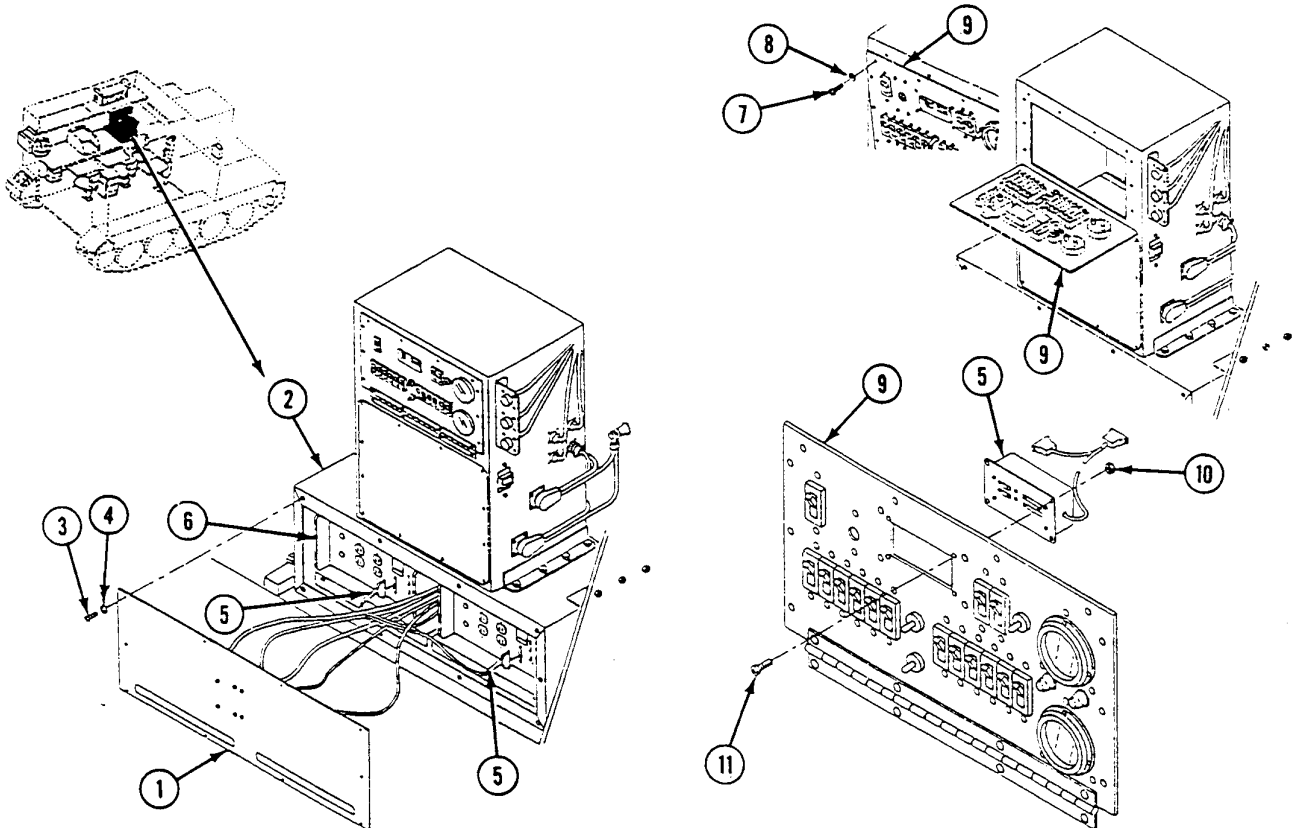
Locknut (4)

Lockwasher (10)

Lockwasher (10)

REMOVAL

1. Remove faceplate (1) on inverter housing A2 (2) by removing ten screws (3) and lockwashers (4). Discard lockwashers.
2. Loosen captive screws on connectors and disconnect RP1 harness (5) from inverters (6).
3. Remove ten screws (7), and lockwashers (8), from faceplate (9). Lower faceplate (9) to gain access to RP1 harness (5). Discard lockwashers.
4. Remove four locknuts (10), screws (11), and RP1 remote harness (5) from faceplate (9). Remove harness. Discard locknuts.

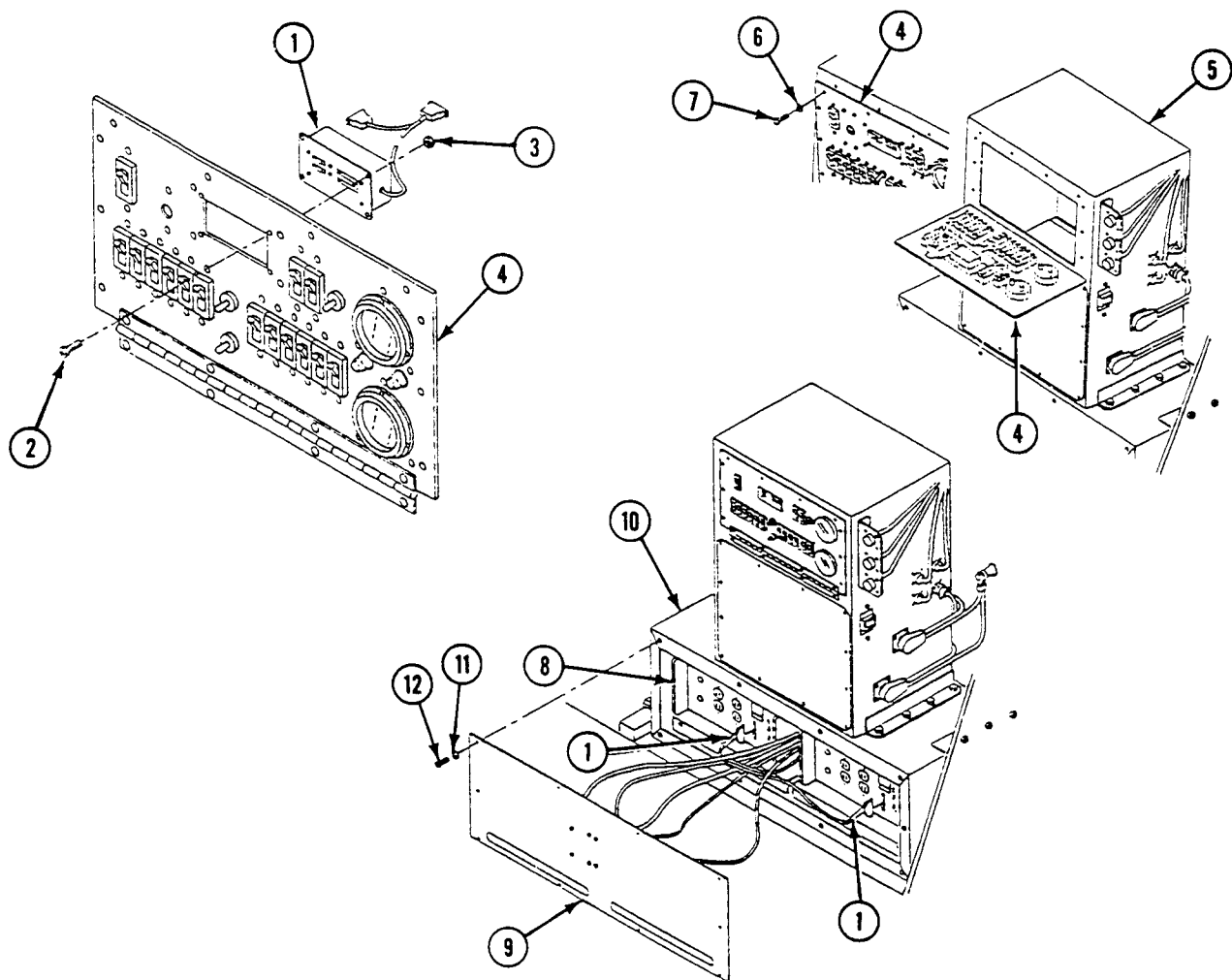


REPLACE CASCADE REMOTE HARNESS (M1068 ONLY) — Continued

0745 00

INSTALLATION

1. Install RP1 harness (1), four screws (2), and new locknuts (3) on faceplate (4). Route RP1 harness leads down through power enclosure (5) and behind inverter housing A2 to front face of inverters. Avoid interfering with other components in power enclosure.
2. Lift faceplate (4) in place and install ten new lockwashers (6) and screws (7).
3. Connect RP1 harness (1) to front of inverters (8). Tighten captive screws on connectors.
4. Install faceplate (9) on front of inverter housing A2 (10) with ten new lockwashers (11) and screws (12).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE DC POWER EXTENSION CABLE (W10) (M1068 ONLY)

0746 00

THIS WORK PACKAGE COVERS:

Removal (page 0746 00-1).
 Installation (page 0746 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

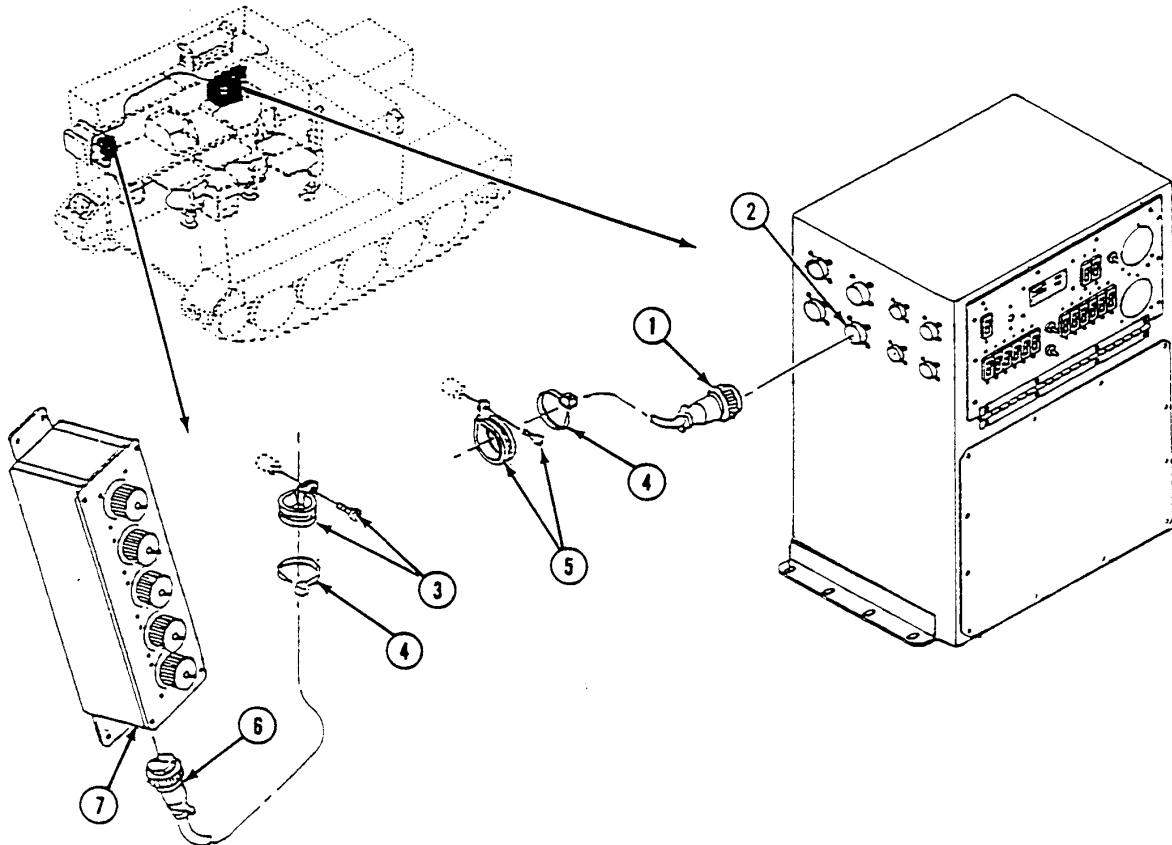
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (6)

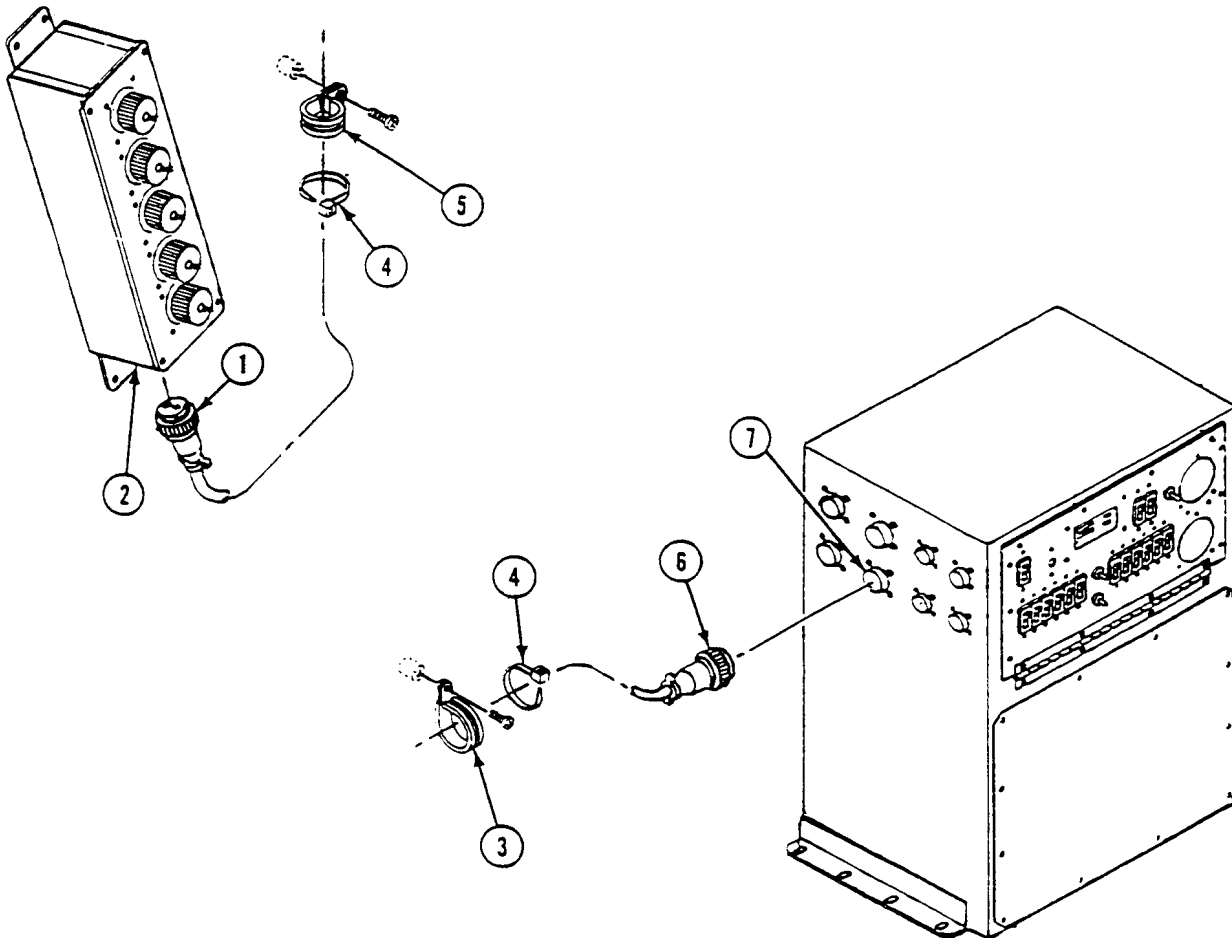
REMOVAL

1. Disconnect cable W10 plug P14 (1) from power control box A1 jack J34 (2).
2. Remove screw and loop clamp (3).
3. Remove and discard six tie straps (4).
4. Remove three screws and loop clamps (5).
5. Disconnect cable W10 plug P1 (6) from DC power extension box A9 jack J1 (7).
6. Remove cable W10 from carrier.



INSTALLATION

1. Install cable W10 in carrier.
2. Connect cable W10 plug P1 (1) to DC power extension box A9 jack J1 (2).
3. Route cable through three loop clamps (3) and attach to hull wall with three screws.
4. Attach six new tie straps (4) to secure slack in cable W10.
5. Attach loop clamp (5) to cable W10 and secure to hull wall with screw.
6. Connect cable W10 plug P14 (6) to power control box A1 jack J34 (7).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE AC LIGHT CABLE (W11) (M1068 ONLY)

0747 00

THIS WORK PACKAGE COVERS:

Removal (page 0747 00-1).
 Installation (page 0747 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

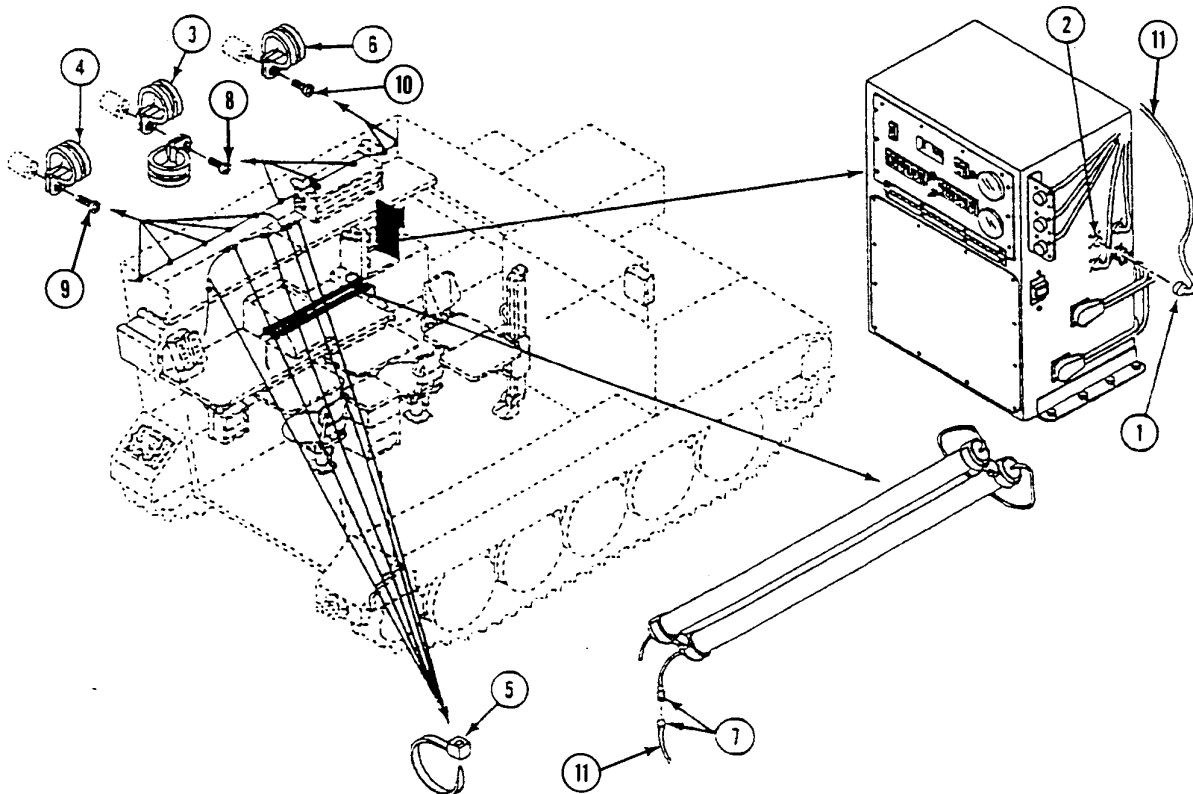
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (5)

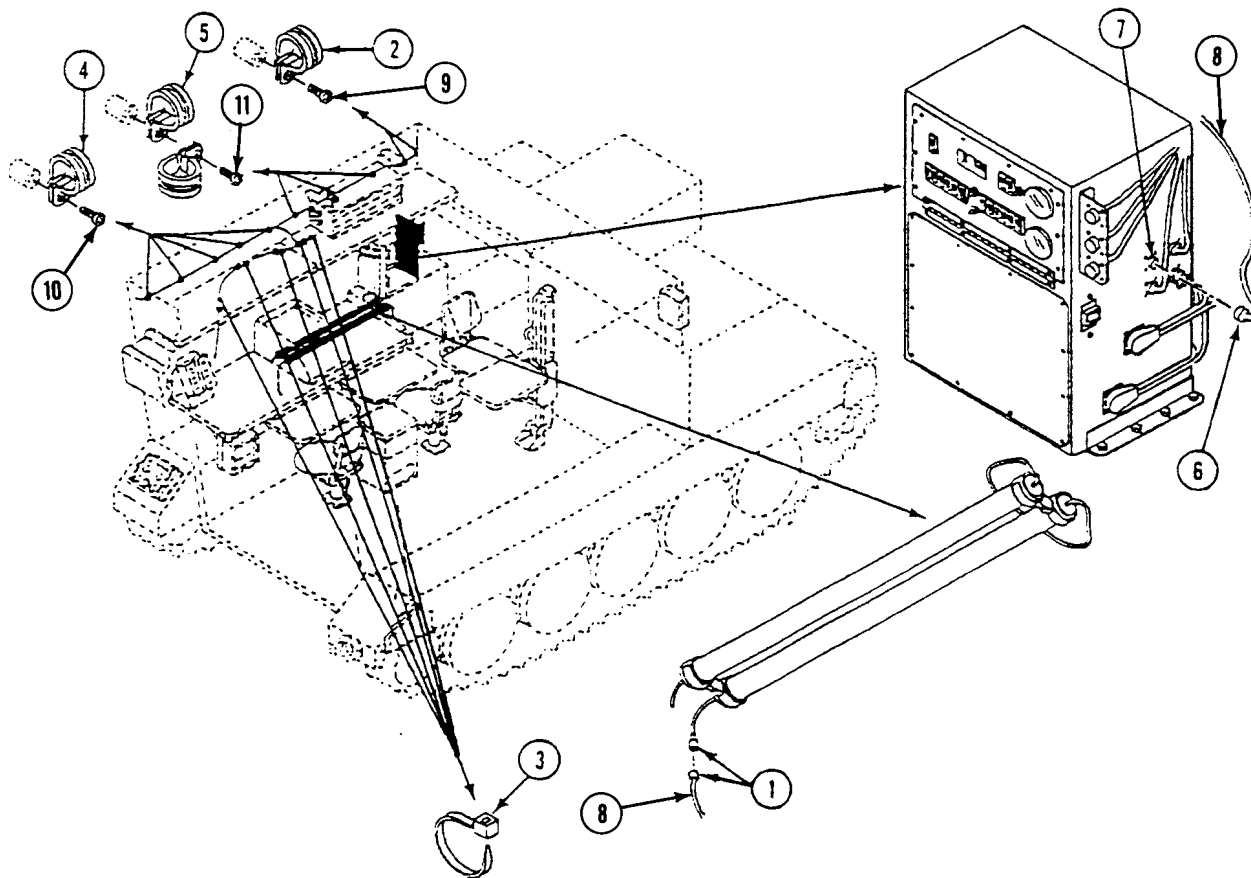
REMOVAL

1. Disconnect cable W11 plug P17 (1) from power control box A1 jack J37 (2).
2. Remove three screws (8) and loop clamps (3).
3. Remove five screws (9) and loop clamps (4).
4. Remove and discard five tie straps (5).
5. Remove two screws (10) and loop clamps (6).
6. Disconnect cable W11 plug P2 (11) from AC light plug P1 (7).
7. Remove cable W11 (12) from carrier.



INSTALLATION

1. Install cable W11 (8) in carrier.
2. Connect cable W11 plug P2 (8) to AC light plug P1 (1).
3. Install two loop clamps (2) and secure to hull with two screws (9).
4. Secure cable with five new tie straps (3).
5. Install five loop clamps (4) and secure to hull with five screws (10).
6. Install three loop clamps (5) and secure to hull with three screws (11).
7. Connect cable W11 plug P17 (6) to power control box A1 jack J37 (7).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE GROUND STRAP (W12) (M1068 ONLY)

0748 00

THIS WORK PACKAGE COVERS:

- Removal (page 0748 00-1).
- Installation (page 0748 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

- Lockwasher
- Lockwasher

Personnel Required

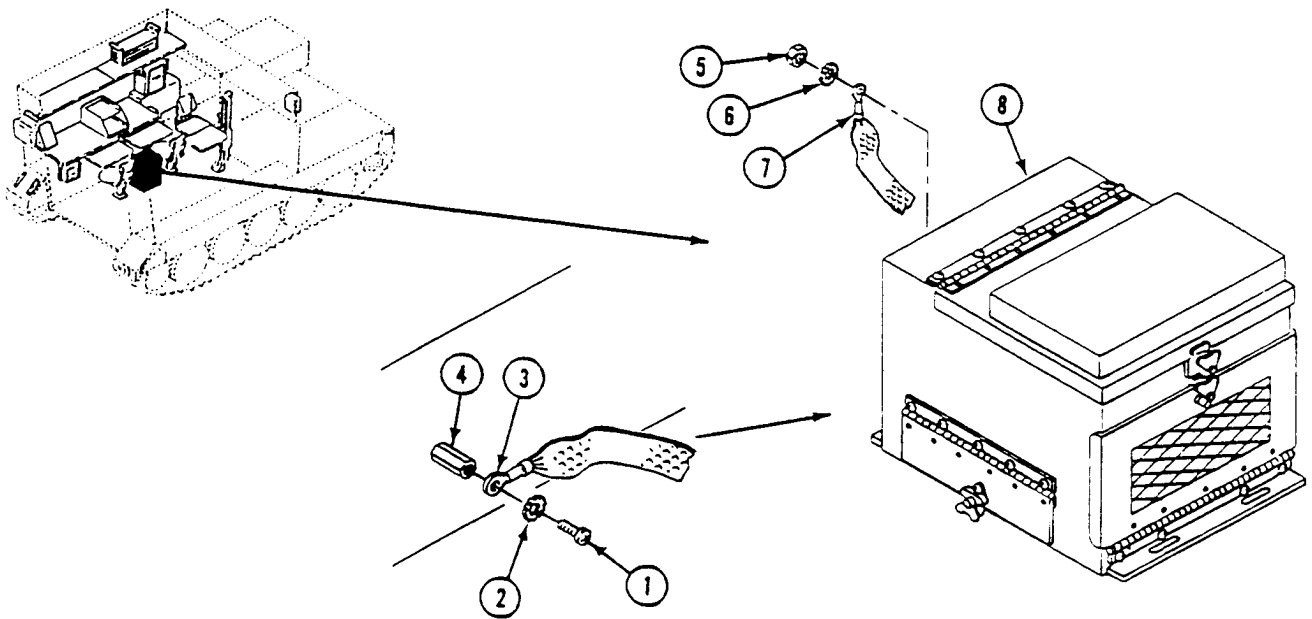
Power-Generation Equipment Repairer 52D10

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- All external power disconnected (TM 11-7010-256-12&P)
- Battery ground lead disconnected (WP 0294 00)

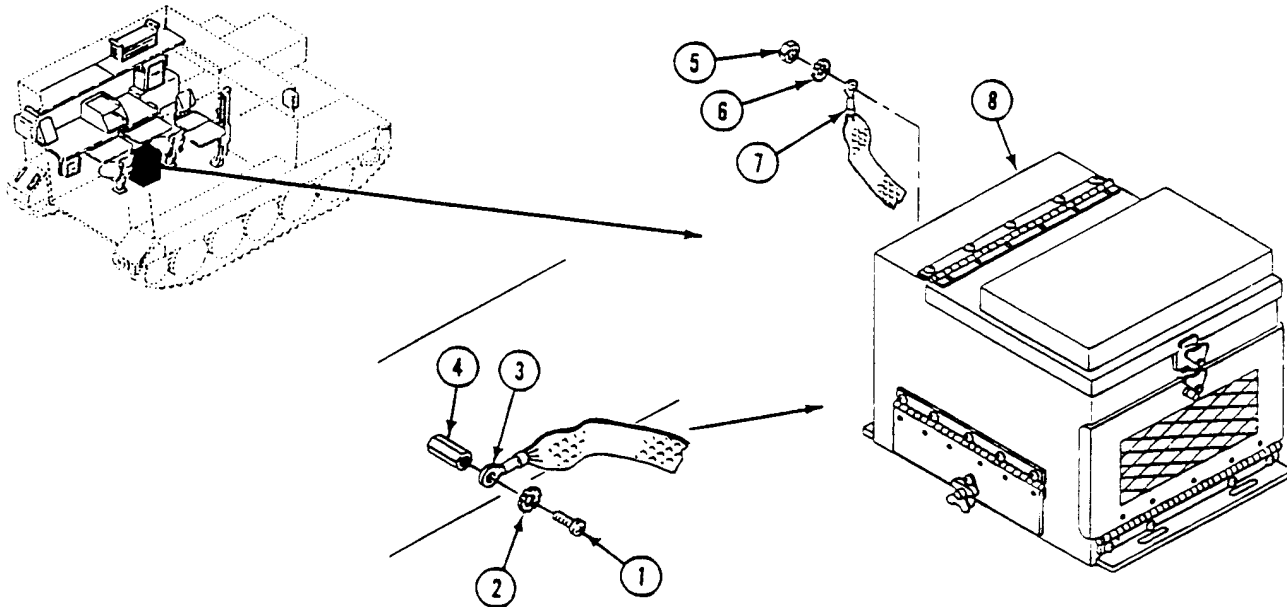
REMOVAL

1. Remove screw (1), lockwasher (2), and ground strap W12 terminal (3) from ground lug G1 (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and ground strap (7) from ATCCS UPS box (8). Discard lockwasher.



REPLACE GROUND STRAP (W12) (M1068 ONLY) — Continued**0748 00****INSTALLATION**

1. Install ground strap (7), new lockwasher (6), and nut (5) on ATCCS UPS box (8).
2. Install ground strap W12 terminal (3), new lockwasher (2), and screw (1) on ground lug G1 (4).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE HARNESS W32 (M1068 ONLY)

0749 00

THIS WORK PACKAGE COVERS:

Removal (page 0749 00-1).
 Installation (page 0749 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Disconnect all external power (TM 11-7010-256-12&P)

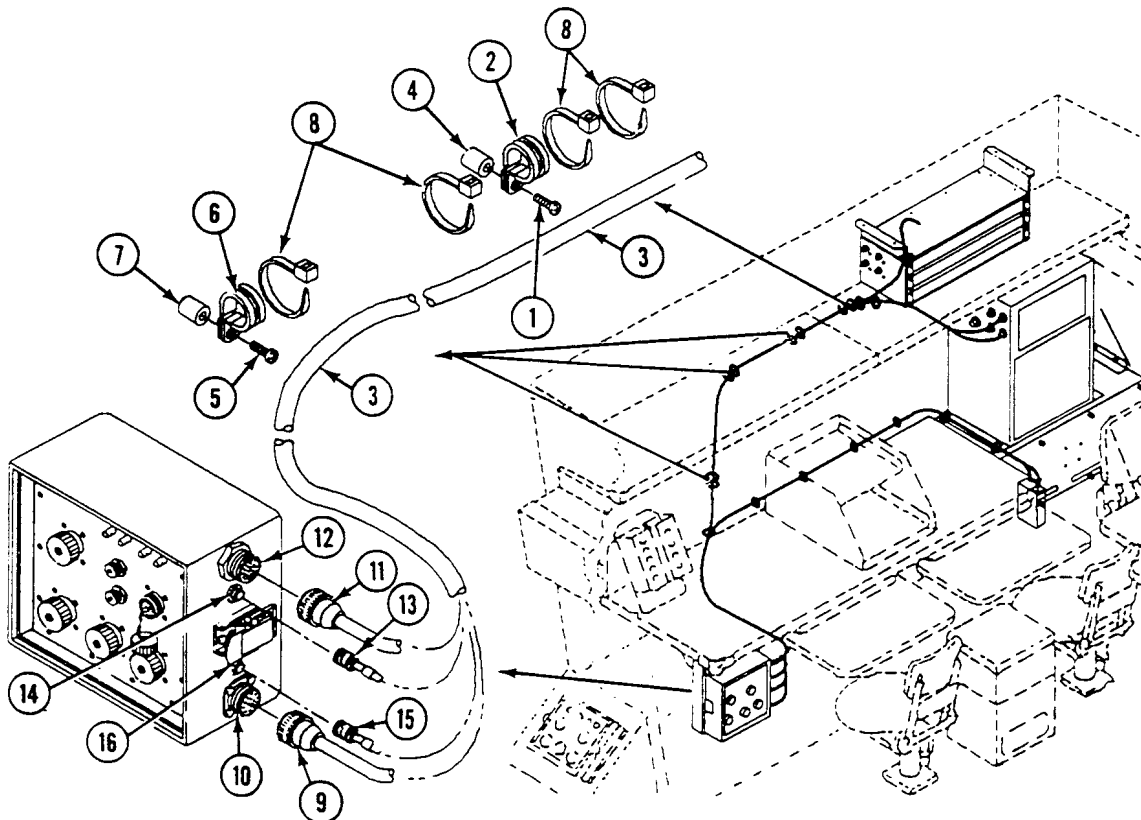
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (11)

REMOVAL

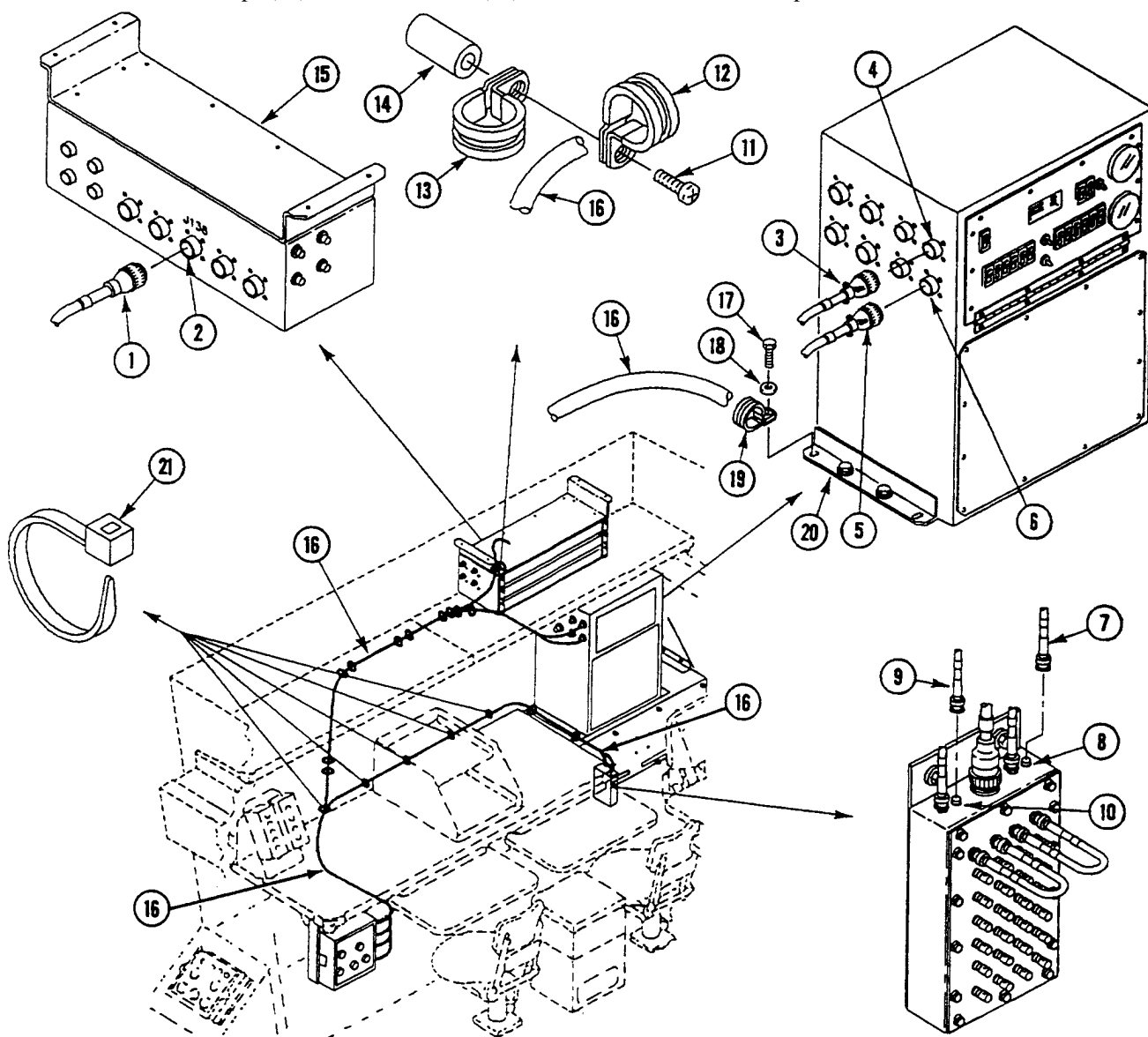
1. Remove screw (1) and clamp (2) from W32 harness (3) and weldnut (4).
2. Remove three screws (5) and clamps (6) from W32 harness (3) and weldnuts (7).
3. Remove six tie straps (8) from W32 harness (3). Discard tie straps.
4. Disconnect W32 harness plug P6 (9) from tent interface panel box A5 jack J7 (10).
5. Disconnect W32 harness plug P7 (11) from tent interface panel box A5 jack J8 (12).
6. Disconnect W32 harness plug P8 (13) from tent interface panel box A5 jack J10 (14).
7. Disconnect W32 harness plug P9 (15) from tent interface panel box A5 jack J9 (16).



REPLACE HARNESS W32 (M1068 ONLY) — Continued

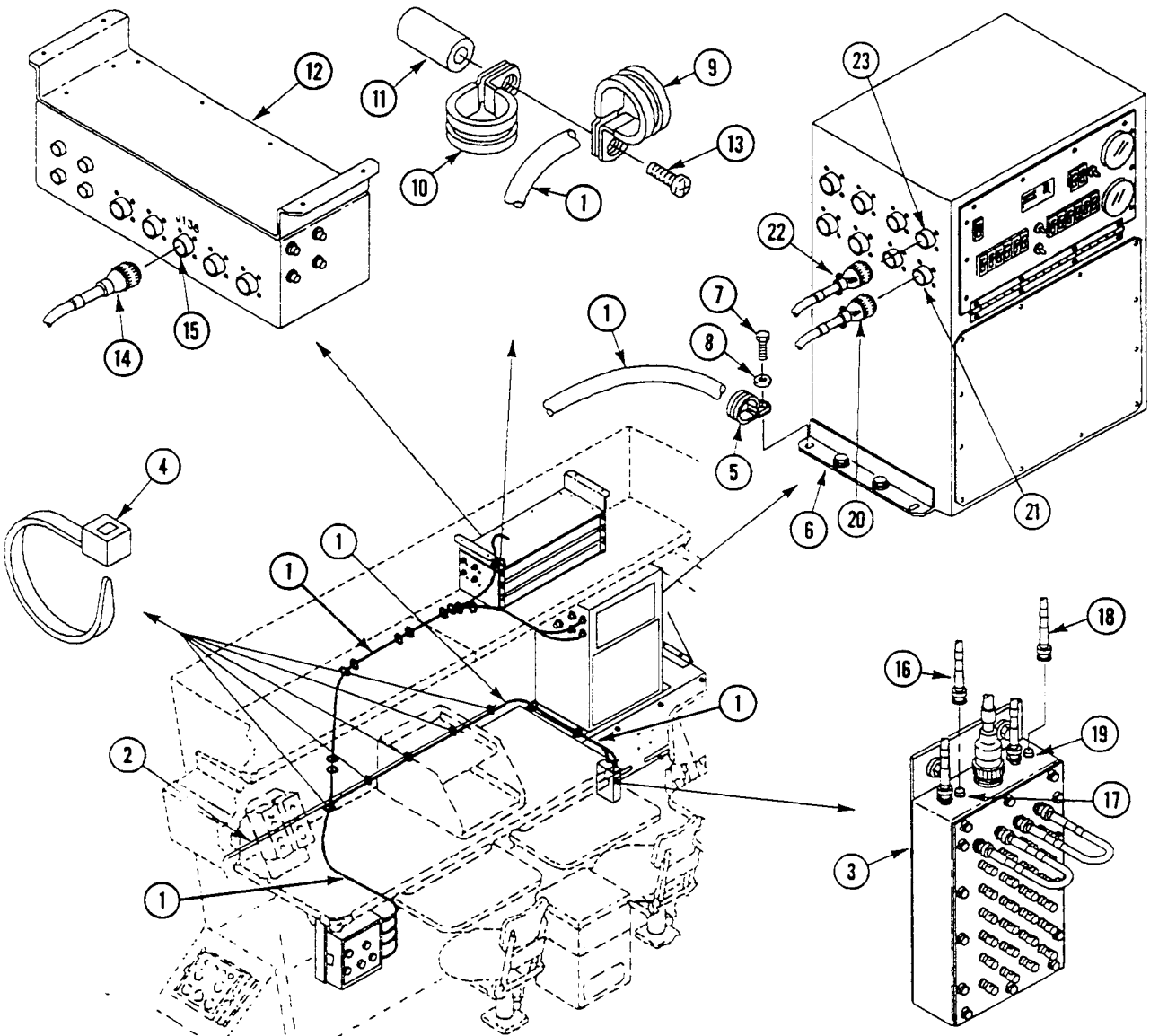
0749 00

8. Disconnect W32 harness plug P107 (1) from patch panel box A10 jack J138 (2).
9. Disconnect W32 harness plug P16 (3) from power control enclosure A1 jack J36 (4).
10. Disconnect W32 harness plug P15 (5) from power control enclosure A1 jack J32 (6).
11. Disconnect W32 harness plug P5 (7) from data panel assembly A13 jack J1 (8).
12. Disconnect W32 harness plug P4 (9) from data panel assembly A13 jack J4 (10).
13. Remove screw (11) and clamps (12) and (13) from weldnut (14) below patch panel box A10 (15). Remove clamp (12) from W32 harness (16).
14. Remove two screws (17), washers (18), and clamps (19) from power control enclosure A1 (20) and W32 harness (16).
15. Remove five tie straps (21) and W32 harness (16) from carrier. Discard tie straps.



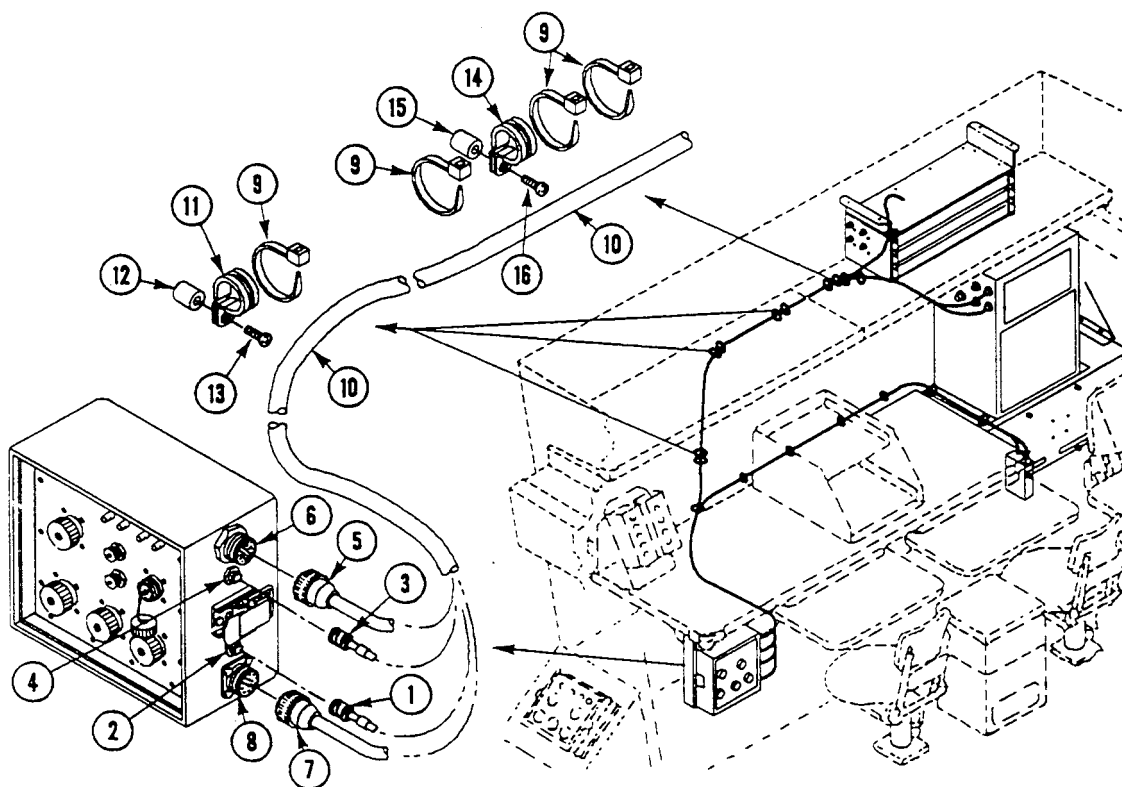
INSTALLATION

1. Route branch of W32 harness (1) along fuel line (2) to data panel assembly A13 (3). Secure W32 harness with five new tie straps (4).
2. Install two clamps (5) on W32 harness (1) and secure to power control enclosure A1 (6) with two screws (7) and washers (8).
3. Install clamp (9) on W32 harness (1) and secure clamps (9) and (10) to weldnut (11) below patch panel box A10 (12) with screw (13).
4. Connect W32 harness plug P107 (14) to patch panel box A10 jack J138 (15).
5. Connect W32 harness plug P4 (16) to data panel assembly A13 jack J4 (17).
6. Connect W32 harness plug P5 (18) to data panel assembly A13 jack J1 (19).
7. Connect W32 harness plug P15 (20) to power control enclosure A1 jack J32 (21).
8. Connect W32 harness plug P16 (22) to power control enclosure A1 jack J36 (23).



REPLACE HARNESS W32 (M1068 ONLY) — Continued**0749 00**

9. Connect W32 harness plug P9 (1) to tent interface panel box A5 jack J9 (2).
10. Connect W32 harness plug P8 (3) to tent interface panel box A5 jack J10 (4).
11. Connect W32 harness plug P7 (5) to tent interface panel box A5 jack J8 (6).
12. Connect W32 harness plug P6 (7) to tent interface panel box A5 jack J7 (8).
13. Install six new tie straps (9) on W32 harness (10).
14. Install three clamps (11) on W32 harness (10) and secure to weldnuts (12) with screws (13).
15. Install clamp (14) on W32 harness (10) and secure to weldnut (15) with screw (16).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE CABLE W35, CABLE W28, AND CABLE ADAPTER (M1068 ONLY)

0750 00

THIS WORK PACKAGE COVERS:

Removal (page 0750 00-1).
 Installation (page 0750 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

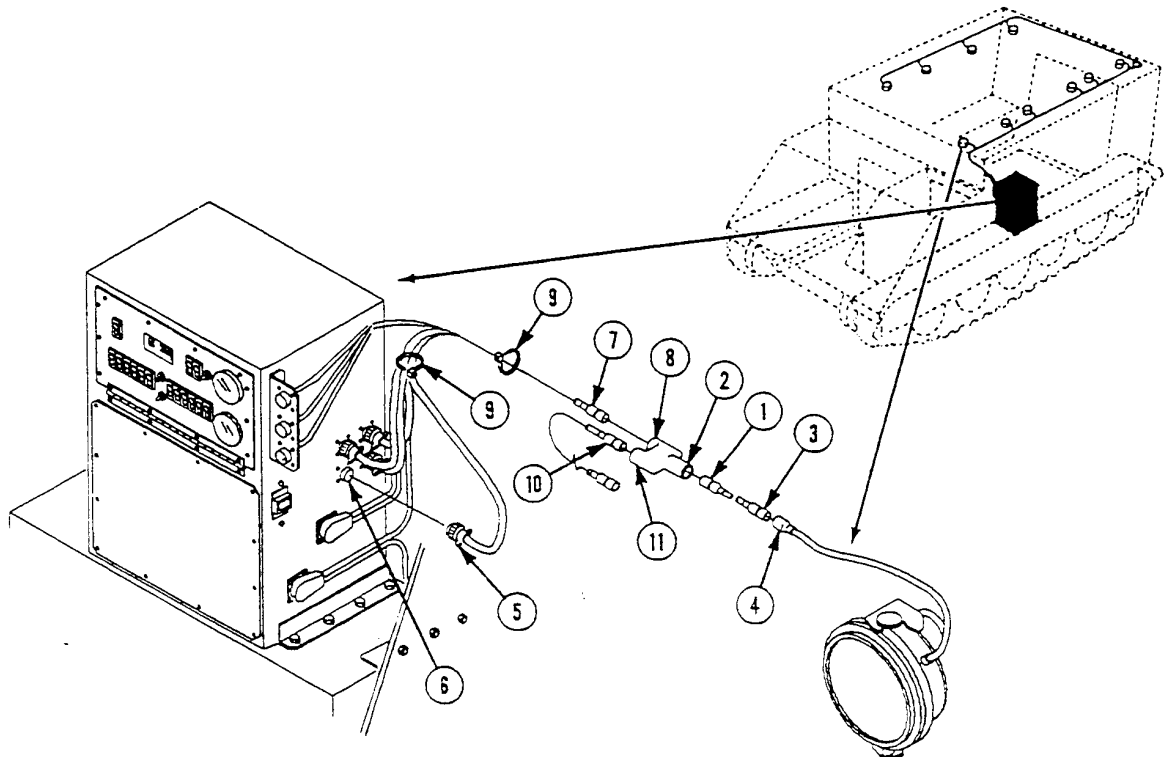
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (5)

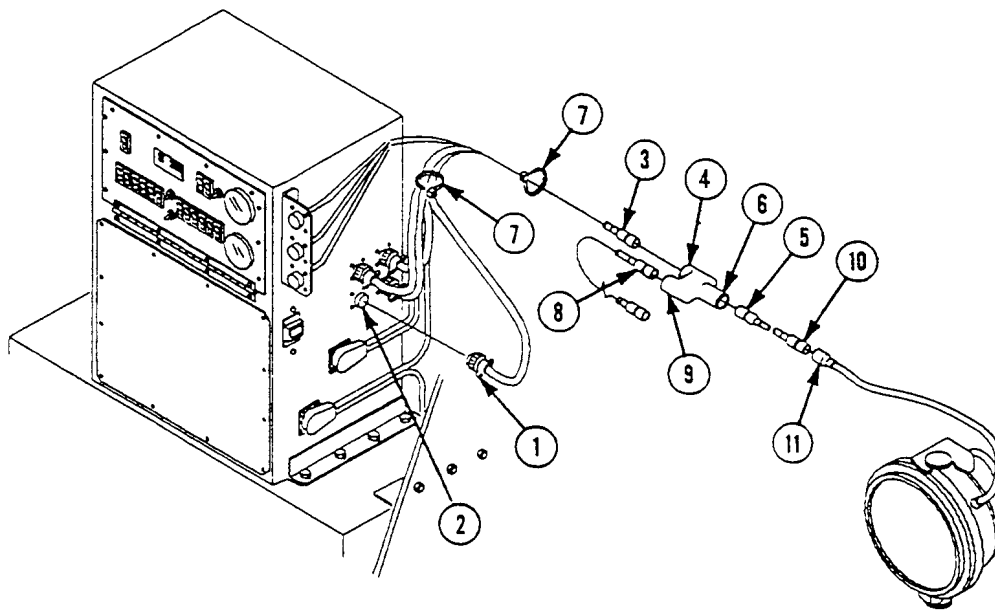
REMOVAL

1. Disconnect cable plug W28 P1 (1) from connector adapter plug T1 P1 (2).
2. Disconnect cable plug W28 P2 (3) from circuit 38B lead (4).
3. Disconnect cable plug W35 P9 (5) from power control enclosure jack A1 J29 (6).
4. Disconnect cable plug W35 P1 (7) from connector adapter plug T1 P2 (8).
5. Remove five tie straps (9) and cable W35 from carrier. Discard tie straps.
6. Disconnect circuit 38B lead (10) from connector adapter plug T1 P3 (11).



INSTALLATION

1. Connect cable plug W35 P9 (1) to power control enclosure jack A1 J29 (2).
2. Connect cable plug W35 P1 (3) to connector adapter plug T1 P2 (4).
3. Connect cable plug W28 P1 (5) to connector adapter plug T1 P1 (6).
4. Secure cable W35 with five new tie straps (7).
5. Connect circuit 38B lead (8) to connector adapter plug T1 P3 (9).
6. Connect circuit 38B lead (10) to cable plug W28 P2 (11).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE CABLE W38, CABLE W29, AND CABLE ADAPTER (M1068 ONLY)

0751 00

THIS WORK PACKAGE COVERS:

- Removal (page 0751 00-1).
- Installation (page 0751 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

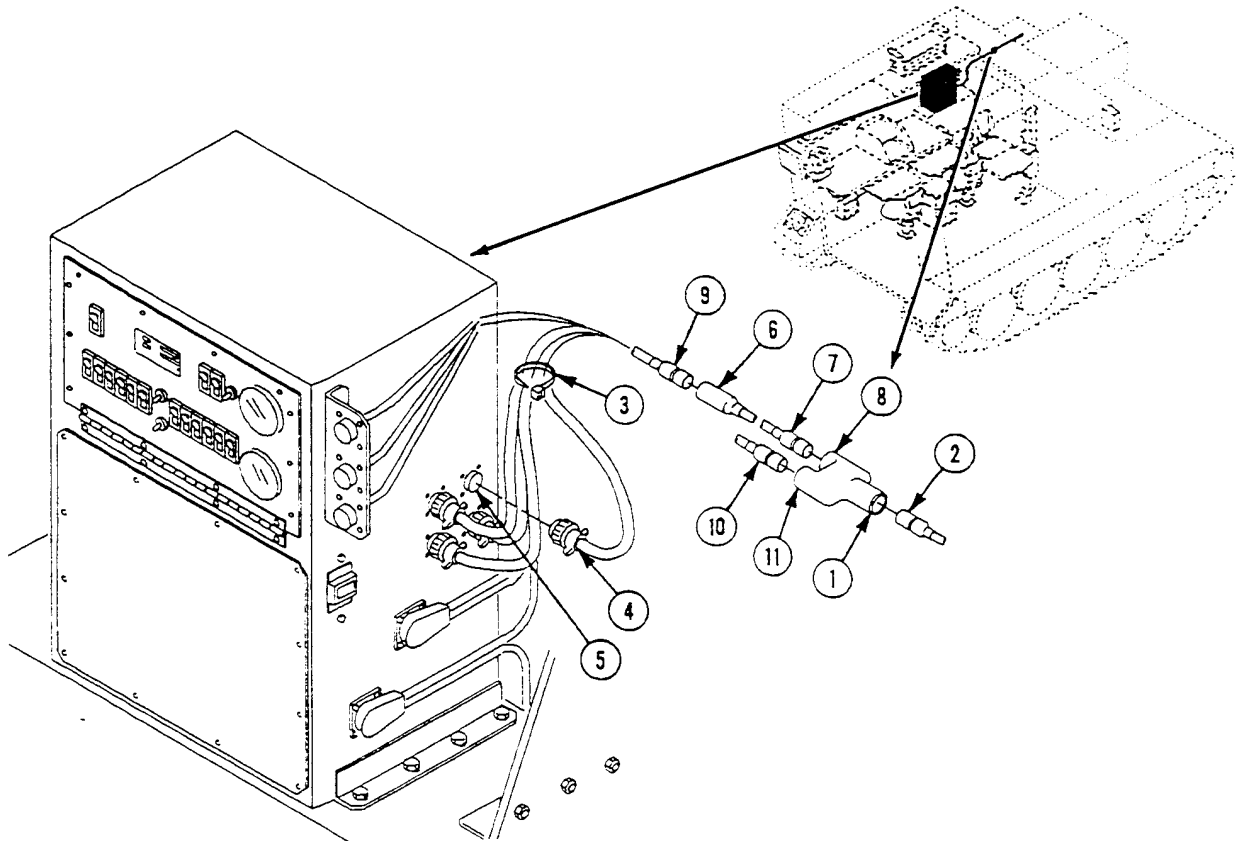
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- All external power disconnected (TM 11-7010-256-12&P)
- Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap

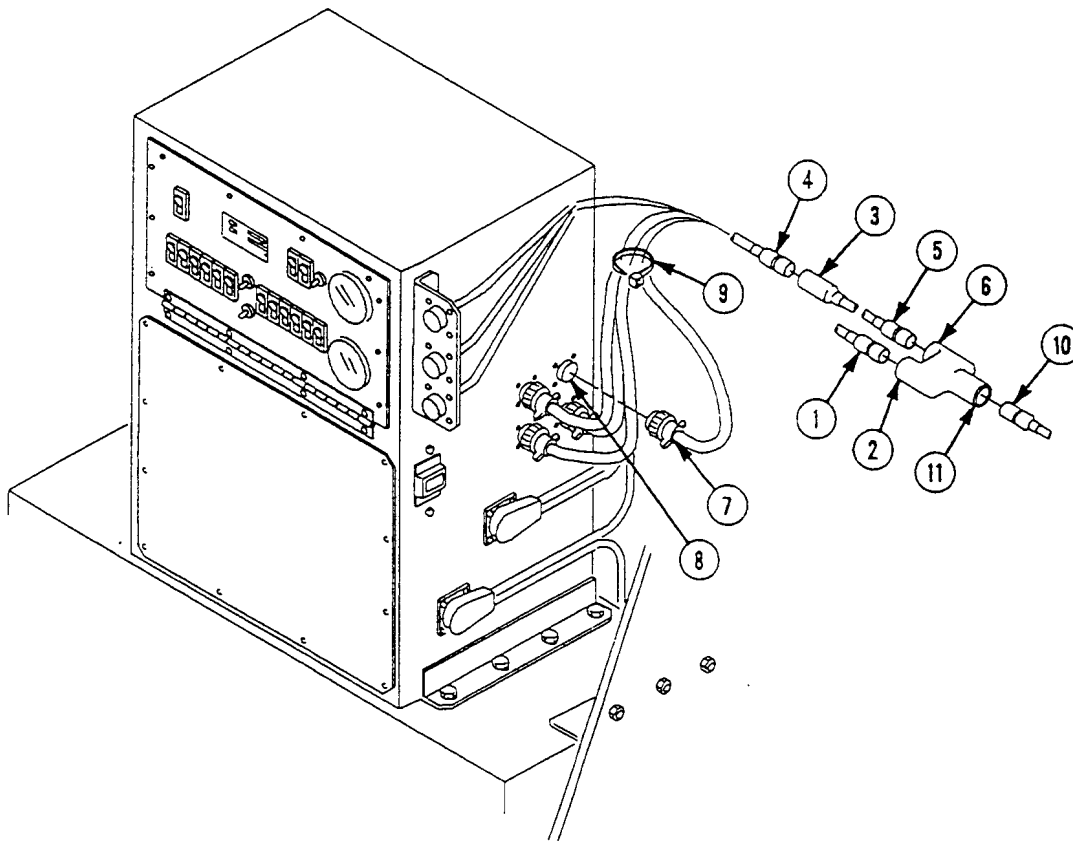
REMOVAL

1. Disconnect connector adapter plug T2 P1 (1) from circuit 415 lead (2).
2. Remove tie strap (3) from cables. Discard tie strap.
3. Disconnect cable plug W38 P7 (4) from power control enclosure jack A1 J28 (5).
4. Disconnect cable plugs W29 P2 (6) and W29 P1 (7) from adapter plug T2 P2 (8) and cable plug W38 P6 (9).
5. Remove dummy connector plug (10) from connector adapter plug T2 P3 (11).



INSTALLATION

1. Install dummy connector plug (1) in connector adapter plug T2 P3 (2).
2. Connect cable plug W29 P2 (3) to cable plug W38 P6 (4).
3. Connect cable plug W29 P1 (5) to connector adapter plug T2 P2 (6).
4. Connect cable plug W38 P7 (7) to power control enclosure jack A1 J28 (8).
5. Secure cables with new tie strap (9).
6. Connect connector adapter plug T2 P1 (10) to circuit 415 lead (11).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE SINGLE POINT LAN CABLE (W40) (M1068 ONLY)

0752 00

THIS WORK PACKAGE COVERS:

Removal (page 0752 00-1).
 Installation (page 0752 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Signal Support System Specialist 31U10

Tools and Special Tools

Radio Equipment Tool Kit (WP 0780 00, Item 81)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

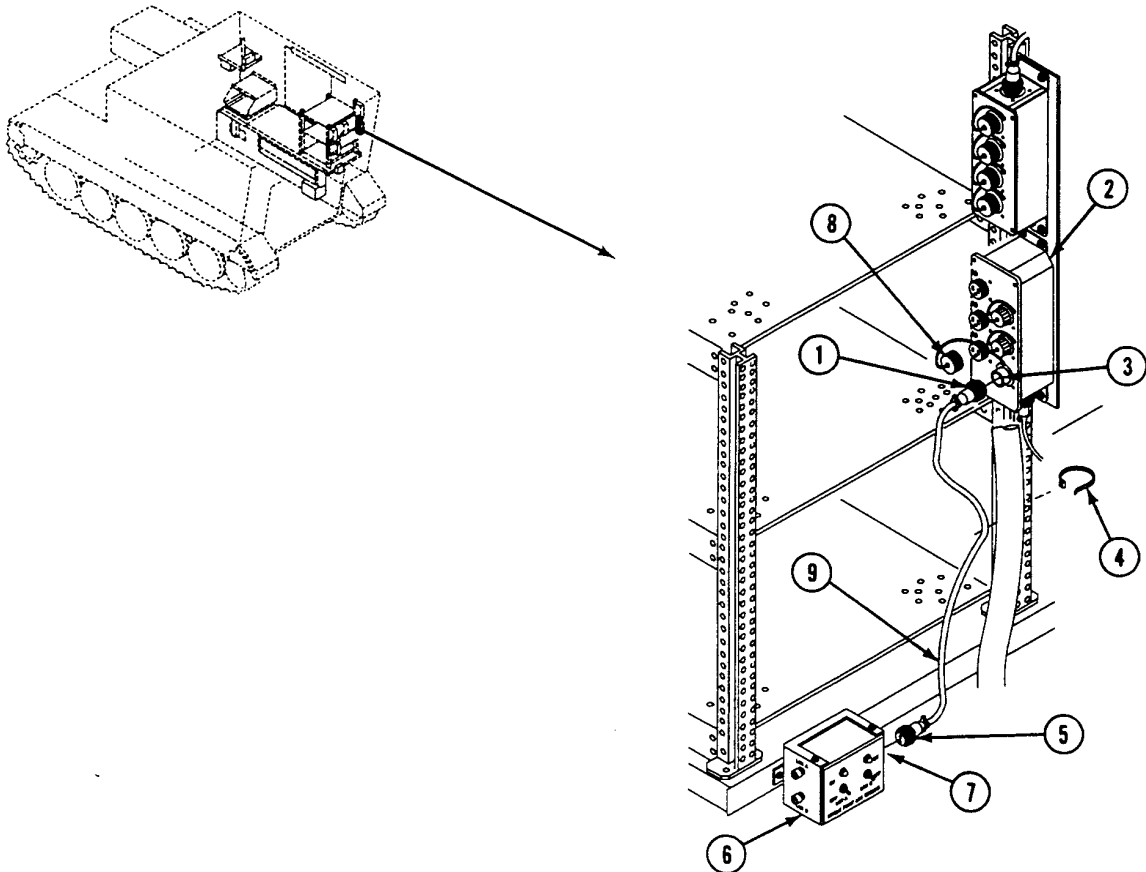
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap

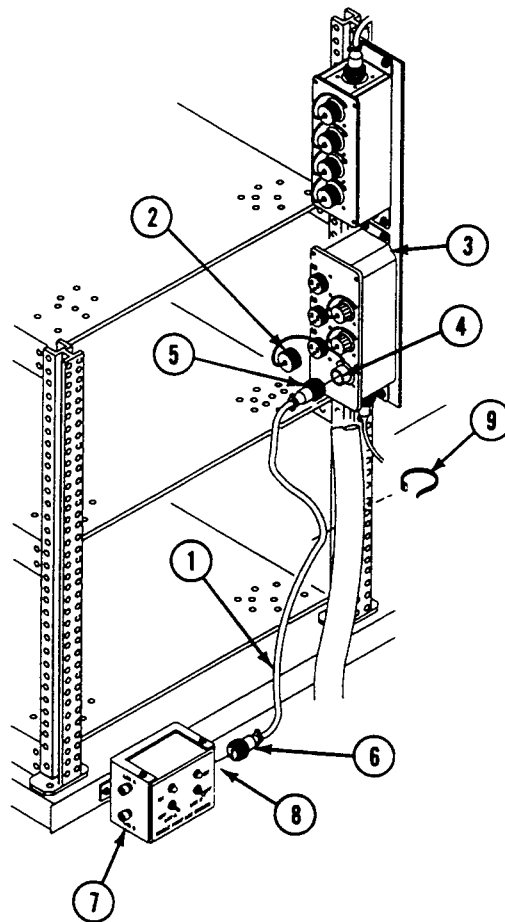
REMOVAL

1. Disconnect cable W40 plug P1 (1) from DC power extension box A8 (2) jack J17 (3).
2. Remove tie strap (4). Discard tie strap.
3. Disconnect cable W40 plug P2 (5) from single point LAN ground box A15 (6) jack J1 (7).
4. Install dust cap (8) on DC power extension box A8 (2) jack J17 (3).
5. Remove cable W40 (9) from carrier.



INSTALLATION

1. Install cable W40 (1) in carrier.
2. Remove dust cap (2) from DC power extension box A8 (3) jack J17 (4).
3. Connect cable W40 plug (5) to DC power extension box A8 (3) jack J17 (4).
4. Connect cable W40 plug 2 (6) to single point LAN ground box A15 (7) jack J1 (8).
5. Secure excess cable slack with new tie strap (9).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly. See TM 11-7010-256-12&P.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE CABLES W42, W43, AND W251 (M1068 ONLY)

0753 00

THIS WORK PACKAGE COVERS:

Removal (page 0753 00-1).
 Installation (page 0753 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Tie strap (6)

Personnel Required

Power-Generation Equipment Repairer 52D10

Equipment Condition

Engine stopped (see your -10)

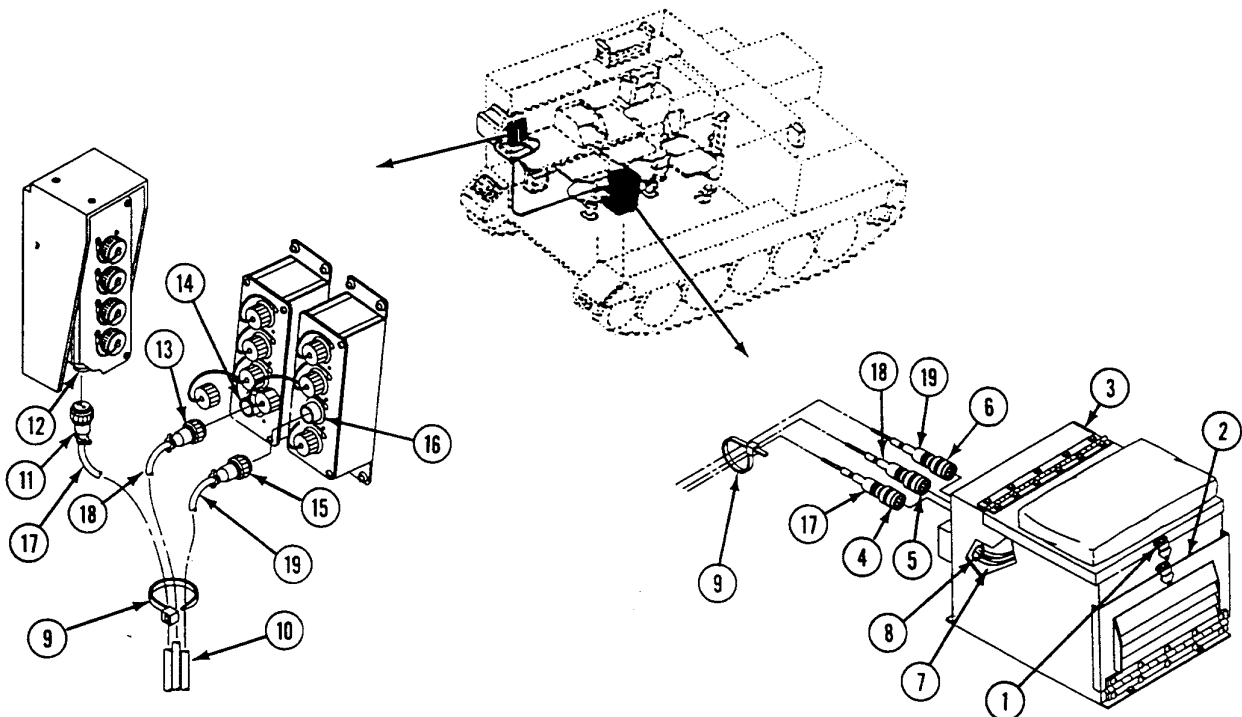
Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

Battery ground lead disconnected (WP 0294 00)

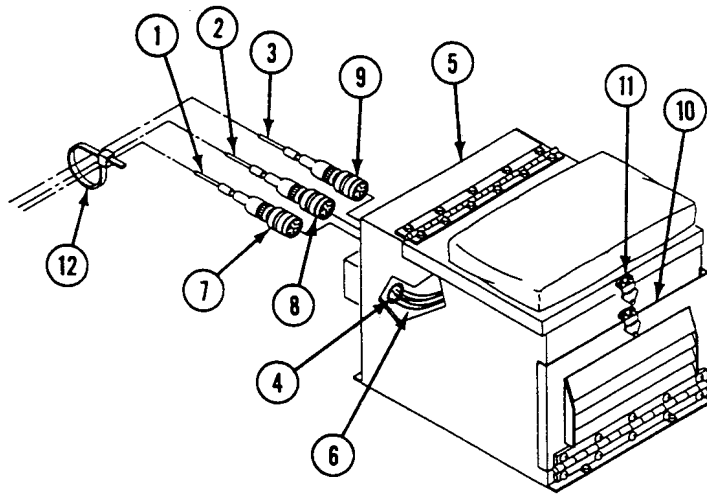
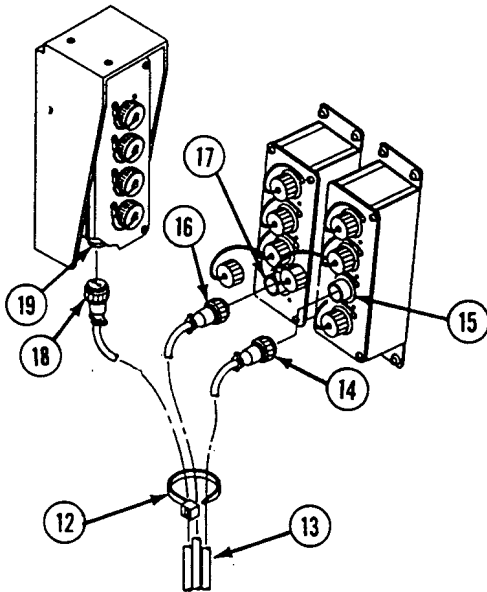
REMOVAL

1. Release catch (1) and open cover (2) on power supply storage box (3).
2. Disconnect cable W251 plug P1 (4), cable W42 plug P1 (5), and cable W43 plug P1 (6) from UPS (7). Remove cables from opening (8) in back of power supply storage box (3).
3. Remove six tie straps (9) from cables (10). Discard tie straps.
4. Disconnect cable W251 plug P2 (11) from UPS power extension box A18 jack J6 (12).
5. Disconnect cable W42 plug P2 (13) from DC power extension box A8 jack J21 (14).
6. Disconnect cable W43 plug P2 (15) from AC power extension box A7 jack J6 (16).
7. Remove cables W251 (17), W42 (18), and W43 (19) from carrier.



INSTALLATION

1. Insert plugs P1 of three cables W251 (1), W42 (2), and W43 (3) through opening (4) in back of power supply storage box (5).
2. Connect cables to UPS (6) as follows:
 W251 plug P1 (7) to AC OUT
 W42 plug P1 (8) to DC IN
 W43 plug P1 (9) to AC IN
3. Close cover (10) on power supply storage box (5) and secure catch (11).
4. Install six new tie straps (12) on cables (13).
5. Connect cable W43 plug P2 (14) to AC power extension box A7 jack J6 (15).
6. Connect cable W42 plug P2 (16) to DC power extension box A8 jack J21 (17).
7. Connect cable W251 plug P2 (18) to UPS power extension box A18 jack J6 (19).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE CABLE W45 (M1068 ONLY)

0754 00

THIS WORK PACKAGE COVERS:

Removal (page 0754 00-1).
 Installation (page 0754 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

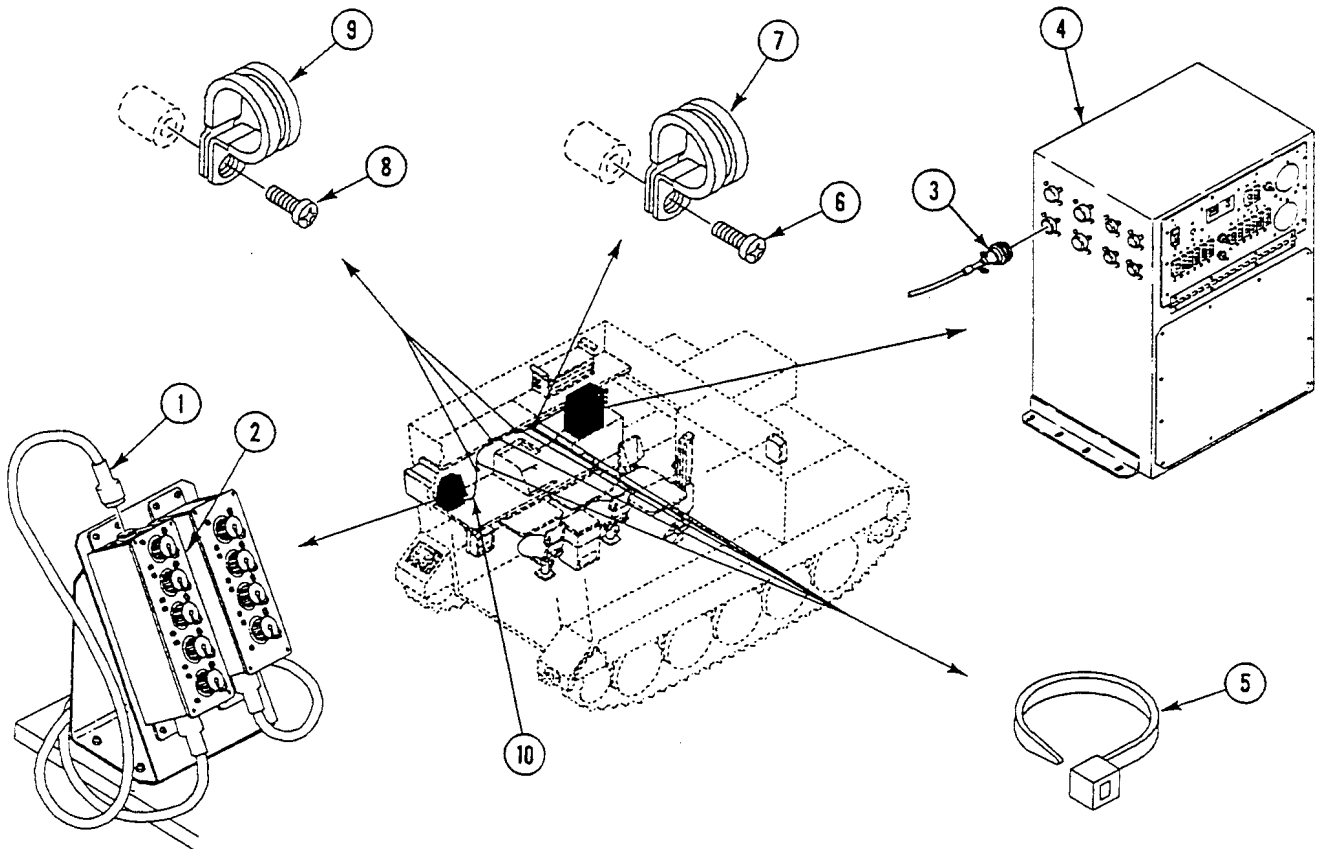
Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Tie strap (6)

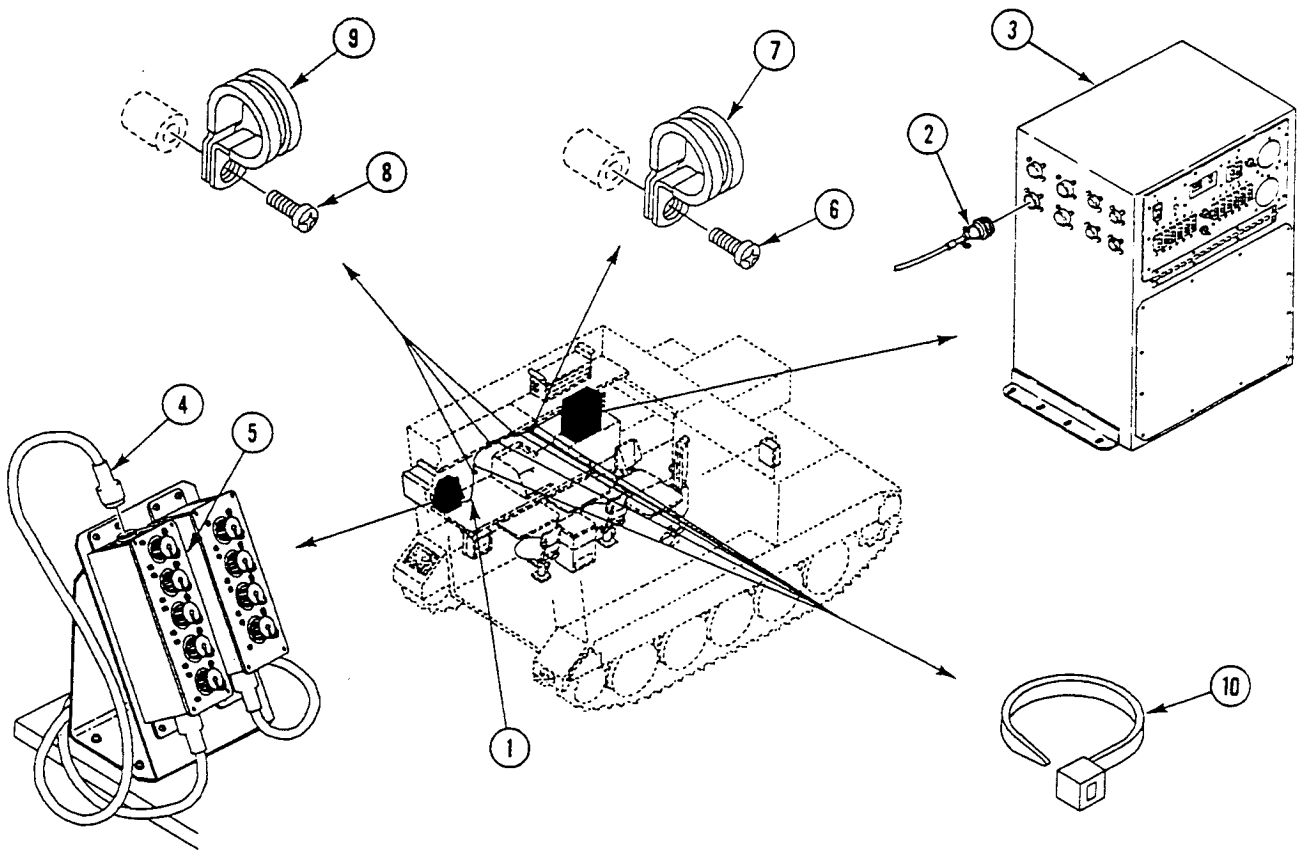
REMOVAL

1. Disconnect cable plug W45 P1 (1) from DC power extension box jack A9 J2 (2).
2. Disconnect cable plug W45 P13 (3) from power control enclosure jack A1 J33 (4).
3. Remove six tie straps (5) from cables. Discard tie straps.
4. Remove screw (6) and clamp (7) from cables.
5. Remove three screws (8) and clamps (9) from cables. Remove cable W45 (10) from carrier.



INSTALLATION

1. Position cable W45 (1) in carrier. Connect cable plug W45 P13 (2) into power control enclosure jack A1 J33 (3).
2. Connect cable plug W45 P1 (4) into DC power extension box jack A9 J2 (5).
3. Connect cables with screw (6) and clamps (7) to bulkhead.
4. Secure cables with three screws (8) and clamps (9) to bulkhead.
5. Secure remaining cable W45 with six new tie straps (10) evenly between clamps (9).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE AC CABLE ASSEMBLY (W252) (M1068 ONLY)

0755 00

THIS WORK PACKAGE COVERS:

Removal (page 0755 00-2).
Installation (page 0755 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Tools and Special Tools

General Mechanic's Tool Kit WP 0780 00, Item 29

All external power disconnected (TM 11-7010-256-12&P)

Materials/Parts

Tie strap (2)

Tie strap (6)

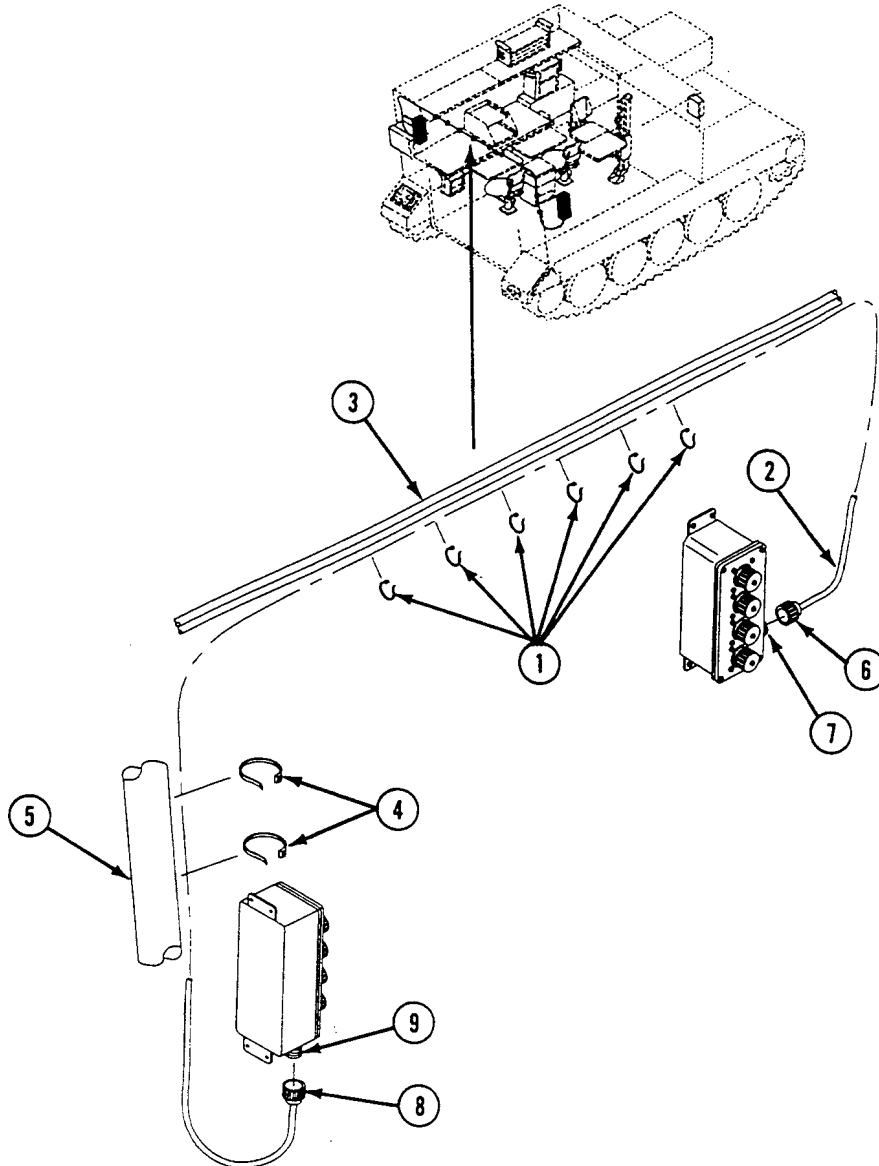
Battery ground lead disconnected (WP 0294 00)

Personnel Required

Unit Mechanic

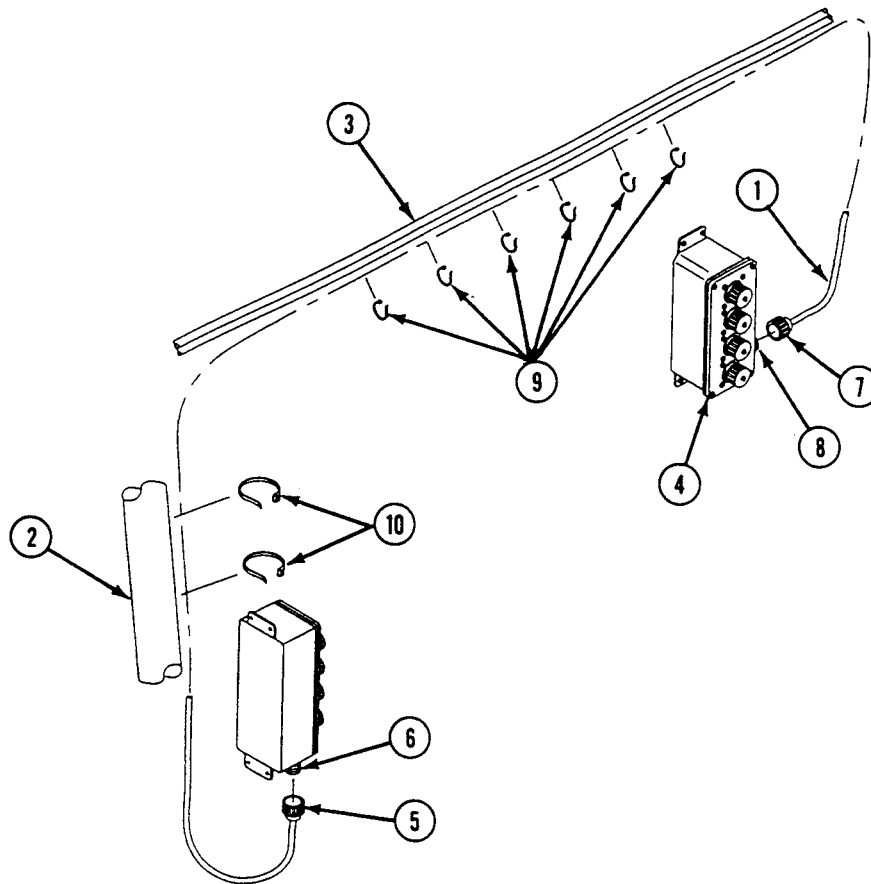
REMOVAL

1. Remove six tie straps (1) and cable W252 (2) from existing wiring harness (3) along top rear hull. Discard tie straps.
2. Remove two tie straps (4) and cable W252 (2) from fuel filler tube (5). Discard tie straps.
3. Disconnect cable W252 plug P1 (6) from AC power extension box A18 jack J1 (7).
4. Disconnect cable W252 plug P2 (8) from AC power extension box A19 jack J15 (9).
5. Remove cable W252 (2) from carrier.



INSTALLATION

1. Install cable W252 (1) in carrier. Route cable along fuel filler tube (2), along the rear wiring harness (3) across the rear top of hull, and down to power extension box A18 (4).
2. Connect cable W252 plug P2 (5) to AC power extension box A19 jack J15 (6).
3. Connect cable W252 plug P1 (7) to power extension box A18 jack J1 (8).
4. Secure cable W252 (1) to rear wiring harness (3) above ramp with six new tie straps (9) and to fuel filler tube (2) with two new tie straps (10).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE LAN A OR B CABLE (W103/W104) (M1068 ONLY)

0756 00

THIS WORK PACKAGE COVERS:

- Removal (page 0756 00-1).
- Installation (page 0756 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

Electronic Equipment Tool Kit (WP 0780 00, Item 81)

Materials/Parts

Locknut (2)

Tie strap (9)

Personnel Required

Unit Level Communications Maintainer 31V10

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

All external power disconnected (TM 11-7010-256-12&P)

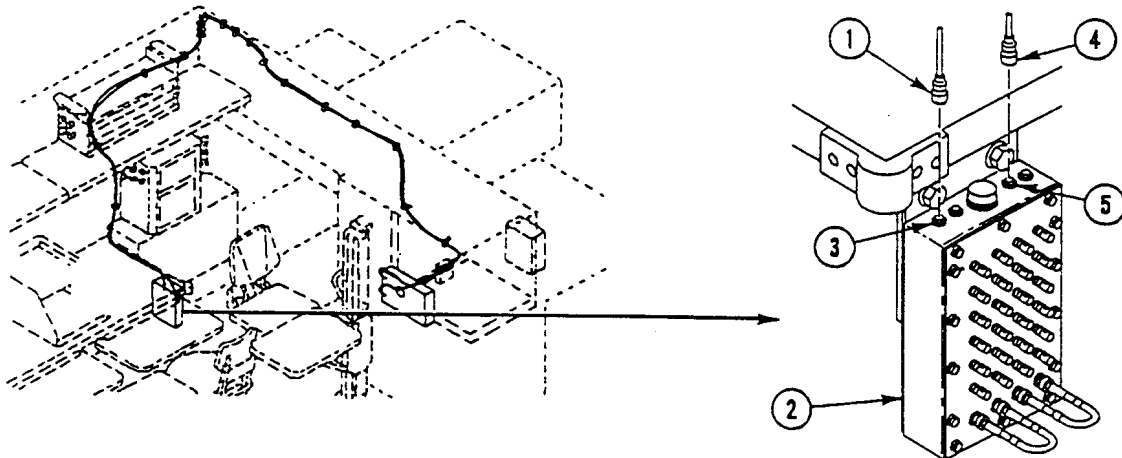
Battery ground lead disconnected (WP 0294 00)

REMOVAL

NOTE

Cables W103 and W104 are routed together. They can be removed and installed using the same procedure.

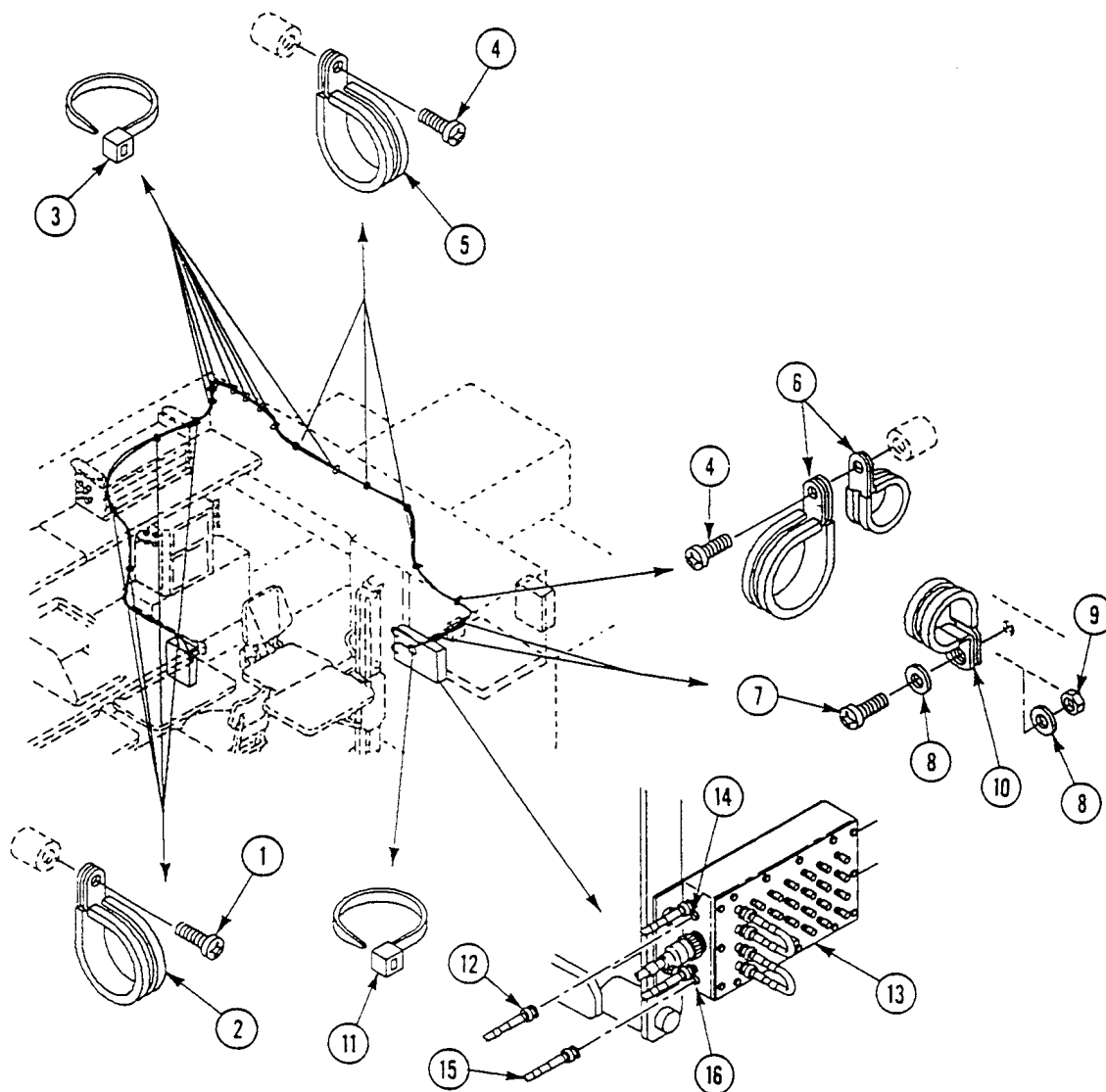
1. Remove cable W103 plug P2 (1) from roadside data box A13 (2) jack J5 (3) or W104 plug P2 (4) from roadside data box A13 (2) jack J2 (5).



REPLACE LAN A OR B CABLE (W103/W104) (M1068 ONLY) — Continued

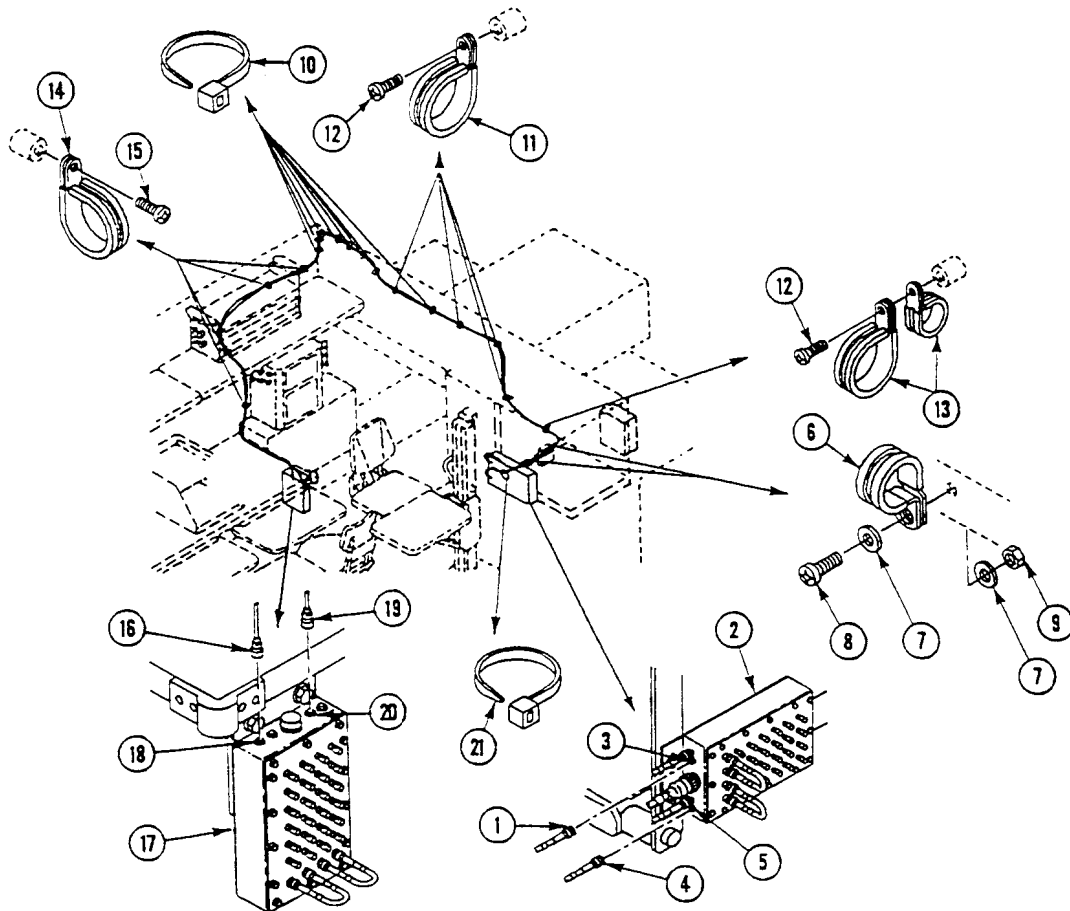
0756 00

2. Remove four screws (1) and clamps (2).
3. Remove eight tie straps (3). Discard tie straps.
4. Remove five screws (4) and clamps (5).
5. Remove screw (4) and two clamps (6) from weldnut.
6. Remove two screws (7), washers (8), locknuts (9), and clamps (10). Discard locknuts.
7. Remove tie strap (11). Discard tie strap.
8. Disconnect cables W103 plug P1 (12) from data panel assembly A12 (13) jack J2 (14) or W104 plug P1 (15) from data panel assembly A12 (13) jack J5 (16).
9. Remove cable W103 or W104 from carrier.



INSTALLATION

1. Install cable W103 or W104 in carrier.
2. Connect cable W103 plug P1 (1) to data panel assembly A12 (2) jack J2 (3) or W104 plug P1 (4) to data panel assembly A12 (2) jack J5 (5).
3. Attach cable to carrier with two clamps (6), washers (7), two screws (8), and new locknuts (9).
4. Secure excess slack in cable with new tie strap (10).
5. Attach cable to carrier hull above engine access panel with four clamps (11) and screws (12).
6. Install two clamps (13) and screws (12) on weldnut.
7. Attach cable to left side of carrier hull with four clamps (14) and screws (15).
8. Connect cable W103 plug P2 (16) to roadside data box A13 (17) jack J5 (18) or W104 plug P2 (19) to roadside data box A13 (17) jack J2 (20).
9. Attach excess cable slack to carrier hull above access panel with eight new tie straps (21).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Turn MASTER SWITCH to ON (see your -10). Check that electrical system works properly.
3. Turn MASTER SWITCH to OFF (see your -10).

END OF TASK

REPLACE CABLE W124 (M1068 ONLY)

0757 00

THIS WORK PACKAGE COVERS:

Removal (page 0757 00-1).
 Installation (page 0757 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Signal Support System Specialist 31U10

Tools and Special Tools

Electronic Equipment Tool Kit (WP 0780 00, Item 81)

Equipment Condition

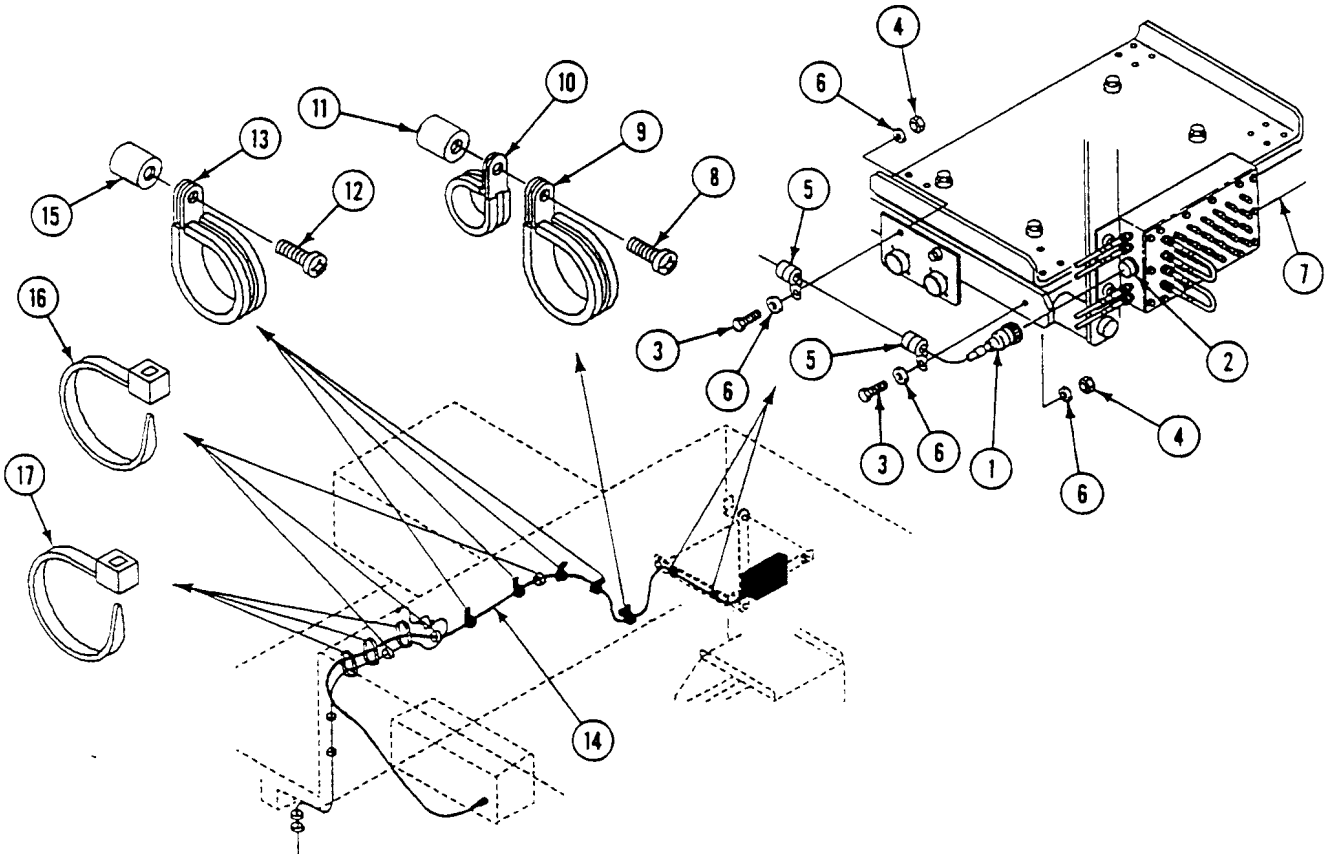
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Locknut (2)
 Tie strap (6)

REMOVAL

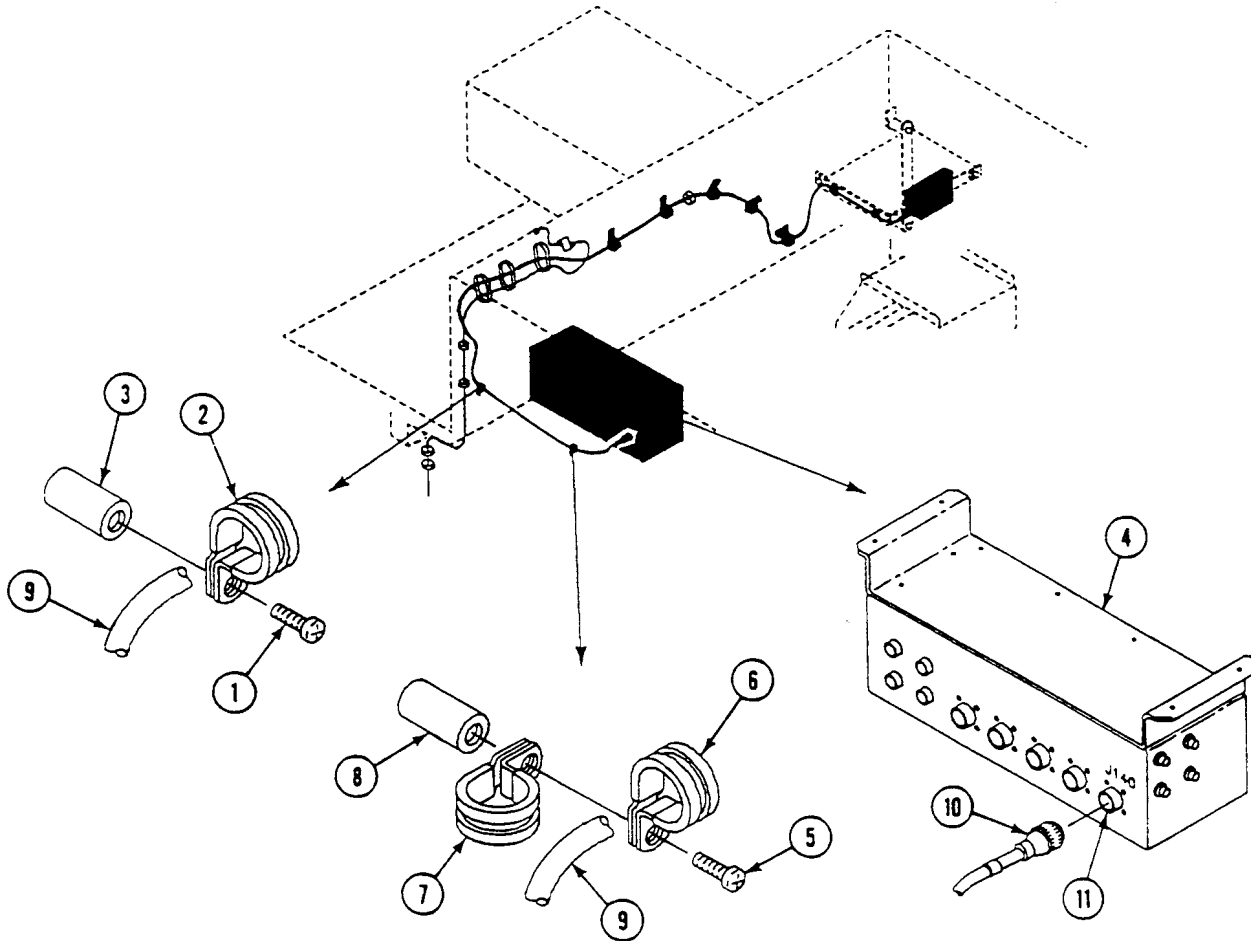
1. Disconnect cable W124 plug P1 (1) from Data Panel Assembly A12 jack J3 (2).
2. Remove two screws (3), locknuts (4), clamps (5), and four washers (6) from APIU rack (7). Discard locknuts.
3. Remove screw (8), clamp (9), and clamp (10) from weldnut (11).
4. Remove four screws (12) and clamps (13) from cables (14) and weldnuts (15).
5. Remove three tie straps (16) from cables (14). Discard tie straps.
6. Remove three tie straps (17) from cables (14). Discard tie straps.



REPLACE CABLE W124 (M1068 ONLY) — Continued

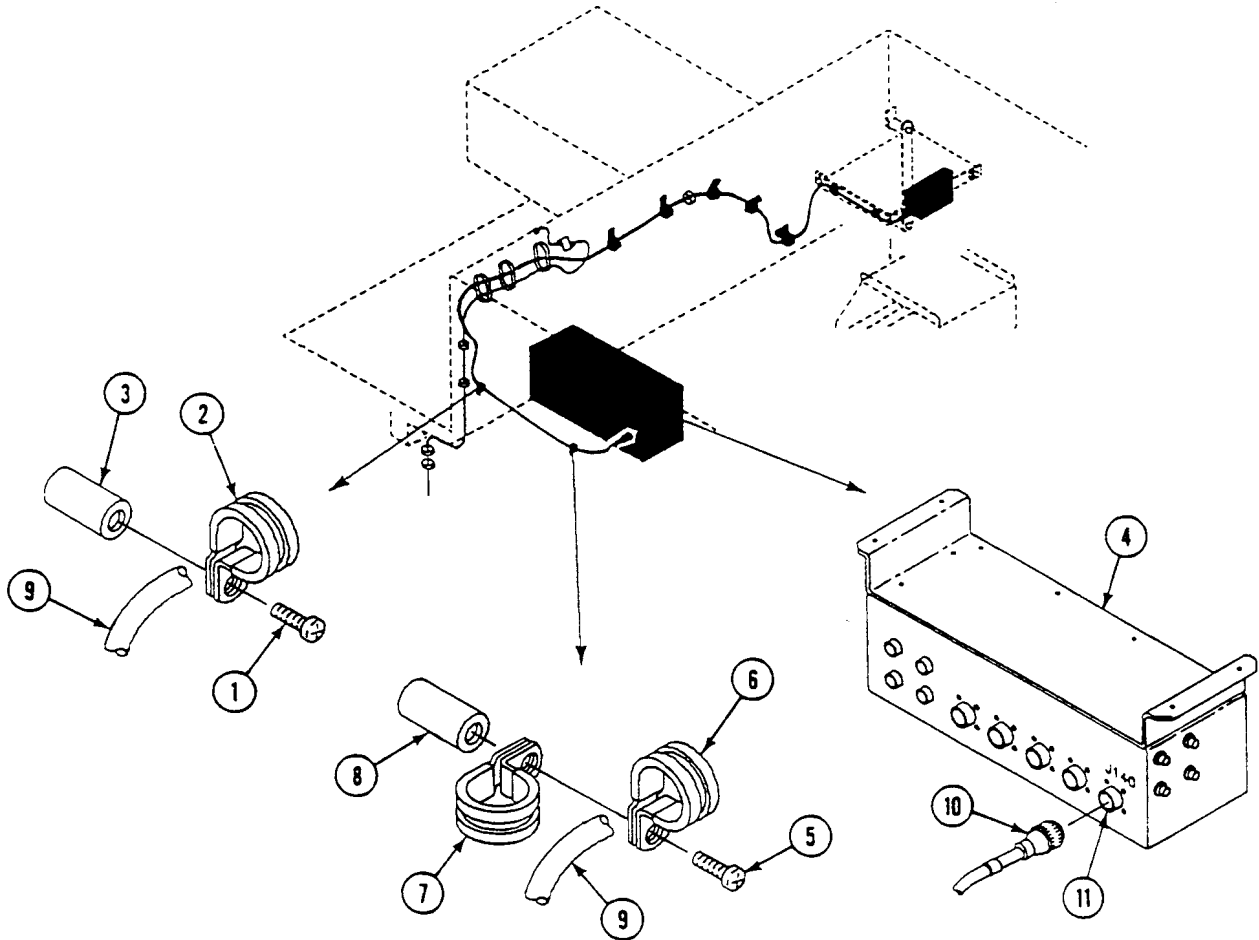
0757 00

7. Remove screw (1) and clamp (2) from weldnut (3) near end of Patch Panel Box A10 (4).
8. Remove screw (5), clamp (6), and clamp (7) from weldnut (8) below Patch Panel Box A10 (4). Remove clamp (6) from cables (9).
9. Disconnect cable W124 plug P109 (10) from Patch Panel Box A10 jack J140 (11).



INSTALLATION

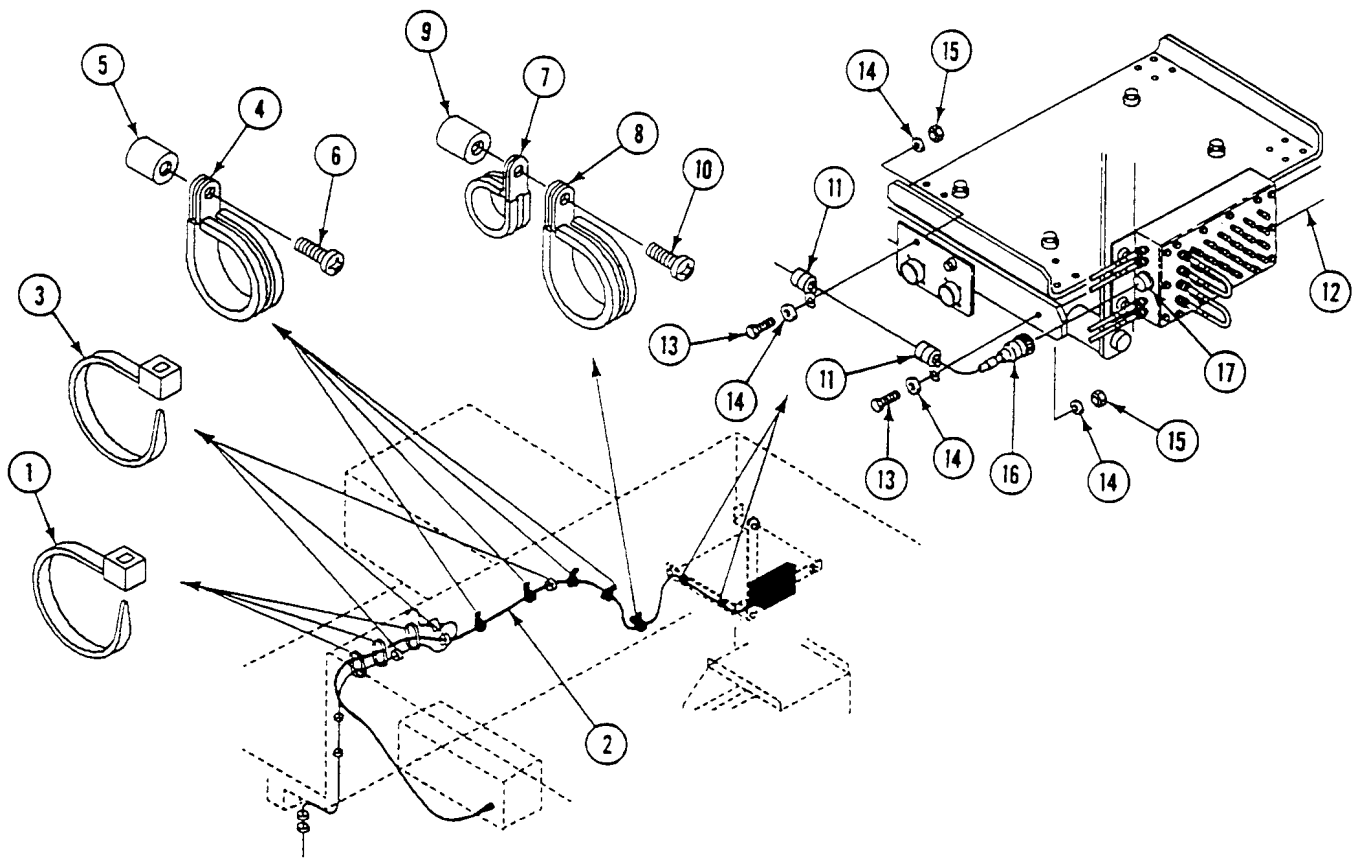
1. Connect cable W124 plug P109 (10) to Patch Panel Box A10 jack J140 (11).
2. Install clamp (6) on cables (9).
3. Secure clamp (7) and clamp (6) to weldnut (8) below Patch Panel Box A10 (4) with screw (5).
4. Install clamp (2) on cables (9) and secure to weldnut (3) near end of Patch Panel Box A10 (4) with screw (1).



REPLACE CABLE W124 (M1068 ONLY) — Continued

0757 00

5. Install three new tie straps (1) on cables (2).
6. Install three new tie straps (3) on cables (2).
7. Install four clamps (4) on cables (2) and secure to weldnuts (5) with screws (6).
8. Install clamp (7) on cables (2).
9. Secure clamp (8) and clamp (7) to weldnut (9) with screw (10).
10. Install two clamps (11) on cables (2) and secure to APIU rack (12) with two screws (13), four washers (14), and two new locknuts (15).
11. Connect cable W124 plug P1 (16) to Data Panel Assembly A12 jack J3 (17).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE CABLE W126 (M1068 ONLY)

0758 00

THIS WORK PACKAGE COVERS:

Removal (page 0758 00-1).
 Installation (page 0758 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Signal Support System Specialist 31U10

Tools and Special Tools

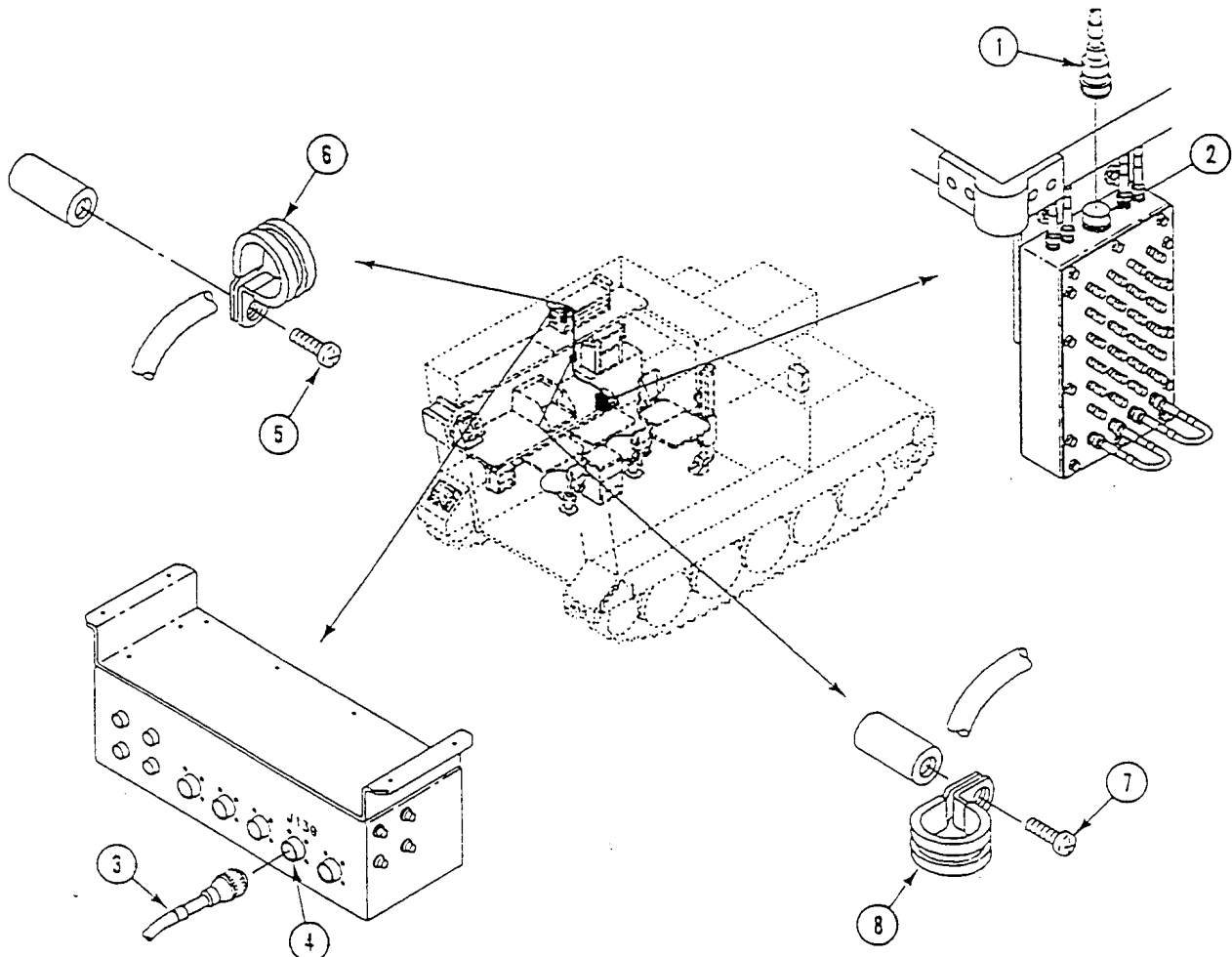
Electronic Equipment Tool Kit (WP 0780 00, Item 81)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery ground lead disconnected (WP 0294 00)

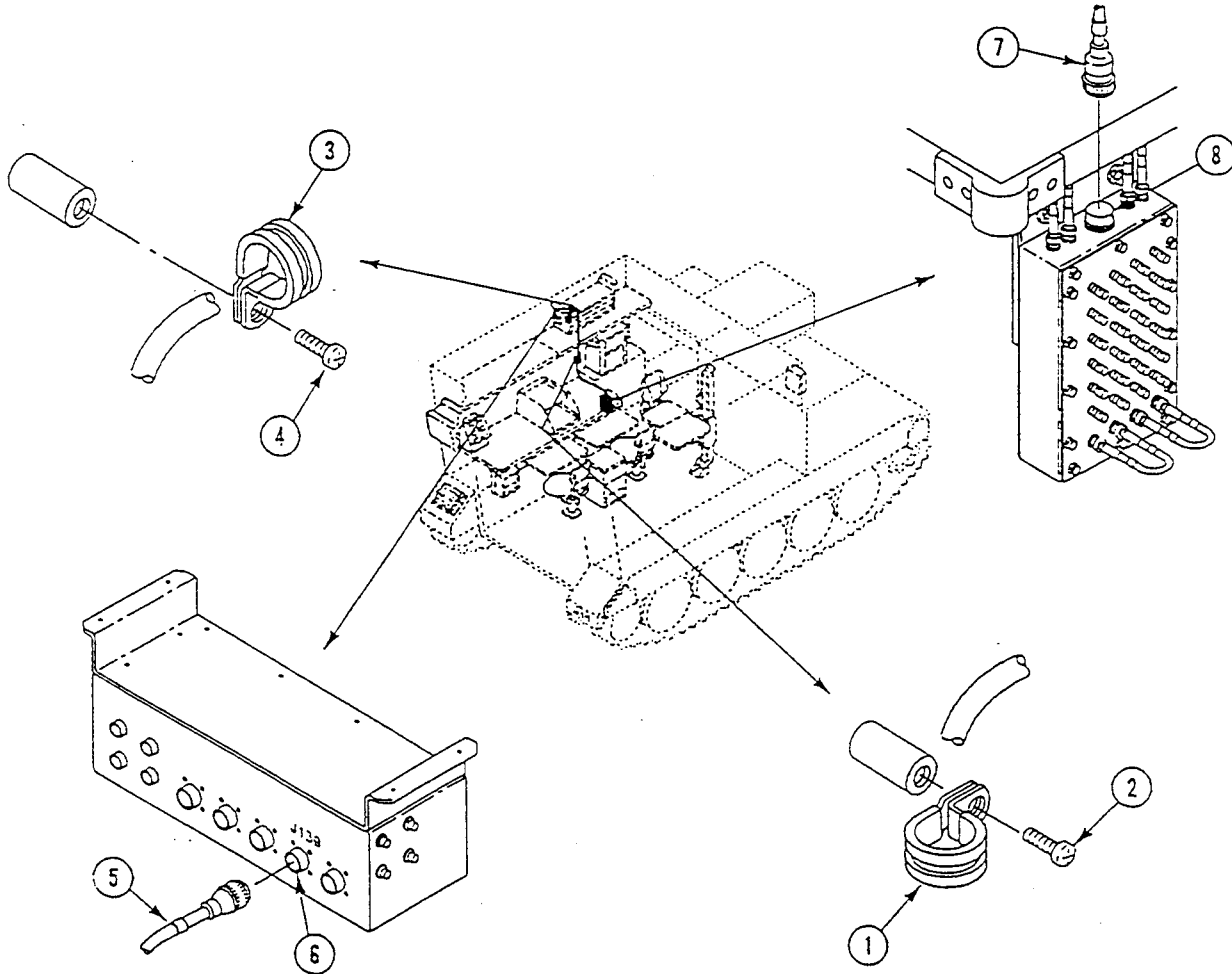
REMOVAL

1. Disconnect cable plug W126 P1 (1) from data panel assembly jack A13 J3 (2).
2. Disconnect cable plug W126 P108 (3) from patch panel box jack A10 J139 (4).
3. Remove screw (5) and clamp (6) from cables.
4. Remove screw (7) and clamp (8) from cables. Remove cable W126 from other cables.



INSTALLATION

1. Position cable W126 with other cables and secure with clamp (1) and screw (2).
2. Install clamp (3) and screw (4) on cables.
3. Connect cable plug W126 P108 (5) to patch panel box jack A10 J139 (6).
4. Connect cable plug W126 P1 (7) to data panel assembly jack A13 J3 (8).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPAIR CABLE ASSEMBLY (W4/W6) (M1068 ONLY)

0759 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0759 00-1).
 Assembly (page 0759 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

WP 0312 00

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Soldering Torch Kit (WP 0780 00, Item 70)

Equipment Condition

Cable Assembly W4 removed (WP 0740 00)
 Cable Assembly W6 removed (WP 0742 00)

Personnel Required

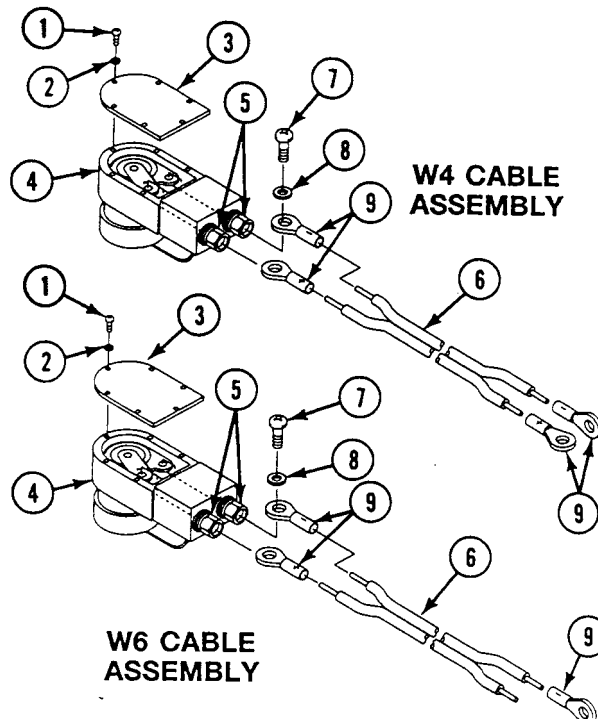
Unit Mechanic

DISASSEMBLY

NOTE

The W4 cable assembly has four terminals. The W6 cable assembly has three terminals and a bare wire end.

1. Remove six screws (1), washers (2), and cover (3) from connector (4).
2. Loosen two adapters (5) securing cables (6) in connector (4).
3. Remove two screws (7), washers (8), and two cables (6) from connector (4).
4. Remove four terminals (9) from cable assembly W4 or three terminals (9) from cable assembly W6.



ASSEMBLY

NOTE

The W4 cable assembly has two negative (-) terminals and two positive (+) terminals.

The W6 cable assembly has two negative (-) terminals and one positive (+) terminal and a positive (+) bare end wire.

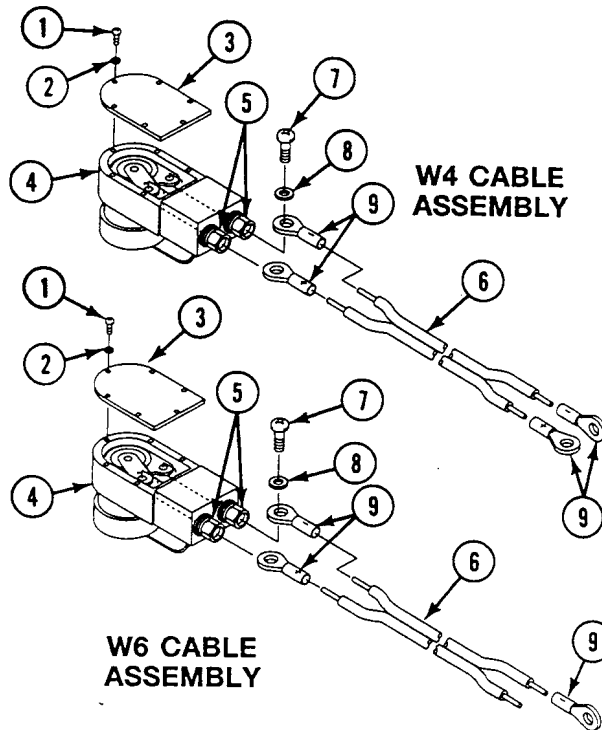
Position the terminals on the cables as shown.

1. Install terminals (9) on cables (6) (WP 0312 00).
2. Strip 1 inch to 1-1/2 inches (2.54 cm to 3.81 cm) of insulation from one end of positive cable of assembly W6.

NOTE

Observe cable polarity when securing cables to connectors. The terminal on the positive (+) (longer) cable connects to the center post of connector on the W4 and the W6 cable assembly.

3. Insert each cable (6) into adapter (5) on connector (4). Secure to connector with two screws (7) and washers (8). Tighten two adapters (5).
4. Secure cover (3) on connector (4) with six screws (1) and washers (2).



END OF TASK

CHAPTER 42

UNIT MAINTENANCE INSTRUCTIONS
FOR COMMUNICATION SYSTEM

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE C-2298/VRC INTERCOM STATION BRACKET (M901A1 ONLY).....	0760 00
REPLACE AS-1729/VRC ANTENNA GUARD (M901A1 ONLY).....	0761 00
REPLACE MX-7777B/GRC OR MX-7778A/GRC TRANSIENT SUPPRESSOR MOUNTS AND GROUND LEAD (M901A1 ONLY).....	0762 00

REPLACE C-2298/VRC INTERCOM STATION BRACKET (M901A1 ONLY)

0760 00

THIS WORK PACKAGE COVERS:

Removal (page 0760 00-1).
 Installation (page 0760 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

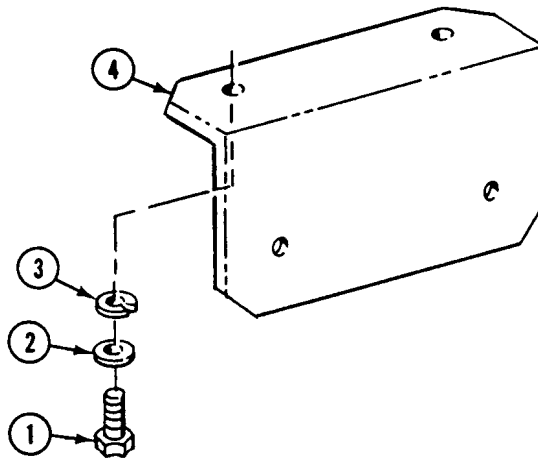
Intercom removed

Materials/Parts

Lockwasher (2)

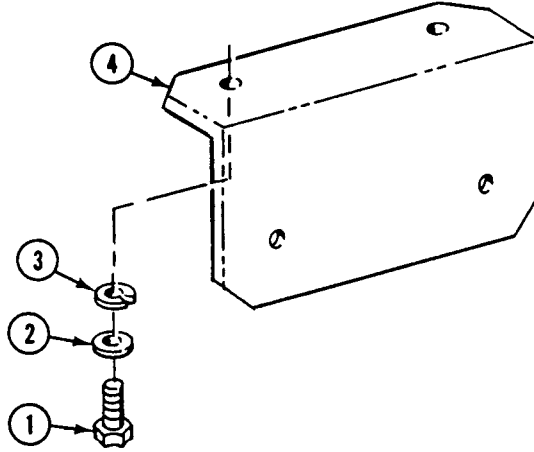
REMOVAL

1. Remove two screws (1), washers (2), lockwashers (3), and bracket (4) from hull. Discard lockwashers.



INSTALLATION

1. Install bracket (4), on hull with two new lockwashers (3), washers (2), and screws (1).

**FOLLOW-THROUGH STEPS**

1. Install intercom.

END OF TASK

REPLACE AS-1729/VRC ANTENNA GUARD (M901A1 ONLY)

0761 00

THIS WORK PACKAGE COVERS:

Removal (page 0761 00-1).
 Installation (page 0761 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

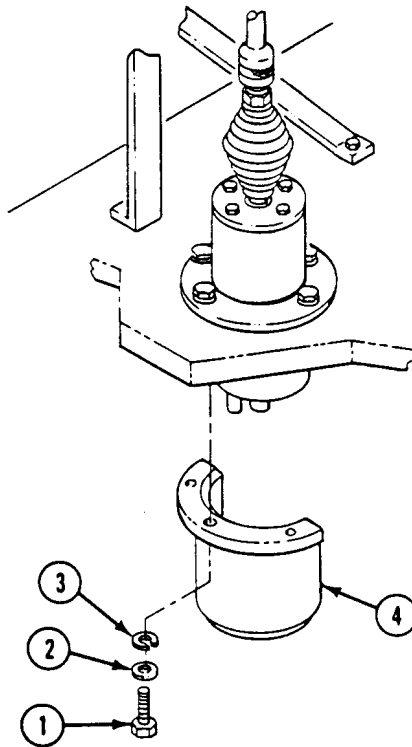
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (3)

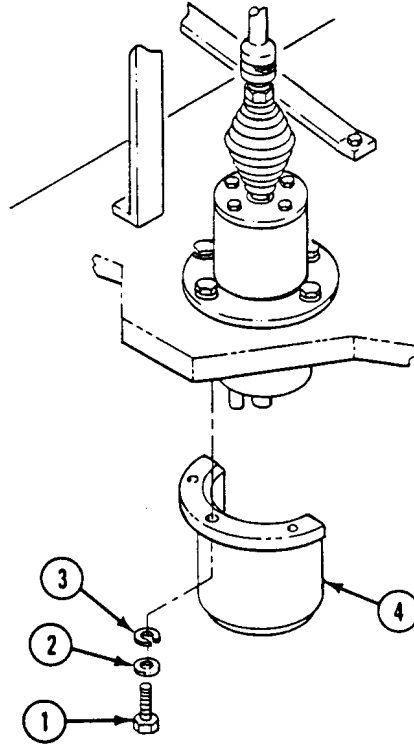
REMOVAL

1. Remove three screws (1), lockwashers (2), washers (3), and guard (4). Discard lockwashers.



INSTALLATION

1. Install guard (4) on hull with three washers (3), new lockwashers (2), and screws (1).

**END OF TASK**

REPLACE MX-7777B/GRC OR MX-7778A/GRC TRANSIENT SUPPRESSOR MOUNTS AND GROUND LEAD (M901A1 ONLY)

0762 00

THIS WORK PACKAGE COVERS:

- Removal (page 0762 00-1).
- Installation (page 0762 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10).

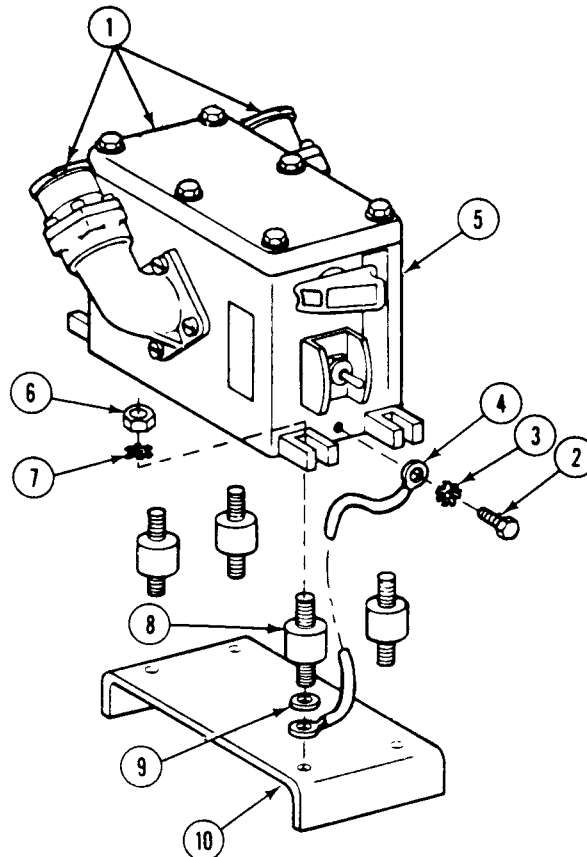
Carrier blocked (see your -10)

Materials/Parts

- Lockwasher
- Lockwasher (4)

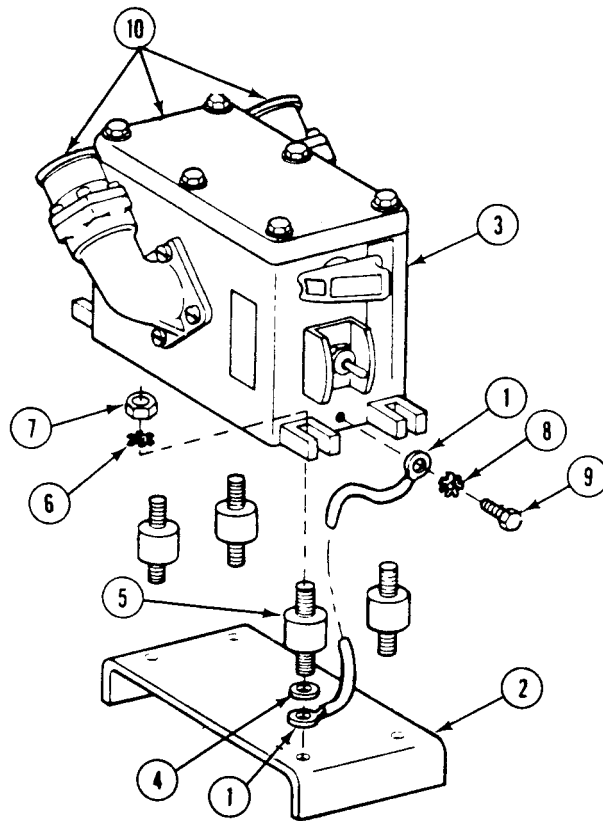
REMOVAL

1. Tag and disconnect three electrical connectors from three connectors (1).
2. Remove screw (2), lockwasher (3), and upper end of ground strap (4) from transient suppressor (5). Discard lockwasher.
3. Remove four nuts (6), lockwashers (7), and transient suppressor (5) from four mounts (8). Discard lockwashers.
4. Remove four mounts (8), washers (9), and lower end of ground strap (4) from mount (10).



**REPLACE MX-777B/GRC OR MX-778A/GRC TRANSIENT SUPPRESSOR MOUNTS
AND GROUND LEAD (M901A1 ONLY) — Continued****0762 00****INSTALLATION**

1. Remove paint where ground strap (1) lug contacts mount (2) and transient suppressor (3) before attaching ground strap.
2. Install lower end of ground strap (1) and four washers (4) on mounts (5) and mount (2).
3. Install transient suppressor (3), four new lockwashers (6), and nuts (7) on four mounts (5).
4. Install upper end of ground strap (1), new lockwasher (8), and screw (9) on transient suppressor (3).
5. Connect three electrical cables to three connectors (10) per tagged identification.

**END OF TASK**

CHAPTER 43

UNIT MAINTENANCE INSTRUCTIONS
FOR FIRE EXTINGUISHER SYSTEM

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE EXTERNAL HANDLE SHIELD (M113A2, M901A1, AND M1059 ONLY).....	0763 00
REPLACE EXTERNAL HANDLE SHIELD (M577A2 AND M1068 ONLY).....	0764 00
REPLACE EXTERNAL HANDLE SHIELD (M1064 ONLY).....	0765 00
REPLACE FIRE EXTINGUISHER CONTROL VALVE AND EXTERNAL HANDLE.....	0766 00
REPLACE EXTERNAL CABLE TUBE.....	0767 00
REPLACE CYLINDER DISCHARGE TUBES.....	0768 00
REPLACE FIRE EXTINGUISHER CYLINDER AND MOUNT.....	0769 00
REPLACE PORTABLE FIRE EXTINGUISHER MOUNT (ALL EXCEPT M1068).....	0770 00
REPLACE FIRE EXTINGUISHER AND MOUNT (M1059 ONLY).....	0771 00
REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER MOUNT (M1068 ONLY).....	0772 00

**REPLACE EXTERNAL HANDLE SHIELD (M113A2, M901A1,
AND M1059 ONLY)**

0763 00

THIS WORK PACKAGE COVERS:

Removal (page 0763 00-1).
Installation (page 0763 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

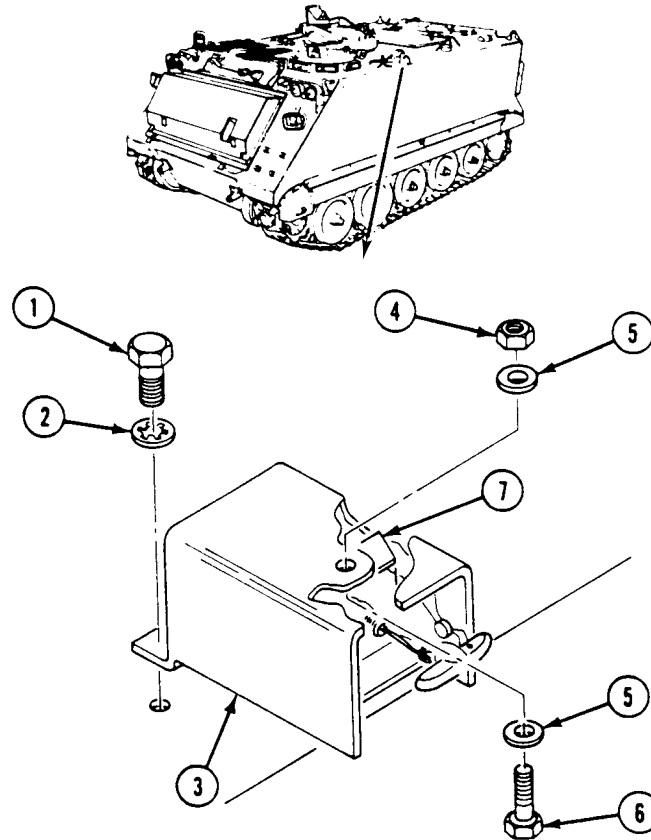
Locknut

Lockwasher (2)

Shield

REMOVAL

1. Remove two screws (1) and lockwashers (2) from shield (3) and hull top plate. Discard lockwashers.
2. Remove locknut (4), two washers (5), screw (6), and shield (3) from support bracket (7). Discard locknut and shield.

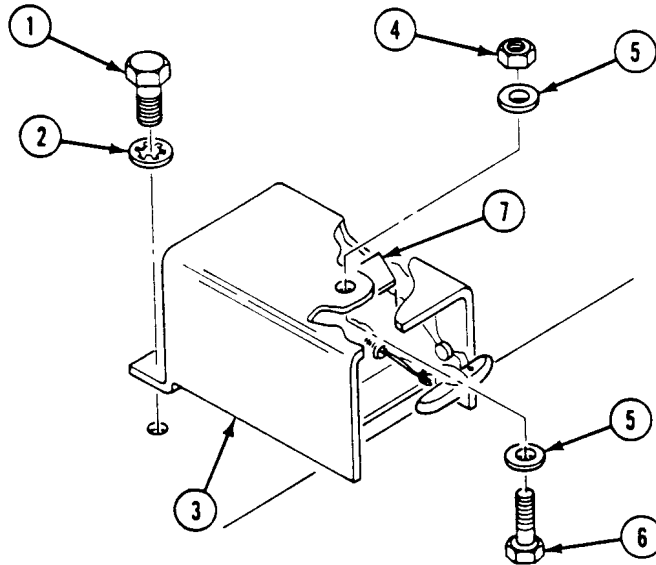


REPLACE EXTERNAL HANDLE SHIELD (M113A2, M901A1, AND M1059 ONLY) — Continued

0763 00

INSTALLATION

1. Place new shield (3) on support bracket (7). Secure with screw (6), two washers (5), and new locknut (4).
2. Secure shield (3) to hull top plate with two new lockwashers (2) and screws (1).

**END OF TASK**

REPLACE EXTERNAL HANDLE SHIELD (M577A2 AND M1068 ONLY)

0764 00

THIS WORK PACKAGE COVERS:

Removal (page 0764 00-1).
 Installation (page 0764 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

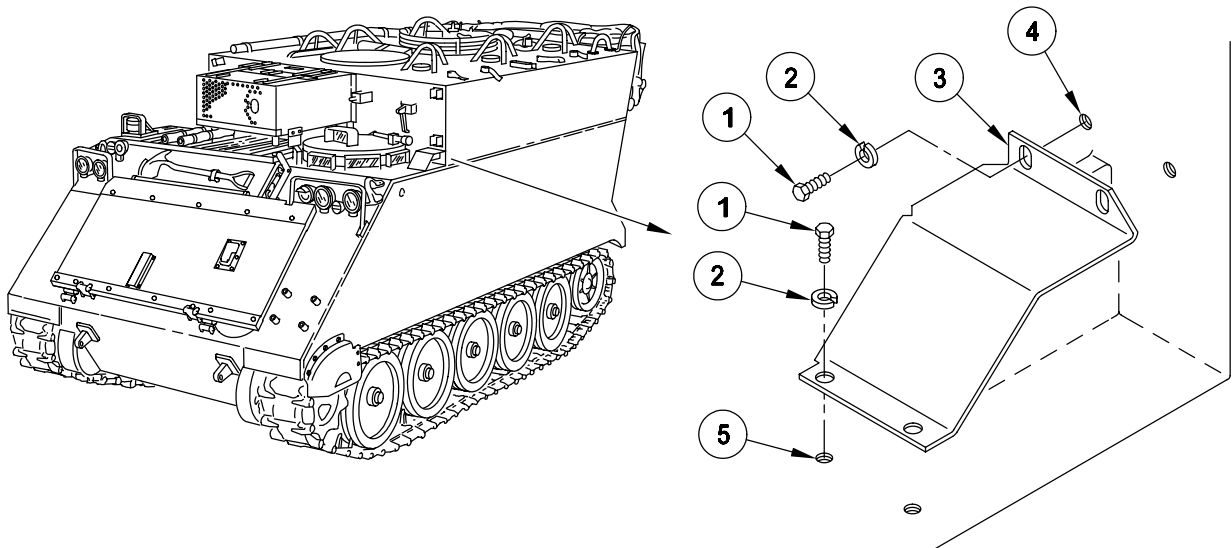
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (4)

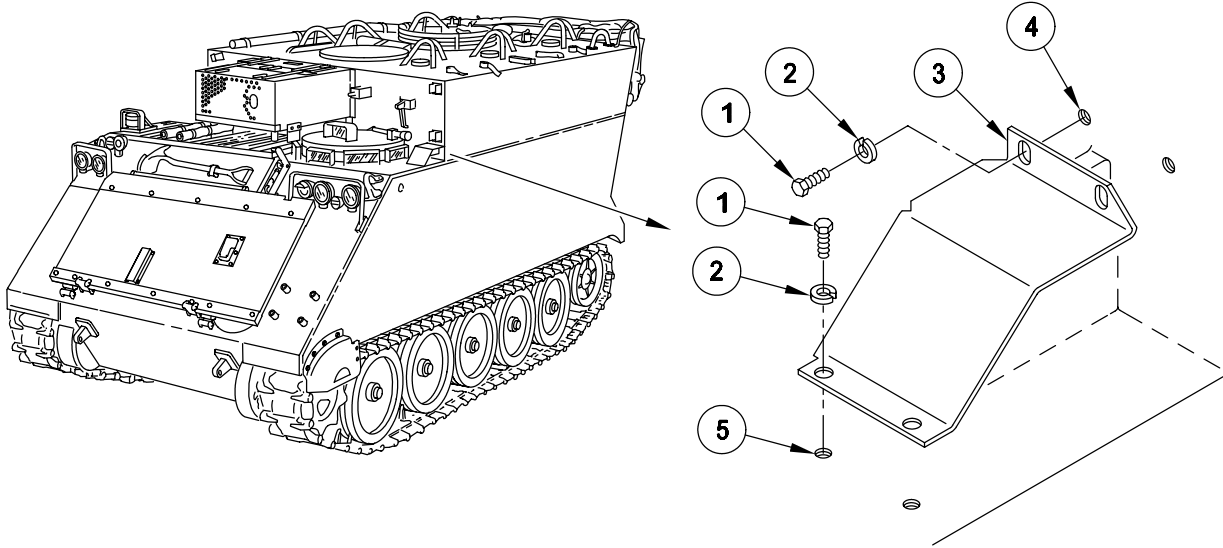
REMOVAL

1. Remove four screws (1) and lockwashers (2) and shield (3) from upper front bulkhead (4) and hull top plate (5). Discard lockwashers.



REPLACE EXTERNAL HANDLE SHIELD (M577A2 AND M1068 ONLY) — Continued**0764 00****INSTALLATION**

1. Place shield (3) on hull top plate (5) and upper front bulkhead (4). Secure with four new lockwashers (2) and screws (1).

**END OF TASK**

REPLACE EXTERNAL HANDLE SHIELD (M1064 ONLY)

0765 00

THIS WORK PACKAGE COVERS:

- Removal (page 0765 00-1).
 - Clean, Inspect, and Repair (page 0765 00-2).
 - Installation (page 0765 00-2).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

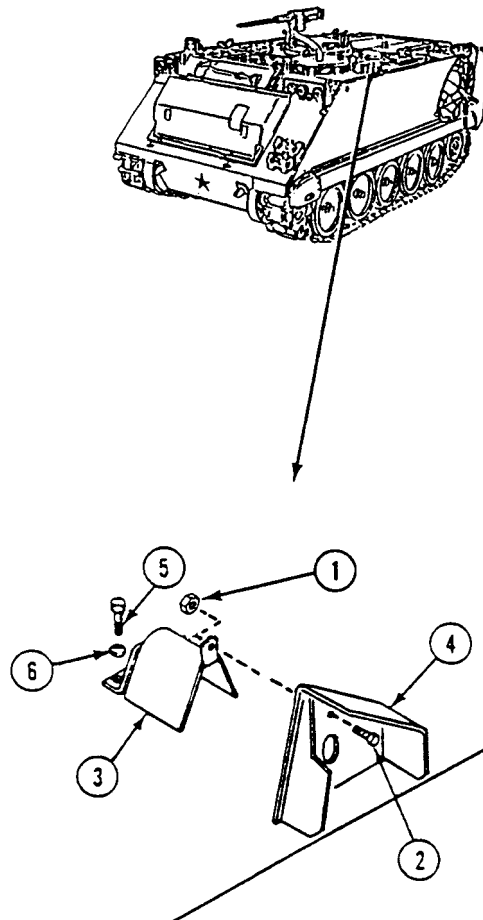
Materials/Parts

Locknut

Lockwasher (2)

REMOVAL

1. Remove locknut (1) and screw (2) from shield (3) and support bracket (4). Discard locknut.
2. Remove two screws (5), lockwashers (6), and shield (3) from hull top plate. Discard lockwashers.

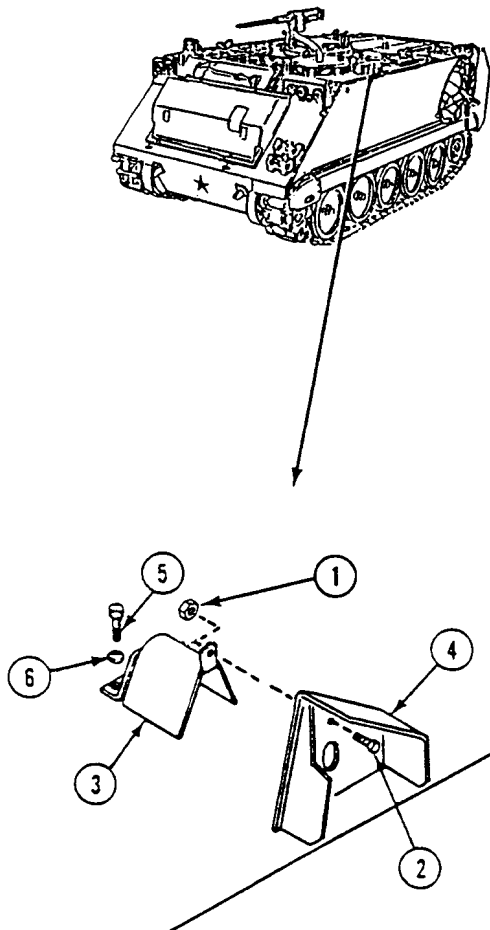


CLEAN, INSPECT, AND REPAIR

1. Check shield. Replace cracked shield.
2. Check threaded parts. Remove burrs. Replace parts that have stripped threads.

INSTALLATION

1. Place shield (3) on top hull plate. Secure with two new lockwashers (6) and screws (5).
2. Secure shield (3) to support bracket (4) with screw (2) and new locknut (1).

**END OF TASK**

**REPLACE FIRE EXTINGUISHER CONTROL VALVE AND
EXTERNAL HANDLE**

0766 00

THIS WORK PACKAGE COVERS:

Removal (page 0766 00-2).
Installation (page 0766 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
Lead Seal Hand Press (WP 0780 00, Item 46)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
External handle shield removed (WP 0763 00,
WP 0764 00, or WP 0765 00)

Materials/Parts

Seal wire

REMOVAL

WARNING



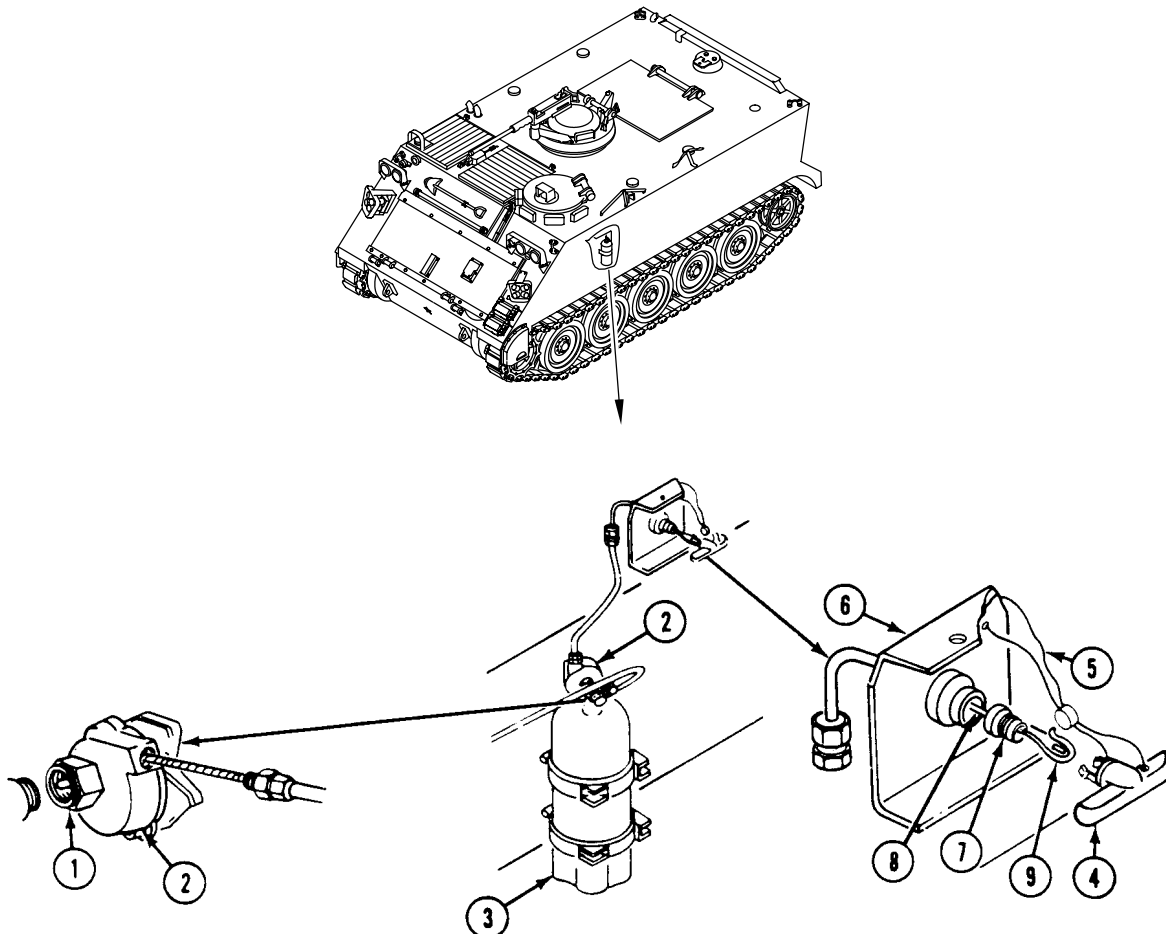
You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

1. Loosen captive nut (1) on control valve (2). Remove valve from fire extinguisher cylinder (3).

NOTE

There are two types of control valves. Remove and install both valves same way.

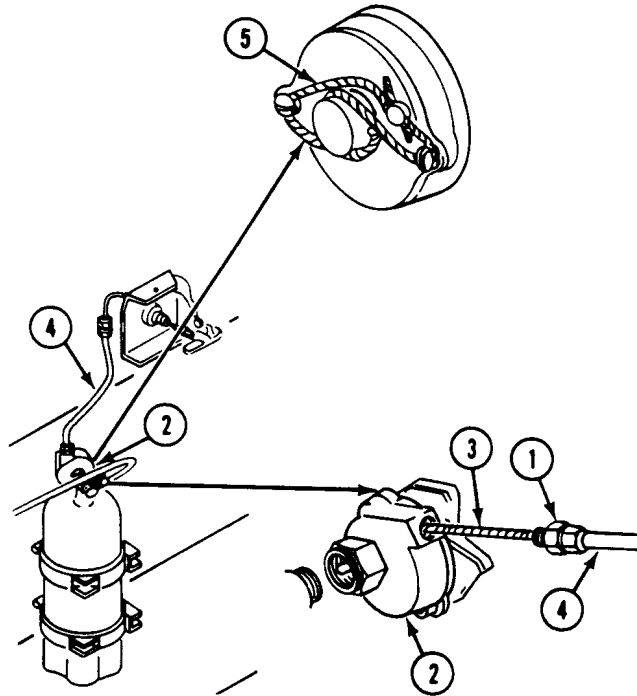
2. Pull external handle (4) to break seal wire (5). Remove wire from handle and support bracket (6). Discard wire.
3. Remove insert (7) from handle (4).
4. Slide insert (7) down cable (8) until wedge (9) can be seen. Remove wedge and cable from insert.



**REPLACE FIRE EXTINGUISHER CONTROL VALVE AND EXTERNAL
HANDLE — Continued**

0766 00

5. Remove adapter (1) from control valve (2).
6. Gently pull control valve (2) until cable (3) is free from cable tube (4). Remove valve from carrier.
7. Remove broken seal wire (5) from control valve (2).

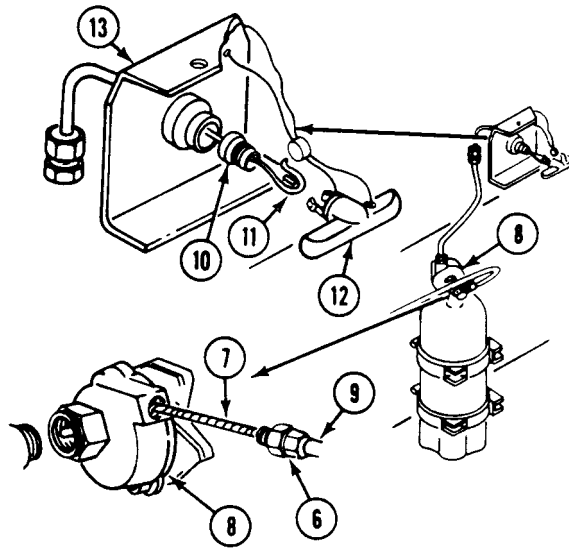


REPLACE FIRE EXTINGUISHER CONTROL VALVE AND EXTERNAL HANDLE — Continued

0766 00

INSTALLATION

1. Slide adapter (1) over cable (3). Install adapter in control valve (2).
2. Route cable (3) through cable tube (4) and insert (6).
3. Bend cable (3) over wedge (7). Slide insert (6) over cable and wedge.
4. Install insert (6) in handle (8).
5. Pull control valve (2) until handle (8) is in place on support bracket (9).



REPLACE FIRE EXTINGUISHER CONTROL VALVE AND EXTERNAL HANDLE — Continued

0766 00

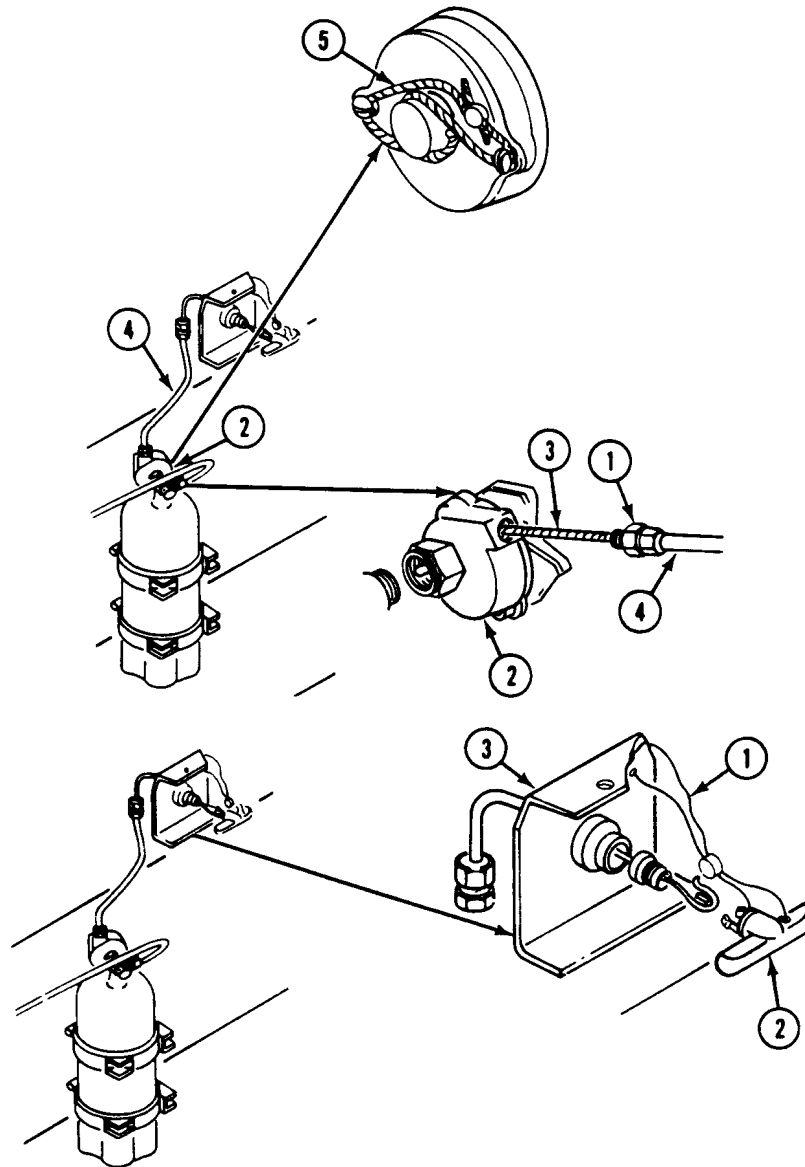
6. Install valve (2) on fire extinguisher cylinder (10). Secure with captive nut (11).

CAUTION

Fire extinguisher control valve sealed with wire will not work. Make sure seal wire is made out of light copper.

Do not nick wire seal during installation.

7. Install new copper seal wire (5) on control valve (2). Use lead seal hand press.
8. Install new seal wire (12) between handle (8) and support bracket (9). Use lead seal hand press.



FOLLOW-THROUGH STEPS

1. Install external handle shield (WP 0763 00, WP 0764 00, or WP 0765 00).

END OF TASK

REPLACE EXTERNAL CABLE TUBE

0767 00

THIS WORK PACKAGE COVERS:

Removal (page 0767 00-2).
 Installation (page 0767 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

External handle shield removed (WP 0763 00,
 WP 0764 00, or WP 0765 00)

External handle and insert removed (WP 0766 00)

Materials/Parts

Adapter

Nut

Sleeve

Sleeve

Tube

REMOVAL

NOTE

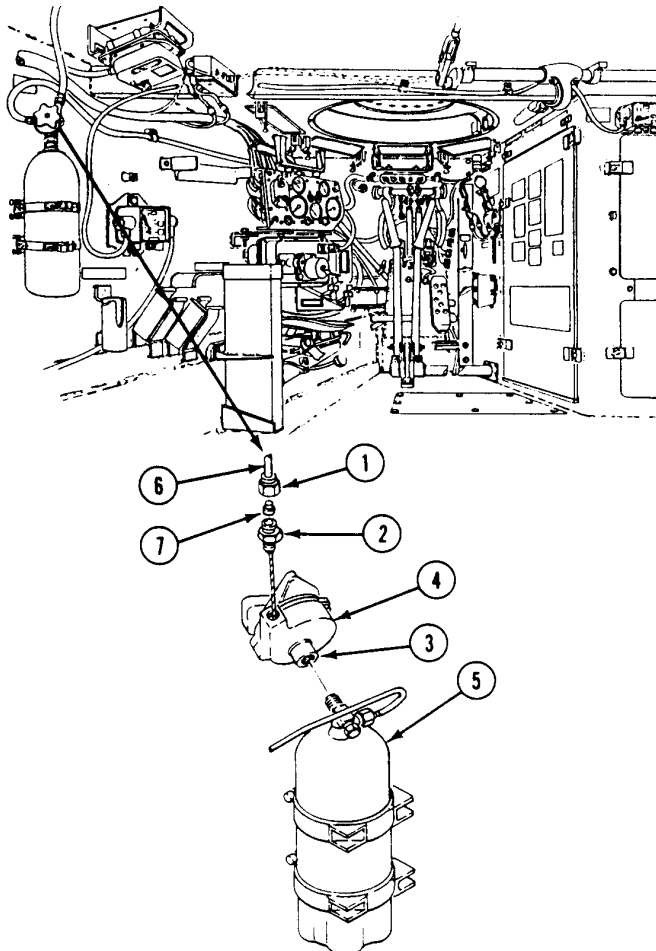
For M113A2, slide spill liner to access engine compartment fire extinguisher.

1. Loosen nut (1) on control valve adapter (2).

WARNING

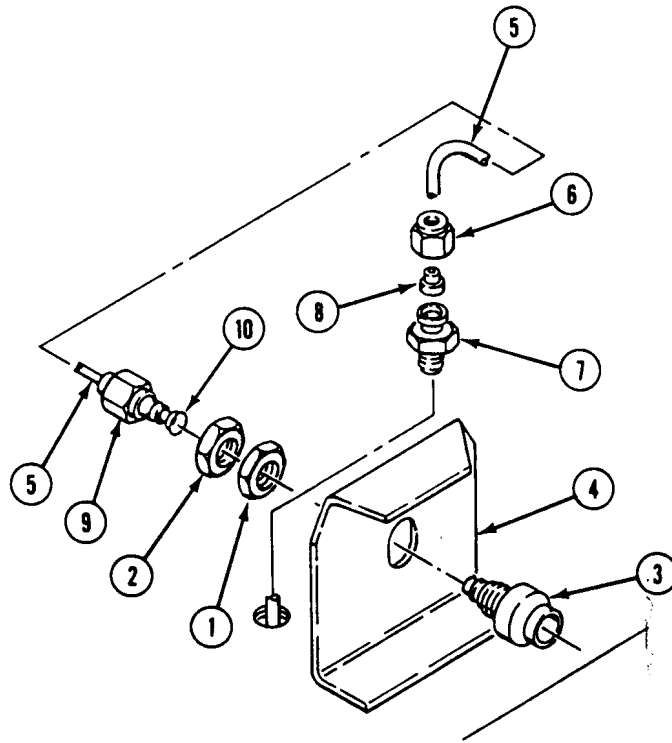
You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

2. Loosen captive nut (3) on control valve (4). Remove valve from fire extinguisher cylinder (5).
3. Remove adapter (2) from control valve (4). Discard adapter.
4. Remove control valve (4) and cable from tube (6).
5. Cut sleeve (6) and nut (1) from tube (7). Discard sleeve and nut.



REPLACE EXTERNAL CABLE TUBE — Continued**0767 00**

6. Remove nut (1) and jam nut (2) from adapter (3). Remove adapter from support bracket (4).
7. Remove cable tube (5) from support bracket (4). Slide nut (1) and jam nut (2) from tube (5).
8. Loosen nut (6) on adapter (7).
9. Pull tube (5) through adapter (7). Remove adapter from hull plate.
10. Cut tube (5) above sleeve (8). Remove two nuts (6) and (9) and remove tube with sleeve (10). Discard tube and sleeve.



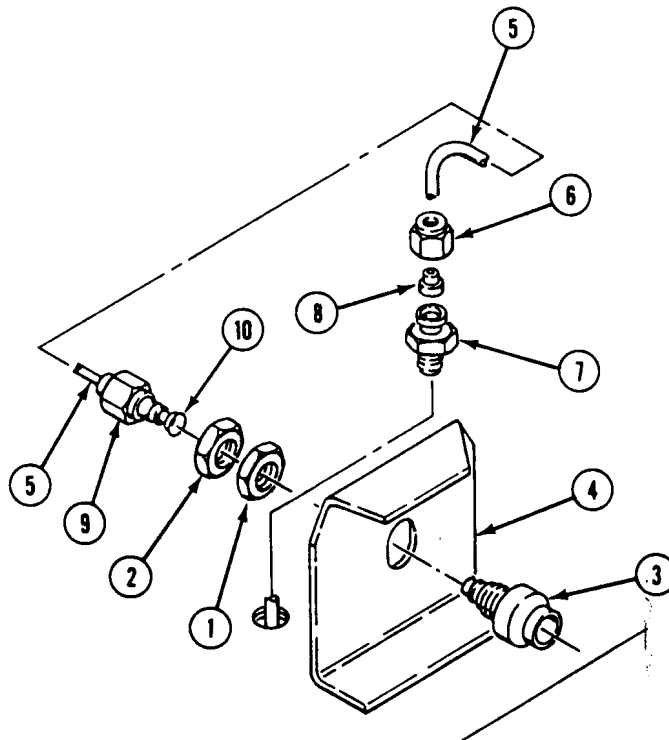
INSTALLATION

1. Install new sleeve (8), two nuts (6) and (9), and adapter (7) on new tube (5).

NOTE

Make sure nuts, sleeves, and adapter are installed in the proper order and facing the right direction as in illustration.

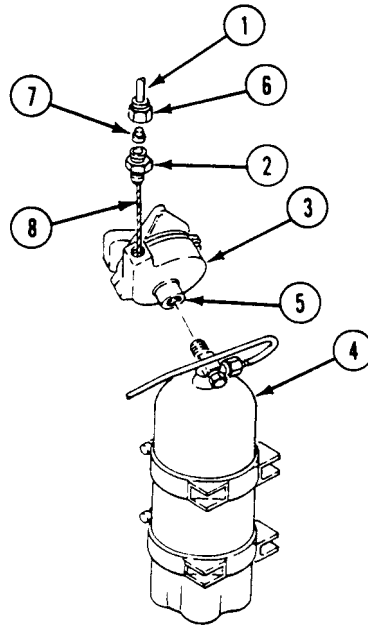
2. Install adapter (7) in hull plate. Secure tube (5) to adapter with sleeve (8) and nut (6).
3. Install adapter (3) in support bracket (4). Secure with nut (1) and jam nut (2).
4. Install tube (5) on adapter (3). Secure with flared sleeve (10) and nut (9).



REPLACE EXTERNAL CABLE TUBE — Continued

0767 00

5. Slide tube (5) through hole in hull plate.
6. Install new adapter (10) on control valve (11).
7. Install control valve (11) on fire extinguisher cylinder (12). Secure with captive nut (13).
8. Install new nut (14) and new sleeve (15) on tube (5).
9. Route cable (16) through tube (5). Tighten nut (14) on adapter (10).

**FOLLOW-THROUGH STEPS**

1. Install external handle and insert (WP 0766 00).
2. Install external handle shield (WP 0763 00, WP 0764 00, or WP 0765 00).

END OF TASK

REPLACE CYLINDER DISCHARGE TUBES

0768 00

THIS WORK PACKAGE COVERS:

Removal (page 0768 00-1).
 Installation (page 0768 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Trim vane lowered (see your -10)
 Power plant access door open (see your -10)
 Power plant removed (if bottom discharge tube is to be removed) (WP 0131 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Materials/Parts

Lockwasher (6)

Personnel Required

Unit Mechanic

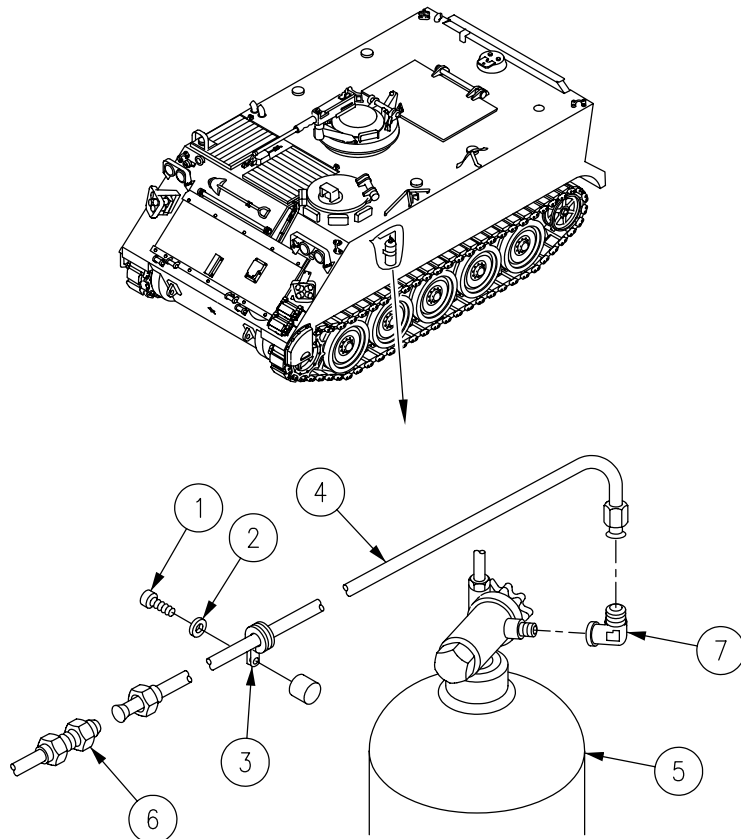
REMOVAL

1. Remove six screws (1), lockwashers (2), and clamps (3) from six hull weldnuts. Discard lockwashers.

NOTE

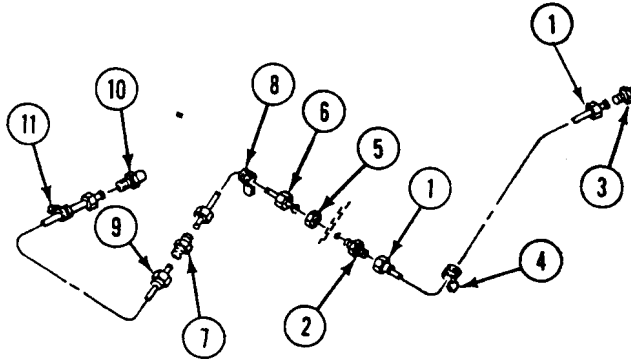
If periscope power cable is stowed behind cylinder discharge tube, move cable away from work area to prevent damage to cable. Elbow will be removed for M1064 only.

2. Remove tube (4) and elbow (7) from fire extinguisher cylinder (5) and nipple (6). Remove clamp (3) from tube.



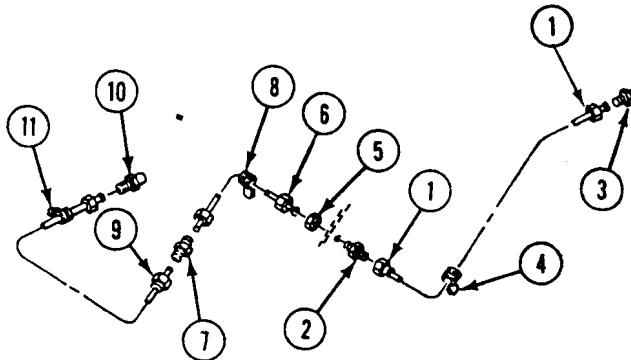
REPLACE CYLINDER DISCHARGE TUBES — Continued**0768 00**

3. Remove tube (1) from nipple (2). Remove nipple (3) and clamp (4) from tube.
4. Remove nut (5) and nipple (2) from driver's bulkhead.
5. Remove tube (6) from nut (5) and nipple (7). Remove clamp (8) from tube.
6. Remove tube (9) from nipple (7).
7. Remove nozzle (10), and three clamps (11) from tube (9).

**INSTALLATION****NOTE**

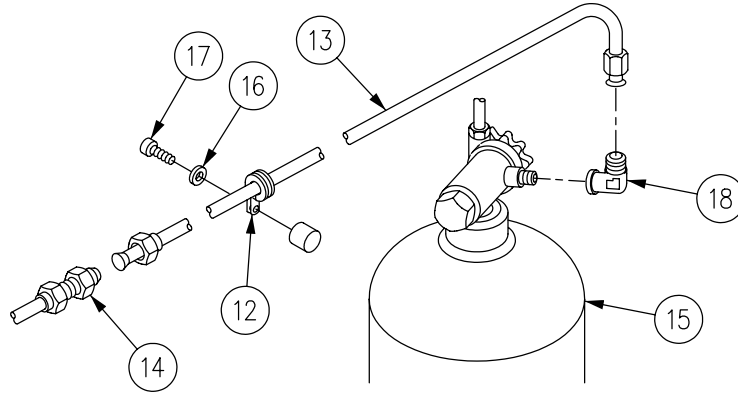
If periscope power cable was removed, stow excess cable behind fire extinguisher.

1. Place three clamps (11) on tube (9). Install nozzle (10) and nipple (7) on tube.
2. Install nipple (2) in driver's bulkhead. Secure with nut (5).
3. Place clamp (8) on tube (6). Install tube on two nipples (2) and (7).
4. Place clamp (4) on tube (1). Install two nipples (2) and (3) on tube.



REPLACE CYLINDER DISCHARGE TUBES — Continued**0768 00**

5. Place clamp (12) and elbow (18) on tube (13). Install tube on nipple (14) and fire extinguisher cylinder (15).
6. Align six clamps (12) with six hull weldnuts. Secure clamps to weldnuts with six new lockwashers (16) and screws (17).

**FOLLOW-THROUGH STEPS**

1. If removed, install power plant (WP 0131 00).
2. Close power plant access door (see your -10).
3. Raise trim vane (see your -10).

END OF TASK

REPLACE FIRE EXTINGUISHER CYLINDER AND MOUNT

0769 00

THIS WORK PACKAGE COVERS:

Removal (page 0769 00-2).
 Installation (page 0769 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Socket Wrench Set (WP 0780 00, Item 95)
 Torque Wrench (WP 0780 00, Item 106)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Control valve removed (WP 0766 00)
 Discharge tube removed from cylinder (WP 0768 00)

Materials/Parts

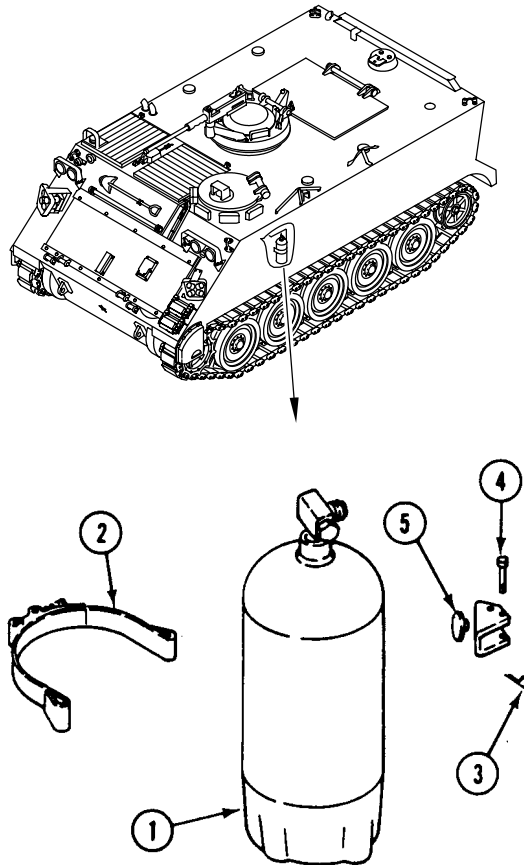
Cotter pin (4)

REMOVAL

WARNING

You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

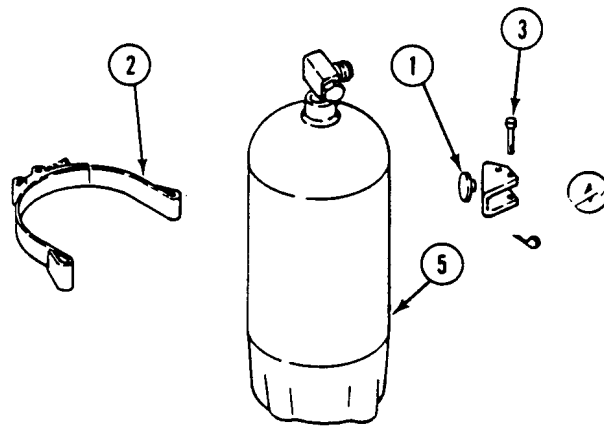
1. Support cylinder (1) and loosen two clamps (2). Remove cylinder from four hull brackets.
2. Remove four cotter pins (3), pins (4), and two clamps (2) from hull brackets. Discard cotter pins.
3. If needed, remove four bumpers (5) from hull brackets.



INSTALLATION**NOTE**

The carbon dioxide (CO₂) cylinder has a 5-pound (2 kg) capacity with a maximum weight of 18 pounds (8 kg). Weigh cylinder before installation. If weight loss is more than 10 percent (2 pounds) (1 kg), replace cylinder with a fully charged one.

1. If removed, install four bumpers (1) in hull brackets.
2. Place two clamps (2) on hull brackets. Secure with four pins (3) and new cotter pins (4).
3. Hold cylinder (5) on hull brackets. Secure with two clamps (2). TIGHTEN CLAMPS TO 51-59 LB-IN (5-6 N·M) TORQUE. Use torque wrench and socket set.

**FOLLOW-THROUGH STEPS**

1. Install discharge tube on cylinder (WP 0768 00).
2. Install control valve (WP 0766 00).

END OF TASK

REPLACE PORTABLE FIRE EXTINGUISHER MOUNT (ALL EXCEPT M1068)

0770 00

THIS WORK PACKAGE COVERS:

Removal (page 0770 00-2).
Installation (page 0770 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

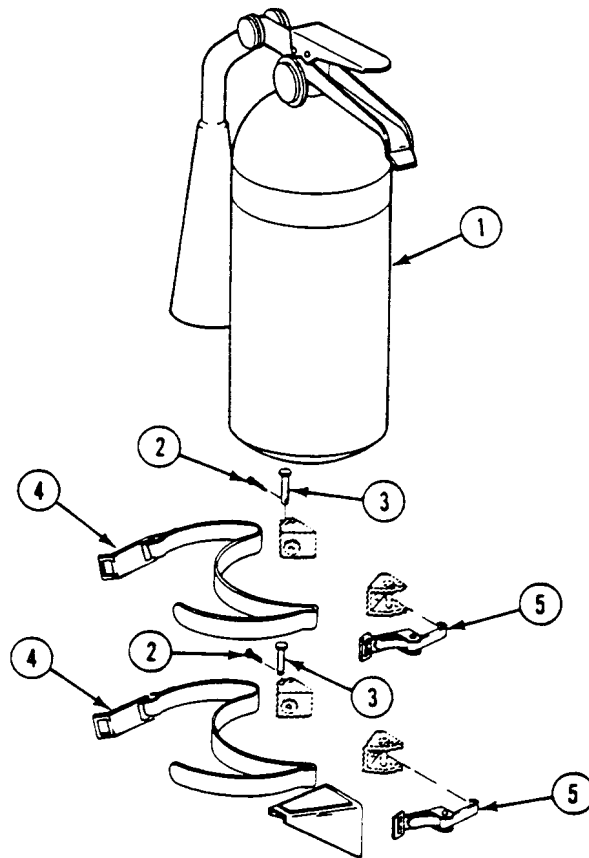
Cotter pin (4)

REMOVAL

WARNING

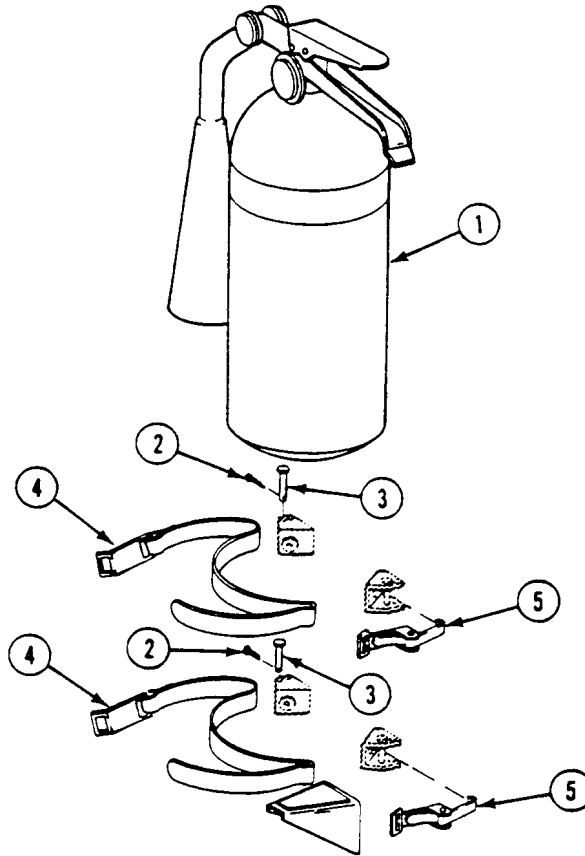
You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

1. Remove fire extinguisher (1).
2. Remove four cotter pins (2), pins (3), and two straps (4). Discard cotter pins.
3. Remove two clamps (5) from two straps (4).



INSTALLATION

1. Install two clamps (5) on two straps (4).
2. Install four pins (3), new cotter pins (2), and two straps (4).
3. Install fire extinguisher (1).



END OF TASK

REPLACE FIRE EXTINGUISHER AND MOUNT (M1059 ONLY)

0771 00

THIS WORK PACKAGE COVERS:

- Removal (page 0771 00-2).
 - Clean, Inspect, and Repair (page 0771 00-3).
 - Installation (page 0771 00-3).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Locknut

REMOVAL

WARNING

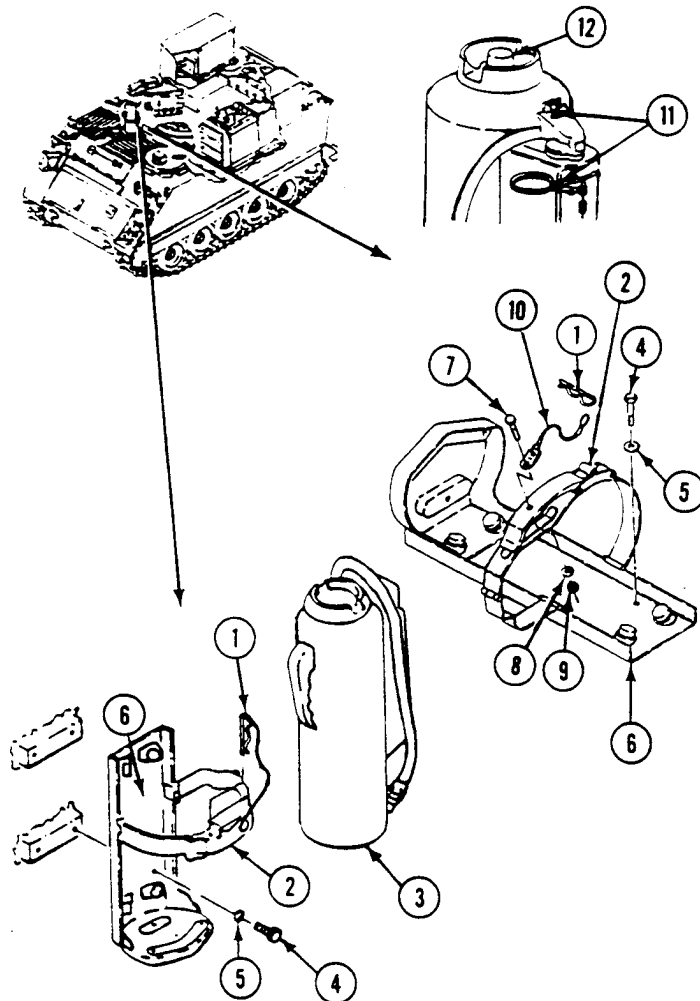


You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

NOTE

Two fire extinguishers are replaced the same way.

1. Remove pin (1) from strap (2).
2. Loosen retaining strap (2) and remove fire extinguisher (3).
3. Remove four screws (4) and four washers (5) securing mount (6) to hull.
4. Remove screw (7), washer (8), locknut (9), and lanyard (10) with pin (1) from strap (2). Discard locknut.

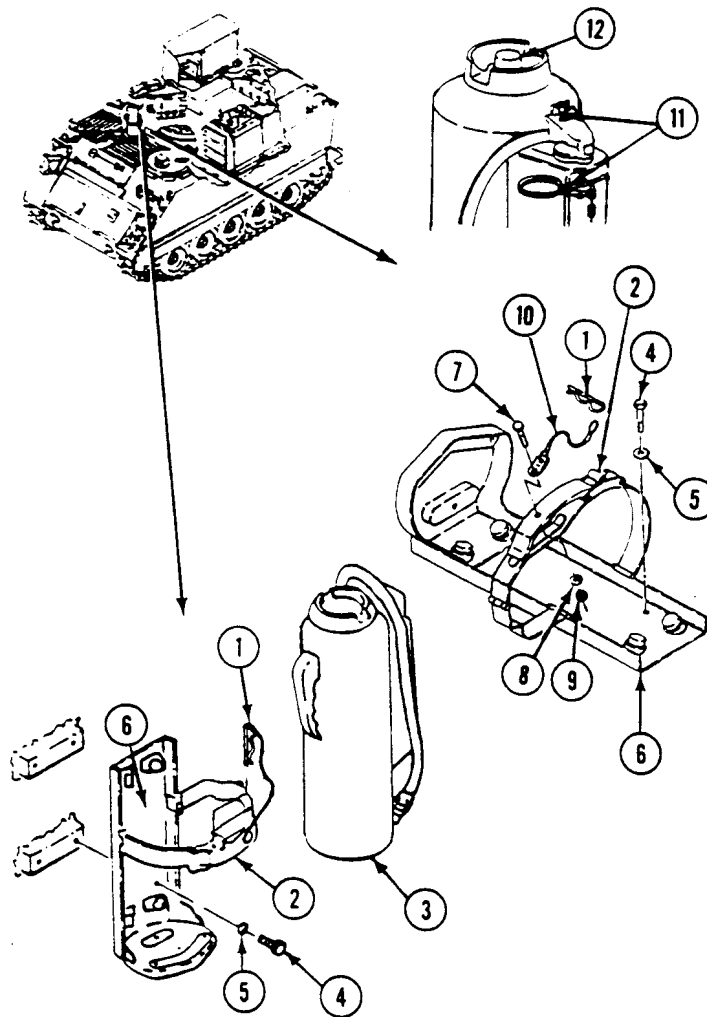


CLEAN, INSPECT, AND REPAIR

1. Inspect fire extinguisher trigger seal (11) and cap indicator (12). If cap indicator is extended or seal wire is broken, notify supervisor.

INSTALLATION

1. Install lanyard (10) with pin (1) attached on strap (2) with screw (7), washer (8), and new locknut (9).
2. Install mount (6) on hull. Secure with four screws (4) and washers (5).
3. Place fire extinguisher (3) in mount (6). Secure with strap (2).
4. Install pin (1) in strap (2).

**END OF TASK**

**REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER
MOUNT (M1068 ONLY)**

0772 00

THIS WORK PACKAGE COVERS:

- Removal (page 0772 00-2).
 - Disassembly (page 0772 00-3).
 - Assembly (page 0772 00-4).
 - Installation (page 0772 00-5).
-

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

- Drill Set (WP 0780 00, Item 23)
- General Mechanic's Tool Kit (WP 0780 00, Item 29)
- Portable Electric Drill (WP 0780 00, Item 22)

Materials/Parts

- Cotter pin
- Lockwasher (4)
- Lockwasher (2)
- Rivet (as required)
- Rivet (2)

Personnel Required

Unit Mechanic

Equipment Condition

- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
-

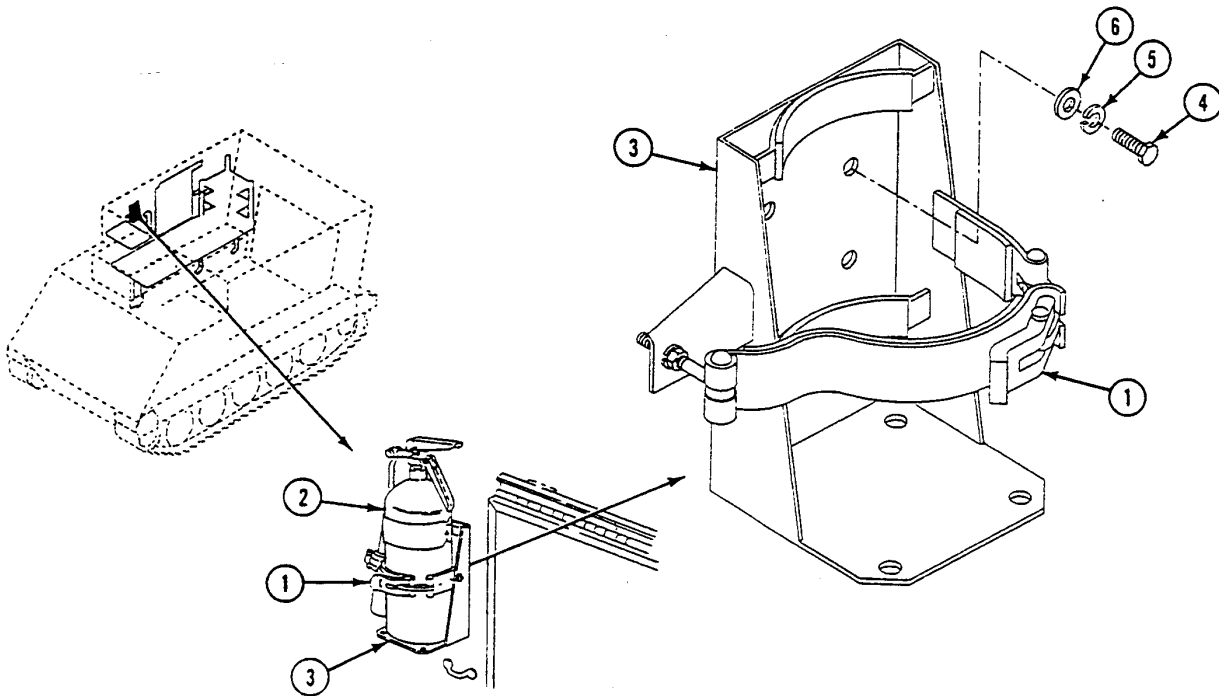
REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER MOUNT (M1068 ONLY) — Continued

0772 00

REMOVAL**WARNING**

You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Handle with great care.

1. Release latch (1) and remove fire extinguisher (2) from bracket (3).
2. Remove four screws (4), lockwashers (5), washers (6), and bracket (3) from hull. Discard lockwashers.

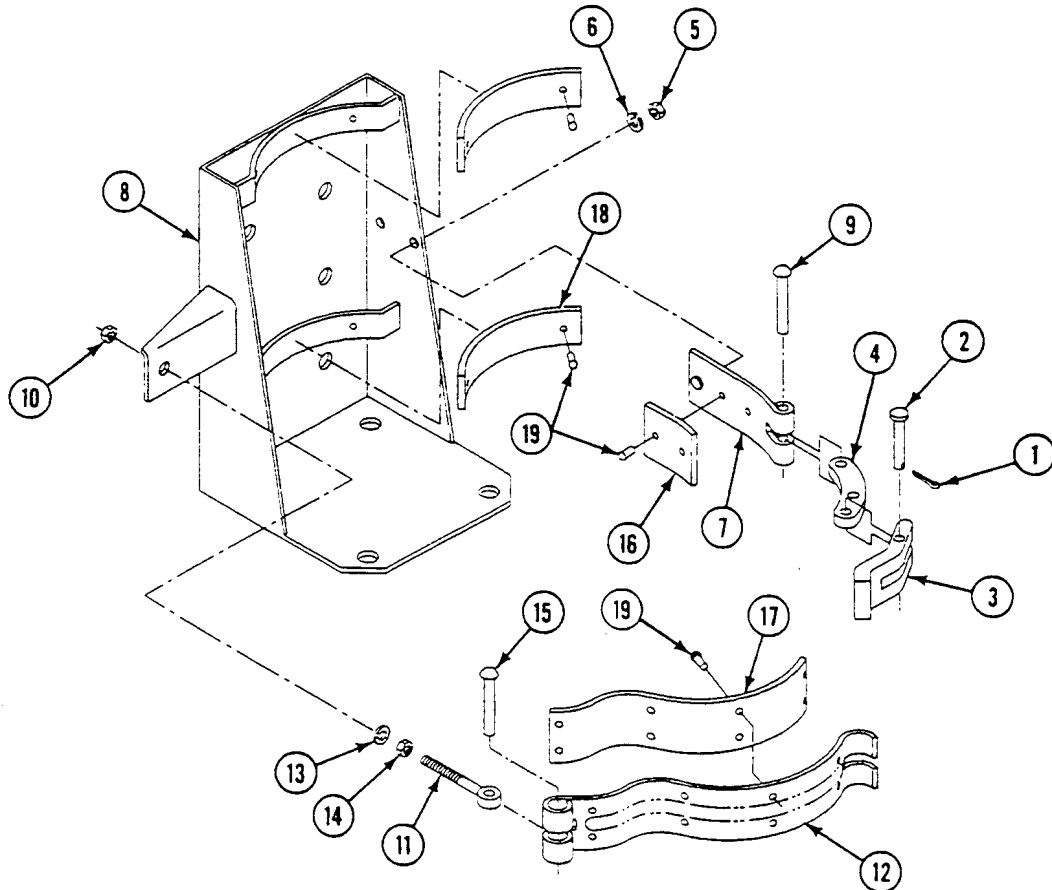


REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER MOUNT (M1068 ONLY) — Continued

0772 00

DISASSEMBLY

1. Remove cotter pin (1), headed pin (2), and latch (3) from link (4). Discard cotter pin.
2. Remove nut (5), lockwasher (6), and fixed arm assembly (7) with link (4) from bracket (8). Discard lockwasher.
3. Remove rivet (9) and link (4) from fixed arm assembly (7). Discard rivet.
4. Remove nut (10) and rod end connector (11) with movable arm assembly (12) from bracket (8). Then remove lockwasher (13) and nut (14) from connector. Discard lockwasher.
5. Remove rivet (15) and rod end connector (11) from movable arm assembly (12). Discard rivet.
6. If lining (16), (17), or (18) on arm assembly (7) or (12) or bracket (8) needs to be replaced, drill out rivets (19) and remove lining. Discard rivets.

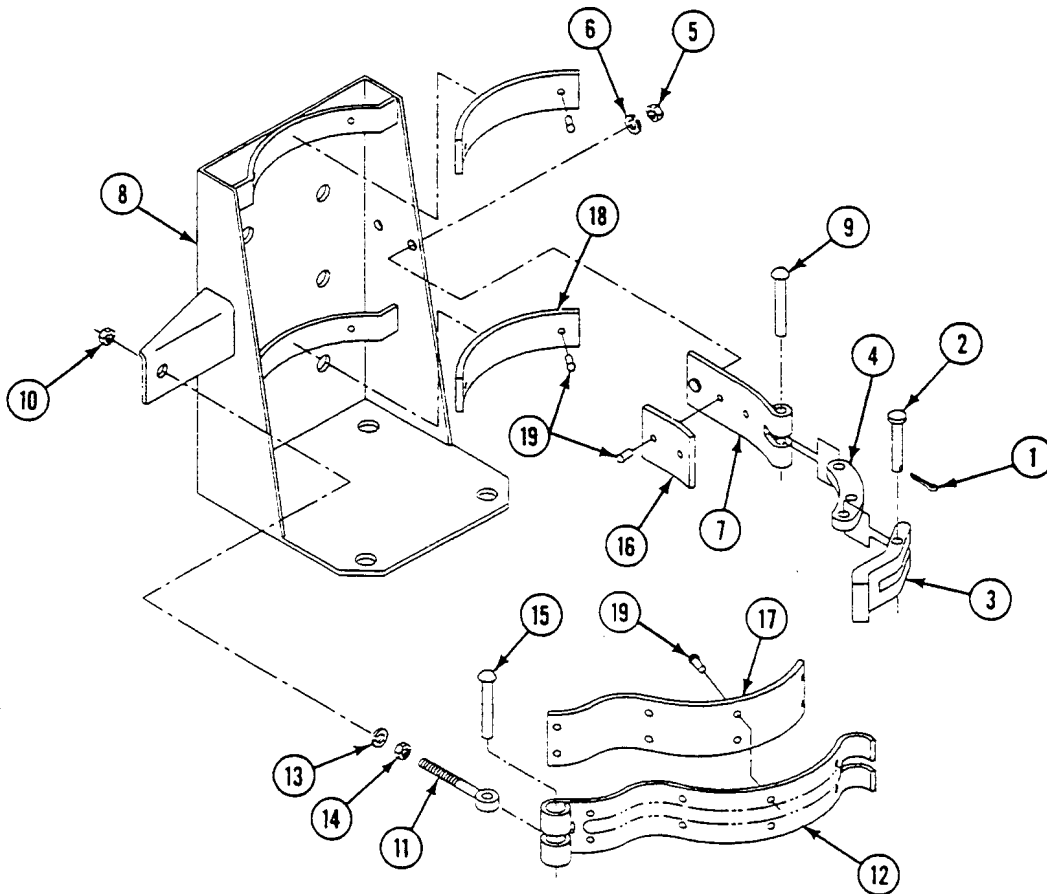


REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER MOUNT (M1068 ONLY) — Continued

0772 00

ASSEMBLY

1. If lining (16), (17), or (18) was removed from arm assembly (7) or (12) or bracket (8), install new lining and secure with new rivets (19).
2. Install rod end connector (11) on movable arm assembly (12) and secure with new rivet (15).
3. Install nut (14) and new lockwasher (13) on rod end connector (11). Insert connector into bracket (8) and secure with nut (10).
4. Install link (4) on fixed arm assembly (7) and secure with new rivet (9).
5. Install fixed arm assembly (7) on bracket (8) and secure with nut (5) and new lockwasher (6).
6. Install latch (3) on link (4) and secure with headed pin (2) and new cotter pin (1).

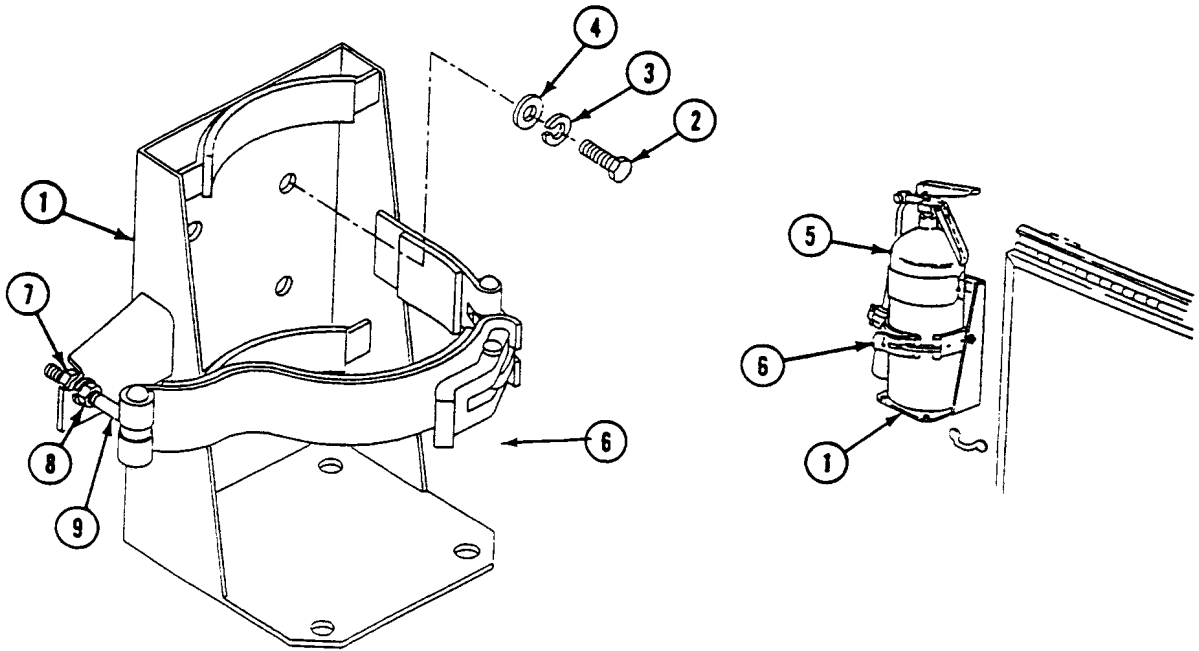


REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER MOUNT (M1068 ONLY) — Continued

0772 00

INSTALLATION

1. Install bracket (1) on hull wall next to map board. Secure with four screws (2), new lockwashers (3), and washers (4).
2. Install fire extinguisher (5) in bracket (1) and close latch (6). If needed, adjust nuts (7) or (8) on rod end connector (9) to clamp fire extinguisher securely.



END OF TASK

CHAPTER 44

UNIT MAINTENANCE INSTRUCTIONS
FOR CHEMICAL AGENT AUTOMATIC ALARM KIT (M113A2 ONLY)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE M8 CHEMICAL ALARM DISTRIBUTION BOX (M113A2 ONLY).....	0773 00
REPAIR M8 CHEMICAL ALARM JUNCTION BOX (M113A2 ONLY).....	0774 00
REPLACE M42 ALARM UNIT CABLE (M113A2 ONLY).....	0775 00
REPLACE CHEMICAL AGENT WIRING HARNESS (M113A2 ONLY).....	0776 00
REPLACE ALARM KIT MOUNTING BRACKETS (M113A2 ONLY).....	0777 00

REPLACE M8 CHEMICAL ALARM DISTRIBUTION BOX (M113A2 ONLY)

0773 00

THIS WORK PACKAGE COVERS:

Removal (page 0773 00-1).
 Installation (page 0773 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Socket Wrench Set (WP 0780 00, Item 96)
 Torque Wrench (WP 0780 00, Item 100)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

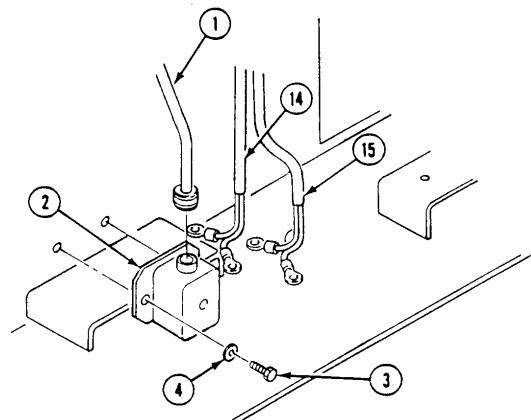
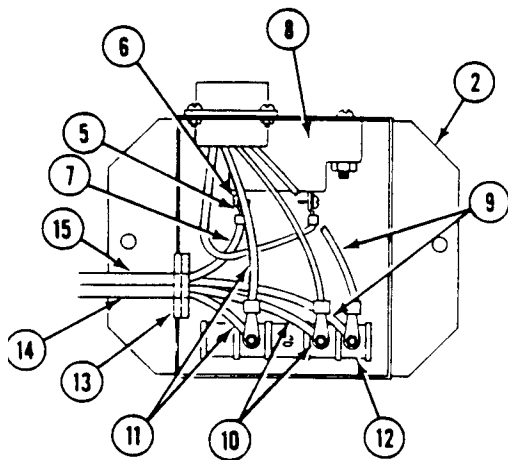
Grommet
 Lockwasher
 Lockwasher (2)

REMOVAL

NOTE

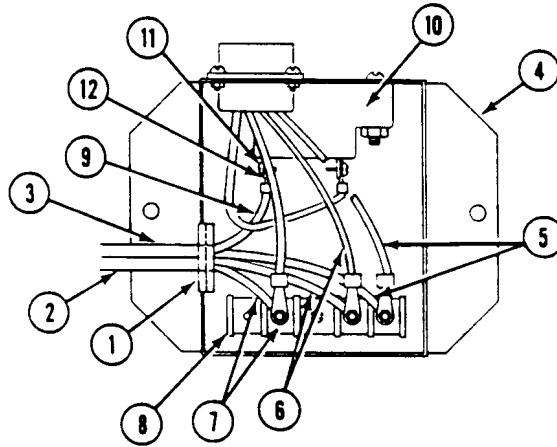
Tag all leads for later installation

1. Disconnect wiring harness (1) from distribution box (2).
2. Remove two mounting screws (3) and lockwashers (4) from distribution box (2). Remove distribution box. Discard lockwashers.
3. Remove screw (5), lockwasher (6), and circuit 6B lead (7) from circuit breaker (8). Discard lockwasher.
4. Disconnect circuits 7B and 7C (9), 509A and 509B (10), and 509C and 509D (11) from terminal board (12).
5. Remove grommet (13) and harness (14) and (15) from distribution box (2). Discard grommet.

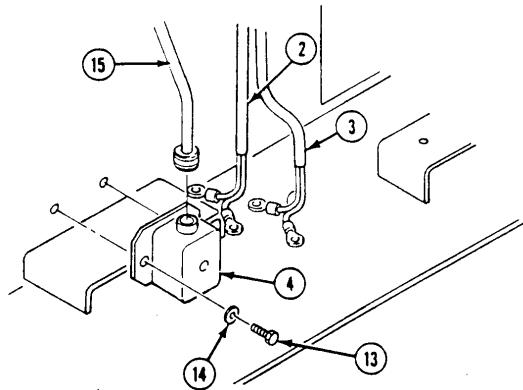


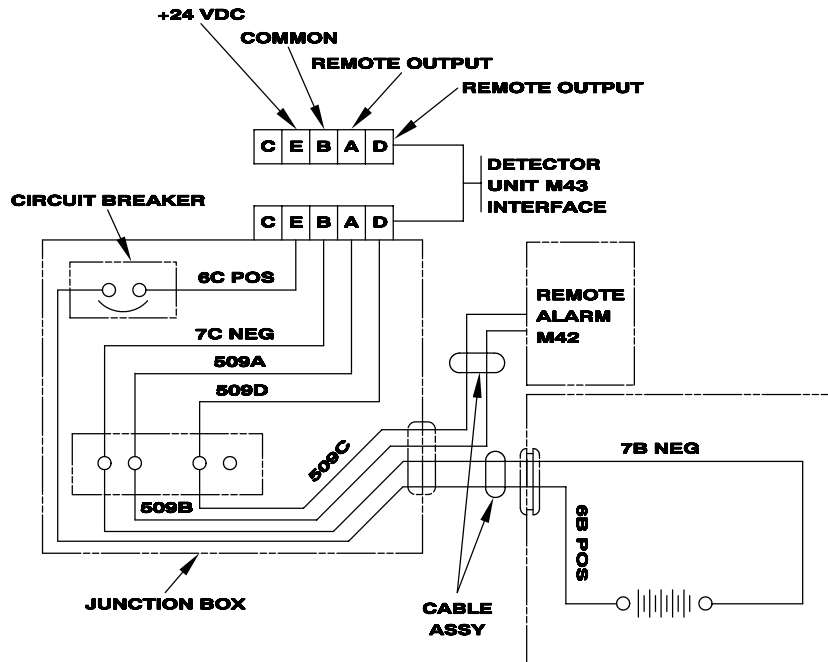
INSTALLATION

1. Place new grommet (1) on harness (2) and (3). Install grommet (1) and harness (2) and (3) in distribution box (4).
2. Pair up circuit leads 7B and 7C (5) and 509A and 509B (6) and 509C and 509D (7), and install on terminal board (8) as shown.
3. Install circuit lead 6B (9) on circuit breaker (10) terminal. Secure with screw (11) and new lockwasher (12).



4. Install two mounting screws (13) and new lockwashers (14) on distribution box (4). TORQUE SCREWS TO 73-79 LB-IN (8-9 N·M). Use torque wrench and socket set.
5. Connect wiring harness (15) to distribution box (4).





FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Raise and lock ramp (see your -10).
3. Stop engine (see your -10).

END OF TASK

REPAIR M8 CHEMICAL ALARM JUNCTION BOX (M113A2 ONLY)

0774 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0774 00-2).
Assembly (page 0774 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Distribution box removed (WP 0773 00)

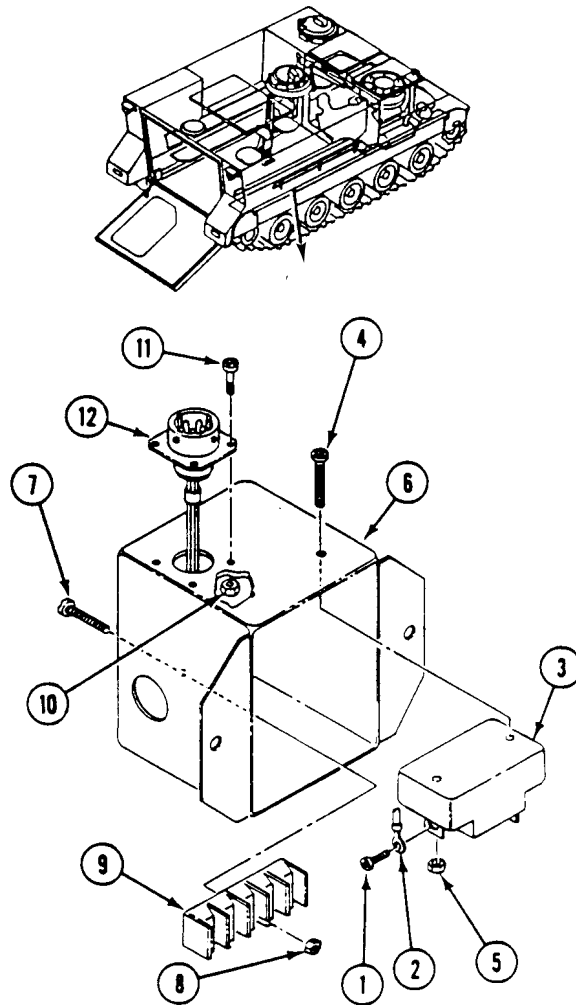
Materials/Parts

Locknut (3)

Locknut (4)

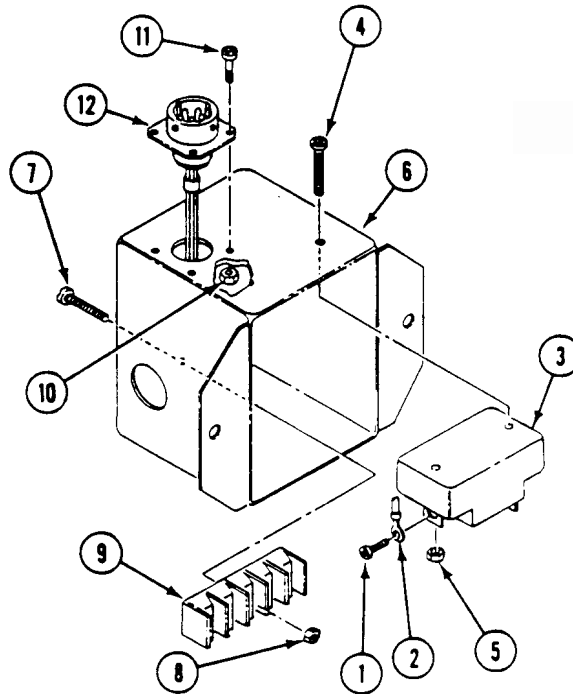
DISASSEMBLY

1. Remove screw (1) and lead (2) from circuit breaker (3).
2. Remove two screws (4), locknuts (5), from circuit breaker (3) and distribution box (6). Remove circuit breaker. Discard locknuts.
3. Remove screws (7), locknut (8), and terminal board (9) from distribution box (6). Discard locknut.
4. Remove four locknuts (10), screws (11), and receptacle (12) from distribution box (6). Discard locknuts.



ASSEMBLY

1. Install receptacle (12), four screws (11), and new locknuts (10) on distribution box (6).
2. Install circuit breaker (3) on distribution box (6). Secure with two screws (4) and new locknuts (5).
3. Secure lead (2) to circuit breaker (3) with screw (1).
4. Install terminal board (9), screw (7), and new locknut (8) in distribution box (6).

**FOLLOW-THROUGH STEPS**

1. Install distribution box (WP 0773 00).

END OF TASK

REPLACE M42 ALARM UNIT CABLE (M113A2 ONLY)

0775 00

THIS WORK PACKAGE COVERS:

- Removal (page 0775 00-1).
- Installation (page 0775 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery ground lead disconnected (WP 0294 00)
- Distribution box removed (WP 0773 00)

Tools and Special Tools

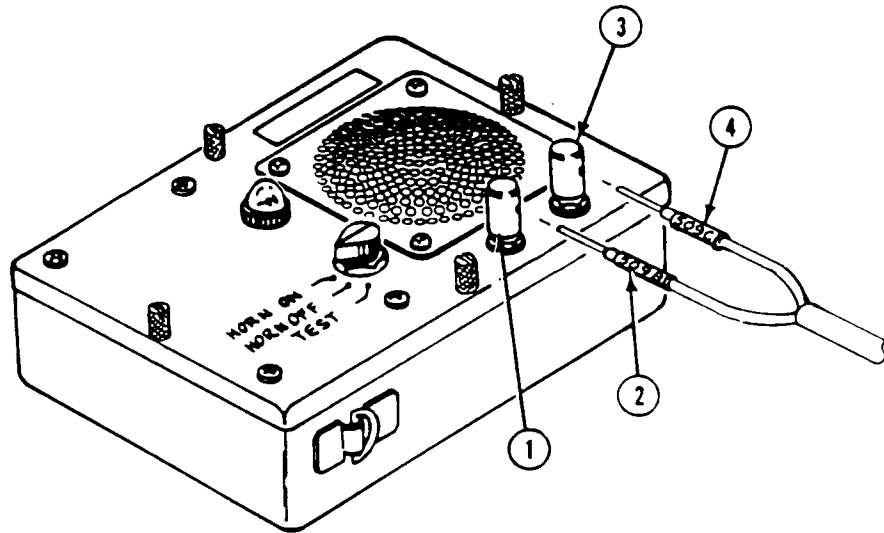
General Mechanic's Tool Kit (WP 0780 00, Item 29)

Personnel Required

Unit Mechanic

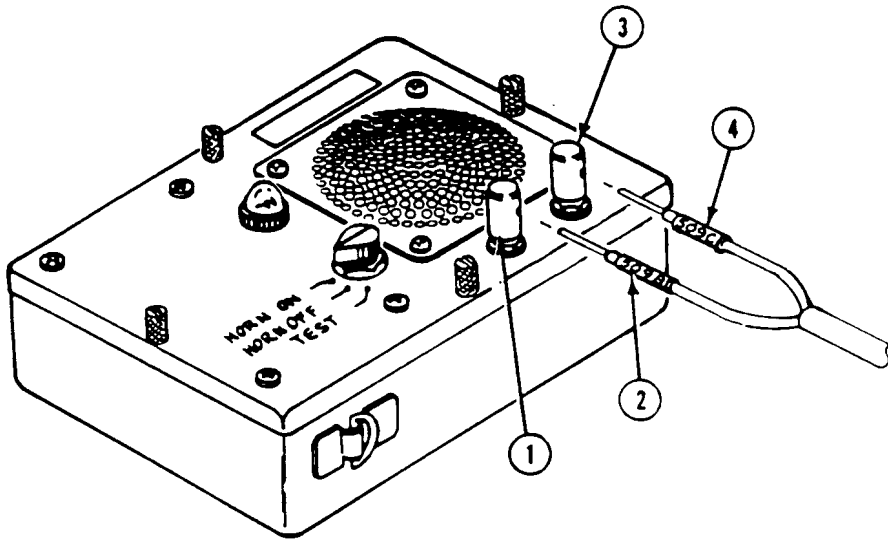
REMOVAL

1. Push in on terminal (1) and remove circuit lead 509B (2).
2. Push in on terminal (3) and remove circuit lead 509C (4).



INSTALLATION

1. Push in on terminal (3) and install circuit lead 509C (4).
2. Push in on terminal (1) and install circuit lead 509B (2).

**FOLLOW-THROUGH STEPS**

1. Connect circuit 509B and 509C leads to terminal board (WP 0773 00).
2. Install distribution box (WP 0773 00).
3. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE CHEMICAL AGENT WIRING HARNESS (M113A2 ONLY)

0776 00

THIS WORK PACKAGE COVERS:

Removal (page 0776 00-2).
 Installation (page 0776 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Locknut (2)

Lockwasher (2)

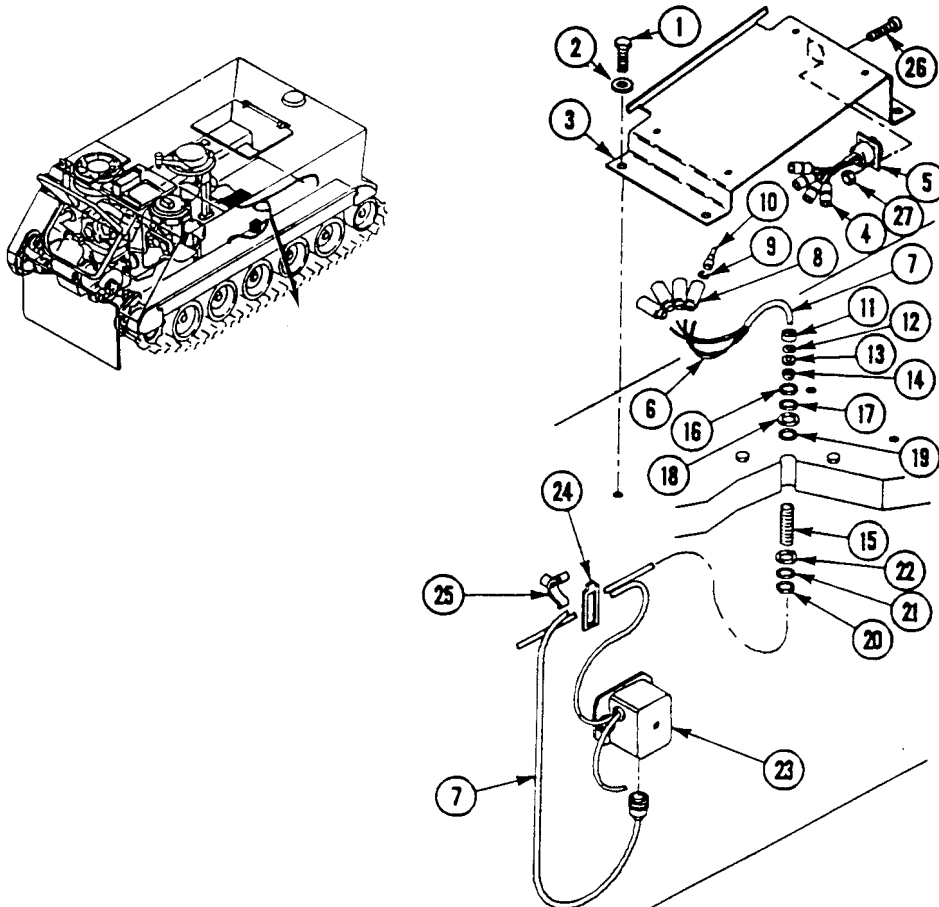
REMOVAL

1. Remove four screws (1) and washers (2) from hull and bracket (3).
2. Disconnect and tag four leads (4) of extension harness (5) from four leads (6) of main harness (7).

NOTE

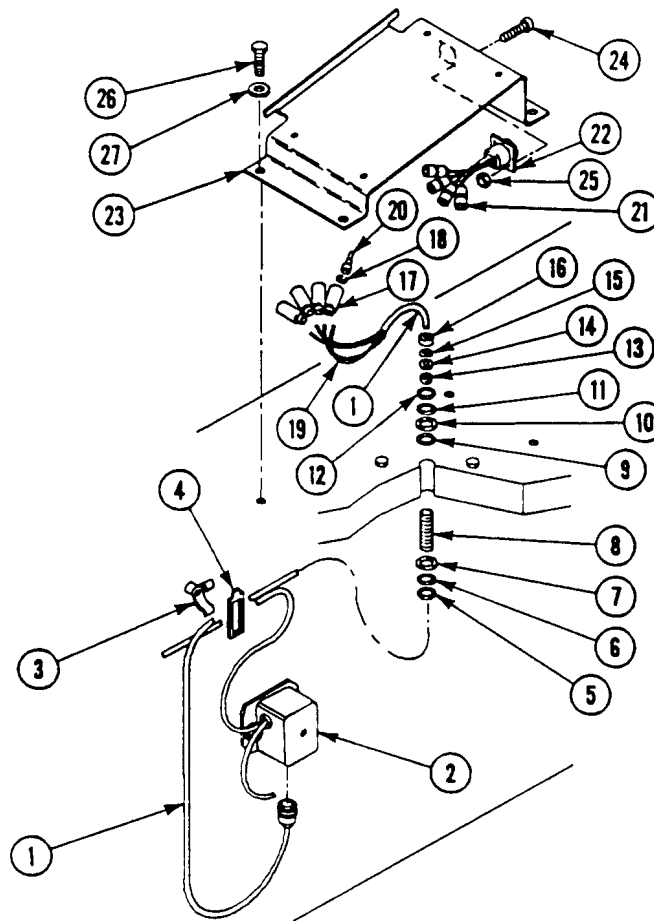
If extension harness only is being replaced, go to REMOVAL Step 9 and INSTALLATION Step 9.

3. Slide four shells (8) back on leads (6). Remove four slotted washers (9) and shells (8) from four leads (6) and contacts (10).
4. Remove coupling nut (11), spring washer (12), packing (13), and rubber bushing (14) from main harness (7) and bushing (15).
5. Remove locknut (16), lockwasher (17), washer (18), and washer insulator (19) from main harness (7) and bushing (15). Discard locknut and lockwasher.
6. Remove locknut (20), lockwasher (21), washer (22), and bushing (15) from hull and main harness (7). Remove and discard locknut and lockwasher from bushing.
7. Disconnect main harness (7) from distribution box (23).
8. Remove clip (24) and main harness (7) from cradle (25).
9. Remove four screws (26), nuts (27), and extension harness (5) from detector bracket (3).



INSTALLATION

1. Connect main harness (1) to distribution box (2).
2. Secure main harness (1) to cradle (3) with clip (4).
3. Slide new locknut (5), new lockwasher (6), washer (7), and new bushing (8) on main harness (1).
4. Insert main harness (1) and bushing (8) through top.
5. Install washer insulator (9) washer (10), new lockwasher (11), and new locknut (12) on main harness (1) and bushing (8).
6. Install rubber bushing (13), packing (14), spring washer (15), and coupling nut (16) on main harness (1) and bushing (8).
7. Tighten locknut (5).
8. Install four shells (17) and slotted washers (18) on leads (19) and contacts (20).
9. Connect four leads (19) of main harness (1) to four leads (21) of extension harness (22).
10. Install extension harness (22) on detector bracket (23) with four screws (24) and nuts (25).
11. Install detector bracket (23) on hull with four screws (26) and washers (27).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).

END OF TASK

REPLACE ALARM KIT MOUNTING BRACKETS (M113A2 ONLY)

0777 00

THIS WORK PACKAGE COVERS:

Removal (page 0777 00-2).
 Installation (page 0777 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0780 00, Item 29)
 Socket Wrench Set (WP 0780 00, Item 96)
 Torque Wrench (WP 0780 00, Item 102)

References

TM 3-6665-225-12

Equipment Condition

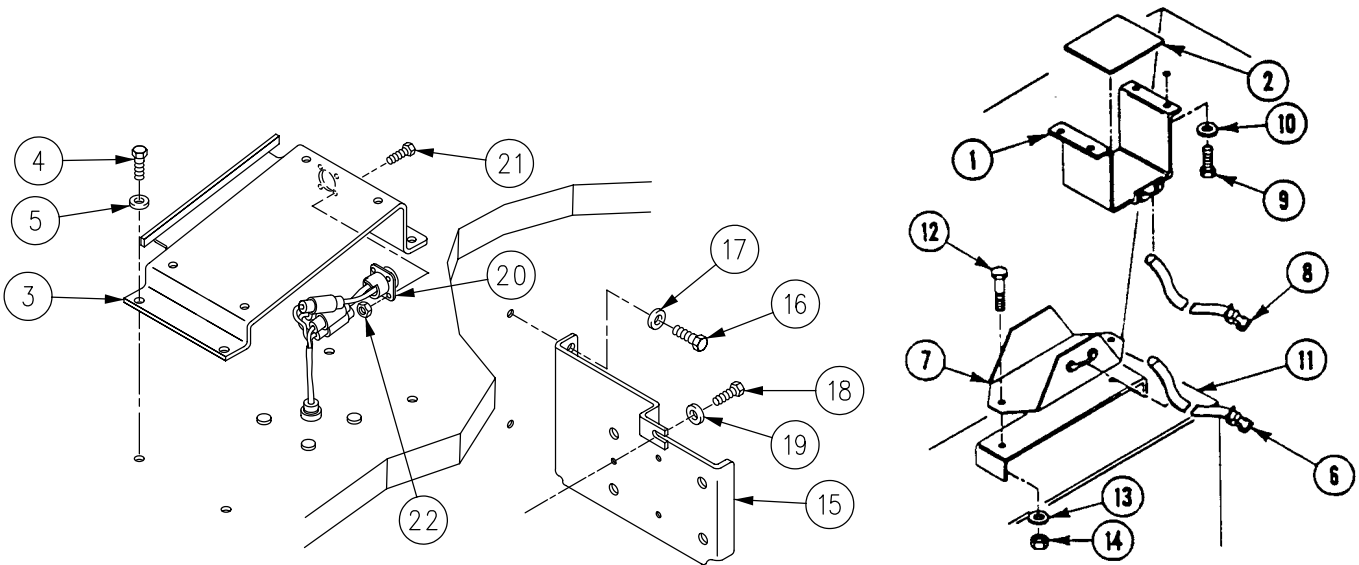
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Ramp lowered (see your -10)
 Battery ground lead disconnected (WP 0294 00)

Materials/Parts

Adhesive (WP 0782 00, Item 2)
 Locknut (2)
 Lockwasher (3)

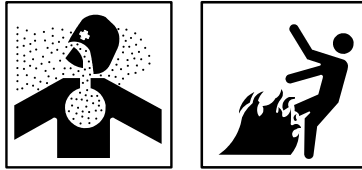
REMOVAL

1. Remove strap (6) from refill bracket (7).
2. Remove refill unit from refill bracket (7). See TM 3-6665-225-12.
3. Remove two locknuts (14), screws (12), washers (13), and refill bracket (7) from battery box cover (11). Discard locknuts.
4. Remove alarm unit from bracket (15). See TM 3-6665-225-12.
5. Remove two screws (16), lockwashers (17), and bracket (15) from bulkhead. Discard lockwashers.
6. Remove screw (18), lockwasher (19), and bracket (15) from radio shelf. Discard lockwasher.
7. Remove strap (8) and battery from bracket (1).
8. Remove five screws (9), washers (10), and bracket (1) from hull top.
9. If damaged, remove pad (2) from bracket (1). Discard pad.
10. Remove detector unit from bracket (3). See TM 3-6665-225-12.
11. Remove four screws (4), washers (5), and bracket (3) from hull.
12. Remove four screws (21), nuts (22), and harness connector (20) from bracket (3).



INSTALLATION

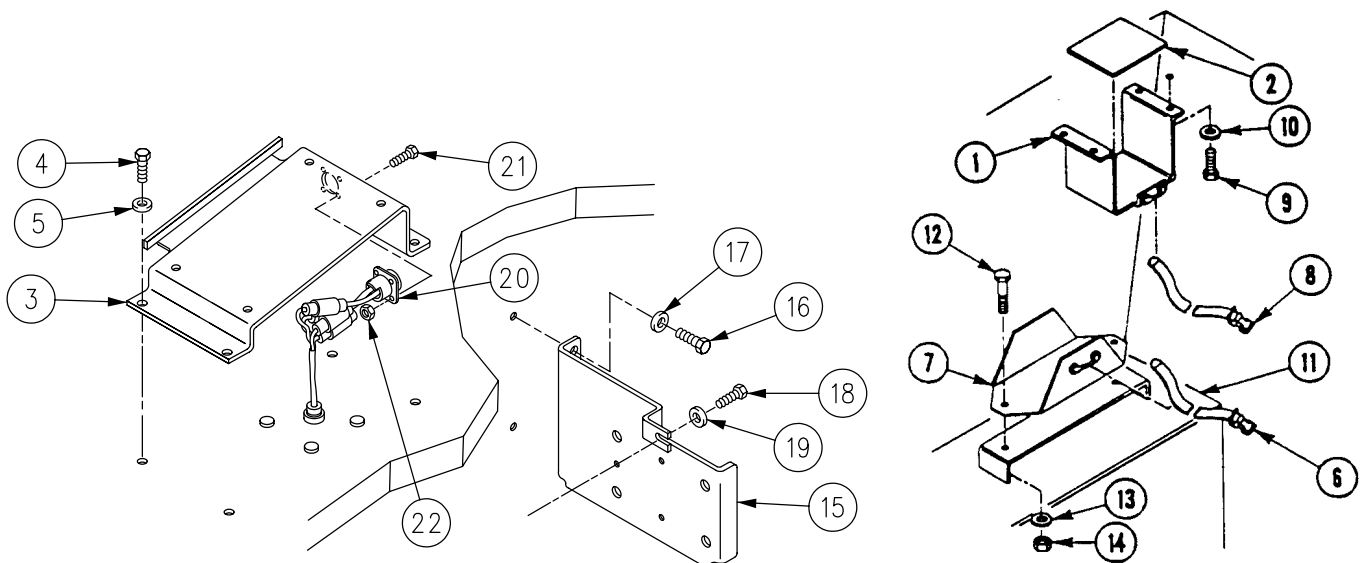
WARNING



Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

1. Apply a thin coat of adhesive to mating surfaces of bracket (1) and new pad (2). Allow 10-20 minutes drying time. Press surfaces together firmly.
2. Secure bracket (3) to top of carrier with four screws (4) and washers (5). TIGHTEN SCREWS TO 264-284 LB-IN (30-32 N·M) TORQUE. Use torque wrench.
3. Install harness connector (20) on bracket (3). Secure with four screws (21) and nuts (22).
4. Install detector unit in bracket (3). See TM 3-6665-225-12.
5. Install strap (6) on bracket (7). Install strap (8) on bracket (1).
6. Secure bracket (1) to hull top with four screws (9) and washers (10). TIGHTEN SCREWS TO 264-284 LB-IN (30-32-N·M) TORQUE. Use torque wrench.
7. Install battery in bracket (1). Secure with strap (8). See TM 3-6665-225-12.
8. Secure refill bracket (7) to battery box cover (11) with two screws (12), washers (13), and new locknuts (14).
9. Install refill unit in bracket (7). Secure with strap (6). See TM 3-6665-225-12.
10. Install alarm unit bracket (15) on bulkhead. Secure with two screws (16) and new lockwashers (17).
11. Secure alarm unit bracket (15) to radio shelf with screw (18) and washer (19).



FOLLOW-THROUGH STEPS

1. Connect battery ground lead (WP 0294 00).
2. Raise and lock ramp (see your -10).
3. Stop engine (see your -10).

END OF TASK

CHAPTER 45

UNIT SUPPORTING INFORMATION

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REFERENCES.....	.0778 00
MAINTENANCE ALLOCATION CHART (MAC).....	.0779 00
COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES LIST.....	.0780 00
FABRICATED TOOLS.....	.0781 00
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.....	.0782 00
M113A2 ELECTRICAL WIRING DIAGRAM 100 AMP GENERATOR.....	FO-1
M113A2 ELECTRICAL WIRING DIAGRAM 200 AMP GENERATOR.....	FO-2
M577A2 ELECTRICAL WIRING DIAGRAM.....	FO-3
M901A1 ELECTRICAL WIRING DIAGRAM.....	FO-4
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)(1 OF 4).....	FO-5
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)(2 OF 4).....	FO-5
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)(3 OF 4).....	FO-5
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)(4 OF 4).....	FO-5
M1068 ELECTRICAL WIRING DIAGRAM.....	FO-6
M1068 ELECTRICAL COMMUNICATION EQUIPMENT (1 OF 3).....	FO-7
M1068 ELECTRICAL COMMUNICATION EQUIPMENT (2 OF 3).....	FO-7
M1068 ELECTRICAL COMMUNICATION EQUIPMENT (3 OF 3).....	FO-7
M1068 POWER CONTROL ENCLOSURE (1 OF 2).....	FO-8
M1068 POWER CONTROL ENCLOSURE (2 OF 2).....	FO-8
M1059 ELECTRICAL WIRING DIAGRAM.....	FO-9

REFERENCES

0778 00

SCOPE

This appendix lists all technical manuals, lubrication orders, miscellaneous publications, and forms referenced in this manual.

TECHNICAL MANUALS

Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Purifier, Air; M2A2 and Precleaner and Particulate Filter Assembly; M1A1-19.....TM 3-4240-276-30&P

Generator Set, Smoke, Mechanical; Pulse Jet, M157A2, W/120 Gallon Fog Oil Tank.....TM 3-1040-283-10

Inspection, Care, and Maintenance of Antifriction Bearings.....TM 9-214

Operator’s and Organizational Manual; Alarm, Chemical Agent, Automatic, Portable.....TM 3-6665-255-12

Operator’s Manual for Mortar, 120MM: Towed M120 and Mortar, 120MM: Carrier-Mounted M121TM 9-1015-250-10

Operator’s Manual for Carrier, Personnel, Full Tracked; Armored Fire Support, M981.....TM 9-2350-266-10

Operator’s Manual for Carriers, Personnel, Full Tracked, Armored, M113A2; Carrier, Command Post, Light Tracked, M577A2; Carrier, Mortar, 120MM, M121, Self-Propelled, M1064; Carrier, Standardized Integrated Command Post System, M1068; Carrier Smoke Generator, Full Tracked, M1059; Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1.....TM 9-2350-261-10

Operator’s Manual for Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1.....TM 9-2350-259-10

Operator’s Manual for Tester, Airflow, Gas-Particulate Filter Unit; M39.....TM 3-6680-316-10

Operator’s and Organizational Maintenance Manual Including Repair Parts and Special Tools List for Simplified Test Equipment for Internal Combustion Engines.....TM 9-4910-571-12&P

Operator’s and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Tactical Command Systems used in M1068 Standardized Integrated Command Post System (SICPS).....TM 11-7010-256-12&P

Operator’s, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Modular Command Post System (MCPS).....TM 10-5410-229-13&P

Operator’s, Unit, Direct Support and General Support Maintenance Manual for Lead-Acid Storage Batteries.....TM 9-6140-200-14

Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for; Heaters, Vehicular Compartment.....TM 9-2540-205-24&P

Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List for Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1.....TM 9-2350-259-24P

Operator, Unit, Direct Support and General Support Maintenance (Including Repair Parts and Special Tools List) for Heater, Vehicular Compartment Model A-20.....TM 9-2540-207-14&P

Operator, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List 5KW, 28VDC Auxiliary Power Unit (APU).....TM 9-6115-664-13&P

Painting Instructions for Army Materiel.....TM 43-0139

Procedures for Destruction of Electronics Materiel to Prevent Enemy Use.....TM 750-244-2

REFERENCES — Continued

0778 00

Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use.....TM 750-244-7

Procedures for Destruction of Tank-automotive Equipment to Prevent Enemy Use.....TM 750-244-6

Unit, Direct Support and General Support Maintenance Manual Standards for Inspection and Classification of Tracks, Track Components and Solid-Rubber TiresTM 9-2530-200-24

Unit and Direct Support Maintenance (Including Repair Parts and Special Tools List) (Including Depot Repair Parts) for Mortar, 120MM; Towed M120; Mortar 120MM; Carrier-Mounted M121; Trailer, Mortar, 120MM; M1100.....TM 9-1015-250-23&P

Unit and Intermediate Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for 107MM Mortar Turntable and Mount, 81MM Mortar Turntable and Mount, and 81MM Mortar Bipod Assembly.....TM 9-1015-232-23&P

Unit Maintenance, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) for Carriers, Personnel, Full Tracked, Armored, M113A2; Carrier, Command Post, Light Tracked, M577A2; Carrier, Mortar, 120MM, M121, Self-Propelled, M1064; Carrier, Standardized Integrated Command Post System, M1068; Carrier, Smoke Generator, Full Tracked, M1059, Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1.....TM 9-2350-261-24P

Unit Maintenance Manual (Including Repair Parts and Special Tool List) for Generator Set, Smoke, Mechanical; Pulse Jet, M157A2, W/120 Gallon Fog Oil Tank.....TM 3-1040-283-20&P

Unit Maintenance Manual for Combat Vehicle, Anti-Tank, Improved TOW Vehicle, M901A1TM 9-2350-259-20

FIELD MANUALS

First Aid.....FM 4-25.11

Desert Operations.....FM 90-3

Operator's Circular Welding Theory and ApplicationTC 9-237

Operation and Maintenance of Ordnance Materiel in Cold WeatherFM 9-207

LUBRICATION ORDERS

Lubrication Order: Combat Vehicle, Anti-Tank, Improved TOW M901.....LO 9-2350-259-12

OTHER PUBLICATIONS

Army Oil Analysis Program (AOAP).....TB 43-0211

CARC Spot PaintingTB 43-0242

Expendable Items (except Medical, Class V, Repair Parts and Heraldic Items).....CTA 50-970

Operator's Circular Welding Theory and ApplicationTC 9-237

The Army Maintenance Management System (TAMMS).....DA Pam 738-750

Use of Antifreeze Solutions, Antifreeze Extender, Cleaning Compounds and Test Kit in Engine Cooling SystemsTB 750-651

FORMS

Refer to DA Pam 25-30 for index of blank forms and to DA Pam 738-750 for explanation of use.

Equipment Inspection and Maintenance Worksheet.....DA Form 2404
 Preventive Maintenance Schedule and Record.....DD Form 314
 Processing and Deprocessing Record for Shipment, Storage, and Issue of Vehicles and Spare
 Engines.....DD Form 1397
 Quality Deficiency Report.....SF 368
 Recommended Changes to Publications and Blank Forms.....DA Form 2028

MILITARY SPECIFICATIONS

Additive, Antifreeze Extender, Liquid Cooling SystemsMIL-A-53009A(1)
 Carriers, Personnel, Full-Track, Armored; M113A2 and M113A3; Mortars, Self-Propelled;
 M106A2 (107MM), M125A2 (81MM) and M1064, M1064A3 (120MM); Smoke
 GeneratorS: M1059, M1059A3 and M58; Processing for Storage and Shipment ofMIL-DTL-45306H
 Coating, Epoxy, High SolidsMIL-PRF-22750F
 Fuel Oil, Diesel; for Posts, Camps and StationsA-A-52557A
 Grease, Aircraft and Instrument, Gear and Actuator Screw.....MIL-PRF-23827C(1)
 Grease, Automotive and ArtilleryMIL-PRF-10924H
 Grease, Wire Rope - Exposed GearMIL-PRF-18458C
 Hydraulic Fluid, Rust Inhibited, Fire Resistant, Synthetic Hydrocarbon Base.....MIL-PRF-46170D
 Lubricating Oil, Gear, Multipurpose (Metric)MIL-PRF-2105E
 Lubricating Oil, General Purpose, Preservative (Water-Displacing, Low Temperature)MIL-PRF-32033(1)
 Lubricating Oil, Internal Combustion Engine, ArcticMIL-PRF-46167C
 Lubricating Oil, Internal Combustion Engine, Combat/Tactical ServiceMIL-PRF-2104H
 Lubricating Oil, Internal Combustion Engine, Preservative Break-InMIL-PRF-21260E
 Lubricating Oil, Preservative, MediumMIL-PRF-3150D(2)

GENERAL

This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels.

Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

Section V. The MAC for the mounts and turntables used on the M1064 for the M121, 4.7 inch, 120-mm mortar is in TM 9-1015-250-23. The maintenance allocation chart for the turntable used in the M1064 is in TM 9-1015-232-23. The MAC for the M157 Pulse Jet Generator set used in M1059 is in TM 3-1040-283-20&P. The MAC for the M901 Turret is covered in TM 9-2350-259-20. The MAC for the M981 Turret and Communication Equipment is covered in TM 9-2350-266-20. The MAC for the M1068 Common Hardware System (CHS) is covered in TM 11-7010-256-12&P. The MAC for the M1068 Modular Command Post System (MCPS) is covered in TM 10-5410-229-13&P. The MAC for Personnel Heaters is covered in TM 9-2540-205-24&P.

MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

- (1) *Inspect*. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
- (2) *Test*. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- (3) *Service*. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gasses.
- (4) *Adjust*. To maintain or regulate, within prescribed limits, by bringing into proper or exact position or by setting the operating characteristics to specified parameters.
- (5) *Align*. To adjust specified variable elements of an item to bring about optimum or desired performance.
- (6) *Calibrate*. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
- (7) *Remove/Install*. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
- (8) *Replace*. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3rd position code of the SMR code.
- (9) *Repair*. The application of maintenance services, including fault location/troubleshooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.
- (10) *Overhaul*. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications

(i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

- (1) *Rebuild*. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

EXPLANATION OF COLUMNS IN THE MAC, SECTION II

- (1) *Column 1, Group Number*. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."
- (2) *Column 2, Component/Assembly*. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.
- (3) *Column 3, Maintenance Function*. Column 3 lists the functions to be performed on the item listed in column 2. For detailed explanation of these functions (see MAINTENANCE FUNCTIONS, page 0779 00-1).
- (4) *Column 4, Maintenance Level*. This column specifies the average total manhours required to do the job. For example, if it takes 2 people 5 hours to complete the job, the figure would be 10. This figure represents the time required to perform the job at the lowest indicated level of maintenance and restore the item to a serviceable condition. It includes disassembly, troubleshooting, quality assurance and assembly. The symbol designations for the various maintenance levels are as follows:
- C — Operator or Crew Maintenance
 - O — Unit Maintenance
 - F — Direct Support Maintenance
 - H — General Support Maintenance
 - D — Depot Maintenance
- (5) *Column 5, Tools and Equipment*. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.
- (6) *Column 6, Remarks*. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III

- (1) *Column 1, Reference Code*. The tool and test equipment reference code correlates with a code used in the MAC, Section II, column 5.
- (2) *Column 2, Maintenance Level*. The lowest level of maintenance authorized to use the tool or test equipment.
- (3) *Column 3, Nomenclature*. Name or identification of the tool or test equipment.
- (4) *Column 4, National Stock Number*. The National stock number of the tool or test equipment.
- (5) *Column 5, Tool Number*. The manufacturer's part number.

EXPLANATION OF COLUMNS IN REMARKS, SECTION IV

- (1) *Column 1, Reference Code*. The code recorded in column 6, Section II.
- (2) *Remarks*. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

Table 1. MAINTENANCE ALLOCATION CHART, SECTION II

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
01	ENGINE								
0100	POWER PLANT	Remove		2.5				1	A
		Install		3.0				1	
0100	ENGINE	Test		0.1				2 3 4 5 6	
		Service		0.2					J
		Replace			7.0			1	
		Repair						7 8 9	B
		Overhaul					50.0		
	HEAD CYLINDER	Inspect			0.5				
		Replace			0.9			10	
		Repair			12.0			11 12 13	
		Overhaul					12.0		
	SLEEVE, CYLINDER	Replace					7.2	14	
0102	SEAL, OIL, CRANKSHAFT, FRONT	Replace			4.0			15	
	SEAL, OIL, CRANKSHAFT, REAR	Replace			4.0			16	
	CRANKSHAFT	Replace					17.0		
		Repair					0.5		
0103	FLYWHEEL	Replace			5.2			17	
		Repair					0.5		
	HOUSING, FLYWHEEL	Replace					3.5	18	
0104	PISTONS	Replace					16.0	19 20	
	RINGS	Replace					16.5	21	
	RETAINER, PISTON PIN	Replace					16.5	22	
0105	ARM, ROCKER	Adjust			1.0				
		Replace			2.0				
		Repair			2.0				
	CAMSHAFT	Replace					26.0	23	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0106	GEAR, TIMING, CAMSHAFT	Replace				4.0		24	
	GEAR, TIMING, CRANKSHAFT	Replace				4.0		25 26	
	GUIDE, VALVE	Replace			12.0			27 28	
	INSERT, VALVE SEATS	Replace				12.0		29 30	
	SPRING, VALVE	Replace			12.0			31 32	
	VALVE, EXHAUST	Adjust			2.0			33	
		Replace			12.0				
	FILTER, ENGINE OIL	Service		0.1					
		Replace		0.5					
		Repair		0.8					
0108	GEAR, DRIVE, OIL PUMP	Replace				6.1		34	
	PUMP, ENGINE OIL	Replace				3.0			
		Repair				3.6			
	OIL COOLER, ENGINE	Inspect			0.2				
		Replace			2.0				
0301	MANIFOLD, EXHAUST	Replace			0.5				
	FUEL SYSTEM								
0301	INJECTOR, FUEL, ENGINE	Test				0.2		35 36	
		Adjust			0.3			44	
		Replace			0.6			37	
		Repair				2.0		38 39 40 41 42 43	
	LEVER, CONTROL, FUEL INJECTOR	Adjust			0.3				
	Replace			1.0					
	TUBES, FUEL INJECTOR	Replace			0.2				

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT			
			C	O	F	H	D			
0302	PUMP, FUEL, ENGINE	Test			0.5			46		
		Replace		1.5						
		Repair				2.0				
0304	LINES, FUEL, INJECTOR CLEANER, AIR, ENGINE	Replace			1.5			45		
		Service	0.3							
		Replace		1.0						
0304	ELEMENT	Repair			0.2				D	
		Service	0.1							
		Replace		0.1						
0305	VALVE, AIR CONTROL	Replace						47		
		Repair				1.0				D
		Replace		2.0						
0305	BLOWER, AIR, ENGINE	Replace			1.6			48		
		Repair				4.0				
		Replace			0.9					
0306	COUPLING, BLOWER DRIVE GEAR, DRIVE, AIR BLOWER	Replace			0.9			49		
		Replace			0.9					
		Repair			0.5					
0308	GOVERNOR	Adjust			0.2					
		Replace			0.5					
		Repair				2.0				
0309	FILTER, FUEL, PRIMARY	Service	0.1						J	
		Replace		0.2						
		Repair		0.2						
0309	FILTER, FUEL, SECONDARY	Service	0.1							
		Replace		0.2						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0311	HEATER ASSEMBLY, AIR BOX	Repair		0.2					
		Replace		0.5					
	BRACKET, ASSEMBLY, THROTTLE CONTROL	Repair		0.6				E	
		Replace		0.5					
		Repair		1.5					
		Adjust		0.5					
		Replace		0.5					
Repair		0.1							
04	EXHAUST SYSTEM								
0401	JOINT, EXHAUST	Replace		0.2					
		Repair		0.2					
05	COOLING SYSTEM								
0501	RADIATOR	Test			0.2				
		Service	0.2	0.5			50	J	
		Replace		3.0					
		Repair			2.0				
0504	THERMOSTAT	Test		0.9					
		Replace		0.8					
		Replace		1.2					
0505	PUMP, COOLANT	Repair			1.8				
		Adjust		0.2					
		Replace		0.9					
0505	BELT, PUMP DRIVE	Adjust		0.1					
		Replace		0.2					
	BELT, FAN DRIVE	Service	0.2	0.5				J	
		Replace		3.2					
FAN ASSEMBLY, VENTILATING	Repair					4.7			

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
06	GEARBOX ASSEMBLY, FAN	Replace			2.0				
		Repair				2.0			
0601	ELECTRICAL SYSTEM BELT, DRIVE GENERATOR	Adjust		0.1					
		Replace		0.2					
0602	GENERATOR REGULATOR (SOLID STATE)	Replace		1.2					
		Repair			2.0			F	
0603	STARTER	Adjust		0.1					
		Replace		0.3					
0606	SOLENOID, SUSPENSION SWITCH, NEUTRAL START	Repair			2.0				
		Adjust		0.2					
0607	PANEL, MASTER SWITCH	Adjust		0.1					
		Replace		0.3					
0607	PANEL ASSEMBLY, WARNING LIGHT	Replace			0.4				
		Repair		0.2					
0607	PANEL ASSY, INSTRUMENT	Replace		0.3					
		Repair			0.5		0.2	D	
		Repair		0.5				E	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0608	HARNESS, WIRING, INSTRUMENT PANEL	Replace			2.0			E	
	DISTRIBUTION BOX	Repair		0.2					
		Replace			0.8				
	POWER SUPPLY INFRARED	Repair			1.2				
		Test		0.1					
0609	DOME LIGHT	Replace		0.9					
		Repair			2.0			E	
	BLACKOUT MARKER LIGHT	Replace		0.2					
		Repair		0.5				C	
	LIGHT ASSEMBLY, TAIL	Replace		0.3					
		Repair		0.2				C	
	HEADLIGHT, BLACKOUT	Replace		0.3					
		Repair		0.2				C	
	INFRARED HEADLIGHT	Replace		0.3					
		Repair		0.2				C	
0610	SERVICE HEADLIGHT	Replace		0.3					
		Repair		0.2				C	
	SWITCH, STOP LIGHT	Adjust		0.2					
0611	LEAD, DIFFERENTIAL OIL TEMPERATURE	Replace		0.3					
		Repair		0.2				C	
	HORN	Replace		0.2					
	LEAD, HORN	Replace		0.3					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT			
			C	O	F	H	D			
0612	BATTERY	Repair		0.2					C	
		Test		0.2						
		Service	0.1	0.2					U	
		Replace		0.5						
		Repair			3.0					
	BOX ASSEMBLY, BATTERY (M1064)	Service		0.3						
		Replace		0.3						
		Repair		0.2					C	
		Replace		0.4						
		Repair		0.9					C	
0613	LEAD, BATTERY	Replace		0.5						
		Repair		0.8					C	
		Replace			0.3					
		Repair		0.2					C	
		Replace			0.4					
	RECEPTACLE, AUXILIARY	Repair		0.2						C
		Replace			0.4					
		Repair		0.2						C
		Replace			0.5					
		Repair		0.8						C
WIRE HARNESS, BATTERY TO RADIO	Replace				0.3					
	Repair		0.2						C	
	Replace			0.4			62			
	Repair		0.2						C	
	Replace			0.4						
WIRING HARNESS, MAIN FORWARD	Repair		0.2						C	
	Replace			0.4						
	Repair		0.2						C	
	Replace			0.4						
	Repair		0.2						C	
WIRING HARNESS, MAIN REAR	Replace				0.5					
	Repair		0.2						C	
	Replace			0.3						
	Repair		0.2						C	
	Replace			0.3						
WIRING HARNESS, HEADLIGHT	Repair		0.2						C	
	Replace			0.3						
	Repair		0.2						C	
	Replace			0.3						
	Repair		0.2						C	
LEAD ASSEMBLY, MASTER SWITCH TO DISTRIBUTION BOX (M577A2)	Replace			0.3						
	Repair		0.2						C	
	Replace			0.3						
	Repair		0.2						C	
	Replace			0.3						
LEAD ASSEMBLY, UTILITY OUTLET (M577A2)	Repair		0.2						C	
	Replace			0.3						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT			DEPOT
			C	O	F	H			D
	LEAD ASSEMBLY, AUXILIARY POWER UNIT (M577A2)	Repair		0.2				C	
		Replace		0.3					
	LEAD ASSEMBLY, MASTER SWITCH TO DOME LIGHT (M577A2)	Repair		0.2				C	
		Replace		0.3					
	LEAD ASSEMBLY, WIRE HARNESS TO DOME LIGHT (M1059)	Repair		0.2				C	
		Replace		0.3					
	WIRE HARNESS, RADIO	Repair		0.2				C	
		Replace		0.3					
	WIRING HARNESS, RADIAC	Repair		0.2				C	
		Replace		0.2				C	
	WIRE HARNESS, TRAILER LIGHT	Repair		0.2					
		Replace		0.4				C	
	RECEPTACLE, GENERATOR SET (M577A2)	Repair		0.6					
		Replace				1.2			
0614	RECEPTACLE, TRAILER COUPLING	Repair		0.3					
		Replace		0.4					
0618	HARNESS, WIRING TRANSMISSION	Repair		0.6					
07		Replace				1.2			
0705	LINKAGE, TRANSMISSION CONTROL	Adjust		0.3					
		Replace		0.2					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0710	SELECTOR, TRANSMISSION RANGE	Repair		0.3					
		Adjust		0.3					
		Replace		0.5					
	TRANSMISSION ASSEMBLY	Repair		0.7					
		Service	0.2						
		Replace			10.0				
0713	OIL SEAL, REAR CLUTCH PACK	Repair			1.0			52 53 54 55 56 57 58 59 60 61 62	G
		Replace					14.6		
0714	CONTROL VALVE	Replace					25.0		
0721	PUMP	Repair							
		Replace							
08	TRANSFER & FINAL DRIVE ASSEMBLIES	Repair						59 60	
0801	MOUNT, TRANSFER GEARCASE	Repair						63 64 65 66	K
		Replace		1.6					
0801	TRANSFER GEARCASE	Service	0.1						
		Replace			12.4				
0801	FINAL DRIVE ASSEMBLY	Repair						67 68	
		Service	0.1						
0801	FINAL DRIVE ASSEMBLY	Repair						69 70	
		Replace		1.6					
0801	FINAL DRIVE ASSEMBLY	Repair						71	H
		Service	0.1						
0801	FINAL DRIVE ASSEMBLY	Replace		1.6				72	
		Repair					5.2	73 75	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0802	ENGINE QUICK DISCONNECT LINKAGE	Adjust		0.2					
		Replace		1.6					
09	PROPELLER SHAFTS, U-JOINTS & CLAMPS								
0900	SPIDERS	Service	0.2				76		
		Replace		.06					
11	REAR AXLE								
1124	BAND, STEERING, BRAKE DIFFERENTIAL	Adjust		0.3					
		Replace		1.1					
		Repair			1.6				
	OIL FILTER, DIFFERENTIAL	Service		0.2					
		Replace		0.9					
		Repair		0.3				C	
	DIFFERENTIAL CONTROL	Service	0.1						
		Replace		3.8					
		Repair				16.0	1 77 78 79 80 81	H	
	MOUNT, DIFFERENTIAL	Replace		0.5			69		
13	WHEELS & TRACKS								
1301	BAR, TORSION	Replace	0.9				82 83 84		
	BEARING, TRUNNION, SUPPORT ARM ASSEMBLY	Replace		0.7			81		
	SEAL, TRUNNION, SUPPORT ARM ASSEMBLY	Replace		0.6			81		
	BEARING, SPINDLE, SUPPORT ARM ASSEMBLY	Replace		0.6			86 87		

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
1303	SEAL, SPINDLE, SUPPORT ARM ASSEMBLY	Replace		0.6				86	
	SUPPORT ARM ASSEMBLY, ROAD WHEEL	Service		0.2					
	ADJUSTER ASSEMBLY, TRACK TENSION	Repair		2.0					
		Adjust		0.2					
	ARM ASSEMBLY, IDLER	Replace			0.6				
		Repair				1.1			E
		Service			0.2				
1305	BEARING, IDLER HUB	Replace		0.7					
	Repair				1.0				
	SEAL, SPINDLE IDLER ARM ASSEMBLY	Replace		0.8				99	
	Replace			0.8				86	
	TRACK ASSEMBLY SHOE, TRACK	Adjust		0.2				84 85 89 90	I
	Inspect			0.2				88	C
	Replace			0.3					
	Repair			0.2					
	TRACK ASSEMBLY, T130	Replace			1.4				S
	TRACK ASSEMBLY, T150	Replace			1.5				S
1311	ROAD WHEEL	Replace		0.3				91	
14	STEERING								
1403	ARM ASSEMBLY, STEERING	Adjust		0.3					
		Replace		0.5					
		Repair		0.3					C

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
15	BRAKE ASSEMBLY, PIVOT, STEER	Replace		0.4					
		Repair			0.6			92	E
	CYLINDER, MASTER, PIVOT STEER	Service		0.1					
		Adjust		0.6					
	CONTROLS AND LINKAGE, DIFFERENTIAL STEERING BRAKES	Replace		0.8					
		Repair			1.0			93	
		Inspect	0.2						
		Replace		4.0					
	TOWING ATTACHMENTS PINTLE, TOWING	Service	0.1						
		Replace		0.2					
Repair			0.4					C	
16	SPRINGS AND SHOCK ABSORBERS								
1604	SHOCK ABSORBER ASSEMBLY	Replace		0.4				94	
		Repair			0.5				
18	HULL								
1800	TRIM VANE ASSY	Adjust		0.2					
1801	GRILL ASSEMBLY, POWER PLANT	Replace					2.2		
		Repair				1.8			
	DOOR ASSEMBLY, POWER PLANT	Replace		0.5					
		Repair		1.0					C
	TRIM VANE ASSEMBLY	Replace		0.3					
		Repair		0.5					C

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
1803	RELEASE ASSEMBLY, TRIM VANE	Adjust		0.1					C
		Replace		0.3					
		Repair		0.5					
	COVER, ENGINE ACCESS	Replace		0.2					
		Repair		1.0					
	INSERT, THREADED COVER, CARGO HATCH	Replace				0.3		95 96	
		Replace		0.5					
		Repair		0.3					
	CUPOLA ASSEMBLY, COMMANDER'S	Replace			2.1				
		Repair			3.1				C
	RAMP ASSEMBLY	Replace					3.5		
		Repair			0.6				
	DOOR ASSEMBLY, RAMP	Replace			0.7				
		Repair			0.2				E
		Adjust		0.2					
COVER ASSEMBLY, COMMANDER'S HATCH	Replace			0.5					
	Repair			0.2				C	
	Replace			0.3					
RELEASE ASSEMBLY, PERISCOPE	Repair			0.6					
	Adjust			0.2					
	Replace			0.5					
COVER ASSEMBLY, DRIVER'S HATCH	Repair			0.2				C	
	Replace			0.5					
	Repair			1.5				C	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT			DEPOT
			C	O	F	H			D
1807	PLATFORM, COMMANDER'S	Replace		0.5					
		Repair		1.5				C	
	SEAT, DRIVER'S	Replace		0.5					
		Repair		1.5				C	
	ASSEMBLY, STOWAGE BOX (M1068)	Replace		0.2					
		Repair		0.5					
	ASSY, WORKSURFACE (M1068)	Replace		0.3					
		Repair		0.2					
	SEAT, COMMANDER'S (M1068)	Replace		0.5					
		Repair		1.5					
	SEAT, CREW STATION (M1068)	Replace		0.5					
		Repair		1.5					
CONTAINER ASSEMBLY, AMMO	Replace		0.5						
	Repair		0.1				C		
1808	RACK, AMMO	Replace		0.9					
		Repair		0.4					
22	HOLDER, CABLE REEL	Replace		0.4					
		Repair		0.3					
2201	MISCELLANEOUS HULL ACCESSORIES	Replace		1.0					
		Repair			3.0			E	
2205	COVERED EXTENSION (M577A2)	Replace		0.2					
		Repair			0.2				
2205	CURTAIN, BLACKOUT (M577A2)	Replace							
		Repair			0.2				
2205	PUMP, BILGE	Service	0.3						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
24	HYDRAULIC LIFT COMPONENTS	Replace		0.8					
		Repair			1.2				
2404	TANK, HYDR FLUID	Service		0.7			37		
		Replace		0.8			37		
		Repair		0.9			37		
	TANK, RAMP SYSTEM	Replace		0.7					
		Repair				1.0		D	
2407	CYLINDER, RAMP	Replace		1.3					
		Repair			0.8				
29	AUXILIARY GENERATOR								
2901	GENERATOR SET (M577A2)	Service	0.1						
		Adjust		0.2					
		Replace		0.2					
		Repair				3.2			
		Overhaul					60		
	AUXILIARY PWR UNIT (M1068)	Service	0.1	0.3					
		Repair	0.2	0.5	1.8				
33	SPECIAL PURPOSE KITS								
3301	SHIPPING CONTAINERS, ENGINE	Replace			0.2				
		Repair			1.5				
3303	BOX, CONTROL, HEATER	Replace		0.2					
		Repair		0.2					
	FILTER, FUEL	Service		0.2					
		Replace		0.3					
	HEATER, COOLANT	Replace		0.4					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
3307	HEATER, PERSONNEL (ALL CARRIERS)	Repair			1.2			97 98	Q
		Replace		0.3					
	PUMP, FUEL, HEATERS	Service		0.1					
		Replace		0.2					
	HEATER CONTROL BOX	Replace		0.5				37	
		Repair		1.9				37 74	
	HEATER, PERSONNEL DRIVER'S WINDSHIELD	Replace		0.3				97 98	
		Install		0.1					
	ELECTRONIC EQUIPMENT WINTERIZATION HEATER KIT (M577A2 ONLY)	Repair				6.0			
		Install							
	ENGINE COOLANT HEATER KIT (ALL CARRIERS)	Repair				8.2			
		Install				20.0			
	FUEL SUPPLY ADAPTER KIT (M577A2 ONLY)	Repair				5.3			
		Install				0.6			
	PERSONNEL HEATER KIT (ALL CARRIERS EXCEPT M577A2)	Repair				0.5			
Install					10.0				
ANCHOR KIT (M113A2, M1059)	Repair				10.6				
	Install				1.0				
APU COVER (M577A2)	Repair		0.2						
	Replace		0.1						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
	ADAPTER ASSEMBLY	Repair			0.5				
		Replace		0.1			37		
	ARTILLERY COMMUNICATION KIT (M577A2)	Repair		0.1				37	
		Install			6.0				
	BRACKET, DOOR	Repair			1.2				
		Replace		0.1				37	
	CAPSTAN KIT (M113A2, M1059)	Repair		0.1				37	
		Install			3.0				
	CHAIN ASSY LITTER C	Repair		0.3					
		Replace		0.1				37	
	CHEMICAL ALARM KIT	Repair		.5				37	
		Install							
	COOLANT HEATER	Replace							
		Repair							
	COOLANT HEATER	Test			0.8			29 41	
		Adjust		0.5				32 34 37 44 53 67	
		Install			3.3			32 34 37 44 53 67	
		Replace		4.0				32 34 37 44 53 67	
	GUN SHIELD KIT (M113A2)	Repair		0.7	0.3			27 29 31 32 34 37 41 44 53 67	
		Install			10.0				
		Repair			0.8				
	HTR KIT, ENG COOL	Replace							
		Service		0.2				32 37	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

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(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
		Remove/ Install			10.0			41	
		Repair		.3				31 32 37 44 74	
	DUCT ASSY	Replace		0.2				37	
		Repair		0.2				37	
	LITTER KIT (M113A2)	Install		0.3					
		Repair		0.5					
		Replace							
	LITTER KIT	Inspect	0.1						
		Remove/ Install		0.3				37	
	MACHINE GUN SHIELD KIT	Remove/ Install			10			29 37	
		Repair		0.6				37	
	MOUNTING ARM ASSY	Replace		0.1				37	
		Repair		0.4	0.9			29 37	
	NON-SKID RAMP KIT (M1064)	Install			4.0				
		Repair			1.3				
	PLATFORM ASSY GUN M	Replace		0.1				37	
		Repair		0.5				37	
	RESTRICTOR ASSY	Replace		0.2				37	
		Repair		0.2				37	
	SMOKE GENERATOR ASSEMBLY (M1059)	Service							M
		Replace		.5					
		Repair							M
	SOCKET ASSY, PINTLE	Replace		0.1				37	
		Repair		0.1	0.1			29 37	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
	SUPPORT ASSEMBLY, SMOKE GENERATOR (M1059)	Replace		1.0					
		Repair		0.5					
	SUPPORT POST LITTER	Replace		0.5			37		
		Repair		0.5			37		
	ADAPTER FUEL TANK (M1059)	Service	0.1						
		Replace		0.2					
		Repair		0.5					
	PANEL ASSEMBLY OPERATORS (M1059)	Replace		0.5				M	
		Repair						N	
	FOG OIL TANK MODULE (M1059)	Replace		1.0				M	
		Repair		0.5				N	
	CABLE ASSEMBLY OPERATOR'S PANEL MAIN POWER (M1059)	Replace		0.2				C	
		Repair		0.5					
	CABLE ASSEMBLY, PANEL TO COMPRESSOR (M1059)	Replace		0.2				C	
		Repair		0.5					
	CABLE ASSEMBLY, PANEL TO PUMP (M1059)	Replace		0.3				D	
		Repair			0.5				
	CABLE ASSEMBLY, PANEL TO ACCESS PLATE (M1059)	Replace		0.8				D	
		Repair			0.5				
	CABLE ASSEMBLY, SMOKE GENERATOR TO ACCESS PLATE (M1059)	Replace		0.5				D	
		Repair			0.5				

MAINTENANCE ALLOCATION CHART (MAC)—Continued

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(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
42 4202	PUMP ASSEMBLY, FOG OIL (M1059)	Replace		0.8					M
		Repair							N
	AIR COMPRESSOR ASSEMBLY (M1059)	Replace		0.5					M
	ELECTRICAL EQUIPMENT								
	CABLE ASSY, AC POWER EXT (W7, W8) (M1068)	Replace		0.4					
		Repair			0.3				
	CABLE ASSY (W4) (M1068)	Replace		0.3					
		Repair		0.3					
	POWER DISTRIBUTION ASSY (A3) (M1068)	Replace		0.1					
		Repair		0.3					
	INVERTER (IN1, IN2) (M1068)	Replace			0.6				
	CABLE ASSY, INVERTED (W5) (M1068)	Replace		0.4					
		Repair		0.3					
	CABLE ASSY (W6) (M1068)	Replace		0.2					
		Repair		0.2					
	HOUSING ASSY, INVERTER (A2) (M1068)	Replace			0.6				
	Repair		0.4	0.8					
CABLE ASSY, DC POWER EXT (W9, W10) (M1068)	Replace		0.4						
	Repair			0.3					
CABLE ASSY, AC LIGHT CORD (W11) (M1068)	Replace		0.4						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
	CABLE ASSY (W3) (M1068)	Repair			0.3				
		Replace		0.4					
	CABLE ASSY, SINGLE POINT LAN (W40) (M1068)	Repair			0.3				
		Replace		0.1					
	CABLE ASSY, DC INPUT (W42) (M1068)	Repair		0.2					
		Replace		0.4					
	CABLE ASSY, AC INPUT (W43) (M1068)	Repair			0.3				
		Replace		0.4					
	CABLE ASSY (W32) (M1068)	Repair			0.3				
		Replace		0.6					
	BOX ASSY, EXT, COMM (ALL) (M1068)	Repair			0.5				
		Replace		0.3					
	CABLE ASSY, LAN (W101, W102) (M1068)	Repair			1.1				
		Replace		0.2					
	CABLE, RADIO FREQUENCY (M1068)	Repair		0.1					
		Replace		0.2					
	BOX ASSY, POWER ENTRY (A4) (M1068)	Repair		0.1					
		Replace		0.3					
	CABLE ASSY, POWER ENTRY INPUT (W13) (M1068)	Repair			0.6				
		Replace		0.3				P	
	CABLE ASSY, POWER ENTRY OUTPUT (W14) (M1068)	Repair		0.2	0.4				
		Replace		0.3				P	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

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(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
	ENCLOSURE ASSY, POWER CONTROL (A1) (M1068)	Repair		0.2	0.4				
		Replace		0.2					
	FACEPLATE ASSY, POWER CONTROL (M1068)	Repair		0.6	1.1				
		Replace		0.4					
	CABLE ASSY, EXT POWER INPUT (W1) (M1068)	Repair		0.5					
		Replace		0.1					
	CABLE ASSY, POWER, EXT AC (W2) (M1068)	Repair		0.2	0.4				
		Replace		0.1					
	PANEL ASSY, TENT INT BOX (A5) (M1068)	Repair		0.1					
		Replace		0.2					
	MOUNT ASSY, FACSIMILE MACH (M1068)	Repair			0.5				
		Replace		0.1					
	BOX ASSY, POWER SUPPLY STORAGE (M1068)	Repair		0.2					
		Replace		0.1					
	BOX, AC POWER (A6, A7) (M1068)	Repair		0.2					
		Replace		0.1					
	BOX, DC POWER (A8, A9) (M1068)	Repair			0.3				
		Replace		0.1					
	GROUND BOX, SINGLE POINT LAN (A15) (M1068)	Repair			0.4				
		Replace		0.1					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

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(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
		Repair		0.2					
	MOUNT, V2 PRINTER (12383945) (M1068)	Replace		0.1					
		Repair		0.3					
	PATCH PANEL BOX (A10) (M1068)	Replace		0.2					
		Repair		0.5					
	DATA PANEL ASSY (A12) (M1068)	Replace		0.6					
		Repair			0.8				
	DATA PANEL ASSY (A13) (M1068)	Replace		0.2					
		Repair			0.8				
	BOX ASSY, POWER EXT (A16, A17) (M1068)	Replace		0.3					
		Repair		0.7					
47	GAUGES (NON- ELECTRICAL)								
4701	SHAFT, ASSEMBLY FLEXIBLE SPEEDOMETER OR TACHOMETER	Replace		0.5					
		Repair		0.2					
76	FIXED FIRE EXTINGUISHER SYSTEM								
7603	CONTROLS, FIXED FIRE EXTINGUISHER	Adjust		0.2					
		Replace		0.4					
		Repair		0.5					
	CYLINDER	Service			0.4				
		Replace		0.2					
		Test		0.2					
7638	PORTABLE FIRE EXTINGUISHER (M1059)	Inspect	0.1						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

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(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
7638	PORTABLE FIRE EXTINGUISHER (M1059)	Service			0.5				
		Replace		0.1					
		Repair			1.0				
		Inspect	0.1						
91	CHEMICAL BIOLOGICAL AND RADIOLOGICAL (CBR) EQUIPMENT	Service			0.5				
		Replace		0.1					
		Repair			1.0				
9116	SHOCK MTG INSTL, CRB	Repair		0.7			37		
9131	CHEM AGENT AUTO DISTRIB BOX RPR PAD, BTRY BRK	Remove/ Install		1.8				4 32 37	
		Replace		0.2				31 37	
		Repair		0.3				31 37	
		Repair		0.1				4 31 37	

Table 2. TOOLS AND TEST REQUIREMENTS, SECTION III

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	O	SLING, POWER PACK: USED TO LIFT POWER PLANT, ENGINE AND DIFFERENTIAL	4910-00-646-6893	10942647
2	F	MANOMETER, U-TUBE: USED W/4720-00-271-9839 HOSE, 6810-00- 285-3450 MERCURY, AND 8950-00- 823-7664 FOOD COLORING TO CHECK CRANKCASE PRESSURE, EXHAUST BACK PRESSURE, AIR BOX PRESSURE, AND AIR INTAKE RESTRICTIONS	6685-00-857-4895	KM-J21478-1
3	F	TUBING, NONMETAL: USED W/6685- 00-857-4895 MANOMETER	4720-00-271-9839	MIL-R-6855
4	F	MERCURY, REAGENT: USED W/6685- 00-857-4895 MANOMETER	6810-00-285-3450	MIL-M191 GR2
5	F	GAUGE ASSEMBLY: USED W/4910- 00-019-5241 ADAPTER TO CHECK CYLINDER COMPRESSION	4910-00-870-6283	10899180
6	F	ADAPTER, CYLINDER: USED W/4910-00-870-6283 GAUGE ASSEMBLY TO CHECK CYLINDER COMPRESSION	4910-00-019-5241	10934456, J 7915-03
7	H	CRADLE ASSEMBLY: USED W/4910- 00-737-0432 AND 2520-01-006-4589 BRACKETS AND 4910-00-795-0189 STAND TO SUPPORT ENGINE OUT OF CARRIER FOR MAINTENANCE	4910-00-795-0198	7950198
8	H	STAND, MAINTENANCE: USED W/4910-00-795-0198 CRADLE ASSEMBLY, 2520-00-006-4589 BRACKETS TO SUPPORT ENGINE OUT OF CARRIER FOR MAINTENANCE	4910-00-795-0189	7950189, MIL-45004
9	H	BRACKET: USED FOR MOUNTING ENGINE IN 4910-00-795-0189 CRADLE ASSEMBLY	2520-01-006-4589	11678105
10	F	STUD, CYLINDER HEAD: USED TO ALIGN CYLINDER HEAD	4910-00-491-6634	KM-J-9965

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
11	H	INSTALLER BODY, INJECTOR: USED W/4940-00-711-1919 INSTALLER BODY TO INSTALL INJECTOR TUBE	4940-00-711-1918	10881893
12	H	INSTALLER PILOT, INJECTOR: USED W/4940-00-711-1918 INSTALLER BODY TO INSTALL INJECTOR TUBE	4940-00-711-1919	10881896
13	H	INSTALLER FLARING DIE, INJECTOR: USED W/4910-00-711-1918 TO FLARE SMALL END OF INJECTOR TUBE	4940-00-711-1920	10881892
14	H	REMOVER, CYLINDER LINER	5120-00-937-6140	J-22490
15	H	EXPANDER, FRONT OIL SEAL: USED TO EXPAND CRANKSHAFT FRONT OIL SEAL WHEN INSTALLING ENGINE LOWER FRONT COVER	4910-00-591-6640	10949378
16	H	EXPANDER, REAR OIL SEAL: USED TO EXPAND REAR OIL SEAL	5120-00-918-0587	KM-J-9769
17	F	HOOK, LIFTING: USED TO LIFT FLYWHEEL	4910-00-722-3877	10881880
18	H	STUD, FLYWHEEL ALINING: USED TO ALIGN FLYWHEEL HOUSING OR ENGINE LOWER FRONT COVER	5120-00-872-6015	KM-J-7540
19	H	CLAMP SET, HOLD DOWN CYLINDER: USED TO LOCATE CYLINDER LINES WHEN INSTALLING PISTONS	5120-00-999-8618	J-21793-01
20	H	COMPRESSOR, PISTON RING: USED TO COMPRESS PISTON RINGS WHEN INSTALLING PISTON IN CYLINDER LINER	5120-00-901-8651	KM-J-6883-01
21	H	REMOVER AND REPLACER: USED TO REMOVE AND REPLACE PISTON RINGS	5120-00-494-1846	KM-J-8128
22	H	REPLACER, PISTON PIN RETAINERS: USED TO REPLACE PISTON PIN RETAINERS	5120-00-733-8874	10881874

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
23	H	REMOVER AND REPLACER: USED TO REMOVE AND REPLACE CAMSHAFT BEARINGS	5180-00-591-6630	10949461
24	H	PULLER KIT, MECHANICAL: USED TO REMOVE CAMSHAFT GEAR AND BLOWER GEARS	5120-00-338-6721	8708724
25	H	PULLER, MECHANICAL: USED TO REMOVE CRANKSHAFT TIMING GEAR	5120-00-740-3345	KM-J-4871
26	H	REPLACER, CRANKSHAFT TIMING GEAR: USED TO INSTALL CRANKSHAFT TIMING GEAR ON CRANKSHAFT (INSTALLING TOOL)	4910-00-736-1371	10949377
27	F	REMOVER, VALVE GUIDE: USED TO REMOVE VALVE GUIDE	4910-00-591-6632	10949450
28	F	REPLACER, VALVE GUIDE: USED TO INSTALL VALVE GUIDE (INSTALLING TOOL)	5120-00-872-6014	KM-J-9729
29	H	REPLACER, VALVE SEAT INSERT: USED TO INSTALL VALVE SEAT INSERTS IN CYLINDER HEAD (INSTALLING TOOL)	4910-00-603-8925	10949451
30	H	TOOL KIT, VALVE SEAT INSERT: USED TO REMOVE VALVE SEAT INSERTS	5180-00-591-6631	10949470
31	F	COMPRESSOR, VALVE SPRING: USED W/4910-00-918-0583 ADAPTER TO REMOVE EXHAUST VALVE SPRINGS	5120-00-733-8888	10881822
32	F	ADAPTER, VALVE SPRING COMPRESSOR: USED W/5120-00-733-8888 COMPRESSOR TO REMOVE EXHAUST VALVE SPRINGS	4910-00-918-0583	KM-J-7455-4
33	F	GAUGE, THICKNESS: USED TO CHECK VALVE CLEARANCE (VALVE GAUGE ADJUSTING)	5220-00-176-0638	KM-J-9708
34	H	INSTALLER, OIL PUMP DRIVE GEAR	5120-00-591-6639	10949379
35	H	TEST FIXTURE: USED W/4910-00-255-8641 TESTER TO TEST INJECTORS	4910-00-355-6248	65-9288-9237

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
36	H	TESTER, INJECTOR: USED W/4910-00-355-6248	4910-00-255-8641	3YFL-05008
37	H	ADAPTER, NEEDLE VALVE: USED W/4910-00-355-6248 TEST FIXTURE	4910-00-764-5626	YA-396
38	F	REMOVER, INJECTOR: USED TO REMOVE INJECTOR ASSEMBLY FROM CYLINDER HEAD	5120-00-219-8400	10881891
39	H	REAMER: USED TO CLEAN FLAT PORTION OF INJECTOR NUT SPRAY TIP SEAT	5110-00-019-5240	10881903
40	H	REAMER, SECOND OPERATION: USED TO CLEAN INJECTOR COPPER TUBE	5110-00-294-4606	10881907
41	H	REAMER, USED TO REAM CARBON FROM INJECTOR SPRAY TIP	5110-00-219-8399	5344968
42	H	REAMER, FIRST OPERATION: USED TO CLEAN INJECTOR TUBE	5110-00-785-1016	10881897
43	H	REMOVER, SPRAY TIP: USED TO REMOVE SPRAY TIP FROM INJECTOR NUT	5120-00-355-6167	10919988
44	H	REFINISHER, INJECTOR TUBE TIP: USED TO FACE SMALL END OF INJECTOR TUBE	5120-00-785-1017	10881902
45	H	GAUGE: USED TO TIME INJECTOR	5220-00-387-9581	10881887
46	F	WRENCH: USED TO TORQUE FUEL LINE NUTS	5120-00-019-5232	10881875
47	F	GAUGE, FUEL PRESSURE: USED TO CHECK FUEL PUMP OUTPUT PRESSURE	6620-00-671-4509	10934455
48	H	INSTALLING HOOK, BLOWER DRIVE CAM: USED TO INSTALL BLOWER DRIVE CAM IN SPRING	4910-00-591-6633	KM-J-5209
49	O	WRENCH, OPEN END AND BOX: USED TO TORQUE FUEL RETURN LINE NUTS	5120-00-740-3347	10949344
50	O	HOSE ASSEMBLY: USED TO DRAIN BOLT-ON FUEL TANK	4720-00-454-8608	11633323

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
51	O	TOOL, RADIATOR CLEANING	4910-00-611-6559	11678393
52	H	LIFTING STRAP: USED W/4910-00-673-3801 EYE TO CHECK CONVERTER MOUNTING SPACING OR REMOVE OR INSTALL CONVERTER DRIVE COVER	4910-00-572-8608	8356175
53	H	HOLDER, STATOR ROLLERS: USED TO HOLD STATOR ROLLERS AND SPRING DURING ASSEMBLY	4910-00-572-8688	8356195
54	H	EYE, LIFTING, ADAPTER HOIST: USED W/4910-00-572-8608 STRAP TO LIFT HIGH RANGE CLUTCH PACKAGE & CONVERTER DRIVER COVER	4910-00-673-3801	10865773
55	H	HANDLE, REPLACERS: USED W/5120-00-572-8660, 5120-00-572-8615, 5120-00-572-8656 AND 5120-00-572-8658, REPLACERS TO INSTALL FRONT OIL PUMP SEAL, HIGH CLUTCH HOUSING BUSHING, OUTPUT BEARING AND SEAL, CONVERTER DRIVE COVER BUSHING AND OUTPUT SHAFT BUSHING	5120-00-316-9182	7950864
56	H	REPLACER: USED W/5120-00-316-9182 HANDLE TO INSTALL HIGH CLUTCH HOUSING BEARING (DRIVER PLUG)	5120-00-572-8656	8356202
57	H	SNAP RING DRIVER KIT: USED TO INSTALL TURBINE SHAFT SNAP RINGS	5120-00-572-8663	8356191
58	H	PULLER BOLT: USED TO REMOVE GROUND SLEEVE DIAPHRAGM ASSEMBLY	4910-00-572-8699	8356200
59	F	REPLACER: USED W/5120-00-316-9182 HANDLE TO INSTALL OUTPUT BEARING AND OIL SEAL (DRIVER PLUG BEARING)	5120-00-572-8615	8356185
60	F	PULLER: USED TO REMOVE REAR SEAL	5120-00-572-8712	8356201

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
61	F	PRESSURE GAUGE KIT: USED TO CHECK TRANSMISSION OIL PRESSURE	4910-00-572-8612	8356176
62	F	SLING, TRANSMISSION: USED TO LIFT TRANSMISSION AND TO MOUNT TRANSMISSION IN STAND (ADAPTER HOIST)	4910-00-572-8614	8356184
63	H	COMPRESSOR, CLUTCH PACKAGE: USED TO COMPRESS AND HOLD CLUTCH PACKAGE DURING INSTALLATION AND REMOVAL OR TO COMPRESS REVERSE CLUTCH PACKAGE TO REMOVE OR INSTALL HOLDING PIN	4910-00-572-8643	8356187
64	H	REMOVER AND REPLACER, TOOL KIT: USED TO REMOVE AND REPLACE CLUTCH PISTON RETURN SPRING RETAINING RING	5120-00-572-8607	8356170
65	H	REPLACER: USED W/5120-00-316-9182 HANDLE TO INSTALL HIGH CLUTCH HOUSING BEARING (DRIVER PLUG BEARING)	5120-00-572-8658	8356174
66	H	BOLT, CLAMPING: USED TO HOLD INTERMEDIATE CLUTCH BACK PLATE IN POSITION DURING BUILD UP AND DISASSEMBLY	4910-00-572-8701	8356186
67	H	GUIDE BOLT SET: USED TO POSITION FRONT AND REAR OIL PUMPS AND FRONT AND REAR PILOT TUBES AND DIAPHRAGM	4910-00-572-8710	8356165
68	H	REPLACER: USED W/5120-00-316-9182 HANDLE TO INSTALL FRONT OIL PUMP SEAL (DRIVER PLUG BEARING)	5120-00-572-8660	8356173
69	O	REMOVER AND REPLACER: USED TO REMOVE AND REPLACE TRANSFER GEARCASE AND DIFFERENTIAL RESILIENT MOUNTS	5120-00-740-3346	10943279
70	O	ADAPTER: APPLY TORQUE TO TRANSFER GEARCASE LEFT MOUNT	1025 00-215 8200	11663358-2

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
71	H	REPLACER: USED TO INSTALL TRANSFER GEARCASE RETAINER AND HOUSING BEARING CUPS	5120-00-776-1864	10886353
72	O	LIFTING BAR: USED TO REMOVE AND REPLACE FINAL DRIVER	5120-00-918-0586	11589384
73	H	REMOVER AND REPLACER: USED TO REMOVE AND REPLACE OUTPUT SHAFT BEARING	5120-00-771-7019	10874765
74	H	REMOVER AND REPLACER, OIL SEAL: USED TO REMOVE AND REPLACE FINAL DRIVE OUTPUT SHAFT OIL SEAL	5120-00-771-7020	10875335
75	F	REMOVER AND REPLACER, OIL SEAL: USED TO REMOVE AND REPLACE FINAL DRIVE OUTPUT SHAFT SPACER, RETAINER AND BEARING; AND USED W/5315-00-834- 0118 PIN AND 5120-00-678-2796 REPLACER COMPENSATING IDLER ARM SPINDLE INNER AND OUTER BEARING	5120-00-771-7018	10875326
76	O	ADAPTER, TORQUE WRENCH: USED TO TORQUE POWER TRAIN UNIVERSAL JOINT SCREWS	5120-00-977-7421	10917666
77	H	TOOL, GAUGE, DIFFERENTIAL BACKLASH: USED AS ALINING TOOL IN CONJUNCTION WITH DIAL INDICATOR	5120-00-074-1164	10942815
78	H	DRIVER PLUG, BEARING AND BUSHING: USED TO REMOVE AND REPLACE RIGHT ANGLE DRIVE PINION INNER AND OUTER BEARINGS	5120-00-649-8126	10865981
79	H	REMOVER AND REPLACER: USED W/5120-00-678-2798 REMOVER AND REPLACER TO REMOVE RIGHT ANGLE PINION GEAR FROM HOUSING	5120-00-649-8140	10865984

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
80	H	REMOVER AND REPLACER, SLEEVE, SNAP RING: USED TO REPLACE RIGHT ANGLE DRIVE HUB BEARING	5120-00-678-2789	10865770
81	O	REMOVER AND REPLACER: USED TO REMOVE RIGHT ANGLE DRIVE PINION GEAR: USED W/5120-00-649-8140 SLEEVE TO REMOVE RIGHT DRIVE CARRIER AND OUTER BEARING, AND TO REPLACE RIGHT ANGLE DRIVE PINION BEARING CAP OIL SEAL OR DIFFERENTIAL SHAFT BEARING CAP OIL SEAL; REMOVE AND REPLACE IDLER AND ROAD WHEEL ARM HOUSING BEARINGS AND OIL SEAL	5120-00-678-2798	8763117
82	O	WRENCH, PLUG: USED TO REMOVE AND REPLACE TORSION BAR PLUG	5120-00-053-3625	10932504
83	O	ADAPTER, MECHANICAL PULLER: USED W/5120-00-557-3615 PULLER TO REMOVE TORSION BAR	5120-00-322-5953	7083703
84	O	PULLER, SLIDE HAMMER TYPE: USED W/5120-00-322-5953 ADAPTER TO REMOVE TORSION BAR; AND W/5120-00-933-8458 TO REMOVE TRACK PIN	5120-00-557-3615	5573615
85	O	ADAPTER, PULLER, TO PULL TRACK PIN: USED WITH PULLER 5120-00-557-3615	5120-00-933-8458	11592843
86	O	REPLACER, OIL SEAL: USED TO INSTALL IDLER AND ROAD WHEEL HUB OIL SEALS	5365-00-004-0763	10863001
87	O	REPLACER, WHEEL HUB: USED TO INSTALL ROAD WHEEL HUB INNER AND OUTER BEARING CUPS	5120-01-102-4627	12269371
88	O	GAUGE, SPROCKET WEAR: USED TO CHECK DRIVER SPROCKET WEAR, AND TRACK BUSHING WEAR	5120-01-041-9920	12253280

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0779 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
89	O	FIXTURE, TRACK CONNECTION: USED TO DISCONNECT AND CONNECT TRACKS (2 REQUIRED PER OPERATION)	5120-01-041-4624	12253183
90	O	DRIFT PIN: USED TO DISCONNECT TRACKS AND CHECK TRACK	5120-01-006-8847	11678718
91	O	LIFTER, ROAD WHEEL: USED TO LIFT ROAD WHEELS	5120-01-062-5607	11268612
92	F	REMOVER AND REPLACER: USED TO REMOVE AND REPLACE PIVOT STEER PISTON DRAG UNIT	5120-00-966-5951	10932469
93	F	SOCKET, SOCKET WRENCH: REMOVE AND REPLACE MASTER CYLINDER RESILIENT VALVE	5120-00-557-8171	11633523
94	O	REMOVER, SHOCK ABSORBER: USED TO REMOVE SHOCK ABSORBER	5120-01-102-4628	12269380
95	H	TOOL SET: USED TO REMOVE AND REPLACE OVERSIZE ROSAN INSERTS	5180-00-966-5961	10932474
96	H	HOLDER KIT, OVERSIZE ROSAN INSERT	5180-00-966-5958	10932383
97	H	REMOVER, FUEL VALVE SCREEN: USED TO REMOVE HEATER FUEL VALVE SCREEN	5120-00-735-5871	735871
98	H	SCRAPER, CARBON: USED TO REMOVE CARBON FROM HEATER COMBUSTION CHAMBER	5120-00-735-5872	7355872
99	O	REPLACER, IDLER HUB BEARING: USED TO INSTALL IDLER HUB BEARING	5120-01-102-4627	12269371
100	O	SCALE, SPRING DIAL INDICATOR: USED TO ADJUST DIFFERENTIAL STEERING BRAKES	6670-00-259-4634	AA-S-133

Table 3. REMARKS, SECTION IV

REMARKS CODE	REMARKS
A	1. THE POWER PLANT IS REMOVED AND INSTALLED FOR AUTHORIZED MAINTENANCE THAT CANNOT BE DONE ON ITEMS IN THE POWER PLANT COMPARTMENT WITH THE POWER PLANT IN PLACE. 2. THE POWER PLANT IS NOT AN AUTHORIZED REPLACEMENT PART.
B	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-261-24P FOR PARTS REPLACED AT UNIT MAINTENANCE. SEE TM 9-2815-205-34P FOR PARTS REPLACED AT DIRECT SUPPORT MAINTENANCE.
C	REPAIR IS LIMITED TO PARTS LISTED IN TM 9-2350-261-24P.
D	REPAIR IS LIMITED TO PARTS AUTHORIZED IN TM 9-2350-261-24P.
E	COMPLETE REPAIR IS AUTHORIZED AT DIRECT SUPPORT MAINTENANCE. SEE TM 9-2350-261-24P FOR PARTS REPLACED AT UNIT MAINTENANCE.
F	REPAIR IS LIMITED TO PARTS LISTED IN TM 9-2920-225-34P.
G	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-261-24P FOR PARTS REPLACED BY UNIT MAINTENANCE. SEE TM 9-2520-254-34P FOR PARTS REPLACED BY DIRECT SUPPORT MAINTENANCE.
H	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-261-24P FOR PARTS REPLACED BY UNIT MAINTENANCE. SEE TM 9-2520-238-34P FOR PARTS REPLACED BY DIRECT SUPPORT MAINTENANCE.
I	1. TRACK SHOE REMOVAL MAY BE REQUIRED TO ADJUST THE TRACK PROPERLY. 2. THE TRACK ASSEMBLY IS NOT AUTHORIZED AS A REPAIR PART.
J	SEE TM 9-2350-261-10 AND TB 750-651 FOR CREW SERVICE.
K	THE ASSEMBLY IS NOT AUTHORIZED AS A REPAIR PART.
M	SEE TM 3-1040-283-20&P FOR CREW SERVICES, UNIT REPAIR, AND MAINTENANCE ALLOCATION CHART (MAC).
N	SEE TM 3-1040-283-20&P FOR REPAIR PARTS.
O	SEE TM 9-6140-200-14 FOR CREW AND UNIT SERVICES.
P	PART OF POWER ENTRY BOX (A4).
Q	SEE TM 9-2450-207-14&P FOR UNIT REPAIR, DIRECT SUPPORT REPAIR AND MAINTENANCE ALLOCATION CHART (MAC).
R	SEE TM 9-6115-664-13&P FOR UNIT REPAIR, DIRECT SUPPORT REPAIR AND MAINTENANCE ALLOCATION CHART (MAC).
S	REPLACEMENT TIME IS FOR ONE SIDE ONLY.

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES LIST

0780 00

INTRODUCTION

Scope

This work package lists all common tools, supplements and special tools/fixtures needed to maintain the M113A2, M577A2, M901A1, M1059, M1064, and M1068 carriers.

Common and special tools for the 120-mm (4.7-inch) M298 mortar, mortar mounts, and turntables are listed in TM 9-1015-250-23.

Explanation of Columns

Column (1) — Item Number. This number is assigned to the entry in the listing and is referenced in the Initial Setup section of the task under Tools to identify the item (e.g., “Torque wrench, (WP 0780 00, Item 105)”).

Column (2) — Name. This column lists the item by noun nomenclature and other descriptive features (e.g., “Wrench set, socket, 1/4 inch drive”).

Column (3) — National Stock Number. This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

Column (4) — Part Number. 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.

Column (5) — Reference. This column identifies the authorizing Supply Catalog (SC) or Repair Parts and Special Tools List (RPSTL) for items listed in this appendix.

Table 1. Tool Identification List

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
1	ADAPTER	5120-00-933-8458	11592843	TM 9-2350-261-24P
2	ADAPTER, SPDL, SANDER	5130-00-293-2330	CP-50	SC4910-95-CL-A74
3	ADAPTER, SOCKET, TORQUE	5120-00-227-8088	A-A-2172	SC4910-95-CL-A72
4	ADAPTER, SOCKET, TORQUE, 1/2 TO 3/8 INCH DRIVE	5120-00-240-8703	A-A-2172	SC4931-95-CL-A22
5	ADAPTER, SOCKET, WRENCH, 3/4 X 1/2 INCH	5120-00-144-5207	11655788-3	SC4931-95-CL-A22
6	ADAPTER, TORQUE WRENCH, 7C U-JOINT	5120-00-213-6976	11663358-1	TM 9-2350-261-24P
7	ADAPTER, TORQUE WRENCH, 6C U-JOINT	5120-00-215-8200	11663358-2	TM 9-2350-261-24P
8	ADAPTER, TORQUE WRENCH, 1/2 INCH DRIVE 9/16 INCH	5120-00-977-7421	10917666	TM 9-2350-261-24P
9	ADAPTER, TORSION BAR	5120-01-017-5328	12251805	TM 9-2350-261-24P
10	ADJUSTING TOOL, STEER CENTERING	2530-01-249-6439	J35223	TM 9-2350-261-24P
11	BAR, LIFTING, FINAL DRIVE	5120-00-918-0586	11589384	TM 9-2350-261-24P

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES

0780 00

LIST — Continued

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
12	BATTERY TERMINAL CLEANER	5120-00-926-5175	BT1	SC4910-95-CL-A74
13	BLADE, HAND HACKSAW	5110-00-277-4588	31-51024	SC4910-95-CL-A74
14	BRACKET, ANGLE, LIFTING	5340-01-264-5991	12354718	TM 9-2350-261-24P
15	CALKING GUN	5120-00-679-5655	101	TM 9-2350-261-24P
16	CAN, RADIATOR FILLING	7240-00-499-8028	MIL-C-43522	TM 9-2350-261-24P
17	CLEANING TOOL, RADIATOR	4910-00-611-6559	11678393	TM 9-2350-261-24P
18	CRIMPING TOOL, TERMINAL	5120-00-432-7836	MY28	TM 9-2350-261-24P
19	CRIMPING TOOL	5120-00-596-9313	M22520/5-100	SC5180-95-CL-A52
20	CROW FOOT ATTACHMENT	5120-00-184-8397	FC18A	TM 9-2350-261-24P
21	DRILL, PORTABLE ELECTRIC 1/4 INCH	5130-00-889-8994	W-D-661	SC4910-95-CL-A72
22	DRILL, PORTABLE ELECTRIC 1/2 INCH	5130-00-293-1849	W-D-661	SC4910-95-CL-A74
23	DRILL SET	5133-00-293-0983	DB129B	SC4910-95-CL-A74
24	FITTING KIT, TUBE-PIPE	4730-00-470-6625	51025	SC4910-95-CL-A74
25	FIXTURE, TRACK CONNECTING	5120-01-041-4624	12253183	TM 9-2350-261-24P
26	FRAME, HACKSAW	5110-00-289-9657	163-20	SC4910-95-CL-A74
27	GAUGE, OIL PRESSURE	6695-01-242-6795	11650182	TM 9-2350-261-24P
28	GAUGE, TRACK AND SPROCKET	5120-01-041-9920	12253280	TM 9-2350-261-24P
29	GENERAL MECHANIC'S TOOL KIT	5180-00-177-7033	SC5180-90-CL-N26	SC5180-90-CL-N26
30	GLOVES, WELDER'S	8415-00-268-7859	A-A-50022	SC4910-95-CL-A72
31	GOGGLES, INDUSTRIAL	4240-00-052-3776	A-A-1110	SC4910-95-CL-A74
32	GUN, AIR BLOW	4940-00-333-5541	DGA520	SC4910-95-CL-A74
33	GUN, SOLDERING	3439-00-618-6623	D550-3	SC4910-95-CL-A74
34	HEATER, GUN	4940-00-561-1002	500A	SC5180-95-CL-B19
35	HELMET, WELDER'S	4240-00-540-0623	A-A-1994	SC4940-95-CL-A08
36	HOSE ASSEMBLY	4720-00-454-8608	11633323	TM 9-2350-261-24P
37	JACK, HYDRAULIC, HAND (12 TON CAPACITY)	5120-00-224-7330	E12-9A	SC4910-95-CL-A74
38	LIFTER, ROAD WHEEL (T130)	5120-01-062-5607	12268612	TM 9-2350-261-24P
39	LIFTER, ROAD WHEEL (T150)	5120-01-496-3694	12474852	TM 9-2350-261-24P
40	LUBRICATING GUN, HAND	4930-00-253-2478	1142	SC4910-95-CL-A74
41	BODY AND FENDER REPAIR KIT	5180-00-754-0643	SC5180-90-CL-N34	SC5180-90-CL-N34

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES
LIST — Continued

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(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
42	MIRROR, INSPECTION	5120-00-596-1098	24	TM 9-2350-261-24P
43	MULTIMETER	6625-01-139-2512	T00377	SC4910-95-CL-A74
44	PLIERS, ELECTRICAL CONNECTOR	5120-00-624-8065	AT508K	TM 9-2350-261-24P
45	PLIERS SET, RETAINING	5120-00-789-0492	4440R	TM 9-2350-261-24P
46	PRESS, LEAD SEAL, HAND	5120-00-224-7592		TM 9-2350-261-24P
47	PULLER, BATTERY TERMINAL	5120-00-944-4268	21	SC4910-95-CL-A74
48	PULLER KIT, UNIVERSAL	5180-01-048-2153	J24171	TM 9-2350-261-24P
49	PULLER, MECHANICAL	5120-00-557-3615	5573615	TM 9-2350-261-24P
50	PULLER, MECHANICAL	5120-00-595-9305	GGG-P-781	SC4910-95-CL-A74
51	PUNCH, DRIVE PIN	5120-01-006-8847	11678718	TM 9-2350-261-24P
52	RADIATOR TESTING KIT	4910-00-728-8227	ST255A	TM 9-2350-261-24P
53	REMOVAL TOOL, OIL FILTER	5120-00-865-0933	2304	SC4910-95-CL-A74
54	REMOVAL TOOL, SHOCK	5120-01-102-4628	12269380	TM 9-2350-261-24P
55	REMOVER AND REPLACER	4910-01-128-0092	12269522	TM 9-2350-261-24P
56	REMOVER AND REPLACER	5120-00-740-3346	10943279	TM 9-2350-261-24P
57	REMOVER AND REPLACER	5120-00-678-2789	10865770	TM 9-2350-261-24P
58	REPLACER, GREASE CAP	5120-00-678-2796	10863002	TM 9-2350-261-24P
59	REPLACER, IDLER BEARING	5120-01-102-4627	12269371	TM 9-2350-261-24P
60	RIVET, BLIND, HAND	5120-00-017-2849	250K	TM 9-2350-261-24P
61	ROD, GROUND (COMES IN 3 SECTIONS)	5975-00-642-8937	6-1-1912-21- 48A	TM 9-2350-261-24P
62	SANDER, ELECTRICAL DISK	5130-00-596-9728	00-S-90	SC4910-95-CL-A73
63	SCALE, WEIGHING	6670-00-254-4634	AAA-S-133	TM 9-2350-261-24P
64	SCREW, CAP, SOCKET HEAD	5305-00-983-7456	MS16998-97	TM 9-2350-261-24P
65	SCREWDRIVER SET, CROSS-TIP	5130-01-115-6873	SDDZ50	SC4910-95-CL-A74
66	SLING, ENDLESS	3940-00-675-5003	PD101-96	TM 9-2350-261-24P
67	SLING, ENGINE AND TRANSMISSION	1450-01-240-2206	12350306	TM 9-2350-261-24P
68	SLING ASSEMBLY	4910-00-646-6893	10942647	TM 9-2350-261-24P
69	SOCKET, UNIVERSAL	5120-00-237-0978	A-A-1401	SC4910-95-CL-A74
70	SOLDER TORCH KIT	3439-00-542-0531	JT25	SC4910-95-CL-A74
71	SPACER, RING	5365-00-004-0763	10863001	TM 9-2350-261-24P
72	STAND, TEST, RADIATOR	4910-00-078-9190	MILS4534	TM 9-2350-261-24P

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES

0780 00

LIST — Continued

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
73	STE/ICER-R TEST SET	4910-01-222-6589	12259266	TM 9-4910-571-12&P
74	STRIPPER, WIRE, HAND	5110-00-268-4224	GA116	TM 9-2350-261-24P
75	TAPE, MEASURING	5120-00-554-7085	GGG-T-106	TM 9-2350-261-24P
76	TENSIOMETER, V-BELT	6635-00-921-6255	12998F	TM 9-2350-261-24P
77	TESTER, ANTIFREEZE AND BATTERY	6630-00-105-1418	10425	SC4910-95-CL-A74
78	TEST KIT, ALTERNATOR	6625-01-505-5996	12358697	TM 9-2350-261-24P
79	TEST KIT, RESERVE ALKALINITY	6630-01-011-5039	311521	TM 9-2350-261-24P
80	TOOL KIT, ELECTRICAL	5180-00-876-9336	7550526	SC4910-95-CL-A74
81	TOOL KIT, ELECTRONIC EQUIPMENT	5180-00-064-5178	TK-101/G	SC5180-91-CL-R13
82	TOOL, TRACK PIN ALIGNMENT	5220-01-504-2610	12474881	TM 9-2350-261-24P
83	WISE, MACHINIST	5120-00-293-1439	504M2	SC4910-95-CL-A74
84	WELDING MACHINE, ARC	3431-01-032-6289	7550000	TM 9-2350-261-24P
85	WELDING SHOP, TRAILER MOUNTED	3431-01-090-1231	11022000	SC3431-95-CL-A04
86	WRENCH, ADJUSTABLE	5120-00-423-6728	AC115	TM 9-2350-261-24P
87	WRENCH, ADJUSTABLE, 0 TO 3-5/8 INCH	5120-00-449-8083	WA615	SC4910-95-CL-A74
88	WRENCH, ADJUSTABLE, 1-5/16 X 12 INCH	5120-00-264-3796	MPA339	SC4910-95-CL-A74
89	INSERTER, SCREW	5120-01-159-6487	CR12W	TM 9-2350-261-24P
90	WRENCH, OPEN END 1 X 1 1/8 INCH	5120-00-187-7133	S3236	SC4910-95-CL-A74
91	WRENCH, OPEN END, 1-15/16 X 1-1/2 INCH	5120-00-277-2323	39A	TM 9-2350-261-24P
92	WRENCH, OPEN END BOX	5120-00-740-3347	10949344	TM 9-2350-261-24P
93	WRENCH, PIPE	5120-00-277-1461	MPA345	SC4910-95-CL-A74
94	WRENCH SET, OPEN END, FIXED	5120-00-148-7918	B107.6TY2	SC4910-95-CL-A74
95	WRENCH SET, SOCKET, 1/4 INCH DRIVE	5120-00-081-2305	GGG-W-641	SC4910-95-CL-A74
96	WRENCH SET, SOCKET, 3/8 INCH DRIVE	5120-00-322-6231	GGG-W-641	SC4910-95-CL-A74
97	WRENCH SET, SOCKET, 3/4 INCH DRIVE	5120-00-204-1999	FED STD 353	SC4910-95-CL-A72
98	WRENCH, SOCKET, 3/4 INCH DRIVE, 15/16 INCH	5120-00-181-6813	A-A-1394	SC4910-95-CL-A74
99	WRENCH, SOCKET ATTACHMENT	5120-00-053-3625	10932504	TM 9-2350-261-24P

**COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES
LIST — Continued**

0780 00

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
100	WRENCH, TORQUE, 3/8 DRIVE, 0-150 LB-IN	5120-00-230-6380	TE-12A	TM 9-2350-261-24P
101	WRENCH, TORQUE, 3/8 DRIVE, 0-200 LB-IN	5120-00-853-4538	F200-1	SC4910-95-CL-A72
102	WRENCH, TORQUE, 3/8 DRIVE, 0-600 LB-IN	5120-00-542-5681	B58	SC5180-95-CL-A12
103	WRENCH, TORQUE, 1/2 DRIVE, 0-175 LB-FT	5120-00-640-6364	A-A-2411	SC4910-95-CL-A74
104	WRENCH, TORQUE, 1/2 DRIVE, 0-150 LB-FT	5120-00-247-2540	F150	SC4910-95-CL-A74
105	WRENCH, TORQUE, 3/4 DRIVE, 0-600 LB-FT	5120-00-221-7983	TE602A	SC4910-95-CL-A74
106	WRENCH, TORQUE, 1/4 DRIVE, 0-75 LB-IN	5120-01-112-9532	TQSC6A	SC4910-95-CL-A72

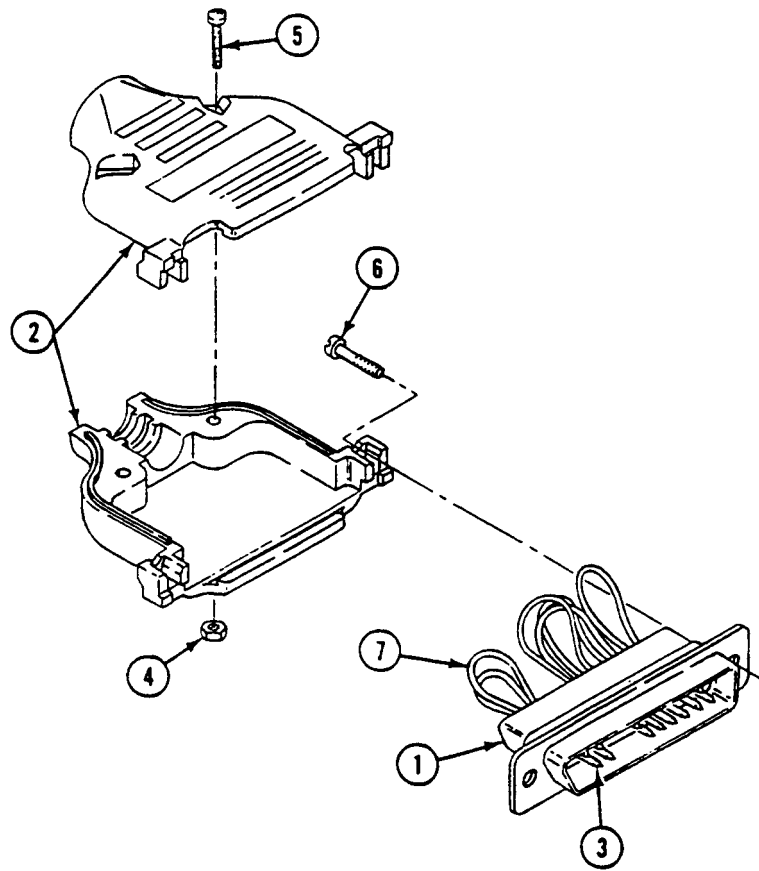
INTRODUCTION

SCOPE

This work package includes instructions for making tools authorized to be fabricated at unit maintenance level. These tools are needed for special maintenance procedures, but are not available in the supply system. The tools are normally fabricated locally when required by the troubleshooting or maintenance task.

FABRICATION ILLUSTRATIONS

The following figures provide tool fabrication instructions. All parts and bulk materials needed for manufacturing the tool are listed on each figure. When needed, any special explanatory instructions are included in the notes on the figure.



Inverter Test Solo Plug (M1068 Only)

PARTS REQUIRED:

<u>Item</u>	<u>Part Name</u>	<u>Part No.</u>	<u>CAGEC</u>	<u>NSN</u>	<u>Qty</u>
1	Connector	539409-5	96214	5935-00-098-9135	1
2	Shell	TBD	TBD	TBD	1
3	Pin (Male)	66506-9	00779	5999-01-083-0891	12
4	Nut	TBD	TBD	TBD	2
5	Screw	TBD	TBD	TBD	2
6	Screw	TBD	TBD	TBD	2
7	Wire (22 AWG)	M22759/16-22-9	81349	6145-01-042-4622	AR
8	Sealant	TBD	TBD	TBD	AR

NOTES:

1. Install minimum length (1 to 1-1/2 inches each) jumper wires (7) between pins (3), and insert pins into connector (1) as follows:

2-3

6-21

11-24

15-16

19-23

20-22

2. Leave pins out of positions 1, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, and 25.

CAUTION

The inverter under test may be damaged if plug connections are not exactly as specified or if wires are shorted to the shell/other wires. Make sure wires are not pinched by the connector shell.

3. Position two captive screws (6) in the ears of shell (2). Install shell over connector (1) and secure with two screws (5) and nuts (4).

4. Fill opening at the rear of shell (2) with sealant (8).

5. Purpose of plug is to fault isolate the inverters to determine which one has failed.

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

0782 00

INTRODUCTION

Scope

This appendix lists expendable supplies and materials you will need to maintain the M113A2, M577A2, M901A1, M1059, M1064, and M1068 carriers. These items are authorized to you by CTA 50-970, *Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)*.

The expendable supplies and materials you will need to maintain the 4.7-inch (120-mm) M298 mortar, mortar mounts, and turntable used on the M1064 carrier are listed in TM 9-1015-250-23.

Explanation of Columns

Column (1) — Item Number. This number is assigned to the entry in the listing, and is referenced in the Initial Setup section of the task under Materials/Parts to identify the material (e.g., “Automotive grease (Item 9)”).

Column (2) — Level. This column identifies the lowest level of maintenance that requires the listed item.

O — Unit Maintenance

Column (3) — National Stock Number. This is the National Stock Number (NSN) assigned to the item. Use it to request or requisition the item.

Column (4) — Description. Indicates the Federal item name and, if required, a description to identify the item. This column also includes the Commercial and Government Entity Code (CAGEC) and the part number for each item.

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 the requirements.

Table 1. Expendable and Durable Items List

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
1	O	5350-00-221-0872	ABRASIVE CLOTH (CROCUS) (81348) P-C-458	SH
2	O	8040-00-664-4318	ADHESIVE (18876) 9995460	CA
3	O	8040-01-068-2423	ADHESIVE (94960) 2141PT	PT
4	O	8040-00-833-9563	ADHESIVE (RTV) (81349) MIL-A-46106 GP1 TY1	KT
5	O	9150-00-985-7244	AIRCRAFT GREASE (81349) MILG23827	OZ
6	O	4720-01-074-4978	AIR DUCT HOSE (19207) 8724783-3	FT
7	O	6850-00-181-7940	ANTIFREEZE (81349) MILA46153	GL
8	O	8030-00-251-3980	ANTISEIZE COMPOUND (81349) MIL-A-907	LB
9	O	9150-01-197-7692	AUTOMOTIVE GREASE (81349) MIL-G-10924	LB

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST — Continued

0782 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
10	O	8030-00-290-5141	BITUMINOUS COMPOUND (81349) MIL-C-450	GL
11	O	8020-00-297-6657	BRUSH, PAINT, SASH & TRIM (81348) H-B-491	EA
12	O	8030-00-577-4740	CAULKING COMPOUND (81348) TT-C-1796	GL
13	O	4010-00-585-2108	CHAIN END RING BEAD (16003) C43974	EA
14	O	7920-00-044-9281	CLEANING CLOTH (51200) MIRACLEWIPEL001	LB
15	O	6850-00-227-1887	CLEANING COMPOUND (81349) MILC43454	QT
16	O	6850-01-277-0595	CLEANING COMPOUND, SOLVENT (59557) 134 HI-SOLV	CT
17	O	8030-00-244-1299	CORROSION PREVENTIVE COMPOUND (81349) MILC16173	GL
18	O	8020-00-720-9739	CORROSION RESISTANT COMPOUND (81349) MIL-C-81706	OZ
19	O	9150-01-152-4119	ENGINE LUBRICATING OIL (81349) MILL2104GRADE15W40	GL
20	O	8010-00-959-4661	EPOXY COATING KIT (81349) MIL-C-22750	EA
21	O	8010-01-313-8702	EPOXY COATING KIT (81349) MIL-PRF-22750	KT
22	O	9150-00-231-9062	GENERAL LUBRICATING OIL (81348) VVL800	GL
23	O	7930-00-531-9715	GENERAL PURPOSE DETERGENT (81349) MIL-D-16791	GL
24	O	9150-01-197-7690	GREASE, AUTOMOTIVE 1.75 LB (81349) MIL-G-10924	CN
25	O	9150-01-197-7689	GREASE, AUTOMOTIVE 6.5 LB (81349) MIL-G-10924	CN
26	O	9150-00-190-0906	GREASE, AUTOMOTIVE 25 LB (81349) MIL-G-10924	CN
27	O	9150-00-111-6256	HYDRAULIC FLUID (FRH) (81349) MIL-PRF-46170	QT
28	O	9150-00-935-9807	HYDRAULIC FLUID (OHT) (81349) MIL-H-6083	QT

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST — Continued

0782 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
29	O	5970-01-159-8000	INSULATING COMPOUND (83574) PR1568AEROSOL	OZ
30	O	5970-00-063-1495	INSULATION SLEEVING (81349) M23053/1-103-0	FT
31	O	5970-00-063-1499	INSULATION SLEEVING (81349) M23053/1-102-0	FT
32	O	5970-00-063-1496	INSULATION SLEEVING (81349) M23053/1-105-0	FT
33	O	5970-00-954-1624	INSULATION SLEEVING (81349) M23053/5-107-0	FT
34	O	5970-01-044-4531	INSULATION SLEEVING (81349) M23053/1-104-0	FT
35	O	5970-00-816-6056	INSULATION TAPE (81348) HH-I-595-B-108-0	FT
36	O	6640-00-285-4694	LENS PAPER (81348) NNN-P-40	EA
37	O	9150-00-292-9689	LUBRICATING OIL, WEAPONS (81349) MIL-L-14107	QT
38	O	6810-00-286-3785	METHYL ISOBUTYL KETONE (81349) D1153	GL
39	O	9150-00-754-2595	MOLYBDENUM D GREASE (81349) MIL-G-21164	LB
40	O	9505-00-293-4208	NON-ELECTRICAL WIRE (96906) MS20995C32	LB
41	O	4720-00-177-0671	NONMETALLIC HOSE (19207) 11662995	EA
42	O	4720-01-114-7686	NONMETALLIC HOSE (19207) 11662995-2	EA
43	O	4720-01-106-6616	NONMETALLIC HOSE (19207) 11662995-3	EA
44	O	4720-00-177-0672	NONMETALLIC HOSE (19207) 11662996	EA
45	O	4720-00-491-0102	HOSE NONMETALLIC (96906) MS521301A203R	FT
46	O	5330-00-807-2874	NONMETALLIC SPECIAL SEAL (19207) 10861633	EA
47	O	4720-01-063-1848	NONMETALLIC TUBING (19207) 11678025	FT

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST — Continued

0782 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
48	O	8125-01-082-9697	OIL SAMPLE BOTTLES (81996) PD8125-1	EA
49	O	8010-01-419-1162	PAINT, SEAFOAM GREEN (81349) M22750-002Q-24533	KT
50	O	5350-01-127-6855	PAPER, ABRASIVE (58536) A-A-1201	EA
51	O	8105-00-837-7754	PLASTIC BAG (58536) A-A-1779	EA
52	O	9330-00-614-9056	PLASTIC SHEET (19207) 10943241	EA
53	O	8010-01-193-0519	PRIMER (81349) MIL-P-53030	QT
54	O	8010-00-292-1127	PRIMER COATING (81348) TT-P-664	GL
55	O	8010-00-515-2208	PRIMER COATING (81348) TT-P-1757	GL
56	O	9320-00-272-2990	RUBBER ADHESIVE TAPE (81349) MIL-T-6841	FT
57	O	9390-00-142-6414	RUBBER SPECIAL SEAL (19207) 10932464	EA
58	O	8030-00-900-2373	SEALING COMPOUND PRIMER (05972) 764-55-MIL-S-22473	GL
59	O	8030-00-656-1426	SEALING COMPOUND (62377) MIL-S-45180TY3	PT
60	O	8030-01-166-0675	SEALING COMPOUND (05972) 567-47	TU
61	O	8030-00-159-8177	SEALING COMPOUND (81349) MIL-S-12158	KT
62	O	8030-00-081-2326	SEALING COMPOUND (05972) 078-21	CC
63	O	8030-00-753-5004	SEALING COMPOUND (83574) PR-1440B-1/2	OZ
64	O	8030-00-252-3391	SEALING COMPOUND (81349) MIL-S-45180TY2	OZ
65	O	8030-00-204-9149	SEALING COMPOUND (05972) 592-41	TU
66	O	8030-00-275-8110	SEALING COMPOUND, ADHESIVE CURING (81349) MIL-S-11031	KT

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST — Continued

0782 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
67	O	8030-00-081-2339	SEALING COMPOUND (05972) 088-21-MIL-S-22473	BX
68	O	8105-00-290-0340	SHIPPING SACK (58536) A-A-160	BX
69	O	6850-00-880-7616	SILICONE COMPOUND (81349) MILS8660	OZ
70	O	6810-00-264-6618	SODIUM BICARBONATE (81348) O-S-576	LB
71	O	3439-00-453-5472	TIN ALLOY SOLDER (81348) SN60WRMAP2 0.036 1LB	LB
72	O	4020-00-270-8673	TWINE, FIBROUS (75678) 22340-9	SP
73	O	5610-00-141-7838	WALKWAY COMPOUND — NON SKID (80244) MIL-W-5044TY2	GL
74	O	4010-00-724-8287	WELDED CHAIN (19207) 10932700P	FT
75	O	4010-01-029-8248	WELDLESS CHAIN (80205) NAS1455B1-600	EA
76	O	7920-00-205-1711	WIPING RAG (58536) A-A-2522	LB

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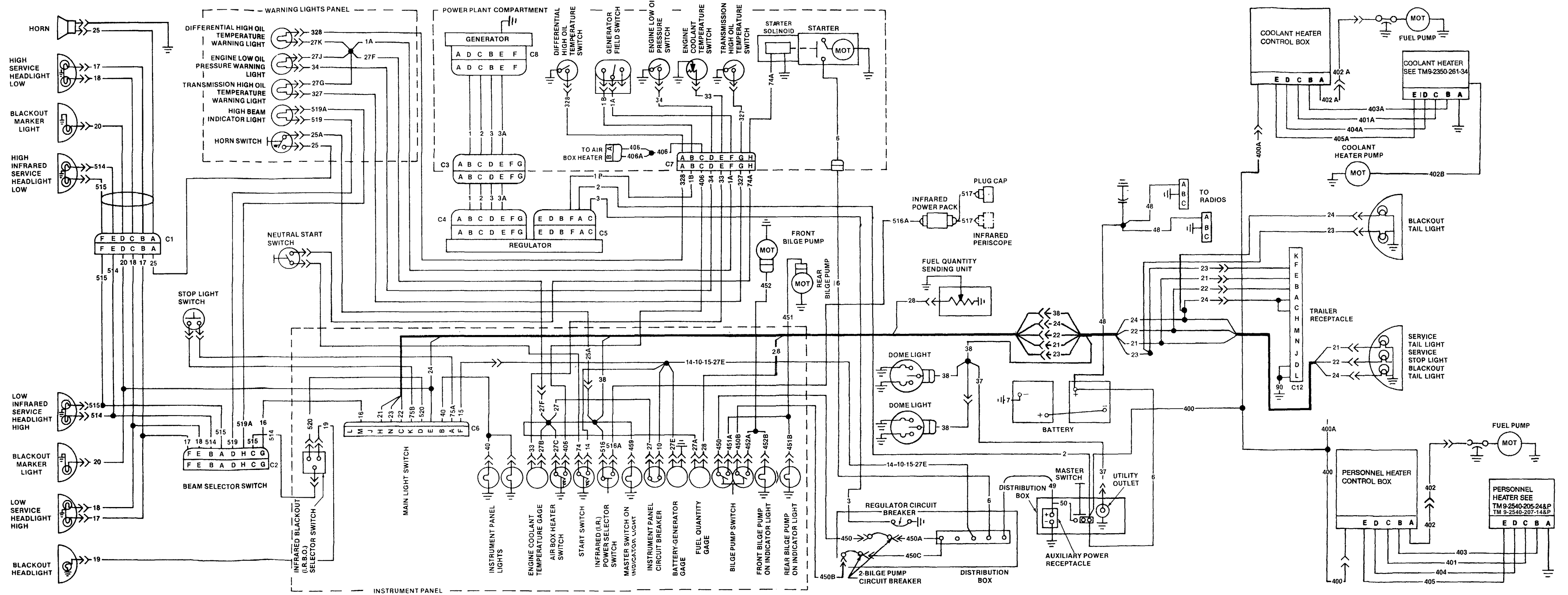
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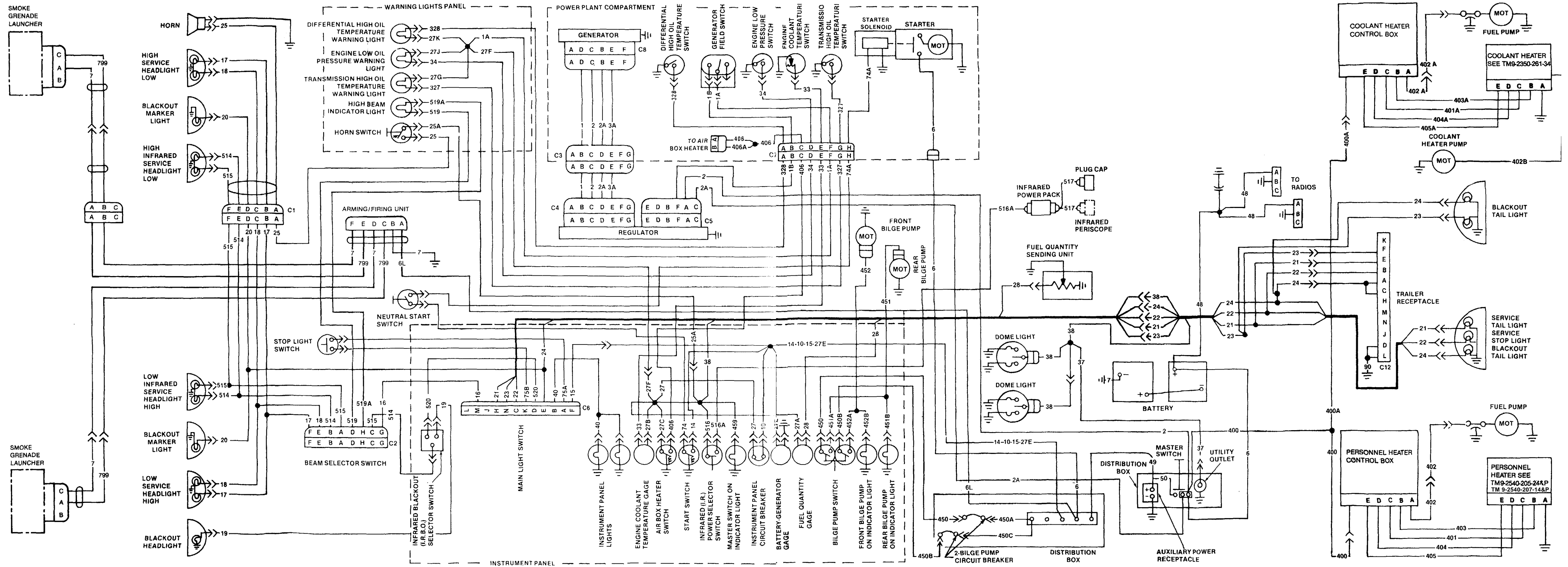
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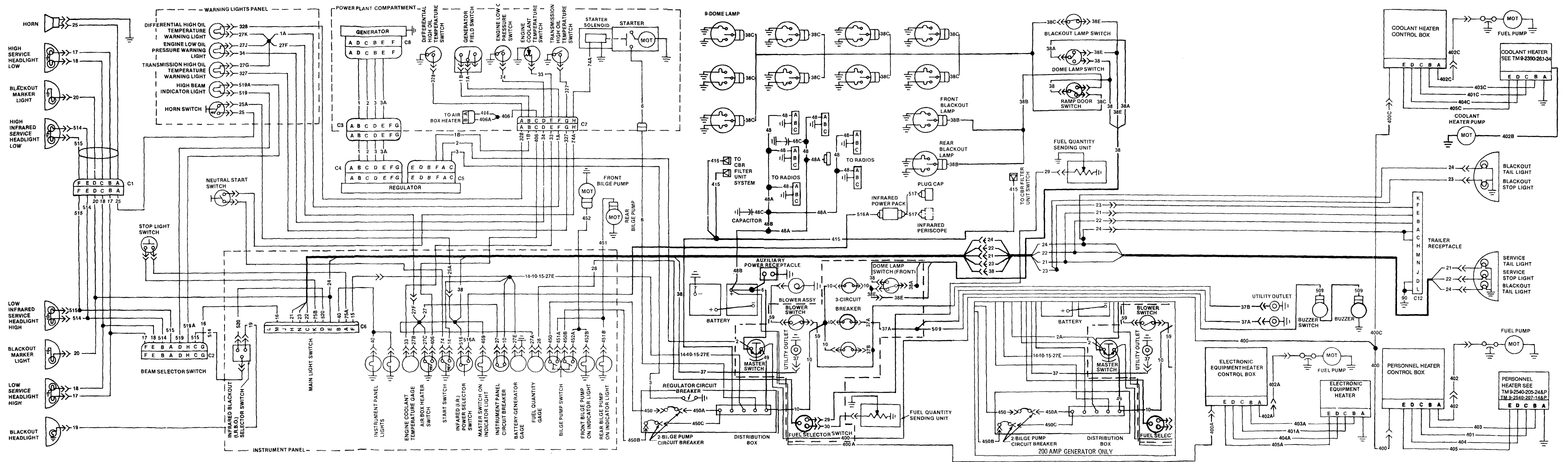
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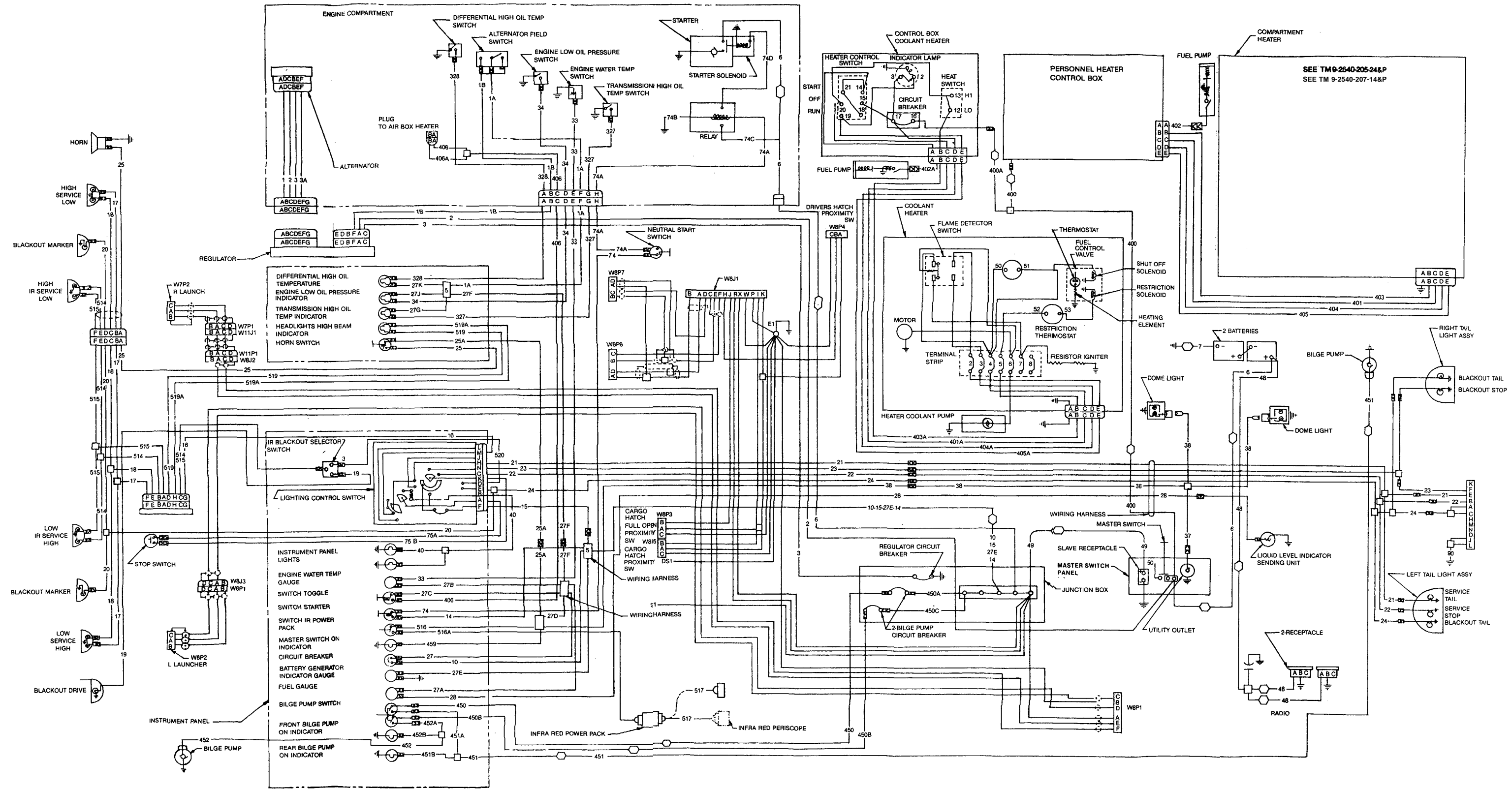
M113A2 ELECTRICAL WIRING DIAGRAM 100 AMP GENERATOR



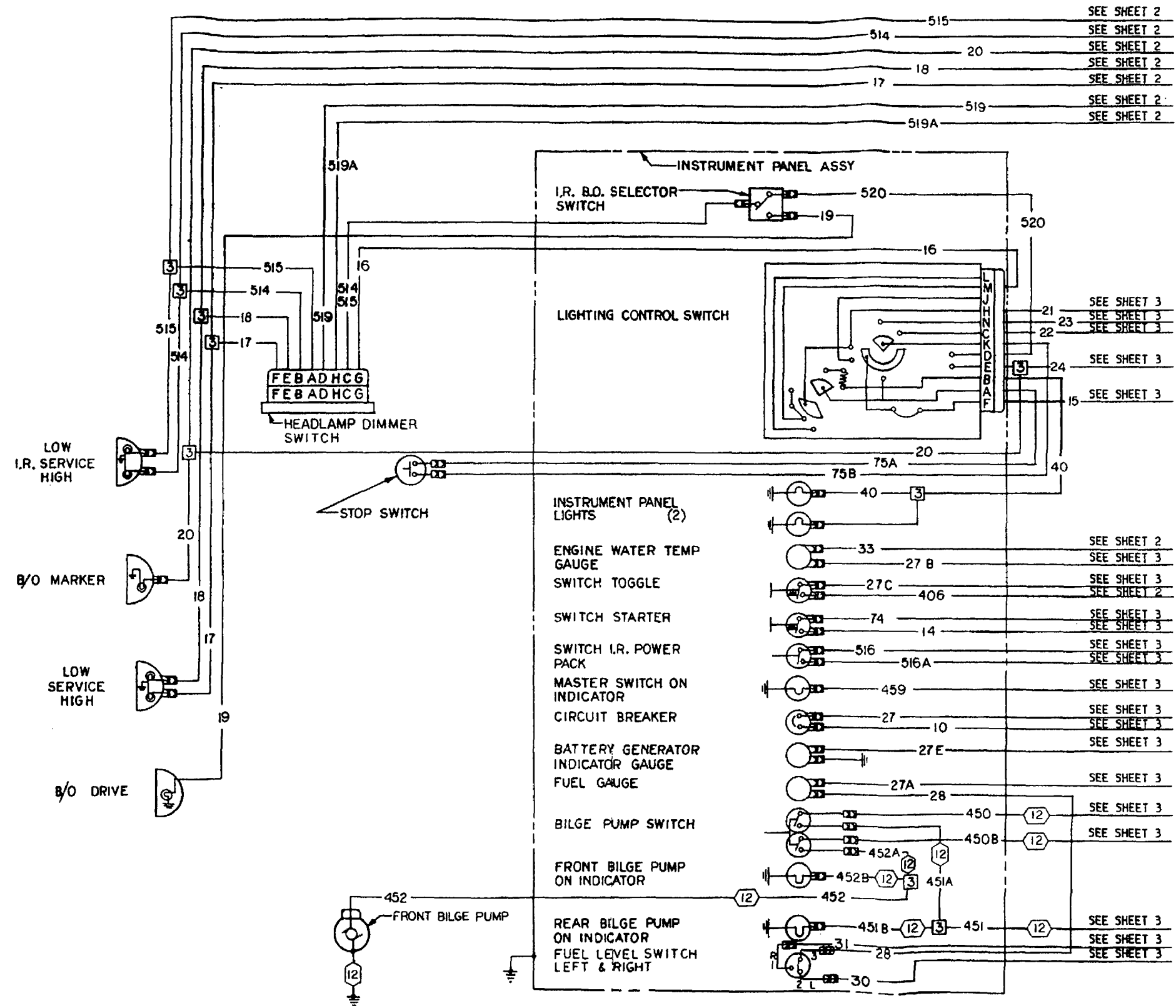
M113A2 ELECTRICAL WIRING DIAGRAM 200 AMP GENERATOR



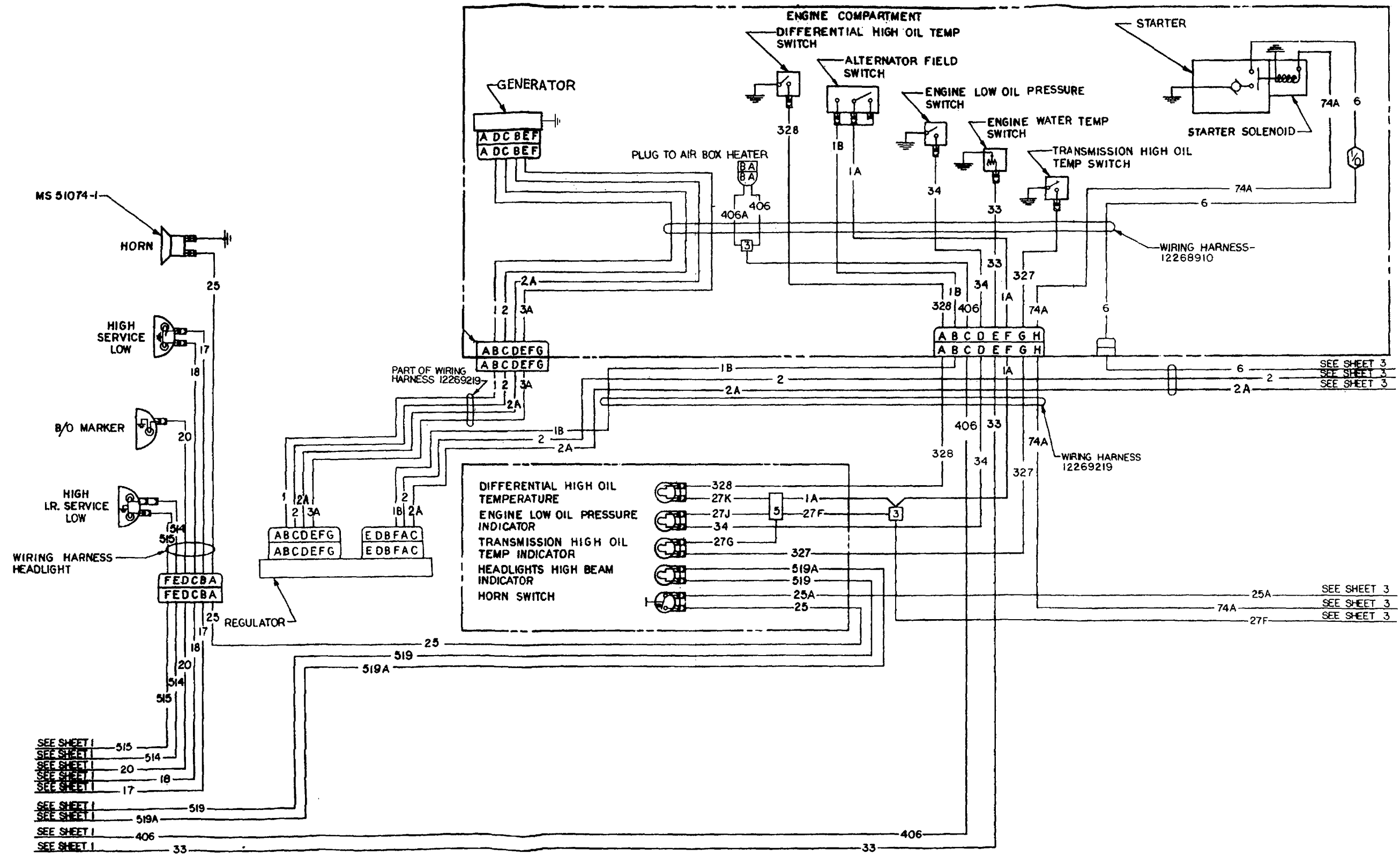
M577A2 ELECTRICAL WIRING DIAGRAM



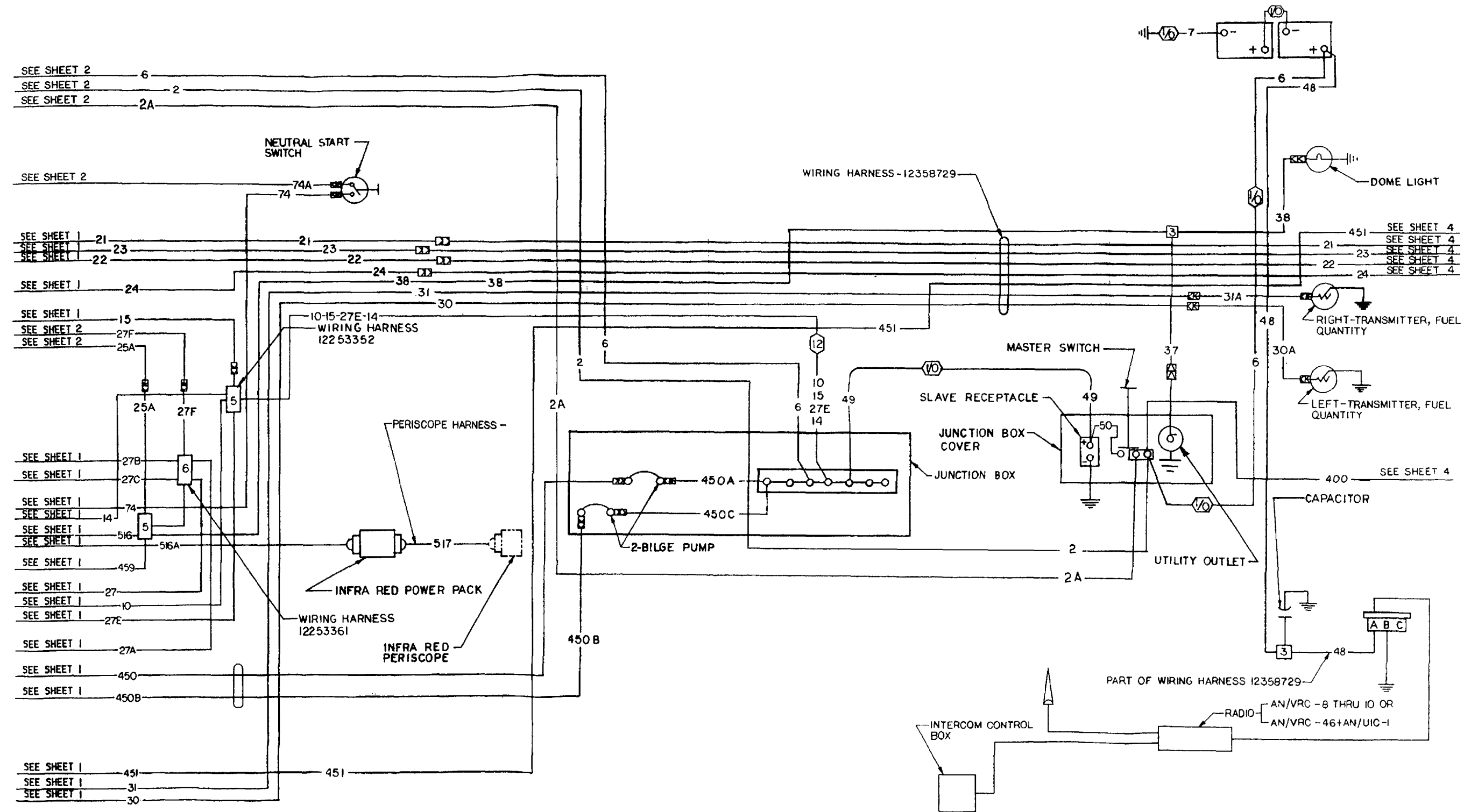
M901A1 ELECTRICAL WIRING DIAGRAM



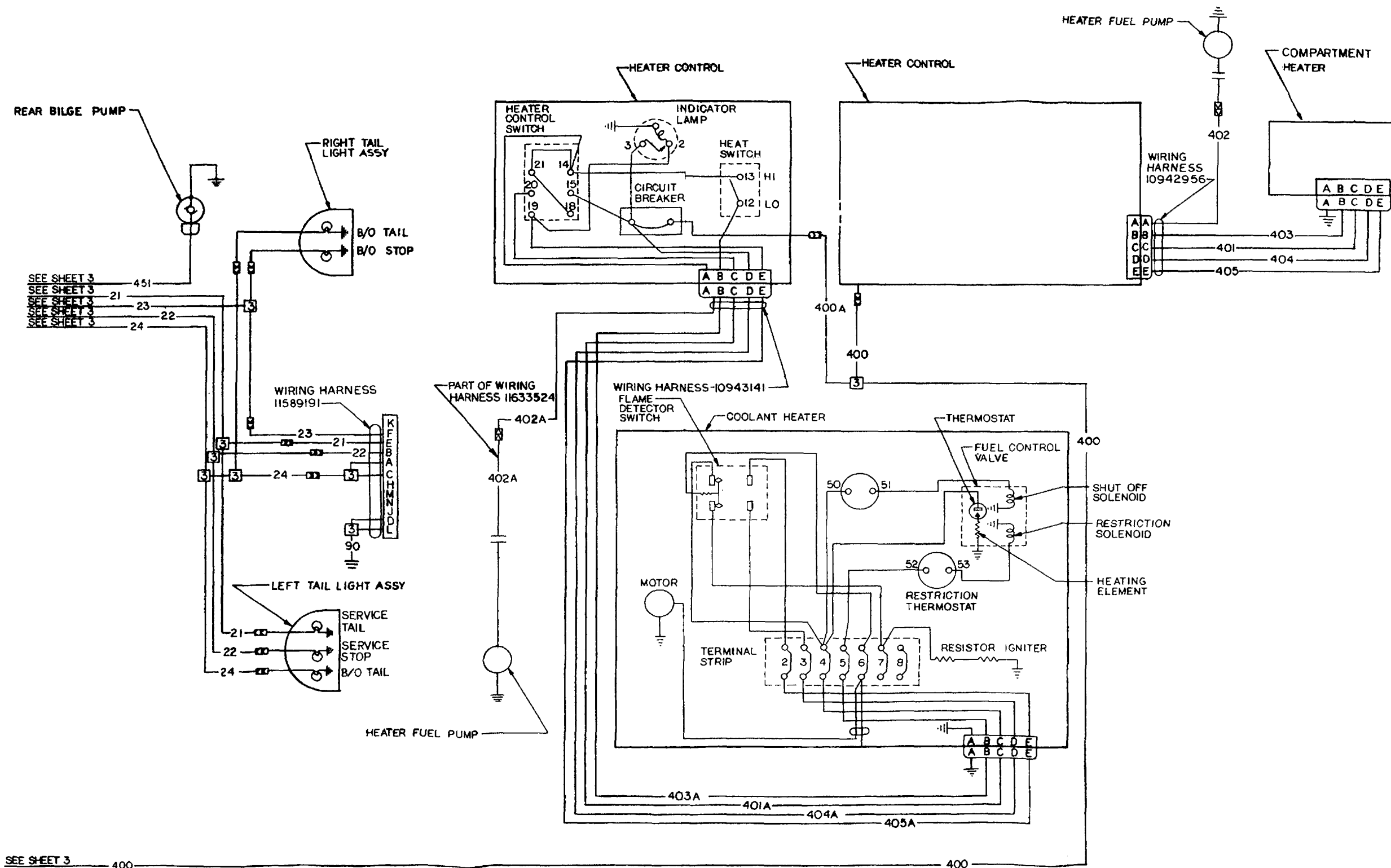
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)



M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)



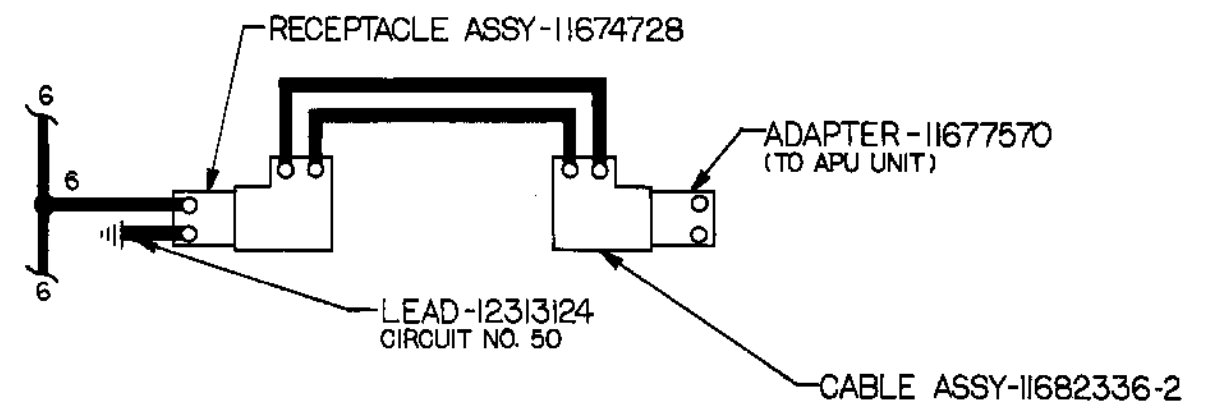
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)



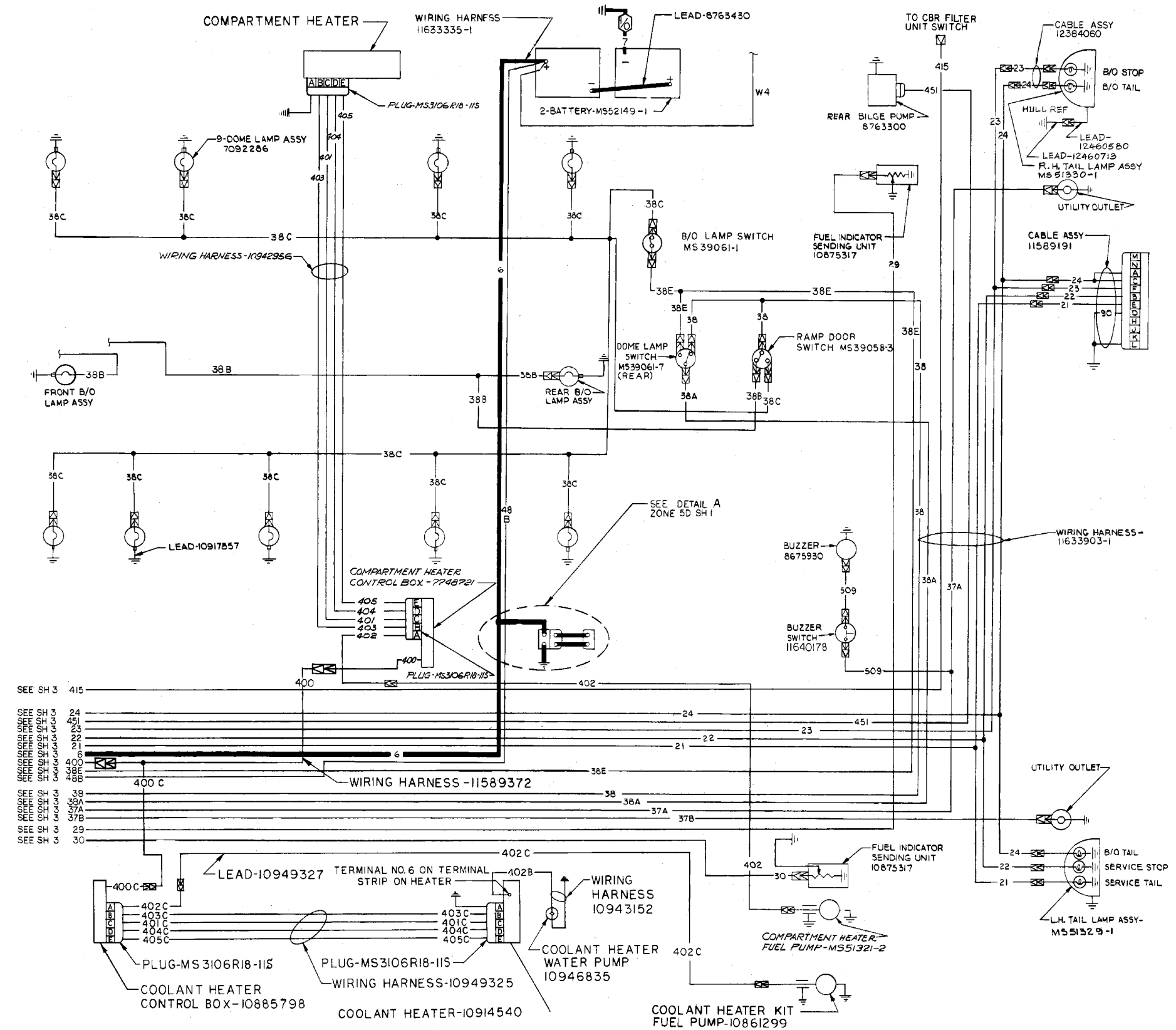
SEE SHEET 3 400

400

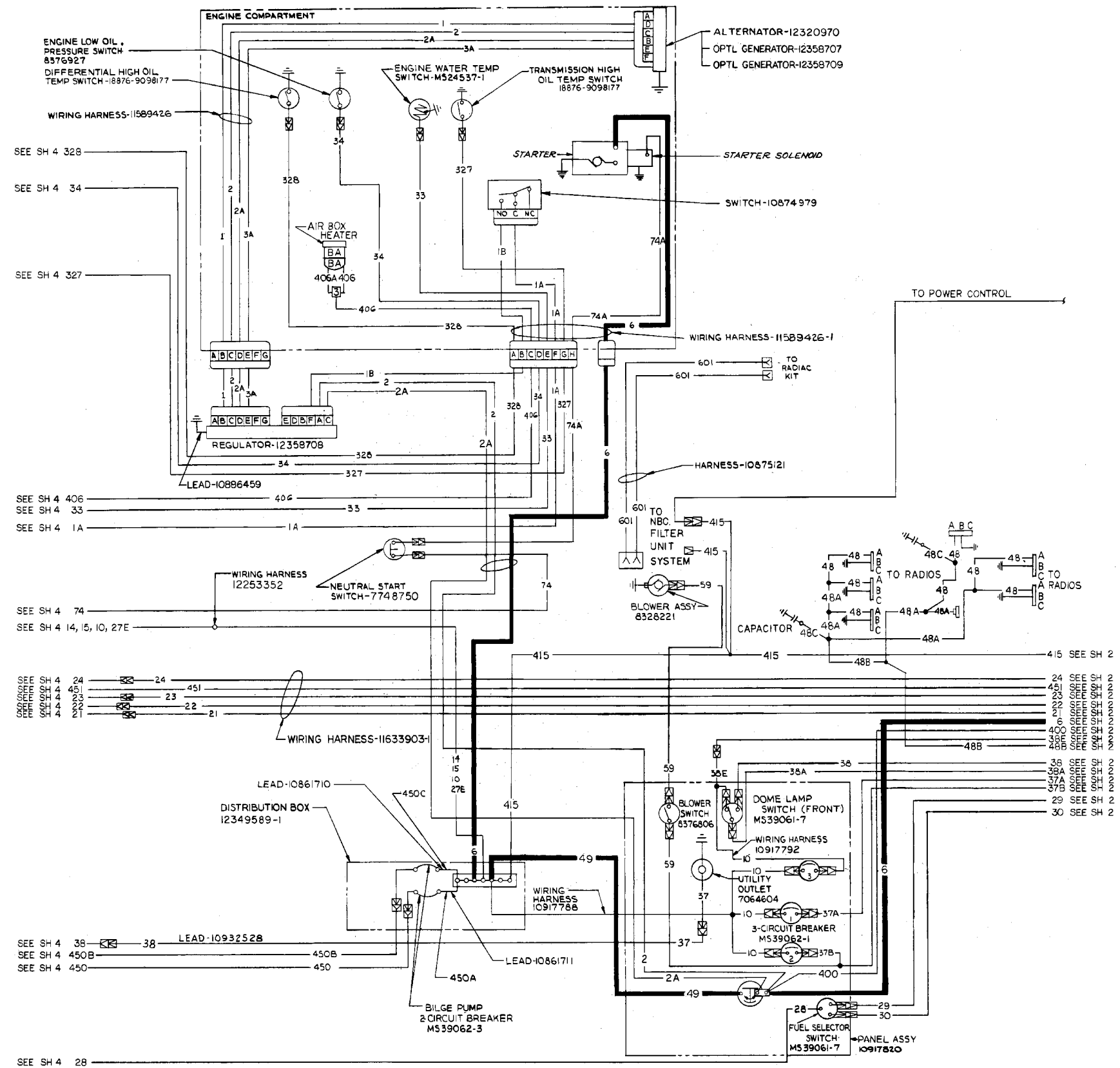
M1064 ELECTRICAL WIRING DIAGRAM (200 AMP)
FO-5 (Sheet 4 of 4)



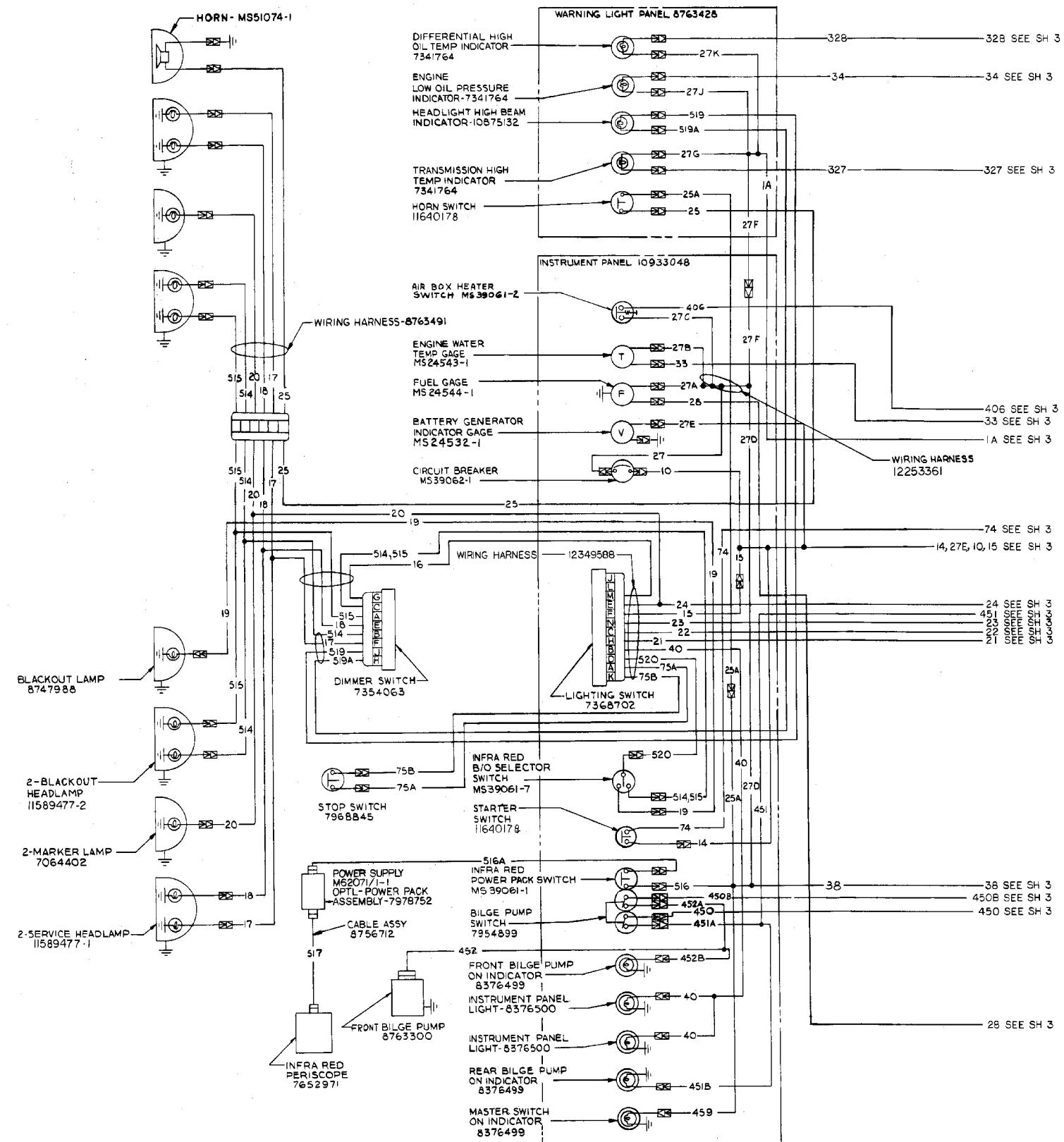
DETAIL A



M1068 ELECTRICAL WIRING DIAGRAM
FO-6 (Sheet 2 of 4)

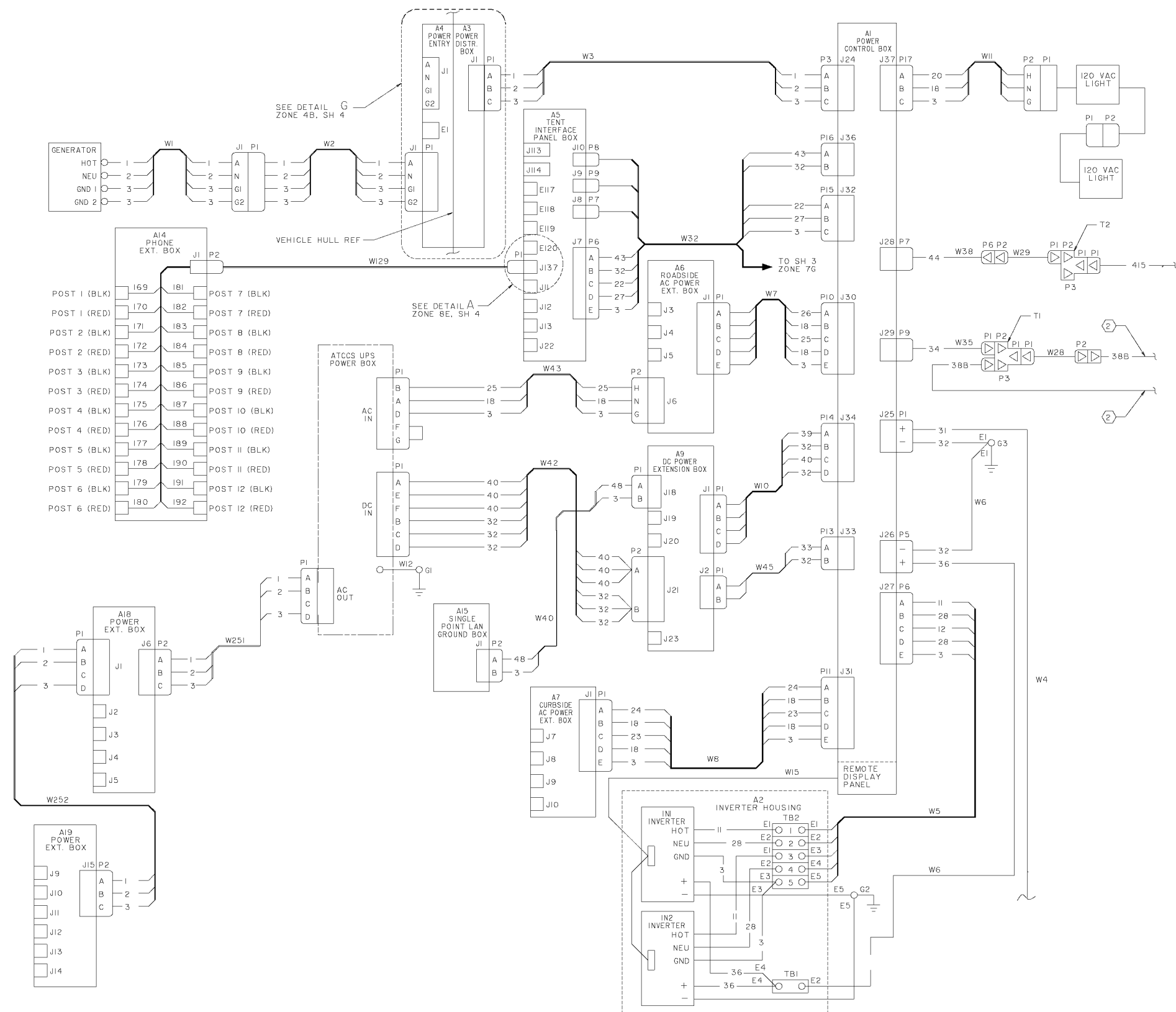


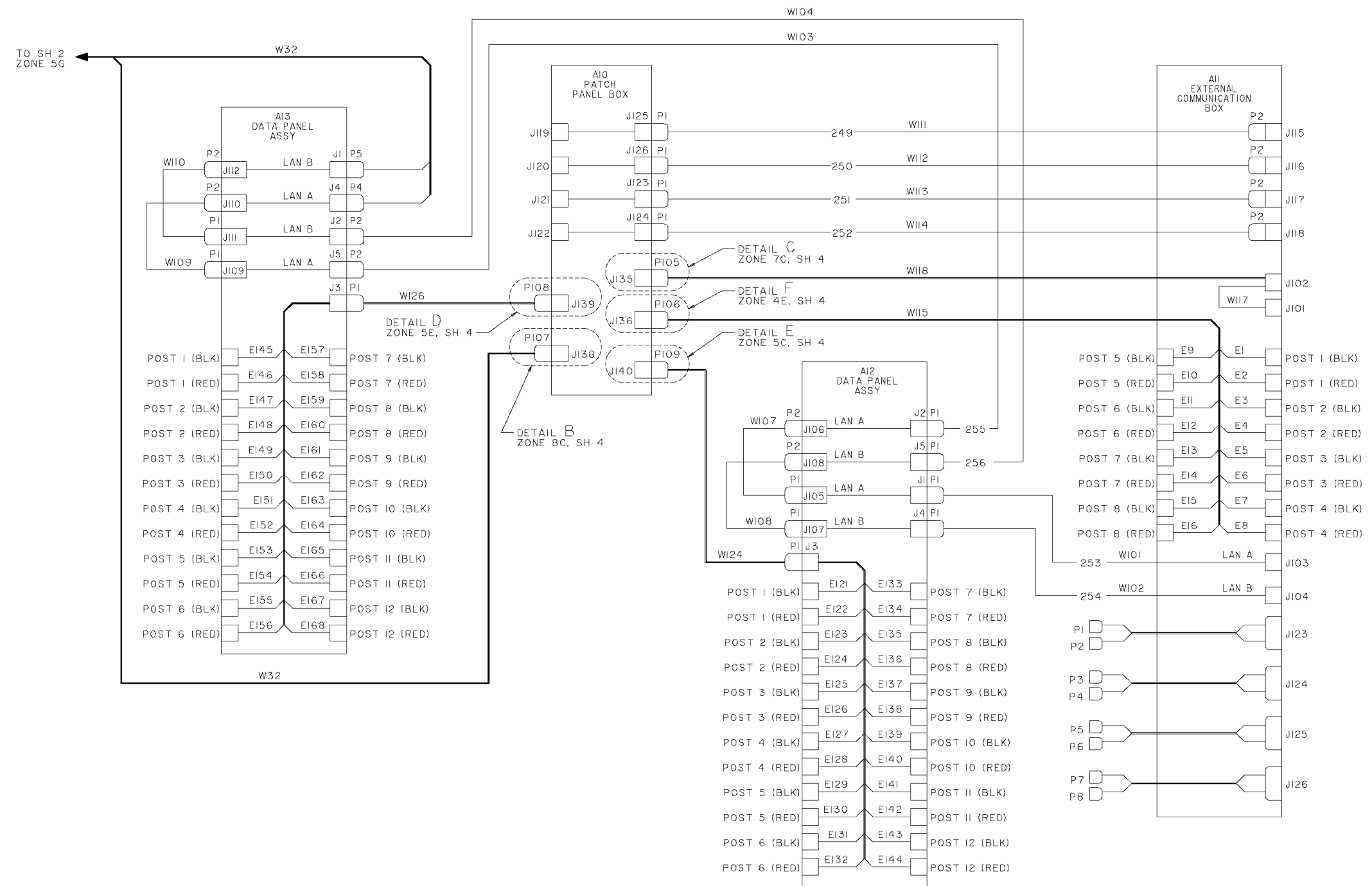
M1068 ELECTRICAL WIRING DIAGRAM
FO-6 (Sheet 3 of 4)

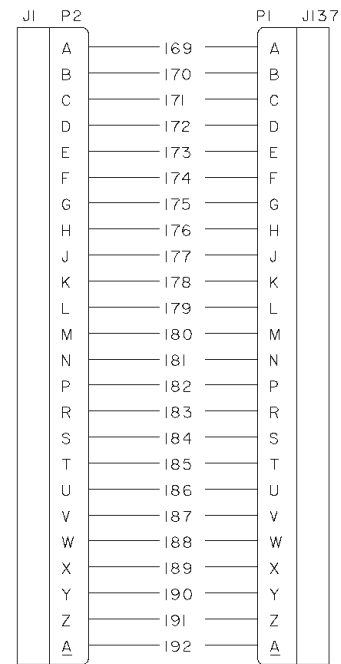


REF DESIG.	NOMENCLATURE	PART NUMBER	ZONE, SH
A1	POWER CONTROL ENCLOSURE	I2408455-1	4H, SH 2
A2	INVERTER HOUSING	I2383973	4B, SH 2
A3	POWER DISTRIBUTION BOX	I2383977	6H, SH 2
A4	POWER ENTRY	I2383982	6H, SH 2
A5	TENT INTERFACE PANEL BOX	I2383862-1	5G, SH 2
A6	ROADSIDE AC POWER EXTENSION BOX	I2383854-1	5F, SH 2
A7	CURBSIDE AC POWER EXTENSION BOX	I2383854-2	5C, SH 2
A9	DC POWER EXTENSION BOX	I2383859	5E, SH 2
A10	PATCH PANEL BOX	I2383948	5G, SH 3
A11	EXTERNAL COMMUNICATION BOX	I2383967-1	3G, SH 3
A12	DATA PANEL ASSY	I2383883-3	4E, SH 3
A13	DATA PANEL ASSY	I2383883-4	6G, SH 3
A14	PHONE EXTENSION BOX	I2383919	7F, SH 2
A15	SINGLE POINT LAN GROUND BOX	I2383920-1	6C, SH 2
A18	POWER EXTENSION BOX	I2408396	6C, SH 2
A19	POWER EXTENSION BOX	I2408397	6B, SH 2
---	ATCCS UPS POWER BOX	---	6F, SH 2
---	VEHICLE BATTERY	---	3B, SH 2
W1	EXTERNAL POWER INPUT PIGTAIL	I2383915	8G, SH 2
W2	EXTERNAL AC POWER CABLE	I2383864	7G, SH 2
W3	POWER DISTRIBUTION CABLE	I2383899	5H, SH 2
W4	DC BATTERY CABLE	I2382525	3B, SH 2
W5	INVERTER AC CABLE	I2383900	3B, SH 2
W6	INVERTER DC CABLE	I2382524	3B,3E, SH 2
W7	AC POWER EXTENSION CABLE	I2384084-1	4F, SH 2
W8	AC POWER EXTENSION CABLE	I2384084-2	5C, SH 2
W10	DC POWER EXTENSION CABLE	I2384082-2	4E, SH 2
W11	AC LIGHT CABLE	I2383861	3H, SH 2
W12	GROUND STRAP	I2383863	6D, SH 2
W13	CABLE ASSY POWER INPUT	I2382097	4D, SH 4
W14	CABLE ASSY POWER OUTPUT	I2382099	4C, SH 4
W15	SPECIAL PURPOSE CABLE ASSY	I2384233	4C, SH 2
W28	BLACKOUT LIGHT ADAPTER CABLE	I2383880-1	2F, SH 2
W29	BLACKOUT LIGHT ADAPTER CABLE	I2383880-2	2F, SH 2
W32	TENT INTERFACE PANEL CABLE	I2384081	5G, SH 2
W35	BLACKOUT CABLE	I2383904	3F, SH 2
W38	DC MASTER SWITCH CABLE	I2383913	3F, SH 2
W40	SINGLE POINT LAN CABLE	I2383924	6C, SH 2
W42	DC INPUT CABLE	I2383978-1	5E, SH 2
W43	AC INPUT CABLE	I2383979-1	5F, SH 2
W45	CABLE ASSY	I2384083	4D, SH 2
W101	LAN A CABLE	I2383870-3	3E, SH 3
W102	LAN B CABLE	I2383870-4	3D, SH 3
W103	LAN A CABLE	I2383871-9	4H, SH 3
W104	LAN B CABLE	I2383871-10	4G, SH 3

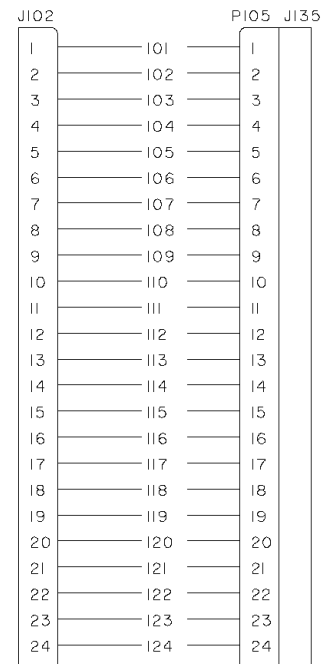
REF DESIG.	NOMENCLATURE	PART NUMBER	ZONE, SH
W107	LAN JUMPER CABLE	I2383871-11	5E, SH 3
W108	LAN JUMPER CABLE	I2383871-12	5E, SH 3
W109	LAN JUMPER CABLE	I2383871-13	7G, SH 3
W110	LAN JUMPER CABLE	I2383871-14	7F, SH 3
W111	RF1 CABLE	I2383869-1	4G, SH 3
W112	RF2 CABLE	I2383869-2	4G, SH 3
W113	RF3 CABLE	I2383869-3	4G, SH 3
W114	RF4 CABLE	I2383869-4	4F, SH 3
W115	BINDING POSTS CABLE	I2383908	4F, SH 3
W117	CABLE HOCK CABLE ASSY	I2383868	3F, SH 3
W118	CABLE HOCK CABLE ASSY	I2383909	4F, SH 3
W124	DATA PANEL CABLE ASSY	I2384086-1	6F, SH 3
W126	DATA PANEL CABLE ASSY	I2384086-2	5E, SH 3
W129	PHONE BOX EXTENSION CABLE	I2383918	6F, SH 2
W251	POWER EXTENSION CABLE	I2408389-1	6C, SH 2
W252	POWER EXTENSION CABLE	I2408389-2	6B, SH 2



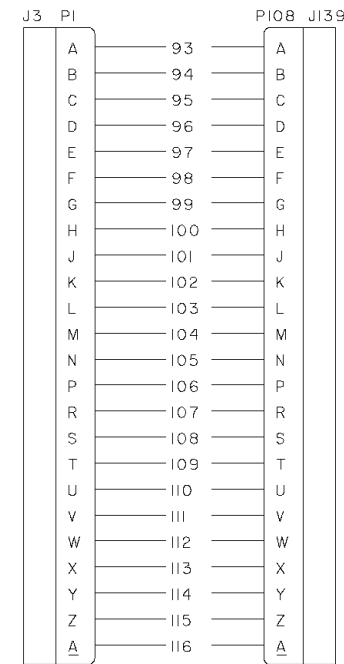




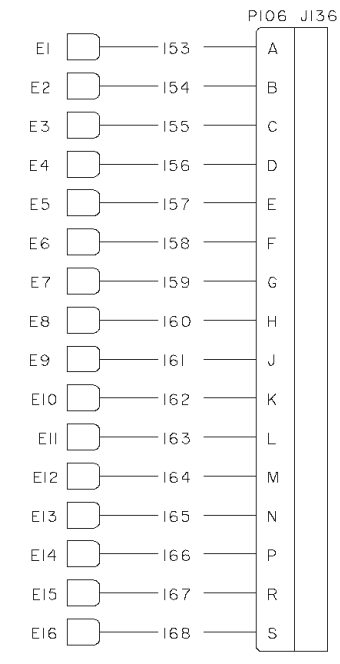
DETAIL A
PINOUTS FOR A14J1 AND A10J137
ZONE 6F, SH 2



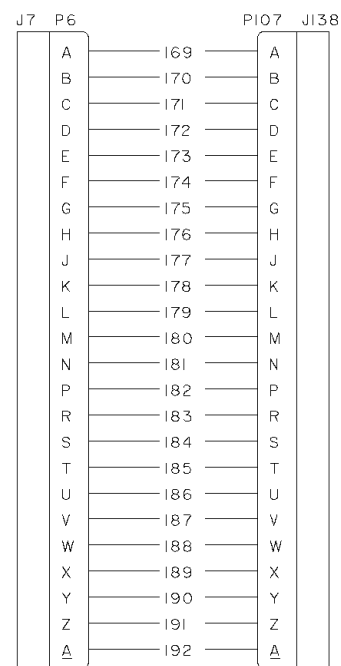
DETAIL C
PINOUTS FOR A11J102 AND A10J135
ZONE 4F, SH 3



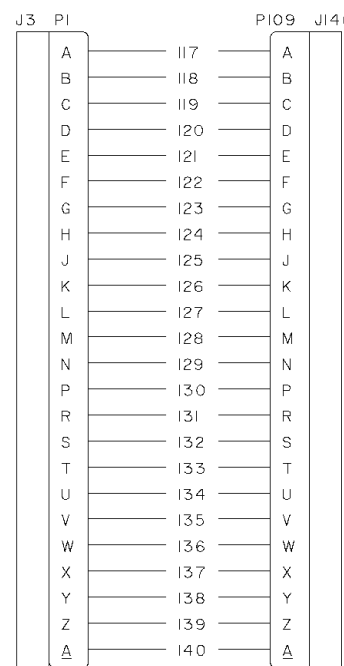
DETAIL D
PINOUTS FOR A13J3 AND A10J139
ZONE 6F, SH 3



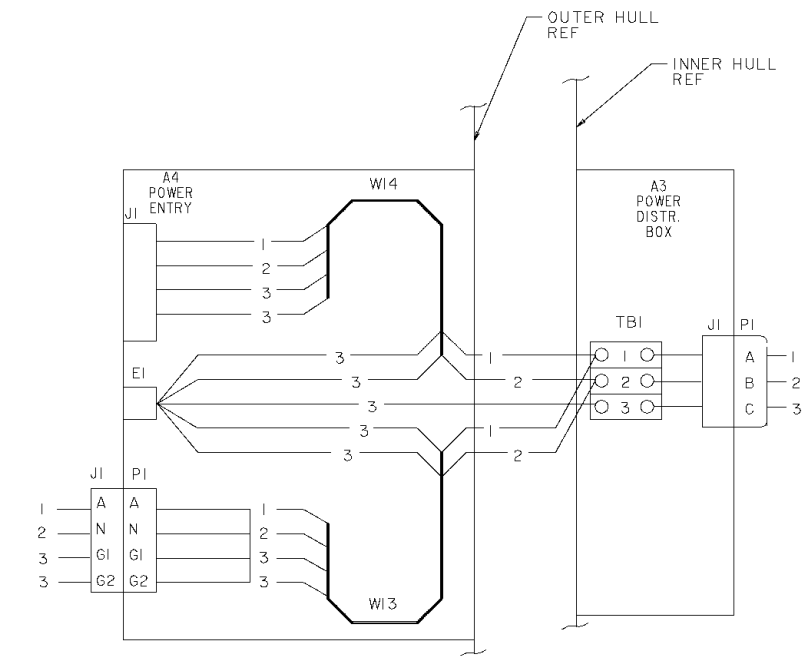
DETAIL F
PINOUTS FOR A11 POST AND A10J136
ZONE 5F, SH 3



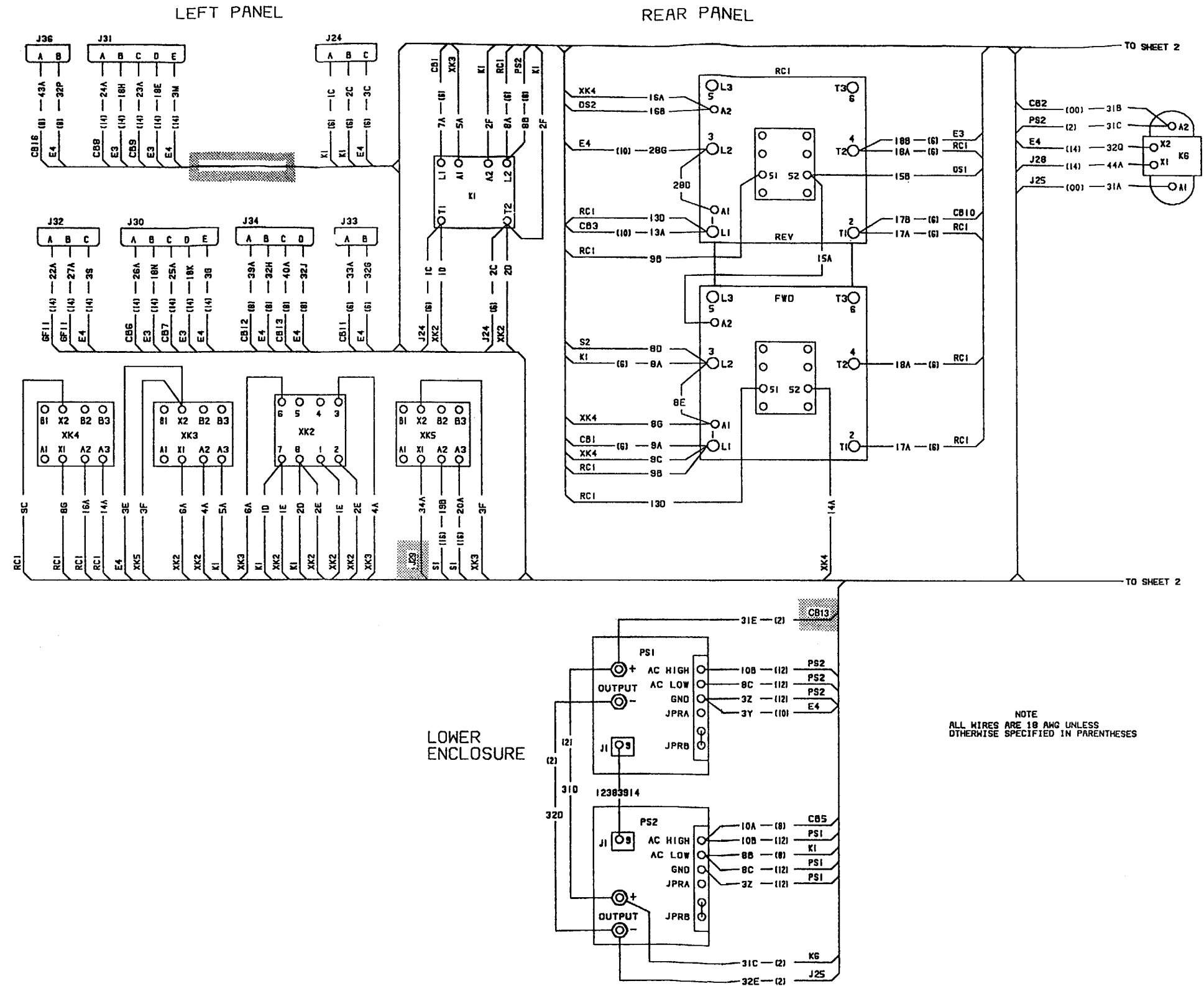
DETAIL B
PINOUTS FOR A5J8 AND A10J138
ZONE 5E, SH 3

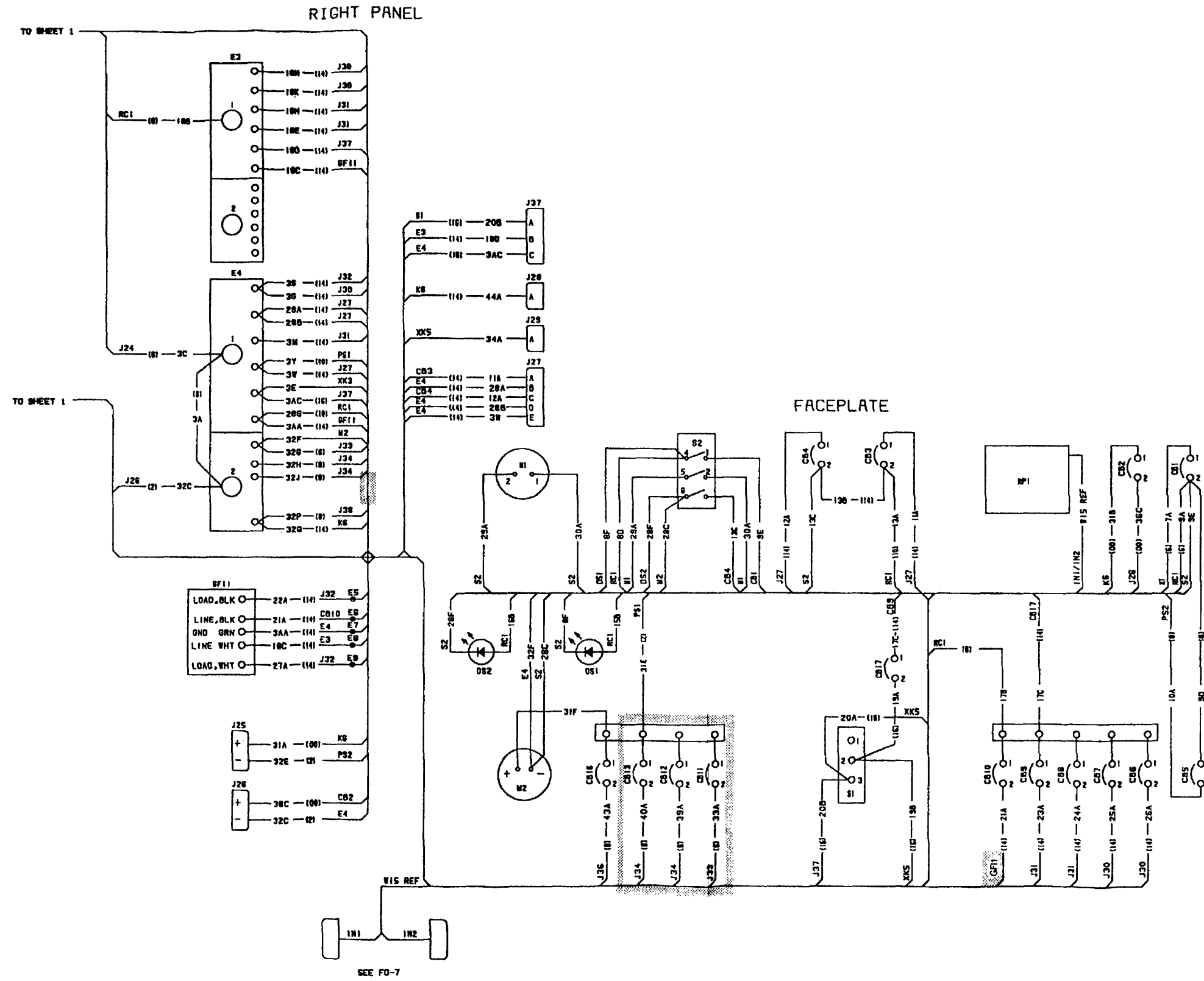


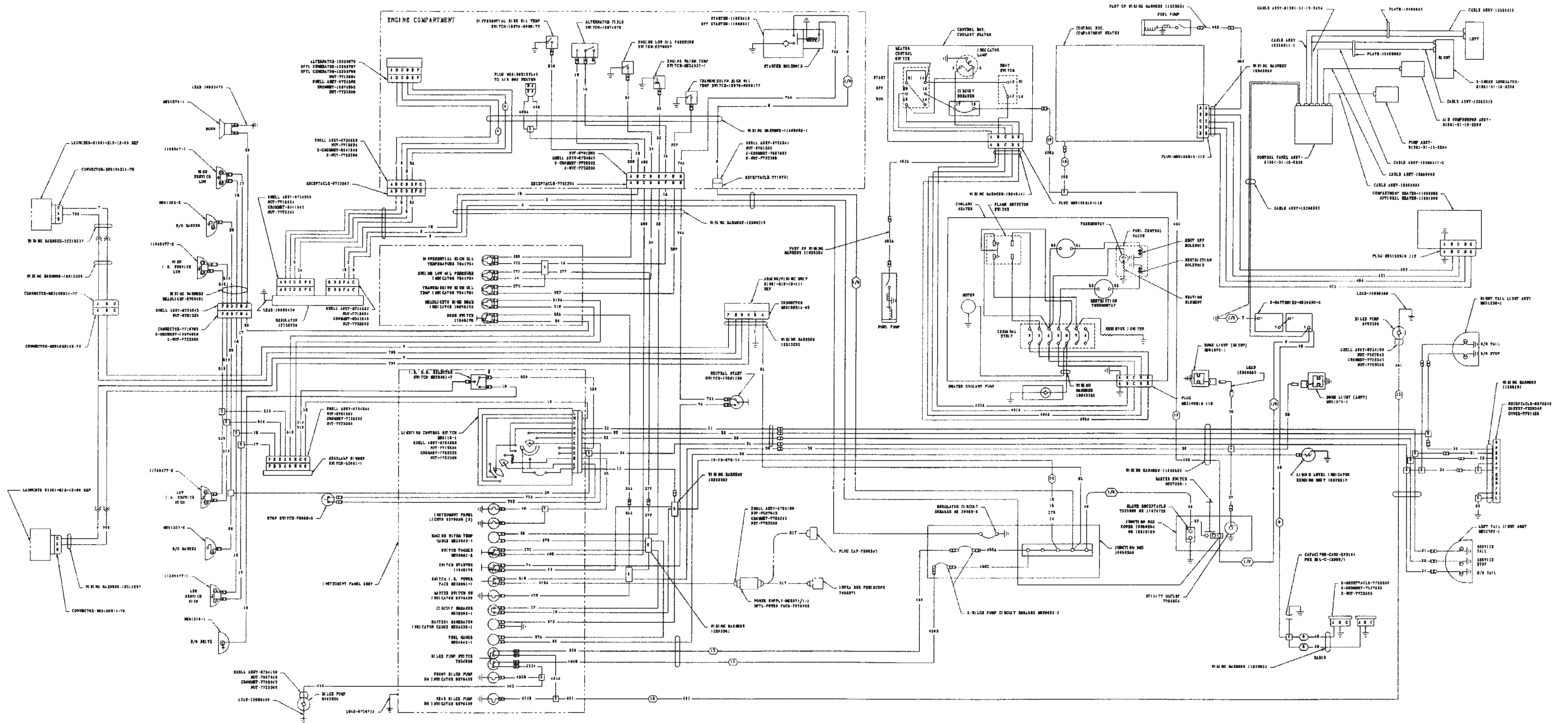
DETAIL E
PINOUTS FOR A12J3 AND A10J140
ZONE 4F, SH 3



DETAIL G
ZONE 6H, SH 2







M1059 ELECTRICAL WIRING DIAGRAM
FO-9

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II (reverse) for Repair Parts and Special Tools Lists (RPSTL) and Supply Catalogs/Supply Manuals SC/SM).	Date
TO: (Forward to proponent of publication or form) (Include ZIP Code)	FROM: (Activity and location) (include ZIP code)	

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER TM 9-2350-261-20-4	DATE 26 AUGUST 2005	TITLE Unit Maintenance Manual for M113A2, M577A2, M1064, M1068, M1059 and M901A1
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ITEM	PAGE	PARA	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON
0052 00-4						Inspection Step 1 WP reference should be (WP 0003 00) <div style="text-align: center; font-size: 4em; opacity: 0.5;"> SAMPLE </div>

**Reference to line numbers within the paragraph or subparagraph.*

TYPED, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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TO: (Forward direct to addressee listed in publication)	FROM: (Activity and location) (Include Zip Code)	Date
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER TM 9-2350-261-20-4	DATE 26 AUGUST 2005	TITLE Unit Maintenance Manual for M113A2, M577A2, M1064, M1068, M1059 and M901A1
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
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PART III – REMARKS (Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed).

SAMPLE

TYPED, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II (reverse) for Repair Parts and Special Tools Lists (RPSTL) and Supply Catalogs/Supply Manuals SC/SM).	Date
--	--	------

TO: (Forward to proponent of publication or form) (Include ZIP Code)	FROM: (Activity and location) (include ZIP code)
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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER TM 9-2350-261-20-4	DATE 26 AUGUST 2005	TITLE Unit Maintenance Manual for M113A2, M577A2, M1064, M1068, M1059 and M901A1
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ITEM	PAGE	PARA	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

**Reference to line numbers within the paragraph or subparagraph.*

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TO: (Forward direct to addressee listed in publication)	FROM: (Activity and location) (Include Zip Code)	Date
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed).*

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TO: (Forward to proponent of publication or form) (Include ZIP Code)	FROM: (Activity and location) (include ZIP code)
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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER TM 9-2350-261-20-4	DATE 26 AUGUST 2005	TITLE Unit Maintenance Manual for M113A2, M577A2, M1064, M1068, M1059 and M901A1
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ITEM	PAGE	PARA	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

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TYPED, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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By Order of the Secretary of the Army:

Official:



SANDRA R. RILEY
*Administrative Assistant to the
Secretary of the Army*

0520105

PETER J. SCHOOMAKER
*General, United States Army
Chief of Staff*

DISTRIBUTION: To be distributed in accordance with the initial distribution requirements for IDN: **371200**, requirements for TM 9-2350-261-20-4.

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

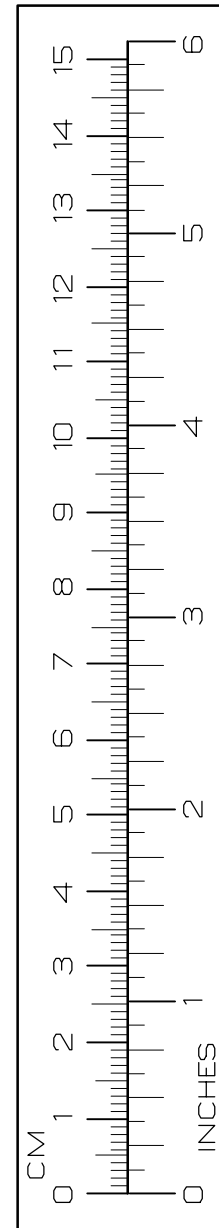
TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $(9/5 \times ^{\circ}\text{C}) + 32 = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Millimeters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



PIN: 082576-000