

TECHNICAL MANUAL

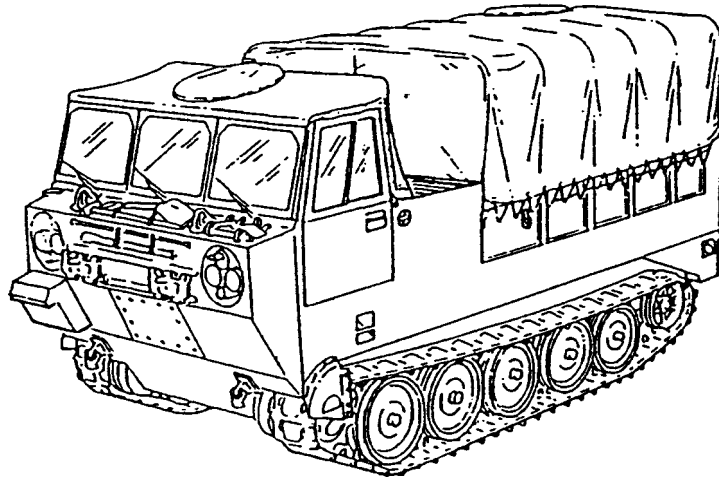
UNIT MAINTENANCE MANUAL

FOR

**CARRIER, CARGO TRACKED, 6-TON M548A1
2350-01-096-9356 (EIC AEU)**

M548A3

2350-01-369-6081 (EIC AE9)



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30 June 2001

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 June 2001

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CHAPTER 17

UNIT MAINTENANCE INSTRUCTIONS
FOR SHOCK ABSORBERS

WORK PACKAGE INDEX

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REPLACE SHOCK ABSORBER.....	.0379 00
REPLACE SHOCK ABSORBER PIN.....	.0380 00
REPLACE SHOCK ABSORBER MOUNT.....	.0381 00

REPLACE SHOCK ABSORBER

0379 00

THIS WORK PACKAGE COVERS:

Removal (page 0379 00-1).
 Installation (page 0379 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Shock Absorber Tool (WP 0541 00, Item 58)
 Torque Wrench (WP 0541 00, Item 68)

References

See your -10

Materials/Parts

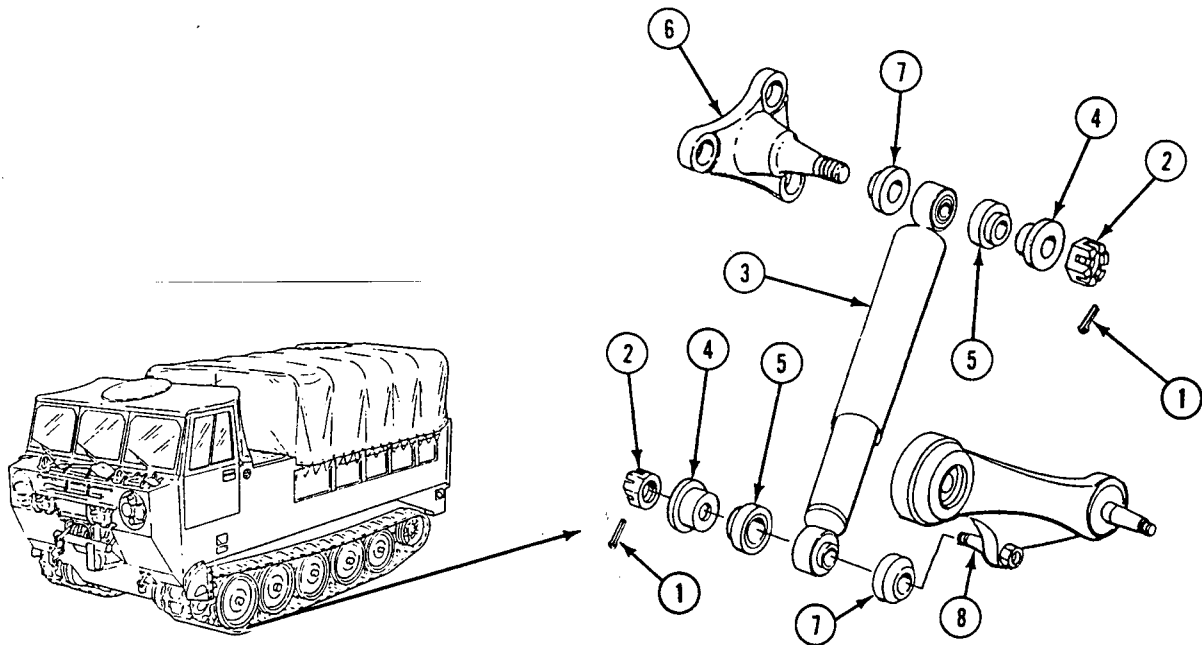
Cotter pin (2)
 Inner seal (2)
 Outer seal (2)

Equipment Condition

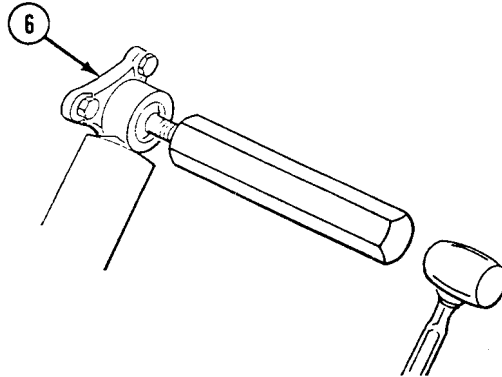
Carrier on level surface
 Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Respective road wheel removed (WP 0361 00)

REMOVAL

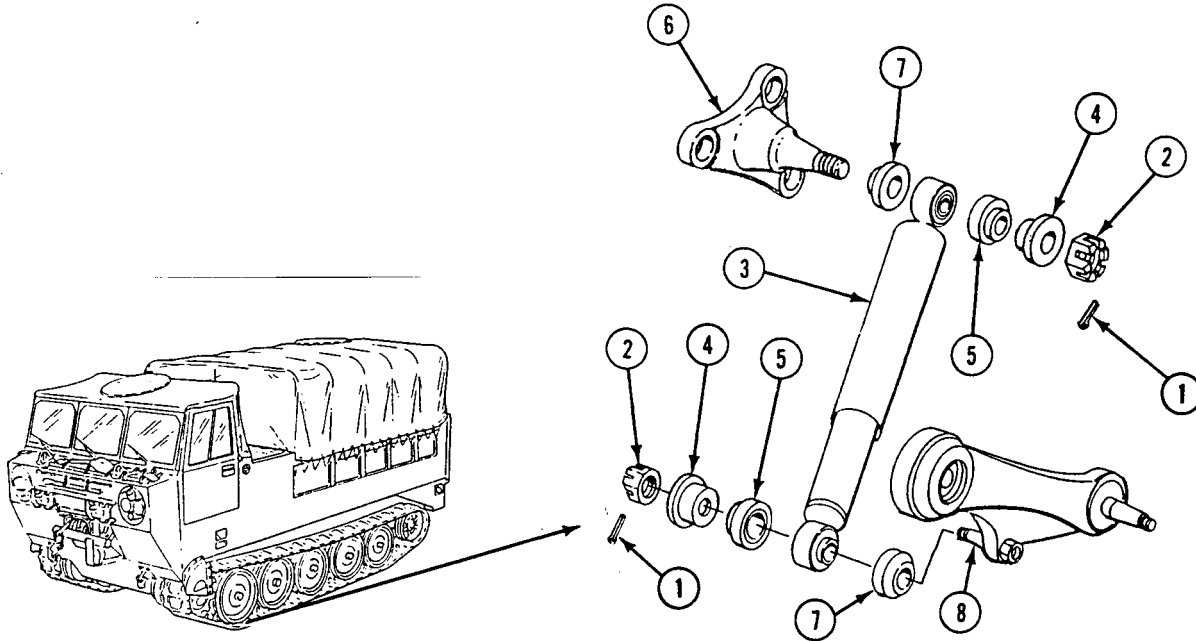
1. Remove two cotter pins (1) and nuts (2) securing shock absorber (3) to hull mount and road arm. Discard cotter pins.
2. Remove two shoulder washers (4) and outer seals (5) from both ends of shock absorber (3). Discard outer seals.



3. Position shock remover on hull bracket (6). Hit remover with heavy hammer to loosen upper end of shock absorber (3). Remove shock remover. Remove shock absorber and inner seal (7) from hull bracket. Discard seal.



4. Position shock remover on support arm pin (8). Hit shock remover with heavy hammer to loosen lower end of shock absorber (3). Remove shock absorber and inner seal (7) from support arm pin. Discard seal.



INSTALLATION

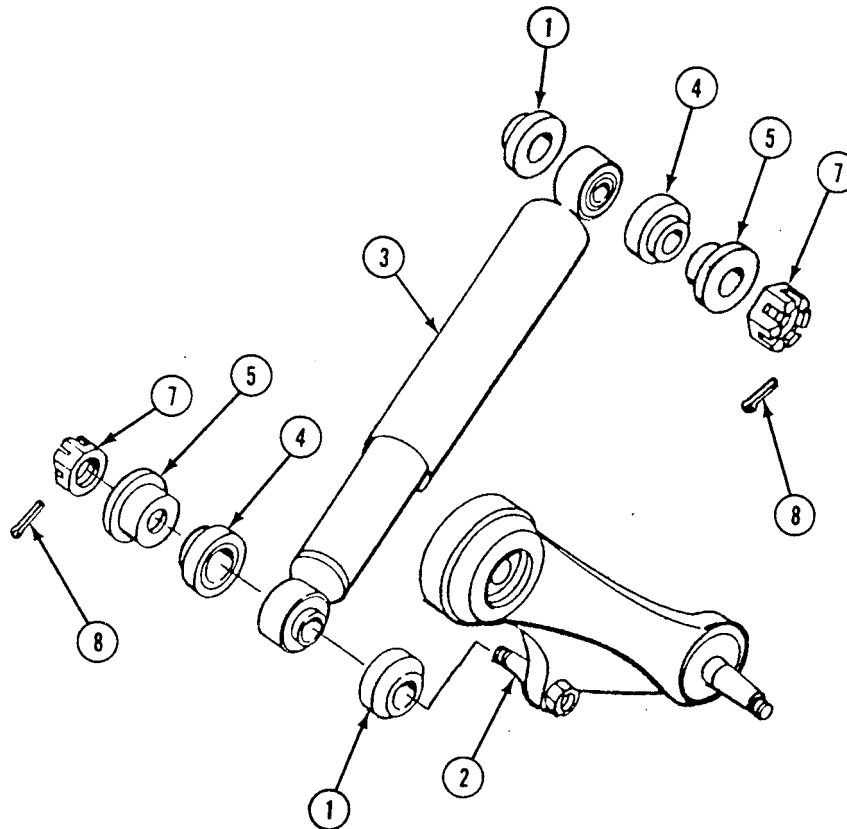
1. Install new inner seal (1) on support arm pin (2).

NOTE

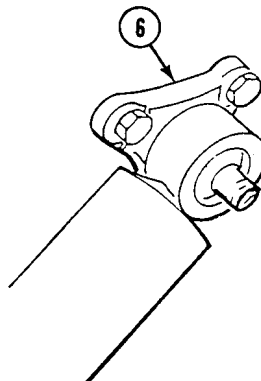
Exercise new shock absorber to the fully extended position and move shock absorber back and forth several times until resistance can be felt throughout the entire length of the stroke.

Make sure shock absorber is installed with large end of bearing installed first.

2. Install shock absorber (3), new outer seal (4), and shoulder washer (5) on support arm pin (2).

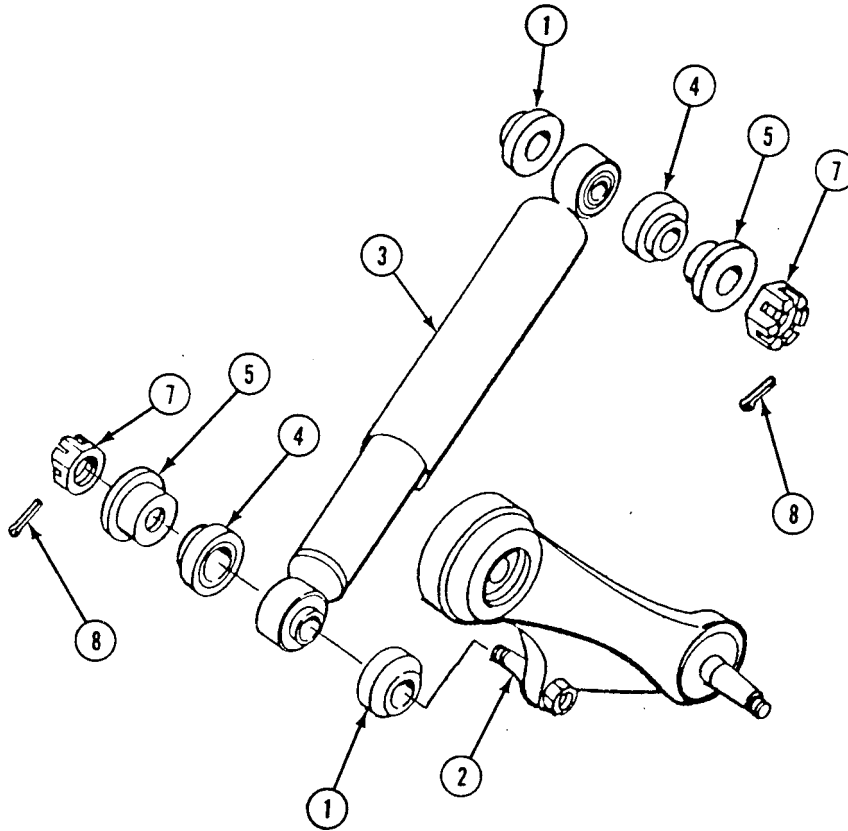


3. Install new inner seal (1), shock absorber (3), new outer seal (4), and shoulder washer (5) on hull bracket (6).



REPLACE SHOCK ABSORBER — Continued**0379 00**

4. Secure shock absorber (3) with two nuts (7).
5. Tighten two nuts (7) to 60-80 lb-ft (8-11 N•m) torque. Secure with two new cotter pins (8).

**FOLLOW-THROUGH STEPS**

1. Install road wheel (WP 0361 00).
2. Road test carrier (WP 0128 00) to check that shock absorber is installed properly.

END OF TASK

REPLACE SHOCK ABSORBER PIN

0380 00

THIS WORK PACKAGE COVERS:

Removal (page 0380 00-1).
 Installation (page 0380 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 65)
 Torque Wrench (WP 0541 00, Item 72)

Equipment Condition

Carrier on level surface
 Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Respective road wheel removed (WP 0361 00)
 Respective road wheel support arm removed
 (WP 0351 00)

Materials/Parts

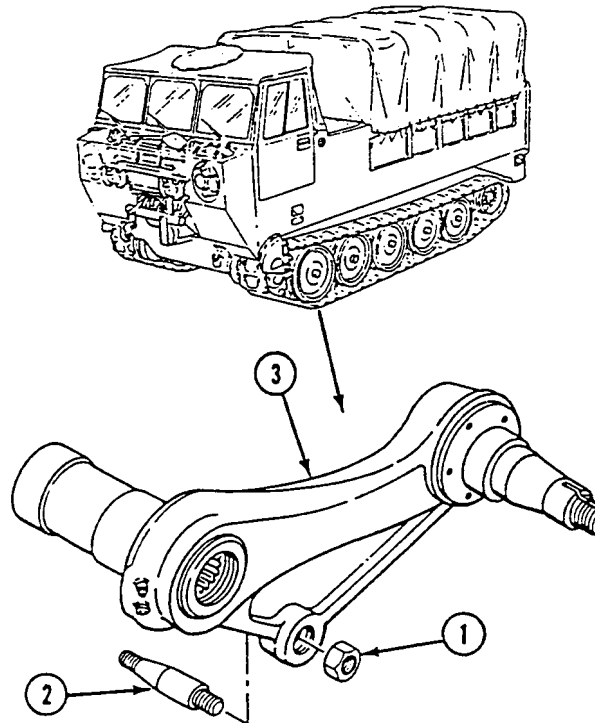
Lock nut
 Wood blocks

Personnel Required

Unit Mechanic

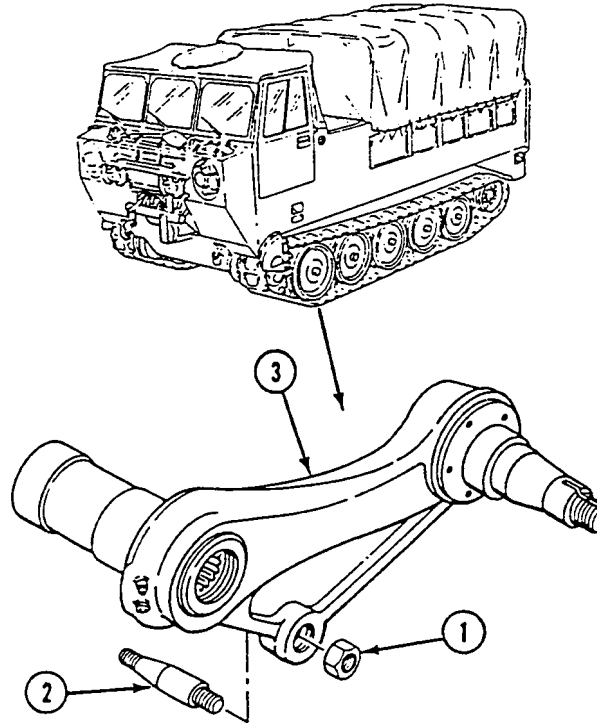
REMOVAL

1. Remove lock nut (1) from shock absorber pin (2). Discard lock nut.
2. Place road wheel support arm (3) on wood blocks. Drive out shock absorber pin (2) with a wood block and hammer.



INSTALLATION

1. Install shock absorber pin (2) in road wheel support arm (3). Secure with new lock nut (1). Tighten lock nut to 210-230 lb-ft (283-310 N•m).

**FOLLOW-THROUGH STEPS**

1. Install road wheel support arm (WP 0351 00).
2. Install road wheel (WP 0361 00).
3. Road test carrier (WP 0128 00) to check that shock absorber pin is installed properly.

END OF TASK

REPLACE SHOCK ABSORBER MOUNT

0381 00

THIS WORK PACKAGE COVERS:

Removal (page 0381 00-1).
 Installation (page 0381 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Torque Wrench (WP 0541 00, Item 69)

Equipment Condition

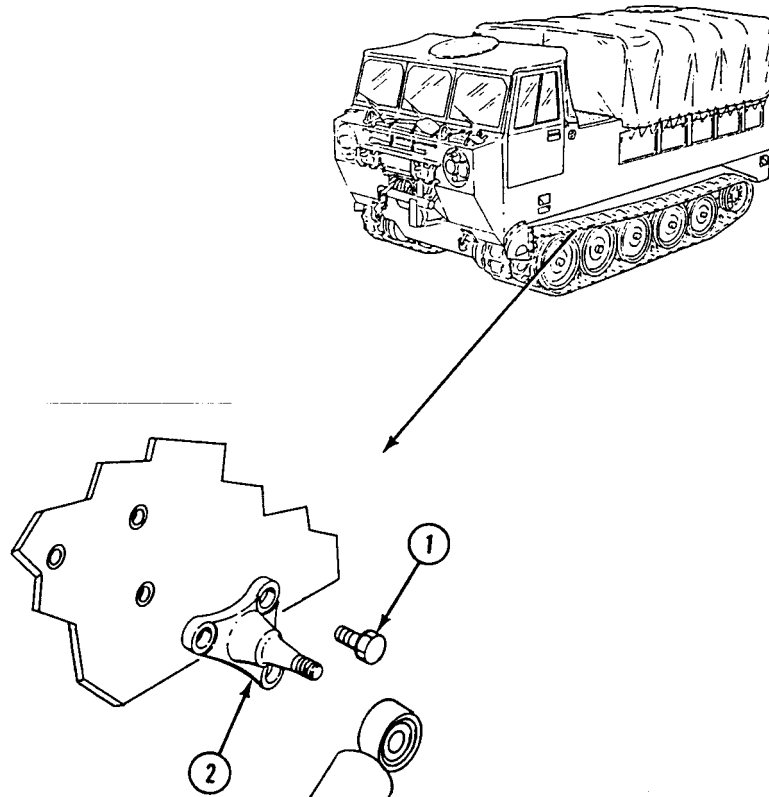
Carrier on level surface
 Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Respective road wheel removed (WP 0361 00)
 Respective shock absorber removed (WP 0379 00)

Personnel Required

Unit Mechanic

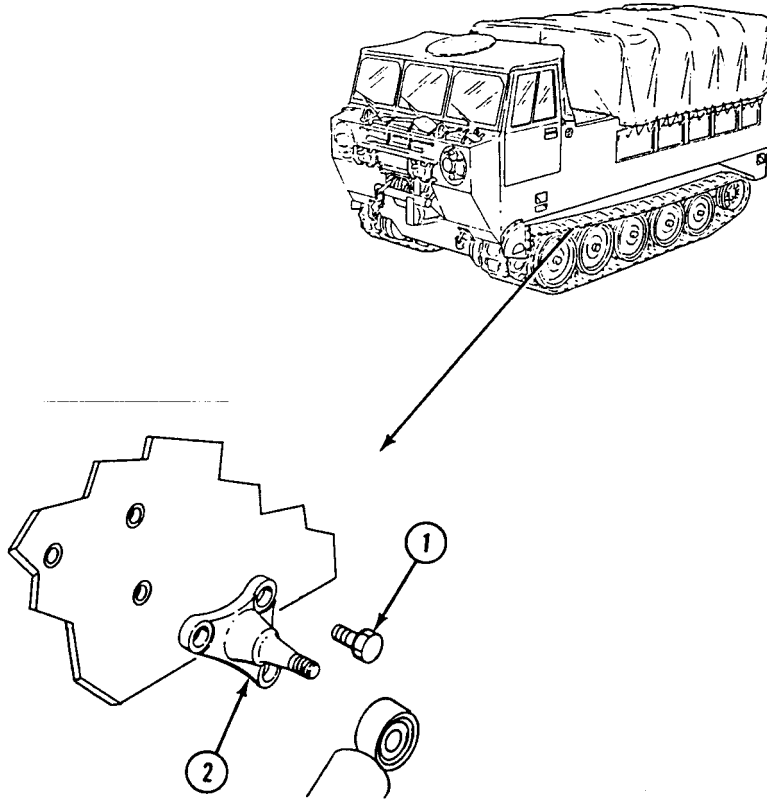
REMOVAL

1. Remove three screws (1) from shock absorber mount (2).
2. Remove shock absorber mount (2) from hull.



INSTALLATION

1. Place shock absorber mount (2) on hull.
2. Install three screws (1) on shock absorber mount (2). Tighten screws to 130-140 lb-ft (176-190 N•m) torque.

**FOLLOW-THROUGH STEPS**

1. Install shock absorber (WP 0379 00).
2. Install road wheel (WP 0361 00).

END OF TASK

CHAPTER 18
UNIT MAINTENANCE INSTRUCTIONS
FOR HULL

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE LIFTING EYE.....	.0382 00
REPLACE HULL BOTTOM ACCESS COVER AND DRAIN COVER.....	.0383 00
REPLACE TRANSVERSE BEAM AND CENTER SEAT PANEL (M548A1).....	.0384 00
REPLACE TRANSVERSE BEAM BOLTED (M548A3).....	.0385 00
REPLACE CAB DOOR, HANDLES, AND LINKAGE.....	.0386 00
REPLACE DOOR WINDOWS.....	.0387 00
REPLACE CAB DOOR SEAL.....	.0388 00
REPLACE POWER PLANT RIGHT REAR ACCESS COVER SEAL.....	.0389 00
REMOVE/INSTALL TOP ACCESS COVER AND GRILLES (M548A1).....	.0390 00
REMOVE/INSTALL FRONT ACCESS COVER (M548A3).....	.0391 00
REPLACE WINDSHIELDS AND WINDSHIELD FRAME.....	.0392 00
RAISE/LOWER CARGO COMPARTMENT FLOOR PLATES.....	.0393 00
REMOVE/INSTALL CAB FLOOR PLATES (M548A1).....	.0394 00
REPLACE CAB FLOOR PLATES, DOOR, AND SEAT SUPPORT (M548A3).....	.0395 00
REPLACE CENTER SEAT SUPPORT (M548A1).....	.0396 00
REPLACE DRIVER'S SEAT.....	.0397 00
REPLACE CAB PERSONNEL SEATS.....	.0398 00
REPLACE SAFETY BELTS.....	.0399 00
REMOVE/INSTALL RIGHT SEAT (M548A1).....	.0400 00
REPLACE M13 DECONTAMINATION BRUSH GUARD AND BACKING PLATE.....	.0401 00
REPLACE CARGO DOOR.....	.0402 00
REPLACE CARGO DOOR SEALS.....	.0403 00
REPLACE TAILGATE CONTROLS.....	.0404 00
REPLACE TAILGATE END SEALS AND BUMPERS.....	.0405 00
REPAIR HULL BY WELDING.....	.0406 00

REPLACE LIFTING EYE

0382 00

THIS WORK PACKAGE COVERS:

Removal (page 0382 00-1).
 Installation (page 0382 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 65)
 Torque Wrench (WP 0541 00, Item 72)

Equipment Condition

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

Personnel Required

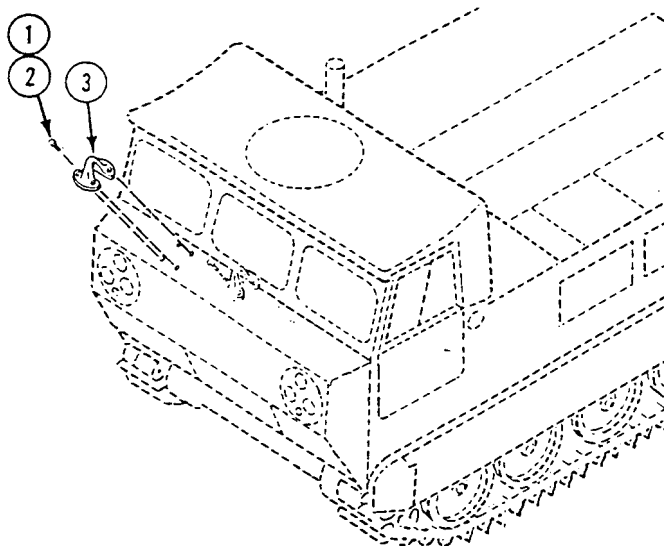
Unit Mechanic

REMOVAL

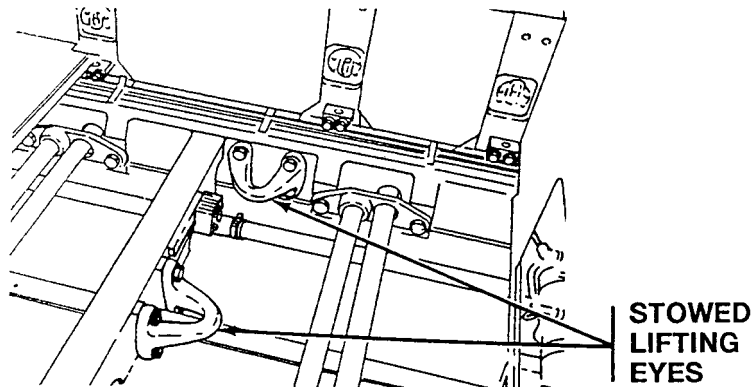
NOTE

There are four lifting eyes. Two eyes are located on front of cab compartment. Two eyes are located in rear of cargo compartment. All four eyes are removed, stowed, and installed the same way.

1. Remove four screws (1) or two screws (1) and two screws (2) that secure lifting eye (3) to hull.

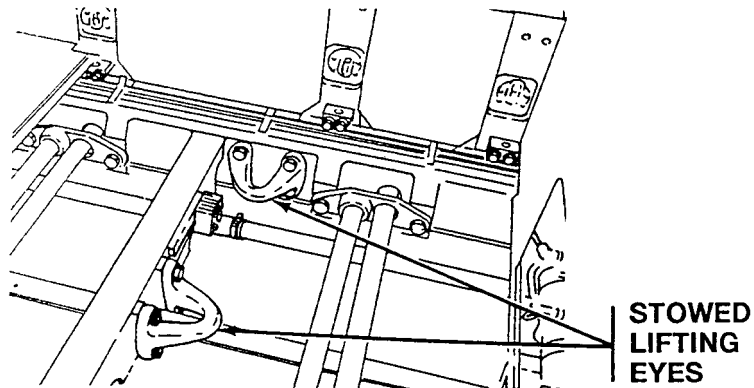


- If lifting eye is to be stowed, secure eye beneath cargo floor plate.

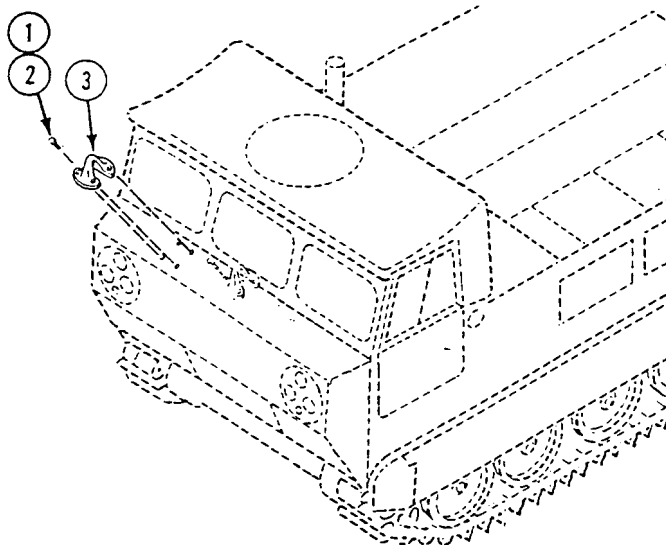


INSTALLATION

- If lifting eye has been stowed, remove eye from stowed position.



- Install lifting eye (3) on hull. Secure with four screws (1) or two screws (1) and two screws (2).
- Tighten screws (1) and screws (2) to 175-200 lb-ft (237-271 N•m) torque.



END OF TASK

REPLACE HULL BOTTOM ACCESS COVER AND DRAIN COVER

0383 00

THIS WORK PACKAGE COVERS:

Removal (page 0383 00-1).
 Installation (page 0383 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Locknut (14)

Equipment Condition

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

REMOVAL

WARNING



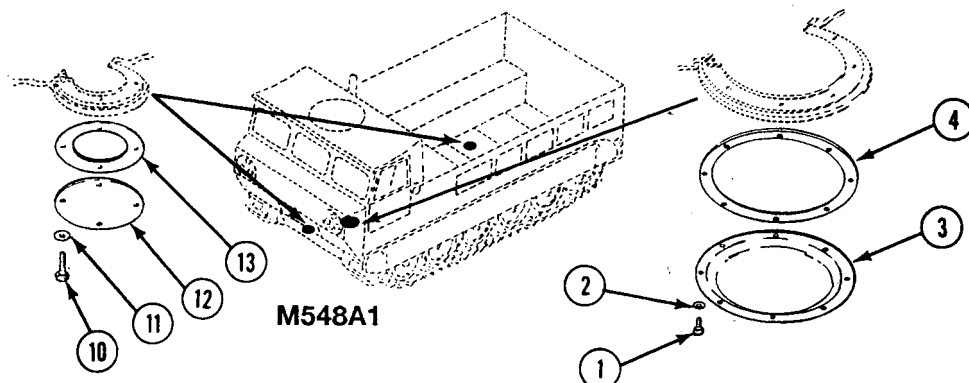
Moving carrier can cause injury or death. Block carrier so it won't move before removing or installing access covers.

NOTE

Hull bottom access covers for M548A1 and M548A3 are different. Both access covers are shown. Do Step 1 for M548A1 hull bottom access covers, then go to Step 3. Do Step 2 for M548A3 hull bottom access cover, then go to Step 3.

Drain covers for M548A1 and M458A3 are the same and are removed and installed the same way.

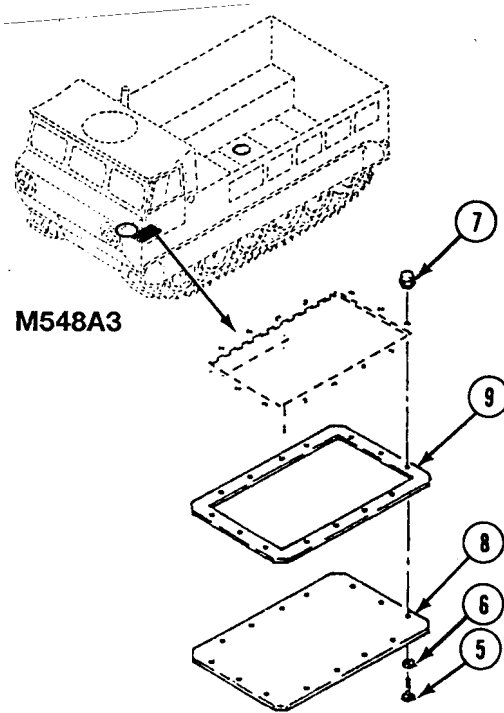
1. Remove eight screws (1) and washers (2) that secure access cover (3) and gasket (4) to hull bottom. Remove cover and gasket.



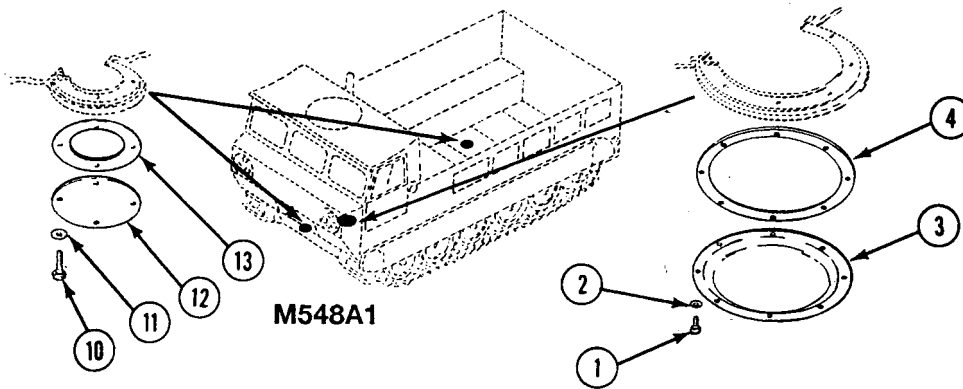
REPLACE HULL BOTTOM ACCESS COVER AND DRAIN COVER — Continued

0383 00

- Remove 14 screws (5) washers (6), and lock nuts (7), that secure cover (8) and gasket (9) to hull bottom. Discard locknuts.



- Remove four screws (10) and washers (11) that secure drain cover (12) and gasket (13) to hull bottom. Remove drain cover and gasket.



- Check gaskets. Replace gaskets that are cracked, broken, or have hardened.
- Check access covers and drain covers. Replace parts that are broken, cracked, or deformed.

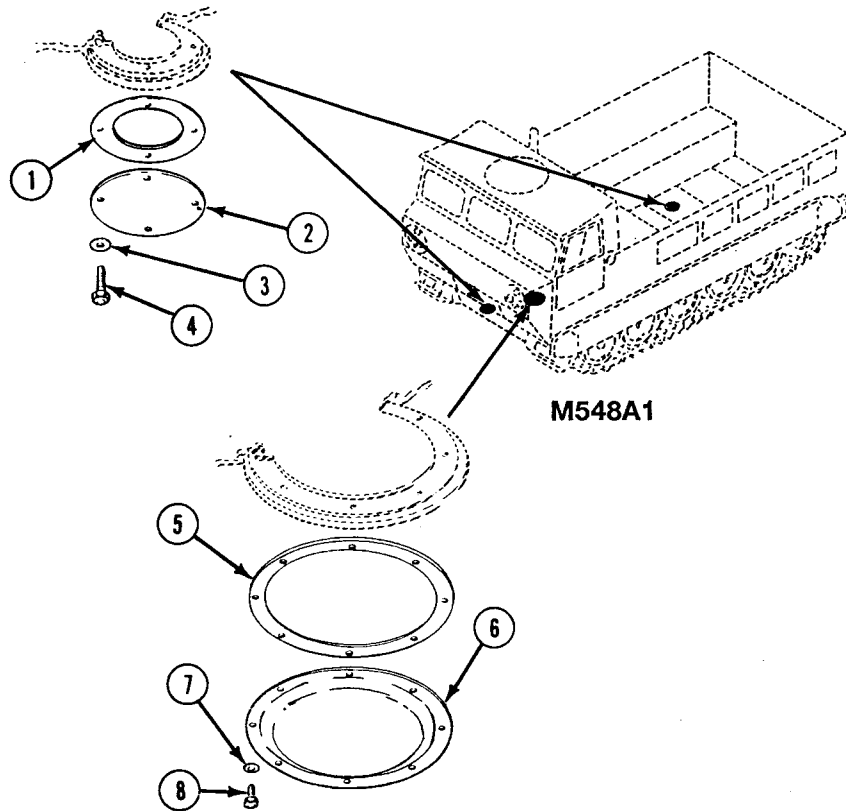
INSTALLATION

NOTE

Hull bottom access covers for M548A1 and M548A3 are different. Both access covers are shown.

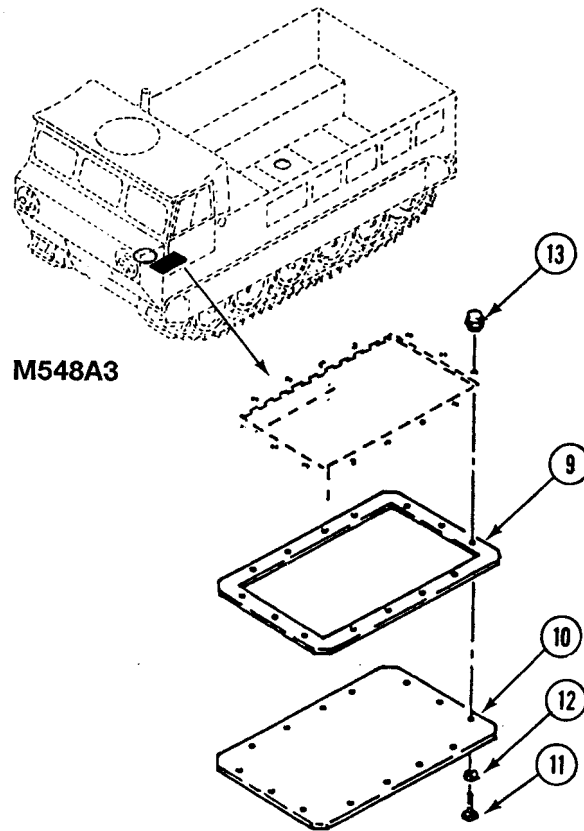
Do Step 2 for M548A1 hull bottom access cover. Do Step 3 for M548A3 hull bottom access cover.

1. Place gasket (1) on drain cover (2). Install drain cover and gasket on hull bottom with four washers (3) and screws (4).
2. Place gasket (5) on access cover (6). Install access cover and gasket on hull bottom with eight washers (7) and screws (8).



REPLACE HULL BOTTOM ACCESS COVER AND DRAIN COVER — Continued**0383 00**

3. Place gasket (9) on access cover (10). Install access cover and gasket on hull bottom with 14 screws (11), washers (12), and new lock nuts (13).

**END OF TASK**

REPLACE TRANSVERSE BEAM AND CENTER SEAT PANEL (M548A1)

0384 00

THIS WORK PACKAGE COVERS:

Removal (page 0384 00-2).
 Installation (page 0384 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut (6)

Personnel Required

Unit Mechanic
 Helper (H)

References

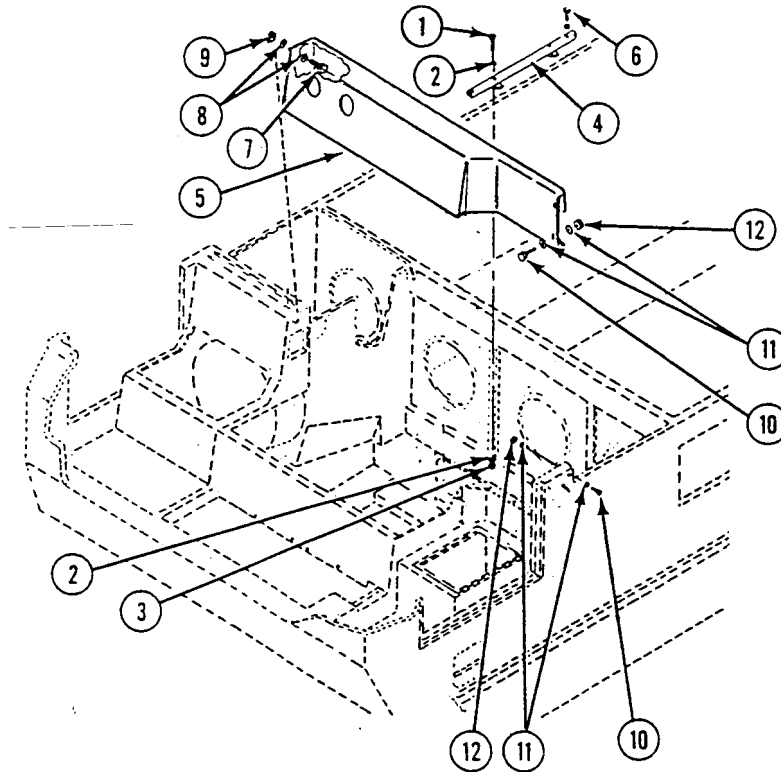
See your -10

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access covers and grilles removed (WP 0390 00)
 Center seat raised (see your -10)
 Machine gun mount kit removed (WP 0513 00),
 (WP 0514 00), or (WP 0515 00)
 Cab cover removed (WP 0418 00) or (WP 0456 00)
 Air cleaner removed (WP 0152 00) or (WP 0159 00)
 Primary fuel filter removed (WP 0176 00) or
 (WP 0178 00)
 Air brake kit removed (WP 0495 00)

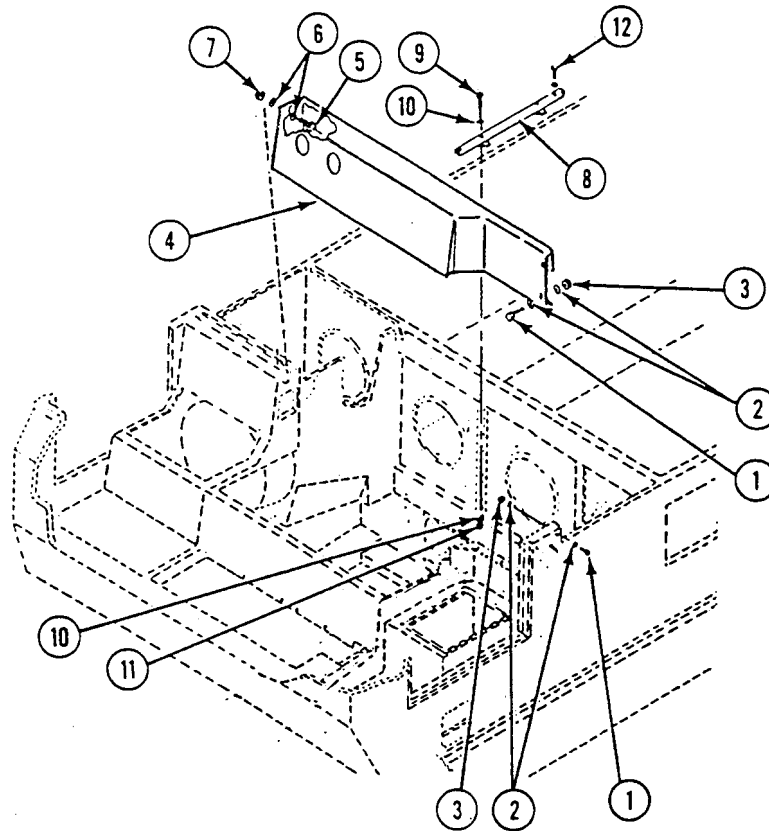
REMOVAL

1. Remove screw (1), two washers (2), and lock nut (3) that secure panel beam (4) to transverse beam (5). Discard lock nut.
2. Loosen screw (6) at rear end of panel beam (4). Swing panel beam to rear.
3. Remove three screws (7), six washers (8), and three lock nuts (9) that secure right end of transverse beam (5) to right seat section. Discard lock nuts.
4. Remove two screws (10), four washers (11), and two lock nuts (12) that secure transverse beam (5) to carrier. Discard lock nuts.



INSTALLATION

1. Install two screws (1), four washers (2), and two new lock nuts (3) in transverse beam (4) to secure beam to carrier.
2. Install three screws (5), six washers (6), and three new lock nuts (7) to secure right end of transverse beam (4) to right seat section.
3. Swing panel beam (8) into place. Install screw (9), two washers (10), and new lock nut (11) to secure panel beam to transverse beam (4).
4. Tighten screw (12) at rear end of panel beam (8).

**FOLLOW-THROUGH STEPS**

1. Install primary fuel filter (WP 0176 00) or (WP 0178 00).
2. Install air cleaner (WP 0152 00) or (WP 0159 00).
3. Install air brake kit (WP 0495 00).
4. Install cab cover (WP 0418 00) or (WP 0456 00).
5. Lower center seat (see your -10).
6. Install top access covers and grilles (WP 0390 00).
7. Install machine gun mount kit (WP 0513 00), (WP 0514 00), or (WP 0515 00).

END OF TASK

REPLACE TRANSVERSE BEAM BOLTED (M548A3)

0385 00

THIS WORK PACKAGE COVERS:

Removal (page 0385 00-1).
 Installation (page 0385 00-3).

INITIAL SETUP:

Maintenance Level
 Unit

References
 See your -10

Tools and Special Tools
 General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Torque wrench (WP 0541 00, Item 69)

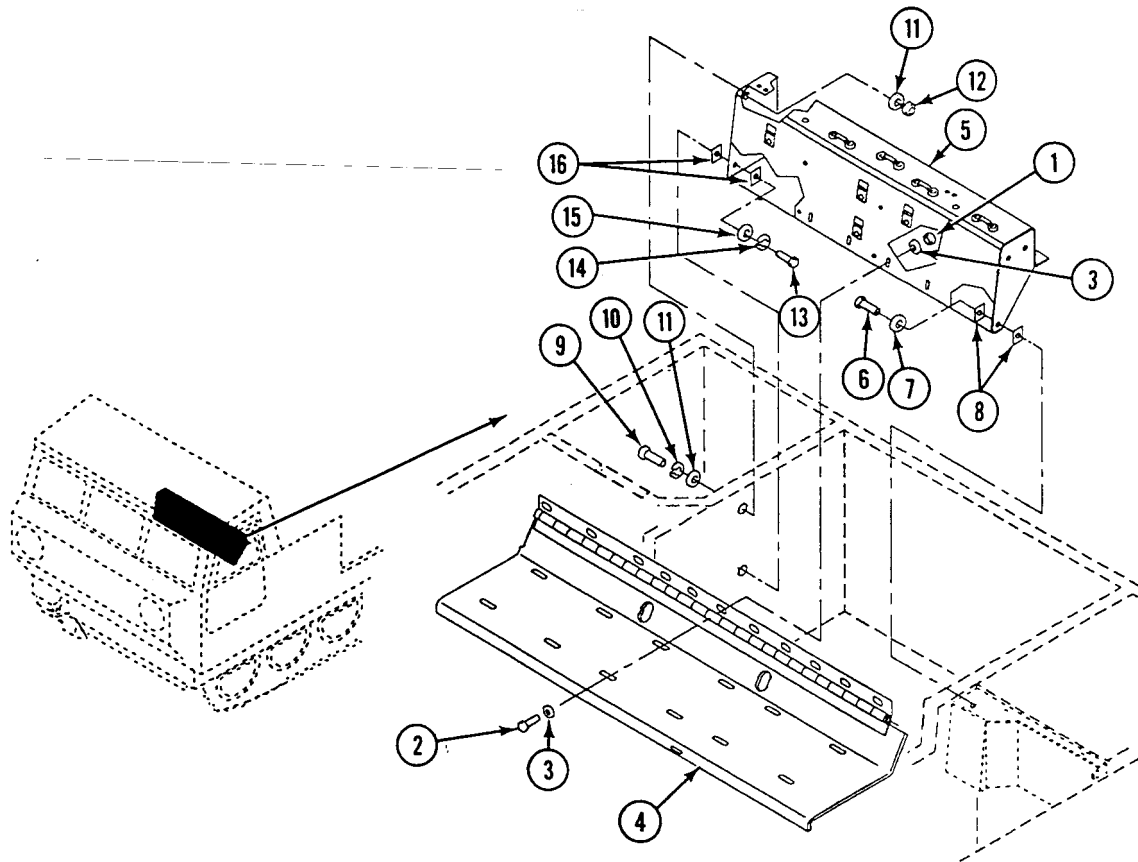
Equipment Condition
 Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access cover and grilles removed (see your -10)
 Machine gun mount kit removed (WP 0513 00),
 (WP 0514 00), or (WP 0515 00)
 Cab cover removed (WP 0418 00) or (WP 0456 00)

Materials/Parts
 Lock nut (2)
 Shims (as required)

Personnel Required
 Unit Mechanic
 Helper (H)

REMOVAL

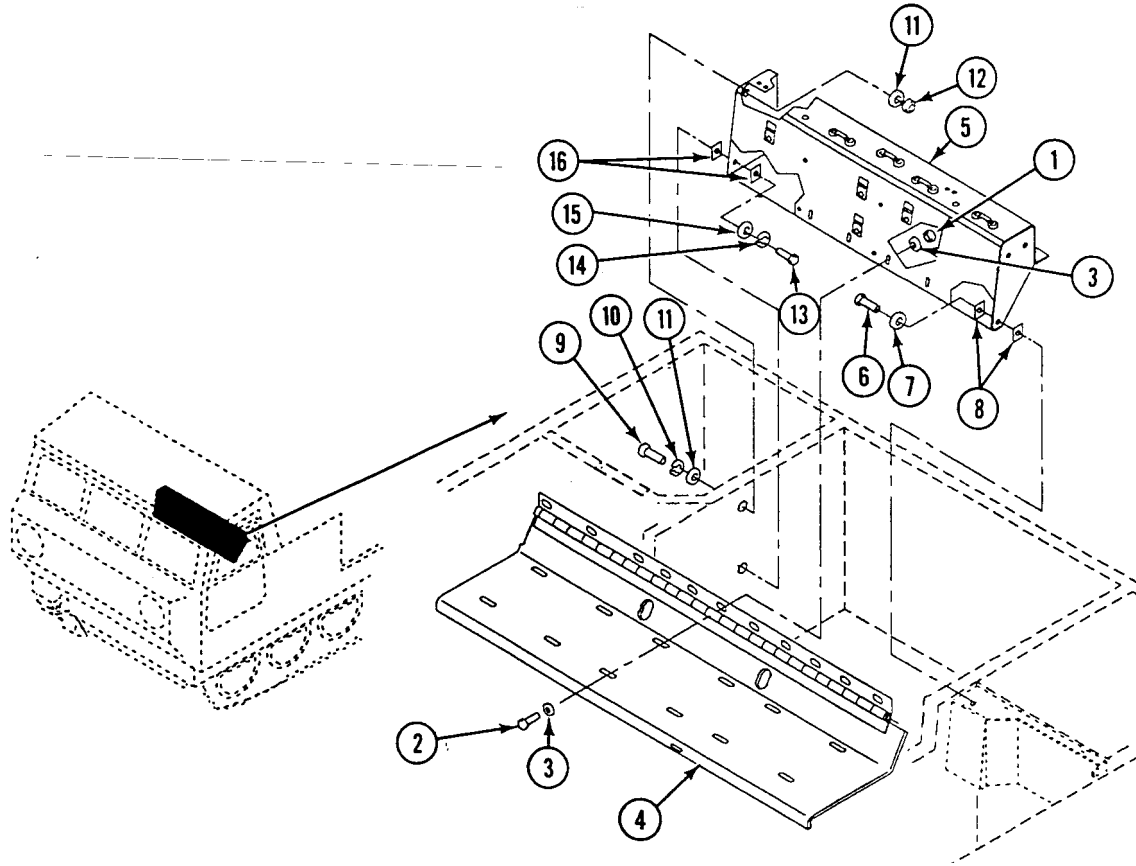
1. Remove 7 nuts (1), screws (2), and 14 washers (3) that attach center of personnel seat (4) to transverse beam (5).
2. Remove three screws (6), washers (7), and shims (8) from transverse beam (5).
3. Remove two screws (9), washers (10), four washers (11), and lock nuts (12) from transverse beam (5). Discard lock nuts.



REPLACE TRANSVERSE BEAM BOLTED (M548A3) — Continued

0385 00

4. Remove screw (13), washer (14), washer (15), and shims (16) from base of transverse beam (5).
5. Remove transverse beam (5) from carrier. Have helper assist.

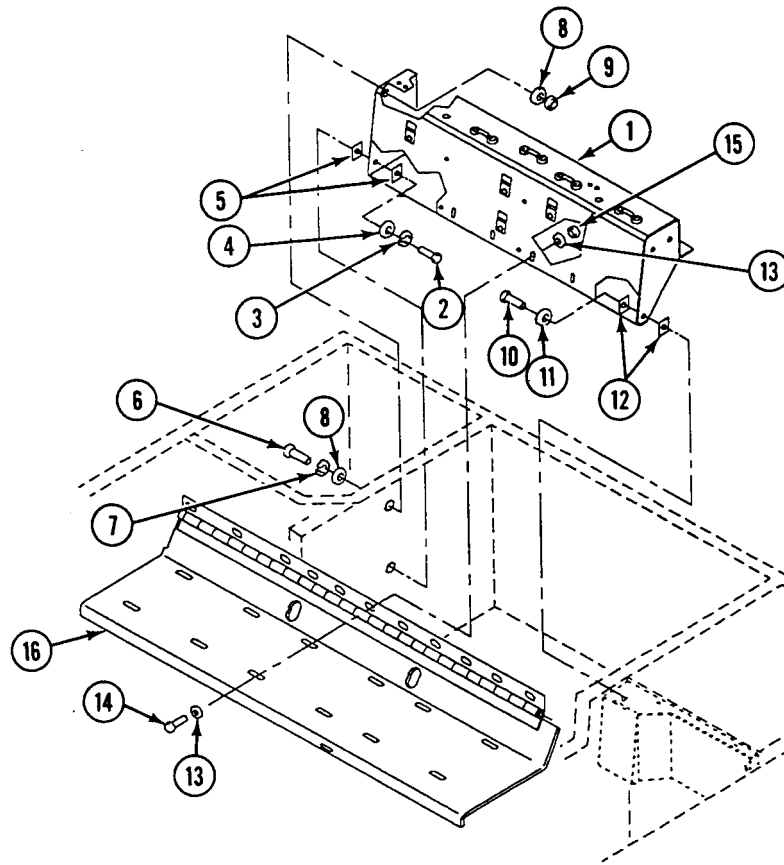


INSTALLATION

NOTE

In Step 2 and Step 4, install enough shims to ensure transverse beam has a snug fit.

1. Install transverse beam (1) in carrier. Have helper assist.
2. Install screw (2), washer (3), washer (4), and shims (5) through base of transverse beam (1).
3. Install two screws (6), washers (7), four washers (8), and new lock nuts (9). Torque screws to 25-30 lb-ft. (34-41 N•m).
4. Install three screws (10), washers (11), and shims (12) on transverse beam (1).
5. Install 14 washers (13), 7 screws (14), and nuts (15) to secure center of personnel seat (16) to transverse beam (1).



FOLLOW-THROUGH STEPS

1. Install cab cover (WP 0418 00) or (WP 0456 00).
2. Install top access cover and grilles (see your -10).
3. Install machine gun mount kit (WP 0513 00), (WP 0514 00), or (WP 0515 00).

END OF TASK

REPLACE CAB DOOR, HANDLES, AND LINKAGE

0386 00

THIS WORK PACKAGE COVERS:

- Removal (page 0386 00-2).
- Disassembly (page 0386 00-3).
- Assembly (page 0386 00-5).
- Installation (page 0386 00-6).
- Adjustment (page 0386 00-7).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

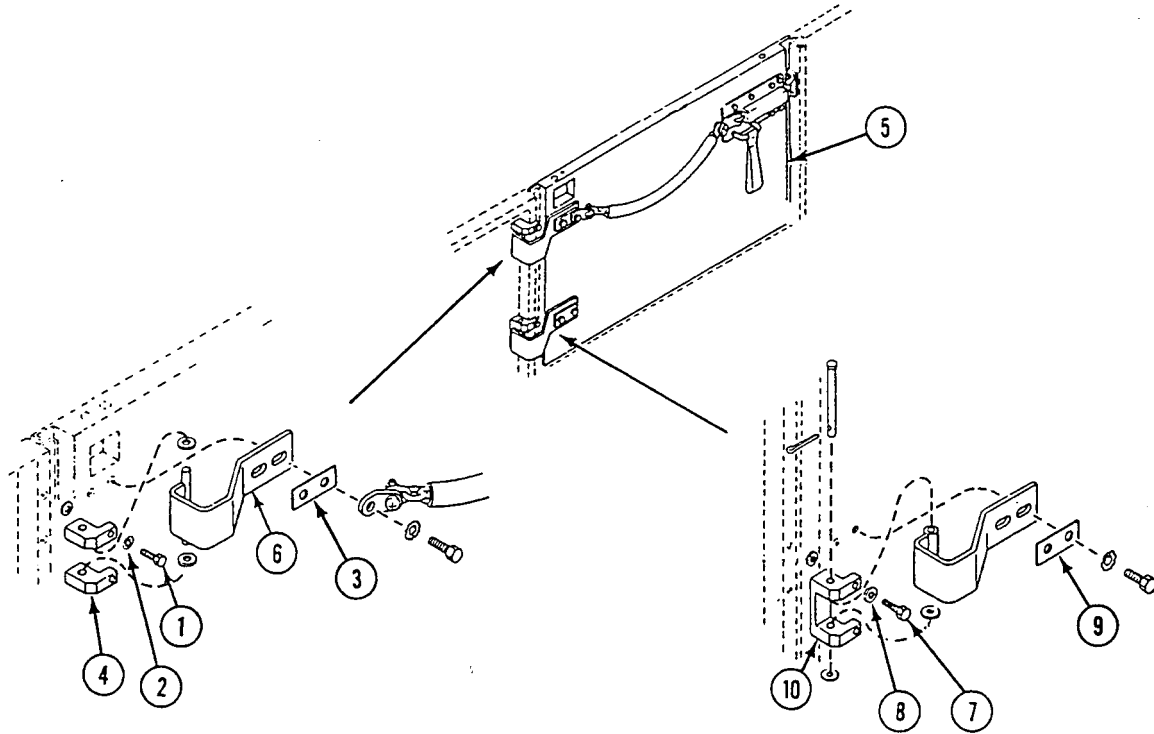
- Cotter pin
- Cotter pin (2)
- Key washer (2)
- Lock nut (6)
- Lock washer (4)
- Spring roll pin (2)

Equipment Condition

- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
 - Cab door window removed (WP 0387 00)
-

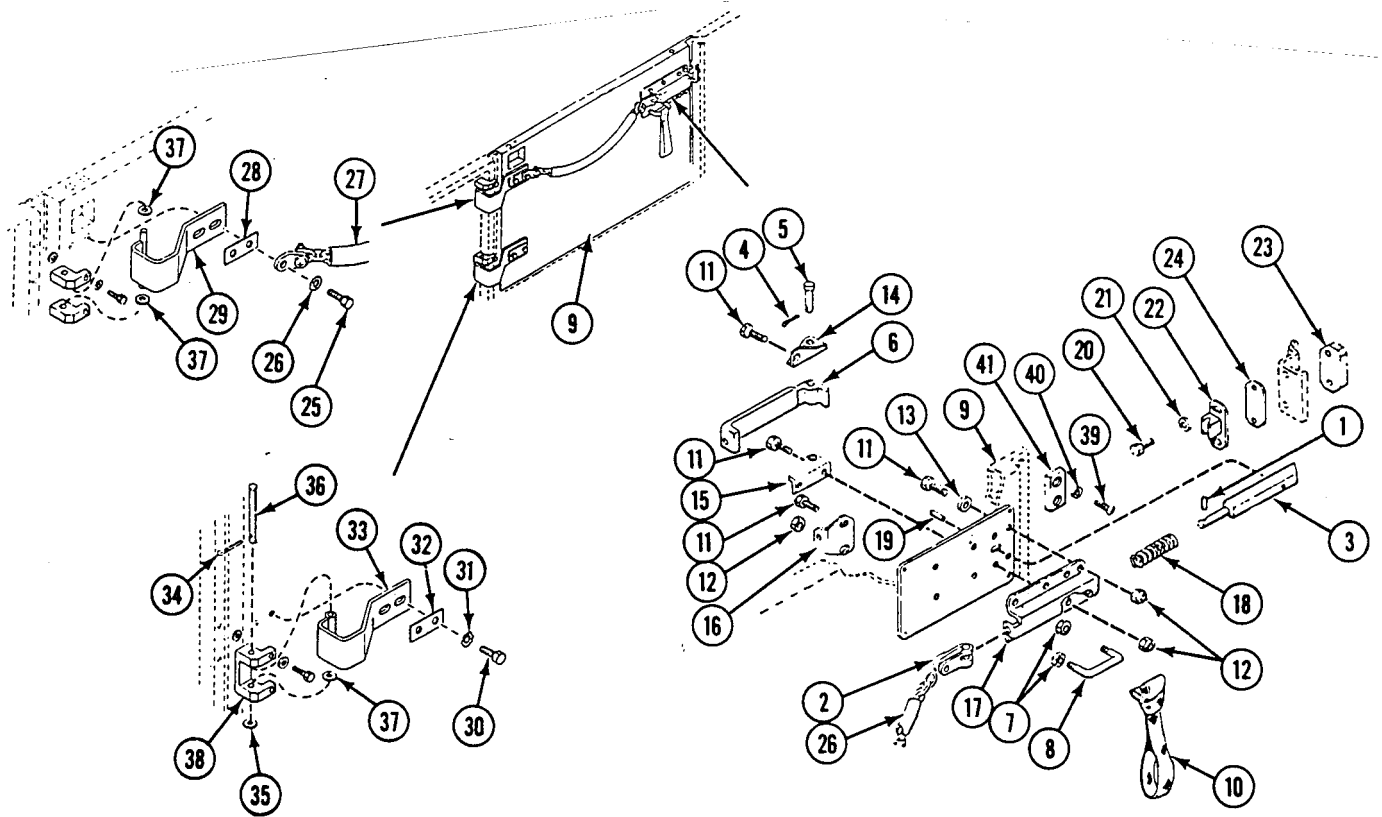
REMOVAL

1. If carrier has two hinge lugs for each hinge, remove as follows:
 - a. Remove four hinge lug screws (1), shim washers (2), and hinge lug spacer plate(s) (3) that secure four hinge lugs (4) to hull. Remove door (5). Separate hinge lugs (4) and hinge lug spacer plate(s) (3) from hinge straps (6).
2. If carrier has a single hinge lug for each hinge, remove as follows:
 - a. Remove four hinge lug screws (7), washers (8), and hinge lug spacer plate(s) (9) that secure two hinge lugs (10) to hull. Remove door (5).



DISASSEMBLY

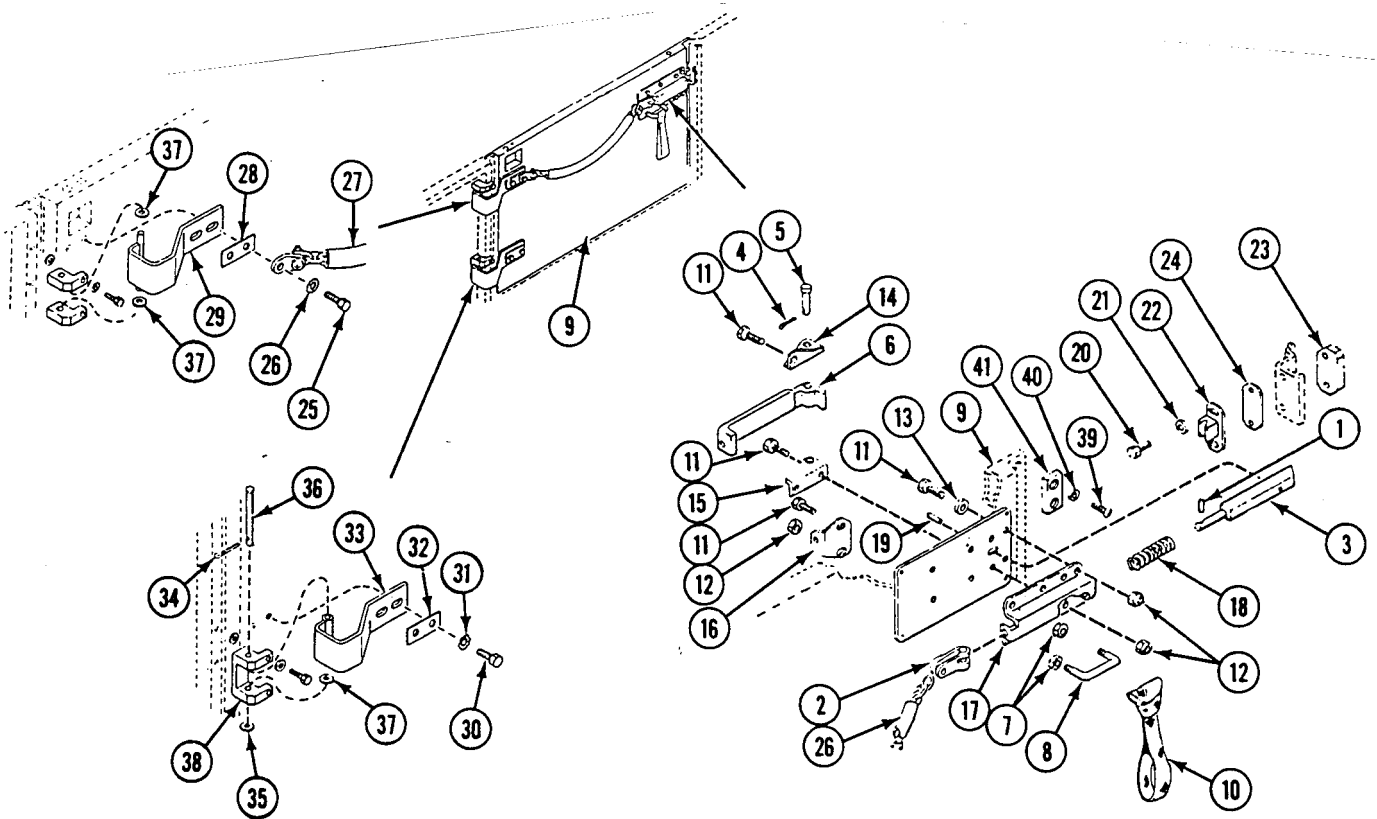
1. Disassemble door handle and latch:
 - a. Remove latch-to-chain linkage spring roll pin (1) that secures linkage strap link (2) to door latch (3). Disengage link from latch. Discard spring roll pin.
 - b. Remove cotter pin (4), outside handle pin (5), and door handle (6). Discard cotter pin.
 - c. Remove two nuts (7) that secure strap loop (8) to door (9). Remove loop and strap (10).
 - d. Remove six bracket mounting screws (11), lock nuts (12), and two washers (13) that secure top bracket (14), bottom bracket (15), lock bracket (16), and latch housing (17) to door (9). Remove brackets and housing. Discard lock nuts.
 - e. Separate door latch (3) and spring (18) from latch housing (17). Remove latch spring roll pin (19) from latch. Discard spring roll pin.
 - f. Remove two catch screws (20) and key washers (21) that secure catch (22) and backup plate (23) to hull. Remove catch, catch shim(s) (24), and backup plate. Discard key washers.



REPLACE CAB DOOR, HANDLES, AND LINKAGE — Continued

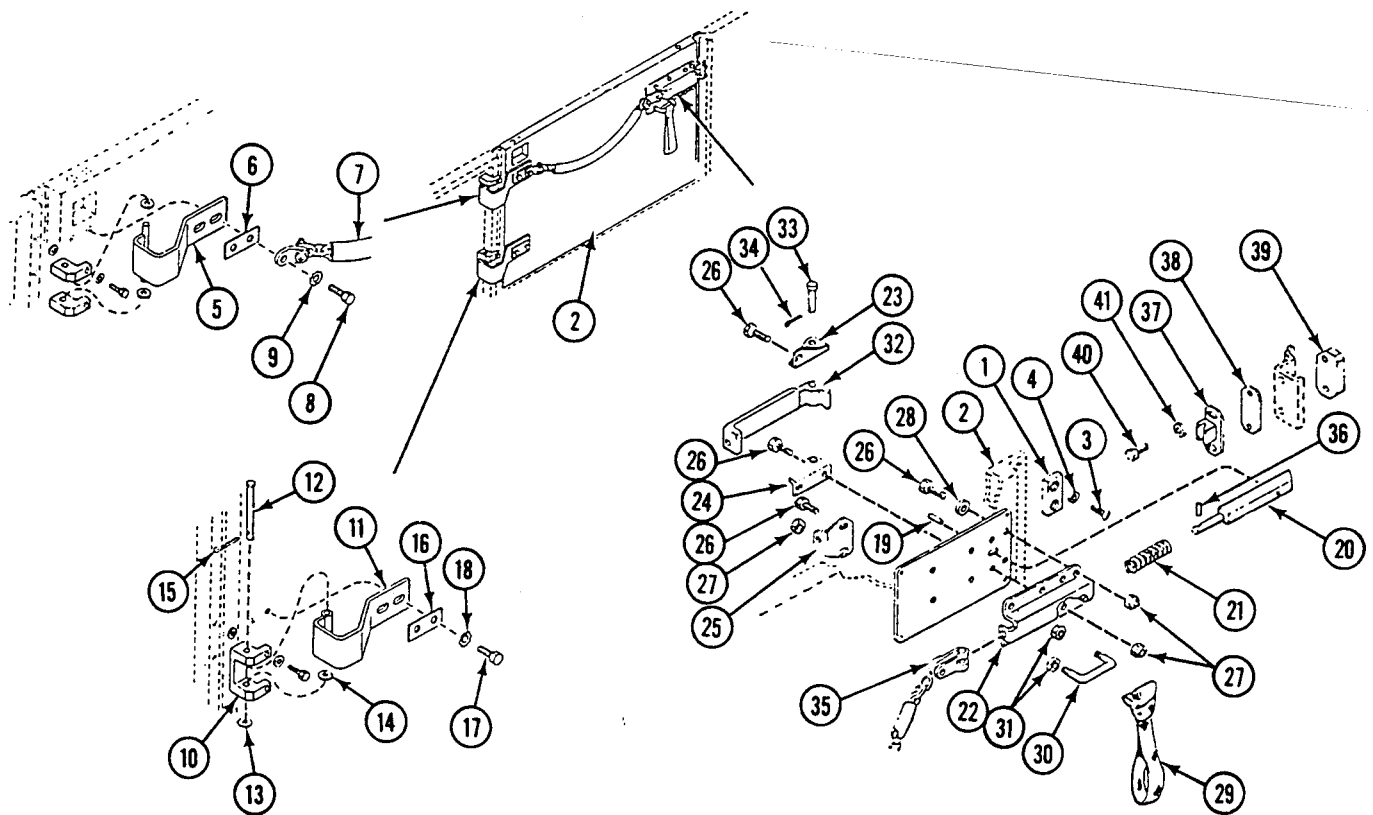
0386 00

2. Disassemble door hinge straps on carriers with two hinge lugs for each hinge.
 - a. Remove four hinge strap screws (25) and lock washers (26) that secure linkage strap (27), two locking plates (28), and two hinge straps (29) to door (9). Discard lock washers.
 - b. Remove two locking plates (28), linkage strap (27), and two hinge straps (29).
3. Disassemble door hinge straps on carriers with a single lug for each hinge.
 - a. Remove four hinge strap screws (30), lock washers (31), and two hinge locking plates (32) that secure linkage strap (27) and two hinge straps (33) to door (9). Remove linkage and hinge straps. Discard lock washers.
 - b. Remove two cotter pins (34), lug washers (35), hinge pin (36), and shim washers (37) (bottom hinge only). Separate lugs (38), hinge straps (33), and shim washers. Discard cotter pins.
4. Remove two door pad screws (39) and washers (40) that secure door pad (41) to door (9). Remove pad.



ASSEMBLY

1. Place door pad (1) on door (2). Secure with two pad screws (3) and washers (4).
2. Assemble door hinge straps on carriers with two hinge lugs.
 - a. Place two hinge straps (5), locking plates (6), and front end of linkage strap (7) on door (2). Secure with four hinge strap screws (8) and new lock washers (9).
3. Assemble door hinge straps on carriers with a single hinge lug.
 - a. Place two hinge lugs (10) in two hinge straps (11). Secure with two hinge pins (12), shim washers (13), lug washers (14), and new cotter pin (15).
 - b. Place two hinge straps (11), locking plates (16), and front end of linkage strap (7) on door (2). Secure with four hinge strap screws (17) and new lock washers (18).

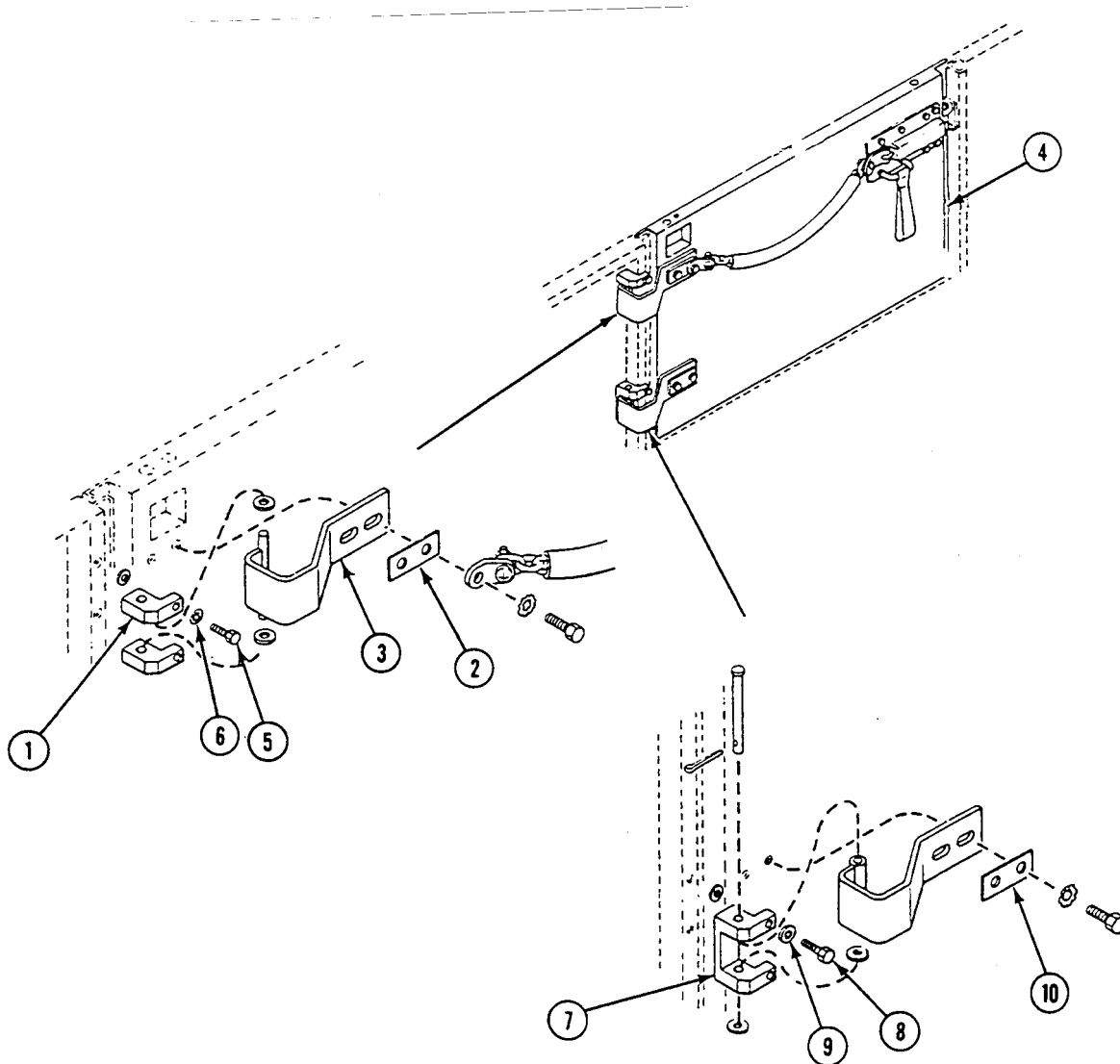


4. Assemble door handle and latch.
 - a. Press new latch spring roll pin (19) into door latch (20) so pin extends 1/2 inch (13 mm) out of latch. Assemble latch spring (21) and door latch (20) into latch housing (22).
 - b. Place latch housing (22), top bracket (23), bottom bracket (24), and lock bracket (25) on door (2). Secure with six bracket mounting screws (26), new lock nuts (27), and two washers (28).
 - c. Attach strap (29) to strap loop (30). Place loop on door (2). Secure with two nuts (31).
 - d. Place door handle (32) on top bracket (23) and bottom bracket (24). Secure with outside handle pin (33) and new cotter pin (34).
 - e. Engage rear end of linkage strap link (35) with door latch (20). Press new latch-to-chain linkage spring roll pin (36) through linkage and latch so spring pin is centered in latch.

- f. Place catch (37), shim(s) (38), and backup plate (39) on hull. Secure with two catch screws (40) and new key washers (41).

INSTALLATION

1. If carrier has two hinge lugs, install as follows:
 - a. Install four hinge lugs (1) and spacer plate(s) (2) on two hinge straps (3) of assembled door (4).
 - b. Place four hinge lugs (1) on hull. Secure with four hinge lug screws (5), lug washers (6), and hinge lug spacer plate(s) (2).
2. If carrier has a single hinge lug, install as follows:
 - a. Place two hinge lugs (7) with assembled door (4) on hull. Secure with four hinge lug screws (8), washers (9), and hinge lug spacer plate(s) (10).



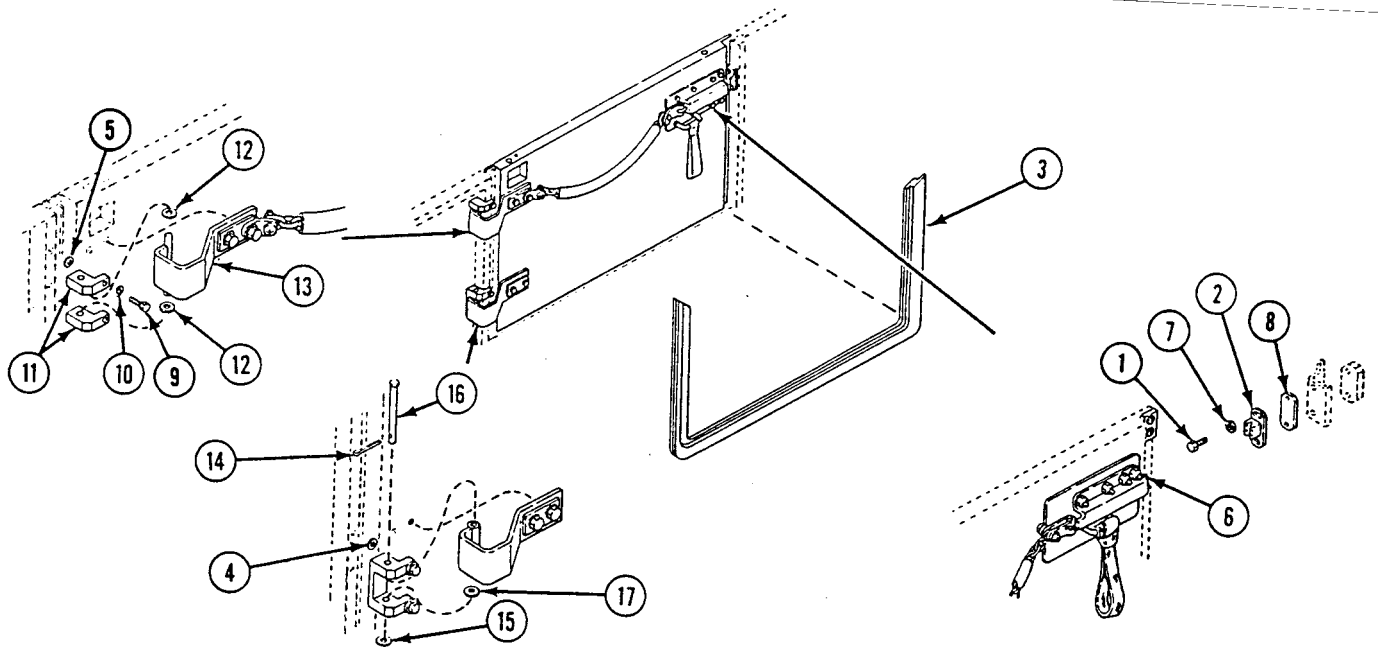
ADJUSTMENT

1. Turn MASTER SWITCH OFF (see your -10).
2. Latch and seal adjustment.
 - a. Loosen two screws (1). Slide door catch (2) in or out to 1/4-1/2 inch (6-13 mm) compression of door seal (3).
 - b. Add or remove hinge lug spacer washers (4 or 5) as needed to get 1/4-1/2 inch (6-13 mm) compression of door seal (3) on hinge side of door.
 - c. Make sure latch (6) and catch (2) fully engage. If needed, remove two screws (1) and washers (7) that secure catch to hull. Add or remove shims (8) as needed for full engagement.
 - d. Install catch (2) with two screws (1) and washers (7).

NOTE

Top edge of door assembly should align with top edge of cowl assembly.

3. Door adjustment (carriers with two hinge lugs).
 - a. Remove two screws (9), washers (10), and hinge lug spacer washer(s) (5) that secure bottom two hinge lugs (11). Remove bottom lugs.
 - b. Add or remove shim washers (12) for proper alignment of door and hull.
 - c. Install lugs (11) on door hinge strap (13).
 - d. Put shim washers (12) in place. Secure with two screws (9), washers (10), and hinge lug washer(s) (5).
4. Door adjustment (carriers with single hinge lug).
 - a. Remove lower hinge cotter pin (14), washer (15), and pin (16). Add shim washer(s) (17) to get proper door and hull alignment. Discard cotter pin.
 - b. Install hinge pin (16), washer (15), and new cotter pin (14).



FOLLOW-THROUGH STEPS

1. Install cab door window (WP 0381 00).

END OF TASK

REPLACE DOOR WINDOWS

0387 00

THIS WORK PACKAGE COVERS:

Removal (page 0387 00-2).
 Installation (page 0387 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Adhesive (WP 0542 00, Item 2)
 Rubber adhesive tape (WP 0542 00, Item 32)
 Lock nut (2)

Equipment Condition

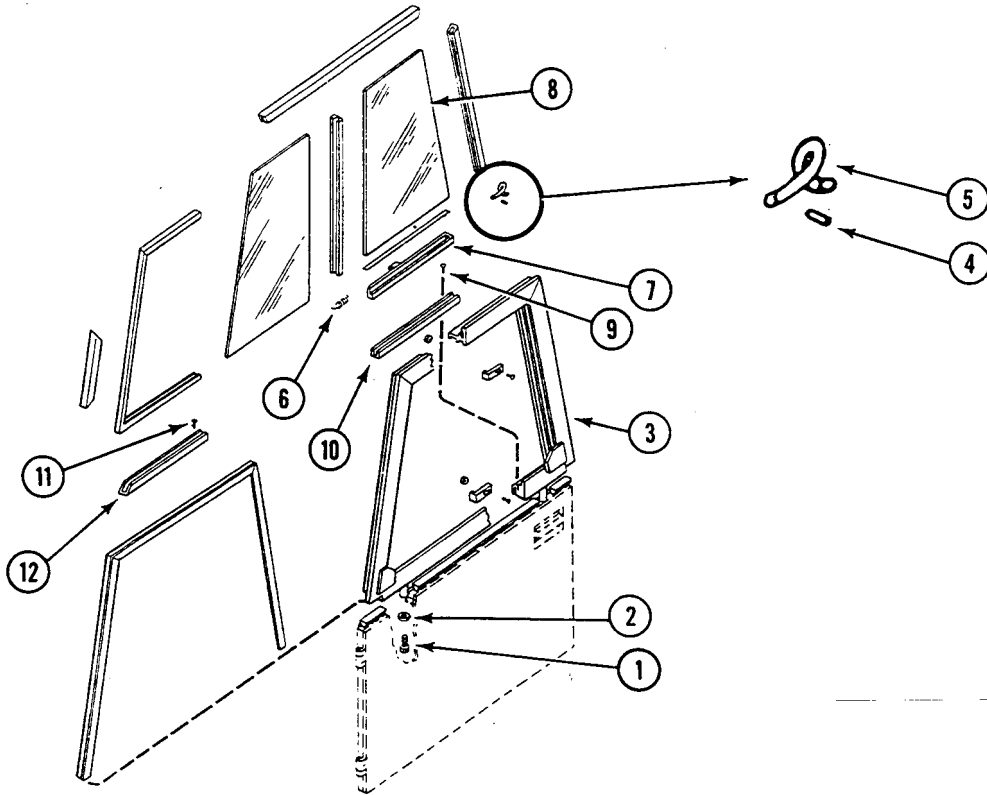
Engine stopped (see your -10)
 Carrier blocked (see your -10)

REMOVAL

NOTE

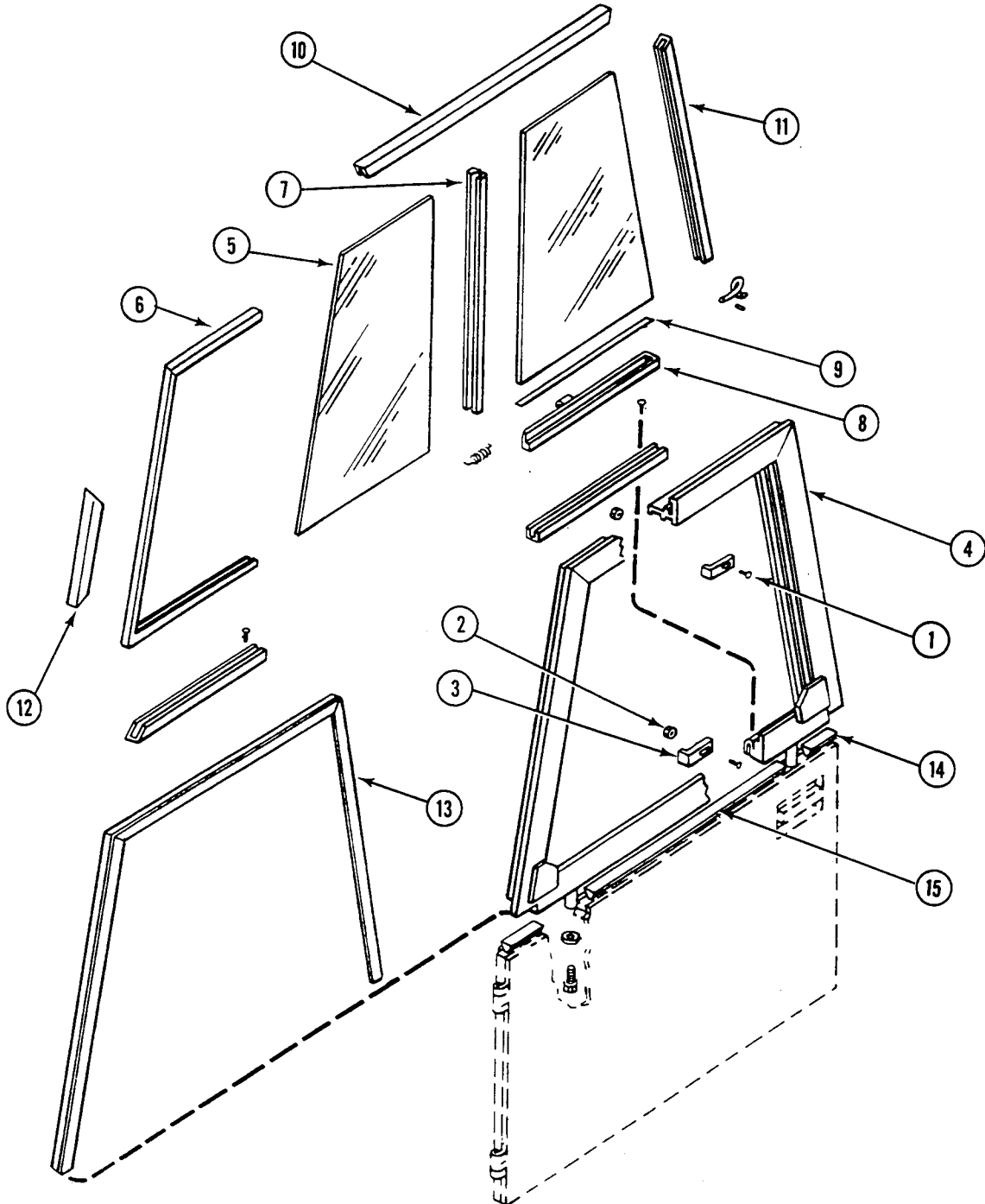
Left and right door windows are removed the same way. Normally, complete disassembly of cab door window is not needed. Remove only those parts that inspection shows are faulty.

1. Remove two screws (1) and washers (2). Remove window frame (3) from cab door.
2. Remove handle retainer pin (4) that secures spring end of sliding window handle (5). Remove handle and handle spring (6) from sliding window bottom channel (7). Remove spring retainer from bottom channel.
3. Slide glass (8) to front. Remove four screws (9) that secure rear glass run channel (10). Return glass to rear position. Remove one screw and channel.
4. Remove four screws (11) that secure front glass run channel (12). Remove channel.



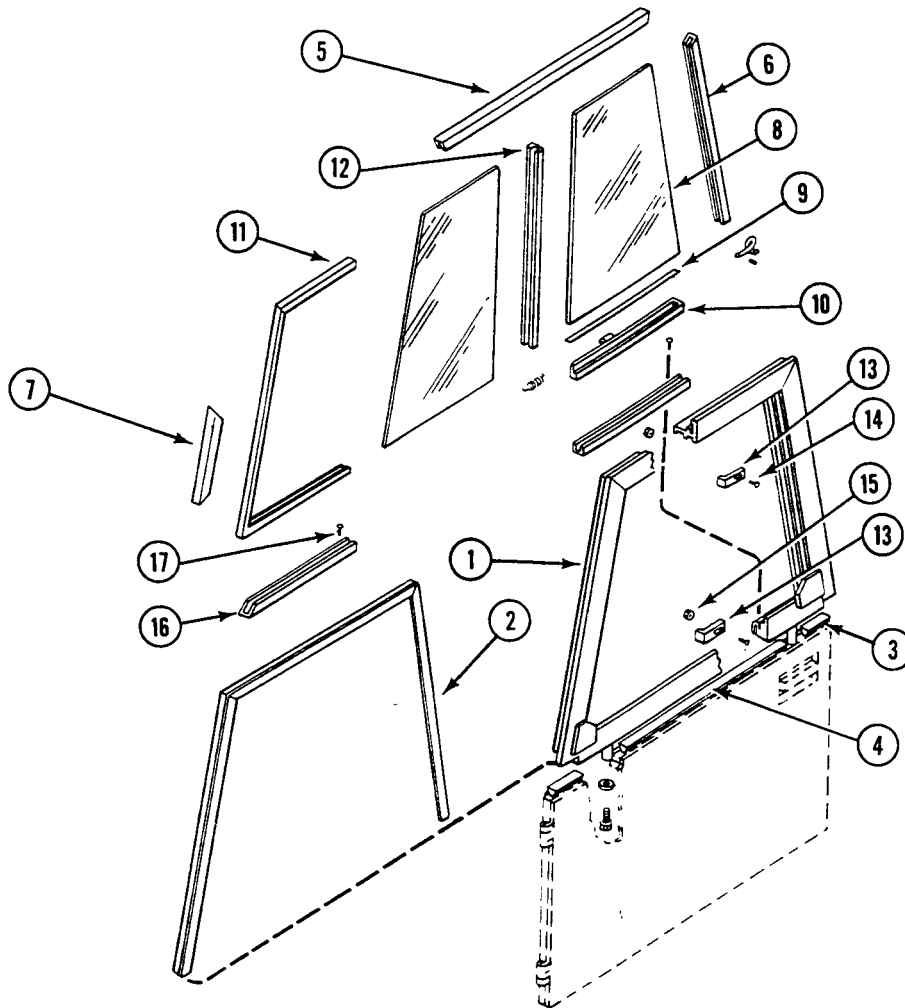
5. Remove two screws (1) and lock nuts (2) that secure two fixed window retainers (3) to window frame (4). Remove retainers. Discard lock nuts.

6. Slide glass (5) toward rear. Remove glass, channel (6), and weatherstrip channel (7) as a unit from window frame (4).
7. Remove bottom channel (8), sealing tape (9), top channel (10), rear channel (11), stop channel (12), only when replacement is needed.
8. If needed, remove window seal (13) and window-to-door seal (14) and window-to-door seal (15) from grooves in window frame (4).



INSTALLATION

1. Clean grooves in window frame (1) and back of window seal (2). Apply a light coat of adhesive to mating surfaces. Install seal.
2. Clean groove in window frame (1). Install window-to-door seal (3) and window-to-door seal (4).
3. Clean channel (5), channel (6), and channel (7) and groove in window frame (1). Apply a light coat of adhesive to mating surfaces. Install channels in window frame.
4. Clean window (8). Apply a strip of rubber adhesive tape (9) centered lengthwise on bottom edge of glass. Trim tape ends. Install sliding window bottom channel (10) on glass.
5. Clean window glass (8). Install window channel (11).

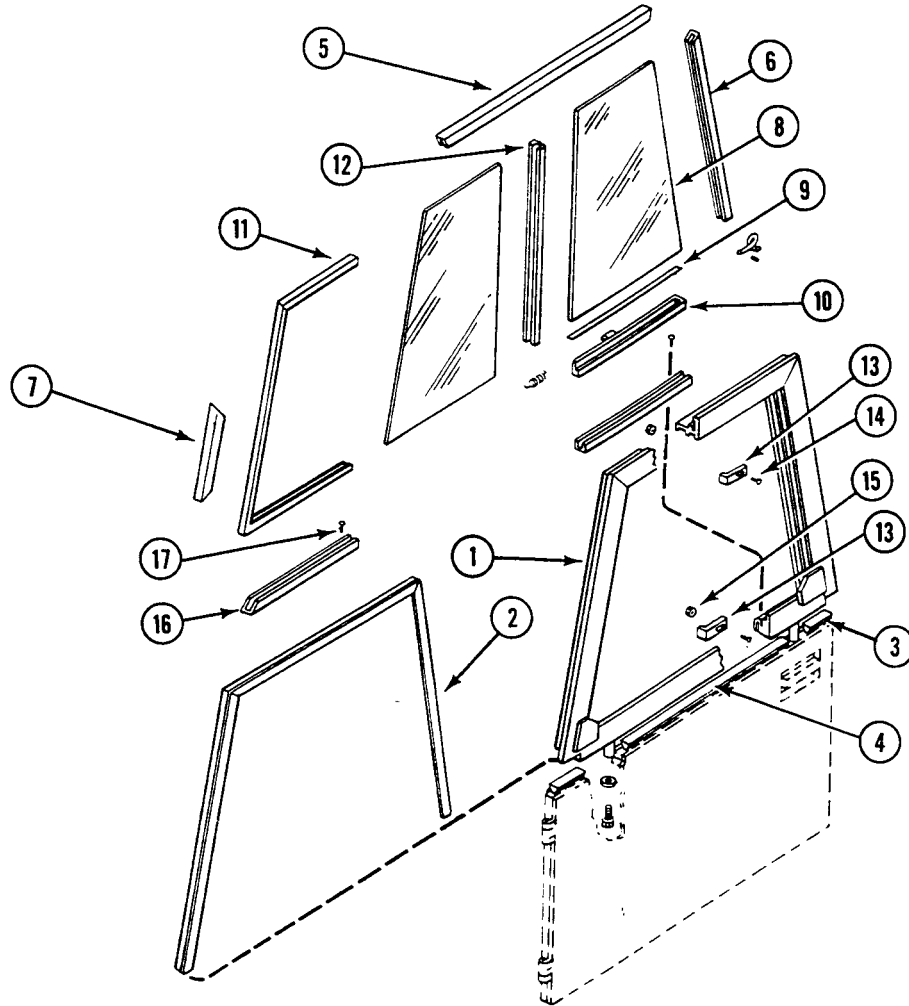


6. Clean rear edge of window glass (8) and inside weatherstrip channel (12) surfaces. Apply a light coat of adhesive to mating surfaces. Install channel on rear edge of glass.
7. Slide window glass (8) with channel (11) and weatherstrip channel (12) as a unit forward into groove in window frame (1).

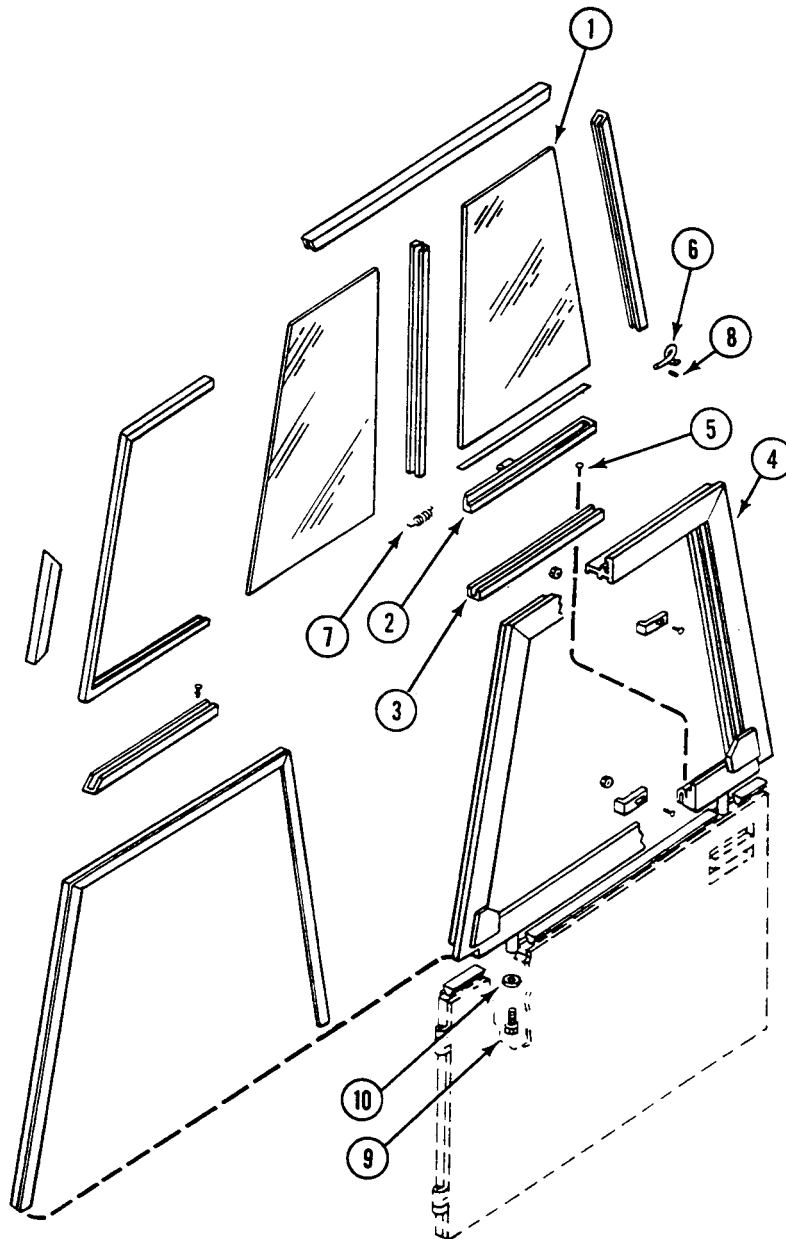
NOTE

Weatherstrip channel (12) must be toward center of window.

8. Place two window retainers (13) on window frame (1). Secure with two screws (14) and new lock nuts (15).
9. Place front glass run channel (16) on window frame (1). Secure with four screws (17).



10. Place window glass (1) and bottom channel (2) as a unit into rear glass run channel (3). Place glass and two channels in window frame (4). Slide glass to forward position. Secure channel (3) with four screws (5). Return glass to rear position. Install one screw in channel.
11. Insert sliding window handle (6) through mounting tube on sliding window bottom channel (2). Install handle spring (7) on handle. Secure with handle retainer pin (8).
12. Install window frame (4) in cab door using two screws (9) and washers (10).



END OF TASK

REPLACE CAB DOOR SEAL

0388 00

THIS WORK PACKAGE COVERS:

- Removal (page 0388 00-1).
 - Cleaning (page 0388 00-1).
 - Installation (page 0388 00-2).
-

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Adhesive (WP 0542 00, Item 2)

Cleaning compound (WP 0542 00, Item 9)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

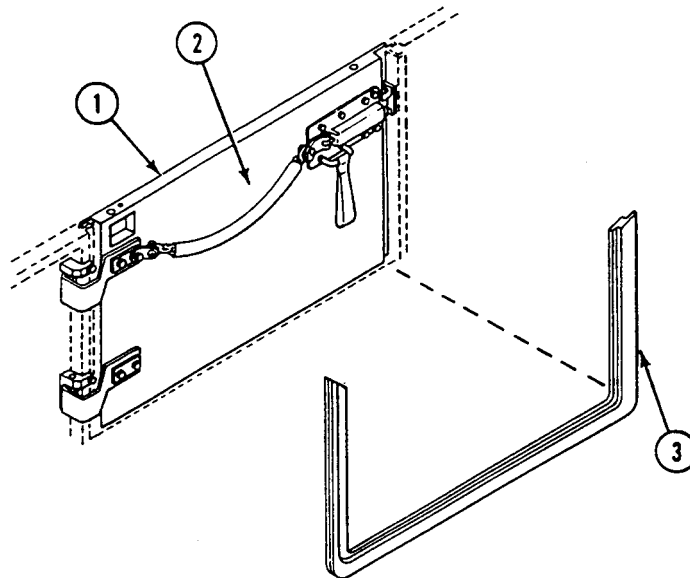
Personnel Required

Unit Mechanic

Cab door removed (WP 0386 00)

REMOVAL

1. Bend retaining strip (1) away from door (2) to release seal (3).
2. Remove door seal (3) from cab door (2).

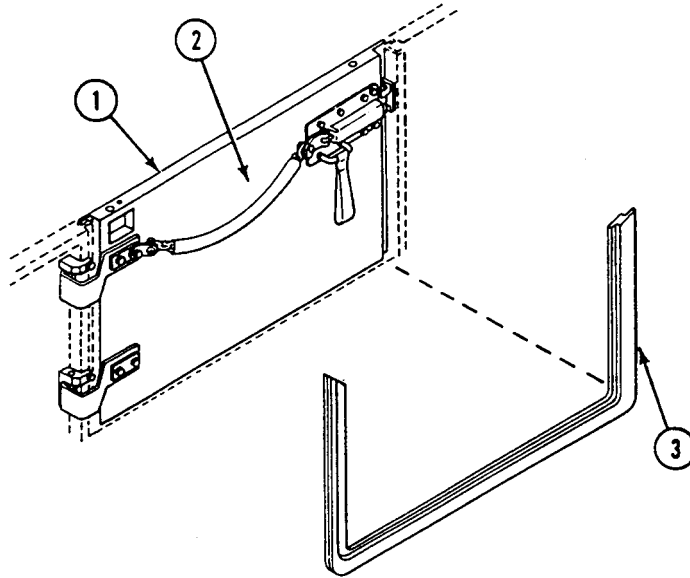


CLEANING

1. Clean door edge with cleaning compound. Remove all adhesive and particles of old seal. Make sure door edge is clean and dry before installing door seal.

INSTALLATION

1. Coat lower corners of seal and edge of door (2) with adhesive. Allow to dry until tacky.
2. Place door seal (3) beneath retaining strip (1) on cab door (2). Press firmly into place.
3. Bend retaining strip (1) to secure seal (3) on door (2).

**FOLLOW-THROUGH STEPS**

1. Install cab door (WP 0386 00).
2. Adjust cab door (WP 0386 00).

END OF TASK

REPLACE POWER PLANT RIGHT REAR ACCESS COVER SEAL

0389 00

THIS WORK PACKAGE COVERS:

Removal (page 0389 00-1).
 Installation (page 0389 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanics Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Adhesive (WP 0542 00, Item 2)
 Cleaning compound (WP 0542 00, Item 9)
 Seal

Equipment Condition

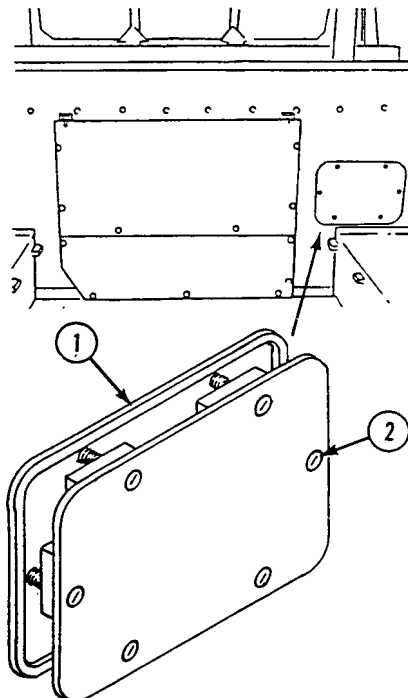
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Power plant right rear access cover removed
 (see your -10)

REMOVAL

NOTE

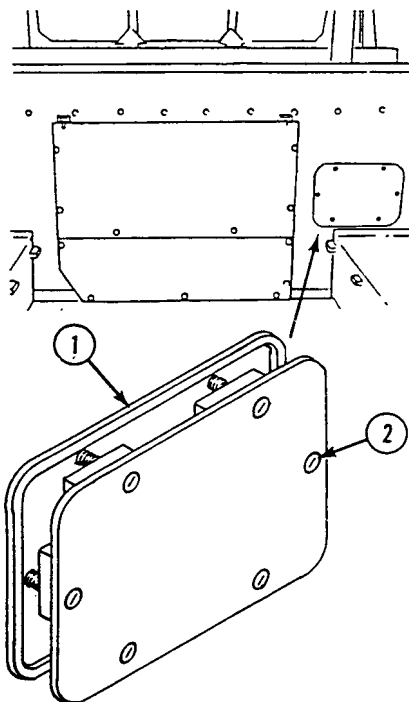
Right rear access cover seal for M548A1 and M548A3 is replaced the same way. M548A1 right rear access cover seal is shown.

1. Remove seal (1) from right rear access cover (2).



INSTALLATION

1. Clean mating surfaces of right rear access cover (2) and seal (1) with cleaning compound.
2. Put a thin coat of adhesive on mating surfaces of right rear access cover (2) and seal (1). Allow to dry until tacky.
3. Press seal (1) on right rear access cover (2) firmly.

**FOLLOW-THROUGH STEPS**

1. Install power plant right rear access cover (see your -10).

END OF TASK

REMOVE/INSTALL TOP ACCESS COVER AND GRILLES (M548A1)

0390 00

THIS WORK PACKAGE COVERS:

Removal (page 0390 00-1).
 Installation (page 0390 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

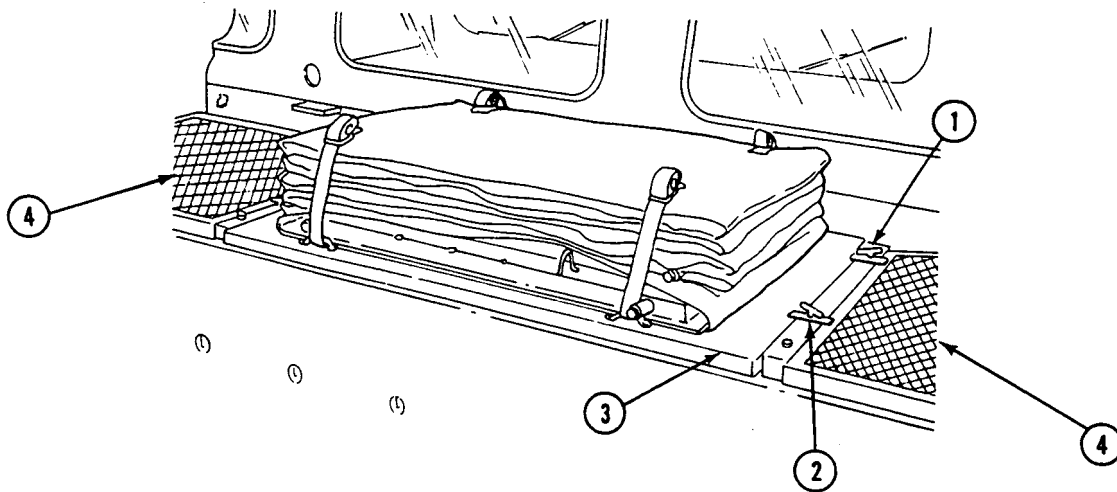
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Heater exhaust pipe removed (WP 0479 00)
 Engine exhaust pipe removed (WP 0209 00)

Personnel Required

Unit Mechanic

REMOVAL

1. Loosen four T-handles (1).
2. Turn four clamps (2) and remove access cover (3) and two grilles (4) from carrier.



INSTALLATION

1. Install two grilles (4) and access cover (3) on hull with four clamps (2).
2. Tighten four T-handles (1).

FOLLOW-THROUGH STEPS

1. Install engine exhaust pipe (WP 0209 00).
2. Install heater exhaust pipe (WP 0479 00).

END OF TASK

REMOVE/INSTALL FRONT ACCESS COVER (M548A3)

0391 00

THIS WORK PACKAGE COVERS:

Removal (page 0391 00-1).
 Installation (page 0391 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

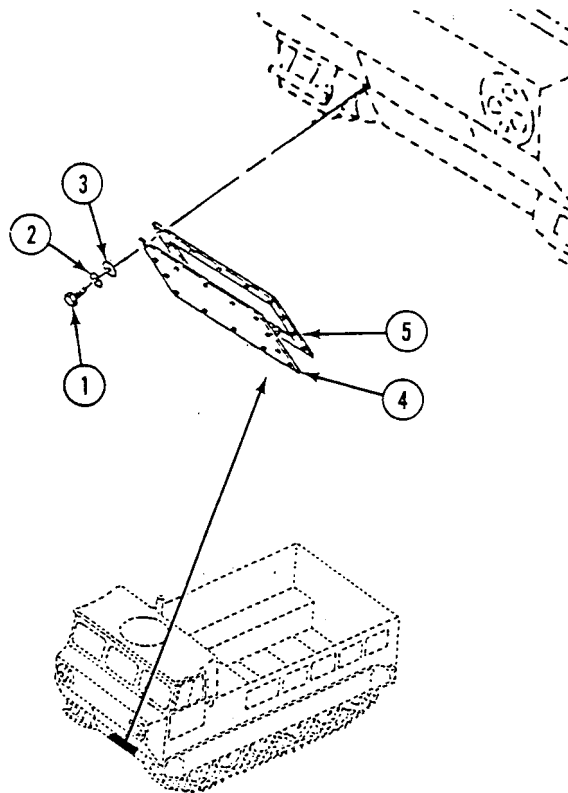
Adhesive (WP 0542 00, Item 1)
 Cleaning compound (WP 0542 00, Item 9)
 Lock washer (14)

Equipment Condition

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

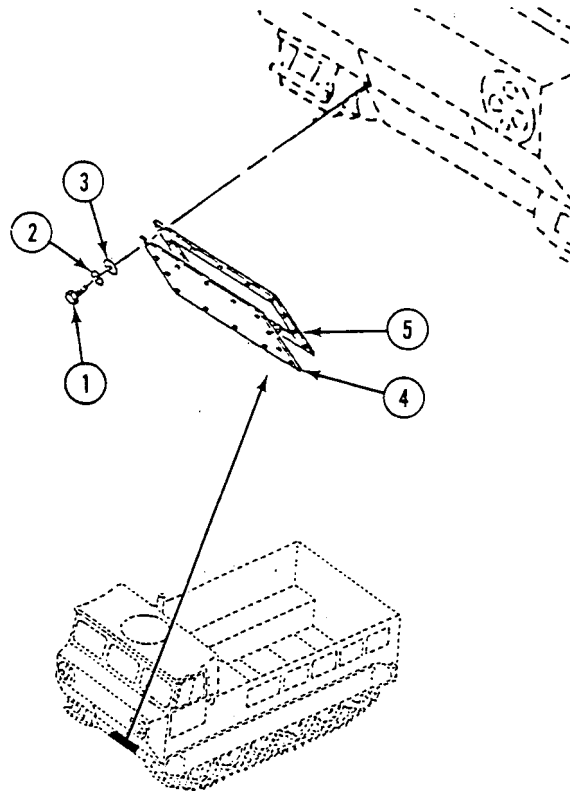
REMOVAL

1. Remove 14 screws (1), lock washers (2), washers (3), front access cover (4), and gasket (5) from carrier. Discard lock washers.



INSTALLATION

1. Clean surfaces of front access cover (4) and gasket (5) with cleaning compound.
2. Put a thin coat of adhesive on mounting surface of gasket (5).
3. Install gasket (5) on front access cover (4).
4. Install front access cover (4) with gasket (5) on carrier. Secure with 14 washers (3), new lock washers (2), and screws (1).

**END OF TASK**

REPLACE WINDSHIELDS AND WINDSHIELD FRAME

0392 00

THIS WORK PACKAGE COVERS:

Removal (page 0392 00-2).
 Installation (page 0392 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)
 Machine gun mount kit removed, if installed
 (WP 0513 00), (WP 0514 00), or (WP 0515 00)
 Cab cover removed, if installed (WP 0417 00)
 Fiberglass cab cover removed, if secondary cab
 personnel heater kit is installed (WP 0456 00)
 Windshield wipers and arms removed (WP 0422 00)

Materials/Parts

Adhesive (WP 0542 00, Item 2)
 Cleaning compound (WP 0542 00, Item 9)
 Spring pin (6)
 Lock nut (8)
 Seal

Personnel Required

Unit Mechanic

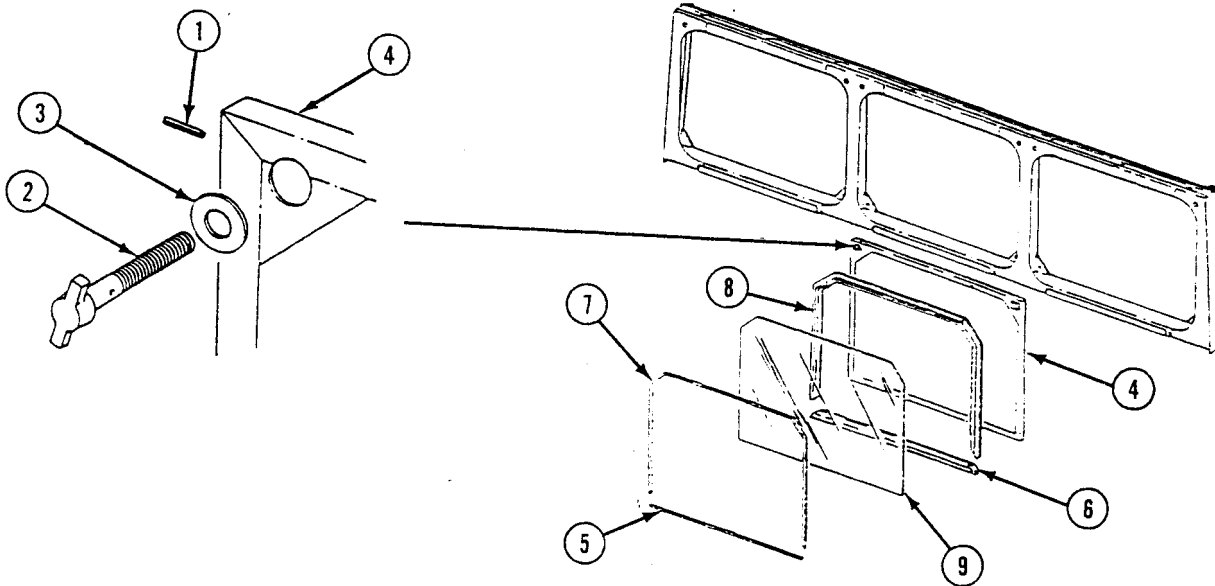
REMOVAL

NOTE

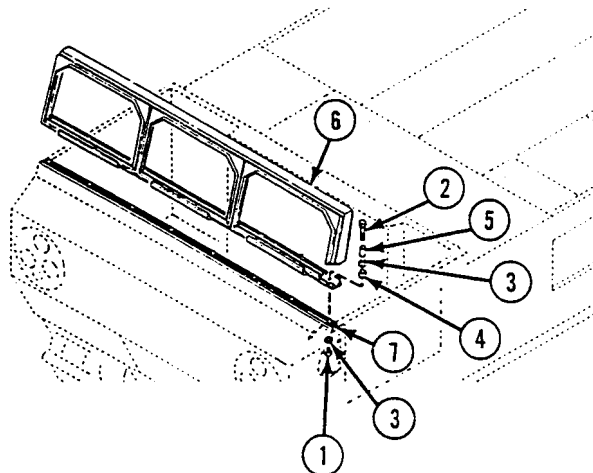
Mark locations of right and left hand locking studs for assembly.

Items one and two describe how to remove one windshield glass and window frame. Repeat these steps for the other windshield windows.

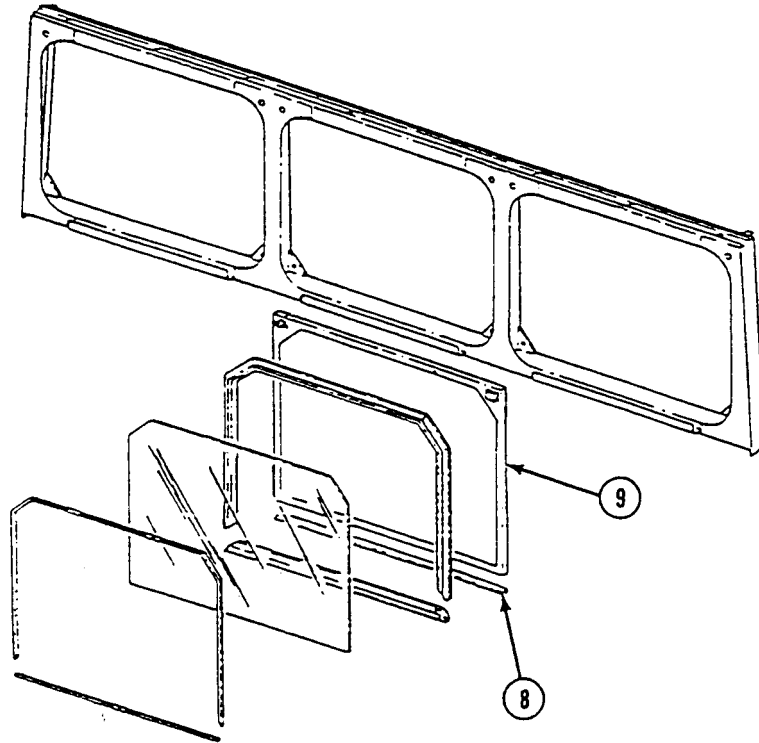
1. Remove spring pins (1) from two thumbscrews (2). Remove thumbscrews (2) and washers (3) from window frame (4). Discard spring pins.
2. Remove lower filler strip (5) from lower retaining seal (6). Remove strip (7) from retaining seal (8). Remove windshield glass (9) and seals from each window frame (4).



3. Remove eight lock nuts (1), screws (2), 16 washers (3), eight rubber bushings (4), spacers (5), windshield frame (6), and frame seal (7) from carrier. Discard lock nuts.

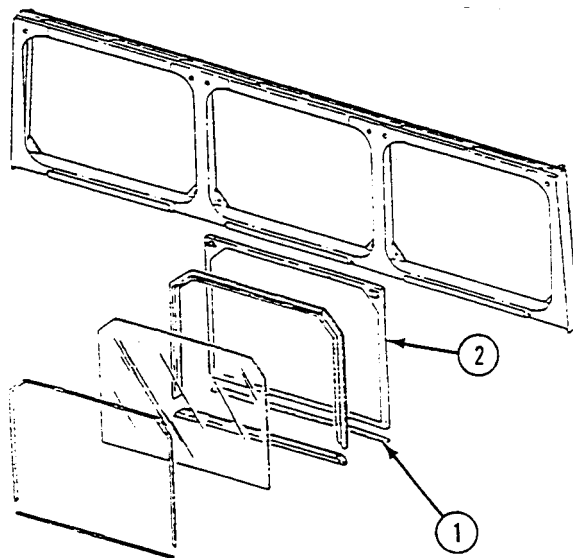


4. Remove seal (8) from window frame (9). Remove old material from frame. Clean frame with cleaning compound. Discard seal.

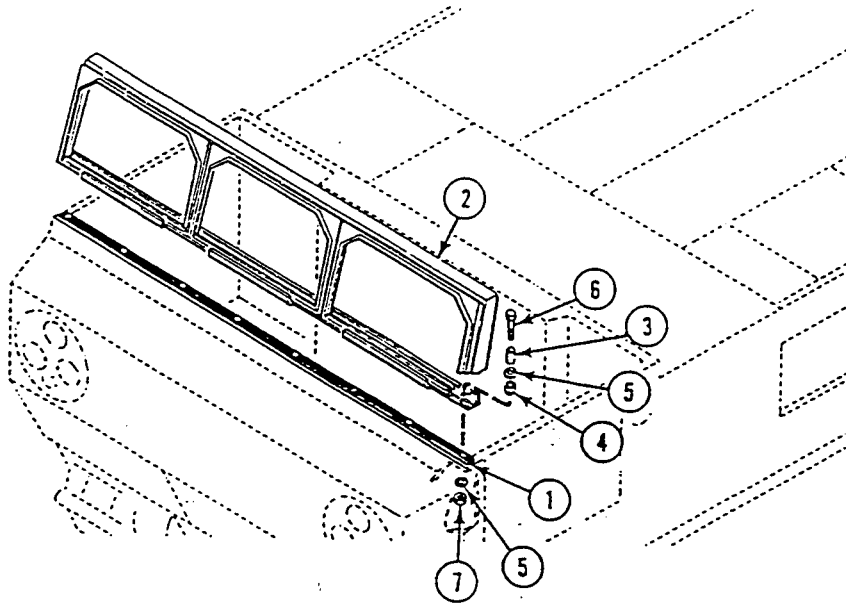


INSTALLATION

1. Cement new seal (1) in place on window frame (2) with adhesive.



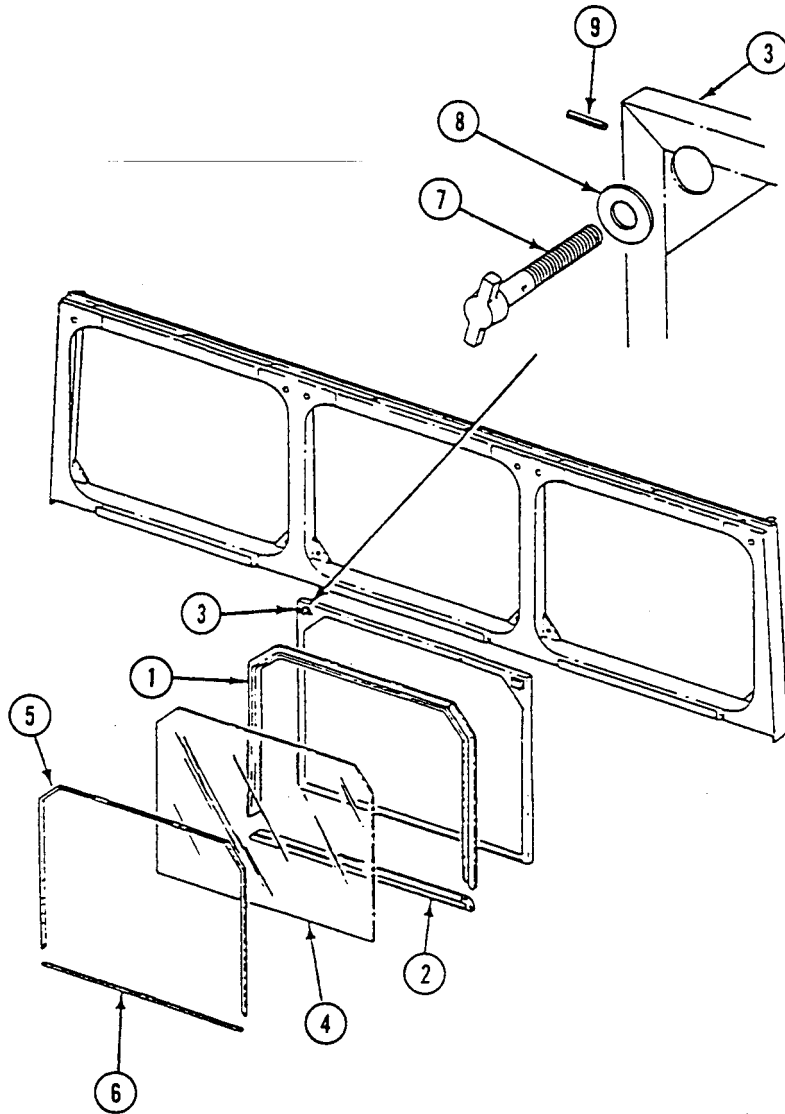
2. Install frame seal (1) and windshield frame (2) on carrier. Secure with 8 spacers (3), rubber bushings (4), 16 washers (5), 8 screws (6), and new lock nuts (7).

**NOTE**

Items seven and eight describe how to install one windshield glass and window frame. Repeat these steps for the other windshield windows.

3. Install retaining seal (1) and lower retaining seal (2) in window frame (3). Install windshield glass (4) in seal. Secure glass with filler strip (5) and lower filler strip (6).

4. Install two thumbscrews (7) and washers (8) in window frame (3). Secure with two new spring pins (9).



FOLLOW-THROUGH STEPS

1. Install windshield wipers and arms (WP 0422 00).
2. Install fiberglass cab cover, if removed (WP 0456 00).
3. Install cab cover, if removed (WP 0417 00).
4. Install machine gun mount kit, if removed (WP 0513 00), (WP 0514 00), or (WP 0515 00).
5. Connect battery negative(s) lead (WP 0292 00).

END OF TASK

RAISE/LOWER CARGO COMPARTMENT FLOOR PLATES

0393 00

THIS WORK PACKAGE COVERS:

Removal (page 0393 00-1).
 Installation (page 0393 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

Unit Mechanic

Helper (H)

Carrier blocked (see your -10)

REMOVAL

NOTE

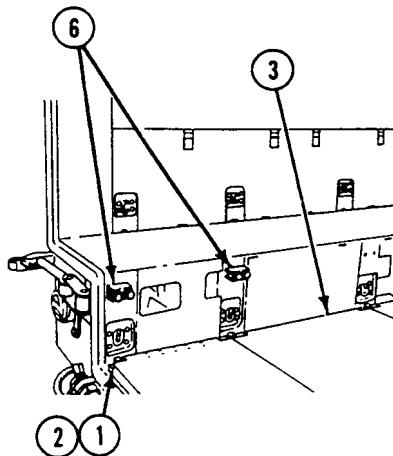
Use a helper. The floor plates are awkward to handle.

1. Remove 14 screws (1) and spacers (2). Lift out floor plates (3).

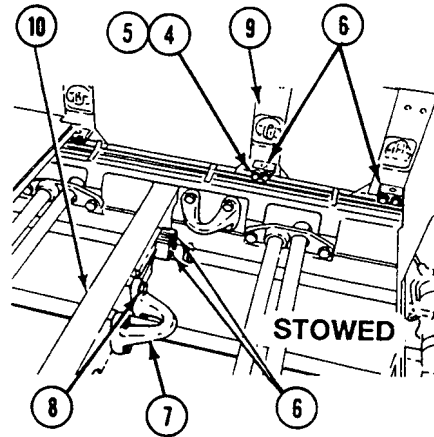
NOTE

If you are adjusting carrier for high floor position or low floor position, remove floor plate mounting blocks.

2. Remove 28 screws (4) and washers (5) that secure 14 floor plate mounting blocks (6) to hull.



3. If rear lifting eyes (7) need to be stowed, remove eight screws (8) that secure lifting eyes on sponson (9). Fasten lifting eyes in stowed position on hull crossmember (10) (see your -10).

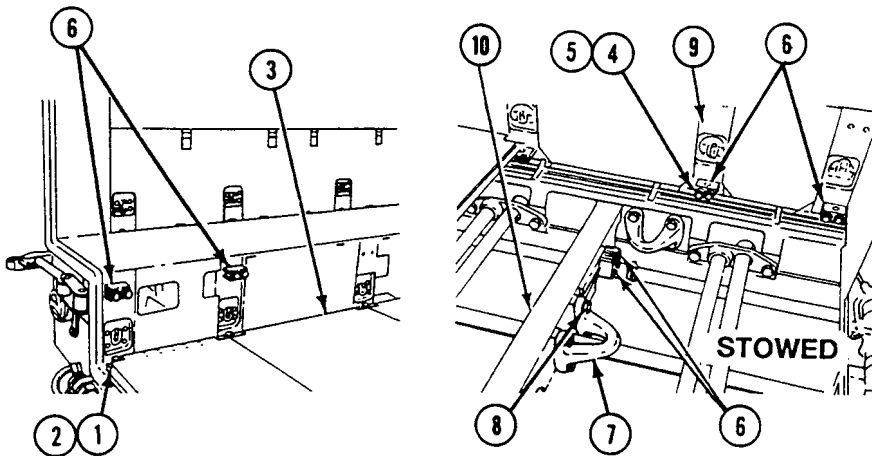


INSTALLATION

NOTE

If adjusting floor plate mounting blocks (6) for high floor position, install seven mounting blocks on each sponson (9). If adjusting floor plate mounting blocks for low floor position, install four mounting blocks (6) along front of each sponson. Stow other six mounting blocks on the hull crossmember (10).

1. Put 14 floor plate mounting blocks (6) in place. Secure with 28 screws (4) and washers (5).
2. Put floor plates (3) in place. Secure with 14 spacers (2) and screws (1).



END OF TASK

REMOVE/INSTALL CAB FLOOR PLATES (M548A1)

0394 00

THIS WORK PACKAGE COVERS:

- Removal of Center Floor Plates (page 0394 00-1).
 - Installation of Center Floor Plates (page 0394 00-2).
 - Removal of Left Floor Plate (page 0394 00-2).
 - Installation of Left Floor Plate (page 0394 00-3).
 - Removal of Throttle Floor Plate (page 0394 00-3).
 - Installation of Throttle Floor Plate (page 0394 00-4).
-

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

Unit Mechanic

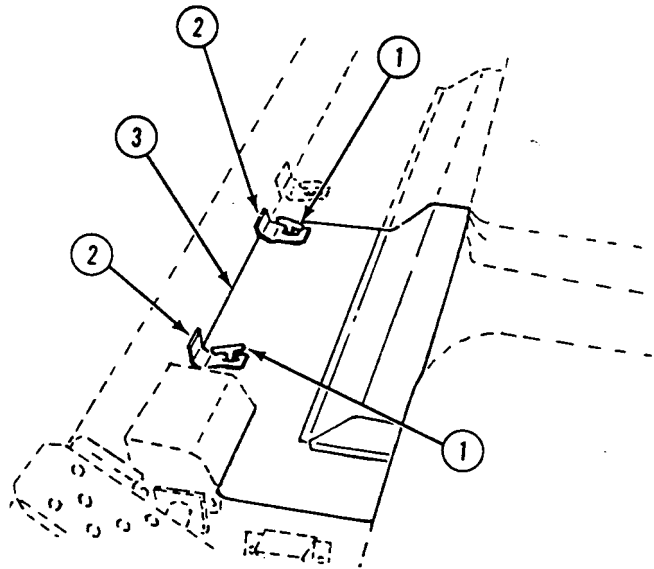
Carrier blocked (see your -10)

REMOVAL OF CENTER FLOOR PLATES

NOTE

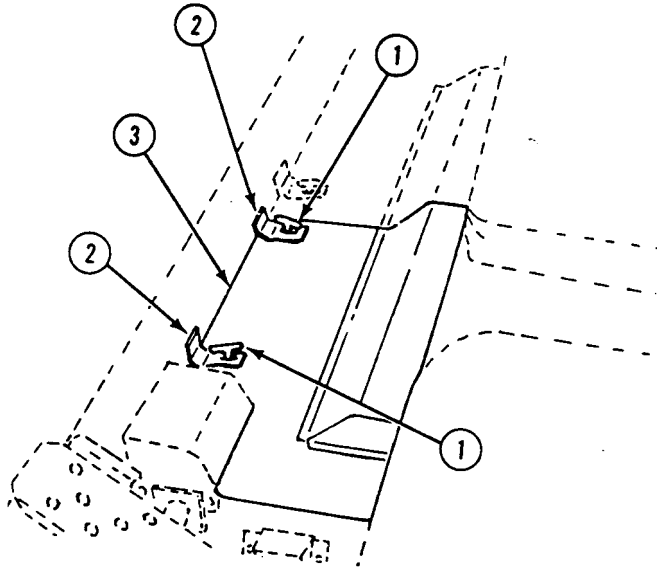
Center floor plates are removed and installed the same way.

1. Unfasten two T-handles (1) and clamps (2). Raise floor plate (3) and secure in open position.



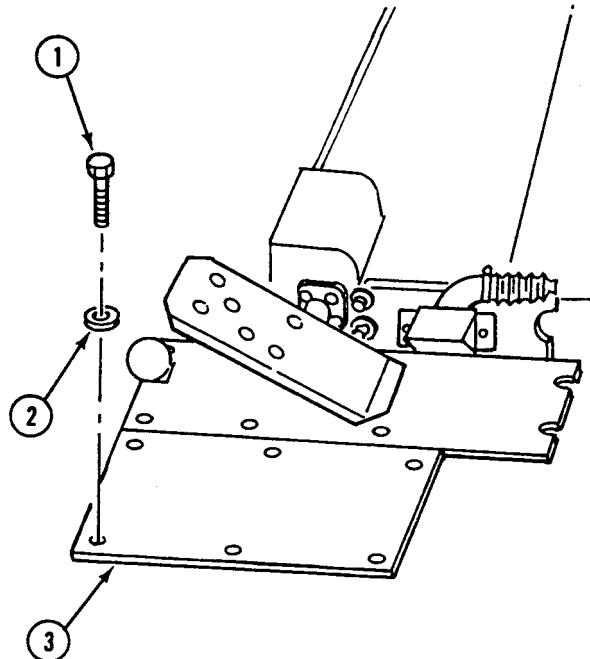
INSTALLATION OF CENTER FLOOR PLATES

1. Lower floor plate (3) and secure to cab floor with two T-handles (1) and clamps (2).



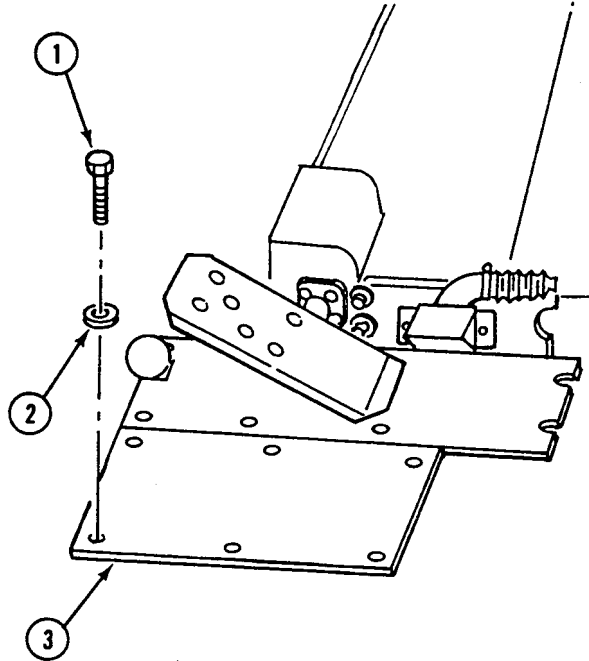
REMOVAL OF LEFT FLOOR PLATE

1. Remove six screws (1), washers (2), and left floor plate (3) from carrier.



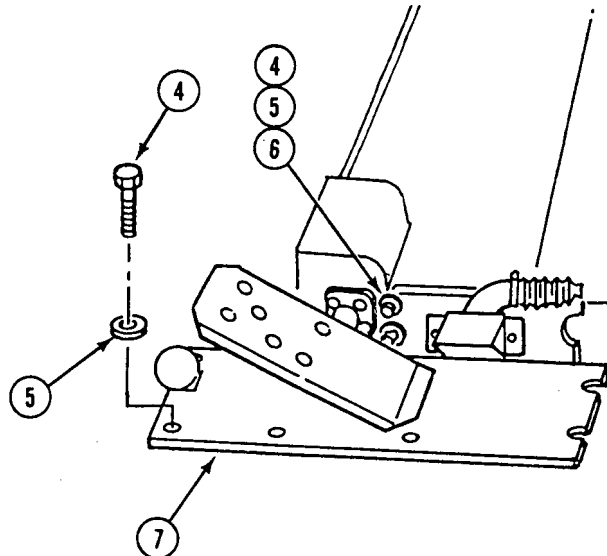
INSTALLATION OF LEFT FLOOR PLATE

1. Install left floor plate (3) in carrier with six screws (1) and washers (2).



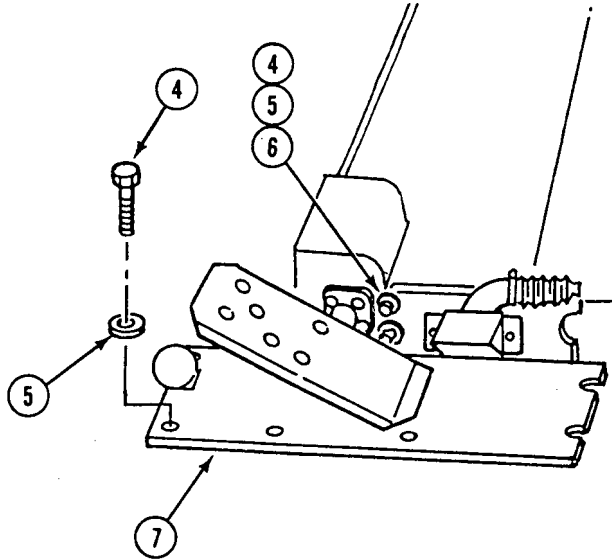
REMOVAL OF THROTTLE FLOOR PLATE

1. Remove 9 screws (4), 12 washers (5), 3 nuts (6), and throttle floor plate (7) from carrier.



INSTALLATION OF THROTTLE FLOOR PLATE

1. Install throttle floor plate (7) in carrier with 9 screws (4), 12 washers (5), and 3 nuts (6).

**END OF TASK**

REPLACE CAB FLOOR PLATES, DOOR, AND SEAT SUPPORT (M548A3)

0395 00

THIS WORK PACKAGE COVERS:

Removal (page 0395 00-2).
 Installation (page 0395 00-5).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Cotter pin (2)
 Lock nut (13)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Center seat raised (see your -10)

Personnel Required

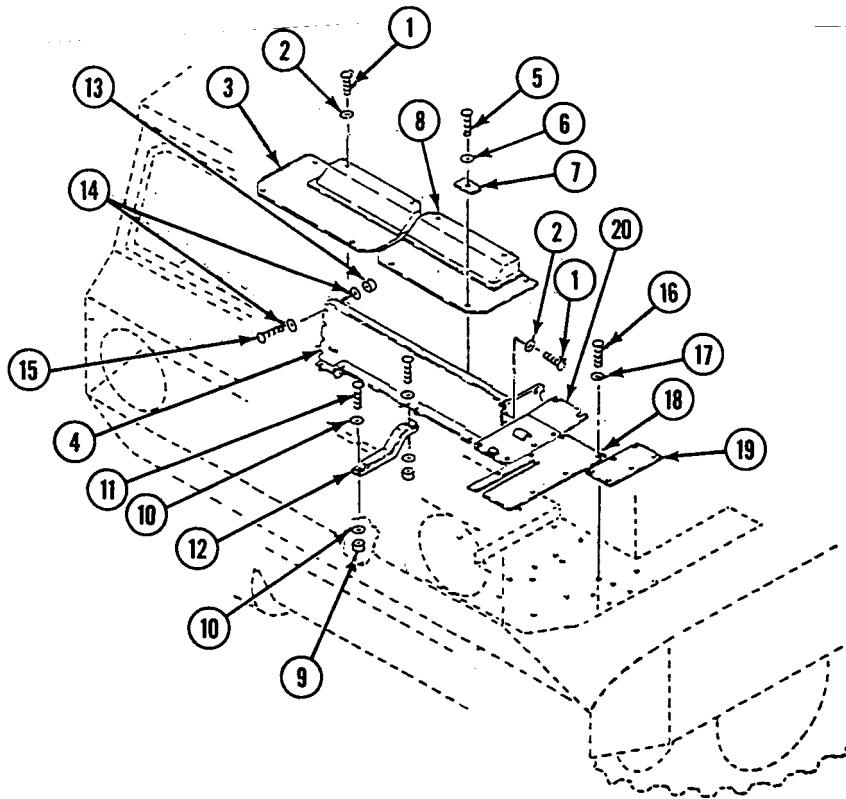
Unit Mechanic

REMOVAL

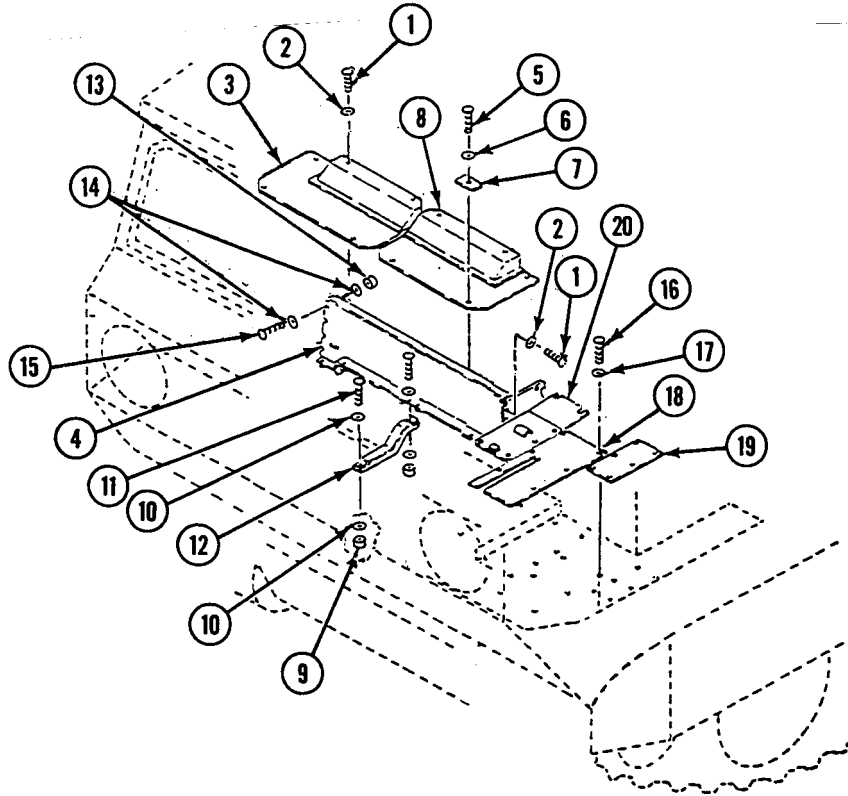
NOTE

Both center floor plates are removed the same way.

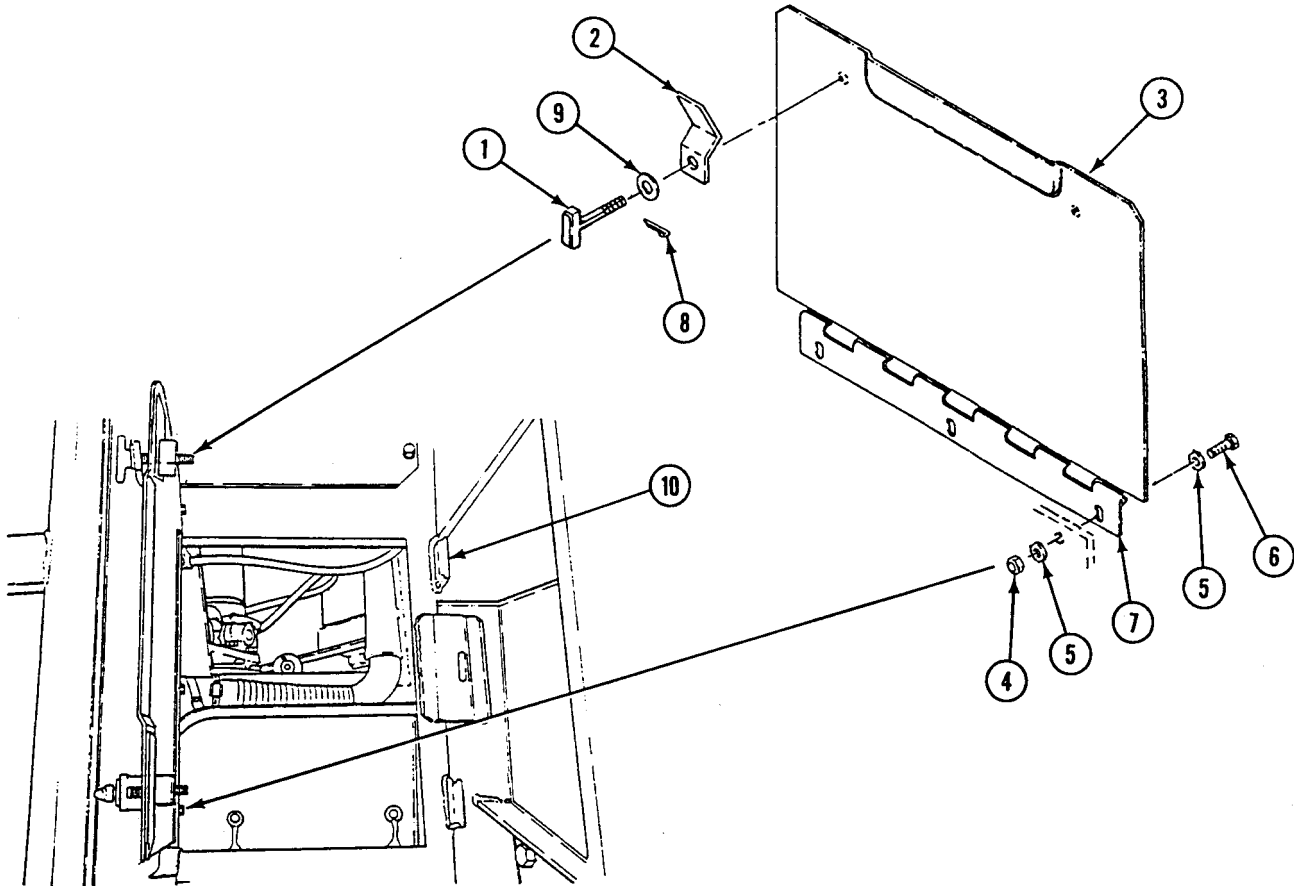
1. Remove three screws (1) and washers (2) from floor plate (3) and seat support (4).
2. Remove two screws (5), washers (6), and retaining plates (7) from seat support (4) and cab floor. Remove floor plate (3).
3. Repeat Step 1 and Step 2 for floor plate (8).



4. Remove two lock nuts (9), four washers (10), two screws (11), and support (12) from seat support (4) and hull. Discard lock nuts.
5. Remove 8 lock nuts (13), 16 washers (14), 8 screws (15), and seat support (4) from hull. Discard lock nuts.
6. Remove 18 screws (16), washers (17), and floor plate (18), floor plate (19), and floor plate (20) from cab floor.

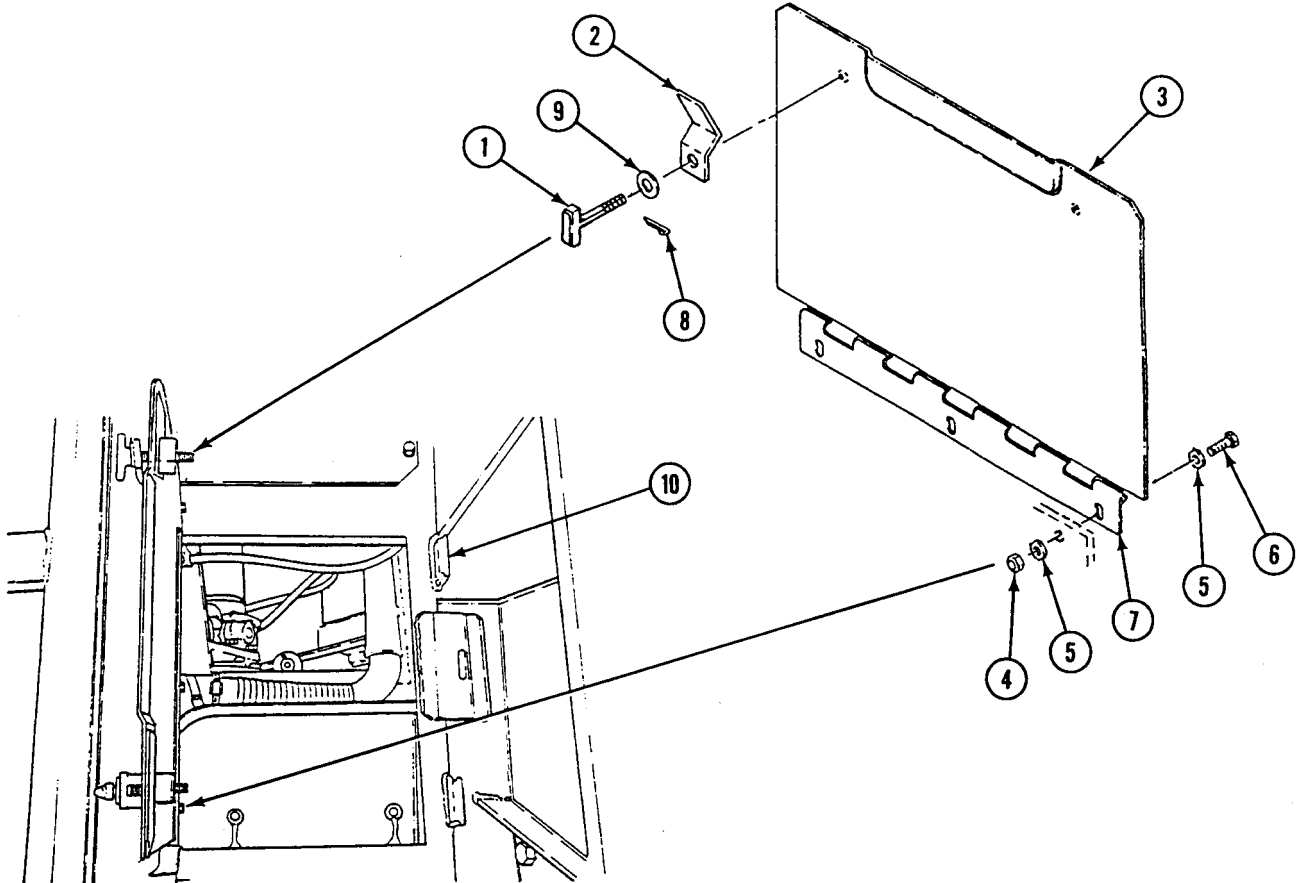


7. Loosen two tee bolts (1). Turn both latches (2) sideways and raise door (3).
8. Remove three lock nuts (4), six washers (5), and three screws (6) securing door hinge (7) to bulkhead. Remove door (3) and discard lock nuts.
9. Remove two cotter pins (8) from two tee bolts (1). Remove tee bolts with two washers (9) and latches (2) from door (3). Discard cotter pins.

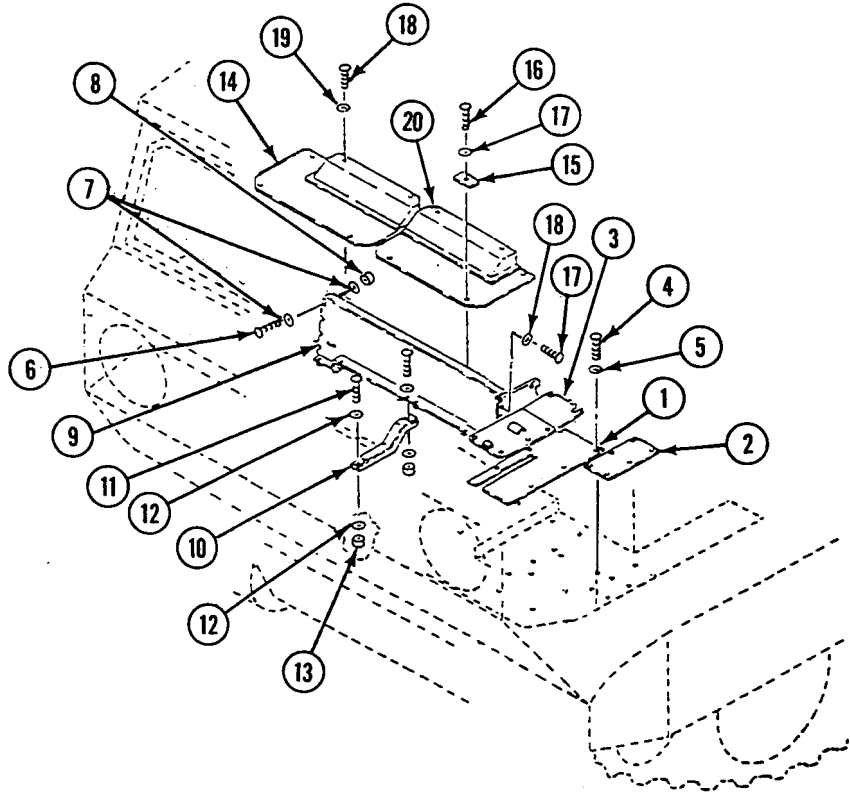


INSTALLATION

1. Install two tee bolts (1) with two washers (9) and latches (2) into door (3). Install two new cotter pins (8) into threaded ends of both tee bolts.
2. Position door (3) on cab floor. Secure door hinge (7) to bulkhead with three screws (6), six washers (5), and three new lock nuts (4).
3. Lower door (3). Turn both latches (2) under latch retainers (10) and tighten two tee bolts (1).



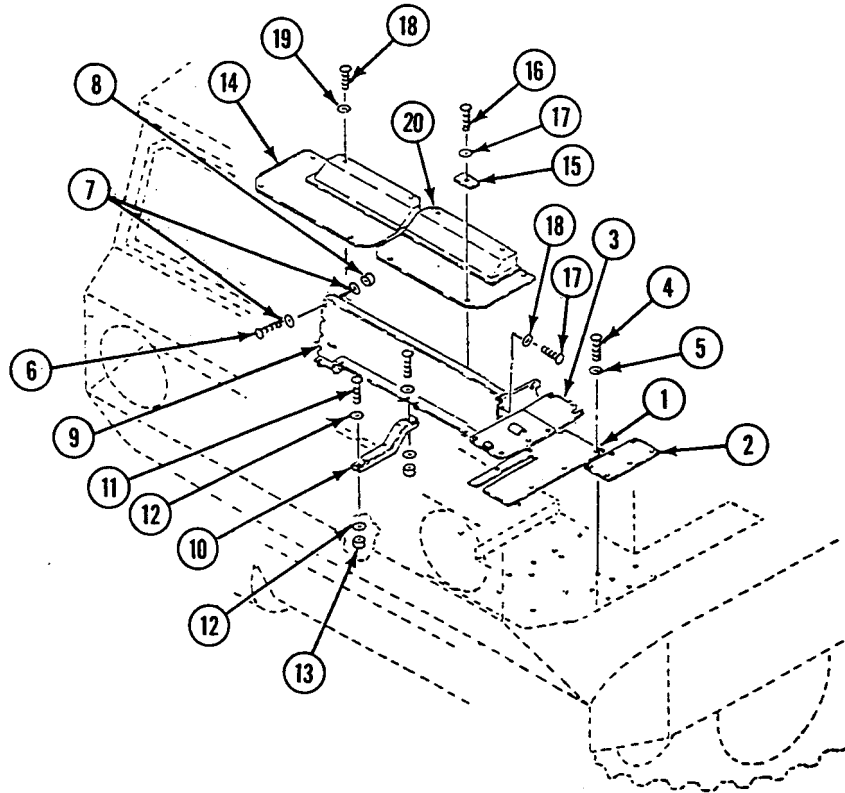
4. Install floor plate (1), floor plate (2), floor plate (3), 18 screws (4), and washers (5) on cab floor.
5. Install 8 screws (6), 16 washers (7), 8 new lock nuts (8), and seat support (9) on hull.
6. Install slotted end of support (10) on seat support (9) and hull. Install two screws (11), four washers (12), two new lock nuts (13), and support on seat support and hull.



NOTE

Both center floor plates are installed the same way.

7. Position floor plate (14) on cab floor. Install two retaining plates (15), screws (16), and washers (17) on seat support (9) and cab floor.
8. Install three screws (18) and washers (19) on floor plate (14) and seat support (9).
9. Repeat Step 7 and Step 8 for floor plate (20).



FOLLOW-THROUGH STEPS

1. Lower center seat (see your -10).

END OF TASK

REPLACE CENTER SEAT SUPPORT (M548A1)

0396 00

THIS WORK PACKAGE COVERS:

Removal (page 0396 00-2).
 Installation (page 0396 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access covers and grilles removed (WP 0390 00)
 Differential steering controls and bearing unit
 disconnected from back of center seat support
 (WP 0366 00)
 Center floor plates removed (WP 0394 00)
 Fuel cutoff control cable disconnected from back of
 center seat support (WP 0194 00)

Materials/Parts

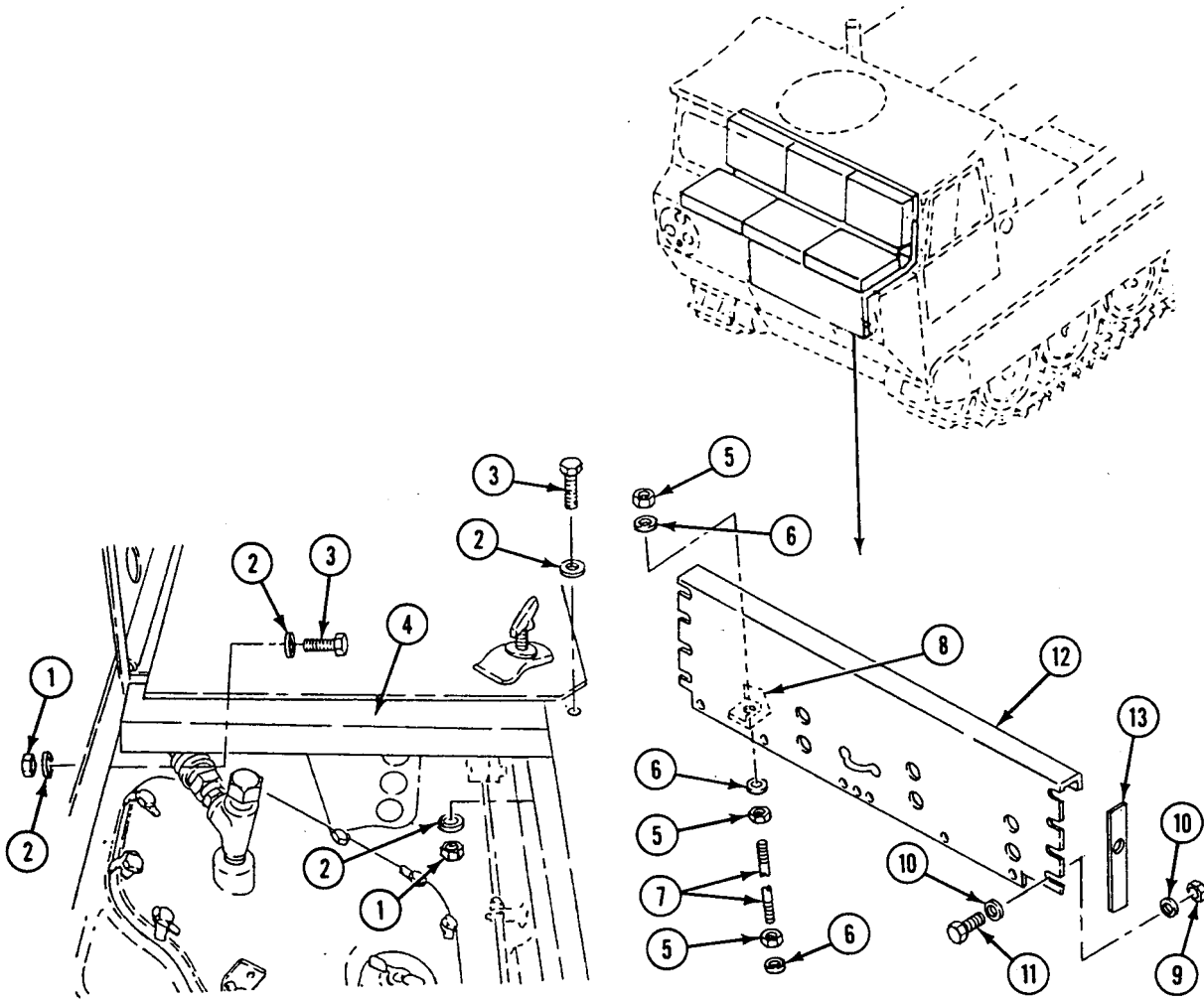
Lock nut (2)
 Lock nut
 Lock nut (8)

Personnel Required

Unit Mechanic

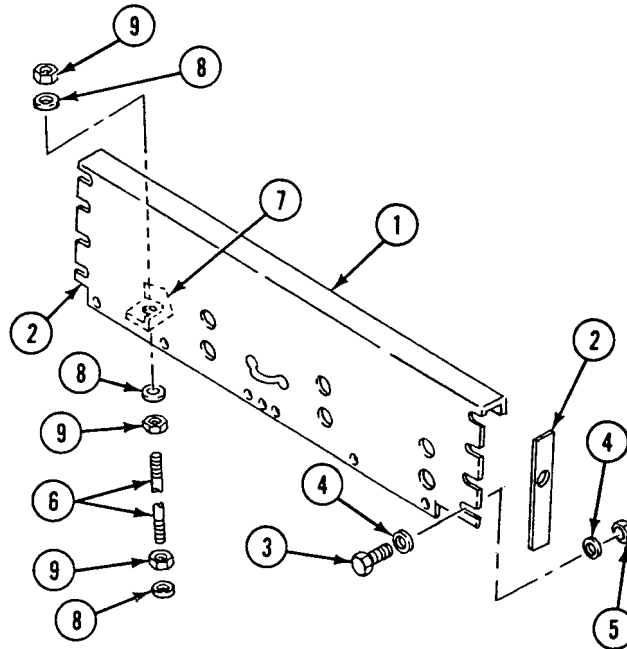
REMOVAL

1. Remove two lock nuts (1), four washers (2), two screws (3), and center floor brace (4) from hull. Discard lock nuts.
2. Remove lock nut (5), washer (6) and brace rod (7) from center seat support bracket (8). Discard lock nut.
3. Remove eight lock nuts (9), 16 washers (10), eight screws (11), and center seat support (12) from brackets (13). Discard lock nuts.

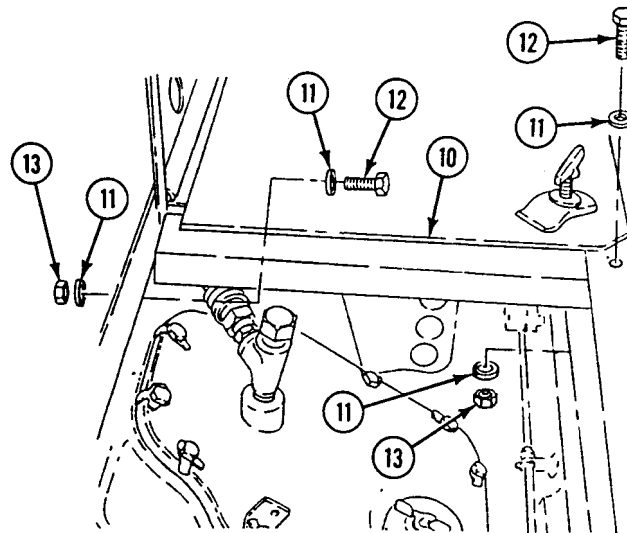


INSTALLATION

1. Align center seat support (1) on brackets (2). Secure with eight screws (3), 16 washers (4), and eight new lock nuts (5).
2. Insert brace rod (6) in center seat support bracket (7). Secure with washer (8) and new lock nut (9).



3. Position center floor brace (10) on hull. Secure with four washers (11), two screws (12), and new lock nuts (13).



FOLLOW-THROUGH STEPS

1. Connect fuel cutoff control cable to back of center seat support (WP 0194 00).
2. Install center floor plates (WP 0394 00).
3. Connect differential steering controls and bearing unit to back of center seat support (WP 0366 00).
4. Install top access covers and grilles (WP 0390 00).

END OF TASK

REPLACE DRIVER'S SEAT

0397 00

THIS WORK PACKAGE COVERS:

- Removal (page 0397 00-2).
 - Disassembly (page 0397 00-3).
 - Assembly (page 0397 00-5).
 - Installation (page 0397 00-7).
-

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

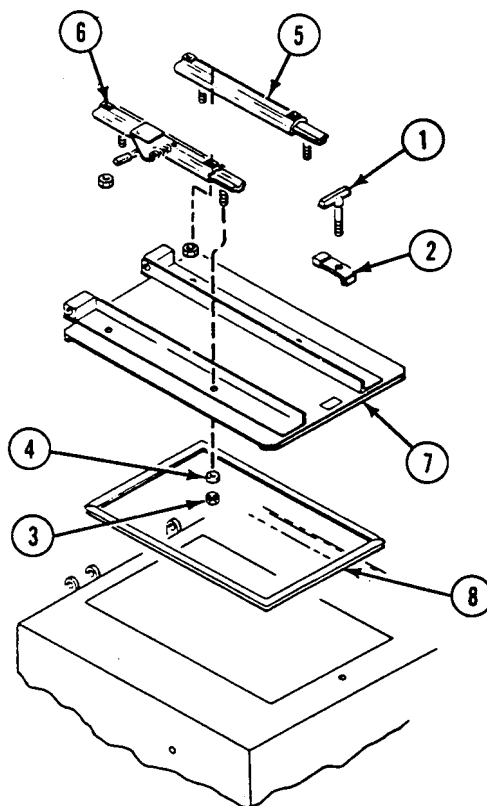
- Lock nut (4)
- Lock washer (4)

Equipment Condition

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

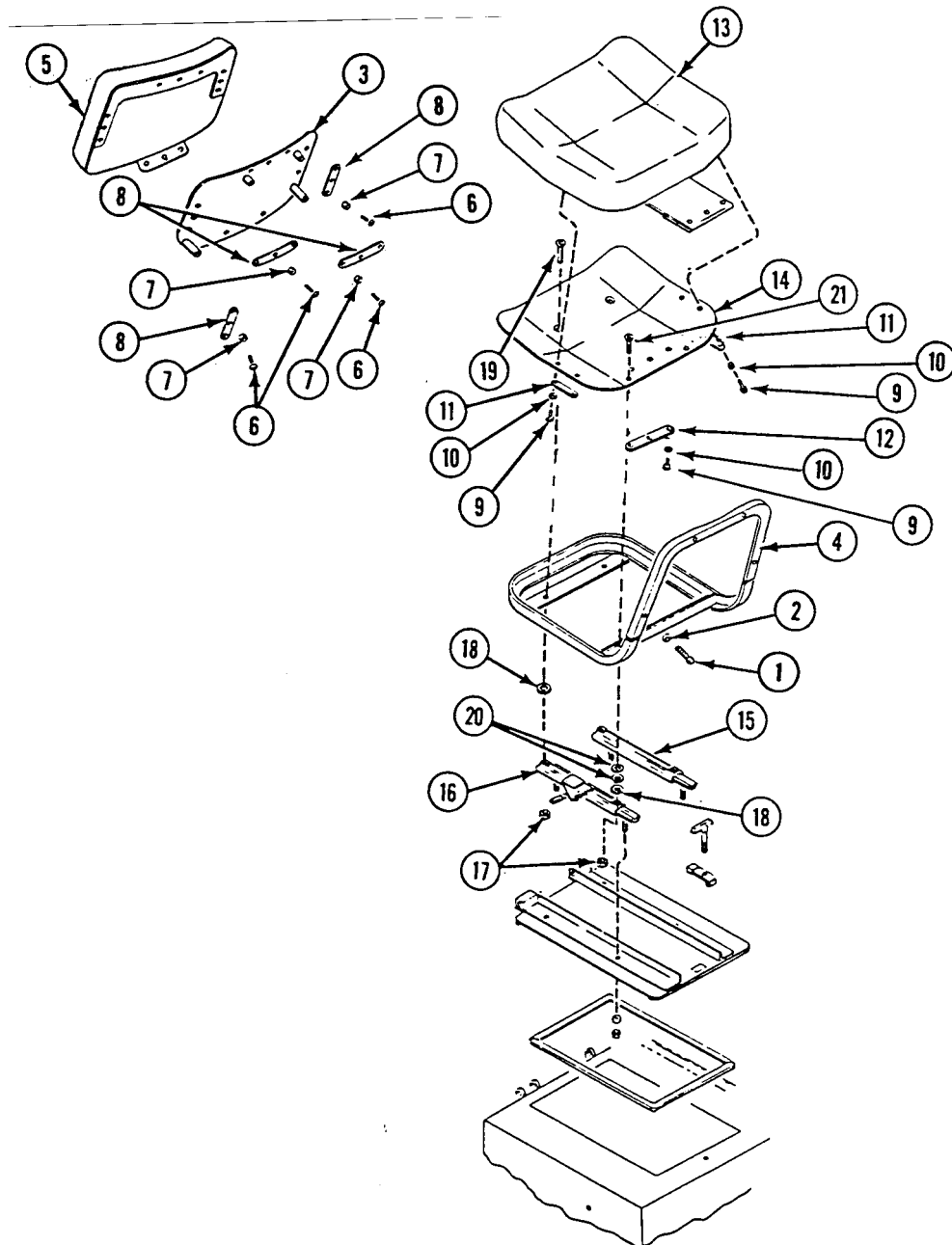
REMOVAL

1. Disengage tee handle (1) and clamp (2). Tilt seat forward.
2. Remove four nuts (3) and washers (4) that secure right track assembly (5) and left track assembly (6) to battery compartment cover (7). Remove seat.
3. Remove battery compartment seal (8) from hull. Check seal for signs of wear, brittleness, cracks, or damage. Replace seal if necessary (WP 0290 00) or (WP 0293 00).

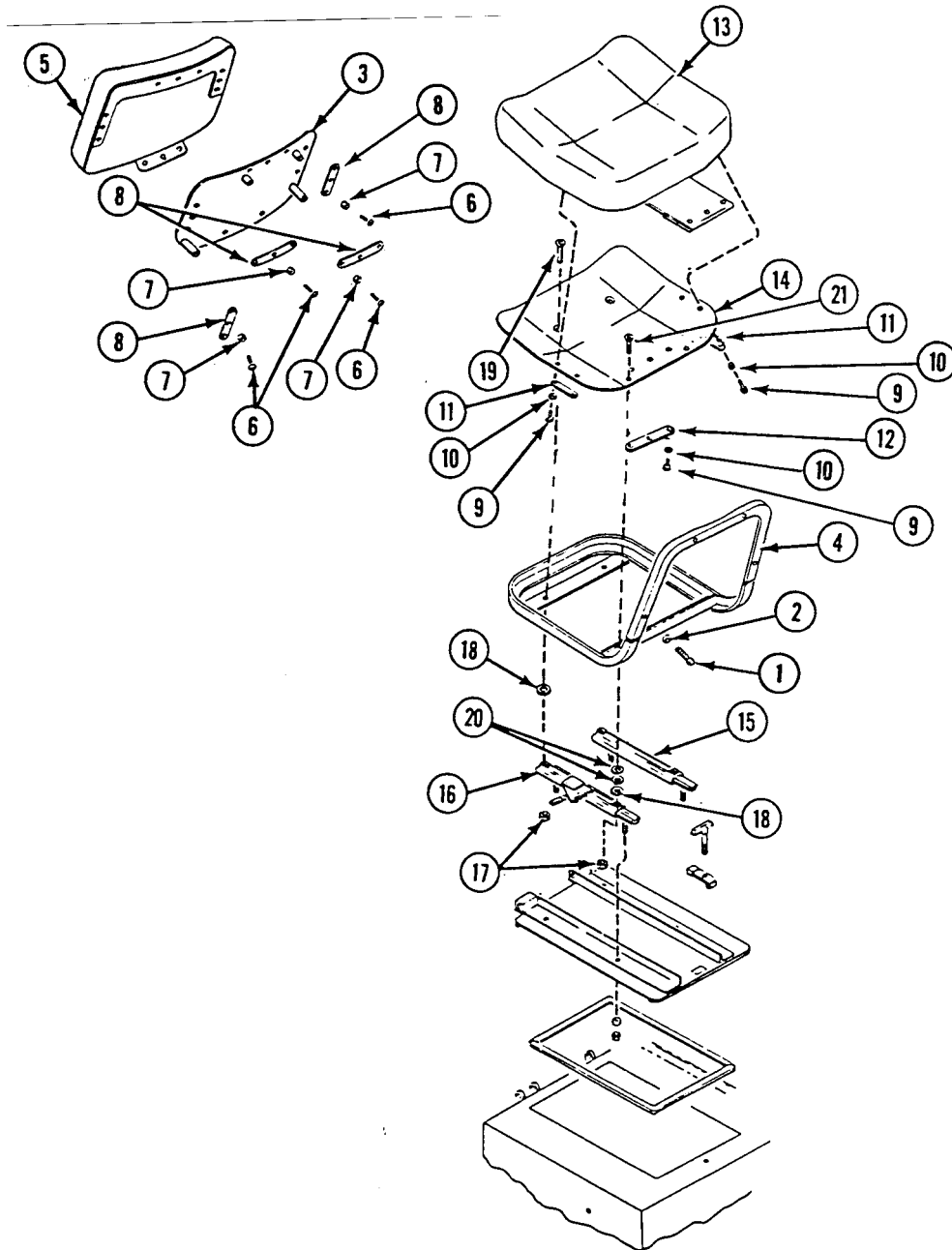


DISASSEMBLY

1. Remove four screws (1) and lock washers (2) that secure backrest support (3) to frame (4). Remove support with backrest cushion (5). Discard lock washers.
2. Remove 12 screws (6), washers (7), and 4 brackets (8) that secure backrest cushion (5) to backrest support (3). Remove cushion.
3. Remove seven screws (9), washers (10), two side brackets (11), and one rear bracket (12) that secure cushion (13) to seat plate (14). Remove cushion.

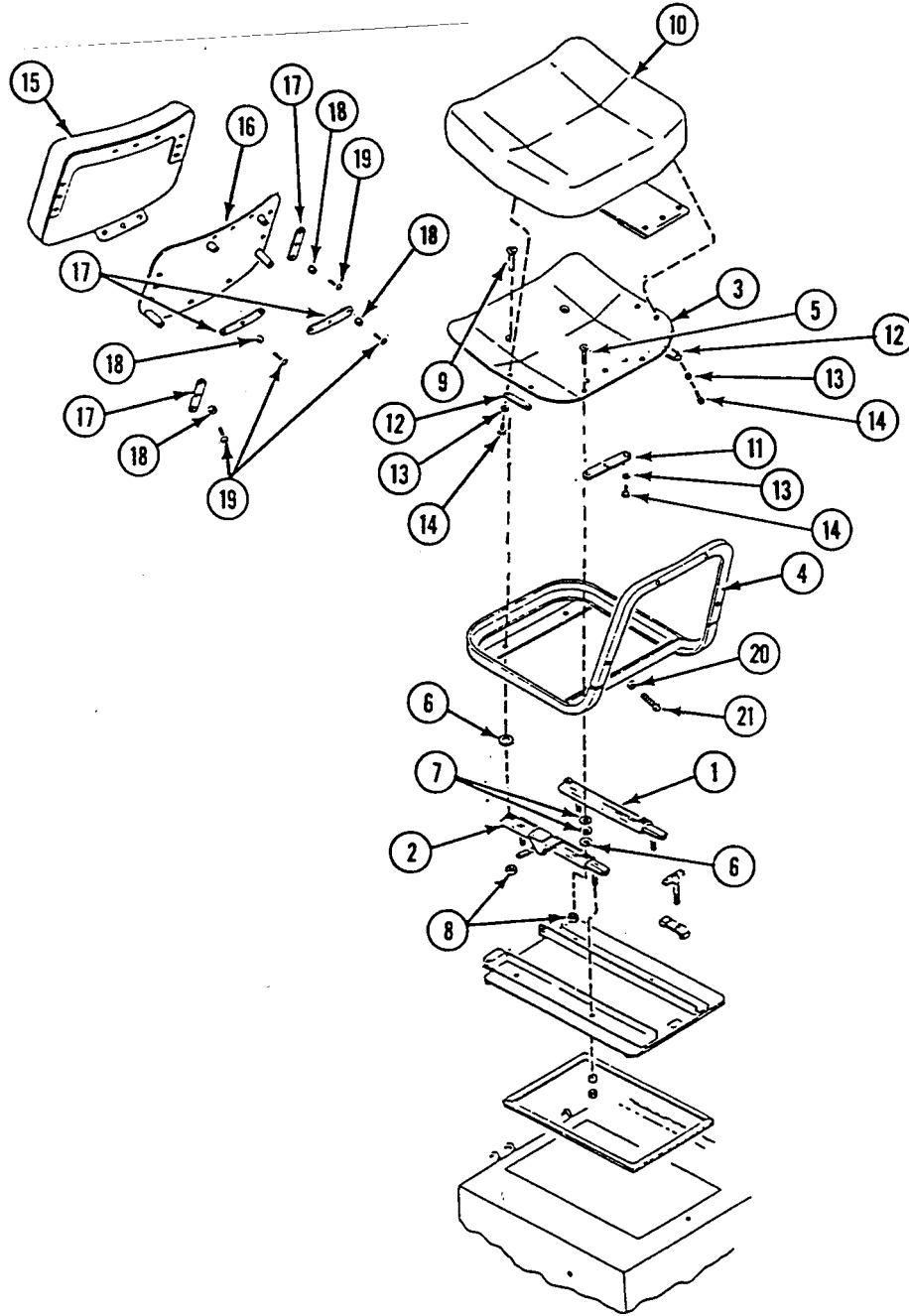


4. Slide lower portions of right track assembly (15) and left track assembly (16) to rear for access to two front lock nuts (17). Remove two lock nuts, spacers (18), and screws (19). Discard lock nuts.
5. Slide lower portions of right track assembly (15) and left track assembly (16) to front for access to two rear lock nuts (17). Remove two lock nuts, spacers (18), four washers (20), and two screws (21). Remove track assemblies and seat plate (14) from frame (4). Discard lock nuts.

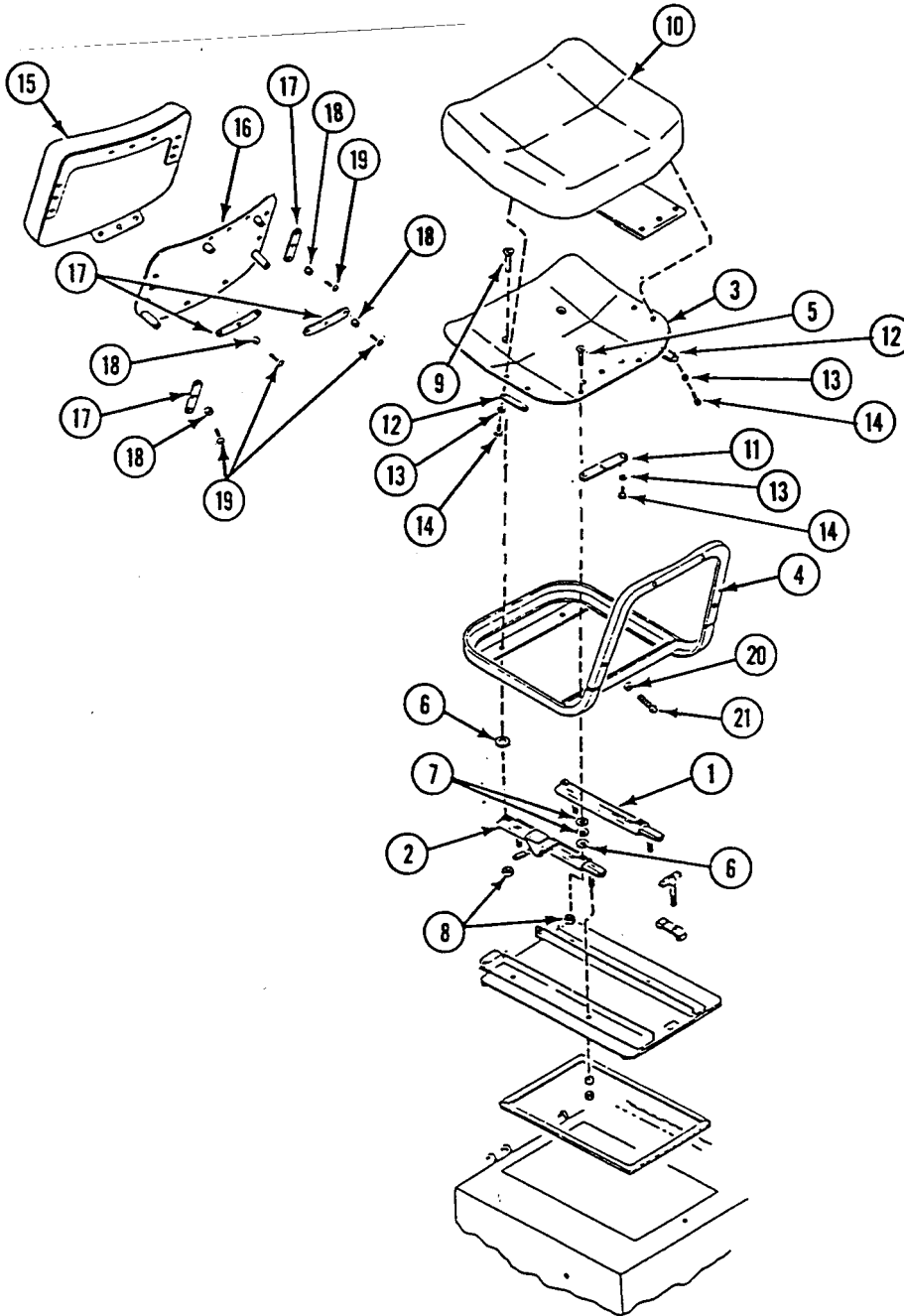


ASSEMBLY

1. Slide lower portion of right track assembly (1) and left track assembly (2) to front. Place track assemblies and seat plate (3) on frame (4). Secure with two rear screws (5), spacers (6), four washers (7), and two new lock nuts (8).
2. Slide lower portion of right track assembly (1) and left track assembly (2) to rear. Secure track assemblies to seat plate (3) and frame (4) with two front screws (9), spacers (6), and new lock nuts (8).

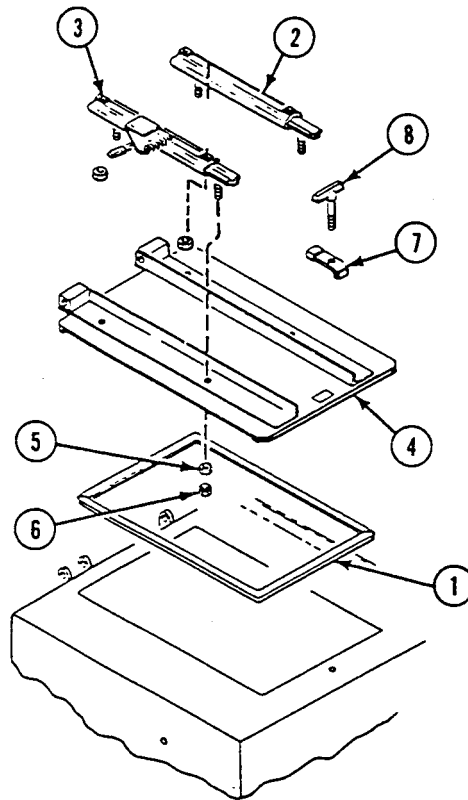


3. Place cushion (10) on seat plate (3). Secure with rear bracket (11), two side brackets (12), seven washers (13), and screws (14).
4. Place backrest cushion (15) on backrest support (16). Secure with 4 brackets (17), 12 washers (18), and screws (19).
5. Place backrest support (16) with backrest cushion (15) on frame (4). Secure with four new lock washers (20) and screws (21).



INSTALLATION

1. If battery compartment seal (1) is replaced, see (WP 0290 00) or (WP 0293 00).
2. Place right left track assembly (2) and left track assembly (3) on battery compartment cover (4). Secure with four washers (5) and nuts (6).
3. Lower seat. Secure with clamp (7) and tee handle (8).

**END OF TASK**

REPLACE CAB PERSONNEL SEATS

0398 00

THIS WORK PACKAGE COVERS:

Removal (page 0398 00-2).
 Installation (page 0398 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
 Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Adhesive (WP 0542 00, Item 2)
 Cleaning compound (WP 0542 00, Item 9)
 Lock nut (6)
 Lock nut (6) (M548A3)
 Lock nut (7)
 Lock nut (8)
 Lock nut (11) (M548A3)

Equipment Condition

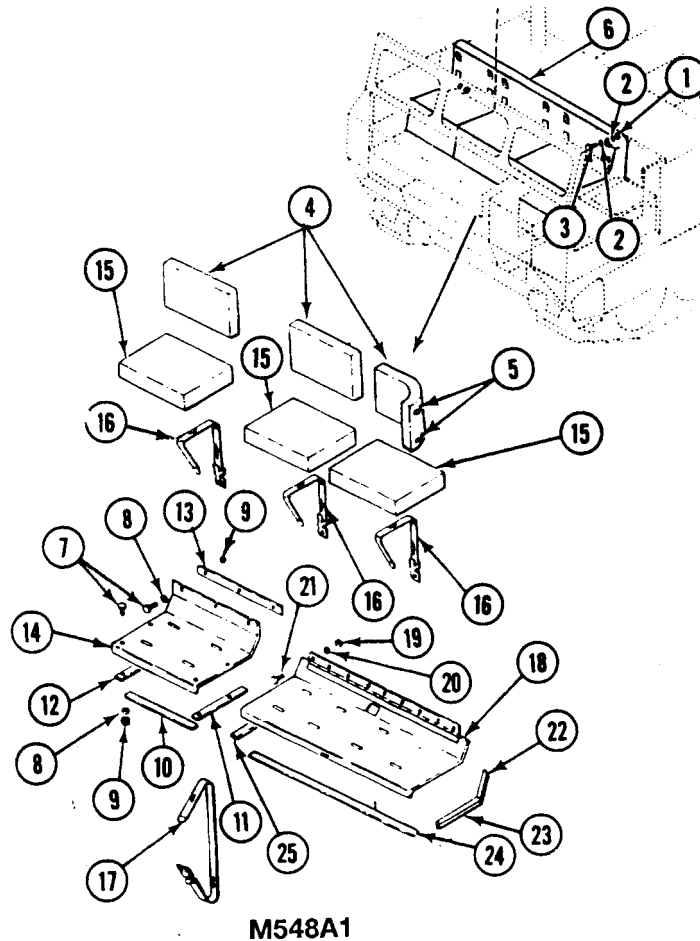
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Left grille and access cover removed (WP 0390 00) or
 see your -10

REMOVAL

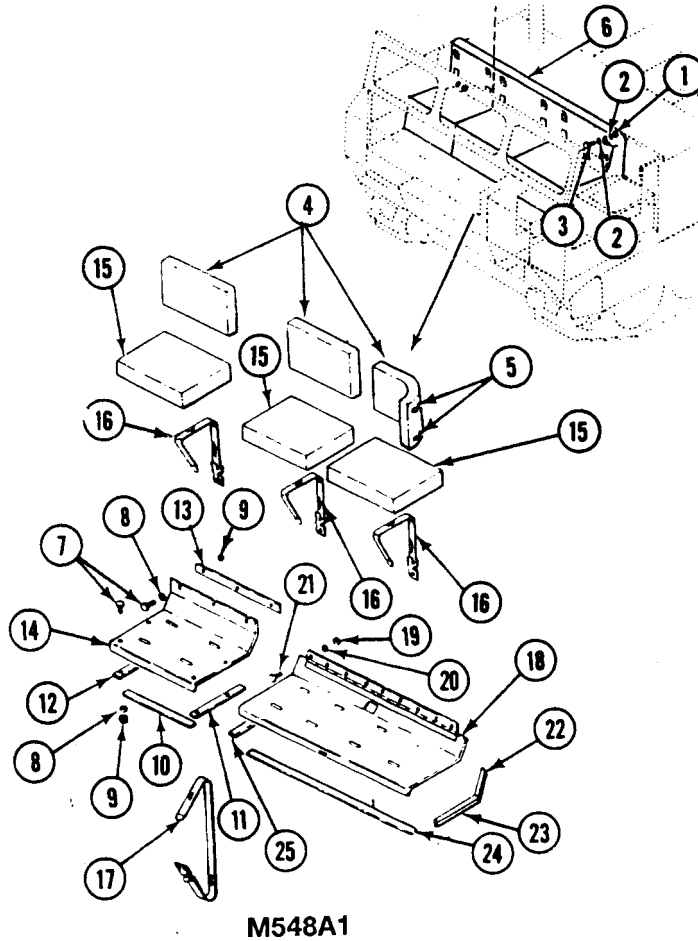
NOTE

For M548A1, do Removal Procedure Step 1, Step 2, Step 3, and Installation Procedure Step 3, Step 4, and Step 5. For M548A3, do Removal Procedure Step 1, Step 4, Step 5, and Installation Procedure Step 1, Step 2, Step 3, and Step 5.

1. Remove backrest cushions.
 - a. Remove 6 lock nuts (1), 12 washers (2), and 6 screws (3) that secure backrest cushion (4) to carrier. Discard lock nuts.
 - b. Raise three backrest cushions (4) until cushion straps (5) clear retainers on backrest panel (6). Remove cushions.
2. Remove right seat panel with cushion.
 - a. Remove seven screws (7), washers (8), lock nuts (9), gasket (10), seal (11), seal (12), and seal (13). Remove right seat panel (14) with cushion (15) from carrier. Discard lock nuts.
 - b. Remove six seat cushion straps (16) and three seat cushions (15) from carrier.



3. Remove center seat panel.
 - a. Unfasten center seat strap (17). Raise center seat panel (18).
 - b. Remove 8 lock nuts (19), 16 washers (20), and 8 screws (21). Remove center seat panel (18), seal (22), seal (23), rubber strip (24), and rubber strip (25) from carrier. Discard lock nuts. Go to Step 3.

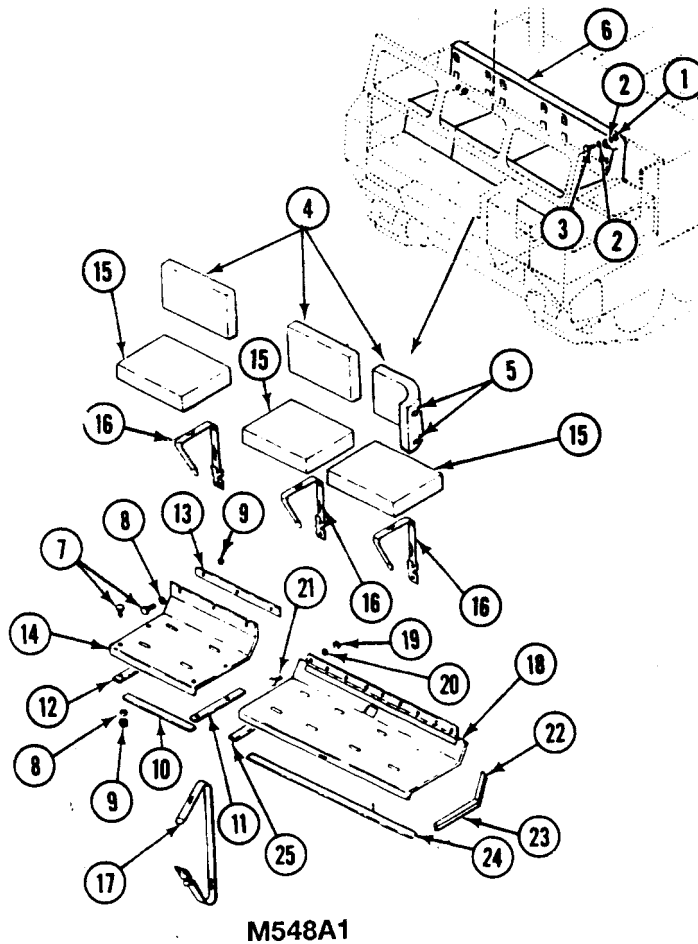


4. Remove lower seat cushions.
 - a. Remove strap (1) securing crew seat panel (2).
 - b. Raise crew seat panel (2) and remove six straps (3) and three seat cushions (4).

NOTE

Do Step 5b only if seals or gaskets are damaged.

5. Remove crew seat panel.
 - a. Remove 11 screws (5), 22 washers (6) and 11 lock nuts (7). Remove crew seat panel (2) from carrier. Have helper assist. Discard lock nuts.
 - b. Remove seal (8), seal (9), gasket (10), gasket (11), gasket (12), and gasket (13) from crew seat panel (2).



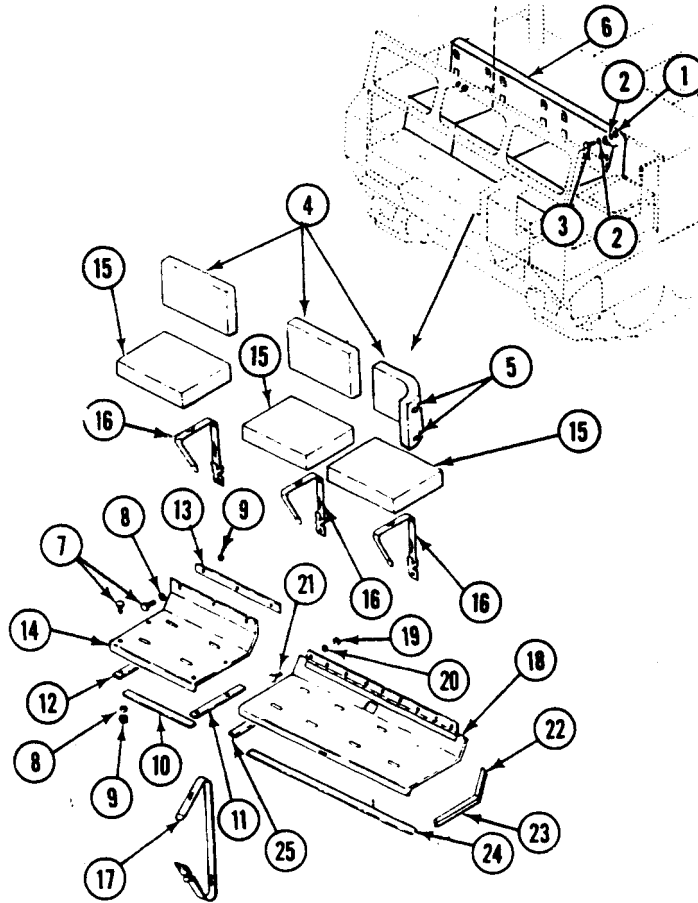
INSTALLATION

NOTE

Do Step 1a and Step 1b only if seals or gaskets were removed.

1. Install crew seat panel.
 - a. Clean mating surfaces with cleaning compound.
 - b. Apply a thin coat of adhesive to mating surfaces. Allow to dry until tacky before installing. Install seal (8), seal (9), gasket (10), gasket (11), gasket (12), and gasket (13) on crew seat panel (2).
 - c. Install crew seat panel (2) in carrier with 11 screws (5), 22 washers (6), and 11 new lock nuts (7). Have helper assist.

2. Install lower seat cushions.
 - a. Raise crew seat panel (2) and install six straps (3) and three seat cushions (4).
 - b. Lower crew seat panel (2) and install strap (1) securing crew seat panel. Go to Step 3.

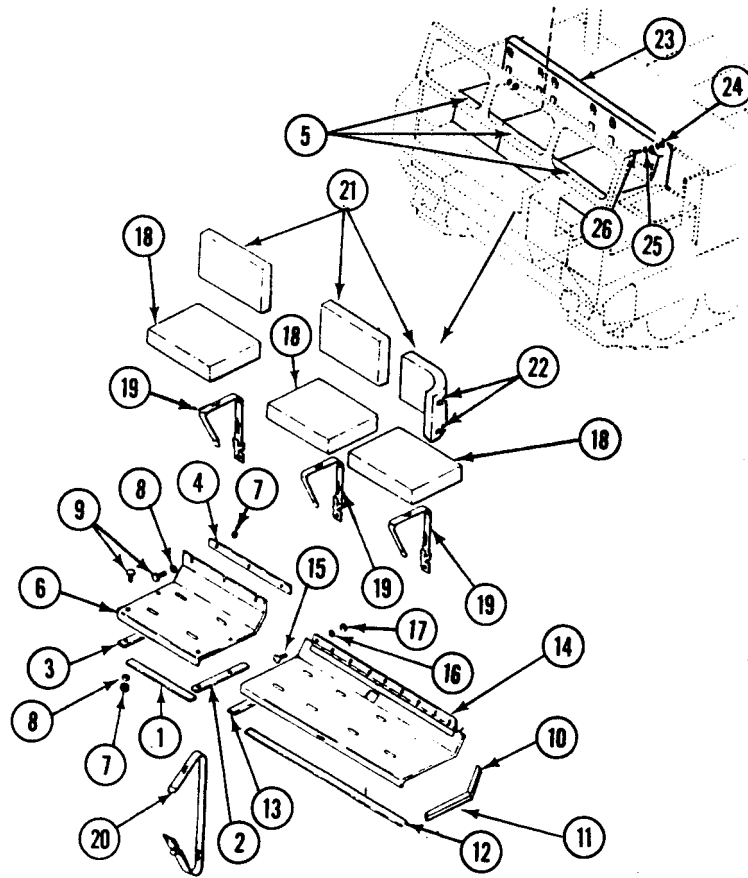


M548A1

NOTE

To install right seat panel, do Steps 3a - 3c. To install center seat panel, do Step 3a, Step 3d, and Step 3e.

3. Install right and center seat panels.
 - a. Clean mating surfaces with cleaning compound.
 - b. Apply light coat of adhesive to mating surfaces. Allow to dry until tacky. Press gasket (1) and seal (2), seal (3), and seal (4) in place on seat support (5).
 - c. Place right seat panel (6) on seat support (5). Secure to carrier with seven new lock nuts (7), washers, (8), and screws (9).
 - d. Apply light coat of adhesive to mating surfaces. Allow to dry until tacky. Press seal (10), seal (11), rubber strip (12), and rubber strip (13) firmly in place on seat support (5).
 - e. Place center seat panel (14) on seat support (5). Secure to carrier with 8 screws (15), 16 washers (16), and 8 new lock nuts (17).
4. Install seat cushions.
 - a. Place seat cushions (18) on right seat panel (6) and on center seat panel (14). Secure with six straps (19).
 - b. Close center seat panel (14). Secure with center seat strap (20).
5. Install backrest cushions.
 - a. Lower backrest cushions (21) until cushion straps (22) fit on retainers on backrest panel (23).
 - b. Install 6 new lock nuts (24), 12 washers (25), and 6 screws (26) to secure backrest cushions (21) to carrier.



M548A1

FOLLOW-THROUGH STEPS

1. Install left grille and access cover (WP 0390 00) or see your -10).

END OF TASK

REPLACE SAFETY BELTS

0399 00

THIS WORK PACKAGE COVERS:

Removal (page 0399 00-2).
Installation (page 0399 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Materials/Parts

Lock nut (5)

Engine stopped (see your -10)

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

Driver's seat raised (see your -10).

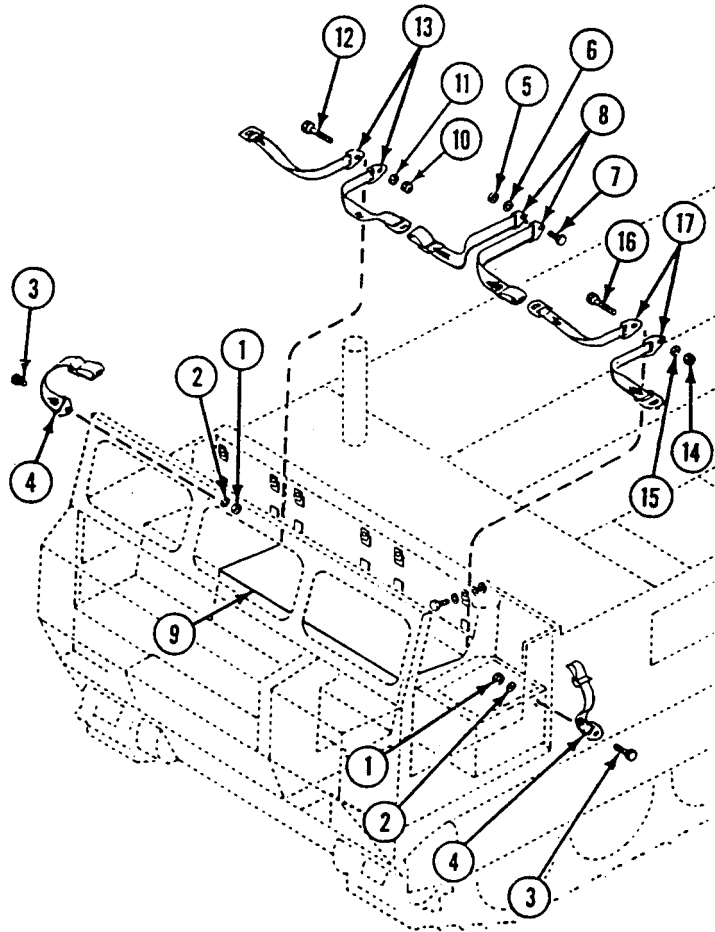
Center seat raised (see your -10).

REMOVAL

NOTE

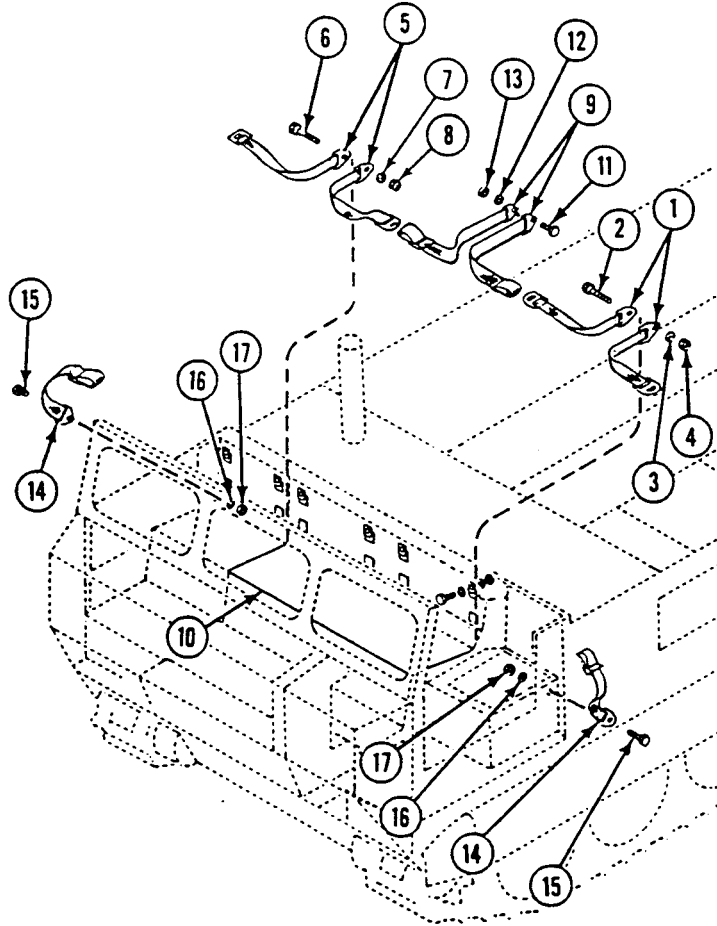
Except for access, safety belts are removed and installed the same way in the M548A1 and M548A3. In M548A3, the center seat does not need to be opened to remove safety belts.

1. Remove two lock nuts (1), washer (2), and screws (3). Remove right and left safety belts (4). Discard lock nut.
2. Remove lock nut (5), washer (6), and screw (7) that secure two center safety belts (8) to center seat panel (9). Remove belts. Discard lock nut.
3. Remove lock nut (10), washer (11), and screw (12) that secure two right safety belts (13) between center and right personnel seats. Remove belts. Discard lock nut.
4. Remove lock nut (14), washer (15), and screw (16) that secure two left safety belts (17) to battery box bulkhead. Remove belts. Discard lock nut.



INSTALLATION

1. Place two left safety belts (1) on battery box bulkhead. Secure with screw (2), washer (3), and new lock nut (4).
2. Place two right safety belts (5) between center and right personnel seats. Secure with screw (6), washer (7), and new lock nut (8).
3. Place two center safety belts (9) on center seat panel (10). Secure with screw (11), washer (12), and new lock nut (13).
4. Place left and right safety belts (14) in carrier. Secure with two screws (15), washers (16), and new lock nuts (17).



FOLLOW-THROUGH STEPS

1. Lower center seat (see your -10).
2. Lower driver's seat (see your -10).

END OF TASK

REMOVE/INSTALL RIGHT SEAT (M548A1)

0400 00

THIS WORK PACKAGE COVERS:

Removal (page 0400 00-1).
 Installation (page 0400 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

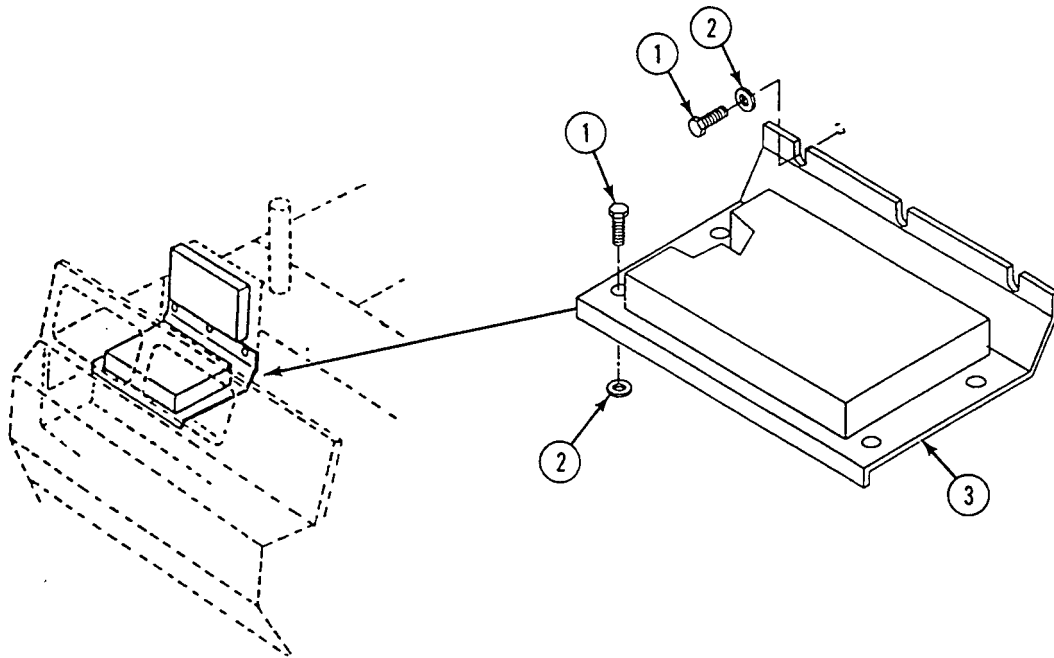
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

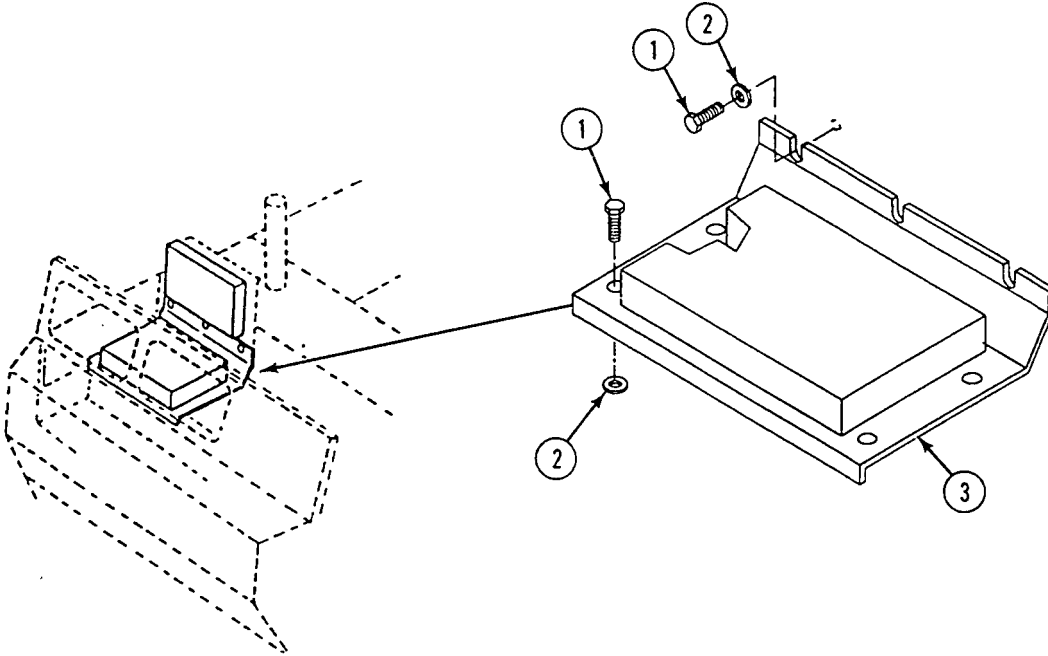
REMOVAL

1. Remove seven screws (1), washers (2), and right seat (3) from carrier.



INSTALLATION

1. Install right seat (3) in carrier with seven washers (2) and screws (1).



END OF TASK

**REPLACE M13 DECONTAMINATION BRUSH GUARD AND BACKING
PLATE**

0401 00

THIS WORK PACKAGE COVERS:

- Removal (page 0401 00-2).
- Cleaning (page 0401 00-3).
- Installation (page 0401 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Socket Wrench Set (WP 0541 00, Item 64)
- Torque Wrench (WP 0541 00, Item 69)

References

See your -10
TM 3-4230-214-12&P

Materials/Parts

- Adhesive (WP 0542 00, Item 2)
- Sealing compound (WP 0542 00, Item 35)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
M13 portable decontamination unit removed
(TM 3-4230-214-12&P)

REPLACE M13 DECONTAMINATION BRUSH GUARD AND BACKING PLATE —
Continued

0401 00

REMOVAL

WARNING

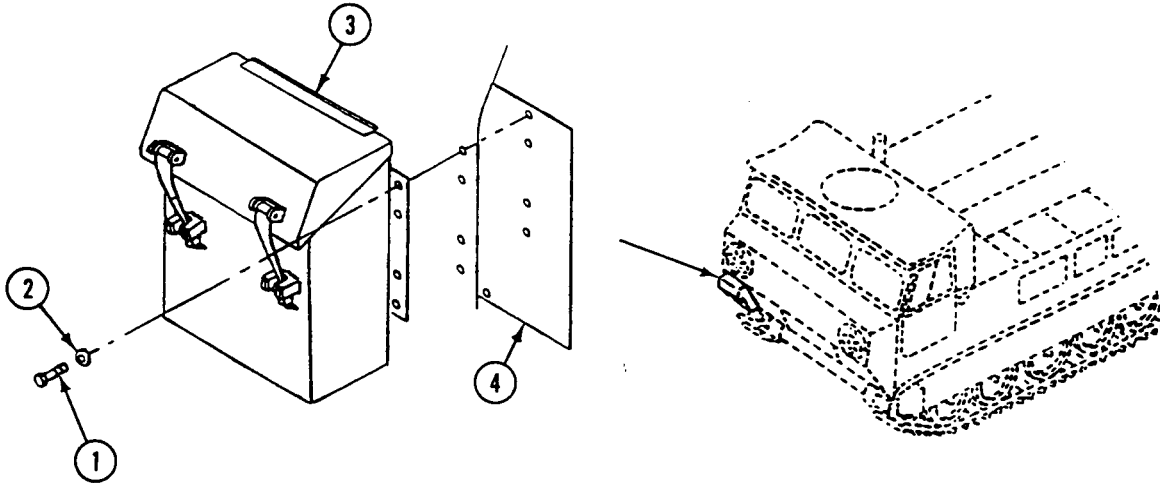


Use extreme caution when working around the M13 Portable Decontamination Kit which contains chemical agent DS2, a combustible solution which can cause severe chemical burns. Wear protective clothing at all times when handling DS2.

NOTE

M13 decontamination brush guard and backing plate are removed and installed the same way in M548A1 and M548A3. M548A1 brush guard and backing plate shown.

1. Remove 10 screws (1) and washers (2) from guard (3) and backing plate (4). Have helper hold guard.
2. Remove guard (3) from carrier. Have helper assist.
3. (H) Remove backing plate (4) from carrier.

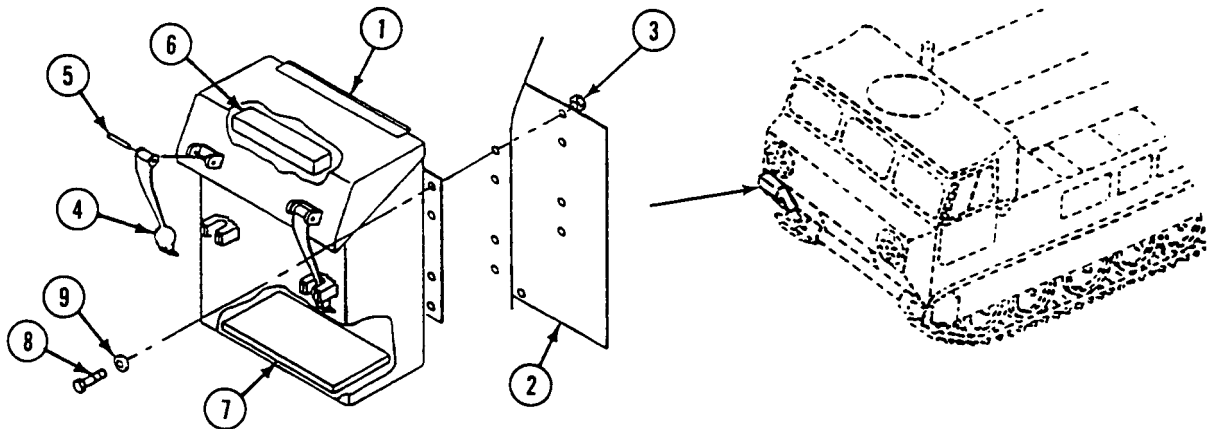


REPLACE M13 DECONTAMINATION BRUSH GUARD AND BACKING PLATE —
Continued

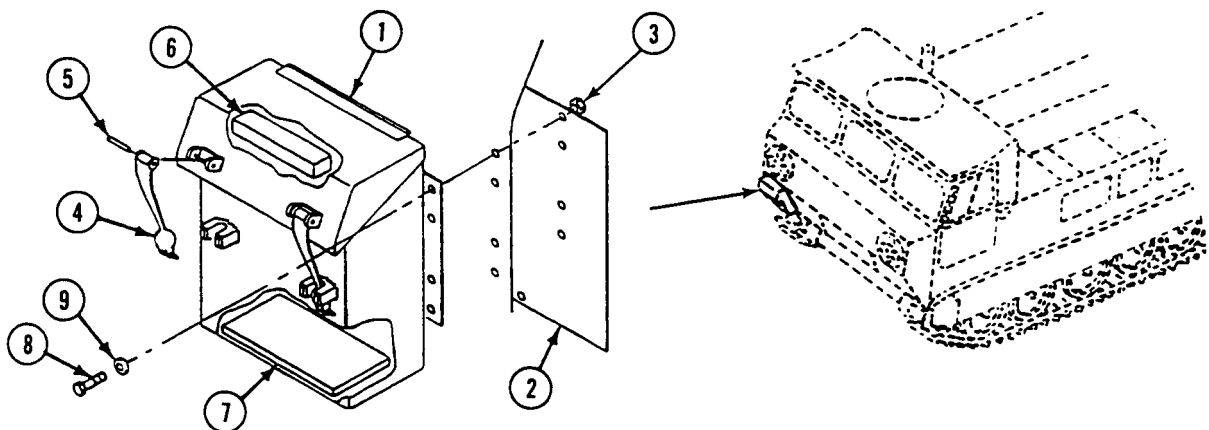
0401 00

CLEANING

1. Use a wire brush to remove any corrosion and sealing compound around mounting holes.
2. Apply sealing compound around mounting holes before installing guard (1).
3. Inspect backing plate (2) for damaged or stripped press nuts (3). Replace as required.
4. Inspect cords (4) for damage. Remove spring pins (5) and elastic cords (4) from guard (1) as required.
5. Inspect upper pad (6) and lower pad (7) for damage. To replace pads, clean mounting surface and apply adhesive as required.

**INSTALLATION**

1. (H) Install backing plate (2) against inside of carrier hull.
2. Install guard (1) against front of carrier. Have helper assist.
3. Secure backing plate (2) and guard (1) on carrier with 10 screws (8) and washers (9). Have helper assist.
4. Torque screws (8) to 36-38 lb-ft (51-52 N•m).

**FOLLOW-THROUGH STEPS**

1. Install M13 portable decontamination unit (TM 3-4230-214-12&P).

END OF TASK

REPLACE CARGO DOOR

0402 00

THIS WORK PACKAGE COVERS:

- Removal (page 0402 00-2).
- Disassembly (page 0402 00-3).
- Assembly (page 0402 00-5).
- Installation (page 0402 00-7).
- Adjustment (page 0402 00-8).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
Suitable Lifting Device

References

See your -10

Materials/Parts

Cotter pin (4)
Grooved pin
Key washer
Lock washer (8)
Spacer plate (as needed)

Equipment Condition

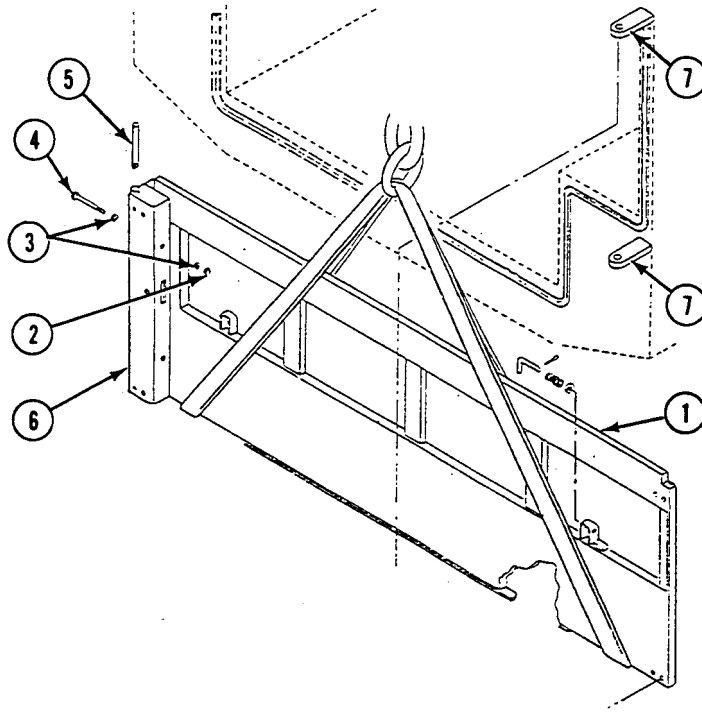
Engine stopped (see your -10)
Carrier blocked (see your -10)
Cargo door opened (see your -10)

REMOVAL

NOTE

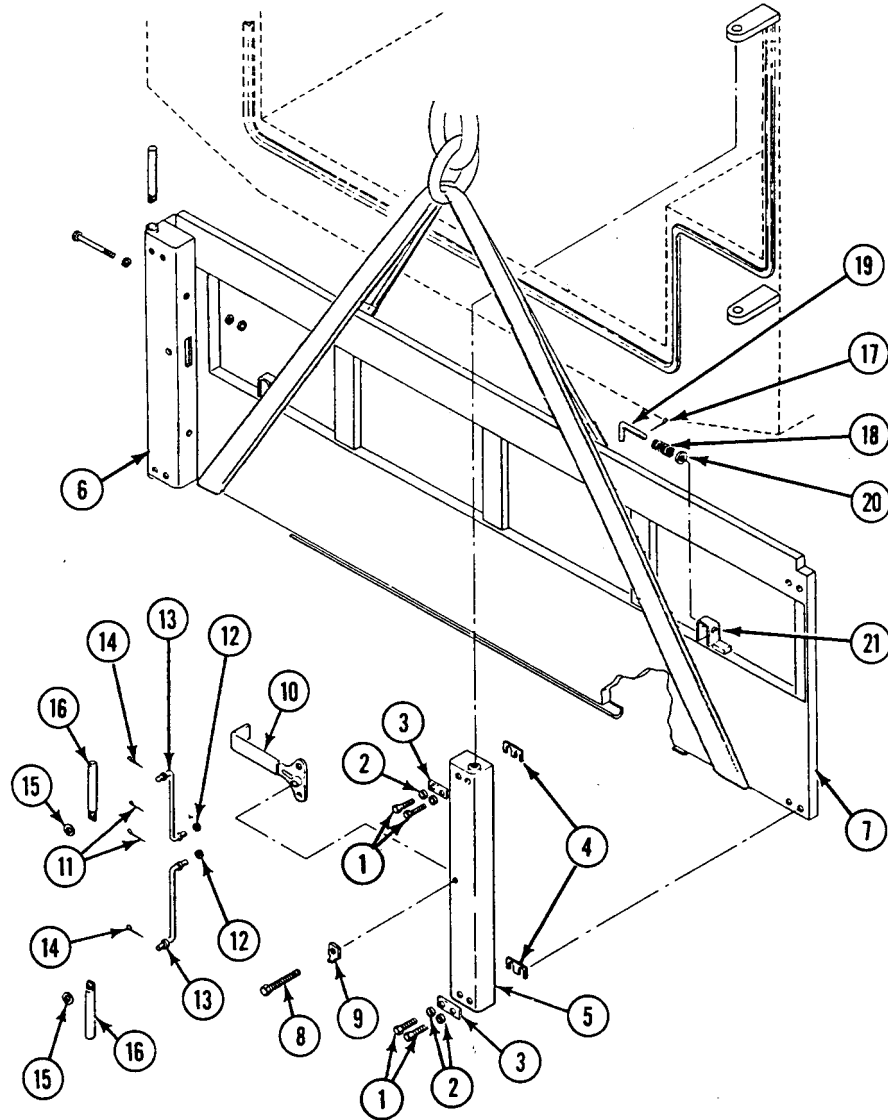
Cargo door is heavy and awkward. Use helper to remove cargo door.

1. Attach suitable lifting device to support weight of cargo door (1).
2. Remove two nuts (2), four washers (3), and two screws (4) that secure top and bottom hinge pins (5) in left control bracket (6). Remove two hinge pins. Remove cargo door (1) from carrier and two bottom hull catches (7) (right side only).

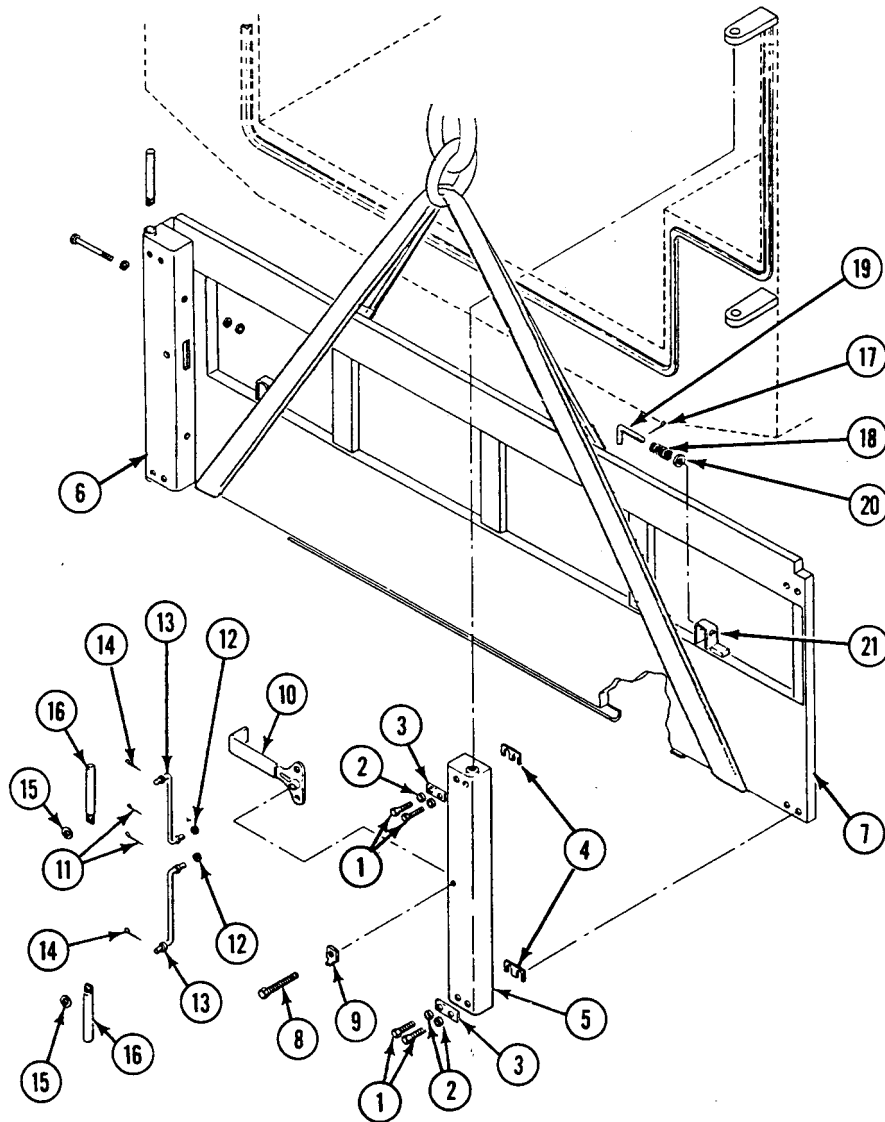


DISASSEMBLY

1. Remove eight screws (1), lock washers (2), four mounting plates (3), and all spacer plates (4) that secure right control bracket (5) or left control bracket (6) to cargo door (7). Discard lock washers.
2. Remove screw (8) and key washer (9) that secures cargo door handle (10) to right control bracket (5). Discard key washer.
3. Remove two cotter pins (11) and washers (12) that secure two control links (13) to cargo door handle (10). Remove handle from right control bracket (5). Discard cotter pins.



4. Remove two cotter pins (14) and washers (15) that secure two handle lock pins (16) to control links (13). Remove links and lock pins. Discard cotter pins.
5. Remove grooved pin (17) that secures spring (18) on handle latch (19). Remove latch, washer (20), and spring from bracket (21). Discard grooved pin.

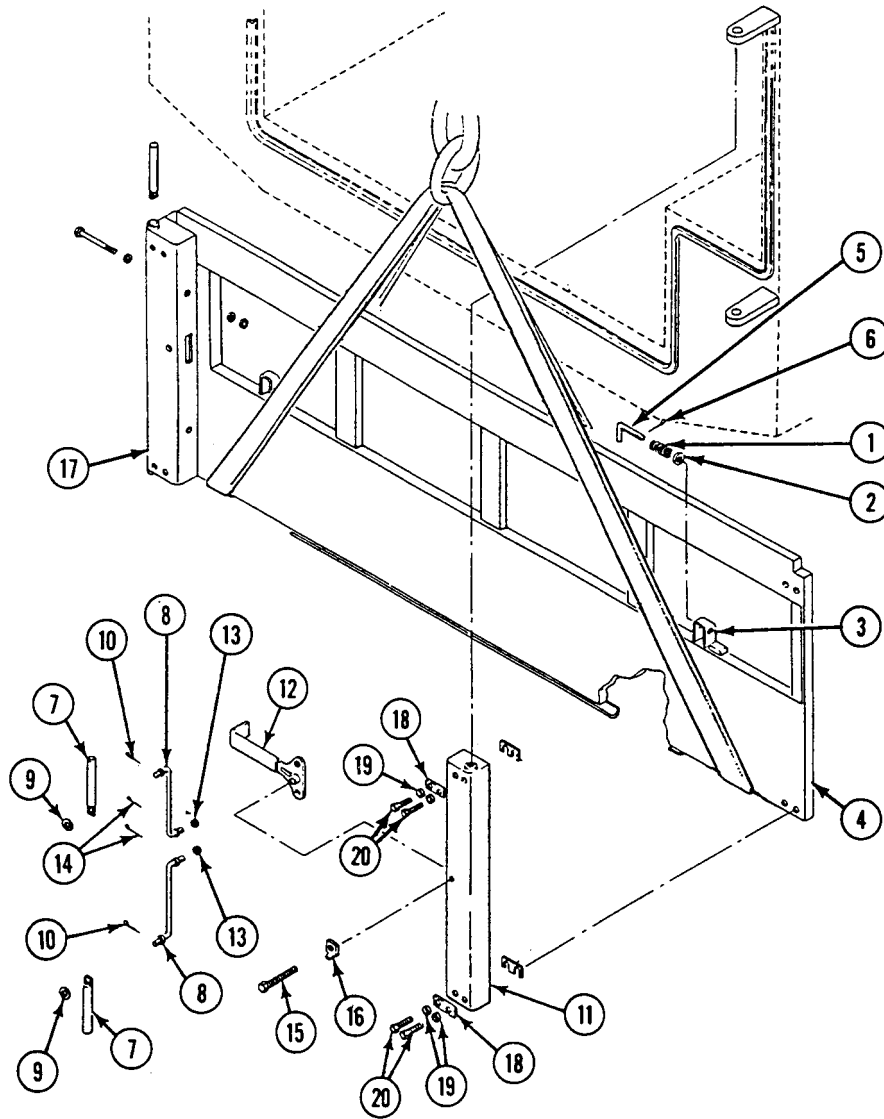


ASSEMBLY

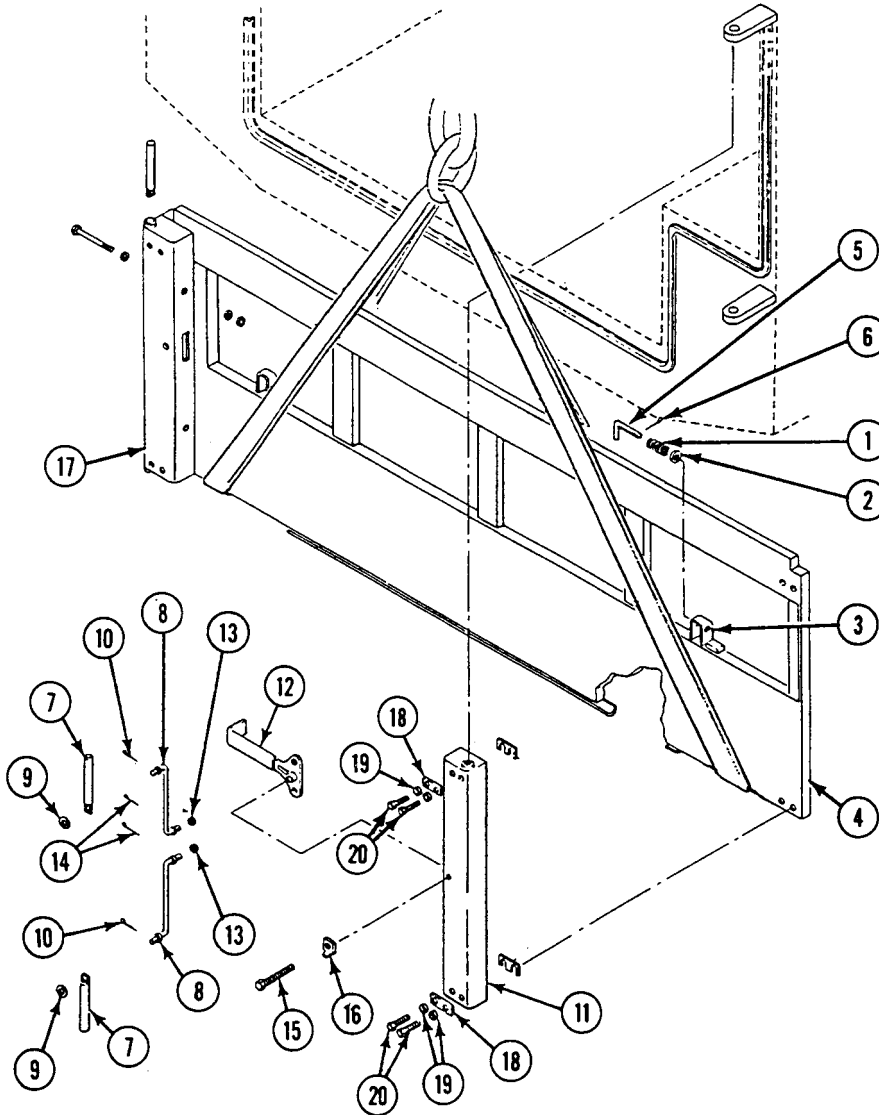
NOTE

To prevent tip of handle latch (5) from pulling through bracket when spring (1) is fully compressed, install washers (2), as needed behind spring and cotter pin (6).

1. Install spring (1) and washer (2) in bracket (3) on cargo door (4).
2. Install handle latch (5) in bracket (3) on cargo door (4). Secure washer (2) and spring (1) to latch with new cotter pin (6).
3. Install two handle lock pins (7) on two control links (8). Secure pins to links with two washers (9) and new cotter pins (10).

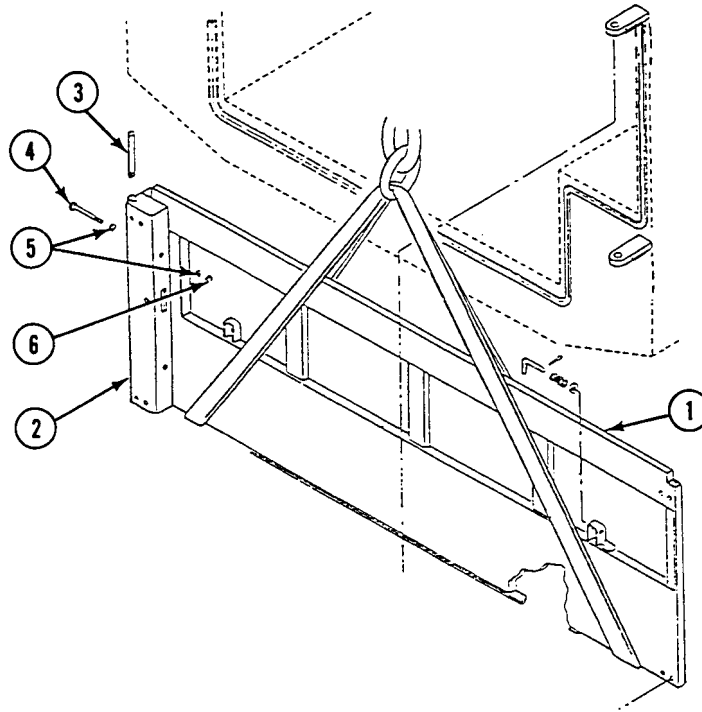


4. Install two control links (8) assembled with handle lock pins (7) in right control bracket (11).
5. Install cargo door handle (12) on two control links (8). Secure with two washers (13) and new cotter pins (14).
6. Secure cargo door handle (12) in right control bracket (11) with screw (15) and new key washer (16). Bend tabs of key washer to secure screw.
7. Place left control bracket (17) and right control bracket (11), with controls, on cargo door (4). Secure brackets to door with four mounting plates (18), eight new lock washers (19), and screws (20).



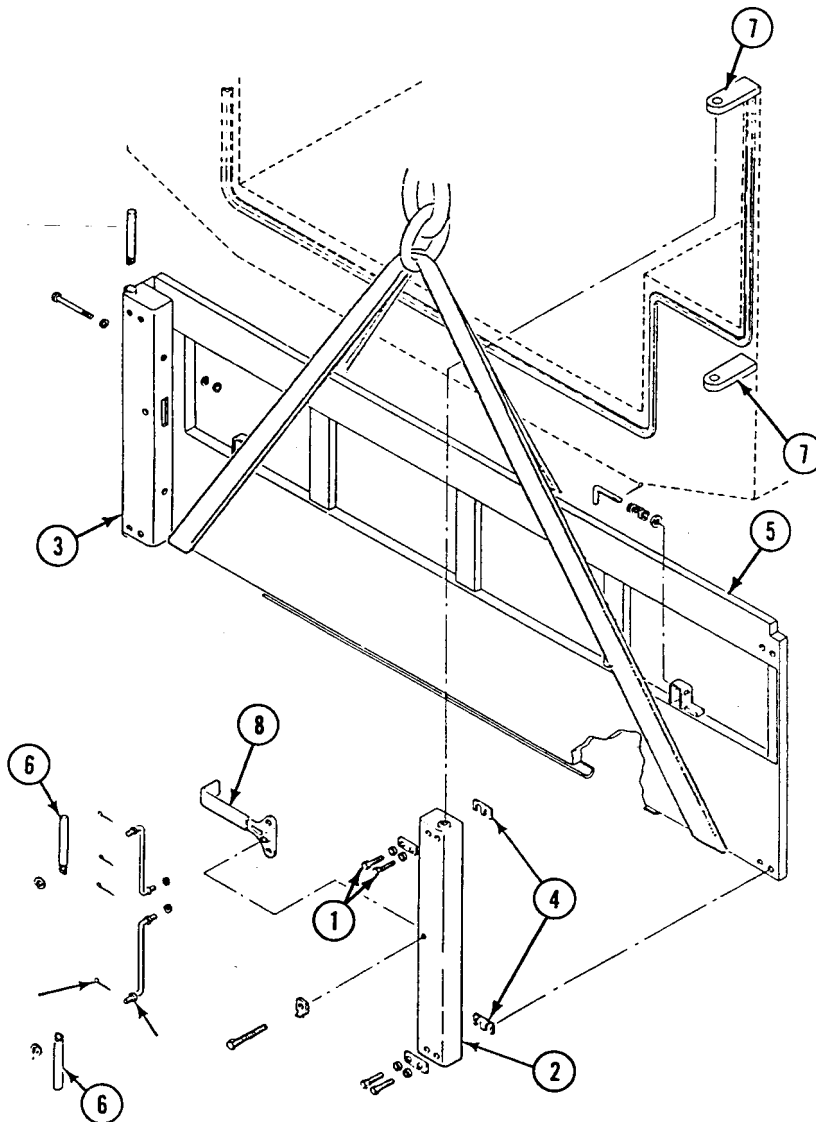
INSTALLATION

1. Attach suitable lifting device to support weight of cargo door (1).
2. Place cargo door (1) on left control bracket (2) and install top and bottom hinge pins (3). Secure with two screws (4), four washers (5), and two nuts (6).
3. Remove suitable lifting device.



ADJUSTMENT

1. Loosen four screws (1) in right control bracket (2) or left control bracket (3) to be adjusted.
2. Add or remove spacer plates (4) to produce 1/4 - 1/2 inch (6 - 13 mm) compression of seals.
3. Close cargo door (5) and line up two handle lock pins (6) with top and bottom hull catches (7) (right side only).
4. Secure adjustment with four screws (1).
5. Adjust cargo door handle (8) and linkage on right side of cargo door (5) until two handle lock pins (6) line up with top and bottom hull catches (7) (right side only).

**FOLLOW-THROUGH STEPS**

1. Close cargo door (see your -10).

END OF TASK

REPLACE CARGO DOOR SEALS

0403 00

THIS WORK PACKAGE COVERS:

Removal (page 0403 00-1).
 Installation (page 0403 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

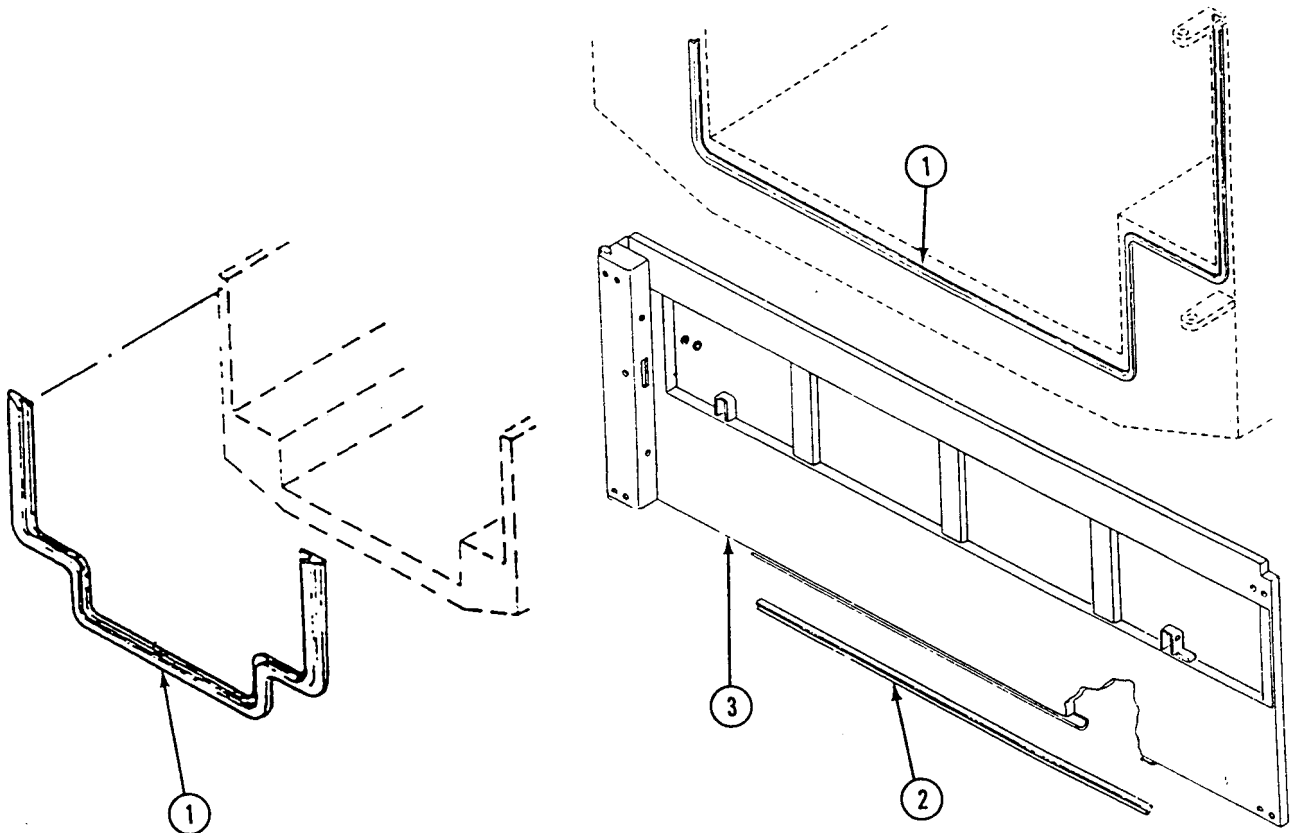
Adhesive (WP 0542 00, Item 2)
 Cleaning compound (WP 0542 00, Item 9)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Cargo door removed (WP 0402 00)

REMOVAL

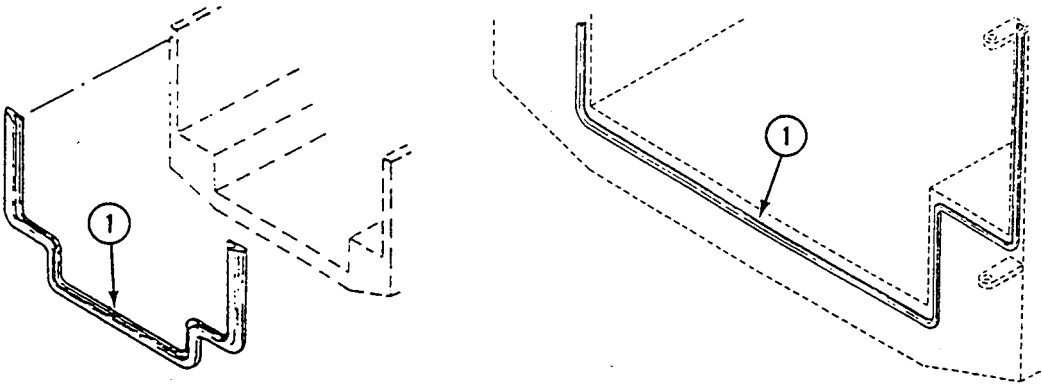
1. Bend metal retaining strips away from cargo door seal (1). Remove seal from hull.
2. Bend metal retaining strips away from cargo door lower seal (2). Remove seal from cargo door (3).



INSTALLATION**NOTE**

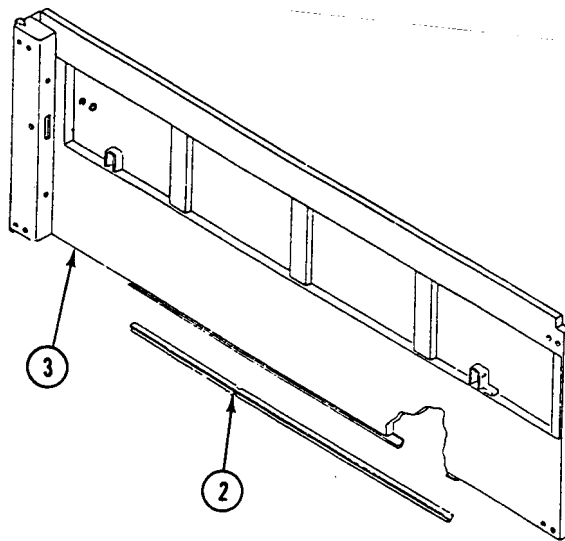
Clean all areas with cleaning compound where adhesive is applied. Make sure area is clean and no old adhesive remains.

1. Apply adhesive to six corners of hull where seal is not held by retaining strips.
2. Place cargo door seal (1) on hull. Bend retaining strips down to secure seal.

**NOTE**

When installing lower seal (2) on cargo door, make sure ends of seal fit tight against two tailgate end seals for proper sealing action.

3. Clean area where lower seal (2) attaches to cargo door. Apply adhesive.
4. Place lower seal (2) on cargo door (3). Bend retaining strip down to secure seal.

**FOLLOW-THROUGH STEPS**

1. Install cargo door (WP 0402 00).

END OF TASK

REPLACE TAILGATE CONTROLS

0404 00

THIS WORK PACKAGE COVERS:

- Removal (page 0404 00-2).
- Installation (page 0404 00-3).
- Adjustment (page 0404 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Socket Wrench Set (WP 0541 00, Item 63)
- Torque Wrench (WP 0541 00, Item 67)

References

See your -10

Materials/Parts

- Cotter pin (2)
- Grooved pin

Equipment Condition

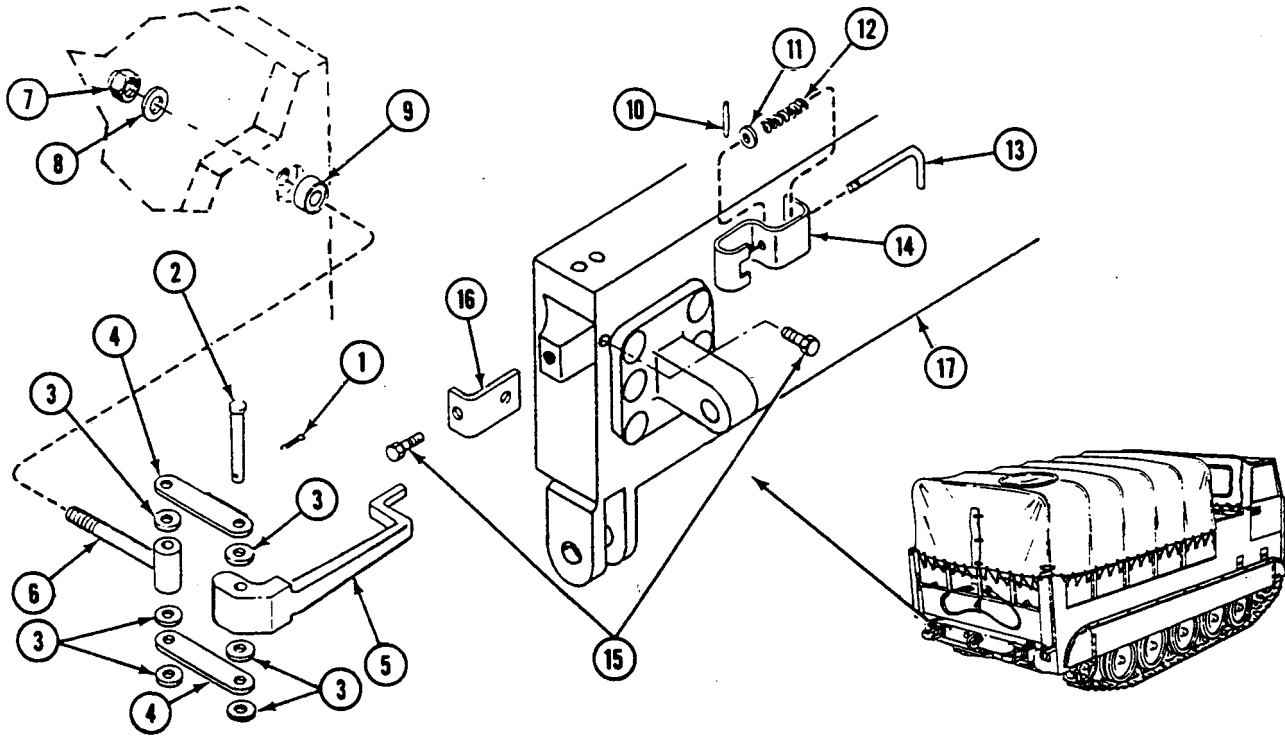
- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
 - Tailgate opened (see your -10)
-

REMOVAL

NOTE

Right and left tailgate controls are adjusted, removed, and installed the same way.

1. Remove two cotter pins (1), link pins (2), and six washers (3) that secure two connecting links (4) to tailgate handle (5) and handle eye bolt (6). Remove links and handle. Discard cotter pins.
2. Remove nut (7) and washer (8) that secure handle eye bolt (6) to hull. Remove eye bolt and seal (9). Check seal. Replace seal if necessary.
3. Remove grooved pin (10) that secures washer (11) and spring (12) to handle latch (13). Remove latch, washer, and spring from bracket (14). Discard grooved pin.
4. Remove two screws (15). Remove striker plate (16) from tailgate (17).



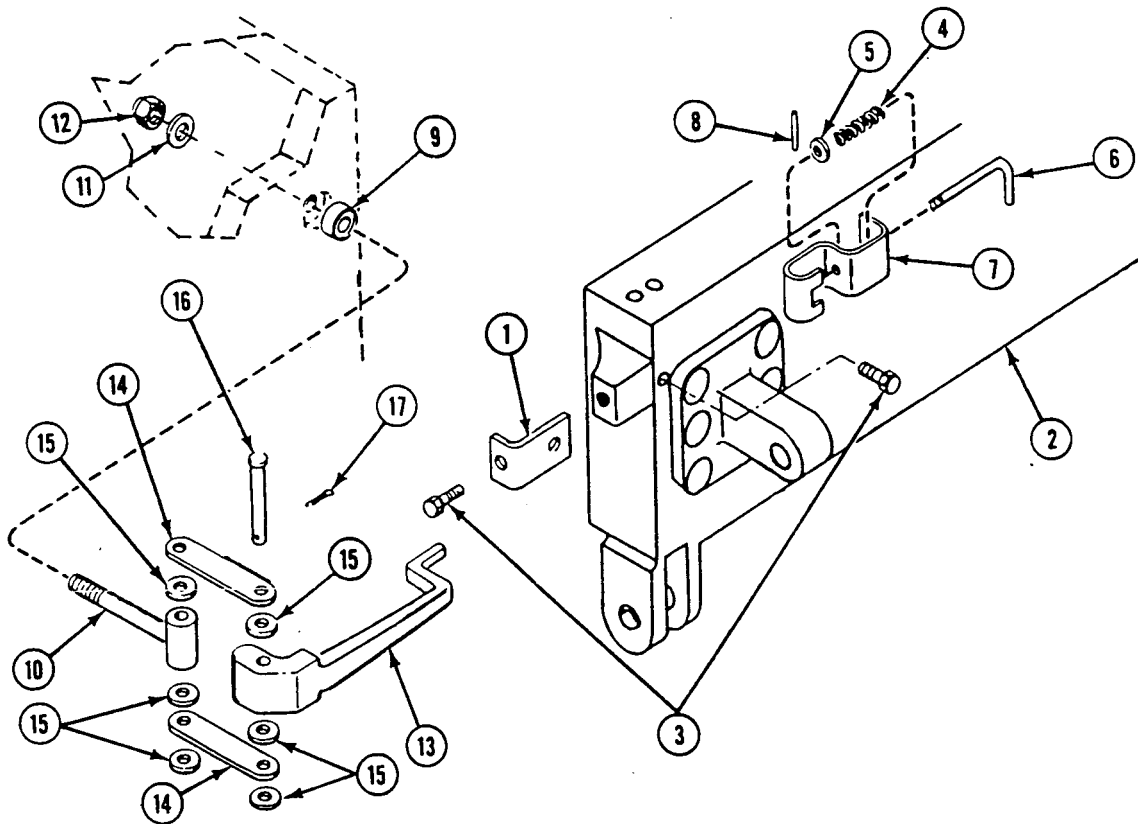
INSTALLATION

1. Place striker plate (1) on tailgate (2). Secure with two screws (3).

NOTE

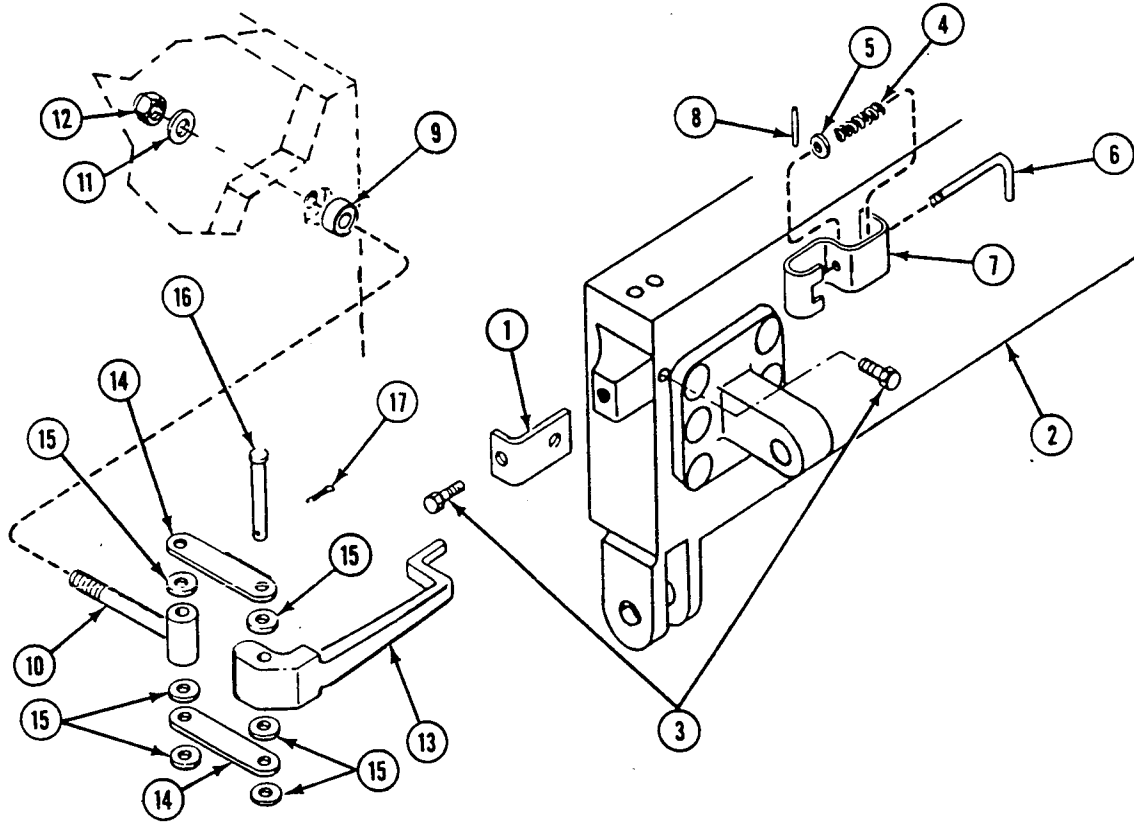
To keep tip of latch (6) from pulling through bracket (7) when spring (4) is fully compressed, install washers (5), as needed, behind spring.

2. Install spring (4), washer (5), and handle latch (6) in bracket (7). Secure spring and washer to bracket with new grooved pin (8).
3. Install seal (9), if replaced, and handle eye bolt (10) in hull. Secure with washer (11) and nut (12).
4. Place tailgate handle (13) and two connecting links (14) on handle eye bolt (10). Secure links to handle and eye bolt with six washers (15), two link pins (16), and new cotter pins (17).



ADJUSTMENT

1. Tighten or loosen nut (12) to get 1/4 - 1/2 inch (6 - 13 mm) compression of seal (9).



FOLLOW-THROUGH STEPS

1. Close tailgate (see your -10).

END OF TASK

REPLACE TAILGATE END SEALS AND BUMPERS

0405 00

THIS WORK PACKAGE COVERS:

Removal (page 0405 00-2).
Installation (page 0405 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

Unit Mechanic
Helper (H)

Carrier blocked (see your -10)

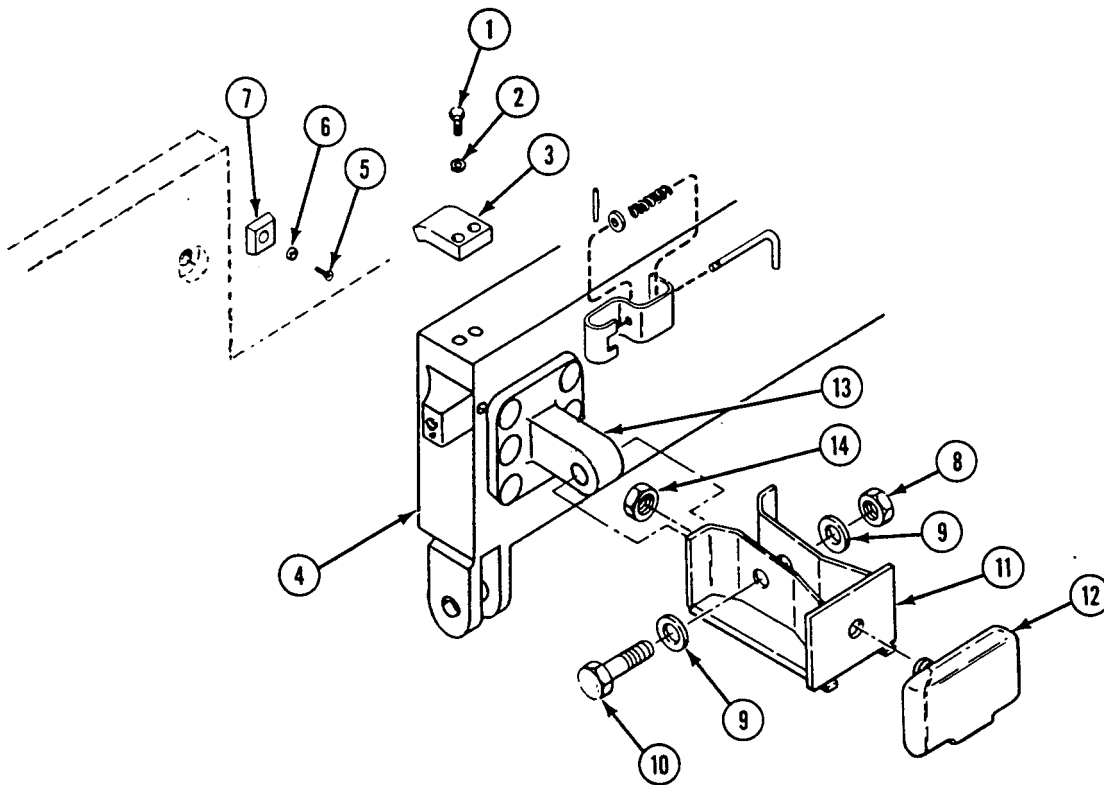
Tailgate opened (see your -10)

REMOVAL

NOTE

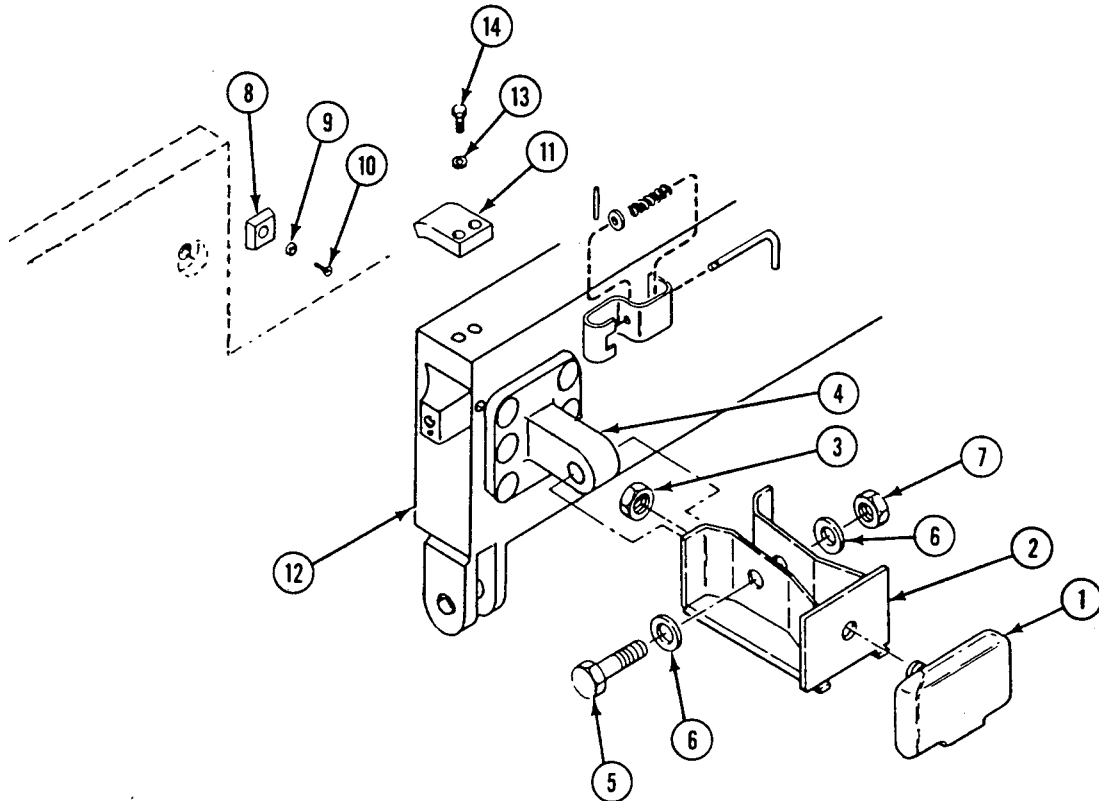
Tailgate is heavy and awkward. Use helper to open/close tailgate.

1. Remove two screws (1) and washers (2) that secure end seal (3) to tailgate (4). Remove end seal.
2. Remove screw (5) and washer (6) that secure tailgate bumper (7) to hull. Remove bumper.
3. Remove nut (8), two washers (9), and one screw (10) that secure bracket (11) and pad (12) to towing eye (13). Remove bracket and pad.
4. Remove nut (14) that secures pad (12) to bracket (11). Remove pad.



INSTALLATION

1. Place pad (1) on bracket (2). Secure with nut (3).
2. Place bracket (2) and pad (1) on towing eye (4). Secure with screw (5), two washers (6), and nut (7).
3. Place tailgate bumper (8) on hull. Secure with washer (9) and screw (10).
4. Place end seal (11) on tailgate (12). Secure with two washers (13) and screws (14).



FOLLOW-THROUGH STEPS

1. Close tailgate (see your -10).

END OF TASK

REPAIR HULL BY WELDING

0406 00

THIS WORK PACKAGE COVERS:

- Introduction (page 0406 00-1).
- Equipment and Materials (page 0406 00-2).
- Safety Precautions (page 0406 00-3).
- Magnesium Casting, Filing, and Grinding (page 0406 00-4).
- MIG Welding Method (page 0406 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

- TM 9-237
- TM 5-3431-200-15
- TM 5-3431-200-35P

Tools and Special Tools

- Welder's gloves (WP 0541 00, Item 20)
- Welder's helmet (WP 0541 00, Item 26)

REPAIR OR REPLACEMENT

INTRODUCTION

WARNING



Do not attempt to weld aluminum or magnesium castings.

1. This chapter shows you how to make basic welding repairs on 5083 aluminum alloy by the MIG (Metal Inert Gas) method. Also included are safety instructions for filing and grinding magnesium castings. Further welding instructions are available in TM 9-237.

Table 1. ALUMINUM CASTINGS

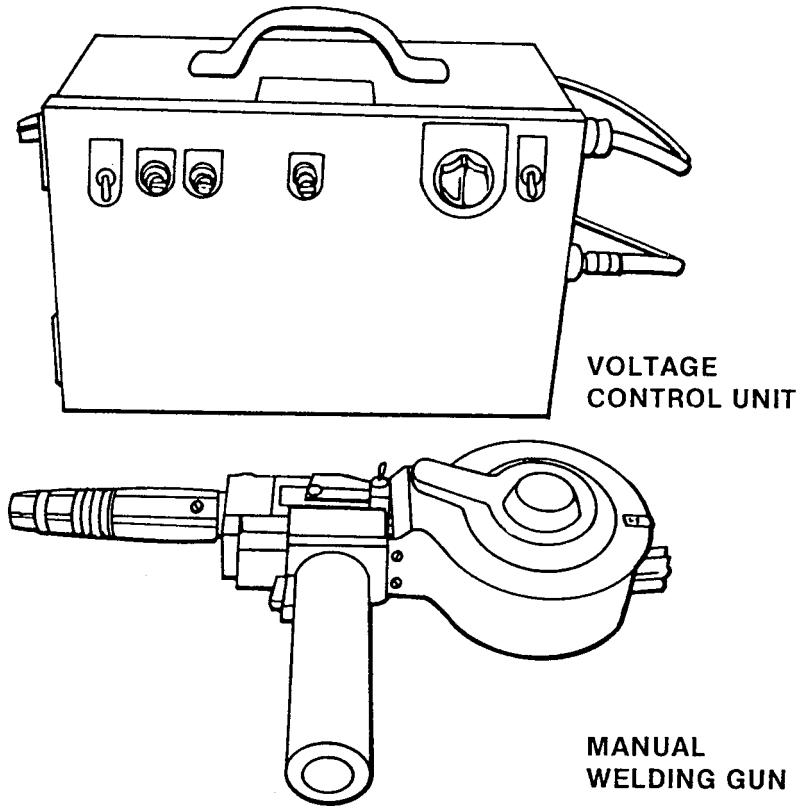
Component	Part	Part Number
Controls	Housing, range selector	10949629
	Lever, left steering	11588867
	Lever, right steering	11588949
Differential	Housing, input bearing	8656606
	Housing, right angle gearbox	8756602
Final Drive	Housing assembly	10890371
Transfer gearcase	Housing, gearcase	10932771
	Cover, transfer gearcase	10932773

Table 2. MAGNESIUM CASTINGS

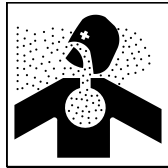
Major Component	Part	Part Number	Alloy
Differential	Adapter, differential oil lines	10865948	AZ91C, 92A
Differential	Plate, adapter	8756605	AZ91C, 92A
Differential	Retainer, oil seal	10886461	AZ91C, 92A
Differential	Housing, differential	8756603	AZ91C, 92A
Differential	Cover, differential housing	8756613	AZ91C, 92A
Fan	Retainer, bearing	10886455	AZ91C, 92A
Fan	Retainer, bearing	10886456	AZ91C, 92A
Fan	Housing assembly, fan gearbox	10863486	AZ91C
Fan	Fan, 20 in. diameter cooling	10865510	AZ91C
Fan	Fan housing, 20 in. diameter	11616515	AZ91C
Fan	Housing, drive shaft bearing	8756933	AZ91C
Fuel compartment	Cover, access	10908008	Optional

EQUIPMENT AND MATERIALS

1. Portable welder Linde model number 3431-972-7672 with manufacturer's manual number 7610-C-12210 or portable welder Westinghouse model number 3431-879-9709 with TM 5-3431-200-15 and TM 5-3431-200-35P and manufacturer's manual number 7610-C-1-2089.
2. Manual welding gun with spool or gun attachment.
3. Voltage control unit.
4. Inert gas supply, regulator-flowmeter, hose and fitting.
5. Number 5356 filler wire.
6. Direct current welding generator (200-ampere minimum capacity).
7. Welding helmet and protective clothing.

**SAFETY PRECAUTIONS**

1. Wear lightproof clothing such as leather, asbestos, or heavy denim. Do not wear clothing with loose pockets, trouser cuffs, short or rolled up sleeves. Wear welder's gloves (WP 0541 00, Item 20).
2. Do not expose bare skin to welding arc.
3. Do not look directly at welding arc unless you are wearing a welder's helmet (WP 0541 00, Item 26)
4. Wear flash goggles or tinted safety glasses (No. 2) in welding area.
5. Disconnect power source before changing parts or making equipment repairs.
6. Do not touch drive mechanism or any part of electrode.
7. Make sure welding area has plenty of fresh air without being drafty. Remove all poisonous and flammable materials.
8. Make sure all electrical and gas connections are tight.
9. Do not touch any metal in welding area with bare hands. Aluminum does not change color when hot.

WARNING

Welding on foam-filled parts is PROHIBITED. Toxic fumes can result in death.

10. Do not weld or use too much heat in areas or carrier where sealing compound (WP 0542 00, Item 33), (WP 0542 00, Item 36), or (WP 0542 00, Item 38) has been applied or is known to exist. If you must weld in these areas, remove compound then clean area with cleaning compound (WP 0542 00, Item 9). After welding, apply new sealing compound (WP 0542 00, Item 36), or (WP 0542 00, Item 38)
 - a. Foam-filled parts: Driver's compartment doors.

MAGNESIUM CASTING, FILING, AND GRINDING**WARNING**

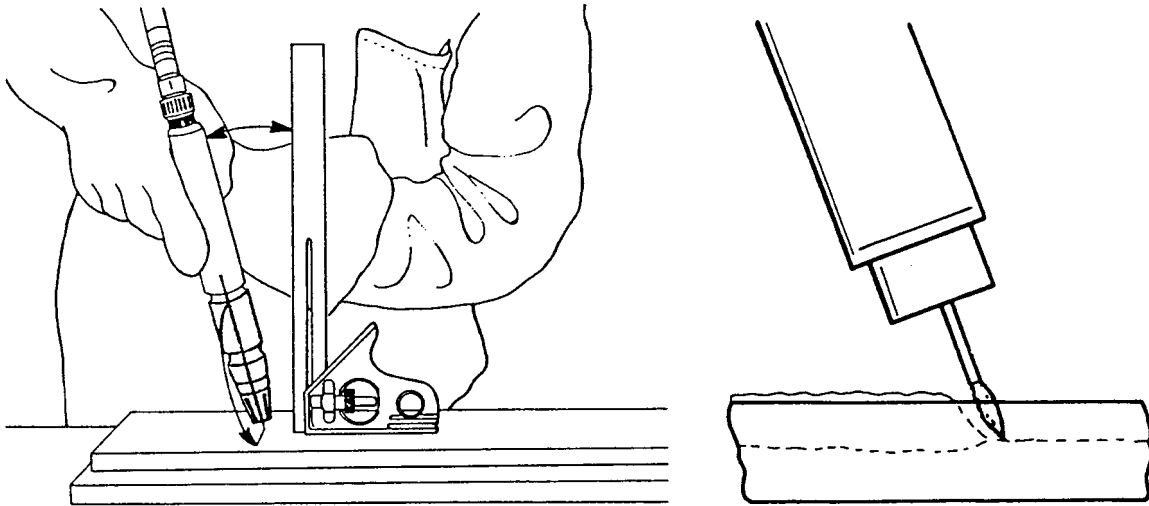
Do not use water or foam-type extinguishers. These types of extinguishers will intensify a magnesium fire.

1. Observe special safety precautions when filing or grinding magnesium castings. Fine particles of magnesium are a fire hazard. See (page 0406 00-3) for a list of magnesium castings used on this carrier. Use the following precautions when working with or near magnesium.
 - a. Use grinding equipment marked FOR MAGNESIUM GRINDING ONLY.
 - b. Do not allow magnesium dust or magnesium dust mixtures to accumulate. Keep area clean.
 - c. Keep tools used to work magnesium sharp.
 - d. Dispose of grinding sludge immediately.
 - e. Wear leather or smooth, fire-retardant clothing; brush frequently.
 - f. Keep fire extinguisher for magnesium handy.

MIG WELDING METHOD

1. MIG (Metal Inert Gas) Welding. This process uses a dc power source, control panel, and a welding gun. the gun feeds a consumable bare electrode at a given rate into a molten pool beneath a blanket of protective inert gas. When an arc is set up, a molten pool forms at once. Move the welding gun along the joint line at a rate that shapes the right size bead. The covering of inert gas keeps air from polluting the weld zone. No flux is needed.
2. Contraction and Expansion. Aluminum welds contract about 6 percent in volume when they become solid after being melted. Welding at a slow speed may cause too much heating of the area around weld. This will cause the metal to expand too much. It will then shrink too much when it cools.
3. Filler wire:

- a. Always use clean wire. Filler wire polluted by grease, oil, dust, or shop fumes causes porous welds.
 - b. After welding, cover wire to prevent pollution.
 - c. Store covered wire in warm, dry place.
4. **Cleaning of Welding Surfaces.** Remove oxides, grease, oil films, and all foreign matter from joint before welding. Brush well with clean stainless steel wire brush to lower oxide level. Wipe edges of joint with clean cloth dipped in solvent such as alcohol or acetone to remove remaining foreign matter. Let surfaces dry before welding.
 5. **Fit-Up and Tacking.** Good joint fit-up makes welding easier, saves filler wire and gas, and helps get high quality welds. You must tack weld to hold the joint members in place if you don't use jigs. Tack welds should be small, neat, and placed right to keep parts lined up right before and during welding.
 6. **Welding Unequal Sections.** When welding unequal sections, direct arc against heavier piece to fuse the two edges evenly. Watch weld pool edges rather than arc to ensure that weld pool edges fuse properly.
 7. **Multipass Welding:**
 - a. Make sure edges of weld pool fuse right. Watch weld pool edges rather than arc. Any oscillating or weaving motion should be slight, smooth, and slow.
 - b. Brush material with clean stainless steel brush after each pass.
 - c. On small weldments, lower amperage slightly after each pass if welding members become too hot.
 8. **Lead Angle and Cant Angle.** Place gun for lead angle of 10 degrees to 15 degrees off vertical. Point gun in direction of weld travel for good gas coverage, cleaning, and preheating of material. Place gun for cant angle of 90 degrees to parent metal so filler wire and arc are directed toward apex of groove. This will give equal fusion on both sides of material, even weld buildup, good gas coverage, and equal penetration.



9. **Nozzle Clearance.** Keep nozzle clearance of 1/2 to 5/8 inch (13 to 16 mm) for good gas coverage. Wrong nozzle clearance will cause the following:
 - a. Oxidize deposits in the weld bead.
 - b. Gas bubbles in the weld.
 - c. No cleaning action on the material in front of the weld pool.
10. **Arc length.** You will hear a slight hissing or smooth buzzing when the right arc length is struck.

END OF TASK

CHAPTER 19

UNIT MAINTENANCE INSTRUCTIONS
FOR WINCH AND POWER TAKEOFF (M548A1)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE WINCH (M548A1).....	0407 00
ADJUST DRUM BRAKE SHOE (M548A1).....	0408 00
ADJUST DRUM SAFETY BRAKE (M548A1).....	0409 00
REPLACE CLUTCH LEVER (M548A1).....	0410 00
REPLACE DRUM LOCK HANDLE (M548A1).....	0411 00
REPLACE WINCH PROPELLER SHAFT (M548A1).....	0412 00
REPLACE WINCH TRANSFER GEARCASE (M548A1).....	0413 00
REPLACE WINCH POWER TAKEOFF CONTROL (M548A1).....	0414 00
REPLACE POWER TAKEOFF (M548A1).....	0415 00
REPLACE WIRE ROPE, HOOK, AND CHAIN (M548A1).....	0416 00

REPLACE WINCH (M548A1)

0407 00

THIS WORK PACKAGE COVERS:

- Removal (page 0407 00-2).
- Cleaning (page 0407 00-4).
- Installation (page 0407 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Socket Wrench Set (WP 0541 00, Item 65)
- Torque Wrench (WP 0541 00, Item 69)
- Torque Wrench (WP 0541 00, Item 72)
- Lifting device with rated lift capability of at least 500 lb (227 kg)

Helper (H)

References

See your -10

Materials/Parts

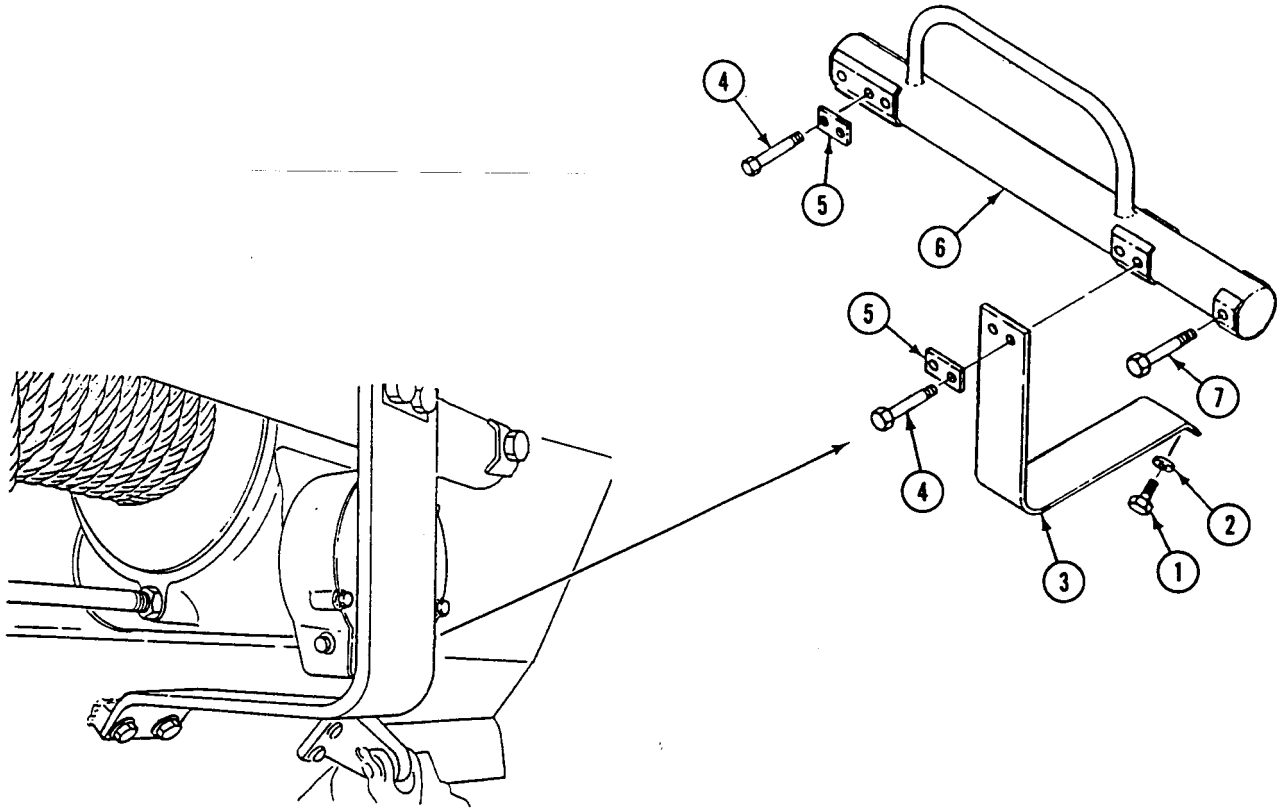
- Adhesive (WP 0542 00, Item 1)
- Cleaning compound (WP 0542 00, Item 9)
- Wiping rag (WP 0542 00, Item 45)
- Gasket
- Gasket (2)
- Screw, 3/4UNCx6 inch

Equipment Condition

- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
 - Battery negative lead disconnected (WP 0292 00)
 - Wire rope assembly removed (WP 0416 00)
 - Cab center floor plate removed (WP 0394 00)
-

REMOVAL

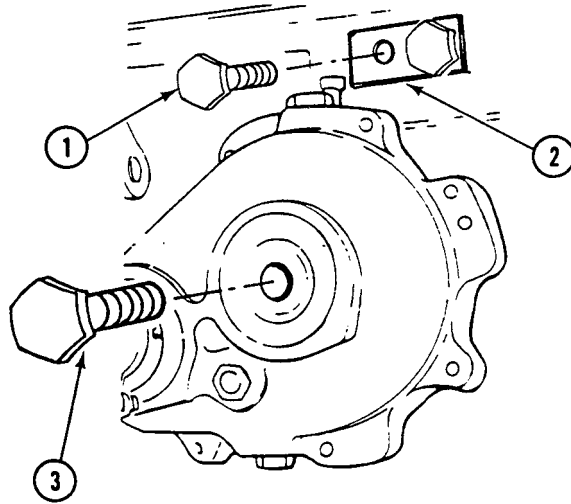
1. Remove two screws (1) and washers (2) from bottom of guard (3).
2. Remove two screws (4), plate (5), and guard (3) from support (6) and safety brake housing.
3. Remove one screw (7) from each end of support (6).



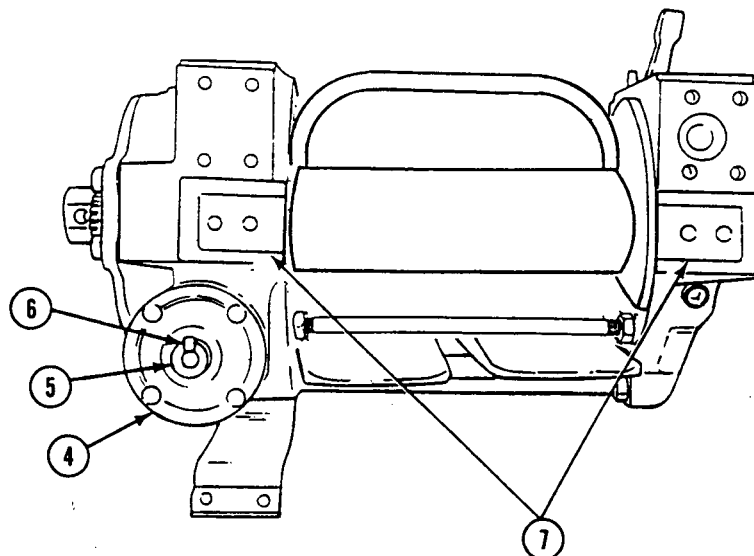
WARNING

Winch weighs more than 400 lbs (181 kg). Use a lifting device with at least 500 lb (227 kg) capacity to hold winch before removing mounting screws, to prevent personnel injury or property damage.

4. Remove four screws (1) and two plates (2) from inside power plant compartment.
5. Use helper and lifting device to remove winch from carrier. If winch cannot be moved, remove screw (3) from winch transfer gear case, and insert a 3/4UNCx6 inch screw. Turn screw until winch moves.

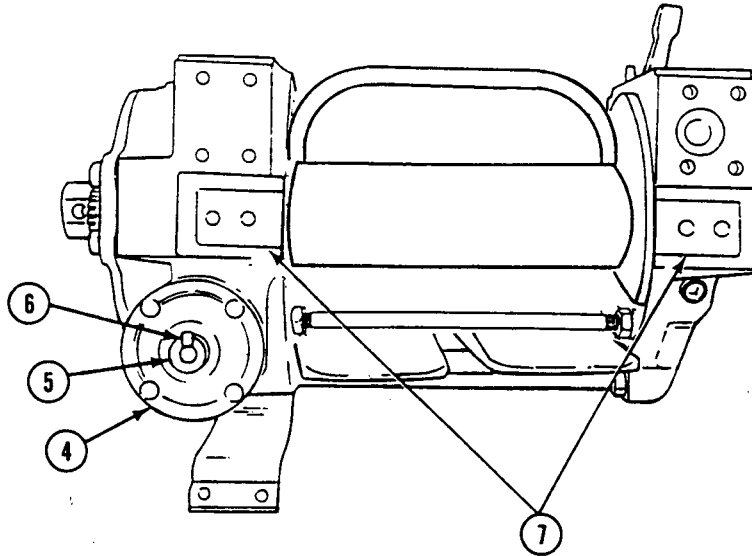


6. Remove gasket (4) from around input shaft (5). Discard gasket. Remove key (6) from shaft.
7. Remove two gaskets (7) from around two pairs of mounting holes on winch. Discard gaskets.



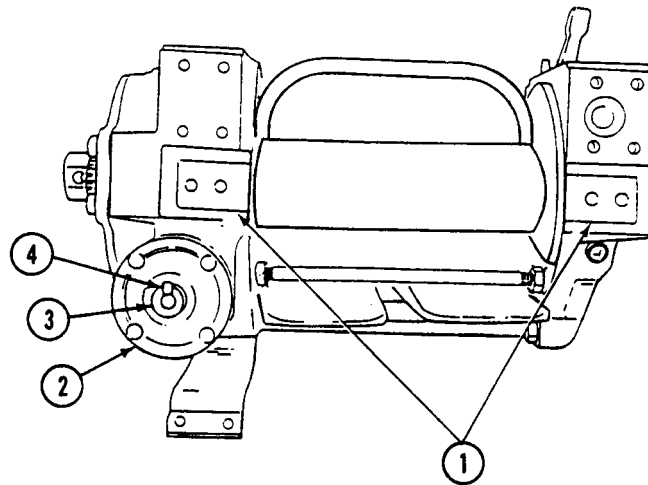
CLEANING

1. Use cleaning compound to clean winch.
2. Check winch. Replace winch that leaks or is cracked or damaged.
3. Clean a 2 x 4 inch (5 cm x 10 cm) area around two pairs of mounting holes where gaskets (7) will be mounted. Clean 3 inch (8 cm) area where gasket (4) will be mounted. Use dry cleaning solvent.



INSTALLATION

1. Apply adhesive to a 2 x 4 inch (5 x 10 cm) area around two pairs of mounting holes where two new gaskets (1) will be mounted. Apply adhesive to 3 inch (8 cm) area where new gasket (2) will be mounted. Apply adhesive by one of the following procedures:
 - a. Apply a thin, even coat of adhesive to each surface. Allow to dry completely. At installation, wet the surface with a clean cloth dampened in dry cleaning solvent. Press surfaces firmly together.
 - b. Apply a thin, even coat of adhesive to both surfaces. Allow to dry until it is tacky but no longer transfers to finger when touched. This takes 10 to 20 minutes. (The higher the temperature, the shorter the drying time.)
2. Apply adhesive to both sides of two gaskets (1) and gasket (2).
3. Install two gaskets (1) on two pairs of mounting holes and gasket (2) on input shaft (3) on winch.
4. Apply adhesive to carrier surfaces that will be touched by two gaskets (1) and gasket (2).
5. Install key (4) on input shaft (3).

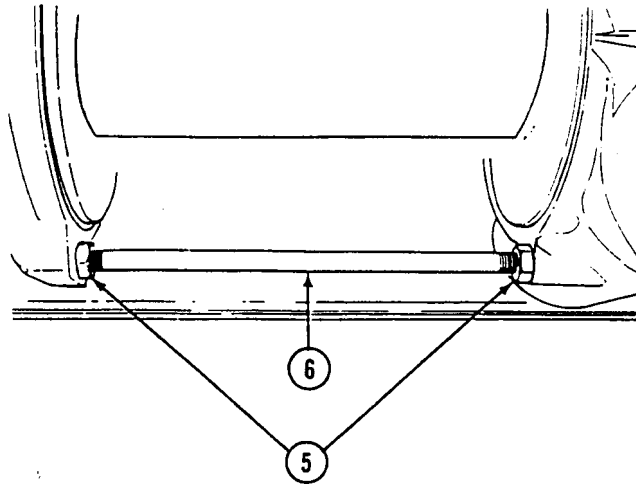


6. Reactivate adhesive on winch and carrier if listed above, is being used.

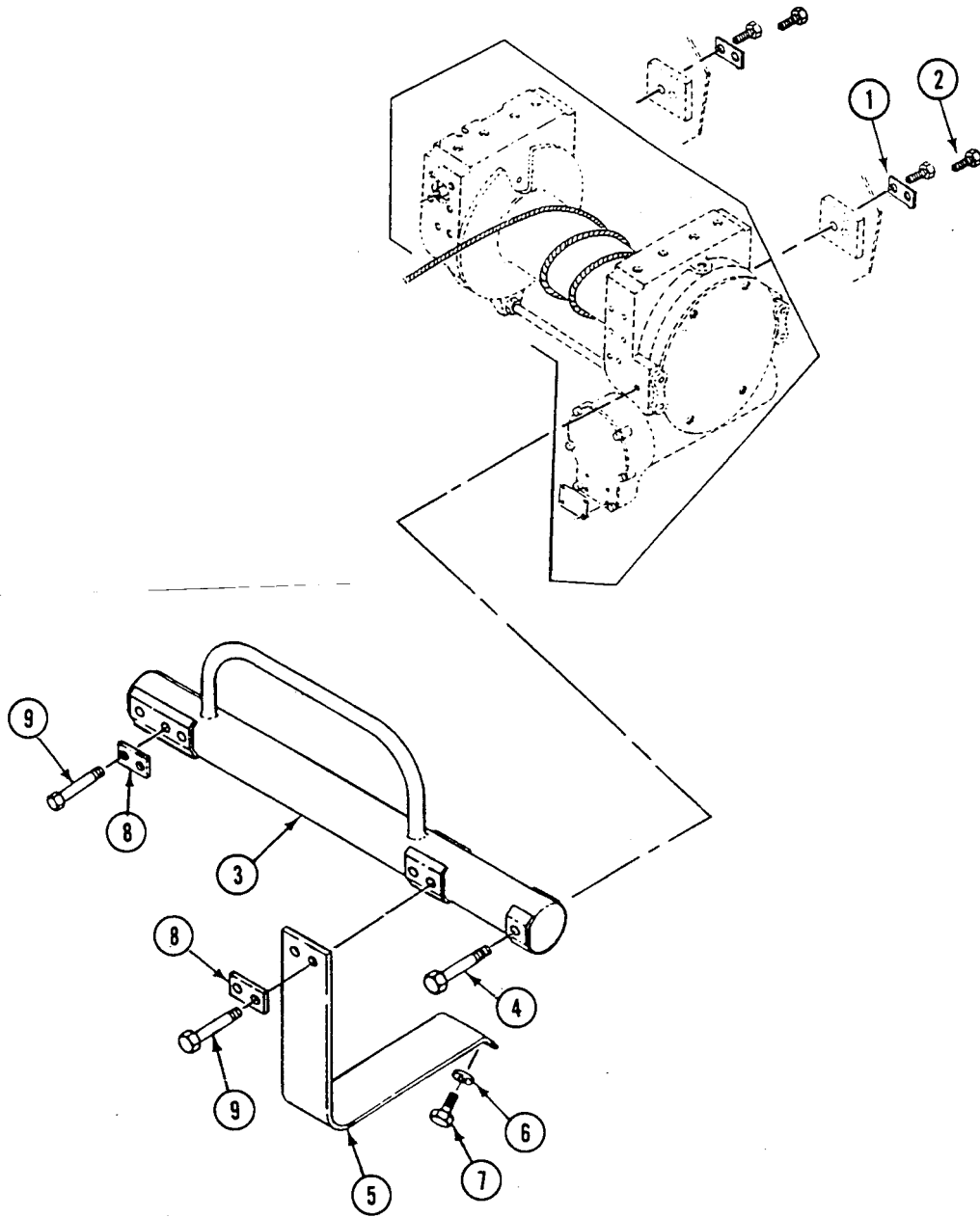
WARNING

Winch weighs more than 400 lbs (181 kg). Use a lifting device with at least 500 lb (227 kg) capacity to mount winch to prevent personnel injury or property damage.

7. Use helper and lifting device to mount winch on carrier. Make sure you align rear mounting holes in winch with mounting holes in carrier bulkhead. If holes do not align, turn nuts (5) on tie rod (6) until holes align. Make sure key (4) mates with splines in transfer gear case.



8. Install two plates (1) and four screws (2) inside power plant compartment. Tighten screws to 90 to 110 lb-ft (122-149 N•m) torque. Bend top corners of plates across flats on screw holes.
9. Place support (3) on winch. Install one screw (4) in each end of support. Tighten screws to 305 to 325 lb-ft (414-441 N•m) torque.
10. Place guard (5) over safety brake housing and on support (3). Install two washers (6) and two screws (7). Do not tighten screws.
11. Place one plate (8) near end of support (3). Install two screws (9). Install plate and screws on other end of support. Tighten screws to 90 to 110 lb-ft (122-149 N•m) torque. Bend corners of plates across flats on screw heads.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Install cab center floor plate (WP 0394 00).
3. Install wire rope assembly (WP 0416 00).
4. Start engine (see your -10).
5. Reel in wire rope (see your -10). Have helper assist.
6. Check winch for proper operation (see your -10).
7. Stop engine (see your -10).

END OF TASK

ADJUST DRUM BRAKE SHOE (M548A1)

0408 00

THIS WORK PACKAGE COVERS:

Adjustment (page 0408 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped/shutdown (see your -10)

Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

Battery negative lead disconnected (WP 0292 00)

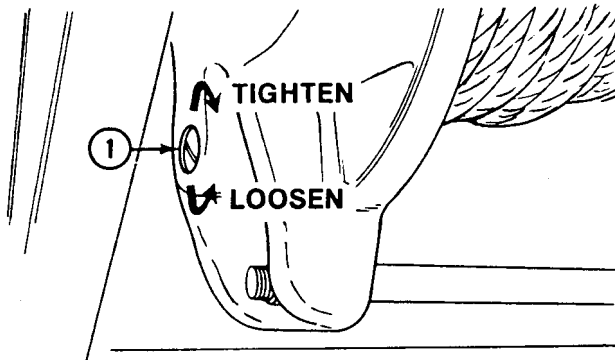
Unlock drum (see your -10)

ADJUSTMENT

NOTE

Drum should turn when wire rope is pulled from winch by hand. It should stop when pulling stops. Adjust drum shoe if it is too tight or too loose.

1. If wire rope cannot be pulled from winch by hand, loosen screw (1) until drum moves when rope is pulled.
2. If drum keeps turning when pulling stops, tighten screw (1) until drum stops when pulling stops.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Lock drum (see your -10).

END OF TASK

ADJUST DRUM SAFETY BRAKE (M548A1)

0409 00

THIS WORK PACKAGE COVERS:

Adjustment (page 0409 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit WP 0542 00, Item 57
 Socket Wrench Set (WP 0541 00, Item 64)
 Torque Wrench (WP 0541 00, Item 71)

Equipment Condition

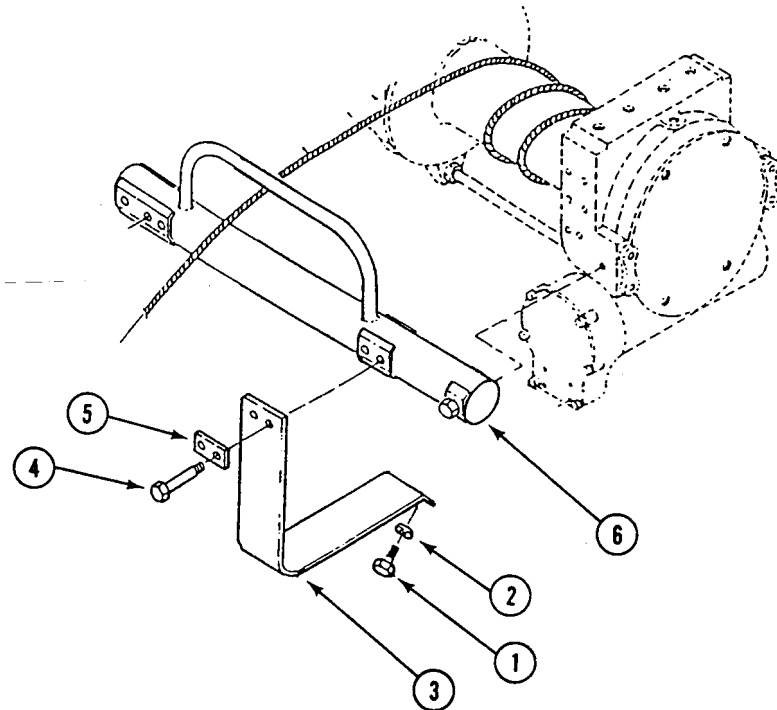
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Winch drum clutch disengaged (see your -10)

Personnel Required

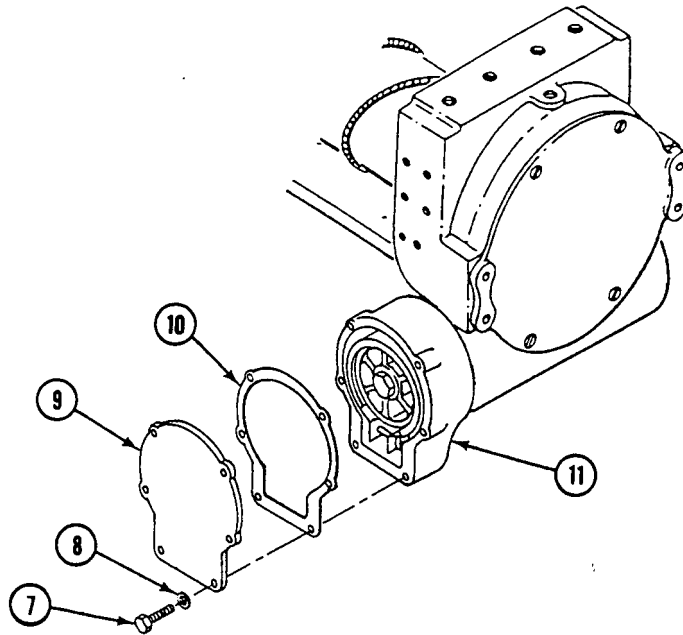
Unit Mechanic
 Helper (H)

ADJUSTMENT

1. Remove two screws (1) and washers (2) from bottom of guard (3).
2. Remove two screws (4) and plate (5) that secure guard (3) to support (6).



- Remove six screws (7), washers (8), cover (9), and gasket (10) from automatic brake case (11).



CAUTION

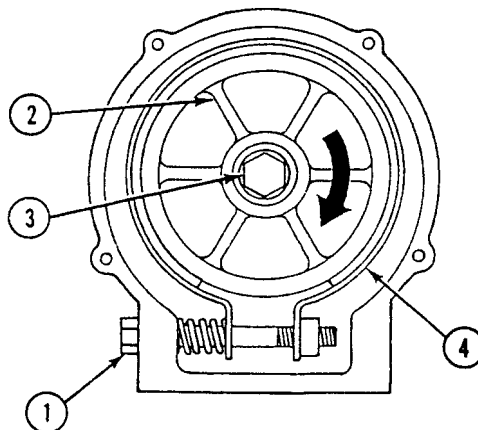
Engaging PTO to transmission while winch drum clutch is engaged with engine running will rotate the winch drum. Damage to the wire rope, winch components, or carrier will result. Ensure winch drum clutch is disengaged.

- With brake mechanism at room temperature, adjust screw (1) so that brake drum (2) just begins to rotate clockwise when a torque of 180-204 lb-in (20-23 N•m) is applied to screw (3).

NOTE

If brake drum will not rotate with applied torque of 180-204 lb-in (20-23 N•m), do Steps 5 - 7. If brake drum rotates, go to Step 8.

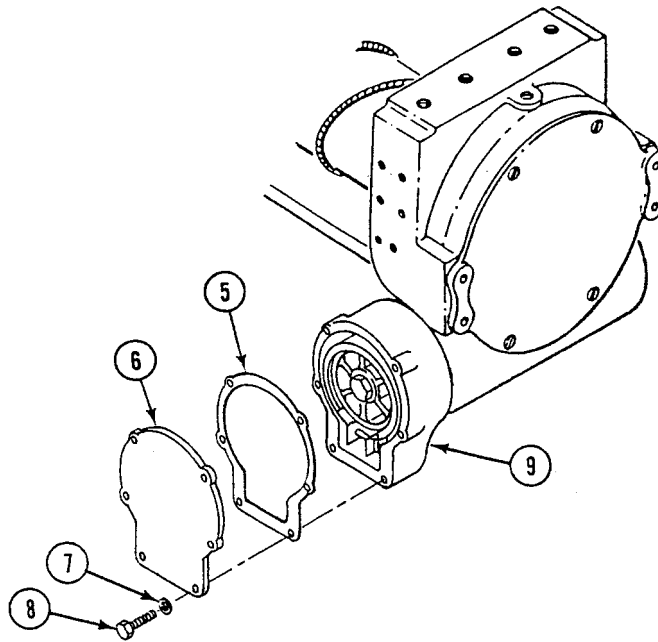
- Loosen screw (1) to maximum without disengaging from band assembly (4).



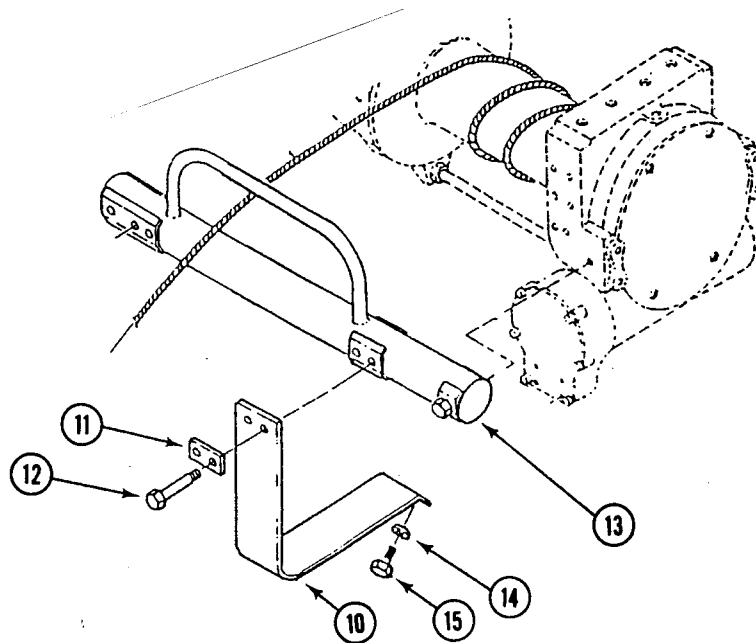
NOTE

Use helper when checking engine/PTO.

6. Start engine (see your -10) and engage PTO to transmission for 5 minutes to allow winch gears to break in.
7. Stop engine (see your -10). Repeat Step 4.
8. Install gasket (5), cover (6), six washers (7), and screws (8) on automatic brake case (9).



9. Install guard (10), plate (11), and two screws (12) on support (13).
10. Install two washers (14) and screws (15) to bottom of guard (10).



END OF TASK

REPLACE CLUTCH LEVER (M548A1)

0410 00

THIS WORK PACKAGE COVERS:

- Removal (page 0410 00-1).
- Installation (page 0410 00-2).
- Adjustment (page 0410 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery negative lead disconnected (WP 0292 00)
- Drum lock handle removed (WP 0411 00)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Personnel Required

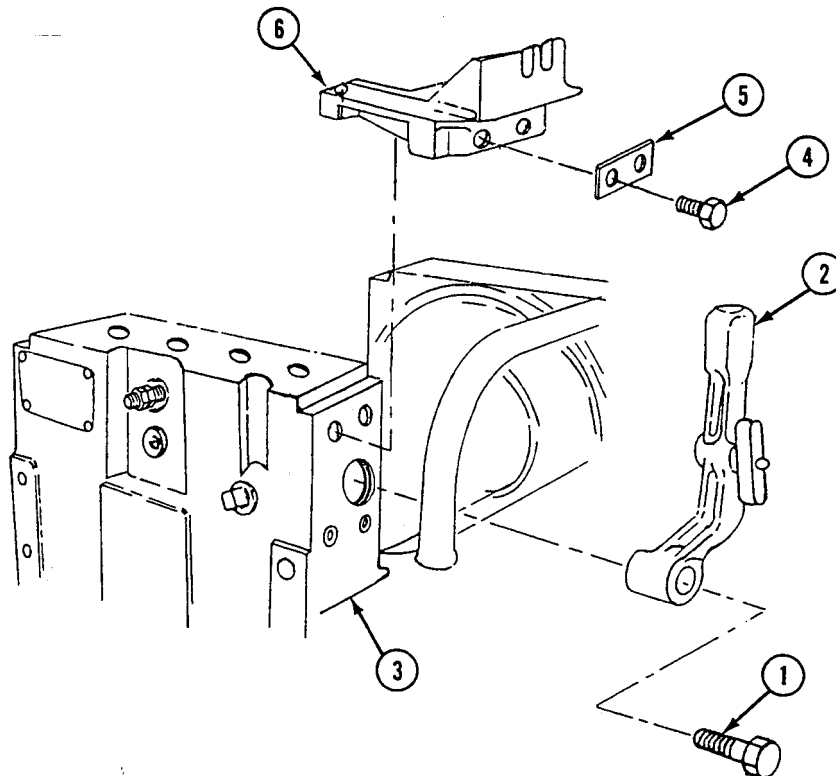
Unit Mechanic

References

See your -10

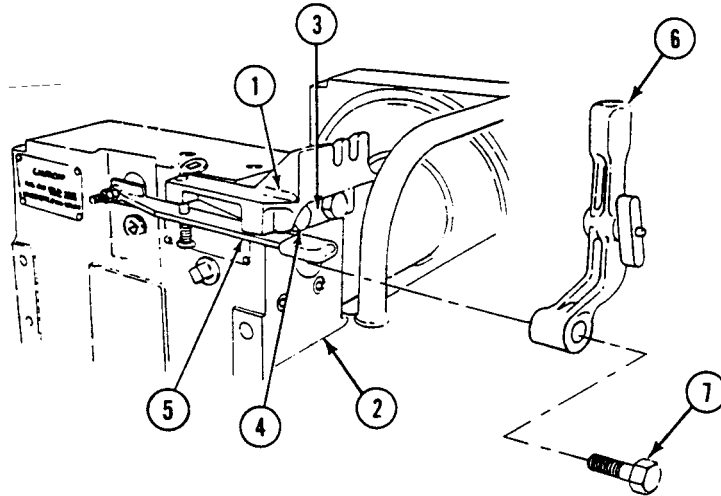
REMOVAL

1. Remove screw (1) that secures clutch lever (2) to winch (3). Remove clutch lever from winch.
2. Remove two screws (4) and plate (5) that secure bracket (6) to winch (3). Remove bracket from winch.



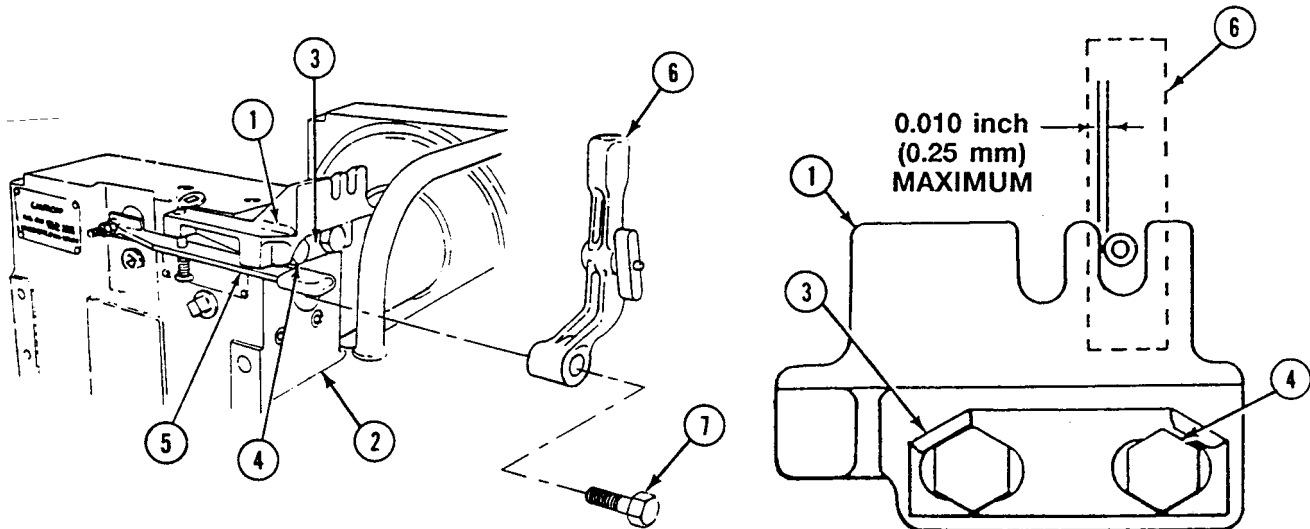
INSTALLATION

1. Install bracket (1) on winch (2). Install plate (3) and two screws (4). Do not tighten screws until clutch is adjusted.
2. Install drum lock handle (5) on winch (2) (WP 0411 00).
3. Install clutch lever (6) on winch (2). Install screw (7). Make sure pin on clutch lever is in DISENGAGE slot of bracket (1) (see your -10).
4. Move drum lock handle (5) to right to unlock drum (see your -10).



ADJUSTMENT

1. Move clutch lever (6) until clutch is bottomed on frame face, then move bracket (1) until outer side of slot is within .010 inch (.25 mm) of detente pin in lever.
2. Tighten two screws (4). Bend top corners of plate (3) across flats on screw heads.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).

END OF TASK

REPLACE DRUM LOCK HANDLE (M548A1)

0411 00

THIS WORK PACKAGE COVERS:

- Removal (page 0411 00-1).
- Installation (page 0411 00-2).
- Adjustment (page 0411 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Cotter pin

Carrier blocked (see your -10)

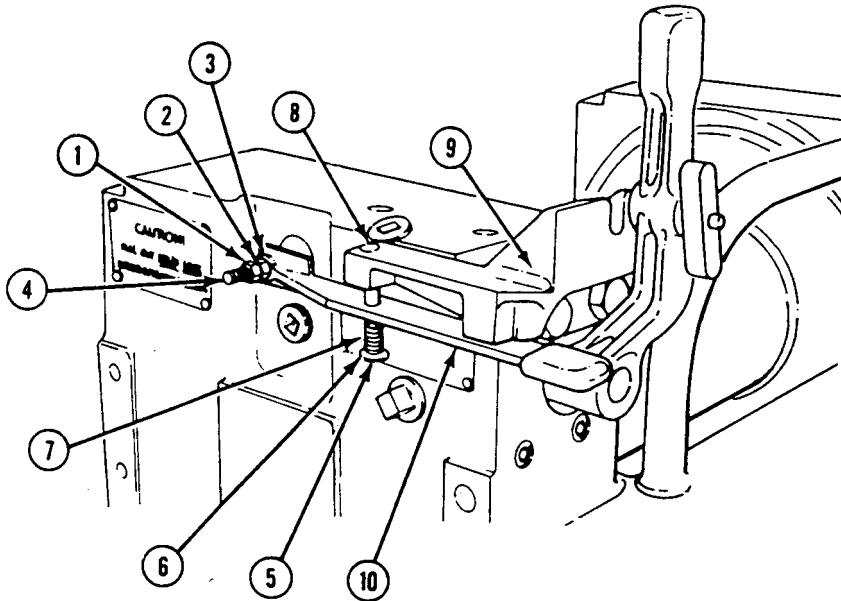
Personnel Required

Unit Mechanic

Battery negative lead disconnected (WP 0292 00)

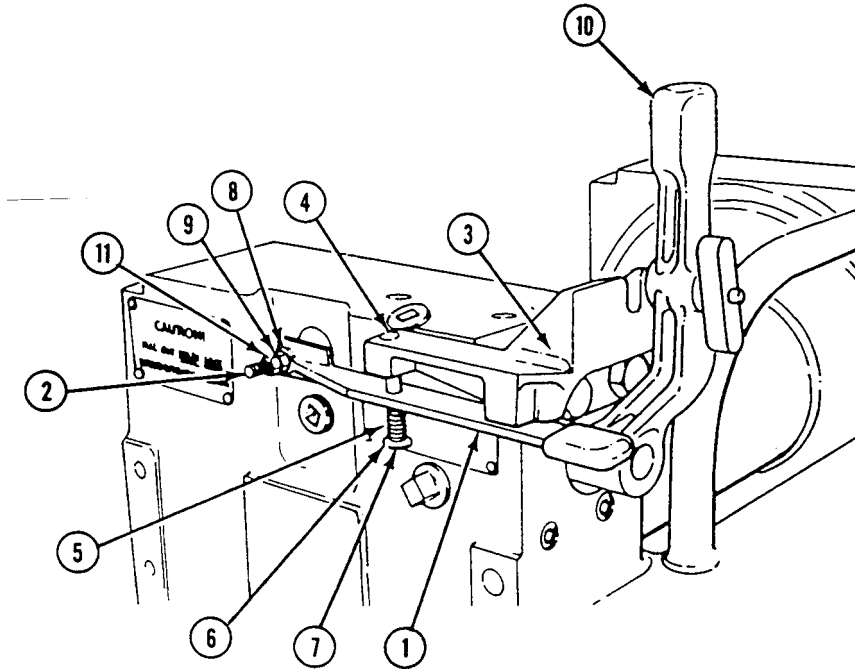
REMOVAL

1. Remove jam nut (1), nut (2), and washer (3) from poppet shaft (4).
2. Remove cotter pin (5), washer (6), and spring (7) from pin (8). Discard cotter pin.
3. Remove pin (8) from bracket (9). Remove drum lock handle (10) from bracket.



INSTALLATION

1. Place drum lock handle (1) over poppet shaft (2) and under bracket (3). Install pin (4), spring (5), washer (6), and new cotter pin (7).
2. Place washer (8) and nut (9) on poppet shaft (2). Do not tighten nut.
3. Move clutch lever (10) as far to right as it will go. Make sure detent pin in lever is seated in DISENGAGED slot of bracket (3).
4. Unlock drum (see your -10). Turn winch drum by hand until poppet shaft (2) is seated in drum flange.

**ADJUSTMENT**

1. Hold nut (9) and install jam nut (11). Adjust nut (9) and nut (11) so that poppet shaft (2) is withdrawn $5/16 \pm 1/16$ inch (7.6 ± 1.6 mm) from maximum inward travel when detent pin in lever is seated in hole on bracket.

FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).

END OF TASK

REPLACE WINCH PROPELLER SHAFT (M548A1)

0412 00

THIS WORK PACKAGE COVERS:

- Removal (page 0412 00-2).
- Disassembly (page 0412 00-3).
- Assembly (page 0412 00-4).
- Installation (page 0412 00-5).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Socket Wrench Set (WP 0541 00, Item 63)
- Torque Wrench (WP 0541 00, Item 67)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Cab center floor plate removed (WP 0394 00)
- Battery negative lead disconnected (WP 0292 00)
- Center seat raised (see your -10)
- Left grille removed (WP 0390 00)
- Air cleaner container with element removed (WP 0152 00)

Materials/Parts

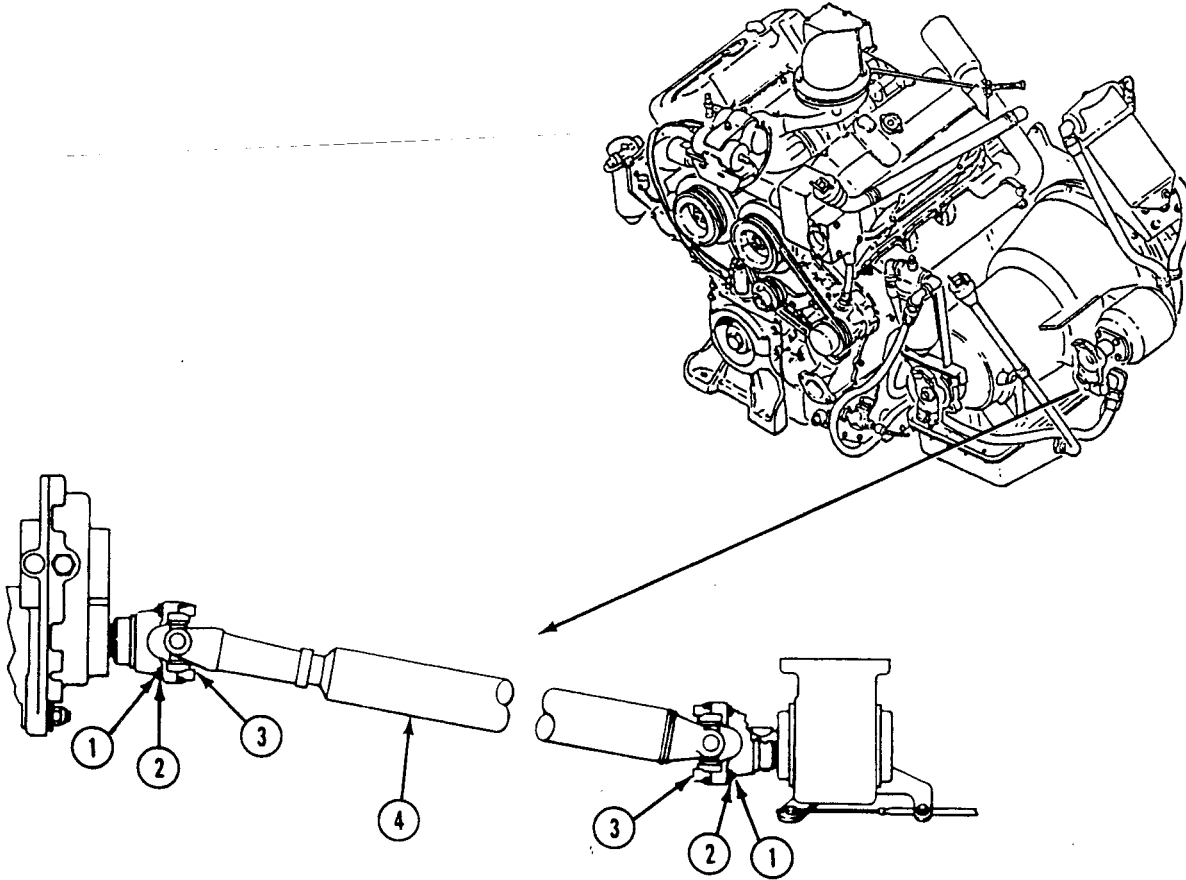
- GAA grease (WP 0542 00, Item 14)
- Lock washer (8)
- Seal

Personnel Required

- Unit Mechanic
 - Helper (H)
-

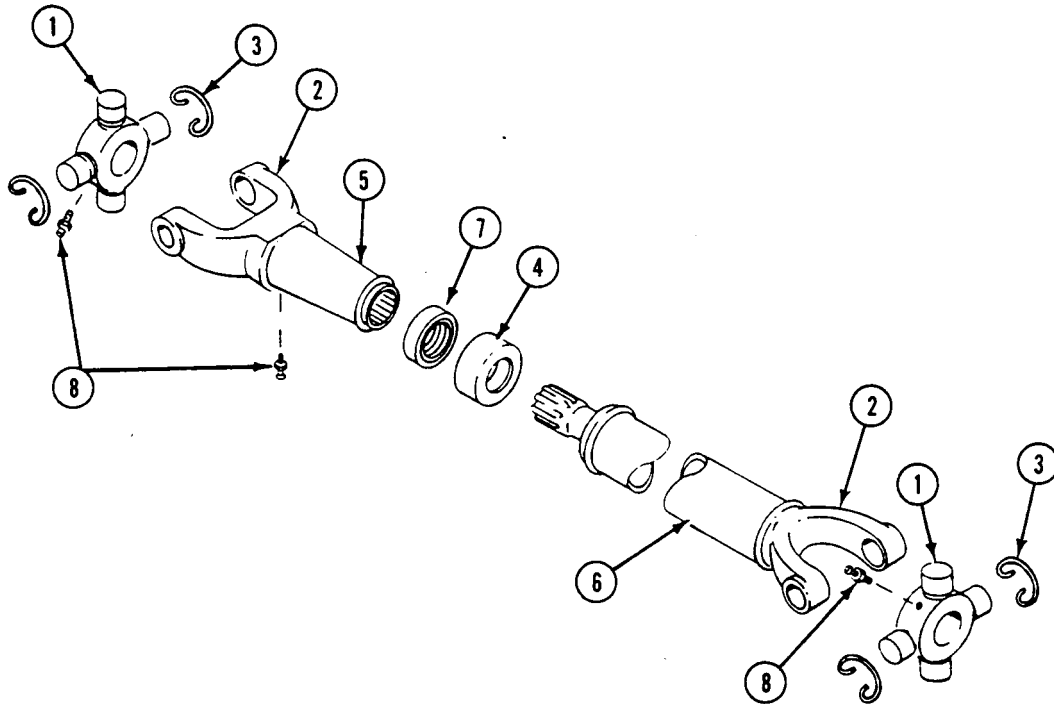
REMOVAL

1. Remove eight nuts (1), lock washers (2), and four clamps (3). Have helper assist removing propeller shaft (4). Discard lock washers.



DISASSEMBLY

1. Remove one journal-and-bearing assembly (1) from each end of propeller shaft (2) by removing four retaining rings (3).
2. Unscrew cap (4) from sleeve yoke (5). Pull yoke (6) from sleeve yoke.
3. Pull seal (7) out of cap (4). Discard seal.
4. Remove three grease fittings (8) from sleeve yoke (5) and journal-and-bearing assemblies (1).



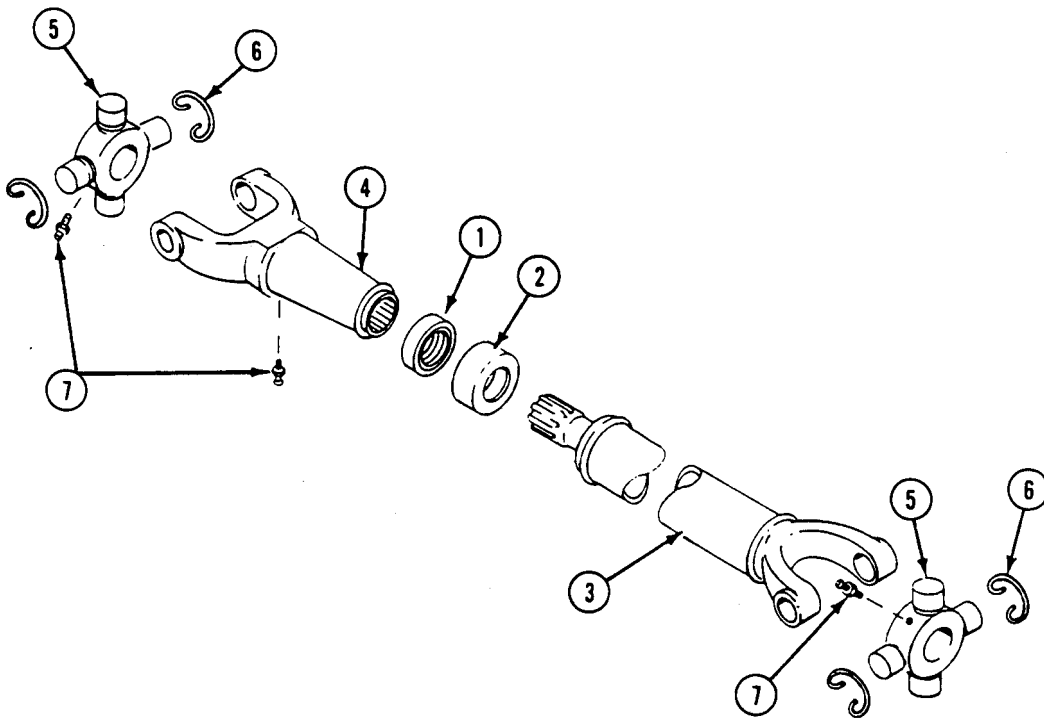
ASSEMBLY

1. Place new seal (1) into cap (2). Place cap and seal on yoke (3).

CAUTION

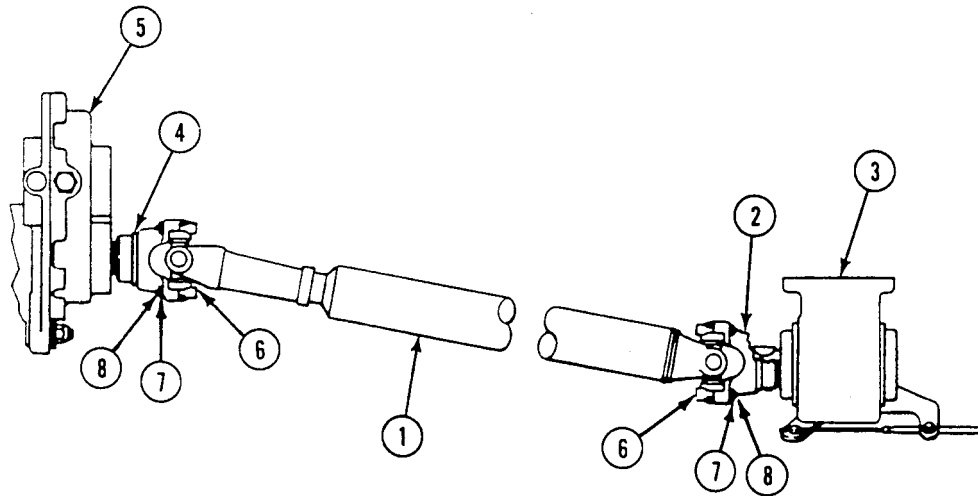
Make sure yoke (4) and yoke (3) are installed with bearing journals in the same plane. Make sure assembled shaft is not twisted. Propeller shaft can be damaged during operation if yokes are not installed right.

2. Install yoke (3) into sleeve yoke (4).
3. Install cap (2) on sleeve yoke (4).
4. Install one journal-and-bearing assembly (5) in yoke (3). Install two retaining rings (6) to hold assembly in yoke.
5. Install one journal-and-bearing assembly (5) into sleeve yoke (4). Install two retaining rings (6) to hold assembly in sleeve yoke.
6. Install one grease fitting (7) in front and rear journal-and-bearing assemblies (5) and one grease fitting in sleeve yoke (4).
7. Lubricate two journal-and-bearing assemblies (5) with grease.



INSTALLATION

1. Place assembled propeller shaft (1) between yoke (2) on power takeoff (3) and yoke (4) on transfer gearcase (5).
2. Place two clamps (6) over yoke (2). Secure each clamp with two new lock washers (7) and two nuts (8). Tighten nuts to 14-17 lb-ft (19-23 N•m) torque.
3. Place two clamps (6) over yoke (4). Secure each clamp with two new lock washers (7) and nuts (8). Tighten nuts to 14-17 lb-ft (19-23 N•m) torque.

**FOLLOW-THROUGH STEPS**

1. Install cab center floor plate (WP 0394 00).
2. Install air cleaner container with element (WP 0152 00).
3. Install left grille (WP 0390 00).
4. Lower center seat (see your -10).
5. Connect battery negative lead (WP 0292 00).

END OF TASK

REPLACE WINCH TRANSFER GEARCASE (M548A1)

0413 00

THIS WORK PACKAGE COVERS:

- Removal (page 0413 00-1).
- Cleaning and Inspection (page 0413 00-2).
- Installation (page 0413 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Cab center floor plate removed (WP 0394 00)
- Battery negative lead disconnected (WP 0292 00)
- Winch propeller shaft disconnected at transfer gearcase (WP 0412 00)

Materials/Parts

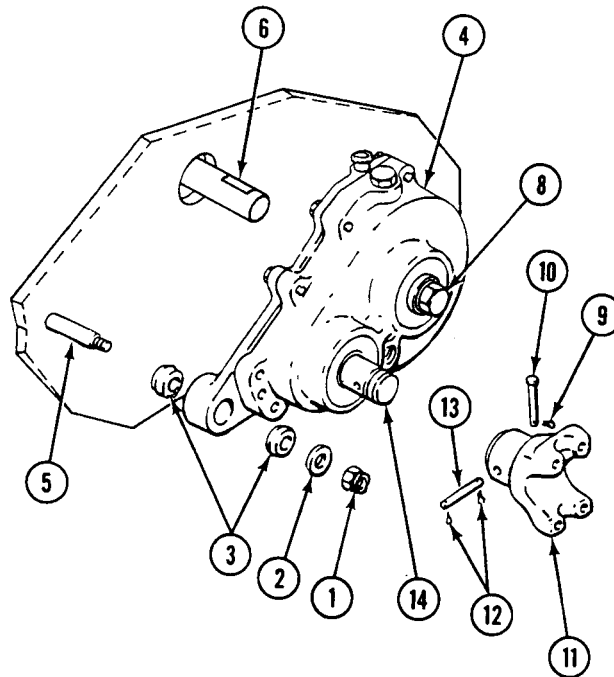
- Cotter pin
- Cotter pin (2)
- Lock nut
- Screw

Personnel Required

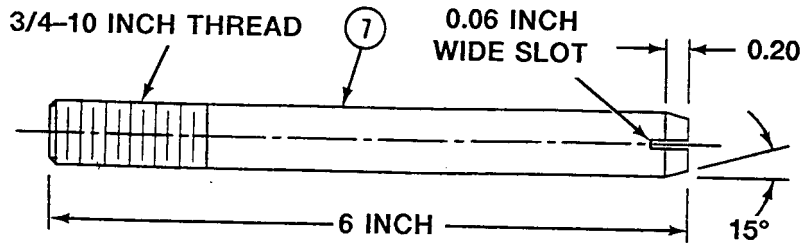
Unit Mechanic

REMOVAL

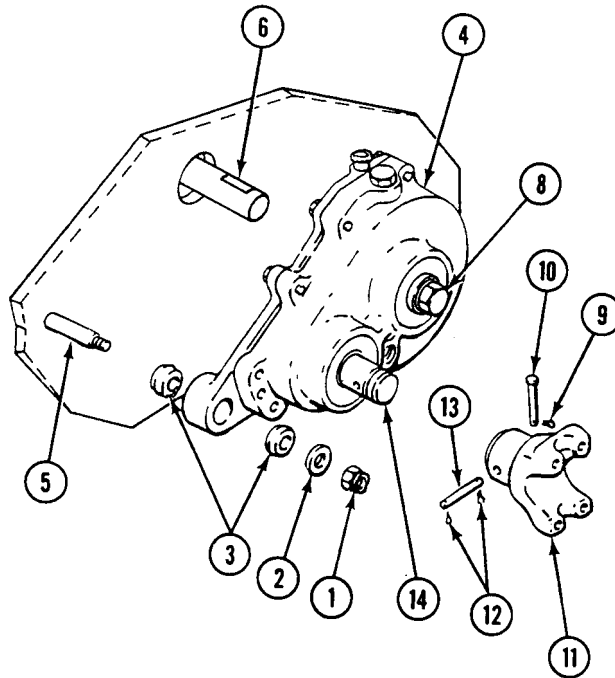
1. Remove lock nut (1), washer (2), two bushings (3), and gearcase (4) from stud (5) and winch input shaft (6). Discard lock nut.



- If gearcase cannot be moved, fabricate gearcase removal tool (7) from 3/4-10 inch x 6 inch bolt. Cut head off bolt. Saw or file a 0.06-inch screwdriver slot in unthreaded end.



- Remove screw (8) from gearcase (4) and insert gearcase removal tool (7). Turn until gearcase comes off winch input shaft (6).
- Remove cotter pin (9) from pin (10). Pull pin (10) from yoke (11). Discard cotter pin.
- Remove two cotter pins (12) from shear pin (13). Pull shear pin out of yoke (11). Discard cotter pins.
- Pull yoke (11) from gearcase output shaft (14).



CLEANING AND INSPECTION

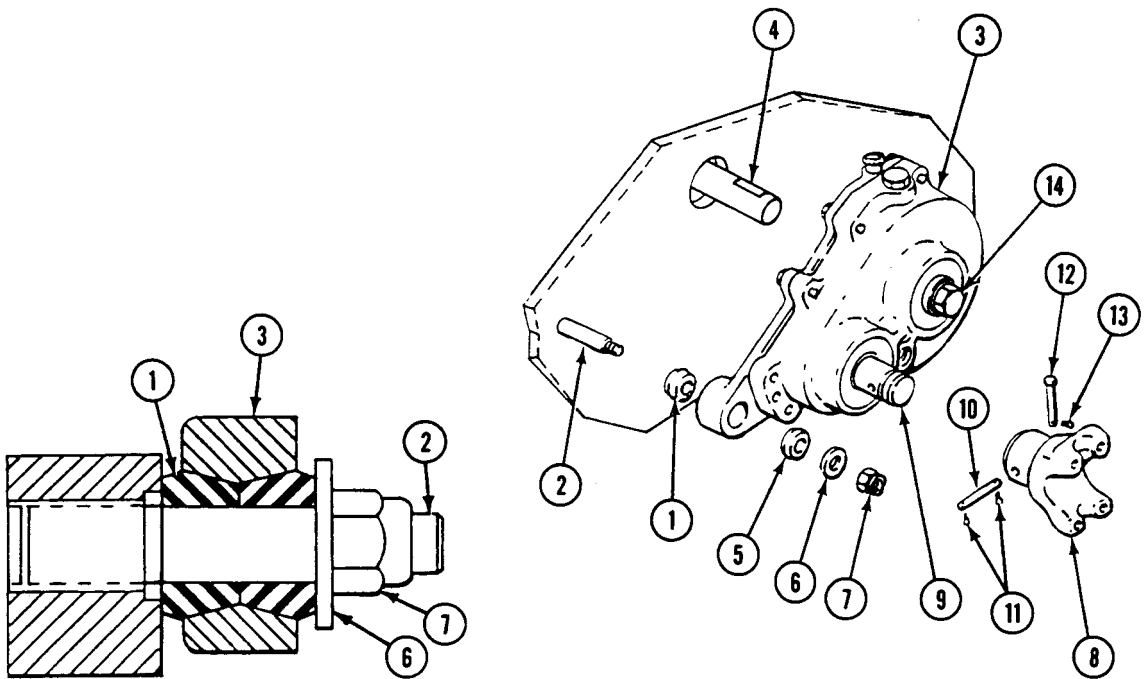
- Clean and service gearcase (WP 0128 00).
- Check nut and stud. Replace nut that has stripped threads. Notify your supervisor if stud is cracked or stripped.
- Check gearcase. Replace gearcase that leaks or is cracked.
- Check bushings. Replace bushing that is worn or cracked.

INSTALLATION

CAUTION

Bushings used to mount the gearcase are tapered. They must be installed right to prevent bushing deformation and lack of shock absorption. Install bushings as shown with tapered side toward gearcase.

1. Place bushing (1) on stud (2) in carrier bulkhead.
2. Position gearcase (3) on carrier bulkhead. Align bushing (1) and stud (2) in gearcase mounting hole and winch output shaft (4) with spline in gearcase. Seat gearcase firmly against stud and shaft.
3. Install bushing (5) on stud (2). Install washer (6) and new lock nut (7).
4. Place yoke (8) on gearcase output shaft (9). Secure with shear pin (10) and two new cotter pins (11).
5. Install pin (12) and new cotter pin (13) in yoke (8).
6. Install screw (14) replaced by gearcase removal tool during removal.

**FOLLOW-THROUGH STEPS**

1. Connect winch propeller shaft at transfer gearcase (WP 0412 00).
2. Install cab center floor plate (WP 0394 00).
3. Connect battery negative lead (WP 0292 00).

END OF TASK

REPLACE WINCH POWER TAKEOFF CONTROL (M548A1)

0414 00

THIS WORK PACKAGE COVERS:

- Removal (page 0414 00-1).
- Cleaning (page 0414 00-2).
- Installation (page 0414 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Socket Wrench Set (WP 0541 00, Item 63)
- Torque Wrench (WP 0541 00, Item 67)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Left grille removed (WP 0390 00)
- Center seat raised (see your -10)
- Cab center floor plate removed (WP 0394 00)
- Power plant rear access covers/door removed (see your -10)
- Battery negative lead disconnected (WP 0292 00)

Materials/Parts

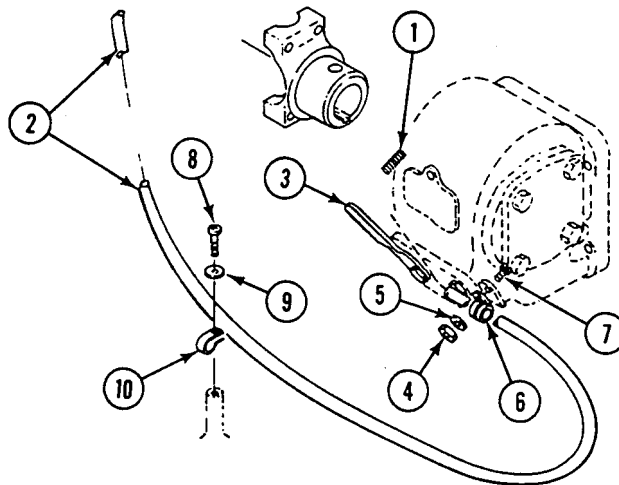
- GAA grease (WP 0542 00, Item 14)
- Grommet

Personnel Required

Unit Mechanic

REMOVAL

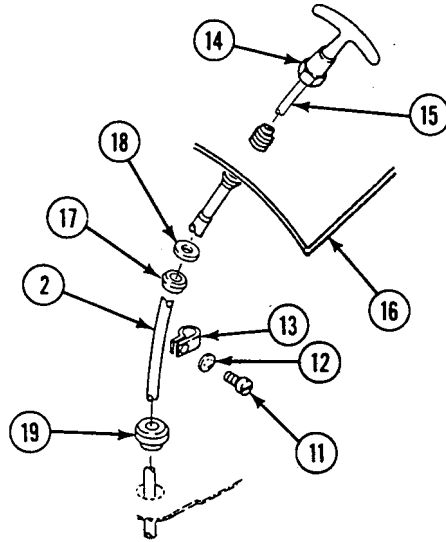
1. Loosen setscrew (1) that secures outer control cable (2) to power takeoff actuating lever (3).
2. Remove jam nut (4), nut (5), and bracket (6) that secure outer control cable (2) to screw (7). Pull control cable from bracket.
3. Remove screw (8), washer (9), and clamp (10) that secure outer control cable (2) to power plant compartment.



REPLACE WINCH POWER TAKEOFF CONTROL (M548A1) — Continued

0414 00

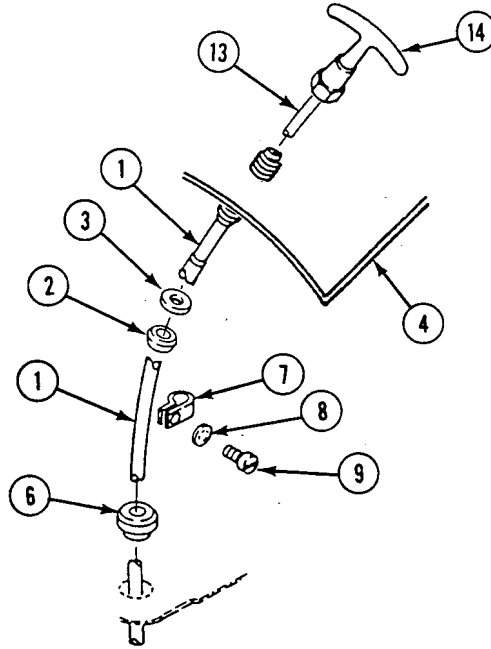
4. Remove screw (11), washer (12), and clamp (13) that secure outer control cable (2) to bulkhead inside cab.
5. Loosen nut (14) that secures inner control cable (15) to range selector housing (16) inside cab. Pull inner control cable out of housing. Push outer control cable (2) through opening in housing. Remove jam nut (17) and washer (18).
6. Remove grommet (19) from cab floor. Discard grommet.

**CLEANING**

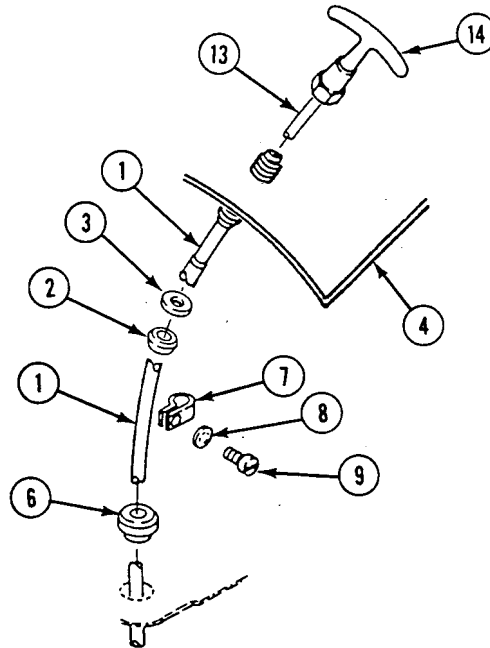
1. Clean all parts.
2. Check outer control cable casing. Replace outer control cable that is not flexible or if it is cracked, broken, or cut.
3. Lubricate outer control cable with grease (WP 0128 00).
4. Check screws, washers, and clamps. Replace parts that have stripped threads or are cracked or deformed.

INSTALLATION

1. Thread outer control cable (1) through jam nut (2), washer (3), and opening in range selector housing (4). Install jam nut on control cable a few turns but do not tighten.
2. Install new grommet (6) on cab floor. Thread outer control cable (1) through grommet.
3. Install clamp (7), washer (8), and screw (9) to secure outer control cable (1) to bulkhead inside cab.



4. Thread outer control cable (1) through power plant compartment and bulkhead. Secure control cable to compartment floor with clamp (10), washer (11), and screw (12).
5. Place range selector in NEUTRAL (see your -10).
6. Push inner control cable (13) through range selector housing (4) and winch control handle (14). Push winch control handle against range selector housing and turn handle a quarter turn to lock it. Tighten nut (2).
7. Push power takeoff actuating lever (15) as far forward as it will go. Bend outer control cable (1) so you can put end through setscrew (16). Do not tighten setscrew.
8. Install bracket (17) and nut (18) on screw (19). Tighten nut. Install and tighten jam nut (20).
9. Tighten setscrew (16).



FOLLOW THROUGH STEPS

1. Install cab center floor plate (WP 0394 00).
2. Connect battery negative lead (WP 0292 00).
3. Install left grille (WP 0390 00).
4. Lower center seat (see your -10).
5. Install power plant rear access covers/door (see your -10). Install power plant rear access covers/door (see your -10).

END OF TASK

REPLACE POWER TAKEOFF (M548A1)

0415 00

THIS WORK PACKAGE COVERS:

Removal (page 0415 00-2).
 Installation (page 0415 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 63)
 Torque Wrench (WP 0541 00, Item 67)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead disconnected (WP 0292 00)
 Winch propeller shaft at power takeoff disconnected
 (WP 0412 00)
 Control cable disconnected from power takeoff
 (WP 0414 00)
 Power plant rear access door removed (see your -10)
 Left grille removed (WP 0390 00)
 Air filter canister and element removed (WP 0152 00)

Materials/Parts

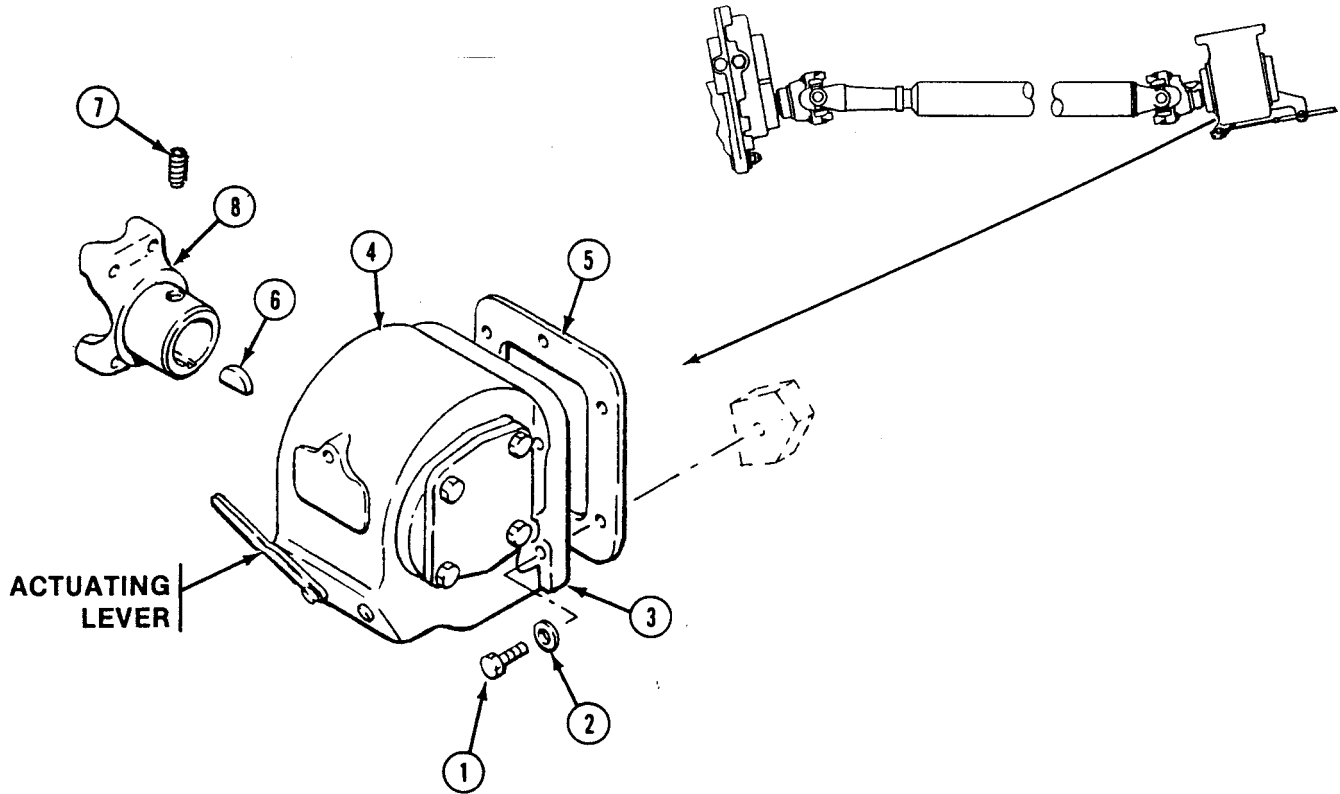
Gasket

Personnel Required

Unit Mechanic

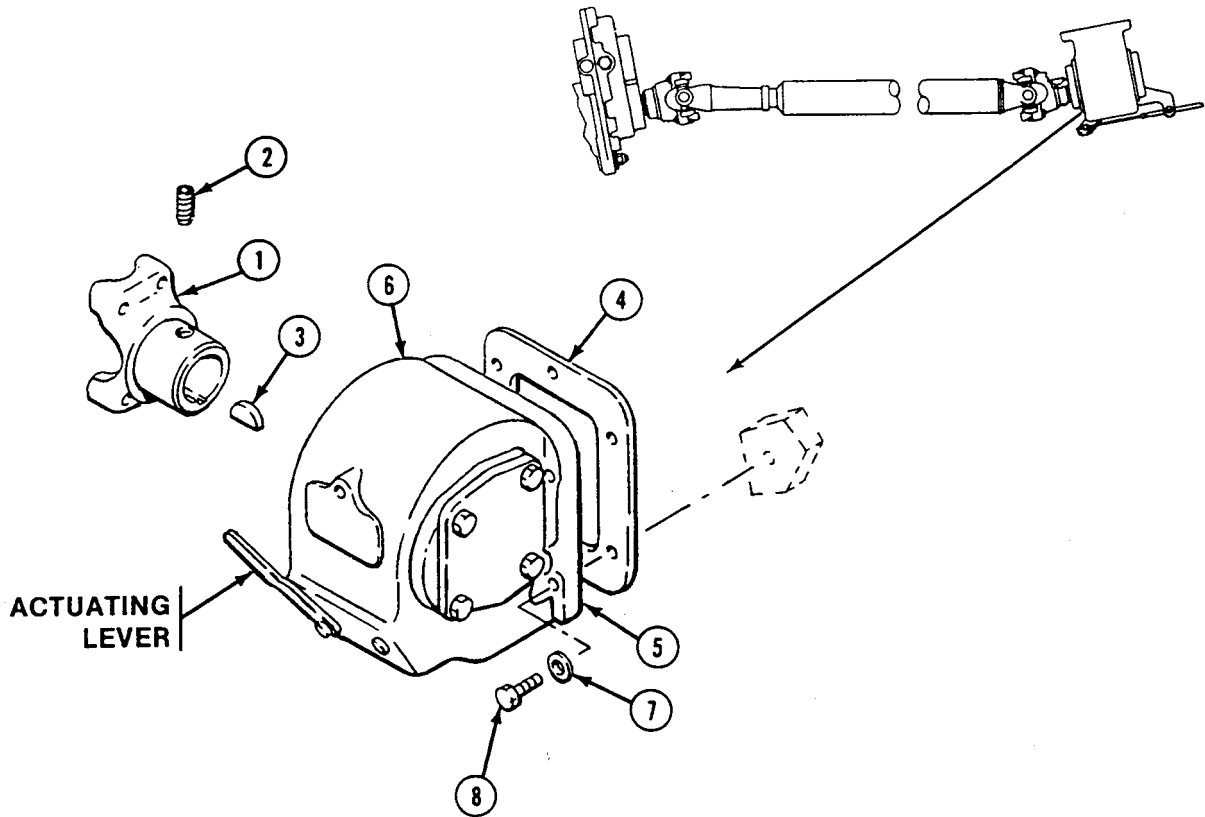
REMOVAL

1. Place range selector in NEUTRAL (see your -10).
2. Remove six screws (1) and washers (2) from power takeoff mounting flange (3). Pull power takeoff (4) from transmission.
3. Remove and discard gasket (5).
4. Remove key (6) and setscrew (7) from yoke (8). Pull yoke from power takeoff shaft.



INSTALLATION

1. Install yoke (1) on power takeoff shaft. Secure yoke to shaft by installing setscrew (2) and key (3).
2. Place one 0.020 inch (0.5 mm) new gasket (4) on power takeoff mounting flange (5) of power takeoff (6).
3. Place power takeoff (6) on transmission. Place six washers (7) on screws (8). Install screws through power takeoff into transmission. Tighten screws to 216-264 lb-in (26-32 N•m) torque.



4. Connect winch propeller shaft to power takeoff (WP 0412 00).
5. Connect power takeoff control to power takeoff (WP 0414 00).
6. Place range selector in NEUTRAL (see your -10).
7. Connect battery negative lead (WP 0292 00).
8. Place winch drum lever in DISENGAGE (see your -10).
9. Check power takeoff for operation by pulling winch control handle in cab (see your -10) and listening to power takeoff.

CAUTION

Two gaskets are supplied with power takeoff: one is 0.020 inch (0.5 mm) thick, the other is 0.010 inch (0.25 mm) thick. The power takeoff can be damaged during operation if the wrong gasket is installed.

10. A whining sound from power takeoff means an incorrect backlash between power takeoff and gear in transmission. Add 0.010 inch (0.25 mm) gaskets, as needed, to stop whining sound.

NOTE

Notify your supervisor if changing gaskets does not stop whining or vibration.

11. A badly vibrating power takeoff means gear backlash is too tight. Remove two 0.010 inch (0.25 mm) gaskets to stop vibration. Add one gasket if needed.

FOLLOW-THROUGH STEPS

1. Install air filter container and element (WP 0152 00).
2. Install left grille (WP 0390 00).
3. Install power plant rear access door (see your -10).

END OF TASK

REPLACE WIRE ROPE, HOOK, AND CHAIN (M548A1)

0416 00

THIS WORK PACKAGE COVERS:

- Removal (page 0416 00-2).
- Cleaning (page 0416 00-2).
- Installation (page 0416 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10
FM 20-22
TM 5-725

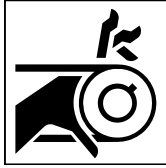
Materials/Parts

Wire rope grease (WP 0542 00, Item 46)
Rod, 1/8 inch (3 mm)
Used engine oil (see your LO)

Equipment Condition

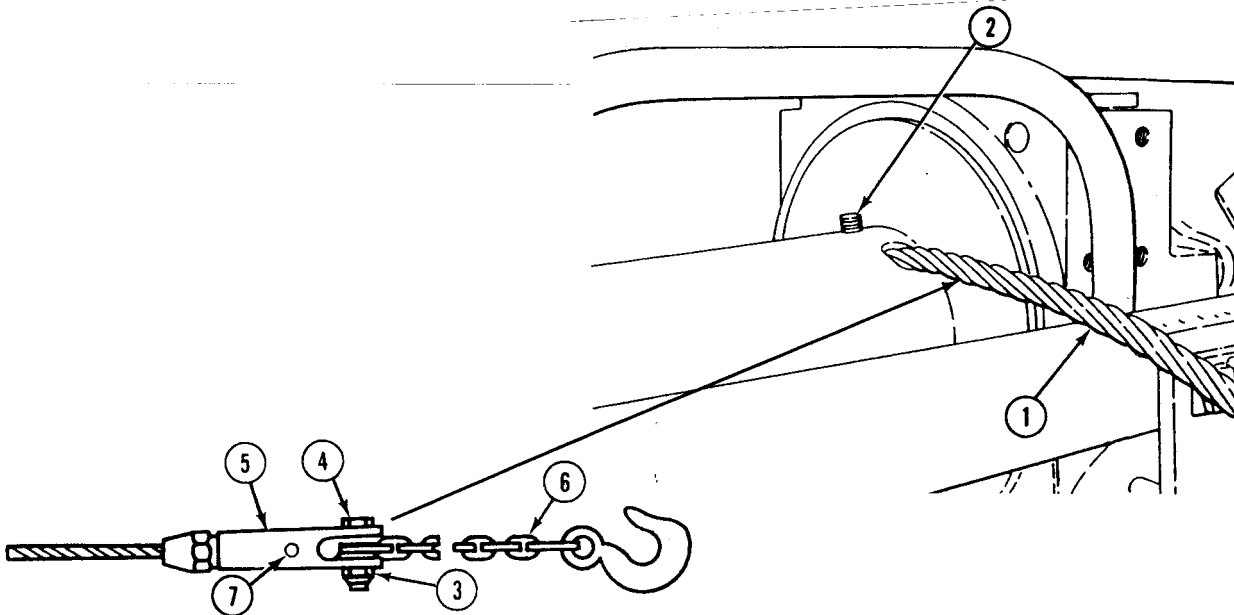
Engine stopped/shutdown (see your -10)
Carrier blocked (see your -10)
Battery negative lead disconnected (WP 0292 00)

REMOVAL

WARNING

Wear leather gloves when handling wire rope. Broken wires can rip your hands open.

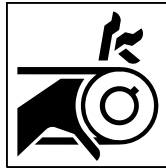
1. Use helper to reel out wire rope (1) as far as it will go (see your -10).
2. Loosen screw (2). Pull wire rope from drum.
3. Remove nut (3) and bolt (4) from clevis (5). Remove hook and chain (6) from clevis.

**CLEANING**

1. Check wire rope. See your FM 20-22 and TM 5-725 for wire rope wear criteria. Replace rope assembly if wires are broken or badly worn. Replace clevis or pin that is damaged.
2. Insert a 1/8 inch (3 mm) rod into inspection hole (7) in clevis. Replace wire rope assembly if rod can be inserted more than 3/4 inch (19 mm).
3. Check chain. Replace chain assembly if chain or hook has cracks.

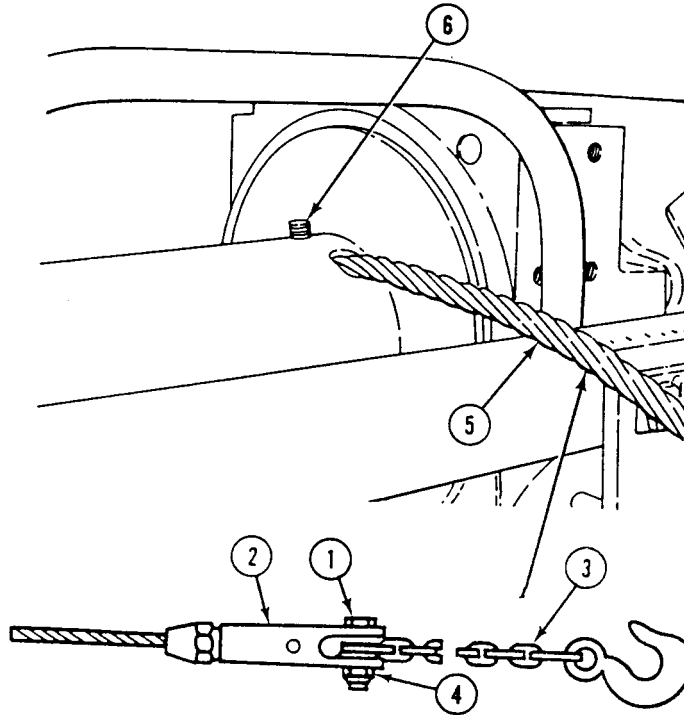
INSTALLATION

1. Install bolt (1) through clevis (2) and hook and chain (3). Secure with nut (4).
2. Turn winch drum until mounting hole in drum is on top.

WARNING

Wear leather gloves when handling wire rope. Broken wires can rip your hands open.

3. Push wire rope (5) through mounting hole as far as it will go. Install and tighten screw (6).



4. Lube wire rope (WP 0128 00).

FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start engine (see your -10).
3. Reel in wire rope (see your -10). Have helper assist.
4. Stop engine (see your -10).

END OF TASK

CHAPTER 20

UNIT MAINTENANCE INSTRUCTIONS
FOR HULL ACCESSORY ITEMS

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE CARGO COMPARTMENT COVER.....	0417 00
REPLACE CAB COVER AND FRAMES.....	0418 00
REPLACE FRONT STEP.....	0419 00
REPLACE WINDSHIELD WIPER MOTOR.....	0420 00
REPLACE WINDSHIELD WIPER LINKAGE.....	0421 00
REPLACE WINDSHIELD WIPER ARM AND BLADE.....	0422 00
REPLACE WIPER MOTOR GEAR.....	0423 00
REPLACE BILGE PUMP.....	0424 00
REPLACE BILGE PUMP DISCHARGE TUBES AND HOSES (M548A1).....	0425 00
REPLACE BILGE PUMP DISCHARGE TUBES AND HOSES (M548A3).....	0426 00
SERVICE/REPAIR/ADJUST VEHICLE COMPARTMENT HEATER.....	0427 00
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS (M548A3).....	0428 00
SERVICE VEHICLE COMPARTMENT HEATER FUEL PUMP.....	0429 00
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY FUEL PUMP (M548A3).....	0430 00
REPLACE VEHICLE COMPARTMENT HEATER CONTROL BOX.....	0431 00
REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS (M548A3).....	0432 00
REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN TOGGLE SWITCHES/ IDENTIFICATION PLATE.....	0433 00
REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN WIRING HARNESS.....	0434 00
REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A3).....	0435 00
SERVICE PERSONNEL HEATER FUEL FILTER (M548A3).....	0436 00
REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY (M548A3).....	0437 00
REPLACE VEHICLE COMPARTMENT HEATER AIR INLET DUCTS (M548A3).....	0438 00
REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/SEPARATOR FILTER (M548A3).....	0439 00
REPLACE PLATES, STENCILS, DECALS, RUBBER PADS, AND STRAPS.....	0440 00
DATA PLATE, MARKER, AND DECAL CHART (M548A1).....	0441 00
DATA PLATE, MARKER, AND DECAL CHART (M548A3).....	0442 00

REPLACE CARGO COMPARTMENT COVER

0417 00

THIS WORK PACKAGE COVERS:

Removal (page 0417 00-2).
 Installation (page 0417 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 63)
 Torque Wrench (WP 0541 00, Item 67)

References

See your -10

Materials/Parts

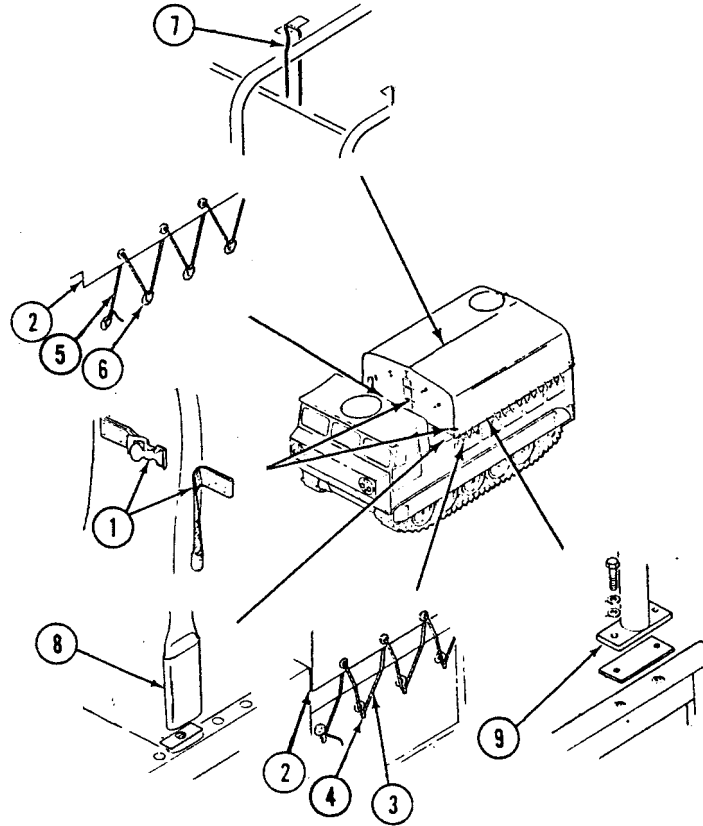
Lock washer (15)

Equipment Condition

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

REMOVAL

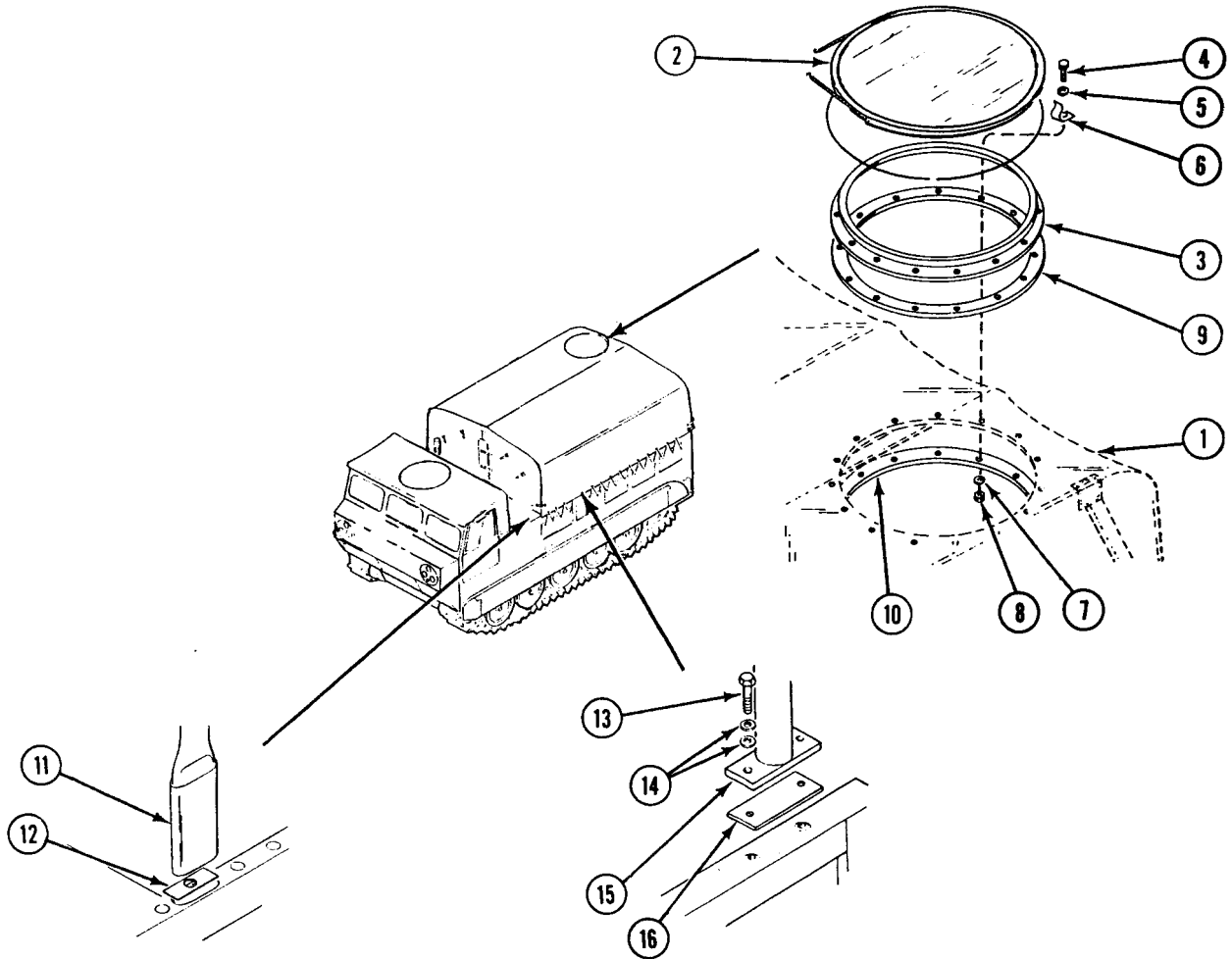
1. Disengage four web straps (1) that secure corners of cargo compartment cover (2).
2. Loosen four outside tie-down ropes (3) on sides and rear of carrier. Disengage ropes from outside tie-down cleats (4).
3. Loosen inside tie-down rope (5). Disengage rope from inside tie-down cleats (6).
4. Disengage six web straps (1) that secure front and rear closure flaps in closed position.
5. Untie nine cover tie ropes (7) that secure cargo compartment cover (2) to bow (8) and bow (9) inside carrier.



REPLACE CARGO COMPARTMENT COVER — Continued

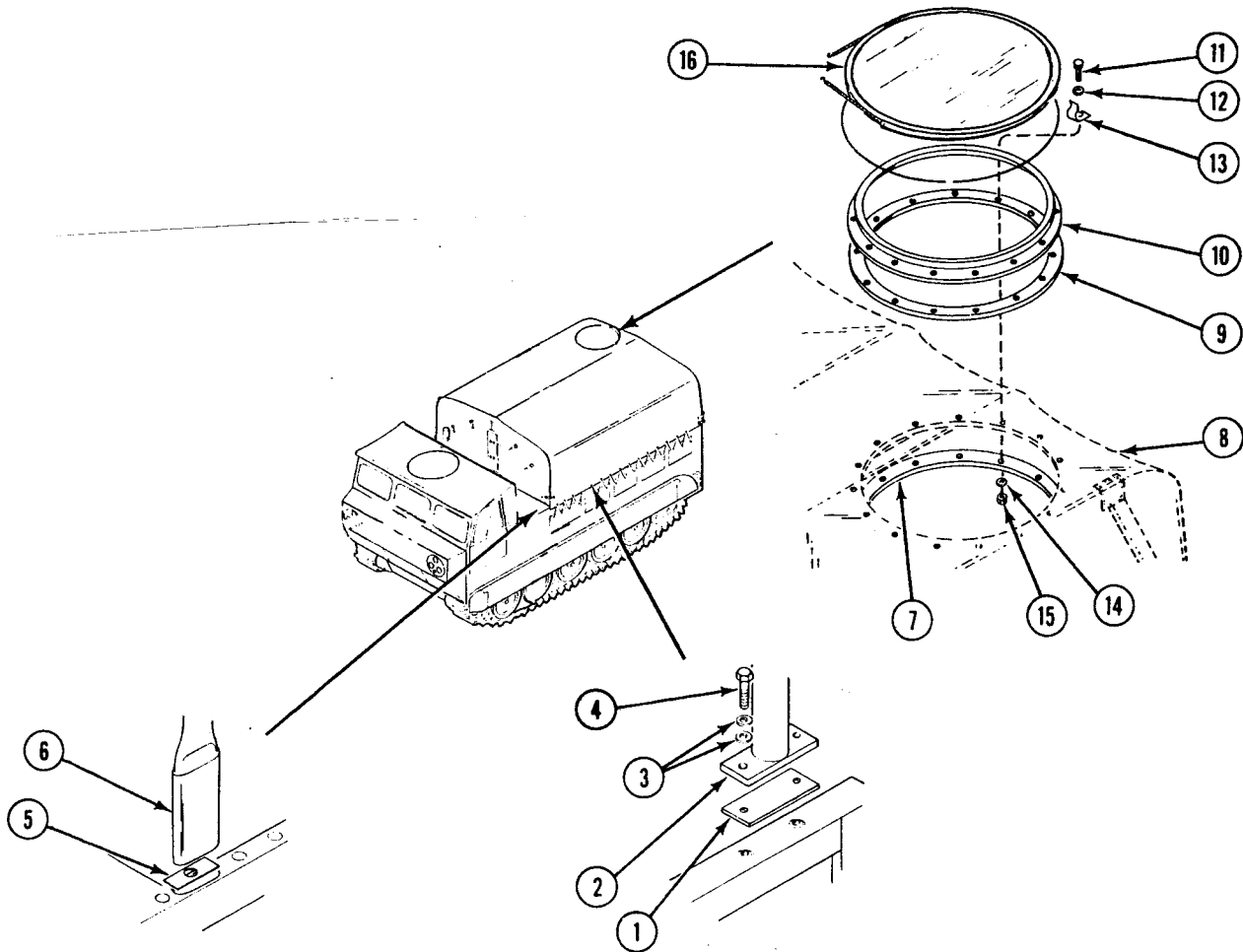
0417 00

6. Remove cargo compartment cover (1) from carrier.
7. Remove escape hatch cover (2) from hatch cover frame (3).
8. Remove 15 screws (4), 14 washers (5), retainer (6), 15 lock washers (7), and 15 nuts (8) that secure hatch cover frame (3) and gasket (9) to cargo compartment cover (1) and clamping ring (10). Discard lock washers.
9. Remove four bows (11) and eight pads (12) from carrier.
10. Remove 8 screws (13) and 16 washers (14) that secure 2 bows (15) to carrier. Remove bows and 4 pads (16).

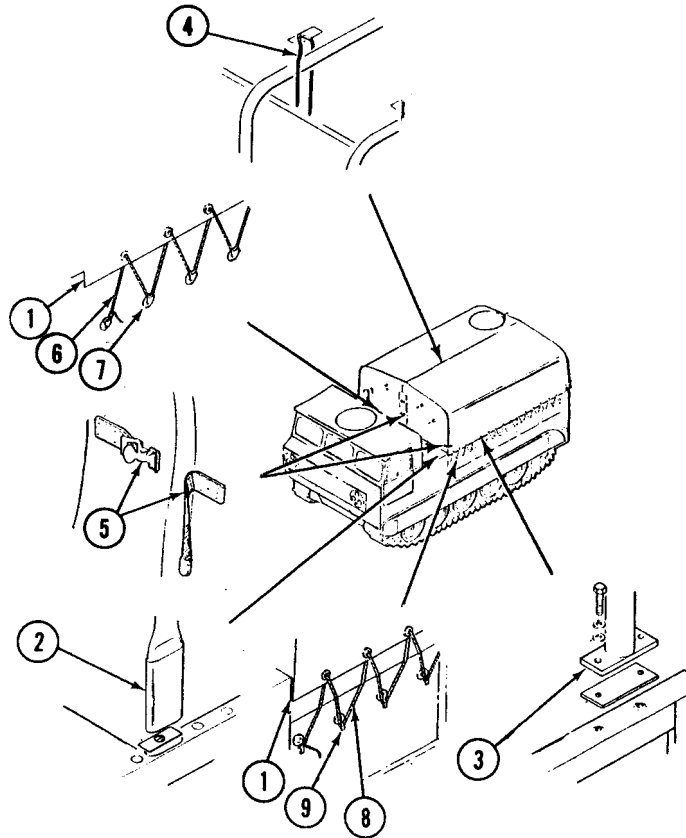


INSTALLATION

1. Place 4 bow pads (1) and 2 bows (2) on carrier. Secure with 16 washers (3) and 8 screws (4).
2. Install eight pads (5) and four bows (6) on carrier.
3. Install clamping ring (7) in cargo compartment cover (8). Secure to gasket (9) and hatch cover frame (10) with 15 screws (11), 14 washers (12), retainer (13), 15 new lock washers (14), and 15 nuts (15). Tighten nuts to 20-25 lb-in (27-34 N•m) torque.
4. Install escape hatch cover (16) on hatch cover frame (10).



5. Install cargo compartment cover (1) over bow (2) and bow (3) with escape hatch at right rear.
6. Attach cargo compartment cover (1) to two bows (2) and two bows (3) with nine cover tie ropes (4) inside carrier.
7. Fasten three web straps (5) to secure front closure flaps in closed position.
8. Install inside tie-down rope (6) under inside tie-down cleats (7). Tighten ropes until front flaps of cargo compartment cover (1) are positioned right. Tie rope ends securely. Stow ends of rope by pulling ends between secured portion of rope and power plant compartment rear bulkhead.

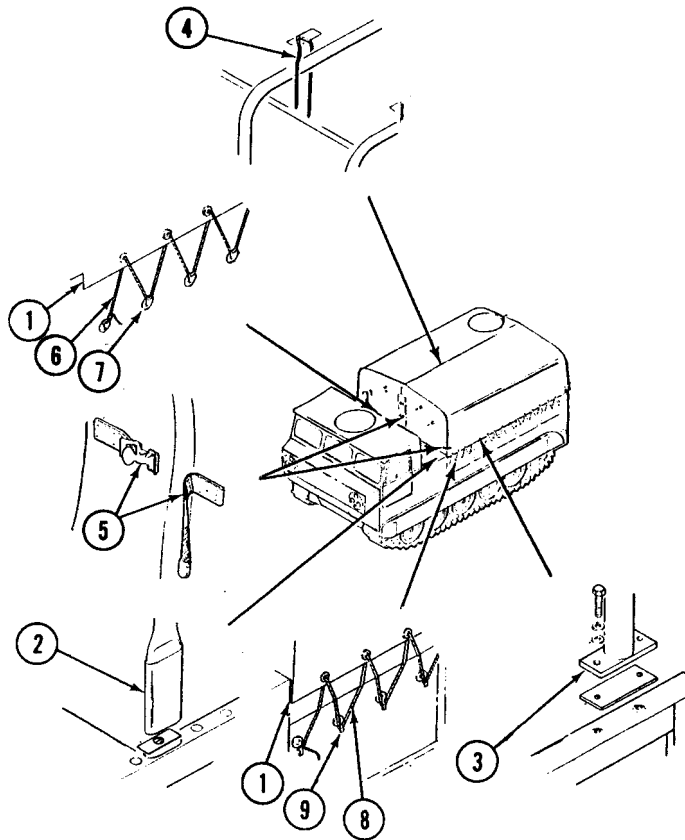


9. Make sure cargo compartment cover (1) is positioned right and stretched smoothly over bows (2) and bows (3). Fasten three web straps (5) to secure rear closure flaps in closed position.
10. Install four outside tie-down ropes (8) under outside tie-down cleats (9). Tie rope ends securely. Stow ends by pulling between secured portion of rope and hull of carrier.

NOTE

Secure sides of cargo compartment cover first, working from front to rear; then secure rear flaps. Make sure uniform tension is applied to all parts of cover and that cover is positioned right and is as smooth as possible.

11. Fasten four web straps (5) to secure rear corners of cargo compartment cover (1).



END OF TASK

REPLACE CAB COVER AND FRAMES

0418 00

THIS WORK PACKAGE COVERS:

Removal (page 0418 00-2).
 Installation (page 0418 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 63)
 Torque Wrench (WP 0541 00, Item 67)

References

See your -10

Materials/Parts

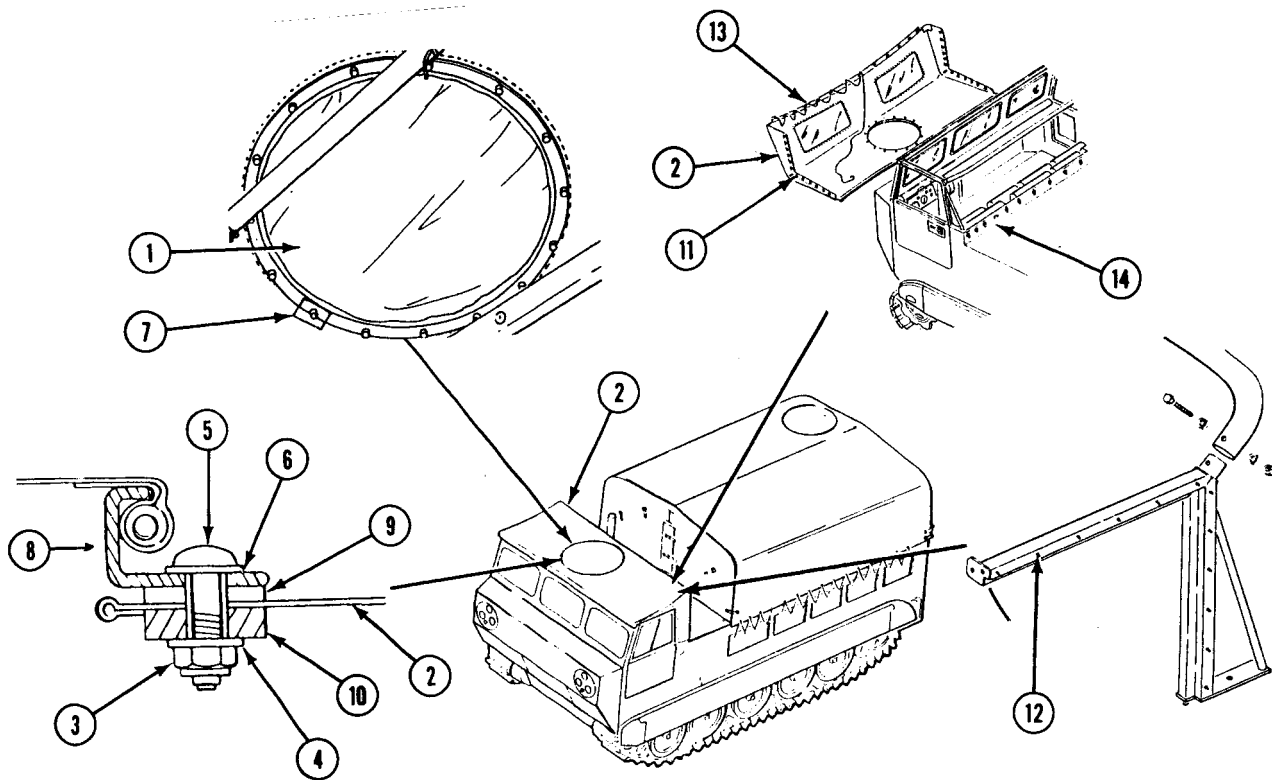
Lock nut (15)
 Lock nut (12)
 Lock nut (2)
 Lock nut (2)
 Lock washers (14)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Machine gun mount kit removed (WP 0513 00),
 (WP 0514 00), or (WP 0515 00)

REMOVAL

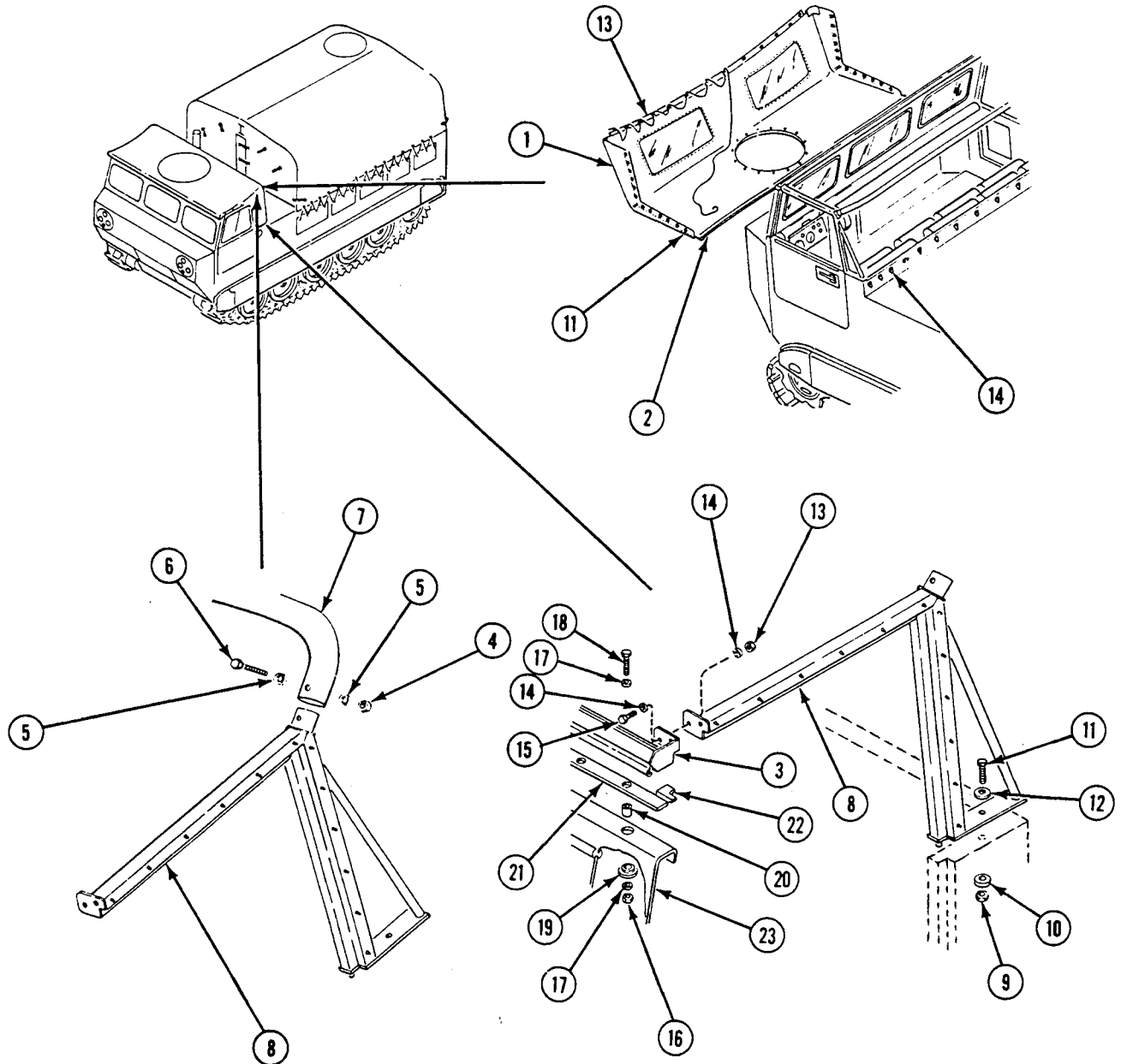
1. Remove machine gun hatch cover (1) from cab cover (2).
2. Remove 15 lock nuts (3), washers (4), screws (5), 14 lock washers (6), and hatch cover retainer (7) that secure ring (8) and gasket (9) to cover (2) and ring (10). Discard lock nuts and lock washers.
3. Disengage 12 cover snaps (11) from snap studs (12) on each side of cab cover (2).
4. Disengage tie-down rope (13) from tie-down cleats (14) at rear of cab.
5. Pull cab cover (2) forward and let cover hang down in front of carrier.



REPLACE CAB COVER AND FRAMES — Continued

0418 00

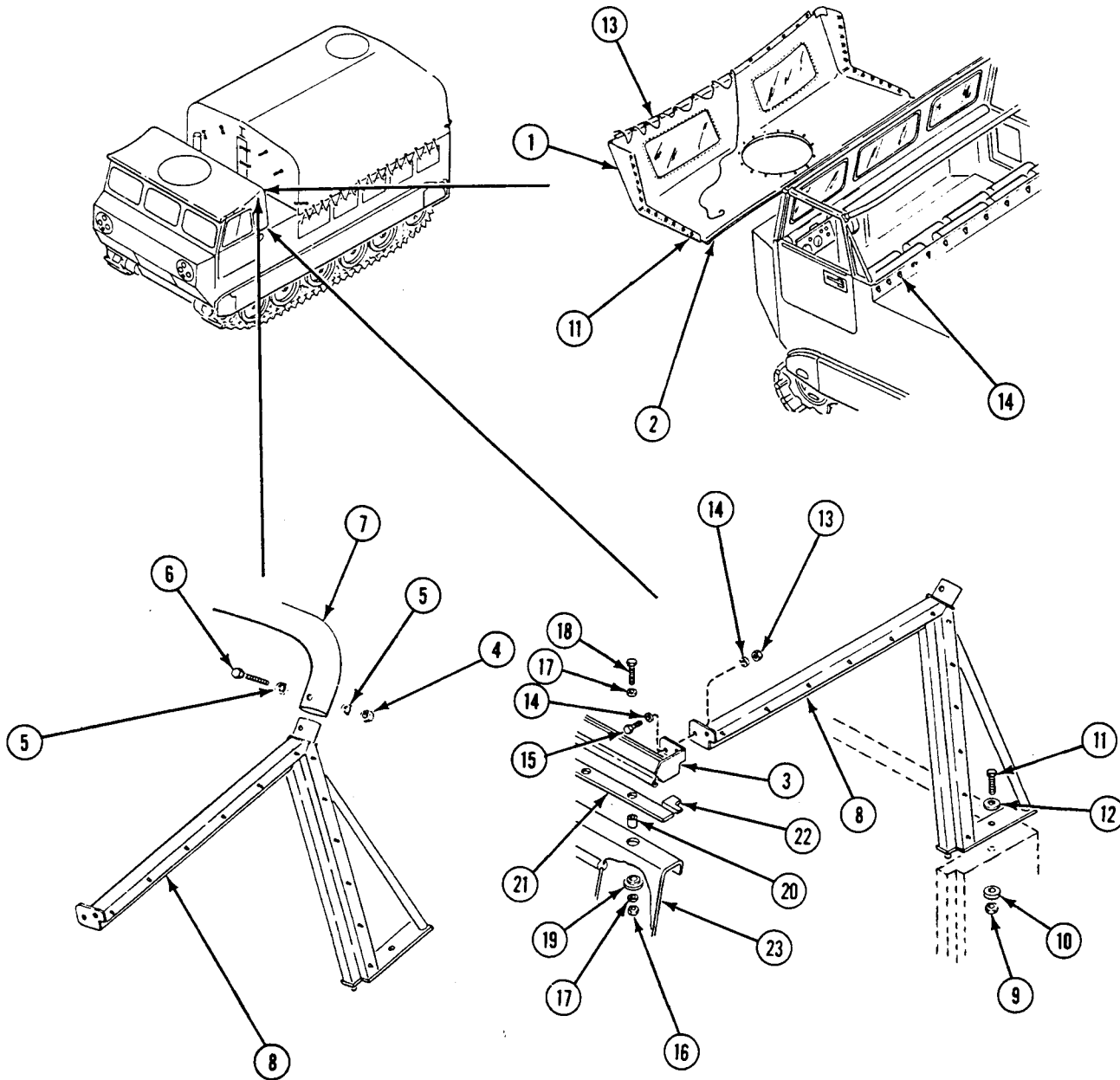
6. Pull cab cover (1) to side to disengage rope retainer (2) from front mounting frame (3).
7. Remove two lock nuts (4), four washers (5), and two screws (6) that secure cab bow (7) to two window frames (8). Remove bow. Discard lock nuts.
8. Remove two lock nuts (9), spacers (10), screws (11), and washers (12) that secure two window frames (8) to hull. Discard lock nuts.



REPLACE CAB COVER AND FRAMES — Continued

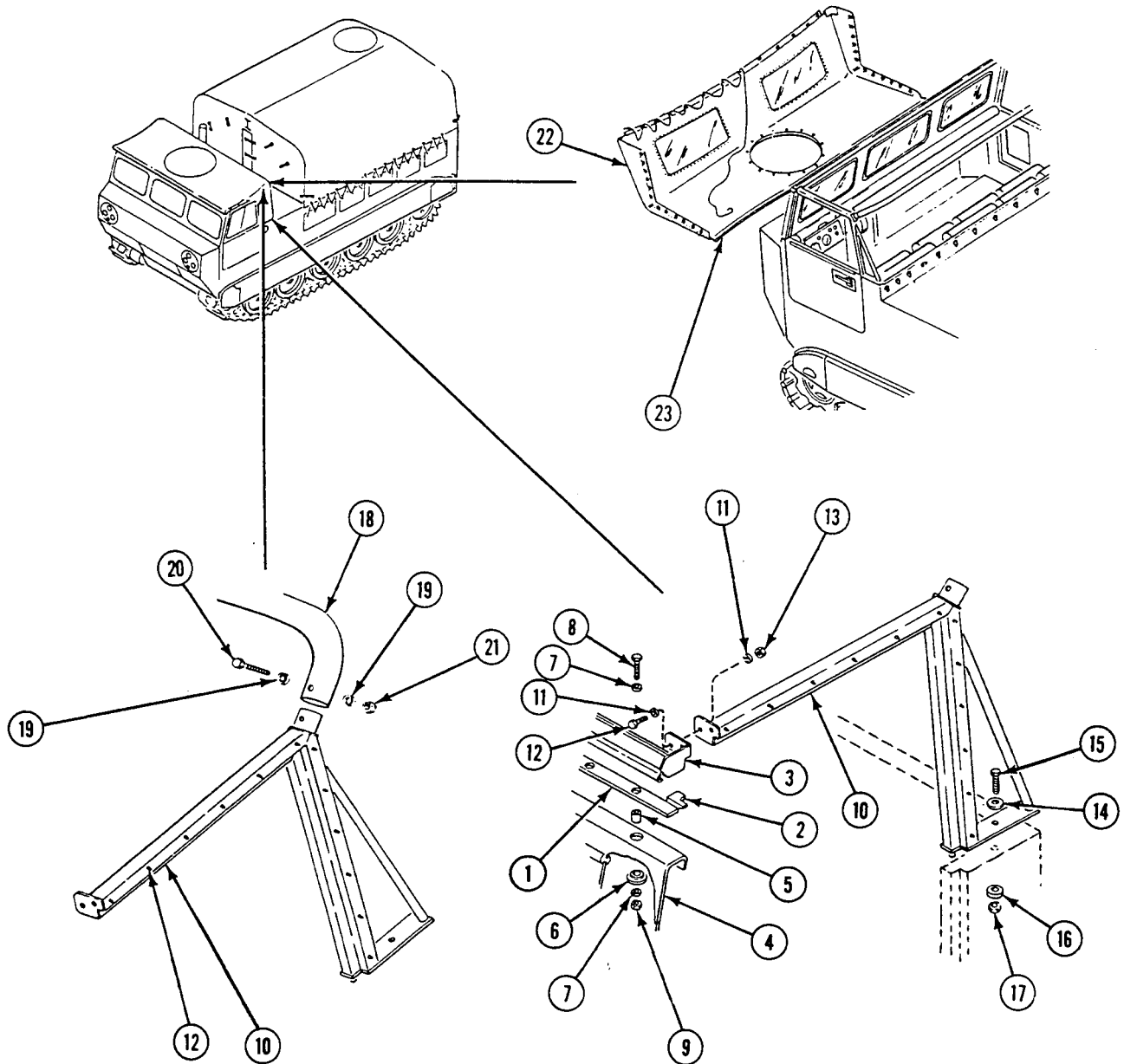
0418 00

9. Remove four lock nuts (13), eight washers (14), and four screws (15) that secure two window frames (8) to front mounting frame (3). Remove frames. Discard lock nuts.
10. Remove 8 lock nuts (16), 16 washers (17), 8 screws (18), 16 grommets (19), and 8 spacers (20). Remove front mounting frame (3), mounting frame seal (21), and two frame end seals (22) from cab windshield (23). Discard lock nuts.



INSTALLATION

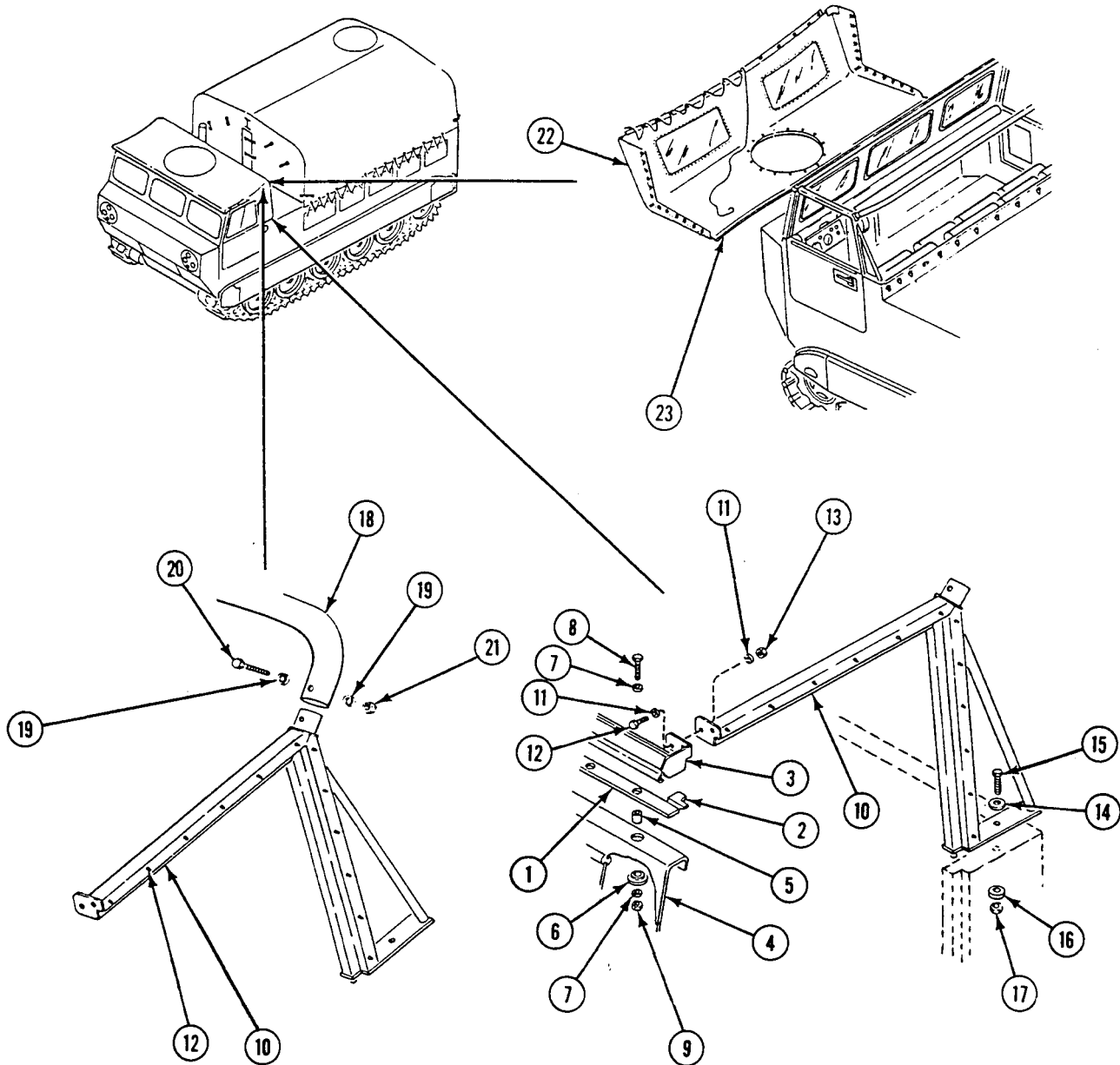
1. Place mounting frame seal (1), two frame end seals (2), and front mounting frame (3) on cab windshield (4). Secure seals and frame with 8 spacers (5), 16 grommets (6), washers (7), 8 screws (8), and new lock nuts (9).
2. Place two window frames (10) on carrier. Secure frames to front mounting frame (3) with eight washers (11), four screws (12), and four new lock nuts (13).



REPLACE CAB COVER AND FRAMES — Continued

0418 00

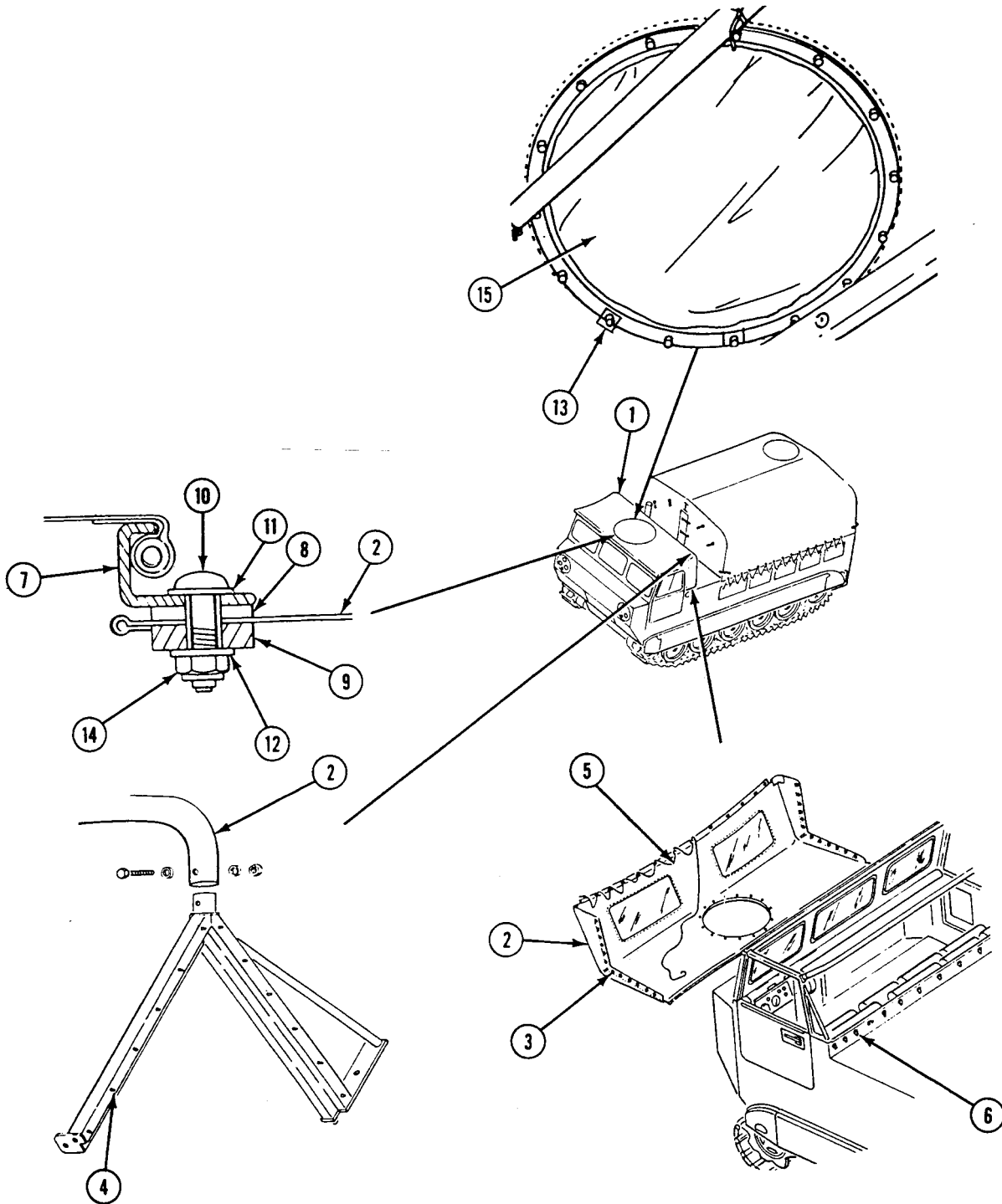
3. Secure two window frames (10) to hull with two washers (14), screws (15), spacers (16), and new lock nuts (17).
4. Install cab bow (18) on two window frames (10). Secure bow to frames with four washers (19), two screws (20), and new lock nuts (21).
5. Place cab cover (22) with rope retainer (23) at top and inside facing forward. Align retainer with groove in front mounting frame (3). Pull cover across front of carrier until cover is positioned, right for installation.



REPLACE CAB COVER AND FRAMES — Continued

0418 00

6. Pull cab cover (1) back over bow (2).
7. Secure 12 cover snaps (3) on snap studs (4) on each side of cab over (1) starting at front.
8. Secure tie-down rope (5) under tie-down cleats (6) at rear of cab.
9. Place retaining ring (7) with gasket (8) on cable cover (1). Secure with ring (9), 15 screws (10), washers (11), 14 new lock washers (12), hatch cover retainer (13) and 15 nuts (14). Tighten nuts to 20-25 lb-in (27-40 N•m) torque.
10. Install machine gun hatch cover (15) on cab cover (1).



FOLLOW-THROUGH STEPS

1. Install machine gun mount kit (WP 0513 00), (WP 0514 00), or (WP 0515 00).

END OF TASK

REPLACE FRONT STEP

0419 00

THIS WORK PACKAGE COVERS:

Removal (page 0419 00-1).
 Installation (page 0419 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

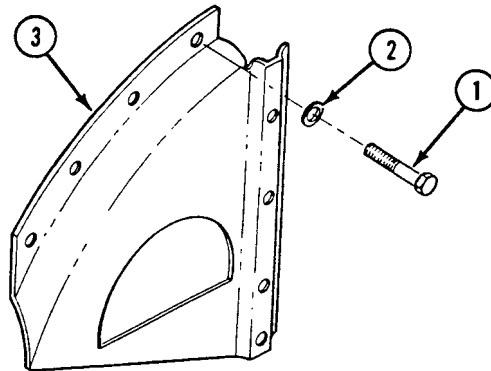
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

REMOVAL

1. Remove four screws (1) and washers (2) from front step (3).
2. Remove front step (3) from hull.
3. Check front step. Straighten bends and dents. Weld cracks (WP 0406 00).



INSTALLATION

1. Place front step (3) on hull. Secure with four screws (1) and washers (2).

END OF TASK

REPLACE WINDSHIELD WIPER MOTOR

0420 00

THIS WORK PACKAGE COVERS:

Removal (page 0420 00-2).
 Installation (page 0420 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut
 Lock washer (6)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

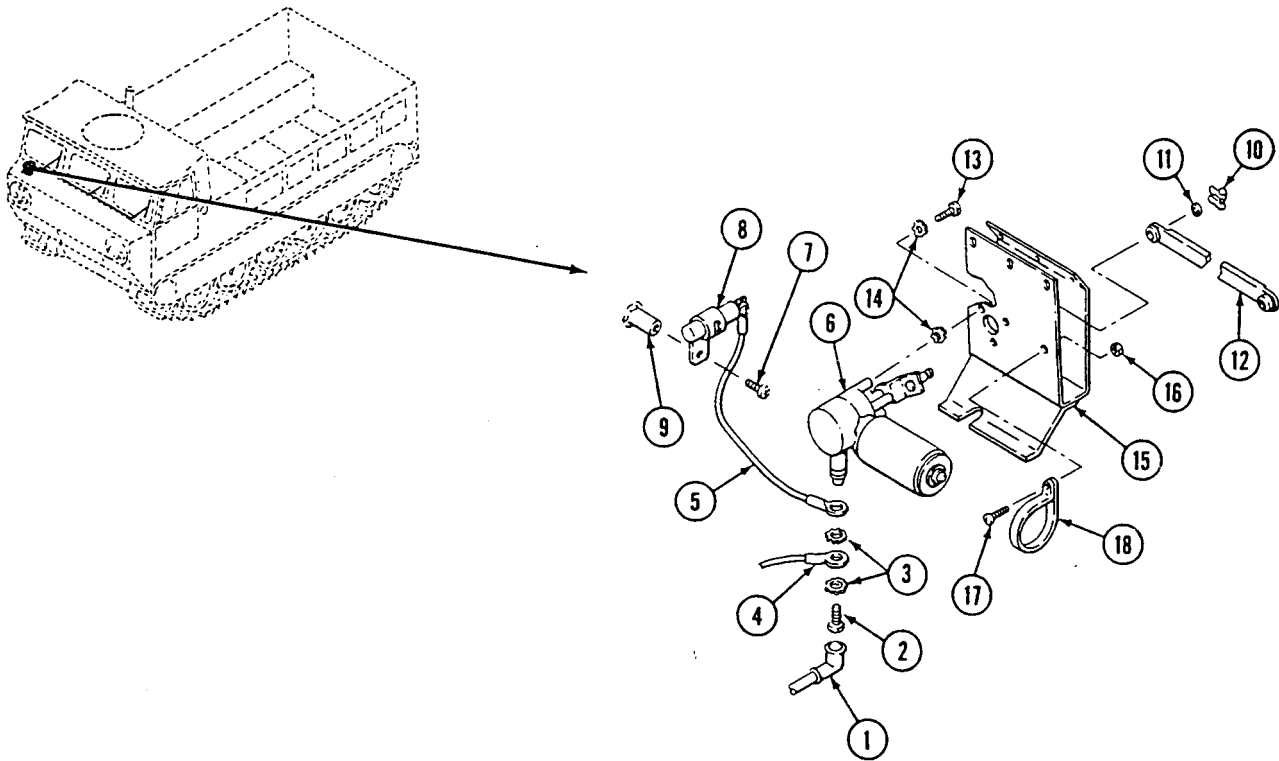
Personnel Required

Unit Mechanic

Battery negative lead(s) disconnected (WP 0292 00)

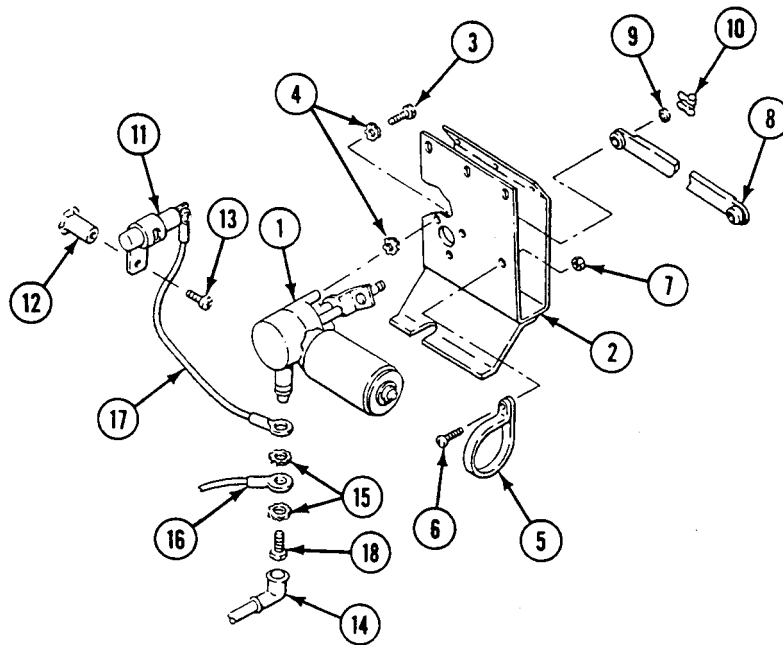
REMOVAL

1. Pull nipple (1) away from screw (2). Remove screw (2), two washers (3), lead (4), and capacitor lead (5) from windshield wiper motor (6).
2. Remove screw (7) and capacitor (8) from weldnut (9).
3. Remove tension clip (10), washer (11), and link (12) from pivot post on windshield wiper motor (6).
4. Remove three screws (13) and six lock washers (14) that secure windshield wiper motor (6) to bracket (15). Remove lock nut (16), screw (17), and clamp (18).
5. Lift windshield wiper motor (6) from carrier.



INSTALLATION

1. Place pivot post of windshield wiper motor (1) through hole in bracket (2).
2. Install three screws (3) and six new lock washers (4) to secure windshield wiper motor (1) to bracket (2). Place washers on each side of bracket. Do not tighten screws.
3. Slide clamp (5) over end of windshield wiper motor (1). Secure clamp to bracket with screw (6) and new lock nut (7). Tighten all screws.
4. Place end of link (8) on pivot post of windshield wiper motor (1). Install washer (9) and clip (10) on pivot post.
5. Install capacitor (11) on weldnut (12) with screw (13).
6. Pull nipple (14) back and install washer (15), lead (16), washer (15), and capacitor lead (17) on screw (18). Install screw in windshield wiper motor (1).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Check windshield wiper motor for proper operation.
3. Turn windshield wiper switch OFF (see your -10).

END OF TASK

REPLACE WINDSHIELD WIPER LINKAGE

0421 00

THIS WORK PACKAGE COVERS:

Removal (page 0421 00-2).
Installation (page 0421 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock nut

Equipment Condition

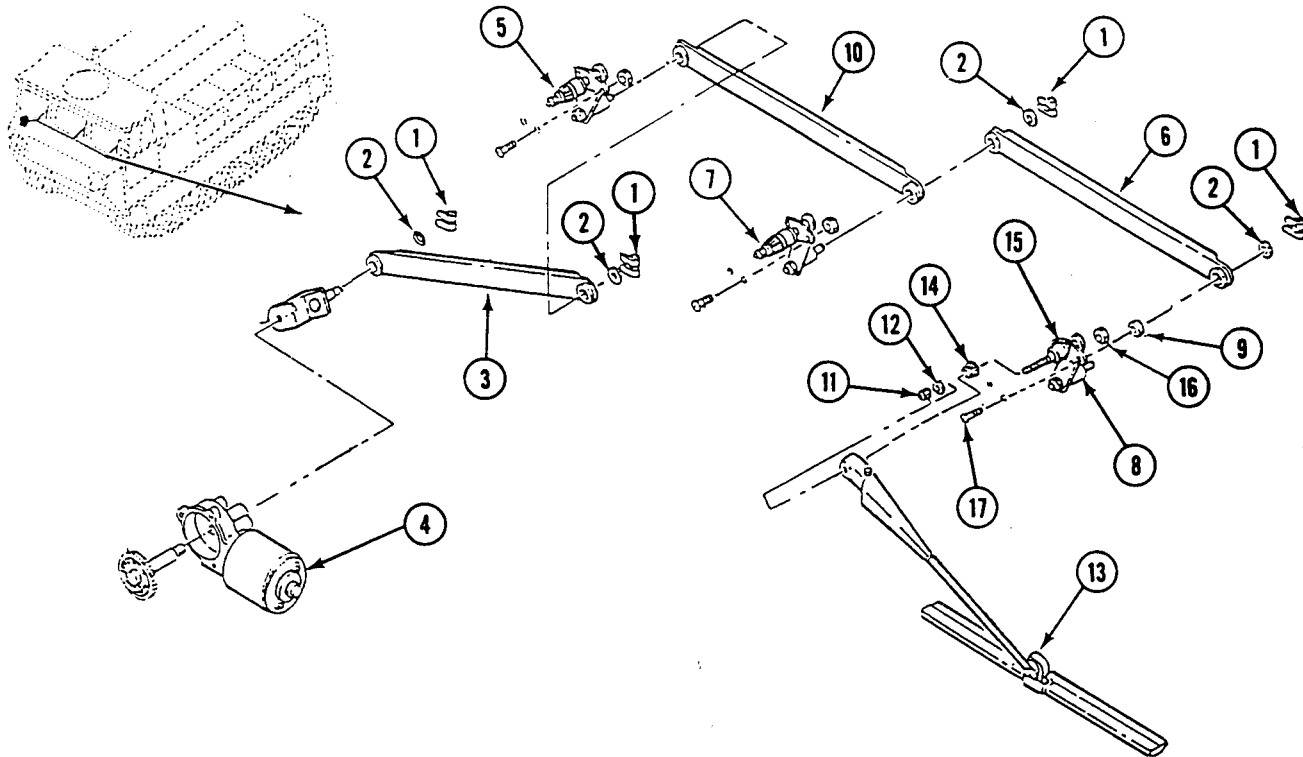
Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead(s) disconnected (WP 0292 00)

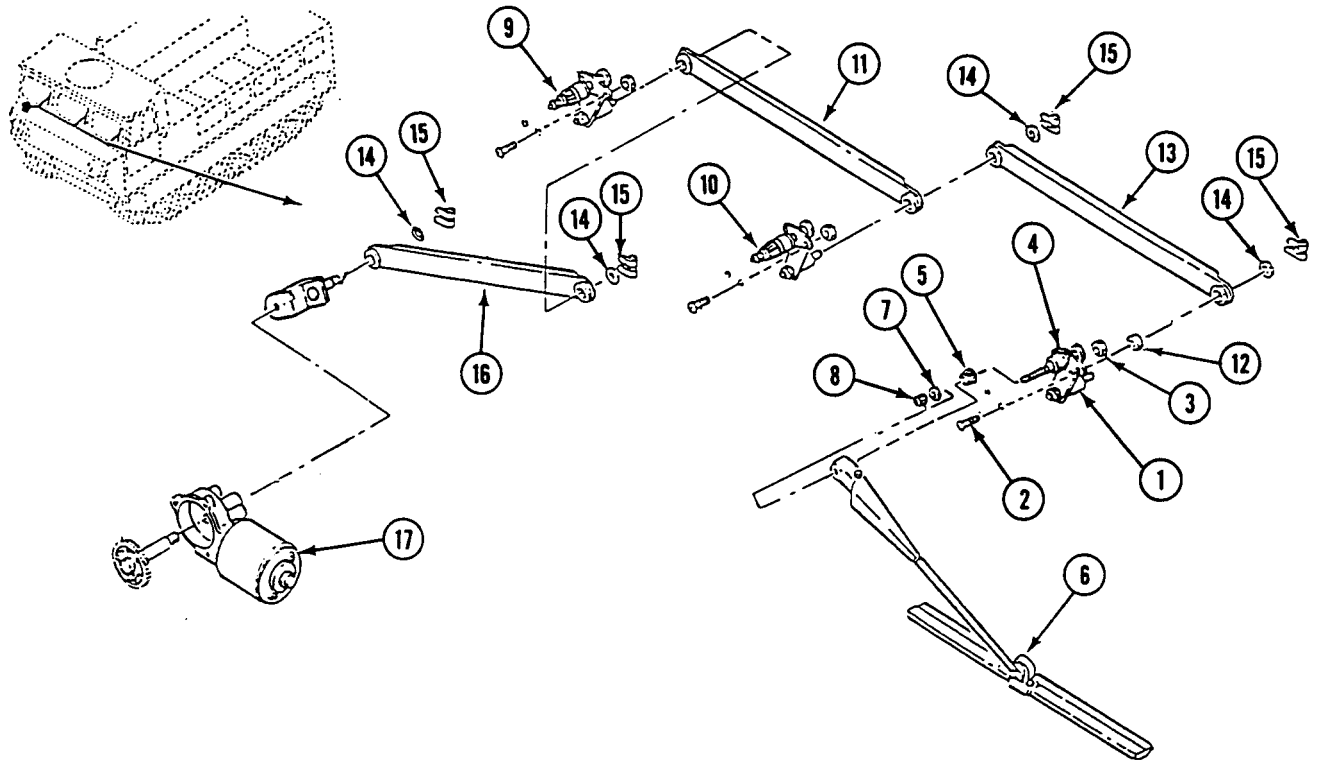
REMOVAL

1. Remove two clips (1) and washers (2) from link (3). Pull link from motor (4) and pivot (5).
2. Remove two clips (1) and washers (2) from link (6). Pull link from pivot (7) and pivot (8). Remove spacer (9) from pivot (8).
3. Pull link (10) from pivot (5) and pivot (7).
4. Remove nut (11), lock washer (12), and arm and blade assembly (13) from pivot (8). Remove tapered bushing (14) from pivot. Remove arm and blade assemblies from pivot (5) and pivot (7) the same way.
5. Remove nut (15) from pivot (8). Remove lock nut (16) and screw (17) from pivot (8). Pull pivot from carrier. Remove pivot (5) and pivot (7) the same way. Discard lock nut.



INSTALLATION

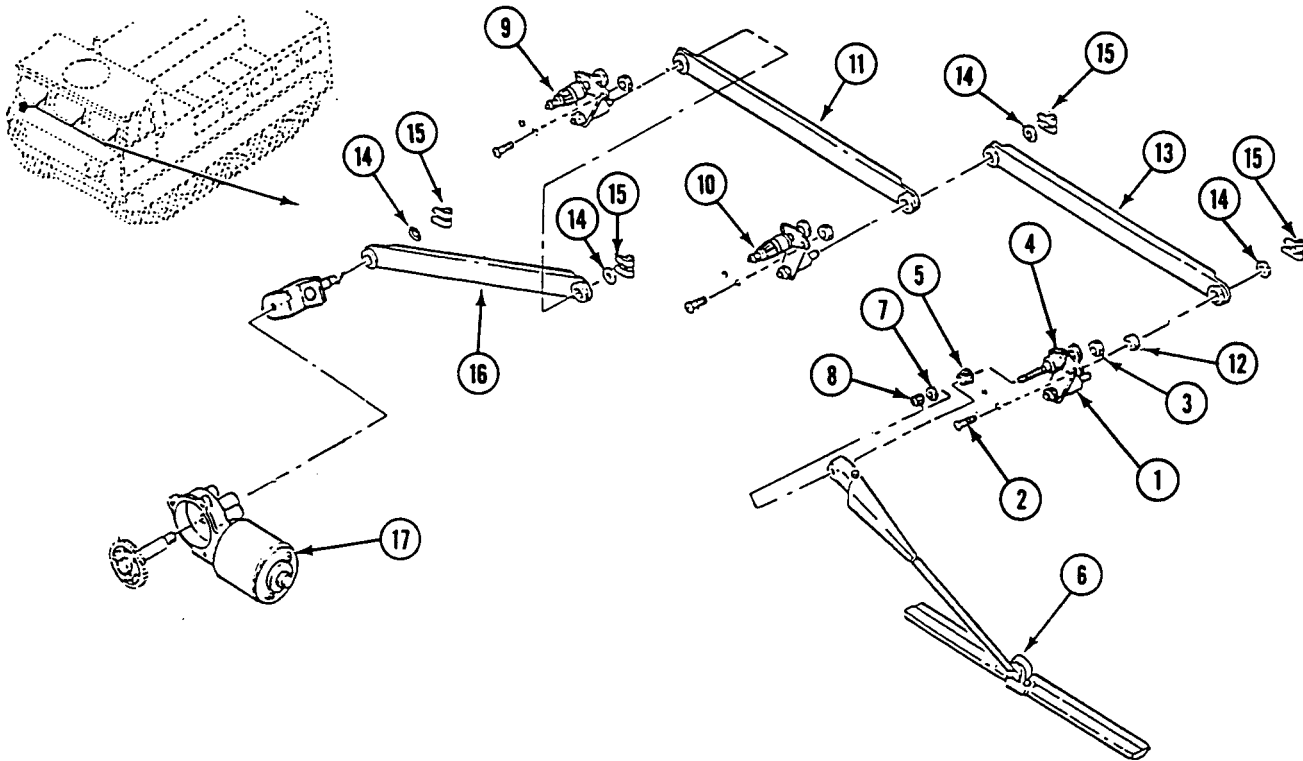
1. Place pivot (1) into carrier hull. Secure pivot with screw (2) and new lock nut (3). Install nut (4) on pivot.
2. Place tapered bushing (5) on pivot (1). Place arm and blade assembly (6) on pivot. Make sure arm mates with tapered bushing.
3. Secure arm and blade assembly (6) with lock washer (7) and nut (8) on pivot (1). Install pivot (9), pivot (10), and arm and blade assemblies the same way.



CAUTION

Install links with flat side toward pivot. Linkage could be damaged during operation if open side of link is toward pivot.

4. Place link (11) on pivot (9) and pivot (10).
5. Place spacer (12) on pivot (1). Place link (13) on pivot (1) and over link (11) on pivot (10). Install two washers (14) and clips (15) on link (13).
6. Place link (16) on motor (17) and pivot (9). Install two washers (14) and clips (15) on link.

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead(s) (WP 0292 00).
2. Check operation of windshield wiper linkage.

END OF TASK

REPLACE WINDSHIELD WIPER ARM AND BLADE

0422 00

THIS WORK PACKAGE COVERS:

- Removal (page 0422 00-1).
- Installation (page 0422 00-2).
- Adjustment (page 0422 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery ground lead(s) disconnected (WP 0292 00)

Personnel Required

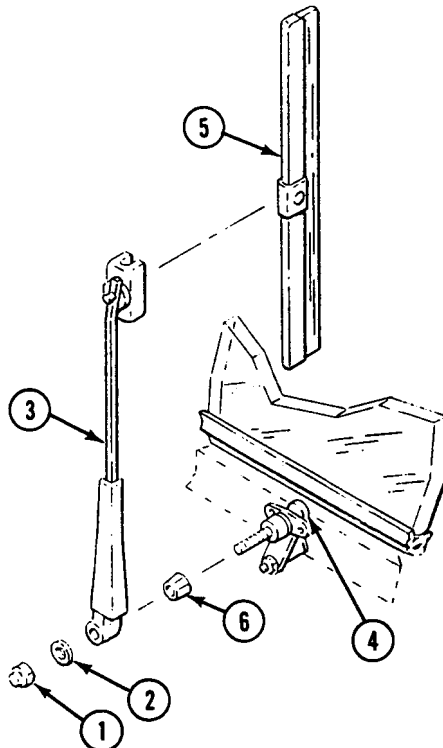
Unit Mechanic

REMOVAL

NOTE

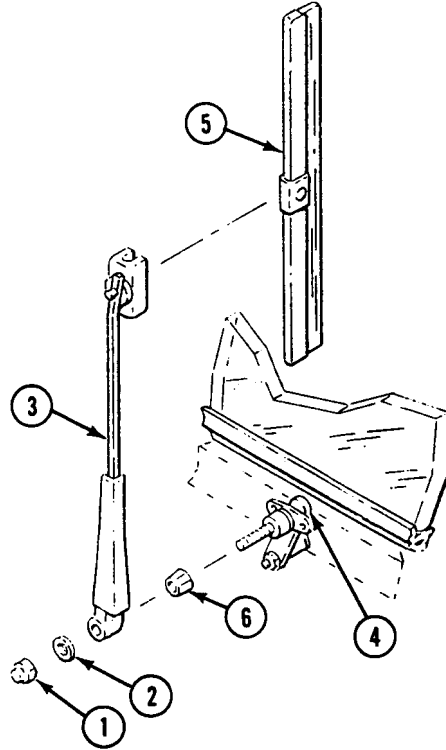
All three windshield wiper arm and blade assemblies are removed, installed, and adjusted the same way.

1. Remove nut (1), washer (2), windshield wiper arm (3), and knurled nut (6) from pivot (4). Pull arm from pivot.
2. To pull blade (5) from windshield wiper arm (3), grasp blade at point where it mates with arm and pull blade straight away from arm.



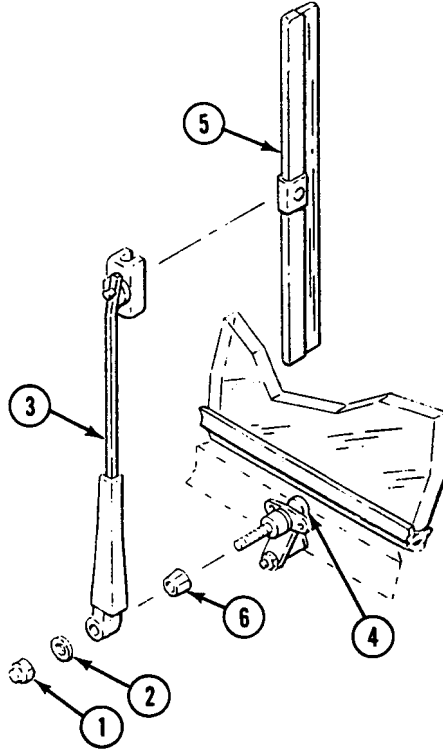
INSTALLATION

1. Place knurled nut (6) on pivot (4).
2. Install blade (5) on windshield wiper arm (3). Install windshield wiper arm on pivot (4). Make sure windshield wiper arm mates with knurled nut (6).



ADJUSTMENT

1. Adjust windshield wiper arm (3) by moving it around knurled nut (6) until both ends of blade (5) are equally distant from edge of windshield.
2. Install washer (2) and nut (1).

**FOLLOW-THROUGH STEPS**

1. Connect battery ground lead(s) (WP 0292 00).

END OF TASK

REPLACE WIPER MOTOR GEAR

0423 00

THIS WORK PACKAGE COVERS:

Removal (page 0423 00-1).
 Installation (page 0423 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

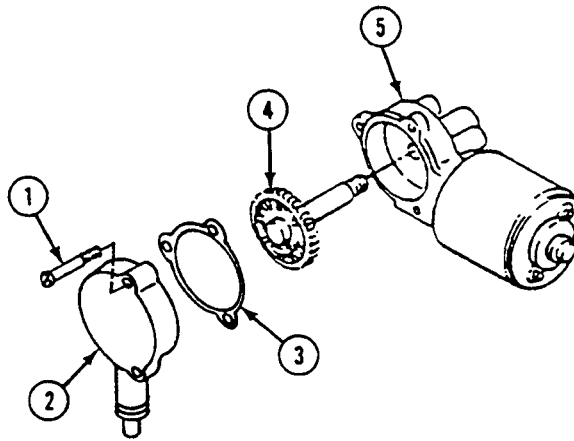
Unit Mechanic

Carrier blocked (see your -10)

Wiper motor removed (WP 0420 00)

REMOVAL

1. Remove three screws (1), cover (2), gasket (3), and plastic gear (4) from motor housing (5). Do not discard gasket.



INSTALLATION

1. Position plastic gear (4) in motor housing (5).
2. Install gasket (3), cover (2), and three screws (1) on motor housing (5).

FOLLOW-THROUGH STEPS

1. Install wiper motor (WP 0420 00).

END OF TASK

REPLACE BILGE PUMP

0424 00

THIS WORK PACKAGE COVERS:

- Removal (page 0424 00-2).
- Cleaning (page 0424 00-3).
- Installation (page 0424 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Cab center floor plates raised (WP 0394 00) or (WP 0395 00)
- Right seat removed (WP 0400 00)
- Cab personnel seat raised (see your -10)
- Differential to final drive shaft removed (WP 0334 00) or (WP 0335 00)

Materials/Parts

- Key washer (3)
- Lock washer (5)
- Lock washer (2)

Personnel Required

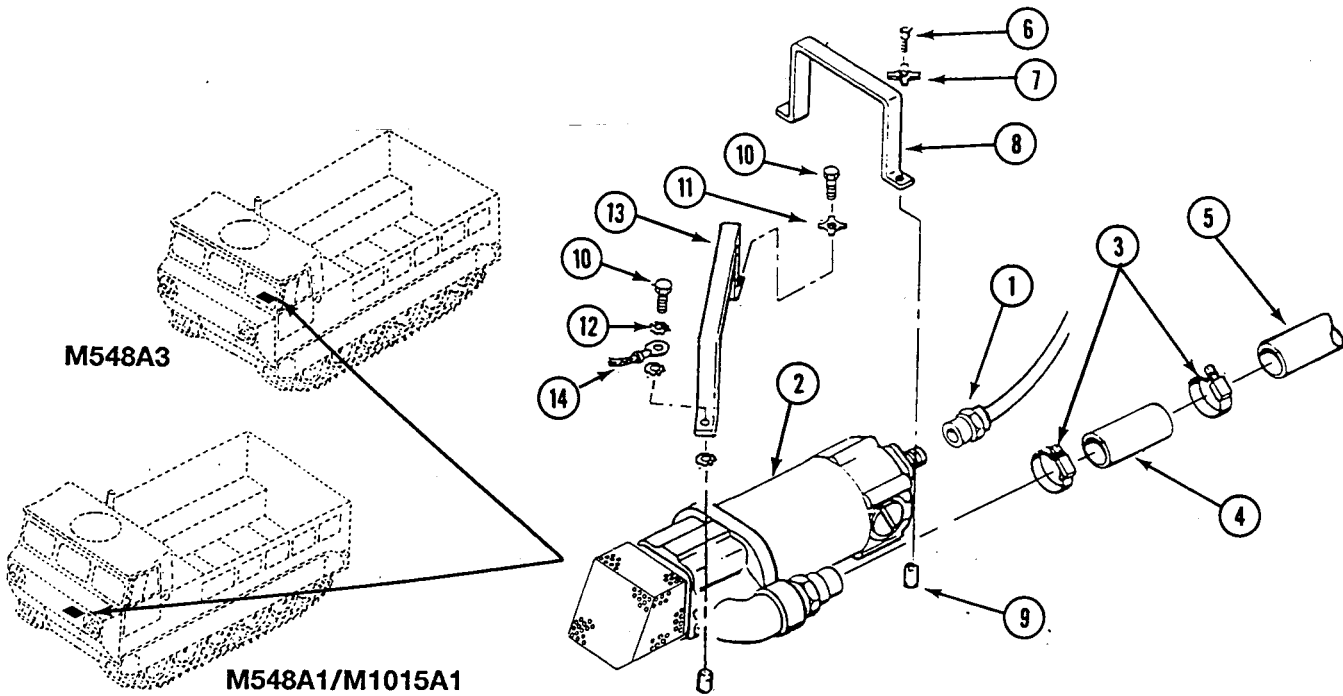
Unit Mechanic

REMOVAL

NOTE

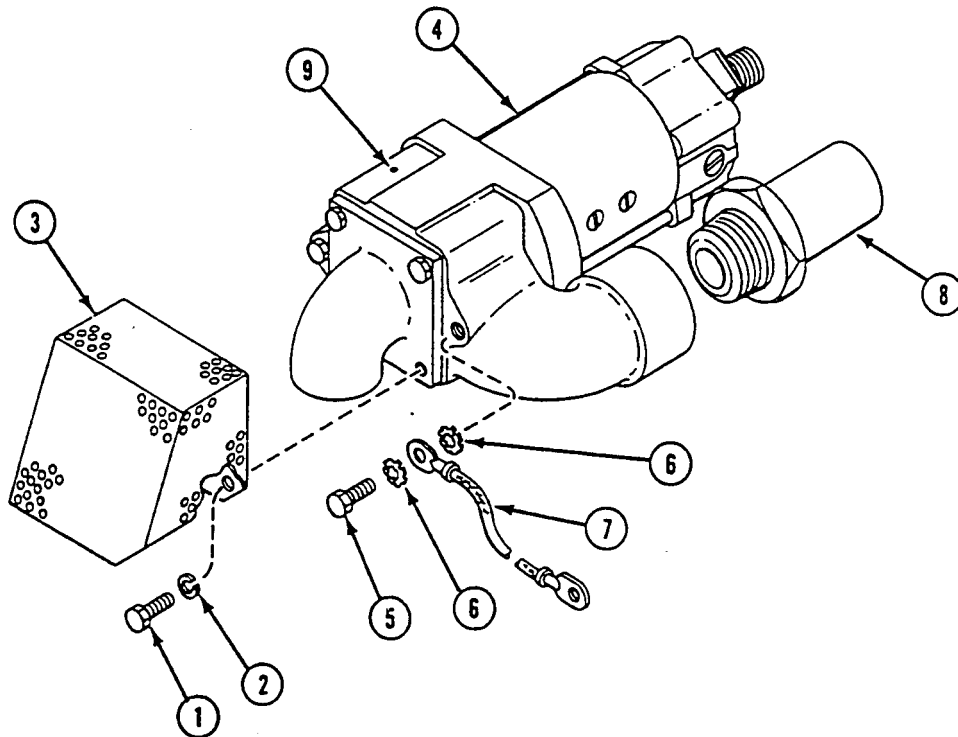
Bilge pumps are removed and installed the same way in M548A1 and M548A3. Bilge pumps are located in different locations. Both locations are shown. There is only one bilge pump in each carrier.

1. Disconnect circuit 452 lead (1) from bilge pump (2).
2. Loosen two clamps (3). Slide hose (4) with two clamps from bilge pump (2) onto pump outlet tube (5).
3. Remove two screws (6) and key washers (7) that secure end strap (8) to two hull weld nuts (9). Remove strap. Discard key washers.
4. Remove two screws (10), key washer (11), and three lock washers (12) that secure cross strap (13) and negative lead (14) to hull weld nuts (9). Discard key and lock washers.
5. Remove cross strap (13) and bilge pump (2).



REPLACE BILGE PUMP — Continued**0424 00**

6. Remove two screws (1) and lock washers (2) that secure screen (3) to bilge pump (4). Discard lock washers.
7. Separate screen (3) from bilge pump (4).
8. Remove screw (5) and two lock washers (6) that secure negative lead (7) to bilge pump (4). Remove negative lead. Discard lock washers.
9. Remove adapter (8) from bilge pump (4).

**CLEANING**

1. Clean 1/8 inch (2 mm) air bleed hole (9).
2. Clean the bottom of the hull. Remove all sludge, oil, dirt or other debris.

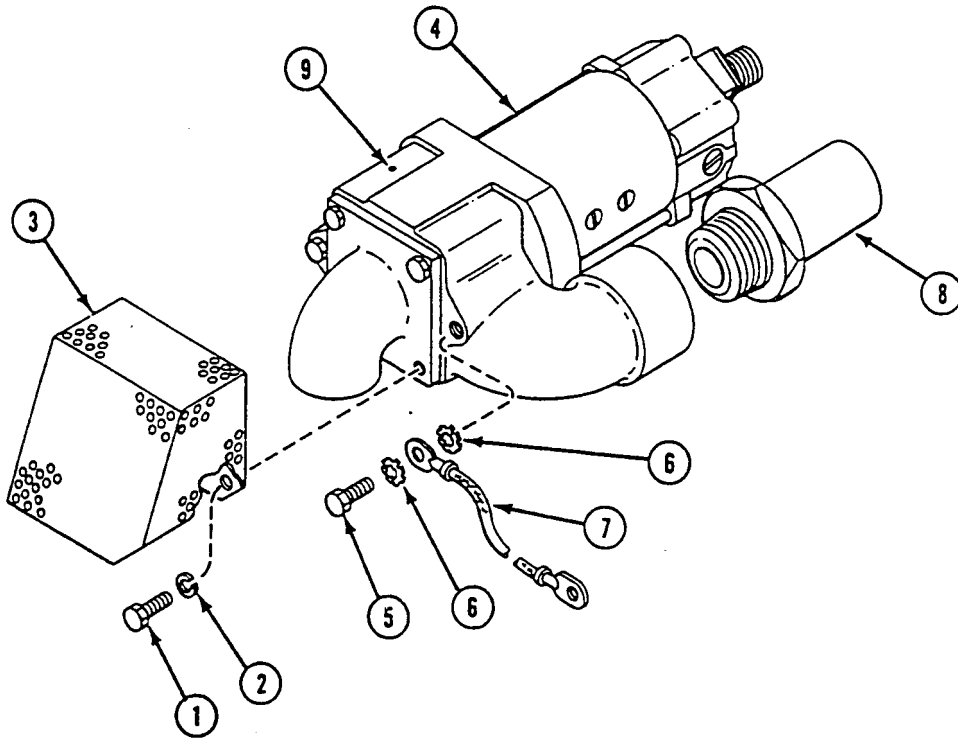
INSTALLATION

1. Place screen (3) on bilge pump (4). Secure with two new lock washers (2) and screws (1).

NOTE

Install one lock washer (6) between negative lead and pump and another between negative lead and screw head.

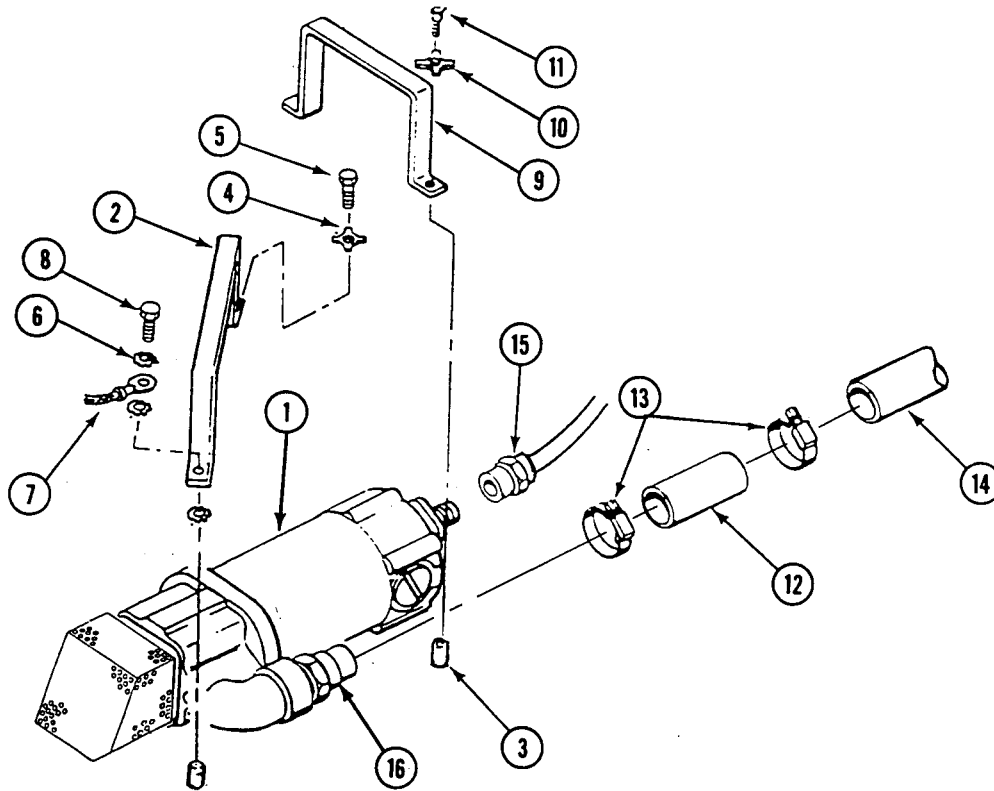
2. Install negative lead (7) on bilge pump (4) with screw (5) and two new lock washers (6).
3. Install adapter (8) on bilge pump (4).



NOTE

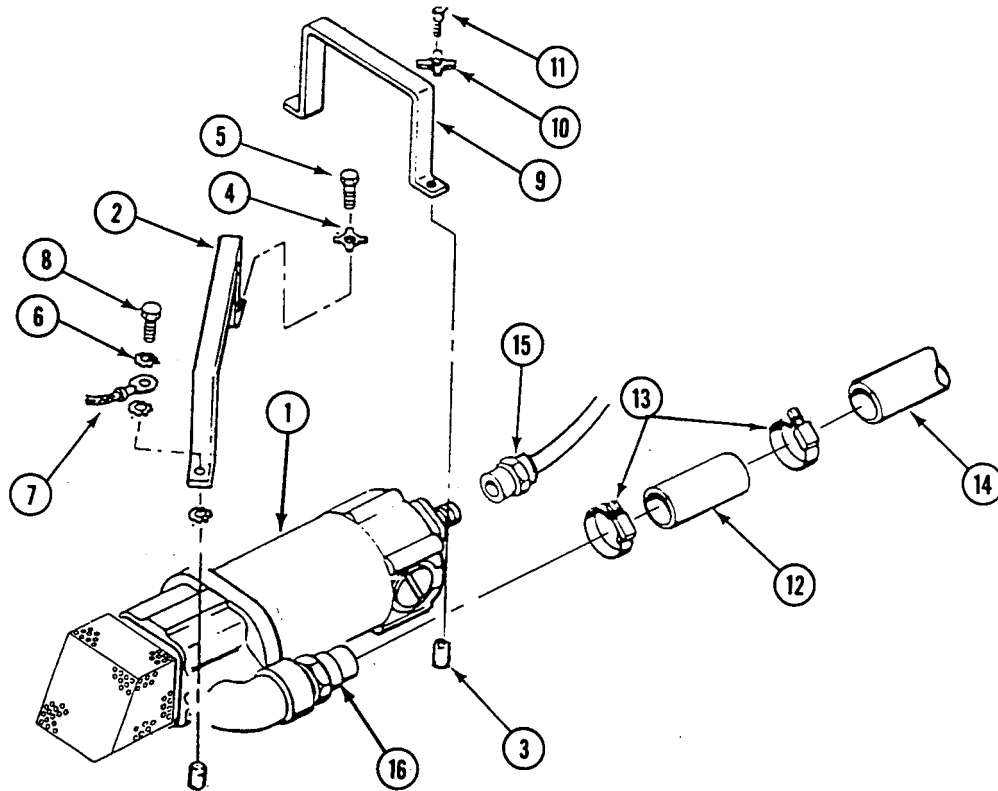
One lock washer (6) is installed between strap (2) and hull weld nut (3), one between strap and negative lead (7), and one between negative lead and screw (8).

4. Place bilge pump (1) and cross strap (2) on hull (3). Secure cross strap to hull with new key washer (4), screw (5), three new lock washers (6), negative lead (7), and screw (8).
5. Bend tabs of key washer (4) to secure screw (5).
6. Place end strap (9) on bilge pump (1) and two hull weld nuts (3). Secure strap with two new key washers (10) and screws (11).



REPLACE BILGE PUMP — Continued**0424 00**

7. Bend tabs of two key washers (10) to secure screws (11).
8. Slide hose (12) with two clamps (13) towards end of pump outlet tube (14) and onto adapter (16). Tighten two clamps.
9. Connect circuit 452 lead (15) to bilge pump (1).



10. Turn MASTER SWITCH ON (see your -10).
11. Turn bilge pump on and put your hand over outlet. If you feel air, pump is working.

FOLLOW-THROUGH STEPS

1. Install differential to final drive shaft (WP 0334 00) or (WP 0335 00).
2. Lower cab center floor plates (WP 0394 00) or (WP 0395 00).
3. Lower cab personnel seat (see your -10).
4. Install right seat (WP 0400 00).

END OF TASK

REPLACE BILGE PUMP DISCHARGE TUBES AND HOSES (M548A1)

0425 00

THIS WORK PACKAGE COVERS:

Removal (page 0425 00-1).
 Installation (page 0425 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Right seat removed (WP 0400 00)
 Cab center floor plates raised (WP 0394 00)

Personnel Required

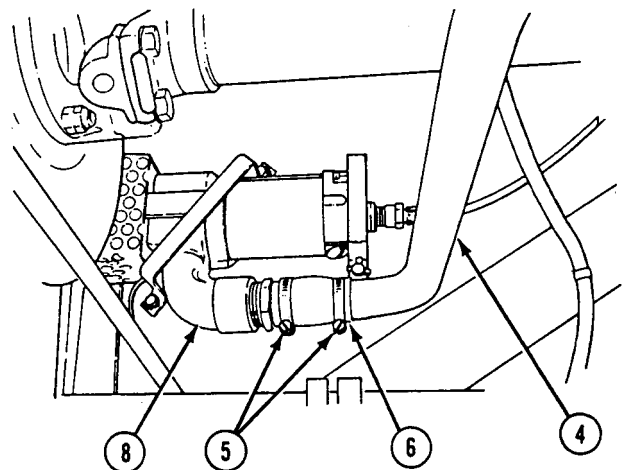
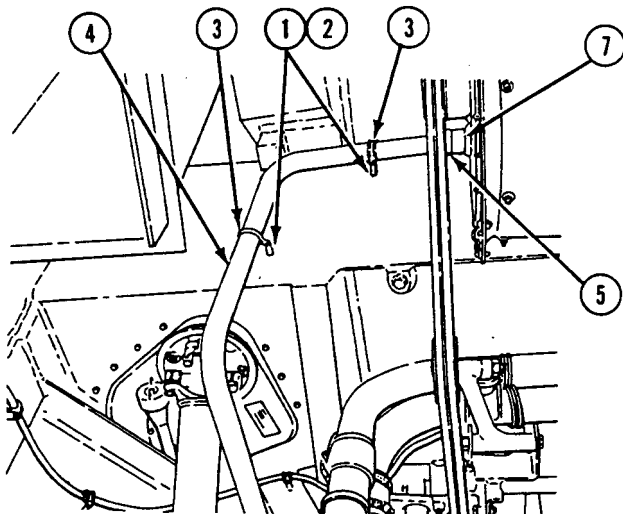
Unit Mechanic

REMOVAL

NOTE

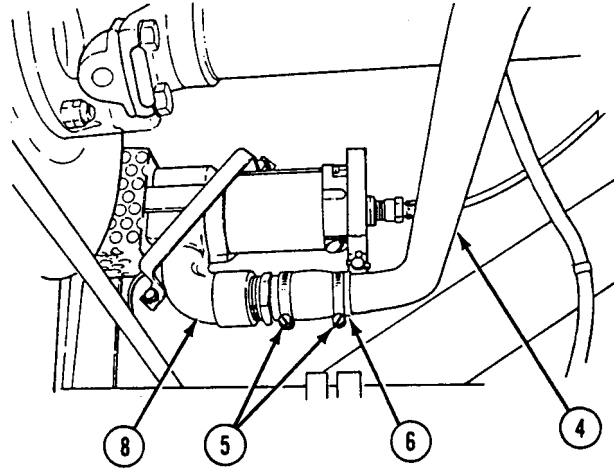
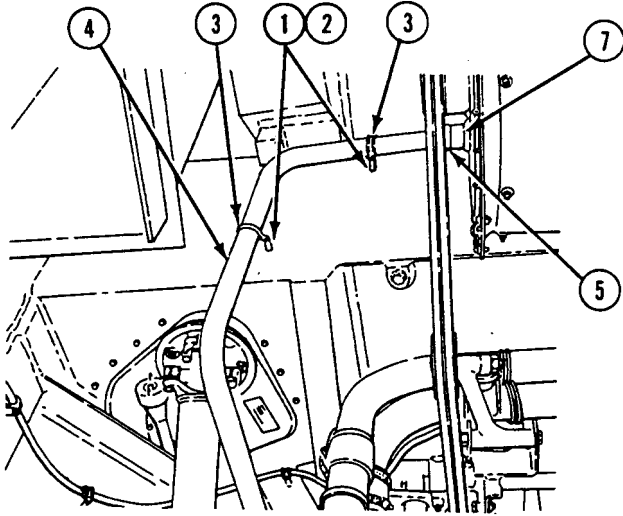
Remove only those tubes and hoses to be replaced. Remove hoses and tubes with clamps attached. Put clamps on replacement hoses and tubes before installation.

1. Remove two screws (1), washers (2), and clamps (3) from tube (4).
2. Loosen four clamps (5) that secure two hoses (6) to tube (4). Separate tube from hoses. Remove hoses from tube (7) and bilge pump (8).



INSTALLATION

1. Install two hoses (6) on each end of tube (4). Connect hoses to tube (7) and bilge pump (8). Tighten four clamps (5).
2. Install two clamps (3) on tube (4) and secure to hull with two screws (1) and washers (2).



FOLLOW-THROUGH STEPS

1. Lower cab center floor plates (WP 0394 00).
2. Install right seat (WP 0400 00).

END OF TASK

REPLACE BILGE PUMP DISCHARGE TUBES AND HOSES (M548A3)

0426 00

THIS WORK PACKAGE COVERS:

Removal (page 0426 00-2).
 Installation (page 0426 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Both battery negative leads disconnected (WP 0292 00)
 Center seat raised (see your -10)
 Cab center floor plates and seat support removed
 (WP 0395 00)
 Hull bottom access cover removed (WP 0383 00)

Materials/Parts

Lock washer (3)

Personnel Required

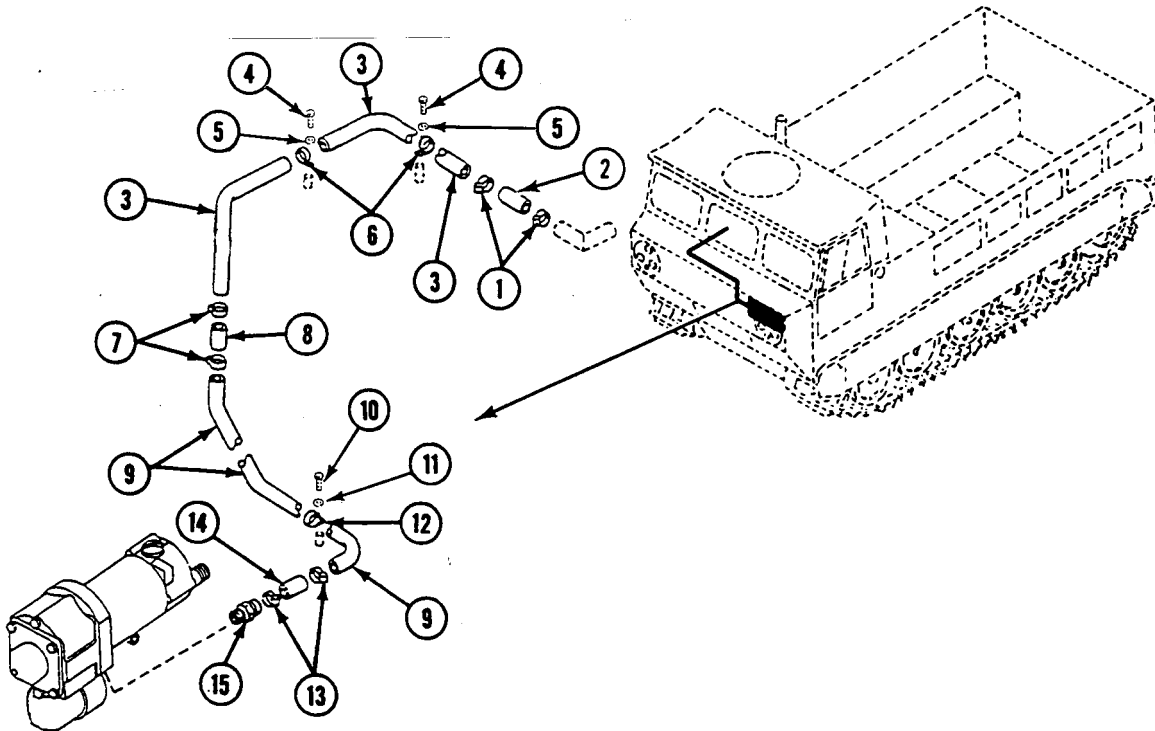
Unit Mechanic

REMOVAL

NOTE

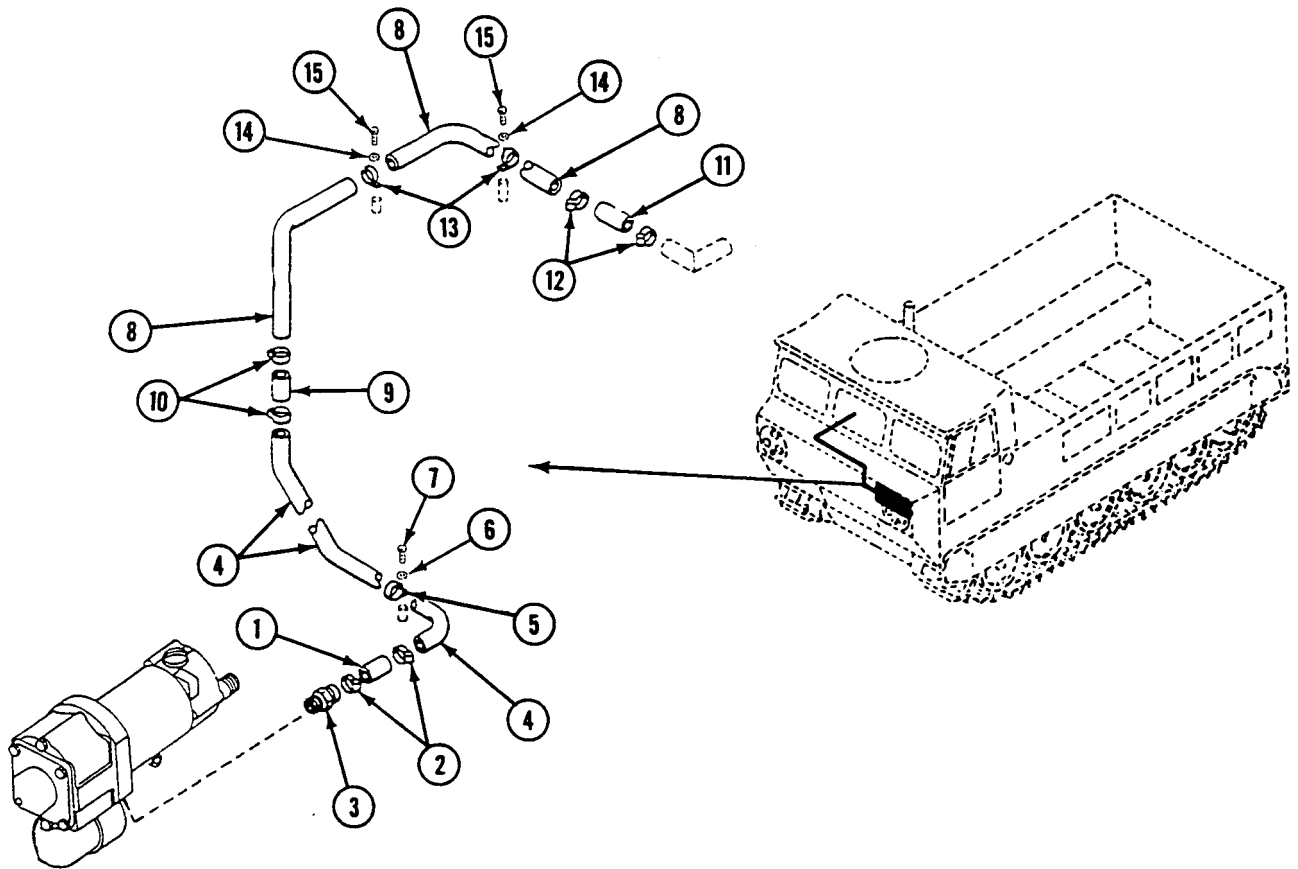
Remove only those hoses and tubes to be replaced. Remove hoses and tubes with clamps attached. Put clamps on replacement hoses and tubes before installation.

1. Remove two clamps (1) and hose (2) from outlet tube (3).
2. Remove two screws (4), lock washers (5), and clamps (6) securing outlet tube (3) to hull. Discard lock washers.
3. Remove two clamps (7) and hose (8) from outlet tube (3) and tube (9). Remove outlet tube from carrier bottom plate.
4. Remove screw (10), lock washer (11), and clamp (12) from tube (9). Discard lock washer.
5. Remove two clamps (13) and hose (14) from tube (9) and adapter (15). Remove tube, hose, clamps, and attaching hardware from carrier.



INSTALLATION

1. Install hose (1) and two clamps (2) on adapter (3) and tube (4). Tighten clamps.
2. Install tube (4) on carrier bottom plate with clamp (5), new lock washer (6), and screw (7).
3. Install outlet tube (8) on tube (4) and hose (9) with two clamps (10).
4. Install hose (11) and two clamps (12) on outlet tube (8).
5. Install outlet tube (8) on hull with two clamps (13), new lock washers (14), and screws (15).



FOLLOW-THROUGH STEPS

1. Install cab center floor plates and seat support (WP 0395 00).
2. Lower center seat (see your -10).
3. Install hull bottom access cover (WP 0383 00).
4. Connect both battery negative leads (WP 0292 00).

END OF TASK

SERVICE/REPAIR/ADJUST VEHICLE COMPARTMENT HEATER

0427 00

THIS WORK PACKAGE COVERS:

 Servicing (page 0427 00-1).

INITIAL SETUP:

Maintenance Level

 Unit

References

 See your -10
 TM-9-2540-205-24&P

Tools and Special Tools

 General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

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

Personnel Required

 Unit Mechanic

SERVICING

1. See TM-9-2540-205-24&P for all repairs and adjustments to the vehicle compartment heater.

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS (M548A3)

0428 00

THIS WORK PACKAGE COVERS:

Removal (page 0428 00-1).
Installation (page 0428 00-6).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Wiping rag (WP 0542 00, Item 45)
Lock washer (4)
Lock washer (5)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Front access cover removed (WP 0391 00)

Personnel Required

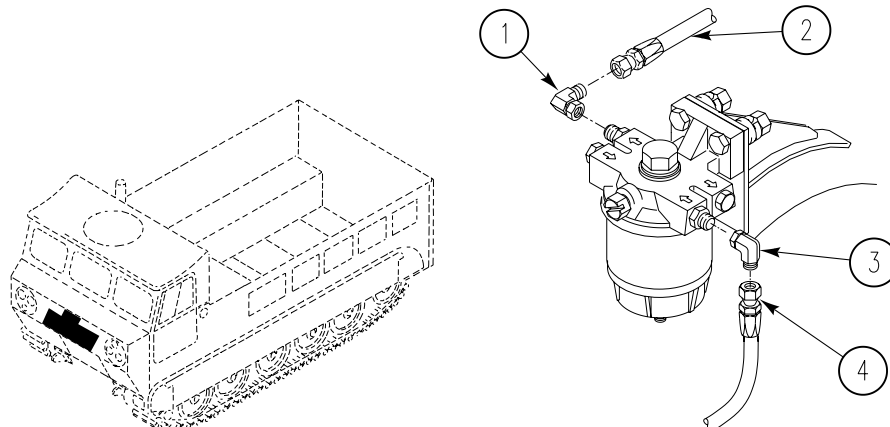
Unit Mechanic
Helper (H)

REMOVAL

NOTE

Fuel inlet hose will allow fuel to leak when disconnected. Be prepared to immediately plug hose when it is disconnected. Use wiping rag to wipe up any excess fuel.

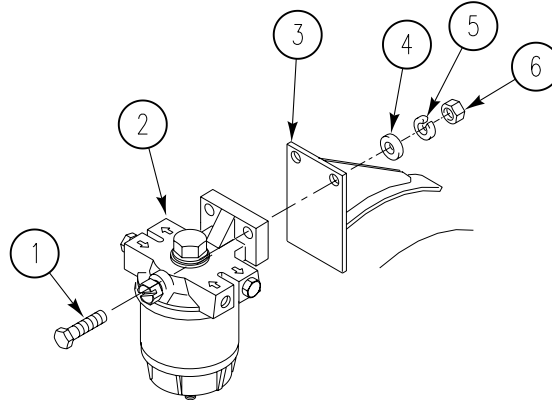
1. Drain fuel filter bowl. See your -10.
2. Disconnect fuel hose (1) from fuel filter elbow (2).
3. Disconnect supply fuel hose (3) from fuel filter elbow (4).
4. Loosen clamp (5) and remove bracket with fuel filter (6) from heater (7).



NOTE

Do Step 5 only if replacing fuel filter.

- Remove two screws (1), lockwashers (5), washers (4), nuts (6), and fuel filter (2) from bracket (3). Discard lock washers.

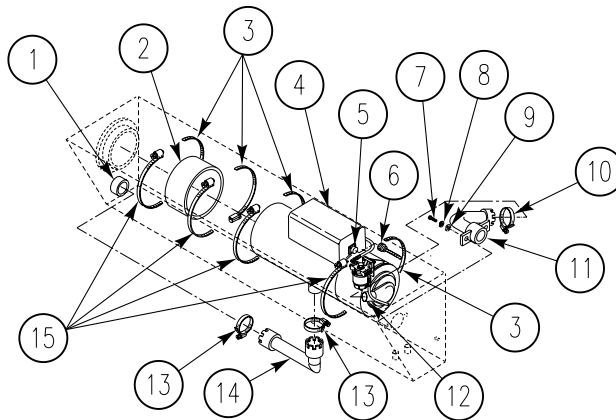


WARNING



Sparks can cause fire or explosion. Fuel can catch fire and burn you. Do not smoke. Wipe up any spilled fuel immediately.

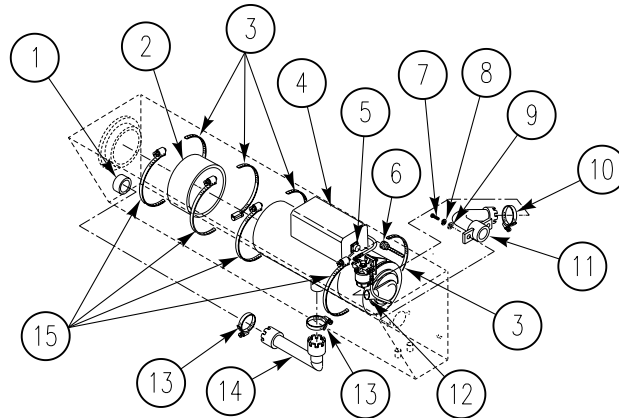
- Loosen seven clamp halves (3) on plenum sleeve (2) and heater (4).
- Loosen clamp (10) securing air inlet duct (11) to heater air inlet (12). Remove two screws (7), lock washers (8), and washers (9) securing air inlet duct to bulkhead. Discard lock washers.



REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS

(M548A3) — Continued**0428 00**

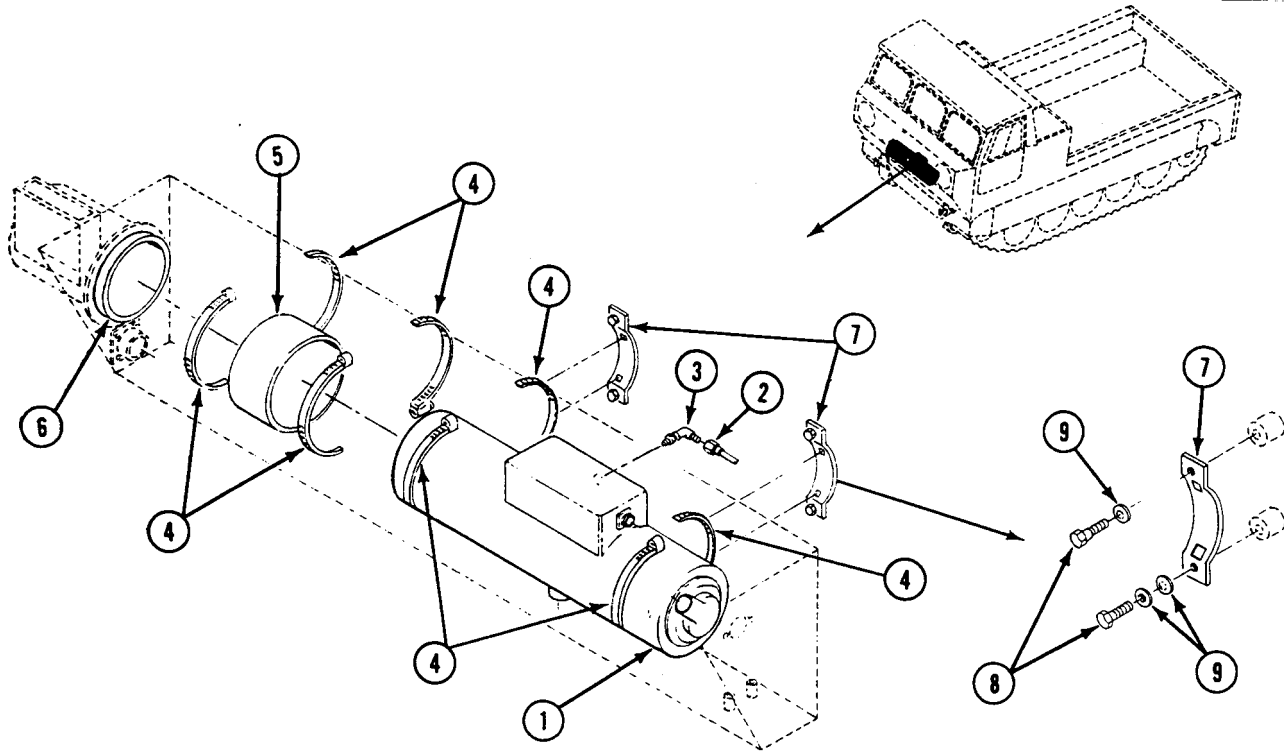
8. Loosen two clamps (13) securing exhaust duct (14) to heater (4) and pipe (1).
9. Disconnect wiring harness (6) from heater receptacle (5).
10. Have helper support heater (4). Move heater around to loosen and remove air inlet duct (11) from heater air inlet (12) and bulkhead. Remove air inlet duct from carrier.
11. Have helper support heater (4). Remove exhaust duct (14) from heater and pipe (1). Remove exhaust duct from carrier.



**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS
(M548A3) — Continued**

0428 00

12. Have helper support and rotate heater (1). Remove fuel inlet hose (2) from heater elbow (3). Plug fuel hose.
13. Have helper support heater (1). Disconnect four clamp halves (4). Slide heater from plenum sleeve (5). Remove heater from carrier. Remove sleeve from heater plenum (6) and four clamp halves and sleeve from carrier.



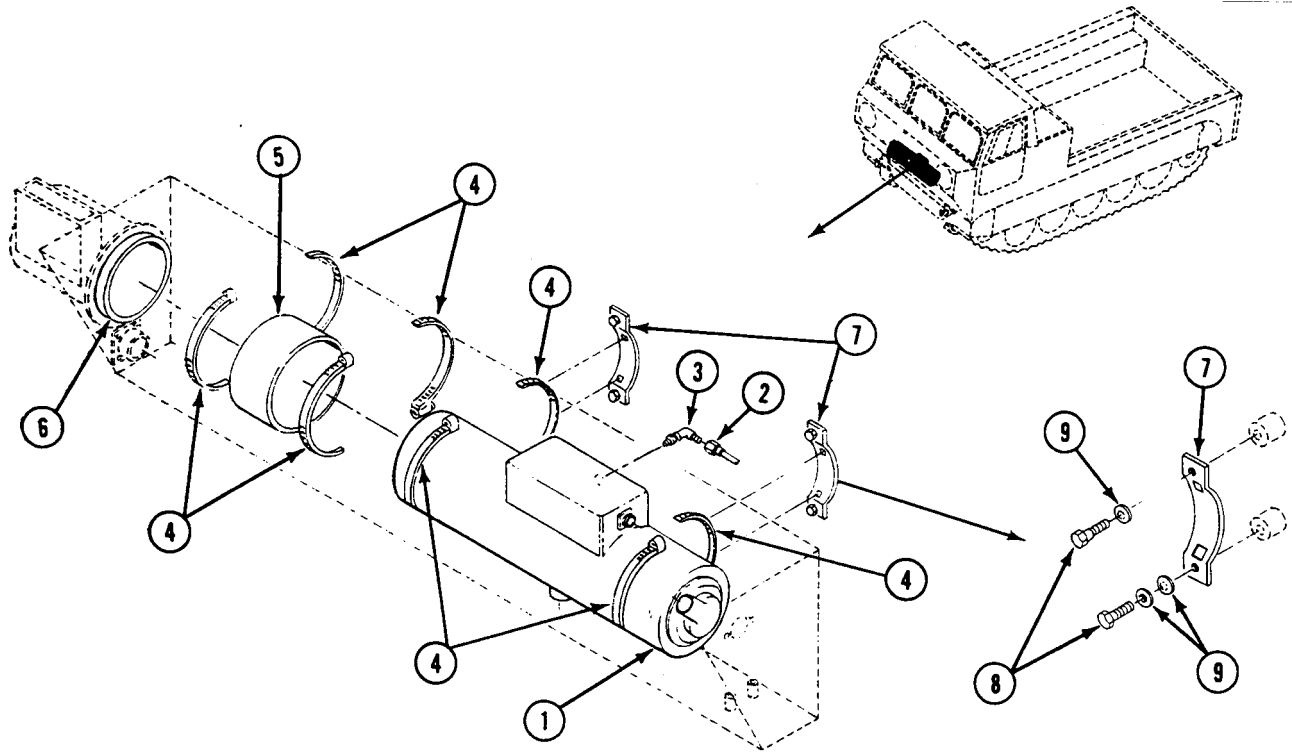
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS (M548A3) — Continued

0428 00

NOTE

Do Step 14 and Step 15 only if clamps or mounting brackets are being replaced.

14. Remove four clamp halves (4) from two mounting brackets (7).
15. Remove four screws (8), five lock washers (9), and two mounting brackets (7) from bulkhead. Note location of fifth lock washer. Discard lock washers.

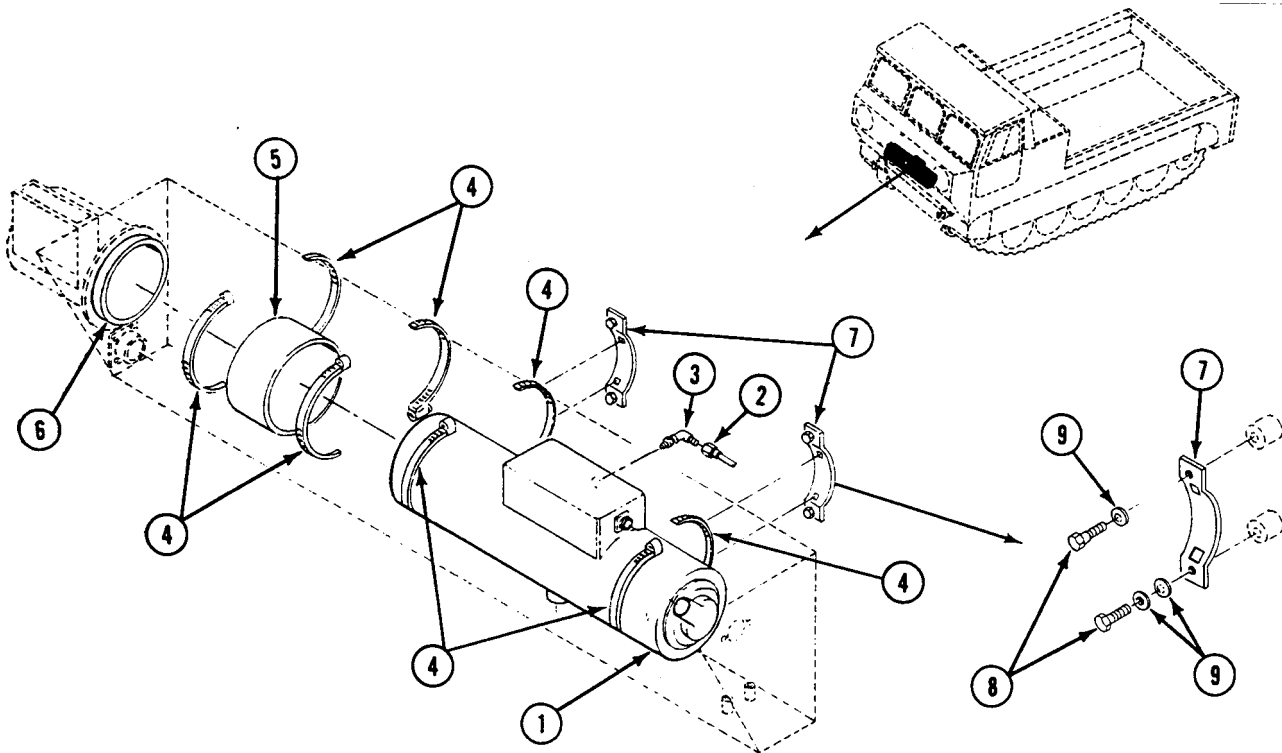


INSTALLATION

NOTE

Do Step 1 and Step 2 only if clamps or mounting brackets were removed for replacement.

1. Install two mounting brackets (7), five new lock washers (9), and four screws (8) on bulkhead.
2. Install four clamp halves (4) on two mounting brackets (7).
3. Install plenum sleeve (5) and four clamp halves (4) on heater plenum (6). Do not tighten clamps.
4. Place heater (1) in plenum sleeve (5) and four clamp halves (4). Have helper assist.



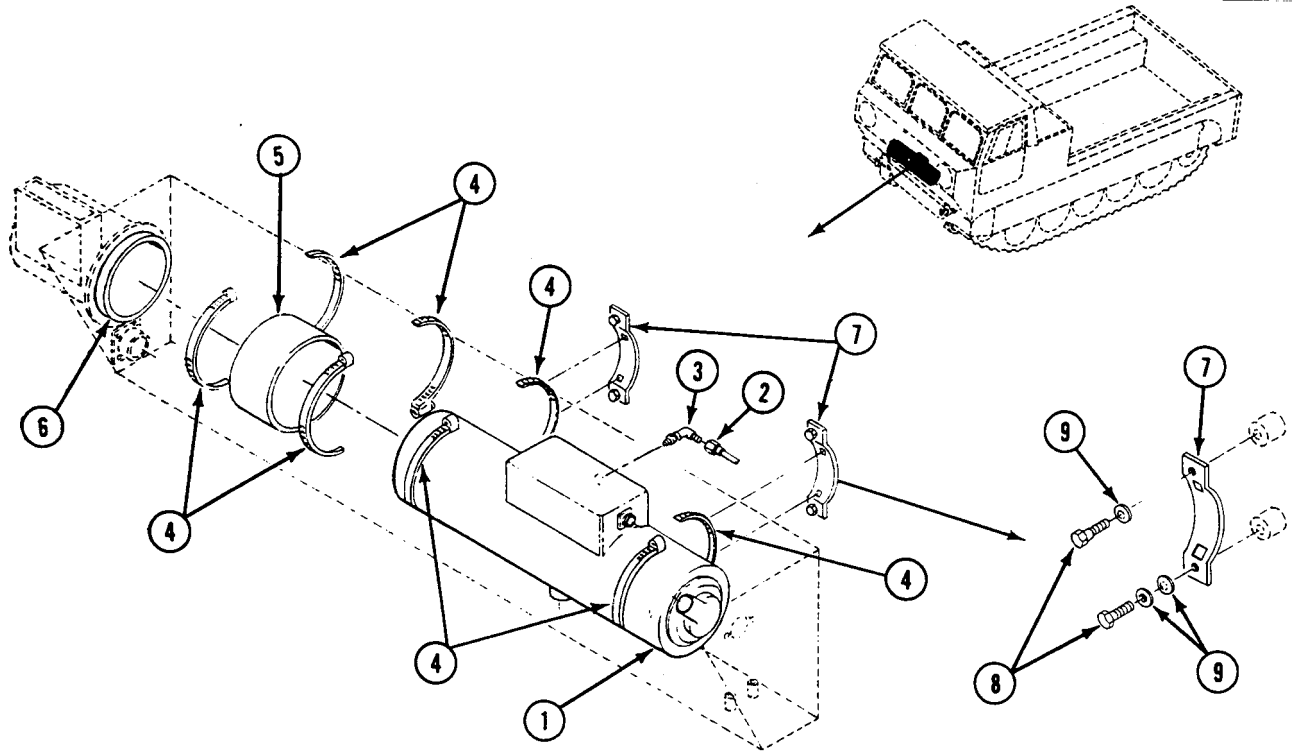
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS
(M548A3) — Continued

0428 00

NOTE

Fuel inlet hose will allow fuel to leak when plug is removed. Be prepared to immediately connect hose to heater elbow. Use wiping rag to wipe up any excess fuel.

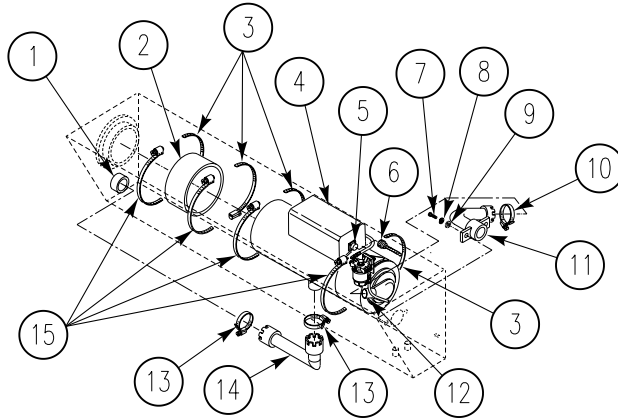
5. Have helper support and rotate heater (1). Remove plug from fuel inlet hose (2). Install fuel inlet hose on heater elbow (3).



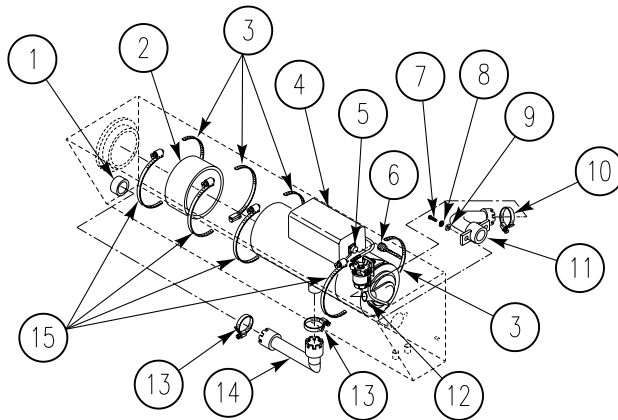
**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY AND MOUNTING BRACKETS
(M548A3) — Continued**

0428 00

6. Place two clamps (13) on exhaust duct (14). Install exhaust duct on heater (4) and pipe (1). Do not tighten clamps.
7. Place clamp (10) on air inlet duct (11).
8. Have helper support and rotate heater (4). Install air inlet duct (11) on heater air inlet (12). Secure heater air inlet duct to bulkhead with two washers (8), new lock washers (9), and screws (7).



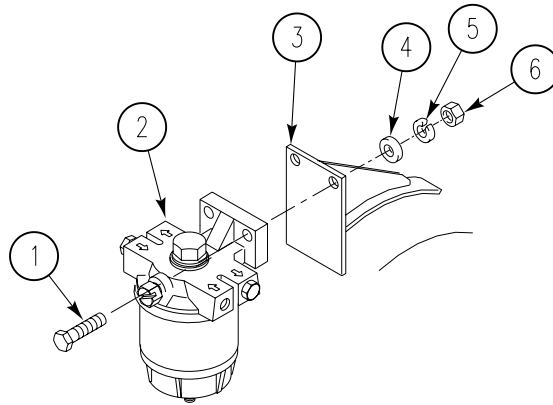
9. Have helper support heater (4). Tighten seven clamp halves (3), two clamps (13), and clamp (10).
10. Connect wiring harness (6) to heater receptacle (5).



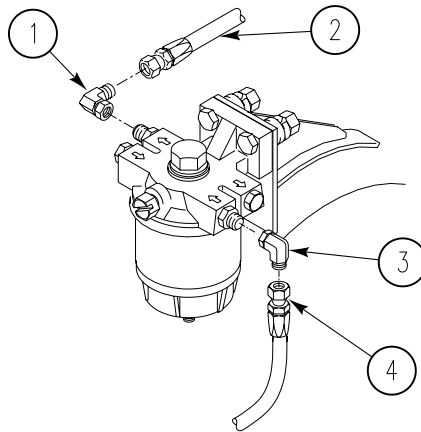
NOTE

Do Step 11 only if replacing fuel filter.

11. Install fuel filter (2) on bracket (3) with two screws (1), new lock washers (5), washers (4), and nuts (6)
12. Install fuel filter (2) with bracket (3) on heater and tighten two clamp halves.



13. Install heater fuel hose (2) on fuel filter elbow (1).
14. Connect fuel pump fuel hose (4) to fuel filter elbow (3).



FOLLOW-THROUGH STEPS

1. Connect both battery negative leads (WP 0292 00).
2. Check vehicle compartment heater for proper operation (see your -10).
3. Install front access cover (WP 0391 00).

END OF TASK

SERVICE VEHICLE COMPARTMENT HEATER FUEL PUMP

0429 00

THIS WORK PACKAGE COVERS:

Service Bendix/Facet (page 0429 00-2).
 Service Walbro (page 0429 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)
 Top left access grille removed (see your -10 or
 (WP 0390 00))
 Cab left center floor plate raised (WP 0394 00) or
 (WP 0395 00)
 Heater fuel shutoff valve closed (see your -10)

Materials/Parts

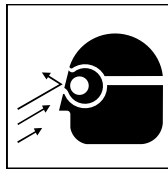
Cleaning compound (WP 0542 00, Item 9)
 Gasket
 Gasket

Personnel Required

Unit Mechanic

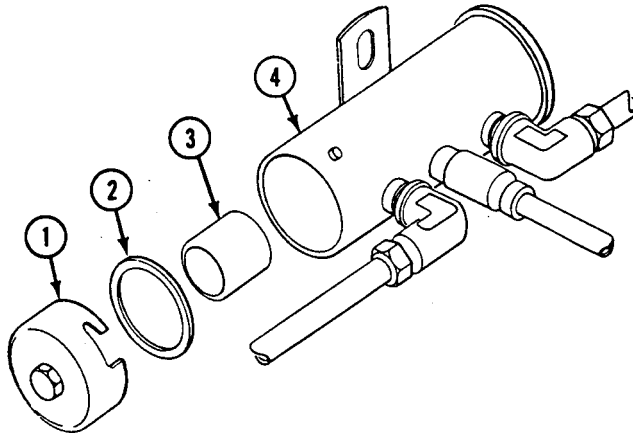
SERVICING**SERVICE BENDIX/FACET**

1. Remove cap (1), gasket (2) and strainer (3) from heater fuel pump (4). Discard gasket.
2. Clean cap (1) and strainer (3) with cleaning compound.
3. Check strainer (3). Replace strainer if screen is torn.

WARNING

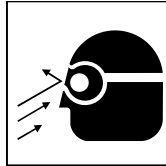
Wear safety goggles while using compressed air to prevent eye injury or blindness.

4. Dry heater fuel pump parts with low pressure compressed air.
5. Install strainer (3), new gasket (2), and cap (1) on heater fuel pump (4).



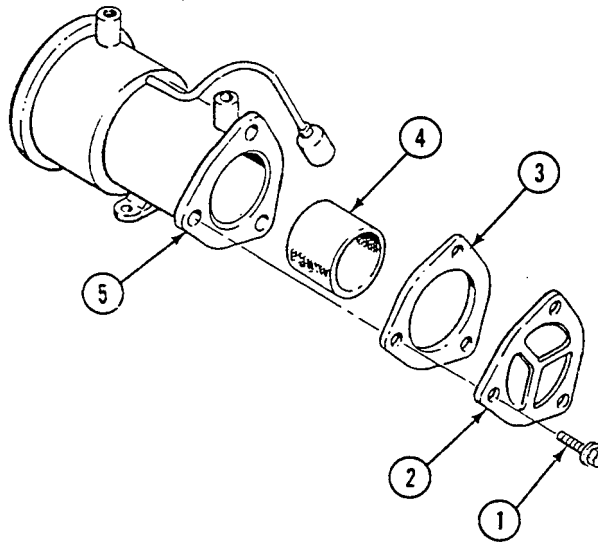
SERVICE WALBRO

1. Remove three screws (1), cap (2), gasket (3), and strainer (4) from heater fuel pump (5). Discard gasket.
2. Clean cap (2) and strainer (4) with cleaning compound.
3. Check strainer (4). Replace strainer if screen is torn.

WARNING

Wear safety goggles while using compressed air to prevent eye injury or blindness.

4. Dry heater fuel pump parts with low pressure compressed air.
5. Install strainer (4), new gasket (3), cap (2), and three screws (1) on heater fuel pump (5).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead(s) (WP 0292 00).
2. Open heater fuel shutoff valve (see your -10).
3. Start heater (see your -10).
4. Check heater fuel pump for leaks and proper operation.
5. Stop heater (see your -10).
6. Install top left access grille (see your -10 or (WP 0390 00)).
7. Lower cab left center floor plate (WP 0394 00) or (WP 0395 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY FUEL PUMP
(M548A3)**

0430 00

THIS WORK PACKAGE COVERS:

Removal (page 0430 00-1).
Installation (page 0430 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

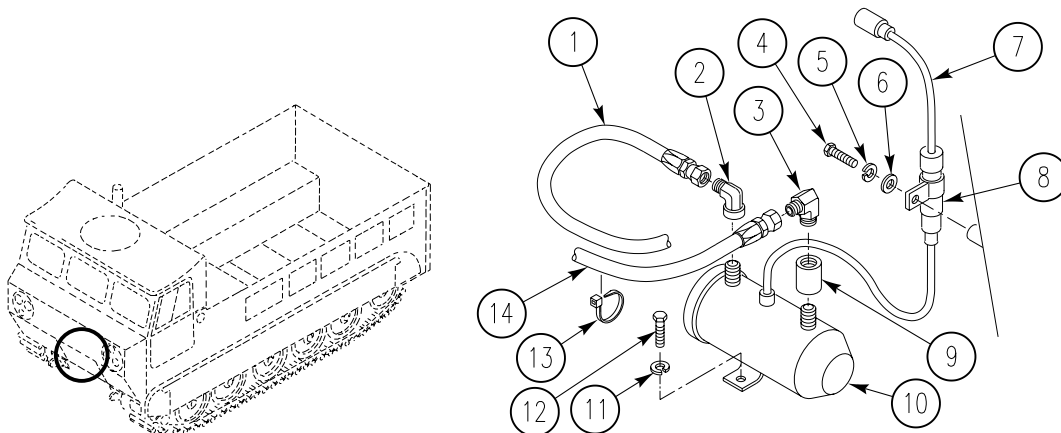
Sealing Compound (WP 0542 00, Item 33)
Lock washer (3)
Strap

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Front access cover removed (WP 0391 00)

REMOVAL

1. Disconnect circuit 402 lead from fuel pump lead (7).
2. Remove screw (4), lock washer (5), washer (6), and capacitor (8) from bulkhead. Discard lock washer.
3. Remove strap (13) from hose (14) and hose (1). Discard strap.
4. Remove hose (1) and elbow (2) from fuel pump (10).
5. Remove hose (14), elbow (3), and adapter (9) from fuel pump (10).
6. Remove two screws (12) and lock washers (11) from fuel pump (10). Remove fuel pump from carrier. Discard lock washers.



**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY FUEL PUMP (M548A3) —
Continued**

0430 00

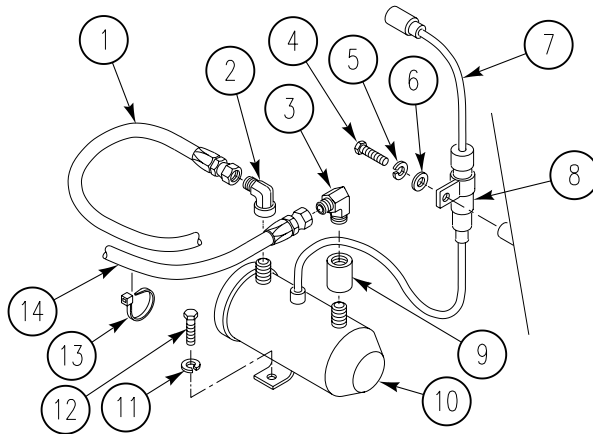
INSTALLATION

1. Install fuel pump (10) in carrier. Secure with two new lock washers (11) and screws (12).

NOTE

Apply sealing compound sparingly to tapered threads of fittings before installation.

2. Apply sealing compound to male threads of fuel pump (10), elbow (3), and elbow (2).
3. Install adapter (9), elbow (3), and hose (14) on fuel pump (10).
4. Install elbow (2) and hose (1) on fuel pump (10).
5. Secure hose (14) and hose (1) with new strap (13)
6. Install capacitor (8), washer (6), new lock washer (5), and screw (14) on bulkhead.
7. Connect circuit 402 lead to fuel pump lead (7).



FOLLOW-THROUGH STEPS

1. Connect both battery negative leads (WP 0292 00).
2. Check vehicle compartment heater for proper operation (see your -10).
3. Check fuel pump for leaks (see your -10).
4. Install front access cover (WP 0391 00).

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER CONTROL BOX

0431 00

THIS WORK PACKAGE COVERS:

Removal (page 0431 00-2).
 Installation (page 0431 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut (4)
 Lock washer (2)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

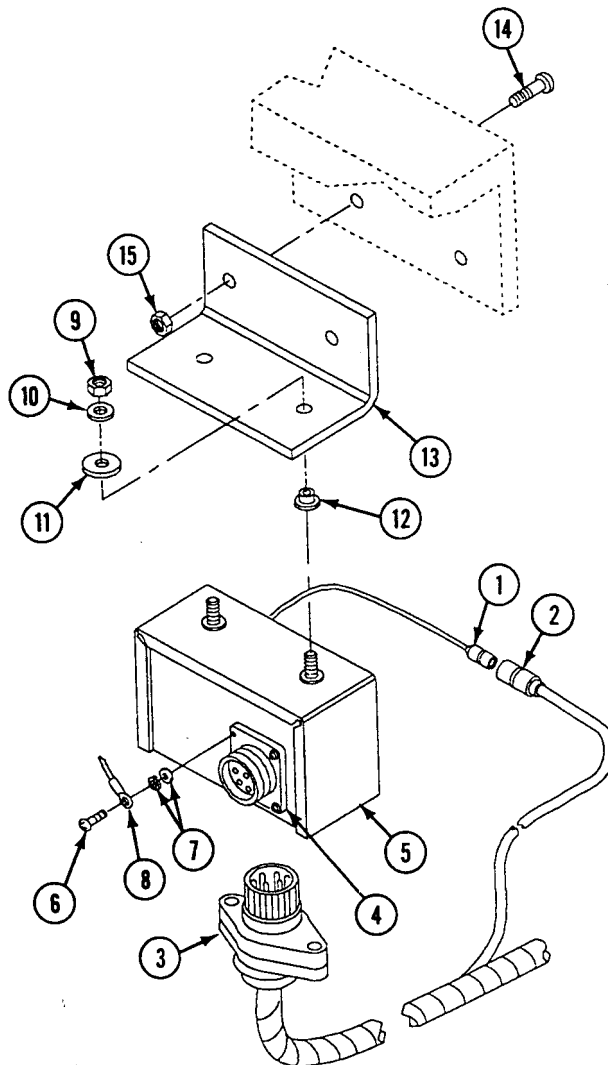
Battery negative lead(s) disconnected (WP 0292 00)

REMOVAL

NOTE

Removal of heater control box is similar for M548A1 and M548A3. Differences are noted in steps.

1. Remove heater control box lead (1) from circuit 400D lead (2).
2. Remove heater wiring harness (3) from receptacle (4) on heater control box (5).
3. Remove screw (6), two lock washers (7), and ground lead (8) from heater control box (5). Discard lock washers.
4. Remove two lock nuts (9), washers (10), mounts (11), and heater control box (5) from hull. Discard lock nuts (M548A1).
5. Remove two lock nuts (9), washers (10), mounts (11), mounts (12), and heater control box (5) from bracket (13). Discard lock nuts (M548A3).
6. Remove two screws (14), bracket (13), and two lock nuts (15) from hull. Discard lock nuts. (M548A3).

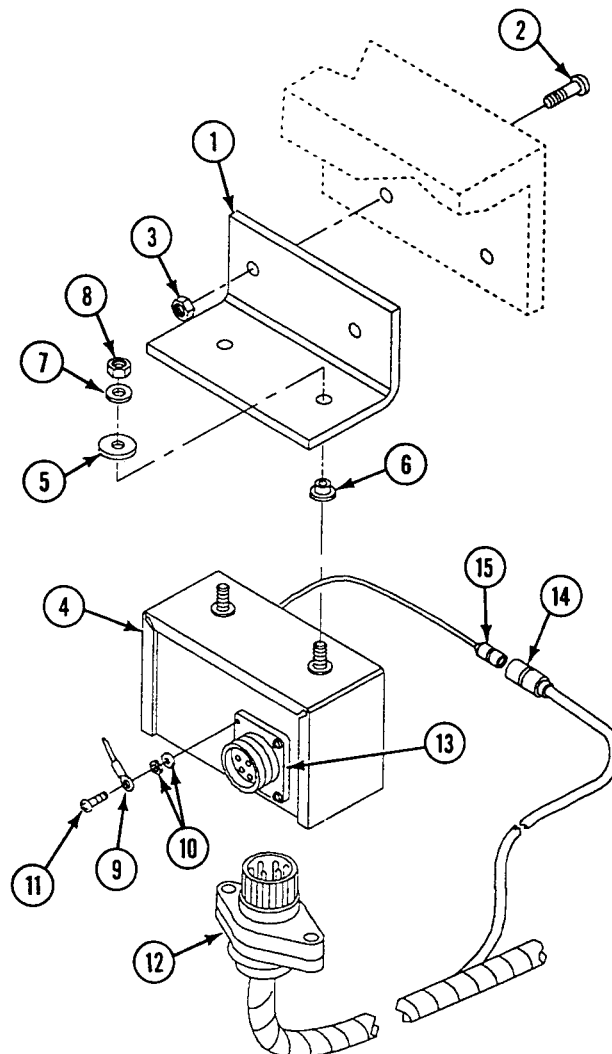


INSTALLATION

NOTE

Installation of heater control box is similar for M548A1 and M548A3. Differences are noted in steps.

1. Install bracket (1), two screws (2), and new lock nuts (3) on hull (M548A3).
2. Install heater control box (4), two mounts (5), mounts (6), washers (7), and new lock nuts (8) on bracket (1) (M548A3).
3. Install heater control box (4), two mounts (5), washers (7), and new lock nuts (8) on hull (M548A1).
4. Install ground lead (9) on heater control box (4) with two new lock washers (10) and screw (11).
5. Connect wiring harness (12) to receptacle (13) on heater control box (4).
6. Connect circuit 400D lead (14) to heater control box lead (15).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater control box for proper operation.
4. Stop heater (see your -10).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND
FANS (M548A3)**

0432 00

THIS WORK PACKAGE COVERS:

Removal (page 0432 00-2).
Installation (page 0432 00-5).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut (2)
Lock washer (2)
Lock washer (6)
Lock washer (4)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Right center floor plate removed (WP 0395 00)
Tool compartment access door raised (see your -10)

Personnel Required

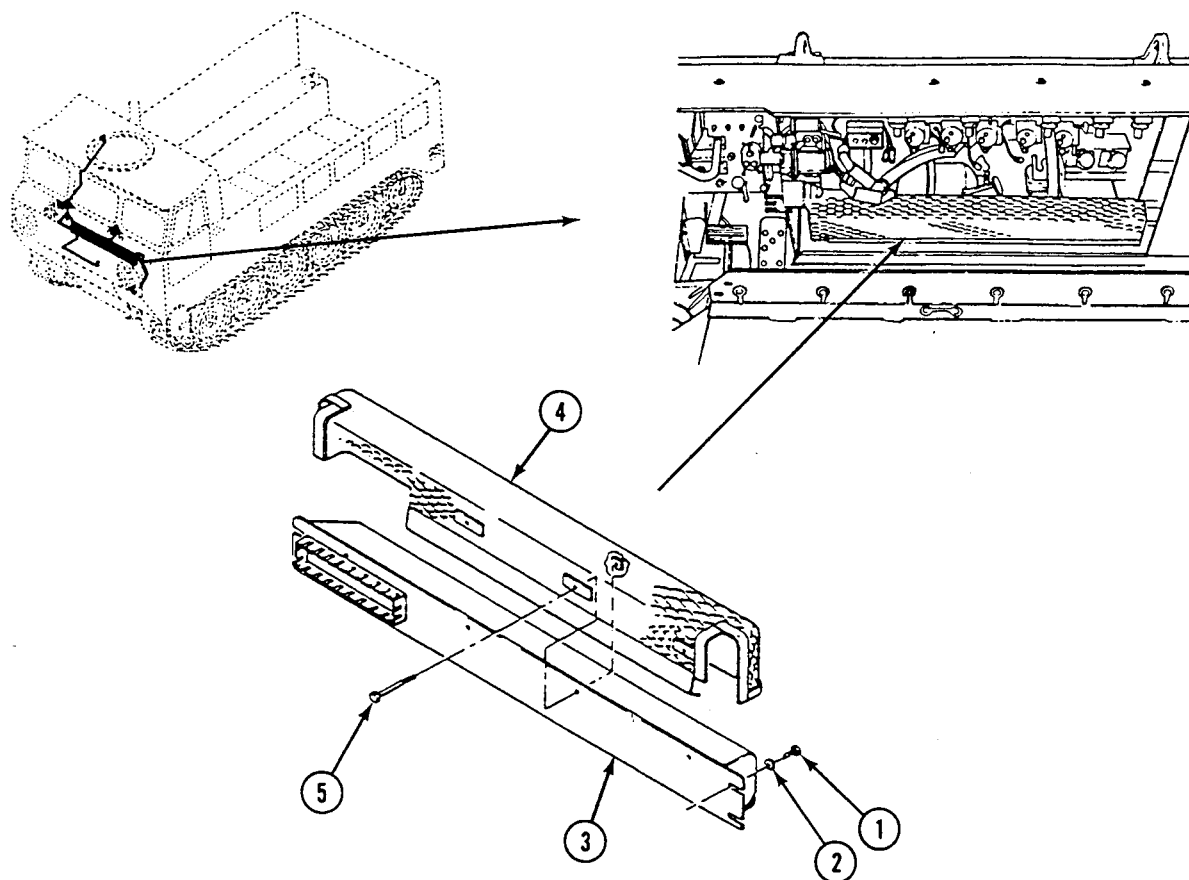
Unit Mechanic
Helper (H)

REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued

0432 00

REMOVAL

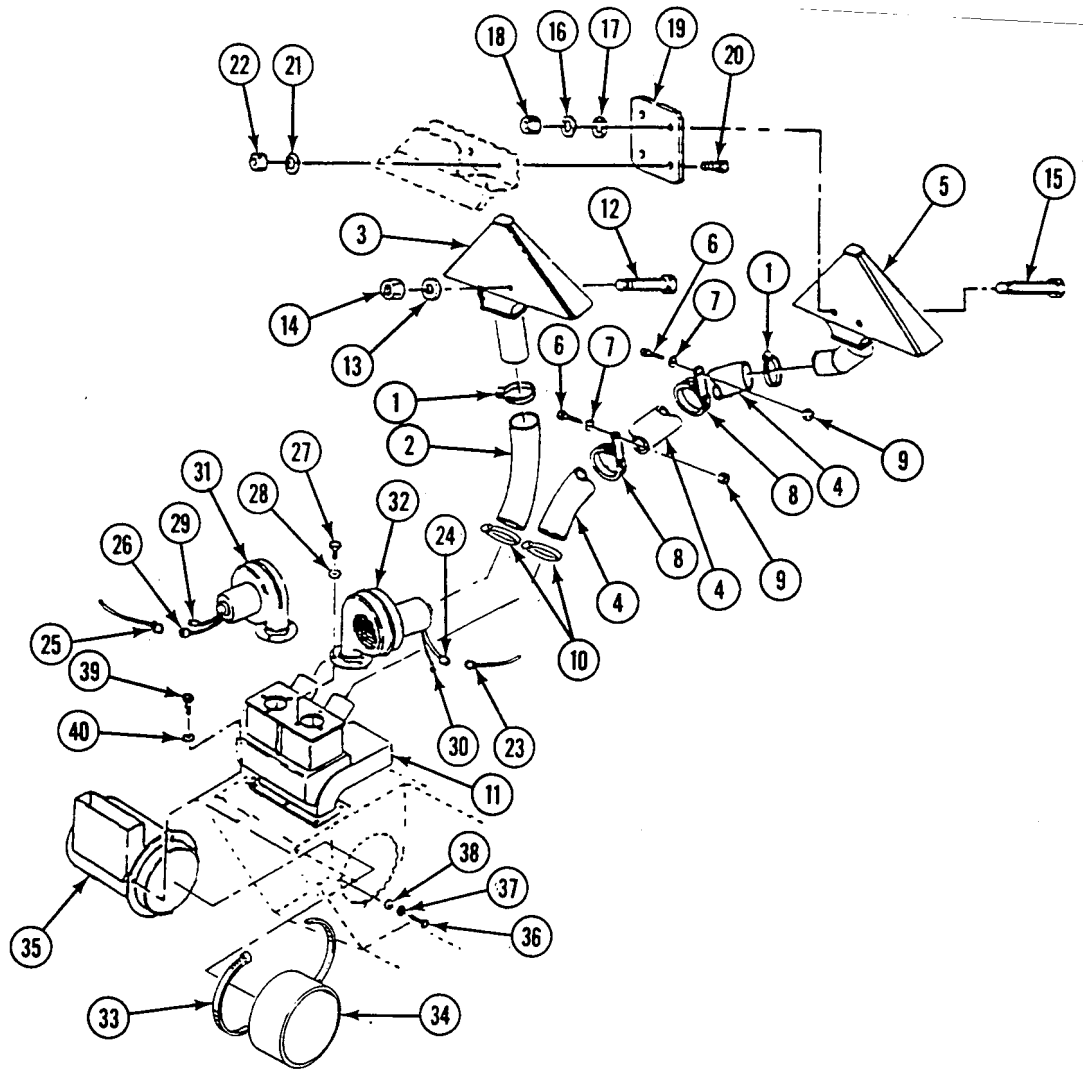
1. Remove four screws (1), washers (2), and diffuser duct (3) with guard (4) from carrier.
2. Remove four screws (5) and separate guard (4) from diffuser duct (3).



REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued

0432 00

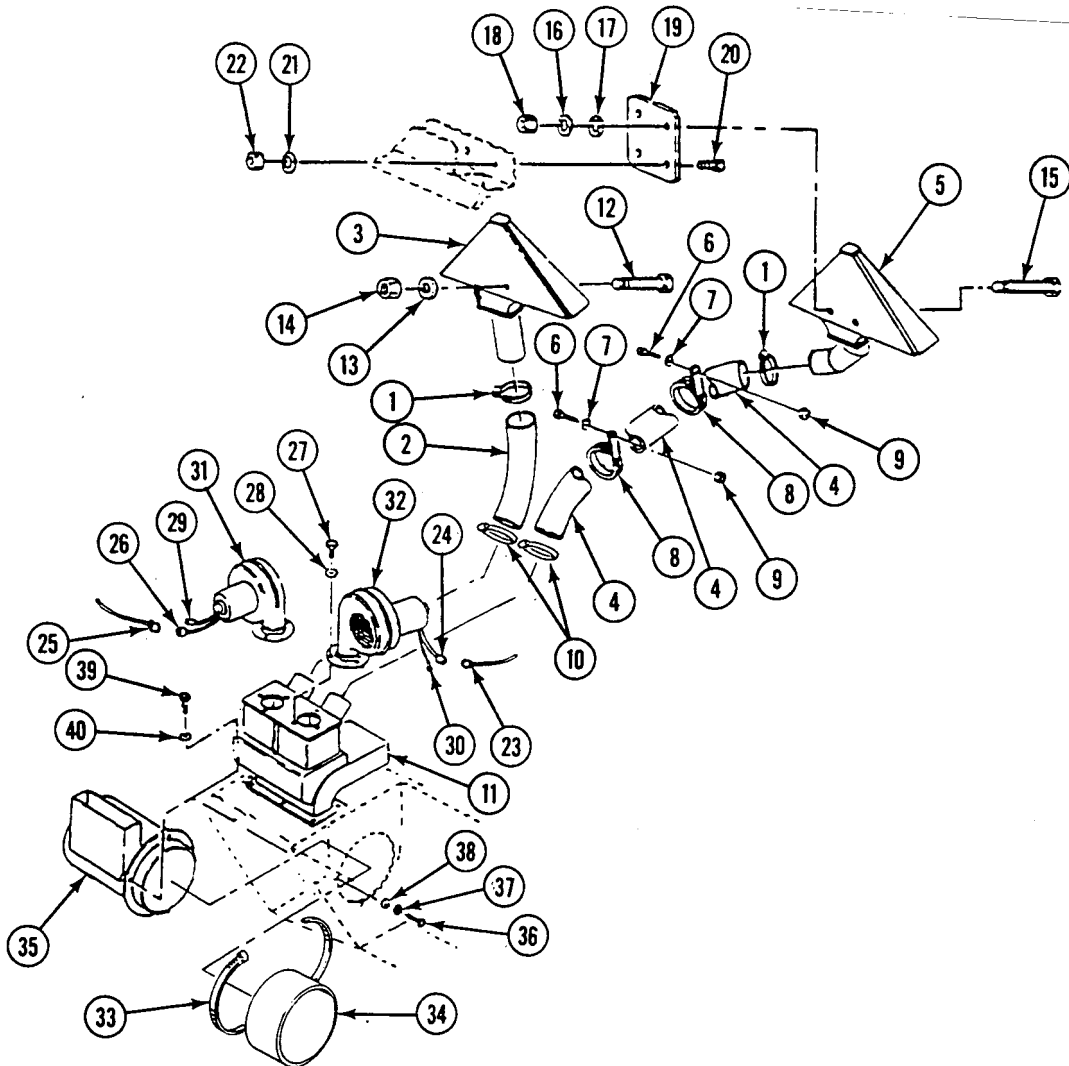
3. Loosen two clamps (1) and remove hose (2) from right defroster (3) and hose (4) from left defroster (5).
4. Remove two screws (6), washers (7), clamps (8), lock nuts (9) and hose (4) from windshield frame. Discard lock nuts.
5. Loosen two clamps (10) and remove hose (2) and hose (4) from defroster duct (11).
6. Remove two screws (12), washers (13), nuts (14), and right defroster (3) from windshield frame.
7. Remove two screws (15), lock washers (16), washers (17), nuts (18), and left defroster (5) from plate (19). Discard lock washers.
8. Remove two screws (20), washers (21), nuts (22), and plate (19) from left windshield frame.



REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued

0432 00

9. Remove circuit lead 347 (23) from left defroster fan lead (24) and circuit lead 346 (25) from right defroster fan lead (26).
10. Remove six screws (27), lock washers (28), ground lead (29), ground lead (30), defroster fan (31), and defroster fan (32) from defroster duct (11). Discard lock washers.
11. Loosen clamp (33) securing plenum sleeve (34) to plenum (35).
12. Remove metal hose assembly under plenum (35).
13. Remove four screws (36), lock washers (37), washers (38), and plenum (35) from bulkhead and defroster duct (11). Have helper assist. Discard lock washers.
14. Remove six screws (39), washers (40), and defroster duct (11) from hull.

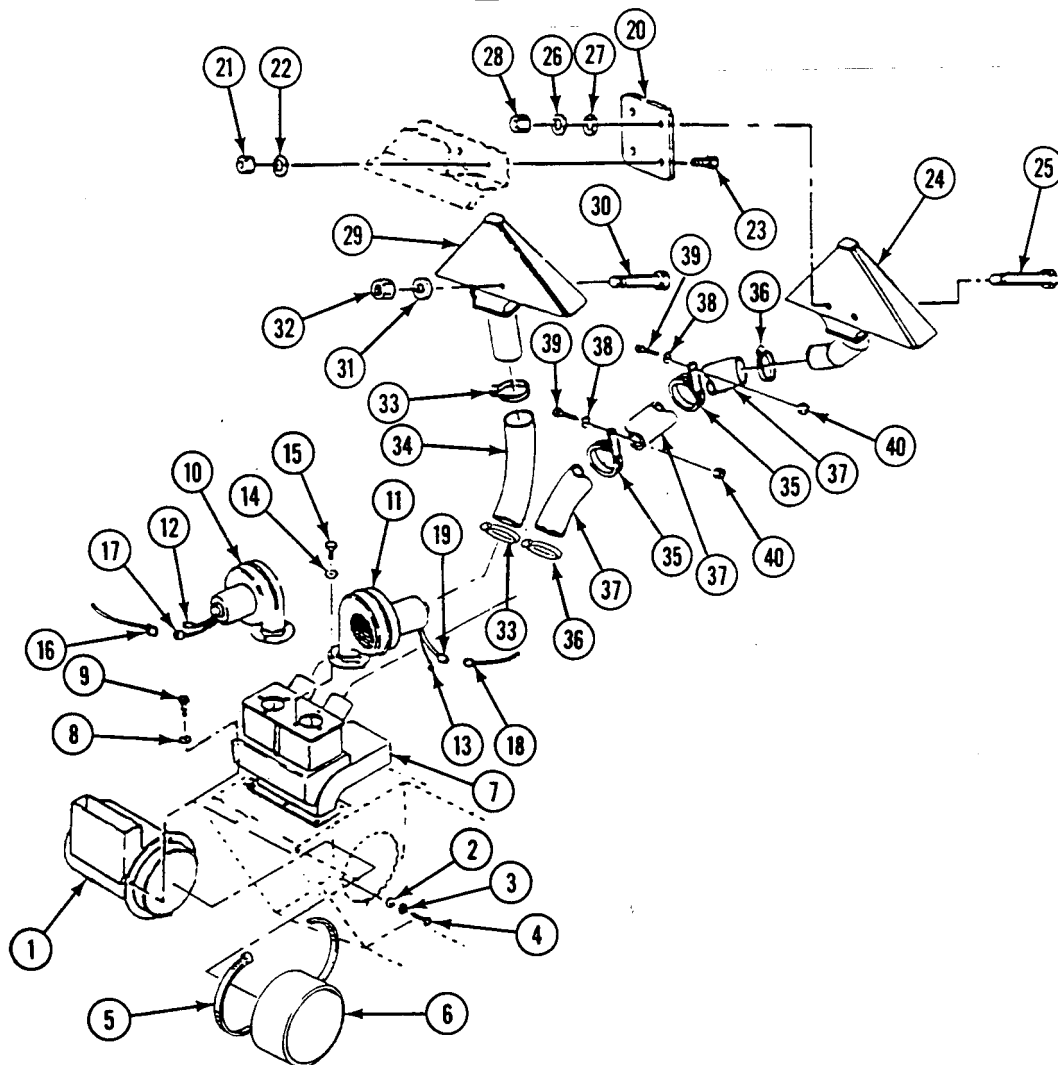


**REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued**

0432 00

INSTALLATION

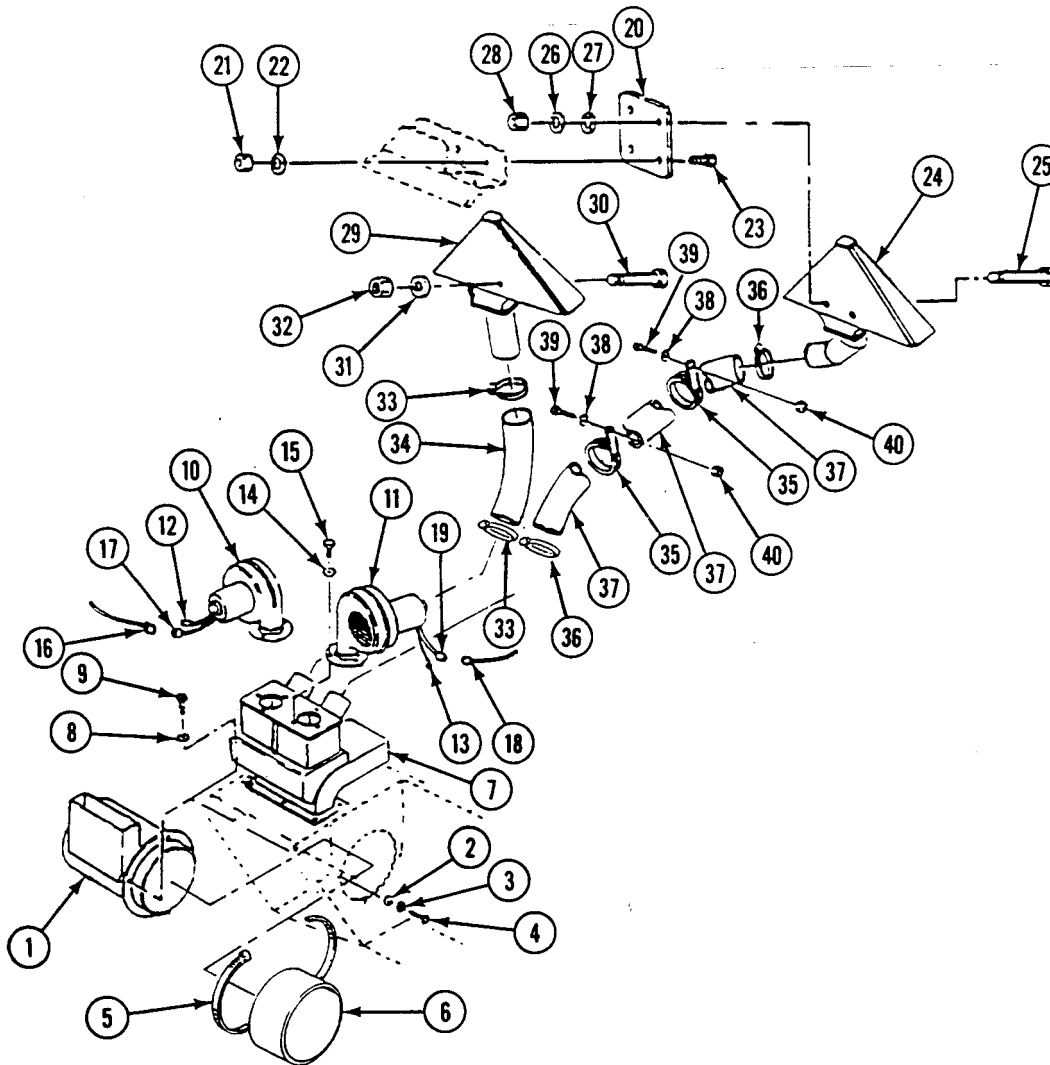
1. Install plenum (1), four washers (2), new lock washers (3), and screws (4) on bulkhead and heater. Have helper assist.
2. Install metal hose assembly under plenum (1).
3. Install clamp (5) securing plenum sleeve (6) to plenum (1). Tighten clamp.
4. Install defroster duct (7), six washers (8), and screws (9) on hull.
5. Install defroster fan (10), defroster fan (11), ground lead (12), ground lead (13), six new lock washers (14), and screws (15) on defroster duct (7).
6. Install circuit lead 346 (16) on right defroster fan lead (17) and circuit lead 347 (18) on left defroster fan lead (19).



REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued

0432 00

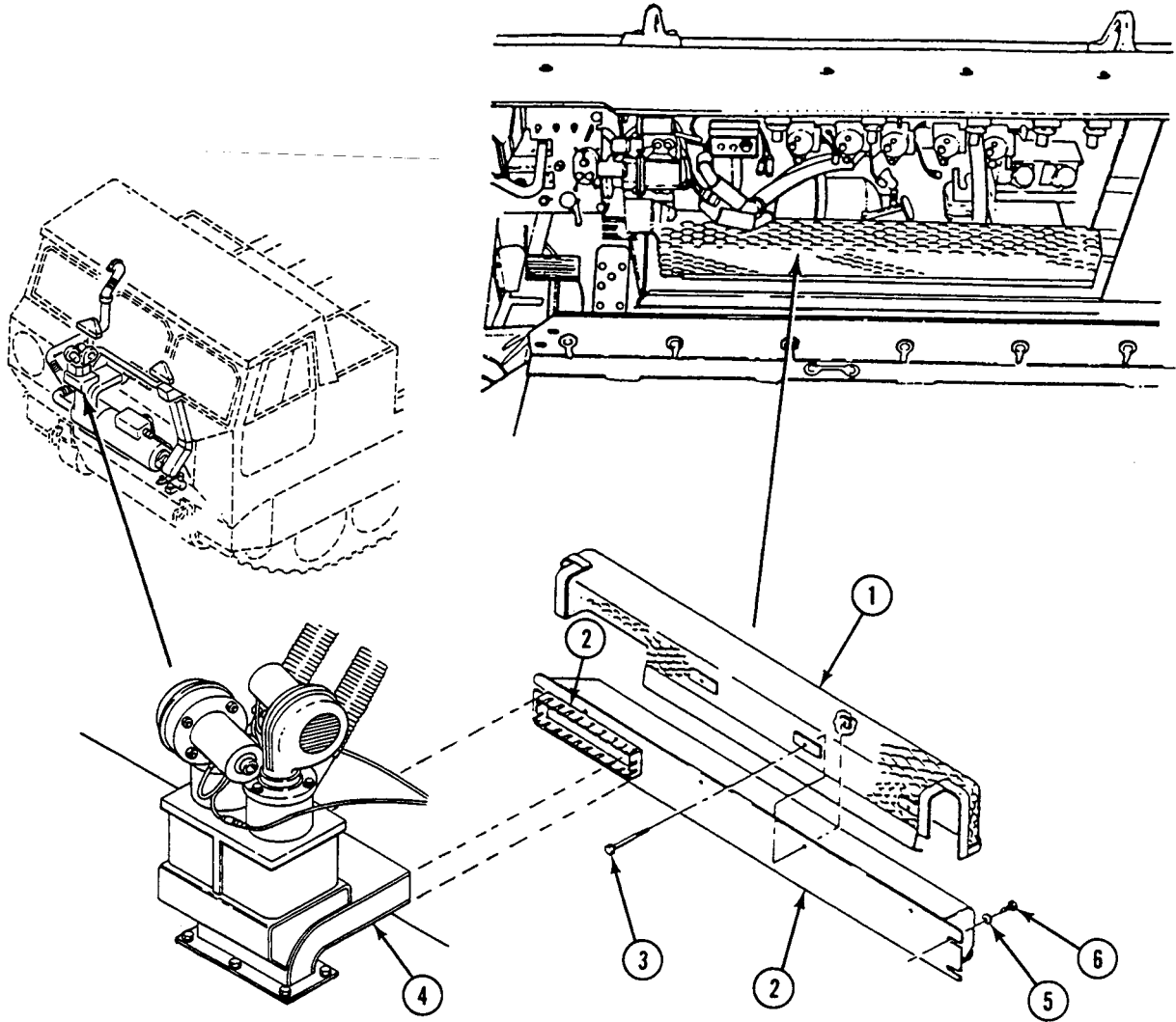
7. Install plate (20), two nuts (21), washers (22), and screws (23) on left windshield frame.
8. Install left defroster (24), two screws (25), new lock washers (26), washers (27), and nuts (28) on plate (20).
9. Install right defroster (29), two screws (30), washers (31), and nuts (32) on windshield frame.
10. Install two clamps (33) and hose (34) on defroster duct (7) and right defroster (29). Tighten clamps.
11. Install two clamps (35) and two clamps (36) on hose (37). Install hose on defroster duct (7) and left defroster (24). Tighten clamps (36).
12. Install two clamps (35), washers (38), screws (39), and new lock nuts (40) on windshield frame.



REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER, HOSES, AND FANS
(M548A3) — Continued

0432 00

13. Place guard (1) on diffuser duct (2) and secure with four screws (3).
14. Align diffuser duct (2) with defroster duct (4) and install diffuser duct, four washers (5), and screws (6) on carrier.


FOLLOW-THROUGH STEPS

1. Lower tool compartment access door (see your -10).
2. Install right center floor plate (WP 0395 00).
3. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN TOGGLE SWITCHES/IDENTIFICATION PLATE

0433 00

THIS WORK PACKAGE COVERS:

Removal (page 0433 00-1).
 Installation (page 0433 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

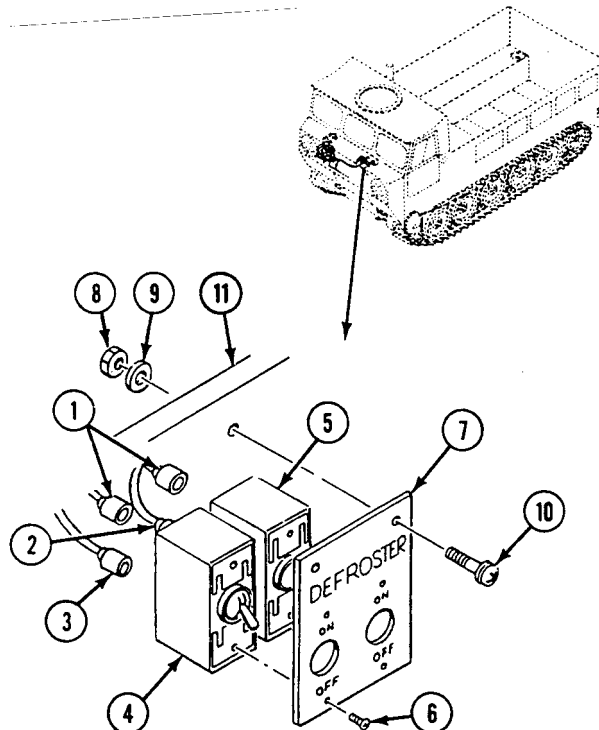
Battery negative lead(s) disconnected (WP 0292 00)

Materials/Parts

Lock nut (2)

REMOVAL

1. Remove two circuit 38 leads (1), circuit 347 lead (2), and circuit 346 lead (3) from toggle switch (4) and toggle switch (5).
2. Remove four screws (6), toggle switch (4), and toggle switch (5) from identification plate (7).
3. Remove two lock nuts (8), washers (9), screws (10), and identification plate (7) from bracket (11). Discard lock nuts.

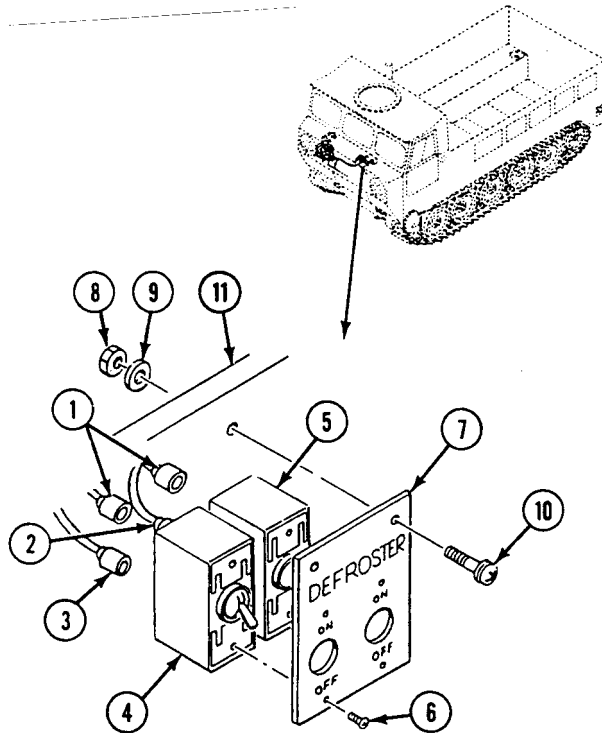


**REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN TOGGLE SWITCHES/
IDENTIFICATION PLATE — Continued**

0433 00

INSTALLATION

1. Install identification plate (7) on bracket (11) with two screws (10), washers (9), and new lock nuts (8).
2. Install toggle switch (4) and toggle switch (5) on identification plate (7) with four screws (6).
3. Connect circuit 346 lead (3), circuit 347 lead (2), and two circuit 38 leads (1) to toggle switch (4) and toggle switch (5).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Turn MASTER SWITCH ON (see your -10).
3. Check defroster switches and fans for proper operation.
4. Turn MASTER SWITCH OFF (see your -10).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN WIRING
HARNESS**

0434 00

THIS WORK PACKAGE COVERS:

Removal (page 0434 00-2).
Installation (page 0434 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

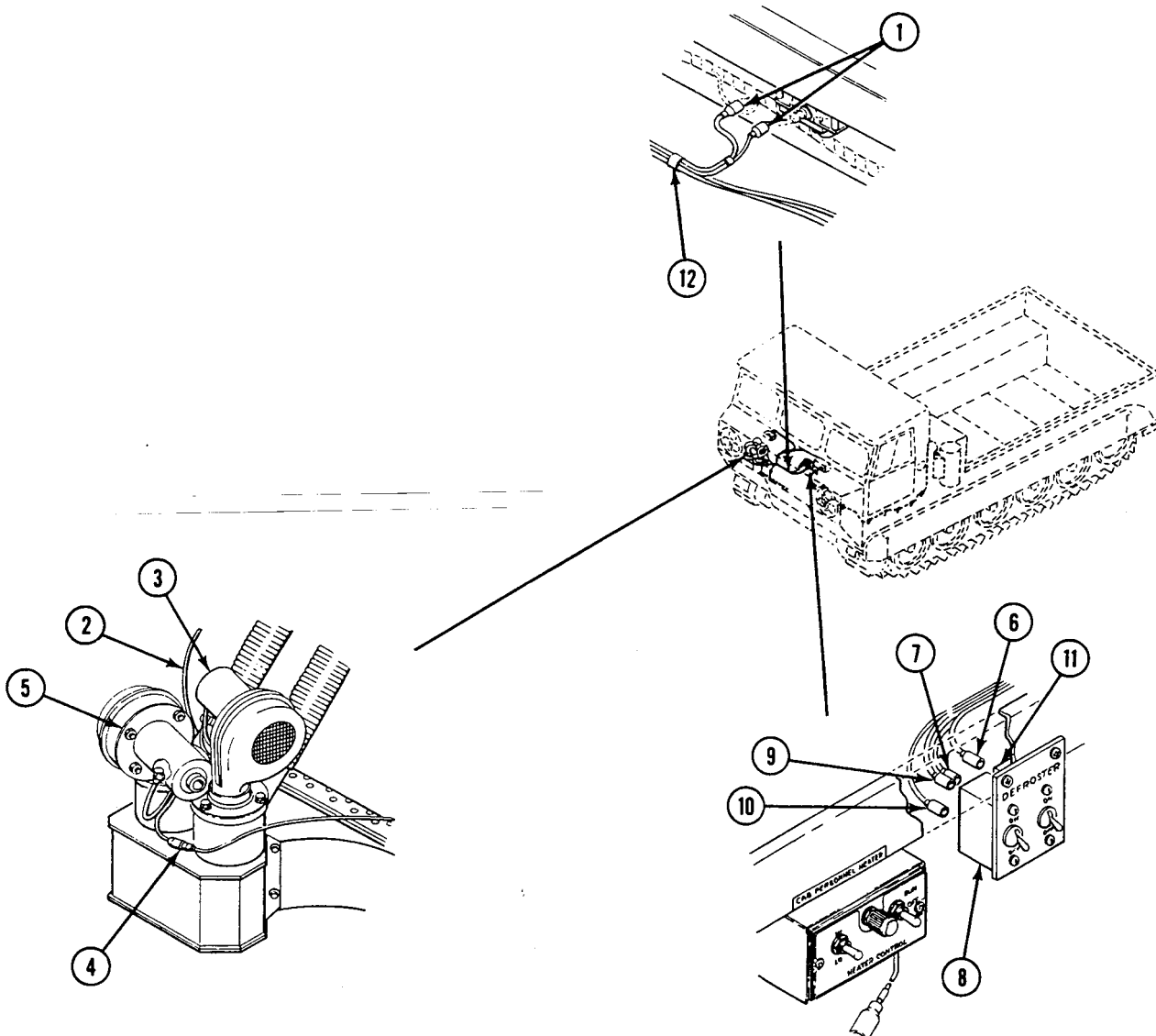
Battery negative lead(s) disconnected (WP 0292 00)

REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN WIRING HARNESS —
Continued

0434 00

REMOVAL

1. Remove two circuit 38 leads (1) from main wiring harness and dome light.
2. Remove circuit 347 lead (2) from left defroster fan (3).
3. Remove circuit 346 lead (4) from right defroster fan (5).
4. Remove circuit 38 lead (6) and circuit 347 lead (7) from left defroster fan toggle switch (8).
5. Remove circuit 38 lead (9) and circuit 346 lead (10) from right defroster fan toggle switch (11). Remove defroster fan wiring harness (12) from carrier.

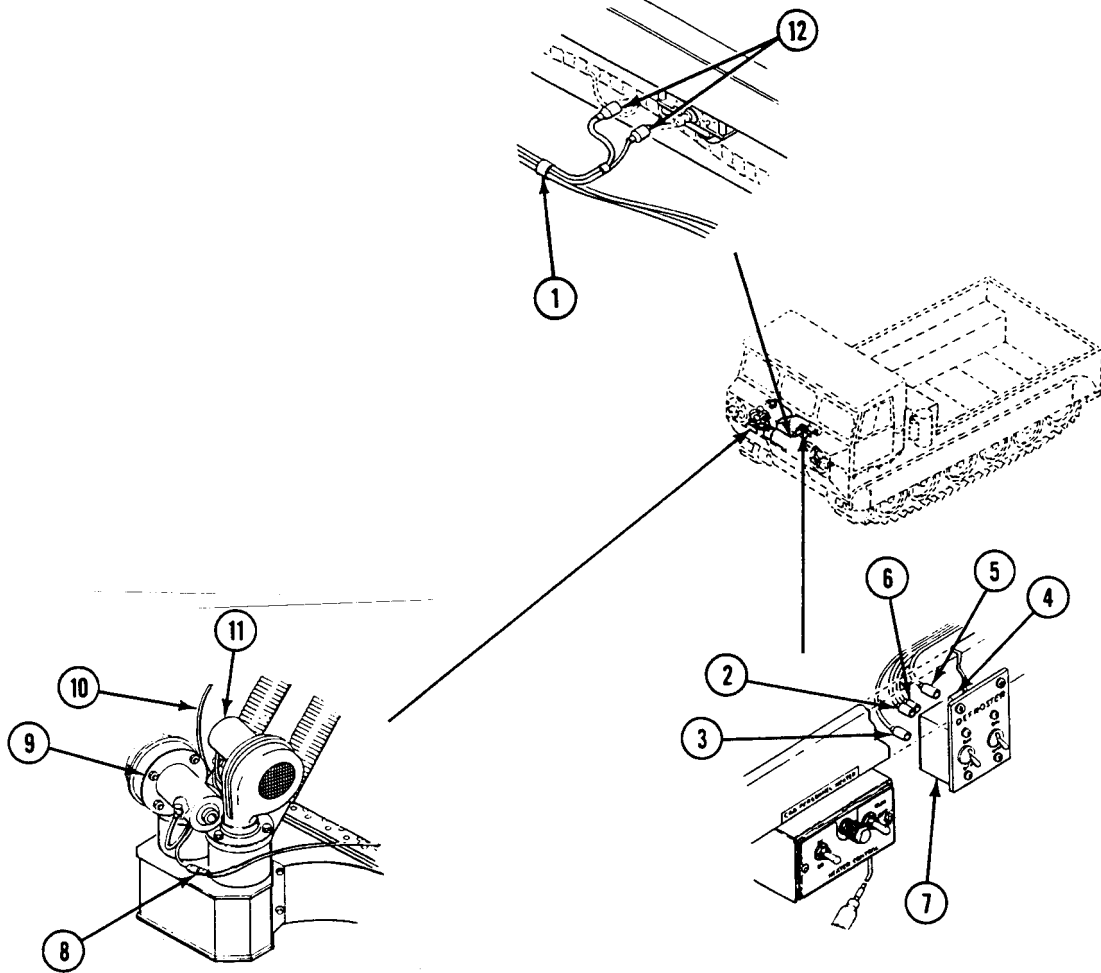


REPLACE VEHICLE COMPARTMENT HEATER DEFROSTER FAN WIRING HARNESS —
Continued

0434 00

INSTALLATION

1. Install defroster fan wiring harness (1) in carrier. Install circuit 38 lead (2) and circuit 346 lead (3) on right defroster fan toggle switch (4).
2. Install circuit 38 lead (5) and circuit 347 lead (6) on left defroster fan toggle switch (7).
3. Install circuit 346 lead (8) on right defroster fan (9).
4. Install circuit 347 lead (10) on left defroster fan (11).
5. Install circuit 38 lead (12) on carrier wiring harness and dome light.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start heater (see your -10).
3. Check defroster fan wiring harness for proper operation.
4. Stop heater (see your -10).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS
(M548A3)**

0435 00

THIS WORK PACKAGE COVERS:

Removal (page 0435 00-2).
Installation (page 0435 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Front access cover removed (WP 0391 00)
NBC manifold removed (WP 0533 00)
M1A1-19 precleaner assembly removed (WP 0534 00)

Materials/Parts

Grommet
Lock washer

Personnel Required

Unit Mechanic

REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A3) —
Continued

0435 00

REMOVAL

NOTE

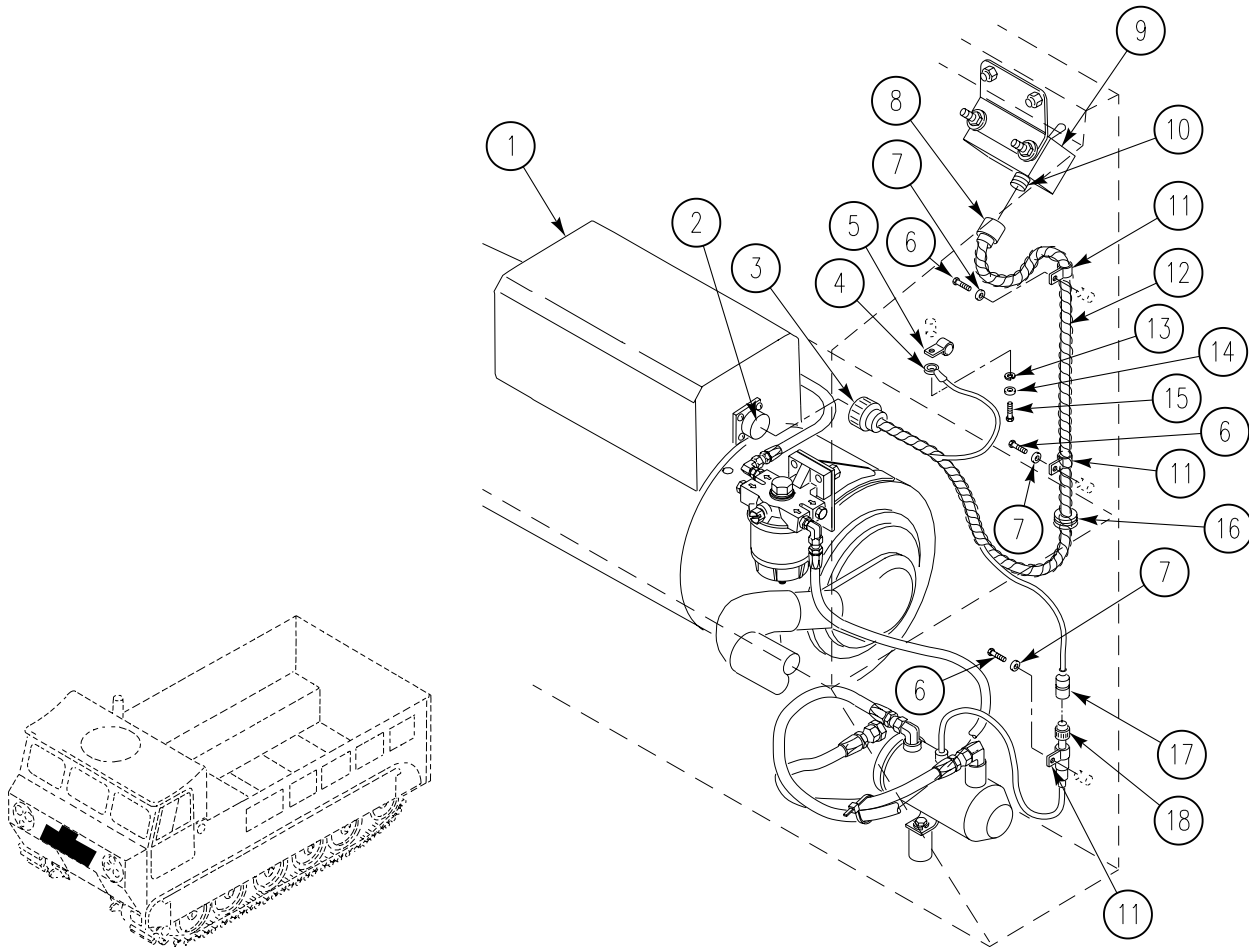
Step 1, Step 2, and Step 3 are accessed through front access cover.

1. Disconnect circuit 402 lead (17) from fuel pump lead (18).

NOTE

Loosen clamp in order to move fuel filter on bracket for access to receptacle.

2. Disconnect wiring harness connector (3) from receptacle (2) on heater (1).
3. Remove screw (15), lock washer (14), washer (13), ground lead (4), and clamp (5) from hull weld nut and wiring harness (12). Discard lock washer.



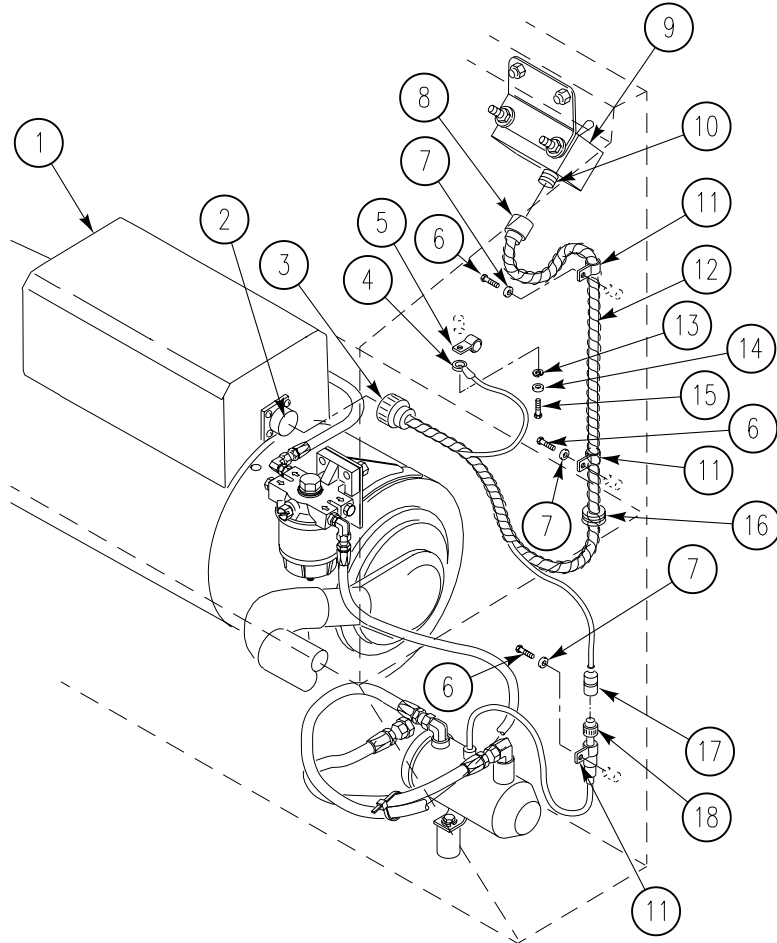
**REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A3) —
Continued**

0435 00

NOTE

Step 4, Step 5, and Step 6 are accessed from inside cab.

4. Disconnect wiring harness connector (8) from receptacle (10) on heater control box (9).
5. Remove three screws (6), washers (7), clamps (11), and wiring harness (12) from hull weld nuts.
6. Cut grommet (16) from hull and wiring harness (12). Remove wiring harness from hull. Discard grommet.



**REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A3) —
Continued**

0435 00

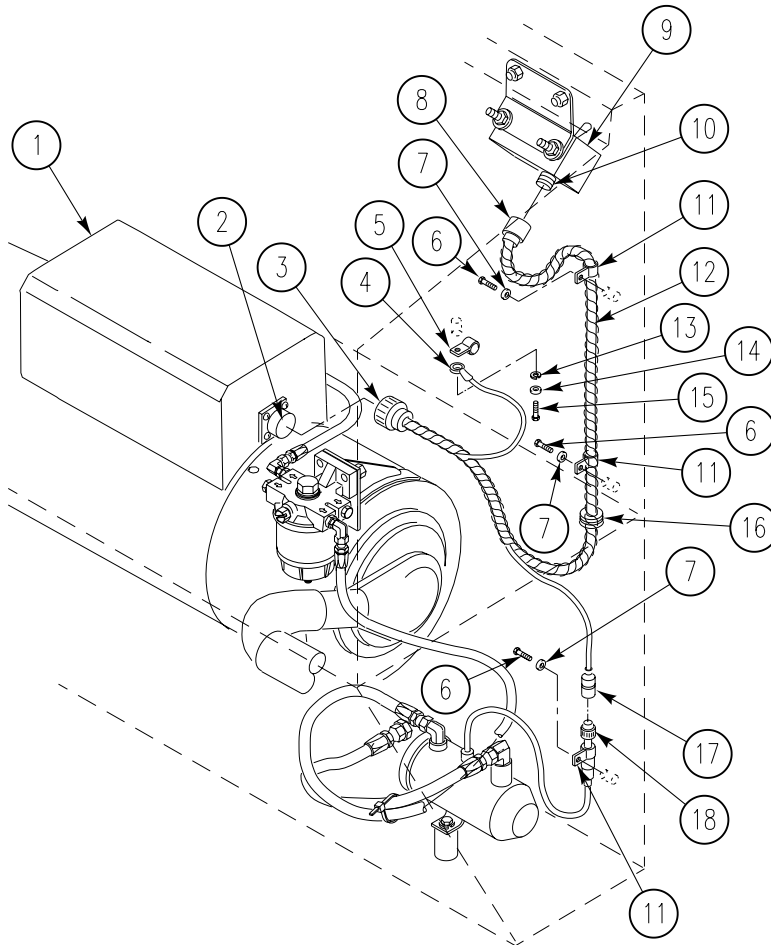
INSTALLATION

1. Install wiring harness (12) and new grommet (16) in hull.
2. Install three clamps (11) on wiring harness (12). Secure clamps to hull weld nuts with three washers (7) and screws (6).

NOTE

Position fuel filter on bracket on heater and tighten clamp.

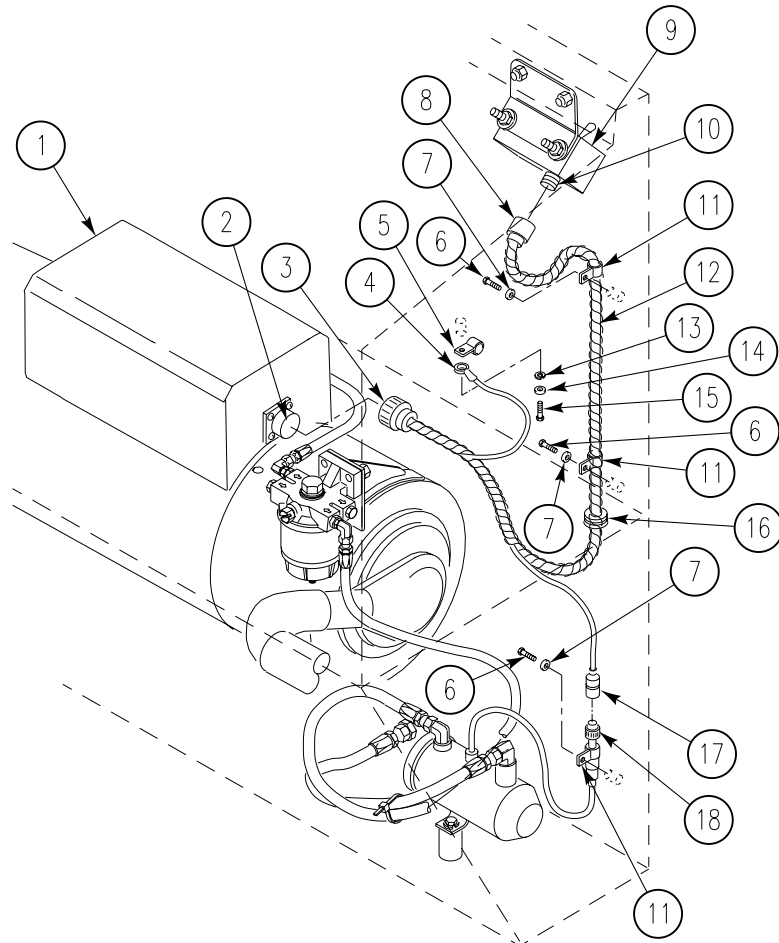
3. Connect wiring harness connector (8) to receptacle (10) on heater control box (9).



REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A3) —
Continued

0435 00

4. Install clamp (5) on wiring harness (12). Secure clamp and ground lead (4) to hull weld nut with washer (13), new lock washer (14), and screw (15).
5. Connect wiring harness connector (3) to receptacle (2) on heater (1).
6. Connect circuit 402 lead (17) to fuel pump lead (18).



FOLLOW-THROUGH STEPS

1. Connect both battery negative leads (WP 0292 00).
2. Check vehicle compartment heater for proper operation (see your -10).
3. Install front access cover (WP 0391 00).
4. Install M1A1-19 precleaner assembly (WP 0534 00).
5. Install NBC manifold (WP 0533 00).

END OF TASK

SERVICE PERSONNEL HEATER FUEL FILTER (M548A3)

0436 00

THIS WORK PACKAGE COVERS:

- Removal (page 0436 00-1).
- Servicing (page 0436 00-2).
- Installation (page 0436 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

- Cleaning compound (WP 0542 00, Item 9)
- Wiping rag (WP 0542 00, Item 45)
- Preformed packing
- Separator parts kit

Equipment Condition

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

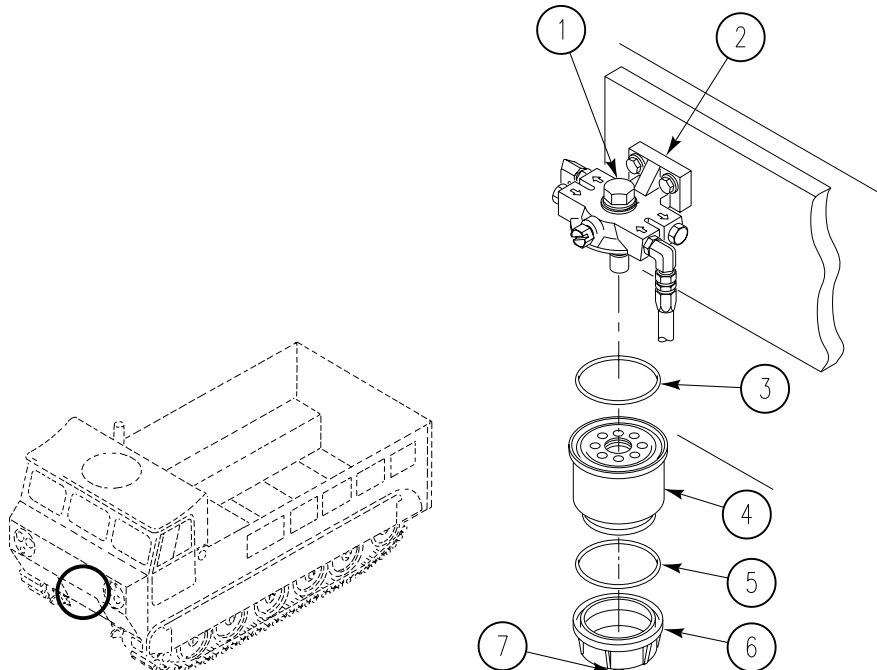
REMOVAL

1. Depress plunger (7) until fluid is drained from collector bowl (6). Wipe up spilled fuel.
2. Remove collector bowl (6) from filter element (7).

NOTE

Loosen head bolt as instructed. Do not remove head bolt from filter head. Do not discard head gasket.

3. Loosen head bolt (1) until filter element (4) with preformed packing (5) can be removed from filter head (2). Do not remove and do not discard head gasket (3). Discard preformed packing and filter element.

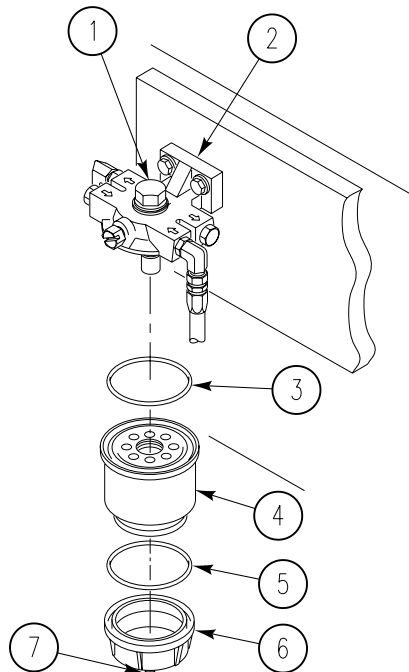


CLEANING

1. Clean collector bowl (6) with cleaning compound and clean wiping rag.

INSTALLATION

1. Install new preformed packing (5) on new filter element (4).
2. Install collector bowl (6) in new filter element (4).
3. If head gasket (3) was removed, position same gasket in filter head (2) or on filter element (4).
4. Install new filter element (4) and gasket (3) on head bolt (1) and filter head (2).

**FOLLOW-THROUGH STEPS**

1. Turn personnel heater ON (see your -10). Check for leaks.
2. Turn personnel heater OFF (see your -10).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE
ASSEMBLY (M548A3)**

0437 00

THIS WORK PACKAGE COVERS:

Removal (page 0437 00-2).
Installation (page 0437 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Front access cover removed (WP 0391 00)
Right floor plate removed (WP 0395 00)
Top right access grille removed (see your -10)
Center seat raised (see your -10)

Materials/Parts

Lock washer (11)

Personnel Required

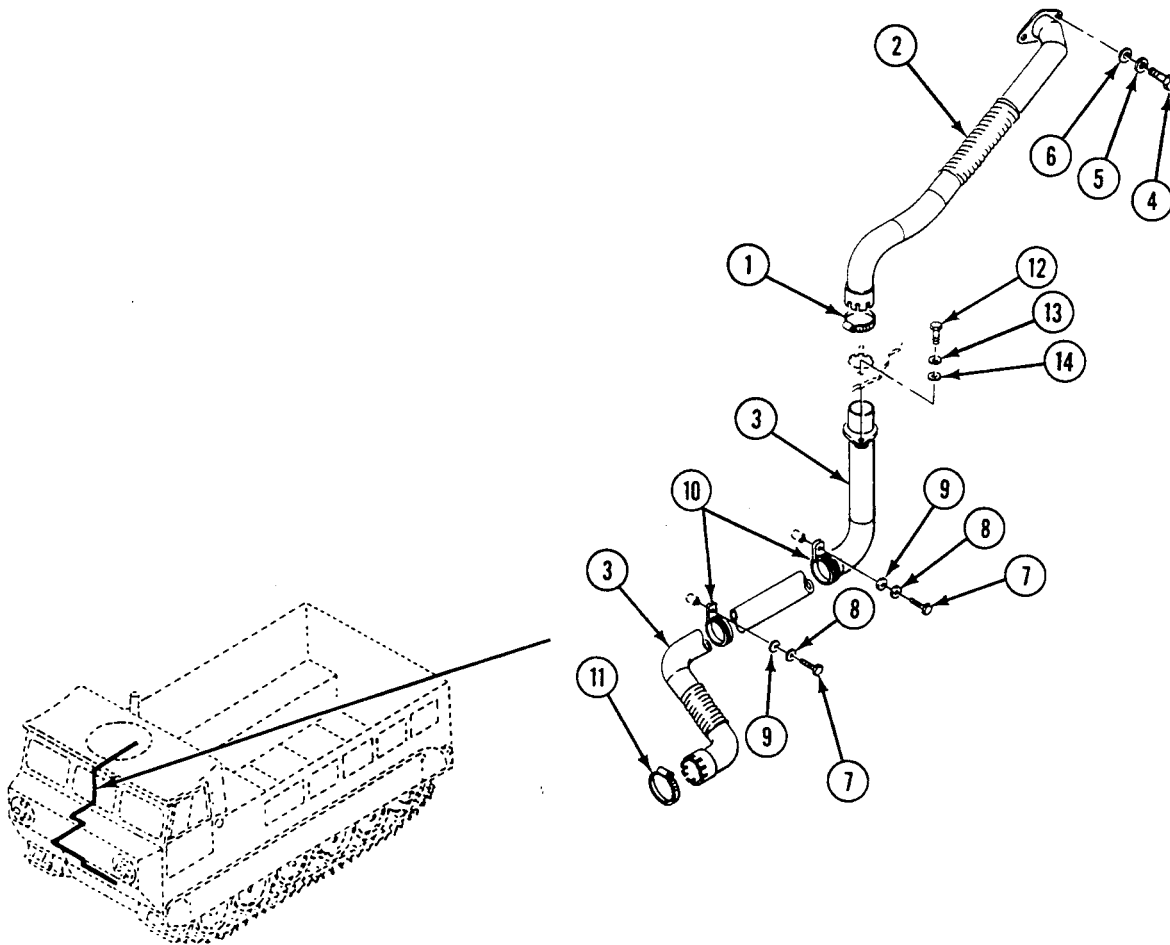
Unit Mechanic
Helper (H)

REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY (M548A3) — Continued

0437 00

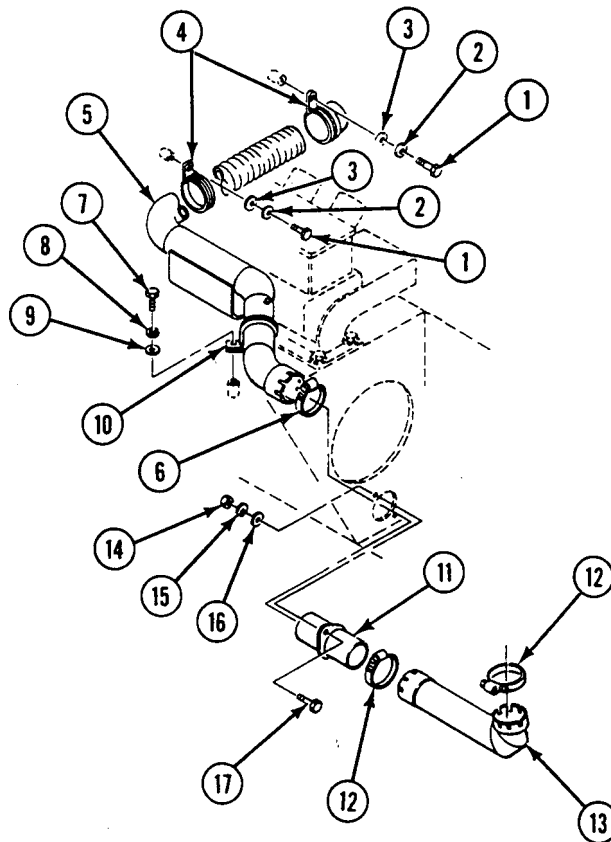
REMOVAL

1. Loosen clamp (1) on metal hose assembly (2).
2. Remove two screws (4), lock washers (5), washers (6), and metal hose assembly (2) from hull. Have helper assist. Discard lock washers.
3. Remove two screws (7), lock washers (8), washers (9), and clamps (10) from two hull weld nuts. Discard lock washers.
4. Loosen clamp (11) on metal hose assembly (3).
5. Remove two screws (12), lock washers (13), washers (14), and metal hose assembly (3) from hull. Have helper assist. Discard lock washers.



**REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY
(M548A3) — Continued****0437 00**

6. Remove two screws (1), lock washers (2), washers (3), clamps (4) and metal hose assembly (5) from two hull weld nuts. Discard lock washers.
7. Loosen clamp (6) on metal hose assembly (5).
8. Remove screw (7), lock washer (8), washer (9), and clamp (10) from hull weld nut. Discard lock washer.
9. Remove metal hose assembly (5) from pipe (11).
10. Loosen two clamps (12) and remove exhaust pipe (13) from pipe (11) and heater (WP 0428 00).
11. Remove two nuts (14), lock washers (15), washers (16), and screws (17) securing pipe (11) to bulkhead. Have helper assist. Remove pipe. Discard lock washers.

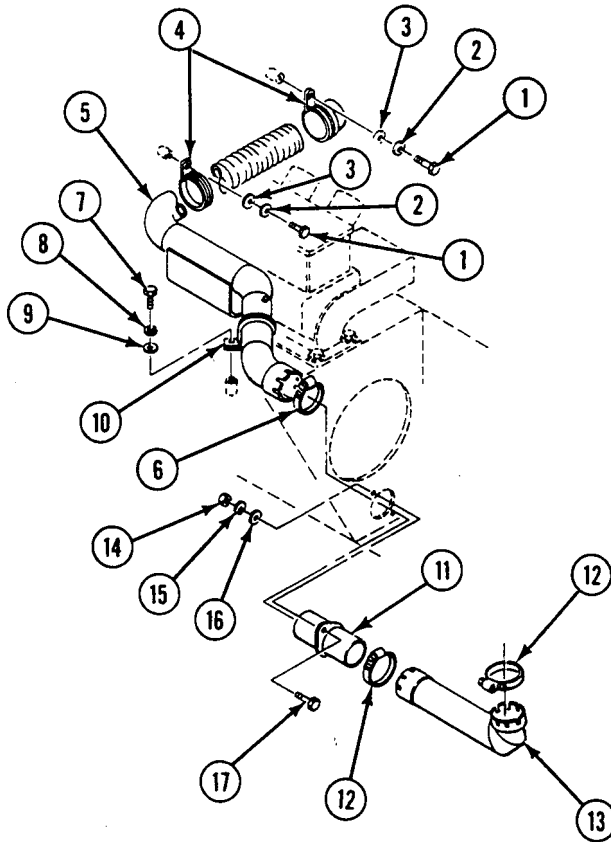


**REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY
(M548A3) — Continued**

0437 00

INSTALLATION

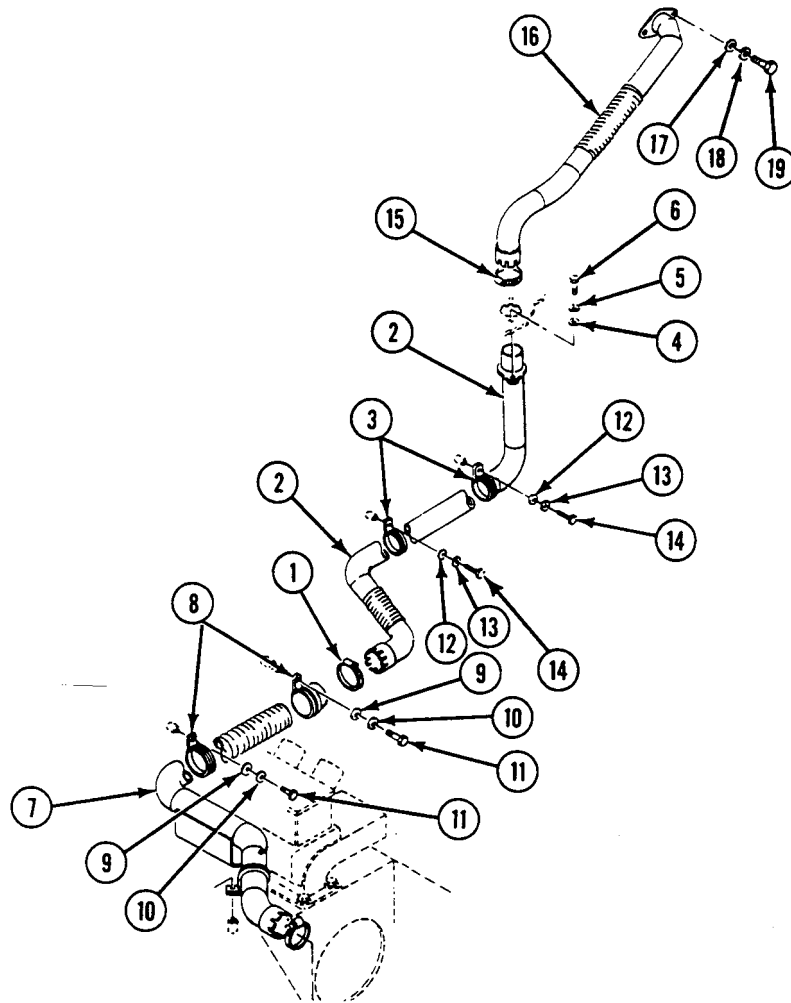
1. Install pipe (11) on bulkhead. Secure with two washers (16), new lock washers (15), nuts (14), and screws (17). Have helper assist.
2. Install two clamps (12) on exhaust pipe (13).
3. Install exhaust pipe (13) on pipe (11) and heater (WP 0428 00). Tighten two clamps (12).
4. Install clamp (10) and clamp (6) on metal hose assembly (5).
5. Install metal hose assembly (5) on pipe (11) and secure with clamp (6). Secure metal hose assembly to hull weld nut with clamp (10), washer (9), new lock washer (8), and screw (7). Tighten clamps.



REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY (M548A3) — Continued

0437 00

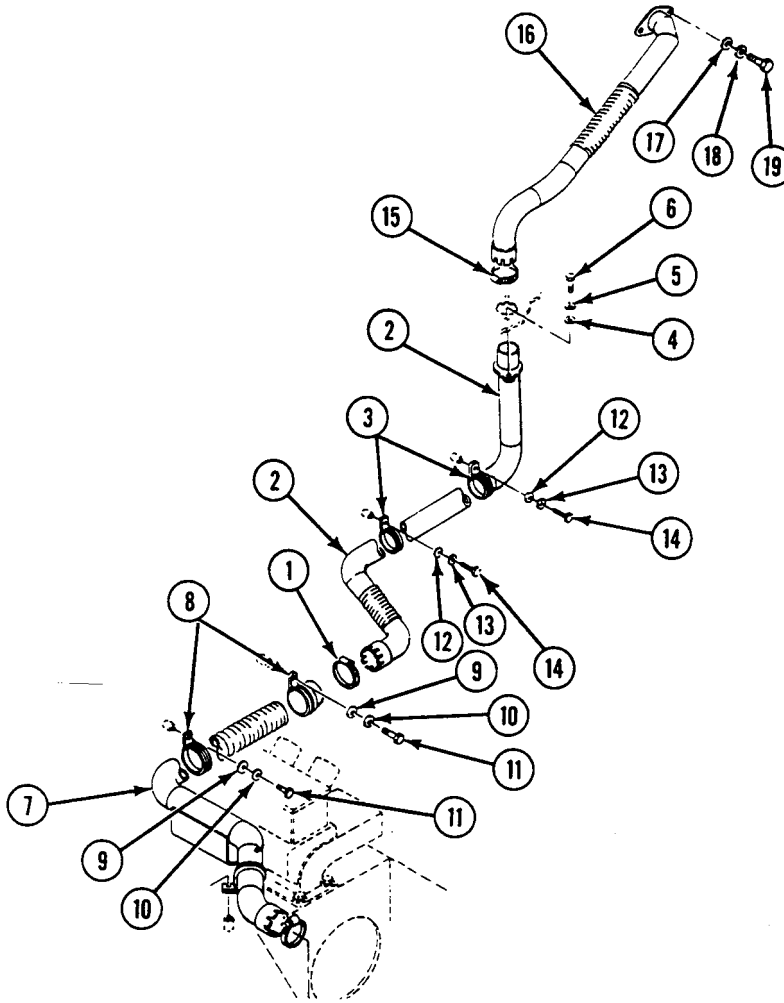
6. Install clamp (1) on metal hose assembly (2).
7. Install two clamps (3) on metal hose assembly (2). Insert end of metal hose assembly through hull and secure with two washers (4), new lock washers (5) and screws (6). Have helper assist.
8. Insert metal hose assembly (7) into metal hose assembly (2) and clamp (1). Tighten clamp. Secure metal hose assembly to two hull weld nuts with two clamps (8), washers (9), new lock washers (10), and screws (11).



REPLACE VEHICLE COMPARTMENT HEATER EXHAUST METAL HOSE ASSEMBLY (M548A3) — Continued

0437 00

9. Secure two clamps (3) and metal hose assembly (2) on two hull weld nuts with two washers (12), new lock washers (13), and screws (14).
10. Install metal hose assembly (15) and clamp (16) on metal hose assembly (2). Tighten clamp.
11. Install end of metal hose assembly (15) through bulkhead. Secure with two washers (17), new lock washers (18), and screws (19). Have helper assist.

**FOLLOW-THROUGH STEPS**

1. Lower center seat (see your -10).
2. Install top right access grille (see your -10).
3. Install right floor plate (WP 0395 00).
4. Install front access cover (WP 0391 00).
5. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER AIR INLET DUCTS (M548A3)

0438 00

THIS WORK PACKAGE COVERS:

Removal (page 0438 00-2).
 Installation (page 0438 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Lock washer (4)

Carrier blocked (see your -10)

Seal

Front access cover removed (WP 0391 00)

Personnel Required

Unit Mechanic

Left front lifting eye removed (WP 0382 00) or machine

Helper (H)

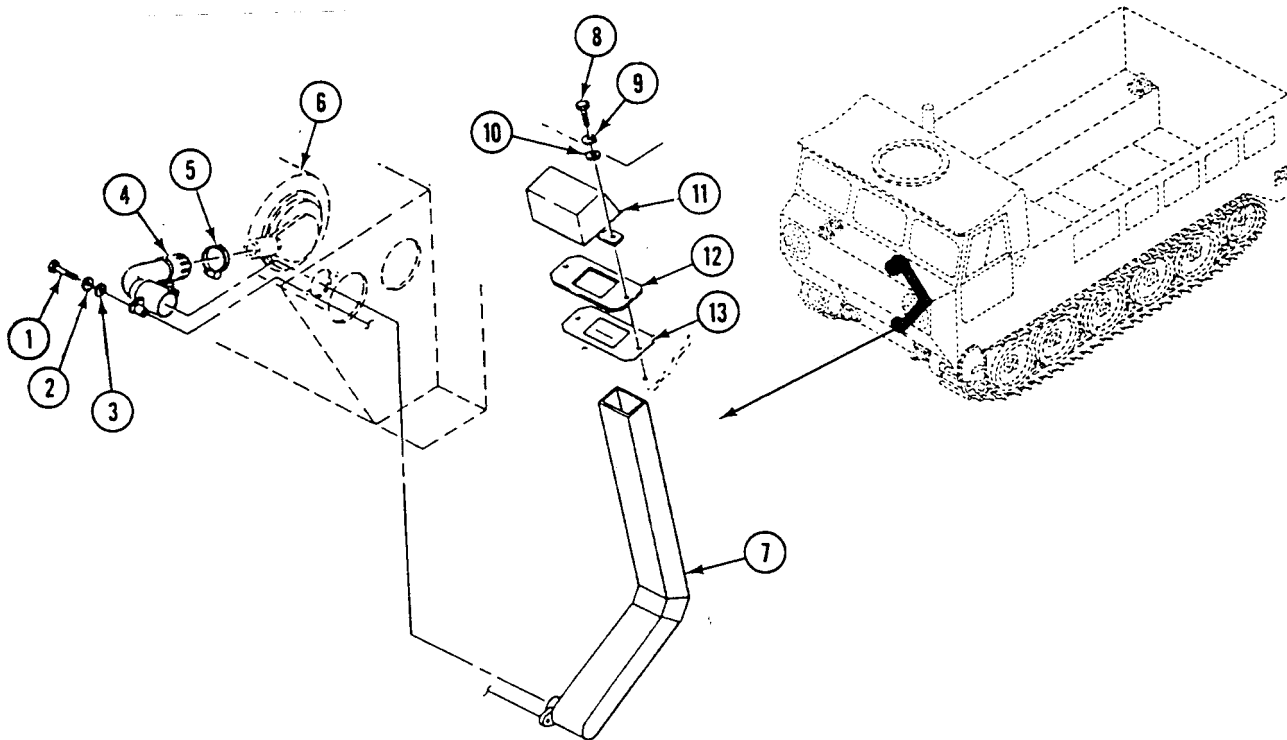
gun mount removed (WP 0513 00), (WP 0514 00) or
 (WP 0515 00), if installed

REMOVAL

NOTE

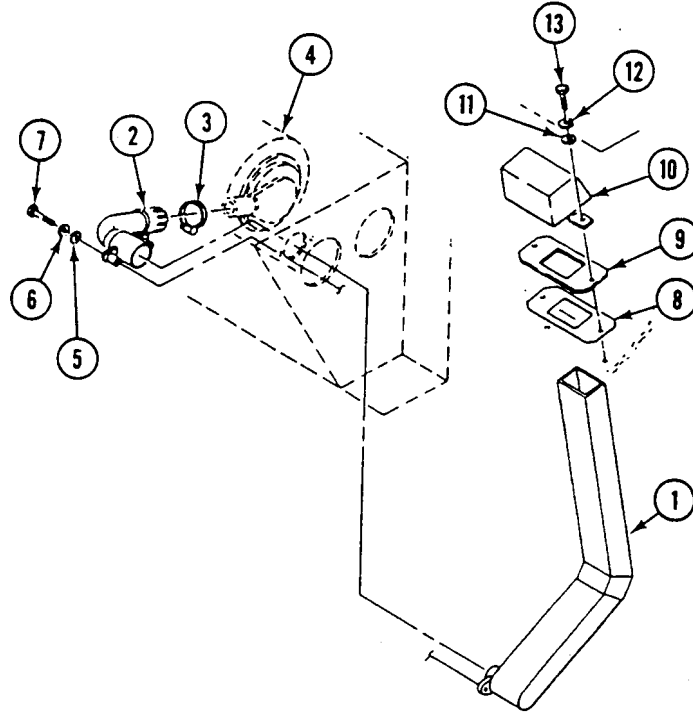
Heater air inlet duct will be behind left front lifting eye or machine gun mount, if installed.

1. Remove two screws (1), washers (2), and lock washers (3) from air inlet duct (4). Discard lock washers.
2. Loosen clamp (5) and remove air inlet duct (4) from heater (6) and tube (7).
3. Remove two screws (8), washers (9), and lock washers (10) from cover (11). Discard lock washers.
4. Remove cover (11), flange (12), seal (13), and tube (7) from carrier. Discard seal.



INSTALLATION

1. Slide tube (1) through top plate and align with air inlet duct (2) opening. Have helper assist.
2. Place clamp (3) on air inlet duct (2) and install duct on tube (1) and heater (4). Tighten clamp.
3. Install two new lock washers (5), washers (6), and screws (7) on air inlet duct (2) and tube (1).
4. Install new seal (8), flange (9), and cover (10) on tube (1).
5. Secure cover (10) on tube (1) and top plate with two new lock washers (11), washers (12), and screws (13).

**FOLLOW-THROUGH STEPS**

1. Install front access cover (WP 0391 00).
2. Install left front lifting eye (WP 0382 00) or machine gun mount (WP 0513 00), (WP 0514 00) or (WP 0515 00), if removed.

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/
SEPARATOR FILTER (M548A3)**

0439 00

THIS WORK PACKAGE COVERS:

Removal (page 0439 00-2).
Installation (page 0439 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Center floor plates removed (WP 0395 00)
Top center access grille removed (see your -10)
Power plant rear access panel removed (see your -10)
Center seat raised (see your -10)
Hull bottom access cover removed (WP 0383 00)
Radiator removed (WP 0216 00)

Materials/Parts

Sealing Compound (WP 0542 00, Item 33)
Lock washer (7)
Strap

Personnel Required

Unit Mechanic

REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/SEPARATOR
 FILTER (M548A3) — Continued

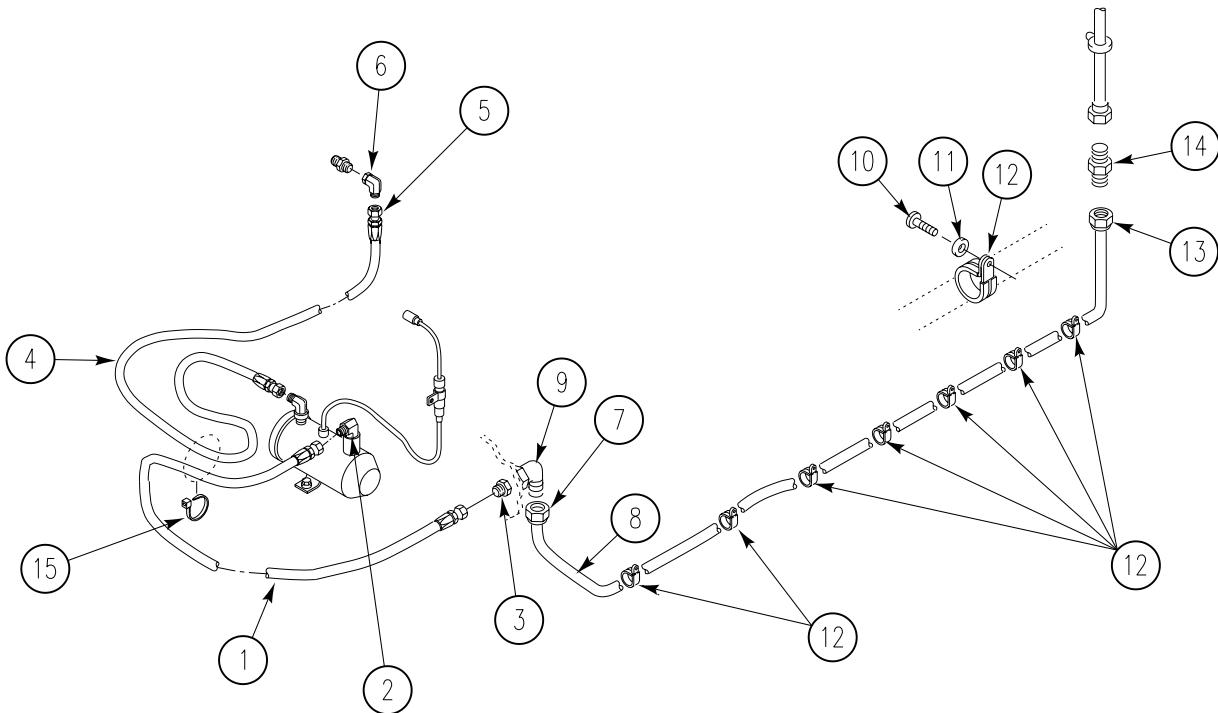
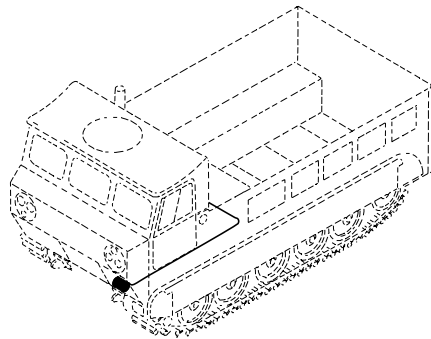
0439 00

REMOVAL

NOTE

Perform steps necessary to access fuel line on heater for removal.

1. Loosen all clamps securing heater and sleeve. Remove air inlet duct and exhaust pipe from heater (WP 0428 00).
2. Remove strap (15) from hose (1) and hose (4). Discard strap.
3. Remove hose assembly (1) from elbow (2) and adapter (3).
4. Remove hose assembly (4) from elbow (5) and elbow (6).
5. Loosen nut (7). Remove hose assembly (8) from elbow (9).



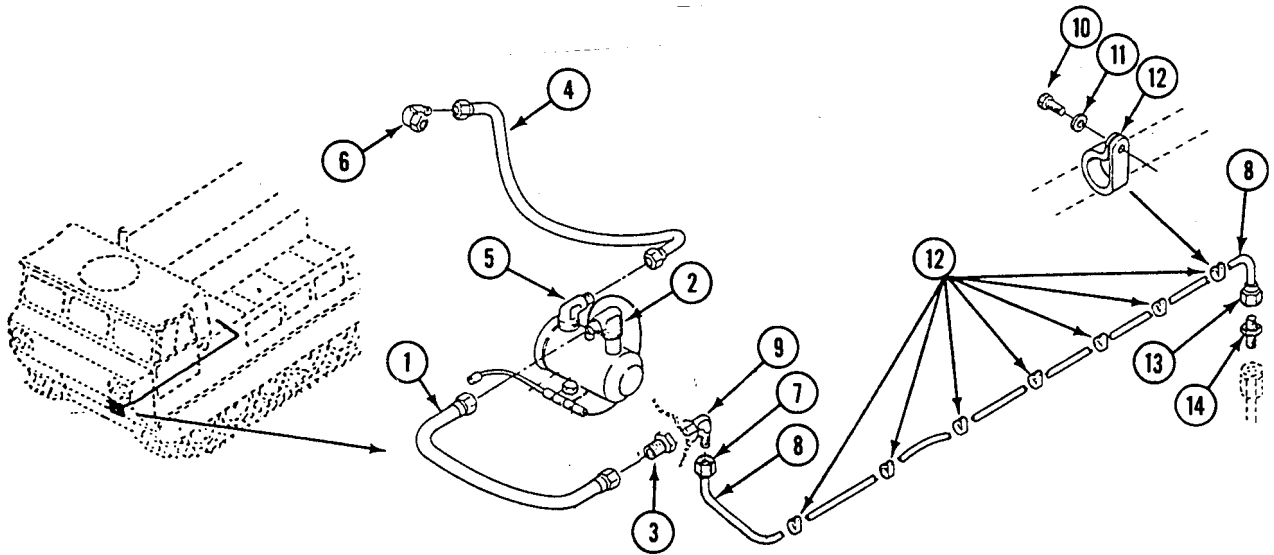
**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/SEPARATOR
FILTER (M548A3) — Continued**

0439 00

NOTE

Access through bottom access cover and from power plant rear access panel for Step 6.

6. Remove seven screws (10) and lock washers (11) from seven clamps (12). Remove clamps from bulkhead and hose assembly (8). Discard lock washers.
7. Loosen nut (13). Remove hose assembly (8) from adapter (14).
8. Remove hose assembly (8) from carrier.



**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/SEPARATOR
FILTER (M548A3) — Continued**

0439 00

INSTALLATION

NOTE

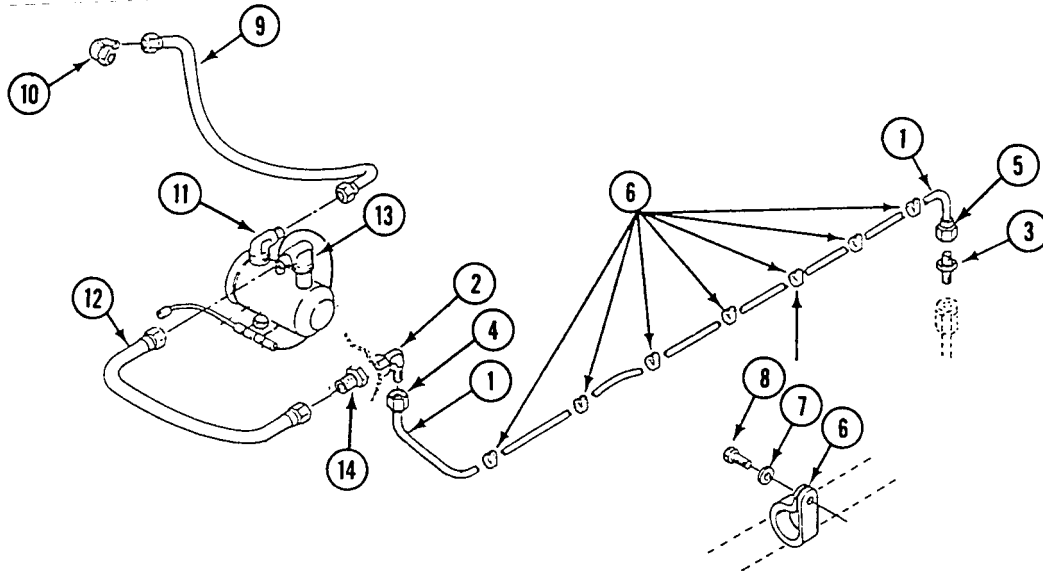
Apply sealing compound sparingly to tapered threads of fittings before installation.

1. Install hose assembly (1) on elbow (2) and adapter (3). Tighten nut (4) and nut (5).

NOTE

Access through bottom access cover and from power plant rear access panel for Step 1.

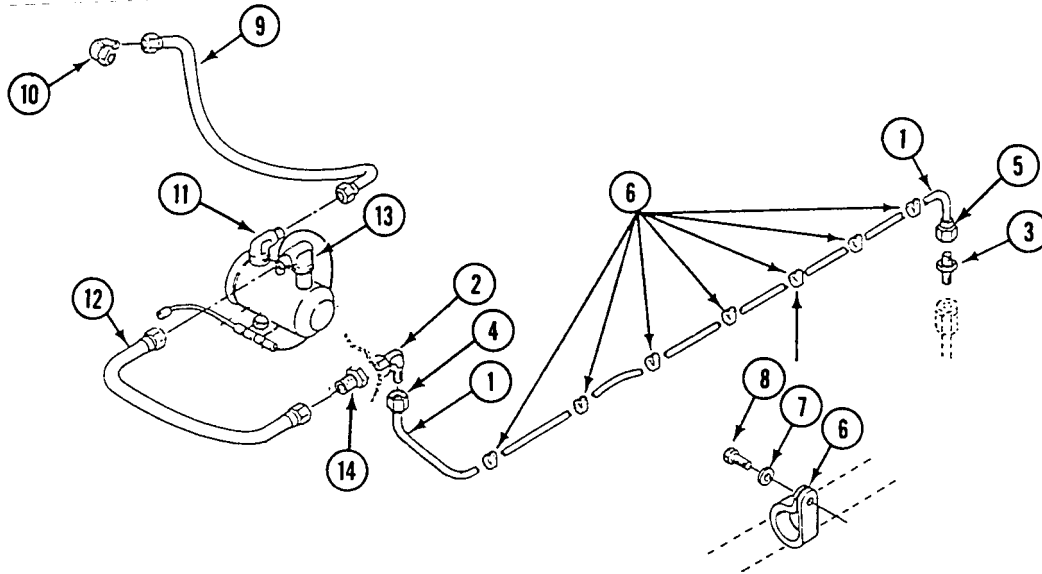
2. Install seven clamps (6) on hose assembly (1). Secure clamps and hose assembly to bulkhead with seven new lock washers (7) and screws (8).



**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES TO FUEL/SEPARATOR
FILTER (M548A3) — Continued**

0439 00

3. Install hose assembly (9) on elbow (10) and elbow (11).
4. Install hose assembly (12) on elbow (13) and adapter (14).
5. Secure hose (9) and hose (12) together with new strap (15).
6. Install air inlet duct and exhaust pipe on heater. Tighten all clamps to secure heater and sleeve (WP 0428 00).



FOLLOW-THROUGH STEPS

1. Install radiator (WP 0216 00).
2. Connect both battery negative leads (WP 0292 00).
3. Check vehicle compartment heater for leaks (see your -10).
4. Install power plant rear access panel (see your -10)
5. Install top center access grille (see your -10).
6. Lower center seat (see your -10).
7. Install center floor plates (WP 0395 00).
8. Install hull bottom access cover (WP 0383 00).

END OF TASK

REPLACE PLATES, STENCILS, DECALS, RUBBER PADS, AND STRAPS

0440 00

THIS WORK PACKAGE COVERS:

- Removal of Vehicle Identification Plates (page 0440 00-2).
- Installation of Vehicle Identification Plates (page 0440 00-3).
- Cleaning of Stencils (page 0440 00-3).
- Removal of Decals (page 0440 00-3).
- Installation of Decals (page 0440 00-5).
- Removal of Rubber Pads and Strips (page 0440 00-6).
- Installation of Rubber Pads and Strips (page 0440 00-6).
- Removal of Straps (page 0440 00-7).
- Installation of Straps (page 0440 00-8).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Drill Bit Set (WP 0541 00, Item 14)
- Hand Blind Riveter Kit (WP 0541 00, Item 42)

References

- See your -10
- TB 43-0209

Materials/Parts

- Adhesive (WP 0542 00, Item 2)
- Cleaning compound (WP 0542 00, Item 9)
- Insulating varnish (WP 0542 00, Item 19)
- Rubber pads

Equipment Condition

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

REMOVAL OF VEHICLE IDENTIFICATION PLATES

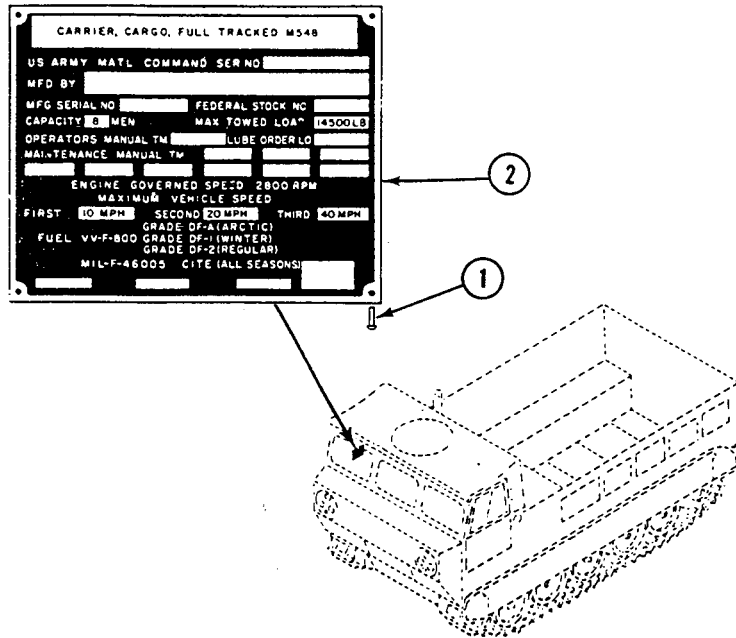
NOTE

Plates, stencils, and decals should be cleaned, replaced, or repainted when they become too hard to read. See WP 0441 00 and WP 0442 00 for location.

NOTE

Remove and install all metal plates in the same way.

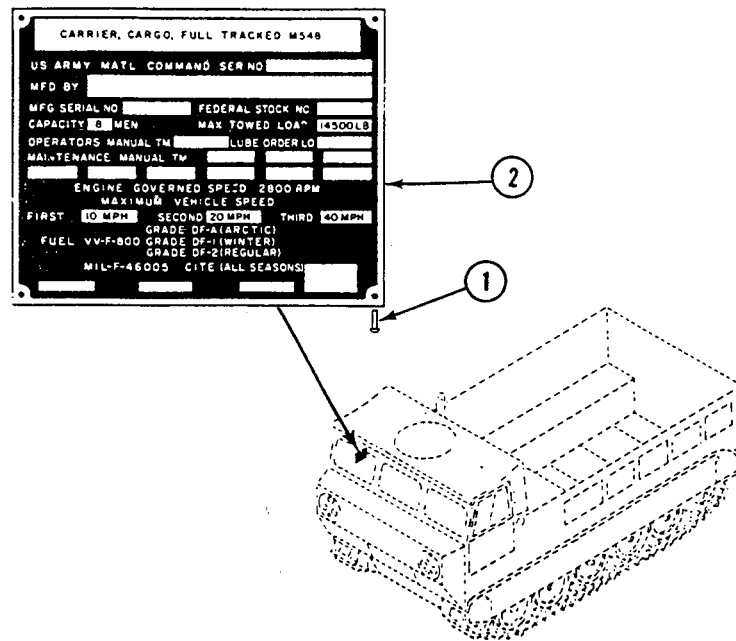
1. Drill out four rivets (1). Remove plate (2).



INSTALLATION OF VEHICLE IDENTIFICATION PLATE**NOTE**

Use plate as template and drill four new holes.

1. Place plate (2) so holes in plate line up with new holes in door.
2. Attach plate (2) to door with drive screws or rivets (1).

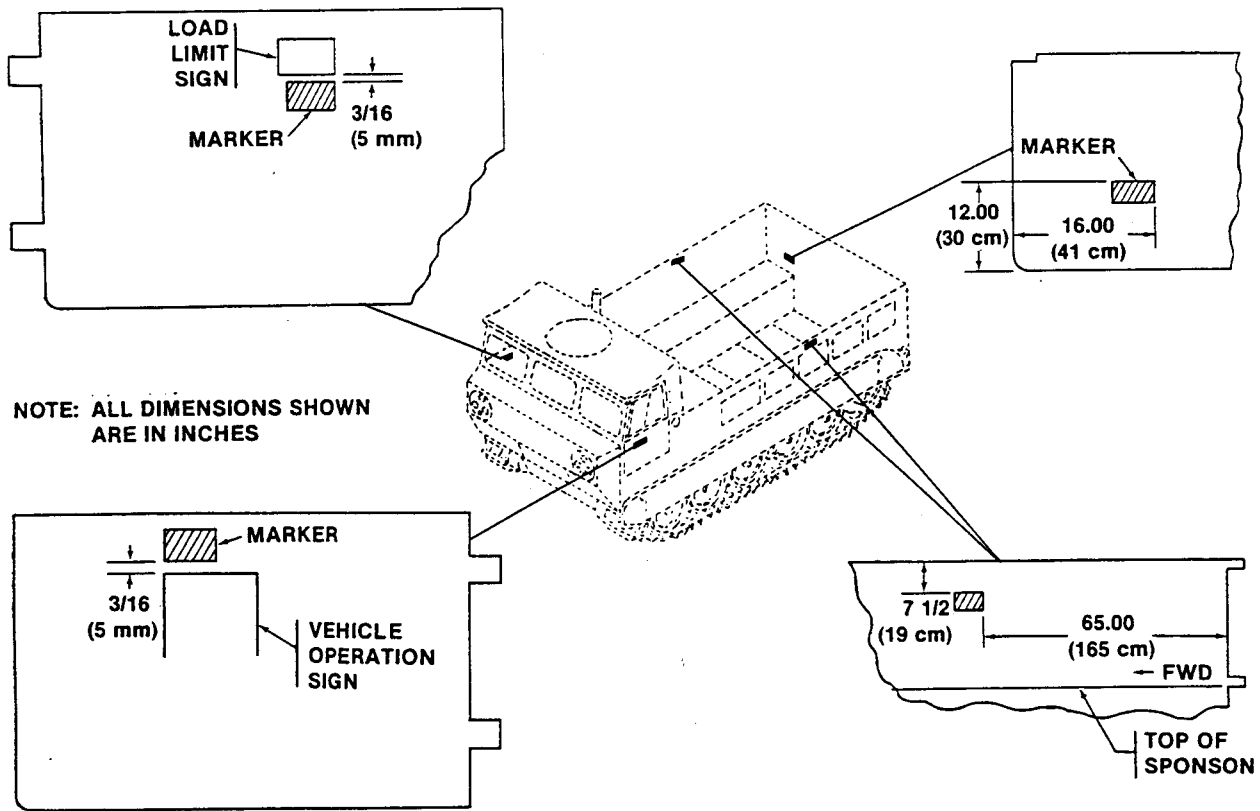
**CLEANING OF STENCILS**

1. Clean stencil with cleaning compound. If stencil needs to be repainted, see TB 43-0209.

REMOVAL OF DECALS

1. Inspect caution markers for damage and legibility. Replace damaged and illegible caution markers (see your -10).

2. Remove decals with cleaning compound.

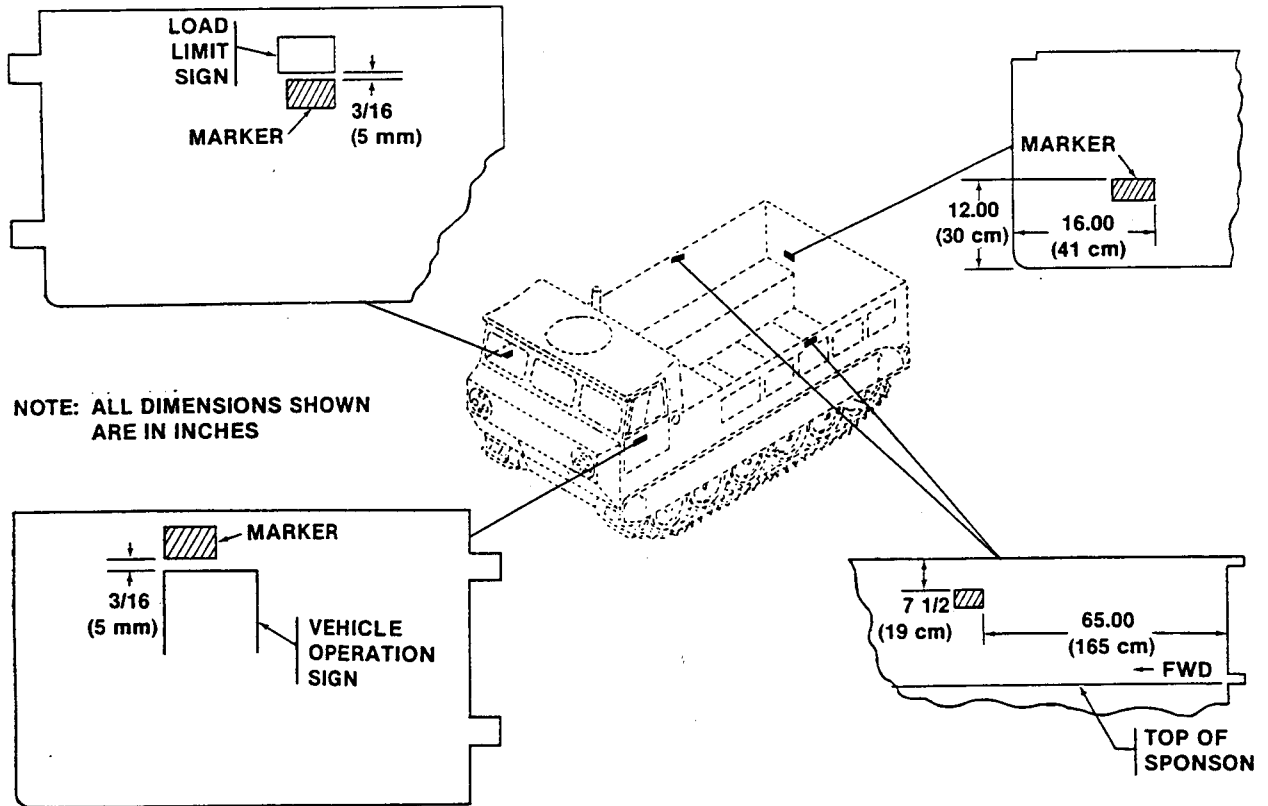


INSTALLATION OF DECALS

NOTE

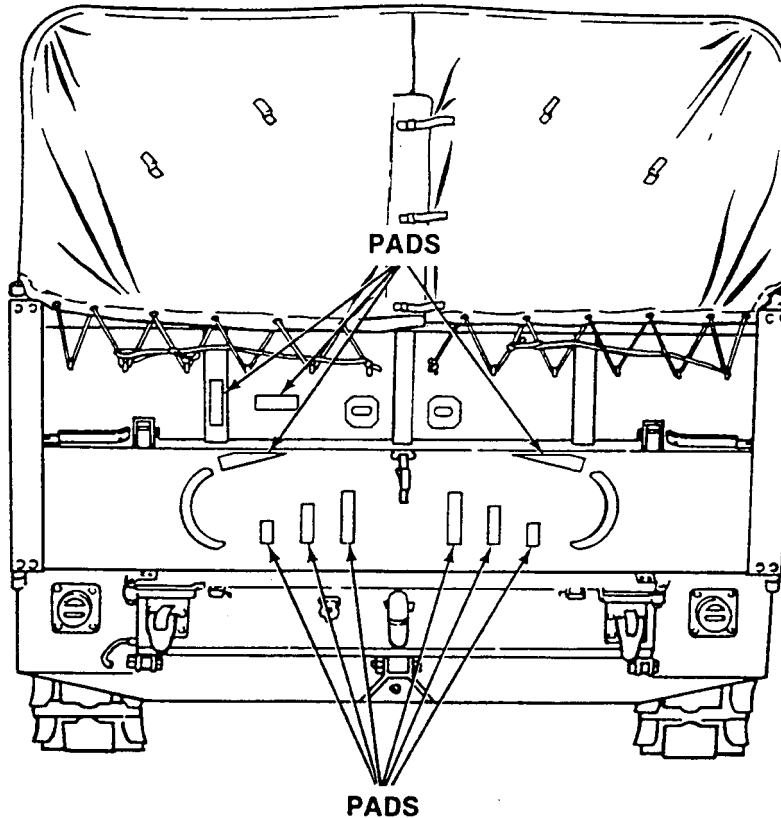
If your carrier does not have caution markers that say: **HIGH INTENSITY NOISE, HEARING PROTECTION REQUIRED**, obtain them. Position and install them as indicated:

1. Install new decal. Apply one coat of full strength insulating varnish over decal.



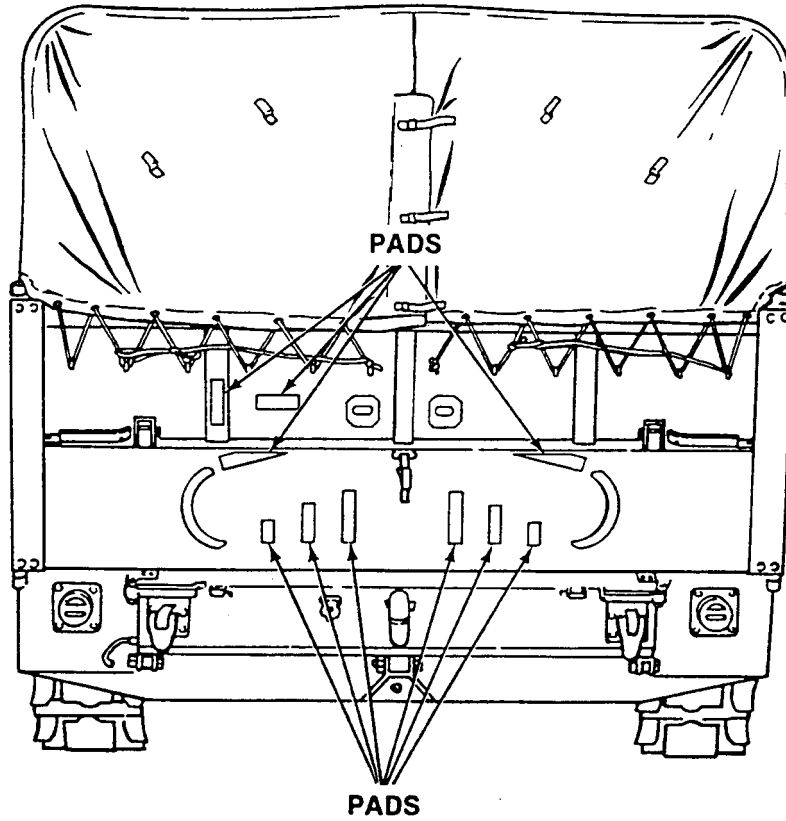
REMOVAL OF RUBBER PADS AND STRIPS

1. Remove rubber pads and strips by scraping. Discard rubber pads.

**INSTALLATION OF RUBBER PADS AND STRIPS**

1. Clean hull surface where pad is to be placed.
2. Apply thin coat of adhesive to hull and back of new rubber pad.
3. Allow 10 to 20 minutes to dry. Surface should be tacky, not too sticky. Warmer temperatures mean a shorter drying time.

- Place pad on hull surface and press firmly.

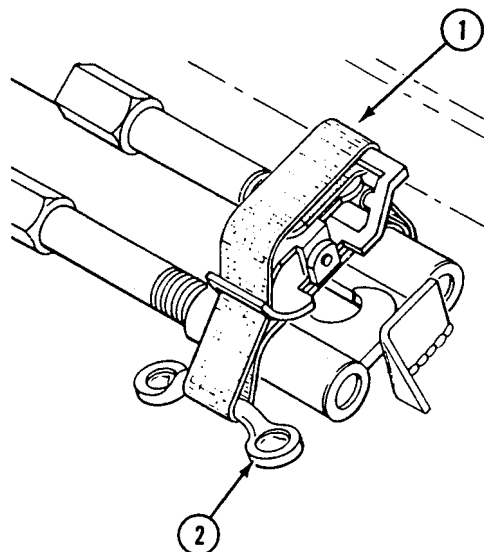


REMOVAL OF STRAPS

NOTE

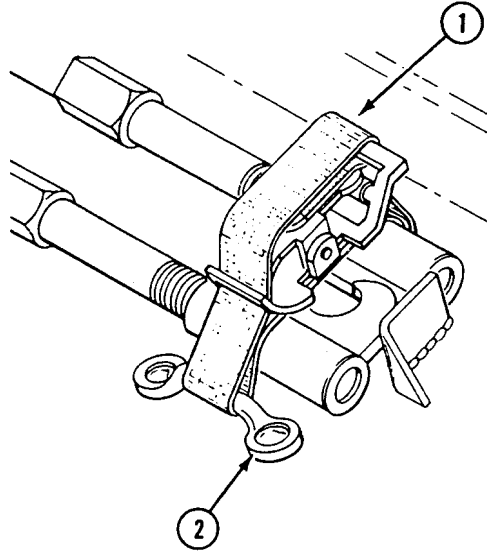
There are 43 straps used to secure stowed items to hull. See your -10 for location.

- Unbuckle and remove strap (1) from footman's loop (2).



INSTALLATION OF STRAPS

1. Pass strap (1) through footman's loop (2) and over item to be secured. Fasten strap.

**END OF TASK**

DATA PLATE, MARKER, AND DECAL CHART (M548A1)

0441 00

THIS WORK PACKAGE COVERS:

Data plate, marker, and decal locations (page 0441 00-1).

INITIAL SETUP:

Maintenance Level

Unit

DATA PLATE, MARKER, AND DECAL LOCATIONS

1. The following chart is for location of all data plates, markers, and decals common to the M548A1 carrier. See (WP 0442 00) for plates, markers, stencils, and decals unique to the M548A3 carrier.

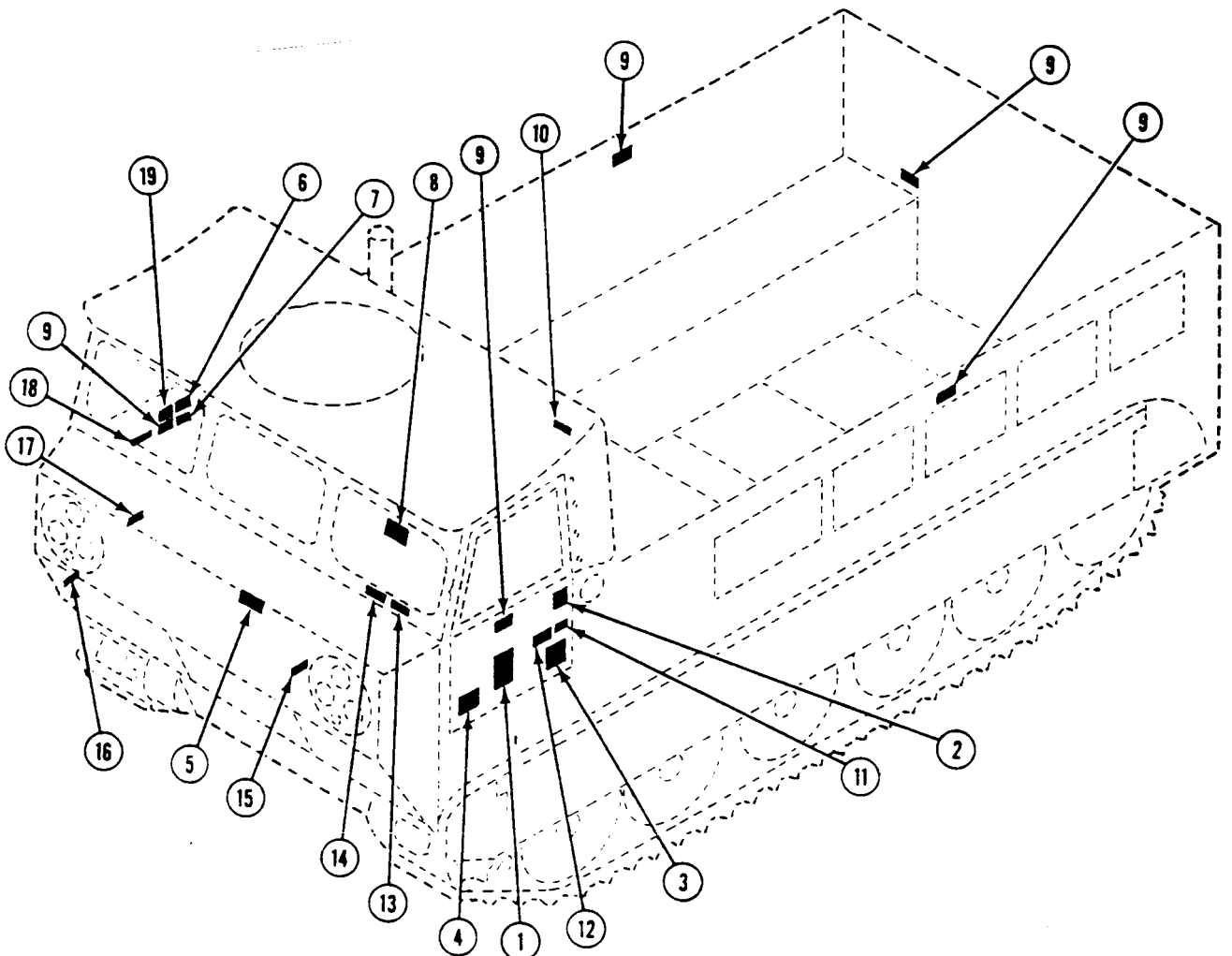


Table 1. DATA PLATE, MARKER, AND DECAL LOCATIONS

1. Plate, identification, vehicle operation	11. Decal, master switch instructions
2. Marker, WARNING, stall check	12. Plate, instruction, differential oil
3. Marker, instruction, power train maintenance	13. Marker, identification, bilge pump
4. Marker, instruction, speed shift limit	14. Decal, pivot steer brakes
5. Plate, instruction, engine idle RPM	15. Decal, fire extinguisher
6. Plate, identification, vehicle	16. Decal, first aid kit
7. Plate, identification, vehicle shipping data	17. Decal, flashlight
8. Marker, engine disconnect	18. Decal, pamphlet bag
9. Marker, instruction, noise caution	19. Decal, load limit
10. Decal, spare barrel	

END OF TASK

DATA PLATE, MARKER, AND DECAL CHART (M548A3)

0442 00

THIS WORK PACKAGE COVERS:

Data plate, marker, and decal locations (page 0442 00-1).

INITIAL SETUP:

Maintenance Level

Unit

DATA PLATE, MARKER, AND DECAL LOCATIONS

1. The following chart is for location of all data plates, markers, and decals for M548A3 carrier. See (WP 0441 00) for plates, markers, stencils, and decals for the M548A1 carrier.

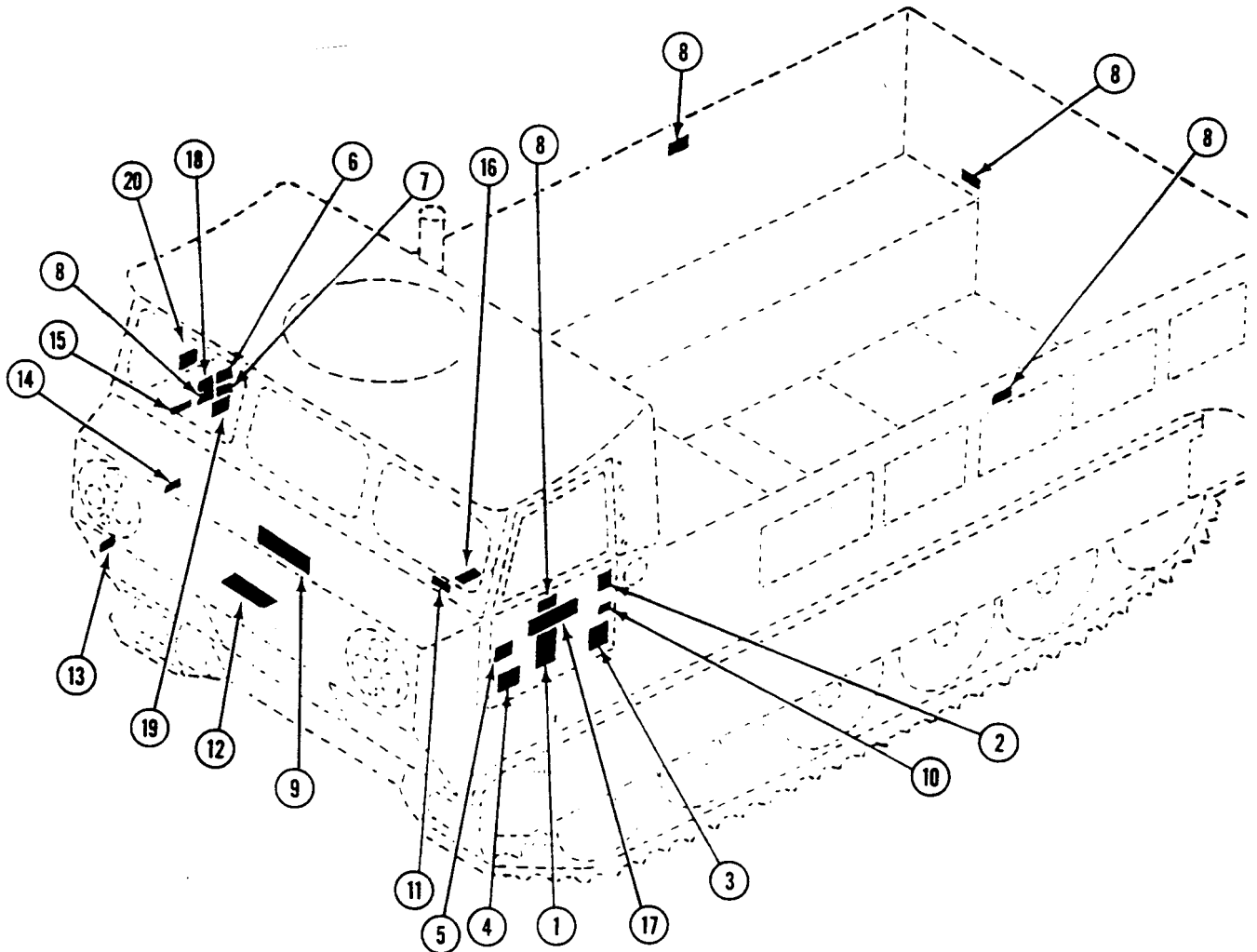


Table 1. DATA PLATE, MARKER, AND DECAL LOCATIONS

1. Marker, vehicle operation	11. Marker, identification bilge pump
2. Marker, WARNING, stall check	12. Decal, fire extinguisher
3. Marker, instruction, power train	13. Decal, first aid kit
4. Marker, instruction, speed shift limit	14. Decal, flashlight
5. Plate, instruction, engine idle RPM	15. Decal, pamphlet bag
6. Plate, identification, vehicle	16. Decal, WARNING, pivot steer
7. Plate, identification, vehicle shipping data	17. Marker, WARNING, pivot steer and lock pin
8. Marker, instruction, noise caution	18. Plate, warranty
9. Decal, spare barrel	19. Marker, CARC, paint
10. Decal, master switch instructions	20. Decal, load limit

END OF TASK

CHAPTER 21

UNIT MAINTENANCE INSTRUCTIONS
FOR TOOLS AND TEST EQUIPMENT

WORK PACKAGE INDEX

Title

Sequence No.

INSPECT POWER PLANT SLING.....0443 00

INSPECT POWER PLANT SLING

0443 00

THIS WORK PACKAGE COVERS:

Periodic Check (page 0443 00-1).
 Preoperative Check (page 0443 00-7).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

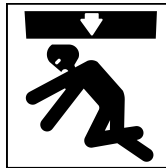
General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Drill set (WP 0541 00, Item 14)
 Straight edge (WP 0541 00, Item 50)
 Measuring tape (WP 0541 00, Item 52)
 Suitable Lifting Device

Equipment Condition

Sling suspended from suitable lifting device

PERIODIC CHECK

WARNING

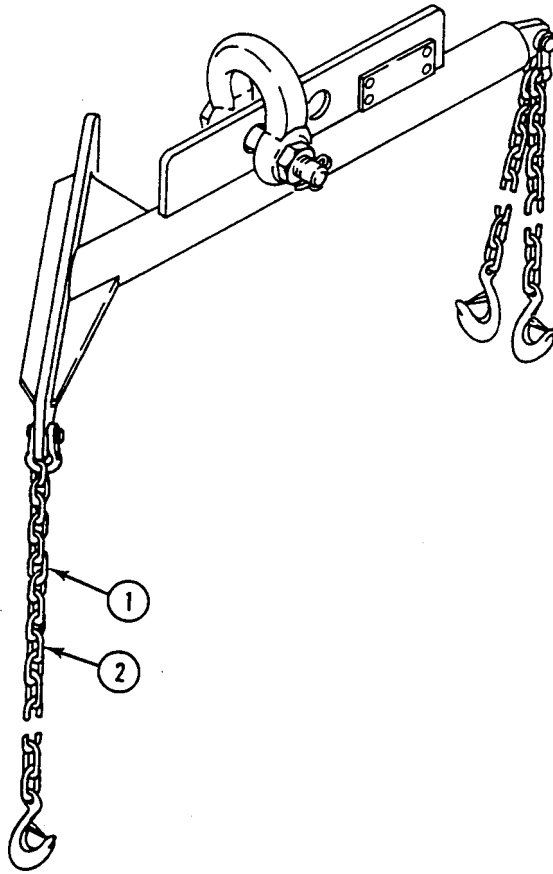


Damaged lifting slings can fall with load. Personnel can be injured or killed. Inspect all slings. Do not use damaged slings.

NOTE

Chains are inspected on a link by link basis with the chain slack.

1. Check chains (1) for excessive wear.
 - a. For 9/32 inch (7 mm) chain, if any link (2) is worn at any point in excess of 3/64 inch (1 mm) or chain size is less than 15/64 inch (6 mm) in diameter, remove sling from service. Use drill set as No-Go gauge and/or caliper.
 - b. For 3/8 inch (10 mm) chain, if any link (2) is worn at any point in excess of 5/64 inch (2 mm) or chain size is less than 19/64 inch (8 mm) in diameter, remove sling from service. Use drill set as No-Go gauge and/or caliper.
2. Check chains (1) for excessive stretch.
 - a. If any link (2) does not hinge freely with adjoining link, remove sling from service.



NOTE

Dimension “L” or “reach” is the distance between the bearing point of hook to bearing point on coupling link while under a light load.

If identification tag attached to chain leg does not contain “reach” dimensions, then dimension “L” must be calibrated prior to use for each chain leg and entered into maintenance record. At each inspection, chain length must be compared with initial inspection.

- b. If length (L) between bearing point of hook (1) and bearing point of coupling link (2) while under light load is greater than the maximum in Table I, remove sling from service.

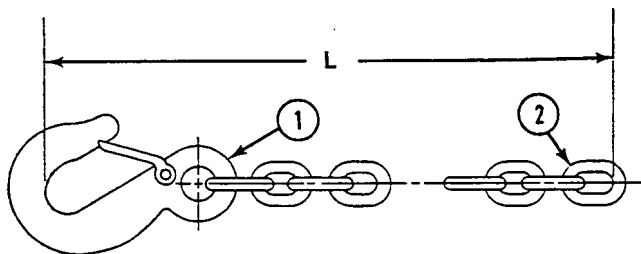


Table 1.

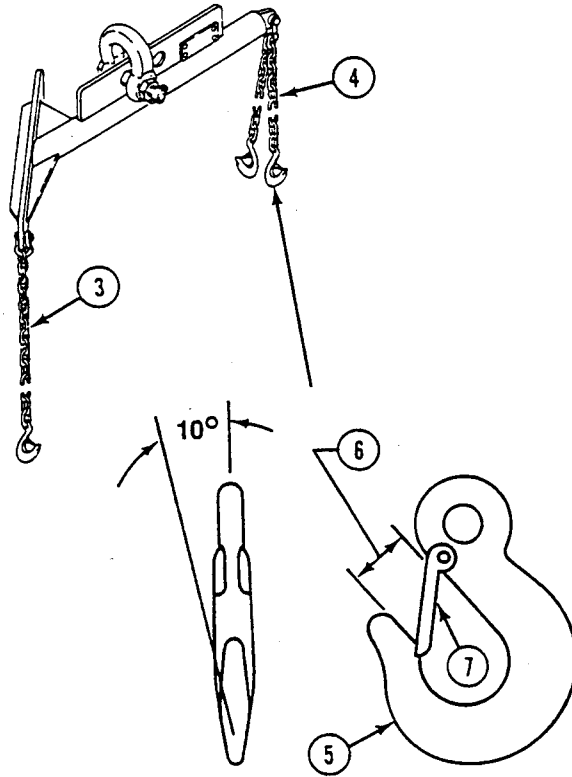
Part Number	(L) Nominal Reach	(L) Maximum Reach	Example
12350350-1	13-1/2 (34.3 cm)	2% Increase	13-3/4 (34.9 cm)
12350350-2	12-3/4 (32.4 cm)	2% Increase	13 (33 cm)
12350350-6	16-7/8 (42.9 cm)	2% Increase	17-1/5 (43.7 cm)

3. Check chains (3) for following:
 - a. If any link (4) is bent or twisted, remove sling from service.
 - b. If any link (4) has a sharp transverse nick or gouge, remove sling from service.
 - c. If any link (4) is modified, homemade, or length of chain is altered, remove sling from service.

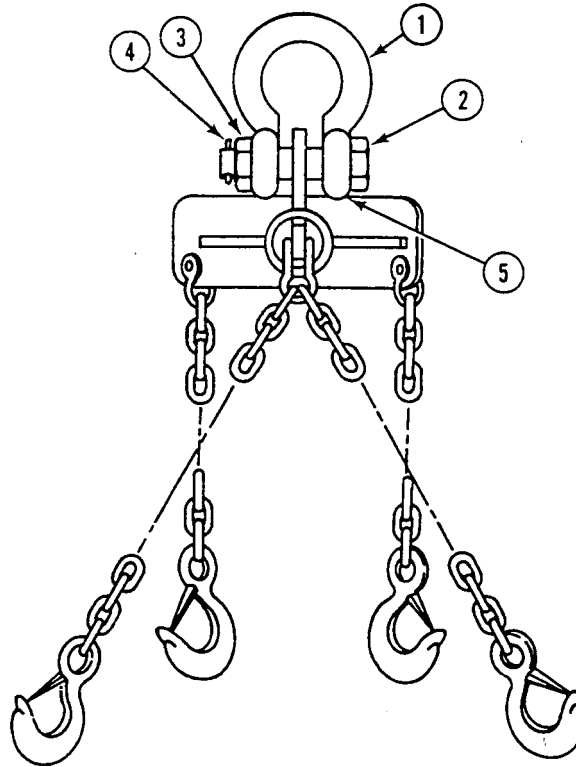
NOTE

Hooks should be free of paint. Paint covers up cracks. Remove all paint from hooks.

4. Inspect hooks (5) for following:
 - a. If any cracks are found on hooks (5), remove sling from service.
 - b. If throat opening (6) exceeds $1 \frac{7}{64}$ inch (28 mm), remove sling from service.
 - c. If twisting exceeds 10° from centerline, remove sling from service.
 - d. Inspect safety closure latch (7). If any latch is damaged, remove sling from service.



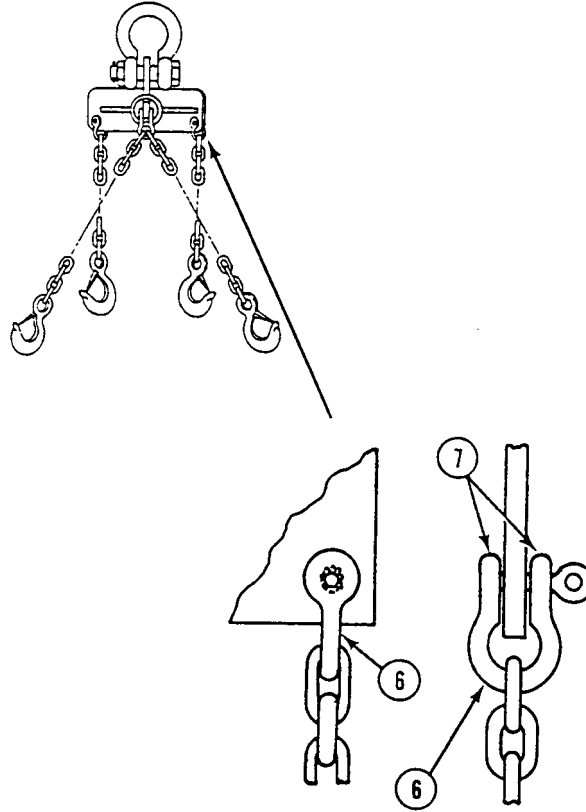
5. Inspect lifting shackle (1) for following:
- Verify correct lifting shackle (1) is being used. Part number 12328579 and/or SWL21T should be visible in raised letters.
 - Verify correct bolt (2) is being used. Diameter of bolt should be 1 3/8 inch (35 mm), and bolt head should be marked with HS in raised letters. Nut (3) should be snug and a cotter pin (4) must be installed through bolt.
 - If any cracks are found in lifting shackle (1), remove sling from service.
 - Lifting shackle (1) must have a minimum width of 1 31/32 inch (5 cm) between eyes (5). If shackle has a visible decrease in eye width or bending and deformation and damaged threads, remove sling from service.



NOTE

Make sure pin is secure in shackle.

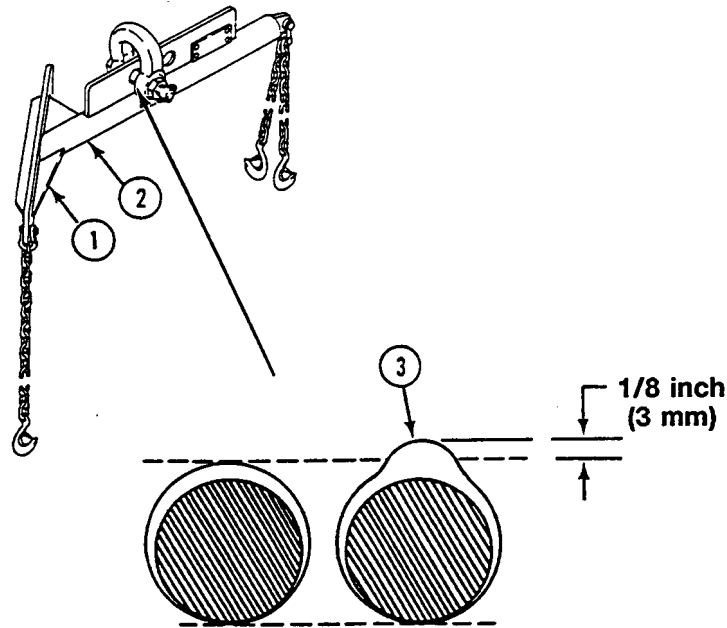
6. Inspect welded shackles (6) for following:
 - a. If any welds are cracked or missing, remove sling from service.
 - b. If welded shackle (6) has any visible decrease in width between eyes (7) or twisting, bending, and deformation, remove sling from service.



NOTE

Use straight edge to measure cross beam bend.

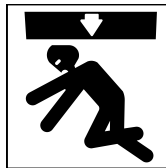
7. Inspect structural members for following:
 - a. If welded joints are cracked in excess of 1/2 inch (13 mm) or 25% of length of weld in gusset (1) to cross beam (2) area, remove sling from service.
 - b. If cross beam is bent or twisted in excess of 1/4 inch (6 mm) at ends of cross beam, remove sling from service. Do not attempt to straighten a bent cross beam.
 - c. If lifting hole (3) is elongated in excess of 1/8 inch (3 mm), remove sling from service.



8. Complete required forms.

PREOPERATIVE CHECK

WARNING



Damaged lifting slings can fall with load. Personnel can be injured or killed. Inspect all slings. Do not use damaged slings.

NOTE

Chains are inspected on a link by link basis with the chain slack.

1. Do Periodic Check Procedure Step 2a and Steps 3 - 8.

END OF TASK

CHAPTER 22

UNIT MAINTENANCE INSTRUCTIONS
FOR SPECIAL PURPOSE KITS

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS (KIT I) (M548A1).....	.0444 00
REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS (KIT II OR III) (M548A1).....	.0445 00
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT I) (M548A1).....	.0446 00
REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III) (M548A1).....	.0447 00
REPLACE VEHICLE COMPARTMENT HEATER FUEL PUMP (KIT I) (M548A1).....	.0448 00
REPLACE VEHICLE COMPARTMENT HEATER FUEL PUMP (KIT II OR III) (M548A1).....	.0449 00
REPLACE VEHICLE COMPARTMENT HEATER CONTROLS COVER (M548A1).....	.0450 00
REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A1).....	.0451 00
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT I) (M548A1).....	.0452 00
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1).....	.0453 00
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III) (M548A1).....	.0454 00
REPLACE VEHICLE COMPARTMENT HEATER EXHAUST GUARD (M548A1).....	.0455 00
REPLACE FIBERGLASS CAB COVER.....	.0456 00
REPLACE FIBERGLASS MACHINE GUN HATCH COVER.....	.0457 00
REPLACE CAB WINDOWS.....	.0458 00
REPLACE LOWER CAB INSULATION.....	.0459 00
REPLACE CLOTH SEAT COVERS.....	.0460 00
REPLACE THERMAL DOOR WINDOWS.....	.0461 00
REPLACE CARGO AREA HEATER AND CONTROL BOX MOUNTING.....	.0462 00
REPLACE CARGO AREA HEATER FUEL LINES, FITTINGS AND SHIELDS.....	.0463 00
REPLACE CARGO AREA HEATER FUEL PUMP.....	.0464 00
REPLACE CARGO AREA HEATER WIRING HARNESS.....	.0465 00
REPLACE INSULATED CARGO COVERS.....	.0466 00
REPLACE ESCAPE HATCH COVER.....	.0467 00
REPLACE INSULATED COVER WINDOWS.....	.0468 00
REPLACE CARGO DOOR INSULATION.....	.0469 00
REPLACE FLOOR PLATE COVERS.....	.0470 00
REPLACE PERSONNEL SEAT COVERS.....	.0471 00
REPLACE/REPAIR HEATER CONTROL BOX.....	.0472 00
REPLACE ENGINE COOLANT HEATER WIRING HARNESS.....	.0473 00
REPLACE ENGINE COOLANT HEATER CONTROL BOX.....	.0474 00
REPLACE ENGINE COOLANT HEATER FUEL PUMP/FUEL LINES.....	.0475 00
REPLACE BATTERY BOX HEAT EXCHANGER/HOSES/FITTINGS.....	.0476 00
REPLACE ENGINE COOLANT HEATER.....	.0477 00

CHAPTER 22

UNIT MAINTENANCE INSTRUCTIONS
FOR SPECIAL PURPOSE KITS

WORK PACKAGE INDEX (Continued)

<u>Title</u>	<u>Sequence No.</u>
REPLACE ENGINE COOLANT HEATER COOLANT PUMP.....	0478 00
REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES GUARD (M548A1).....	0479 00
REPLACE ENGINE COOLANT HEATER EXHAUST SYSTEM (M548A1).....	0480 00
REPLACE ENGINE COOLANT HEATER EXHAUST SYSTEM (M548A3).....	0481 00
REMOVE/INSTALL MATERIAL HANDLING KIT.....	0482 00
REPLACE BEAM/BEAM SUPPORTS/STOPS.....	0483 00
REPLACE HOIST/STOPS/SLING.....	0484 00
REPAIR HOIST ASSEMBLY.....	0485 00
REPLACE PERSONNEL SEATS/SAFETY BELT.....	0486 00
REMOVE/INSTALL BULKHEAD PROTECTOR.....	0487 00
REPLACE RIFLE RACK.....	0488 00
REPLACE AIR BRAKE COMPRESSOR (M548A1).....	0489 00
REPLACE AIR BRAKE GOVERNOR (M548A1).....	0490 00
REPLACE AIR BRAKE RESERVOIR (M548A1).....	0491 00
REPLACE AIR BRAKE SAFETY VALVE (M548A1).....	0492 00
REPLACE STOPLIGHT SWITCH (M548A1).....	0493 00
REPLACE AIR LOW PRESSURE SWITCH (M548A1).....	0494 00
REPLACE AIR HOSES/TUBES/FITTINGS (M548A1).....	0495 00
REPLACE OIL HOSES/FITTINGS (M548A1).....	0496 00
REPLACE COMPRESSOR DRIVE BELT GUARD (M548A1).....	0497 00
ADJUST/ALIGN COMPRESSOR DRIVE PULLEY/BELTS (M548A1).....	0498 00
REPLACE COMPRESSOR DRIVE PULLEY/BELTS (M548A1).....	0499 00
REPLACE AIR STRAINER (M548A1).....	0500 00
REPLACE AIR BRAKE INSTRUMENT PANEL (M548A1).....	0501 00
REPLACE AIR LOW PRESSURE WARNING LIGHT (M548A1).....	0502 00
REPLACE AIR BRAKE PRESSURE INDICATOR (M548A1).....	0503 00
REPLACE AIR BRAKE PANEL LIGHT (M548A1).....	0504 00
REPLACE TURN SIGNAL LIGHT.....	0505 00
REPLACE BLACKOUT MARKER LIGHT.....	0506 00
REPLACE BLACKOUT STOPLIGHT-TAILLIGHT.....	0507 00
REPLACE TURN SIGNAL CONTROL/MOUNT.....	0508 00
REPLACE FLASHER.....	0509 00
REPLACE REFLECTOR.....	0510 00
REPLACE TURN SIGNAL FRONT WIRING HARNESS.....	0511 00
REPLACE TURN SIGNAL REAR WIRING HARNESS.....	0512 00
REPLACE CALIBER .50 MACHINE GUN MOUNT.....	0513 00
REPLACE M66 RING MOUNT KIT.....	0514 00
REPLACE 7.62 MM MACHINE GUN MOUNT.....	0515 00

REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS (KIT I) (M548A1)

0444 00

THIS WORK PACKAGE COVERS:

Removal (page 0444 00-1).
 Installation (page 0444 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Sealing compound (WP 0542 00, Item 33)

Top left access grille removed (WP 0390 00)

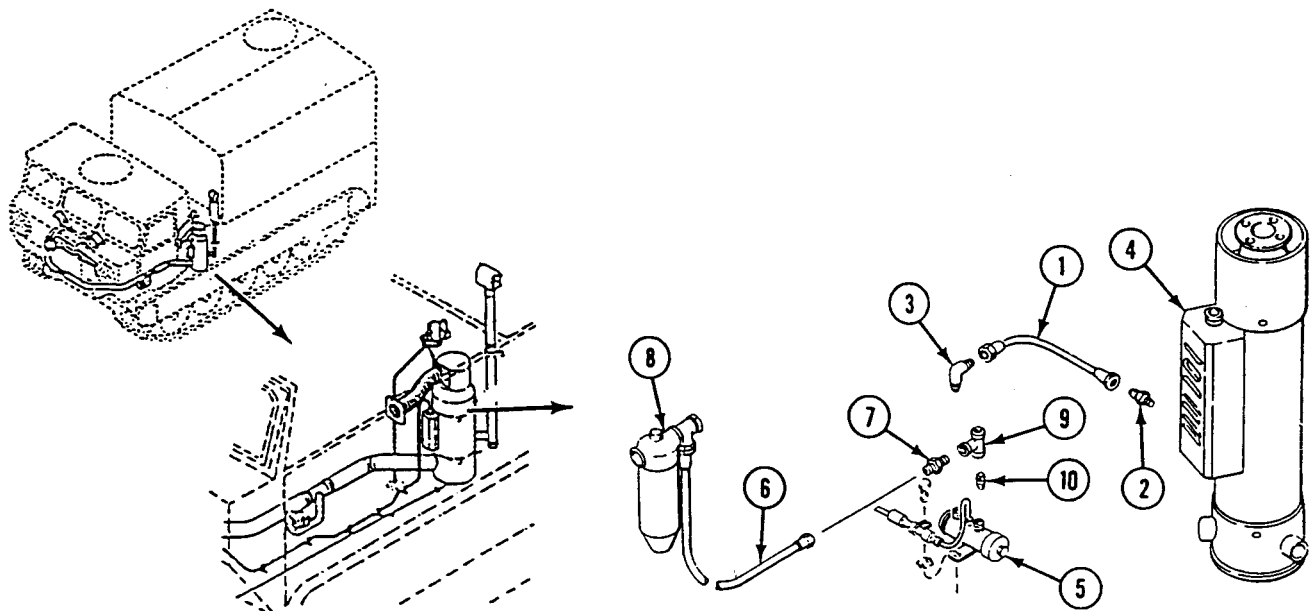
Personnel Required

Unit Mechanic

Battery negative lead disconnected (WP 0292 00)

REMOVAL

1. Remove hose (1) from nipple (2) and elbow (3).
2. Remove nipple (2) from heater (4). Remove elbow (3) from fuel pump (5).
3. Remove hose (6) from nipple (7) and primary fuel filter (8).
4. Remove tee (9) and nipple (10) from fuel pump (5).



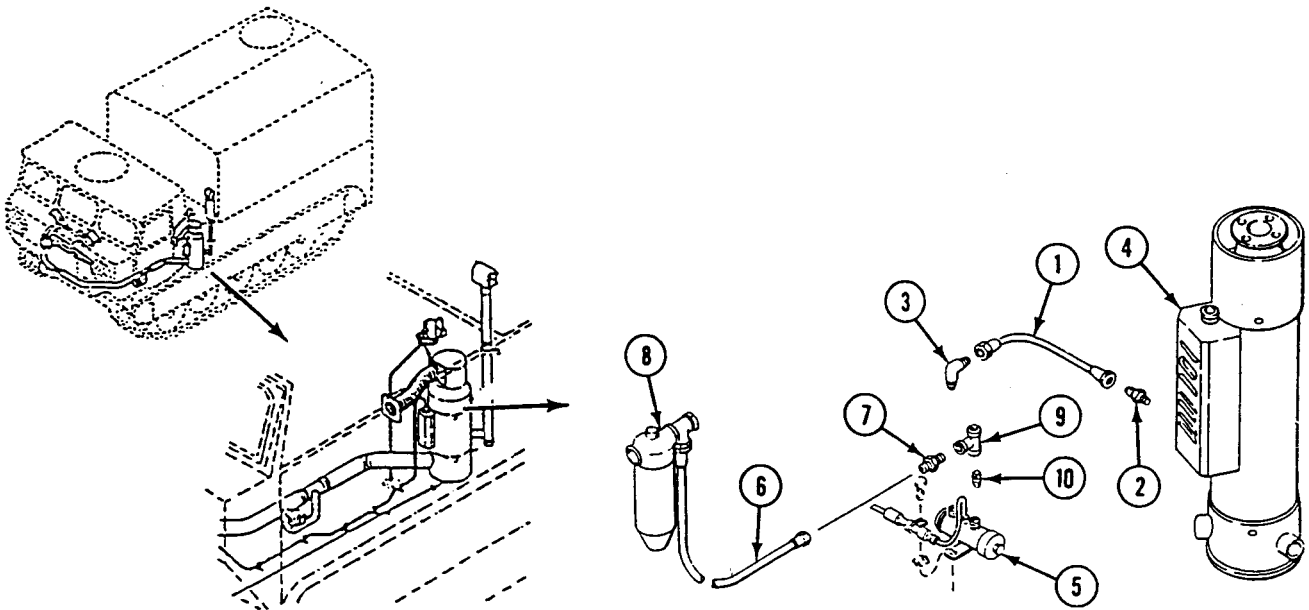
**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS
(KIT I) (M548A1) — Continued**

0444 00

INSTALLATION**NOTE**

Apply sealing compound sparingly to tapered threads of fittings before installation.

1. Install nipple (10) and tee (9) in fuel pump (5).
2. Install nipple (7) in tee (9). Connect hose (6) to nipple and primary fuel filter (8).
3. Install elbow (3) in fuel pump (5). Install nipple (2) in heater (4).
4. Connect hose (1) to elbow (3) and nipple (2).

***FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater for leaks and proper operation.
4. Stop heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS (KIT II OR III) (M548A1)

0445 00

THIS WORK PACKAGE COVERS:

Removal (page 0445 00-1).
Installation (page 0445 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

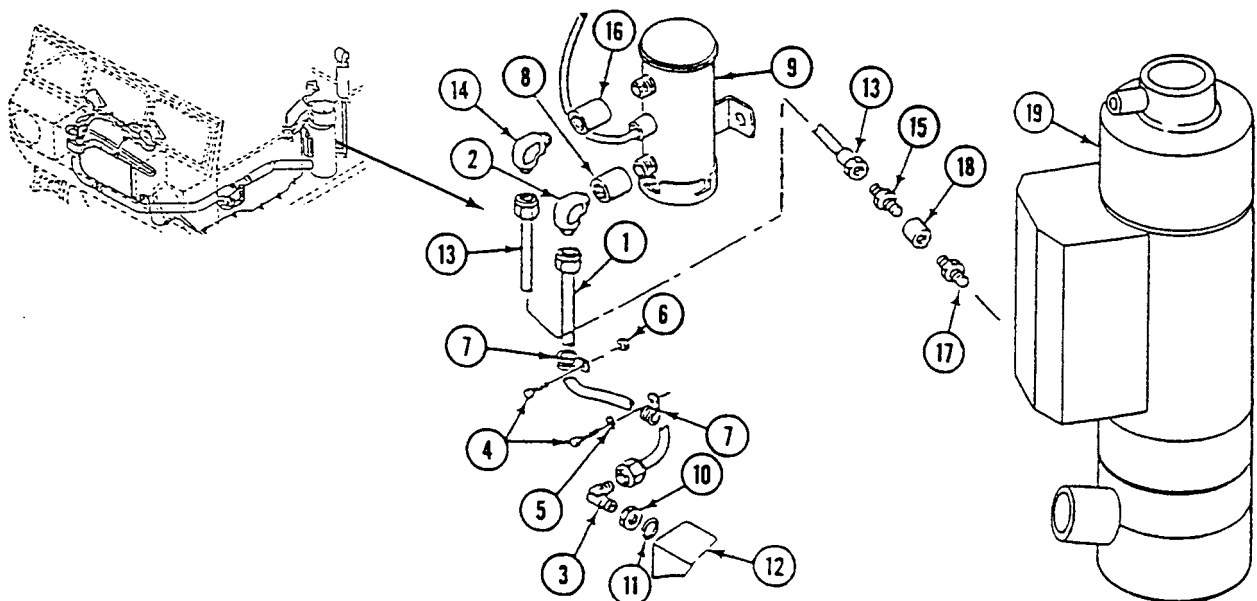
Sealing compound (WP 0542 00, Item 33)
Lock washer (2)
Lock nut (2)
Preformed packing

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery negative lead disconnected (WP 0292 00)
Top left access grille removed (WP 0390 00)

REMOVAL

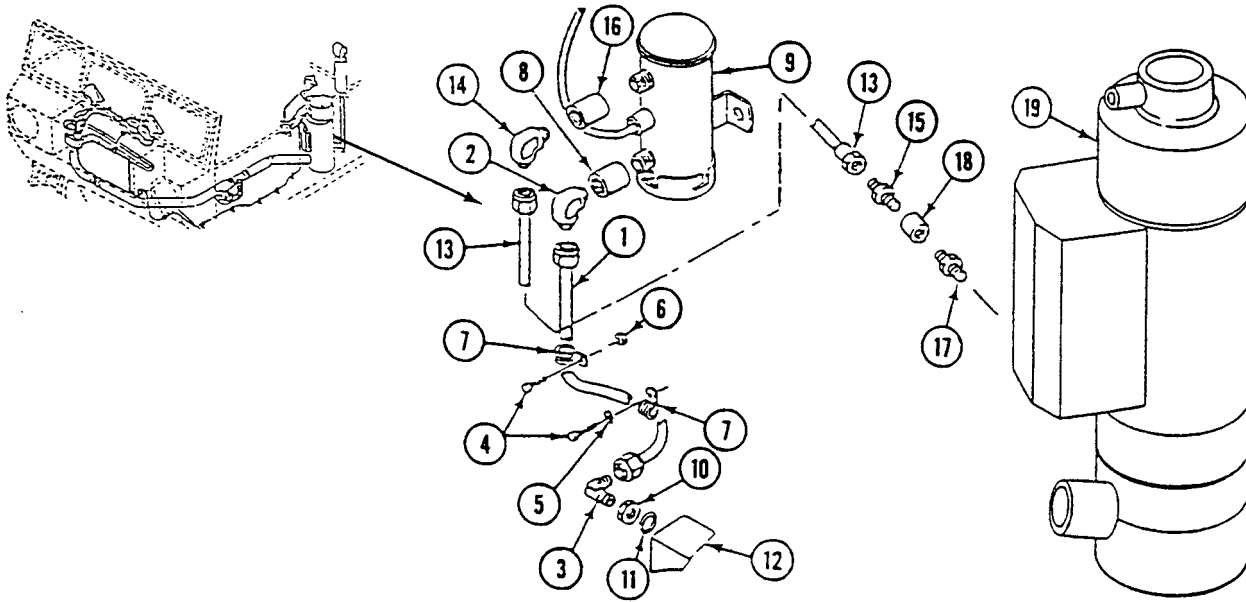
1. Remove hose (1) from elbow (2) and elbow (3).
2. Remove two screws (4), two lock nuts (6), and four clamps (7) securing hose (1) to bulkhead. Discard lock nuts.
3. Remove elbow (2) from coupling (8).
4. Remove coupling (8) from fuel pump (9).



**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS
(KIT II OR III) (M548A1) — Continued**

0445 00

5. Remove elbow (3), nut (10), and preformed packing (11) from fuel manifold block (12). Discard preformed packing.
6. Remove hose (13) from elbow (14) and nipple (15).
7. Remove elbow (14) from coupling (16) and coupling from fuel pump (9).
8. Remove nipple (15), nipple (17), and coupling (18) from cab heater (19).



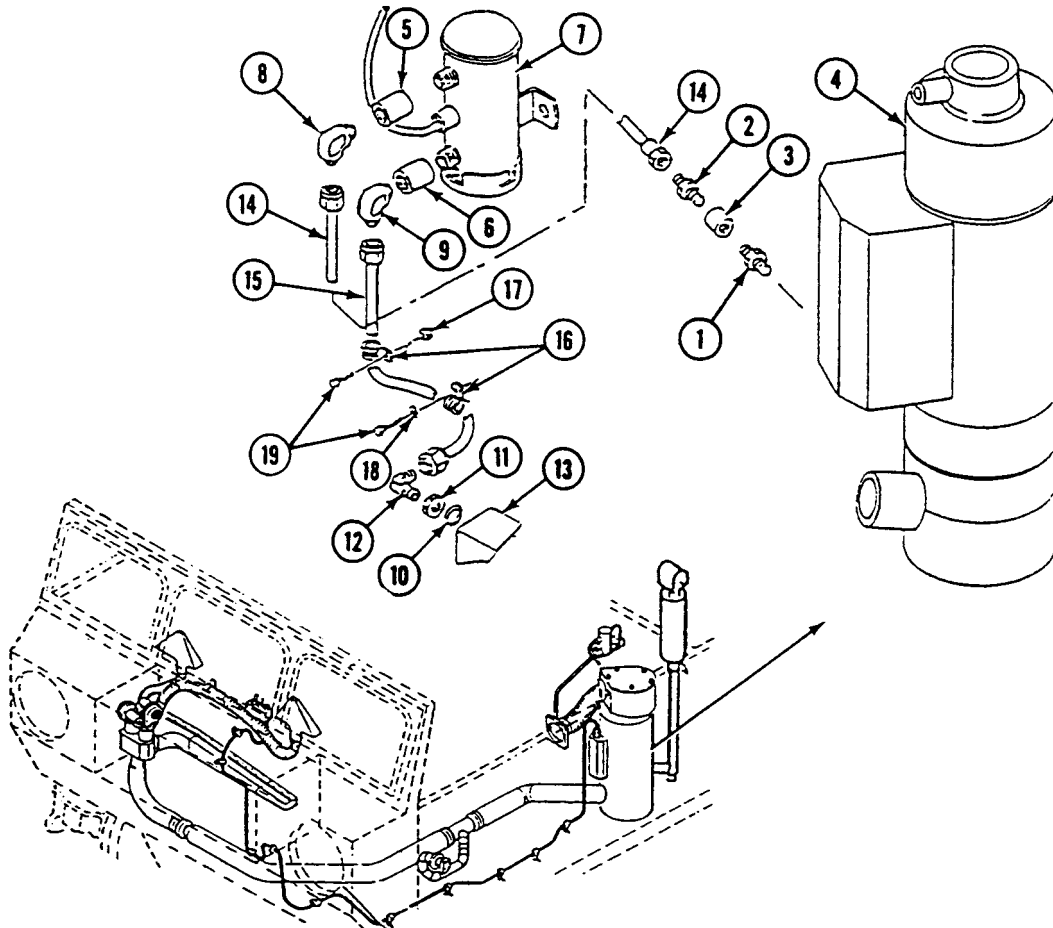
**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS
(KIT II OR III) (M548A1) — Continued**

0445 00

INSTALLATION**NOTE**

Apply sealing compound sparingly to tapered threads of fittings before installation.

1. Install nipple (1), nipple (2), and coupling (3) in cab heater (4).
2. Install coupling (5) and coupling (6) on fuel pump (7).
3. Install elbow (8) and elbow (9) in coupling (5) and coupling (6).
4. Install new preformed packing (10), nut (11), and elbow (12) in fuel manifold block (13).
5. Connect hose (14) to nipple (2) and elbow (8).
6. Connect hose (15) to elbow (12) and elbow (9).
7. Install four clamps (16), two new lock nuts (17), and screws (19) securing hose (15) to bulkhead.



**REPLACE VEHICLE COMPARTMENT HEATER FUEL HOSES, TUBES, AND FITTINGS
(KIT II OR III) (M548A1) — Continued**

0445 00

FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater fuel hoses, tubes, and fittings for leaks and proper operation.
4. Stop heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT I) (M548A1)

0446 00

THIS WORK PACKAGE COVERS:

Removal (page 0446 00-2).
 Installation (page 0446 00-5).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Portable Electric Drill (WP 0541 00, Item 13)
 Drill Set (WP 0541 00, Item 14)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead disconnected (WP 0292 00)
 Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
 Power plant rear access door removed (see your -10)
 Top left access grille removed (WP 0390 00)
 Heater exhaust pipe removed (WP 0209 00)

Materials/Parts

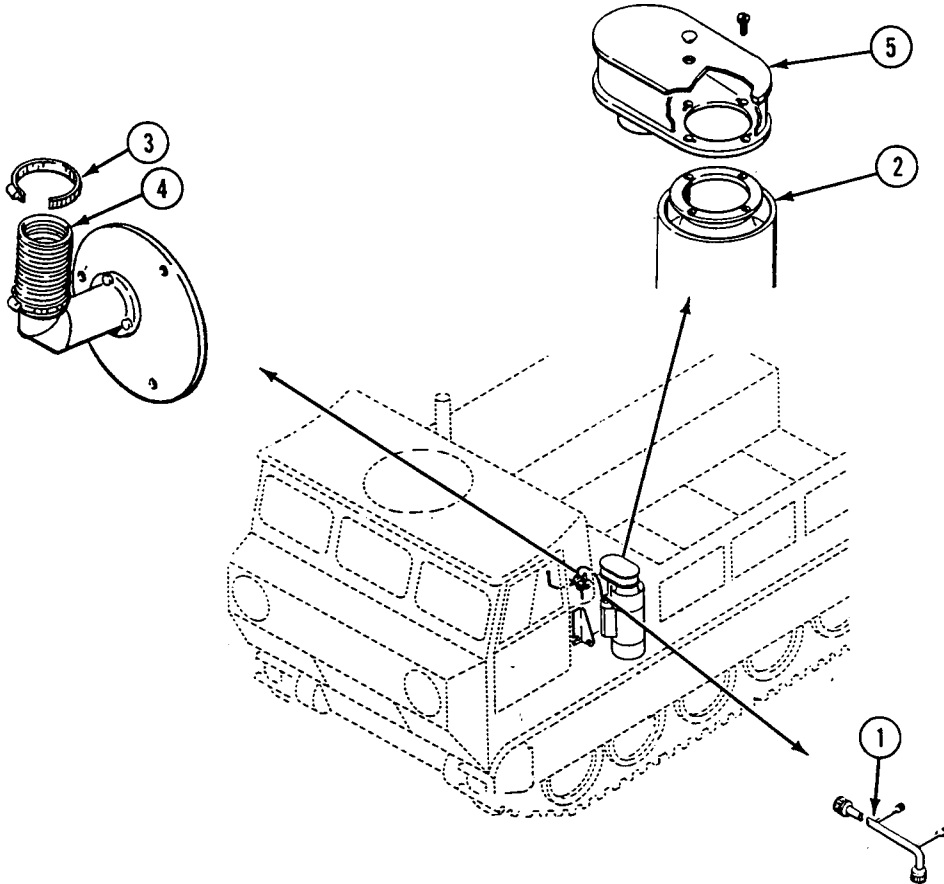
Rubber adhesive tape (WP 0542 00, Item 32)
 Grommet
 Lock washer

Personnel Required

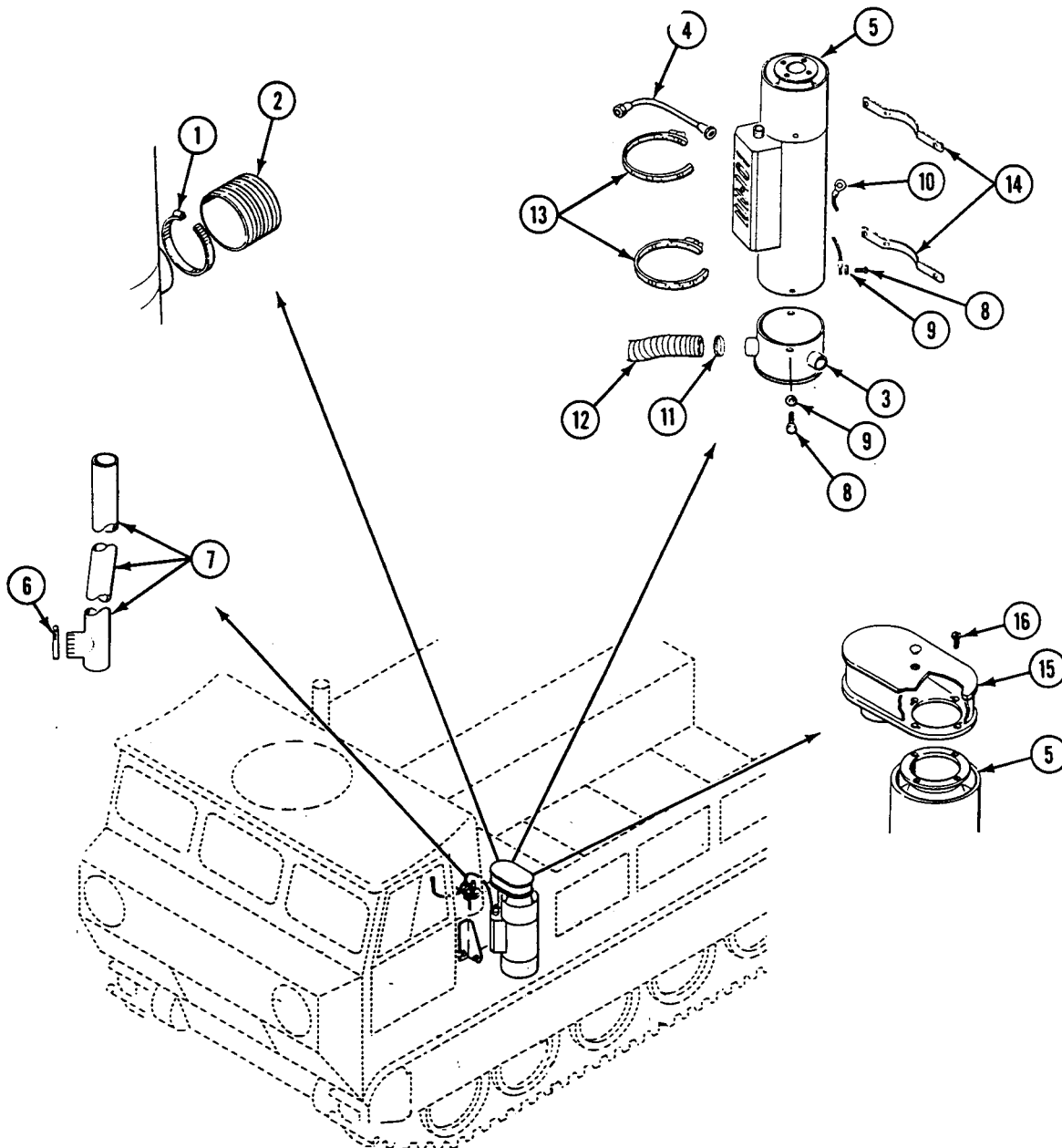
Unit Mechanic

REMOVAL

1. Disconnect wiring harness (1) at heater (2).
2. Loosen clamp (3). Disconnect intake hose (4) from intake duct (5).



7. Loosen clamp (11). Disconnect defroster tube (12) from plenum chamber (3).
8. Open two clamps (13). Remove heater (5) from two brackets (14) with plenum chamber (3) and intake duct (15) attached.
9. Remove three screws (8), washers (9), and plenum chamber (3) from heater (5).
10. Remove four screws (16) and intake duct (15) from heater (5).

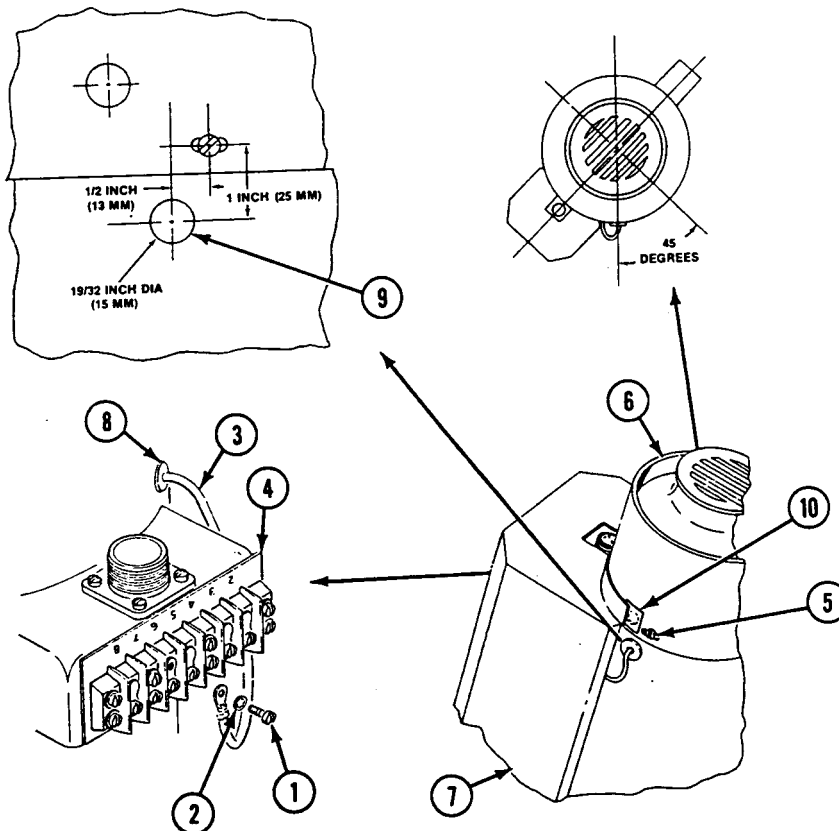


INSTALLATION

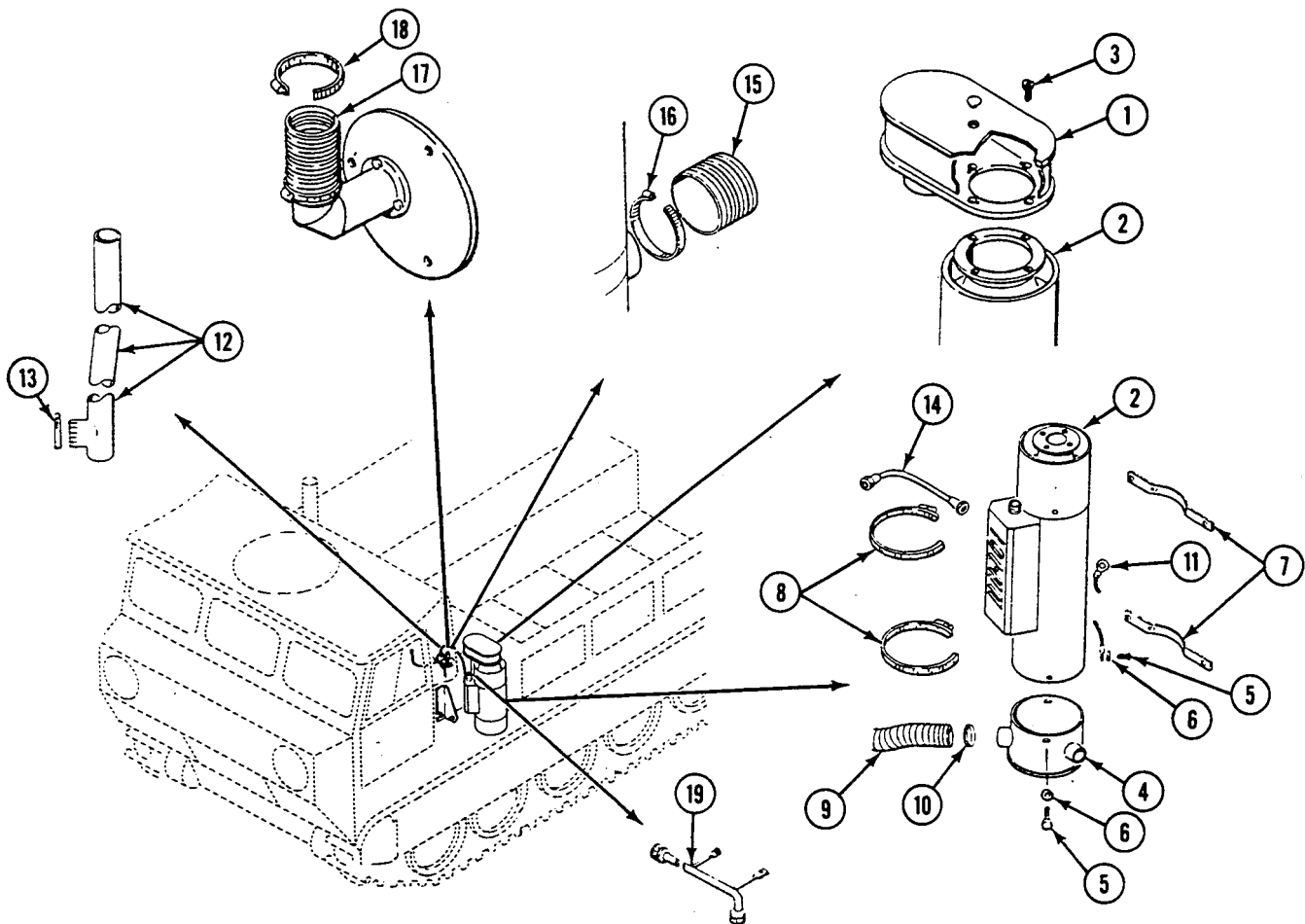
NOTE

If new heater is Model 8460C, do Steps 1 - 10.

1. Remove heater controls cover (WP 0450 00).
2. Remove screw (1), washer (2), and blower lead 6 (3) from terminal board (4).
3. Remove four screws (5) and heater blower (6) from heater housing (7).
4. Remove grommet (8) from heater housing (7). Discard grommet.
5. Drill new hole (9) 19/32 in (15 mm) into heater housing (7).
6. Install new grommet (8) in new 19/32 in (15 mm) hole in heater housing (7).
7. Thread blower lead 6 (3) through new grommet (8) to terminal board (4). Secure with washer (2) and screw (1).
8. Install heater blower (6) in heater housing (7) with four screws (5).
9. Cover old opening (10) with rubber adhesive tape.



10. Install heater controls cover (WP 0450 00).
11. Install intake duct (1) on heater (2) with four screws (3).
12. Install plenum chamber (4) on heater (2) with three screws (5) and washers (6).
13. Place heater (2), with intake duct (1) and plenum chamber (4) attached, on two brackets (7). Secure with two clamps (8).
14. Install defroster tube (9) on plenum chamber (4) with clamp (10).
15. Install ground strap (11) on plenum chamber (4) with new lock washer (6) and screw (5).
16. Install exhaust pipe (12) on heater (2) with clamp (13). Connect fuel hose (14) to heater.
17. Install outlet hose (15) on plenum chamber (4) with clamp (16).
18. Install intake hose (17) on intake duct (1) with clamp (18). Connect wiring harness (19) to heater (2).



FOLLOW-THROUGH STEPS

1. Install power plant rear access door (see your -10).
2. Install bulkhead protector, if material handling kit is installed (WP 0484 00).
3. Install heater exhaust pipe (WP 0209 00).
4. Install top left access grille (WP 0390 00).
5. Connect battery negative lead (WP 0292 00).
6. Start heater (see your -10). Check heater for proper operation.

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III)
(M548A1)**

0447 00

THIS WORK PACKAGE COVERS:

Removal (page 0447 00-1).
Installation (page 0447 00-5).

INITIAL SETUP:

Maintenance Level
Unit

References
See your -10

Tools and Special Tools
General Mechanic's Tool Kit (WP 0541 00, Item 57)
Portable Electric Drill (WP 0541 00, Item 13)
Drill Set (WP 0541 00, Item 14)

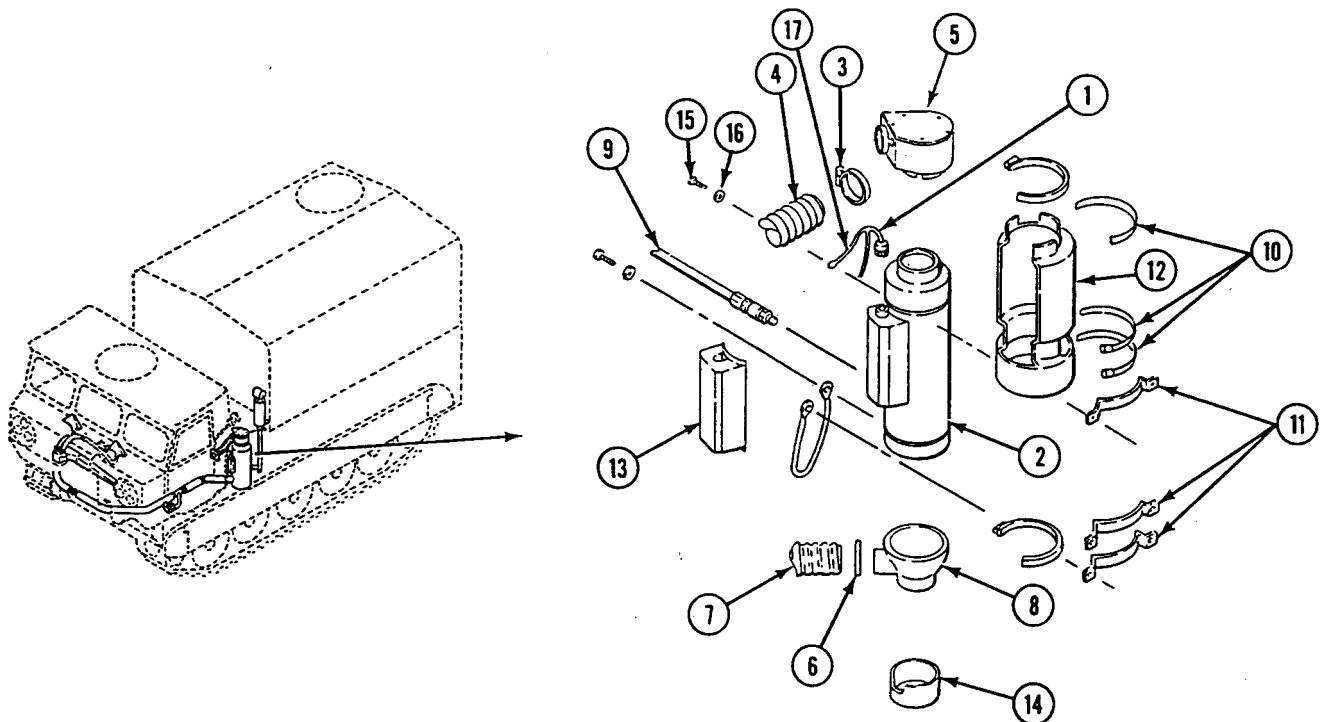
Equipment Condition
Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery negative lead disconnected (WP 0292 00)
Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
Power plant rear access door removed (see your -10)
Top left access grille removed (WP 0390 00)
Heater exhaust pipe guard removed (WP 0455 00)

Materials/Parts
Rubber adhesive tape (WP 0542 00, Item 32)
Grommet
Lock nut (2)
Lock washer

Personnel Required
Unit Mechanic

REMOVAL

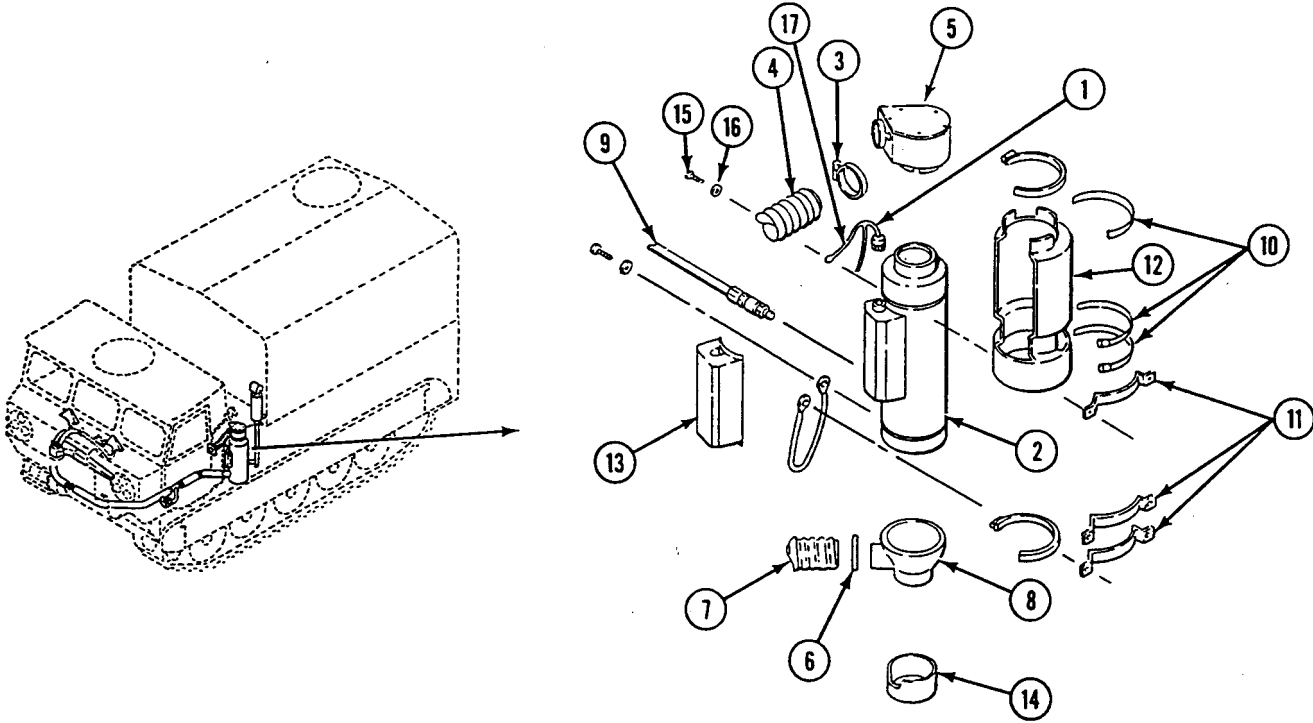
1. Disconnect wiring harness (1) at heater (2).
2. Loosen clamp (3). Disconnect intake hose (4) from intake duct (5).
3. Loosen clamp (6). Disconnect outlet hose (7) from plenum chamber (8). Disconnect fuel hose (9) from heater (2).



**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III) (M548A1) —
Continued**

0447 00

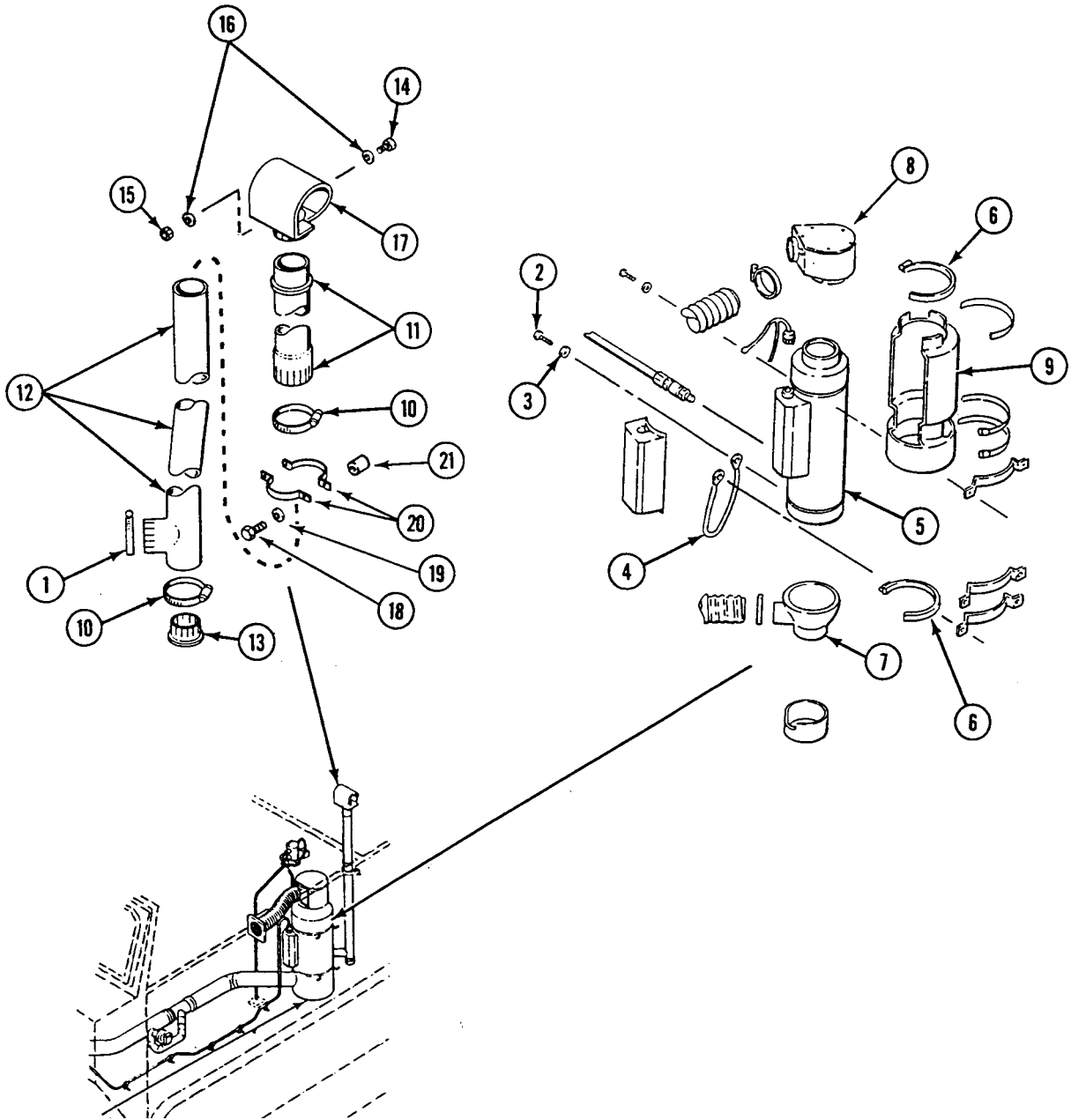
4. Remove three clamps (10). From three brackets (11), remove heater cover (12), control cover (13), plenum cover (14), and heater (2) with plenum chamber (8) and intake duct (5) attached.
5. Remove screw (15), washer (16), and wiring harness ground lead (17) from bracket (11).



REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III) (M548A1) —
Continued

0447 00

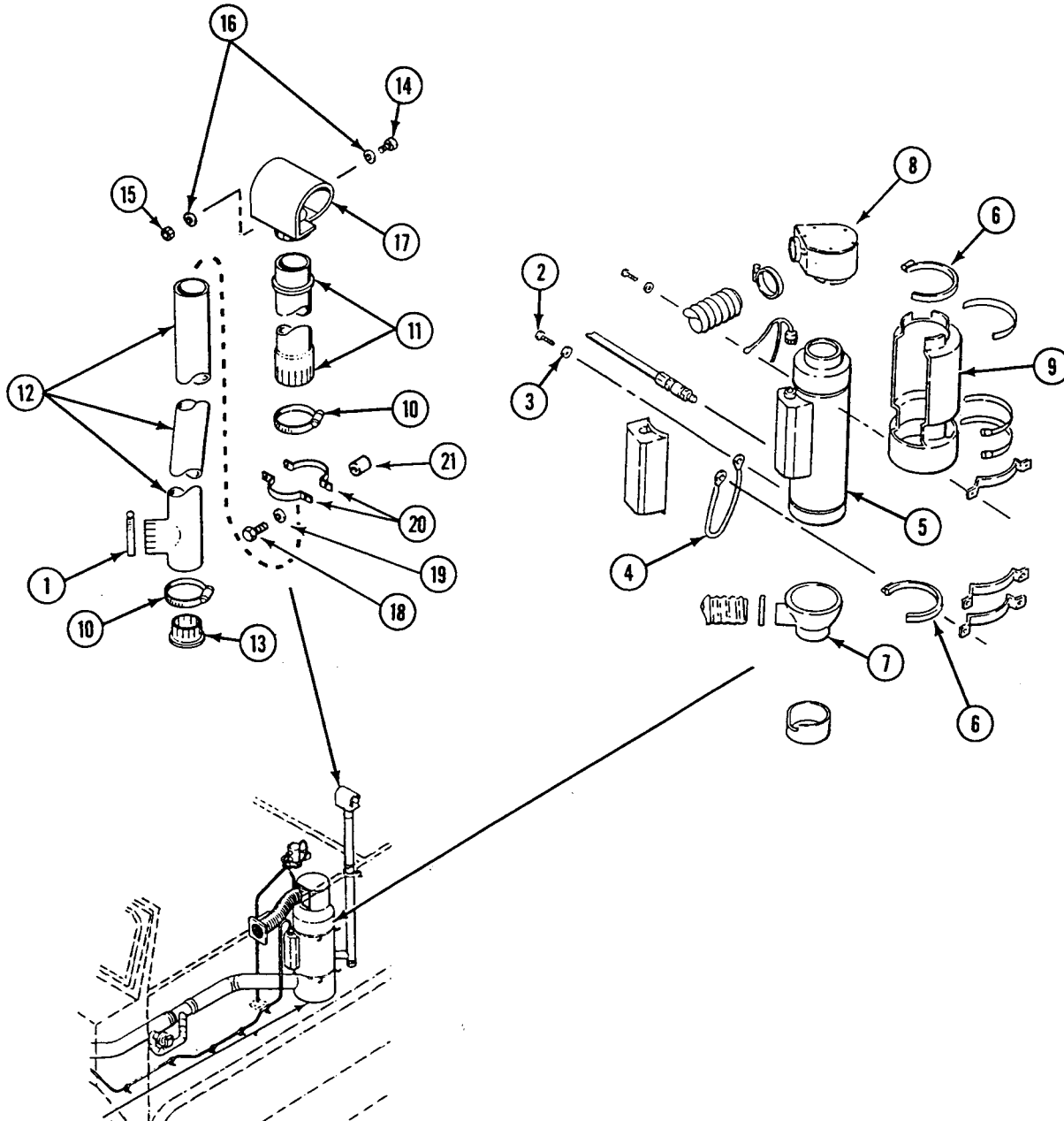
6. Loosen clamp (1).
7. Remove screw (2), lock washer (3), and ground strap (4) from heater (5). Discard lock washer.
8. Loosen two clamps (6). Remove plenum chamber (7) and intake duct (8) from heater (5).
9. Spread open heater cover (9) and pull end of heater away from cover to clear heater exhaust outlet.



REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III) (M548A1) —
Continued

0447 00

10. Loosen two clamps (10). Separate exhaust pipe (11) and exhaust pipe (12) and adapter (13).
11. Loosen two screws (14), lock nuts (15), and washers (16). Remove exhaust hood (17) from upper exhaust pipe (11). Discard lock nuts.
12. Remove screw (18), washer (19), two brackets (20), and upper exhaust pipe (11) from weld nut (21).

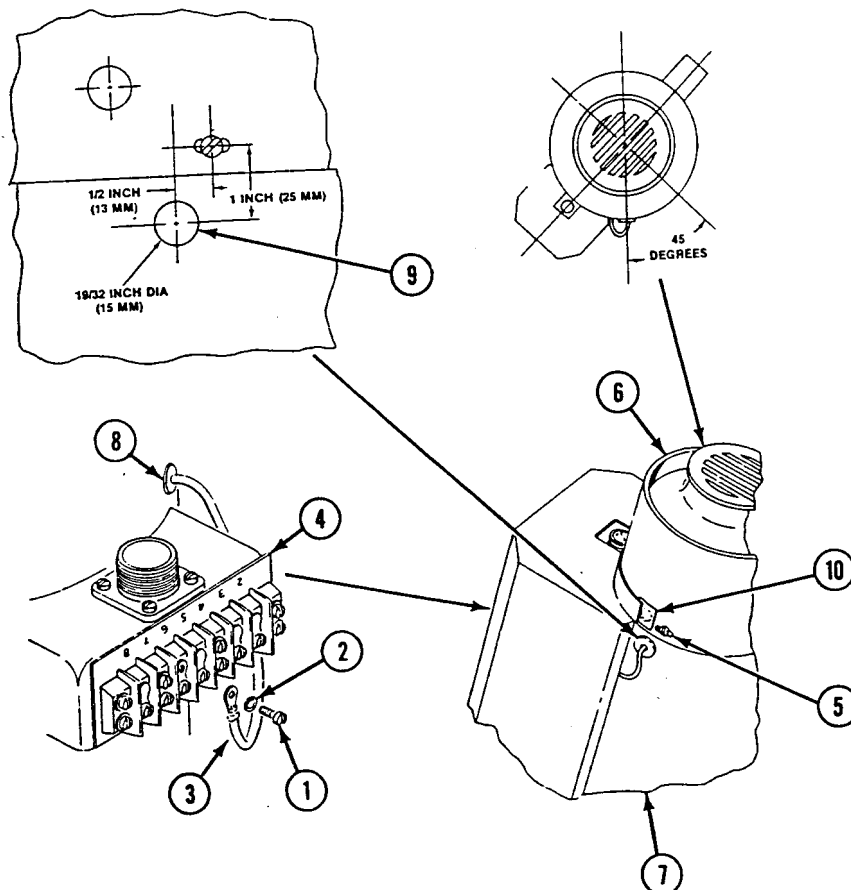


INSTALLATION

NOTE

If new heater is Model 8460C, do Steps 1 - 10.

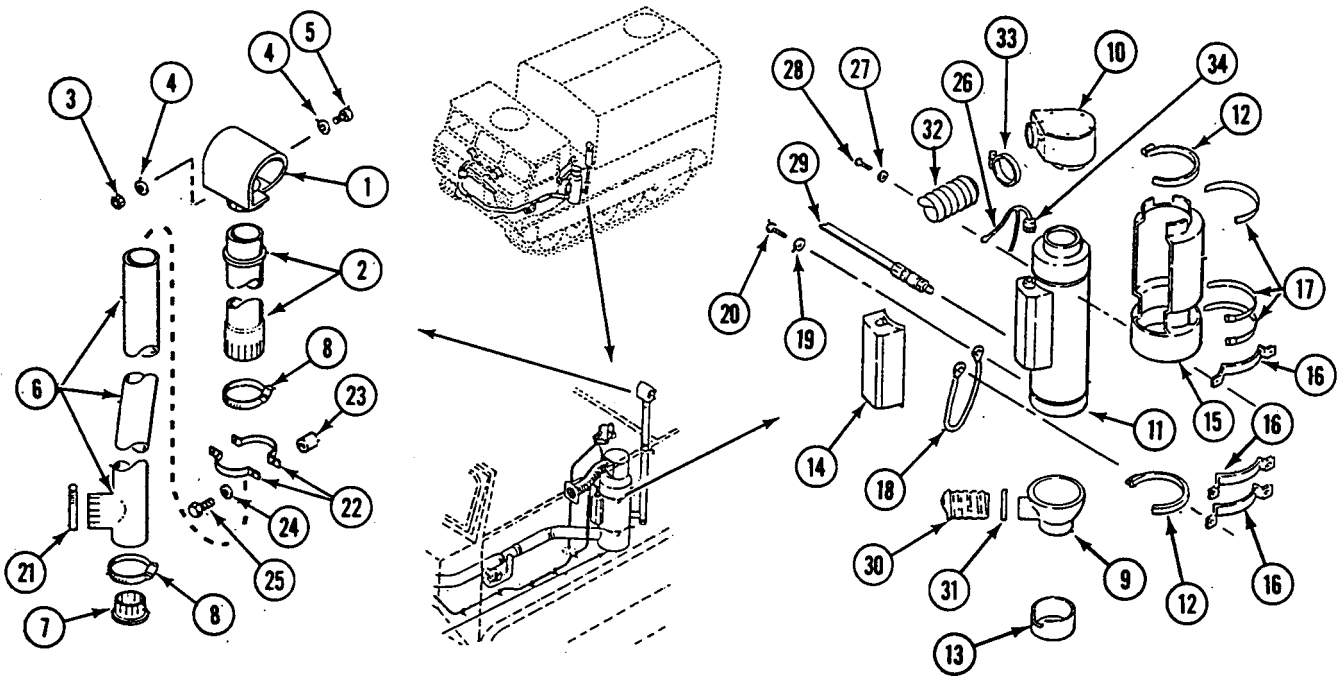
1. Remove heater controls cover (WP 0447 00).
2. Remove screw (1), washer (2), and blower lead 6 (3) from terminal board (4).
3. Remove four screws (5) and heater blower (6) from heater housing (7).
4. Remove grommet (8) from heater housing (7). Discard grommet.
5. Drill new hole (9) 19/32 inch (15 mm) into heater housing (7).
6. Install new grommet (8) in new 19/32 inch (15 mm) hole in heater housing (7).
7. Thread blower lead 6 (3) through new grommet AB (8) to terminal board (4). Secure with washer (2) and screw (1).
8. Install heater blower (6) on heater housing (7) with four screws (5).
9. Cover old opening (10) with rubber adhesive tape.



**REPLACE VEHICLE COMPARTMENT HEATER ASSEMBLY (KIT II OR III) (M548A1) —
Continued**

0447 00

10. Install heater controls cover (WP 0450 00).
11. Install exhaust hood (1) on upper exhaust pipe (2) with two new lock nuts (3), washers (4), and screws (5).
12. Install exhaust pipes (2, 6) and adapter (7). Secure with two clamps (8).
13. Install plenum chamber (9) and intake duct (10) on heater (11). Secure with two clamps (12).
14. Install plenum cover (13), controls cover (14), and heater cover (15) on heater (11).
15. Place heater (11) on three brackets (16). Secure with three clamps (17).
16. Install ground strap (18) on heater (11) with new lock washer (19) and screw (20).
17. Install exhaust pipe (2) and exhaust pipe (6) on heater (11) with clamp (21).
18. Install upper exhaust pipe (2) and two brackets (22) on weld nut (23) with two washers (24) and screws (25).
19. Install wiring harness ground lead (26) to bracket (16) with washer (27) and screw (28).
20. Connect fuel hose (29) to heater (11). Secure outlet hose (30) to plenum chamber (9) with clamp (31).
21. Install intake hose (32) on intake duct (10) with clamp (33).
22. Connect wiring harness (34) to heater (11).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater for proper operation.
4. Install power plant rear access door (see your -10).
5. Install bulkhead protector, if material handling kit is installed (WP 0487 00).
6. Install top left access grille (WP 0390 00).
7. Install heater exhaust pipe guard (WP 0455 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER FUEL PUMP (KIT I)
(M548A1)**

0448 00

THIS WORK PACKAGE COVERS:

Removal (page 0448 00-1).
Installation (page 0448 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Sealing compound (WP 0542 00, Item 33)

Lock washer (4)

Carrier blocked (see your -10)

Personnel Required

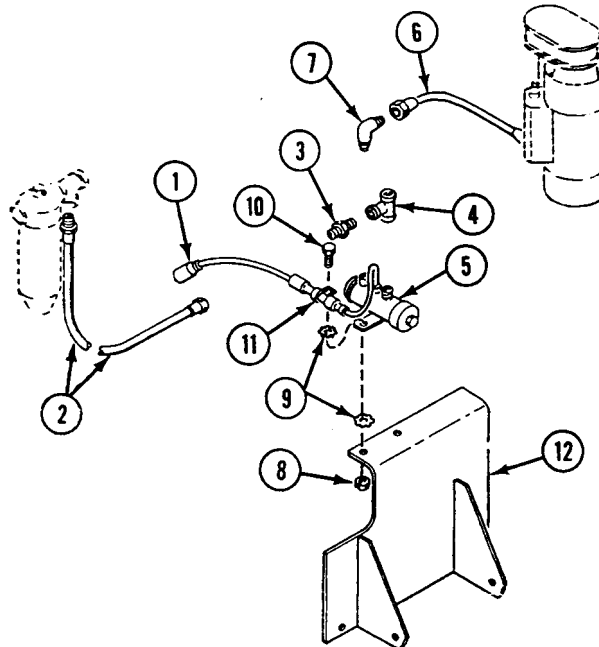
Unit Mechanic

Top left access grille removed (WP 0390 00)

Battery negative lead disconnected (WP 0292 00)

REMOVAL

1. Remove pump circuit 402 lead (1) from heater wiring harness.
2. Remove hose (2) from nipple (3) in tee (4). Remove nipple from tee. Remove tee from fuel pump (5).
3. Remove hose (6) from elbow (7) on fuel pump (5). Remove elbow from fuel pump.
4. Remove two nuts (8), four lock washers (9), two screws (10), fuel pump (5), and capacitor (11) from bracket (12). Discard lock washers.

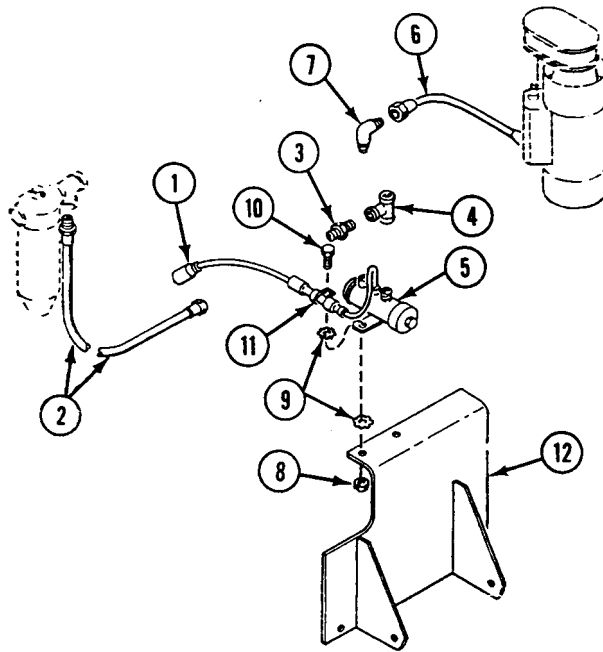


Continued

INSTALLATION**NOTE**

Apply sealing compound sparingly to tapered threads of fittings before installation.

1. Install fuel pump (5) and capacitor (11) on bracket (12) with two screws (10), four new lock washers (9), and two nuts (8).
2. Install elbow (7) and tee (4) in fuel pump (5). Connect hose (6) to elbow (7).
3. Install nipple (3) in tee (4). Connect hose (2) to nipple (3).
4. Connect fuel pump circuit 402 lead (1) to heater wiring harness.

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater for leaks and proper operation.
4. Stop heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER FUEL PUMP (KIT II OR III)
(M548A1)**

0449 00

THIS WORK PACKAGE COVERS:

Removal (page 0449 00-1).
Installation (page 0449 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Sealing compound (WP 0542 00, Item 33)

Lock washer (2)

Carrier blocked (see your -10)

Personnel Required

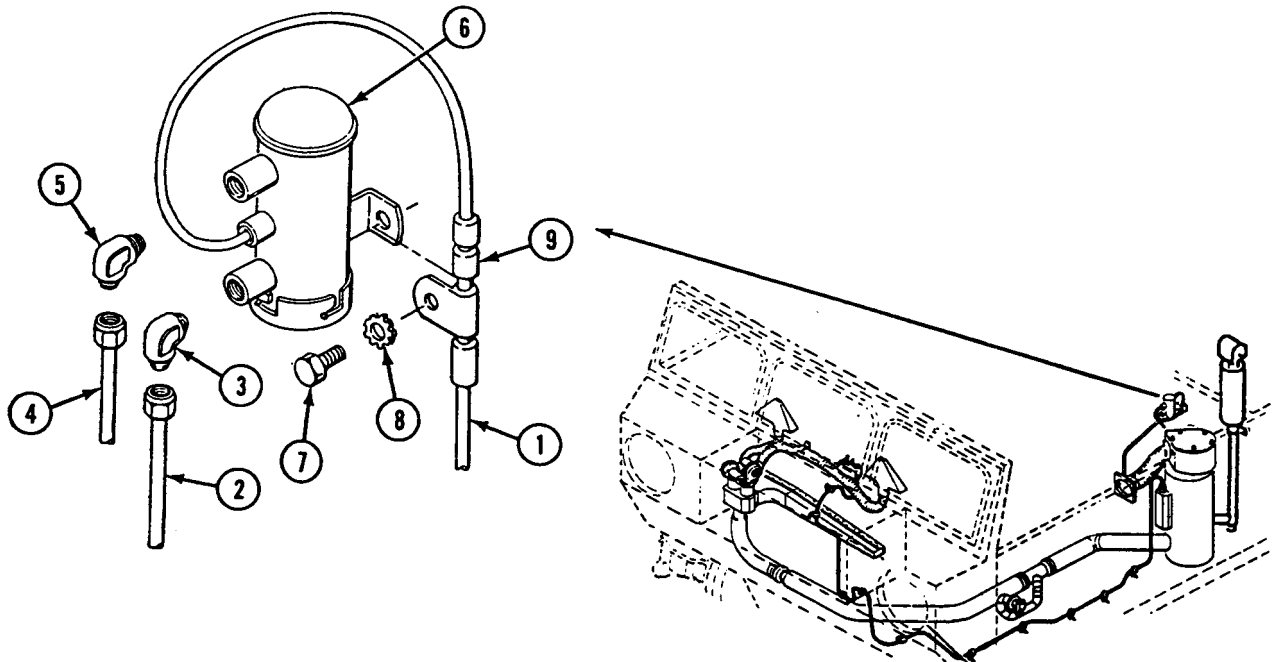
Unit Mechanic

Battery negative lead disconnected (WP 0292 00)

Top left access grille removed (WP 0390 00)

REMOVAL

1. Remove pump circuit 402 lead (1) from heater wiring harness.
2. Remove hose (2) from elbow (3) and hose (4) from elbow (5). Remove elbows from fuel pump (6).
3. Remove two screws (7), lock washers (8), fuel pump (6), and capacitor (9) from rear power plant compartment bulkhead. Discard lock washers.



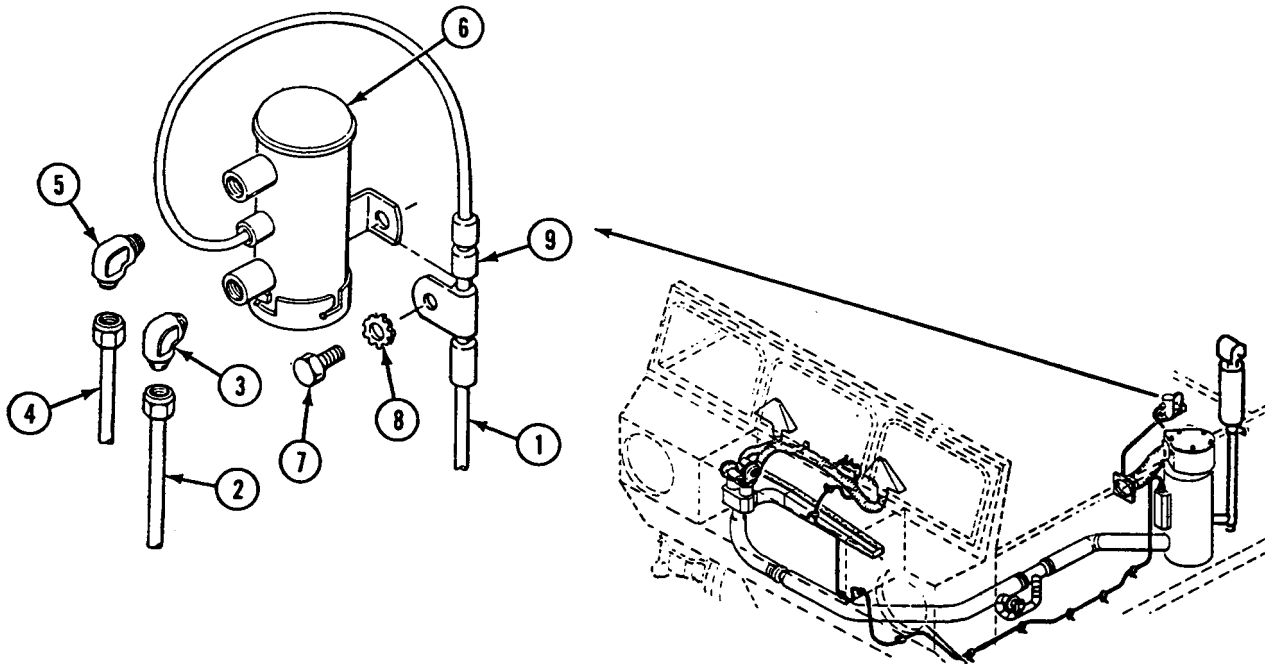
REPLACE VEHICLE COMPARTMENT HEATER FUEL PUMP (KIT II OR III) (M548A1) —
Continued

0449 00

INSTALLATION**NOTE**

Apply sealing compound sparingly to tapered threads of fittings before installation.

1. Install fuel pump (6) and capacitor (9) on power plant bulkhead with two new lock washers (8) and screws (7).
2. Install elbows (5, 3) on fuel pump (6). Install hose (4) on elbow (5) and hose (2) on elbow (3).
3. Connect fuel pump circuit 402 lead (1) to heater wiring harness.

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater fuel pump for leaks and proper operation.
4. Stop heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER CONTROLS COVER
(M548A1)**

0450 00

THIS WORK PACKAGE COVERS:

Removal (page 0450 00-1).
Installation (page 0450 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

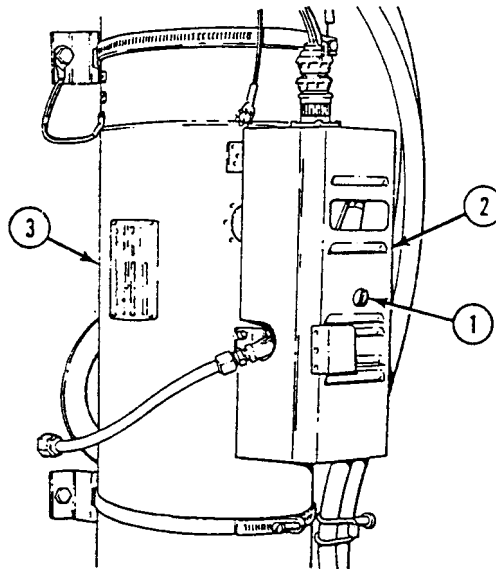
Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery negative lead disconnected (WP 0292 00)
Top left access grille removed (WP 0390 00)

Personnel Required

Unit Mechanic

REMOVAL

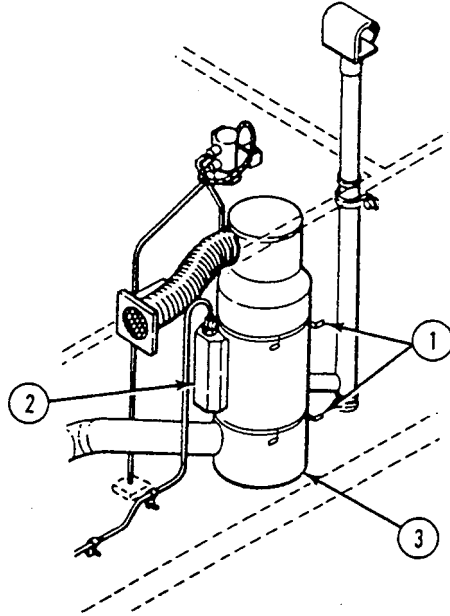
1. For Kit I, turn fastener (1) to left and remove cover (2) from heater (3).



**REPLACE VEHICLE COMPARTMENT HEATER CONTROLS COVER (M548A1) —
Continued**

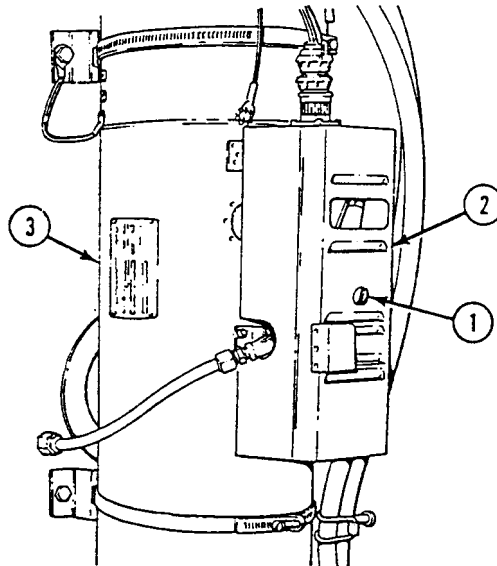
0450 00

- For Kits II and III, open two clamps (1) and remove insulated cover (2) from heater (3).



INSTALLATION

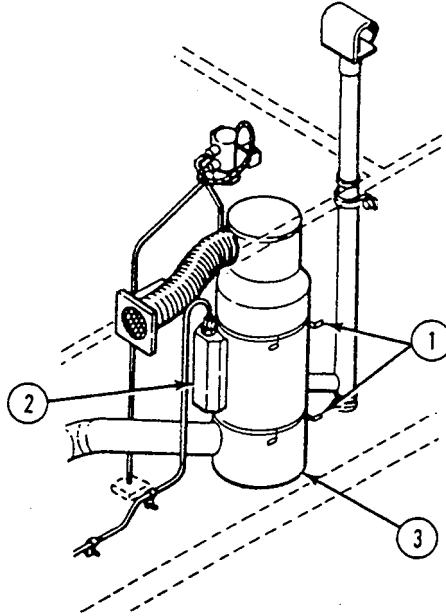
- For Kit I, install cover (2) over controls and secure to heater (3) by turning fastener (1) to right.



REPLACE VEHICLE COMPARTMENT HEATER CONTROLS COVER (M548A1) —
Continued

0450 00

- For Kits II and III, install insulated cover (2) over controls and secure to heater (3) with two clamps (1).

**FOLLOW-THROUGH STEPS**

- Install top left access grille (WP 0390 00).
- Connect battery negative lead (WP 0292 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS
(M548A1)**

0451 00

THIS WORK PACKAGE COVERS:

Removal (page 0451 00-2).
Installation (page 0451 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Grommet

Lock washer (2)

Lock washer (9)

Personnel Required

Unit Mechanic

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Battery negative lead disconnected (WP 0292 00)

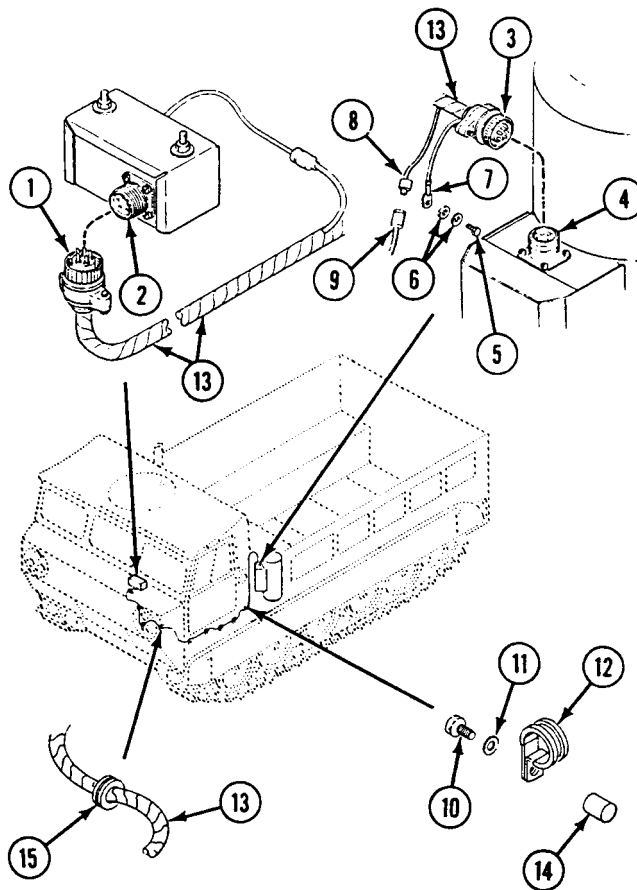
Top left access grille removed (WP 0390 00)

**REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A1) —
Continued**

0451 00

REMOVAL

1. Remove wiring harness connector (1) from control box receptacle (2).
2. Remove wiring harness connector (3) from heater receptacle (4).
3. Remove screw (5), two lock washers (6), and wiring harness ground lead (7) from hull. Discard lock washers.
4. Remove wiring harness circuit 402 lead (8) from fuel pump lead (9).
5. Remove nine screws (10), lock washers (11), clamps (12), and wiring harness (13) from nine weld nuts (14). Discard lock washers.
6. Remove wiring harness (13) from carrier. Remove grommet (15) from wiring harness. Discard grommet.

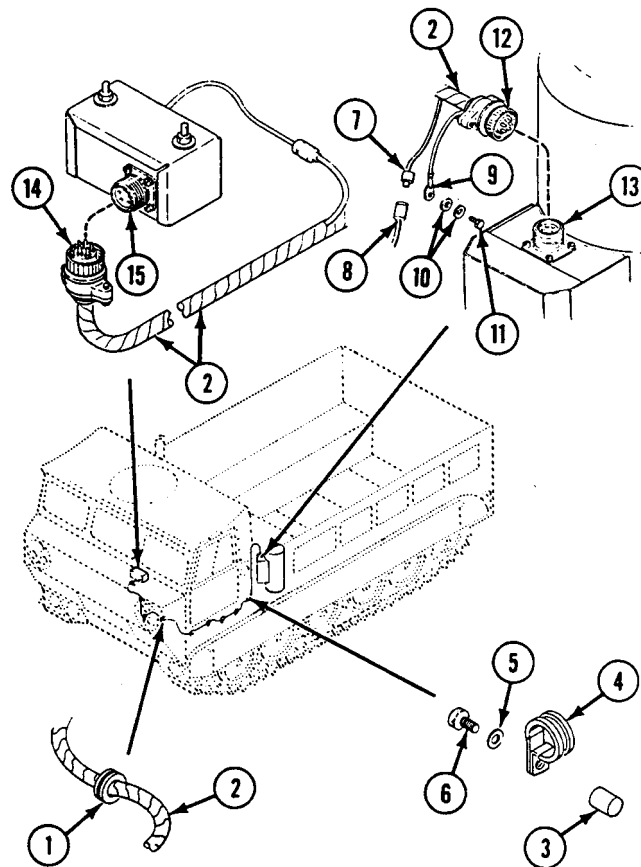


REPLACE VEHICLE COMPARTMENT HEATER WIRING HARNESS (M548A1) —
Continued

0451 00

INSTALLATION

1. Install new grommet (1) on wiring harness (2).
2. Install wiring harness (2) on nine weld nuts (3) in carrier with nine clamps (4), new lock washers (5), and screws (6).
3. Install circuit 402 lead (7) on fuel pump lead (8).
4. Install wiring harness ground lead (9) on hull with two new lock washers (10) and screw (11).
5. Install wiring harness connector (12) on heater receptacle (13).
6. Install wiring harness connector (14) on control box receptacle (15).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater wiring harness for proper operation.
4. Stop heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES
(KIT I) (M548A1)**

0452 00

THIS WORK PACKAGE COVERS:

Removal (page 0452 00-2).
Installation (page 0452 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Personnel Required

Unit Mechanic

References

See your -10

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Battery negative lead disconnected (WP 0292 00)
Top left access grille removed (WP 0390 00)
Cab left center floor plate raised (WP 0394 00)

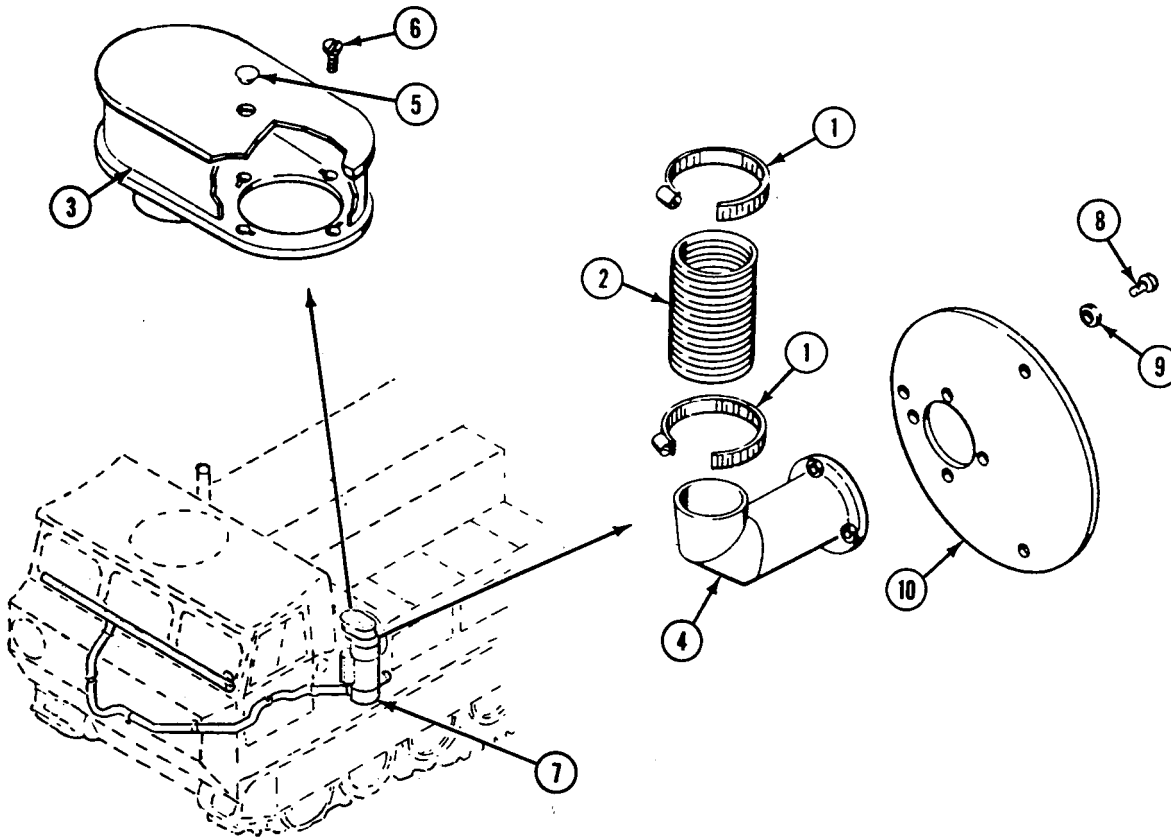
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT I) (M548A1)

0452 00

— Continued

REMOVAL

1. Remove two clamps (1) and intake hose (2) from air duct (3) and elbow (4).
2. Remove four plugs (5) from air duct (3) access holes. Remove four screws (6) and air duct from cab heater (7).
3. Remove four screws (8), washers (9), and elbow (4) from power plant access cover (10).

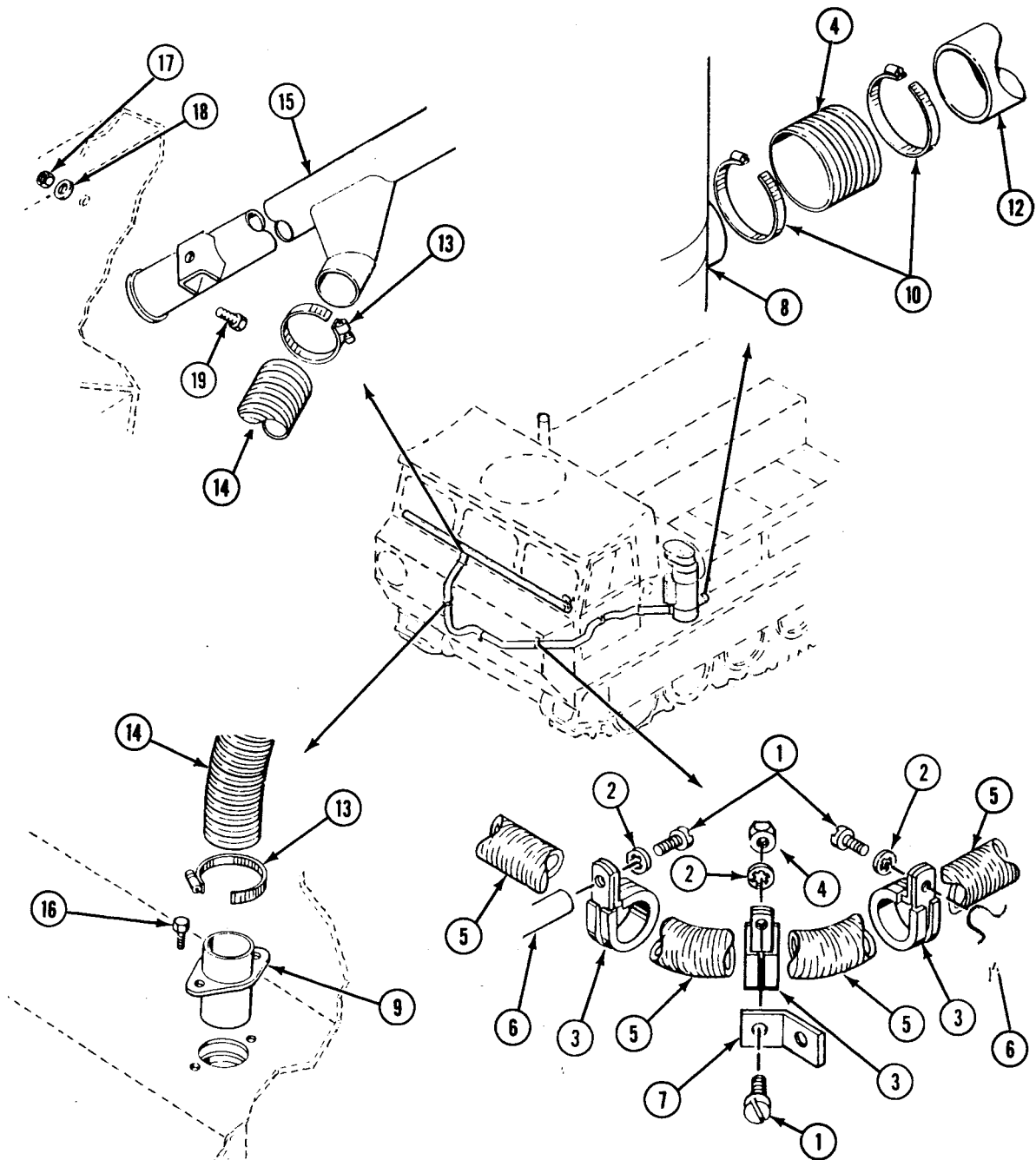


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT I) (M548A1)

0452 00

— Continued

4. Remove four screws (1), washers (2), four clamps (3), and two nuts (4) securing hose (5) to two weld nuts (6), brackets (7), heater plenum (8) and adapter (9).
5. Remove two clamps (10) and outlet hose (11) from heater plenum (8) and outlet duct (12).
6. Remove two clamps (13) and hose (14) from adapter (9) and defroster manifold hose (15).
7. Remove two screws (16) and adapter (9) from hull.
8. Remove five nuts (17), washers (18), screws (19), and defroster manifold hose (15) from hull.

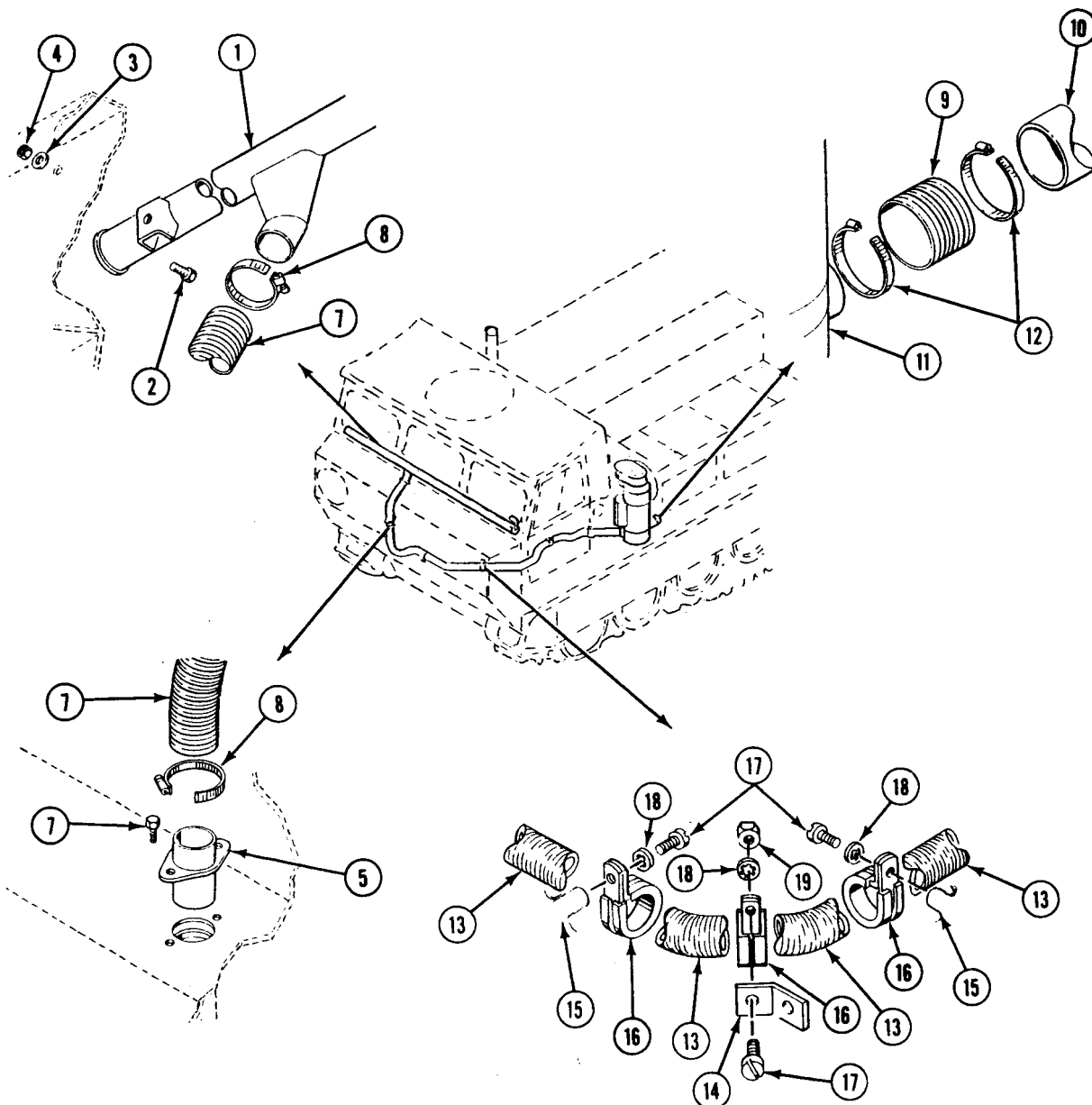


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT I) (M548A1)
 — Continued

0452 00

INSTALLATION

1. Install defroster manifold hose (1) on hull with five screws (2), washers, (3), and nuts (4).
2. Install adapter (5) on hull with two screws (6).
3. Install hose (7) on defroster manifold hose (1) and adapter (5) with two clamps (8).
4. Install hose (9) on outlet duct (10) and heater plenum (11) with two clamps (12).
5. Install hose (13) on two brackets (14), weld nuts (15), heater plenum (11), and adapter (5) with four clamps (16), screws (17), washers (18), and two nuts (19).

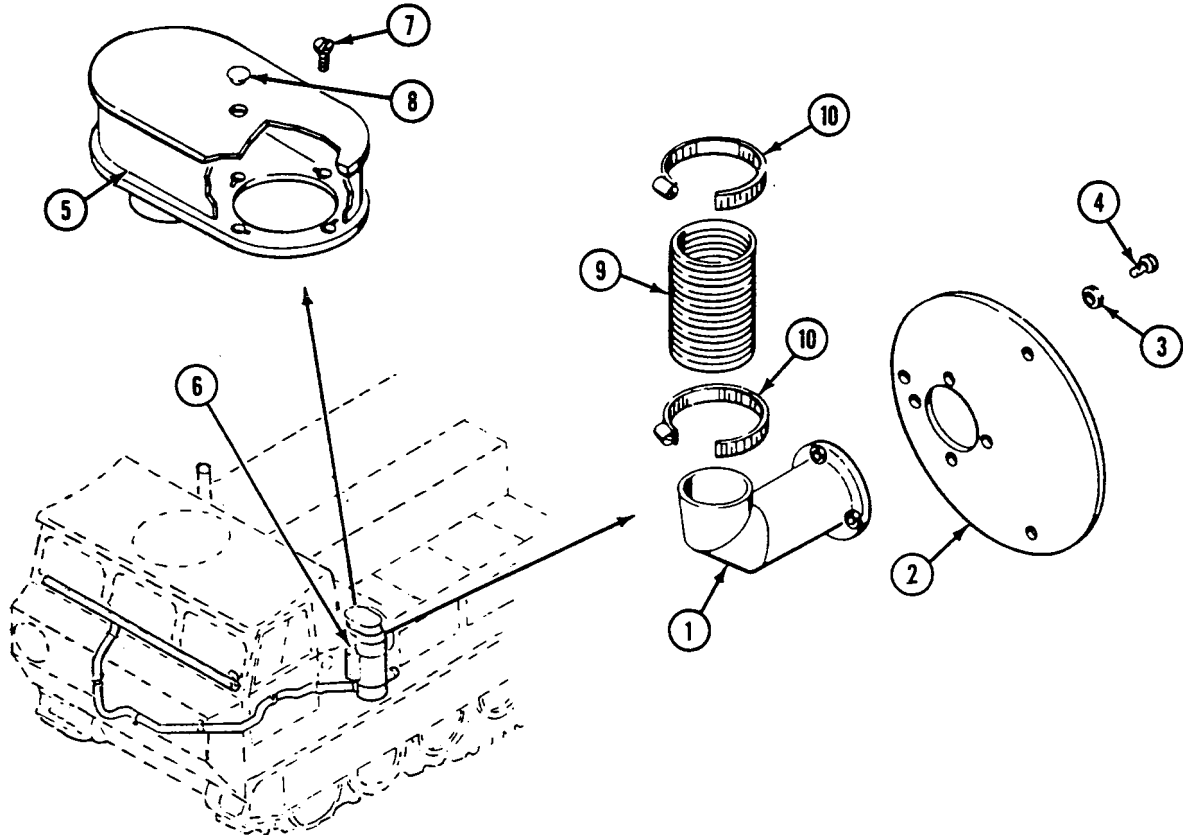


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT I) (M548A1)

0452 00

— Continued

6. Install elbow (1) on power plant access cover (2) with four washers (3) and screws (4).
7. Install air duct (5) on cab heater (6) with four screws (7). Install four plugs (8) in air duct access holes.
8. Install hose (9) on air duct (5) and elbow (1) with two clamps (10).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater air ducts and hoses for leaks and proper operation.
4. Stop heater (see your -10).
5. Lower cab left center floor plate (WP 0394 00).
6. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES
(KIT II) (M548A1)**

0453 00

THIS WORK PACKAGE COVERS:

Removal (page 0453 00-2).
Installation (page 0453 00-6).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock nut
Lock nut
Lock nut
Lock nut (4)
Lock washer (4)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Top left access grille removed (WP 0390 00)
Cab left center floor plate raised (WP 0394 00)
Battery negative lead disconnected (WP 0292 00)

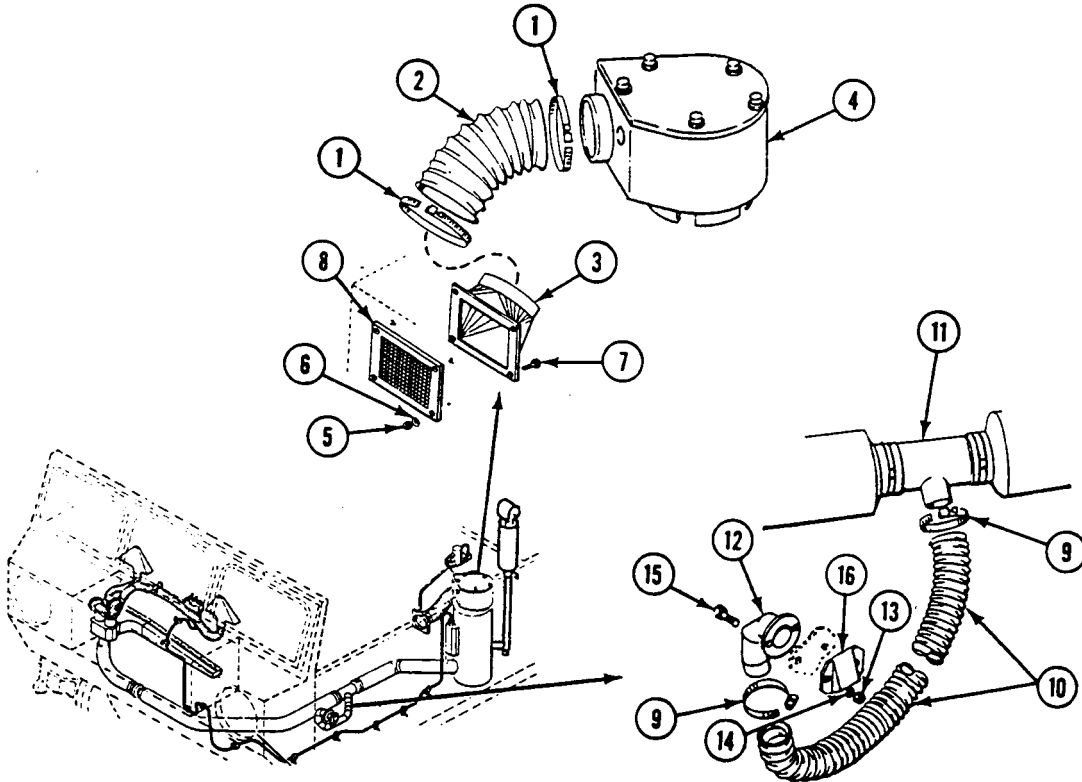
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)

0453 00

— Continued

REMOVAL

1. Remove two clamps (1) and intake hose (2) from adapter (3) and intake duct (4).
2. Remove four nuts (5), washers (6), screws (7), grille (8), and adapter (3) from driver's seat rear bulkhead.
3. Remove two clamps (9) and hose (10) from tee (11) and elbow (12).
4. Remove two nuts (13), washers (14), screws (15), elbow (12), and deflector (16) from battery well bulkhead.

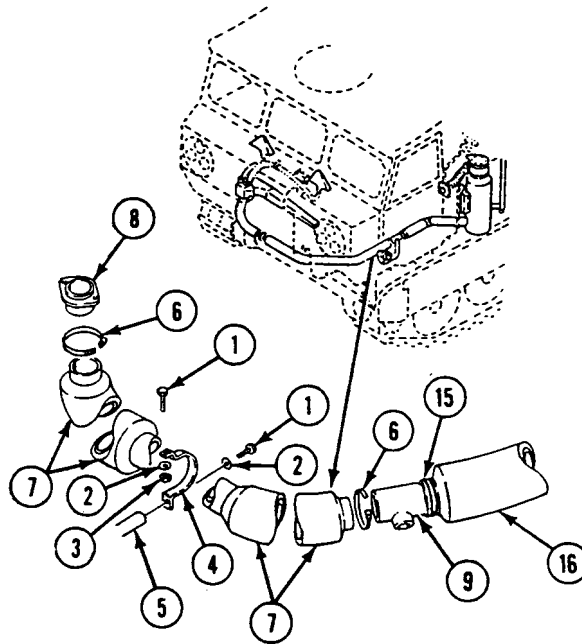


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)

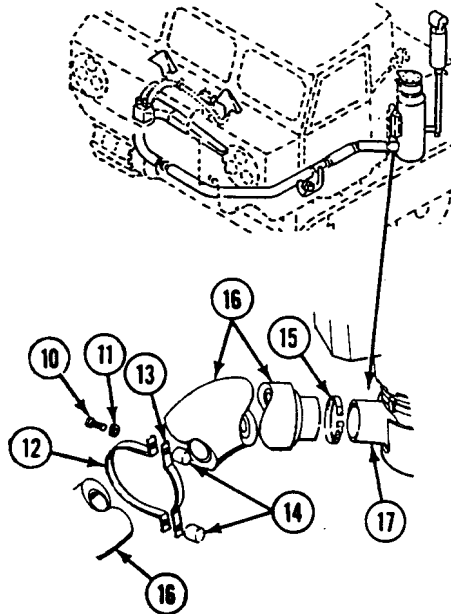
0453 00

— Continued

5. Remove two screws (1), lock washers (2), lock nut (3), and clamp (4) from weld nut (5) and driver's floor. Discard lock washers and lock nut.
6. Remove two clamps (6) and hose (7) from adapter (8) and tee (9).



7. Remove two screws (10), lock washers (11), clamp (12), and bracket (13) from two weld nuts (14). Discard lock washers.
8. Remove two clamps (15) and hose (16) from plenum (17) and tee (9).

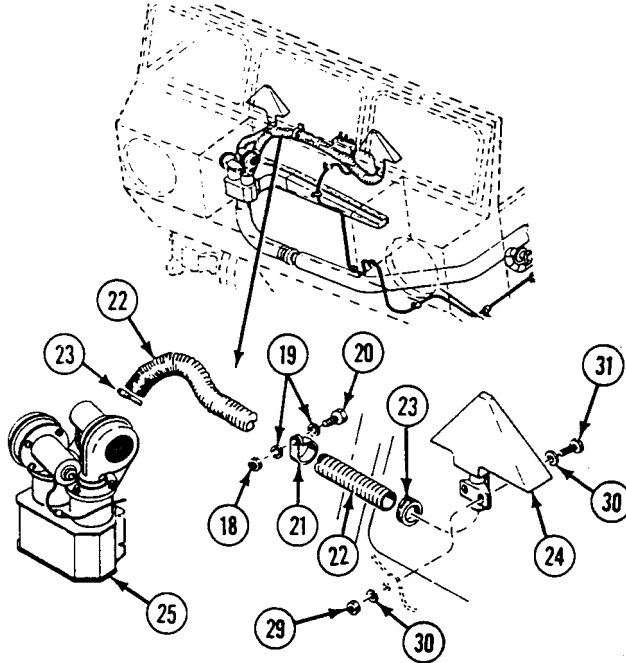


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)

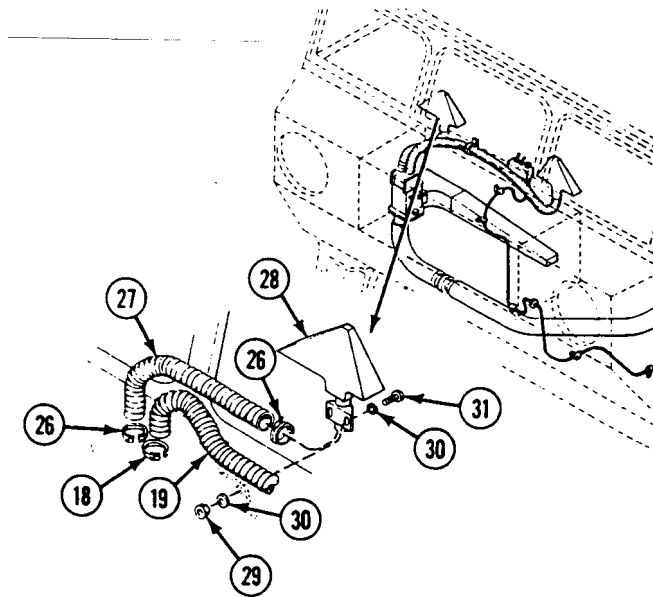
0453 00

— Continued

9. Remove lock nut (18), two washers (19), screw (20), clamp (21), and left defroster hose (22) from hull. Discard lock nut.
10. Remove two clamps (23). Disconnect left defroster hose (22) from left defroster duct (24) and heat regulator (25).



11. Remove two clamps (26). Disconnect right defroster hose (27) from right defroster duct (28) and heat regulator (25).
12. Remove four lock nuts (29), eight washers (30), four screws (31), and left defroster duct (24) and right defroster duct (28) from hull. Discard lock nuts.

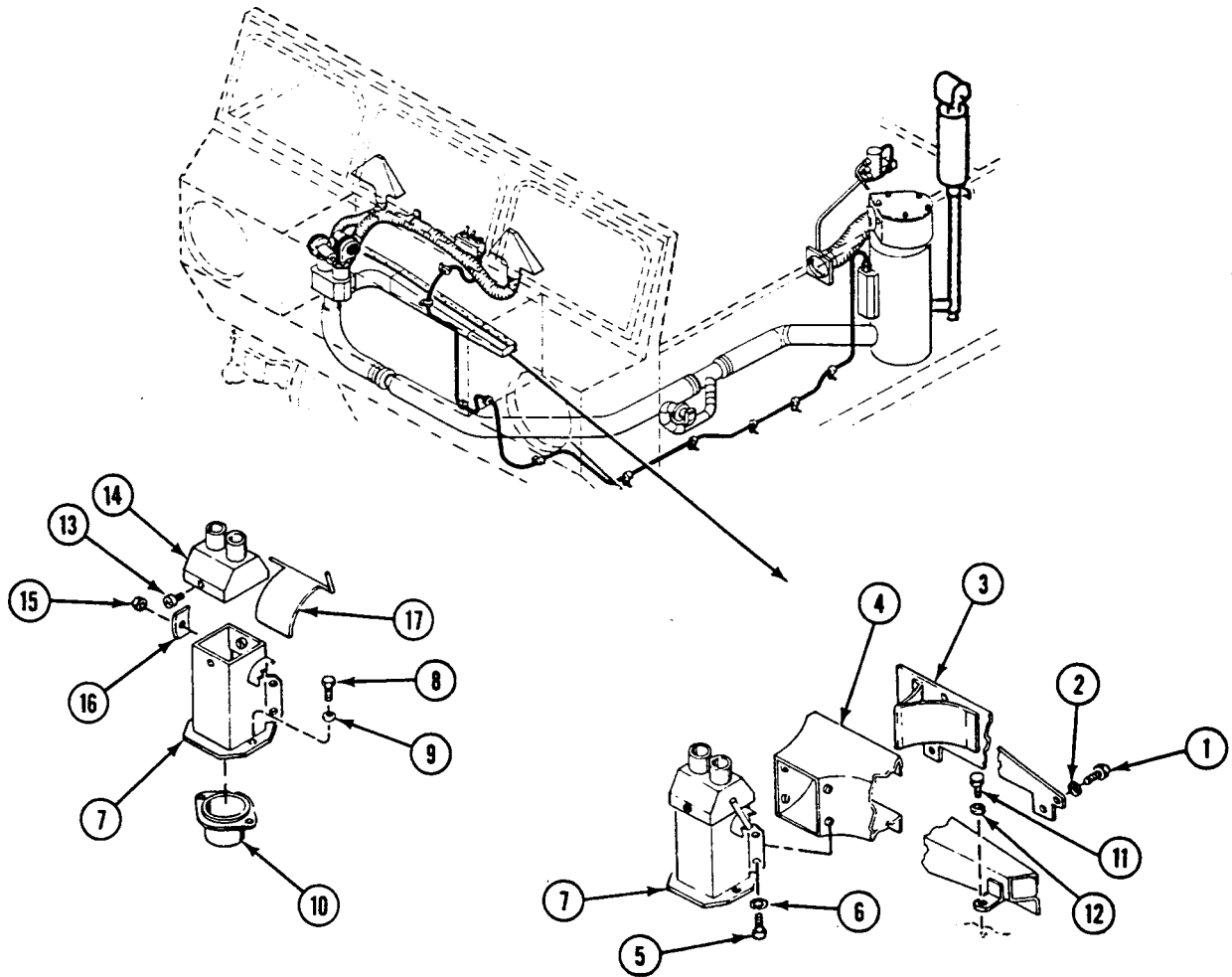


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)

0453 00

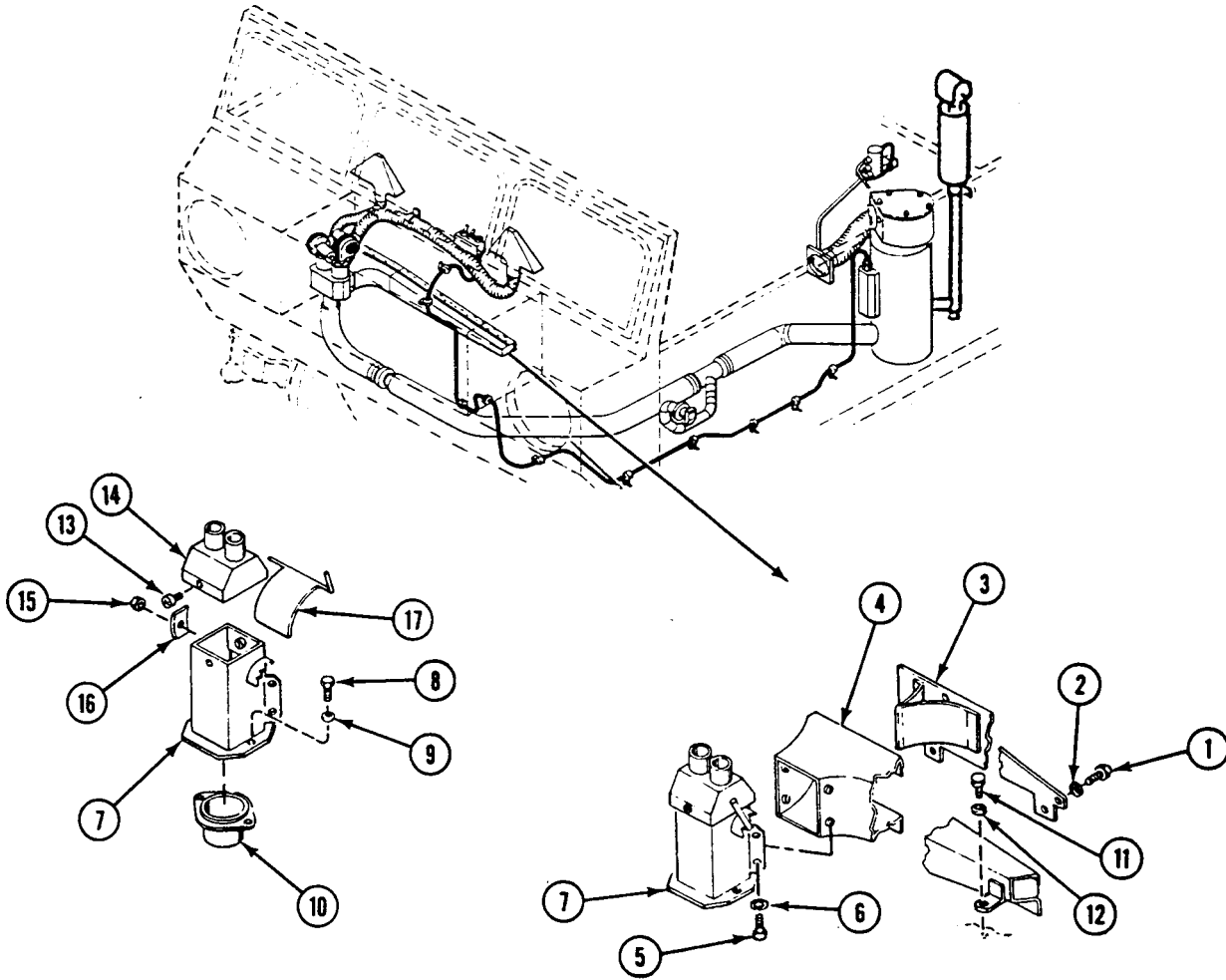
— Continued

13. Remove 11 screws (1), washers (2), and heat distributor cover (3) from heat distributor (4).
14. Remove four screws (5), washers (6), and heat regulator (7) from heat distributor (4).
15. Remove two screws (8), washers (9), and adapter (10) from heat regulator (7).
16. Remove three screws (11), washers (12), and heat distributor (4) from hull.
17. Remove two screws (13) and heat regulator cover (14) from heat regulator (7).
18. Remove lock nut (15), spring (16), and valve (17) from regulator (7). Discard lock nut.



INSTALLATION

1. Install valve (17) in heat regulator (7) with spring (16) and new lock nut (15).
2. Install heat regulator cover (14) on heat regulator (7) with two screws (13).
3. Install heat distributor (4) on hull with three washers (12) and screws (11).
4. Install adapter (10) on heat regulator (7) with two washers (9) and screws (8).
5. Install heat regulator (7) on heat distributor (4) with four washers (6) and screws (5).
6. Install heat distributor cover (3) on heat distributor (4) with 11 washers (2) and screws (1).

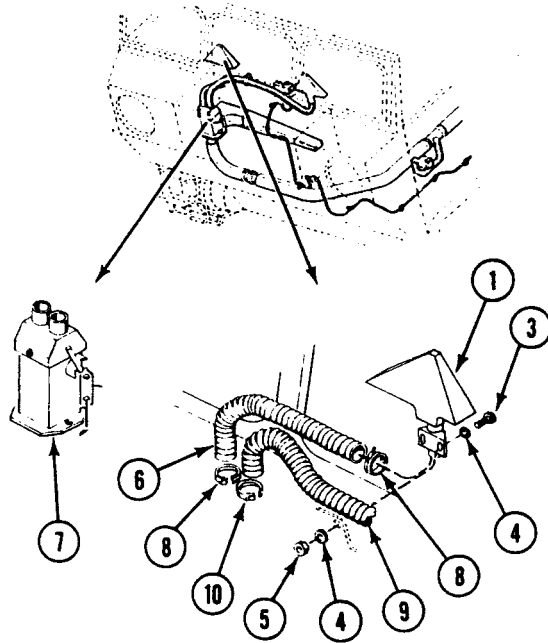


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)

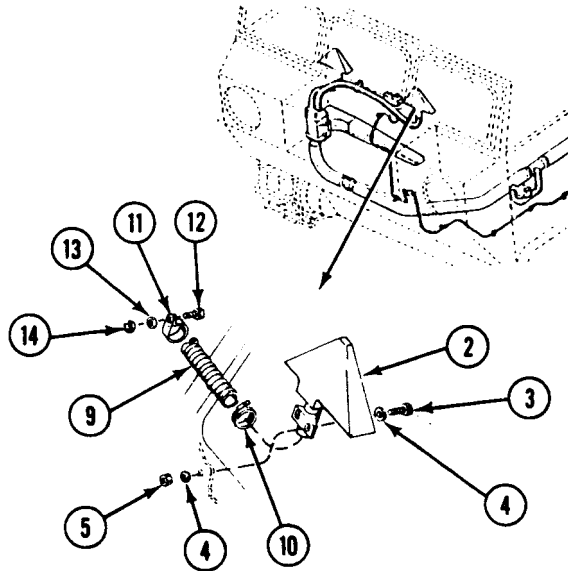
0453 00

— Continued

7. Install right defroster duct (1) and left defroster duct (2) in hull with four screws (3), eight washers (4), and four new lock nuts (5).
8. Connect right defroster hose (6) to right defroster duct (1) and heat regulator (7). Secure with two clamps (8).



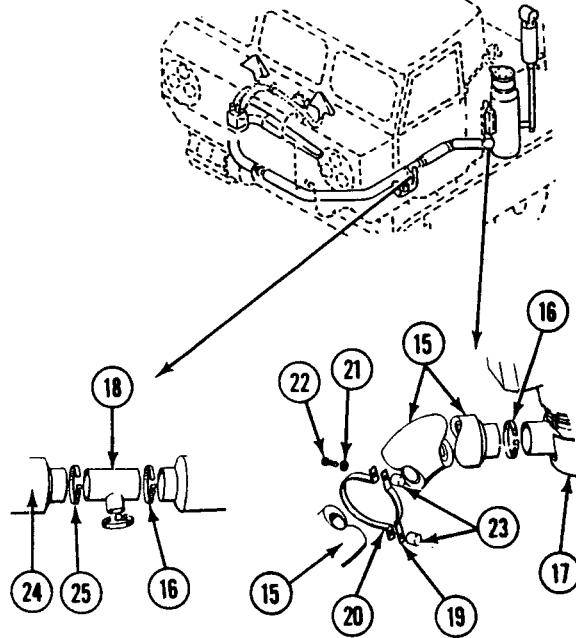
9. Connect left defroster hose (9) to left defroster duct (2) and heat regulator (7). Secure with two clamps (10).
10. Install left defroster hose (9) on hull with clamp (11), screw (12), washer (13), and new lock nut (14).



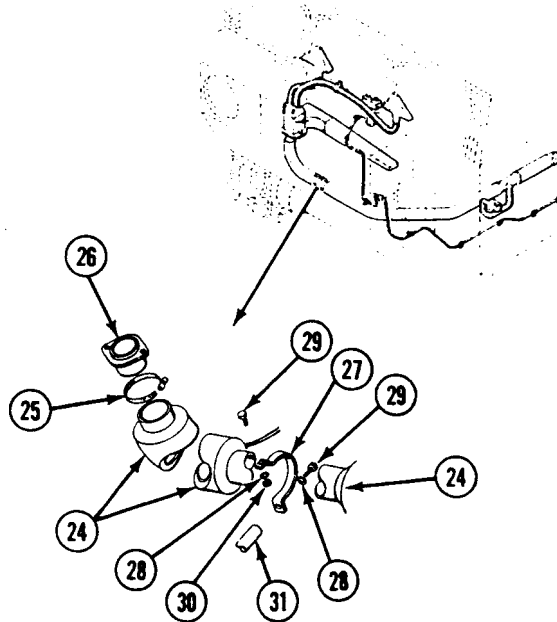
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)
— Continued

0453 00

11. Install hose (15) and two clamps (16) on plenum (17) and tee (18).
12. Install bracket (19), clamp (20), two new lock washers (21), and screws (22) on two weld nuts (23).

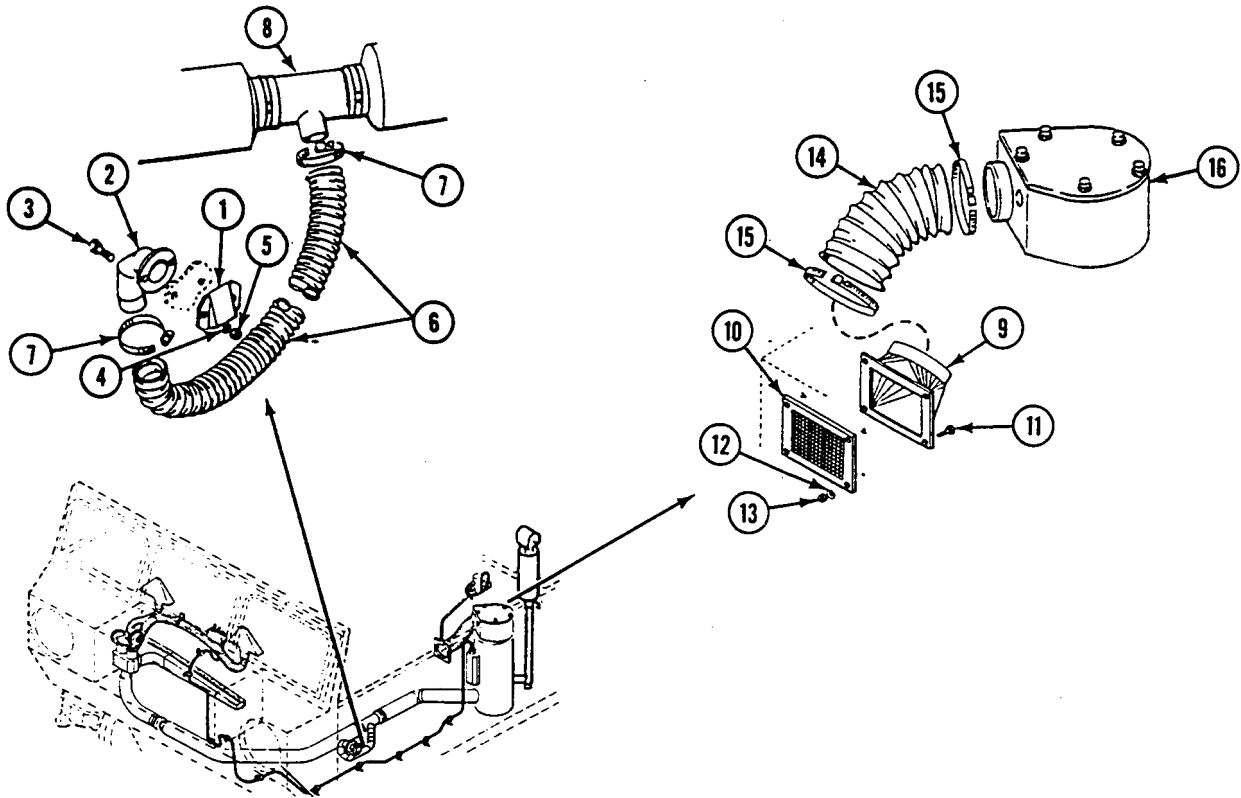


13. Install hose (24) and two clamps (25) on adapter (26) and tee (18).
14. Install clamp (27), two new lock washers (28), screws (29), and new lock nut (30) onto weld nut (31) and driver's floor.



REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT II) (M548A1)**0453 00****— Continued**

15. Install deflector (1), elbow (2), two screws (3), washers (4), and nuts (5) to battery well bulkhead.
16. Install hose (6) and two clamps (7) to tee (8) and elbow (2).
17. Install adapter (9), grille (10), four screws (11), washers (12), and nuts (13) to driver's seat rear bulkhead.
18. Install intake hose (14) and two clamps (15) to adapter (9) and intake duct (16).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check heater for leaks and proper operation.
4. Stop heater (see your -10).
5. Install cab left center floor plate (WP 0394 00).
6. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES
(KIT III) (M548A1)**

0454 00

THIS WORK PACKAGE COVERS:

Removal (page 0454 00-2).
Installation (page 0454 00-6).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut
Lock nut (5)
Lock washer (4)
Lock washer (6)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Top left access grille removed (WP 0390 00)
Cab left center floor plate raised (WP 0394 00)
Battery negative lead disconnected (WP 0292 00)

Personnel Required

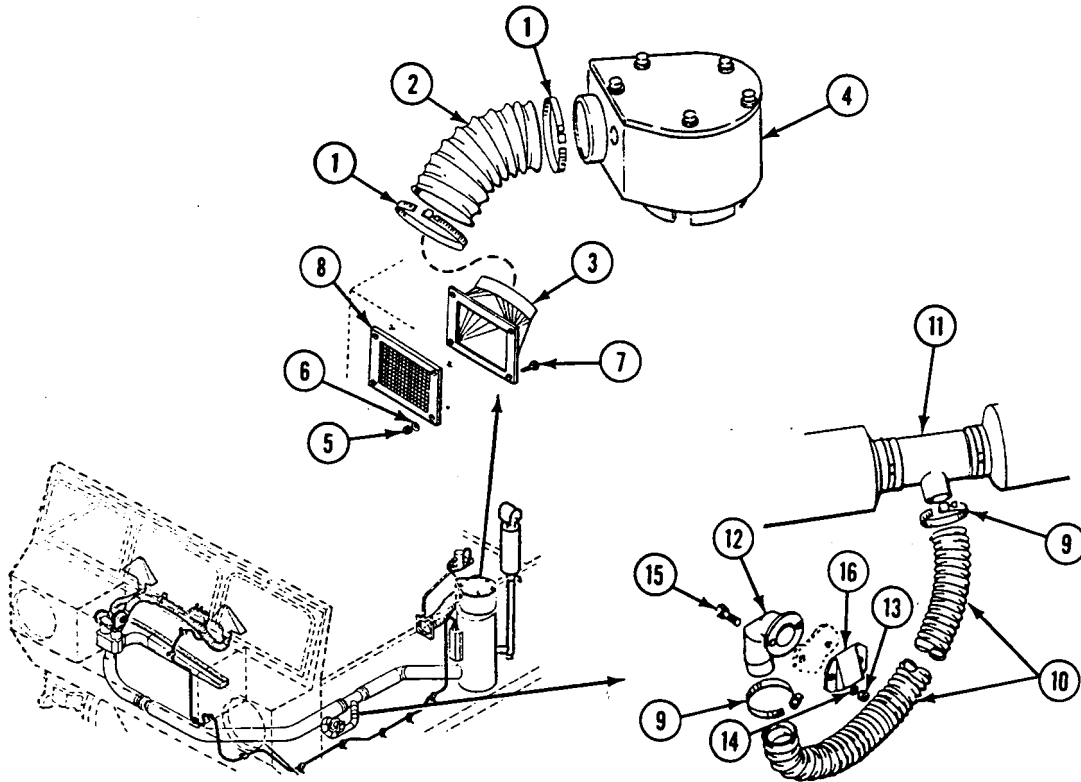
Unit Mechanic

**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

REMOVAL

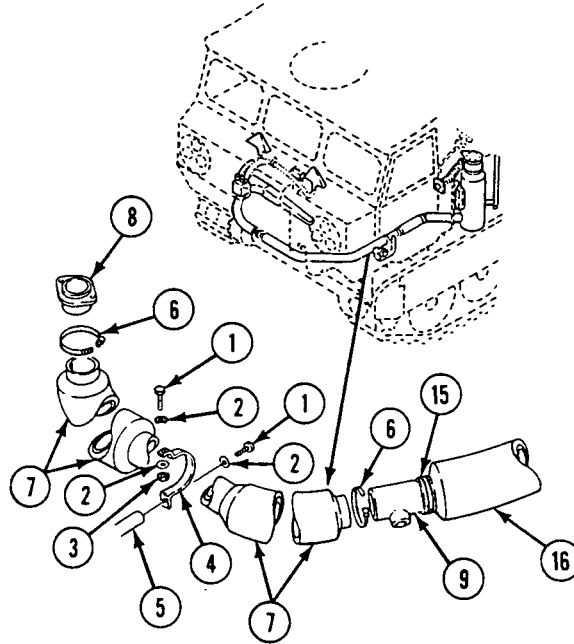
1. Remove two clamps (1) and intake hose (2) from adapter (3) and intake duct (4).
2. Remove four nuts, (5), washers (6), screws (7), grille (8), and adapter (3) from driver's seat rear bulkhead.
3. Remove two clamps (9) and hose (10) from tee (11) and elbow (12).
4. Remove two nuts (13), washers (14), screws (15), elbow (12), and deflector (16) from battery well bulkhead.



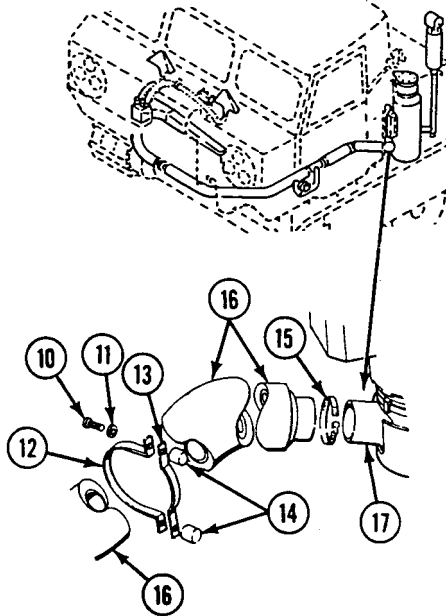
**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

5. Remove two screws (1), lock washers (2), lock nut (3), and clamp (4) from weld nut (5) and driver's floor. Discard lock washers and lock nut.
6. Remove two clamps (6) and hose (7) from adapter (8) and tee (9).



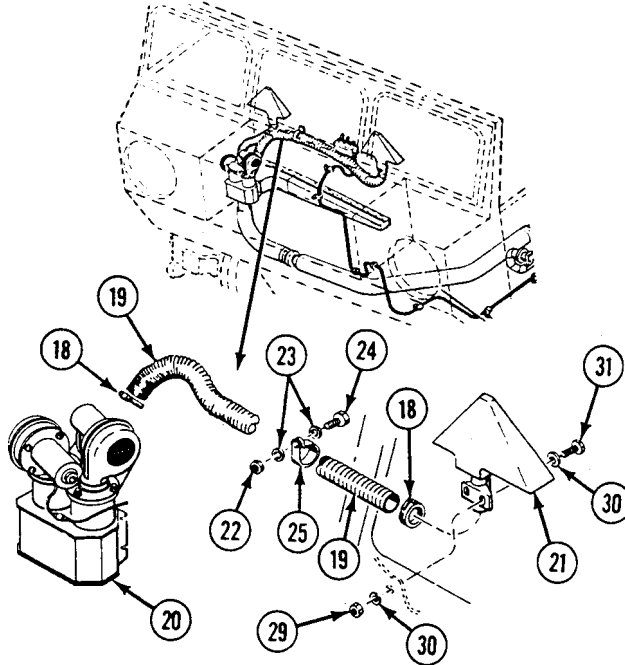
7. Remove two screws (10), lock washers (11), clamp (12), and bracket (13) from two weld nuts (14). Discard lock washers.
8. Remove two clamps (15) and hose (16) from plenum (17) and tee (9).



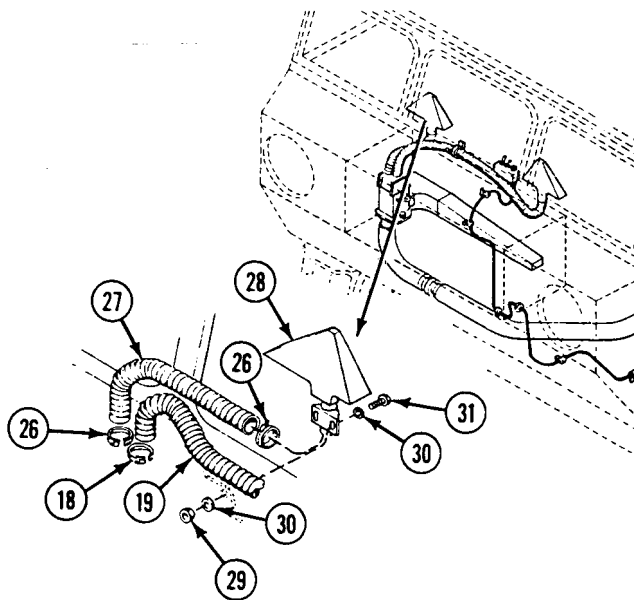
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued

0454 00

9. Remove two clamps (18) and left defroster hose (19) from housing (20) and left defroster duct (21).
10. Remove lock nut (22), two washers (23), screw (24), clamp (25), and hose (19) from hull. Discard lock nut.



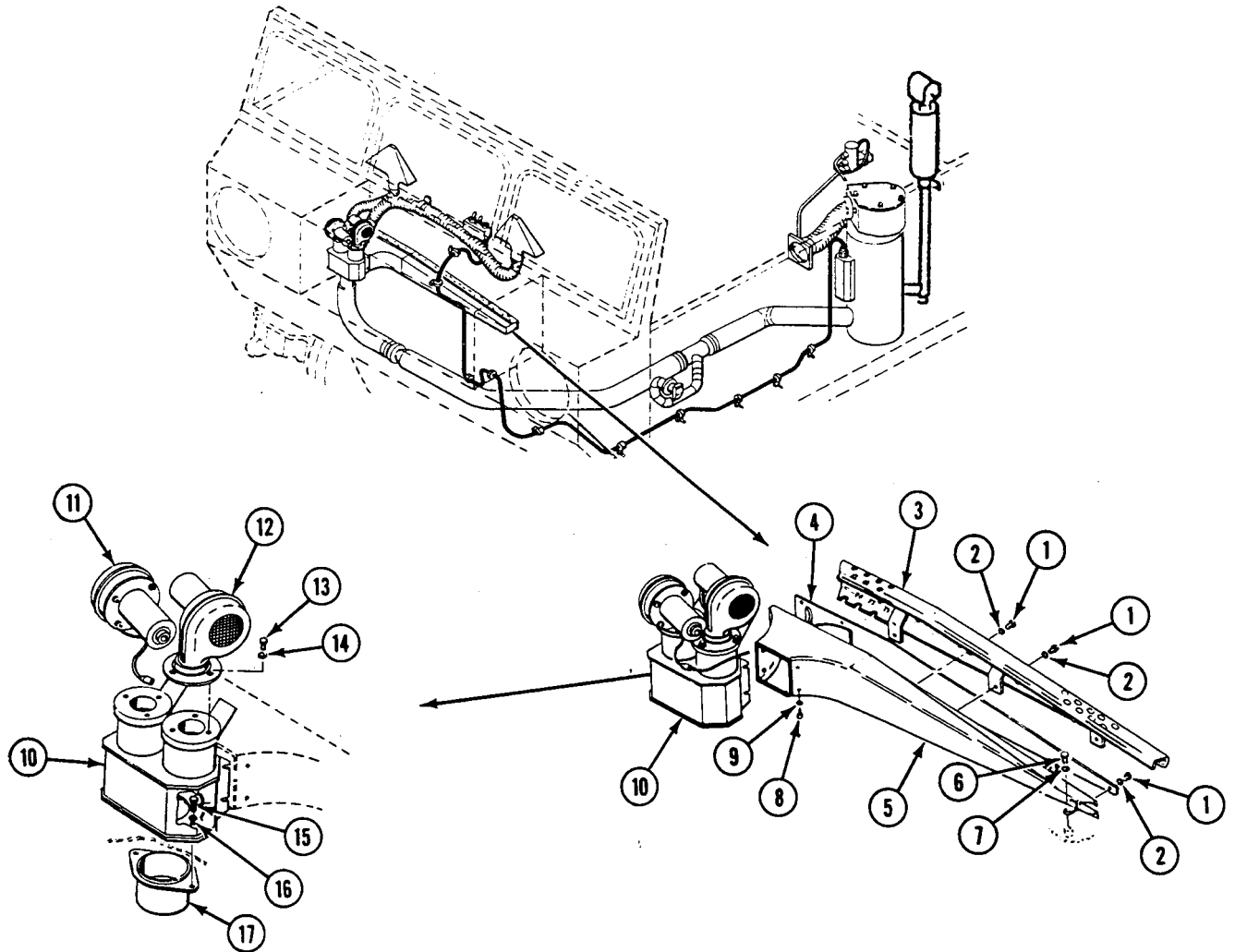
11. Remove two clamps (26) and right defroster hose (27) from right defroster duct (28) and housing (20).
12. Remove four lock nuts (29), eight washers (30), four screws (31), and left defroster duct (28) and right defroster duct (21) from hull. Discard lock nuts.



**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

13. Remove 11 screws (1), washers (2), shield (3), and distributor cover (4) from distributor duct (5).
14. Remove three screws (6), washers (7), and distributor duct (5) from hull.
15. Remove four screws (8), washers (9), and housing (10) from distributor duct (5).
16. Disconnect circuit 346 lead from right defroster fan (11) and circuit 347 lead from left defroster fan (12).
17. Remove six screws (13), lock washers (14), and right defroster fan (11) and left defroster fan (12) from housing (10). Discard lock washers.
18. Remove two screws (15), washers (16), and adapter (17) from housing (10).

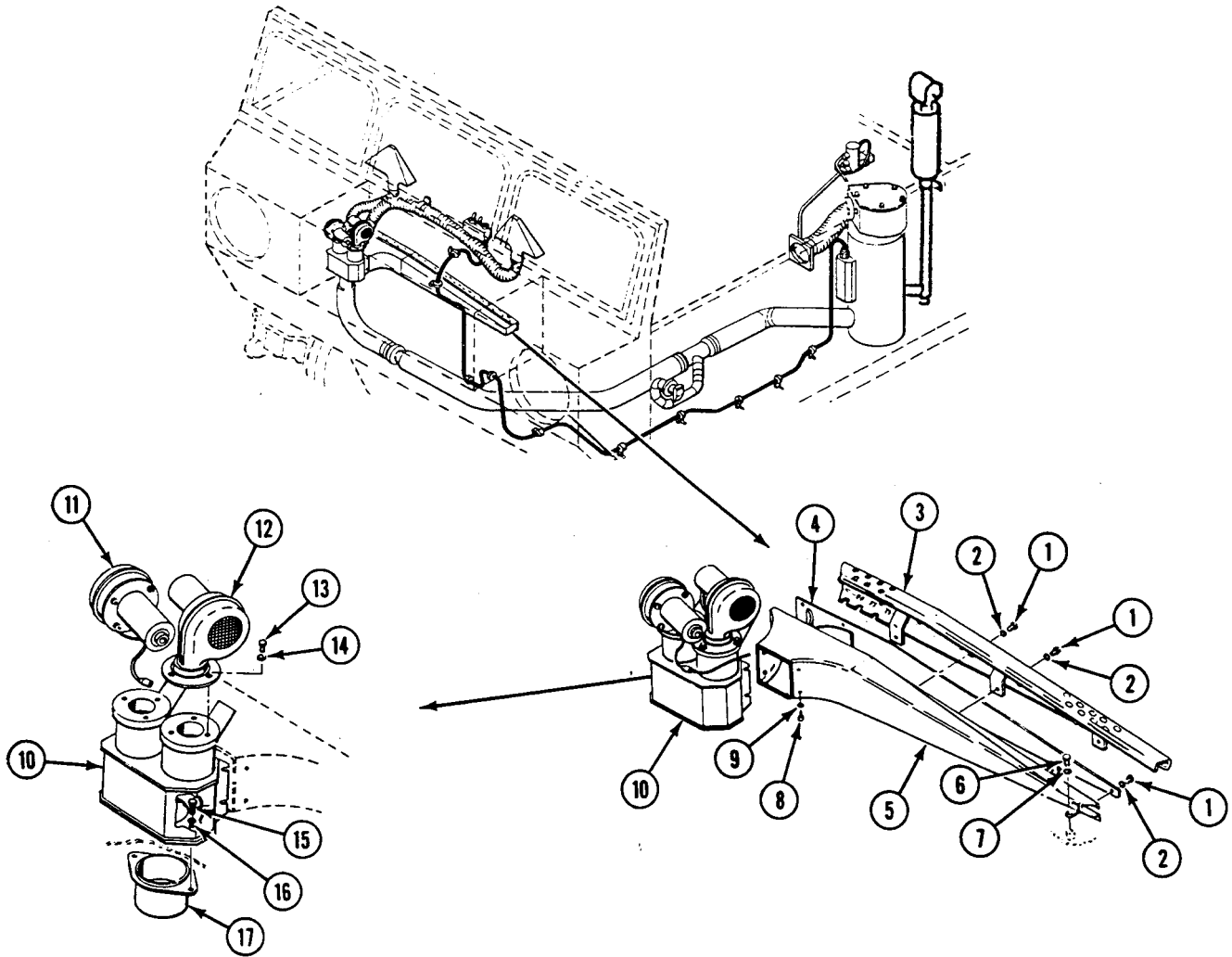


REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued

0454 00

INSTALLATION

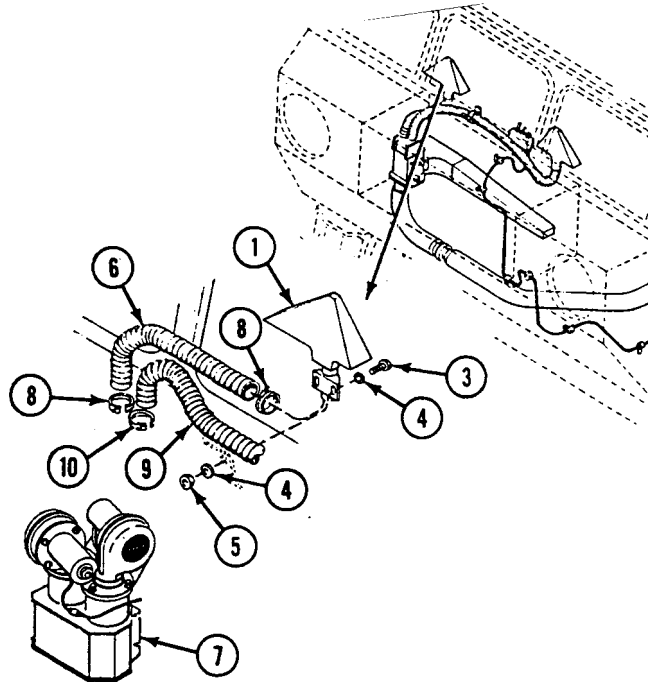
1. Install adapter (17) on housing (10) with two washers (16) and screws (15).
2. Install left defroster fan (12) and right defroster fan (11) on housing (10) with six new lock washers (14) and screws (13).
3. Connect circuit 347 lead to left defroster fan (12) and circuit 346 lead to right defroster fan (11).
4. Install housing (10) on distributor duct (5) with four washers (9) and screws (8).
5. Install distributor duct (5) on hull with three washers (7) and screws (6).
6. Install distributor cover (4) and shield (3) on distributor duct (5) with 11 washers (2) and screws (1).



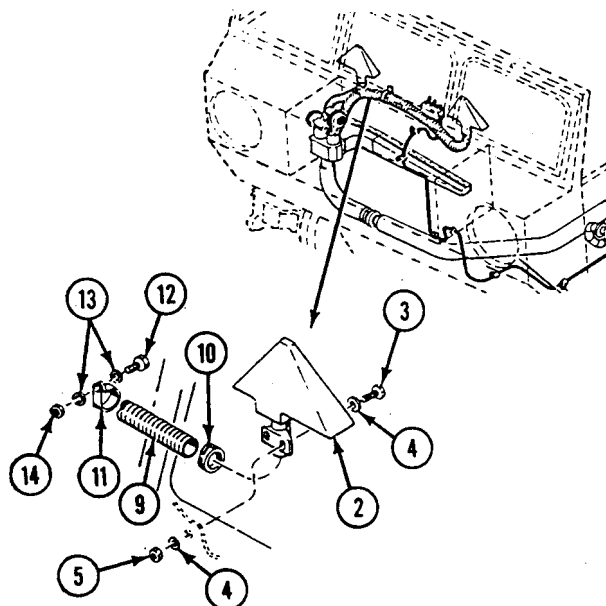
**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

7. Install right defroster duct (1) and left defroster duct (2) in hull with four screws (3), eight washers (4), and four new lock nuts (5).
8. Connect right defroster hose (6) to right defroster duct (1) and housing (7). Secure with two clamps (8).
9. Connect left defroster hose (9) to left defroster duct (2) and housing (7). Secure with two clamps (10).



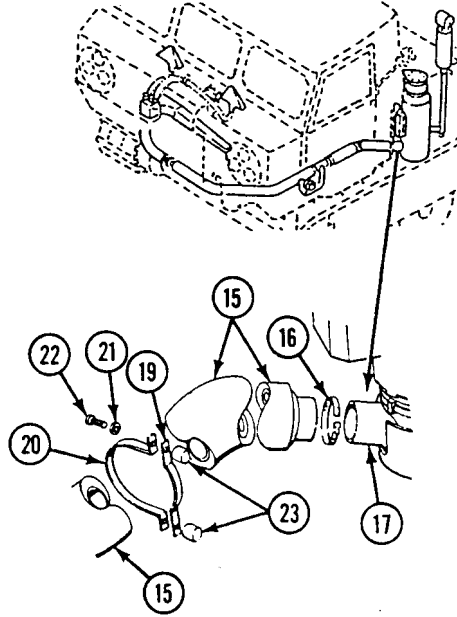
10. Install hose (9) on hull with clamp (11), screw (12), two washers (13), and new lock nut (14).



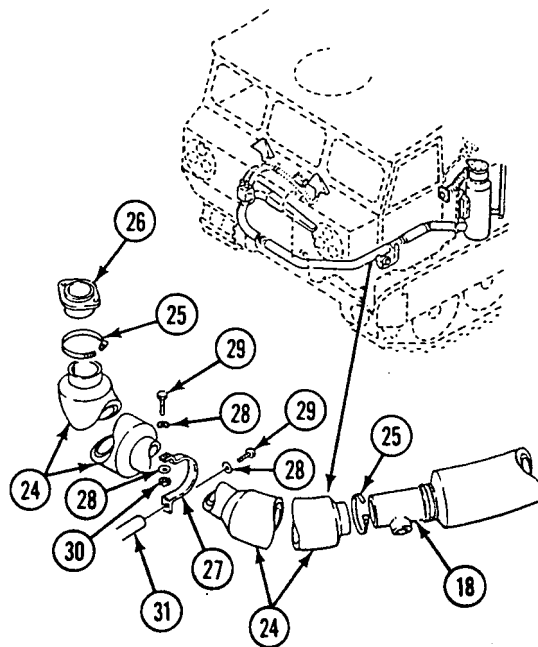
REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued

0454 00

11. Install hose (15) and two clamps (16) on plenum (17) and tee (18).
12. Install bracket (19), clamp (20), two new lock washers (21), and screws (22) on two weld nuts (23).



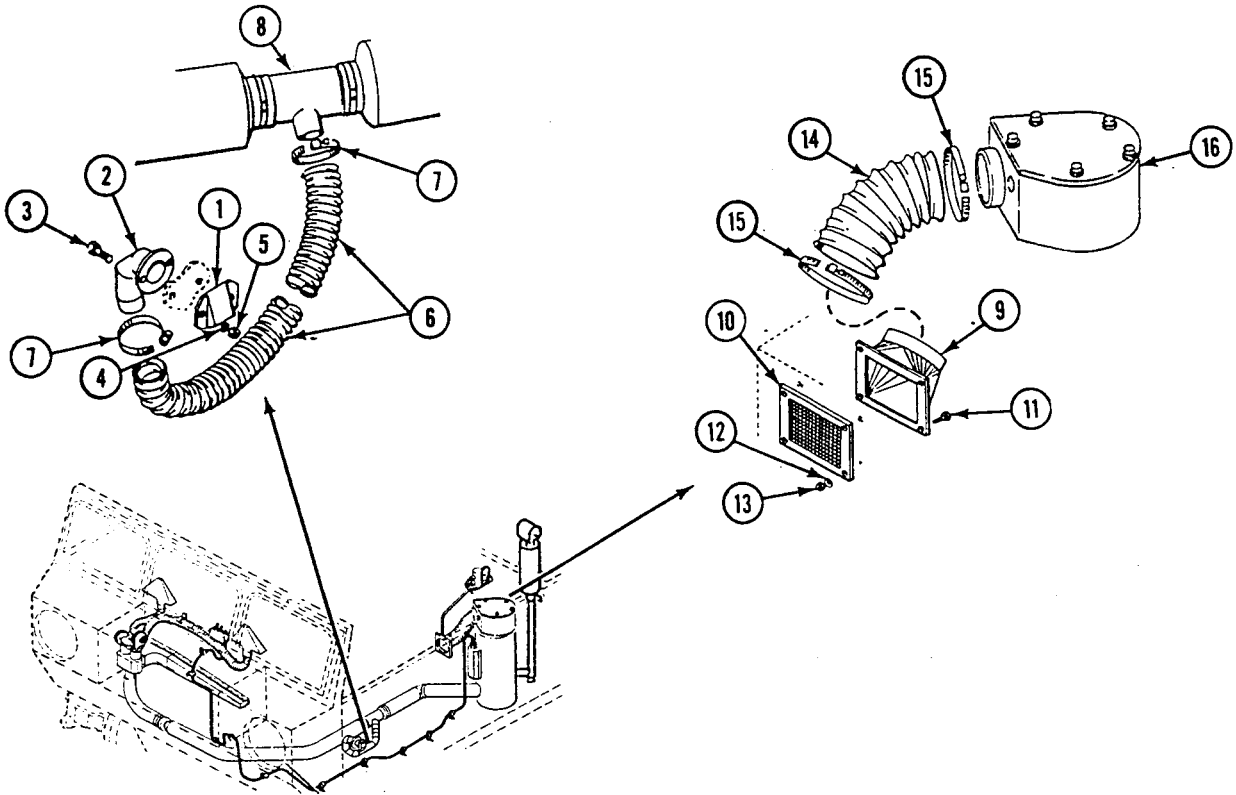
13. Install hose (24) and two clamps (25) on adapter (26) and tee (18).
14. Install clamp (27), two new lock washers (28), screws (29), and new lock nut (30) on weld nut (31) and driver's floor.



**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

15. Install deflector (1), elbow (2), two screws (3), washers (4), and nuts (5) on battery well bulkhead.
16. Install hose (6) and two clamps (7) on tee (8) and elbow (2).
17. Install adapter (9), grille (10), four screws (11), washers (12), and nuts (13) on driver's seat rear bulkhead.
18. Install intake hose (14) and two clamps (15) on adapter (9) and intake duct (16).



**REPLACE VEHICLE COMPARTMENT HEATER AIR DUCTS AND HOSES (KIT III)
(M548A1) — Continued**

0454 00

FOLLOW-THROUGH STEPS

1. Connect battery negative lead (WP 0292 00).
2. Start heater (see your -10).
3. Check cab heater for leaks and proper operation.
4. Stop heater (see your -10).
5. Install cab left center floor plate (WP 0394 00).
6. Install top left access grille (WP 0390 00).

END OF TASK

**REPLACE VEHICLE COMPARTMENT HEATER EXHAUST GUARD
(M548A1)**

0455 00

THIS WORK PACKAGE COVERS:

Removal (page 0455 00-2).
Installation (page 0455 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock nut (6)
Lock nut (2)
Lock nut (2)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Left side intake grille removed (WP 0390 00)

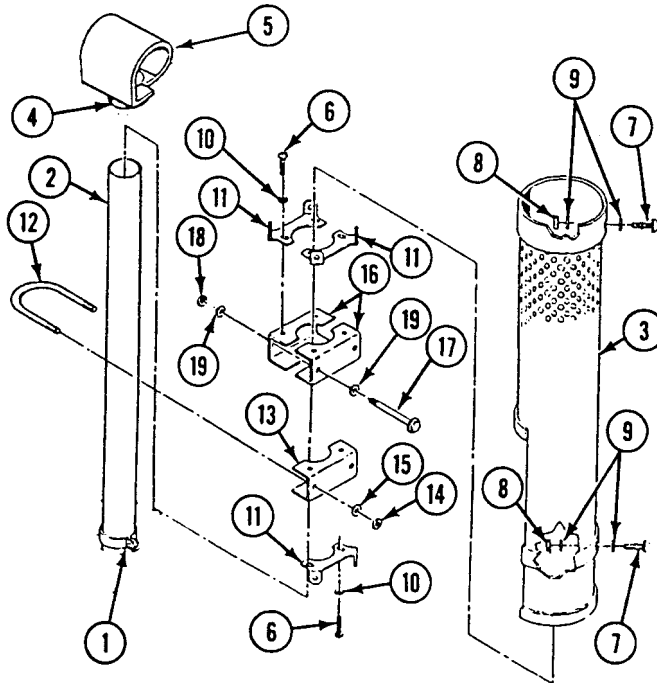
REMOVAL

WARNING



Do not work on hot exhaust pipes. Personnel could be burned.

1. Loosen clamp (1) securing upper exhaust pipe (2) and remove upper exhaust pipe with guard (3) attached.
2. Loosen nut (4) and slide hood (5) off upper exhaust pipe (2).
3. Loosen six screws (6).
4. Remove 6 screws (7), lock nuts (8), and 12 washers (9). Discard lock nuts.
5. Slide exhaust guard (3) off exhaust pipe (2) from bottom.



REPLACE VEHICLE COMPARTMENT HEATER EXHAUST GUARD (M548A1) —
Continued

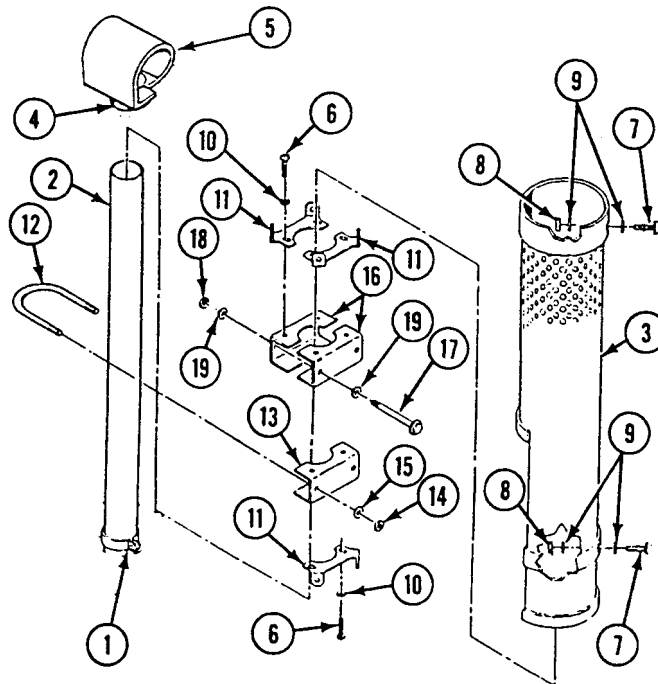
0455 00

6. Remove six screws (6), washers (10), and three guard brackets (11).

NOTE

Mark upper exhaust pipe (2) 5 1/2 inch and 25 inch (13.97 cm and 63.5 cm) from bottom to indicate position of bracket clamps (13, 16).

7. Remove U-bolt (12) from bracket clamp (13) by removing two lock nuts (14) and washers (15). Discard lock nuts.
8. Disassemble two bracket clamps (16) by removing two screws (17), lock nuts (18), and four washers (19). Discard lock nuts.



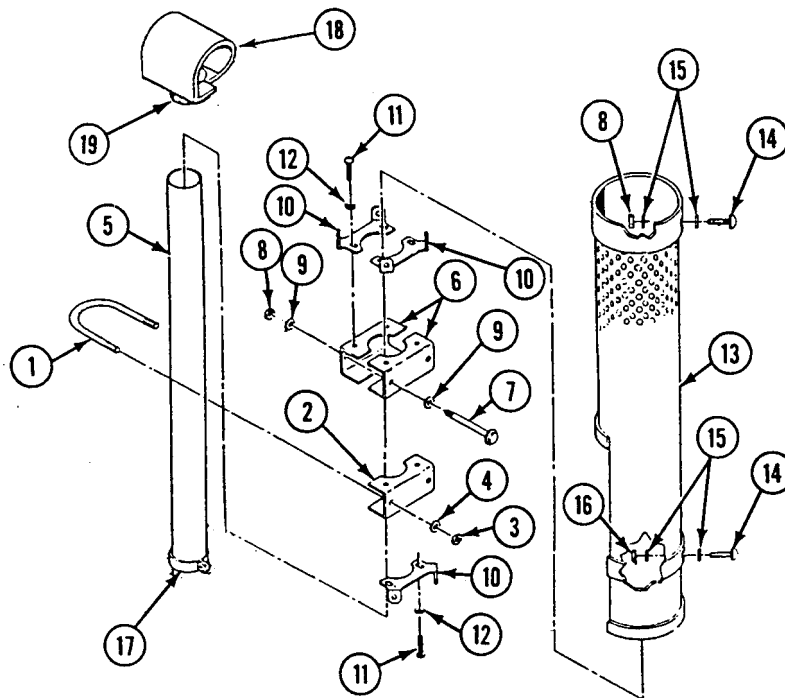
REPLACE VEHICLE COMPARTMENT HEATER EXHAUST GUARD (M548A1) —
Continued

0455 00

INSTALLATION**NOTE**

Be sure to install bracket clamp (2) and bracket clamp (6) so that guard brackets are attached above top clamp and below bottom clamp. Bracket clamp screws (7) should show through holes in exhaust guard.

1. Install U-bolt (1) and bracket clamp (2) with two new lock nuts (3) and washers (4) to upper exhaust pipe (5) just above 5 1/2 inch (13.97 cm) mark.
2. Assemble two bracket clamps (6) with two cap screws (7), new lock nuts (8), and four washers (9) to upper exhaust pipe (5) just above 25 inch (63.5 cm) mark.

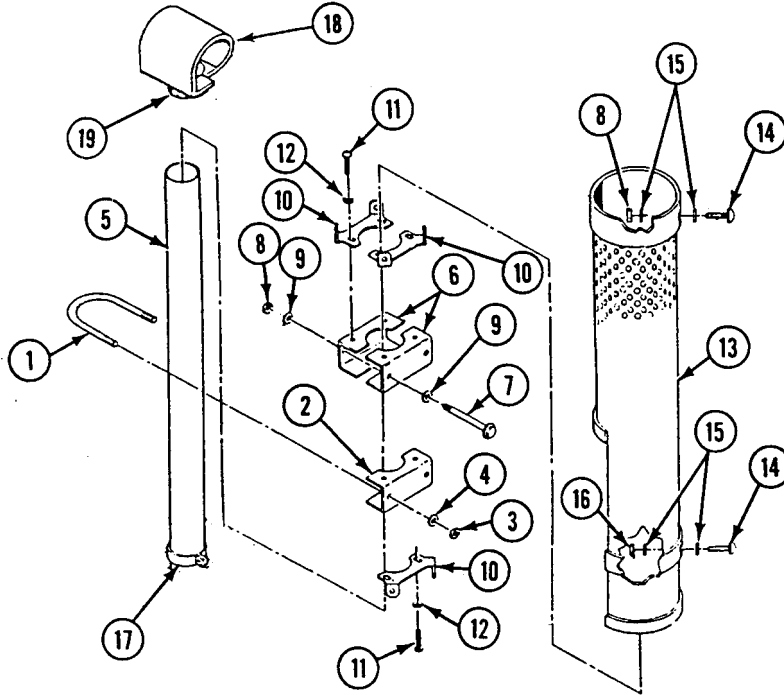


3. Install three guard brackets (10) with six screws (11) and washers (12). Do not tighten screws.
4. Slide exhaust guard (13) onto exhaust pipe (5) from bottom of exhaust pipe.
5. Install 6 screws (14), 12 washers (15), and 6 new lock nuts (16).
6. Secure upper exhaust pipe (5) with clamp (17).

CAUTION

Do not allow exhaust to blow on canvas as fire could result.

7. Position hood (18) on upper exhaust pipe (5), with wide area forward and tighten nut (19).



FOLLOW-THROUGH STEPS

1. Install left side intake grille (WP 0390 00).

END OF TASK

REPLACE FIBERGLASS CAB COVER

0456 00

THIS WORK PACKAGE COVERS:

Removal (page 0456 00-2).
Installation (page 0456 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Lock nut (16)

Personnel Required

Unit Mechanic

Helper (H)

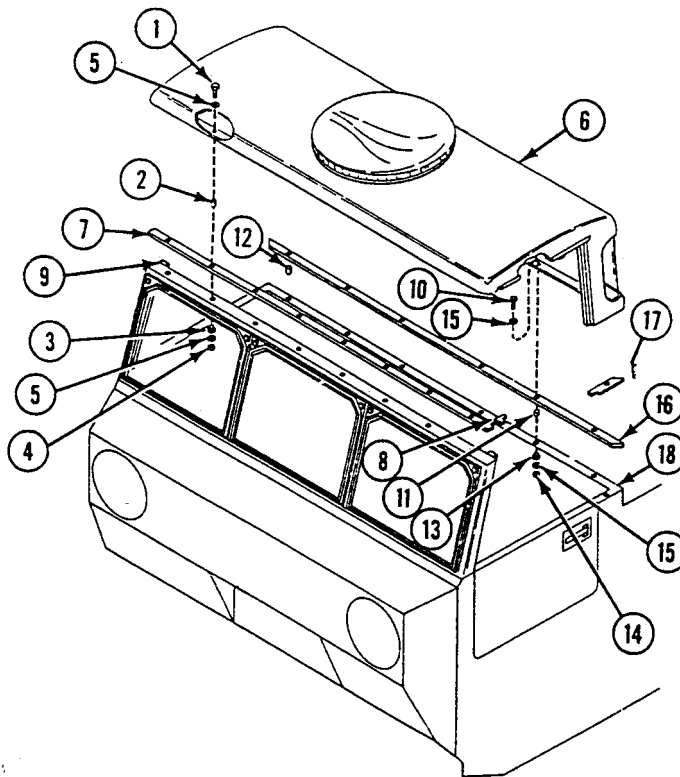
REMOVAL

1. Remove 8 screws (1), spacers (2), grommets (3), lock nuts (4), and 16 washers (5) that secure fiberglass cab cover (6), front seal (7), and 2 pads (8) to windshield frame (9). Discard lock nuts.
2. Remove 8 screws (10), 7 spacers (11), and large spacer (12). Remove 8 grommets (13), lock nuts (14), and 16 washers (15) that secure fiberglass cab cover (6), rear seal (16) and 2 side seals (17) to transverse beam (18). Discard lock nuts.

NOTE

Lifting fiberglass cab cover on or off carrier is a two-person job.

3. Remove fiberglass cab cover (6), front seal (7), rear seal (16), and two side seals (17) from carrier. Have helper assist. Check seals for cracks and wear. Replace seals if necessary.

**INSTALLATION**

1. Place rear seal (16) and two side seals (17) on transverse beam (18). Place front seal (7) and two pads (8) on windshield frame (9).
2. Place fiberglass cab cover (6) on carrier.
3. Secure front seal (7), 2 pads (8), and fiberglass cab cover (6) on windshield frame (9) with 8 spacers (2), grommets (3), screws (1), new lock nuts (4), and 16 washers (5).
4. Secure rear seal (16), 2 side seals (17), and fiberglass cab cover (6) on transverse beam (18) with 7 spacers (11), large spacer (12), 8 grommets (13), 16 washers (15), 8 screws (10), and new lock nuts (14).

END OF TASK

REPLACE FIBERGLASS MACHINE GUN HATCH COVER

0457 00

THIS WORK PACKAGE COVERS:

Removal (page 0457 00-1).
 Installation (page 0457 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

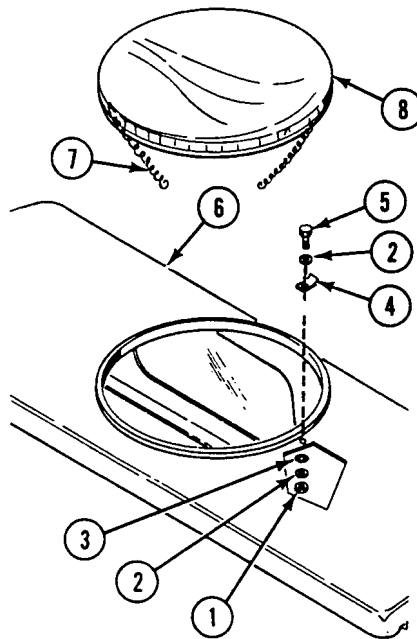
Preformed packing

Equipment Condition

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

REMOVAL

1. Remove nut (1), two washers (2), preformed packing (3), retainer (4), and screw (5) from cab cover (6). Discard preformed packing.
2. Unhook spring (7) in hatch cover (8). Remove spring through slit in cover.
3. Remove hatch cover (8) from cab cover (6).



INSTALLATION

1. Insert spring (7) in hatch cover (8) through slit in cover.
2. Place hatch cover (8) on cab cover (6). Secure with screw (5), two washers (2), new preformed packing (3), retainer (4), and nut (1).

END OF TASK

REPLACE CAB WINDOWS

0458 00

THIS WORK PACKAGE COVERS:

Removal (page 0458 00-1).
 Installation (page 0458 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

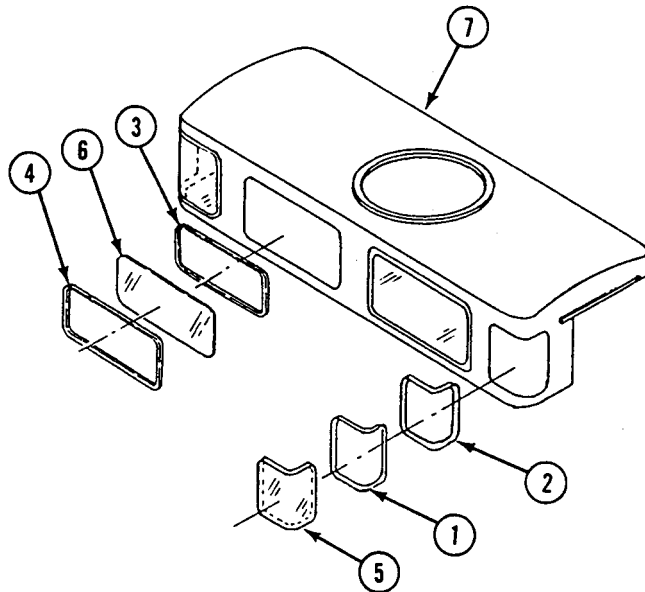
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

REMOVAL

1. Remove two side filler seals (1) from two side window seals (2). Remove two rear filler seals (3) from rear window seals (4).
2. Remove two side window seals (2) and side windows (5) from fiberglass cab cover (7).
3. Remove two rear window seals (4) and rear windows (6) from fiberglass cab cover (7).



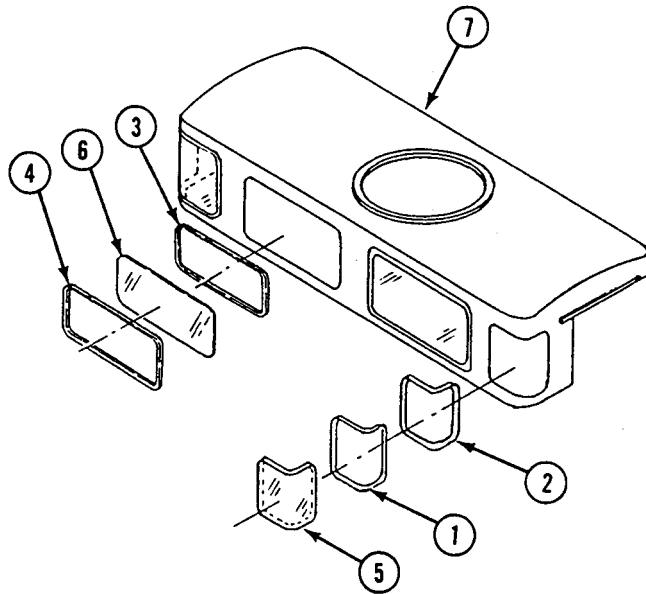
INSTALLATION

1. Install two side window seals (2) in fiberglass cab cover (7).
2. Install two side windows (5) in two side window seals (2). Secure with two side filler seals (1).
3. Install two rear window seals (4) in fiberglass cab cover (7).

NOTE

If carrier has a breather tube on rear window, install window with tube at bottom.

4. Install two rear windows (6) in two rear window seals (4). Secure with two rear filler seals (3).

**END OF TASK**

REPLACE LOWER CAB INSULATION

0459 00

THIS WORK PACKAGE COVERS:

Removal (page 0459 00-1).
 Installation (page 0459 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Cleaning compound (WP 0542 00, Item 9)
 Insulation

Equipment Condition

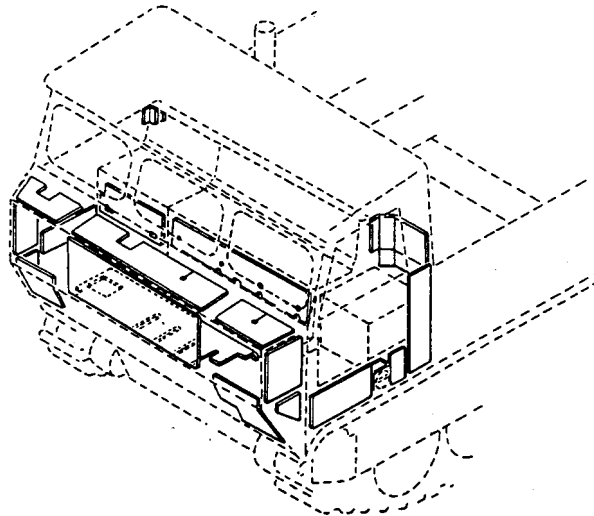
Engine stopped (see your -10)
 Carrier blocked (see your -10)

REMOVAL

NOTE

Remove lower cab insulation only if inspection shows replacement is needed. These instructions are for removal of damaged panels or damaged areas of panels.

1. Remove as much old damaged insulation as you can by scraping. Make edges even. Cut patch to fit.
2. Remove remaining insulation and dried adhesive with cleaning compound.



INSTALLATION

1. Trim new insulation to fit. If panel to be installed is large, cut it into squares of about 3 feet (1 meter).
2. Spray or swab cleaning compound on back of insulation to activate adhesive.
3. Allow 10 to 15 seconds for adhesive to become tacky. Press insulation firmly into place at once.

END OF TASK

REPLACE CLOTH SEAT COVERS

0460 00

THIS WORK PACKAGE COVERS:

Removal (page 0460 00-2).
Installation (page 0460 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Personnel Required

Unit Mechanic

References

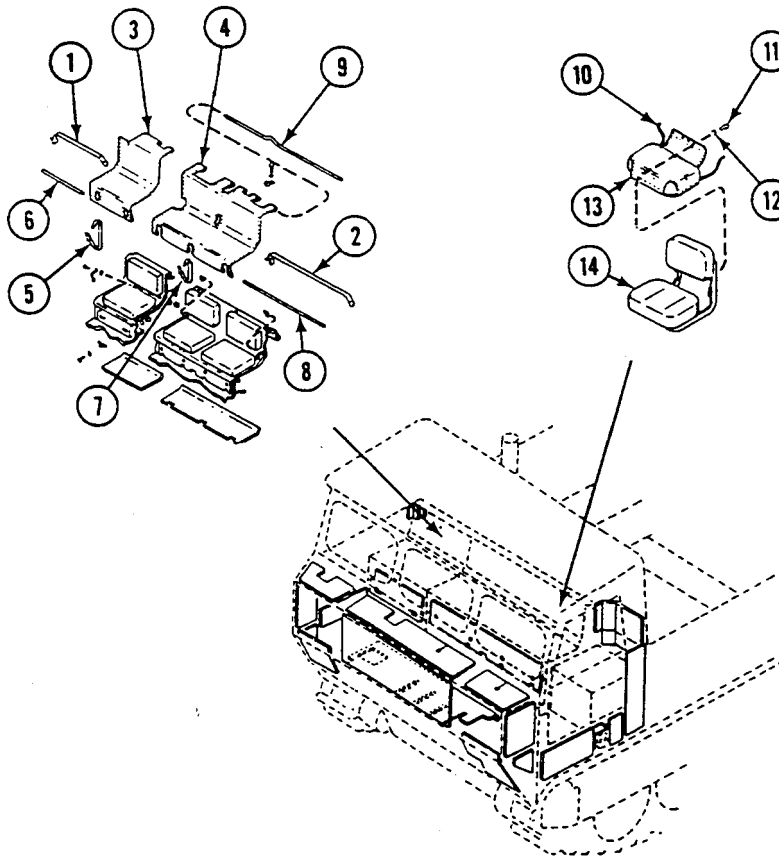
See your -10
FM 10-16

Equipment Condition

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

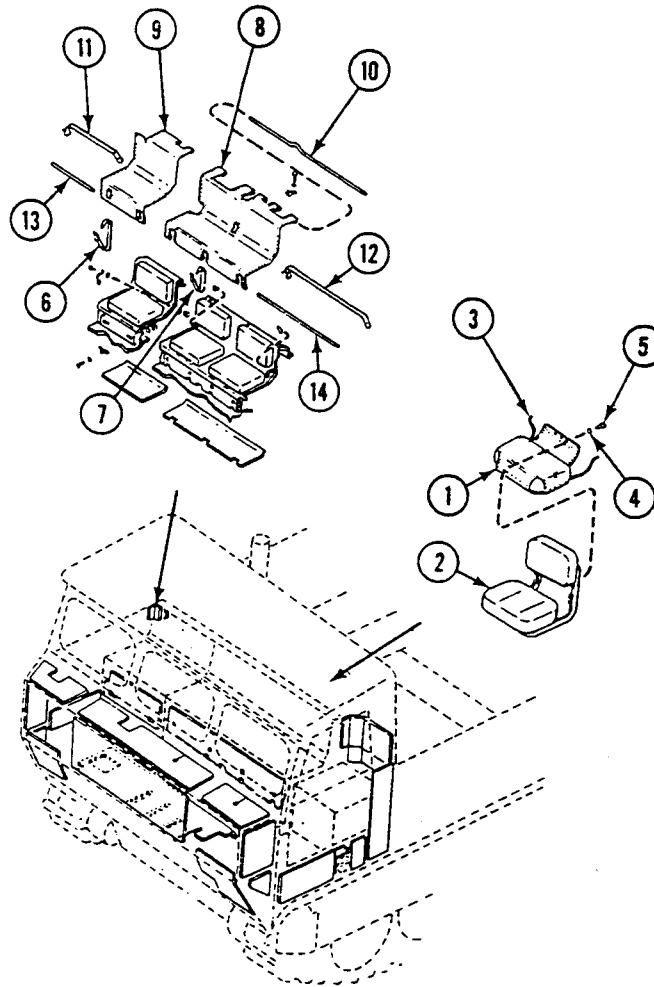
REMOVAL

1. Detach right seat cover strap (1) and center seat cover strap (2). Remove straps from seat cover (3) and seat cover (4) and hull.
2. Detach two right tie down straps (5). Remove right rod (6) from right seat cover (3).
3. Detach three center tie down straps (7). Remove center rod (8) from center seat cover (4).
4. Remove upper rod (9), right seat cover (3), and center seat cover (4) as a unit. Remove right seat cover and center seat cover from upper rod.
5. Remove two right tie down straps (5) and three center tie down straps (7).
6. Untie cord (10). Remove three screws (11) and washers (12). Remove driver's seat cover (13) from driver's seat (14).



INSTALLATION

1. Place driver's seat cover (1) on driver's seat (2). Secure with cord (3), three washers (4), and screws (5).
2. Install two right tie down straps (6) and three center tie down straps (7) on hull.
3. Place center seat cover (8) and right seat cover (9) on upper rod (10). Install rod and covers on hull as a unit.
4. Install right seat cover strap (11) and center seat cover strap (12). Make sure right seat cover (9) and center seat cover (8) are placed right. Secure straps.
5. Install right rod (13) in right seat cover (9). Secure cover with two right tie down straps (6).
6. Install center rod (14) in center seat cover (8). Secure cover with three center tie down straps (7).



END OF TASK

REPLACE THERMAL DOOR WINDOWS

0461 00

THIS WORK PACKAGE COVERS:

Removal (page 0461 00-1).
 Installation (page 0461 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Rubber adhesive tape (WP 0542 00, Item 32)

Equipment Condition

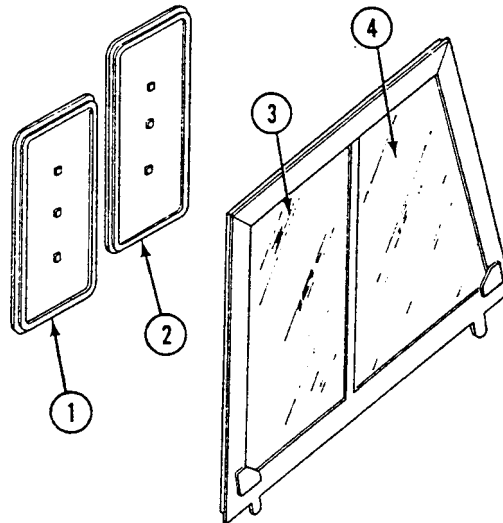
Engine stopped (see your -10)
 Carrier blocked (see your -10)

REMOVAL

NOTE

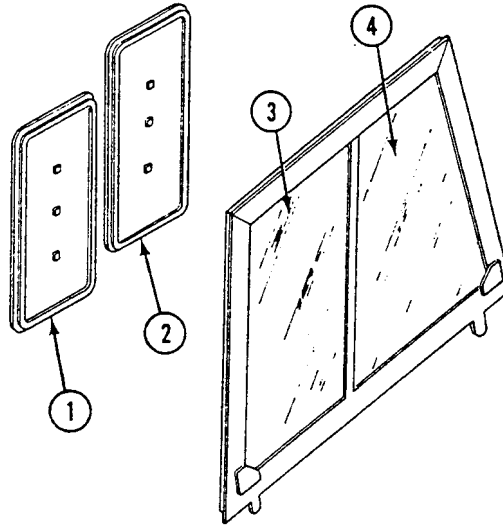
Before removing thermal panels, look for cracks and scratches. Check sealing tape for wear and looseness. If panels are scratched enough to affect vision, replace them.

1. Remove front thermal panel (1) and rear thermal panel (2) from front window glass (3) and rear window glass (4).
2. Remove rubber adhesive tape from front window glass (3), rear window glass (4), front thermal panel (1), and rear thermal panel (2). Discard rubber adhesive tape.



INSTALLATION

1. Remove protective backing from new rubber adhesive tape. Place tape on front window glass (3) and rear window glass (4).
2. Place front thermal panel (1) and rear thermal panel (2) on front window glass (3) and rear window glass (4). Press securely in place.

**END OF TASK**

REPLACE CARGO AREA HEATER AND CONTROL BOX MOUNTING

0462 00

THIS WORK PACKAGE COVERS:

Removal (page 0462 00-2).
 Installation (page 0462 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

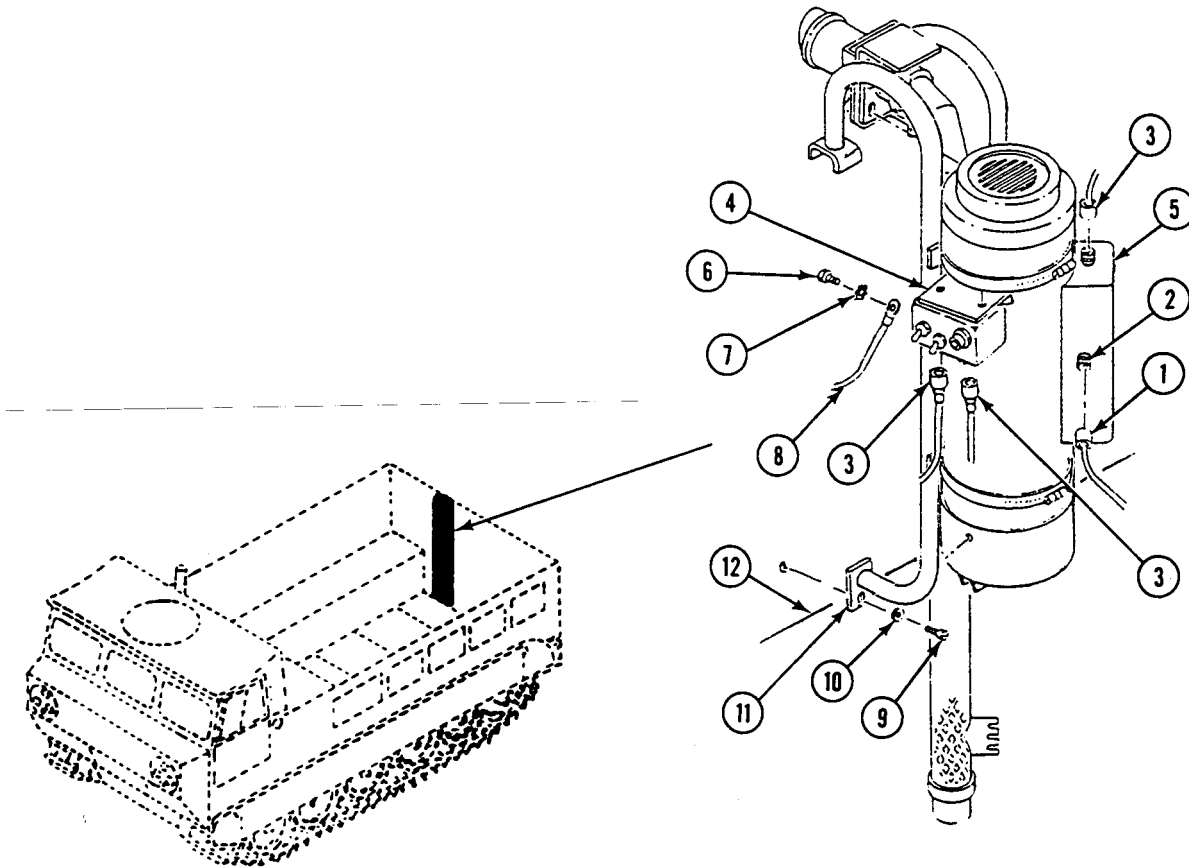
Gasket (2)
 Lock nut (8)
 Lock washer
 Lock washer (3)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)

REMOVAL

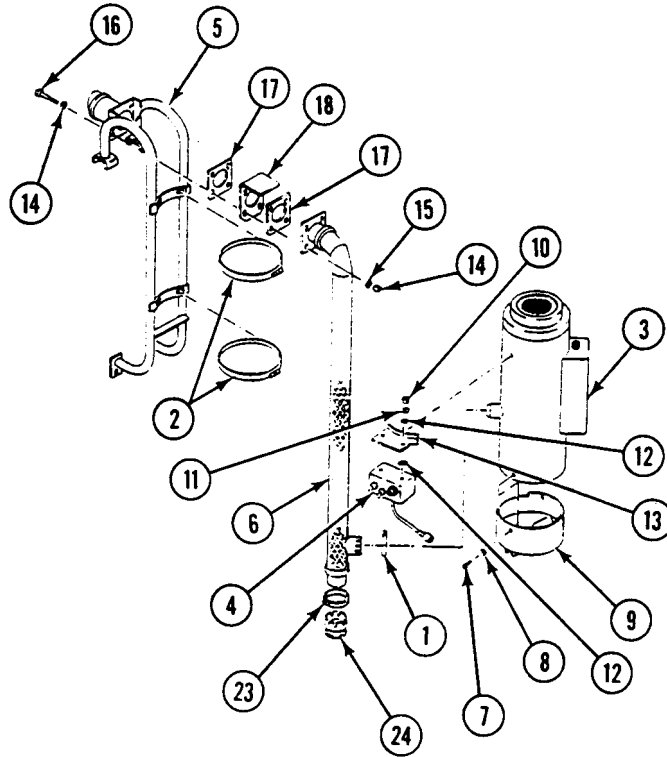
1. Disconnect fuel hose elbow (1) from adapter (2).
2. Disconnect wiring harness (3) from control box (4) and cargo area heater (5).
3. Remove screw (6), lock washer (7), and ground lead (8) from control box (4). Discard lock washer.
4. Remove two screws (9), washers (10), support (11), and cargo area heater (5) from cargo door (12).



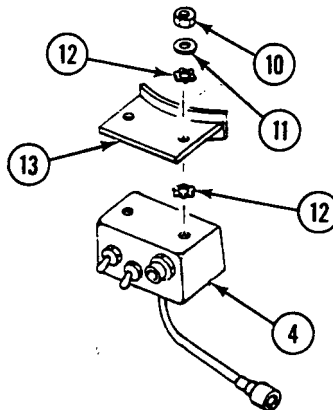
REPLACE CARGO AREA HEATER AND CONTROL BOX MOUNTING — Continued

0462 00

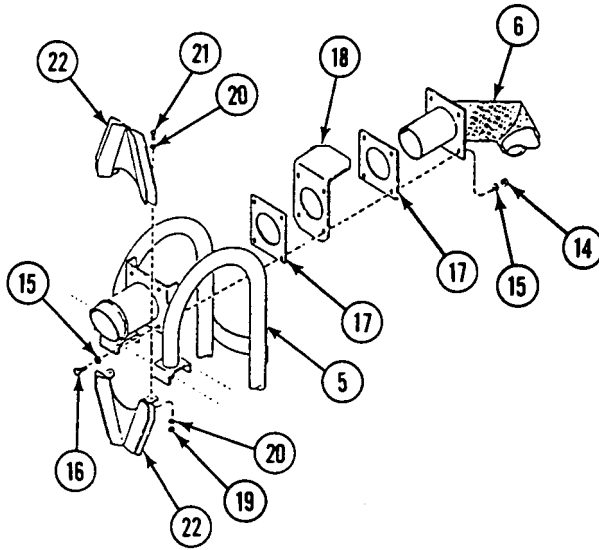
5. Loosen clamp (1). Remove two clamps (2) and cargo area heater (3) with control box (4) from support (5) and exhaust pipe (6).
6. Remove three screws (7), lock washers (8), and heat diffuser (9) from cargo area heater (3). Discard lock washers.



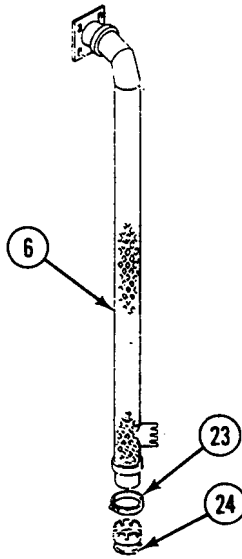
7. Remove two lock nuts (10), washers (11), mounts (12), and control box (4) from bracket (13). Discard lock nuts.



8. Remove four lock nuts (14), eight washers (15), four screws (16), exhaust pipe (6), two gaskets (17), and plate (18) from support (5). Discard gaskets and lock nuts.
9. Remove two lock nuts (19), four washers (20), two screws (21), and two curtain guards (22) from support (5). Discard lock nuts.

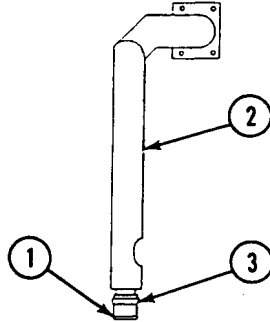


10. Loosen clamp (23). Remove moisture trap (24) from exhaust pipe (6).

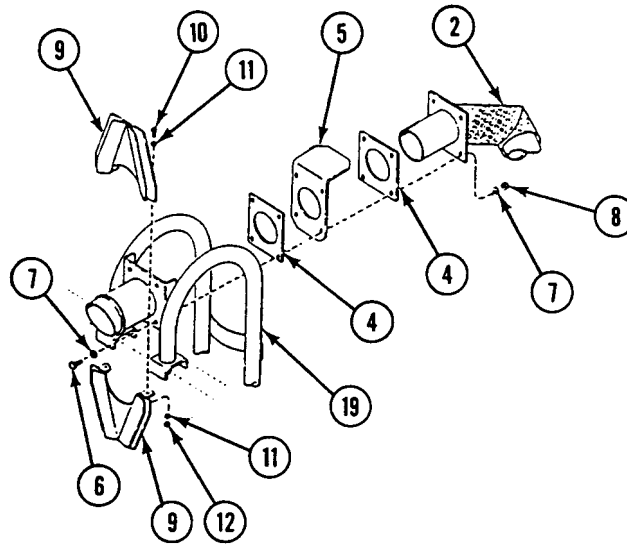


INSTALLATION

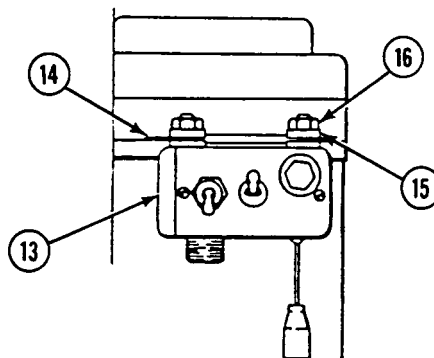
1. Install moisture trap (1) on exhaust pipe (2). Secure with clamp (3).



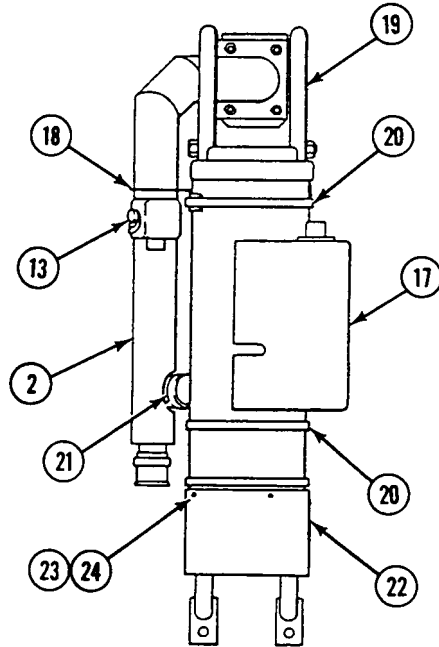
2. Install two new gaskets (4), plate (5), and exhaust pipe (2). Secure with four screws (6), eight washers (7), and four new lock nuts (8).
3. Install two curtain guards (9). Secure with two screws (10), four washers (11), and two new lock nuts (12).



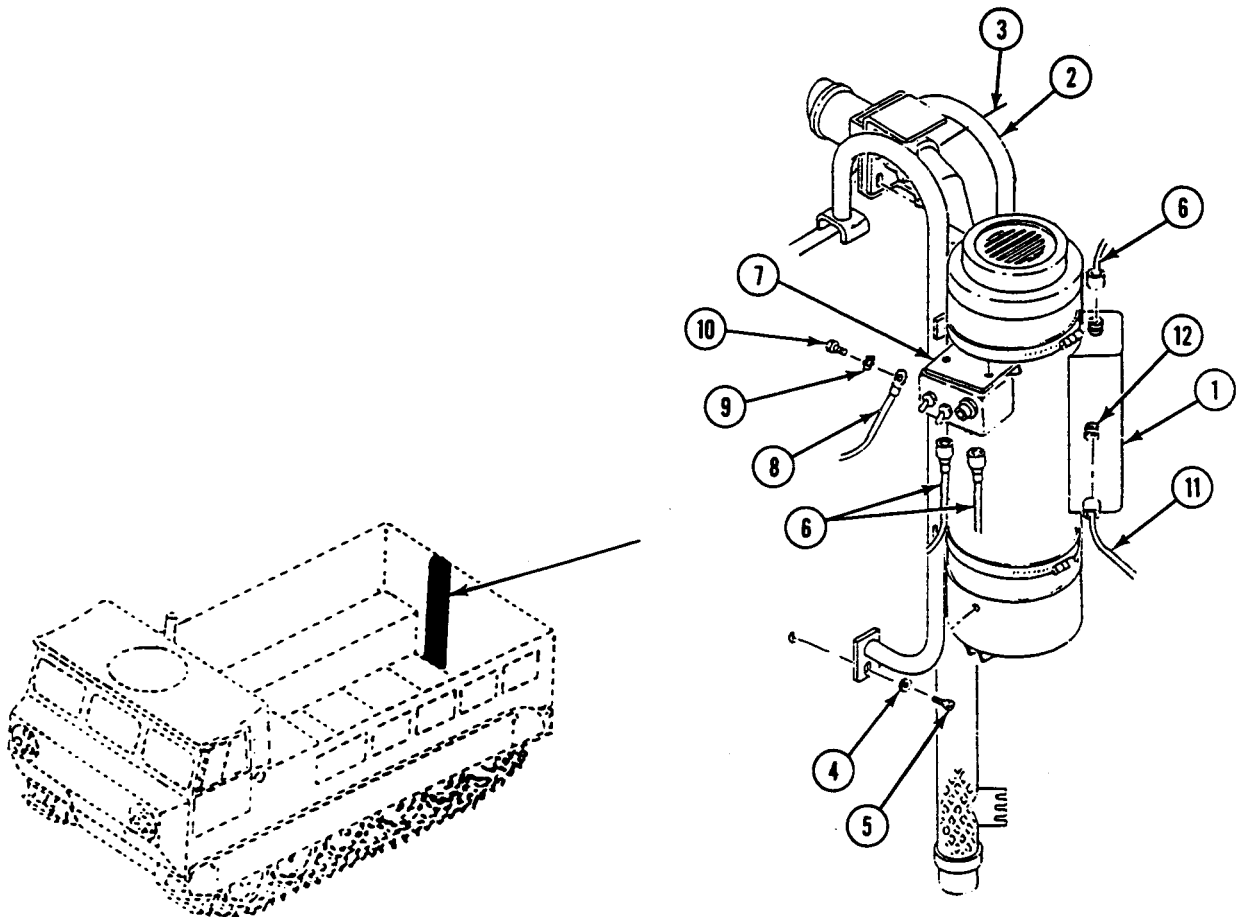
4. Install control box (13) on bracket (14). Secure with two washers (15) and new lock nuts (16).



5. Install cargo area heater (17) and control box (13), assembled on control box support (18), on support (19). Secure with two mounting clamps (20).
6. Connect exhaust pipe (2) to cargo area heater (17). Secure with clamp (21).
7. Install hot air diffuser (22) on bottom of cargo area heater (17). Secure with three new lock washers (23) and screws (24).



8. Install assembled cargo area heater (1) and support (2) on cargo door (3). Make sure two bracket pins engage holes in top of cargo door. Secure with two washers (4) and screws (5).
9. Connect wiring harness (6) to cargo area heater (1) and control box (7).
10. Connect ground lead (8) to control box (7). Secure with new lock washer (9) and screw (10).
11. Connect fuel hose elbow (11) to adapter (12).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start engine (see your -10).
3. Check cargo area heater and control box mounting for proper operation.
4. Stop engine (see your -10).

END OF TASK

REPLACE CARGO AREA HEATER FUEL LINES, FITTINGS AND SHIELDS

0463 00

THIS WORK PACKAGE COVERS:

Removal (page 0463 00-1).
 Installation (page 0463 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Antiseize compound (WP 0542 00, Item 6)
 Sealing compound (WP 0542 00, Item 33)
 Lock nut (4)
 Lock nut (11)
 Preformed packing

Equipment Condition

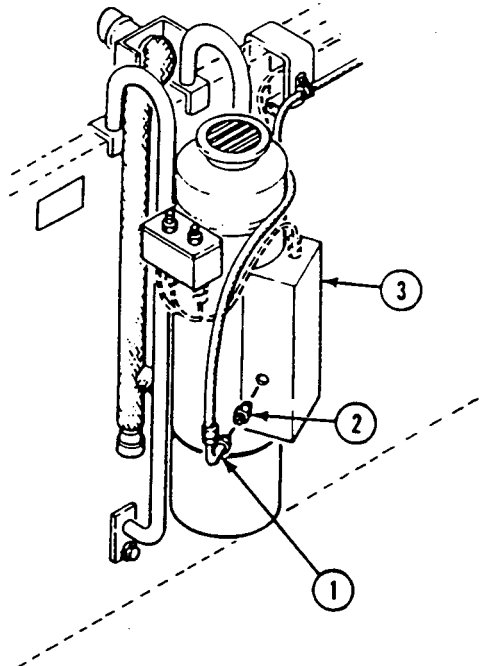
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)
 Top left access grille removed (WP 0390 00)
 Excess fuel drained (see your -10)

REMOVAL

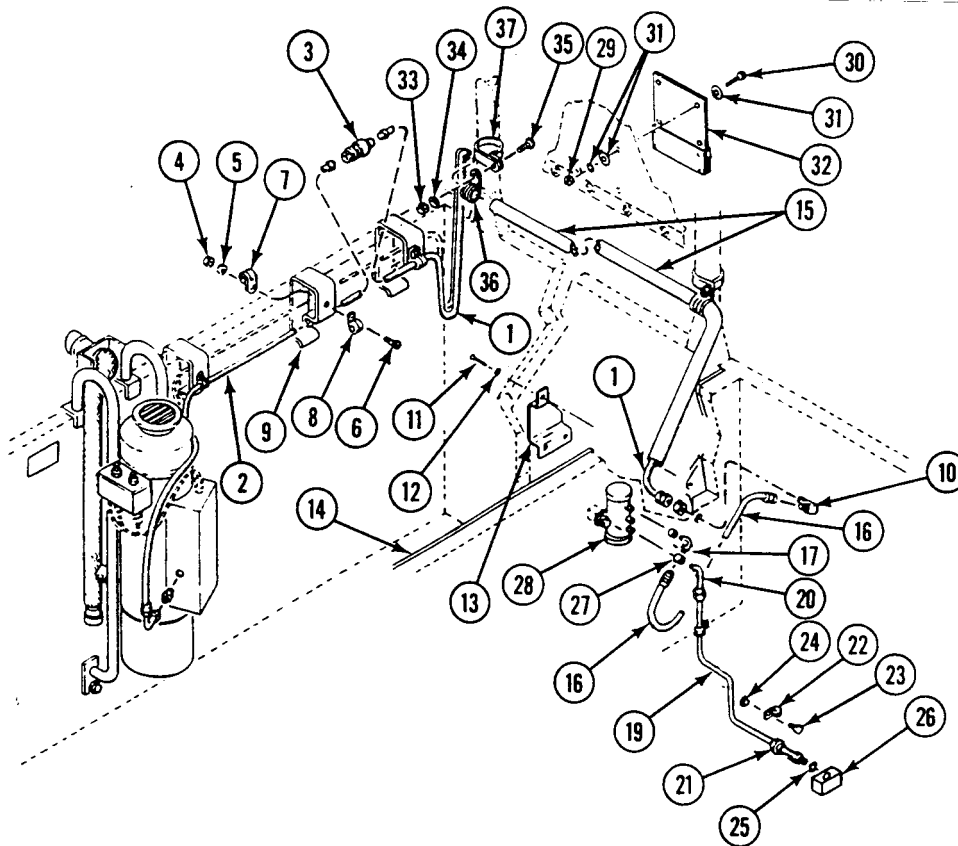
NOTE

Cap all fuel lines.

1. Disconnect rear fuel hose elbow coupling (1) from adapter (2). Remove adapter from cargo area heater (3).

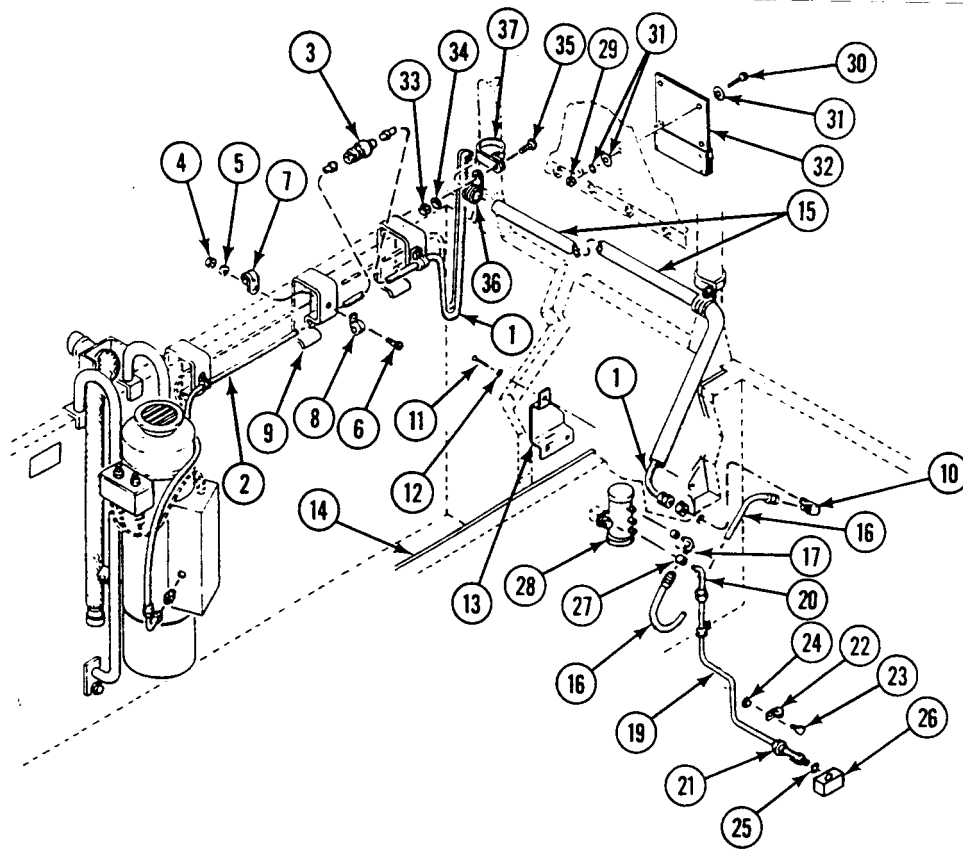


2. Disconnect fuel hose (1) from rear fuel hose (2) at coupling (3).
3. Remove three lock nuts (4), washers (5), screws (6), three lead clamps (7), three hose clamps (8), and rear fuel hose (2) from three clips (9). Discard lock nuts.
4. Disconnect fuel hose (1) from elbow (10).
5. Remove three screws (11), washers (12), and cover (13) from bulkhead protector (14).

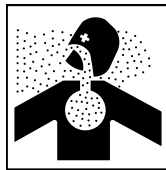


6. Remove fuel hose (1) running through guard (15).
7. Disconnect fuel hose (16) from elbow (10) and elbow (17).
8. Remove nut (18) and elbow (10) from bulkhead.
9. Disconnect fuel tube (19) from elbow (20) and adapter (21).
10. Remove four clamps (22), two screws (23), lock nuts (24), and tube (19) from bulkhead. Discard lock nuts.
11. Remove adapter (21) and preformed packing (25) from fuel manifold block (26). Discard preformed packing.

12. Remove two elbows (17 and 20) and unions (27) from fuel pump (28).



WARNING



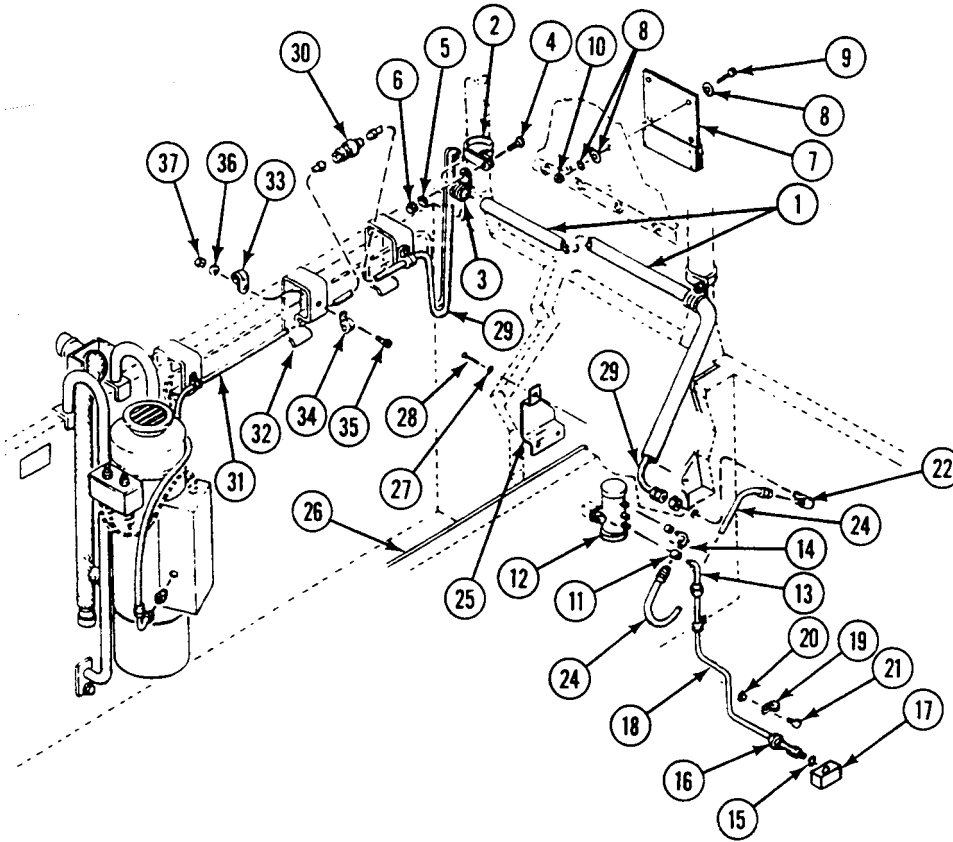
Heat shield insulation may contain asbestos. Inhaled asbestos dust can cause permanent lung damage. Wear a filter mask approved for asbestos protection and rubber gloves during handling of asbestos. Wash skin and clothing with soap and water after handling asbestos. Dispose of asbestos material in accordance with approved hazardous waste disposal procedures.

13. Remove 4 lock nuts (29), screws (30), 12 washers (31), and shield (32) from cargo cover. Discard lock nuts.
14. Remove six lock nuts (33), washers (34), screws (35), clamps (36), and guard (15) from six clamps (37). Discard lock nuts.

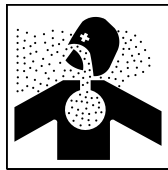
INSTALLATION

1. Apply a light coat of sealing compound to tapered pipe fittings.
2. Apply a light coat of antiseize compound to straight threaded fittings.

3. Secure guard (1) to six clamps (2) with six clamps (3), screws (4), washers (5), and new lock nuts (6).



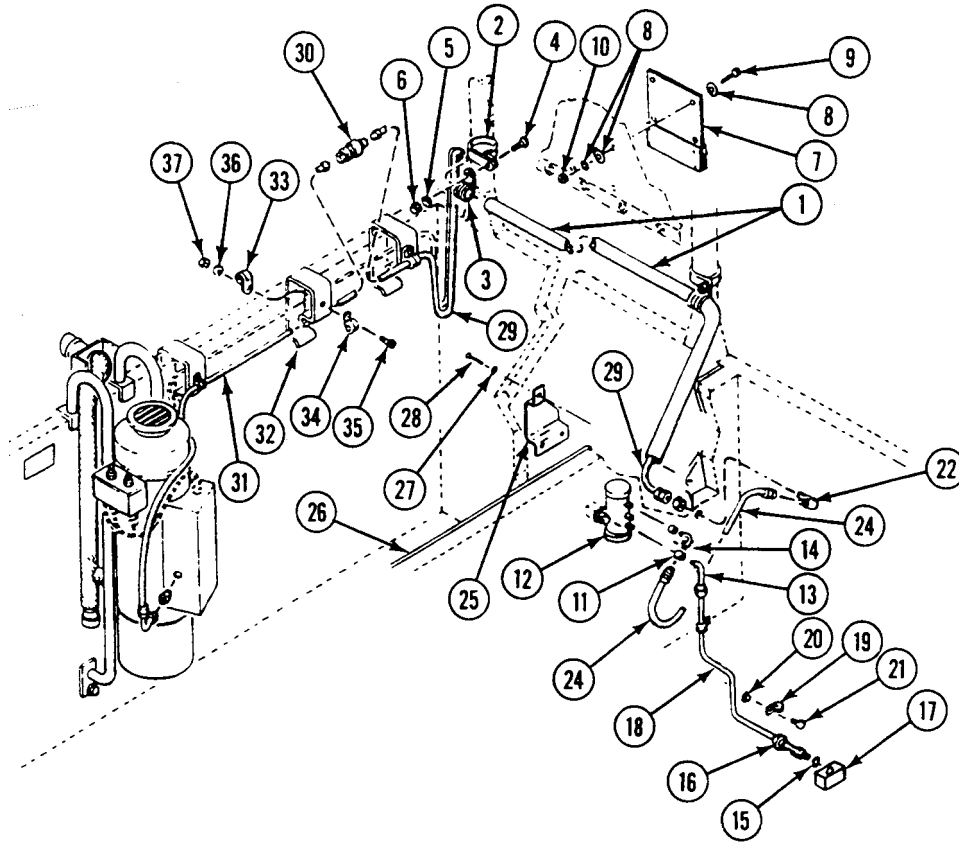
WARNING



Heat shield insulation may contain asbestos. Inhaled asbestos dust can cause permanent lung damage. Wear a filter mask approved for asbestos protection and rubber gloves during handling of asbestos. Wash skin and clothing with soap and water after handling asbestos. Dispose of asbestos material in accordance with approved hazardous waste disposal procedures.

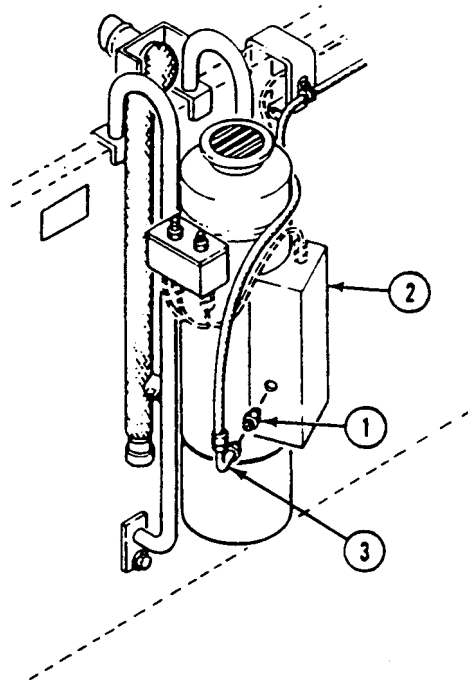
4. Install shield (7) on cargo cover. Secure with 12 washers (8), 4 screws (9), and new lock nuts (10).
5. Install two unions (11) on fuel pump (12).
6. Install two elbows (13 and 14) in two unions (11).
7. Install new preformed packing (15) and adapter (16) in fuel manifold block (17).
8. Connect fuel tube (18) to adapter (16) and elbow (13).

9. Secure fuel tube (18) to bulkhead with four clamps (19), two new lock nuts (20), and screws (21).



10. Install elbow (22) in bulkhead. Secure with nut (23).
11. Connect fuel hose (24) to elbow (14) and elbow (22).
12. Install cover (25) on bulkhead protector (26). Secure with three washers (27) and screws (28).
13. Install fuel hose (29) through guard (1). Connect hose to elbow (22) and coupling (30).
14. Secure rear fuel hose (31) and fuel hose (29) to three clips (32) with three lead clamps (33), hose clamps (34), screws (35), washers (36), and new lock nuts (37).

15. Screw adapter (1) into cargo area heater (2). Connect rear fuel hose elbow coupling (3) to adapter (1).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead(s) (WP 0292 00).
2. Start cargo area heater (see your -10).
3. Check cargo area heater for leaks and proper operation.
4. Stop cargo area heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

REPLACE CARGO AREA HEATER FUEL PUMP

0464 00

THIS WORK PACKAGE COVERS:

Removal (page 0464 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Personnel Required

Unit Mechanic

Engine stopped (see your -10)

Carrier blocked (see your -10)

REMOVAL

1. See (primary) vehicle compartment heater fuel pump for maintenance procedures (WP 0448 00 or WP 0449 00).

END OF TASK

REPLACE CARGO AREA HEATER WIRING HARNESS

0465 00

THIS WORK PACKAGE COVERS:

Removal (page 0465 00-2).
 Installation (page 0465 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Grommet
 Lock nut (14)
 Lock washer
 Lock washer (2)

Equipment Condition

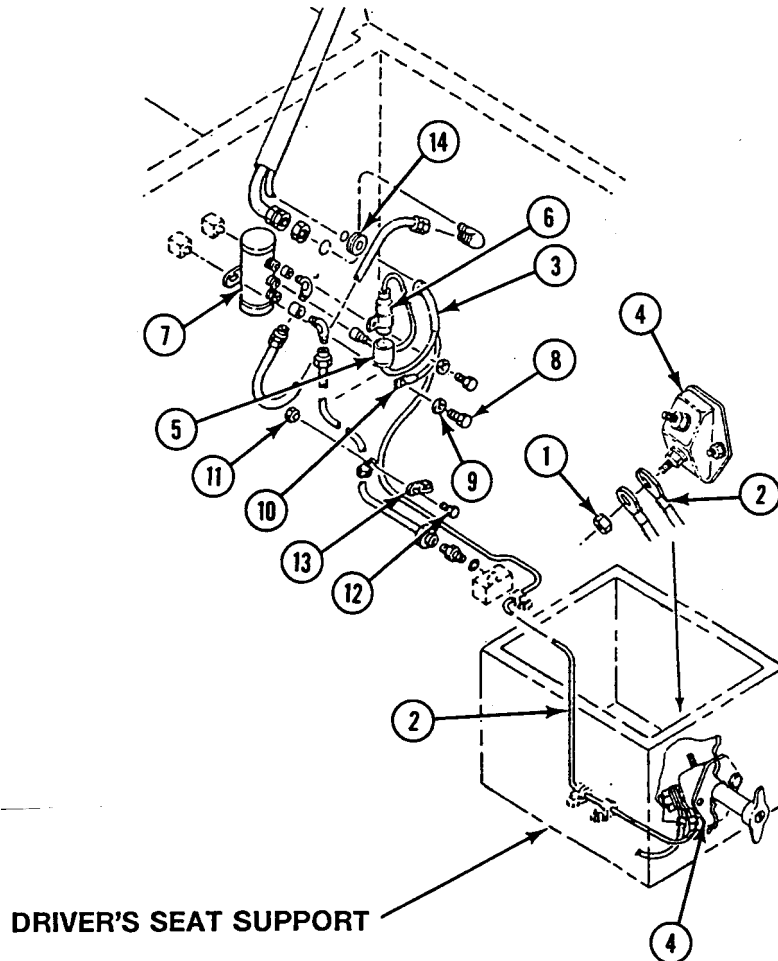
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)
 Top left access grille removed (WP 0390 00)

REMOVAL

NOTE

The vehicle compartment heater is an installed system in the M548A3. It is a kit in the M548A1.

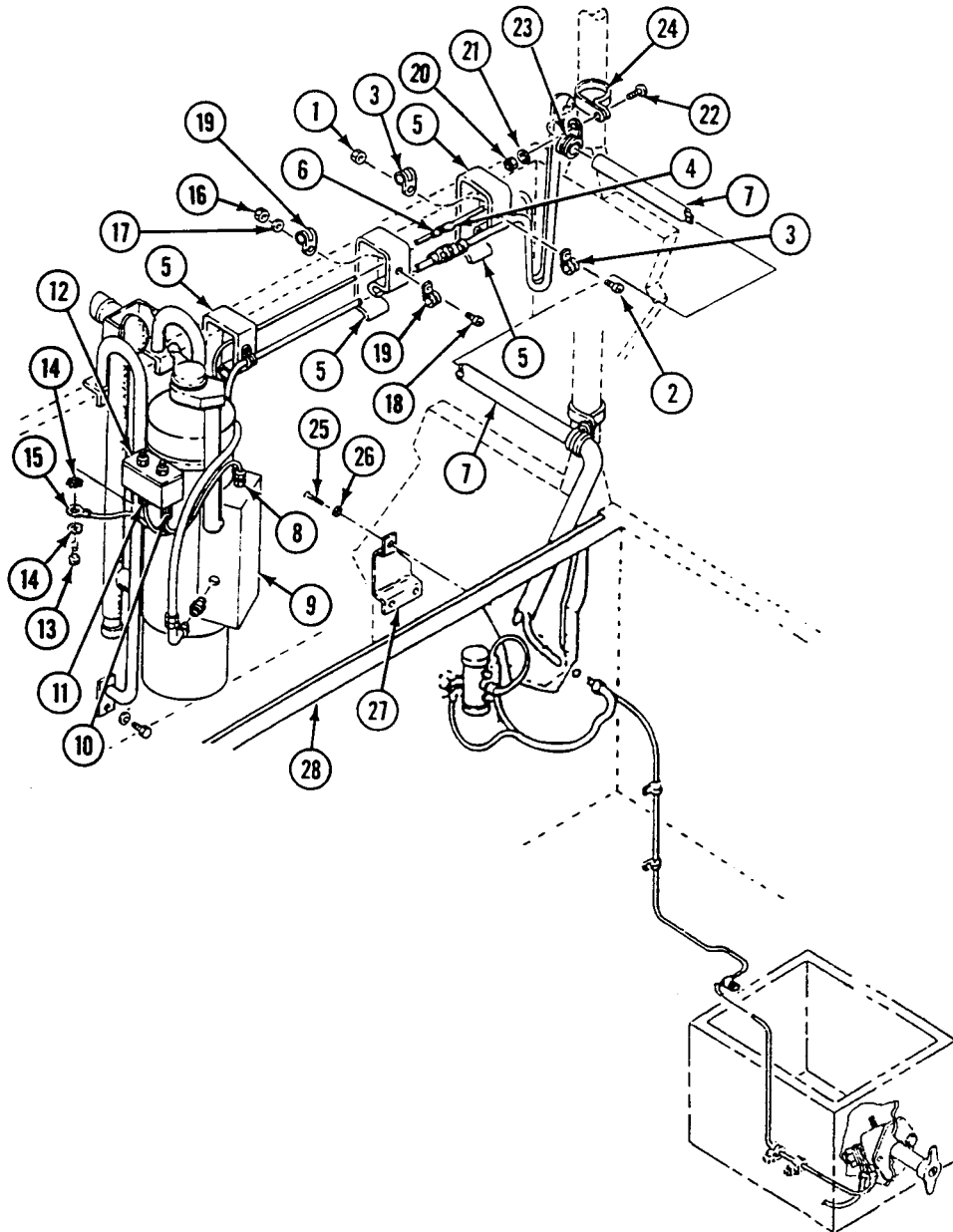
1. Remove nut (1), and circuit 400C lead (2) of front wiring harness (3) from master switch (4).
2. Disconnect circuit 402C lead (5) of front wiring harness (3) from capacitor (6) on fuel pump (7).
3. Remove screw (8), lock washer (9), and ground lead (10) of front wiring harness (3) from fuel pump (7). Discard lock washer.
4. Remove five lock nuts (11), screws (12), seven clamps (13), and front wiring harness (3) from battery box and bulkhead. Discard lock nuts.
5. Remove grommet (14) from bulkhead and front wiring harness (3). Discard grommet.



REPLACE CARGO AREA HEATER WIRING HARNESS — Continued

0465 00

6. Remove lock nut (1), screw (2), and two clamps (3) securing front wiring harness (4) to clip (5). Discard lock nut.
7. Disconnect front wiring harness (4) from rear wiring harness (6).
8. Remove front wiring harness (4) from carrier through guard (7).
9. Disconnect rear wiring harness connector (8) from heater (9).
10. Disconnect rear wiring harness connector (10) and circuit 400C lead (11) from control box (12).

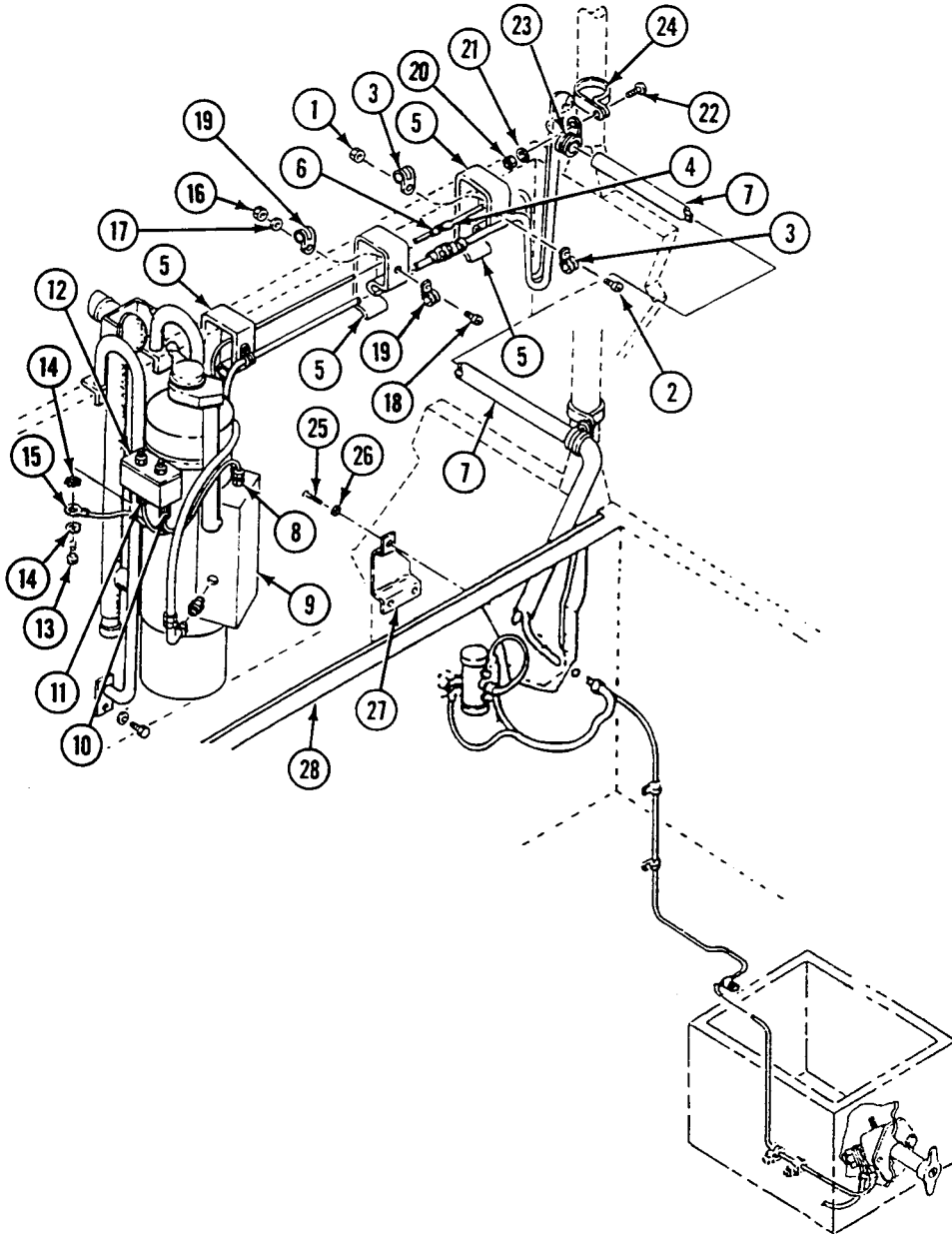


11. Remove screw (13), two lock washers (14), and rear wiring harness ground lead (15) from control box (12). Discard lock washers.
12. Remove two lock nuts (16), washers (17), screws (18), four clamps (19), and rear wiring harness (6) from two clips (5). Discard lock nuts.

REPLACE CARGO AREA HEATER WIRING HARNESS — Continued

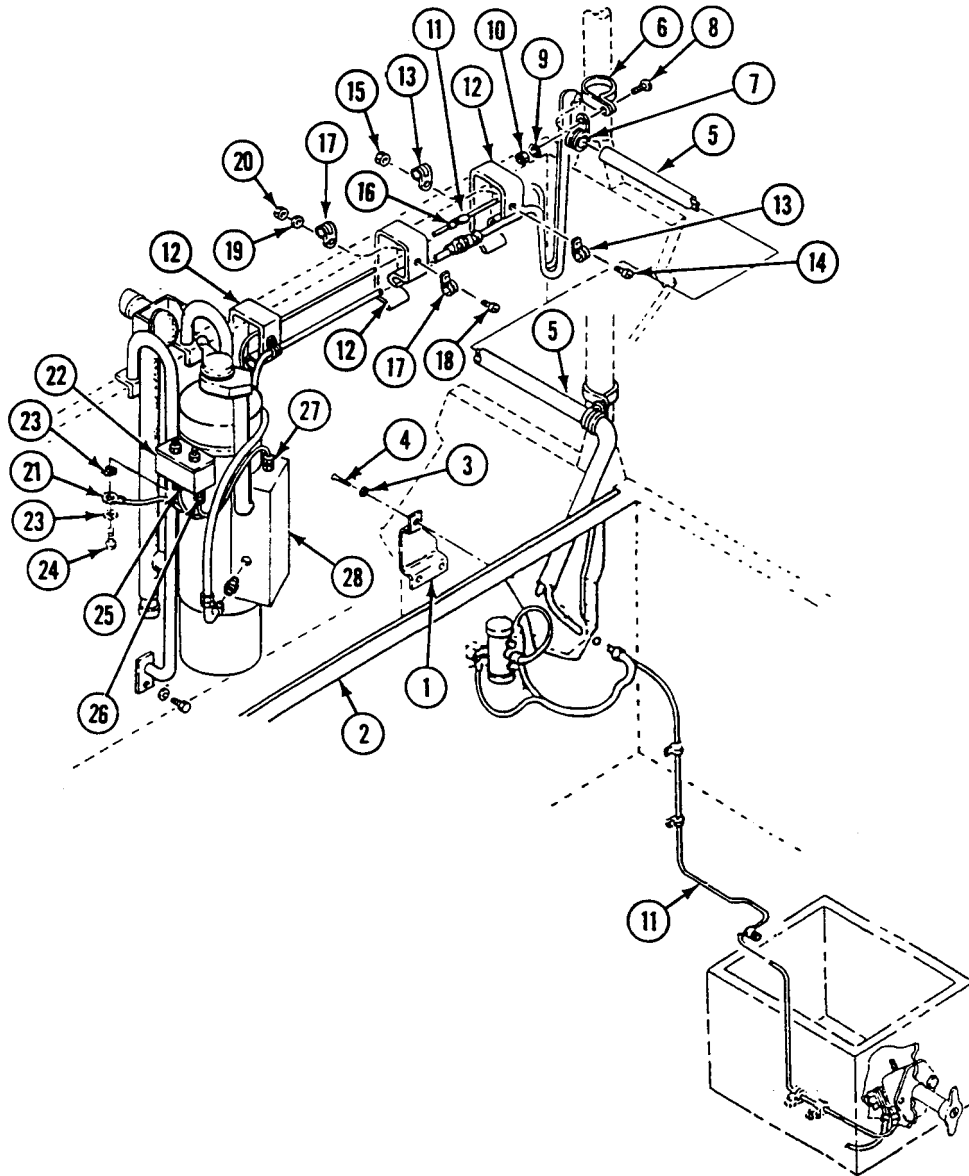
0465 00

13. Remove six lock nuts (20), washers (21), screws (22), clamps (23), and guard (7) from six clamps (24). Discard lock nuts.
14. Remove three screws (25), washers (26), and cover (27) from bulkhead protector (28).



INSTALLATION

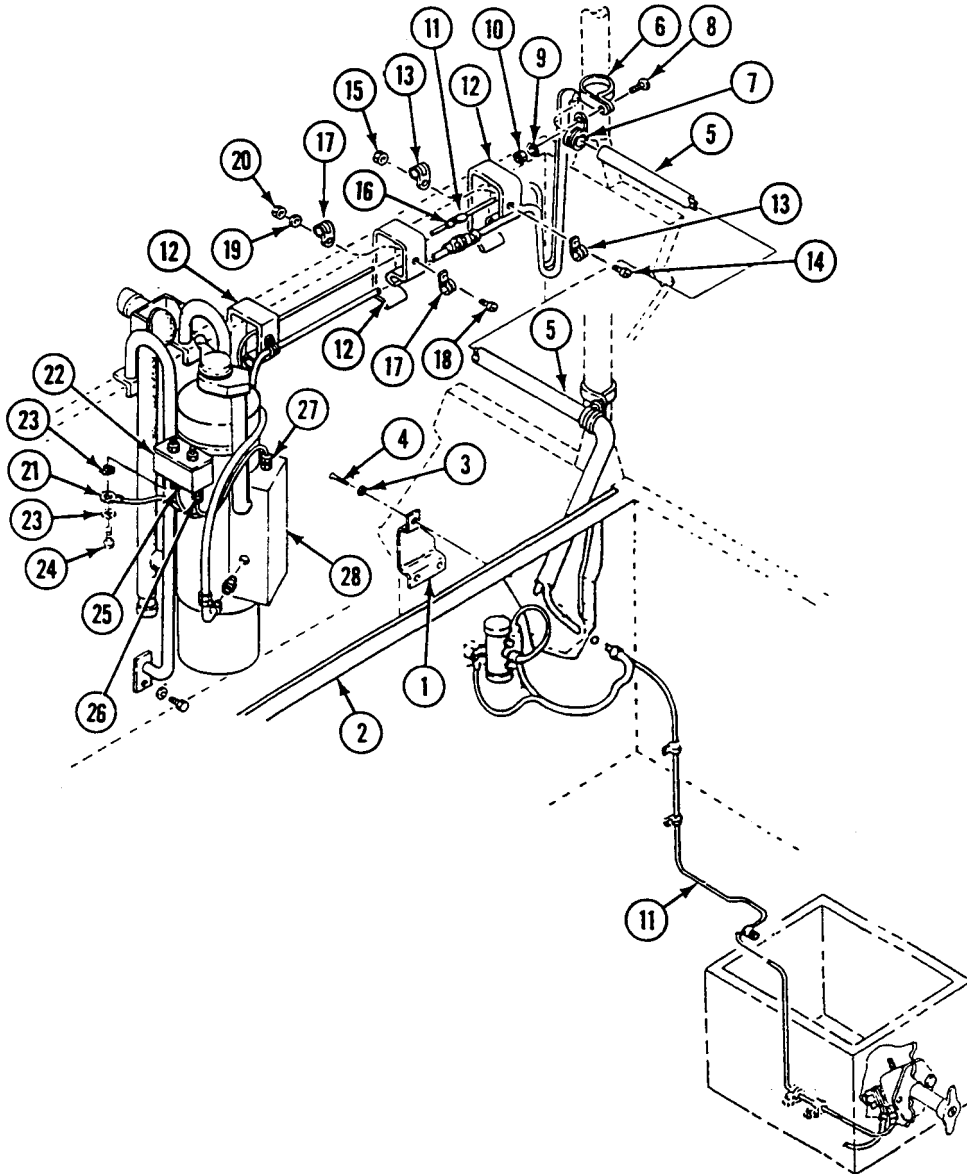
1. Install cover (1) on bulkhead protector (2). Secure with three washers (3) and screws (4).
2. Secure guard (5) to six clamps (6) with six clamps (7), screws (8), washers (9), and new lock nuts (10).
3. Install front wiring harness (11) through guard (5).
4. Secure front wiring harness (11) to clip (12) with clamp (13), screw (14), and new lock nut (15).



REPLACE CARGO AREA HEATER WIRING HARNESS — Continued

0465 00

5. Secure rear wiring harness (16) to two clips (12) with four clamps (17), two screws (18), washers (19), and new lock nuts (20).
6. Secure rear wiring harness ground lead (21) to control box (22) with two new lock washers (23) and screw (24).
7. Connect rear wiring harness circuit 400C lead (25) and connector (26) to control box (22).
8. Connect rear wiring harness connector (27) to heater (28).
9. Connect rear wiring harness (16) to front wiring harness (11).

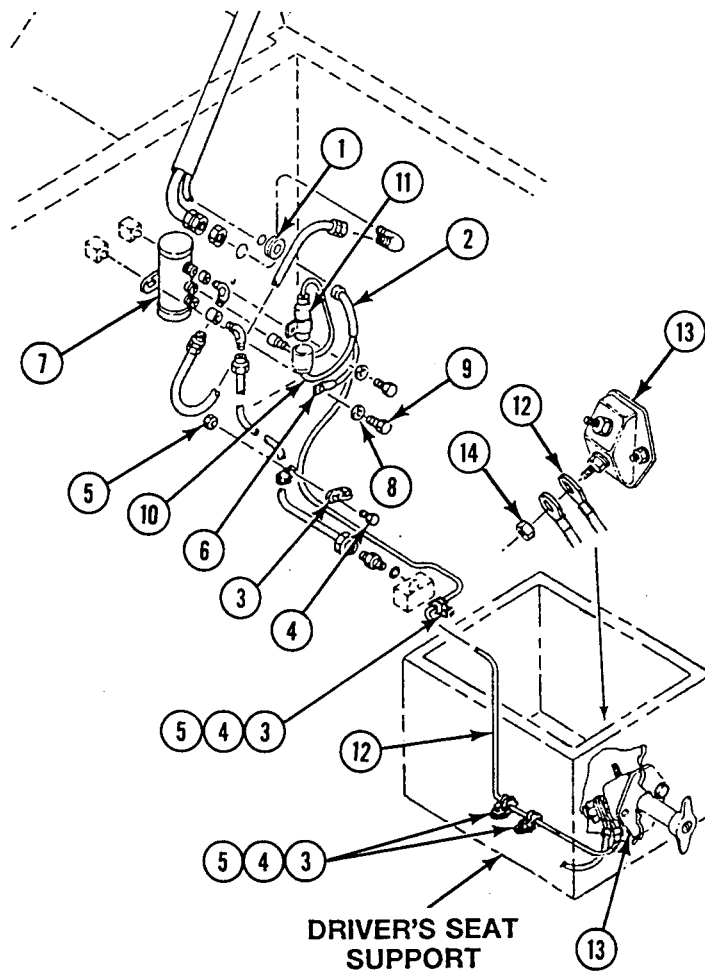


10. Install new grommet (1) on front wiring harness (2) and in bulkhead.
11. Secure front wiring harness (2) to battery box and bulkhead with seven clamps (3), five screws (4), and new lock nuts (5).
12. Secure front wiring harness ground lead (6) to fuel pump (7) with new lock washer (8) and screw (9).
13. Connect circuit 402C lead (10) to capacitor (11) on fuel pump (7).

NOTE

The second circuit 400C is for the vehicle compartment heater, if installed.

14. Secure front wiring harness circuit 400C lead (12) with circuit 400C and circuit 6 to master switch (13) in battery box with nut (14).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start cargo area heater (see your -10).
3. Check cargo area heater for proper operation.
4. Stop cargo area heater (see your -10).
5. Install top left access grille (WP 0390 00).

END OF TASK

REPLACE INSULATED CARGO COVERS

0466 00

THIS WORK PACKAGE COVERS:

Removal (page 0466 00-2).
Installation (page 0466 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Personnel Required

Unit Mechanic

References

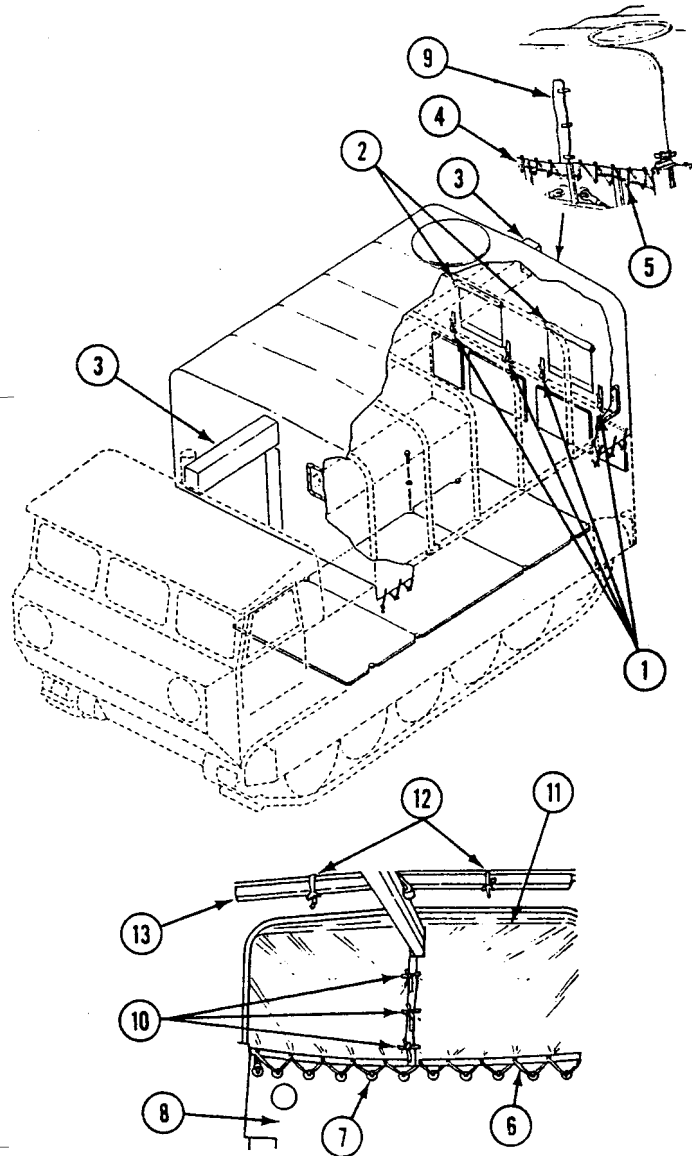
See your -10
FM 10-16

Equipment Condition

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

REMOVAL

1. Loosen four curtain straps (1) that secure curtains (2) to inside of cargo door (see your -10).
2. Remove front and rear pockets (3) from material handling kit beam.
3. Loosen four outside tiedown ropes (4) on sides and rear of carrier. Unhook ropes from tiedown hooks (5).
4. Loosen inside tiedown rope (6). Unhook rope from tiedown hooks (7) along bulkhead (8).
5. Unhook six web straps (9) that secure front and rear closure flaps closed.
6. Untie three ties (10) (at front and rear) on inside of cargo cover (11).
7. Untie nine cover tie ropes (12) that secure cargo cover (11) to four bows (13).
8. Remove cargo cover (11) from four bows (13).



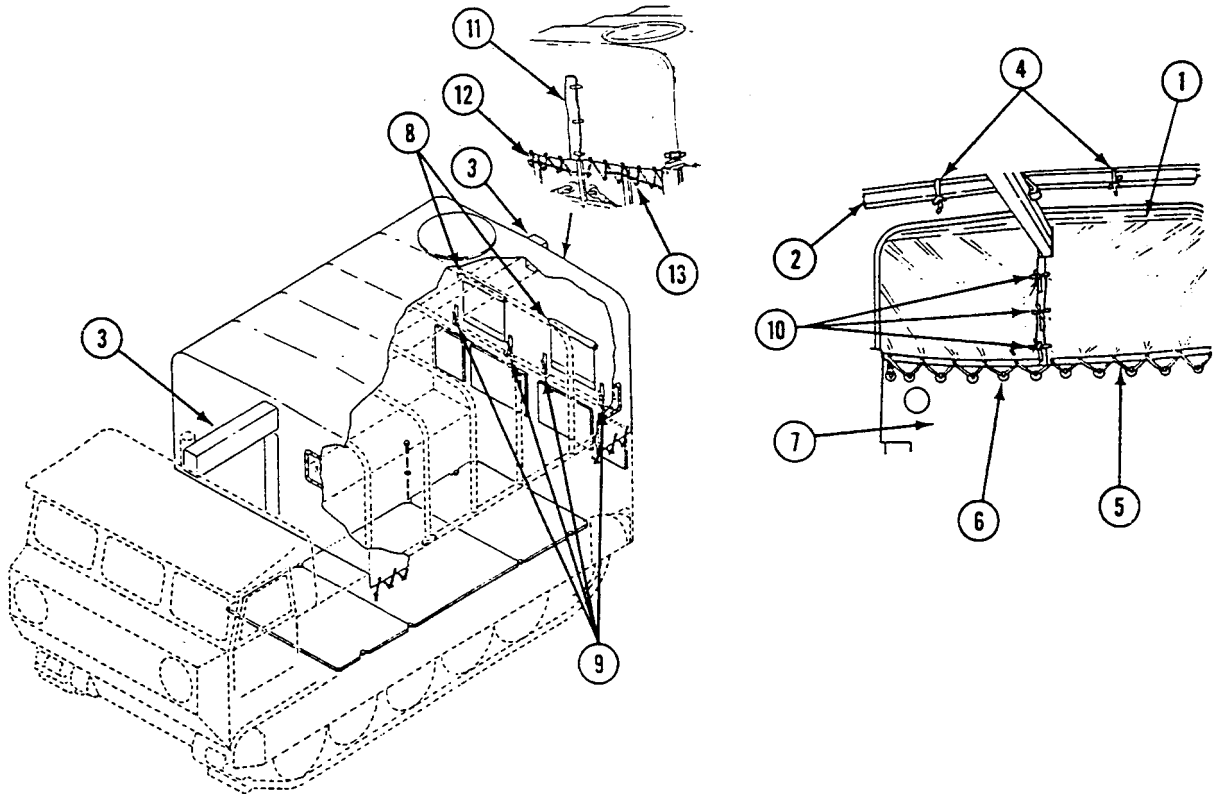
NOTE

Make sure cover is clean and dry when it is folded and stored. If it is dirty or wet, it could mildew and rot.

9. To remove bows, if damaged, see (WP 0417 00).

INSTALLATION

1. To install bows, if removed, see (WP 0417 00).
2. Place cargo cover (1) over four bows (2). Place front and rear pockets over ends of material handling kit beam (3). Escape hatch will be at right rear of carrier.
3. Secure cargo cover (1) to four bows (2) with nine cover tie ropes (4).
4. Fasten inside tiedown ropes (5) to inside tiedown hooks (6) on bulkhead (7). Pull rope until front flaps of cargo cover (1) are in place. Tie rope securely.
5. Tuck tiedown rope ends between rope (5) and bulkhead (7).
6. Lower curtains (8). Fasten four curtain straps (9) to inside of cargo door (see your -10).
7. Tie three ties (10) (front and rear) on inside of cargo cover (1) to close flaps.
8. Fasten three web straps (11) (front and rear) on outside of cargo cover (1) to secure flaps.
9. Fasten four outside tiedown ropes (12) on sides and rear of carrier. Tie ropes securely to tiedown hooks (13).
10. Tuck tiedown rope ends between rope (12) and bulkhead (7).



END OF TASK

REPLACE ESCAPE HATCH COVER

0467 00

THIS WORK PACKAGE COVERS:

Removal (page 0467 00-2).
Installation (page 0467 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Lock washer (15)

Personnel Required

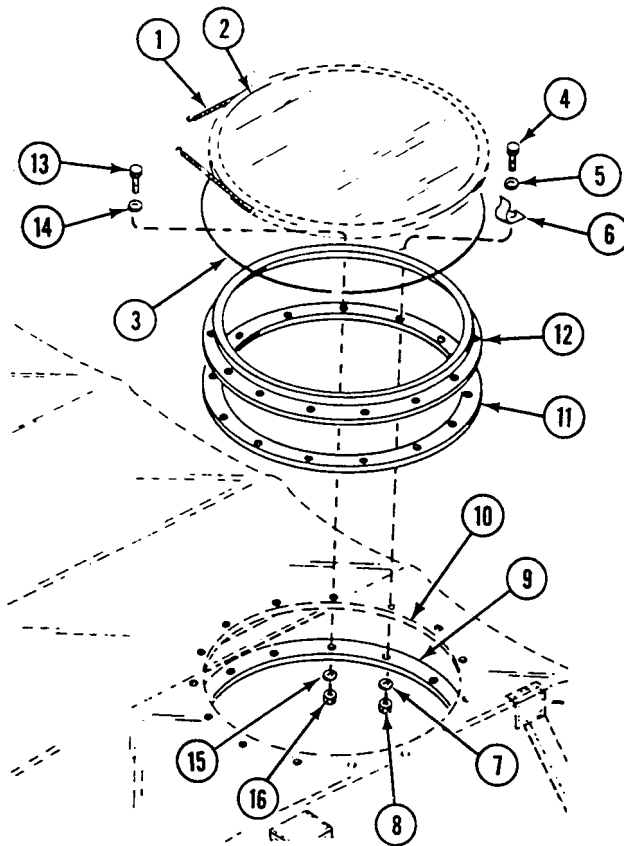
Unit Mechanic

REPLACE ESCAPE HATCH COVER — Continued

0467 00

REMOVAL

1. Unhook spring (1) and remove it through slit in hatch cover (2).
2. Remove hatch cover (2) from webbed cord (3).
3. Remove screw (4), washer (5), retainer (6), lock washer (7), and nut (8) from clamping ring (9), cargo cover (10), gasket (11), and hatch cover frame (12). Discard lock washer.
4. Remove 14 screws (13), washers (14), lock washers (15), and nuts (16) from clamping ring (9), cargo cover (10), gasket (11), and hatch cover frame (12). Separate hatch cover frame, gasket, canvas cover, and clamping ring. Discard lock washers.



INSTALLATION

1. Place gasket (11) and cargo cover (10) between hatch cover frame (12) and clamping ring (9).
2. Secure hatch cover frame (12), gasket (11), cargo cover (10) to clamping ring (9) with screw (4), washer (5), retainer (6), new lock washer (7), and nut (8).
3. Secure hatch cover frame (12), gasket (11), cargo cover (10) to clamping ring (9) with 14 screws (13), washers (14), new lock washers (15), and nuts (16).
4. Place hatch cover (2) and webbed cord (3) over hatch cover frame (12). Hook ends of spring together.
5. Install spring (1) through slit in hatch cover (2).

END OF TASK

REPLACE INSULATED COVER WINDOWS

0468 00

THIS WORK PACKAGE COVERS:

- Removal (page 0468 00-1).
- Installation (page 0468 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

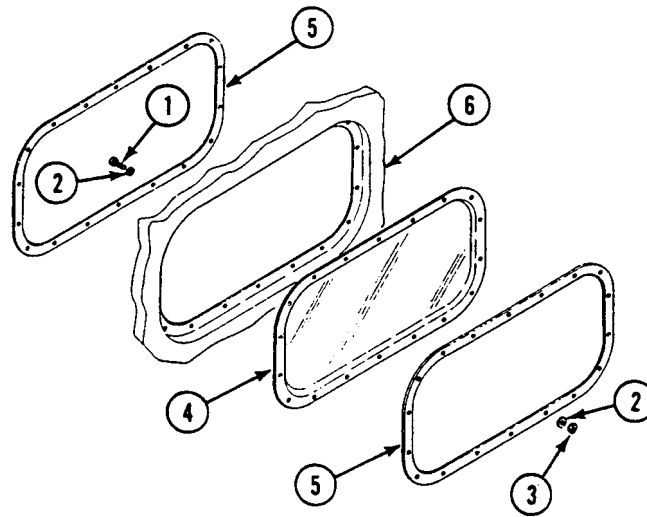
- Lock nut (18)
- Lock washer (36)

Equipment Condition

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

REMOVAL

1. Secure window curtains in rolled position to expose window to be removed (see your -10).
2. Remove 18 screws (1), 36 lock washers (2), and 18 lock nuts (3) from window (4) and 2 window frames (5). Discard lock washers and lock nuts.
3. Remove and separate window (4) and two window frames (5) from insulated cover (6).



INSTALLATION

1. Place window (4) and two window frames (5) in insulated cover (6).
2. Secure window (4) and 2 window frames (5) to insulated cover with 18 screws (1), 36 new lock washers (2), and 18 new lock nuts (3).
3. Secure window curtain in closed position (see your -10).

END OF TASK

REPLACE CARGO DOOR INSULATION

0469 00

THIS WORK PACKAGE COVERS:

Removal (page 0469 00-1).
 Installation (page 0469 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

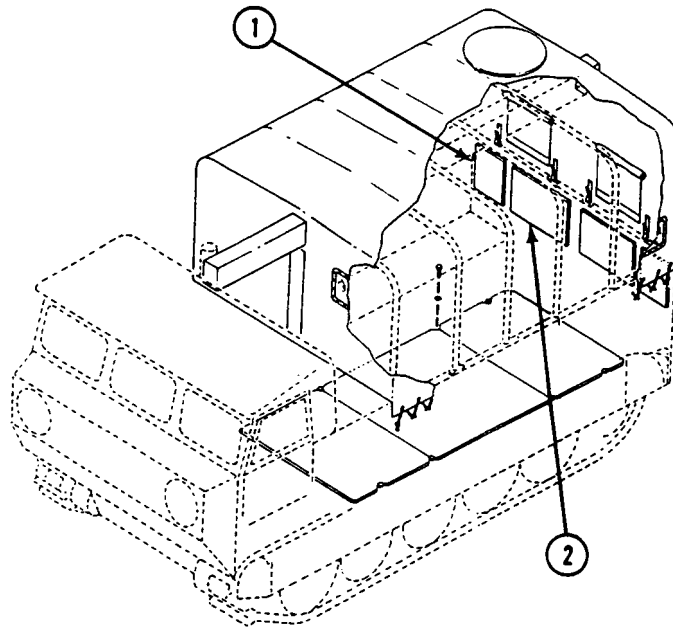
Cleaning compound (WP 0542 00, Item 9)
 Insulation tape WP 0542 00, Item 25

Equipment Condition

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

REMOVAL

1. Scrape insulation (1) from cargo door (2).
2. Remove remaining insulation and adhesive with cleaning compound.



INSTALLATION

1. Trim new insulation to fit. Cut panels into sections about 3 feet square (1 m) in size.
2. Make sure surface to be covered is clean and dry. Spray or swab cleaning compound on back of insulation to activate adhesive.
3. Allow 10 to 15 seconds for adhesive to become tacky. Butt sections together and press them firmly into place at once.

END OF TASK

REPLACE FLOOR PLATE COVERS

0470 00

THIS WORK PACKAGE COVERS:

Removal (page 0470 00-1).
 Installation (page 0470 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

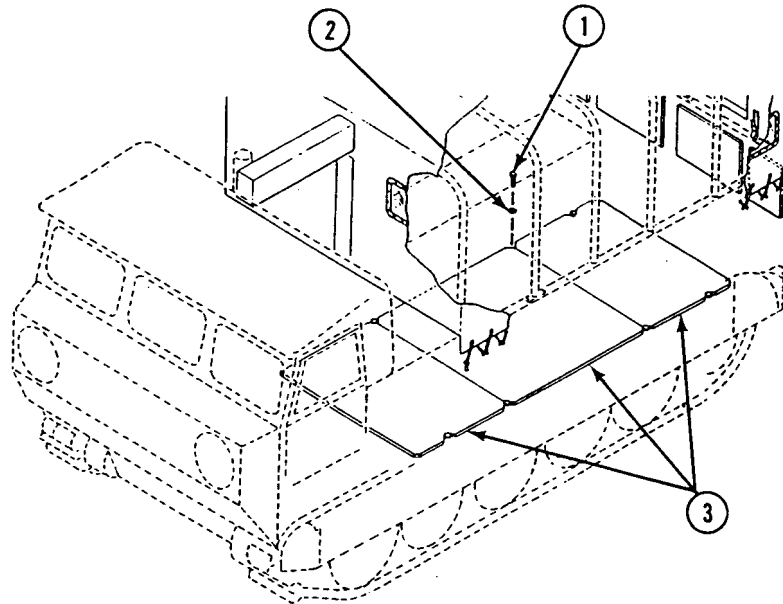
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

REMOVAL

1. Remove eight screws (1) and washers (2) from three plywood floor plate covers (3) in cargo compartment. Remove covers from cargo compartment floor plates.



INSTALLATION

1. Place three plywood floor plate covers (3) on cargo compartment floor plates. Secure with eight washers (2) and screws (1).

END OF TASK

REPLACE PERSONNEL SEAT COVERS

0471 00

THIS WORK PACKAGE COVERS:

Removal (page 0471 00-1).
 Installation (page 0471 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10
 FM 10-16

Personnel Required

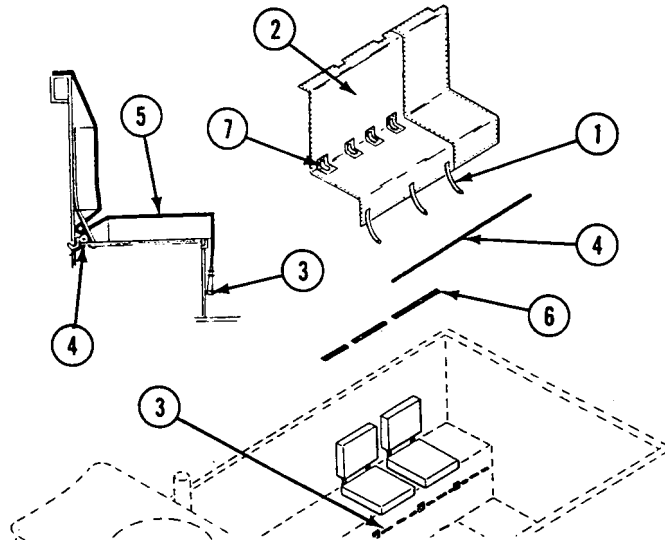
Unit Mechanic

Equipment Condition

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

REMOVAL

1. Loosen straps (1) that secure bottom edges of two seat covers (2) to six tiedown eyes (3).
2. Remove two cover tubes (4) from between two seat covers (2) and cargo compartment personnel seats (5).
3. Loosen fastener tapes (6) that secure top edges of two seat covers (2) to hull.
4. Pass seat belts through holes (7) in two seat covers (2). Remove seat covers.



INSTALLATION

1. Place two seat covers (2) on cargo compartment personnel seats (5). Press fastener tapes (6) firmly to tapes on hull.
2. Pull seat belts through holes (7) in two seat covers (2).
3. Install two cover tubes (4) between two seat covers (2) and cargo compartment personnel seats (5).
4. Secure bottom edges of two seat covers (2) to six tiedown eyes (3) with six straps (1).

END OF TASK

REPLACE/REPAIR HEATER CONTROL BOX

0472 00

THIS WORK PACKAGE COVERS:

- Removal (page 0472 00-1)
- Disassembly (page 0472 00-2)
- Assembly (page 0472 00-5)
- Installation (page 0472 00-7)

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Electrical Tool Kit (WP 0541 00, Item 56)

References

See your -10

Materials/Parts

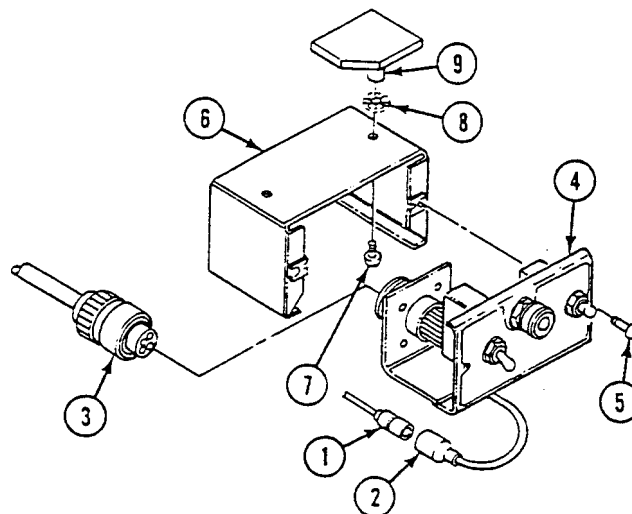
- Lock washer (12)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery negative lead(s) disconnected (WP 0292 00)

REMOVAL

1. Disconnect circuit 400 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 heater control box (4) from control box case (6).
4. Remove two screws (7), control box case (6), and two lock washers (8) from two hull weld nuts (9). Discard lock washers.



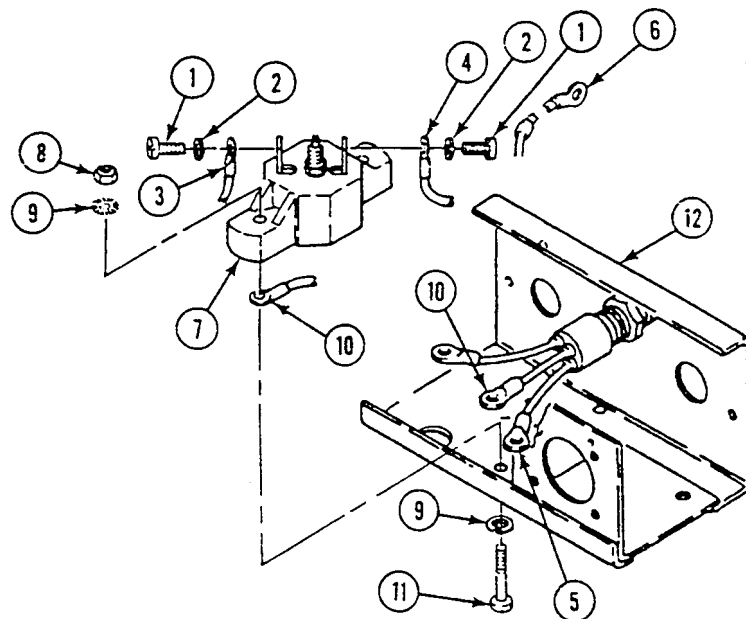
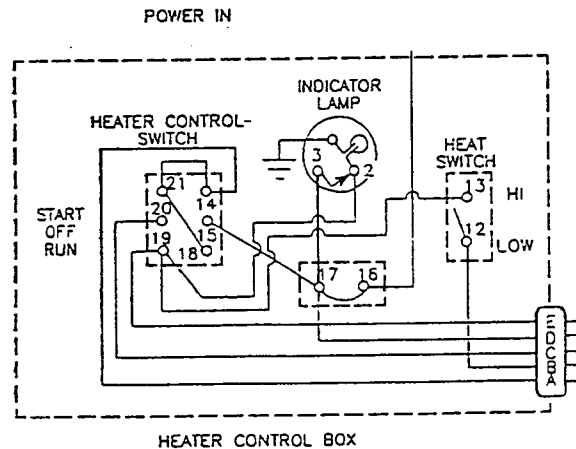
DISASSEMBLY

NOTE

To repair circuit breaker, do Disassembly Step 1 and Assembly Step 5. To repair indicator light, do Disassembly Step 2 and Assembly Step 4. To repair start switch, do Disassembly Step 3 and Assembly Step 3. To repair HI-LO heater switch, do Disassembly Step 4 and Assembly Step 2. To repair outlet receptacle, do Disassembly Step 5 and Assembly Step 1.

Tag electrical leads as they are removed.

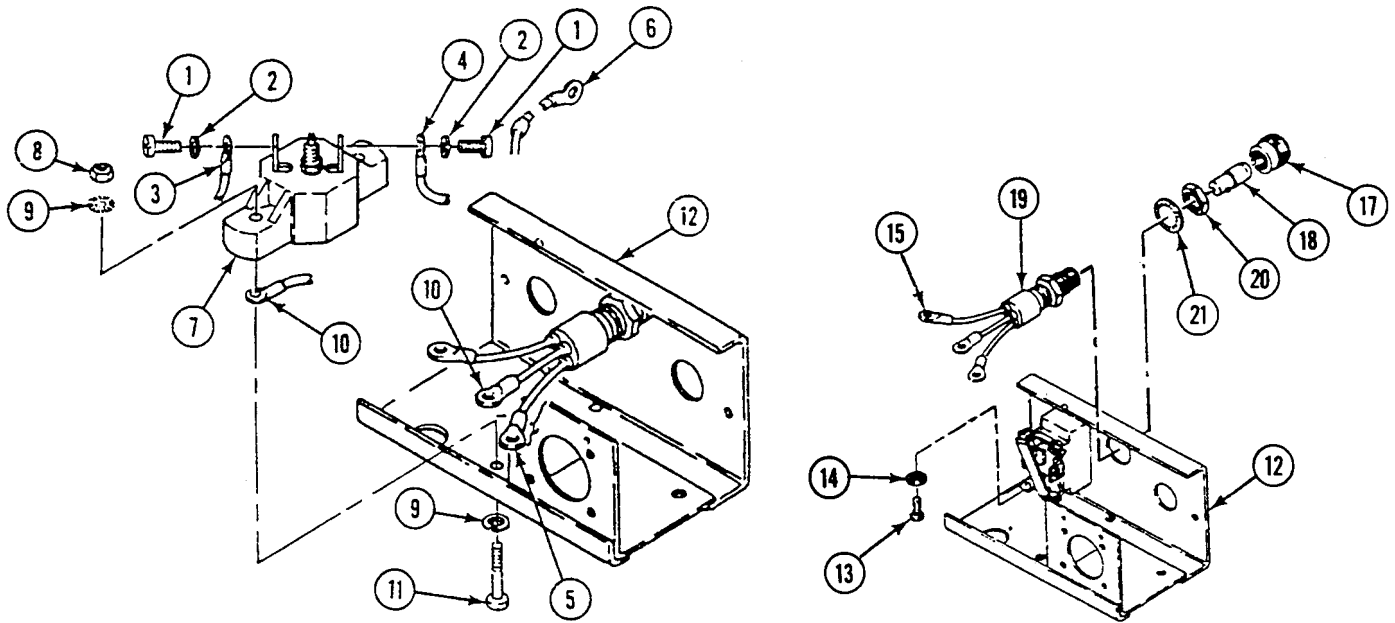
1. Remove circuit breaker from heater control box as follows:
 - a. Remove two screws (1), lock washers (2), lead 16 (3), lead 17 (4), lead 17-3 (5), and jumper 15-17 (6) from circuit breaker (7).
 - b. Remove two nuts (8), lock washers (9), indicator light negative lead (10), two screws (11), and circuit breaker (7) from heater control box (12). Discard lock washers.



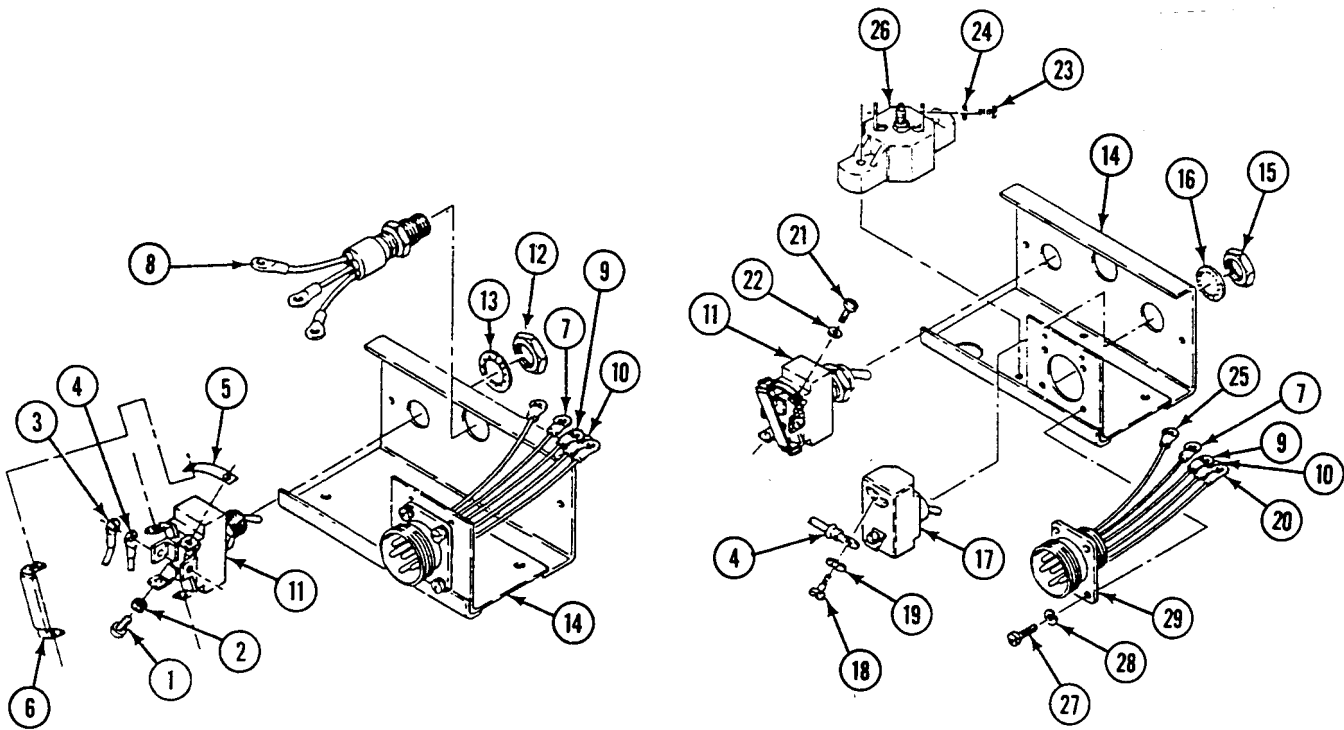
NOTE

It may be necessary to loosen both screws when removing indicator light negative lead.

2. Remove indicator light from heater control box as follows:
 - a. Remove nut (8), lock washer (9), and indicator light negative lead (10) from circuit breaker (7).
 - b. Remove screw (1), lock washer (2), and lead 17-3 (5) from circuit breaker (7).
 - c. Remove screw (13), lock washer (14), and lead 19-2 (15) from start switch (16).
 - d. Unscrew cap (17) and remove bulb (18) from cable assembly (19).
 - e. Remove nut (20), lock washer (21), and cable assembly (19) from heater control box (12).



3. Remove start switch from heater control box as follows:
 - a. Remove six screws (1), lock washers (2), jumper 15-17 (3), lead 13-19 (4), jumper 21-14 (5), jumper 21-18 (6), lead 14 (7), lead 19-2 (8), lead 19 (9), and lead 20 (10) from start switch (11).
 - b. Remove nut (12), washer (13), and start switch (11) from heater control box (14).
4. Remove HI-LO heater switch from heater control box as follows:
 - a. Remove nut (15), lock washer (16), instruction plate (if applicable), and heater switch (17) from heater control box (14). Discard lock washer.
 - b. Remove two screws (18), lock washers (19), lead 13-19 (4), and lead 12B (20) from heater switch (17).
5. Remove outlet receptacle from heater control box as follows:
 - a. Remove three screws (21), lock washers (22), lead 14 (7), lead 20 (10), and lead 19 (9) from start switch (11).
 - b. Remove screw (23), lock washer (24), and lead 17 (25) from circuit breaker (26).
 - c. Remove four screws (27), lock washers (28), and outlet receptacle (29) from heater control box (14). Discard lock washers.
 - d. Remove screw (18), lock washer (19), and lead 12B (20) from heater switch (17).



ASSEMBLY

NOTE

Before connecting electrical leads, check connection diagram (1) to make sure of proper connection.

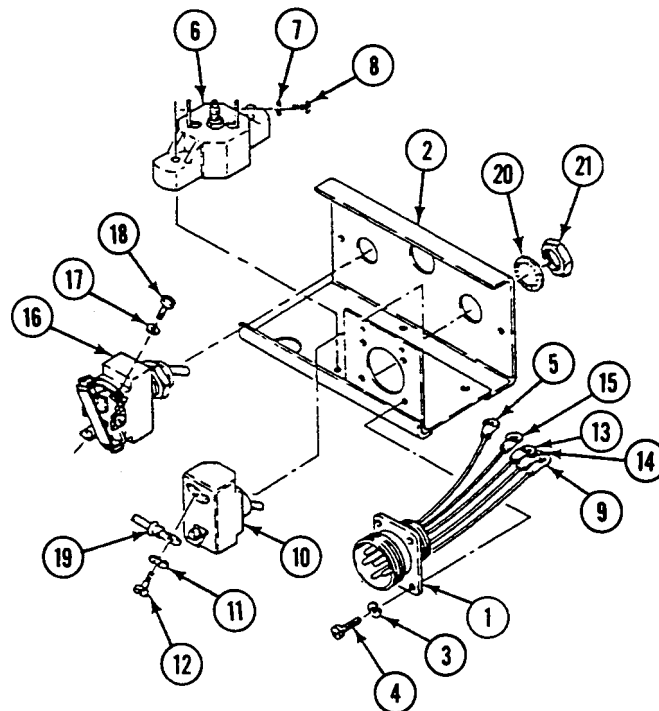
Make sure key in outlet receptacle is at the top.

1. Install outlet receptacle in heater control box as follows:
 - a. Install outlet receptacle (1) in heater control box (2). Secure with four new lock washers (3) and screws (4).
 - b. Install lead 17 (5) on circuit breaker (6) with lock washer (7) and screw (8).
 - c. Install lead 12B (9) on heater switch (10) with lock washer (11) and screw (12).
 - d. Install lead 19 (13), lead 20 (14), and lead 14 (15) on start switch (16) with three new lock washers (17) and screws (18).

NOTE

Heater switch is marked ON and OFF.

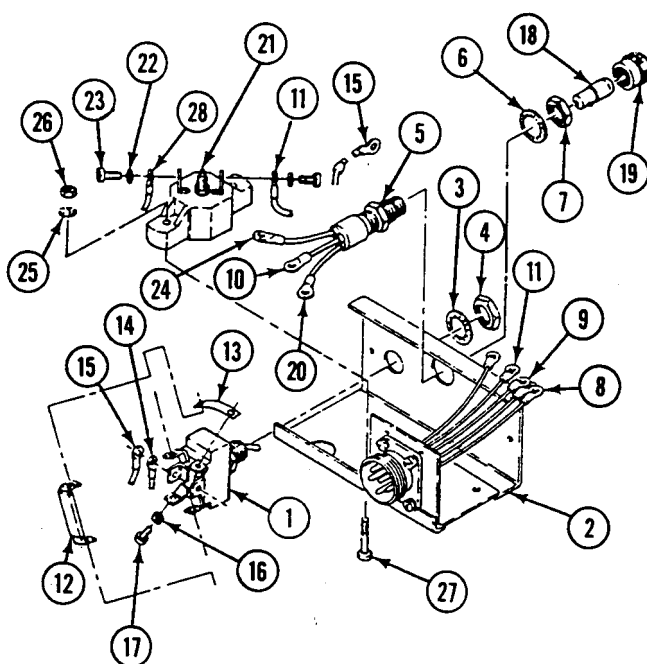
2. Install HI-LO heater switch in heater control box as follows:
 - a. Place heater switch (10) with ON at the top of heater control box (2).
 - b. Install lead 13-19 (19) and lead 12B (9) on heater switch (10) with lock washer (11) and screw (12).
 - c. Install heater switch (10) in heater control box (2) with instruction plate (if applicable), new lock washer (20), and nut (21).



NOTE

Start switch has locked position and spring-loaded position.

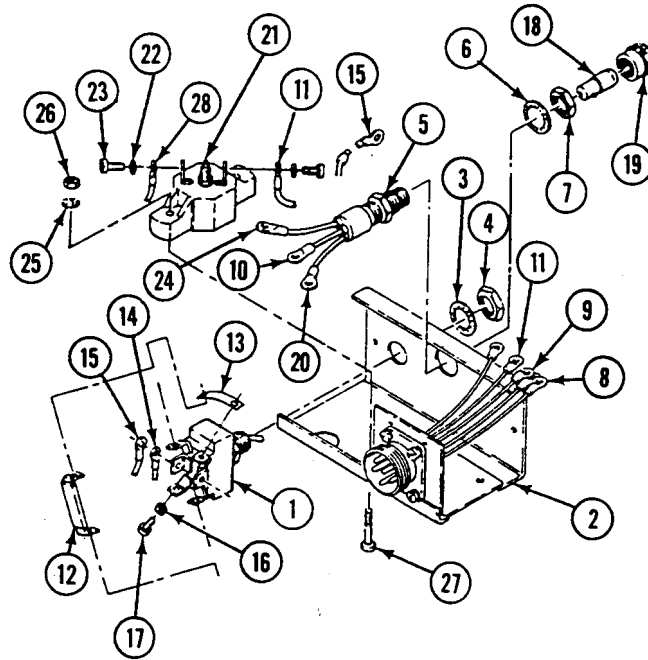
3. Install start switch in heater control box as follows:
 - a. Place start switch (1) with locked position at top of heater control box (2).
 - b. Install start switch (1) in heater control box (2) with washer (3) and nut (4).
 - c. Install cable assembly (5) in heater control box (2) with lock washer (6) and nut (7).
 - d. Place lead 20 (8), lead 19 (9), lead 19-2 (10), lead 14 (11), jumper 21-18 (12), jumper 21-14 (13), lead 13-19 (14), and jumper 15-17 (15) on start switch (1). Secure with six lock washers (16) and screws (17).

**NOTE**

Ensure that both circuit breaker screws are tight.

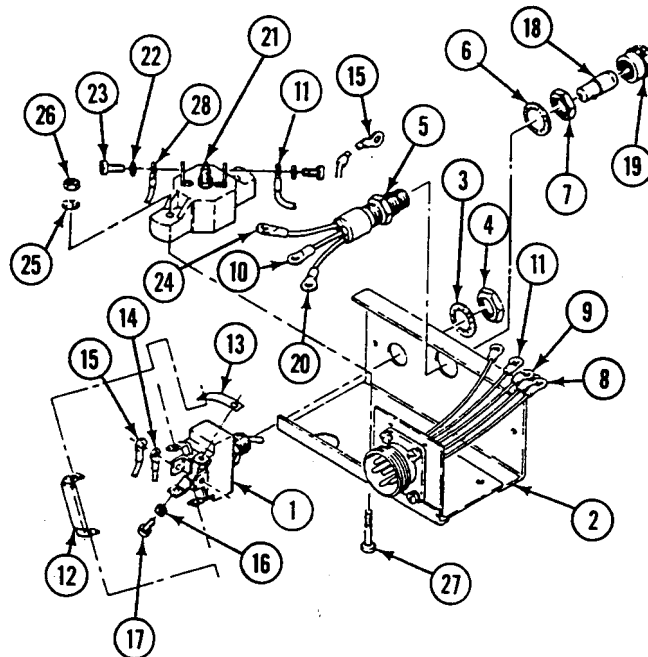
4. Install indicator light in heater control box as follows:
 - a. Install bulb (18) in cable assembly (5) with cap (19).
 - b. Install lead 19-2 (10) on start switch (1) with lock washer (16) and screw (17).
 - c. Install lead 17-3 (20) on circuit breaker (21) with lock washer (22) and screw (23).
 - d. Install indicator light negative lead (24) on circuit breaker (21) with lock washer (25) and nut (26).
5. Install circuit breaker in heater control box as follows:
 - a. Install circuit breaker (21) in heater control box (2) with four new lock washers (25), screws (27), indicator light negative lead (24), and two nuts (26).

- b. Install jumper 15-17 (15), lead 17-3 (20), lead 17 (11), and lead 16 (10) on circuit breaker (21) with two lock washers (22) and screws (23).



INSTALLATION

1. Place two new lock washers (1) and control box case (2) on two hull weld nuts (3). Secure with two screws (4).
2. Install heater control box (5) in control box case (2). Secure with two screws (6).
3. Connect heater wiring harness (7) to heater control box (5).
4. Connect circuit 400 lead (8) to heater control box lead (9).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start heater (see your -10).
3. Check heater control box for proper operation.
4. Turn heater off (see your -10).

END OF TASK

REPLACE ENGINE COOLANT HEATER WIRING HARNESS

0473 00

THIS WORK PACKAGE COVERS:

- Removal (page 0473 00-1).
- Cleaning (page 0473 00-2).
- Installation (page 0473 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Multimeter (WP 0541 00, Item 29)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery negative lead(s) disconnected (WP 0292 00)
- Top left access grille removed (see your -10 or WP 0390 00)
- Heater exhaust pipe removed (WP 0480 00 or WP 0481 00)

Materials/Parts

- Wiping rag (WP 0542 00, Item 45)
- Grommet
- Lock washer (2)
- Lock washer (10)

Personnel Required

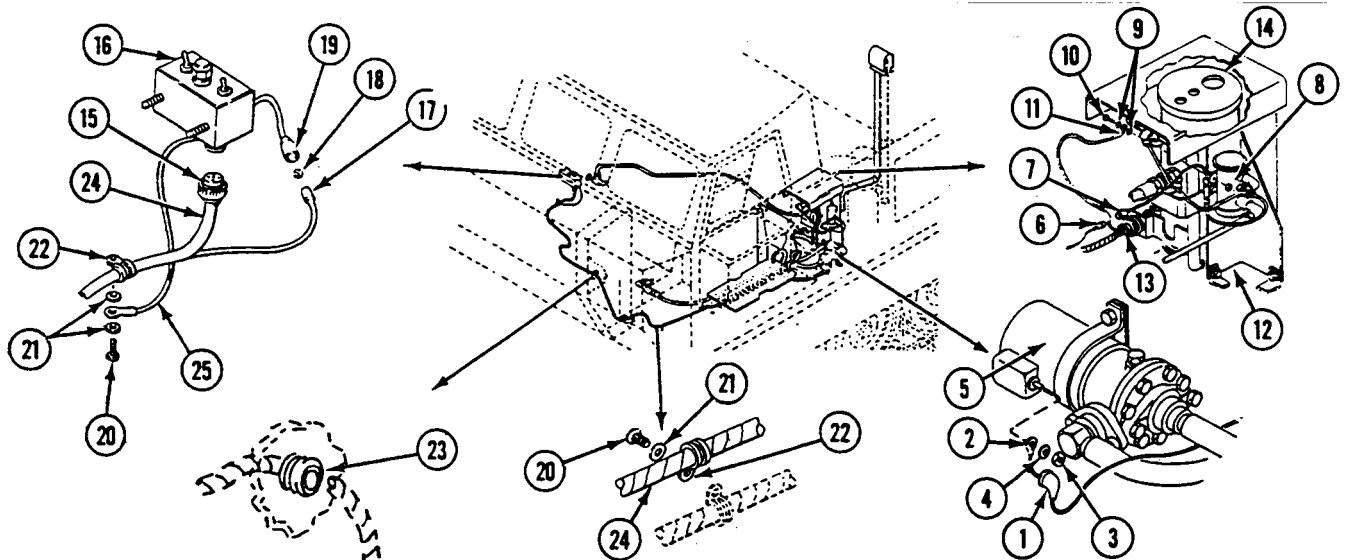
Unit Mechanic

REMOVAL

NOTE

Engine coolant heater wiring harness for M548A1 and M548A3 is removed and installed the same way. M548A1 wiring harness is shown.

1. Pull back protector (1) on circuit 402A lead (2). Remove nut (3), washer (4), and lead from coolant pump (5).
2. Disconnect circuit 402A lead (6) from connector (7).

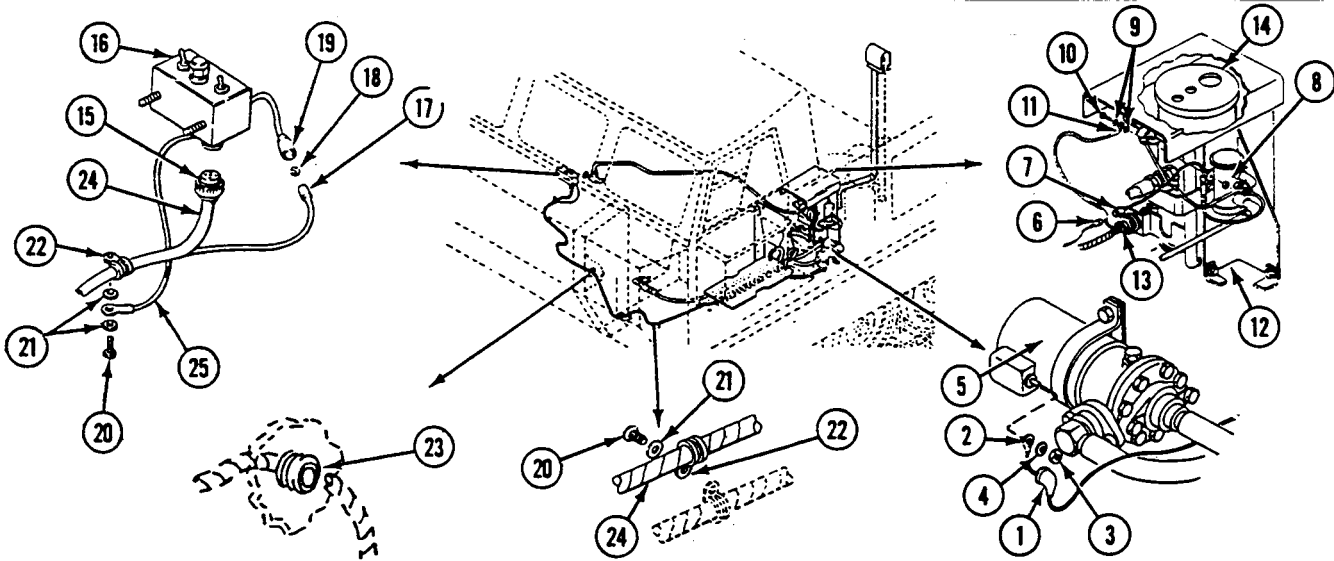


3. Remove nut (8), two lock washers (9), screw (10), and ground lead (11) from mount (12). Discard lock washers.
4. Disconnect connector (13) from coolant heater (14).

REPLACE ENGINE COOLANT HEATER WIRING HARNESS — Continued

0473 00

5. Disconnect connector (15) from control box (16) and circuit 400A lead (17) and slotted washer (18) from connector (19).
6. Remove 9 screws (20), 10 lock washers (21), 9 clamps (22), one grommet (23), coolant heater wiring harness (24), and control box ground lead (25) from hull. Discard grommet and lock washers.

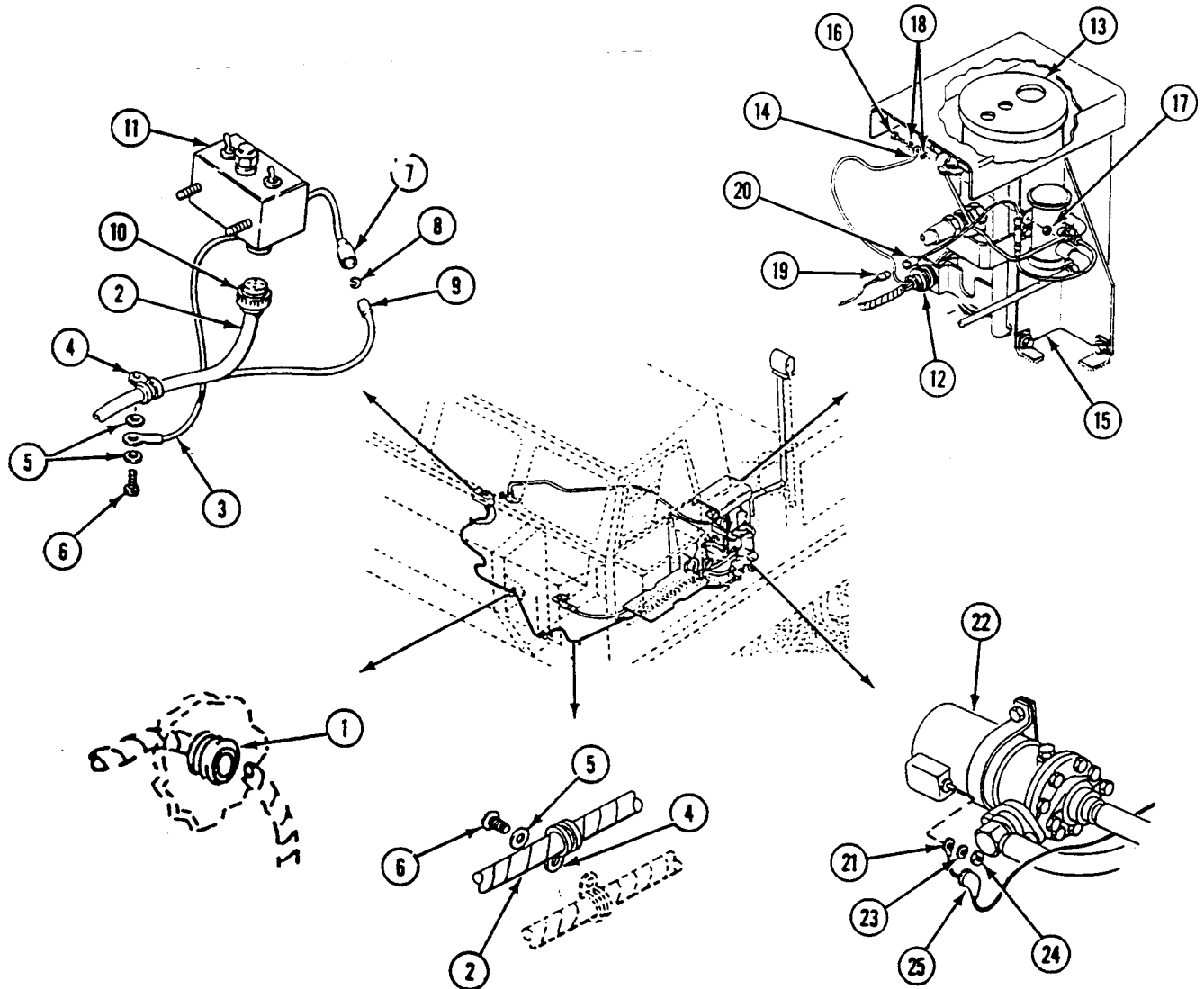


CLEANING

1. Clean coolant heater wiring harness with a clean wiping rag.
2. Check coolant heater wiring harness for continuity. Use multimeter.
3. Repair damaged coolant heater wiring harness (WP 0294 00). Replace coolant heater wiring harness that cannot be repaired.

INSTALLATION

1. Install new grommet (1) on coolant heater wiring harness (2). Install wiring harness and grommet in hull.
2. Secure control box ground lead (3) and coolant heater wiring harness (2) to hull with 9 clamps (4), 10 new lock washers (5), and 9 screws (6).
3. Connect connector (7) to slotted washer (8) and circuit 400A lead (9) and connector (10) to control box (11).
4. Connect connector (12) to coolant heater (13).
5. Secure ground lead (14) to mount (15) with screw (16), nut (17), and two new lock washers (18).
6. Connect circuit 402A lead (19) to connector (20).
7. Secure circuit 402A lead (21) to coolant pump (22) with washer (23) and nut (24).
8. Place protector (25) over circuit 402A lead (21).



FOLLOW-THROUGH STEPS

1. Install top left access grille (see your -10 or (WP 0390 00)).
2. Install heater exhaust pipe (WP 0480 00) or (WP 0481 00).
3. Connect battery negative lead(s) (WP 0292 00).
4. Start coolant heater (see your -10).
5. Check coolant heater wiring harness for proper operation.
6. Stop coolant heater (see your -10).

END OF TASK

REPLACE ENGINE COOLANT HEATER CONTROL BOX

0474 00

THIS WORK PACKAGE COVERS:

Removal (page 0474 00-1).
 Installation (page 0474 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

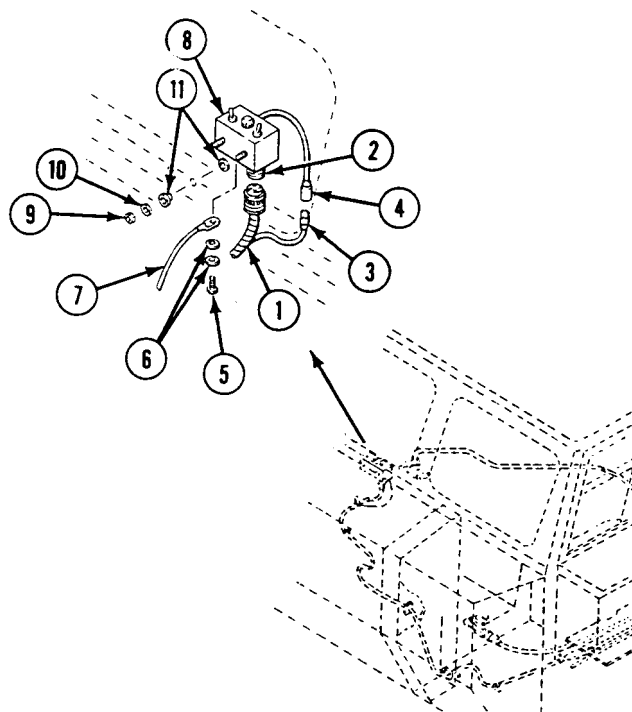
Lock nut (2)
 Lock washer (2)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)

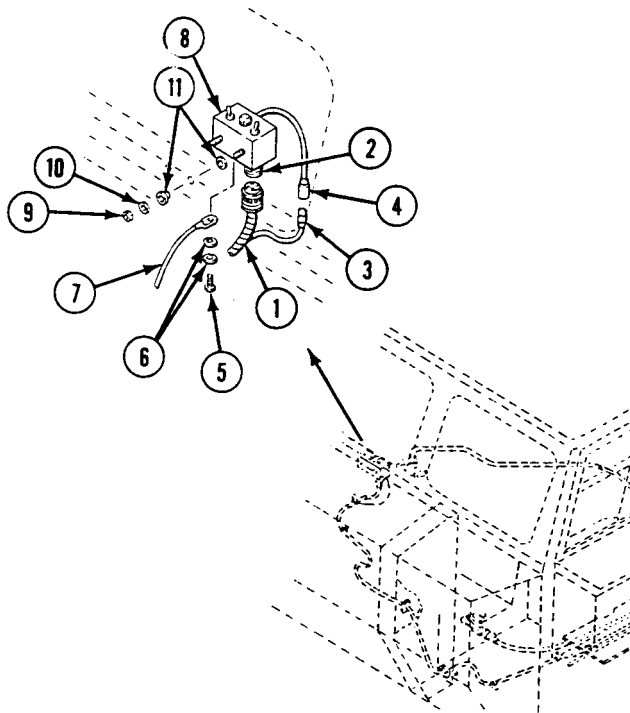
REMOVAL

1. Disconnect wiring harness (1) from control box receptacle (2).
2. Disconnect circuit 400A lead (3) from connector (4).
3. Remove screw (5), two lock washers (6), and ground lead (7) from control box (8). Discard lock washers.
4. Remove two lock nuts (9), washers (10), four mounts (11), and control box (8) from hull. Discard lock nuts.



INSTALLATION

1. Secure control box (8) to hull with four mounts (11), two washers (10), and new lock nuts (9).
2. Secure ground lead (7) to control box (8) with two new lock washers (6) and screw (5).
3. Connect circuit 400A lead (3) to connector (4).
4. Connect wiring harness (1) to receptacle (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead(s) (WP 0292 00).
2. Start coolant heater (see your -10).
3. Check coolant heater control box for proper operation.
4. Stop coolant heater (see your -10).

END OF TASK

REPLACE ENGINE COOLANT HEATER FUEL PUMP/FUEL LINES

0475 00

THIS WORK PACKAGE COVERS:

Removal (page 0475 00-1).
 Installation (page 0475 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Power plant rear access door/panel removed
 (see your -10)

Top left access grille removed (see your -10 or
 WP 0390 00)

Materials/Parts

Lock nut (2)
 Lock washer (4)
 Preformed packing

Battery negative lead(s) disconnected (WP 0292 00)

Personnel Required

Unit Mechanic

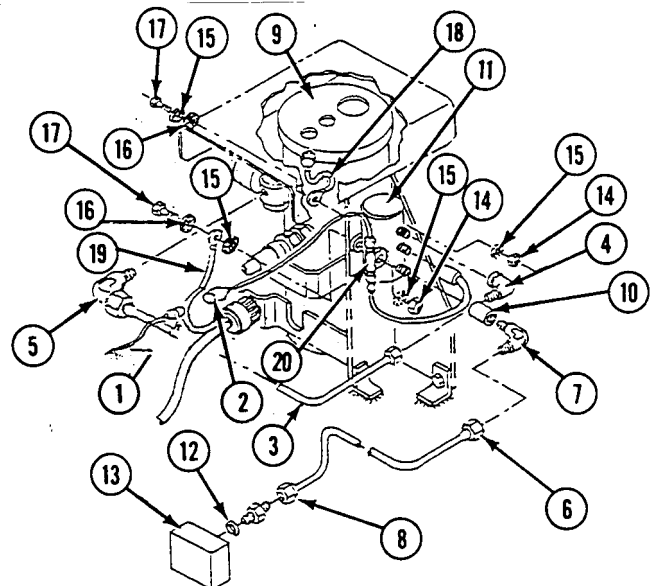
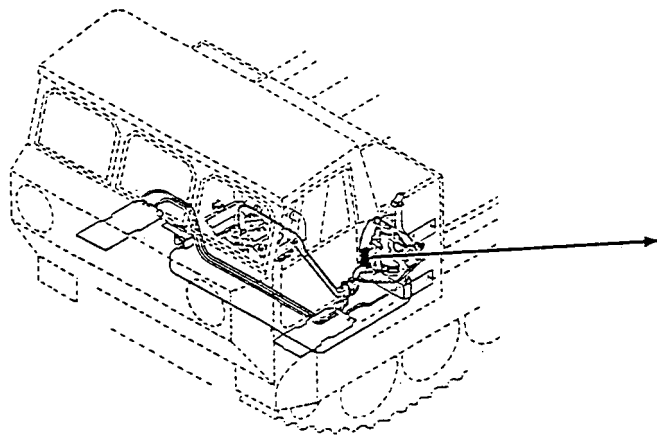
REMOVAL

NOTE

M548A1 and M548A3 engine heater fuel pumps are removed and installed the same way.

For M548A1, do Step 5. For M548A3, do Step 6.

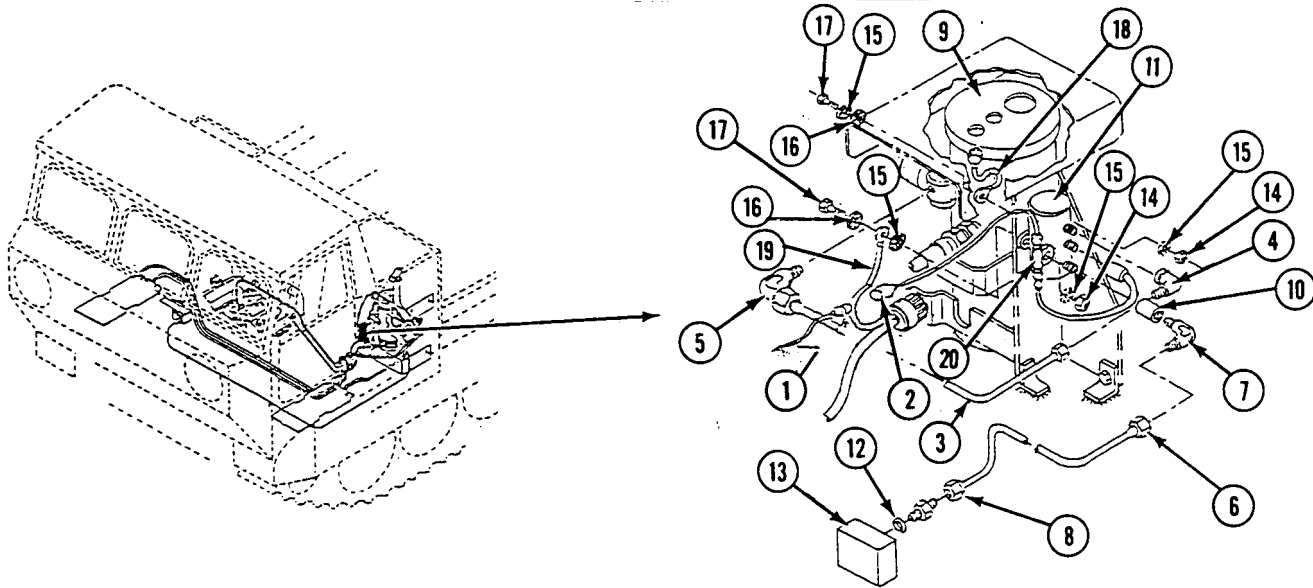
1. Disconnect circuit 402A lead (1) from fuel pump lead (2).
2. Disconnect tube (3) from elbow (4) and elbow (5).
3. Disconnect tube (6) from elbow (7) and union (8).



REPLACE ENGINE COOLANT HEATER FUEL PUMP/FUEL LINES — Continued

0475 00

4. Remove elbow (5) from coolant heater (9).
5. Remove elbow (4), elbow (7), and nipple (10) from fuel pump (11).
6. Remove elbow (4) and elbow (7) from fuel pump (11).
7. Remove union (8) and preformed packing (12) from manifold block (13). Discard preformed packing.
8. Remove two lock nuts (14), four lock washers (15), two washers (16), screws (17), ground lead (18), ground lead (19), capacitor (20), and fuel pump (11) from bracket (21). Discard lock washers and lock nuts.



INSTALLATION

NOTE

For M548A1, do Step 3.

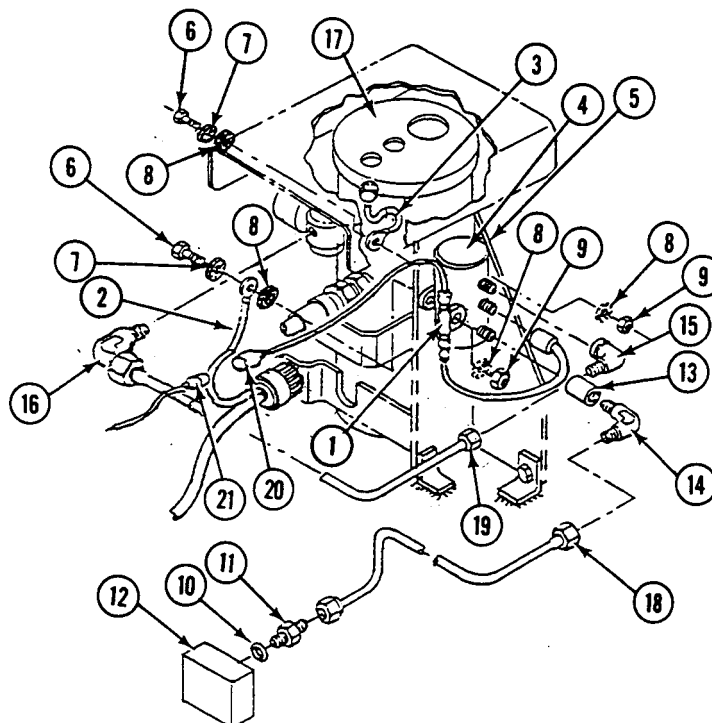
For M548A3, do Step 4.

1. Place capacitor (1), ground lead (2), ground lead (3), and fuel pump (4) on bracket (5). Secure with two screws (6), washers (7), four new lock washers (8), and two new lock nuts (9).
2. Install new preformed packing (10) and union (11) in manifold block (12).

NOTE

On M548A3 make sure elbow (14) points down and elbow (15) points up.

3. Install nipple (13), elbow (14), and elbow (15) in fuel pump (4).
4. Install elbow (14) and elbow (15) in fuel pump (4).
5. Install elbow (16) in coolant heater (17).
6. Connect tube (18) to union (11) and elbow (14).
7. Connect tube (19) to elbow (16) and elbow (15).
8. Connect fuel pump lead (20) to circuit 402A lead (21).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start coolant heater (see your -10).
3. Check for leaks and proper operation of coolant heater.
4. Stop coolant heater (see your -10).
5. Install top left access grille or (see your -10 or (WP 0390 00)).
6. Install power plant rear access door/panel (see your -10).

END OF TASK

REPLACE BATTERY BOX HEAT EXCHANGER/HOSES/FITTINGS

0476 00

THIS WORK PACKAGE COVERS:

Removal (page 0476 00-1).
 Installation (page 0476 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Batteries removed (WP 0290 00 or WP 0293 00)
 Top left access grille removed (see your -10 or
 WP 0390 00)

Materials/Parts

Sealing compound (WP 0542 00, Item 36)
 Coolant
 Lock nut (3)

Personnel Required

Unit Mechanic

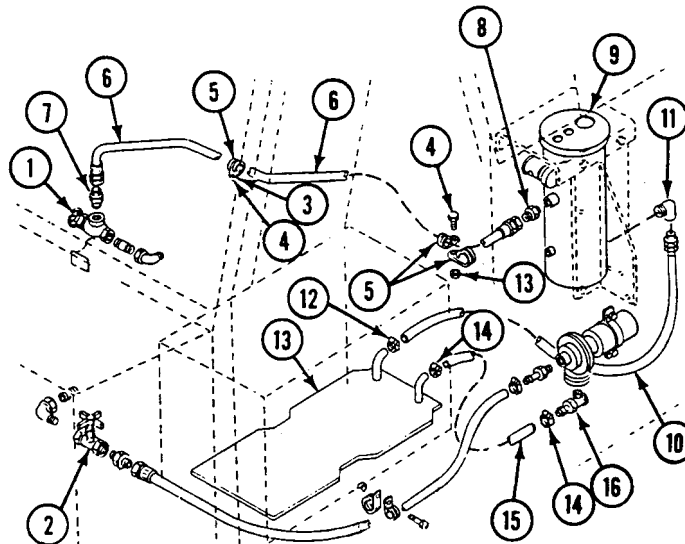
REMOVAL

1. Turn coolant valve (1) and coolant valve (2) off.

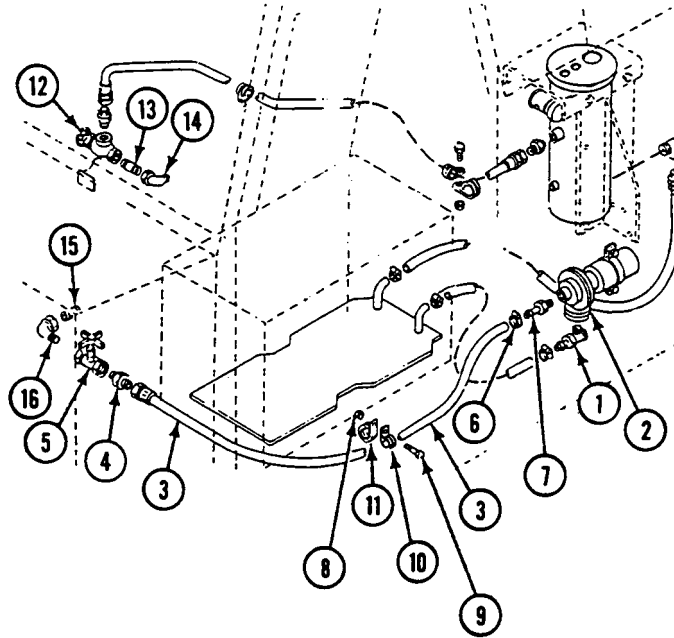
NOTE

Cap or cover lines to prevent fluid leaks.

2. Remove two lock nuts (3), screws (4), and three clamps (5) that secure hose (6) to engine oil filler tube and battery box. Discard lock nuts.
3. Disconnect hose (6) from nipple (7). Remove nipple from coolant valve (1).
4. Disconnect hose (6) from nipple (8). Remove nipple from coolant heater (9).
5. Disconnect hose (10) from elbow (11). Remove elbow from coolant heater (9).
6. Remove clamp (12) and hose (10) from heat exchanger (13).
7. Remove two clamps (14) and hose (15) from heat exchanger (13) and valve (16). Remove heat exchanger from battery box.



8. Remove valve (1) from coolant pump (2).
9. Disconnect hose (3) from nipple (4). Remove nipple from coolant valve (5).
10. Remove clamp (6) from hose (3). Disconnect hose from adapter (7).
11. Remove adapter (7) from coolant pump (2).
12. Remove lock nut (8), screw (9), and clamp (10) from clamp (11). Discard lock nut.



INSTALLATION

NOTE

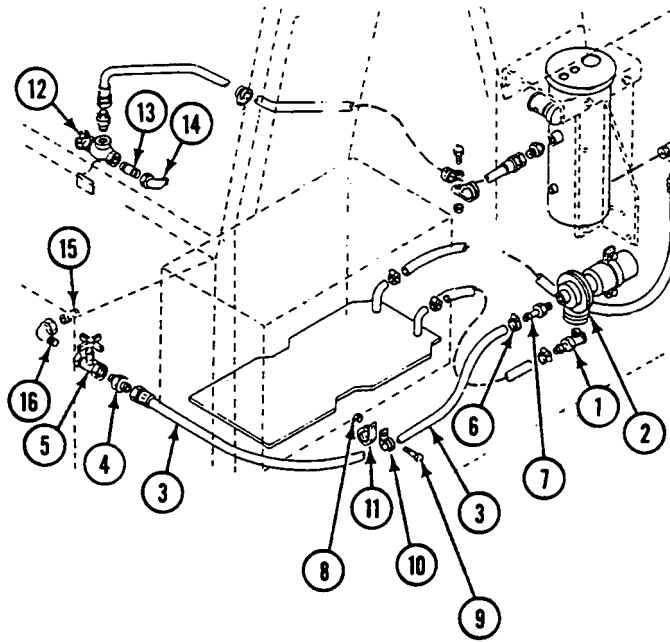
If coolant valve (12), coolant valve (5), nipple (13), elbow (14), nipple (15), and elbow (16) are removed, drain carrier cooling system (WP 0213 00) or (WP 0214 00).

NOTE

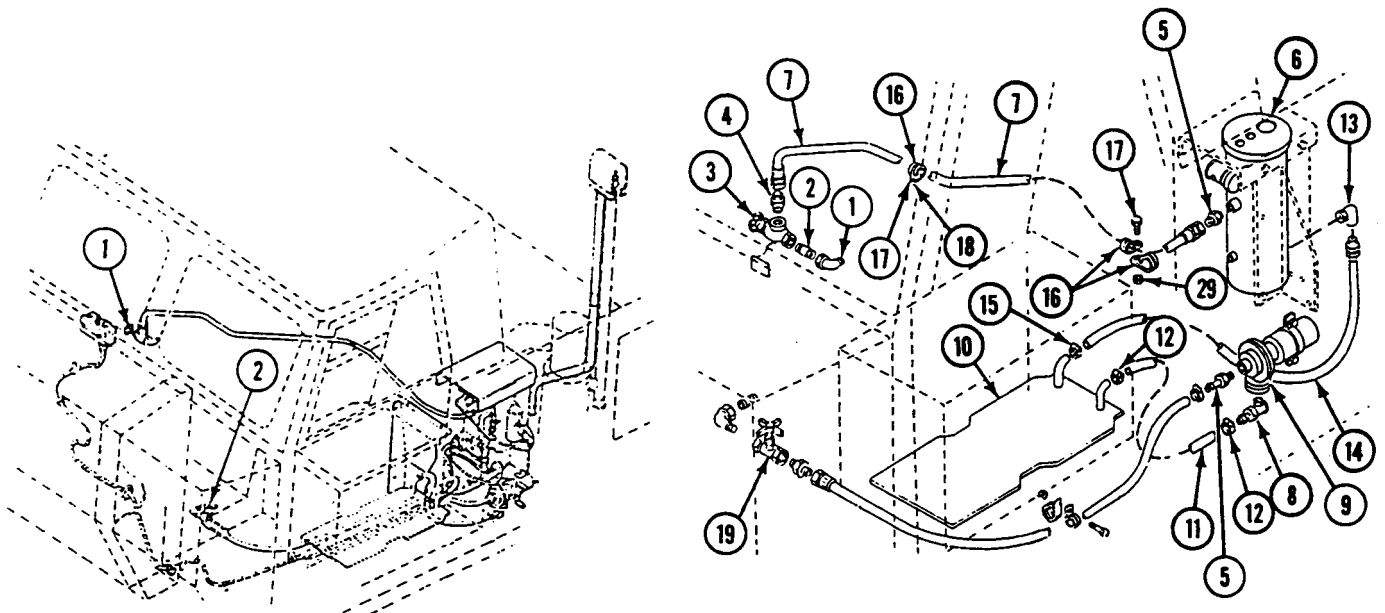
Apply a light coat of sealing compound to outer tapered thread fittings before installation.

1. If removed, install nipple (15) in oil cooler housing.
2. If removed, install elbow (16) on nipple (15).
3. If removed, install coolant valve (5) on elbow (16).
4. Install nipple (4) in coolant valve (5).
5. Install adapter (7) in coolant pump (2).
6. Secure hose (3) and clamp (10) to clamp (11) with screw (9) and new lock nut (8).
7. Connect hose (3) to nipple (4).

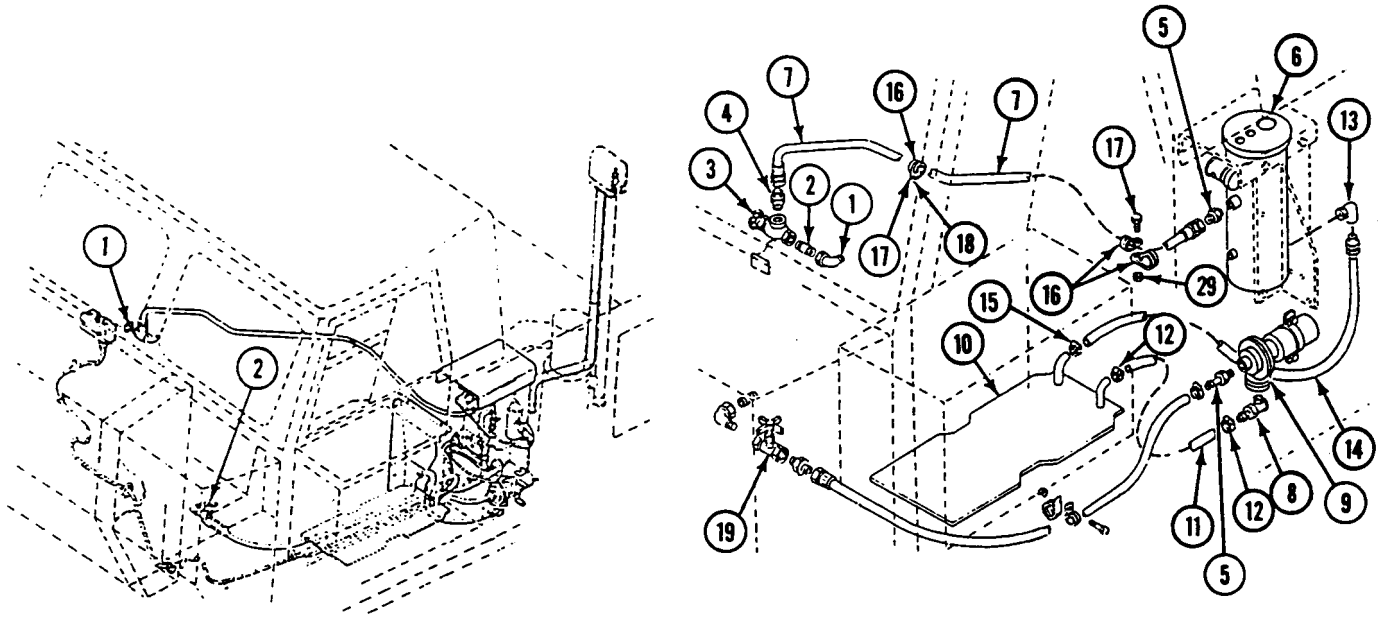
8. Secure hose (3) to adapter (7) with clamp (6).



9. If removed, install elbow (1) in engine block.
10. If removed, install nipple (2) in elbow (1).
11. If removed, install coolant valve (3) on nipple (2).
12. Install nipple (4) in coolant valve (3).
13. Install nipple (5) in coolant heater (6).
14. Connect hose (7) to nipple (5) and nipple (4).
15. Install valve (8) in coolant pump (9).



16. Install heater exchanger (10) in battery box.
17. Connect hose (11) to valve (8) and heat exchanger (10). Secure hose with two clamps (12).
18. Install elbow (13) in coolant heater (6).
19. Connect hose (14) to elbow (13) and to heat exchanger (10). Secure hose to heat exchanger with clamp (15).
20. Secure hose (7) to battery box and engine oil filler tube with three clamps (16), two screws (17), and new lock nuts (18).
21. Turn coolant valve (19) and coolant valve (3) on.



FOLLOW-THROUGH STEPS

1. Install batteries (WP 0290 00) or (WP 0293 00).
2. If drained, fill carrier cooling system (WP 0212 00) or (WP 0214 00).
3. Start coolant heater (see your -10).
4. Check coolant heater for proper operation.
5. Stop coolant heater (see your -10).
6. Install top left access grille (see your -10 or (WP 0390 00)).

END OF TASK

REPLACE ENGINE COOLANT HEATER

0477 00

THIS WORK PACKAGE COVERS:

Removal (page 0477 00-1).
 Installation (page 0477 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead(s) disconnected (WP 0292 00)
 Top left access grille removed (see your -10 or
 WP 0390 00)

Materials/Parts

Lock washer

Personnel Required

Unit Mechanic

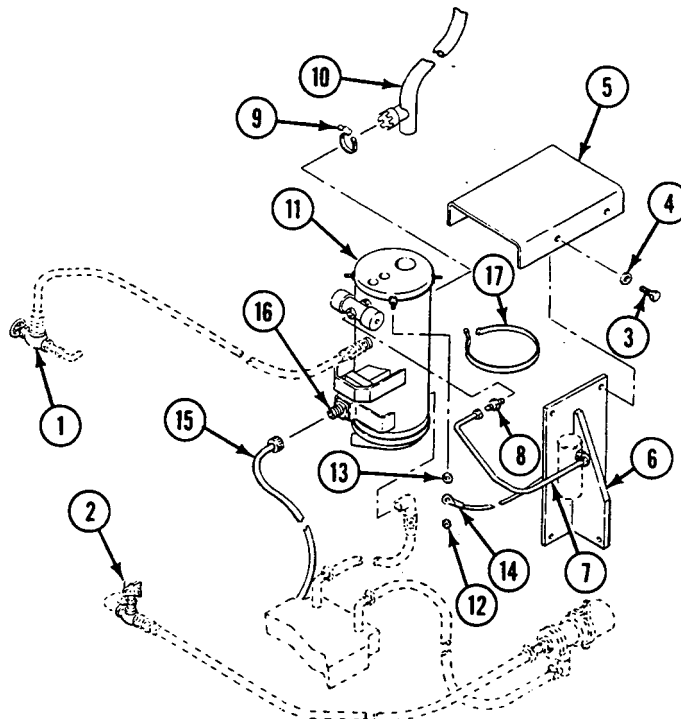
REMOVAL

NOTE

Removal procedures for M548A1 and M548A3 engine coolant heater are similar. M548A3 coolant heater does not have a cover. M548A1 coolant heater is shown.

For M548A1, do Step 2.

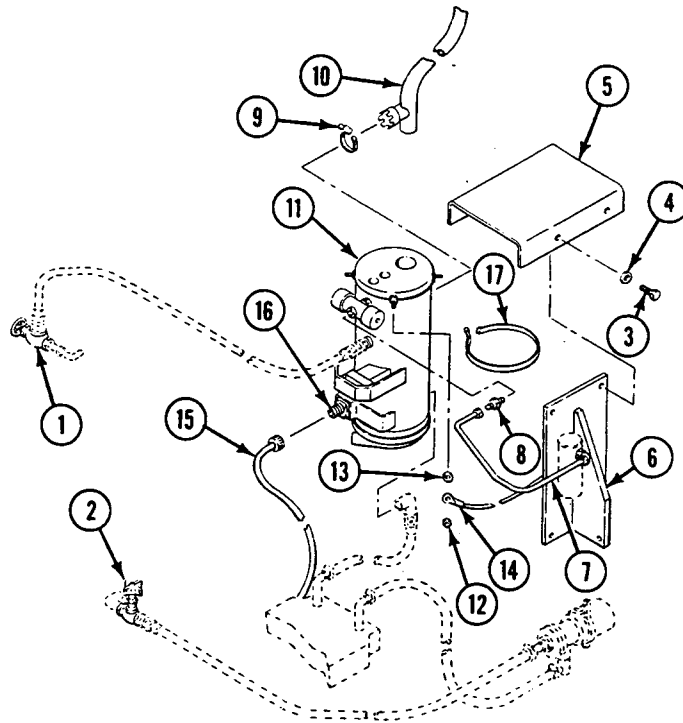
1. Turn off coolant valve (1) and coolant valve (2).
2. Remove two screws (3) and washers (4) that secure heater cover plate (5) to mounting bracket (6). Remove plate.
3. Disconnect engine inlet and plate outlet coolant hoses from engine coolant heater (WP 0476 00).



REPLACE ENGINE COOLANT HEATER — Continued

0477 00

4. Disconnect pump-to-heater fuel tube (7) from heater nipple (8).
5. Loosen clamp (9) that secures lower exhaust pipe (10) to engine coolant heater (11). Disconnect pipe from heater.
6. Remove engine coolant heater ground lead nut (12) and lock washer (13). Disconnect heater ground lead (14) from end cover on heater. Discard lock washer.
7. Disconnect wiring harness (15) from receptacle (16) on engine coolant heater (11).
8. Loosen two mounting clamps (17) that secure engine coolant heater (11) to mounting bracket (6). Remove engine coolant heater.
9. If engine coolant heater (11) is to be replaced, remove heater nipple (8) from engine coolant heater.



INSTALLATION

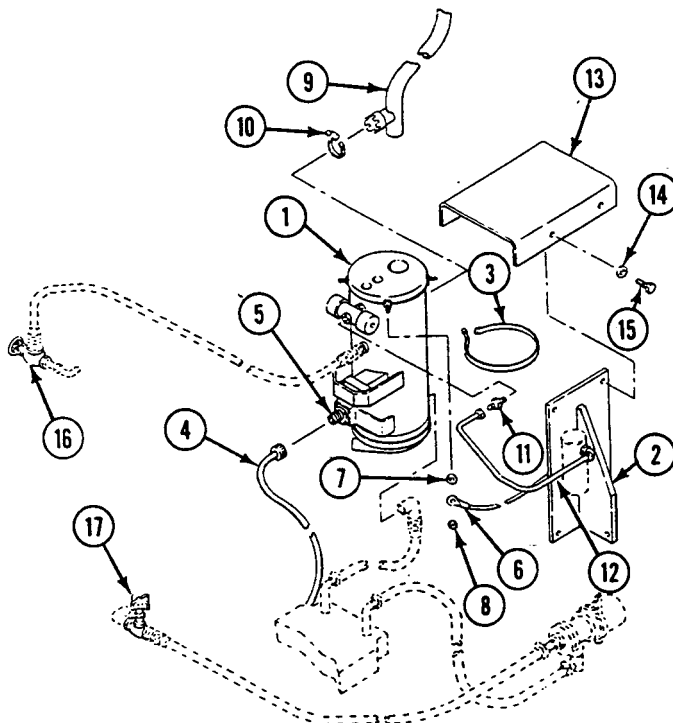
NOTE

Installation procedures for M548A1 and M548A3 engine coolant heater are similar. M548A3 coolant heater does not have a cover. M548A1 coolant heater is shown.

NOTE

For M548A1, do Step 8.

1. Place engine coolant heater (1) on bracket (2). Secure with two clamps (3).
2. Connect wiring harness (4) to receptacle (5) on engine coolant heater (1).
3. Connect ground lead (6) to engine coolant heater (1). Secure with new lock washer (7) and nut (8).
4. Connect exhaust pipe (9) to engine coolant heater (1). Secure with clamp (10).
5. If replacement engine coolant heater (1) is being installed, install heater nipple (11) in heater.
6. Connect pump-to-heater fuel tube (12) to heater nipple (11).
7. Connect inlet and outlet hoses to engine coolant heater (WP 0476 00).
8. Place cover plate (13) on bracket (2). Secure with two washers (14) and screws (15).
9. Open coolant valve (16) and coolant valve (17).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Start engine coolant heater (see your -10).
3. Check engine coolant heater for proper operation.
4. Stop engine coolant heater (see your -10).
5. Install top left access grille (see your -10 or (WP 0390 00)).

END OF TASK

REPLACE ENGINE COOLANT HEATER COOLANT PUMP

0478 00

THIS WORK PACKAGE COVERS:

- Removal (page 0478 00-1).
- Installation (page 0478 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery negative lead(s) disconnected (WP 0292 00)
- Top left access grille removed (see your -10 or WP 0390 00)

Materials/Parts

Lock washer

Personnel Required

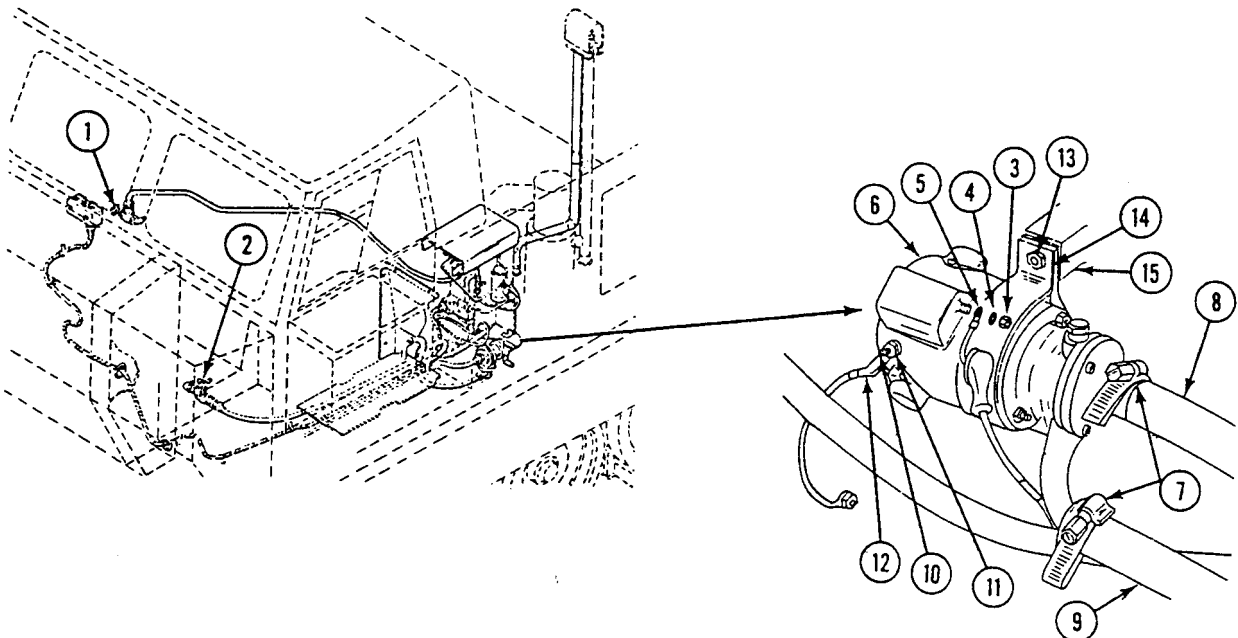
Unit Mechanic

REMOVAL

NOTE

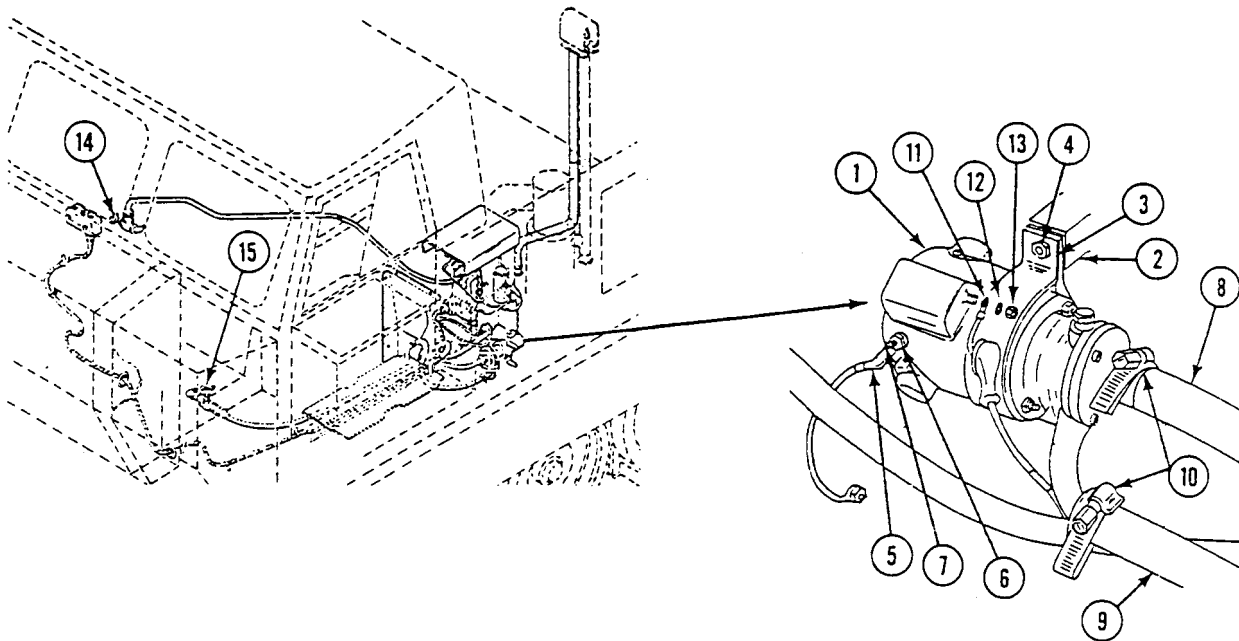
M548A1 and M548A3 coolant pumps are removed and installed the same way. M548A1 coolant pump is shown.

1. Turn off coolant valve (1) and coolant valve (2).
2. Remove nut (3), washer (4), and circuit 402A lead (5) from coolant pump (6).
3. Loosen two clamps (7). Remove hose (8) and hose (9) from coolant pump (6).
4. Remove nut (10), lock washer (11), and ground lead (12) from coolant pump (6). Discard lock washer.
5. Remove two screws (13), clamp (14), and coolant pump (6) from mount (15).



INSTALLATION

1. Place coolant pump (1) on mount (2). Secure with clamp (3) and two screws (4).
2. Secure ground lead (5) to coolant pump (1) with new lock washer (6) and nut (7).
3. Install hose (8) and hose (9) on coolant pump (1). Secure with two clamps (10).
4. Secure circuit 402A lead (11) to coolant pump (1) with washer (12) and nut (13).
5. Open coolant valve (14) and coolant valve (15).

**FOLLOW-THROUGH STEPS**

1. Turn heater fuel pump to OFF (see your -10).
2. Connect battery negative lead(s) (WP 0292 00).
3. Move run-off-start switch to START (see your -10). Run coolant heater pump for a maximum of 30 seconds, then shut it off.
4. Turn coolant heater fuel pump ON (see your -10).
5. Start coolant heater (see your -10).
6. Check coolant heater for proper operation and leaks.
7. Stop coolant heater (see your -10).
8. Turn coolant heater fuel pump OFF (see your -10).
9. Install top left access grille (see your -10 or (WP 0390 00)).

END OF TASK

**REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER
EXHAUST PIPES GUARD (M548A1)**

0479 00

THIS WORK PACKAGE COVERS:

Removal (page 0479 00-2).
Installation (page 0479 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
Open End Wrench Set (WP 0541 00, Item 60)

References

See your -10

Materials/Parts

Lock nut (14)

Equipment Condition

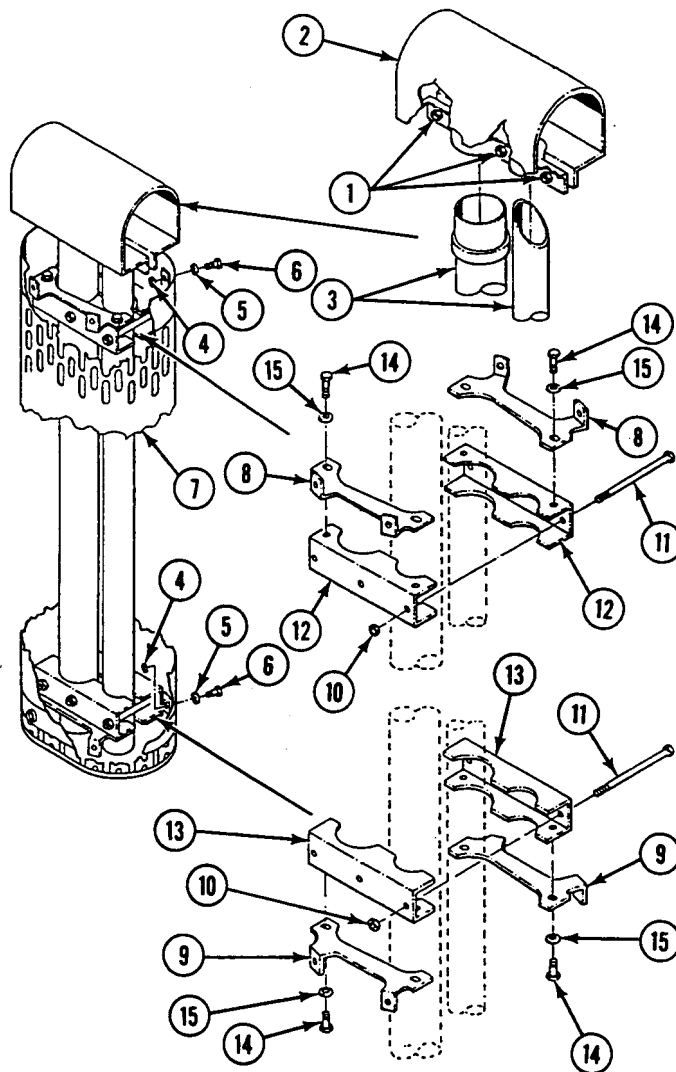
Engine stopped (see your -10)
Carrier blocked (see your -10)

**REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES
GUARD (M548A1) — Continued**

0479 00

REMOVAL

1. Remove left side intake grille (WP 0390 00).
2. Loosen three nuts (1) and remove exhaust hood (2) from heater exhaust pipes (3).
3. Remove eight lock nuts (4), washers (5), and screws (6) from guard (7), two mounting brackets (8), and two mounting brackets (9). Remove guard from four mounting brackets. Discard lock nuts.
4. Remove three lock nuts (10) and screws (11) from two upper double angle brackets (12). Remove two upper double angle brackets with two mounting brackets (8) from heater exhaust pipes (3). Discard lock nuts.
5. Remove three lock nuts (10) and screws (11) from two lower double angle brackets (13). Remove two lower double angle brackets with two mounting brackets (9) from heater exhaust pipes (3). Discard lock nuts.
6. Remove eight screws (14) and washers (15) from two mounting brackets (8), two mounting brackets (9), upper double angle brackets (12), and lower double angle brackets (13).

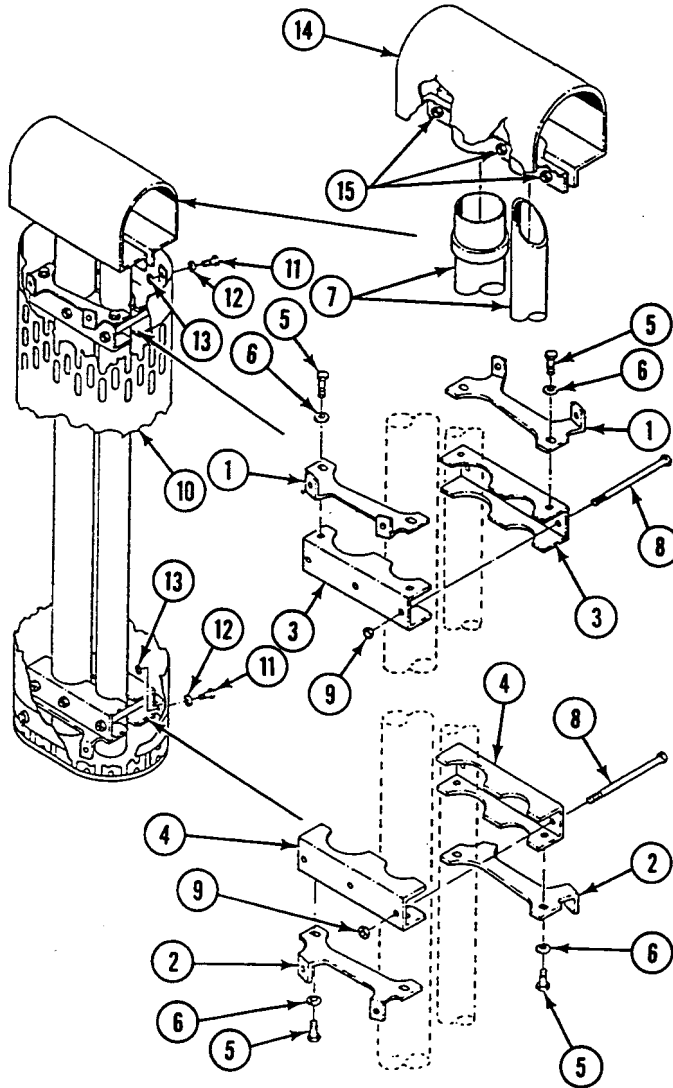


REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES
 GUARD (M548A1) — Continued

0479 00

INSTALLATION

1. Install two mounting brackets (1) and two mounting brackets (2) on upper double angle brackets (3) and lower double angle brackets (4) with eight screws (5) and washers (6).



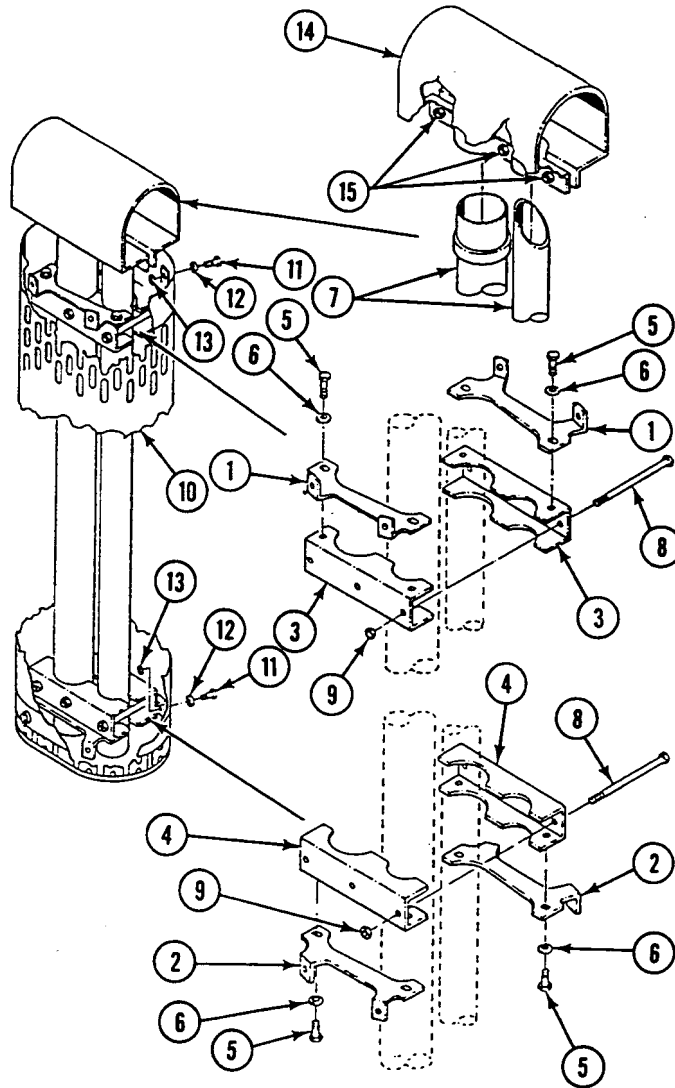
**REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES
GUARD (M548A1) — Continued**

0479 00

NOTE

When installing double angle brackets and mounting brackets on heater exhaust pipes, make sure mounting brackets on upper part of exhaust pipes are facing up, and mounting brackets on lower part of exhaust pipes are facing down.

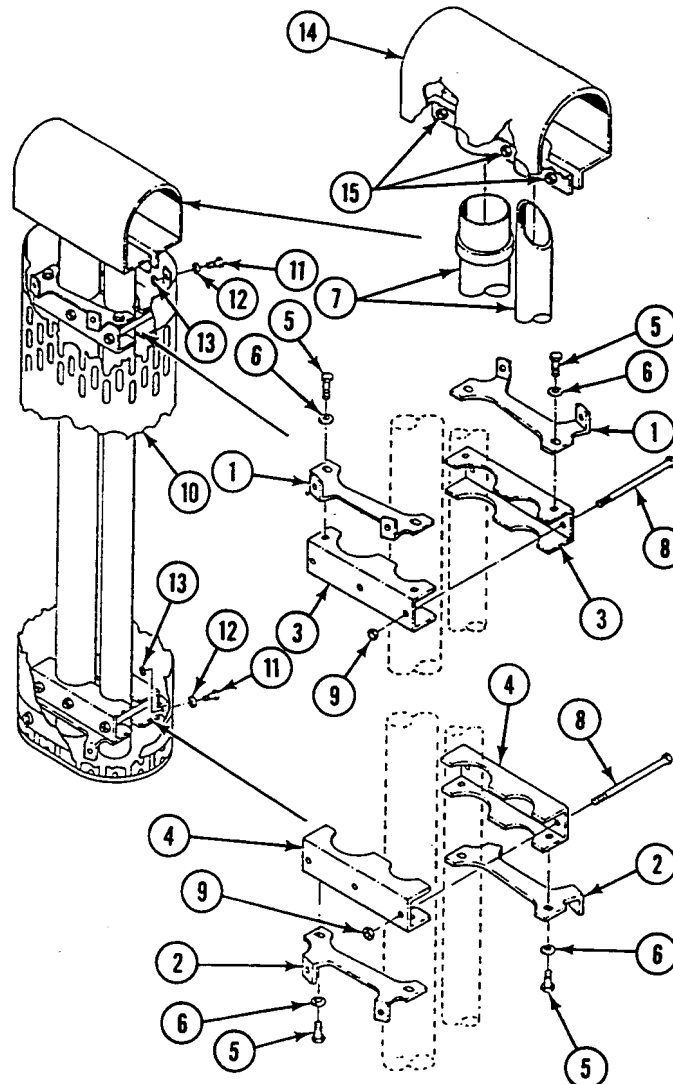
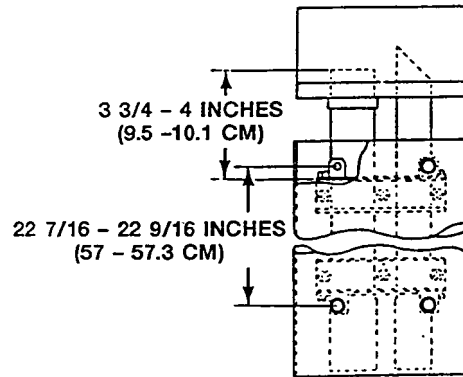
2. Install two upper double angle brackets (3) and mounting brackets (1) on heater exhaust pipes (7) so bottom of each mounting bracket is 3 3/4-4 inches (9.5-10.1 cm) from top of exhaust pipes with three screws (8) and new lock nuts (9). Finger tighten nuts only.



**REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES
GUARD (M548A1) — Continued**

0479 00

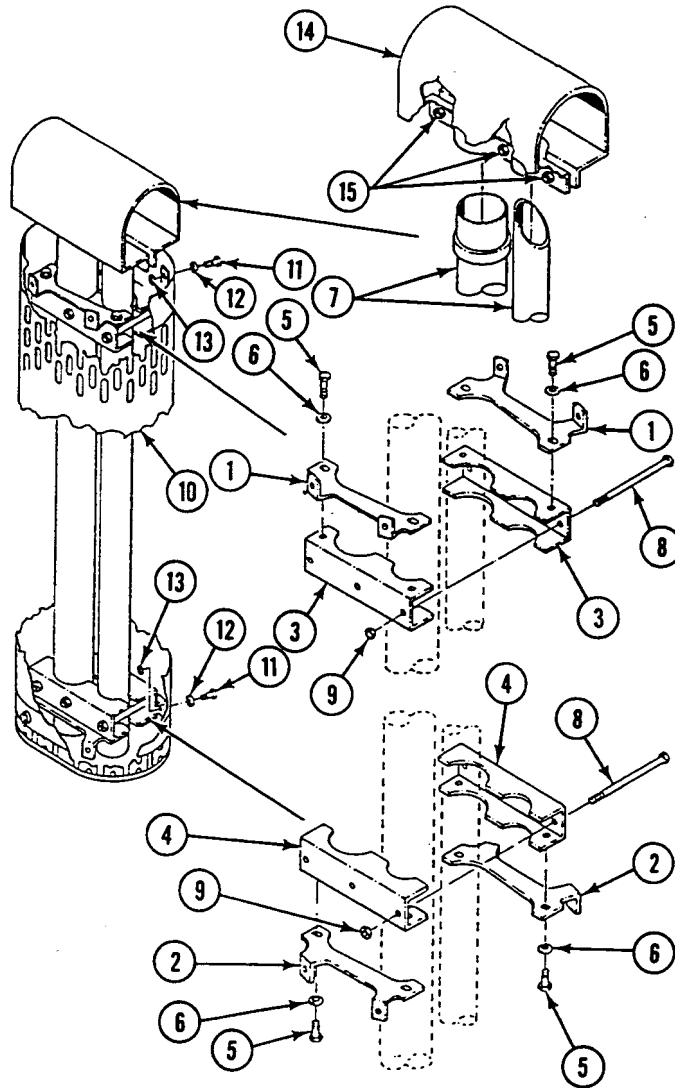
3. Install two lower double angle brackets (4) and mounting brackets (2) on heater exhaust pipes (7) 22 7/16-22 9/16 inches (57-57.3 cm) from upper double angle brackets (2) with three screws (8) and new lock nuts (9). Measure from centerline to centerline.



**REPLACE ENGINE COOLANT/VEHICLE COMPARTMENT HEATER EXHAUST PIPES
GUARD (M548A1) — Continued**

0479 00

4. Tighten lock nuts (9) on upper double angle brackets (3) and lower double angle brackets (4).
5. Place guard (10) over heater exhaust pipes (7) with holes on guard aligned with holes on mounting bracket (1) and mounting bracket (2).
6. Install guard (10) on mounting bracket (1) and mounting bracket (2) with eight screws (11), washers (12), and new lock nuts (13).
7. Install exhaust hood (14) on heater exhaust pipes (7) and tighten two nuts (15).
8. Install left side intake grille (WP 0390 00).



END OF TASK

REPLACE ENGINE COOLANT HEATER EXHAUST SYSTEM (M548A1)

0480 00

THIS WORK PACKAGE COVERS:

Removal (page 0480 00-2).
 Installation (page 0480 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead disconnected (WP 0292 00).
 Engine coolant heater exhaust guard removed
 (WP 0479 00)
 Top left access grille removed (WP 0390 00)

Materials/Parts

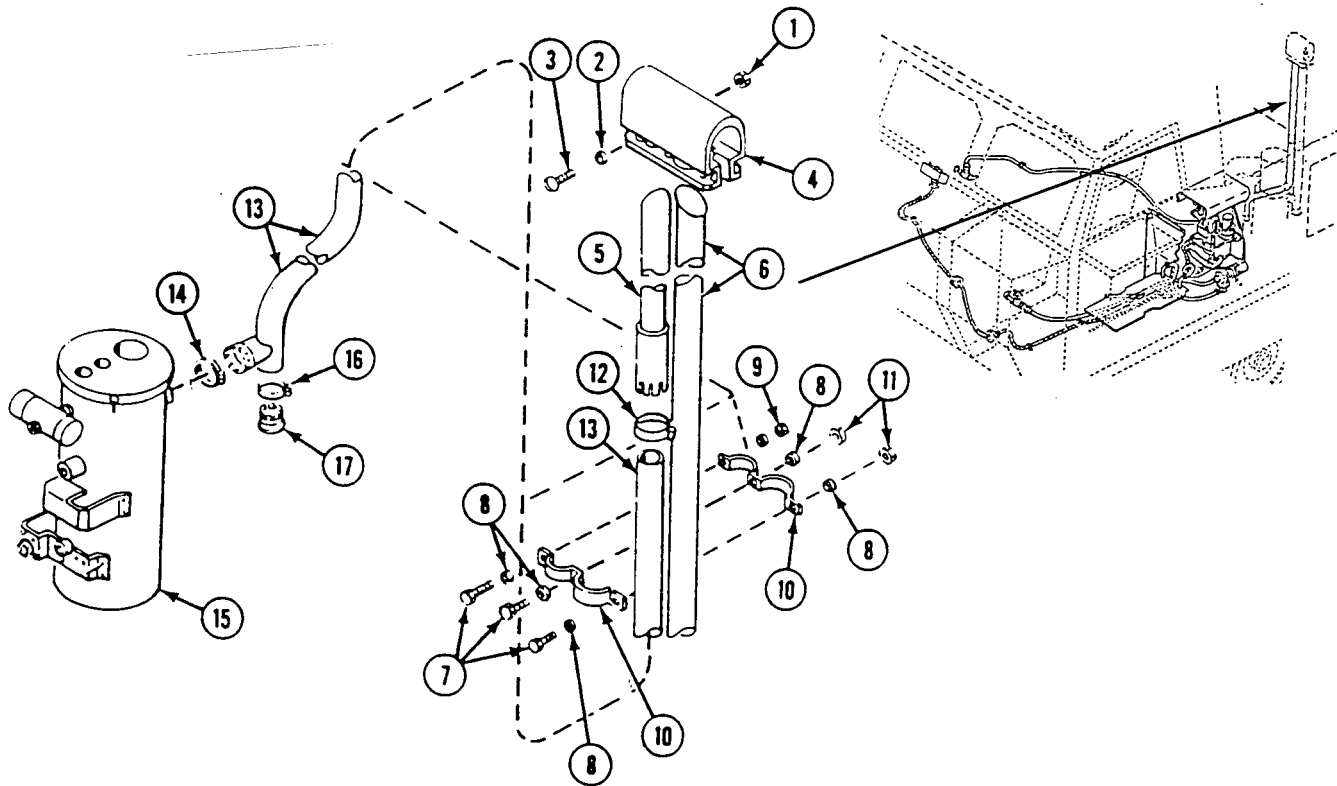
Lock nut
 Lock washer (3)

Personnel Required

Unit Mechanic

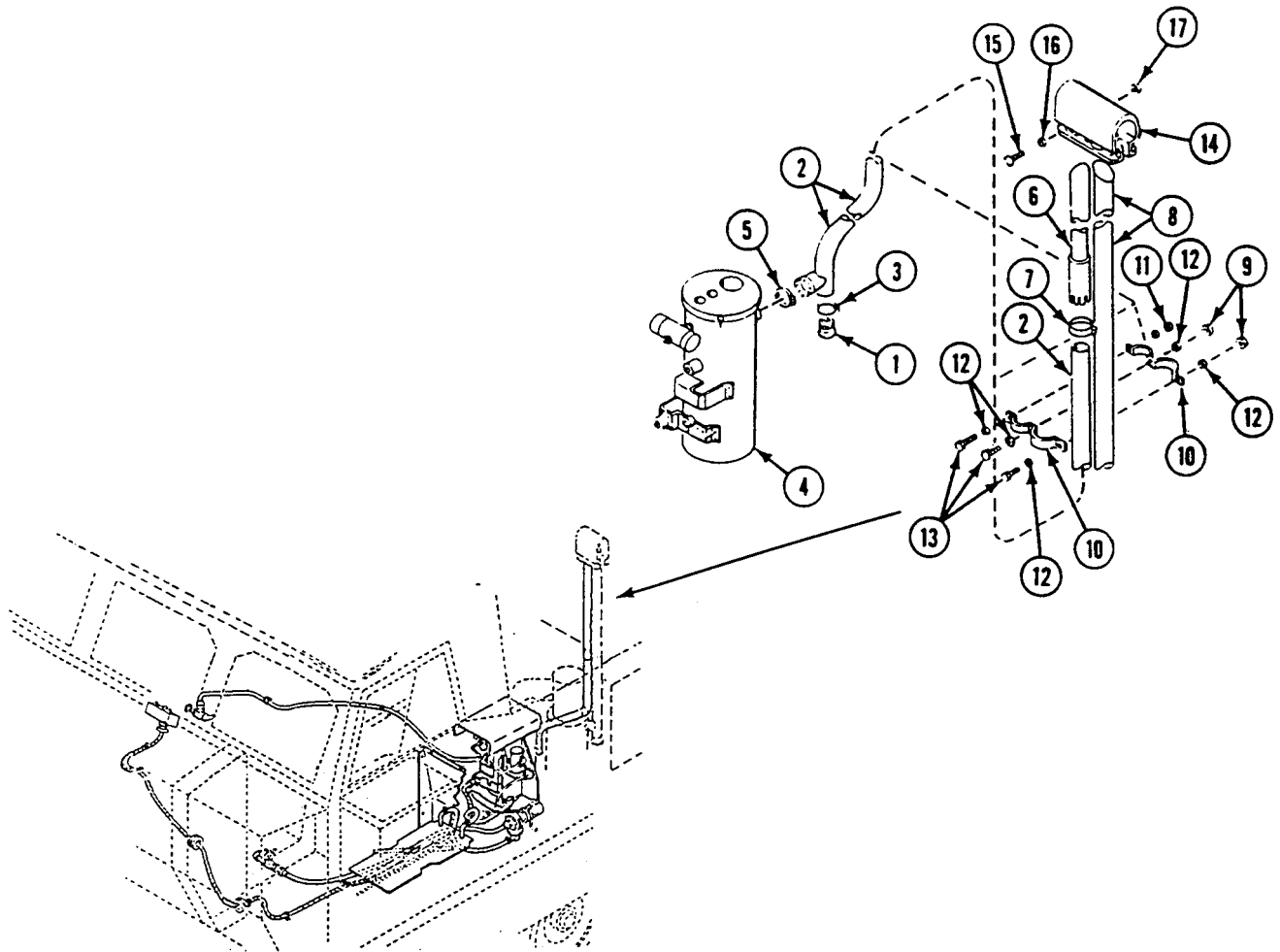
REMOVAL

1. Remove three nuts (1), lock washers (2), screws (3), and hood (4) from exhaust pipe (5) and exhaust pipe (6). Discard lock washers.
2. Remove three screws (7), six washers (8), lock nut (9), and two clamps (10) that secure exhaust pipe (5) and exhaust pipe (6) to two weld nuts (11). Discard lock nut.
3. Remove clamp (12) and exhaust pipe (5) from exhaust pipe (13).
4. Remove clamp (14) and exhaust pipe (13) from coolant heater (15).
5. Remove clamp (16) and moisture trap (17) from exhaust pipe (13).



INSTALLATION

1. Install moisture trap (1) in exhaust pipe (2). Secure with clamp (3).
2. Place exhaust pipe (2) on coolant heater (4). Secure with clamp (5).
3. Install exhaust pipe (6) over exhaust pipe (2). Secure with clamp (7).
4. Secure exhaust pipe (2), exhaust pipe (8), and exhaust pipe (6) to two weld nuts (9) with two clamps (10), new lock nut (11), six washers (12), and three screws (13).
5. Place hood (14) on exhaust pipe (8) and exhaust pipe (6). Secure with three screws (15), new lock washers (16), and nuts (17).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).
2. Install top left access grille (WP 0390 00).
3. Install engine coolant heater exhaust guard (WP 0479 00).

END OF TASK

REPLACE ENGINE COOLANT HEATER EXHAUST SYSTEM (M548A3)

0481 00

THIS WORK PACKAGE COVERS:

Removal (page 0481 00-2).
 Installation (page 0481 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

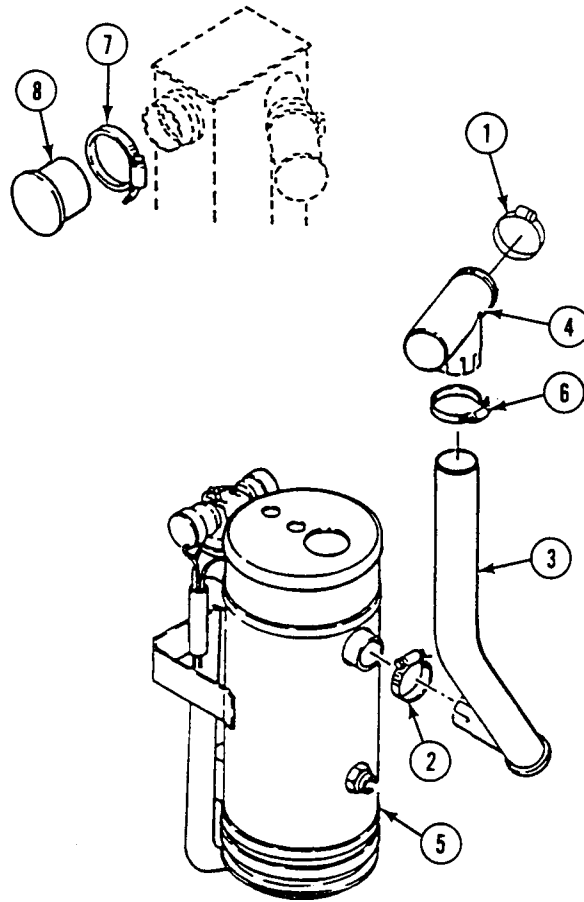
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 MASTER SWITCH OFF (see your -10)
 Both battery negative leads disconnected (WP 0292 00)
 Top left access grille removed (see your -10)

Personnel Required

Unit Mechanic

REMOVAL

1. Loosen clamp (1) and clamp (2) and remove exhaust pipe (3) with adapter (4) from coolant heater (5) and exhaust housing.
2. Loosen clamp (6) and remove adapter (4) from exhaust pipe (3).
3. Loosen clamp (7) and remove cap (8) from exhaust housing.

**INSTALLATION**

1. Install cap (8) and clamp (7) on exhaust housing. Tighten clamp.
2. Install adapter (4) and clamp (6) on exhaust pipe (3). Tighten clamp.
3. Align adapter with exhaust housing and exhaust pipe with coolant heater (5). Tighten clamp (1) and clamp (2).

FOLLOW-THROUGH STEPS

1. Install top left access grille (see your -10).
2. Connect both battery negative leads (WP 0292 00).

END OF TASK

REMOVE/INSTALL MATERIAL HANDLING KIT

0482 00

THIS WORK PACKAGE COVERS:

Removal (page 0482 00-1).
 Installation (page 0482 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Personnel Required

Unit Mechanic

Engine stopped (see your -10)

Carrier blocked (see your -10)

REMOVAL

1. Remove rifle racks (WP 0488 00).
2. Remove bulkhead protector (WP 0487 00).
3. Remove personnel seats and safety belts (WP 0486 00).
4. Remove hoist and stops (WP 0484 00).
5. Remove beam, beam supports, and stops (WP 0483 00).

INSTALLATION

NOTE

If cargo cover is not installed, install two bolt-on bows on hull (WP 0417 00).

1. Install beam, beam supports, and stops (WP 0483 00).
2. Install hoist and stops (WP 0484 00).
3. Install personnel seats and safety belts (WP 0486 00).
4. Install bulkhead protector (WP 0487 00).
5. Install rifle racks (WP 0488 00).

END OF TASK

REPLACE BEAM/BEAM SUPPORTS/STOPS

0483 00

THIS WORK PACKAGE COVERS:

- Removal (page 0483 00-1).
- Disassembly (page 0483 00-2).
- Assembly (page 0483 00-2).
- Installation (page 0483 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock nut
Lock washer (2)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Hoist removed (WP 0484 00)

REMOVAL

NOTE

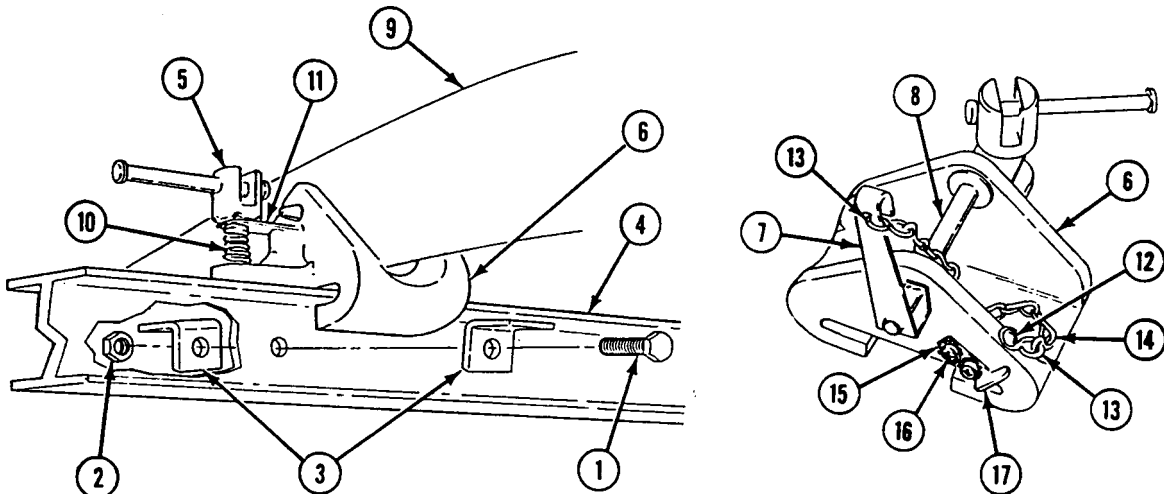
There are two beam supports. They are each removed and installed the same way.

1. Remove screw (1), lock nut (2), and two center stops (3) from beam (4). Discard lock nut.

NOTE

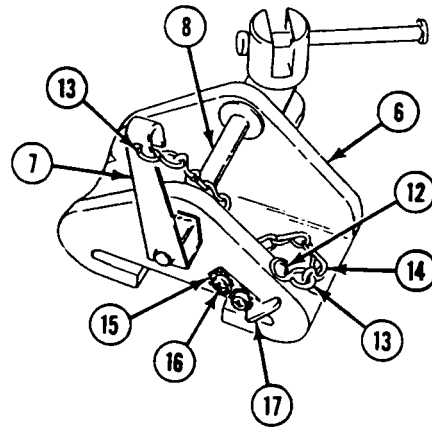
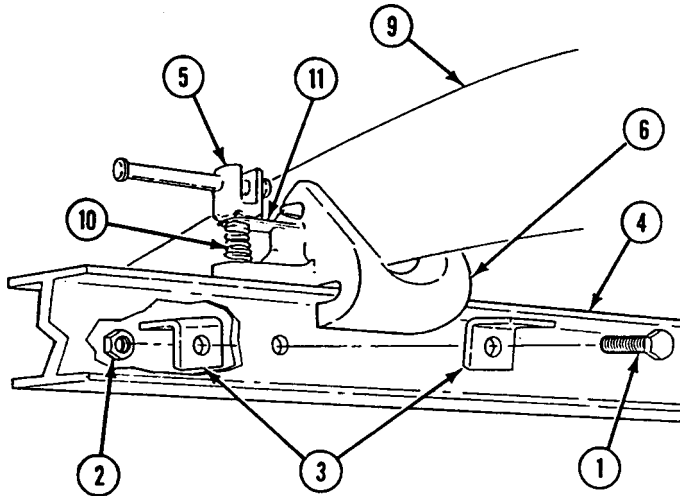
Beams are heavy and awkward. Use helper to remove and install beams.

2. Loosen beam lock (5) on each beam support (6). Slide beam (4) out of supports.
3. Turn retaining pin handle (7) of retaining pin (8) up and pull pin from beam support (6). Remove support from bolt-on bow support (9).



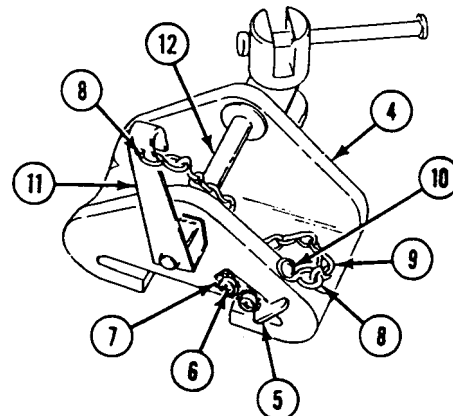
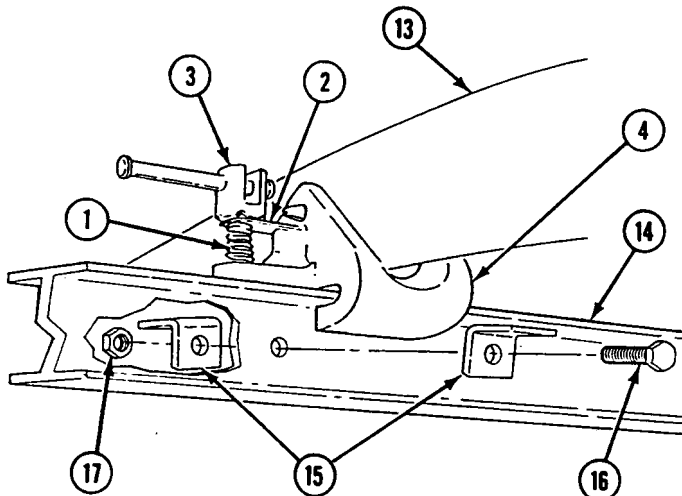
DISASSEMBLY

1. Unscrew and remove beam lock (5), spring (10), and bolt lock (11) from beam support (6).
2. Remove screw (12), two S-hooks (13), and chain (14) from beam support (6). Remove S-hook from retaining pin handle (7).
3. Remove two screws (15), lock washers (16), and one pin retainer (17) from beam support (6). Discard lock washers.



ASSEMBLY

1. Install spring (1), bolt lock (2), and beam lock (3) on beam support (4).
2. Place pin retainer (5) on beam support (4). Secure with two new lock washers (6) and screws (7).
3. Attach two S-hooks (8) to chain (9). Secure S-hook at one end to beam support (4) with screw (10).
4. Install other S-hook (8) on handle (11) of retaining pin (12).



INSTALLATION

NOTE

Bend or close S-hooks so they will not interfere with pin removal and installation.

1. Place beam support (4) on bolt-on bow support (13). Secure with retaining pin (12).

NOTE

Beams can be placed in several positions. If beam is to be angled, one beam support must be at center of bolt-on bow support (see your -10).

2. Install beam (14) on two beam supports (4). Tighten beam locks (3).

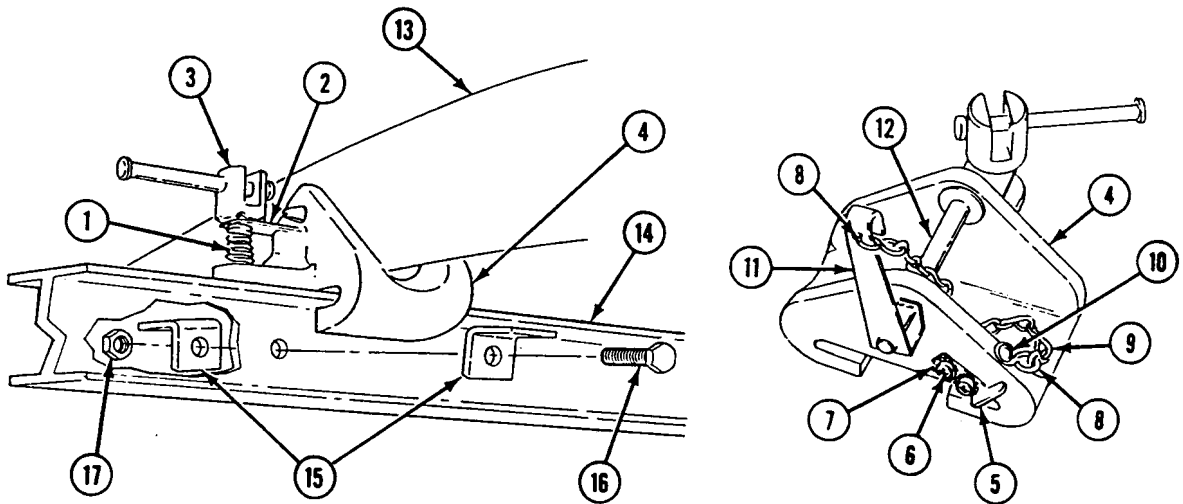
CAUTION

When you install beam, make sure center stops are in front of rear beam support and beam locks are toward front.

NOTE

To prepare hoist and beam for travel, see your -10.

3. Install two center stops (15) at each beam support (4) with screw (16) and new lock nut (17).



FOLLOW-THROUGH STEPS

1. Install hoist (WP 0484 00).

END OF TASK

REPLACE HOIST/STOPS/SLING

0484 00

THIS WORK PACKAGE COVERS:

- Removal (page 0484 00-1).
- Disassembly (page 0484 00-2).
- Assembly (page 0484 00-3).
- Installation (page 0484 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10
TB 43-0142

Materials/Parts

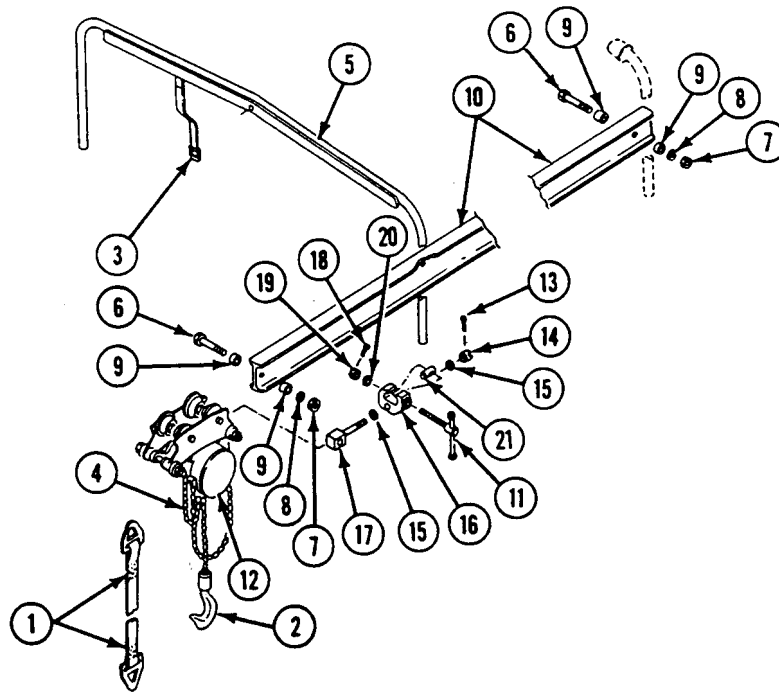
Cotter pin
Lock nut (2)
Cotter pin

Equipment Condition

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

REMOVAL

1. Remove sling (1) from hoist chain hook (2). Remove strap (3) and release chain (4) from bow support (5).

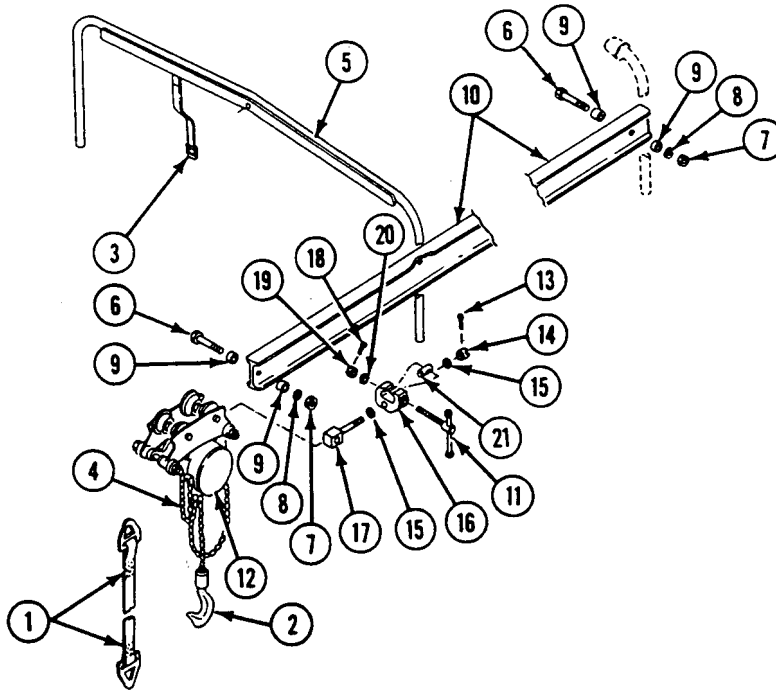


2. Remove two screws (6), lock nuts (7), washers (8), and four beam end stops (9) from beam (10). Discard lock nuts.
3. Loosen trolley lock handle (11).

WARNING

Hoist weighs 77 lb (35 kg). You could be seriously injured when removing hoist. Removal of hoist requires two people.

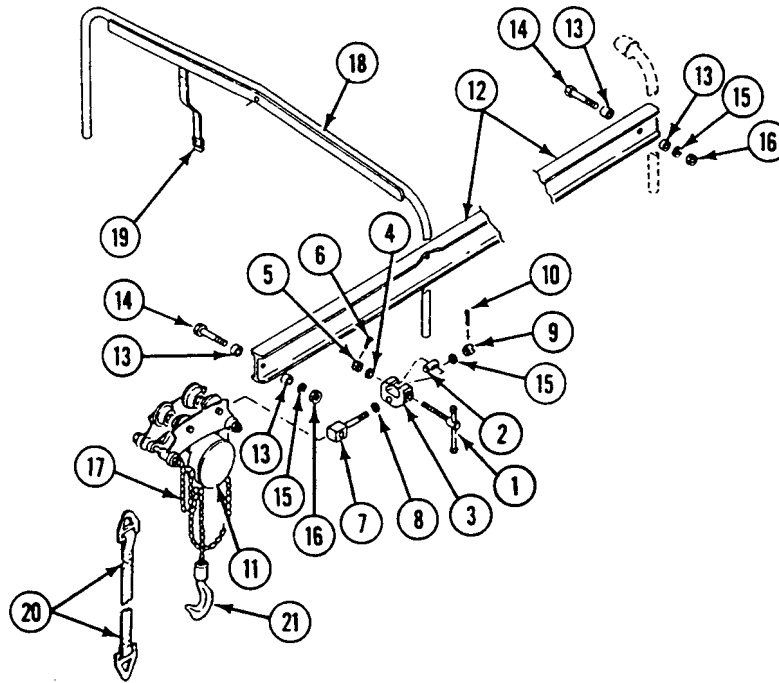
4. Remove hoist (12) from beam (10). Have helper assist.

**DISASSEMBLY**

1. Remove cotter pin (13), slotted nut (14), two washers (15), and trolley lock (16) from bolt (17) on hoist (12). Discard cotter pin.
2. Remove cotter pin (18), slotted nut (19), two washers (20), trolley lock handle (11), and nut (21) from trolley lock (16). Discard cotter pin.

ASSEMBLY

1. Install trolley lock handle (1) and nut (2) in trolley lock (3) with two washers (4) and one slotted nut (5). Secure slotted nut with new cotter pin (6).
2. Install assembled trolley lock (3) on bolt (7) with two washers (8) and one slotted nut (9). Secure slotted nut with new cotter pin (10).



INSTALLATION



Hoist weighs 77 lb (35 kg). You could be seriously injured when installing hoist. Installation of hoist requires two people.

1. Install hoist (11) on beam (12). Tighten trolley lock handle (1). Have helper assist.
2. Install four beam end stops (13) with two screws (14), washers (15), and new lock nuts (16).
3. Secure chain (17) to bow support (18) with strap (19).
4. Attach sling (20) to chain hook (21).

END OF TASK

REPAIR HOIST ASSEMBLY

0485 00

THIS WORK PACKAGE COVERS:

- Removal (page 0485 00-2).
- Installation (page 0485 00-7).
- Adjustment (page 0485 00-14).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Retaining Pliers Set (WP 0541 00, Item 32)
- Drive Pin Punch (WP 0541 00, Item 38)

References

TB 43-0142

Materials/Parts

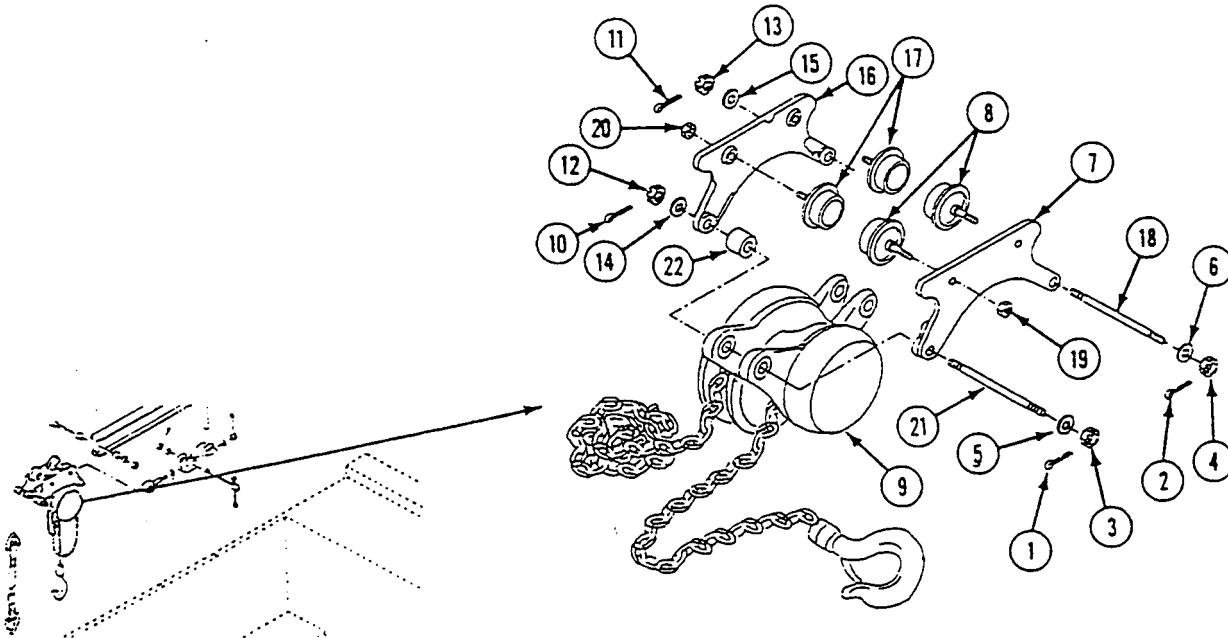
- Cotter pin (5)
- Cotter pin
- Lock washer (3)
- Lock washer (3)
- Lock washer (2)
- Lock washer

Equipment Condition

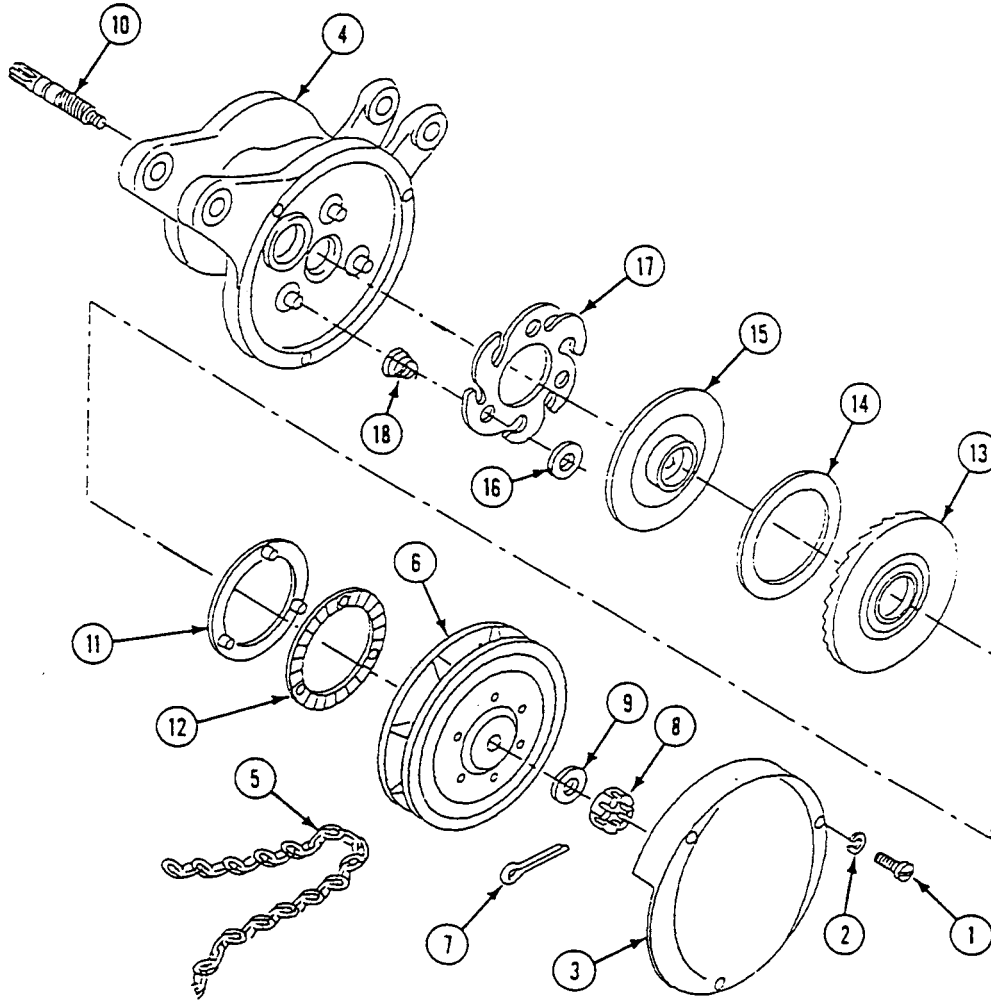
- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
 - Hoist removed from carrier (WP 0484 00)
-

REMOVAL

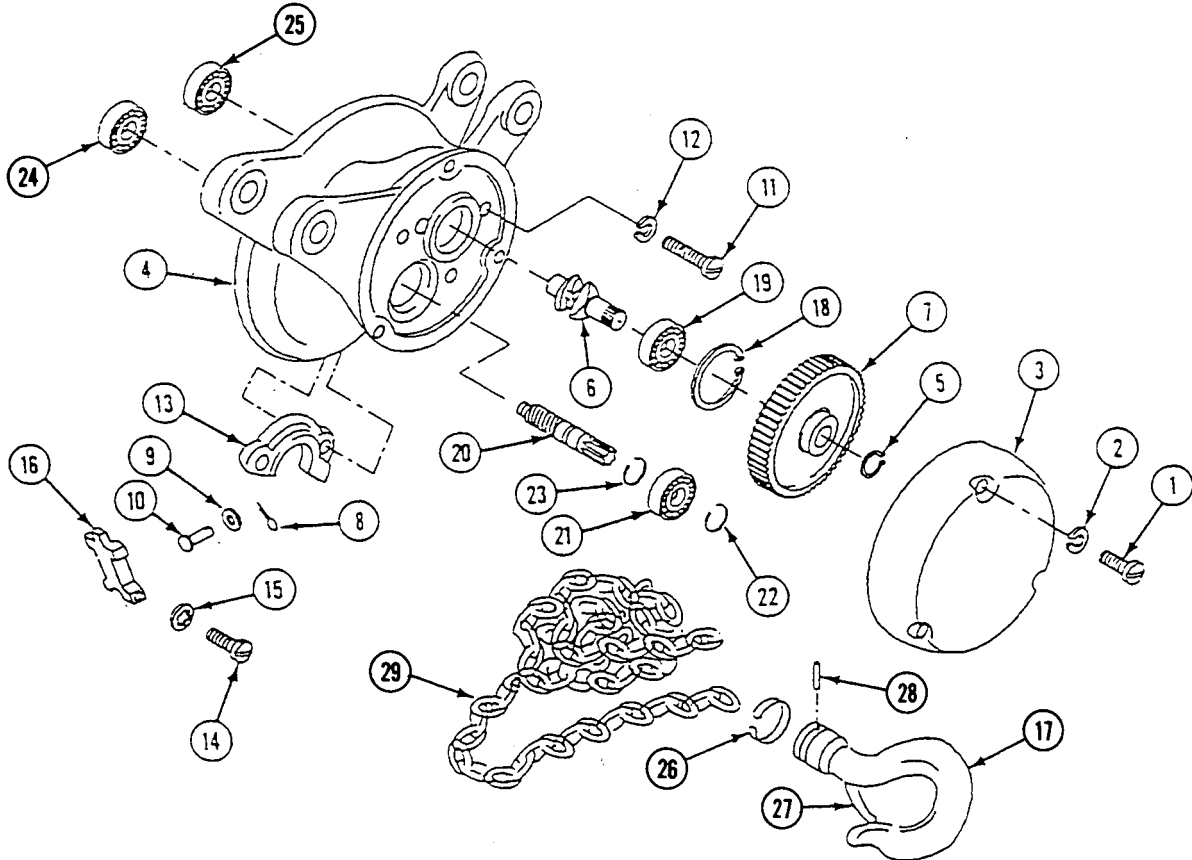
1. Remove right side cotter pin (1), right side cotter pin (2), nut (3), nut (4), washer (5), and washer (6) from right side plate (7), two right side track wheels (8), and hoist assembly (9). Discard cotter pins.
2. Remove left side cotter pin (10), left side cotter pin (11), nut (12), nut (13), washer (14), and washer (15) from left side plate (16), two left side track wheels (17), and hoist assembly (9). Discard cotter pins.
3. Remove lock clamp suspension pin (18) from left side plate (7) and right side plate (16).
4. Remove left side plate (7), right side plate (16), two left side track wheels (17), and right side track wheels (8) from hoist assembly (9).
5. Remove two nuts (19) and two right side track wheels (8) from right side plate (7).
6. Remove two nuts (20) and two left side track wheels (17) from left side plate (16).
7. Remove lock clamp suspension pin (21) and hoist assembly spacer (22) from hoist assembly (9).



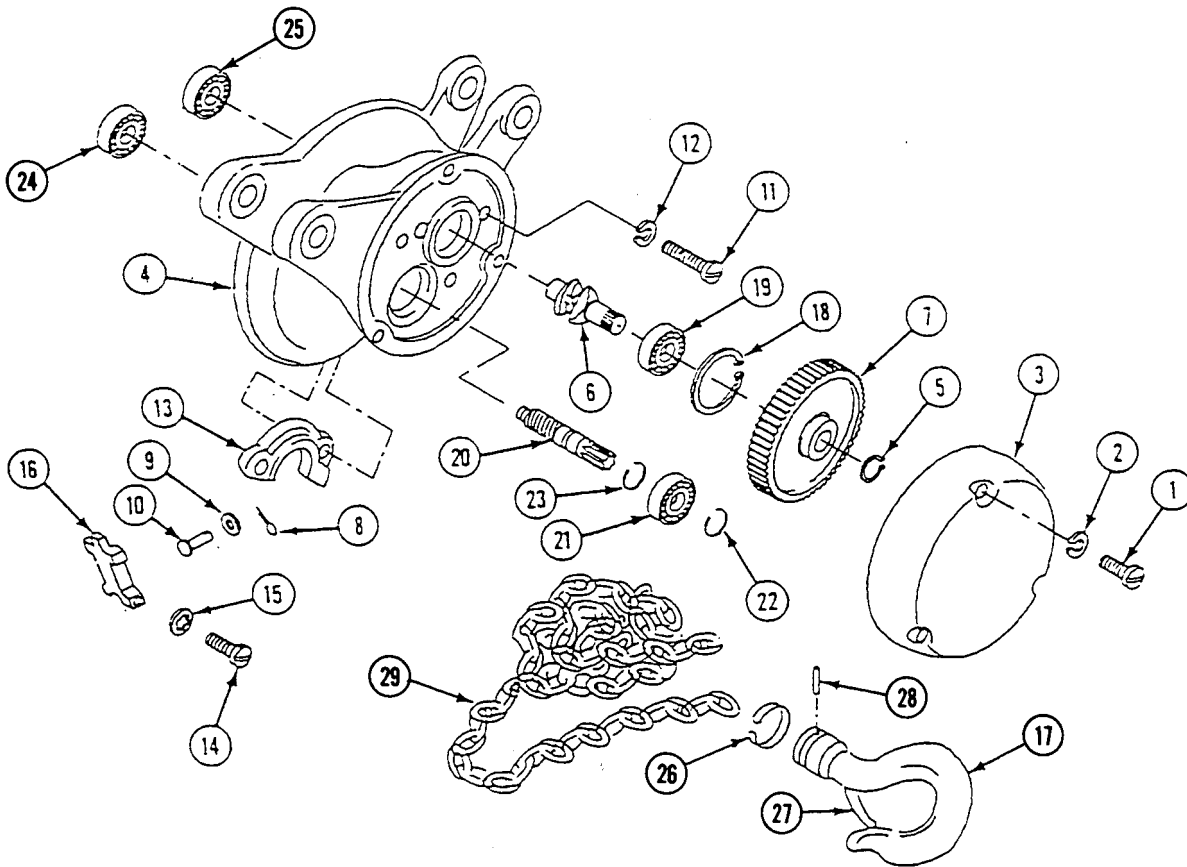
11. Remove friction disk (11) and spring washer (12) from chain handwheel (6) and separate ratchet disk (13) and brake disk (14) from friction plate (15).
12. Turn friction plate (15) to the left and remove from driving pinion (10).
13. Remove three retaining rings (16), ring pawl (17), and three ring pawl springs (18) from suspension frame (4).



14. Remove three screws (1), lock washers (2), and gear cover (3) from suspension frame (4). Discard lock washers.
15. Remove load gear retaining ring (5) and load sheave (6) from load gear (7) Use retaining pliers set.
16. Remove cotter pin (8), washer (9), and chain end pin (10) from suspension frame (4). Discard cotter pin.
17. Remove two screws (11), lock washers (12), and load chain guide (13) from suspension frame (4). Discard lock washers.
18. Remove screw (14), lock washer (15), load chain stripper (16), and load chain and hook assembly (17) from suspension frame (4). Discard lock washer.

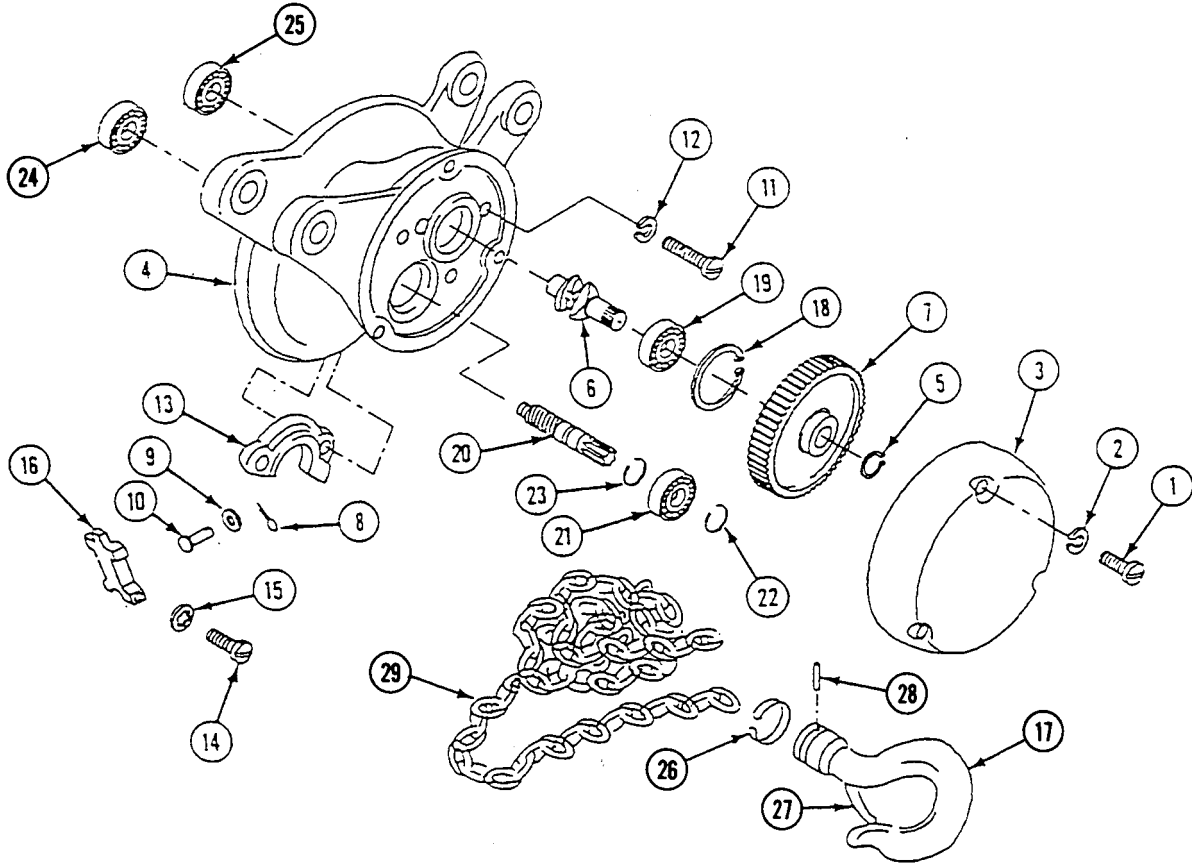


19. Remove bearing retaining ring (18), load sheave (6), and load sheave bearing (19) from suspension frame (4). Use retaining pliers set
20. Remove driving pinion (20) with driving pinion bearing (21) from suspension frame (4). Remove outer bearing retaining ring (22), inner bearing retaining ring (23), and driving pinion bearing (21) from driving pinion (20). Use retaining pliers set.
21. Pull driving pinion bearing (24) and load sheave bearing (25) from suspension frame (4).
22. Remove retaining ring (26) from nut end of load hook (27).
23. Press anchor pin (28) from load hook (27) and separate load chain (29) from load hook.

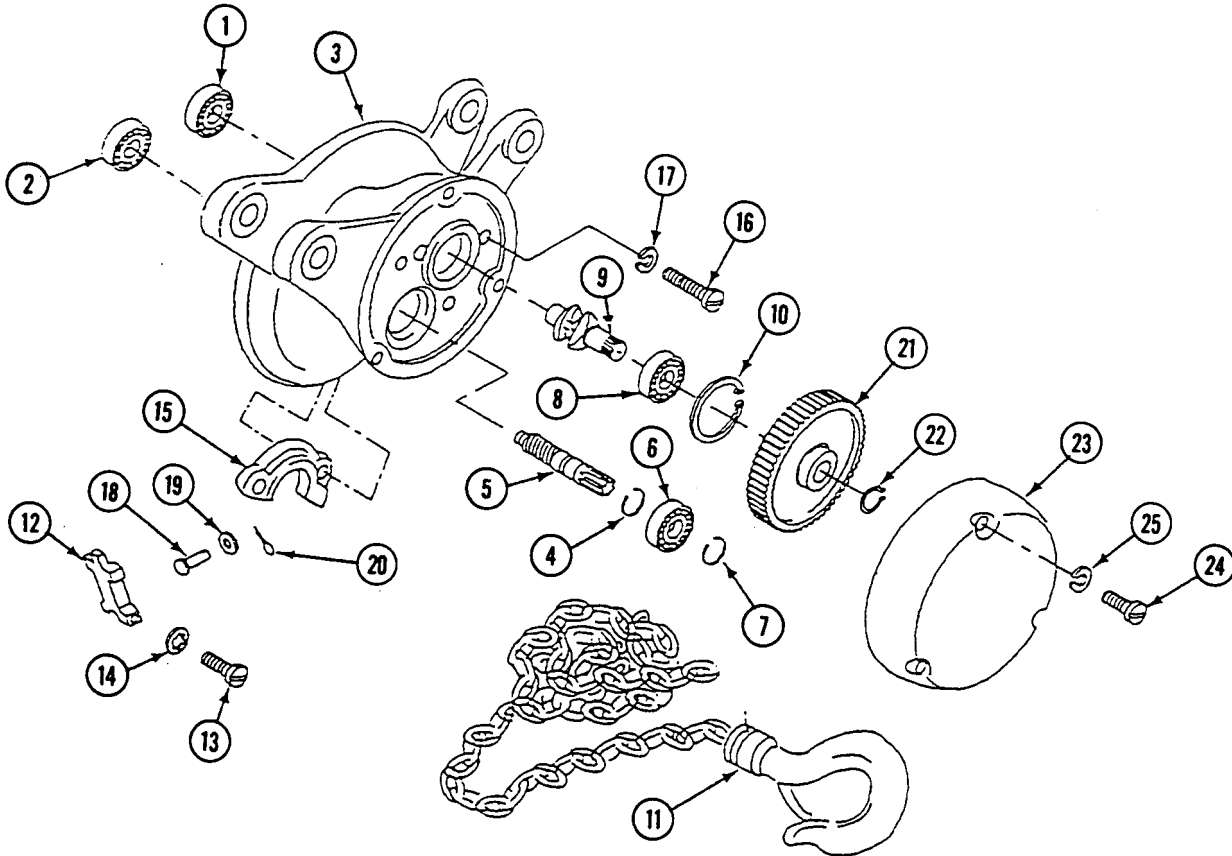


INSTALLATION

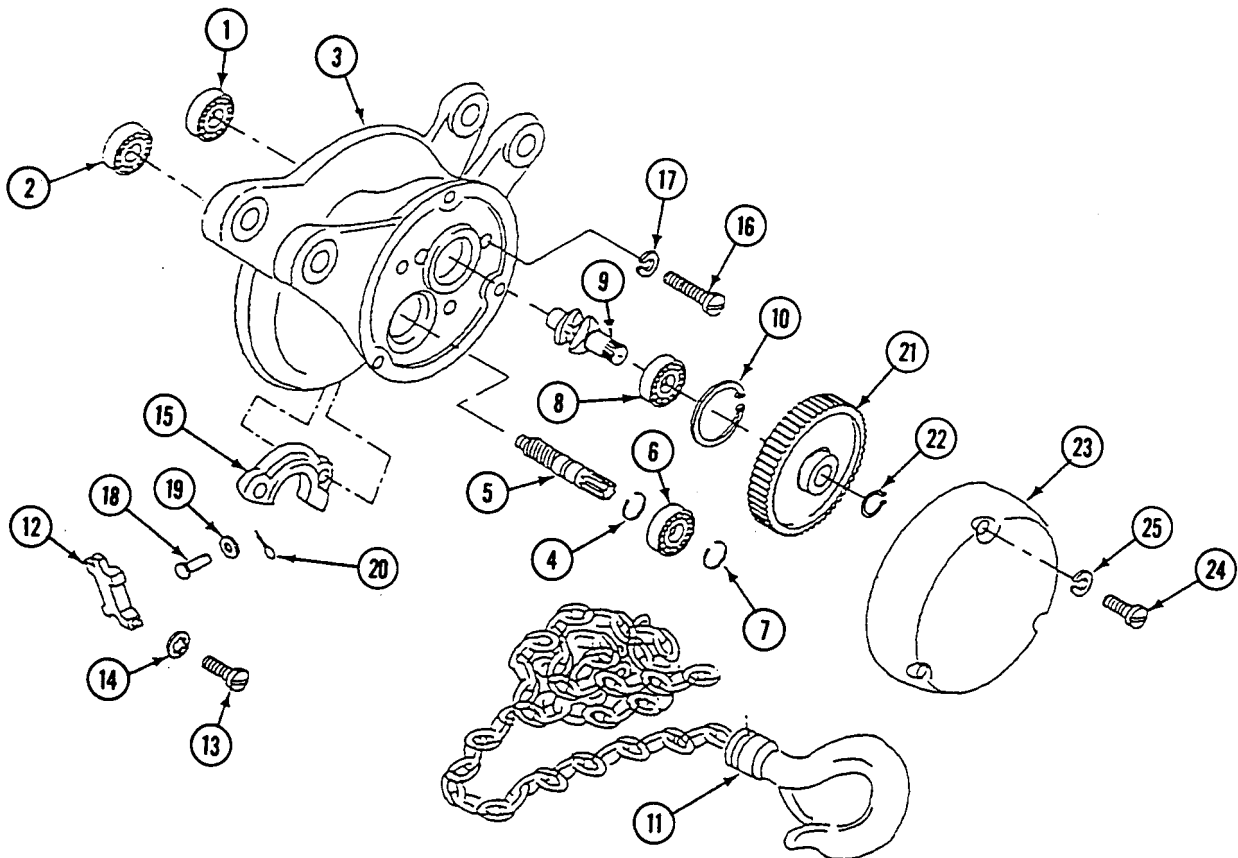
1. Install load hook (27) with anchor pin (28) on load chain (29).
2. Install retaining ring (26) on nut end of load hook (27).



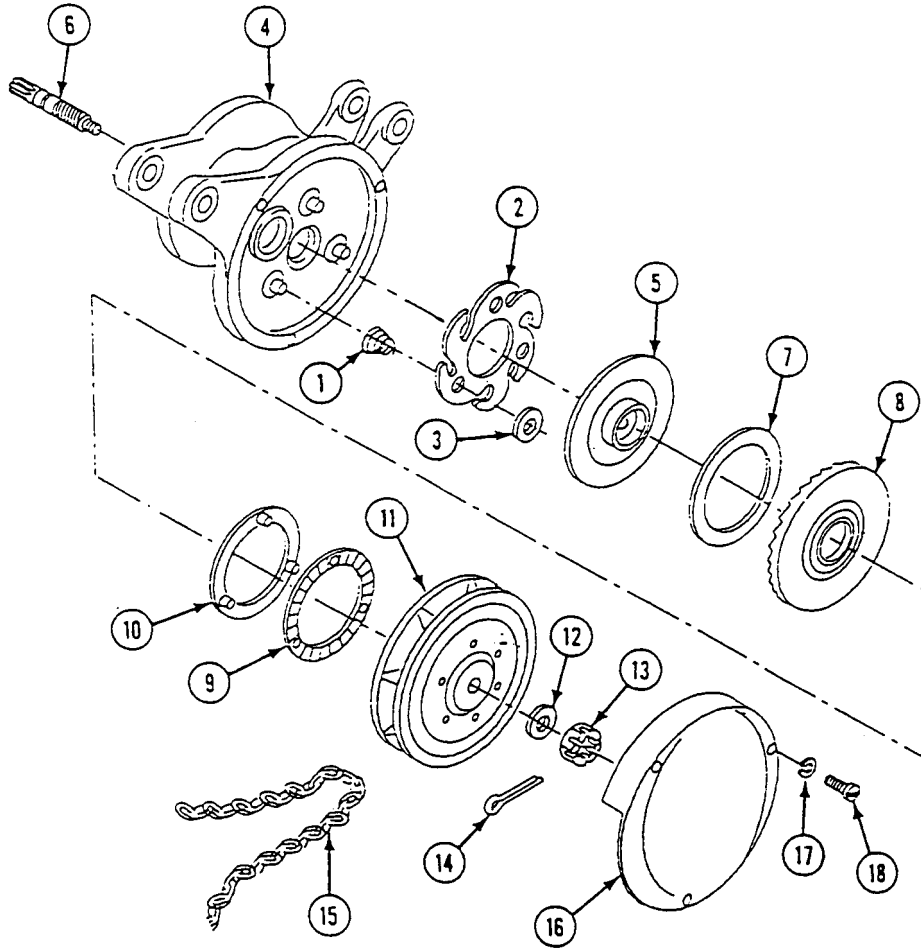
3. Install load sheave bearing (1) and driving pinion bearing (2) (with bearing lips facing out) into suspension frame (3). Press into place.
4. Install inner bearing retaining ring (4) in groove on driving pinion (5). Press driving pinion bearing (6) on splined end of driving pinion with bearing lip facing toward splines. Install outer bearing retaining ring (7) in groove of driving pinion. Use retaining pliers set.
5. Install driving pinion (5) with driving pinion bearing (6) into bore of suspension frame (3). Press driving pinion into driving pinion bearing (2) and driving pinion bearing (6) into bore of suspension frame. Use drive pin punch.



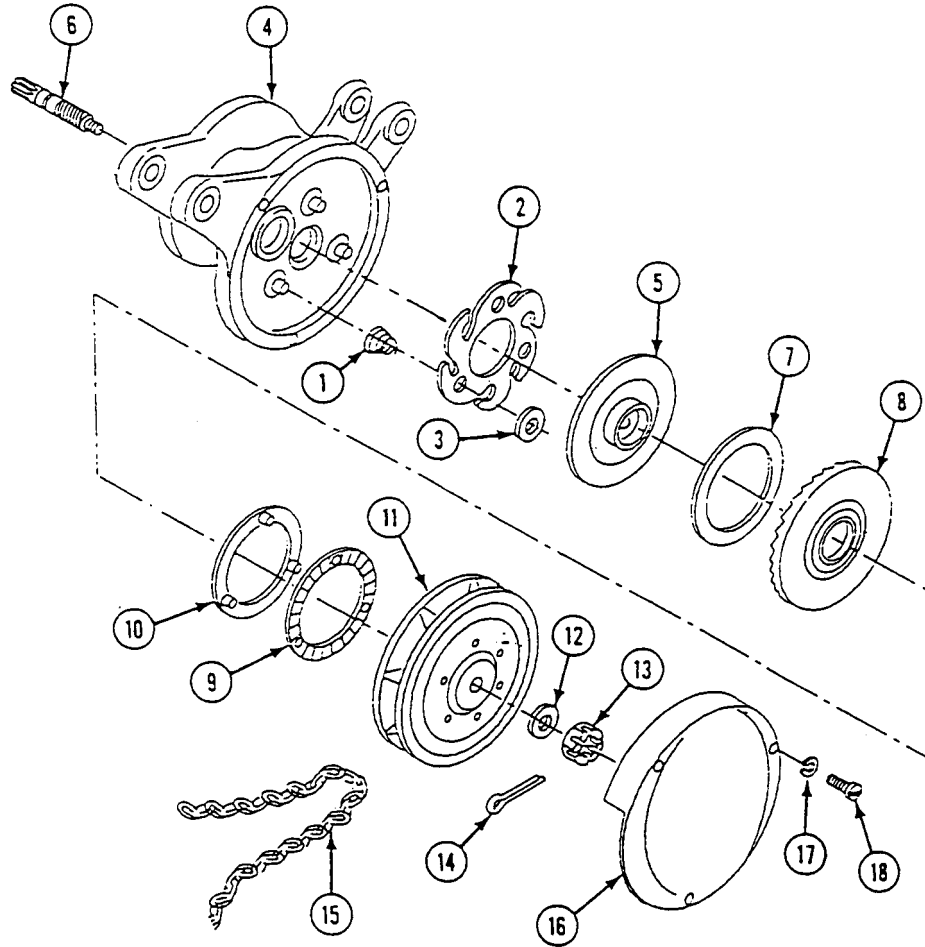
6. Align load sheave bearing (8) on splined end of load sheave (9) with bore of suspension frame (3). Press load sheave (9) with load sheave bearing into bore of suspension frame (3) and load sheave bearing (1) into bore of suspension frame. Use drive pin punch. Install retaining ring (10) into groove of suspension frame. Use retaining pliers set.
7. Install load chain and hook assembly (11), load chain stripper (12) with screw (13), and new lock washer (14) on suspension frame (4).
8. Install load chain guide (15) with two screws (16) and new lock washers (17) on suspension frame (4).
9. Install chain link of load chain and hook assembly (11) on suspension frame (4) with chain end pin (18), washer (19), and new cotter pin (20).
10. Install load gear (21) on load sheave (9) with retaining ring (22).
11. Install gear cover (23), three screws (24) and new lock washers (25) on suspension frame (4).



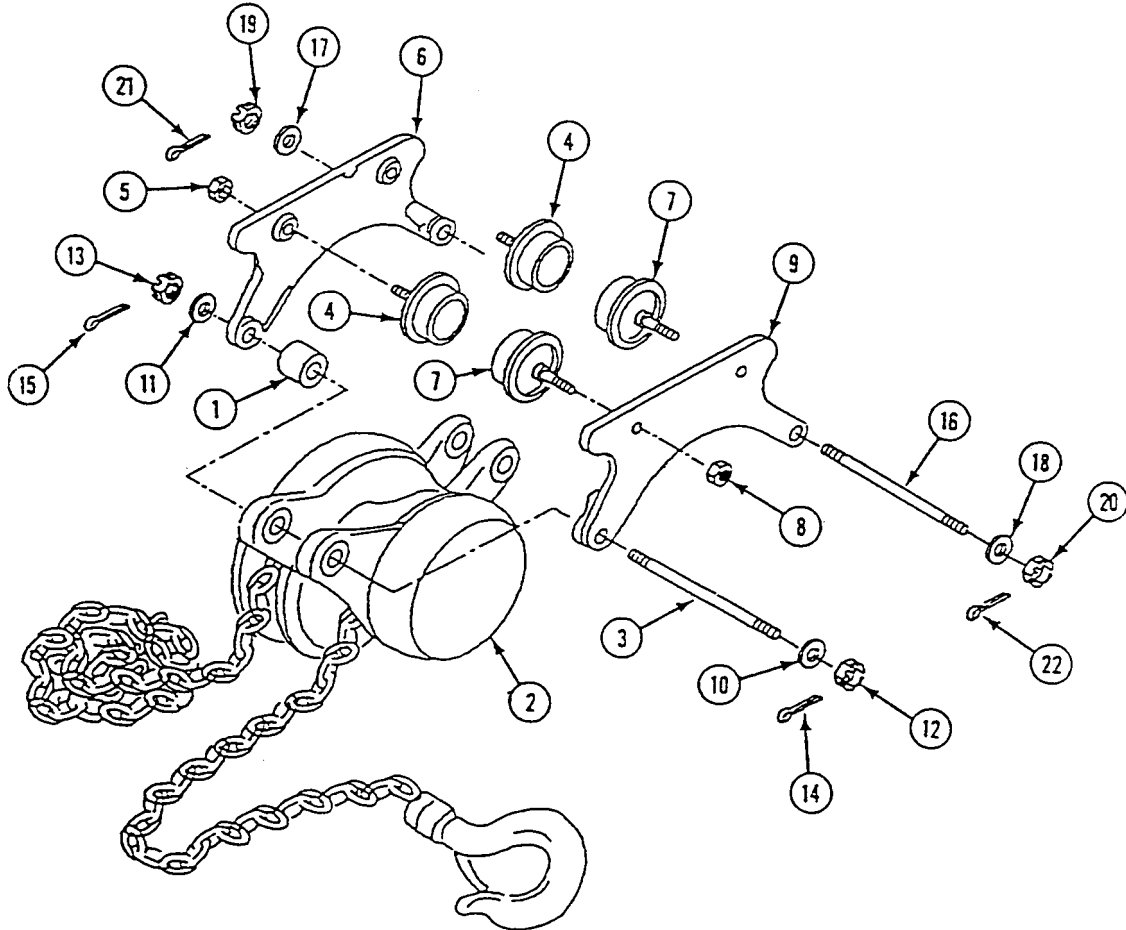
12. Install three ring pawl springs (1), ring pawl (2), and three spring retaining rings (3) on suspension frame (4). Use retaining pliers set.
13. Install friction plate (5) on driving pinion (6) and turn to the right to secure.
14. Install brake disk (7) and ratchet disk (8) on friction disk (5) with spring washer (9) and friction disk (10) on chain handwheel (11).



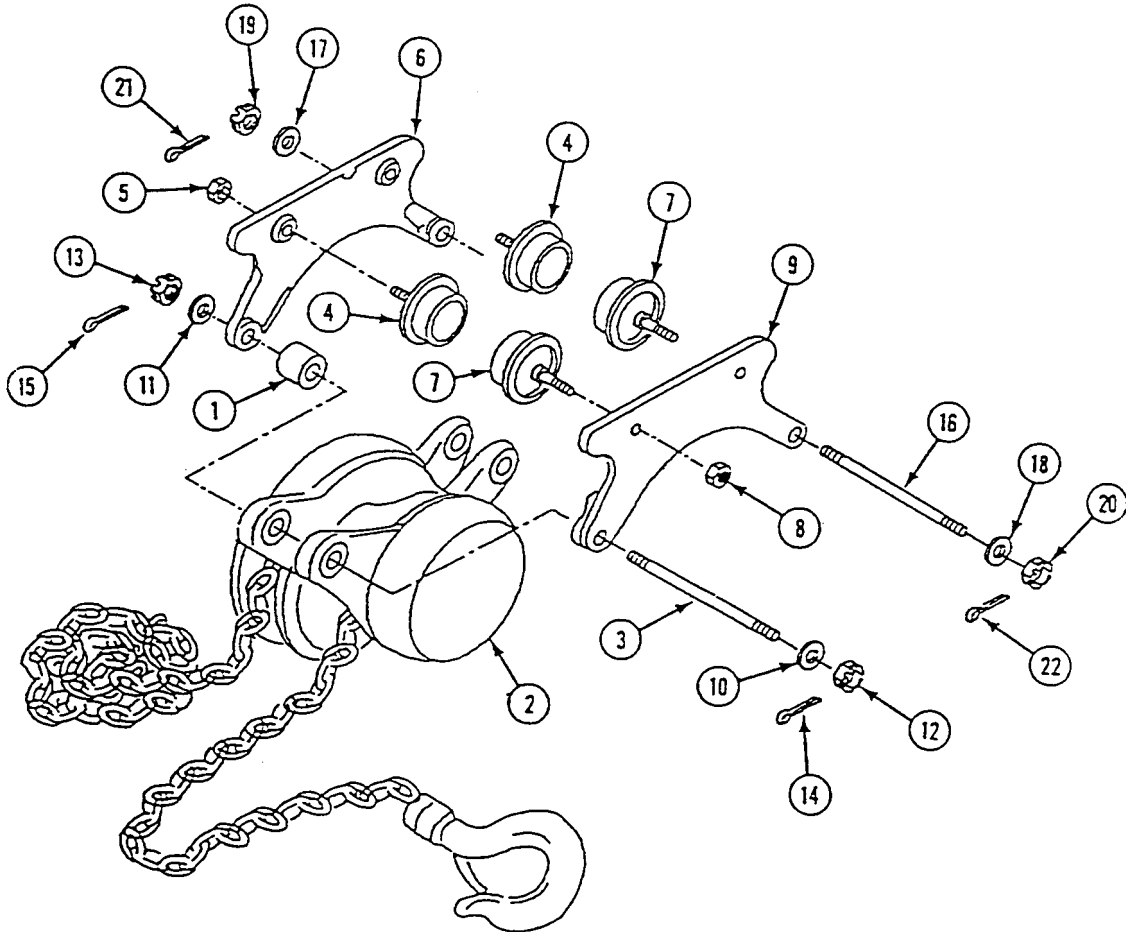
15. Install chain handwheel (11), spring washer (9), and friction disk (10) on driving pinion (6). Turn chain handwheel to the right on driving pinion and install washer (12), nut (13) and new cotter pin (14).
16. Install hand chain (15) over chain handwheel (11).
17. Install chain guide cover (16), three new lock washers (17), and screws (18) on suspension frame (4).



18. Install hoist assembly spacer (1) on hoist assembly (2) with lock clamp suspension pin (3) through hoist assembly and hoist assembly spacer.
19. Install two left side track wheels (4) with two nuts (5) on left side plate (6).
20. Install two right side track wheels (7) with two nuts (8) on right side plate (9).

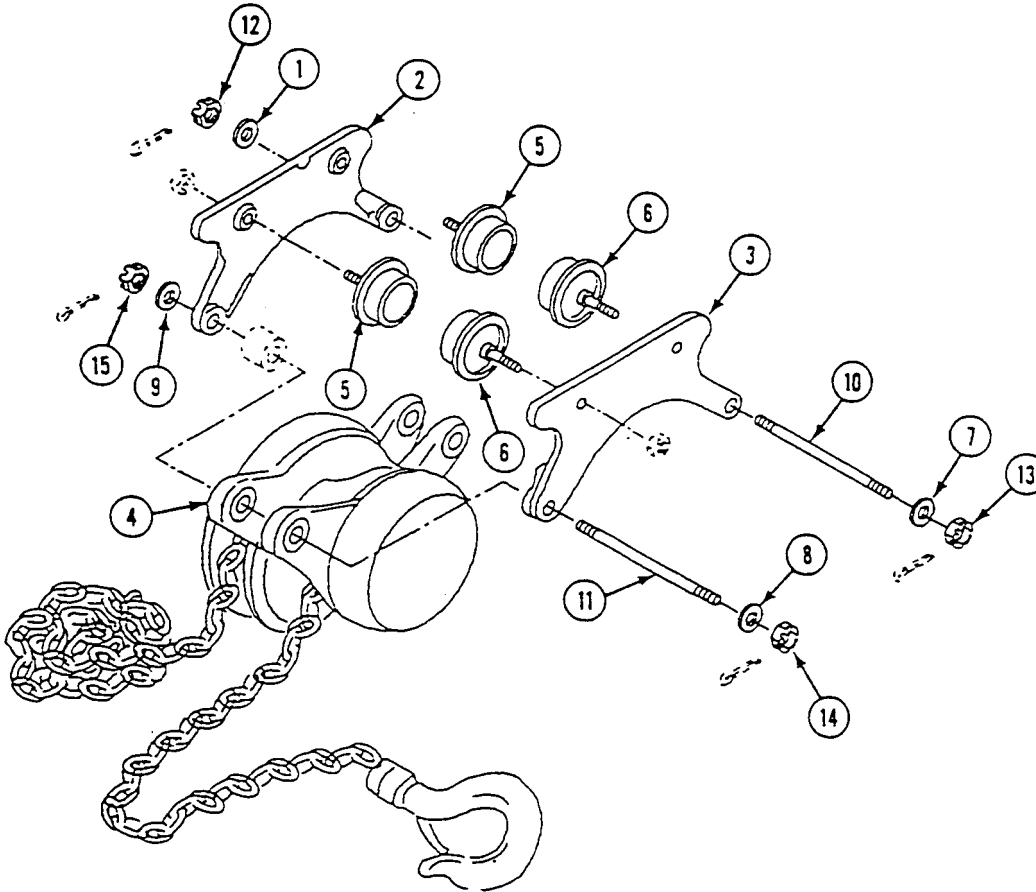


21. Install left side plate (6) with two left side track wheels (4) and right side plate (9) with two right side track wheels (7) on hoist assembly (2) with washer (10), washer (11), nut (12), nut (13), new cotter pin (14), and new cotter pin (15).
22. Install lock clamp suspension pin (16) in left side plate (6) and right side plate (9) with washer (17), washer (18), nut (19), nut (20), new cotter pin (21), and new cotter pin (22).



ADJUSTMENT

1. Add or remove flat washers, similar to flat washer (1) between left side plate (2), right side plate (3), and suspension frame (4) to maintain approximately 7/8 inch (22 mm) dimension between inner surfaces of left side track wheel (5) and right side track wheel (6). Left and right side plates must be equally spaced from centerline of hoist assembly.
2. Add or remove flat washer (1), flat washer (7), flat washer (8), and flat washer (9) as necessary to align cotter pin hole in lock clamp suspension pin (10) and lock clamp suspension pin (11) with slots in nut (12), nut (13), nut (14), and nut (15) to provide proper lock for nuts.

**FOLLOW-THROUGH STEPS**

1. Install hoist on carrier (WP 0484 00).

END OF TASK

REPLACE PERSONNEL SEATS/SAFETY BELT

0486 00

THIS WORK PACKAGE COVERS:

- Removal (page 0486 00-1).
- Installation (page 0486 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock nut (2)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

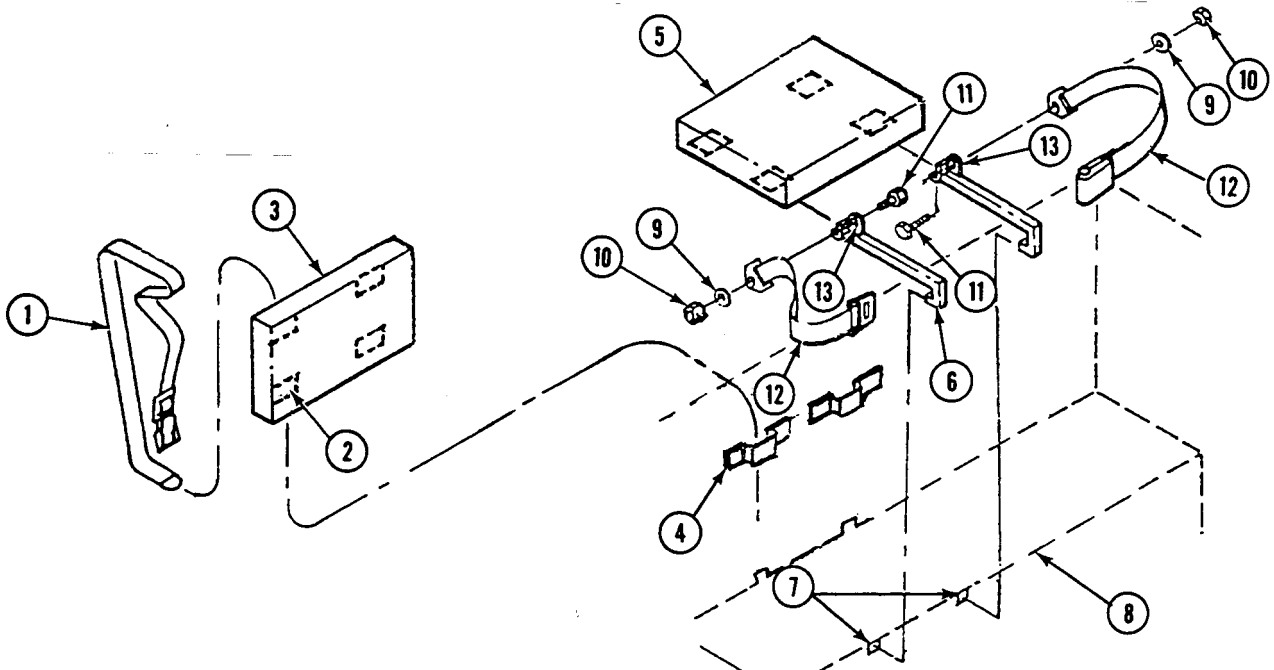
REMOVAL

NOTE

All cargo compartment seats and safety belts are removed and installed the same way.

If secondary cargo area heater kit is used, remove seat covers and tubes (WP 0471 00).

1. Unhook two backrest straps (1) from two loops (2) on backrest cushion (3). Remove straps from hull retainers (4).
2. Slide seat cushion (5) and retainers (6) forward to remove retainers from slots (7) in sponson (8). Remove retainers from cushion.
3. Remove two washers (9), lock nuts (10), screws (11) and both halves of safety belt (12) from retainers (13). Discard lock nuts.

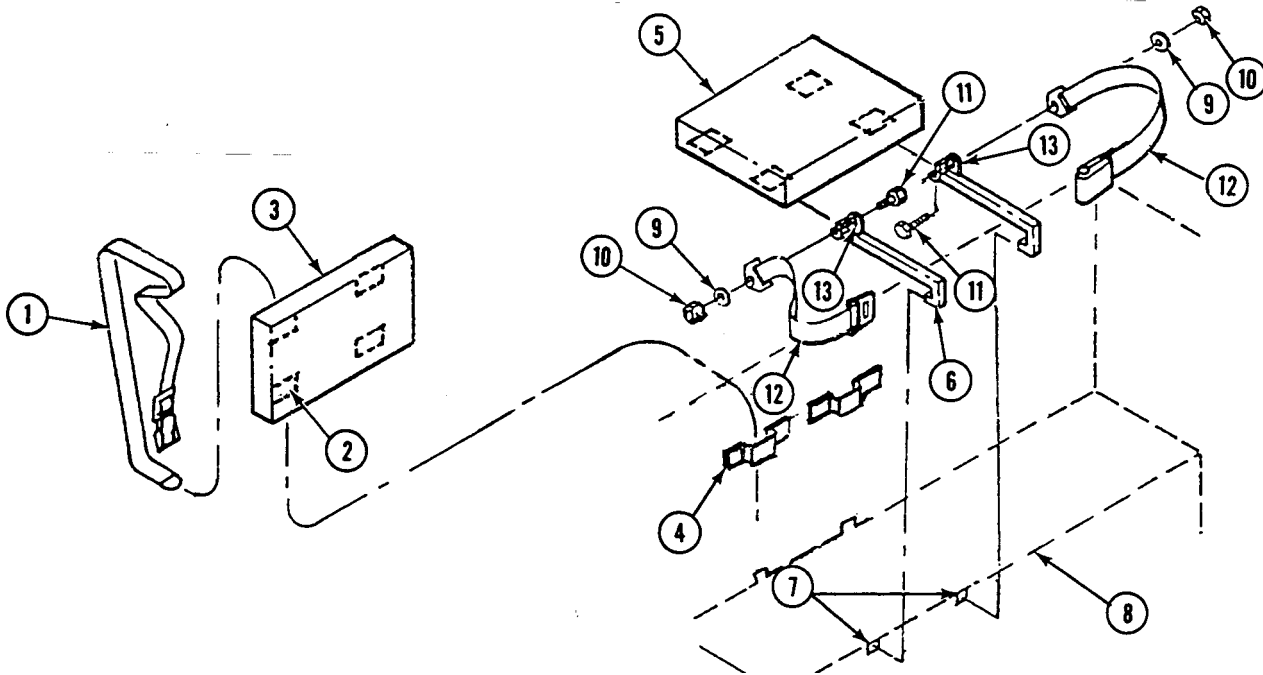


INSTALLATION

NOTE

If secondary cargo heater kit is installed, install seat covers and tubes (WP 0471 00).

1. Install each safety belt half (12) to each retainer (13) with two screws (11), washers (9), and new lock nuts (10).
2. Install seat cushion retainers (6) on seat cushion (5). Place cushion (5) and retainers on sponson (8). Hook retainers in slots (7).
3. Install two backrest straps (1) on hull retainers (4) and through two loops (2) on backrest cushion (3). Buckle straps.



END OF TASK

REMOVE/INSTALL BULKHEAD PROTECTOR

0487 00

THIS WORK PACKAGE COVERS:

Removal (page 0487 00-1).
 Installation (page 0487 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

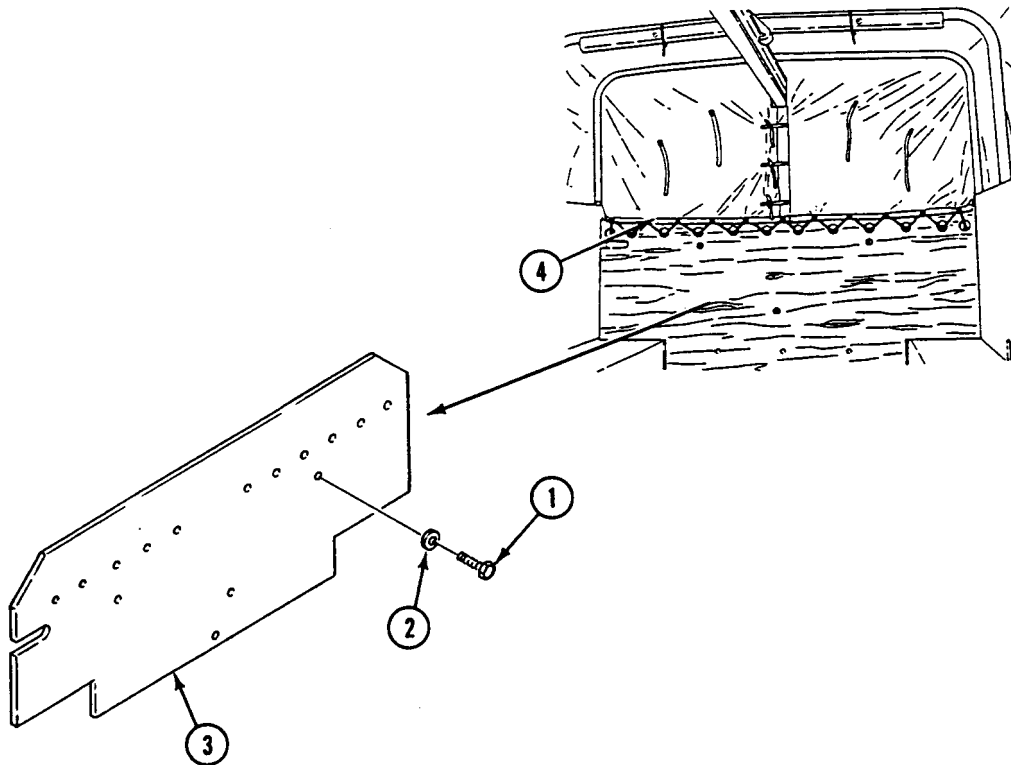
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

REMOVAL

1. Remove three screws (1), washers (2), and bulkhead protector (3) from bulkhead (4).



INSTALLATION

1. Install bulkhead protector (3) on bulkhead (4) with three screws (1) and washers (2).

END OF TASK

REPLACE RIFLE RACK

0488 00

THIS WORK PACKAGE COVERS:

Removal (page 0488 00-1).
 Installation (page 0488 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

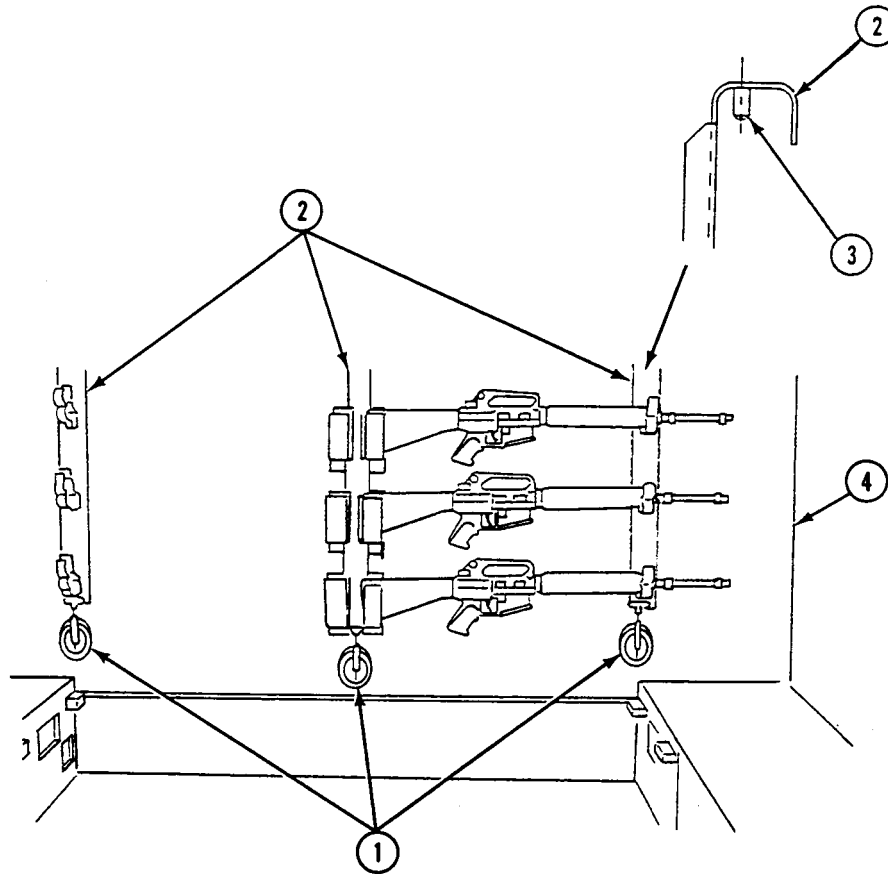
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

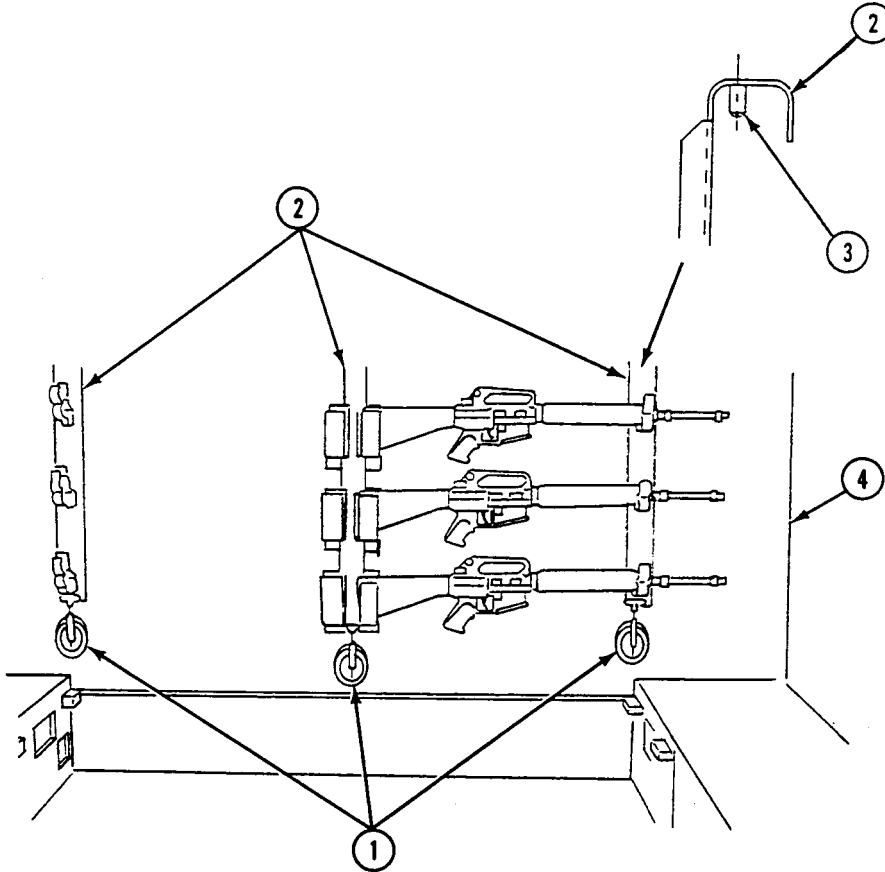
REMOVAL

1. Unhook three latches (1). Lift racks (2) up to remove mounting pins (3) from cargo door (4).



INSTALLATION

1. Place three racks (2) on inside cargo door (4). Make sure mounting pins (3) are in holes on top of door.
2. Engage three latches (1).

**END OF TASK**

REPLACE AIR BRAKE COMPRESSOR (M548A1)

0489 00

THIS WORK PACKAGE COVERS:

Removal (page 0489 00-2).
 Installation (page 0489 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Power plant rear access door removed (see your -10)
 Top access cover and grilles removed (WP 0390 00)
 Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
 Compressor drive pulley and belts removed (WP 0499 00)
 Air strainer removed (WP 0500 00)

Materials/Parts

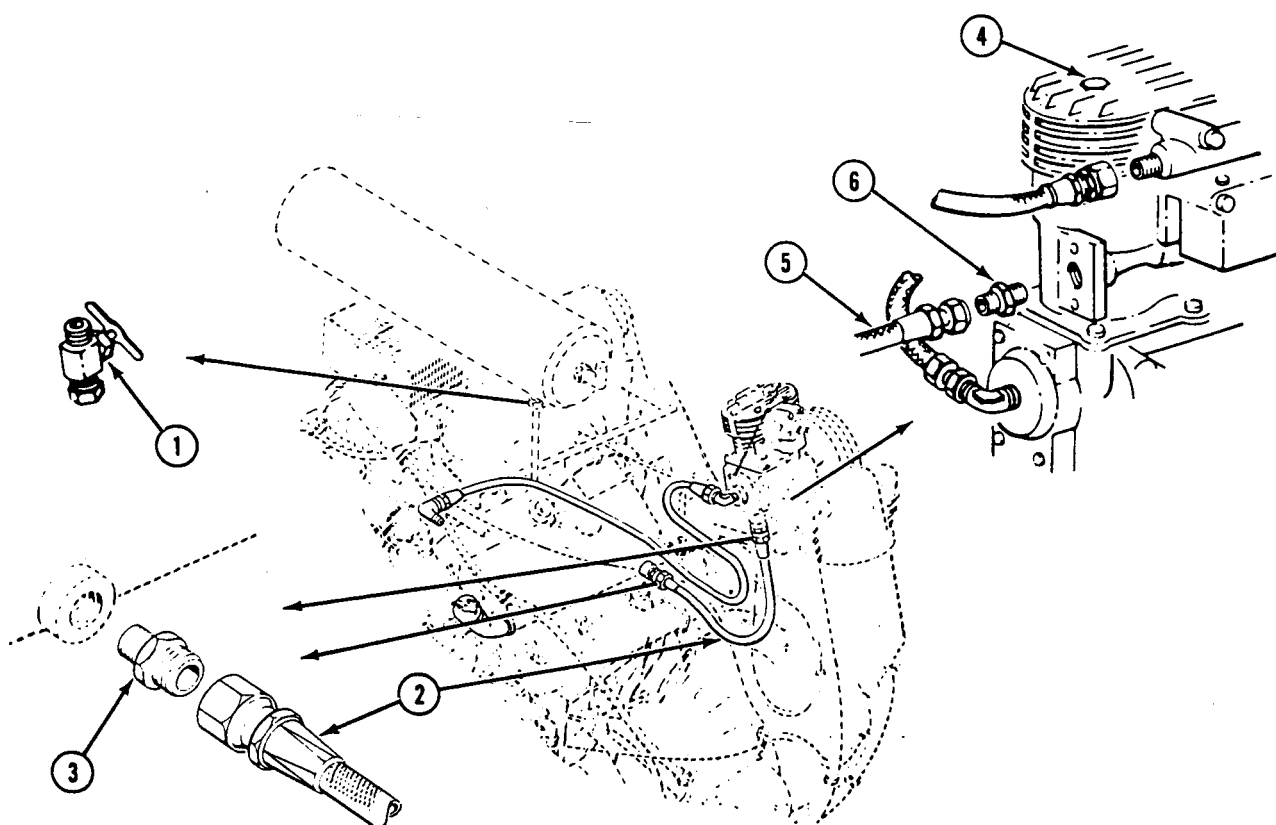
Container, 1 gallon
 Gasket
 Gasket (2)
 Lock washer (2)
 Lock nut (4)

Personnel Required

Unit Mechanic

REMOVAL

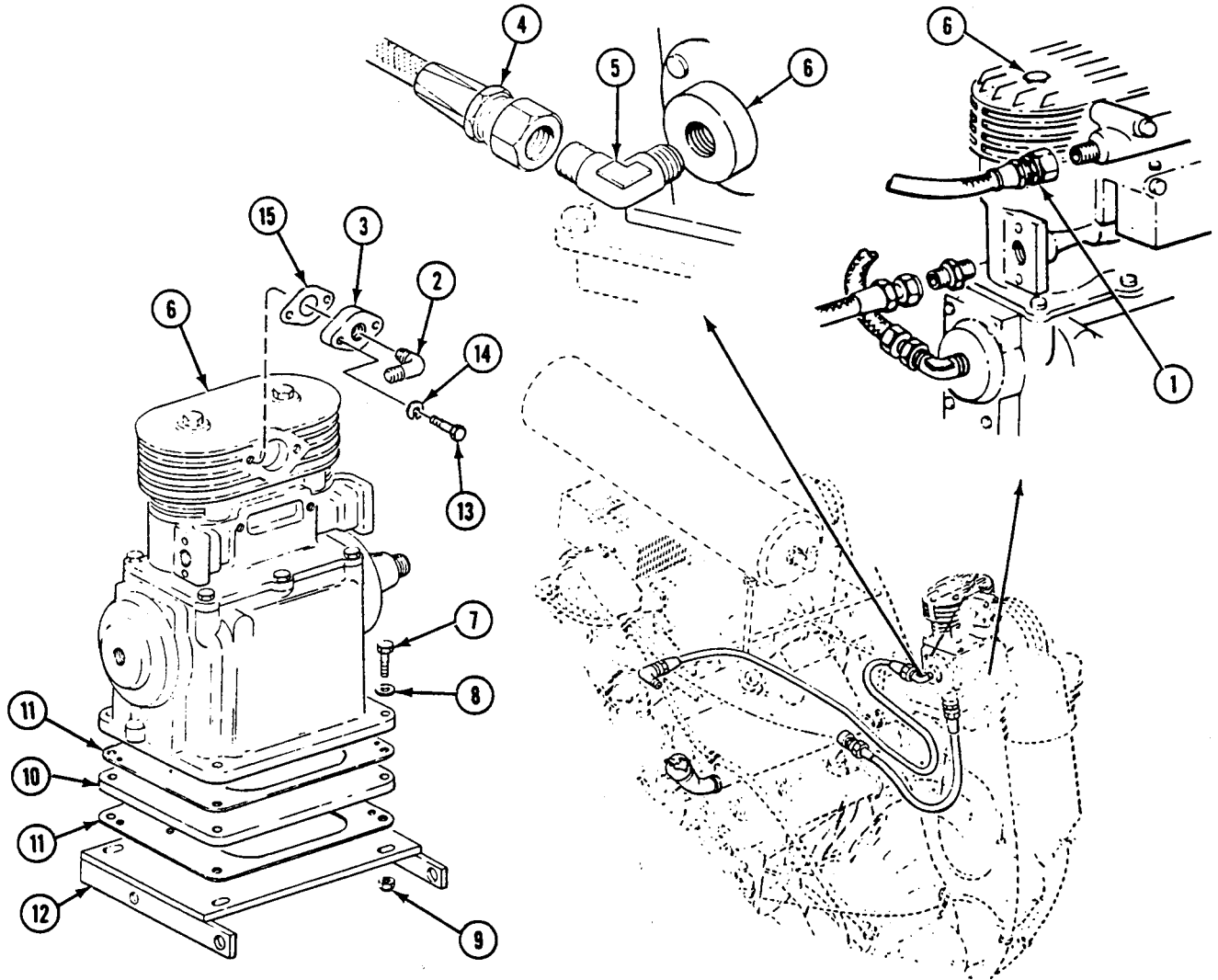
1. Open drain cock (1) to release reservoir pressure.
2. Disconnect compressor-to-oil filler tube hose (2) from oil filler tube union (3). Place open end in 1 gallon container. Drain oil from compressor (4).
3. Disconnect governor-to-compressor air hose (5) from compressor nipple (6). Remove nipple from compressor (4).



REPLACE AIR BRAKE COMPRESSOR (M548A1) — Continued

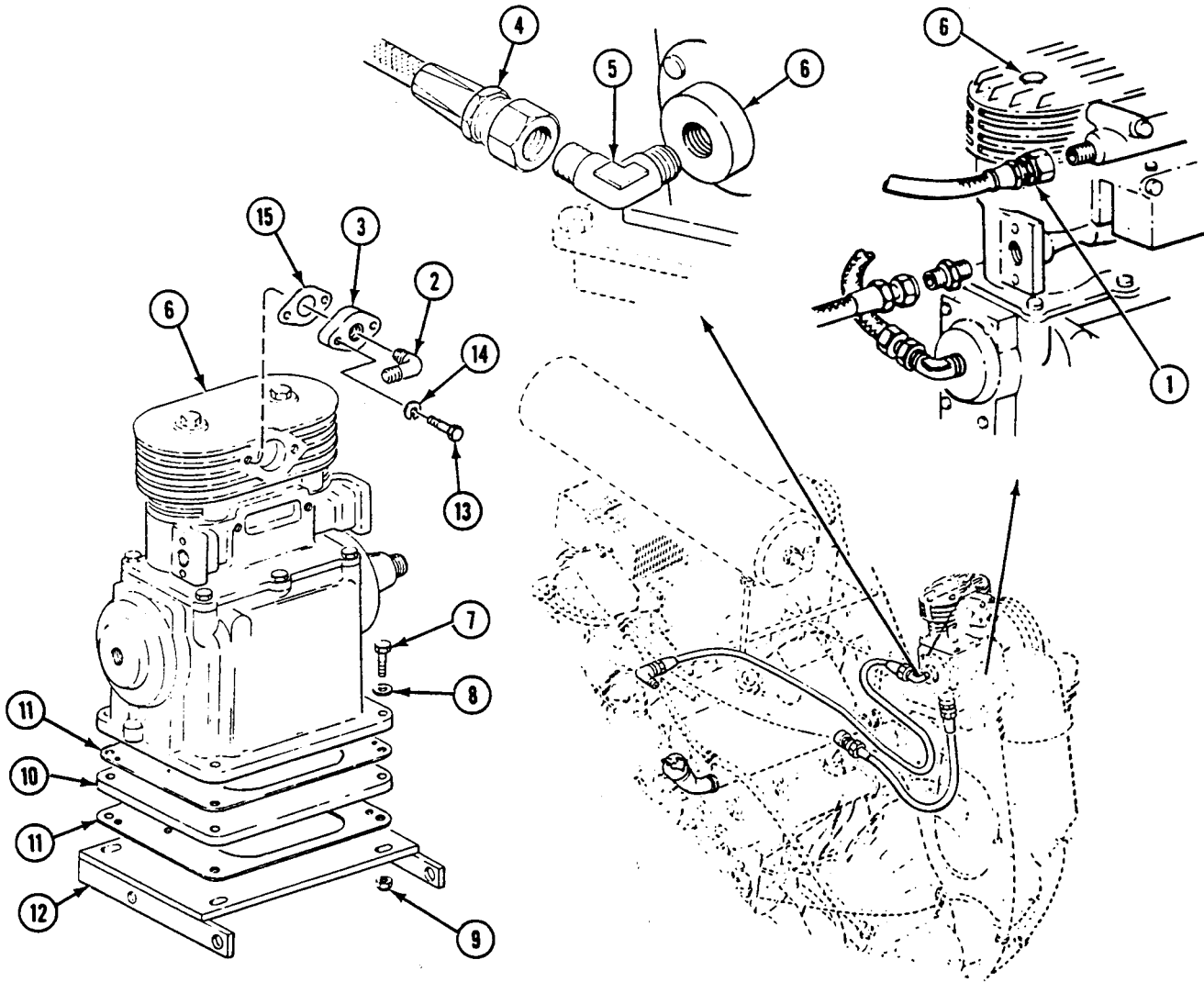
0489 00

4. Disconnect compressor discharge hose (1) from discharge elbow (2).
5. Remove discharge elbow (2) from adapter (3).
6. Disconnect and cap engine-to-compressor hose (4) from elbow (5). Remove elbow from compressor (6).
7. Remove four screws (7), washers (8), lock nuts (9), spacer (10), two gaskets (11), and compressor (6) from platform (12). Discard lock nuts and gaskets.
8. Remove two screws (13), lock washers (14), adapter (3), and gasket (15) from compressor (6). Discard lock washers and gasket.



INSTALLATION

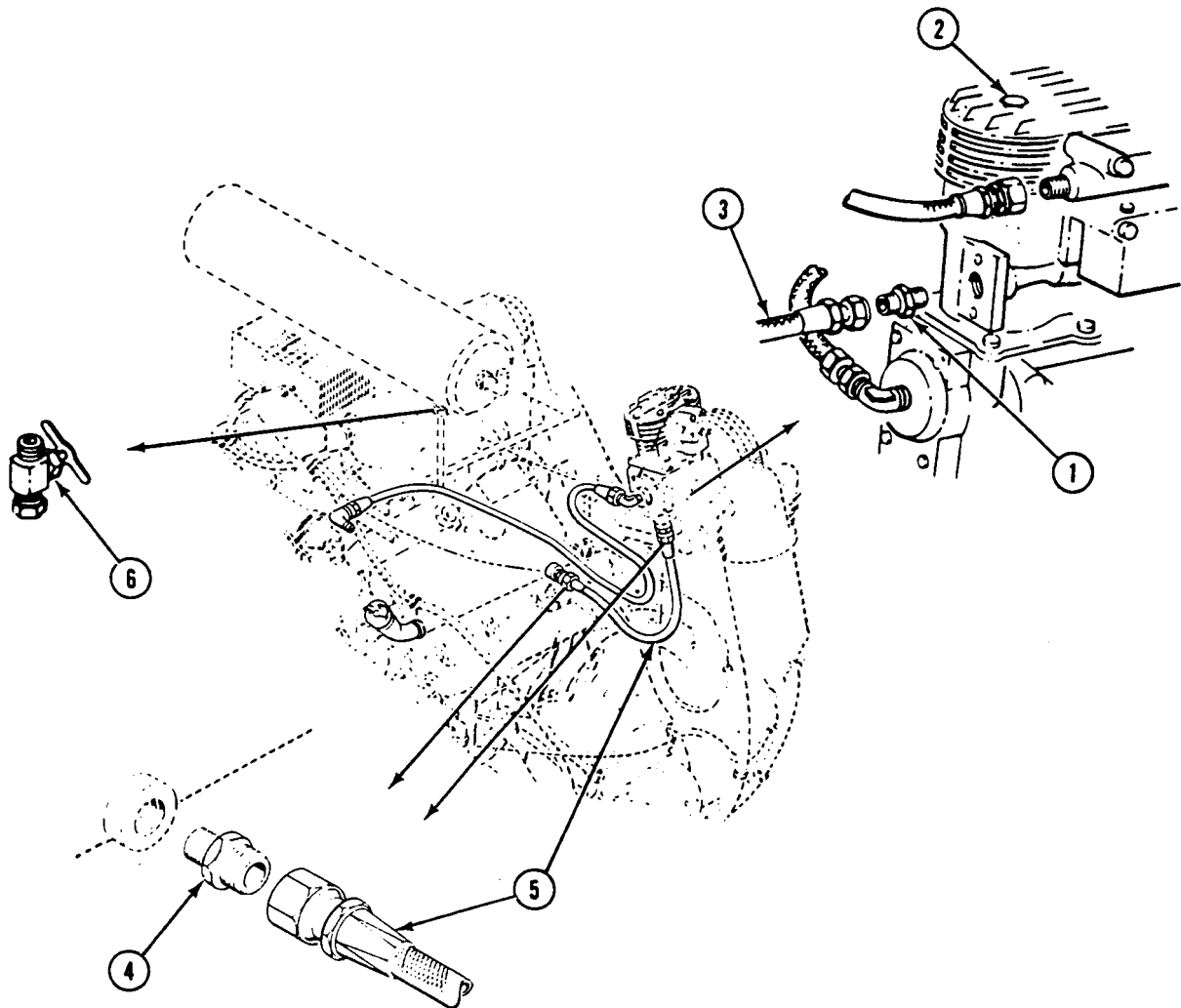
1. Install new gasket (15) and adapter (3) on compressor (6) with two new lock washers (14) and screws (13).
2. Install two new gaskets (11), spacer (10), and compressor (6) on platform (12) with four new lock nuts (9), washers (8), and screws (7).
3. Install engine-to-compressor hose elbow (5) in compressor (6). Connect engine-to-compressor hose (4) to elbow.
4. Install discharge elbow (2) in adapter (3).
5. Connect compressor discharge hose (1) to discharge elbow (2).



REPLACE AIR BRAKE COMPRESSOR (M548A1) — Continued

0489 00

6. Install compressor nipple (1) in compressor (2). Connect governor-to-compressor air hose (3) to nipple.
7. Install oil filler union (4) in engine. Connect compressor-to-oil filler tube hose (5) to union.

**FOLLOW-THROUGH STEPS**

1. Fill compressor (2) with oil.
2. Close drain cock (6).
3. Start engine (see your -10).
4. Check for proper operation of air brake compressor.
5. Stop engine (see your -10).
6. Install air strainer (WP 0500 00).
7. Install compressor drive pulley and belts (WP 0499 00).
8. Install bulkhead protector, if material handling kit is installed (WP 0487 00).
9. Install top access cover and grilles (WP 0390 00).
10. Install power plant rear access door (see your -10).

END OF TASK

REPLACE AIR BRAKE GOVERNOR (M548A1)

0490 00

THIS WORK PACKAGE COVERS:

Removal (page 0490 00-1).
 Installation (page 0490 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access cover and grilles removed (WP 0390 00)
 Power plant rear access cover/door removed
 (see your -10)

Materials/Parts

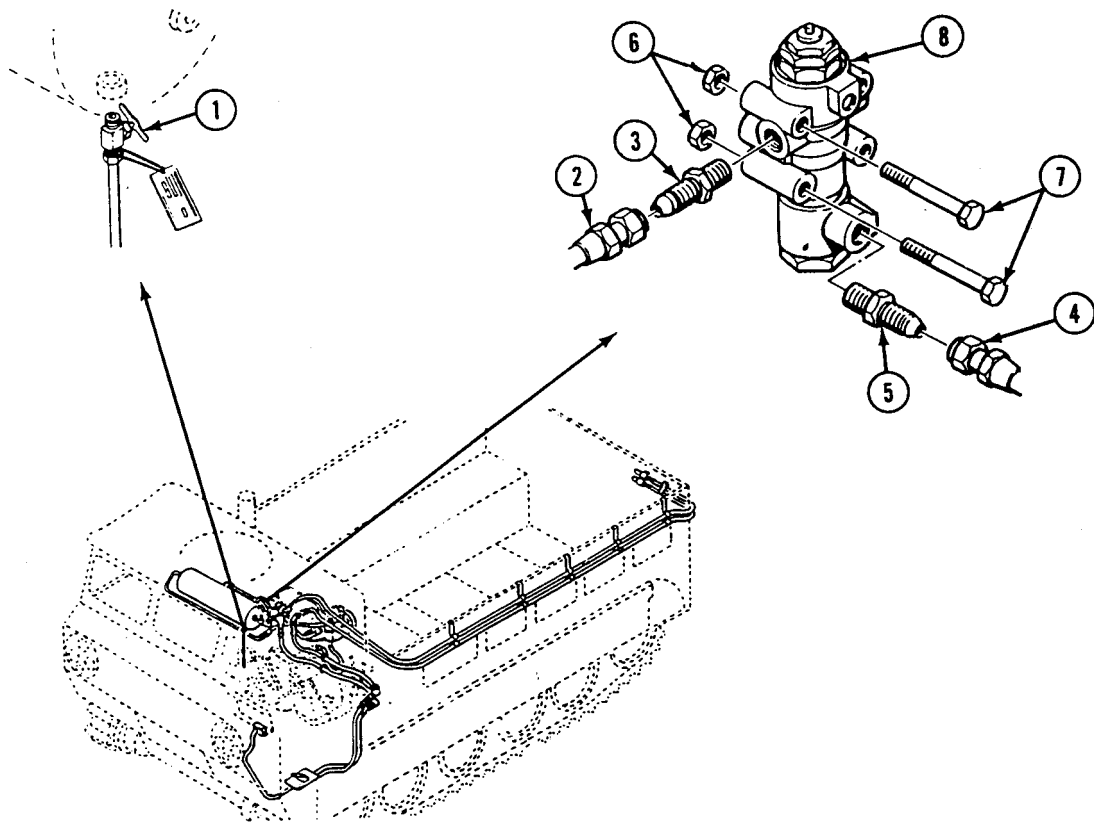
Antiseize compound (WP 0542 00, Item 6)
 Lock nuts (2)

Personnel Required

Unit Mechanic

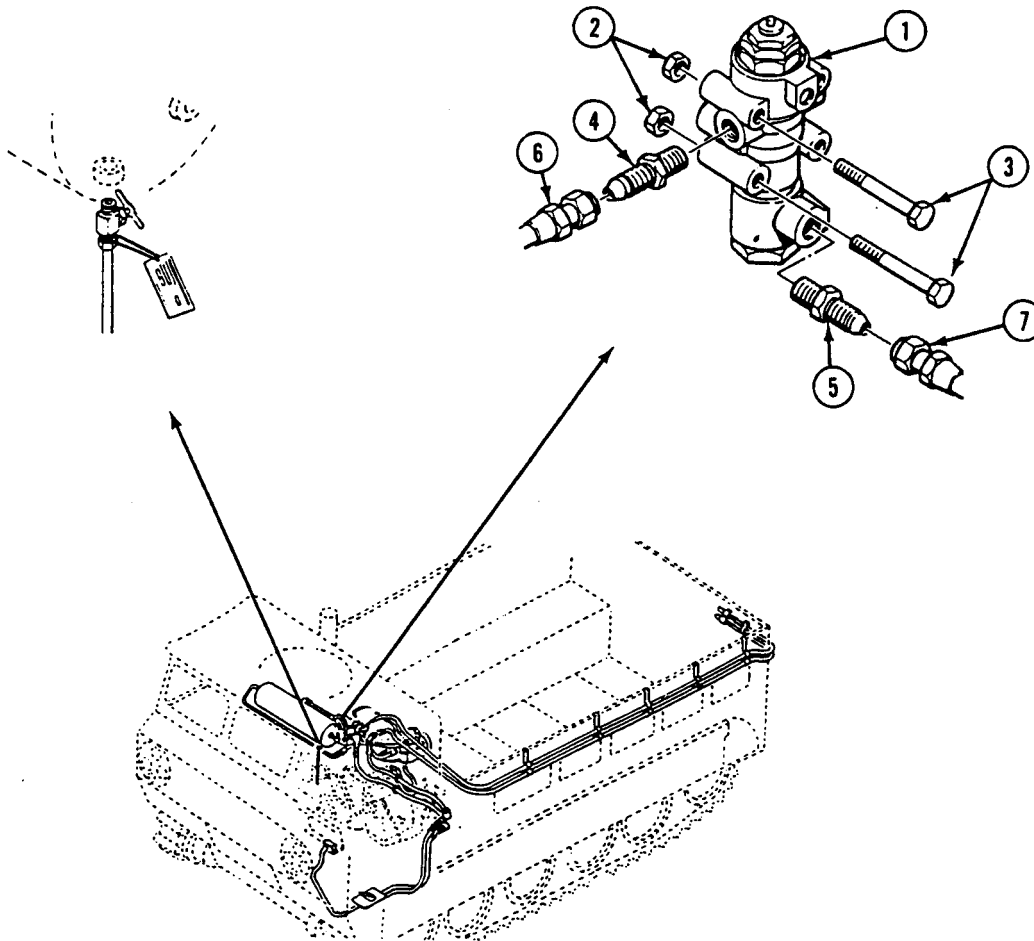
REMOVAL

1. Release air reservoir pressure at drain cock (1).
2. Disconnect compressor-to-governor air hose (2) from adapter (3).
3. Disconnect reservoir air tube (4) from adapter (5).
4. Remove two lock nuts (6), screws (7), and governor (8) from air cleaner assembly. Discard lock nuts.
5. Remove adapter (3) and adapter (5) from governor (8).



INSTALLATION

1. Install governor (1) on air cleaner assembly with two new lock nuts (2) and screws (3).
2. Apply antiseize compound sparingly to threads of adapter (4) and adapter (5).
3. Install adapter (4) and adapter (5) on governor (1).
4. Connect compressor-to-governor air hose (6) to adapter (4).
5. Connect reservoir air tube (7) to adapter (5).

**FOLLOW-THROUGH STEPS**

1. Start engine (see your -10).
2. Check operation of governor.
3. Stop engine (see your -10).
4. Install top access cover and grilles (WP 0390 00).
5. Install power plant rear access cover/door (see your -10).

END OF TASK

REPLACE AIR BRAKE RESERVOIR (M548A1)

0491 00

THIS WORK PACKAGE COVERS:

Removal (page 0491 00-1).
 Installation (page 0491 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Top access cover and grilles removed (WP 0390 00)

Center seat raised (see your -10)

Personnel Required

Unit Mechanic

Helper (H)

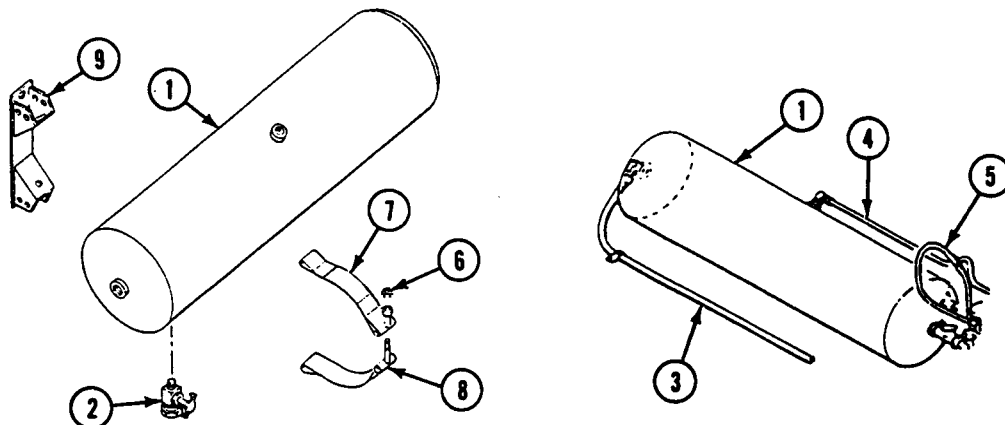
REMOVAL

1. Release air pressure from reservoir (1) at drain cock (2).
2. Disconnect air tube line (3), air tube line (4), and air tube line (5) from reservoir (1).
3. Remove air tube fittings (WP 0495 00).
4. Remove air brake safety valve (WP 0492 00).
5. Remove drain cock (2) from reservoir (1).

NOTE

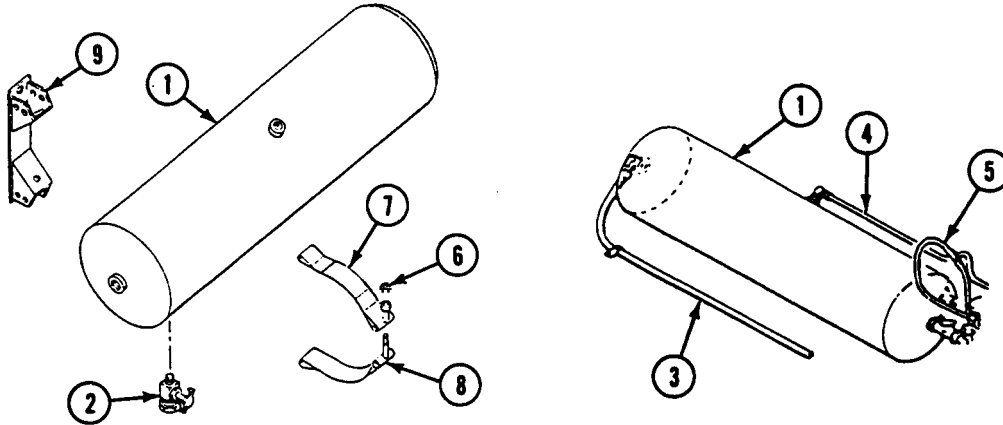
Use helper to lift out reservoir. It is awkward to lift out.

6. Remove two nuts (6), clamp (7), clamp (8), and reservoir (1) from two brackets (9). Lift out reservoir.



INSTALLATION

1. Install reservoir (1) on two brackets (9) with clamp (7), clamp (8), and nuts (6).
2. Install drain cock (2) on reservoir (1).
3. Install air safety valve (WP 0492 00).
4. Install air tube fittings (WP 0495 00).
5. Connect air tube line (3), air tube line (4), and air tube line (5) to reservoir (1).

**FOLLOW-THROUGH STEPS**

1. Install top access cover and grilles (WP 0390 00).
2. Lower center seat (see your -10).

END OF TASK

REPLACE AIR BRAKE SAFETY VALVE (M548A1)

0492 00

THIS WORK PACKAGE COVERS:

Removal (page 0492 00-1).
 Installation (page 0492 00-1).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

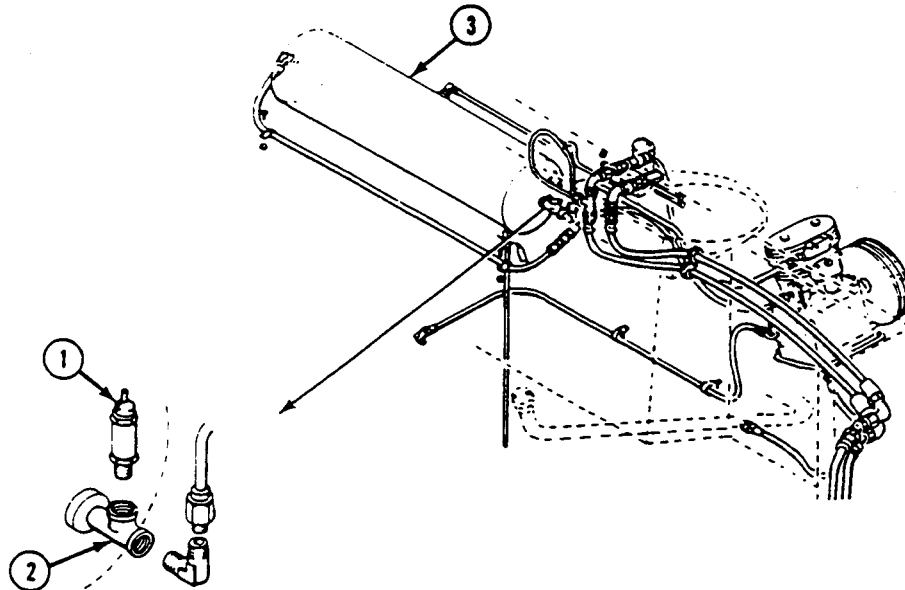
Unit Mechanic

Carrier blocked (see your -10)

Top access cover and grilles removed (WP 0390 00)

REMOVAL

1. Turn safety valve (1) to the left and remove from fitting (2) at end of reservoir (3).



INSTALLATION

1. Install safety valve (1) in fitting (2) at end of reservoir (3) and turn valve to the right.

FOLLOW-THROUGH STEPS

1. Install top access cover and grilles (WP 0390 00).

END OF TASK

REPLACE STOPLIGHT SWITCH (M548A1)

0493 00

THIS WORK PACKAGE COVERS:

Removal (page 0493 00-1).
 Installation (page 0493 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access cover and grilles removed (WP 0390 00)
 Left cab floor plate removed (WP 0394 00)
 Drain cock opened, air brake reservoir pressure released
 (WP 0491 00)

Materials/Parts

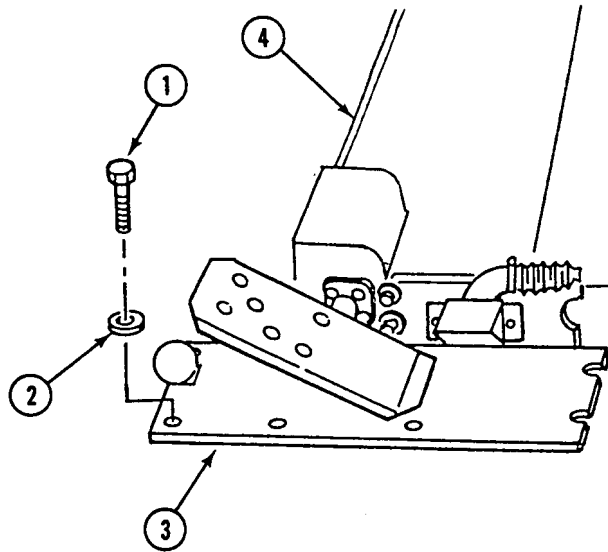
Lock nut (2)

Personnel Required

Unit Mechanic

REMOVAL

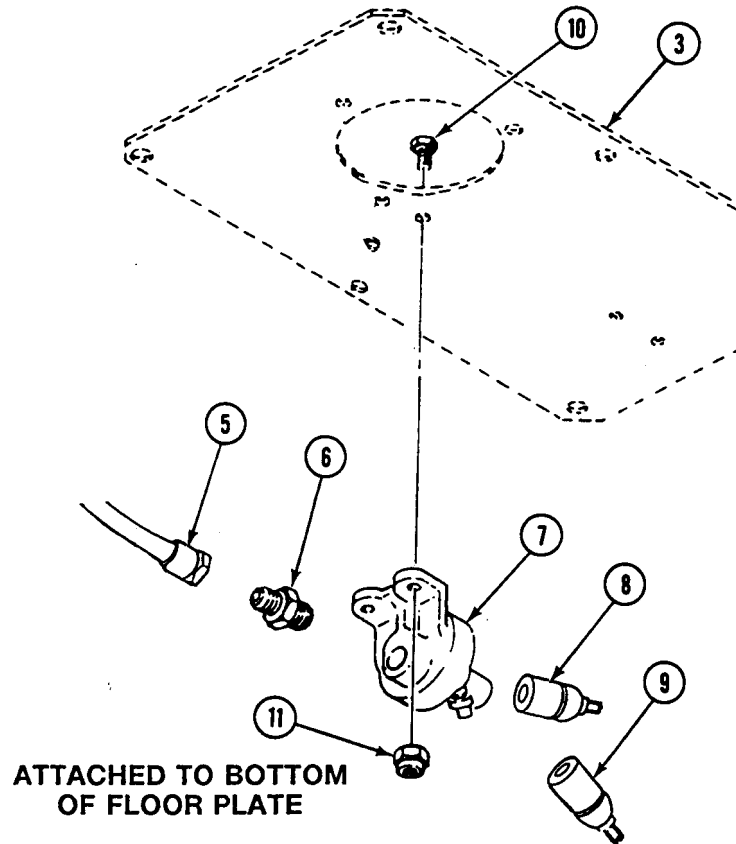
1. Remove six screws (1) and washers (2) from treadle valve assembly floor plate (3) on hull (4) and partially remove floor plate.



TOP OF FLOOR PLATE

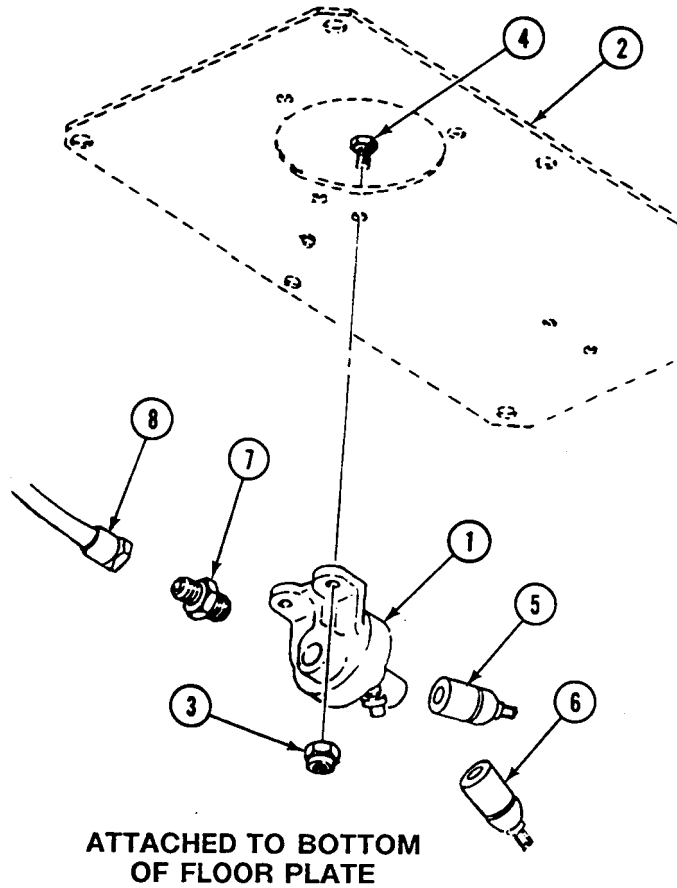
REPLACE STOPLIGHT SWITCH (M548A1) — Continued**0493 00**

2. Disconnect air stoplight hose (5) from nipple (6). Remove nipple from stoplight switch (7).
3. Disconnect circuit lead 75 (8) and circuit lead 75A (9) from stoplight switch (7).
4. Remove two screws (10), lock nuts (11), and stoplight switch (7) from bottom side of treadle valve assembly floor plate (3). Discard lock nuts.

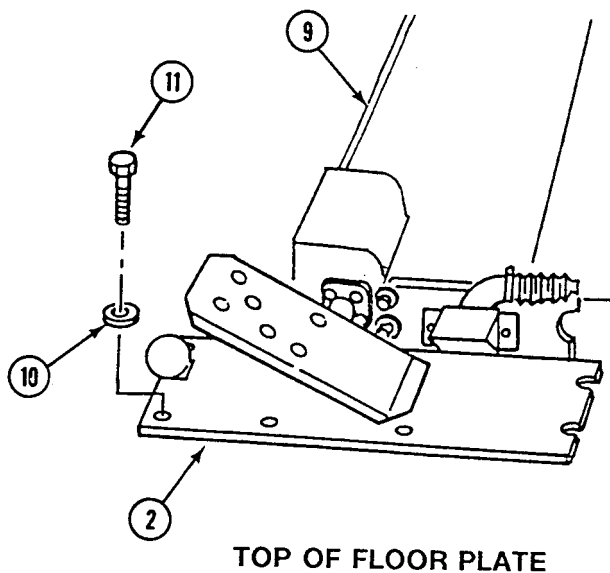


INSTALLATION

1. Install stoplight switch (1) on bottom side of treadle valve assembly floor plate (2) with two new lock nuts (3) and screws (4).
2. Connect circuit lead 75 (5) and circuit lead 75A (6) to stoplight switch (1).
3. Install nipple (7) in stoplight switch (1). Connect air stoplight hose (8) to nipple.



4. Install treadle valve assembly floor plate (2) on hull (9) with six washers (10) and screws (11).



FOLLOW-THROUGH STEPS

1. Close drain cock on air brake reservoir (WP 0491 00).
2. Install left cab floor plate (WP 0394 00).
3. Install top access cover and grilles (WP 0390 00).
4. Start engine (see your -10).
5. Check stoplight switch for proper operation.
6. Stop engine (see your -10).

END OF TASK

REPLACE AIR LOW PRESSURE SWITCH (M548A1)

0494 00

THIS WORK PACKAGE COVERS:

Removal (page 0494 00-1).
 Installation (page 0494 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Top access cover and grilles removed (WP 0390 00)
 Left cab floor plate removed (WP 0394 00)
 Drain cock opened, air brake reservoir pressure released
 (WP 0491 00)

Materials/Parts

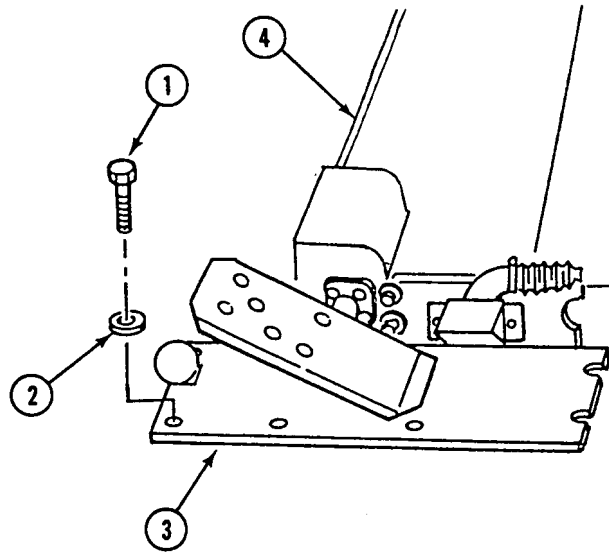
Lock nut (2)

Personnel Required

Unit Mechanic

REMOVAL

1. Remove six screws (1) and washers (2) from treadle valve assembly floor plate (3) on hull (4) and partially remove floor plate.

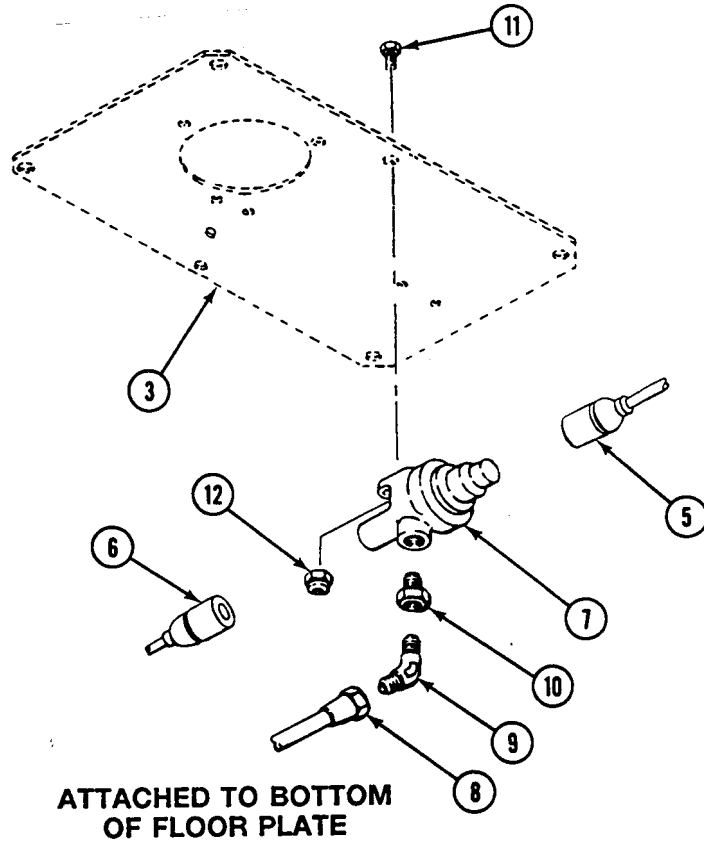


TOP OF FLOOR PLATE

REPLACE AIR LOW PRESSURE SWITCH (M548A1) — Continued

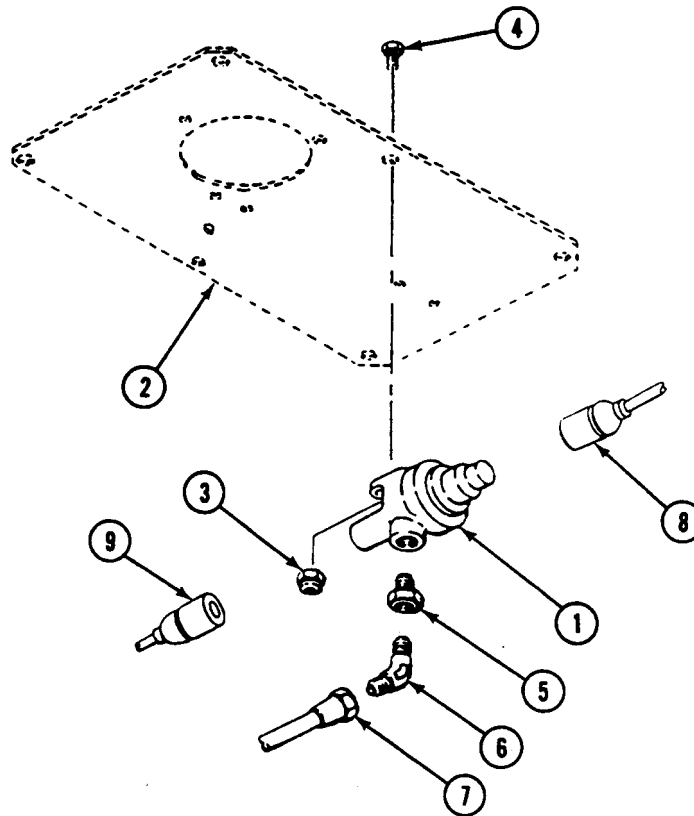
0494 00

2. Disconnect circuit lead 1B (5) and circuit lead 1C (6) from air low pressure switch (7).
3. Disconnect air low pressure hose (8) from inlet elbow (9). Remove inlet elbow and bushing (10) from air low pressure switch (7).
4. Remove two screws (11), lock nuts (12), and air pressure switch (7) from bottom side of treadle valve assembly floor plate (3). Discard lock nuts.



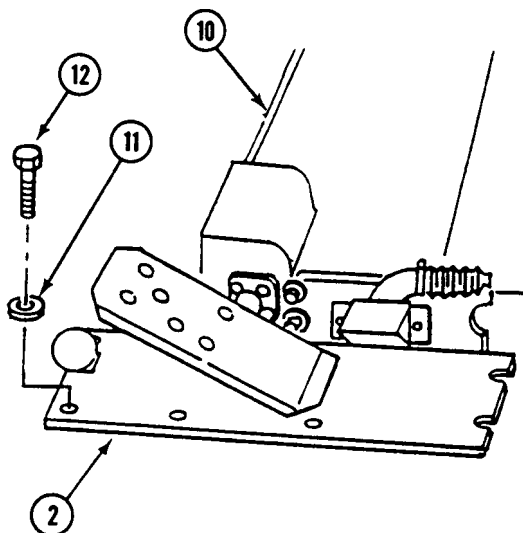
INSTALLATION

1. Install air low pressure switch (1) on bottom side of treadle valve assembly floor plate (2) with two new lock nuts (3) and screws (4).
2. Install bushing (5) and inlet elbow (6) on air low pressure switch (1). Connect air low pressure hose (7) to inlet elbow.
3. Connect circuit lead 1B (8) and circuit lead 1C (9) to air low pressure switch (1).



**ATTACHED TO BOTTOM
OF FLOOR PLATE**

4. Install treadle valve assembly floor plate (2) on hull (10) with six washers (11) and screws (12).



TOP OF FLOOR PLATE

FOLLOW-THROUGH STEPS

1. Close drain cock on air brake reservoir (WP 0491 00).
2. Install left cab floor plate (WP 0394 00).
3. Install top access cover and grilles (WP 0390 00).
4. Start engine (see your -10).
5. Check air low pressure switch for proper operation.
6. Stop engine (see your -10).

END OF TASK

REPLACE AIR HOSES/TUBES/FITTINGS (M548A1)

0495 00

THIS WORK PACKAGE COVERS:

- Removal (page 0495 00-1).
- Installation (page 0495 00-9).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Center seat raised (see your -10)
- Driver's seat raised (see your -10)
- Bulkhead protector removed, if installed (WP 0487 00)
- Power plant rear access covers/door removed (see your -10)
- Top access cover and grilles removed (WP 0390 00)
- Left floor plates removed (WP 0394 00)
- Drain cock on reservoir opened (WP 0491 00)

Materials/Parts

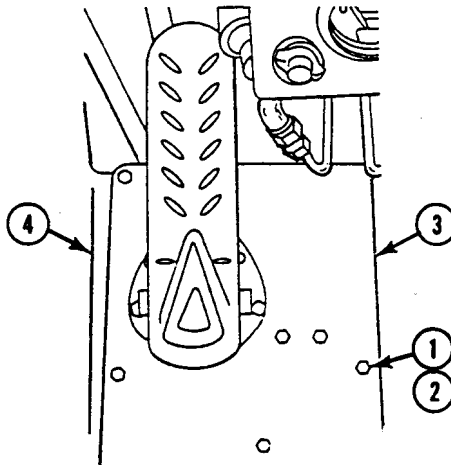
- Antiseize compound (WP 0542 00, Item 6)
- Sealing compound (WP 0542 00, Item 37)
- Grommet (2)
- Lock nut (5) (M548A1)
- Lock nut (3)
- Lock washer (2)

Personnel Required

Unit Mechanic

REMOVAL

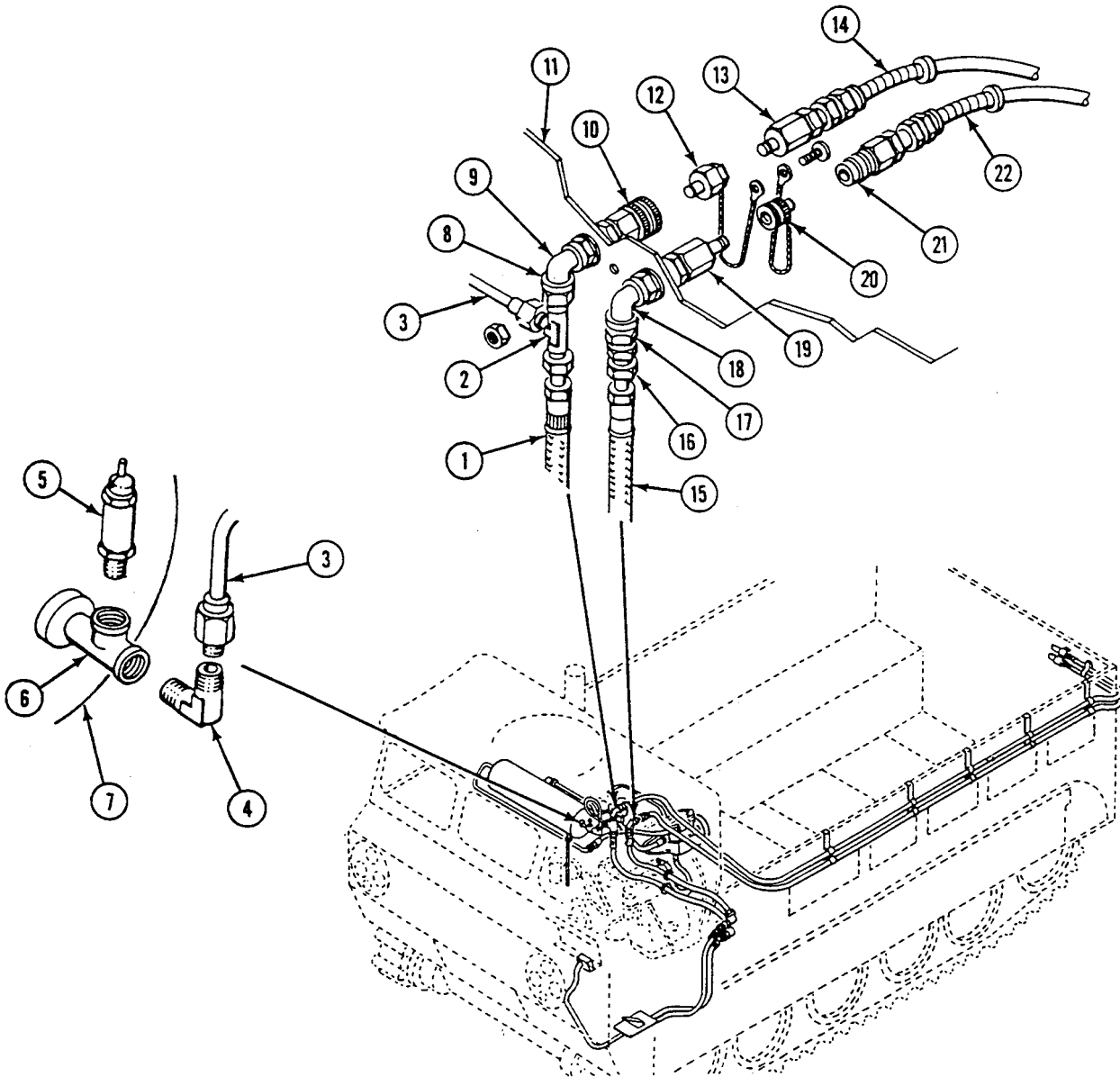
1. Remove six screws (1) and washers (2) from treadle valve floor plate (3) on hull (4) and partially remove floor plate.



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

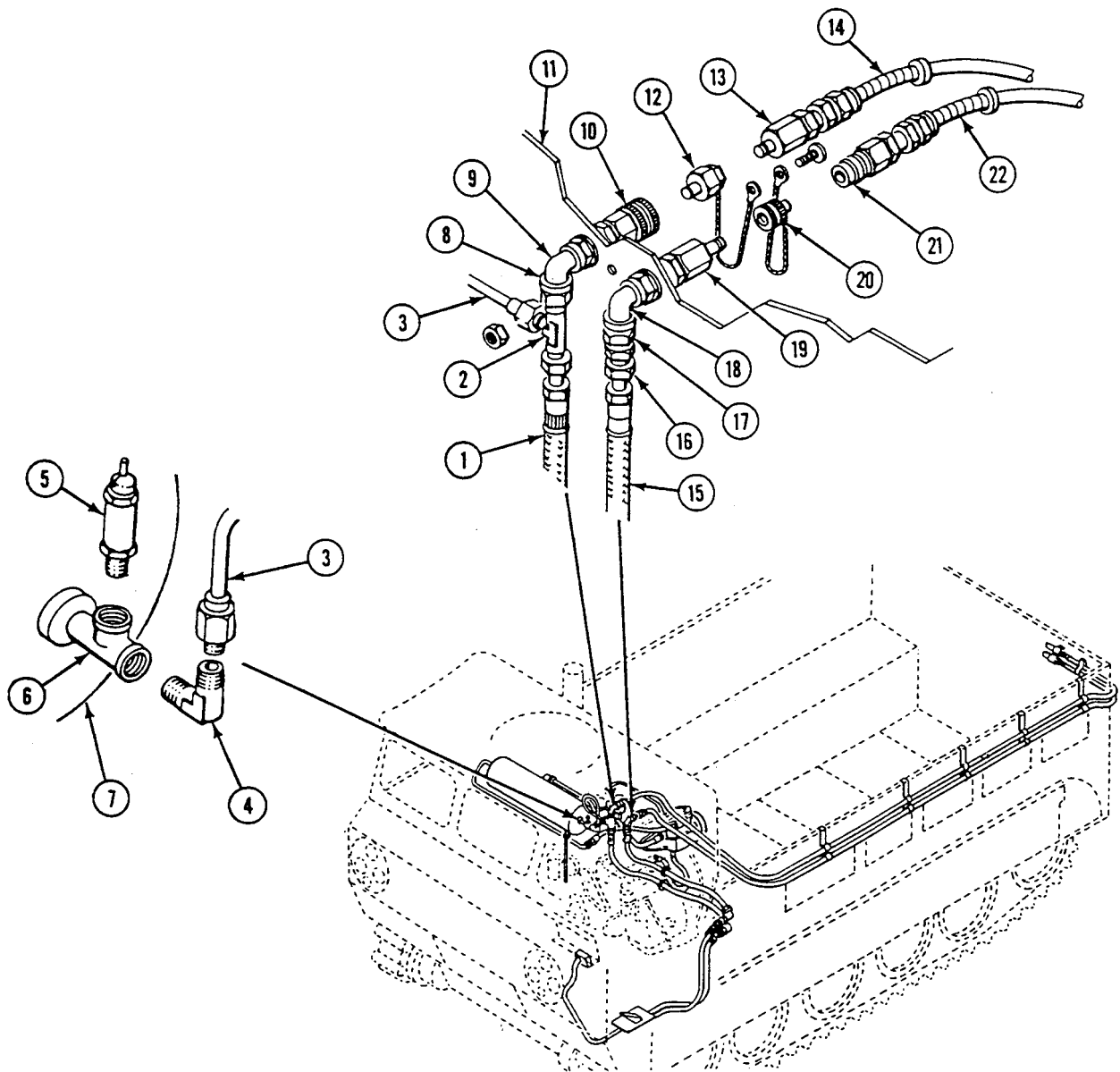
2. Disconnect short emergency hose (1) from tee (2).
3. Disconnect reservoir outlet tube (3) from tee (2) and elbow (4).
4. Remove elbow (4) and safety valve (5) from reservoir outlet tee (6).
5. Remove reservoir outlet tee (6) from reservoir (7).
6. Remove tee (2), bushing (8), and elbow (9) from connector (10).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

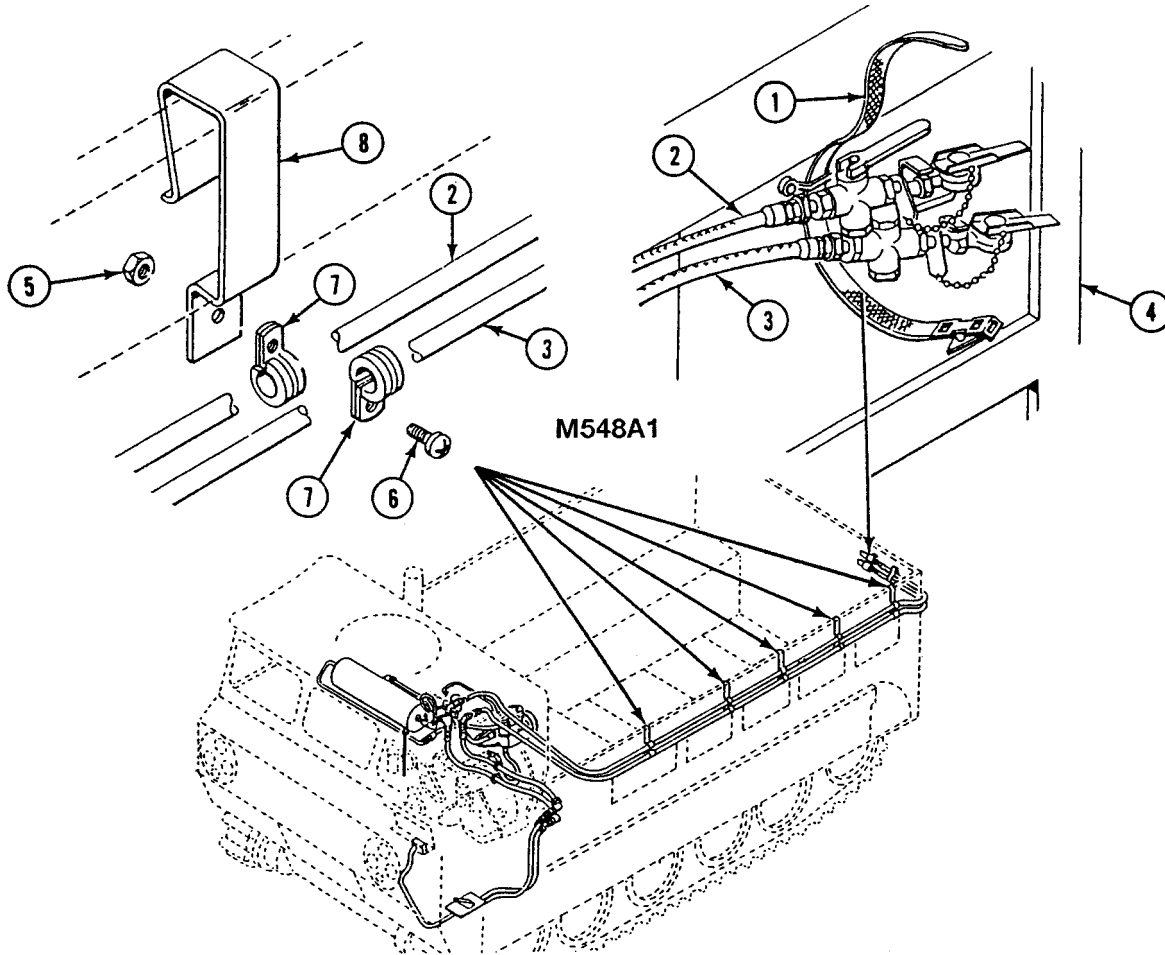
7. Remove connector (10) from bulkhead (11).
8. Remove cap (12) and connector (13) from hose (14).
9. Disconnect hose (15) from nipple (16).
10. Remove nipple (16), bushing (17) and elbow (18) from connector (19).
11. Remove connector (19), cap (20), and connector (21) from hose (22).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

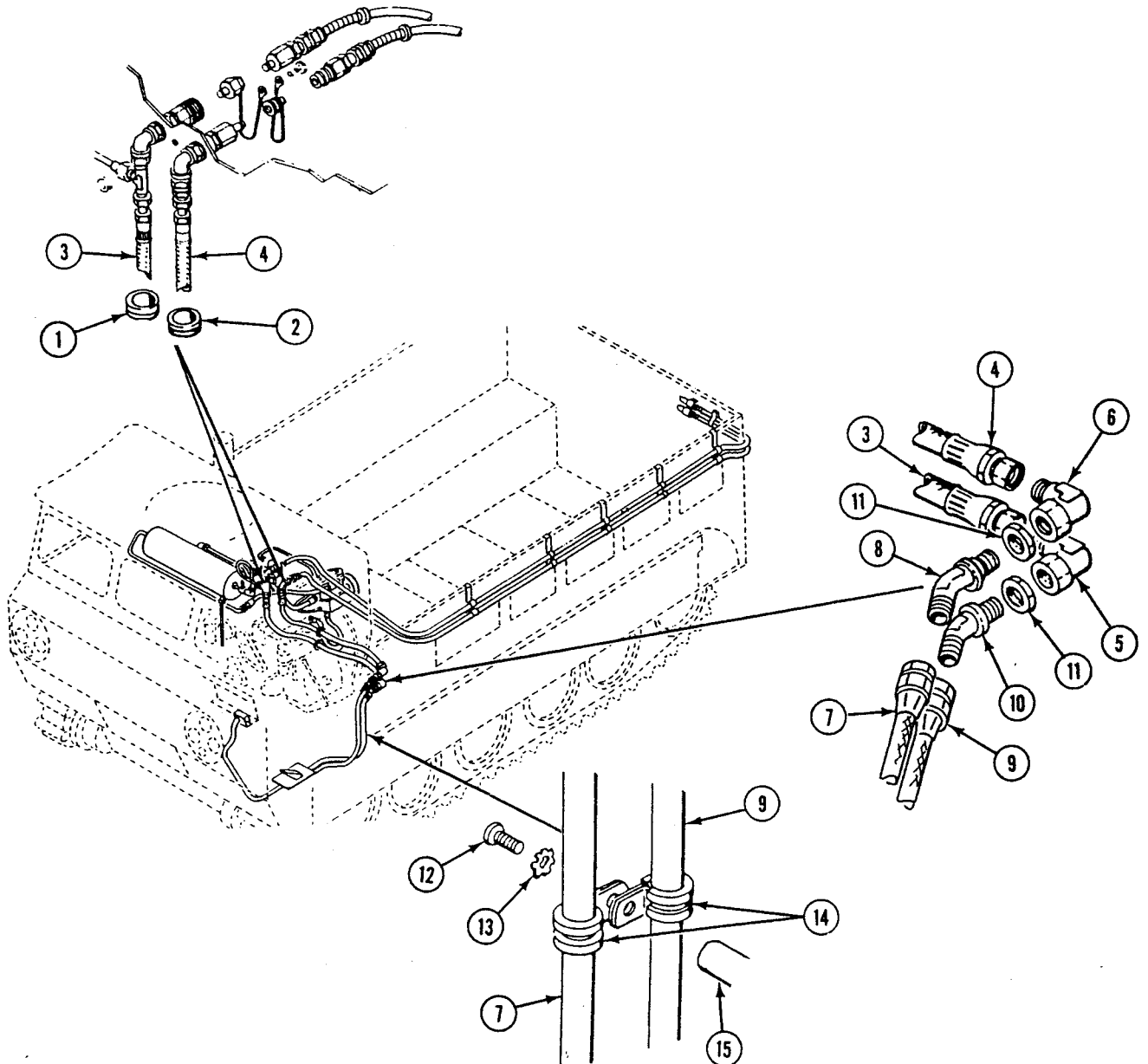
12. Remove two straps (1), hose (2), and hose (3) from cargo door (4).
13. Remove 5 lock nuts (5), screws (6), 10 clamps (7), 5 clips (8), hose (2), and hose (3) from outside left side of hull. Discard lock nuts.



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

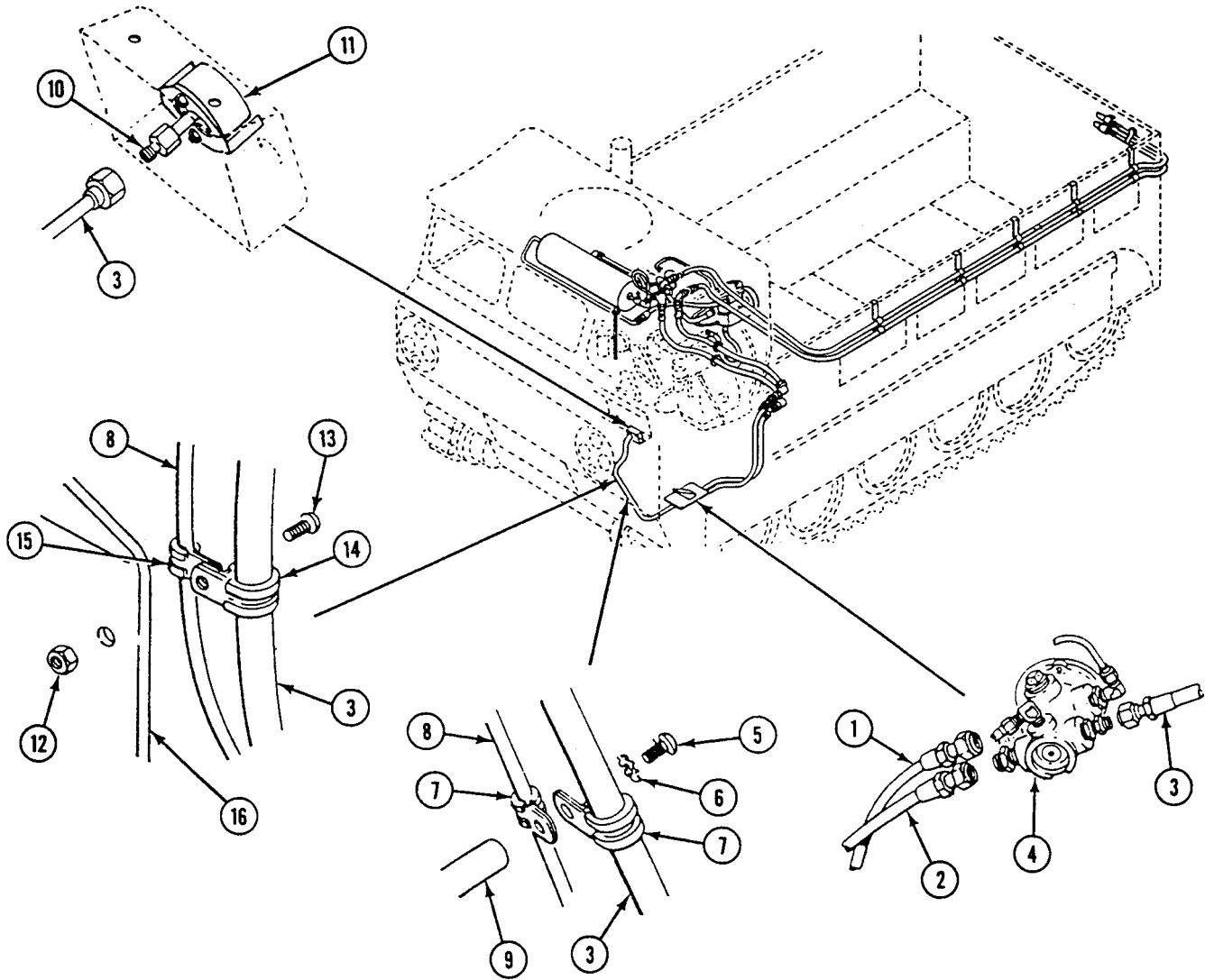
14. Remove grommet (1) and grommet (2) from hose (3) and hose (4). Discard grommets.
15. Remove hose (3) from elbow (5). Remove hose (4) from elbow (6).
16. Remove hose (7) from elbow (8). Remove hose (9) from elbow (10).
17. Loosen two jam nuts (11). Separate elbow (5) from elbow (10). Separate elbow (6) from elbow (8).
18. Remove screw (12), lock washer (13), two clamps (14), hose (7), and hose (9) from weld nut (15). Discard lock washer.



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

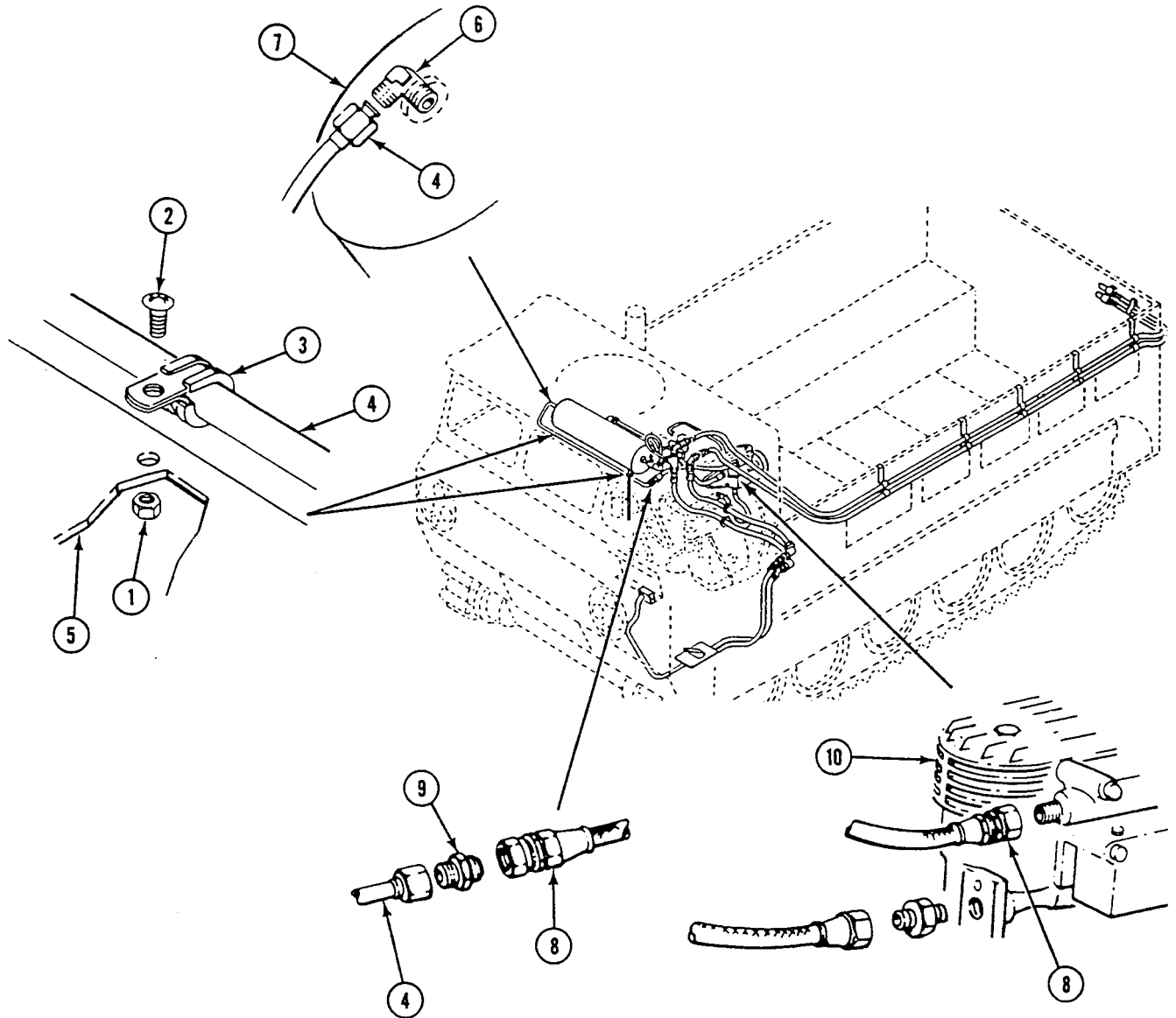
19. Disconnect hose (1), hose (2), and hose (3) from bottom side of treadle valve (4).
20. Remove screw (5), lock washer (6), two clamps (7), hose (3), and circuit 1C lead (8) from weld nut (9). Discard lock washer.
21. Remove hose (3) and connector (10) from gauge (11).
22. Remove lock nut (12), screw (13), clamp (14), clamp (15), hose (3), and circuit 1C lead (8) from support (16). Discard lock nut.



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

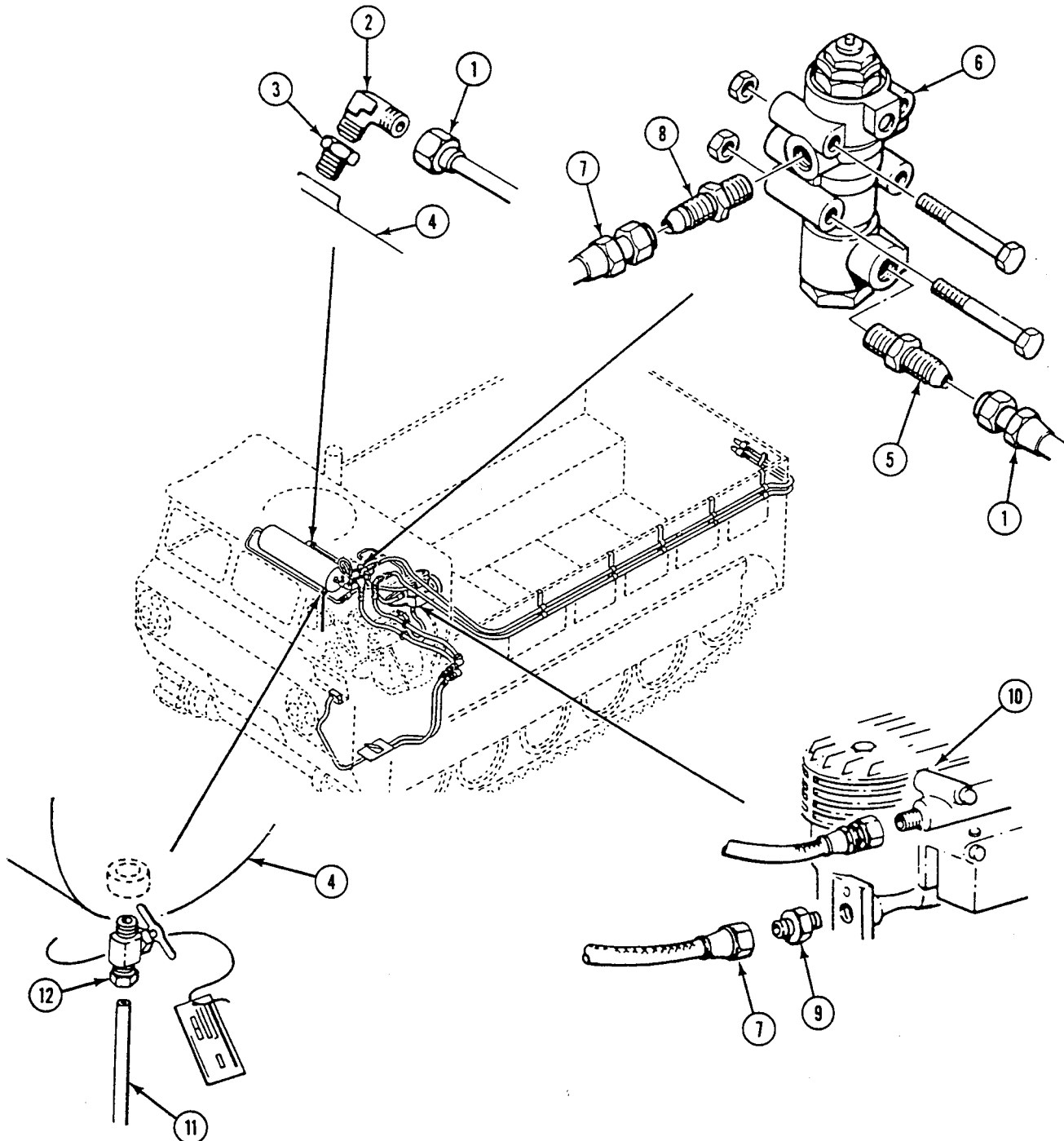
23. Remove two lock nuts (1), screws (2), clamps (3), and tube (4) from transverse beam (5). Discard lock nuts.
24. Disconnect tube (4) from elbow (6). Remove elbow from reservoir (7).
25. Disconnect tube (4) and hose (8) from union (9).
26. Disconnect hose (8) from compressor (10).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

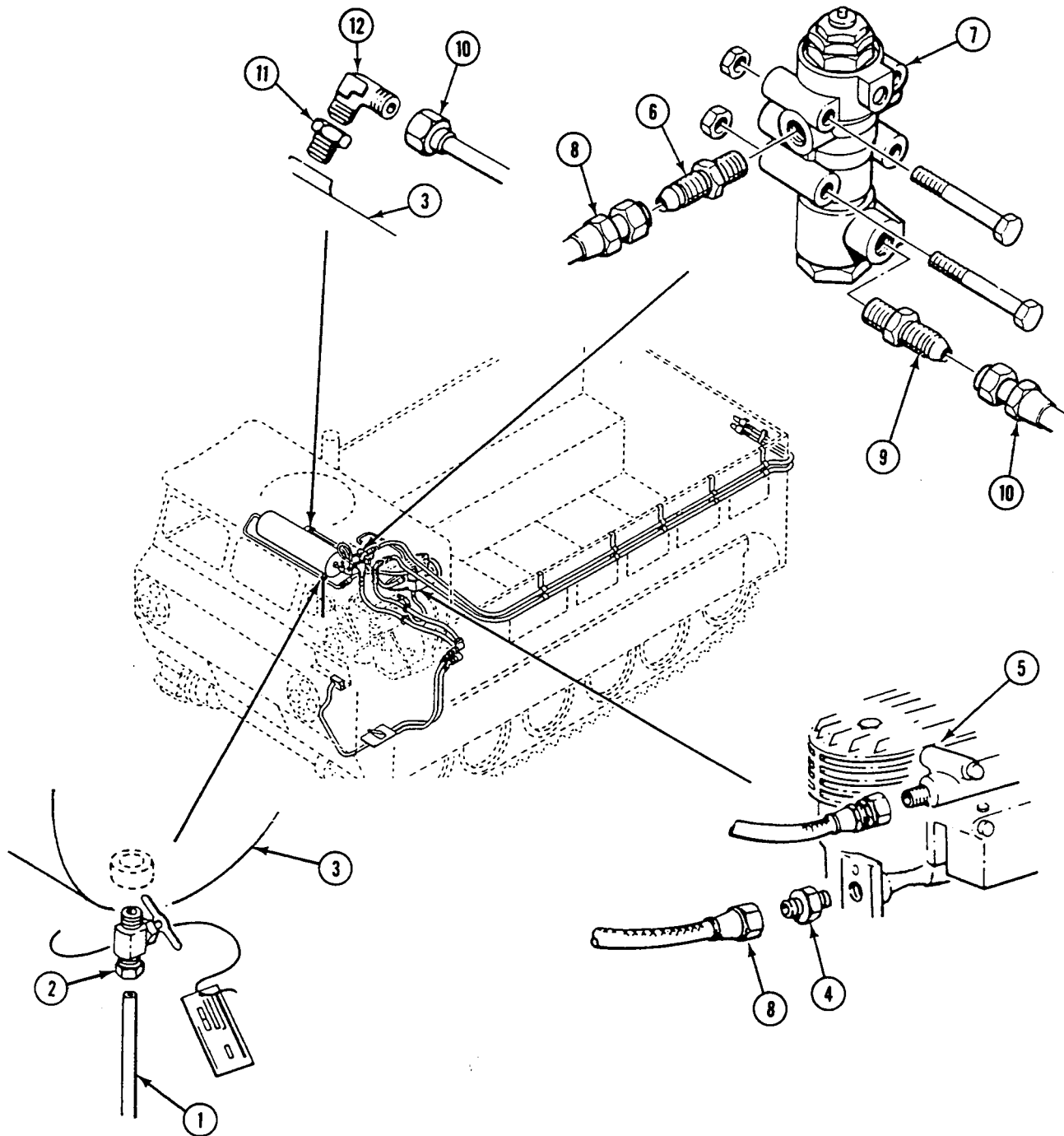
27. Disconnect tube (1) from elbow (2). Remove elbow and adapter (3) from reservoir (4).
28. Disconnect tube (1) from adapter (5). Remove adapter from governor (6).
29. Disconnect hose (7) from adapter (8) and nipple (9). Remove nipple from compressor (10). Remove adapter from governor (6).
30. Remove tube (11) and drain cock (12) from reservoir (4).



INSTALLATION**NOTE**

Before installation, apply a light coat of antiseize compound to outer screw threads and a light coat of sealing compound to outer pipe threads.

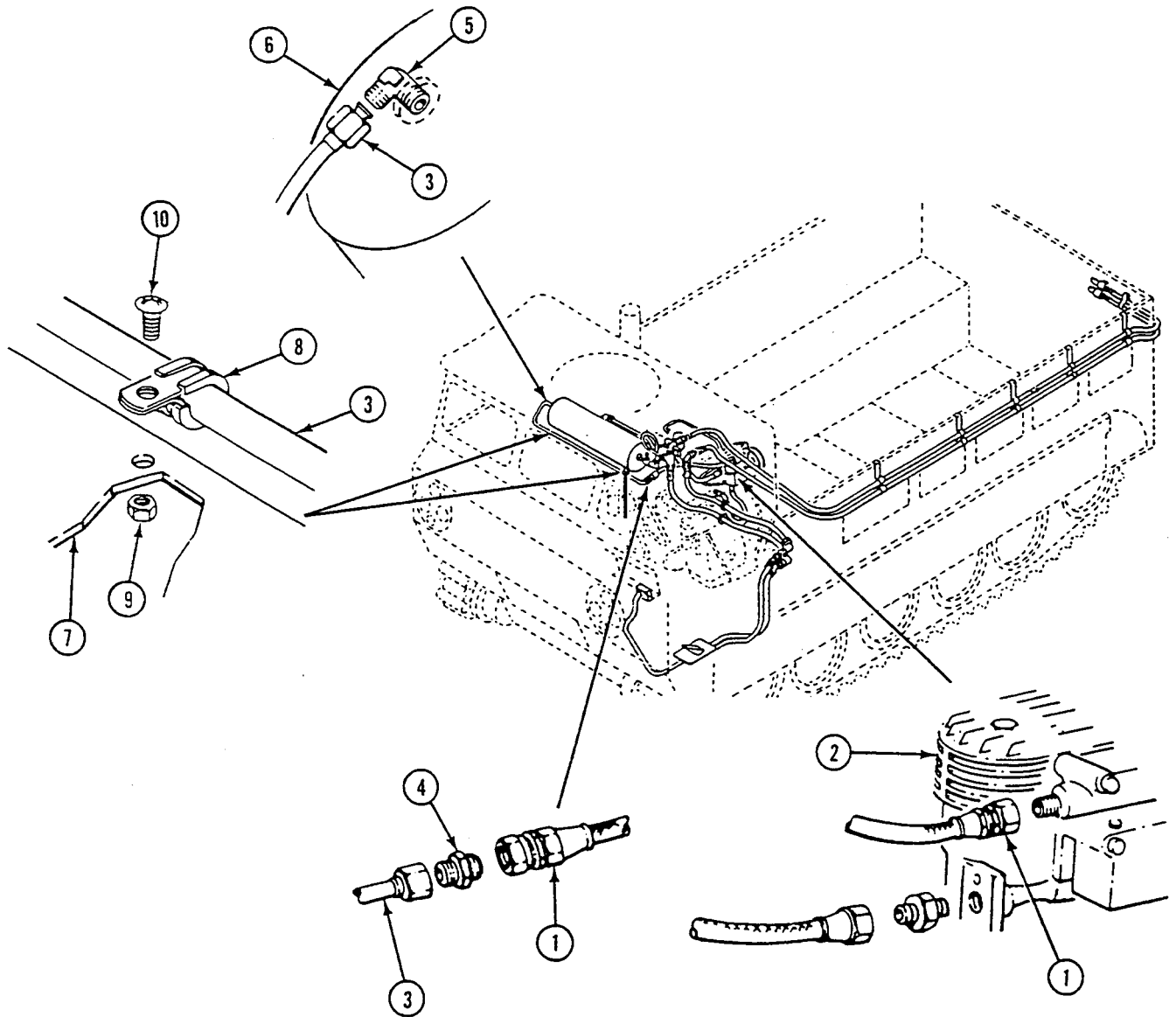
1. Install tube (1) and drain cock (2) on reservoir (3).
2. Install nipple (4) on compressor (5) and adapter (6) on governor (7). Connect hose (8) to adapter and nipple.
3. Install adapter (9) on governor (7). Connect tube (10) to adapter.
4. Install adapter (11) and elbow (12) on reservoir (3). Connect tube (10) to elbow.



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

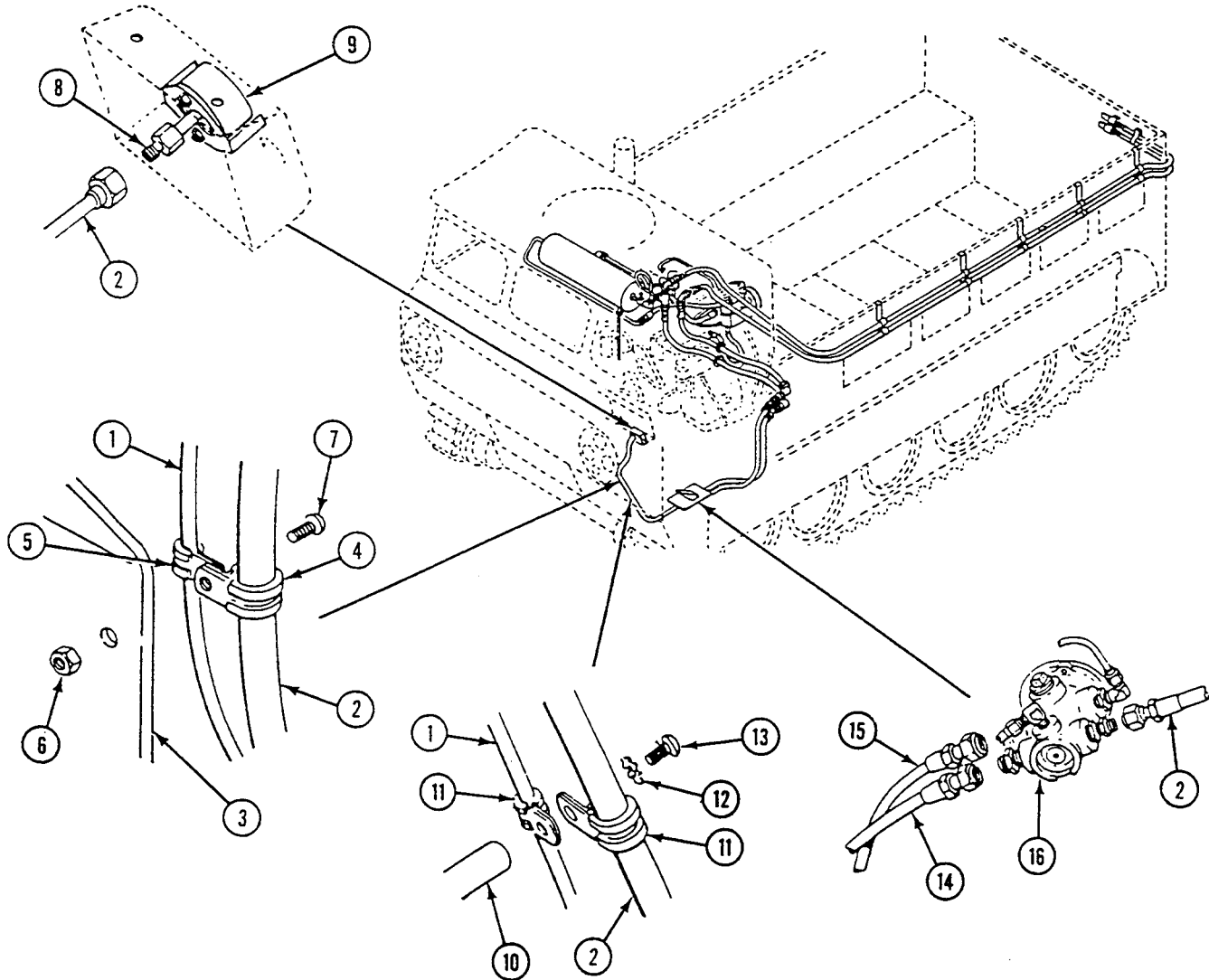
5. Connect hose (1) to compressor (2).
6. Connect hose (1) and tube (3) to union (4).
7. Install elbow (5) on reservoir (6). Connect tube (3) to elbow.
8. Install tube (3) on transverse beam (7) with two clamps (8), new lock nuts (9), and screws (10).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

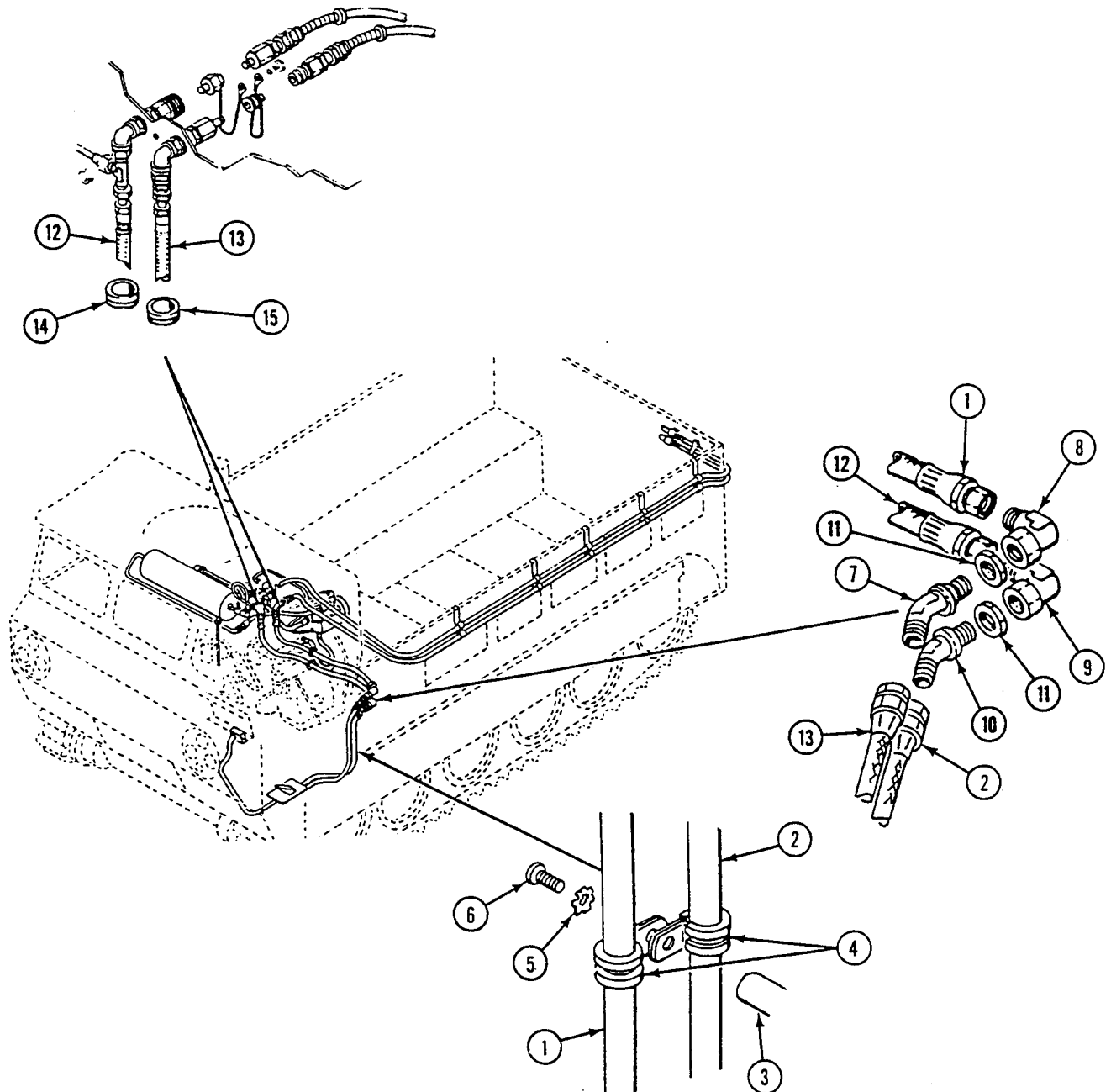
9. Install circuit 1C lead (1) and hose (2) on support (3) with clamp (4), clamp (5), new lock nut (6), and screw (7).
10. Install connector (8) on gauge (9). Connect hose (2) to connector.
11. Install circuit 1C lead (1) and hose (2) on weld nut (10) with two clamps (11), new lock washer (12), and screw (13).
12. Connect hose (2), hose (14), and hose (15) to bottom side of treadle valve (16).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

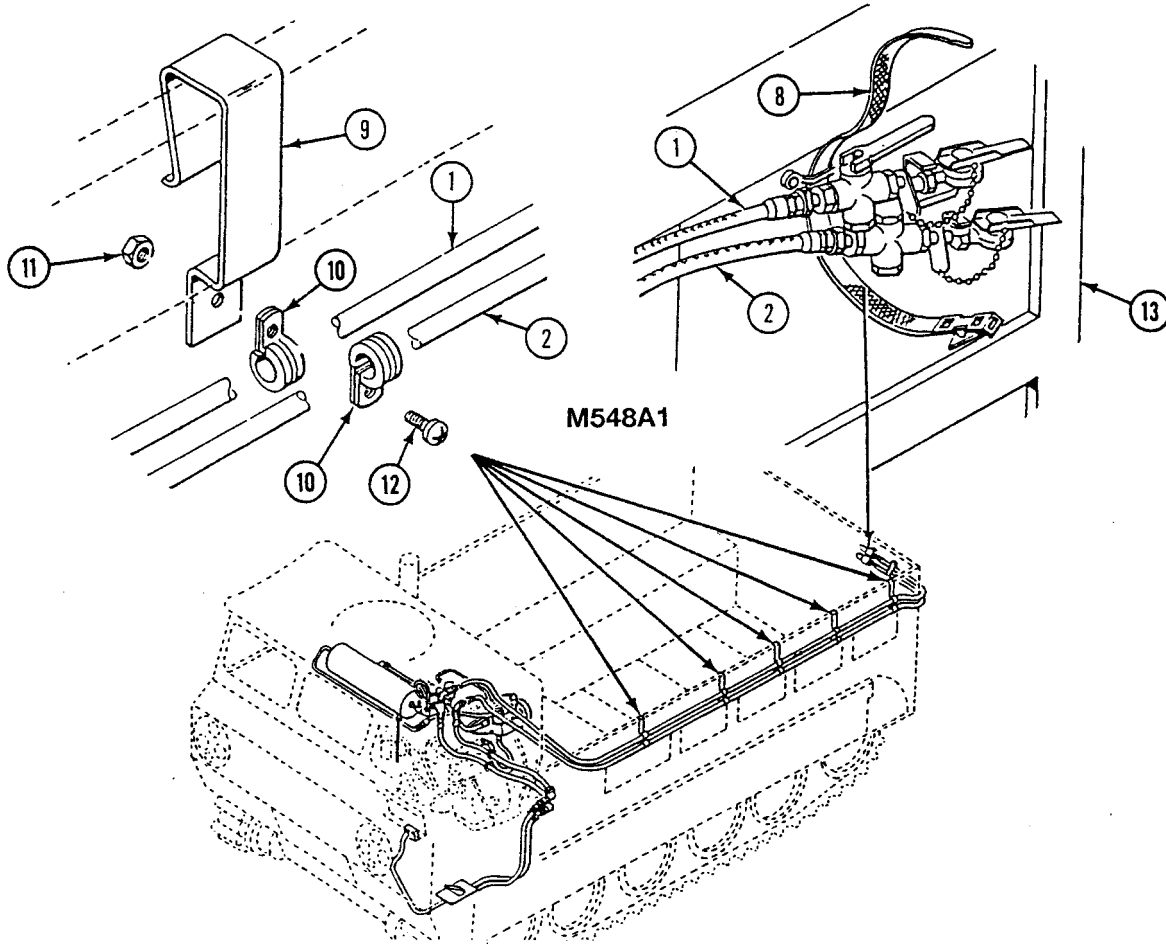
13. Install hose (1) and hose (2) on weld nut (3) with two clamps (4), new lock washer (5), and screw (6).
14. Connect elbow (7) to elbow (8) and elbow (9) to elbow (10). Tighten two jam nuts (11).
15. Connect hose (1) to elbow (8) and hose (2) to elbow (10).
16. Connect hose (12) to elbow (9) and hose (13) to elbow (7).
17. Install new grommet (14) and new grommet (15) on hose (12) and hose (13).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

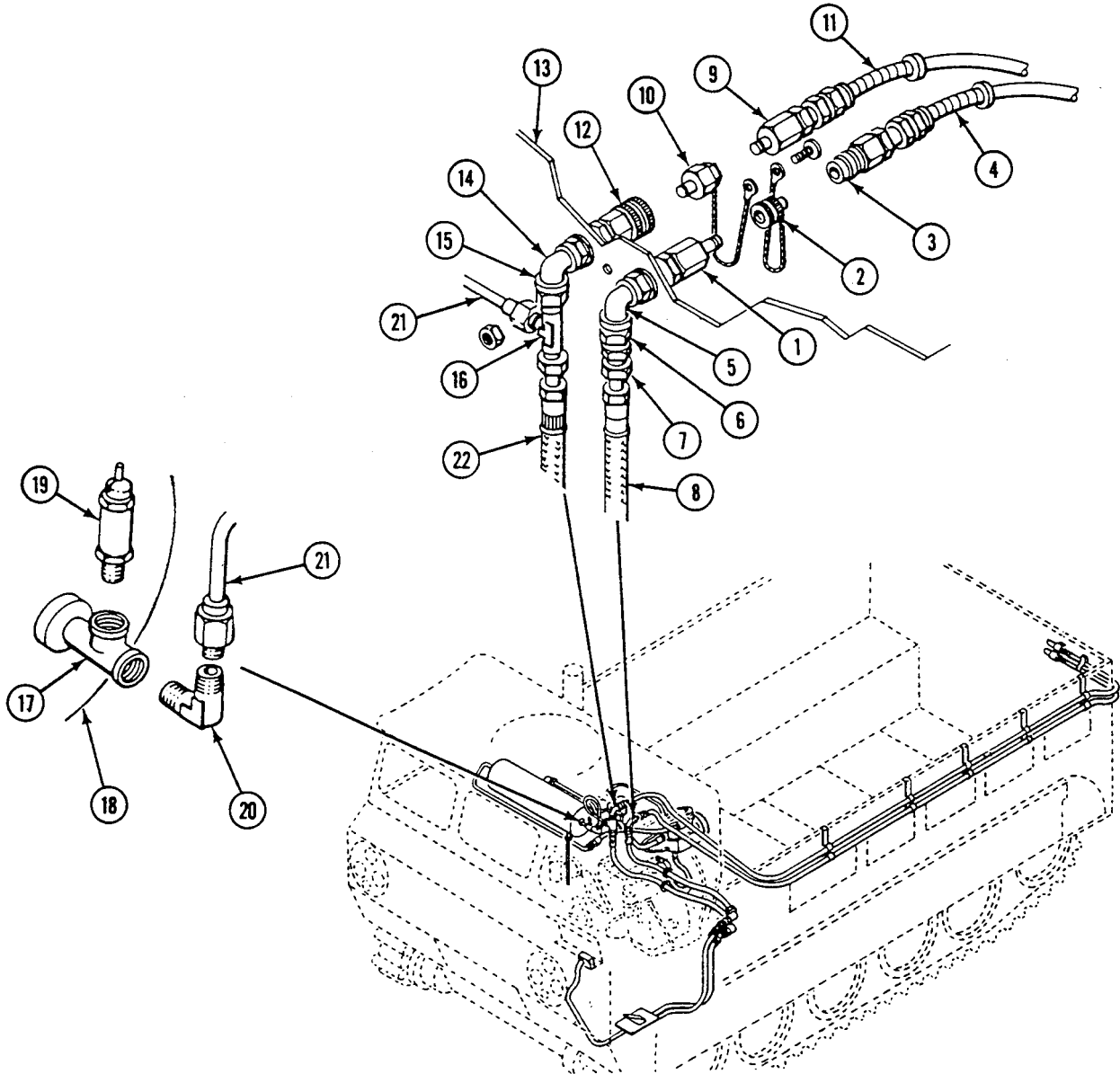
18. Install hose (1) and hose (2) on outside left side of hull with 5 clips (9), 10 clamps (10), 5 new lock nuts (11), and screws (12).
19. Secure hose (1) and hose (2) to cargo door (13) with two straps (8).



REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

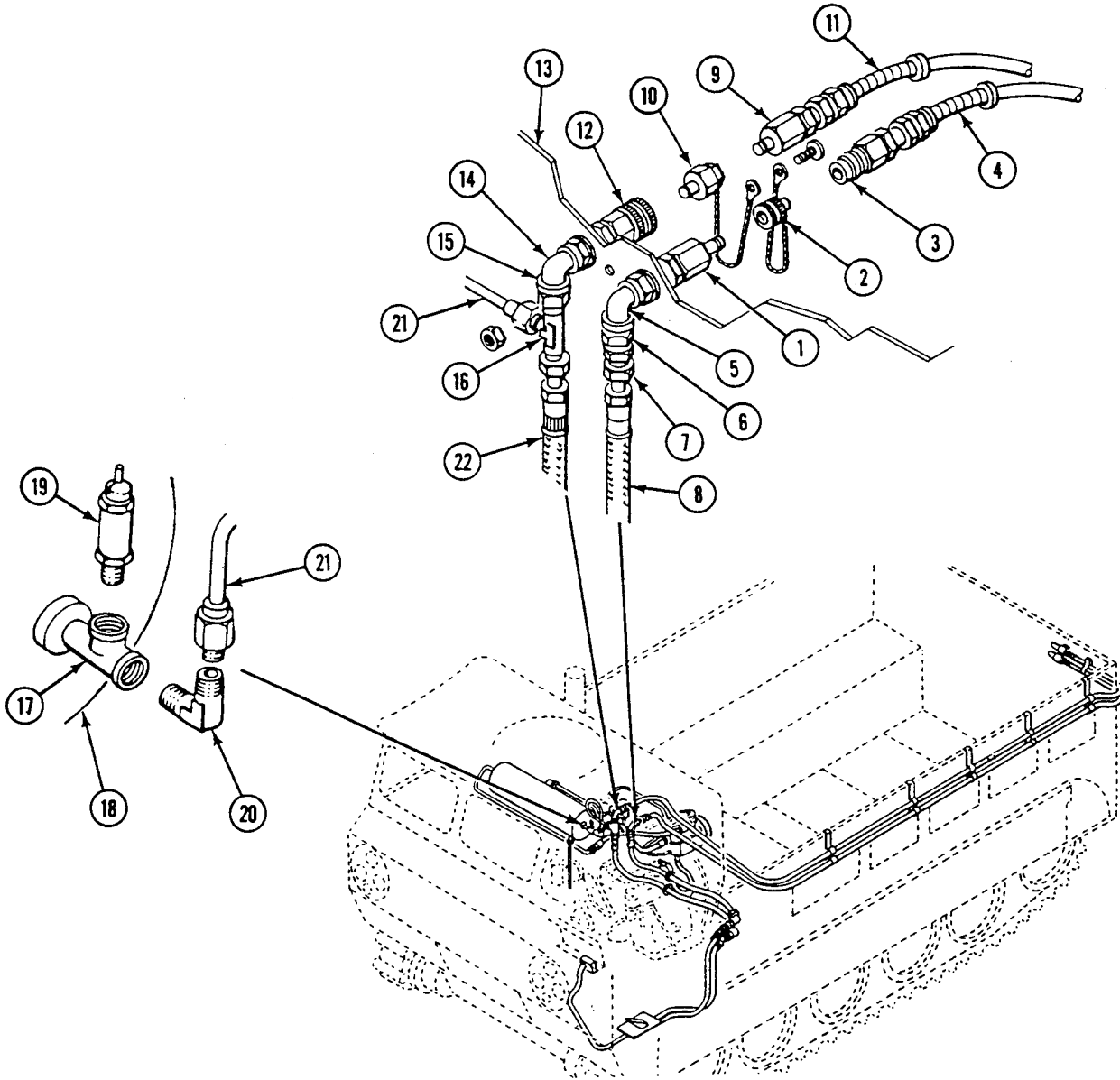
20. Install connector (1), cap (2), and connector (3) on hose (4).
21. Install elbow (5), bushing (6), and nipple (7) on connector (1).
22. Connect hose (8) to nipple (7).
23. Install connector (9) and cap (10) on hose (11).
24. Install connector (12) in bulkhead (13).
25. Install elbow (14), bushing (15), and tee (16) on connector (12).



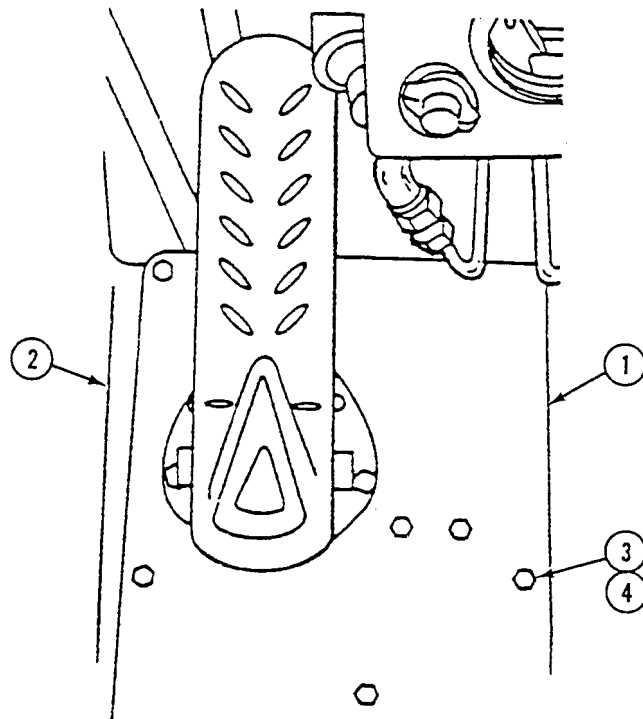
REPLACE AIR HOSES/TUBES/FITTINGS (M548A1) — Continued

0495 00

26. Install reservoir outlet tee (17) in reservoir (18).
27. Install safety valve (19) and elbow (20) on reservoir outlet tee (17).
28. Connect reservoir outlet tube (21) to elbow (20) and tee (16).
29. Connect short emergency hose (22) to tee (16).



30. Install treadle valve floor plate (1) on hull (2) with six washers (3) and screws (4).



FOLLOW-THROUGH STEPS

1. Close drain cock on reservoir.
2. Install top access cover and grilles (WP 0390 00).
3. Install power plant rear access covers/door (see your -10).
4. Install bulkhead protector, if material handling kit is installed (WP 0487 00).
5. Start engine (see your -10).
6. Check trailer air brakes for proper operation.

END OF TASK

REPLACE OIL HOSES/FITTINGS (M548A1)

0496 00

THIS WORK PACKAGE COVERS:

Removal (page 0496 00-2).
 Installation (page 0496 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Bulkhead protector removed, if installed (WP 0487 00)
 Power plant rear access cover/door removed
 (see your -10)
 Top access cover and grilles removed (WP 0390 00)

Materials/Parts

Antiseize compound (WP 0542 00, Item 6)
 Container

Personnel Required

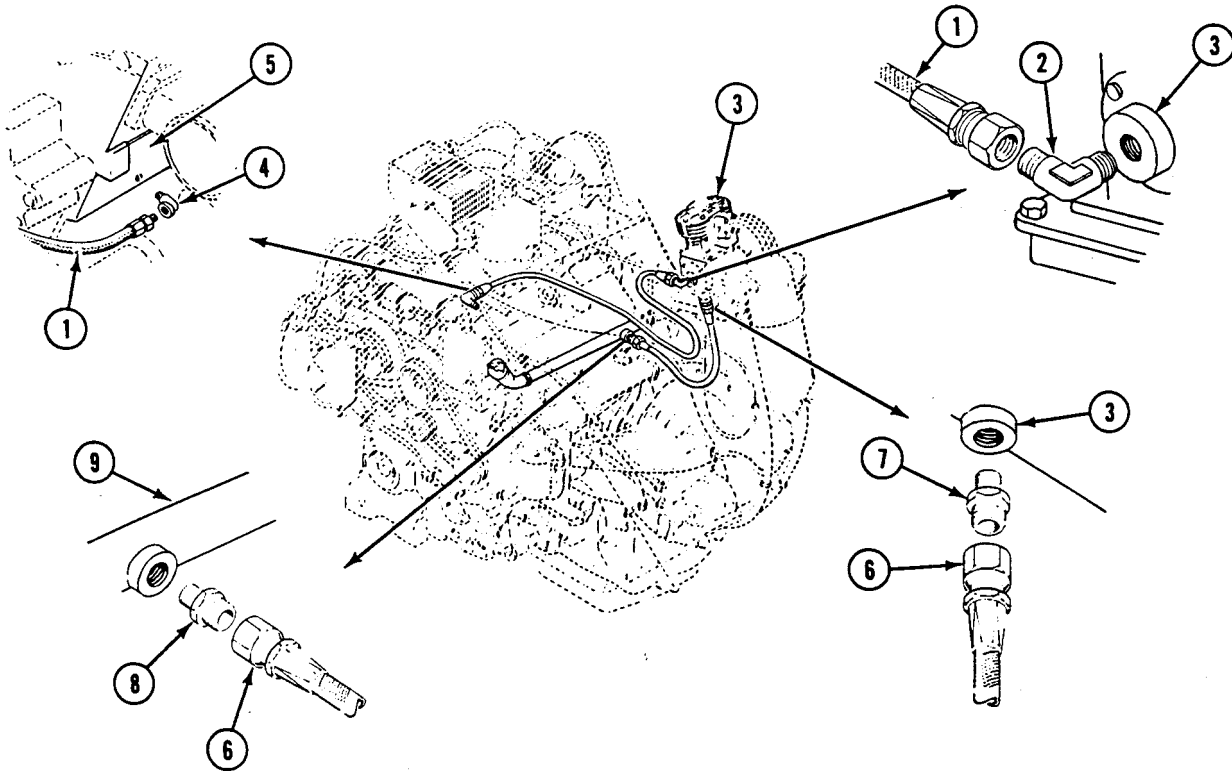
Unit Mechanic

REMOVAL

NOTE

Use a container to catch run-off oil when removing oil hoses.

1. Disconnect hose (1) from elbow (2). Remove elbow from compressor (3).
2. Disconnect hose (1) from elbow (4). Remove elbow (4) from engine (5).
3. Disconnect hose (6) from nipple (7). Remove nipple from compressor (3).
4. Disconnect hose (6) from nipple (8). Remove nipple from filler tube (9).

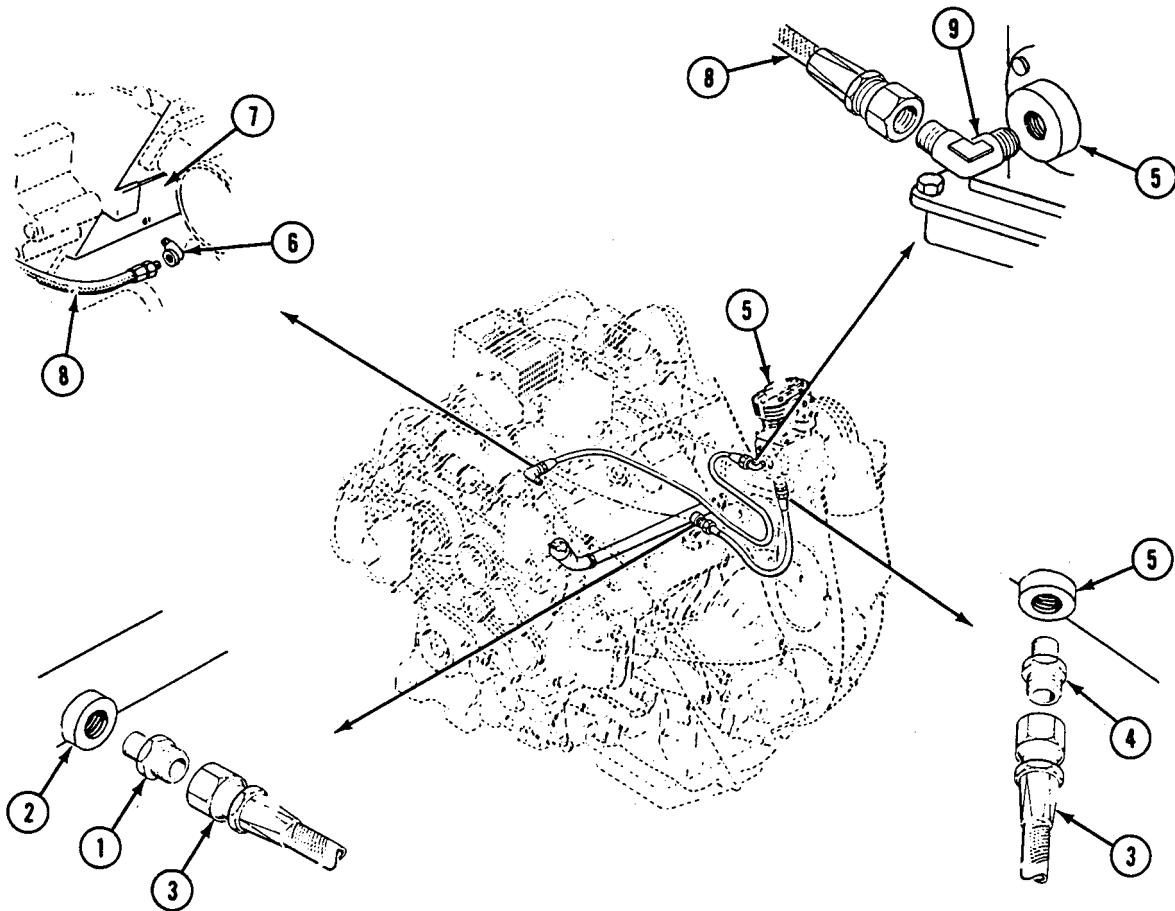


INSTALLATION

NOTE

Before installation, apply a light coat of antiseize compound to outer straight screw threads.

1. Install nipple (1) in filler tube (2). Connect hose (3) to nipple.
2. Install nipple (4) in compressor (5). Connect other end of hose (3) to nipple.
3. Install elbow (6) in engine (7). Connect hose (8) to elbow.
4. Install elbow (9) in compressor (5). Connect other end of hose (8) to elbow.



FOLLOW-THROUGH STEPS

1. Install top access cover and grilles (WP 0390 00).
2. Install power plant rear access cover/door (see your -10).
3. Install bulkhead protector, if material handling kit is installed (WP 0487 00).
4. Start engine (see your -10).
5. Operate air brakes and check for leaks from hoses and fittings.
6. Stop engine (see your -10).

END OF TASK

REPLACE COMPRESSOR DRIVE BELT GUARD (M548A1)

0497 00

THIS WORK PACKAGE COVERS:

Removal (page 0497 00-1).
 Installation (page 0497 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
 Power plant rear access cover/door removed (see your -10)

Materials/Parts

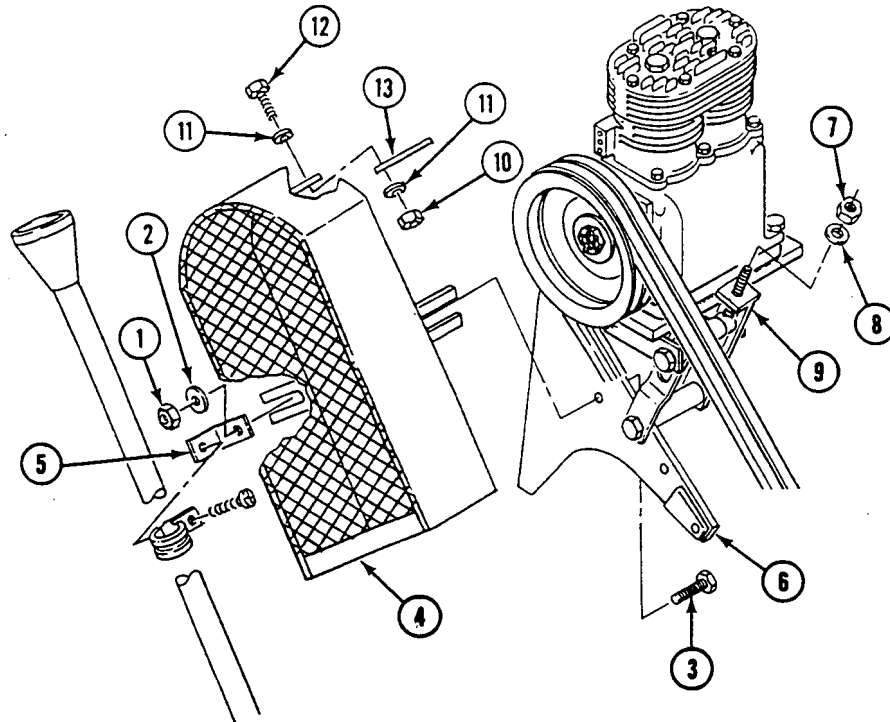
Lock nut (3)

Personnel Required

Unit Mechanic

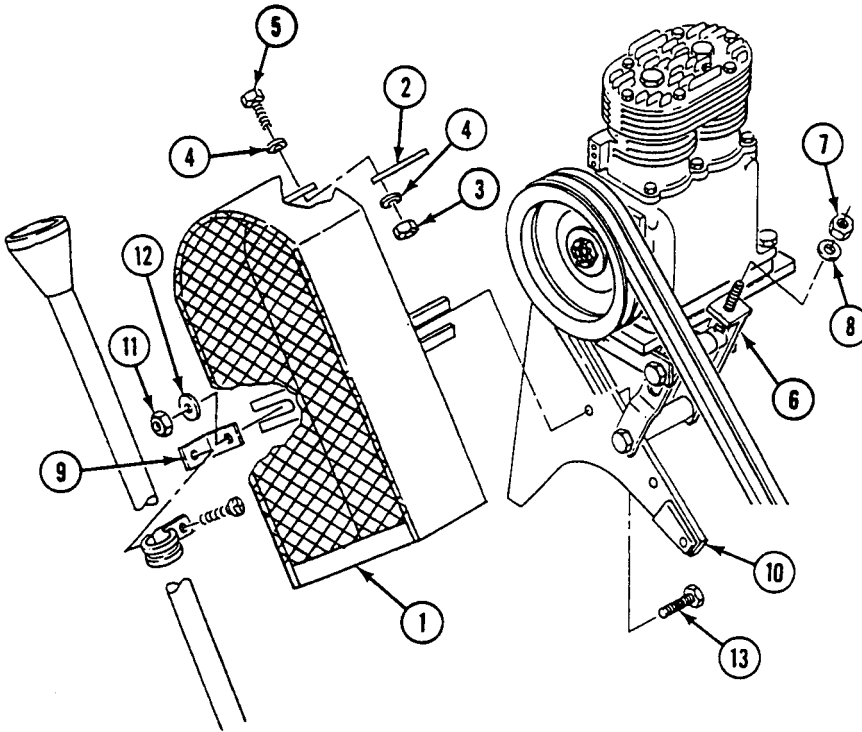
REMOVAL

1. Remove lock nut (1), washer (2), screw (3), guard (4), and filler neck bracket (5) from engine oil filter bracket (6). Discard lock nut.
2. Remove lock nut (7), washer (8), and guard (4) from bracket (9). Discard lock nut.
3. Remove lock nut (10), two washers (11), screw (12), and guard (4) from bracket (13). Discard lock nut.



INSTALLATION

1. Install guard (1) to cover drive belts and pulley on bracket (2) with new lock nut (3), two washers (4), and screw (5).
2. Install guard (1) on bracket (6) with new lock nut (7) and washer (8).
3. Install guard (1) and filler neck bracket (9) on engine oil filter bracket (10) with new lock nut (11), washer (12), and screw (13).

**FOLLOW-THROUGH STEPS**

1. Install power plant rear access cover/door (see your -10).
2. Install bulkhead protector, if material handling kit is installed (WP 0487 00).

END OF TASK

ADJUST/ALIGN COMPRESSOR DRIVE PULLEY/BELTS (M548A1)

0498 00

THIS WORK PACKAGE COVERS:

Adjustment (page 0498 00-1).
 Alignment (page 0498 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Personnel Required

Unit Mechanic

References

See your -10

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

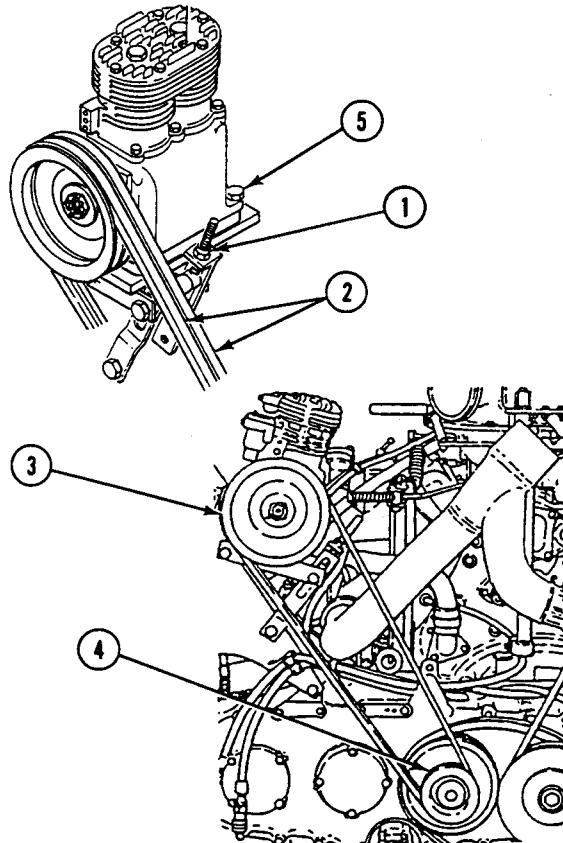
Bulkhead protector removed, if material handling kit is installed (WP 0487 00)

Power plant rear access cover/door removed (see your -10)

Compressor drive belt guard removed (WP 0497 00)

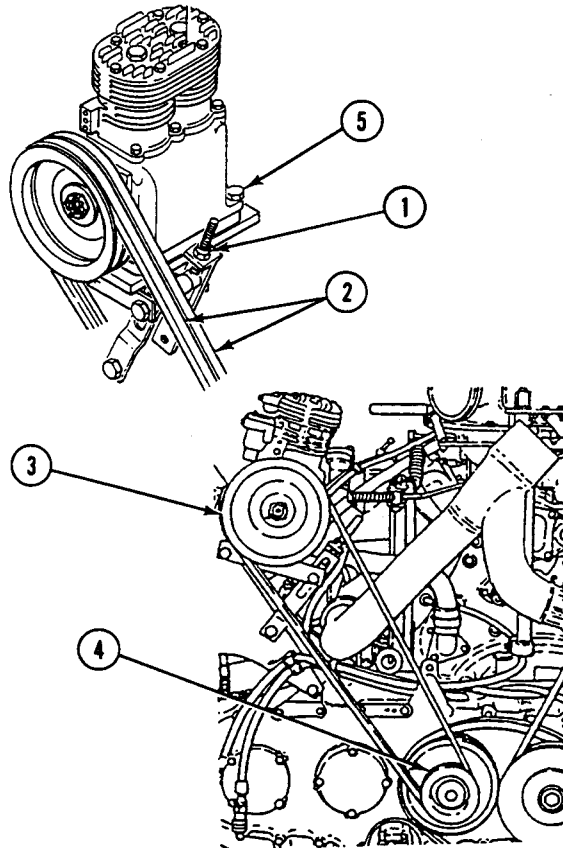
ADJUSTMENT

1. Turn adjusting nut (1) to the right to tighten or to the left to loosen compressor drive belts (2).
2. Turn adjusting nut (1) until 5/8 inch (16 mm) deflection is obtained when about 25 lbs (11 kg) force is applied to each compressor drive belt (2) midway between compressor pulley (3) and drive pulley (4).



ALIGN

1. Turn adjusting nut (1) to the left until compressor drive belts (2) are loose.
2. Loosen four compressor mounting screws (5).
3. Position compressor to align compressor pulley (3) with drive pulley (4) in the same plane within 1/8 inch (3 mm) of each other.
4. Tighten four compressor mounting screws (5).
5. Adjust drive belt tension. Go to Step 1 and Step 2.

**FOLLOW-THROUGH STEPS**

1. Install compressor drive belt guard (WP 0497 00).
2. Install power plant rear access cover/door (see your -10).
3. Install bulkhead protector, if material handling kit is installed (WP 0487 00).

END OF TASK

REPLACE COMPRESSOR DRIVE PULLEY/BELTS (M548A1)

0499 00

THIS WORK PACKAGE COVERS:

Removal (page 0499 00-1).
 Installation (page 0499 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
 Power plant rear access cover/door removed (see your -10)
 Compressor drive belt guard removed (WP 0497 00)

Materials/Parts

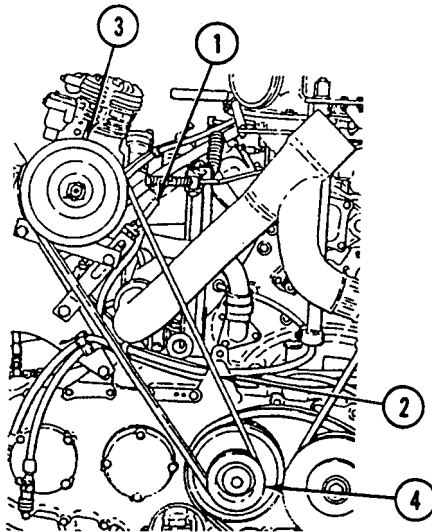
Cotter pin

Personnel Required

Unit Mechanic

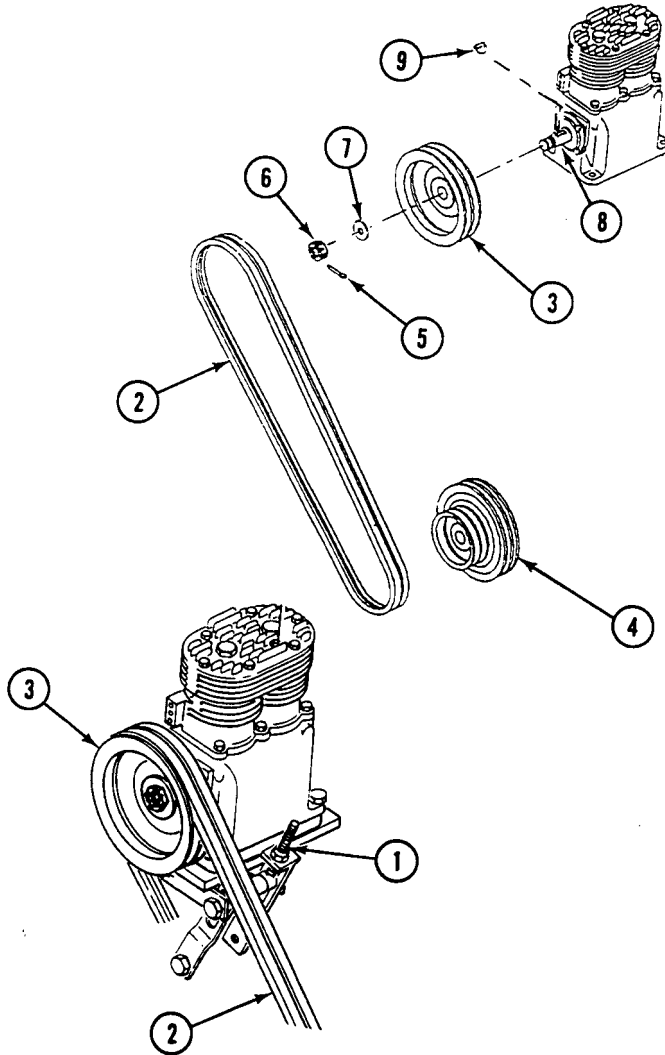
REMOVAL

1. Turn adjusting screw (1) to the left until compressor drive belts (2) are loose. Remove drive belts from compressor pulley (3) and pulley (4).



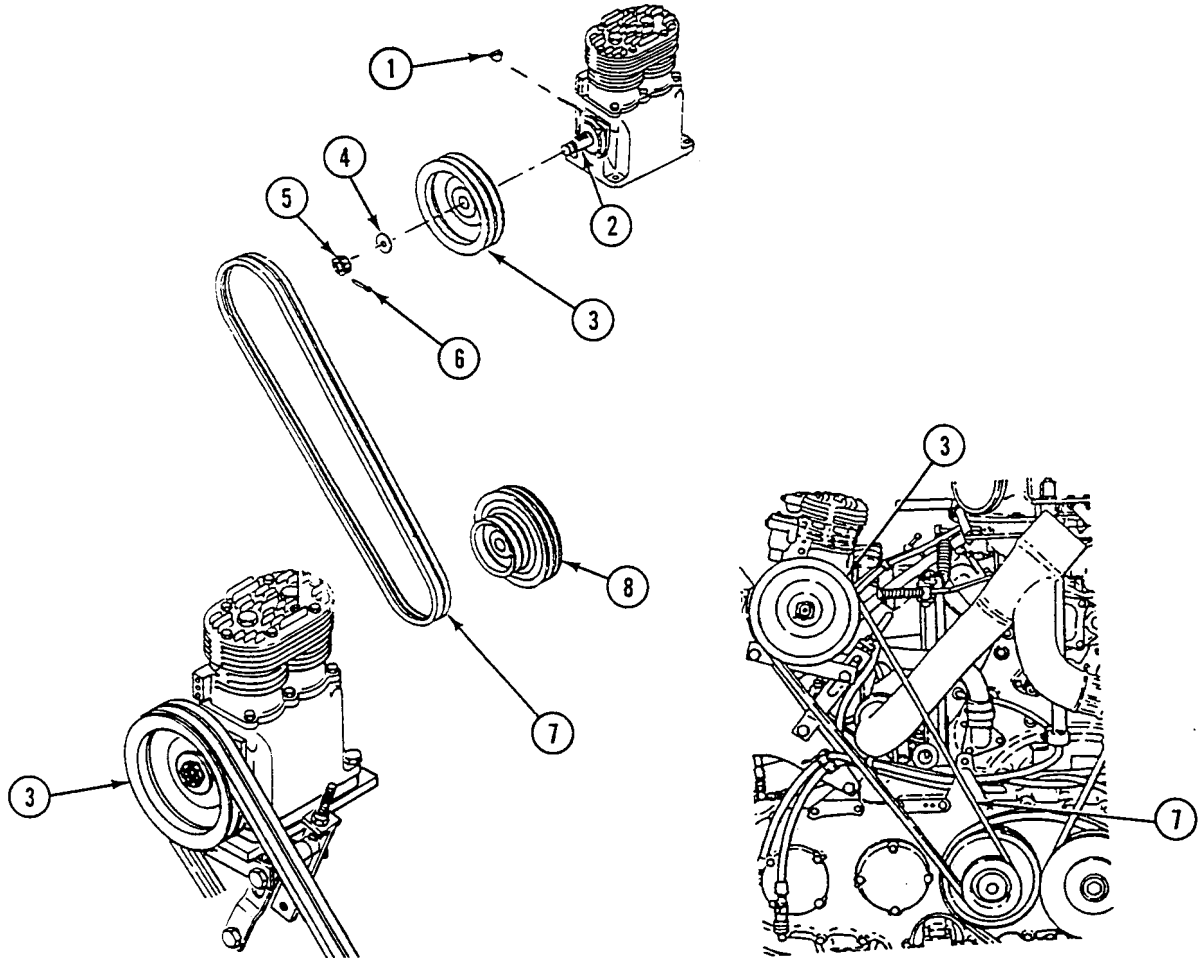
REPLACE COMPRESSOR DRIVE PULLEY/BELTS (M548A1) — Continued**0499 00**

2. Remove cotter pin (5), nut (6), and washer (7) from compressor shaft (8). Discard cotter pin.
3. Remove compressor pulley (3) from compressor shaft (8).
4. Remove woodruff key (9) from compressor shaft (8).



INSTALLATION

1. Insert woodruff key (1) in compressor shaft (2).
2. Install compressor pulley (3) on compressor shaft (2) with washer (4), nut (5), and new cotter pin (6).
3. Install compressor drive belts (7) on compressor pulley (3) and pulley (8).



4. Adjust and align compressor drive belts (WP 0498 00).

FOLLOW-THROUGH STEPS

1. Install compressor drive belt guard (WP 0497 00).
2. Install power plant rear access cover/door (see your -10).
3. Start engine (see your -10).
4. Operate air brakes. Check compressor pulleys and belts for proper operation.
5. Stop engine (see your -10).
6. Install bulkhead protector, if material handling kit is installed (WP 0487 00).

END OF TASK

REPLACE AIR STRAINER (M548A1)

0500 00

THIS WORK PACKAGE COVERS:

- Removal (page 0500 00-1).
- Installation (page 0500 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Bulkhead protector removed, if material handling kit is installed (WP 0487 00)
- Power plant rear access cover/door removed (see your -10)

Materials/Parts

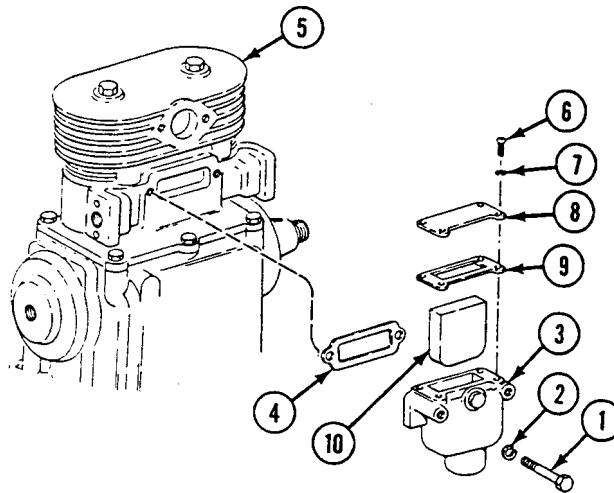
- Engine lubricating oil (WP 0542 00, Item 13)
- Lock washer (2)
- Gasket (2)

Personnel Required

Unit Mechanic

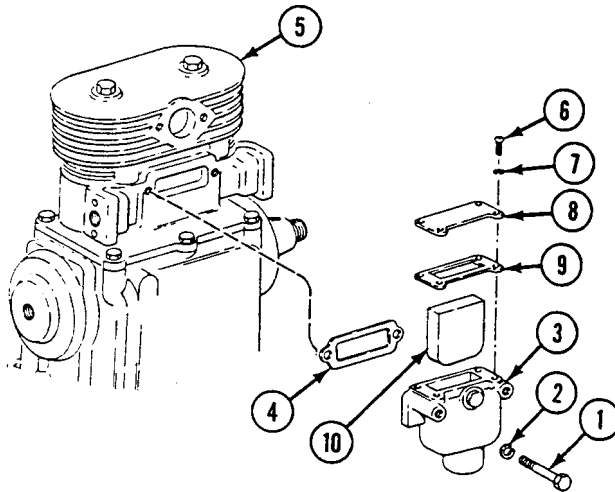
REMOVAL

1. Remove two screws (1), lock washers (2), air strainer (3), and gasket (4) from compressor (5). Discard gasket and lock washers.
2. Remove four screws (6), washers (7), cover (8), gasket (9), and element (10) from air strainer (3). Discard gasket.



INSTALLATION

1. New or used element (10) needs to be soaked in new or fresh engine lubricating oil and then squeezed out until element is slightly oiled.
2. Insert element (10) in air strainer (3). Install new gasket (9) and cover (8) on air strainer (3) with four washers (7) and screws (6).
3. Install air strainer (3) and new gasket (4) on compressor (5) with two new lock washers (2) and screws (1).

**FOLLOW-THROUGH STEPS**

1. Install power plant rear access cover/door (see your -10).
2. Install bulkhead protector, if material handling kit is installed (WP 0487 00).

END OF TASK

REPLACE AIR BRAKE INSTRUMENT PANEL (M548A1)

0501 00

THIS WORK PACKAGE COVERS:

Removal (page 0501 00-1).
 Installation (page 0501 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit WP 0542 00, Item 57

References

See your -10

Materials/Parts

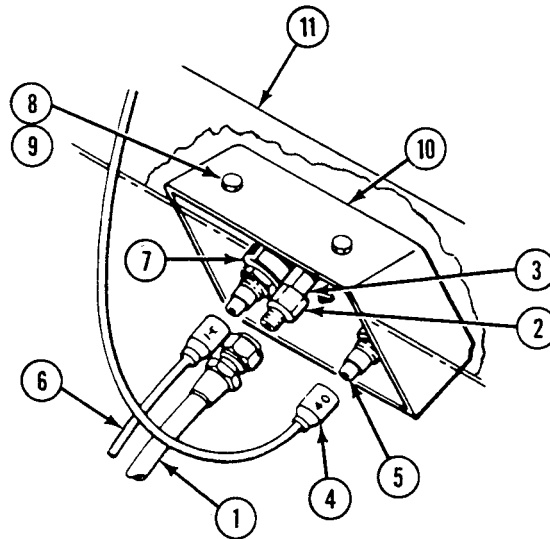
Lock nut (2)

Equipment Condition

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

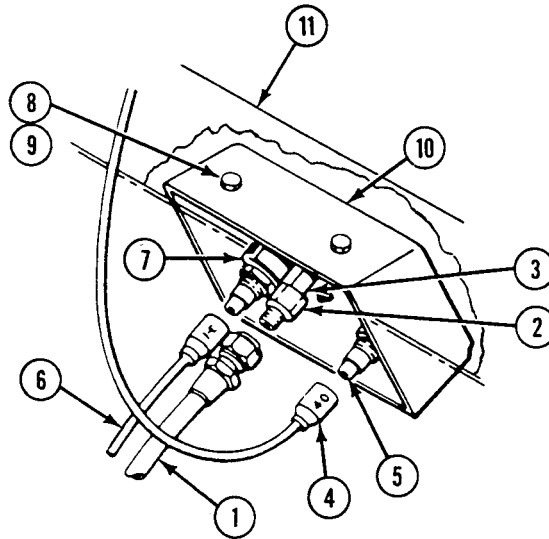
REMOVAL

1. Disconnect air hose (1) from connector (2). Remove connector from air brake pressure indicator (3).
2. Disconnect circuit 40 lead (M548A1) (4) from air brake instrument panel light (5).
3. Disconnect circuit 1C (6) from air flow pressure warning light (7).
4. Remove two screws (8) lock nuts (9), and air brake instrument panel (10) from instrument panel (11). Discard lock nuts.



INSTALLATION

1. Install air brake instrument panel (10) on instrument panel (11) with two new lock nuts (9) and screws (8).
2. Connect circuit 1C lead (6) to air low pressure warning light (7).
3. Connect circuit 40 lead (M548A1) (4) to air brake instrument panel light (5).
4. Install connector (2) on air brake pressure indicator (3). Connect air hose (1) to connector.

**FOLLOW-THROUGH STEPS**

1. Turn MASTER SWITCH ON (see your -10).
2. Check lights and indicator for proper operation.
3. Turn MASTER SWITCH OFF (see your -10).

END OF TASK

REPLACE AIR LOW PRESSURE WARNING LIGHT (M548A1)

0502 00

THIS WORK PACKAGE COVERS:

Removal (page 0502 00-1).
 Installation (page 0502 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

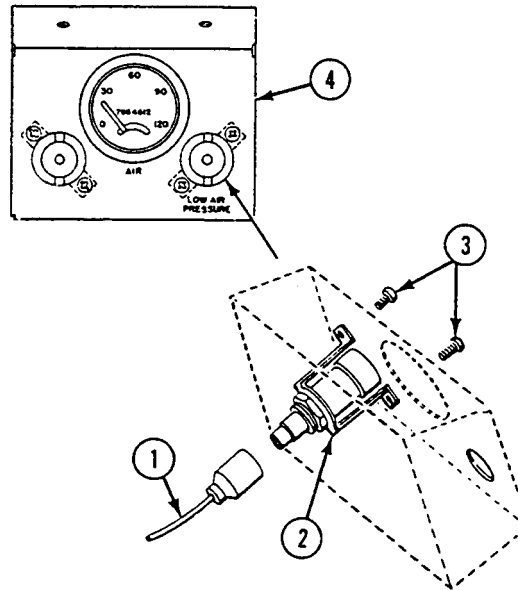
Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Battery negative lead disconnected (WP 0292 00)

Personnel Required

Unit Mechanic

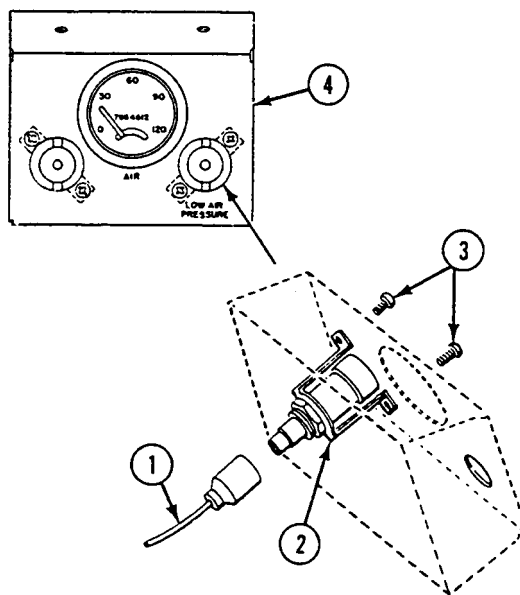
REMOVAL

1. Disconnect circuit 1C lead (1) from air low pressure warning light (2).
2. Remove two screws (3) and air low pressure warning light (2) from air brake instrument panel (4).



INSTALLATION

1. Install air low pressure warning light (2) on air brake instrument panel (4) with two screws (3).
2. Connect circuit 1C lead (1) to air low pressure warning light (2).

**FOLLOW-THROUGH STEPS**

1. Connect battery negative lead (WP 0292 00).

END OF TASK

REPLACE AIR BRAKE PRESSURE INDICATOR (M548A1)

0503 00

THIS WORK PACKAGE COVERS:

Removal (page 0503 00-1).
 Installation (page 0503 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

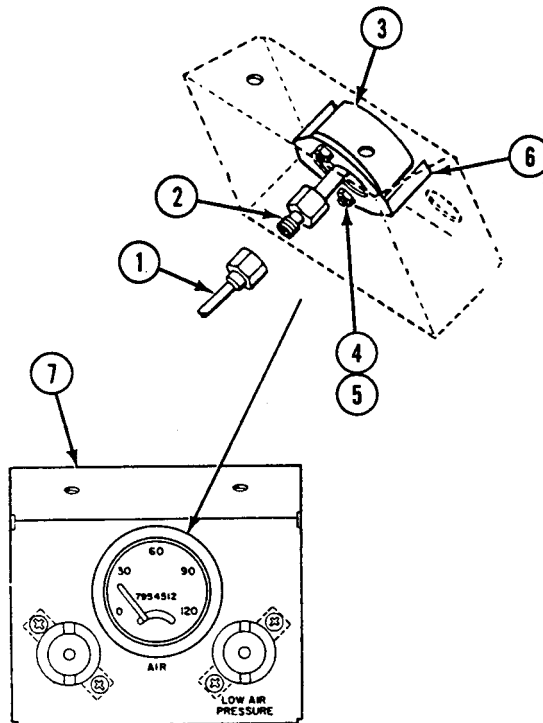
Personnel Required

Unit Mechanic

Carrier blocked (see your -10)

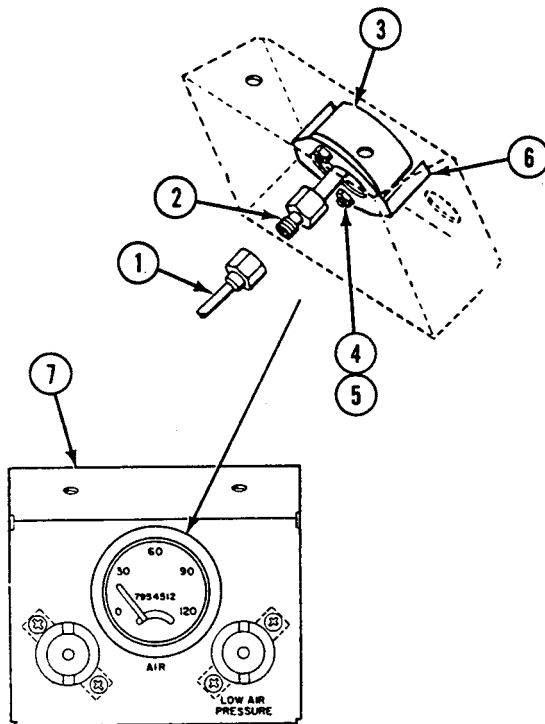
REMOVAL

1. Disconnect air hose (1) from connector (2). Remove connector from air brake pressure indicator (3).
2. Remove two nuts (4), washers (5), and bracket (6) from rear of air brake instrument panel (7).
3. Remove air brake pressure indicator (3) from front of air brake instrument panel (7).



INSTALLATION

1. Install air brake pressure indicator (3) through front of air brake instrument panel (7).
2. Install air brake pressure indicator (3) to air brake instrument panel (7) from rear of panel with bracket (6), two washers (5), and nuts (4).
3. Install connector (2) on air brake pressure indicator (3). Connect air hose (1) to connector.

**FOLLOW-THROUGH STEPS**

1. Start engine (see your -10).
2. Operate air brakes.
3. Check air pressure indicator for proper operation.
4. Stop engine (see your -10).

END OF TASK

REPLACE AIR BRAKE PANEL LIGHT (M548A1)

0504 00

THIS WORK PACKAGE COVERS:

Removal (page 0504 00-1).
 Installation (page 0504 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Personnel Required

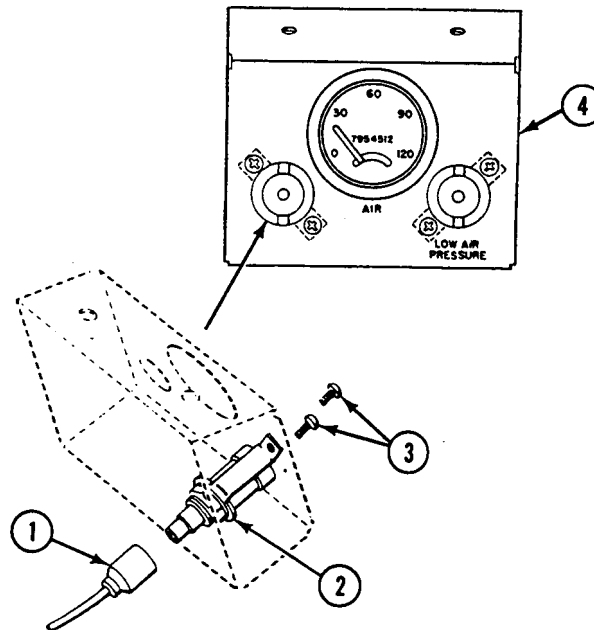
Unit Mechanic

Carrier blocked (see your -10)

Battery negative lead disconnected (WP 0292 00).

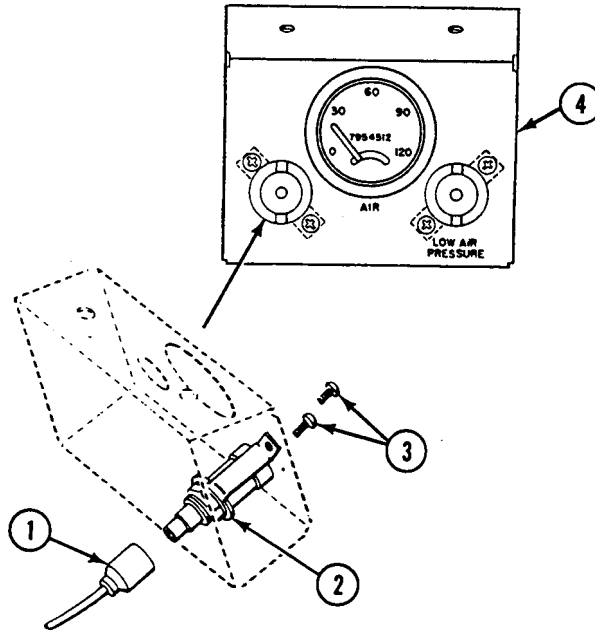
REMOVAL

1. Disconnect circuit 40 lead (M548A1) (1) from air brake panel light (2).
2. Remove two screws (3) and air brake panel light (2) from air brake instrument panel (4).



INSTALLATION

1. Install air brake panel light (2) on air brake instrument panel (4) with two screws (3).
2. Connect circuit 40 lead (M548A1) (1) to air brake panel light (2).

**FOLLOW-THROUGH STEPS**

1. Connect negative battery lead (WP 0292 00).

END OF TASK

REPLACE TURN SIGNAL LIGHT

0505 00

THIS WORK PACKAGE COVERS:

Removal (page 0505 00-1).
 Installation (page 0505 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Gasket

Lock nut

Lock washer (2)

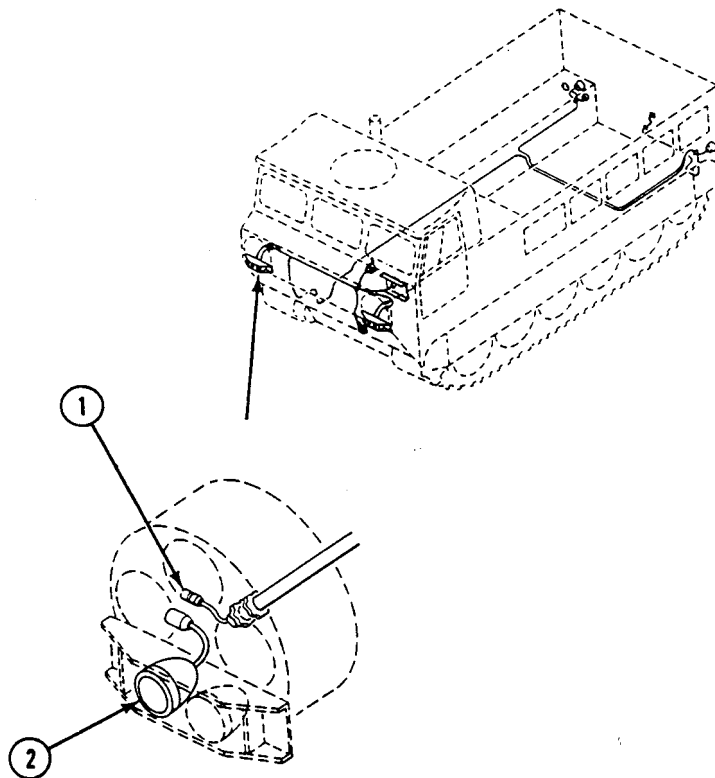
Equipment Condition

Engine stopped (see your -10)

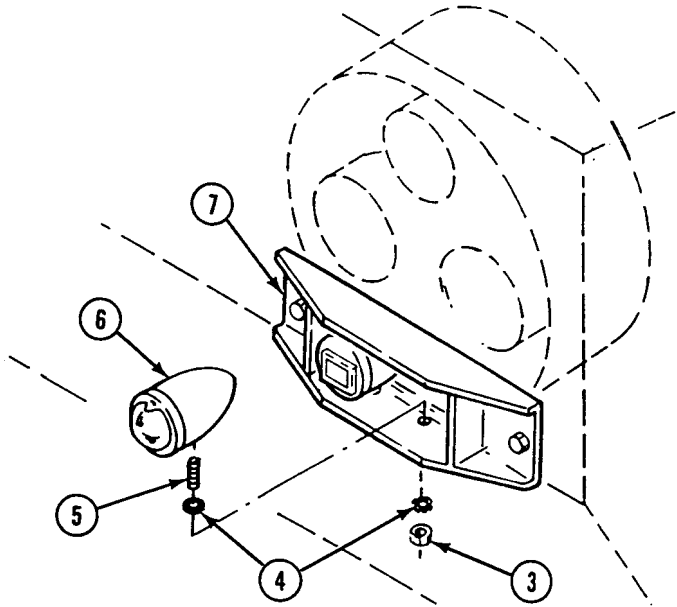
Carrier blocked (see your -10)

REMOVAL

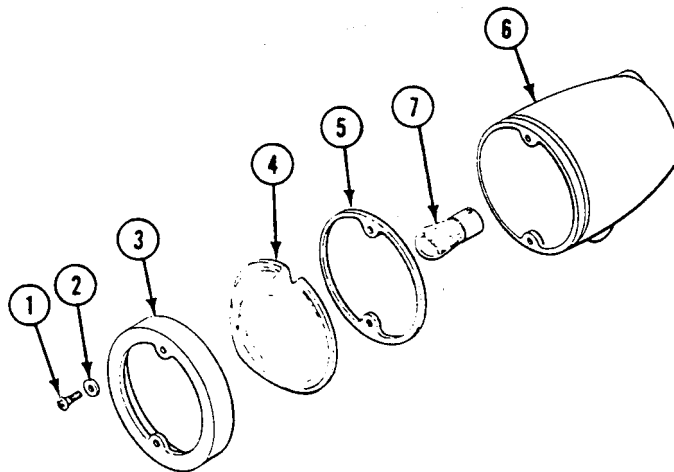
1. Disconnect circuit 460 (right side) or 461 (left side) lead (1) as required from turn signal light (2).



2. Remove lock nut (3), two lock washers (4), stud (5), and turn signal light (6) from bracket (7). Discard lock washers and lock nut.

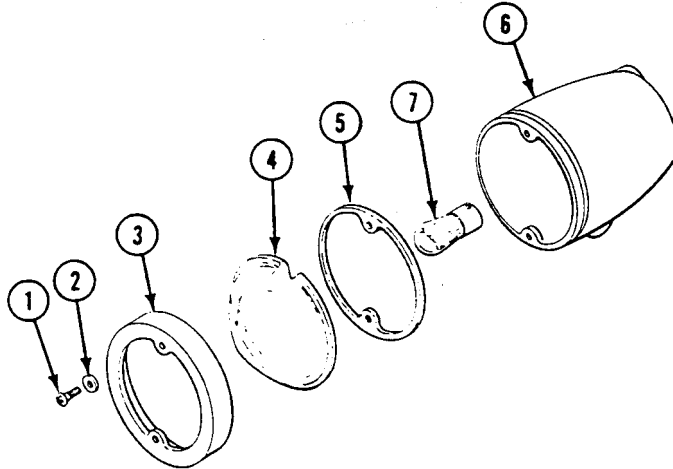


3. Remove two screws (1) and washers (2) that secure lens retainer (3), lens (4), and gasket (5) to body (6). Remove lens retainer, lens, and gasket. Discard gasket.
4. Remove lamp (7) from socket in body (6).

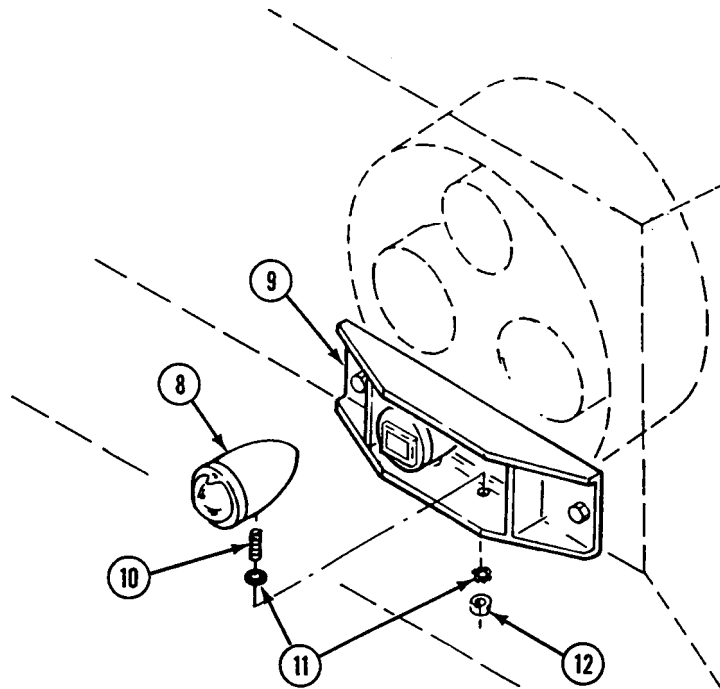


INSTALLATION

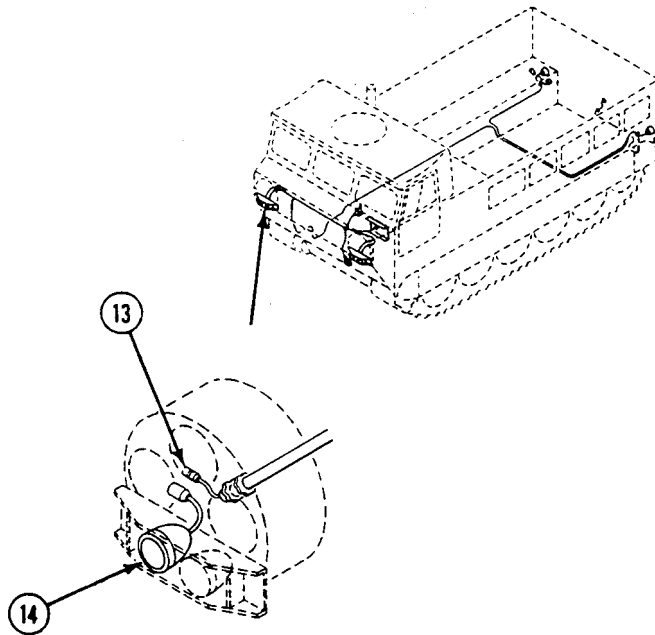
1. Install lamp (7) into socket of body (6).
2. Place new gasket (5), lens (4), and lens retainer (3) on body (6). Secure with two washers (2) and screws (1).



3. Place turn signal light (8) on bracket (9). Secure with stud (10), two new lock washers (11) and new lock nut (12). Install one lock washer on each side of bracket.



4. Connect circuit 460 (right side) or 461 (left side) lead (13) as required to turn signal light (14).

**FOLLOW-THROUGH STEPS**

1. Turn MASTER SWITCH ON (see your -10).
2. Check turn signal lights for proper operation.
3. Turn MASTER SWITCH OFF (see your -10).

END OF TASK

REPLACE BLACKOUT MARKER LIGHT

0506 00

THIS WORK PACKAGE COVERS:

Removal (page 0506 00-2).
Installation (page 0506 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

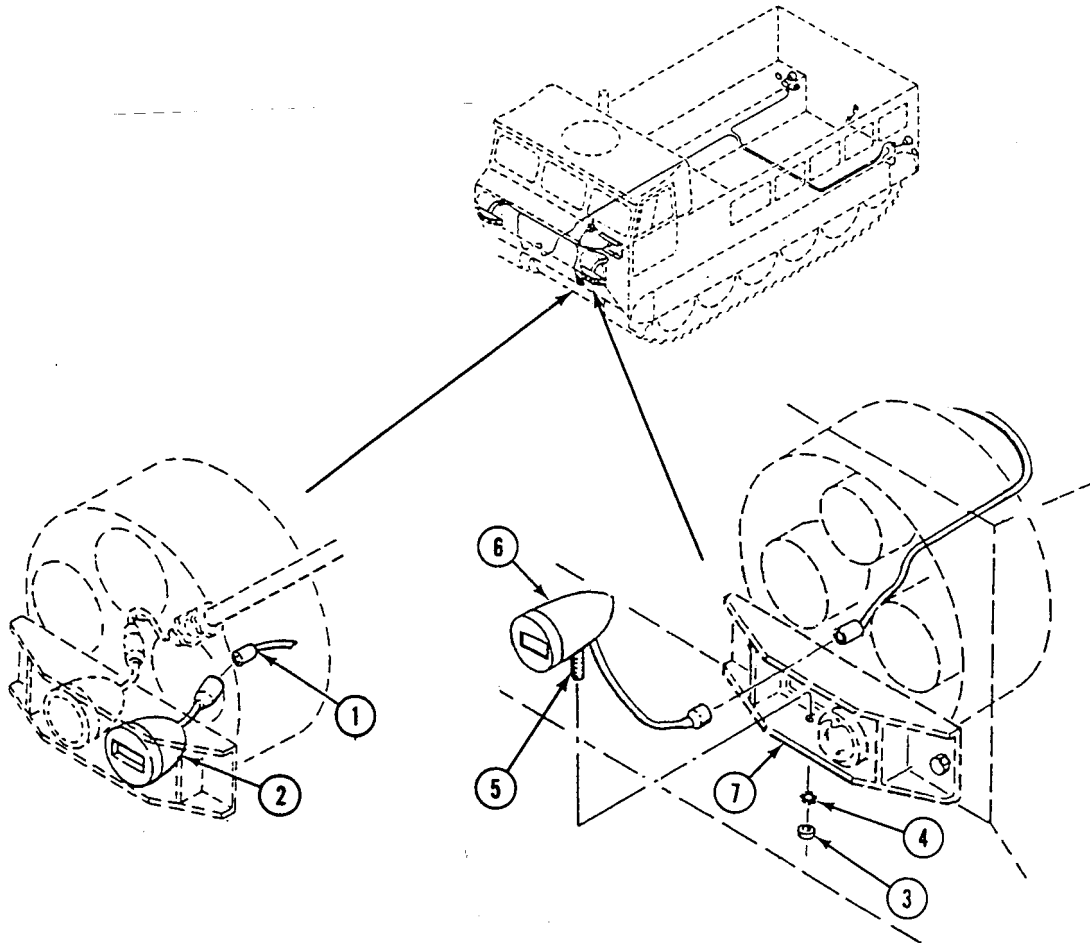
Lock nut
Lock washer

Equipment Condition

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

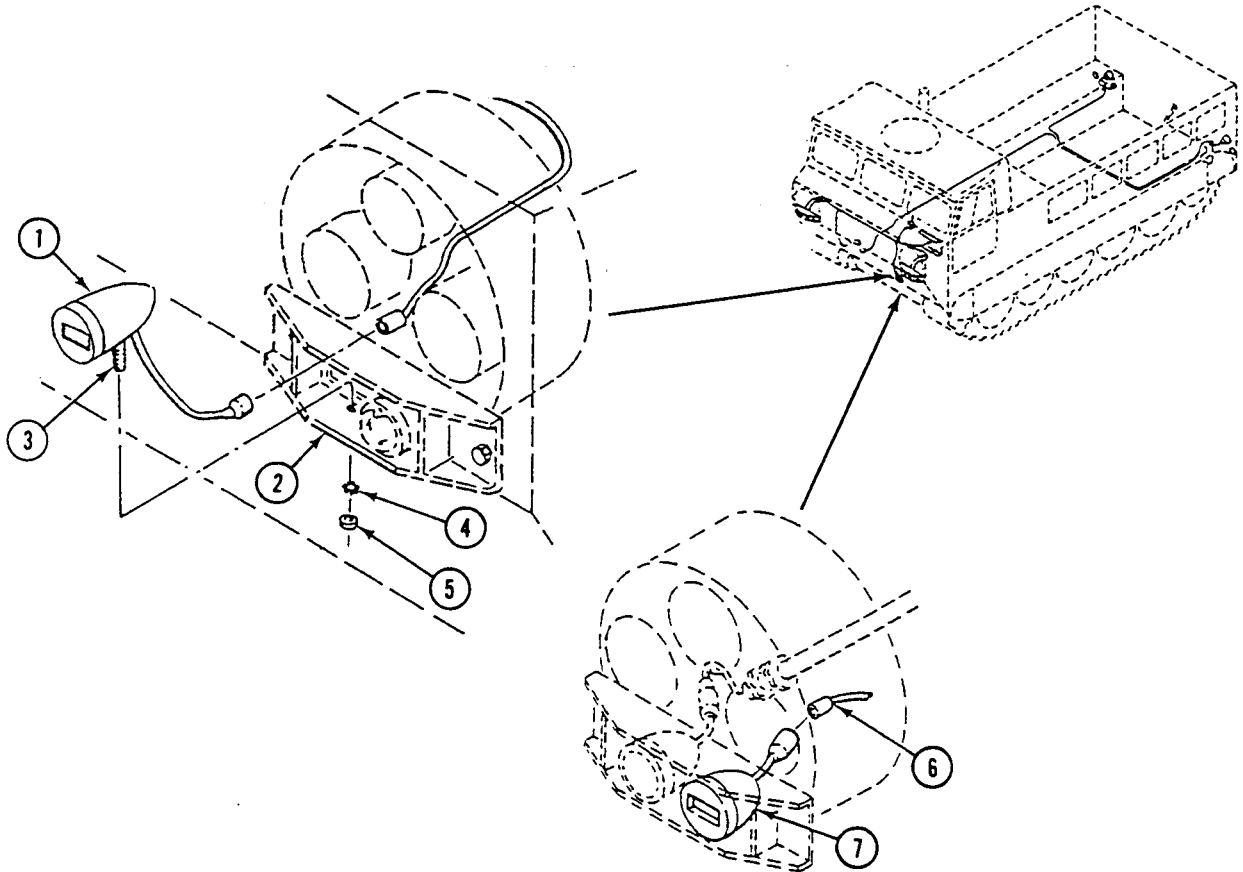
REMOVAL

1. Disconnect circuit 20 lead (1) from blackout marker light (2).
2. Remove lock nut (3), lock washer (4), stud (5), and blackout marker light (6) from bracket (7). Discard lock washer and lock nut.



INSTALLATION

1. Place marker light (1) on bracket (2). Secure with stud (3), new lock washer (4) and new lock nut (5). Install one washer on each side of bracket. Make sure 1-1/2 threads extend through nut after installation.
2. Connect circuit 20 lead (6) to blackout marker light (7).

**FOLLOW-THROUGH STEPS**

1. Turn MASTER SWITCH ON (see your -10).
2. Check blackout marker light for proper operation.
3. Turn MASTER SWITCH OFF (see your -10).

END OF TASK

REPLACE BLACKOUT STOPLIGHT-TAILLIGHT

0507 00

THIS WORK PACKAGE COVERS:

Removal (page 0507 00-1).
 Installation (page 0507 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock washer (2)
 Lock washer (2)

Equipment Condition

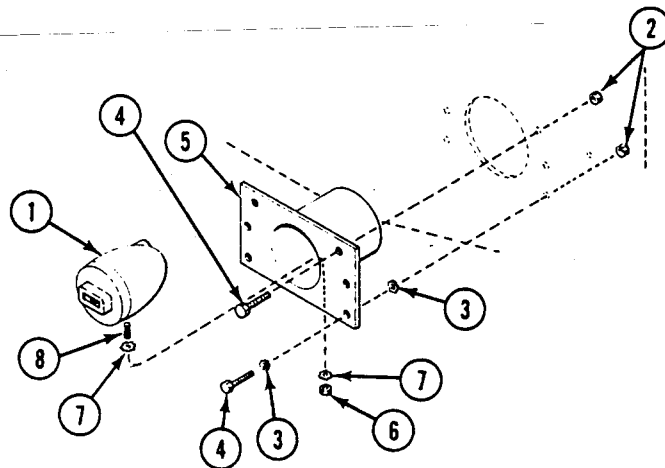
Engine stopped (see your -10)
 Carrier blocked (see your -10)

REMOVAL

NOTE

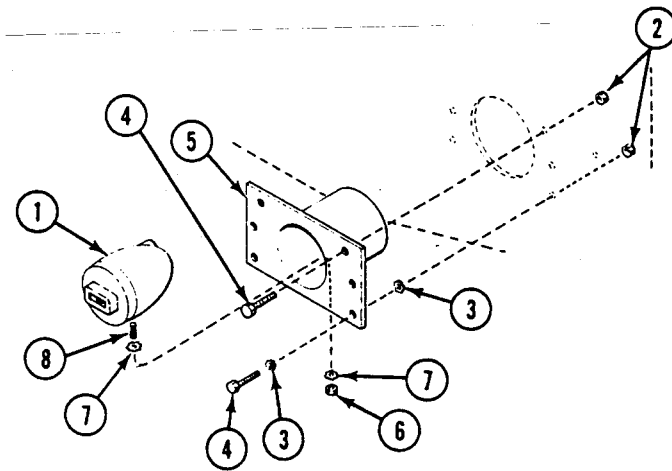
The blackout stoplight-tailight is like the blackout marker light. Refer to (WP 0278 00) for maintenance and (WP 0061 00) or (WP 0062 00) for electrical connections.

1. Disconnect circuit 23 lead from blackout stoplight-tailight (1).
2. Remove six nuts (2), two lock washers (3), and six screws (4) that secure bracket (5) to hull. Partially remove bracket with blackout stoplight-tailight light (1). Discard lock washers.
3. Remove nut (6), two lock washers (7), and stud (8) that secure blackout stoplight-tailight light (1) to bracket (5). Remove light and bracket. Discard lock washers.



INSTALLATION

1. Place bracket (5) in hull opening. Insert blackout stoplight-tailight (1) in bracket. Secure with two new lock washers (7), stud (8), and nut (6). Install one washer on each side of bracket. Make sure 1-1/2 threads extend through nut.
2. Place bracket (5) in hull opening. Secure with six screws (4), two new lock washers (3), and six nuts (2).
3. Place fuel compartment vent hose over bracket (5). Connect circuit 23 lead to blackout stoplight-tailight (1).

**FOLLOW-THROUGH STEPS**

1. Check blackout stoplight-tailight for proper operation (see your -10).

END OF TASK

REPLACE TURN SIGNAL CONTROL/MOUNT

0508 00

THIS WORK PACKAGE COVERS:

Removal (page 0508 00-1).
 Installation (page 0508 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Lock nut (3)

Personnel Required

Unit Mechanic

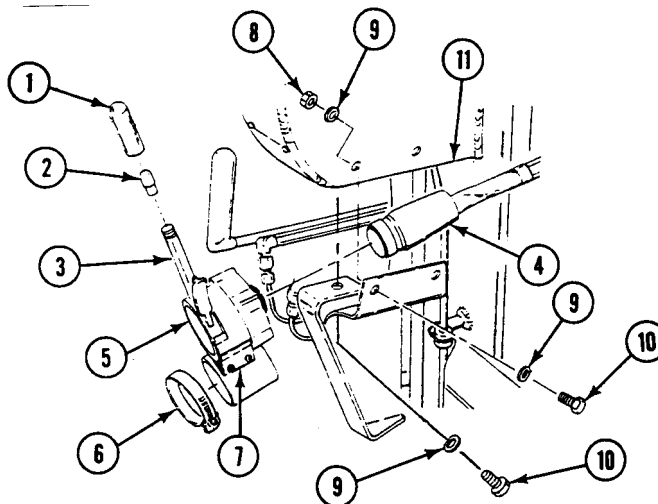
REMOVAL

NOTE

Removal and installation procedures for turn signal control/mount is similar for M548A1 and M548A3. M548A3 turn signal control does not have a bracket. M548A1 is shown.

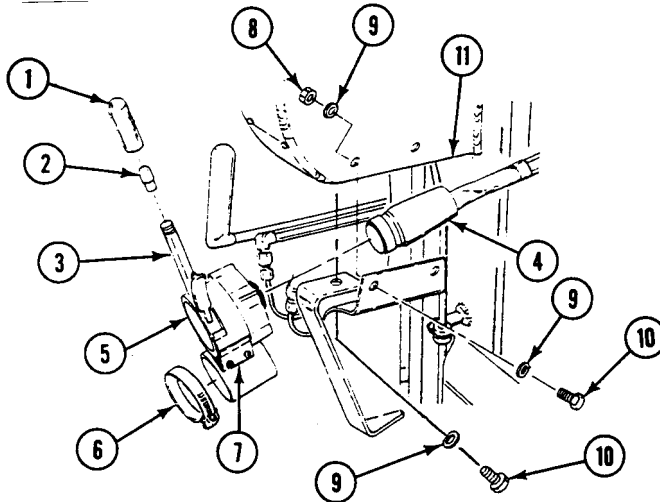
For M548A1, do Step 4 and Step 1.

1. Remove light lens (1) and lamp (2) from turn signal control handle (3).
2. Disconnect harness connector (4) from turn signal control (5).
3. Loosen clamp (6) that secures turn signal control (5) to mount (7). Remove turn signal control.
4. Remove three lock nuts (8), six washers (9), and three screws (10) that secure mount (7) to range selector housing (11). Remove mount. Discard lock nuts.



INSTALLATION

1. Place mount (7) on turn signal range selector housing (11). Secure with three screws (10), six washers (9), and three new lock nuts (8).
2. Place turn signal control (5) on mount (7). Secure with clamp (6).
3. Install lamp (2) and light lens (1) in turn signal control handle (3).
4. Connect harness connector (4) to turn signal control (5).

**FOLLOW-THROUGH STEPS**

1. Check turn signal control for proper operation.

END OF TASK

REPLACE FLASHER

0509 00

THIS WORK PACKAGE COVERS:

Removal (page 0509 00-1).
 Installation (page 0509 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

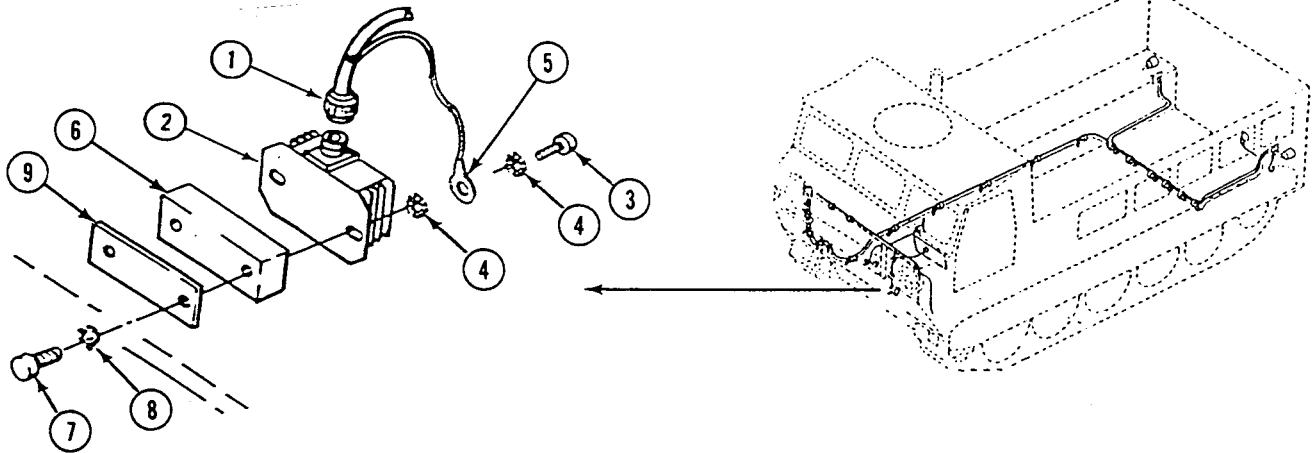
Gasket
 Lock washer (2)
 Lock washer (3)

Equipment Condition

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

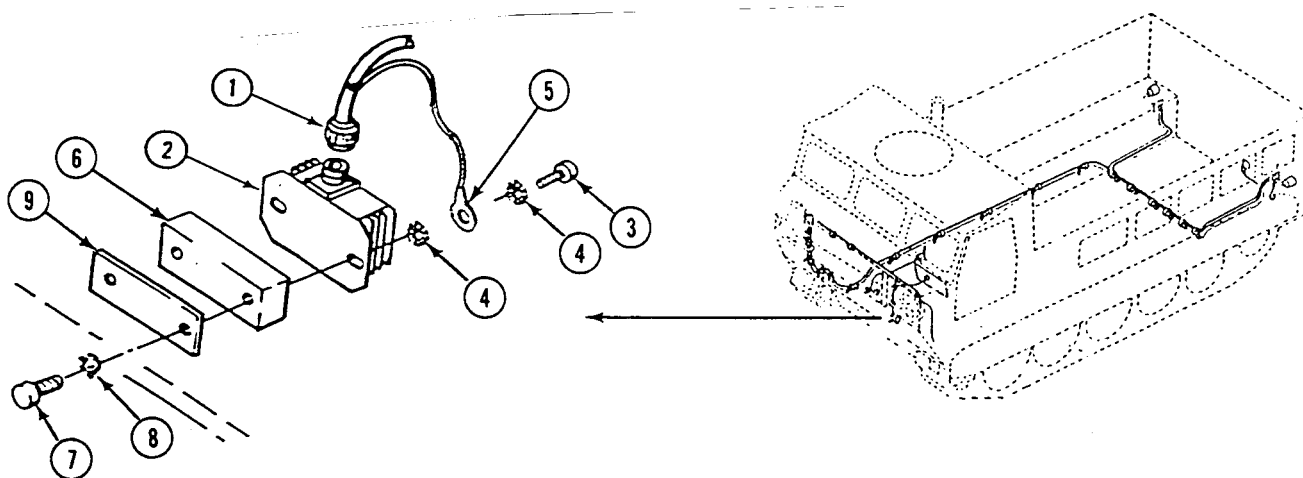
REMOVAL

1. Disconnect harness lead (1) from flasher (2).
2. Remove two screws (3) and three lock washers (4) and ground lead (5) that secure flasher (2) to bar (6). Remove flasher. Discard lock washers.
3. Remove two screws (7) and lock washers (8) that secure bar (6) to hull from outside of carrier. Remove bar and gasket (9) from inside of carrier. Discard gasket and lock washers.



INSTALLATION

1. Place new gasket (9) and bar (6) on inside of carrier. Secure with two screws (7) and new lock washers (8) from outside of carrier.
2. Place flasher (2) on bar (6). Secure with ground lead (5), three new lock washers (4), and two screws (3). Install one washer on each side of ground lead terminal.
3. Connect harness lead (1) to flasher (2).

**FOLLOW-THROUGH STEPS**

1. Check flasher for proper operation.

END OF TASK

REPLACE REFLECTOR

0510 00

THIS WORK PACKAGE COVERS:

Removal (page 0510 00-1).
 Installation (page 0510 00-2).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Self-locking screws (2)

Equipment Condition

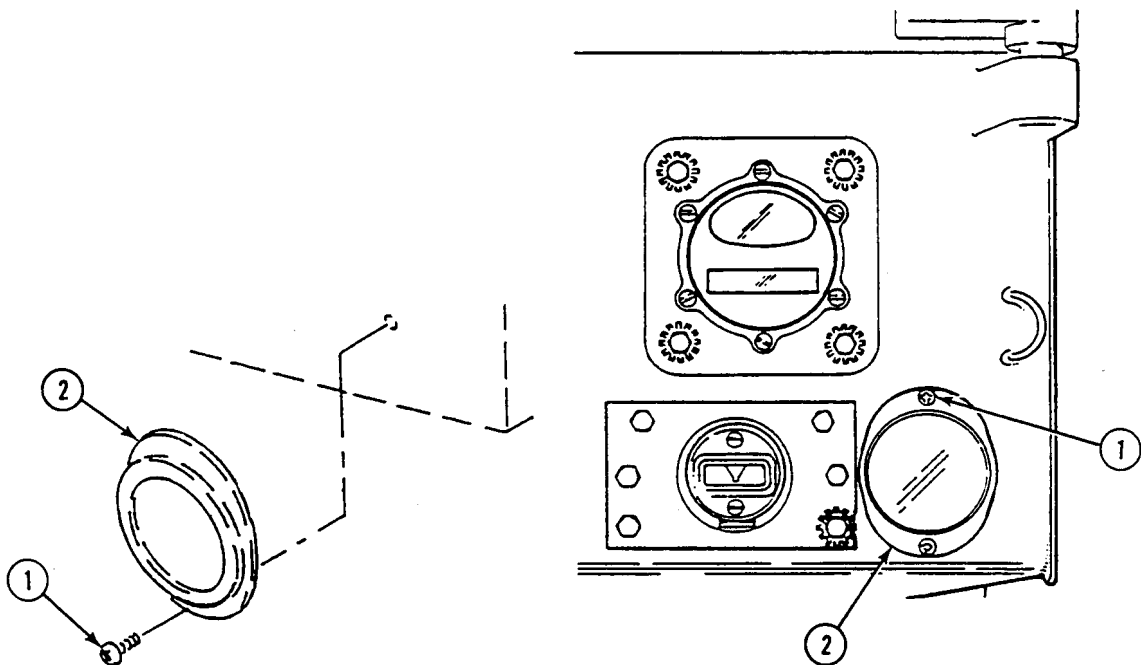
Engine stopped (see your -10)
 Carrier blocked (see your -10)

REMOVAL

NOTE

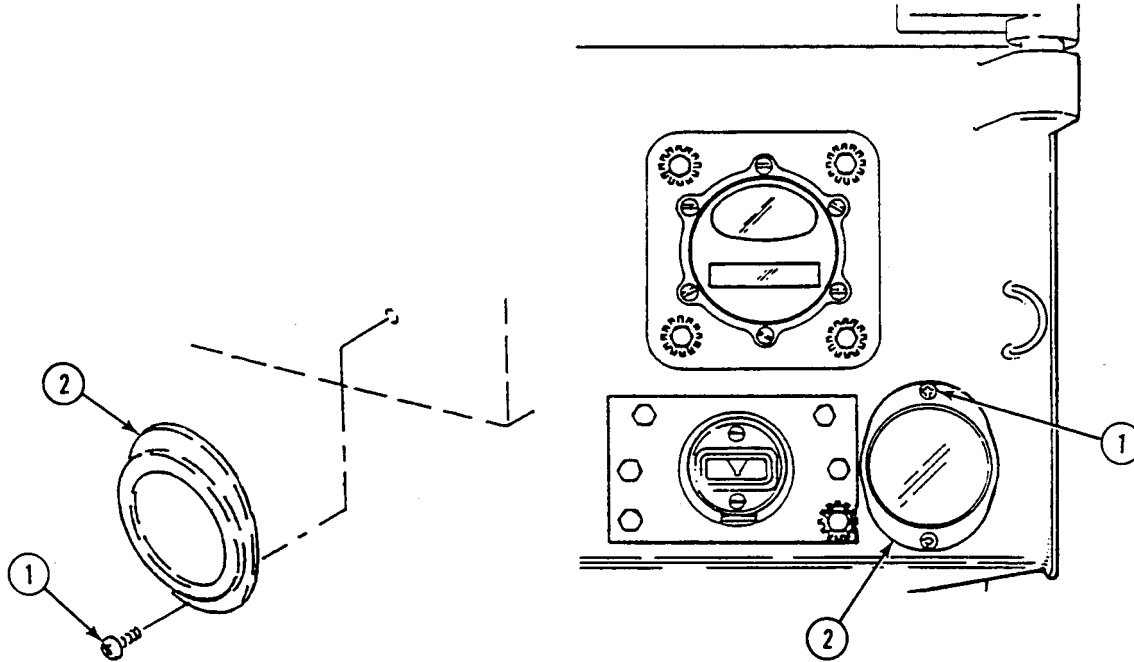
Maintenance of left and right reflectors is the same.

1. Remove two self-locking screws (1) and reflector (2) from hull. Discard screws.



INSTALLATION

1. Place reflector (2) on hull. Secure with two new self-locking screws (1).

**END OF TASK**

REPLACE TURN SIGNAL FRONT WIRING HARNESS

0511 00

THIS WORK PACKAGE COVERS:

- Removal (page 0511 00-1).
- Installation (page 0511 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Soldering Gun (WP 0541 00, Item 23)

References

See your -10

Materials/Parts

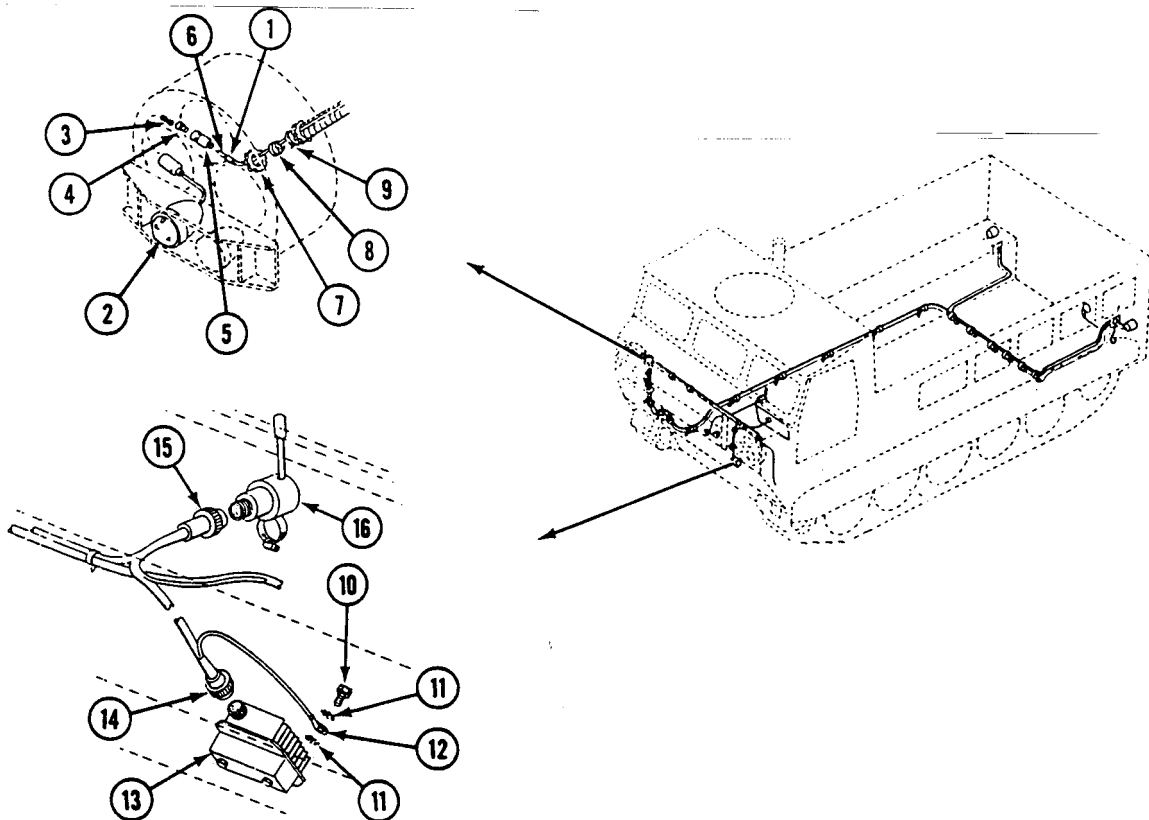
- Tiedown strap (32) (WP 0542 00, Item 43)
- Tin alloy solder (WP 0542 00, Item 44)
- Grommet (1)
- Lock washer (2)
- Terminal (2)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Battery negative lead(s) disconnected (WP 0292 00)
- Left and right stoplight-taillight removed (WP 0278 00)
- Cargo compartment floor plates removed (WP 0393 00)

REMOVAL

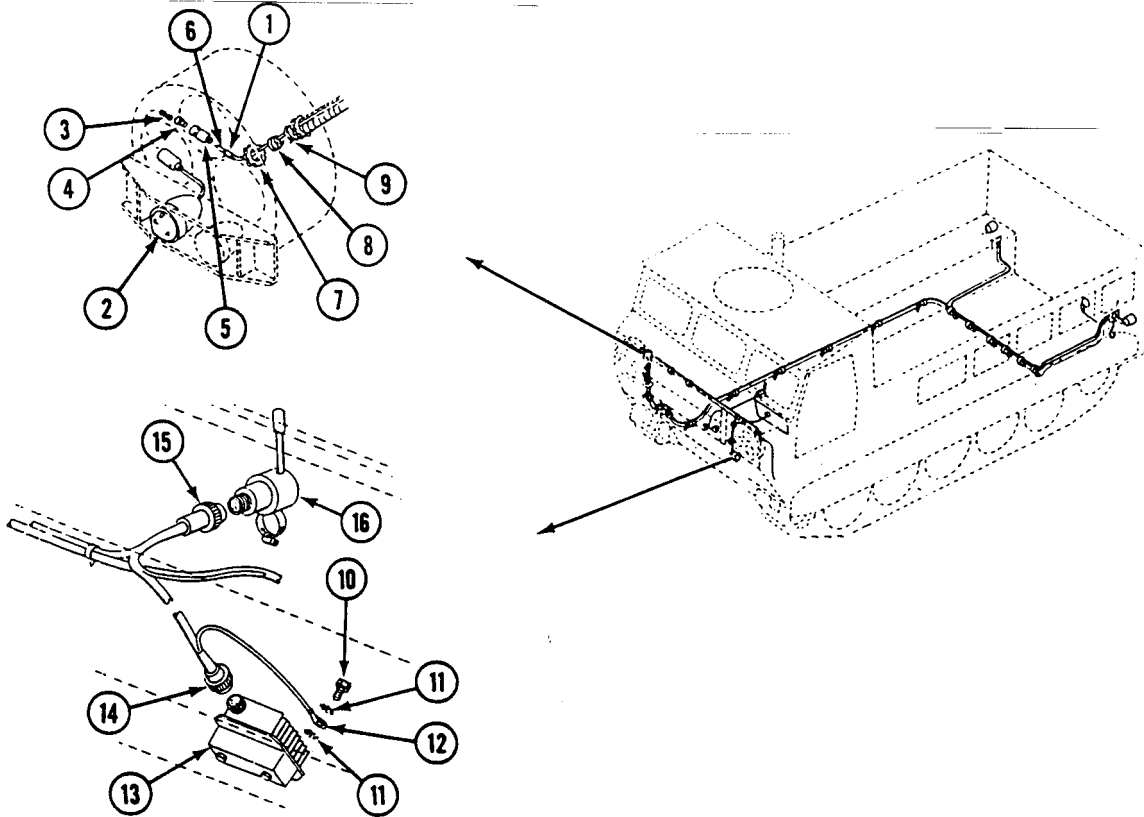
1. Disconnect circuit 460 and 461 leads (1) at right and left front turn lamps (2), respectively.
2. Remove terminal (3), sleeve (4), shell (5), and circuit marker band (6) from end of harness leads (1). Discard two terminals.



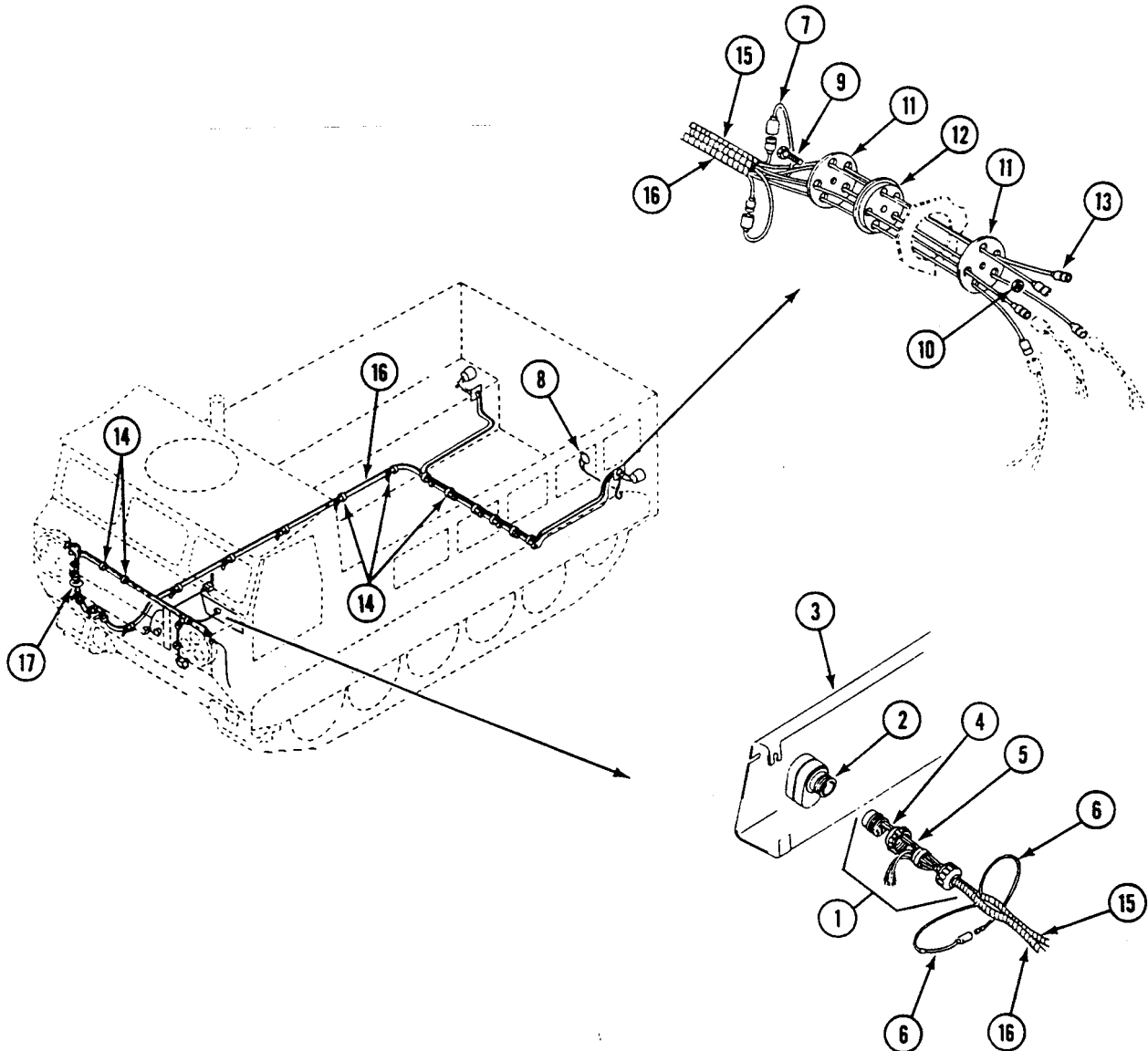
REPLACE TURN SIGNAL FRONT WIRING HARNESS — Continued

0511 00

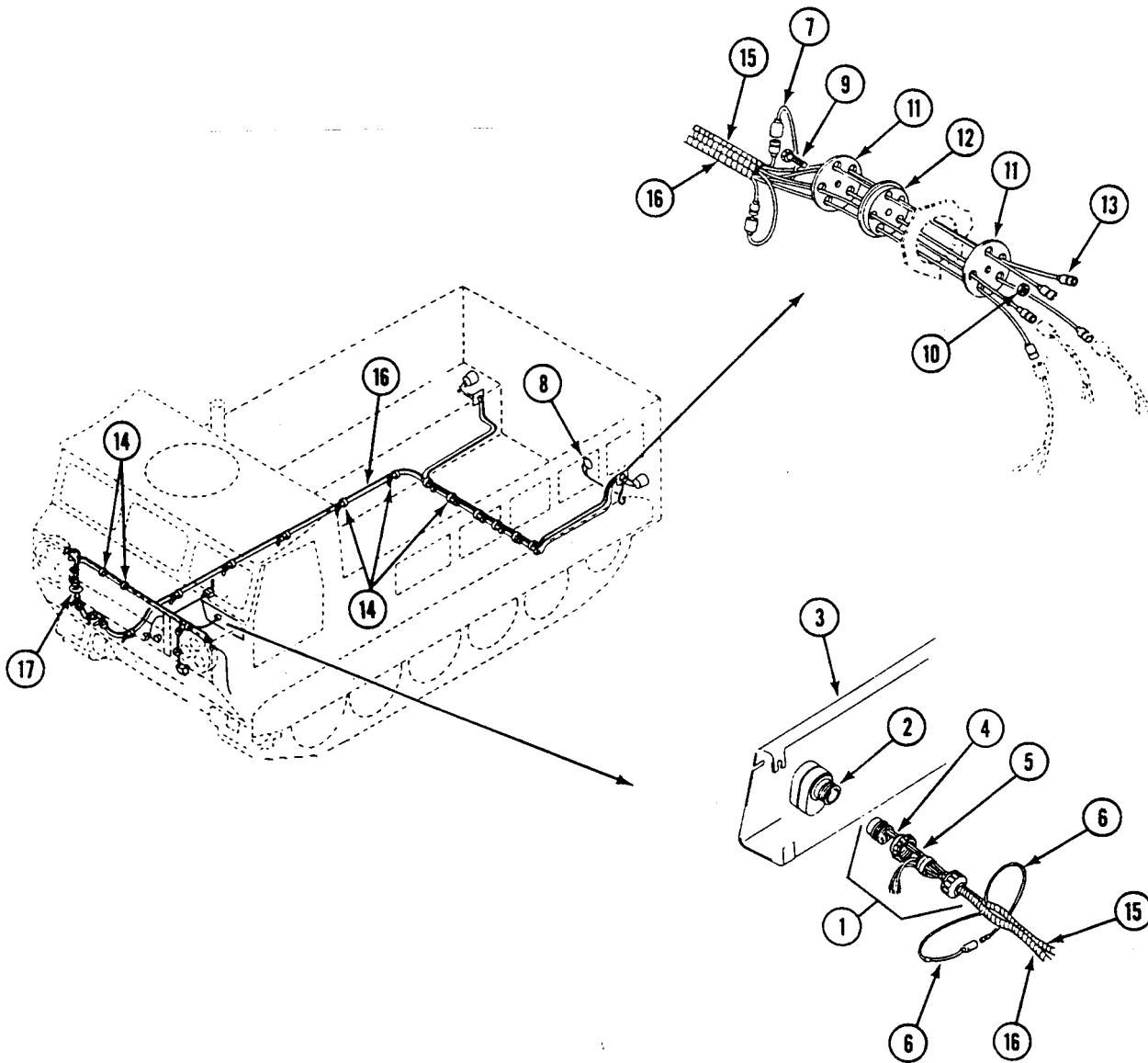
3. Unscrew nut (7) that secures bushing (8) in stuffing tube (9). Slide bushing (8) down on leads and remove circuit 460 and 461 leads (1) from right and left headlight wells, respectively.
4. Remove screw (10) and two lock washers (11) that secure ground lead (12) to flasher unit (13). Disconnect connector (14) from flasher unit. Discard two lock washers.
5. Remove connector (15) from control assembly (16).



6. Remove connector (1) from switch (2) on back of instrument panel (3).
7. Disassemble connector (1). Remove circuit 22 and 460-461 leads (4 and 5) from connector pins C and J, respectively. Use soldering gun. Pull leads from connector.
8. Remove circuit 22-461 lead (6) behind connector (1).
9. Disconnect circuit 22-460 lead (7) at trailer wiring harness (8).
10. Remove screw (9) and nut (10) that secure two retainers (11) to bushing (12). Remove circuit 22-460 lead (7) from bushing and pull lead through two retainers.

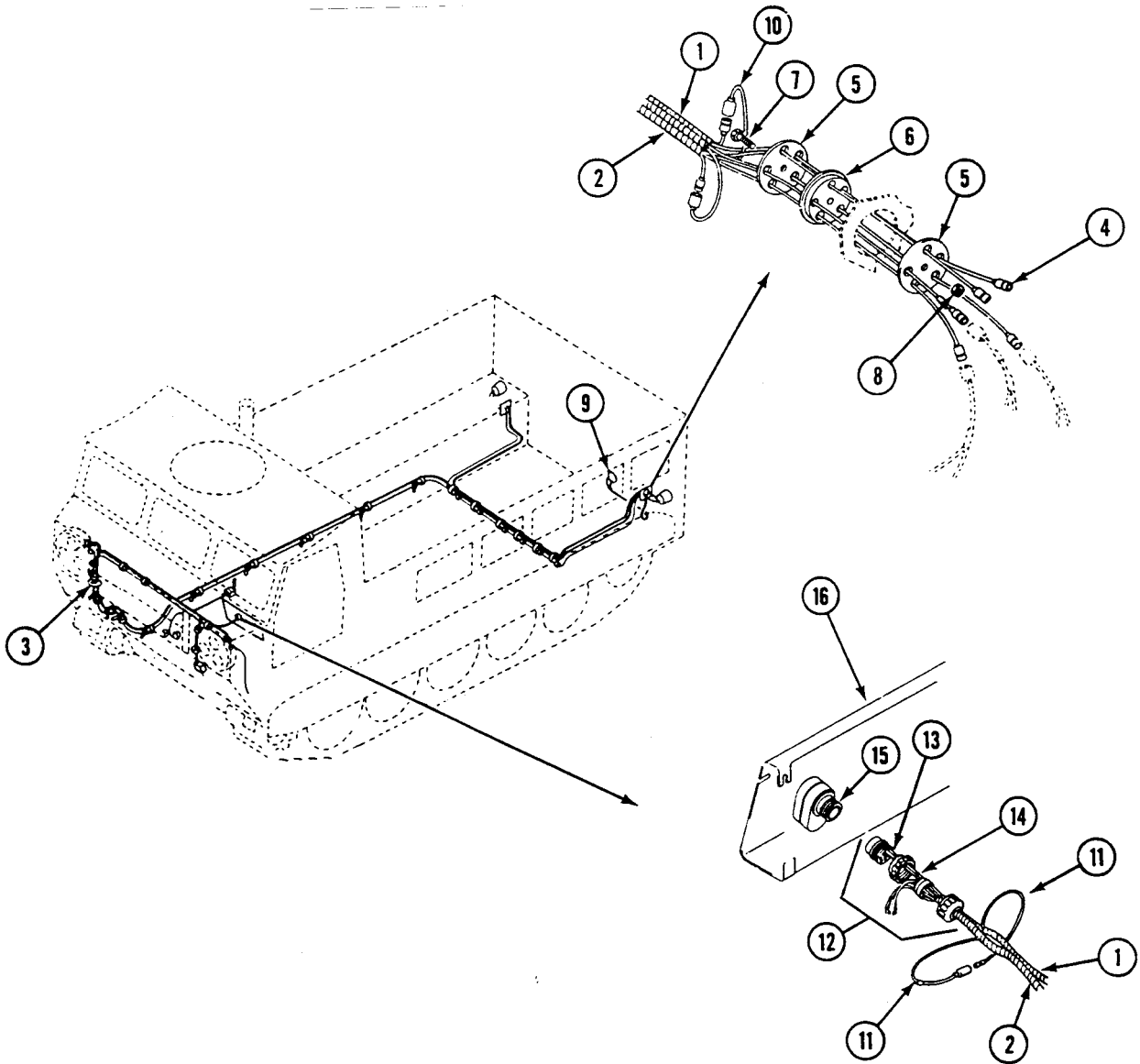


11. Disconnect circuit 22-460 lead (13) in left taillight well and pull lead (13) and lead (7) through left hull channel to front of fuel compartment.
12. Remove 32 tiedown straps (14) that secure front harness (15) to main harness (16) and fuel cut-off control. Discard tiedown straps.
13. Pull front harness (15) through power plant compartment, grommet (17) in cab floor, and into cab. Remove harness. Discard grommet.



INSTALLATION

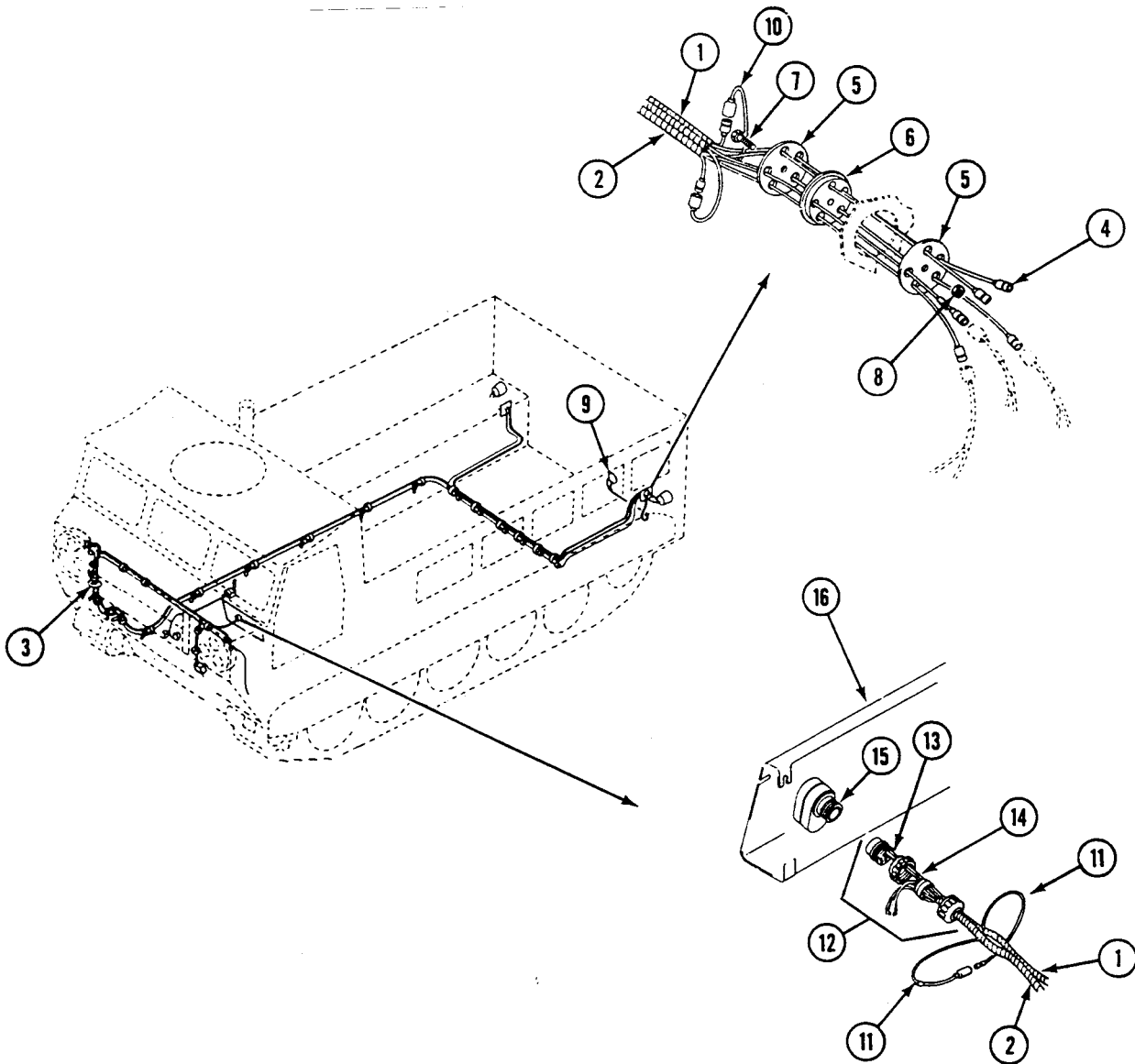
1. Position front wiring harness (1) in cab and route beside main wiring harness (2) through new grommet (3) in cab floor, power plant compartment, right side of hull, front of fuel compartment, and left hull channel into taillight well.
2. Insert front harness circuit 22-460 lead (4) through two retainers (5). Install lead in bushing (6). Position bushing and two retainers in hole. Secure with screw (7) and nut (8).
3. Connect circuit 22-460 lead (4) to trailer wiring harness (9).



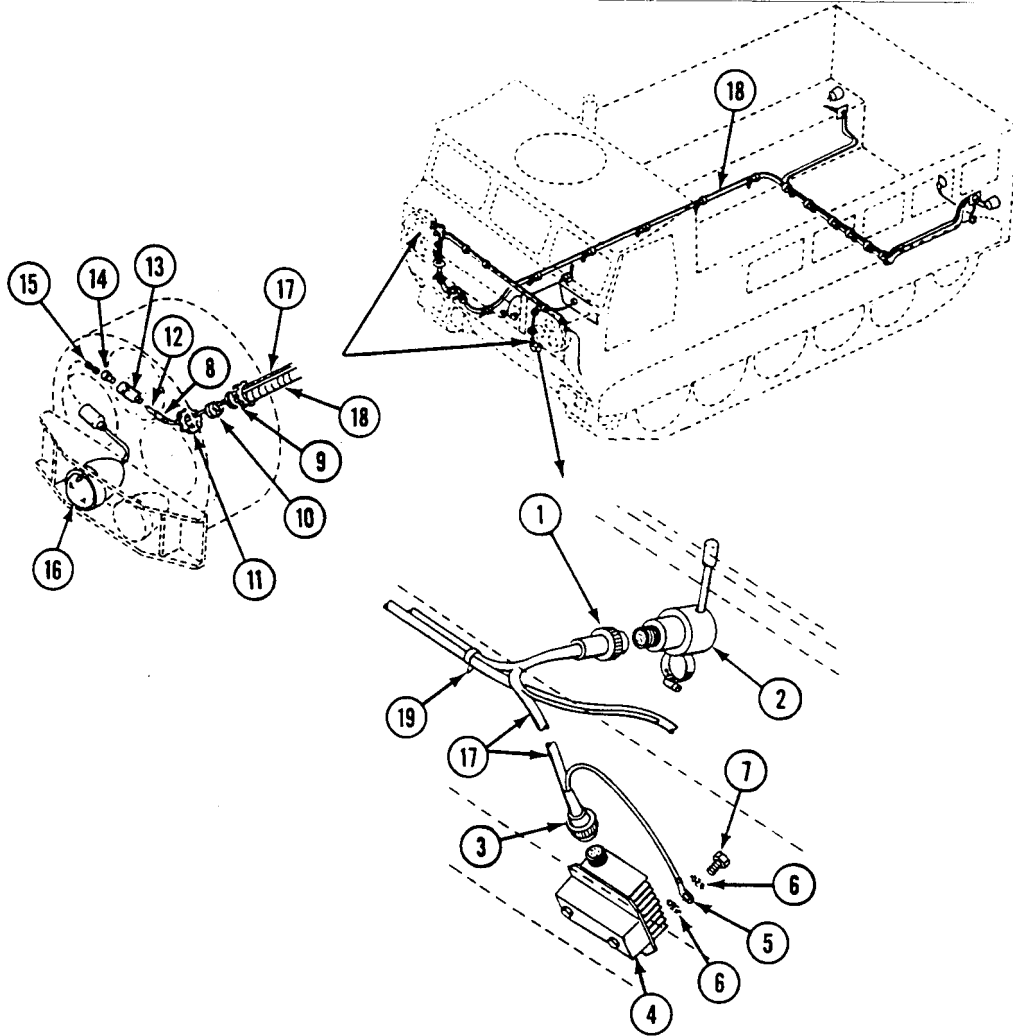
REPLACE TURN SIGNAL FRONT WIRING HARNESS — Continued

0511 00

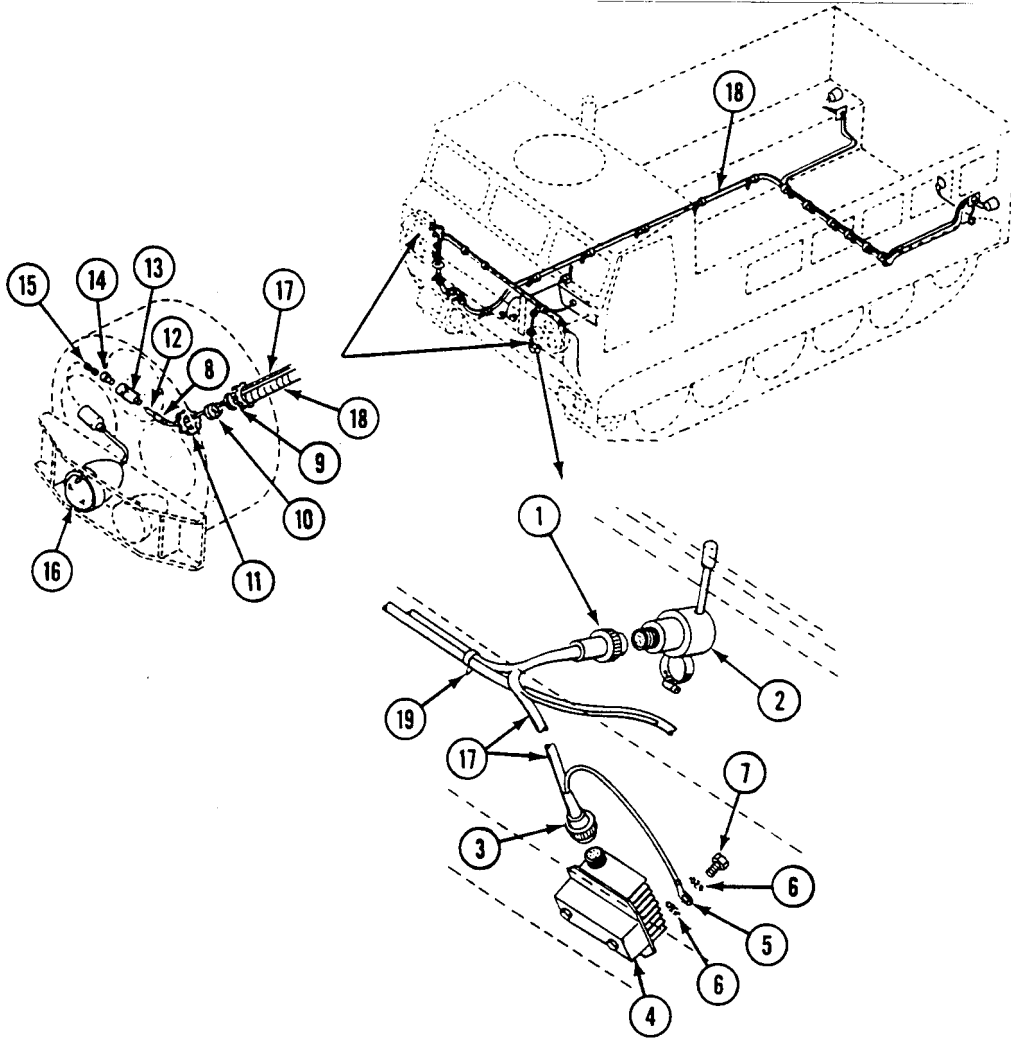
4. Connect circuit 22-460 lead (10) in left taillight well.
5. Connect circuit 22-461 lead (11) behind connector (12).
6. Thread circuit 22 lead (13) through connector (12), and attach lead to pin C. Use solder and soldering gun.
7. Thread circuit 460-461 lead (14) through connector (12) and attach lead to pin J. Use solder and soldering gun.
8. Assemble connector (12) and attach to switch (15) on back of instrument panel (16).



9. Attach connector (1) to control assembly (2).
10. Attach connector (3) to flasher unit (4) and secure ground lead (5) to flasher unit with two new lock washers (6) and screw (7).
11. Thread circuit 461 lead (8) through stuffing tube (9), bushing (10), and nut (11) into left headlight well. Thread circuit 460 lead (8) through bushing (10) and nut (11) into right headlight well. Slide bushing up on leads and secure nut.



12. Install circuit marker band (12), shell (13), sleeve (14), and new terminal (15) on end of each harness lead (8).
13. Connect circuit 461 lead (8) to left turn indicator lamp (16) and circuit 460 lead (8) to right indicator lamp.
14. Secure front wiring harness (17) to main harness (18) and fuel cutoff control with 32 new tiedown straps (19) installed next to each clamp, or route through front and main harness clamps.



FOLLOW-THROUGH STEPS

1. Install left and right stoplight-taillight (WP 0278 00).
2. Connect battery negative lead(s) (WP 0292 00).
3. Install cargo compartment floor plates (WP 0393 00).

END OF TASK

REPLACE TURN SIGNAL REAR WIRING HARNESS

0512 00

THIS WORK PACKAGE COVERS:

Removal (page 0512 00-1).
 Installation (page 0512 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Tiedown strap (7) (WP 0542 00, Item 43)
 Connector (2)

Carrier blocked (see your -10)

Cargo compartment floor plates removed (WP 0393 00)

Personnel Required

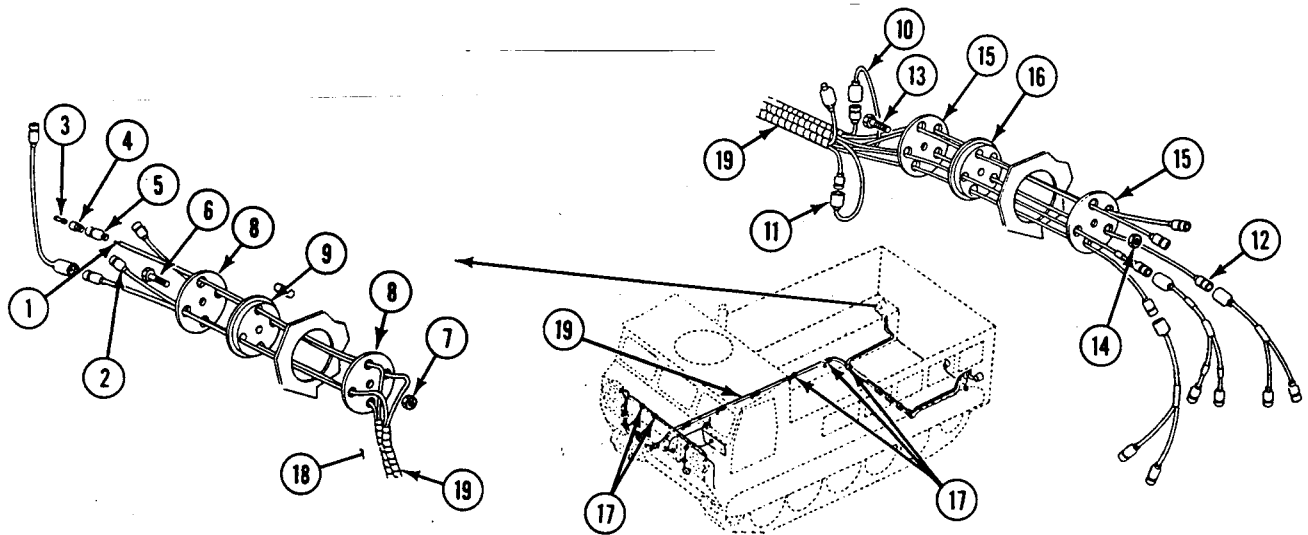
Unit Mechanic

Battery negative lead(s) disconnected (WP 0292 00)

Left and right stoplight-taillights removed (WP 0278 00)

REMOVAL

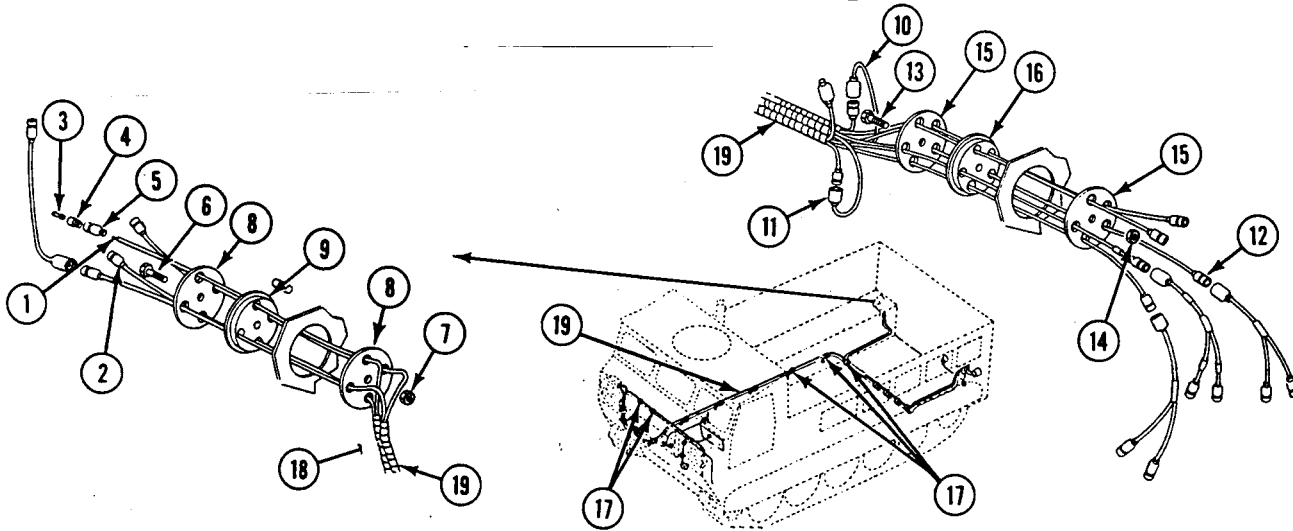
1. Disconnect rear harness circuit 21 lead (1) and circuit 22-460 lead (2) from right taillight leads. Remove lead connector (3), sleeve (4), and shell (5) from each lead. Discard two connectors.
2. Remove screw (6), nut (7), two right spacer plates (8), and bushing (9). Remove rear harness circuit 21 and 22-460 lead (1) and 22-460 lead (2) from bushing. Pull leads through spacer plates.
3. Disconnect circuit 22-460 lead (10) in left taillight.
4. Disconnect circuit 21 lead (11) and circuit 21 lead (12) in left taillight.



REPLACE TURN SIGNAL REAR WIRING HARNESS — Continued

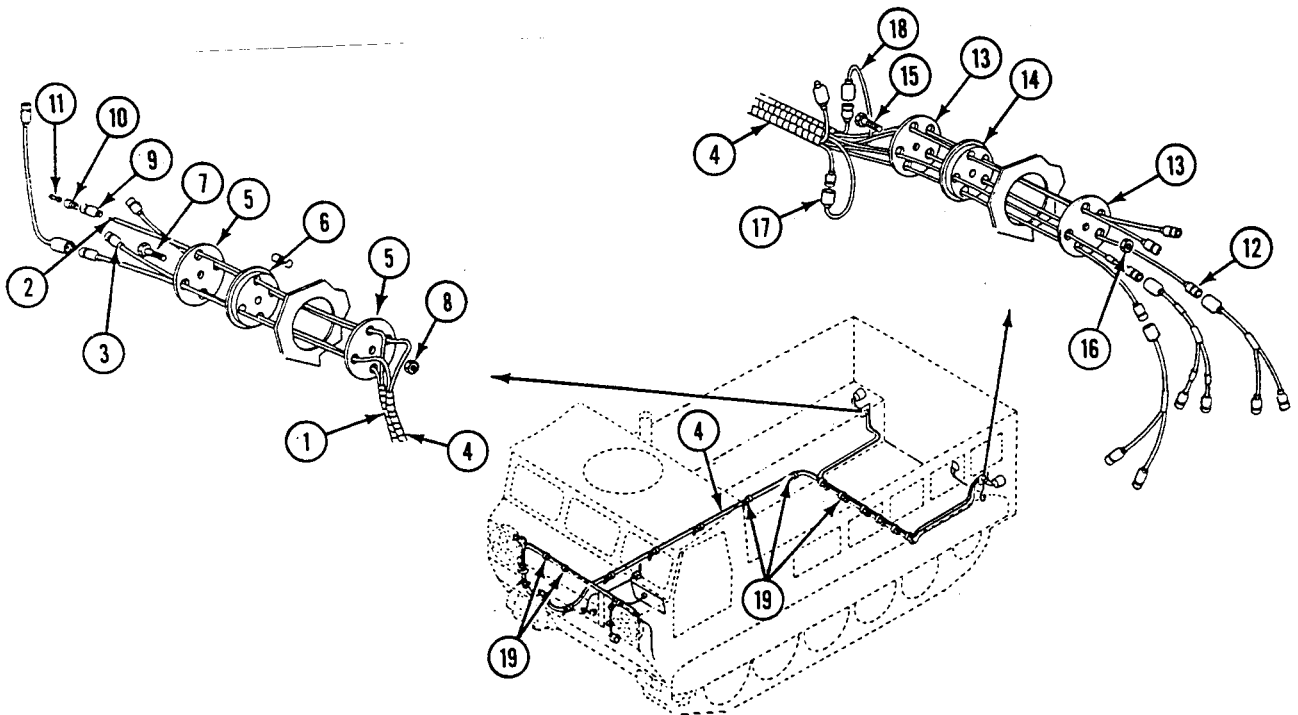
0512 00

5. Remove screw (13), nut (14), two spacer plates (15), and bushing (16). Remove circuit 21 lead (12) from bushing. Pull lead through spacer plates.
6. Remove and discard seven tiedown straps (17) and rear wiring harness (18) from main wiring harness (19) at front of fuel compartment.
7. Pull rear harness circuit 21 and 22-460 lead (1) and 22-460 lead (2) through right hull channel to front of fuel compartment.
8. Pull rear wiring harness (18) through left hull channel into left taillight. Remove harness.



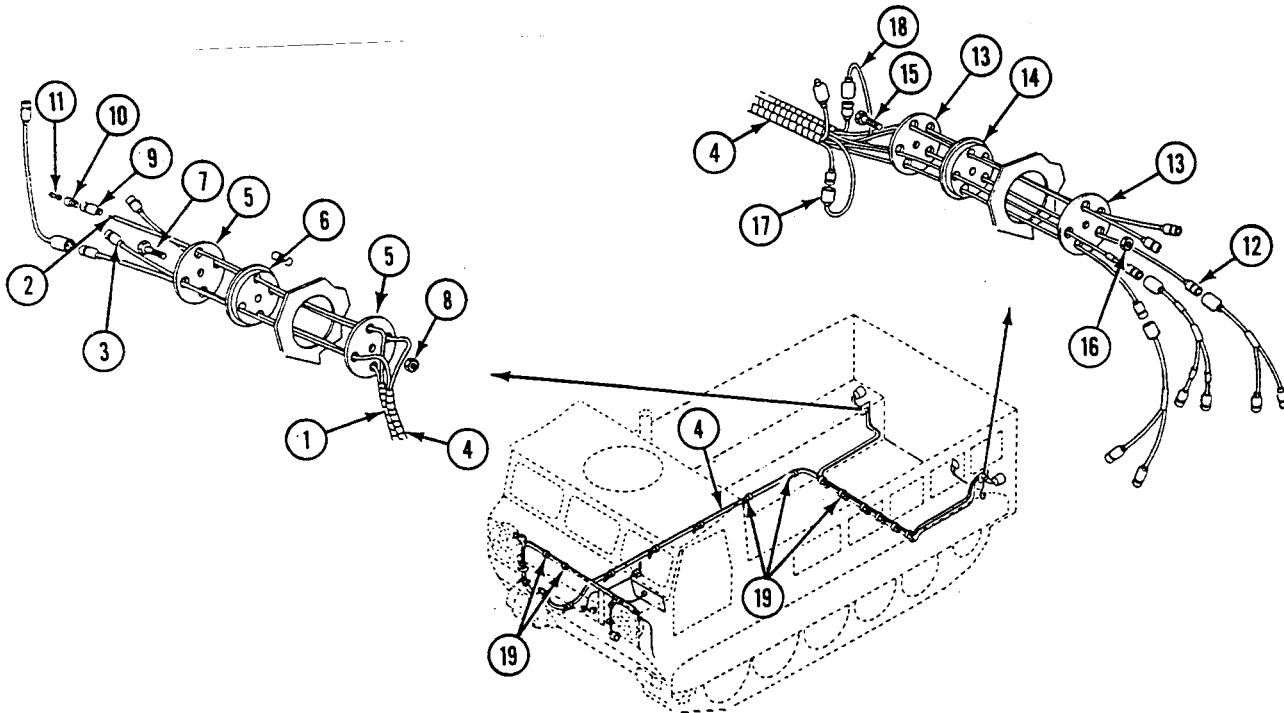
INSTALLATION

1. Position rear wiring harness (1) in left taillight. Route rear harness circuit 21 and 22-460 lead (2) and 22-460 lead (3) through left hull channel across front of fuel compartment along main wiring harness (4).
2. Thread rear harness circuit 21 and 22-460 lead (2) and 22-460 lead (3) through right hull channel into right taillight.
3. Insert rear harness circuit 21 lead (2) and circuit 22-460 lead (3) through two right taillight spacer plates (5). Install leads in bushing (6). Secure bushing and two spacer plates to hole in taillight with screw (7) and nut (8).
4. Install lead connector shell (9), sleeve (10), and new connector (11) on rear harness circuit 21 and 22-460 lead (2) and 22-460 lead (3). Connect leads at right taillight.



REPLACE TURN SIGNAL REAR WIRING HARNESS — Continued**0512 00**

5. Insert circuit 21 lead (12) through two left taillight spacer plates (13). Install lead in bushing (14). Secure bushing and two spacer plates to hole in taillight with screw (15) and nut (16).
6. Install circuit 21 lead (12) in left taillight.
7. Install rear-to-main harness circuit 21 lead (17) in left taillight.
8. Install front-to-rear harness circuit 22-460 lead (18) in left taillight.
9. Secure rear wiring harness (1) to main wiring harness (4) along front of fuel compartment with seven new tiedown straps (19). Install adjacent to each existing cable clamp or route harness through main wiring harness clamps.

**FOLLOW-THROUGH STEPS**

1. Install left and right stoplight-taillights (WP 0278 00).
2. Connect battery negative lead(s) (WP 0292 00).
3. Install cargo compartment floor plates (WP 0393 00).

END OF TASK

REPLACE CALIBER .50 MACHINE GUN MOUNT

0513 00

THIS WORK PACKAGE COVERS:

- Removal (page 0513 00-1).
- Disassembly (page 0513 00-2).
- Assembly (page 0513 00-4).
- Installation (page 0513 00-5).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10
TM 9-1005-245-14

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Spring pin (2)

Equipment Condition

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

Personnel Required

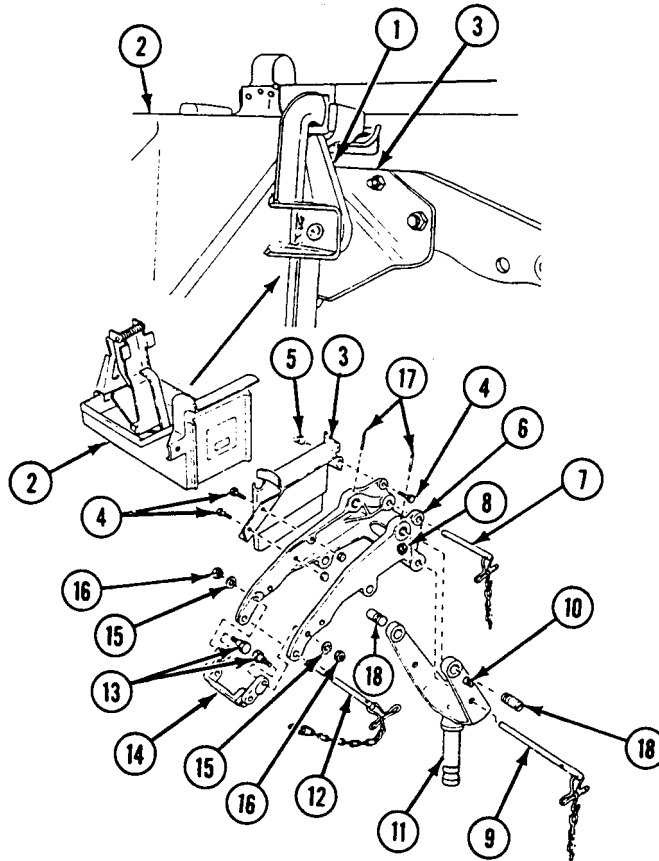
Unit Mechanic

REMOVAL

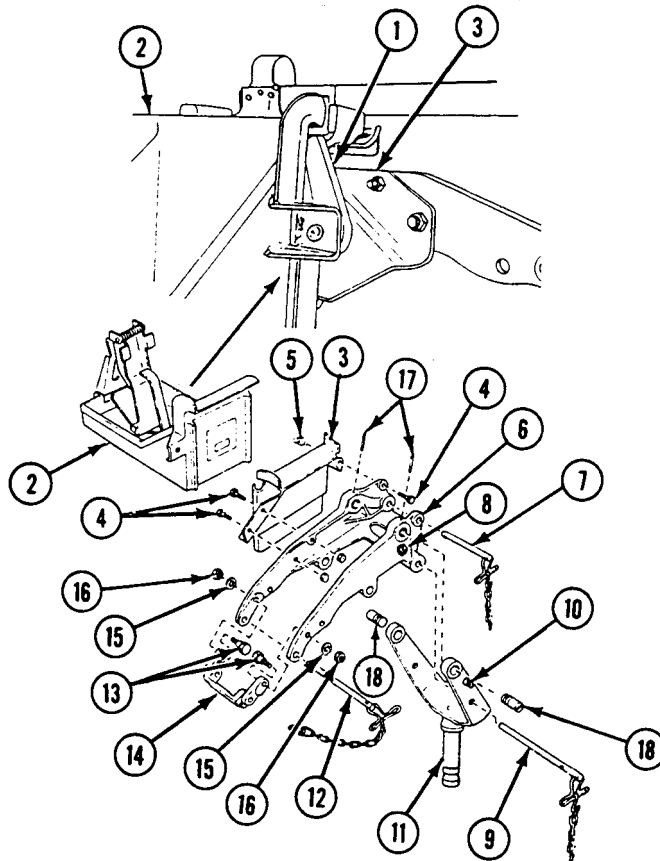
1. Remove gun mount (see your -10).
2. Remove cartridge deflector, ammo straps, and backrest from ring mount and supports (WP 0514 00).
3. Remove ring mount and supports from carrier (WP 0514 00).

DISASSEMBLY

1. Disassemble ring mount. See TM 9-1005-245-14.
2. Release cam (1). Remove ammo tray (2) from ammo tray bracket (3).
3. Remove three screws (4), nuts (5), and ammo tray bracket (3) from cradle (6).
4. Remove chain on front locking pin (7) from rivet (8). Remove locking pin (7) from cradle (6).

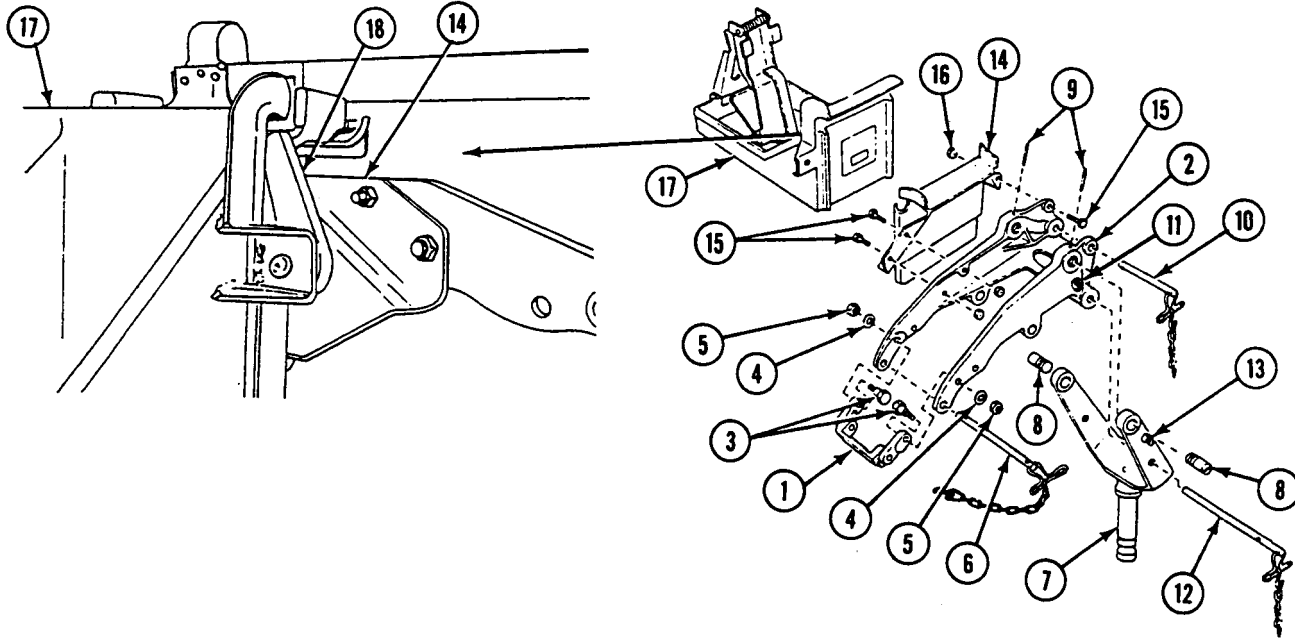


5. Remove chain on locking pin (9) from rivet (10). Remove locking pin (9) from pintle (11).
6. Remove chain on rear locking pin (12) from one bolt (13). Remove locking pin (12) from cradle (6) and spacer cradle (14).
7. Remove two bolts (13), washers (15), nuts (16), and spacer cradle (14) from cradle (6).
8. Remove two spring pins (17) from holes in cradle (6). Remove two setscrews (18) from pintle (11). Separate pintle from cradle. Discard spring pins.

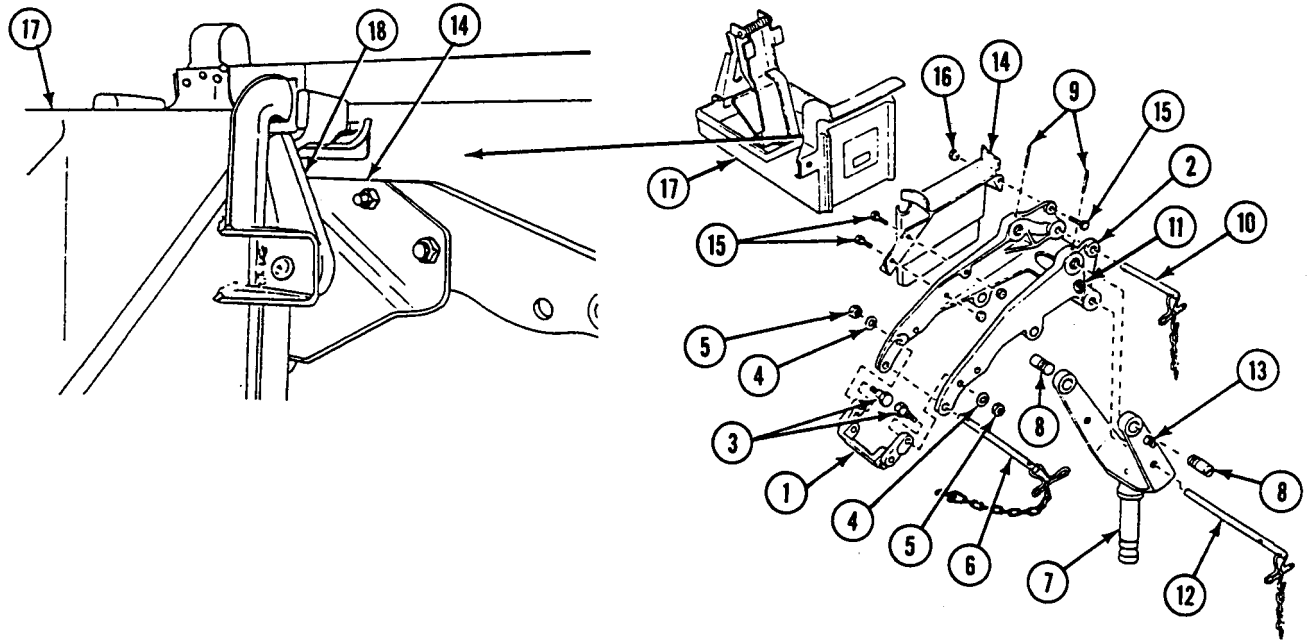


ASSEMBLY

1. Install spacer cradle (1) on cradle (2) with two bolts (3), washers (4), and nuts (5).
2. Install rear locking pin (6) with chain attached through cradle (2) and spacer cradle (1). Attach end of chain to one bolt (3). Tighten both bolts.
3. Place cradle (2) on pintle (7). Secure with two setscrews (8).
4. Align holes in setscrews (8) with holes in top of cradle (2). Install two new spring pins (9) to secure setscrews (8).



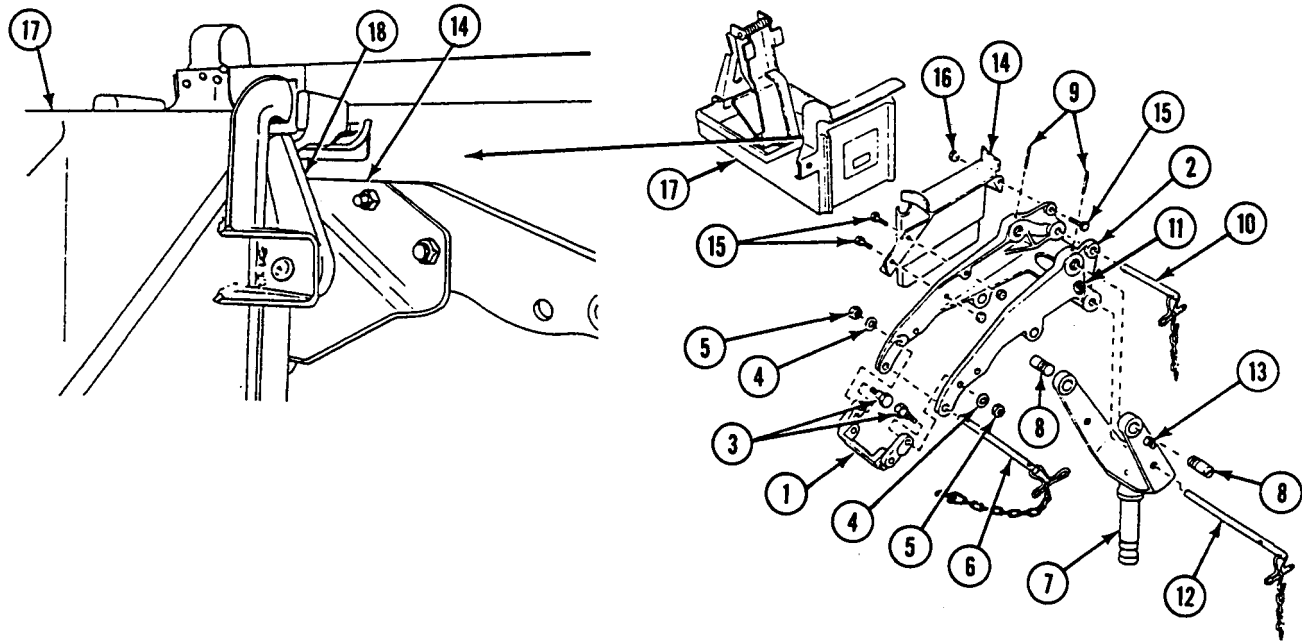
5. Install front locking pin (10) with chain attached in cradle (2). Secure end of chain to rivet (11) on cradle (2).
6. Install locking pin (12) with chain attached through pintle (7) and cradle (2). Secure end of chain to rivet (13) on pintle (7).
7. Install ammo tray bracket (14) on cradle (2) with three screws (15) and nuts (16).
8. Place ammo tray (17) on ammo tray bracket (14). Secure with cam (18).



INSTALLATION

1. Install ring mount on carrier (WP 0514 00).
2. Install cartridge deflector, ammo straps, and backrest on ring mount (WP 0514 00).

3. Install assembled cradle (2) and pintle (7) on ring mount (see your -10).



END OF TASK

REPLACE M66 RING MOUNT KIT

0514 00

THIS WORK PACKAGE COVERS:

Removal (page 0514 00-2).
 Installation (page 0514 00-5).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)
 Socket Wrench Set (WP 0541 00, Item 65)
 Torque Wrench (WP 0541 00, Item 72)
 Lifting Device

References

See your -10
 TM 9-1005-245-14

Materials/Parts

Nonelectrical wire (WP 0542 00, Item 27)
 Cotter pin (2)
 Lock nut (2)
 Lock nut (4)
 Lock nut (12)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Cargo compartment floor plates removed (WP 0393 00)

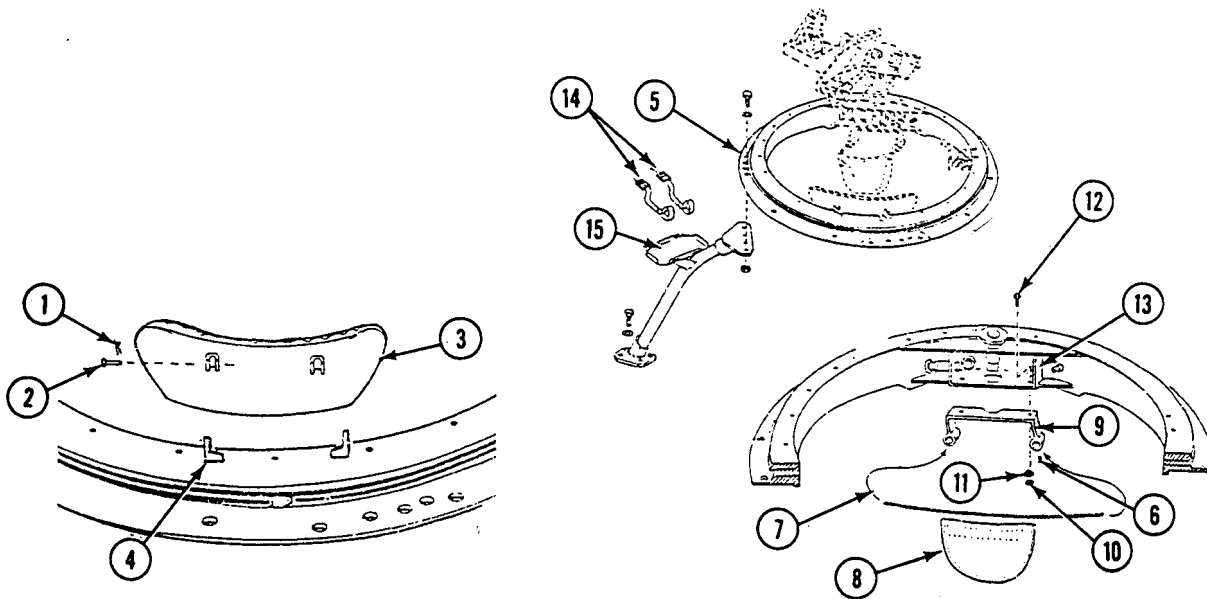
REMOVAL

1. Remove machine gun mount (WP 0513 00) or (WP 0515 00).
2. Remove two cotter pins (1), pins (2), and backrest (3) from brackets (4) on ring mount (5). Discard cotter pins.
3. Remove two setscrews (6), lock wire (7), and cartridge deflector (8) from deflector support (9). Separate lock wire (7) from deflector (8) and discard lock wire.
4. Remove two lock nuts (10), washers (11), screws (12), and support (9) from gun mount (13). Discard lock nuts.
5. Remove straps (14) from ammo box holders (15).

CAUTION

Ring mount weighs 314 lb (143 kg). Make sure lifting device is strong enough.

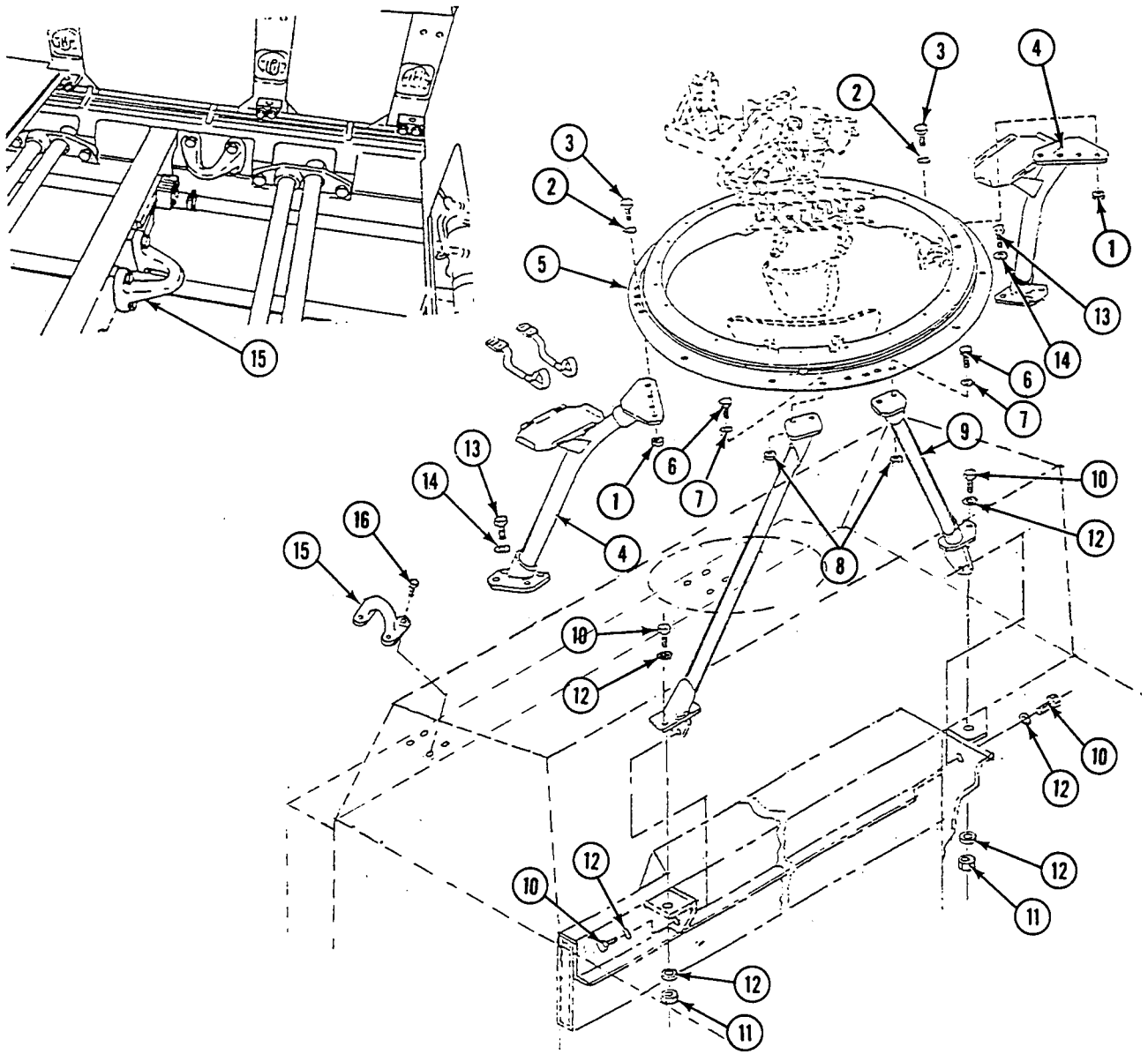
6. Secure suitable lifting device to ring mount (5).



REPLACE M66 RING MOUNT KIT — Continued

0514 00

7. Remove eight lock nuts (1), washers (2), and screws (3) from two front supports (4) and ring mount (5). Discard lock nuts.
8. Remove four screws (6), washers (7), and lock nuts (8) from two rear supports (9) and ring mount (5). Discard lock nuts.
9. Remove ring mount (5) with suitable lifting device.
10. Remove four screws (10), lock nuts (11), six washers (12), and two rear supports (9) from transverse beam. Discard lock nuts.

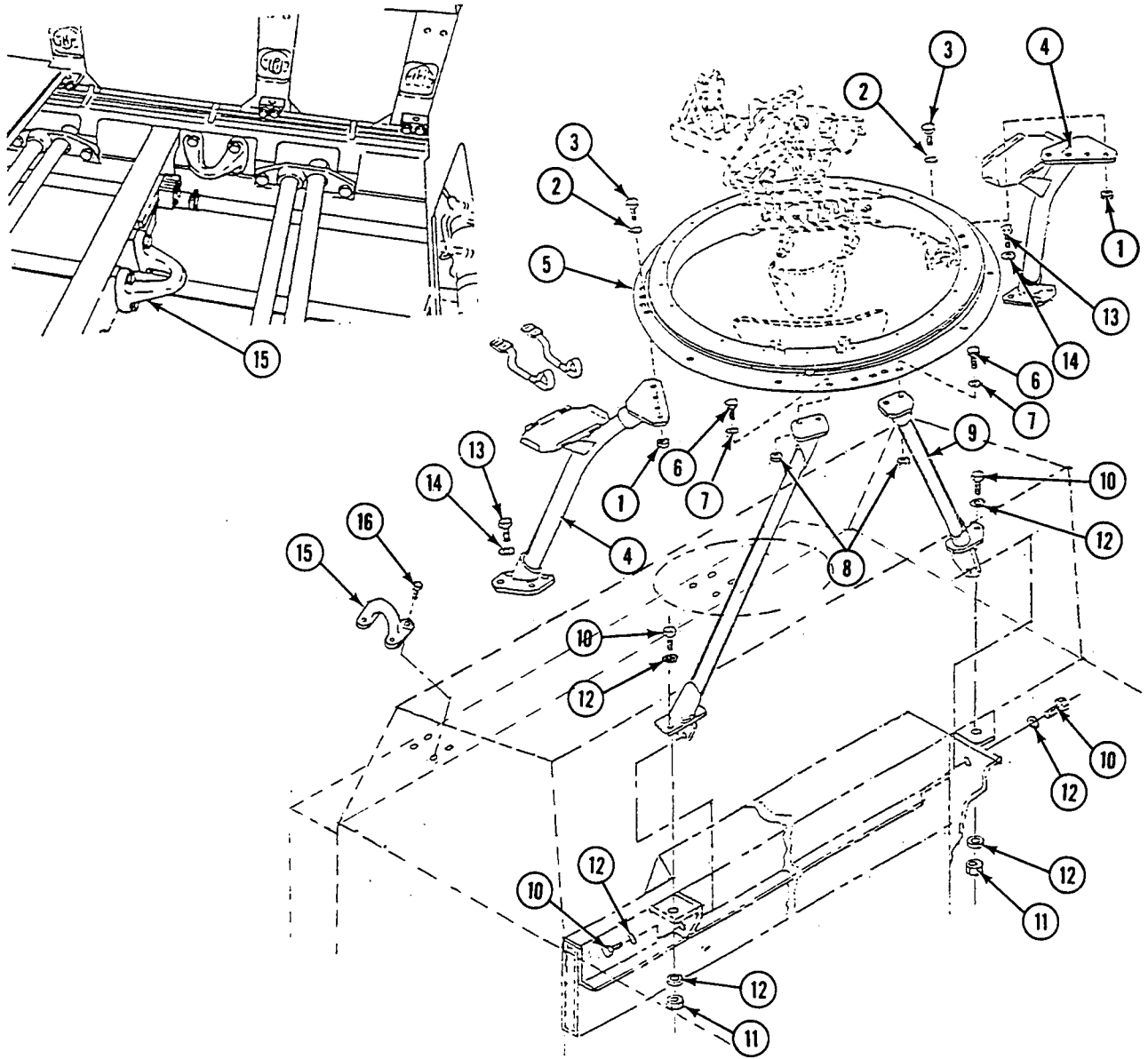


11. Remove eight screws (13), washers (14), and two front supports (4) from hull.
12. Remove cargo compartment floor plates (WP 0388 00). Remove eight screws (provided with kit) and two lifting eyes (15) from stowage.

NOTE

See TM 9-1005-245-14 for disassembly of gun mount ring.

13. (H) Install lifting eyes (15) on hull with original eight screws (16). Tighten screws to 185 lb-ft (251 N•m) torque.



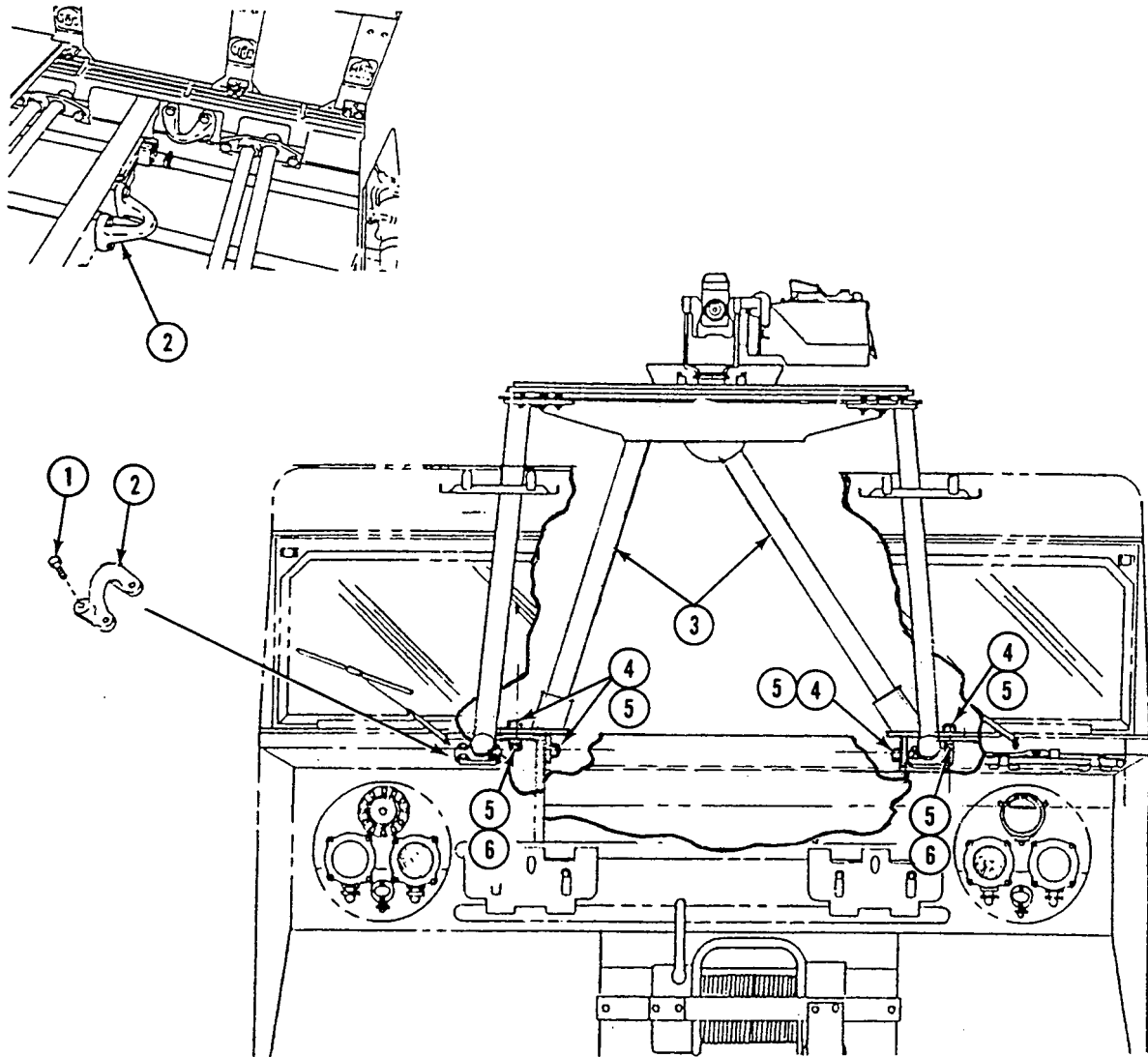
INSTALLATION

1. Remove eight screws (1) and two front lifting eyes (2) from hull.

NOTE

Eight screws are provided in kit for stowage of lifting eyes.

2. (H) Use screws provided. Install lifting eyes (2) under cargo floor plate for stowage.
3. Place rear ring mount supports (3) on transverse beam. Secure each support with two screws (4), three washers (5), and two lock nuts (6). Tighten screws to 185 lb-ft (251 N•m) torque.

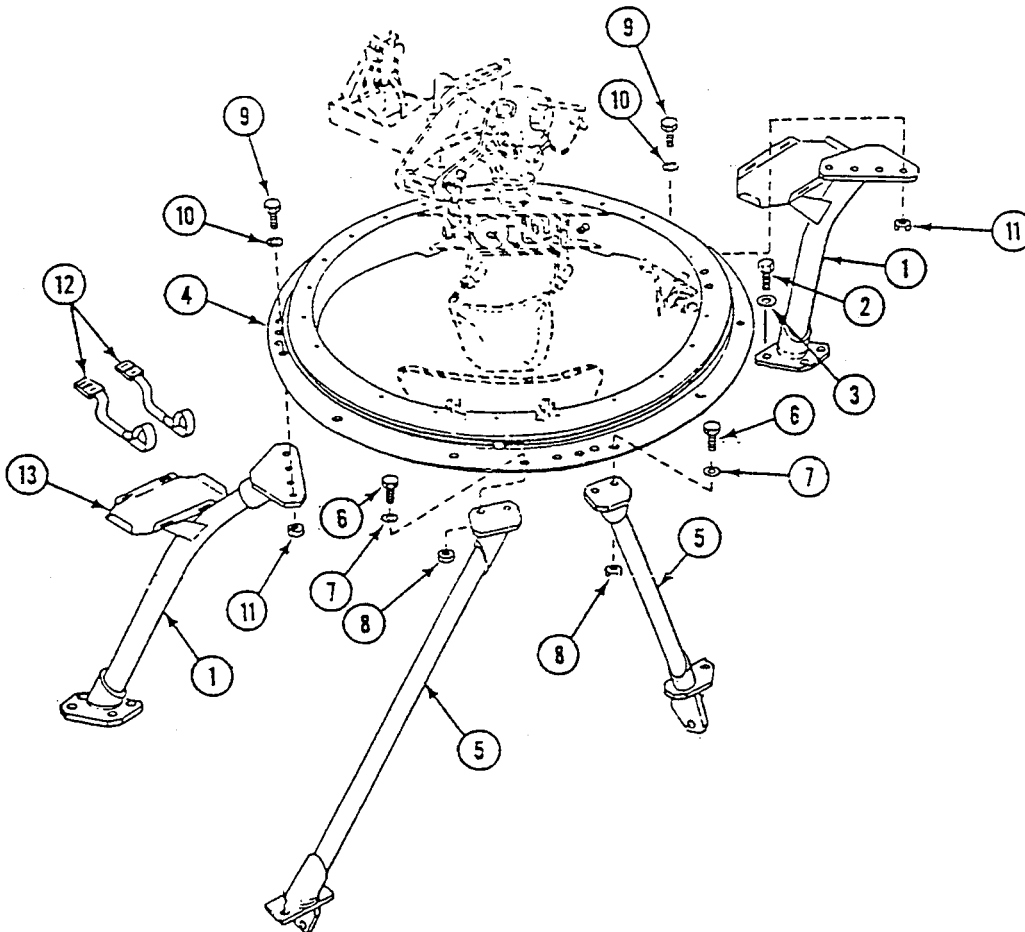


4. Place front ring mount supports (1) on hull. Secure each support (1) with four screws (2) and washers (3). Tighten screws to 185 lb-ft (251 N•m) torque.

CAUTION

Ring mount weighs 314 lb (143 kg). Make sure lifting device is strong enough.

5. Raise ring mount (4) with suitable lifting device. Place ring mount on support (1) and support (5). Align holes.
5. Secure rear supports (5) to ring mount (4) with four screws (6), washers (7), and lock nuts (8). Tighten screws to 65 lb-ft (88 N•m) torque.
6. Secure front supports (1) to ring mount (4) with eight screws (9), washers (10), and new lock nuts (11). Tighten screws to 65 lb-ft (88 N•m) torque.
7. Secure straps (12) around ammo box holders (13).

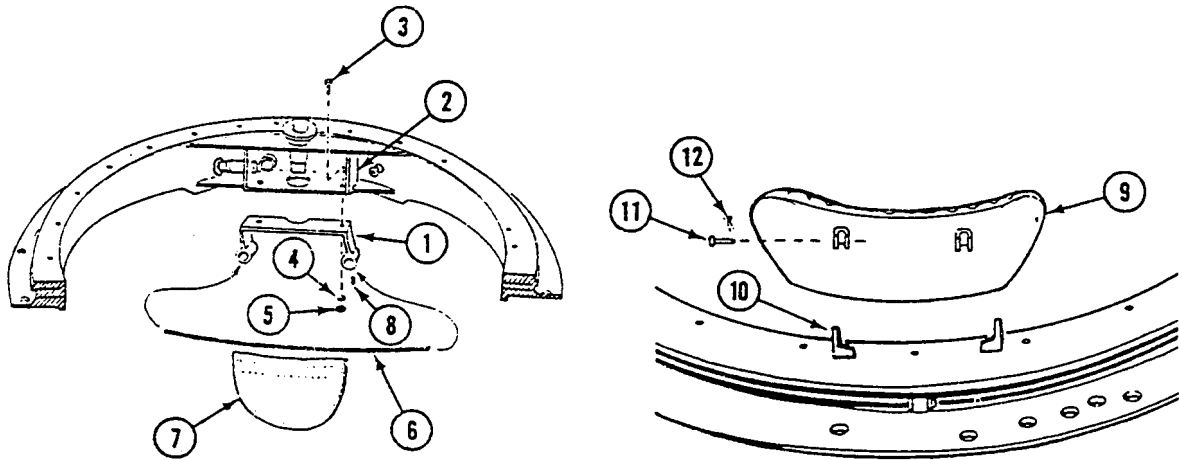


8. Install machine gun mount (WP 0513 00) or (WP 0515 00).
9. Install deflector support (1) on gun mount (2) with two screws (3), washers (4), and new lock nuts (5).
10. Install new lock wire (6) in cartridge deflector (7). Put ends of lock wire in holes on deflector holder (1). Secure with two setscrews (8).

NOTE

See your -10 for adjustment of equilibrator spring.

11. Install backrest (9) on brackets (10) with two pins (11). Secure with two new cotter pins (12).



FOLLOW-THROUGH STEPS

1. Install cargo compartment floor plates (WP 0393 00).

END OF TASK

REPLACE 7.62 MM MACHINE GUN MOUNT

0515 00

THIS WORK PACKAGE COVERS:

- Removal (page 0515 00-1).
- Disassembly (page 0515 00-2).
- Assembly (page 0515 00-3).
- Installation (page 0515 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

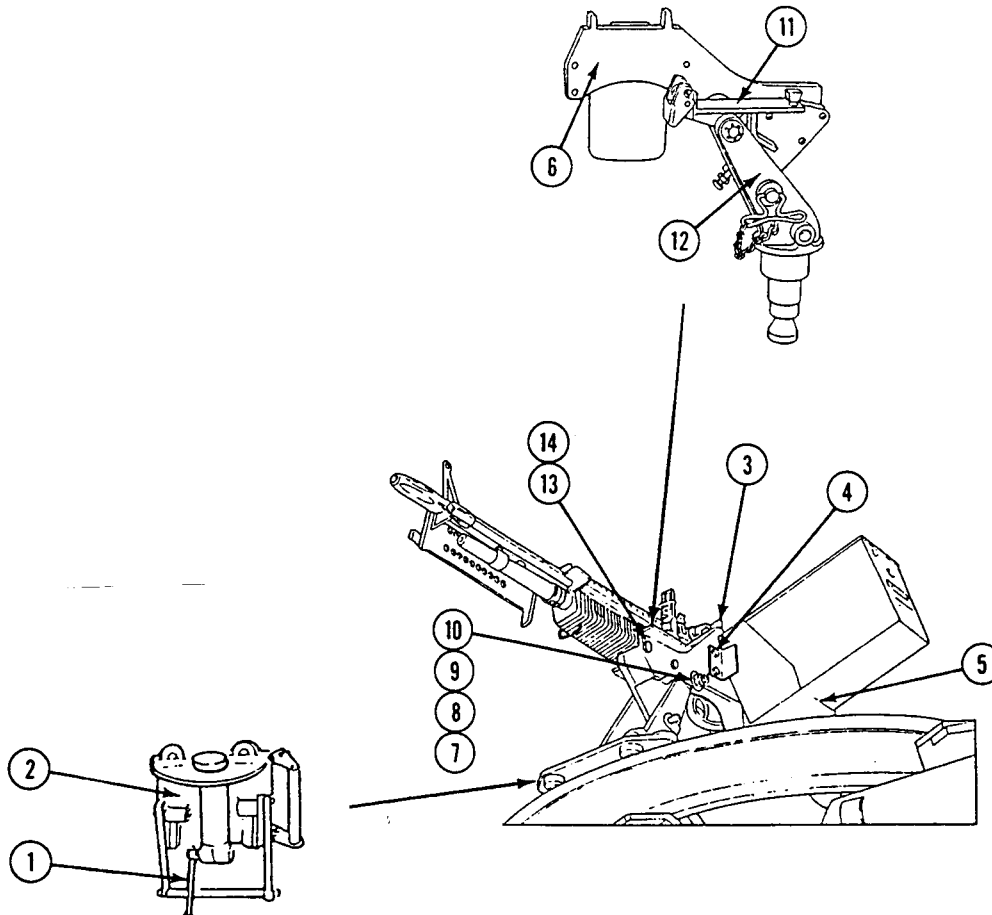
- Lubricating oil preservative (WP 0542 00, Item 15)
- Nonelectrical wire (WP 0542 00, Item 27)
- Cotter pin

Equipment Condition

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

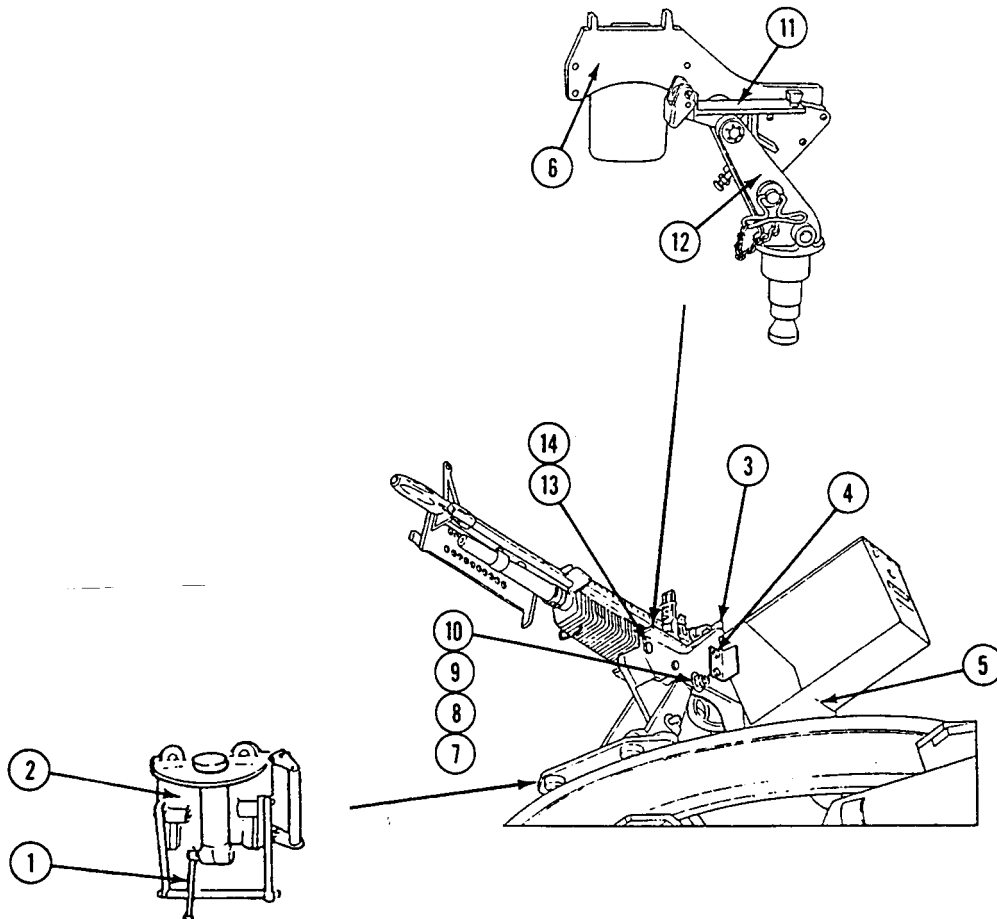
REMOVAL

1. Loosen pintle clamping screw (1). Remove 7.62 mm machine gun mount from ring mount carriage (2).



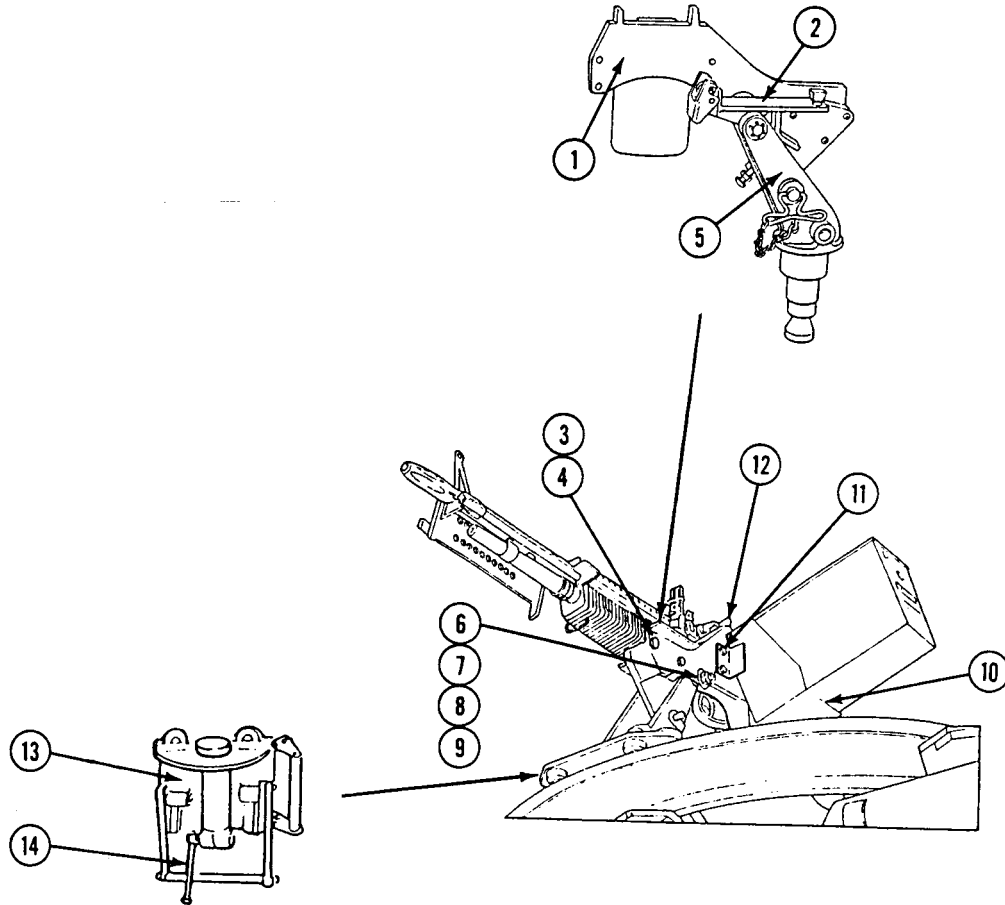
DISASSEMBLY

1. Remove lock wire (3) and four screws (4) that secure holder (5) to cradle (6). Remove cradle. Discard lock wire.
2. Remove cotter pin (7), nut (8), screw (9), and washer (10) that secure platform (11) and cradle (6) to pintle (12). Separate pintle from platform and cradle. Discard cotter pin.
3. Remove lock wire (13) and three screws (14) that secure cradle (6) to platform (11). Discard lock wire.



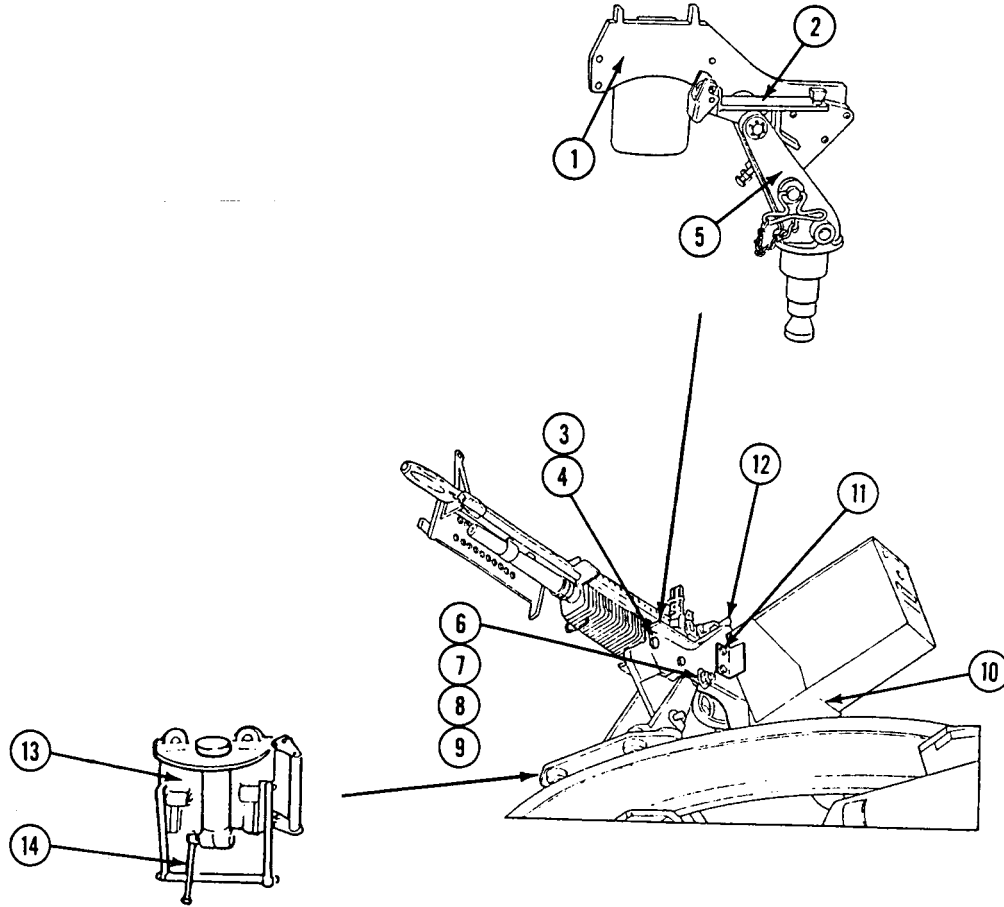
ASSEMBLY

1. Place cradle (1) on platform (2). Install three screws (3). Secure screws with new lock wire (4).
2. Place platform (2) and cradle (1) on pintle (5). Make sure pivot holes are aligned.
3. Install washer (6), screw (7), and nut (8) to secure platform (2) and cradle (1) on pintle (5). Tighten nut by hand.
4. Back nut (8) off to align notches with hole in screw (7). Install new cotter pin (9) in nut.
5. Place holder (10) on cradle (1). Secure with four screws (11) and new lock wire (12).



INSTALLATION

1. Install 7.62 mm machine gun mount in ring mount carriage (13). Secure with pintle clamping screw (14).



END OF TASK

CHAPTER 23

UNIT MAINTENANCE INSTRUCTIONS
FOR GAUGES

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE SPEEDOMETER.....	0516 00
REPLACE SPEEDOMETER CABLE HOUSING AND ADAPTER.....	0517 00
REPLACE SPEEDOMETER CABLE.....	0518 00
REPLACE TACHOMETER.....	0519 00
REPLACE TACHOMETER CABLE HOUSING AND ADAPTER (M548A1).....	0520 00
REPLACE TACHOMETER CABLE HOUSING AND ADAPTER (M548A3).....	0521 00
REPLACE TACHOMETER CABLE (M548A1).....	0522 00
REPLACE TACHOMETER CABLE (M548A3).....	0523 00

REPLACE SPEEDOMETER

0516 00

THIS WORK PACKAGE COVERS:

Removal (page 0516 00-1).
 Installation (page 0516 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Gasket

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

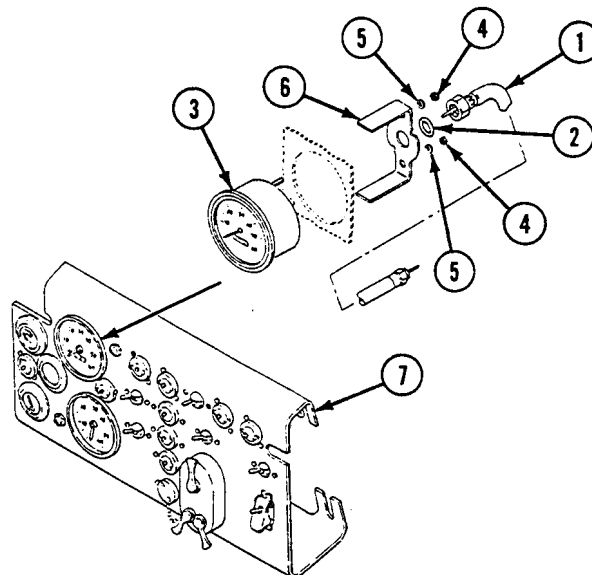
Instrument panel partially removed (WP 0256 00)

REMOVAL

NOTE

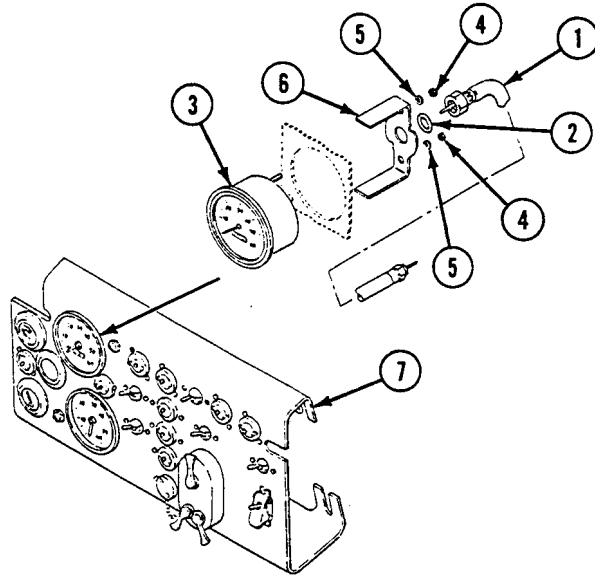
Instrument panel switches, indicators, and controls will vary between the M548A1 and M548A3. M548A1 instrument panel is shown.

1. Disconnect flexible shaft assembly (1) and gasket (2) from speedometer (3). Discard gasket.
2. Remove two nuts (4), washers (5), and bracket (6) from speedometer (3) and instrument panel (7). Remove speedometer from instrument panel.



INSTALLATION

1. Place speedometer (3) in instrument panel (7). Secure with bracket (6), two washers (5), and nuts (4).
2. Install new gasket (2) in speedometer flexible shaft assembly (1). Connect speedometer flexible shaft assembly to speedometer (3).

**FOLLOW-THROUGH STEPS**

1. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE SPEEDOMETER CABLE HOUSING AND ADAPTER

0517 00

THIS WORK PACKAGE COVERS:

Removal (page 0517 00-1).
 Installation (page 0517 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Instrument panel partially removed (WP 0256 00)
 Left cab floor plate removed (WP 0394 00) or
 (WP 0395 00)
 Speedometer cable housing disconnected from
 speedometer (WP 0516 00)

Materials/Parts

Grommet
 Tablock washer (4)
 Preformed packing

Personnel Required

Unit Mechanic

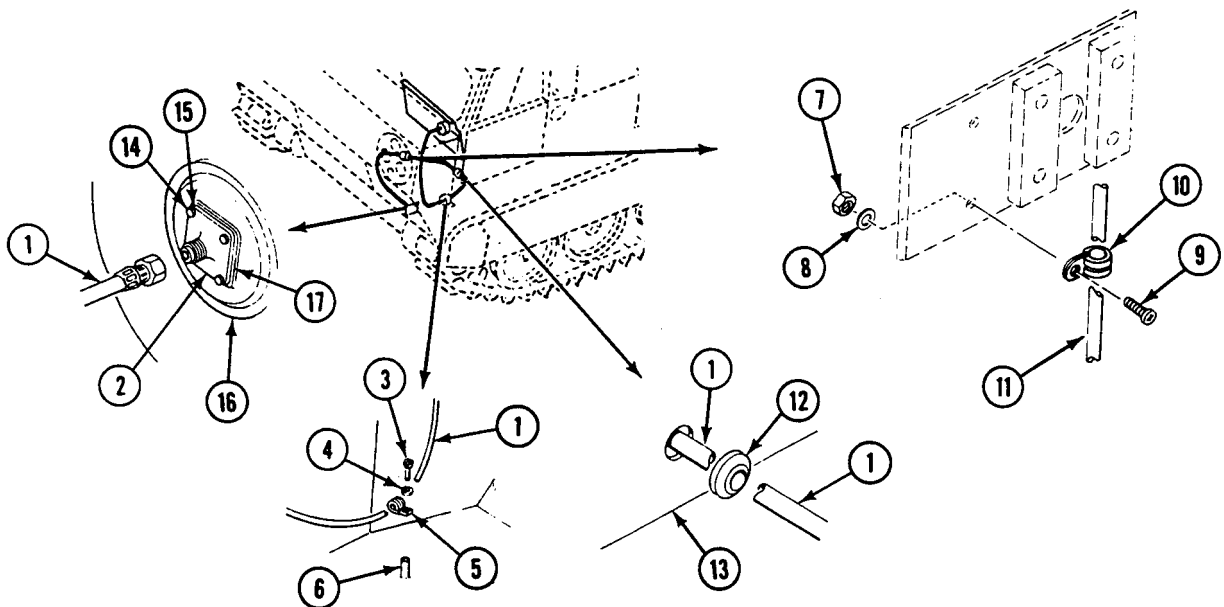
REMOVAL

1. Disconnect speedometer cable housing (1) from left final drive shaft adapter (2).

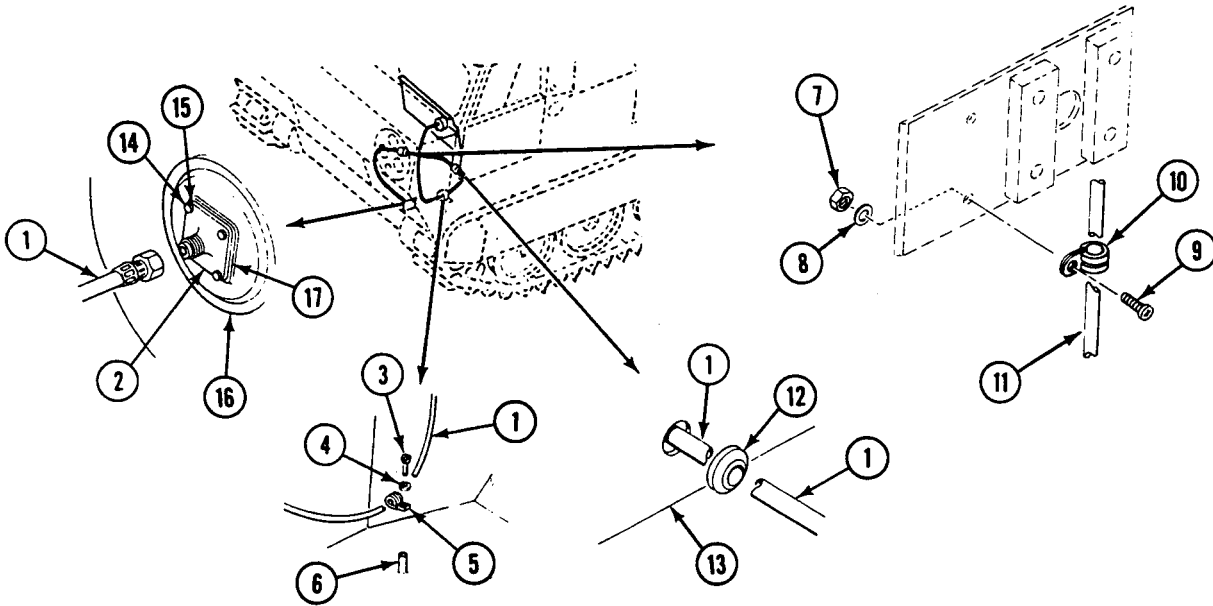
NOTE

For M548A1, do Step 2. For M548A3, do Step 3.

2. Remove three screws (3), washers (4), and clamps (5) from weld nuts (6) that secure speedometer cable housing (1).
3. Remove nut (7), washer (8), screw (9), and clamp (10) securing speedometer shaft (11) to hand brake bracket.



4. Pull speedometer cable housing (1) through grommet (12) located in bulkhead (13) and out of carrier.
5. Remove grommet (12) from bulkhead (13). Discard grommet.
6. Remove four screws (14) and tablock washers (15) from left final drive shaft adapter (2) and final drive (16). Discard tablock washers.
7. Remove left final drive shaft adapter (2) and preformed packing (17) from final drive (16). Discard preformed packing.

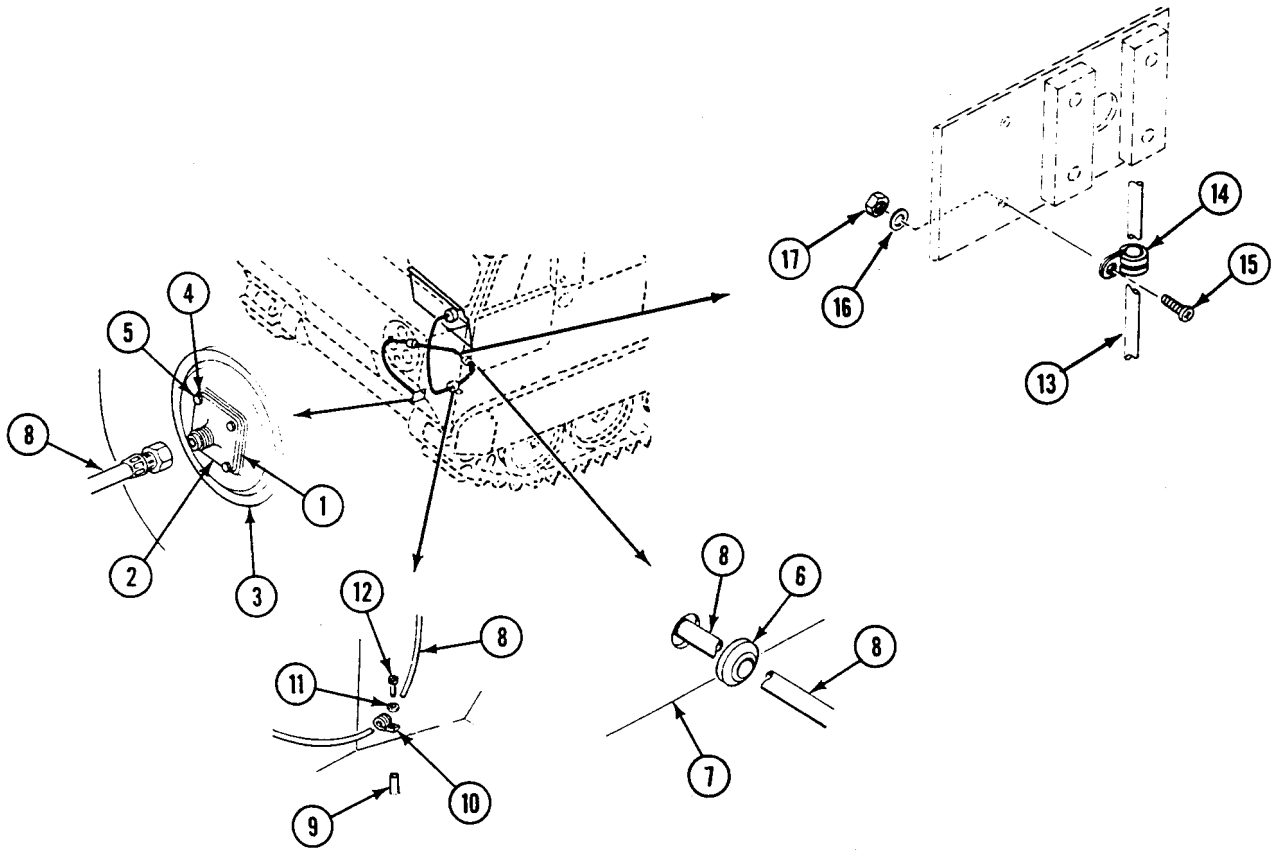


INSTALLATION

NOTE

See WP 0128 00 for grease used on final drive shaft adapter.

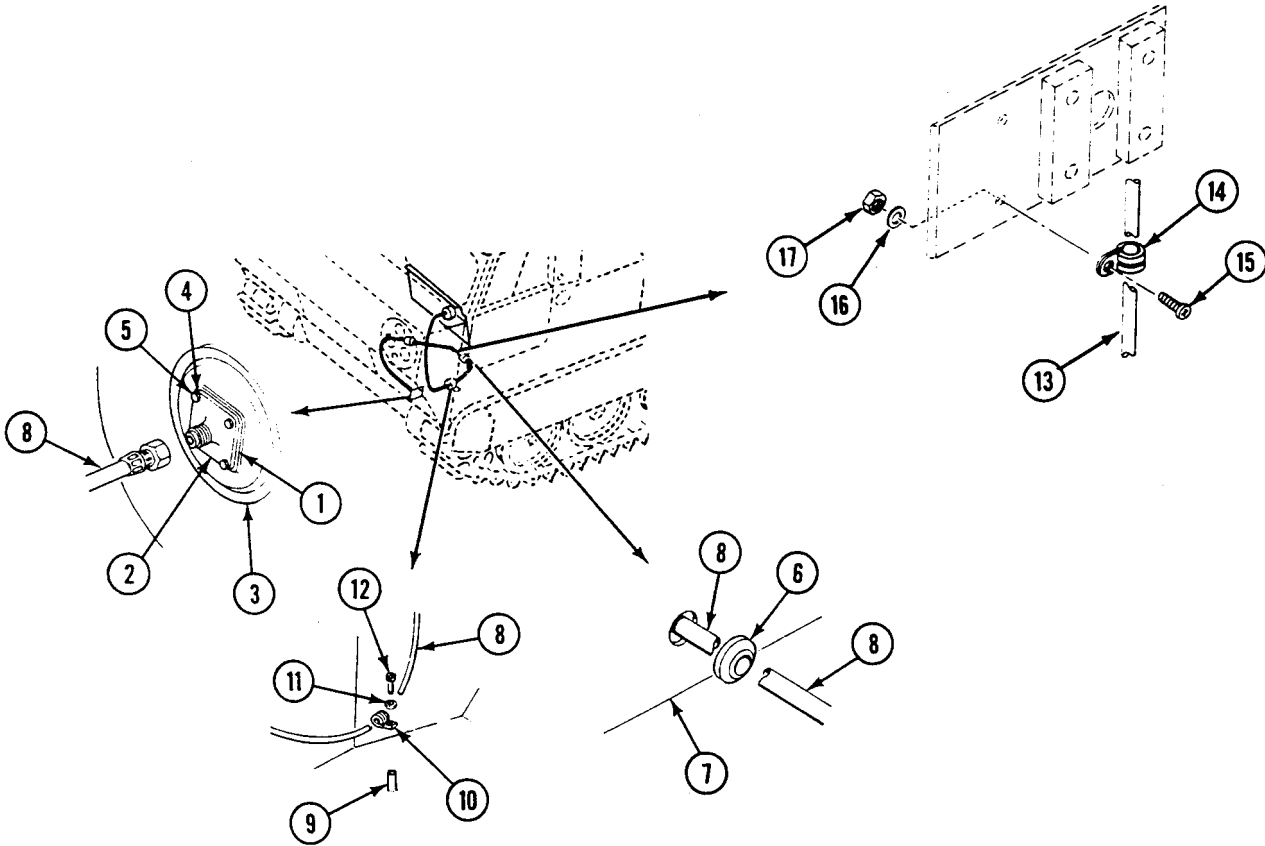
1. Install new preformed packing (1) in left final drive shaft adapter (2). Place adapter on final drive (3) and engage drive shaft of adapter in final drive.
2. Secure left final drive shaft adapter (2) to left final drive (3) with four new tablock washers (4) and screws (5). Bend tabs of washers to secure screws.
3. Install new grommet (6) in bulkhead (7). Insert speedometer cable housing (8) through grommet to left final drive shaft adapter (2).
4. Connect speedometer cable housing (8) to left final drive shaft adapter (2).



NOTE

For M548A1, do Step 5. For M548A3, do Step 6.

5. Secure speedometer cable housing (8) to hull weld nuts (9) with three clamps (10), washers (11), and screws (12).
6. Position speedometer shaft (13) on hull and secure with clamp (14), screw (15), washer (16), and nut (17).



FOLLOW-THROUGH STEPS

1. Install left cab floor plate (WP 0394 00) or (WP 0395 00).
2. Install instrument panel (WP 0256 00).
3. Connect speedometer cable housing to speedometer (WP 0516 00).

END OF TASK

REPLACE SPEEDOMETER CABLE

0518 00

THIS WORK PACKAGE COVERS:

- Removal (page 0518 00-1).
- Installation (page 0518 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Instrument panel partially removed (WP 0256 00)
- Left cab floor plate removed (WP 0394 00) or (WP 0395 00)

Materials/Parts

Aircraft Grease (WP 0542 00, Item 3)

Personnel Required

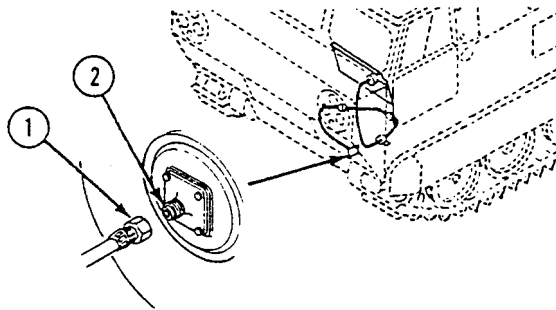
Unit Mechanic

REMOVAL

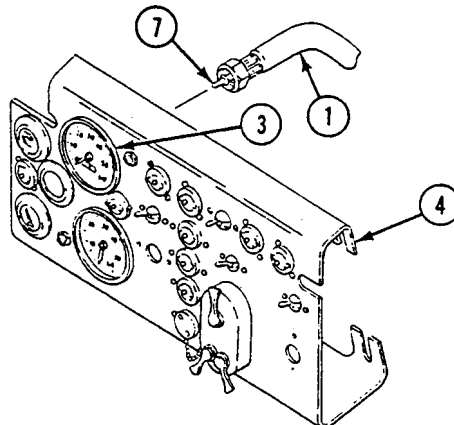
NOTE

Speedometer cable can be removed without removing speedometer or speedometer cable housing.

1. Disconnect speedometer cable housing (1) from left final drive adapter (2).



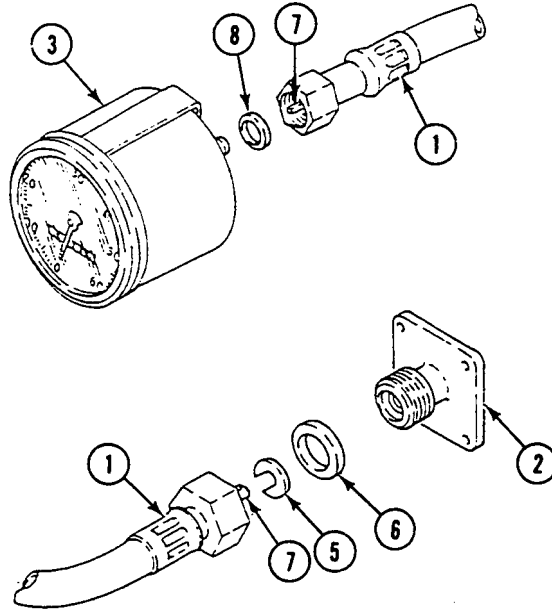
2. Disconnect speedometer cable housing (1) from speedometer (3) at instrument panel (4).



REPLACE SPEEDOMETER CABLE — Continued

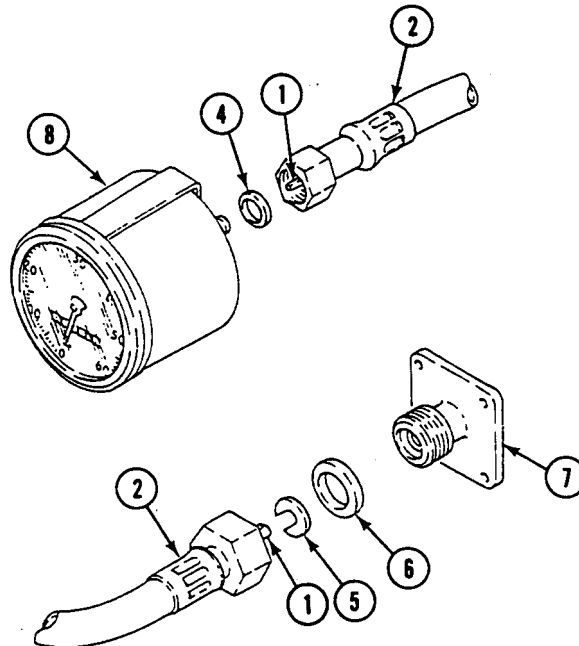
0518 00

3. Remove slotted washer (5) and washer (6) from left final drive adapter (2) end of speedometer cable (7).
4. Pull speedometer cable (7) out of speedometer cable housing (1) at instrument panel (4) end. Check gasket (8) in cable housing. Replace gasket if necessary.

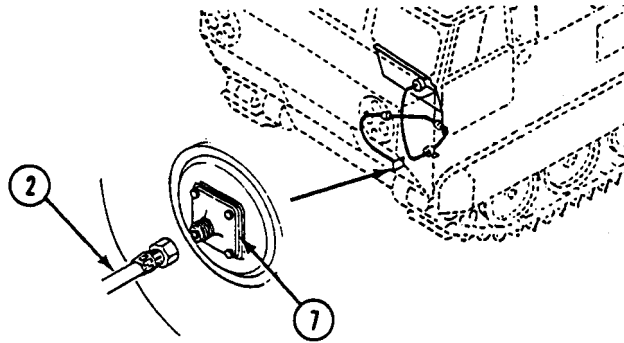


INSTALLATION

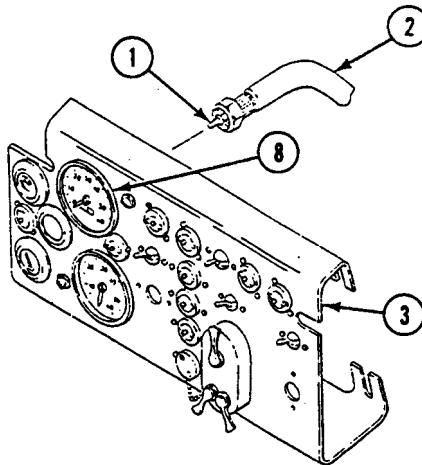
1. Coat speedometer cable (1) with grease (WP 0128 00).
2. Install speedometer cable (1) in speedometer cable housing (2) at instrument panel (3) end. Install gasket (4), if replaced, in cable housing.
3. Install slotted washer (5) and washer (6) on speedometer cable (1) at left final drive adapter (7) end.



4. Connect speedometer cable housing (2) to left final drive adapter (7).



5. Connect speedometer cable housing (2) to speedometer (8) at instrument panel (3).



FOLLOW-THROUGH STEPS

1. Install cab left floor plate (WP 0394 00) or (WP 0395 00).
2. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE TACHOMETER

0519 00

THIS WORK PACKAGE COVERS:

Removal (page 0519 00-1).
 Installation (page 0519 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Gasket

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

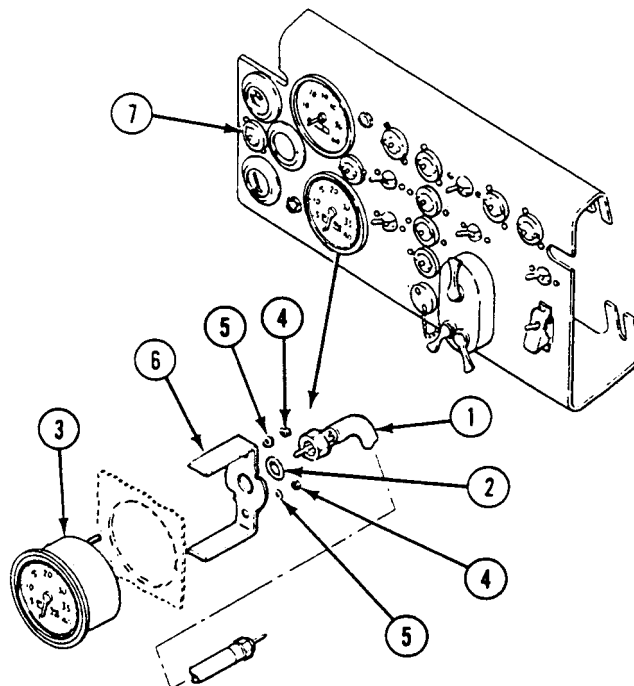
Instrument panel partially removed (WP 0256 00)

REMOVAL

NOTE

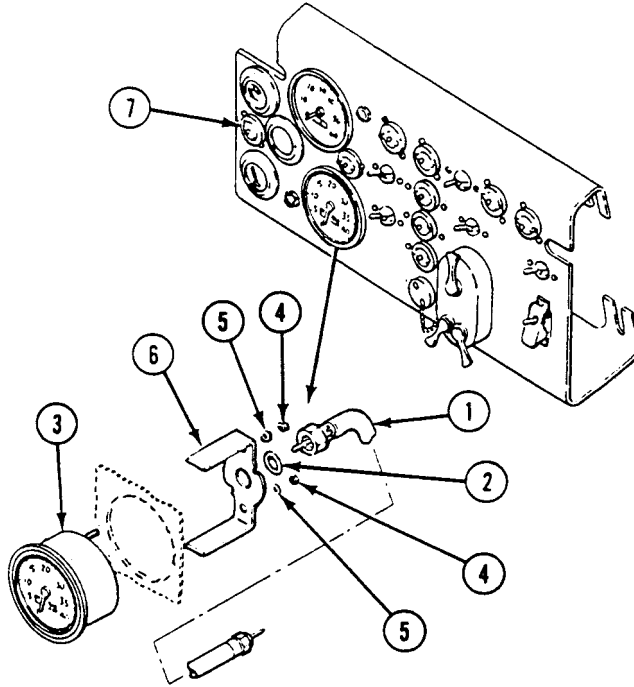
Instrument panel switches, indicators, and controls will vary between the M548A1 and M548A3. M548A1 instrument panel is shown.

1. Disconnect flexible shaft assembly (1) and gasket (2) from tachometer (3). Discard gasket.
2. Remove two nuts (4), washers (5), and bracket (6) from tachometer (3) and instrument panel (7). Remove tachometer from instrument panel.



INSTALLATION

1. Place tachometer (3) in instrument panel (7). Secure with bracket (6), two washers (5), and nuts (4).
2. Install new gasket (2) in flexible shaft assembly (1). Connect flexible shaft assembly to tachometer (3).

**FOLLOW-THROUGH STEPS**

1. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE TACHOMETER CABLE HOUSING AND ADAPTER (M548A1)

0520 00

THIS WORK PACKAGE COVERS:

Removal (page 0520 00-2).
 Installation (page 0520 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Instrument panel partially removed (WP 0256 00)
 Left cab floor plate removed (WP 0394 00)
 Power plant rear access covers/door removed
 (see your -10)
 Tachometer cable housing disconnected from tachometer
 (WP 0519 00)

Materials/Parts

Nonelectrical wire (WP 0542 00, Item 27)
 Grommet
 Lock nut (4)

Personnel Required

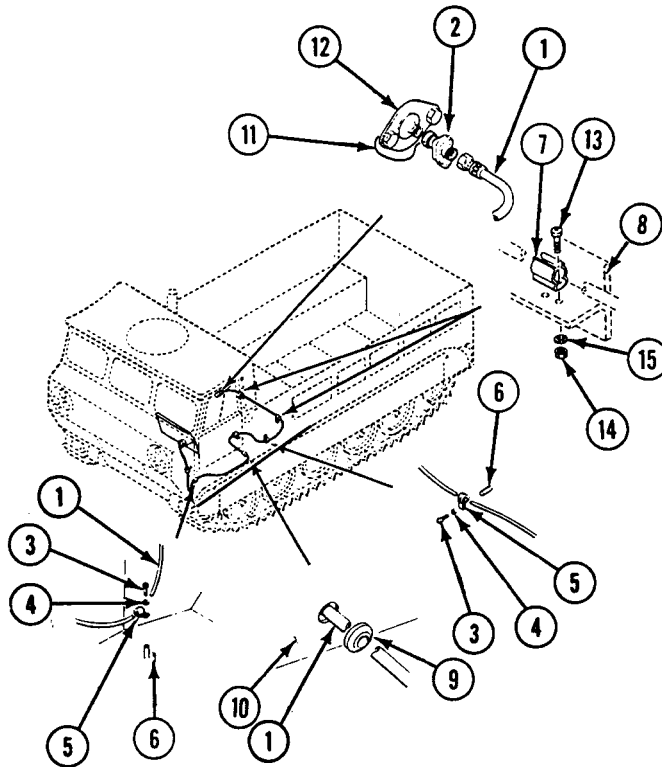
Unit Mechanic

REMOVAL

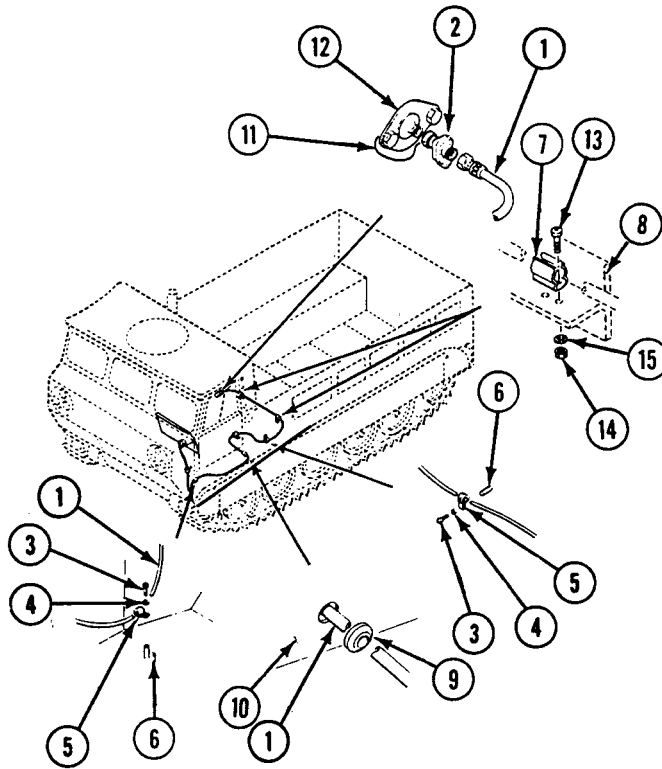
NOTE

If material handling kit is installed, remove bulkhead protector (WP 0487 00).

1. Disconnect tachometer cable housing (1) from tachometer drive adapter (2) on engine.
2. Remove tachometer cable housing (1), four screws (3), washers (4), and clamps (5) from hull weld nuts (6).
3. Pull tachometer cable housing (1) from two clips (7) on lower bulkhead panel (8).
4. Pull tachometer cable housing (1) through grommet (9) located in bulkhead (10) and out of carrier.

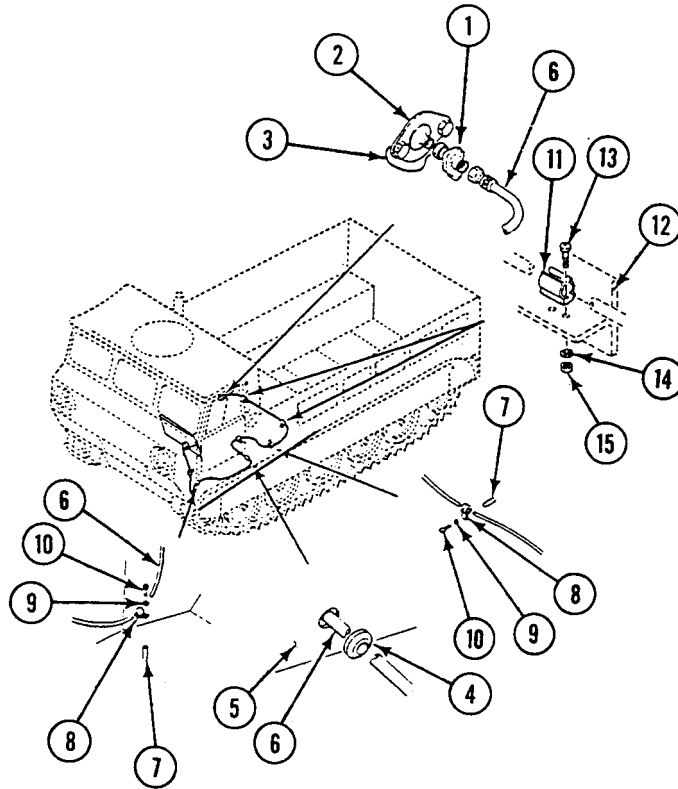


5. Remove grommet (9) from bulkhead (10). Discard grommet.
6. Remove lock wire (11) from drive adapter (2) and engine adapter plate (12). Discard lock wire.
7. Remove drive adapter (2) from engine adapter plate (12).
8. Remove four screws (13), lock nuts (14), washers (15), and two clips (7) from lower bulkhead panel (8). Discard lock nuts.



INSTALLATION

1. Attach drive adapter (1) to engine adapter plate (2). Secure with new lock wire (3).
2. Install new grommet (4) in bulkhead (5). Insert tachometer cable housing (6) through grommet to drive adapter (1).
3. Connect tachometer cable housing (6) to drive adapter (1) on engine.

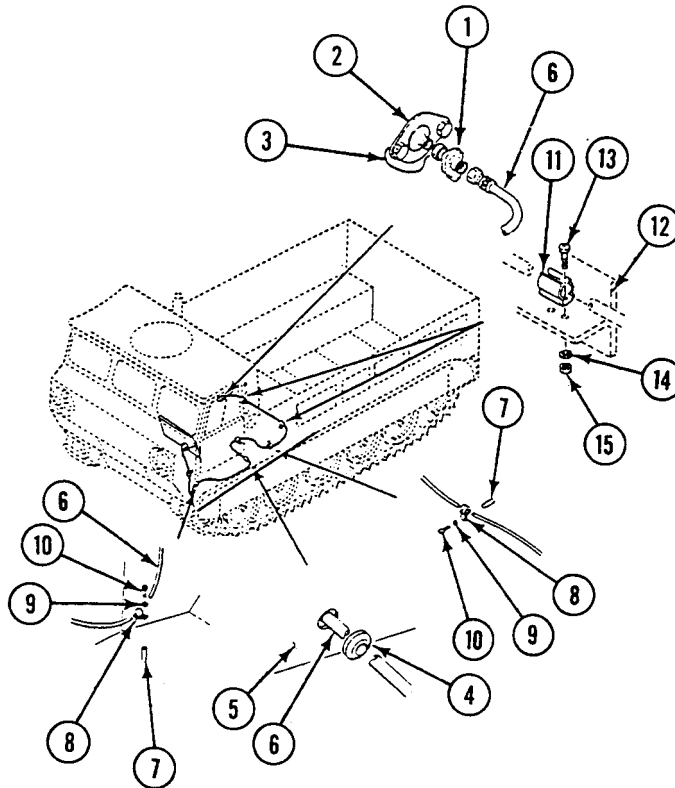


4. Connect tachometer cable housing to tachometer (WP 0519 00).
5. Secure tachometer cable housing (6) to hull weld nuts (7) with four clamps (8), washers (9), and screws (10).
6. Install two clips (11) on lower bulkhead panel (12) with four screws (13), washers (14), and new lock nuts (15).

NOTE

After completing this step, if material handling kit is installed, install bulkhead protector (WP 0487 00).

7. Push tachometer cable housing (6) firmly into two clips (11).



FOLLOW-THROUGH STEPS

1. Install power plant rear access covers/door (see your -10).
2. Install left cab floor plate (WP 0394 00).
3. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE TACHOMETER CABLE HOUSING AND ADAPTER (M548A3)

0521 00

THIS WORK PACKAGE COVERS:

- Removal (page 0521 00-1).
- Cleaning (page 0521 00-2).
- Installation (page 0521 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Both battery negative leads disconnected (WP 0292 00)
- Instrument panel partially removed (WP 0256 00)
- Driver's side batteries removed on left side (WP 0293 00)
- Driver's floor plate removed on left side (WP 0395 00)
- Center seat raised (see your -10)

Materials/Parts

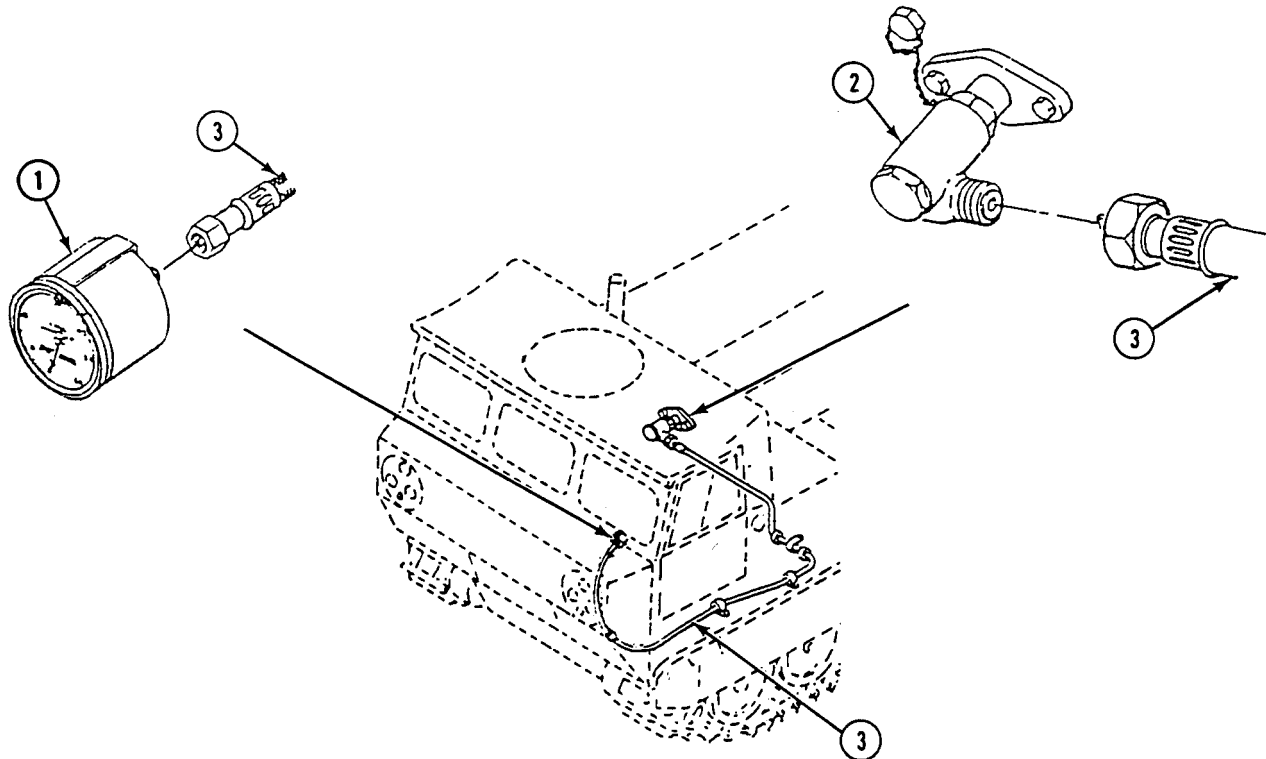
- Nonelectrical wire (WP 0542 00, Item 27)
- Grommet
- Lock washer (4)

Personnel Required

Unit Mechanic

REMOVAL

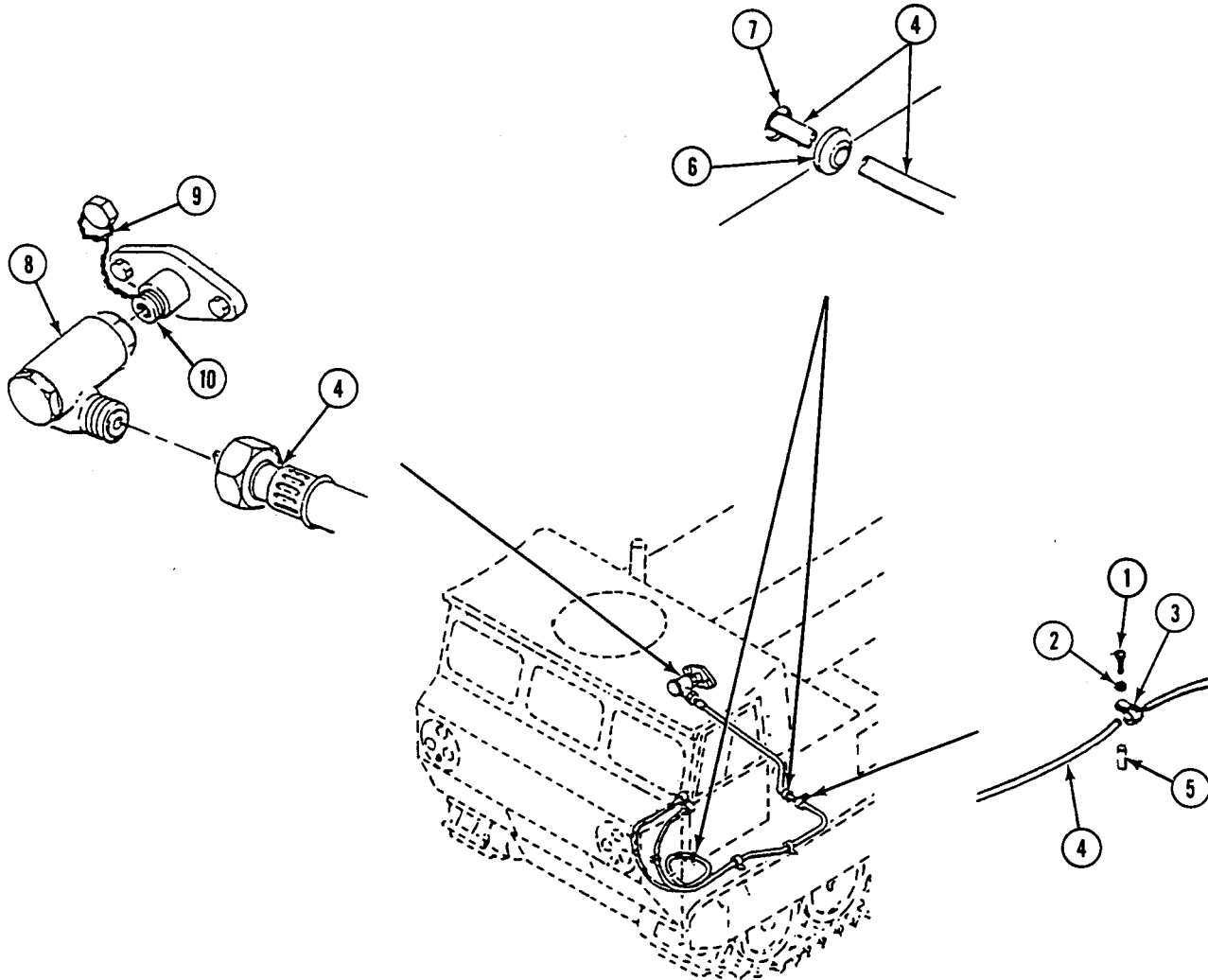
1. Locate tachometer (1) and tachometer drive adapter (2) in carrier.
2. Remove tachometer cable (3) from tachometer (1).



REPLACE TACHOMETER CABLE HOUSING AND ADAPTER (M548A3) — Continued

0521 00

3. Remove four screws (1), lock washers (2), and clamps (3) that secure tachometer cable (4) to four weld nuts (5). Discard lock washers.
4. Remove grommet (6) from tachometer cable (4) at battery compartment bulkhead (7). Discard grommet.
5. Remove tachometer cable (4) from tachometer drive adapter (8).
6. Remove tachometer cable (4) from power plant compartment, battery compartment bulkhead (7), and under driver's floor plate in carrier.
7. Remove lock wire (9) and tachometer drive adapter (8) from engine connector (10). Discard lock wire.



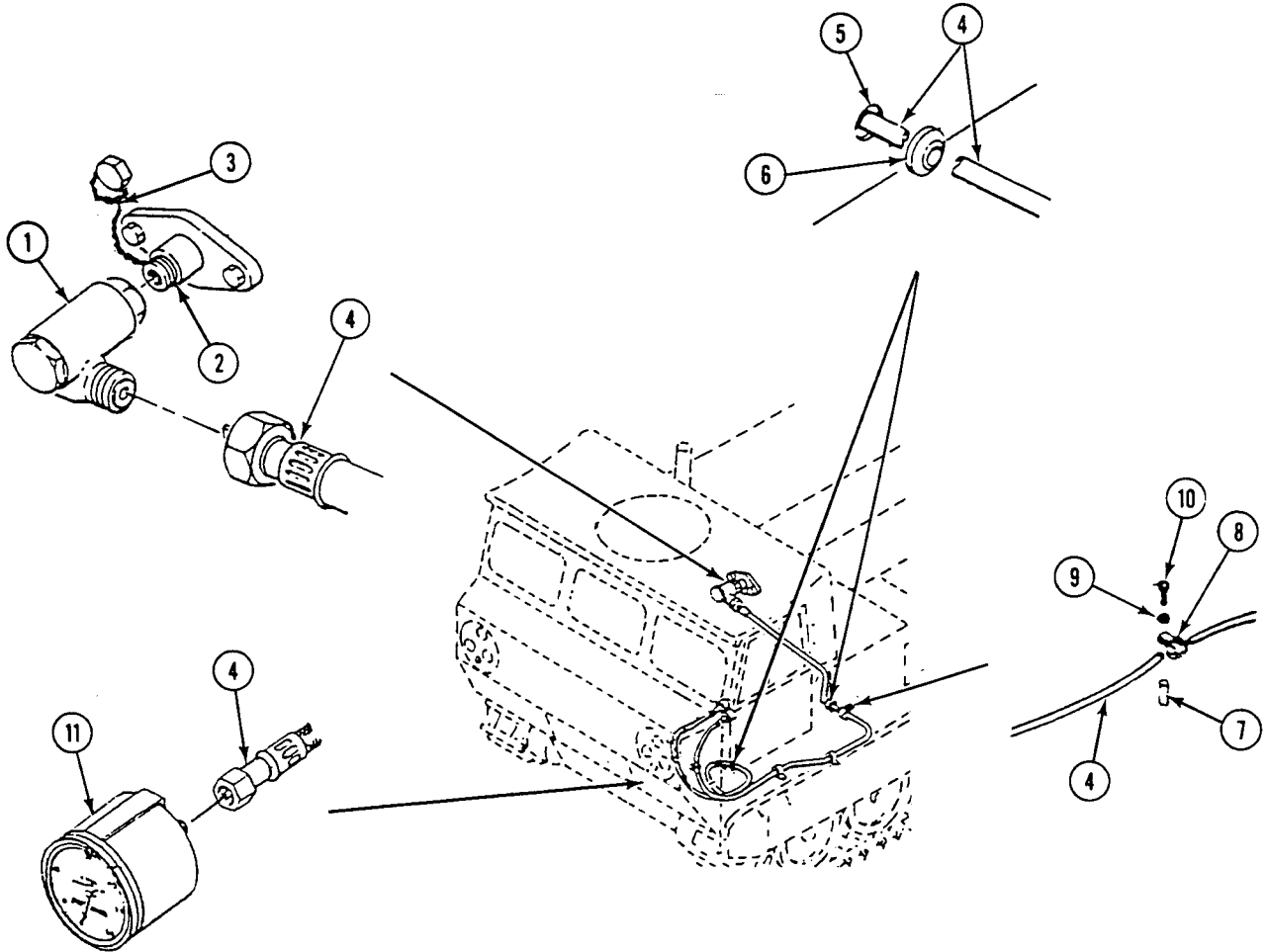
CLEANING

1. Inspect threaded areas on tachometer drive adapter for burrs, nicks, or other damage. If damage can not be repaired, replace adapter.
2. Inspect tachometer cable for damage, cracks, breaks, cuts, deteriorated rubber, or damaged end fittings. If defects can not be repaired, replace cable.

INSTALLATION

1. Install tachometer drive adapter (1) on engine connector (2). Secure with new lock wire (3).

2. Insert tachometer cable (4) under driver's floor plate in carrier. Route through battery compartment bulkhead (5) and into power plant compartment.
3. Place new grommet (6) on tachometer cable (4) at battery compartment bulkhead (5).
4. Place tachometer cable (4) on four weld nuts (7). Secure with four clamps (8), new lock washers (9) and screws (10).
5. Connect tachometer cable (4) to tachometer drive adapter (1) and tachometer (11).



FOLLOW-THROUGH STEPS

1. Install driver's side batteries on left side (WP 0293 00).
2. Connect both battery negative leads (WP 0292 00).
3. Install driver's floor plate on left side (WP 0395 00).
4. Lower center seat (see your -10).
5. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE TACHOMETER CABLE (M548A1)

0522 00

THIS WORK PACKAGE COVERS:

- Removal (page 0522 00-1).
- Installation (page 0522 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Materials/Parts

Aircraft grease (WP 0542 00, Item 3)

Instrument panel partially removed (WP 0256 00)

Personnel Required

Unit Mechanic

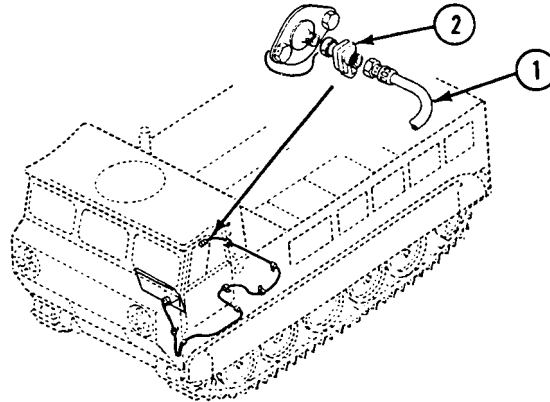
Power plant rear access door removed (see your -10)

REMOVAL

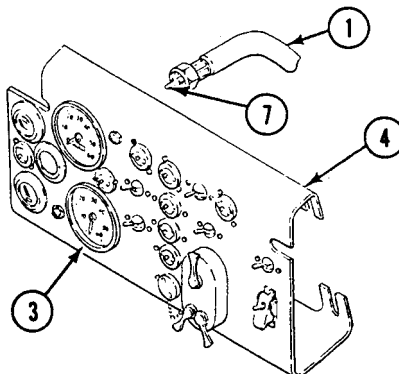
NOTE

If material handling kit is installed, remove bulkhead protector (WP 0487 00). Tachometer cable can be removed without removing tachometer or tachometer cable housing.

1. Disconnect tachometer cable housing (1) from tachometer drive adapter (2) on engine.

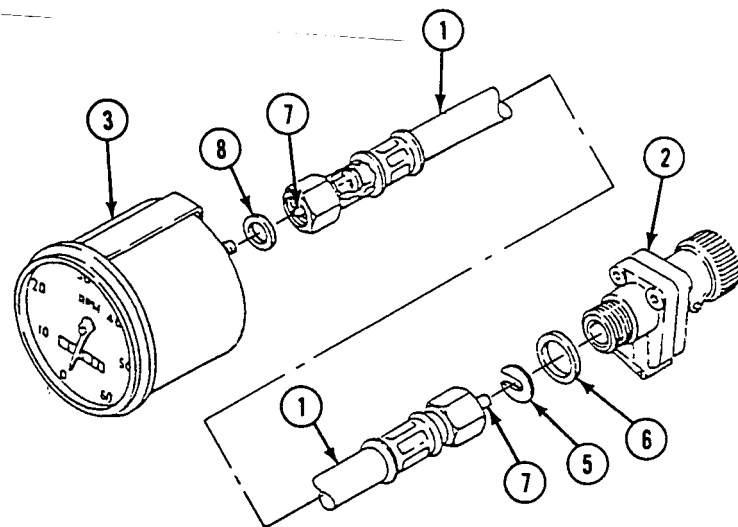


2. Disconnect tachometer cable housing (1) from tachometer (3) on instrument panel (4).



REPLACE TACHOMETER CABLE (M548A1) — Continued**0522 00**

3. Remove slotted washer (5) and washer (6) from tachometer cable (7) at tachometer drive adapter (2) end.
4. Pull tachometer cable (7) out of tachometer cable housing (1) at instrument panel (4) end. Check gasket (8) in cable housing. Replace gasket if necessary.



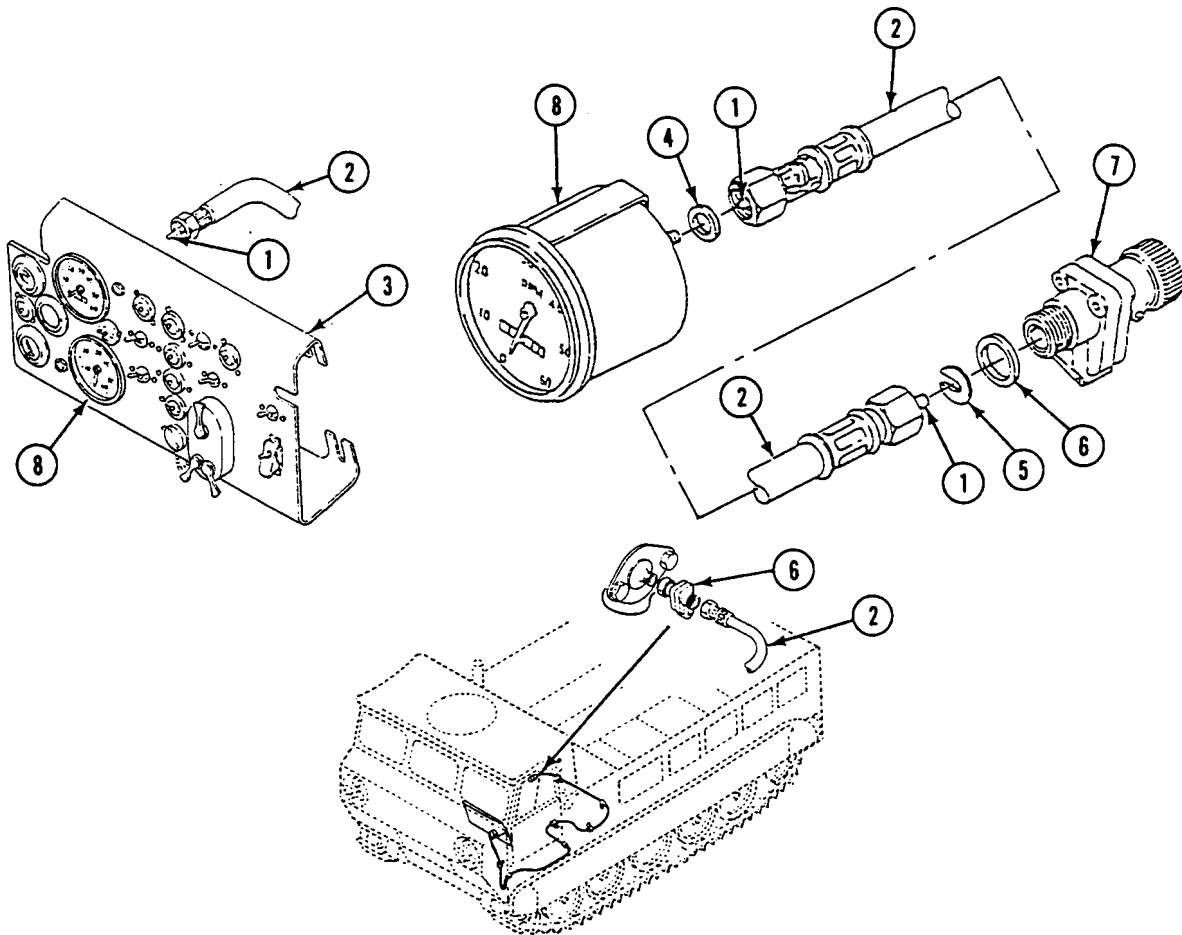
INSTALLATION

1. Coat tachometer cable (1) with grease (WP 0128 00).
2. Install tachometer cable (1) in tachometer cable housing (2) at instrument panel (3) end. Install gasket (4), if replaced, in cable housing.
3. Install slotted washer (5) and washer (6) on tachometer cable (1) at tachometer drive adapter (7) end of tachometer cable.
4. Connect tachometer cable housing (2) to tachometer (8) on instrument panel (3).

NOTE

After completing this step, if material handling kit is installed, install bulkhead protector (WP 0487 00).

5. Connect tachometer cable housing (2) to tachometer drive adapter (7).

**FOLLOW-THROUGH STEPS**

1. Install power plant rear access door (see your -10).
2. Install instrument panel (WP 0256 00).

END OF TASK

REPLACE TACHOMETER CABLE (M548A3)

0523 00

THIS WORK PACKAGE COVERS:

- Removal (page 0523 00-1).
- Cleaning (page 0523 00-2).
- Installation (page 0523 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Both battery negative leads disconnected (WP 0292 00)
- Instrument panel partially removed (WP 0256 00)
- Center seat raised (see your -10)

Materials/Parts

GAA grease (WP 0542 00, Item 14)

Personnel Required

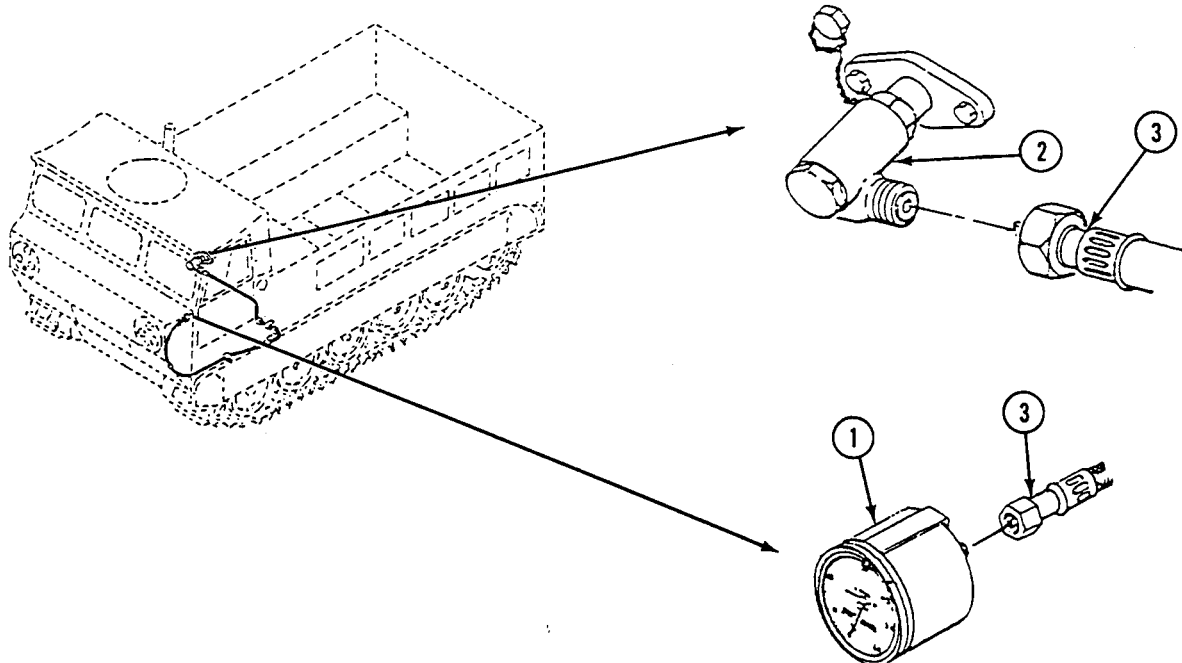
Unit Mechanic

REMOVAL

NOTE

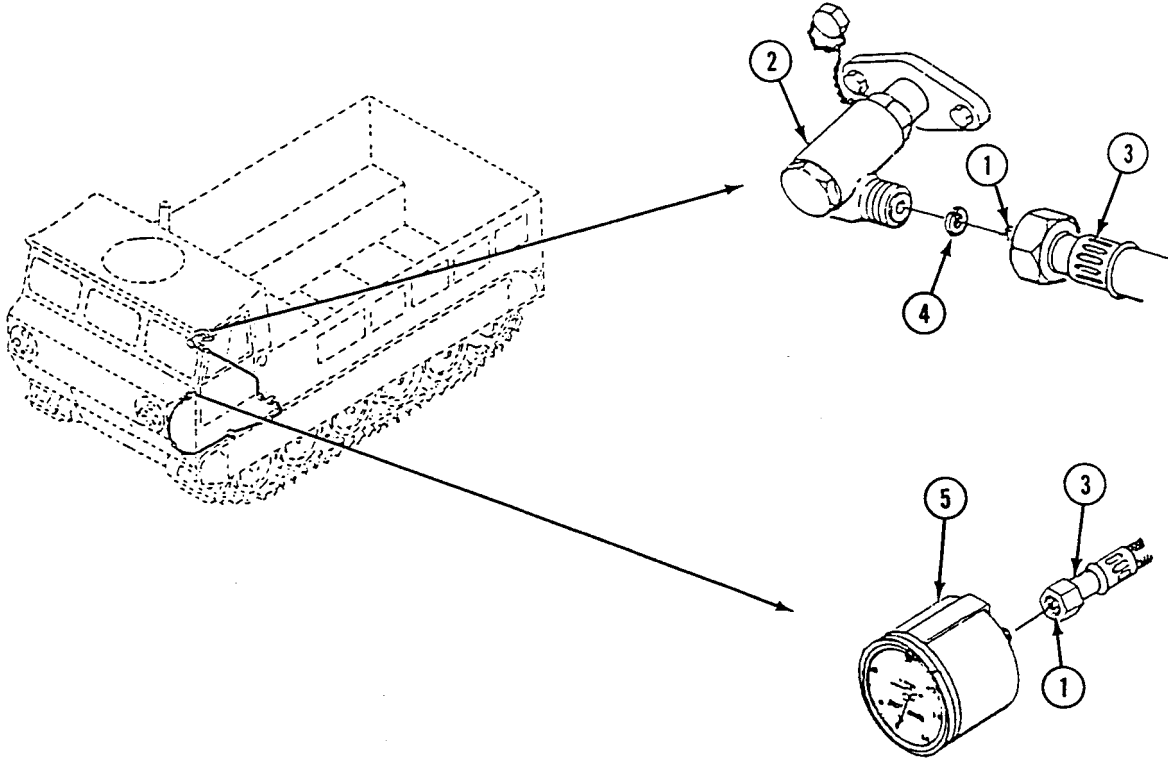
The instrument panel must be partially removed to access tachometer cable. Tachometer cable can be removed without removing tachometer or tachometer cable housing.

1. Locate tachometer (1) and tachometer drive adapter (2). Tachometer cable (3) is connected to the tachometer at one end and to the tachometer drive adapter on the other end.
2. Remove tachometer cable (3) from tachometer (1) and tachometer drive adapter (2).



REPLACE TACHOMETER CABLE (M548A3) — Continued**0523 00**

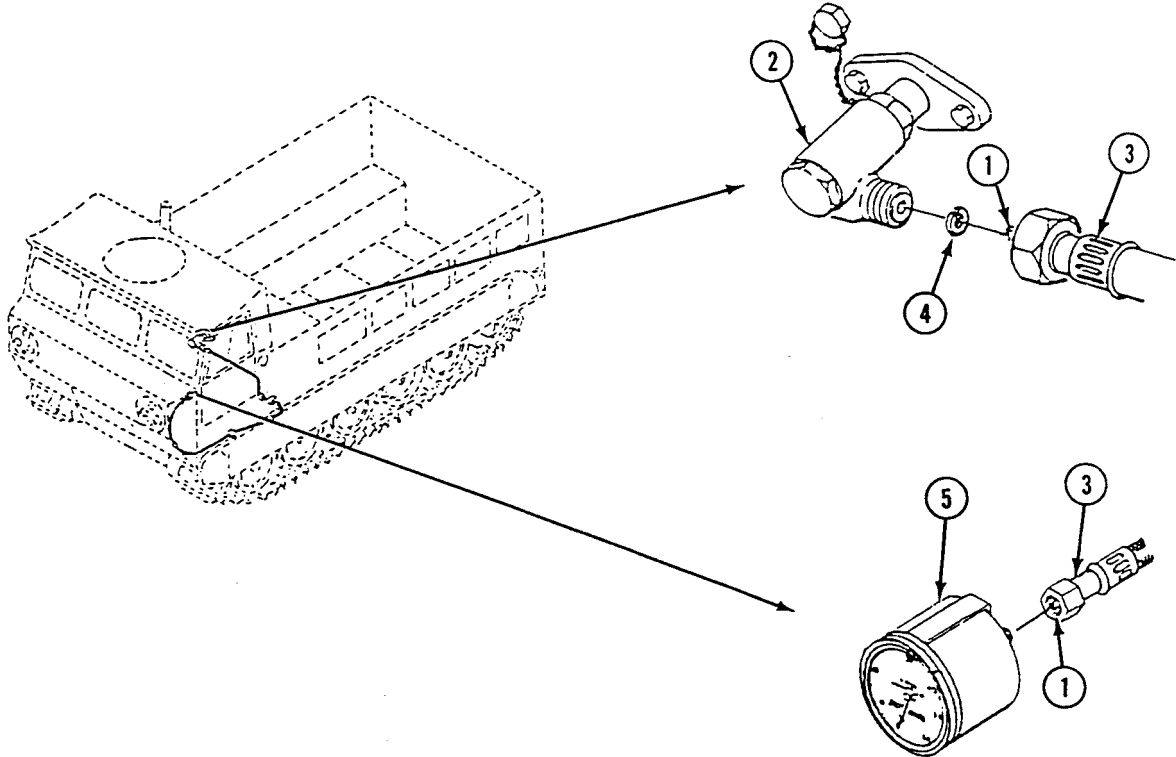
3. Pull cable core (1) from tachometer drive adapter (2) end of tachometer cable (3), as far out as possible. Remove core lock (4).
4. Remove cable core (1) from tachometer (5) end of tachometer cable (3).

**CLEANING**

1. Inspect cable core for worn or loose end fittings and broken or marred strands. Replace damaged or defective core.

INSTALLATION

1. Pack cable core (1) with grease.
2. Insert cable core (1) into tachometer cable (3). Insert cable at end of tachometer (5).
3. Pull end of cable core (1) from tachometer cable (3) at end of tachometer drive adapter (2). Attach core lock (4) to secure cable core.
4. Connect tachometer cable (3) to tachometer drive adapter (2) and to tachometer (6).



FOLLOW-THROUGH STEPS

1. Install instrument panel (WP 0256 00).
2. Connect both battery negative leads (WP 0292 00).
3. Lower center seat (see your -10).

END OF TASK

CHAPTER 24

UNIT MAINTENANCE INSTRUCTIONS
FOR FIRE EXTINGUISHER SYSTEM

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE NOZZLES, TUBES, AND FITTINGS (NEW CONFIGURATION).....	0524 00
REPLACE NOZZLES, TUBES, AND FITTINGS (OLD CONFIGURATION).....	0525 00
REPLACE CARBON DIOXIDE (CO2) CYLINDER.....	0526 00
REPLACE FYR-FYTER CONTROL VALVE.....	0527 00
REPLACE WALTER KIDDE CONTROL VALVE.....	0528 00
REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER PANEL ASSEMBLY (M548A3).....	0529 00

REPLACE NOZZLES, TUBES, AND FITTINGS (NEW CONFIGURATION)

0524 00

THIS WORK PACKAGE COVERS:

Removal (page 0524 00-1).
 Installation (page 0524 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0542 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
 Carrier blocked (see your -10)
 Driver's seat raised (see your -10)
 Battery negative lead disconnected (WP 0292 00)
 Center seat raised (see your -10)

Materials/Parts

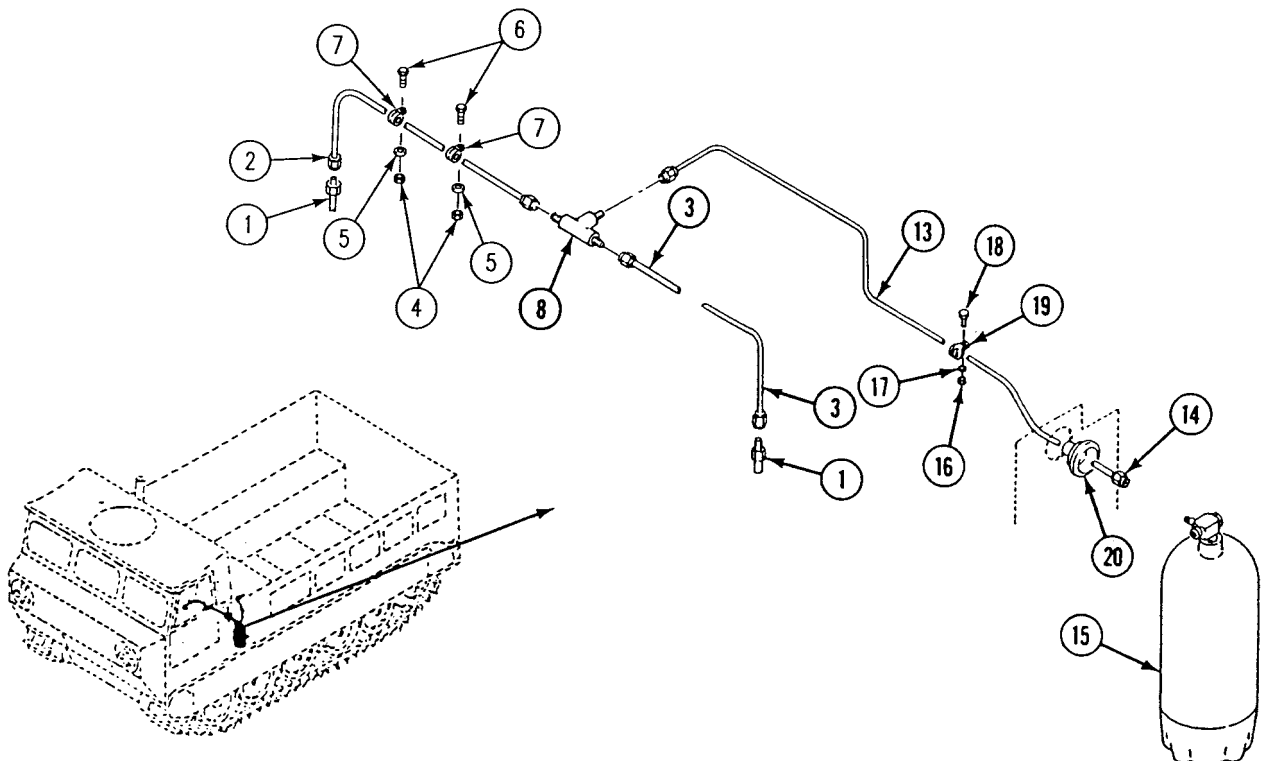
Lock nut (3)

Personnel Required

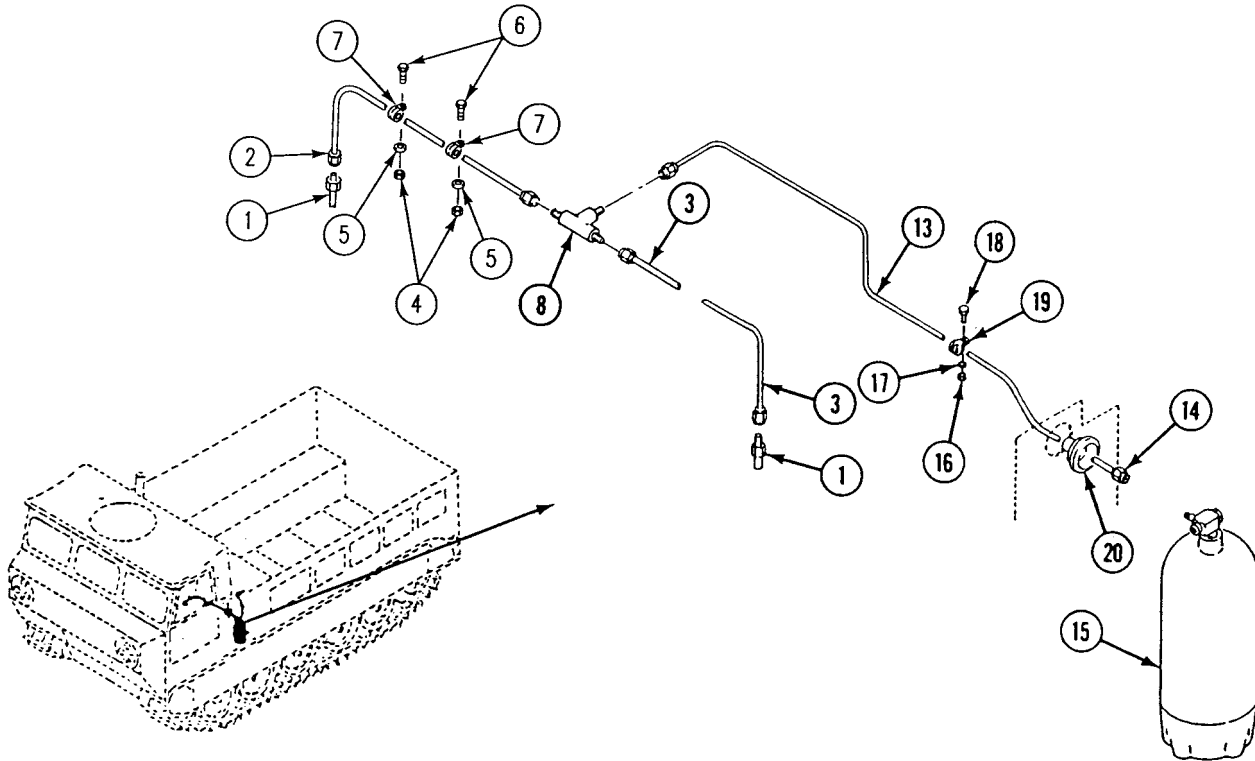
Unit Mechanic

REMOVAL

1. Remove two nozzles (1) from tube (2) and tube (3).
2. Remove three lock nuts (4), washers (5), and screws (6) that secure three clamps (7) to carrier bulkhead. Discard lock nuts.
3. Remove tube (2) from tee (8).



4. Remove tube (3) from tee (8).
5. Remove tee (8) from tube (13).
6. Loosen nut (14) that secures tube (13) to cylinder (15).
7. Remove lock nut (16), washer (17), and screw (18) that secure clamp (19) to carrier bulkhead. Discard lock nut. Remove tube (13).
8. Remove boot (20) from carrier bulkhead.

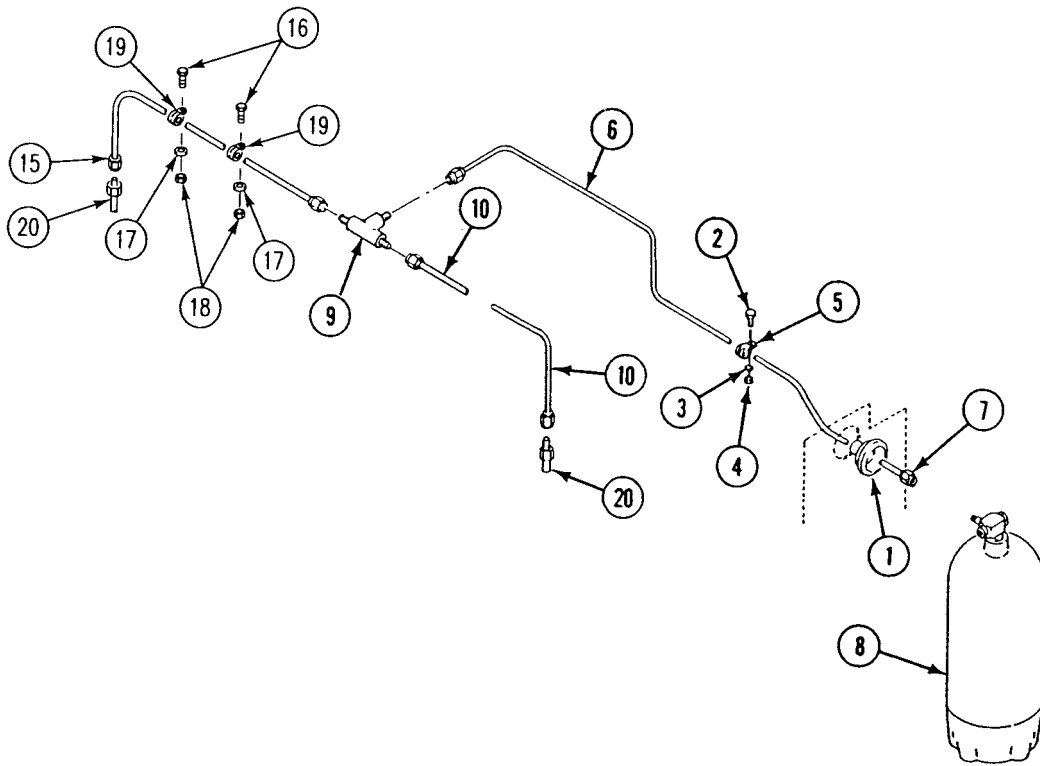


INSTALLATION

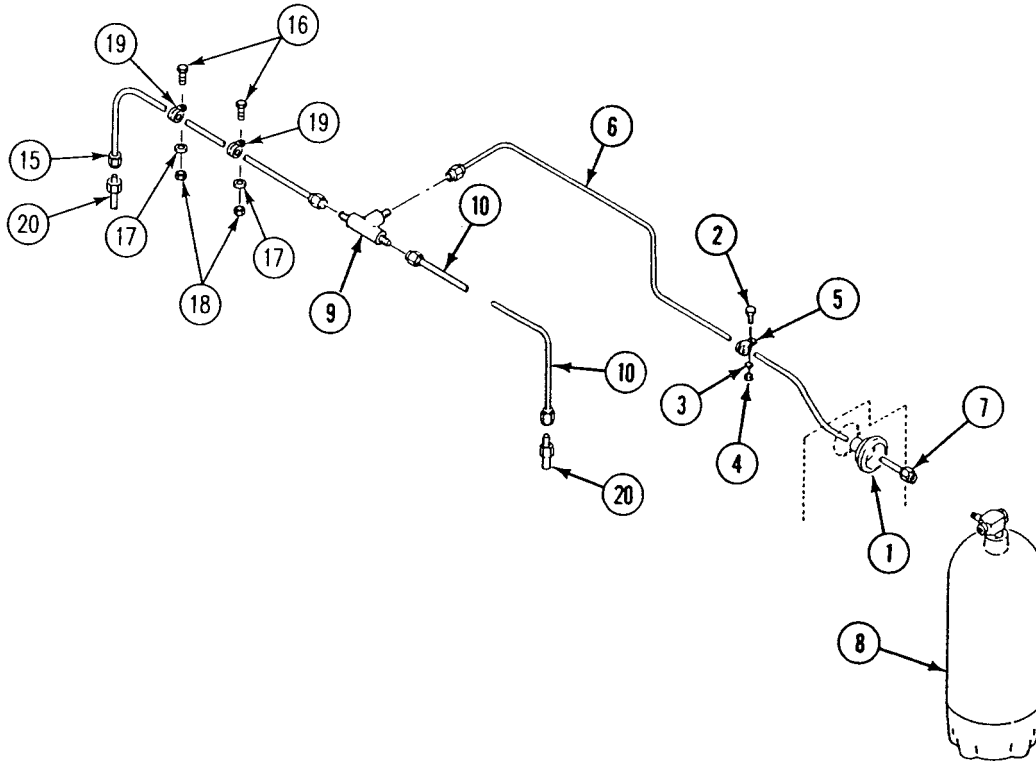
NOTE

Inspect lines, tubes, nozzles, and clamps for damage. Replace as needed.

1. Install boot (1) on carrier bulkhead.
2. Install screw (2), washer (3), and new lock nut (4) securing clamp (5) to carrier bulkhead. Install tube (6).
3. Tighten nut (7) that secures tube (6) to cylinder (8).
4. Install tee (9) on tube (6).
5. Install tube (10) on tee (9).



6. Install tube (15) on tee (9).
7. Install three screws (16), washers (17), and new lock nuts (18) securing three clamps (19) to carrier bulkhead.
8. Install two nozzles (20) on tube (15) and tube (10).



FOLLOW-THROUGH STEPS

1. Lower center seat (see your -10).
2. Connect battery negative lead (WP 0292 00).
3. Lower driver's seat (see your -10).

END OF TASK

REPLACE NOZZLES, TUBES, AND FITTINGS (OLD CONFIGURATION)

0525 00

THIS WORK PACKAGE COVERS:

- Removal (page 0525 00-1).
- Installation (page 0525 00-2).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Driver's seat raised (see your -10)
- Both battery negative leads disconnected (WP 0292 00)
- Center seat raised (see your -10)

Materials/Parts

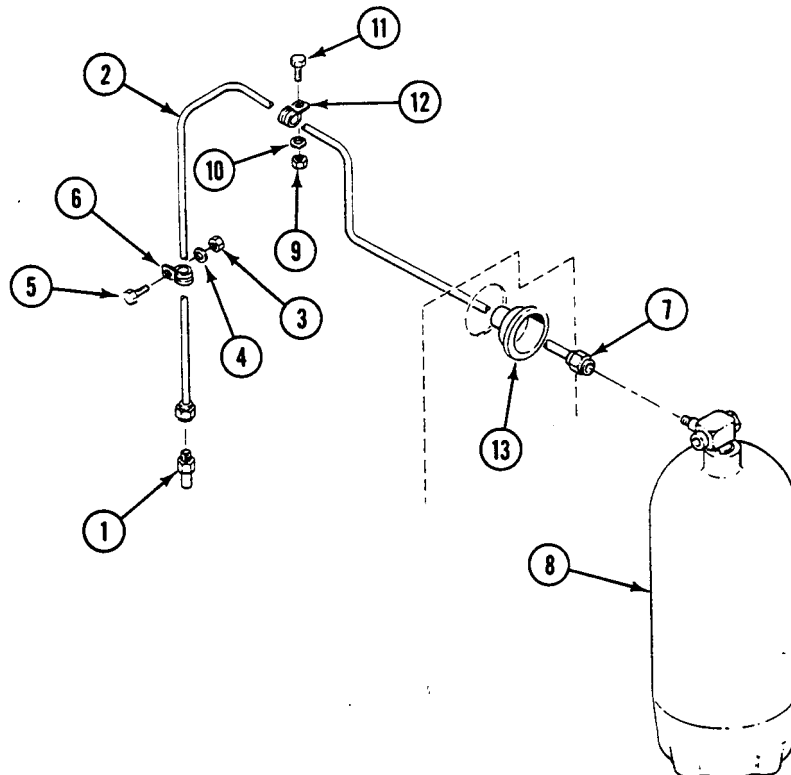
Lock nut (2)

Personnel Required

Unit Mechanic

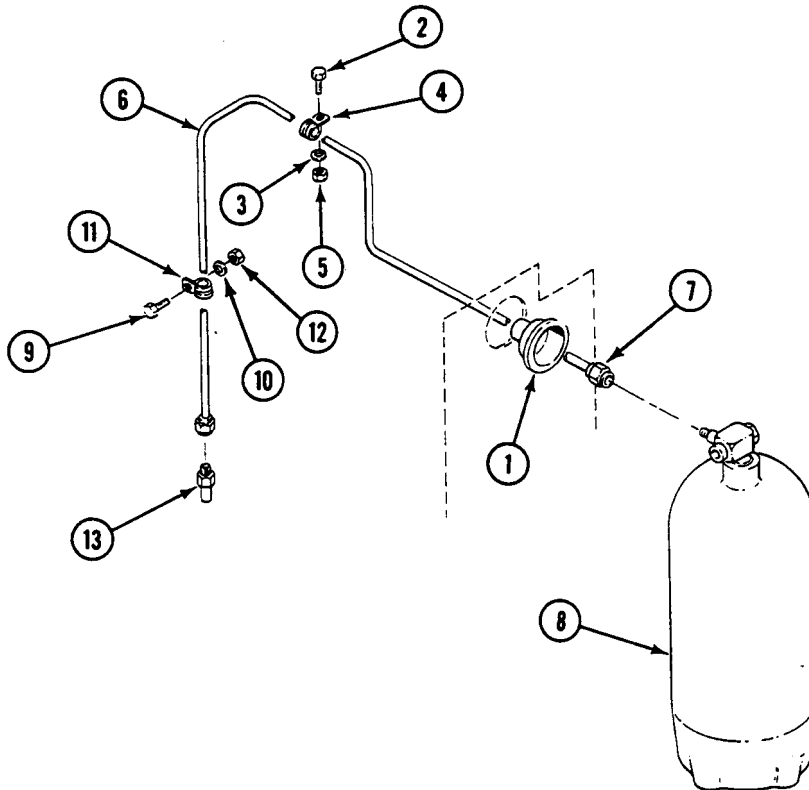
REMOVAL

1. Remove nozzle (1) from tube (2).
2. Remove lock nut (3), washer (4), screw (5), and clamp (6) from carrier bulkhead. Discard lock nut.
3. Loosen nut (7) that secures tube (2) to cylinder (8).
4. Remove lock nut (9), washer (10), screw (11), and clamp (12) from carrier bulkhead. Discard lock nut. Remove tube (2).
5. Remove boot (13) from carrier bulkhead.



INSTALLATION

1. Install boot (1) on carrier bulkhead.
2. Install screw (2), washer (3), clamp (4), and new lock nut (5) on carrier bulkhead. Insert tube (6).
3. Tighten nut (7) that secures tube (6) to cylinder (8).
4. Install screw (9), washer (10), clamp (11), and new lock nut (12) on carrier bulkhead.
5. Install nozzle (13) on tube (6).

**FOLLOW-THROUGH STEPS**

1. Lower center seat (see your -10).
2. Connect both battery negative leads (WP 0292 00).
3. Lower driver's seat (see your -10).

END OF TASK

REPLACE CARBON DIOXIDE (CO2) CYLINDER

0526 00

THIS WORK PACKAGE COVERS:

Removal (page 0526 00-2).
 Installation (page 0526 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Materials/Parts

Cotter pin (4)

Engine stopped (see your -10)

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

Driver's seat raised (see your -10)

Battery negative lead(s) disconnected (WP 0292 00)

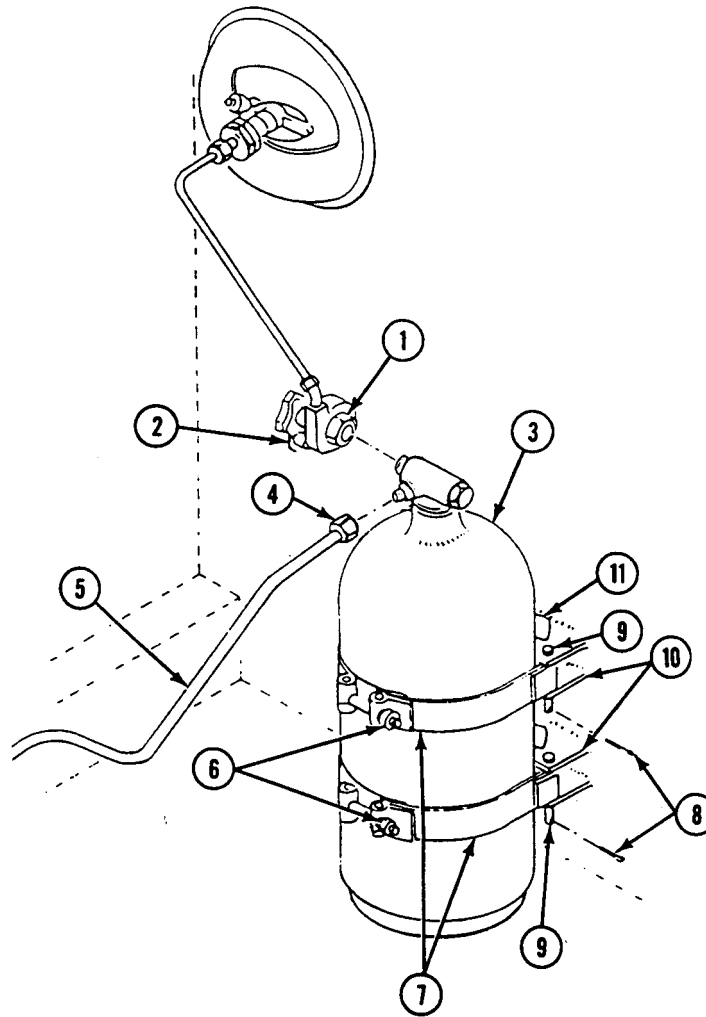
REMOVAL

1. Loosen nut (1) that secures control valve (2) to cylinder (3). Remove control.
2. Loosen nut (4) that secures tube (5) to cylinder (3). Remove tube.

WARNING

You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Discharge cylinder completely before removing it from its mount. Handle cylinders with great care.

3. Loosen two nuts (6) that secure two clamps (7) around cylinder (3). Remove cylinder.
4. Remove four cotter pins (8) and pins (9) that secure two clamps (7) to four brackets (10). Remove clamps. Discard cotter pins.
5. Remove four bumpers (11) from four brackets (10).



INSTALLATION

1. Install four bumpers (1) in four brackets (2).

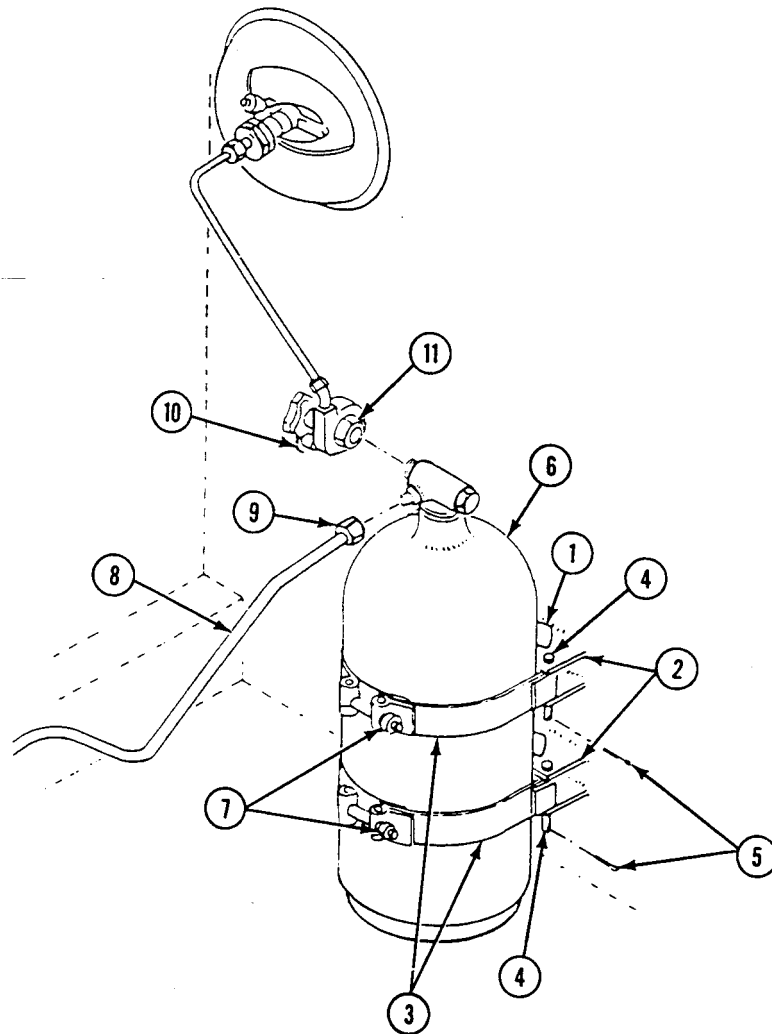
WARNING

You could be injured if cylinder discharges when it is out of its mounting brackets or is dropped. Reset or close control valve prior to installing it on the cylinder. Handle cylinders with great care.

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.

2. Align two clamps (3) with holes in four brackets (2). Secure two clamps with four pins (4) and four new cotter pins (5).
3. Place cylinder (6) in four brackets (2). Secure with two clamps (3) and tighten two nuts (7).
4. Install tube (8) on cylinder (6). Secure with nut (9).
5. Install control valve (10) on cylinder (6). Secure with nut (11).



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Lower driver's seat (see your -10).

END OF TASK

REPLACE FYR-FYTER CONTROL VALVE

0527 00

THIS WORK PACKAGE COVERS:

Removal (page 0527 00-2).
 Installation (page 0527 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Driver's seat raised (see your -10)

Center seat raised (see your -10)

Battery negative lead(s) disconnected (WP 0292 00)

Materials/Parts

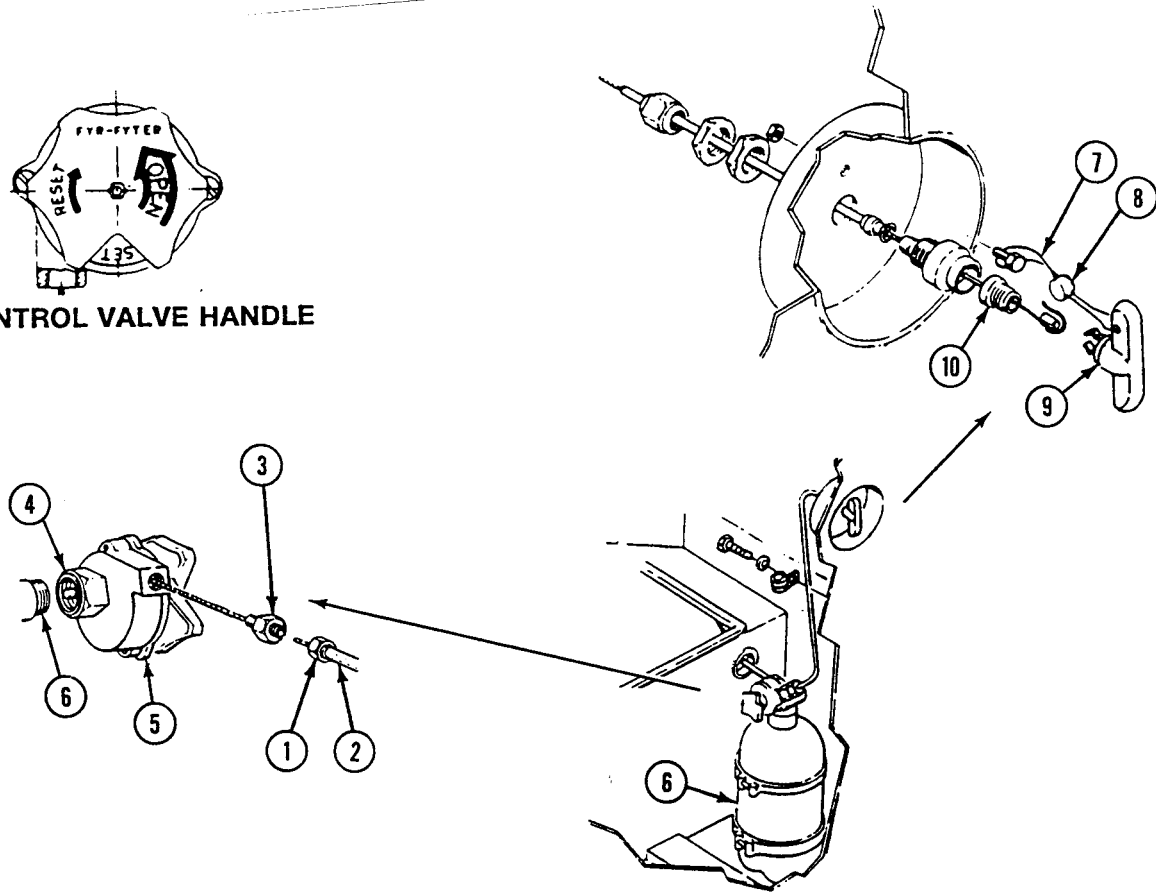
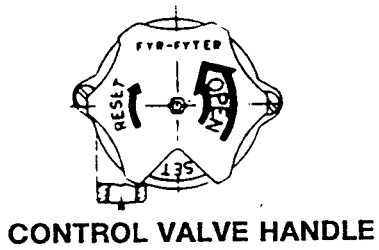
Lock nut
 Lock washer
 Wire seal (.020 copper)

Personnel Required

Unit Mechanic

REMOVAL

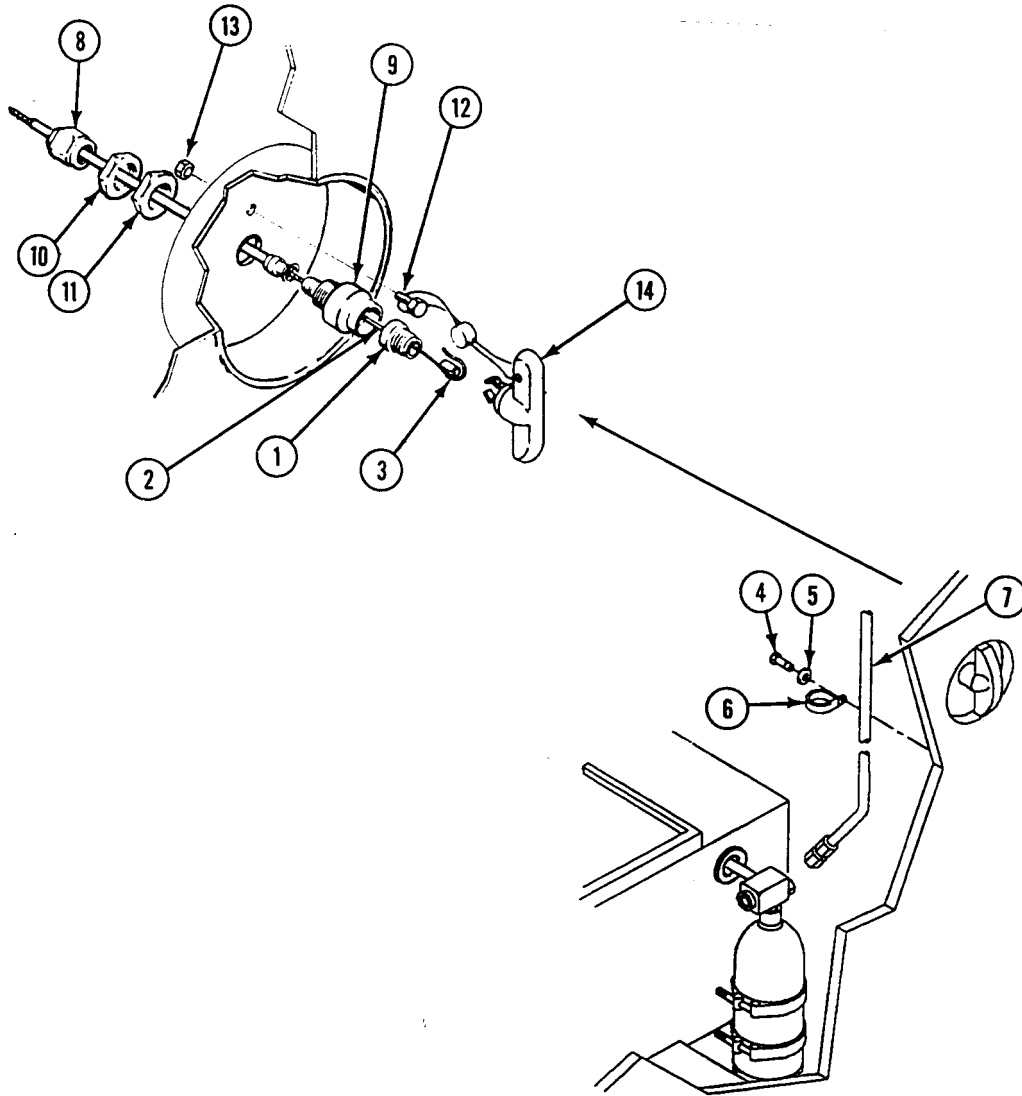
1. Loosen nut (1) that secures tube (2) to adapter (3).
2. Loosen nut (4) that secures control valve (5) to cylinder (6). Remove valve.
3. Cut seal wire (7). Remove wire and seal (8). Discard wire and seal.
4. Pull handle (9) and remove insert (10) from handle.



REPLACE FYR-FYTER CONTROL VALVE — Continued

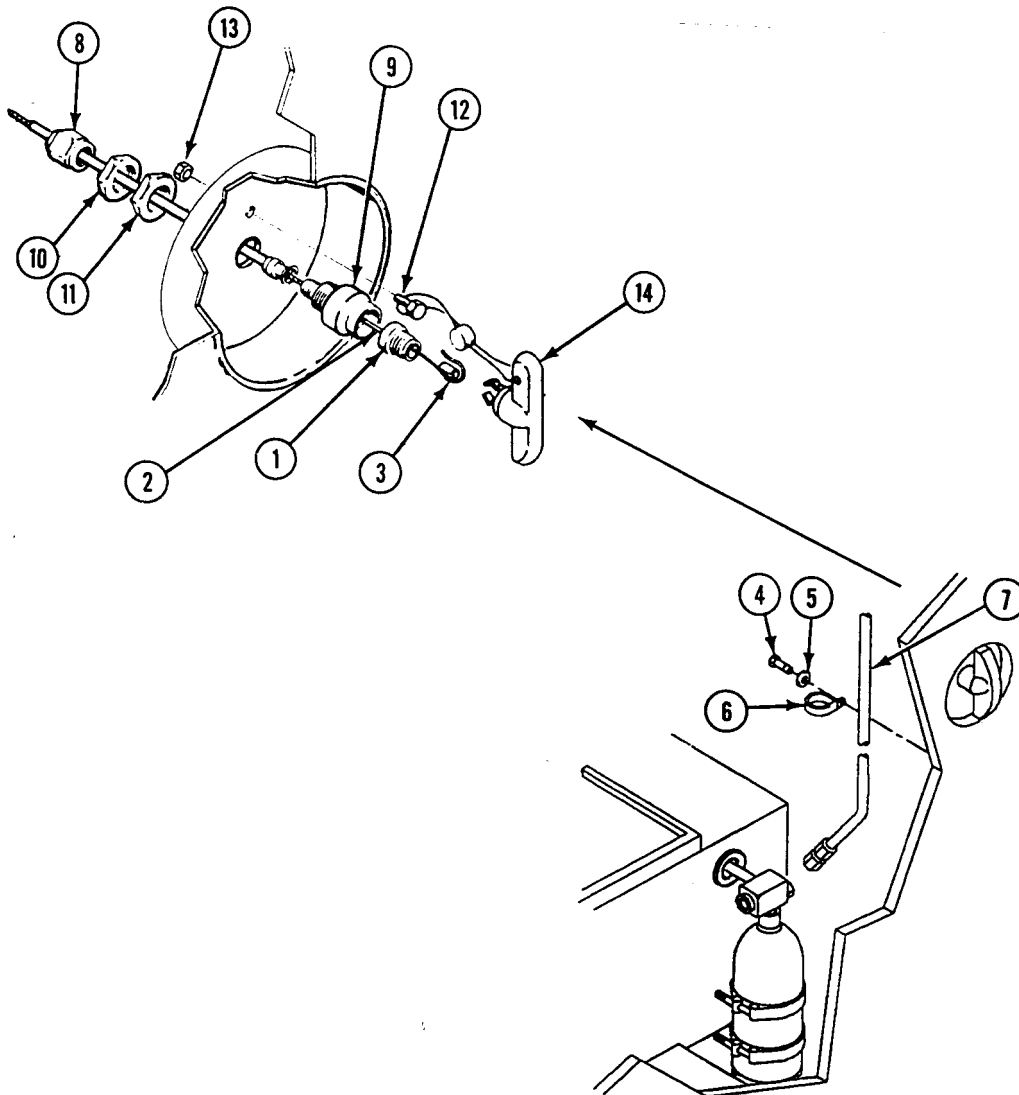
0527 00

5. Slide insert (1) down cable (2) until wedge (3) can be seen. Remove wedge and insert from cable.
6. Remove screw (4), lock washer (5), and clamp (6) securing tube (7) to bulkhead. Discard lock washer. Remove tube.
7. Loosen nut (8) from tube reducer (9).
8. Loosen jam nut (10) and nut (11) that secure tube reducer (9) to bulkhead. Remove tube reducer.
9. Remove screw (12) and lock nut (13) from bulkhead. Discard lock nut.



INSTALLATION

1. Install screw (12) in bulkhead. Secure with new lock nut (13).
2. Install tube reducer (9) through bulkhead. Secure with nut (11) and jam nut (10).
3. Route cable (2) through nut (8), tube (7), and tube reducer (9).
4. Install nut (8) on tube reducer (9) and tighten.
5. Slide insert (1) on cable (2). Bend cable over wedge (3). Install wedge and cable in insert.
6. Install insert (1) in handle (14).



WARNING

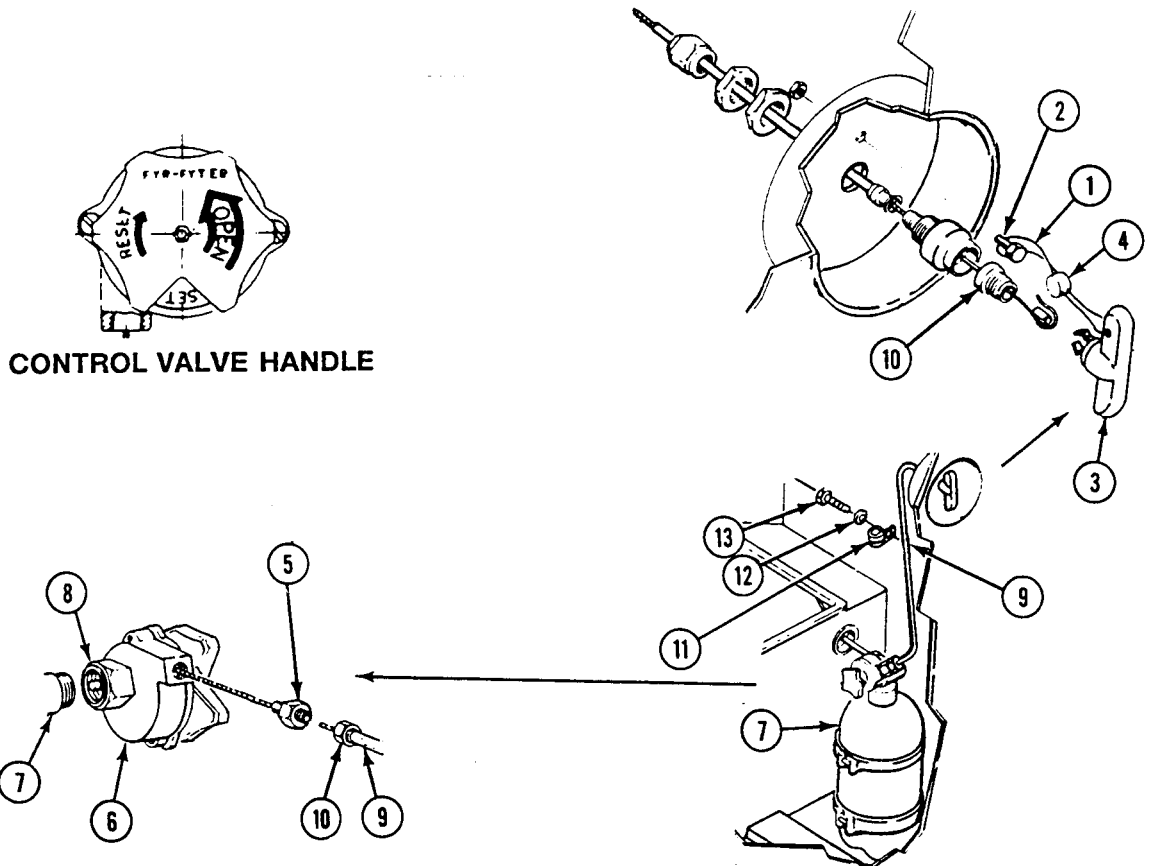


Steel wire cannot be broken in an emergency. Make sure wire is light copper. Failure of fire extinguisher to operate properly may cause injury to personnel or damage equipment.

NOTE

.020 copper safety wire is used to secure outside handle.

7. Install new copper wire seal (1) through screw (2) and handle (3). Make sure wire is tight so it will break when handle is pulled. Crimp seal (4) on wire.
8. Install adapter (5) on control valve (6).
9. Install control valve (6) on cylinder (7). Secure with nut (8).
10. Install tube (9) on adapter (5).
11. Tighten nut (10) to secure tube (9) on adapter (5).
12. Install clamp (11), new lock washer (12), and screw (13) securing tube (9) to bulkhead.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Lower center seat (see your -10).
3. Lower driver's seat (see your -10).

END OF TASK

REPLACE WALTER KIDDE CONTROL VALVE

0528 00

THIS WORK PACKAGE COVERS:

Removal (page 0528 00-2).
 Installation (page 0528 00-4).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Driver's seat raised (see your -10)

Center seat raised (see your -10)

Battery negative lead(s) disconnected (WP 0292 00)

Materials/Parts

Lock nut

Lock washer

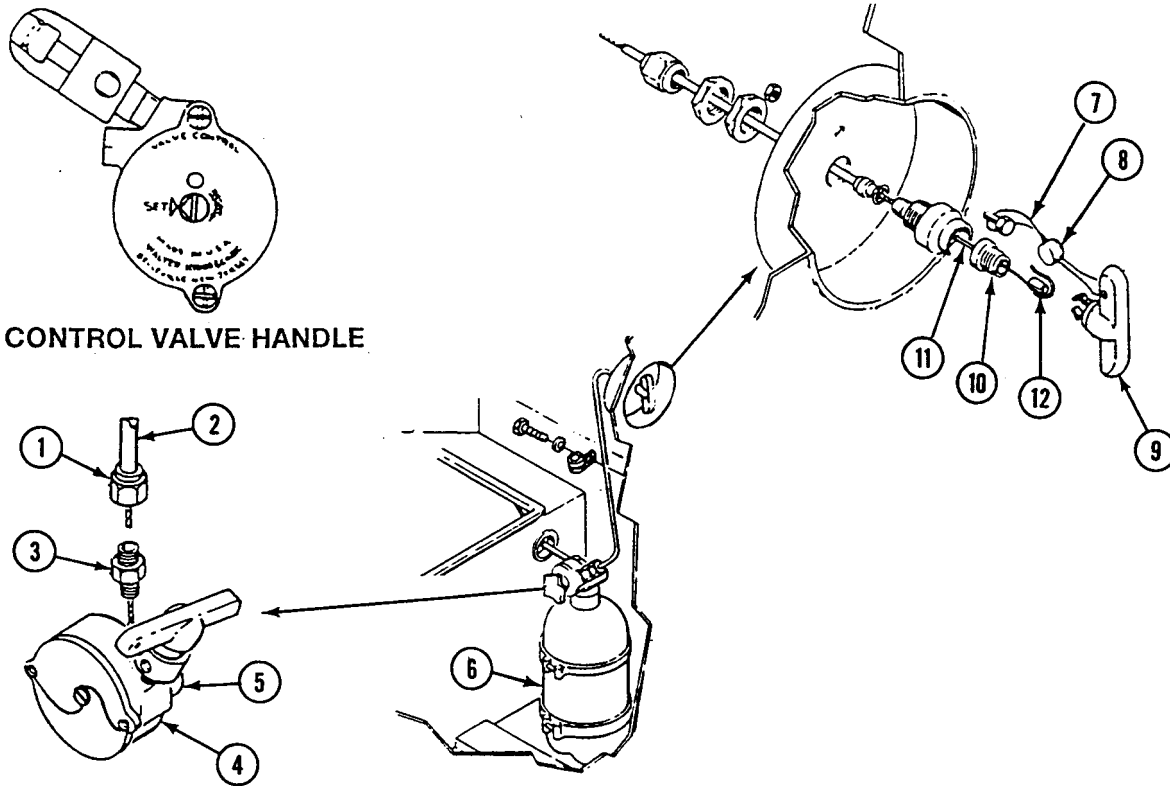
Wire seal (.020 copper)

Personnel Required

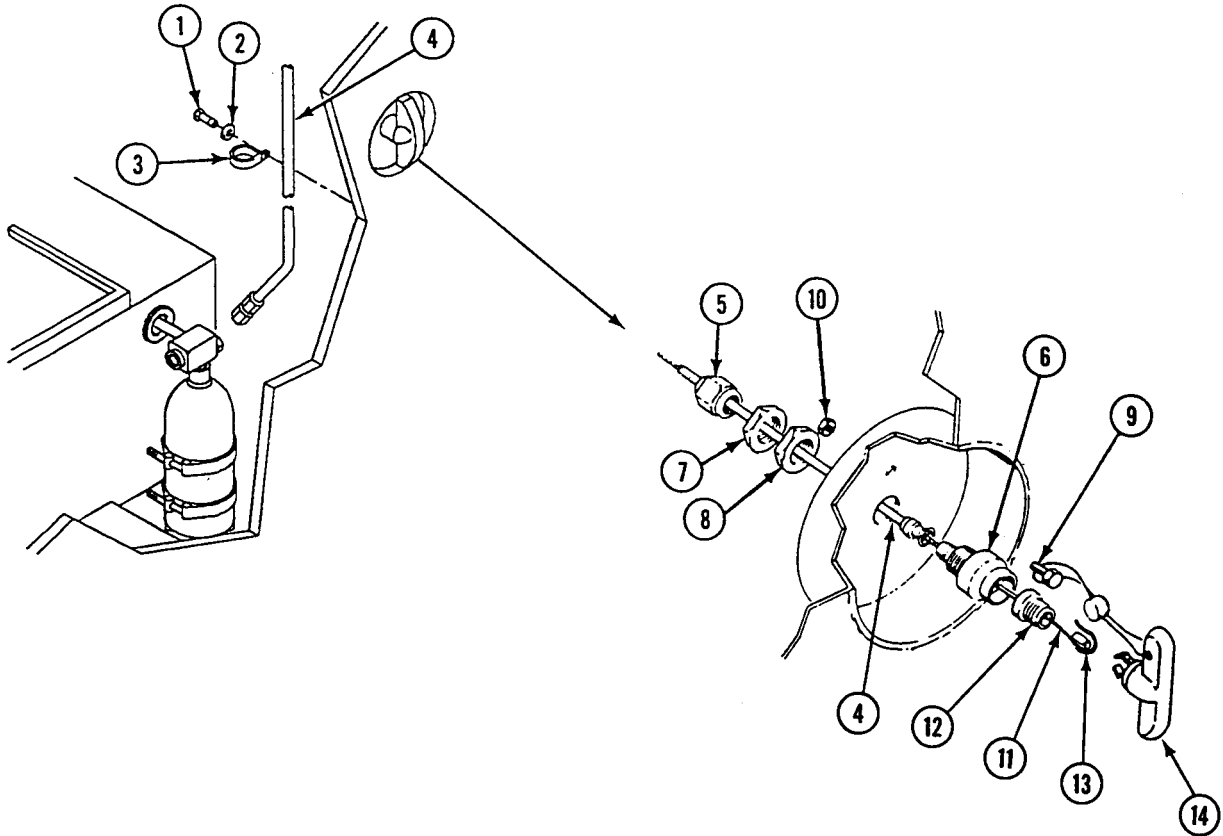
Unit Mechanic

REMOVAL

1. Loosen nut (1) that secures tube (2) to adapter (3).
2. Remove adapter (3) from control valve (4).
3. Loosen nut (5) that secures control valve (4) to cylinder (6). Remove valve.
4. Cut seal wire (7). Remove wire and seal (8). Discard wire and seal.
5. Pull handle (9) and remove insert (10) from handle.
6. Slide insert (10) down cable (11) until wedge (12) can be seen. Remove wedge and insert from cable.

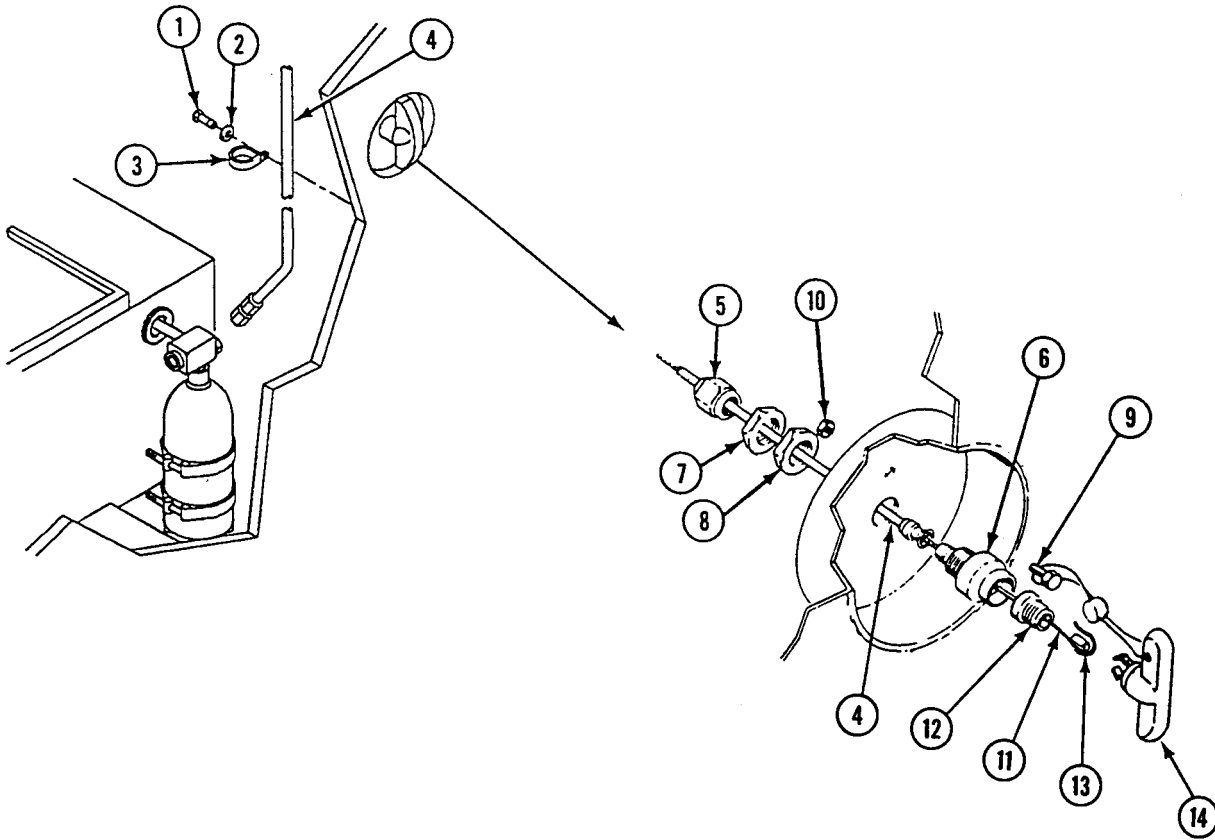


7. Remove screw (1), lock washer (2), and clamp (3) securing tube (4) to bulkhead. Discard lock washer.
8. Loosen nut (5) that secures tube (4) to tube reducer (6). Remove tube.
9. Loosen jam nut (7) and nut (8) that secure tube reducer (6) to bulkhead. Remove tube reducer.
10. Remove screw (9) and lock nut (10) from bulkhead. Discard lock nut.



INSTALLATION

1. Install screw (9) in bulkhead. Secure with new lock nut (10).
2. Install tube reducer (6) through bulkhead. Secure with nut (8) and jam nut (7).
3. Route cable (11) through tube (4), nut (5), and tube reducer (6).
4. Secure cable (11) to tube reducer (6) with nut (5).
5. Slide insert (12) on cable (11). Bend cable over wedge (13) and install wedge and cable in insert.
6. Install insert (12) in handle (14).



WARNING

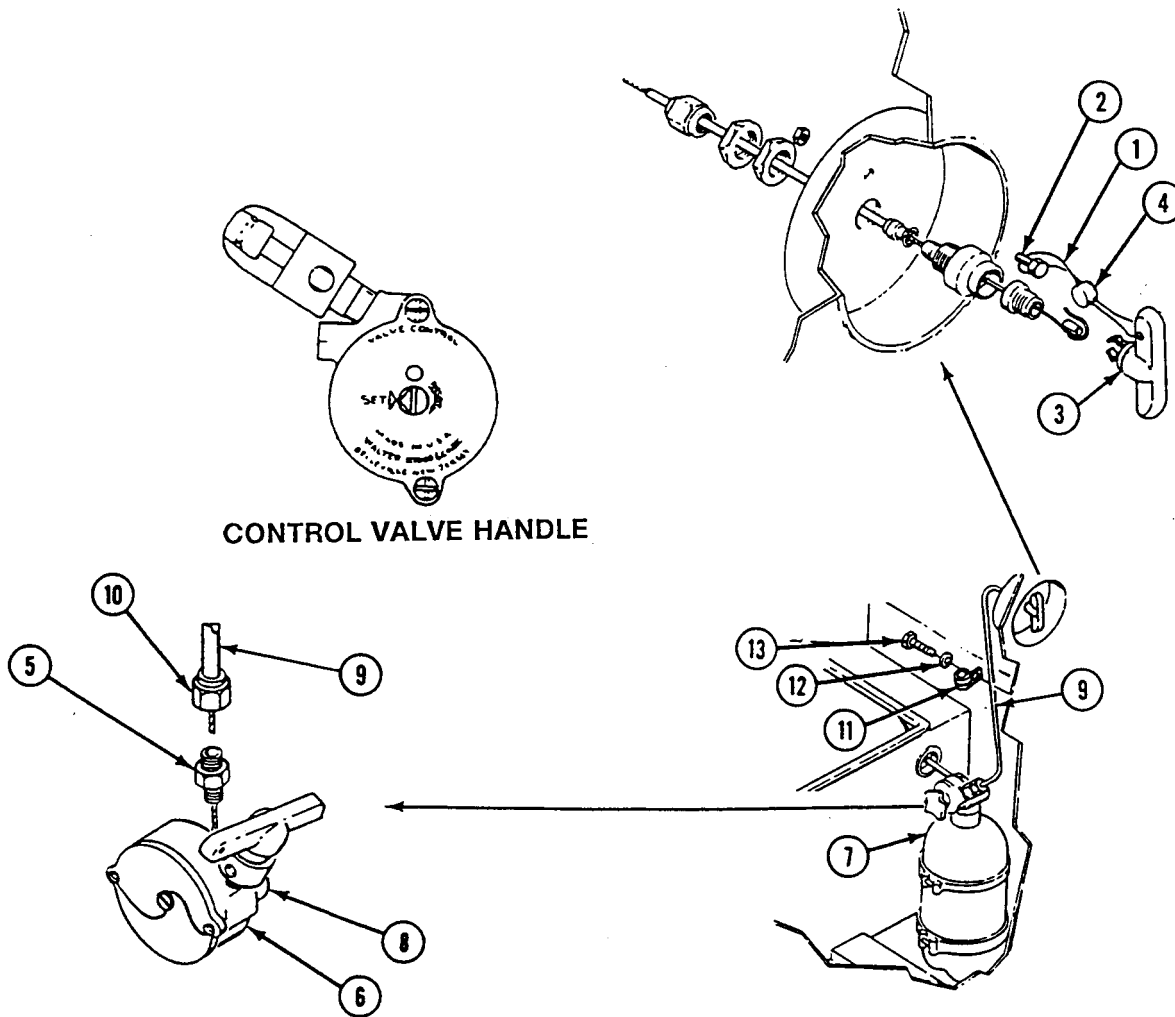
Steel wire cannot be broken in an emergency. Make sure the wire is light copper. Failure of fire extinguisher to operate properly may cause injury to personnel or damage equipment.

NOTE

.020 copper safety wire is used to secure outside handle.

7. Install new copper wire seal (1) through screw (2) and handle (3). Make sure wire is tight so it will break when handle is pulled. Crimp seal (4) on wire.
8. Install adapter (5) in control valve (6).
9. Install control valve (6) on cylinder (7). Secure with nut (8).
10. Install tube (9) on adapter (5). Secure with nut (10).

11. Install clamp (11), new lock washer (12), and screw (13) securing tube (9) to bulkhead.



FOLLOW-THROUGH STEPS

1. Connect battery negative lead(s) (WP 0292 00).
2. Lower center seat (see your -10).
3. Lower driver's seat (see your -10).

END OF TASK

**REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER PANEL ASSEMBLY
(M548A3)**

0529 00

THIS WORK PACKAGE COVERS:

- Removal (page 0529 00-2).
- Disassembly (page 0529 00-3).
- Assembly (page 0529 00-3).
- Installation (page 0529 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Cleaning compound (WP 0541 00, Item 9)

Decal

Lock washer (10)

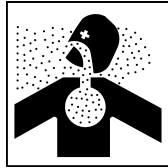
Rubber bumper (4)

Equipment Condition

Engine stopped (see your -10)

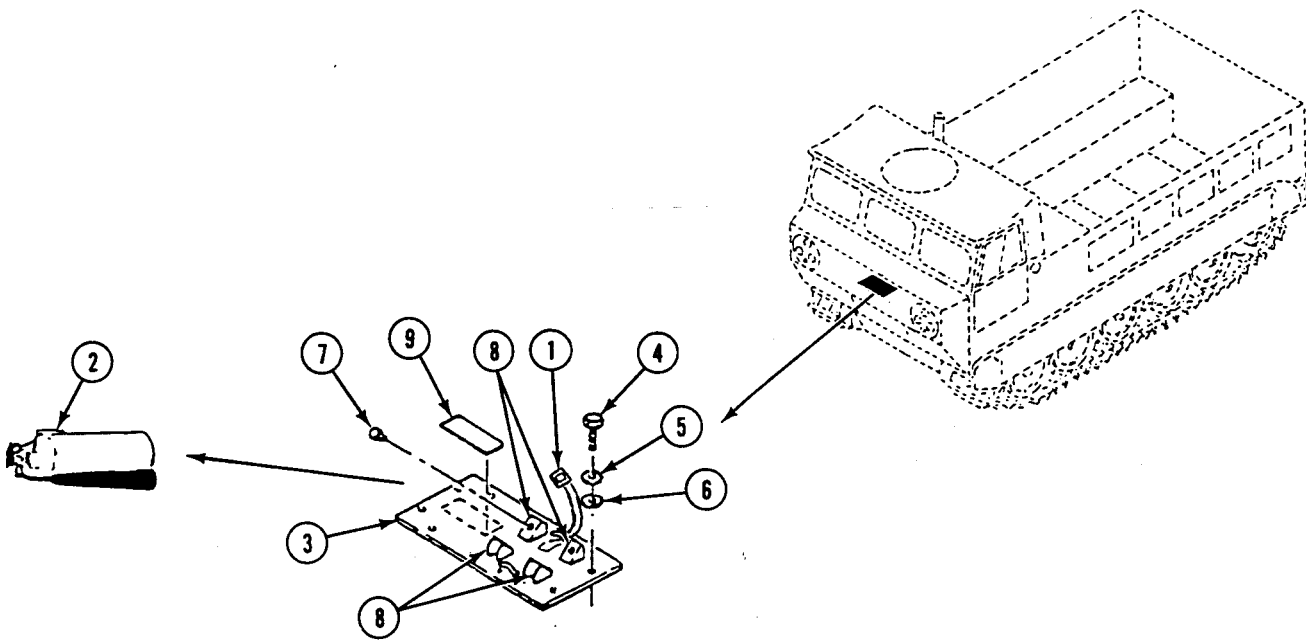
Carrier blocked (see your -10)

REMOVAL

WARNING

Portable and fixed fire extinguisher cylinders are under pressure and can discharge and injure you. Handle cylinders with care.

1. Remove web strap (1) and portable fire extinguisher (2) from panel assembly (3).
2. Remove 10 screws (4), washers (5), and lock washers (6) securing panel assembly (3) to carrier. Discard lock washers.
3. Remove panel assembly (3) from carrier.

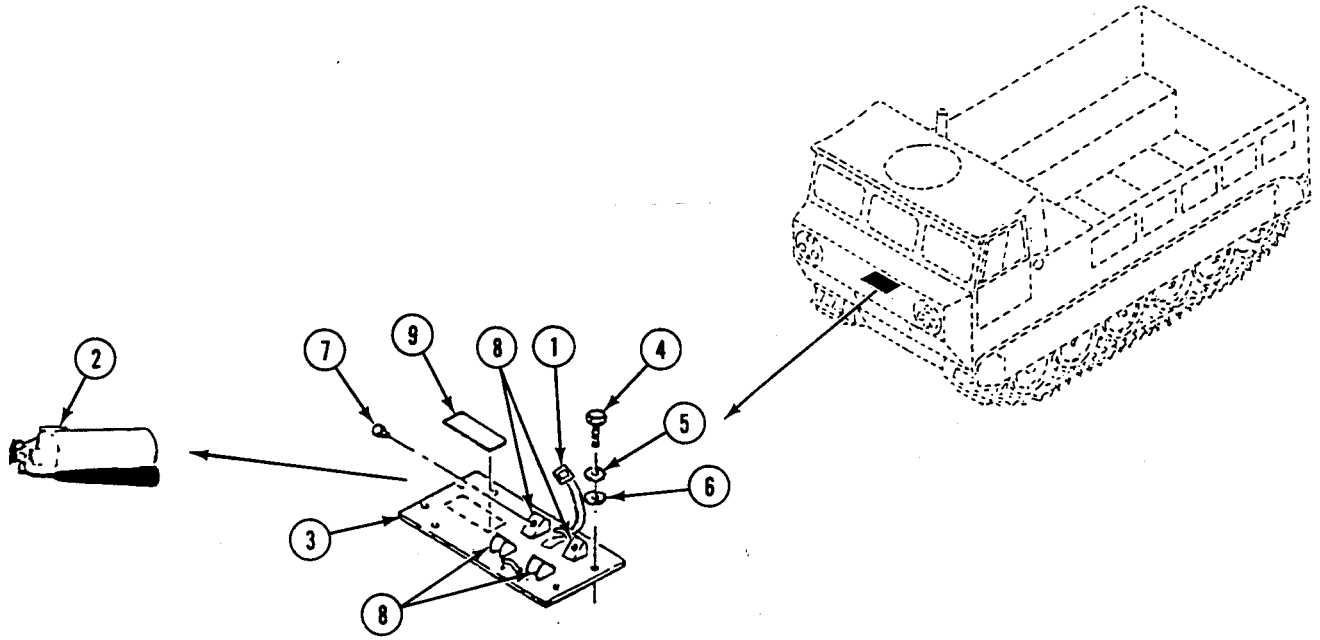


**REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER PANEL ASSEMBLY (M548A3) —
Continued**

0529 00

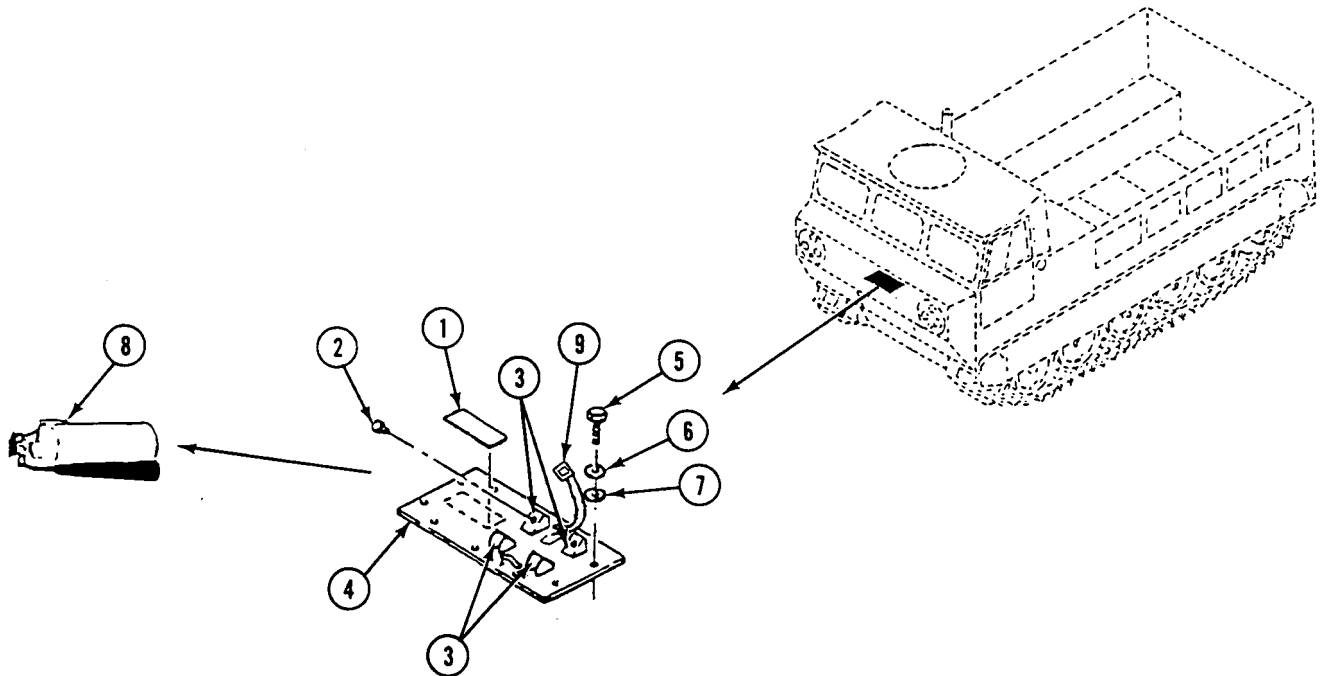
DISASSEMBLY

1. Remove four rubber bumpers (7) from four brackets (8) on panel assembly (3). Discard rubber bumpers.
2. Inspect decal (9) on panel assembly (3). Replace decal if necessary.



ASSEMBLY

1. Clean mounting surface of new decal (1) if replaced. Use cleaning compound.
2. Install four new rubber bumpers (2) in four brackets (3) on panel assembly (4).

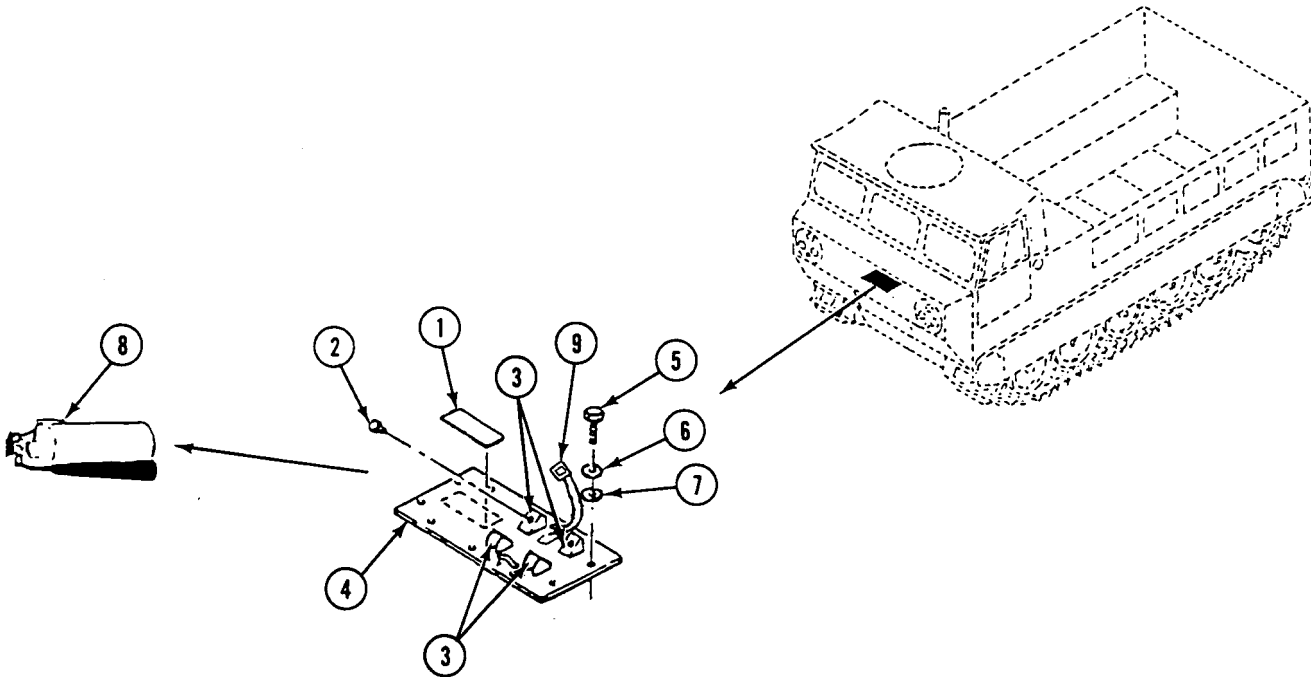


REPLACE/REPAIR PORTABLE FIRE EXTINGUISHER PANEL ASSEMBLY (M548A3) —
Continued

0529 00

INSTALLATION

1. Install panel assembly (4) in carrier. Secure panel to carrier with 10 new lock washers (5), washers (6), and screws (7).
2. Secure portable fire extinguisher (8) on panel assembly (4) with web strap (9).

**END OF TASK**

CHAPTER 25

UNIT MAINTENANCE INSTRUCTIONS
FOR NBC SYSTEM (M548A3)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPLACE NBC CIRCUIT BREAKER AND RELAY (M548A3).....	.0530 00
REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO MANIFOLD (M548A3).....	.0531 00
REPLACE NBC M3 HEATER AND ADAPTER (M548A3).....	.0532 00
REPAIR NBC MANIFOLD (M548A3).....	.0533 00
REMOVE/INSTALL NBC M1A1-19 PRECLEANER ASSEMBLY AND FRAME (M548A3).....	.0534 00
REPLACE NBC M19 PARTICULATE FILTER UNIT (M548A3).....	.0535 00
REPLACE NBC M18 FILTER (M548A3).....	.0536 00
REPLACE NBC FILTERED AIR HOSE (M548A3).....	.0537 00
REPLACE NBC ORIFICE CONNECTOR ASSEMBLY AND BRACKET (M548A3).....	.0538 00

REPLACE NBC CIRCUIT BREAKER AND RELAY (M548A3)

0530 00

THIS WORK PACKAGE COVERS:

- Removal (page 0530 00-1).
- Test and Inspection (page 0530 00-2).
- Installation (page 0530 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0541 00, Item 57)
- Multimeter (WP 0541 00, Item 29)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Driver's seat raised (see your -10)
- Both battery negative leads disconnected (WP 0292 00)

Materials/Parts

- Lock washer (2)

Personnel Required

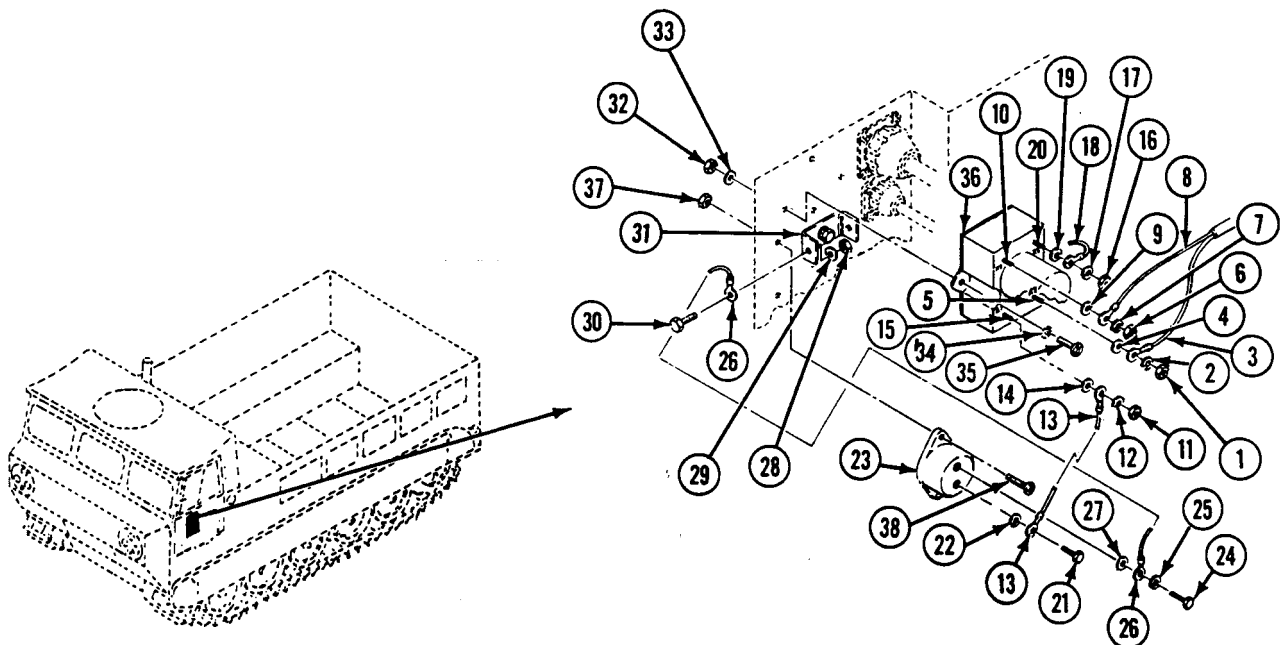
Unit Mechanic

REMOVAL

NOTE

Mark all parts for easy identification before removing.

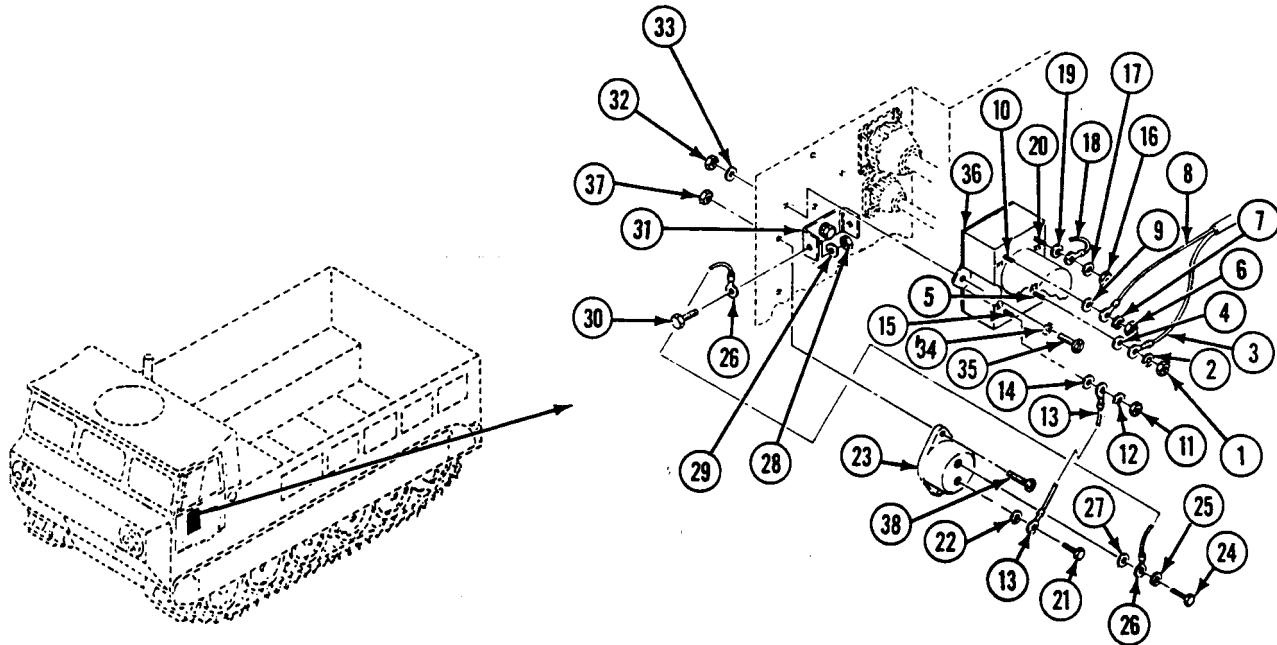
1. Remove nut (1), lock washer (2), circuit 135G lead (3), and washer (4) from relay terminal A2 (5).
2. Remove nut (6), lock washer (7), circuit 537 lead (8), and washer (9) from relay terminal X1 (10).
3. Remove nut (11), lock washer (12), one end of jumper (13), and washer (14) from relay terminal A1 (15).
4. Remove nut (16), lock washer (17), ground lead (18), and washer (19) from relay terminal X2 (20).
5. Remove screw (21), jumper (13), and washer (22) from circuit breaker (23).



REPLACE NBC CIRCUIT BREAKER AND RELAY (M548A3) — Continued

0530 00

6. Remove screw (24), lock washer (25), one end of jumper (26), and washer (27) from circuit breaker (23).
7. Remove nut (28), washer (29), jumper (26), and screw (30) from bus bar (31).
8. Remove two nuts (32), lock washers (33), washers (34), screws (35), ground lead (18), and relay (36). Discard lock washers.
9. Remove two nuts (37), screws (38), and circuit breaker (23) from panel.

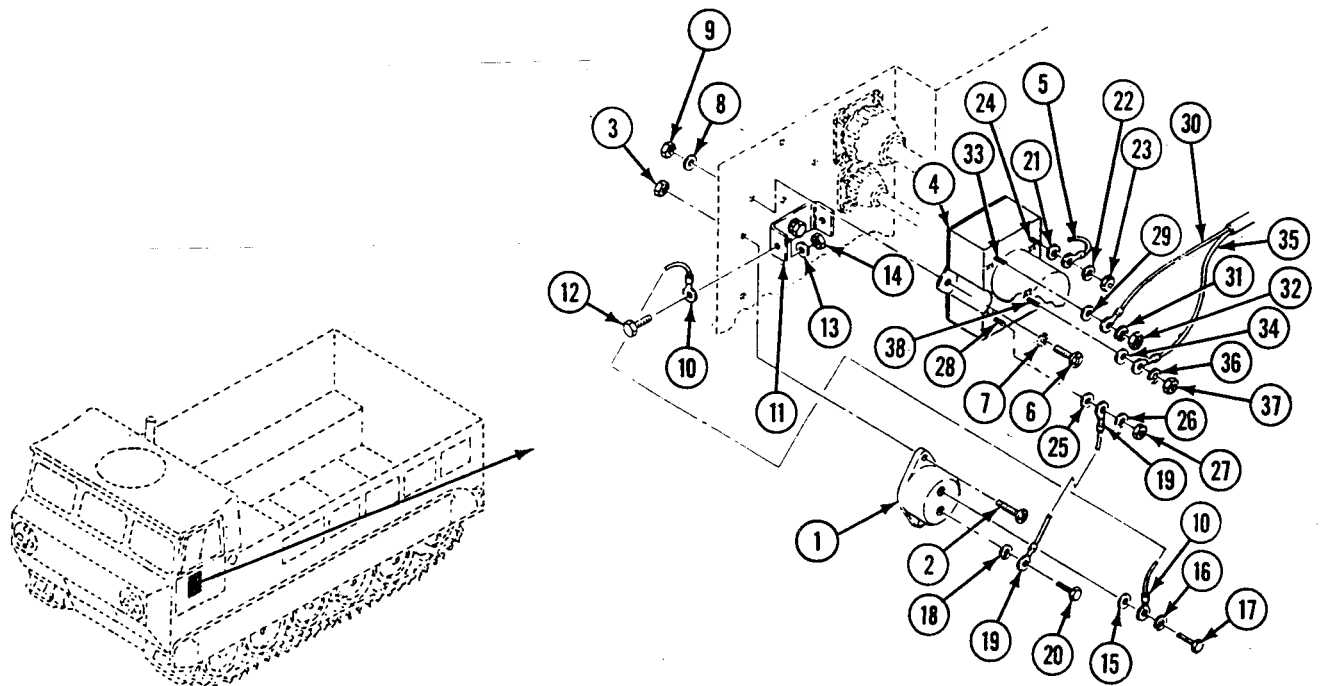


TEST AND INSPECTION

1. Check resistance through circuit breaker. Reading should be 0 ohms. If reading is infinity, replace defective circuit breaker.
2. Check resistance through relay. Place multimeter probes on terminals X1 and X2. Reading should be approximately 0 ohms. If reading is infinity, replace relay. Place multimeter probes on terminals A1 and A2. Reading should be infinity. If reading is 0 ohms, replace relay.

INSTALLATION

1. Install circuit breaker (1) with two screws (2) and nuts (3).
2. Install relay (4) and one end of ground lead (5) on panel with two screws (6), washers (7), new lock washers (8), and nuts (9).
3. Install one end of jumper (10) on bus bar (11) with screw (12), washer (13), and nut (14).
4. Install washer (15), jumper (10), washer (16), and screw (17) on circuit breaker (1).
5. Install washer (18), one end of jumper (19), and screw (20) on circuit breaker (1).
6. Install washer (21), ground lead (5), washer (22), and nut (23) on relay terminal X2 (24).
7. Install washer (25), jumper (19), washer (26), and nut (27) on relay terminal A1 (28).
8. Install washer (29), circuit 537 lead (30), washer (31), and nut (32) on relay terminal X1 (33).
9. Install washer (34), circuit 135G lead (35), washer (36), and nut (37) on relay terminal A2 (38).



FOLLOW-THROUGH STEPS

1. Connect both battery negative leads (WP 0292 00).
2. Lower driver's seat (see your -10).

END OF TASK

**REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO
MANIFOLD (M548A3)**

0531 00

THIS WORK PACKAGE COVERS:

Removal (page 0531 00-2).
Installation (page 0531 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Materials/Parts

Lock washer (5)

Personnel Required

Unit Mechanic

References

See your -10

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Both battery negative leads disconnected (WP 0292 00)

Driver's side front left battery removed (WP 0293 00)

NBC manifold removed (WP 0533 00)

M1A1-19 Precleaner assembly and frame removed
(WP 0534 00)

Driver's left side floor plate removed (WP 0395 00)

Steering guard removed (WP 0365 00)

Instrument panel partially removed (WP 0256 00)

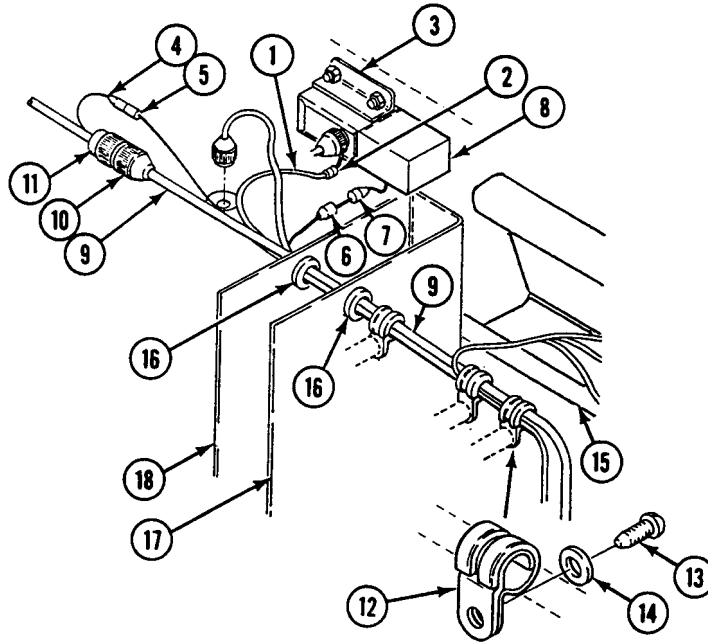
**REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO MANIFOLD
(M548A3) — Continued**

0531 00

REMOVAL**NOTE**

Mark all parts for easy identification before removing.

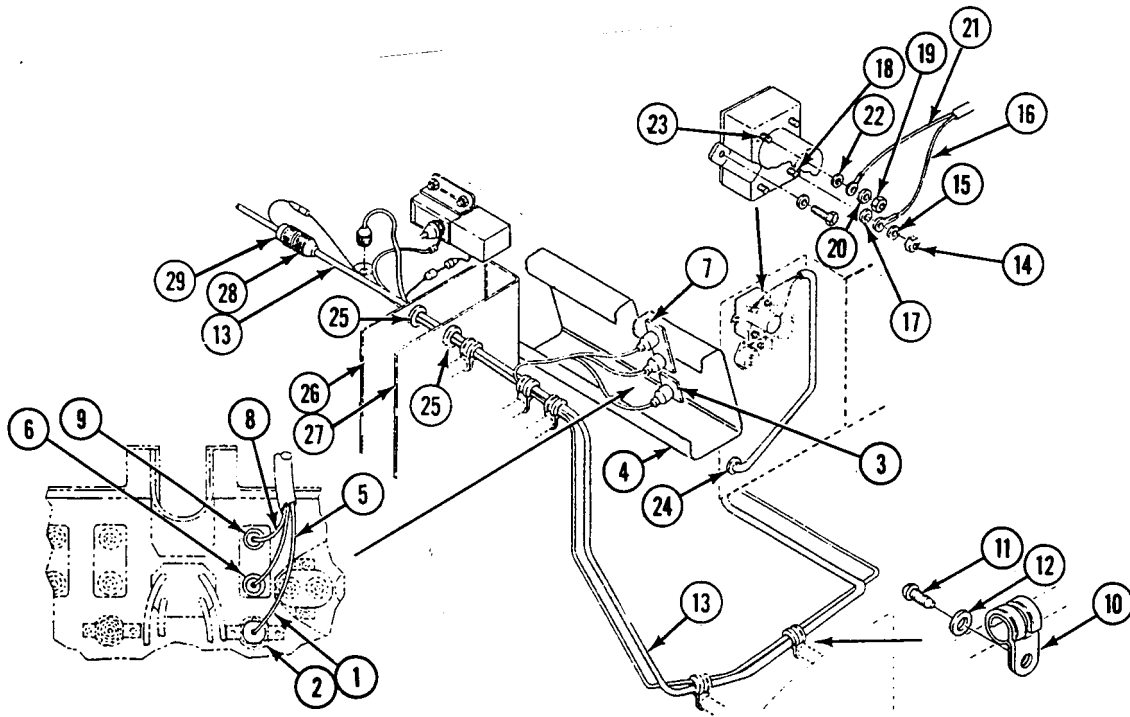
1. Disconnect circuit 400D lead (1) from lead (2) on vehicle compartment heater control box (3).
2. Disconnect circuit 400C lead (4) from circuit 400 lead (5).
3. Disconnect circuit 400A lead (6) from circuit 400 lead (7) on coolant heater control box (8), if installed.
4. Disconnect NBC wiring harness (9) at connector (10) to M3 heater harness connector (11).
5. Remove three clamps (12), screws (13), and lock washers (14) securing NBC wiring harness (9) and existing harness to weld nuts behind instrument panel (15). Discard lock washers.
6. Remove NBC wiring harness (9) with grommets (16) from stiffener (17) and stiffener (18).



**REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO MANIFOLD
(M548A3) — Continued**

0531 00

7. Disconnect 135H lead (1) from terminal (2) on air filter indicator (3) on back side of instrument panel (4).
8. Disconnect circuit 537 lead (5) from bottom terminal (6) on air filter switch (7) on back side of instrument panel (4).
9. Disconnect circuit 400B lead (8) from top terminal (9) on air filter switch (7) on back side of instrument panel (4).
10. Remove two clamps (10), screws (11), lock washers (12), and NBC wiring harness (13) and existing harness from weld nuts on inside of driver's left side floor plate. Discard lock washers.
11. Remove nut (14), lock washer (15), circuit 135G lead (16), and washer (17) from relay terminal A2 (18).
12. Remove nut (19), lock washer (20), circuit 537 lead (21), and washer (22) from relay terminal X1 (23).
13. Remove NBC wiring harness (13) with grommet (24) from battery compartment.
14. Remove NBC wiring harness (13) from carrier.



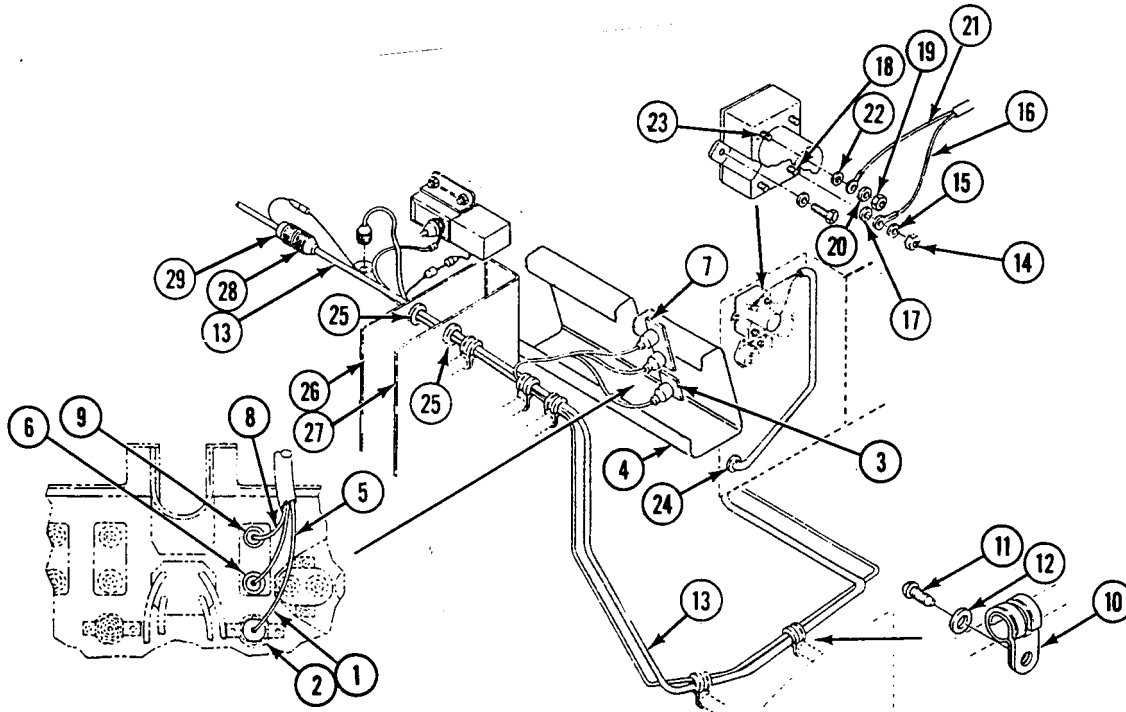
REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO MANIFOLD
(M548A3) — Continued

0531 00

INSTALLATION**NOTE**

Hardware is supplied with new relay and circuit breaker only and can not be ordered through TM 9-2350-247-24P.

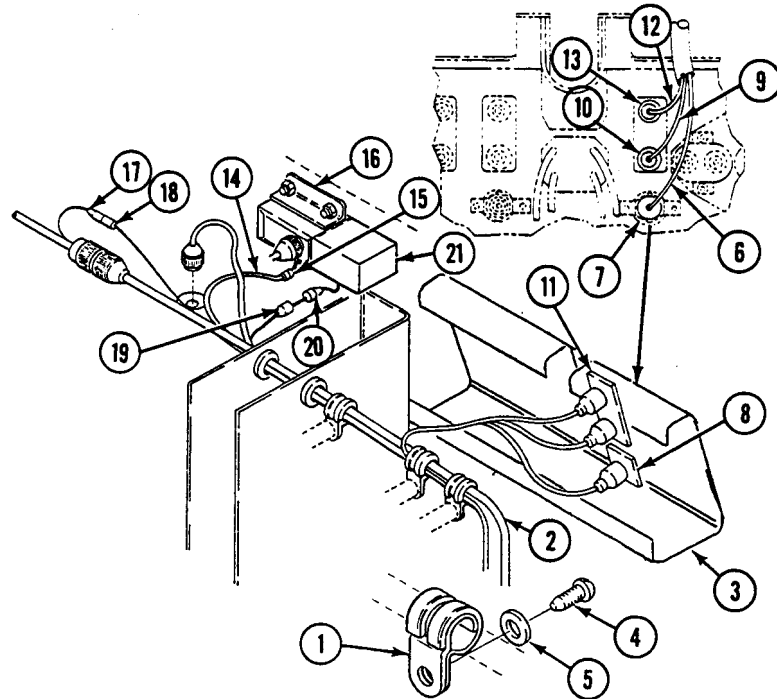
1. Place grommet (24) on NBC wiring harness (13) and route harness through hole in battery box compartment.
2. Route NBC wiring harness (13) under driver's left side floor plate and up behind instrument panel (4).
3. Place two grommets (25) on NBC wiring harness (13) and route harness through holes in stiffener (26) and stiffener (27). Make sure grommets are securely in holes to avoid damaging the harness from metal contact and vibration.
4. Connect NBC wiring harness connector (28) to M3 heater wiring harness connector (29).
5. Install washer (22), circuit 537 lead (21), lock washer (18), and nut (17) on relay terminal X1 (23).
6. Install washer (17), circuit 135G lead (16), lock washer (15), and nut (14) on relay terminal A2 (18).
7. Install two clamps (10) on existing harness and NBC wiring harness (13). Secure clamps on weld nuts under driver's left side floor plate with two screws (11) and new lock washers (12).



REPLACE NBC WIRING HARNESS FROM BATTERY COMPARTMENT TO MANIFOLD (M548A3) — Continued

0531 00

8. Install three clamps (1) on existing harness and NBC wiring harness (2) behind instrument panel (3). Secure clamps on weld nuts with three screws (4) and new lock washers (5).
9. Connect circuit 135H lead (6) to terminal (7) on air filter indicator (8) on back side of instrument panel (3).
10. Connect circuit 537 lead (9) to bottom terminal (10) on air filter switch (11) on back side of instrument panel (3).
11. Connect circuit 400B lead (12) to top terminal (13) on air filter switch (11) on back side of instrument panel (3).
12. Connect circuit 400D lead (14) to lead (15) on vehicle compartment heater control box (16).
13. Connect circuit 400C lead (17) to circuit 400 lead (18).
14. If installed, connect circuit 400A lead (19) to circuit 400 lead (20) on coolant heater control box (21).

**FOLLOW-THROUGH STEPS**

1. Install instrument panel (WP 0256 00).
2. Install steering guard (WP 0365 00).
3. Install driver's left side floor plate (WP 0395 00).
4. Install M1A1-19 precleaner assembly and frame (WP 0534 00).
5. Install NBC manifold (WP 0533 00).
6. Install driver's side left front battery (WP 0293 00).
7. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE NBC M3 HEATER AND ADAPTER (M548A3)

0532 00

THIS WORK PACKAGE COVERS:

Removal (page 0532 00-2).
Installation (page 0532 00-3).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

Materials/Parts

Lock nut (4)
Lock washer (4)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)

REMOVAL

WARNING

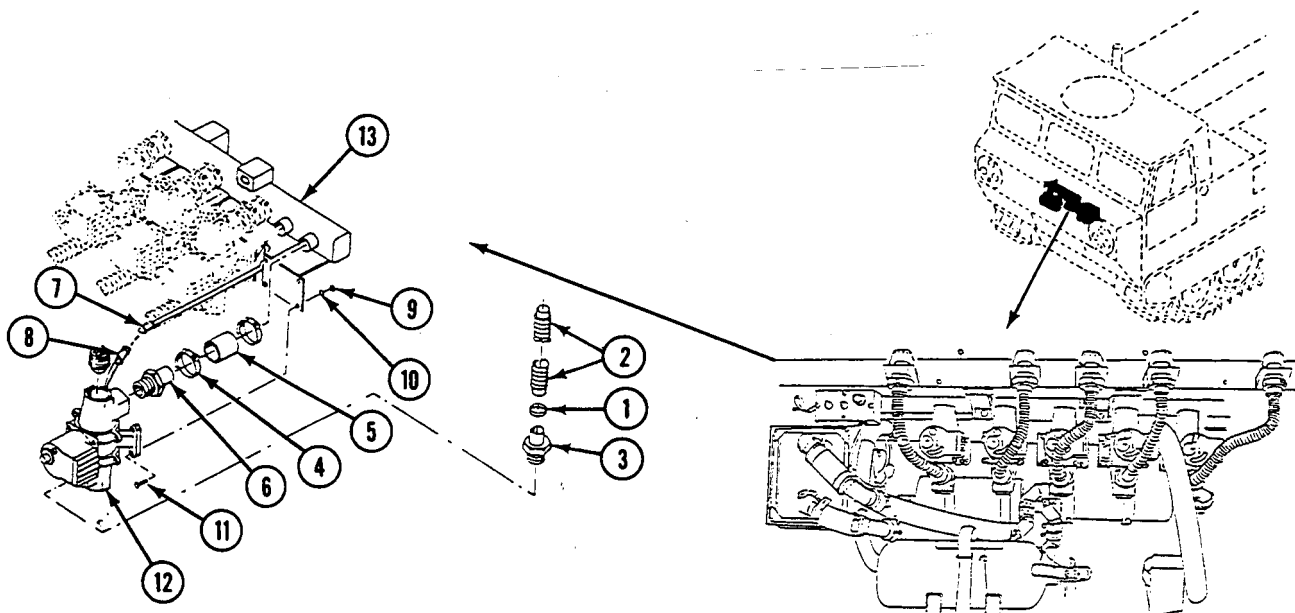


NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

NOTE

All five M3 heaters and adapters are removed the same way. If your carrier was converted from a M730A2, it may have five heaters, otherwise the M548A3 will have only four heaters.

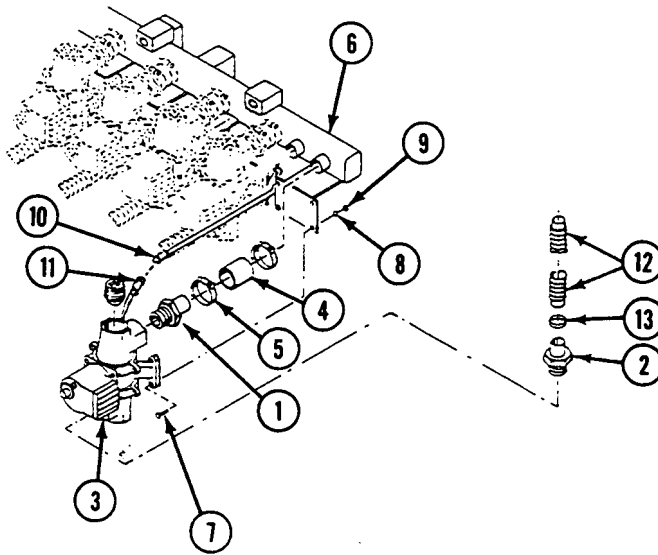
1. Remove clamp (1) and hose (2) from outlet adapter (3).
2. Remove clamp (4) and hose (5) from inlet adapter (6).
3. Disconnect electrical lead (7) of wiring harness from M3 heater lead (8).
4. Remove four lock nuts (9), lock washers (10), screws (11), and M3 heater (12) from manifold (13). Discard lock nuts and lock washers.
5. Remove inlet adapter (6) and outlet adapter (3) from M3 heater (12).



INSTALLATION**NOTE**

All five M3 heaters and adapters are installed the same way. If your carrier was converted from a M730A2, it may have five heaters, otherwise the M548A3 will have only four heaters.

1. Install inlet adapter (1) and outlet adapter (2) on M3 heater (3).
2. Install hose (4) on inlet adapter (1). Secure with clamp (5).
3. Install M3 heater (3) on manifold (6). Secure with four screws (7), new lock washers (8), and new lock nuts (9).
4. Connect electrical lead (10) of wiring harness to M3 heater lead (11).
5. Install hose (12) on outlet adapter (2). Secure with clamp (13).

**FOLLOW-THROUGH STEPS**

1. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPAIR NBC MANIFOLD (M548A3)

0533 00

THIS WORK PACKAGE COVERS:

- Removal (page 0533 00-2).
- Disassembly (page 0533 00-3).
- Inspection (page 0533 00-4).
- Assembly (page 0533 00-5).
- Installation (page 0533 00-6).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic
Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

See your -10

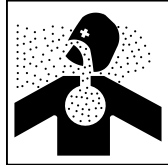
Materials/Parts

- Cotter pin (8)
- Lock nut (20)
- Lock washer (2)
- Lock washer (2)
- Lock washer (20)

Equipment Condition

- Engine stopped (see your -10)
 - Carrier blocked (see your -10)
 - Both battery negative leads disconnected (WP 0292 00)
 - Portable fire extinguisher removed (see your -10)
-

REMOVAL

WARNING

NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

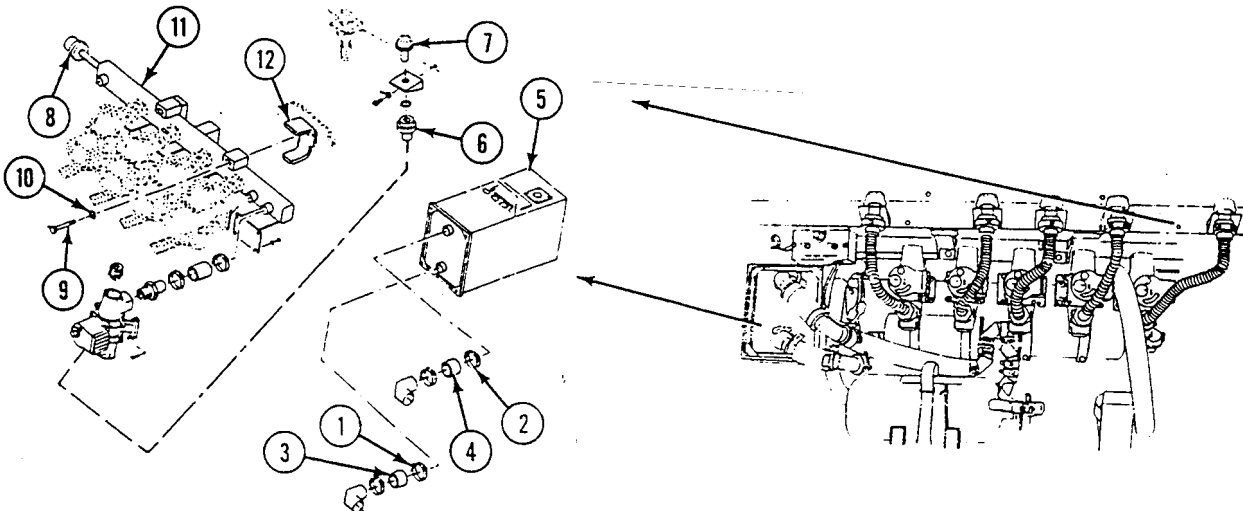
NOTE

Remove oil can before removing manifold (see your -10).

NOTE

Only M548A3 carriers converted from M730A2 will have five NBC stations.

1. Remove clamp (1) and clamp (2) securing hose (3) and hose (4) to outlets on M1A1-19 precleaner (5).
2. Disconnect five quick disconnect couplings (6) from five orifice connector assemblies (7).
3. Disconnect circuit 135 lead (8) from main NBC wiring harness.
4. Remove two screws (9) and lock washers (10) securing manifold (11) to mounting brackets (12). Remove manifold from carrier. Have helper assist. Discard lock washers.



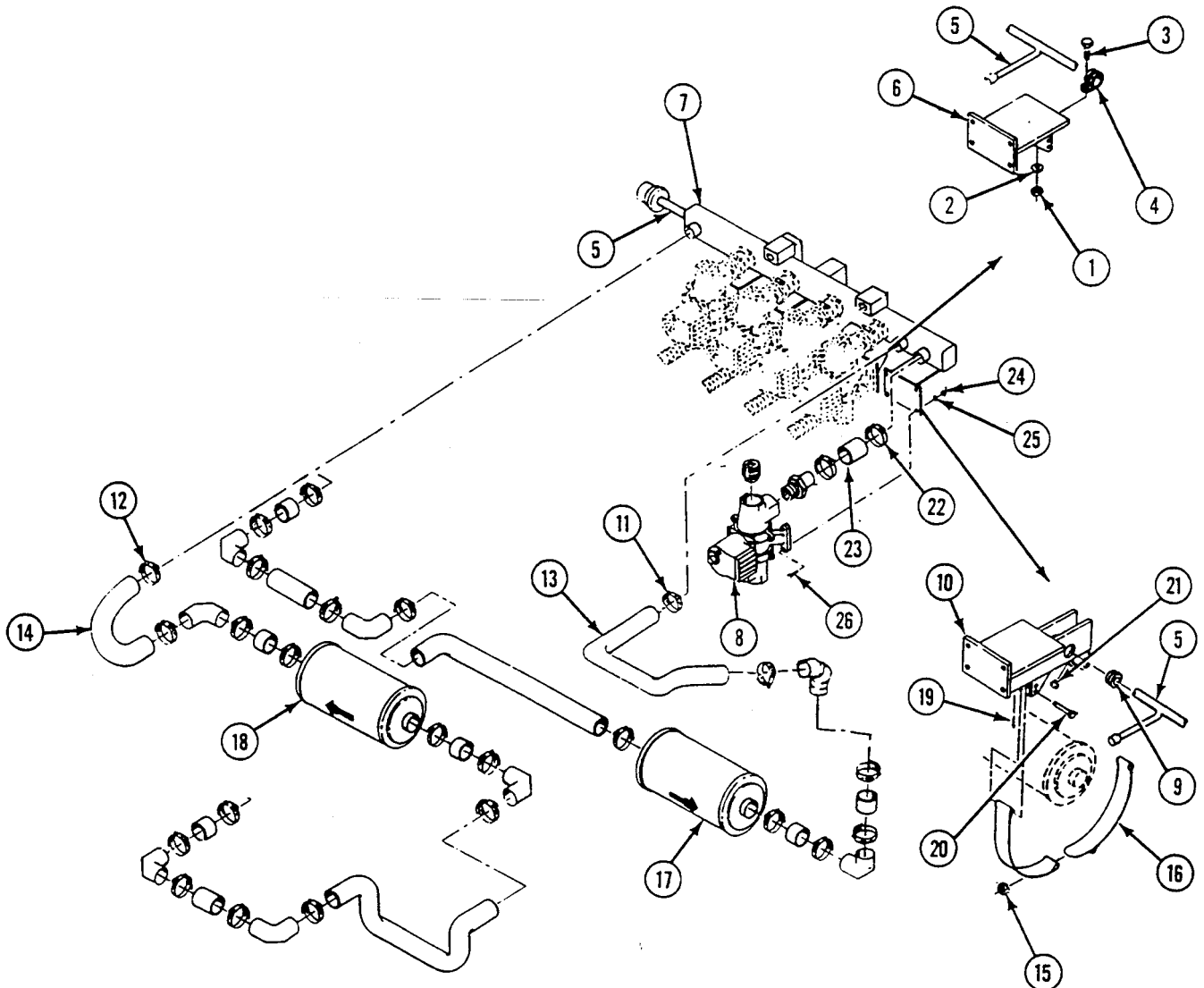
DISASSEMBLY

1. Remove two nuts (1), lock washers (2), screws (3) and clamps (4) securing NBC wiring harness (5) to two short heater mounts (6) on manifold (7). Discard lock washers.

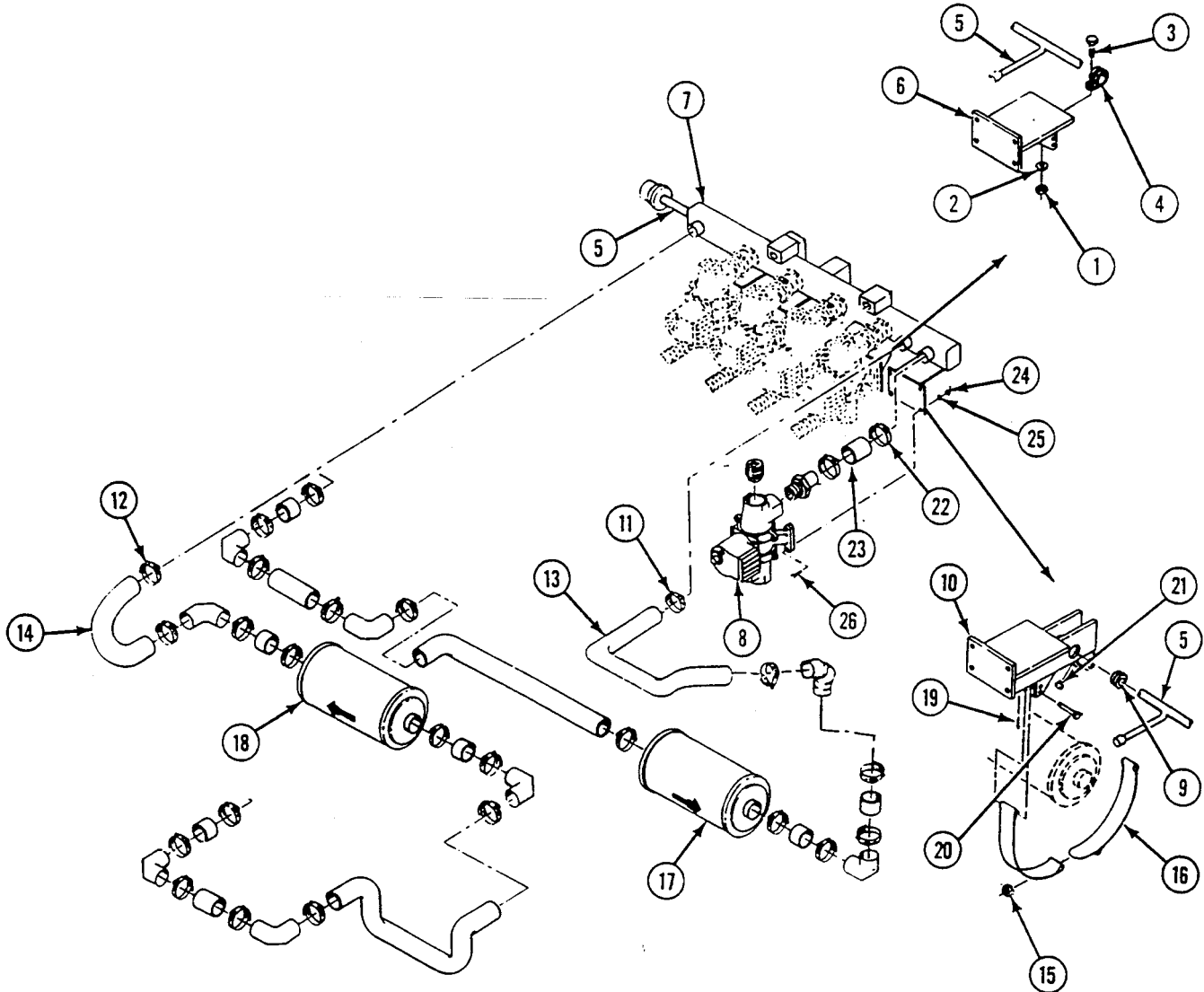
NOTE

Perform Step 2 if manifold is being replaced.

2. Disconnect NBC wiring harness (5) leads from five M3 heaters (8).
3. Remove four grommets (9) and NBC wiring harness (5) from two long heater mounts (10) on manifold (7).
4. Loosen clamp (11) and clamp (12) securing hose (13) and hose (14) to manifold (7). Remove hoses from manifold.
5. Remove four nuts (15) and disconnect four clamps (16) securing M18 filter (17) and M18 filter (18) to manifold (7). Remove filters and attached hoses from manifold.



6. Remove eight cotter pins (19), headed pins (20), four clamps (16), and eight bumpers (21) from manifold (7). Discard cotter pins.
7. Loosen five clamps (22) securing five hoses (23) to manifold (7).
8. Remove 20 lock nuts (24), lock washers (25), and screws (26) securing 5 M3 heaters (8) to manifold (7). Discard lock washers and lock nuts.
9. Remove five hoses (23) from outlets on manifold (7) and five M3 heaters (8) from manifold.



INSPECTION

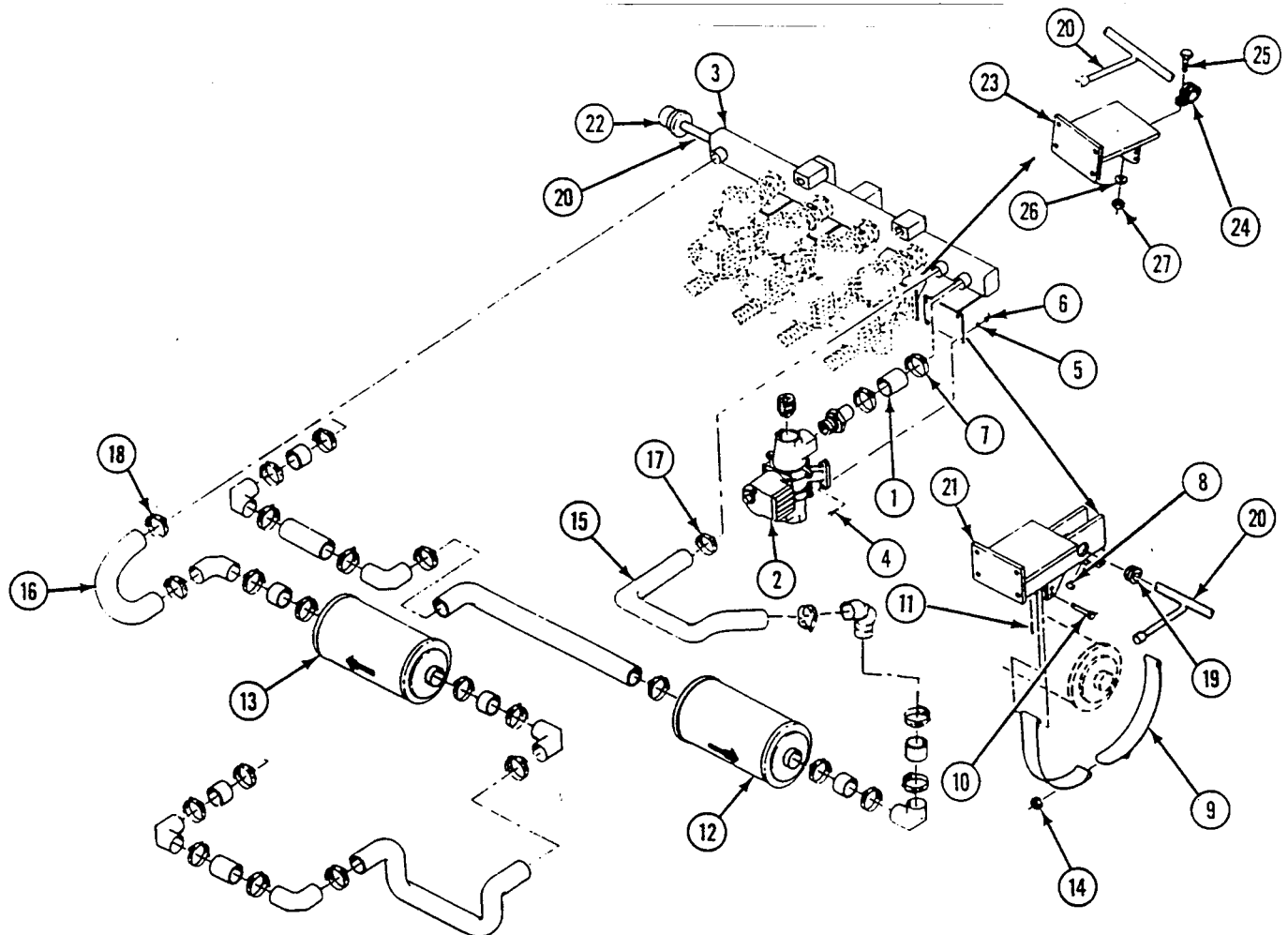
NOTE

Do not use any solvents inside the manifold.

1. Inspect manifold for breaks, cracks, and signs of leaks. Replace manifold if there is any damage that will let it leak. Clean the manifold with a clean, dampened, lint free cloth.

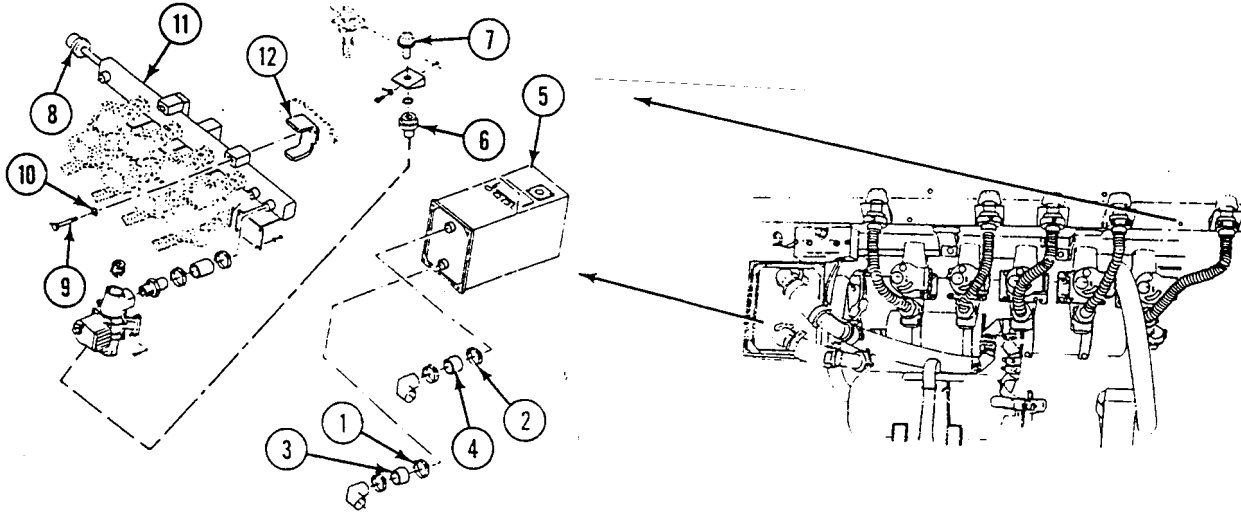
ASSEMBLY

1. Install five hoses (1) connected to five M3 heaters (2) on outlets of manifold (3).
2. Secure 5 M3 heaters (2) to manifold (3) with 20 screws (4), new lock washers (5), and new lock nuts (6).
3. Secure five hoses (1) to outlets on manifold (3) with five clamps (7).
4. Install eight bumpers (8), four clamps (9), eight headed pins (10), and eight new cotter pins (11) on manifold (3).
5. Install M18 filter (12) and M18 filter (13) with attached hoses on manifold (3). Secure filters with four clamps (9) and nuts (14).
6. Install two hoses (15 and 16) on outlets of manifold (3). Secure with clamp (17) and clamp (18).
7. Install four grommets (19) and NBC wiring harness (20) in two long heater mounts (21) on manifold (3) with NBC wiring harness circuit 135 lead (22) on left end of manifold (3).
8. Secure NBC wiring harness (20) to two short heater mounts (23) on manifold (3) with two clamps (24), screws (25), new lock washers (26), and nuts (27).
9. Connect NBC wiring harness (20) leads to five M3 heaters (2).



INSTALLATION

1. Position manifold (11) in carrier. Have helper assist.
2. Connect circuit 135 lead (8) to main NBC wiring harness.
3. Install manifold (11) on mounting brackets (12) with two new lock washers (10) and screws (9).
4. Connect five quick disconnect couplings (6) to five orifice connector assemblies (7).
5. Install two hoses (4 and 3) on outlets of M1A1-19 precleaner (5) with clamp (2) and clamp (1).

**FOLLOW-THROUGH STEPS**

1. Install portable fire extinguisher (see your -10).
2. Install oil can in mounting bracket (see your -10).
3. Connect both battery negative leads (WP 0292 00).

END OF TASK

**REMOVE/INSTALL NBC M1A1-19 PRECLEANER ASSEMBLY AND FRAME
(M548A3)**

0534 00

THIS WORK PACKAGE COVERS:

Removal (page 0534 00-2).
Installation (page 0534 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)
Carrier blocked (see your -10)
Both battery negative leads disconnected (WP 0292 00)
Portable fire extinguisher removed (see your -10)
NBC manifold removed (WP 0533 00)

Materials/Parts

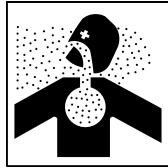
Lock washer (4)

Personnel Required

Unit Mechanic

REMOVE/INSTALL NBC M1A1-19 PRECLEANER ASSEMBLY AND FRAME (M548A3) —
Continued

0534 00

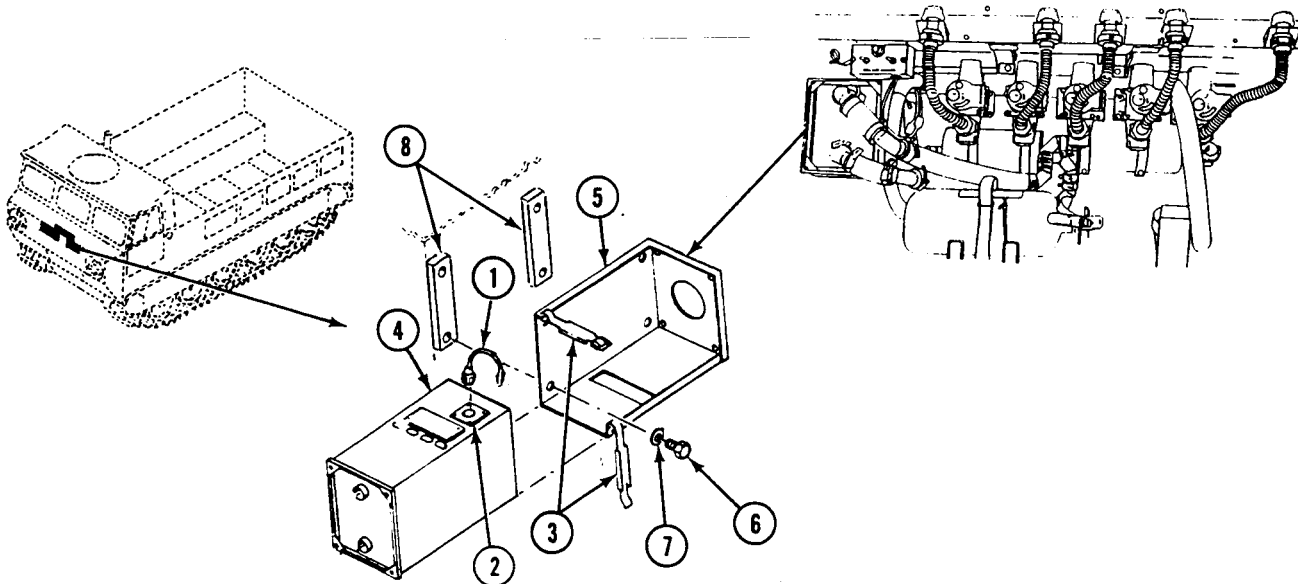
REMOVAL**WARNING**

NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

NOTE

The M548A3 should only have four NBC stations. Converted M730A2 vehicles may have five NBC stations.

1. Disconnect circuit 135F lead (1) from precleaner electrical socket (2).
2. Disconnect strap (3) securing precleaner assembly (4) to frame assembly (5). Remove precleaner assembly.
3. Remove four screws (6) and lock washers (7) securing frame assembly (5) to mounting strips (8). Remove frame assembly from carrier. Discard lock washers.

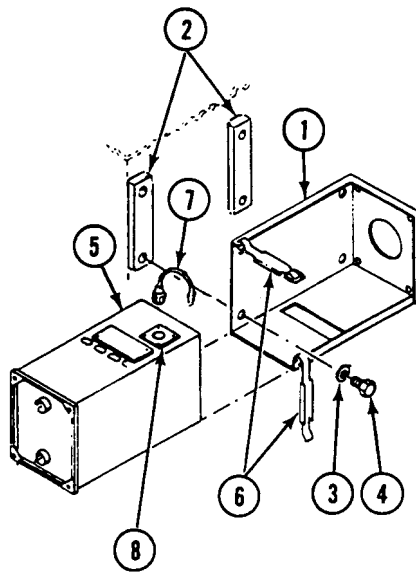


REMOVE/INSTALL NBC M1A1-19 PRECLEANER ASSEMBLY AND FRAME (M548A3) —
Continued

0534 00

INSTALLATION

1. Install frame assembly (1) on mounting strips (2) with four new lock washers (3) and screws (4).
2. Install precleaner assembly (5) on frame assembly (1) with strap (6).
3. Connect circuit 135F lead (7) to precleaner electrical socket (8). Tighten finger tight only.

**FOLLOW-THROUGH STEPS**

1. Install NBC manifold (WP 0533 00).
2. Install portable fire extinguisher (see your -10).
3. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE NBC M19 PARTICULATE FILTER UNIT (M548A3)

0535 00

THIS WORK PACKAGE COVERS:

Removal (page 0535 00-2).
 Installation (page 0535 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

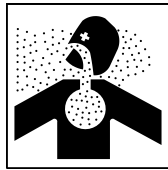
Both battery negative leads disconnected (WP 0292 00)

M1A1-19 precleaner assembly removed (WP 0534 00)

Materials/Parts

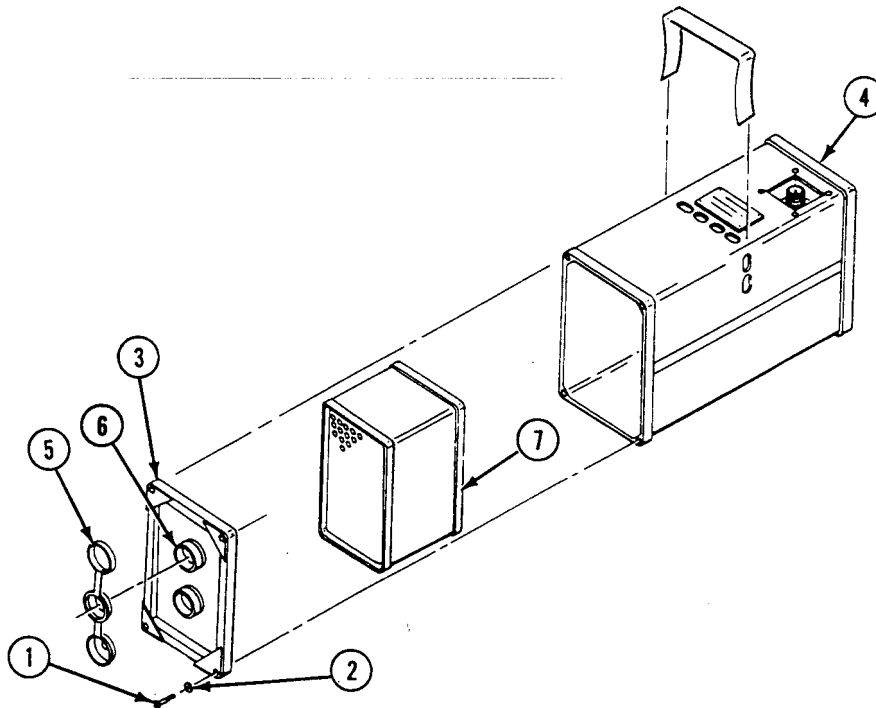
Lock washer (4)

REMOVAL

WARNING

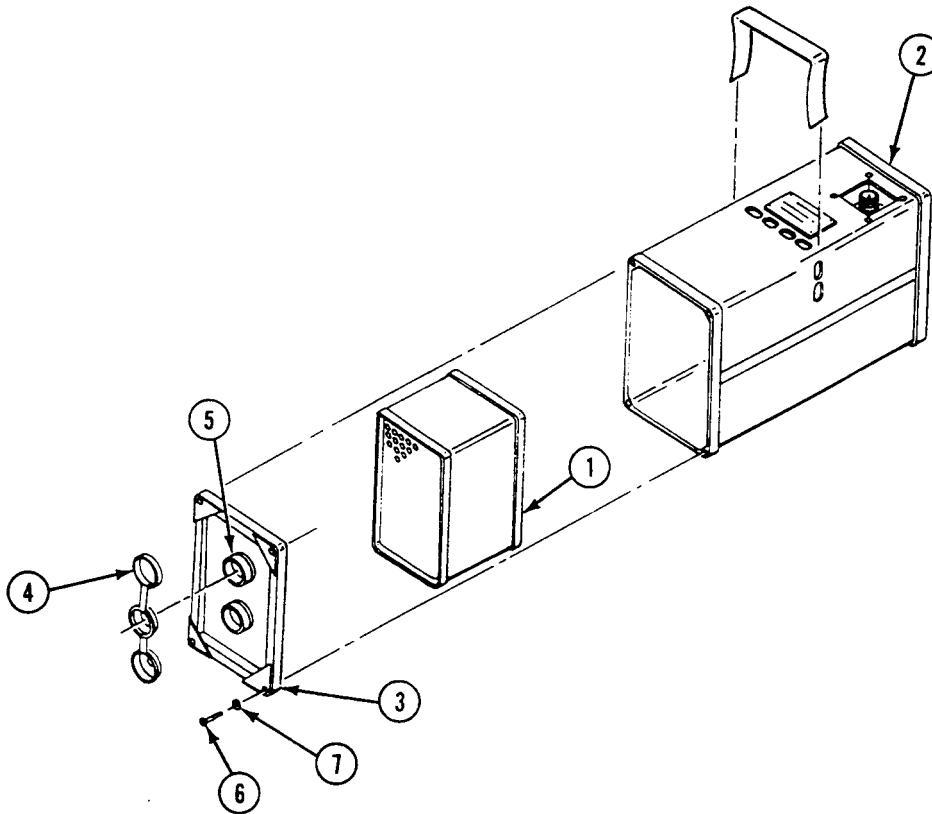
NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

1. Remove four screws (1) and lock washers (2) securing manifold (3) to precleaner housing (4). Discard lock washers.
2. Remove manifold (3) from precleaner housing (4).
3. Remove two air flow control caps (5) from two outlets (6) on manifold (3).
4. Remove M19 particulate filter (7) from precleaner housing (4). Tilt housing to facilitate removal of filter.



INSTALLATION

1. Install M19 particulate filter (1) in precleaner housing (2). Make sure felt gasket on M19 particulate filter is facing the manifold (3).
2. Install two air flow control caps (4) on two outlets (5) on manifold (3).
3. Install manifold (3) on precleaner housing (2). Secure with four screws (6) and new lock washers (7).

**FOLLOW-THROUGH STEPS**

1. Install M1A1-19 precleaner (WP 0534 00).
2. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE NBC M18 FILTER (M548A3)

0536 00

THIS WORK PACKAGE COVERS:

- Removal (page 0536 00-1).
- Inspection (page 0536 00-2).
- Installation (page 0536 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

Equipment Condition

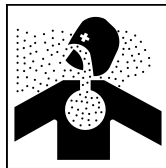
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Both battery negative leads disconnected (WP 0292 00)
- Portable fire extinguisher removed (see your -10)
- NBC manifold removed (WP 0533 00)

Personnel Required

Unit Mechanic
Helper (H)

REMOVAL

WARNING

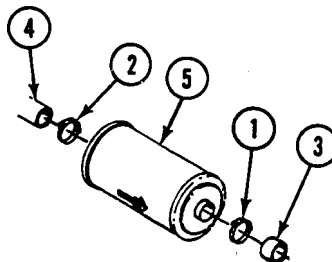


NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

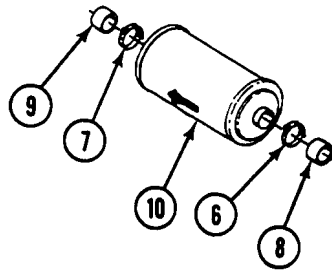
NOTE

The M548A3 should only have four NBC stations. Converted M730A2 vehicles may have five NBC stations.

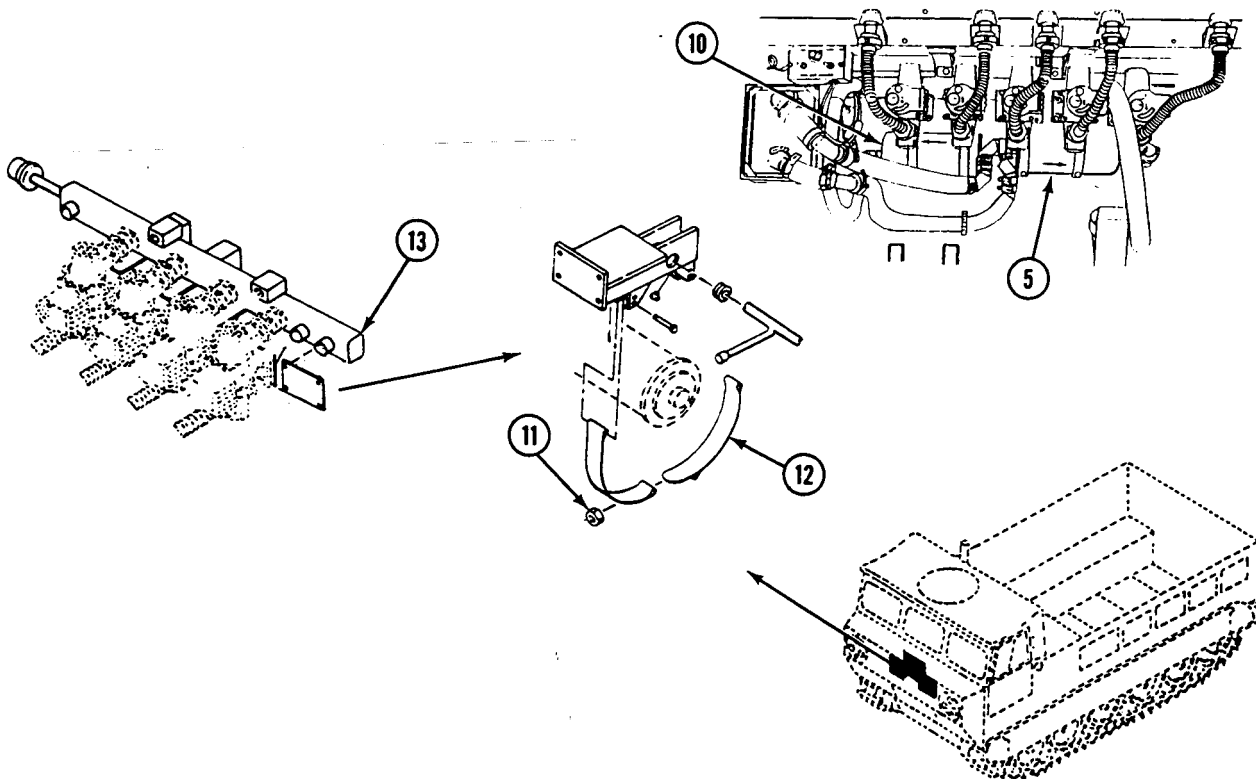
1. Remove clamp (1), clamp (2), hose (3), and hose (4) from ends of M18 filter (5).



- Remove clamp (6), clamp (7), hose (8), and hose (9) from ends of M18 filter (10).



- Remove four nuts (11) and disconnect four clamps (12) securing M18 filter (5) and M18 filter (10) to manifold (13). Remove filters from manifold.

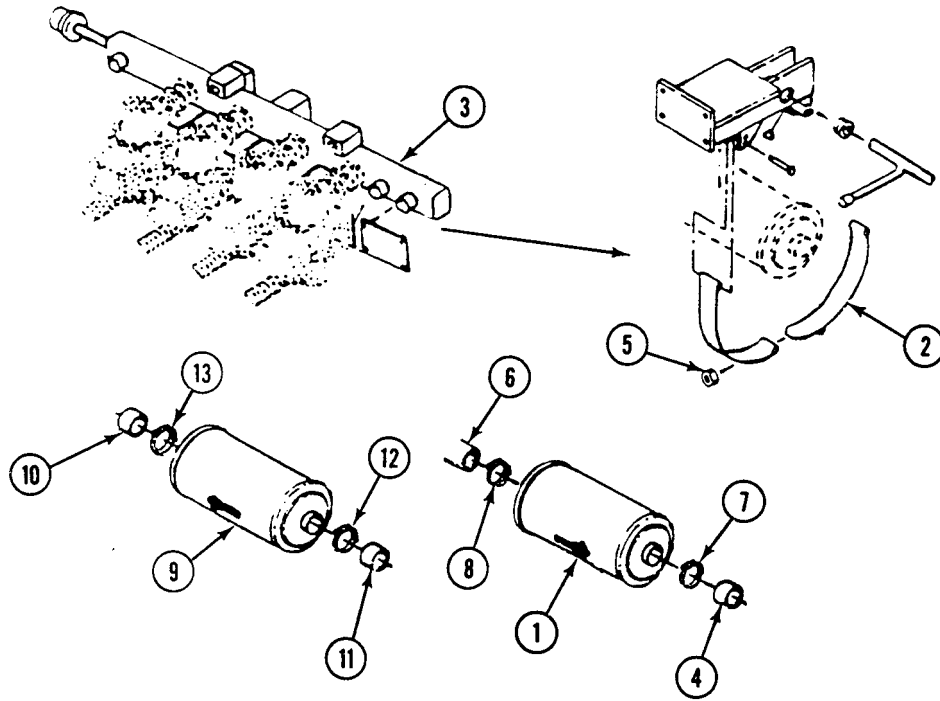


INSPECTION

- Inspect M18 filters for damage and exposure to water. Replace if there is any damage to filters or any water damage.
- Inspect M18 filters for high resistance to air flow.

INSTALLATION

1. Install M18 filter (1) in two clamps (2) on manifold (3) with AIR FLOW arrow pointing toward hose (4) on right side of M18 filter. Secure clamps with two nuts (5).
2. Install hose (4) and hose (6) on ends of M18 filter (1) with clamp (7) and clamp 8(8).
3. Install M18 filter (9) in two clamps (2) on manifold (3) with AIR FLOW arrow pointing toward hose (10) on left side of M18 filter. Secure clamps with two nuts (5).
4. Install hose (10) and hose (11) on ends of M18 filter (9) with clamp (12) and clamp (13).



FOLLOW-THROUGH STEPS

1. Install NBC manifold (WP 0533 00).
2. Install portable fire extinguisher (see your -10).
3. Connect both battery negative leads (WP 0292 00).

END OF TASK

REPLACE NBC FILTERED AIR HOSE (M548A3)

0537 00

THIS WORK PACKAGE COVERS:

- Removal (page 0537 00-2).
- Inspection (page 0537 00-3).
- Installation (page 0537 00-3).

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanics Tool Kit (WP 0541 00, Item 57)

Equipment Condition

Personnel Required

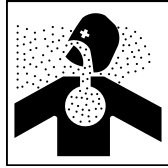
Unit Mechanic

Engine stopped (see your -10)

Carrier blocked (see your -10)

REMOVAL

WARNING



NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

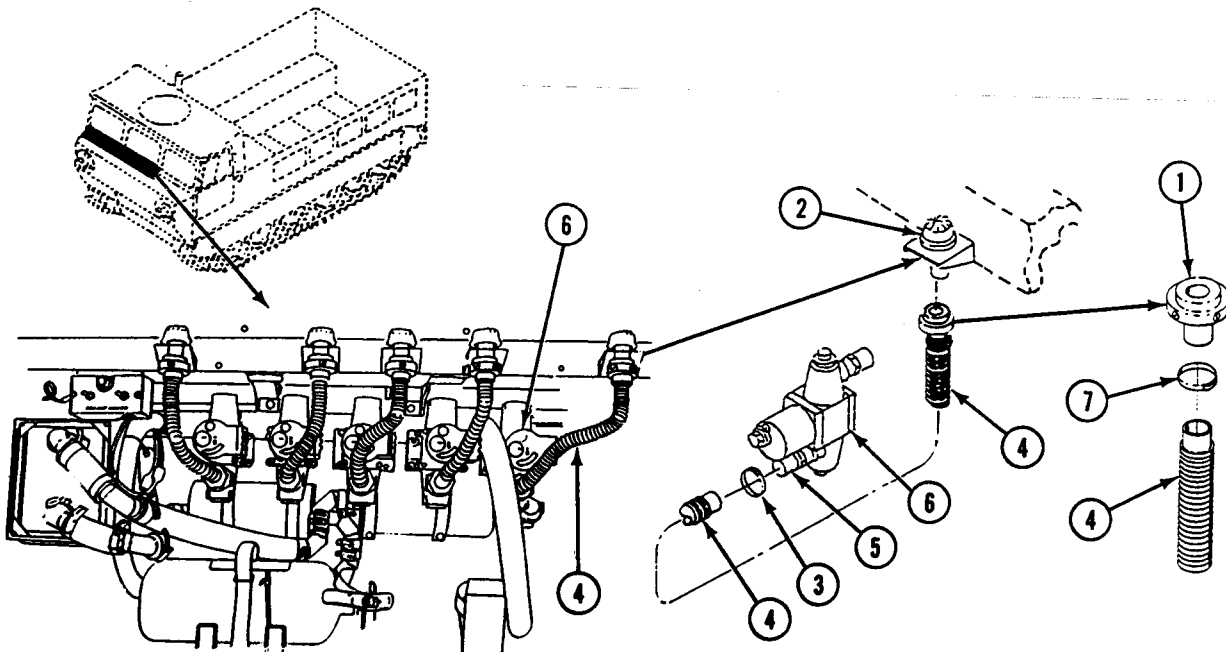
NOTE

The removal, inspection, and installation procedures are the same for each NBC filtered air hose.

NOTE

M548A3 carrier should only have four NBC stations. Converted M730A2 vehicles may have five NBC stations.

1. Remove quick disconnect coupling (1) from orifice connector assembly (2).
2. Remove ratchet clamp (3) securing filtered air hose (4) to outlet adapter (5) on M3 heater (6). Push blade of screwdriver under catch on ratchet clamp and lift up catch release. Remove hose from adapter.
3. Remove ratchet clamp (7) securing filtered air hose (4) to quick disconnect coupling (1). Push blade of screwdriver under catch on ratchet clamp and lift up catch release. Remove hose from quick disconnect coupling.

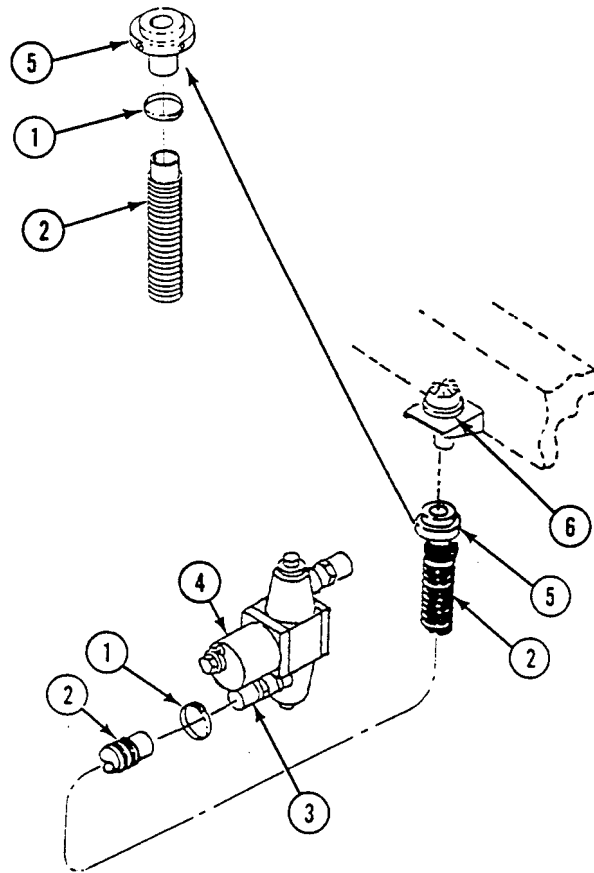


INSPECTION

1. Inspect quick disconnect coupling for wear, grooves, nicks, scratches, and loose fittings that may cause quick disconnect coupling to leak. Replace quick disconnect coupling if leakage is suspected.
2. Inspect filtered air hose for cracks, wear, crimps, and breaks that could cause air leaks. Replace hose that shows signs of leakage.
3. Inspect ratchet clamps for deformation and excessive wear. Replace clamps that show either of these defects.

INSTALLATION

1. Install ratchet clamp (1) on each end of filtered air hose (2).
2. Install filtered air hose (2) on outlet adapter (3) on M3 heater (4) and quick disconnect coupling (5).
3. Install quick disconnect coupling (5) on orifice connector assembly (6).

**END OF TASK**

**REPLACE NBC ORIFICE CONNECTOR ASSEMBLY AND BRACKET
(M548A3)**

0538 00

THIS WORK PACKAGE COVERS:

- Removal (page 0538 00-2).
- Inspection (page 0538 00-3).
- Installation (page 0538 00-4).

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0541 00, Item 57)

References

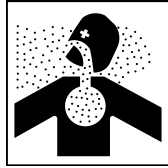
See your -10

Materials/Parts

Lock nut
Lock washer

Equipment Condition

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

REMOVAL**WARNING**

NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated and filters disposed of by NBC team. Unit commander or officer in charge must assign NBC team to decontaminate system and dispose of filters. Unit commander or officer in charge must prescribe necessary protective clothing and safety measures for NBC team.

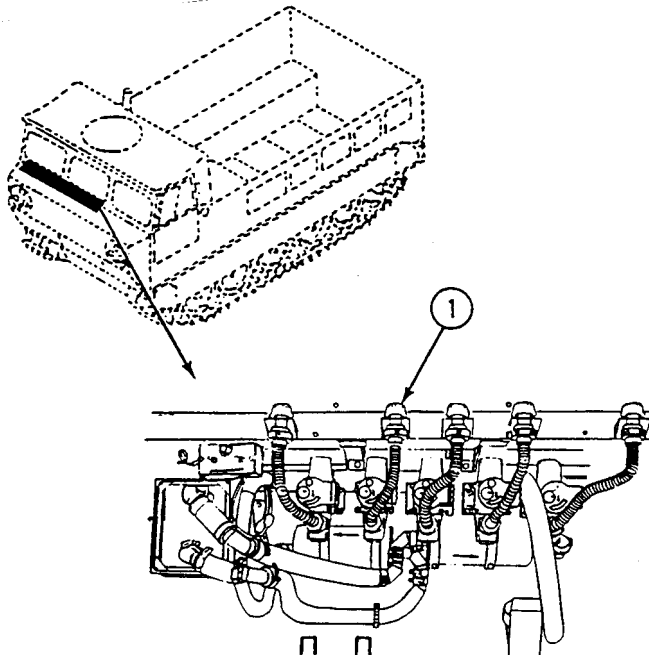
NOTE

Procedures to remove, repair, and install orifice connectors and brackets are the same for all five orifice connectors.

NOTE

Typically, the M548A3 carrier will only have four NBC stations. Converted M730A2 vehicles have five NBC stations.

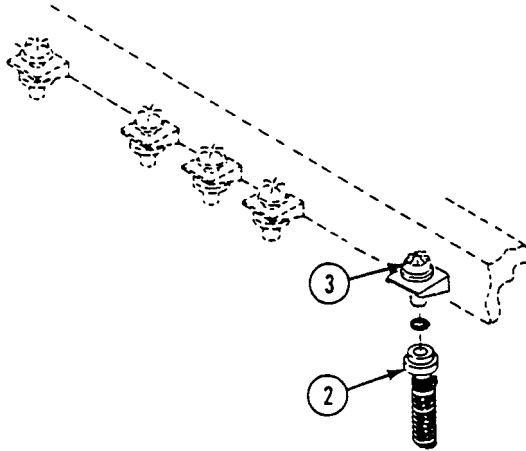
1. Locate five orifice connectors (1) in carrier.



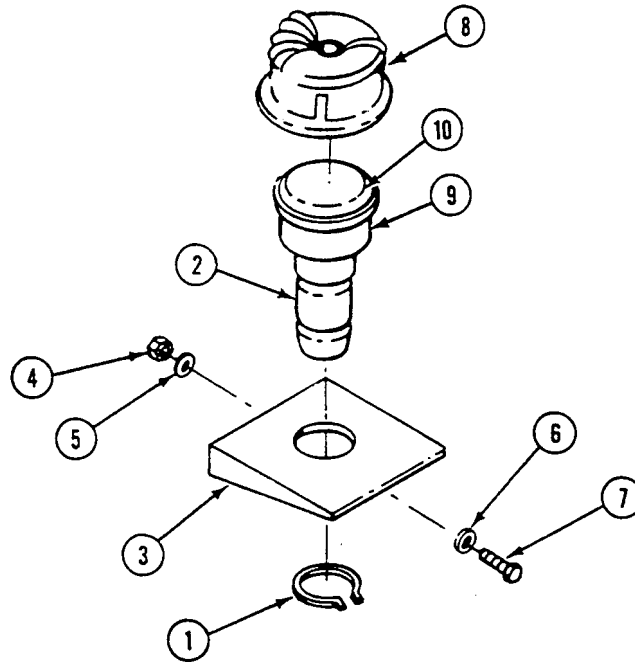
**REPLACE NBC ORIFICE CONNECTOR ASSEMBLY AND BRACKET (M548A3) —
Continued**

0538 00

- Remove quick disconnect coupling (2) from orifice connector assembly (3).



- Remove retaining ring (1) securing orifice connector assembly (2) to bracket (3). Remove orifice connector assembly from bracket.
- Remove lock nut (4), lock washer (5), washer (6), and screw (7) securing bracket (3) to cowl stiffener. Discard lock nut and lock washer.
- Remove outlet valve cover (8) from orifice connector (9).
- Remove outlet valve disk (10) from orifice connector (9).



INSPECTION

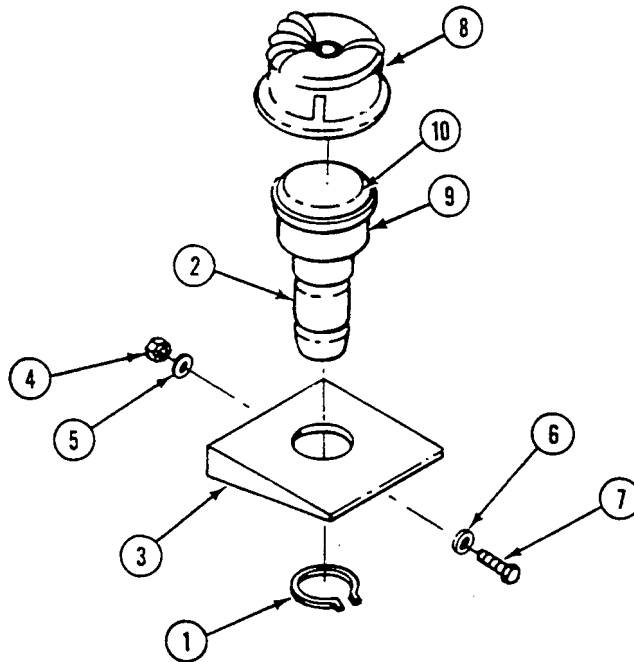
- Inspect outlet valve cover for damage or wear. If damaged or worn, replace valve cover.
- Inspect outlet valve disk for cracking, curling, deterioration, tears, and seating. If damaged, replace valve disk.

REPLACE NBC ORIFICE CONNECTOR ASSEMBLY AND BRACKET (M548A3) —
Continued

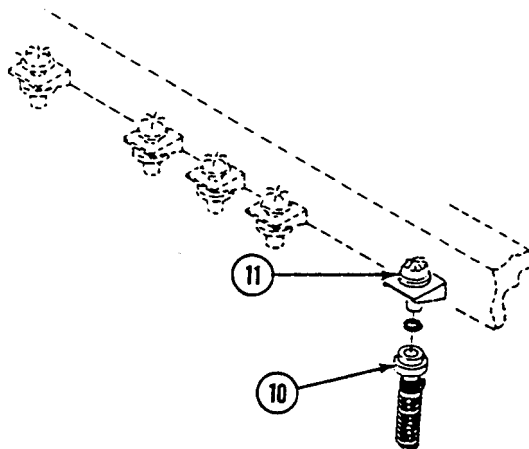
0538 00

INSTALLATION

1. Place bracket (3) on cowl stiffener and secure with screw (7), new lock washer (5), washer (6), and new lock nut (4).
2. Install outlet valve disk (10) on orifice connector (9).
3. Install outlet valve cover (8) on orifice connector (9).
4. Install orifice connector (9) in bracket (3) with retaining ring (1).



5. Install quick disconnect coupling (10) on orifice connector assembly (11).

**END OF TASK**

CHAPTER 26

UNIT SUPPORTING INFORMATION

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REFERENCES.....	0539 00
MAINTENANCE ALLOCATION CHART (MAC).....	0540 00
COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES LIST.....	0541 00
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.....	0542 00

REFERENCES**0539 00****SCOPE**

This work package lists all indexes, technical manuals, miscellaneous publications, and forms referenced in this manual.

INDEXES

The following indexes should be consulted for the latest changes or revisions to references given in this work package and for new publications relating to material covered in this technical manual.

Index of Graphics Training Aids.....DA Pam 25-37

Consolidated Index of Army Publications and Blank Forms.....DA Pam 25-30

TECHNICAL MANUALS

Ammunition and Explosives Standards.....TM 9-1300-206

Direct and General Support and Depot Maintenance Repair parts and Special Tools List:
Welding Set, ARC. Inert Gas Shielded, Plastic or Metal Lined Gun for 3/64 inch Wire; DC,
115 V (Westinghouse Model SA-135) (FSN 3431-879-9709).....TM 5-3431-200-35P

Inspection, Care, and Maintenance of Antifriction Bearings.....TM 9-214

Maintenance and Components Manual for Heater and Heater Control Box.....TM 9-2540-205-24&P

Operator, Organizational, DS and GS Maintenance Manual for Lead-Acid Storage Batteries.....TM 9-6140-200-14

Operator, Organizational, DS and GS Maintenance Manual, Including Repair Parts and
Special Tools List (Including Depot Maintenance Repair Parts and Special Tools): Various
Machine Gun Mounts and Combinations Used on Tactical and Armored Vehicles.....TM 9-1005-245-14

Operator, Organizational, DS and GS Maintenance Manual; Standards for Inspection and
Classification of Tracks, Track Components and Solid-Rubber Tires.....TM 9-2530-200-24

Operator, Organizational, DS, GS, and Depot Maintenance Manual: Welding Set, Arc,
Inert-Gas Shielded; Plastic or Metal-Lined Gun; for 3/64-Inch Wire; DC, 115 V
(Westinghouse Model SA-135) (FSN 3431-879-9709).....TM 5-3431-200-15

Operator's and Organizational Maintenance Manual Including Repair Parts and Special Tools
List for Simplified Test Equipment for Internal Combustion Engines (NSN
4910-01-124-2554).....TM 9-4910-571-12&P

Operator's and Organizational Maintenance Manual; Radio Sets; AN/VRC-12,
(5820-00-223-7412), AN/VRC-43, (5820-00-223-7415), AN/VRC-44,
(5820-00-223-7417), AN/VRC-45, (5820-00-223-7418), AN/VRC-46,
(5820-00-223-7433), AN/VRC-47, (5820-00-223-7434), AN/VRC-48,
(5820-00-223-7435), AN/VRC-49, (5820-00-223-7437), AN/VRC-54,
(5820-00-223-7567), AN/VRC-55, (5820-00-402-2265); Mounting MT-1029/VRC
(5820-00-893-1323), Mounting MT-1898/VRC (5820-00-893-1324); Antenna AT-912/
VRC (5820-00-897-6357); Control, Frequency Selector C-2742/VRC (5820-00-892-3343),
and Control, Radio Set C-2299/VRC (5820-00-892-3340).....TM 11-5820-401-12

Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools List for
Decontaminating Apparatus: Portable, 14 Liter, M13, (4230-01-133-4124) and
Decontaminating Apparatus: Portable, 14 Liter, M13, (Practice) (4230-01-345-5172).....TM 3-4230-214-12&P

Operator's Manual; Carrier, Cargo, Tracked, 6-ton; M548A1 (2350-01-096-9356), M548A3
(2350-01-369-6081).....TM 9-2350-247-10

REFERENCES—Continued

0539 00

- Operator's Manual - Detecting System, Special Purpose AN/TSQ-114A.....TM 32-5811-900-10
- Operator's Manual for Tester, Airflow, Gas-Particulate Filter Unit M39 (NSN 6680-00-436-4212).....TM 3-6680-316-10
- Operator's Manual: Radio Sets; AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, and AN/VRC-49, (Used with Intercom Systems).....TM 4-5820-401-10-2
- Operator's Manual, Special Purpose Receiving System AN/MSQ-103A.....TM 32-5811-030-10
- Operator's Manual: Welding Theory and Application.....TM 9-237
- Operator's, Organizational, Direct Support, and General Support Maintenance Manual; Suppressor, Electrical Transient MX-7778A/GRC.....TM 11-5820-401-10-2
- Operator's Technical Manual for Countermeasures Set, Special Purpose, AN/MLQ-34.....TM 32-5865-060-10
- Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools Lists for Counter Measures Set, Special Purpose, AN/MLQ-34 Part Number 5051430-1 (NSN 5865-01-008-6629).....TM 32-5865-060-24&P-1
- Organizational, Direct Support and General Support Maintenance manual (Including Repair Parts and Special Tools) for Heaters, Vehicular Compartment: Stewart-Warner 10560M (NSN 2540-01-071-0651), 10560M24B1 (2540-01-169-5159), 10560C24 (2540-01-083-0691), and 10560G (7540-01-262-6013); Hupp MF560A (2540-00-930-8938), MF510B (2540-01-071-0652), and MF510C, MF60B-24V (2540-01-162-3834), ESPAR VZS (2540-01-114-7688).....TM 9-2540-205-24&P
- Organizational, Direct Support and General Support Maintenance Manual: Machine Gun, 7.62, M60.....TM 9-1005-224-24
- Organizational, Direct Support, General Support, and Depot Maintenance Manual, Including Repair Parts and Special Tools Lists: Machine Gun, Caliber .50 Browning, M2 Heavy Barrel, Flexible.....TM 9-1005-213-25
- Painting Instructions for Field Use.....TM 43-0139
- Preservation, Packaging, and Packing of Military Supplies and Equipment (Packing, Vols I and II).....TM 38-230-1 and -2
- Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).....TM 750-244-2
- 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 (U.S. Army Tank-Automotive Command).....TM 750-244-6
- Processing for Administrative Storage of Carriers.....TM 740-90-1
- Repairs and Utilities: Sheet Metal.....TM 5-625
- Rigging.....TM 5-725
- Unit Maintenance, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List): for Carrier,

REFERENCES—Continued

0539 00

Cargo, Tracked, 6-ton; M548A1 (2350-01-096-9356); Carrier, Cargo, Tracked, 6-ton; M548A3 (2350-01-369-6081).....TM 9-2350-247-24P

Unit Maintenance Manual: Carrier, Cargo, Tracked, 6-ton Carrier, M548A1 (2350-01-096-9356), M548A3 (2350-01-369-6081).....TM 9-2350-247-20

Unit Maintenance Repair Parts and Special Tool Lists: welding Set, Arc, Inert Gas Shielded: Plastic or Metal Lined Gun; for 3/64 in. Wire; DC, 115 V (Westinghouse Model SA-135) FSN 3431-879-9079.....TM 5-3431-200-20P

Use and Care of Hand Tools and Measuring Tools.....TM 9-243

OTHER PUBLICATIONS

Army Maintenance Management System (TAMMS).....DA Pam 738-750

Army Oil Analysis Program (AOAP).....TB 43-0211

Basic Cold Weather Manual.....FM 31-70

Color, Marking, and Camouflage-Painting of Military Vehicles, Construction Equipment, and Materials-Handling Equipment.....TB 43-0209

Desert Operations (How to Fight).....FM 90-3

Environmental Protection and Enhancement.....AR 200-1

Expendable Items (except Medical, Class V, Repair Parts and Heraldic Items).....CTA 50-970

Explosives and Demolitions.....FM 5-250

First Aid for Soldiers.....FM 21-11

General Fabric Repair.....FM 10-16

Malfunctions Involving Ammunition and Explosives.....AR 75-1

Mountain Operations.....FM 90-6

Operation and Maintenance of Ordnance Materiel in Cold Weather (0°F to -65°F).....FM 9-207

Packaging of Army Materiel for Shipment or Storage.....AR 746-1

Safety Inspection and Testing of Lifting Devices.....TB 43-0142

Use of Antifreeze Solutions, Antifreeze Extender, Cleaning Compounds, and Test Kit in Engine Cooling Systems.....TB 750-651

Vehicle Recovery Operations.....FM 20-22

FORMS

Refer to Department of the Army Pamphlet 310-2 for index of blank forms and to DA Pam 738-750 for explanation of use.

Accident Reporting and Records.....AR 385-40

Army Oil Analysis (AOAP) Log.....DA Form 2408-20

Equipment Control Record.....DA Form 2408-9

REFERENCES—Continued

0539 00

Equipment Inspection and Maintenance Worksheet.....DA Form 2404

Exchange Tag.....DA Form 2402

Maintenance Work Request.....DA Form 2407

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

Product Quality Deficiencies Report (NSN 7540-00-133-5541).....SF Form 368

Recommended Changes to Publications and Blank Forms.....DA Form 2028 or DA Form
2028-2

Report of Discrepancy (ROD).....SF Form 364

Uncorrected Fault Record.....DA Form 2408-14

MAINTENANCE ALLOCATION CHART (MAC)

0540 00**INTRODUCTION****GENERAL**

This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

The Maintenance Allocation Chart (MAC) (immediately following this introduction) 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 shall be consistent with the capacities and capabilities of the designated maintenance levels. They are:

- Unit — includes two subcolumns, C (operator/crew) and O (unit) maintenance.
- Direct Support — includes an F subcolumn.
- General Support — includes an H subcolumn.
- Depot — includes a D subcolumn.

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

MAINTENANCE FUNCTIONS

Maintenance functions are 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. 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 on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.
- (3) **Service.** Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms.
- (4) **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper 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 of 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 assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.
- (9) **Repair.** The application of maintenance services, including fault location/troubleshooting, removal/installation, 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.

NOTE

The following definitions are applicable to the “repair” maintenance function:

- **Services** — Inspect, test, service, adjust, align, calibrate, and/or replace.
- **Fault location/troubleshooting** — The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (ET).
- **Disassembly/assembly** — The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).
- **Actions** — Welding, grinding, riveting, straightening, facing, machining, and/or surfacing.

- (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. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
- (11) **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 material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

Explanations of Columns in the MAC

Column (1) — Group Number. Column (1) lists FGC numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) — Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) — Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above.)

Column (4) — Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. 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

Column (5) — Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) — Remarks Code. When applicable, this column contains a letter code, in alphabetical order, that is keyed to the remarks table entries.

EXPLANATION OF COLUMNS IN THE TOOLS AND TEST EQUIPMENT REQUIREMENTS

Column (1) — Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) — Nomenclature. Name or identification of the tool or test equipment.

Column (4) — National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) — Tool Number. The manufacturer's part number, model number, or type number.

EXPLANATION OF COLUMNS IN THE REMARKS

Column (1) — Remarks Code. The code recorded in column (6) of the MAC.

Column (2) — Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

Table 1. MAINTENANCE ALLOCATION CHART, SECTION II

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
01 0100	ENGINE POWER PLANT (M548A1)	Remove/ Install Remove/ Install		2.5 3.0				1	A
0100	POWER PLANT ASSY (M548A3)	Adjust Remove/ Install		.2 3.7				112, 114, 121 111, 113, 114, 115, 118, 120	
0101	ENGINE (M548A1)	Test Service Replace Repair Overhaul	.2	.1	9.5	*		2-7 1 8-10 50.0	
0101	ENGINE (M548A3)	Inspect Service Adjust Replace Repair Overhaul		.1 .3 .1 .3	6.5			2-7 112, 114 124, 114, 118, 119, 120 114, 122, 123 50.0	
03 0301	FUEL SYSTEM INJECTOR, FUEL, ENGINE	Test Replace Repair			.6 .3	.2 2.0		36, 37 38 39-45	
0301	LEVER, CONTROL , FUEL INJECTOR	Adjust Replace Overhaul			.3 1.0		.8	38 36, 39, 40, 41, 42, 45	
0302	PUMP, FUEL, ENGINE	Test Replace Repair		.5 1.5	2.0			47	
0302	LINES, FUEL INJECTOR	Replace			1.5			46	
0304	CLEANER, AIR, ENGINE (M548A1)	Service	.3						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
		Replace		1.0					
		Repair		.2					
0304	CLEANER, ENGINE, AIR (M548A3)	Service	.3						
		Replace		1.0				Q	
		Repair		.2					
0304	ELEMENT, ENGINE AIR (M548A3)	Service		.3					
		Replace		.1					
0304	INTAKE, AIR CLEANER	Replace		.6					
0304	DUCTING/HOSES (M548A3)	Repair		.4				Q	
0305	BLOWER, AIR, ENGINE	Replace			2.9				
		Repair				4.0			
0305	BLOWER ASSY, BYPASS (M548A3)	Replace			5.5				
		Overhaul				2.5	126		
0308	GOVERNOR (M548A1)	Replace			.5				
		Repair			.2	2.0		B	
0308	GOVERNOR ASSY (M548A3)	Replace			1.0				
		Repair			2.0		125, 127	B	
0309	FILTER, FUEL, PRIMARY (M548A1)	Service	.1						
		Replace		.2					
		Repair		.2					
0309	FILTER, FUEL, SECONDARY (M548A1)	Service	.1						
		Replace		.2					
		Repair		.2					
0309	FILTER, PRIMARY FUEL (M548A3)	Service	.1						
		Replace		.6					
		Repair		.2					
0309	FILTER, SECONDARY FUEL (M548A3)	Service	.1						

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
		Replace		.6					
		Repair		.2					
0311	HEATER ASSEMBLY, AIR BOX	Replace		.5					
		Repair			1.2				
0312	SHAFT ASSEMBLY, CROSS	Replace		.5					
		Repair			1.0			C	
0312	BRACKET ASSEMBLY, THROTTLE CONTROL (M548A1)	Replace		.5					
		Repair		1.5					
0312	LINKAGE, THROTTLE	Adjust		.5					
		Replace		.5					
		Repair		1.0					
0312	THROTTLE PEDAL CONTROLS AND LINKAGE (M548A3)	Adjust		.3					
		Replace		1.4					
0312	HAND THROTTLE CONTROL	Adjust		.2					
		Replace		.3					
0312	FUEL CUTOFF	Adjust		.2					
		Replace		.7					
0312	TV MODULATOR ASSY (M548A3)	Adjust		.5					
		Replace		.5					
05 0501	COOLING SYSTEM RADIATOR (M548A1)	Service	.2	.5			50		
		Replace		.7					
		Repair		.1	4.0				
0501	RADIATOR (M548A3)	Service	.2	.5			50		
		Replace		1.3					
		Repair		.1	4.0				
0504	PUMP, COOLANT	Replace		1.2					
		Repair			1.8				

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
0505	FAN, COOLING (M548A1)	Service Replace Repair		.1 .9				4.9	
0505	FAN ASSY VENTILATING (M548A3)	Service Replace Repair Rebuild	.3	.3 2.2				4.9	T
0505	COOLING FAN ANGLE	Replace			2.0				
0505	DRIVE GEAR BOX ASSY (M548A3)	Repair			2.0				I
06 0601	ELECTRICAL SYSTEM GENERATOR (M548A1)	Replace Repair		.5	2.0				F
0601	GENERATOR ASSY (M548A3)	Replace Repair		.5	2.0				U F
0602	REGULATOR, GENERATOR (M548A1)	Adjust Replace Repair		.1 .3	2.4				
0603	STARTER (M548A1)	Replace Repair		6.1	2.4				Q G
0603	ENGINE STARTER ASSY (M548A3)	Replace Repair		.7	2.4				U G
0603	CABLES, STARTER CONNECTING (M548A1)	Replace Repair		.3 .2					
0603	CABLES, STARTER (M548A3)	Replace Repair		.3 .2					U
0607	PANEL, INSTRUMENT	Replace Repair			.5 2.5				E

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
0607	WIRING HARNESS, INSTRUMENT PANEL (M548A3)	Replace			2.0				
		Repair			.4				E
0607	LIGHTS, INSTRUMENT PANEL (M548A1)	Replace			.2				
		Repair			.1				
0607	CIRCUIT BREAKER ASSEMBLY	Test		.1				99	
		Replace		.6				99	
		Repair		.4					
0608	DISTRIBUTION BOX	Replace			.8				
		Repair			1.2				
0609	LIGHTS, HULL DOME	Replace		.2					
		Repair		.5					
0609	HEADLIGHT, BLACKOUT	Replace		.3					
		Repair		.2					
0609	STOP LIGHTS	Replace		.3					
		Repair		.2					
0609	LIGHT, BLACKOUT	Replace		.3				C	
0609	MARKER	Repair		.2					
0609	HEADLIGHT, SERVICE	Replace		.3					
		Repair		.2					
0613	WIRING HARNESS, POWER PLANT (M548A1)	Replace			.4				C
		Repair		.2					
0613	WIRING HARNESS, POWER PLANT (M548A3)	Replace			.8				D
		Repair		.2					
0613	WIRING HARNESS, INTERCONNECTING (M548A1)	Replace			3.5				C
		Repair		.2					
0614	RECEPTACLE, TRAILER COUPLING	Replace		.4					C
		Repair		.6					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
07 07	TRANSMISSION MOUNT, TRANSMISSION (M548A3)	Replace		.8				111, 113, 114, 115, 118, 119 120	A
		Repair		.8				111, 113, 114, 115, 118, 119, 120	A
0705	LINKAGE, TRANSMISSION CONTROL	Adjust		.3					
		Replace		.2					
		Repair		.3					
0705	SELECTOR, TRANSMISSION RANGE (M548A1)	Adjust		.3					
		Replace		.5					
		Repair		.7					
0705	CONTROLLER, ELECTRICAL, TRANS, (M548A3)	Replace		1.0				108, 114, 123	
		Repair		.7				114, 123	
0708	TOW, START AND CONTR (M548A3)	Adjust		.2				114	
		Repair		.4				111, 114	
0710	TRANSMISSION ASSEMBLY (M548A1)	Service	.2						
		Replace			8.7				
		Repair				16.0		51-61	H
		Overhaul					25.0		
0710	TRANSMISSION AND CONTAINER (M548A3)	Service	.4	.1				114, 117, 122	
		Adjust		.9				109, 111, 112, 114	
0710	STEERING (M548A3)	Adjust		1.0					
0710	BRAKES (M548A3)	Adjust		1.0					
		Replace			1.9			110, 114, 119, 120	

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
		Repair			67.1			111, 113, 114, 115, 117, 118, 120, 122, 123	R
08 0801	TRANSFER GEARCASE AND FINAL DRIVE ASSEMBLIES TRANSFER GEARCASE (M548A1)	Service Replace Repair	.5		11.0		6.2	70	I
0801	FINAL DRIVE	Service Replace Repair	.1	1.6		5.2		67 71 73, 79-82	
09 0901	PROPELLER SHAFTS, U-JOINTS AND CLAMPS SPIDERS AND SHAFTS	Service Replace		.2 .6				76	
11 1124	DIFFERENTIAL BAND, STEERING, BRAKE DIFFERENTIAL (M548A1)	Adjust Replace Repair		.3	1.1 1.6				
1124	OIL FILTER, DIFFERENTIAL (M548A1)	Service Replace Repair		.2 .9 .3					
1124	DIFFERENTIAL CONTROL (M548A1)	Service Replace Repair	.1	2.6		16.0		72, 78-82	I
12 1201	BRAKE ASSEMBLY PARKING BRAKE (M548A3)	Adjust Replace		.2 .6					
1206	BRAKE LINKAGE (M548A3)	Adjust		.6					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
		Replace		2.2					
13 1301	WHEELS AND TRACKS SUPPORT ARM ASSY, ROAD WHEEL	Service Replace		.2 2.0					
1303	ADJUSTER, TRACK TENSION	Adjust Replace Replace	.2	.6	1.1				
1303	ARM ASSEMBLY, IDLER WHEEL	Replace Repair		.7	1.0			L C	
1304	SPROCKET, DRIVE	Inspect Replace		.2 .5					
1305	TRACK ASSEMBLY	Adjust Replace	.2	.8			88	K	
1305	SHOE, TRACK	Inspect Replace		.2 .3			88 89, 90		
1311	ROAD WHEEL HUB BEARING	Replace		.8			87		
14 14	STEERING STEERING WHEEL ASSY (M548A3)	Service Adjust Replace		.2 .9 2.2					
1403	LINK ASSEMBLY (M548A1)	Adjust		.3					
1403	STEERING CONTROL (M548A1)	Repair		2.0					
1403	BRAKE ASSEMBLY, PIVOT (M548A1)	Service		.1					
1403	STEER	Replace Repair		.4	.6		93		
1403	MASTER CYLINDER, PIVOT STEER (M548A1)	Service Adjust		.1 .6					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
1403	MASTER CYLINDER, PIVOT STEER (M548A1)	Replace		.8					
		Repair			2.1			77	
15 1503	TOWING ATTACHMENTS PINTLE, TOWING	Service		.1					C
		Replace		.2					
		Repair		.4					
16 1604	SHOCK ABSORBER SHOCK ABSORBER	Replace		.4				94	
		Repair			.5				
18 1801	HULL CAB CLOSURE ASSEMBLY	Replace		1.2					C
		Repair			3.0				
1802	WINDSHIELD	Replace		.2					
		Repair			1.0				
1806	SEATS AND CUSHIONS	Replace		.3					
		Repair			1.5				
1806	RACKS, BOXES, AND STRAPS	Replace		.3					
		Repair			.4				
20 2001	WINCH AND POWER TAKEOFF BAND, WINCH DRUM (M548A1)	Adjust		.1					
2001	BRAKE (M548A1)	Replace			.5				
		Repair			.5				
2001	CABLE, WINCH (M548A1)	Service	.2						
		Replace		.3					
		Repair		.2					
2001	CLUTCH, WINCH (M548A1)	Adjust		.1					
2001	DRUM (M548A1)	Replace			.9				
		Repair			1.3				
2001	WINCH (M548A1)	Service	.1						
		Replace		1.0					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
		Repair			3.0				
2004	POWER TAKEOFF, WINCH (M548A1)	Replace		.9					
		Repair			2.0				
2004	SHAFT, PROPELLER, FLANGE AND U-JOINT	Service		.1					
		Replace		.3					
		Repair		.1					
2004	GEARCASE, WINCH DRIVE (M548A1)	Service		.1					
2004	TRANSFER GEARCASE	Replace		.4					
		Repair			.9				
22	HULL ACCESSORY ITEMS								
2201	COVER, CAB	Remove/ Install		.3					
		Replace		.5					
		Repair			1.0				
2201	COVER, CARGO	Remove/ Install		.5					
		Replace		.6					
		Repair			1.5				
2202	MOTOR, BLADE AND ARM	Adjust		.1					
2207	HEATER ASSY (M548A3)	Replace		1.0					
		Repair			1.2			V	
26	ENGINE AND TRANSMISSION								
2604	SLING, ENG AND TRANS (M548A3)	Inspect		.1			111, 114		
		Test			.8		114		
		Repair		.1	1.7		130, 114, 115		
2604	STAND, ENG AND TRANS (M548A3)	Service			.1		124		
		Adjust			.2		114		
		Repair		.1	1.3		124, 130, 114, 115		
33	SPECIAL PURPOSE KITS								

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
3301	SHIPPING CONTAINERS, ENGINE KIT, VEHICLE COMPARTMENT HEATER (PRIMARY AND SECONDARY)	Replace			.2				
		Repair			1.5				
		Remove/ Install			4.0				
3301	KIT, VEHICLE COMPARTMENT HEATER, (CARGO PRIMARY AND SECONDARY)	Remove/ Install			4.0				
3301	KIT, ENGINE COOLANT HEATER	Remove/ Install			4.0				
3301	BOX, HEATER CONTROL	Replace		.2					
		Repair		.2					
3301	FILTER, HEATER FUEL PUMP	Replace		.2					
		Repair		.3					
3301	PUMP, HEATER FUEL	Service		.3					
		Replace		.3					
3301	HEATER, VEHICLE COMPARTMENT	Replace		.4					
		Repair		1.6					
3301	HEATER, COOLANT	Replace		.5					
		Repair			1.2				
3301	IGNITER, COOLANT HEATER	Replace		.2					
3301	COVER, FIBERGLASS CAB	Replace		.5					
		Repair			2.0				
3301	COVER, INSULATED CARGO	Replace		.3					
		Repair			2.0				
3301	KIT, MATERIAL HANDLING	Remove/ Install		1.0					
3301	KIT, CALIBER .50 MACHINE GUN MOUNT	Remove/ Install		1.0					
3301	KIT, M66 RING MOUNT	Remove/ Install		1.0					

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS CODE
			C	O	F	H	D		
3301	KIT, 7.62 MACHINE GUN MOUNT	Remove/ Install		1.0					
3301	KIT, TURN SIGNAL	Remove/ Install		4.0					
47	GAUGES (NON-ELECTRICAL)								
4701	SHAFT ASSEMBLY, FLEXIBLE	Replace		.5					
		Repair		.2					
76	FIXED FIRE EXTINGUISHER SYSTEM								
7603	CONTROLS, FIXED FIRE EXTINGUISHER	Adjust		.2					
		Replace		.4					
		Repair		.5					
7603	CYLINDER	Service			.4				
		Replace		.2					

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 (19207), 10865984 (19207)
2	F	MANOMETER: USED WITH 4720-00-271-9839 HOSE, 6810-00-290-0017 MERCURY, AND 8950-00-823-7664 FOOD COLORING TO CHECK CRANKCASE PRESSURE, EXHAUST BACK PRESSURE, AIRBOX PRESSURE AND AIR INTAKE RESTRICTIONS	6685-00-065-5308	KM-J-2147 (33287)
3	F	HOSE, RUBBER: USED WITH 6685-00-065-5308 MANOMETER	4720-00-271-9839	M6855/4-10L089
4	F	MERCURY: USED WITH 6685-00-065-5308 MANOMETER	6810-00-290-0017	
5	F	FOOD COLORING, LIQUID, RED, 8-OZ: USED WITH 6685-00-065-5308 MANOMETER	8950-00-823-7664	MIL-F-35093 (81349)
6	F	GAUGE ASSEMBLY: USED WITH 4910-00-019-5241 ADAPTER TO CHECK CYLINDER COMPRESSION	4910-00-870-6283	10899180 (19207)
7	F	ADAPTER: USED WITH 4910-00-870-6283 GAUGE ASSEMBLY TO CHECK COMPRESSION	4910-00-019-5241	10934456 (19207)
8	H	CRADLE ASSEMBLY: USED WITH 4910-00-737-0432 AND 4910-00-789-1017 BRACKETS AND WITH 4910-00-985-0189 BRACKETS TO SUPPORT ENGINE OUT OF CARRIER FOR MAINTENANCE	4910-00-795-0198	7950189 (19207)
9	H	STAND, ENGINE MAINTENANCE: USED WITH 4910-00-795-0198 CRADLE ASSEMBLY, AND WITH 4910-00-737-0432 AND 4910-00-737-1017 BRACKETS TO SUPPORT ENGINE OUT OF CARRIER FOR MAINTENANCE	4910-00-795-0189	7950189 (19207)
10	H	BRACKET, FRONT: USED FOR MOUNTING ENGINE IN 4910-00-795-0189 CRADLE ASSEMBLY	2520-01-006-4589	11678105 (19207)
11	F	STUD: USED TO ALIGN CYLINDER HEAD	4910-00-591-6634	KM-J-9665 (33287)
12	H	INSTALLER BODY, INJECTOR: USED WITH 4940-00-711-1918 INSTALLER BODY TO INSTALL INJECTOR TUBE	4940-00-711-1918	B-1088189 (19207)
13	H	INSTALLER PILOT, INJECTOR: USED WITH 4910-00-711-1918 INSTALLER BODY TO INSTALL INJECTOR TUBE	4940-00-711-1919	10881896 (19207)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
14	H	INSTALLER FLARING DIE, INSTALLER: USED WITH 4910-00-711-1918 INSTALLER BODY TO FLARE SMALL END OF INJECTOR TUBE	4910-00-711-1920	10881892
15	H	REMOVER, CYLINDER LINER	5120-00-937-6140	J22490 (33287)
16	H	EXPANDER, FRONT OIL SEAL: USED TO EXPAND CRANKSHAFT FRONT OIL SEAL WHEN INSTALLING ENGINE LOWER FRONT COVER	4910-00-591-6640	10949378 (19207)
17	H	EXPANDER: USED TO EXPAND REAR OIL SEAL	5120-00-918-0587	KM-J-9769 (33287)
18	F	HOOK, LIFTING: USED TO LIFT FLYWHEEL	4910-00-722-3877	10881880 (19207)
19	H	STUD: USED TO ALIGN FLYWHEEL HOUSING OR ENGINE LOWER FRONT COVER	5120-00-872-6015	KM-J-7540 (33287)
20	H	CLAMP SET: USED TO LOCATE CYLINDER LINERS WHEN INSTALLING PISTONS	5120-00-999-8618	J-21793 (33287)
21	H	COMPRESSOR, PISTON RING: USED TO COMPRESS PISTON RINGS WHEN INSTALLING PISTON IN CYLINDER LINER	5120-00-901-8651	KM-J-6883 (33287)
22	H	REMOVER AND REPLACER: USED TO REMOVE AND INSTALL PISTON RINGS	5120-00-494-1846	KM-J-8128 (33827)
23	H	PISTON RING RETAINER: USED TO REPLACE PISTON PIN RETAINERS	5120-00-733-8874	10881874 (19207)
24	H	REMOVER AND REPLACER: USED TO REMOVE AND INSTALL CAMSHAFT BEARINGS	5180-00-591-6630	10949461 (19207)
25	H	PULLER KIT: USED TO REMOVE CAMSHAFT GEAR AND BLOWER GEARS	5120-00-338-6721	8708724 (19207)
26	H	PULLER, MECHANICAL: USED TO REMOVE CRANKSHAFT TIMING GEAR	5120-00-740-3345	KM-J-4871 (33287)
27	H	REPLACER, CRANKSHAFT TIMING GEAR: USED TO INSTALL CRANKSHAFT TIMING GEAR ON CRANKSHAFT	4910-00-736-1371	10949377 (19207)
28	F	REMOVER, VALVE GUIDE: USED TO REMOVE VALVE GUIDE	4910-00-591-6632	KM-J-777 (33287)
29	F	REPLACER, VALVE GUIDE: USED TO INSTALL VALVE GUIDE	5120-00-872-6014	KM-J-972 (33287)
30	H	REPLACER, VALVE SEAT INSERT: USED TO INSTALL VALVE SEAT INSERTS IN CYLINDER HEAD	4910-00-603-8925	10949451 (19207)
31	F	TOOL KIT, VALVE SEAT INSERT: USED TO REMOVE VALVE SEAT INSERTS	5130-00-591-6631	10949470 (19207)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
32	F	COMPRESSOR, VALVE SPRING: USED WITH 5120-00-999-4052 COMPRESSOR TO REMOVE EXHAUST VALVE SPRINGS	5120-00-733-8888	10881882 (19207)
33	F	ADAPTER, VALVE SPRING COMPRESSOR: USED WITH 5120-00-733-8888 COMPRESSOR TO REMOVE EXHAUST VALVE SPRINGS	4910-00-918-0583	J-7455-4 (33287)
34	F	GAUGE, THICKNESS: USED TO CHECK VALVE CLEARANCE	5120-00-273-8527	KM-J-9708 (33287)
35	H	INSTALLER, OIL PUMP DRIVE GEAR: USED TO INSTALL OIL PUMP DRIVE GEAR	4910-00-591-6639	10949379 (19207)
36	H	TEST FIXTURE: USED WITH 4910-00-255-4681 TESTER TO TEST INJECTORS	4910-00-355-6248	65-928-B (92372)
37	H	ADAPTER, NEEDLE VALVE: USED WITH 4910-00-355-6248 TEST FIXTURE	4910-00-764-5626	YA-396 (05083)
38	F	REMOVER, INJECTOR: USED TO REMOVE INJECTOR ASSEMBLY FROM CYLINDER HEAD	5120-00-219-8400	10881891 (19207)
39	H	REAMER: USED TO CLEAN FLAT PORTION OF INJECTOR NUT SPRAY TIP SEAT	5110-00-019-5240	10881903 (19207)
40	H	REAMER, SECOND OPERATION: USED TO CLEAN INJECTOR COPPER TUBE	5110-00-294-4606	10881907 (19207)
41	H	REAMER: USED TO REAM CARBON FROM INJECTOR SPRAY TIP	5110-00-219-8399	5344968 (33287)
42	H	REAMER, FIRST OPERATION: USED TO CLEAN INJECTOR SPRAY TUBE	5110-00-785-1016	10881897 (19207)
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 (19207)
45	H	GAUGE: USED TO TIME INJECTOR	5220-00-387-9581	10881887 (19207)
46	F	GAUGE, FUEL PRESSURE: USED TO CHECK FUEL PUMP OUTPUT PRESSURE	6620-00-671-4509	10934455 (19207)
47	O	WRENCH, OPEN-END AND BOX-END: USED TO TORQUE FUEL RETURN LINE NUTS	5120-00-740-3347	10949344 (19207)
48	O	TOOL, RADIATOR CLEANING: USED TO CLEAN RADIATOR	4910-00-611-6559	11678393 (19207)
49	H	LIFTING STRAP: USED WITH 4810-00-673-3801 ADAPTER TO CHECK CONVERTER MOUNTING SPACING, OR TO REMOVE AND INSTALL CONVERTER DRIVE COVER	4910-00-572-8608	8356175 (19207)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
50	H	HOLDER, STATOR ROLLERS: USED TO HOLD STATOR ROLLERS AND SPRING DURING ASSEMBLY	4910-00-572-8688	8356195 (19207)
51	H	EYE, LIFTING: USED WITH 4910-00-572-8606 STRAP TO LIFT HIGH RANGE CLUTCH PACKAGE AND CONVERTER DRIVE COVER	4910-00-673-3801	1086573 (19207)
52	H	HANDLE, REPLACERS: USED WITH 5120-00-572-8660, 5120-00-572-8658, 5120-00-572-8615, 5120-00-572-8656 AND 5120-00-759-5415 REPLACERS TO INSTALL FRONT OIL PUMP SEAL, HIGH-RANGE CLUTCH HOUSING BUSHING, OUTPUT BEARING AND SEAL, CONVERTER DRIVE COVER BUSHING AND OUTPUT SHAFT BUSHING	5120-00-316-9182	7950864 (19207)
53	H	REPLACER: USED WITH 5120-00-316-9182 HANDLE TO INSTALL HIGH-RANGE CLUTCH HOUSING BEARING	5120-00-572-8656	8356202 (19207)
54	H	SNAPRING DRIVE KIT: USED TO INSTALL TURBINE SHAFT SNAP RINGS	5120-00-572-8663	8356191 (19207)
55	H	PULLER BOLT: USED TO REMOVE GROUND SLEEVE ASSEMBLY	4910-00-572-8699	8356200 (19207)
56	H	REPLACER: USED WITH 5120-00-316-9182 HANDLE TO INSTALL OUTPUT BEARING AND OIL SEAL	5120-00-572-8615	8356185 (19207)
57	F	PULLER: USED TO REMOVE REAR SEAL	5120-00-572-8712	8356201 (19207)
58	F	KIT, PRESSURE GAUGE: USED TO CHECK TRANSMISSION OIL PRESSURE	4910-00-572-8612	8356176 (19207)
59	F	SLING, TRANSMISSION: USED TO LIFT TRANSMISSION AND TO MOUNT TRANSMISSION IN STAND (ADAPTER HOIST)	4910-00-572-8614	8356184 (19207)
60	H	COMPRESSOR, CLUTCH PACKAGE: USED TO HOLD CLUTCH PACKAGE DURING REMOVAL OR INSTALLATION, OR TO COMPRESS REVERSE CLUTCH PACKAGE DURING REMOVAL OR INSTALLATION OF HOLDING PIN	4910-00-572-8643	8356187 (19207)
61	H	KIT, REMOVER AND REPLACER: USED TO REMOVE AND INSTALL CLUTCH PISTON RETURN SPRING RETAINING RING	5180-00-572-8607	8356170 (19207)
62	H	REPLACER: USED WITH 5120-00-316-9182 HANDLE TO INSTALL HIGH-RANGE CLUTCH HOUSING BEARING	5120-00-572-8658	8356174 (19207)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
63	H	BOLT: USED TO HOLD INTERMEDIATE-RANGE CLUTCH BACKPLATE DURING DISASSEMBLY AND ASSEMBLY	4910-00-572-8701	8356186 (19207)
64	H	SET, GUIDE BOLT: USED TO POSITION FRONT AND REAR OIL PUMPS, FRONT AND REAR PILOT TUBES, AND DIAPHRAGM	4910-00-572-8710	8356165 (19207)
65	F	REPLACER: USED WITH 5120-00-316-9182 HANDLE TO INSTALL FRONT OIL PUMP SEAL	5120-00-672-8660	8356178 (19207)
66	H	REPLACER: USED TO INSTALL TRANSFER GEARCASE RETAINER AND HOUSING BEARING CUPS	5120-00-776-1864	10886353 (19207)
67	O	BAR, LIFTING: USED TO REMOVE AND INSTALL FINAL DRIVE	5120-00-918-0586	11589384 (19207)
68	H	REMOVER AND REPLACER: USED TO REMOVE AND INSTALL OUTPUT SHAFT BEARING	5120-00-771-7019	10874765 (19207)
69	F	REMOVER AND REPLACER: USED TO REMOVE AND INSTALL FINAL DRIVE OUTPUT SHAFT OIL SEAL	5120-00-771-7020	10875335 (19207)
70	F	REMOVER AND REPLACER, OIL SEAL: USED TO REMOVE AND INSTALL FINAL DRIVE OUTPUT SHAFT SPACER, RETAINER, AND BEARING; AND WITH 5315-00-834-0118 PIN AND 5120-00-678-2796 REPLACER	5120-00-771-7018	10875326 (19207)
71	F	PIN, STRAIGHT, HEADLESS: USED WITH 5120-00-771-7018 REMOVER AND REPLACER	5315-00-834-0118	MS16556-3 (96906)
72	O	ADAPTER, TORQUE WRENCH: USED TO TIGHTEN POWER-TRAIN UNIVERSAL JOINT SCREWS	5120-00-977-7421	1091766 (19207)
73	F	SOCKET, SOCKET-WRENCH: USED TO REMOVE AND INSTALL MASTER CYLINDER RESILIENT VALVE	5120-00-557-8171	11633523 (19207)
74	H	TOOL, DIFFERENTIAL BACKLASH: USED IN CONJUNCTION WITH DIAL INDICATOR AS ALIGNING TOOL	5120-00-074-1164	10942815 (19207)
75	H	DRIVER PLUG, BEARING AND BUSHING: USED TO REMOVE AND INSTALL RIGHT-ANGLE DRIVE PINION INNER AND OUTER BEARINGS	5120-00-649-8126	10865981 (19207)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
76	H	REMOVER AND REPLACER: USED WITH 5120-00-678-2798 REMOVER AND REPLACER TO REMOVE RIGHT-ANGLE PINION GEAR FROM HOUSING	5120-00-649-8140	
77	H	REMOVER AND REPLACER, SLEEVE, SNAPRING: USED TO REPLACE RIGHT-ANGLE DRIVE HUB BEARING	5120-00-678-2789	10865770
78	O	REMOVER AND REPLACER: USED TO REMOVE RIGHT-ANGLE DRIVE PINION GEAR; AND WITH 5120-00-649-8140 SLEEVE TO REMOVE RIGHT-ANGLE DRIVE CARRIER AND OUTER BEARING; AND TO REPLACE RIGHT-ANGLE DRIVE PINION BEARING CAP OIL SEAL OR DIFFERENTIAL SHAFT BEARING OIL CAP SEAL; AND TO REMOVE AND INSTALL IDLER AND ROAD WHEEL ARM HOUSING BEARINGS AND OIL SEAL	5120-00-678-2798	8763117 (19207)
79	O	REPLACER, WHEEL HUB BEARING CUP: USED TO INSTALL IDLER AND ROAD WHEEL HUB INNER AND OUTER BEARING CUPS	5120-00-678-2796	10863002 (19207)
80	O	GAUGE, SPROCKET WEAR: USED TO CHECK DRIVE SPROCKET WEAR, TRACK BUSHING WEAR, AND TRACK TENSION	5120-01-041-9920	12253280 (19207)
81	O	FIXTURE, TRACK CONNECTING: USED TO DISCONNECT AND CONNECT TRACKS (2 EACH)	5120-01-041-4624	12253183 (19207)
82	O	PIN, DRIFT: USED TO DISCONNECT TRACKS	5120-01-006-8847	11678718 (19207)
83	F	REMOVER AND REPLACER: USED TO REMOVE AND INSTALL PIVOT STEER PISTON DRAG UNIT	5120-00-966-5951	1094246 (19207)
84	O	REMOVER, SHOCK ABSORBER: USED TO REMOVE SHOCK ABSORBER	5120-00-710-8075	12269380 (19207)
85	F	TOOL SET: USED TO REMOVE AND INSTALL OVERSIZE ROSAN INSERTS	5180-00-966-5961	10932474 (19207)
86	H	REMOVER, FUEL VALVE SCREEN: USED TO REMOVE HEATER FUEL VALVE SCREEN	5120-00-735-5871	7355871 (19207)
87	H	SCRAPER, CARBON: USED TO REMOVE CARBON FROM HEATER COMBUSTION CHAMBER	5120-00-735-5872	7355872 (19207)
88	O	ADAPTER, PULLER: USED WITH 5120-00-557-3615 PULLER	5120-00-933-8458	11592843 (19207)
89	O	TOOL KIT, ELECTRONIC MAINTENANCE (LI W37913)	5180-00-575-0716	10886353
90	H	LIFTING SLING	5340-01-247-3070	3383W265 (23755)

MAINTENANCE ALLOCATION CHART (MAC)—Continued

0540 00

EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
91	H	RECESSED TIPS ALIGNMENT TOOL	5120-00-293-0644	8722 (22653)
92	O	PLIERS, ELEC CON	5120-00-624-8065	AT508K
93	O	ADJ, STEER CENTERING: USED FOR M548A3 CROSS DRIVE TRANSMISSION	2530-01-249-6439	J35223
94	F	SHOP EQUIP, SUPPL #1	4910-00-754-0706	SC4910-95-CL-A62
95	F O	SHOP EQUIP, COM #2	4910-00-754-0650	SC4910-95-CL-A72
96	F O	SHOP EQUIP, COM #1	4910-00-754-0654	SC4910-95-CL-A74
97	O	TOOL SET, SUPPL #2	4940-00-754-0743	SC4910-95-CL-A08
98	F H O	TOOL KIT, GEN MECH	5180-00-177-7033	SC5180-90-CL-N26
99	F O	CALKING GUN	5120-00-679-5655	
100	O	BAR, LIFTING FINAL DRIVE	5120-00-918-0586	11589384
101	O	GAUGE, OIL TESTER	6695-01-242-6795	11650182
102	F O	ADAPTER, TORQUE WRENCH	5120-00-213-6976	11663358-1
103	F	STAND, ENGINE AND TRANS: USED FOR M548A3 POWERPLANT	4910-01-239-6836	12349616
104	F O	SLING, ENGINE AND TRANS: USED FOR M548A3 POWERPLANT	1450-01-240-2206	12350306
105	O	TENSIOMETER, V-BELT: USED FOR M548A3 FAN AND GENERATOR BELTS	6635-00-921-6255	12998F
106	O	TEST SET, STE/ICE	4910-01-222-6589	12259266
107	F O	MULTIMETER	6625-01-265-6000	27/FMW/ACCE
108	F H O	SHOP EQUIP, FLD BSC	4910-00-754-0705	SC4910-95-CL-A31
109	H	BLADE THICKNESS GAUGE	5210-01-048-7085	J23185
110	H	SHIELD, TURBO INLET	4910-01-127-7959	J26554-A
111	F	WRENCH, RETAINING NUT	5120-00-806-5230	J5895
112	F	PRIMER, FUEL SYSTEM	4910-00-402-9623	J5956
113	H	TESTER, DIESEL FUEL	4910-00-255-8641	3YFL
114	F	WELDING SHOP, TLRMTD	3431-01-090-1231	SC3431-95-CL-A04

Table 3. REMARKS, SECTION IV

REMARKS CODE	REMARKS
A	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. THE POWER PLANT IS NOT AN AUTHORIZED REPLACEMENT PART.
B	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P 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 9-2350-247-24P.
D	REPAIR IS LIMITED TO PARTS AUTHORIZED IN TM 9-2350-247-24P.
E	COMPLETE REPAIR IS AUTHORIZED AT DIRECT SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P FOR PARTS REPLACED AT UNIT MAINTENANCE.
F	REPAIR IS LIMITED TO PARTS LISTED IN TM 9-2920-225-34P.
G	REPAIR IS LIMITED TO REPLACEMENT OF PARTS LISTED IN TM 9-2815-205-34P.
H	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P FOR PARTS REPLACED BY UNIT MAINTENANCE. SEE TM 9-2350-254-34P FOR PARTS REPLACED BY DIRECT SUPPORT MAINTENANCE.
I	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P FOR PARTS REPLACED BY UNIT MAINTENANCE. SEE TM 9-2350-238-34P FOR PARTS REPLACED BY DIRECT SUPPORT MAINTENANCE.
J	TRACK SHOE REMOVAL MAY BE REQUIRED TO ADJUST THE TRACK PROPERLY. THE TRACK ASSEMBLY IS NOT AUTHORIZED AS A REPAIR PART.
L	THE ASSEMBLY IS NOT AUTHORIZED AS A REPAIR PART.
M	REFER TO TM 9-2350-238-34 FOR ITEM MAINTENANCE INFORMATION.
P	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P FOR MOUNTING COMPONENTS. SEE TM 9-2350-238-34P FOR COMPONENT PARTS.
Q	THE POWER PLANT HAS TO BE REMOVED TO PERFORM THE REPLACE TASK
R	COMPLETE REPAIR IS AUTHORIZED AT GENERAL SUPPORT MAINTENANCE. SEE TM 9-2350-247-24P FOR PARTS REPLACED BY ORGANIZATIONAL MAINTENANCE. SEE TM 9-2520-272-34P FOR PARTS REPLACED BY DIRECT SUPPORT MAINTENANCE.
S	IF SERVICING IS REQUIRED, THE FAN NEEDS TO BE REMOVED TO ADD OIL.
T	EXHAUST DUCTS NEED TO BE REMOVED TO PERFORM TASK.
U	GENERATOR OR ENGINE STARTER CAN BE REACHED THROUGH BOTTOM HULL ACCESS COVER (M548A3).
V	REFER TO TM 9-2450-205-24&P FOR MAINTENANCE PROCEDURES, REPAIR PARTS, AND MAINTENANCE ALLOCATION CHART (MAC).

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES LIST

0541 00

INTRODUCTION

Scope

This work package lists all common tools, supplements and special tools/fixtures needed to maintain the M548A1 and M548A3 carriers.

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, (Item 72)”).

Column (2) — Name. This column lists the item by noun nomenclature and other descriptive features (e.g., “Bracket, angle, lifting”).

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 work package.

Table 1. Tool Identification List

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
1	ADAPTER, SOCKET, WRENCH	5120-00-227-8088	SH-131	SC 4910-95-CL-A72
2	ADAPTER, TORQUE WRENCH, 1/2 IN DRIVE, 9/16 IN	5120-00-977-7421	10917666	TM 9-2350-247-24P
3	ADAPTER, TORQUE WRENCH, 7C U-JOINT	5120-00-213-6976	11663358-1	TM 9-2350-247-24P
4	ADAPTER, TORSION BAR	5120-01-017-5328	12251805	TM 9-2350-247-24P
5	ADJUSTING TOOL, STEER CENTERING	2530-01-249-6439	J35223	TM 9-2350-247-24P
6	ANALYZER SET, ENGINE STE/ICE-R	4910-01-222-6589	12259266	TM 9-4910-571-12&P
7	BAR, LIFTING, FINAL DRIVE	5120-00-918-0586	11589384	TM 9-2350-247-24P
8	BLADE, HAND HACKSAW	5110-00-277-4588	31-51024	SC 4910-95-CL-A74
9	CAN, RADIATOR FILLING	7240-00-499-8028	MIL-C-43522	TM 9-2350-247-24P
10	CLEANING TOOL, RADIATOR	4910-00-611-6559	11678393	TM 9-2350-247-24P
11	CRIMPING TOOL, TERMINAL	5120-00-432-7836	MY28	TM 9-2350-247-24P
12	DISPENSER, SEALANT	5120-00-679-5655	101	TM 9-2350-247-24P
13	DRILL, PORTABLE ELECTRIC, 1/2 IN	5130-00-293-1849	W-D-661	SC 4910-95-CL-A74

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES

0541 00

LIST—Continued

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
14	DRILL SET, TWIST	5133-00-293-0983	DB129B	SC 4910-95-CL-A74
15	FITTING KIT, TUBE-PIPE	4730-00-470-6625	51025	SC 4910-95-CL-A74
16	FIXTURE, TRACK CONNECTING	5120-01-041-4624	12253183	TM 9-2350-247-24P
17	FRAME, HAND HACKSAW	5110-00-289-9657	163-20	SC 4910-95-CL-A74
18	GAUGE, TENSION	6635-00-921-6255	12998F	TM 9-2350-247-24P
19	GAUGE, TRACK AND SPROCKET	5220-01-041-9920	12253280	TM 9-2350-247-24P
20	GLOVES, WELDER'S	8415-00-268-7859	A-A-50022	SC 4910-95-CL-A72
21	GOGGLES, INDUSTRIAL	4240-00-052-3776	A-A-1110	SC 4910-95-CL-A74
22	GUN, AIR BLOW	4940-00-333-5541	DGA520	SC 4910-95-CL-A74
23	GUN, SOLDERING	3439-00-618-6623	D550-3	SC 4910-95-CL-A74
24	HAMMER, SOFT HEAD	5120-01-065-9037		TM 9-2350-247-24P
25	HEATER, GUN TYPE, ELECTRIC	4940-00-561-1002	500A	SC 5180-95-CL-B19
26	HELMET, WELDER'S	4240-00-540-0623	A-A-1994	SC 4940-95-CL-A08
27	LIFTER, ROAD WHEEL	5120-01-062-5607	12268612	TM 9-2350-247-24P
28	MIRROR, INSPECTION	5120-00-596-1098	24	TM 9-2350-247-24P
29	MULTIMETER	6625-01-139-2512	T00377	SC 4910-95-CL-A74
30	PLIERS, RETAINING RING	5120-00-288-9717	2104893	SC 4910-95-CL-A74
31	PLIERS, RETAINING RING	5120-00-293-0046	0500	SC 4910-95-CL-A74
32	PLIERS, SET, RETAINING	5120-00-789-0492	4440R	SC 4910-95-CL-A74
33	PLIERS, SLIP JOINT	5120-00-624-8065	AT508K	TM 9-2350-247-24P
34	PRESSURE GAUGE KIT	6695-01-242-6795	11650182	TM 9-2350-247-24P
35	PULLER, BATTERY TERMINAL	5120-00-944-4268	21	SC 4910-95-CL-A74
36	PULLER, MECHANICAL	5120-00-595-9305	GGGP781	SC 4910-95-CL-A74
37	PULLER, SLIDE	5120-00-557-3615	5573615	TM 9-2350-247-24P
38	PUNCH, DRIVE PIN	5120-01-006-8847	11678718	TM 9-2350-247-24P
39	REMOVER AND REPLACER	5120-00-678-2798	8763117	TM 9-2350-247-24P
40	REMOVER AND REPLACER	5120-00-740-3346	10943279	TM 9-2350-247-24P
41	REPLACER, GREASE CAP	5120-00-678-2796	10863002	TM 9-2350-247-24P
42	RIVETER, BLIND, HAND KIT	5120-01-289-4310	HP-2	
43	SCALE, WEIGHING	6670-00-254-4634	AAA-S-133	SC 4910-95-CL-A74
44	SCREW, CAP, SOCKET HEAD	5305-00-983-7456	MS16998-97	TM 9-2350-247-24P

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES

0541 00

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(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
45	SLING, BEAM TYPE	4910-00-646-6893	10942647	TM 9-2350-247-24P
46	SLING, ENDLESS	3940-00-675-5003	PD101-96	TM 9-2350-247-24P
47	SLING, ENGINE AND TRANSMISSION	3940-01-240-2206	12350306	TM 9-2350-247-24P
48	SOCKET, SOCKET WRENCH SPLINED	5120-00-906-1051	8355955	TM 9-2350-247-24P
49	SPACER, RING	5365-00-004-0763	10863001	TM 9-2350-247-24P
50	STRAIGHT EDGE	5120-00-264-6400	MIL-S-15769 TYPE 2	TM 9-2350-247-24P
51	STRIPPER, WIRE, HAND	5110-00-268-4224	GA116	TM 9-2350-247-24P
52	TAPE, MEASURING	5120-00-554-7085	GGG-T-106	TM 9-2350-247-24P
53	TEST KIT, GENERATOR		12358697	TM 9-2350-247-24P
54	TEST KIT, RADIATOR	4910-00-728-8227	ST255A	TM 9-2350-247-24P
55	TESTER, ANTIFREEZE AND BATTERY	6630-00-105-1418	10425	SC 4910-95-CL-A74
56	TOOL KIT, ELECTRICAL	5180-00-876-9336	7550526	SC 4910-95-CL-A74
57	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033	SC5180-90- CL-N26	SC 5180-90-CL-N26
58	TOOL, SHOCK ABSORBER	5210-01-102-4268	12269380	TM 9-2350-247-24P
59	V-BELT, TENSIO METER, DIAL ENGINE	6635-01-093-3710	J23600-B	TM 9-2350-247-24P
60	WRENCH, OPEN END BOX	5120-00-740-3347	10949344	TM 9-2350-247-24P
61	WRENCH, PIPE, 10 IN	5120-00-277-1485	GGG-W-651	TM 9-2350-247-24P
62	WRENCH SET, OPEN END	5120-00-148-7918	GGG-W-636	SC 4910-95-CL-A74
63	WRENCH SET, SOCKET, 1/4 IN DRIVE	5120-00-081-2305	GGG-W-641	SC 4910-95-CL-A74
64	WRENCH SET, SOCKET, 3/8 IN DRIVE	5120-00-322-6231	GGG-W-641	SC 4910-95-CL-A74
65	WRENCH SET, SOCKET, 3/4 IN DRIVE	5120-00-204-1999	FED STD 353	SC 4910-95-CL-A72
66	WRENCH, SOCKET ATTACHMENT, 3/4 IN DRIVE, 1-3/8 IN HEX	5120-00-053-3625	10932504	TM 9-2350-247-24P
67	WRENCH, TORQUE, 1/4 IN DRIVE, 0-75 LB-IN	5120-01-112-9532	B107.14M TYICLCSTI	SC 4910-95-CL-A74
68	WRENCH, TORQUE, 1/2 IN DRIVE, 0-150 LB-FT	5120-00-247-2540	J-1313-B	SC 4910-95-CL-A74
69	WRENCH, TORQUE, 1/2 IN DRIVE, 0-170 LB-FT	5120-00-640-6364	1753LDF	SC 4910-95-CL-A74
70	WRENCH, TORQUE, 3/8 IN DRIVE, 0-200 LB-IN	5120-00-853-4538	F200I	SC 4910-95-CL-A72

**COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES
LIST—Continued**

0541 00

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
71	WRENCH, TORQUE, 3/8 IN DRIVE, 0-600 LB-IN	5120-00-542-5681	F600I3-8	SC 5180-95-CL-A12
72	WRENCH, TORQUE, 3/4 IN DRIVE, 0-600 LB-FT	5120-00-221-7983	SW130-301	SC 4910-95-CL-A74

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST**0542 00****INTRODUCTION****Scope**

This work package lists expendable supplies and materials you will need to maintain the M548A1 and M548A3 carriers. These items are authorized to you by CTA 50-970, *Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)*.

Explanation of Columns in the Expendable/Durable Items List

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 item (e.g., “Antiseize compound (Item 6)”).

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) in parentheses followed by the part number.

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,CAGE,PART NUMBER	(5) U/M
1	O	8040-00-664-4318	ADHESIVE (18876) 9995460	PT
2	O	8040-01-068-2423	ADHESIVE (94960) 2141PT	PT
3	O	9150-00-985-7244	AIRCRAFT GREASE (81349) MIL-G-23827	TU
4	O	6850-00-181-7940	ANTIFREEZE (81349) MIL-A-46153	DR
5	O	6630-01-011-5039	ANTIFREEZE TEST KIT (IBY35) 1208	EA
6	O	8030-00-251-3980	ANTISEIZE COMPOUND (05972) 76764	LB
7	O	8030-00-577-4740	CAULKING COMPOUND (81349) TT-C-1796	GL
8	O	7920-00-044-9281	CLEANING CLOTH (51200) MIRACLE WIPE L001	BX
9	O	6850-01-277-0595	CLEANING COMPOUND (59557) 134-HI-SOLV	CN

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST—Continued

0542 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME,DESCRIPTION,CAGE,PART NUMBER	(5) U/M
10	O	5970-01-159-8000	ELECTRICAL INSULATING COMPOUND (83574) PR1568 AEROSOL	OZ
11	O	6810-00-249-9354	ELECTROLYTE SULFURIC ACID (19207) 10875529	GL
12	O	6810-00-236-0702	ELECTROLYTE SULFURIC ACID (TROPICAL) (81348) 0-5-801	GL
13	O	9150-01-152-4119	ENGINE LUBRICATING OIL (81349) MIL-L-2104	DR
14	O	9150-00-190-0905	GAA GREASE (81349) MIL-G-10924	CN
15	O	9150-00-231-2361	GENERAL PRESERVATIVE LUBRICATING OIL (81349) PETROTEC 90B	QT
16	O	7930-00-531-9715	GENERAL PURPOSE DETERGENT (81349) MIL-D-16791	GL
17	O	3439-00-076-1279	HEAT SINK COMPOUND (28493) X-275	EA
18	O	9150-01-131-3324	HYDRAULIC FLUID (FRH) (81349) MIL-H-46170	GL
19	O	5970-00-161-7422	INSULATING VARNISH (24446) 1201	GL
20	O	5970-00-063-1495	INSULATION SLEEVING (38597) M23053/1-103-0	FT
21	O	5970-00-063-1496	INSULATION SLEEVING (81349) M23053/1-105-0	FT
22	O	5970-00-063-1499	INSULATION SLEEVING (81349) M23053/1-102-0	FT
23	O	5970-00-954-1624	INSULATION SLEEVING (81349) M23053/2-107-0	FT
24	O	5970-01-044-4531	INSULATION SLEEVING (81349) M23053/1-104-0	FT
25	O	5970-00-816-6056	INSULATION TAPE (81348) HH-I-595-B-108-0	FT
26	O	9150-00-754-2595	MOLYBDENUM D GREASE (11770) MIL-G-21164	LB
27	O	9505-00-293-4208	NONELECTRICAL WIRE (96906) MS20995C32	LB
28	O	4720-00-278-4892	NONMETALLIC HOSE (19207) 12309272-4	FT

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST—Continued

0542 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME,DESCRIPTION,CAGE,PART NUMBER	(5) U/M
29	O	6850-00-227-1887	OPTICAL LENS CLEANING COMPOUND (81349) MIL-C-43454	QT
30	O	8020-00-297-6657	PAINT BRUSH (81348) H-B-491	EA
31	O	8010-01-184-0334	POLYURETHANE COATING (81348) TT-C-542	GL
32	O	9320-00-272-2990	RUBBER ADHESIVE TAPE (81349) MIL-T-6841	FT
33	O	8030-00-088-7818	SEALING COMPOUND (81349) MIL-S-7916	CN
34	O	8030-00-148-9833	SEALING COMPOUND (81349) MIL-S-46163, 10 CC BOTTLE	BX
35	O	8030-00-159-8177	SEALING COMPOUND (81349) MIL-S-12158	QT
36	O	8030-00-247-2525	SEALING COMPOUND (81349) MIL-S-45180	TU
37	O	8030-00-252-3391	SEALING COMPOUND (81349) MIL-S-45180TY2	TU
38	O	8030-00-841-6832	SEALING COMPOUND (81349) MIL-S-8802	KT
39	O	8030-01-166-0675	SEALING COMPOUND (05972) 567-47	TU
40	O	8030-00-900-2373	SEALING COMPOUND PRIMER (05972) MIL-S-22473	BT
41	O	6810-00-264-6618	SODIUM BICARBONATE (81348) O-S-576	LB
42	O	3439-00-273-1637	SOLDER, 1/8 IN. (81348) QQ-S-571	LB
43	O	5975-00-111-3208	TIEDOWN STRAP (96906) MS3367-5-9	EA
44	O	3439-00-453-5472	TIN ALLOY SOLDER (81348) SN60WRMAP2 0.036 1 LB	LB
45	O	7920-00-205-1711	WIPING RAG (58536) A-A-2522	BE
46	O	9150-00-530-6814	WIRE ROPE GREASE (81349) MIL-G-18458	CN

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST—Continued

0542 00

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME,DESCRIPTION,CAGE,PART NUMBER	(5) U/M
47	O	8030-00-081-2339	SEALING COMPOUND (05972) 088-21 MIL-S-22473 GRA	CC
48	O	8030-00-181-8372	SEALING COMPOUND PRIMER (05972) 747-56 MIL-S-22473GRTFMR	CN

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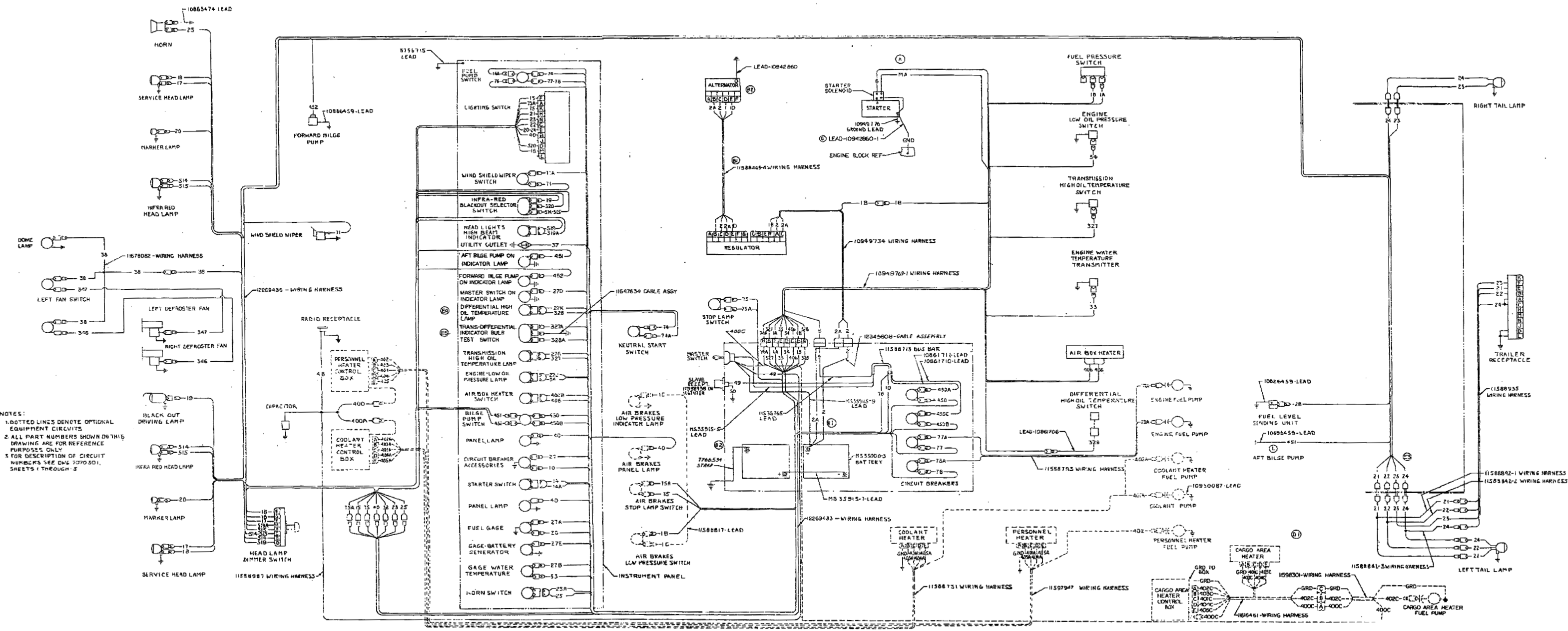
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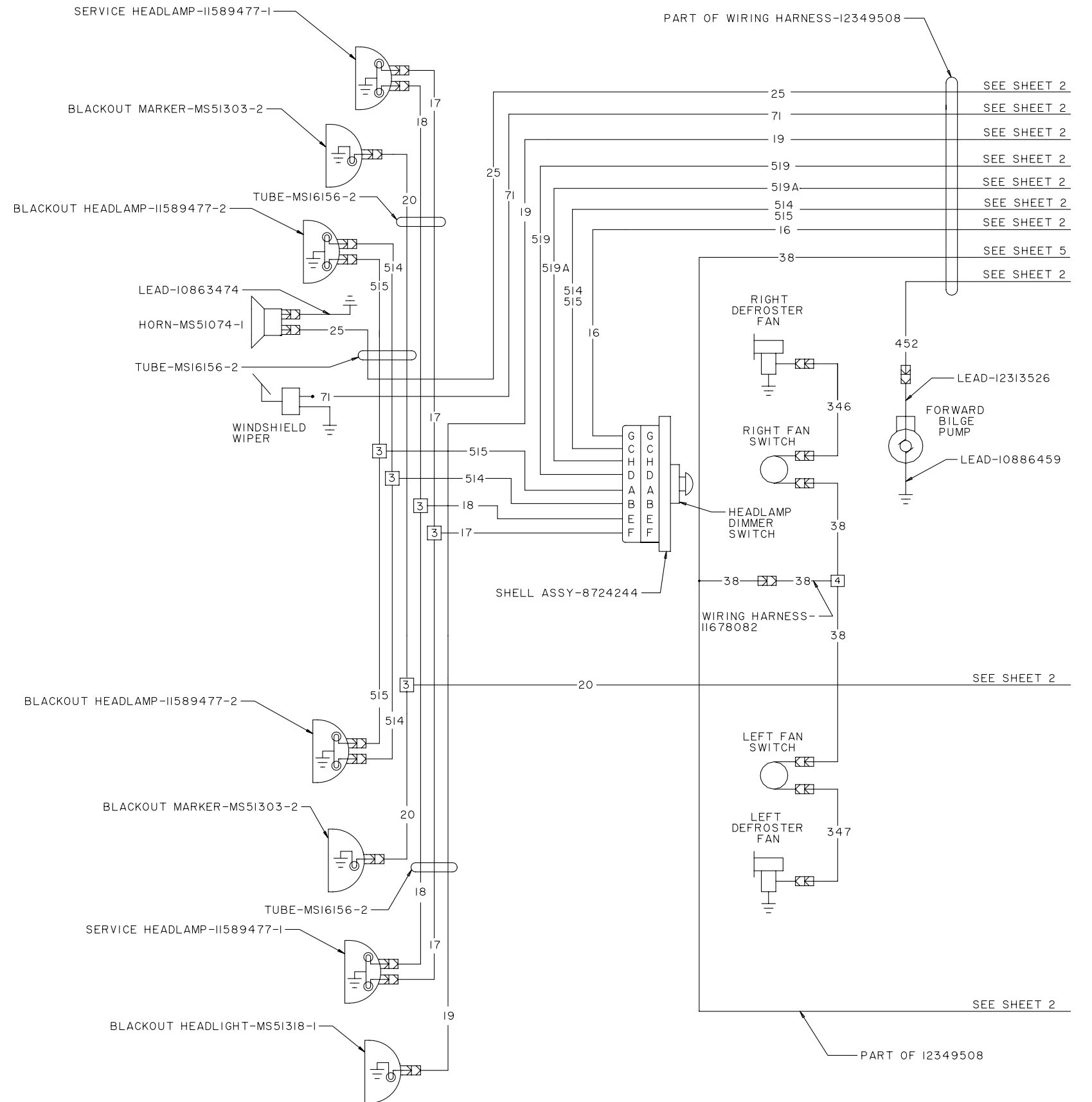
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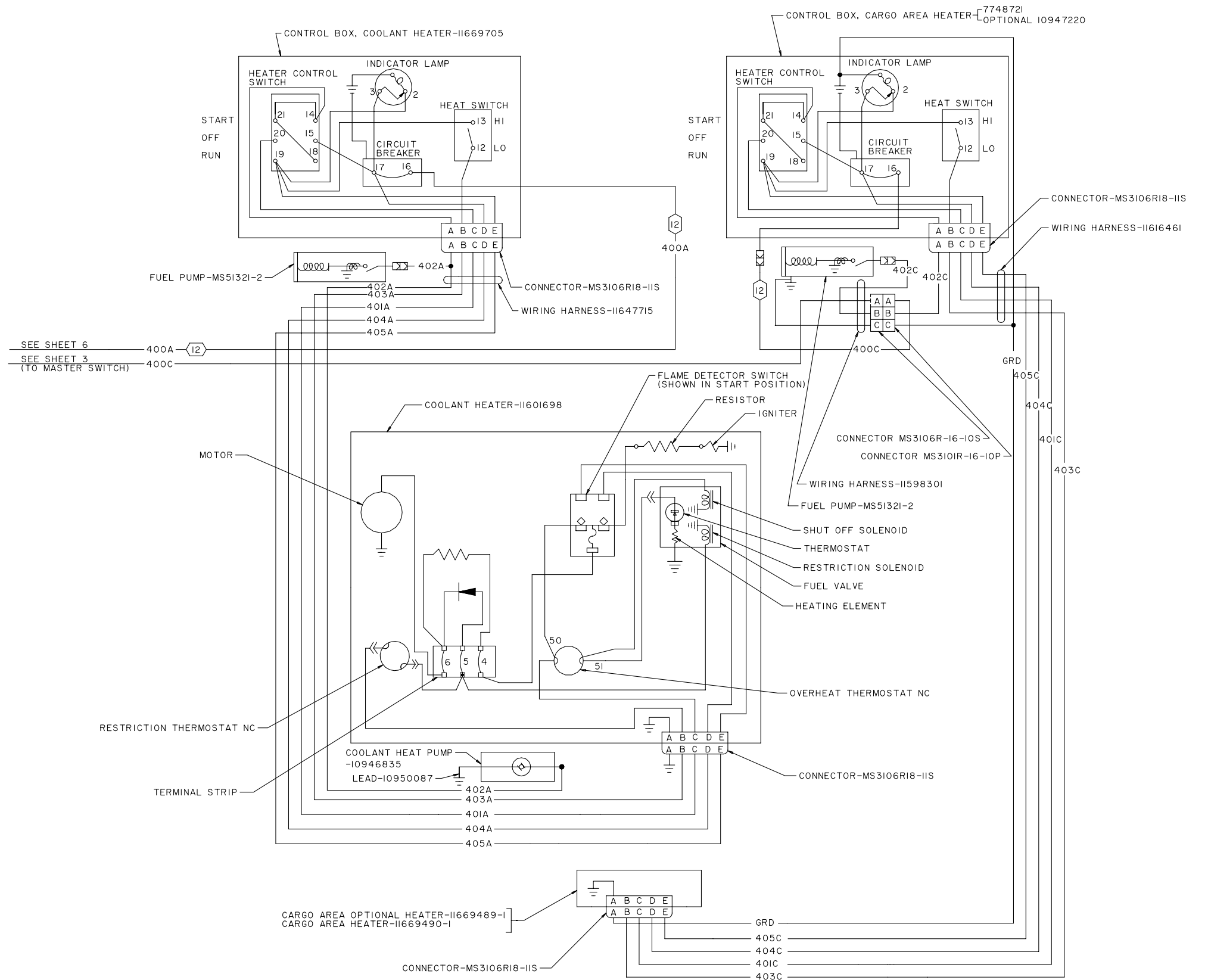
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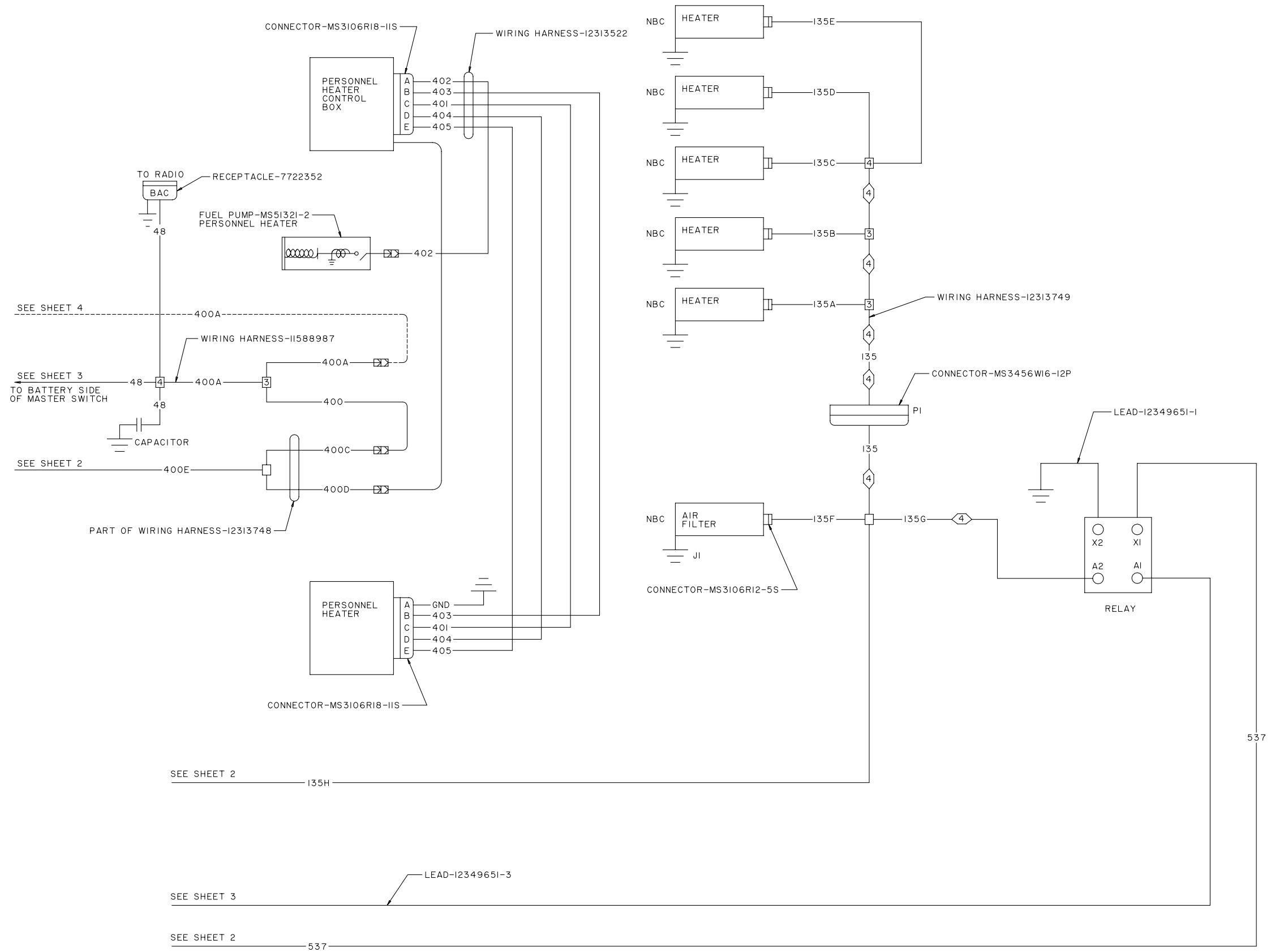


NOTES:
 1. DOTTED LINES DENOTE OPTIONAL EQUIPMENT CIRCUITS
 2. ALL PART NUMBERS SHOWN ON THIS DRAWING ARE FOR REFERENCE PURPOSES ONLY
 3. FOR DESCRIPTION OF CIRCUIT NUMBERS SEE DWG 7070501, SHEETS 1 THROUGH 5

M548A1 Carrier
 Electrical Circuit Diagram







By Order of the Secretary of the Army:

Official



JOEL B. HUDSON

*Administrative Assistant to the
Secretary of the Army*

0105109

ERIC K. SHINSEKI
*General, United States Army
Chief of Staff*

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PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE					TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE

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PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE		TITLE			
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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METRIC CONVERSION CHART

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	Milliliters	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 Centimeters	Cubic Inches	0.060
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

TEMPERATURE CONVERSIONS

$$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$$

212° Fahrenheit is equivalent to 100° Celsius

90° Fahrenheit is equivalent to 32.2° Celsius

32° Fahrenheit is equivalent to 0° Celsius

$$9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$$

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