TM 9-2320-211-34-2-2
T.O. 36A12-1C-422-2-2

TECHNICAL MANUAL

VOLUME 2 OF 2

PART 2 OF 4

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

5-TON, 6X6, M39 SERIES TRUCKS (MULTIFUEL)

TRUCK, CHASSIS: M40A2C, M61A2, M63A2; TRUCK, CARGO: M54A2, M54A2C, M55A2; TRUCK, DUMP: M51A2; TRUCK, TRACTOR: M52A2; TRUCK, WRECKER, MEDIUM: M543A2

Chapter 11
Brake System

Chapter 12
Wheel System

Chapter 13
Steering System

Chapter 14
Frame and Towing Attachments

Chapter 15
Springs and Torque and Stabilizer Rods

Chapter 16
Body, Cab, and Hood

NOTE:

THE STYLE OF THIS TM IS EXPERIMENTAL. IT IS BEING TRIED BY THE ARMY ONLY ON A LIMITED BASIS

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

FEBRUARY 1981

WARNING

EXHAUST GASES CAN BE DEADLY

Exposure to exhaust gases produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, and coma. Permanent brain damage or death can result from severe exposure.

Carbon monoxide occurs in the exhaust fumes of fuel burning heaters and internal combustion engines, and becomes dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to insure the safety of personnel whenever fuel burning heater(s) or engine of any vehicle is operated for maintenance purposes or tactical use.

Do not operate heater or engine of vehicle in an enclosed area unless it is adequately ventilated.

Do not idle engine for long periods without maintaining adequate ventilation in personnel compartments.

Do not drive any vehicle with inspection plates or cover plates removed unless necessary for maintenance purposes.

Be alert at all times during vehicle operation for exhaust odors and exposure symptoms. If either are present, immediately ventilate personnel compartments. If symptoms persist, remove affected personnel from vehicle and treat as follows: expose to fresh air; keep warm; do not permit physical exercise; if necessary, administer artificial respiration.

If exposed, seek prompt medical attention for possible delayed onset of acute lung con gestion. Administer oxygen if available.

The best defense against exhaust gas poisoning is adequate ventilation.

WARNING

Serious or fatal injury to personnel may result
if the following instructions are not complied with.

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

Eye shields must be worn when using compressed air. Eye injury can occur if eye shields are not used.

Do not use a wire brush or compressed air to clean brake drum. There may be asbestos dust on the drums which can be dangerous to your health if you breathe it in.

Hold air cylinder end plate when taking off C-clamps. Parts are under spring tension and can cause injury to personnel.

WARNING - Cont

Be careful not to let brake fluid get into eyes when taking off brake lines and fittings. Brake fluid could cause loss of sight.

Fifth wheel assembly parts are heavy and bulky. Be careful to avoid injury when handling or repairing this unit.

Fifth wheel assembly spring is under tension. Hold it tightly when taking it out to prevent spring from flying out and causing injury.

Springs are under tension. Be careful when taking them apart to avoid injury to personnel.

Cross tube is heavy. Make sure jacks will support cross tube when it is lowered. If cross tube falls, it can cause injury to personnel and damage to equipment.

Always wear leather gloves when handling glass. Broken or sharp edges can cause serious injury to personnel.

Rubber cement is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when cement is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

Dump body is a heavy piece of equipment. Do not stand under it when it is being lifted. Failure of hoist equipment or slippage of chain slings could cause death or serious injury to personnel.

Never work under dump body unless safety braces are properly positioned. When body is partially raised, always use a strong heavy prop to hold body in raised position. If these steps are not taken, personnel can be seriously injured.

When taking out tailgate holding pins, make sure that there is tension on chain and chain hoist or tailgate may tip or fall, causing serious injury to personnel.

Care must be taken when lifting tailgate. Tailgate could fall and cause injury to personnel.

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T.O. 36A12-1C-422-2-2

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NO. 9-2320 -211-34-2-2
TECHNICAL ORDER
NO. 36A12-1C-422-2-2

DEPARTMENTS OF THE ARMY
AND
THE AIR FORCE
WASHINGTON, DC, 25 February 1981

TECHNICAL MANUAL

VOLUME 2 OF 2

PART 2 OF 4

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

5-TON, 6X6, M39 SERIES TRUCKS
(MULTIFUEL)

Model		NSN without Winch	NSN with Winch
Truck, Chassis	M40A2C	2320-00-969-4114	
	M61A2	2320-00-055-9264	2320-00-965-0321
	M63A2	2320-00-226-6251	2320-00-285-3757
Truck, Cargo	M54A2	2320-00-055-9266	2320-00-055-9265
	M54A2C	2320-00-926-0874	2320-00-926-0874
	M55A2	2320-00-073-8476	2320-00-055-9259
Truck, Dump	M51A2	2320-00-055-9262	2320-00-055-9263
Truck, Tractor	N152A2	2320-00-055-9260	2320-00-055-9261
Truck, Wrecker, Medium	M543A2		2320-00-055-9258

Current as of 25 Jul 80.

*This manual together with TM 9-2320-211-34:1, 25 February 1981; TM 9-2320-211-34-2-1, 25 February 1981, TM 9-2320-211-34-2-3, 25 February 1981 and TM 9-2320-211-34-2-4, 25 February 1981 supersedes so much of TM 9-2320-'211-35, 13 September 1964 as pertains to multifuel vehicles including all changes.

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedure, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, Michigan 48090. A reply will be furnished to you.

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CHAPTER 11

BRAKE SYSTEM GROUP MAINTENANCE

Section I. SCOPE

11-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for the handbrake and service brake, hydraulic brake, and mechanical brake systems for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

11-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section II. HANDBRAKE AND SERVICE BRAKE SYSTEMS

11-3. HANDBRAKE LINKAGE REPAIR.

TOOLS: No special tools required.

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed, Spec P-D-680.
Dry rags

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set, wheels chocked.

a. Preliminary Procedures.

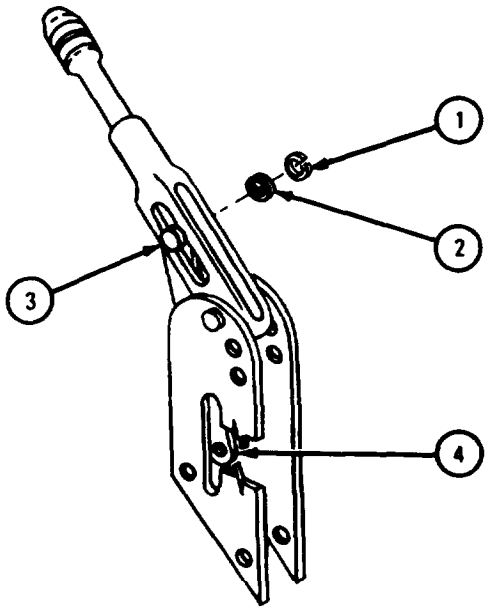
(1) Remove handbrake lever. Refer to TM 9-2320-211-20.

(2) Remove cable and lever assembly. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

1. Take off snapring (1), washer (2), clevis pin (3), and connecting link (4).
END OF TASK



TA 087332

c. Cleaning, Inspection, and Repair.

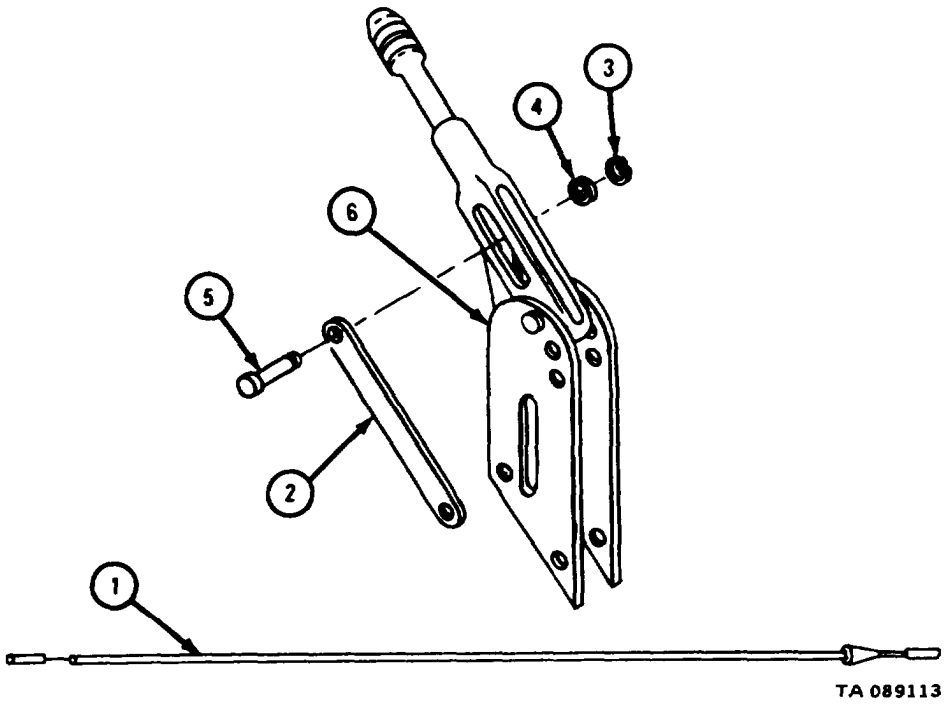
FRAME 1

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

1. Clean all parts, except cable (1), with solvent. Clean all mud and grease off cable with dry rag.
2. Check that cable (1) is not damaged. If cable is damaged, get a new one.
3. Check that connecting link (2), snapring (3), washer (4), and clevis pin (5) are not damaged. If parts are damaged, get new ones.
4. Check that handbrake lever assembly (6) is not damaged. If assembly is damaged, get a new one.

END OF TASK



d. Assembly.

FRAME 1

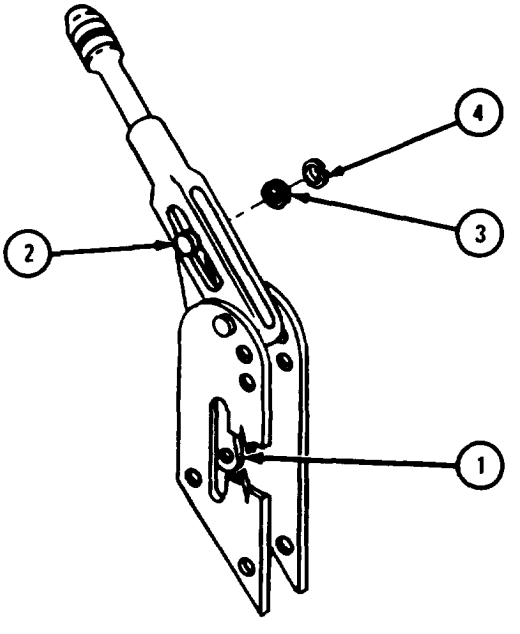
1. Put connecting link (1) in place. Put in clevis pin (2). Put on washer (3) and snapring (4).

NOTE

Follow-on Maintenance Action Required:

1. Replace cable and lever assembly. Refer to TM 9-2320-211-20.
2. Replace handbrake lever. Refer to TM 9-2320-211-20.

END OF TASK



TA 089115

11-4. HANDBRAKE BRAKE DRUM ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: Yoke replacer, pn 7950147

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set, wheels chocked.

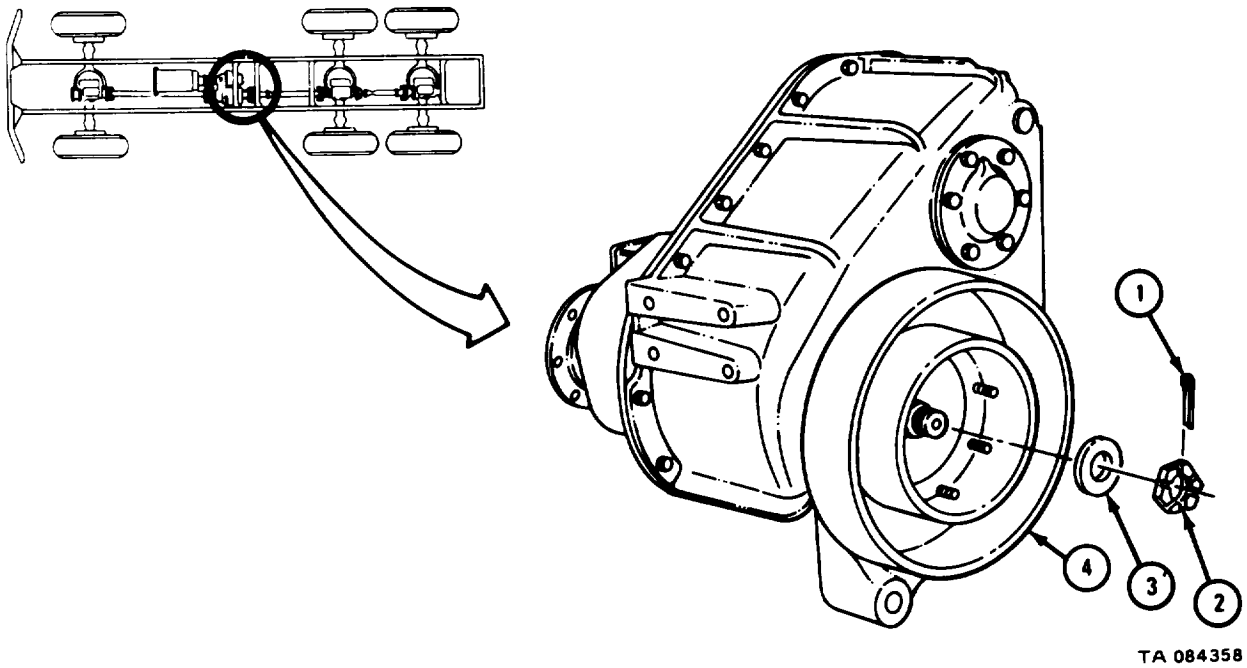
Preliminary Procedure. Remove transfer to forward-rear axle propeller shaft. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

1. Take out cotter pin (1).
2. Take off nut (2) and washer (3).
3. Put handbrake in down (brake off) position. Refer to TM 9-2320-211-10.
4. Remove handbrake linkage. Refer to TM 9-2320-211-20.
5. Remove handbrake brakeshoes. Refer to TM 9-2320-211-20.
6. Take off drum and flange assembly (4).

END OF TASK

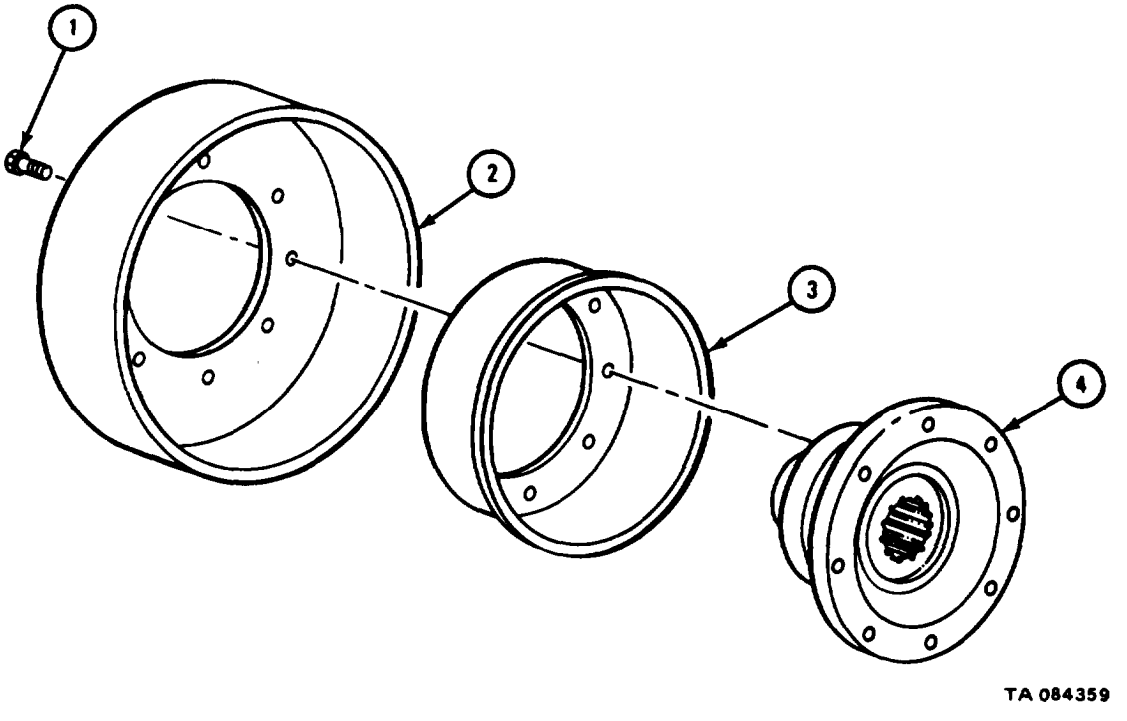


c. Disassembly.

FRAME 1

1. Using brass drift pin and hammer, tap out eight screws (1).
2. Take apart brake drum (2), shield (3), and flange (4).

END OF TASK



d. Cleaning, Inspection, and Repair.

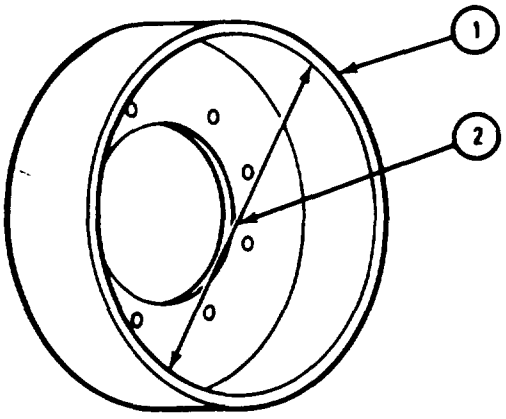
FRAME 1

WARNING

Do not use a wire brush or compressed air to clean brake drum (1). There may be asbestos dust on the drums which can be dangerous to your health if you breathe it in.

1. Clean dirt or mud from brake drum (1) using a brush and water.
2. Check that brake drum (1) is not warped or cracked. If brake drum is warped or cracked, throw away drum and get a new one.
3. Check that brake drum (1) is not scored or pitted. If brake drum is scored or pitted, using calipers, measure inside diameter (2). If inside diameter is more than 13.5 inches, throw away drum and get a new one.
4. If inside diameter (2) is not more than 13.5 inches and brake drum (1) is scored or pitted, using lathe, cut drum. Cut drum only as needed to take off scores and pitting.
5. If brake drum (1) was cut, using calipers, measure inside diameter (2). If caliper reading is more than 13.5 inches, throw away drum and get a new one.

GO TO FRAME 2

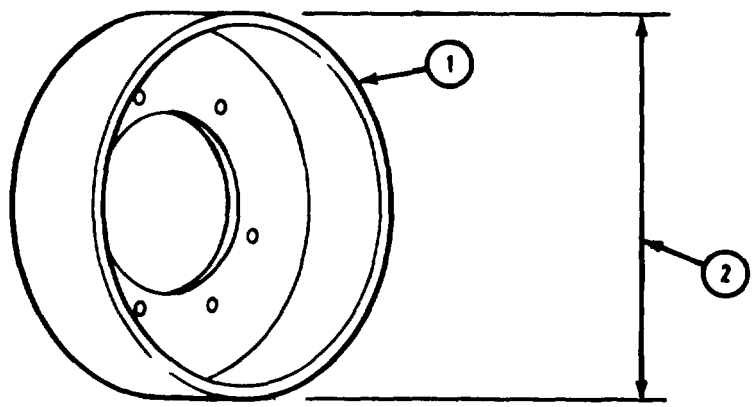


TA 116701

FRAME 2

1. Check that brake drum (1) is not scored or pitted. If brake drum is scored or pitted, using calipers, measure outside diameter (2). If outside diameter is less than 13.875 inches, throw away drum and get a new one.
2. If outside diameter (2) is not less than 13.875 inches and brake drum (1) is scored or pitted, using lathe, cut drum. Cut drum only as needed to take off scores and pitting. Refer to TM 9-4910-482-10.
3. If brake drum (1) was cut, using calipers, measure outside diameter (2). If caliper reading is less than 13.875 inches, throw away drum and get a new one.

END OF TASK



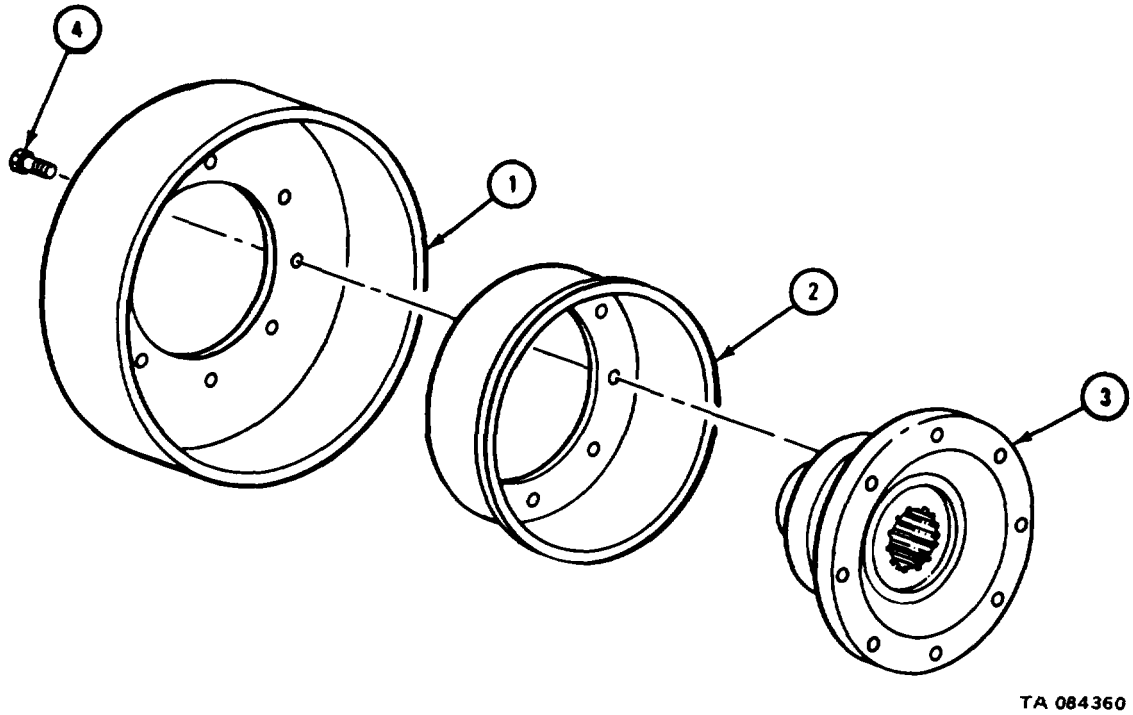
TA 088775

e. Assembly.

FRAME 1

1. Line up holes in brake drum (1), shield (2), and flange (3).
2. Put in eight screws (4) through holes.

GO TO FRAME 2



TA 084360

FRAME 2

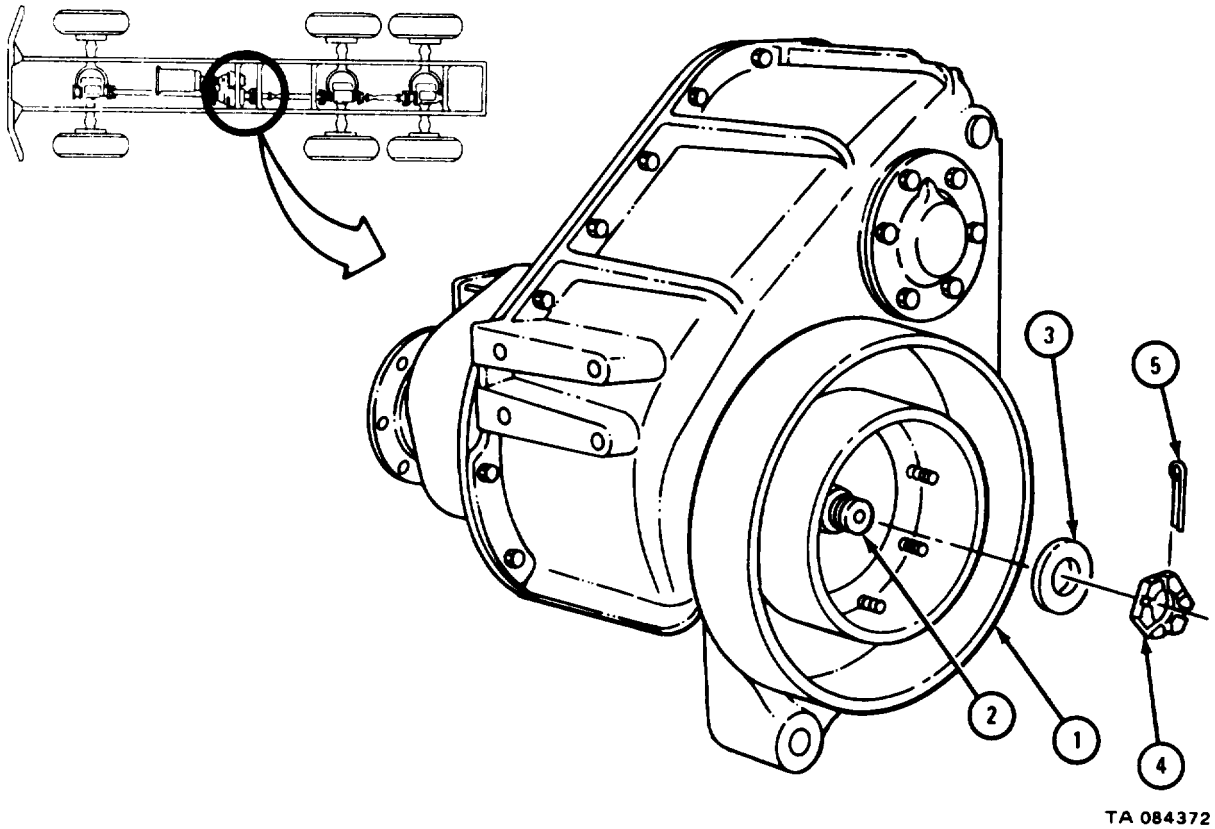
1. Push brake drum and flange assembly (1) onto shaft (2).
2. Replace handbrake brake shoes. Refer to TM 9-2320-211-20.
3. Replace handbrake linkage. Refer to TM 9-2320-211-20.
4. Put handbrake in up (brake on) position. Refer to TM 9-2320-211-10.
5. Put on washer (3) and nut (4). Tighten nut to 300 to 400 pound-feet. Aline hole in nut (4) with hole in shaft (2).
6. Put in cotter pin (5).

NOTE

Follow-on Maintenance Action Required:

1. Replace transfer to forward-rear axle propeller shaft. Refer to TM 9-2320-211-20.
2. Remove chocks.

END OF TASK



11-5. PARKING BRAKESHOE ASSEMBLIES REPAIR.

TOOLS: No special tools required

SUPPLIES: Outer brake shoe lining
Inner brakeshoe lining
Brakeshoe lining rivet (16)
Brush and water

PERSONNEL: One

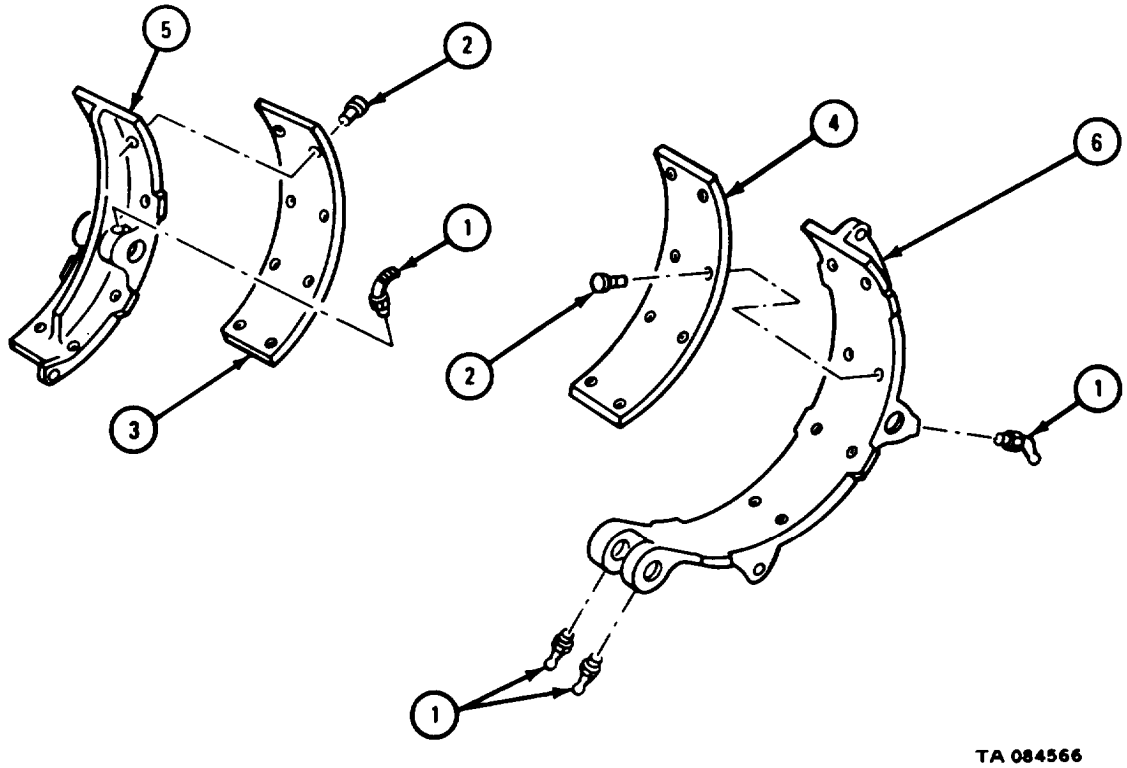
EQUIPMENT CONDITION: Brakeshoe assemblies on bench.

a. Disassembly.

FRAME 1

1. Take out four lubrication fittings (1).
2. Using brake reliner, take out 16 rivets (2).
3. Take off and throw away two linings (3 and 4) from brakeshoes (5 and 6).

END OF TASK



WARNING

Do not use a wire brush or compressed air to clean linings. There may be asbestos dust on the shoes which can be dangerous to your health if you breathe it in.

b. Cleaning. Clean dirt or mud from brake linings using a brush and water.

c. Inspection.

(1) Check that all threaded parts are not stripped or crossthreaded.

(2) Check that brakeshoes are not bent or damaged in any other way.

d. Repair.

(1) Tap threaded holes in brakeshoes as needed.

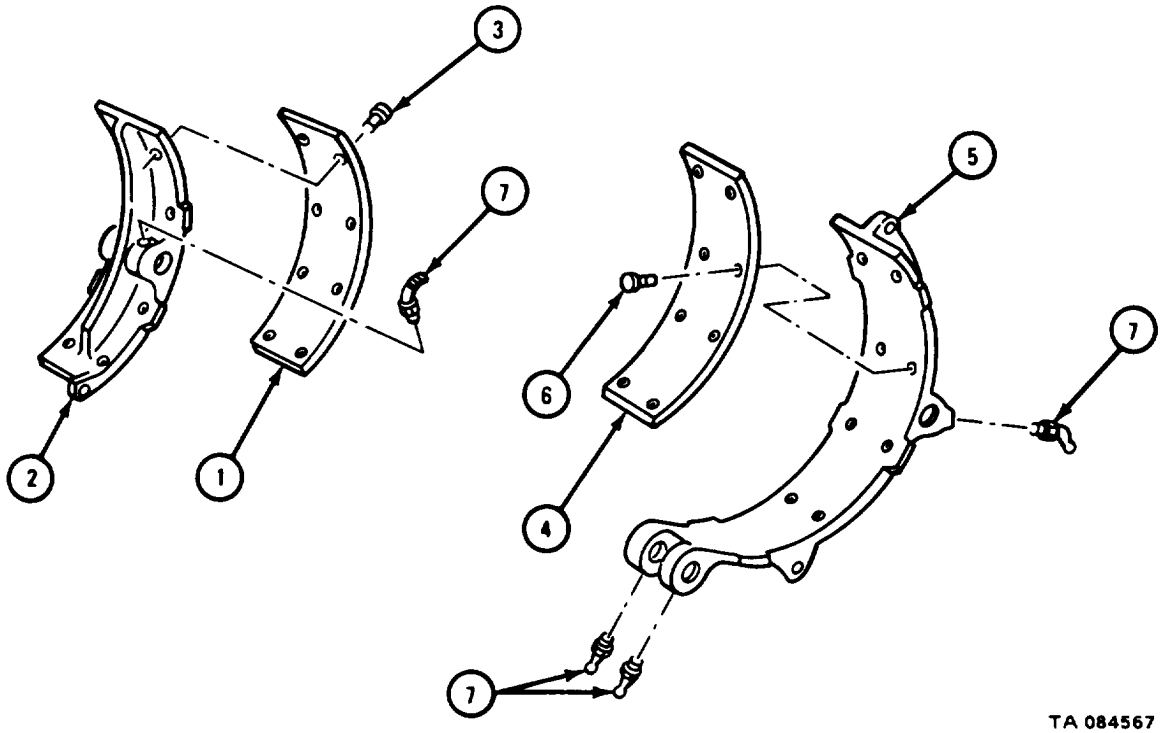
(2) Other damage cannot be fixed. Throw away damaged parts and get new parts in their place.

e. Assembly.

FRAME 1

1. Aline holes in interlining (1), and brakeshoe (2). Using brake reliner, put in eight rivets (3).
2. Aline holes in outer lining (4) and brakeshoe (5). Using brake reliner, put in eight rivets (6).
3. Using feeler gage, check that linings (1 and 4) are less than 0.010 inch away from brakeshoes (2 and 5) at any one place. If clearance is 0.010 of an inch or more, throw away brakeshoe and put in new one.
4. Put in four lubrication fittings (7).

END OF TASK



11-6. SERVICE BRAKE DRUM AND BRAKESHOE ASSEMBLY REPAIR.

NOTE

Fix both drums on any one axle if one is damaged. Fix drums so inside diameters are within 0.010 inch of each other.

TOOLS: No special tools required

SUPPLIES: Brakeshoe lining set
Brakeshoe rivets
Water and brush

PERSONNEL: One

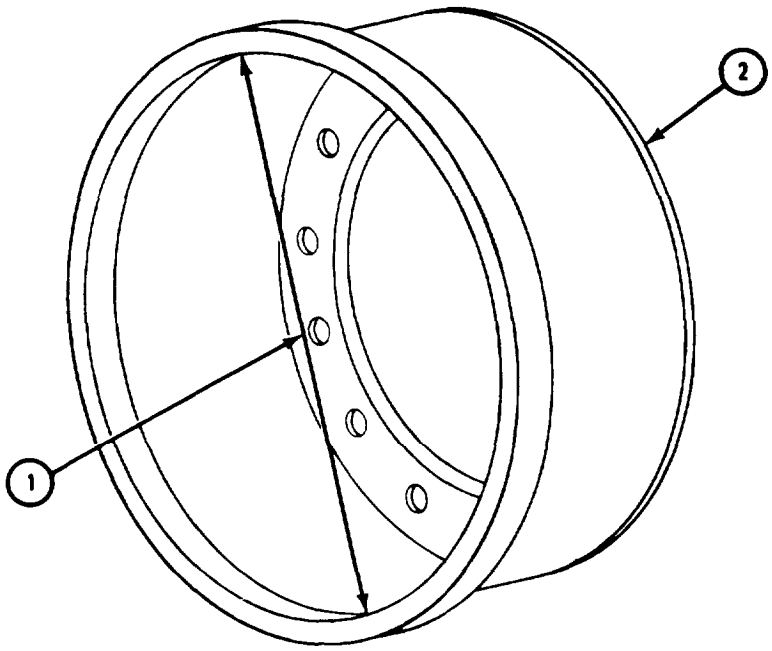
EQUIPMENT CONDITION: Brakeshoe assembly and brake drum on bench.

a. Repair of Brake Drum.

FRAME 1

1. Using calipers, measure inside diameter (1) of brake drum (2).
2. If caliper reading is more than 16.625 inches, throw away drum (2). If caliper reading is not more than 16.625 inches, use lathe to repair drum. Refer to TM 9-4910-482-10. Note total depth of cut.
3. After drum (2) has been repaired, use calipers to remeasure inside diameter (1). If caliper reading is more than 16.625 inches, throw away drum.

END OF TASK



TA 088774

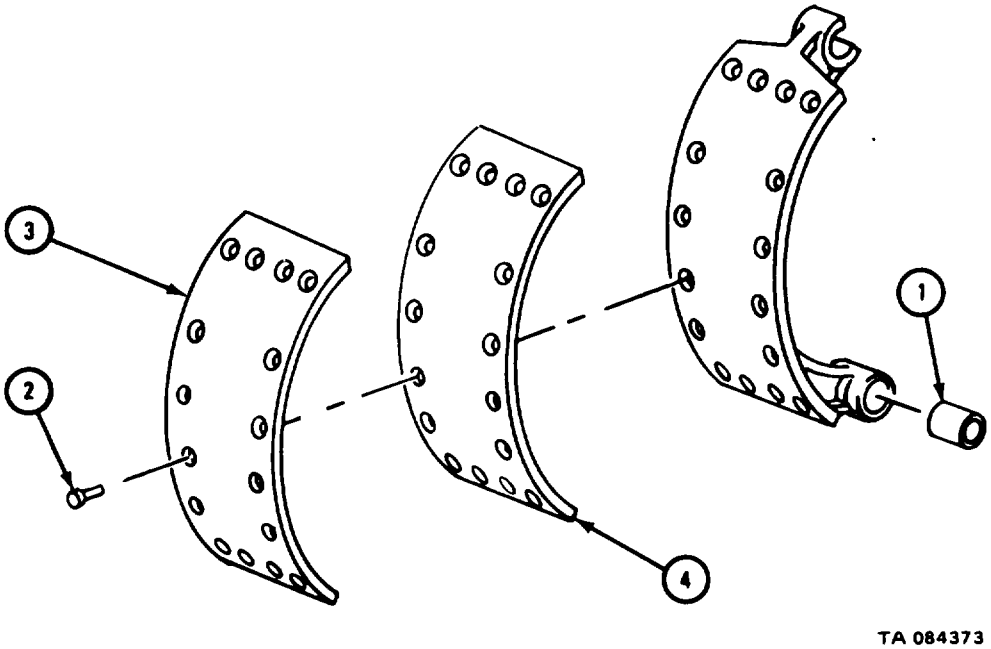
b. Repair of Brakeshoe Assembly.

(1) Disassembly.

FRAME 1

1. Press out bushing (1).
2. Using brake reliner, takeout 16 rivets (2). Refer to TM 9-4910-443-12.
3. Take off lining (3) and shims (4), if there are any. Throw away lining.

END OF TASK



TA 084373

WARNING

Do not use a wire brush or compressed air to clean brakeshoe. There may be asbestos dust on the shoes which can be dangerous to your health if you breathe it in.

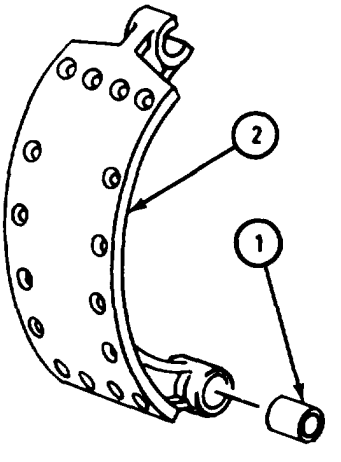
(2) Cleaning. Clean dirt or mud from brake shoe using a brush and water.

(3) Inspection.

FRAME 1

1. Check that bushing (1) is not scored, chipped or damaged in any other way.
2. Check that brakeshoe (2) is not cracked or broken.

END OF TASK



TA 084374

(4) Repair. Throw away damaged parts and get new ones in their place.

(5) Assembly.

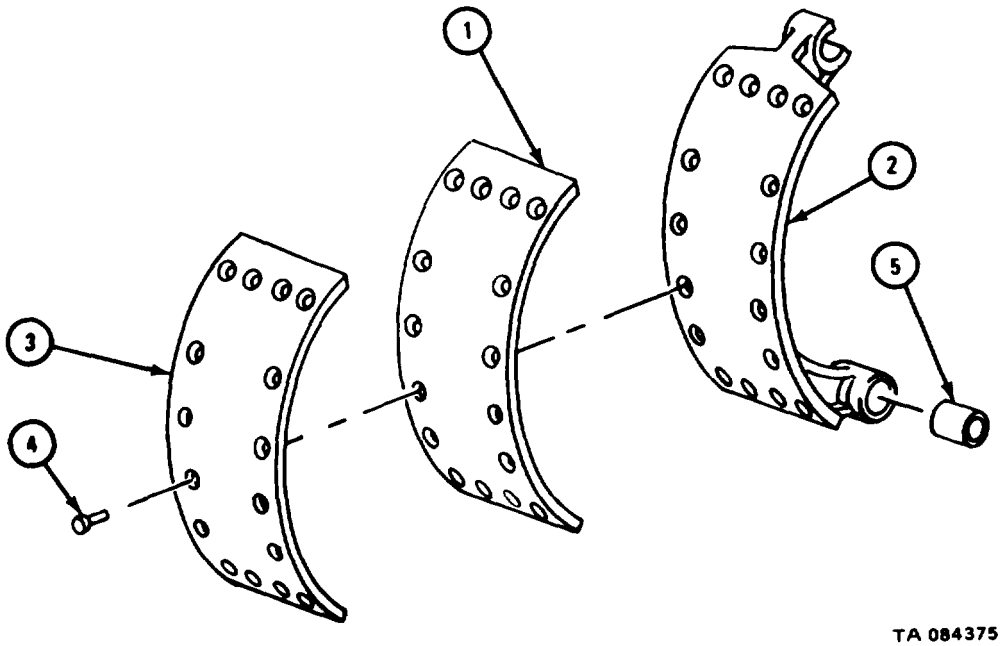
FRAME 1

NOTE

If brakeshoes are to be used with a fixed brake drum do steps 1 through 4. If brakeshoes are to be used with a new brake drum, do steps 2 through 4.

1. Put shims (1) in place on brakeshoe (2). Shim thickness should be the same as total depth of cut from repair of brake drum.
2. Put lining (3) in place.
3. Using brake reliner, put in 16 rivets (4).
4. Press in bushing (5).

END OF TASK



TA 084375

Section III. HYDRAULIC BRAKE SYSTEM

11-7. AIR HYDRAULIC CYLINDER REPAIR.

TOOLS: Holding tool, pn ST384
Honing stone

SUPPLIES: 10-inch long steel stock, 2 inches wide, 3/26-inch thick
9 1/4-inch long steel rod, 1/8-inch diameter (2)
Brake and air hydraulic air pak kit
Hydraulic brake fluid, type HB, VV-B-680
Compressed air source, 30 psi max
Steel wool, no. 00
Crocus cloth
Clean rags
Wood block, 2x4x6 inches
Eye shields

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

Preliminary Procedure. Remove air hydraulic cylinder. Refer to TM 9-2320-211-20.

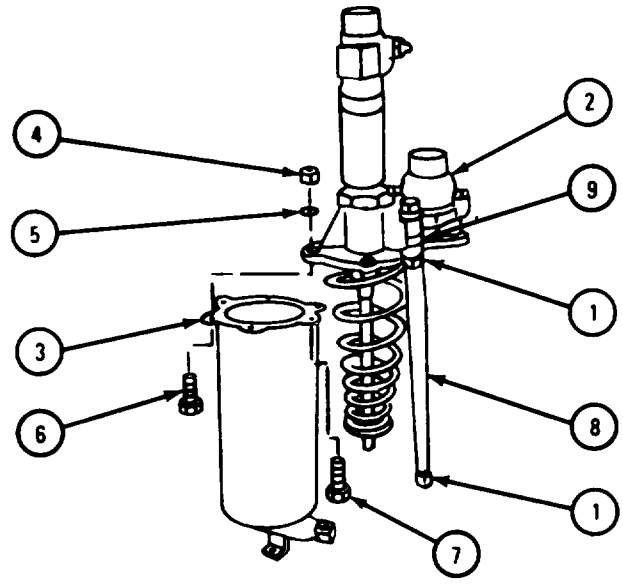
b. Disassembly.

(1) Air cylinder shell.

FRAME 1

1. Unscrew two fittings (1).
2. Scribe a line across end plate (2) and air pak shell (3) so they will be put back the same way.
3. Take off two nuts (4) and lockwashers (5). Take out four long capscrews (6) and two short capscrews (7).
4. Take off end plate assembly (2).
5. Take out tube (8). Take out and throw away seal (9).

GO TO FRAME 2



TA 084376

FRAME 2

1. Takeoff elbow (1).
2. Takeoff double check valve (2).

WARNING

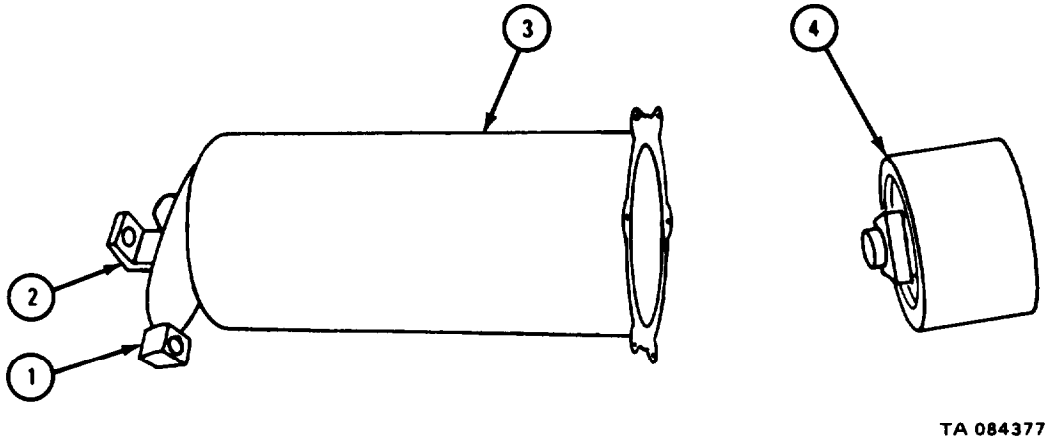
Eye shields must be worn when using compressed air. Eye injury can occur if eye shields are not used.

CAUTION

Only use 10 pounds of air pressure and put opening in air pak shell (3) close to wood block so piston does not fly out and get damaged.

3. Using compressed air at double check valve opening in air pak shell (3), blow out piston assembly (4).

END OF TASK



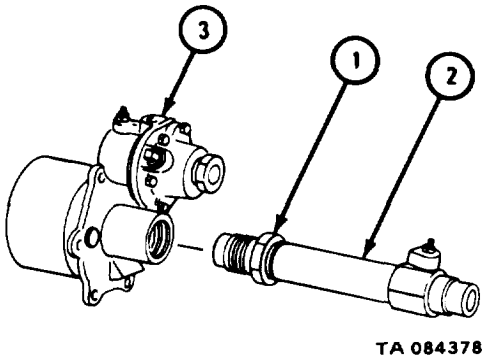
TA 084377

(2) Piston and end plate assembly.

FRAME 1

1. Loosen nut (1).
2. Take slave cylinder tube (2) off end plate assembly (3).

GO TO FRAME 2

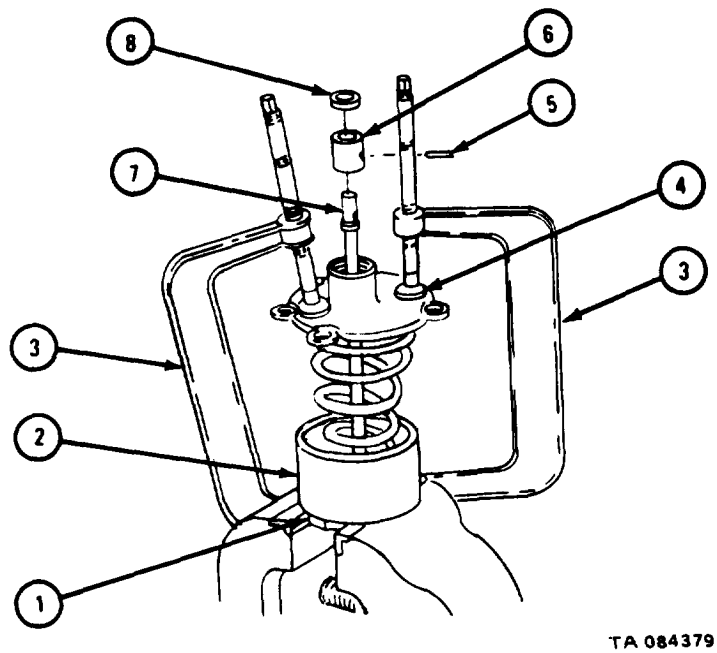


TA 084378

FRAME 2

1. Clamp nut (1) on piston (2) in vise.
2. Put on two C-clamps (3).
3. Tighten two C-clamps (3) to compress end plate assembly (4) into piston (2).
4. Takeout pin (5) from hydraulic piston (6).
5. Take hydraulic piston (6) off piston rod (7).
6. Take seal (8) off hydraulic piston (6).

GO TO FRAME 3



TA 084379

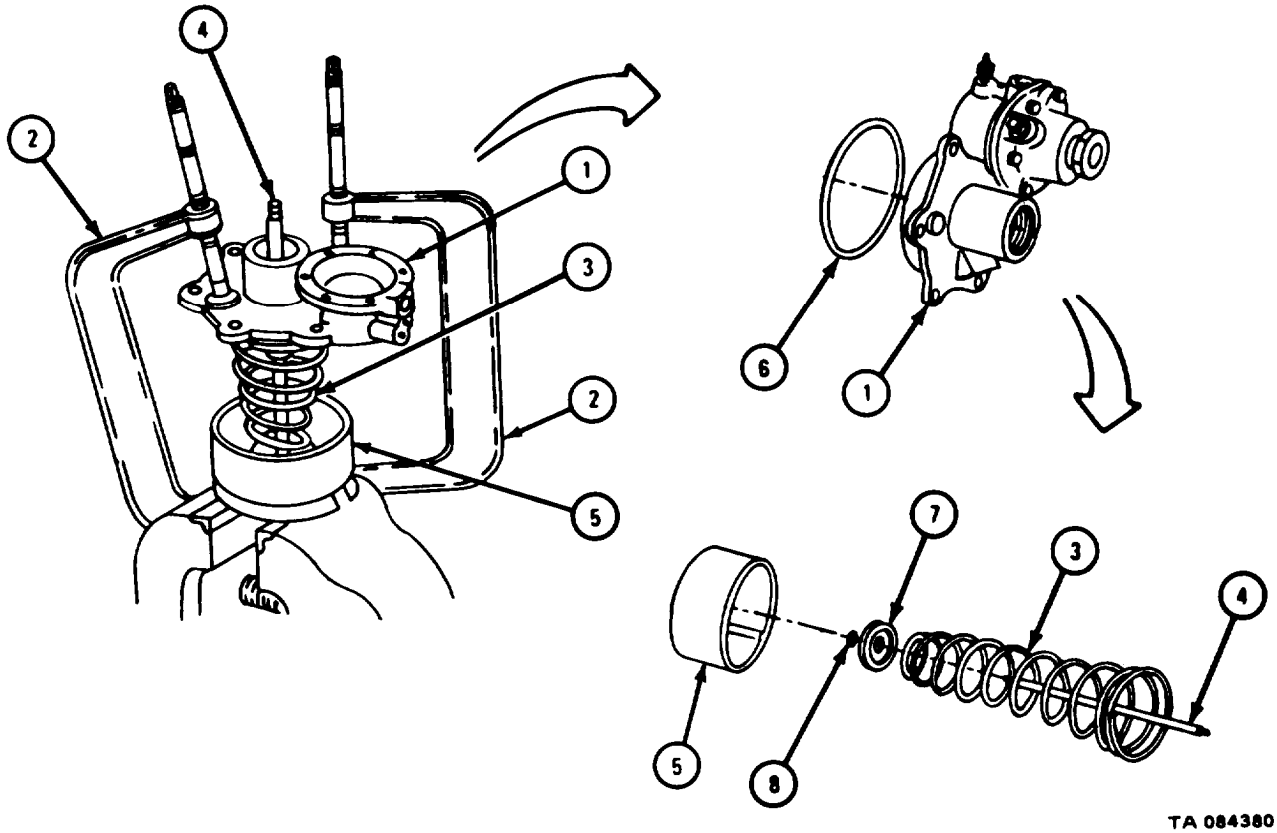
FRAME 3

WARNING

Hold end plate (1) when taking off C-clamps (2). Parts are under spring tension and can cause injury to personnel.

1. Hold down end plate (1) and take off two C-clamps (2).
2. Take end plate (1), spring (3), piston rod, and washer (4) off piston (5).
3. Take seal (6) off end plate (1).
4. Take washer (7) off piston rod (4). Pry off snapring (8). Take off spring (3).
5. Take piston (5) out of vise.

END OF TASK

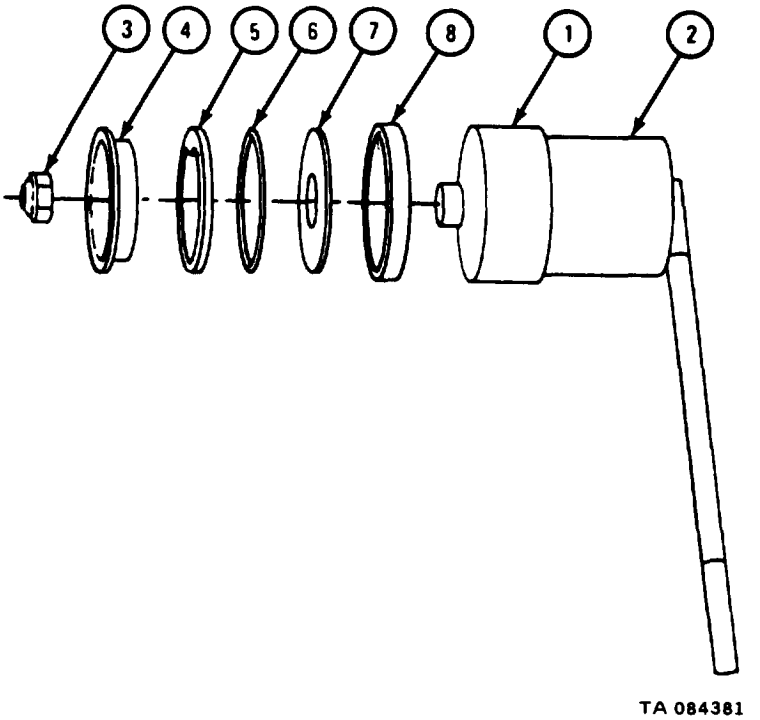


(3) Air pak piston assembly.

FRAME 1

1. Put piston (1) in holding tool (2).
2. Takeoff nut (3).
3. Take out retaining plate (4), packing ring (5), packing wick (6), backing plate (7), and packing (8). Throw away packing ring, packing wick, and packing.
4. Take piston (1) off holding tool (2).

END OF TASK



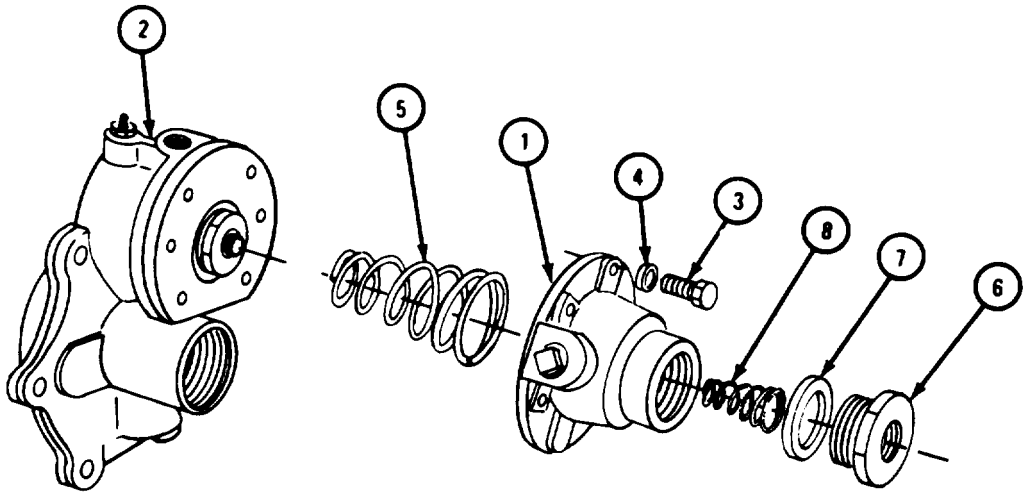
TA 084381

(4) Air pak end plate assembly.

FRAME 1

1. Mark control valve poppet body (1) and end plate (2) so they are put back the same way.
2. Hold down control valve poppet body (1), which is under spring tension.
3. Take out six screws (3) and lockwashers (4).
4. Carefully letting out spring tension, take off control valve poppet body (1).
5. Take out valve seat spring (5).
6. Take out control valve adapter (6), seal (7), and spring (8).

GO TO FRAME 2

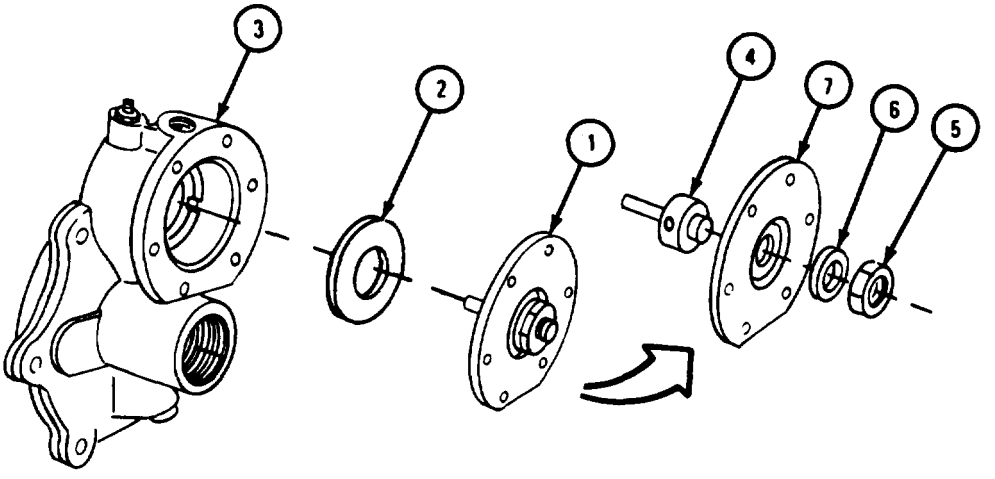


TA 084382

FRAME 2

1. Take out diaphragm and adapter assembly (1) and retainer (2) from end plate (3).
2. Put pin punch through hole in stem (4). Takeoff nut (5). Take off plate (6) and adapter (7) from stem.

GO TO FRAME 3

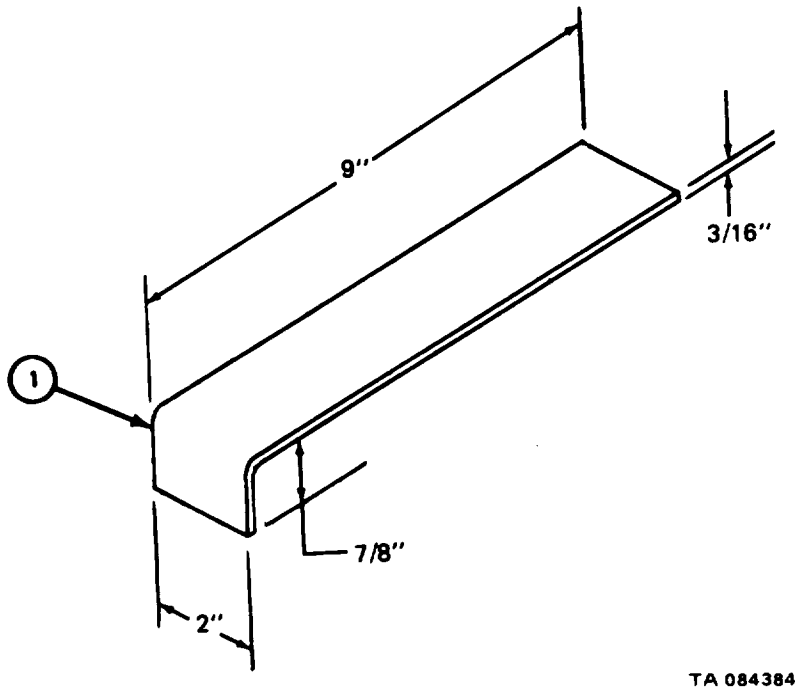


TA 084383

FRAME 3

1. Using vise, hammer, and piece of 3/16-inch thick flat steel stock, make offset screwdriver (1) using dimensions shown.

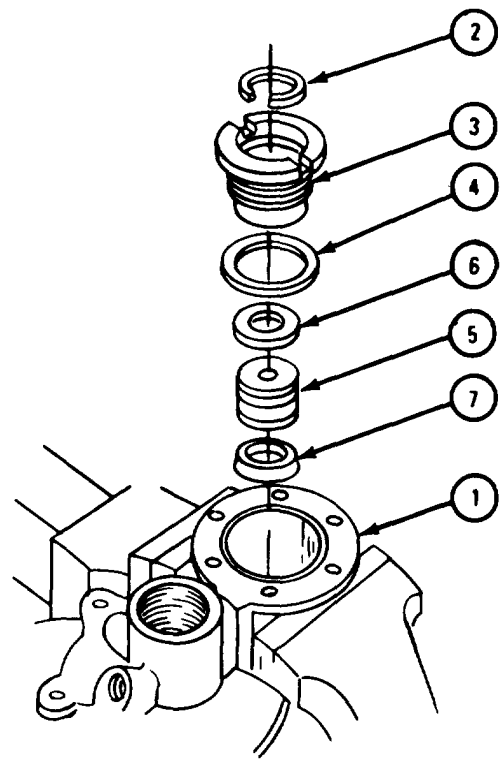
GO TO FRAME 4



FRAME 4

1. Clamp end plate assembly (1) in vise.
2. Take out retaining ring (2).
3. Using fabricated offset screwdriver, take out fitting (3).
4. Take out and throw away seal (4).
5. Take out piston (5) with piston cups (6 and 7). Take off and throw away piston cups.

GO TO FRAME 5

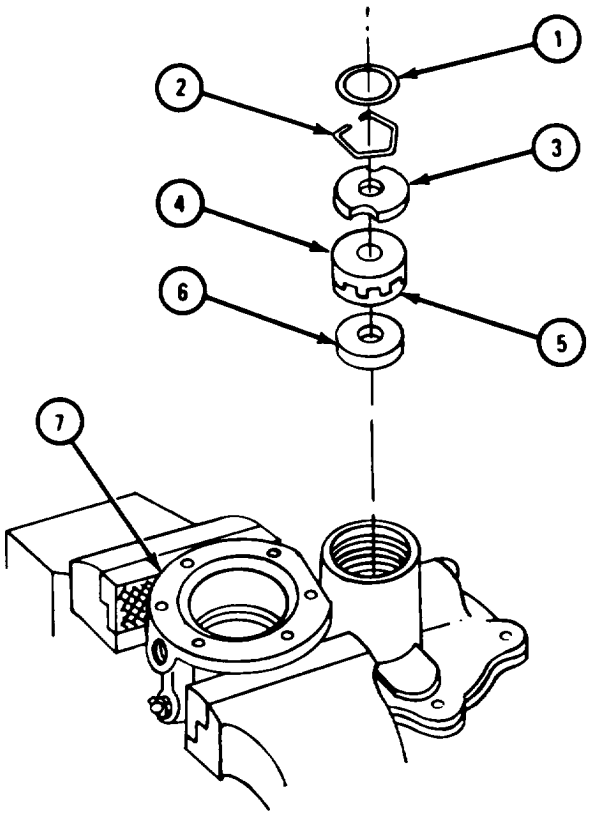


TA 084385

FRAME 5

1. Takeout and throw away preformed packing (1).
2. Take out and throw away snapring (2).
3. Take out thrust washer (3), packing retainer (4), push rod cup (5), and guide washer (6). Throw away push rod cup.
4. Take end plate (7) out of vise.

GO TO FRAME 6

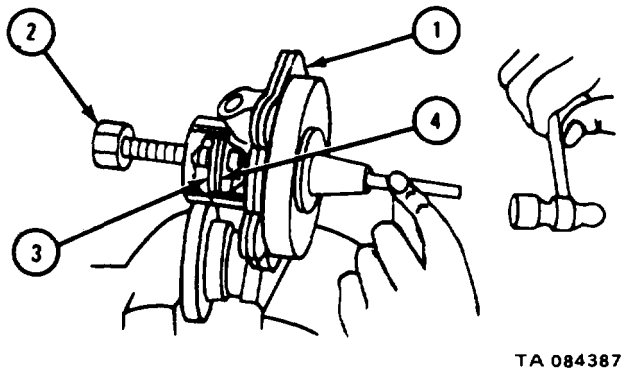


TA 084386

FRAME 6

1. Clamp end plate (1) in vise.
2. Put 1/2-inch screw (2), four inches long, through seal (3) in end plate (1).
3. Tap threaded end of screw (2) and drive out seal (3). Throw away seal.
4. Takeout and throw away gasket (4).
5. Take end plate (1) out of vise.

END OF TASK



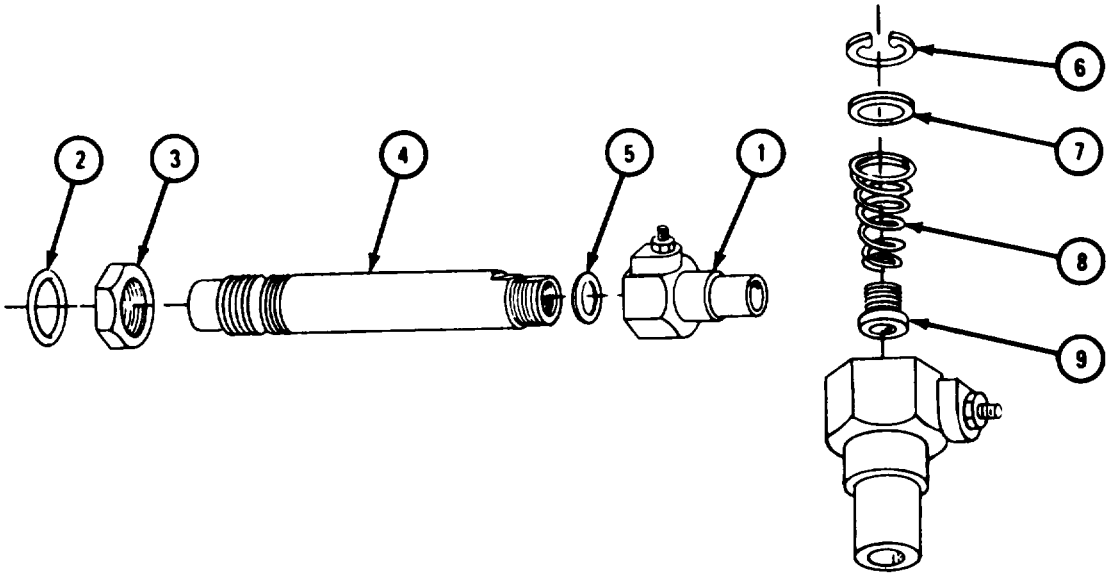
TA 084387

(5) Slave cylinder.

FRAME 1

1. Clamp slave cylinder cap (1) in vise.
2. Take off and throw away seal (2).
3. Take off nut (3).
4. Take off slave cylinder tube (4). Take out and throw away gasket (5).
5. Take out and throw away snapring (6), washer (7), spring (8), and check valve (9).
6. Take slave cylinder cap (1) out of vise.

END OF TASK

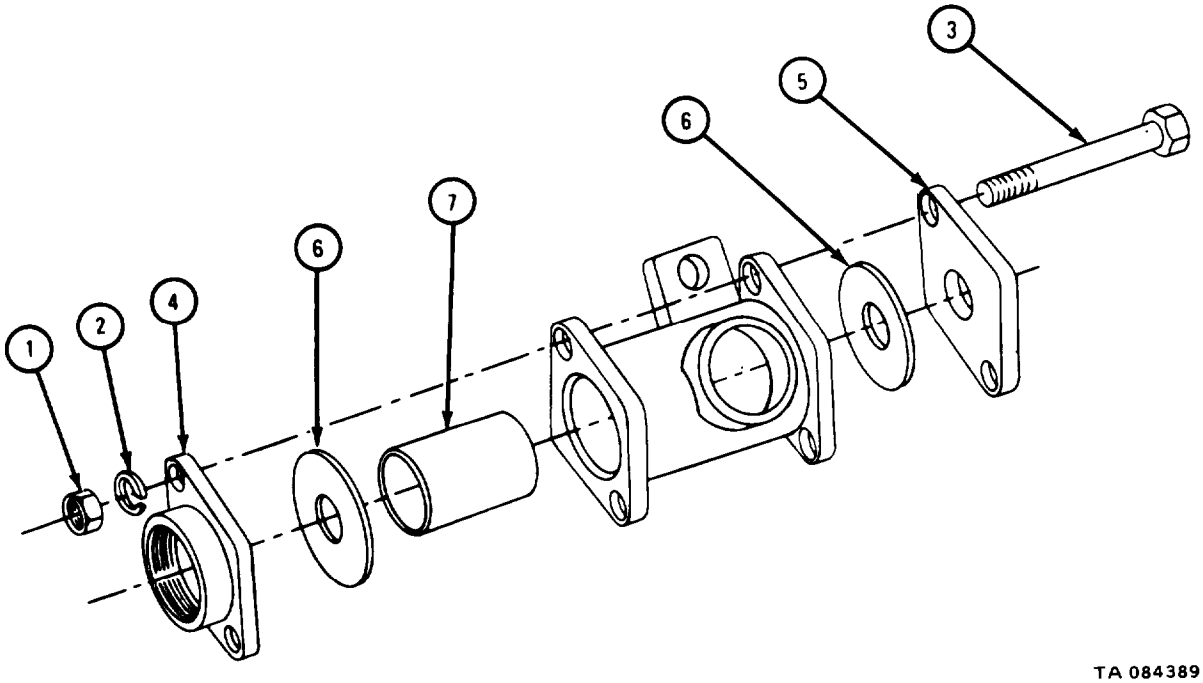


(6) Double check valve.

FRAME 1

1. Take off two nuts (1) and washers (2). Take out two screws (3).
2. Take off caps (4 and 5).
3. Take out and throw away two disks (6).
4. Take out piston (7).

END OF TASK



TA 084389

c. Cleaning, Inspection, and Repair.

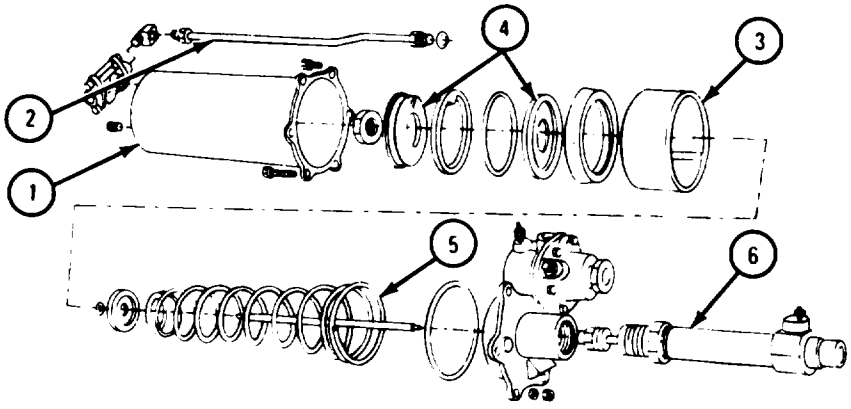
(1) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair.

FRAME 1

1. Check that air cylinder shell (1) has no scored inner surface, damaged seal surface or stripped screw threads. Using crocus cloth or no. 00 steel wool, take off small scratches and corrosion. If air cylinder shell needs more repair, get a new one.
2. Check that air control line (2) has no dents, cracks or damaged or stripped fittings threads. If air control line is damaged, get a new one.
3. Check that piston (3) and two plates (4) have no breaks or distortion. If parts are damaged, get new ones.
4. Using ruler, check that length of helical spring (5) is 12 3/8 inches. If spring is not this length, get a new one.
5. Push down on helical spring (5) until it is 2 3/4-inches high and let it go back to full height. Measure spring length again. If it is not 12 3/8 inches, get a new one.
6. Check that slave cylinder tube (6) has no corrosion, scoring, cracks or stripped threads. Using micrometer, check that bore of slave cylinder tube is between 1.125 and 1.126 inches.
7. If slave cylinder tube (6) is within given limits, take off small scratches and corrosion using honing stone. If slave cylinder tube is damaged or is not within given limits, get a new one.

GO TO FRAME 2



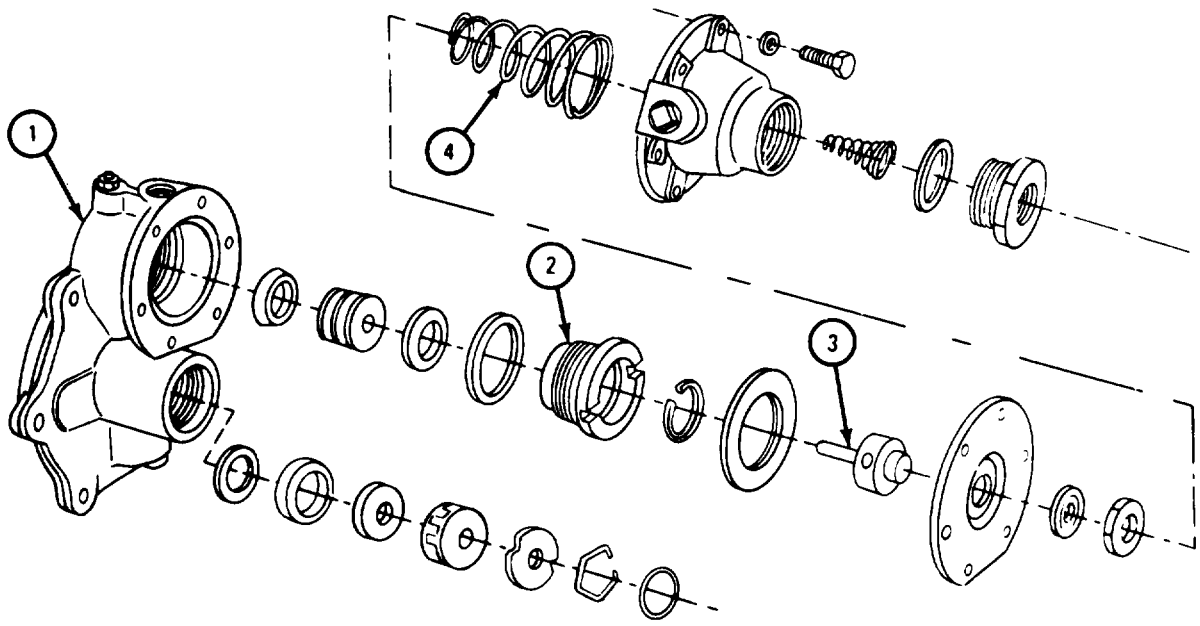
NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084390

FRAME 2

1. Check that end plate (1) is not cracked or distorted and that threads are not damaged. If end plate is damaged, get a new one.
2. Check that fitting (2) is not corroded or scored, and that threads are not damaged. Using micrometer, check that bore of fitting is between 1.2505 and 1,2520 inches. If fitting is damaged or not within given limits, get a new one.
3. Check that stem (3) is not corroded or damaged in any way. Using no. 00 steel wool, take off corrosion. If stem is damaged, get a new one.
4. Check that spring (4) is not damaged. Using ruler, check that free length of spring is 3 1/2 inches. If it is not this length, get a new one.
5. Push down on spring (4) until it is 1 9/32 inches high and let it go back to its full height. Measure spring length again. If it is not 3 1/2 inches, get a new one.

GO TO FRAME 3



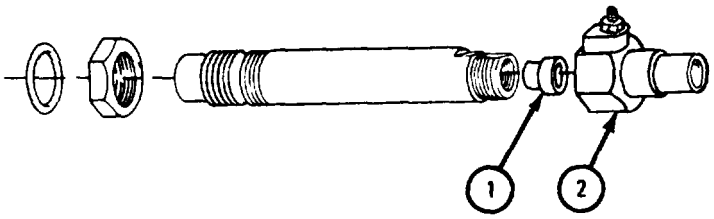
NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084391

FRAME 3

1. Check that check valve (1) and piston bore in cap (2) are not scratched or corroded. Polish check valve and bore with no. 00 steel wool. Using honing stone, take off minor scratches. If part cannot be repaired, get a new one.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084392

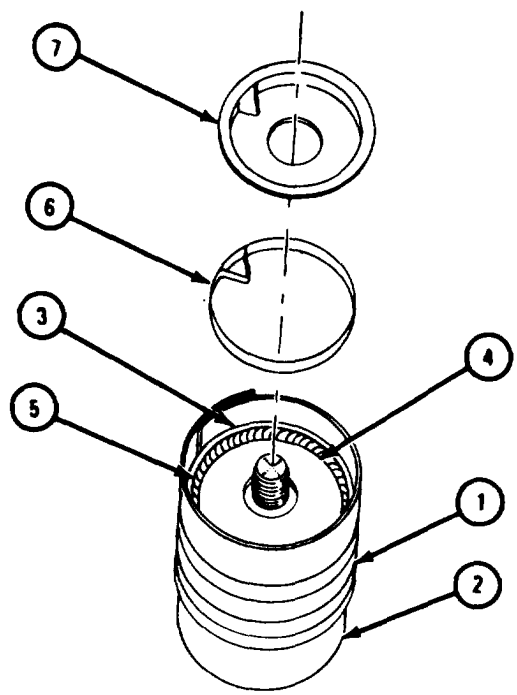
d. Assembly.

(1) Air pak piston assembly.

FRAME 1

1. Put piston ring compressor (1) on piston (2).
2. Put packing (3) in place with lip facing up.
3. Put packing retaining plate (4) in place with cupped side down.
4. Put packing wick (5) inside lip of packing (3).
5. Put packing ring (6) in place and lock ends together.
6. Put retaining plate (7) in place with cutout centered over lock of packing ring (6).

GO TO FRAME 2

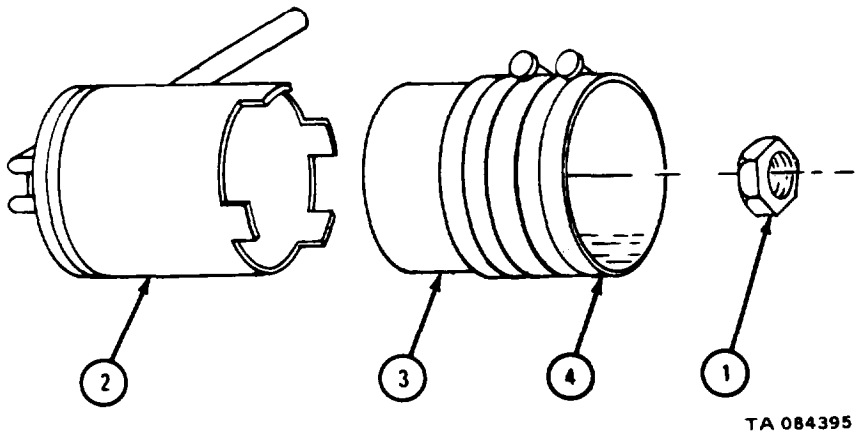


TA 084394

FRAME 2

1. Screw on nut (1) with beveled shoulder down.
2. Place holding tool (2) in bottom of piston (3).
3. Tighten nut (1).
4. Take piston (3) off holding tool (2). Take piston ring compressor (4) off piston (3).

END OF TASK



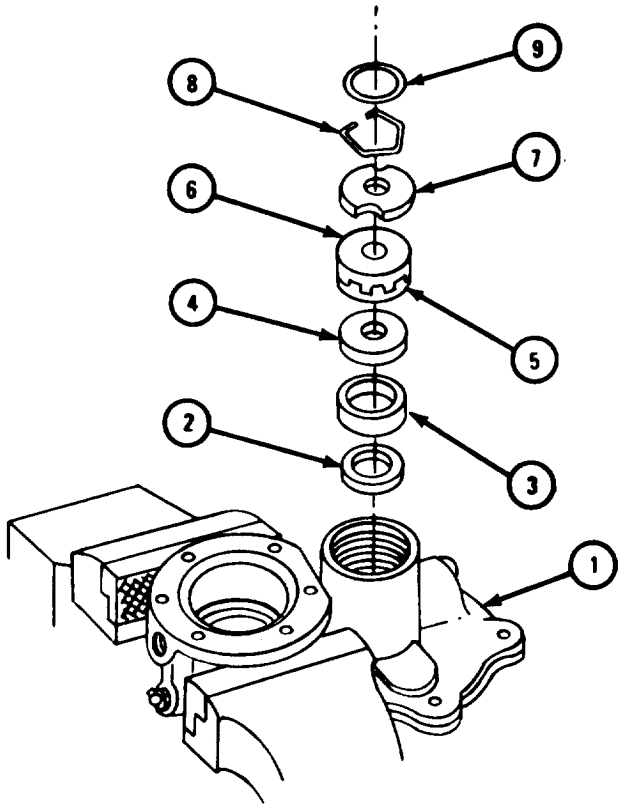
TA 084395

(2) Air pak end plate assembly.

FRAME 1

1. Put end plate (1) in vise as shown.
2. Put in gasket (2).
3. Put in seal (3) with sealing lip down.
4. Put in guide washer (4) with bevel side down.
5. Put in push rod cup (5) with sealing lip up.
6. Put in packing retainer (6) with recessed hole down, and thrust washer (7).
7. Put in snapring (8).
8. Put in preformed packing (9).

GO TO FRAME 2

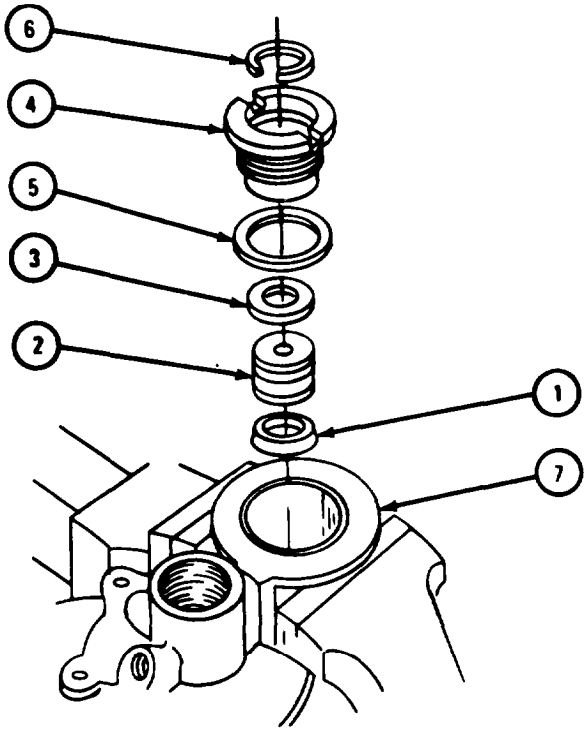


TA 084396

FRAME 2

1. Put cup (1) on piston (2) with sealing lip down.
2. Put cup (3) on piston (2) with sealing lip up.
3. Put a light coat of hydraulic brake fluid on piston (2) with cups (1 and 3) and fitting (4).
4. Put piston assembly (2), with hole up, into bottom of fitting (4).
5. Put seal (5) on fitting (4).
6. Using fabricated screwdriver, screw in and tighten fitting (4).
7. Put retaining ring (6) in fitting (4).
8. Take end plate assembly (7) out of vise.

GO TO FRAME 3

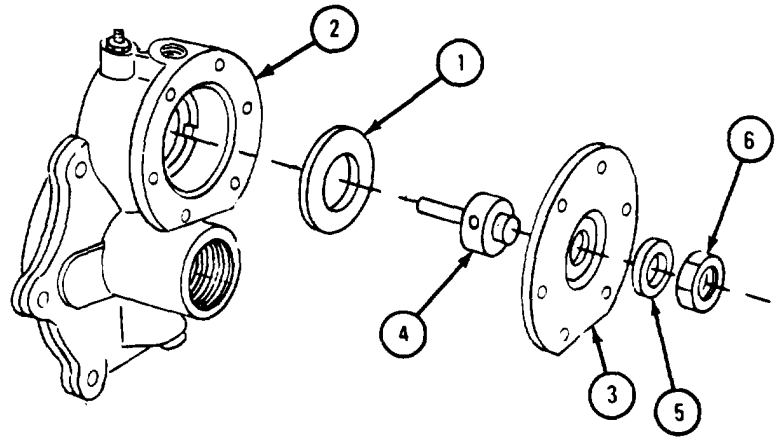


TA 084397

FRAME 3

1. Put retainer (1) in place in end plate (2).
2. Put diaphragm (3) on stem (4).
3. Put on plate (5) with raised side against diaphragm (3).
4. Put on and tighten nut (6).

GO TO FRAME 4

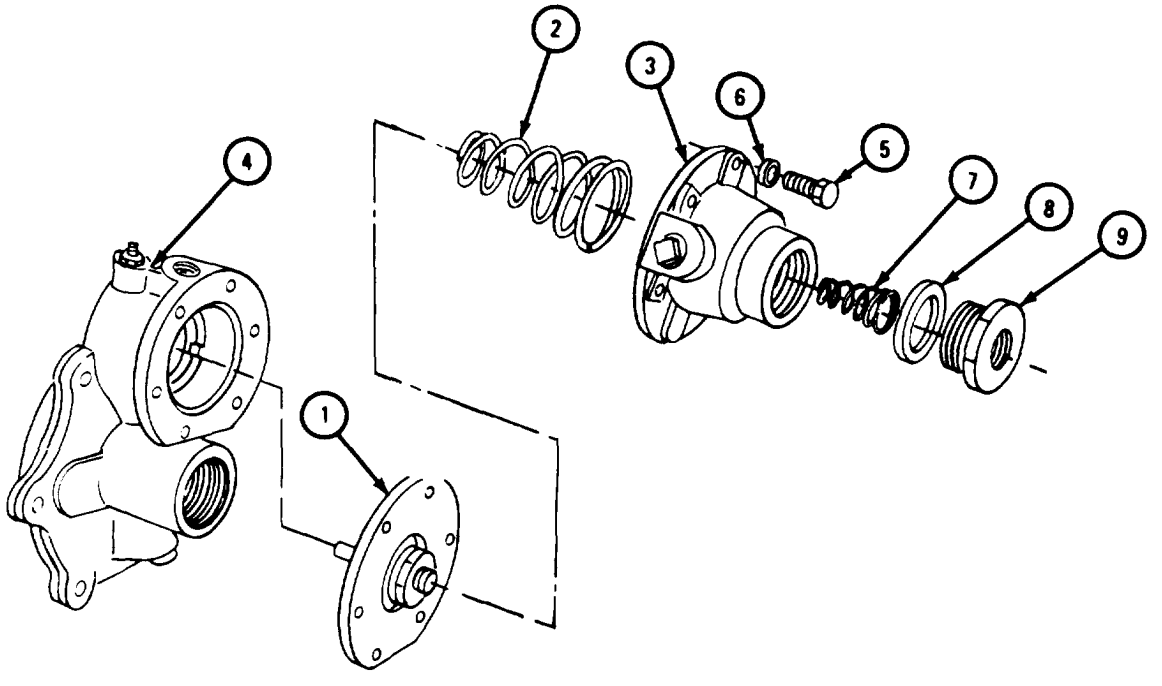


TA 084398

FRAME 4

1. Put diaphragm and adapter assembly (1) in place.
2. Put valve seat spring (2) in place.
3. Put control valve poppet body (3) on end plate (4), alining scribe marks, and hold it down against spring tension.
4. Put in and tighten six screws (5) and lockwashers (6).
5. Put spring (7) and seal (8) in place.
6. Put in and tighten control valve adapter (9).

END OF TASK



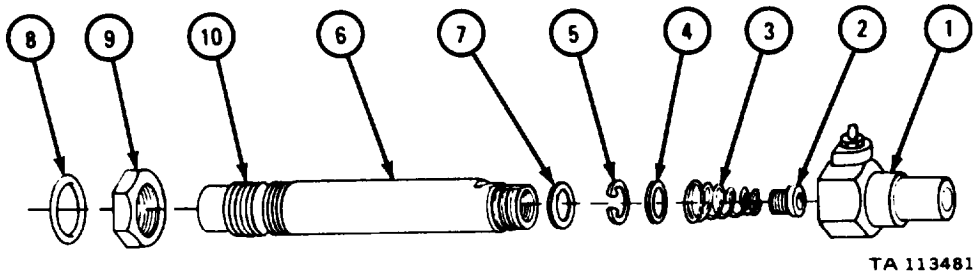
TA 084399

(3) Slave cylinder assembly.

FRAME 1

1. Clamp slave cylinder cap (1) in vise.
2. Put check valve (2), spring (3) and washer (4) in slave cylinder cap (1).
3. Pushdown spring (3). Put in snapring.
4. Put a light coat of hydraulic brake fluid in slave cylinder tube (6) and on gasket (7) and seal (8).
5. Put gasket (7) in slave cylinder cap (1). Put in and tighten slave cylinder tube (6).
6. Put on nut (9). Put seal (8) in groove (10).

END OF TASK

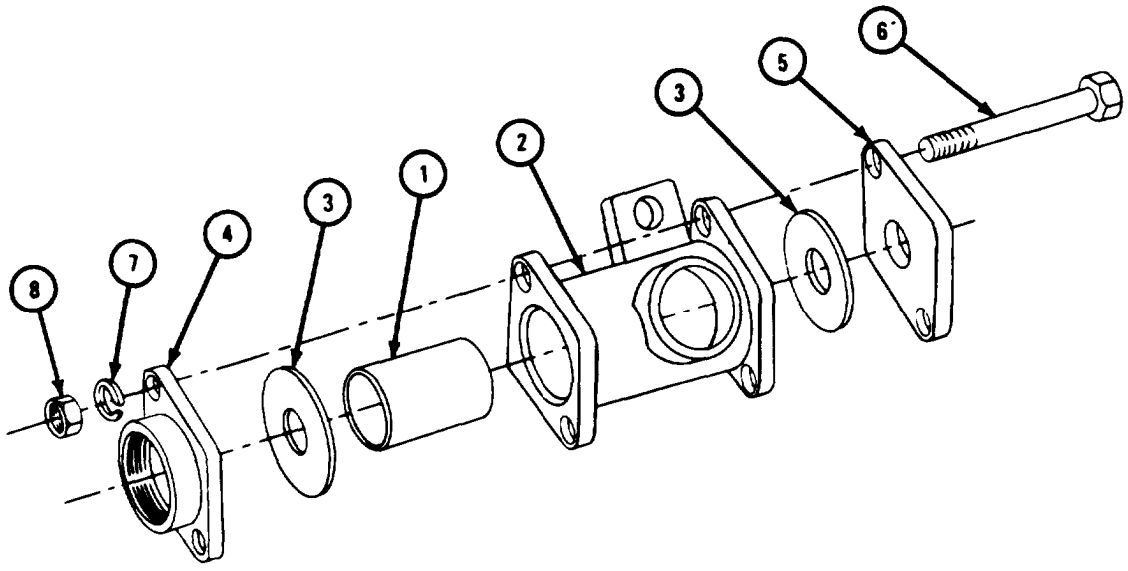


(4) Double check valve assembly.

FRAME 1

1. Slide piston (1) into place in valve body (2).
2. Put two disks (3) in place with raised side toward piston (1).
3. Put caps (4 and 5) in place.
4. Put in and tighten two screws (6), washers (7), and nuts (8)

END OF TASK



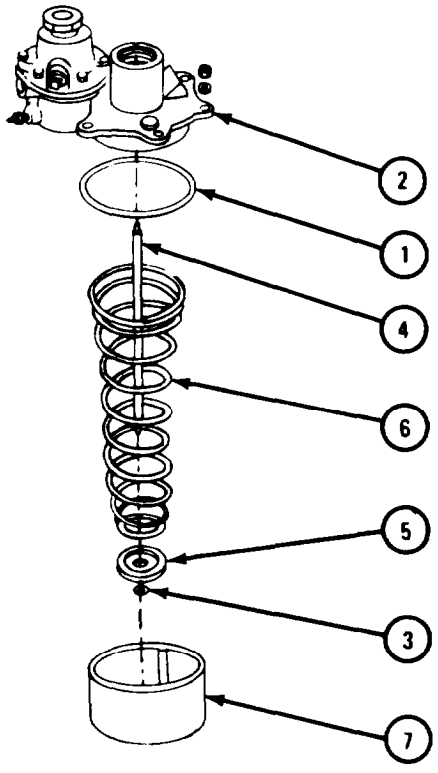
TA 113482

(5) Piston and end plate assembly.

FRAME 1

1. Put seal (1) in place on end plate (2).
2. Put snapring (3) on piston rod (4).
3. Put washer (5) and spring (6) on piston rod (4).
4. Put end of piston rod (4) with washer (5) and spring (6) in piston (7).
5. Put end plate (2) on spring (6).

GO TO FRAME 2

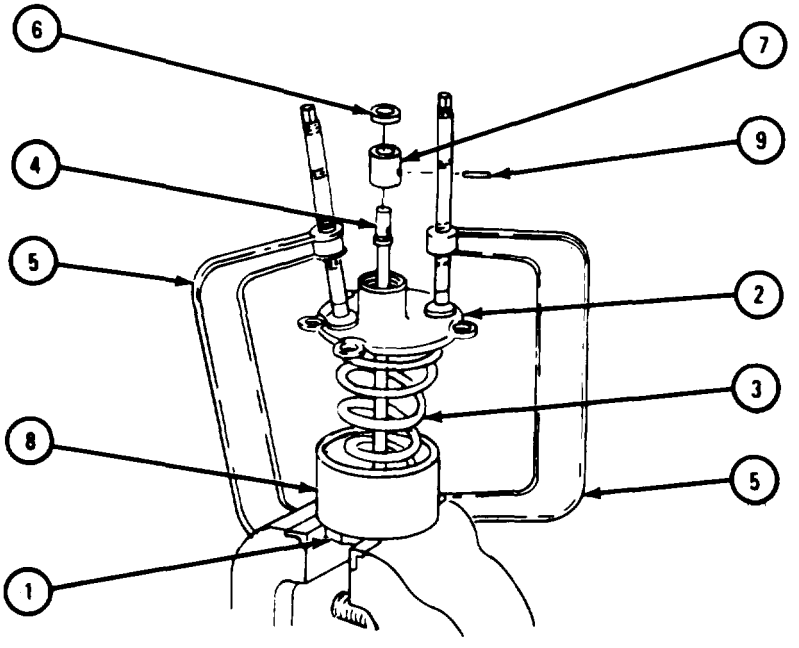


TA 113483

FRAME 2

1. Clamp piston nut (1) in vise.
2. Pressing on end plate (2), compress spring (3) and put piston rod (4) through end plate (2) as shown.
3. Put on two C-clamps (5) as shown.
4. Put seal (6) on hydraulic piston (7).
5. Tighten two C-clamps (5) to compress spring (3) into piston (8).
6. Put hydraulic piston (7) on piston rod (4).
7. Match hole in hydraulic piston (7) with hole in piston rod (4) and put in pin (9).
8. Loosen and take off C-clamps (5).
9. Take piston (8) out of vise.

GO TO FRAME 3

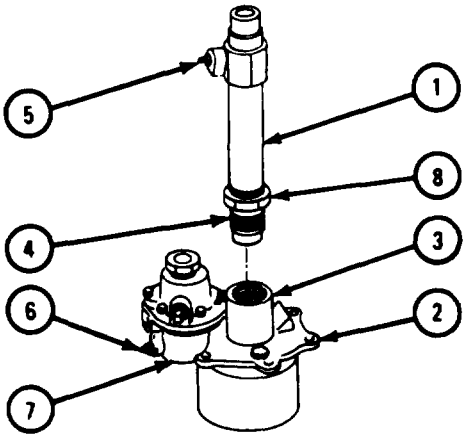


TA 113484

FRAME 3

1. Screw slave cylinder tube assembly (1) into end plate (2) until face of end plate (3) is in center of spacer (4) on slave cylinder tube (1).
2. Aline bleeder fitting (5) on slave cylinder (1) with bleeder fitting (6) on control valve poppet body (7).
3. Hold slave cylinder tube assembly (1) in place. Tighten jamnut (8).

END OF TASK



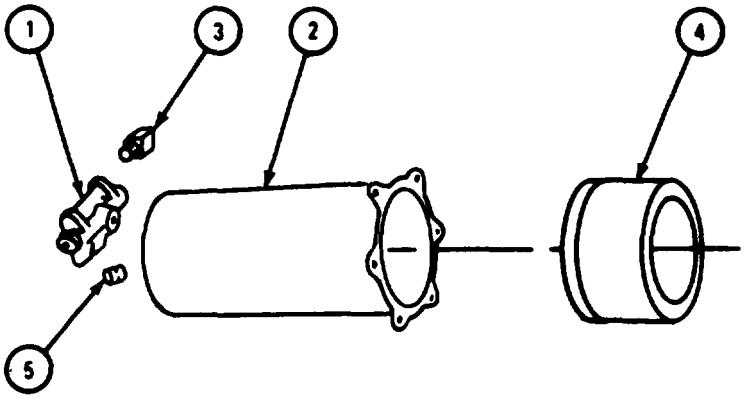
TA 113485

(6) Air cylinder shell.

FRAME 1

1. Screw double check valve (1) on end of air pak shell (2). Tighten double check valve (1).
2. Screw on and tighten elbow (3).
3. Coat air piston (4) with hydraulic brake fluid.
4. Slide air piston (4) into air pak shell (2) and push it all the way to bottom.
5. Tighten pipe plug (5).

GO TO FRAME 2



TA 113486

FRAME 2

1. Put seal (1) on tube (2).
2. Put tube (2) in place in control valve poppet body (3).
3. Put end plate assembly (4) in place in air pak shell (5), alining scribe marks.
4. Put in four long cap screws (6) and two short cap screws (7). Tighten six nuts with lockwashers (8).

NOTE

If threads on fittings (9) will not screw into elbow (10) and control valve poppet body (3), turn elbow on double check valve (11) slightly to right or left to line these up.

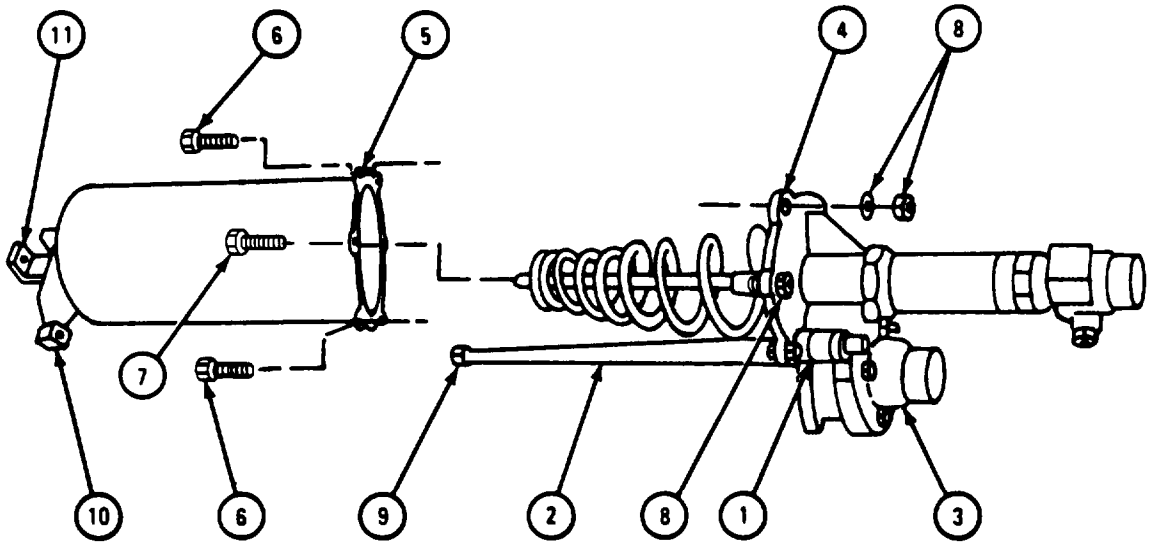
5. Slide tube (2) back into elbow (10). Tighten two fittings (9).

NOTE

Follow-on Maintenance Action Required:

Replace air hydraulic cylinder. Refer to TM 9-2320-211-20.

END OF TASK



TA 113487

11-8. HYDRAULIC BRAKE LINES REPAIR. Repair for hydraulic brake lines and fittings is limited to replacement of damaged parts. For removal and replacement of damaged parts, refer to TM 9-2320-211-20.

Section IV. MECHANICAL BRAKE SYSTEM

11-9. BRAKE ACTUATING LEVER AND CLUTCH AND BRAKE LEVER MAIN SUPPORT BRACKET ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS : No special tools required

SUPPLIES : Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL : Two

EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove cab tunnel. Refer to TM 9-2320-211-20.

(2) Remove brake pedal. Refer to TM 9-2320-211-20.

(3) Remove clutch pedal. Refer to TM 9-2320-211-20.

(4) Remove clutch actuating lever link rod assembly. Refer to TM 9-2320-211-20.

(5) Remove clutch lever return spring. Refer to TM 9-2320-211-20.

(6) Remove clutch actuating lever assembly. Refer to TM 9-2320-211-20.

(7) Remove master cylinder. Refer to TM 9-2320-211-20.

(8) Remove transfer-to-front axle propeller shaft. Refer to TM 9-2320-211-20.

(9) Remove left side tool box. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

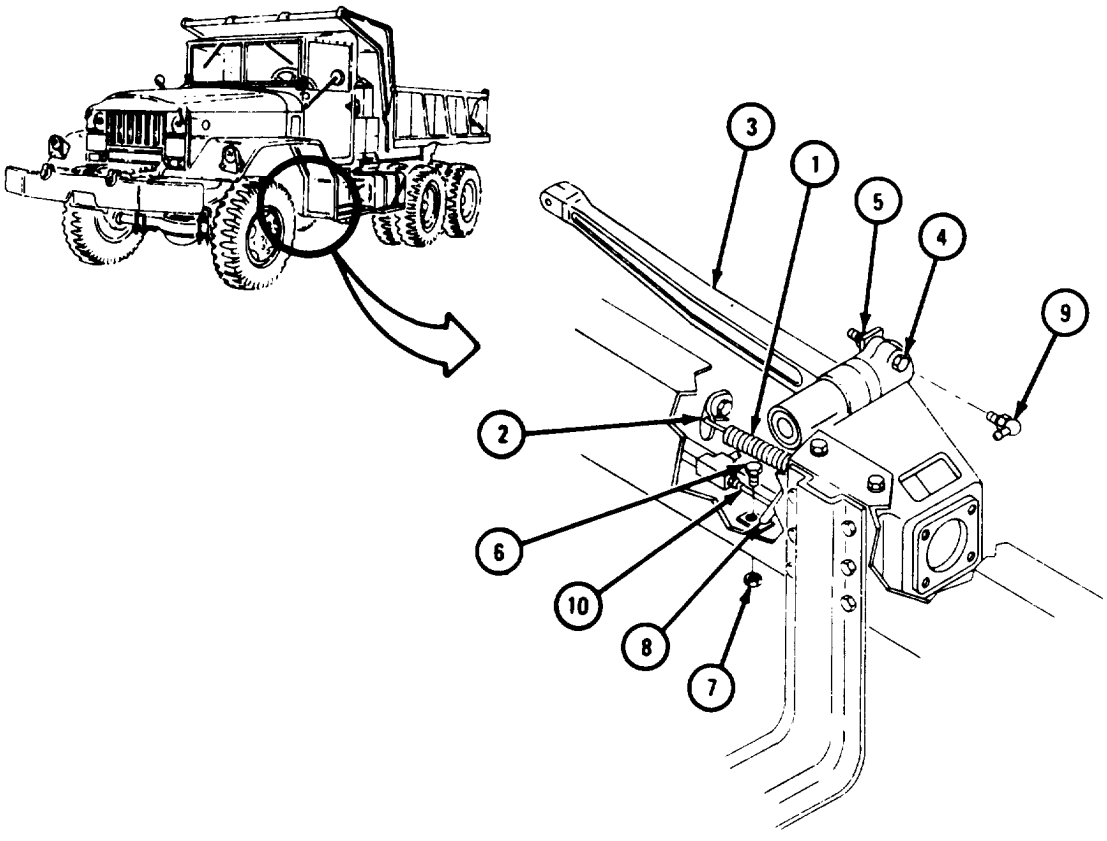
1. Working in cab of truck, take spring (1) off bracket (2) and brake actuating lever (3).
2. Take out screw (4) and take off nut (5).
3. Working under truck, take out screw (6) and take off nut (7). Take off bracket (8).
4. Take out lubrication fitting (9).

WARNING

Be careful not to let brake fluid get into eyes when taking off line and fitting (10). Brake fluid could cause loss of sight.

5. Take off line and fitting (10).

GO TO FRAME 2



TA 103112

FRAME 2

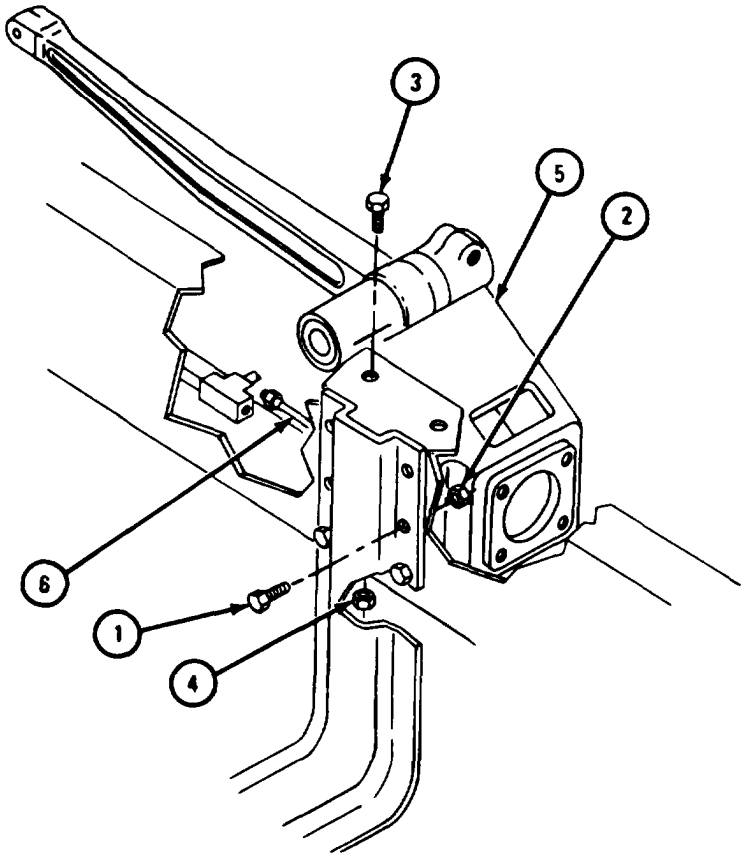
Soldier A 1. Hold four screws (1).

Soldier B 2. Take off four nuts (2).

Soldier A 3. Hold two screws (3).

Soldier B 4. Take off two nuts (4). Slide main support bracket (5) over end of hydraulic line (6) and take it out. Take out six screws (1 and 3).

END OF TASK



TA 103113

c. Disassembly.

FRAME 1

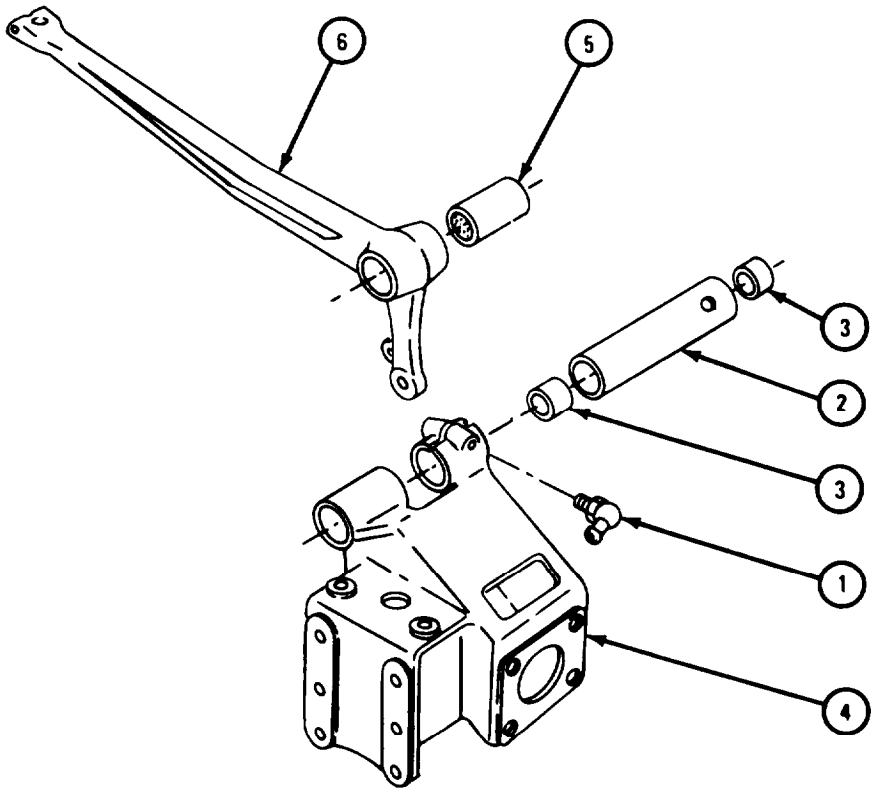
1. Take out lubrication fitting (1).
2. Press bearing tube (2) with two bearings (3) out of main support bracket (4).

NOTE

Do not take out bearings (3 and 5) unless they are worn or damaged. Refer to Part 1, para 7-7 for inspection procedures.

3. If two bearings (3) are worn or damaged, put bearing tube (2) in vise and tap out two bearings.
4. If bearing (5) is worn or damaged, press bearing out of brake activating lever (6).

END OF TASK



TA 103114

d. Cleaning There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection.

(1) Check that all parts are not cracked, bent or broken.

(2) Check that bearings are not damaged. Refer to Part 1, para 7-7.

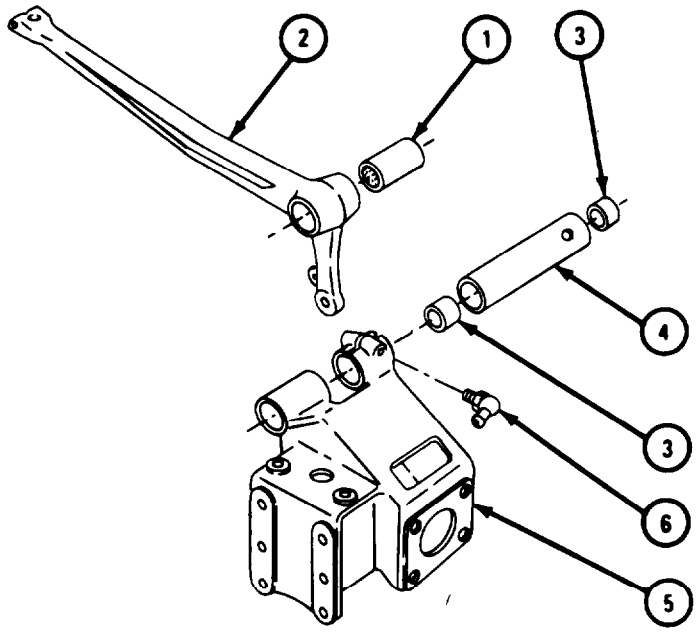
f. Repair. If parts are damaged, get new ones in their place.

g. Assembly.

FRAME

1. If bearing (1) was taken out, put in in brake actuating lever (2). Refer to Part 1, para 7-7.
2. If two bearings (3) were taken out, press bearings into bearing tube (4).
3. Aline hole in bearing tube (4) with hub hole in main support bracket (5).
4. Press two bearings (3) and bearing tube (4) in main support bracket (5).
5. Put in lubrication fittings (6).

END OF TASK



TA 103115

h. Replacement.

FRAME 1

1. Slide main support bracket (1) over end of hydraulic line (2) and into place, alining holes.

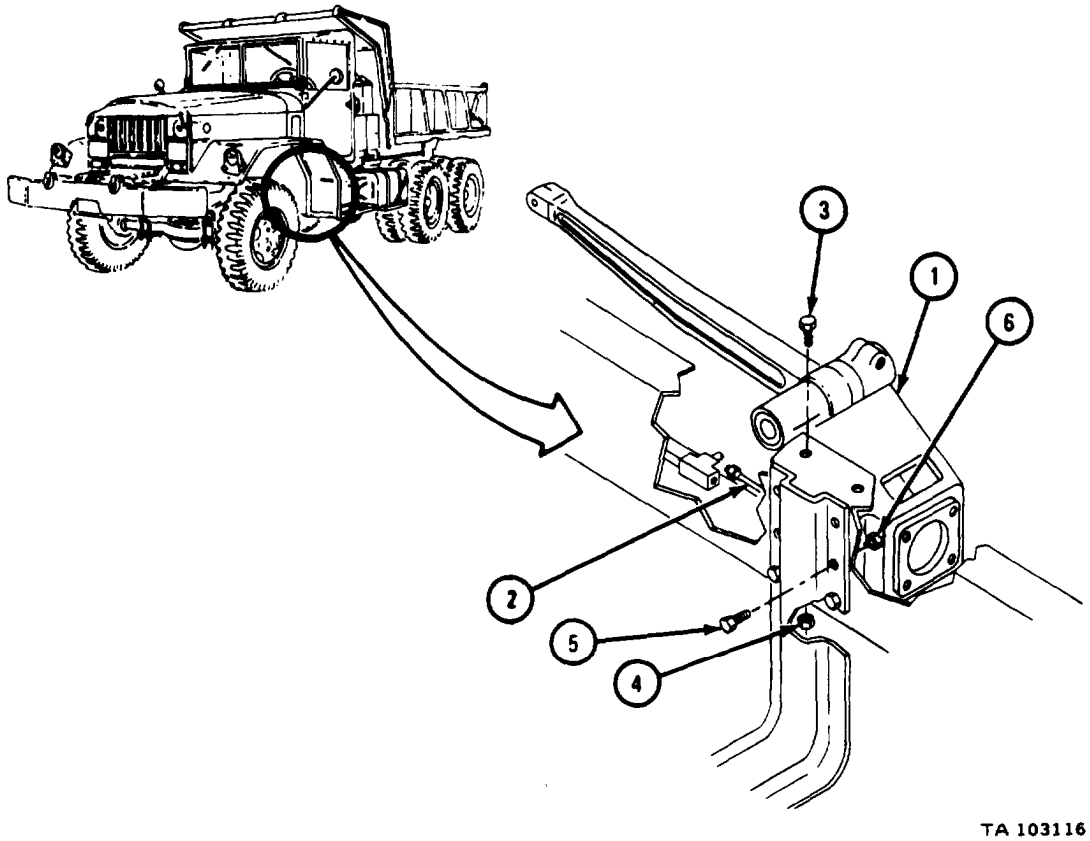
Soldier A 2. Put in and hold two screws (3).

Soldier B 3. Put on two nuts (4).

Soldier A 4. Put in and hold four screws (5).

Soldier B 5. Put on four nuts (6).

GO TO FRAME 2



TA 103116

FRAME 2

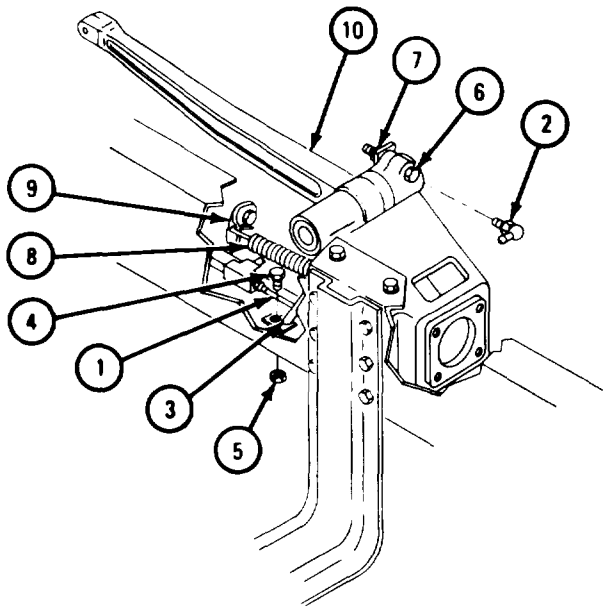
1. Put in line and fitting (1).
2. Put in lubrication fitting (2).
3. Put bracket (3) in place. Put in screw (4) and put on nut (5).
4. Put in screw (6) and put on nut (7).
5. Put spring (8) on bracket (9) and brake actuating lever (10).

NOTE

Follow-on Maintenance Action Required:

1. Replace master cylinder. Refer to TM 9-2320-211-20.
2. Replace clutch actuating lever assembly. Refer to TM 9-2320-211-20.
3. Replace clutch lever return spring. Refer to TM 9-2320-211-20.
4. Replace clutch actuating lever link rod assembly. Refer to TM 9-2320-211-20.
5. Replace clutch pedal. Refer to TM 9-2320-211-20.
6. Replace brake pedal. Refer to TM 9-2320-211-20.
7. Replace cab tunnel. Refer to TM 9-2320-211-20.
8. Replace transfer-to-front axle propeller shaft. Refer to TM 9-2320-211-20.
9. Replace left side tool box. Refer to TM 9-2320-211-20.

END OF TASK



TA 103117

CHAPTER 12

WHEEL SYSTEM GROUP MAINTENANCE

Section I. SCOPE

12-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for tires for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

12-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section II. TIRES

12-3. TIRE REPAIR.

a. Removal. Remove damaged tire. Refer to TM 9-2320-211-20.

b. Repair. Repair damaged tire. Refer to TB 9-2610-200-34/1.

c. Replacement. Replace tire. Refer to TM 9-2320-211-20.

CHAPTER 13

STEERING SYSTEM GROUP MAINTENANCE

Section I. SCOPE

13-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for the mechanical steering gear and power steering gear assemblies, steering hydraulic system and steering system valves for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

13-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section 11. MECHANICAL STEERING GEAR ASSEMBLY

13-3. DRAG LINK ASSEMBLY REPAIR.

NOTE

This task is the same for the upper and lower drag link assembly. This task is shown for the lower drag link assembly.

TOOLS: No special tools required

SUPPLIES: Steering drag link repair parts kit

PERSONNEL: One

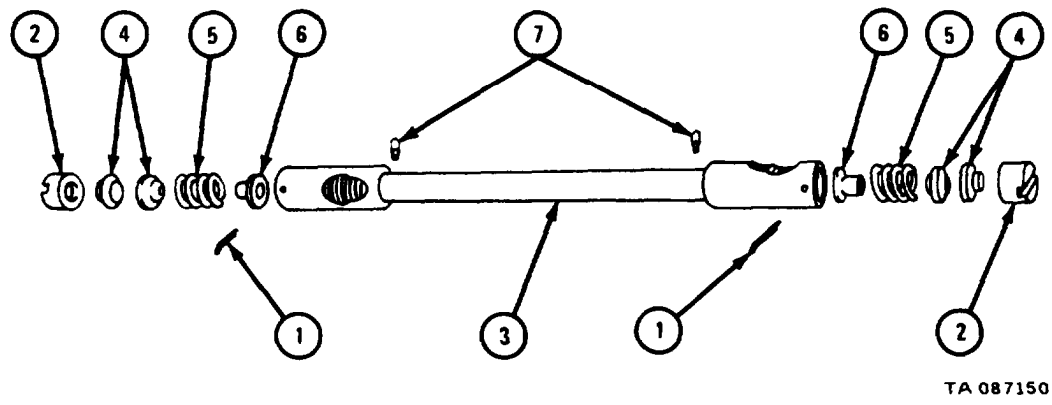
EQUIPMENT CONDITION: Drag link assembly on workbench.

a. Disassembly.

FRAME 1

1. Take out cotter pin (1).
2. Take out plug (2) at end of drag link (3).
3. Take out two ball seats (4), spring (5), and retainer (6).
4. Do steps 1 and 2 again at other end of drag link (3).
5. Take out two lubrication fittings (7).

END OF TASK



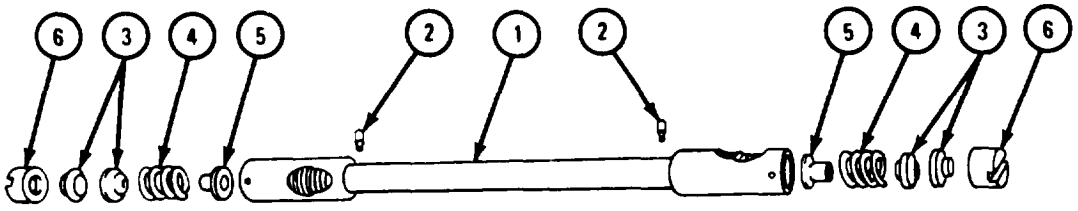
b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that drag link tube (1) has no bends, cracks or stripped threads.
2. Check that lubrication fittings (2) have no bends or cracks.
3. Check that ball seats (3), springs (4), retainer (5), and plugs (6) have no cracks, breaks or worn areas.
4. Throw away all worn or damaged parts and get new ones.

END OF TASK



TA 087151

d. Assembly.

FRAME 1

CAUTION

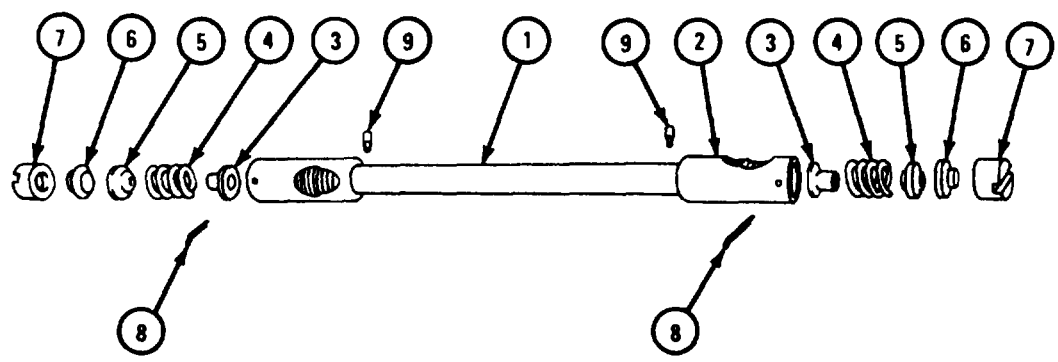
Make sure no dirt gets into drag link or on parts. Dirt will cause ball studs and seats to bind and wear out.

NOTE

Rear end of drag link (1) has shortest space between ball seat opening (2) and drag link end.

1. Put retainer (3) into rear end of drag link (1), large end first.
2. Put in spring (4).
3. Put in ball seat (5), large end out.
4. Put in ball seat (6), large end in.
5. Put plug (7) into end of drag link (1), but do not tighten it,
6. Aline groove in plug (7) with hole and put in cotter pin (8).
7. Do steps 1 through 5 again at other end of drag link (1).
8. Put in two lubrication fittings (9).

END OF TASK



TA 087152

13-4. RELAY LEVER ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Relay lever seals (2)

PERSONNEL: One

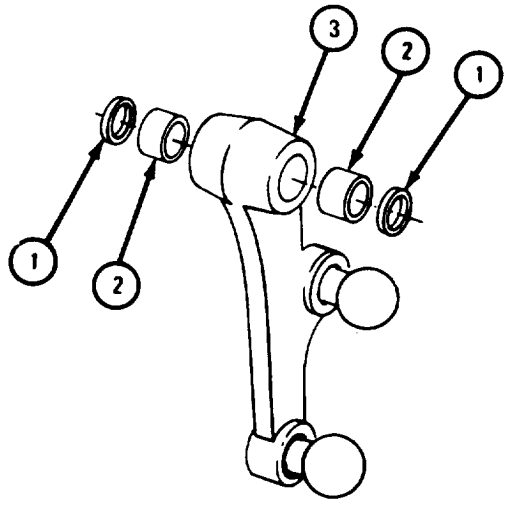
EQUIPMENT CONDITION: Relay lever assembly on workbench.

Disassembly.

FRAME 1

1. Press out two seals (1) and two bushings (2) from relay lever (3). Throw away seals.

END OF TASK



TA 087176

b. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Clean all parts with solvent.

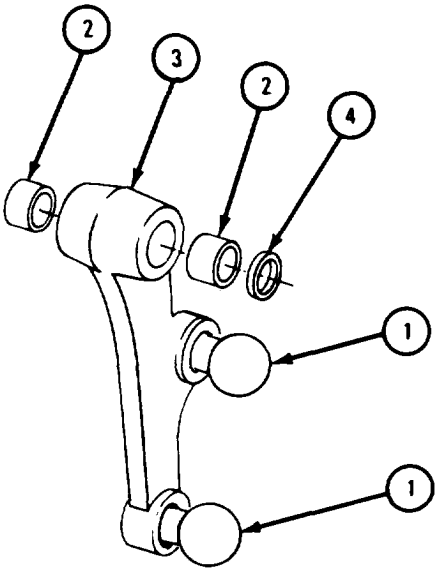
(2) Let parts dry well.

c. Inspection and Repair.

FRAME 1

1. Check that balls (1) on ball studs are not worn or loose.
2. Check that bushings (2) are not cracked or worn.
3. Check that relay lever (3) has no bends, cracks or stripped threads.
4. T brow away damaged or worn parts and get new ones in their place.
5. Throw away two seals (4) and get new ones.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

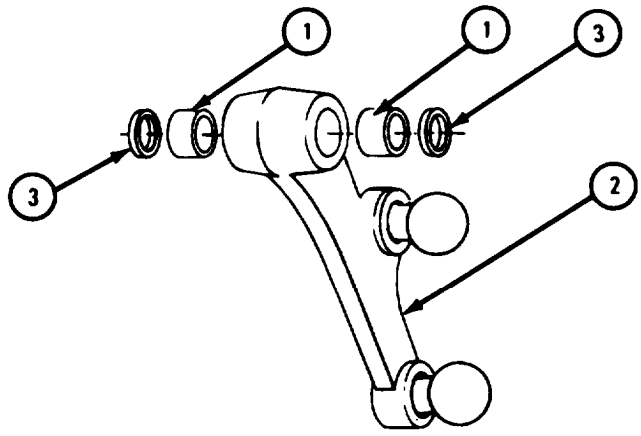
TA 087177

d. Assembly.

FRAME 1

1. Press two bushings (1) into relay lever (2) until there is a 3/16-inch recess from side of relay lever to bushing.
2. Put in two seals (3).

END OF TASK



TA 087178

Section III. POWER STEERING GEAR ASSEMBLY

13-5. STEERING GEAR REMOVAL, REPAIR, AND ADJUSTMENT.

TOOLS: Hand reamer, pn 7950248
Bearing replacer, pn 7950129
Remover/replacer, pn 7950137
Burnisher, pn 7950139

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Lubricating oil, ICE, OE/HDO 10, MIL-L-2104
Steering Parts Kit
Sliding end cover gasket
Cam end cover gasket
Gear housing cover gasket
Hydraulic control valve preformed packing (3)
Pitman arm seal

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Open hood and left side panel. Refer to TM 9-2320-211-10.

(2) Drain power steering reservoir. Refer to LO 9-2320-211-12.

(3) Remove steering gear tube and jacket. Refer to para 13-6.

(4) Drain steering gear lubricant. Refer to LO 9-2320-211-12.

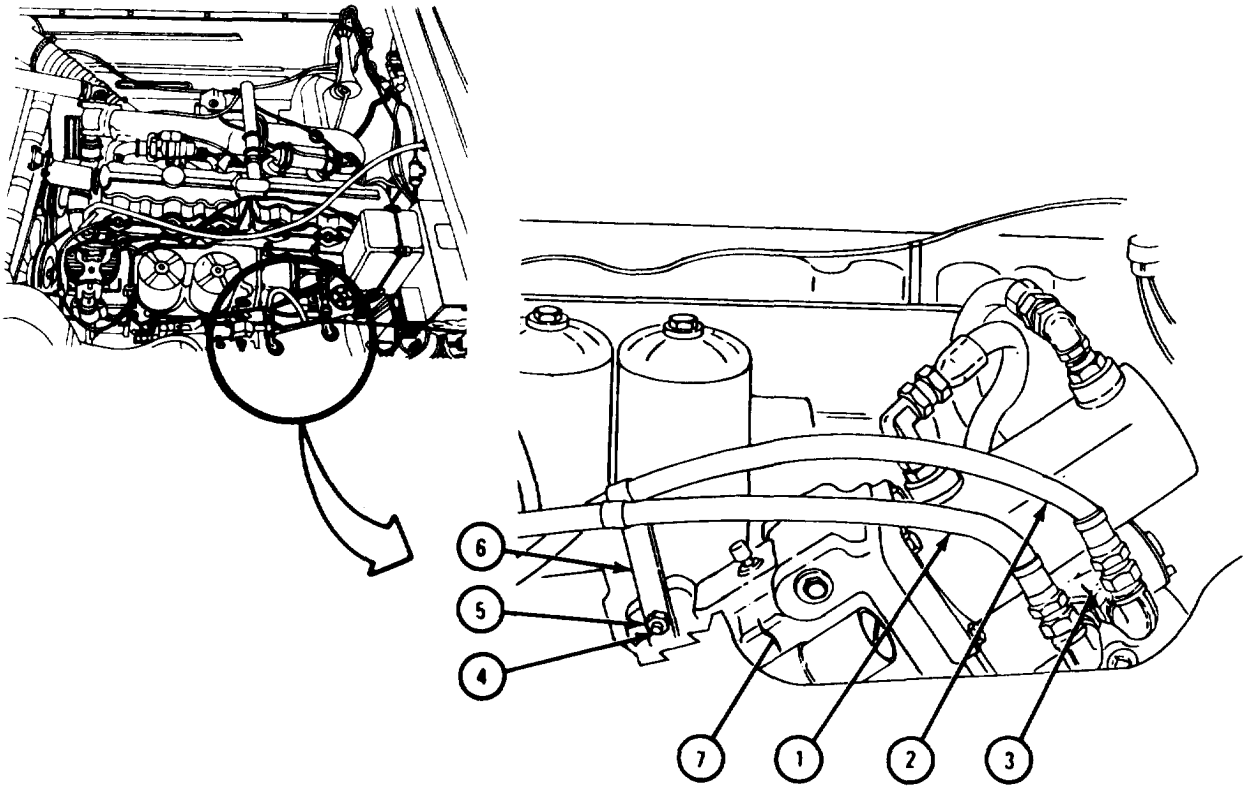
(5) Remove pitman arm from steering assembly. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

1. Unhook inlet line (1) and outlet line(2) from control housing(3).
2. Take out screw (4) and takeoff nut (5).
3. Take bracket(6) off steering gear (7).

GO TO FRAME 2

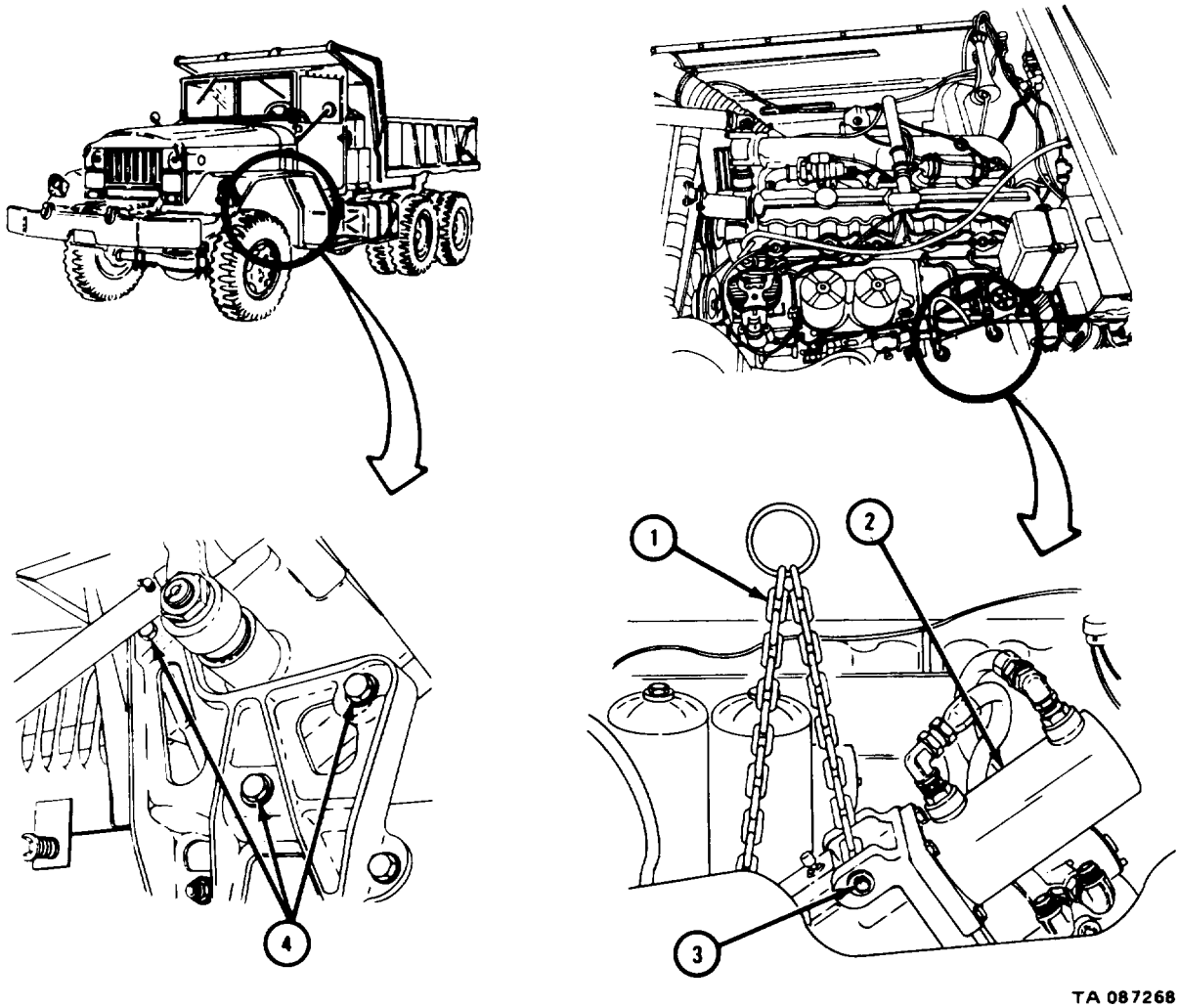


TA 087266

FRAME 2

1. Put chain sling (1) on steering gear (2) with two bolts, washers, and nuts (3) as shown.
2. Hook chain sling (1) onto hoist. Take up slack in chain.
3. Take out three screws, nuts, and lockwashers (4).
4. Take steering gear (2) out of truck and lower it onto workbench.
5. Unhook chain hoist. Take off two bolts, washers, nuts (3), and chain sling (1).

GO TO FRAME 3

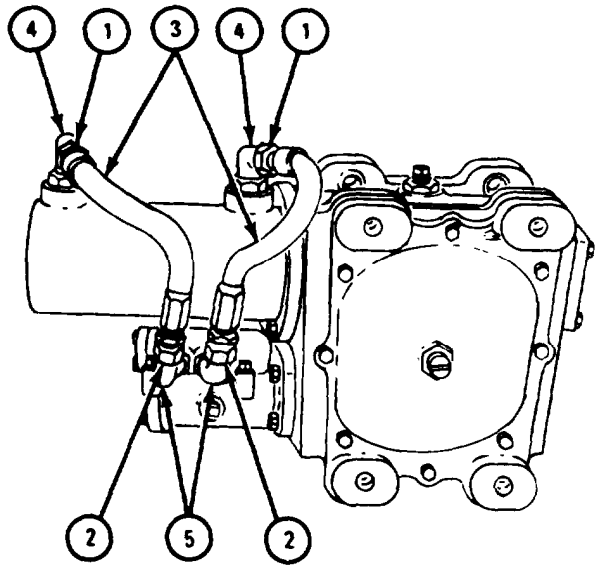


TA 087268

FRAME 3

1. Unscrew two nuts (1) and two nuts (2) and take out two hoses (3).
2. Take off two elbows (4).
3. Take off four elbows (5), two from each side.

END OF TASK



TA087269

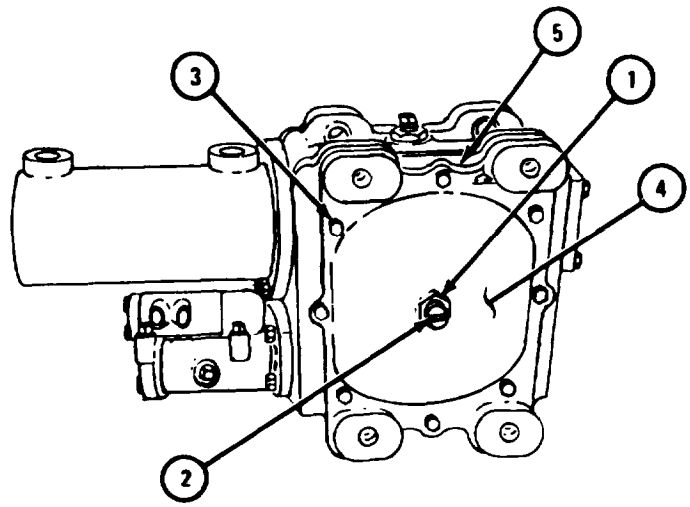
c. Disassembly into Subassemblies.

(1) Pitman arm shaft.

FRAME 1

1. Loosen adjusting nut (1) and screw (2).
2. Take out eight screws (3) and take off gear housing side cover (4) and gasket (5). Throw away gasket.

GO TO FRAME 2

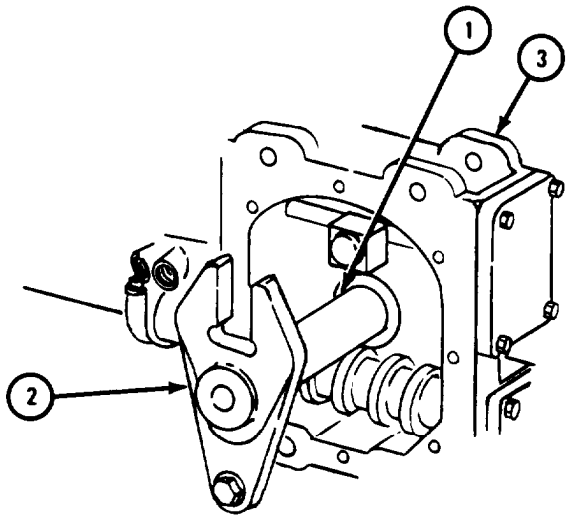


TA 087270

FRAME 2

1. Take burrs off splined end of pitman arm shaft (1).
2. Pull shaft with integral lever assembly (2) from housing (3).

END OF TASK



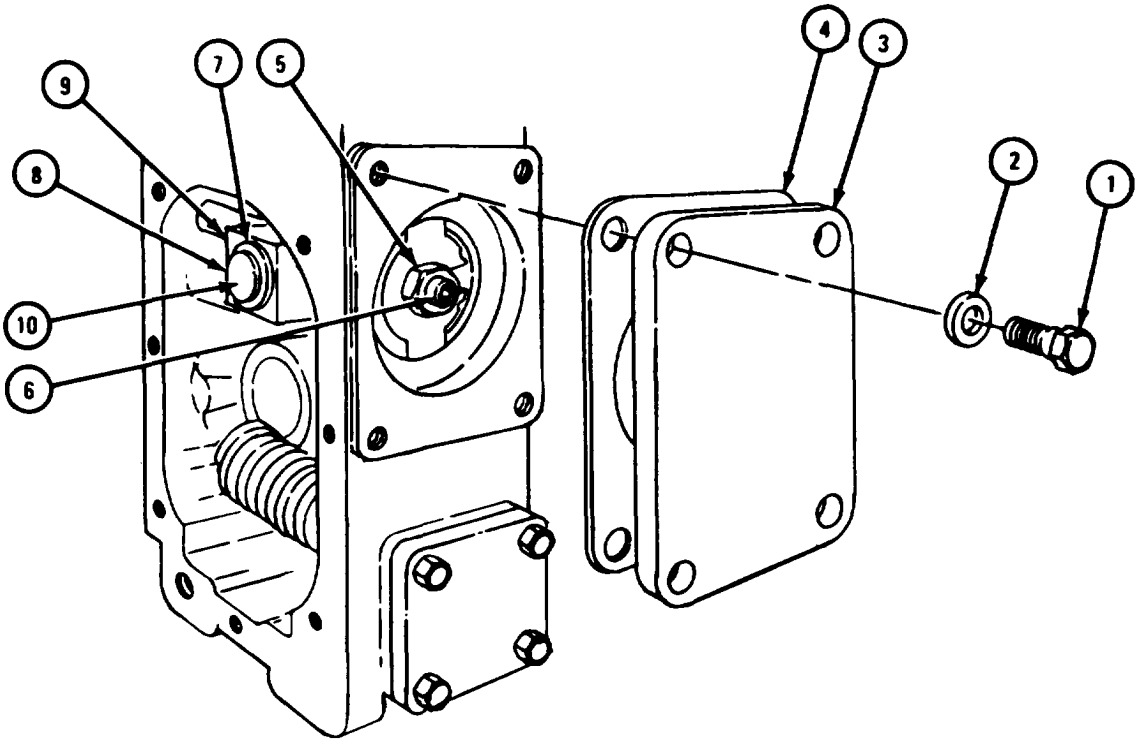
TA 087271

(2) Power cylinder assembly.

FRAME 1

1. Take out four screws (1) and washers (2).
2. Take off cover (3) and gasket (4). Throw away gasket.
3. Loosen nut (5) and setscrew (6).
4. Take off snapring (7). Take off flat washer (8) and take out integral lever block (9) and pin (10).

GO TO FRAME 2

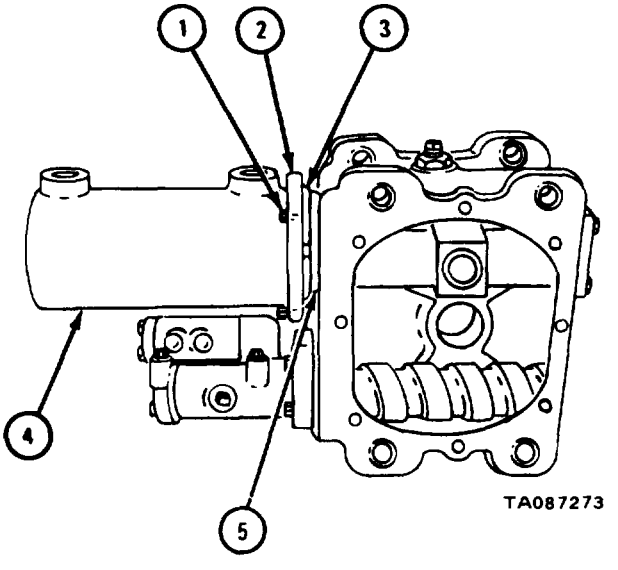


TA 087272

FRAME 2

1. Take out four screws (1).
2. Turn flange (2) 90° to right and pull flange back from snapring (3).
3. Take off snapring (3).
4. Slide off cylinder (4), flange (2), and gasket (5).

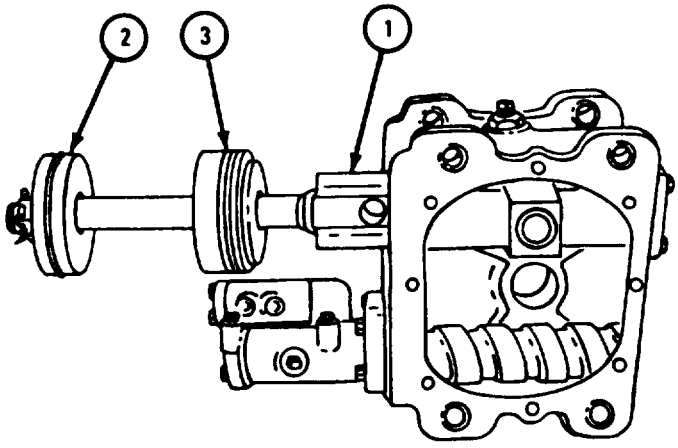
GO TO FRAME 3



FRAME 3

1. Pull out sliding bar(1), piston (2), and adapter with bushing assembly (3).

END OF TASK

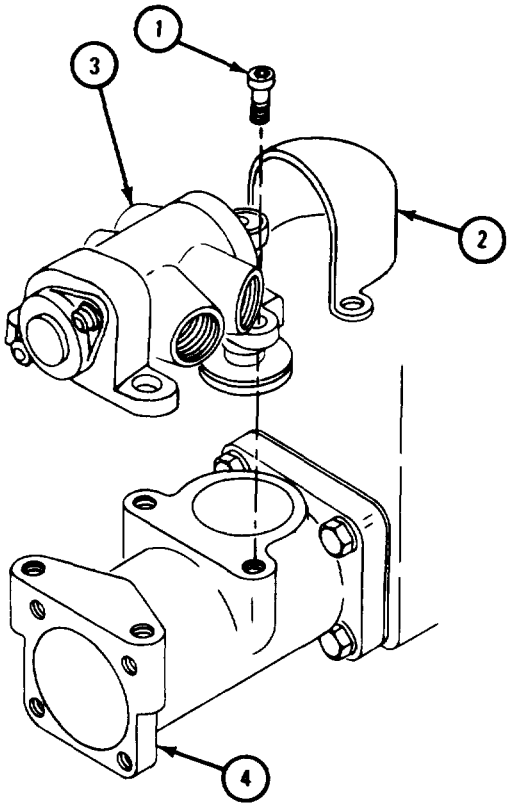


(3) Hydraulic control valve.

FRAME 1

1. Take out four screws (1) and lift off actuating lever cover and seal (2).
2. Take off hydraulic control valve assembly (3) from control housing (4).

END OF TASK



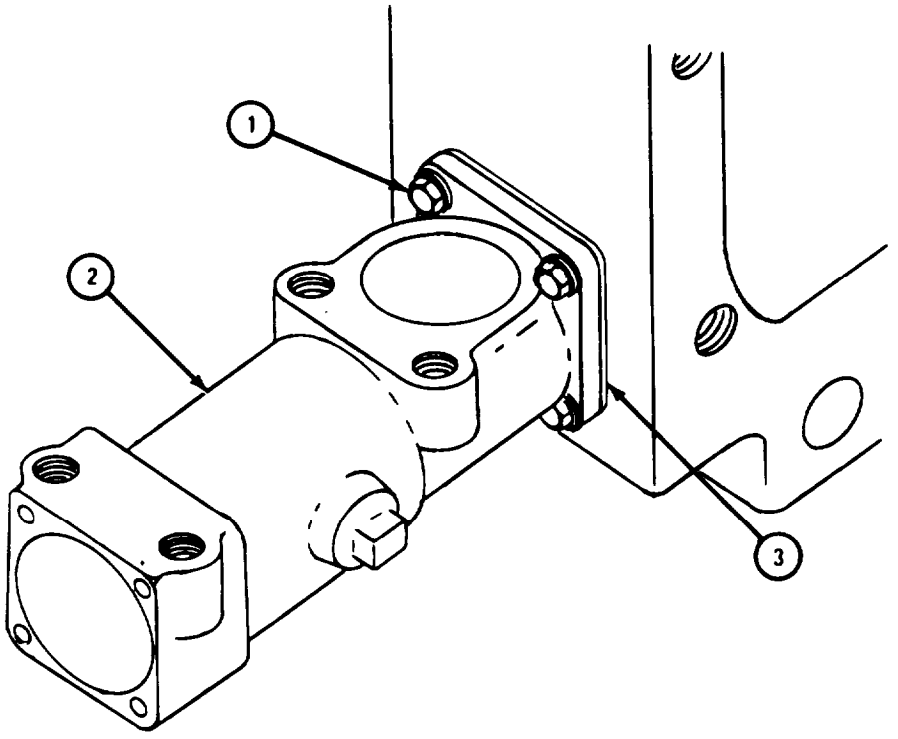
TA 087275

(4) Steering gear control housing assembly.

FRAME 1

1. Take out four screws (1).
2. Take off control housing (2) and gasket (3).

END OF TASK



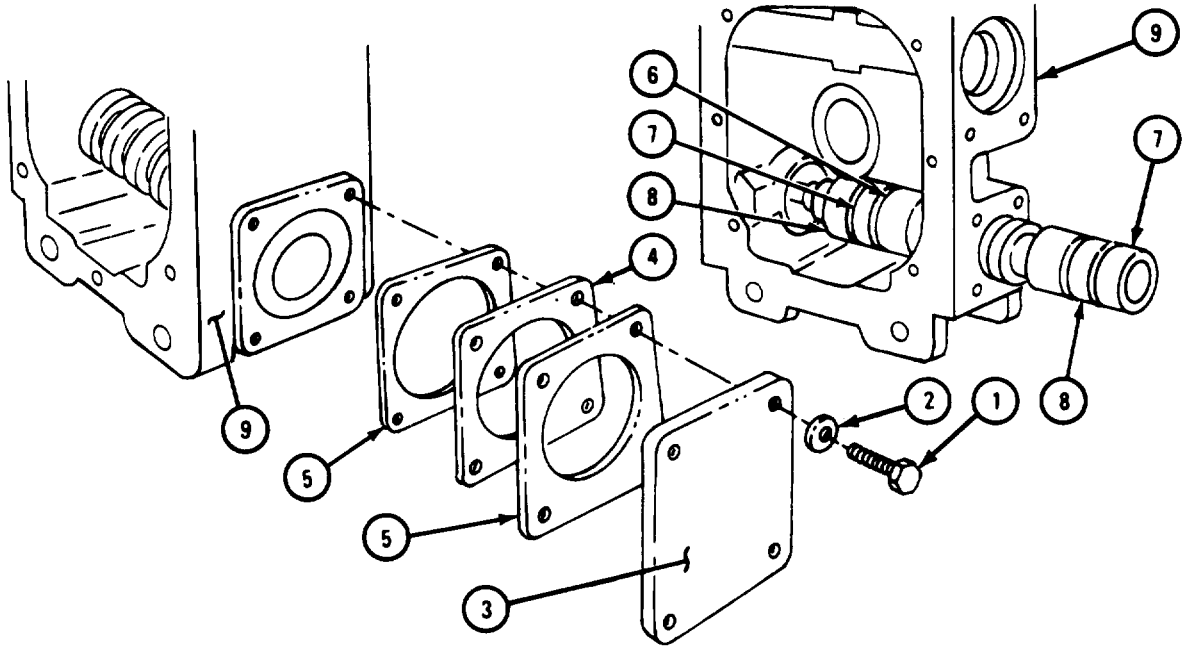
TA 087276

(5) Cam assembly.

FRAME 1

1. Take out four screws (1) and washers (2).
2. Take off cam cover (3), shims (4), and two gaskets (5). Throw away gaskets.
3. Measure and note thickness of shims (4).
4. Pull cam (6) with two retainers (7) and two thrust bearings (8) out of housing (9).

END OF TASK



d. Disassembly of Subassemblies.

(1) Pitman armshaft with integral lever assembly.

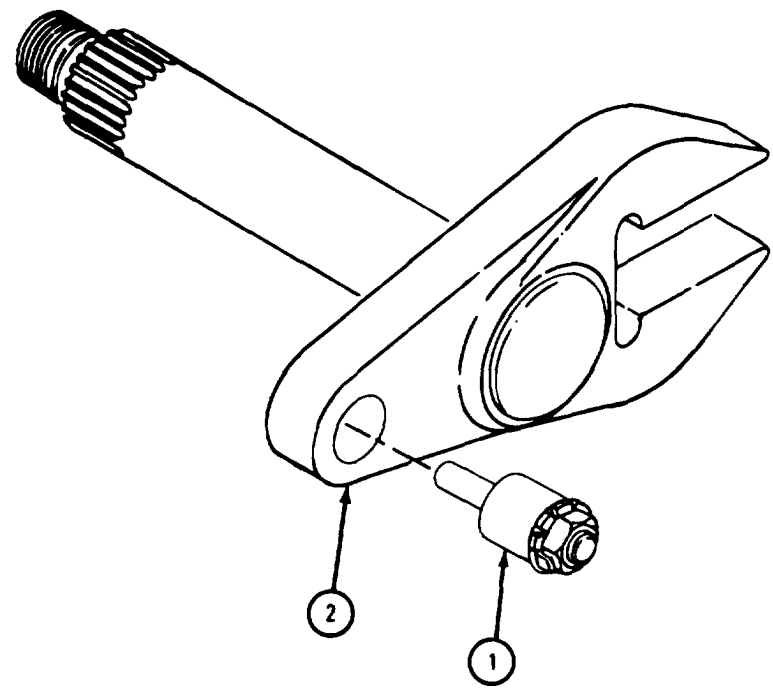
FRAME 1

NOTE

Do not take out bearing and stud assembly (1) unless it is damaged. Refer to Part 1, para 7-7 for inspection purposes.

1. Press roller bearing and stud assembly (1) out of shaft (2).

END OF TASK



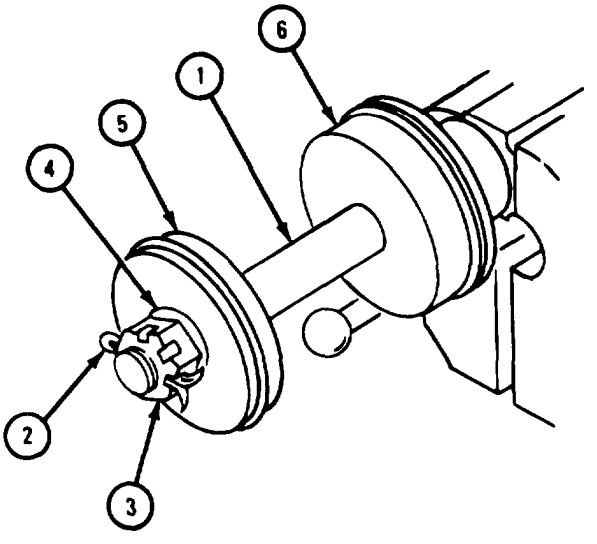
TA 087278

(2) Power cylinder assembly.

FRAME 1

1. Clamp sliding bar (1) in soft-jaw vise.
2. Take out cotter pin (2). Take off slotted nut (3). Take off washer (4) and piston (5).
3. Slide off adapter and bushing assembly (6).

GO TO FRAME 2

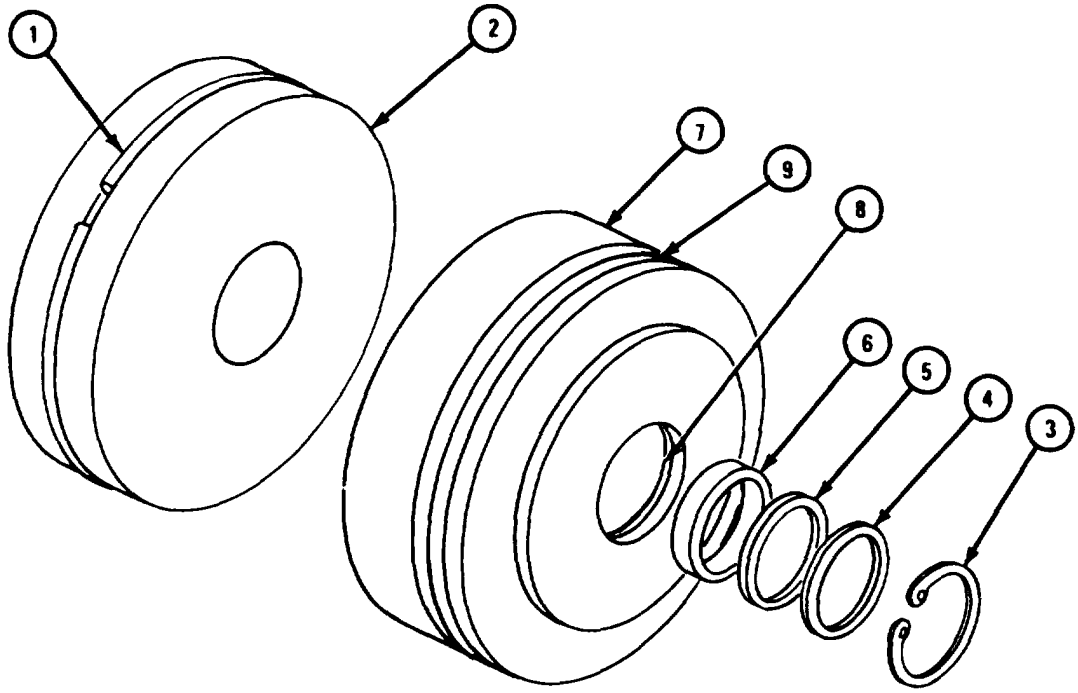


TA087280

FRAME 2

1. Take ring (1) off piston (2).
2. Take out snapring (3), plain washer (4), special washer (5), and oil seal (6) from adapter (7).
3. Take bushing (8) out of adapter (7) and take off preformed packing (9) from adapter (7).

END OF TASK



TA102303

(3) Hydraulic control valve.

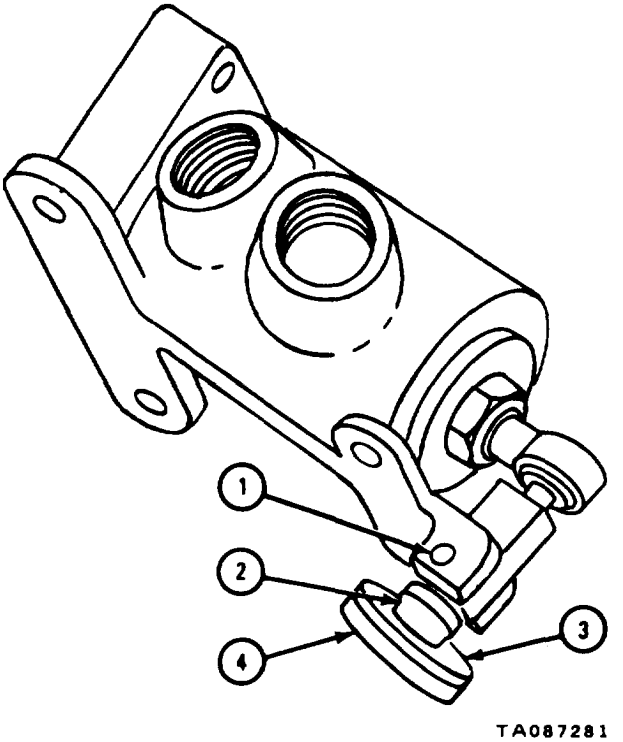
FRAME 1

CAUTION

Be careful when taking out hydraulic control valve parts, especially spool sleeve, spool, and preformed packings. Spool sleeve and spool have precision machined surfaces which can be easily damaged. Make sure sealing edges of spool sleeve and spool are not broken. If seals are cut, take them off and put on new ones, Broken seals or sealing edges will cause leaks and drop in hydraulic power.

1. Take out pin (1).
2. Take off lever (2), plain washer (3), and rubber washer (4).

GO TO FRAME 2



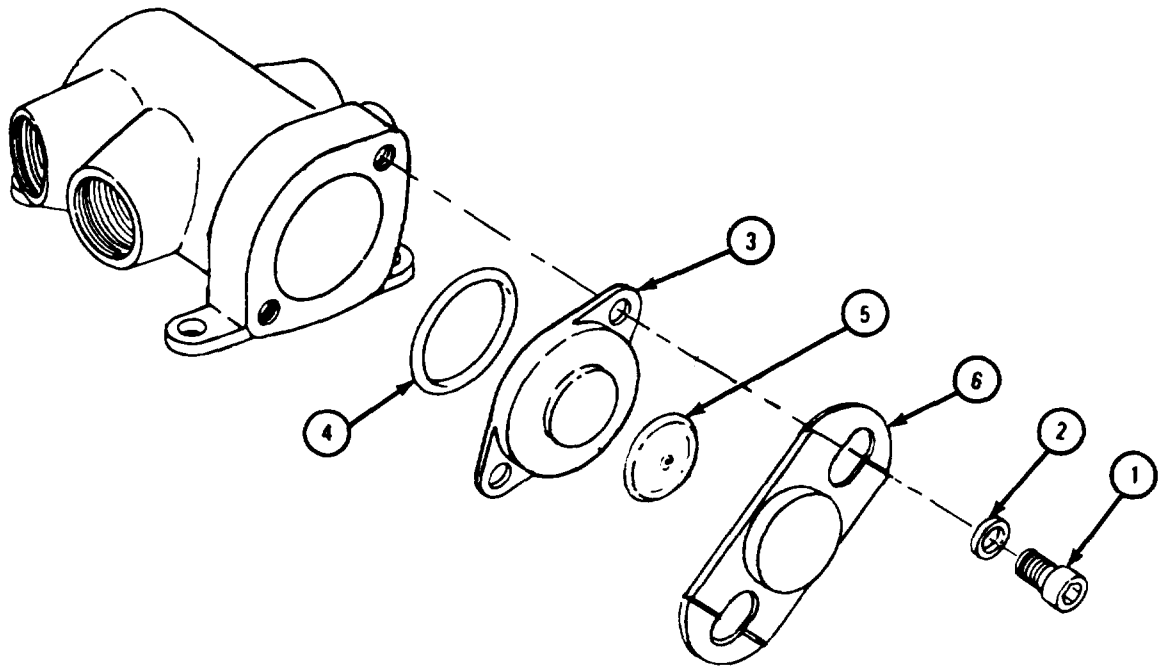
FRAME 2

NOTE

Some models may have a valve (5) and valve cover (6) attached to cover (3).

1. Take out two screws (1) and washers (2).
2. Take off cover (3) and preformed packing (4). Throw away preformed packing

GO TO FRAME 3

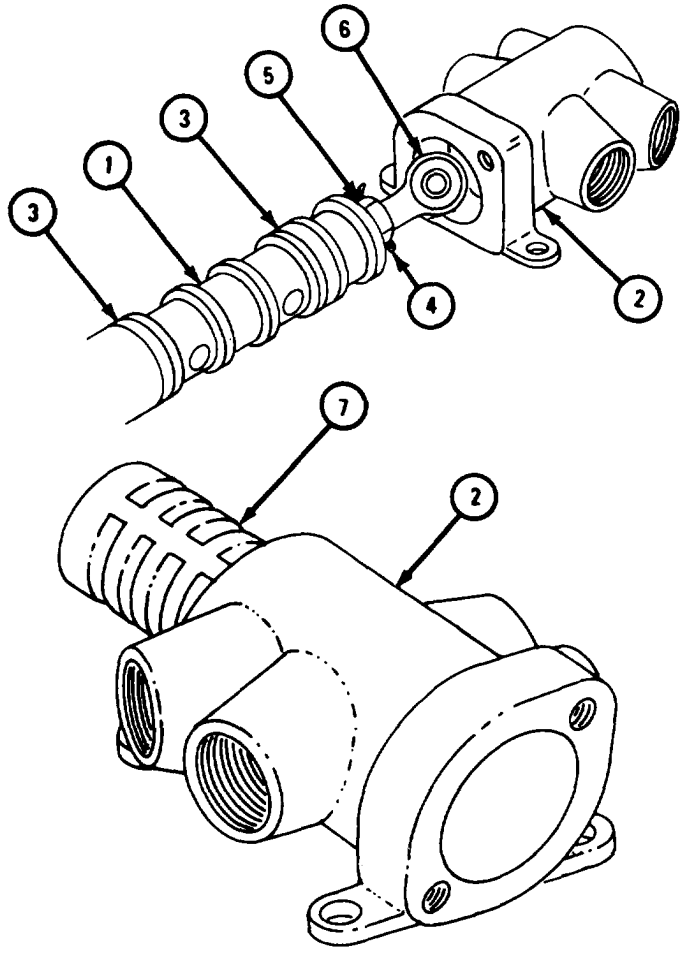


TA 087282

FRAME 3

1. Push spool (1) out of housing (2).
2. Takeoff and throw away two preformed packings (3).
3. Takeout cotter pin (4). Take slotted nut (5) and eyebolt with bearing (6) off spool (1).
4. Press spool sleeve (7) out of housing (2).

END OF TASK



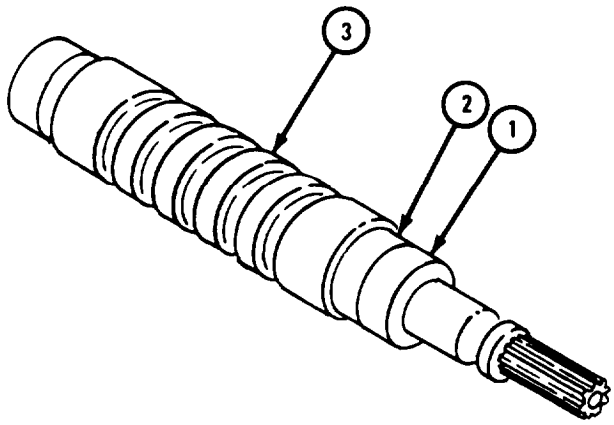
TA087284

(4) Cam assembly.

FRAME 1

1. Take off cam retainer assembly (1) and cam thrust bearing (2) from each end of cam (3).

END OF TASK



(5) Steering gear housing with bushing and seal assembly.

FRAME 1

NOTE

Do not take out pitman arm shaft seal unless it has signs of oil leaks.

1. Pry out and throw away pitman arm shaft seal (1).

NOTE

Do not take out bushings at this time.

END OF TASK

e. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Clean all parts with dry cleaning solvent. Pay special attention to roller bearing with stud assembly, cam retainer assemblies, and hydraulic control valve. Make sure they are completely clean.

(2) Cover parts to keep out dust and grit after cleaning.

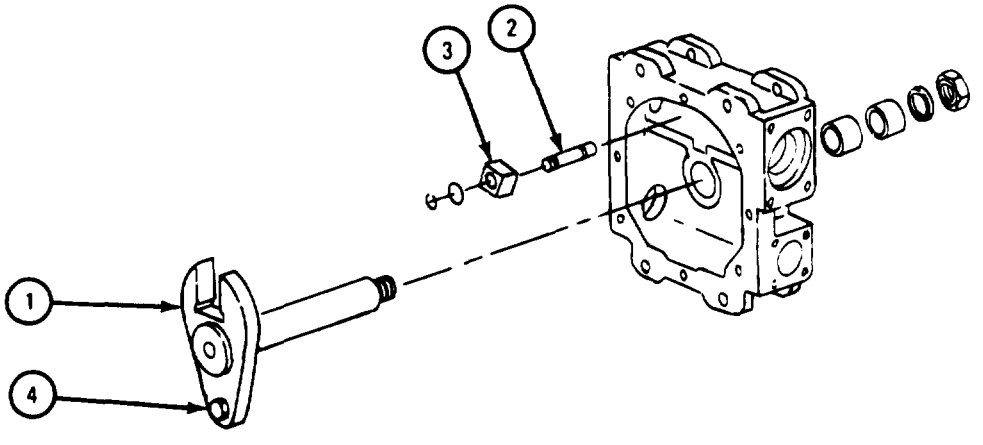
f. Inspection and Repair.

(1) Pitman arm shaft with integral lever assembly.

FRAME 1

1. Check that pitman arm shaft with integral lever assembly (1) is not cracked, scratched, scored, cut or worn. Take out small scratches and scoring with a honing stone. If more repair is needed, get a new pitman arm shaft.
2. Check that integral lever block pin (2) and block (3) have no raised metal or scratches. Rub off raised metal with fine mill file. If parts are damaged in any other way, get new ones in their place.
3. Check that roller bearing and stud assembly (4) is not pitted or worn. If part is damaged, get a new one in its place.
4. Check that stud is not loose in roller bearing and stud assembly (4).

IF STUD IS LOOSE, GO TO FRAME 2.
IF STUD IS NOT LOOSE, GO TO FRAME 3



NOTE
CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 087290

FRAME 2

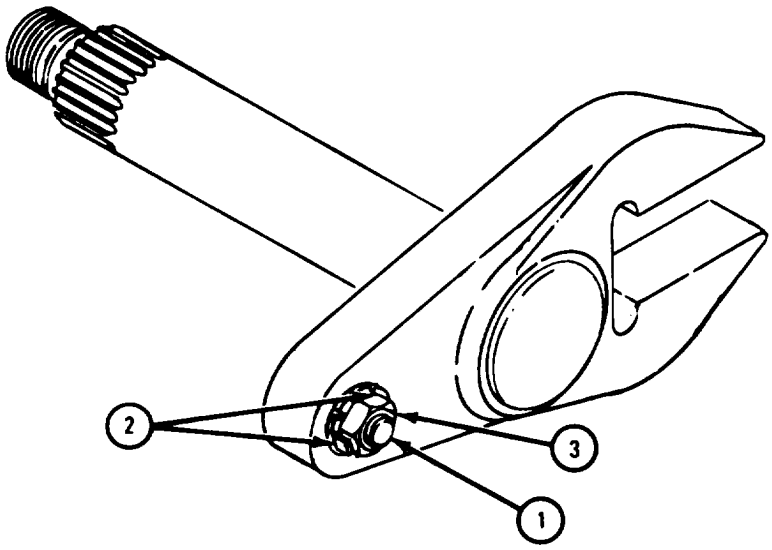
1. If stud (1) was loose in frame 1, bend down prong on washer (2). Get new washer if possible. Break off bent prong if old washer is used.
2. Tighten nut (3) to 3 pound-inches. Turn stud (1) back and forth. Tighten nut (3) to given limit again.

NOTE

Bend prong that is 90° to side of nut.

3. If new washer (2) is used, bend prong of washer against flat side of nut (3).

GO TO FRAME 3



TA 087292

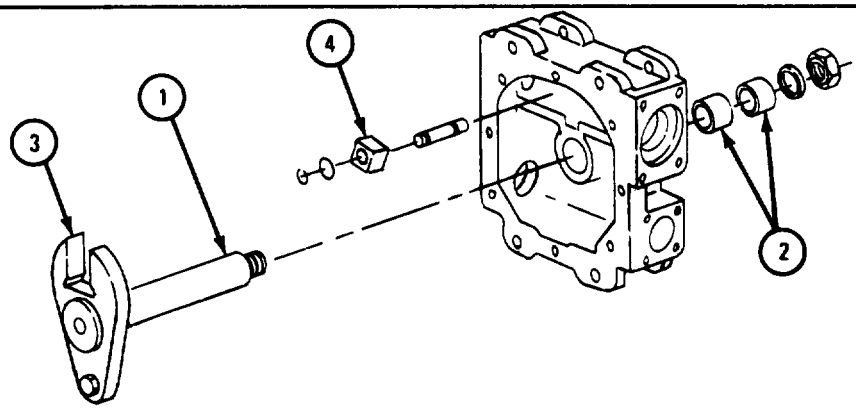
FRAME 3

NOTE

Readings must be within limits given in table 13-1. If readings are not within given limits, throw away part and get a new one.

1. Measure diameter of shaft (1).
2. Measure inside diameter of two bushings (2).
3. Measure fit of bushings (2) on shaft (1).
4. Measure opening in integral lever fork (3).
5. Measure width of integral lever block (4).
6. Measure fit of integral lever block (4) in fork (3).

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME .PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 087291

Table 13-1. Pitman Arm Shaft Assembly Wear Limits

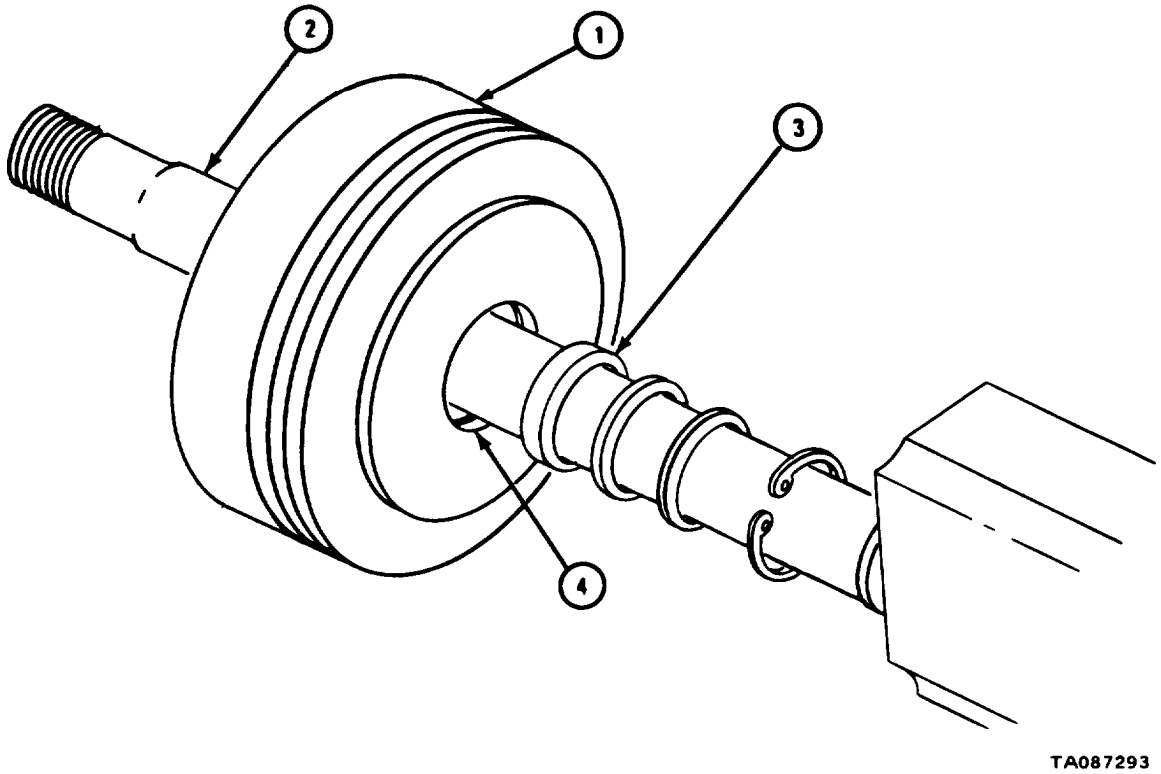
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Shaft diameter	1.7470 to 1.7480	None
2	Bushing inside diameter	1.7485 to 1.7500	None
2 and 1	Fit of bushing on shaft	0.0005 to 0.0030	None
3	Integral lever fork	1.5025 to 1.5035	None
4	Integral lever block	1.4950 to 1.5005	None
4 and 3	Fit of integral lever block in fork	0.0020 to 0.0040	None

(2) Power cylinder assembly.

FRAME 1

1. Check that all surfaces have no burrs, nicks or other damage. Rub off burrs with a fine mill file. If more repair is needed, get new parts.
2. Check that adapter with bushing assembly (1) moves freely on sliding bar (2).
3. Check that oil seal (3) has a snug fit in recess (4).
4. If any parts are damaged, get new ones in their place.

GO TO FRAME 2

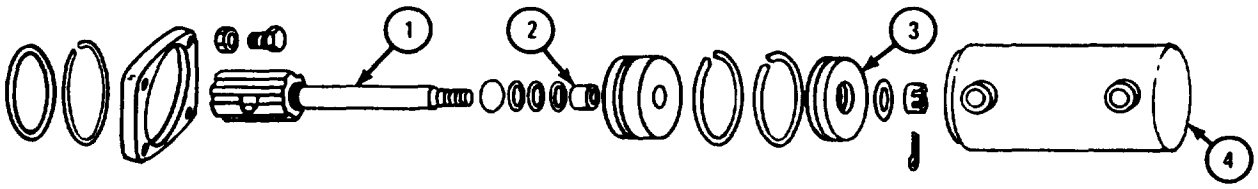


FRAME 2

NOTE

Readings must be within limits given in table 13-2. The letter L shows a loose fit. If readings are not within given limits, throw away part and get a new one.

1. Measure out side diameter of bar shaft (1).
2. Measure inside diameter of bushing (2).
3. Measure fit of bushing (2) on shaft (1).
4. Measure outside diameter of piston (3).
5. Measure inside diameter of cylinder (4).
6. Measure fit of piston (3) in cylinder (4).



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA087294

Table 13-2. Power Cylinder Wear Limits

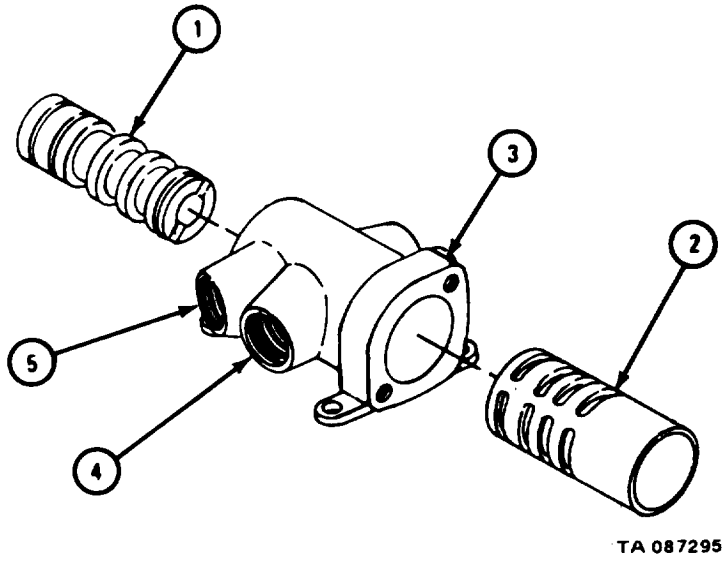
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limits (inches)
1	Sliding bar shaft diameter	0.9094 to 1.0000	None
2	Bushing inside diameter	1.0020 to 1.0040	None
2 and 1	Fit of bushing on shaft	0.0020 to 0.0046	None
3	Piston outside diameter	3.8670 to 3.8690	None
4	Cylinder inside diameter	3.8750 to 3.8770	None
3 and 4	Fit of piston in cylinder	0.006L to 0.010L	None

(3) Hydraulic control valve.

FRAME 1

1. Check that all precision finished surfaces have no burrs or scratches. Repair with a fine mill file.
2. Put spool (1) in sleeve (2) and slide spool back and forth. Spool should slide freely and smoothly.
3. Check that body (3) has no cracks. If body is cracked, get a new one.
4. Check that inlet port (4) and outlet port (5) have no damaged threads. Retap damaged threads with proper size tap.

GO TO FRAME 2



TA 087295

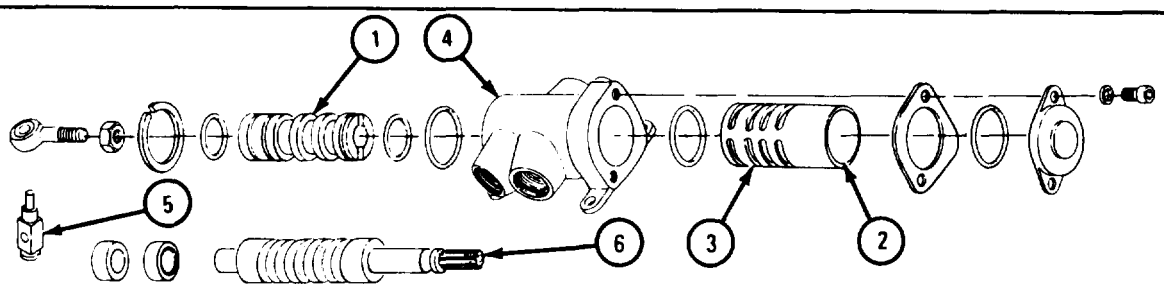
FRAME 2

NOTE

Readings must be within limits given in table 13-3. The letter L shows a loose fit. If readings are not within given limits, throw away part and get a new one.

1. Measure out side diameter of valve spool (1).
2. Measure inside diameter of spool sleeve (2).
3. Measure clearance of valve spool (1) in spool sleeve (2).
4. Measure outside diameter (3) of spool sleeve.
5. Measure inside diameter of valve body (4).
6. Measure fit of spool sleeve (2) in valve body (4).
7. Measure actuator lever ball (5).
8. Measure cam groove dimension (6).
9. Measure fit of actuator lever ball (5) in cam groove (6).

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUT S ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 087296

Table 13-3. Hydraulic Control Valve Assembly, Wear Limits

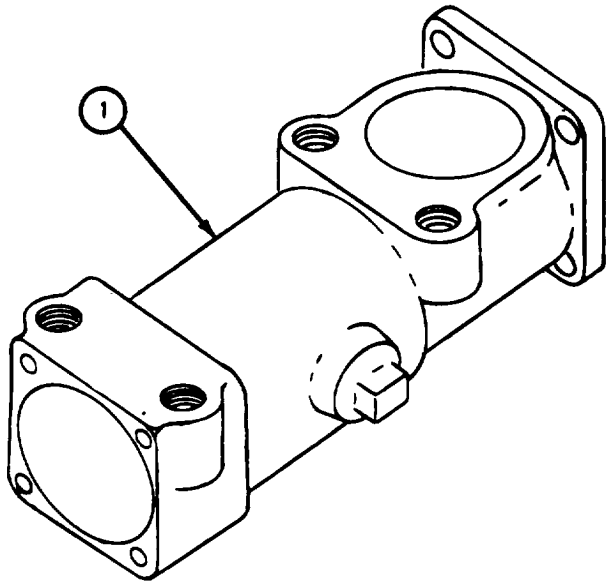
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Outside diameter of valve spool	1.2476 to 1.2482	None
2	Inside diameter of spool sleeve	1.2490 to 1.2500	None
1 and 2	Clearance of spool in sleeve	0.0008L to 0.0024L	None
3	Outside diameter of spool sleeve	1.4975 to 1.4985	None
2 and 4	Fit of spool sleeve in valve body	0.0005L to 0.0025L	None
5	Actuating lever ball diameter	0.4670 to 0.4680	None
6	Cam groove dimension	0.4685 to 0.4690	None
5 and 6	Fit of actuator lever ball in cam groove	0.0005L to 0.002L	None

(4) Control housing assembly.

FRAME 1

1. Check that control housing assembly (1) has no cracks or damaged threads. Retap damaged threads. If housing assembly is cracked, get a new one in its place.

END OF TASK



TA 087297

(5) Cam assembly.

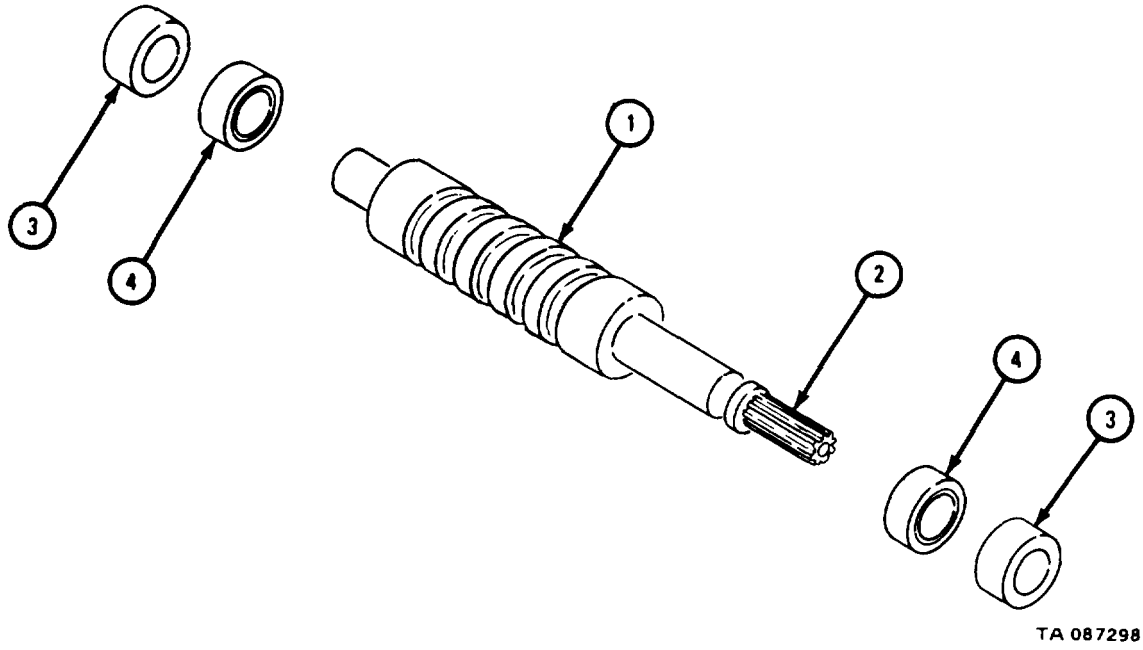
FRAME 1

NOTE

Cam groove is copper plate when new. Wearing away of this plating is normal.

1. Check that cam groove (1) is not cracked, burned, or damaged in any other way.
2. Check that splines (2) are not twisted or worn.
3. Check that cam retainers (3) are not worn or loose.
4. Check that cam thrust bearings (4) have no roughness or other damage.
5. If parts are damaged, get new ones in their place.

END OF TASK



TA 087298

g. Assembly of Subassemblies.

(1) Pitman arm shaft with integral lever assembly.

NOTE

If tapered roller bearing and stud assembly was not taken out, go to para 13-5g (2). If tapered roller bearing and stud assembly was taken out, do frame 1.

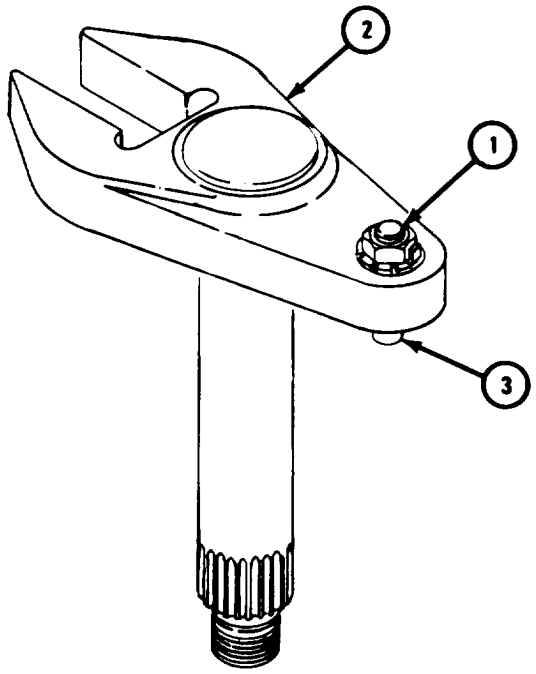
FRAME 1

NOTE

Make sure flange on bearing race is on shaft side of tapered roller bearing and stud assembly (1).

1. Press tapered roller bearing and stud assembly (1) into pitman arm shaft (2) with stud (3) on shaft side.

END OF TASK



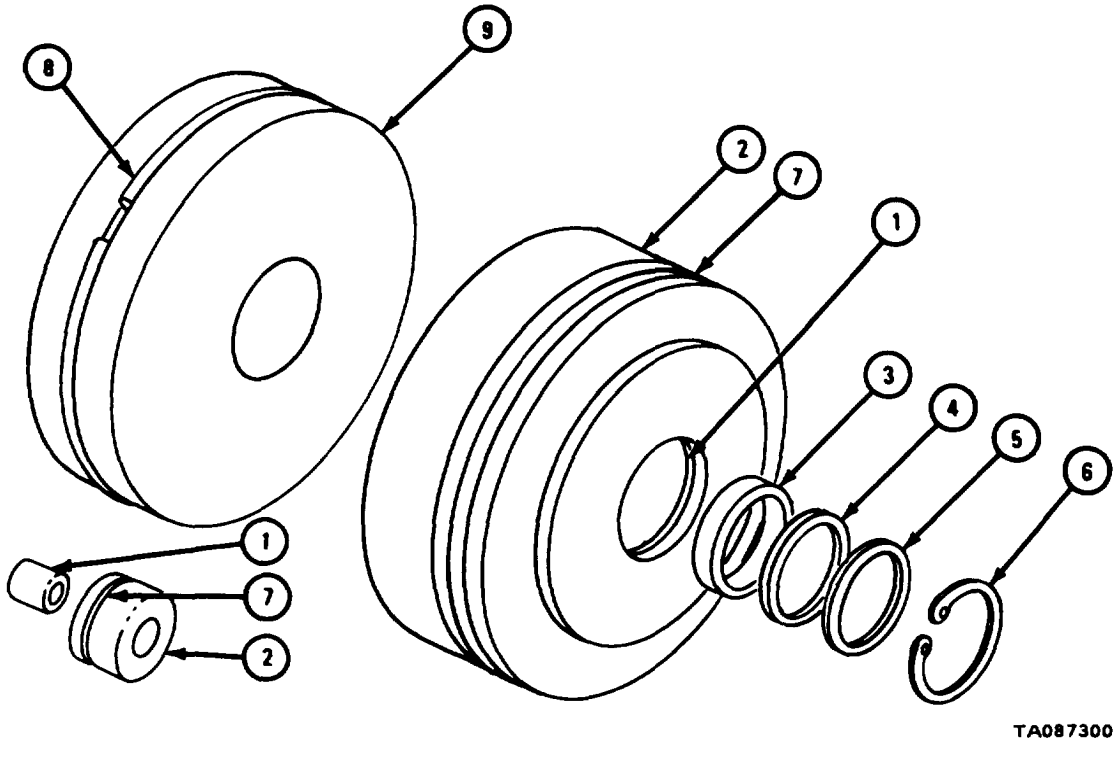
TA 087299

(2) Power cylinder assembly.

FRAME 1

1. Press new bushing (1) into adapter (2).
2. Put oil seal (3), special washer (4), plain washer (5), and snapring (6) into adapter (2), and put preformed packing (7) on adapter (2).
3. Check that groove for piston ring (8) is clean. Put piston ring on piston (9).

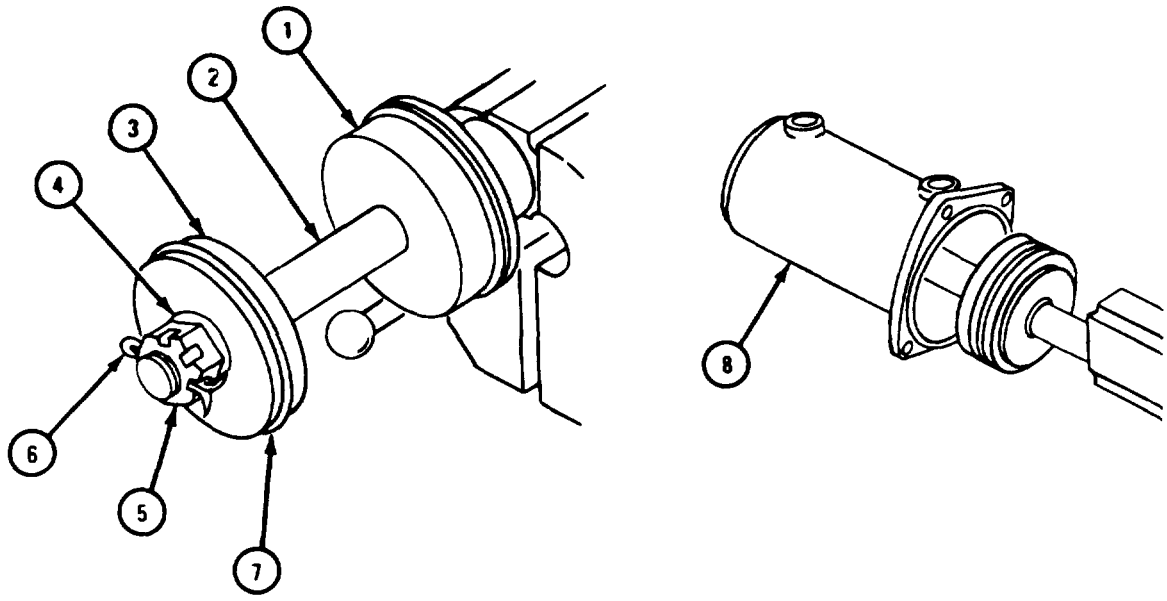
GO TO FRAME 2



FRAME 2

1. Slide adapter with bushing assembly (1) onto sliding bar (2).
2. Put piston (3) on bar (2).
3. Put on plain washer (4) and slotted nut (5), and put in cotter pin (6).
4. Squeeze piston ring (7) and put sliding bar (2) into cylinder (8).

END OF TASK



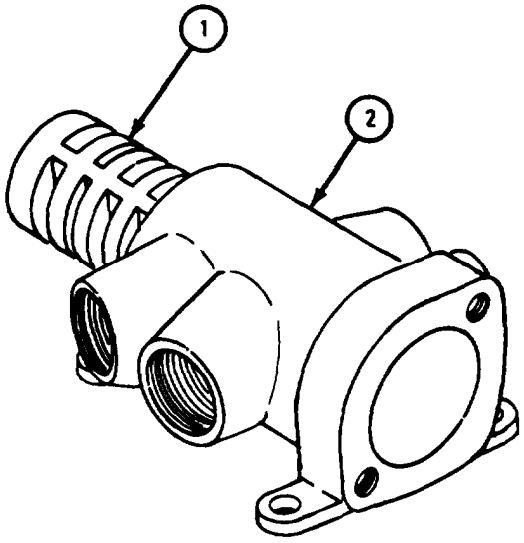
TA087301

(3) Hydraulic control valve.

FRAME 1

1. Put a coat of oil on spool sleeve (1).
2. Working from lever end of control valve (2), put in spool sleeve (1), step cut end first, twisting it slightly.

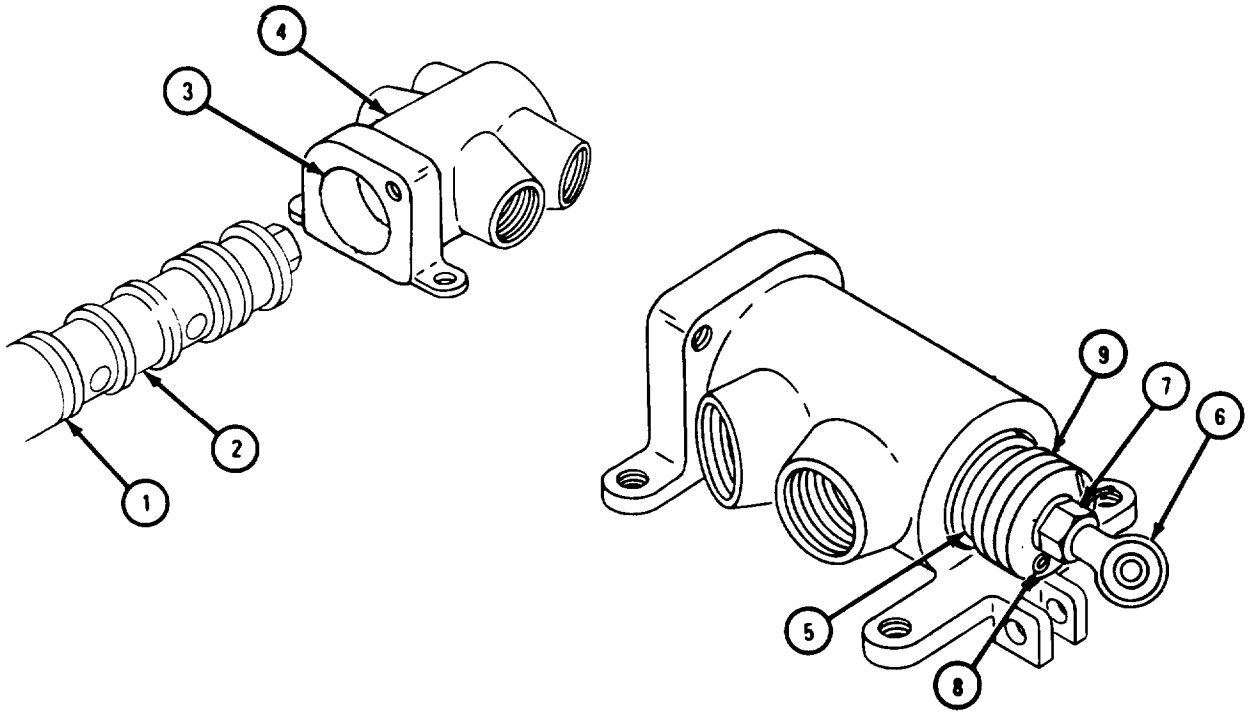
GO TO FRAME 2



FRAME 2

1. Put spool preformed packing (1) in groove of spool (2).
2. Put spool (2) in spool sleeve (3) and housing (4) as shown.
3. Push spool (2) through to groove (5).
4. Put in eyebolt with bearing (6) and slotted nut (7) and put in cotter pin (8).
5. Put spool preformed packing (9) in groove (5) and push spool (2) back into sleeve (3) until preformed packing is inside housing (4).

GO TO FRAME 3



TA087303

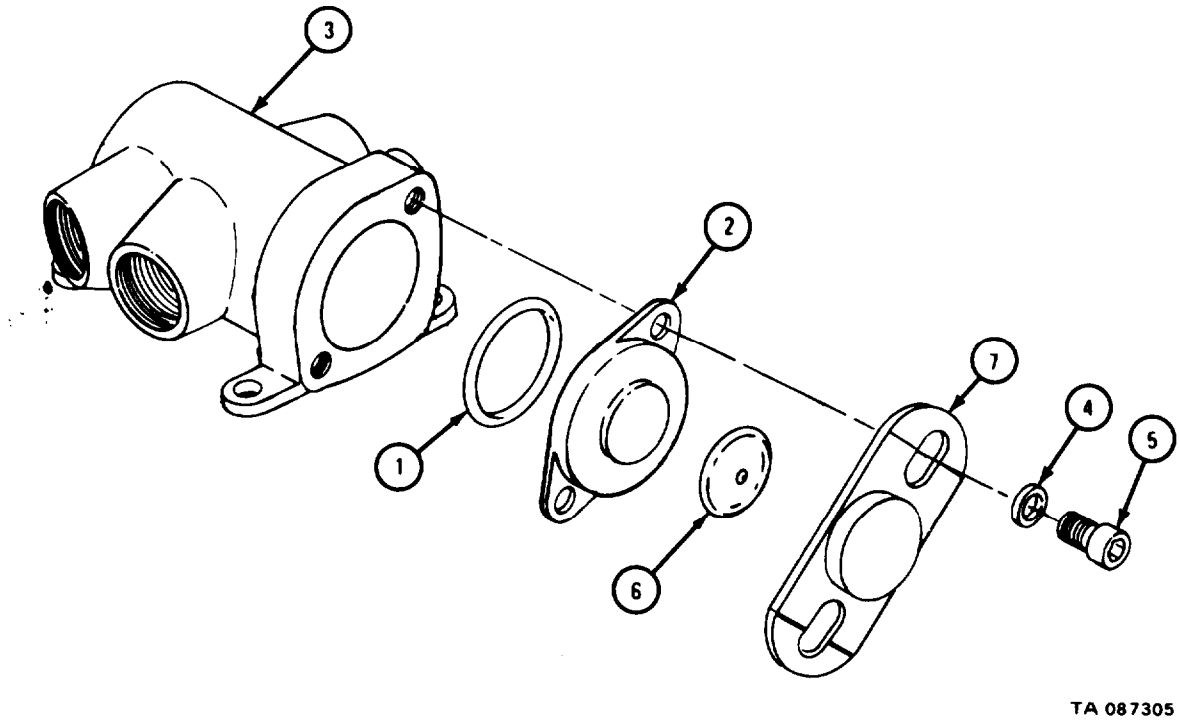
FRAME 3

NOTE

Some models may have a valve (6) and cover (7) attached to cover (2).

1. Put spool cover preformed packing (1) and spool cover (2) on housing (3).
2. Put in two washers (4) and screws (5). Do not tighten screws at this time.

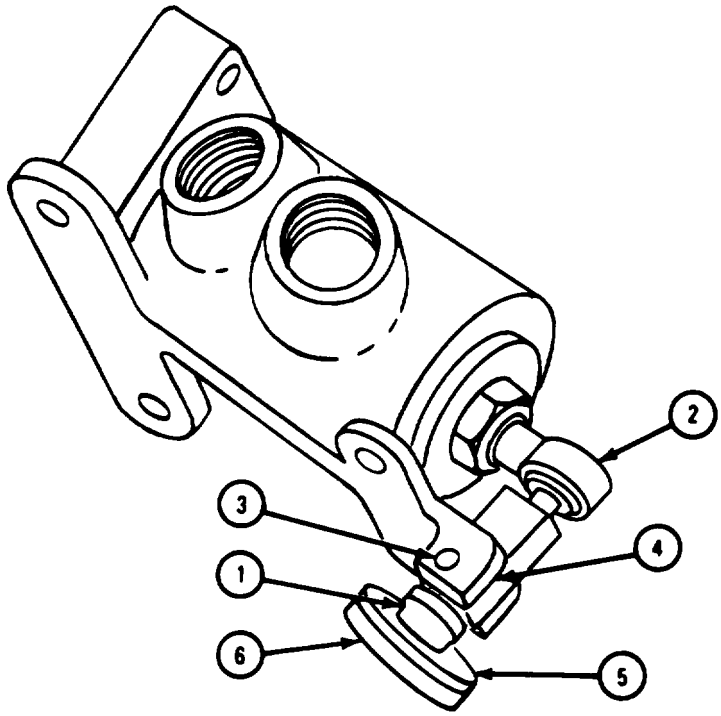
GO TO FRAME 4



FRAME 4

1. Put valve actuating lever (1) in eyebolt (2) and put actuating lever pin (3) through clevis (4) and actuating lever (1).
2. Put on plain washer (5) and rubber washer (6) over rounded part of valve actuating lever (1).

END OF TASK



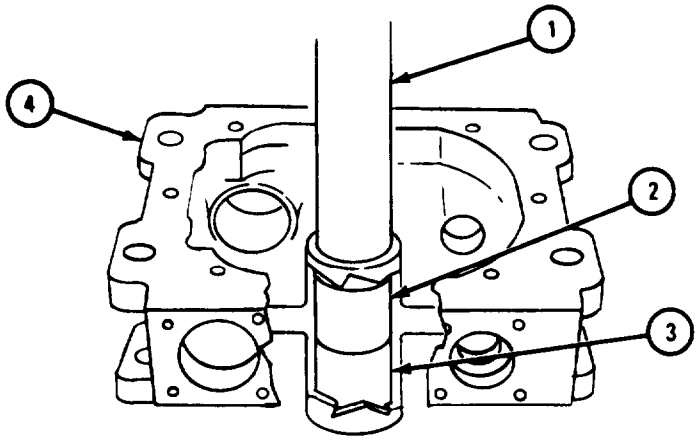
TA087306

(4) Steering gear housing with bushing and seal assembly.

FRAME 1

1. Put bushing remover and replacer (1) on inner bushing (2). Press until outer bushing (3) is out of housing (4) and inner bushing sticks out 1/2 inch.
2. Press in new inner bushing (2) flush with housing (4). Using old inner bushing as a pilot, ream new inner bushing 1.7485 to 1.750 inches.
3. Take out old inner bushing (2). Press in new outer bushing (3) flush with bottom of seal recess.
4. Ream new outer bushing (3) using new inner bushing (2) as a pilot. Ream bushing 1.7485 to 1.750 inches.
5. Burnish inner and outer bushings (2 and 3).

GO TO FRAME 2

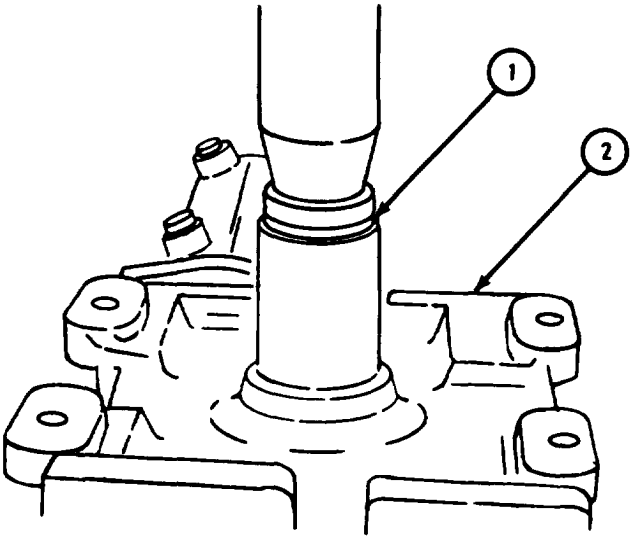


TA 087307

FRAME 2

1. Using replacer, press pitman arm shaft seal (1) into gear housing (2).

END OF TASK



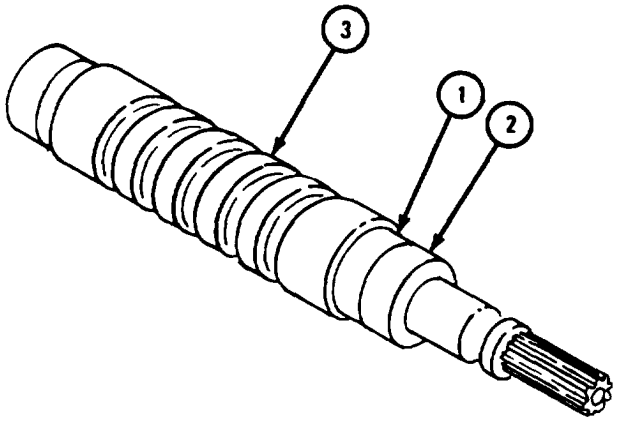
TA 087310

(5) Cam assembly.

FRAME 1

1. Put cam thrust bearing (1) and cam assembly retainer (2) on each end of cam (3).

END OF TASK



TA 087311

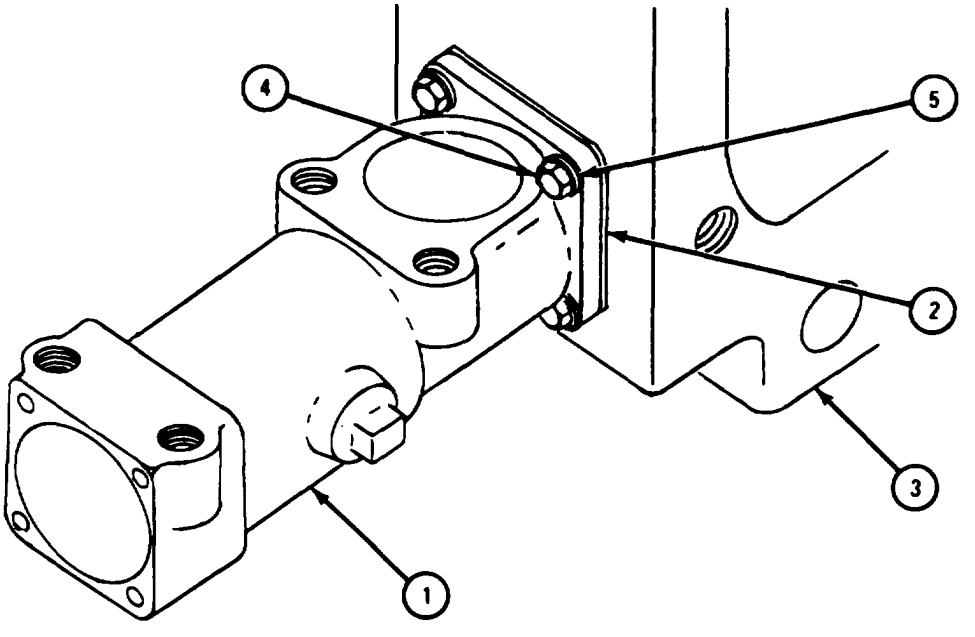
h. Assembly from Subassemblies.

(1) Control housing and cam assembies.

FRAME 1

1. Place control housing assembly (1) with gasket (2) on steering gear housing (3).
2. Put in four screws (4) and washers (5).

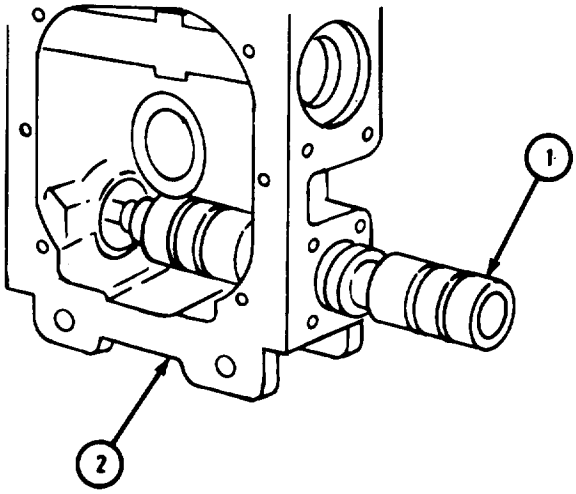
GO TO FRAME 2



FRAME 2

1. Slide cam (1) into gear housing (2).

GO TO FRAME 3

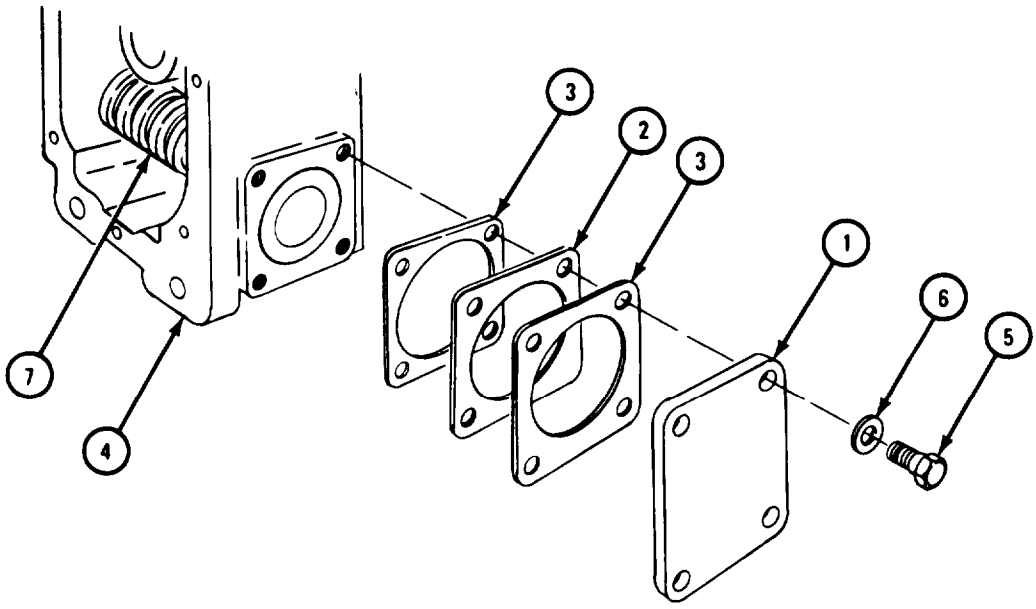


TA 087312

FRAME 3

1. Place cover (1) with noted thickness of shims (2) and two gaskets (3) on housing (4).
2. Put in four screws (5) and washers (6).
3. Check that cam (7) turns freely.
4. If cam (7) binds, take out four screws (5) and washers (6). Take off cover (1) and add another shim (2). Do steps 1 through 3 again.
5. Check that there is no end play between cam (7) and housing (4).
6. If there is end play, take out four screws (5) and washers (6), take off cover (1), and take out a shim (2). Do steps 1 through 5 again until cam turns freely and there is no end play.

GO TO FRAME 4



TA 087313

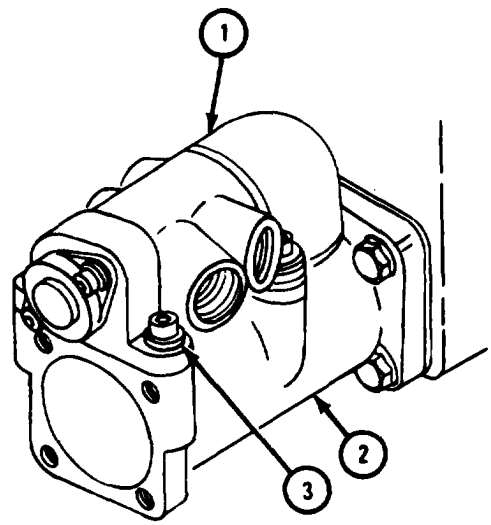
FRAME 4

NOTE

Make sure actuator lever ball is seated in the same groove.

1. Put hydraulic control valve (1) in place on control housing assembly (2).
2. Put in two screws and washers (3).

GO TO FRAME 5



TA 113497

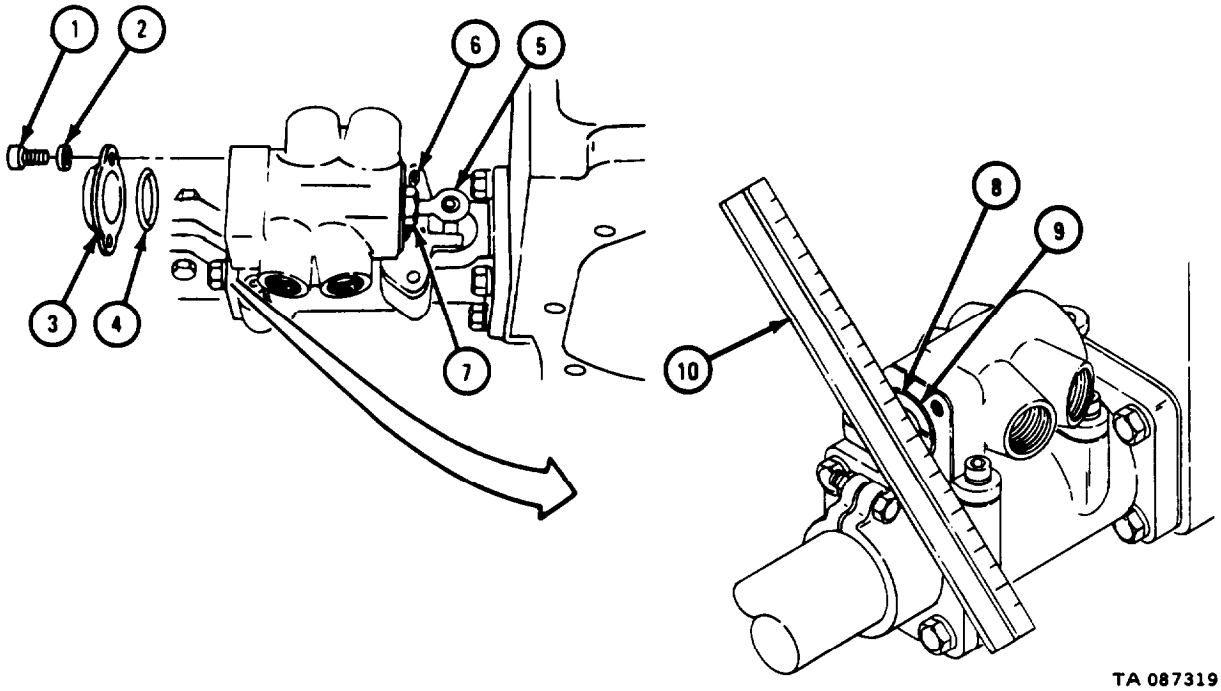
FRAME 5

NOTE

Some models have a valve and valve cover attached to cover (3).

1. Take out two screws (1) and washers (2). Take off cover (3) and preformed packing (4).
2. Holding eyebolt (5) with one hand, take out cotter pin (6). Loosen slotted nut (7),
3. Turn spool (8) until face is flush with spool sleeve (9). Use straight edge (10) to aline surfaces.
4. Tighten nut (7). Put in cotter pin (6).
5. Put preformed packing (4) on cover (3). Put on cover. Put in two screws (1) and washers (2).

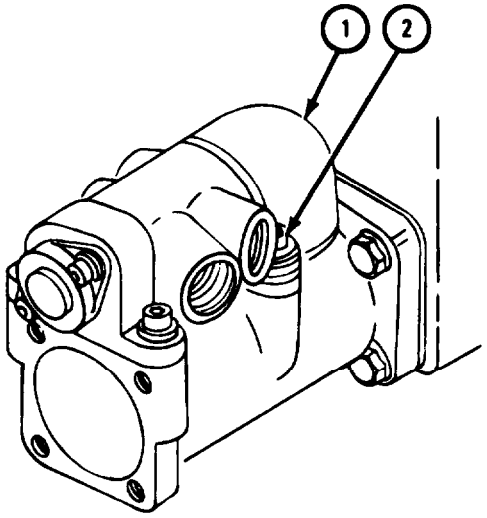
GO TO FRAME 6



FRAME 6

1. Put actuating lever cover (1) and seal in place.
2. Put in two screws (2).

END OF TASK



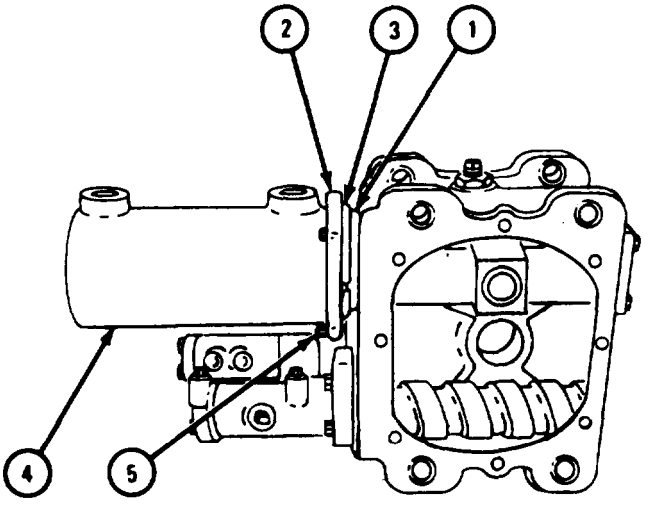
TA 116715

(2) Power cylinder, assembly.

FRAME 1

1. Put on mounting flange gasket (1).
2. Put on cylinder mounting flange (2) and snapring (3).
3. Slide power cylinder assembly (4) into mounting flange (2).
4. Put snapring (3) into place on cylinder.
5. Put in four screws (5).

GO TO FRAME 2

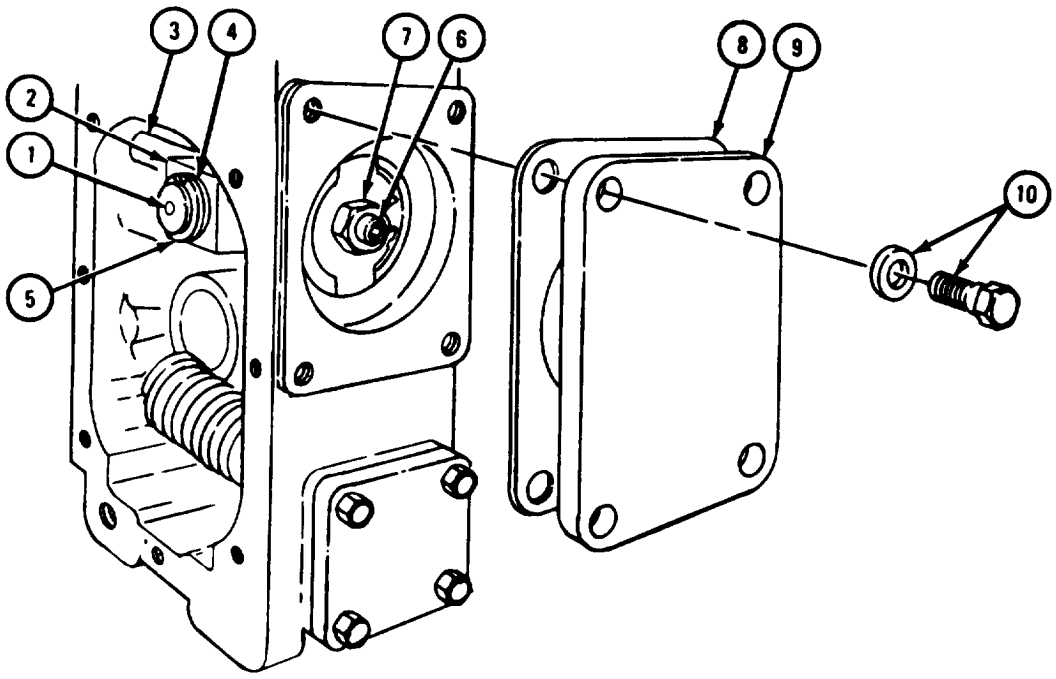


TA087320

FRAME 2

1. Put integral lever block pin (1) and integral lever block (2) in sliding bar (3). Put on flat washer (4) and snapring (5).
2. Tighten setscrew (6) and nut (7).
3. Put on end cover gasket (8) and end cover (9).
4. Put in four screws with washers (10).

END OF TASK



TA 113496

(3) Pitman arm shaft assembly.

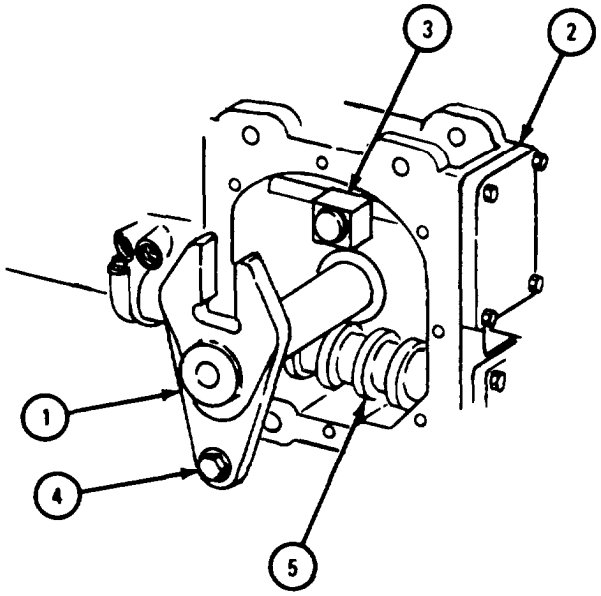
FRAME 1

CAUTION

Be careful when putting pitman arm shaft (1) in housing (2). Bushings in housing can be easily damaged.

1. Put pitman arm shaft and integral lever assembly (1) into gear housing (2).
2. Put integral lever fork of pitman arm shaft on integral lever block (3).
3. Put roller bearing and stud assembly (4) into groove of cam (5).

GO TO FRAME 2

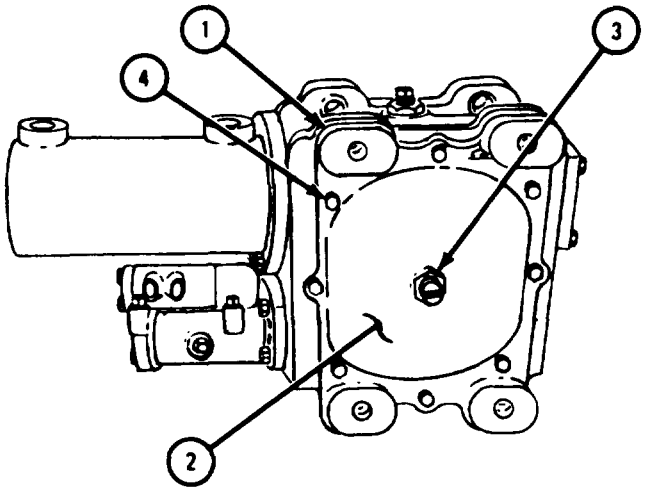


TA 087322

FRAME 2

1. Put on gear housing side cover gasket (1) and gear housing side cover (2) with adjusting nut (3) loosened. Do not set adjusting nut (3) at this time.
2. Screw in eight screws (4).

END OF TASK



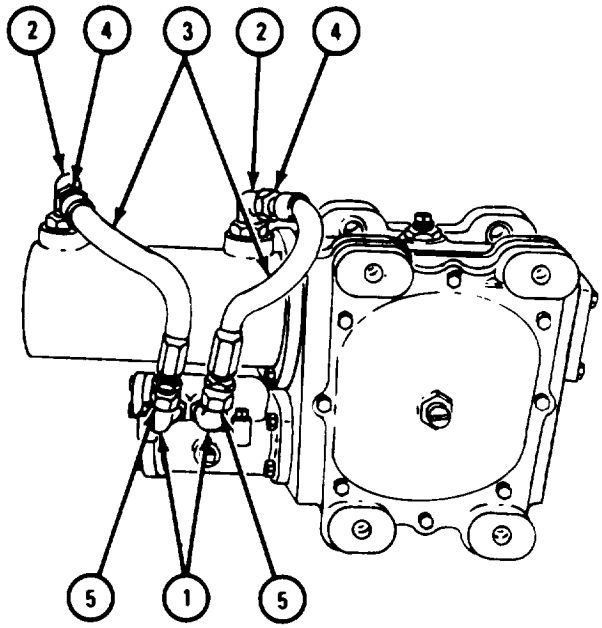
TA 087323

i. Replacement.

FRAME 1

1. Put on four elbows (l), two on each side.
2. Put on two elbows (2).
3. Put two hoses (3) in place and tighten nuts (4 and 5).

GO TO FRAME 2

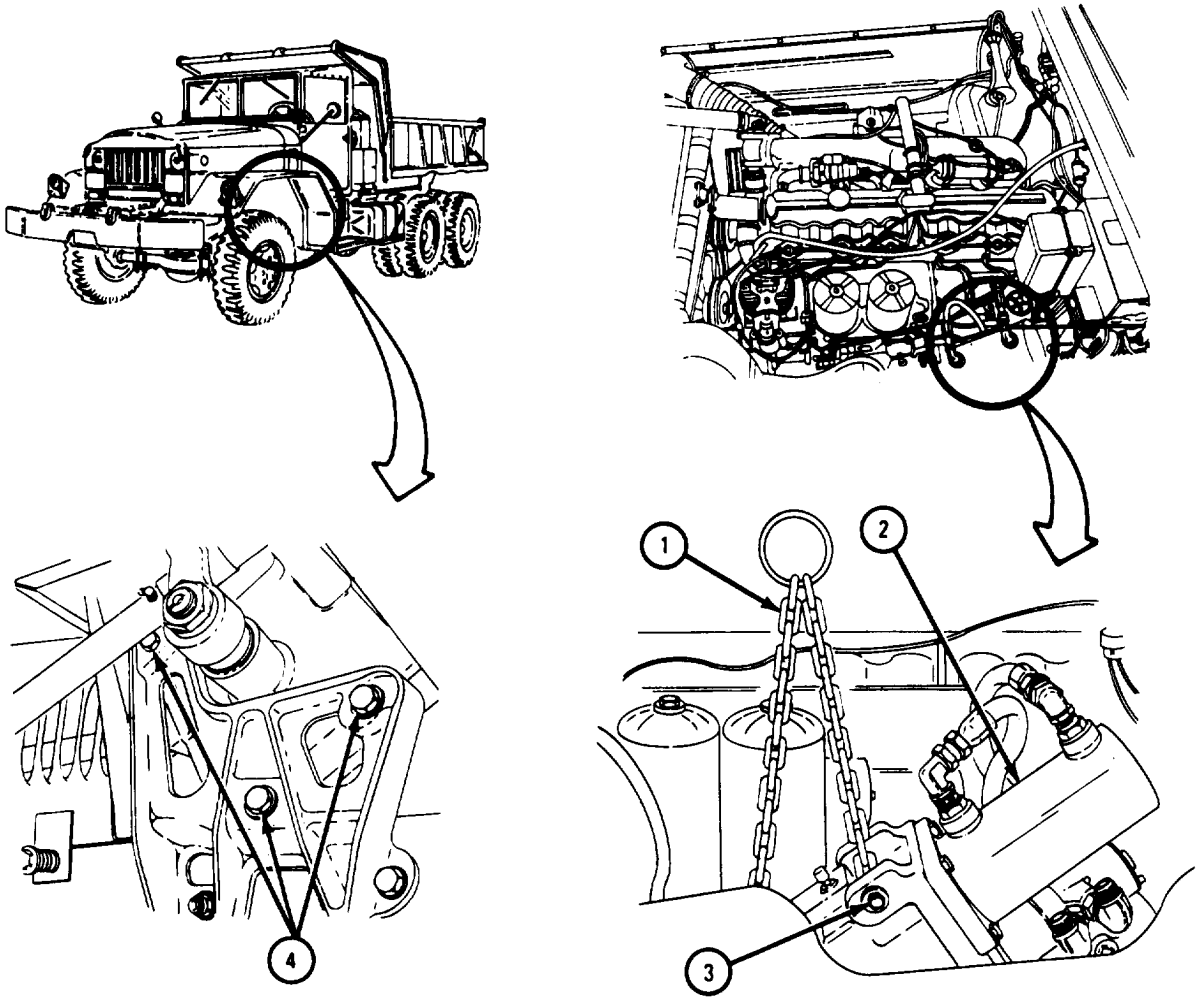


TA 087324

FRAME 2

1. Put chain sling (1) on steering gear (2) with two bolts, washers, and nuts (3) as shown.
2. Hook chain sling (1) to overhead hoist. Lift steering gear off work stand and lower it into place on truck.
3. Aline holes in steering gear (2) with holes on truck.
4. Put in three screws, nuts, and lockwashers (4).
5. Unhook chain hoist. Take off two bolts, washers, nuts (3), and chain sling (1).

GO TO FRAME 3



TA 087268

FRAME 3

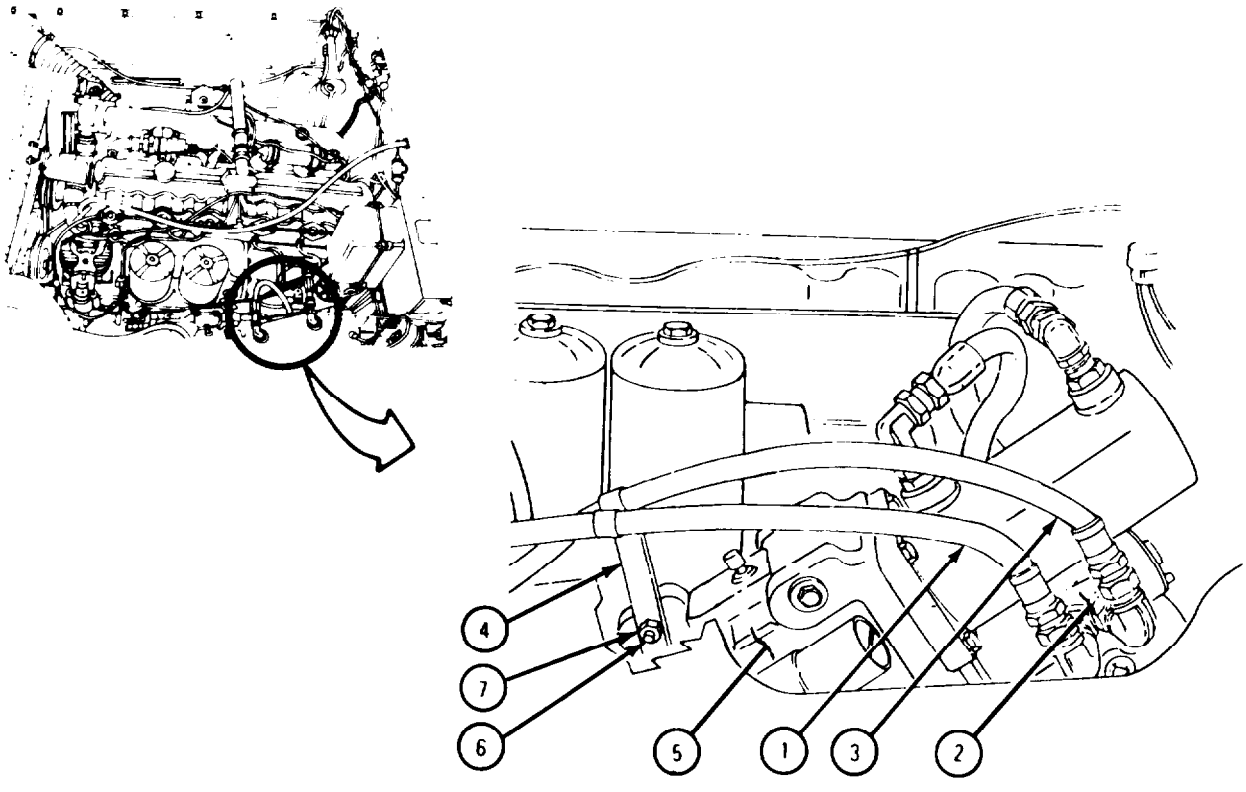
1. Put outlet line (1) in place on control housing (2) and tighten.
2. Put inlet line (3) in place on control housing (2) and tighten.
3. Put bracket (5) on steering gear (4).
4. Put on screw (6) and nut (7) and tighten.

NOTE

Follow-on Maintenance Action Required:

1. Replace pitman arm on steering assembly. Refer to TM 9-2320-211-20.
2. Replace steering gear tube and jacket. Refer to para 13-6.
3. Fill power steering reservoir. Refer to LO 9-2320-211-12.
4. Fill steering gear. Refer to LO 9-2320-211-12.
5. Do adjustment. Refer to para 13-5j.

END OF TASK



TA 103132

j. Adjustment.

(1) Hydraulic pressure test.

FRAME 1

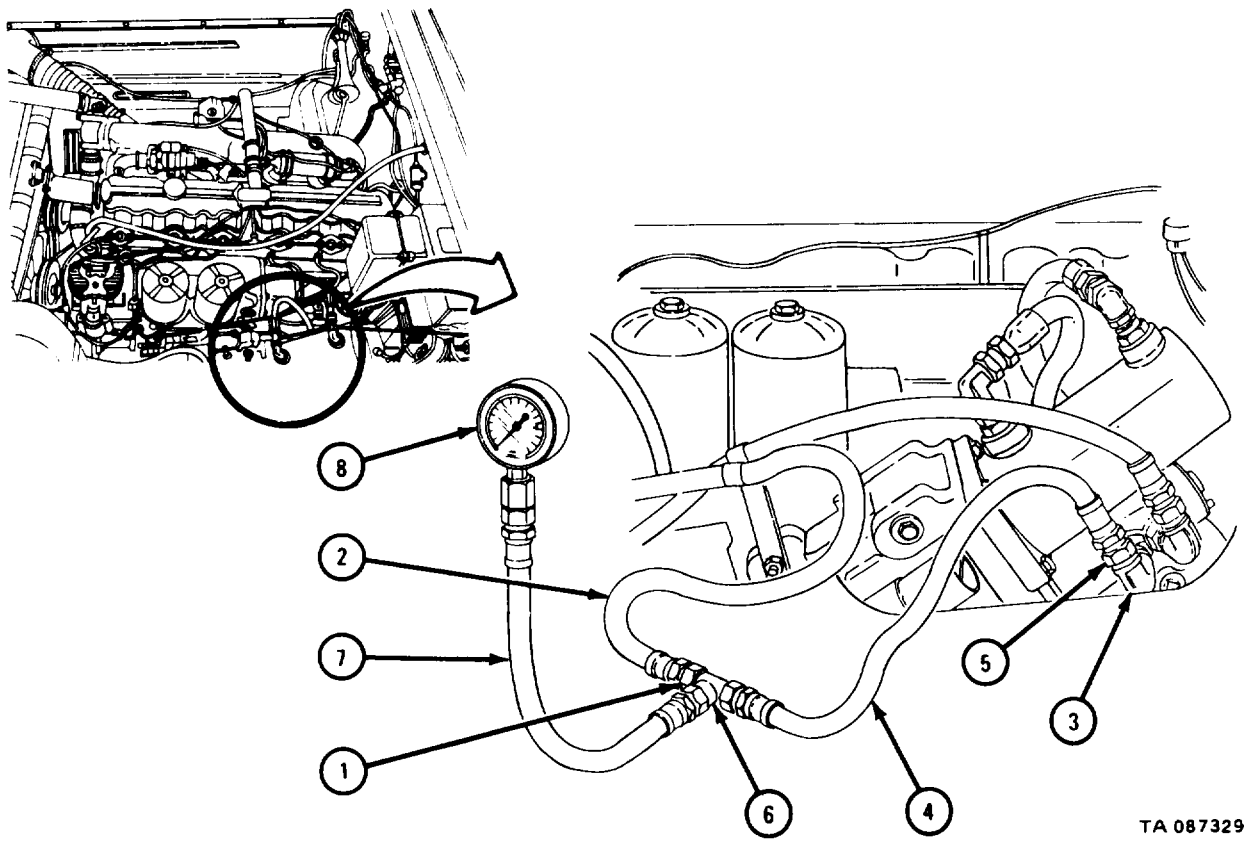
1. Unscrew nut (1). Lift hose (2) off elbow (3).
2. Join hose (4) to elbow (3) and tighten nut (5).
3. Join hose (2) to hose (4) with tee fitting (6).
4. Center hose (7) and gage (8) on tee fitting (6). Put gage (8) where it can be seen from driver's seat.

NOTE

Make sure scale on gage is at least 1,000 psi.

5. Start engine. Refer to TM 9-2320-211-10.
6. Watch gage (8) to see if pressure rises suddenly. Pressure may rise above safe limits and damage hoses. If pressure rises suddenly, stop engine. Refer to TM 9-2320-211-10.
7. Turn steering wheel to right turn stop. Hold steering wheel there for no more than 5 seconds. Gage (8) must read 850 to 1000 psi.

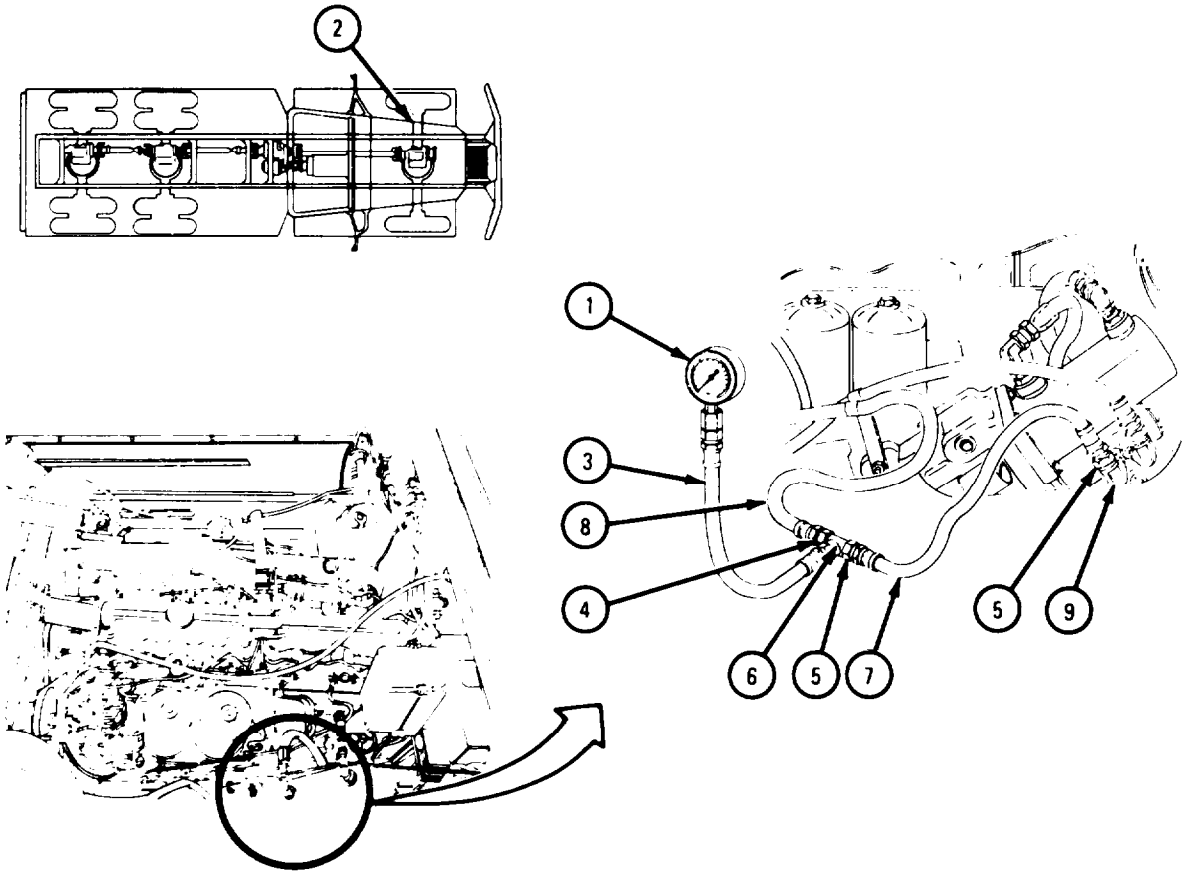
GO TO FRAME 2



FRAME 2

1. Turn steering wheel all the way to left and watch gage (1). If reading on gage drops suddenly, tape 1/4-inch thick shim to front left turn stop (2).
2. Do step one again. Gage should read 850 to 1,000 psi.
3. Turn engine off. Refer to TM 9-2320-211-10.
4. Take 1/4-inch thick shim off front left turn stop (2).
5. Take off gage (1) and hose (3).
6. Unscrew nuts (4) and two nuts (5). Take off tee fitting (6) and hose (7).
7. Put hose (8) on elbow (9). Tighten nut (4).

END OF TASK



TA 087330

(2) Lever shaft stud in cam groove.

FRAME 1

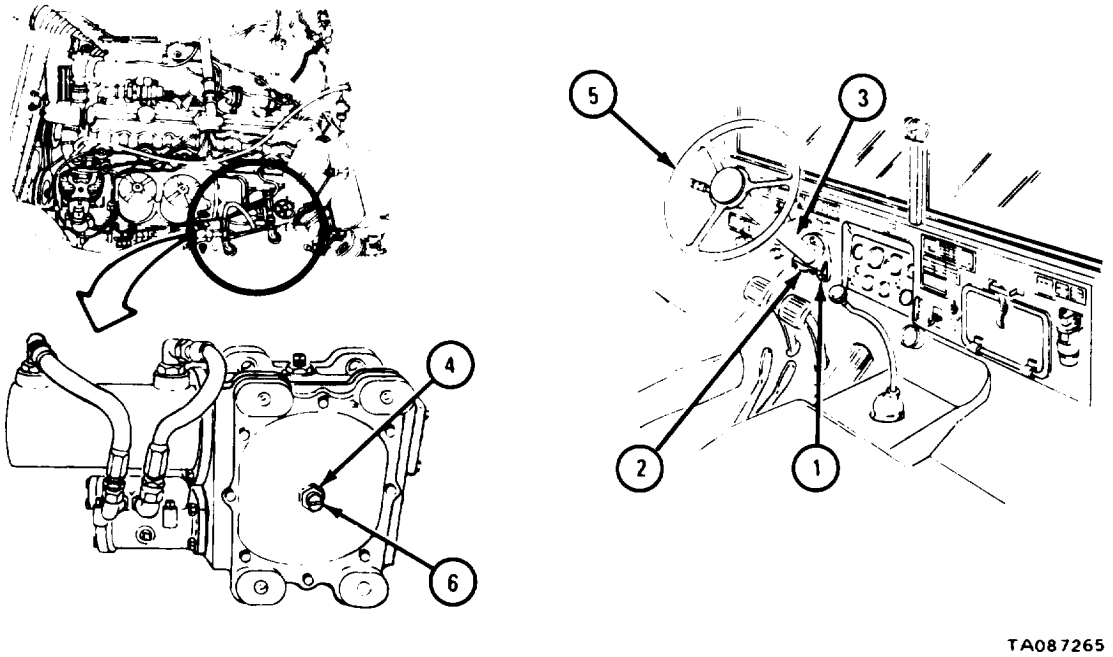
1. Remove drag link at pitman arm. Refer to TM 9-2320-211-20.
2. Loosen screw (1) in clamp (2) on steering jacket (3).
3. Unscrew adjusting screw locknut (4).

NOTE

Do not do this adjustment if steering wheel (5) is not set in position in step 4. A false adjustment will be made if steering wheel is not set correctly.

4. Turn steering wheel (5) all the way to left. Turn steering wheel all the way to right, counting number of turns. Turn steering wheel to left one-half the number of turns counted.
5. Tighten adjusting screw (6) with thumb and forefinger until a slight drag is felt when turning steering wheel (5).
6. Hold adjusting screw (6) and tighten adjusting screw locknut (4). Be careful not to change adjustment.
7. Check drag through full travel of steering wheel (5).
8. Tighten screw (1) in clamp (2).
9. Replace drag link on pitman arm. Refer to TM 9-2320-211-20.

END OF TASK



TA087265

(3) Steering gear column.

FRAME 1

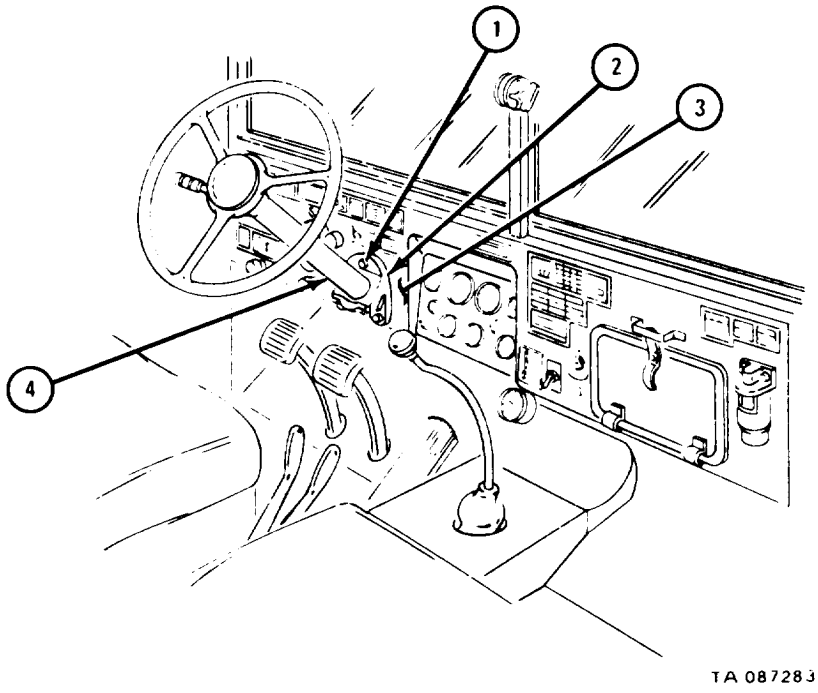
1. Unscrew three screws (1) holding steering column bracket (2) to instrument panel (3). Note whether steering gear column (4) moves.

CAUTION

Steering gear jacket must not be moved in any direction from free position. Binding steering shaft inside jacket may keep hydraulic system from working right.

2. Check that steering gear column (4) is not bent. If steering gear column is bent, put a new one in its place.
3. Tighten three screws (1).

END OF TASK



13-6. STEERING GEAR TUBE AND JACKET REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Control housing cover gasket (2)

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Open hood and left side panel. Refer to TM 9-2320-211-10.

(2) Remove steering wheel. Refer t oTM 9-2320-211-20.

(3) Remove horn contact brush assembly. Refer to Part 1, para 6-13.

(4) Remove turn signal assembly from steering jacket. Refer to TM 9-2320-211-20.

(5) Remove hand control valve. Refer to TM 9-2320-211-20.

(6) Remove weatherguard from floorboard that goes around steering column. Refer to TM 9-2320-211-20.

(7) Disconnect battery ground cable. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

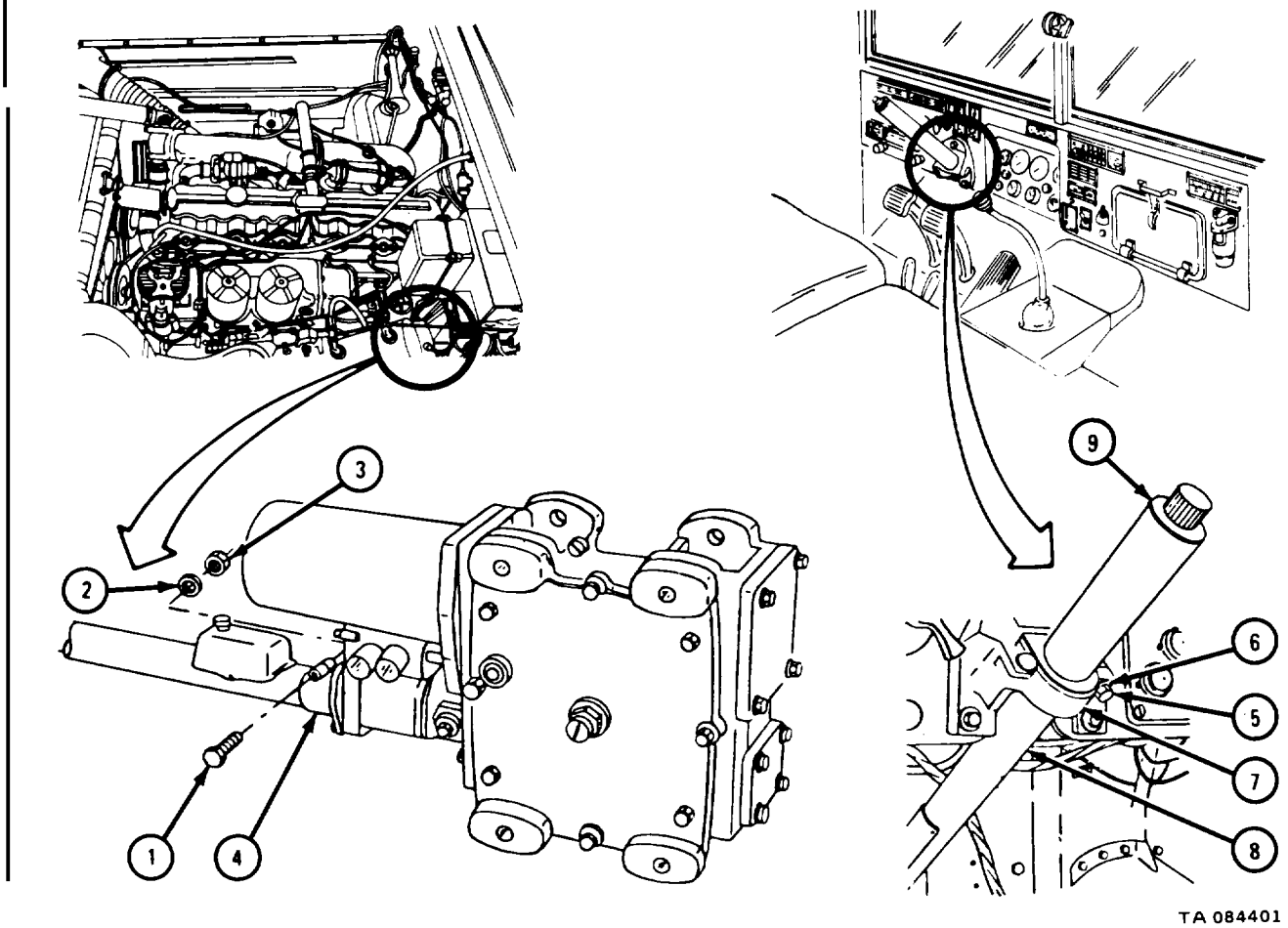
1. Take out screw (1), washer (2), and nut (3) from clamp (4).
2. Take out screw (5) and washer (6).
3. Open swing clamp (7).
4. Take out steering jacket (8).
5. Take off clamp (4) from steering jacket (8).

NOTE

Do not take out bearing (9) unless it is damaged. Refer to para 13-6e for inspection procedures.

6. Place long bar in end of steering jacket (8) opposite bearing (9). Tap out bearing.

GO TO FRAME 2

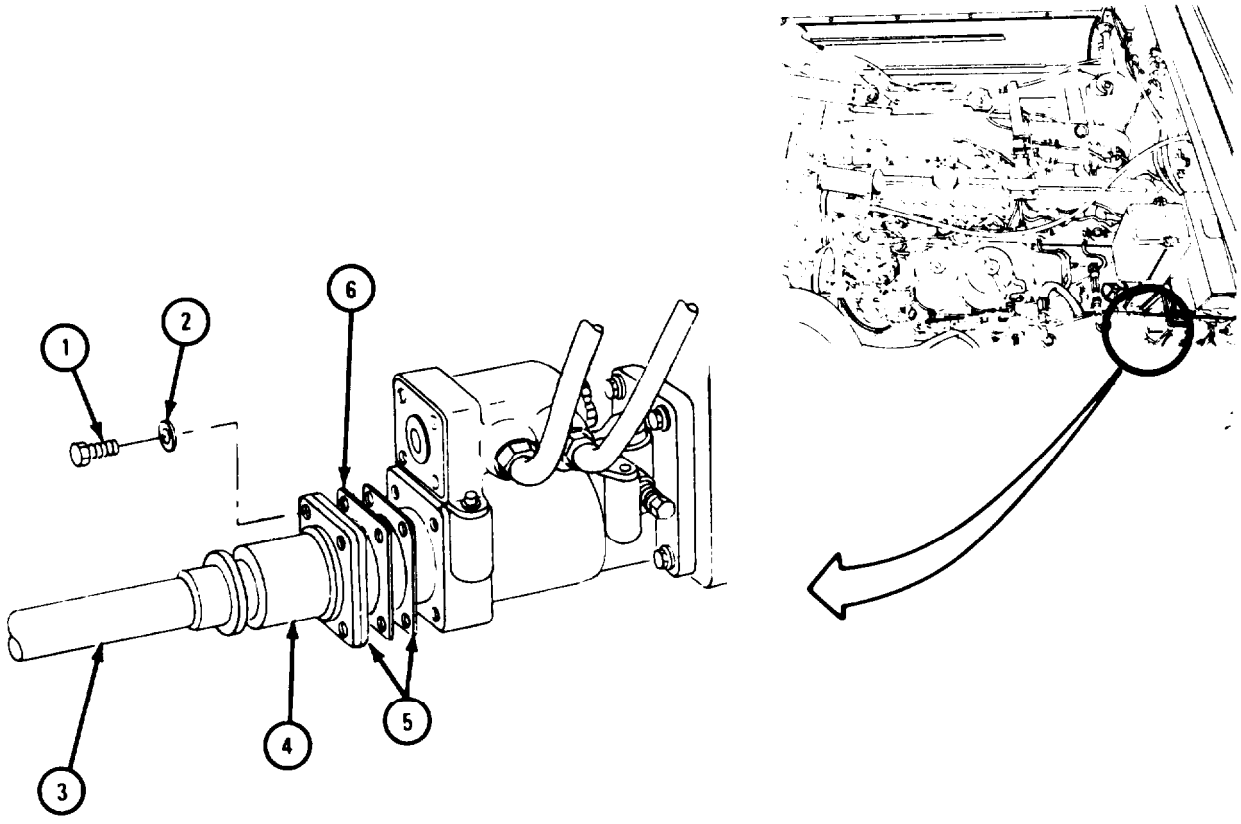


TA 084401

FRAME 2

1. Take out four screws (1) and washers (2).
2. Take out steering tube assembly (3) with control housing cover (4), two gaskets (5), and shims (6).
3. Take off shims (6). Measure and note thickness of shims.
4. Take off and throw away gaskets (5).
5. Take off control housing cover (4) from steering tube assembly (3).

END OF TASK



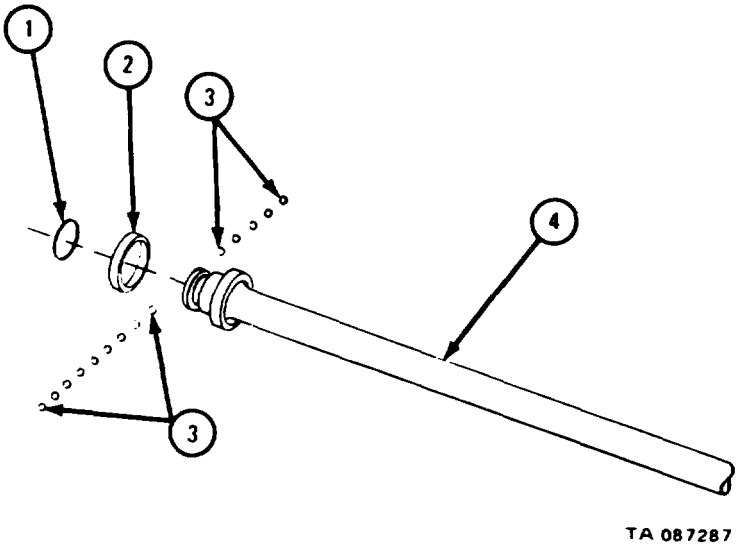
TA 087286

c. Disassembly.

FRAME 1

1. Take off snapring (1).
2. Take off bearing cup (2) and take out 14 bearing balls (3) from steering tube assembly (4).

END OF TASK



NOTE

Clean all parts before inspection and after repair.

There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

CAUTION

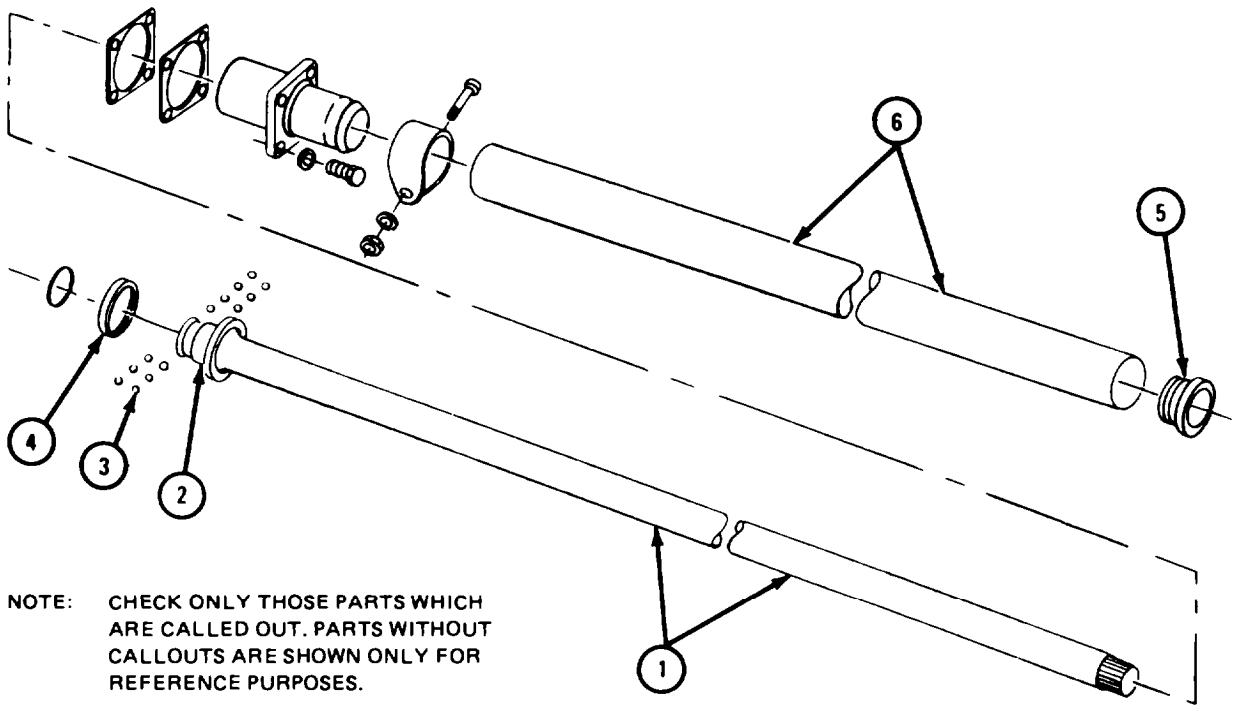
If steering jacket bearing was not taken out, do not clean jacket. Bearing lubrication will be taken out if bearing is cleaned with solvent.

e. Inspection and Repair.

FRAME 1

1. Using magnifying glass, check that steering tube assembly (1) has no cracks. If cracks are found, get a new part.
2. Check that steering tube assembly (1) is not torn or pitted near bearing cup (2). If bearing cup area is worn, get a new steering tube assembly.
3. Check that bearing balls (3) have no score marks or dull areas. If bearing balls are worn, get new ones.
4. Check that bearing cup (4) has no cracks, pitting or wear grooves. If bearing race is worn or damaged, get a new one.
5. Check that steering jacket bearing (5) has lubrication and that bearing moves freely without binding. If bearing is worn or damaged, get a new one.
6. Minor dents and scratches on steering jacket (6) are acceptable. If large dents keep steering tube assembly (1) from turning smoothly, get a new steering jacket.

ND OF TASK

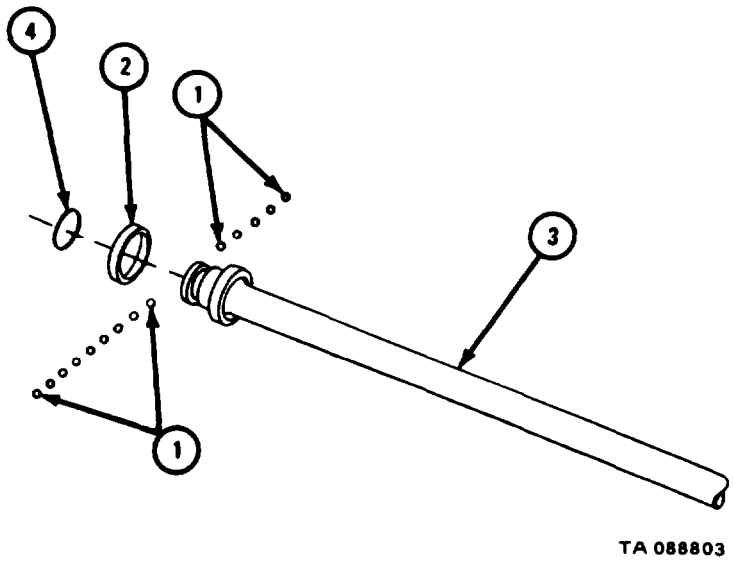


f. Assembly.

FRAME 1

1. Put 14 bearing balls (1) in bearing cup (2).
2. Lower steering tube assembly (3) onto bearing balls (1).
3. Hold bearing cup (2) with bearing balls (1) on steering tube assembly (3) with one hand and put on snapring (4) with the other.

END OF TASK



TA 088803

g. Replacement.

FRAME 1

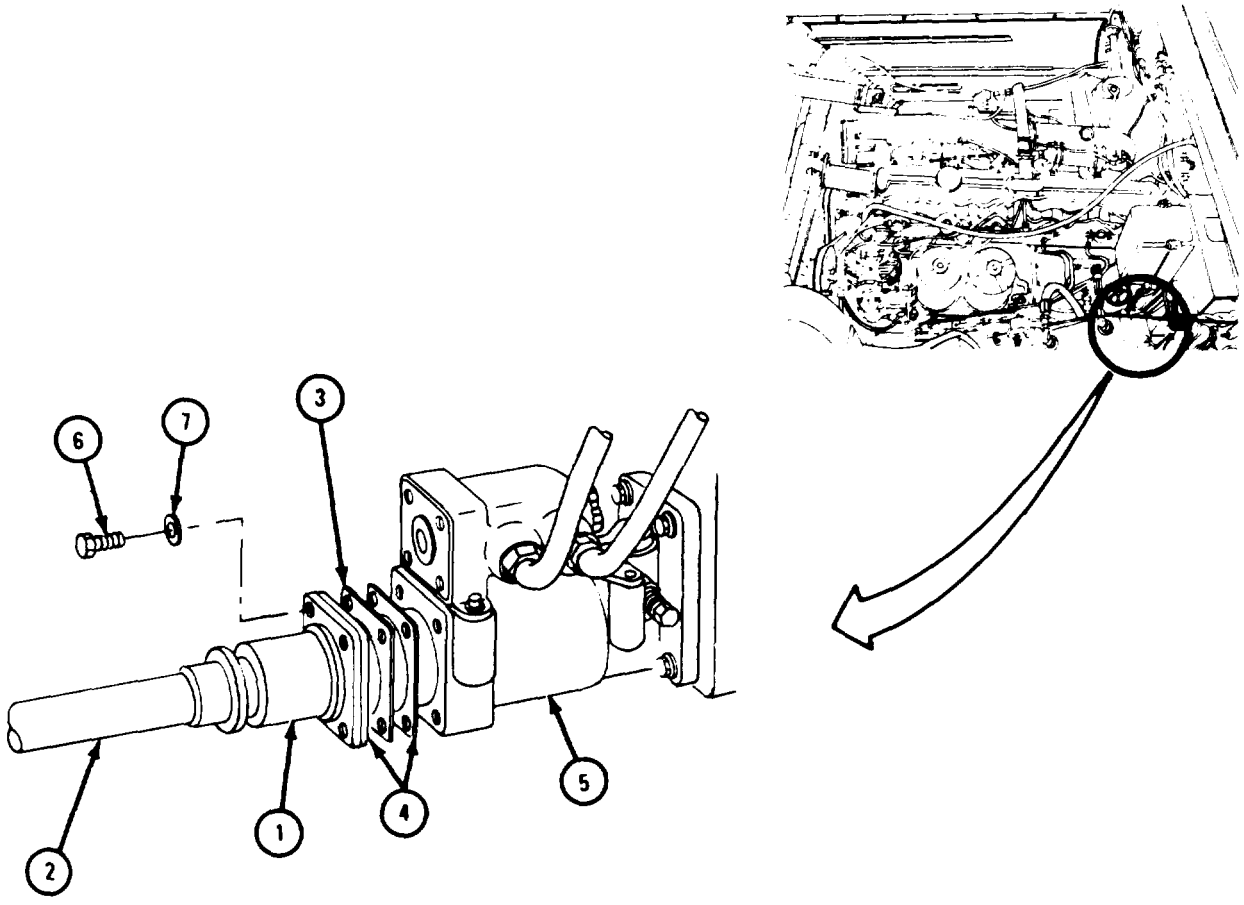
1. Place control housing cover (1) in position on steering tube assembly (2).

NOTE

Place shims (3) between gaskets (4) so gaskets seal against machined surfaces.

2. Place steering tube assembly (2) in control housing assembly (5).
3. Put on four screws (6) and washers (7).
4. Check that steering tube assembly (2) turns freely without binding.

GO TO FRAME 2

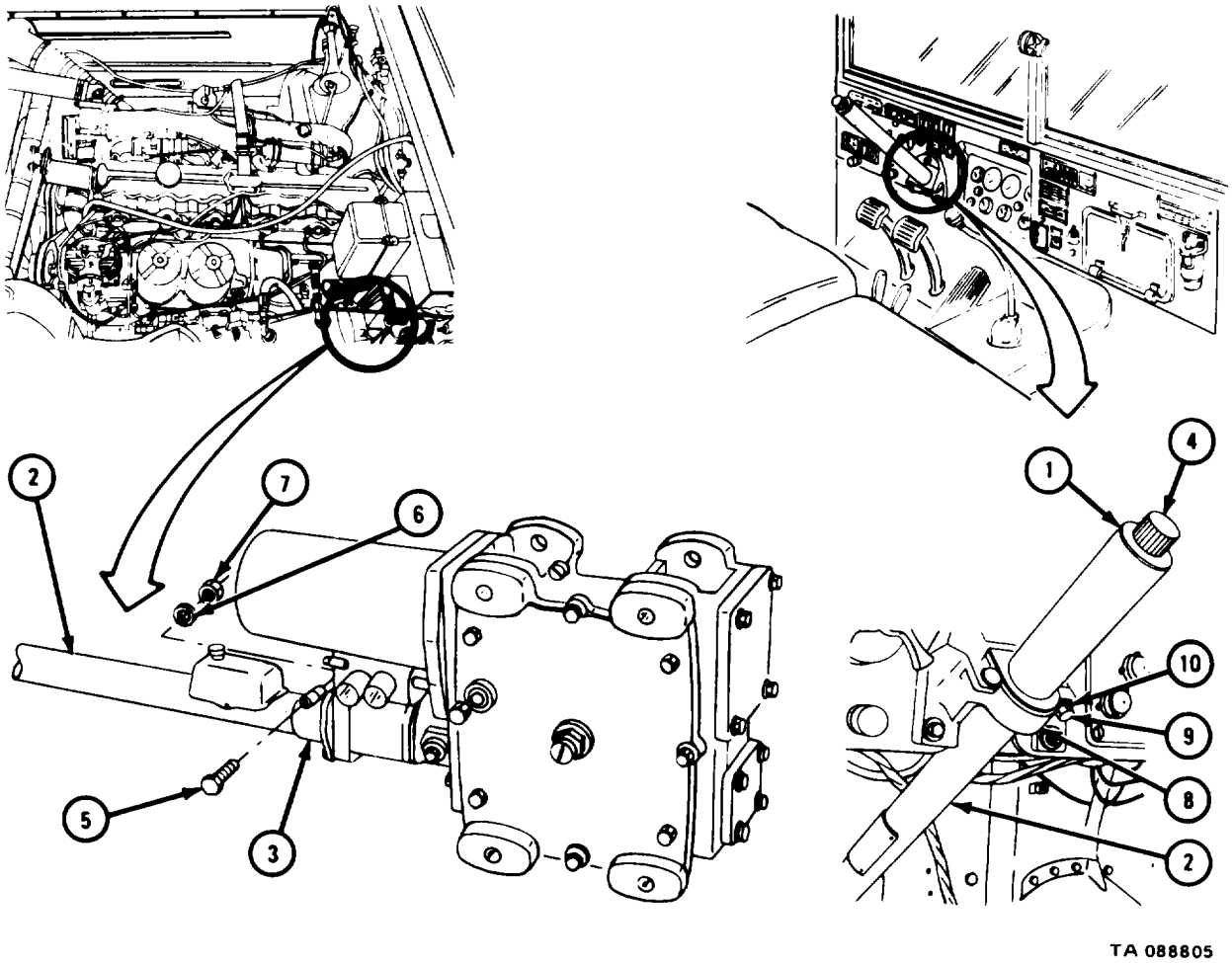


TA 088804

FRAME 2

1. If steering jacket bearing (1) was taken out, press new bearing into steering jacket (2).
2. Put clamp (3) on steering jacket (2).
3. Working inside cab, slide steering jacket (2) over steering tube assembly (4).
4. Working outside truck, slide steering jacket (2) down until jacket is seated against control housing.
5. Slide clamp (3) against control housing.
6. Put on screw (5), washer (6), and nut (7).
7. Close swing clamp (8).
8. Put in screw (9) and washer (10).

GO TO FRAME 3



FRAME 3

NOTE

Follow-on Maintenance Action Required:

1. Replace hand control valve. Refer to TM 9-2320-211-20.
2. Replace turn signal assembly. Refer to TM 9-2320-211-20.
3. Replace horn contact brush assembly. Refer to Part 1, para 6-13.
4. Replace steering wheel. Refer to TM 9-2320-211-20.
5. Replace weather guard from floorboard that goes around steering column. Refer to TM 9-2320-211-20.
6. Close hood and left side panel. Refer to TM 9-2320-211-10.
7. Reconnect battery ground cable. Refer to TM 9-2320-211-20.

END OF TASK

Section IV. STEERING HYDRAULIC SYSTEM

13-7. POWER STEERING HYDRAULIC PUMP REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Hydraulic pump gasket
Hydraulic pump adapter gasket
Outlet line elbow preformed packing
Crocus cloth
Thread tape, MIL-T-27730A
Caps and plugs

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Open hood. Refer to TM 9-2320-211-10.

(2) Remove brushguard. Refer to TM 9-2320-211-20.

(3) Remove radiator. Refer to TM 9-2320-211-20.

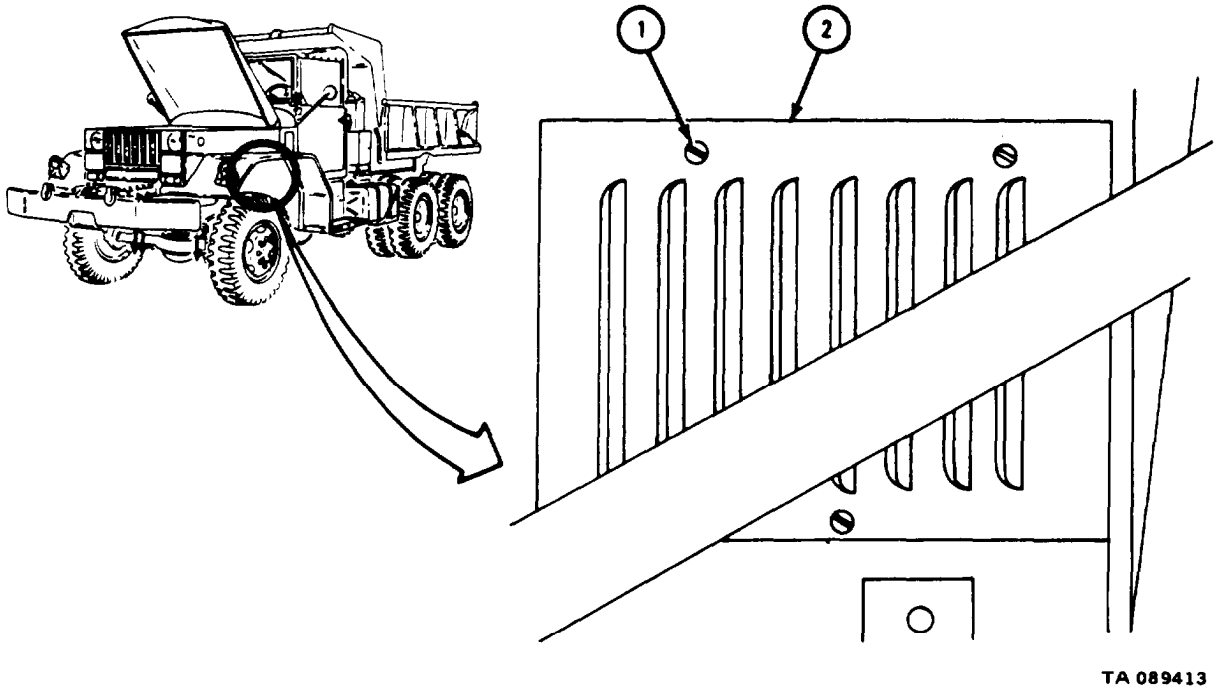
(4) Drain power steering reservoir. Refer to LO 9-2320-211-12.

b. Removal.

FRAME 1

1. Turn three fasteners (1) to left to unlock them.
2. Take off power steering access panel (2).

GO TO FRAME 2



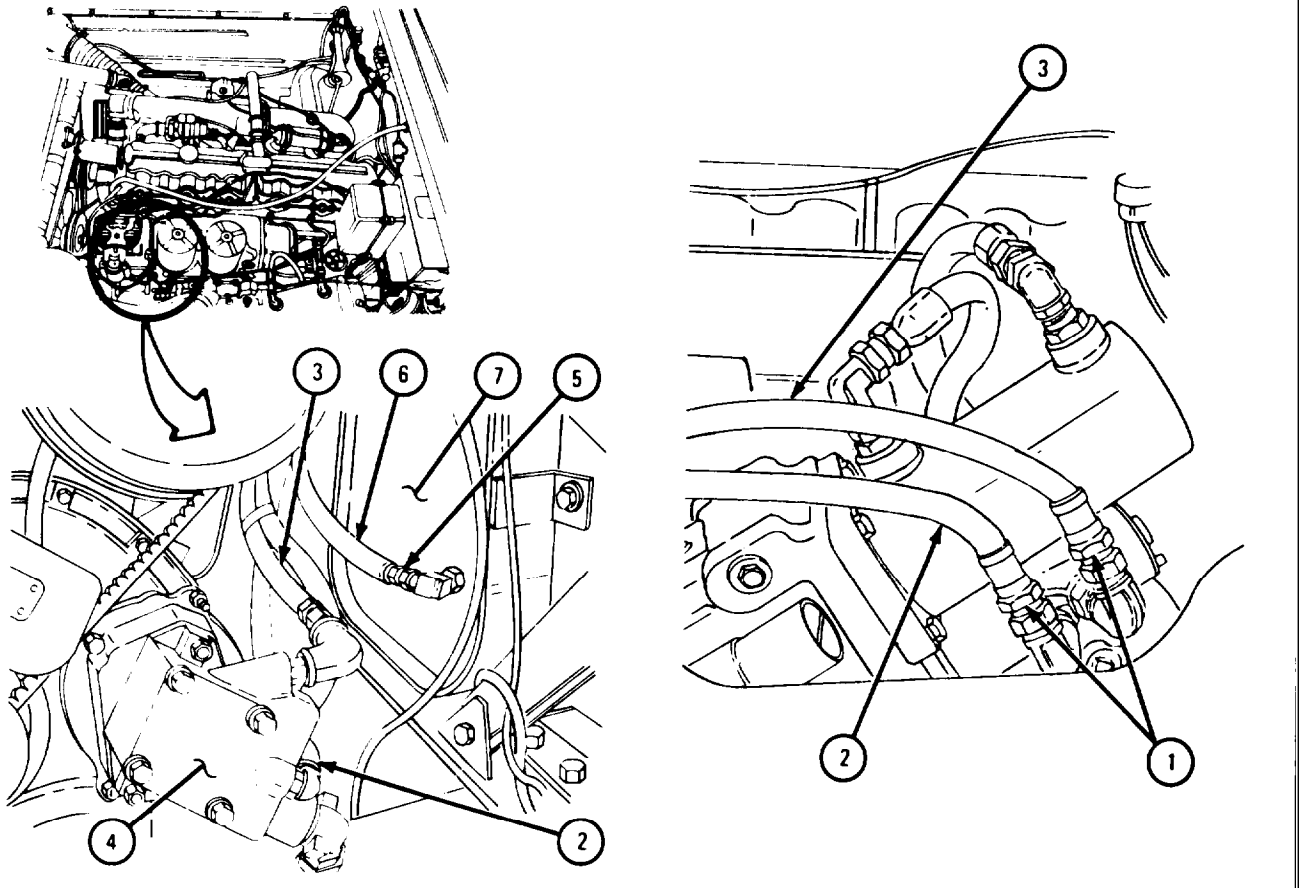
FRAME 2

CAUTION

Cap all open ports and hoses to keep dirt out of hydraulic system. Dirt will damage parts.

1. Place one-gallon container below power steering pump.
2. Unscrew two nuts (1) on hoses (2 and 3).
3. Unscrew hoses (2 and 3) from pump (4). Cap open ports and hoses.
4. Unscrew nut (5) on hose (6).
5. Take hose (6) off reservoir (7). Cap open port and hose.

GO TO FRAME 3

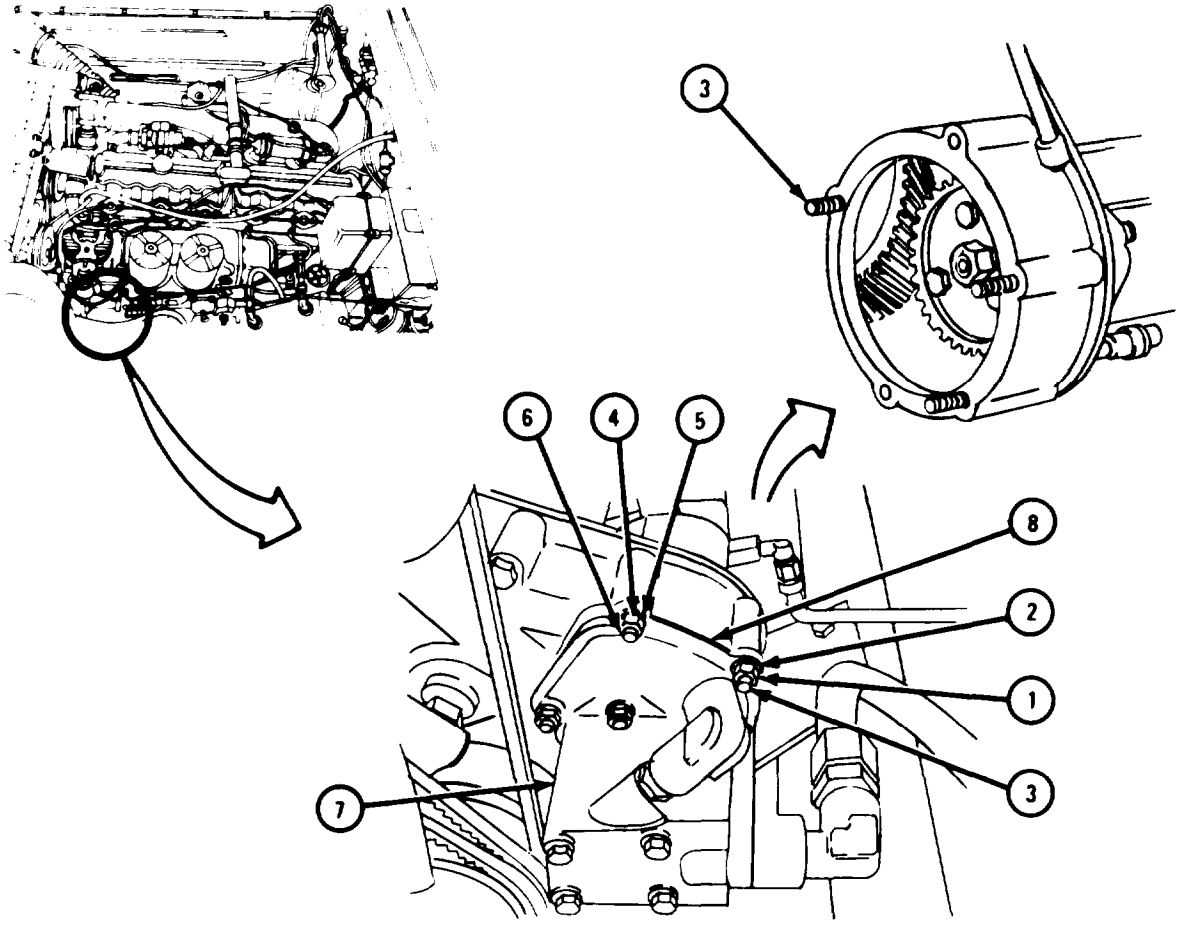


TA 101629

FRAME 3

1. Take off three nuts (1) and washers (2) from studs (3).
2. Take off two nuts (4) and washers (5) from screws (6). Take out screws.
3. Pull off hydraulic pump (7) with gasket (8). Throw away gasket.
4. Take container out from under truck. Put oil in approved disposal area.

END OF TASK



TA 087432

c. Disassembly.

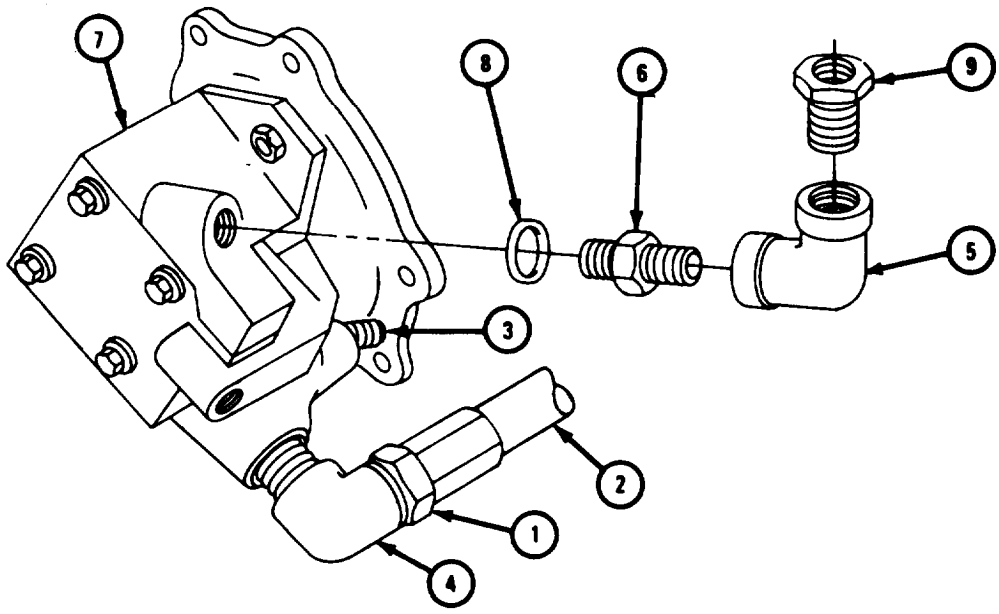
FRAME 1

CAUTION

Be careful when taking out brass fittings. If fittings are damaged, they can cause damage to hydraulic pump.

1. Unscrew nut (1) on hose (2). Take off hose.
2. Take out elbows (3 and 4).
3. Take out elbow (5) by taking out adapter (6) from pump (7). Take off and throw away preformed packing (8).
4. Take off reducer (9) from elbow (5).

GO TO FRAME 2

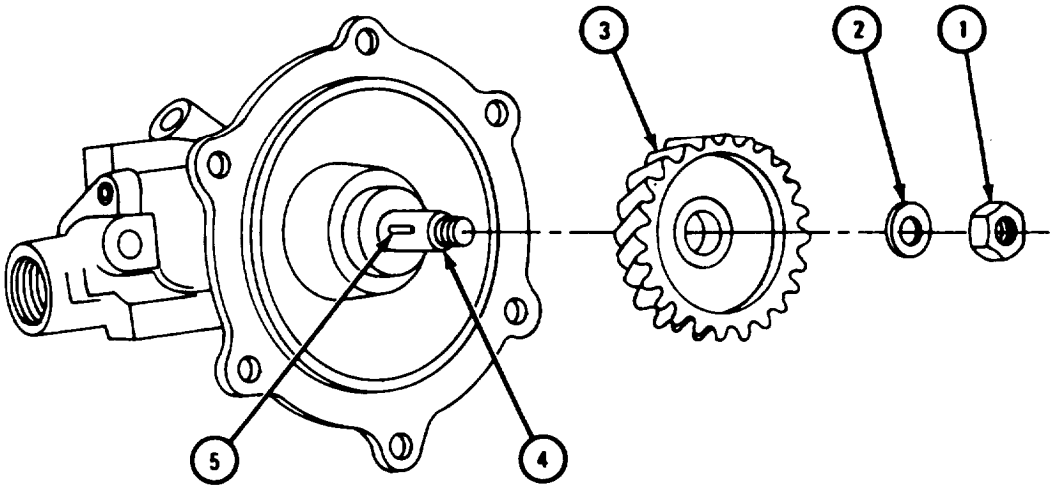


TA 089414

FRAME 2

1. Take off self-locking nut (1) and flat washer (2).
2. Pull drive gear (3) off shaft (4).
3. Take out woodruff key (5).

GO TO FRAME 3

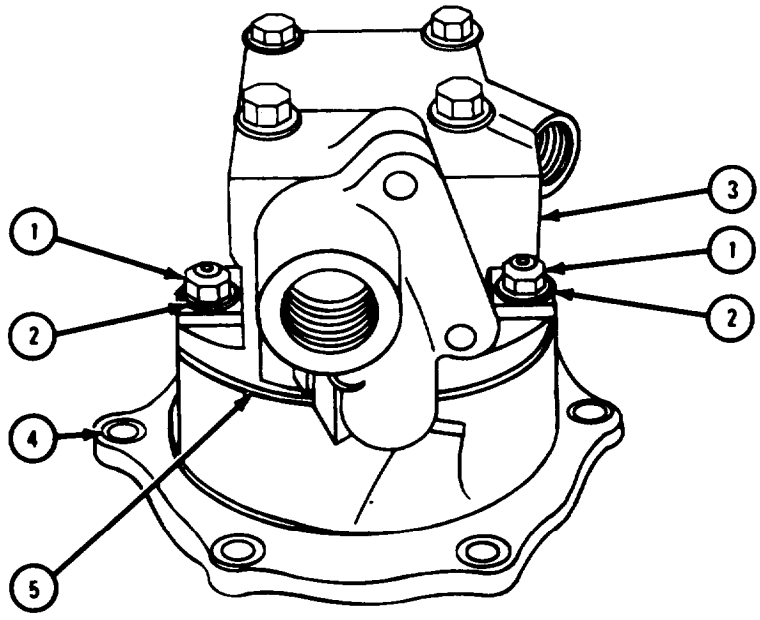


TA 089415

FRAME 3

1. Take off two nuts (1) and lockwashers (2).
2. Takeoff hydraulic pump (3) from adapter (4).
3. Take off and throw away gasket (5).

END OF TASK



TA 089416

d. Cleaning, Inspection, and Repair.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

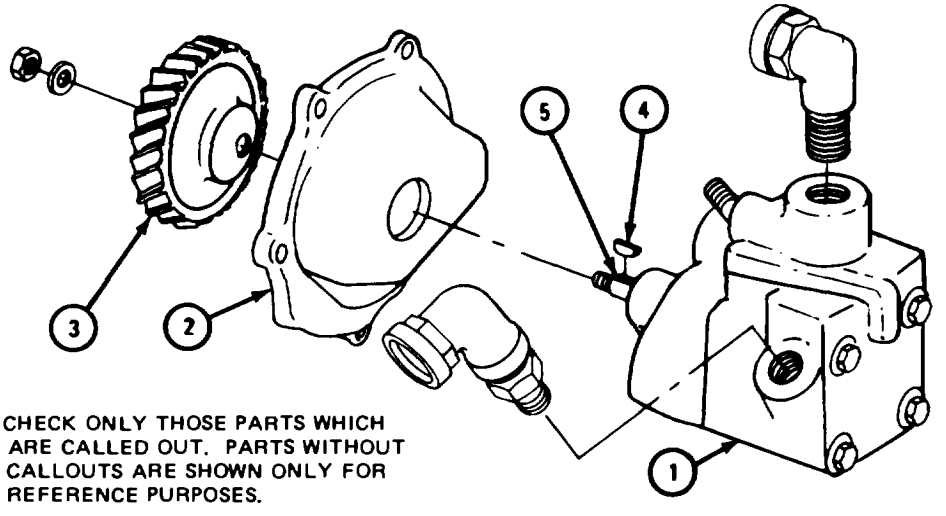
(1) Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair.

FRAME 1

1. Check that hydraulic pump (1) and pump adapter (2) do not have any chips, cracks or small holes. If more repair is needed, get a new part.
2. Check that drive gear (3) is not chipped or cracked and does not have damaged teeth. Check that keyway is not burred. If gear is damaged, get a new one.
3. Check that key (4) is not worn or damaged. If key is damaged, get a new one.
4. Check that shaft (5) is not chipped, cracked or burred. If shaft is damaged, get a new one.
5. Check that all threaded parts are not stripped or crossthreaded. If threads are damaged, get a new part.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

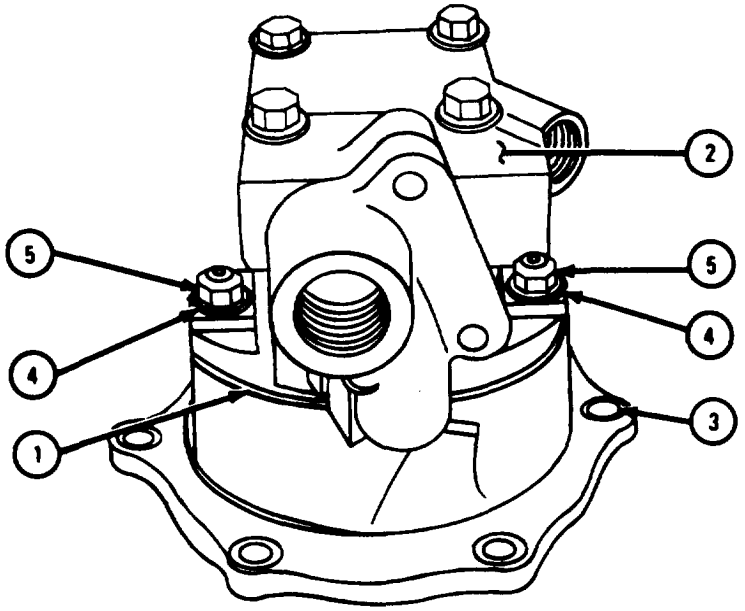
TA 089417

e. Assembly.

FRAME 1

1. Put gasket (1) and hydraulic pump (2) on adapter (3).
2. Put on two lockwashers (4) and two nuts (5).

GO TO FRAME 2

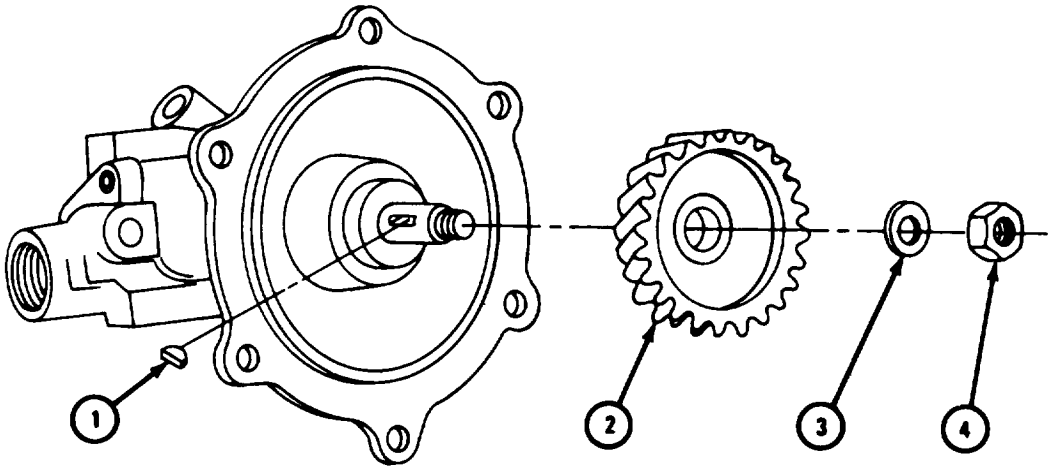


TA 089418

FRAME 2

1. Put in woodruff key (1).
2. Aline keyway in drive gear (2) with woodruff key (1). Press on drive gear.
3. Put on flatwasher (3) and self-locking nut (4) and tighten nut to 45 to 50 pound-feet.

GO TO FRAME 3



TA 089419

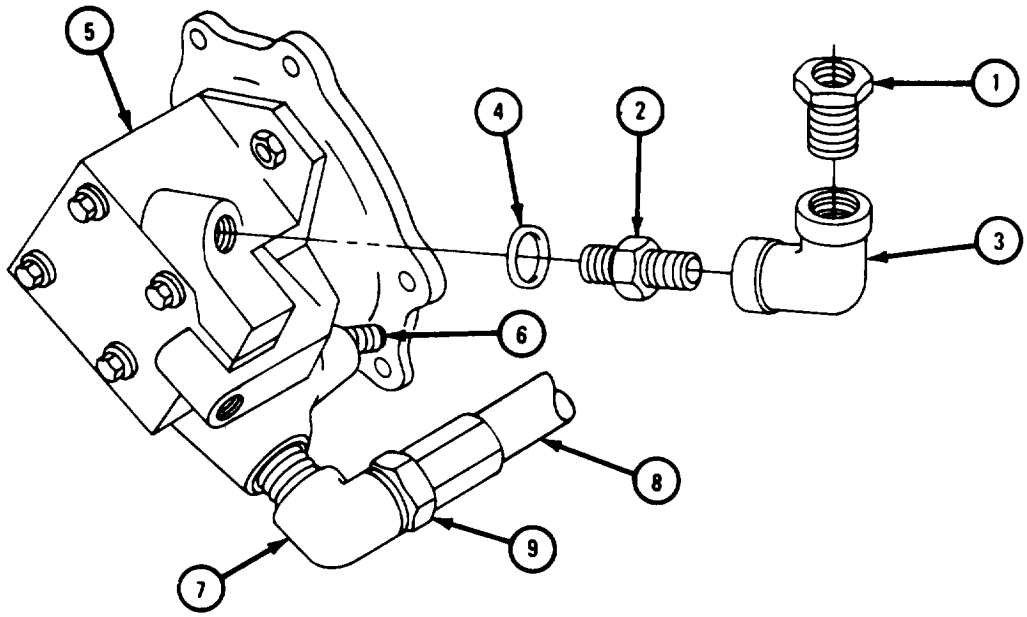
FRAME 3

CAUTION

Be careful when putting on brass fittings. If brass fittings are damaged, they can cause damage to hydraulic pump.

1. Wrap threads of fittings with thread tape.
2. Put reducer (1) and adapter (2) on elbow (3).
3. Place preformed packing (4) on adapter (2).
4. Put adapter (2) into hydraulic pump (5).
5. Put on elbows (6 and 7).
6. Put hose (8) into place and tighten nut (9).

END OF TASK



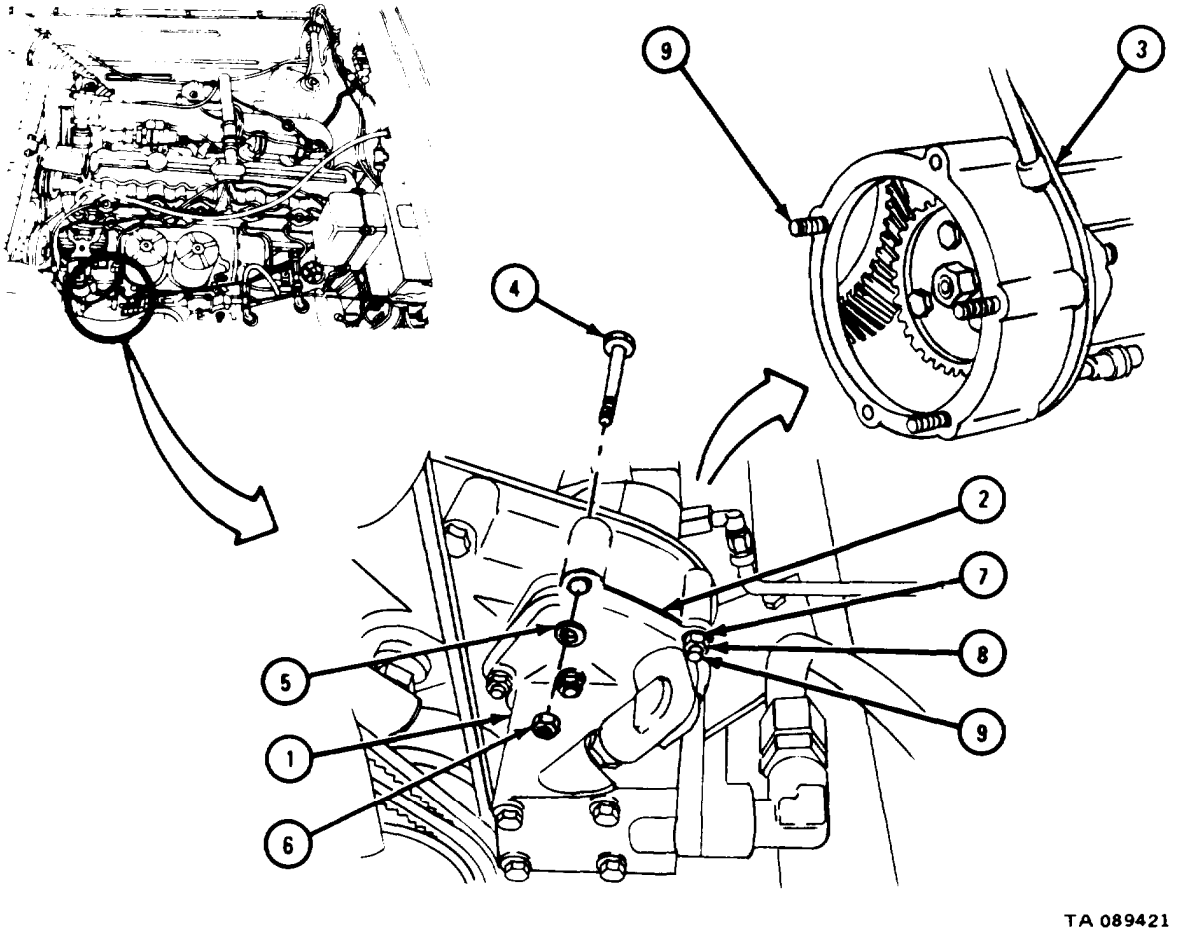
TA 089420

f. Replacement.

FRAME 1

1. Place hydraulic pump (1) and gasket (2) on housing (3).
2. Put on two screws (4), washers (5), and nuts (6).
3. Put three washers (7) and three nuts (8) on three studs (9).

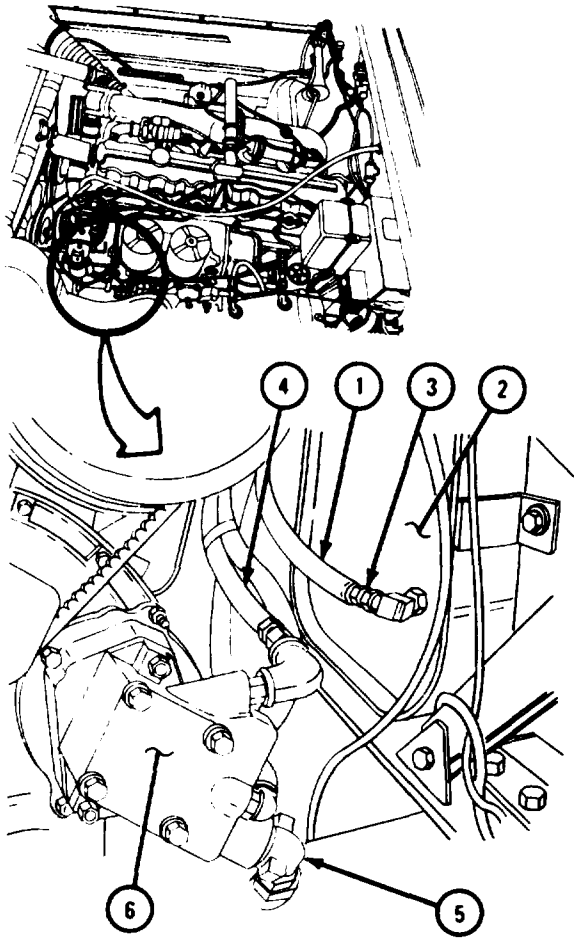
GO TO FRAME 2

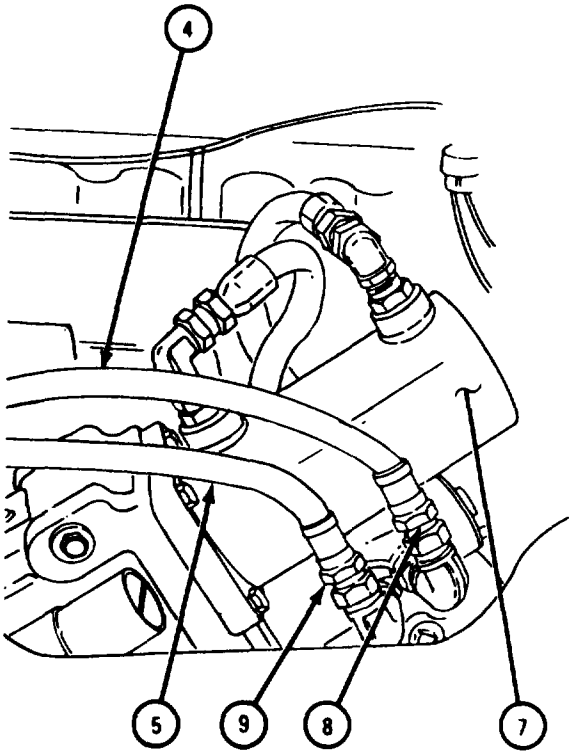


FRAME 2

1. Wrap threads of fittings with thread tape.
2. Place hose (1) on reservoir (2). Tighten nut (3).
3. Screw hoses (4 and 5) into pump (6).
4. Put hoses (4 and 5) on cylinder (7). Tighten nuts (8 and 9).

GO TO FRAME 3





TA 087433

FRAME 3

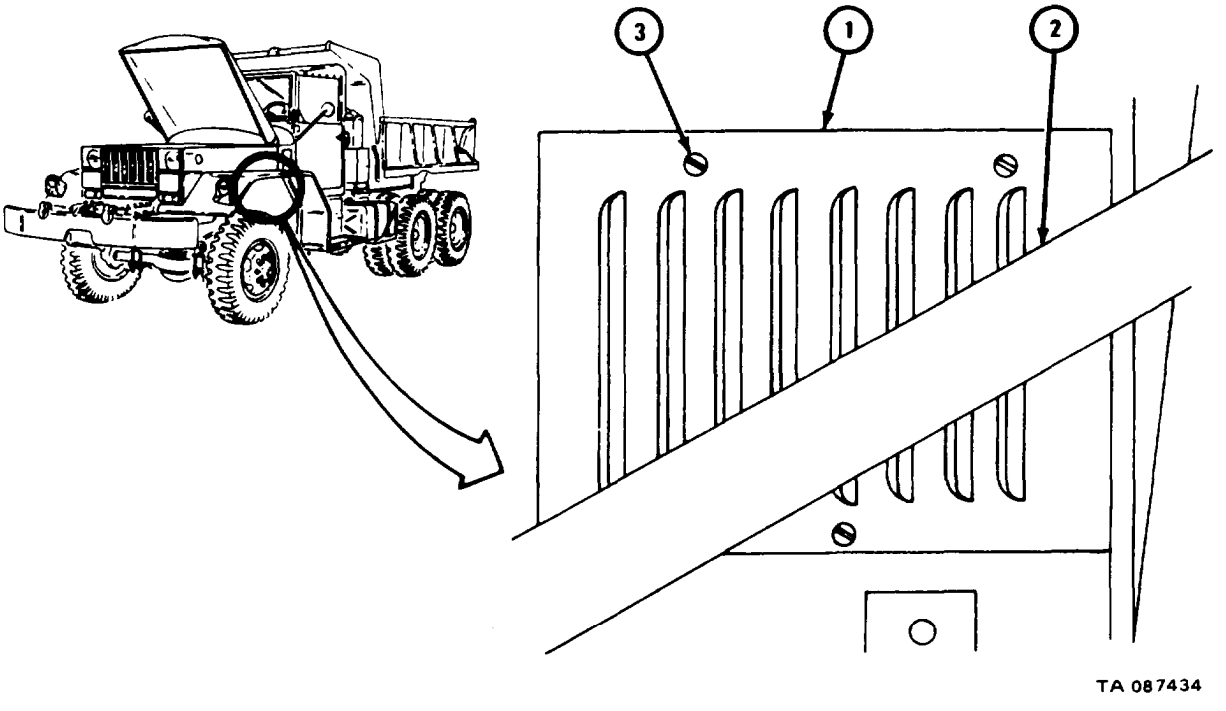
1. Put power steering access cover (1) on inside fender housing (2).
2. Turn three fasteners (3) to right to lock them.

NOTE

Follow-on Maintenance Action Required:

1. Fill power steering reservoir. Refer to LO 9-2320-211-12.
2. Replace radiator. Refer to TM 9-2320-211-20.
3. Replace brushguard. Refer to TM 9-2320-211-20.
4. Close hood. Refer to TM 9-2320-211-10.

END OF TASK



TA 087434

13-8. POWER STEERING HYDRAULIC OIL RESERVOIR REPAIR.

TOOLS: No special tools required

SUPPLIES: Fill plug gasket

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

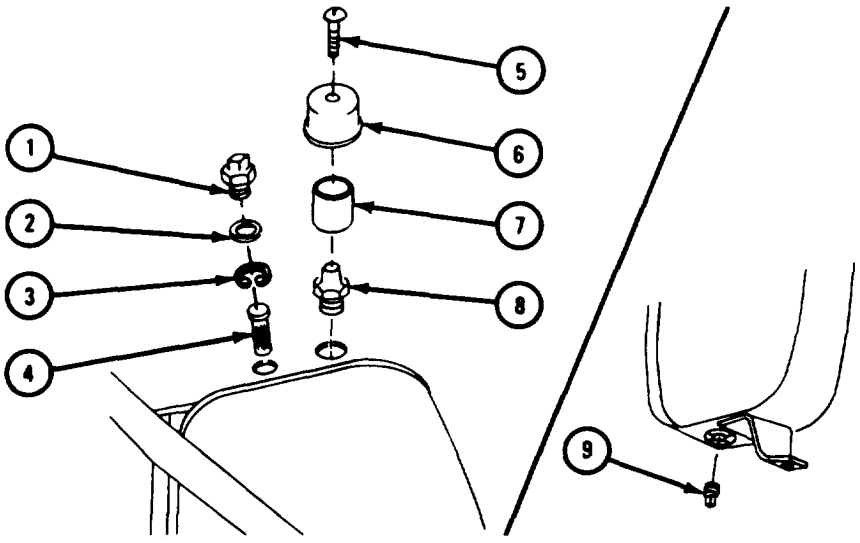
a. Preliminary Procedure. Remove steering hydraulic oil reservoir. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

1. Take out filler plug (1), gasket (2), snapring (3), and filler screen (4). Throw away gasket.
2. Take out screw (5). Take off cover (6) and filler (7). Take out breather body (8).
3. Take out plug (9).

END OF TASK



TA 087520

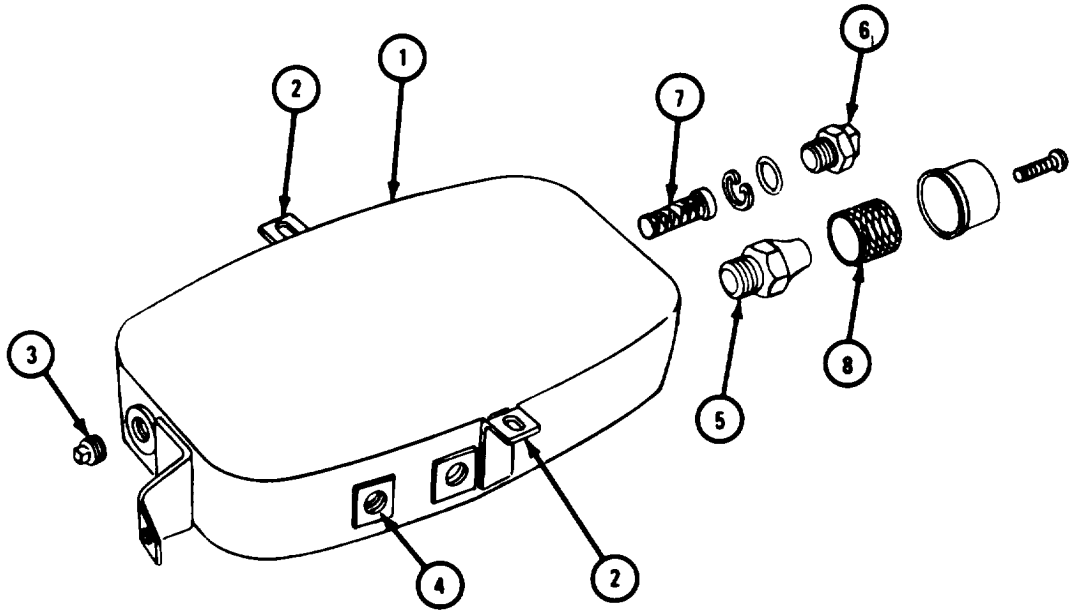
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection.

FRAME 1

1. Check that hydraulic oil reservoir (1) does not leak.
2. Check that oil reservoir mounting brackets (2) are not bent or cracked.
3. Check that plugs (3) do not have damaged threads.
4. Check that all threaded holes (4) are not damaged.
5. Check that plugs (5) and (6) have no damaged threads.
6. Check that screen (7) and filter (8) have no damage.

END OF TASK



NOTE
CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

TA 087521

e. Repair.

(1) If there is a large leak in oil reservoir, get a new one. If there is a small leak, repair it by welding. Refer to TM 9-237.

(2) If oil reservoir mounting brackets are bent, straighten them. Refer to FM 43-2. If brackets are cracked, weld them. Refer to TM 9-237.

(3) If plugs have damaged threads, get new ones.

(4) If threaded holes are damaged, get a new oil reservoir.

(5) If screen and filter are damaged, get new ones.

f. Assembly.

FRAME 1

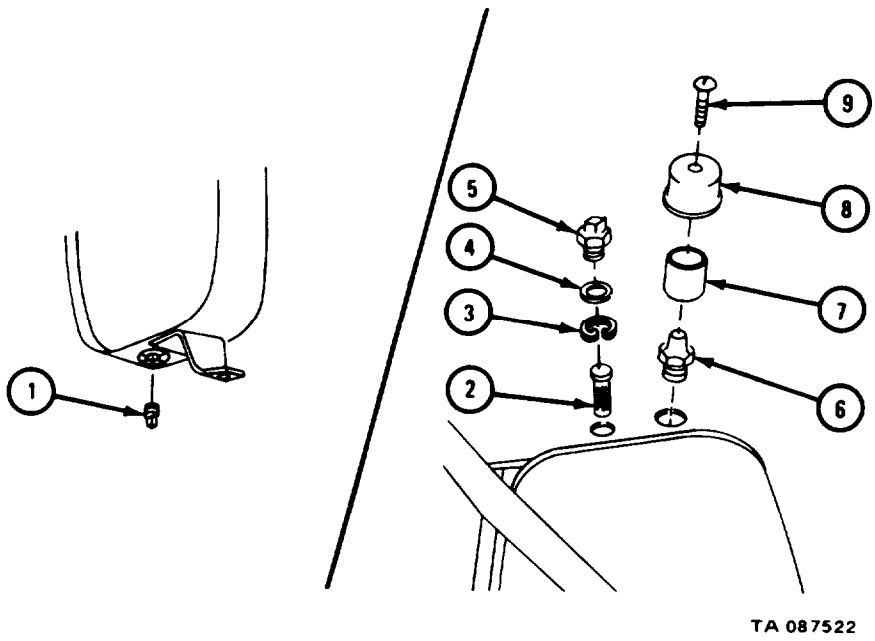
1. Put in plug (1).
2. Put in filler screen (2) and snapring (3).
3. Put in gasket (4). Put in filler plug (5).
4. Put in breather body (6). Put on filter (7) and cover (8).
5. Put in screw (9).

NOTE

Follow-on Maintenance Action Required:

Replace hydraulic oil reservoir. Refer to para TM 9-2320-211-20.

END OF TASK



TA 087522

Section V. STEERING SYSTEM VALVES

13-9. STEERING RELIEF VALVE REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

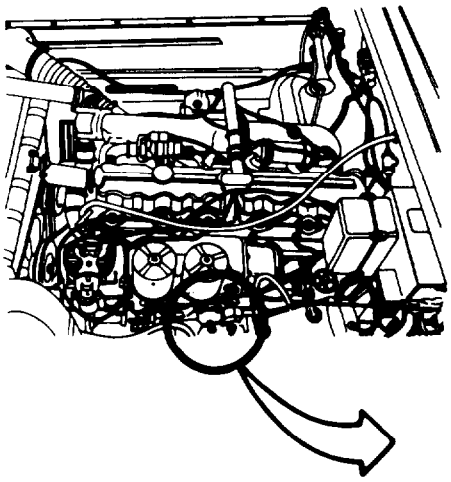
a. Preliminary Procedure. Open hood and left side panel. Refer to TM 9-2320-211-10.

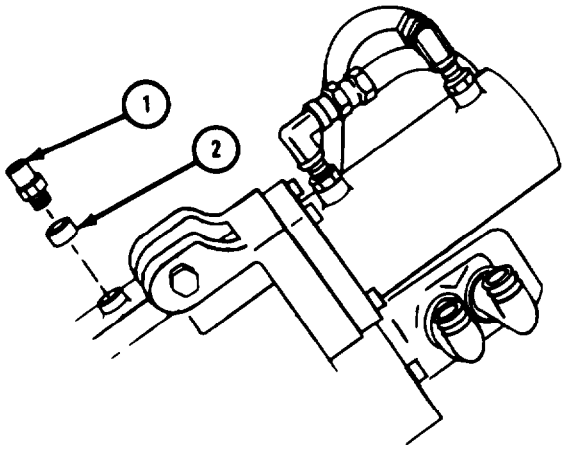
b. Removal.

FRAME 1

1. Take out relief valve (1) and bushing (2).

END OF TASK





TA 088758

c. Replacement.

FRAME 1

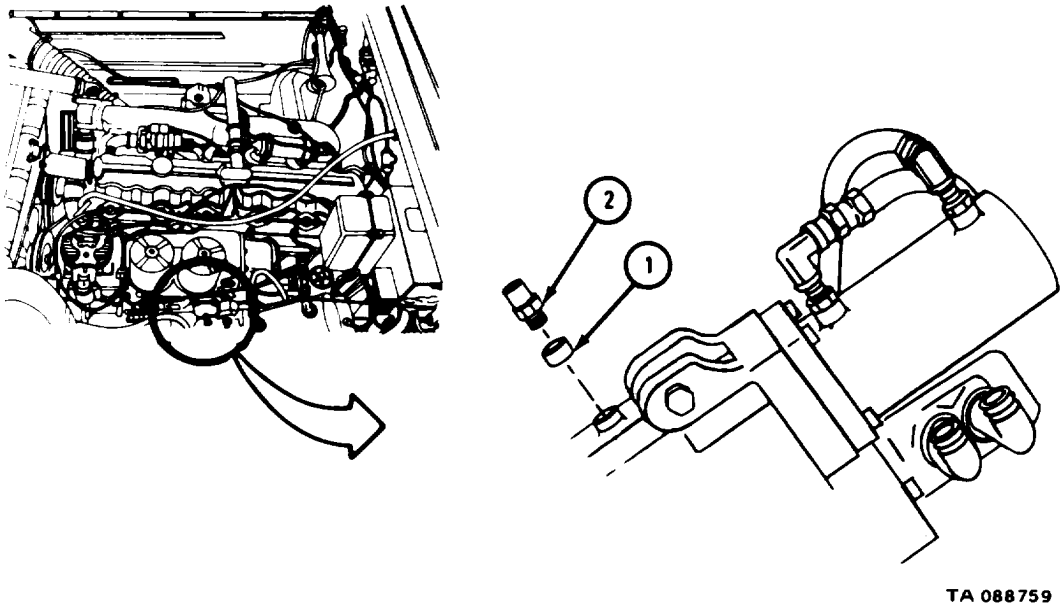
1. Put in bushing (1) and relief valve (2).

NOTE

Follow-on Maintenance Action Required:

Close hood and left side panel. Refer to TM 9-2320-211-10.

END OF TASK



CHAPTER 14

FRAME AND TOWING ATTACHMENTS GROUP MAINTENANCE

Section I. SCOPE

14-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for the frame assembly, pintles, and the fifth wheel assembly for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

14-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section II. FRAME ASSEMBLY

14-3. FRAME ALINEMENT CHECK, INSPECTION, AND REPAIR.

TOOLS: Plumb bob
Tape measure
Pencil
Chalk line

SUPPLIES: Paper, 5 inches by 8 inches
Masking tape

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked on level floor, engine off, handbrake set.

a. Preliminary Procedures.

(1) Make sure truck is parked in a straight line so that rear axles are not on a twist or binding from turning action.

(2) Make sure rear spring seat bearings are properly adjusted. Refer to TM 9-2320-211-20.

b. Alinement Check.

NOTE

The truck shown in this task has six frame crossmembers. When checking frame alinement on any truck, use same holes, bolts, and rivets on each side of truck.

FRAME 1

1. Tape paper to floor under each frame crossmember (1) and rear spring seat caps (2).

NOTE

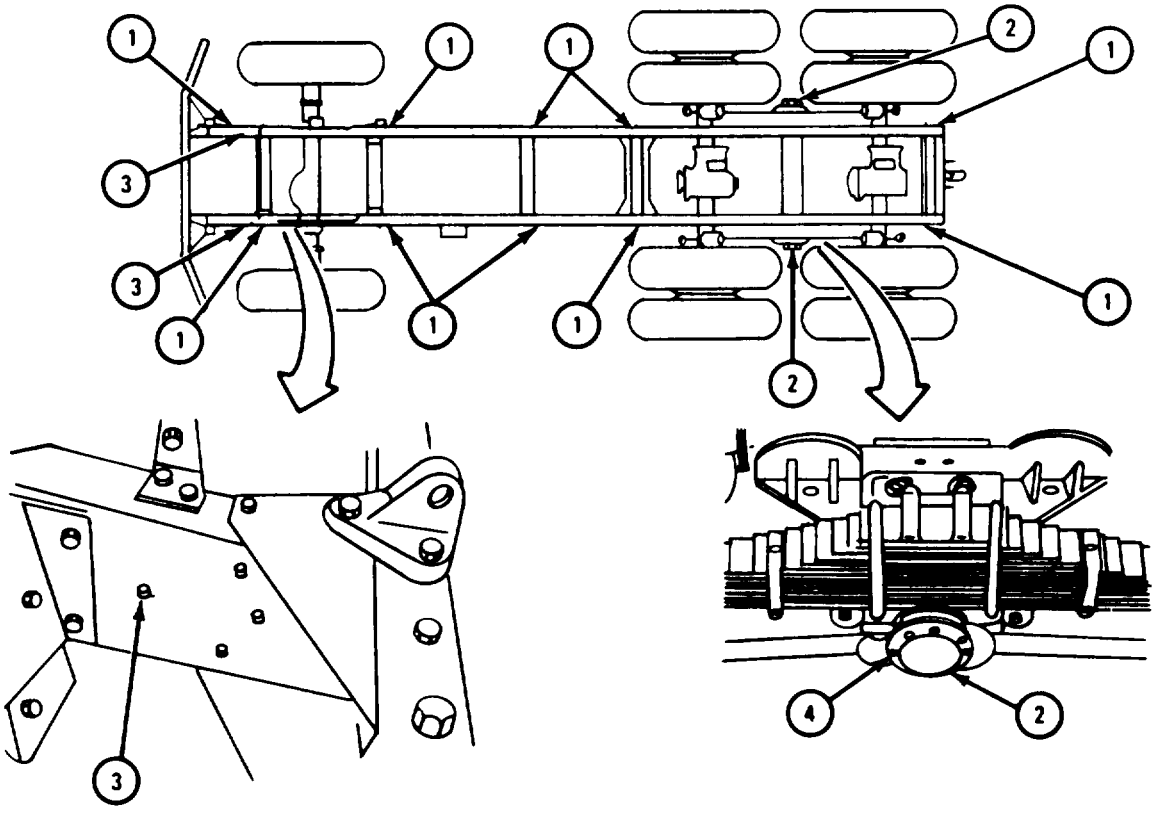
When marking floor at front frame crossmember, use hole (3) in frame as marking point.

Soldiers A and B

2. Using plumb bob and pencil, carefully mark point on paper below both sides of frame crossmembers (1), and two front screws (4) in rear spring seat caps (2).

3. Start engine and drive truck off marked paper. Refer to TM 9-2320-211-10.

GO TO FRAME 2



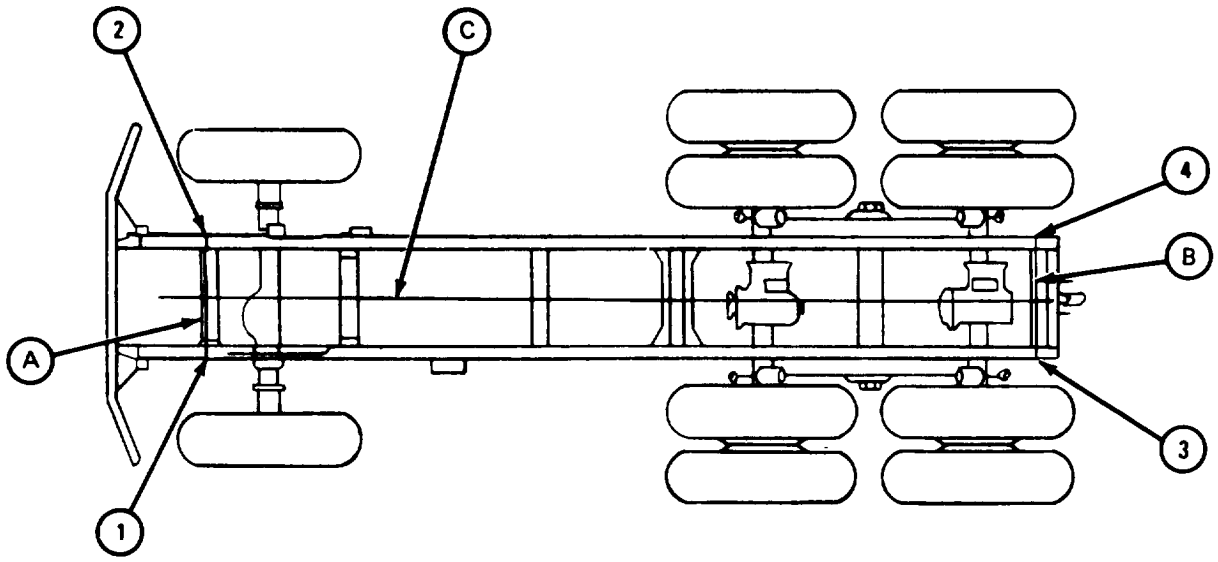
TA 114073

FRAME 2

Soldiers A and B

1. Using chalk line, mark line A between points (1 and 2) and line B between points (3 and 4).
2. Using tape measure, check that lines A and B are between 33 7/8 inches and 34 1/8 inches. If they are not between limits given, frame is bent.
3. Using tape measure and chalk line, mark center line C from midpoints of lines A and B.

GO TO FRAME 3



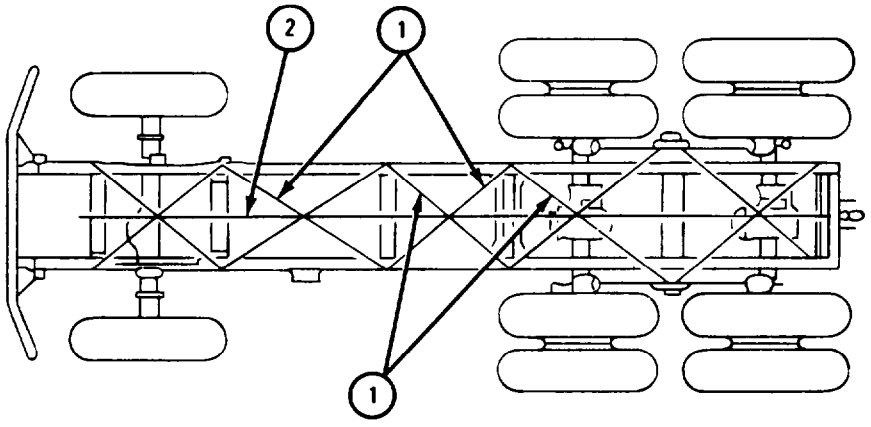
TA 114074

FRAME 3

Soldiers A and B

1. Using chalk line, mark 10 diagonal lines (1) between marked points as shown.
2. Diagonal lines (1) should cross at center line (2). If diagonal lines cross more than 1/8 inch from center line, frame is bent.

END OF TASK



TA 114075

c. Inspection and Repair.

(1) Check that frame rails are not cracked, bent, or misalined. Check that crossmembers have no cracks or damage. If they are damaged, refer to para 14-4 and TM 9-237.

(2) Check that all riveted joints have no cracks or broken rivets. Repair if damaged. Refer to para 14-4 and FM 43-2.

(3) Check that all bolted brackets and supports are not cracked or damaged. Repair if damaged. Refer to paras 14-4, 14-7 and 14-8.

(4) Check that running board hangers are not damaged. Repair if damaged. Refer to paras 14-4 and 16-12.

14-4. FRAME, SIDEMEMBERS, CROSSMEMBERS, AND BRACKETS REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Rags
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Three

EQUIPMENT CONDITION: Truck parked, handbrake set, engine off, wheels chocked.

NOTE

Disassembly of frame is done when all associated parts have been taken off. No crossmembers, gussets, brackets, reinforcements, or engine mounts will be taken off unless inspection shows that replacement or repair is necessary.

The number of crossmembers on frame changes for each type of truck chassis used. Bolts and nuts must be used to replace rivets as needed. Refer to TB 9-2300-247-40.

For unspecified torque values of screws or bolts, refer to Part 1, table 1-1, Standard Torque Specifications.

a. Right and Left Angle Bracket and Brushguard Hinges.

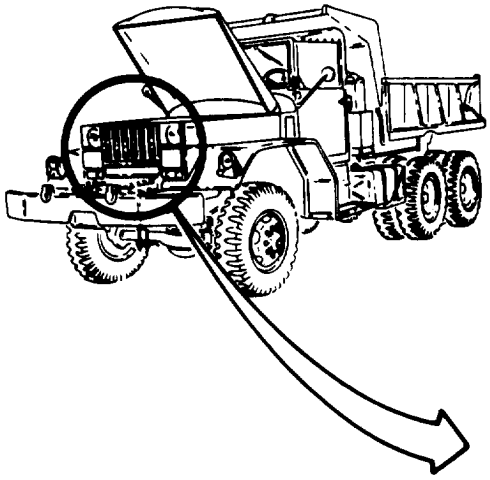
(1) Preliminary Procedure. Open hood. Refer to TM 9-2320-211-10.

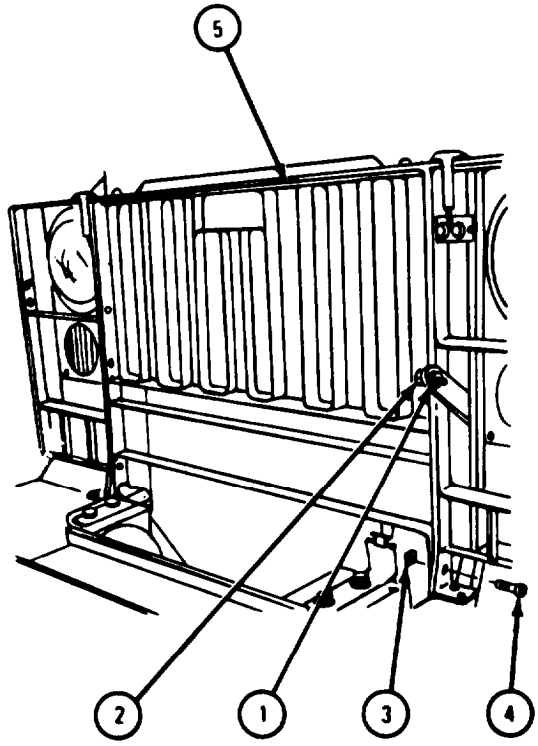
(2) Removal.

FRAME 1

1. Loosen two brace nuts (1) and bolts (2).
2. Loosen two mounting nuts (3) and bolts (4).
3. Pull top of brushguard (5) forward and lift it off truck.

GO TO FRAME 2



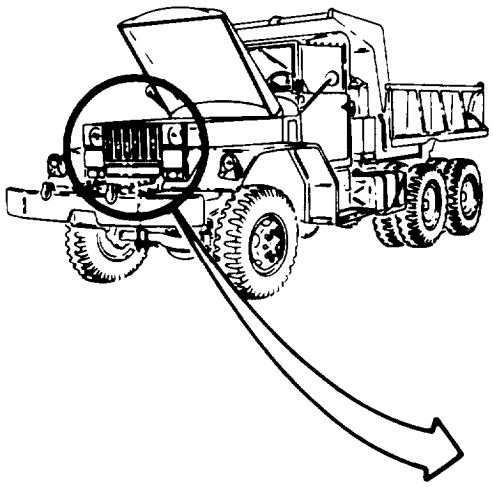


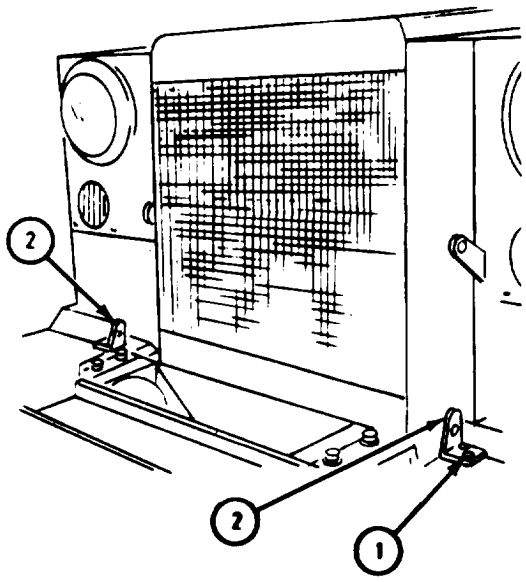
TA 103901

FRAME 2

1. Using center punch and drill, take out two rivets (1) from left angle bracket (2).
2. Using center punch and drill, take out two rivets (1) from right angle bracket (2).
3. Take off two angle brackets (2).

END OF TASK





TA 103902

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets and hinges for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

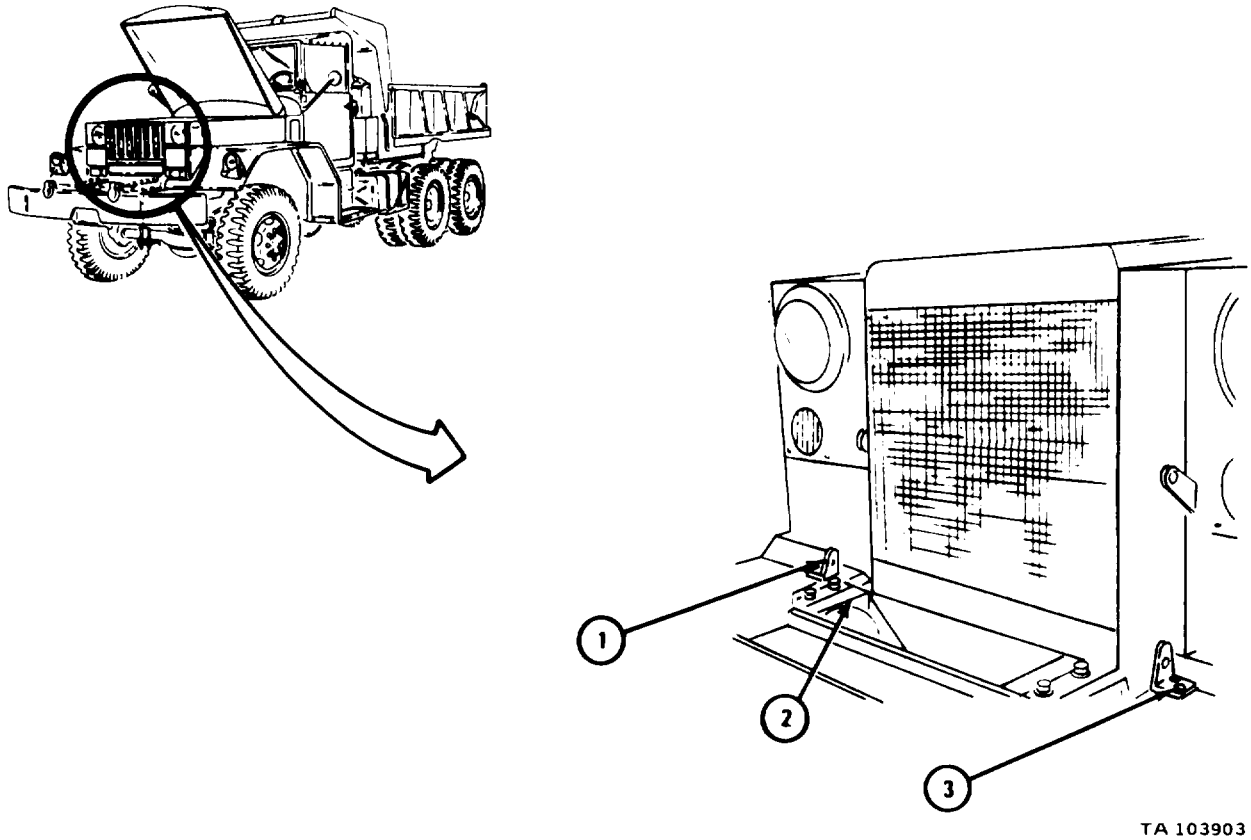
(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

1. Aline left angle bracket (1) with frame (2) and put in two bolts (3). Refer to TB 9-2300-247-40.
2. Do step 1 for right angle bracket.

GO TO FRAME 2



FRAME 2

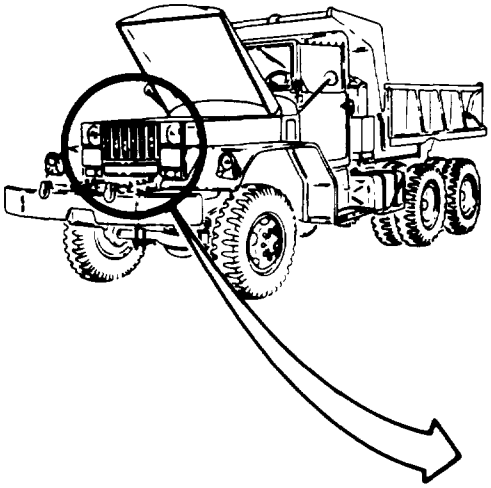
1. Position brushguard (1) on front of truck as shown.
2. Screw in and tighten two mounting nuts (2) and bolts (3).
3. Screw in and tighten two brace nuts (4) and bolts (5).

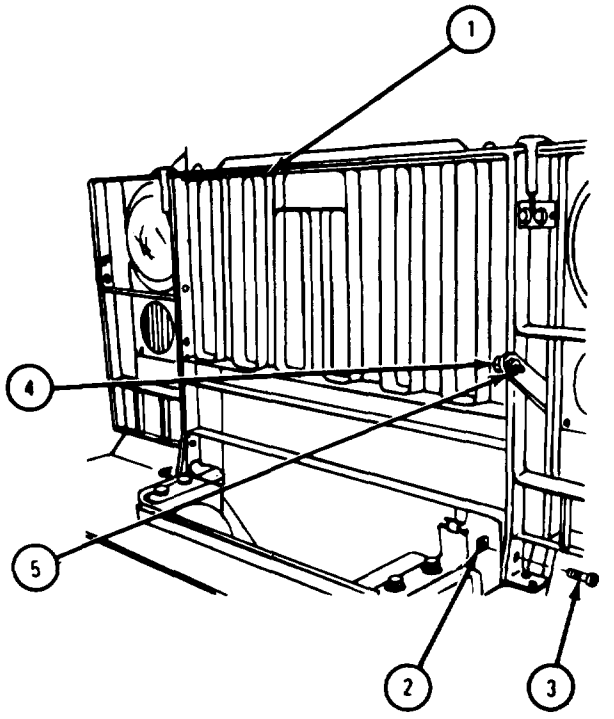
NOTE

Follow-on Maintenance Action Required:

Close hood. Refer to TM 9-2320-211-10.

END OF TASK





TA 103904

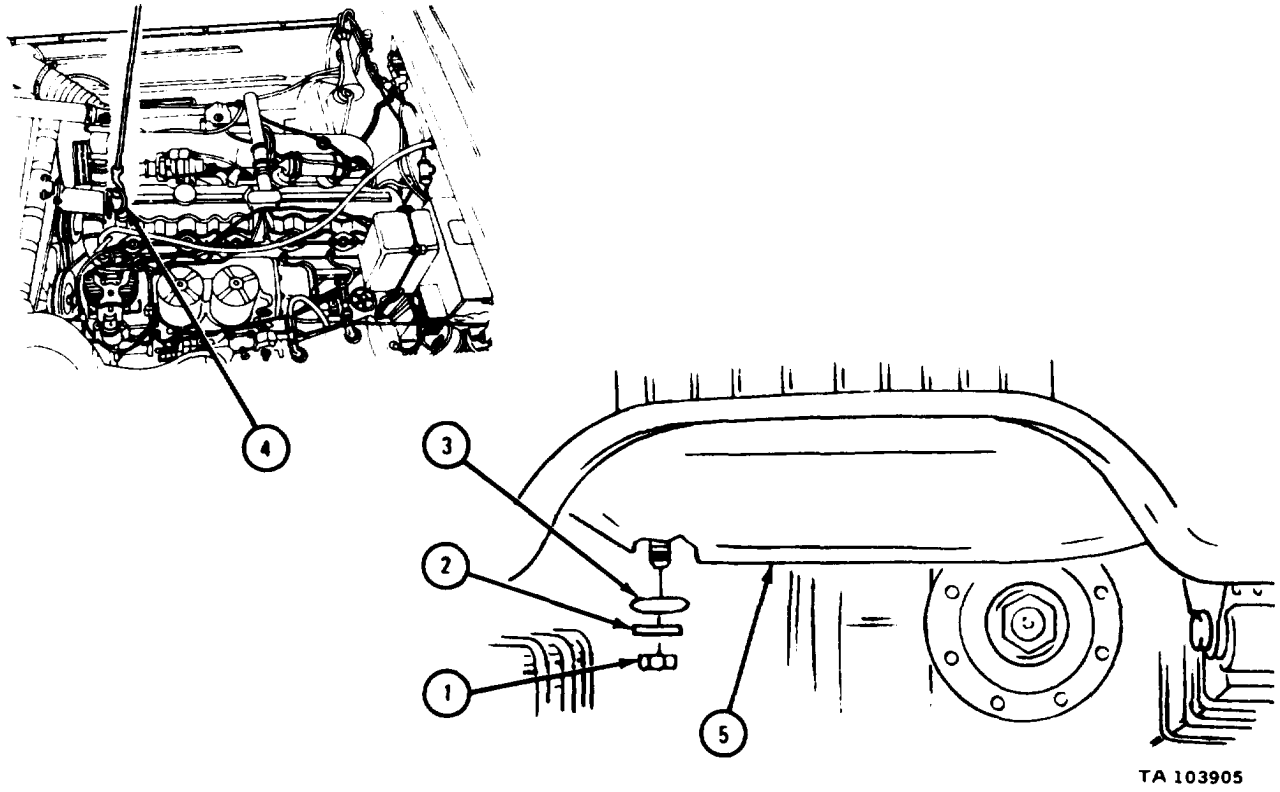
b. Radiator Crossmember and Engine Support Bracket.

(1) Removal.

FRAME 1

1. Unscrew two mounting nuts (1) and take off nuts, two washers (2), and two rubber mounts (3).
2. Using hoist, put hook through front engine hoist bracket (4) and raise engine up to clear radiator crossmember and engine support bracket (5).

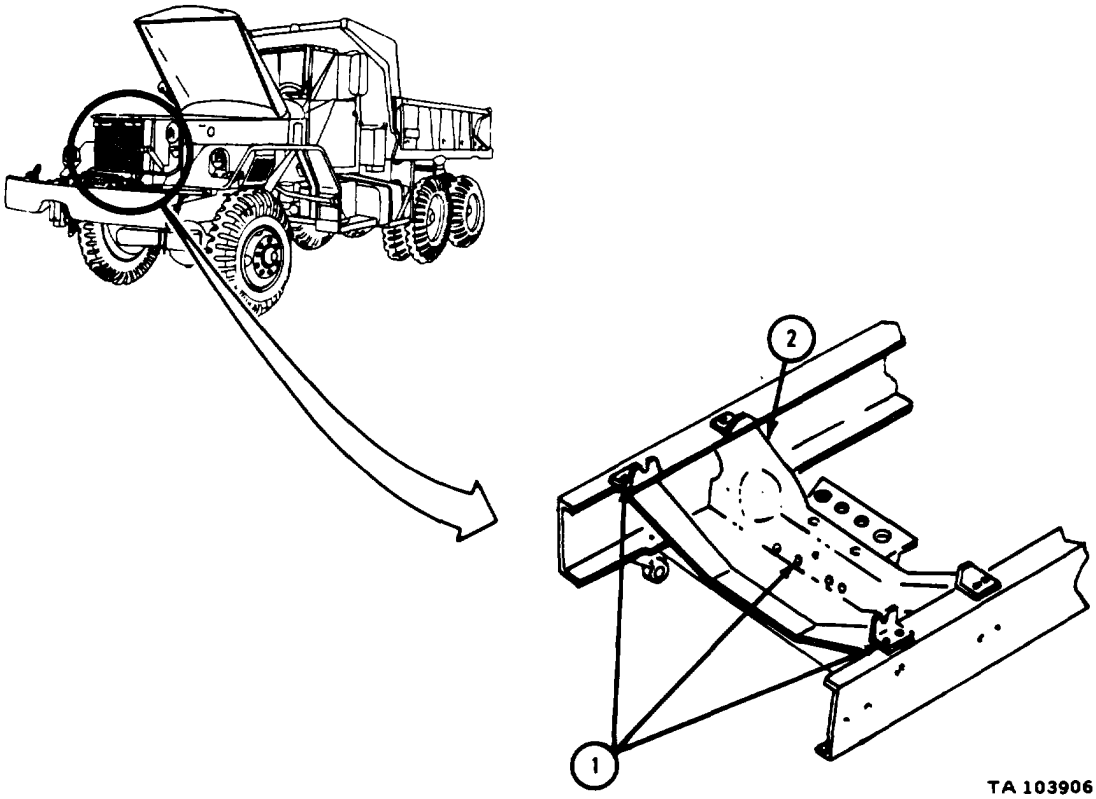
GO TO FRAME 2



FRAME 2

1. Using center punch and drill, take out seventeen rivets (1) from radiator crossmember and engine support bracket (2).
2. Take radiator crossmember and engine support bracket (2) out of truck.

END OF TASK



(2) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(3) Inspection and Repair.

(a) Check brackets, supports, and crossmember for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

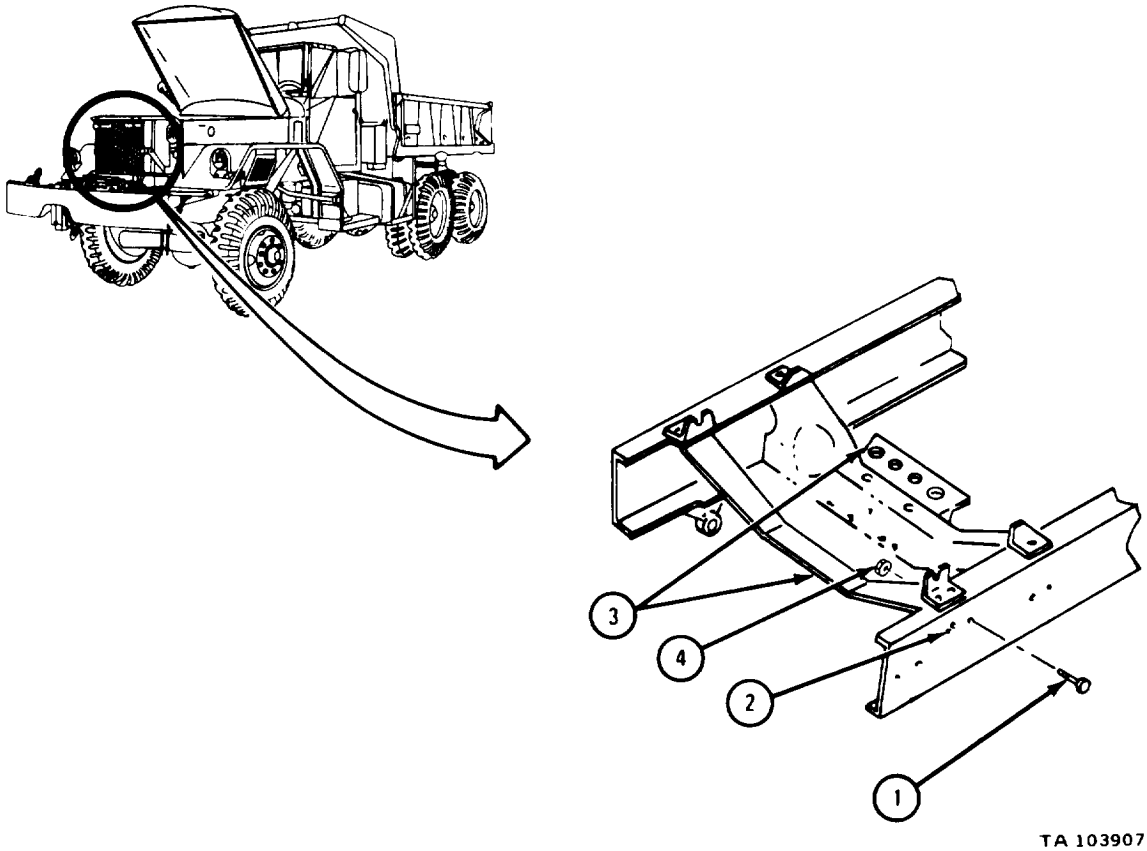
(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(4) Replacement.

FRAME 1

1. Aline seventeen bolts (1) with holes (2) on radiator crossmember and engine support bracket (3). Refer to TB 9-2300-247-40.
2. Put in seventeen bolts (1) and nuts (4).

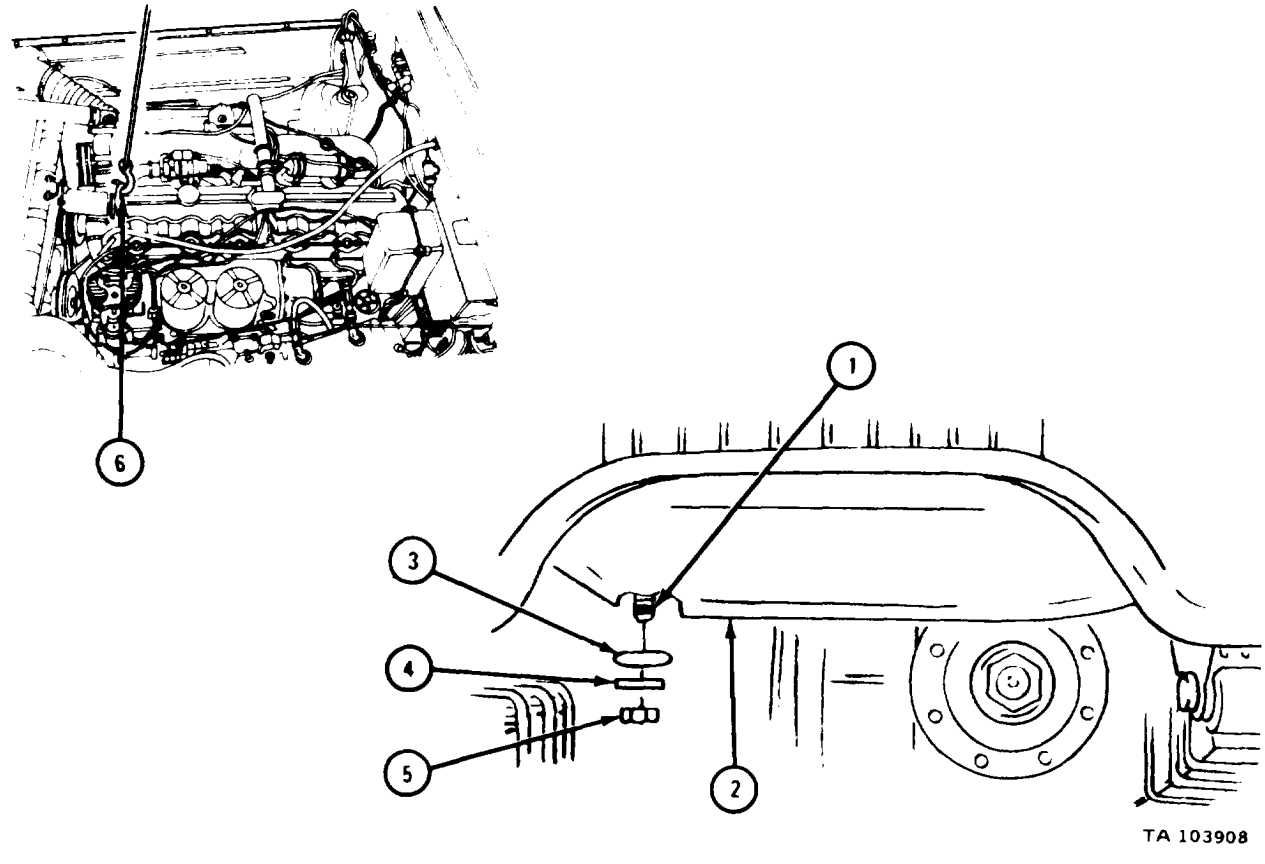
GO TO FRAME 2



FRAME 2

1. Aline radiator mounting bolts (1) with engine support bracket (2).
2. Put on two rubber mounts (3), two washers (4) and two nuts (5).
3. Lower hoist and take off from engine hoist bracket (6).

END OF TASK



c. Right and Left Front Spring Hangers.

NOTE

This procedure is the same for the left and right sides.

(1) Preliminary procedure. Lower front or rear spring eye. Refer to TM 9-2320-211-20.

(2) Removal.

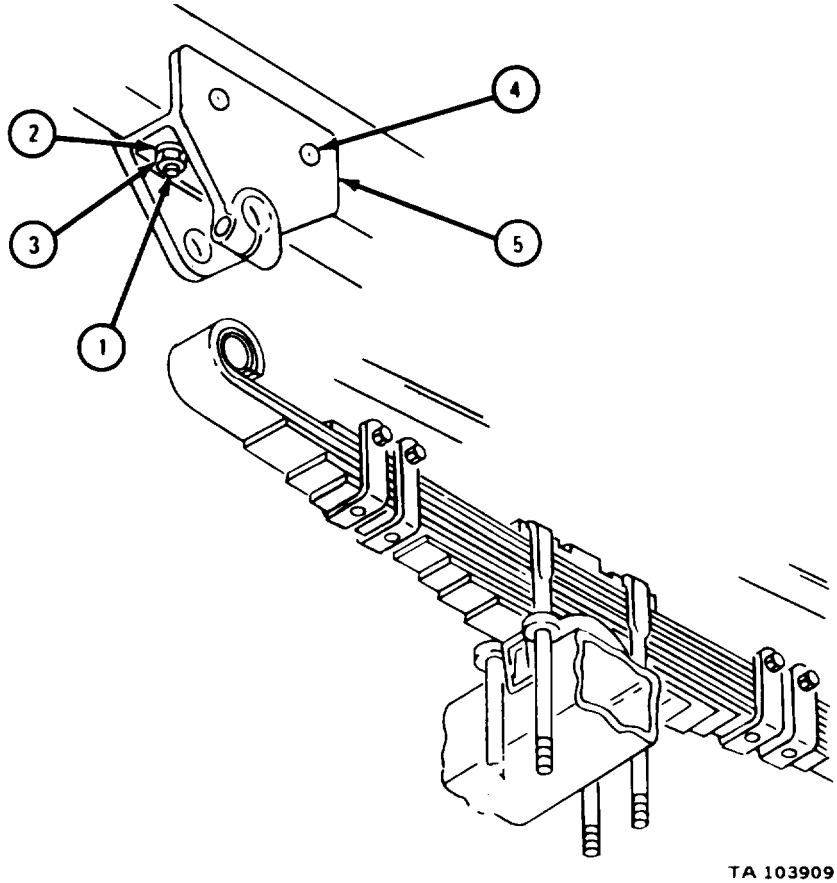
FRAME 1

NOTE

This procedure is typical for two front and two rear spring hangers.

1. Take out two screws (1), two washers (2), and two nuts (3).
2. Using center punch and drill, take out two rivets (4) from spring hanger (5).

END OF TASK



(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in para 1-3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

NOTE

This procedure is the same for the left and right sides of truck frame.

FRAME 1

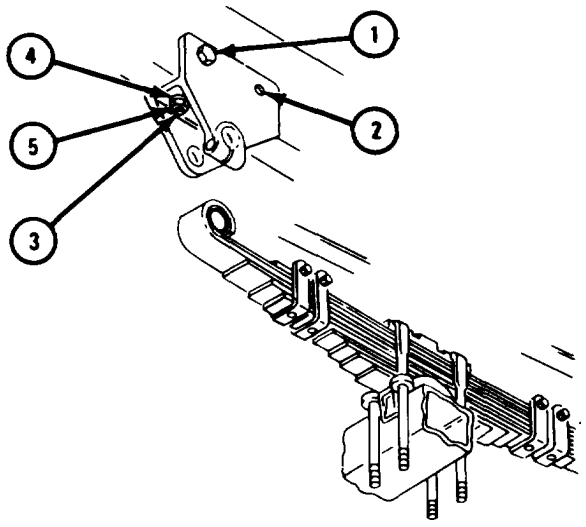
1. Aline and put in two bolts and nuts (1) into holes (2). Refer to TB 9-2300-247-40.
2. Put in two bolts (3), two washers (4), and two nuts (5).

NOTE

Follow-on Maintenance Action Required:

Install lower front or rear spring eye. Refer to TM 9-2320-211-20.

END OF TASK



TA 103910

d. Steering Gear Bracket.

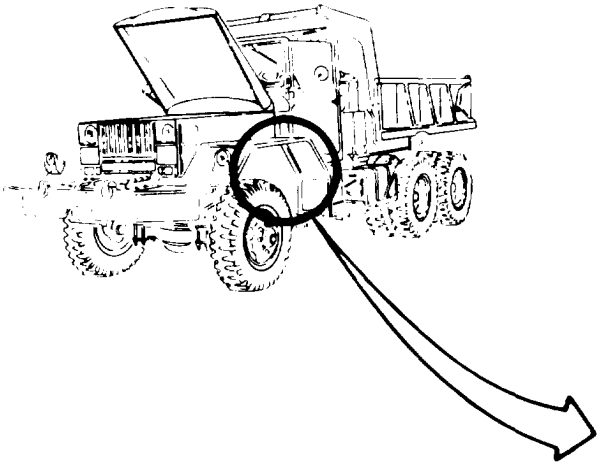
(1) Preliminary procedure. Remove steering gear assembly. Refer to para 13-5.

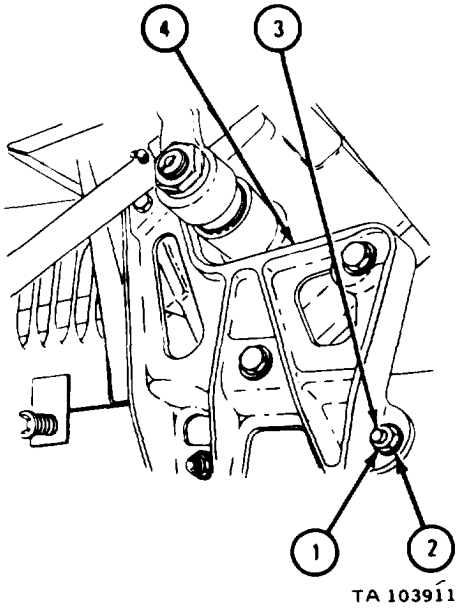
(2) Removal.

FRAME 1

1. Take off four nuts (1), four washers (2) and four bolts (3) from steering gear bracket (4).
2. Take steering gear bracket (4) off truck.

END OF TASK





TA 103911

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

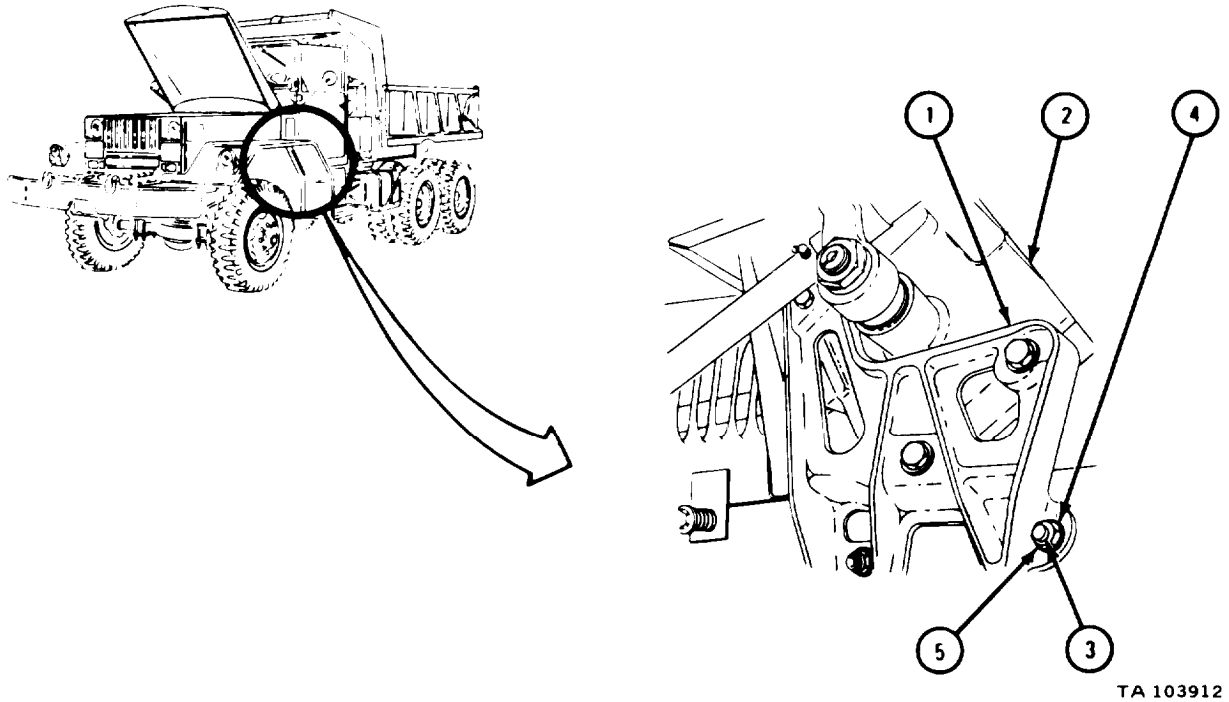
1. Aline steering gear bracket (1) with frame (2).
2. Put in four bolts (3), four washers (4) and four nuts (5).

NOTE

Follow-on Maintenance Action Required:

Install steering gear. Refer to para 13-5.

END OF TASK



e. Rear Engine Support Brackets.

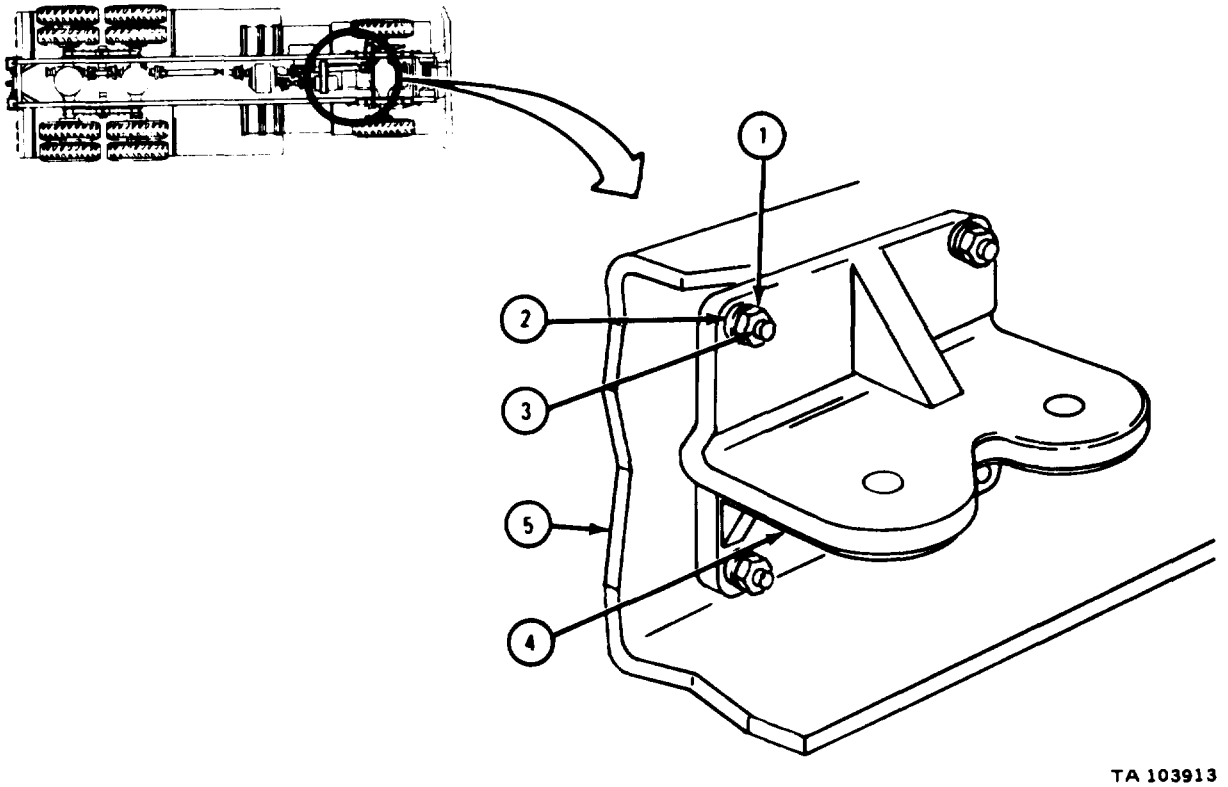
(1) Preliminary procedure. Remove rear engine support brackets. Refer to Part 1, para 2-4.

(2) Removal.

FRAME 1

1. Take off four nuts (1), four washers (2), and four bolts (3), from right support bracket (4) to frame (5).
2. Do step 1 for left support bracket.
3. Take support brackets (4) off vehicle frame.

END OF TASK



TA 103913

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

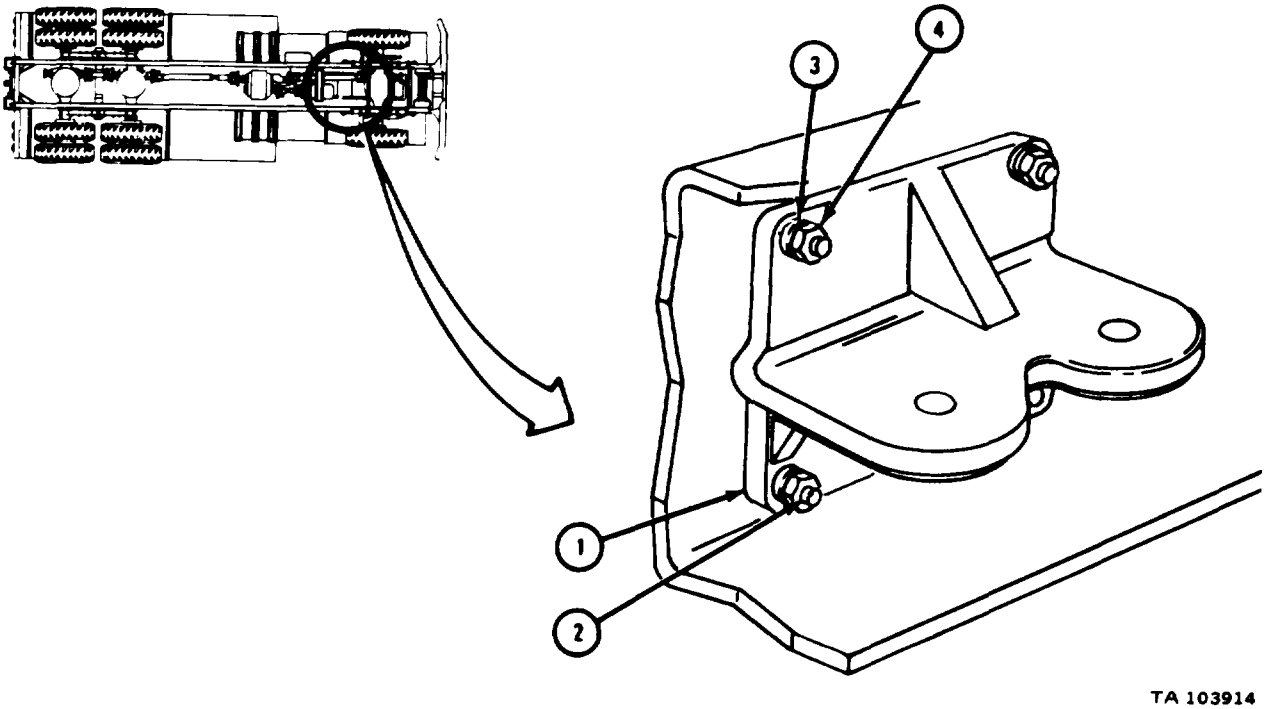
1. Aline right rear engine support bracket and frame holes (1).
2. Put in four bolts (2), four washers (3), and four nuts (4).
3. Do steps 1 and 2 for left support bracket.

NOTE

Follow-on Maintenance Action Required:

Install rear engine support brackets. Refer to para 2-4.

END OF TASK



TA 103914

f. Left and Right Cab Mounting Bracket.

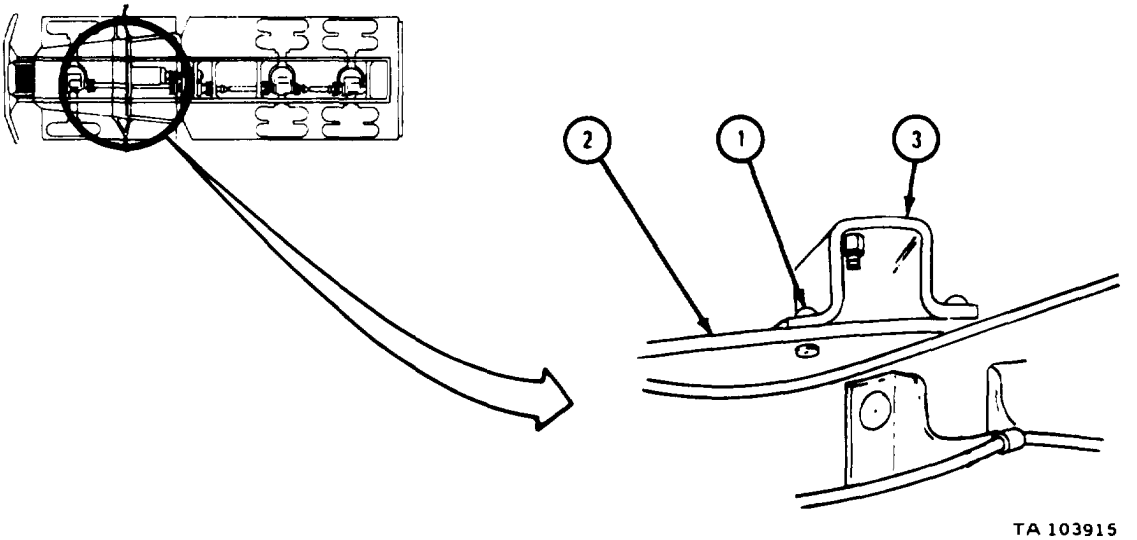
(1) Preliminary procedure. For removal of cab assembly, refer to para 16-7.

(2) Removal.

FRAME 1

1. Using a center punch and drill, take out two rivets (1) from one side of frame (2).
2. Do step 1 for the other side.
3. Take two cab mounting brackets (3) off vehicle.

END OF TASK



TA 103915

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets and hinges for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

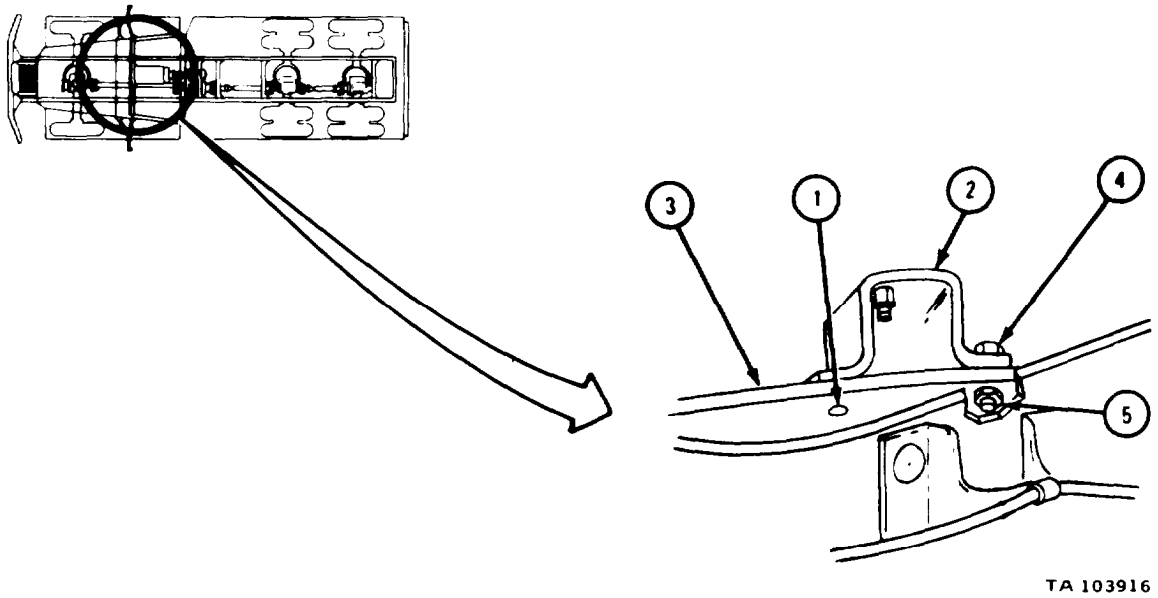
1. A line two holes (1) on cab mounting bracket (2) with frame (3).
2. Put in two bolts (4) and nuts (5).
3. Do steps 1 and 2 for the other side of frame.

NOTE

Follow-on Maintenance Action Required:

Replace cab assembly. Refer to para 16-7.

END OF TASK



TA 103916

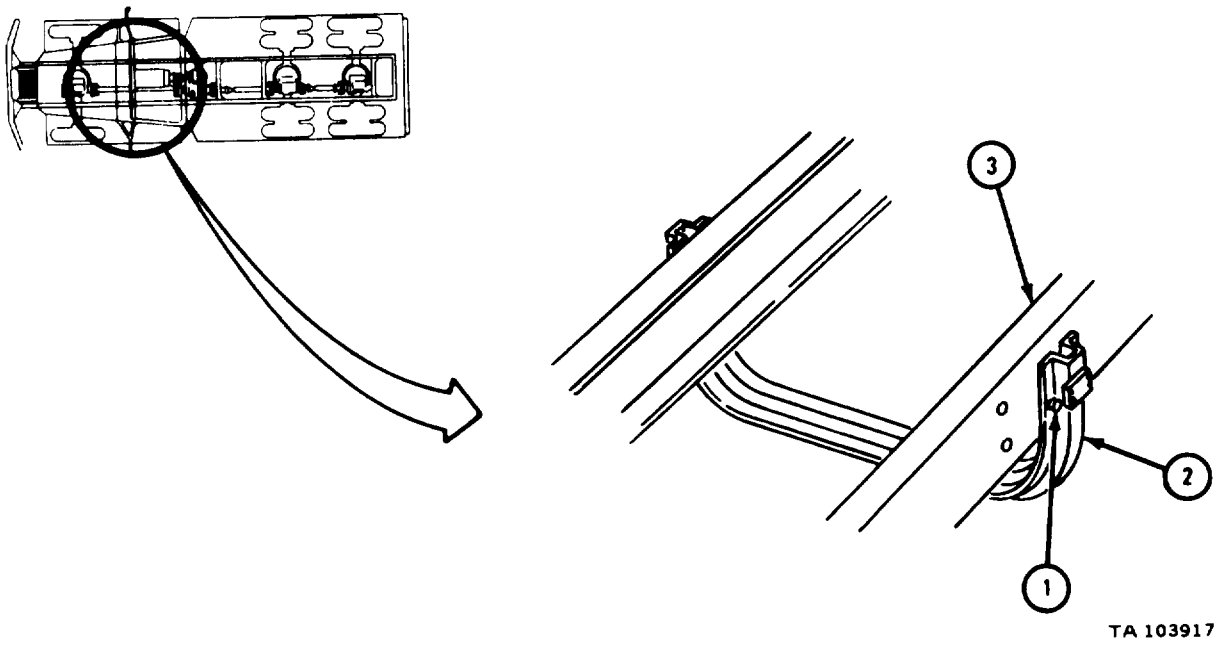
g. Crossmember.

(1) Removal.

FRAME 1

1. Using a center punch and drill, take out four rivets (1) from crossmember (2) and frame (3).
2. Do step 1 for the other side.
3. Take crossmember off truck frame.

END OF TASK



(2) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(3) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

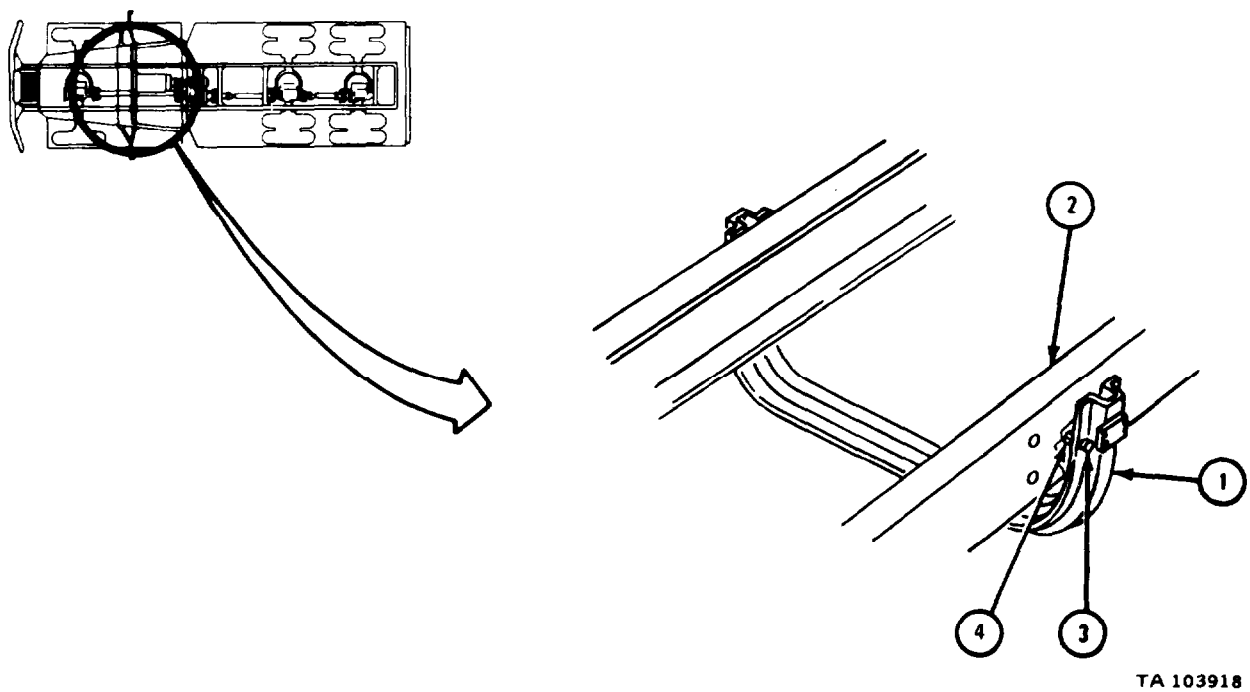
(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(4) Replacement.

FRAME 1

1. Aline crossmember (1) with frame (2).
2. Put in four bolts (3) and nuts (4).
3. Do step 2 for the other side. Refer to TB 9-2300-247-40.

END OF TASK



h. Transfer Case Support.

(1) Removal. For removal of transfer case support, refer to Part 1, para 8-6.

(2) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(3) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(4) Replacement. For replacement of transfer case support refer to Part 1, para 8-6.

i. Rear of Transfer Frame Crossmember.

(1) Preliminary procedures.

(a) Take off truck body from truck frame on trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

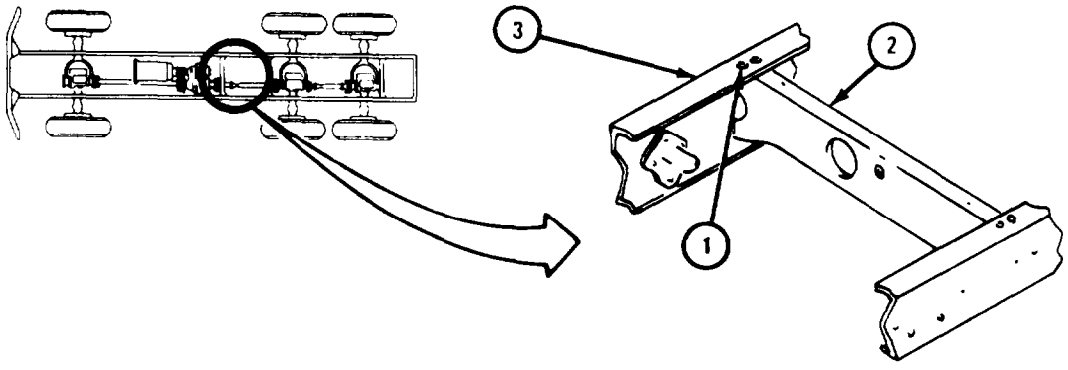
(b) Take off transfer linkage. Refer to Part 1, paras 8-7 and 8-8.

(2) Removal.

FRAME 1

1. Using a center punch and drill take out four rivets (1) from rear of transfer crossmember (2) and frame (3).
2. Do step 1 for other side.
3. Take rear of transfer crossmember off truck frame.

END OF TASK



TA 103919

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1–3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

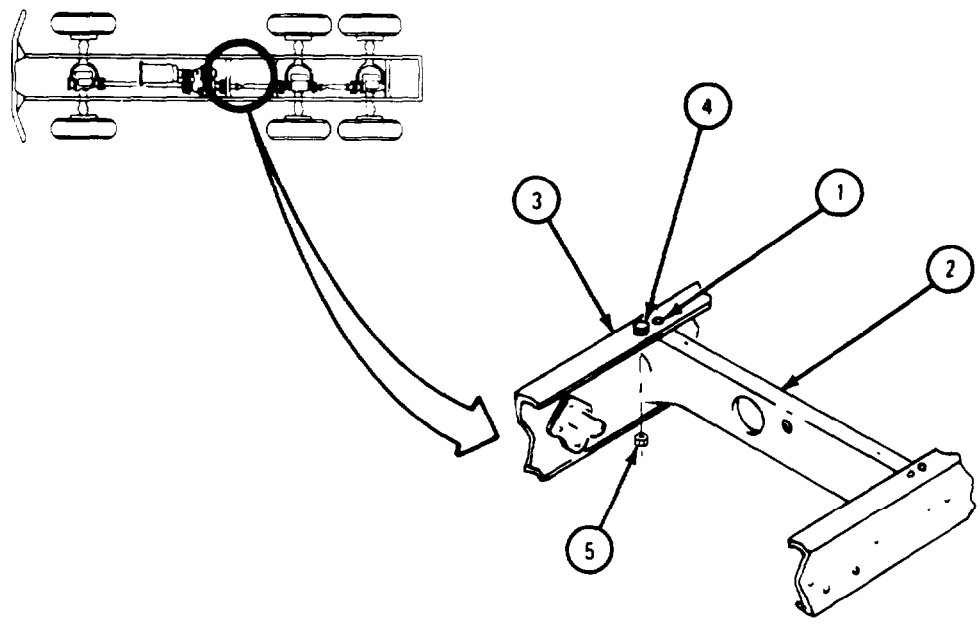
1. Aline holes (1) of rear transfer crossmember (2) with frame (3).
2. Put in four bolts (4) and nuts (5). Refer to TB 9-2300-247-40.
3. Do step 2 for other side.

NOTE

Follow-on Maintenance Action Required:

1. Install transfer linkage. Refer to Part 1, paras 8-7 and 8-8.
2. Install truck body to frame in trucks M5142, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

END OF TASK



TA 103920

j. Transfer Rear Support Crossmember Frame.

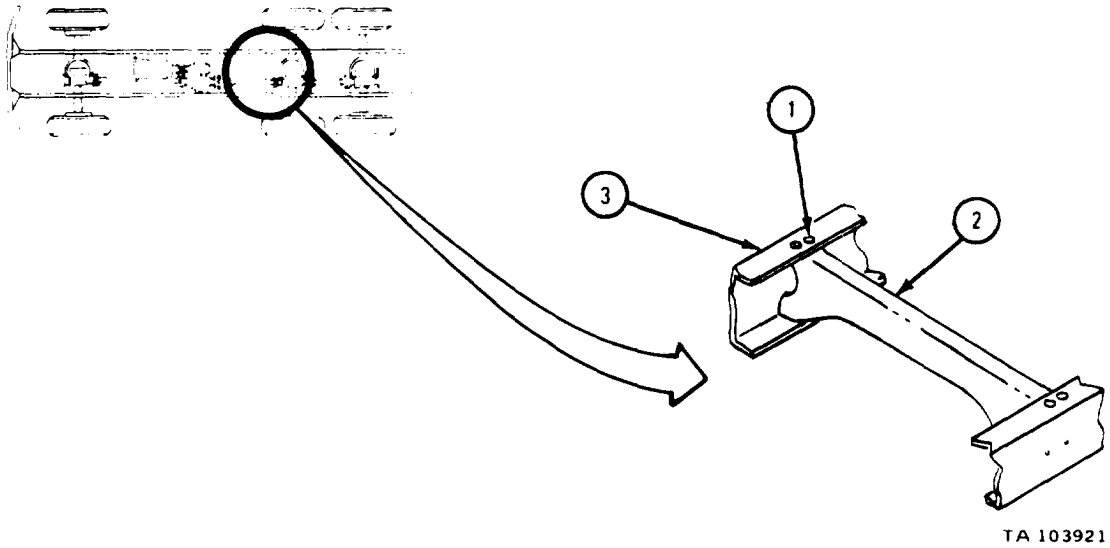
(1) Preliminary procedures. Take off truck body from frames on trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

(2) Removal.

FRAME 1

1. Using center punch and drill, take out four rivets (1) from crossmember frame (2).
2. Do step 1 for other side.
3. Take crossmember frame off truck frame (3).

END OF TASK



(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

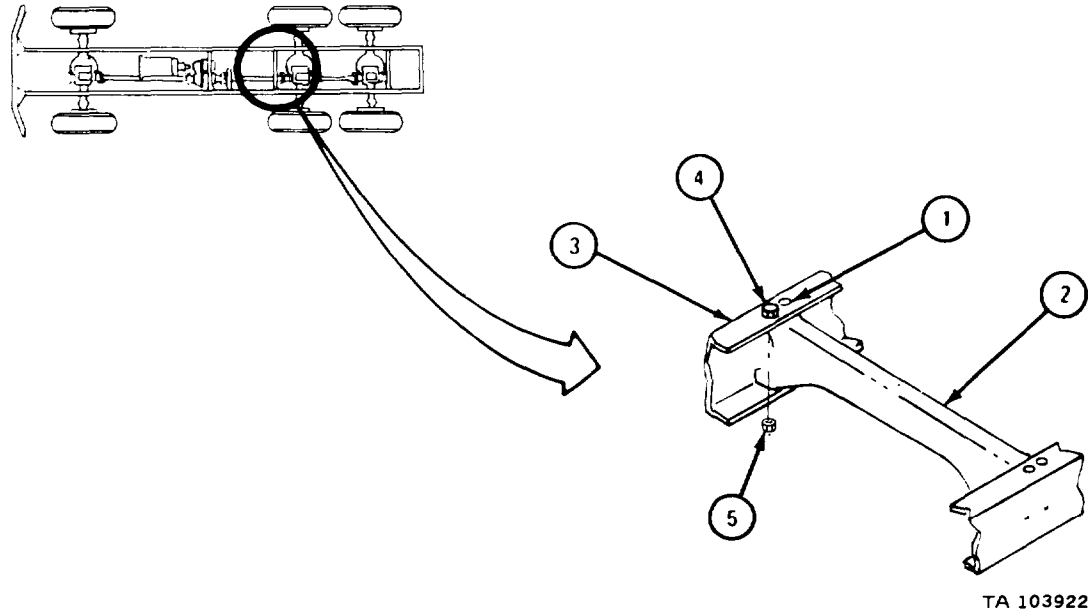
1. Aline holes (1) of crossmember frame support (2) with frame (3).
2. Put in four bolts (4) and nuts (5). Refer to TB 9-2300-247-40.
3. Do step 2 for other side.

NOTE

Follow-on Maintenance Action Required:

Install truck body on frame in trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

END OF TASK



k. Rear Axle Bogie Support Bracket.

(1) Removal. For removal of rear axle bogie support brackets refer to para 15-10.

(2) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(3) Inspection and Repair.

(a) Check brackets, braces, supports and cross members for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(4) Replacement, For replacement of rear axle bogie support brackets refer to para 15-10.

1. Crossmember Frame.

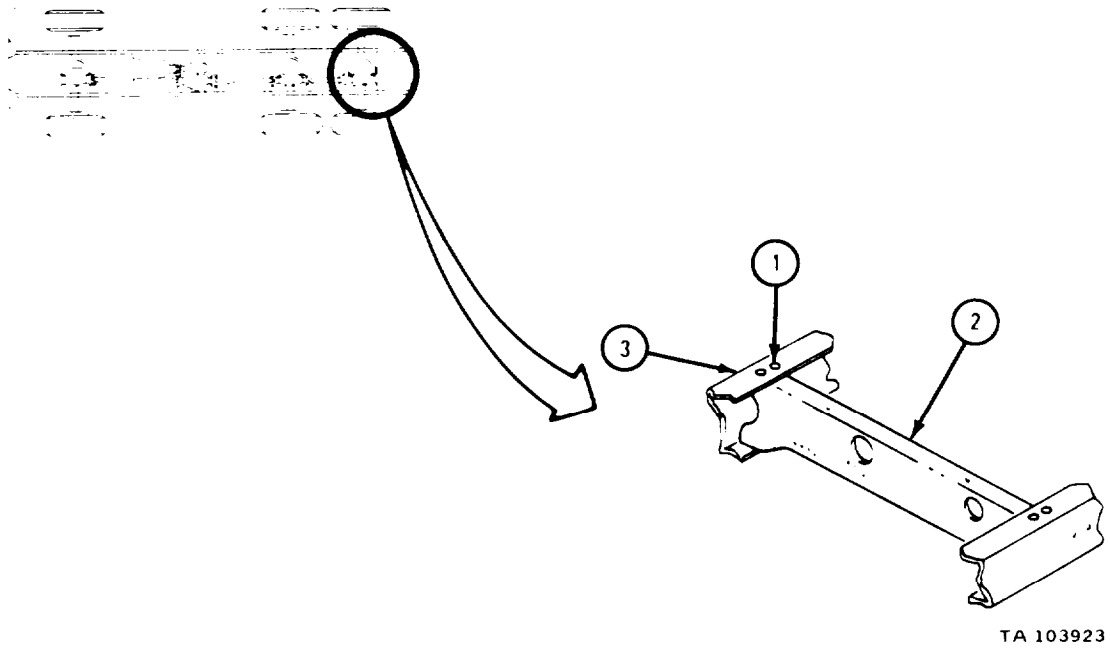
(1) Preliminary procedures. Take off truck body from truck frame in trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

(2) Removal.

FRAME 1

1. Using center punch and drill, take out four rivets (1) from frame crossmember (2) and frame (3).
2. Do step 1 for other side.
3. Take frame crossmember (2) off truck.

END OF TASK



TA 103923

(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

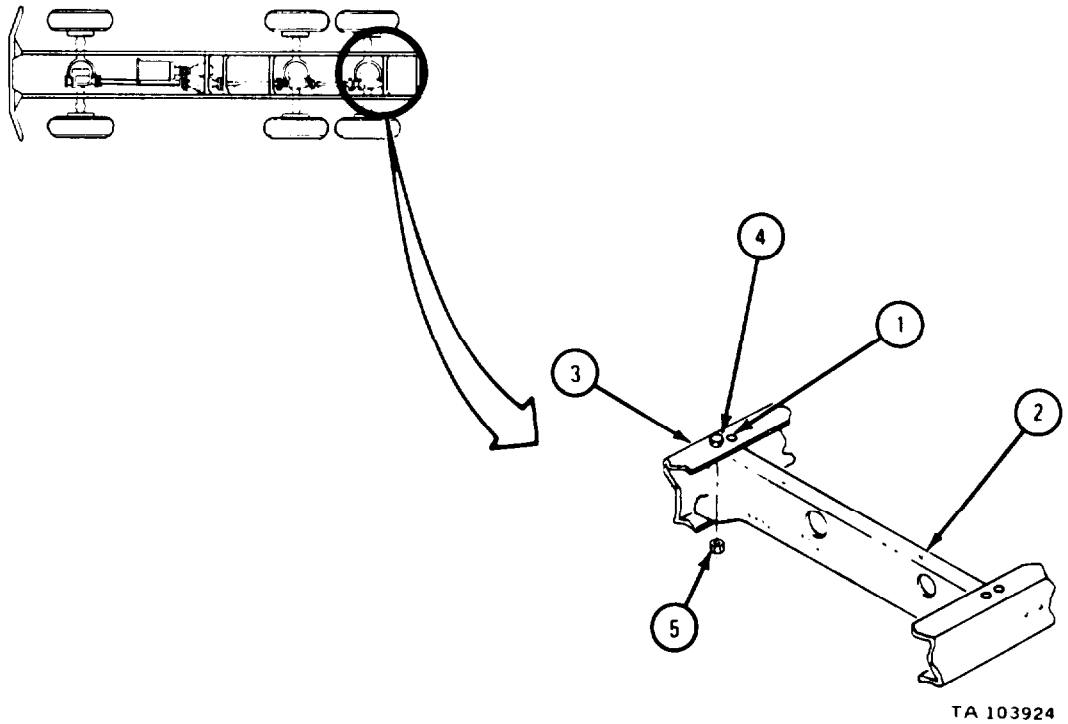
1. Aline holes (1) of crossmember frame (2) with frame (3).
2. Put in four bolts (4) and nuts (5). Refer to TB 9-2300-247-40.
3. Do step 2 for other side.

NOTE

Follow-on Maintenance Action Required:

Install truck body on frame, in trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

END OF TASK



m. Rear Crossmember Frame.

(1) Preliminary procedures.

(a) Remove truck body from truck frame in trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

(b) Remove pintle hook from truck frame. Refer to TM 9-2320-211-20.

(c) Remove two lifting shackles from truck frame. Refer to TM 9-2320-211-20.

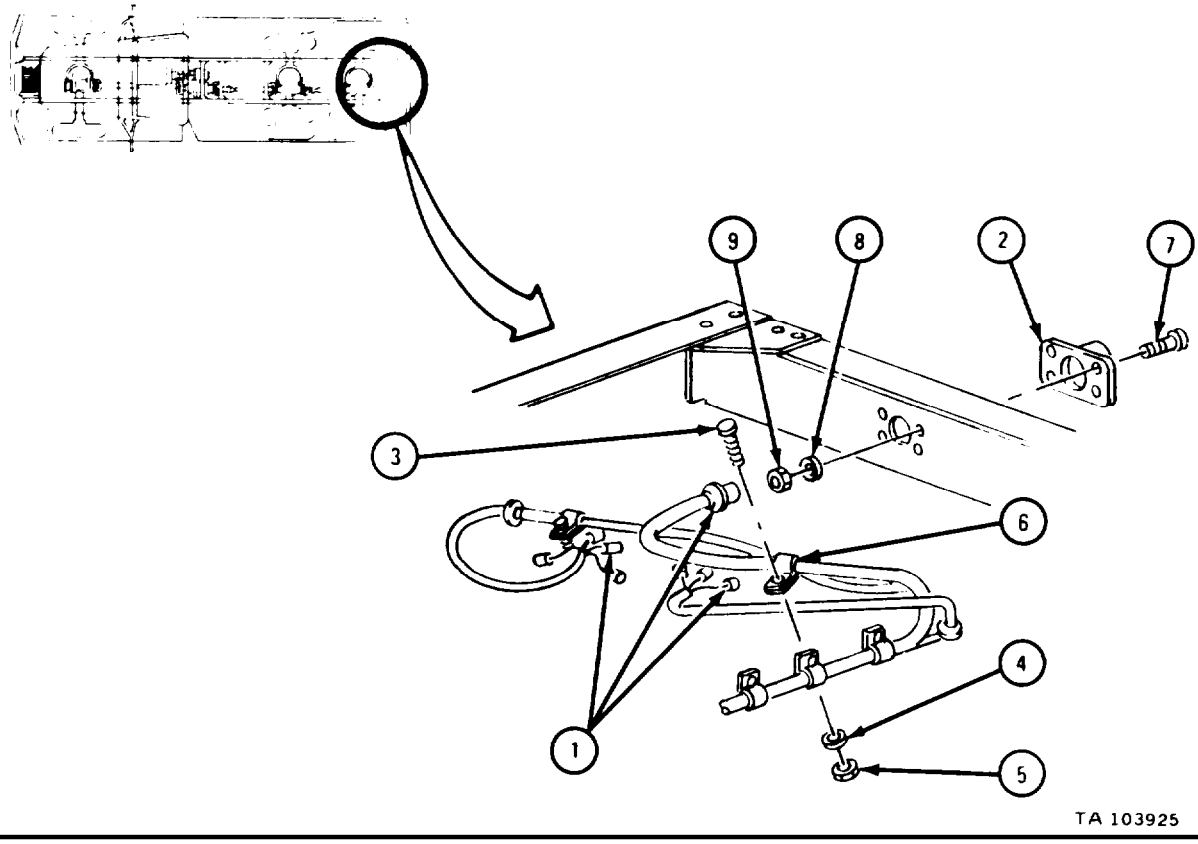
(d) Remove two rubber bumpers from truck frame. Refer to TM 9-2320-211-20.

(2) Removal.

FRAME 1

1. Disconnect harness leads (1) from trailer receptacle, right and left taillights, and stop lights (2).
2. Take out two screws (3), washers (4), nuts (5) and clamps (6).
3. Take out four screws (7) washers (8) and nuts (9) from trailer electrical receptacle (2). Take out electrical receptacle (2).

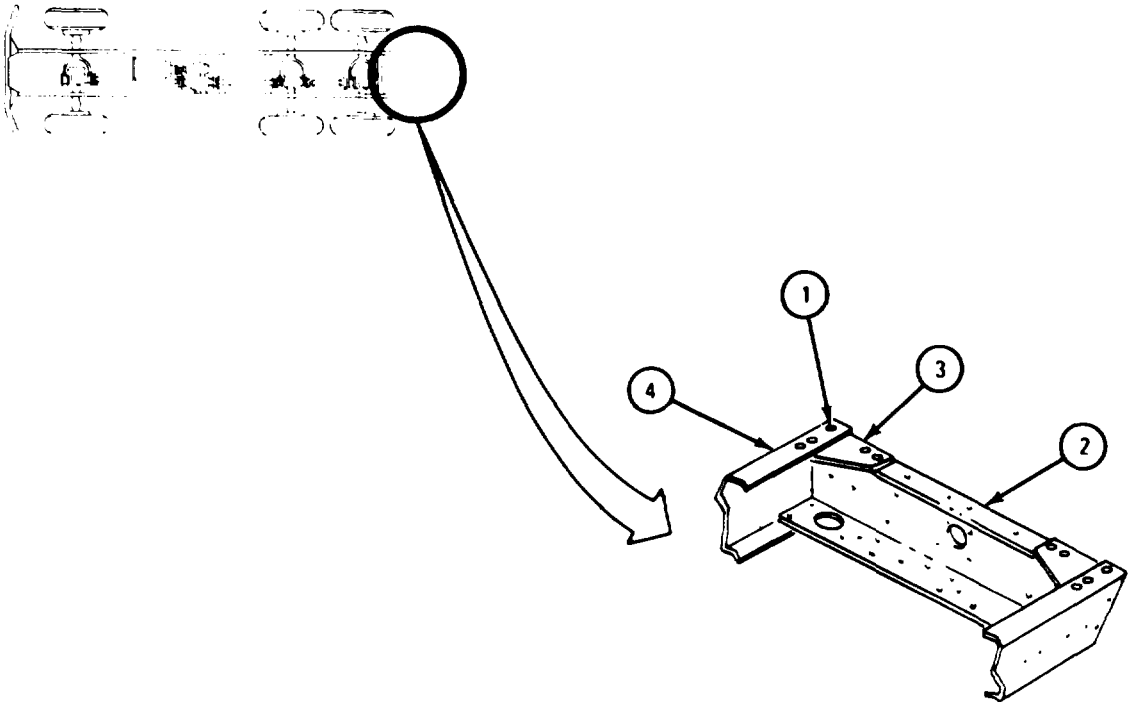
GO TO FRAME 2



FRAME 2

1. Using center punch and drill, take out eight rivets (1) from rear frame crossmember (2), plate (3) and frame (4).
2. Do step 1 for other side.
3. Take rear frame crossmember (2) off truck.

END OF TASK



(3) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(4) Inspection and Repair.

(a) Check brackets and crossmember for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

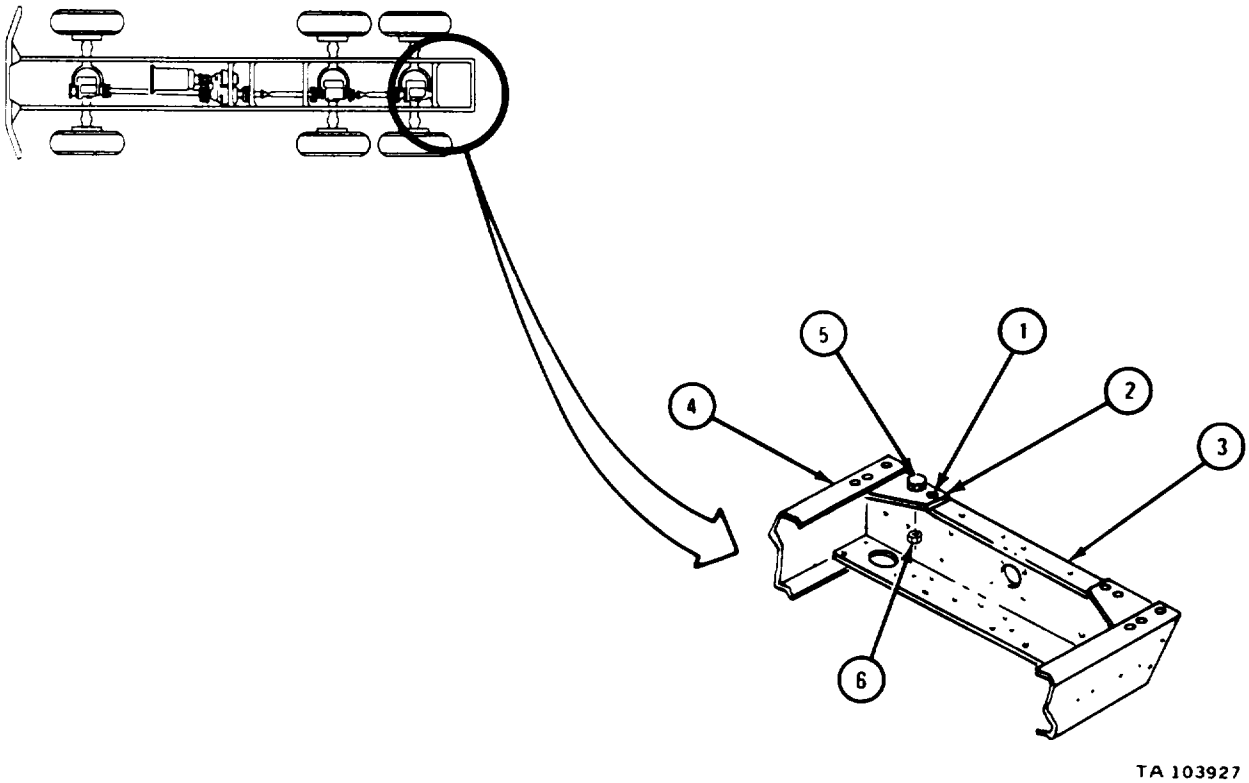
(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(5) Replacement.

FRAME 1

1. Aline holes (1) from plate (2) and rear frame crossmember (3) with frame (4).
2. Put in eight bolts (5) and nuts (6). Refer to TB 9-2300-247-40.
3. Do steps 1 and 2 for other side.

GO TO FRAME 2



FRAME 2

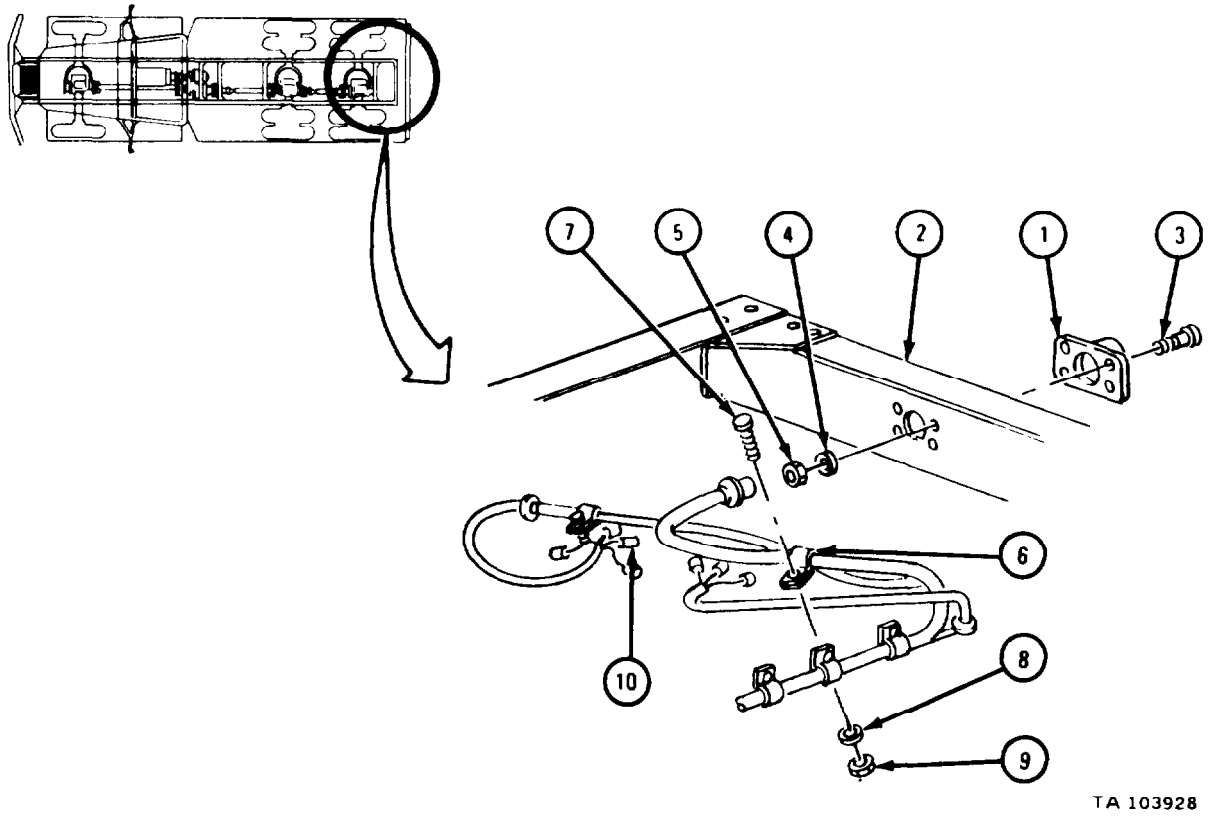
1. Aline trailer electrical receptacle (1) with frame (2).
2. Put in four screws (3), four washers (4), and four nuts (5).
3. Put on two clamps (6), two screws (7), two washers (8), and two nuts (9).
4. Reconnect harness leads to trailer electrical receptacle and right and left taillights (10).

NOTE

Follow-on Maintenance Action Required:

1. Install two rubber bumpers to truck frame. Refer to TM 9-2320-211-20.
2. Install two lifting shackles to truck frame. Refer to TM 9-2320-211-20.
3. Install pintle hook to truck frame. Refer to TM 9-2320-211-20.
4. Install truck body to truck frame in trucks M51A2, M52A2, M54A2, M54A2C, and M55A2. Refer to paras 16-26, 16-27, and 16-28.

END OF TASK



n. U-Bolts.

(1) Removal.

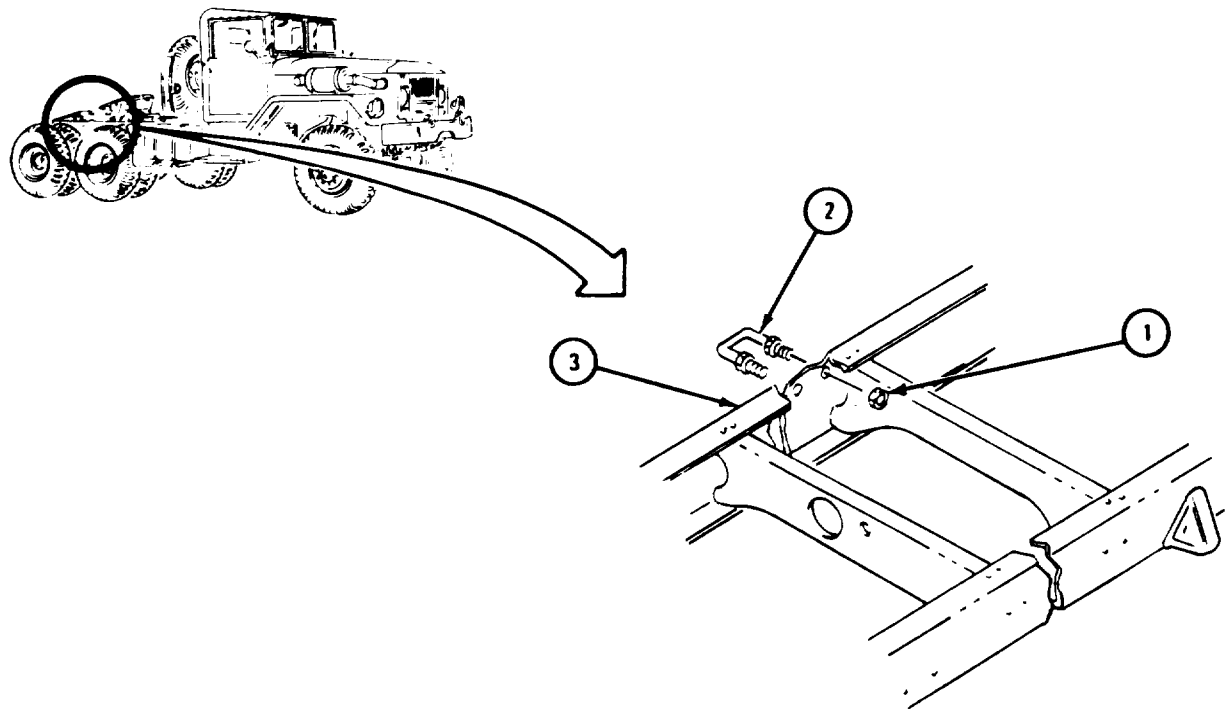
FRAME 1

NOTE

This is typical for sixteen U-bolts.

1. Take off two nuts (1) from U-bolt (2) and frame assembly side rail (3).
2. Take U-bolt (2) from truck frame.

END OF TASK



TA 103929

(2) Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in Part 1, para 1-3.

(3) Inspection and Repair.

(a) Check brackets, braces, supports and crossmembers for cracks, breaks and distortion. Check for loose rivets and screws.

(b) Fix minor damage by straightening or welding. If rivets or screws are missing, get new ones. Refer to TM 9-237.

(c) If brackets, braces, supports and crossmembers have major damage, get new ones.

(4) Replacement.

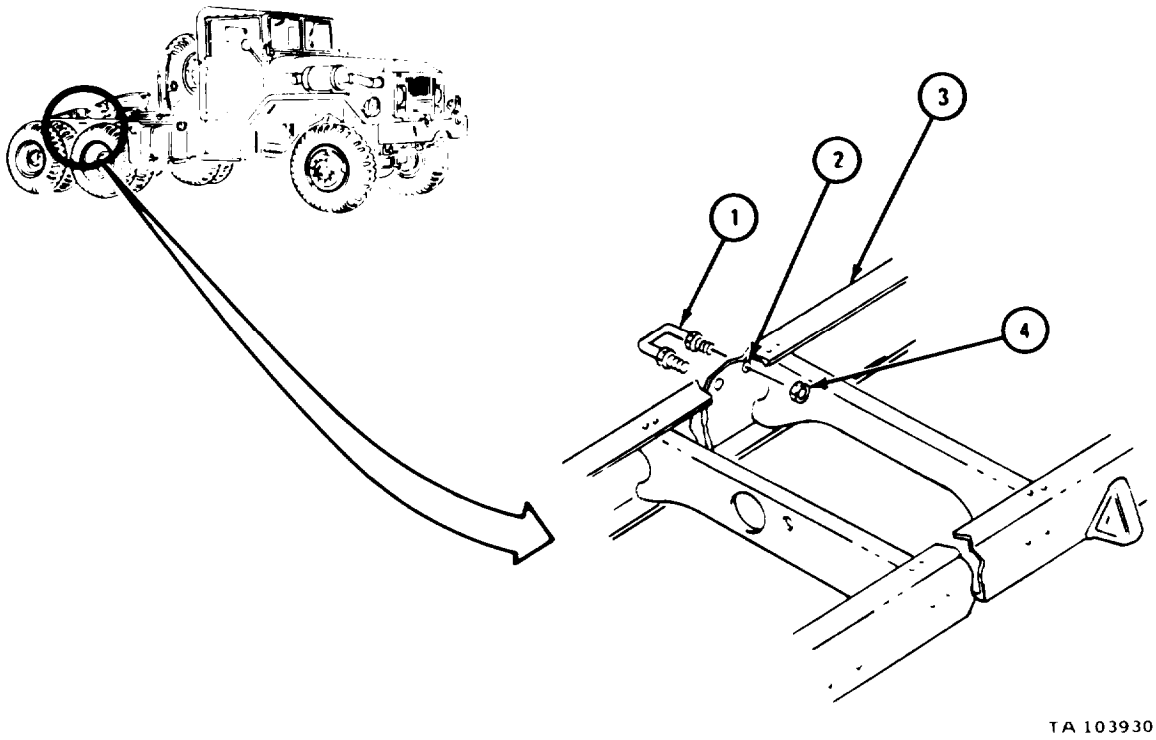
FRAME 1

NOTE

This is typical for sixteen U-bolts.

1. Aline U-bolt (1) to holes (2) in truck frame (3).
2. Put on two nuts (4) and tighten.

END OF TASK



TA 103930

14-5. FRONT BUMPER AND REINFORCING GUSSETS REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required.

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove both lifting shackles and lifting shackle brackets. Refer to TM 9-2320-211-20.

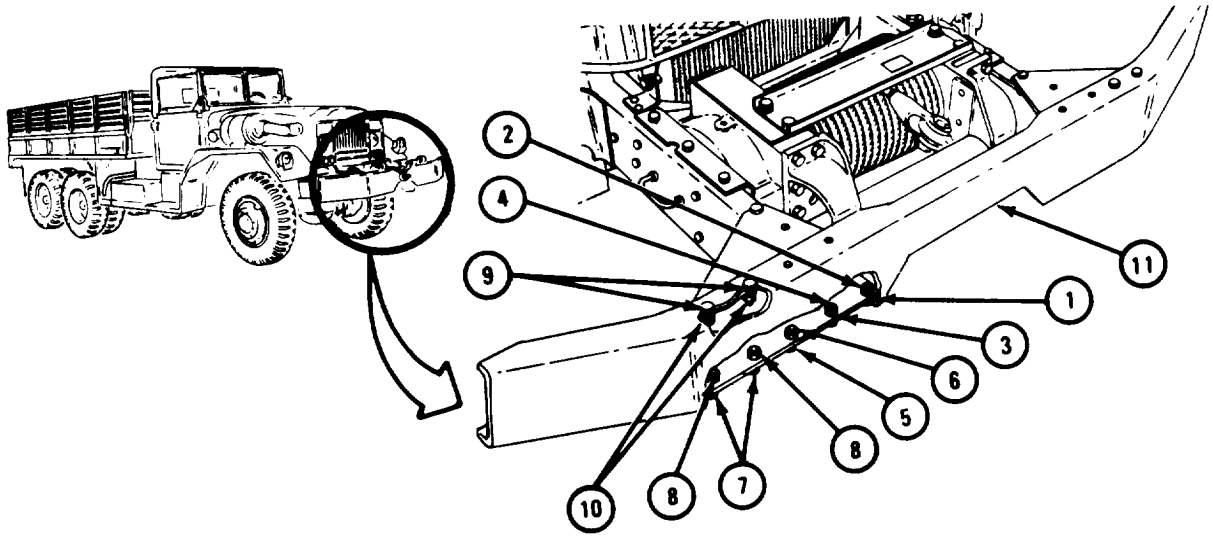
b. Removal.

FRAME 1

1. Take out screw (1) and nut (2).
2. Take out screw (3) and nut (4).
3. Take out screw (5) and nut (6).
4. Take out two screws (7) and nuts (8).
5. Take out two screws (9) and nuts (10).
6. Do steps 1 through 4 again on other side of bumper (11).

Soldiers A and B 7. Take bumper (11) off truck.

GO TO FRAME 2

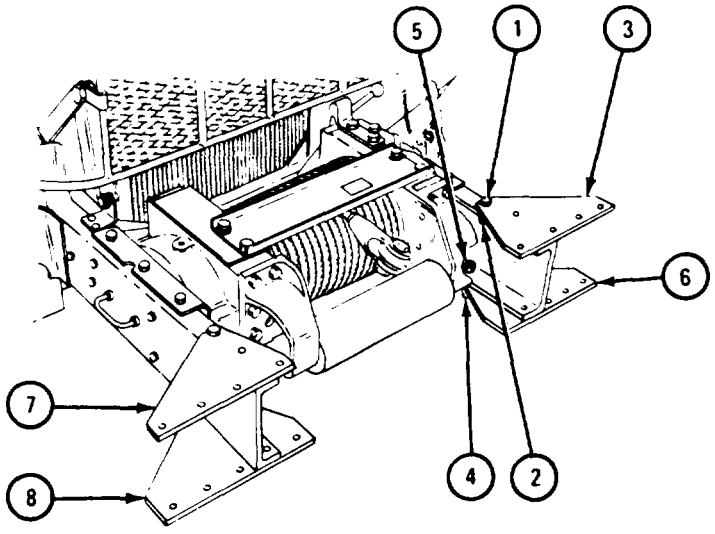


TA 084568

FRAME 2

1. Take out screw (1) and nut (2).
2. Take off upper reinforcing gusset (3).
3. Take out screw (4) and nut (5).
4. Take off lower reinforcing gusset (6).
5. Do steps 1 through 4 again to take off upper reinforcing gusset (7) and lower reinforcing gusset (8).

END OF TASK



TA 084569

c. Cleaning, Inspection, and Repair.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Cleaning. Clean parts in solvent.

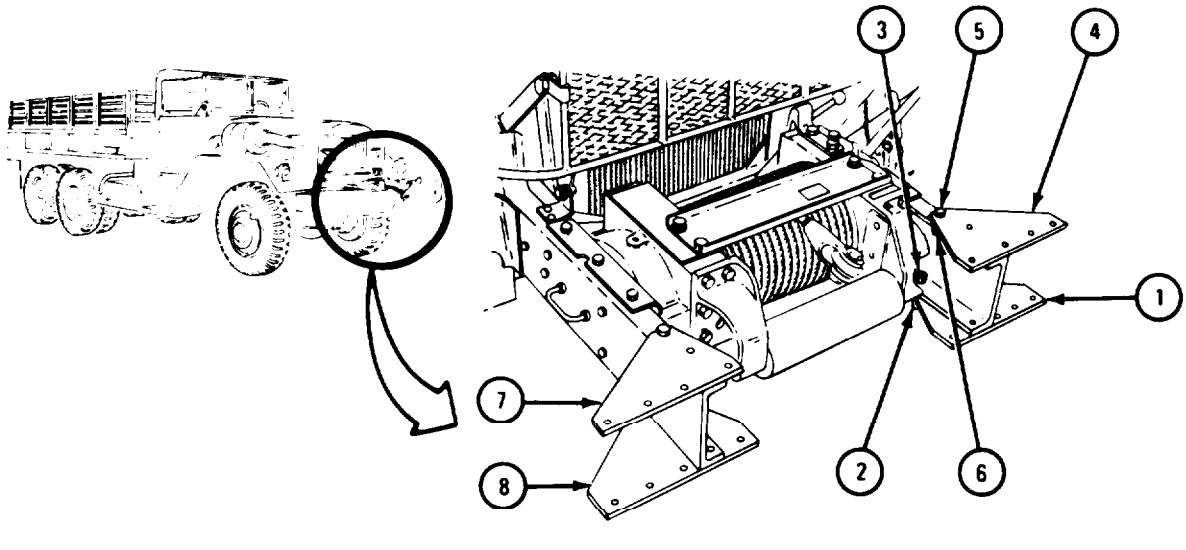
(2) Inspection and Repair. Check that bumper, upper reinforcing gussets, and lower reinforcing gussets are not cracked, broken or bent. Repair by straightening or welding. Refer to TM 9-237.

d. Replacement.

FRAME 1

1. Hold lower reinforcing gusset (1) in place.
2. Put in screw (2) and nut (3).
3. Hold upper reinforcing gusset (4) in place.
4. Put in screw (5) and nut (6).
5. Do steps 1 through 4 again to put on upper reinforcing gusset (7) and lower reinforcing gusset (8).

GO TO FRAME 2



TA 084570

FRAME 2

Soldiers A and B
1. Lift bumper (1) into place and aline all holes in bumper.

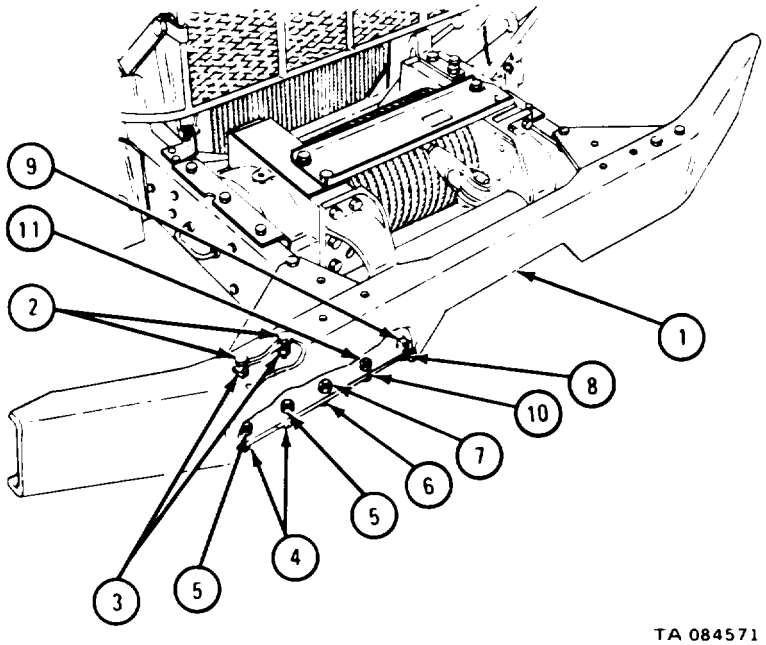
Soldier A
2. Put in two screws (2) and nuts (3).
3. Put in two screws (4) and nuts (5).
4. Put in screw (6) and nut (7).
5. Put in screw (8) and nut (9).
6. Put in screw (10) and nut (11).
7. Do steps 1 through 6 again on other side of bumper (1).
8. Tighten all nuts and screws to 62 to 68 pound-feet.

NOTE

Follow-on Maintenance Action Required:

Replace both lifting shackle brackets and lifting shackles. Refer to TM 9-2320-211-20.

END OF TASK



TA 084571

14-6. REAR BUMPER BUMPERETTE REMOVAL, REPAIR, AND REPLACEMENT (TRUCKS M54A2 and M54A2C).

NOTE

This task is the same for the right and left rear bumper bumperettes. This task is shown for the left rear bumper bumperette.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

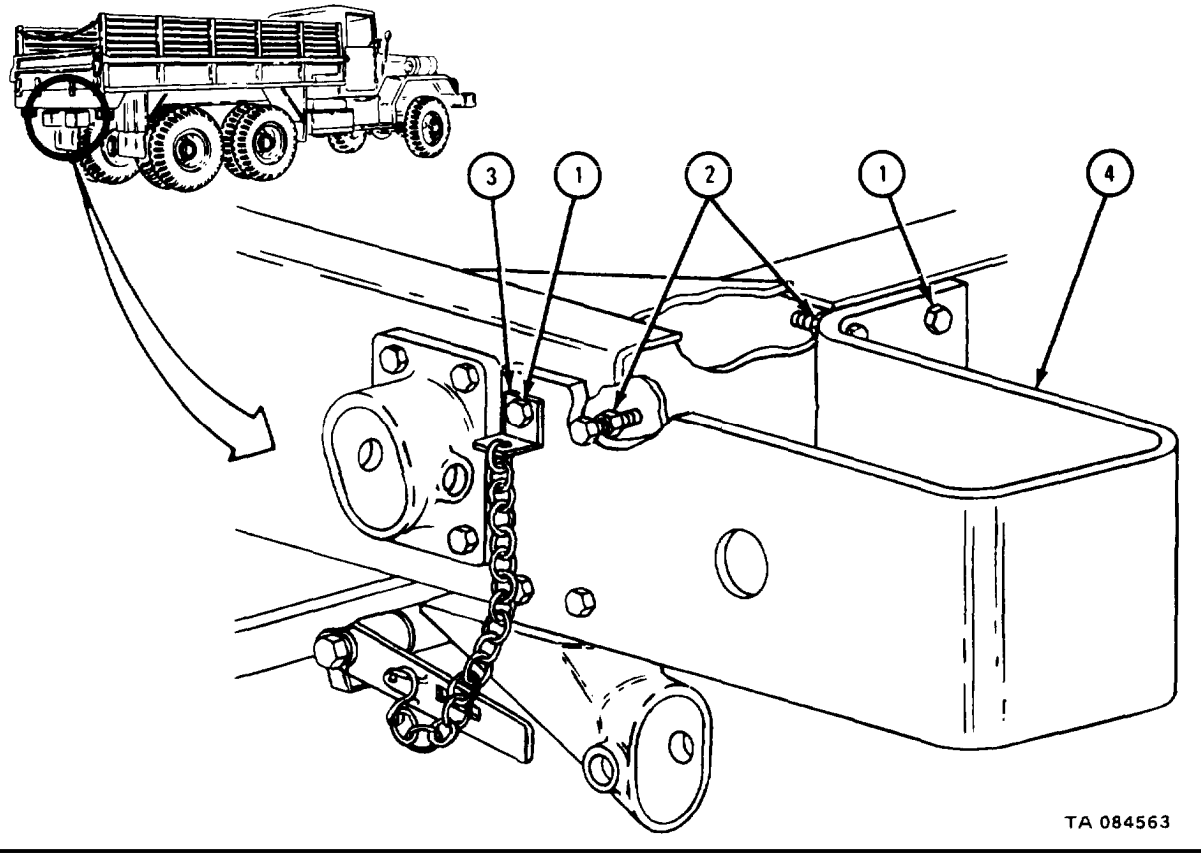
Preliminary Procedure. Remove auxiliary airline couplings. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

1. Take out six bolts (1), nuts (2), and bracket (3).
2. Take off bumperette (4).

END OF TASK



c. Cleaning, Inspection and Repair.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

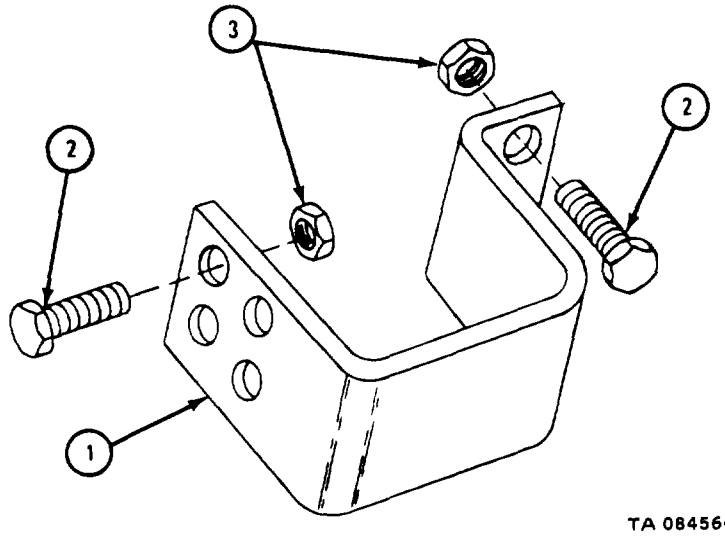
(1) Cleaning. Clean bumperettes, bolts and nuts with solvent.

(2) Inspection and repair.

FLAME 1

1. Check that bumperette (1) is not cracked, bent or broken. Weld or straighten it as needed. Refer to TM 9-237.
2. Check that bolts (2) and nuts (3) have no stripped threads. If parts are damaged, get new ones.

END OF TASK



d. Replacement.

FRAME 1

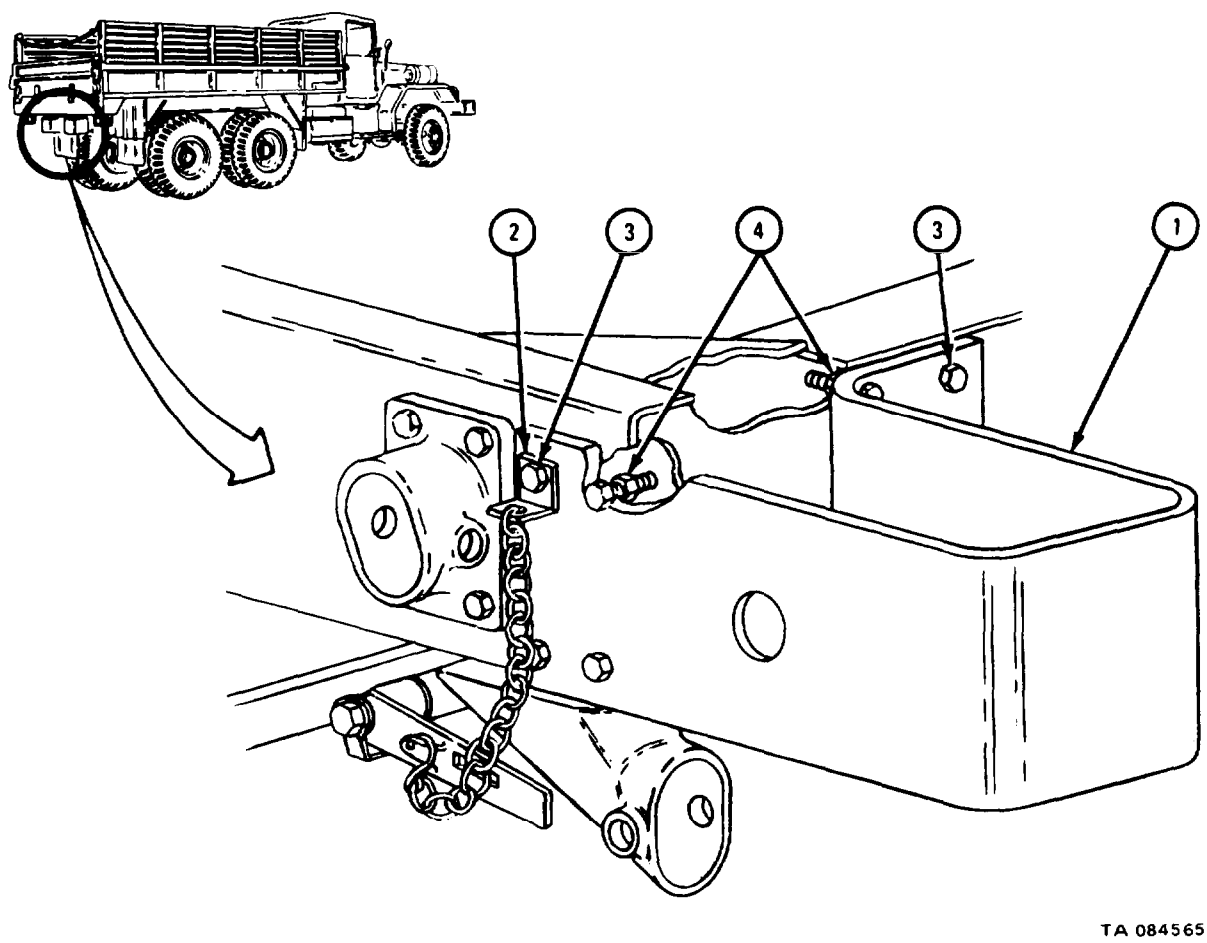
1. Put bumperette (1) and bracket (2) in place.
2. Put in six bolts (3) and nuts (4).

NOTE

Follow-on Maintenance Action Required:

Replace auxiliary airline coupling. Refer to TM 9-2320-211-20.

END OF TASK



14-7. REAR AXLE BUMPER MOUNTING BRACKET REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

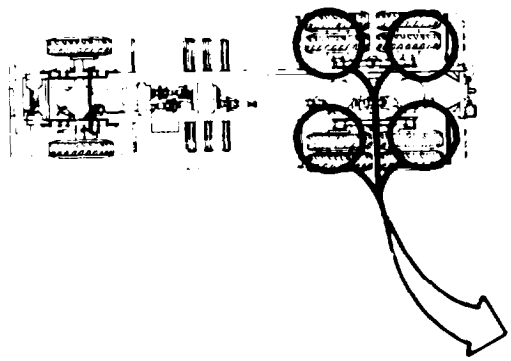
a. Preliminary Procedure. Remove wheels near bumper mounting bracket. Refer to TM 9-2320-211-10.

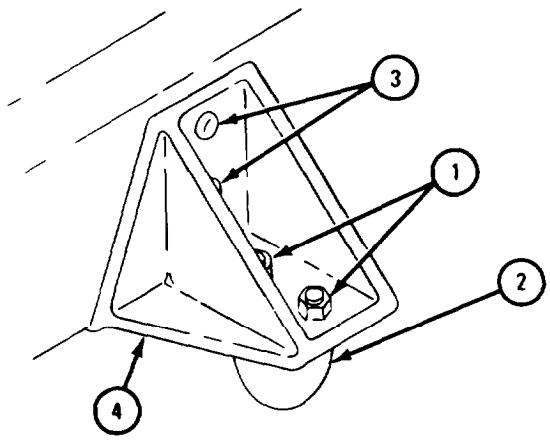
b. Removal.

FRAME 1

1. Take off two nuts (1). Take out bumper (2).
2. Center punch two rivets (3).
3. Drill two rivets (3). Drive out two rivets.
4. Take off bracket (4).

END OF TASK





TA 084406

c. Cleaning, Inspection, and Repair.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Cleaning. Clean bracket with solvent, and air dry.

(2) Inspection and Repair.

(a) Check that bracket is not damaged, bent or cracked. If bracket is damaged, get new bracket or repair by welding or straightening as needed.

(b) Check that bumper is not cracked or damaged. If bumper is damaged, get new bumper.

d. Replacement.

FRAME 1

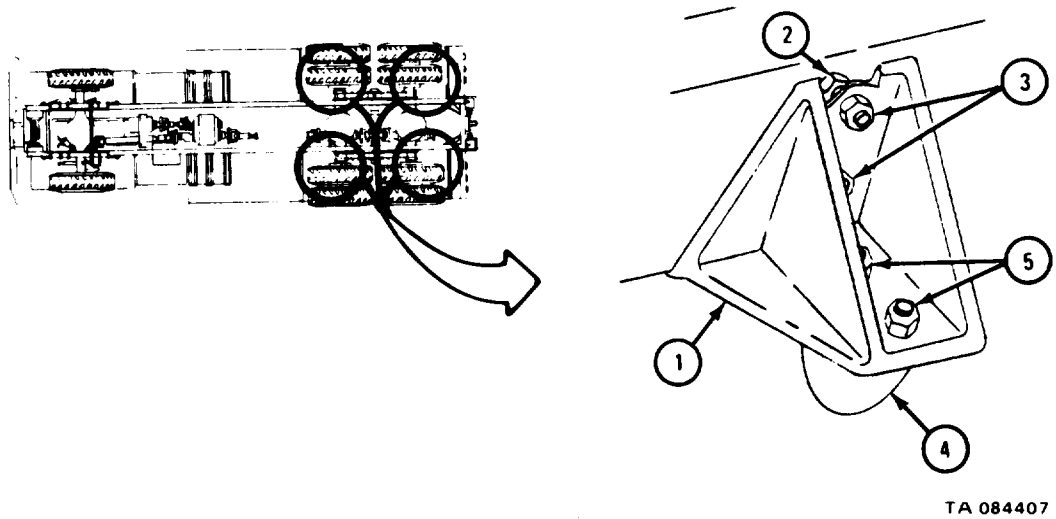
1. Put bracket (1) in place. Line up holes and put in two screws (2).
2. Put on two nuts (3).
3. Put bumper (4) in place. Put on two nuts (5).

NOTE

Follow-on Maintenance Action Required:

Replace wheels near bumper mounting bracket. Refer to TM 9-2320-211-10.

END OF TASK



14-8. DUMP BODY HOLD DOWN BRACKET REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M51A2).

NOTE

This task is the same for the right and left side hold down brackets. This task is shown for the left side hold down bracket.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

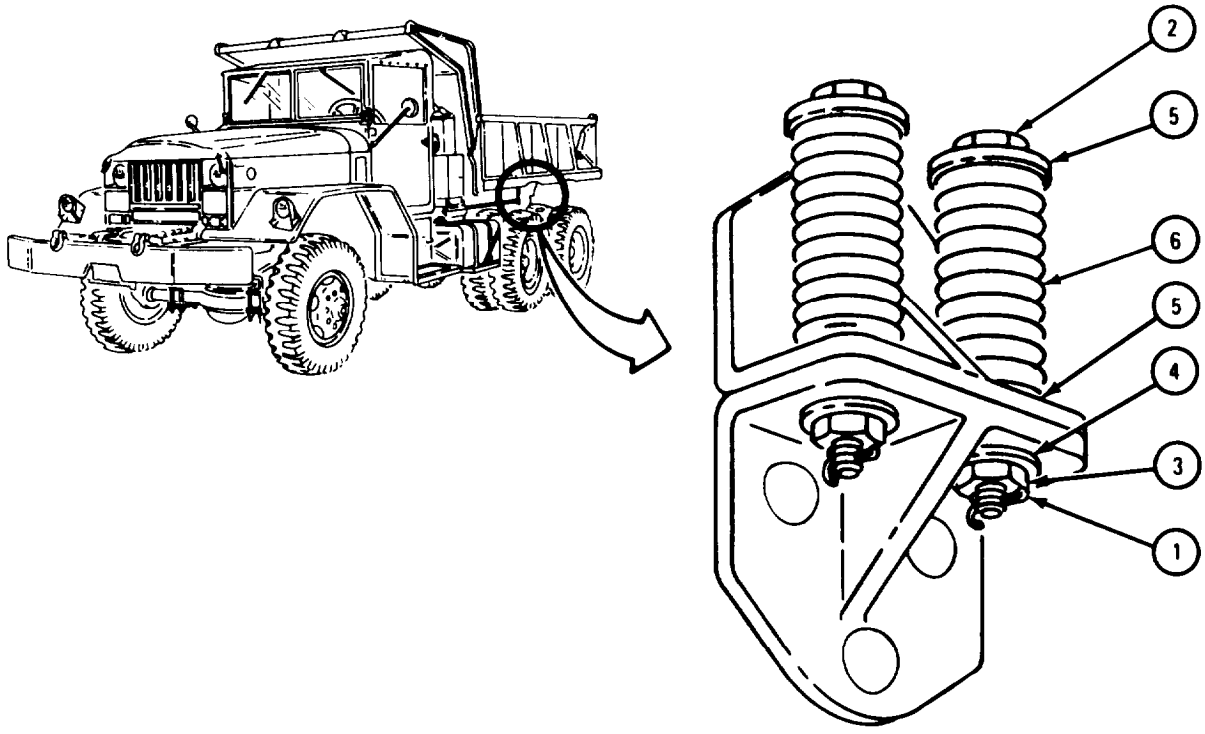
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take out and throw away two cotter pins (1).
2. Hold two screws (2). Take off two nuts (3) and two washers (4).
3. Take off two screws (2), four keepers (5), and two springs (6).

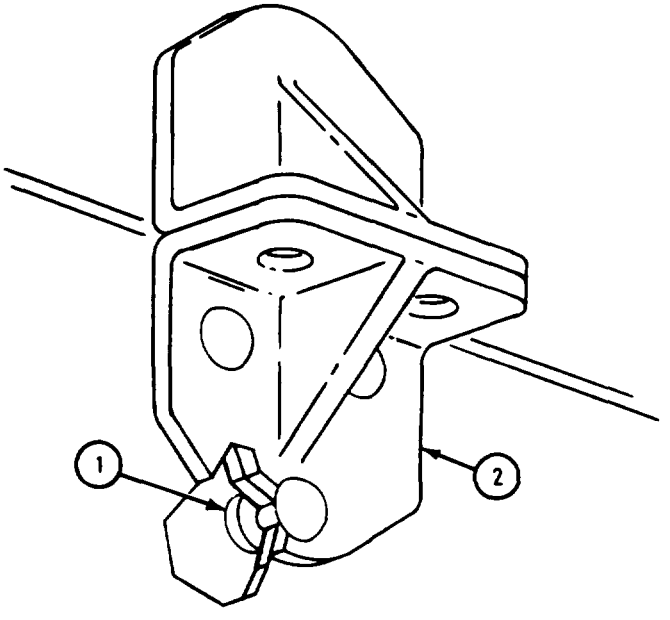
GO TO FRAME 2



FRAME 2

1. Take off three rivets (1).
2. Take off bracket (2).

END OF TASK



TA 084413

b. Cleaning, Inspection, and Repair.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when the solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Cleaning. Clean bracket with solvent.

(2) Inspection and Repair. Check that lower bracket is not damaged, bent or cracked. Repair by strsightening or welding. Refer to TM 9-237. If more repair is needed, get a new bracket.

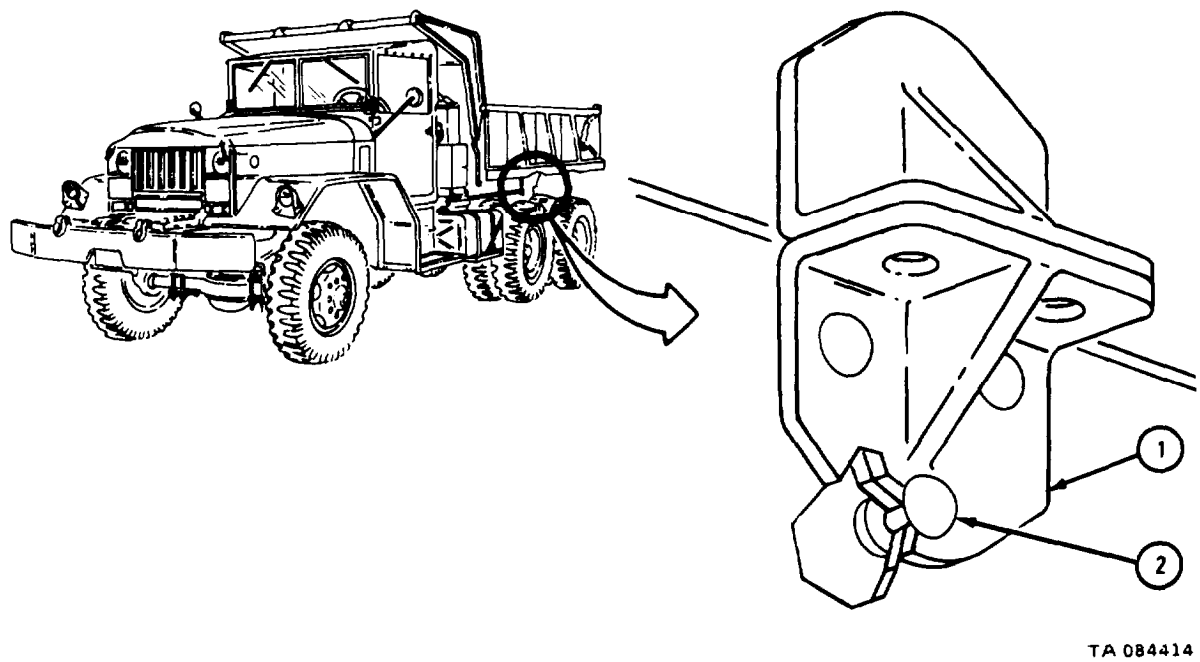
(3) Check that upper bracket to frame weld has no cracks. Repair by straightening or welding. Refer to TM 9-237.

c. Replacement.

FRAME 1

1. Put bracket (1) in place, Put in three rivets (2).

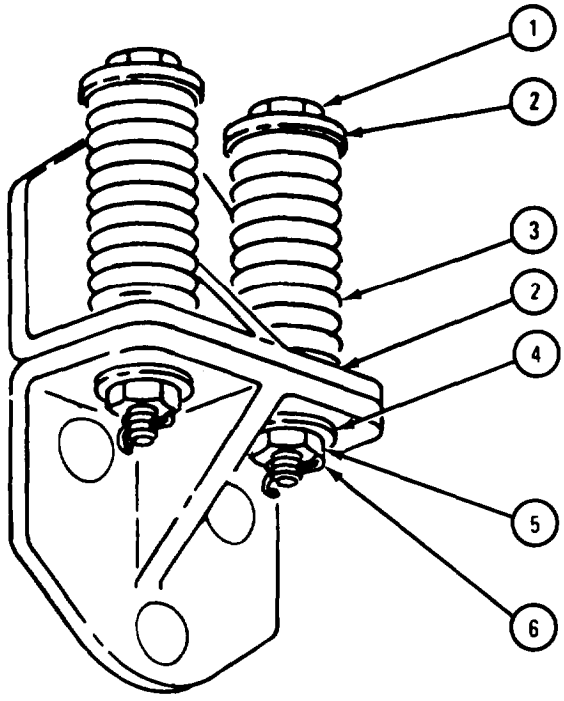
GO TO FRAME 2



FRAME 2

1. Put in two screws (1) with four spring keepers (2), two springs (3), and two washers (4).
2. Put on two nuts (5).
3. Put in two cotter pins (6).

END OF TASK



TA 084415

Section III. PINTLES

14-9. PINTLE HOOK REPAIR.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Cotter pin (2)

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

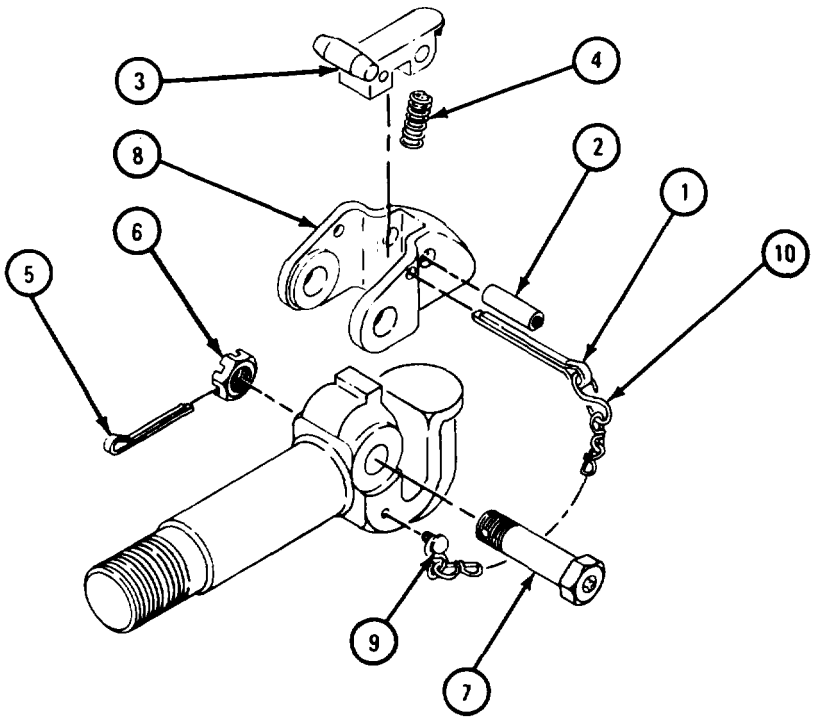
a. Preliminary Procedure. Remove pintle hook. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

1. Takeout cotter pin (1), pin (2), latch (3), and spring (4).
2. Take out cotter pin (5).
3. Takeoff nut (6) and screw (7).
4. Takeoff lock (8).
5. Bend open S link (10) rivet (9).

END OF TASK



TA 087185

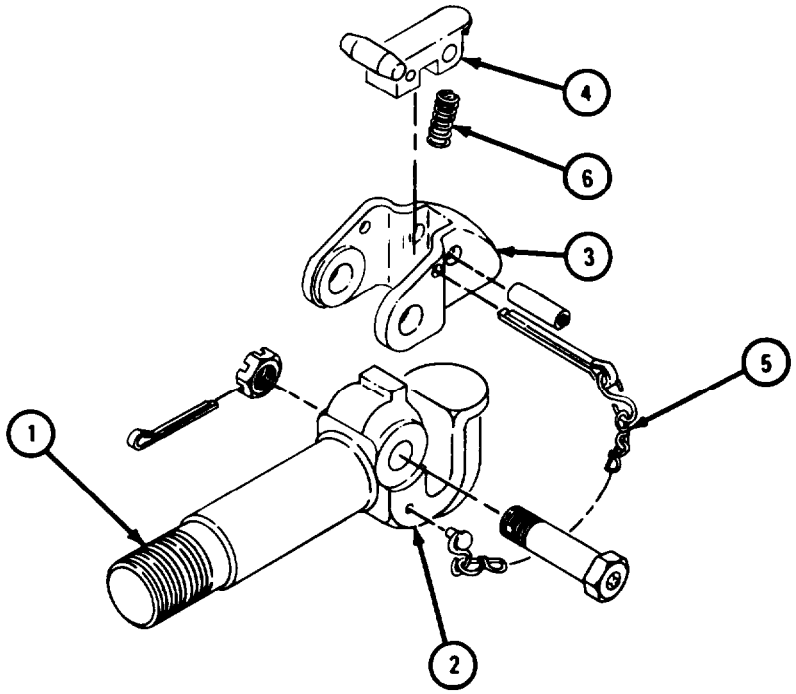
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that shaft (1) in hook (2) is not worn. If shaft is damaged, throw away hook and get a new one in its place.
2. Check that hook (2), lock (3), and latch (4) are not damaged. File off raised metal or scores.
3. Check that chain (5) has no broken or damaged links. If chain is damaged, throw it away and get a new one in its place.
4. Check that spring (6) is not damaged in any way. If spring is damaged, throw it away and get a new one in its place.

END OF TASK



NOTE
CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

TA 087186

e. Assembly.

FRAME 1

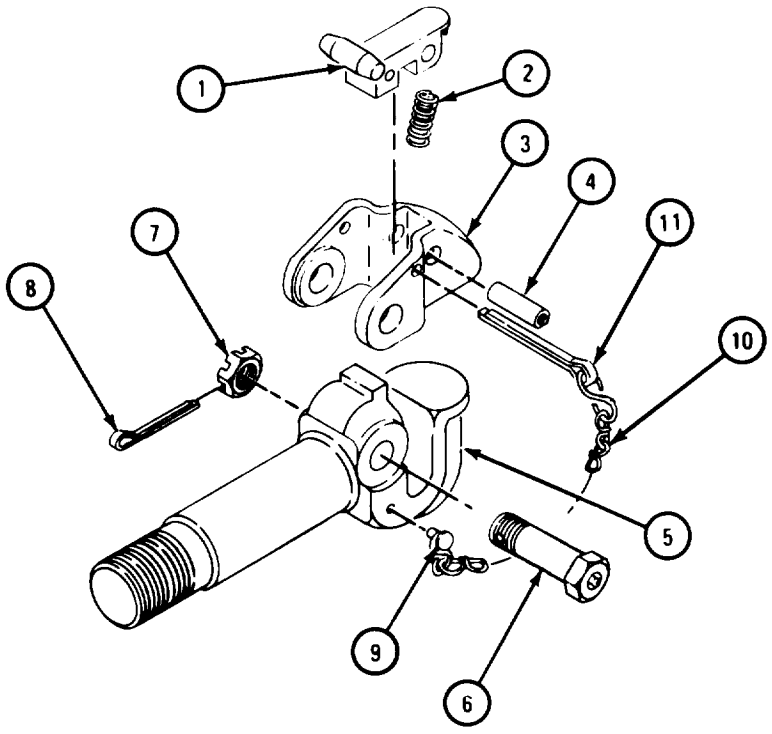
1. Put tip on latch (1) into end of spring(2).
2. Put latch (1) with spring (2) in place in lock (3) and aline holes for pin (4).
3. Put pin (4) through lock (3) and latch (1), and stake with center punch.
4. Put lock (3) on hook (5).
5. Put screw (6) through lock (3) and hook (5).
6. Put nut (7) on screw (6) and put cotter pin (8) through screw.
7. Check that lock (3) and latch (1) work correctly.
8. Put S link on rivet (9). Put chain (10) on cotter pin (11).
9. Put cotter pin (11) through hole in lock (3).

NOTE

Follow-on Maintenance Action Required:

Replace pintle hook assembly. Refer to TM 9-2320-211-20.

END OF TASK



TA 087187

Section IV. FIFTH WHEEL ASSEMBLY

14-10. FIFTH WHEEL ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: Safety wire
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Cutting fluid, VV-C-846

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

Preliminary Procedure. Remove fifth wheel assembly. Refer to TM 9-2320-211-20.

b. Disassembly.

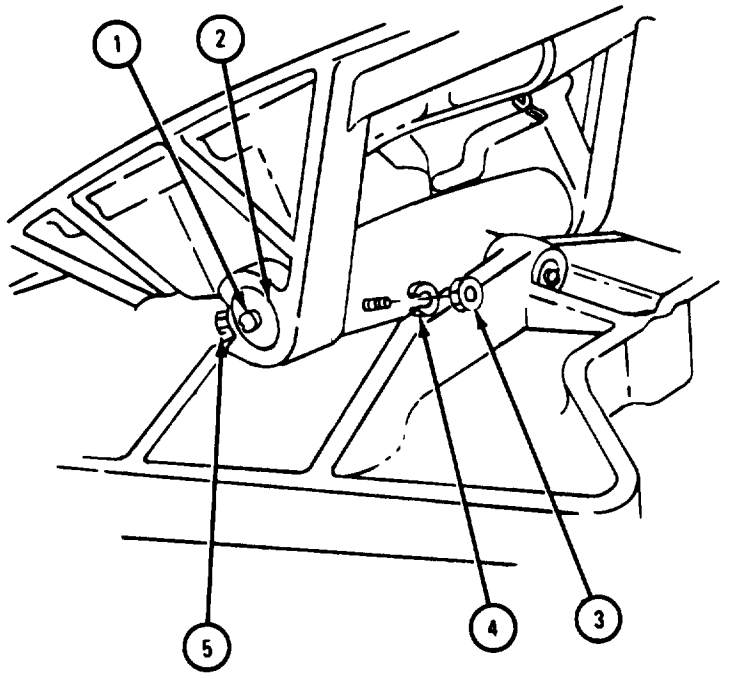
FRAME 1

WARNING

Fifth wheel assembly parts are heavy and bulky. Be careful to avoid injury when handling or repairing this unit.

1. Take out two lubrication fittings (1), one from each end of base shaft (2).
2. Take out nut (3), lockwasher (4), and screw (5).

GO TO FRAME 2



TA 084416

FRAME 2

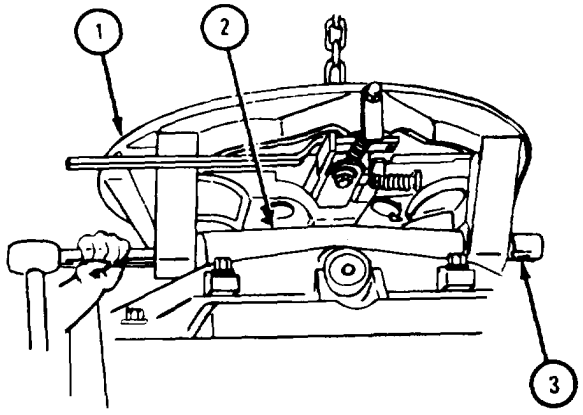
Soldier A 1. Hook chain hoist to base (1). Using chain hoist, take weight of base off walking beam (2).

Soldier B 2. Drive base shaft (3) out of walking beam (2).

Soldier A 3. Using chain hoist, lift base (1) and set it upside down on bench or floor.

Soldier B 4. Unhook chain hoist from base (1).

GO TO FRAME 3

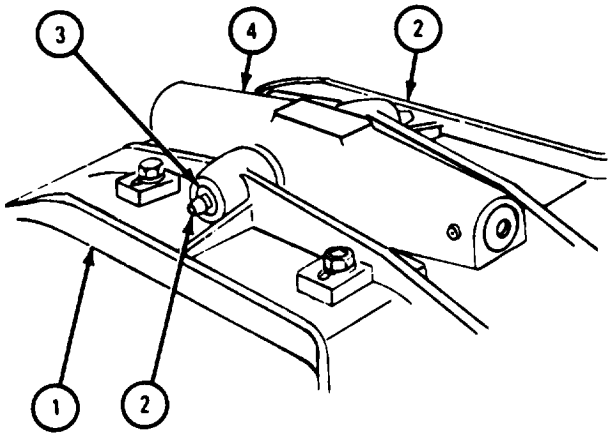


TA 084417

FRAME 3

1. Working on subbase assembly (1), take out two lubrication fittings (2) from subbase shaft (3).
2. Drive subbase shaft (3) out of walking beam (4) and subbase (1).
3. Lift walking beam (4) off subbase (1) and set it aside.

GO TO FRAME 4



TA 084418

FRAME 4

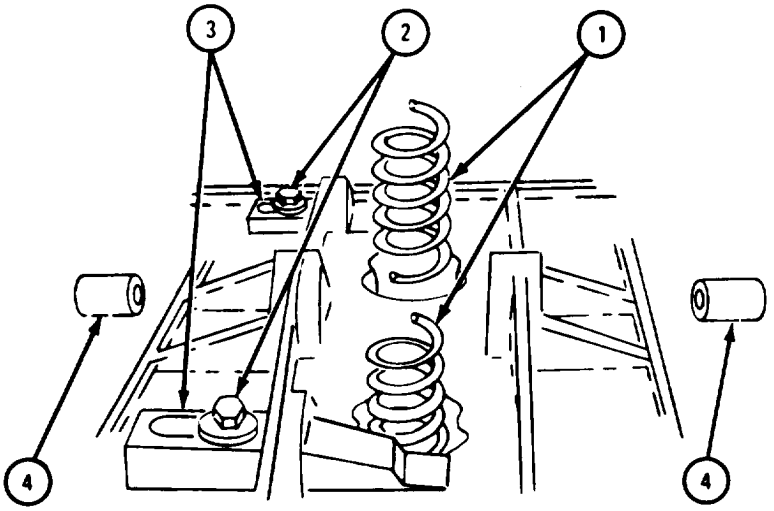
1. Lift out two springs (1).
2. Take out two screws, lockwashers, and flat washers (2).
3. Take out two wedges (3).

NOTE

Do not take out subbase bushings (4) unless they are worn. Refer to para 14-10d for inspection procedures.

4. Take out two subbase bushings (4).

GO TO FRAME 5



TA 084419

FRAME 5

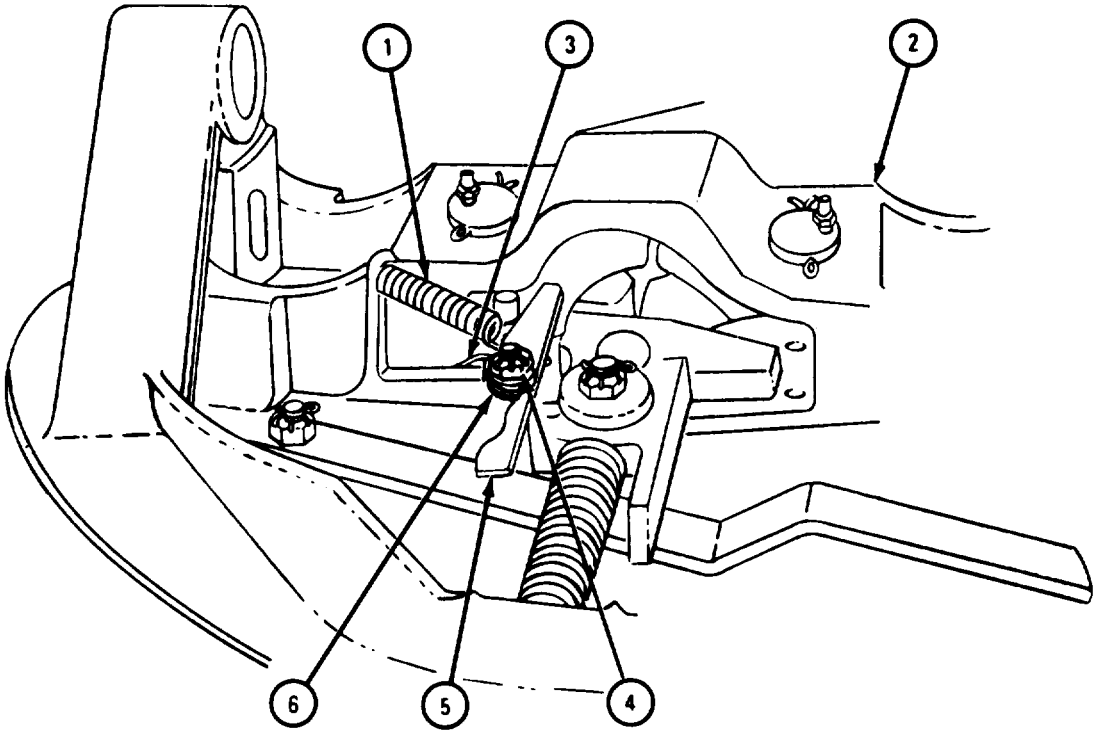
1. Unhook both ends of spring (1).
2. Working on subbase assembly (2), takeout safety wire (3).
3. Take off nut with washer (4).

NOTE

Spacer washers (6) are used to aline locking plunger latch (5) with locking plunger. Count number above and below latch to make sure they are put back in the right place.

4. Take off locking plunger latch (5) and spacer washers (6).

GO TO FRAME 6

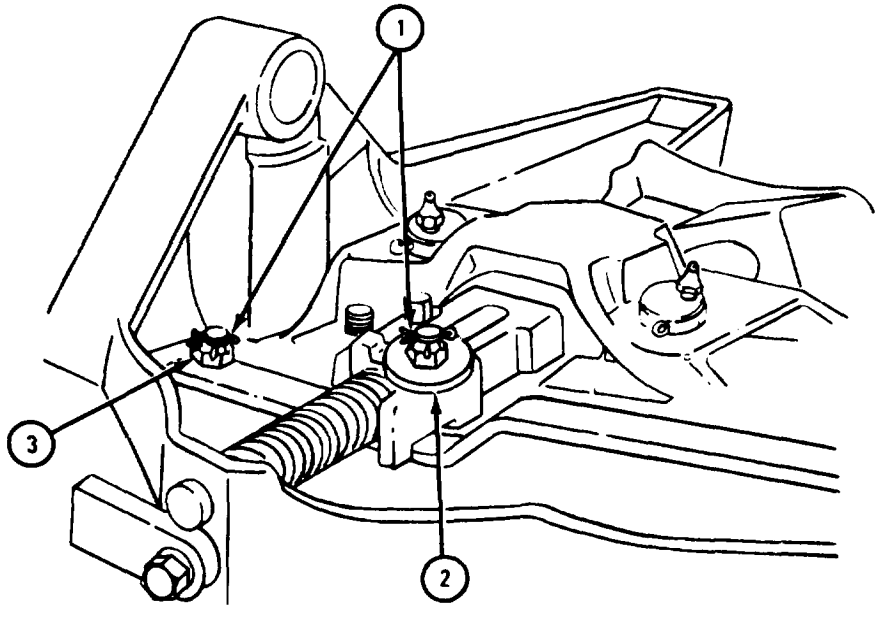


TA 084420

FRAME 6

1. Take out two cotter pins (1) and throw them away.
2. Take off nut and washer (2).
3. Take off nut (3).

GO TO FRAME 7



TA 084421

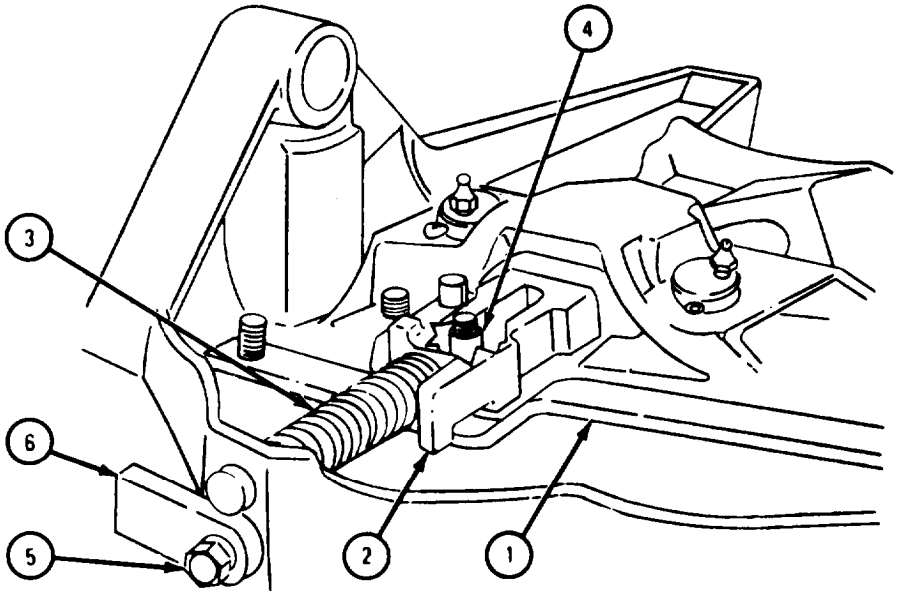
FRAME 7

WARNING

Spring (3) is under tension. Hold it tightly when taking it out to prevent spring from flying out and causing injury.

1. Lift up on operating lever (1) and take out operating lever, plunger (2), spring (3), and sleeve spacer (4).
2. Take out screw (5) and safety latch (6).

GO TO FRAME 8



TA 084422

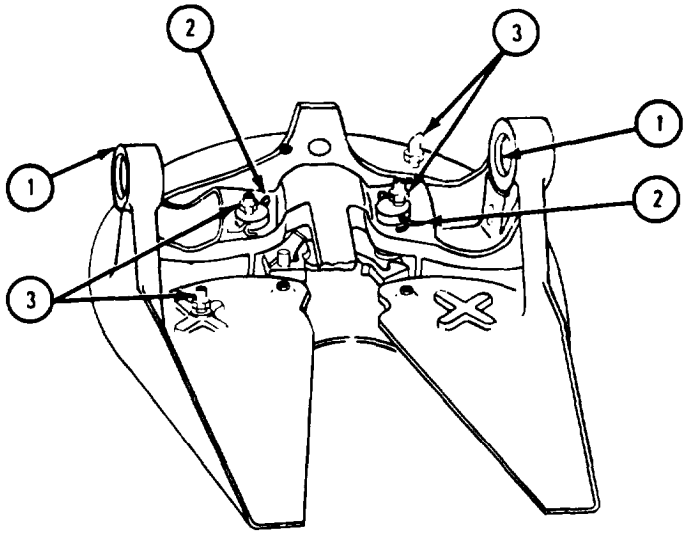
FRAME 8

NOTE

Do not take out bushings (1) unless they are worn. Refer to para 14-10d for inspection procedures.

1. Take out two base bushings (1).
2. Take out two cotter pins (2) and throw them away.
3. Take out four lubrication fittings (3).

GO TO FRAME 9



TA 084423

FRAME 9

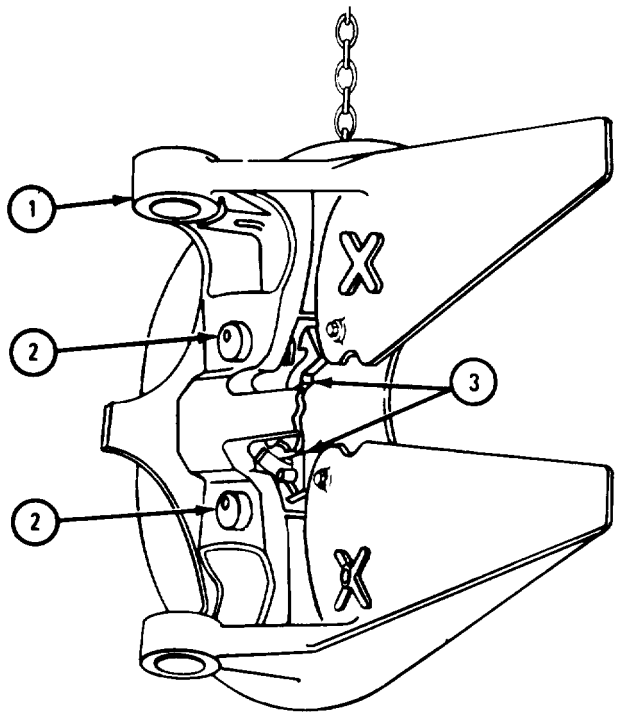
Soldier A 1. Using chain hoist, turn base (1) on its side.

Soldier B 2. Using hammer and brass punch, push out two pivot pins (2) and take out two coupler jaws (3).

Soldier A 3. Using chain hoist, set base (1) upside down on workbench.

Soldier B 4. Unhook chain hoist from base (1).

END OF TASK



TA 084424

c. Cleaning

(1) Clean larger parts with steam and wire brush.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(2) Clean smaller parts with solvent.

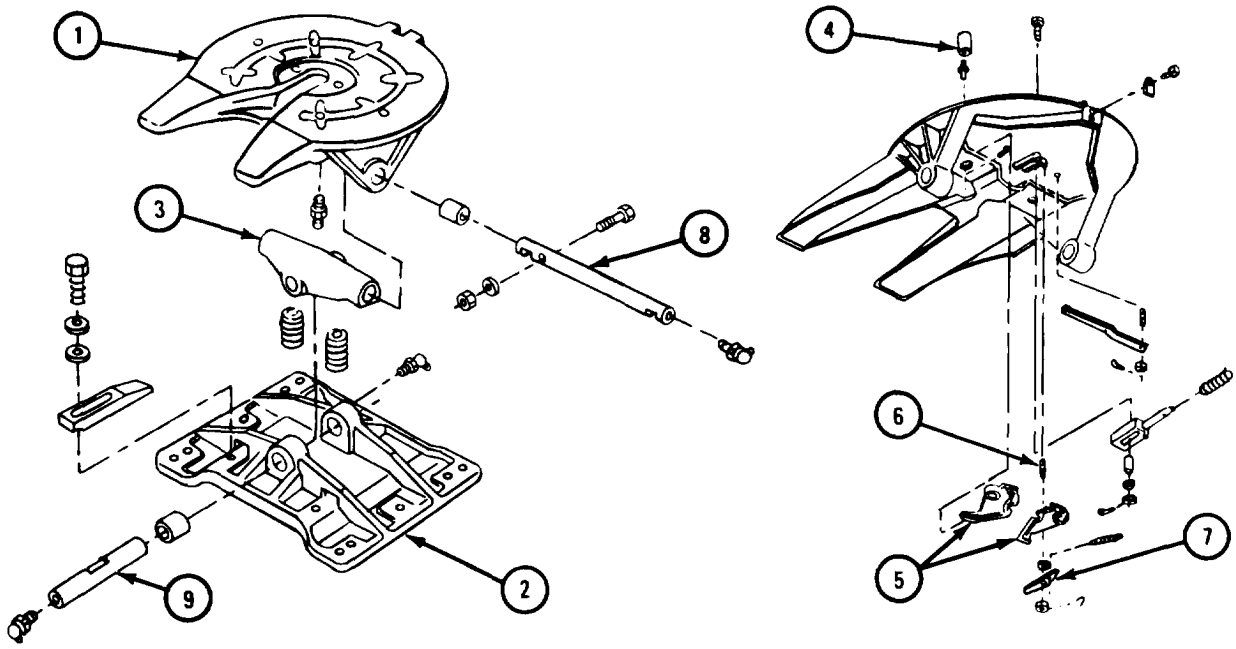
(3) Be sure that all grease passages are clean and open.

d. Inspection.

FRAME 1

1. Check that base (1) and subbase (2) are not cracked.
2. Check that walking beam (3) is not cracked and that bores are not out-of round, pitted or scored.
3. Check that two pivot pins (4) are not pitted, grooved or broken.
4. Check that two coupler jaws (5) do not have rounded edges and that bores are not out-of-round.
5. Check that stud (6) is not bent or worn, and that it has no damaged threads.
6. Check that locking plunger latch (7) is not bent or worn.
7. Check that base shaft (8) and subbase shaft (9) are not pitted, grooved or cracked.

GO TO FRAME 2



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084425

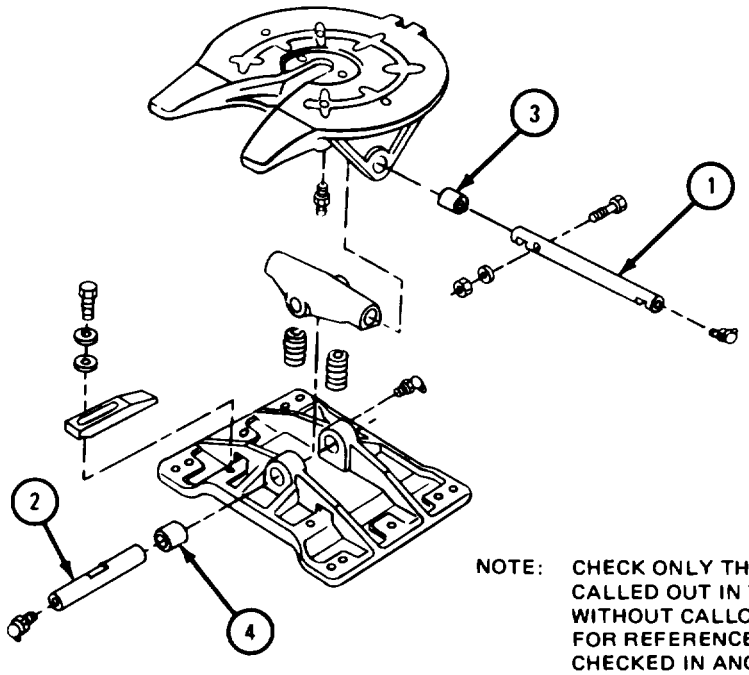
FRAME 2

NOTE

Readings must be within limits given in table 14-1. If readings are not within given limits. throw away part and get a new one.

1. Measure outside diameter of base shaft (1).
2. Measure outside diameter of subbase shaft (2).
3. Measure inside diameter of two base bushings (3).
4. Measure inside diameter of two subbase bushings (4).

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084426

Table 14-1. Fifth Wheel Assembly Wear Limits

Index Number	Item/Point of Measurement	Wear Limit (inches)
1	Base shaft (outside diameter)	1.996 to 2.000
2	Subbase shaft (outside diameter)	1.996 to 2.000
3	Base bushing (inside diameter)	2.005 to 2.006
4	Subbase bushing (inside diameter)	2.005 max

e. Repair.

(1) If base or subbase is cracked, weld it. Refer to TM 9-237. Only cracks found in center of base or subbase may be welded. If base or subbase cannot be repaired by welding, use a new one.

(2) Get new parts for all other damaged parts.

f. Assembly.

FRAME 1

Soldier A 1. Using chain hoist, turn base (1) on its side.

Soldier B 2. Working on top side of base (1), push two pivot pins (2) partway through base.

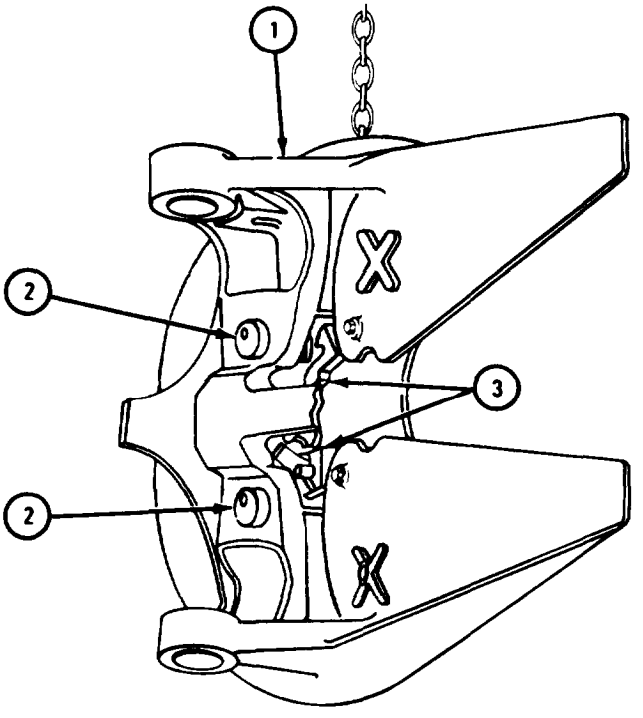
Soldier A 3. Put two coupler jaws (3) on pivot pins (2).

Soldier B 4. Drive pivot pins (2) into coupler jaws (3).

Soldier A 5. Using chain hoist, set base (1) upside down on workbench.

6. Unhook chain hoist from base (1).

GO TO FRAME 2

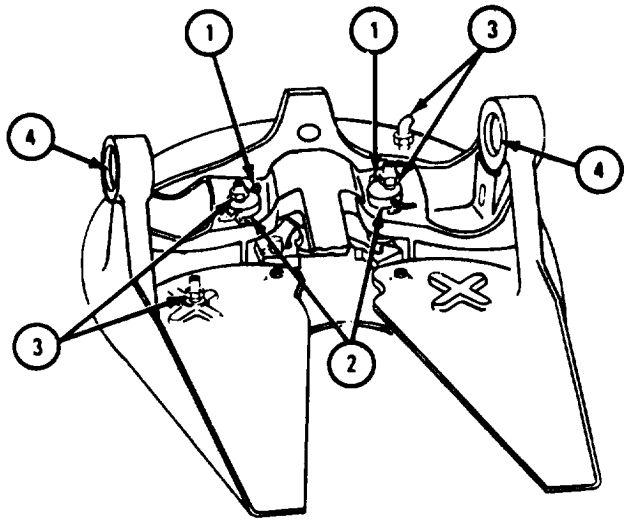


TA 084427

FRAME 2

1. Put two cotter pins (1) in pivot pins (2).
2. Put in four lubrication fittings (3).
3. If base bushings (4) were taken out, drive in two base bushtigs. Refer to para 14-10d, frame 2. Ream bushings to size as given in table 4-1.

GO TO FRAME 3

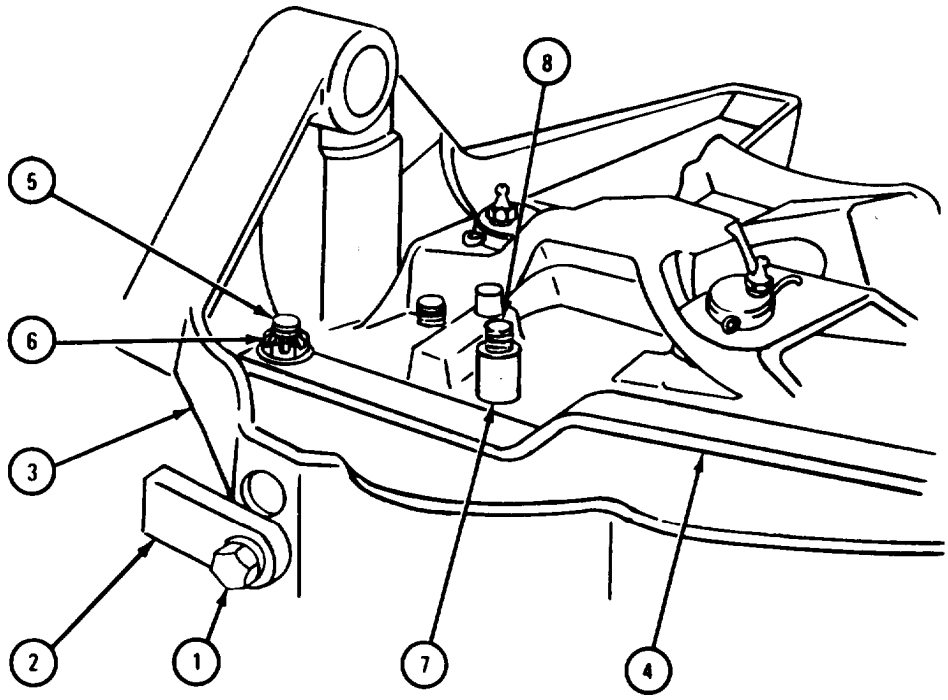


TA 084428

FRAME 3

1. Put screw (1) through safety latch (2) into base (3).
2. Put operating lever (4) in place on stud (5).
3. Put on nut with washer (6).
4. Put sleeve spacer (7) on stud (8).

GO TO FRAME 4



TA 084429

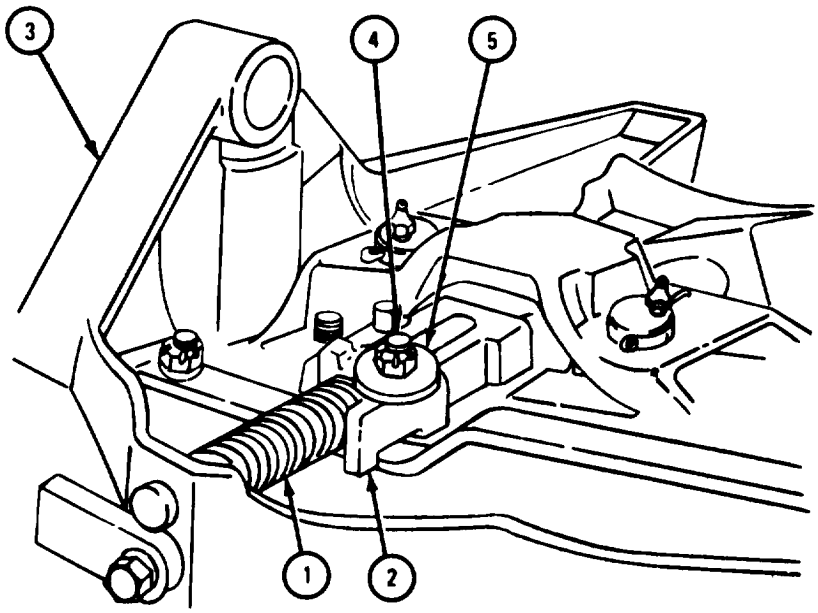
FRAME 4

WARNING

Spring (1) is under tension. Hold spring tightly in place to prevent spring from flying out and causing injury.

1. Put spring (1) in place on plunger (2).
2. Push plunger (2) through hole in base (3) and over stud (4).
3. Put on nut and washer (5).

GO TO FRAME 5



TA 084430

FRAME 5

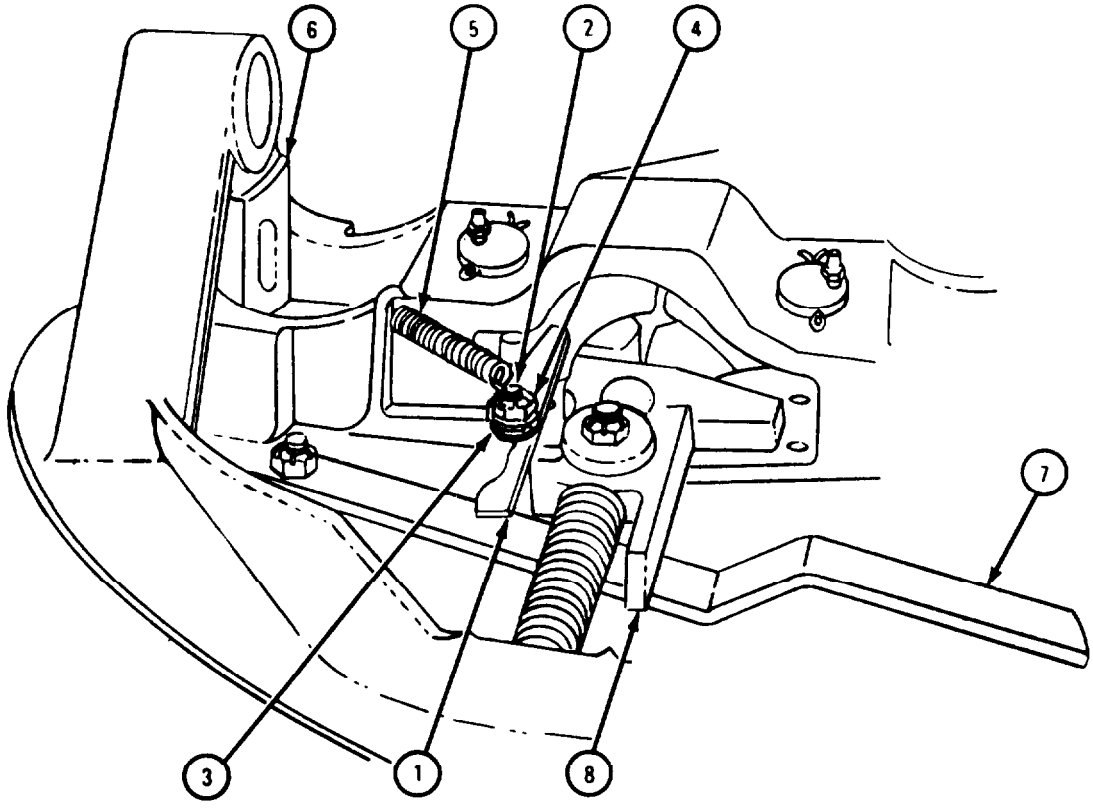
1. Put locking plunger latch (1) on stud (2) with spacer washers (3) in place as noted in disassembly.

NOTE

Be sure to keep all spacer washers (3) on stud (2) so that cotter pinhole in stud will aline with slot in nut (4).

2. Put on nut with washer (4).
3. Hook spring (5) in holes in base (6) and locking plunger latch (1).
4. Pull operating lever (7) forward and check that locking plunger latch (1) locks plunger (8) in forward position. If latch does not lack plunger in forward position, move spacer washers (3) to positions above or below latch to aline latch and plunger.

GO TO FRAME 6

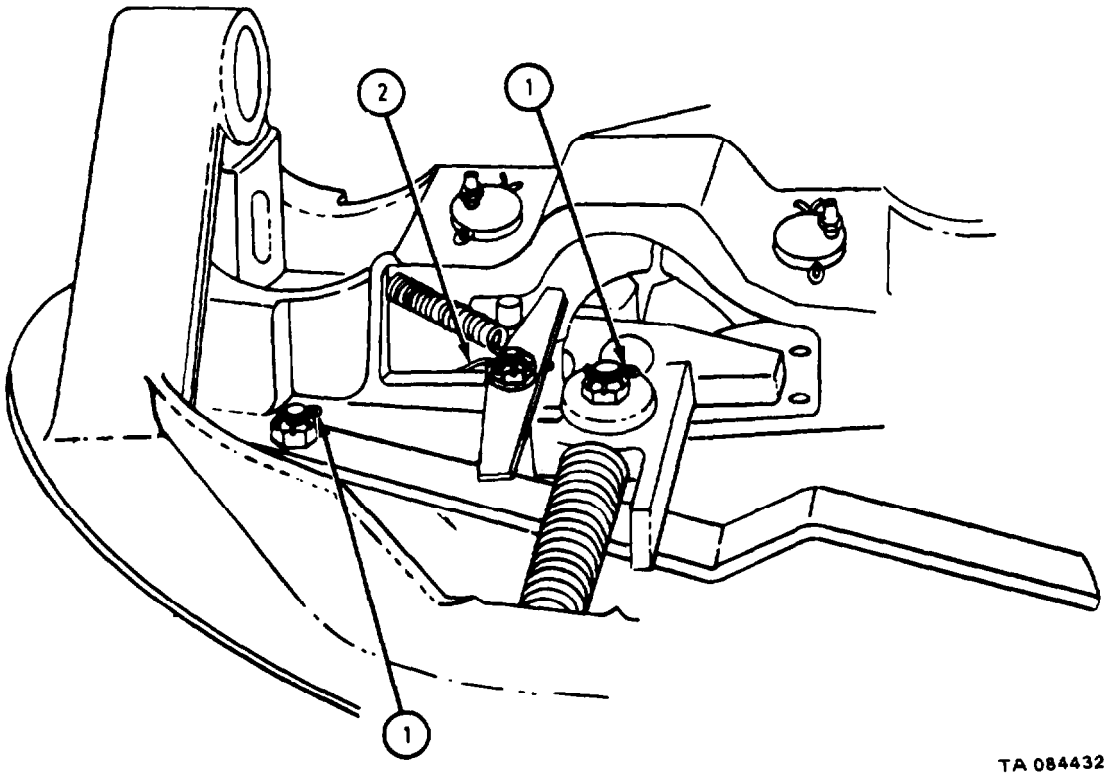


TA 084431

FRAME 6

1. Put in two cotter pins (1). Put in safety wire (2).

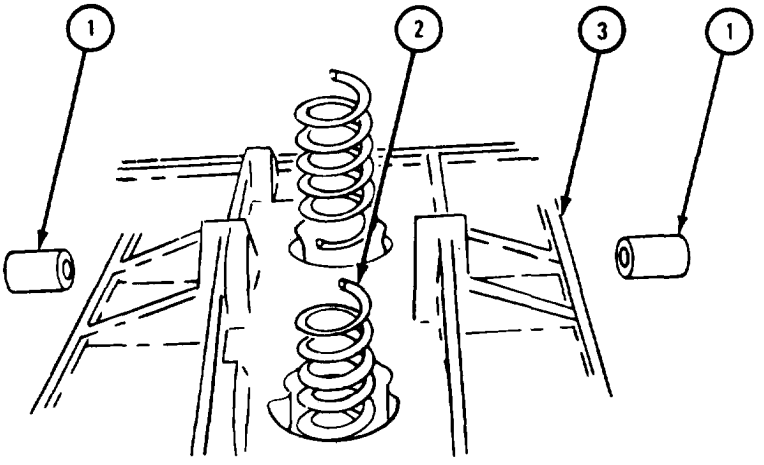
GO TO FRAME 7



FRAME 7

1. If subbase bushings (1) were taken out, drive in two subbase bushings. Ream bushings to size as given in table 14-1. Refer to para 14-10d, frame 2.
2. Put two springs (2) in holes in subbase (3).

GO TO FRAME 8

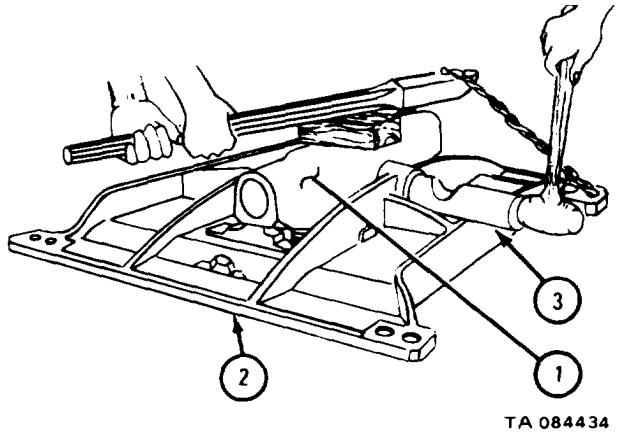


TA 084433

FRAME 8

Soldiers A and B	1.	Put walking beam (1) in place on subbase (2) as shown.
	2.	Hook chain to subbase (2) as shown. Place wooden block and prybar on walking beam (1) as shown.
Soldier A	3.	Push down on prybar to aline hole in walking beam (1) with holes in subbase (2).
Soldier B	4.	When holes are alined, start subbase shaft (3) into subbase (2). Be sure that groove in shaft is at top.
	5.	Drive subbase shaft (3) to centered position in walking beam (1) and subbase (2). Check that groove in subbase shaft is alined with base shaft hole in walking beam.
Soldier A	6.	Unhook chain from subbase (2) and set it aside.

GO TO FRAME 9



TA 084434

FRAME 9

Soldier A 1. Using chain hoist, place base (1) in mounting position on walking beam (2).

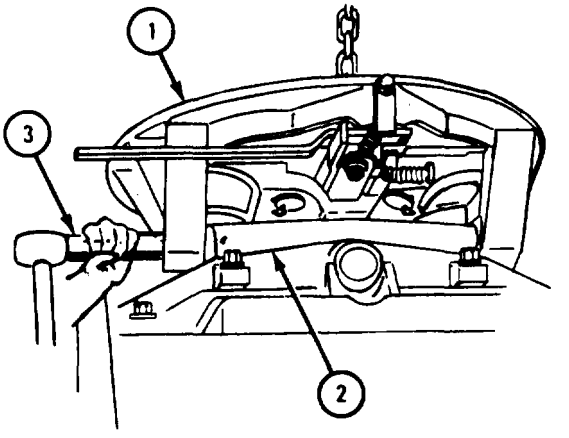
Soldier B 2. Aline holes in base (1) with holes in walking beam (2).Hold base in position.

Soldier A 3. Start base shaft (3) into holes of base (1). Make sure that screw hole in base shaft is lined up with hole in walking beam (2).

4. Drive base shaft (3) into centered position in base (1) and walking beam (2).

Soldier B 5. Unhook chain hoist from base (1).

GO TO FRAME 10

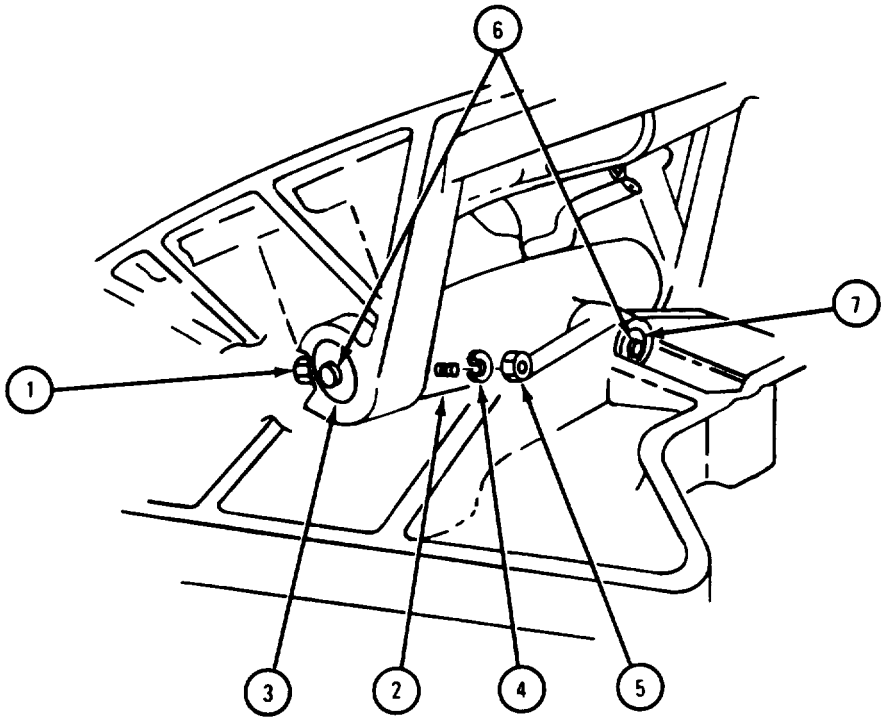


TA 084435

FRAME 10

1. Push screw (1) through holes in walking beam (2) and base shaft (3). Put lockwasher (4) and nut (5) on screw.
2. Tighten four lubrication fittings (6), one in each end of base shaft (3) and subbase shaft (7).

GO TO FRAME 11



TA 084436

FRAME 11

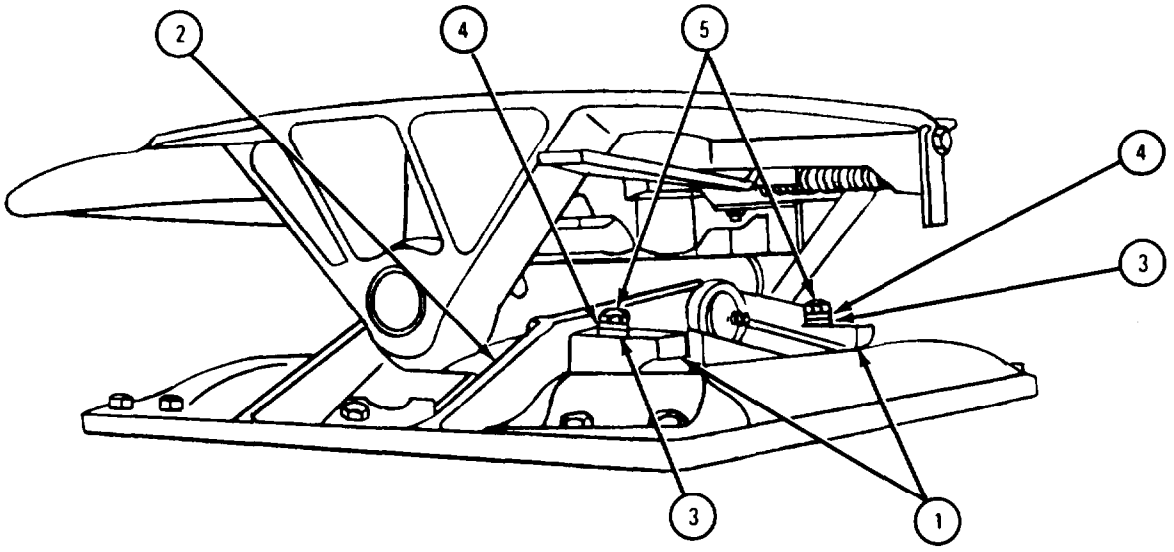
1. Put two wedges (1) in position on subbase (2).
2. Put two lockwashers (3) and two flat washers (4) on two screws (5). Put in screws.

NOTE

Follow-on Maintenance Action Required:

1. Replace fifth wheel assembly. Refer to TM 9-2320-211-20.
2. Lubricate fifth wheel assembly. Refer to LO 9-2320-211-12.

END OF TASK



TA 084437

14-11. APPROACH PLATES AND CENTER DECK REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M52A2).

TOOLS : No special tools required

SUPPLIES : Solvent, dry cleaning, type II (SD-2), Fed. Spec p-D-680

PERSONNEL : Two

EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Clean all parts. Refer to part 1, para 1-3.

b. Removal.

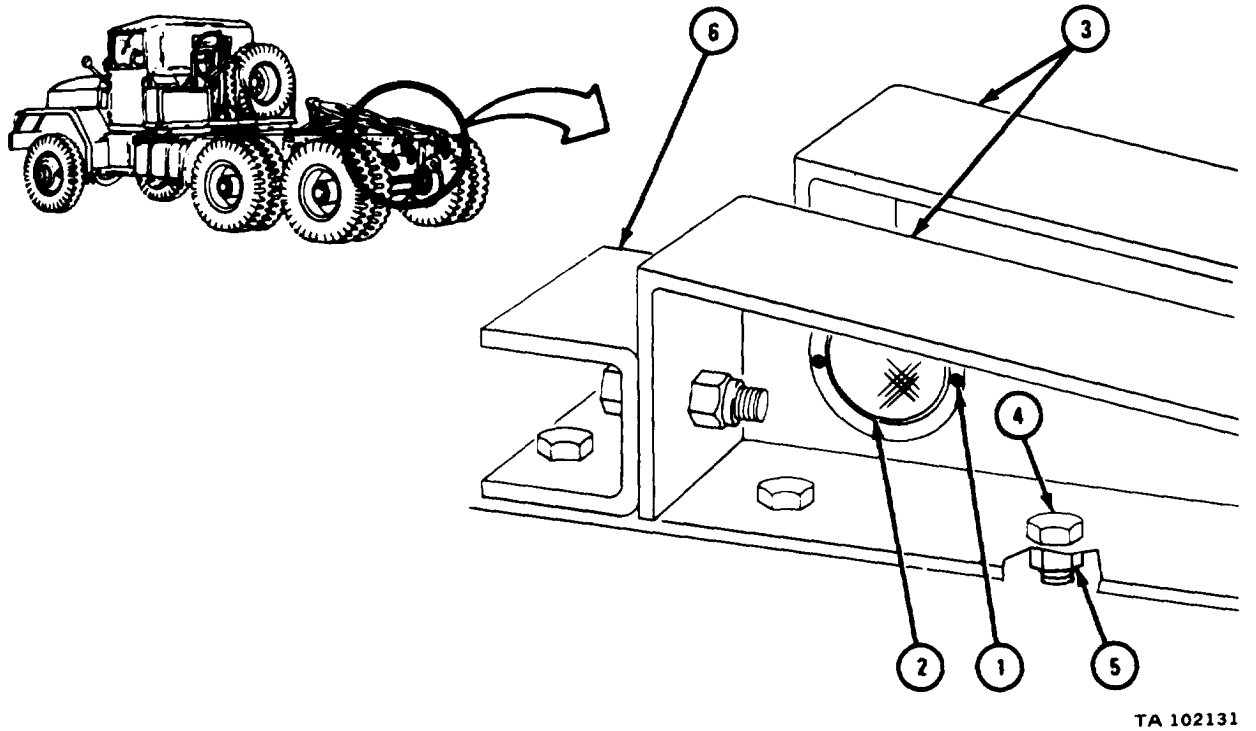
NOTE

Welding repairs can be made on truck without taking off approach plates or center deck.

FRAME 1

1. Take out two screws (1) and take off reflector (2) from both approach plates (3).
2. Take out 14 screws (4) and nuts (5) from approach plates (3) and crossmember (6).
3. Take off two approach plates (3) and crossmember (6).

GO TO FRAME 2

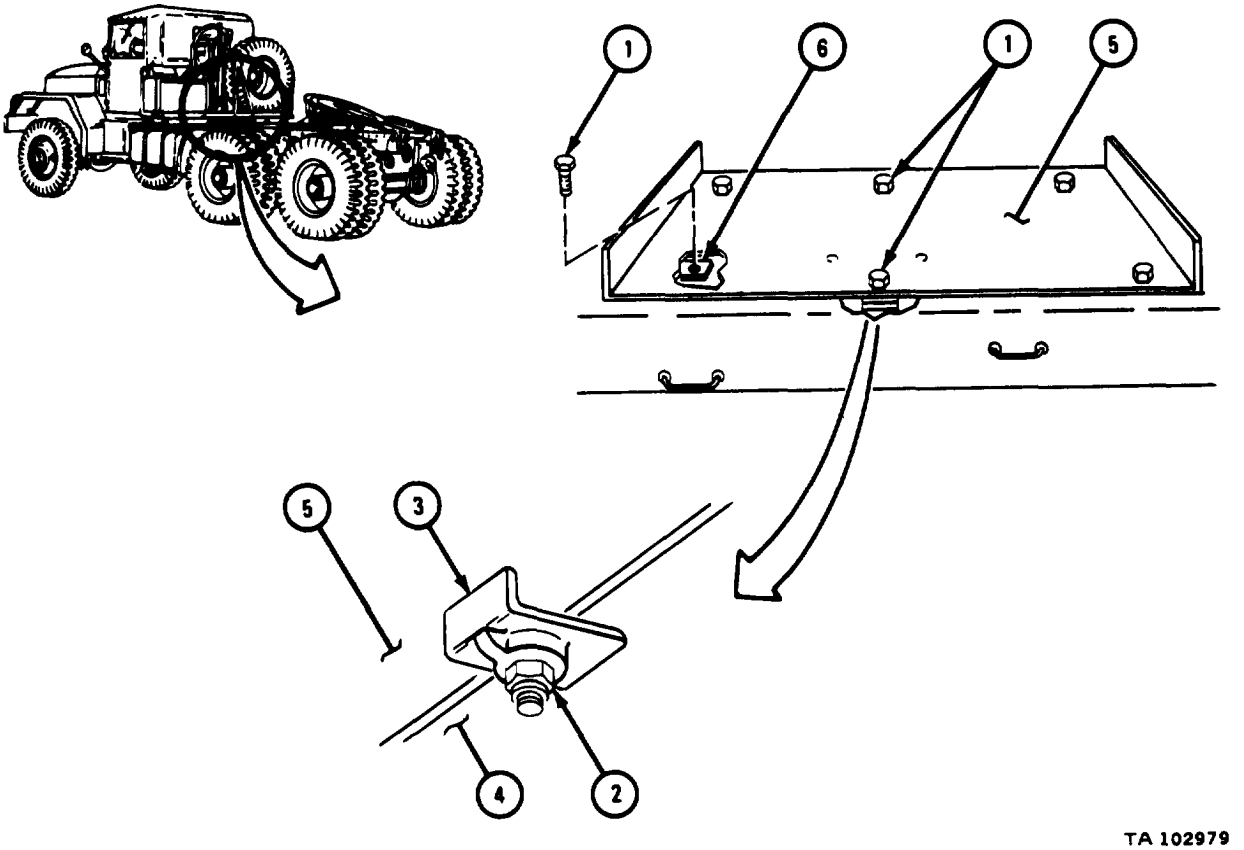


TA 102131

FRAME 2

1. Take out six screws (1) and nuts (2).
2. Take four deck clamps (3) off side rails (4).
3. Take off center deck plate (5).
4. Take off two deck plate spacers (6).

END OF TASK



TA 102979

c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

(1) Check that approach plates and center deck are not cracked, dented or worn.

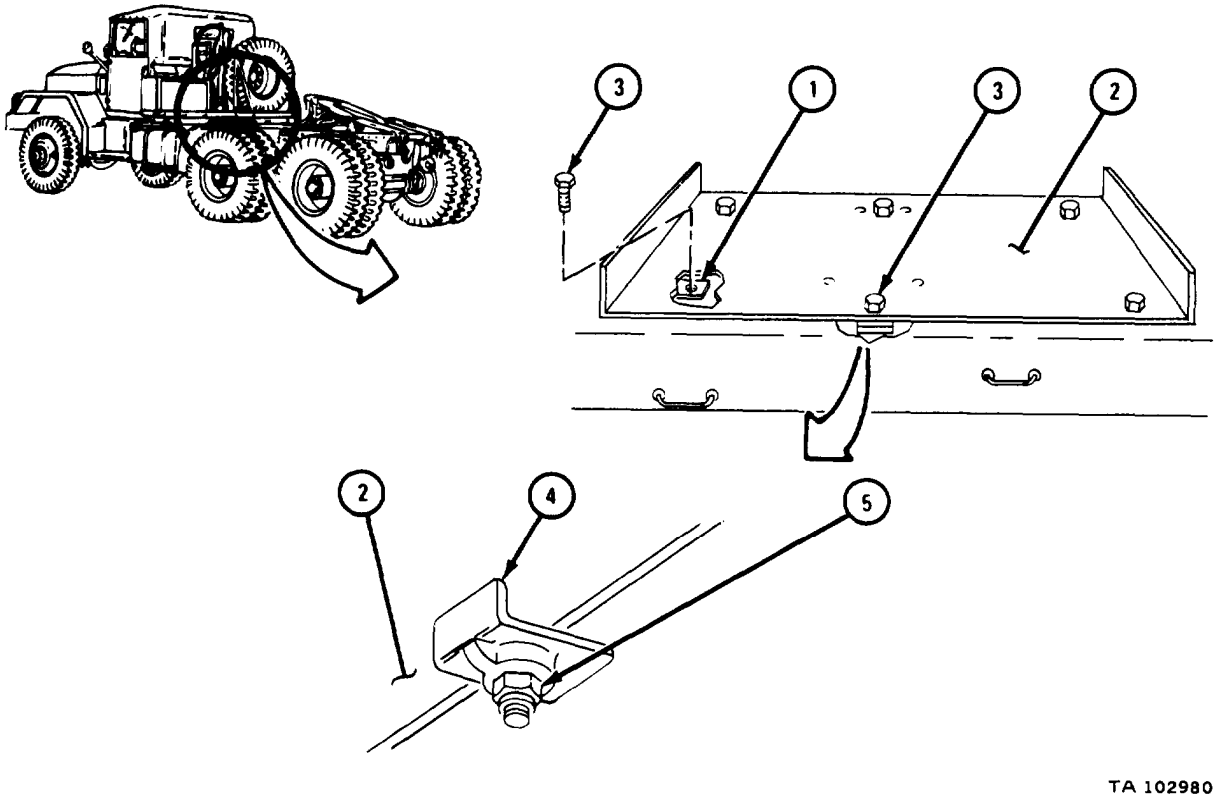
(2) Weld any cracks in approach plates and center deck. If more repair is needed, get a new part.

e. Replacement.

FRAME 1

1. Put on two deck plate spacers (l).
2. Put on center deck plate (2).
3. Put in six screws (3), four center deck clamps (4), and six nuts (5).

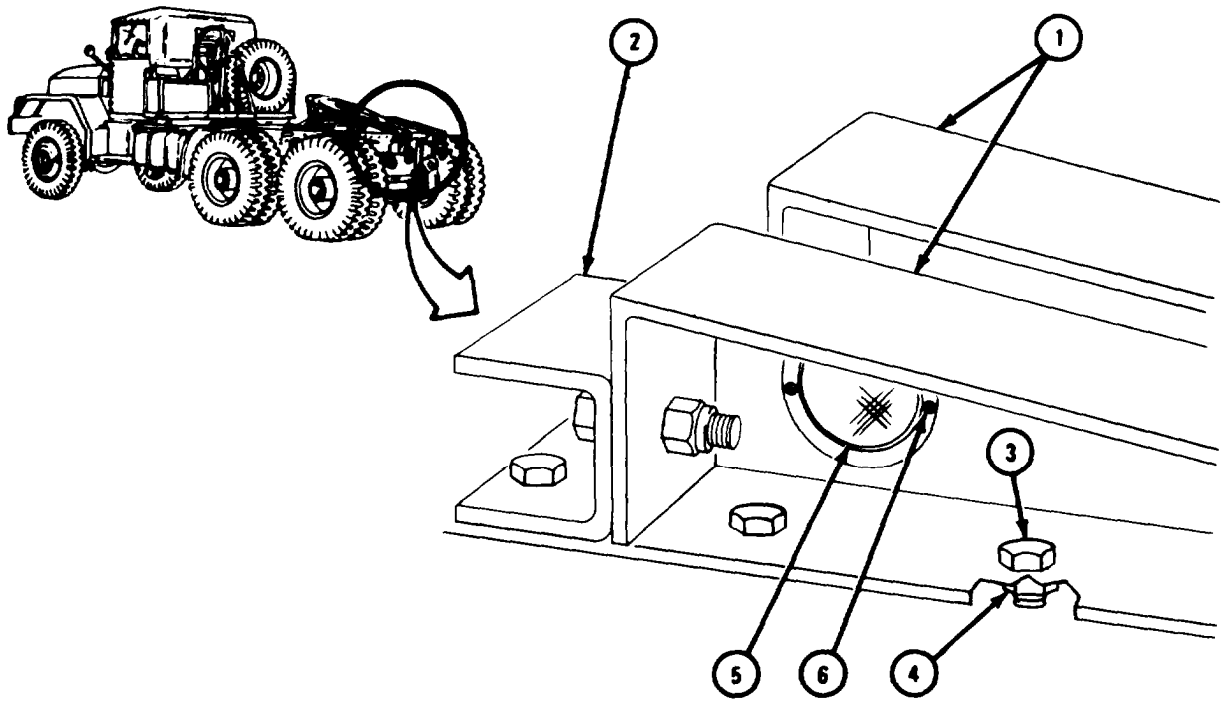
GO TO FRAME 2



FRAME 2

1. Put on two approach plates (1) and crossmember (2).
2. Put in 14 screws (3) and nuts (4).
3. Put on two reflectors (5) and four screws (6).

END OF TASK



TA 102132

CHAPTER 15

SPRINGS AND TORQUE AND STABILIZER RODS GROUP MAINTENANCE

Section 1. SCOPE

15-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for springs and torque and stabilizer rods for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

15-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section II. SPRINGS

15-3. FRONT LEAF SPRING REPAIR.

TOOLS : No special tools required

SUPPLIES : Powdered red graphite, SS-G-659
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove front leaf spring. Refer to TM 9-2320-211-20.

b. Disassembly.

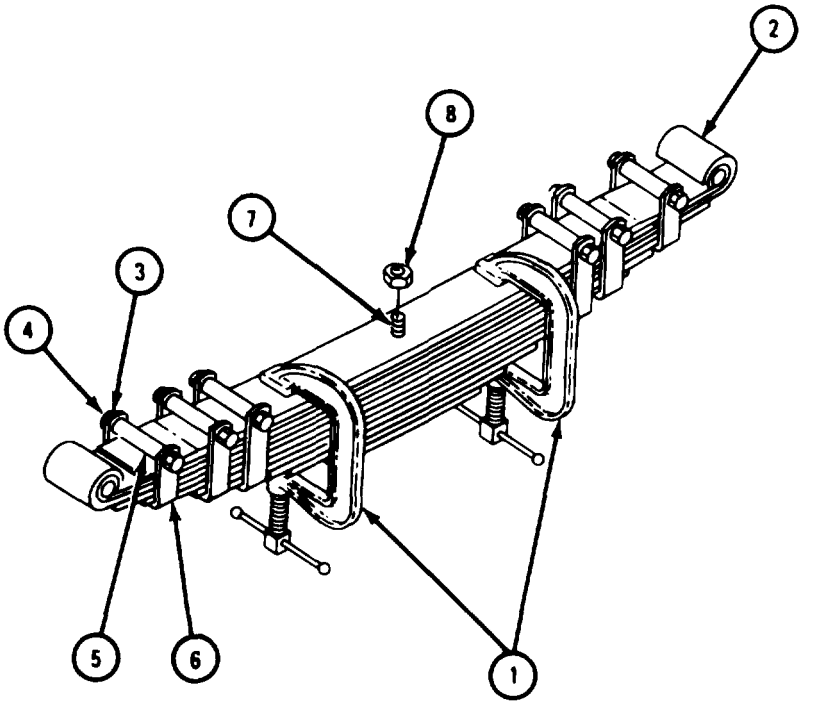
FRAME 1

WARNING

Springs are under tension. Be careful when taking them apart to avoid injury to personnel.

1. Put two C-clamps (1) on springs (2) as shown.
2. File off peened ends of screw (3).
3. Take off nut (4), screw (3), and spacer (5) from clip (6). Throw away nut and screw.
4. Do steps 1 through 3 again for other five clips (6).
5. File off peened end of center bolt (7).
6. Carefully take off nut (8) and take out center bolt (7).
7. Carefully take off C-clamps (1).

END OF TASK



TA 087437

c. Cleaning, Inspection, and Repair.

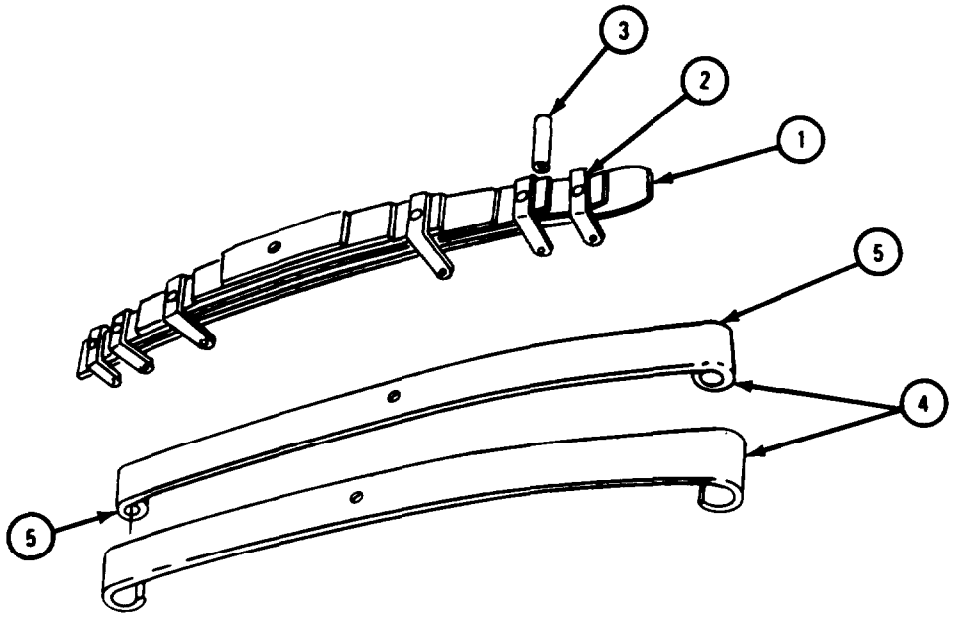
FRAME 1

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failfure to do this may result in injury to personnel and damage to equipment.

1. Clean all parts with solvent.
2. Using wire brush, clean rust or corrosion off leaves (1 and 4).
3. Check that clips (2) and spacers (3) have no cracks or loose rivets. Get new parts if cracks or loose rivets are found.
4. Check that leaves (1 and 4) have no cracks or breaks. If leaves (4) are cracked or broken, get new leaves. If leaves (1) are cracked or broken, get new spring assembly.
5. Check that bushings (5) are not scored, burred, or worn unevenly. If scoring, burrs or uneven wear is found, get new bushings.

END OF TASK



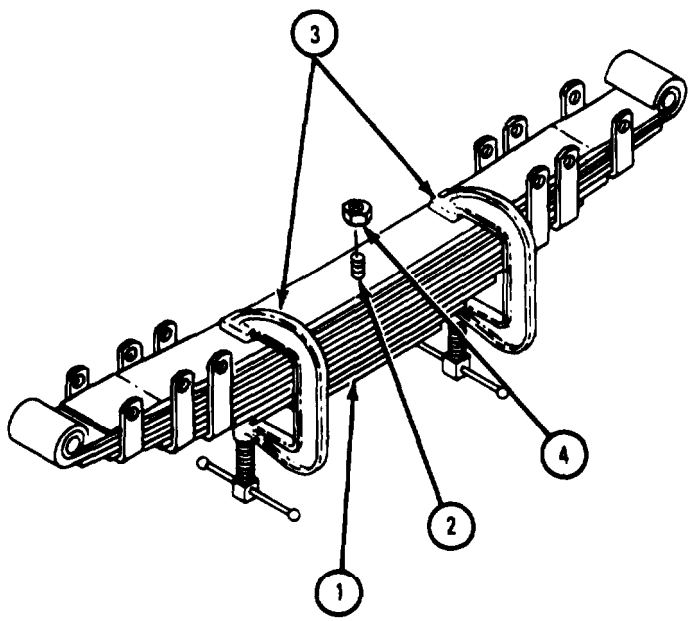
TA 087438

d. Assembly.

FRAME 1

1. Put a small amount of powdered graphite between all leaves (1).
2. Put leaves (1) on center bolt (2), starting with the smallest leaf.
3. Put on two C-clamps (3).
4. Put on nut (4).
5. Peen over end of center bolt (1).

GO TO FRAME 2



TA 087439

FRAME 2

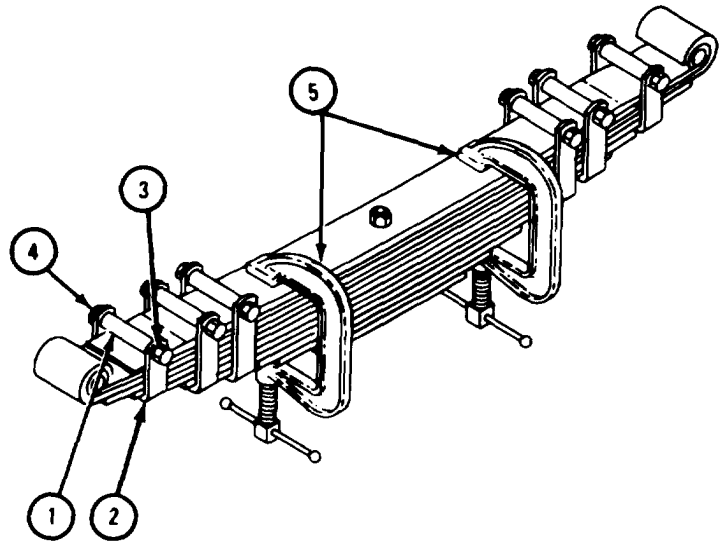
1. Put spacer (1) between ends of clip (2).
2. Put screw (3) through clip (2) and spacer (l).
3. Put on nut (4).
4. Peen over end of screw (3).
5. Do steps 1 through 4 again for other five clips (2).
6. Take off two C-clamps (5).

NOTE

Follow-on Maintenance Action Required:

Replace front leaf spring. Refer to TM 9-2320-211-20.

END OF TASK



TA 087440

15-4. FRONT SPRING HANGER REMOVAL, REPAIR, AND REPLACEMENT.

NOTE

This task is the same for the four front spring hangers. This task is shown for the left front spring hanger.

TOOLS: No special tools required

SUPPLIES: Hex head capscrew, MS90726-140 (2)
Hex head capscrew, MS90727-114 (2)
Self-locking nut, MS21045-8 (2)
Self-locking nut, MS21045-9 (2)

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove brushguard. Refer to TM 9-2320-211-20.

(2) Remove radiator. Refer to TM 9-2320-211-20.

(3) Remove front spring. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

NOTE

If rivets are used to hold spring hanger to frame, do steps 1, 2, and 5. If capscrews and nuts are used to hold spring hanger to frame, do steps 3, 4, and 5.

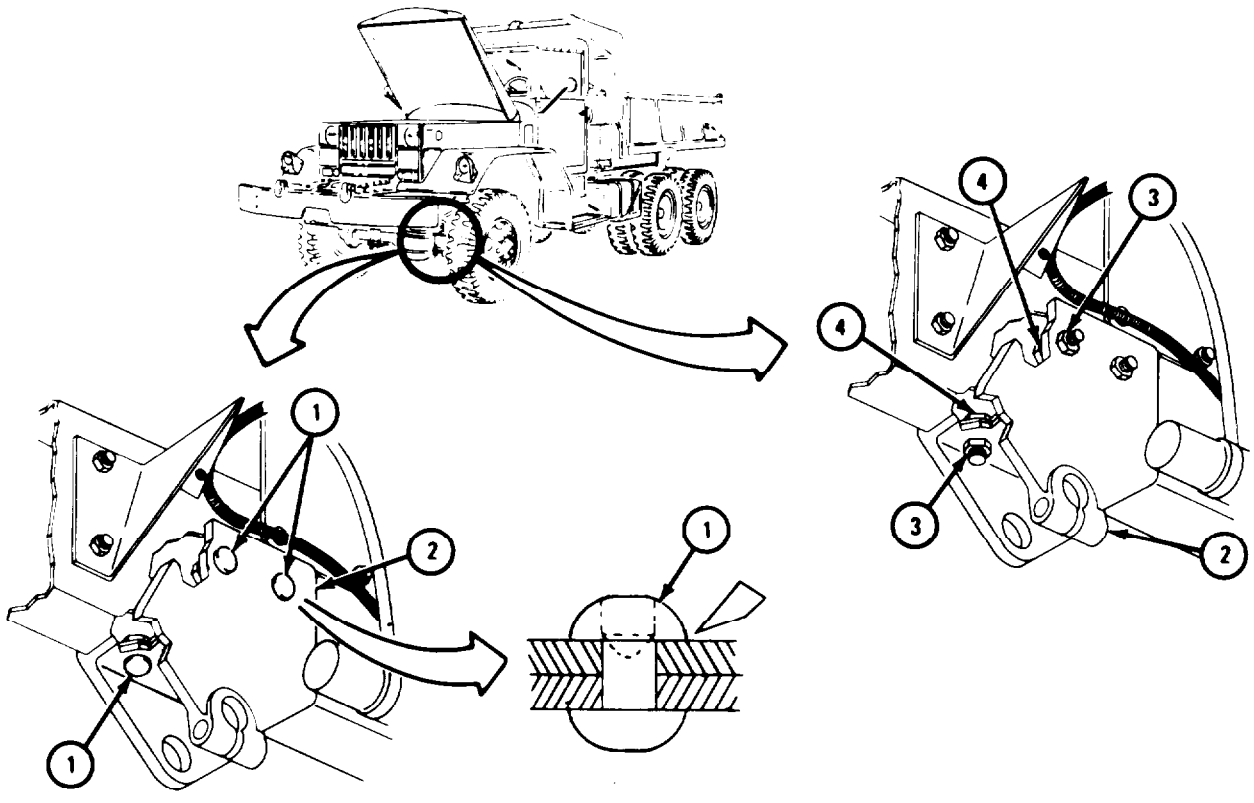
1. Drill head of rivet (1) as shown. Using steel cutting chisel and hammer, cut away head of rivet.
2. Using punch and hammer, drive shrank of rivet (1) out of spring hanger (2).

Soldier A 3. Hold four nuts (3).

Soldier B 4. Take out four capscrews (4).

5. Take out front spring hanger (2).

END OF TASK



TA 084404

c. Cleaning, Inspection, and Repair.

(1) Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair. Check that hanger is not damaged, bent, or cracked. If hanger is damaged, repair by welding. Refer to TM 9-237. If more repair is needed, get a new hanger.

d. Replacement.

FRAME 1

Soldier A 1. Put spring hanger (1) in place.

Soldier B 2. Put in two capscrews (2) and two cap screws (3).

Soldier A 3. Put on two self-locking nuts (4) and two self-locking nuts (5).

Soldier B 4. Hold four capscrews (2 and 3).

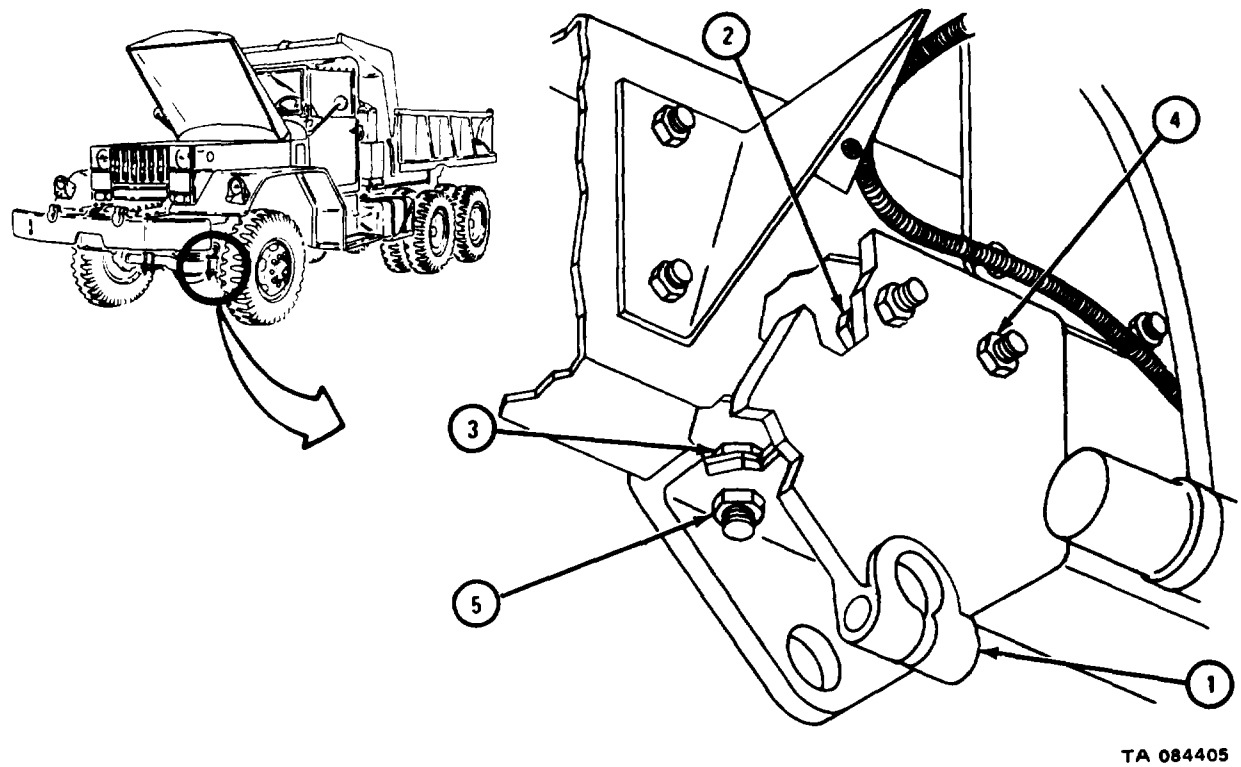
Soldier A 5. Tighten four nuts (4 and 5) to 103 to 123 pound-feet.

NOTE

Follow-on Maintenance Action Required:

1. Replace front spring. Refer to TM 9-2320-211-20.
2. Replace radiator. Refer to TM 9-2320-211-20.
3. Replace brush guard. Refer to TM 9-2320-211-20.

END OF TASK



15-5. REAR LEAF SPRING REPAIR.

TOOLS: No special tools required

SUPPLIES: Powdered graphite, SS-G-659

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove rear spring. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

WARNING

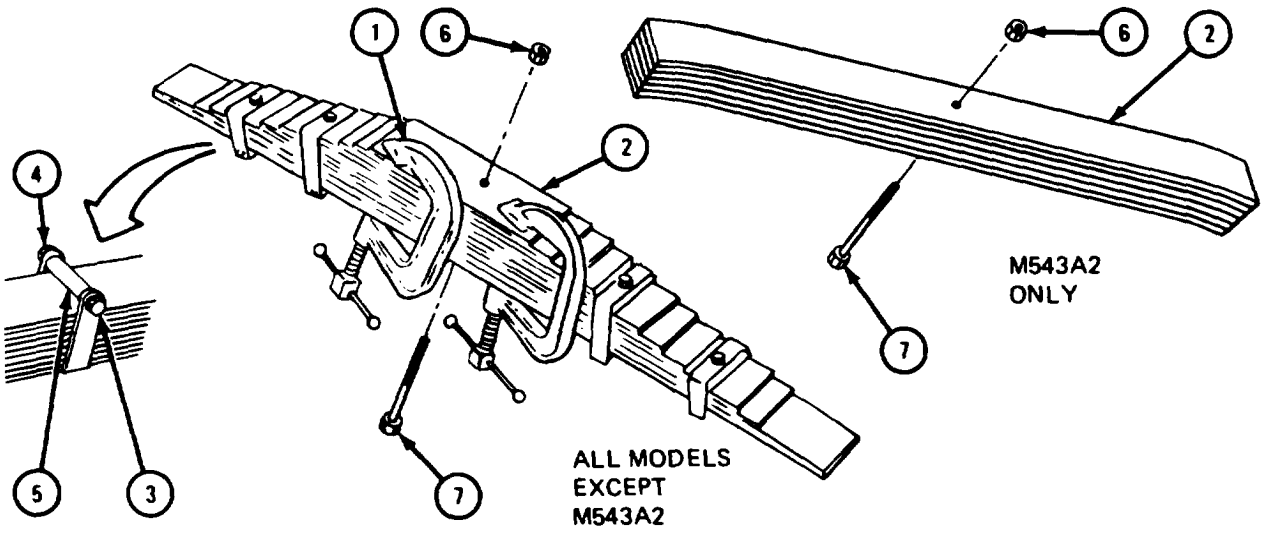
Springs are under tension. Be careful when taking them apart. Spring tension can cause injury to personnel and damage to equipment.

NOTE

There are four spring clips on all models except truck M543A2. which has none. Only the two longest leaves can be taken off.

1. Put two C-clamps (1) on spring (2) as shown.
2. File off peened ends of four bolts (3) down to four nuts (4).
3. Take off four nuts (4), bolts (3), and spacers (5). Throw away bolts and nuts.
4. Take off nut (6) and bolt (7).
5. Carefully take off C-clamps (1).

END OF TASK



c. Cleaning, Inspection, and Repair.

FRAME 1

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

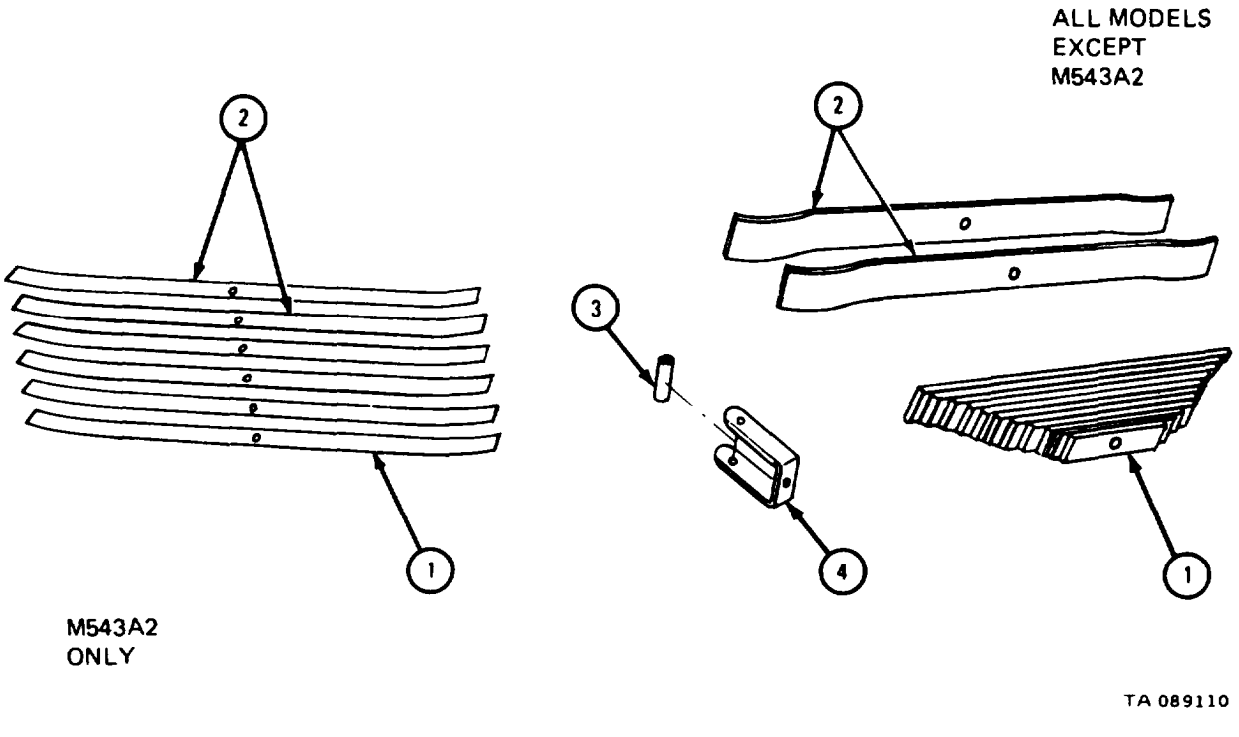
1. Clean all parts with solvent.
2. Using wire brush, clean off any rust or corrosion on spring assembly (1).

NOTE

Only the two longest leaves (2) can be replaced. If any other leaves are damaged, throw away spring assembly (1) and get a new one.

3. Check that leaves (2) are not cracked, broken or worn. If either of two longest leaves are damaged, throw them away and get new ones.
4. Check that spring assembly (1) is not cracked, broken or worn. If spring assembly is damaged, throw it away and get a new one.
5. Check that four spacers (3) and four clips (4) are not damaged. If parts are damaged, throw them away and get new ones.

END OF TASK

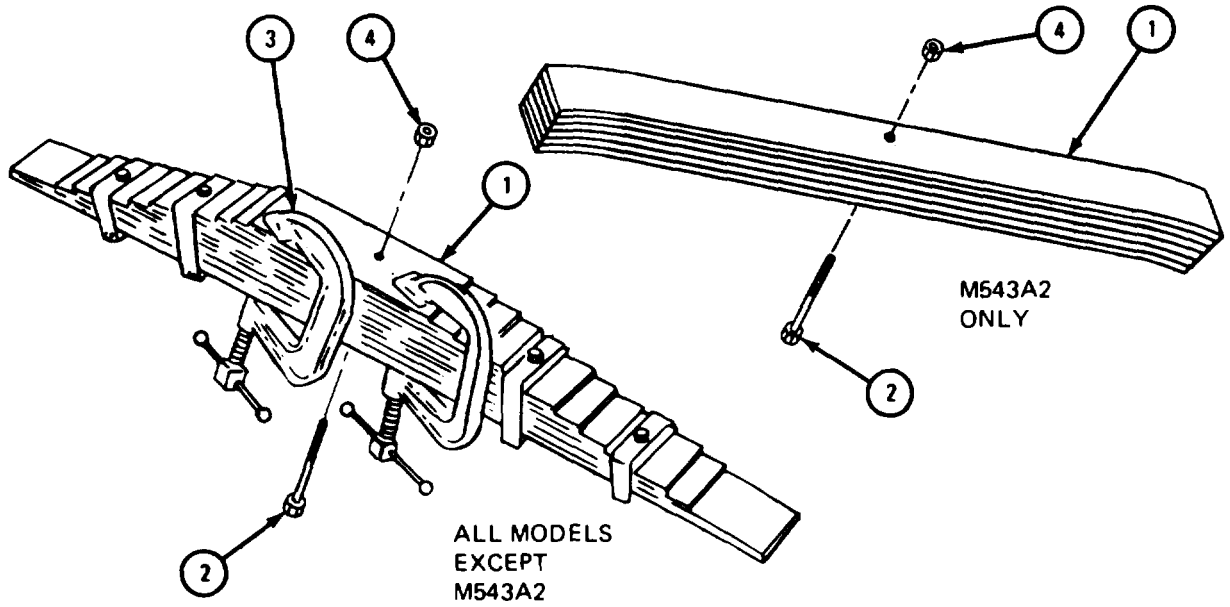


d. Assembly.

FRAME 1

1. Put a small amount of powdered graphite on each side of spring leaves (1).
2. Starting with the longest spring leaf (1), put spring leaves on center bolt (2) as shown.
3. Put on two C-clamps (3). Tighten C-clamps to squeeze spring leaves (1) together.
4. Put on nut (4).

GO TO FRAME 2



FRAME 2

NOTE

There are four spring clips on all trucks except the M543A2, which has none.

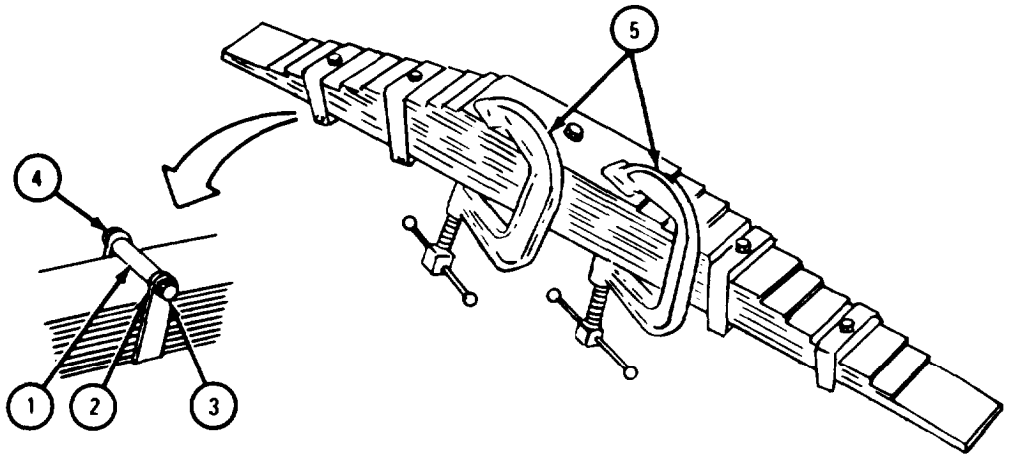
1. Put spacer (1) between ends of clip (2).
2. Put screw (3) through clip (2) and spacer (1).
3. Put on nut (4).
4. Peen over ends of screw (3).
5. Do steps 1 through 4 again for other three clips (2).
6. Take off two C-clamps (5).

NOTE

Follow-on Maintenance Action Required:

Replace rear spring. Refer to TM 9-2320-211-20.

END OF TASK



TA 089112

15-6. REAR SPRING SEAT REMOVAL, REPLACEMENT, AND ADJUSTMENT.

TOOLS: No special tools required

SUPPLIES: Bearing cap gasket
Artillery and automotive grease, type GAA, MIL-F-10924
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Clean rags

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

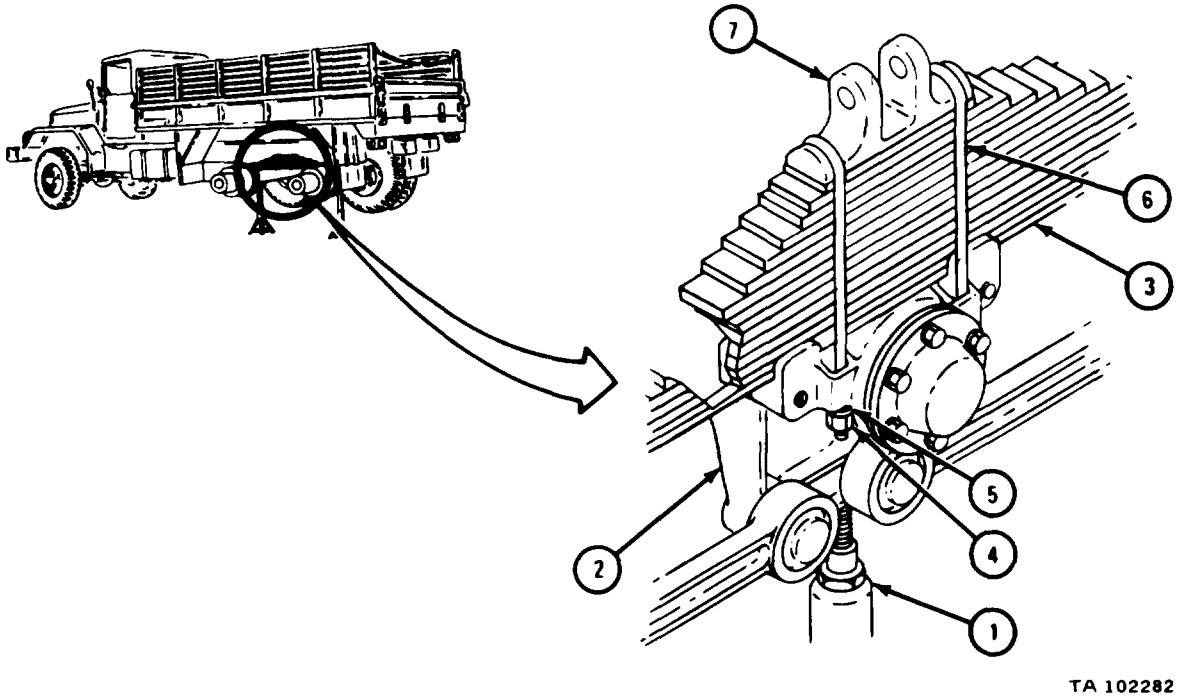
Preliminary Procedure. Take off wheels next to spring seat to be taken off. Refer to TM 9-2320-211-10.

b. Removal.

FRAME 1

1. Place jack (1) under cross tube bracket (2). Lift bracket high enough to take tube load off spring (3).
2. Take off four nuts (4). Take off four washers (5), two U-bolts (6), and saddle (7).

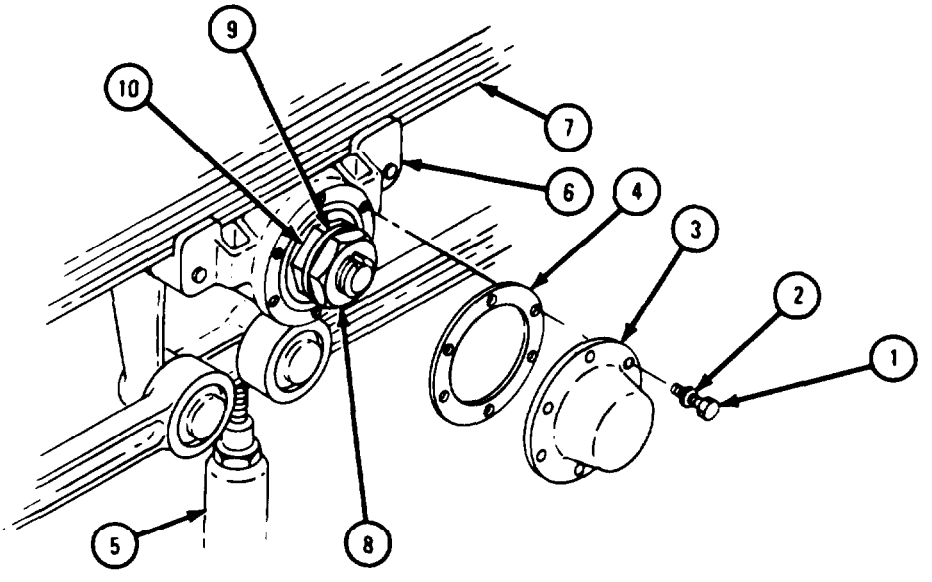
GO TO FRAME 2



FRAME 2

1. Take out six screws (1) and washers (2). Take off bearing cap (3) and gasket (4). Throw away gasket.
2. Lower jack (5) enough for spring seat (6) to clear spring (7).
3. Take off outer nut (8). Take off washer (9).
4. Take off inner nut (10).

GO TO FRAME 3



TA 102283

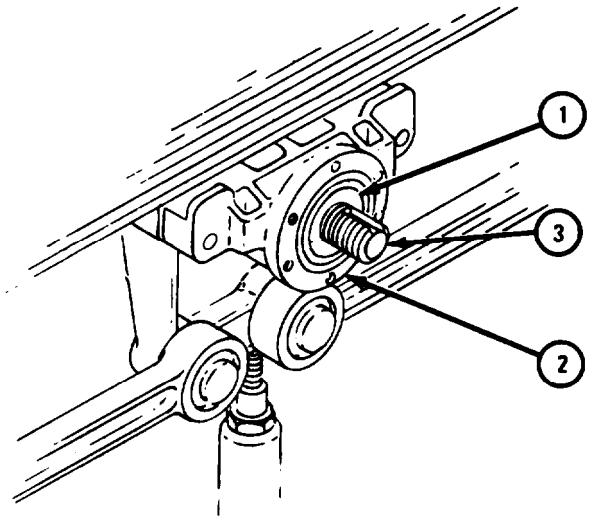
FRAME 3

NOTE

Outer bearing (1) will fall out when spring seat (2) is taken off cross tube (3).

1. Slide spring seat (2) off cross tube (3).
2. Tag outer bearing (1).

GO TO FRAME 4



TA 102284

FRAME 4

1. Using hammer and tire iron, pry and tap side to side and take washer (1), two dust seals (2), and wiper (3) off cross tube {4)

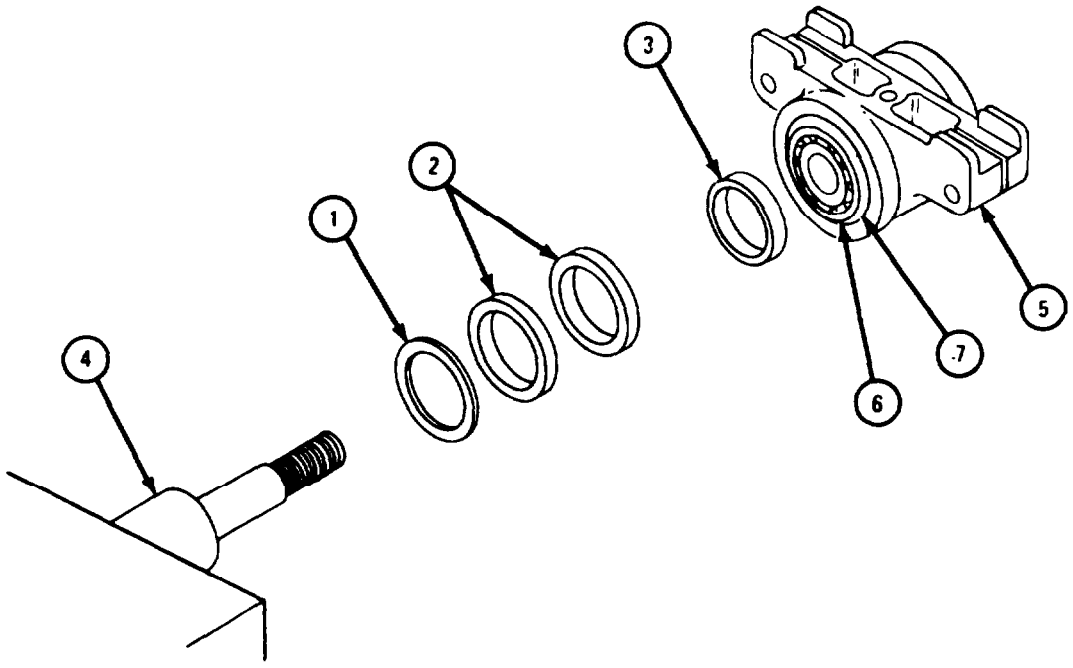
CAUTION

Put spring seat (5) on wood blocks when taking out bearing (6) and seal (7) so that they will not be damaged.

2, Tap around inside of inner bearing (6) and take out seal (7) and inner bearing

3. Tag inner bearing (6) so that it will be put back in the same place.

GO TO FRAME 5



TA 102285

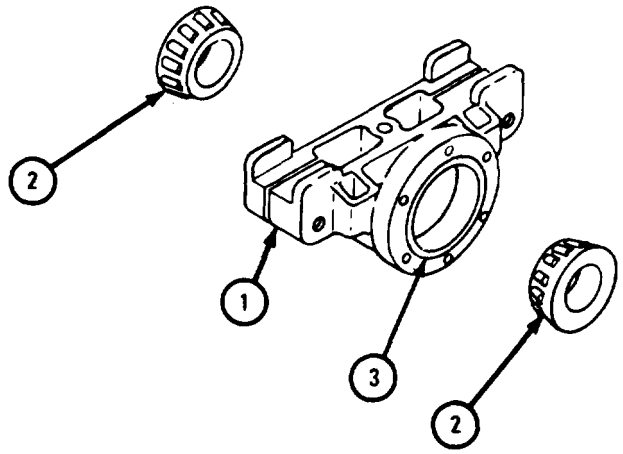
FRAME 5

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

1. Using rags, wipe all grease from spring seat (1), two bearings (2) and two bearing cups (3). Clean with solvent and air dry thoroughly. Do not use compressed air.
2. Check that bearings (2) and bearing cups (3) are not worn or damaged.
3. If bearings (2) or bearing cups (3) are damaged, drive bearing cups out of spring seat (1) and get new bearings and bearing cups.

END OF TASK



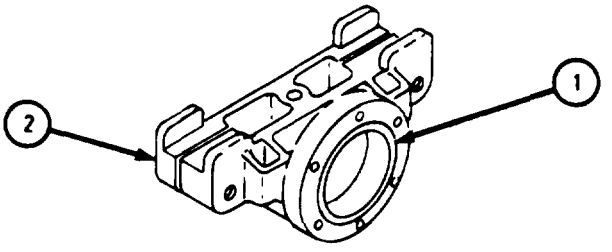
TA 102286

c. Replacement and Adjustment.

FRAME 1

1. If bearing cups (1) were taken out, place new bearing cup into each end of spring seat (2) with thin edge out.
2. Tap two bearing cups (1) into place. Make sure that bearing cups are seated.

GO TO FRAME 2

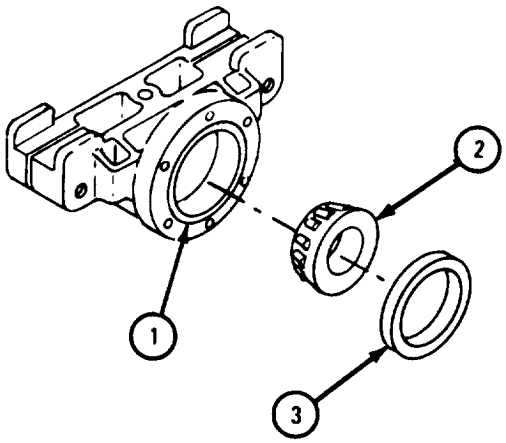


TA 102287

FRAME 2

1. Put a light coat of grease on inside of spring seat (1).
2. Pack inner bearing (2) with grease.
3. Place inner bearing (2) in spring seat (1) with small end in.
4. Tap seal (3) into spring seat (1) with seal lip into bearing (2).

GO TO FRAME 3

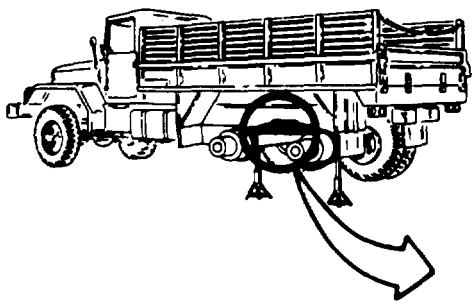


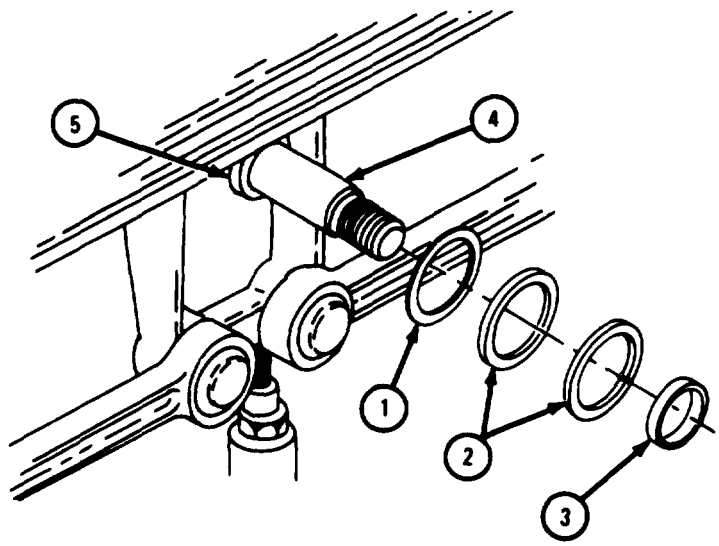
TA 102288

FRAME 3

1. Put washer (1), two seals (2), and wiper (3) on cross tube shaft (4).
2. Tap wiper (3) onto seat (5).

GO TO FRAME 4



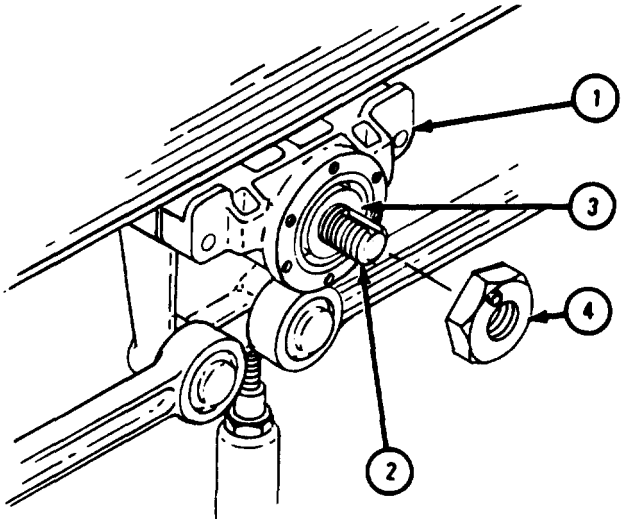


TA 102289

FRAME 4

1. Place spring seat (1) on cross tube (2) with empty end facing out.
2. Pack outer bearing (3) with grease. Make sure that grease fills all spaces.
3. Place outer bearing (3) in spring seat (1) with small end in.
4. Screw on inner adjusting nut (4) with bump facing out as shown. Do not tighten nut at this time.

GO TO FRAME 5

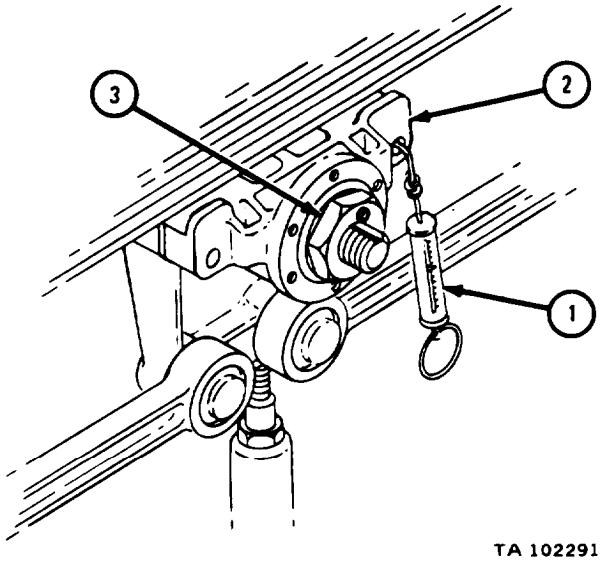


TA 102290

FRAME 5

1. Hook end of scale (1) in hole in spring seat (2) as shown.
2. Tighten inner adjusting nut (3).
3. Pull down on scale (1) until spring seat (2) just starts to turn. Scale should read between 24 and 32 pounds. (This is equal to 12 to 15 pounds preload on bearings.)
4. If reading is more than 32 pounds, loosen inner adjusting nut (3) and do step 3 again.
5. If reading is less than 24 pounds, tighten inner adjusting nut (3) and do step 3 again.
6. Do steps 4 and 5 again until reading on scale (1) is between 24 and 32 pounds.

GO TO FRAME 6

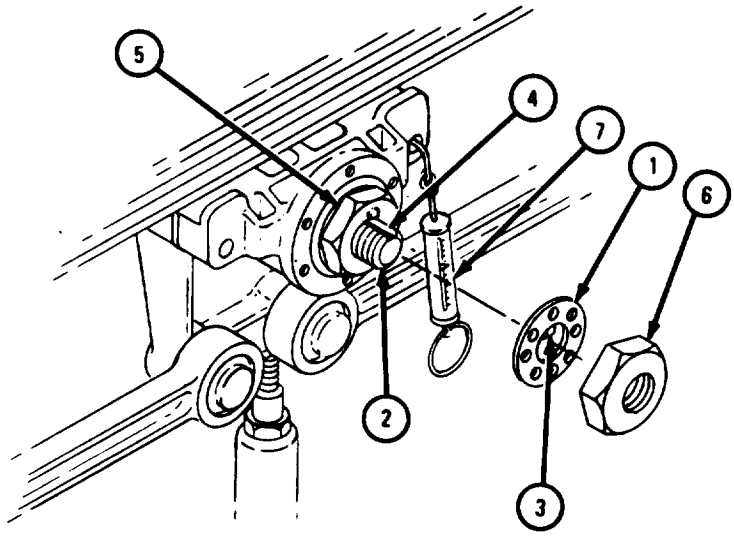


TA 102291

FRAME 6

1. Put washer (1) on cross tube (2) with tab (3) in keyway (4).
2. Bump on nut (5) should aline with a hole on washer (1). If it does not, turn nut to the right. Line up bump with next hole.
3. Put on nut (6).
4. Pull down on scale (7) until spring seat just starts to turn and read scale. If reading is not between 24 and 32 pounds, unscrew nut (6), take off washer (1), and do frame 4 again.

GO TO FRAME 7

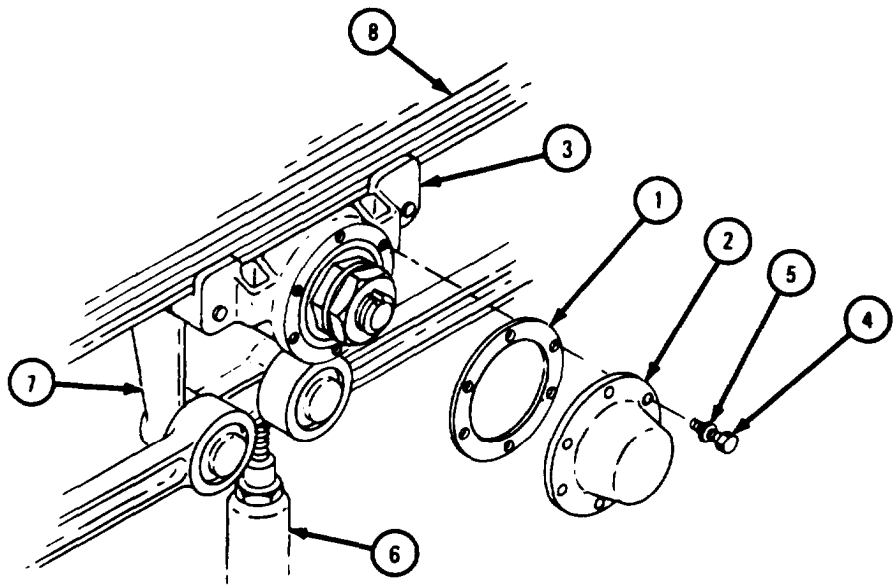


TA 102292

FRAME 7

1. Place gasket (1) and bearing cap (2) on spring seat (3), alining holes. Put in six screws (4) with washers (5).
2. Raise jack (6) under cross tube bracket (7) until spring (8) rests on spring seat (3).

GO TO FRAME 8



TA 102293

FRAME 8

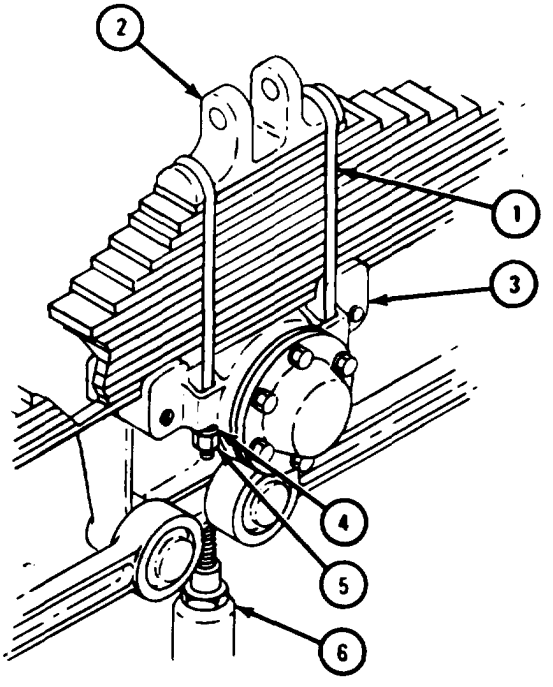
1. Place two U-bolts (1) over saddle (2) are through seat (3).
2. Put four washers (4) on ends of two U-bolts (1) and put on four nuts (5). Tighten nuts to 300 to 400 pound-feet.
3. Lower jack (6) and take it out.

NOTE

Follow-on Maintenance Action Required:

Replace wheels. Refer to TM 9-2320-211-10.

END OF TASK



TA 102294

Section III. TORQUE AND STABILIZER RODS

15-7. TORQUE ROD UPPER AND LOWER BRACKETS REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove hydraulic brake line and clamps. Refer to TM 9-2320-211-20.

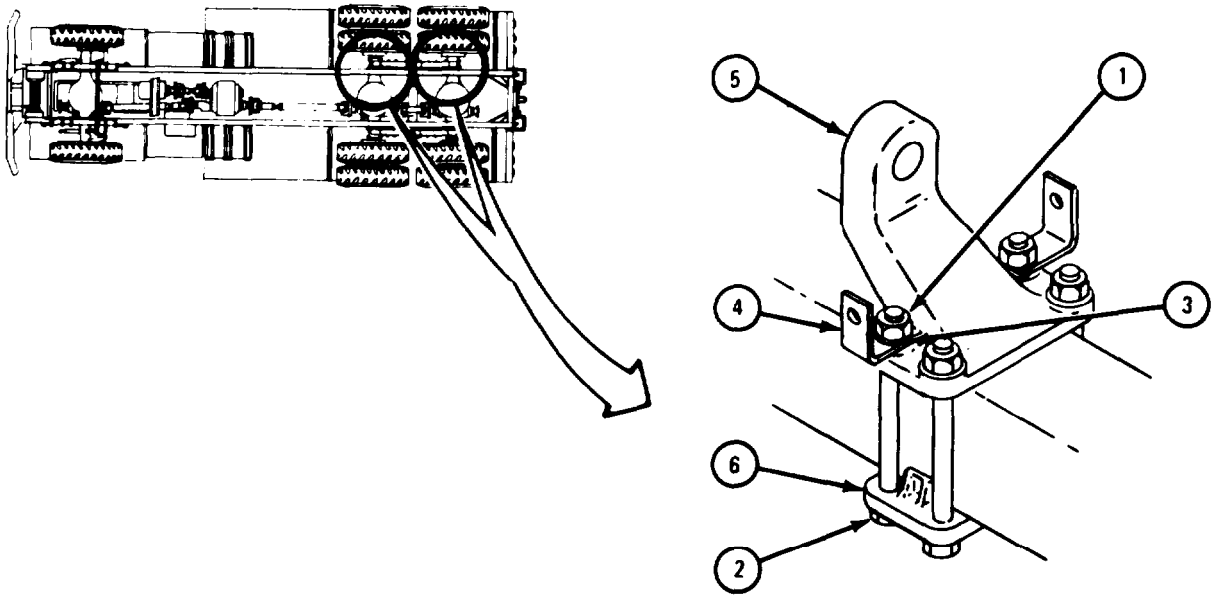
(2) Take off torque rod from bracket to be taken out. Refer to para 15-8.

b. Removal.

FRAME 1

1. Take off four nuts (1). Take out four screws (2) , four washers (3) , and two hydraulic line brackets (4).
2. Take off upper (5) and lower (6) brackets.

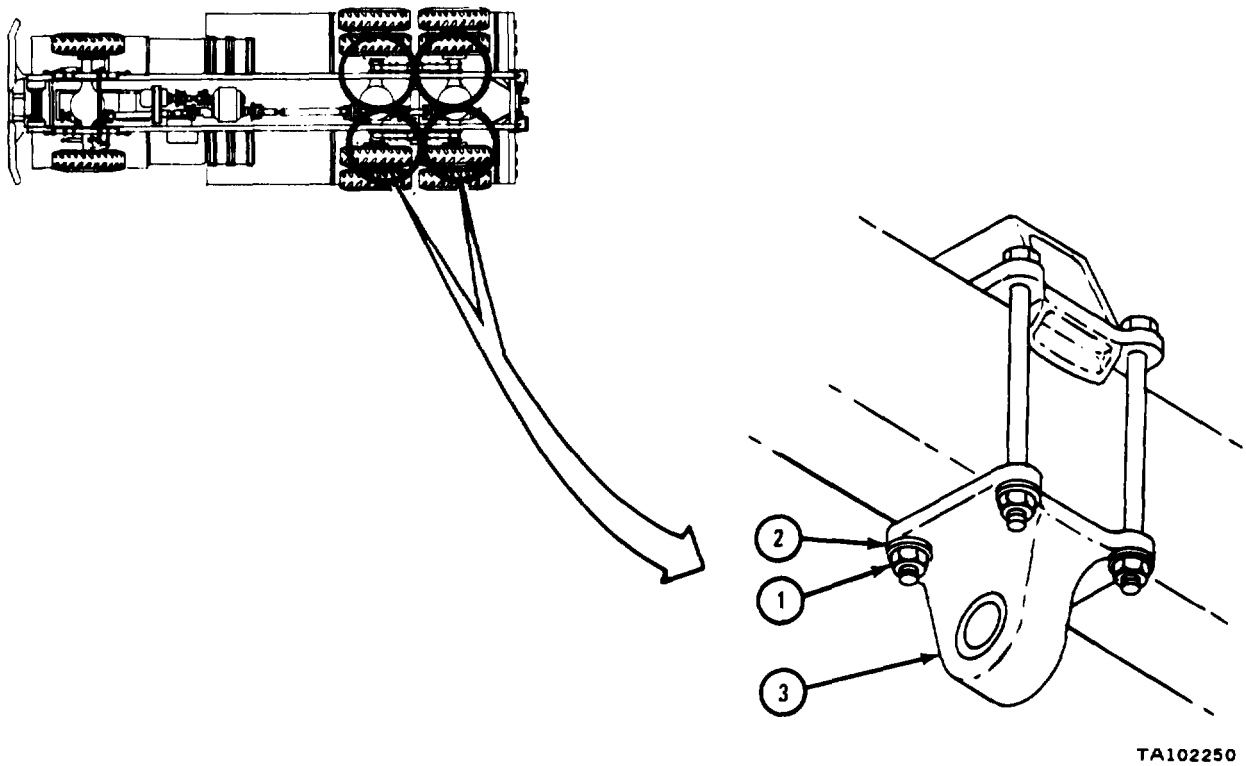
GO TO FRAME 2



FRAME 2

1. Take off four nuts (1) and washers (2).
2. Takeoff bracket (3).

END OF TASK

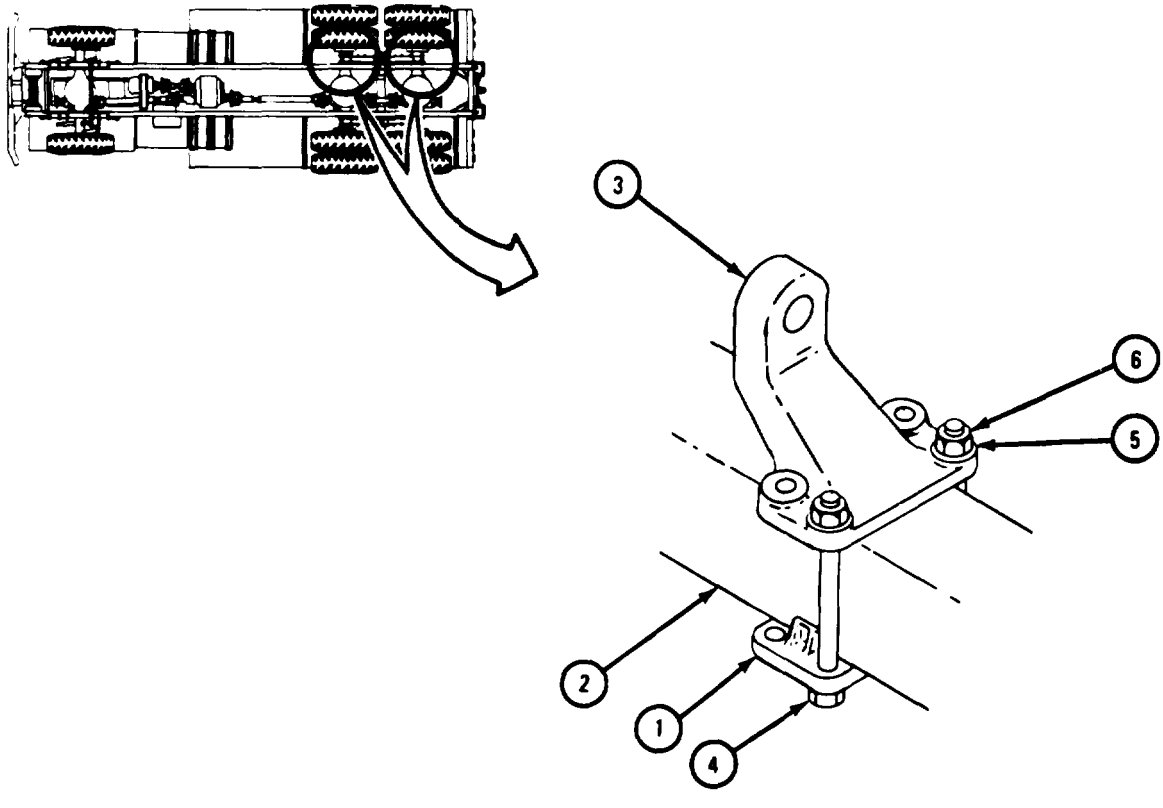


c. Replacement.

FRAME 1

1. Hold lower bracket (1) below axle (2), Put upper bracket (3) on top of axle.
2. Put two outer screws (4) up through both brackets. Put on two washers (5) and nuts (6).

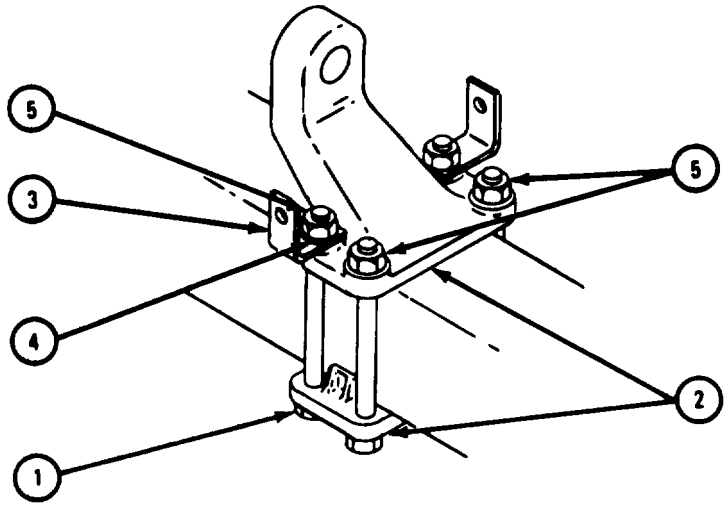
GO TO FRAME 2



FRAME 2

1. Put two inner screws (1) up through brackets (2).
2. Put two hydraulic line brackets (3) and two washers (4) on two screws (1). Put on two nuts (5).

GO TO FRAME 3



TA102252

FRAME 3

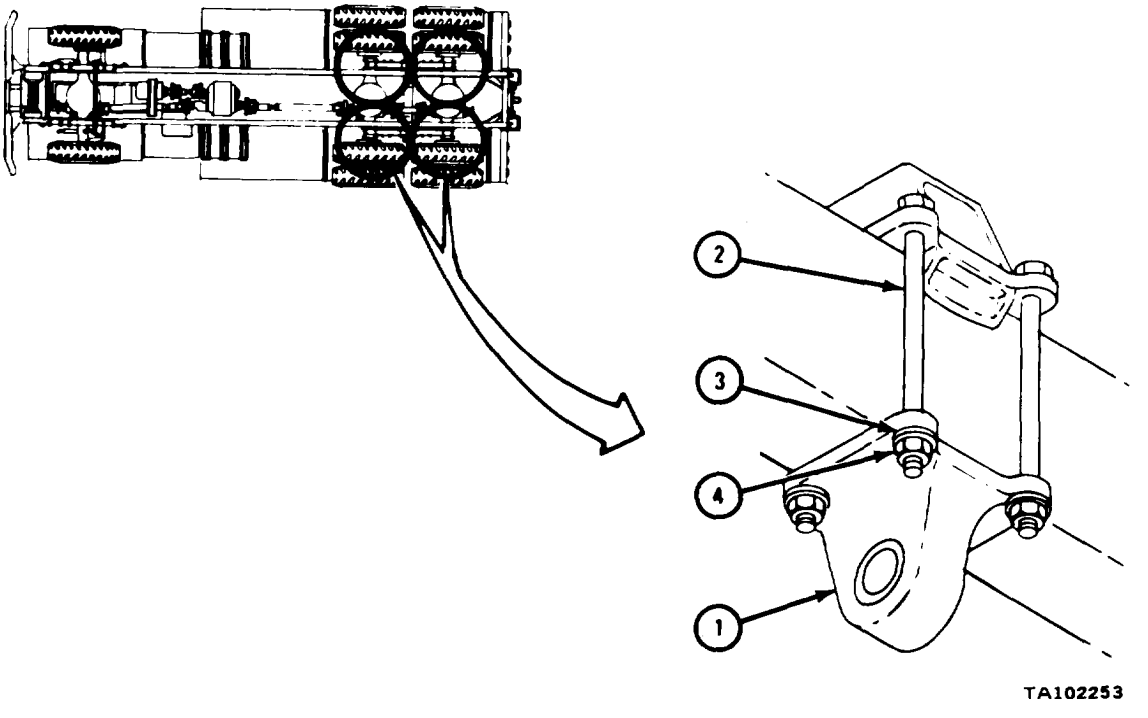
1. Place bracket (1) on four screws (2).
2. Put on four washers (3) and nuts (4).

NOTE

Follow-on Maintenance Action Required:

1. Replace hydraulic brake line and clamps. Refer to TM 9-2320-211-20.
2. Replace torque “rods. Refer to para 15-8.

END OF TASK



15-8. TORQUE ROD ASSEMBLY REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Cotter pin (6) (2 for each torque rod)

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. To remove upper torque rods on right side, right rear spring assembly must be removed first. Refer to para 15-6.

b. Removal.

FRAME 1

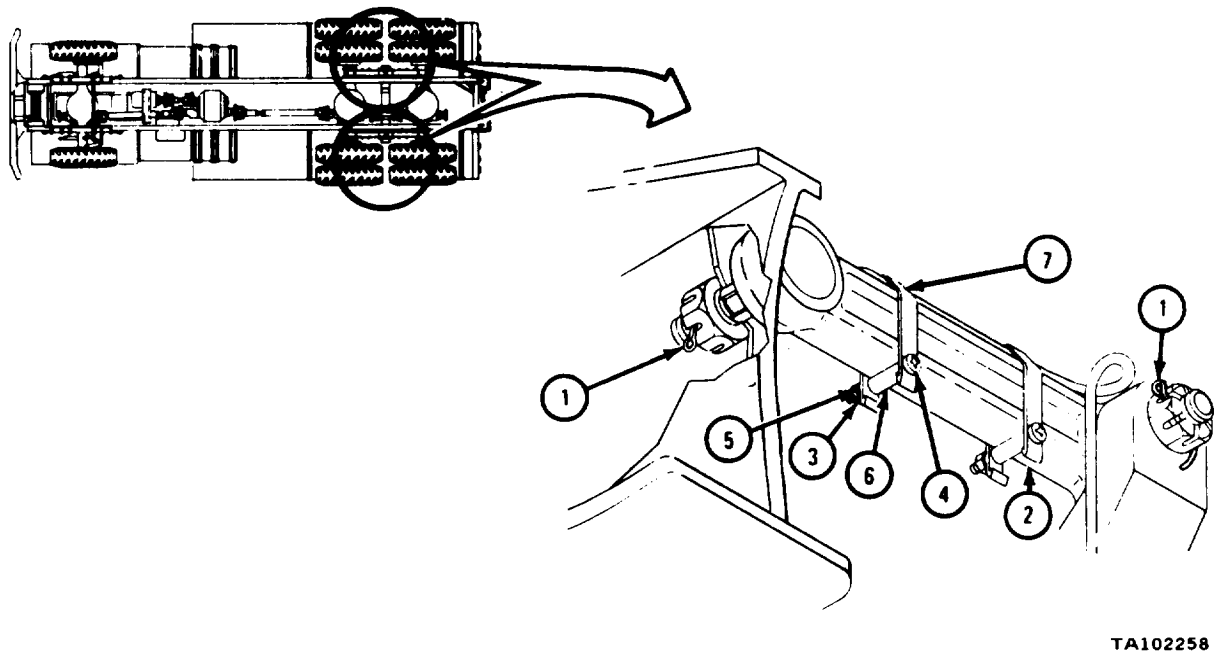
1. Take out cotter pin (1) at each end of torque rod (2) to be taken out. Throw away cotter pins.

NOTE

Items 3 through 7 are only on two upper torque rods.

2. Take off two nuts (3), screws (4), washers (5), and spacers (6). Take off two clips (7).

GO TO FRAME 2



FRAME 2

Soldier A 1. On upper torque rods (1), unscrew nuts (2) until they are even with ends of studs (3).

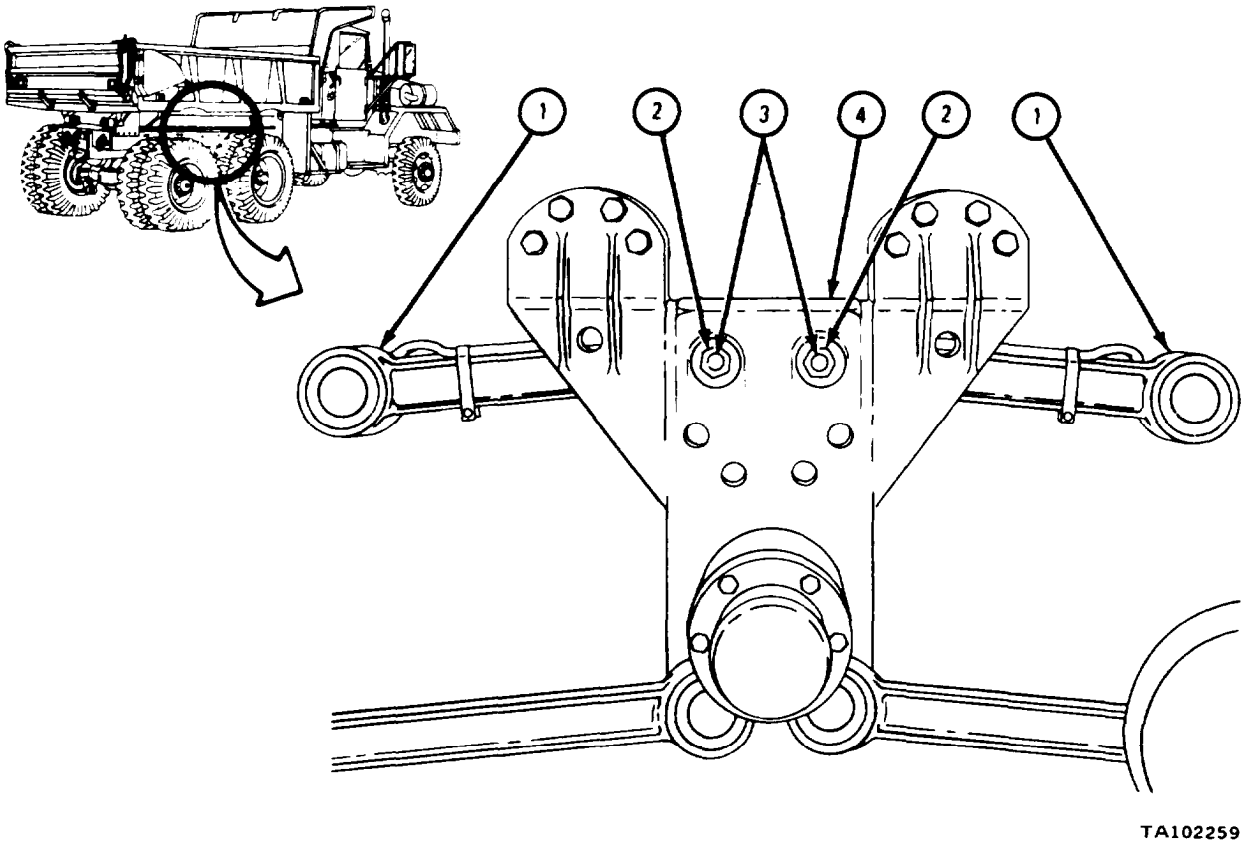
2. Hold end of steel stock against nuts (2) and studs (3).

Soldier B 3. Using sledge hammer, hit other end of steel stock and jar studs (3) loose.

4. Take off nuts (2).

5. Pry studs (3) from plate (4).

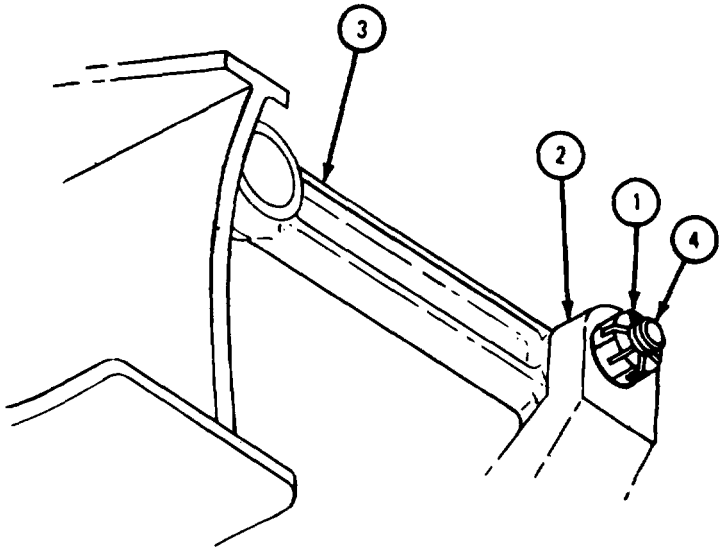
GO TO FRAME 3



FRAME 3

1. Takeoff nut (1).
2. Using hammer, sharply hit bracket (2) at other end of torque rod (3) to loosen studs (4).
3. Pry studs (4) from bracket (2). Hit bracket with hammer while prying with bar to loosen stud.
4. Take out torque rod (3).
5. Do steps 1 through 4 again for both ends of other torque rods (3).

END OF TASK



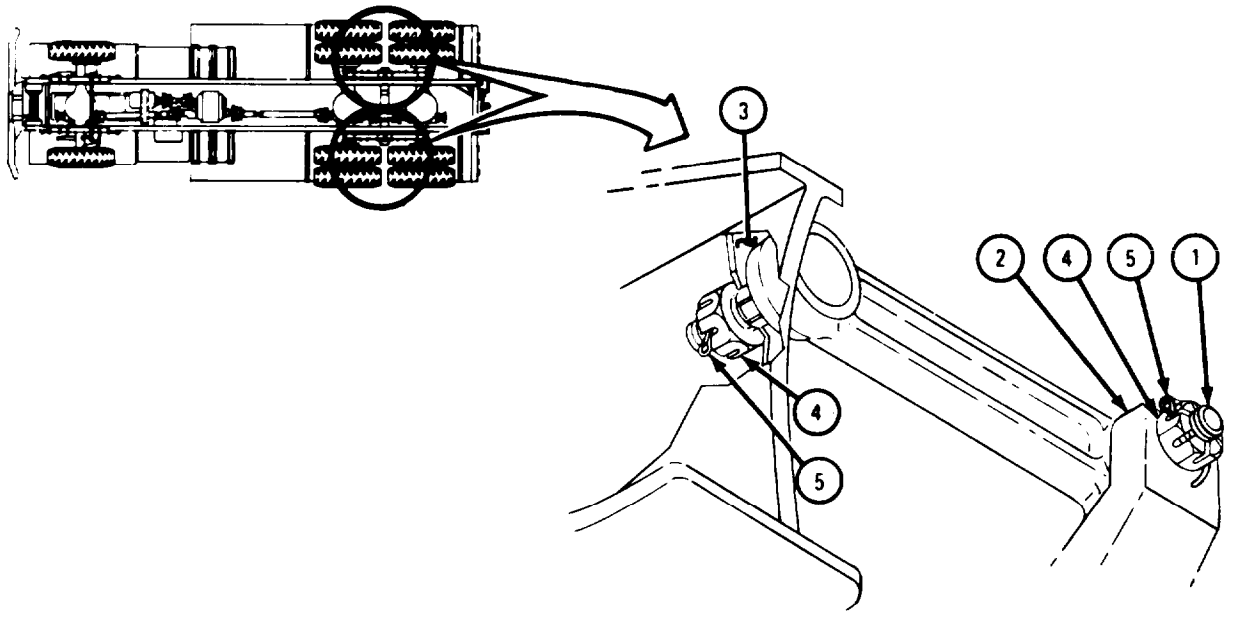
TA102260

c. Replacement.

FRAME 1

1. Put two torque rod studs (1) into bracket (2) and frame (3).
2. Put on two nuts (4).
3. Put cotter pin (5) through each nut (4) and stud (1).

IF UPPER TORQUE ROD HAS BEEN PUT BACK, GO TO FRAME 2.
IF LOWER TORQUE ROD HAS BEEN PUT BACK, END OF TASK



TA102261

FRAME 2

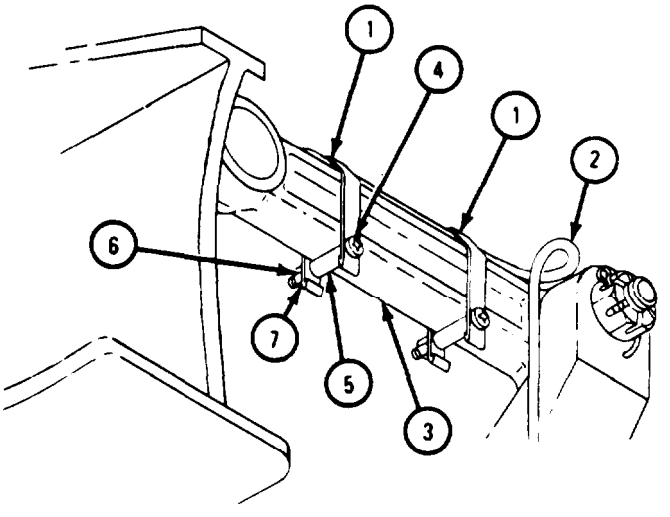
1. Place two clips (1) over brake line (2) and upper torque rod (3).
2. Put screw (4) through each clip (1) with spacer (5) and washer (6). Put on two nuts (7).

NOTE

Follow-on Maintenance Action Required:

Replace right rear spring assembly. Refer to para 15-6.

END OF TASK



TA102262

15-9. REAR SPRING CROSS TUBE REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set, front wheels chocked.

a. Preliminary Procedures.

(1) Jack up and support truck chassis. Refer to TM 9-2320-211-20.

(2) Remove rear wheels. Refer to TM 9-2320-211-10.

(3) Remove all lower torque rods. Refer to para 15-8.

(4) Remove rear springs and spring seats. Refer to para 15-6.

b. Removal.

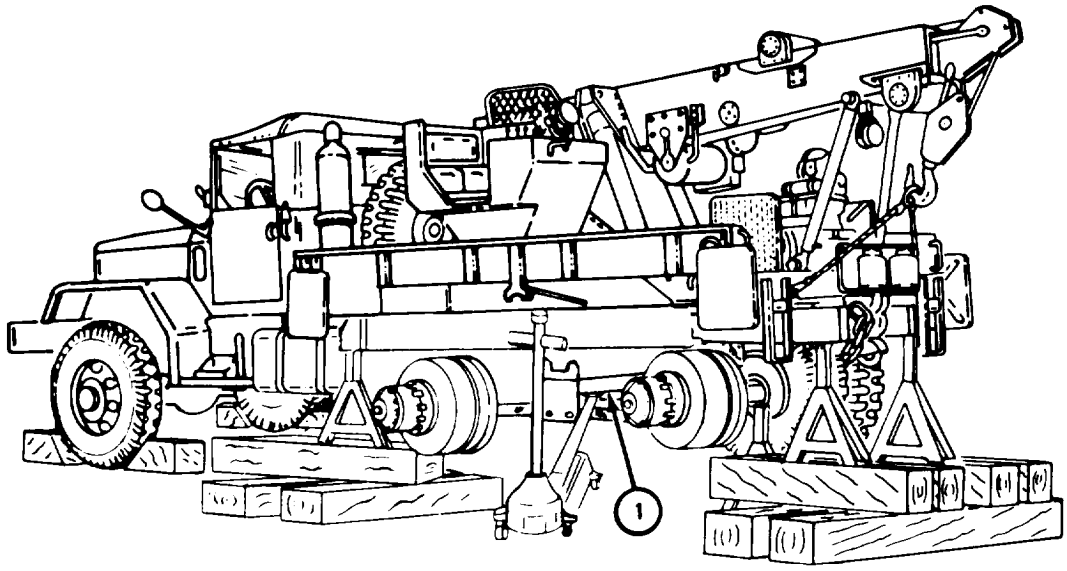
FRAME 1

WARNING

Cross tube (1) is very heavy. If it falls, it can cause injury to personnel and damage to equipment.

1. Put hydraulic jack under center of cross tube (1). Make sure it will support cross tube when it is lowered.

GO TO FRAME 2



TA 102264

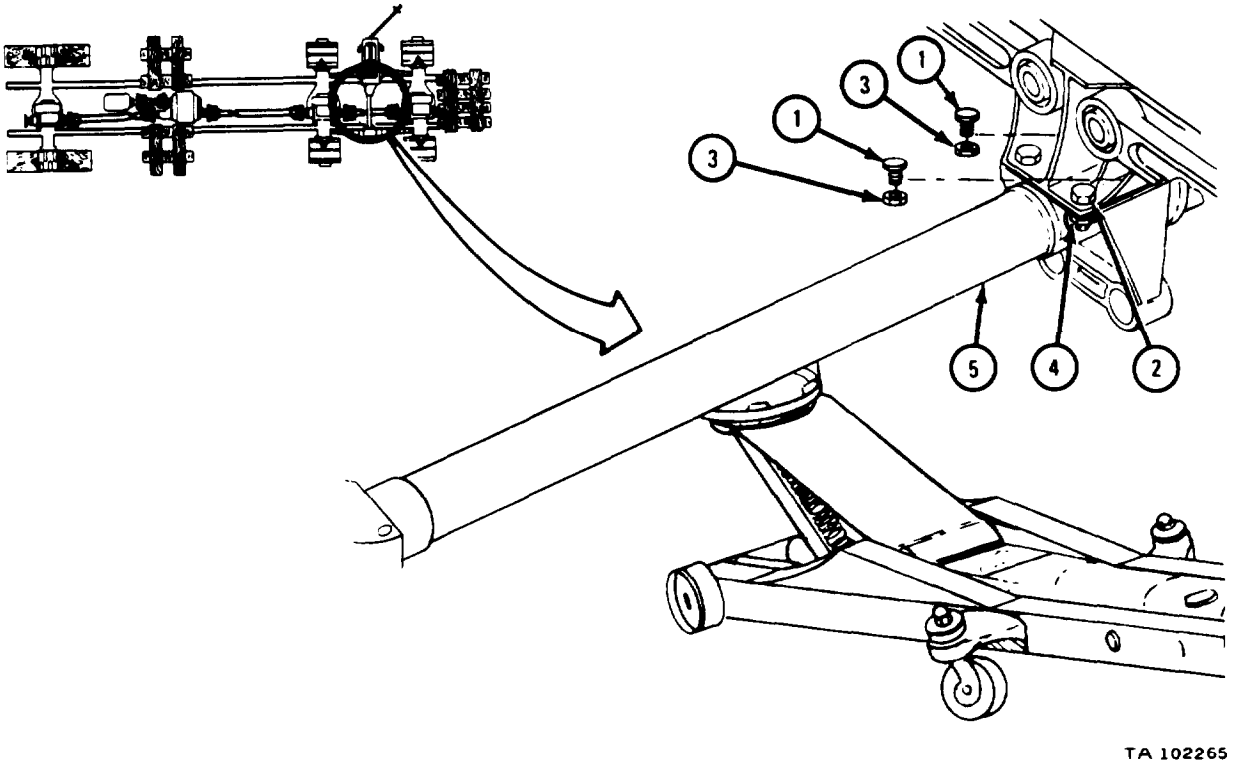
FRAME 2

NOTE

Capscrews (1 and 2) and nuts (3 and 4) are tightened to 1200 to 1300 pound-feet.

Soldier A	1.	Working under right side of truck using torque multiplier and hinged handle, take out four capscrews (1 and 2) and four nuts (3 and 4).
	2.	Do step 1 again on left side of truck.
Soldier B	3.	Using hydraulic jack, lower cross tube (5) all the way down.
Soldiers A and B	4.	Take cross tube (5) out from under truck.

END OF TASK



TA 102265

c. Replacement.

FRAME 1

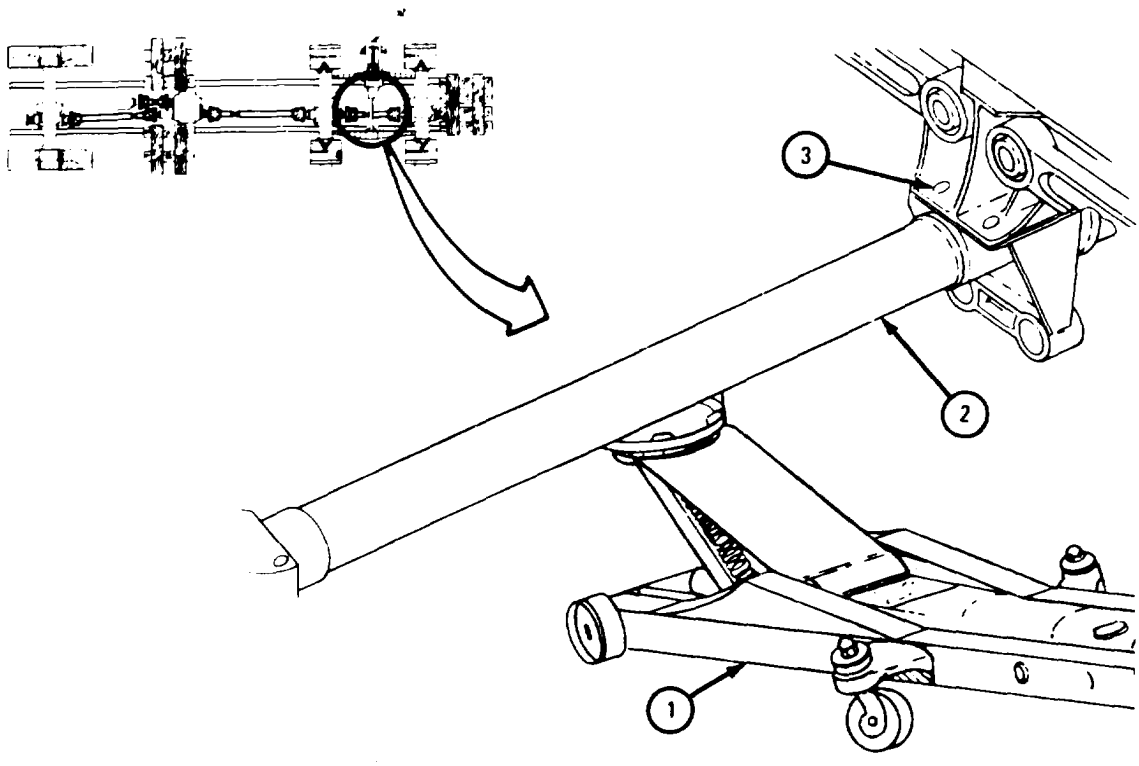
Soldier A 1. Using hydraulic jack (1), put cross tube (2) under truck.

Soldier B 2. Working under truck, guide hydraulic jack into place. Be sure that jack supports cross tube (2).

Soldier A 3. Using hydraulic jack (1), raise cross tube (2).

Soldier B 4. Guide cross tube (2) into place and aline screw holes (3).

GO TO FRAME 2

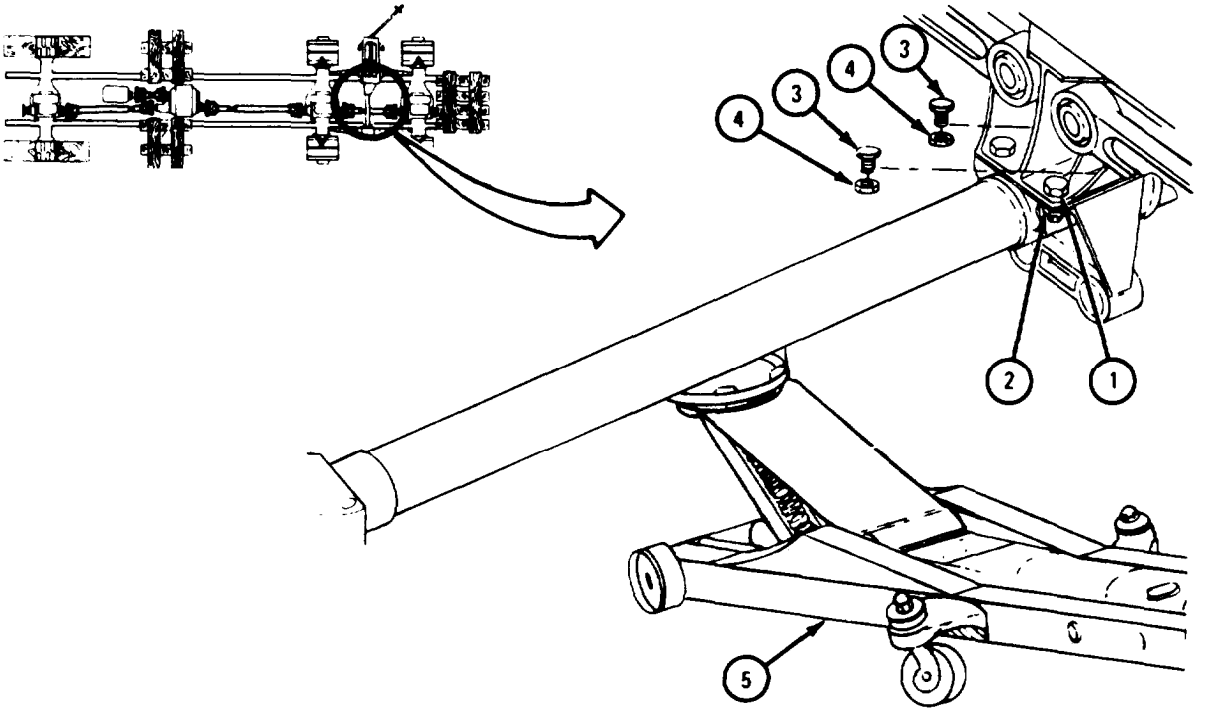


TA 102266

FRAME 2

1. Working under right side of truck, put in and hold two capscrews (1).
2. Put on two nuts (2). Using torque wrench, torque multiplier, and 1-inch drive extension, tighten nuts to 1200 to 1300 pound-feet.
3. Put in two screws (3) and two nuts (4). Using torque wrench, torque multiplier, and l-inch drive extension, tighten nuts to 1200 to 1300 pound-feet.
4. Do steps 1 through 3 again on left side of truck.
5. Lower and take out hydraulic jack (5).

GO TO FRAME 3



TA 102267

FRAME 3

NOTE

Follow-on Maintenance Action Required:

1. Replace rear spring seats and rear springs. Refer to para 15-6.
2. Replace lower torque rods, Refer to para 15-8.
3. Replace rear wheels. Refer to TM 9-2320-211-10.
4. Remove supports and lower truck chassis. Refer to TM 9-2320-211-20.

END OF TASK

15-10. REAR AXLE BOGIE SUPPORT BRACKET REMOVAL, REPAIR, AND REPLACEMENT (TRUCKS M51A2 AND M52A2).

NOTE

This task is the same for the right and left rear bogie support brackets. This task is shown for the left rear bogie support bracket.

TOOLS: No special tools required

SUPPLIES: Machine screw (8)
Self-locking nut (8)

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Jack up and support rear axle housings. Refer to TM 9-2320-211-20.

(2) Raise and support truck frame to take load off springs. Refer to TM 9-2320-211-20.

(3) Remove rear wheels. Refer to TM 9-2320-211-10.

(4) Remove torque rods from support bracket (right side only). Refer to TM 9-2320-211-20.

(5) Remove rear spring. Refer to TM 9-2320-211-20.

(6) Remove fifth wheel assembly (truck M52A2). Refer to TM 9-2320-211-20.

(7) Raise dump body (truck M51A2). Refer to TM 9-2320-211-10.

(8) Raise safety braces (truck M51A2). Refer to TM 9-2320-211-20.

b. Removal.

WARNING

Cross tube is heavy. Make sure jacks will support cross tube when it is lowered. If cross tube falls, it can cause injury to personnel.

FRAME 1

1. Place hydraulic jacks (1) under each end of cross tube (2) to hold weight when four screws (3) are taken out.

Soldier A 2. Hold four screws (3).

NOTE

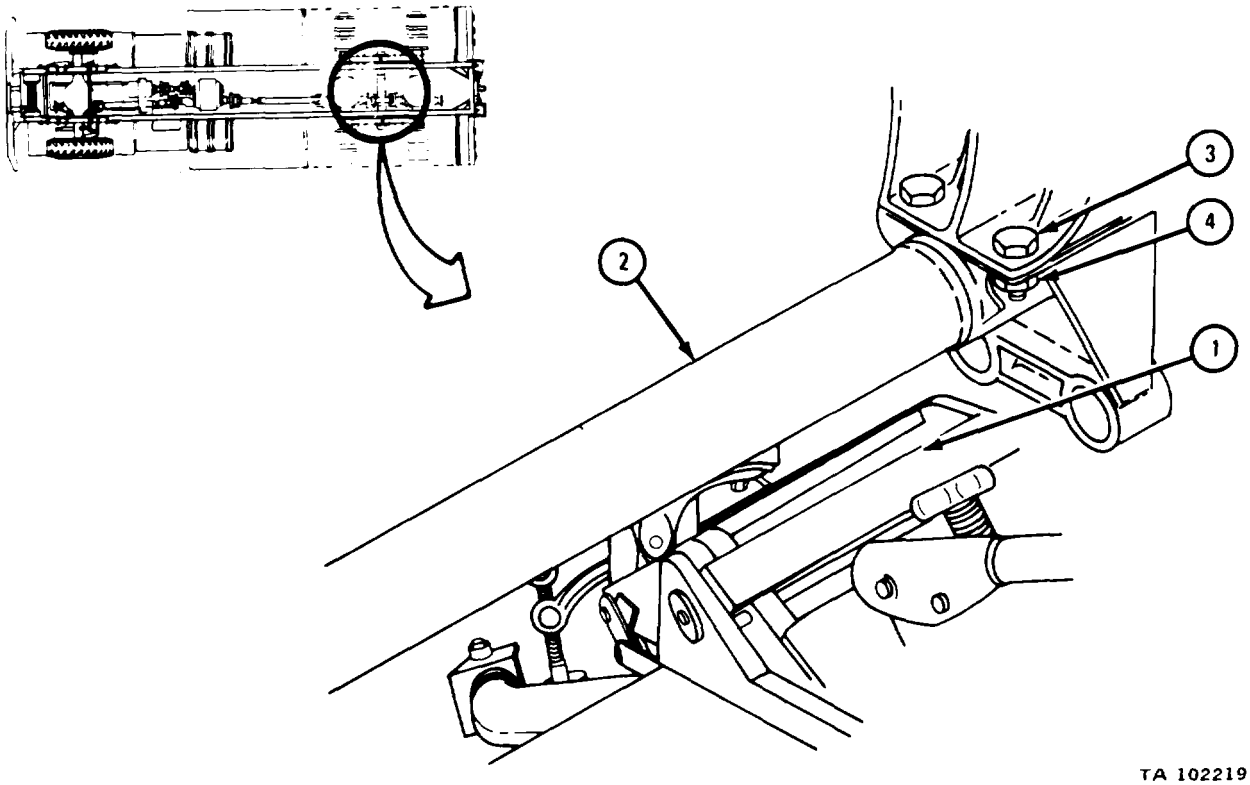
Screws (3) are tightened to 1200 to 1300 pound-feet.

Soldier B 3. Using socket with 3-foot breaker bar and wrench multiplier, take off four nuts (4).

Soldier A 4. Take out four screws (3).

5. Lower cross tube (2) two inches.

GO TO FRAME 2



FRAME 2

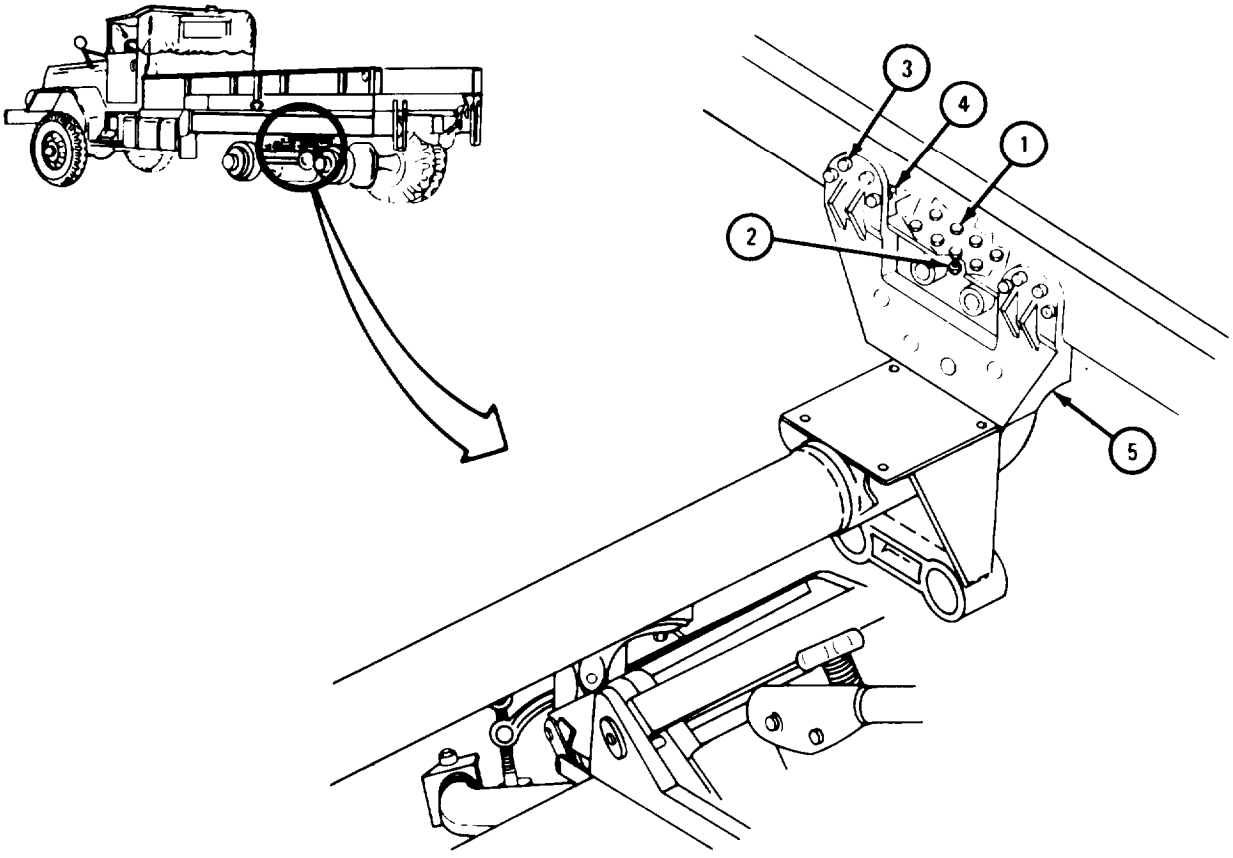
Soldier A 1. Hold eight screws (1).

Soldier B 2. Take off eight nuts (2).

Soldier A 3. Center punch and drill out eight rivets (3).

Soldier B 4. Take out eight screws (4), and boggie support bracket (5).

END OF TASK



TA 102220

c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair. Check that bracket is not damaged, bent or cracked. Repair by welding or straightening. Refer to TM 9-237 and FM 43-2, If more repair is needed, get a new part.

e. Replacement.

FRAME 1

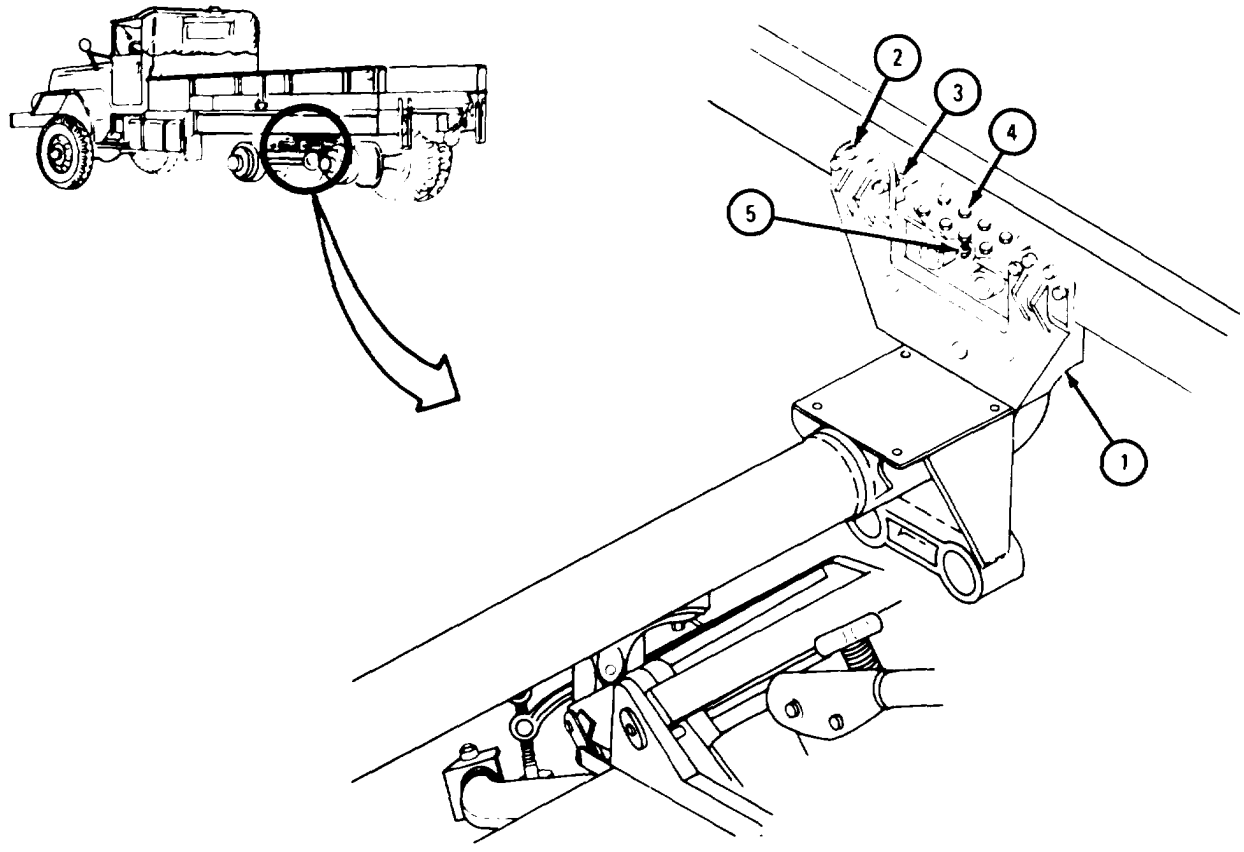
Soldier A 1. Put bogie support bracket (1) in Place. Aline holes and put in eight screws (2).

Soldier B 2. Put on eight nuts (3) and tighten nuts to 145 to 160 pound-feet.

Soldier A 3. Put in four screws (4) and hold them.

Soldier B 4. Put on four nuts (5) and tighten nuts to 145 to 160 pound-feet.

GO TO FRAME 2



FRAME 2

Soldier A 1. Using jacks (1), raise cross tube (2) into place under bogie support brackets (3). Aline holes in each cross tube bracket (4) with holes in bogie support bracket at each side of truck.

2. Put four screws (5) through each bogie support bracket (3) and hold them. Let wrench wedge against sides of bogie support bracket due to very high tightness being put on nuts (6).

Soldier B 3. Put on four nuts (6) at both sides of truck. Tighten nuts to 1200 to 1300 pound-feet.

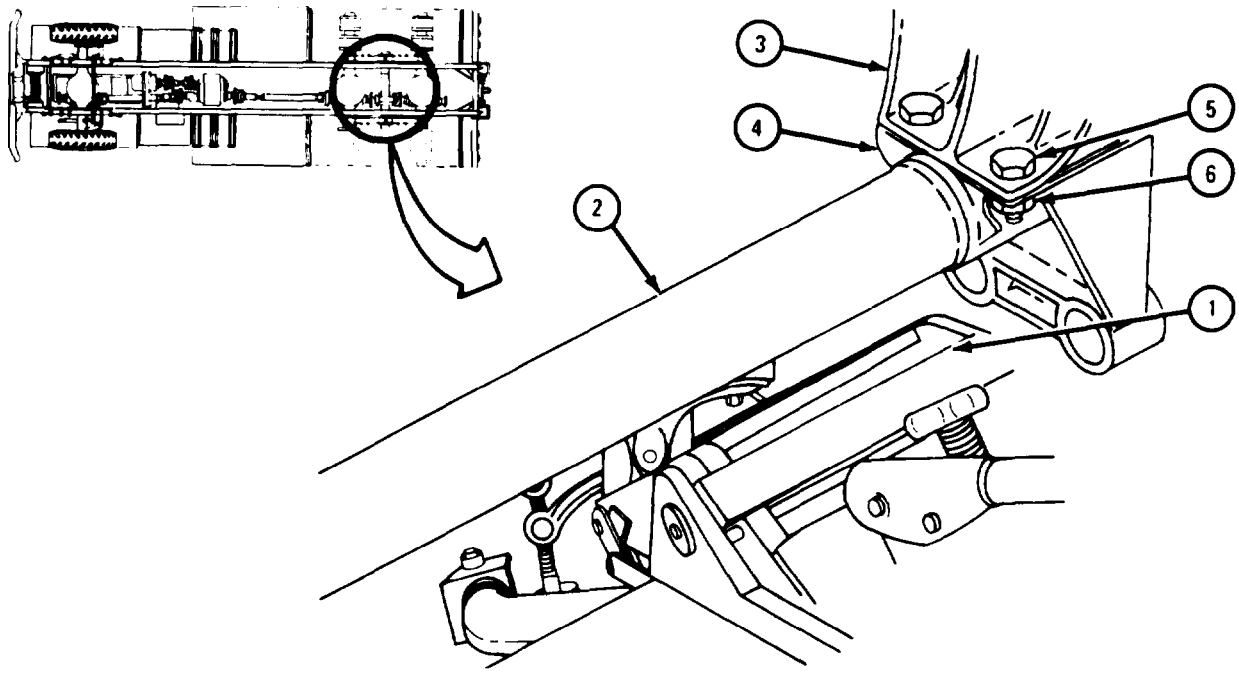
4. Take out jacks (1).

NOTE

Follow-on Maintenance Action Required:

1. Replace rear spring. Refer to TM 9-2320-211-20.
2. Replace torque rods. Refer to TM 9-2320-211-20.
3. Replace rear wheels. Refer to TM 9-2320-211-10.
4. Remove supports and lower truck chassis. Refer to TM 9-2320-211-20.
5. Replace fifth wheel assembly (truck M52A2). Refer to TM 9-2320-211-20.
6. Lower safety braces (truck M51A2). Refer to TM 9-2320-211-20.
7. Lower dump body (truck M51A2). Refer to TM 9-2320-211-10.

END OF TASK



TA 102222

CHAPTER 16

BODY, CAB, AND HOOD GROUP MAINTENANCE

Section I. SCOPE

16-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for body, cab, and hood components, fender, running boards, and windshield assembly, seats, tools and stowage boxes, cargo bodies, and special purpose bodies for which there are authorized corrective maintenance tasks at the direct and general support maintenance levels.

16-2. EQUIPMENT ITEMS NOT COVERED . All equipment items for which corrective maintenance is authorized at the direct and general support maintenance levels are covered in this chapter.

Section II. BODY, CAB, AND HOOD COMPONENTS

16-3. HOOD SIDE PANEL REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Open hood. Refer to TM 9-2320-211-10.

(2) If working on right hood side panel, take off air tube to air filter. Refer to TM 9-2320-211-20.

b. Removal.

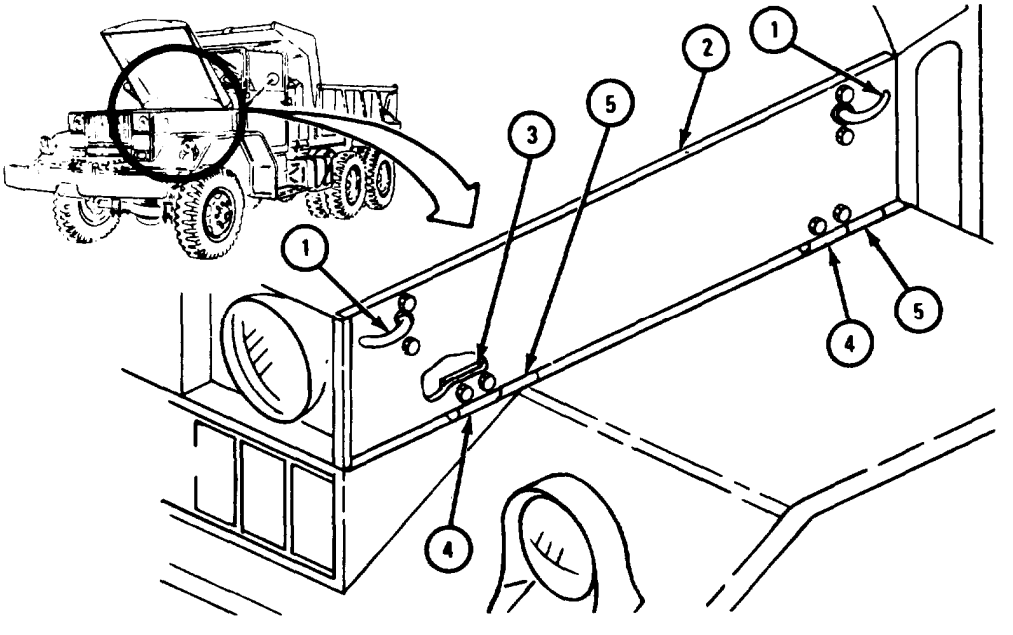
FRAME 1

NOTE

This task is shown for the left hood side panel.

1. Pull latches (1) and open hood side panel (2).
2. Raise retainer latch (3).
3. Slide hood side panel (2) toward front of truck to free two hinge halves (4) from two hinge halves (5).
4. Lift hood side panel (2) off truck.

END OF TASK



TA 089121

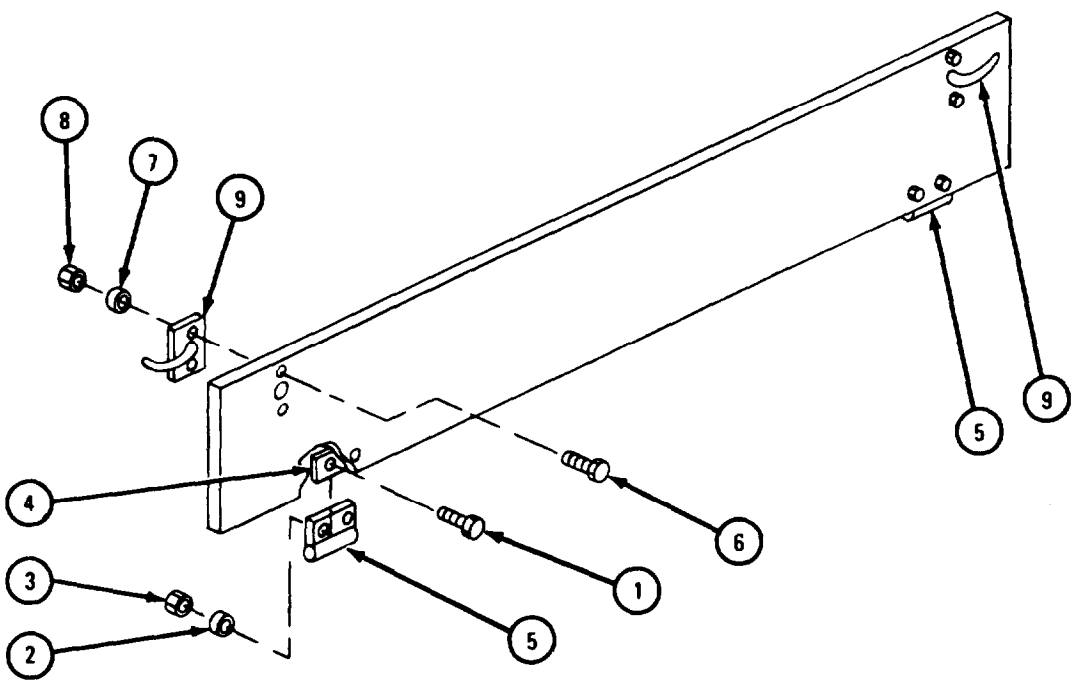
c. Disassembly.

FRAME 1

1, Take out four screws (1), four washers (2), four nuts (3), retainer clip (4), and two hinge halves (5).

2. Take out four screws (6), four washers (7), four nuts (8), and two latches (9).

END OF TASK



d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

NOTE

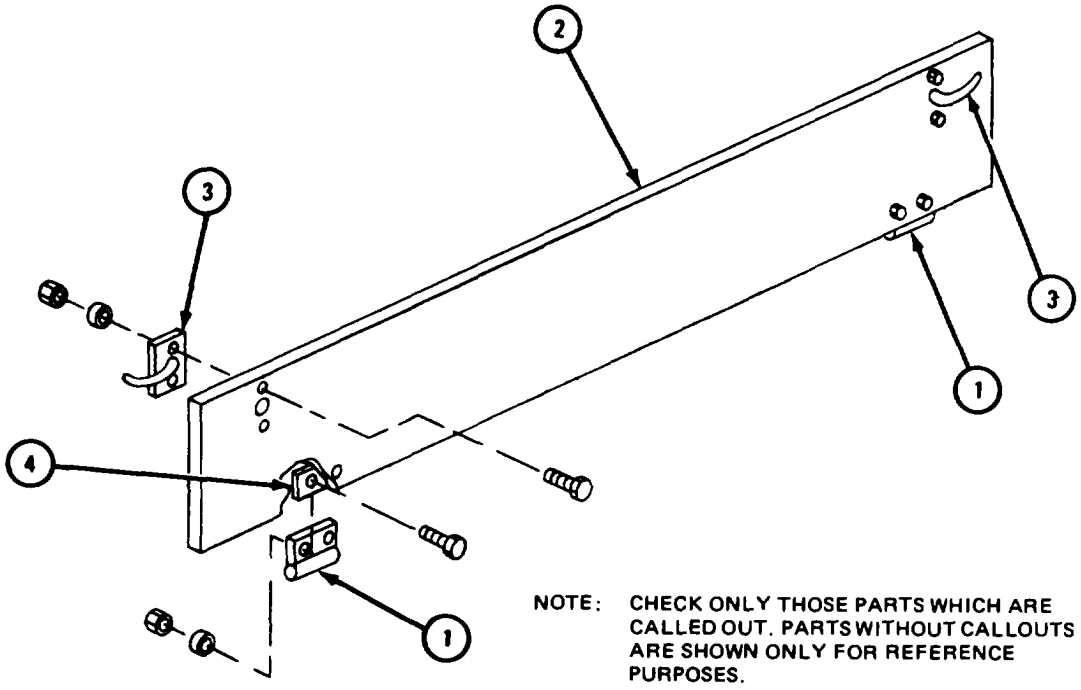
Clean all parts before inspection and after repair.

Inspection and Repair.

FRAME 1

1. Check that two hinge halves (1) have no cracks or worn hinge pin holes. Weld cracked hinge half. Refer to TM 9-23'/.
2. Check that hood side panel (2) has no dents, bends or cracks. Straighten bends and dents. Refer to FM 43-2. Weld cracks. Refer to TM 9-237.
3. Check that two latches (3) work freely without binding. If latches are damaged, get new ones.
4. Check that retainer clip (4) has no cracks or broken ends.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

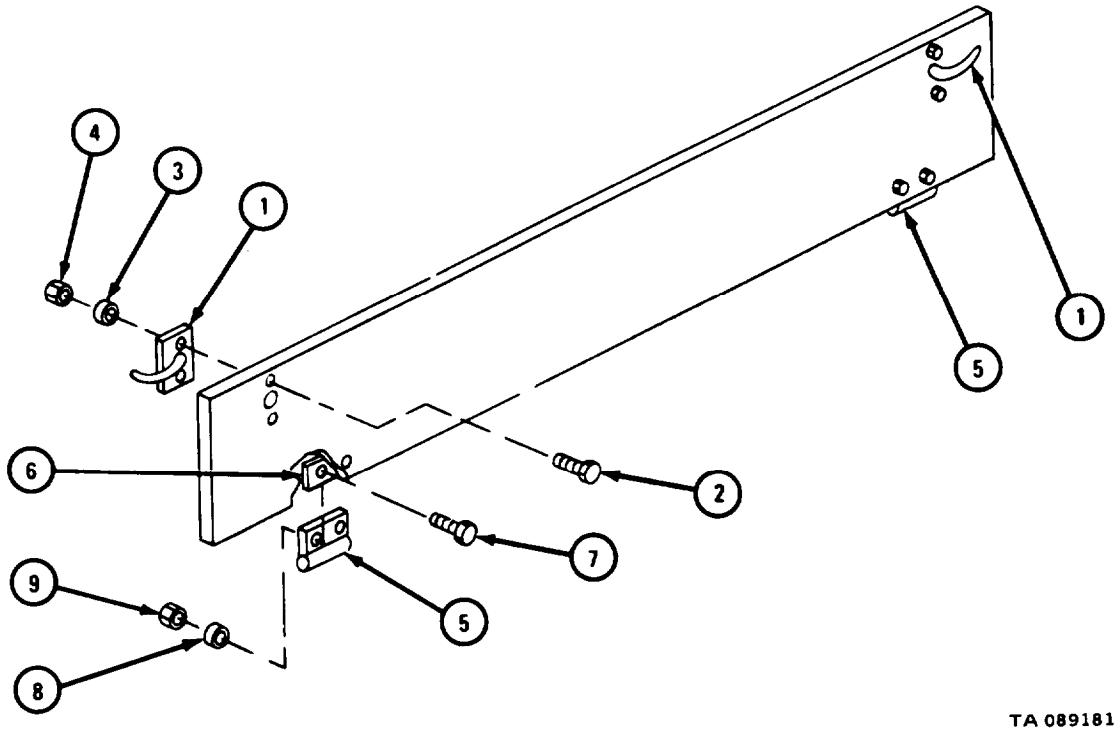
TA 089167

f. Assembly.

FRAME 1

1. Put on two latches (1) and put in four screws (2), washers (3), and nuts (4).
2. Put on two hinge halves (5) and retainer clip (6). Put in four screws (7), washers (8), and nuts(9).

END OF TASK



TA 089181

Replacement

FRAME 1

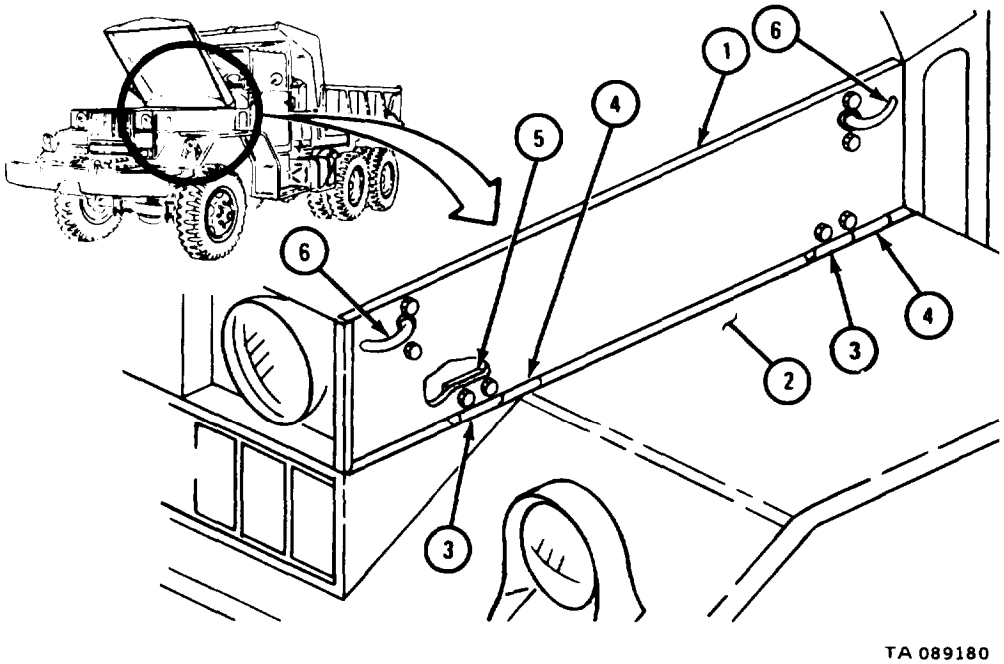
1. Slide hood side panel (1) on fender (2) toward rear of truck and mate hinge halves (3 and 4) until retainer clip (5) locks hinges in position.
2. Close hood side panel (1) by pulling on latches (6).

NOTE

Follow-on Maintenance Action Required:

1. If right hood panel was worked on, replace air tube to air filter. Refer to TM 9-2320-211-20.
2. Close hood. Refer to TM 9-2320-211-10.

END OF TASK



TA 089180

16-4. HOOD SUPPORT ROD AND CLIP REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

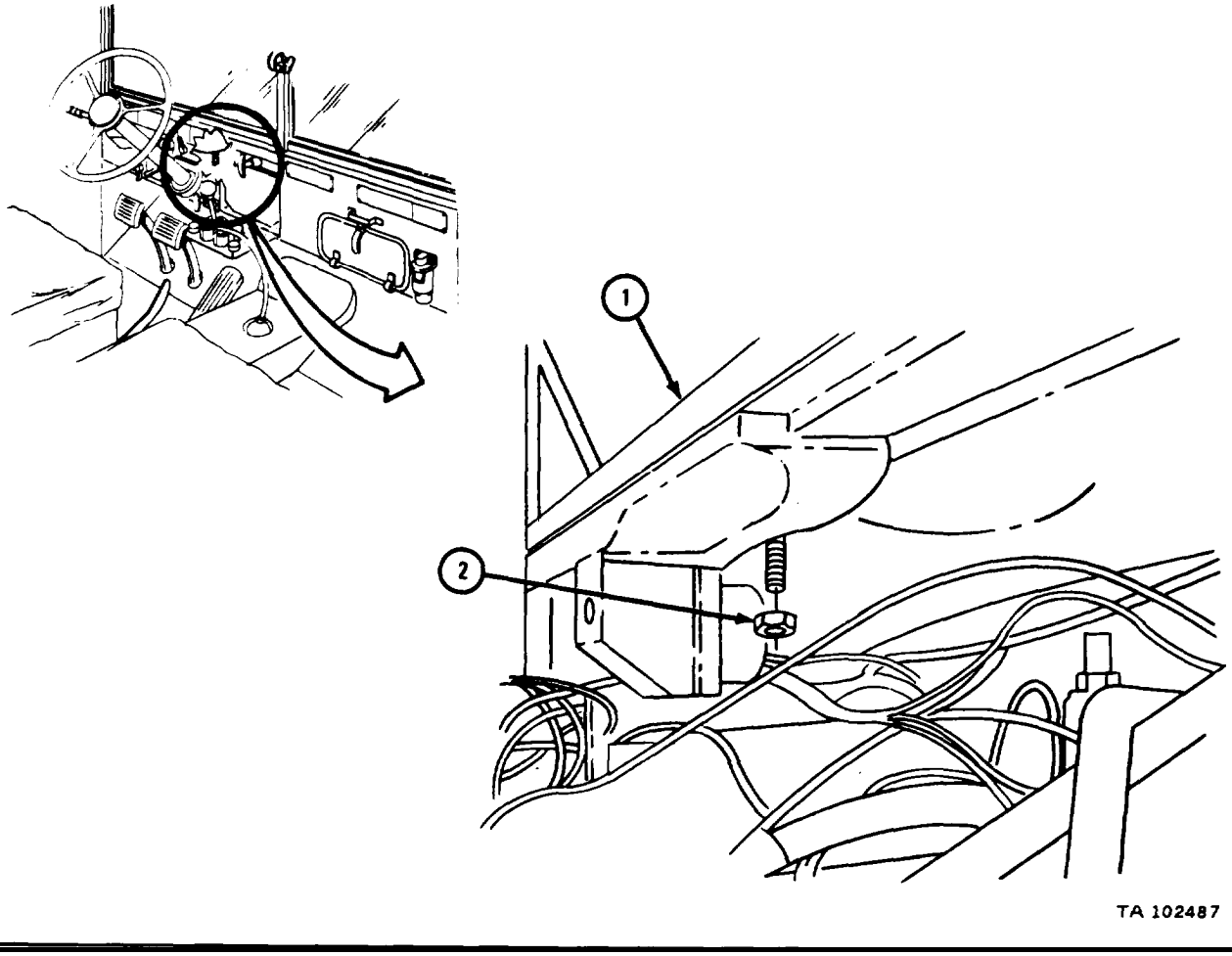
a. Preliminary Procedure. Slide down instrument cluster. Refer to TM9-2320-211-20.

b. Removal.

FRAME 1

1. Working inside cab to the right of steering column, reach under cowl (1) to find nut (2).
2. Take off nut (2).

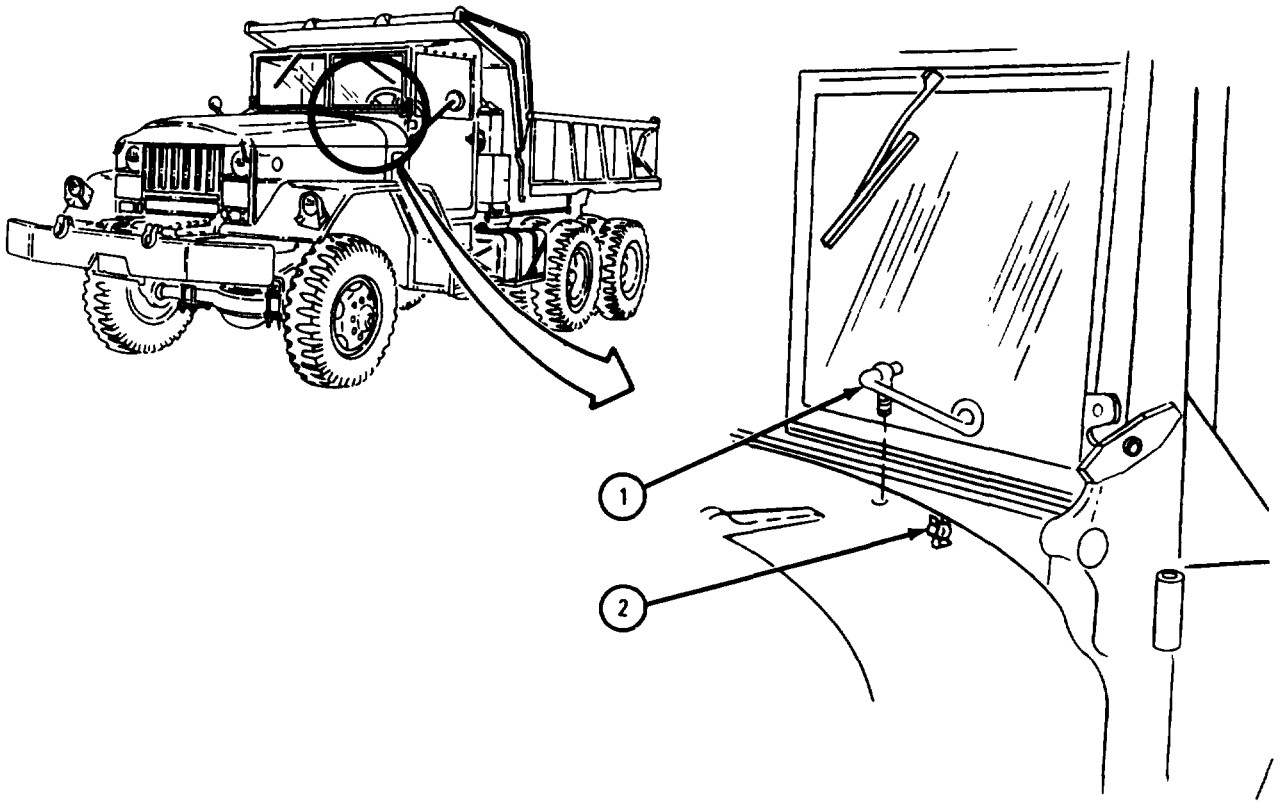
GO TO FRAME 2



FRAME 2

1. Working outside cab, lift support rod (1) out of support rod clip (2).
2. Take off support rod (1).

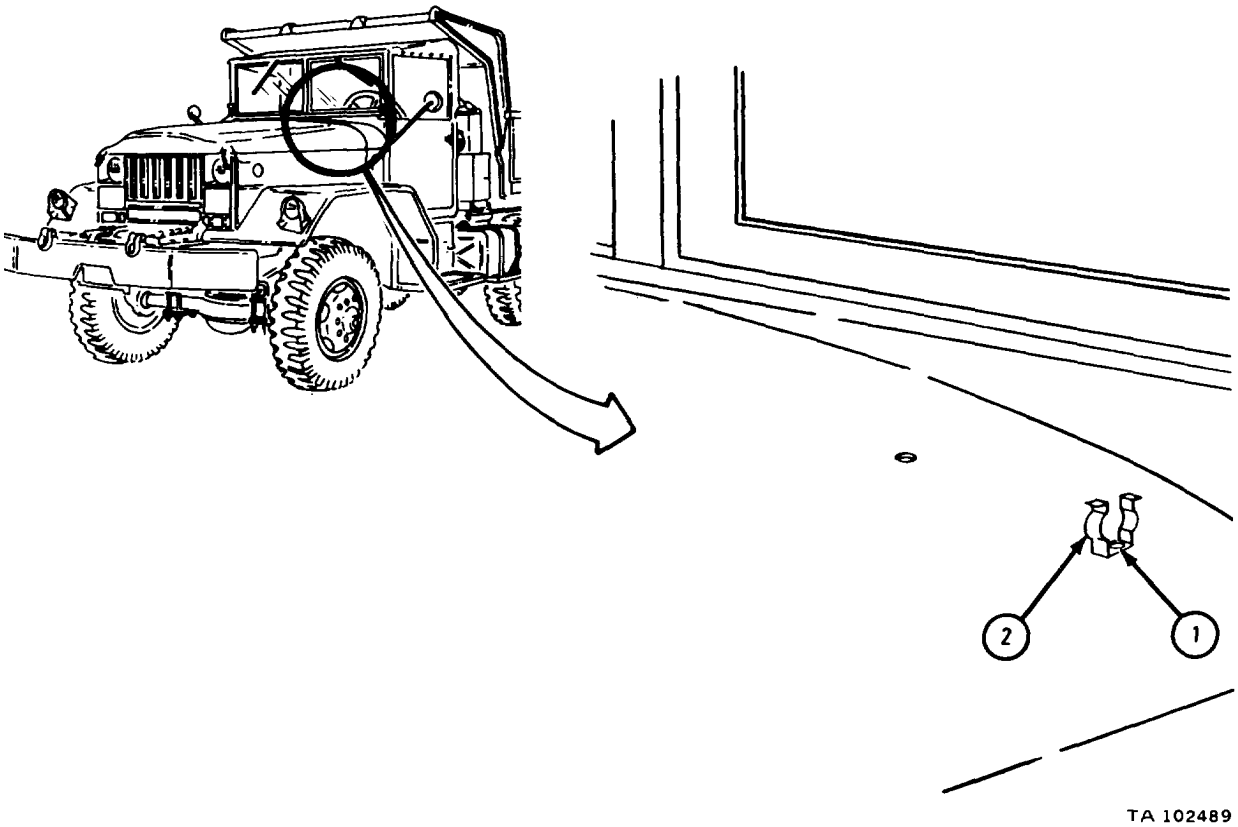
GO TO FRAME 3



FRAME 3

1. Take out screw (1). Takeoff hood support rod clip (2).

END OF TASK

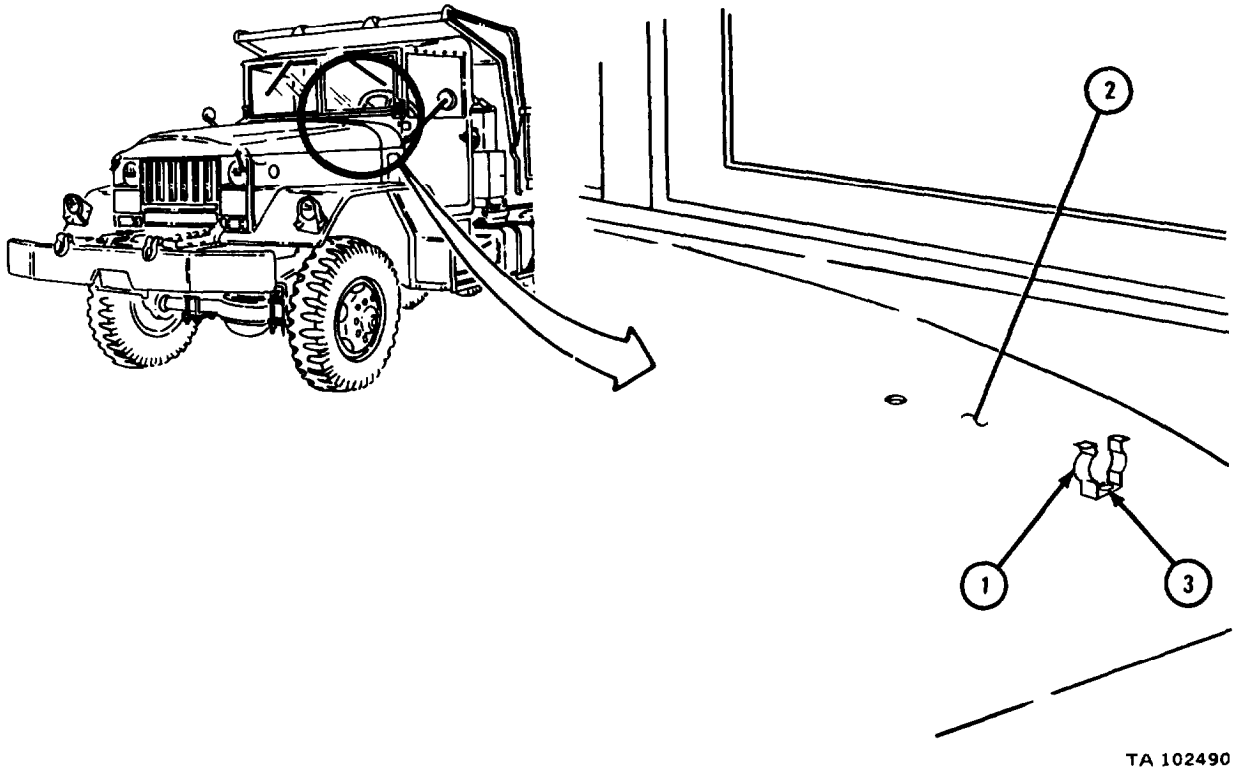


c. Replacement.

FRAME 1

1. Put hood support rod clip (1) on cab (2).
2. Put in screw (3).

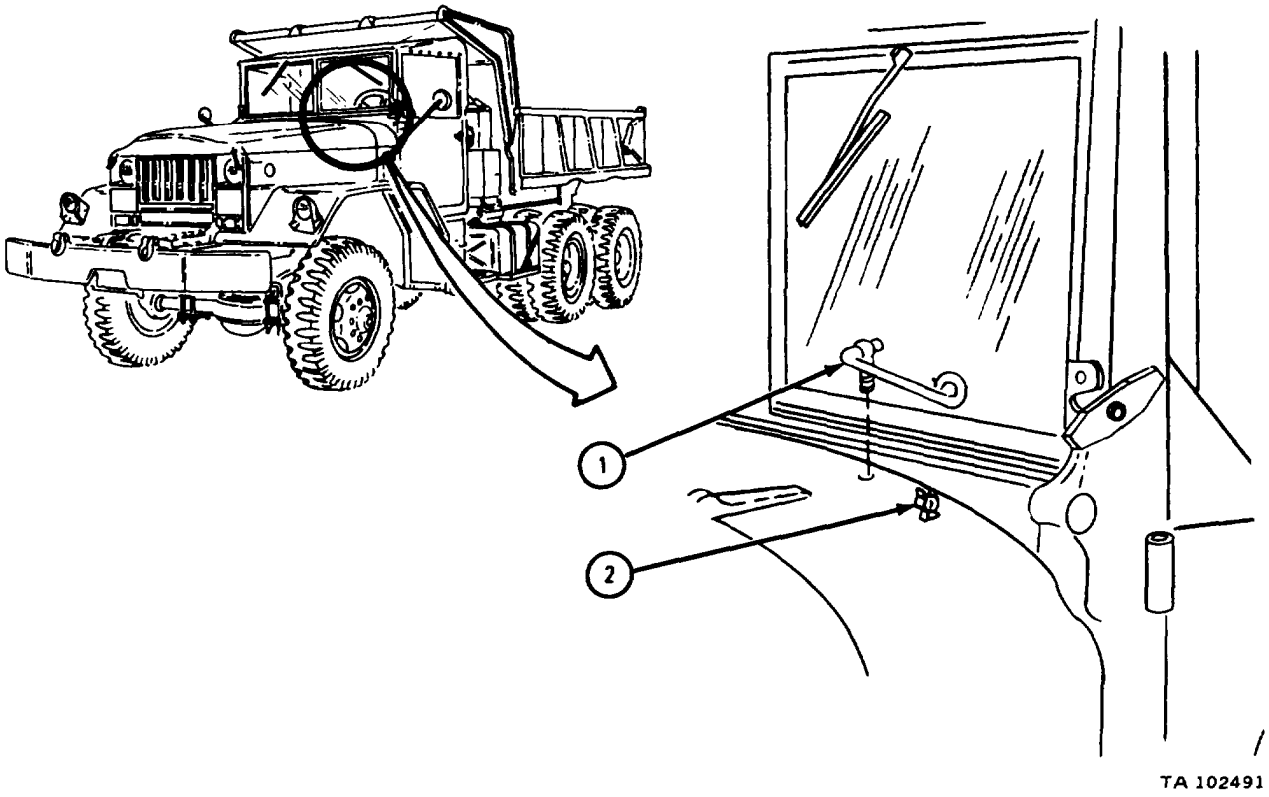
GO TO FRAME 2



FRAME 2

1. Put mounting stud of support rod (1) through hole in cowl and put support rod in clip (2).

GO TO FRAME 3



FRAME 3

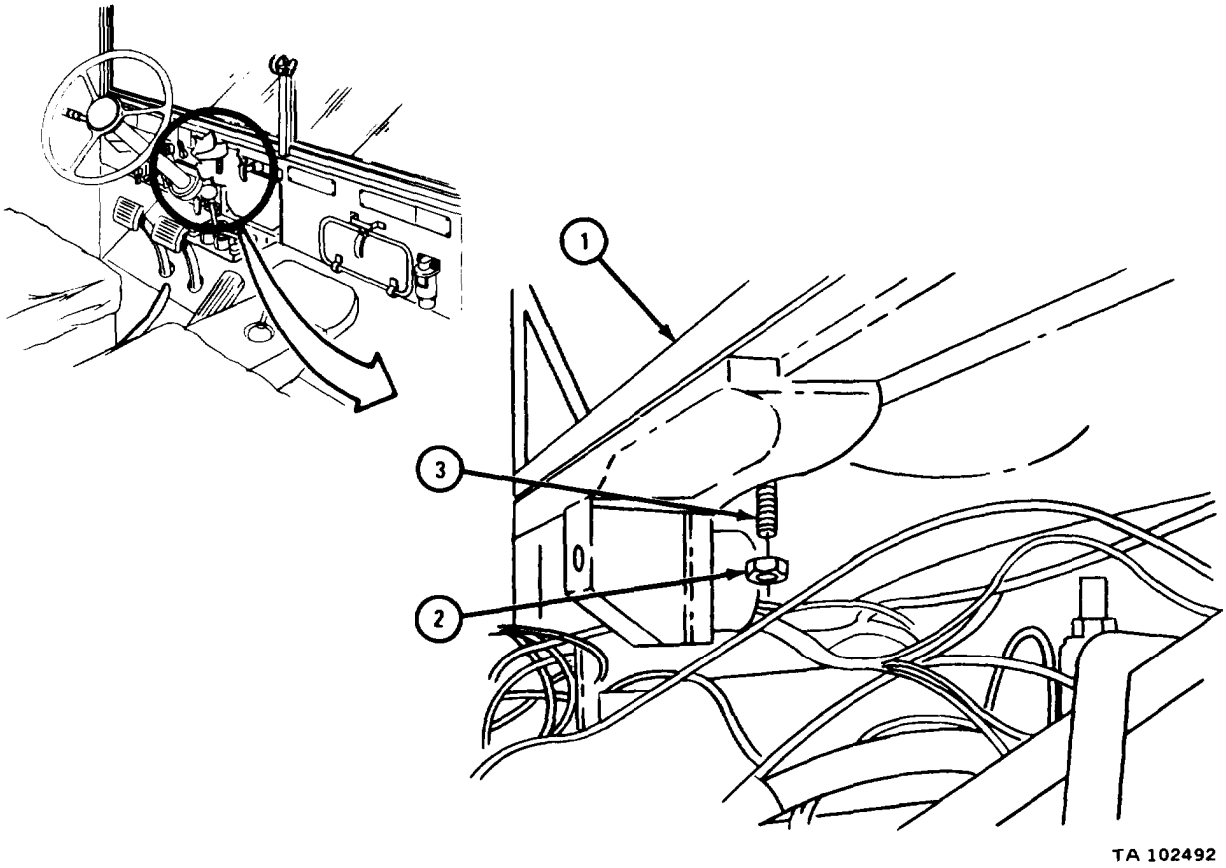
1. Working inside cab, reach under cowl (1) and put nut (2) on support rod (3).

NOTE

Follow-on Maintenance Action Required:

Replace instrument cluster. Refer to TM 9-2320-211-20.

END OF TASK



16-5. HOOD REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Two

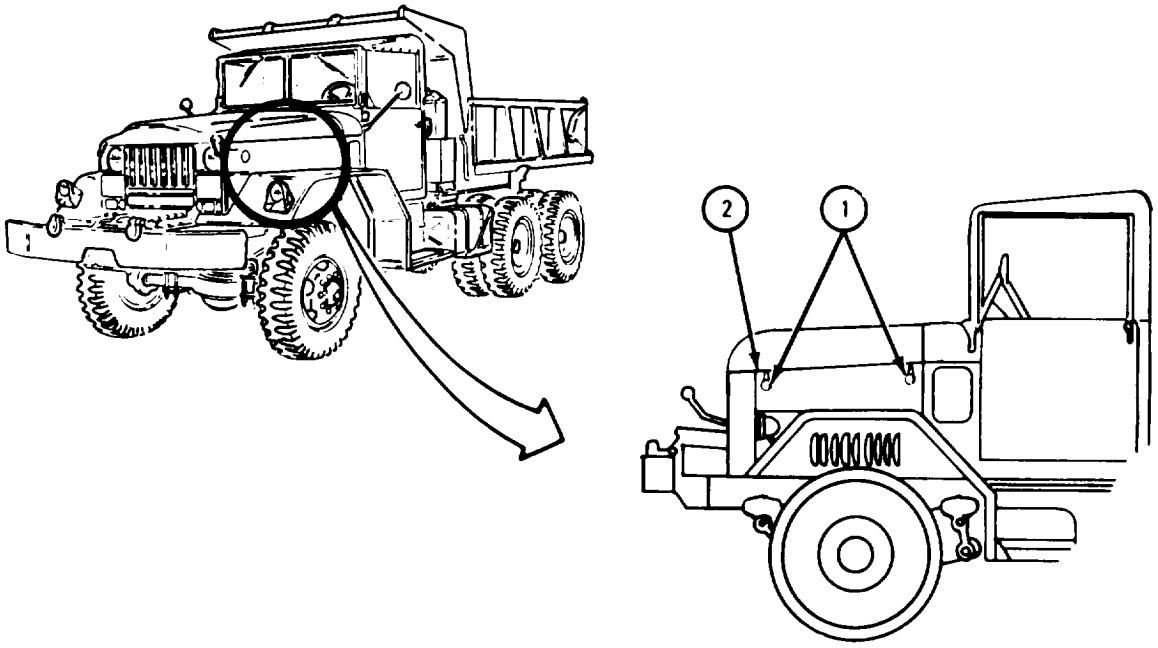
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Turn two side panel latches (1) to the up position.
2. Lower left side panel (2).

GO TO FRAME 2



FRAME 2

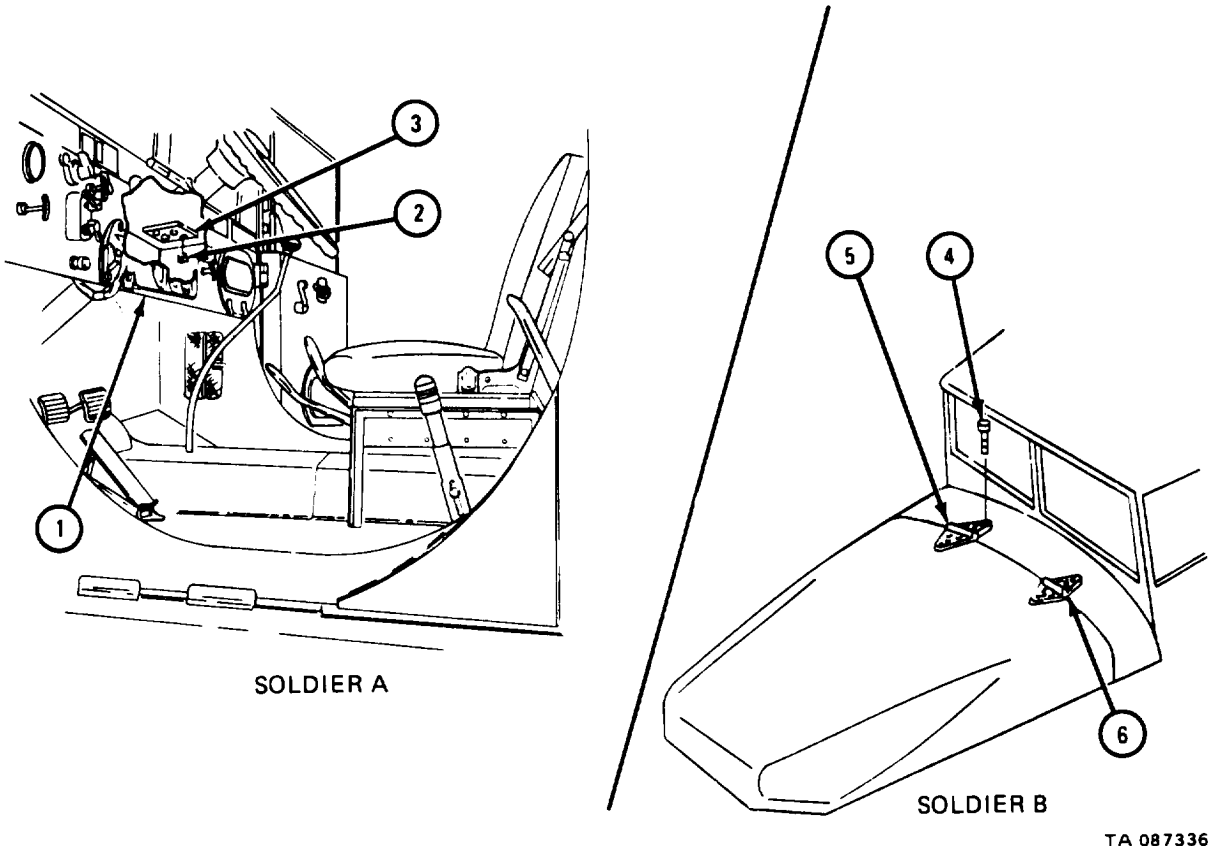
Soldier A 1. Working behind instrument panel (1), hold four nuts (2) and bracket (3).

Soldier B 2. Take out four capscrews (4) from right hood hinge (5).

Soldier A 3. Take off bracket (3).

Soldiers A and B 4. Do steps 1 through 3 again for left hood hinge (6).

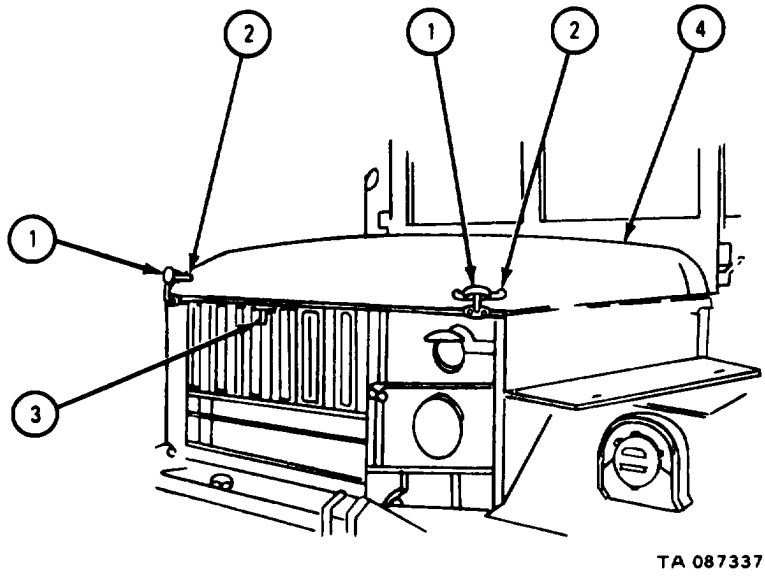
GO TO FRAME 3



FRAME 3

Soldier A	1.	Pull up on each hood hold down latch (1) until they clear each hood catch (2).
Soldier B	2.	Push in and hold hood latch (3).
Soldiers A and B	3.	Lift hood (4) and let go of hood latch (3).
	4.	Take hood (4) off truck.

END OF TASK



TA 087337

b. Disassembly.

FRAME 1

Soldiers A and B 1. Put hood (1) on wood blocks (2).

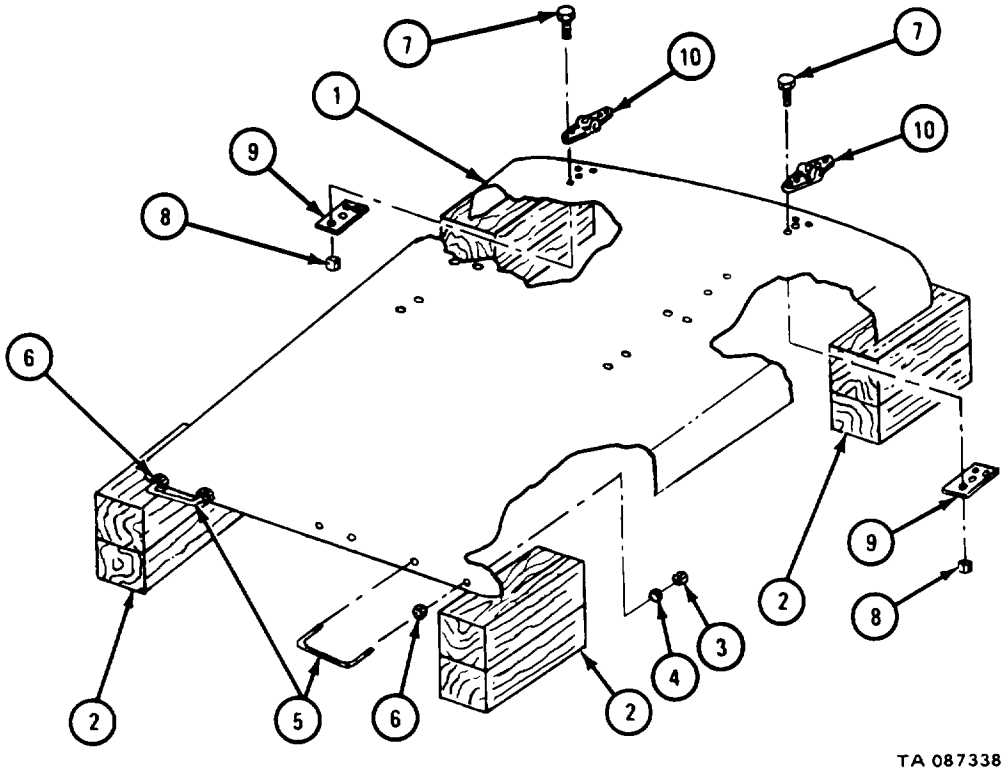
Soldier A 2. Take off four nuts (3) and washers (4).

Soldier B 3. Take off two hood catches (5) with four nuts (6). Take off nuts (6).

Soldier A 4. Take out eight screws (7) and take off eight nuts (8).

Soldiers A and B 5. Take off two brackets (9) and hood hinges (10).

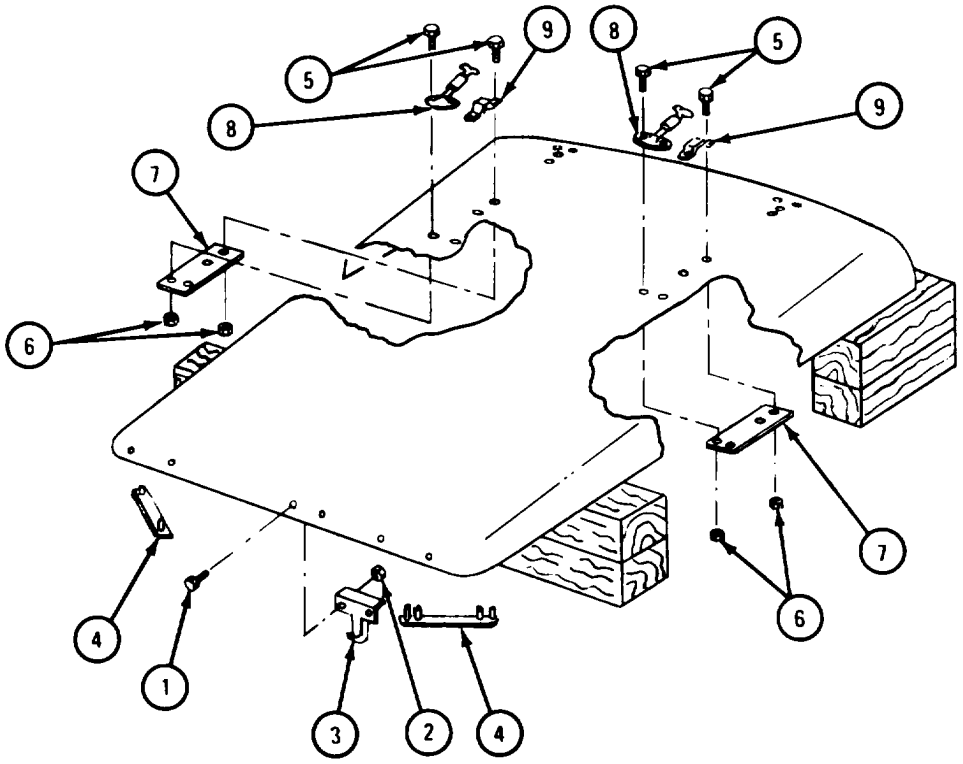
GO TO FRAME 2



FRAME 2

1. Take out two screws (1) and take off two nuts (2). Take off hood safety latch (3).
2. Take off two rubber bumpers (4).
3. Take out eight screws (5) and takeoff nuts (6).
4. Take off two brackets (7), two latches (8), and two brackets (9).

END OF TASK



TA 087339

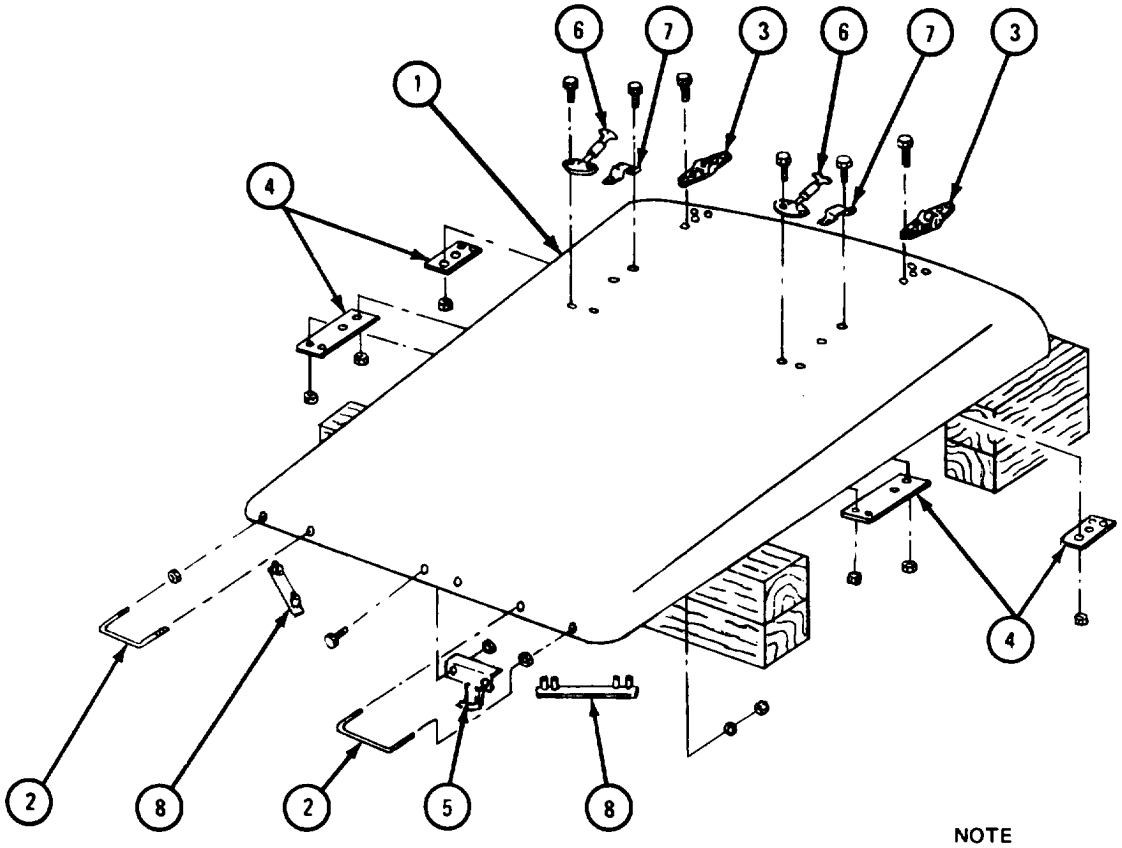
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection.

FRAME 1

1. Check that hood (1) has no cracks, bends, dents or welding defects.
2. Check that two hood catches (2), two hood hinges (3), four brackets (4), safety latch (5), two latches (6), and two brackets (7) have no bends, cracks or other damage.
3. Check that rubber bumpers (8) are not broken or worn.
4. Check that all screws and nuts have no worn or stripped threads.

END OF TASK



NOTE
CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

TA 087340

e. Repair.

(1) Repair minor damage by straightening or welding. Refer to FM 43-2 and TM 9-237.

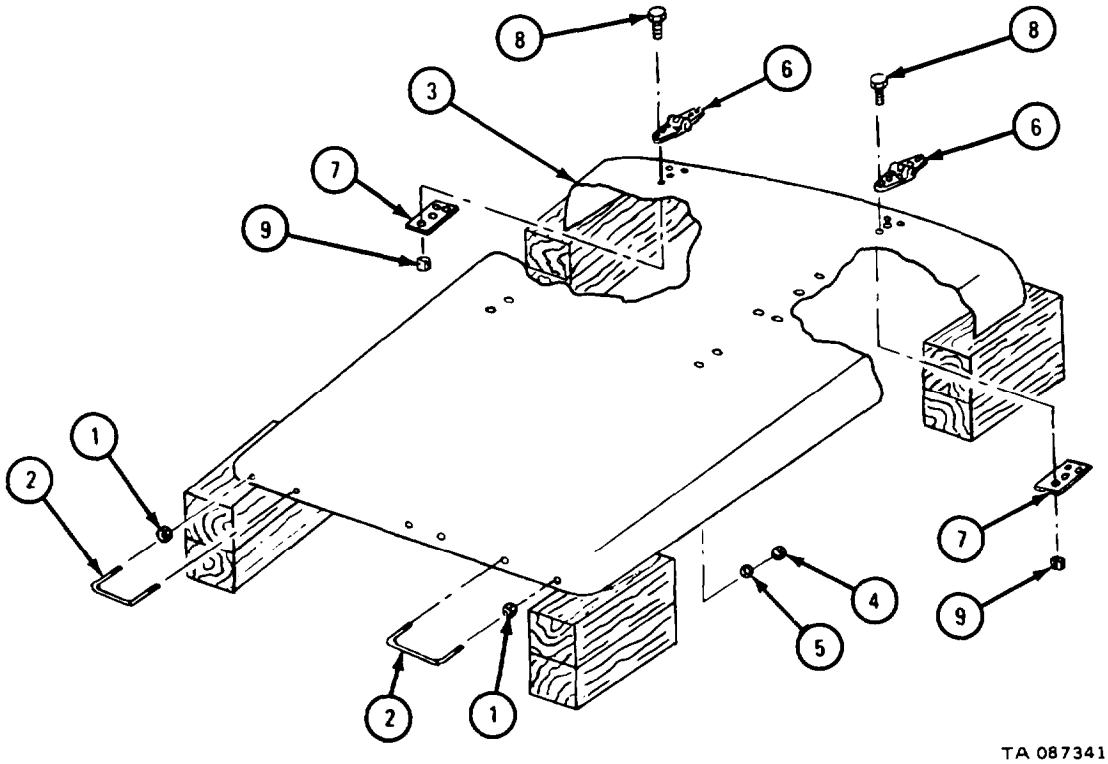
(2) If more repair is needed, throw parts away and get new ones in their place.

f. Assembly.

FRAME 1

1. Put four nuts (1) on two catches (2).
2. Put two hood catches (2) into hood (3).
3. Put on four nuts (4) and washers (5).
4. Put two hood hinges (6) and brackets (7) in place.
5. Put in eight screws (8) and put on nuts (9).

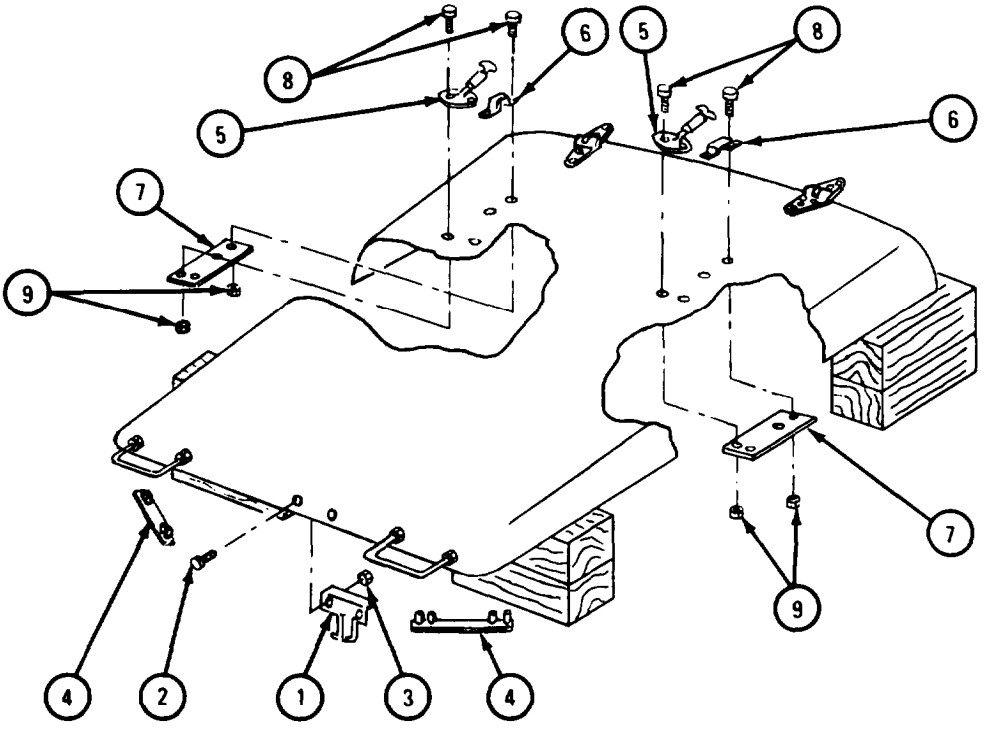
GO TO FRAME 2



FRAME 2

1. Put on safety latch (1) and aline holes. Put in two bolts (2) and put on nuts (3).
2. Put on two rubber bumpers (4).
3. Put two latches (5), two brackets (6), and two brackets (7) in place.
4. Put in eight bolts (8) and put on nuts (9).

END OF TASK



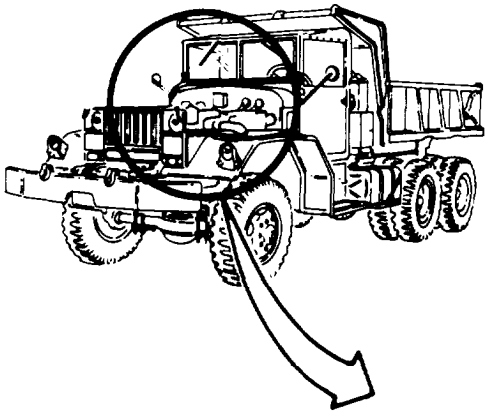
g. Replacement.

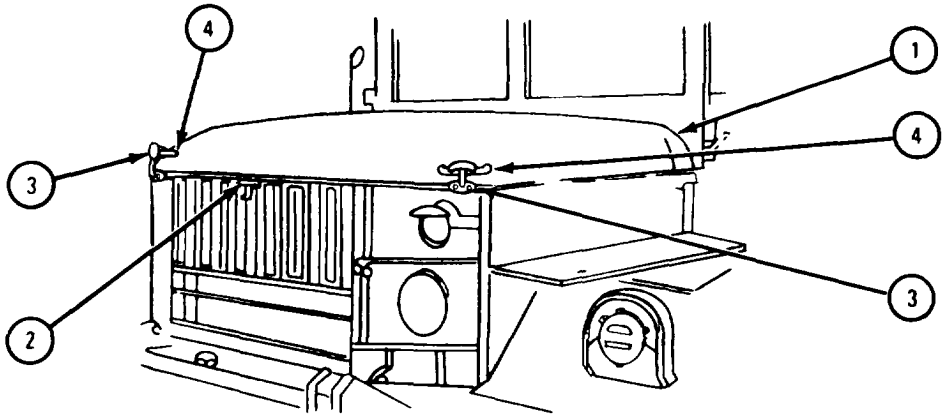
FRAME 1

Soldiers A and B 1. Put hood (1) in place and push down on front of hood to lock it onto hood latch (2) .

Soldier A 2. Pull two hold down catches (3) up to handles (4) and lock hood (1) in place.

GO TO FRAME 2





TA 087343

FRAME 2

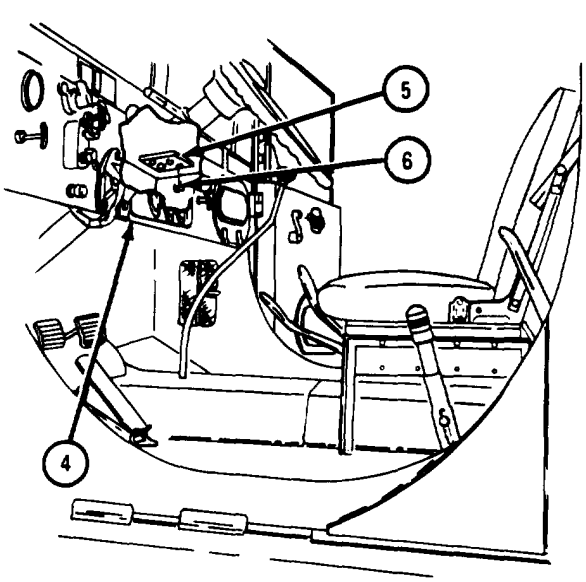
Soldier A 1. Put four screws (1) through right hood hinge (2) and holes in cowl of truck (3). Tell soldier B when ready.

Soldier B 2. Working behind instrument panel (4), put bracket (5) in place so screws (1) go through bracket.

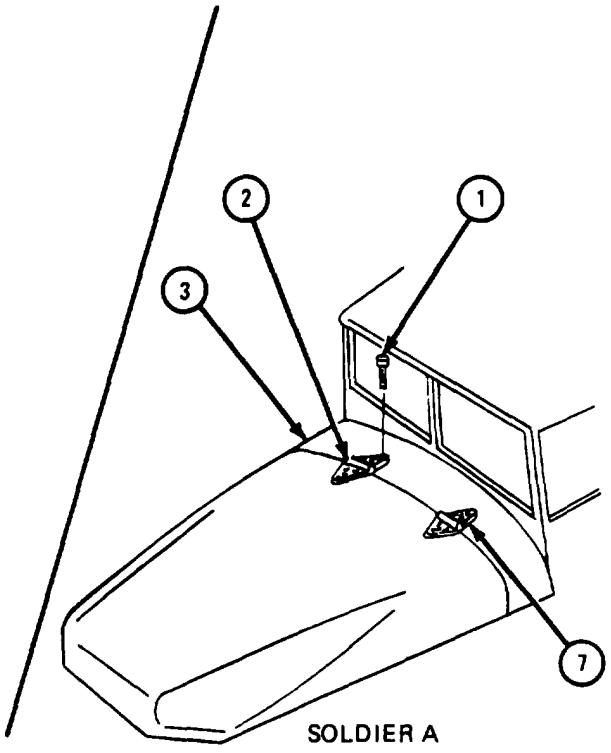
3. Put on four nuts (6).

Soldiers A and B 4. Do steps 1 through 3 again for left hood hinge (7).

G0 TO FRAME 3



SOLDIER B



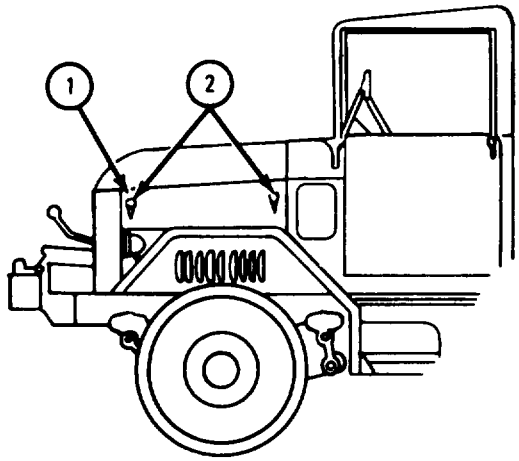
SOLDIER A

TA 087344

FRAME 3

1. Raise side panel (1).
2. Turn two side panel latches (2) to the down position.

END OF TASK



TA 087345

16-6. CAB DOOR ASSEMBLY REPAIR.

NOTE

This task is the same for the right and left cab door assemblies. This task is shown for the right cab door assembly.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2) , Fed. Spec P-D-680
Soapy water
Denatured alcohol
Rubber cement, MMM-A-121

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

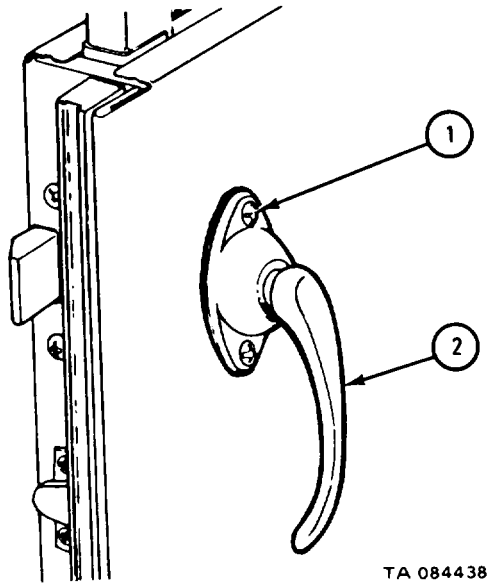
a. Preliminary Procedure. Remove cab door. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

1. Take out two screws (1).
2. Pull off outer door handle (2).

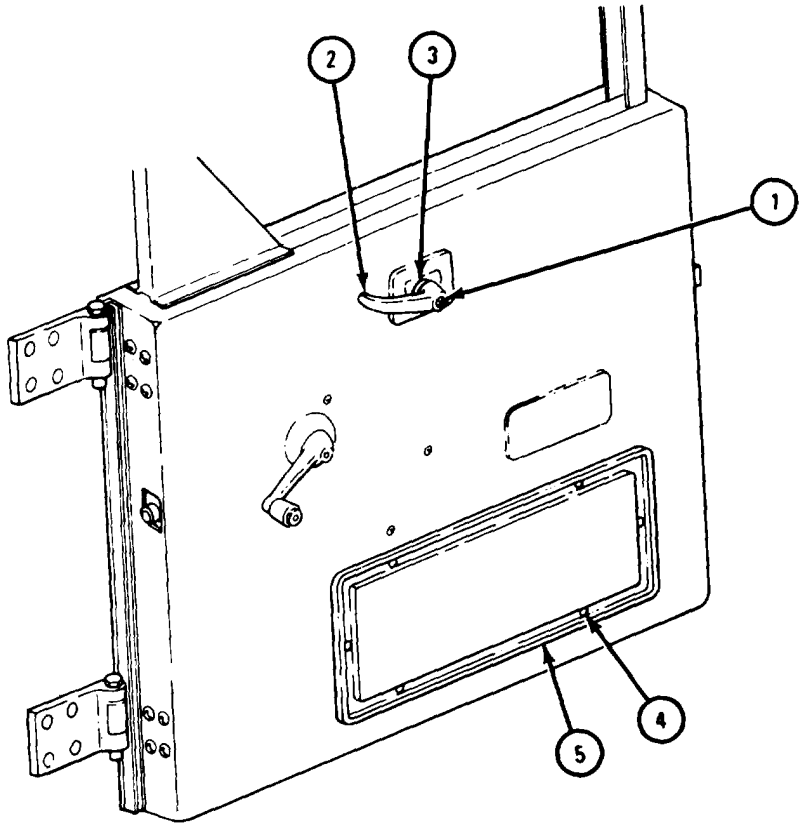
GO TO FRAME 2



FRAME 2

1. Take out screw (1). Take off inner door handle (2) and spacer (3).
2. Take out six screws (4) and take off inspection hole cover (5).

GO TO FRAME 3

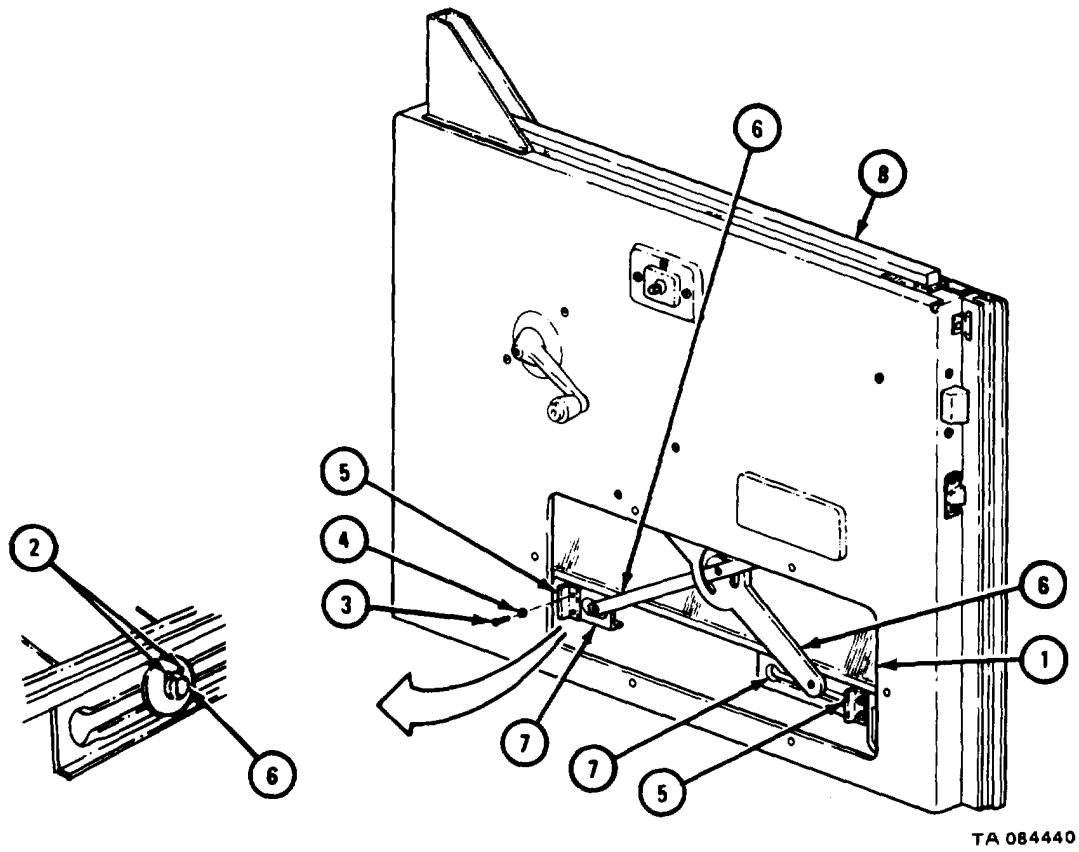


TA 084439

FRAME 3

1. With door glass (1) in down position, pop off two pin fasteners (2).
2. Take out four screws (3) and washers (4) and take off two stop brackets (5).
3. Take door glass regulator assembly guides (6) out of door glass regulator channels (7).
4. Pushing door glass (1) up from bottom, grab door glass frame (8) on top. Take out door glass and door glass frame.

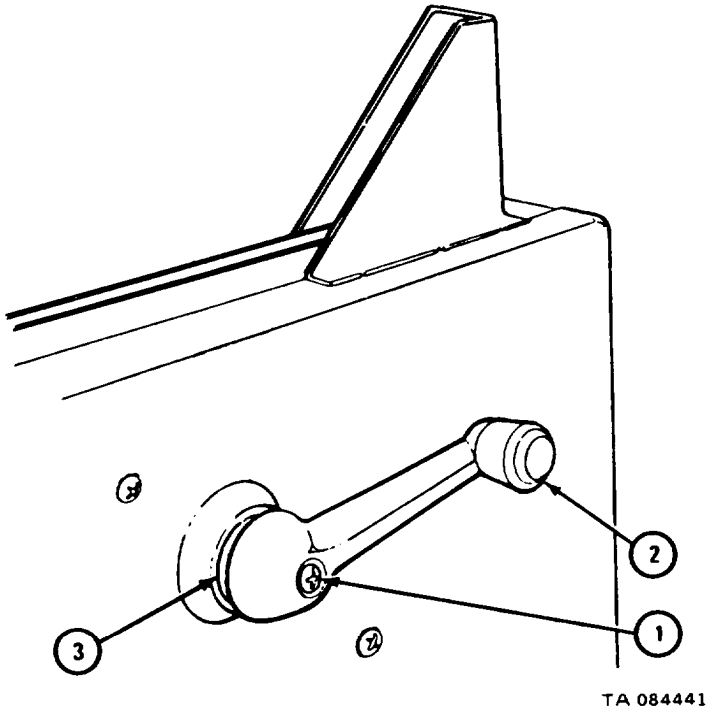
GO TO FRAME 4



FRAME 4

1. Takeout screw (1).
2. Take off door glass regulator handle (2) md spacer (3).

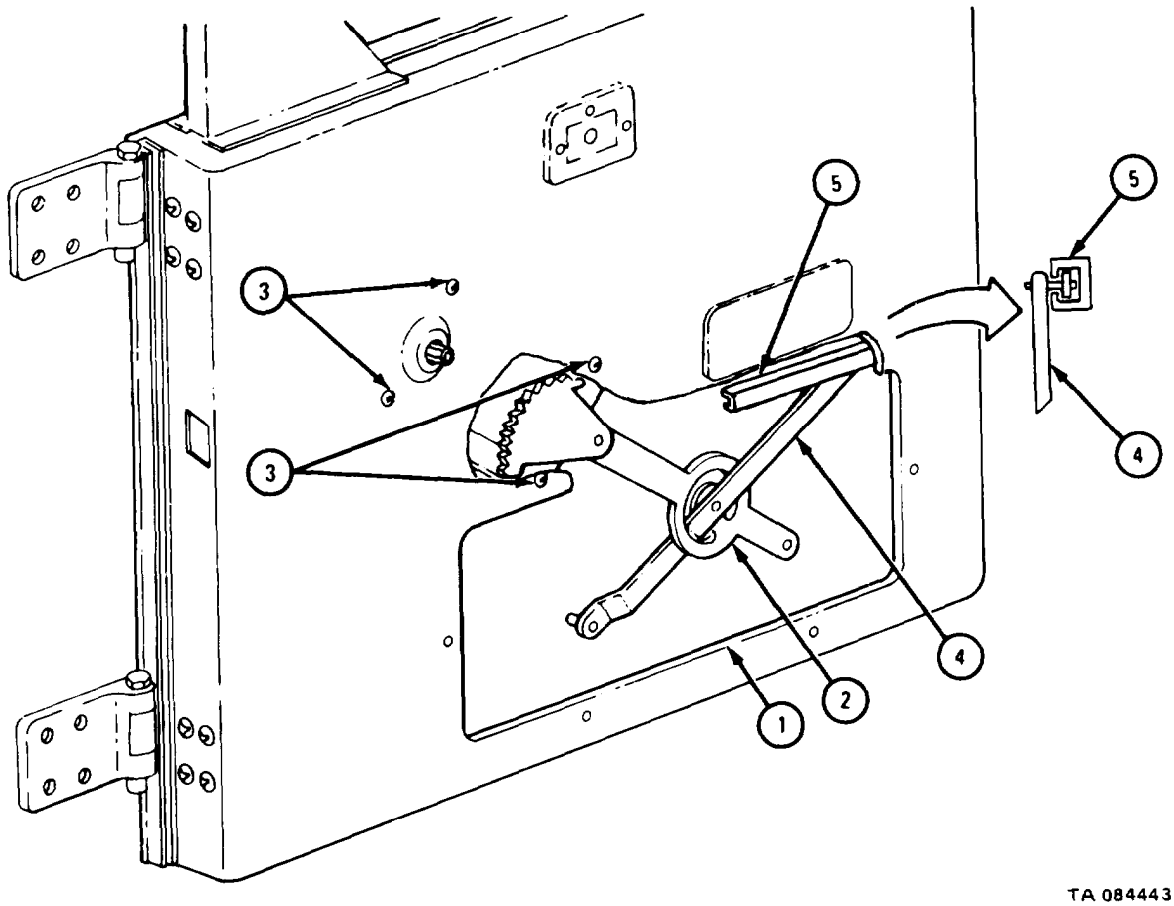
GO TO FRAME 5



FRAME 5

1. Reaching through inspection hole (1), hold door glass regulator assembly (2).
2. Take out four screws (3).
3. Slide regulator arm (4) out of channel (5) and take door glass regulator assembly (2) through inspection hole (1).

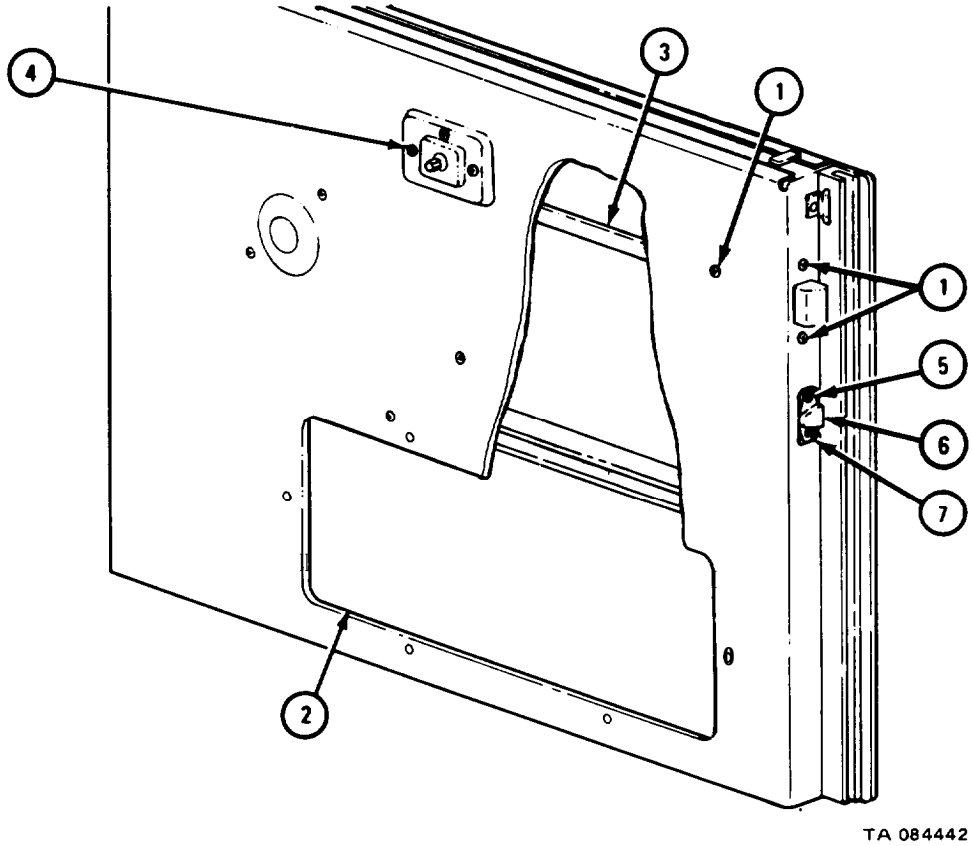
GO TO FRAME 6



FRAME 6

1. Take out three screws (1).
2. Reaching through inspection hole (2), hold door lock assembly (3). Take out three screws (4) and take out door lock assembly through inspection hole.
3. Take out two screws (5) and take off male dovetail (6) and shim (7).

GO TO FRAME 7

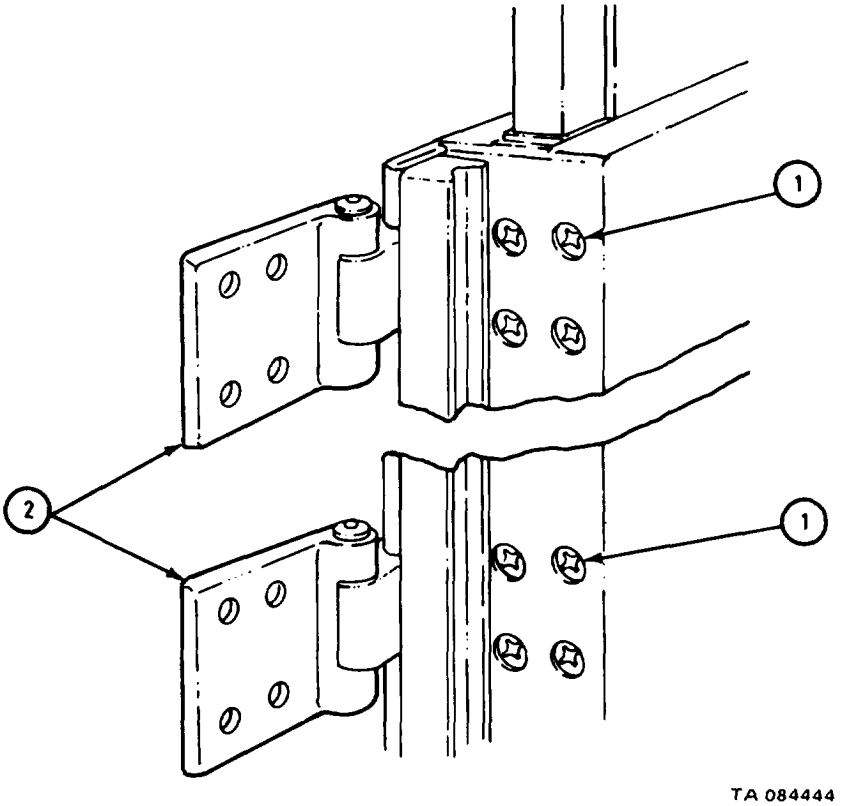


TA 084442

FRAME 7

1. Take out eight screws (1).
2. Take out two hinges (2).

GO TO FRAME 8

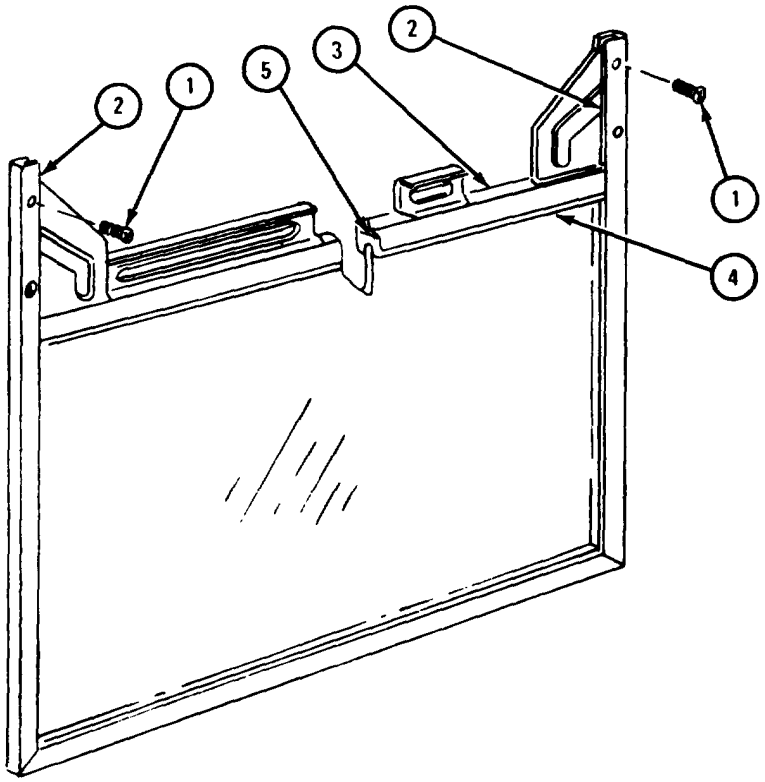


TA 084444

FRAME 8

1. Take out four screws (1).
2. Spread sides of door glass frame (2). Pry out door glass regulator channel (3) and take out door glass regulator channel seal (4).
3. Take out filler strip (5).

GO TO FRAME 9



TA 084445

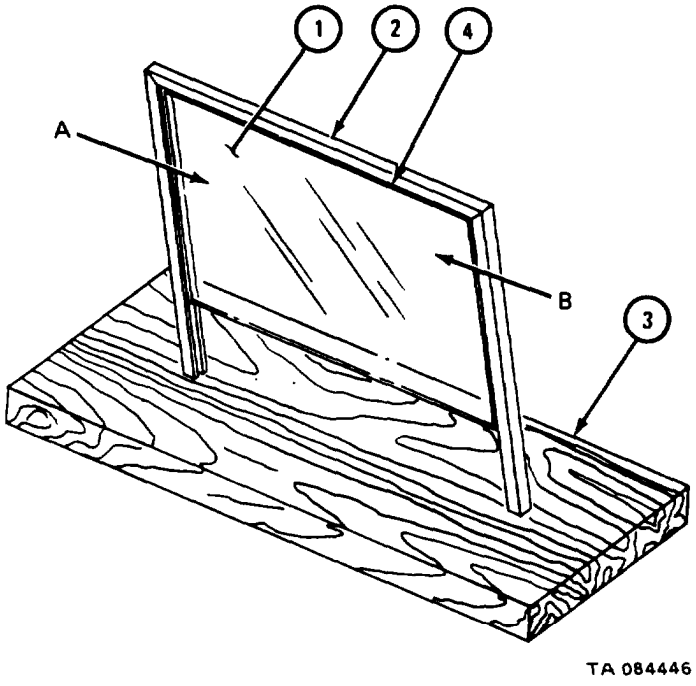
FRAME 9

WARNING

Always wear leather gloves when handling glass. Broken or sharp edges can cause serious injury to personnel.

1. Holding glass (1) and frame (2) at points A and B, take out glass by tapping ends of frame on block of wood (3).
2. Take off and throw away door glass seal (4).

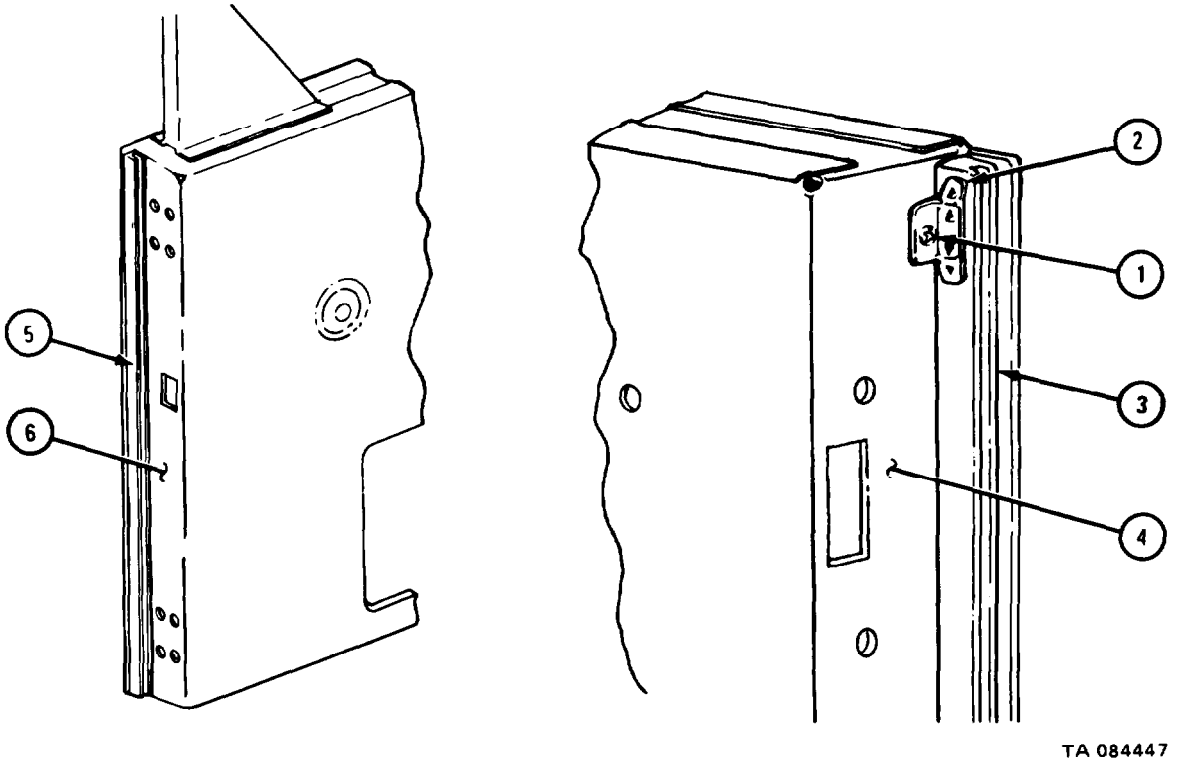
GO TO FRAME 10



FRAME 10

1. Take out five screws (1).
2. Take off five door weather seal clips (2).
3. Take off two weather seals (3) on back and bottom edge of door (4).
4. Take off weather seal (5) on front edge of door (6).

GO TO FRAME 11

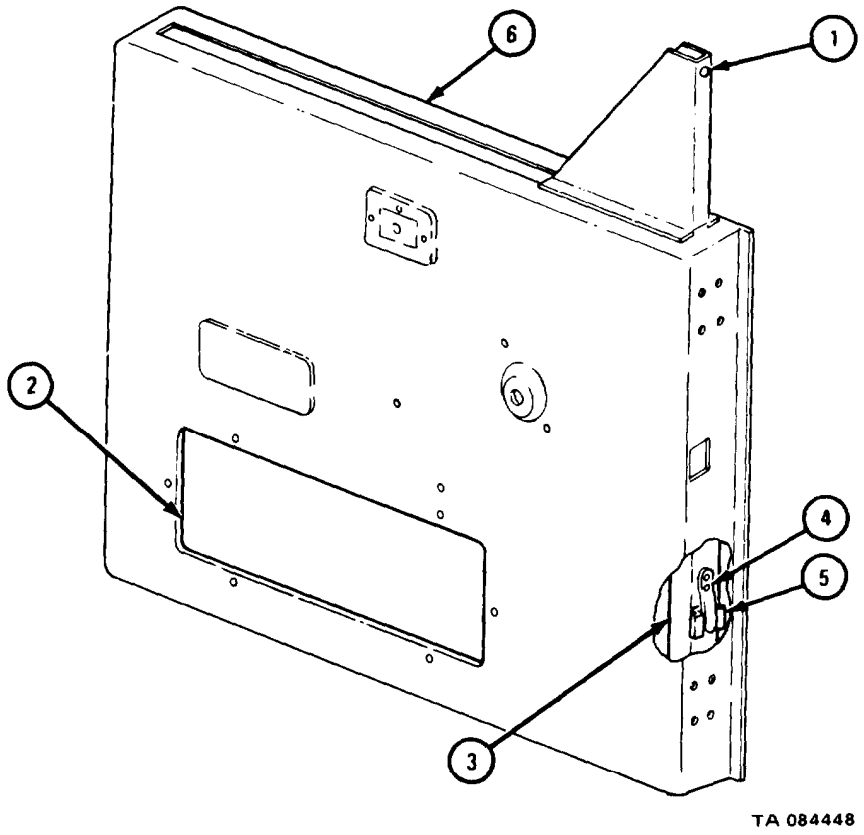


TA 084447

FRAME 11

1. Drill out rivet (1).
2. Working through inspection hole (2), lift front glass run channel (3) with retaining clip (4) up out of retaining bracket (5).
3. Slide front glass run channel (3) up and out top of door (6).

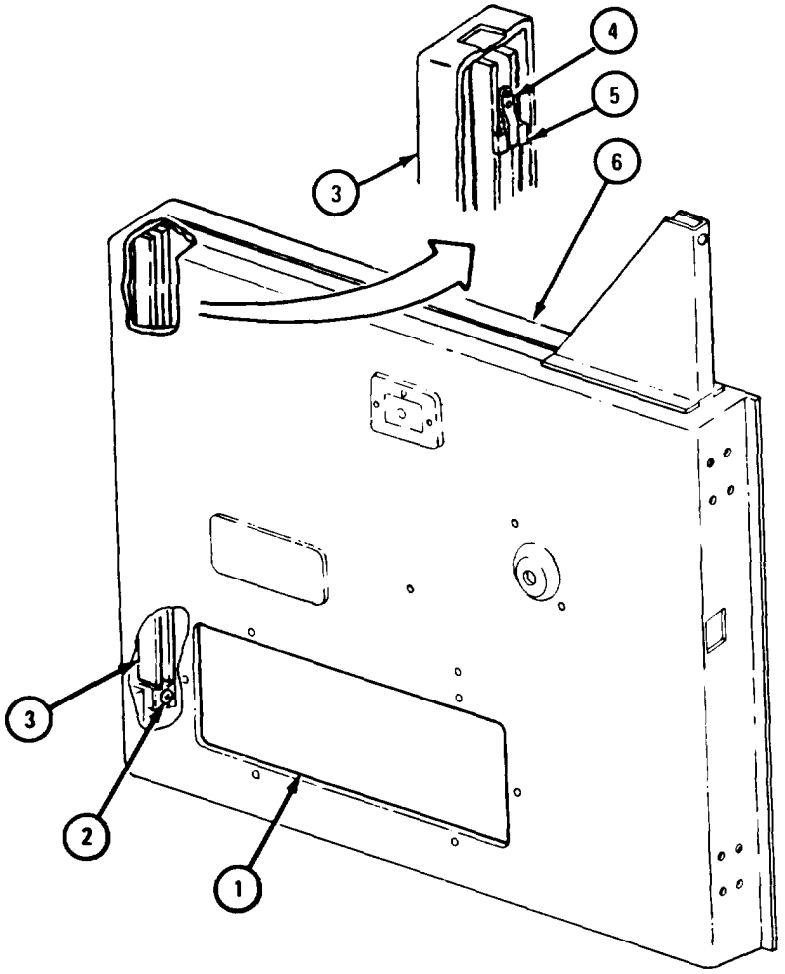
GO TO FRAME 12



FRAME 12

1. Working through inspection hole (1), takeout screw (2).
2. Lift rear glass run channel (3) with retaining clip (4) out of retaining bracket (5) and out top of door (6).

END OF TASK



TA 101630

c. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Steam clean door assembly. Clean smaller metal parts with solvent and let parts air dry.

(2) Using wire brush, take off rust.

WARNING

Always use leather gloves when handling glass. Broken or sharp edges can cause serious injury to personnel.

(3) Using soapy water, clean door glass.

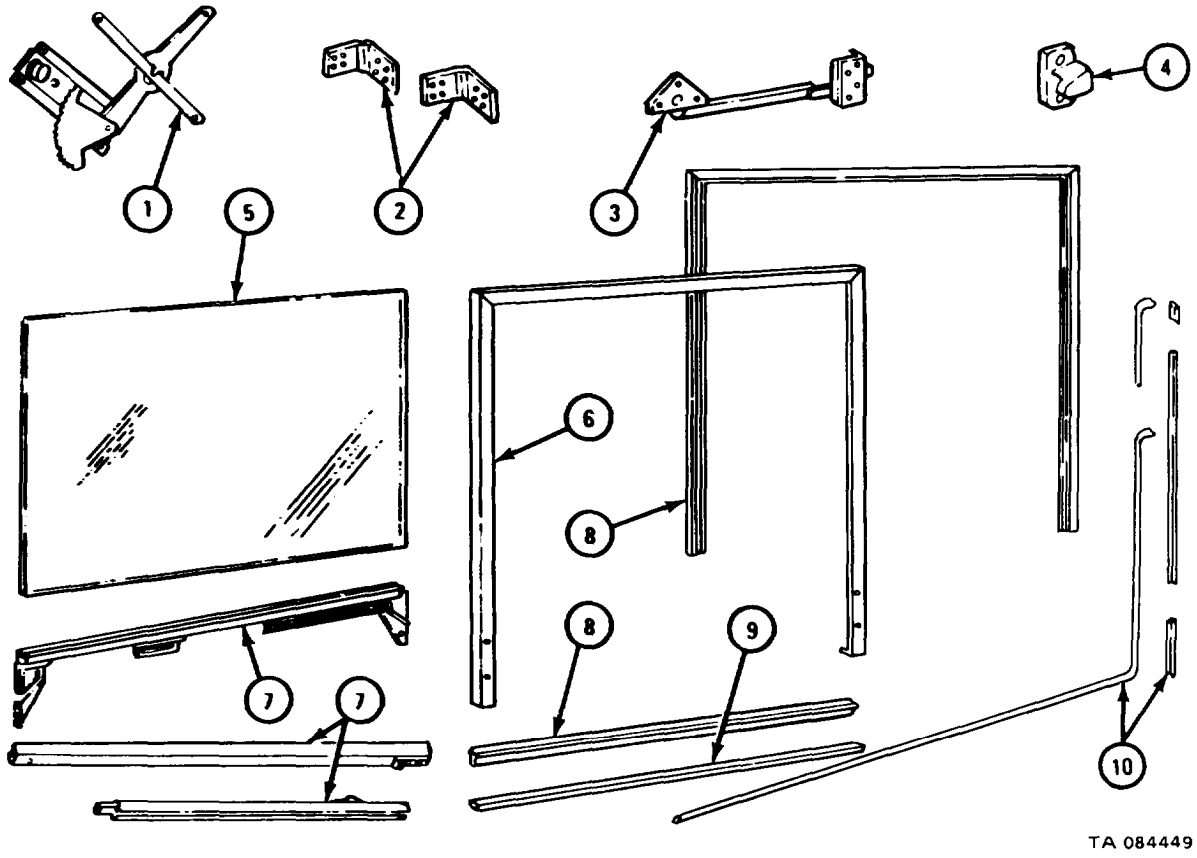
(4) Using denatured alcohol, clean rubber cement off door assembly and glass.

d. Inspection.

FRAME 1

1. Check that door glass regulator (1), door hinges (2), door lock assembly (3), and male dovetail (4) work correctly.
2. Check that door glass (5) is not cracked or chipped and that layers are not coming apart.
3. Check that frame (6), three channels (7), two seals (8), filler strip (9), and weather seal (10) are not worn or damaged.

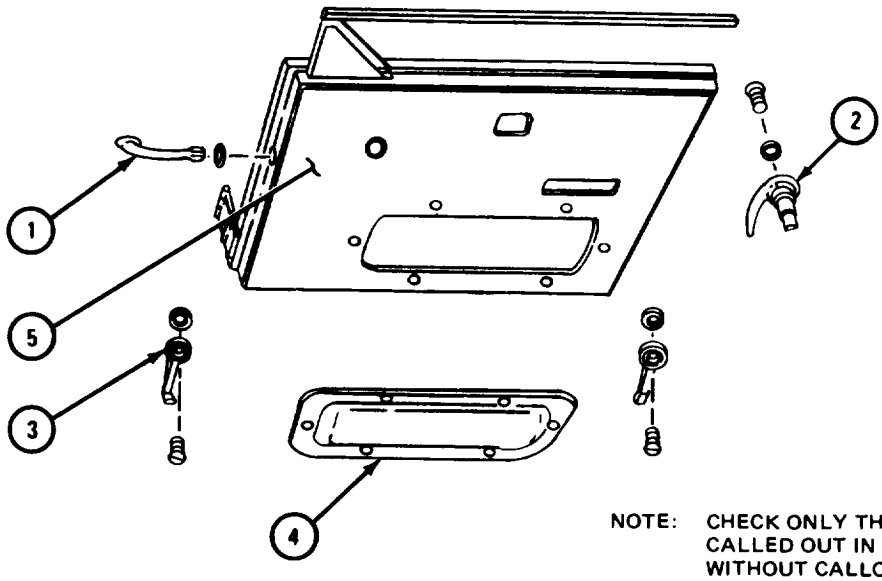
GO TO FRAME 2



FRAME 2

1. Check that door latch assembly (1) is not damaged.
2. Check that outside door handle (2) is not damaged.
3. Check that lock handle (3) is not damaged.
4. Check that inspection hole cover (4) fits correctly and is not damaged.
5. Check that cab door (5) is not damaged.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 087279

e. Repair.

(1) If door assembly is damaged, refer to FM 43-2 for repair of sheet metal parts.

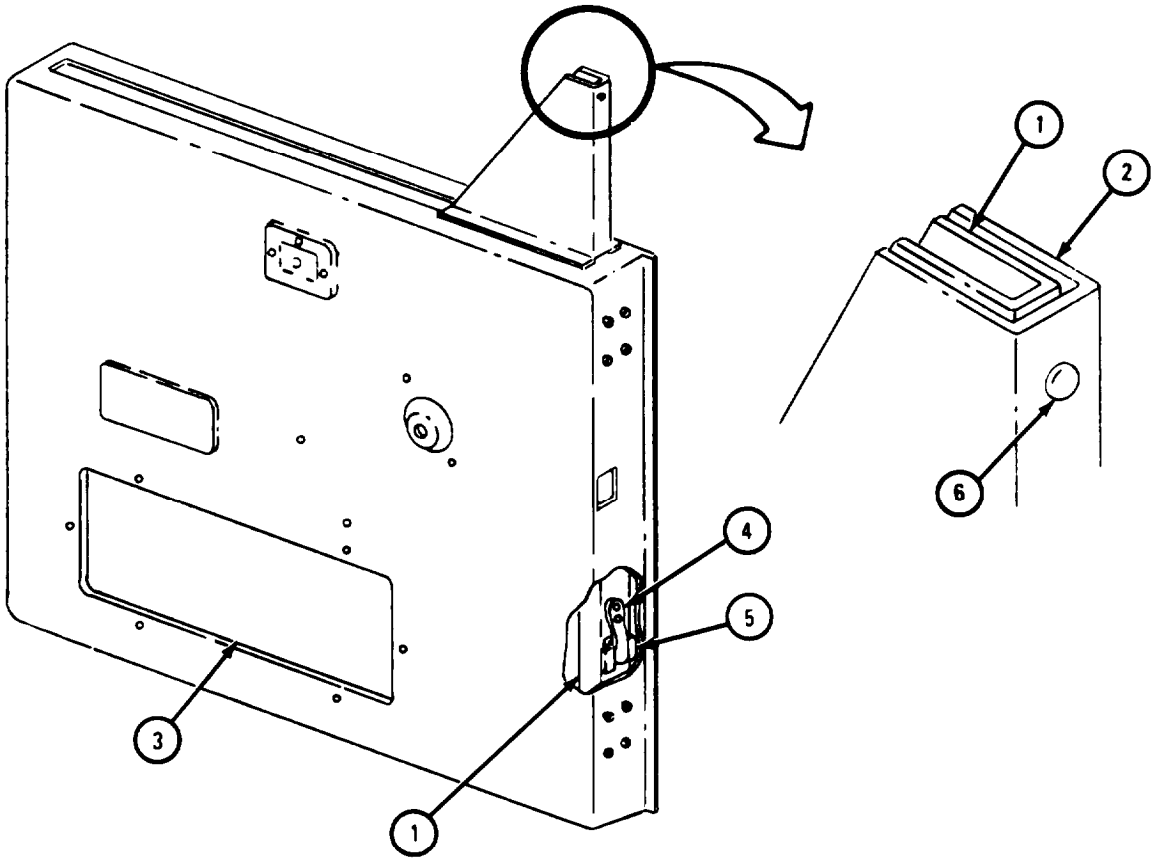
(2) Throw away all other damaged parts and get new ones.

f. Assembly.

FRAME 1

1. Put front glass run channel (1) in through top of door (2).
2. Working through inspection hole (3), put retaining clip (4) in retaining bracket (5).
3. Put in rivet (6).

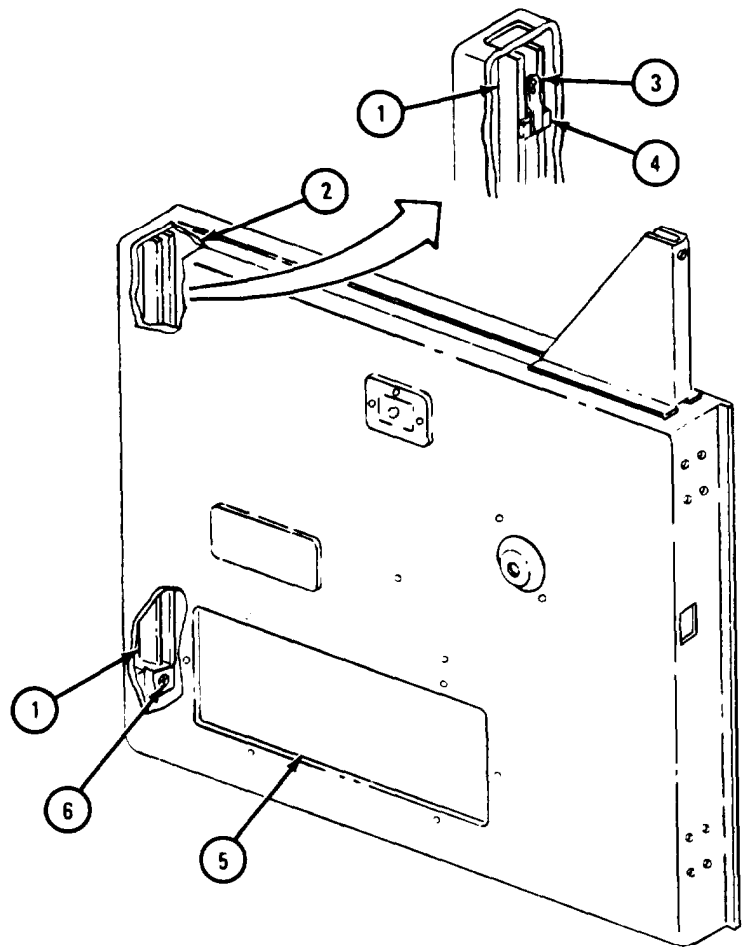
GO TO FRAME 2



FRAME 2

1. Put rear glass run channel (1) in through top of door (2) and put retaining clip (3) in retaining bracket (4).
2. Working through inspection hole (5), put in screw (6).

GO TO FRAME 3



TA 084451

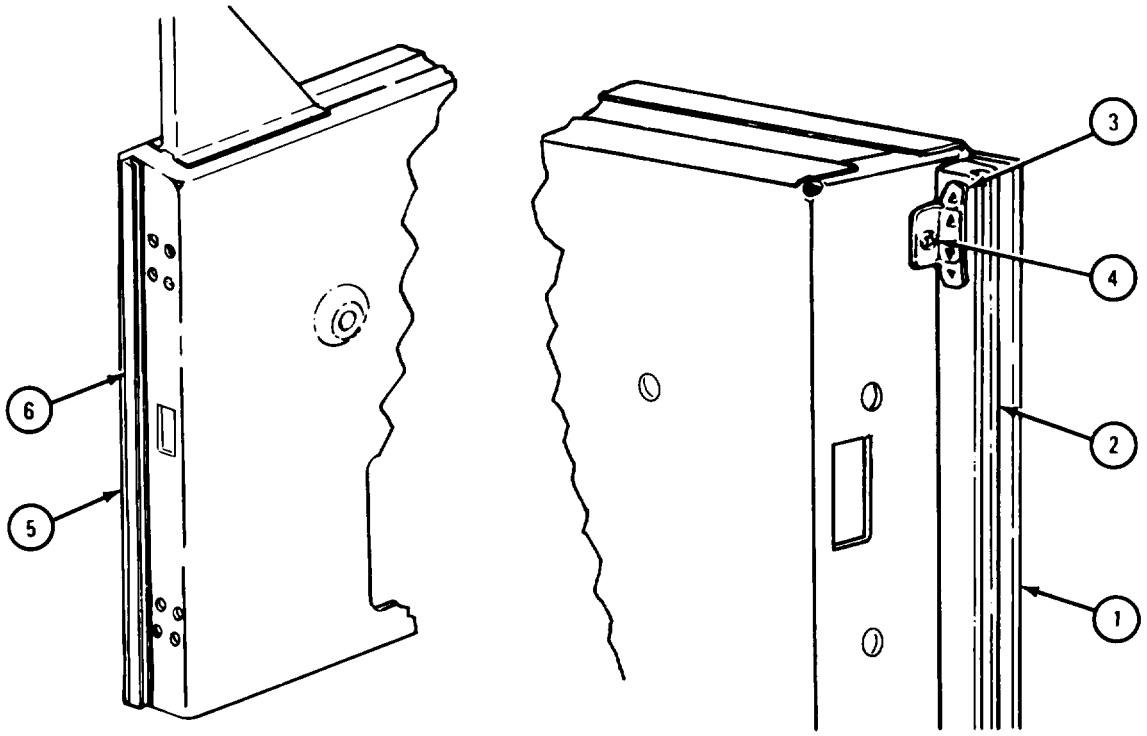
FRAME 3

WARNING

Rubber cement is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when cement is used. Use only in well ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

1. Put rubber cement on back and bottom edges of door (1).
2. Put weather seal (2) in place around back and bottom edges of door (1).
3. Put five weather seal clips (3) in place on back and bottom of door (1). Put in five screws (4).
4. Put rubber cement on front edge of door (5).
5. Put weather seal (6) in place on front edge of door (5).

GO TO FRAME 4



TA 084452

FRAME 4

WARNING

Always wear leather gloves when handling glass. Broken or sharp edges can cause serious injury to personnel.

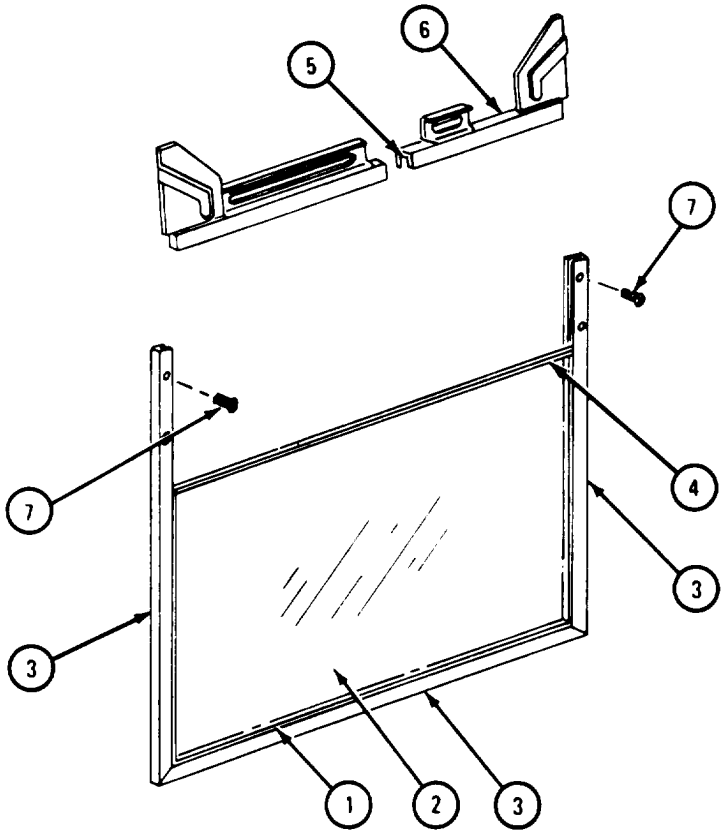
1. Put door glass frame seal (1) around three sides of door glass (2).
2. Put soapy water into frame channel (3) and on outside of glass frame seal (1).
3. Push door glass (2) with seal (1) all the way into door glass frame (3).
4. Put door glass regulator channel seal (4) in place on door glass (2).
5. Put filler strips (5) in regulator channel (6).

NOTE

Make sure filler strip (5) does not fall out or get damaged when putting on regulator channel (6).

6. Put soapy water into regulator channel (6) and on outside of regulator channel seal (4). Push regulator channel onto door glass (2) until screw holes aline.
7. Put in four screws (7).

GO TO FRAME 5

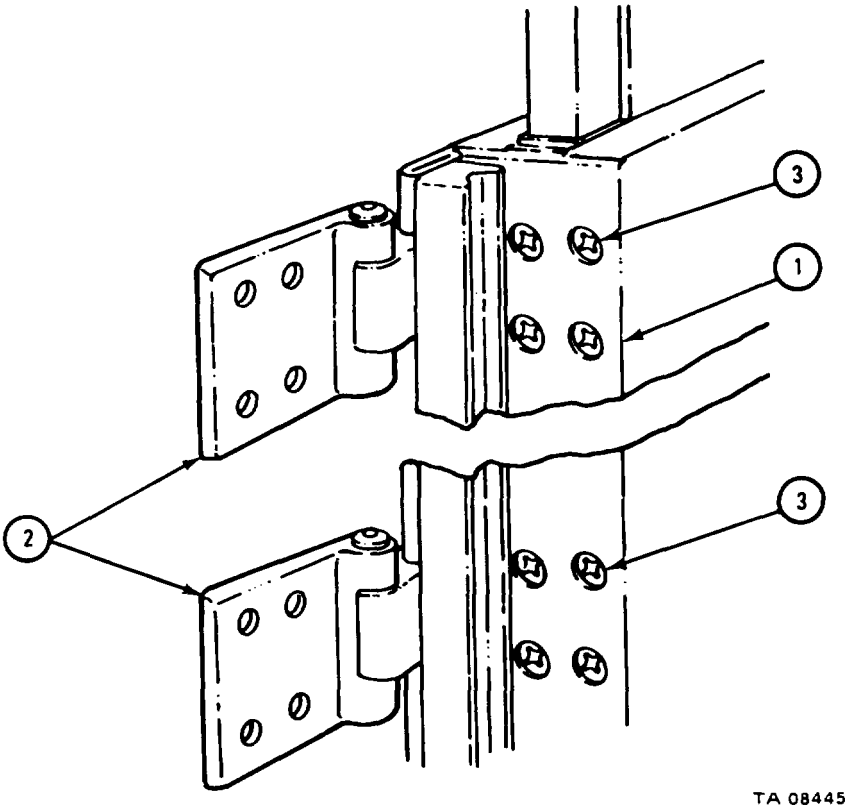


TA 084453

FRAME 5

1. Aline holes indoor assembly (1) with holes in two hinges (2).
2. Put in eight screws (3).

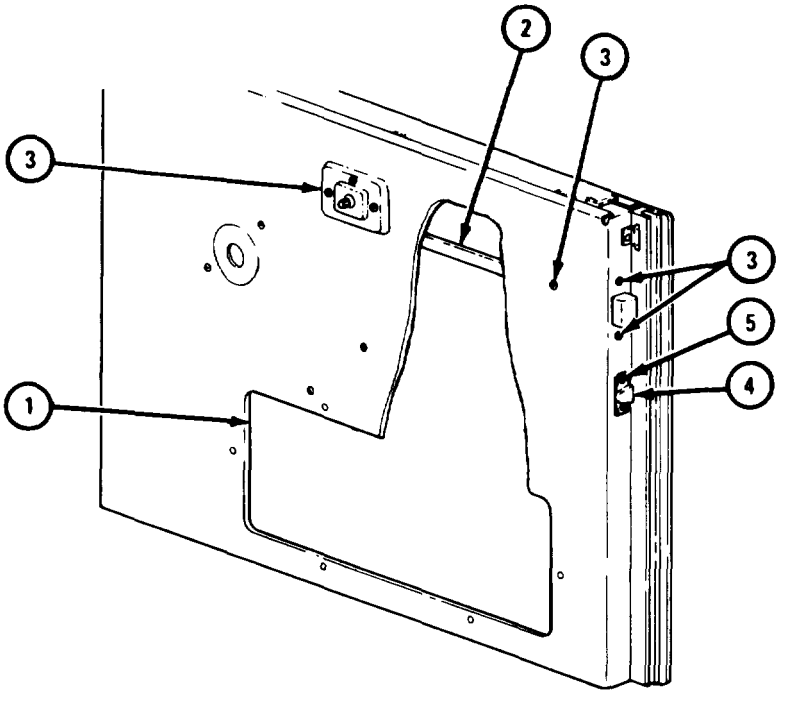
GO TO FRAME 6



FRAME 6

1. Working through inspection hole (1), hold door lock assembly (2) in place.
2. Put in six screws (3).
3. Put male dovetail and shim (4) in place.
4. Put in two screws (5).

GO TO FRAME 7



TA 084455

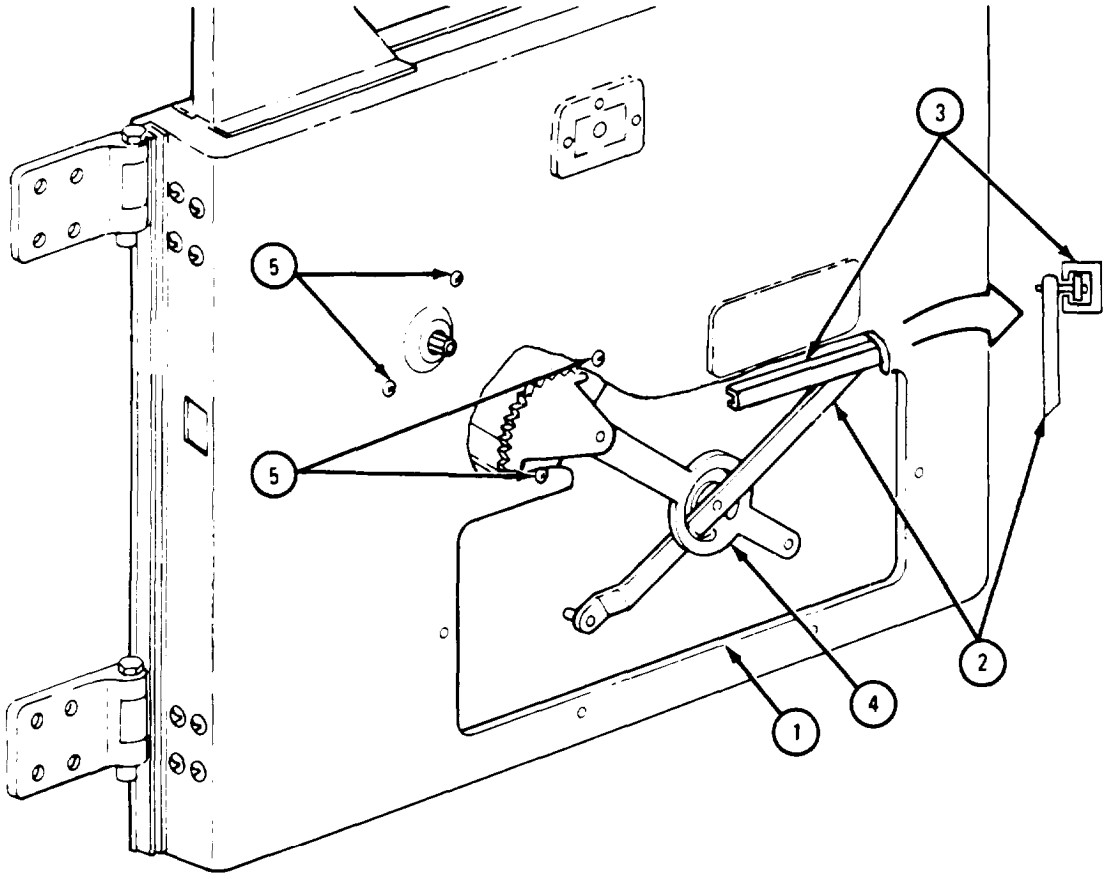
FRAME 7

NOTE

Make sure regulator arm guides are alined inside door channel.

1. Working through inspection hole (1), slide regulator arm (2) into channel (3) and put regulator assembly (4) in place, alining holes.
2. Put in four screws (5).

GO TO FRAME 8

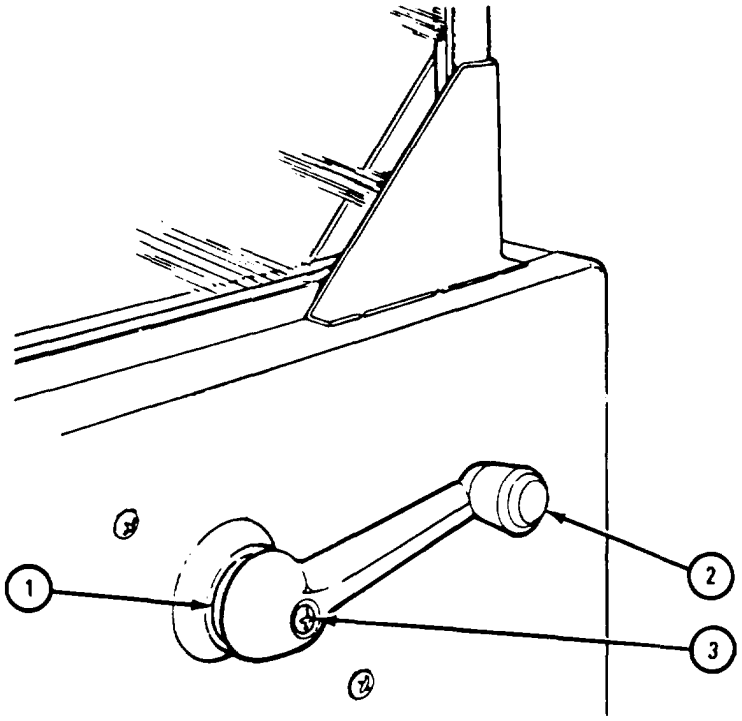


TA 084456

FRAME 8

1. Put spacer (1) and door glass regulator handle (2) on door assembly.
2. Put in screw (3).

GO TO FRAME 9

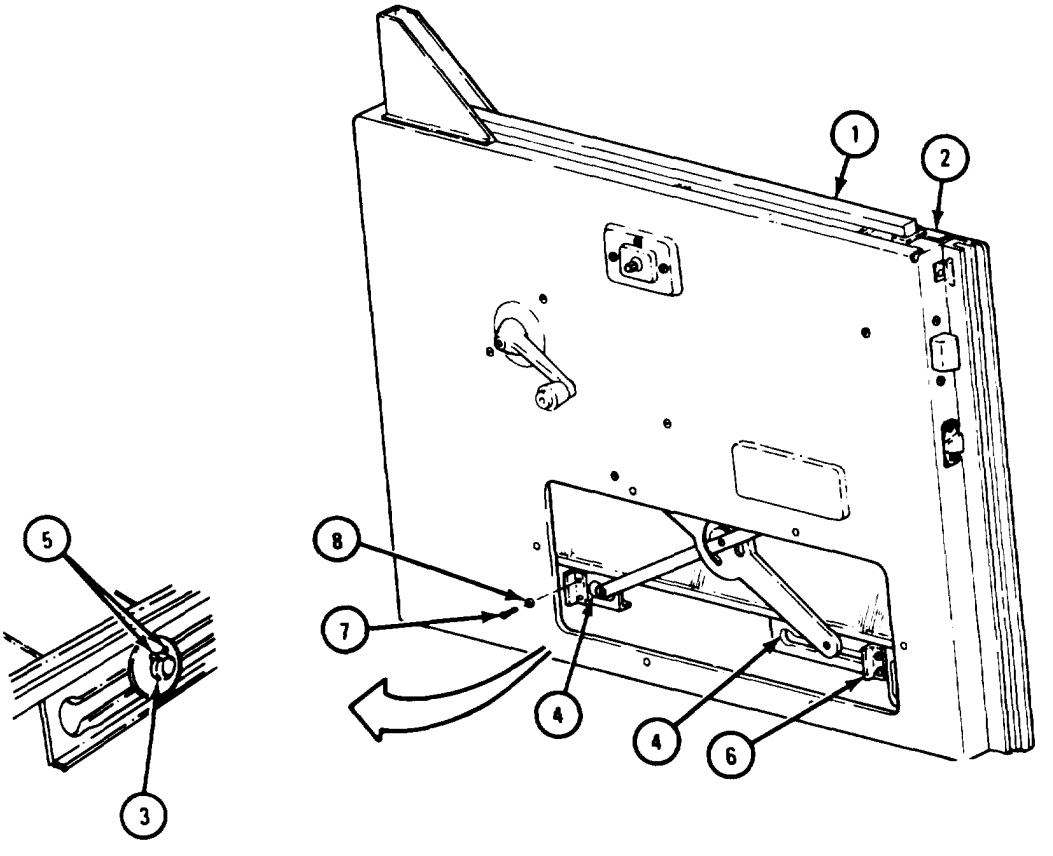


TA 084457

FRAME 9

1. Slide door glass with door glass frame (1) down into door assembly (2).
2. Put door glass regulator assembly guides (3) in door glass regulator channel (4) as shown and push on two pin fasteners (5).
3. Put two stop brackets (6) in place, alining holes.
4. Put in four screws (7) and washers (8).

GO TO FRAME 10

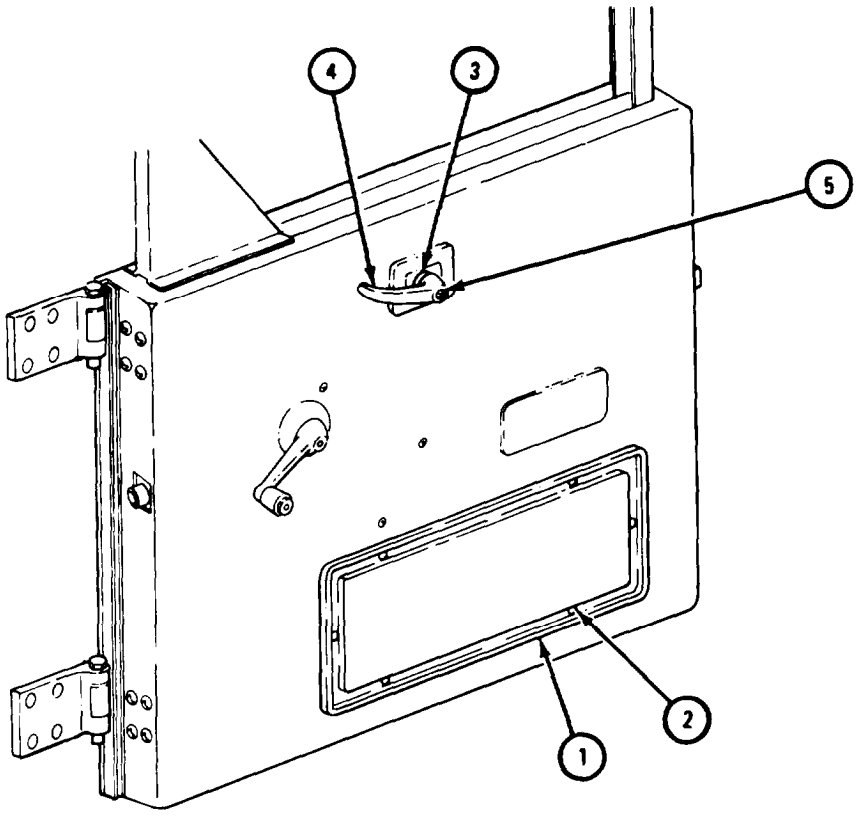


TA 084458

FRAME 10

1. Put inspection hole cover (1) in place.
2. Put in six screws (2).
3. Put spacer (3) and inner door handle (4) in place.
4. Put in screw (5).

GO TO FRAME 11



TA 084459

FRAME 11

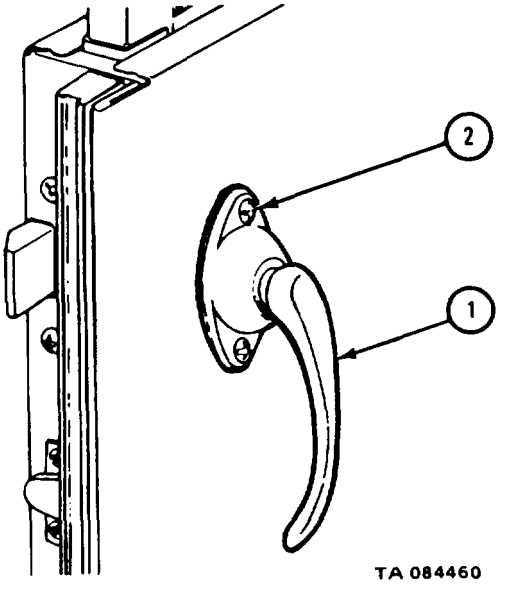
1. Put outer door handle (1) in place.
2. Put in two screws (2).

NOTE

Follow-on Maintenance Action Required:

Replace cab door. Refer to TM 9-2320-211-20.

END OF TASK



16-7. CAB REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Lint-free cloth
Cotter pin

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove soft top if installed. Refer to TM 9-2320-211-10.

(2) Remove hard top if installed. Refer to Part 4, para 19-22.

(3) Remove brake and clutch pedals. Refer to TM 9-2320-211-20.

(4) Remove generator regulator. Refer to TM 9-2320-211-20.

(5) Remove accelerator pedal. Refer to TM 9-2320-211-20.

(6) Remove transmission shift lever. Refer to TM 9-2320-211-20.

(7) Remove thermal blankets (winterized trucks only). Refer to Part 4, para 19-20.

(8) Remove cab tunnel covers. Refer to TM 9-2320-211-20.

(9) Remove speedometer cable. Refer to TM 9-2320-211-20.

(10) Remove tachometer cable. Refer to TM 9-2320-211-20.

(11) Remove front fenders and squeak shield. Refer to para 16-11.

(12) Remove hood, support rod, and clip. Refer to para 16-4 and para 16-5.

(13) Remove steering column. Refer to para 13-5.

(14) Remove driver's seat. Refer to TM 9-2320-211-20.

(15) Remove companion seat. Refer to TM 9-2320-211-20.

(16) Remove handbrake lever and cable. Refer to TM 9-2320-211-20.

(17) Remove wiring harness at firewall. Refer to Part 1, para 6-16.

(18) Remove electric horn and solenoid. Refer to TM 9-2320-211-20.

(19) Remove air compressor governor valve. Refer to TM 9-2320-211–20.

(20) On trucks M51A2 and M543A2, remove dump and power divider linkages. Refer to TM 9-2320-211-20.

(21) Remove rear view mirrors. Refer to TM 9-2320-211-20.

(22) Remove air lines and fittings. Refer to TM 9-2320-211-20.

(23) Remove vertical exhaust pipe. Refer to TM 9-2320-211-20.

(24) Remove spare wheel carrier. Refer to TM 9-2320-211-20.

(25) Remove cab doors. Refer to TM 9-2320-211-20.

(26) Remove transmission transfer level. For trucks without front winch, refer to Part 1, para 8-7. For trucks with front winch, refer to Part 1, para 8-8.

(27) Remove power takeoff lever. Refer to Part 3, para 17-59.

(28) Remove cab vent door and seals. Refer to para 16-8.

(29) Remove engine stop control. Refer to TM 9-2320-211-20.

(30) Remove instrument panel. Refer to TM 9-2320-211-20.

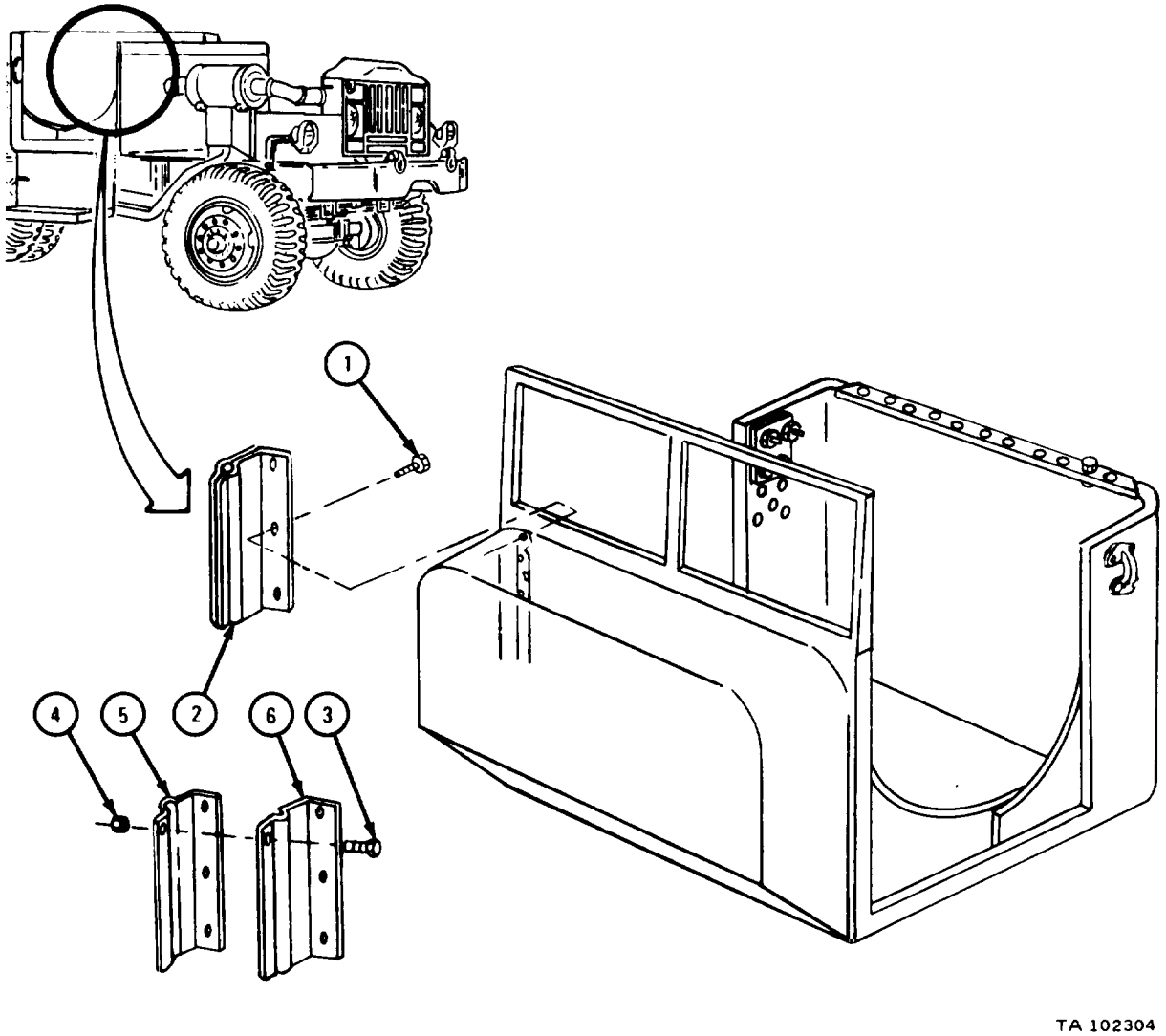
(31) Remove throttle controllable. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

1. Take out four screws (1). Takeout gun mount bracket assembly (2).
2. Takeout two screws (3) and nuts (4).
3. Take away front gun mount bracket (5) from rear gun mount bracket (6).

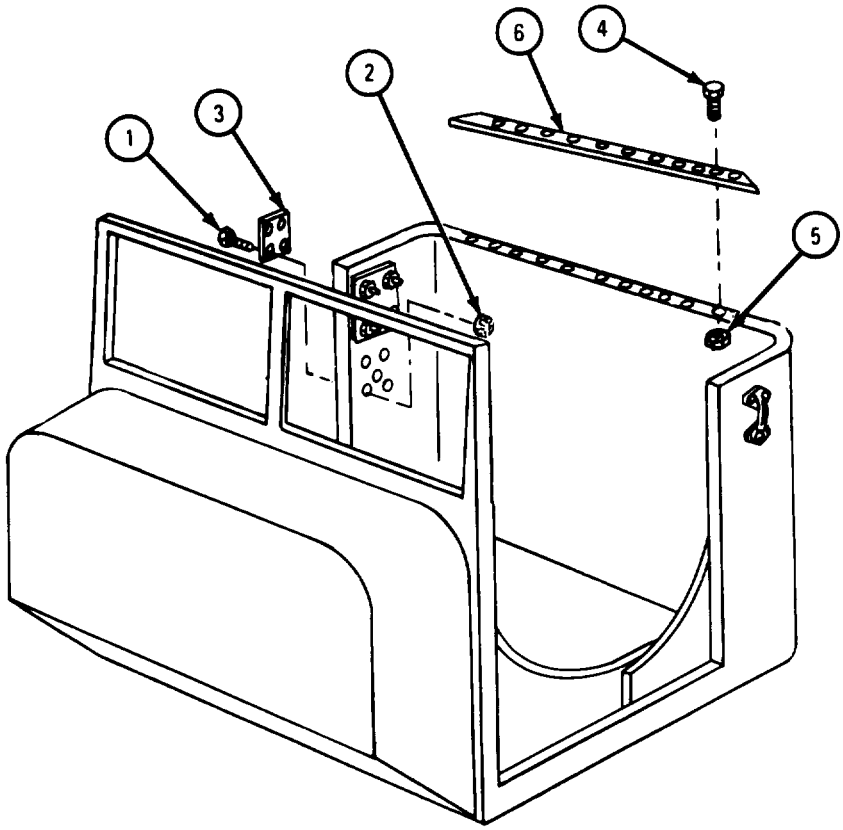
GO TO FRAME 2



FRAME 2

1. Take out four screws (1) and nuts (2). Take off slave receptacle cover (3).
2. Take out 12 screws (4) and nuts (5). Take off panel cap reinforcement (6).

GO TO FRAME 3

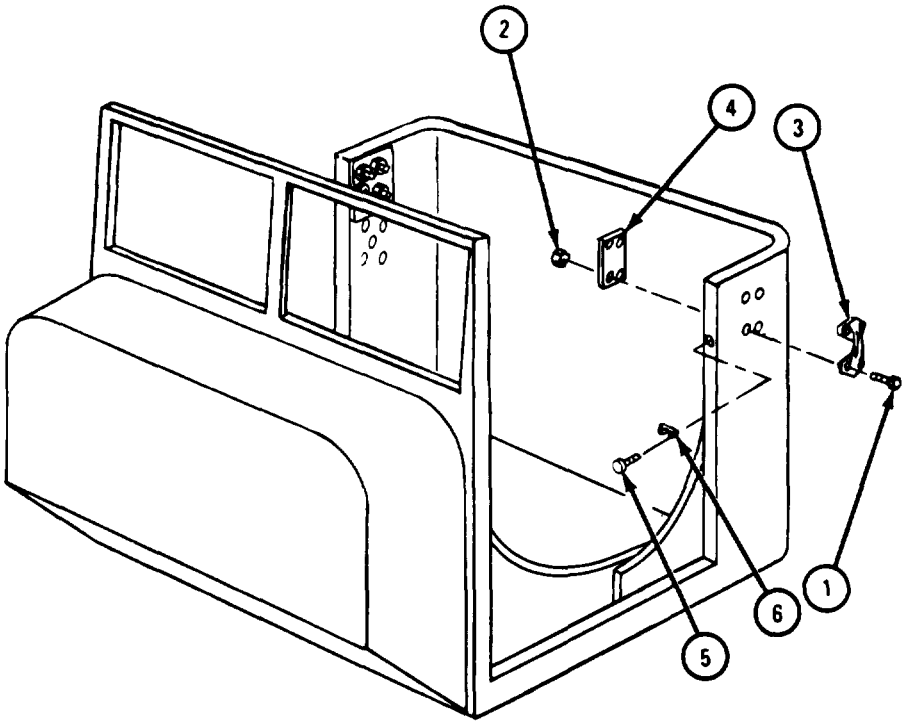


TA 102305

FRAME 3

1. Take out four screws (1) and nuts (2). Take out grab handle (3) and plate (4).
2. Take out two screws (5). Take off door lock striker (6).
3. Do steps 1 and 2 again on other side of cab.

GO TO FRAME 4

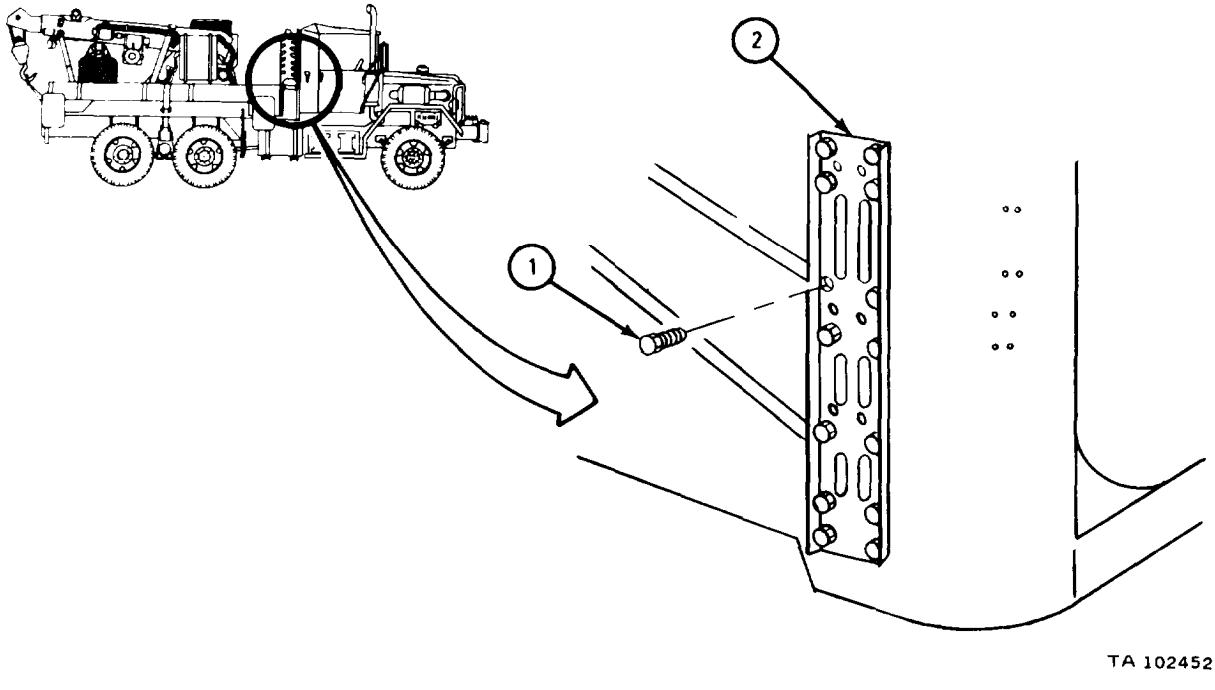


TA 102451

FRAME 4

1. Takeout 14 screws (1). Takeoff rear gun mount bracket (2).
2. Do step 1 again on other side of cab.

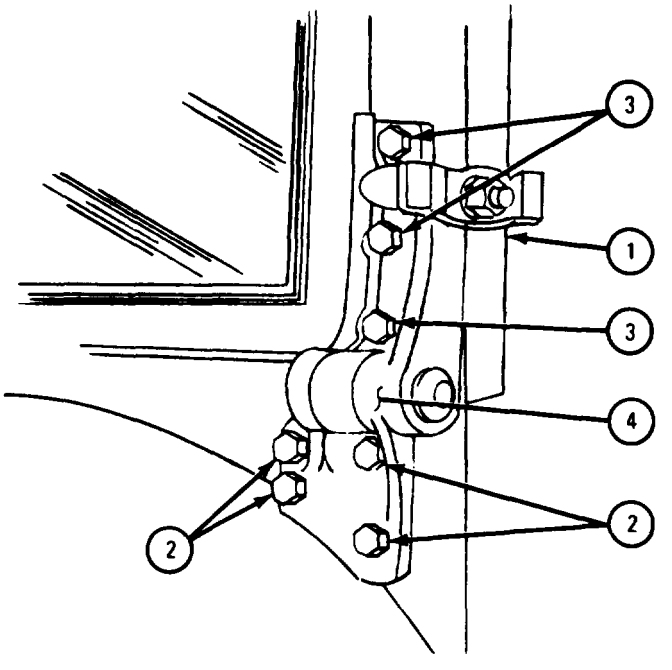
GO TO FRAME 5



FRAME 5

Soldier A	1.	Hold windshield frame (1) as soldier B takes out screws (2 and 3) from both sides of cab.
Soldier B	2.	Take out four screws (2).
	3.	Take out three screws (3).
	4.	Take off hinge (4).
	5.	Do steps 2 through 4 again on other side of windshield frame (1).
Soldiers A and B	6.	Lift off windshield frame (1).

GO TO FRAME 6

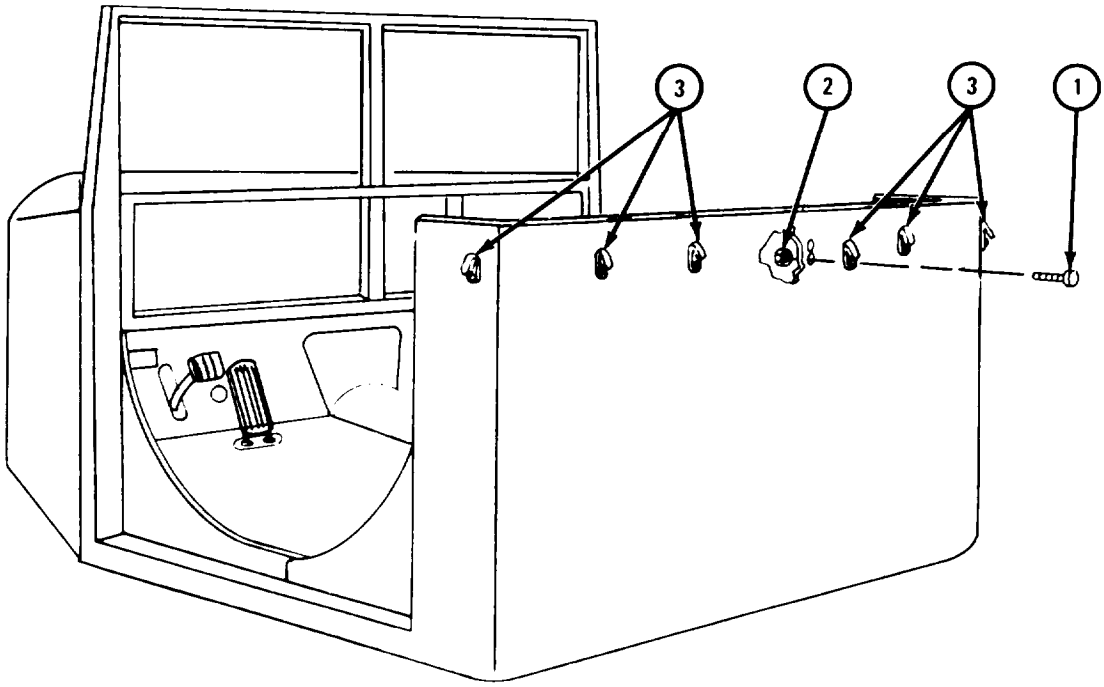


TA 102453

FRAME 6

1. Take out 12 screws (1) and nuts (2). Take off six lashing hooks (3).

GO TO FRAME 7

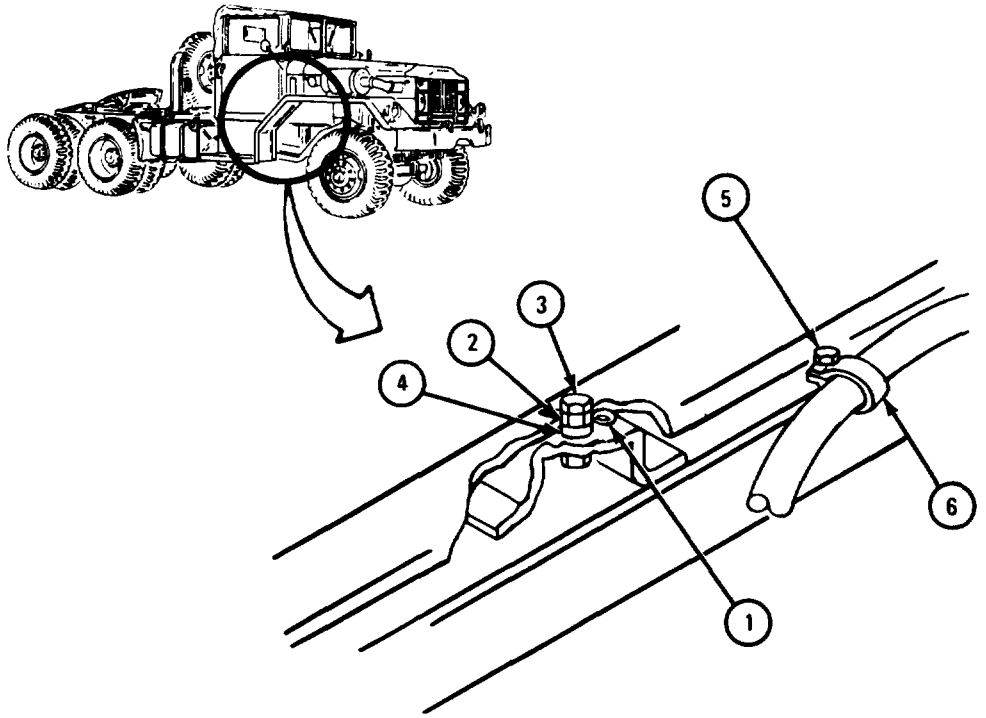


TA 102454

FRAME 7

1. Working under truck, take out cotter pin (1).
2. Take out nut (2).
3. Take out bolt (3) and insulator (4).
4. Do steps 1 through 3 again on other side of cab.
5. Take out screw (5) and take off clamp (6).

GO TO FRAME 8

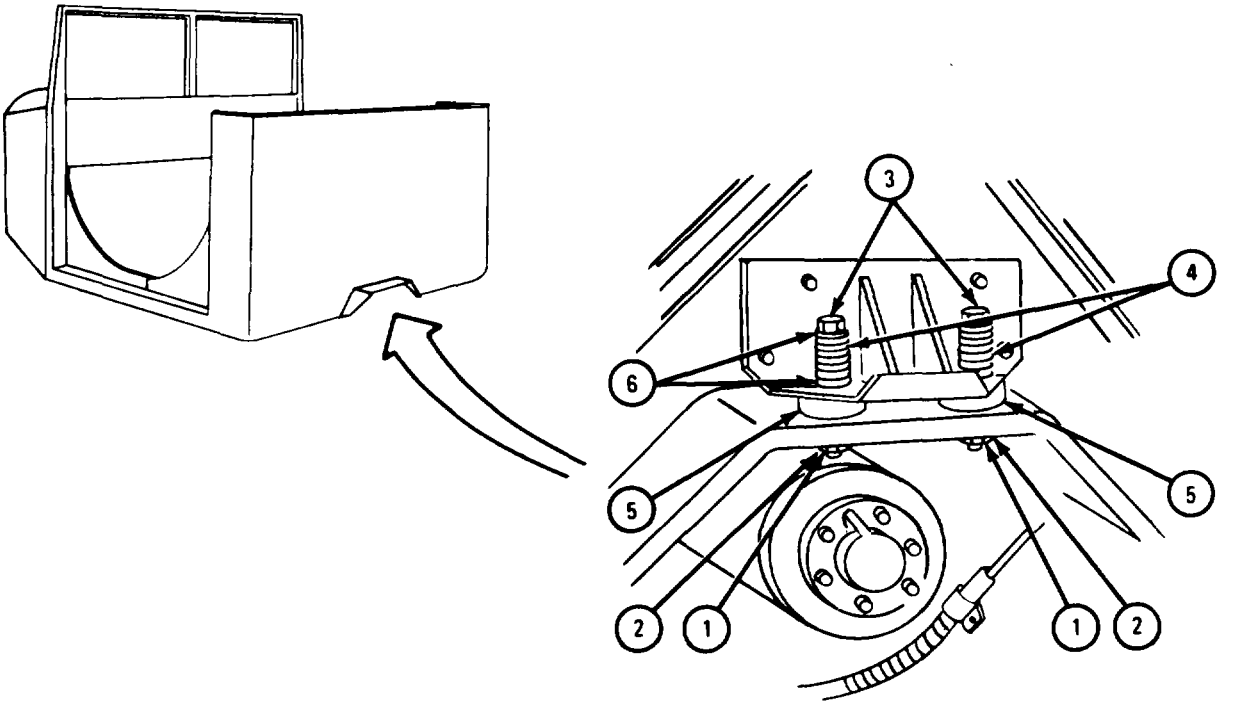


TA 102457

FRAME 8

1. At back center of cab, unscrew two nuts (1). Take out nuts with two washers (2).
2. Take out two bolts (3) with two springs (4), two insulators (5), and four washers (6).

GO TO FRAME 9

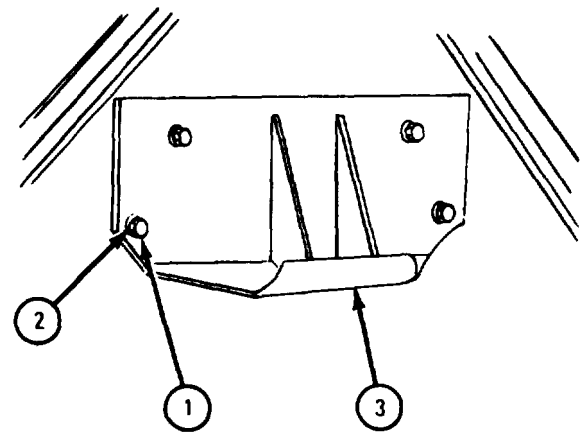


TA 102458

FRAME 9

1. At rear of cab, take out four capscrews (1) with lockwashers (2).
2. Takeoff bracket (3).

GO TO FRAME 10

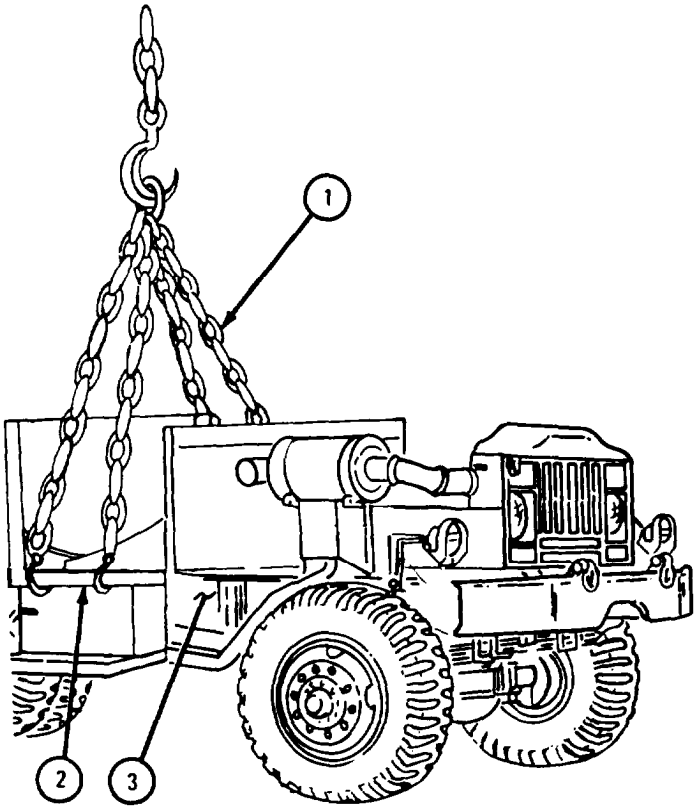


TA 102499

FRAME 10

1. Using hoist and chain sling (1), put sling on lower end of cab (2) as shown.
2. Lift cab (2) off frame (3) and lower it onto wooden blocks.
3. Take off hoist and chain sling (1).

END OF TASK



TA 102459

c. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Using a steam cleaner, clean all parts of cab that are normally exposed to moisture. Clean all other metal parts with dry cleaning solvent.

(2) Using wire brush, brush rust off metal parts. Refer to TM 9-247 for additional cleaning materials.

d. Inspection and Repair.

(1) Check that all panels and moving parts are not damaged in any way. If any damage is found, repair by welding or straightening or get a new part. Refer to TM 9-237 for welding procedures.

(2) Check that all cab welds are not damaged and that there are no bends. dents or cracks in cab. Refer to FM 43-2 for repair of sheet metal. Repair other damage by welding if parts will not be damaged or distorted by welding. Refer to TM 9-237.

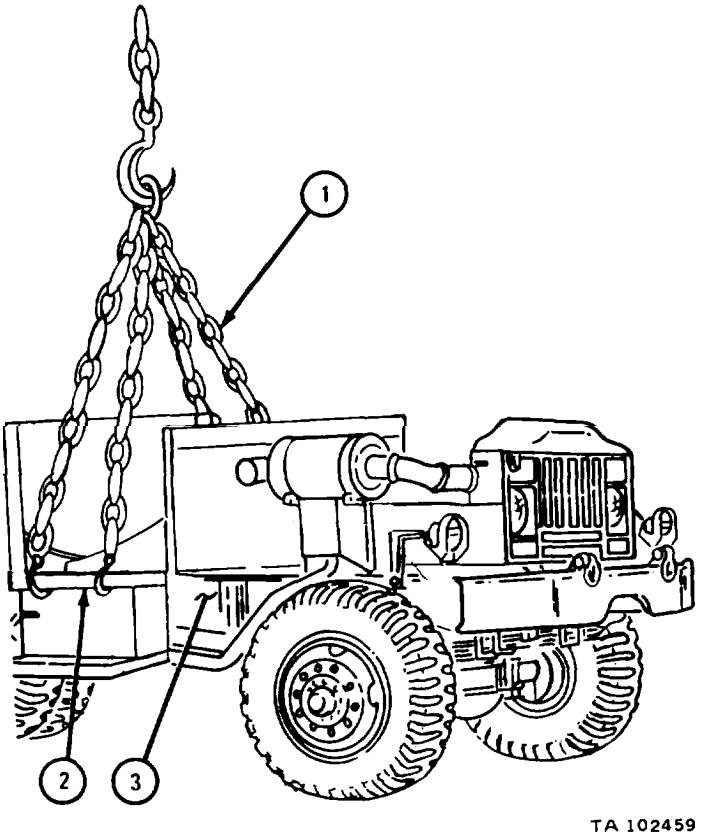
(3) Check that frames, retainers, seal, and other small cab parts are not worn or damaged. Throw away damaged parts and get new ones.

e. Replacement.

FRAME 1

1. Using hoist and chain sling (1), put sling on lower end of cab (2) as shown.
2. Lift cab (2) off wooden blocks and lower it onto frame (3).
3. Take off hoist and chain sling (1).

GO TO FRAME 2

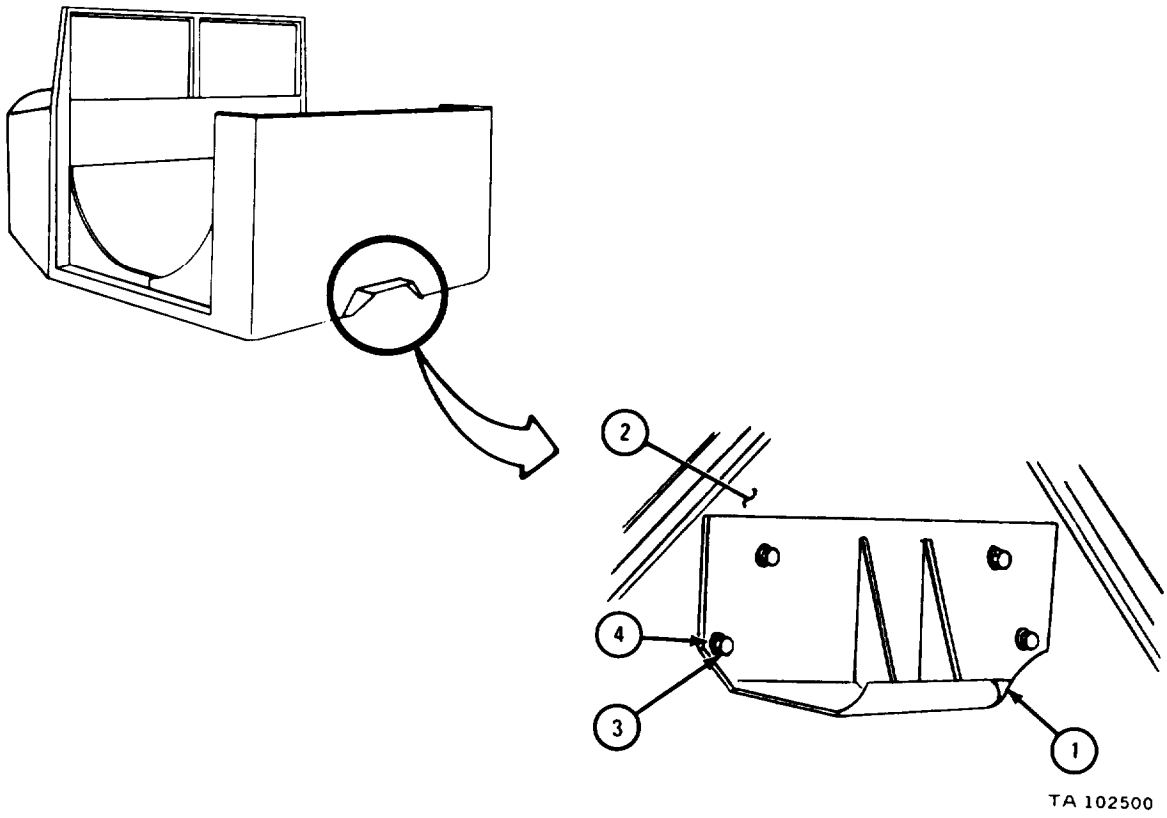


TA 102459

FRAME 2

1. Hold bracket (1) on rear of cab (2). Put in four capscrews (3) with washers (4).

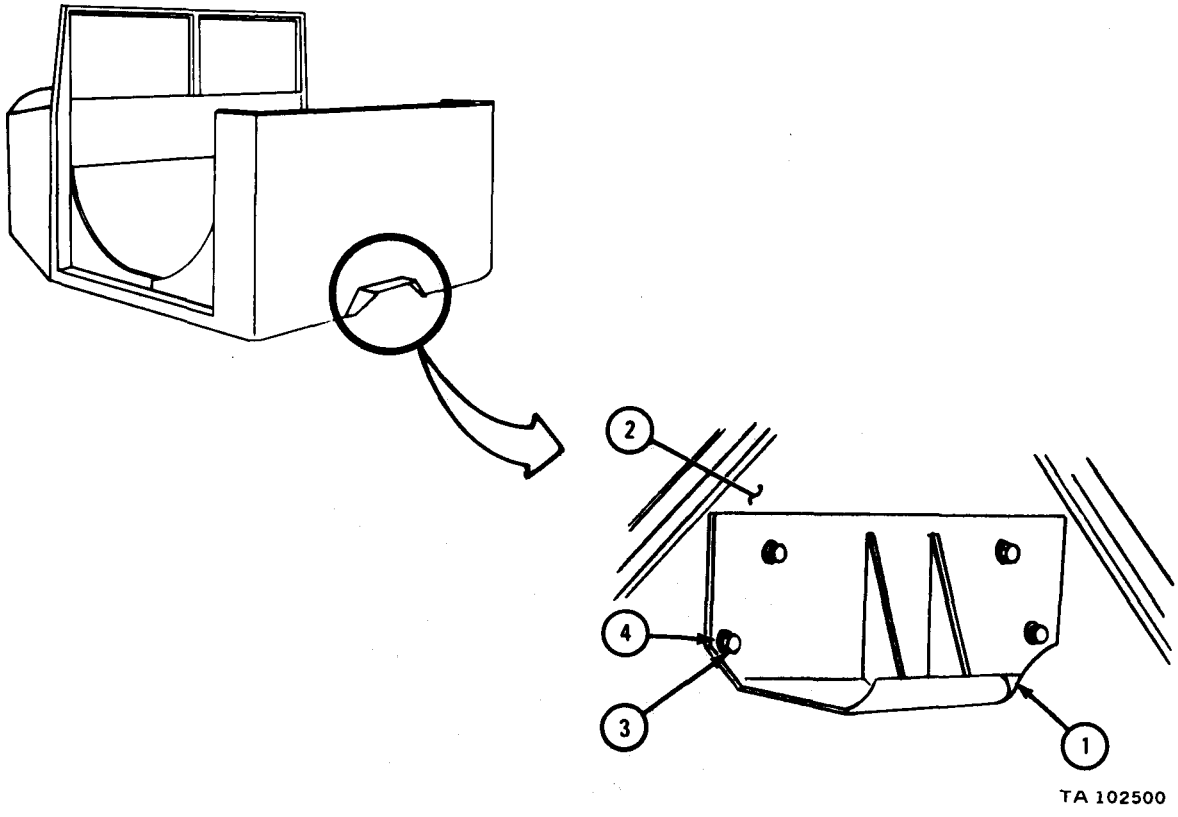
GO TO FRAME 3



FRAME 2

1. Hold bracket (1) on rear of cab (2). Put in four capscrews (3) with washers (4).

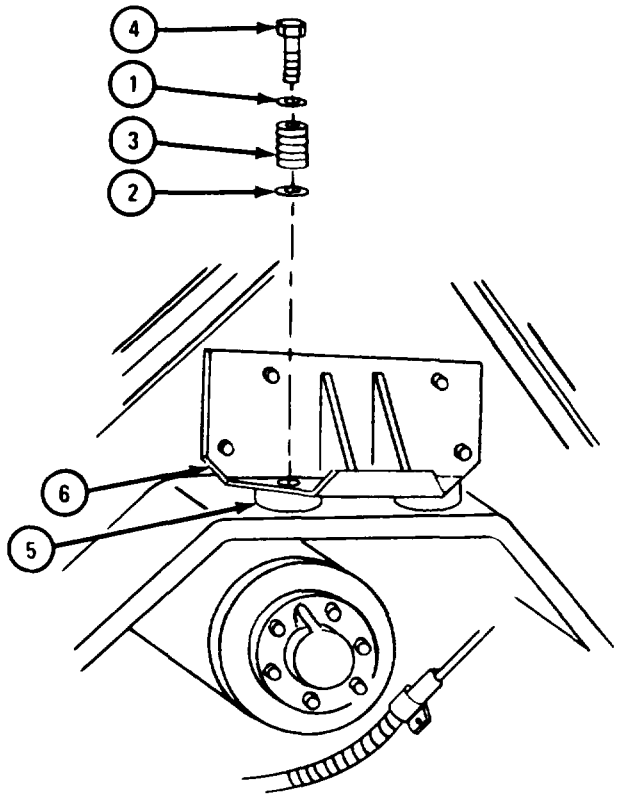
GO TO FRAME 3



FRAME 3

1. Put washers (1 and 2) and spring (3) on bolt (4).
2. Put insulator (5) under bracket (6).
3. Screw bolt assembly into bracket (6).
4. Do steps 1, 2, and 3 again on other side of cab.

GO TO FRAME 4

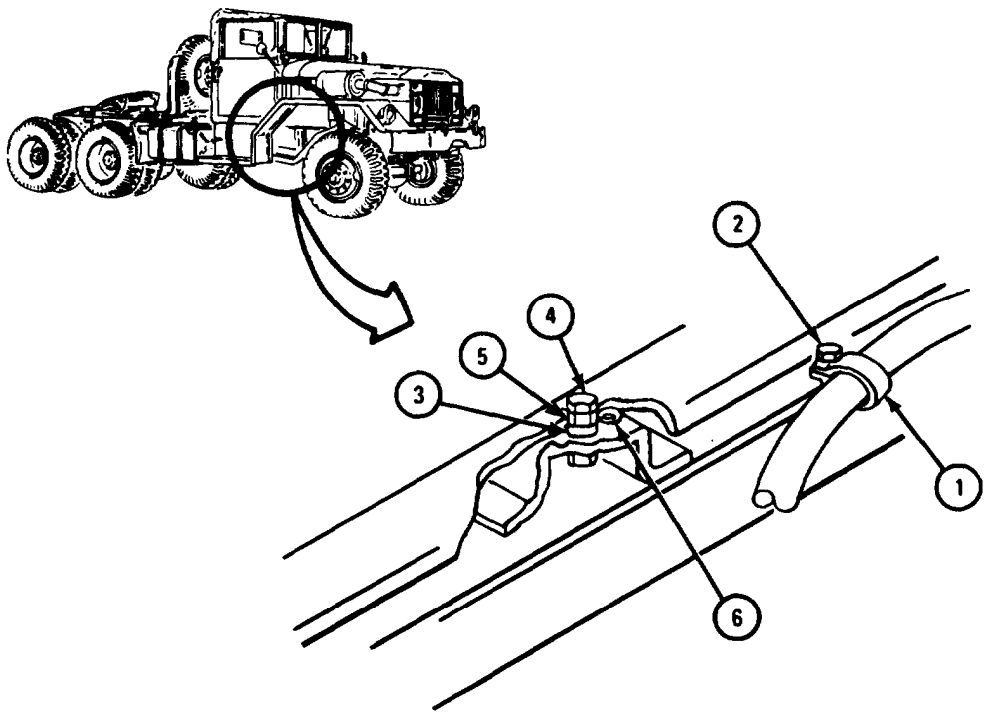


TA 102461

FRAME 4

1. Put on wiring harness clamp (1) with screw (2).
2. Put on insulator (3) and bolt (4).
3. Put on nut (5).
4. Put in cotter pin (6).
5. Do steps 2, 3, and 4 again on other side of cab.

GO TO FRAME 5

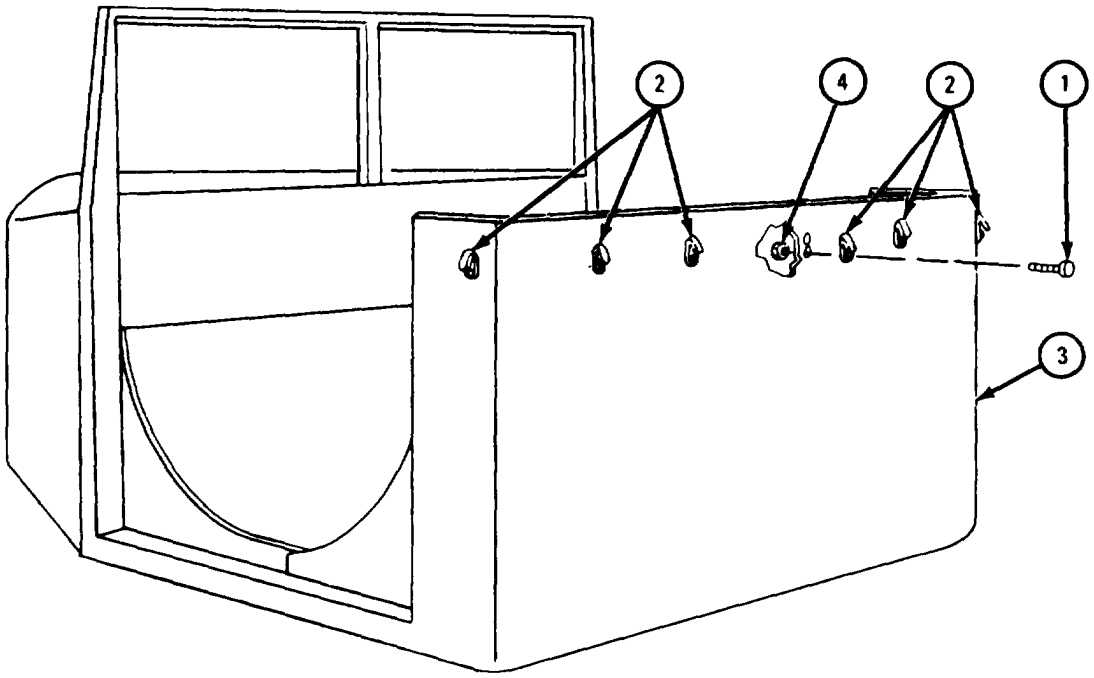


TA 102462

FRAME 5

1. Put 12 screws (1) through hooks (2) and through cab (3).
2. Put on 12 nuts (4).

GO TO FRAME 6



TA 102466

FRAME 6

1. Put two windshield hinges (1) on frame (2).
2. Put in four screws (3) on each hinge (1).

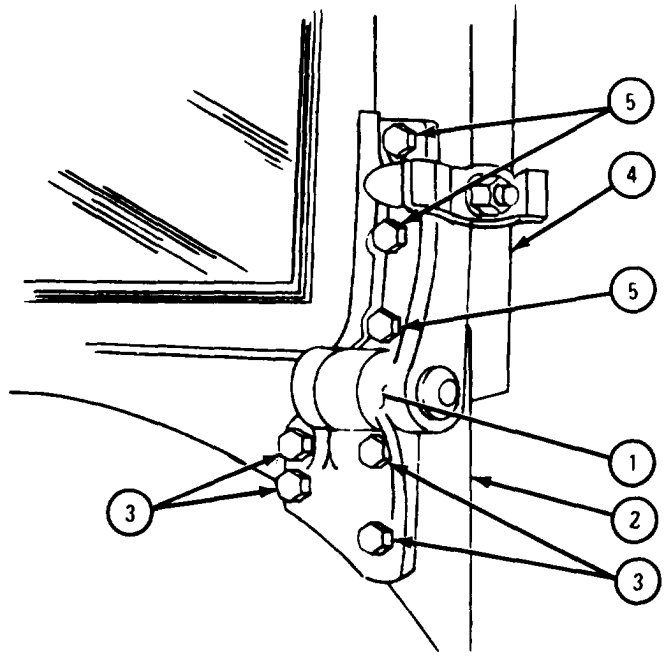
Soldiers A and B

3. Lift windshield frame (4) and put it in place.
4. Hold windshield frame (4) as soldier B puts in screws (5).

Soldier B

5. Put in six screws (5), three on each hinge (1).

GO TO FRAME 7

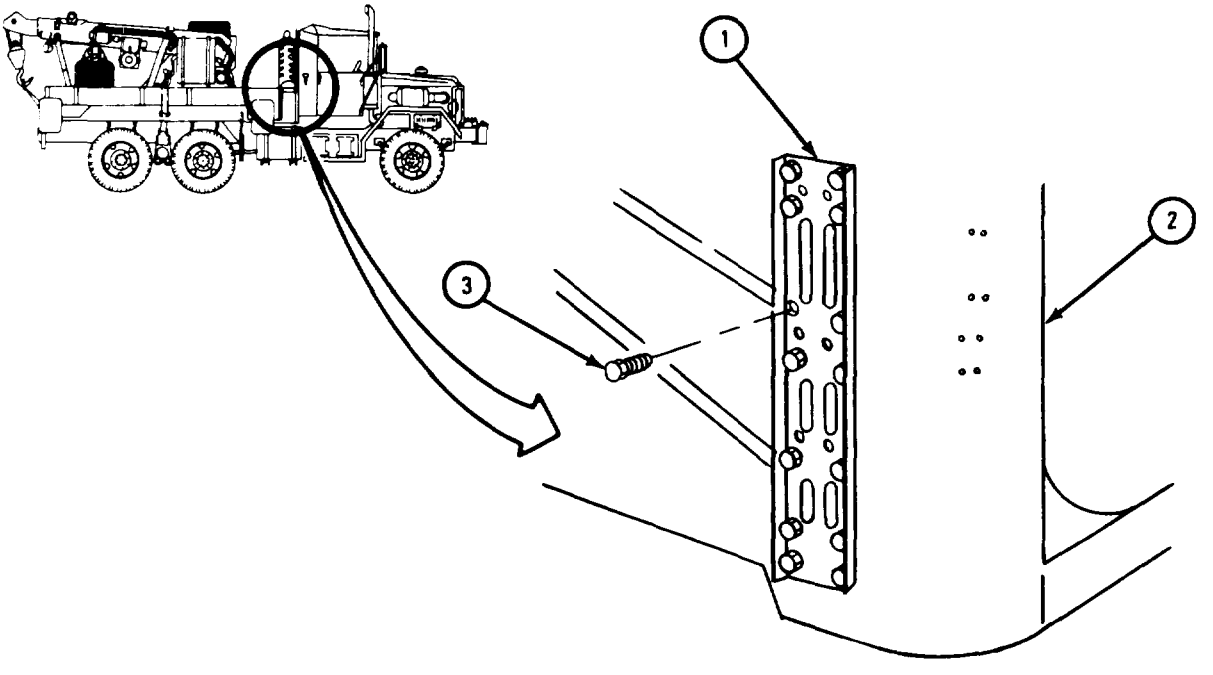


TA 102465

FRAME 7

1. Put rear gun mount bracket (1) on cab (2) as shown.
2. Put in 14 screws (3).
3. Do steps 1 and 2 again on other side of cab.

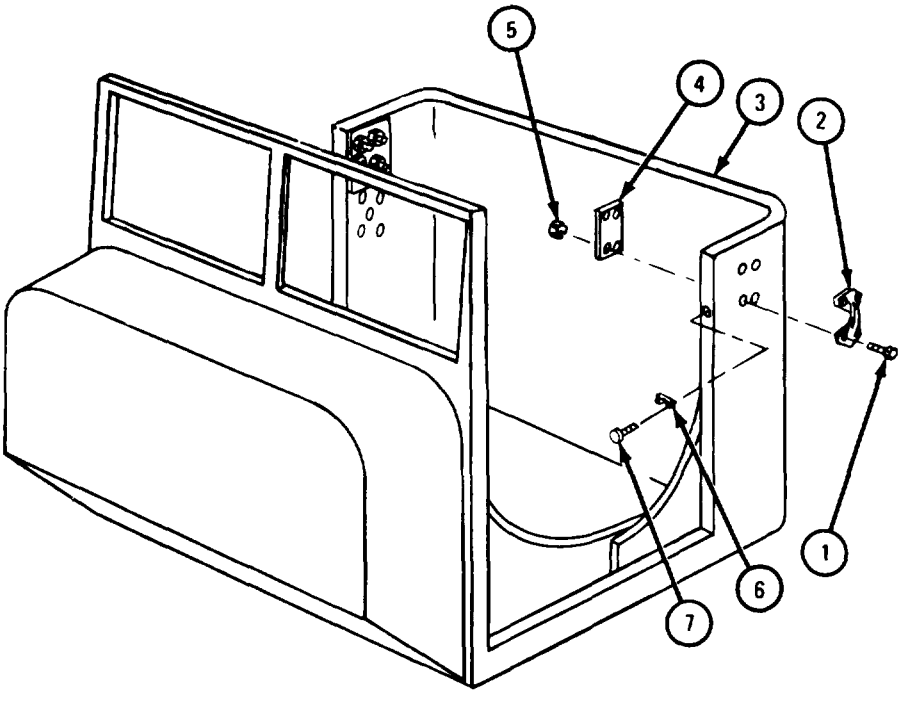
GO TO FRAME 8



FRAME 8

1. Put four screws (1) through grab handle (2).
2. Put handle (2) with screws (1) through cab (3).
3. Put on plate (4).
4. Put on four nuts (5).
5. Put on door lock striker (6) and put in two screws (7).
6. Do steps 1 through 5 again for other side of cab (3).

GO TO FRAME 9

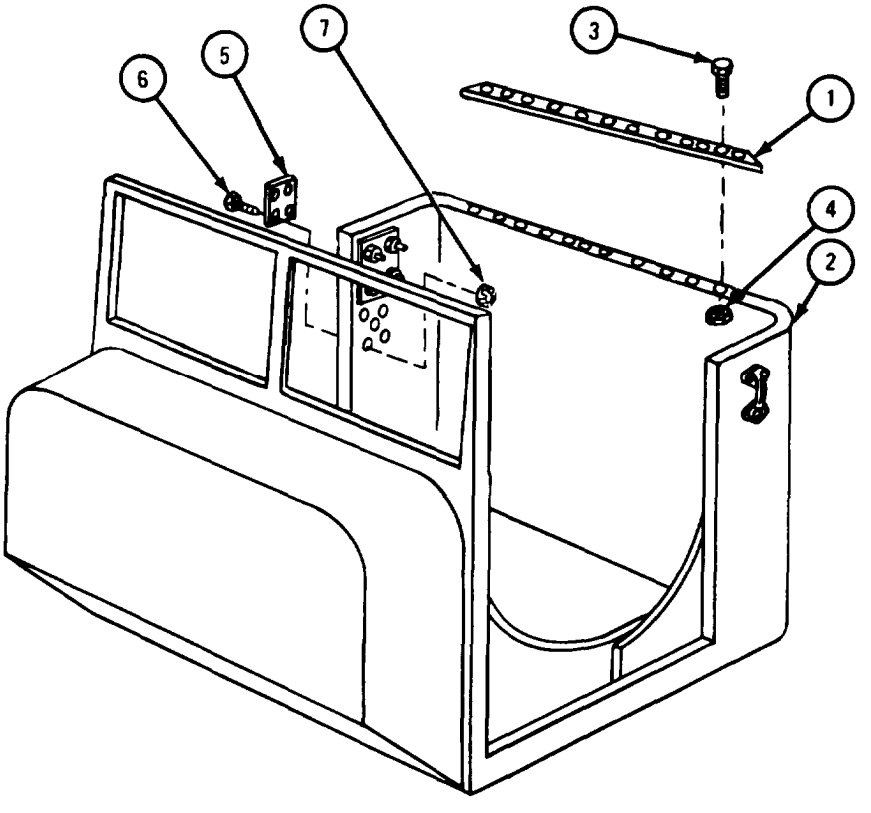


TA 102468

FRAME 9

1. Put panel cap reinforcement (1) on cab (2).
2. Put in 12 screws (3) and nuts (4).
3. Put on slave receptacle cover (5).
4. Put in four screws (6) and nuts (7).

GO TO FRAME 10

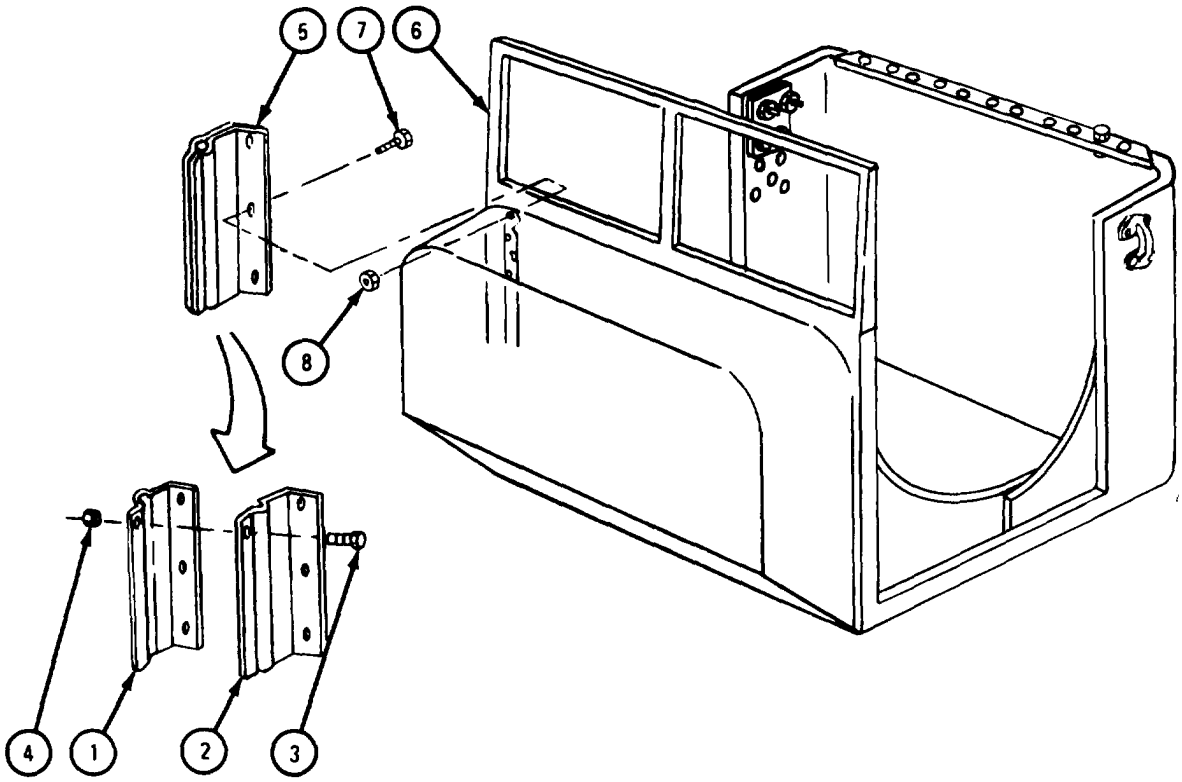


TA 102469

FRAME 10

1. Join front gun mount bracket (1) to rear gun mount bracket (2).
2. Put in two screws (3) and nuts (4).
3. Put in gun mount bracket assembly (5) on cable (6).
4. Put in three screws (7) and nuts (8).

GO TO FRAME 11



TA 102470

FRAME 11

NOTE

Follow-on Maintenance Action Required:

1. Replace throttle control cable. Refer to TM 9-2320-211-20.
2. Replace instrument panel. Refer to TM 9-2320-211-20.
3. Replace engine stop control. Refer to TM 9-2320-211-20.
4. Replace transmission transfer lever. For trucks without front winch, refer to Part 1, para 8-7. For trucks with front winch, refer to Part 1, para 8-8.
5. Replace power takeoff lever. Refer to Part 3, para 17-59.
6. Replace cab vent doors and seals. Refer to para 16-8.
7. Replace cab doors. Refer to TM 9-2320-211-20.
8. Replace spare wheel carrier. Refer to TM 9-2320-211-20.
9. Replace vertical exhaust pipe. Refer to TM 9-2320-211-20.
10. Replace air lines and fittings at firewall. Refer to TM 9-2320-211-20.
11. Replace rear view mirrors. Refer to TM 9-2320-211-20.
12. On trucks M51A2 and M543A2, replace dump or power divider control linkage. Refer to TM 9-2320-211-20.
13. Replace air compressor governor valve. Refer to TM 9-2320-211-20.
14. Replace electric horn and solenoid. Refer to TM 9-2320-211-20.
15. Replace wiring harness at firewall. Refer to Part 1, para 6-16.
16. Replace handbrake lever and cable. Refer to TM 9-2320-211-20.
17. Replace companion seat. Refer to TM 9-2320-211-20.
18. Replace driver's seat. Refer to TM 9-2320-211-20.
19. Replace steering column. Refer to para 13-5.
20. Replace hood, support rod, and clip. Refer to para 16-4 and para 16-5.
21. Replace front fenders and squeak shield. Refer to para 16-11.
22. Replace tachometer cable. Refer to TM 9-2320-211-20.
23. Replace speedometer drive cable. Refer to TM 9-2320-211-20.
24. Replace cab tunnel covers. Refer to TM 9-2320-211-20.
25. Replace thermal blankets (winterized trucks only). Refer to Part 4, para 19-20.
26. Replace transmission shift lever. Refer to TM 9-2320-211-20.
27. Replace accelerator pedal. Refer to TM 9-2320-211-20.
28. Replace brake and clutch pedals. Refer to TM 9-2320-211-20.
29. Replace generator regulator. Refer to TM 9-2320-211-20.
30. Replace cab hard top if installed. Refer to Part 4, para 19-22.
31. Replace cab soft top if installed. Refer to TM 9-2320-211-20.

END OF TASK

16-8. VENT DOOR AND WEATHER SEAL REMOVAL AND REPLACEMENT

NOTE

This task is the same for the left and right vent door. This task is shown for the left vent door.

TOOLS: No special tools required

SUPPLIES: Cotter pins
Weather seals
Rubber cement, MMM-A-121

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

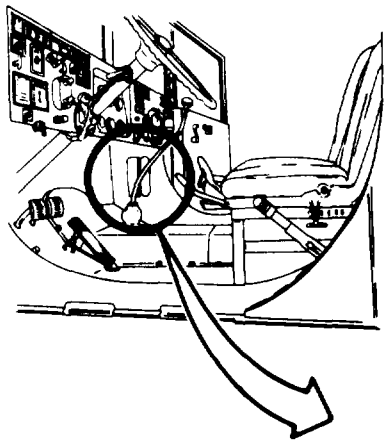
a. Removal.

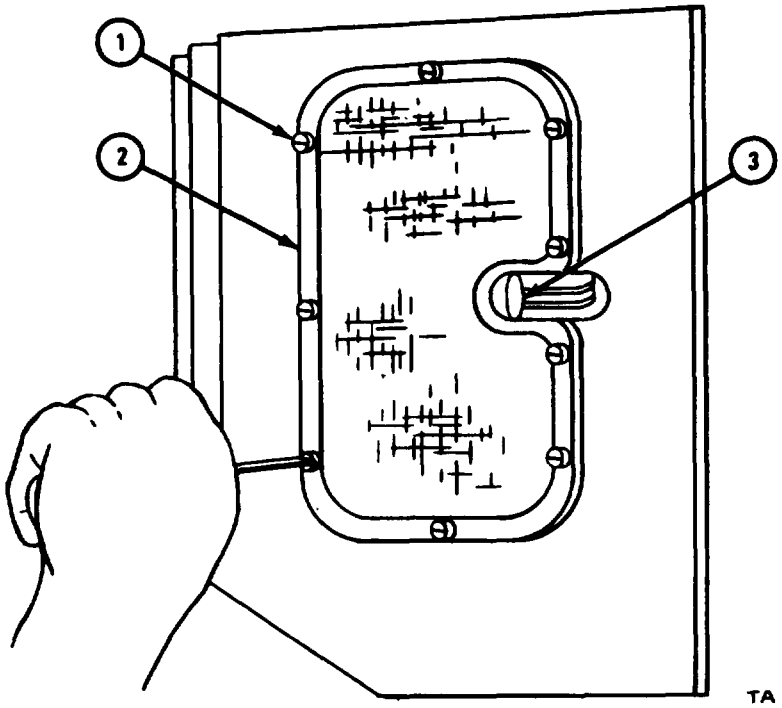
(1) Vent door.

FRAME 1

1. Take out nine screws (1).
2. Take off cowl ventilator screen (2).
3. Open cowl ventilator door by pushing handle (3).

GO TO FRAME 2

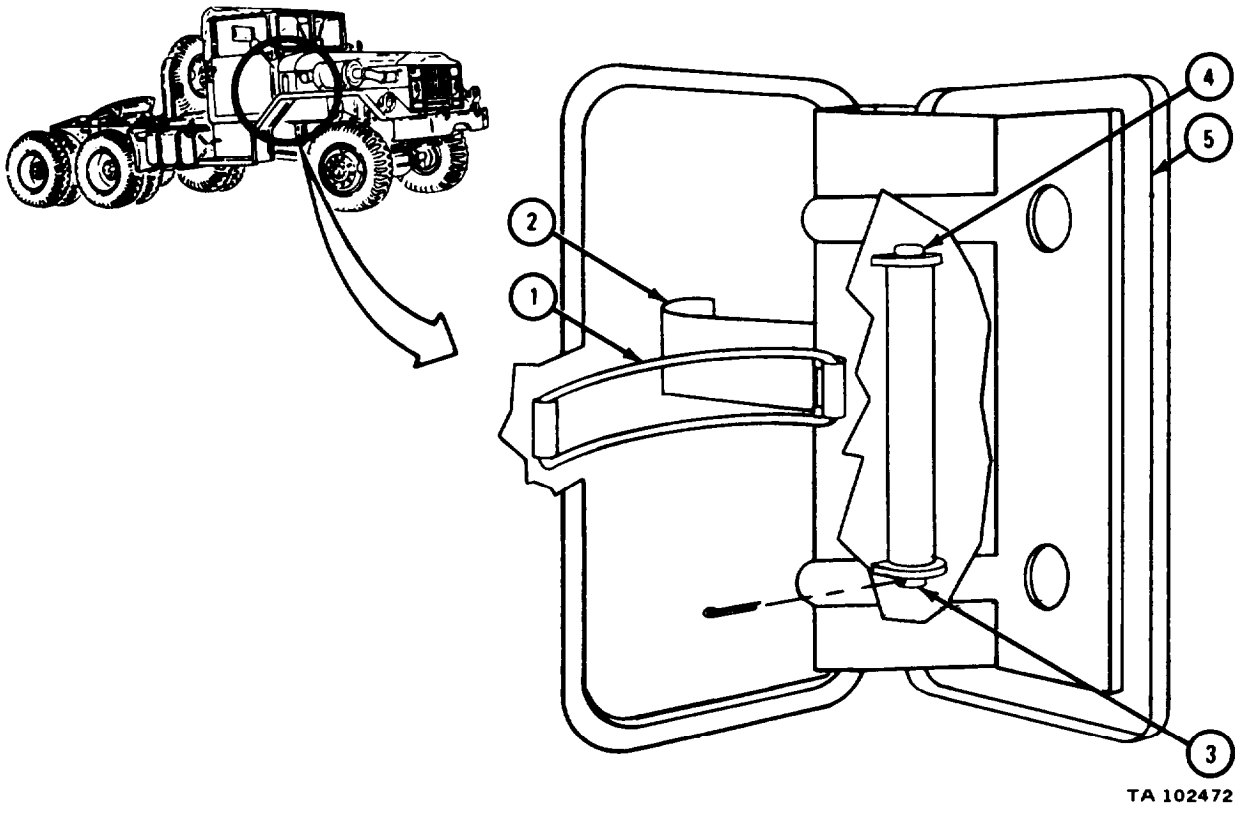




FRAME 2

1. Spread door spring (1) apart and set free from bracket (2).
2. Pull cotter pin (3) out of door pivot pin (4).
3. Lift out pivot pin (4) and takeoff vent door (5).

END OF TASK

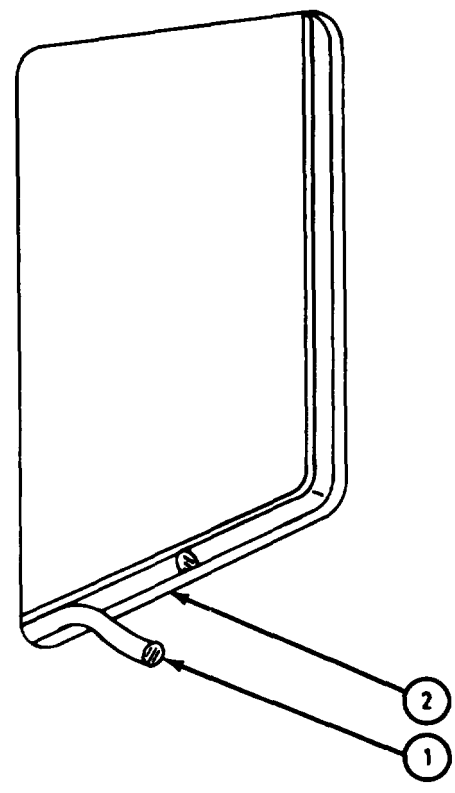


(2) Weather seal.

FRAME 1

1. Working outside cab, pull special-shaped rubber seal (1) from cowl opening (2). Throw away seal.

END OF TASK



TA 102473

b. Replacement.

(1) Weather seal.

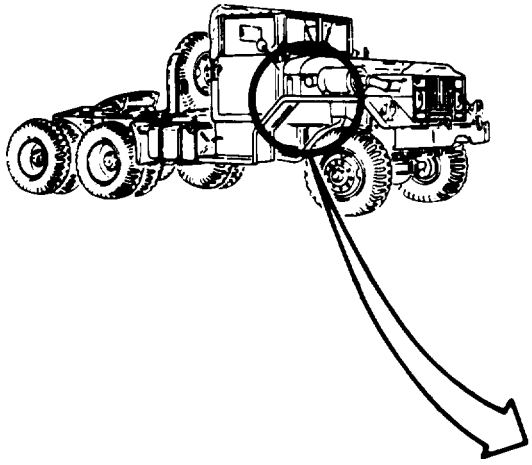
FRAME 1

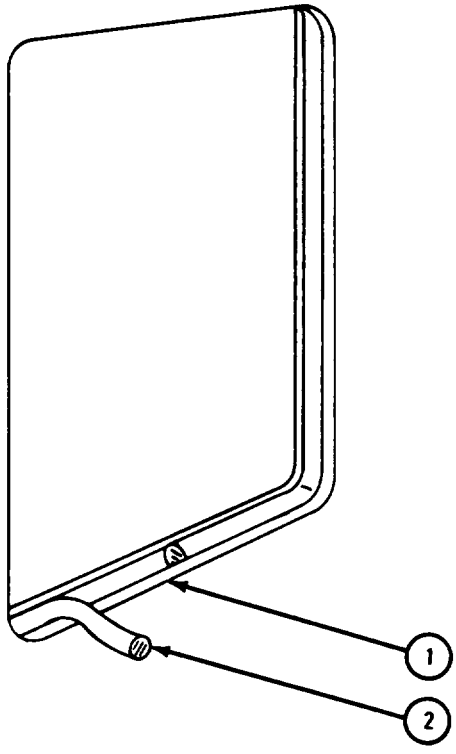
NOTE

Surface of cowl opening (1) must be clean, dry, and free of oil and grease before seal (2) is put in.

1. Spread a thin, even coat of rubber cement on cowl opening (1) and seal (2).
2. Let cement dry until it becomes tacky. Place seal (2) on cowl opening (1) and press seal firmly in place.

END OF TASK





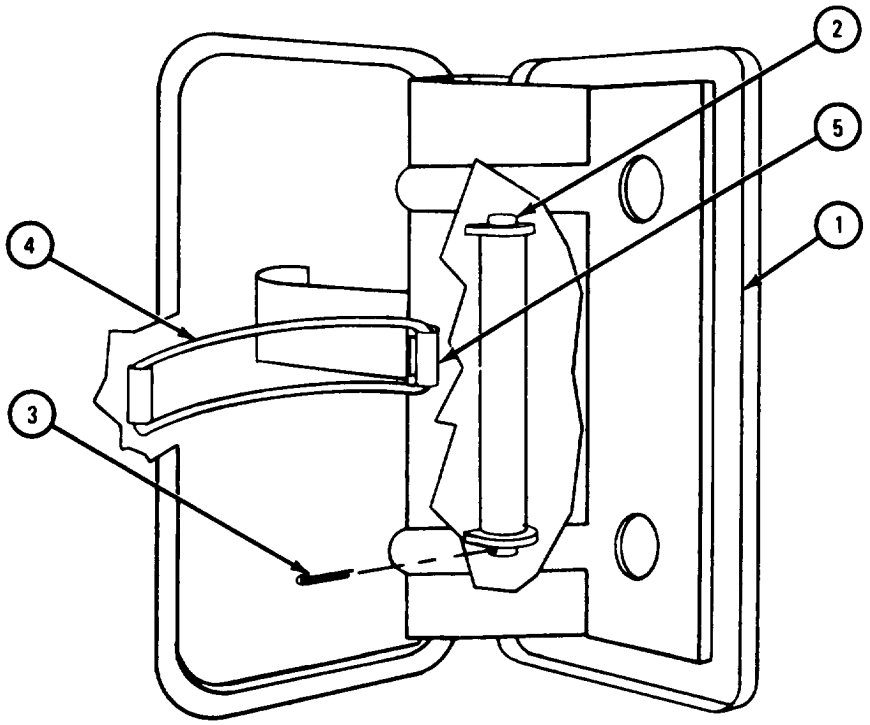
TA 102474

(2) Vent door.

FRAME 1

1. Put vent door (1) in place and push pivot pin (2) down.
2. Put cotter pin (3) in bottom hole of pivot pin (2).
3. Spread ends of door spring (4) apart and put in bracket (5).

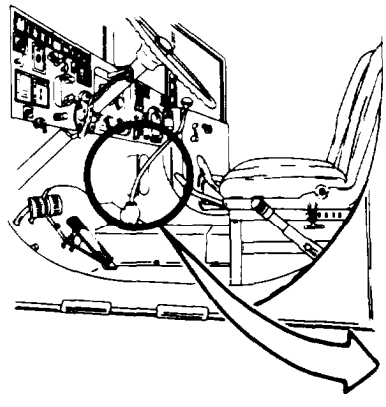
GO TO FRAME 2

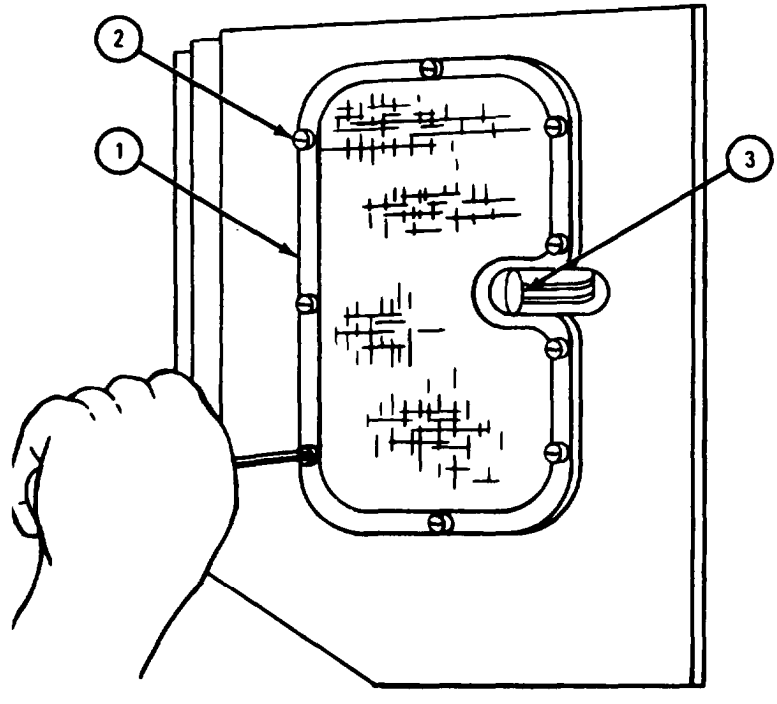


FRAME 2

1. Put cowl ventilator screen (1) in place.
2. Put in nine screws (2).
3. Working inside cab, close cowl ventilator door by pulling handle (3).

END OF TASK





TA 102476

16-9. BRUSH GUARD REPAIR.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Brush guard removed from truck.

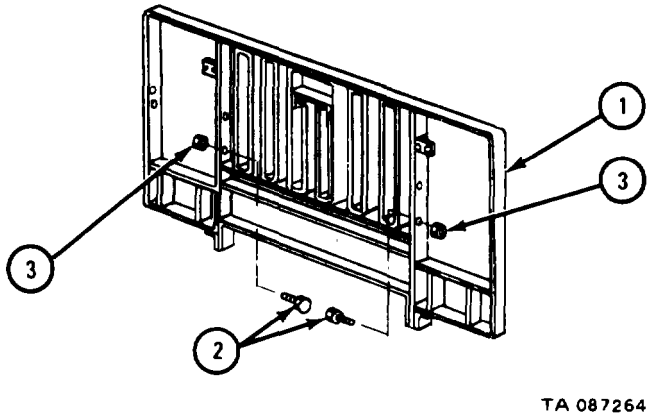
WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

FRAME 1

1. Clean all parts in solvent. Let parts dry.
2. Check that brush guard (1) has no cracks, breaks or bends.
3. Check that bolts (2) and nuts (3) have no stripped threads.
4. Fix cracks or breaks in brush guard (1) by welding, Refer to TM 9-237.
5. Straighten bends in brush guard (1).
6. Repair threads on bolts (2) and nuts (3) with taps or dies.
7. If more repair is needed, throw parts away and get new ones.
8. Paint parts after repair. Refer to TM 43-0139.

END OF TASK



16-10. GUN MOUNT BRACKETS REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove mirror from door hinges. Refer to TM 9-2320-211-20.

(2) Remove exhaust pipe brackets. Refer to TM 9-2320-211-20.

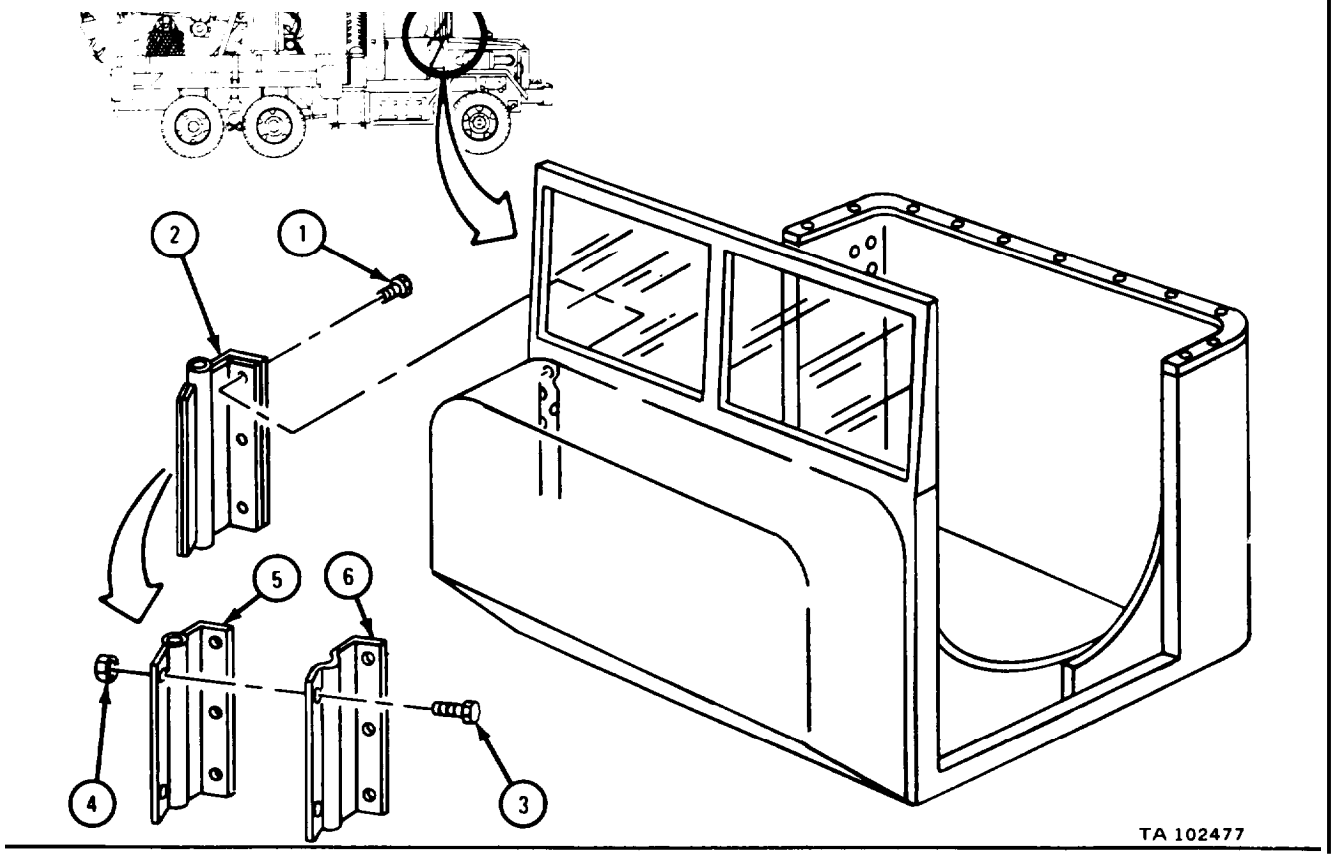
b. Removal.

(1) Front bracket.

FRAME 1

1. Takeout four screws (l). Takeout gun mount bracket assembly (2).
2. Takeout screw (3) and takeoff nut (4).
3. Take away front gun mount bracket (5) from rear gun mount bracket (6).

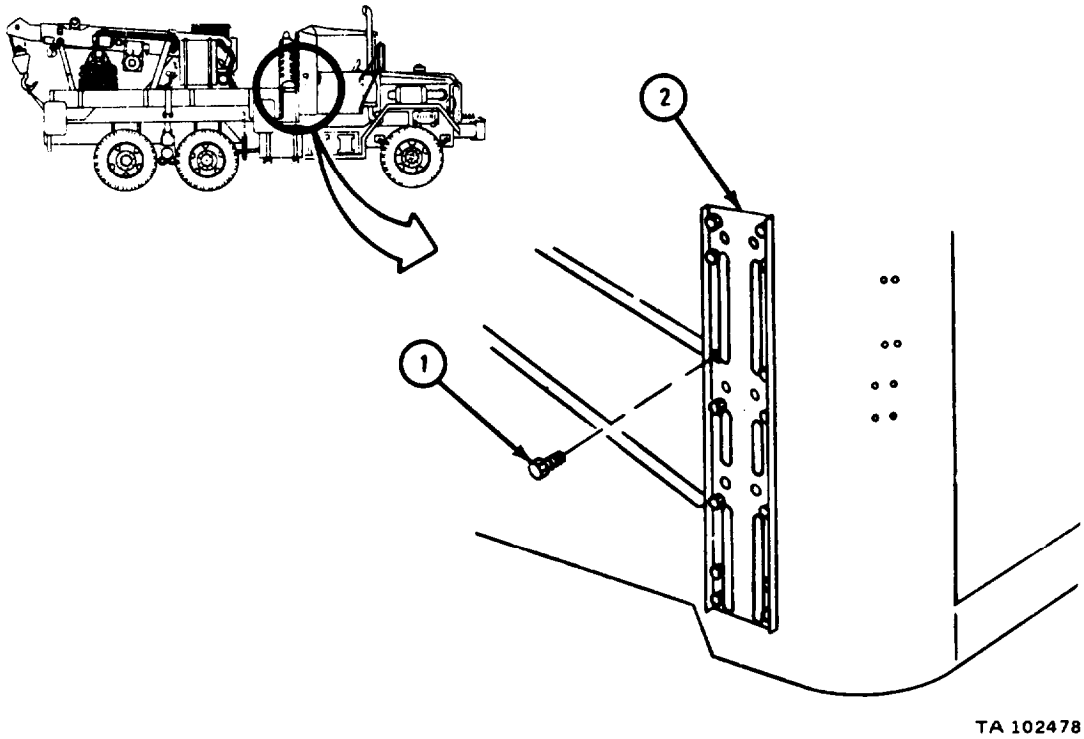
END OF TASK



(2) Rear bracket.

FRAME 1

1. Take out 14 screws (1). Takeoff rear gun mount bracket (2).
2, Do step 1 again on other side of cab.
END OF TASK



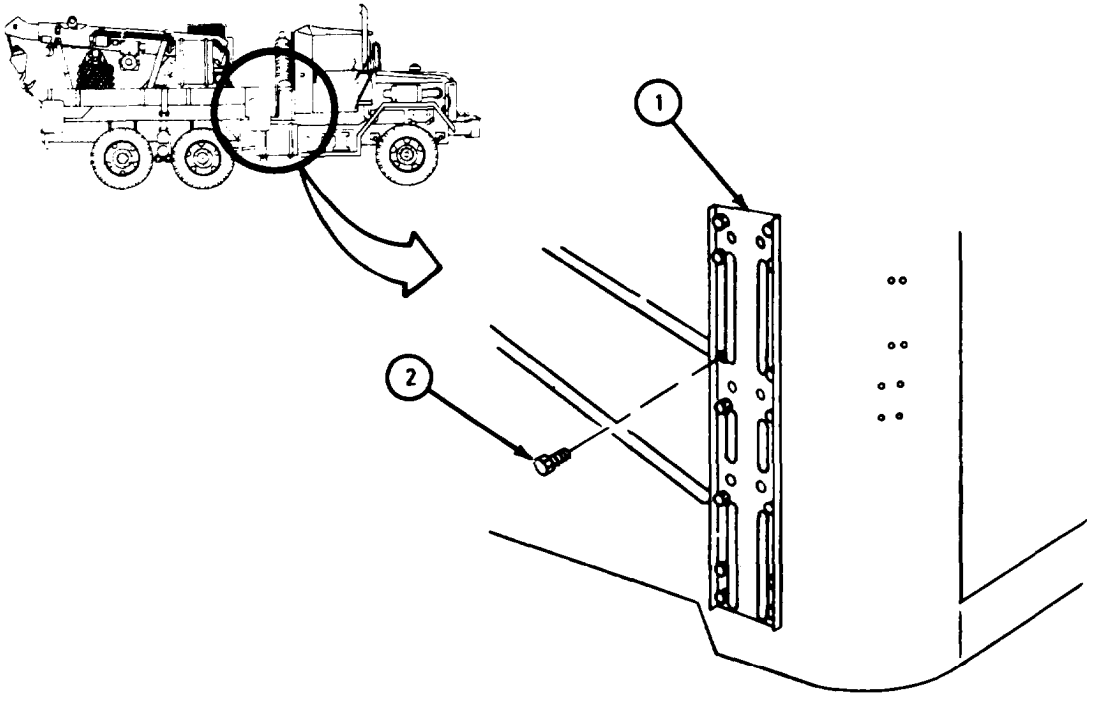
c. Replacement.

(1) Rear bracket.

FRAME 1

1. Put rear gun mount bracket (1) in place and put in 14 screws (2).
2. Do step 1 again on other side of cab.

END OF TASK



(2) Front bracket.

FRAME 1

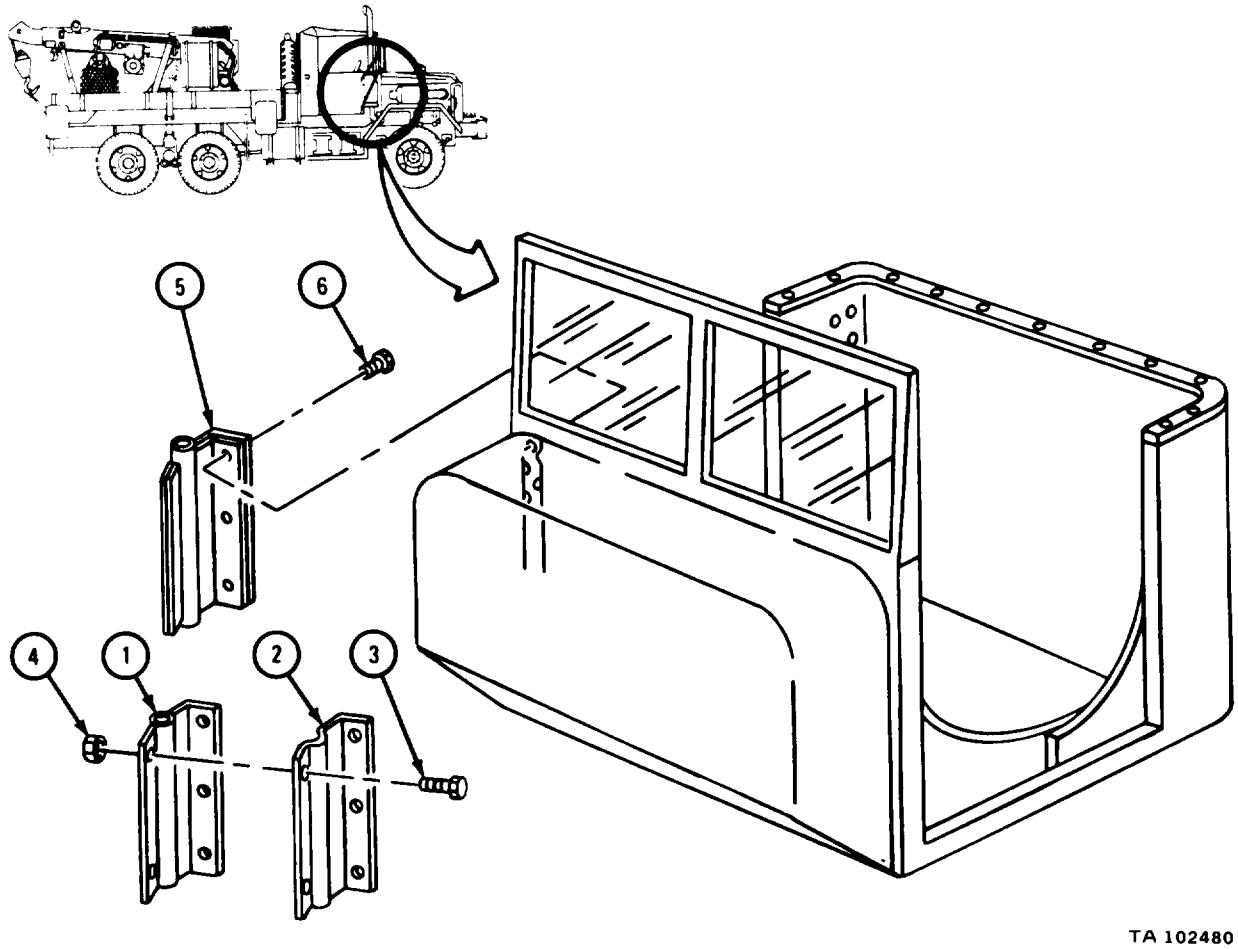
1. Put front gun mount bracket (1) on rear gun mount bracket (2).
2. Put in screw (3) and put on nut (4).
3. Put gun mount bracket assembly (5) in place and put in four screws (6).

NOTE

Follow-on Maintenance Action Required:

1. Replace exhaust pipe brackets. Refer to TM 9-2320-211-20.
2. Replace mirror on door hinge. Refer to TM 9-2320-211-20.

END OF TASK



TA 102480

Section III. FENDERS, RUNNING BOARDS, AND WINDSHIELD ASSEMBLY.

16-11. FRONT FENDER ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.

NOTE

Early model trucks may have certain components mounted in a slightly different way. This task is still done in the same way for all trucks except as noted.

TOOLS: No special tools required

SUPPLIES: Tags

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures,

(1) Open hood. Refer to TM 9-2320-211-10.

(2) Remove hood side panel. Refer to para 16-3.

(3) Disconnect battery ground wire. Refer to TM 9-2320-211-20.

(4) Remove brush guard. Refer to TM 9-2320-211-20.

(5) Remove headlight assembly. Refer to TM 9-2320-211-20.

(6) For left fender, remove shielded blackout headlight assembly and ground strap. Refer to TM 9-2320-211-20,

(7) For right fender, do the following:

(a) Remove air filter and turbocharger air tube. Refer to TM 9-2320-211-20.

(b) Remove exhaust pipe. Refer to TM 9-2320-211-20.

b. Removal of Left Front Fender.

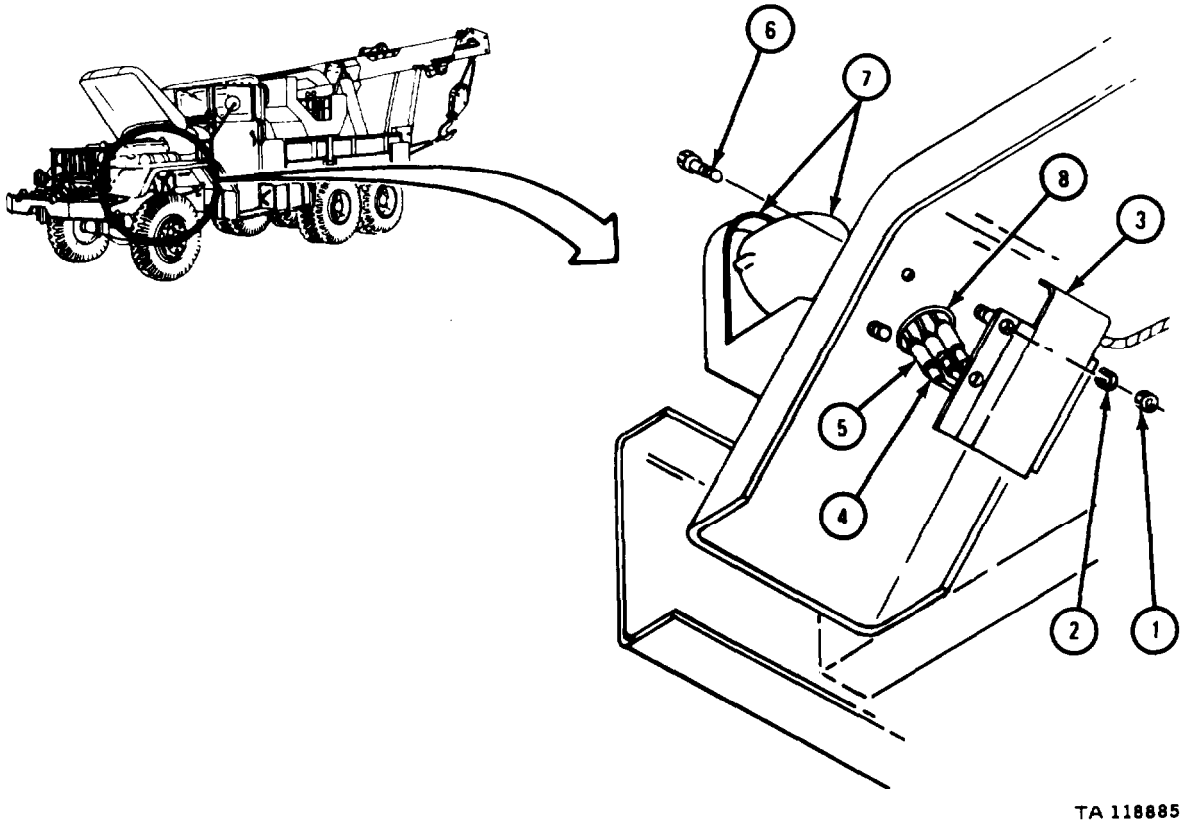
FRAME 1

NOTE

Tag connectors before taking them apart so that they are put back in the right place.

1. Working under fender, unscrew and take off four nuts (1), lockwashers (2), and protector box (3).
2. Pull three electrical leads (4) out of connectors (5).
3. Take out four screws (6) and take off light and bracket assembly (7).
4. Take out grommet (8).

IF WORKING ON TRUCK M543A2, GO TO FRAME 2.
IF WORKING ON ANY OTHER TRUCK, GO TO FRAME 3



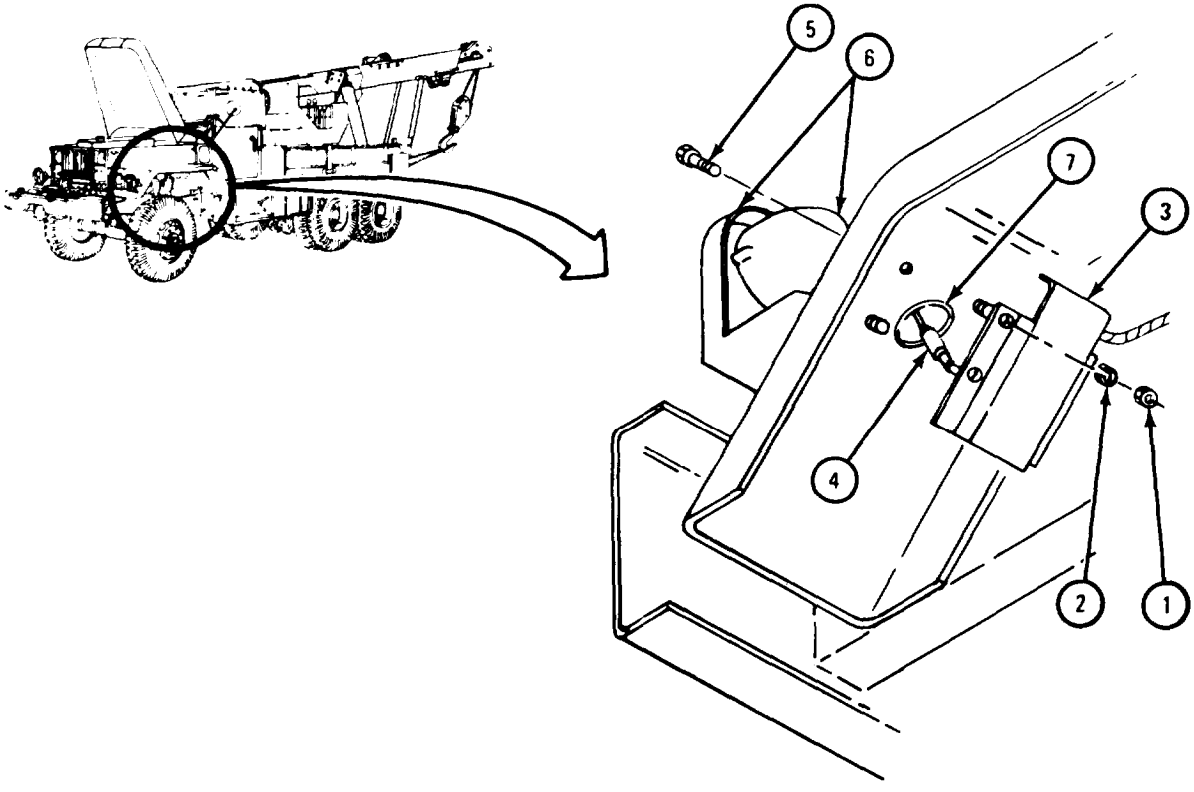
FRAME 2

NOTE

Tag connectors before taking them apart so that they are put back in the right place.

1. Working under fender, unscrew and take off four nuts (1), lockwashers (2), and protector box (3).
2. Pull connector (4) apart.
3. Take out four screws (5) and take off emergency light and bracket assembly (6).

GO TO FRAME 3

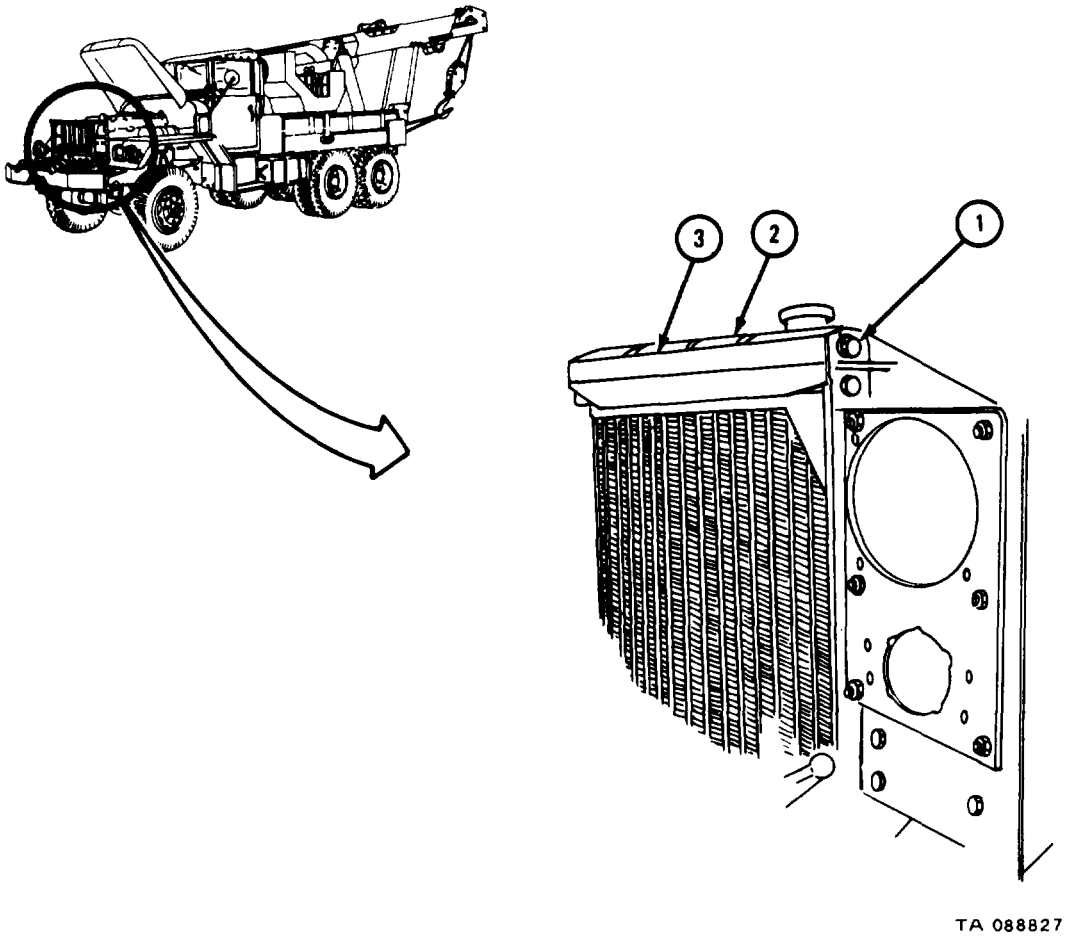


TA 118886

FRAME 3

1. Loosen screw (1).
2. Do step 1 on other side of radiator (2).
3. Take off radiator dust shield (3).

GO TO FRAME 4



FRAME 4

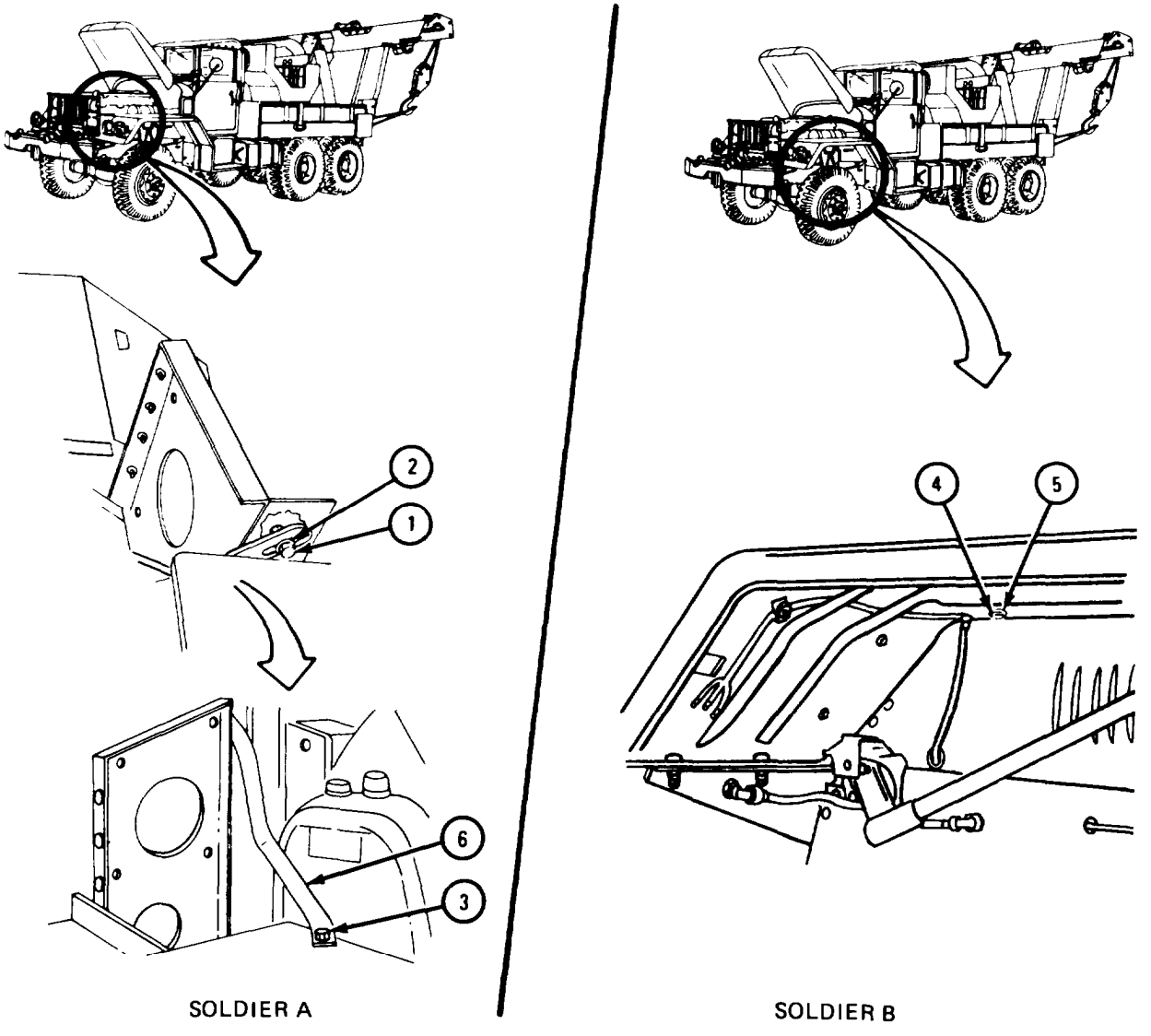
Soldier A 1. Unscrew and take out screw (1) and lockwasher (2).

2. Hold screw (3).

Soldier B 3. Working under fender, unscrew and take off nut (4) and lockwasher (5).

Soldier A 4. Take out screw (3) and take off headlight support brace (6).

GO TO FRAME 5



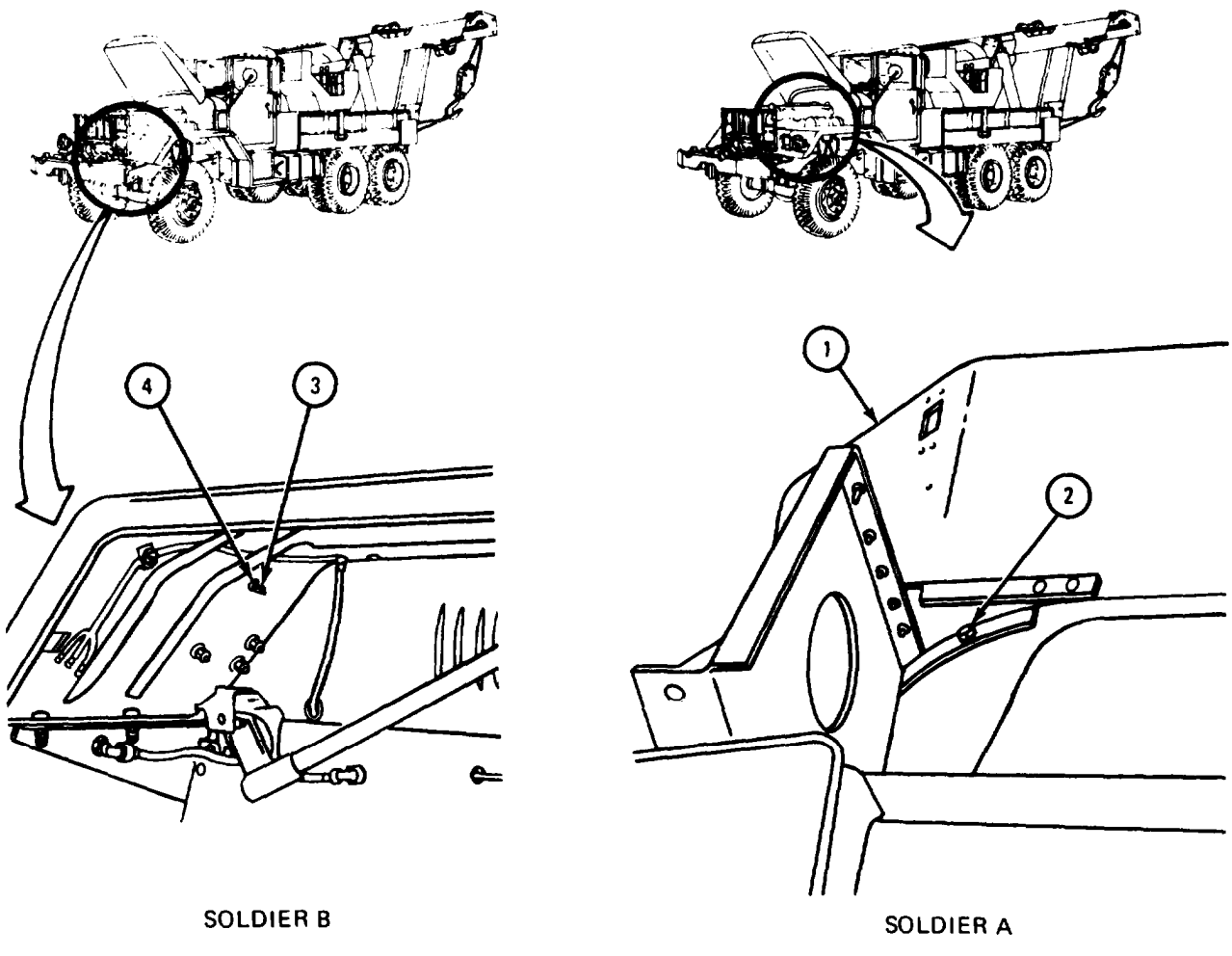
FRAME 5

Soldier A 1. Workingat top of left front fender (1), hold screw (2). Tell soldier B when ready.

Soldier B 2. Working under left front fender (1), take off nut (3) and lockwasher (4).

Soldier A 3. Takeout screw (2).

GO TO FRAME 6



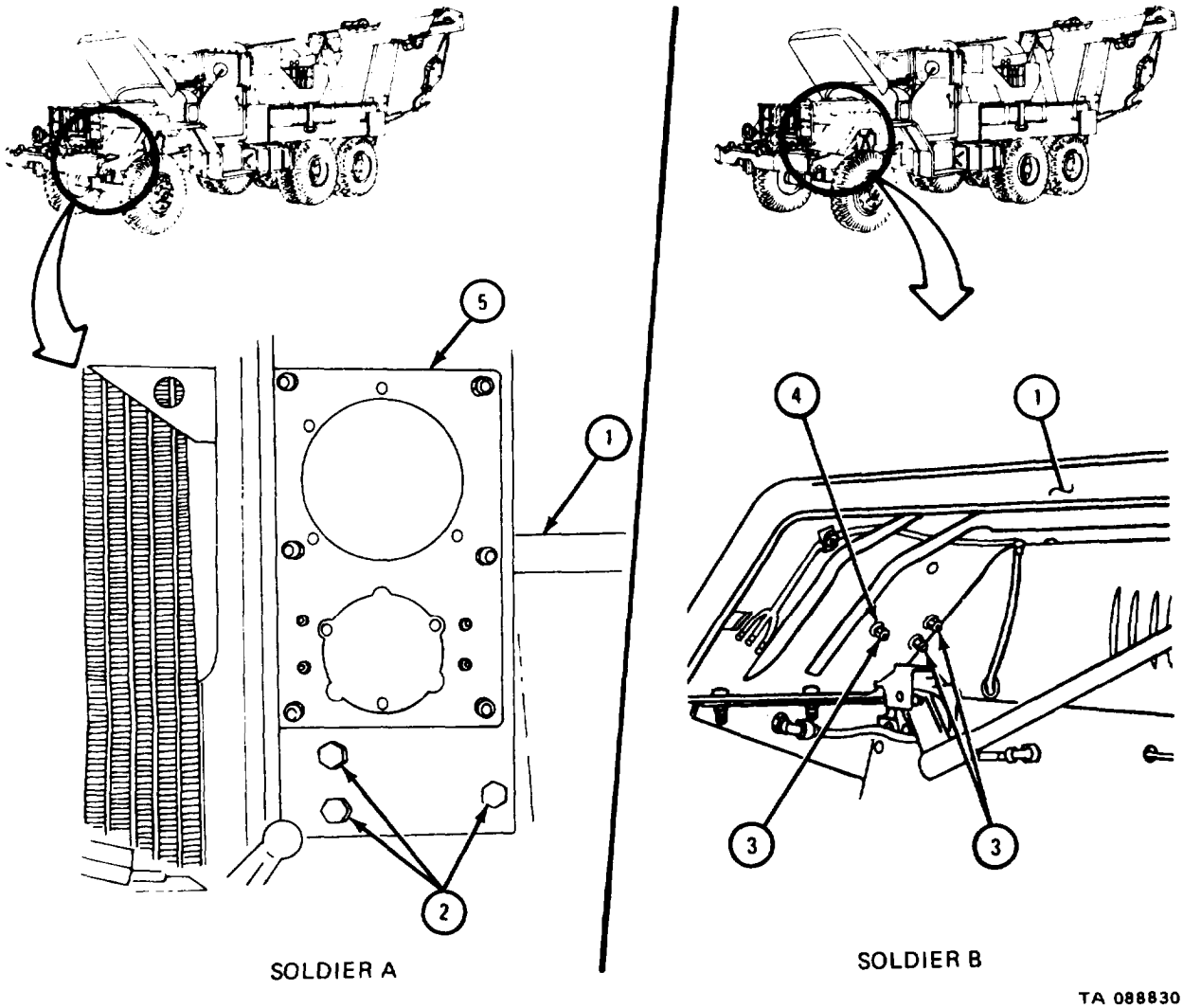
FRAME 6

Soldier A 1. Working at top of left front fender (1), hold three screws (2). Tell soldier B when ready.

Soldier B 2. Working under fender (1), take off three nuts (3) and lockwashers (4).

Soldier A 3. Take off headlight support (5) and three screws (2).

GO TO FRAME 7



SOLDIER A

SOLDIER B

TA 088830

FRAME 7

Soldier A 1. Working in engine compartment, hold screw (1).

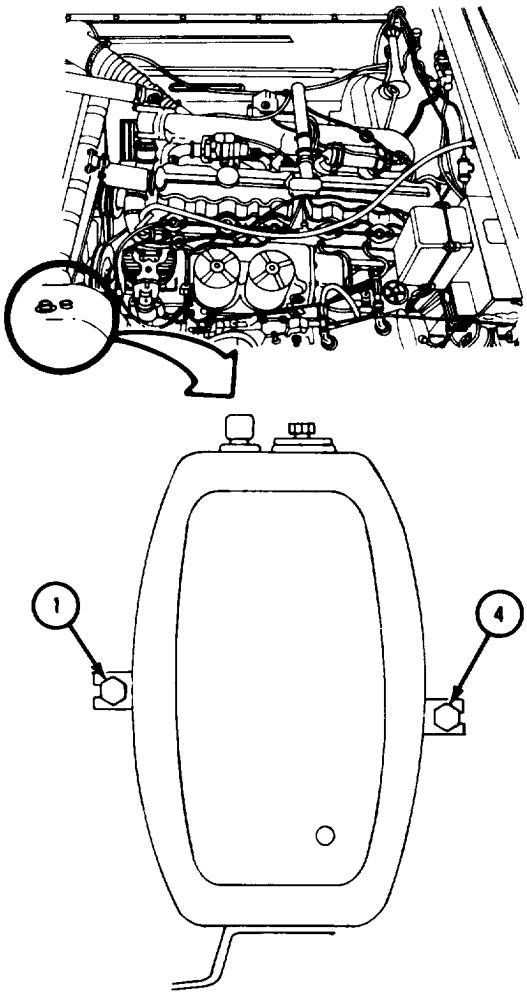
Soldier B 2. Working under fender, take off nut (2) and two washers (3).

Soldier A 3. Hold screw (4).

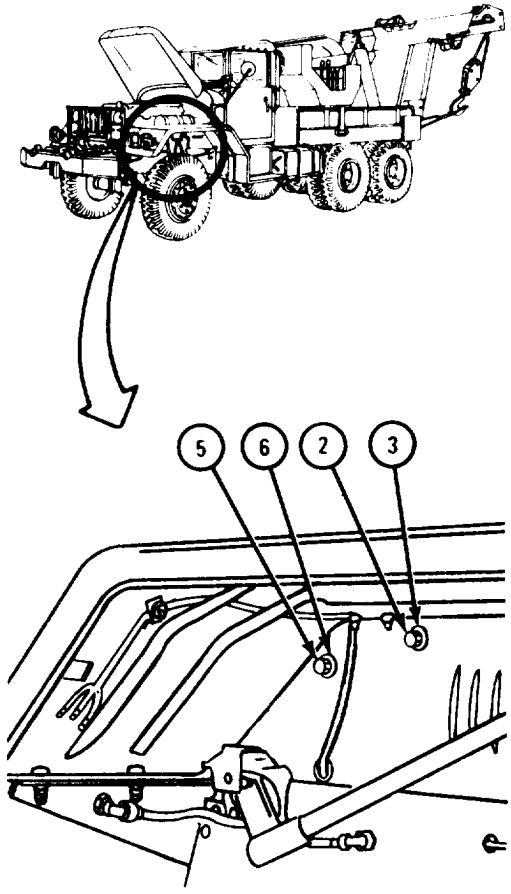
Soldier B 4. Take off nut (5) and two washers (6).

Soldier A 5. Take out screws (1 and 4).

GO TO FRAME 8



SOLDIER A



SOLDIER B

TA 088831

FRAME 8

Soldier A 1. Working on top of fender (1), hold screw (2).

Soldier B 2. Working under fender (1), take off nut (3) and washer (4).

Soldier A 3. Hold screw (5).

Soldier B 4. Take off nut (6) and washer (7).

Soldier A 5. Take out screws (2 and 5).

Soldier B 6. Take off clamps (8).

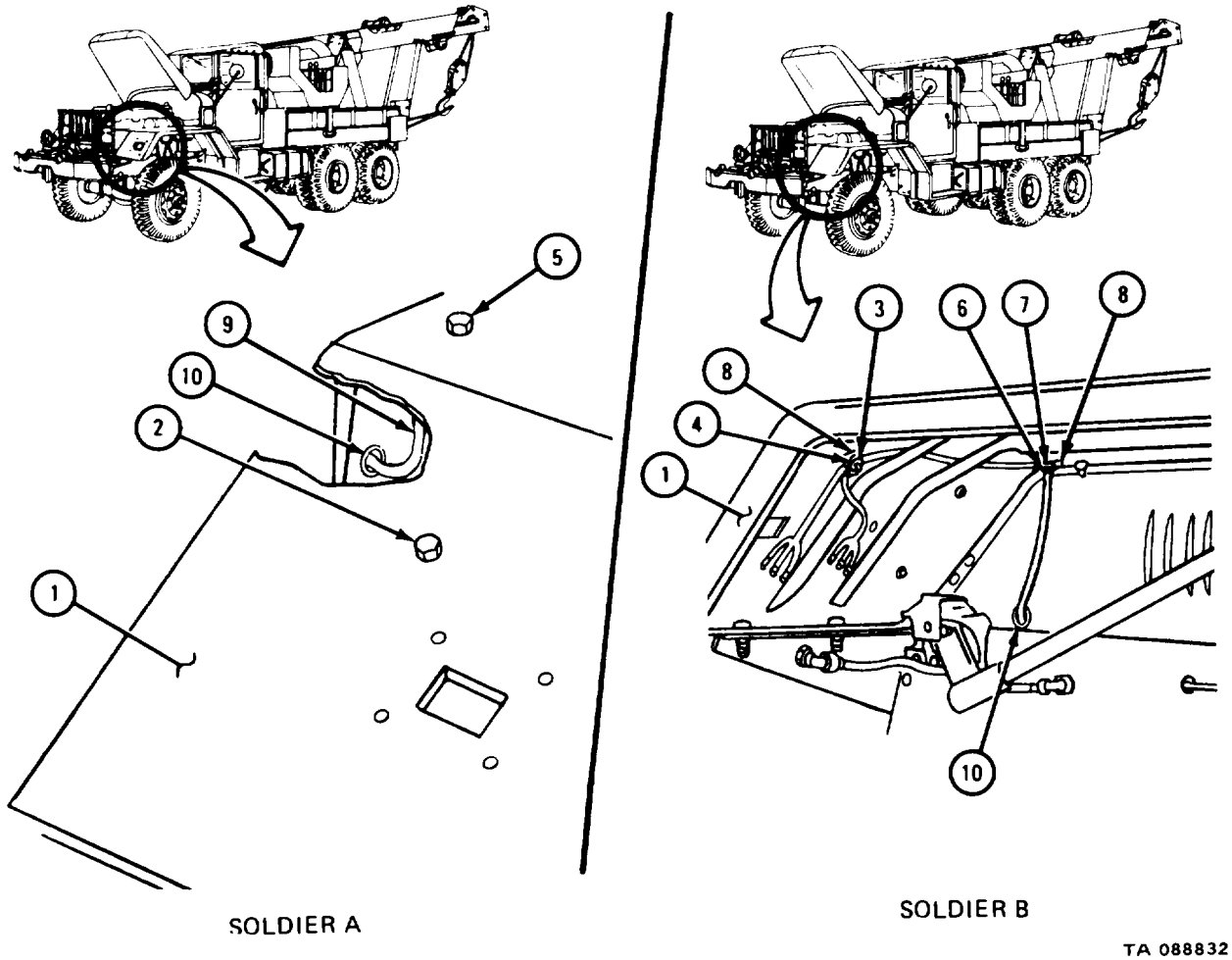
NOTE

On truck M543A 2, there are two wiring cables (9).

7. Pull wiring cable (9) out from supports in fender (1).

Soldier A 8. Pull wiring cable (9) and grommet (10) out of inner fender well and let them hang in engine compartment.

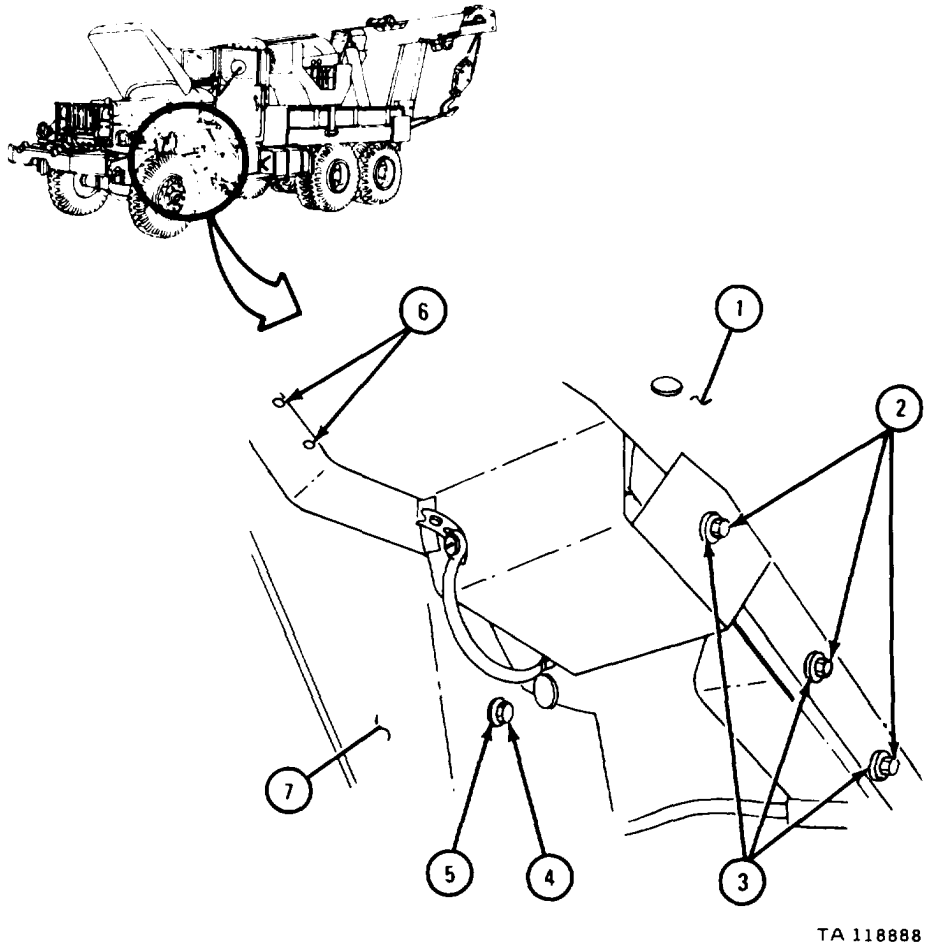
GO TO FRAME 9



FRAME 9

1. Working under fender (1), take out three screws (2) and washers (3).
2. Take out screw (4) and washers (5).
3. Loosen four quick release fasteners (6) and take off splash shield (7).

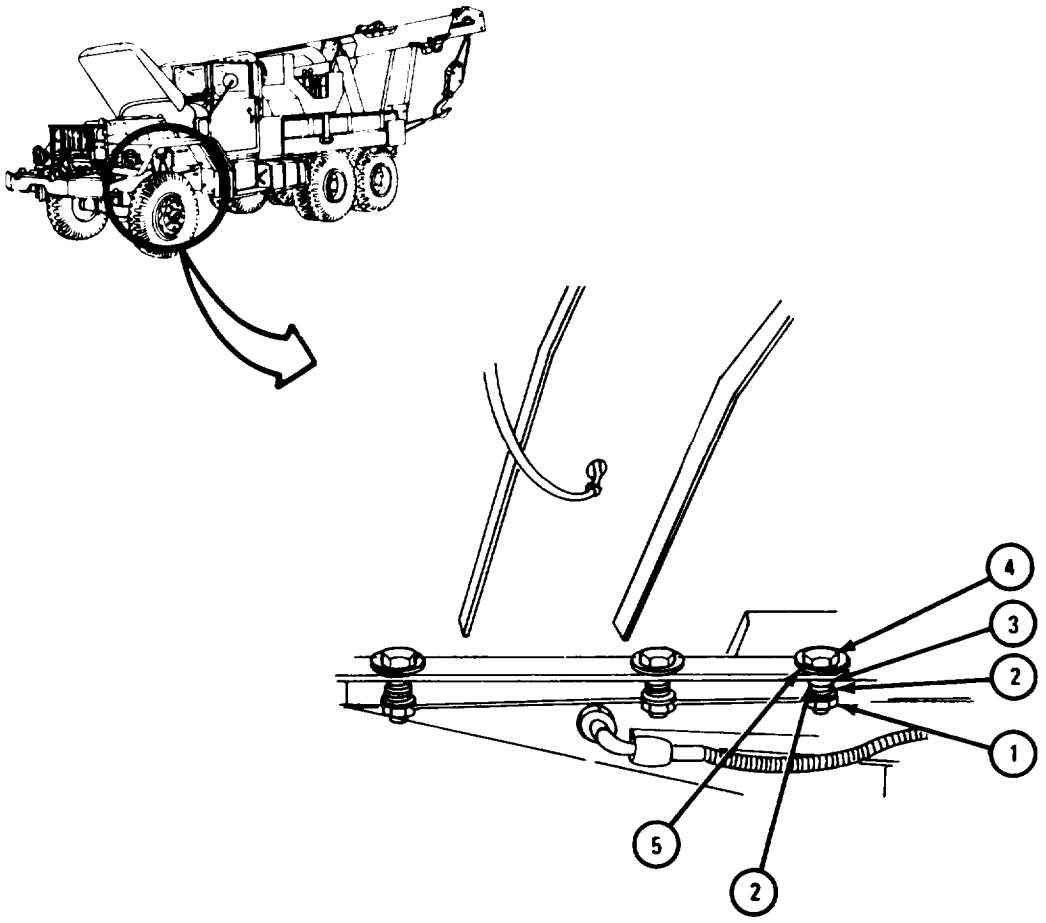
GO TO FRAME 10



FRAME 10

1. Working under fender, unscrew and take off three self-locking nuts (1), six flat washers (2), and three springs (3).
2. Take out three screws (4) and three flat washers (5).

GO TO FRAME 11



FRAME 11

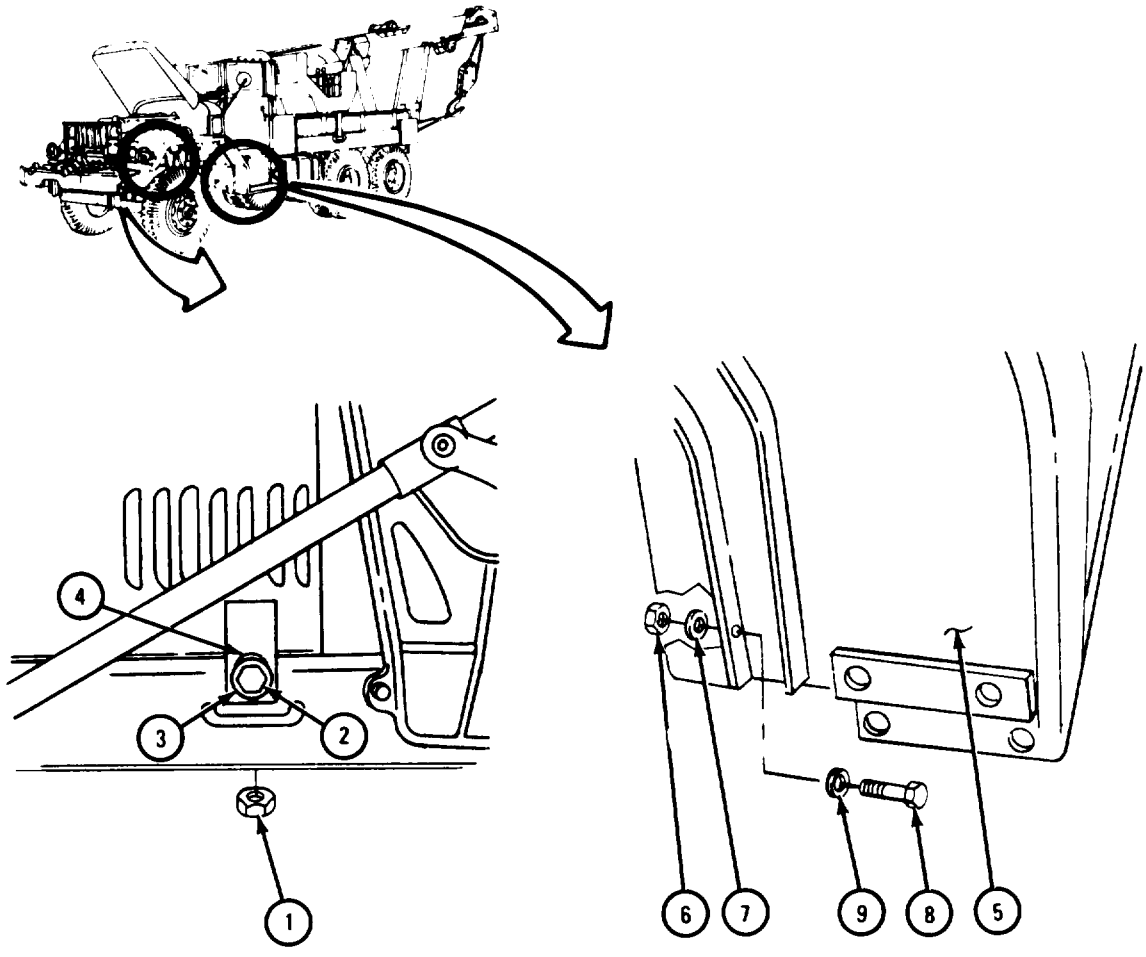
Soldier A 1. Working under fender, unscrew and takeoff self-locking nut (1), and take out screw (2) , two flat washers (3) , and spring (4).

Soldier B 2. Hold fender (5) and keep it from falling.

Soldier A 3. Unscrew and take off two self-locking nuts (6) and two flat washers (7). Take out two screws (8) and flat washers (9).

Soldiers A and B 4. Take fender (5) off truck.

GO TO FRAME 12

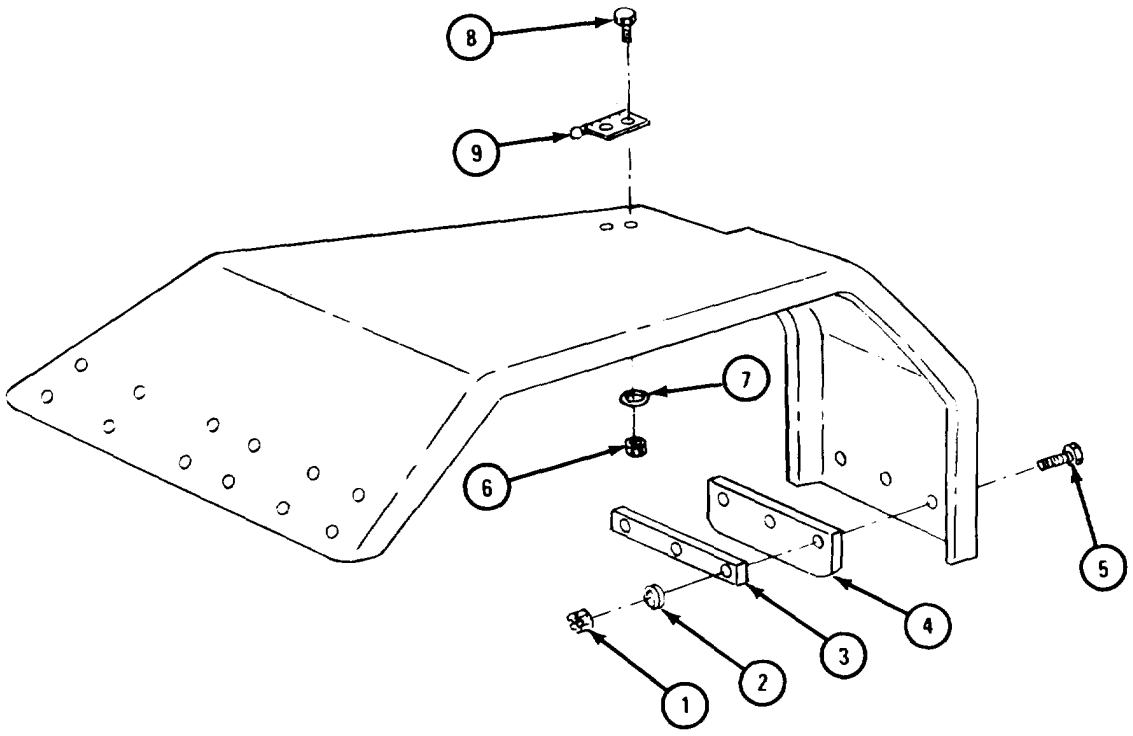


TA 118890

FRAME 12

1. Unscrew and takeoff three nuts (1) and lockwashers (2).
2. Take off spIash shieId pIate (3), splash shield (4), and take out three screws (5).
3. Unscrew and take off two nuts (6) and lockwashers (7).
4. Take out two screws (8) and take off hinge (9).

END OF TASK



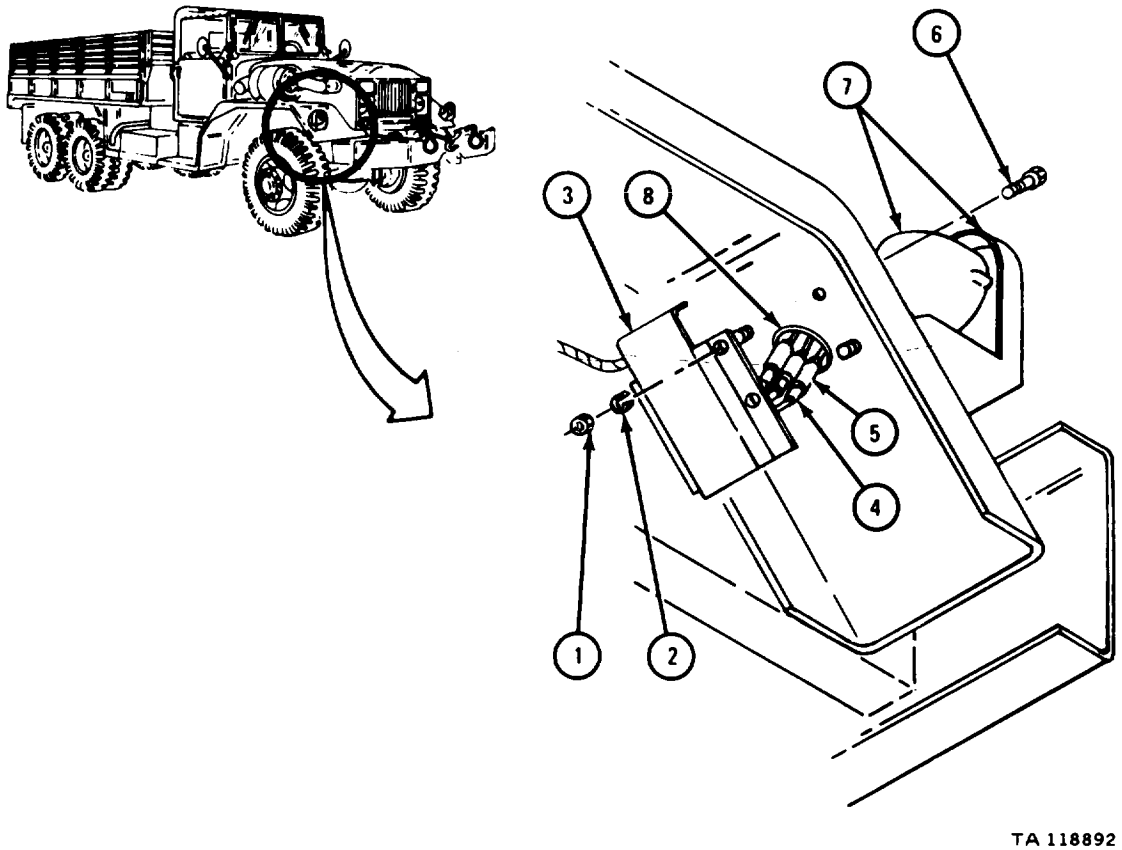
TA 118891

c. Removal of Right Front Fender.

FRAME 1

1. Working under fender, unscrew and take off four nuts (1), lockwashers (2), and protector box (3).
2. Pull three electrical leads (4) out of connectors (5).
3. Take out four screws (6) and take off light and bracket assembly (7).
4. Take out grommet (8).

GO TO FRAME 2



TA 118892

FRAME 2

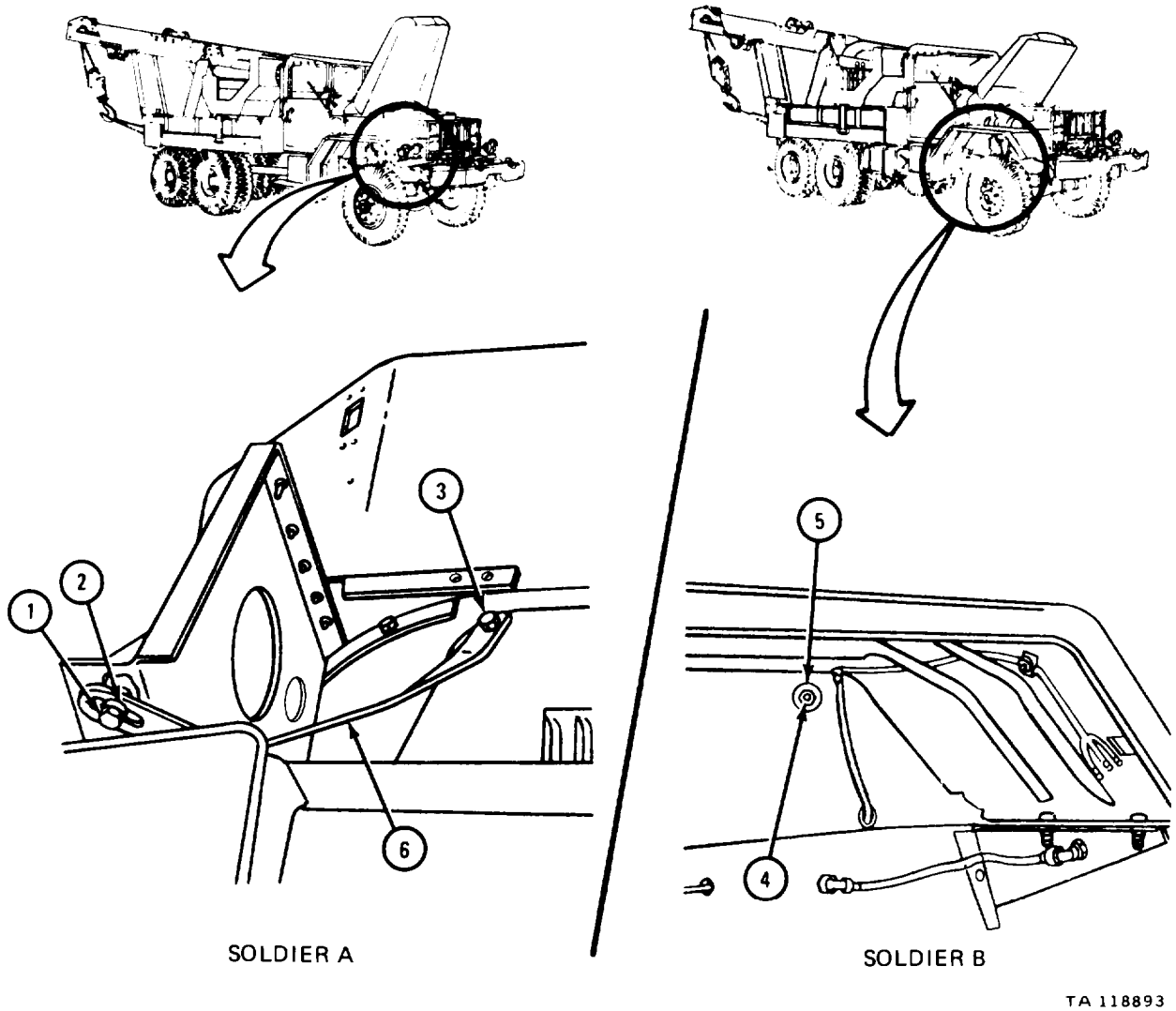
Soldier A 1. Unscrew and take out screw (1) and flat washer (2).

2. Hold screw (3).

Soldier B 3. Working under fender, unscrew and take off nut (4) and lockwasher (5).

Soldier A 4. Take out screw (3) and take off headlight bracket (6).

GO TO FRAME 3



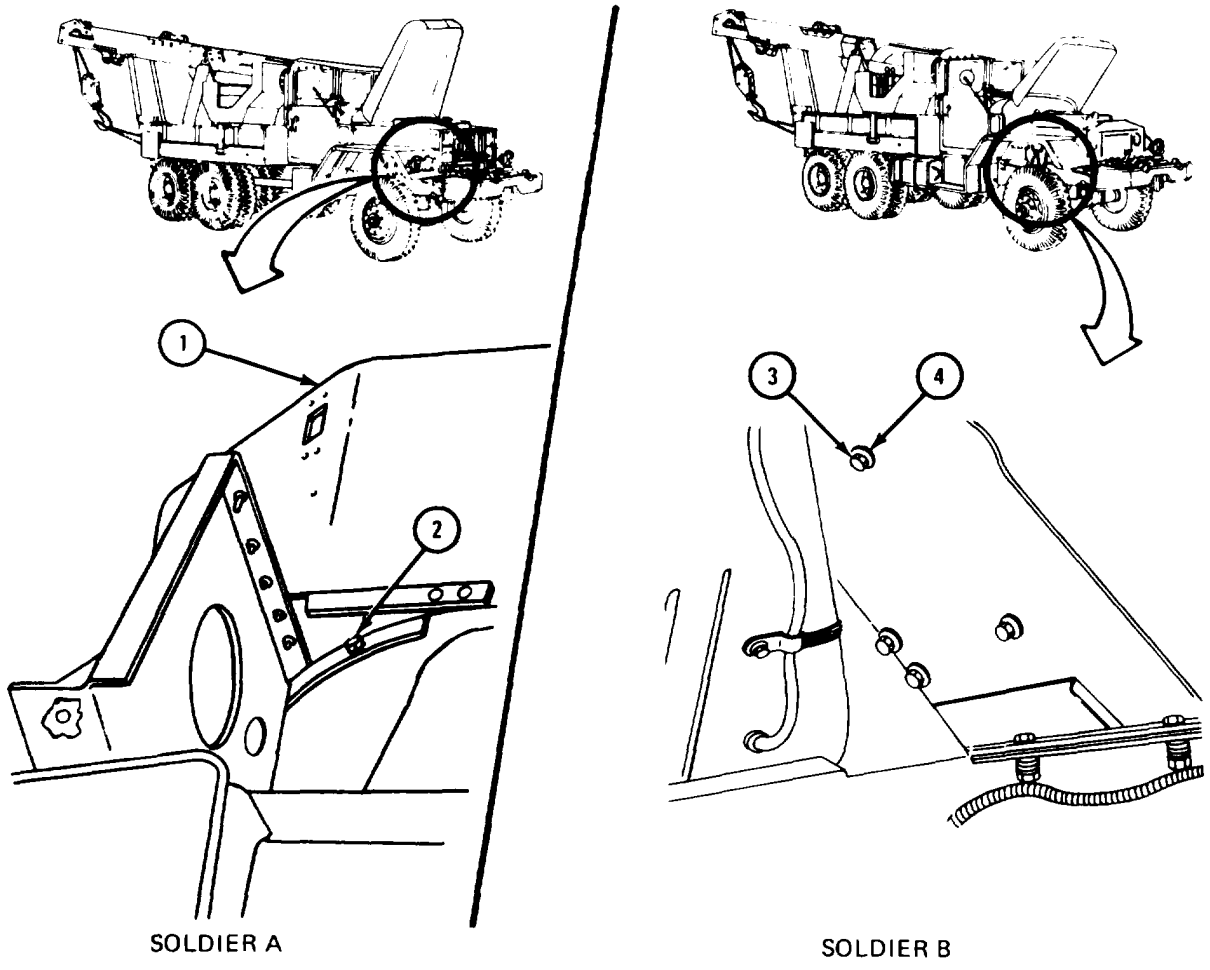
FRAME 3

Soldier A 1. Working on top of right front fender (1), hold screw (2).

Soldier B 2. Working under fender (1), take off nut (3) and washer (4).

Soldier A 3. Take out screw (2).

GO TO FRAME 4



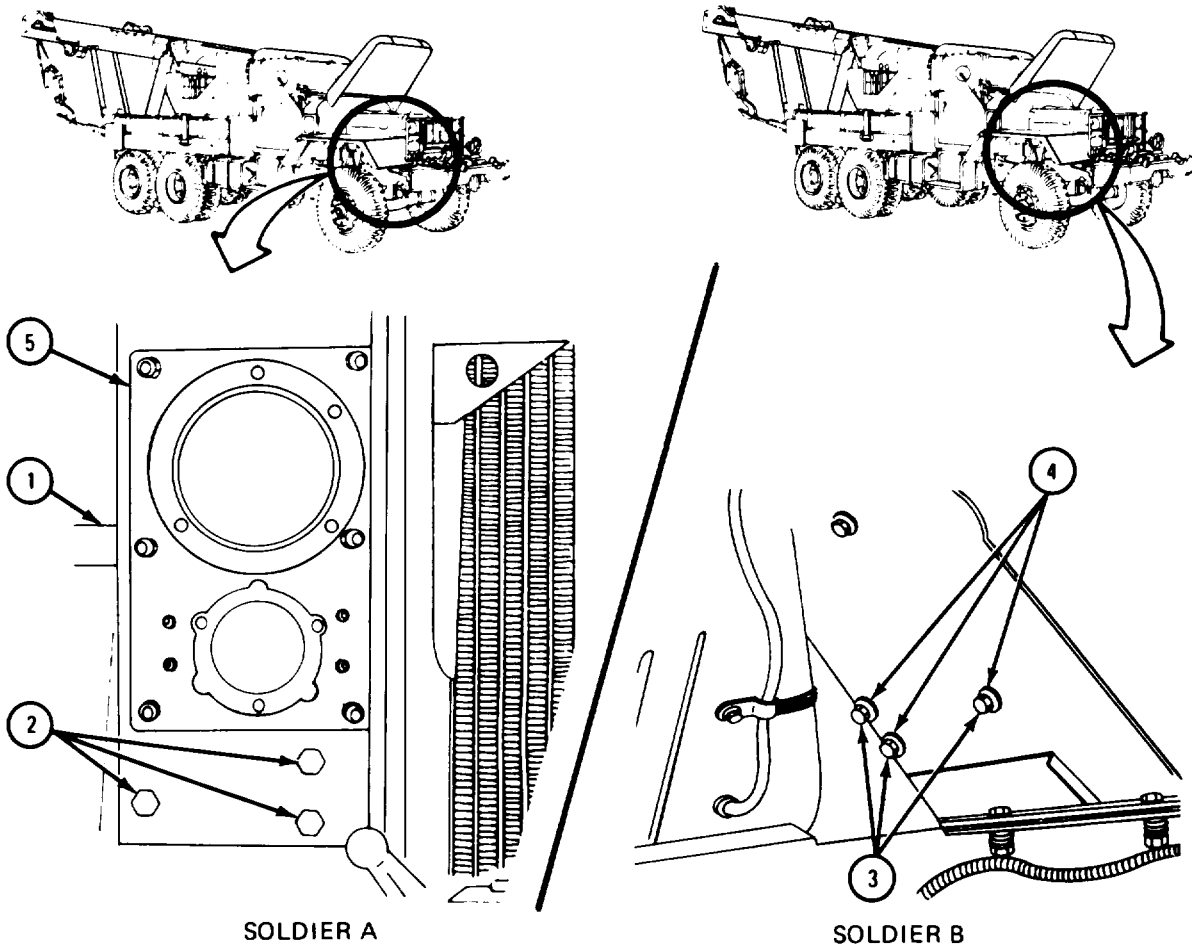
FRAME 4

Soldier A 1. Working on top of front fender (1), hold three screws (2).

Soldier B 2. Working under front fender, unscrew and take off three nuts (3) and lockwashers (4).

Soldier A 3. Take out three screws (2) and take off headlight mounting bracket (5).

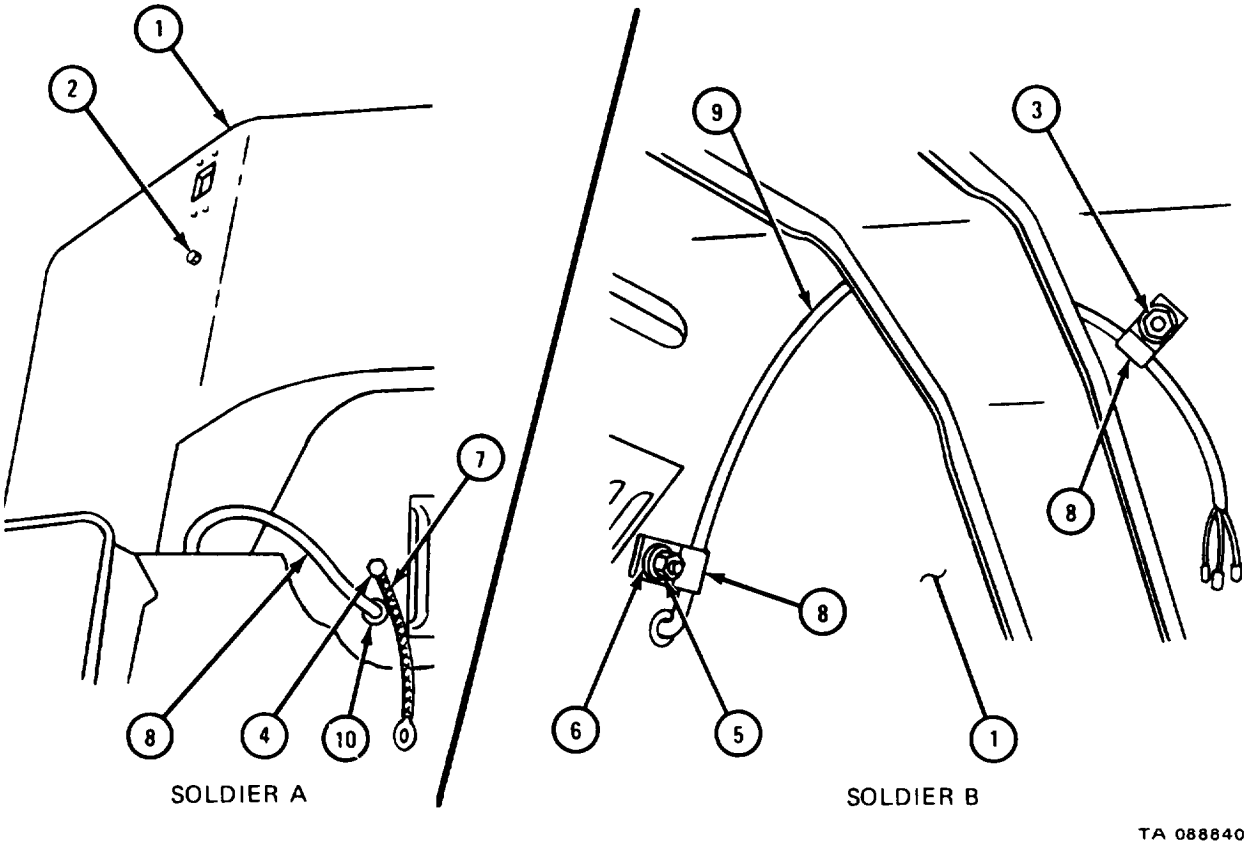
GO TO FRAME 5



FRAME 5

Soldier A	1.	Working on top of front fender (1), hold screw (2).
Soldier B	2.	Working under fender (1), take off nut and washer (3) .
Soldier A	3.	Hold screw (4).
Soldier B	4.	Take off nut (5) and washer (6).
Soldier A	5.	Take out screws (2 and 4) and ground strap (7).
Soldier B	6.	Take off clamps (8).
	7.	Pull wiring cable (9) out from supports in fender (1).
Soldier A	8.	Pull wiring cable (9) and grommet (10) out of inner fender wall and let them hang in engine compartment.

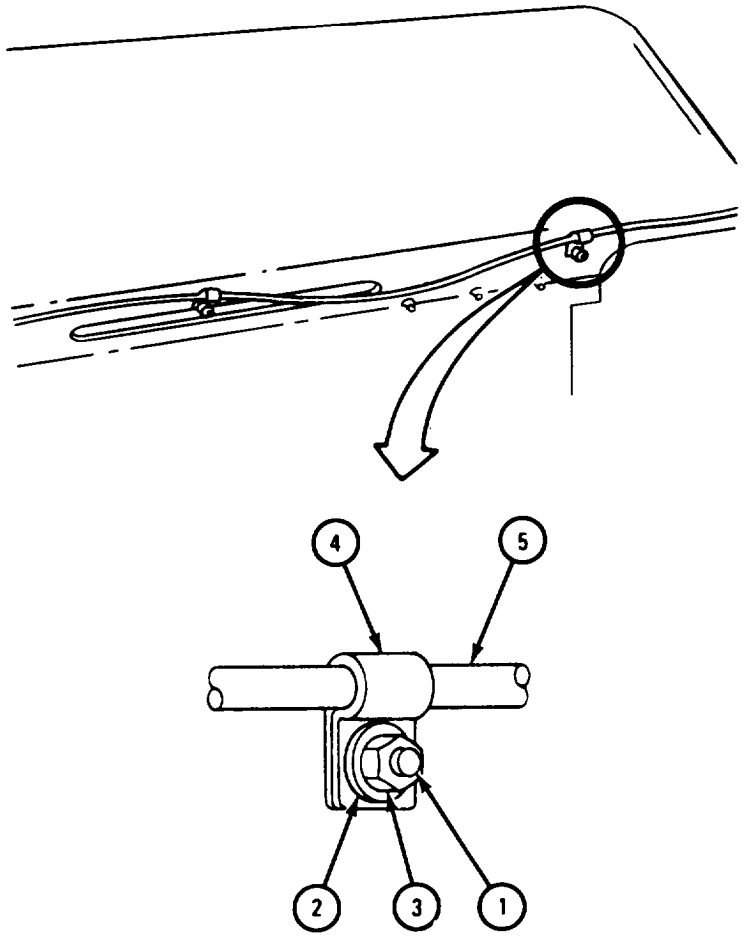
GO TO FRAME 6



FRAME 6

1. Take out two screws (1), washers (2), nuts (3), and clamps (4).
2. Let air restriction indicator tube (5) hang.

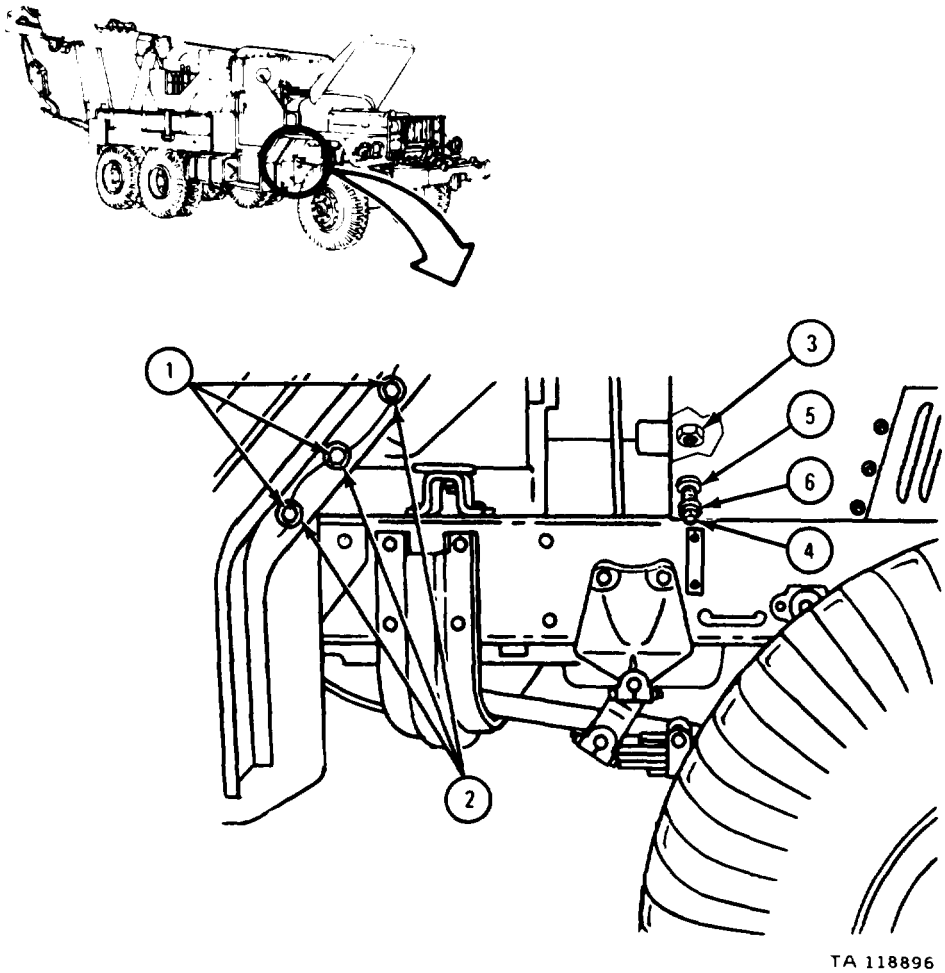
GO TO FRAME 7



FRAME 7

1. Working under fender, unscrew and take out three screws (1) and flat washers (2).
2. Unscrew and take off self-locking nut (3) and take out screw (4) , spring (5), and two flat washers (6).

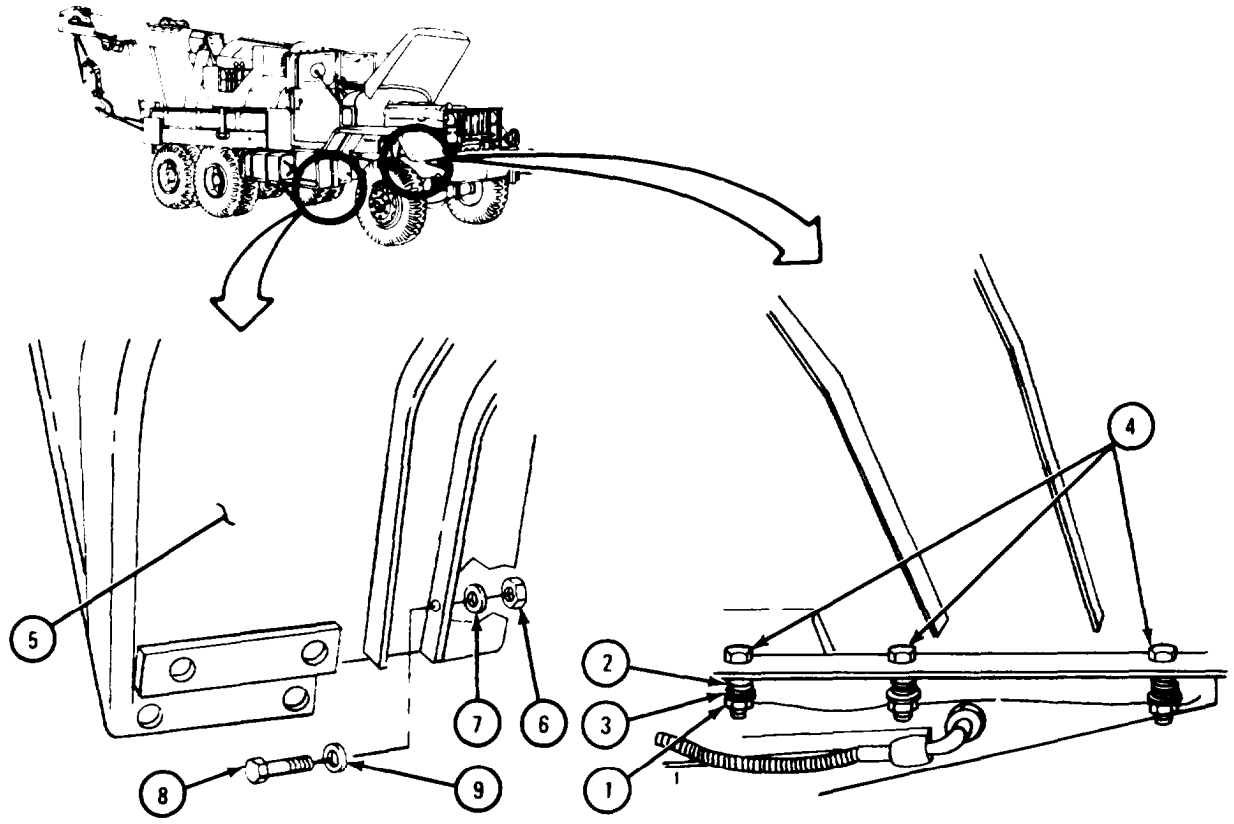
GO TO FRAME 8



FRAME 8

Soldier A	1. Working under fender, unscrew and take off three self-locking nuts (1) , six flat washers (2) , and three springs (3). Take out three screws and flat washers (4).
Soldier B	2. Hold fender (5) and keep it from falling.
Soldier A	3. Unscrew and take off two nuts (6) and flat washers (7). Take out two screws (8) and flat washers (9).
Soldiers A and B	4. Take fender (5) off truck.

GO TO FRAME 9

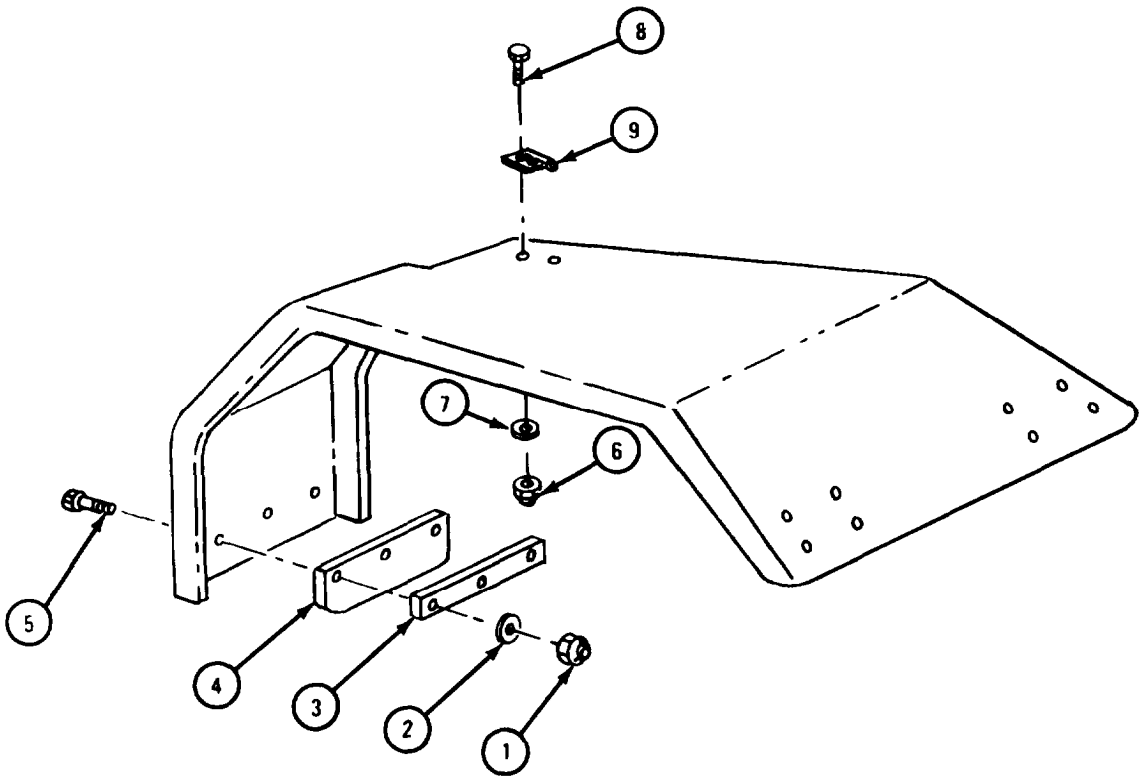


TA 118897

FRAME 9

1. Unscrew and takeoff three nuts (1) and lockwashers (2).
2. Take off splash shield plate (3) and splash shield (4) and take out three screws (5).
3. Unscrew and take off two nuts (6) and lockwashers (7).
4. Take out two screws (8) and take off hinge (9).

END OF TASK



TA 118898

d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

NOTE

Clean all parts before inspection and after repair.

e. Inspection and Repair.

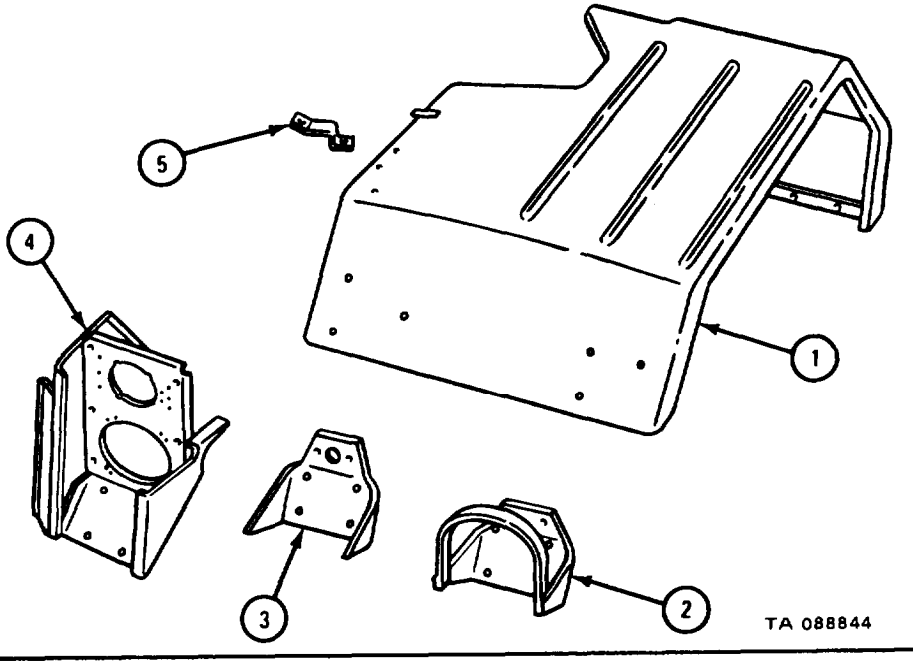
FRAME 1

NOTE

This task is the same for the left and right fenders.
This task is shown for the left fender.

1. Check that fender (1) has no broken or cracked welds. Repair by welding. Refer to TM 9-237.
2. Check that turn signal support bracket (2) and fender (1) is not cracked or dented and that there are no broken welds. Take out dents and weld cracks. Refer to TM 9-237.
3. Check that warning light support bracket (3) (used only on left fender of truck M543A2) is not dented or cracked. Take out dents and weld cracks. Refer to TM 9-237.
4. Check that light mounting bracket (4) is not dented or cracked. Take out small dents. Weld cracks. Refer to TM 9-237.
5. Check that light mount brace (5) is not bent.
6. Straighten bent or dented parts. Refer to FM 43-2.

END OF TASK

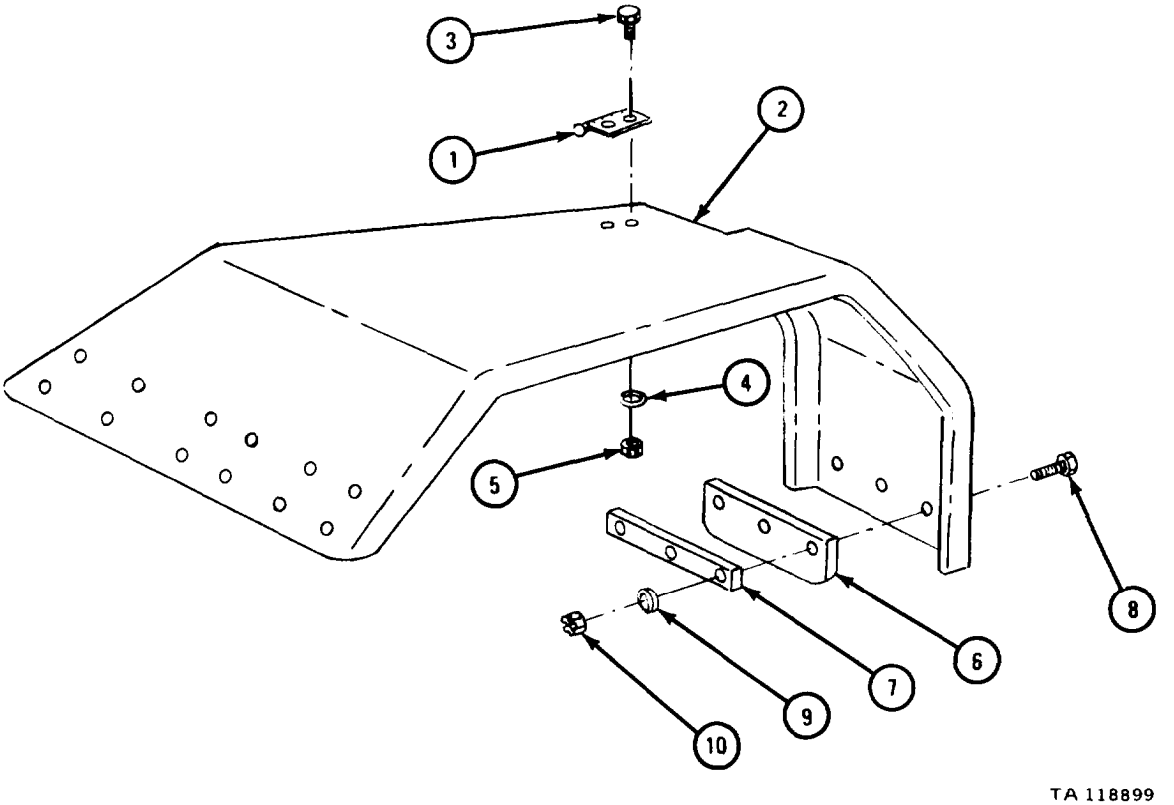


f. Replacement of Left Front Fender.

FRAME 1

1. Put hinge (1) in place on fender (2), alining holes, and put in two screws (3). Put on two flat washers (4) , and screw on and tighten two self-locking nuts (5).
2. Put splash shield (6) and splash shield plate (7) in place, alining holes, and put in three screws (8). Put on three flat washers (9) and screw on and tighten three self-locking nuts (10).

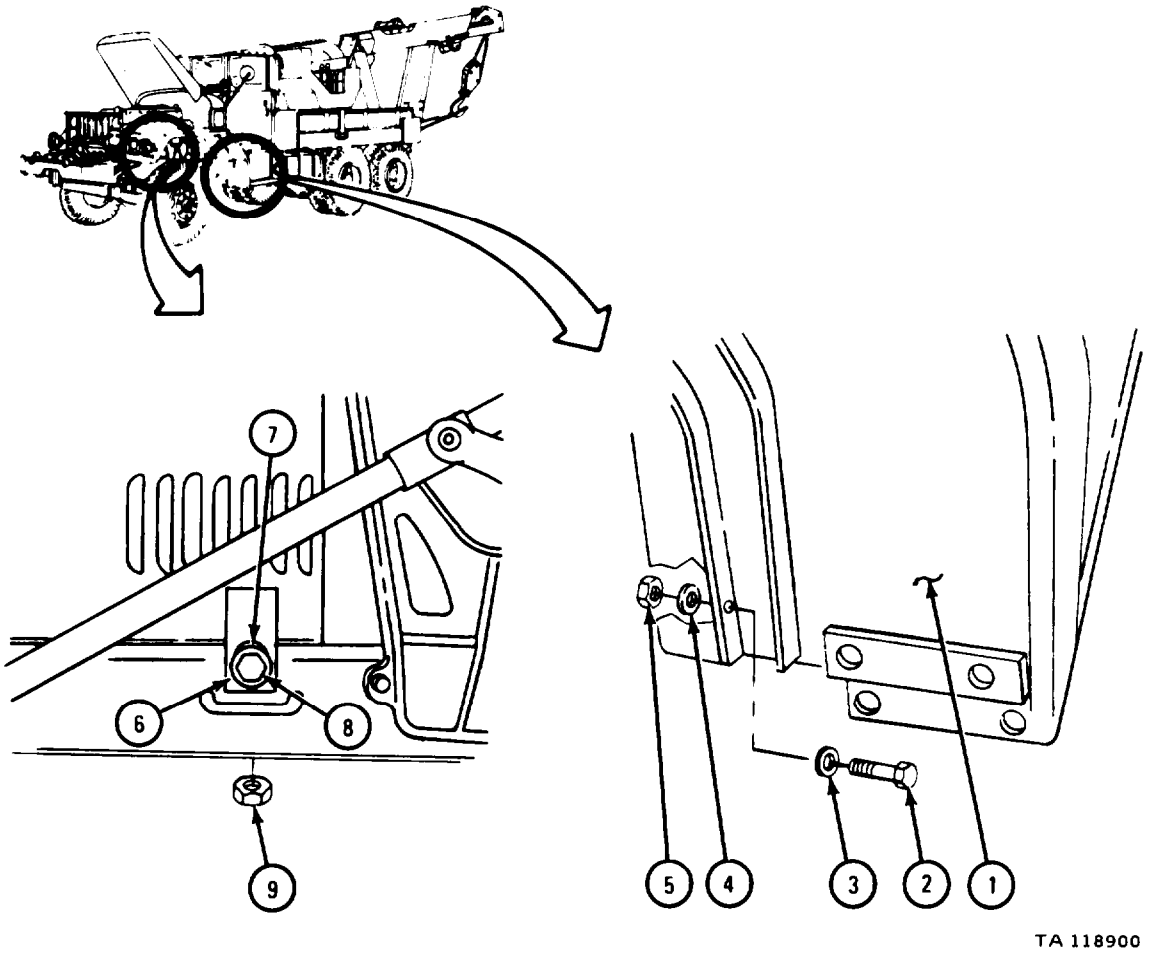
GO TO FRAME 2



FRAME 2

Soldiers A and B	1.	Put fender (1) in place on truck.
Soldier B	2.	Hold fender (1) in place and keep it from falling.
Soldier A	3.	Aline holes and put in two screws (2) and flat washers (3). Put on two flat washers (4) and screw on and tighten two self-locking nuts (5).
	4.	Put two flat washers (6) and spring (7) on screw (8). Put in screw (8) and screw on and tighten self-locking nut (9).
Soldier B	5.	Let go of fender (1).

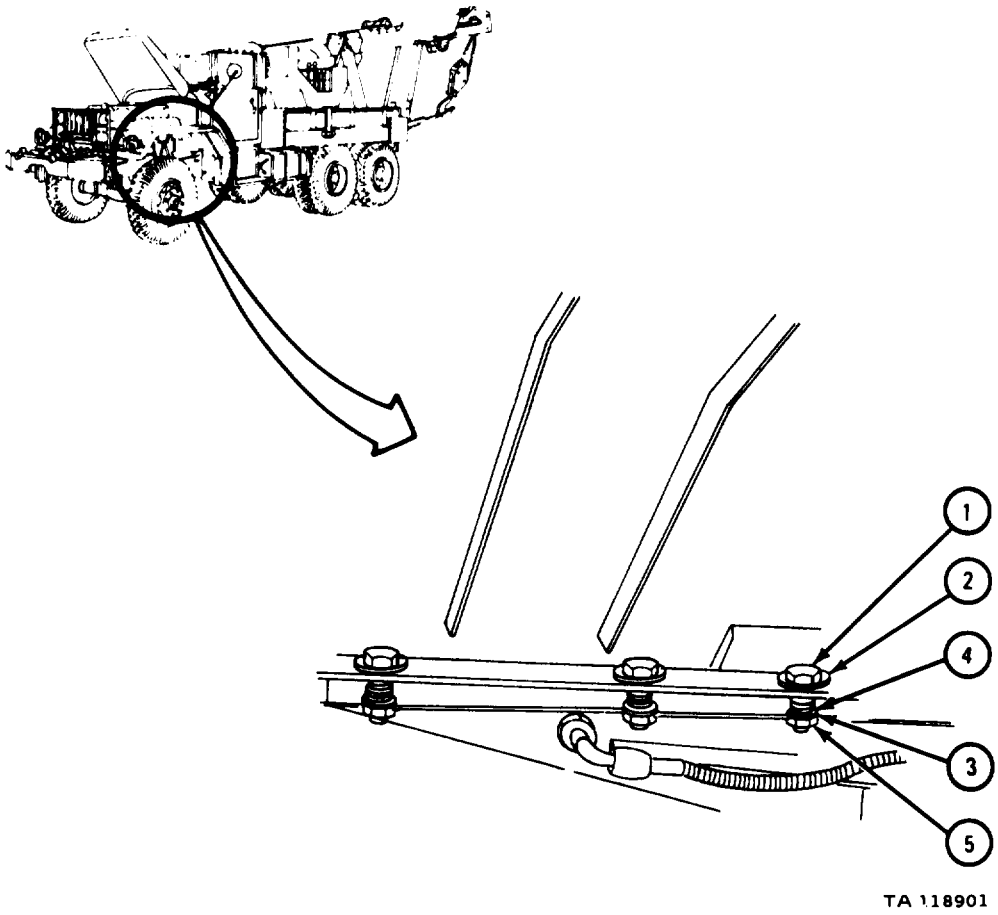
GO TO FRAME 3



FRAME 3

1. Working under fender, aline holes and put in three screws (1) and flat washers (2).
2. Put on six flat washers (3), three springs (4), and screw on and tighten three self-locking nuts (5).

GO TO FRAME 4

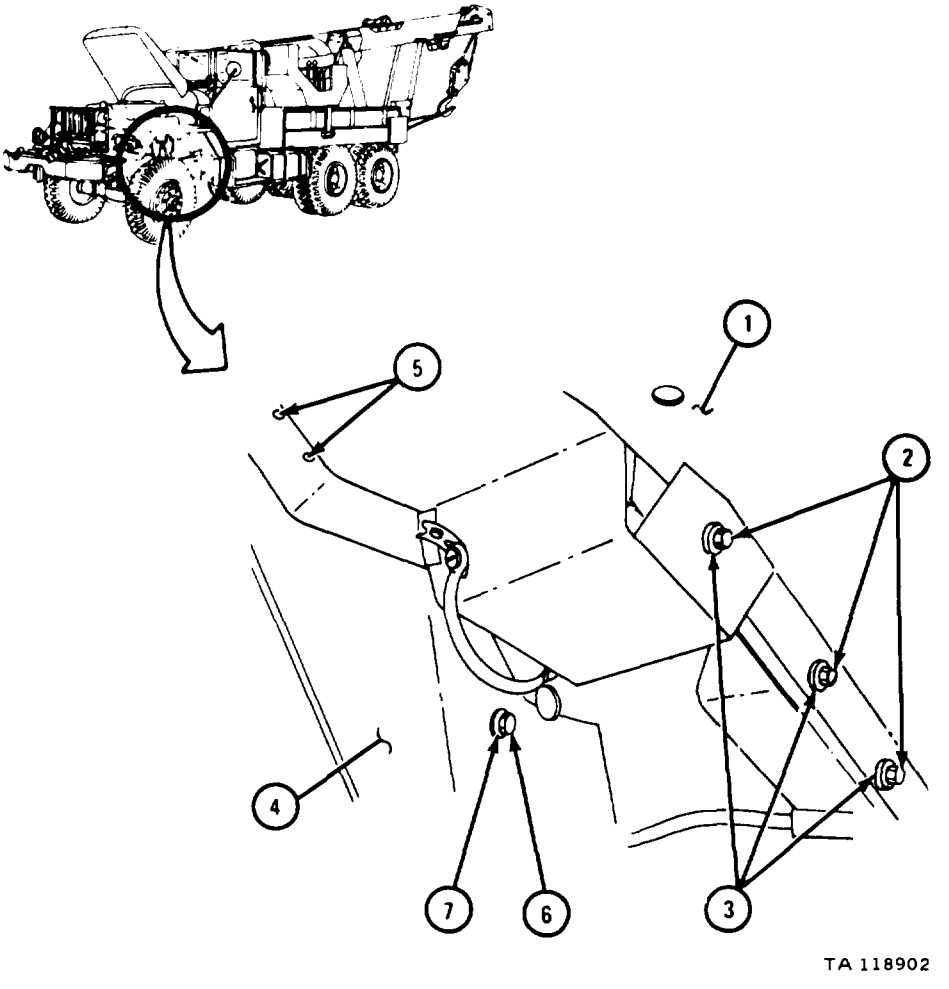


TA 118901

FRAME 4

1. Working under fender (1), screw in and tighten three screws (2) and flat washers (3).
2. Put splash shield (4) in place and fasten four quick-release fasteners (5).
3. Screw in and tighten screw (6) and flat washer (7).

GO TO FRAME 5



FRAME 5

NOTE

On truck M543A2, there are two wiring cables (2).

Soldier A 1, Working on top of fender (1) , route wiring cable (2) through inner fender wall. Put on grommet (3).

Soldier B 2. Working under fender (1) , route wiring cable (2) between fender supports as shown. Put on two clamps (4).

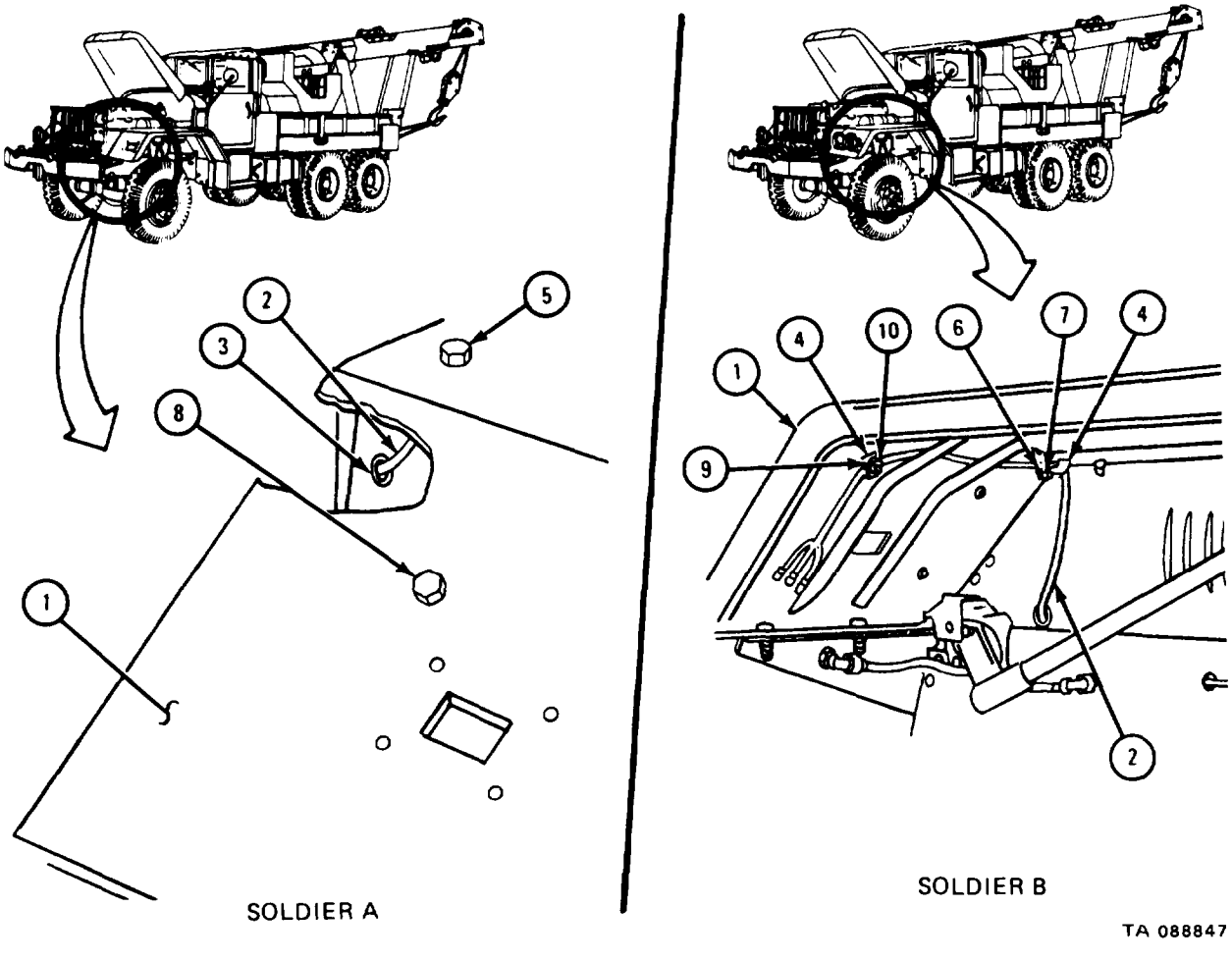
Soldier A 3. Put in and hold screw (5).

Soldier B 4. Put on clamp (4), washer (6), and nut (7).

Soldier A 5. Put in and hold screw (8).

Soldier B 6, Put on clamp (4), washer (9), and nut (10).

GO TO FRAME 6



FRAME 6

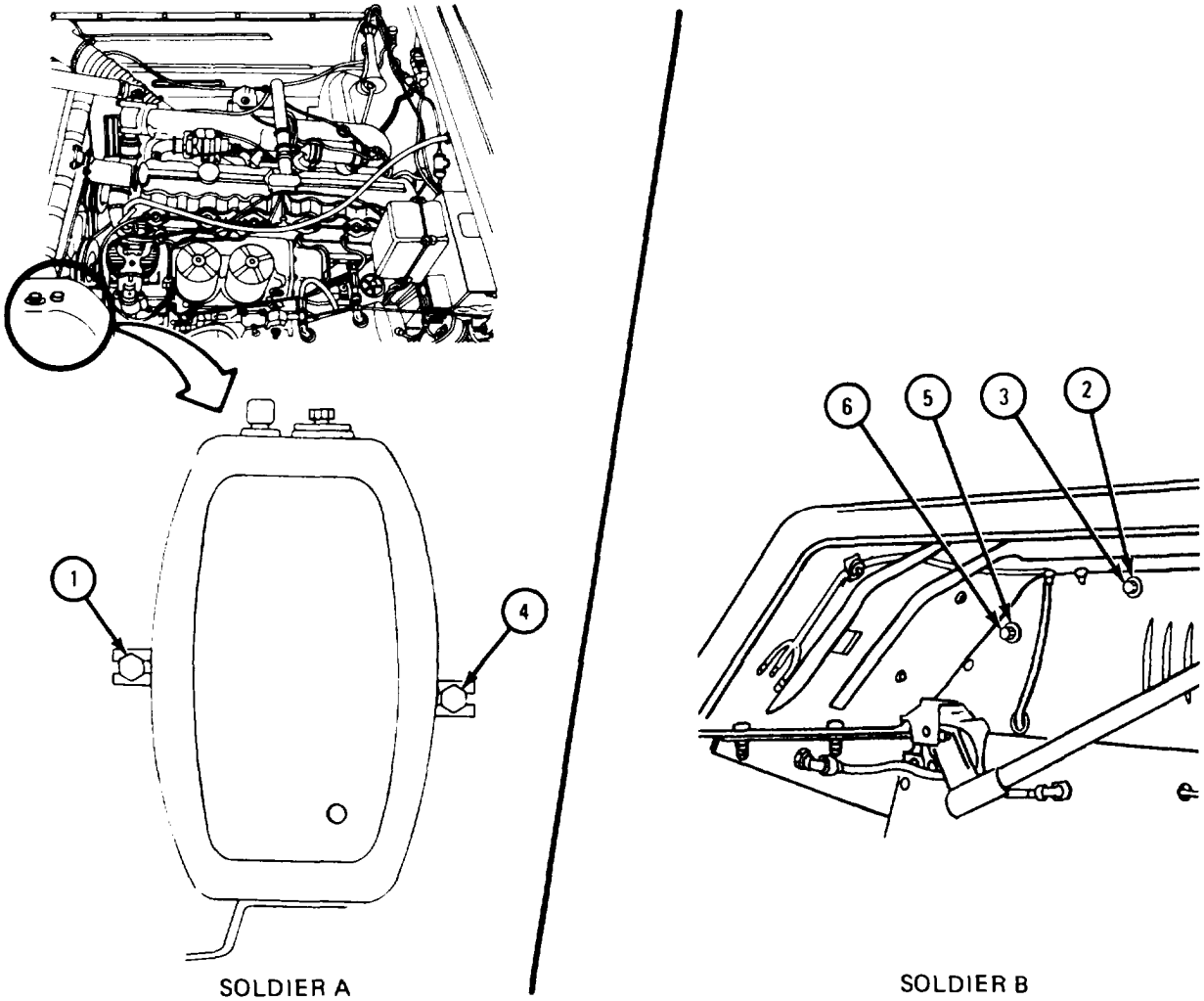
Soldier A 1. Working in engine compartment, put in and hold screw (1).

Soldier B 2. Working under fender, put on two washers (2) and nut (3).

Soldier A 3. Put in and hold screw (4).

Soldier B 4. Put on two washers (5) and nut (6).

GO TO FRAME 7



SOLDIER A

SOLDIER B

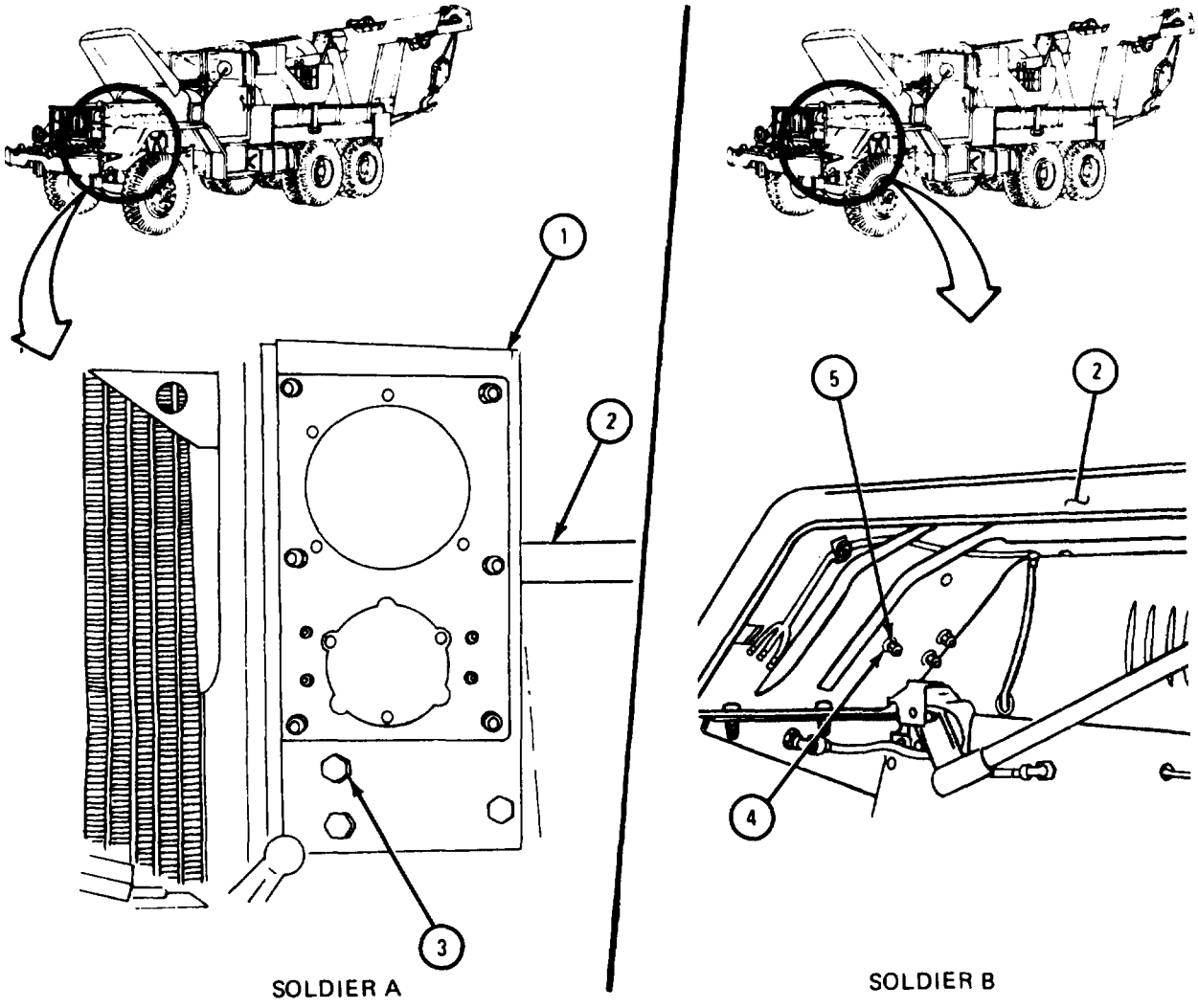
TA 088848

FRAME 7

Soldier A 1. Put headlight support (1) in place on fender (2), alining holes. Put in and hold three screws (3).

Soldier B 2. Working under fender, put on three lockwashers (4) and screw on and tighten three nuts (5).

GO TO FRAME 8

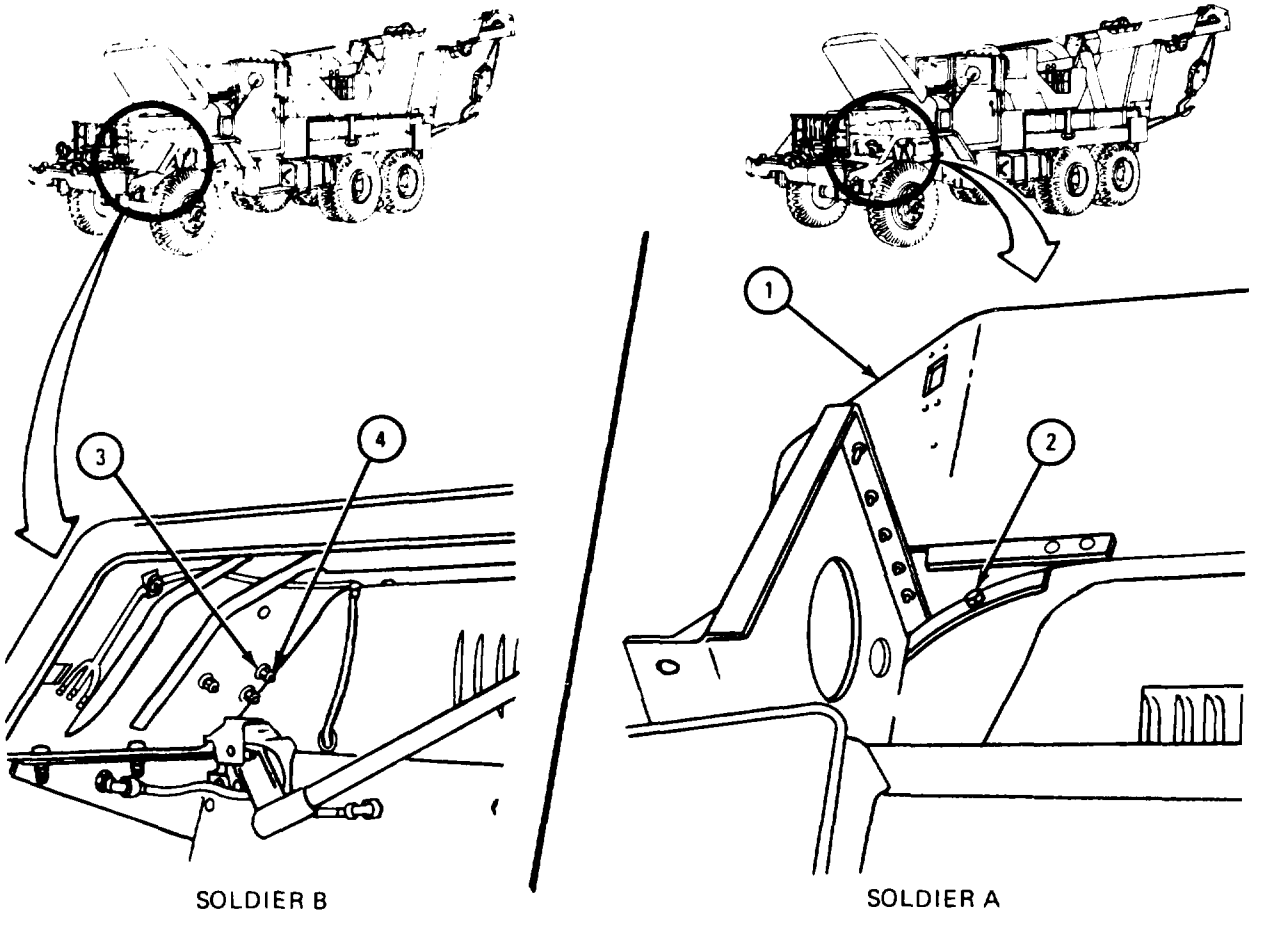


FRAME 8

Soldier A 1. Working on top of fender (1) , put in and hold screw (2).

Soldier B 2. Working under fender, put on lockwasher (3) and screw on and tighten nut (4).

GO TO FRAME 9



FRAME 9

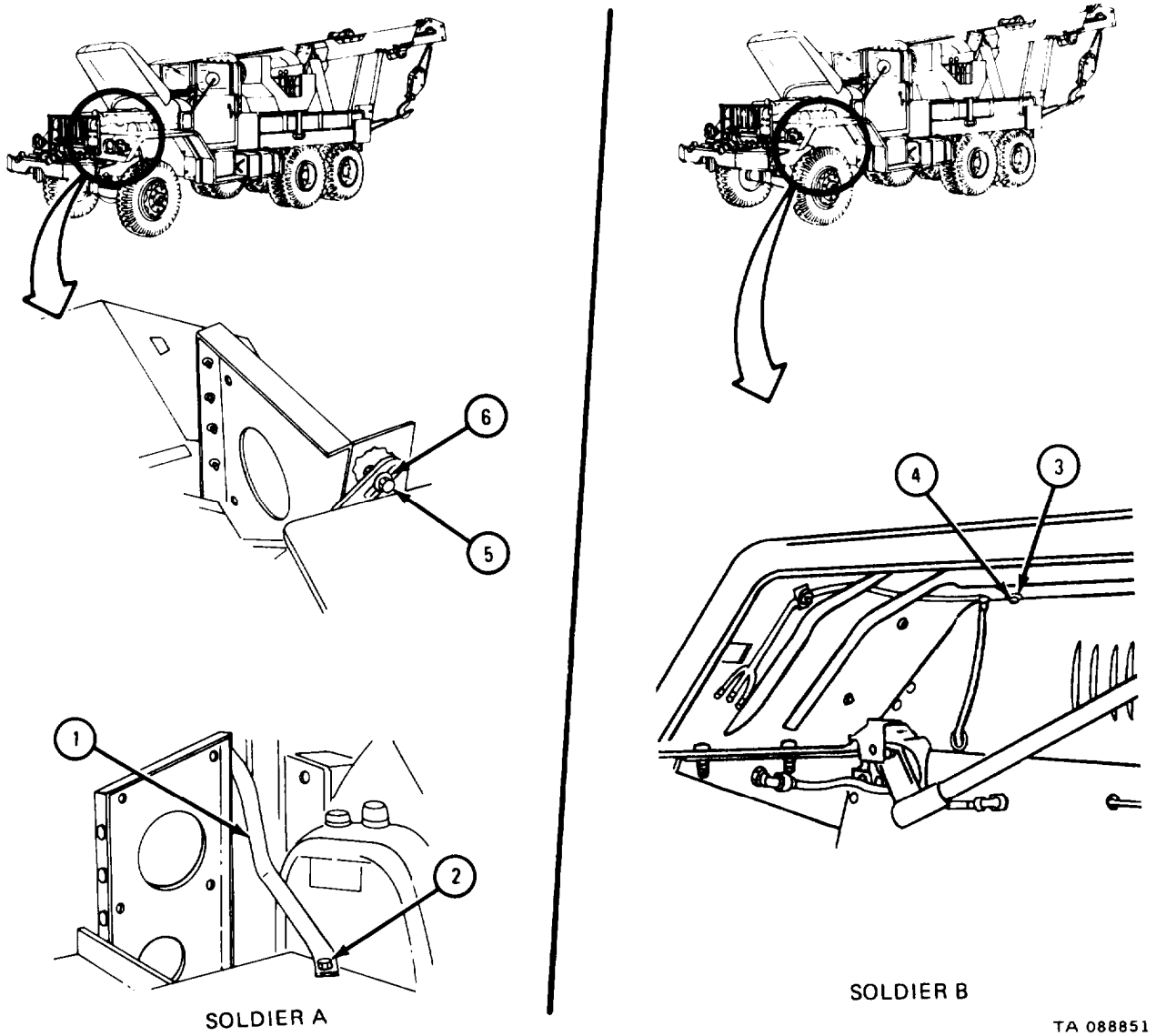
Soldier A 1. Working on top of fender, put headlight support bracket (1) in place, alining holes.

2. Put in and hold screw (2).

Soldier B 3. Put on lockwasher (3) and screw on and tighten nut (4).

Soldier A 4. Put in screw (5) and flat washer (6).

GO TO FRAME 10



FRAME 10

1. Put grommet (1) in place on fender (2).
2. Put light and bracket assembly (3) in place, alining holes. Put in four screws (4).
3. Push three electrical leads (5) into connectors (6) . Take off tags.
4. Working under fender, put protector box (7) and four lockwashers (8) in place on four screws (4).
5. Screw on and tighten four nuts (9).

NOTE

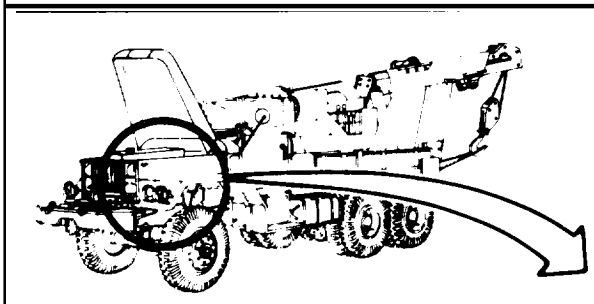
If working on truck M543A2, go to frame 11.

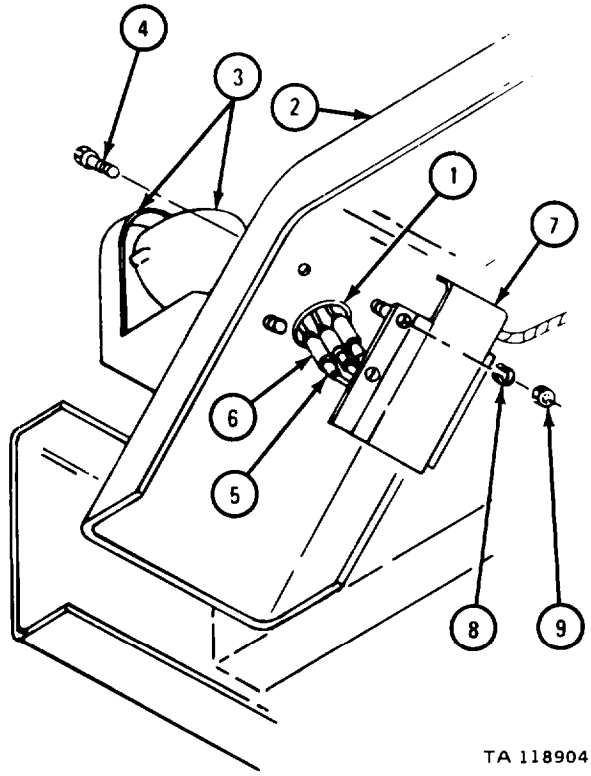
NOTE

Follow-on Maintenance Action Required:

1. Replace shielded blackout headlight assembly and ground strap. Refer to TM 9-2320-211-20.
2. Replace brush guard. Refer to TM 9-2320-211-20.
3. Replace headlight assembly. Refer to TM 9-2320-211-20.
4. Reconnect battery ground cable. Refer to TM 9-2320-211-20.
5. Replace hood side panel. Refer to para 16-3.
6. Close hood. Refer to TM 9-2320-211-10.

END OF TASK





FRAME 11

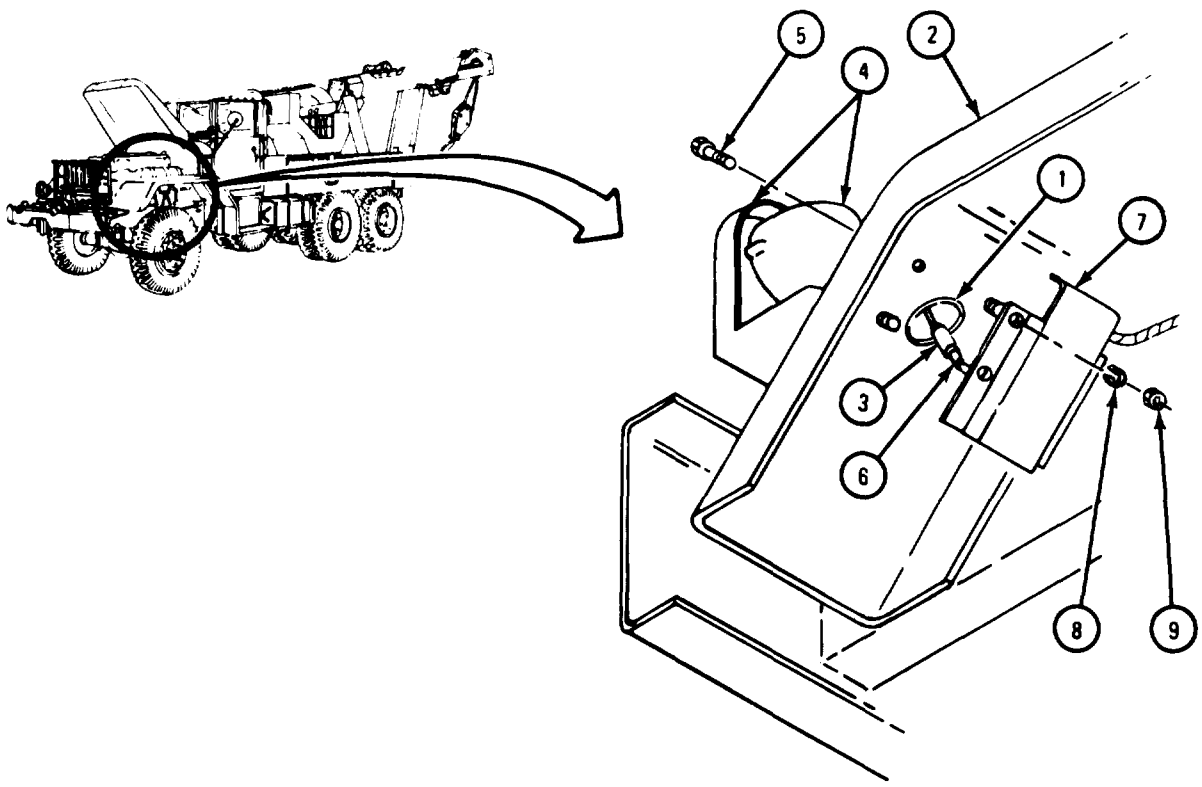
1. Put grommet (1) in place on fender (2).
2. Put electrical lead connector (3) through grommet (1) , and put emergency light and bracket (4) in place, alining holes.
3. Put in four screws (5).
4. Working under fender, push electrical lead (6) into electrical lead connector (3).
5. Put protector box (7) and four lockwashers (8) in place on screws (5). Screw on and tighten four nuts (9).

NOTE

Follow-on Maintenance Action Required:

1. Replace shielded blackout headlight assembly and ground strap. Refer to TM 9-2320-211-20.
2. Replace brush guard. Refer to TM 9-2320-211-20.
3. Replace headlight assembly. Refer to TM 9-2320-211-20.
4. Reconnect battery ground cable. Refer to TM 9-2320-211-20.
5. Replace hood side panel. Refer to para 16-3.
6. Close hood. Refer to TM 9-2320-211-10.

END OF TASK



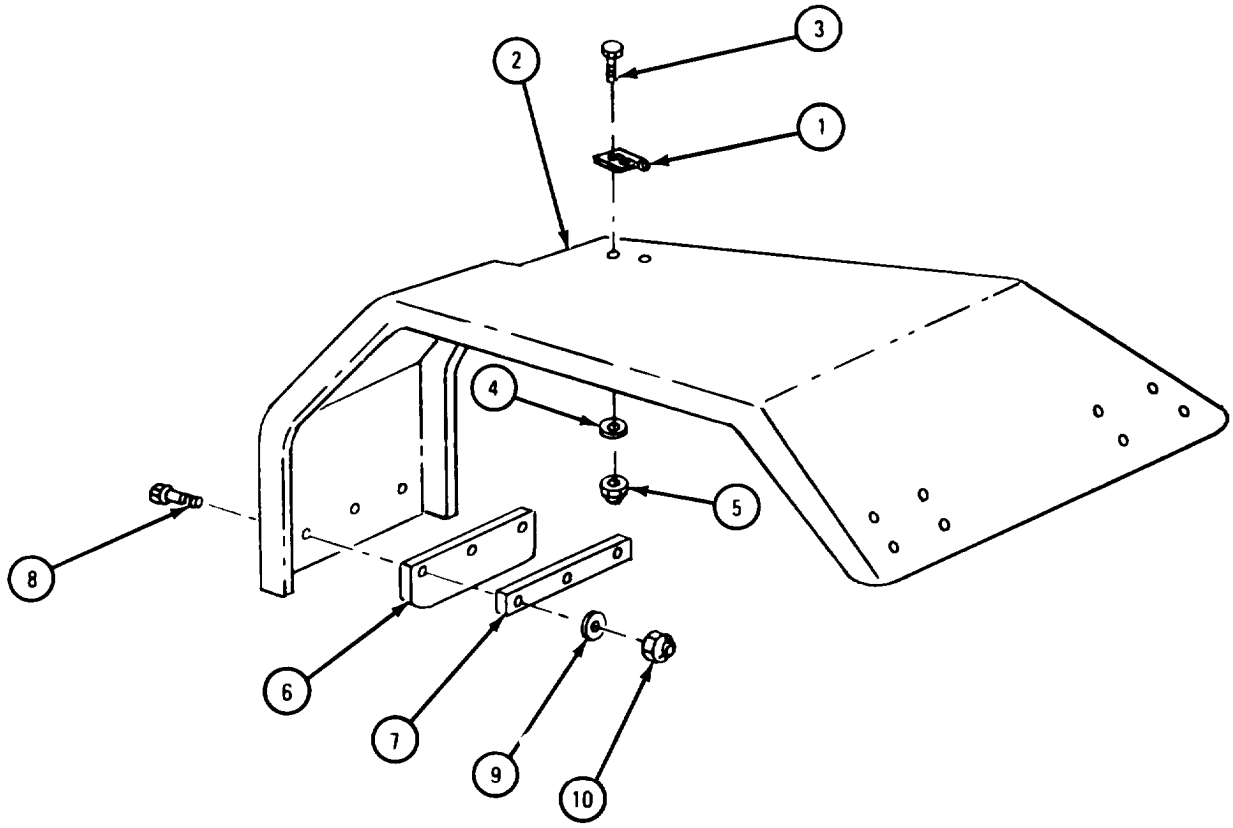
TA 118905

g. Replacement of Right Front Fender.

FRAME 1

1. Put hinge (1) in place on fender (2) alining holes, and put in two screws (3). Put on two flat washers (4) and screw on and tighten two self-locking nuts (5)
2. Put splash shield (6) and splash shield plate (7) in place, alining holes, and put in three screws (8). Put on three flat washers (9) and screw on and tighten three self-locking nuts (10).

GO TO FRAME 2

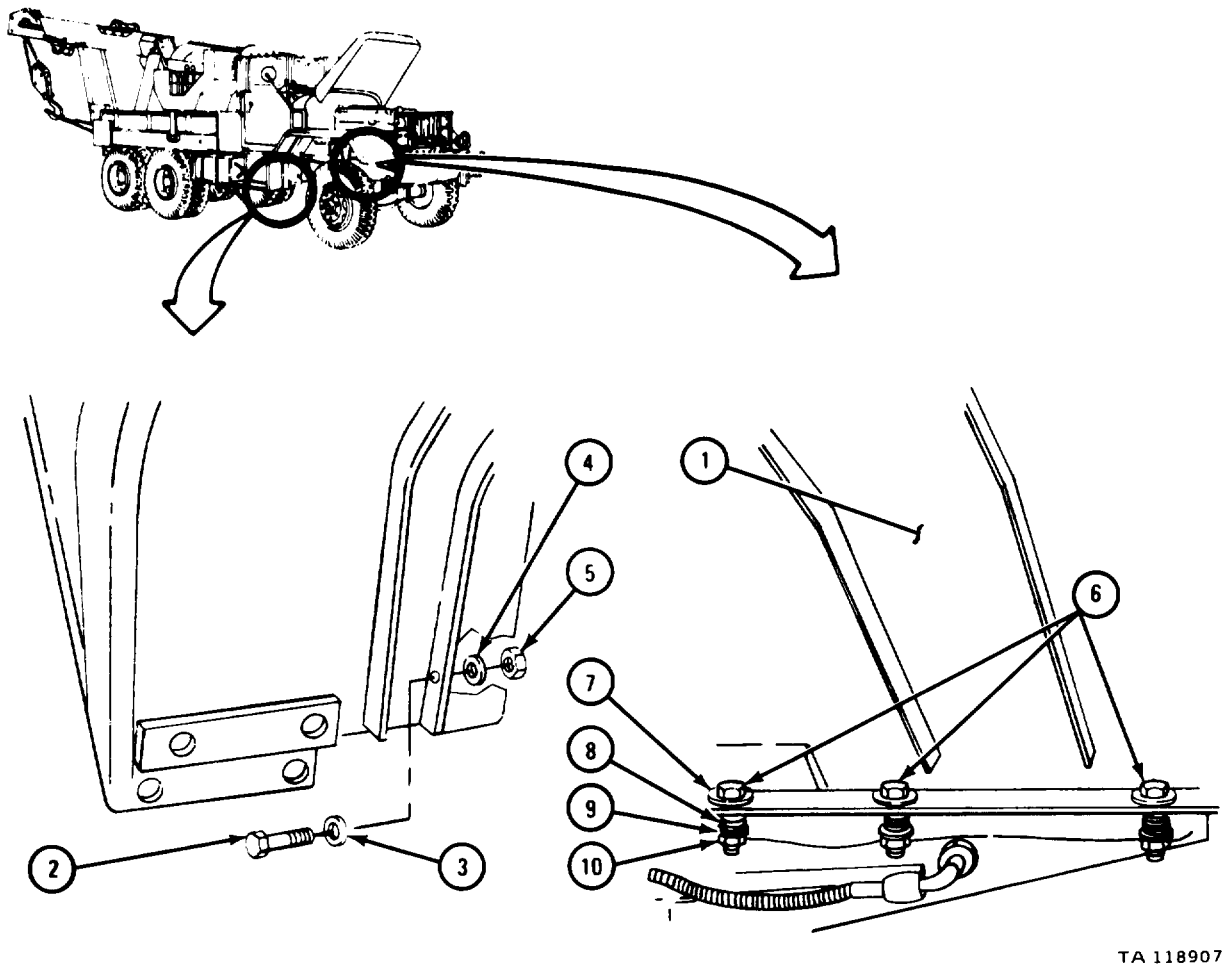


TA 118906

FRAME 2

Soldiers A and B	1.	Put fender (1) in place on truck.
Soldier B	2.	Hold fender (1) in place.
Soldier A	3.	Working under fender, aline holes and put in two screws (2) and flat washers (3). Put on two flat washers (4) and screw in and tighten two self-locking nuts (5).
Soldier B	4.	Let go of fender (1).
Soldier A	5.	Aline holes and put in three screws (6) and flat washers (7). Put on six flat washers (8), three springs (9), and screw on and tighten three self-locking nuts (10).

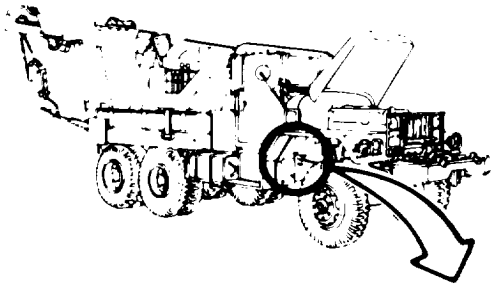
GO TO FRAME 3

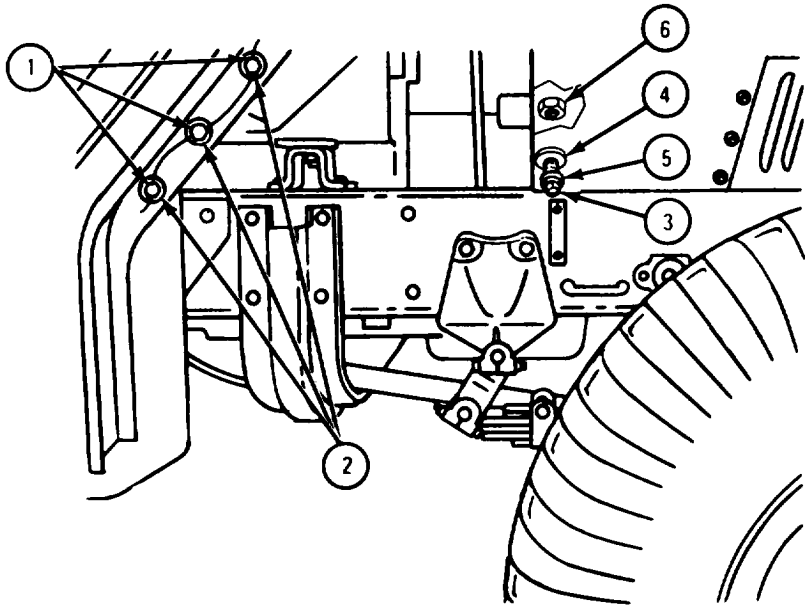


FRAME 3

1. Working under fender, screw in and tighten three screws (1) and flat washers (2).
2. Put in screw (3) , spring (4) , two flat washers (5) , and screw on and tighten self-locking nut (6) .

GO TO FRAME 4



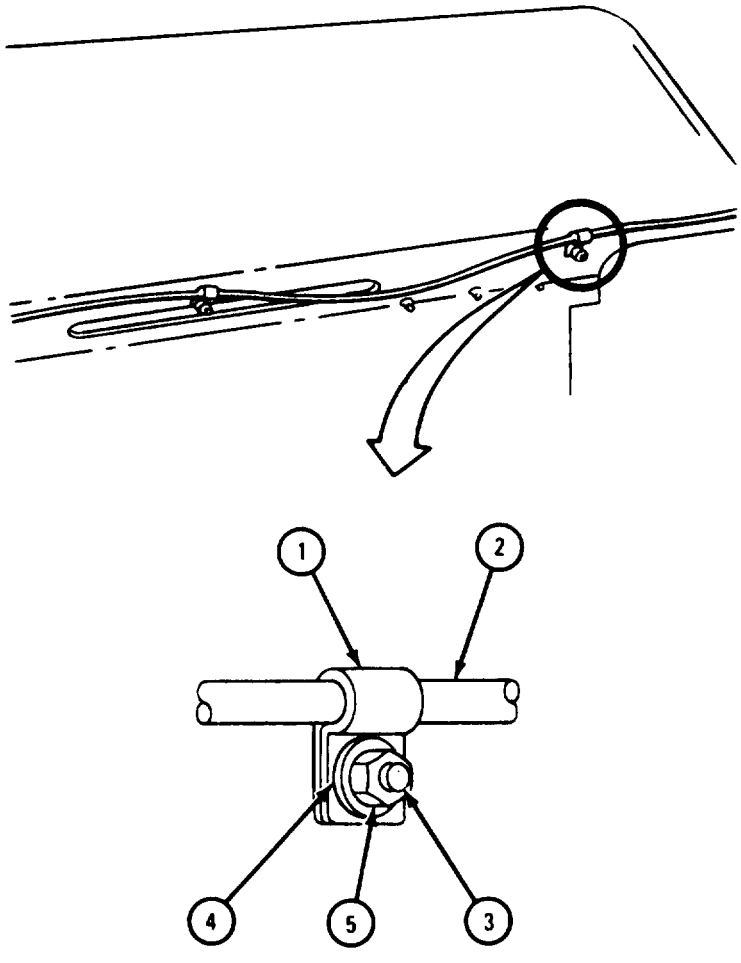


TA 118908

FRAME 4

1. Put two clamps (1) on air restriction indicator tube (2).
2. Put clamps (1) in place as shown. Put in two screws (3) , washers (4), and nuts (5).

GO TO FRAME 5



TA 088858

FRAME 5

Soldier A 1. Working on top of fender (1), route wiring cable (2) through inner fender wall. Put on grommet (3).

Soldier B 2. Working under fender (1), route wiring cable (2) between fender supports as shown.

3. Put two clamps (4) on wiring cable (2).

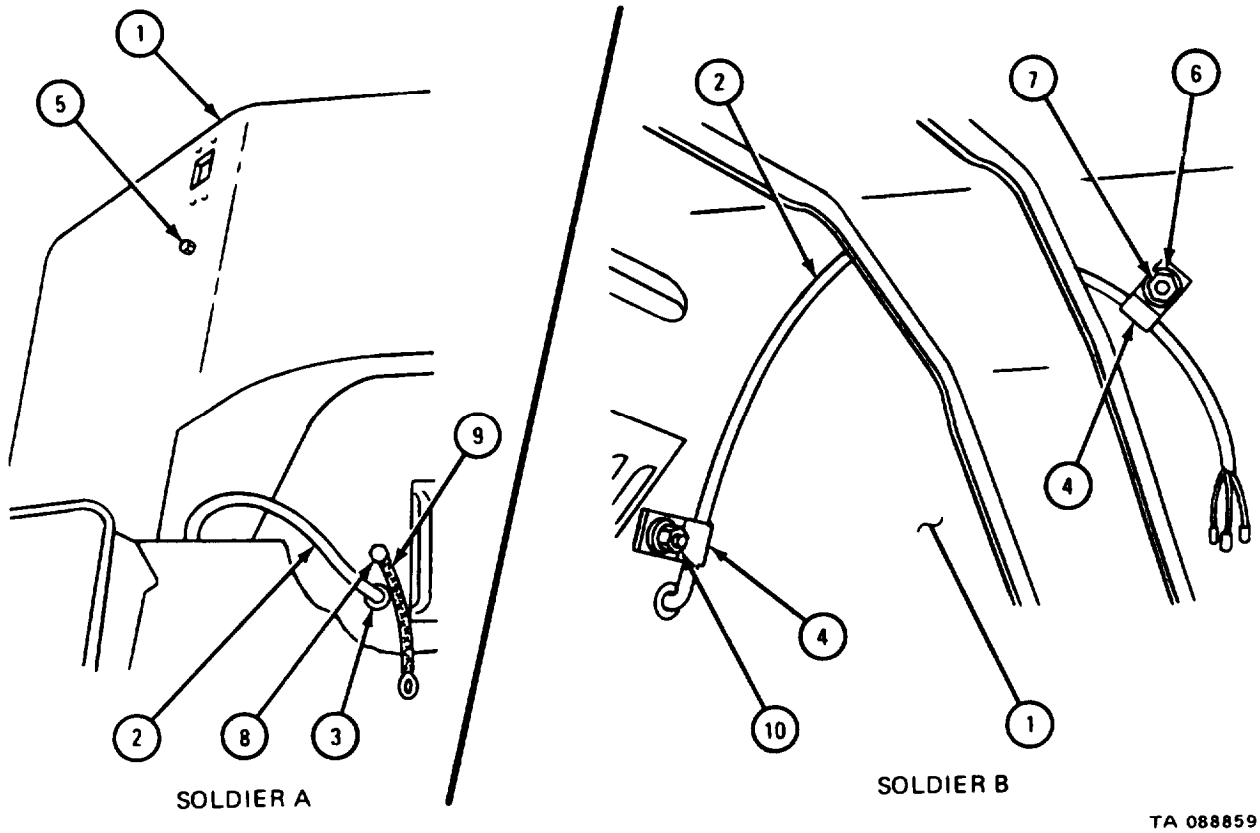
Soldier A 4. Put in and hold screw (5).

Soldier B 5. Put on clamp (4) , washer (6), and nut (7).

Soldier A 6. Put in and hold screw (8) and ground strap (9).

Soldier B 7. Put on clamp (4) and washer and nut (10).

GO TO FRAME 6



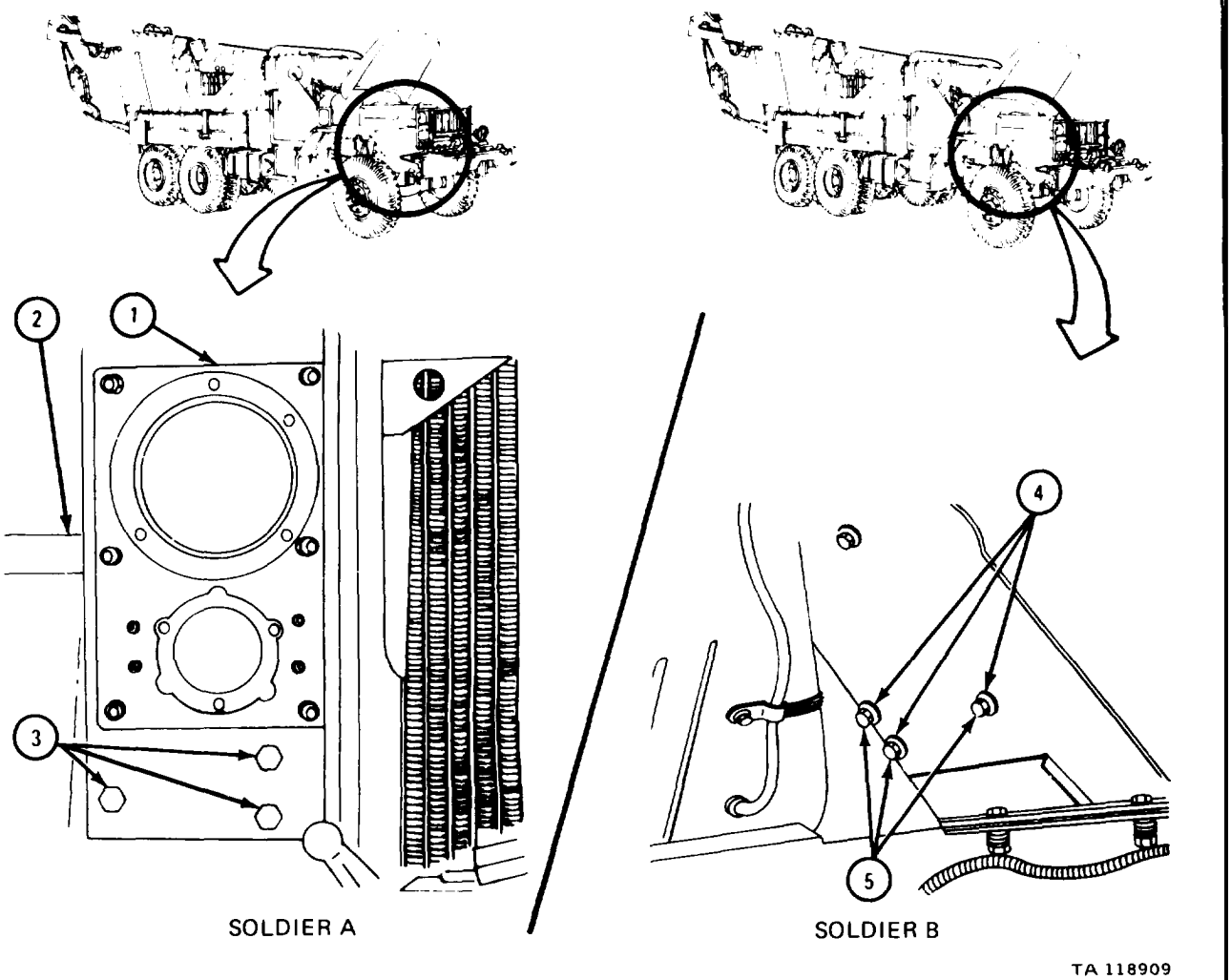
FRAME 6

Soldier A 1. Put headlight mounting bracket (1) in place on fender (2).

2. Put in and hold three screws (3).

Soldier B 3. Working under fender, put on three lockwashers (4) , and screw on and tighten three nuts (5).

GO TO FRAME 7

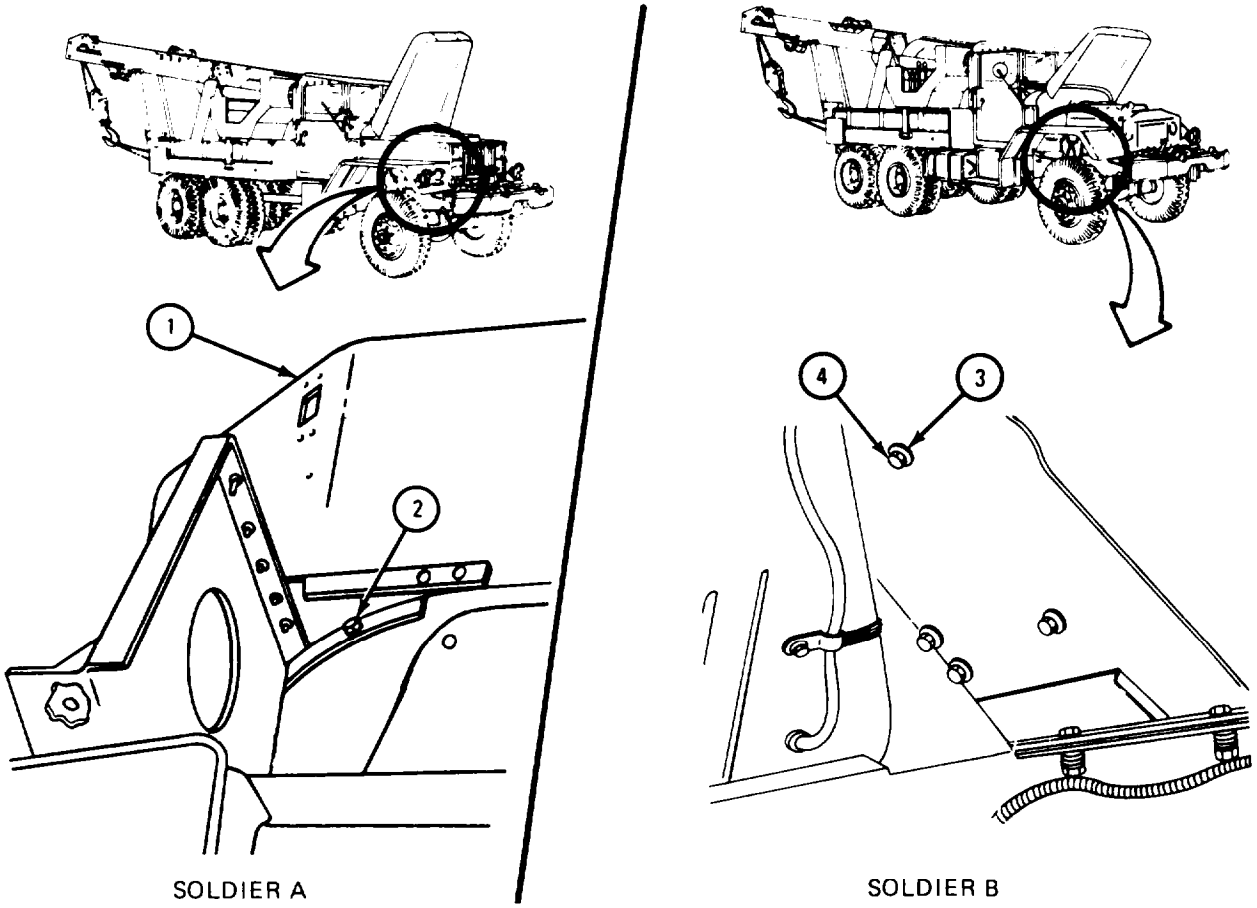


FRAME 7

Soldier A 1. Working on top of fender (1), put in and hold screw (2).

Soldier B 2. Working under fender (1) , put on lockwasher (3) and screw on and tighten nut (4).

GO TO FRAME 8



FRAME 8

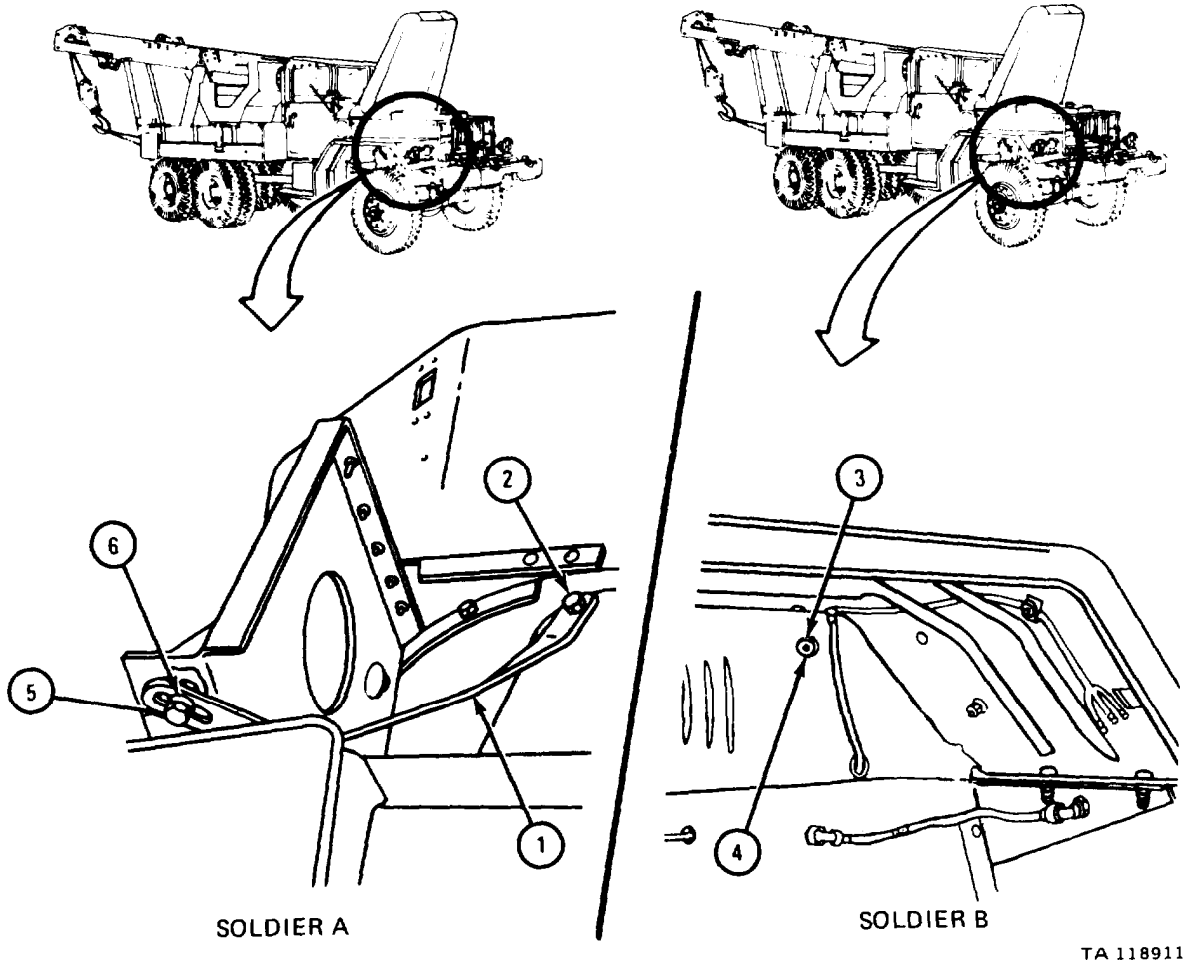
Soldier A 1. Put headlight support brace (1) in place, alining holes.

2. Put in and hold screw (2).

Soldier B 3. Working under fender, put on lockwasher (3) and screw on and tighten nut (4).

Soldier A 4. Screw on and tighten screw (5) and flat washer (6).

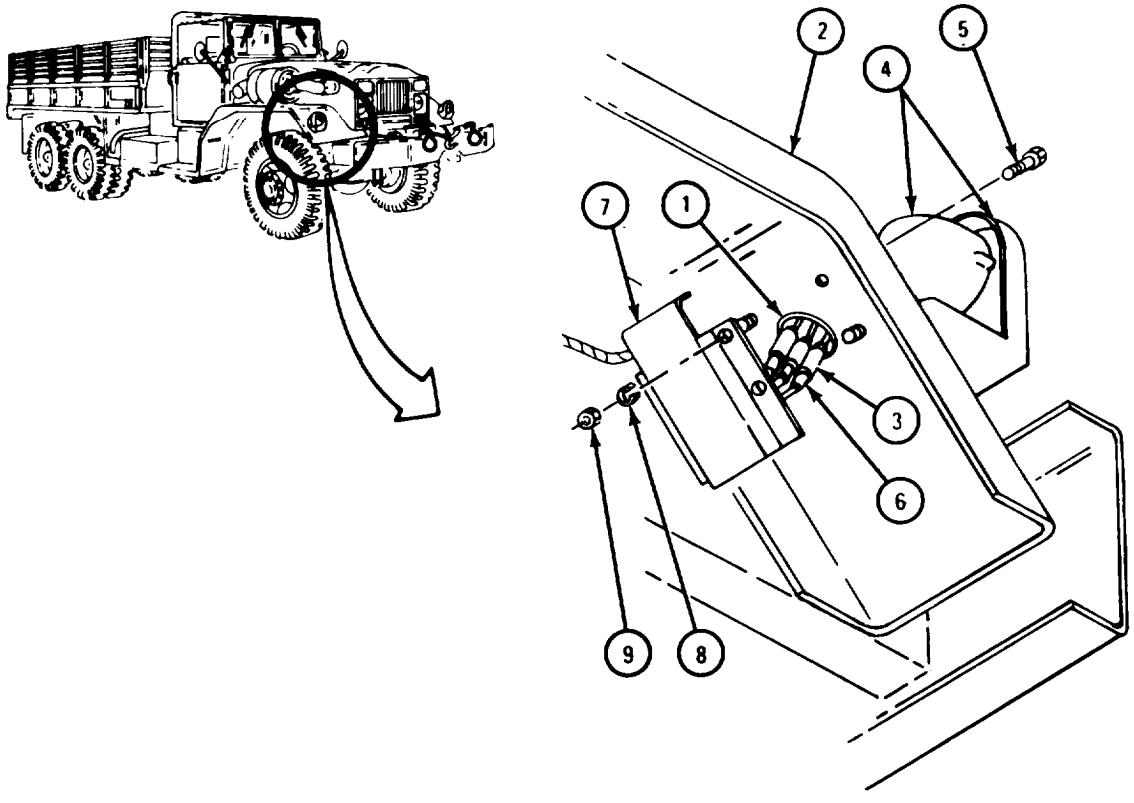
GO TO FRAME 9



FRAME 9

1. Put grommet (1) in place on fender (2).
2. Route electrical lead connectors (3) through grommet (1), and put light and bracket assembly (4) in place, alining holes. Put in four screws (5).
3. Push three electrical leads (6) into connectors (3) as tagged. Take off tags.
4. Working under fender, put protector box (7) and four lockwashers (8) in place on four screws (5).
5. Screw on and tighten four nuts (9).

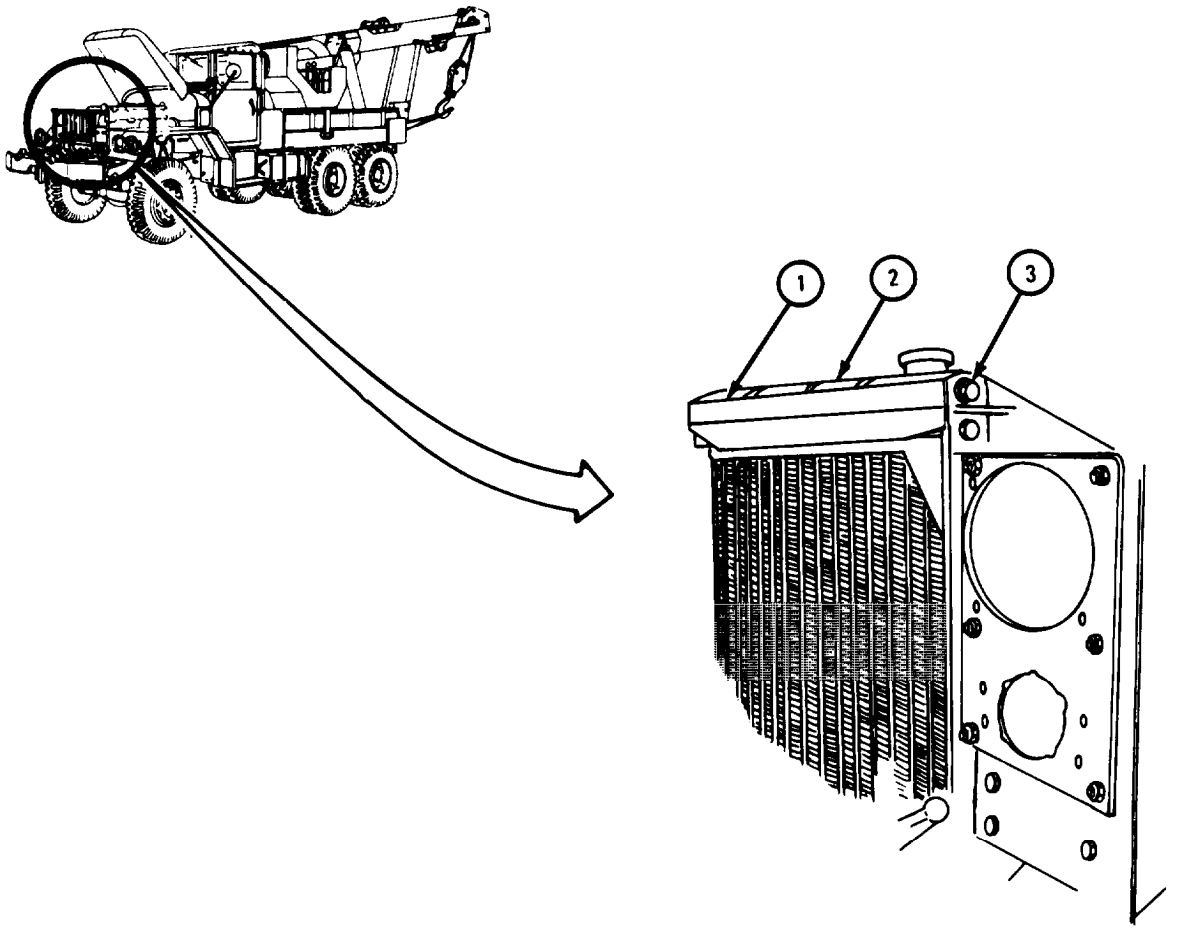
GO TO FRAME 10



FRAME 10

1. Put radiator dust shield (1) in place on radiator (2).
2. Screw in and tighten screw (3).
3. Do step 2 again on other side of radiator.

GO TO FRAME 11



FRAME 11

NOTE

Follow-on Maintenance Action Required:

1. Replace exhaust pipe. Refer to TM 9-2320-211-20.
2. Replace air filter and turbocharger air tube. Refer to TM 9-2320-211-20.
3. Replace brush guard. Refer to TM 9-2320-211-20.
4. Replace headlight assembly. Refer to TM 9-2320-211-20.
5. Reconnect battery ground cable. Refer to TM 9-2320-211-20.
6. Replace hood side panel. Refer to para 16-3.
7. Close hood. Refer to TM 9-2320-211-10.

END OF TASK

16-12. RUNNING BOARD REMOVAL, REPAIR, AND REPLACEMENT.

NOTE

This task is the same for the left and right running boards except where shown. This task is shown for the left running board.

TOOLS : No special tools required

SUPPLIES : Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Removal.

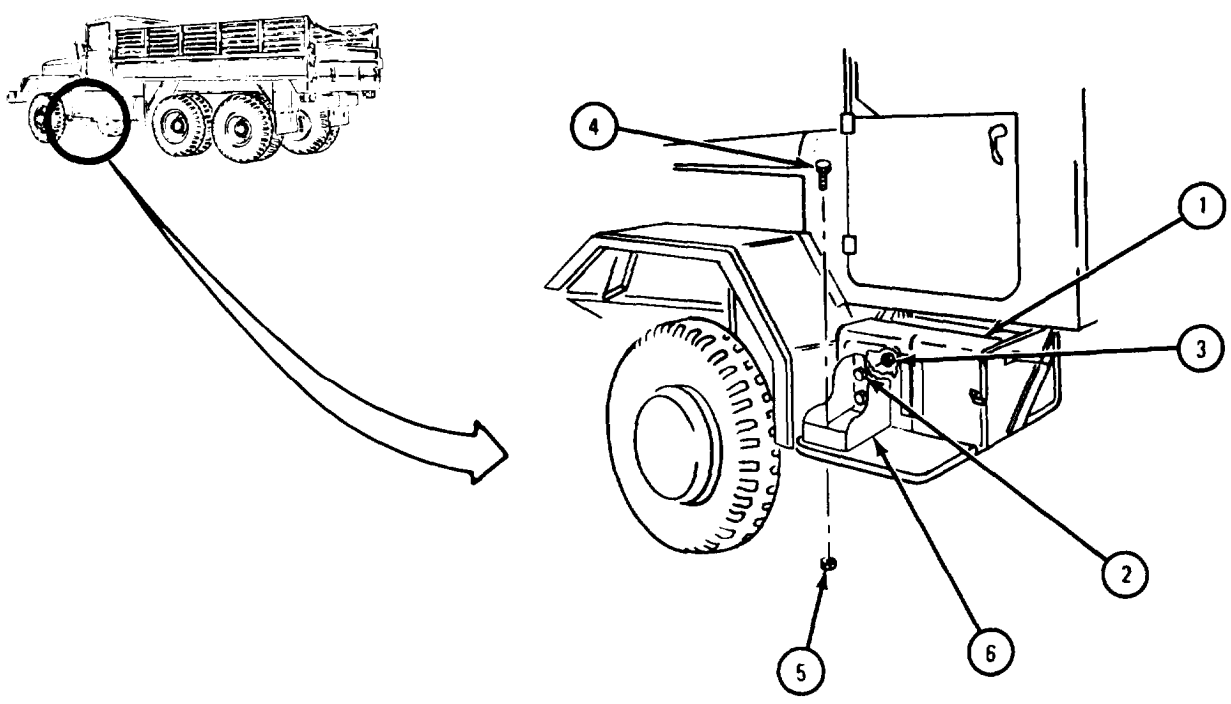
FRAME 1

NOTE

Liquid container bracket (6) is on left running board.

1. Open door (1). Take off four screws (2) and nuts (3).
2. Take off four screws (4) and nuts (5) through running board and take off liquid container bracket (6).

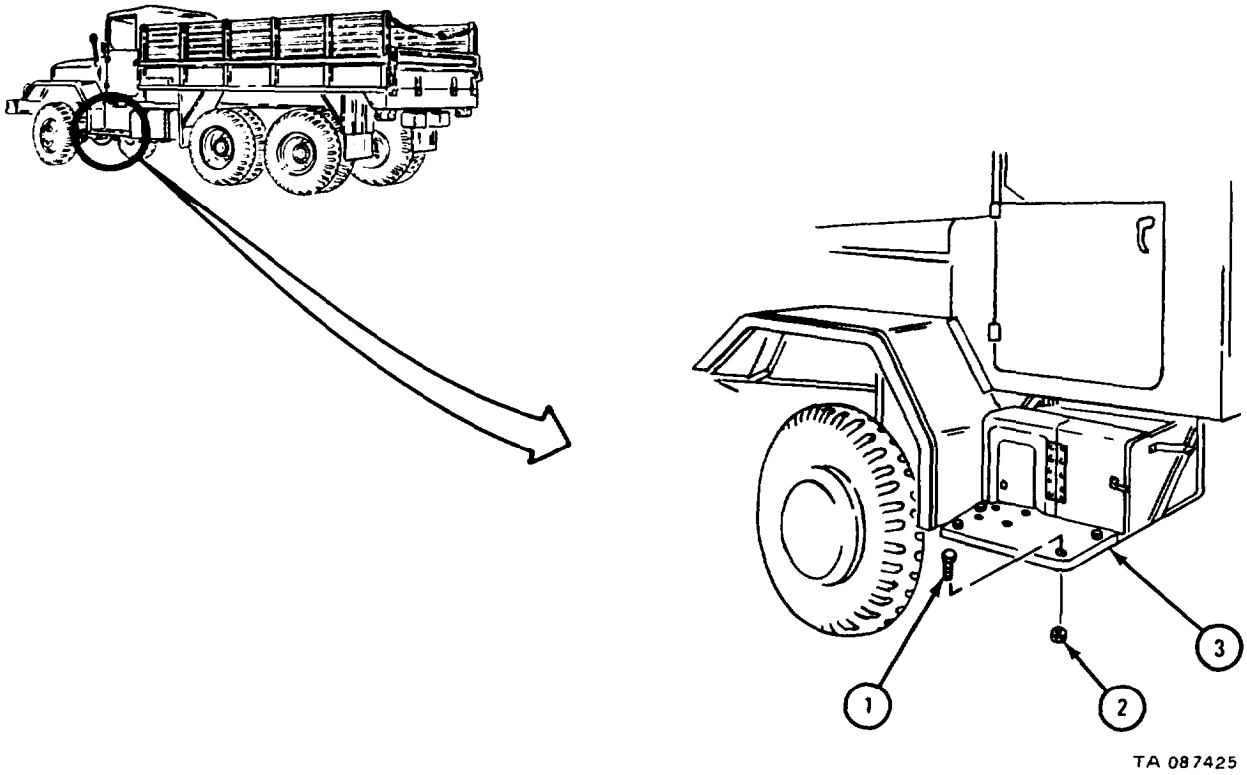
GO TO FRAME 2



FRAME 2

1. Takeoff four screws (1) and nuts (2).
2. Takeoff running board (3).

END OF TASK



b. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Cleaning. Clean all parts with solvent.

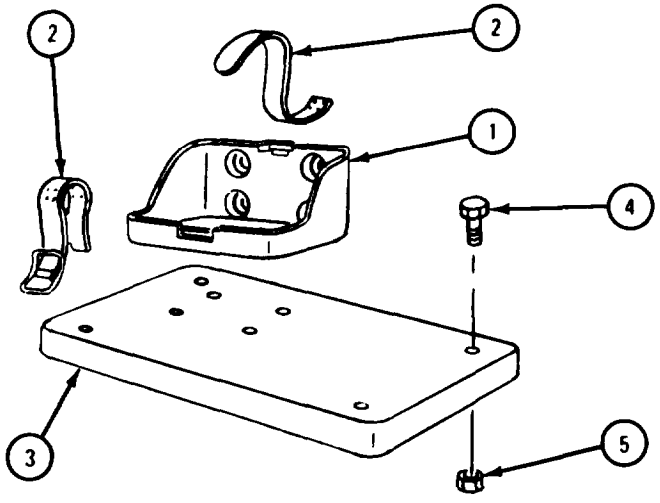
(2) Dry all parts thoroughly.

. Inspection and Repair.

FRAME 1

1. Check that liquid container bracket (1) has no dents, cracks, bends or loose welds.
2. Check straps (2) for tears, cracks or fraying.
3. Check that running board (3) has no dents, cracks, bends, loose welds or holes.
4. Check that bolts (4) and nuts (5) have no worn or stripped threads.
5. Fix liquid container bracket (1) and running board (3) by straightening or welding. Refer to TM 9-237.
6. Chase threads on bolts (4) and nuts (5) with dies or taps.
7. If more repair is needed, throw away parts and get new ones in their place.
8. Paint parts after repair. Refer to TM 43-0139.

END OF TASK



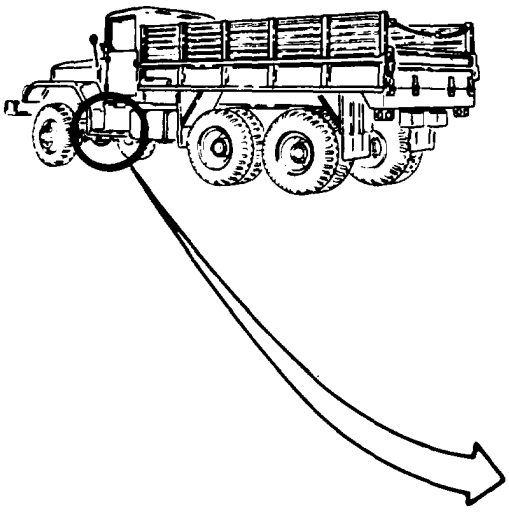
TA 087426

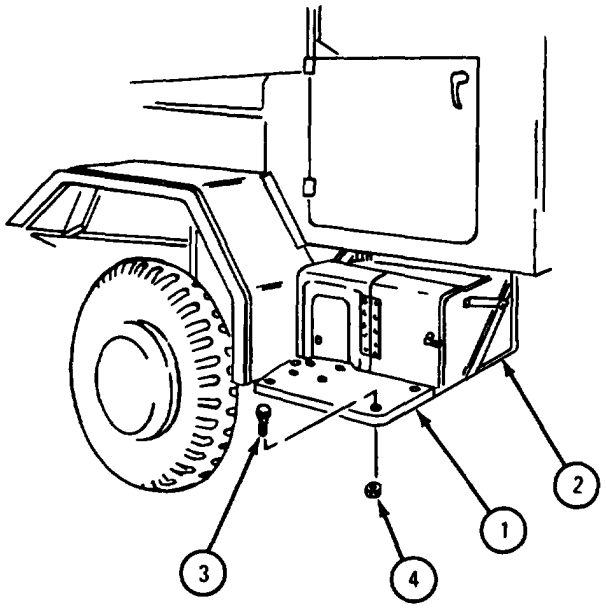
d. Replacement.

FRAME 1

1. Put running board (1) on two supports (2) , alining holes.
2. Put in four screws (3) and put on four nuts (4).

GO TO FRAME 2





TA 087427

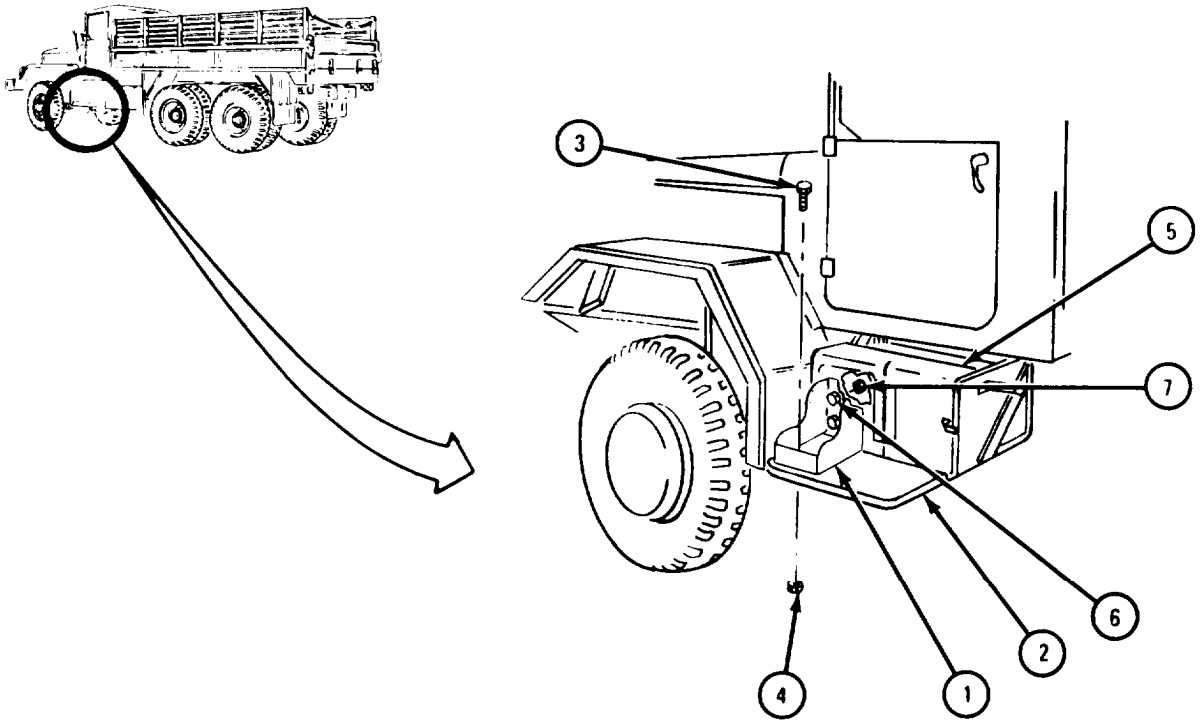
FRAME 2

NOTE

Liquid container bracket (1) is on left running board only.

1. Put liquid container bracket (1) on running board (2) , alining holes.
2. Put in four screws (3) and four nuts (4).
3. Open tool box door (5) and put in four screws (6) and four nuts (7).

END OF TASK



TA 118915

16-13. VEHICLE WINDSHIELD ASSEMBLY REPAIR.

TOOLS : No special tools required

SUPPLIES : Rubber seal
Solvent, dry cleaning, type 11 (SD-2) , Fed. Spec P-D-680
Soapy water
Clean lint-free cloth

PERSONNEL : Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

WARNING

Wear leather gloves and take care when working with glass. Sharp or broken edges can cause injury to personnel.

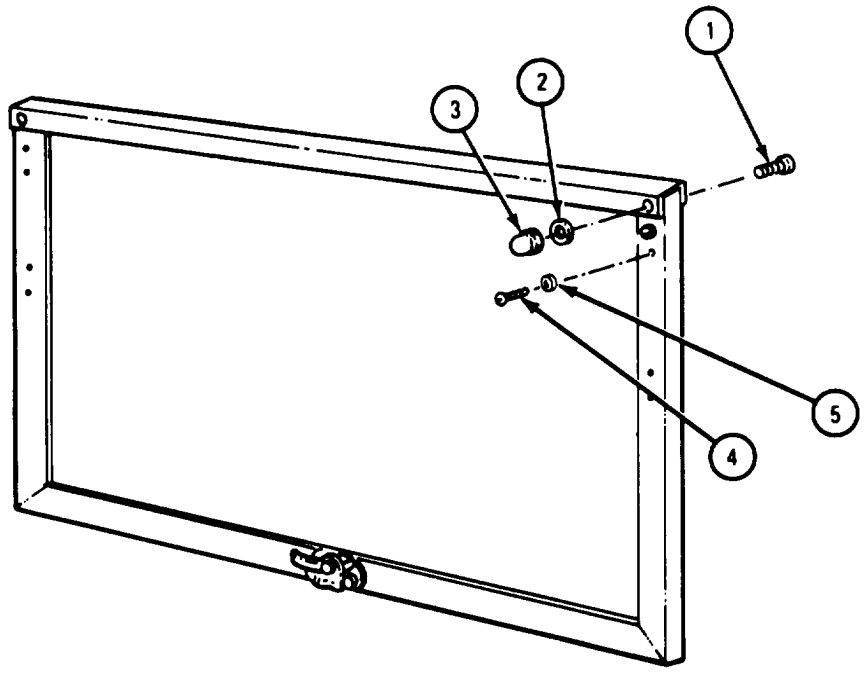
a. Preliminary Procedure. Remove windshield assembly from truck. Refer to TM9-2320-211-20.

b. Disassembly.

FRAME 1

1. Take out two screws (1), two lockwashers (2) , and cap nuts (3).
2. Take out four screws (4) and four lockwashers (5).

GO TO FRAME 2



TA 088760

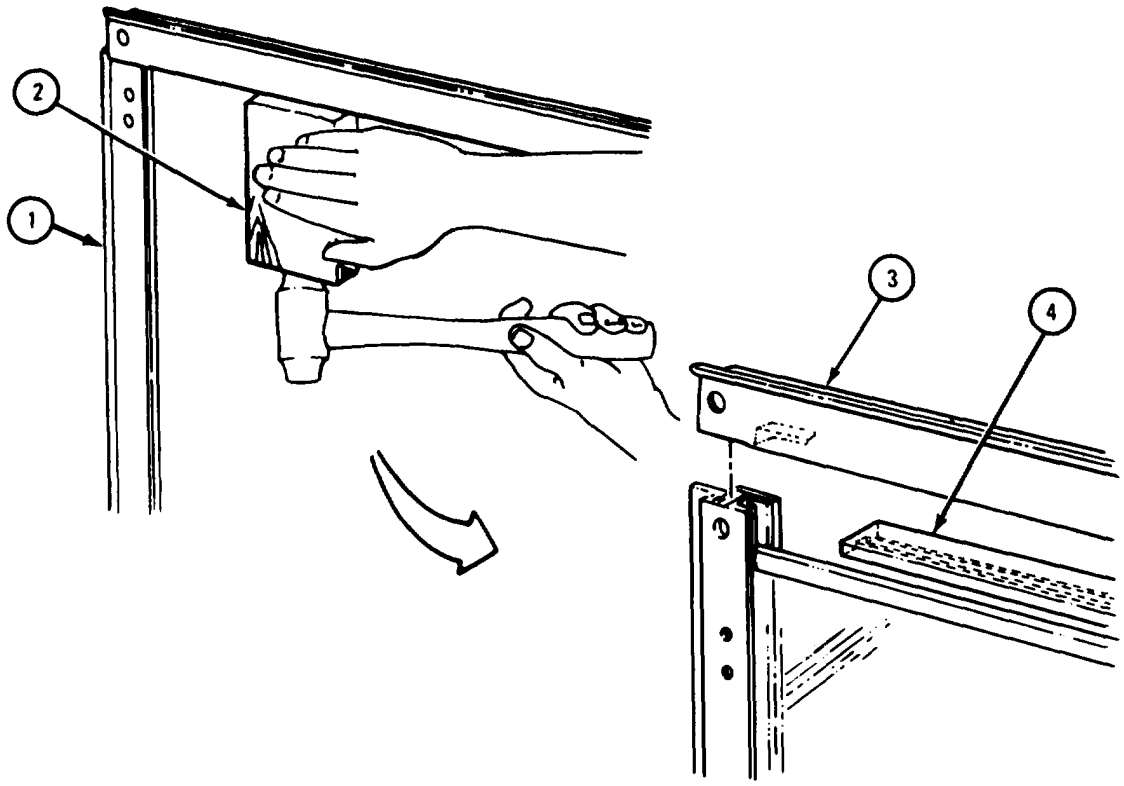
FRAME 2

Soldier A 1. Hold glass and frame assembly (1).

Soldier B 2. Using block of wood (2) and rubber mallet as shown, take off crosspiece (3).

3. Take out rubber seal (4) and throw it away.

GO TO FRAME 3

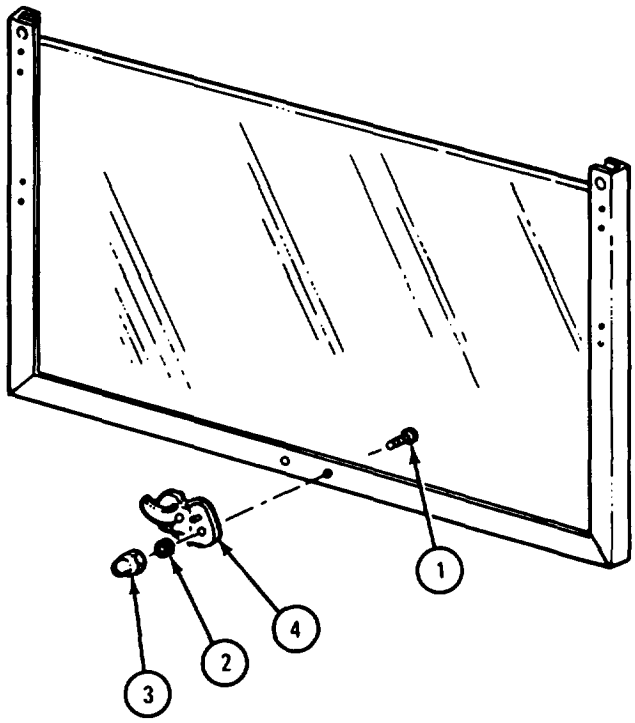


TA 088761

FRAME 3

1. Take out two screws (1), two lockwashers (2), and cap nuts (3). Take off locking latch (4).

GO TO FRAME 4

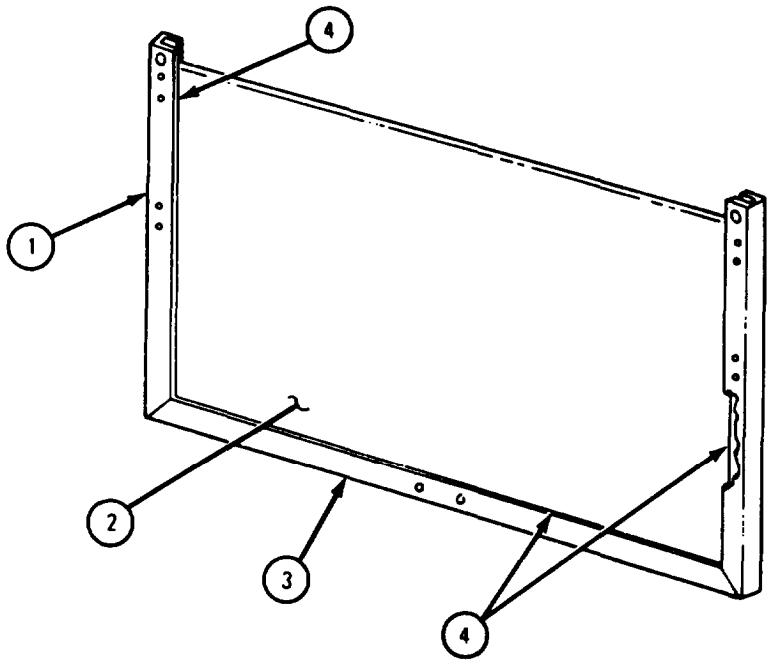


TA 088771

FRAME 4

1. Pull windshield side frame rails (1) away from glass (2).
2. Using knife, pry frame (3) away from glass (2).
3. Take out glass (2) and three rubber seals (4). Throw away rubber seals.

END OF TASK



TA 088763

c. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Clean windshield frame and other metal parts with solvent. Let parts air dry.

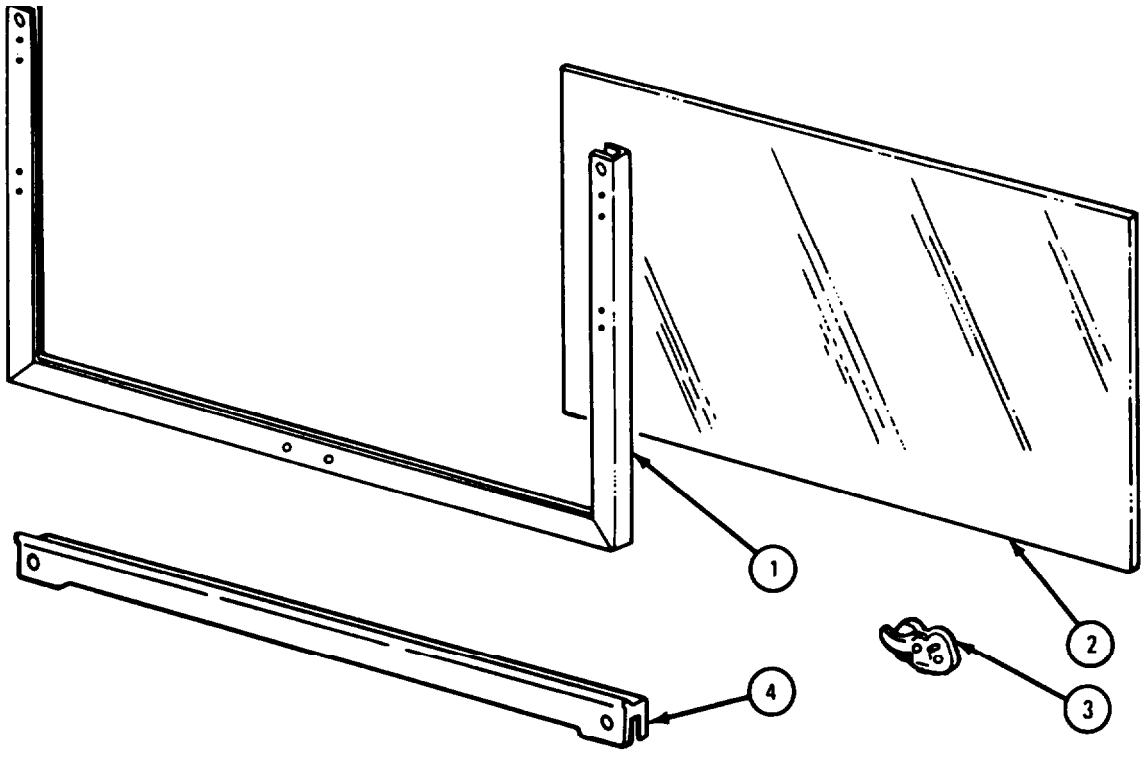
(2) Wash glass with warm soapy water. Dry glass with clean lint-free cloth.

d. Inspection and Repair.

FRAME 1

1. Check that windshield frame (1) has no bends, dents, cracks or other damage.
2. Check that glass (2) is not cracked or scratched.
3. Check that latch (3) and crosspiece (4) are not damaged.
4. Throw away damaged parts and get new ones in their place.

END OF TASK



e. Assembly.

FRAME 1

Soldier A

1. Put two side rubber seals (1) and bottom rubber seal (2) on glass (3) .
2. Put soapy water on rubber seals (1 and 2) and glass (3) so that they will slide easily into frame rails (4).

Soldier B

3. Hold frame rails (4).

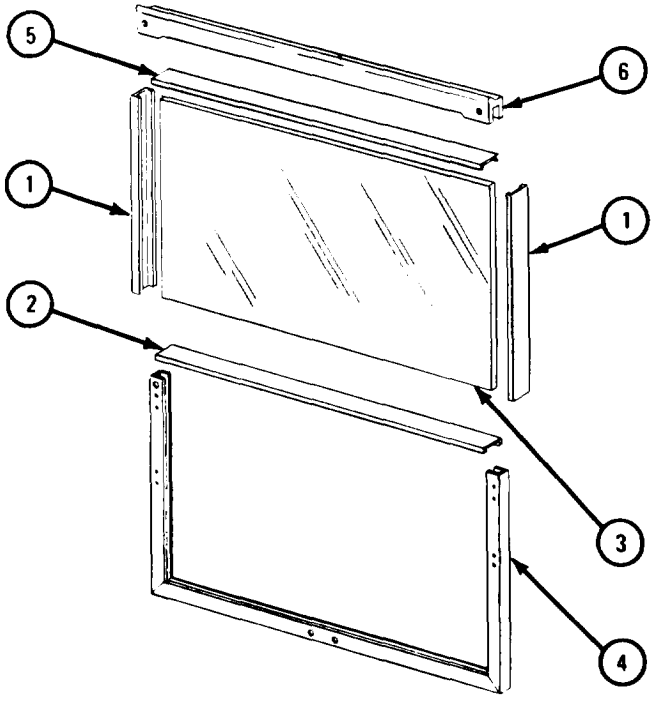
NOTE

Make sure that rubber seals (1 and 2) do not tear and that they go evenly over top and side edges of glass (3).

Soldier A

4. Put glass (3) into frame rails (4). Using rubber mallet, lightly tap glass into place.
5. Put top rubber seal (5) on glass (3). Put soapy water on rubber seal and glass. Put crosspiece (6) on top of frame rails (4) and side rubber seals (1) .
6. Using rubber mallet, lightly tap crosspiece (6) until screw holes in crosspiece and frame rails (4) are alined.

GO TO FRAME 2

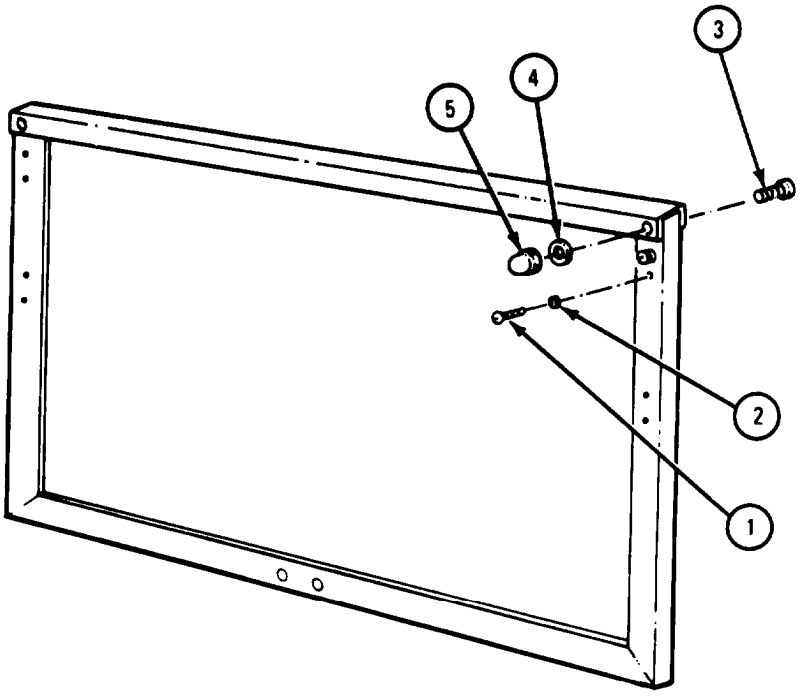


TA 088765

FRAME 2

1. Put in four screws (1) and four lockwashers (2).
2. Put in two screws (3), two lockwashers (4), and two cap nuts (5).

GO TO FRAME 3

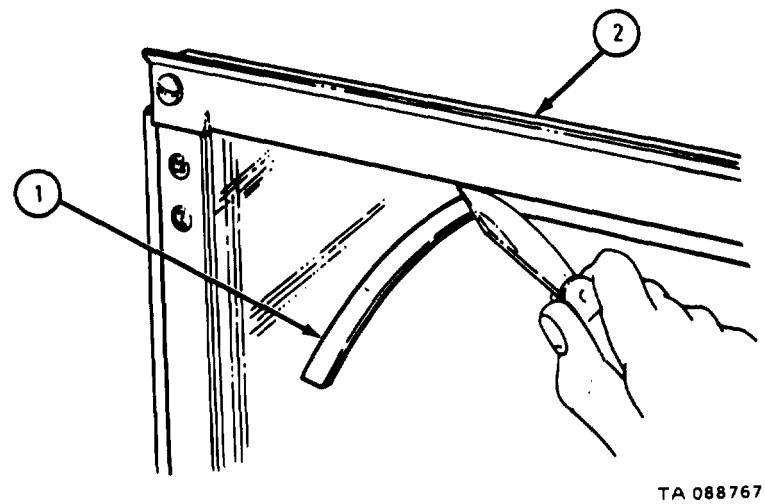


TA 088766

FRAME 3

1. Using knife, trim rubber seal (1) even with bottom of crosspiece (2) as shown.

GO TO FRAME 4



FRAME 4

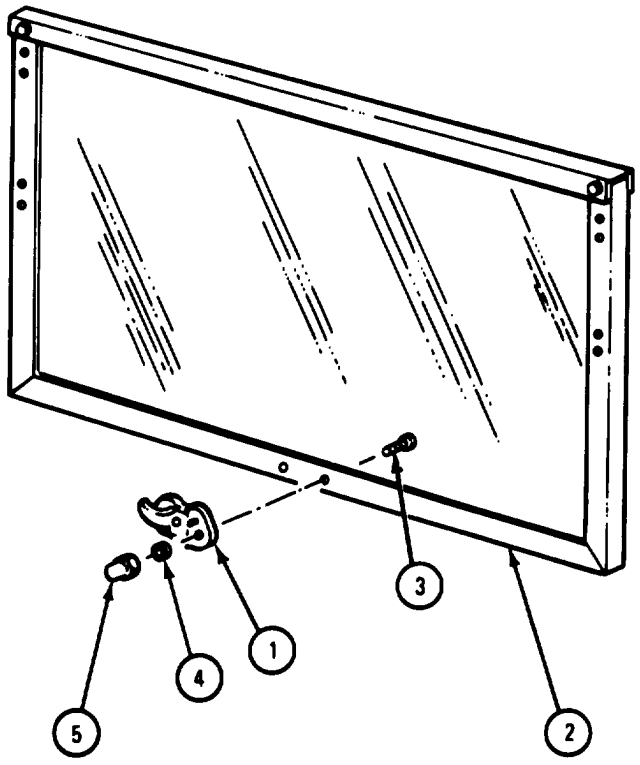
1. Aline locking latch (1) with holes in frame rail (2).
2. Put in two screws (3), two lock washers (4), and two cap nuts (5).

NOTE

Follow-on Maintenance Action Required:

Replace windshield assembly. Refer to TM 9-2320-211-20.

END OF TASK



TA 088768

16-14. CAB WINDSHIELD HINGE ASSEMBLY REMOVAL AND REPLACEMENT.

TOOLS : No special tools required

SUPPLIES : None

PERSONNEL: Two

EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

Soldier A 1. Hold windshield frame (1) as soldier B takes out screws.

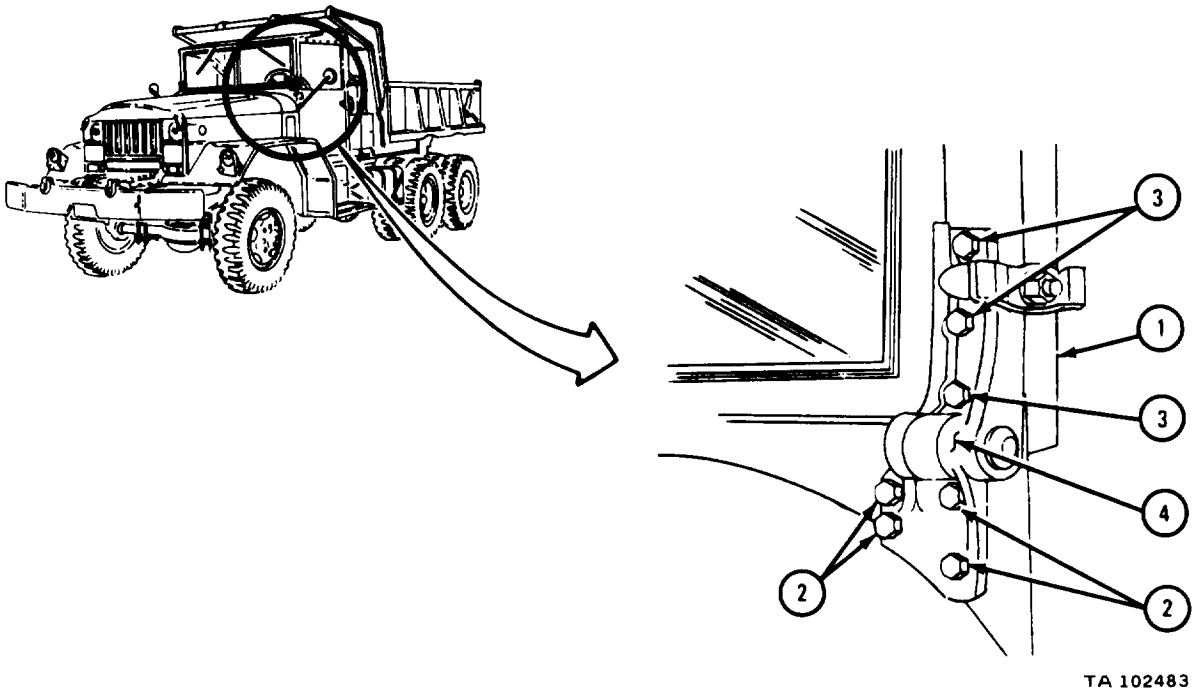
Soldier B 2. Take out four screws (2).

3. Take out three screws (3). Take off hinge (4)9

4. Do steps 2 and 3 again on other side of windshield frame (1).

Soldier A 5. Lift off windshield frame (1).

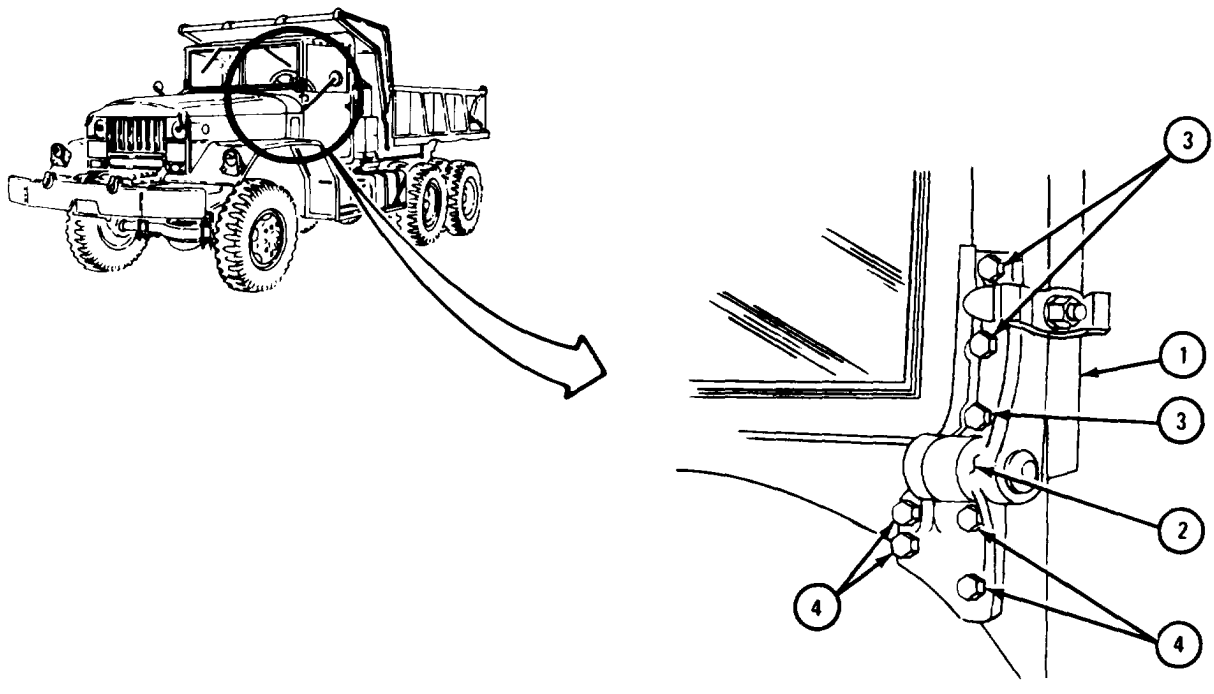
END OF TASK



b. Replacement.

FRAME 1

Soldier A 1. Put windshield frame (1) in place and hold it.
Soldier B 2. Put hinge (2) in place and put in three screws (3).
3. Put in four screws (4).
4. Do steps 2 and 3 again on other side of windshield frame (1).
Soldier A 5. Let go of windshield frame (1).
END OF TASK



16-15. GRAB HANDLE REMOVAL AND REPLACEMENT.

NOTE

This task is the same for the left and right grab handles. This task is shown for the right grab handle.

TOOLS : No special tools required

SUPPLIES : None

PERSONNEL: One

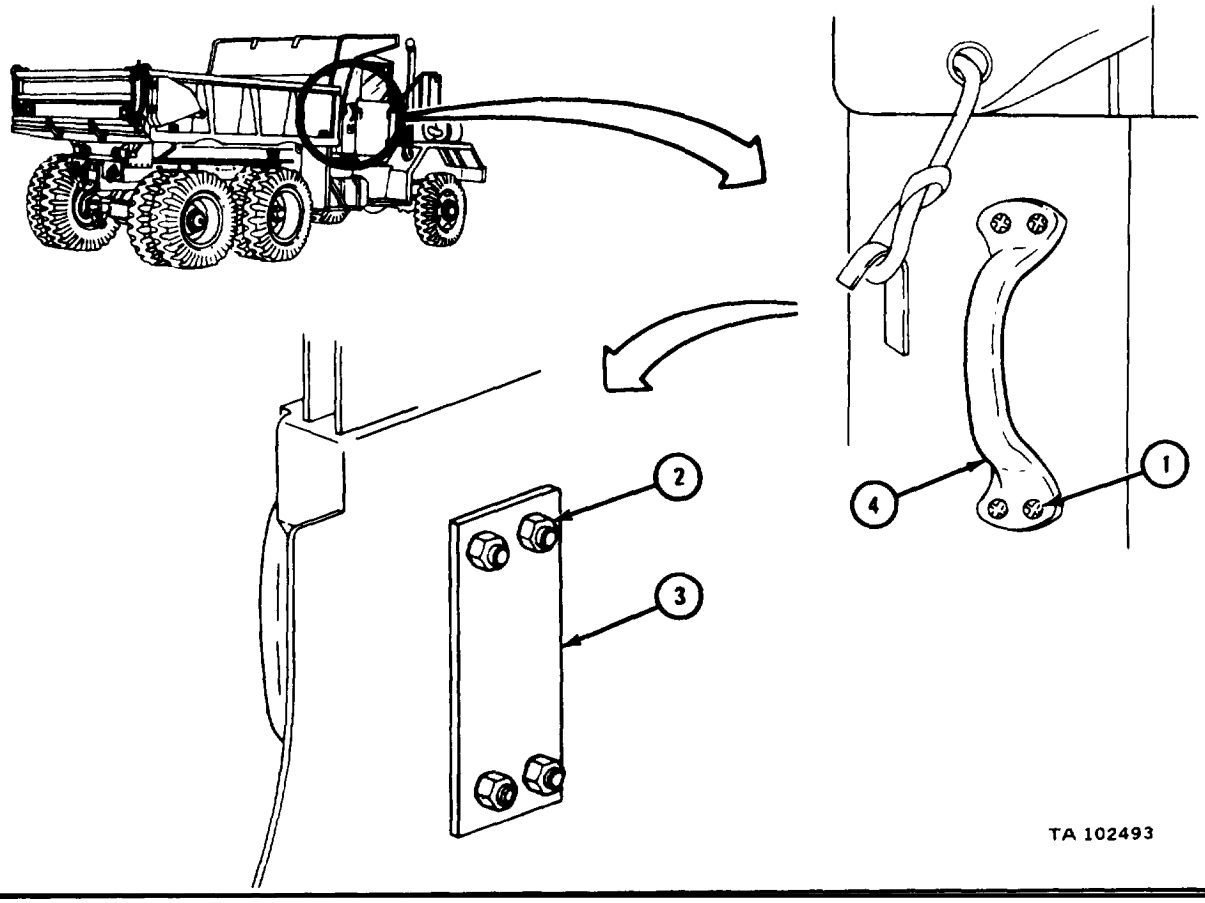
EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Working outside cab, hold four screws (1) and take off four nuts (2) on inside of cab.
2. Take off reinforcement plate (3).
3. Take off grab handle (4) and take out four screws (1).

END OF TASK

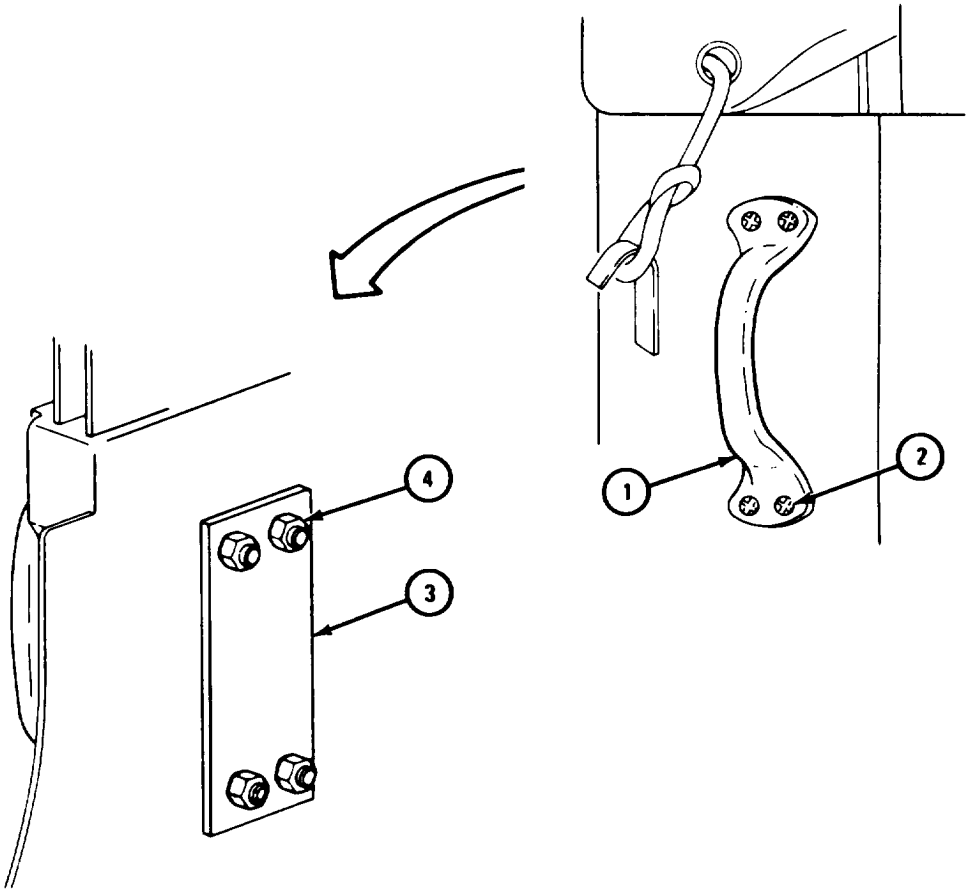


b. Replacement.

FRAME 1

1. Put grab handle (1) in place on cab.
2. Put in four screws (2).
3. Put reinforcement plate (3) in place inside of cab.
4. Hold four screws (2) and put on four nuts (4).

END OF TASK



TA 102495

16-16. REAR SPLASH SHIELD REMOVAL AND REPLACEMENT (TRUCK M543A2).

NOTE

This task is the same for both rear splash shields.
This task is shown for the left rear splash shield.

TOOLS : No special tools required

SUPPLIES : None

PERSONNEL: One

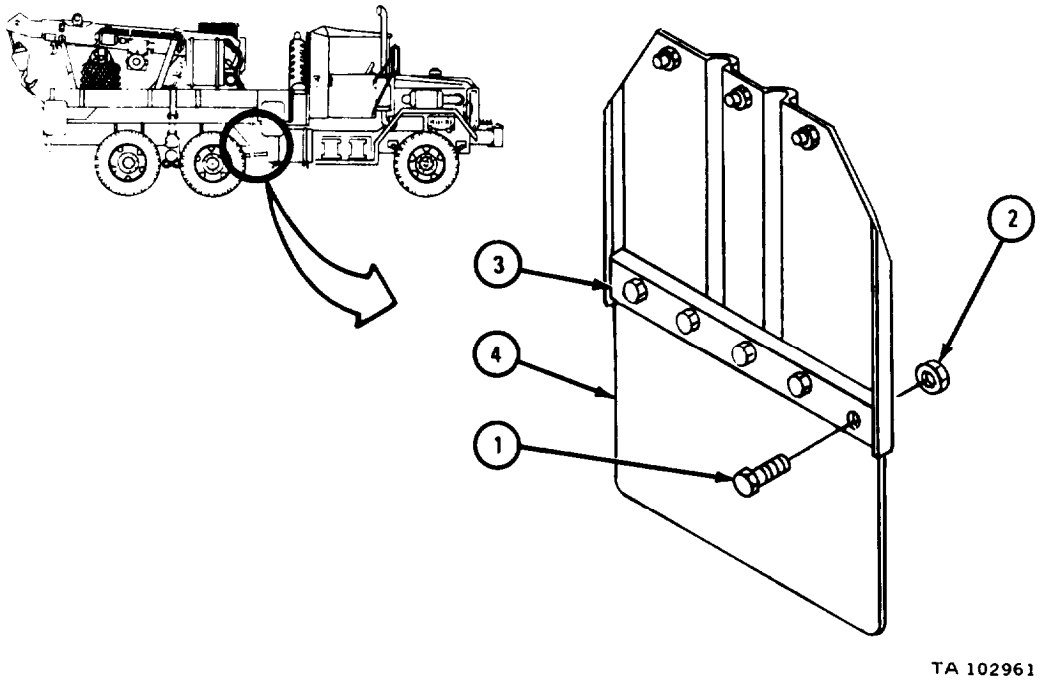
EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take out five screws (1).
2. Take off five nuts (2), retainer (3), and lower splash shield (4).

END OF TASK

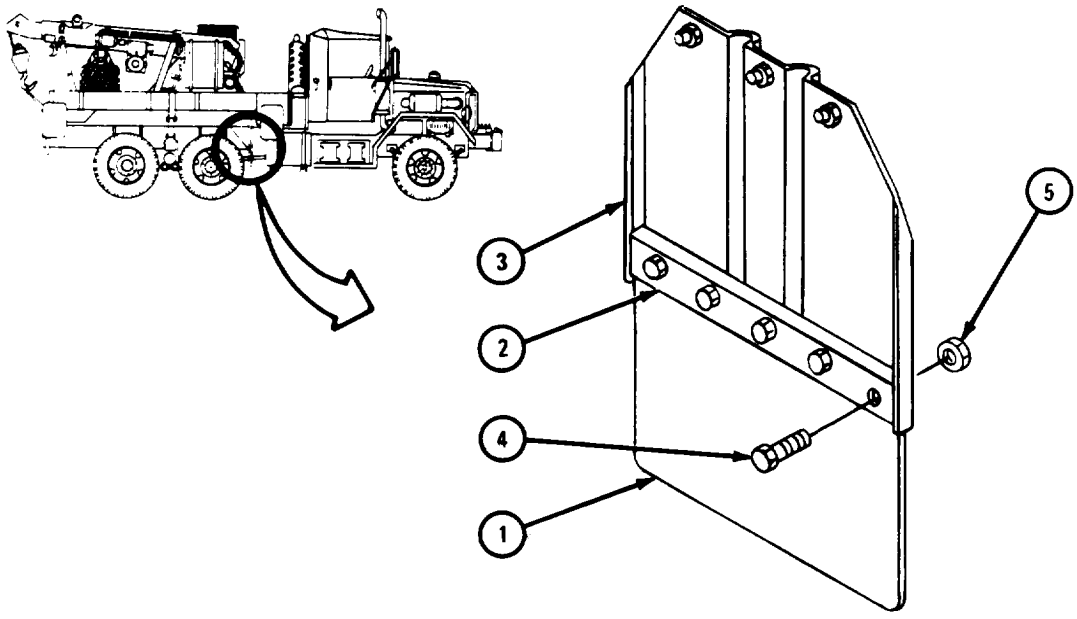


b. Replacement.

FRAME 1

1. Put lower splash shield (1) and retainer (2) on upper splash shield (3), alining holes.
2. Place five screws (4) in holes.
3. Put on and tighten five nuts (5) .

END OF TASK



TA 102962

16-17. REAR SPLASH SHIELD ASSEMBLY REMOVAL AND REPLACEMENT (TRUCKS M54A2, M54A2C, and M55A2).

NOTE

This task is the same for all four rear splash shield assemblies. This task is shown for the right rear splash shield assembly.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

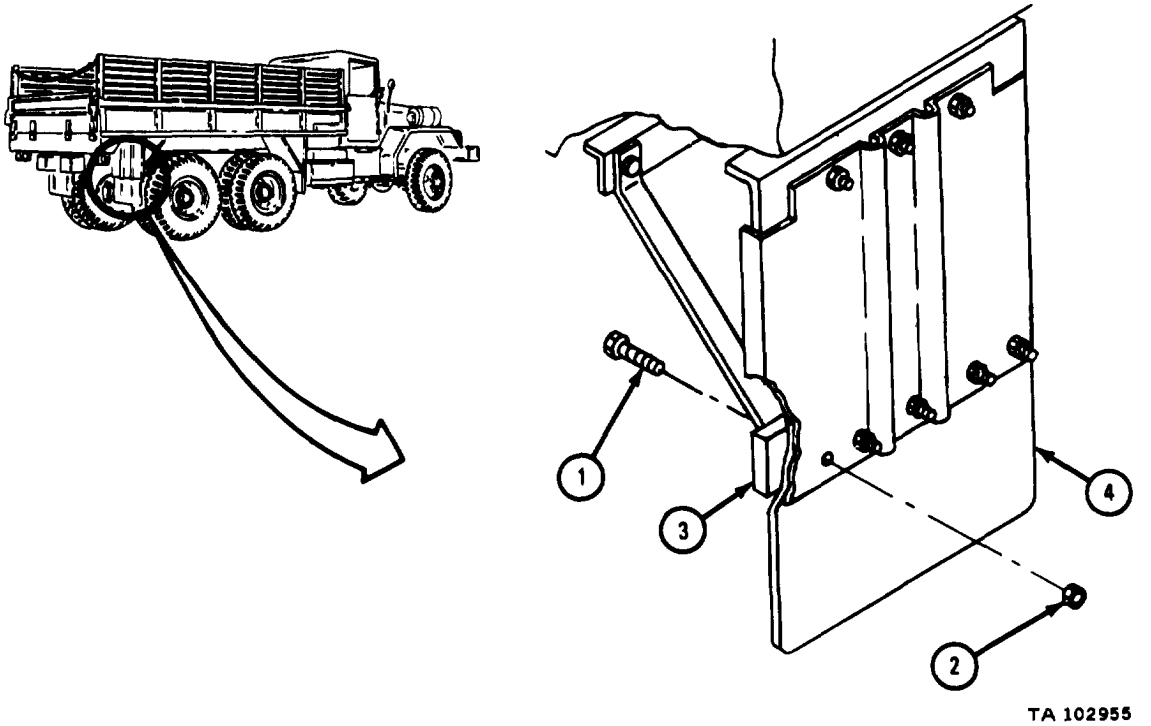
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take out five capscrews (1) and take off five nuts (2).
2. Take off retainer (3) and lower splash shield guard (4).

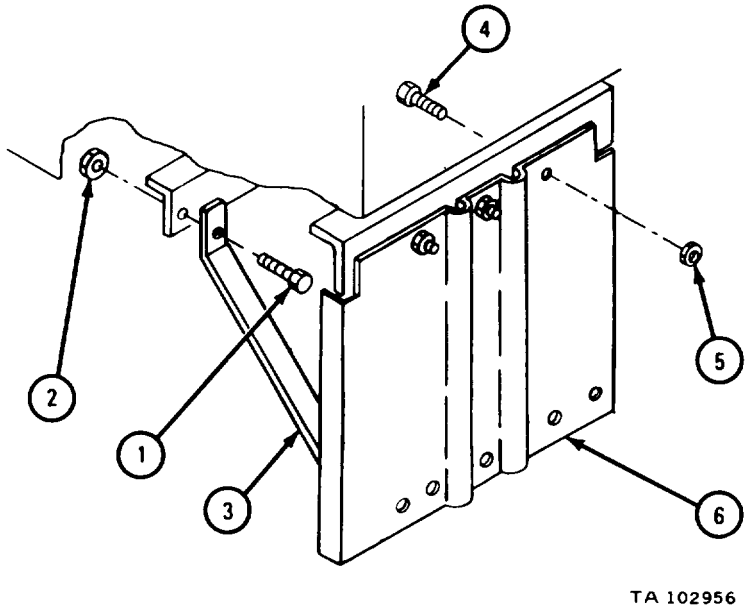
GO TO FRAME 2



FRAME 2

1. Takeout two capscrews (1) and takeoff nuts (2). Takeoff two splash guard braces (3).
2. Takeout three capscrews (4) and takeoff nuts (5). Takeoff upper splash shield guard (6) .

END OF TASK

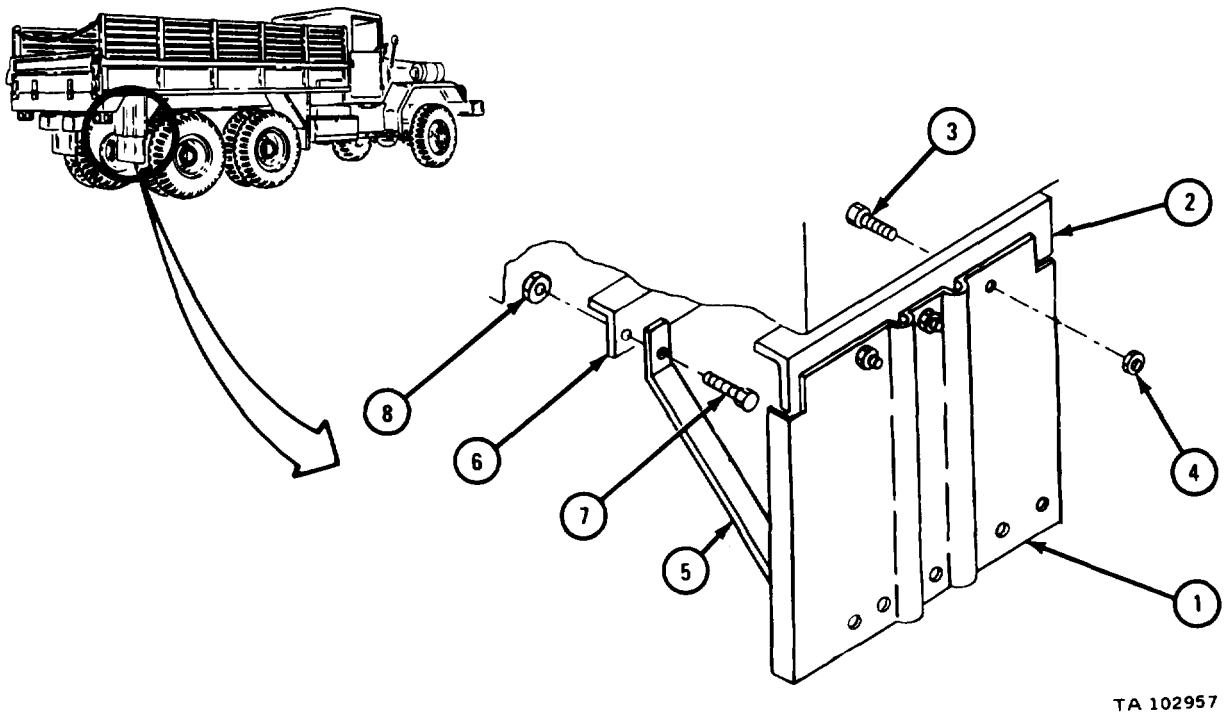


b. Replacement.

FRAME 1

1. Put upper splash shield guard (1) on bracket (2), alining holes.
2. Put in three capscrews (3) and put on nuts (4).
3. Put two splash guard braces (5) on chassis rail (6), alining holes.
4. Put in two capscrews (7) and put on nuts (8),

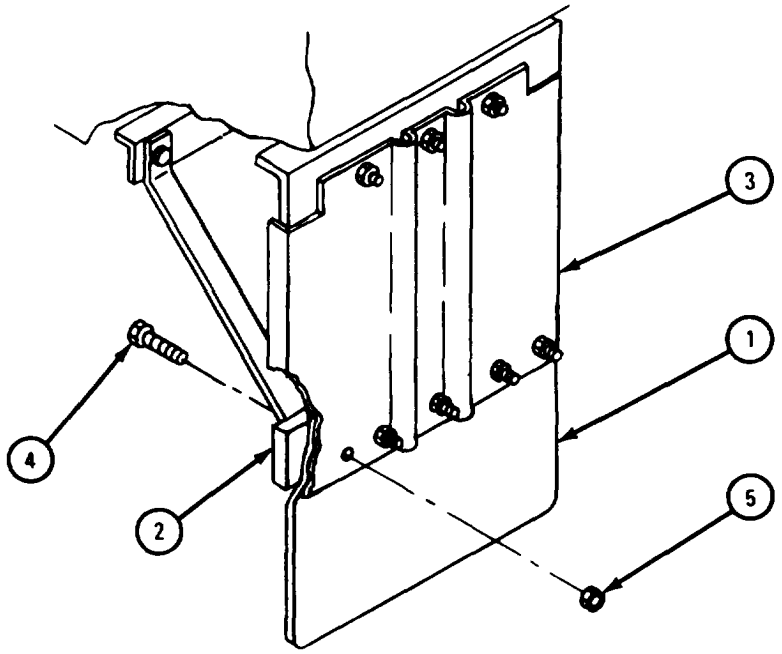
GO TO FRAME 2



FRAME 2

1. Put lower splash shield guard (1) and retainer (2) on upper splash shield guard (3), dining holes.
2. Put in five cap screws (4) and put on nuts (5).

END OF TASK



TA 102958

16-18. REAR SPLASH SHIELD REMOVAL AND REPLACEMENT (TRUCK M52A2).

NOTE

This task is the same for the right and left rear splash shields. This task is shown for the right rear splash shield.

TOOLS: No special tools required

SUPPLIES : None

PERSONNEL: One

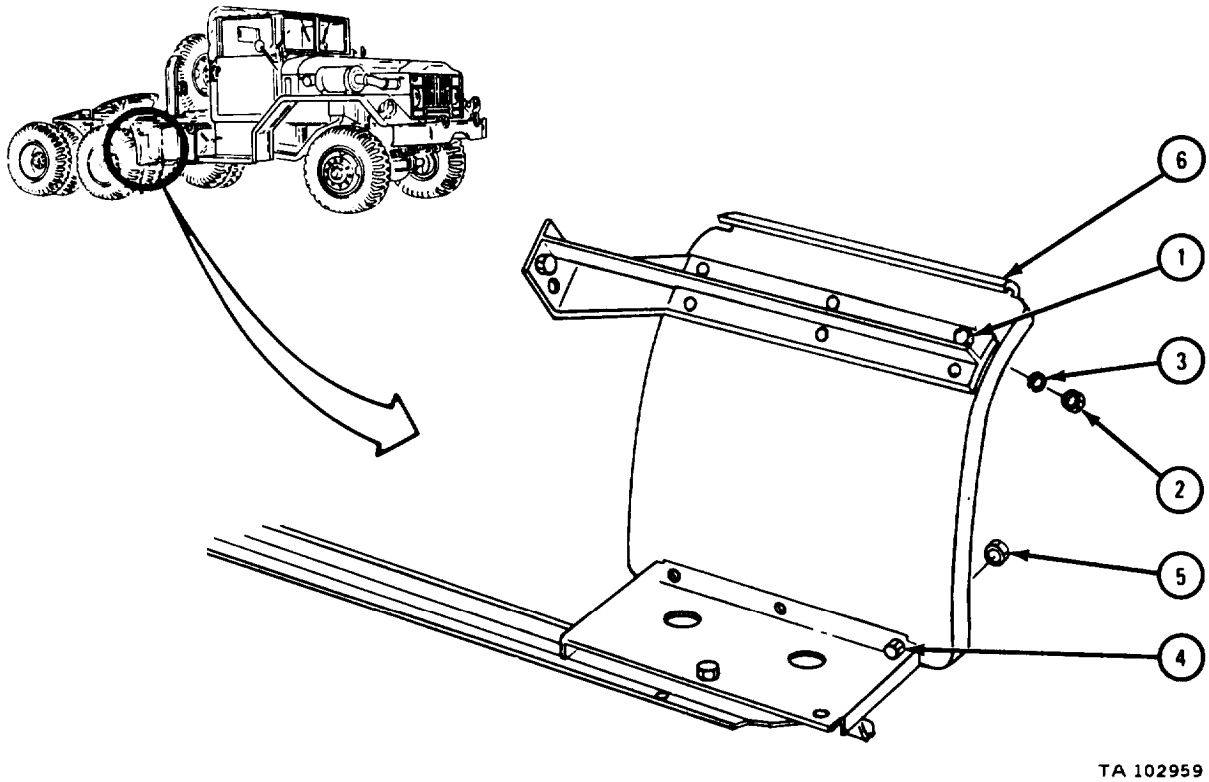
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take out six screws (1). Take off six nuts (2) and washers (3).
2. Take out three screws (4). Take off three nuts (5) and splash shield (6).

END OF TASK

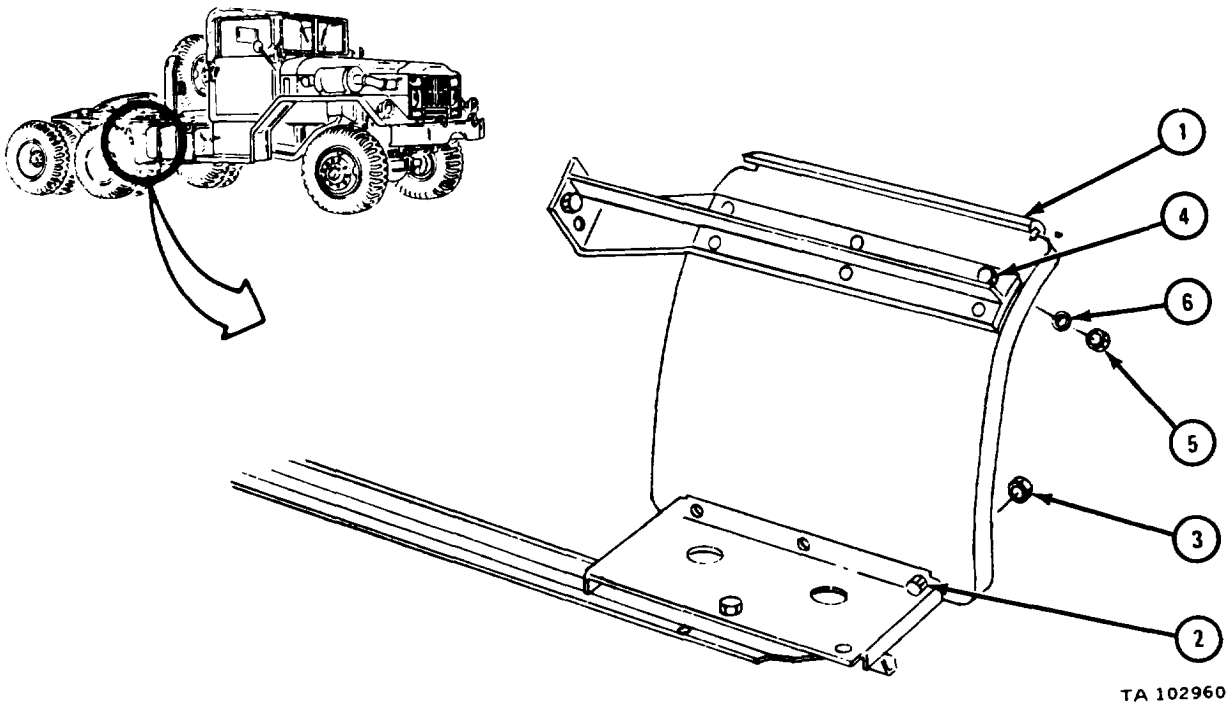


b. Replacement.

FRAME 1

1. Put splash shield (1) in place, alining holes.
2. Put three screws (2) through holes and put on three nuts (3).
3. Put six screws (4) through holes and put on six nuts (5) with washers (6).
4. Tighten three screws (2) and six screws (4).

END OF TASK



Section IV. SEATS

16-19. DRIVER'S SEAT REPAIR.

TOOLS : No special tools required

SUPPLIES : Cotter pin
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

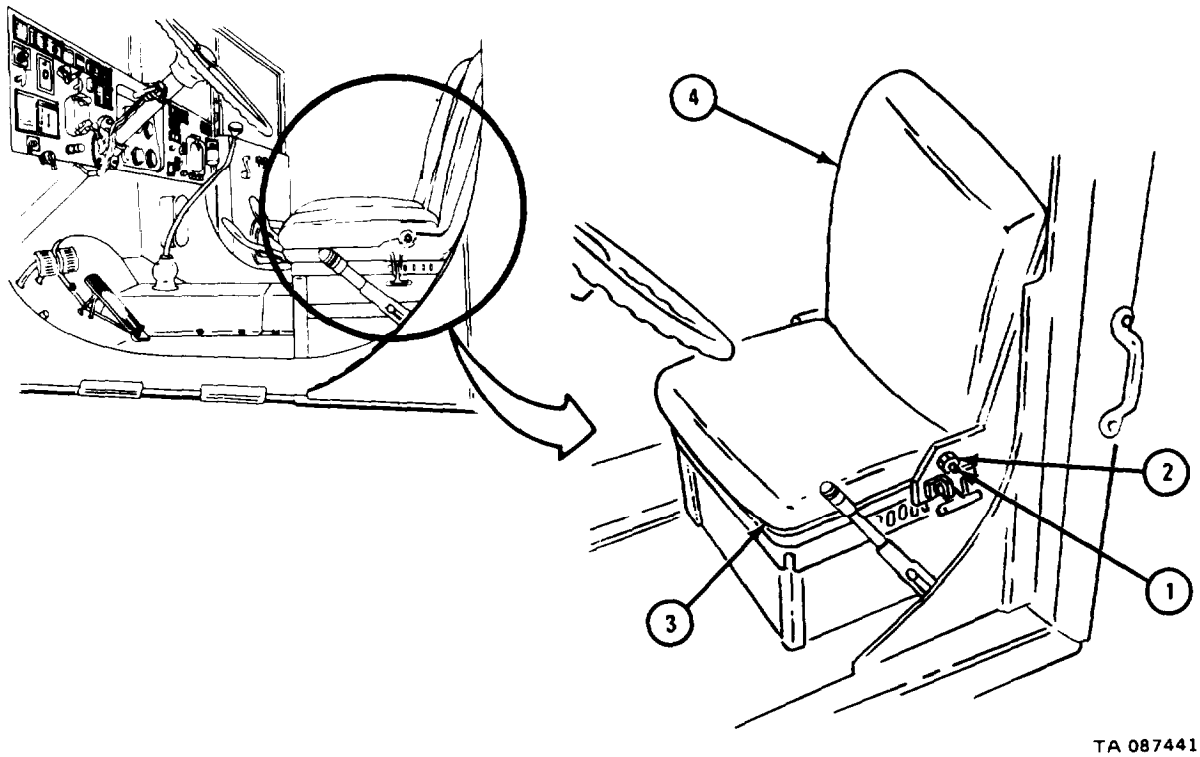
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take off screw (1) and nut (2).
2. Do step 1 again on other side of seat cushion (3).
3. Pull out seat cushion (3).
4. Pull off backrest cushion (4).

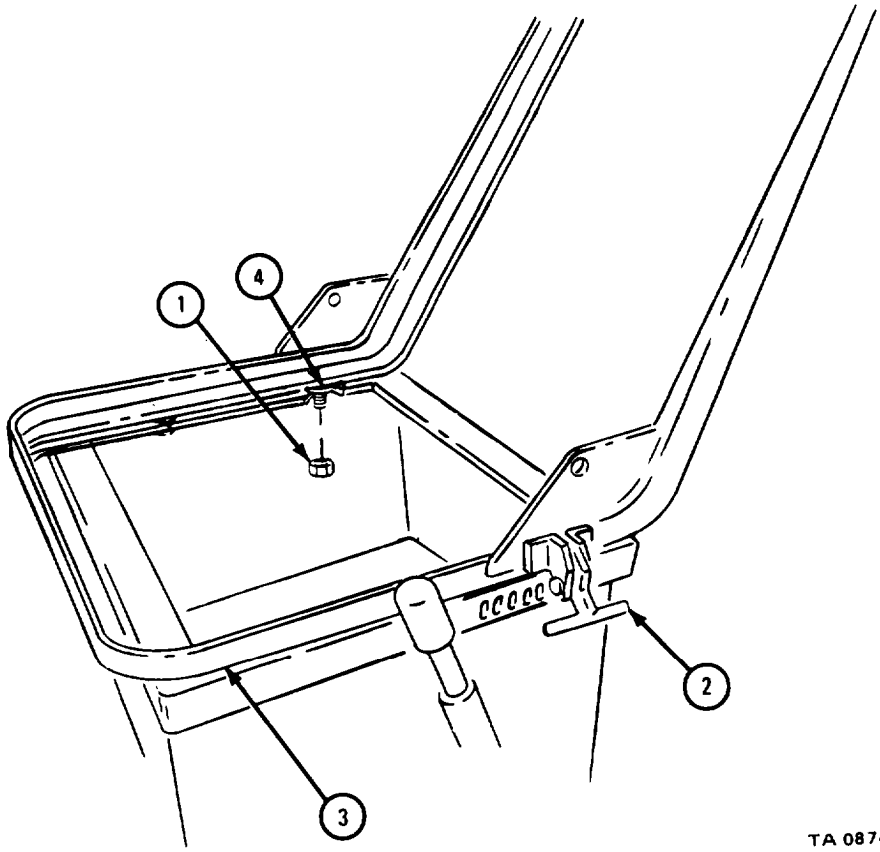
GO TO FRAME 2



FRAME 2

1. Take off four nuts (l).
2. Lift up handle (2) and hold it.
3. While holding handle (2) in up position, pull up and take off seat frame (3).
4. Take off four flat washers (4).

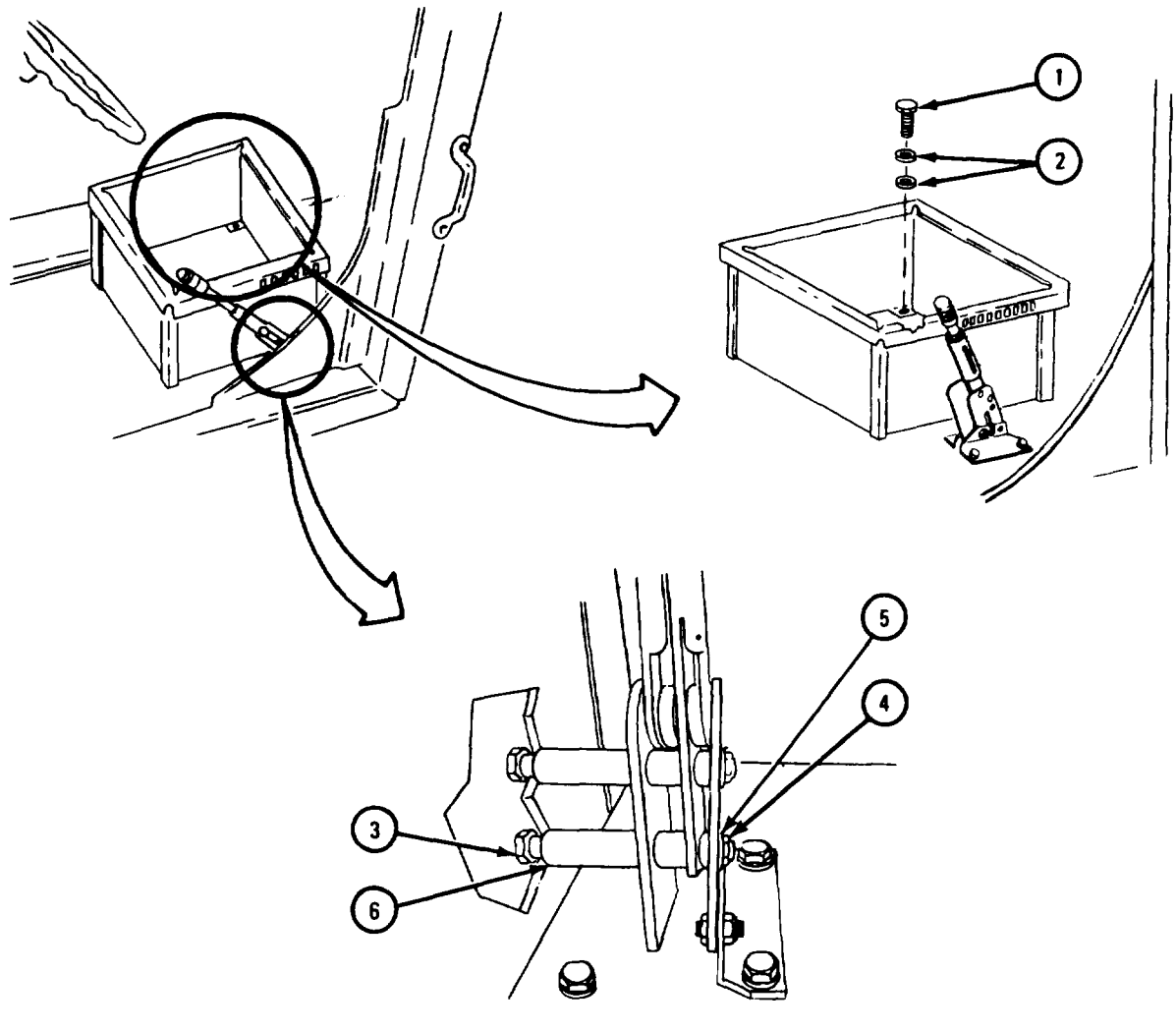
GO TO FRAME 3



FRAME 3

1. Take out four screws (1) and eight washers (2).
2. Take out two screws (3), nuts (4), washers (5), and spacers (6).

GO TO FRAME 4

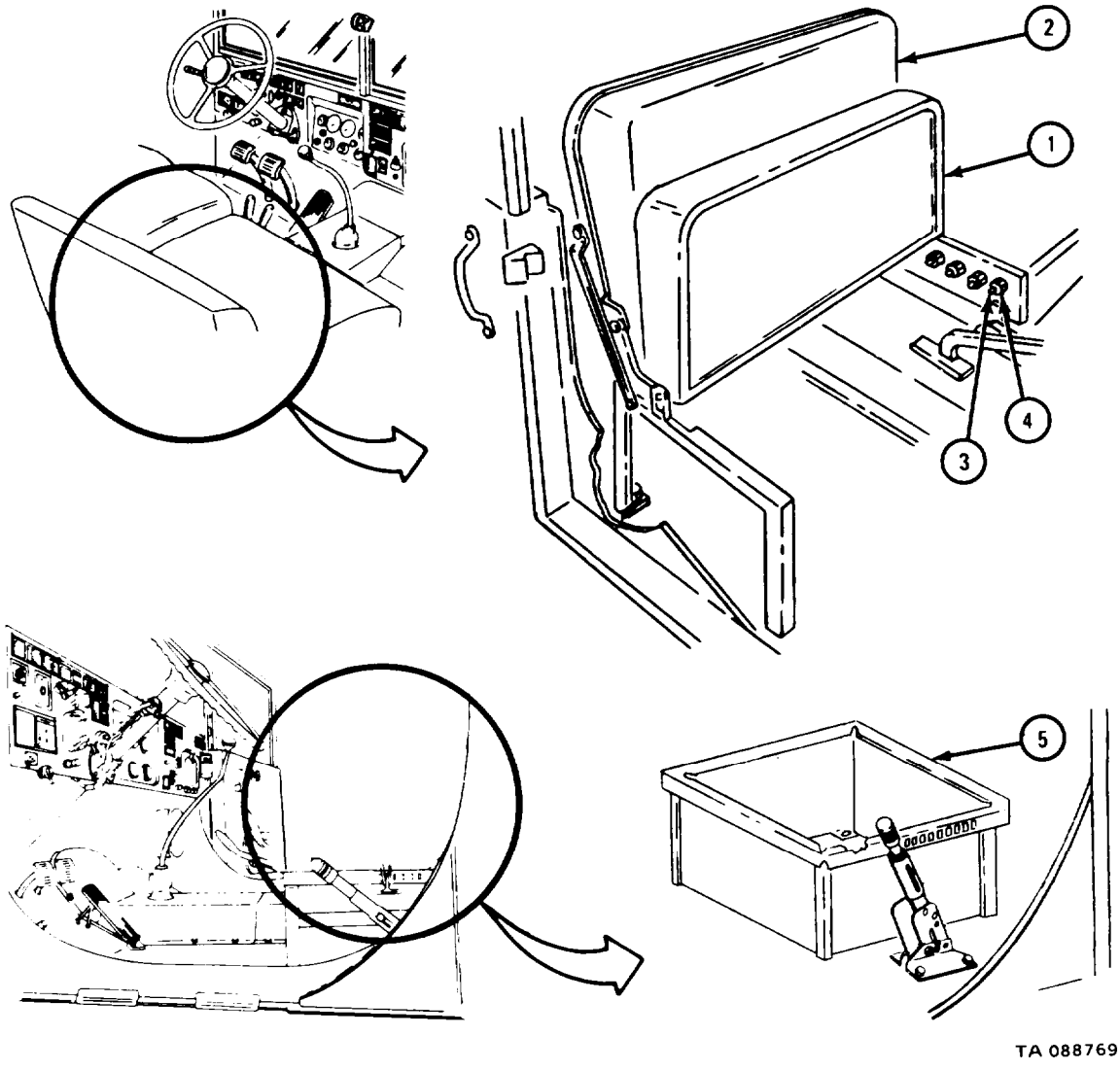


TA 087443

FRAME 4

1. Raise companion seat cushion (1) to lean against companion backrest cushion (2) as shown.
2. Take out four screws (3) and nuts (4).
3. Lift out driver's seat base frame (5).

GO TO FRAME 5



FRAME 5

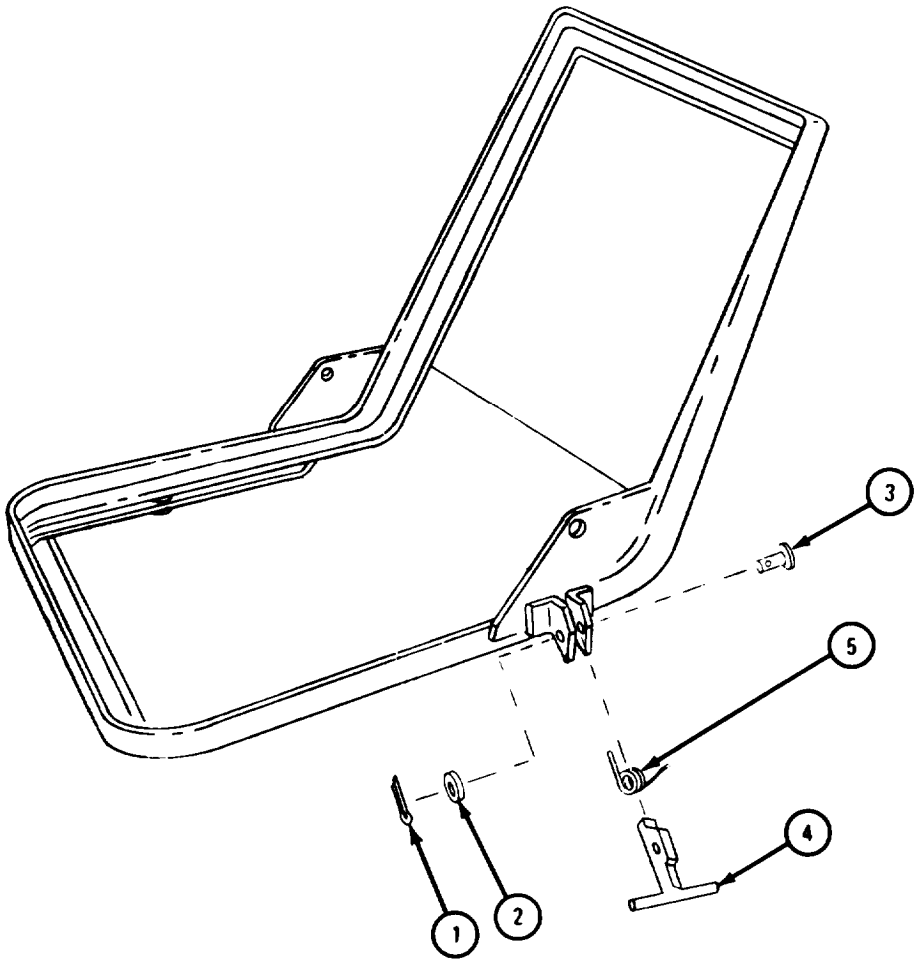
1. Take out cotter pin (1) and washer (2). Throw away cotter pin.

NOTE

Be careful when taking out pin (3) so that handle (4) and spring (5) do not get lost. Handle (4) is spring loaded and may fly out when pin (3) is taken out. Note position of spring for assembly.

2. Take out pin (3), handle (4), and spring (5).

END OF TASK



TA 087444

b. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Clean all metal parts in solvent.

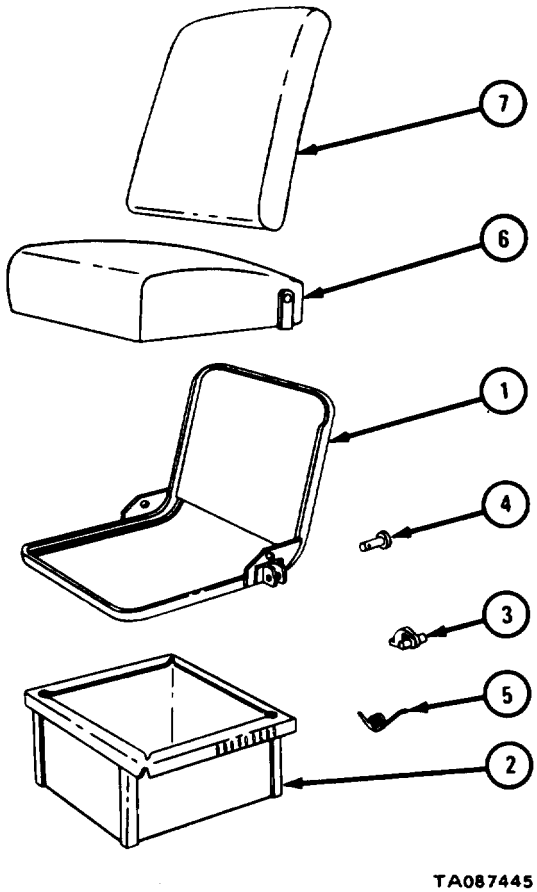
(2) Let parts dry completely.

c. Inspection and Repair.

FRAME 1

1. Check that seat frame (1) and seat base (2) have no bends, cracks or wear. Repair by straightening or welding. Refer to TM 9-237 for welding procedures.
2. Check that handle (3), pin (4), and spring (5) have no cracks, wear or other damage. If parts are damaged, get new ones in their place.
3. Check that seat cushions (6 and 7) have no tears or worn canvas. If cushions are damaged, refer to FM 43-3.

END OF TASK

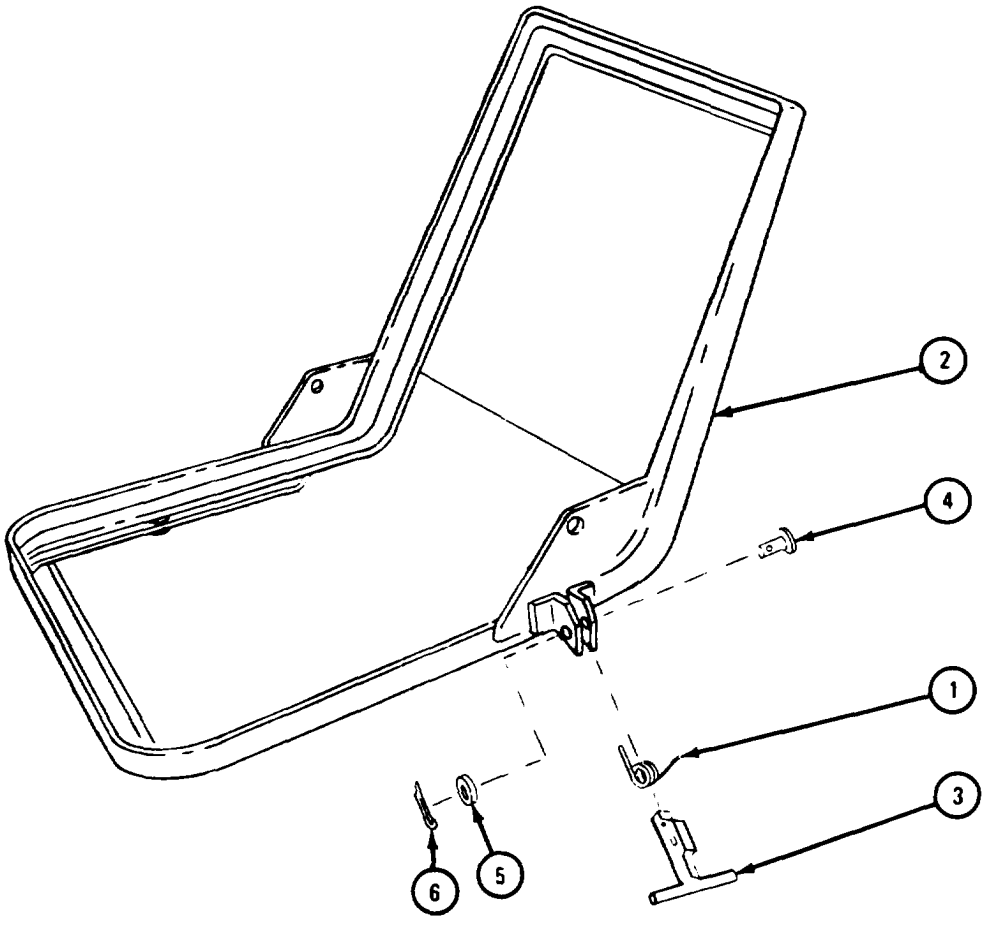


d. Replacement.

FRAME 1

1. Aline hole in spring (1) with holes in seat frame (2), with the shorter end of spring (1) facing top of seat frame (2) as shown.
2. Holding spring (1) in place, put in handle (3), alining hole in handle (3) with holes in spring (1) and seat frame (2).
3. Put in pin (4) and put on washer (5).
4. Put cotter pin (6) into end of pin (4).

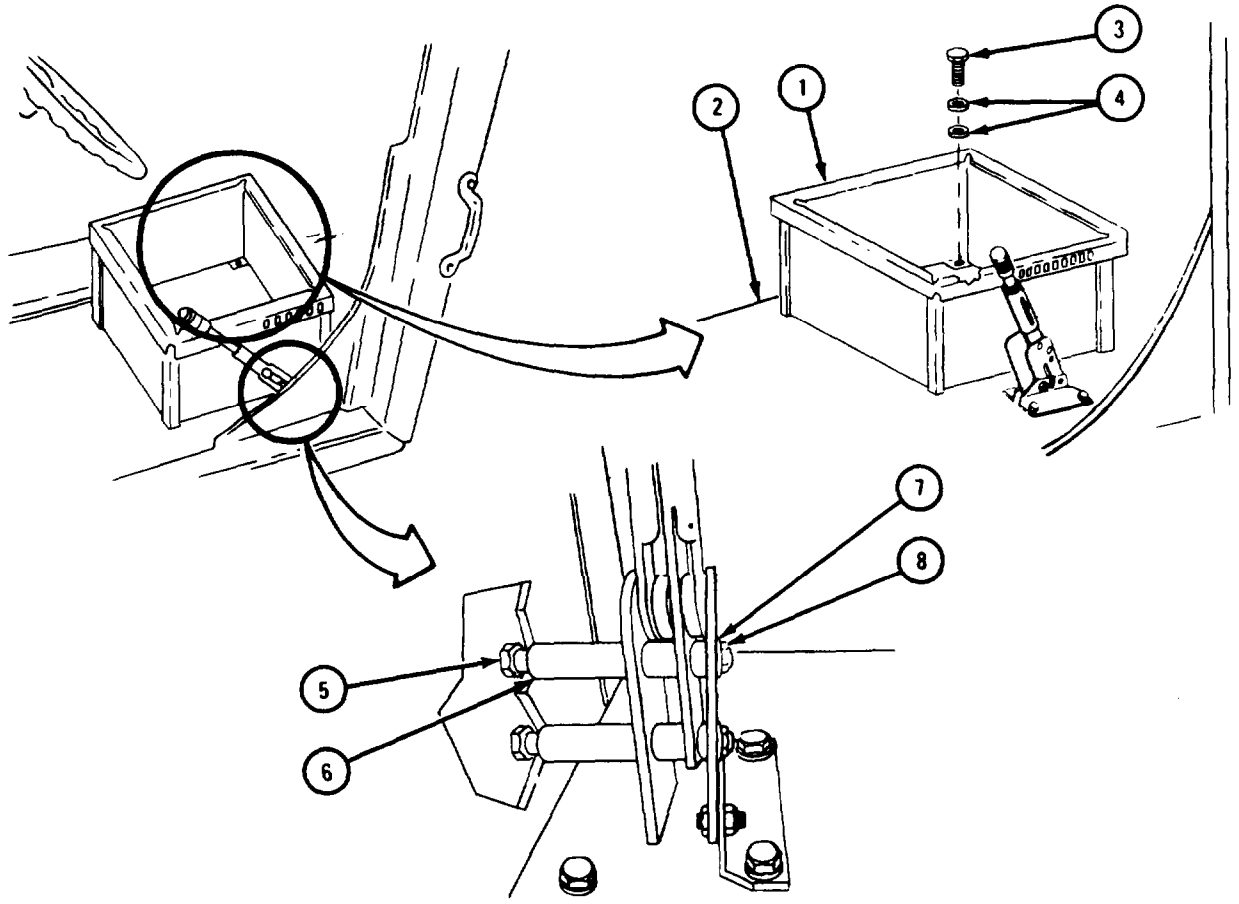
GO TO FRAME 2



FRAME 2

1. Aline holes in seat base frame (1) with holes in cab floor (2).
2. Put seat base frame (1) on cab floor (2).
3. Put in four screws (3) and eight washers (4).
4. Put in four screws (5), two spacers (6), two washers (7), and two nuts (8).

GO TO FRAME 3

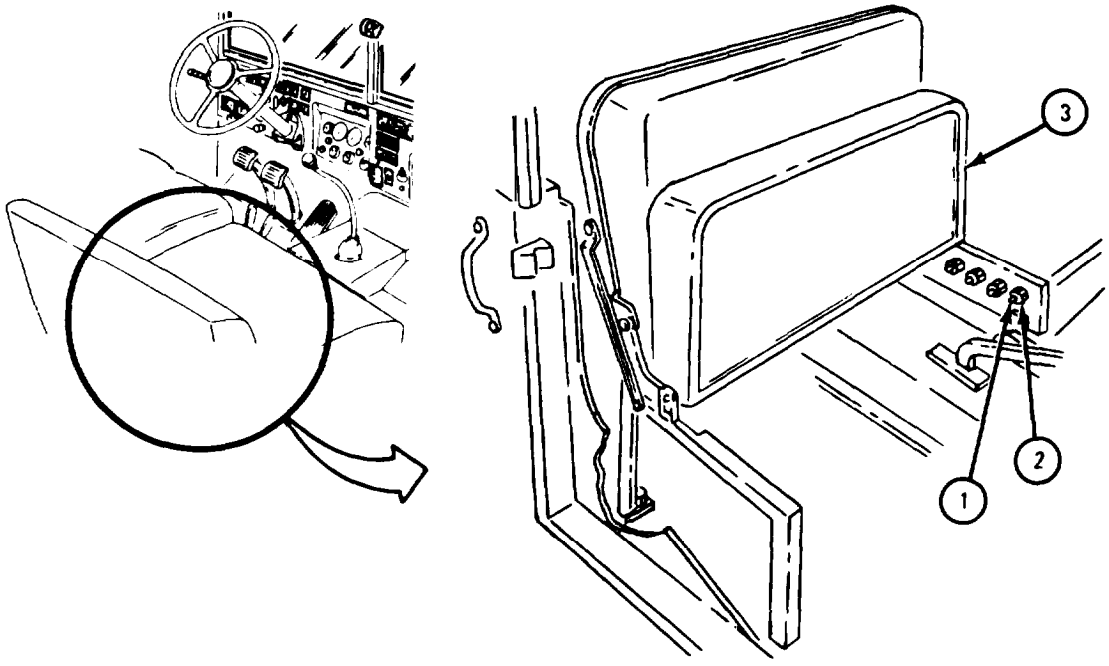


TA 087447

FRAME 3

1. Put in four screws (1) and nuts (2).
2. Pull front of companion seat cushion (3) forward and down.

GO TO FRAME 4

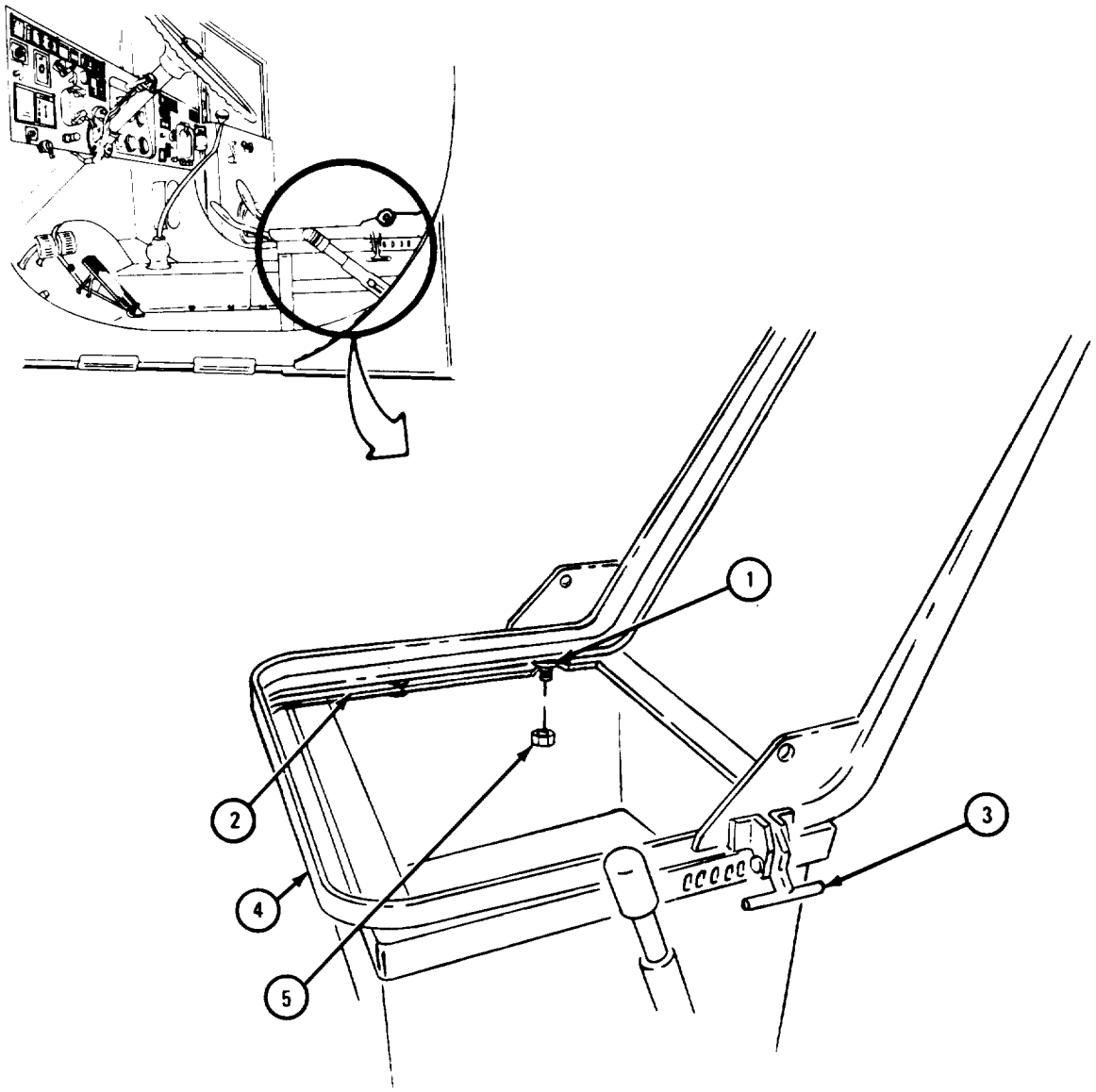


TA 088770

FRAME 4

1. Put four flat washers (1) in place on base (2). While holding handle (3) in up position, put seat frame (4) on seat base (2) as shown.
2. Put on four nuts (5).
3. Push handle (3) down as shown.

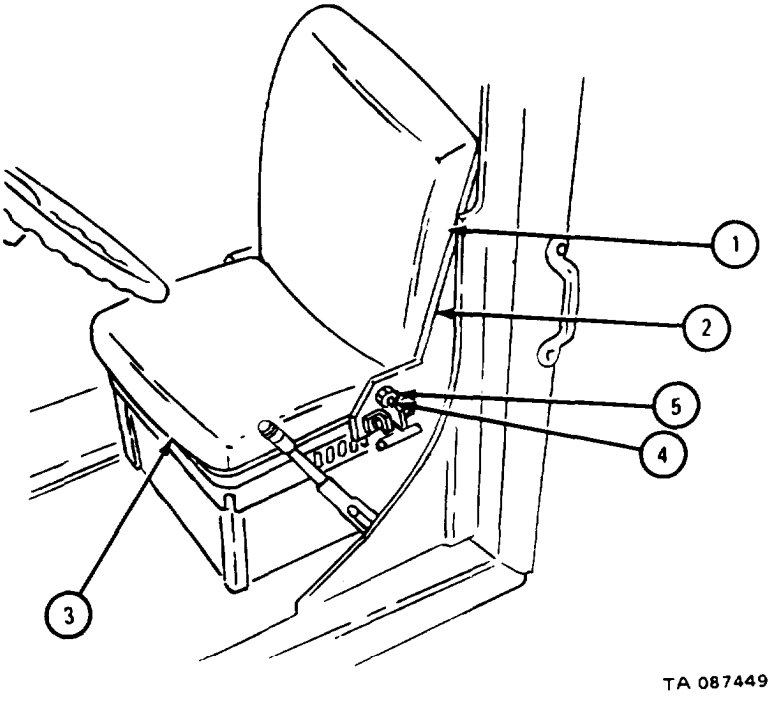
GO TO FRAME 5



FRAME 5

1. Put backrest cushion (1) into frame (2) as shown.
2. Put seat cushion (3) into frame (2) as shown.
3. Put in screw (4) and nut (5) on both sides of frame (2).

END OF TASK



16-20. COMPANION SEAT REPAIR.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

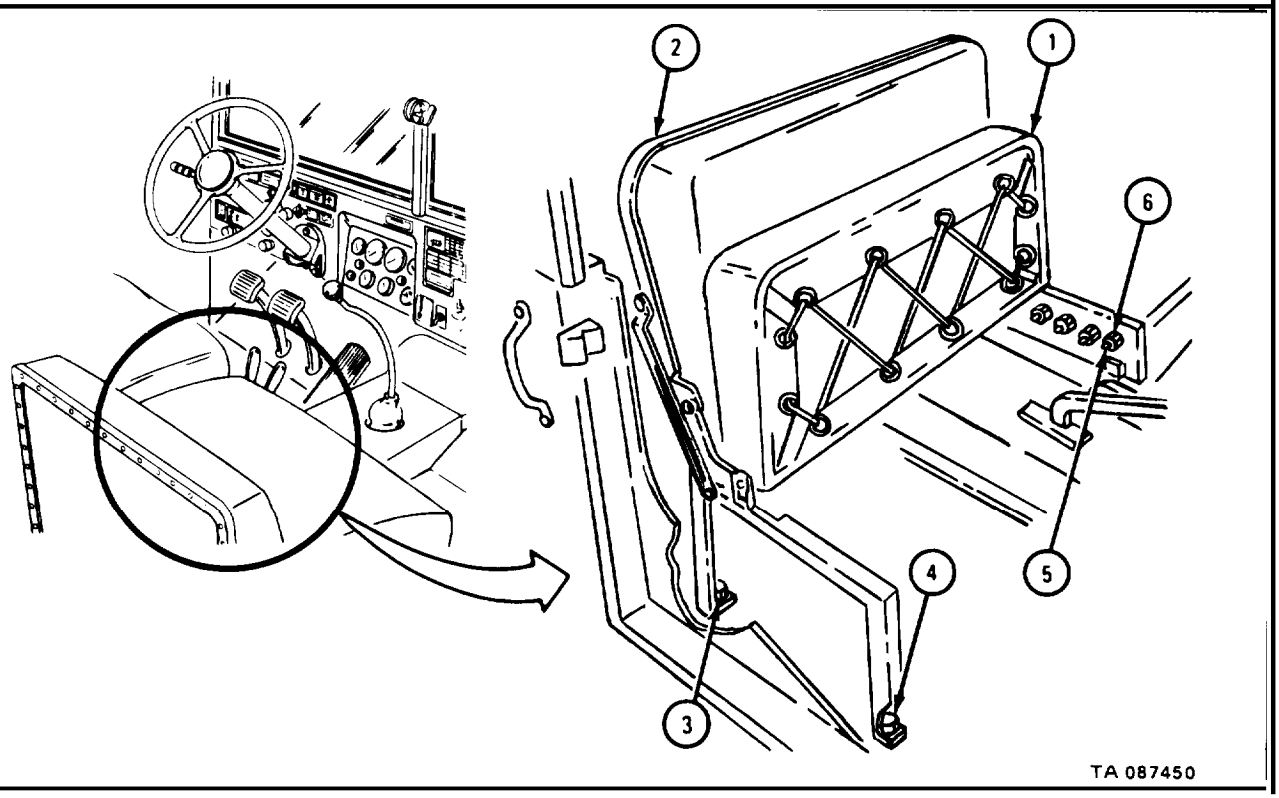
FRAME 1

1. Raise seat cushion (1) to lean against backrest cushion (2) as shown
2. Take out screw (3).
3. Take out screw (4) .
4. Take off four screws (5) and nuts (6).
5. Move seat cushion (1) down.
6. Push backrest cushion (2) down to lean against seat cushion (1).

Soldiers A and B

7. Lift up companion seat assembly and take it out of cab.
8. Take off seat cushion (1) and backrest cushion (2). Refer to Companion Seat Assembly Removal and Replacement, TM 9-2320-211-20.

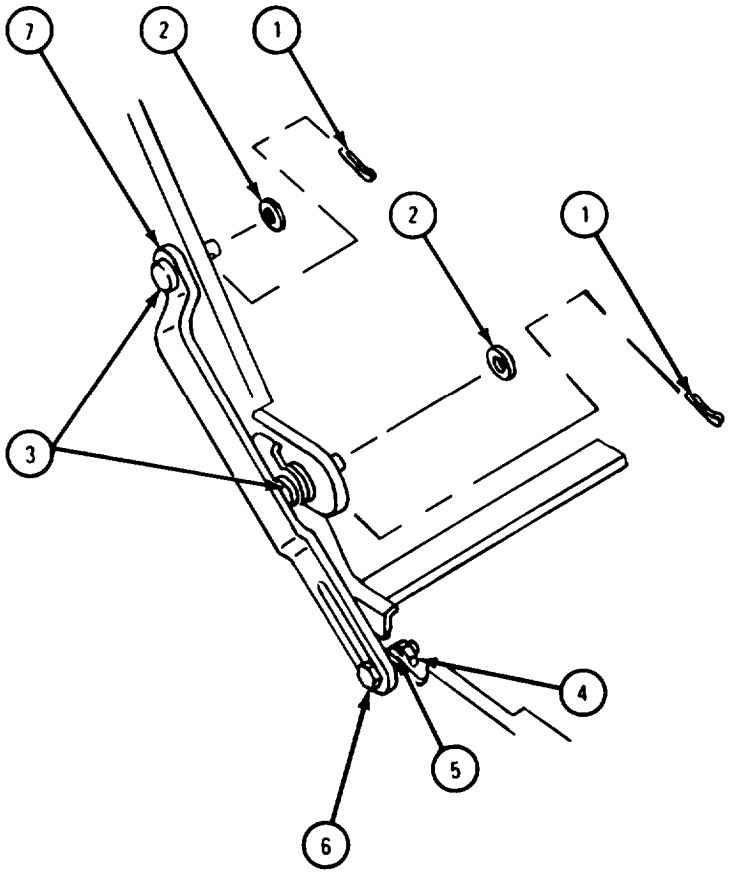
GO TO FRAME 2



FRAME 2

1. Take out two cotter pins (1) and take off two washers (2). Throw away cotter pins. Take out two pins (3).
2. Takeoff nut (4) with washer (5). Take out screw (6) and take off link assembly (7).

GO TO FRAME 3

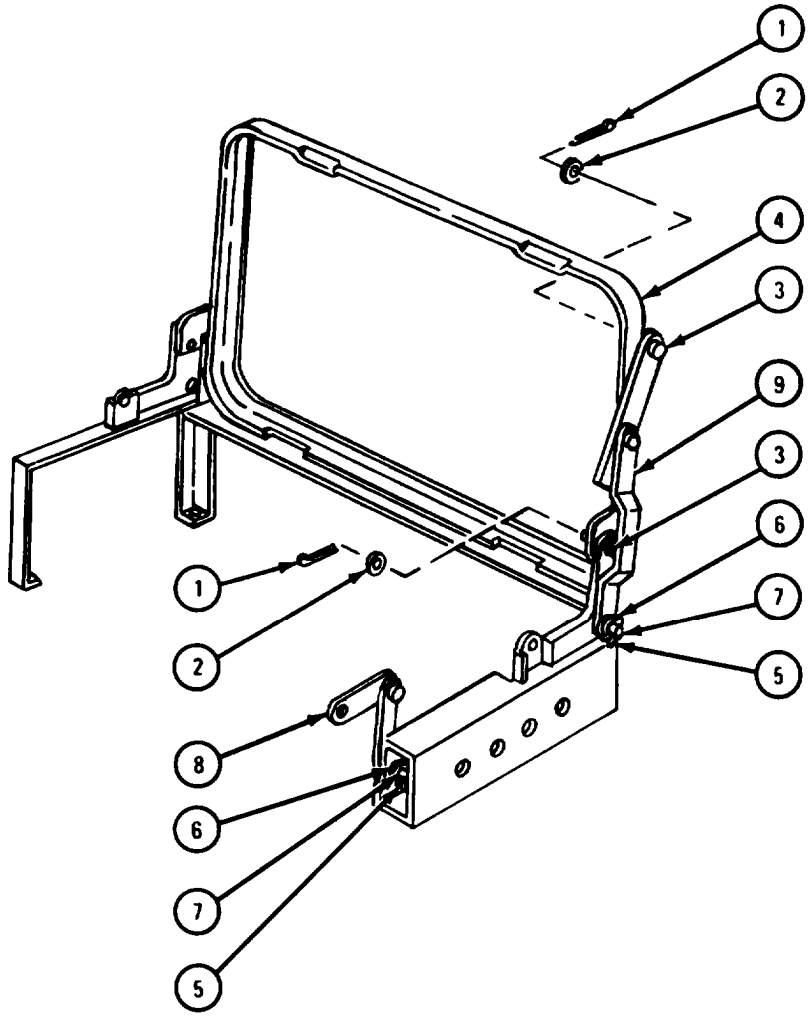


TA 087452

FRAME 3

1. Take out two cotter pins (1) and take off two washers (2). Throw away cotter pins.
2. Take out two pins (3). Take off frame assembly (4).
3. Take out two cotter pins (5) and take off two washers (6). Throw away cotter pins.
4. Take out two pins (7). Take off two link assemblies (8 and 9).

END OF TASK



TA 087453

b. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

(1) Clean all metal parts with solvent.

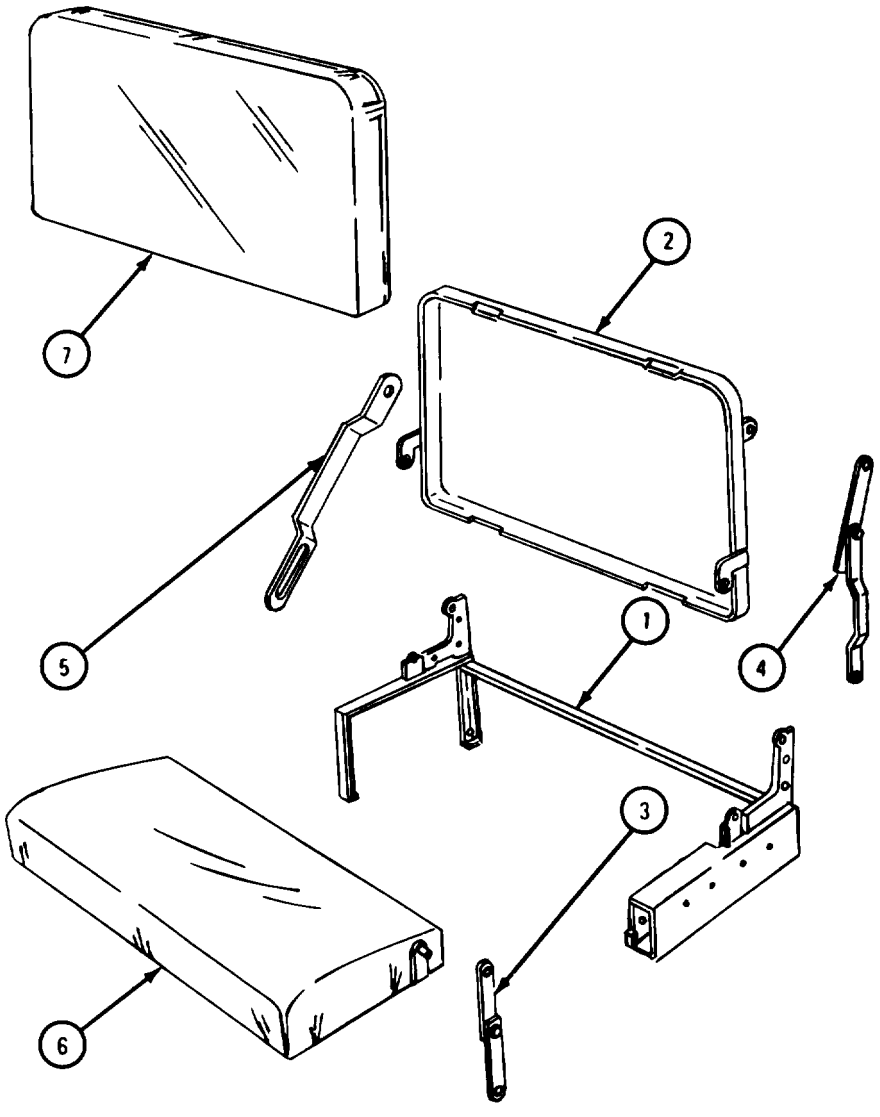
(2) Let parts air dry.

c. Inspection and Repair.

FRAME 1

1. Check that seat frame (1) and backrest frame (2) are not bent or cracked. Repair by straightening or welding. Refer to TM 9-237.
2. Check that link assemblies (3, 4, and 5) are not bent, worn, damaged or cracked. Repair by straightening or welding. Refer to TM 9-237.
3. Check that seat cushion (6) and backrest cushion (7) have no tears or worn canvas. Refer to FM 43-3 if cushions are damaged or worn.
4. If more repair is needed, get new parts.

END OF TASK

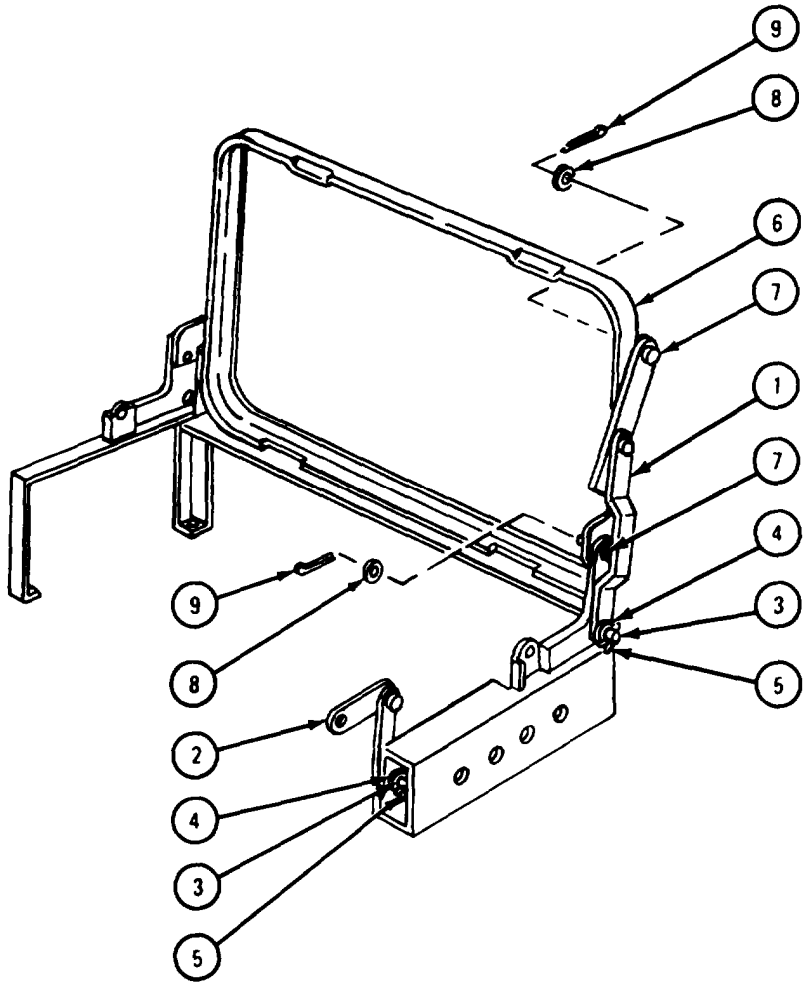


d. Replacement.

FRAME 1

1. Put link assemblies (1 and 2) in place. Put in two pins (3) and put on two washers (4).
2. Put in two cotter pins (5).
3. Put frame assembly (6) in place. Put in two pins (7) and put on two washers (8).
4. Put in two cotter pins (9).

GO TO FRAME 2

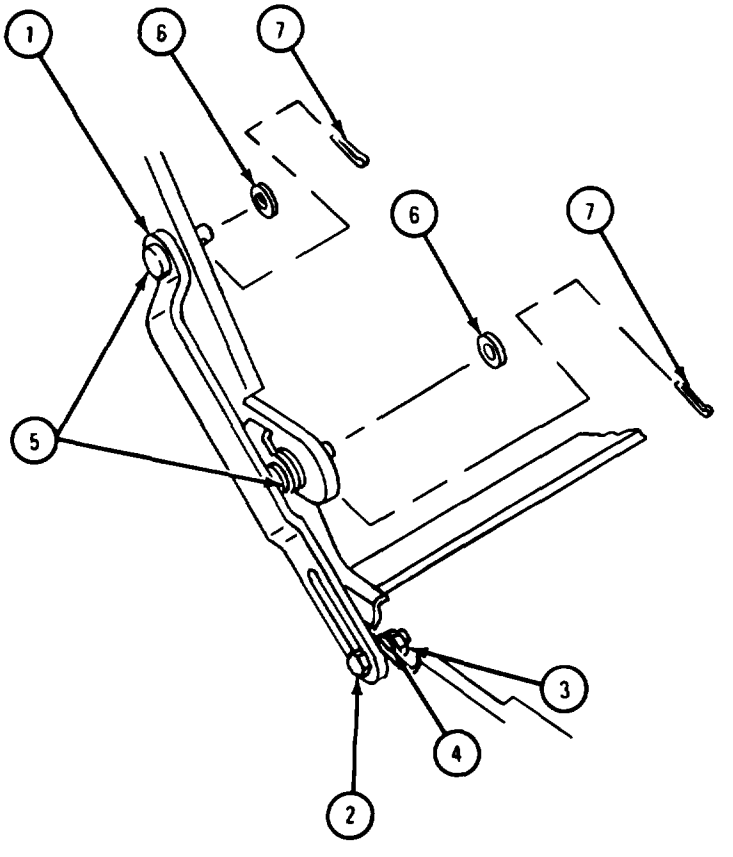


TA 087457

FRAME 2

1. Put link assembly (1) in place and put in screw (2).
2. Put on nut (3) with washer (4).
3. Put in two pins (5) and put on two washers (6).
4. Put in two cotter pins (7).

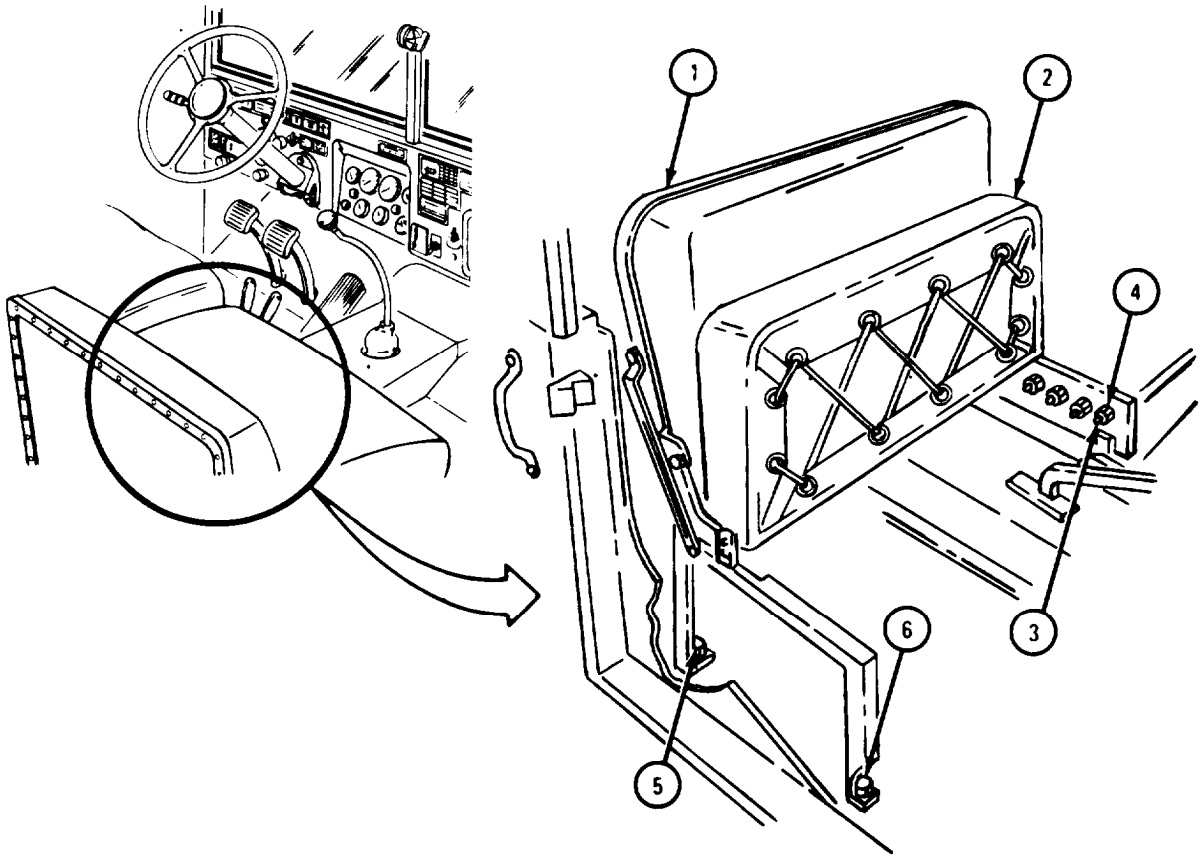
GO TO FRAME 3



FRAME 3

Soldiers A and B	1.	Put companion seat frame assembly into cab.
	2.	Put in backrest cushion (1) and seat cushion (2) . Refer to Companion Seat Assembly Removal and Replacement, TM 9-2320-211-20.
Soldier A	3.	Raise backrest cushion (1) into position as shown.
	4.	Raise seat cushion (2) to lean against backrest cushion (1) as shown.
	5.	Put in four screws (3) and nuts (4).
	6,	Put in screw (5).
	7.	Put in screw (6).
	8.	Pull front of seat cushion (2) forward and down,

END OF TASK



16-21. SEAT CUSHION REPAIR.

a. Removal. To remove seat cushion and seat back, refer to TM 9-2320-211-20.

b. Repair. To repair seat cushion and seat back, refer to FM 43-2 and FM 43-3.

c. Replacement. To replace seat cushion and seat back, refer to TM 9-2320-211-20.

Section V. TOOL AND STOWAGE BOXES

16-22. LEFT TOOL BOX ASSEMBLY REPAIR.

TOOLS : No special tools required

SUPPLIES : None

PERSONNEL: One

EQUIPMENT CONDITION : Truck parked, engine off, handbrake set.

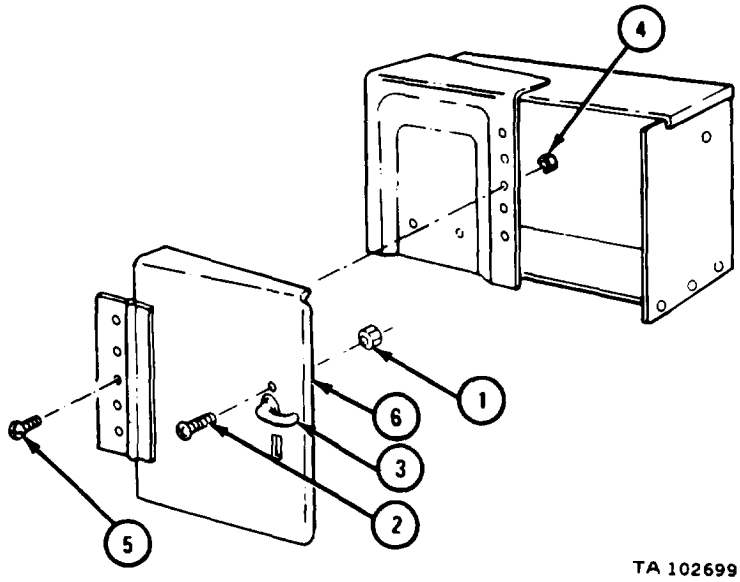
a. Preliminary Procedure. Remove left tool box assembly. Refer to TM 9-2$20-211-20.

b. Disassembly.

FRAME 1

1. Take off two nuts (1) and two screws (2). Take out latch (3).
2. Take off five nuts (4) and five screws (5).
3. Take off door (6).

END OF TASK



c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair. Check tool box and door to see that there are no bends, dents, cracks or welding defects. Fix damage by welding or straightening. Refer to TM 9-237 for welding or FM 43-2 for straightening.

e. Assembly.

FRAME 1

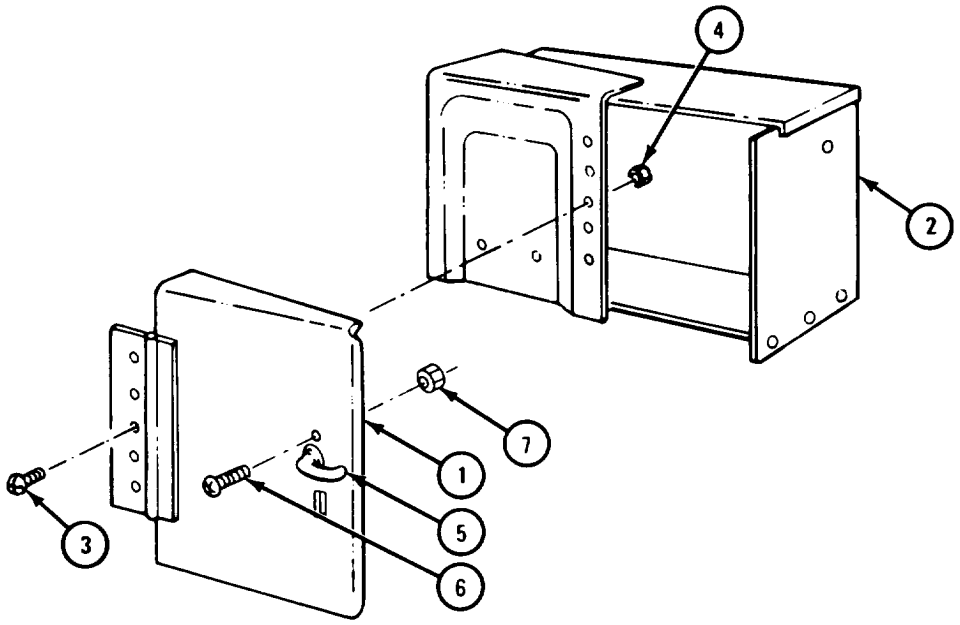
1. Put door (1) in place on tool box (2).
2. Put in five screws (3) and five nuts (4).
3. Put latch (5) in place on door (1). Put in two screws (6) and nuts (7).

NOTE

Follow-on Maintenance Action Required:

Replace left tool box assembly. Refer to TM 9-2320-211-20.

END OF TASK



TA 102700

16-23. PIONEER TOOLBOX REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

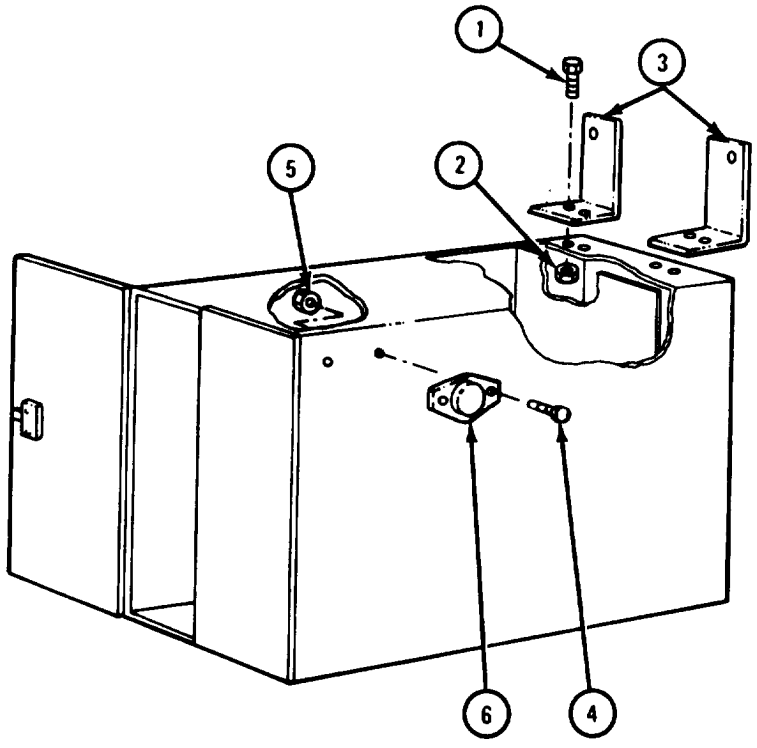
a. Preliminary Procedure. Remove pioneer tool box. Refer to TM 9-2320-211-20.

b. Disassembly.

FRAME 1

1. Takeoff four capscrews (1) and four self-locking nuts (2).
2. Takeoff two brackets (3).
3. Takeoff two screws (4) and two self-locking nuts (5).
4. Takeoff reflector (6).

END OF TASK



TA 102165

c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair. Check that pioneer tool box has no bends, dents, cracks or welding defects. Repair by welding or straightening. Refer to TM 9-237 and FM 43-2.

e. Assembly.

FRAME 1

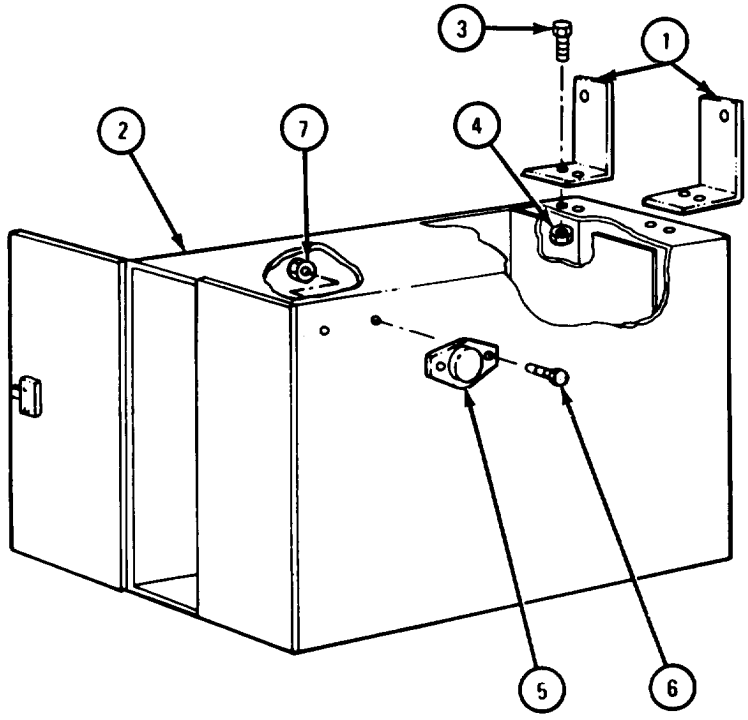
1. Put two brackets (1) in place on tool box (2), alining holes.
2. Put in four capscrews (3) and four self-locking nuts (4).
3. Hold reflector (5) in place, alining holes.
4. Put in two screws (6) and two self-locking nuts (7).

NOTE

Follow-on Maintenance Action Required:

Replace pioneer tool box. Refer to TM 9-2320-211-20.

END OF TASK



TA 102166

16-24. PIONEER TOOL SET BRACKET AND STOWAGE TOOL BOX REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M51A2).

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

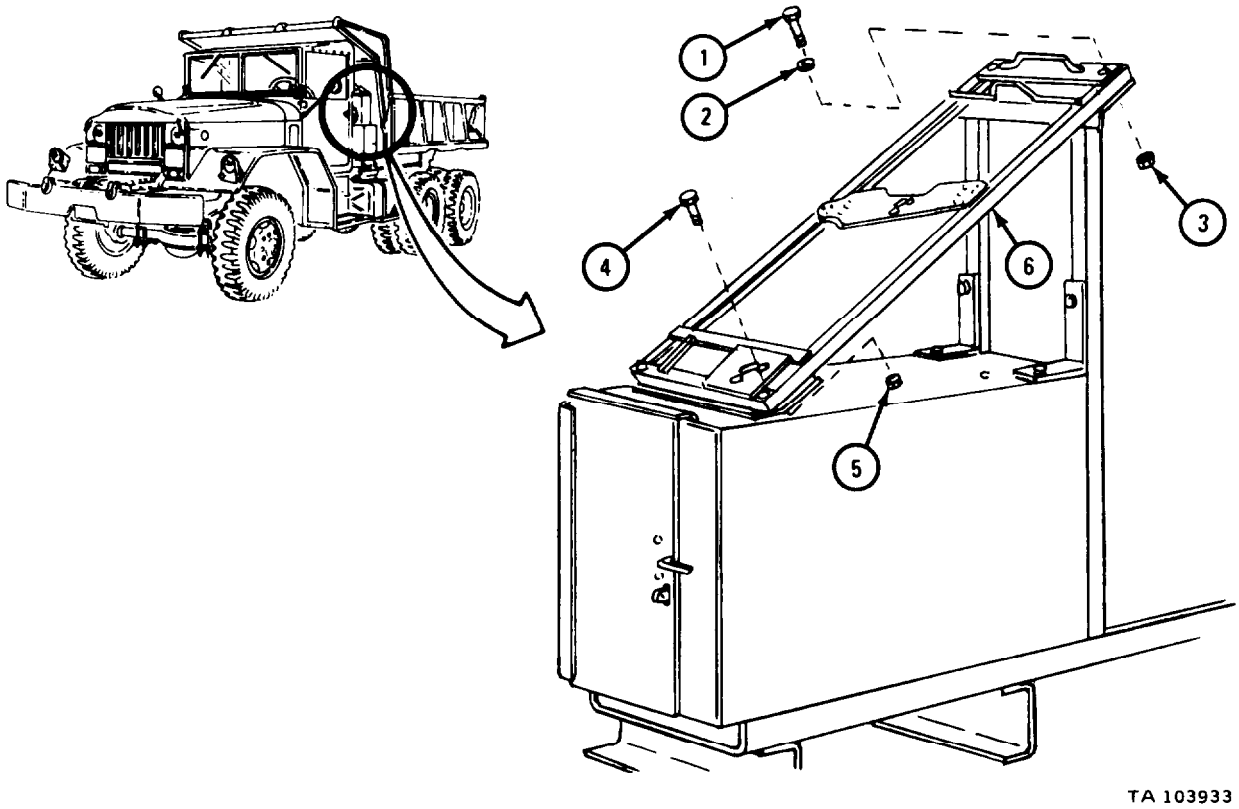
a. Preliminary Prccedure. Remove pioneer tools from bracket.

b. Removal.

FRAME 1

1. Take out two screws (1), washers (2), and nuts (3).
2. Take out two screws (4) and two nuts (5).
3. Take off pioneer tool bracket (6).

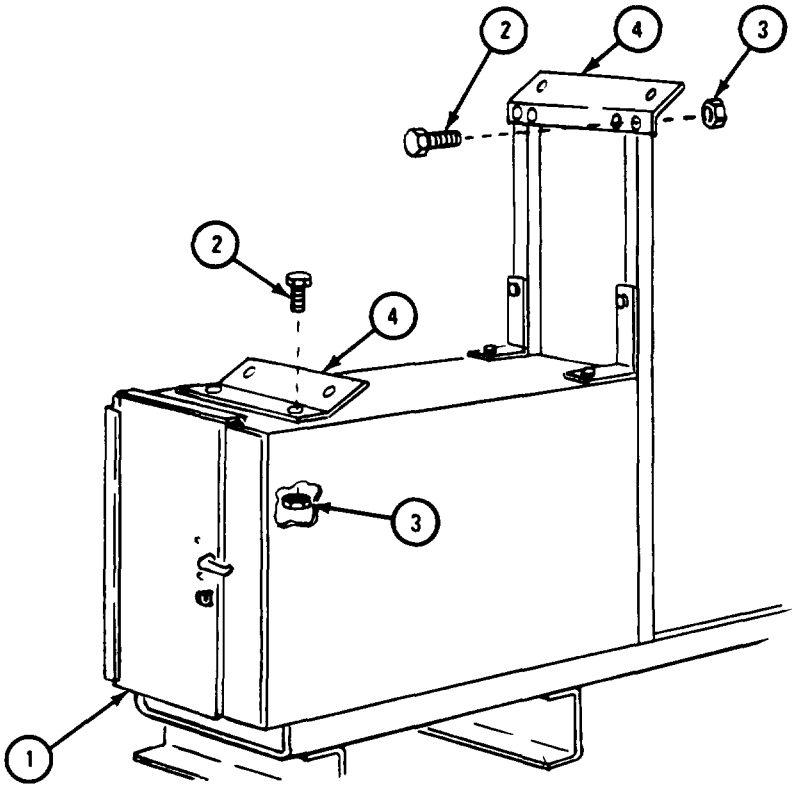
GO TO FRAME 2



FRAME 2

1. Open tool box door (1).
2. Take out four screws (2) and four nuts (3), two in each bracket (4).
3. Take off two brackets (4).

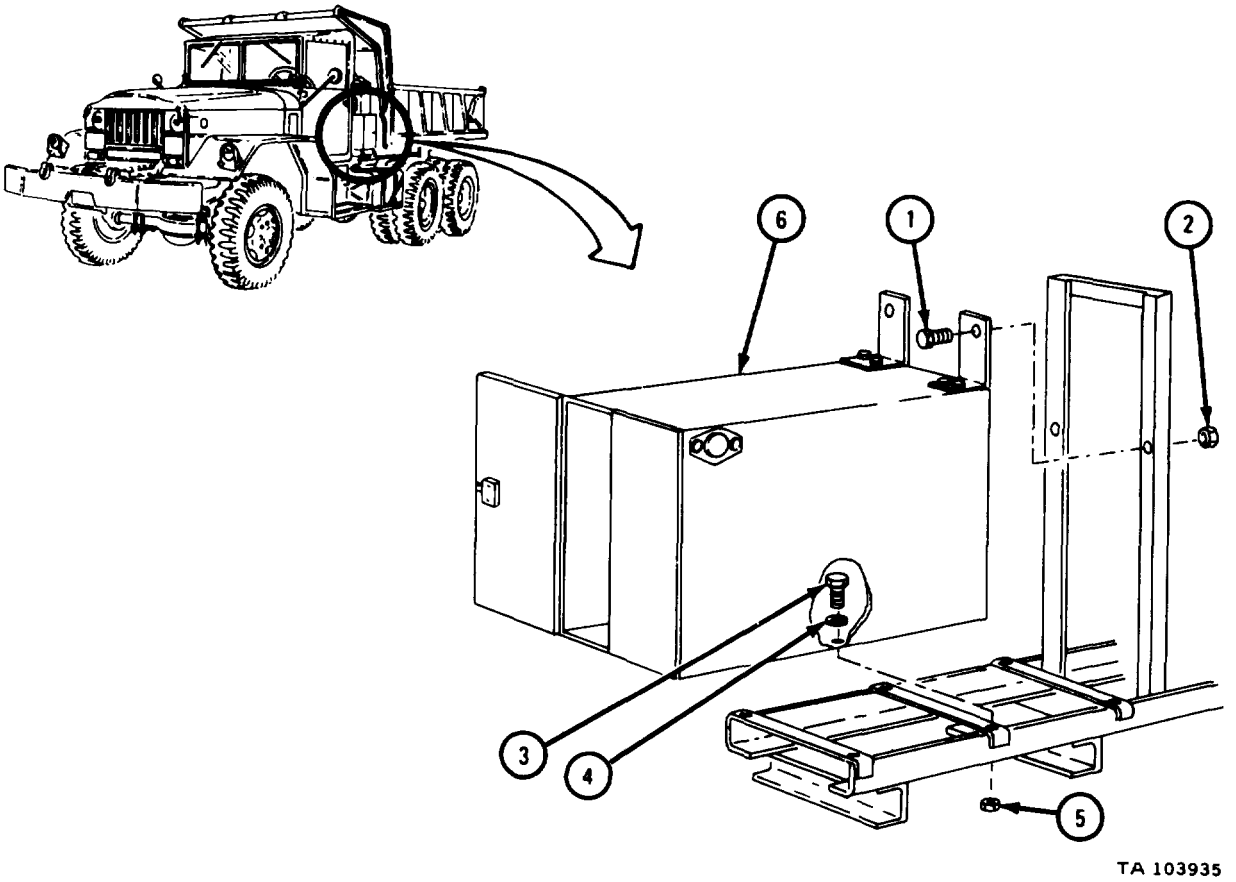
GO TO FRAME 3



FRAME 3

1. Take out two screws (1) and two nuts (2).
2. Take out six screws (3), washers (4), and nuts (5)
3. Lift off tool box assembly (6).

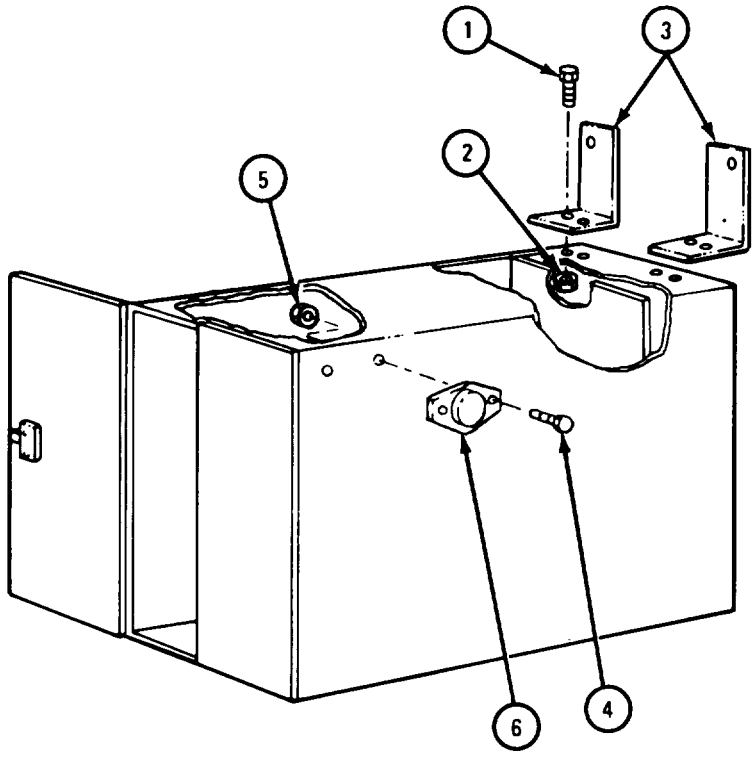
GO TO FRAME 4



FRAME 4

1. **Take out four screws (1) and four nuts (2).**
2. **Take off two brackets (3).**
3. **Take out two screws (4) and two nuts (5).**
4. **Take off reflector (6).**

END OF TASK



TA 103936

c. Cleaning There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

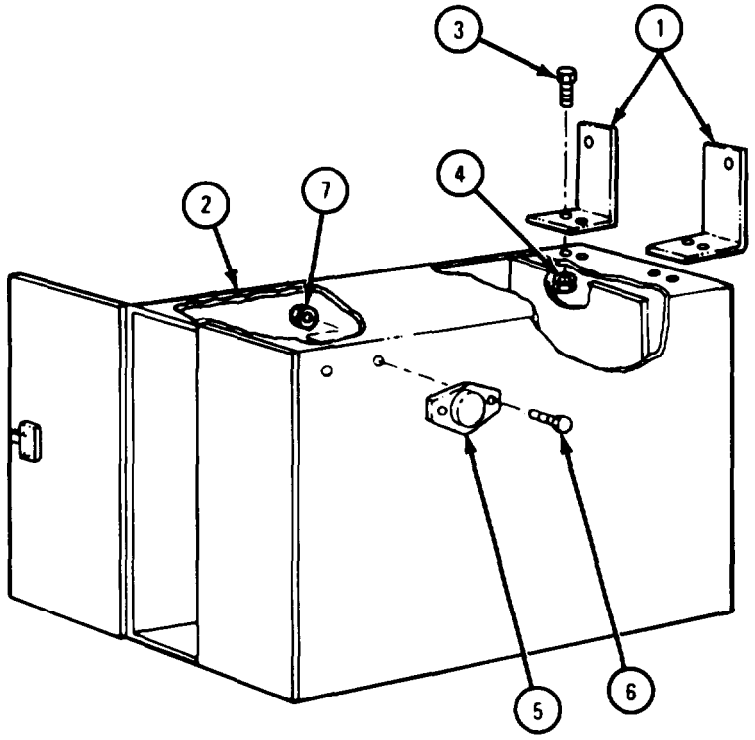
d. Inspection and Repair. Check that pioneer tool bracket, stowage tool box brackets, and stowage tool box have no bends, dents, cracks or broken welds. Repair by welding or straightening. Refer to TM 9-237 and FM 43-2.

e. Replacement.

FRAME 1

1. Put two brackets (1) in place on tool box (2).
2. Put in two screws (3) and put on two nuts (4).
3. Put reflector (5) in place.
4. Put in four screws (6) and put on four nuts (7).
5. Lift tool box assembly (2) onto truck.

GO TO FRAME 2

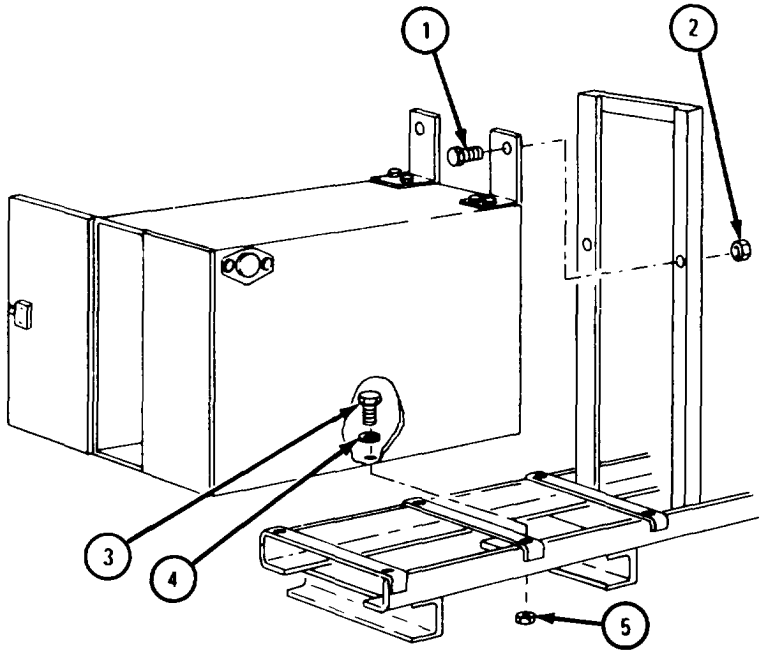


TA 102153

FRAME 2

1. Put in two screws (1) and put on two nuts (2).
2. Put in six screws (3) and washers (4), and put on six nuts (5).

GO TO FRAME 3

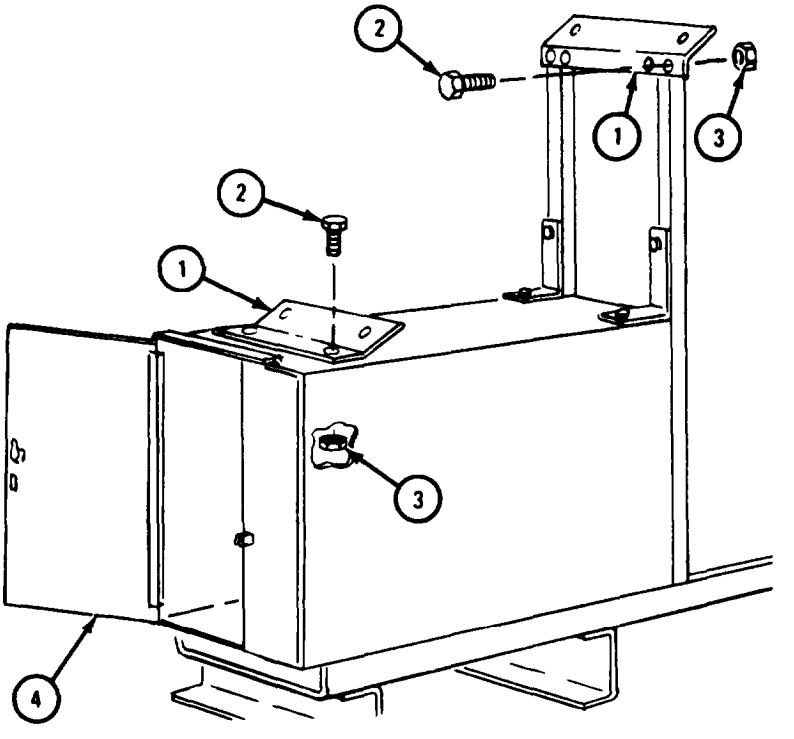


TA 102154

FRAME 3

1. Put two brackets (1) in place.
2. Put in four screws (2) and put on four nuts (3), two in each bracket (1)
3. Close tool box door (4).

GO TO FRAME 4



TA 102155

FRAME 4

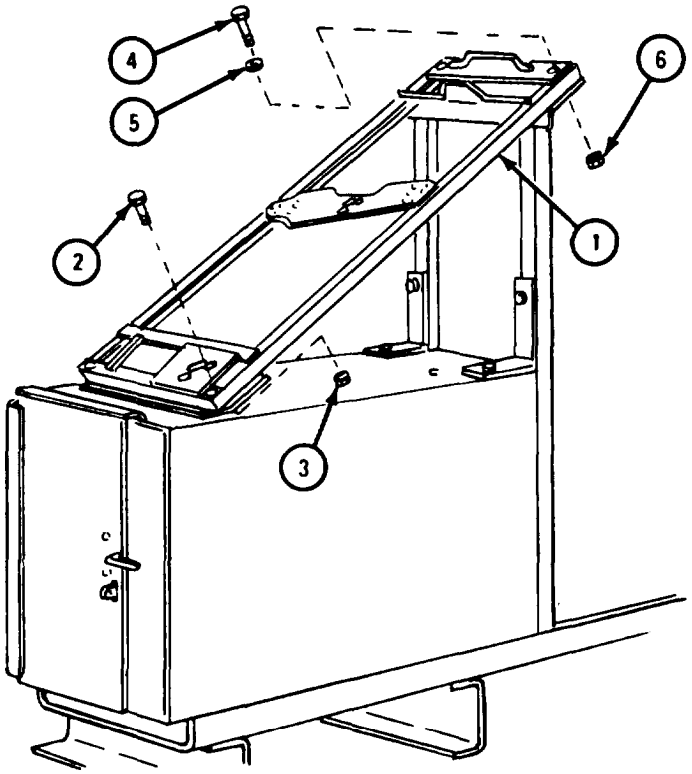
1. Put pioneer tool bracket (1) in place.
2. Put in two screws (2) and put on two nuts (3).
3. Put in two screws (4) and washers (5), and put on two nuts (6).

NOTE

Follow-on Maintenance Action Required:

Replace pioneer tools.

END OF TASK



TA 102156

16-25. PIONEER TOOLBOX ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT (TRUCKS M54A2, M54A2C, AND M55A2).

TOOLS : No special tools required

SUPPLIES : Dry cleaning solvent, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

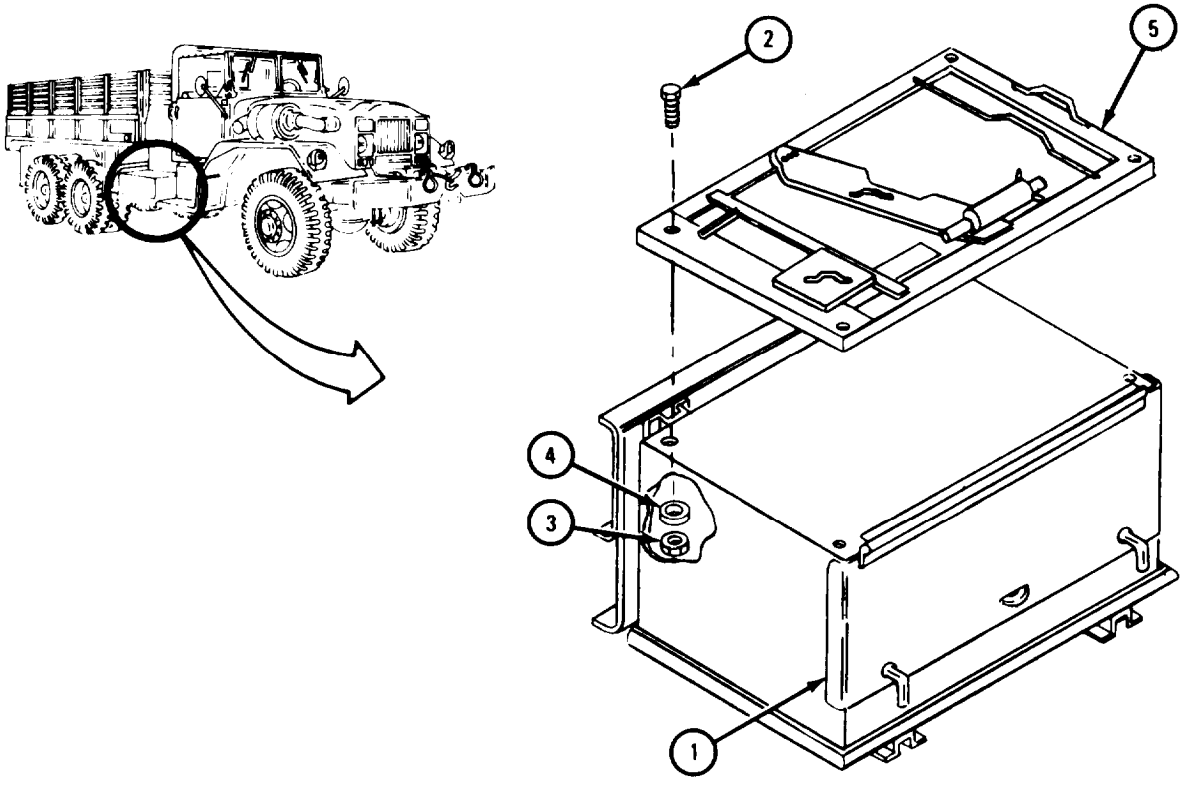
a. Preliminary Procedures. Remove tools from tool box.

b. Removal.

FRAME 1

1. Open tool box door (1) .
2. Take out four screws (2), nuts (3), and washers (4).
3. Take off pioneer tool bracket (5).

GO TO FRAME 2

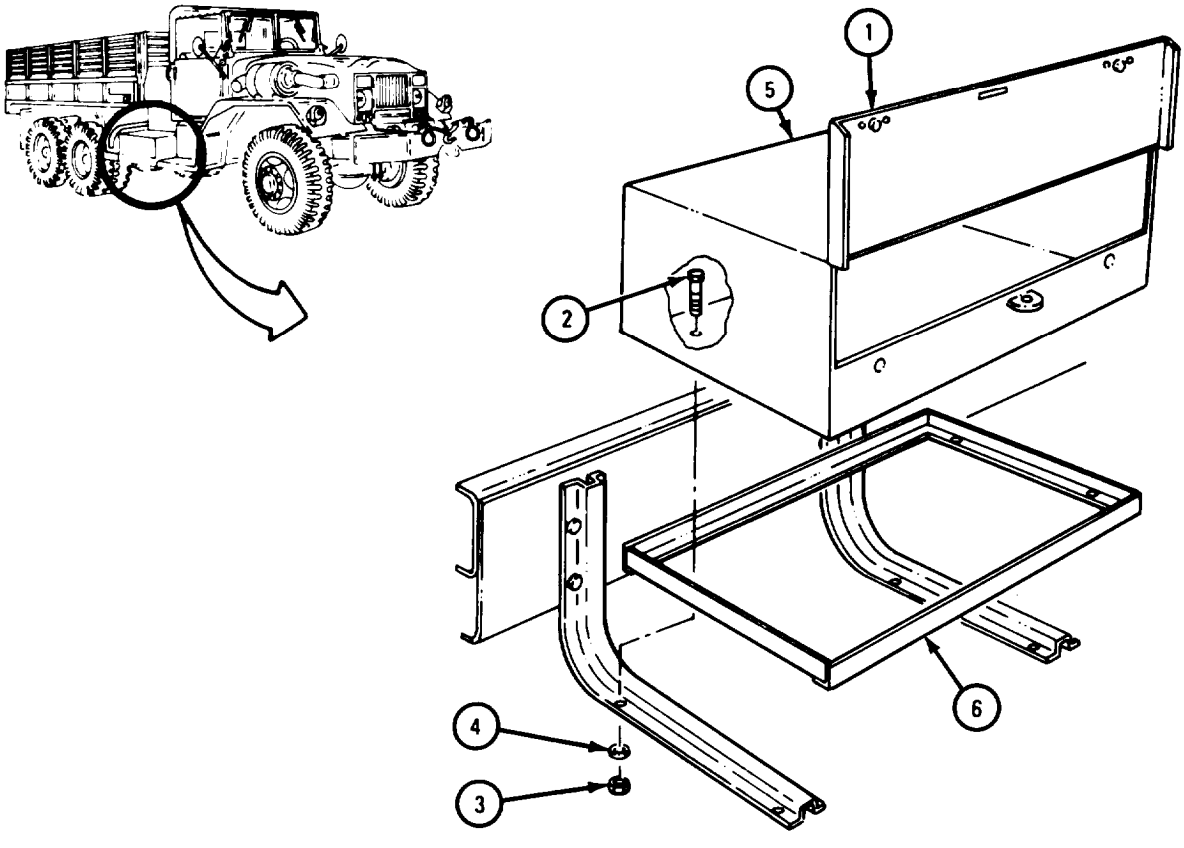


TA 102157

FRAME 2

1. Open tool box door (1).
2. Take out four screws (2) , nuts (3) , and washers (4).
3. Take off tool box assembly (5) and set it on ground.
4. Take off tool box frame assembly (6) .

GO TO FRAME 3

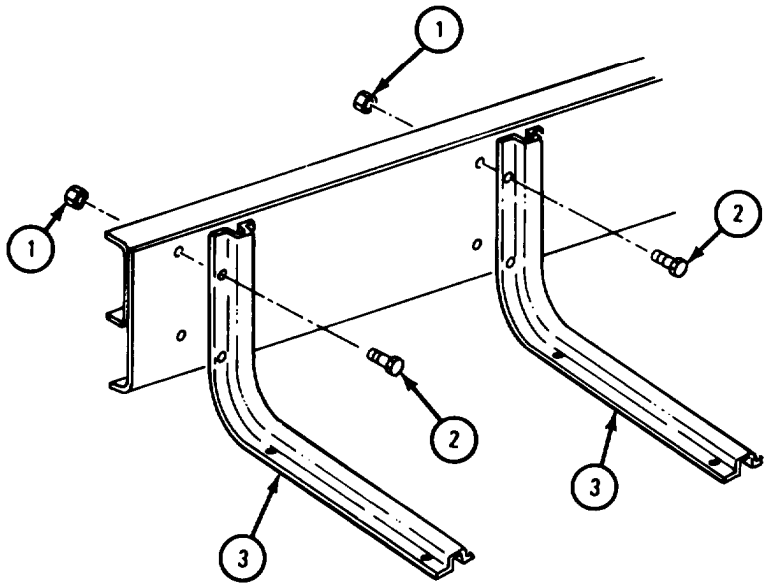


TA 102158

FRAME 3

1. Take off eight nuts (1) and screws (2).
2. Take off two hangers (3).

END OF TASK



TA 102159

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

c. Cleaning. Clean pioneer tool bracket, tool box, and tool box hangers with solvent.

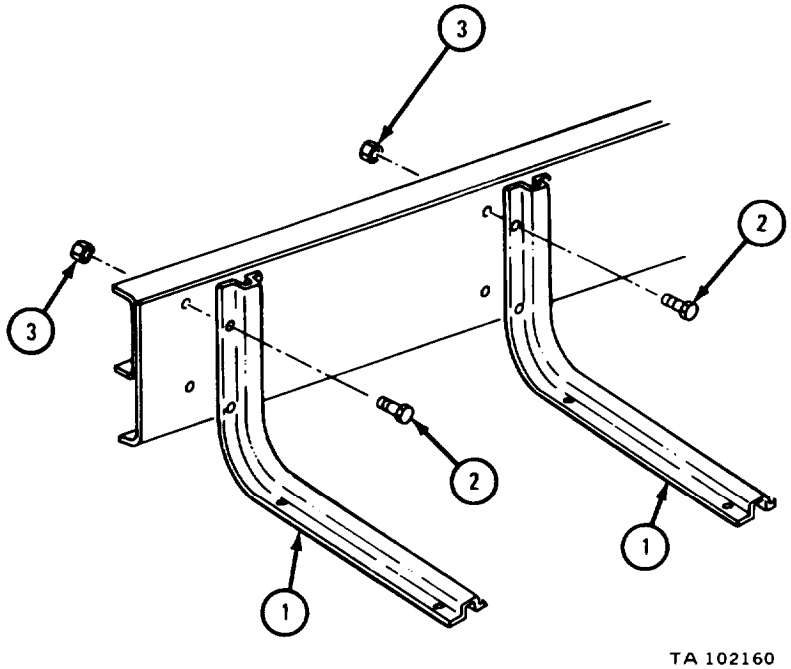
d. Inspection and Repair. Check that brackets and box have no dents, bends, cracks or welding defects. Repair by welding or straightening. Refer to TM 9-237 or FM 43-2.

e. Replacement.

FRAME 1

1. Put two hangers (1) in place.
2. Put in eight screws (2) and nuts (3).

GO TO FRAME 2

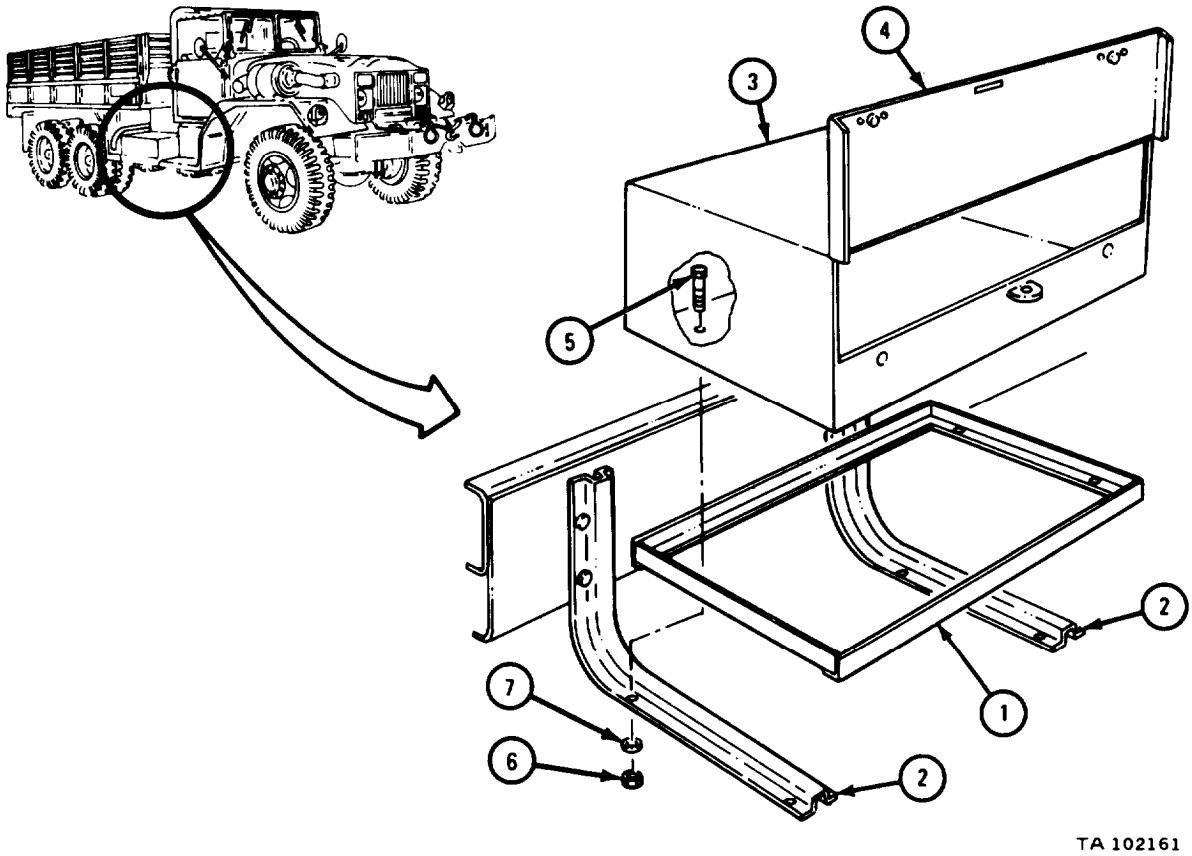


TA 102160

FRAME 2

1. Put tool box frame assembly (1) in place on hangers (2), alining holes.
2. Put tool box assembly (3) in place on frame assembly (1), with tool box door (4) open.
3. Put in four screws (5), nuts (6), and washers (7).
4. Close tool box door (4).

GO TO FRAME 3



TA 102161

FRAME 3

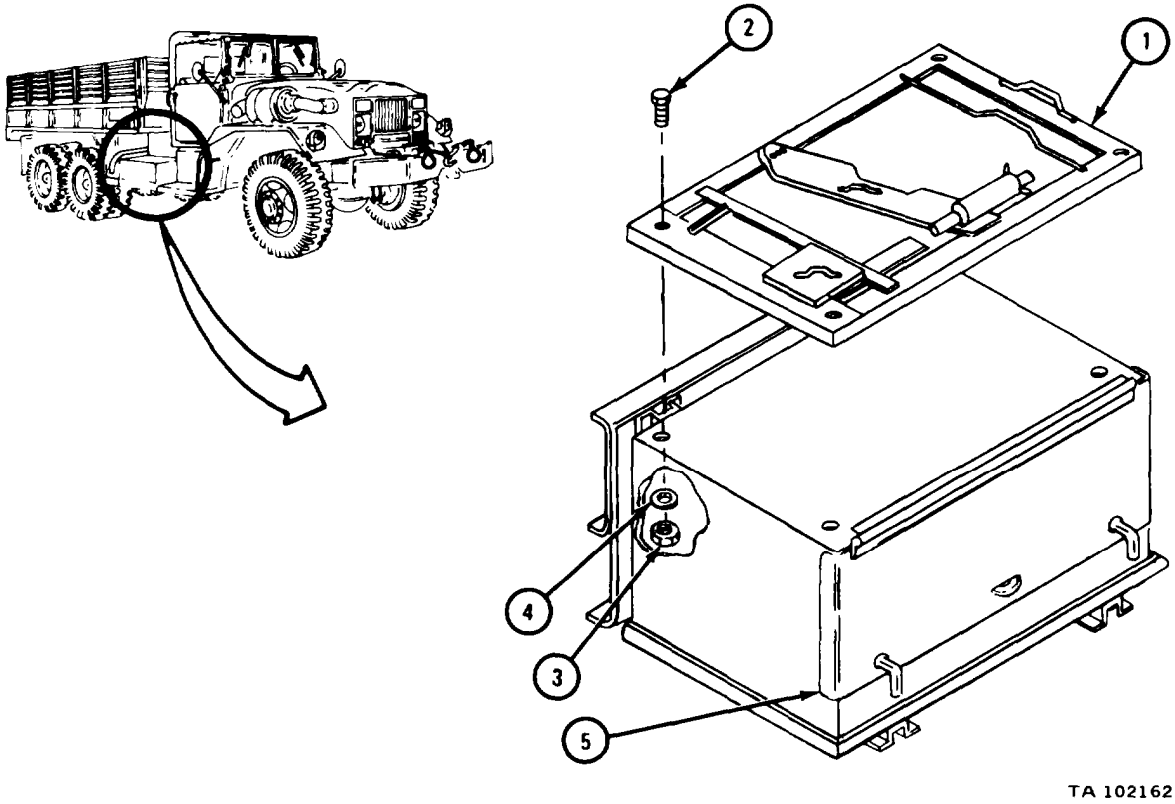
1. Put pioneer tool bracket (1) in place.
2. Put in four screws (2), nuts (3), and washers (4).
3. Close tool box door (5).

NOTE

Follow-on Maintenance Action Required:

Put pioneer tools back in pioneer tool bracket.

END OF TASK



TA 102162

Section VI. CARGO BODIES

16-26. CARGO BODY ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT (TRUCKS M54A2 AND M54A2C).

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Three

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminarv Procedures.

(1) Remove spare tire carrier. Refer to TM 9-2320-211-20.

(2) Remove body cover and end curtains. Refer to TM 9-2320-211-10.

(3) Remove bows. Refer to TM 9-2320-211-10.

(4) Remove side racks. Refer to TM 9-2320-211-10.

(5) Remove taillight and bracket assemblies. Refer to TM 9-2320-211-20.

(6) Remove tailgate. Refer to para 16-29.

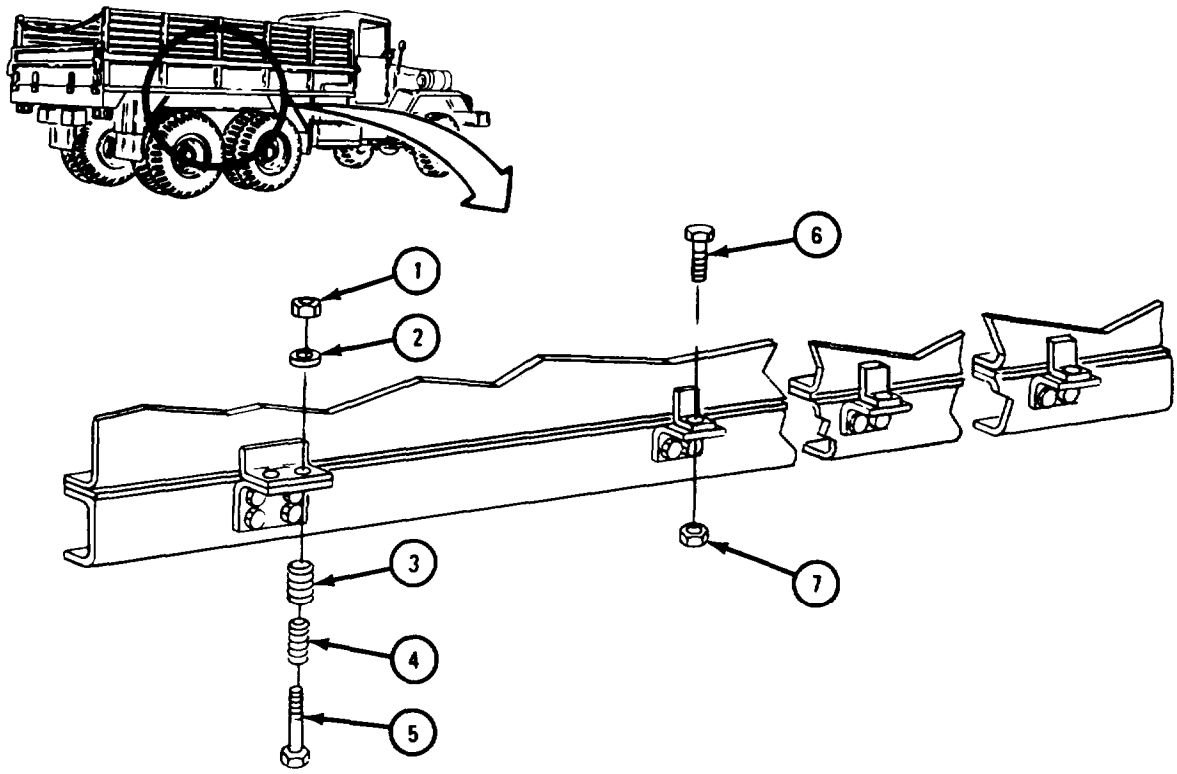
(7) Remove splash shields. Refer to para 16-16.

b. Removal.

FRAME 1

1. Working on right side of truck, take off two nuts (1), washers (2), outer springs (3), inner springs (4), and bolts (5).
2. Take out three bolts (6) and nuts (7).
3. Do steps 1 and 2 again on other side of truck.

GO TO FRAME 2

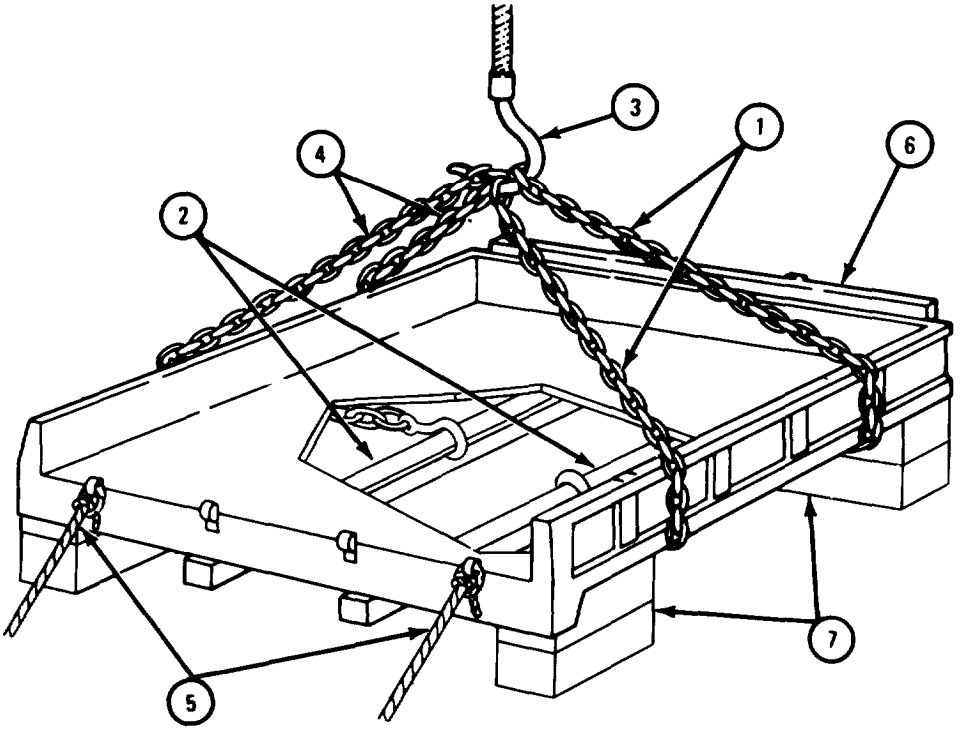


TA 084478

FRAME 2

Soldier	A 1.	Working on right side of truck, hook ends of two chains (1) over right body rail (2) about three feet from front and three feet from rear of body.
	2.	Hook two chains (1) over hoist hook (3).
Soldier	B 3.	Working on left side of truck, hook ends of two chains (4) over left body rail (2) about three feet from front and three feet from rear of body.
	4.	Hook two chains (4) over hoist hook (3).
Soldier A and B	5.	Tie two guide ropes (5) to truck body (6). Guide truck body when soldier C lifts body off truck.
Soldier	C 6.	Using hoisting equipment, lift body (6) off truck and onto wood blocks (7) .
Soldiers A and B	7.	Unhook chains (1 and 4) from body rails (2) and hoist hook (3).
	8.	Take off two guide ropes (5).

END OF TASK



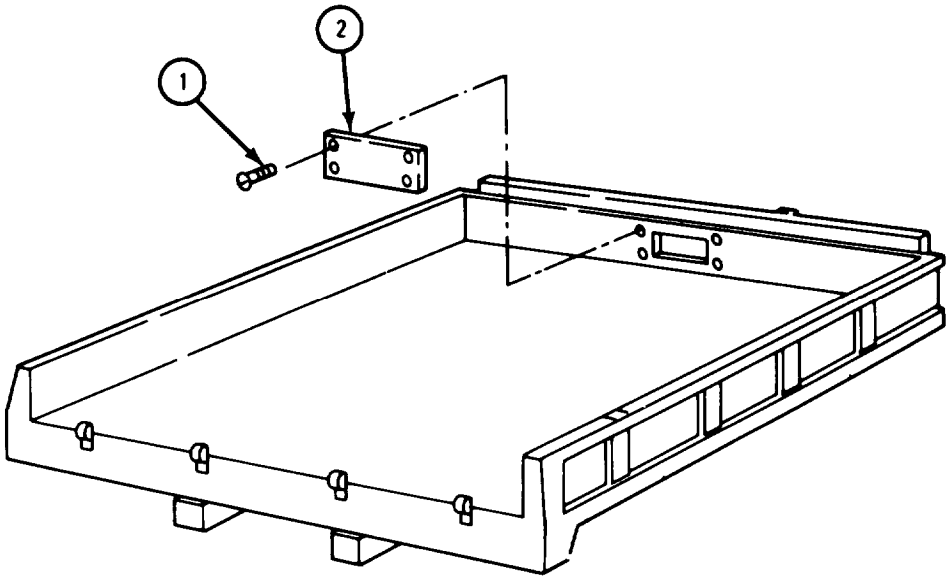
TA 084479

c. Disassembly.

FRAME 1

1. Takeout four screws (1).
2. Takeoff cover (2).

GO TO FRAME 2

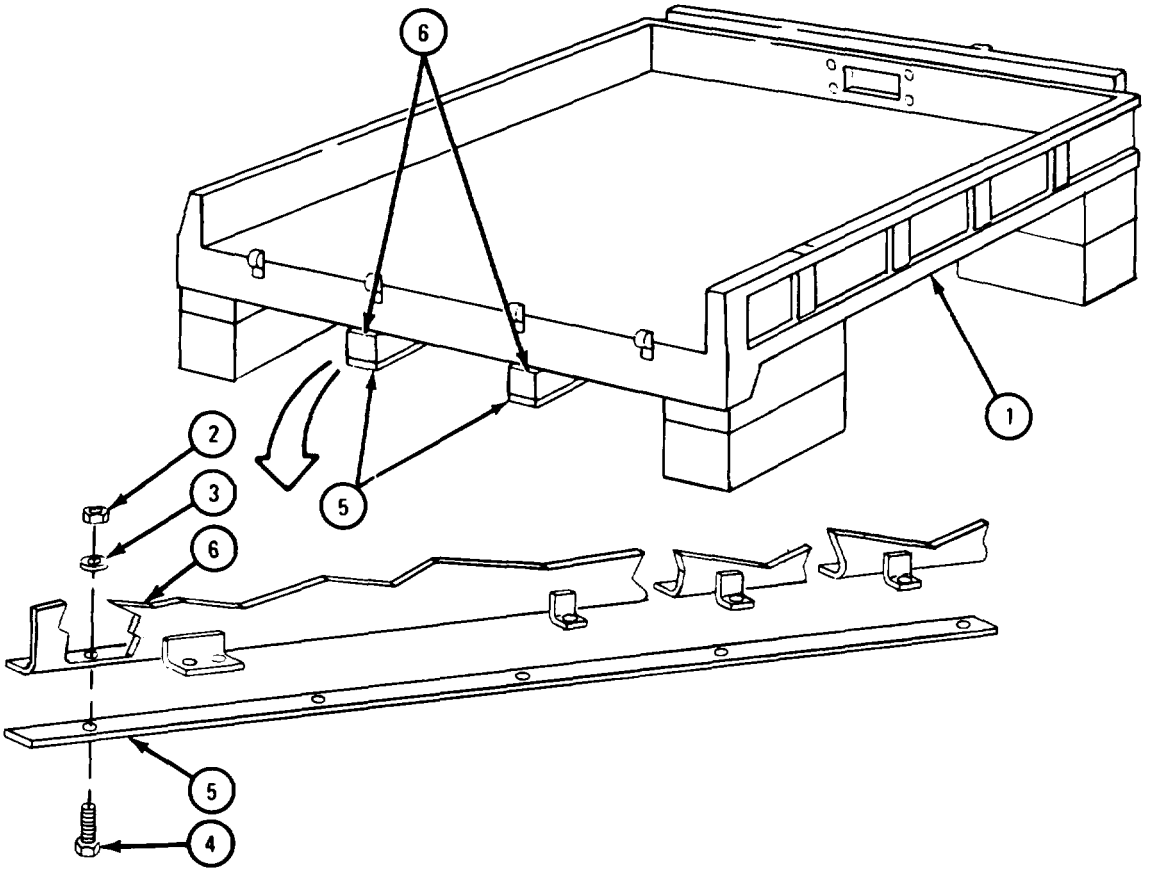


TA 084480

FRAME 2

1. Working under truck body (1), take off five nuts (2) and washers (3). Take out five screws (4).
2. Take body sill (5) from body rail (6).
3. Do steps 1 and 2 again on other side of truck body (1).

END OF TASK



TA 087333

d. Cleaning.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventialted palces. Failure to do this may result in injury to personnel and damage to equipment.

(1) Using steam cleaner, clean body.

(2) Clean smaller parts with solvent.

(3) Clean wood sills with water.

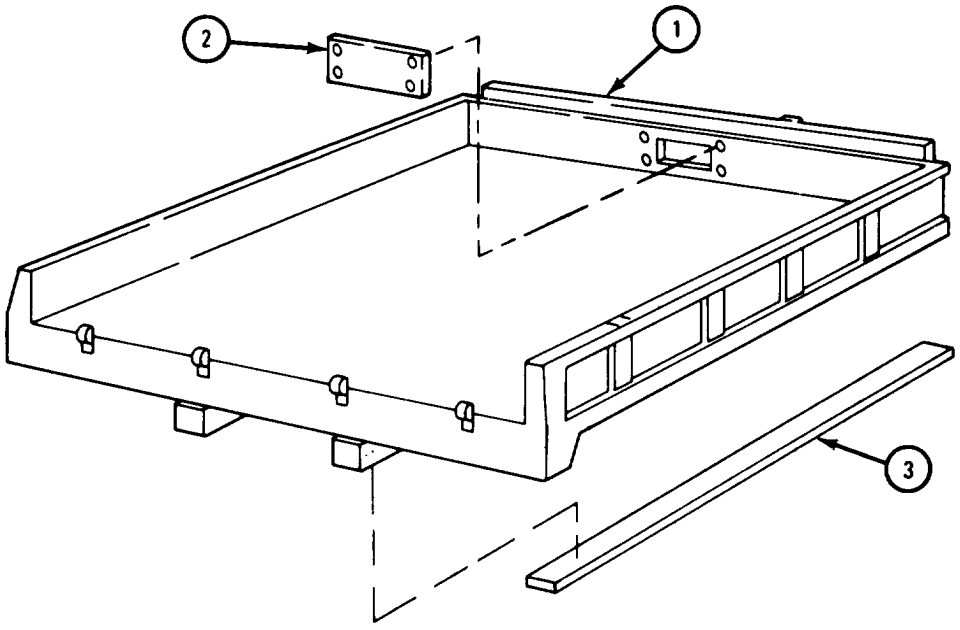
(4) Let parts dry.

e. Inspection and Repair.

FRAME 1

1. Check that body (1) has no bends, dents, cracks or welding defects. Repair damage by straightening or welding. Refer to TM 9-237.
2. Check that cover (2) is not damaged. Repair damage by straightening or welding. Refer to TM 9-237.
3. Check that wood sills (3) are not damaged. If sills are damaged, throw them away and get new ones in their place.

END OF TASK



TA 084481

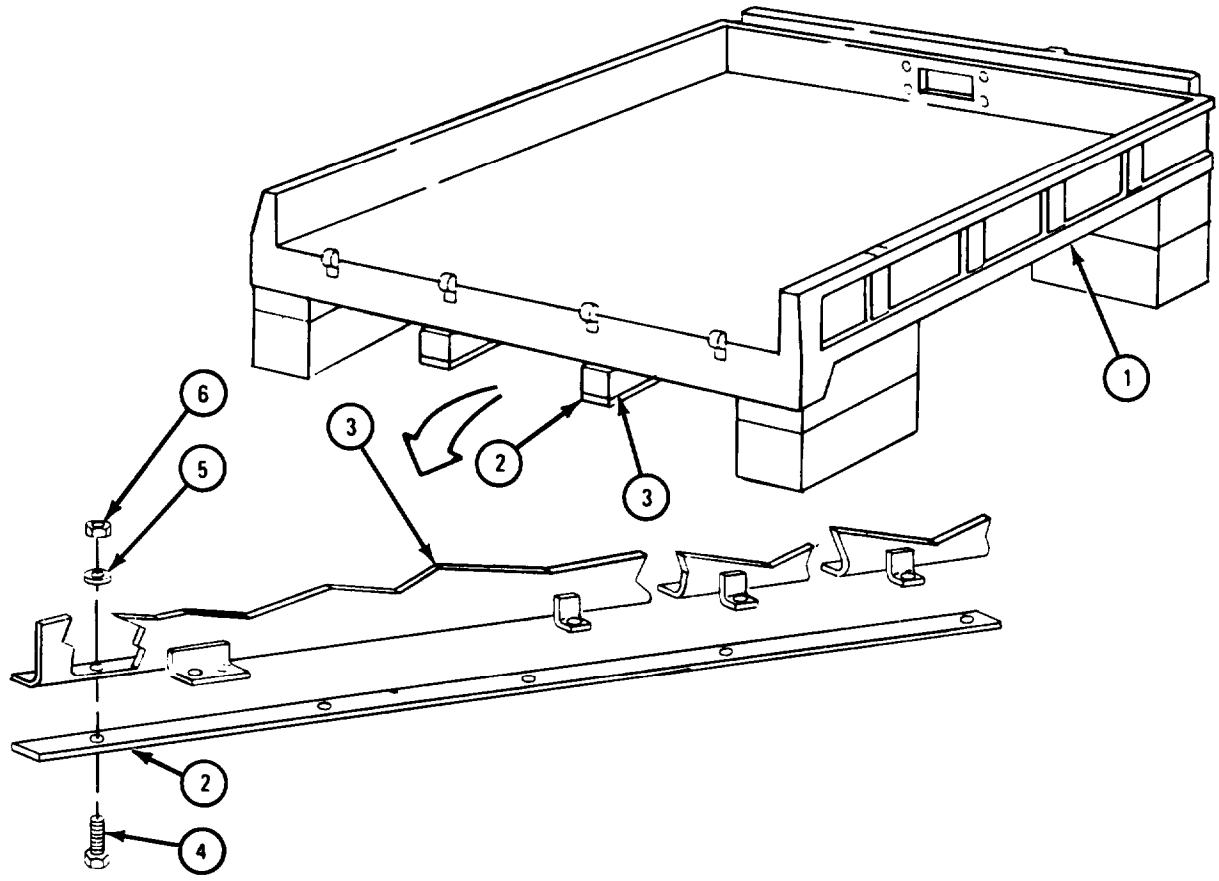
f. Assembly.

FRAME 1

Soldiers A and B

1. Working on right side of truck body (1), put body sill (2) in place on body rail (3).
2. Put in five screws (4), lockwashers (5), and nuts (6).
3. Do steps 1 and 2 again on other side of truck body (1).

GO TO FRAME 2

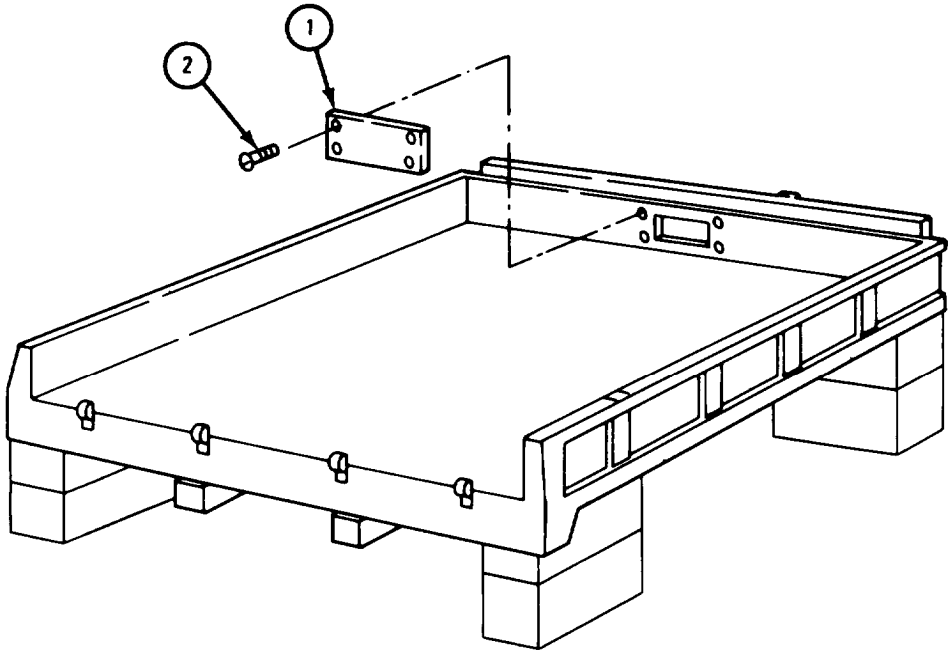


TA 087334

FRAME 2

1. Put cover (1) in place, alining holes.
2. Put in four screws (2).

END OF TASK



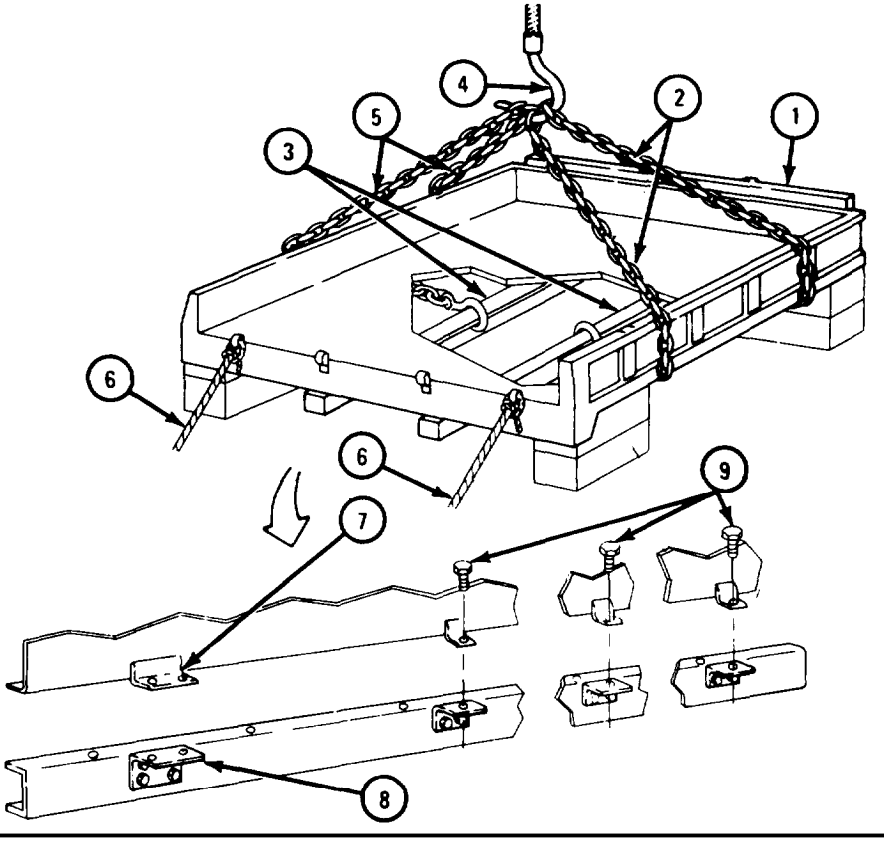
TA 084482

g. Replacement.

FRAME 1

Soldier A	1.	Working on right side of truck body (1), hook two chains (2) over right body rail (3) and over hoist hook (4).
Soldier B	2.	Working on left side of truck body (1), hook two chains (5) over left body rail (3) and over hoist hook (4).
Soldiers A and B	3.	Tie two guide ropes (6) to truck body (1). Guide truck body onto truck when soldier C lifts body.
Soldier C	4.	Using hoisting equipment, lift truck body (1) onto truck.
Soldiers A and B	5.	Working on right side of truck and using rolling head prybar, aline holes in body mounting bracket (7) with holes in truck frame bracket (8).
Soldier A	6.	Put in three short screws (9).
Soldiers A and B	7.	Do steps 5 and 6 again on other side of truck.
	8.	Unhook chains (2 and 5) from body rails (3) and hoist hook (4).
	9.	Take off two guide ropes (6).

GO TO FRAME 2



FRAME 2

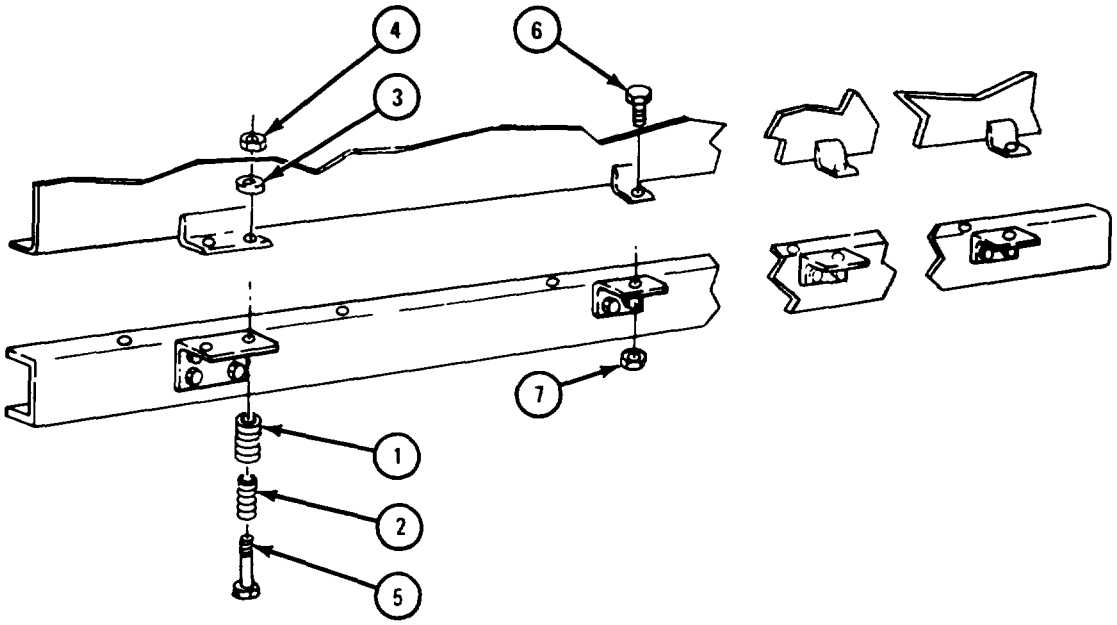
1. Working on right side of truck, put two outer springs (1), two inner springs (2), two washers (3), and two nuts (4) onto two long bolts (5).
2. Hold three short screws (6) and put on three locknuts (7).
3. Do steps 1 and 2 again on other side of truck.

NOTE

Follow-on Maintenance Action Required:

1. Replace splash shields. Refer to para 16-16.
2. Replace tailgate. Refer to para 16-29.
3. Replace taillight and bracket assemblies. Refer to TM 9-2320-211-20.
4. Replace side racks. Refer to TM 9-2320-211-10.
5. Replace bows. Refer to TM 9-2320-211-10.
6. Replace body cover and end curtains. Refer to TM 9-2320-211-10.
7. Replace spare tire carrier. Refer to TM 9-2320-211-20.

END OF TASK



TA 084484

16-27. LONG CARGO BODY ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M55A2).

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Three

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove spare tire carrier. Refer to TM 9-2320-211-20.

(2) Remove body cover and end curtains. Refer to TM 9-2320-211-10.

(3) Remove bows. Referto TM 9-2320-211-10.

(4) Remove side racks. Refer to TM 9-2320-211-10.

(5) Remove taillights and brackets. Refer to TM 9-2320-211-20.

(6) Remove tailgate. Refer to para 16-29.

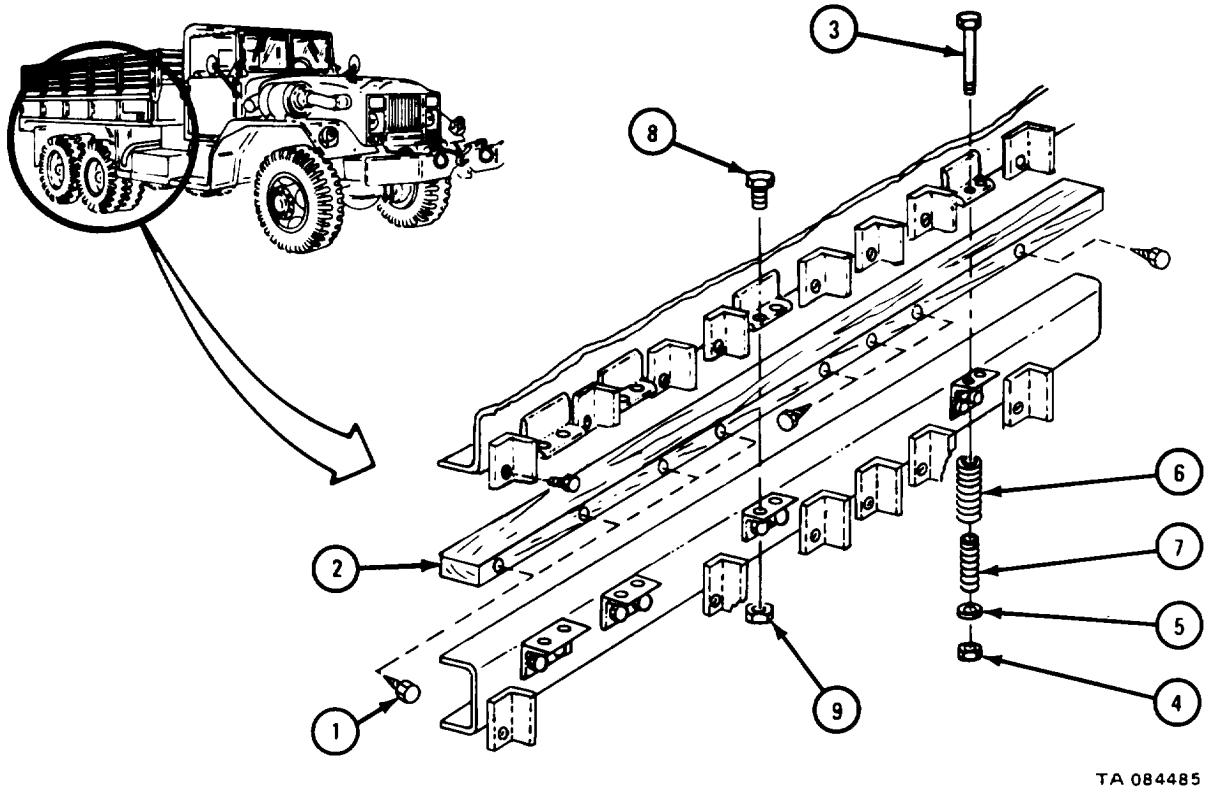
(7) Remove splash shields. Refer to para 16-16.

b. Removal.

FRAME 1

1. Take out eight wood screws (1) from body rail sill (2).
2. Hold two long bolts (3) and take off two nuts (4), washers (5), outer spring (6), and inner spring (7).
3. Take out two long bolts (3).
4. Hold six short screws (8) and take off six nuts (9).
5. Do steps 1 through 4 again on other side of truck.

GO TO FRAME 2



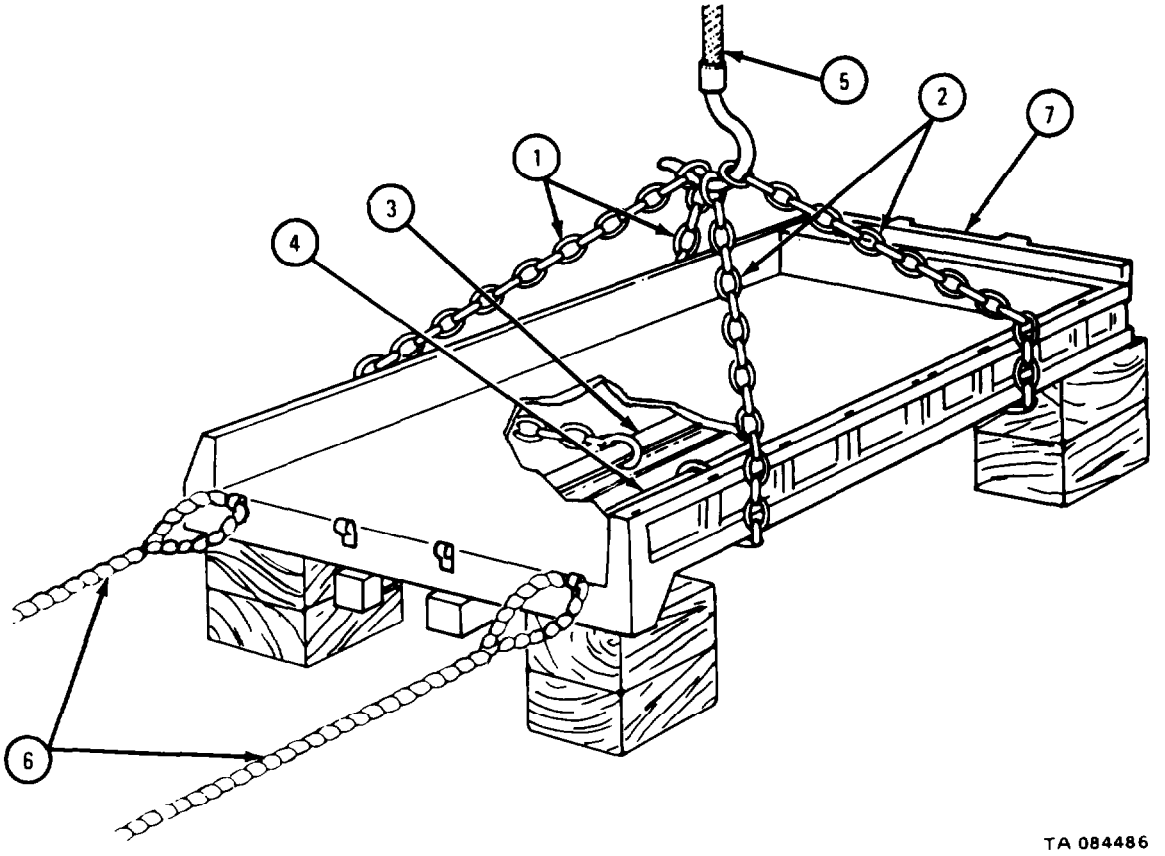
FRAME 2

NOTE

Hook on chains (1 and 2) two feet from front and rear end of bed as shown.

Soldier A	1. Hook two chains (1) over body rail (3) on left side of truck body at front and rear as shown.
Soldier B	2. Hook two chains (2) over body rail (4) on right side of truck body at front and rear as shown.
Soldiers A and B	3. Hook chains (1 and 2) to hoist hook (5) as shown.
Soldier C	4. Using hoist, take up slack in chains (1 and 2).
Soldiers A and B	5. Using two guide ropes (6), guide body (7) when soldier C lifts body off truck.
Soldier C	6. Using hoist, lift body (7) off truck and onto wooden blocks.
Soldiers A and B	7. Take off four chains (1 and 2) from hoist (5) and take off guide ropes (6).

END OF TASK



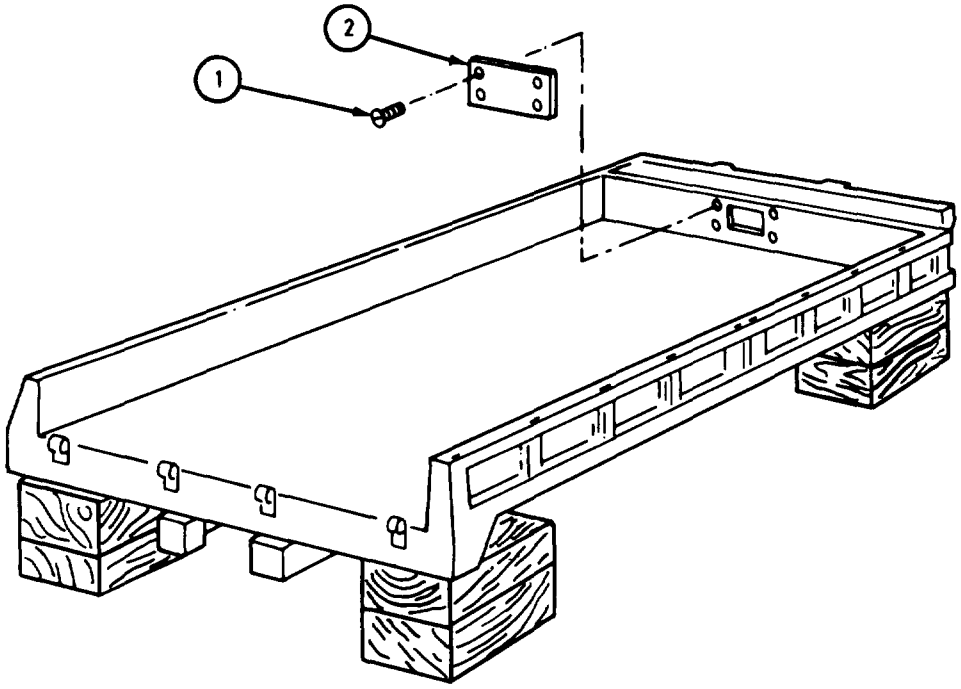
TA 084486

c. Disassemble.

FRAME 1

1. Take out four screws (1).
2. Take off cover (2).

END OF TASK



TA 084487

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

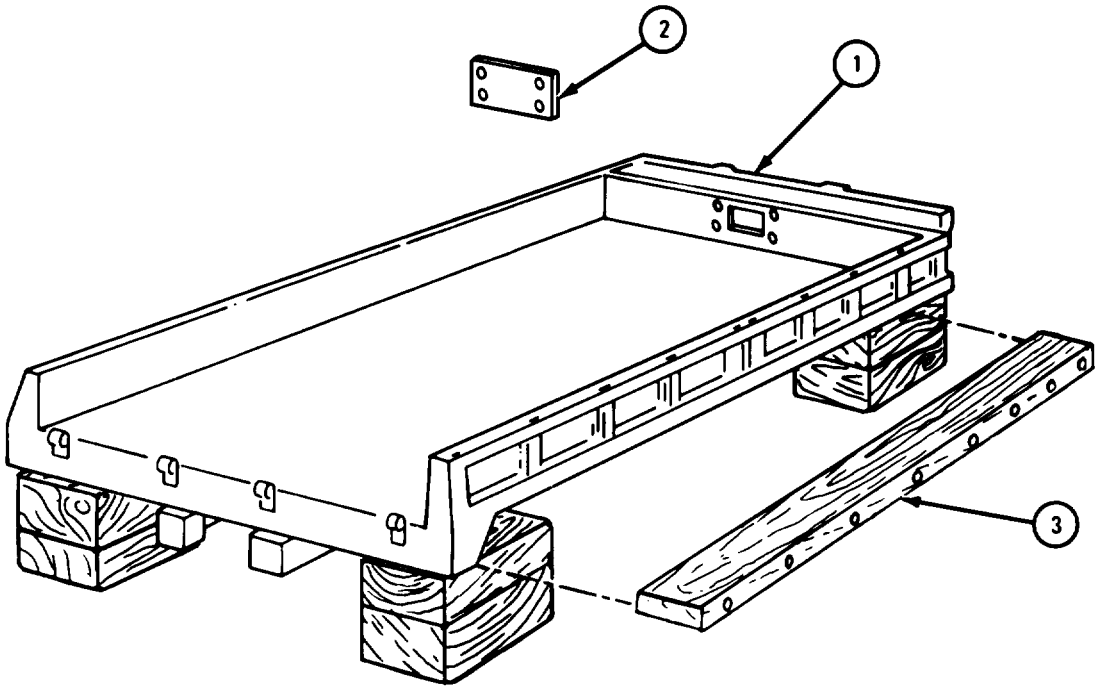
There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1–3.

e. Inspection and Repair.

FRAME 1

1. Check that body (1) has no bends, dents, cracks or welding defects. Repair by straightening or welding. Refer to TM 9-237.
2. Check that cover (2) is not damaged. Repair by straightening or welding. Refer to TM 9-237.
3. Check that wood sills (3) have no rotting, cracks or breaks. If wood sills are damaged, get new ones,

END OF TASK

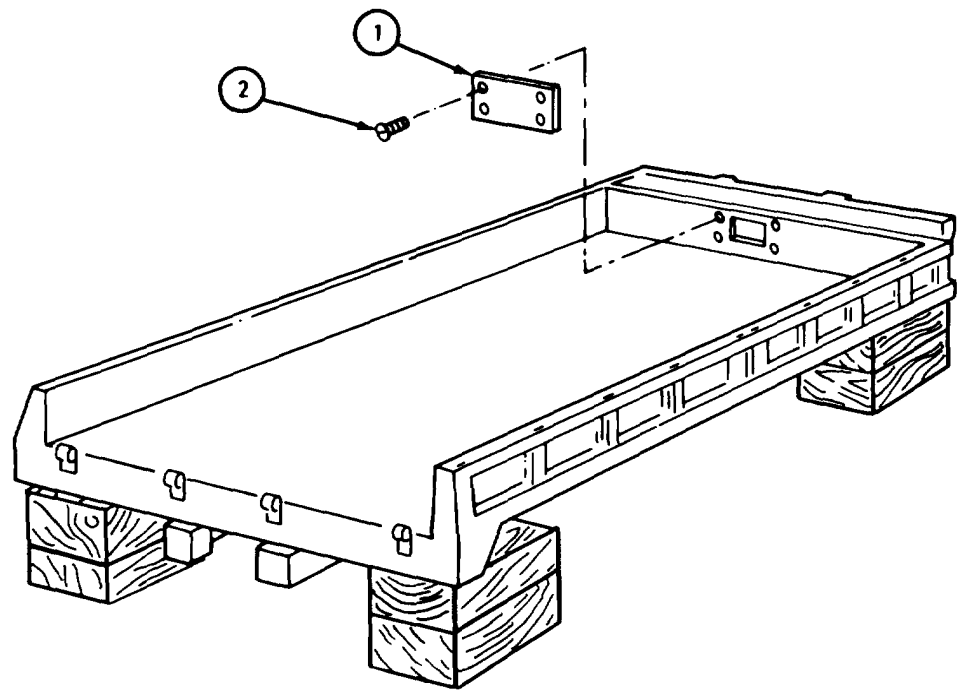


f. Assembly.

FRAME 1

1. Put cover (1) in place, dining holes.
2. Put in four screws (2).

GO TO FRAME 2

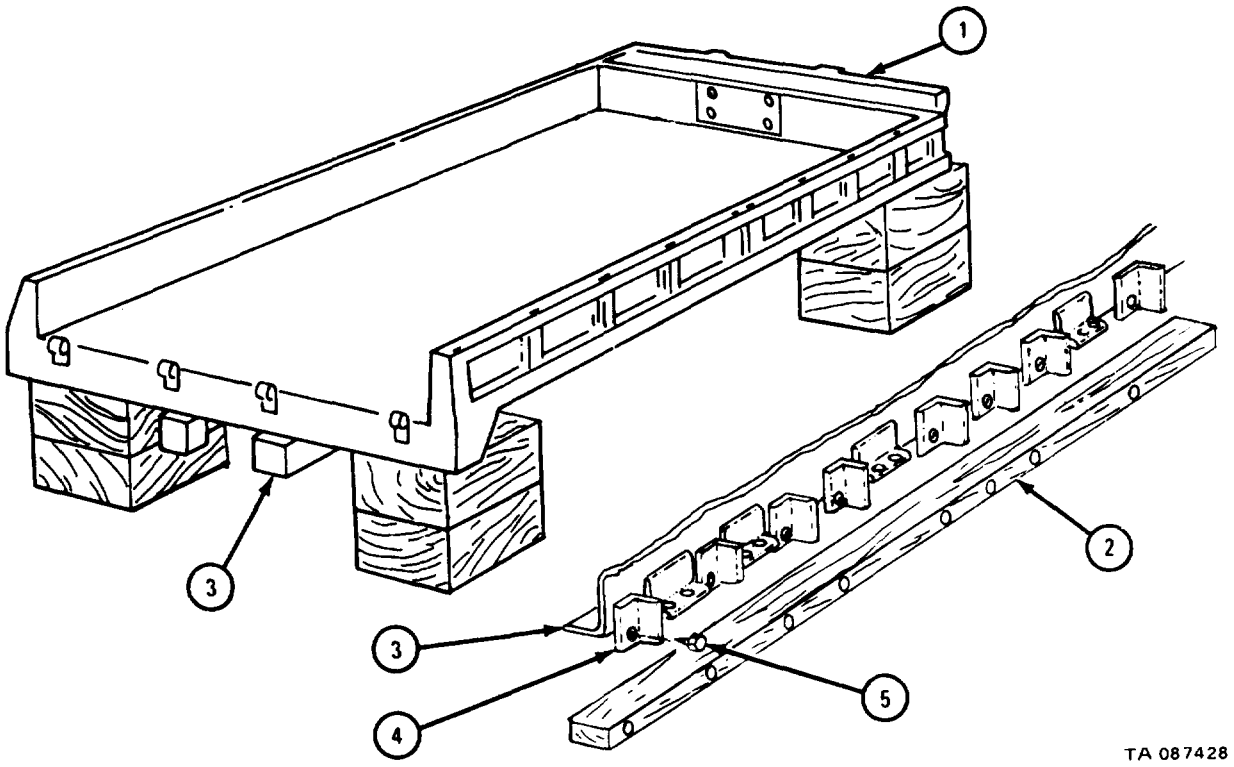


TA 084489

FRAME 2

Soldier A	1.	Working under right front of body (1), pick up and hold wood sill (2).
Soldier B	2.	Working under right rear of body (1), pick up and hold other end of wood sill (2).
Soldiers A and B	3.	Put wood sill (2) in place on body rail (3), alining holes in body rail brackets (4) with holes in wood sill (2).
	4.	Put in eight wood screws (5).
	5.	Do steps 1 through 4 on other side of body (1).

END OF TASK



g. Replacement.

FRAME 1

NOTE

Hook on chains (1 and 2) two feet from front and rear ends of bed as shown.

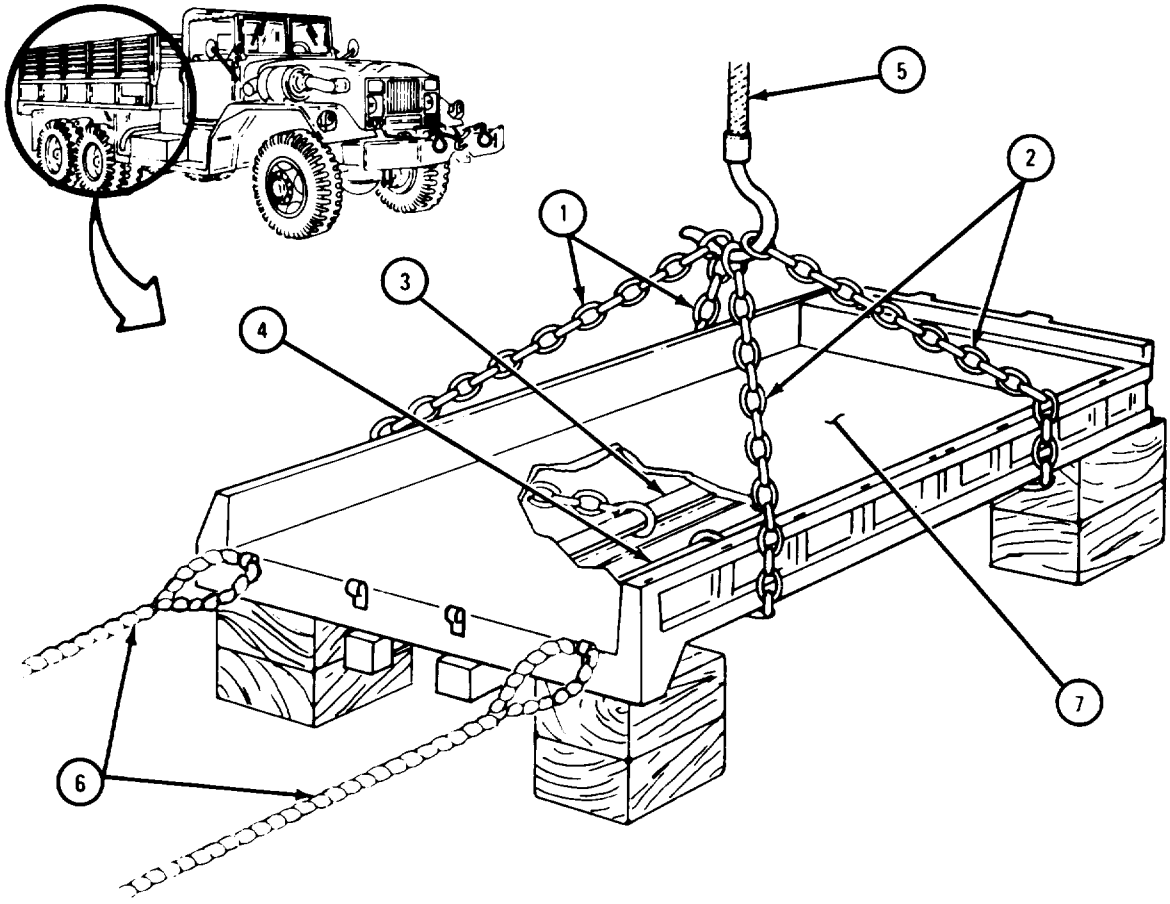
Soldier A 1. Hook two chains (1) over left body rail (3) and to hoist (5) as shown.

Soldier B 2. Hook two chains (2) over right body rail (4) and to hoist (5) as shown.

Soldiers A and B 3. Using two guide ropes (6), guide truck body (7) when soldier C lifts body.

Soldier C 4. Using hoist (5), lift truck body (7) and move it to 1/2 inch above frame.

GO TO FRAME 2

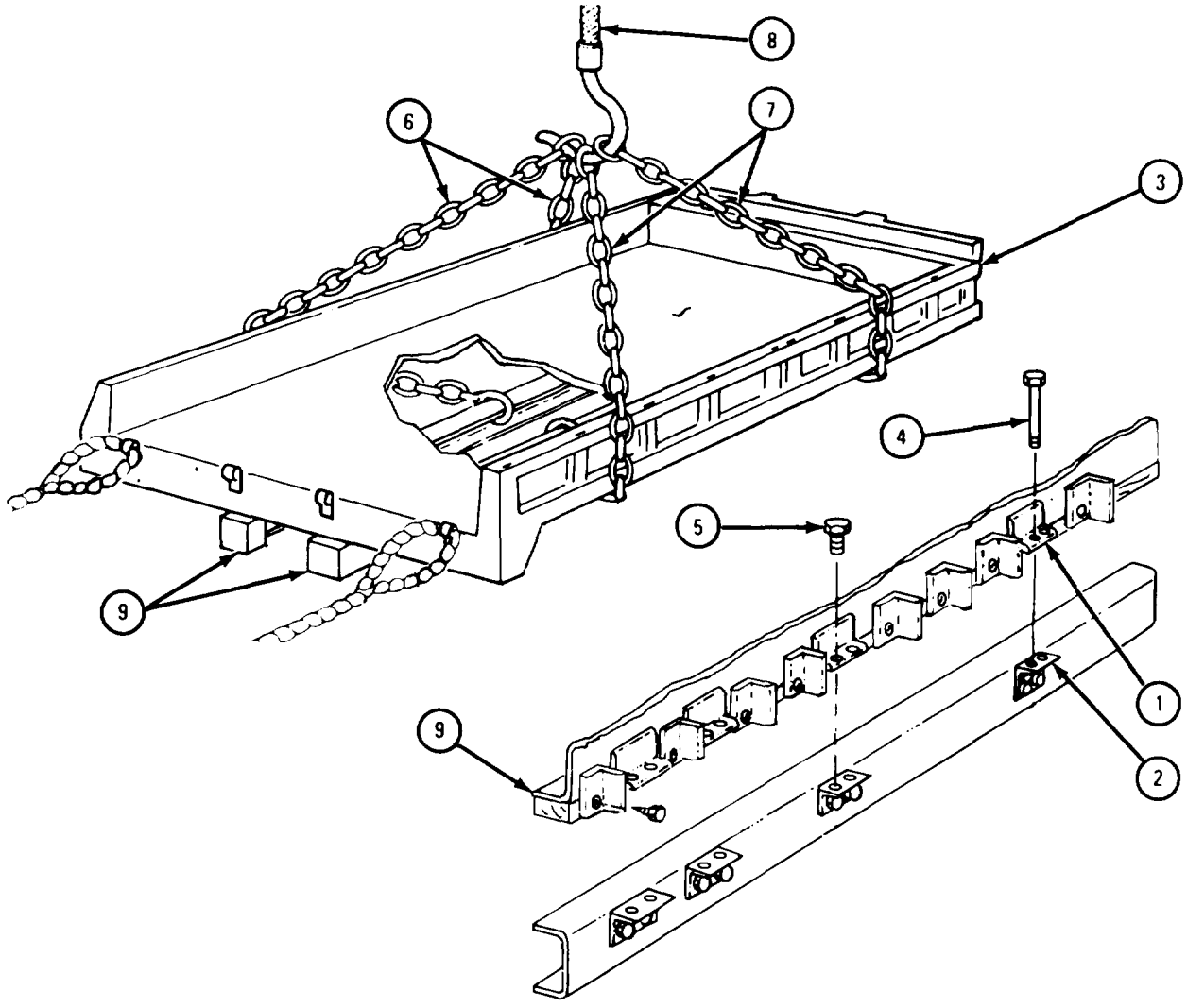


TA 084490

FRAME 2

Soldiers A and B	1.	Aline holes in body mounting brackets (1) with holes in truck rail mounting brackets (2).
Soldier A	2.	Working at right front side of body (3), put two long bolts (4) in rail mounting brackets (1 and 2).
Soldier B	3.	Working at left front side of body (3), put two long bolts (4) in rail mounting brackets (1 and 2).
Soldiers A and B	4.	At the same time on both sides of body (3), put six screws (5) in rail mounting brackets (1 and 2).
Soldier C	5.	Lower truck body (3) onto truck.
Soldiers A and B	6.	Unhook chains (6 and 7) from hoist (8) and from body rails (9).

GO TO FRAME 3



TA 088751

FRAME 3

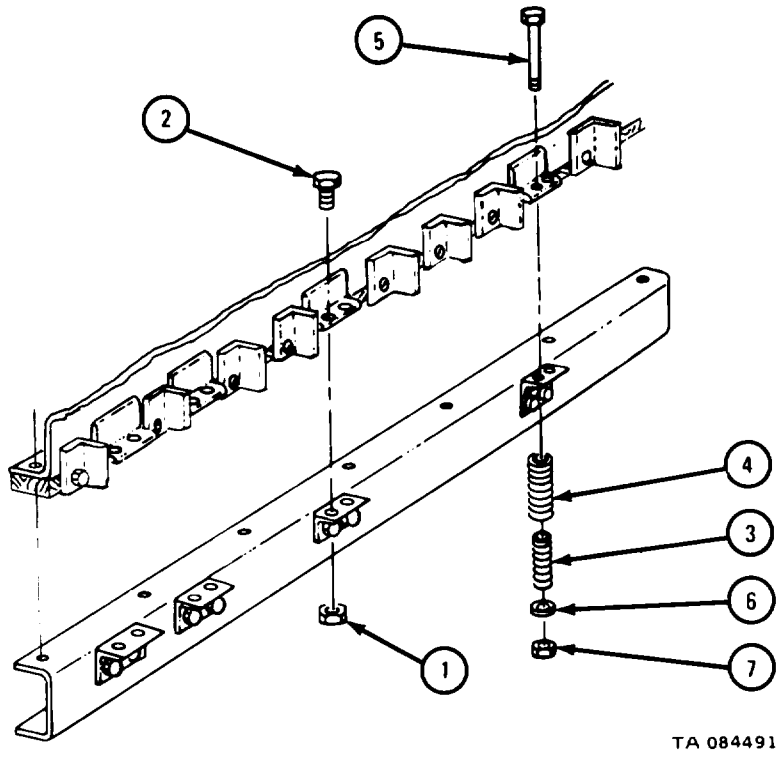
1. Put six locknuts (1) on six screws (2).
2. Put two inner springs (3) and two outer springs (4) in place on two long bolts (5).
3. Put two washers (6) and two nuts (7) onto two long bolts (5).
4. Do steps 1 through 3 again on other side of truck.

NOTE

Follow-on Maintenance Action Required:

1. Replace splash shields. Refer to para 16-16.
2. Replace tailgate. Refer to para 16-29.
3. Replace taillights and brackets. Refer to TM 9-2320-211-20.
4. Replace side racks. Refer to TM 9-2320-211-10.
5. Replace bows. Refer to TM 9-2320-211-10.
6. Replace body cover and end curtains, Refer to TM 9-2320-211-10.
7. Replace spare tire carrier. Refer to TM 9-2320-211-20.

END OF TASK



16-28. DUMP TRUCK BODY ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M51A2).

TOOLS: No special tools required

SUPPLIES: 3/8-inch steel bolt (2)
3/8-inch steel nut (2)
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedures.

(1) Remove dump body tailgate control linkage. Refer to para 16-31.

(2) Remove dump body tailgate. Refer to para 16-30.

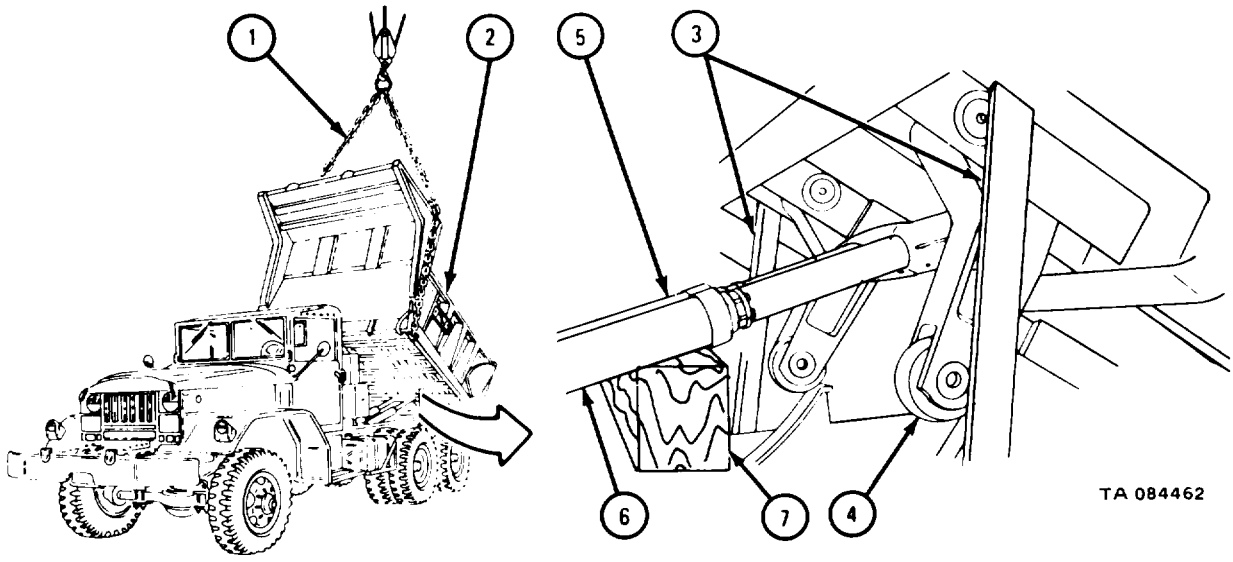
(3) Remove taillights. Refer to TM 9-2320-211-20.

b. Removal.

FRAME 1

Soldier A	1.	Hook two point chain sling (1) under front corners of body (2) and to hoist equipment as shown.
	2.	Raise hoist equipment when soldier B raises dump body (2).
Soldier B	3.	Raise dump body (2). Refer to TM 9-2320-211-10.
	4.	Raise two safety braces (3) into locked position as shown.
Soldier A	5.	Lower hoist equipment when soldier B lowers dump body (2) onto safety braces (3).
Soldier B	6.	Lower dump body (2) onto safety braces (3). Refer to Hoist Brace Locking and Unlocking, TM 9-2320-211-20.
Soldiers A and B	7.	Remove both hoist roller assemblies (4). Refer to Part 3, para 17-28.
Soldier A	8.	Stand at outside of cylinder (5).
Soldier B	9.	Stand at outside of cylinder (6).
Soldiers A and B	10.	Lift up cylinder (5 and 6) at the same time. Slide out wood block (7) and carefully lower cylinders.
Soldier A	11.	Using hoist equipment, raise dump body (2) to take weight off two safety braces (3).
Soldier B	12.	Lower two safety braces (3).
Soldier A	13.	Using hoist equipment, lower dump body (2).
Soldier B	14.	Take off two-point chain sling (1).

GO TO FRAME 2



FRAME 2

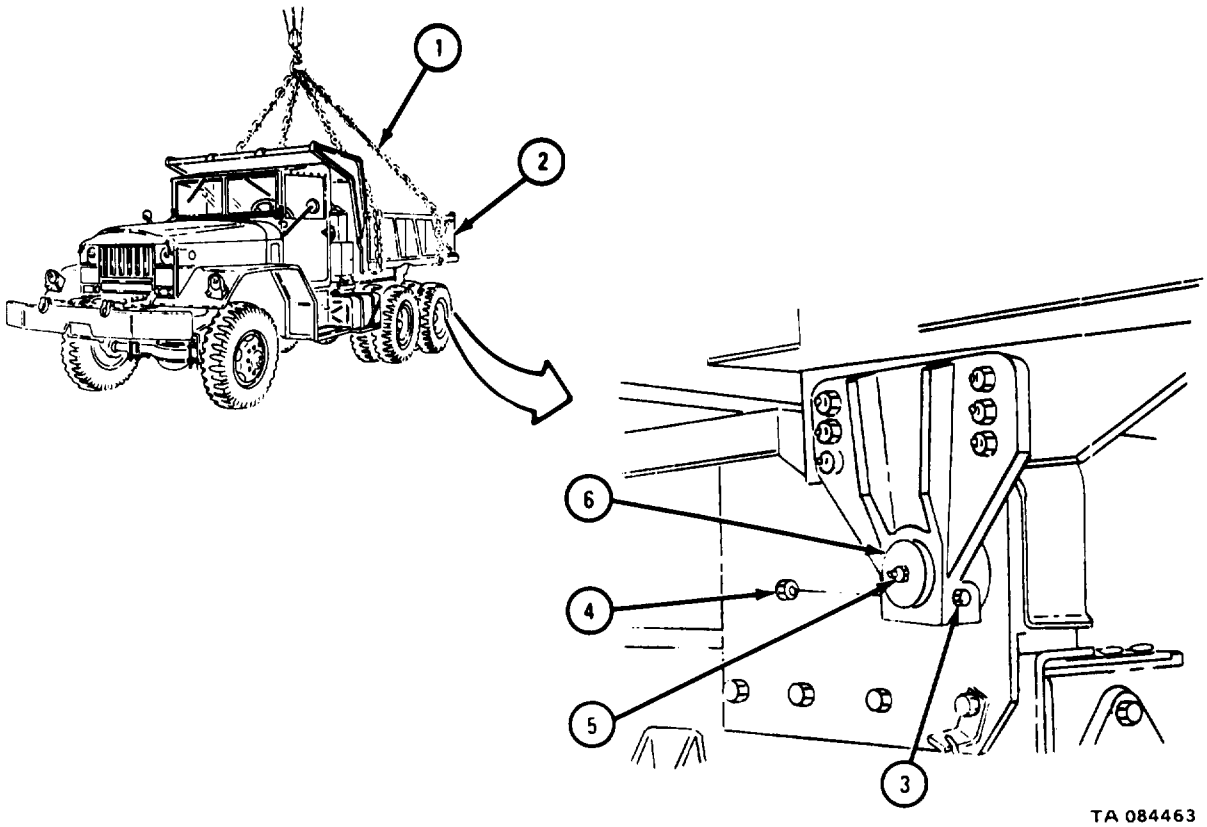
1. Hook up four-point chain sling (1) to dump body (2) as shown. Join chain sling to hoist equipment.
2. Take out screw (3) and nut (4).
3. Take out grease fitting (5).

Soldier A 4. Using hoist equipment, raise or lower dump body (2) as needed to take tension off hinge pin (6).

Soldier B 5. Drive out hinge pin (6).

6. Do steps 2 through 5 again on other side of truck.

GO TO FRAME 3



FRAME 3

WARNING

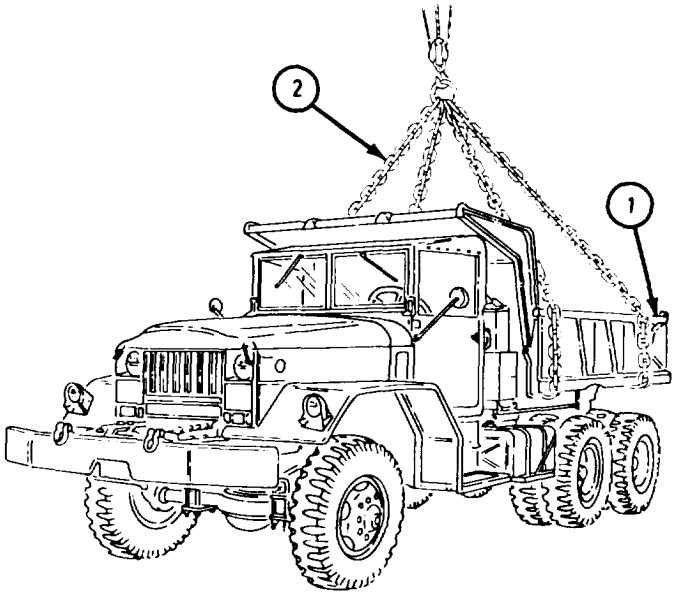
Dump body is a heavy piece of equipment. Do not stand under it when it is being lifted. Failure of hoist equipment or slippage of chain slings could cause death or serious injury to personnel.

Soldier A 1. Guide dump body (1) as soldier B lifts it off truck.

Soldier B 2. Using hoist equipment, lift dump body (1) off truck and set it down on wood blocks.

Soldier A 3. Take off four-point chain sling (2).

END OF TASK



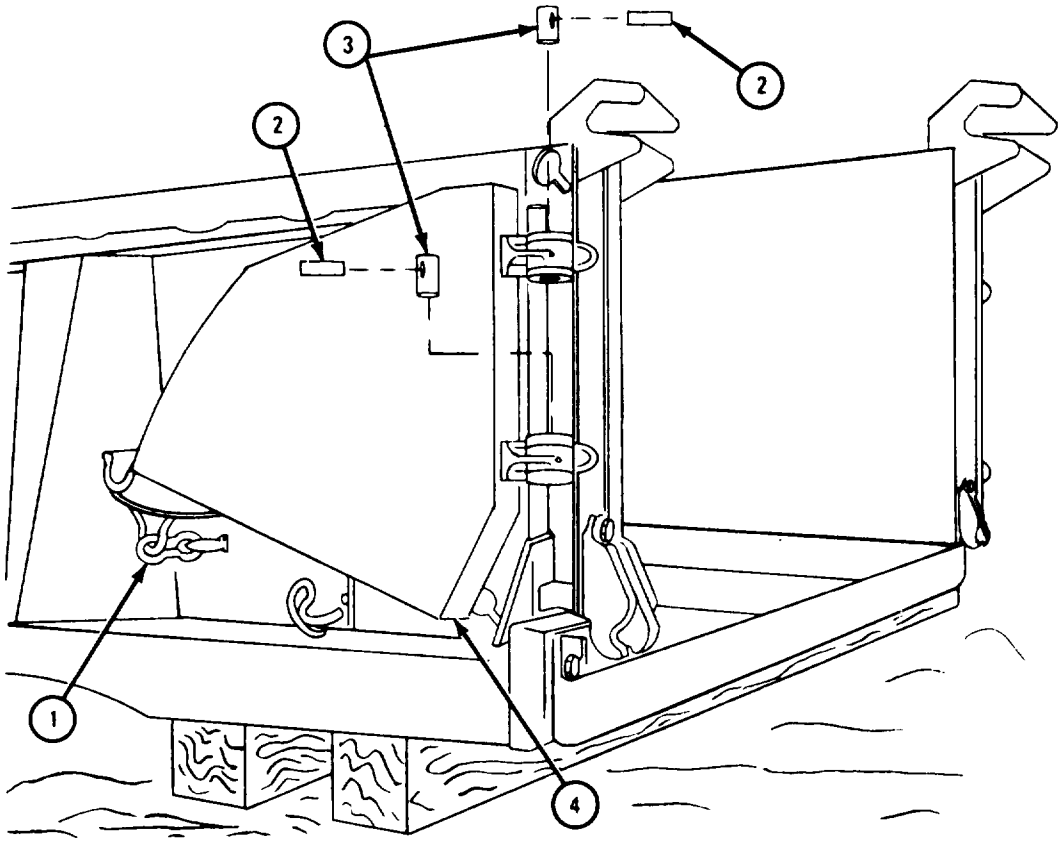
TA 084464

c. Disassembly.

FRAME 1

1. Unhook catch (1).
2. Drive out two pins (2).
3. Drive out two pins (3).
4. Takeoff tailgate wing (4).
5. Do steps 1 through 4 again to takeoff other tailgate wing (4).

GO TO FRAME 2

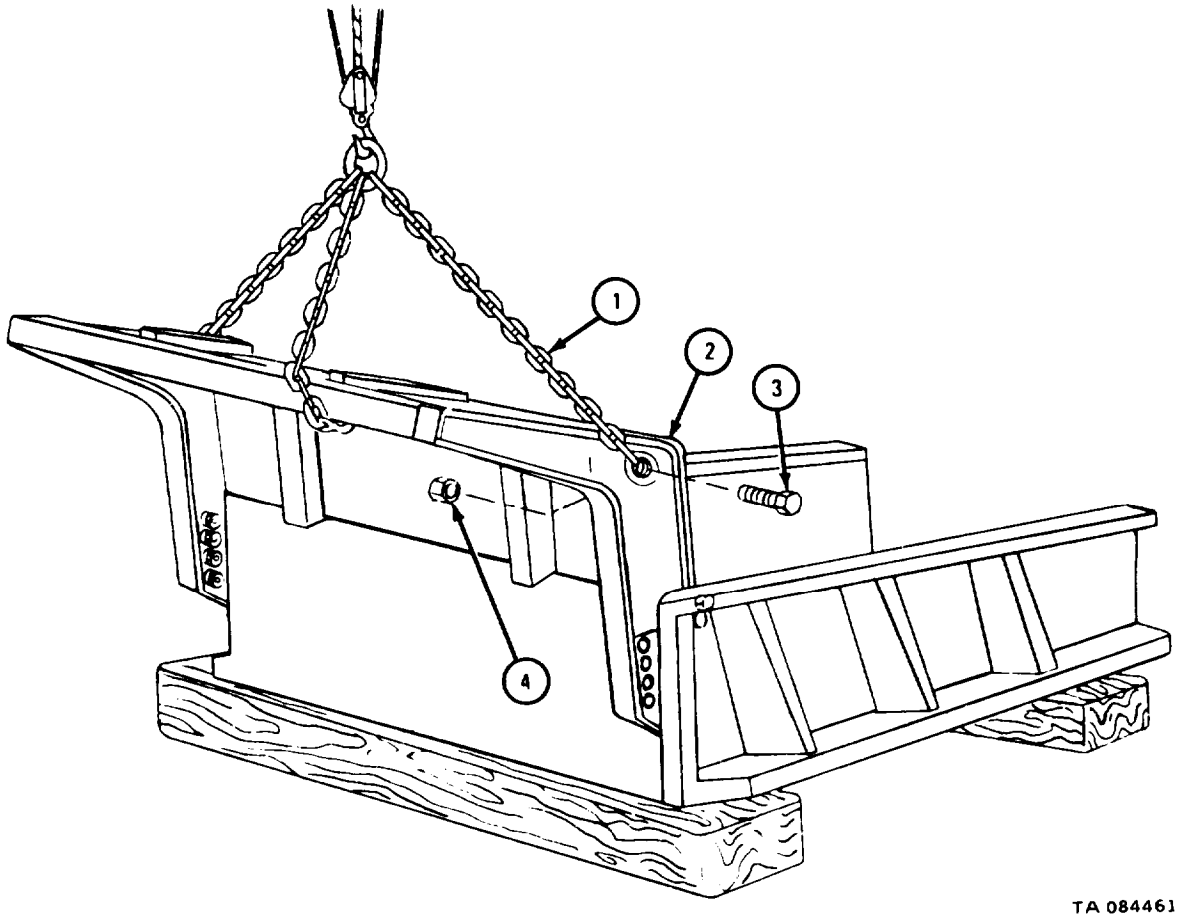


TA 084465

FRAME 2

1. Place end link of three-point chain sling (1) over hole in cab shield (2) as shown.
2. Put bolt (3) through end link of chain sling (1) and cab shield (2).
3. Put on nut (4).
4. Do steps 1 through 3 again at other side of cab shield (2).
5. Hook third section of chain sling (1) on front of cab shield (2) as shown.
6. Hook three-point chain sling (1) to hoist equipment as shown.

GO TO FRAME 3

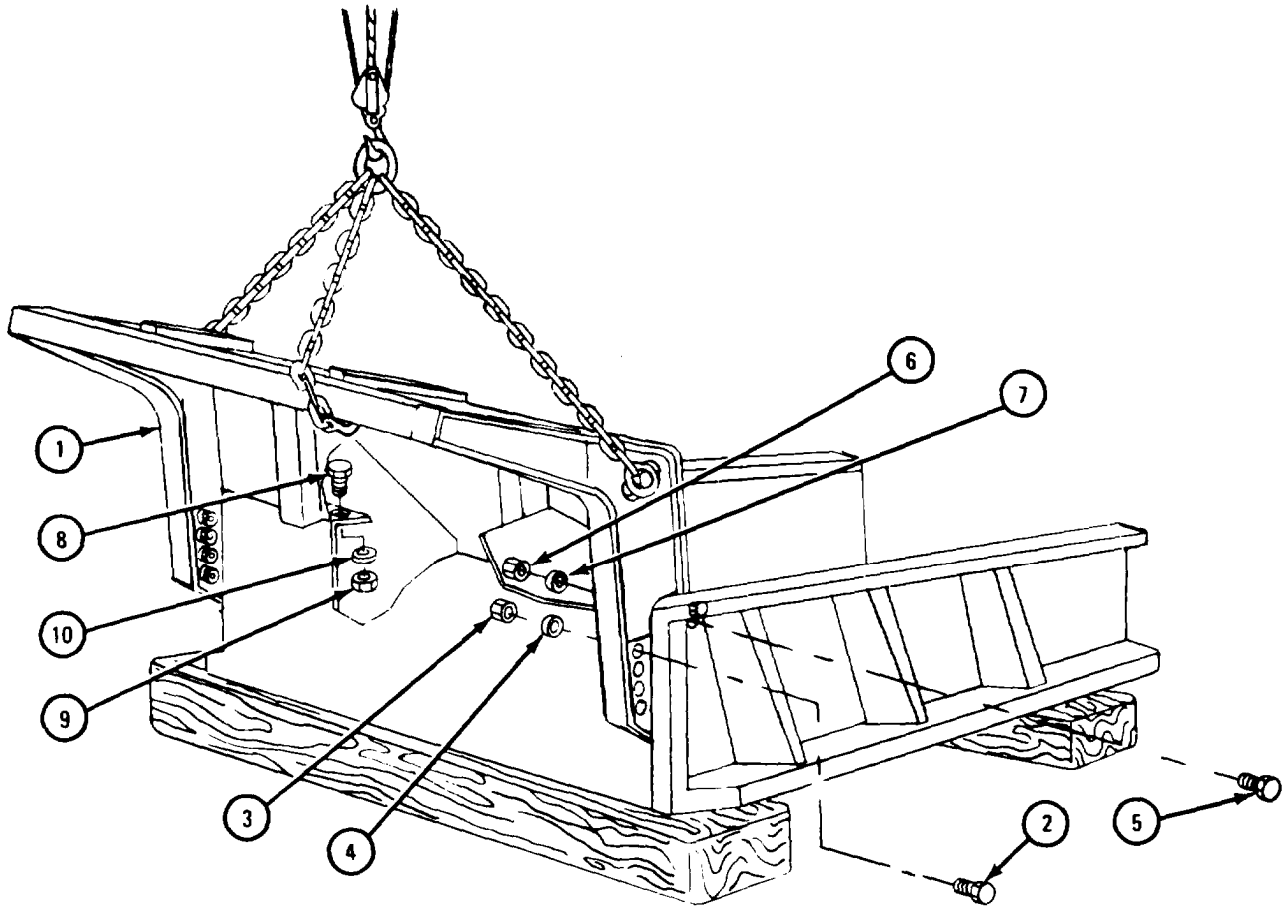


TA 084461

FRAME 3

1. Raise hoist equipment enough to hold weight of cab shield (1).
2. Takeout four screws (2), nuts (3), and washers (4).
3. Take out two screws (5), nuts (6), and washers (7).
4. Do steps 2 and 3 again on other side of body.
5. Take out seven screws (8), nuts (9), and washers (10).

GO TO FRAME 4



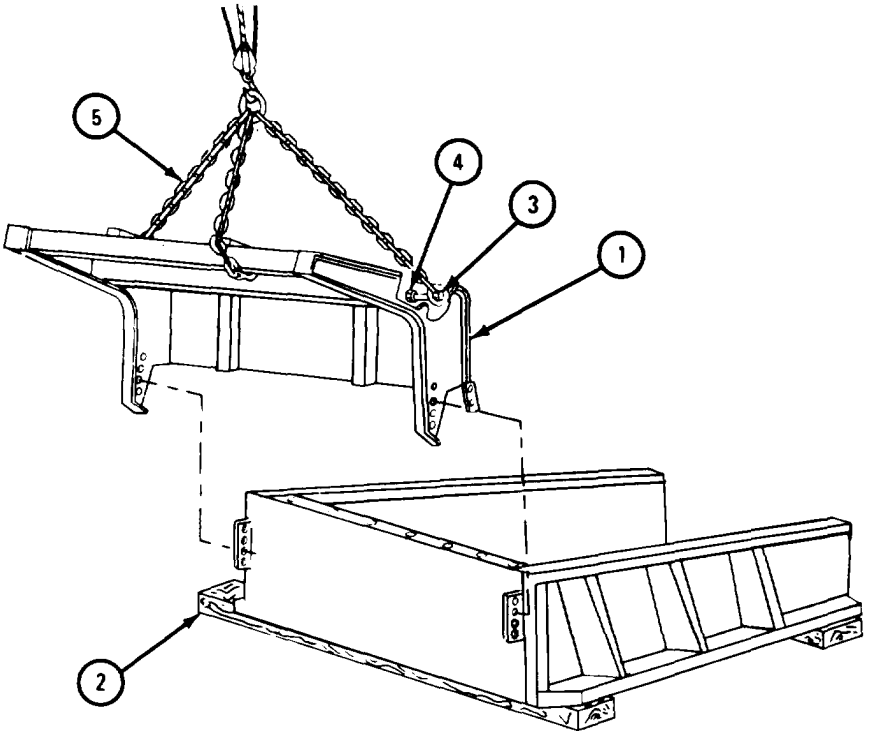
FRAME 4

Soldier A 1. Guide cab shield (1) when soldier B lifts it off dump body (2).

Soldier B 2. Using hoist equipment, lift cab shield (1) off dump body (2) and set it down on ground.

Soldier A 3. Take out two bolts (3) and nuts (4) and take off chain sling (5).

GO TO FRAME 5

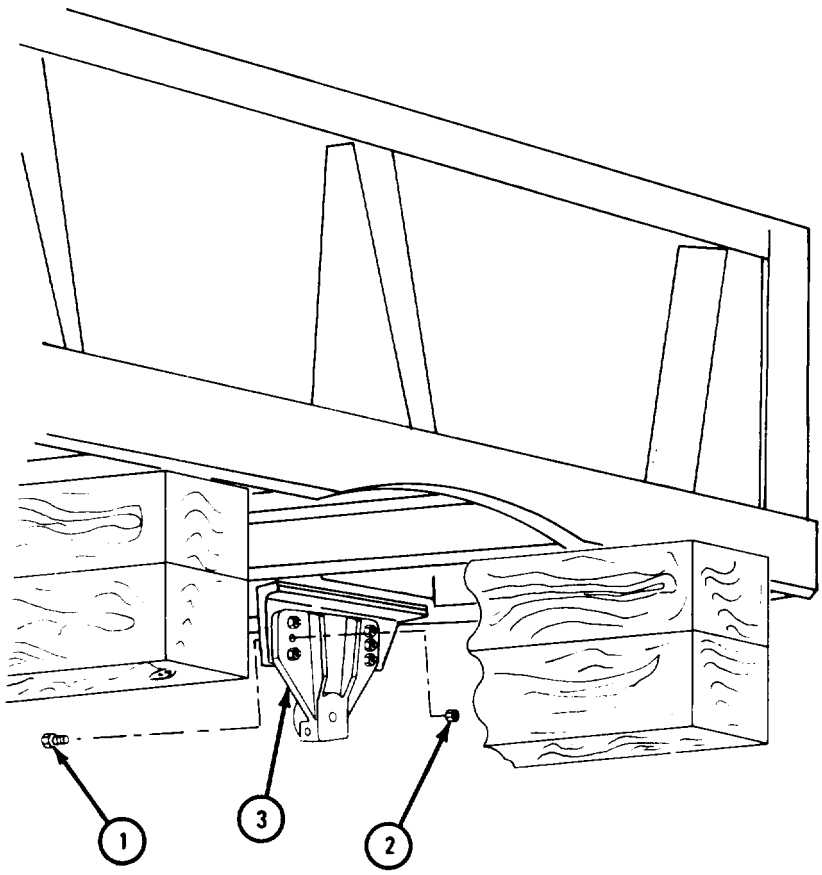


TA 084467

FRAME 5

1. Takeout six screws (1) and nuts (2).
2. Takeoff hinge bracket (3).
3. Do steps 1 and 2 again on other side of body.

END OF TASK



TA 084468

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

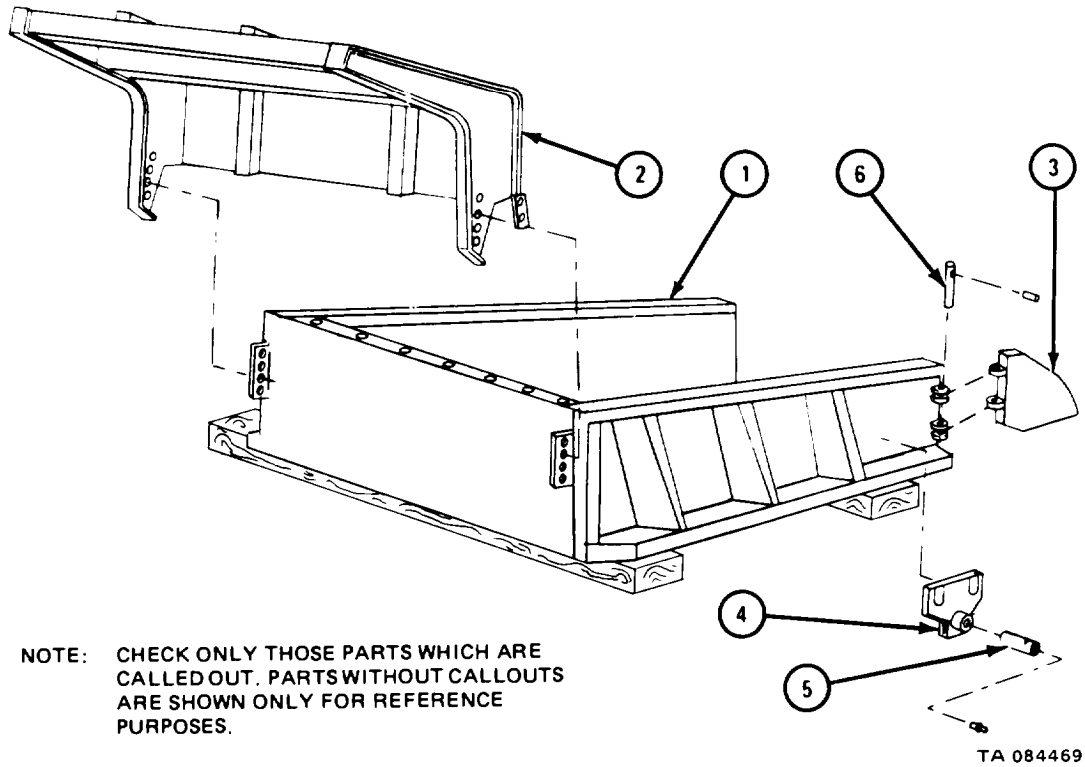
d. Cleaning. Clean body using steam cleaner. Clean smaller parts with solvent.

e. Inspection and Rep sir.

FRAME 1

1. Check that body (1), cab shield (2), two tailgate wings (3), and two hinge brackets (4) have no bends, dents, cracks or broken welds. Weld or straighten damaged parts. Refer to TM 9-237.
2. Check that two hinge pins (5) and four pins (6) are not bent, scored or damaged in any other way. If pins are damaged, get new ones.

END OF TASK

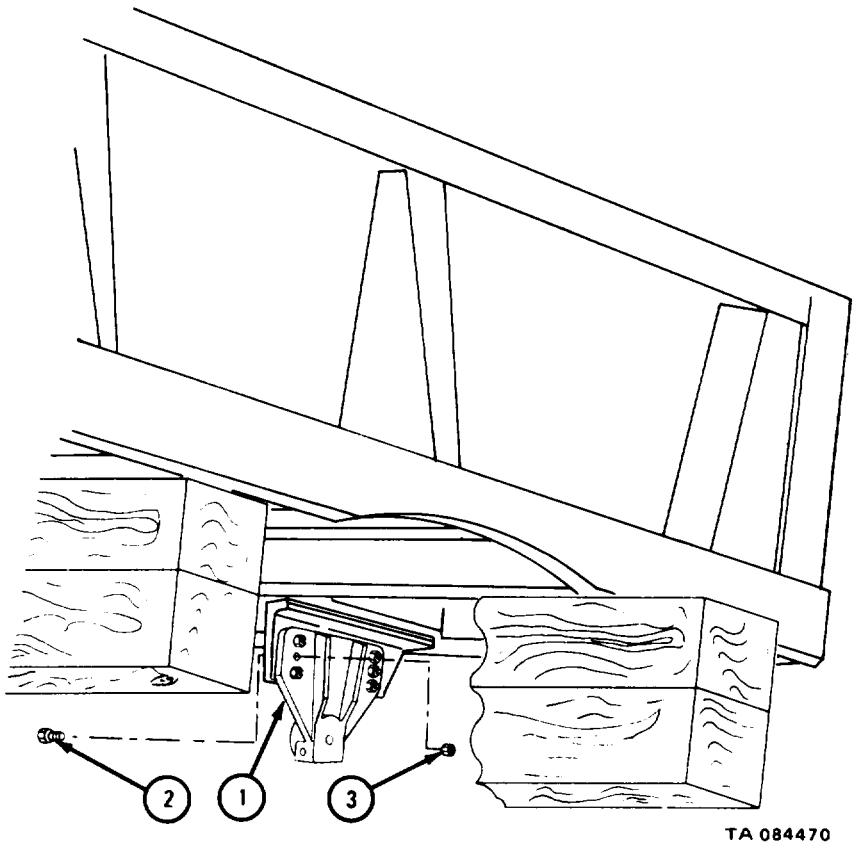


f. Assembly.

FRAME 1

1. Put hinge bracket (1) in place. Put in six screws (2) and nuts (3).
2. Do step 1 again on other side of body.

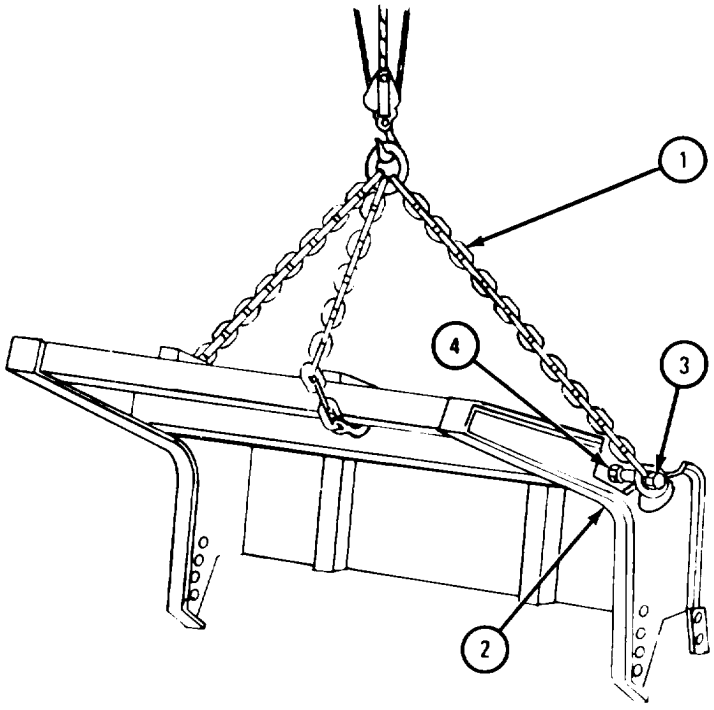
GO TO FRAME 2



FRAME 2

1. Place link of three-point chain sling (1) over hole in cab shield (2) as shown.
2. Put bolt (3) through link of three-point chain sling (1) and cab shield (2).
3. Put on nut (4).
4. Do steps 1 through 3 again at other side of cab shield (2).
5. Hook third section of chain sling (1) on front of cab shield (2) as shown.
6. Hook three-point chain sling (1) to hoist equipment as shown.

GO TO FRAME 3

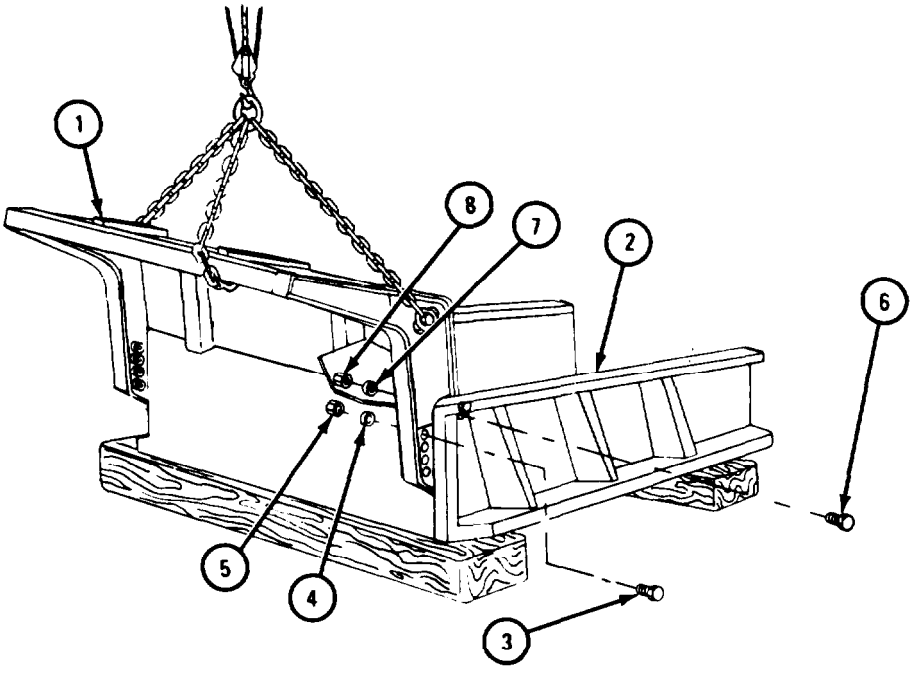


TA 084471

FRAME 3

Soldier A	1.	Guide cab shield (1) into place on dump body (2) when soldier B lifts it.
Soldier B	2.	Using hoist equipment, lift cab shield (1) in place on dump body (2).
Soldier A	3.	Put in four screws (3), washers (4), and nuts (5) on each side of dump body (2).
	4.	Put in two screws (6), washers (7), and nuts (8) on each side of dump body (2).

GO TO FRAME 4



TA 084472

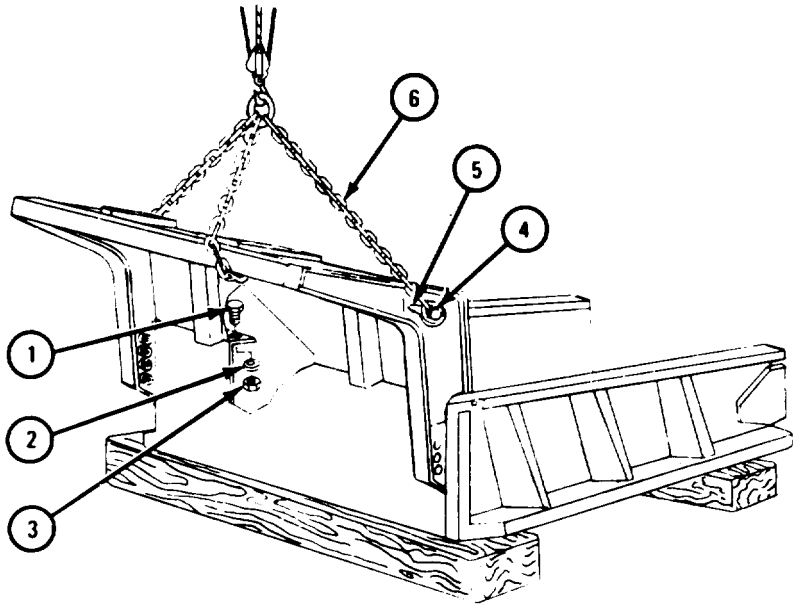
FRAME 4

Soldier A 1. Put in seven screws (1), washers (2), and nuts (3).

Soldier B 2. Lower hoist equipment.

Soldier A 3. Take out two bolts (4) and nuts (5) and take off three-point chain sling (6).

GO TO FRAME 5

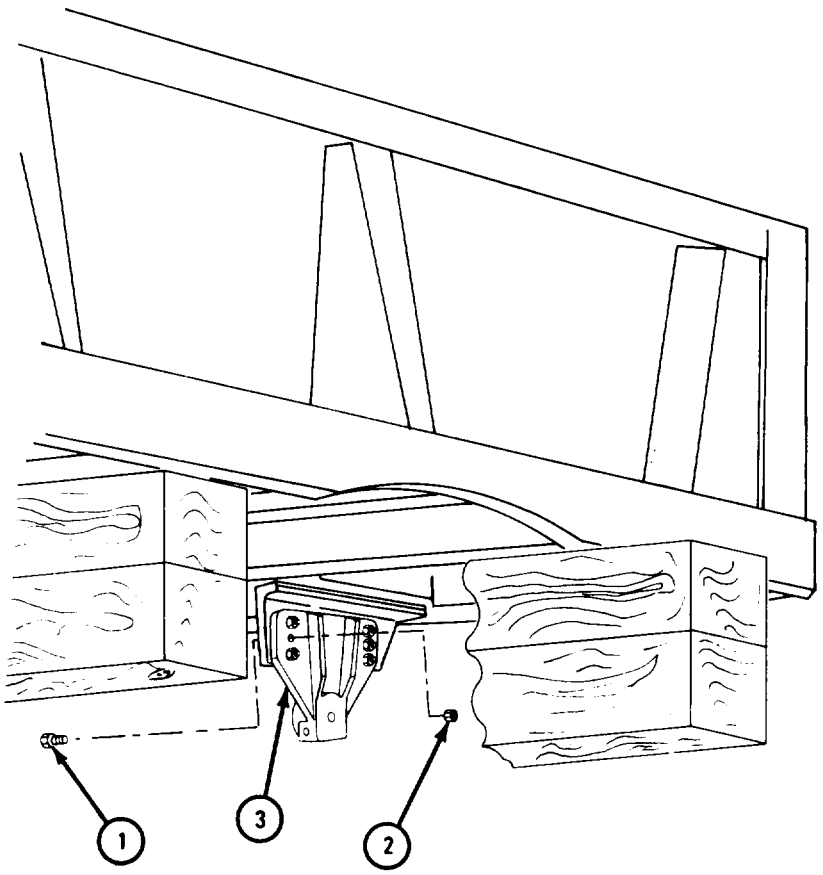


TA 087237

FRAME 5

1. Takeout six screws (1) and nuts (2).
2. Takeoff hinge bracket (3).
3. Do steps 1 and 2 again on other side of body.

END OF TASK



TA 084468

g. Replacement.

FRAME 1

WARNING

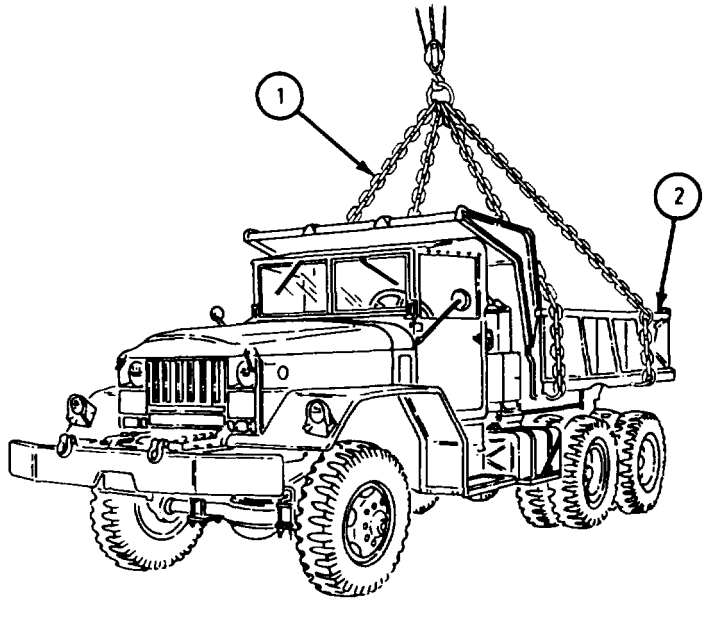
Dump body is a heavy piece of equipment. Do not stand under it when it is being lifted. Failure of hoist equipment or slippage of chain slings could cause death or serious injury to personnel.

1. Hook up four-point chain sling (1) to dump body (2) as shown. Join chain sling to hoist equipment.

Soldier A 2. Guide dump body (2) as soldier B lowers it onto truck.

Soldier B 3. Using hoist equipment, lower dump body (2) into place on truck.

GO TO FRAME 2



TA 084474

FRAME 2

Soldier A 1. Using hoist equipment, raise or lower dump body (1) as needed to line up bores for two hinge pins (2).

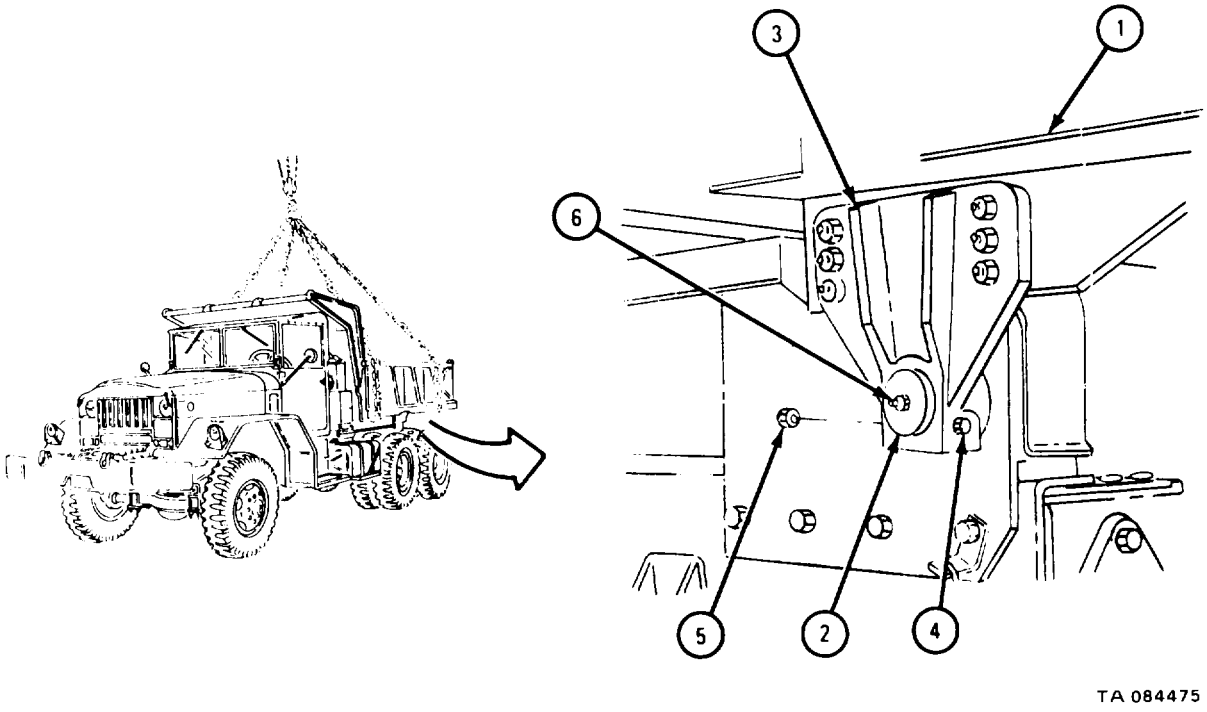
Soldier B 2. Drive hinge pin (2) in place. Make sure groove in hinge pin lines up with screw hole in hinge bracket (3).

3. Put in screw (4) and nut (5).

4. Put in grease fitting (6).

Soldiers A and B 5. Do steps 1 through 4 again on other side of dump body (1).

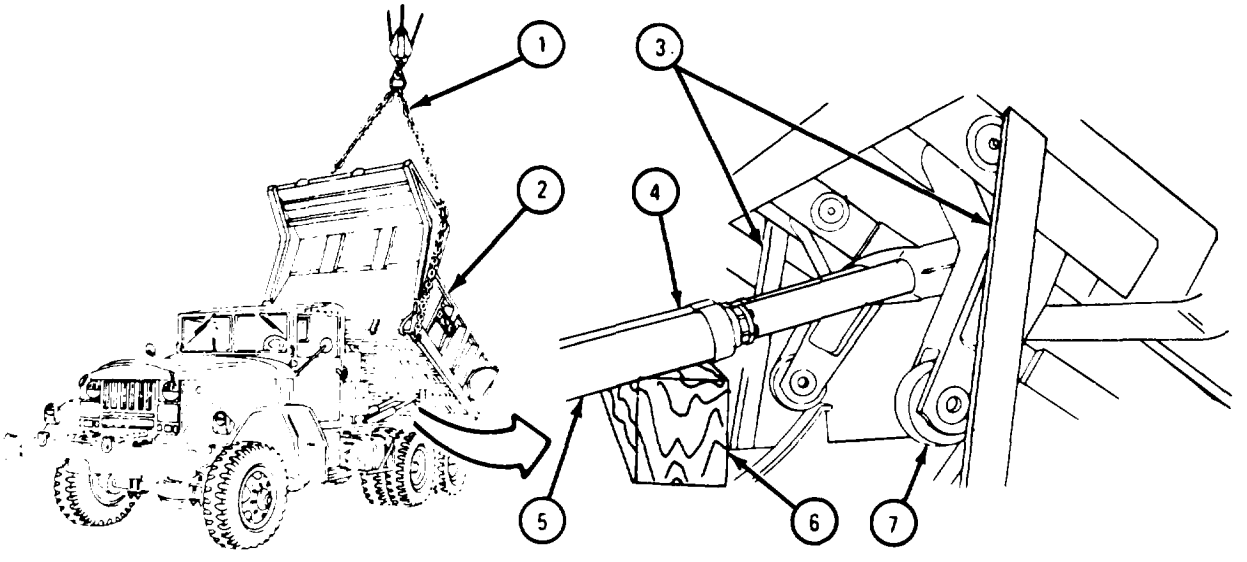
G0 TO FRAME 3



FRAME 3

Soldier A	1.	Hook up two-point chain sling (1) to hoist equipment.
Soldier B	2.	Using hoist equipment, raise dump body (2) to fully raised position.
Soldier A	3.	Raise two hoist braces (3) to fully raised position.
Soldier B	4.	Using hoist equipment, lower dump body (2) on safety braces (3).
	5.	Stand at outside of cylinder (4).
Soldier A	6.	Stand at outside of cylinder (5).
Soldiers A and B	7.	Lift up cylinders (4 and 5) at the same time and place wood block (6) under cylinders as shown.
	8.	Replace both hoist roller assemblies (7). Refer to para 17-28.

GO TO FRAME 4



TA 084476

FRAME 4

Soldier A 1. Lower hoist equipment when soldier B lowers dump body (1).

Soldier B 2. Lower dump body (1). Refer to TM 9-2320-221-10

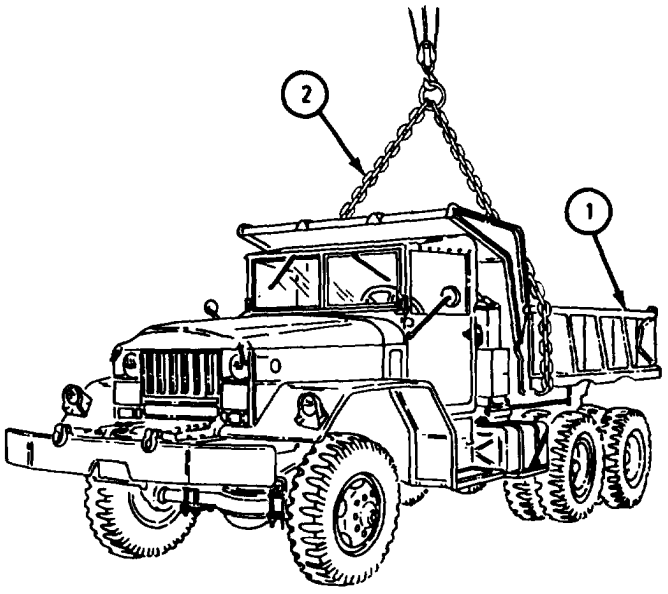
Soldier A 3. Unhook two-point chain sling (2).

N O T E

Follow-on Maintenance Action Required:

1. Replace dump body tailgate. Refer to para 16-30.
2. Replace dump body tailgate control linkage. Refer to para 16-31.
3. Replace taillights. Refer to TM 9-2320-211-20.

END OF TASK



TA 084477

16-29. TAILGATE ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT (TRUCKS M54A2, M54A2C, AND M55A2).

TOOLS : No special tools required

SUPPLIES : Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Cotter pin (8)

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

Soldier A 1. Hook chain hoist and chain (1) to tailgate assembly (2) as shown.

Soldier B 2. Using chain hoist, take slack out of chain (1).

NOTE

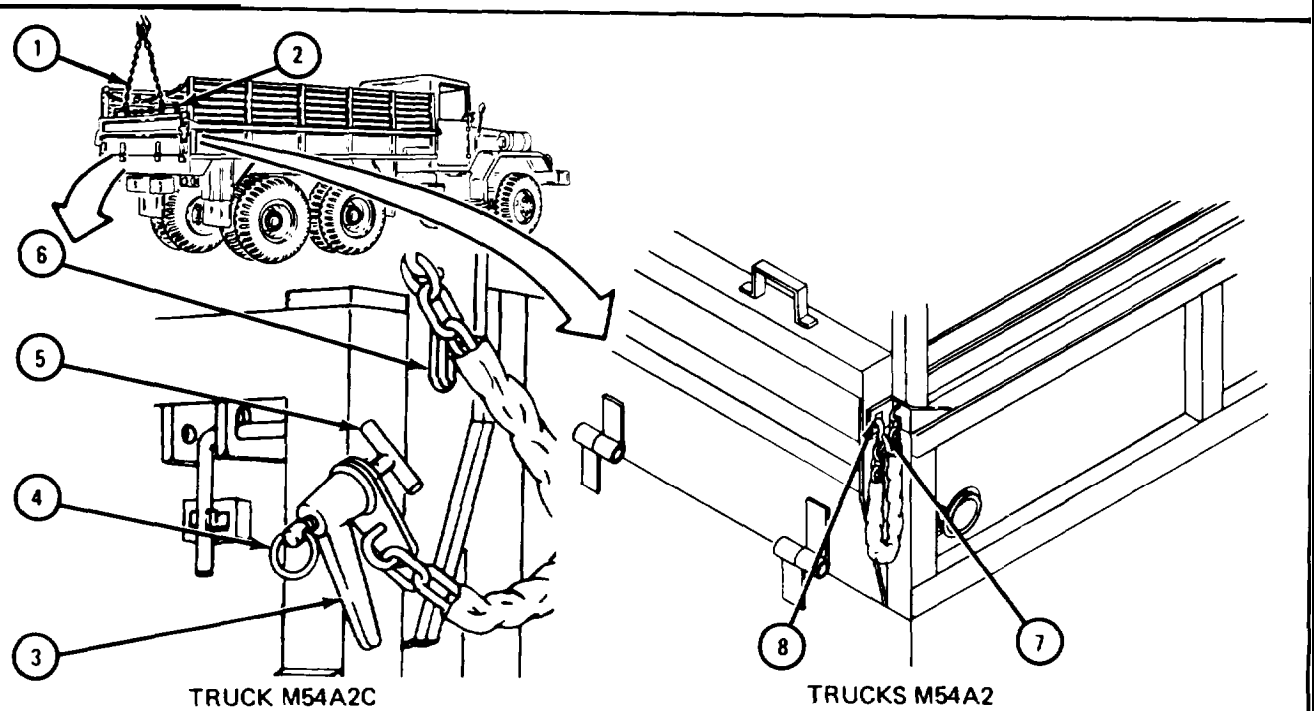
If working on truck M54A2C, do steps 3 and 4. If working on trucks M54A2 and M55A2, do step 5.

Soldier A 3. Turn two handles (3), one on each side of tailgate assembly (2), to left.

4. Turn two rings (4) 90° and aline two T-bolts (5) with two slots (6). Pull handles (3) out from slots (6).

5. Take two hooks (7) out of two slots (8).

GO TO FRAME 2



FRAME 2

Soldier A 1. Takeout two cotter pins (1) and two washers (2).

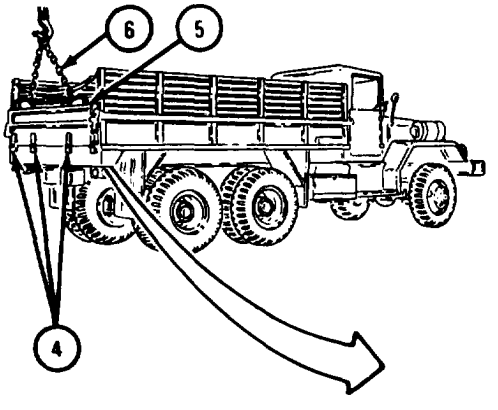
2. Drive out hinge pin (3).

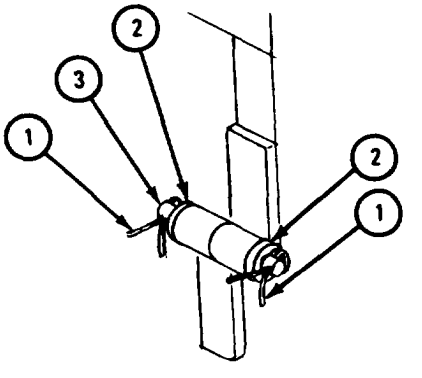
3. Do steps 1 and 2 again for other three hinge pins (4).

Soldier B 4. Using chain hoist, take tailgate (5) off truck and set it down on ground.

5. Take off chain (6) and chain hoist.

END OF TASK





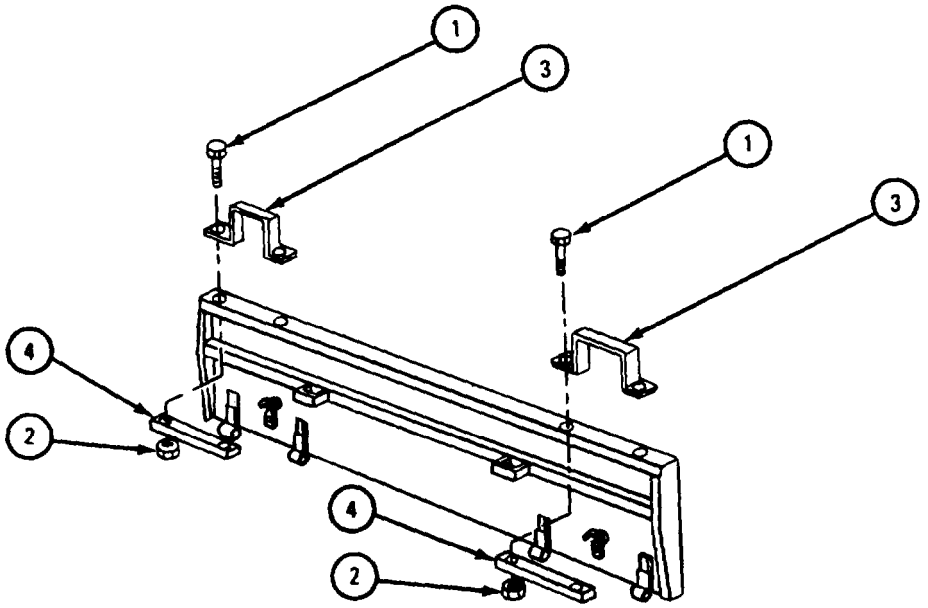
TA 084493

b. Disassembly.

FRAME 1

1. Take off four screws (1) and nuts (2) and take off two tailgate steps (3) and plates (4).

END OF TASK



c. Cleaning, Inspection, and Repair.

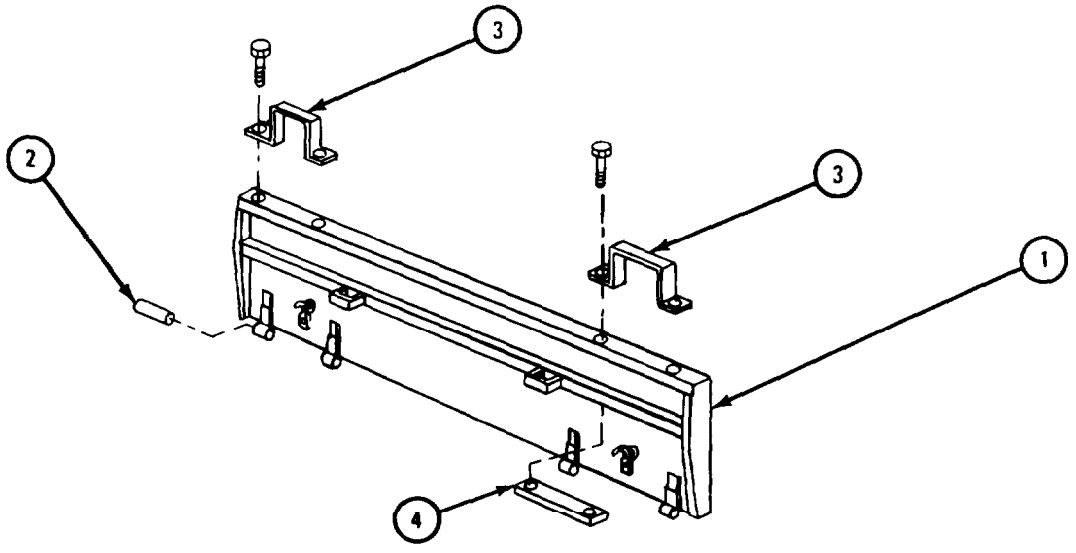
FRAME 1

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

1. Clean all parts with solvent.
2. Check that tailgate (1) has no bends or cracked welds. Repair by straightening or welding. Refer to TM 9-237. If more repair is needed, get a new part.
3. Check that four hinge pins (2) are not bent. Repair by straightening. If more repair is needed, get a new hinge pin.
4. Check that two steps (3) have no bends or dents. Repair by straightening.
5. Check that plates (4) have no cracks or bends. Repair by straightening both sides.

END OF TASK



NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES.

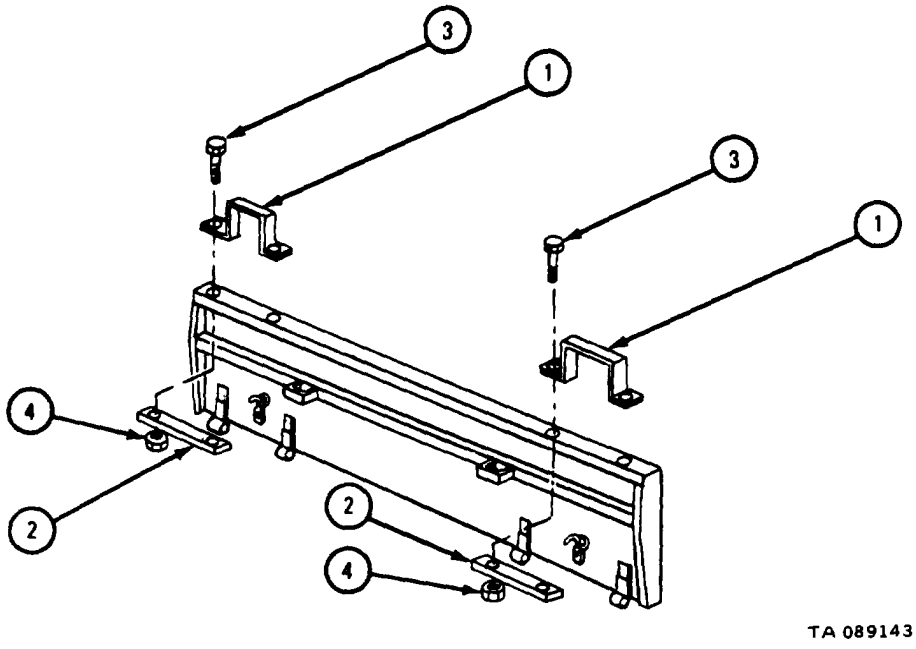
TA 087429

d. Assembly.

FRAME 1

1. Put two tailgate steps (1) and plates (2) in place and put in four screws (3) and four nuts (4).

END OF TASK



e. Replacement.

Frame 1

Soldier A 1. Put chain hoist and chain (1) on tailgate (2) as shown.

2. Using hoist, lift tailgate (2) into place.

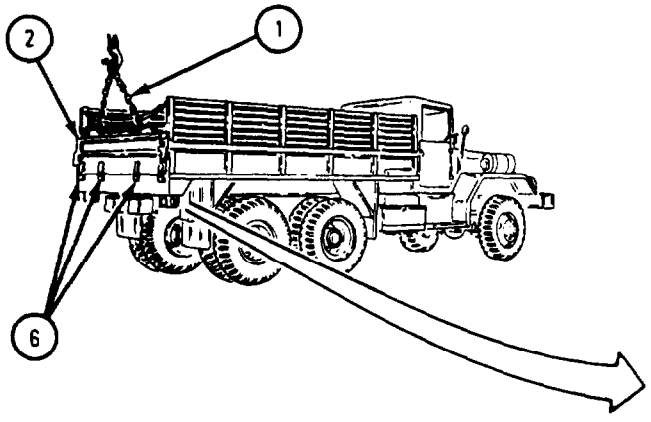
Soldier B 3. Drive in hinge pin (3).

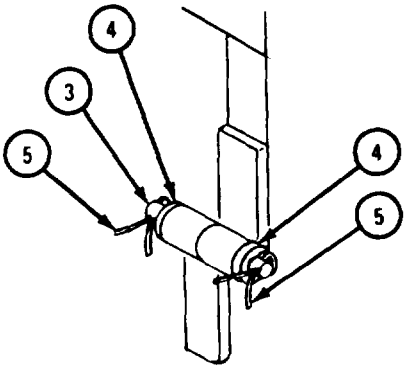
4. Put on two washers (4).

5. Put in two cotter pins (5).

6. Do steps 3 through 5 again for other three hinge pins (6).

GO TO FRAME 2





TA 087430

FRAME 2

NOTE

If working on truck M54A2C, do steps 1 through3.
If working on trucks M54A2 and M55A2, do step 4.

Soldier B 1. Put two T-bolts (1) through two slots (2).

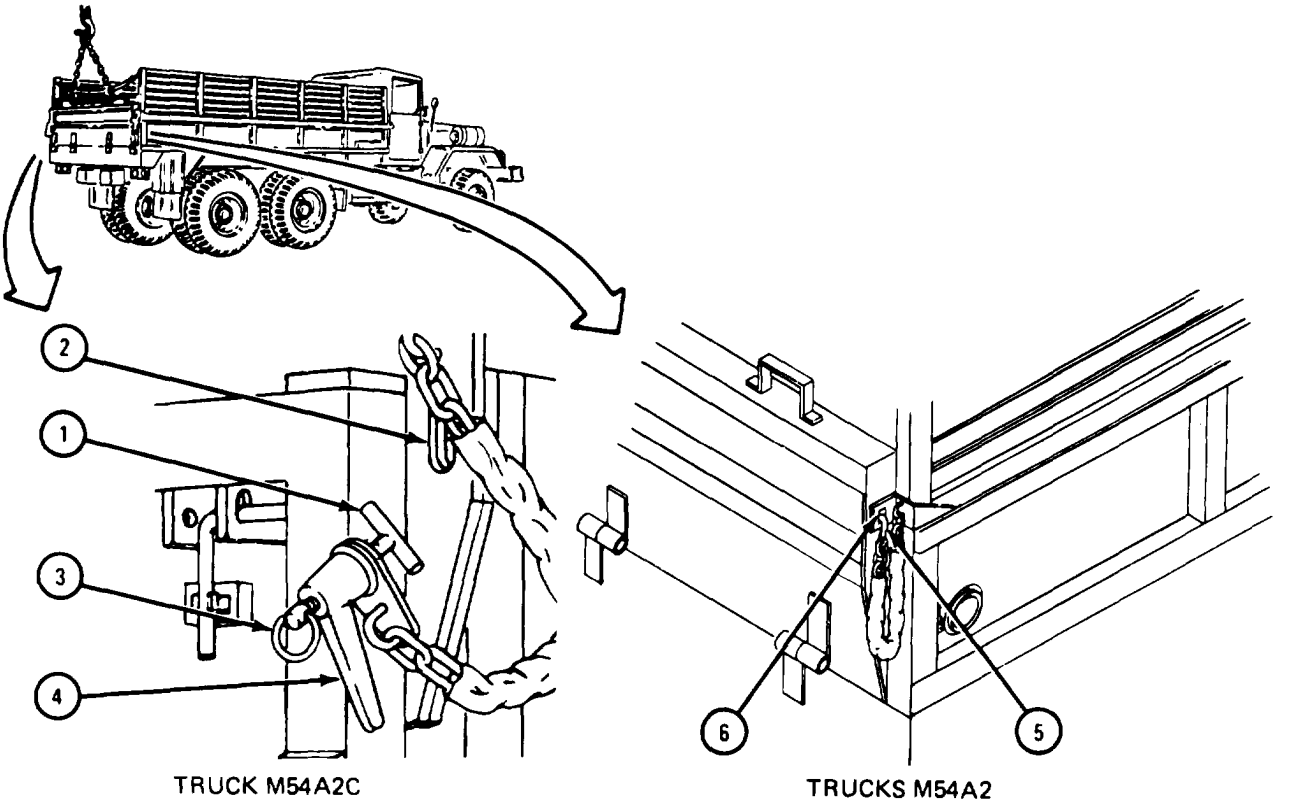
2. Turn two rings (3) 90° to turn T-bolts (1) across slots (2).

3. Turn two handles (4) to right.

4. Put two hooks (5) in two slots (6).

Soldier A 5. Lower hoist and take off chain.

END OF TASK



TRUCK M54A2C

TRUCKS M54A2
AND M55A2

TA 087431

16-30. DUMP TRUCK TAILGATE REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M51A2).

TOOLS : No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Release tailgate lower latches. Refer to TM 9-2320-211-10.

b. Removal.

FRAME 1

Soldier A 1. Hook up chain sling (1) to tailgate (2) as shown. Join chain sling to hoist and take up slack in chain sling.

Soldier B 2. Unhook two chains (3) from two slotted chain catches (4).

WARNING

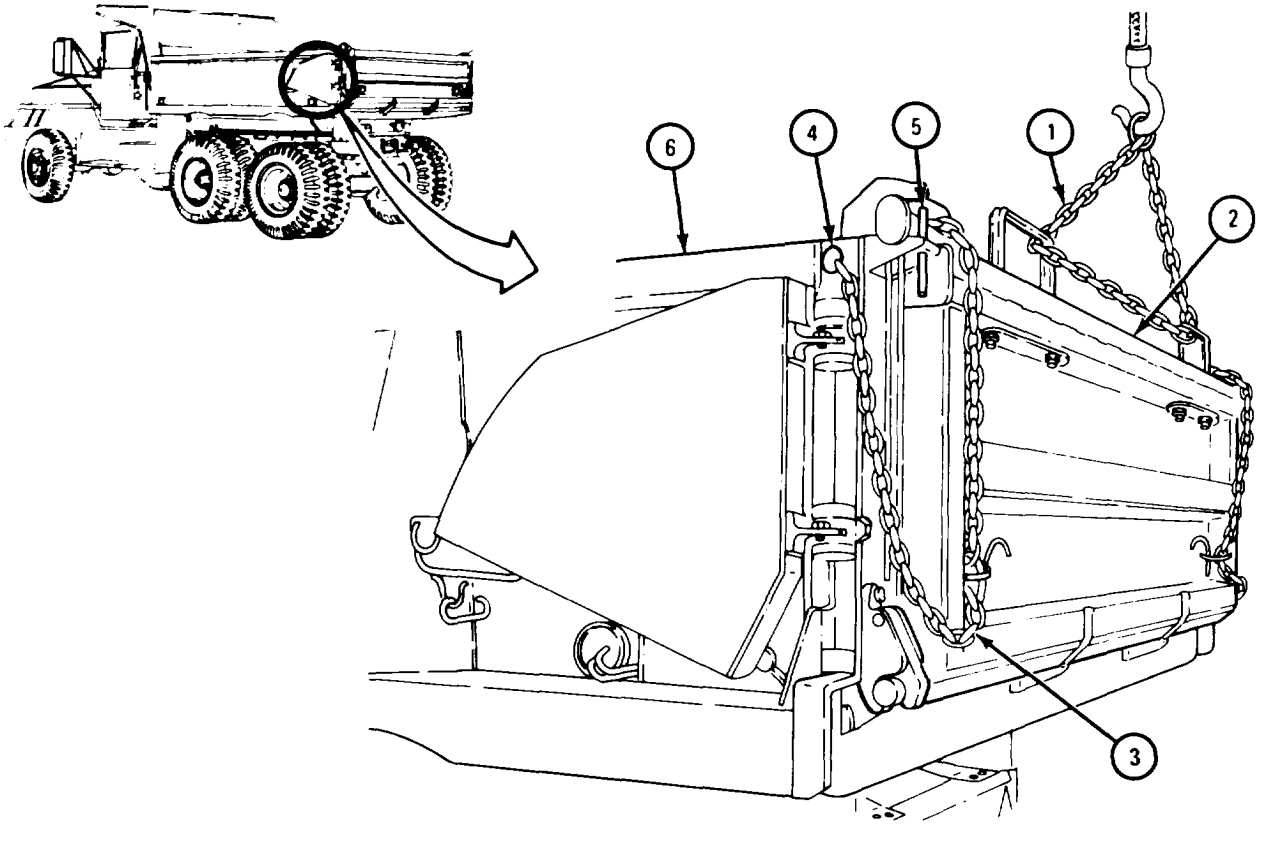
When pulling pins (5), make sure that there is tension on chain and chain hoist or tailgate may tip or fall, causing serious injury to personnel.

3. Pull out two tailgate pins (5).

Soldier A 4. Using hoist, lift tailgate (2) off body (6). Set it down on wood blocks.

5. Unhook chain sling (1) from hoist and tailgate (2).

END OF TASK

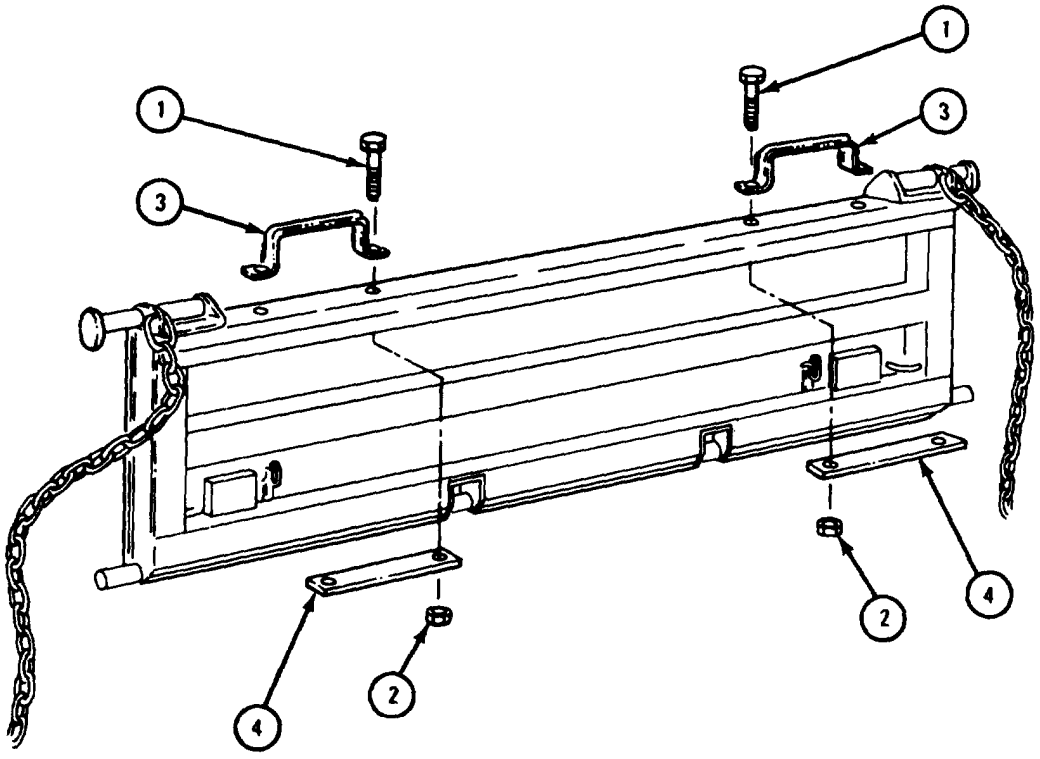


c. Disassembly.

FRAME 1

1. Take out four screws (1) and four nuts (2). Take off two steps (3) and two reinforcement bars (4).

END OF TASK



TA 084346

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

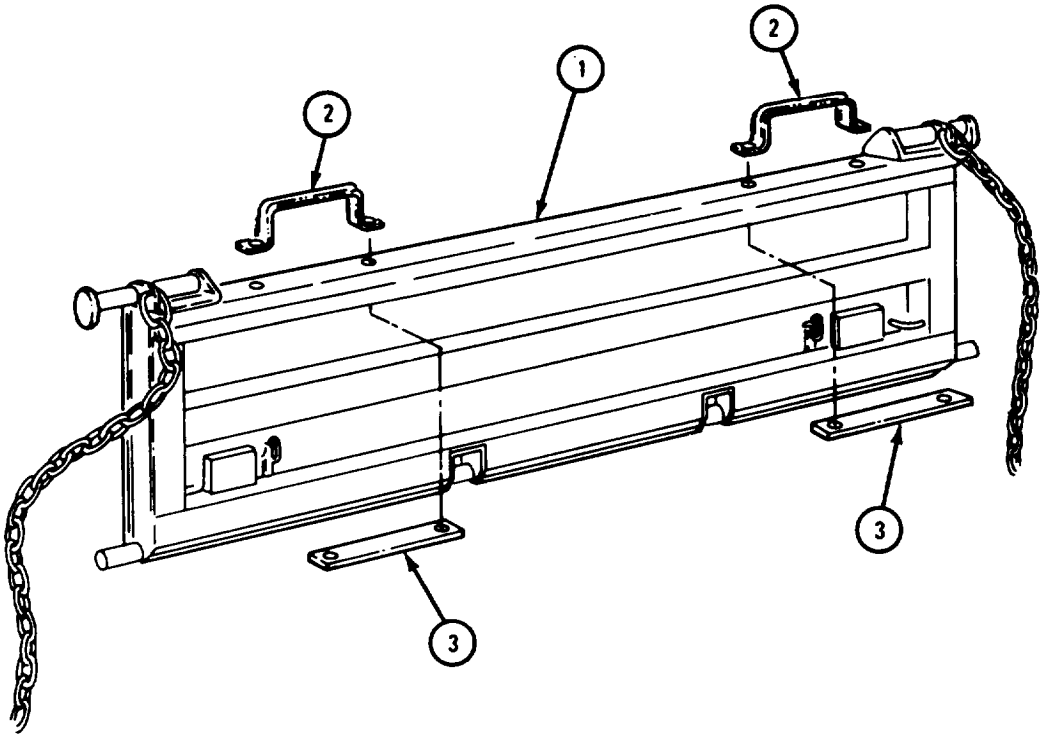
d. Cleaning. Using steam cleaner, clean tailgate. Clean smaller parts with solvent. Let parts dry.

e. Inspection and Repair.

FRAME 1

1. Check that tailgate (1), two steps (2) and two reinforcement bars (3) have no bends, dents, cracks or other damage.
2. Weld or straighten damaged parts. Refer to TM 9-237 or FM 43-2.

END OF TASK



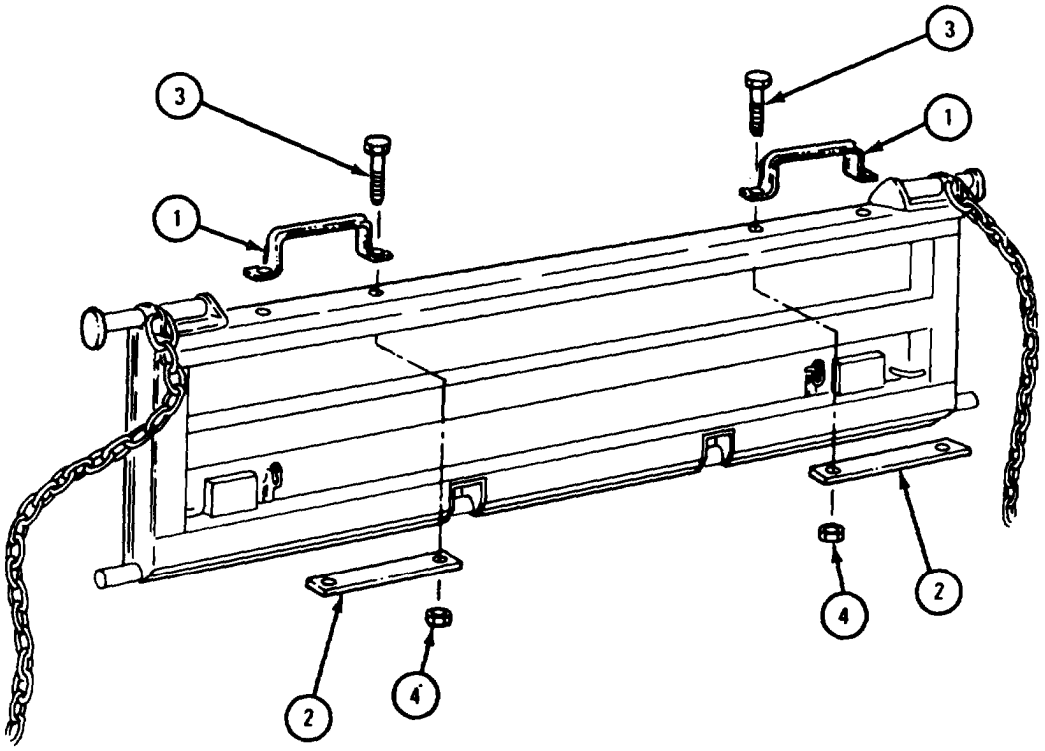
TA 084347

f. Assembly.

FRAME 1

1. Put two steps (1) and two reinforcement bars (2) in place.
2. Put in four screws (3) and four nuts (4).

END OF TASK



TA 084348

g. Replacement.

WARNING

Care must be taken when lifting tailgate. Tailgate could fall and cause injury to personnel.

FRAME 1

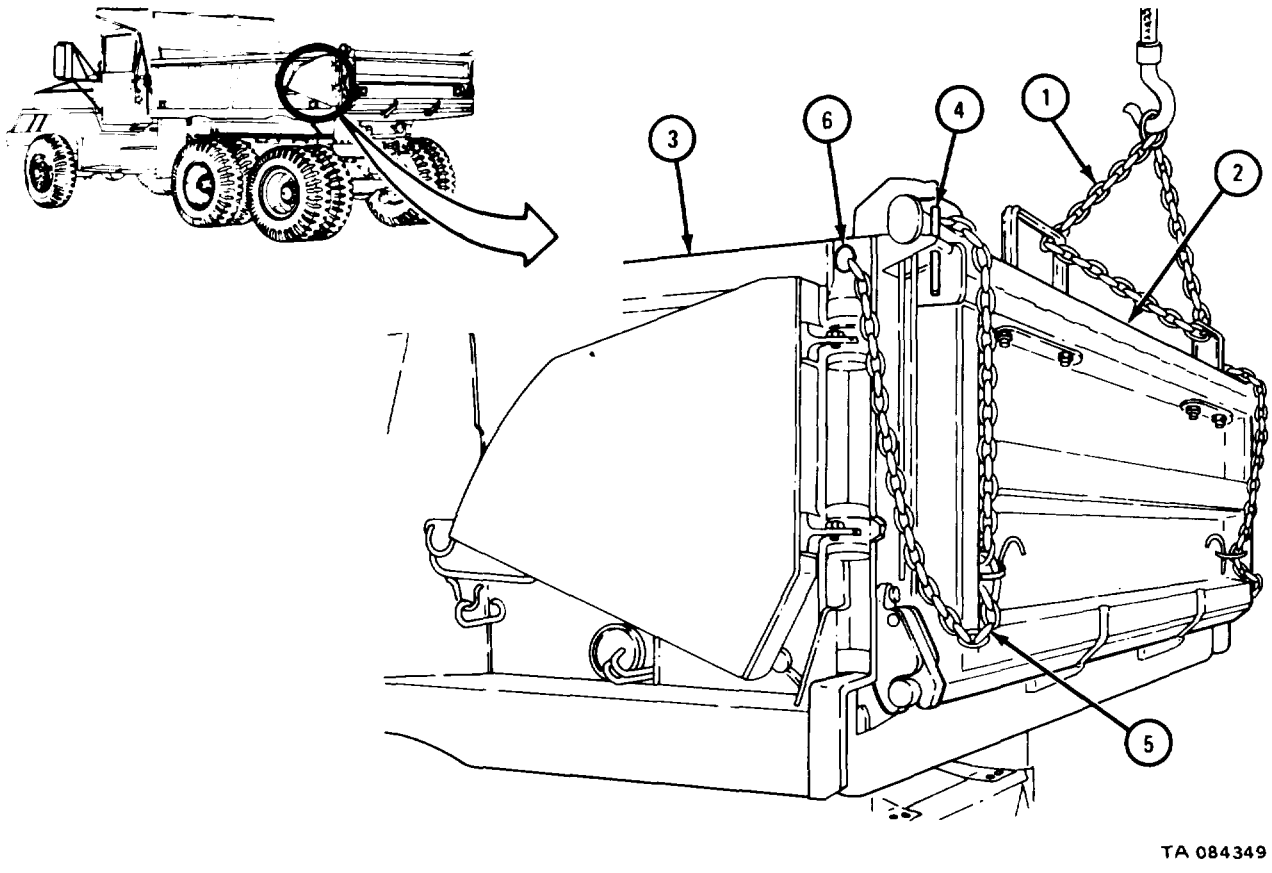
Soldier A	1.	Hook up chain sling (1) to tailgate (2) as shown. Join chain sling to hoist.
	2.	Lift tailgate (2) into place on body (3).
Soldier B	3.	Put in two tailgate pins (4).
	4.	Hook two chains (5) into two slotted chain catches (6).

NOTE

Follow-on Maintenance Action Required:

Latch tailgate lower latches. Refer to TM 9-2320-211-10.

END OF TASK



16-31. TAILGATE CONTROL LINKAGE REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M51A2).

TOOLS: No special tools required

SUPPLIES: Cotter pin (4)

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

WARNING

Never work under dump body unless safety braces are properly positioned. When body is partially raised, always use a strong heavy prop to hold body in raised position. If these steps are not taken, personnel can be seriously injured.

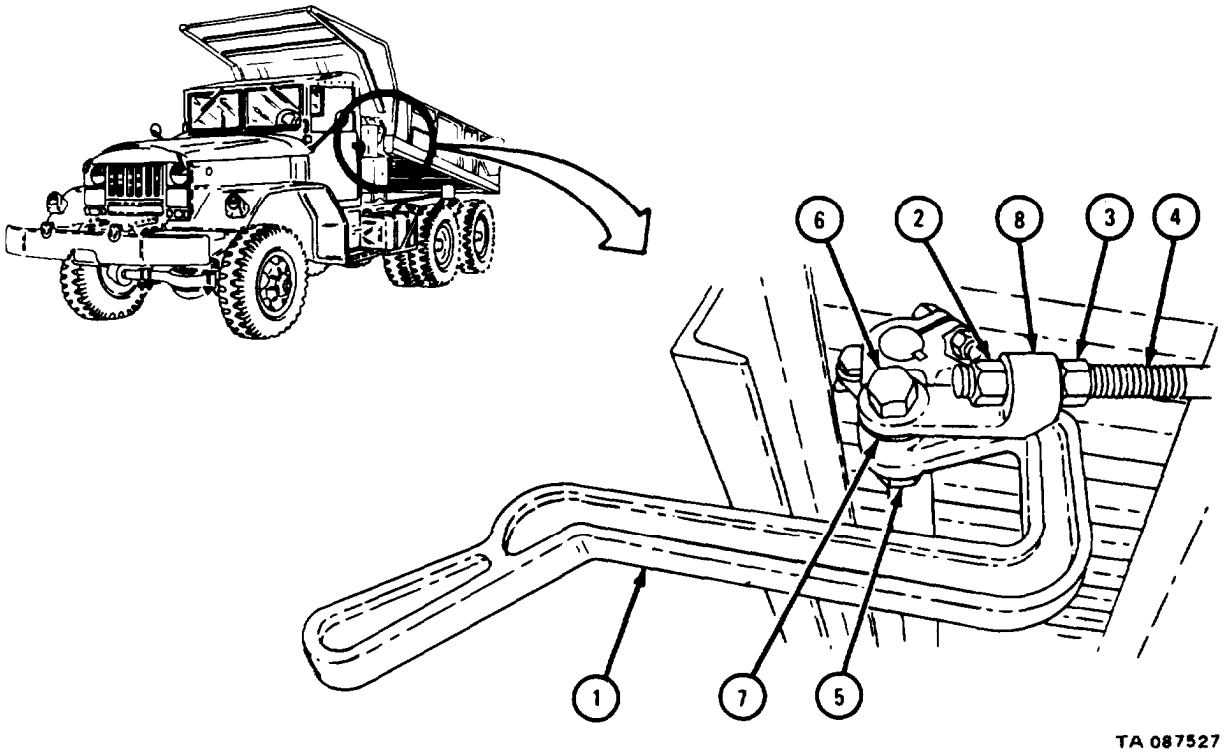
a, Preliminary Procedure. Raise dump body partway and put in safety braces. Refer to Hoist Brace Locking and Unlocking, TM 9-2320-211-20.

b. Removal.

FRAME 1

1. Pull hand control lever (1) forward and down to open position.
2. Take off nut (2) and back off nut (3) on control rod (4).
3. Take off clevis locknut (5) and screw out clevis bolt (6) with washer (7).
4. Take tailgate control clevis (8) off control rod (4).

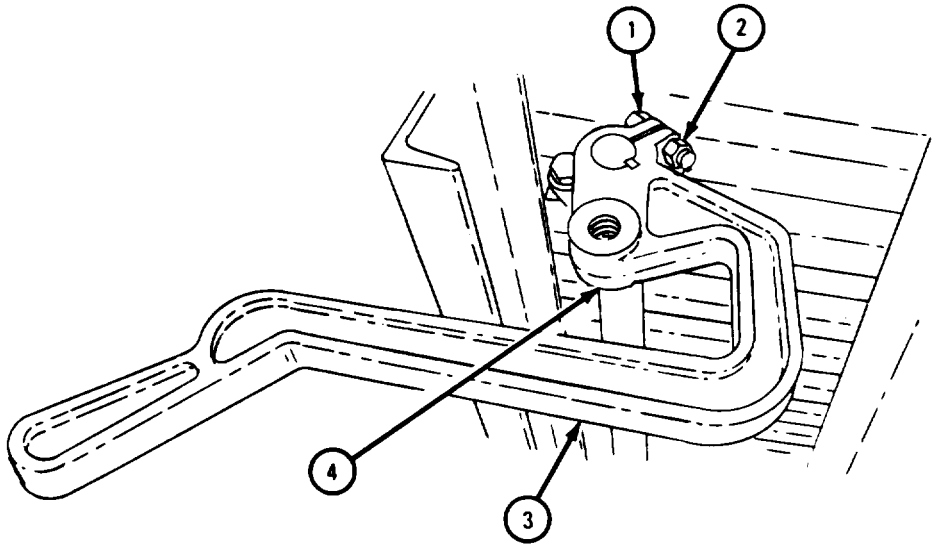
GO TO FRAME 2



FRAME 2

1. Loosen capscrew (1) and locknut (2).
2. Lightly tap control arm (3) off control shaft (4).

GO TO FRAME 3

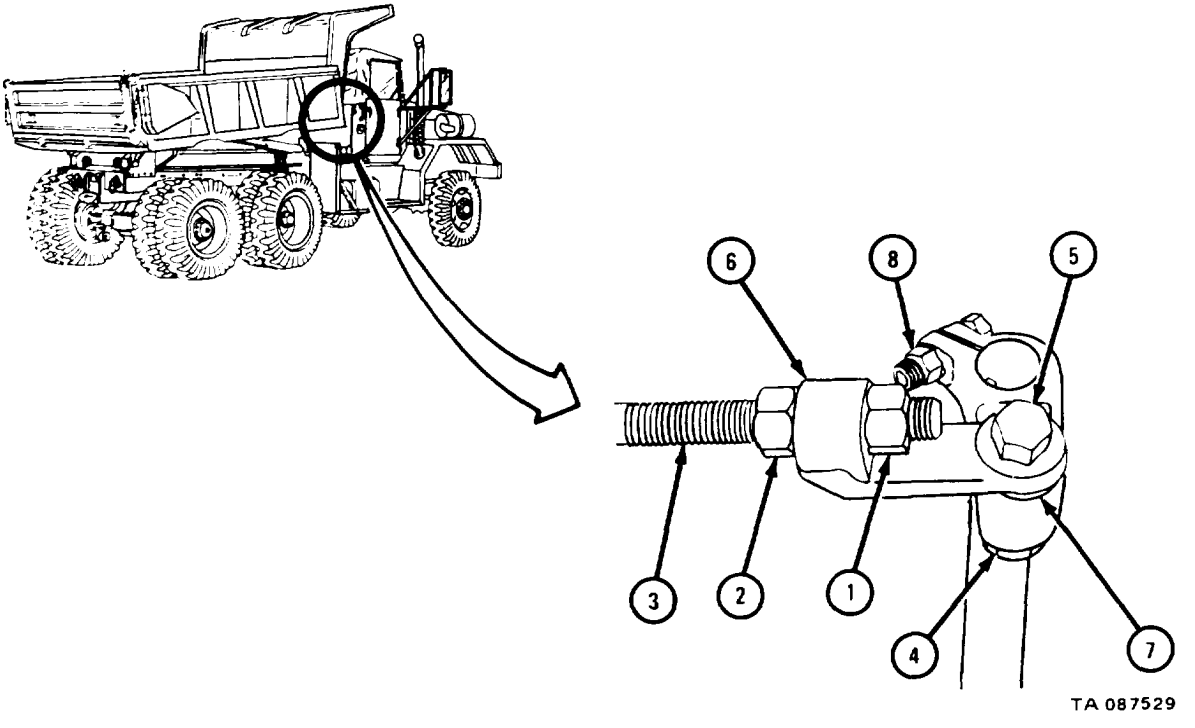


TA 087528

FRAME 3

1. Take off nut (1) and back off nut (2) on right side control rod (3).
2. Take off clevis nut (4) and screw out clevis bolt (5). Take off clevis (6) with washer (7).
3. Loosen locknut (8).

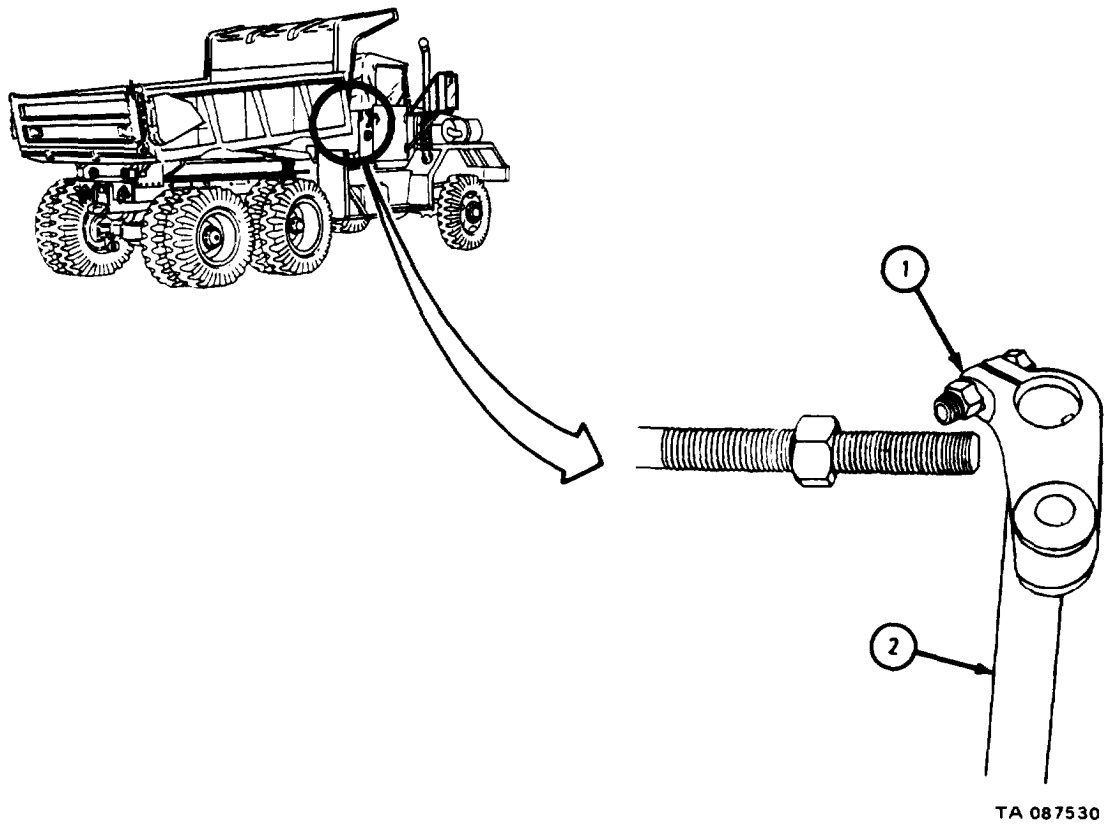
GO TO FRAME 4



FRAME 4

1. Lightly tap lever (1) off control shaft (2).

GO TO FRAME 5



FRAME 5

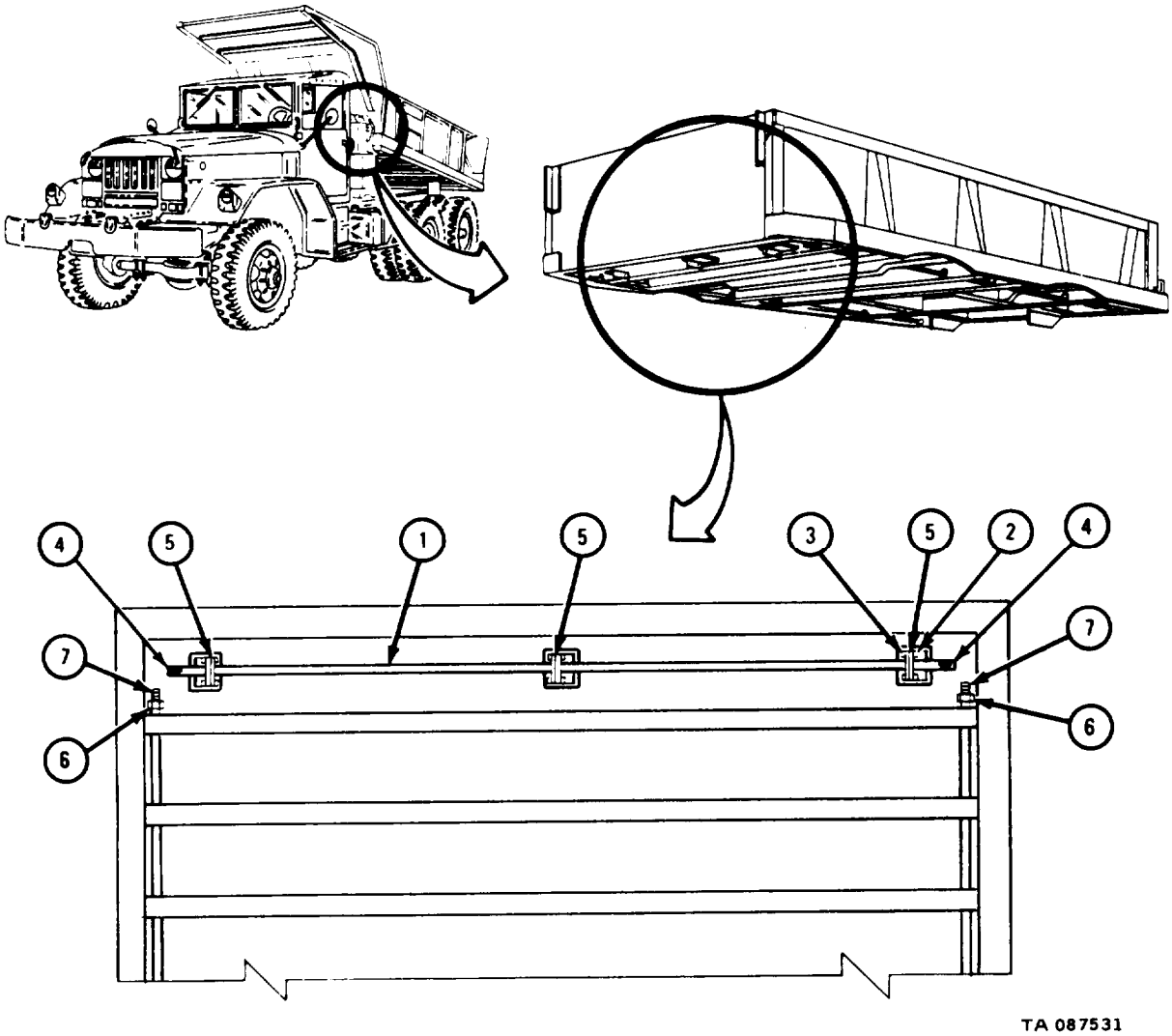
Soldier A 1. Hold control shaft assembly (1) in place.

Soldier B 2. Take off six capscrews (2) and six locknuts (3).

Soldiers A and B 3. Take off control shaft assembly (1). Take out two woodruff keys (4) and slide off three bearings (5).

Soldier A 4. Take off two nuts (6) from two control rods (7).

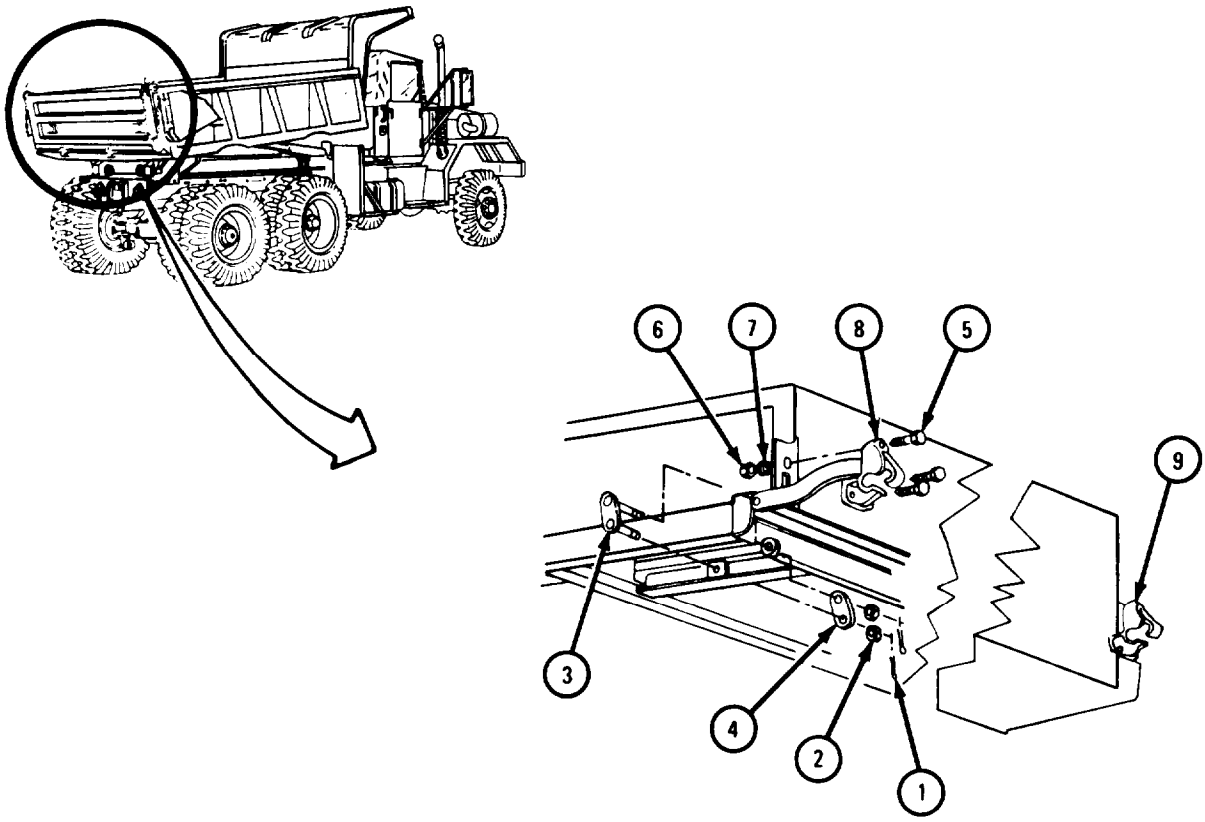
GO TO FRAME 6



FRAME 6

1. Take out two cotter pins (1) from two link nuts (2).
2. Take off two link nuts (2). Take out main rod link (3) and link plate (4).
3. Take off three cap screws (5) and three nuts (6) with flat washer (7). Take off tailgate control latch (8).
4. Do steps 1 through 3 again for tailgate control latch (9) on other side of dump body.

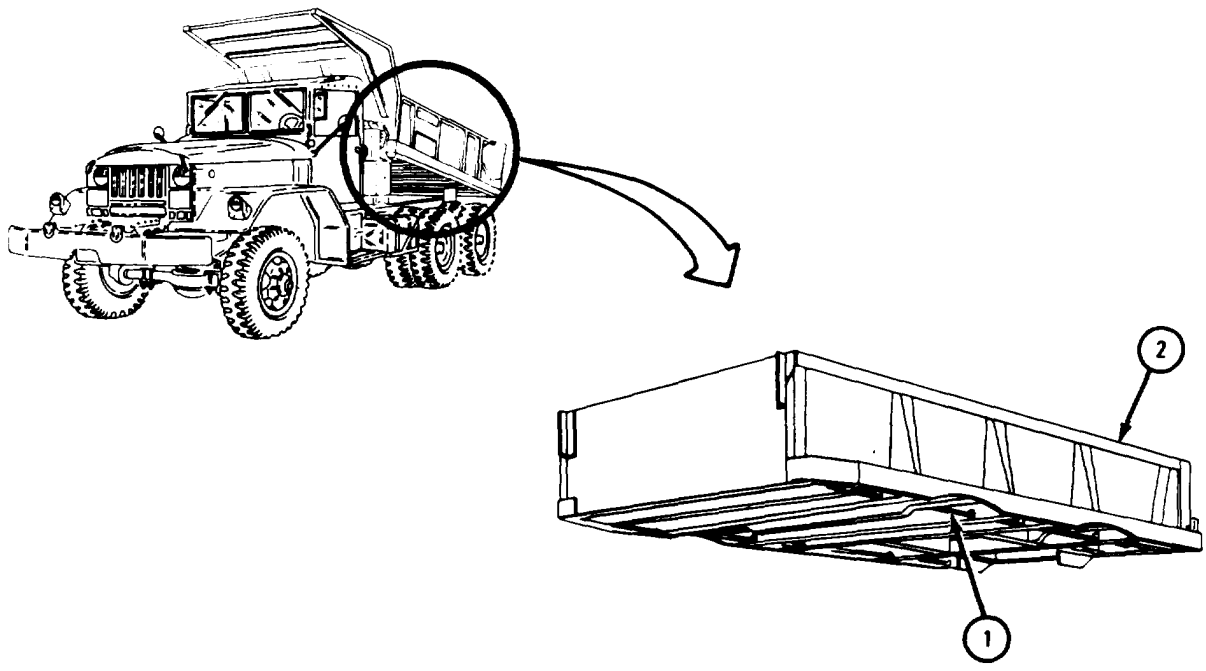
GO TO FRAME 7



FRAME 7

1. Take out two control rods (1) through front of dump body (2).

END OF TASK



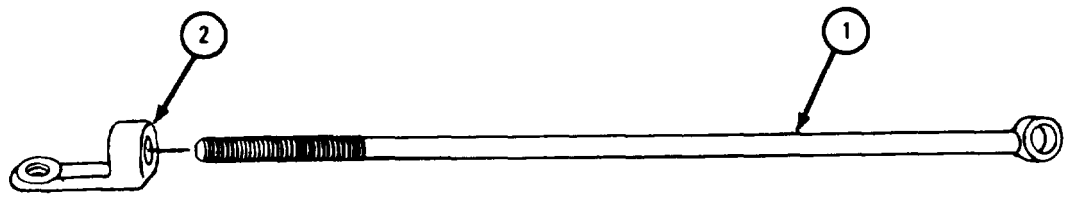
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection.

FRAME 1

1. Check that threads are not damaged.
2. Check that main control rods (1) are not bent.
3. Put two tailgate control clevises (2) on main control rods (1). Check that there is not too much play in bores. Check that castings are not cracked.

GO TO FRAME 2

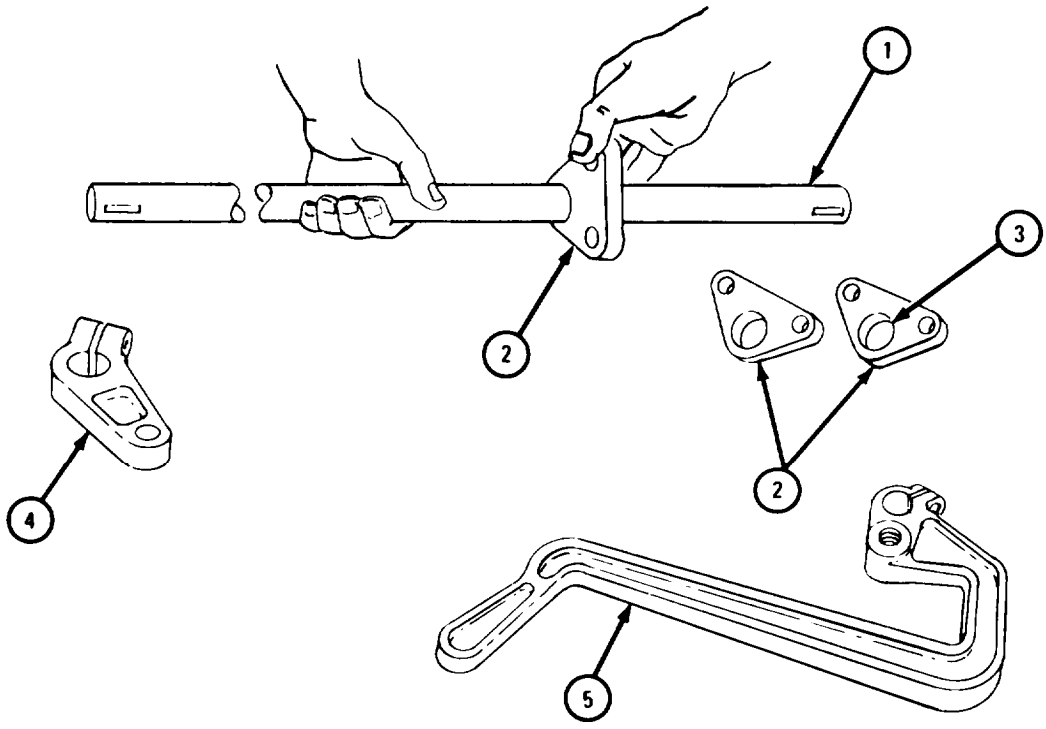


TA 087534

FRAME 2

1. Check that tailgate control shaft (1) is not bent.
2. Put three tailgate control shaft bearings (2) on tailgate control shaft (l).
3. While holding tailgate control shaft (1), twist each bearing (2) on control shaft to make sure that there is not too much play in bearing bores (3).
4. Check play in bores and look for cracks in lever (4) and control arm (5).

GO TO FRAME 3

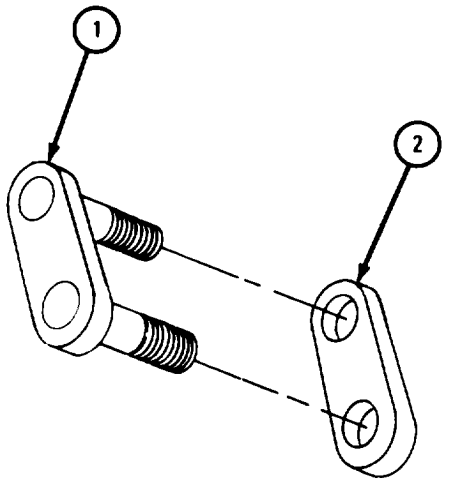


TA 087535

FRAME 3

1. Check that tailgate main rod link (1) is not cracked or bent and that threads are not damaged.
2. Put link plate (2) on tailgate main rod link (1) and check that there is no play in parts. Check that link plate has no cracks.

GO TO FRAME 4

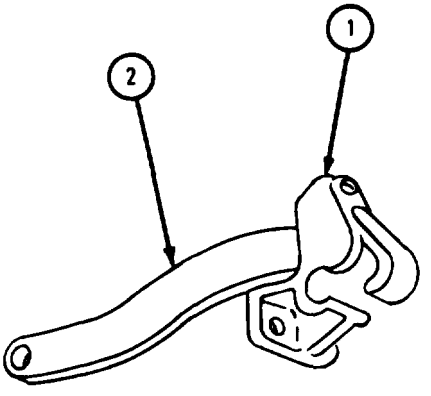


TA 087536

FRAME 4

1. Check that two latches (1) are not cracked or worn. Move latch bar (2) in and out to see if latch opens and closes.
2. Check that capscrews and nuts do not have damaged threads.

END OF TASK



TA 087537

e. Repair. Repair is limited to getting new parts for damaged ones. Throw away damaged parts and use new parts in their place.

f. Replacement.

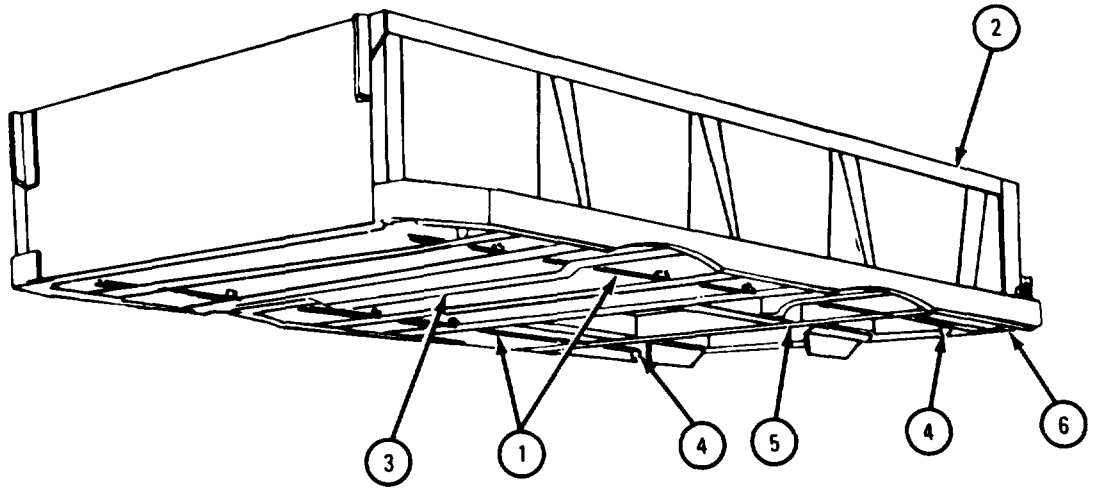
WARNING

Never work under dump body unless safety braces are properly positioned. When body is partially raised, always use strong heavy prop to hold body in a raised position. If these steps are not taken, personnel can be seriously injured.

FRAME 1

1. Put two main control rods (1) in dump body (2) through holes in crossmembers (3) until rod eye (4) is between last two crossmembers (5 and 6).

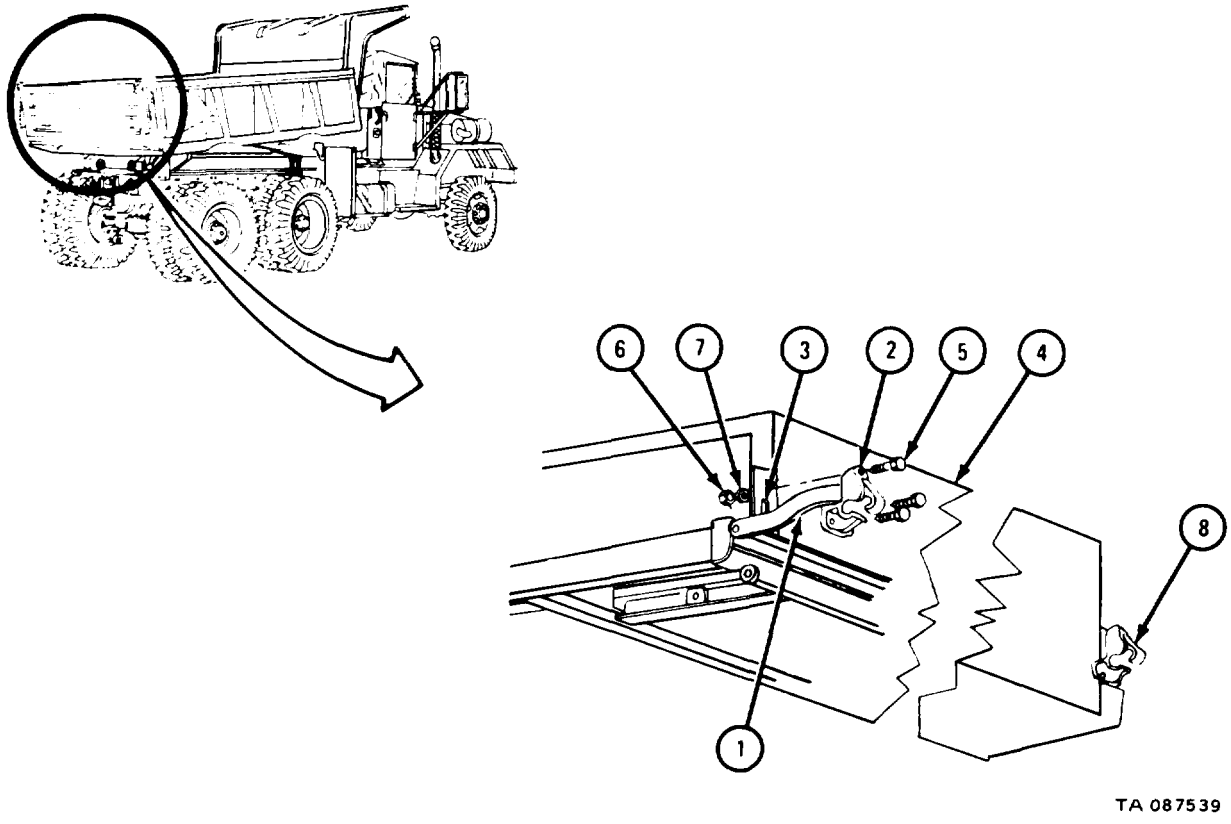
GO TO FRAME 2



FRAME 2

1. Put latch bar (1) with latch (2) through slot (3) in rear of dump body (4).
2. Put in three capscrews (5), three nuts (6), and flat washer (7).
3. Do steps 1 and 2 again to put latch (8) on other side of dump body.

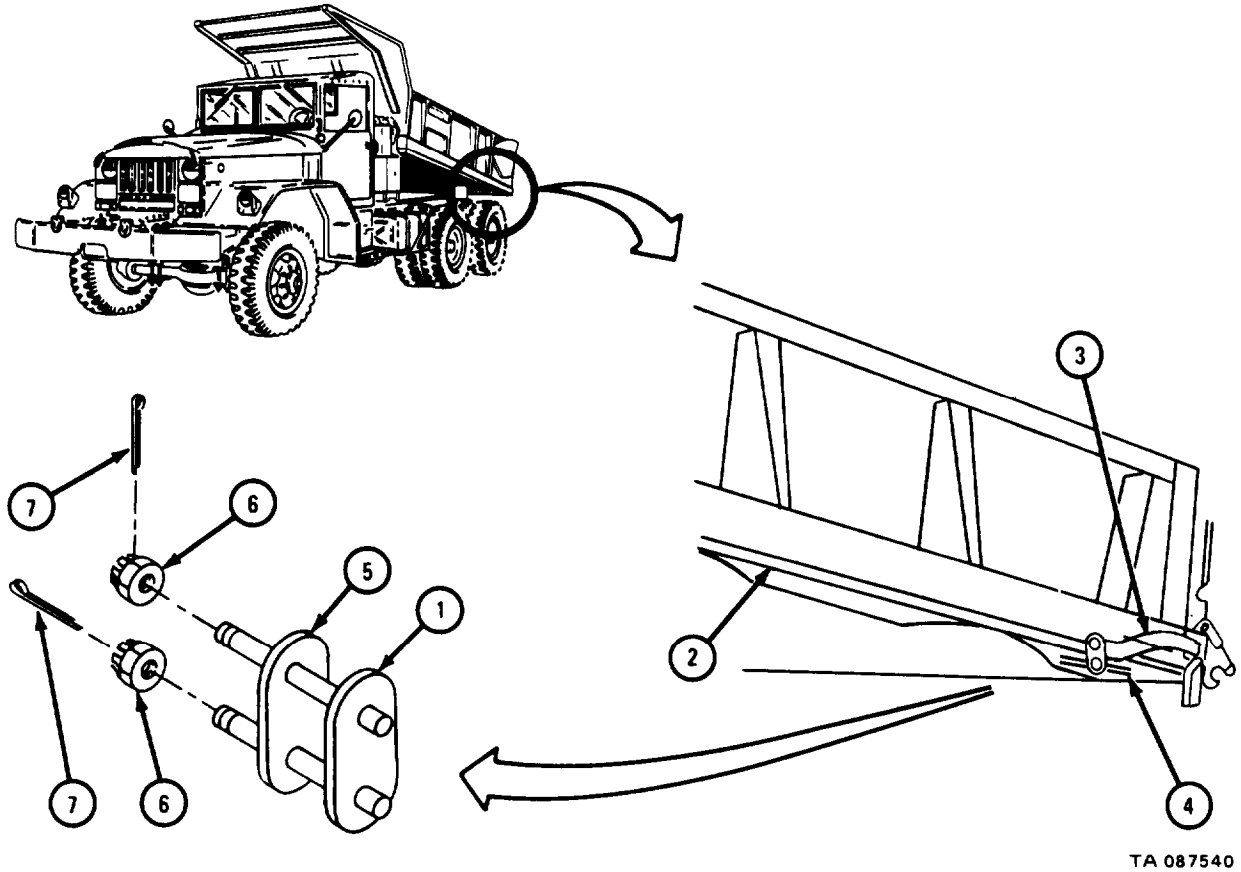
GO TO FRAME 3



FRAME 3

1. Put one stud on main rod link (1) through holes in control rod (2) and latch bar (3). Put other stud on main rod link through chassis rail (4).
2. Put link plate (5) over studs on main rod link (1).
3. Put on two nuts (6) and aline holes in nuts and studs for cotter pins (7).
4. Put two cotter pins (7) through two nuts (6).
5. Do steps 1 through 4 again on other side of truck.

GO TO FRAME 4



TA 087540

FRAME 4

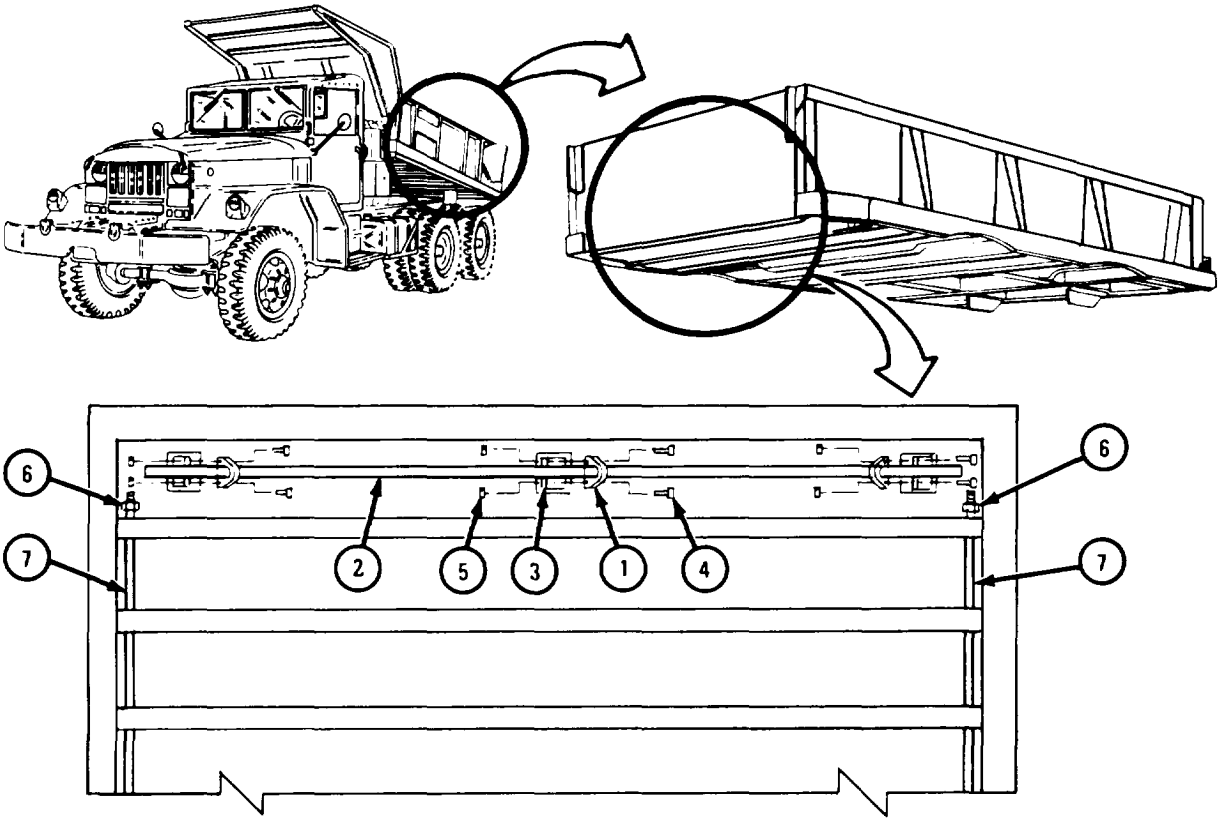
Soldier A 1. Put three tailgate control shaft bearings (1) on tailgate control shaft (2).

2. Hold control shaft (2) with three bearings (1) in place.

Soldier B 3. Aline screw holes in bearings (1) with holes in brackets (3) on body. Put in six capscrews (4) with six locknuts (5).

4. Put two nuts (6) all the way on two main control rods (7).

GO TO FRAME 5

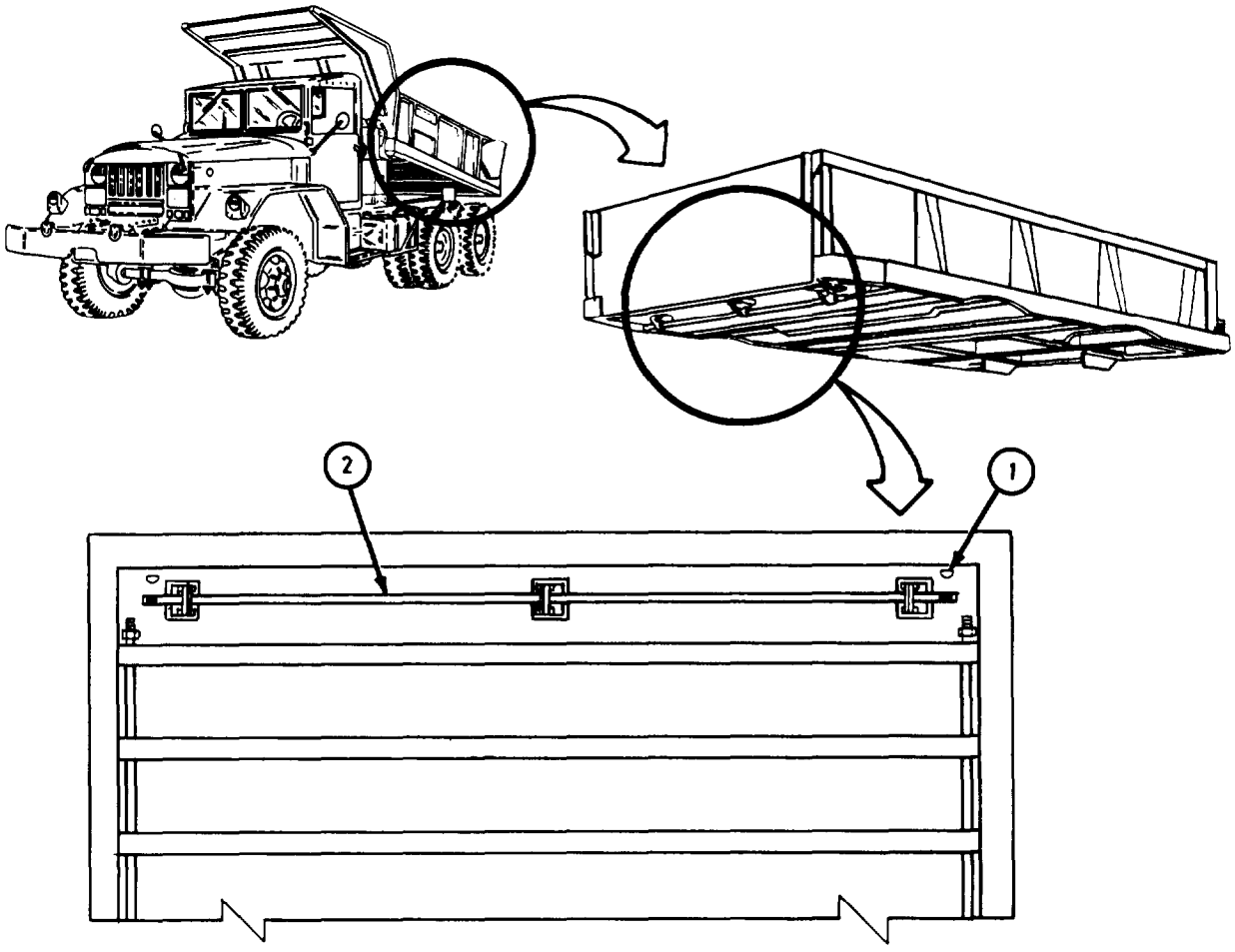


TA 087541

FRAME 5

1. Lightly tap woodruff key (1) into each end of tailgate control shaft (2).

GO TO FRAME 6

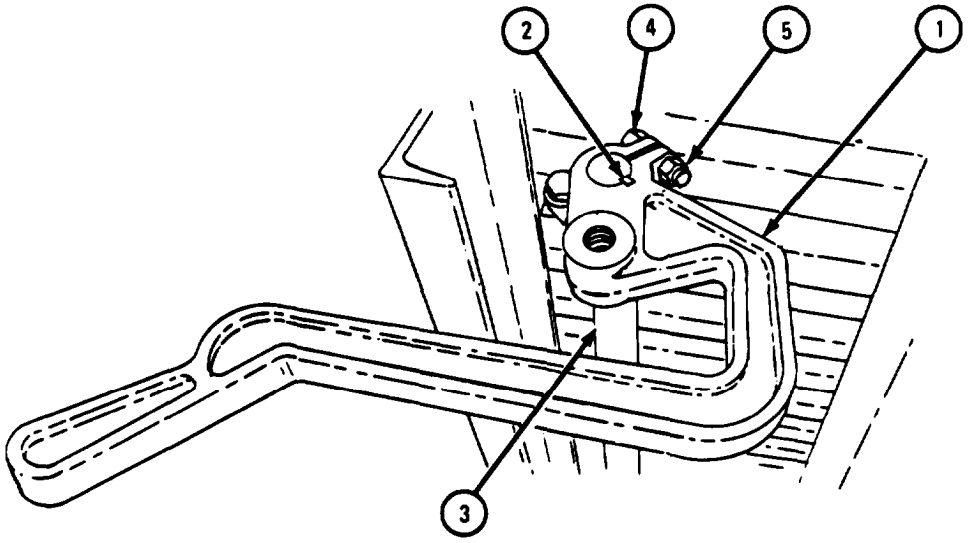


TA 087542

FRAME 6

1. Aline keyway in control arm (1) with woodruff key (2) on control shaft (3).
2. Lightly tap control arm (1) on control shaft (3).
3. Tighten capscrew (4) and locknut (5).

GO TO FRAME 7

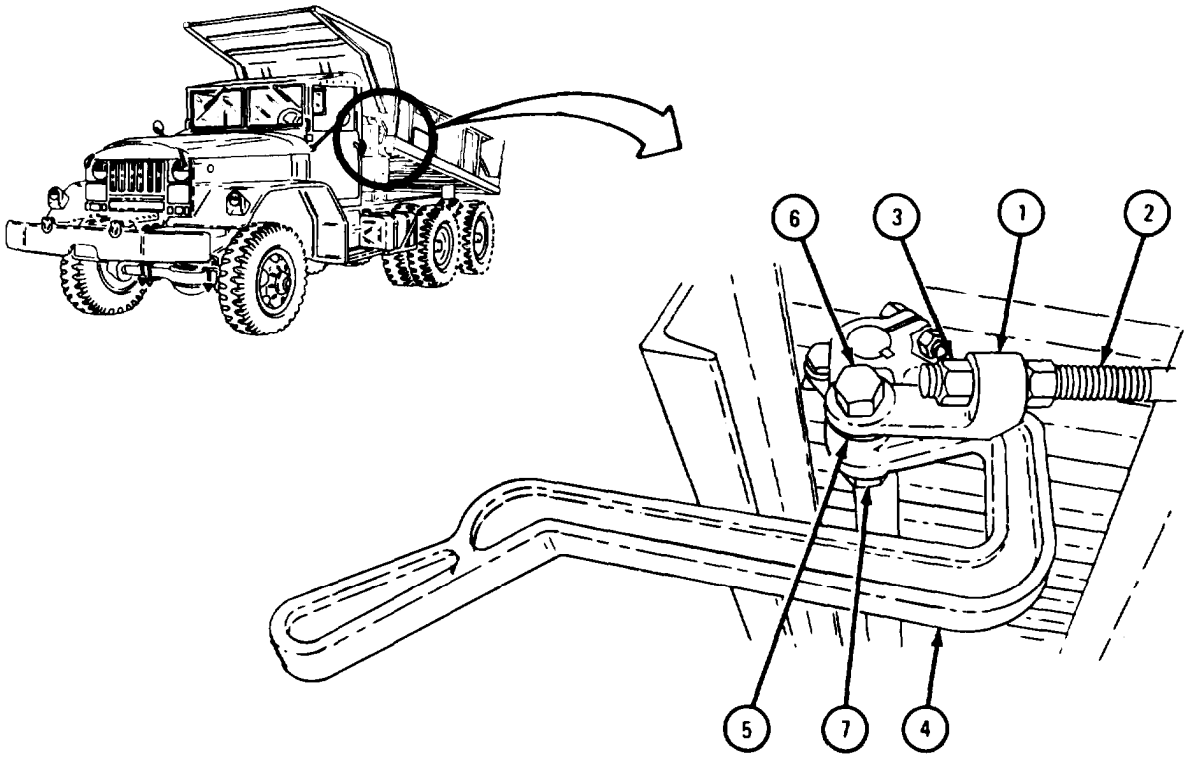


TA 105171

FRAME 7

1. Put clevis (1) on control rod (2). Screw on nut (3).
2. Aline holes in clevis (1) with control arm (4). Put washer (5) between clevis and control arm. Put in clevis bolt (6) and nut (7).

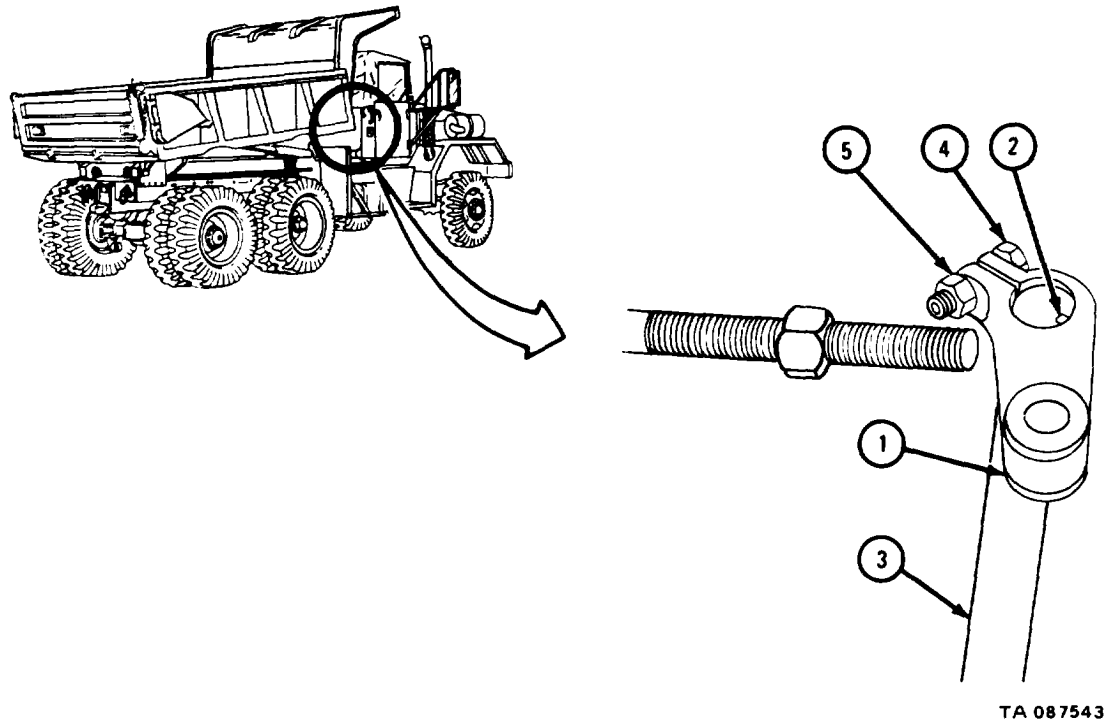
GO TO FRAME 8



FRAME 8

1. Aline keyway on lever (1) with woodruff key (2) on shaft (3). Lightly tap lever onto shaft.
2. Tighten capscrew (4) with locknut (5).

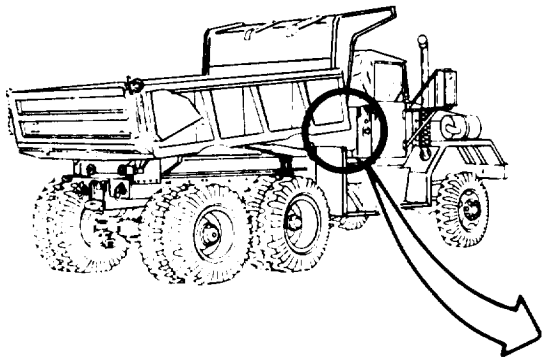
GO TO FRAME 9

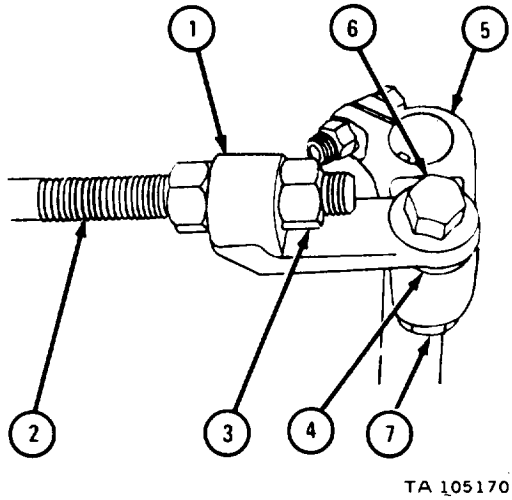


FRAME 9

1. Put clevis (1) on main control rod (2). put on nut (3).
2. Put washer (4) between clevis (1) and lever (5) and aline holes in clevis and lever. Put in clevis bolt (6) and put on nut (7).

GO TO FRAME 10



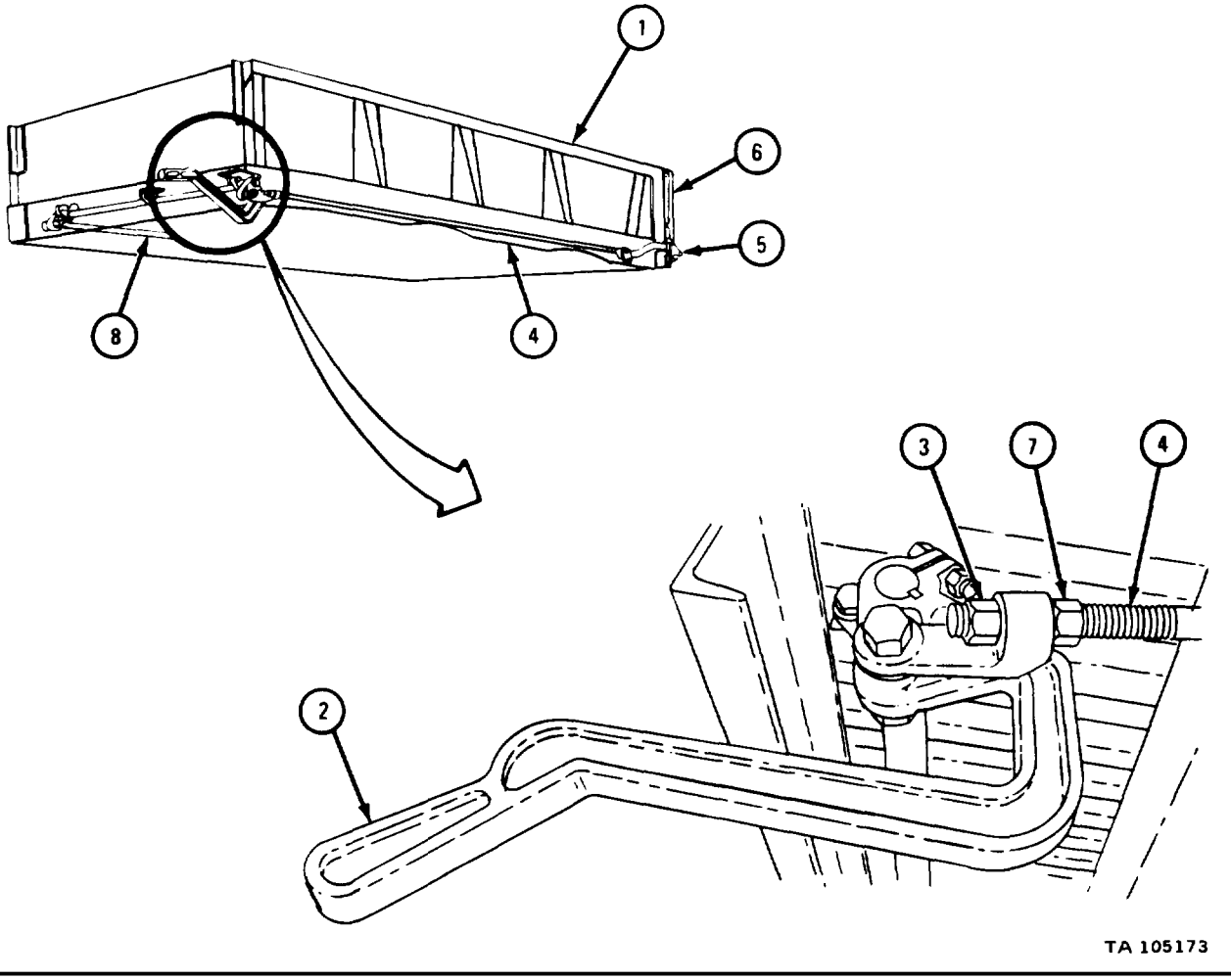


TA 105170

FRAME 10

1. Take out safety braces and lower dump body (1) all the way down. Refer to Hoist Brace Locking and Unlocking, TM 9-2320-211-20.
2. Push control arm (2) up to lock position.
3. Tighten nut (3) on left control rod (4) until left latch (5) 1ocks tailgate (6) closed.
4. Tighten nut (7).
5. Do steps 3 and 4 again on right control rod (8).
6. Raise dump body (1). Refer to TM 9-2320-211-10. Pull control arm (2) down to open position.
7. Check that both latches (5) release tailgate (6).
8. Lower dump body (1) all the way down. Refer to TM 9-2320-211-10.
9. Push control arm (2) up to lock position and check that both latches (5) lock tailgate (6) closed.

END OF TASK



TA 105173

Section VII. SPECIAL PURPOSE BODIES

16-32. CRANE BODY ASSEMBLY REPAIR (TRUCK M543A2). Repair of crane body is limited to welding and straightening of parts that are damaged. Refer to TM 9-237 for welding procedures. Refer to FM 43-2 for straightening procedures.

NOTE

Refer to para 16-33 for repair of crane front and outrigger assemblies.

16-33. FRONT AND REAR OUTRIGGER ASSEMBLIES REMOVAL, REPAIR, AND REPLACEMENT (TRUCK M543A2).

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engineoff, handbrake set.

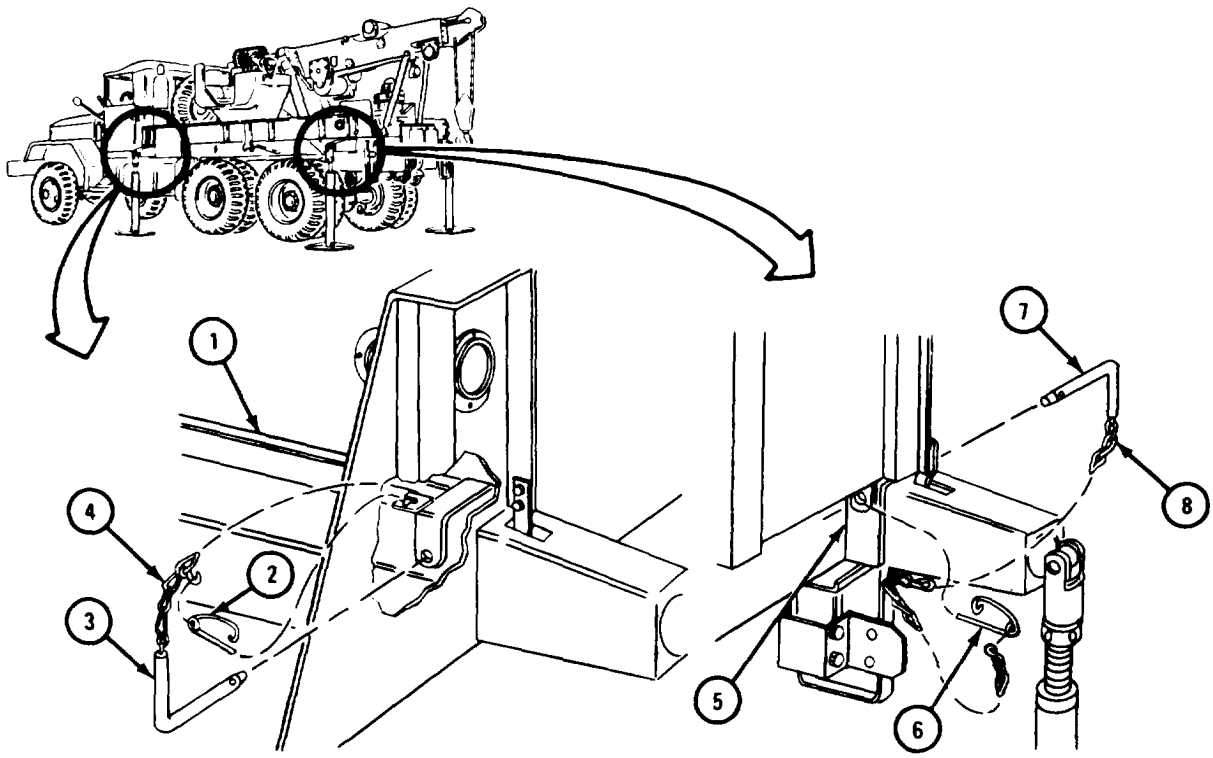
a. Preliminary Procedure. Swing out outrigger jacks. Refer to TM 9-2320-211-10.

b. Removal.

FRAME 1

1. Working at front frame (1), pullout pin (2) and pin (3) with chain (4).
2. Working at rear frame (5), pullout pin (6) and pin (7) with chain (8).
3. Do steps 1 and 2 again on other side of truck.

GO TO FRAME 2



TA 103013

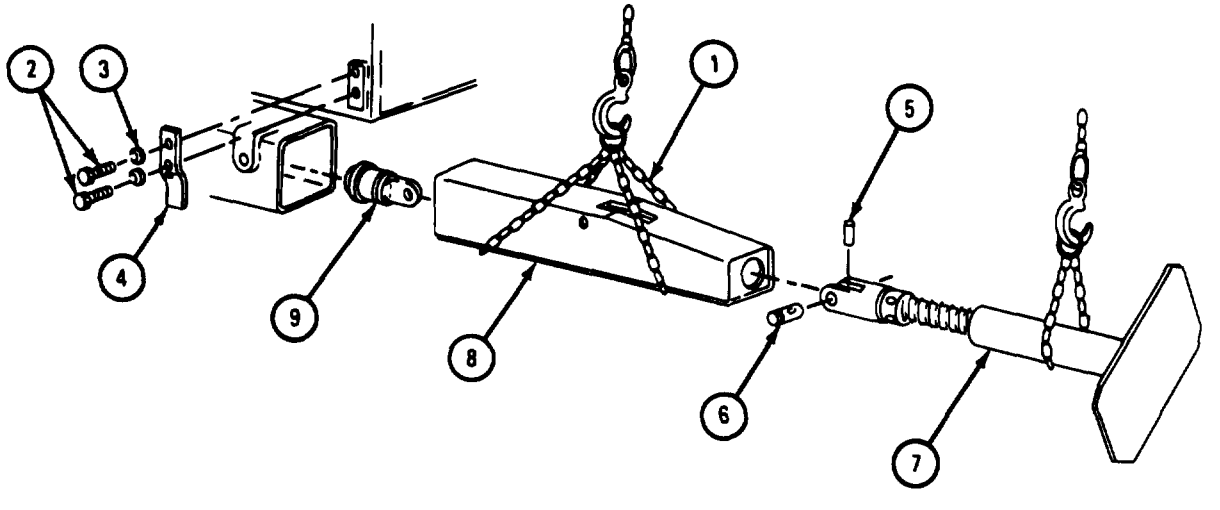
FRAME 2

WARNING

Support outrigger assembly with hoist and chain sling (1) after stop (4) is taken out. Outrigger assembly could fall and injure personnel.

1. Take out two capscrews (2) with washers (3). Take out stop (4).
2. Pull out pin (5) and knockout pin (6).
3. Take off jack assembly (7).
4. Pull out crane beam (8). Take socket assembly (9) out of beam (8).
5. Lower beam to floor. Takeoff hoist and chain sling (1).
6. Do steps 1 through 5 again for other three outrigger assemblies.

END OF TASK



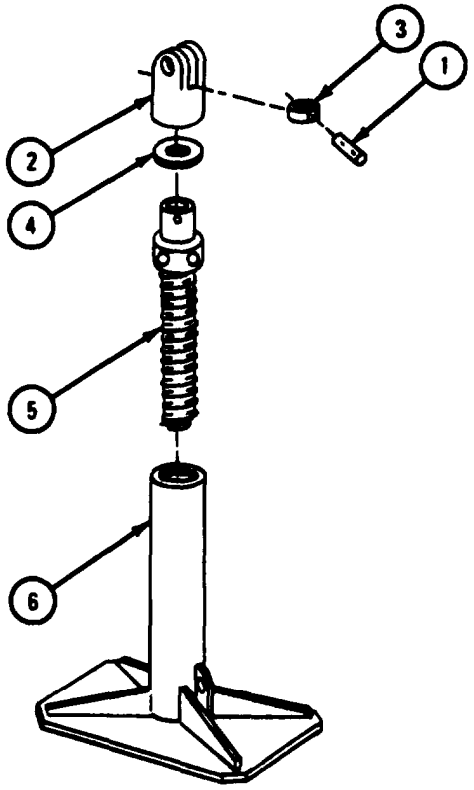
TA 103014

c. Disassembly.

FRAME 1

1. Pull out pin (1). Take off yoke (2).
2. Take out collar (3) and washer (4).
3. Take screw (5) out of base (6).

END OF TASK



TA 103015

d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection and Repair.

(1) Check that threads on screws are not stripped or crossthreaded. Fix damaged threads with a tap. If more repair is needed, get new screws.

(2) Check that all parts are not cracked. Weld cracks. Refer to TM 9-237.

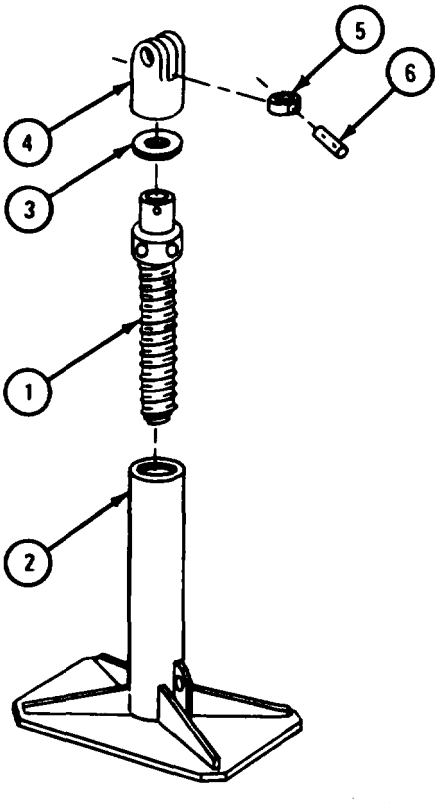
(3) Check that all parts are not dented. Straighten dents. Refer to FM 43-2. If more repair is needed, get new parts.

f. Assembly.

FRAME 1

1. Put screw (1) into base (2).
2. Put washer (3) on screw (1).
3. Put yoke (4) and collar (5) on screw (1).
4. Put in pin (6).

END OF TASK



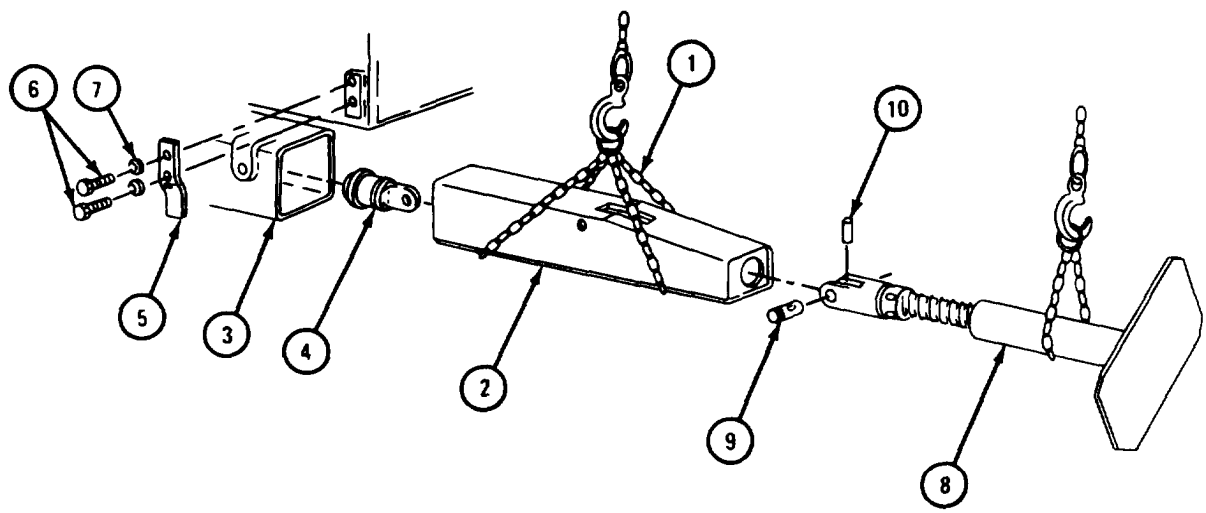
TA 103016

g. Replacement.

FRAME 1

1. Put hoist and chain sling (1) on beam (2).
2. Lift beam (2) and place it near frame (3) as shown.
3. Put socket (4) into beam (2).
4. Slide beam (2) into frame (3).
5. Put on stop (5). Put in two cap screws (6) with washers (7). Take off hoist and chain sling (1).
6. Put on jack (8). Drive in pin (9). Drive in Pin (10).

GO TO FRAME 2



TA 103017

FRAME 2

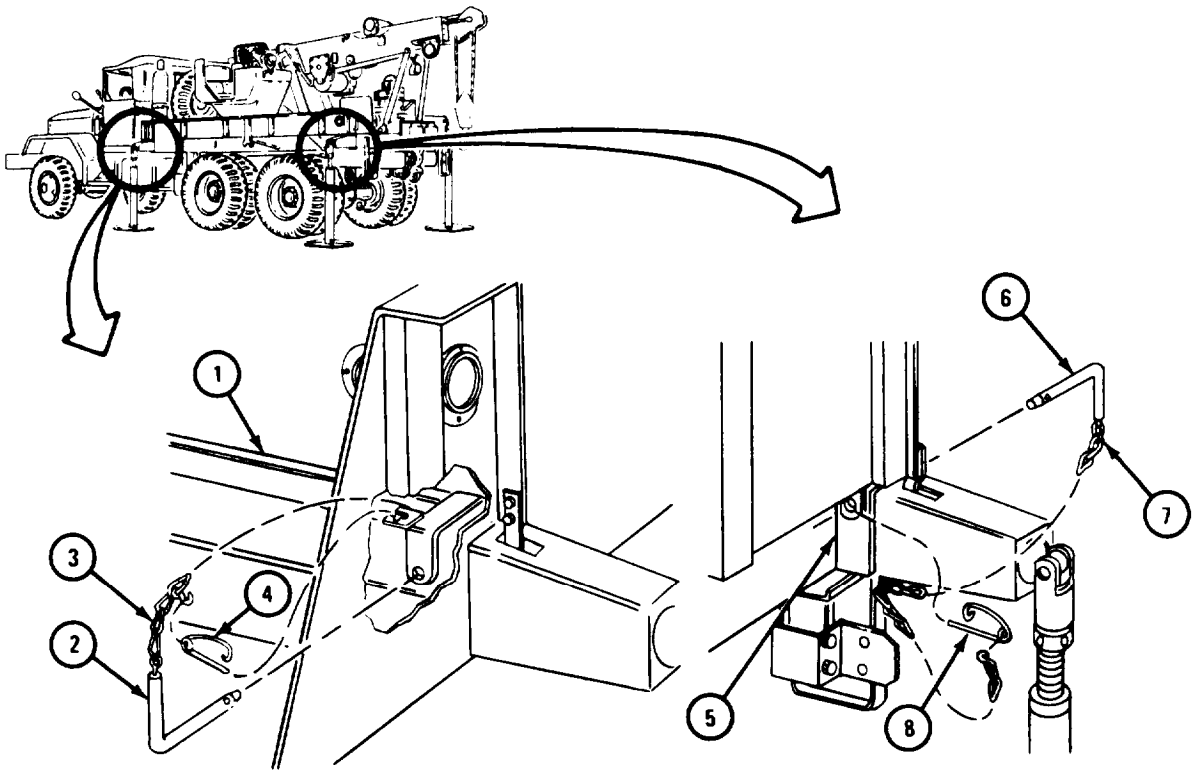
1. Working at front frame (1), put in pin (2) with chain (3) and pin (4).
2. Working at rear frame (5), put in pin (6) with chain (7) and pin (8).
3. Do steps 1 and 2 again on other side of truck.

NOTE

Follow-on Maintenance Action Required:

Stow outrigger jacks. Refer to TM 9-2320-211-10.

END OF TASK



TA 103018

By Order of the Secretaries of the Army and the Air Force:

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TM 9-2320-211-34-2-2	25 Feb 1981	DIR. & GEN. SUPPORT MAINT. MANUAL

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO
13-2	13-3 a		
14-71			14-1
16-38	16-6 d		

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

FRAME 1, step 3 reads "Take out ball seat (4), spring (5), and retainer (6)." Should read "Take out two ball seats (4), spring (5), and retainer (6)."

Item 2, wear limit is given as 1.996 inches. Should be 1.996 to 2.000 inches.

FRAME 2, change illustration callouts. Reason: callouts for outside door handle (2) and lock handle (3) are reversed.

SAMPLE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
SP4 Jane Idone Autovon 222-2224

SIGN HERE
Jane Idone

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OFFICIAL BUSINESS

SAMPLE

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U.S. Army Tank-Automotive Command
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Warren, MI 48090

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN. . . JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

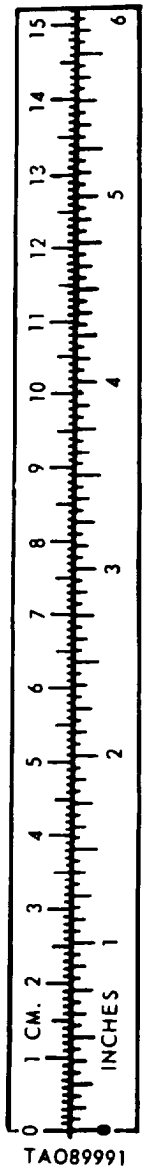
1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

TEMPERATURE

$5/9\ (^0F - 32) = {}^0C$
212^0 Fahrenheit is equivalent to 100^0 Celsius
90^0 Fahrenheit is equivalent to 32.2^0 Celsius
32^0 Fahrenheit is equivalent to 0^0 Celsius
$9/5\ C^0 + 32 = F^0$



TAO89991

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 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

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