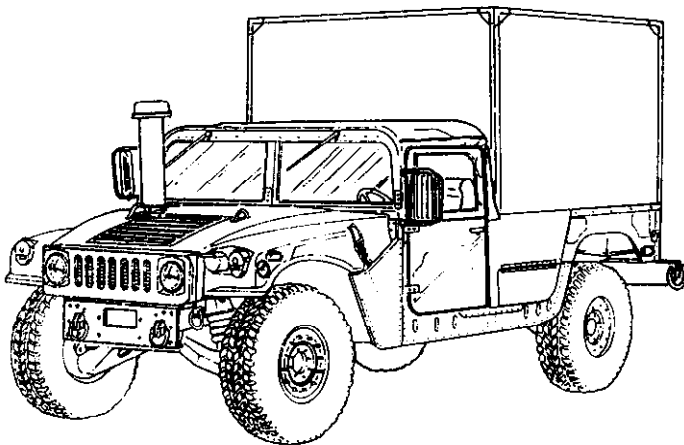


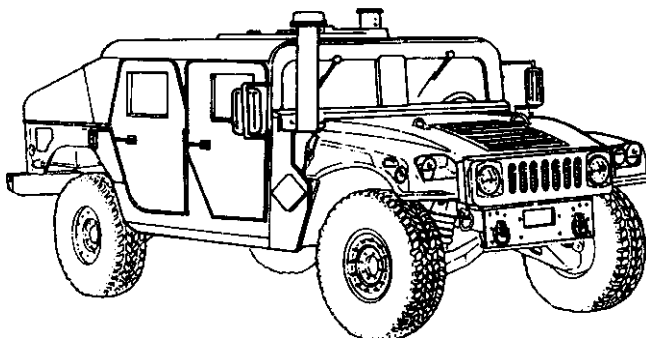
TECHNICAL MANUAL
UNIT, DIRECT SUPPORT, AND
GENERAL SUPPORT MAINTENANCE

FOR

**TRUCK, UTILITY: S250 SHELTER
CARRIER, 4X4, M1113
(2320-01-412-0143) (EIC: B6B)**



**TRUCK, UTILITY: UP-ARMORED
CARRIER, 4X4, M1114
(2320-01-413-3739) (EIC: B6C)**



Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**

DECEMBER 1997

**CHANGE
NO. 1**

**HEADQUARTERS,
DEPARTMENTS OF THE ARMY, AND
THE AIR FORCE
Washington, D.C., 31 October 2001**

**TECHNICAL MANUAL
VOLUME 2 OF 2
UNIT, DIRECT SUPPORT, AND
GENERAL SUPPORT MAINTENANCE
FOR**

TRUCK, UTILITY: S250 SHELTER CARRIER, 4X4, M1113 (2320-01-412-0143) (EIC: B6B)

TRUCK, UTILITY: UP - ARMORED CARRIER, 4X4, M1114 (2320-01-413-3739) (EIC: B6C)

TM 9-2320-387-24-2, December 1997, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the margin of the page.
3. File this change sheet in front of the publication for reference purposes.

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By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0119704

By Order of the Secretary of the Air Force:

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Chief of Staff

Official:

HENRY VICCELLIO, JR.
General, United States Air Force
Commander, Air Force Materiel Command

Distribution:

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WARNING

EXHAUST GASES CAN KILL

Brain damage or death can result from heavy exposure. Precautions must be followed to ensure personnel safety when the personnel heater or engine of any vehicle is operated for any purpose.

1. Do not operate your vehicle engine in enclosed areas.
 2. Do not idle vehicle engine with vehicle windows closed.
 3. Be alert at all times for exhaust odors.
 4. Be alert for exhaust poisoning symptoms. They are:
 - Headache
 - Dizziness
 - Sleepiness
 - Loss of muscular control
 5. If you see another person with exhaust poisoning symptoms:
 - Remove person from area
 - Expose to open air
 - Keep person warm
 - Do not permit physical exercise
 - Administer artificial respiration, if necessary*
 - Notify a medic
- * For artificial respiration, refer to FM 21-11.
6. BE AWARE, the field protective mask for nuclear, biological, or chemical (NBC) protection will not protect you from exhaust poisoning.

THE BEST DEFENSE AGAINST EXHAUST POISONING IS ADEQUATE VENTILATION.

WARNING SUMMARY

- Improper cleaning methods and use of unauthorized cleaning solutions may cause injury to personnel or damage to equipment. See TM 9-247 for correct information.
- Compressed air used for cleaning purposes will not exceed 30 psi (207 kPa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).
- Do not touch hot exhaust system components with bare hands. Severe injury will result.
- Gloves must be worn whenever handling winch cable. Severe injury may result.
- Seatbelts are to be replaced as a set. Failure to do this may cause injury to personnel or damage to equipment.
- Direct all personnel to stand clear during any hoisting operations. A heavy, swinging load can be extremely dangerous. Failure to do so may cause injury to personnel or damage to equipment.
- Diesel fuel is highly flammable. Do not perform any procedure near fires, flames, or sparks. Severe injury or death may result.
- Ensure engine compartment is free of all tools and working material before starting engine. Failure to do this may cause injury to personnel or damage to equipment.
- Do not remove surge tank filler cap before depressurizing system when engine temperature is above 190°F (88°C). Steam or hot coolant under pressure will cause severe burns.
- Do not drain oil when engine is hot. Severe injury to personnel will result.
- Allow transmission/transfer case to cool before performing maintenance. Failure to do this may cause injury.
- When steam cleaning, protective clothing must be used. Failure to do this may cause injury.
- Air pressure must not exceed 50 psi (345 kPa) when air checking forward and direct clutch piston or injury to personnel or damage to equipment may result.
- Direct all personnel to stand clear of vehicle before starting engine. Transmission slipping into gear may cause injury to personnel or damage to equipment.
- When sanding fiberglass, personal protective equipment (respirator, goggles/shield, gloves, coveralls, etc.) must be used. Failure to do this may cause injury.
- Do not operate heater in enclosed areas. Exhaust gases can kill. Make sure work area is well ventilated and exhaust fumes are routed away from test area.
- Drycleaning solvent is flammable and will not be used near an open flame. A fire extinguisher will be kept nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel or damage to equipment.
- Always wear eye protection around R-134a or when servicing the air-conditioning system. Exercise extreme care when handling R-134a; direct contact between R-134a and skin may cause frostbite. Never smoke in areas where R-134a is used or stored. Ensure adequate ventilation whenever R-134a is being discharged. Personnel with a history of cardiac rhythm abnormalities should be made aware of potential aggravation as a result of exposure to R-134a. Failure to do so may result in injury to personnel.
- Air-conditioning system must be discharged prior to replacing components. Failure to do this may result in injury to personnel or damage to equipment.

LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page.

Dates of issue for original and changed pages of volume 2 are:

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TECHNICAL MANUAL
NO. 9-2320-387-24-2

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
WASHINGTON, D.C., 31 December 1997

TECHNICAL ORDER
NO. 36A12-1A-3052-2

TECHNICAL MANUAL VOLUME 2 OF 2

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE FOR

TRUCK, UTILITY: S250 SHELTER
CARRIER, 4X4, M1113
(2320-01-412-0143) (EIC: B6B)

TRUCK, UTILITY: UP-ARMORED
CARRIER, 4X4, M1114
(2320-01-413-3739) (EIC: B6C)

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This manual is published in two parts. TM 9-2320-387-24-1 contains chapters 1 through 9. TM 9-2320-387-24-2 contains chapters 10 through 33 and appendices A through H.

This manual contains a table of contents and alphabetical index for both volumes 1 and 2.

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10-2. FUEL FILLER HOUSING MAINTENANCE

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Removal b. Inspection | <ul style="list-style-type: none"> c. Installation |
|---|---|

INITIAL SETUP:

Tools

General mechanic's tool kit:
 automotive (Appendix B, Item 1)
 Maintenance and repair shop equipment:
 automotive (Appendix B, Item 2)

Materials/Parts

Sealing compound
 (Appendix C, Item 72.1)

Manual References

TM 9-2320-387-10
 TM 9-2320-387-24P

Equipment Condition

Fuel door open (M1114 only) (TM 9-2320-387-10).

Maintenance Level

Unit

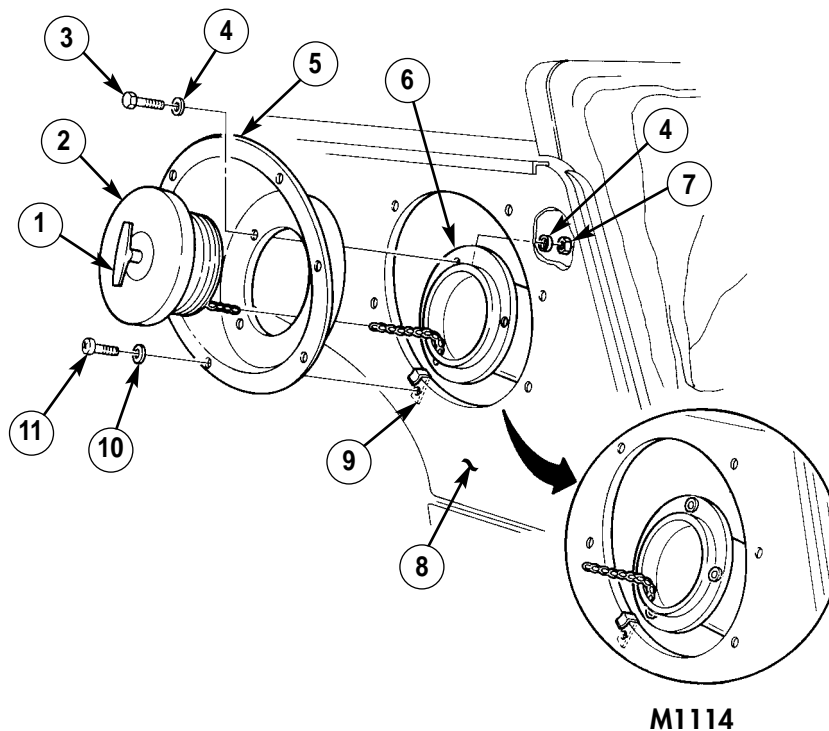
a. Removal

1. Turn filler cap T-handle (1) and remove filler cap (2) from filler spout (6).

NOTE

M1114 vehicles are equipped with plusnuts instead of nuts and washers.

2. Remove three nuts (7), washers (4), capscrews (3), and washers (4) from filler housing (5) and filler spout (6).
3. Remove six screws (11) and washers (10) from fuel filler housing (5) and right outer wheelhouse panel (8).
4. Push filler cap (2) through filler housing (5) and remove filler housing (5).
5. Inspect six speednuts (9) for presence or damage. Replace if defective or missing.



10-2. FUEL FILLER HOUSING MAINTENANCE (Cont'd)

b. Inspection

Refer to para. 10-56 for plusnut (11) inspection and replacement.

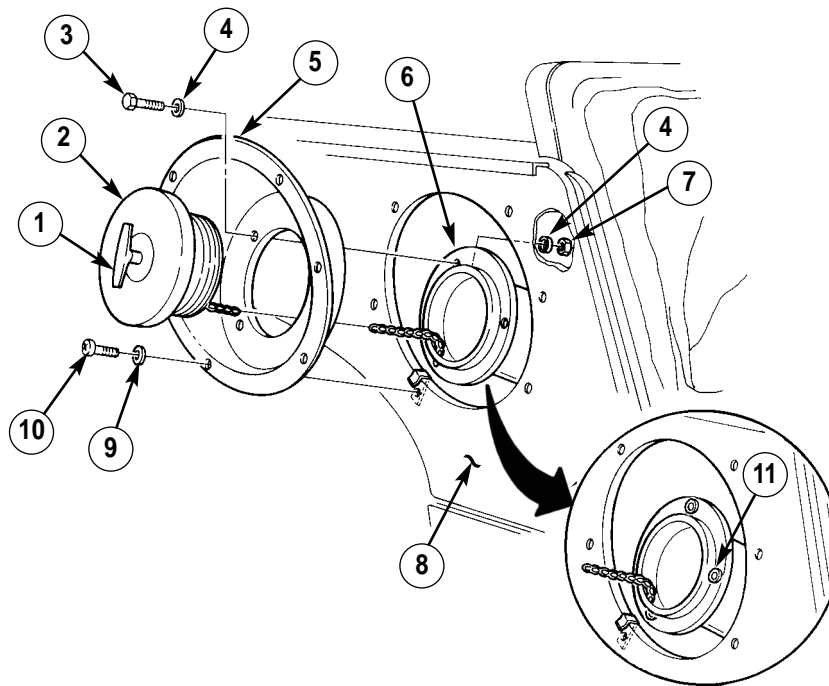
c. Installation

1. Pull filler cap (2) through filler housing (5) on right outer wheelhouse panel (8).
2. Install filler housing (5) on right outer wheelhouse panel (8) with six washers (9) and screws (10). Tighten screws (10) to 20 lb-in. (2 N·m).

NOTE

M1114 vehicles are equipped with plusnuts instead of nuts and washers. Apply sealing compound on threads for M1114 vehicles only.

3. Install filler housing (5) on filler spout (6) with three washers (4), capscrews (3), washers (4), and nuts (7). For M1114 only, tighten capscrews (3) to 75 lb-in. (9 N·m).
4. Install filler cap (2) on filler spout (6) with T-handle (1).



M1114

FOLLOW-ON TASK: Close fuel door (M1114 only) (TM 9-2320-387-10).

10-3. FUEL DOOR REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Applicable Models

M1114

Tools

General mechanic's tool kit:
 automotive (Appendix B, Item 1)
 Maintenance and repair shop equipment:
 automotive (Appendix B, Item 2)

Materials/Parts

Sealing compound (Appendix C, Item 72.1)

Personnel Required

One mechanic
 One assistant

Manual References

TM 9-2320-387-10
 TM 9-2320-387-24P

Equipment Condition

Fuel door open (TM 9-2320-387-10).

Maintenance Level

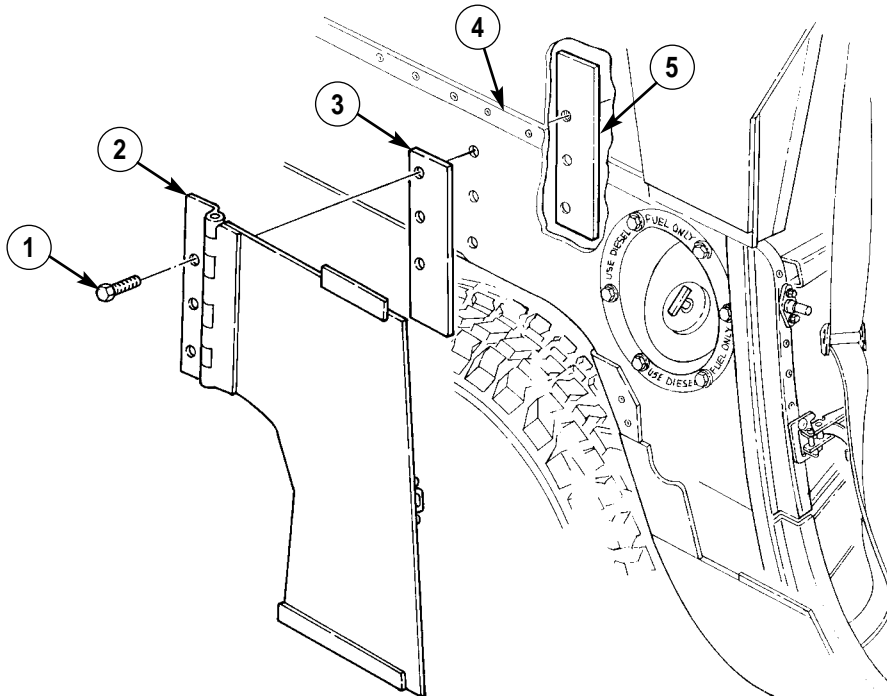
Unit

a. Removal

Remove three capscrews (1), fuel door (2), shim (3), and mounting plate (5) from body (4).

b. Installation

Apply sealing compound to threads of three capscrews (1), and install mounting plate (5), shim (3), and fuel door (2) on body (4) with capscrews (1). Tighten capscrews (1) to 10 lb-ft (14 N·m).



FOLLOW-ON TASK: Close fuel door (TM 9-2320-387-10).

10-4. FUEL DOOR CATCH REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Applicable Models

M1114

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Materials/Parts

Two rivets (Appendix G, Item 353)

Manual References

TM 9-2320-387-10
TM 9-2320-387-24P

Equipment Condition

Fuel door open (TM 9-2320-387-10).

Maintenance Level

Unit

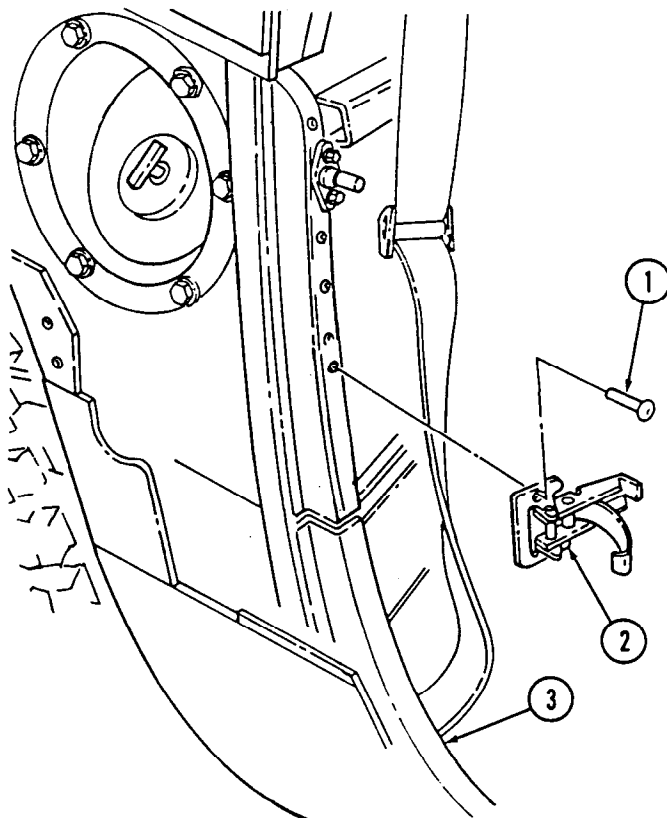
a. Removal

NOTE

For rivet replacement instructions, refer to para. 10-56.
Remove two rivets (1) and catch (2) from body (3).

b. Installation

Install catch (2) on body (3) with two rivets (1).



FOLLOW-ON TASK: Close fuel door (TM 9-2320-387-10).

10-5. HOOD LATCH MAINTENANCE

This task covers:

- | | |
|----------------|-----------------|
| a. Removal | c. Assembly |
| b. Disassembly | d. Installation |

INITIAL SETUP:

Tools

General mechanic's tool kit:
 automotive (Appendix B, Item 1)
 Maintenance and repair shop equipment:
 automotive (Appendix B, Item 2)

Materials/Parts

Two locknuts (Appendix G, Item 109)
 Cotter pin (Appendix G, Item 29)
 Spring pin (Appendix G, Item 450)
 Sealing compound (Appendix C, Item 72.1)

Manual References

TM 9-2320-387-10
 TM 9-2320-387-24P

Equipment Condition

Hood raised and secured (TM 9-2320-387-10).

Maintenance Level

Unit

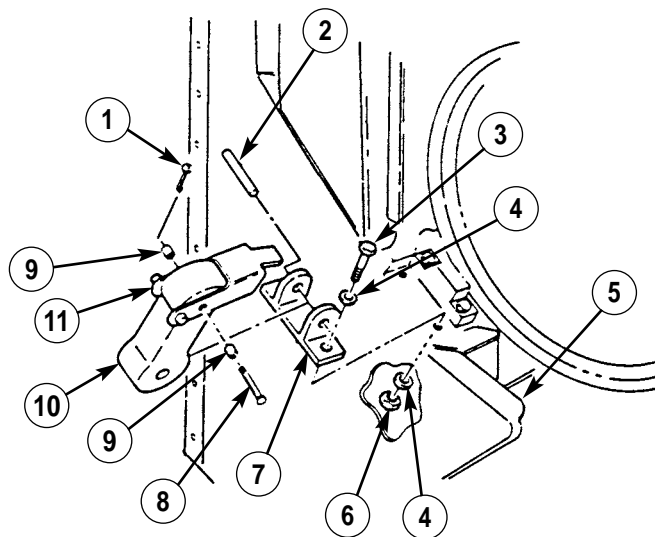
a. Removal

NOTE

- If only rubber latch is to be replaced, spring pin does not have to be completely out of base.
 - M1114 vehicles are equipped with plusnuts/tapping blocks instead of nuts and washers.
1. Remove two locknuts (6), washers (4), capscrews (3), washers (4), and base (7) from body (5). Discard locknuts (6).
 2. Remove spring pin (2) and latch (10) from base (7). Discard spring pin (2).

b. Disassembly

Remove cotter pin (1), pin (8), two rollers (9), and hood latch (11) from latch (10). Discard cotter pin (1).



10-5. HOOD LATCH MAINTENANCE (Cont'd)

c. Assembly

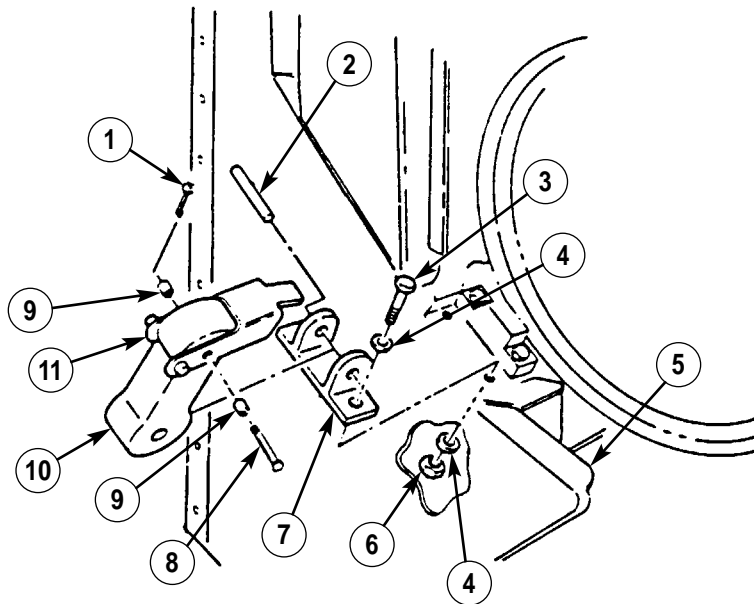
Install hood latch (11) on latch (10) with two rollers (9), pin (8), and cotter pin (1).

d. Installation

NOTE

- If only rubber latch is to be replaced, spring pin may not be completely out of base.
- M1114 vehicles are equipped with plusnuts/tapping blocks instead of nuts and washers. Apply sealing compound to threads of capscrews for M1114 vehicles only.

1. Install latch (10) on base (7) with spring pin (2).
2. Install base (7) on body (5) with two washers (4), capscrews (3), washers (4), and locknuts (6). Tighten capscrews (3) to 6 lb-ft (8 N·m).



FOLLOW-ON TASK: Lower and secure hood (TM 9-2320-387-10).

10-6. HOOD LATCH BRACKET REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Manual References

TM 9-2320-387-10
TM 9-2320-387-24P

Materials/Parts

Five locknuts (Appendix G, Item 109)

Equipment Condition

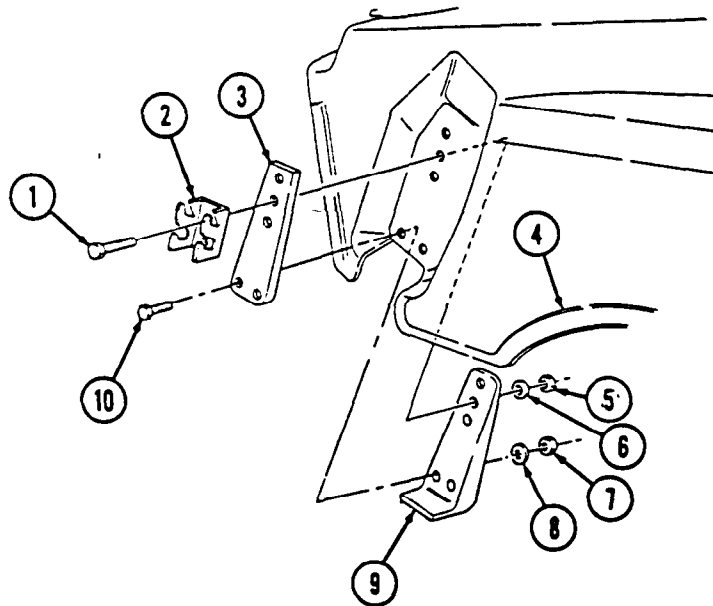
Hood raised and secured (TM 9-2320-387-10).

Maintenance Level

Unit

a. Removal

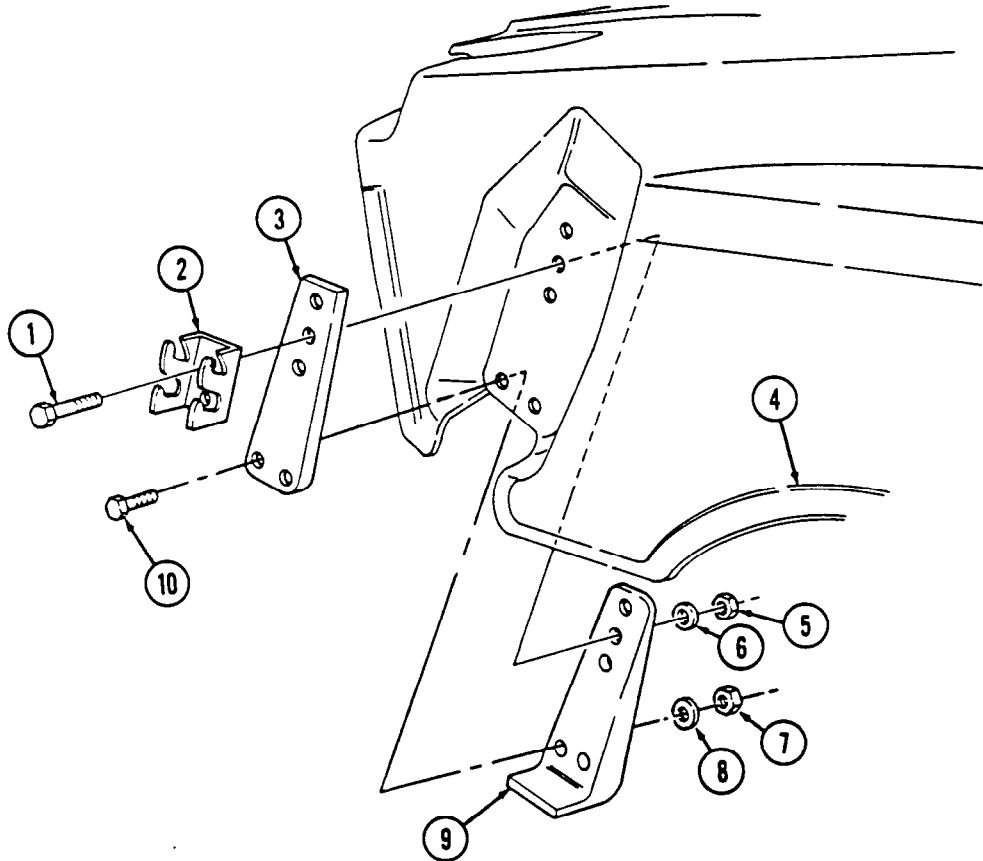
1. Remove two locknuts (5), washers (6), capscrews (1), and latch bracket (2) from hood (4). Discard locknuts (5).
2. Remove three locknuts (7), washers (8), capscrews (10), latch stop bracket (9), and latch plate (3) from hood (4). Discard locknuts (7).



10-6. HOOD LATCH BRACKET REPLACEMENT (Cont'd)

b. Installation

1. Install latch plate (3) and latch stop bracket (9) on hood (4) with three capscrews (10), washers (8), and locknuts (7).
2. Install latch bracket (2) on latch plate (3) and hood (4) with two capscrews (1), washers (6), and locknuts (5). Tighten locknuts (5) and (7) to 10 lb-ft (14 N·m).



FOLLOW-ON TASK: Lower and secure hood (TM 9-2320-387-10).

10-7. HOOD LATCH TAPPING BLOCK REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Applicable Models

M1114

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Manual References

TM 9-2320-387-24P

Equipment Condition

- Hood latch removed (para. 10-5).
- Side hood stop removed (para. 10-11).

Maintenance Level

Unit

a. Removal

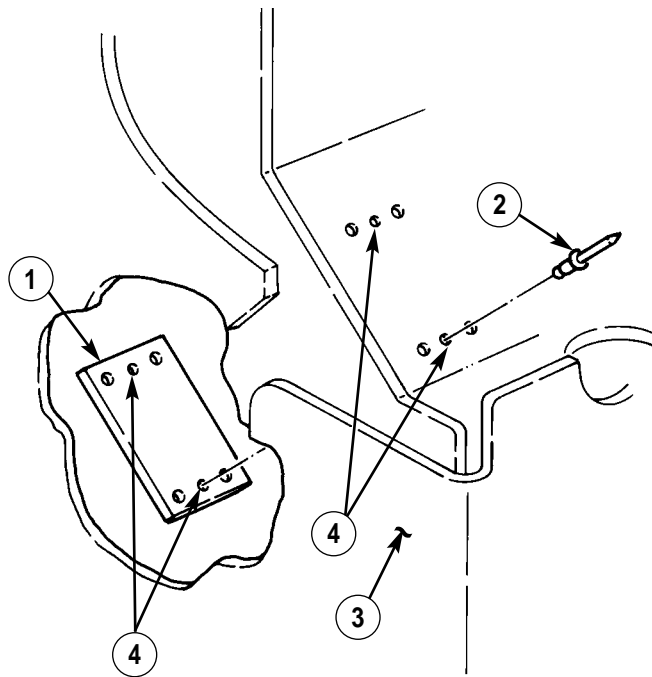
NOTE

For instructions on replacement of rivets, refer to para. 10-56.

Remove two rivets (2) and tapping block (1) from body (3).

b. Installation

1. If new tapping block (1) is being installed, drill two 3/16-in. (4.8-mm) diameter rivet holes (4) through body (3) and tapping block (1).
2. Install tapping block (1) on body (3) with two rivets (2).



- FOLLOW-ON TASKS:**
- Install side hood stop (para. 10-11).
 - Install hood latch (para. 10-5).

10-8. HOOD PROP ROD AND BRACKET MAINTENANCE

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a. Removal b. Disassembly c. Inspection | <ul style="list-style-type: none"> d. Assembly e. Installation |
|---|--|

INITIAL SETUP:

Tools

General mechanic's tool kit:
 automotive (Appendix B, Item 1)
 Maintenance and repair shop equipment:
 automotive (Appendix B, Item 2)

Materials/Parts

Four lockwashers (Appendix G, Item 207)
 Locknut (Appendix G, Item 116)
 Cotter pin (Appendix G, Item 30)

Manual References

TM 9-2320-387-10
 TM 9-2320-387-24P

Equipment Condition

Hood raised and secured (TM 9-2320-387-10).

General Safety Instructions

Hood must be supported during hood prop rod and bracket replacement.

Maintenance Level

Unit

WARNING

Hood must be supported during hood prop rod and bracket replacement. Failure to support hood may cause injury to personnel or damage to equipment.

a. Removal

1. Remove cotter pin (4), washer (3), hood prop rod (2), and washer (3) from hood (1). Discard cotter pin (4).
2. Remove four screws (8), lockwashers (7), and bracket (6) from airlift bracket (5). Discard lockwashers (7).

b. Disassembly

1. Remove hood prop rod (2) from eyebolt (15).
2. Remove locknut (9), washer (10), bushing (16), spring (11), eyebolt (15), and washer (14) from bracket (6). Discard locknut (9).
3. Remove snapping (12) and bushing (13) from bracket (6).

c. Inspection

Inspect bushings (13) and (16) and spring (11) for cracks, wear, or distortion. Replace bushings (13) and (16) and spring (11) if cracked, worn, or distorted.

d. Assembly

1. Install bushing (13) on bracket (6) with snapping (12).

NOTE

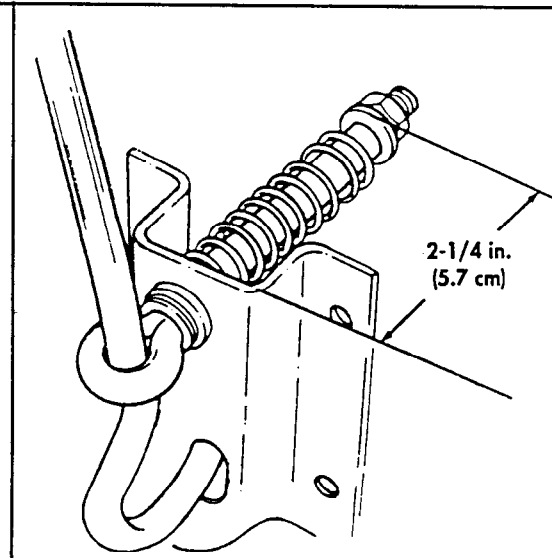
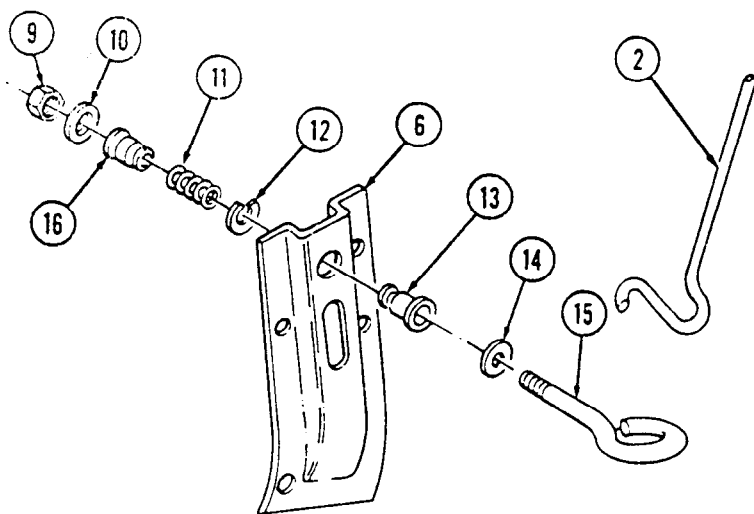
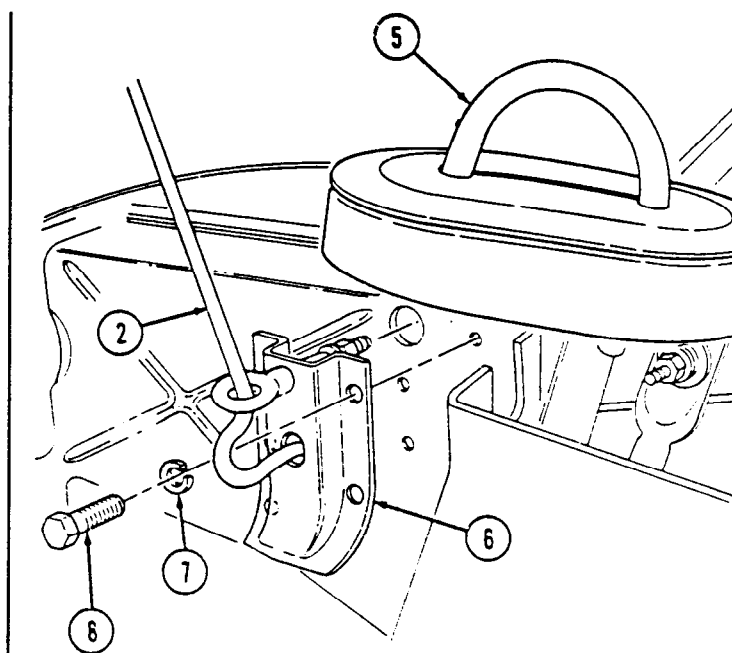
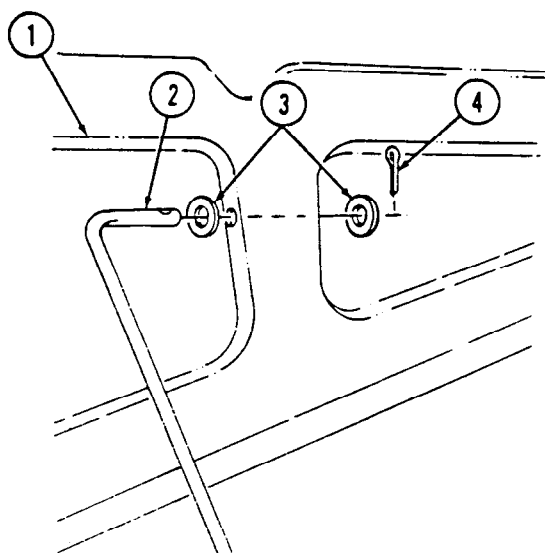
Length of spring with bracket assembled is 2-1/4 in. (5.7 cm).

2. Install washer (14), eyebolt (15), and spring (11) on bracket (6) with bushing (16), washer (10), and locknut (9).
3. Install hood prop rod (2) into eyebolt (15).

10-8. HOOD PROP ROD AND BRACKET MAINTENANCE (Cont'd)

e. Installation

1. Install hood prop rod (2) and bracket (6) on airlift bracket (5) with four lockwashers (7) and screws (8). Tighten screws (8) to 6 lb-ft (8 N.m).
2. Install washer (3) and hood prop rod (2) on hood (1) with washer (3) and cotter pin (4).



FOLLOW-ON TASK: Lower and secure hood (TM 9-2320-387-10).

10-9. HOOD AND HINGE MAINTENANCE

This task covers:

- a. Removal
- b. Installation
- c. Alignment

INITIAL SETUP:

Tools

General mechanic's tool kit:
 automotive (Appendix B, Item 1)
 Maintenance and repair shop equipment:
 automotive (Appendix B, Item 2)

Materials/Parts

Three cotter pins (Appendix G, Item 30)
 Eight locknuts (Appendix G, Item 109)
 Antiseize compound (Appendix C, Item 17)

Personnel Required

One mechanic
 One assistant

Manual References

TM 9-2320-387-10
 TM 9-2320-387-24P
 TM 43-0139

Equipment Condition

Hood raised and secured (TM 9-2320-387-10).

General Safety Instructions

Hood must be supported during removal and installation.

Maintenance Level

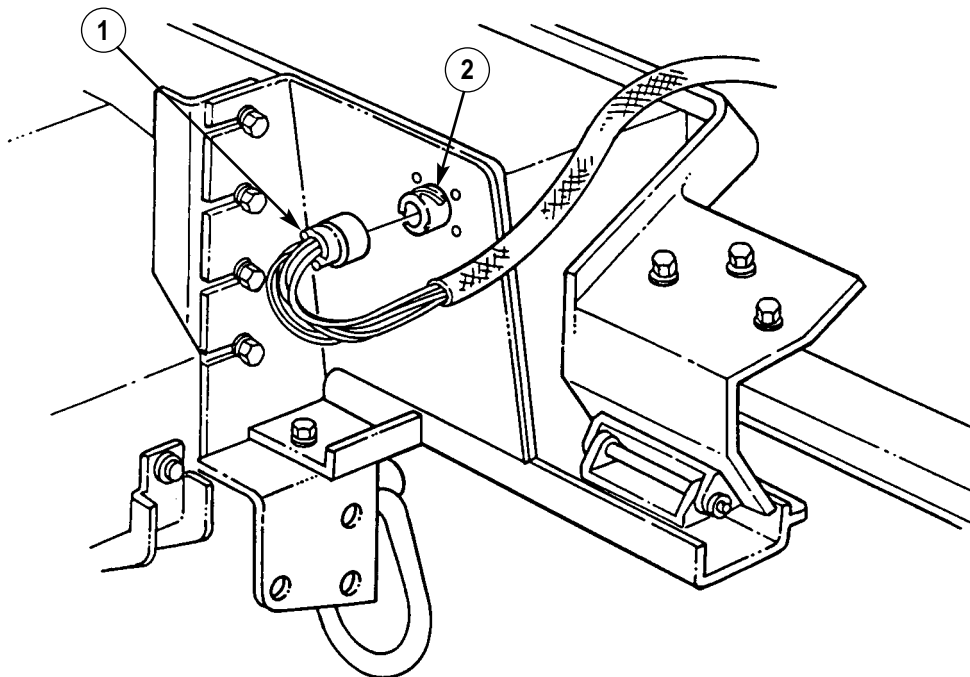
Unit

WARNING

Hood must be supported during removal and installation. Failure to support hood may cause injury to personnel or damage to equipment.

a. Removal

1. Disconnect left and right hood harness connectors (1) from harness connectors (2).



10-9. HOOD AND HINGE MAINTENANCE (Cont'd)

2. Remove two cotter pins (4), washers (6), hinge pins (16), and washers (15) from upper hinge halves (14) and lower hinge halves (11). Discard cotter pins (4).
3. Remove cotter pin (20), washer (21), hood prop rod (23), and washer (22) from hood (19). Discard cotter pin (20).
4. Remove hood (19).

NOTE

- Perform steps 5 and 6 if replacing hinges.
 - Note position of hinge halves prior to removal for installation.
5. Remove four locknuts (3), washers (18), capscrews (12), washers (13), and two upper hinge halves (14) from hood brackets (17). Discard locknuts (3).
 6. Remove four locknuts (9), washers (10), capscrews (5), washers (7), and two lower hinge halves (11) from headlight housing (8). Discard locknuts (9).

