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TECHNICAL MANUAL

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VOLUME 2 OF 2

PART 2 OF 2

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

TRUCK, CARGO:

1-1/4-TON, 6x6, M561 (NSN 2320-00-873-5407)

TRUCK, AMBULANCE:

1-1/4-TON, 6x6, M792 (NSN 2310-00-832-9907)

Chapter 10
Center and Rear
Axles

Chapter 11
Brake System

Chapter 12
Wheel System

Chapter 13
Steering System

Chapter 14
Frame and Towing
Attachments

Chapter 15
Body, Cab, and
Hull Group

Chapter 16
Body, Chassis, and
Accessory Items

Chapter 17
Materiel Used In
Conjunction with
Major Items

Appendix A
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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
JANUARY 1981

***TM 9-2320-242-34-2-2**
T.O. 36A12-1A-2052-2-2

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NO. 36A12-1A-2052-2-2

DEPARTMENTS OF THE ARMY
AND
THE AIR FORCE
WASHINGTON, DC, 29 JANUARY 1981

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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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* This manual together with TM 9-2320-242-34-1, 29 January 1981, and TM 9-2320-242-34-2-1, 29 January 1981, supersedes TM 9-2320-242-34, 3 April 1970, including all changes.

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CHAPTER 10

CENTER AND REAR AXLE GROUP MAINTENANCE

Section I. SCOPE

10-1. EQUIPMENT ITEMS COVERED. This chapter gives maintenance procedures for the center and rear differential assemblies for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

10-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct support and general support maintenance levels are covered in this chapter.

Section II. CENTER DIFFERENTIAL ASSEMBLY

10-3. CENTER DIFFERENTIAL REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: Differential tool kit, pn 11660115
 Equalizer measuring assembly, pn 11660107
 Equalizer assembly fixture, pn 11660105

SUPPLIES:	Anti-seize compound, white lead, Fed. Spec TT-A-680-B-2	Preformed packing
	Artillery and automotive grease, type GAA, MIL-G-10924	Preformed mechanical felt
	Gear, lubricating oil, GO 80/90, type MIL-L-2105	Pinion bearing shim set
	Cotter pin	Pinion bearing shim set
	Bearing retainer gasket	Pinion bearing shim set
	Shim set	Pinion gear bearing shim set
	Retainer gasket	Support assembly gasket
	Housing gasket	Support assembly shim
	Housing cover gasket	Plain encased seal
		Output yoke seal
		Plain encased seal
		Bearing cover shim

PERSONNEL: Two

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set, selector lever in TWO WHEEL position.

a. Preliminary Procedures.

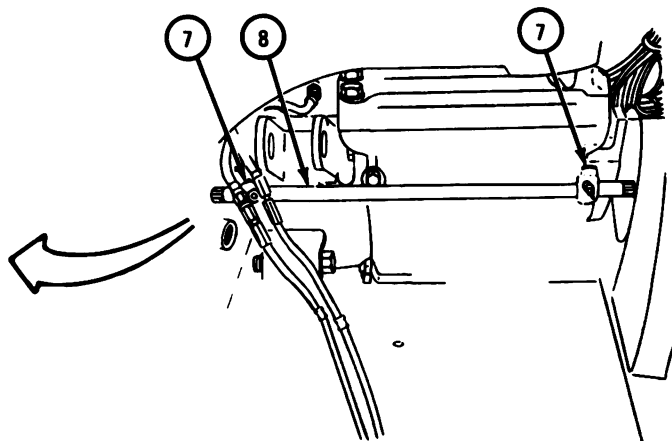
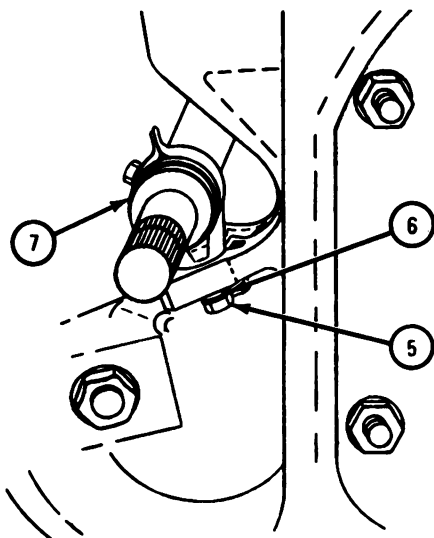
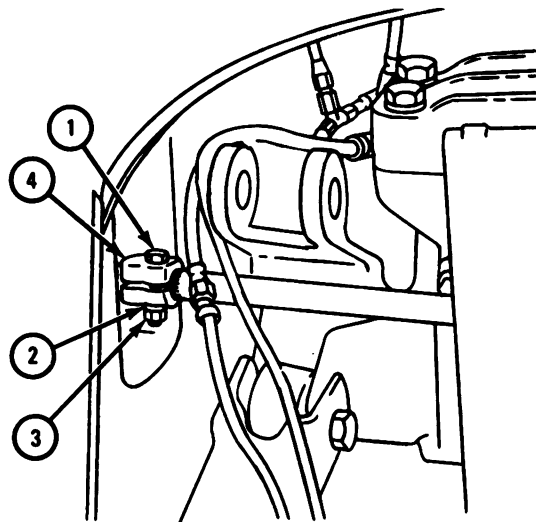
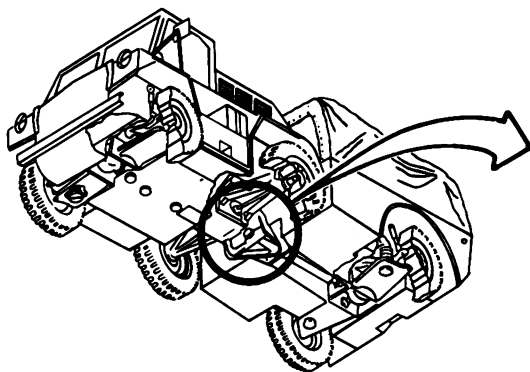
- (1) Uncouple tractor and carrier. Refer to para 14-3.
- (2) Jack up and support tractor. Refer to TM 9-2320-242-20.
- (3) Remove tractor hull access panel. Refer to TM 9-2320-242-20.
- (4) Drain center differential. Refer to LO 9-2320-242-12.
- (5) Remove center wheels and tires. Refer to TM 9-2320-242-20.
- (6) Remove center axle assemblies. Refer to TM 9-2320-242-20.
- (7) Remove center shock absorbers. Refer to TM 9-2320-242-20.
- (8) Remove center axle leaf spring. Refer to TM 9-2320-242-20.
- (9) Remove A-frame suspension. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out screw (1), lockwasher (2), and nut (3) from yoke (4).
2. Take off two nuts (5) and lockwashers (6) from bearings (7).
3. Slide center steering shaft (8) out of yoke (4) and take out shaft with bearings (7).

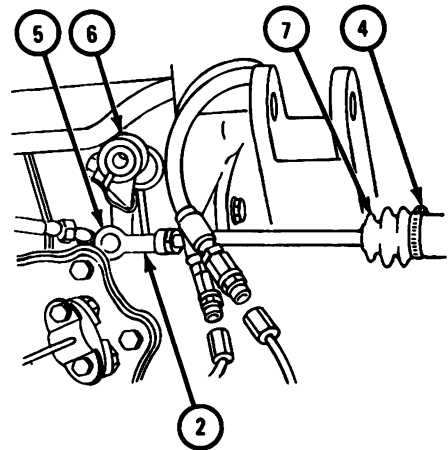
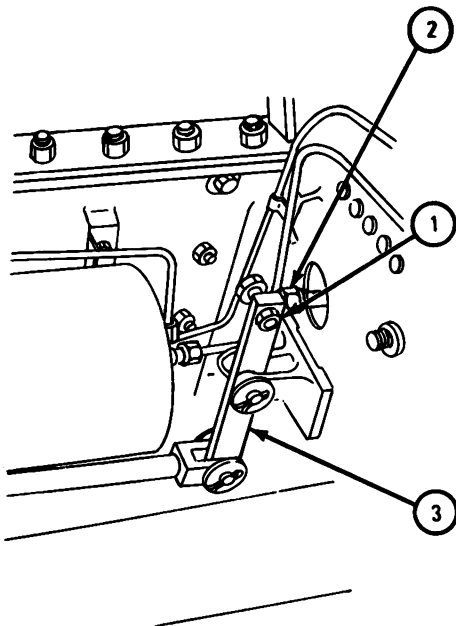
GO TO FRAME 2



TA 089361

FRAME 2

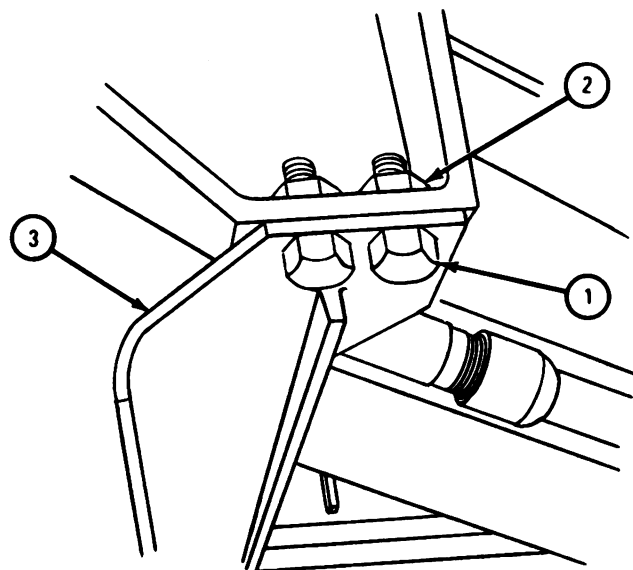
1. Take off nut and washer (1). Take off link assembly (2) from shaft linkage lever (3).
2. Loosen clamp (4).
3. Take off nut and washer (5). Take off link assembly (2) from differential linkage lever (6). Take link assembly out of tractor.
4. Take off boot (7).

GO TO FRAME 3

TA 089362

FRAME 3

1. Take out eight screws (1) and four nuts (2).
 2. Take out two plate assemblies (3), left and right.
- GO TO FRAME 4



TA 089364

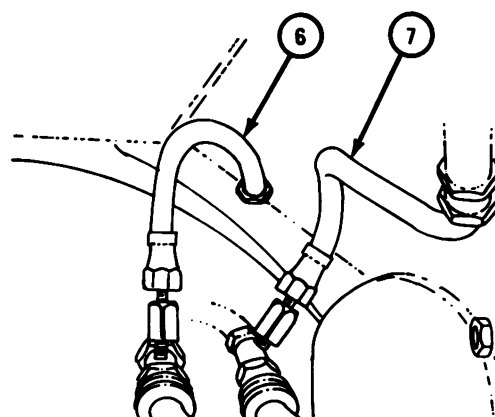
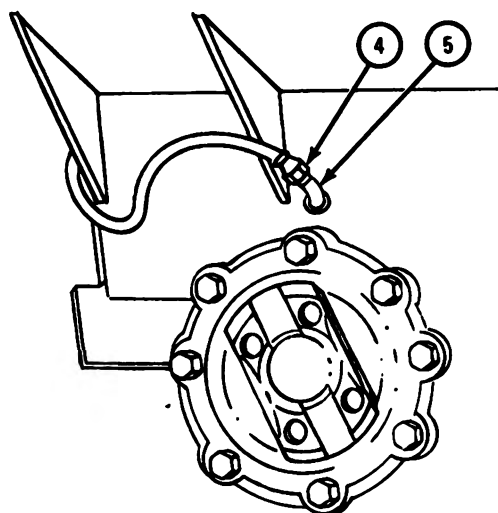
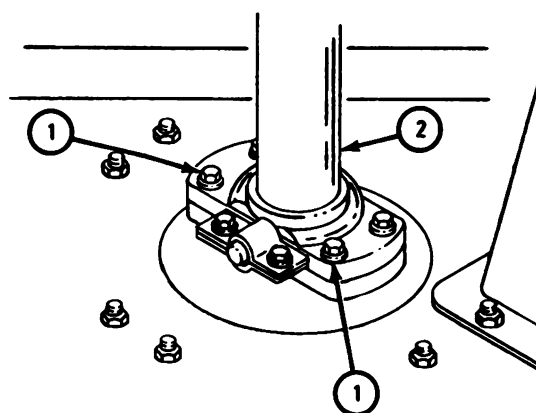
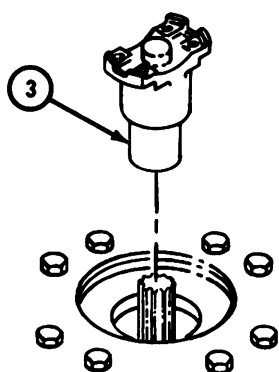
FRAME 4

NOTE

Parts (1, 2, and 3) are found from inside tractor hull.
Parts (4, 5, 6, and 7) are found under tractor.

1. Take out four screws (1).
2. Push driveshaft (2) sideways, and pull out yoke assembly (3).
3. Take off vent line (4). Take out elbow (5).
4. Take off air line (6) and hydraulic line (7).

GO TO FRAME 5

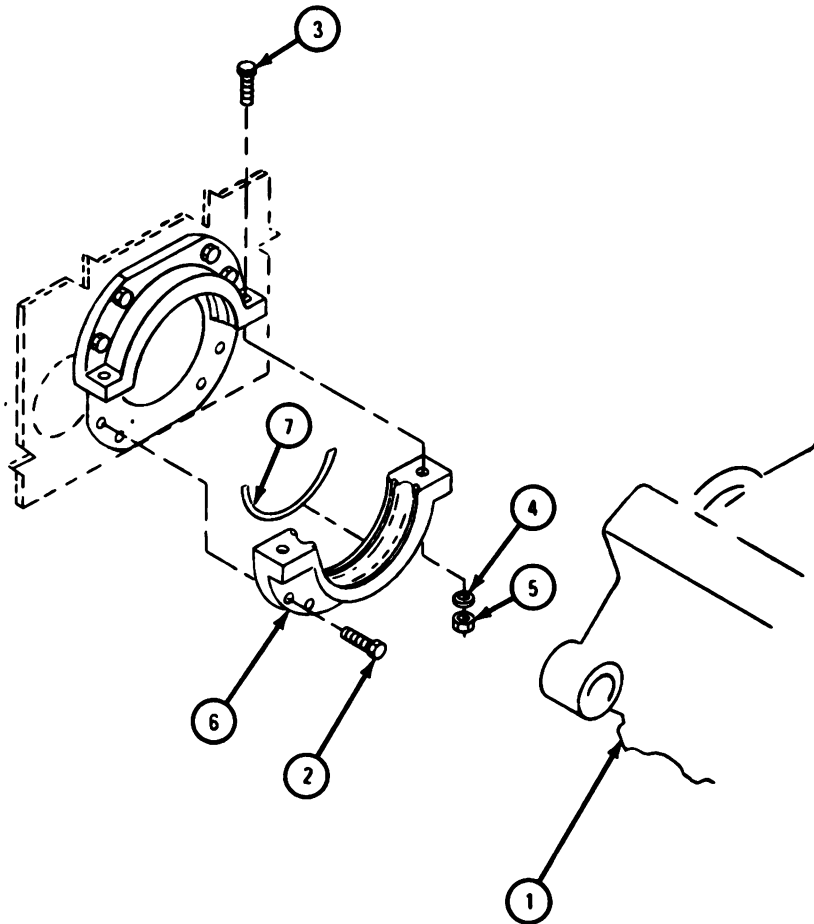


TA 089365

FRAME 5

1. Place jack under differential assembly (1) and give it a slight upward pressure.
2. Take out four screws (2).
3. Take out two screws (3), two lockwashers (4), and two nuts (5).
4. Take off lower half of front support assembly (6).
5. Take off and throw away two felt strips (7).

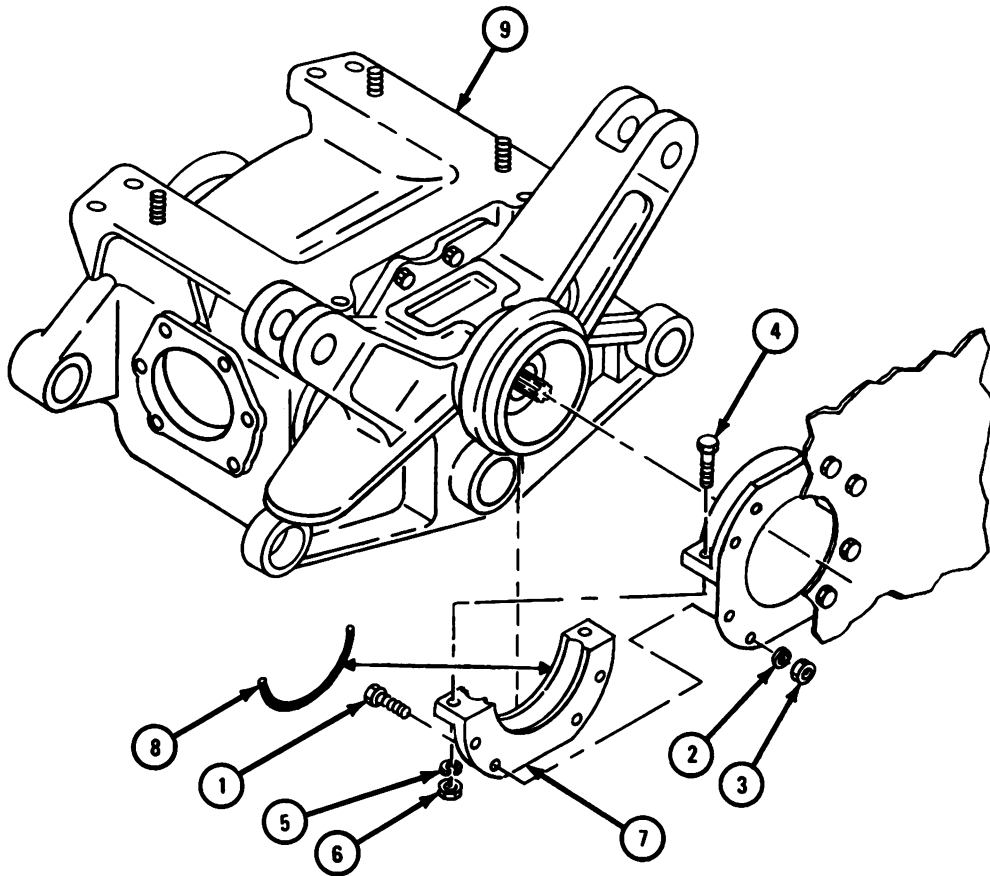
GO TO FRAME 6



TA 088157

FRAME 6

1. Take out four screws (1), four lockwashers (2), and four nuts (3).
2. Take out two screws (4), two lockwashers (5), and two nuts (6).
3. Take out lower half of rear support assembly (7). Take out and throw away felt strips (8).
4. Lower differential (9) and take out from under tractor.

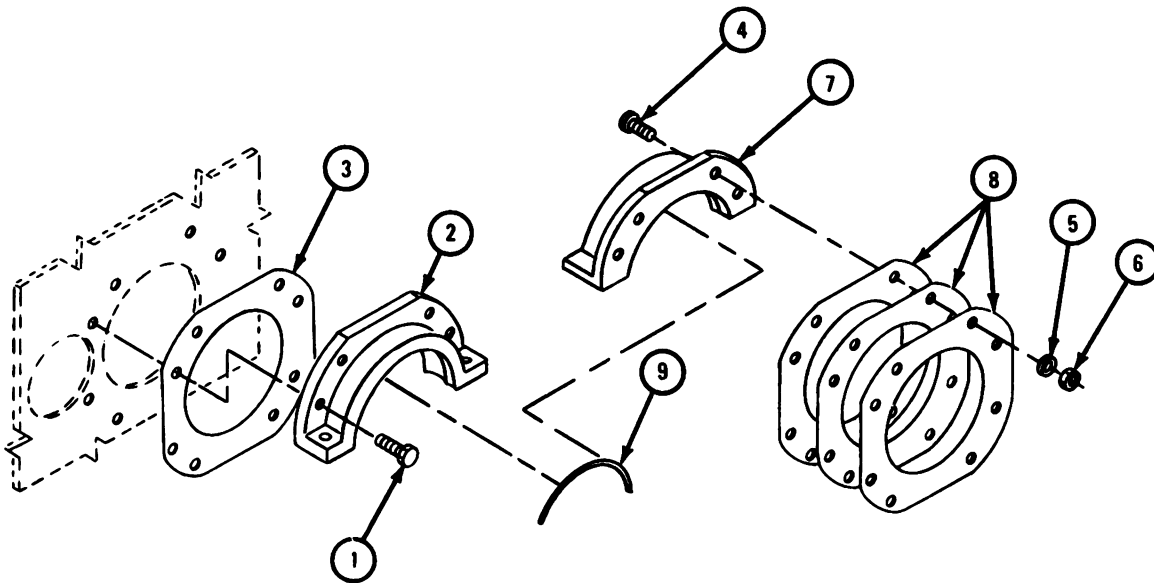
GO TO FRAME 7

TA 089366

FRAME 7

1. Take out four screws (1). Take off upper half of front support assembly (2).
2. Take off front gasket (3) and throw away.
3. Take out four screws (4), four lockwashers (5), and four nuts (6).
4. Take off rear upper support (7).
5. Take off shims (8).
6. Take out and throw away four felt pads (9) from front and rear upper supports (2 and 7).

GO TO FRAME 8

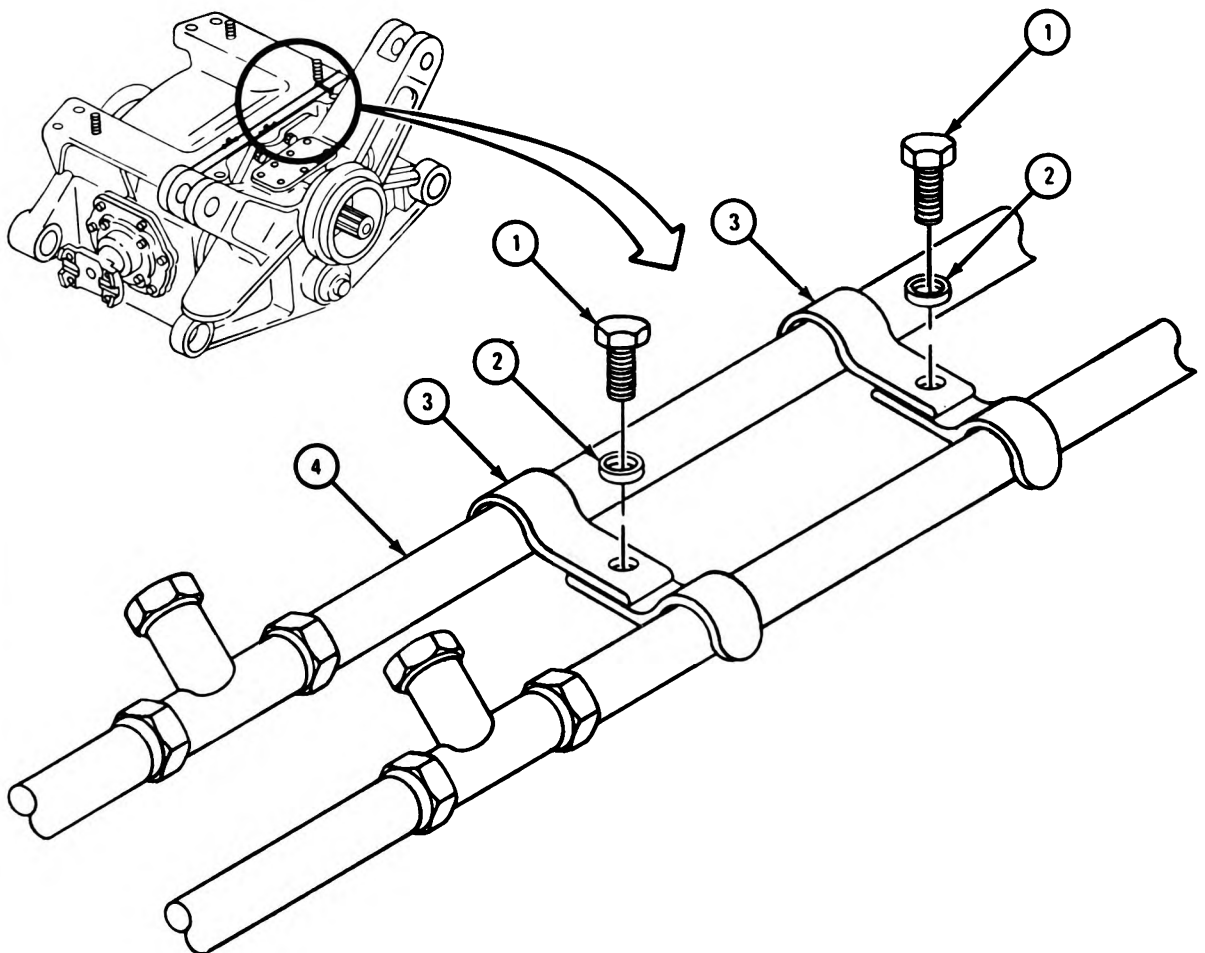


TA 089367

FRAME 8

1. Take out two screws (1) and two washers (2).
2. Take off four clamps (3) and two hydraulic lines (4).

END OF TASK

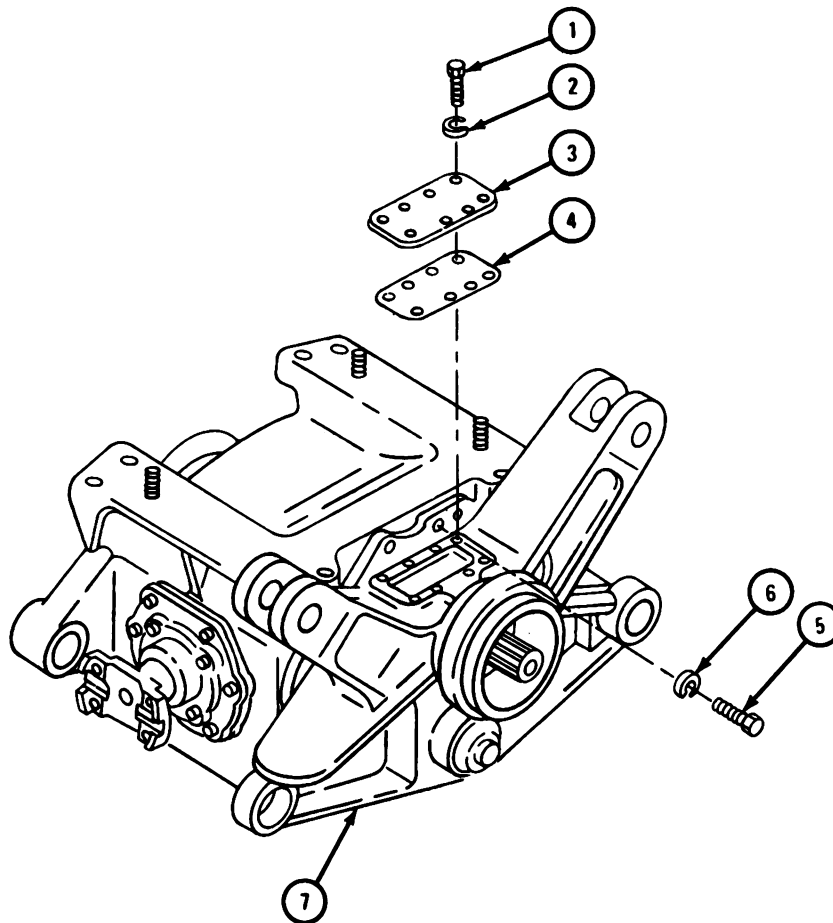


TA 089368

c. Disassembly.

FRAME 1

1. Take out six screws (1) and six lockwashers (2). Take off cover (3) and gasket (4). Throw gasket away.
 2. Take out 12 screws (5) and 12 washers (6). Take off housing (7).
- GO TO FRAME 2

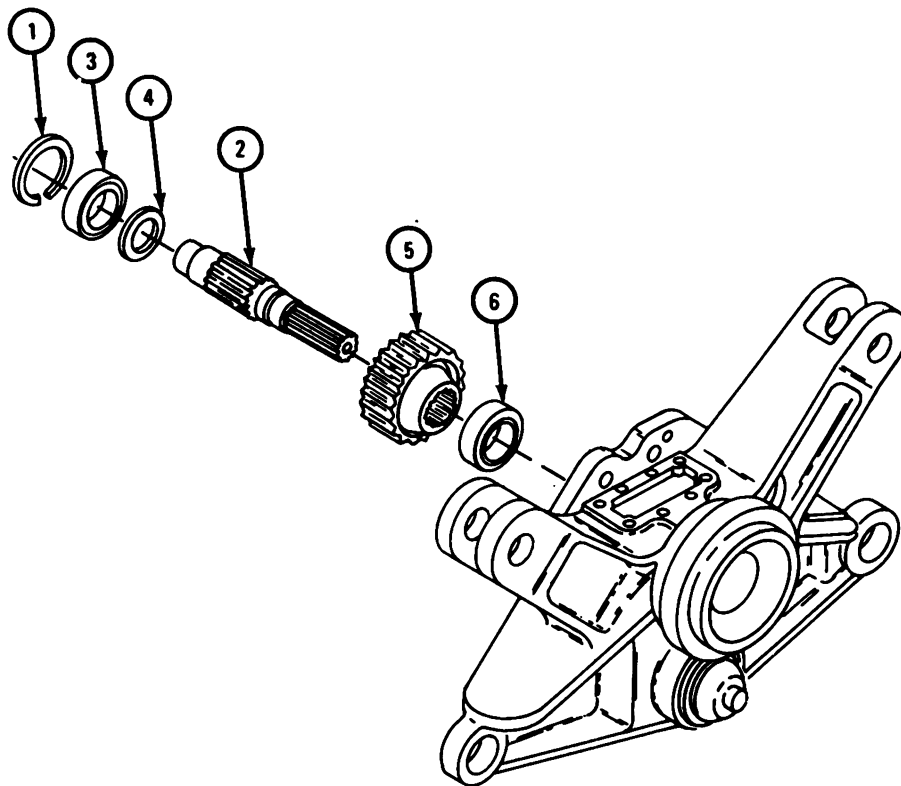


TA 088148

FRAME 2

1. Take out **retaining ring** (1).
2. Take out **shaft** (2).
3. Press bearing (3) from shaft (2). Refer to Part 1, para 7-6.
4. Take off spacer (4).
5. Take out **gear** (5).
6. Take out **bearing** (6).

GO TO FRAME 3

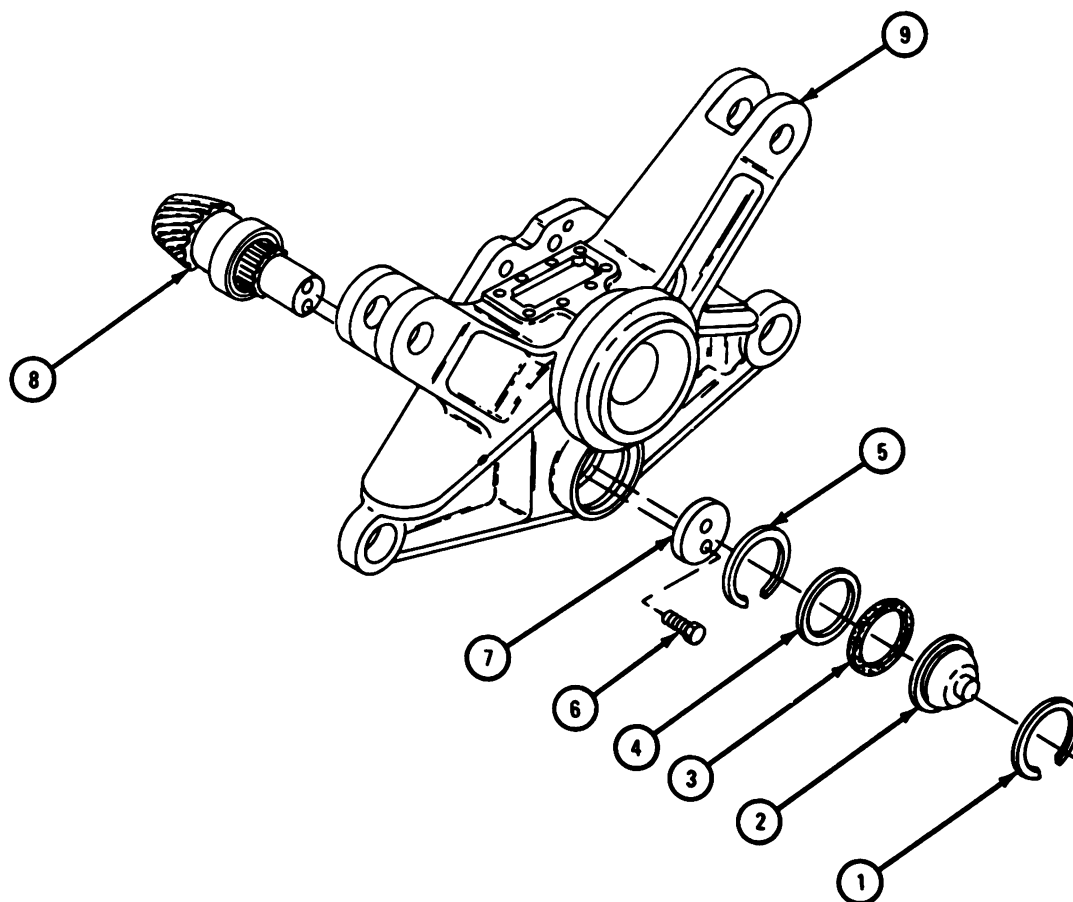


TA 088149

FRAME 3

1. Take off retaining ring (1) and bearing cover (2).
2. Take out preformed packing (3), bearing cover shim (4), and retaining ring (5). Throw away preformed packing.
3. Take out two screws (6). Take off cap (7).
4. Press assembled pinion (8) from housing (9).

GO TO FRAME 4

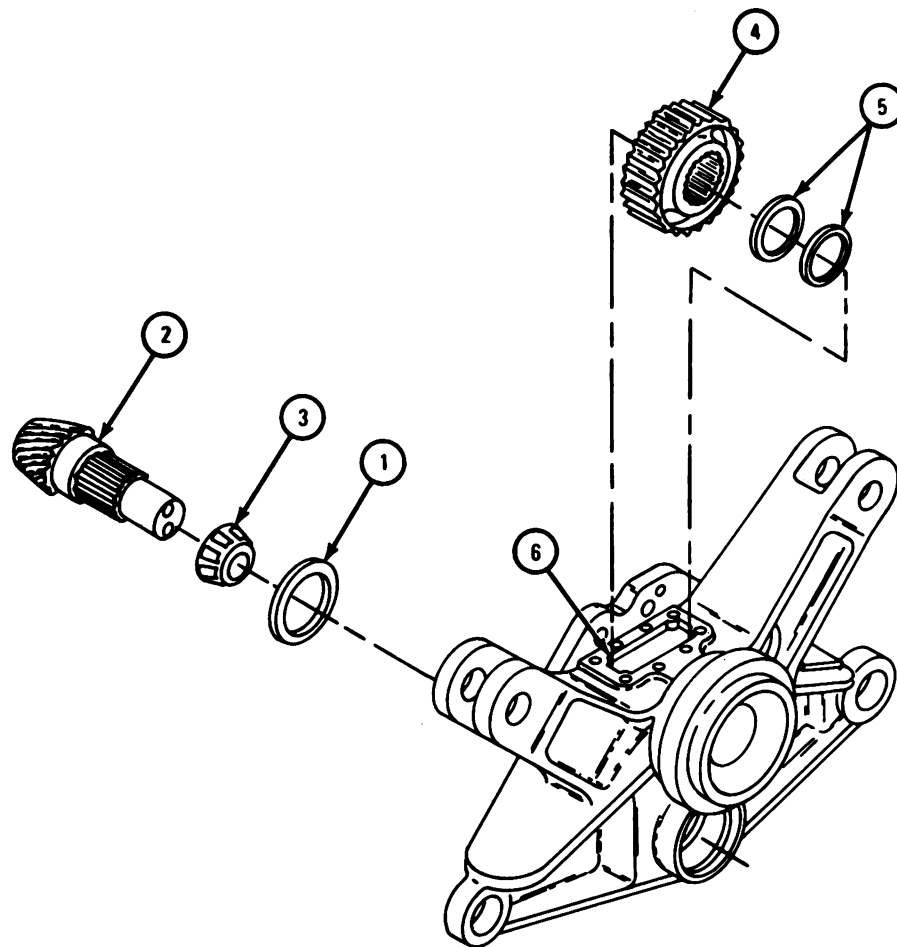


TA 088150

FRAME 4

1. Take spacer (1) from pinion (2).
2. Press bearing (3) from pinion (2).
3. Take out gear (4) and shims (5) through cover opening (6).

GO TO FRAME 5

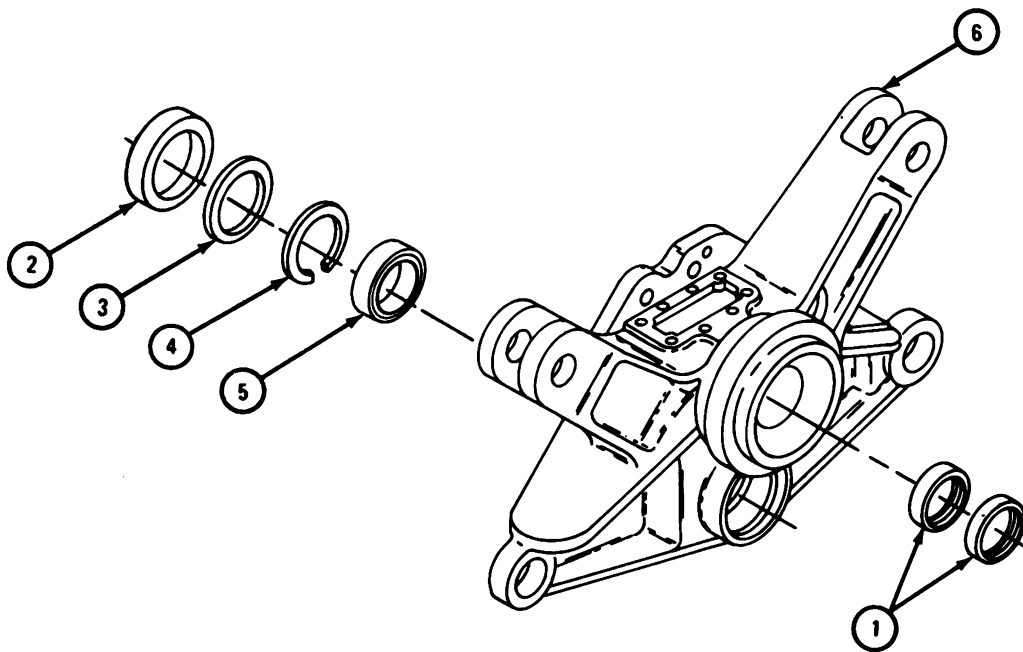


TA 088151

FRAME 5

1. Take out seals (1).
2. Take out bearing cap (2).
3. Take out shims (3).
4. Take off retaining ring (4) and press bearing (5) from housing (6). Refer to Part 1, para 7-6.

GO TO FRAME 6



TA 088152

FRAME 6

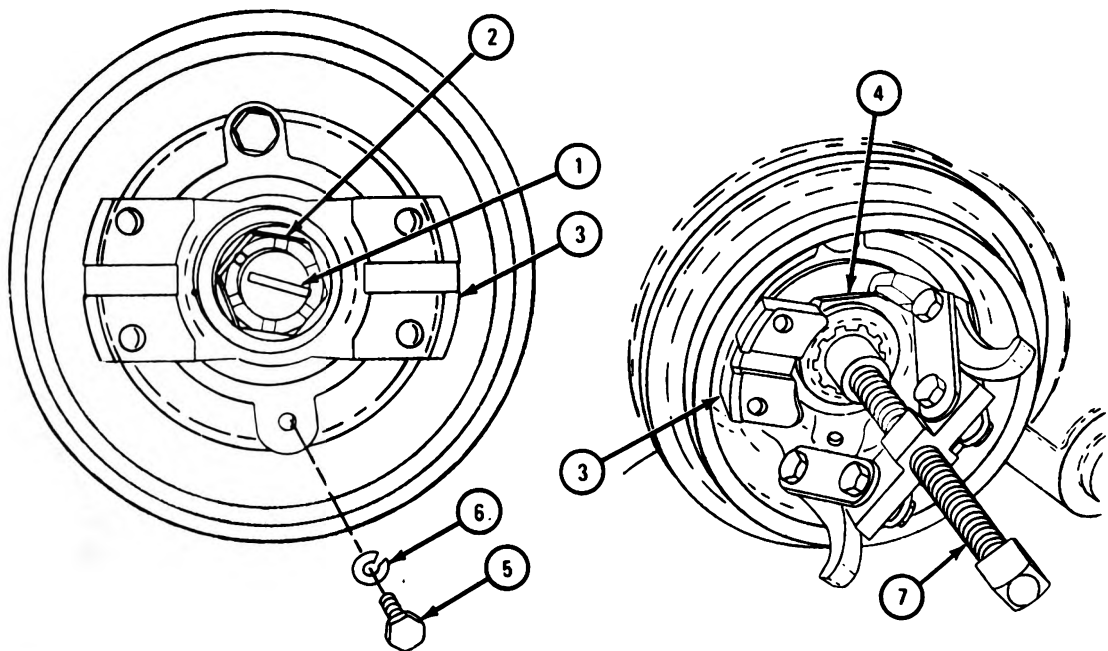
1. Take out and throw away cotter pin (1).
2. Take off nut (2).
3. Take out yoke (3).

NOTE

Yoke (3) may be frozen or forced onto shaft. Refer to steps 4 and 5 to take off output yoke retainer plate (4).

4. Take out four screws (5) and lockwashers (6).
5. Using puller (7) take off output yoke retainer plate (4).

GO TO FRAME 7

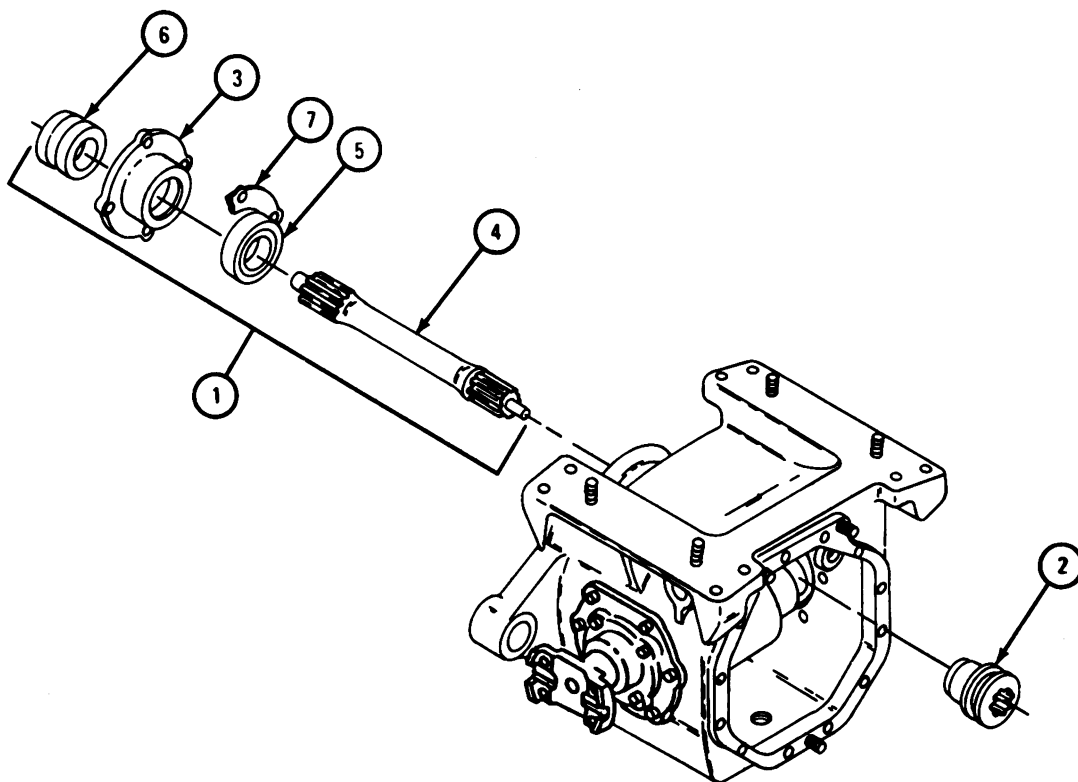


TA 088154

FRAME 7

1. Take out shaft assembly (1) and sleeve (2).
2. Take retainer (3) off shaft (4).
3. Press bearing (5) from shaft (4).
4. Press seal (6) from retainer (3).
5. Take off and throw away gasket (7).

GO TO FRAME 8

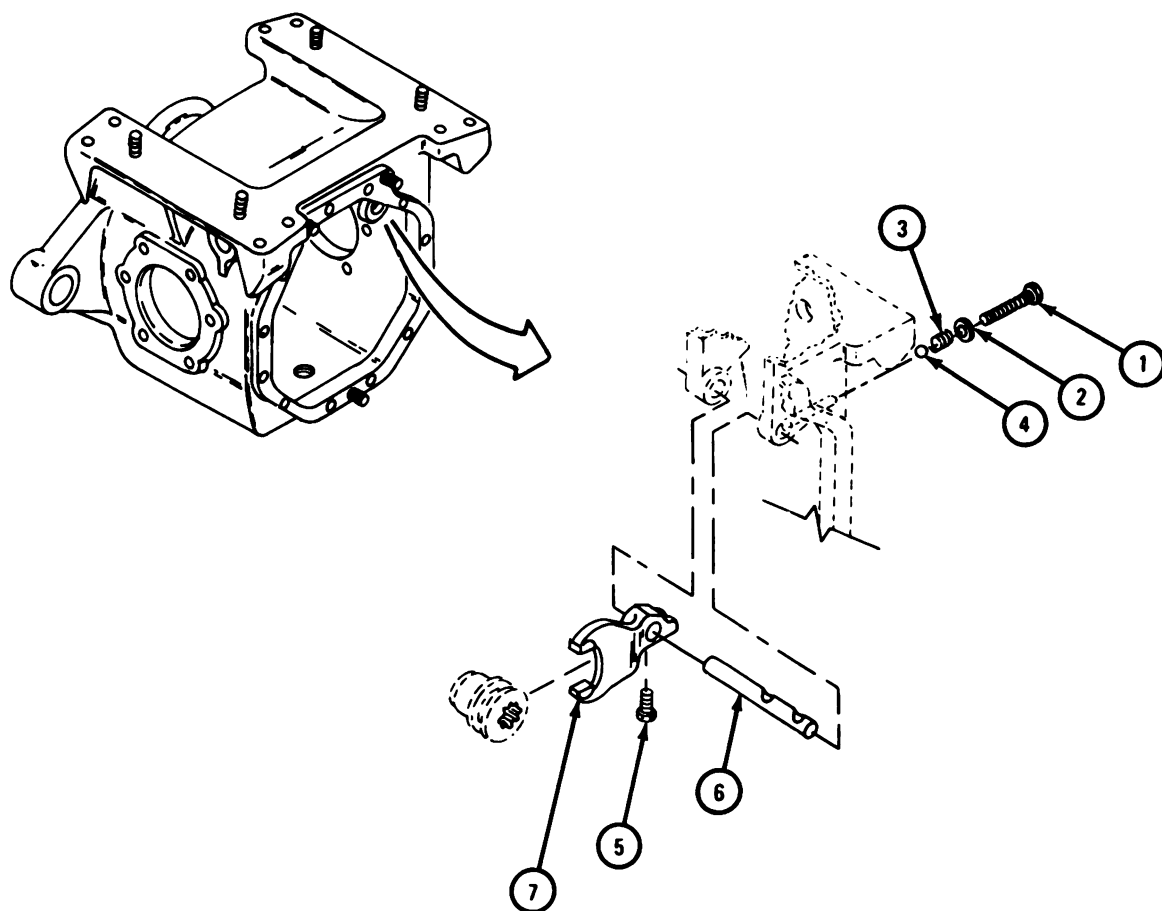


TA 088155

FRAME 9

1. Take out screw (1) and washer (2). Take out spring (3) and ball (4).
2. Cut safety wire and take out setscrew (5). Take out shaft (6) and shifter fork (7).

GO TO FRAME 10

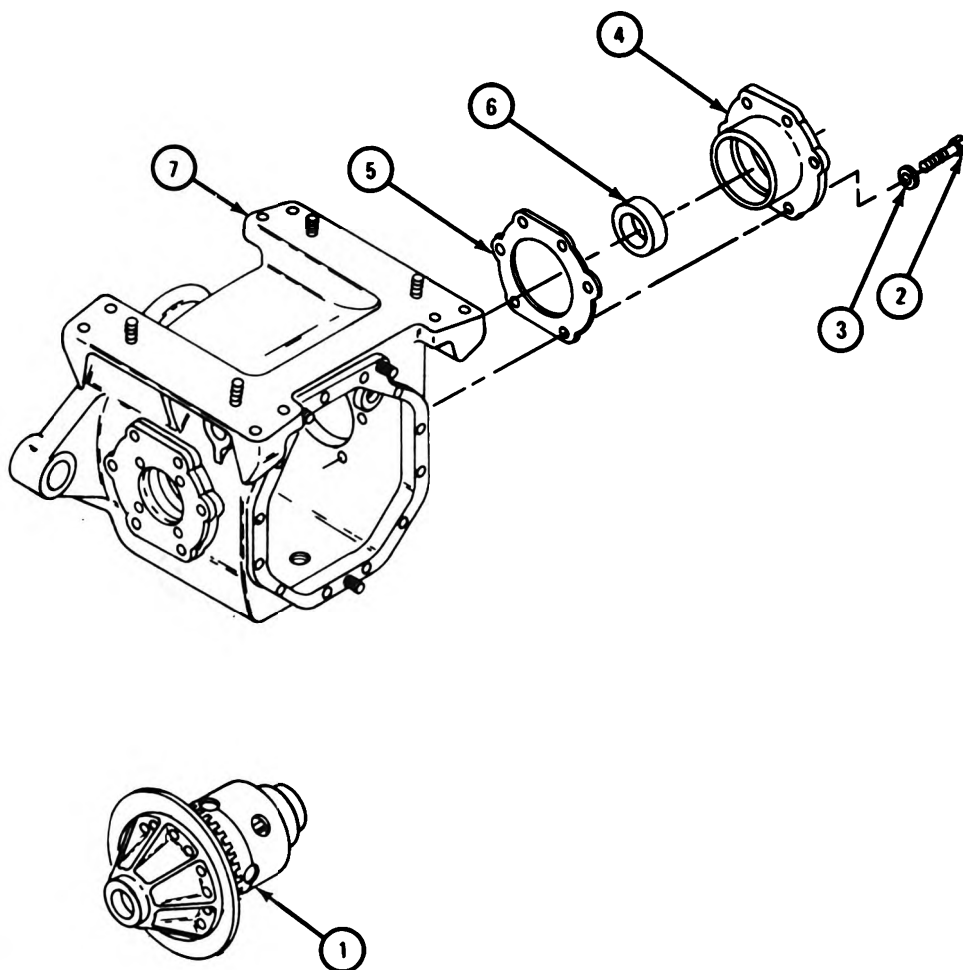


TA 088158

FRAME 10

1. Hold up equalizer assembly (1).
2. Take out six screws (2) and six washers (3).
3. Take out housing (4) and shim set (5). Tie shim set together and tag it to mark location.
4. Take out bearing cup (6).
5. Do step 2 through 4 again on other side of differential housing (7).
6. Take out equalizer assembly (1).

GO TO FRAME 11

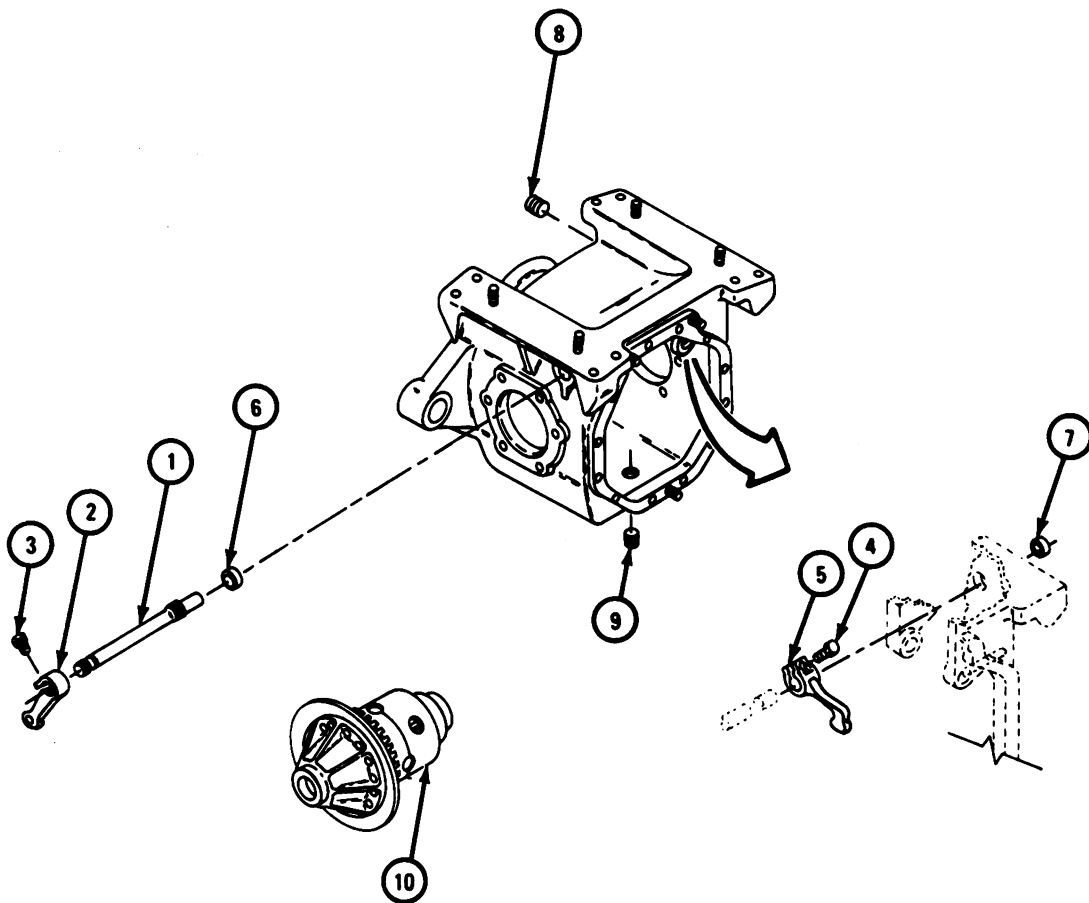


TA 088159

FRAME 11

1. Make alinement marks on shaft (1) and lever (2).
2. Take off safety wire and take out screws (3 and 4).
3. Take off lever (2) shifter fork (5), and shaft (1).
4. Take out seal (6) and expansion plug (7).
5. Take out plugs (8 and 9).
6. Disassemble equalizer assembly (10). Refer to Part 1, para 9-3.

END OF TASK



TA 089370

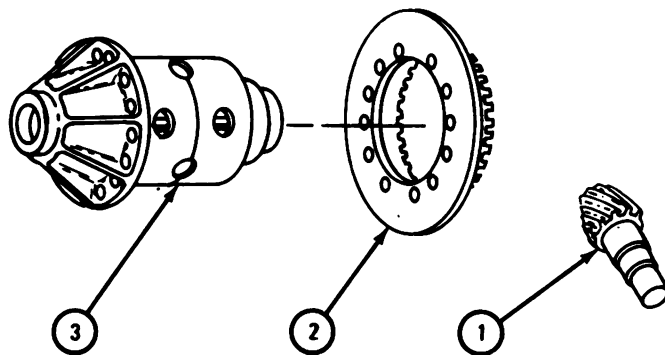
d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection and Repair.

FRAME 1

1. Check that pinion (1) and ring gear (2) are not damaged. If pinion or ring gear is damaged, both parts must be replaced as a set.
2. Check that equalizer assembly housings (3) are not damaged. If housings are damaged, get a new equalizer assembly.

GO TO FRAME 2



TA 088160

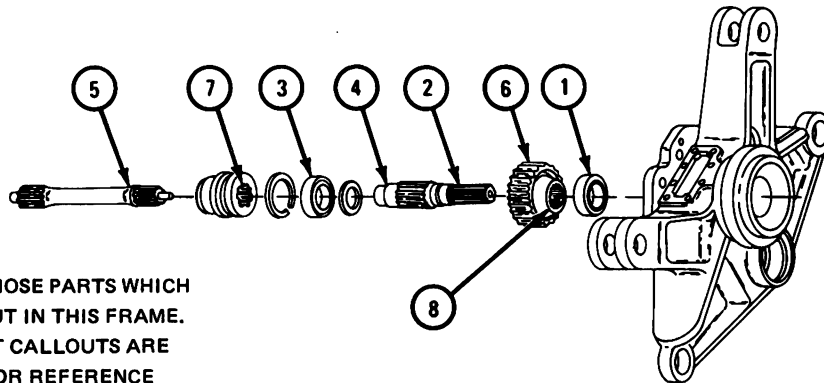
FRAME 2

NOTE

Readings must be within limits given in table 10-1. If readings are not within given limits, throw away part and get a new one.

1. Measure fit of bearing (1) on input shaft (2).
2. Measure fit of bearing (3) on input shaft (4).
3. Measure running bore of thru-shaft (5).
4. Measure thickness of gear spline tooth (6).
5. Measure thickness of sleeve spline tooth (7).
6. Measure hub length of input gear (8).

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 088161

Table 10-1. Center Differential Input Shaft and Thru-Shaft and Gears Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1 and 2	Fit of bearing on input shaft	1.3779 to 1.3784	0.0005
3 and 4	Fit of bearing on input shaft	1.5747 to 1.5752	0.0005
5	Thru-shaft running bore	0.7500 to 0.7510	0.0015
6	Gear spline tooth thickness	0.1650 to 0.1670	0.0015
7	Sleeve spline tooth thickness	0.2275 to 0.2295	0.0100
8	Input gear hub length	2.2170 to 2.2190	0.0100

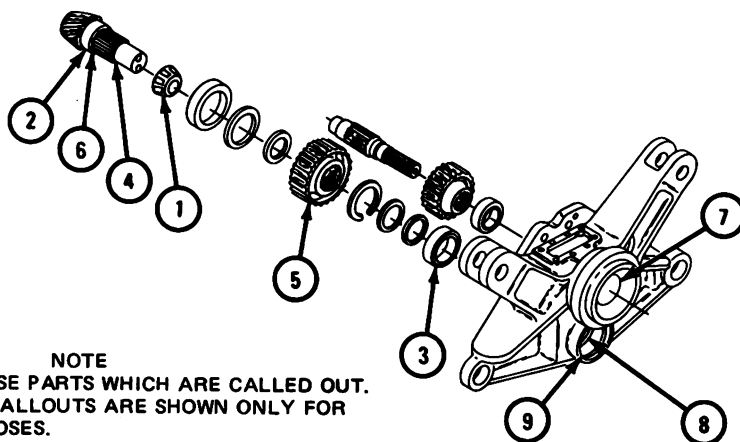
FRAME 3

NOTE

Readings must be within limits given in table 10-2. If readings are not within given limits, throw away part and get a new one.

1. Measure fit of bearing (1) on pinion (2).
2. Measure fit of bearing (3) on pinion (4).
3. Measure fit of gear (5) on pinion (6).
4. Measure input housing input shaft bearing bore (7).
5. Measure input housing pinion bearing bore (8).
6. Measure input housing pinion bearing bore (9).

GO TO FRAME 4



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

TA 088162

Table 10-2. Center Differential Pinion and Input Housing Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1 and 2	Fit of bearing on pinion	1.9385 to 1.9390	0.001
3 and 4	Fit of bearing on pinion	1.6255 to 1.6260	0.001
5 and 6	Fit of gear on pinion	1.7700 to 1.7750	0.003
7	Input housing input shaft bearing bore	3.1495 to 3.1501	0.002
8	Input housing pinion bearing bore	3.3730 to 3.3740	0.002
9	Input housing pinion bearing bore	4.1230 to 4.1240	0.002

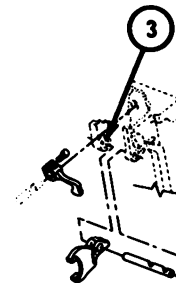
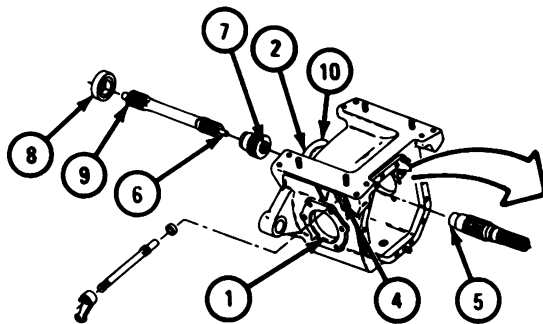
FRAME 4

NOTE

Readings must be within limits given in table 10-3. If readings are not within given limits, throw away part and get a new one.

1. Measure differential housing propeller shaft housing bore (1).
2. Measure differential housing thru-shaft bearing bore (2).
3. Measure shifter shaft bore (3).
4. Measure shifter shaft bore (4).
5. Measure fit of input shaft (5) on thru-shaft (6).
6. Measure thickness of sleeve spline tooth (7).
7. Measure fit of bearing (8) on thru-shaft (9).
8. Measure outside of diameter of thrust bearing (10).

GO TO FRAME 5



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

TA 088163

Table 10-3. Center Differential Bearings and Shafts Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Differential housing propeller shaft housing bore	5.2500 to 5.2520	0.0020
2	Differential housing thru-shaft bearing bore	2.8345 to 2.8351	0.0010
3	Shifter shaft bore	0.7505 to 0.7525	0.0010
4	Shifter shaft bore	0.8770 to 0.8790	0.0010
5 and 6	Fit of input shaft on thru-shaft	0.7460 to 0.7470	0.0015
7	Sleeve spline tooth thickness	0.2275 to 0.2295	0.0100
8 and 9	Fit of bearing on thru-shaft	1.3779 to 1.3784	0.0010
10	Thrust bearing outside diameter	7.2500 to 7.2600	0.0050

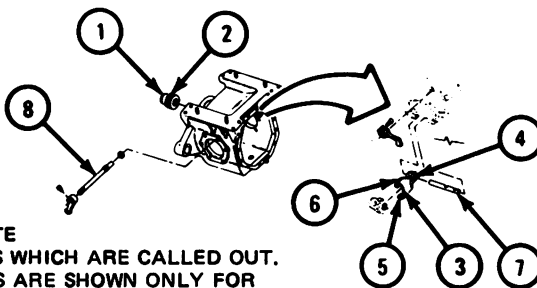
FRAME 5

NOTE

Readings must be within limits given in table 10-4. If readings are not within given limits, throw away part and get a new one.

1. Measure length of thru-shaft engagement sleeve (1).
2. Measure thru-shaft engagement sleeve fork groove (2).
3. Measure opening of sleeve shifter fork (3).
4. Measure sleeve shifter fork shaft bore (4).
5. Measure thickness of sleeve shifter fork finger (5).
6. Measure thickness of sleeve shifter fork (6).
7. Measure diameter of sleeve shifter fork shaft (7).
8. Measure diameter of shifter shaft (8).

GO TO FRAME 6



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

TA 088164

Table 10-4. Center Differential Sleeve Shifter Fork and Shaft Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limits (inches)
1	Thru-shaft engagement sleeve length	1.9700 to 2.0300	0.030
2	Thru-shaft engagement sleeve fork groove	0.3730 to 0.3780	0.010
3	Sleeve shifter fork opening	1.8700 to 1.8800	0.010
4	Sleeve shifter fork shaft bore	0.7495 to 0.7505	0.002
5	Sleeve shifter fork finger thickness	0.3580 to 0.3630	0.010
6	Sleeve shifter fork thickness	0.2800 to 0.3400	0.010
7	Sleeve shifter fork shaft diameter	0.7475 to 0.7485	0.002
8	Shifter shaft diameter	0.8710 to 0.8750	0.001

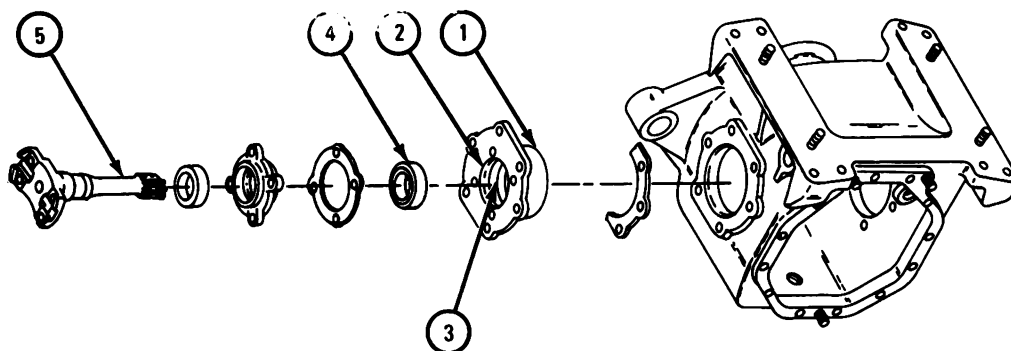
FRAME 6

NOTE

Readings must be within limits given in table 10-5. If readings are not within given limits, throw away part and get a new one.

1. Measure outside diameter of propeller shaft housing (1).
2. Measure propeller shaft housing bearing bore (2).
3. Measure propeller shaft housing bearing bore (3).
4. Measure fit of bearing (4) on propeller shaft (5).
5. Get new parts for all damaged parts.

END OF TASK



NOTE

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

TA 088165

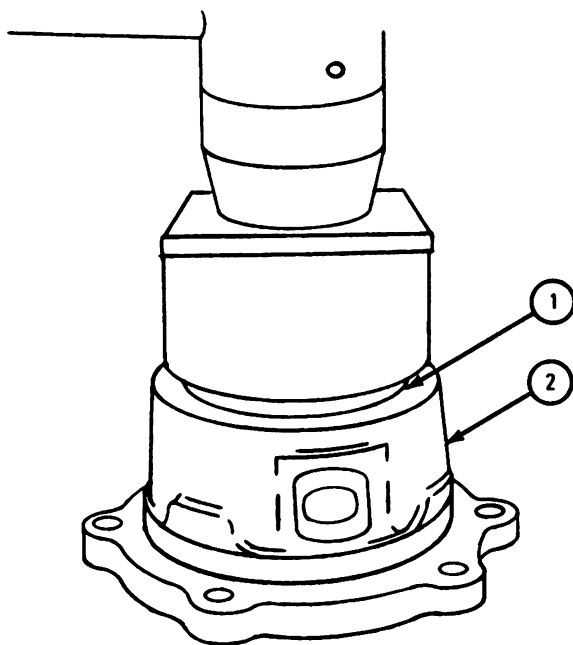
Table 10-5. Center Differential Propeller Shaft Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Propeller shaft housing outside diameter	5.248 to 5.249	0.002
2	Propeller shaft housing bearing bore	3.837 to 3.839	0.002
3	Propeller shaft housing bearing bore	2.9527 to 2.9533	0.002
4	Fit of bearing on propeller shaft	1.7716 to 1.7721	0.0015

f. Assembly.

FRAME 1

1. Press bearing cup (1) into housing (2).
 2. Do step 1 again for other housing.
- GO TO FRAME 2

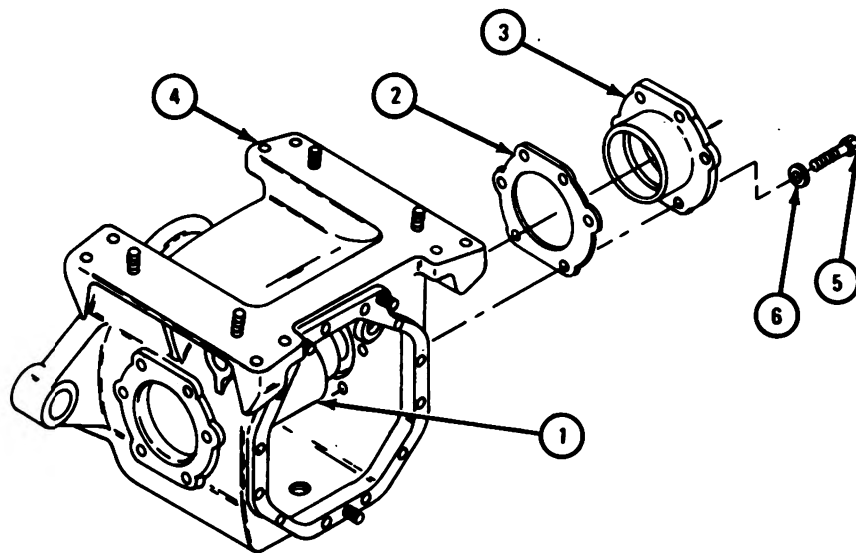


TA 088166

FRAME 2

1. Assemble equalizer assembly (1). Refer to Part 1, para 9-3. Put equalizer assembly in place.
2. Put shims (2) on housing (3) and put housing into differential housing (4).
3. Put six screws (5) with washers (6) into housings (3 and 4).
4. Do steps 2 and 3 again on other side of differential housing (4).

GO TO FRAME 3

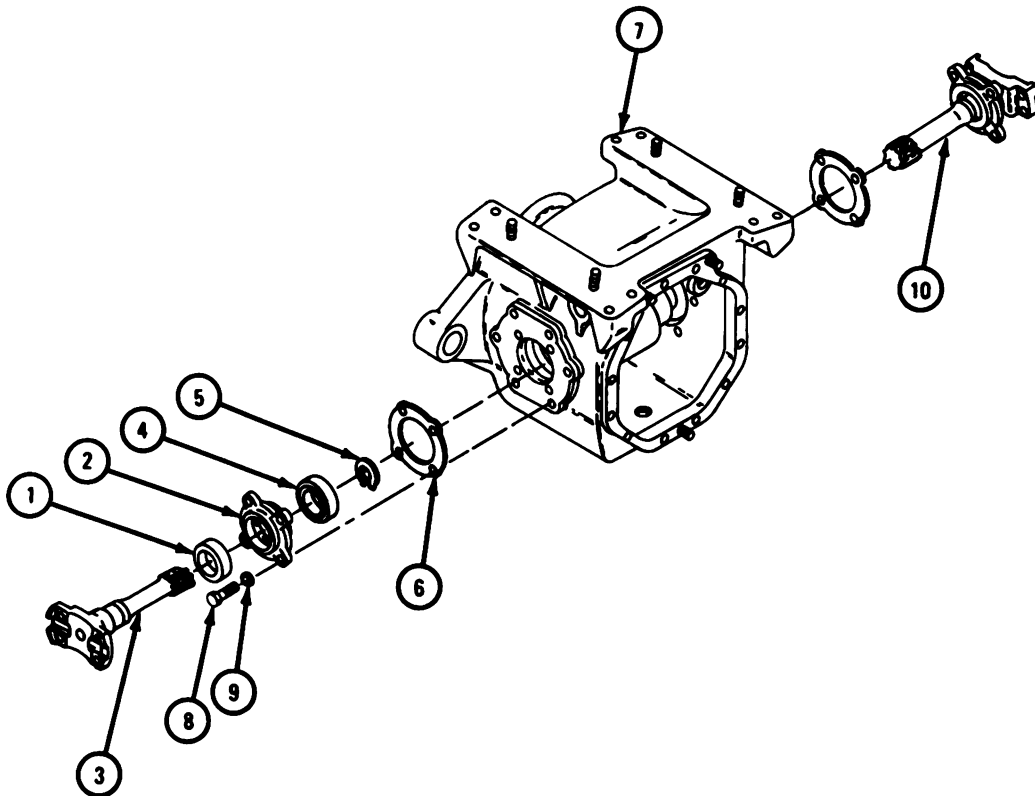


TA 088167

FRAME 3

1. Put seal (1) and retainer (2) on propeller shaft (3).
2. Press bearing (4) on propeller shaft (3).
3. Put on retaining ring (5).
4. Put on gasket (6).
5. Put propeller shaft assembly into differential housing (7).
6. Put in four screws (8) with washers (9).
7. Do steps 1 through 6 again for other propeller shaft (10).

GO TO FRAME 4



TA 088168

FRAME 4

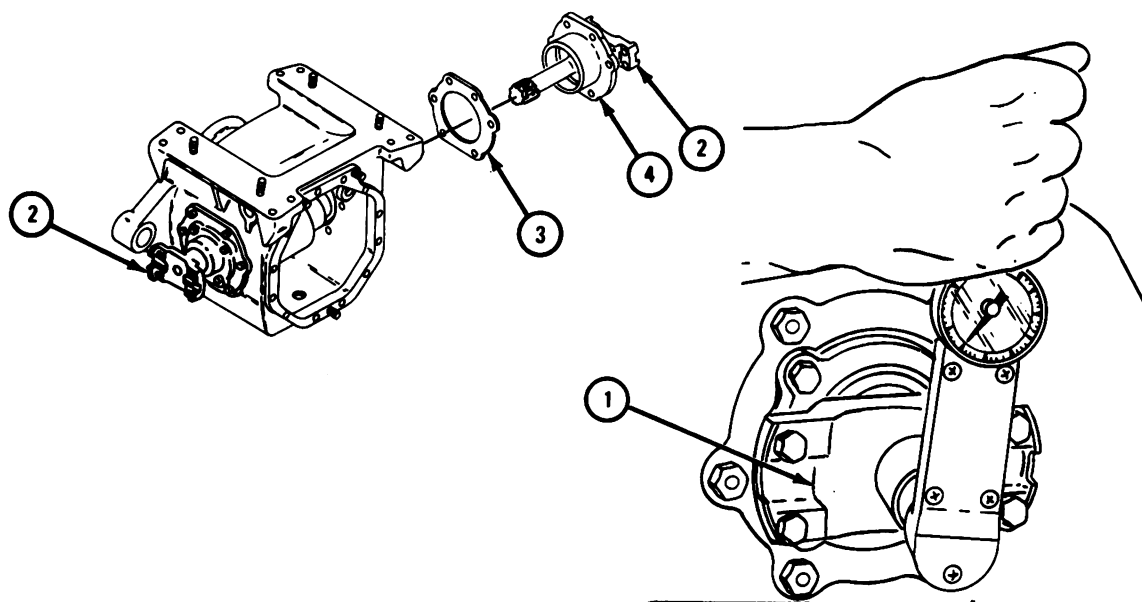
1. Put adapter (1) on propeller shaft (2). Check that bearing preload is 5 to 15 pound-inches.
2. If preload is not within limits given, set bearing preload by putting on or taking off shims (3) behind both housings (4).

NOTE

Do steps (a) and (b) until reading is within limits given, and alternate sides when doing over again.

- a. If preload is over 15 pound-inches, add a shim (3).
- b. If preload is less than 5 pound-inches, take out a shim (3).

GO TO FRAME 5

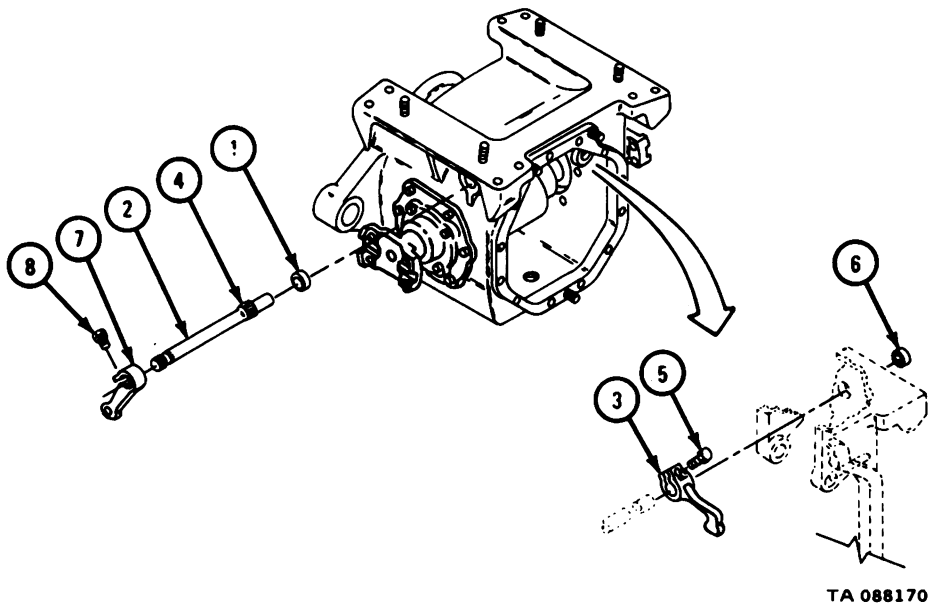


TA 088169

FRAME 5

1. Put in seal (1).
2. Slide in shaft (2) and put shifter fork (3) in place on shaft.
3. Aline shifter fork (3) with recess (4) in shaft (2).
4. Put in screw (5) and put safety wire in place.
5. Put in expansion plug (6).
6. Line up marks on shaft (2) and lever (7) and put lever (7) on shaft (2).
7. Put screw (8) into lever (7) and put safety wire in place.

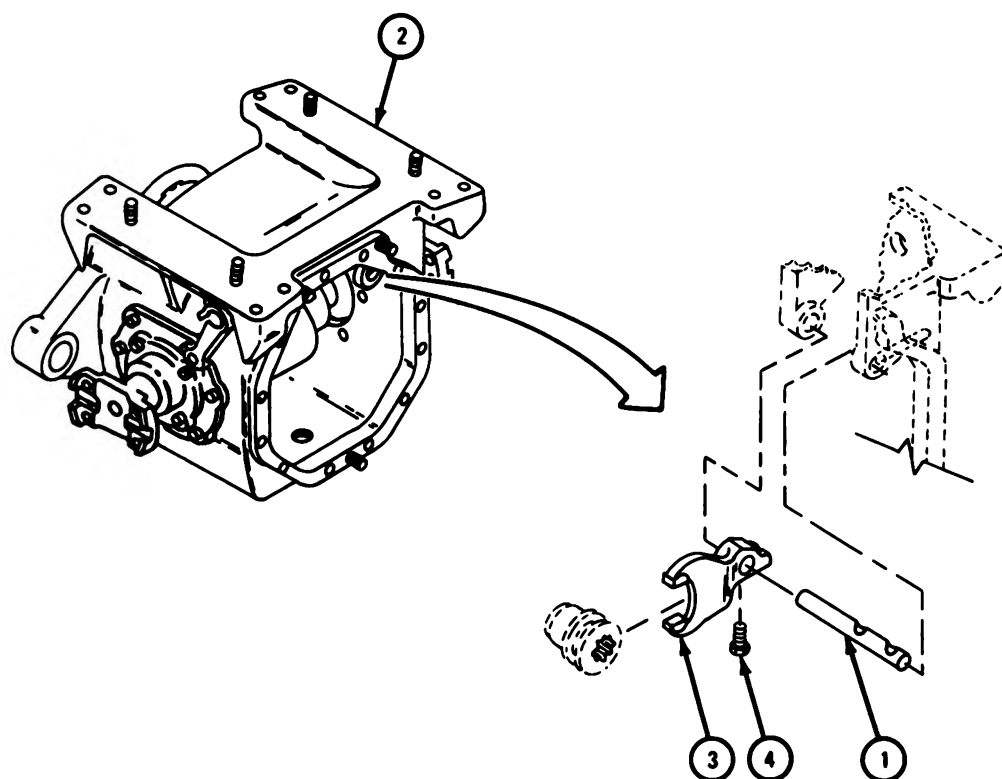
GO TO FRAME 6



FRAME 6

1. Slide shaft (1) into housing (2) and shifter fork (3) on shaft (1).
2. Aline shifter fork (3) with hole in shaft (1). Put in setscrew (4) and put safety wire in place.

GO TO FRAME 7

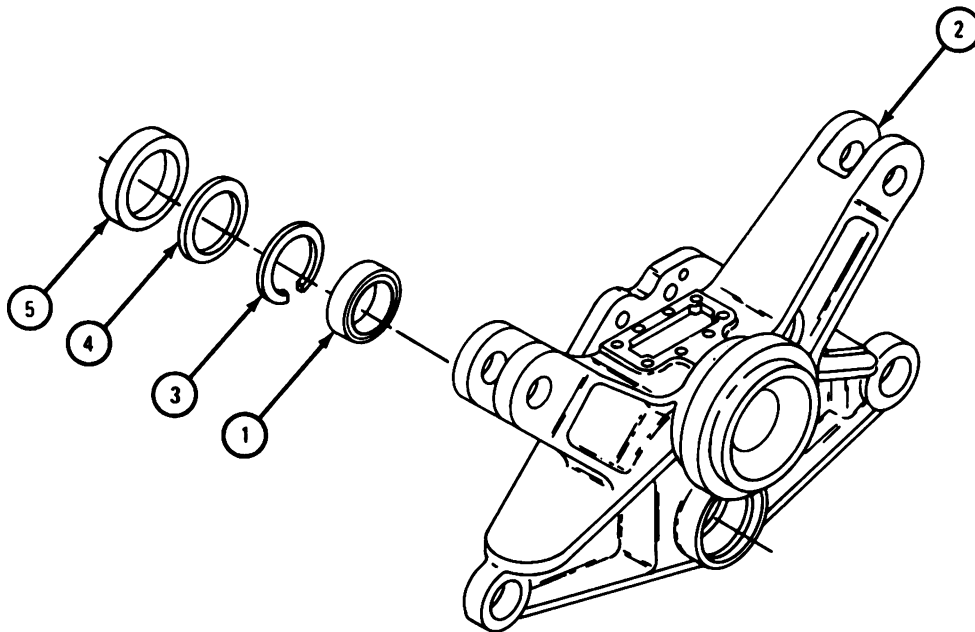


TA 088171

FRAME 7

1. Press bearing (1) into housing (2). Refer to Part 1, para 7-6. Put in retaining ring (3).
2. Put in shims (4) and press bearing cup (5) into housing (2).

GO TO FRAME 8

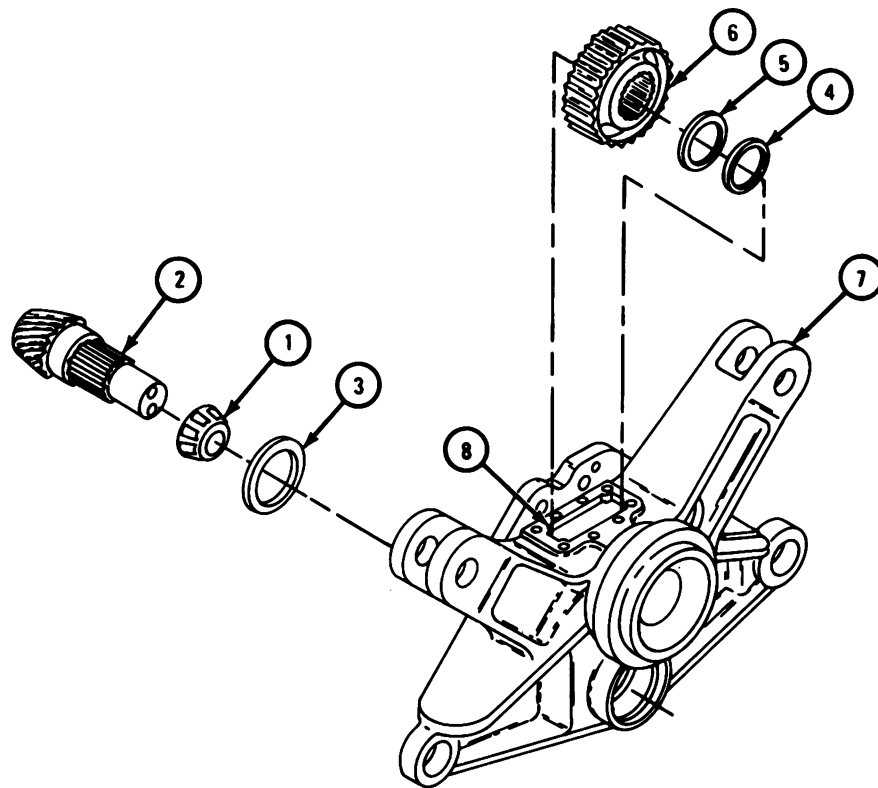


TA 088172

FRAME 8

1. Press bearing (1) on pinion (2).
2. Put spacer (3) on pinion (2).
3. Put shims (4 and 5) and gear (6) into housing (7) through opening (8).
4. Aline shims (4 and 5) and gear (6) and press pinion (2) into housing (7).

GO TO FRAME 9

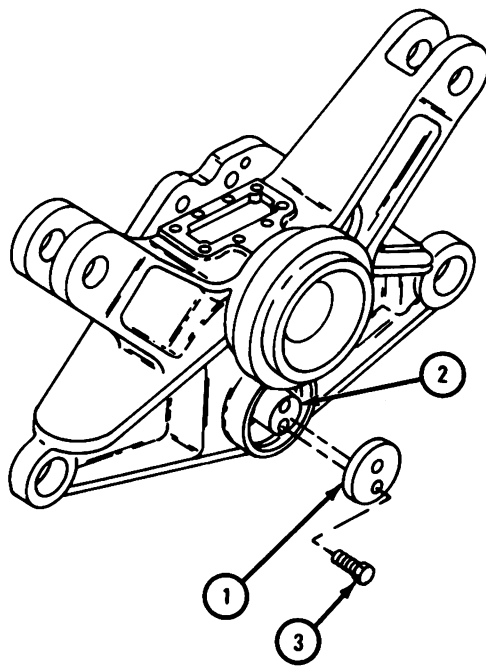


TA 088173

FRAME 9

1. Place cap (1) on pinion (2).
2. Put in two screws (3) and tighten to draw pinion (2) in place. Take out screws (3) and cap (1).

GO TO FRAME 10

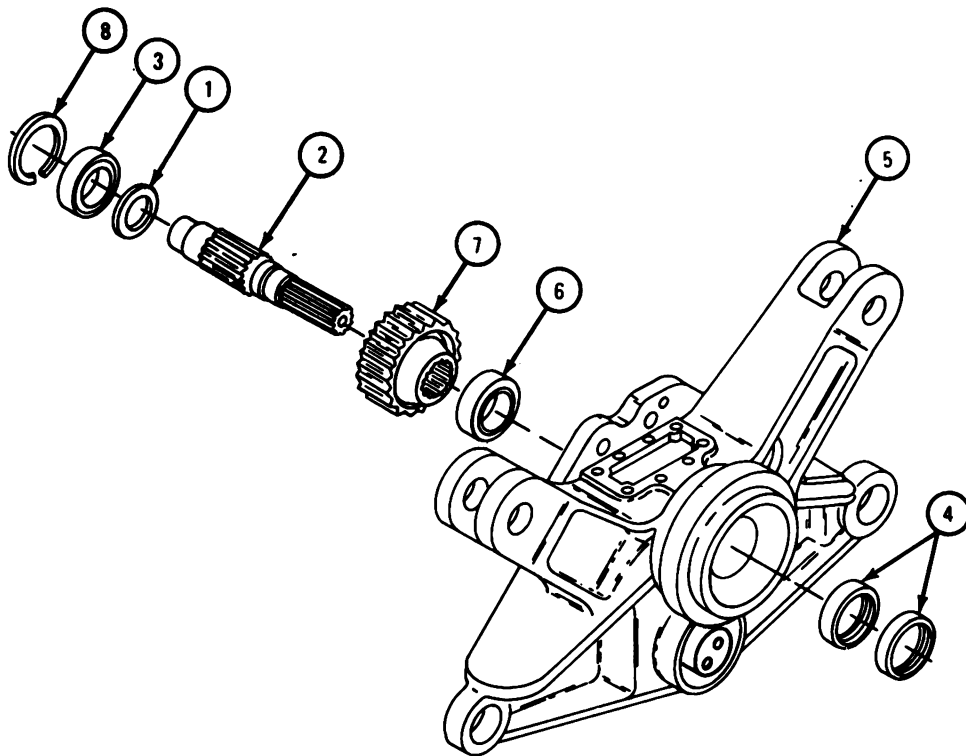


TA 088174

FRAME 10

1. Put spacer (1) on shaft (2).
2. Press bearing (3) on shaft (2). Refer to Part 1, para 7-6.
3. Pack seal (4) with grease and put seal in housing (5).
4. Put bearing (6) in housing (5). Refer to Part 1, para 7-6.
5. Put gear (7) in housing (5) and put in assembled shaft (2).
6. Put on retaining ring (8).

GO TO FRAME 11

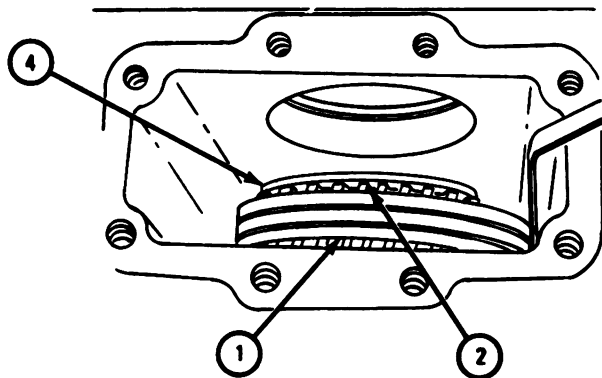
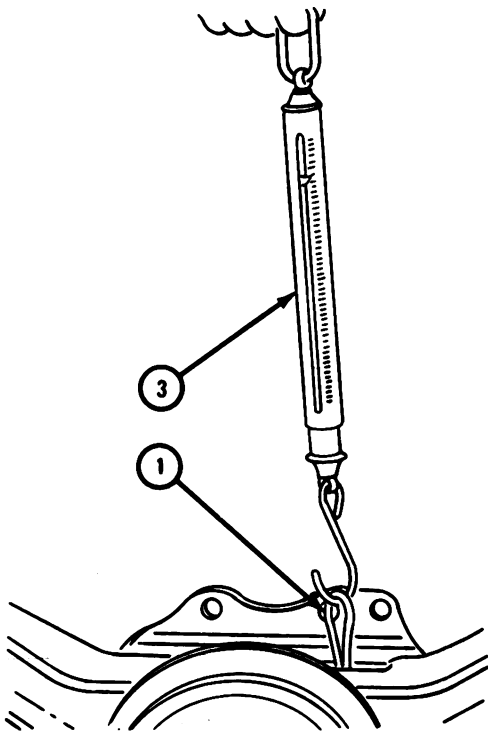


TA 088182

FRAME 11

1. Wrap a cord (1) around gear (2) at least three times.
2. Pull cord with inch-pound spring scale (3) and multiply reading by 2.5 to set pinion preload. Pinion preload should be 5 to 15 pound-inches.
3. If pinion preload is not within given limits, do the following:
 - a. Take out gear (2) and shims (4). Refer to para 10-3c, frame 4.
 - b. If pinion preload is more than 15 pound-inches, take out a shim (4).
 - c. If pinion preload is less than 5 pound-inches, add a shim (4).
 - d. Put back gear (2) and shims (4). Refer to frames 8 and 9.
4. Do steps 1 and 2 again until pinion preload is within given limits.

GO TO FRAME 12

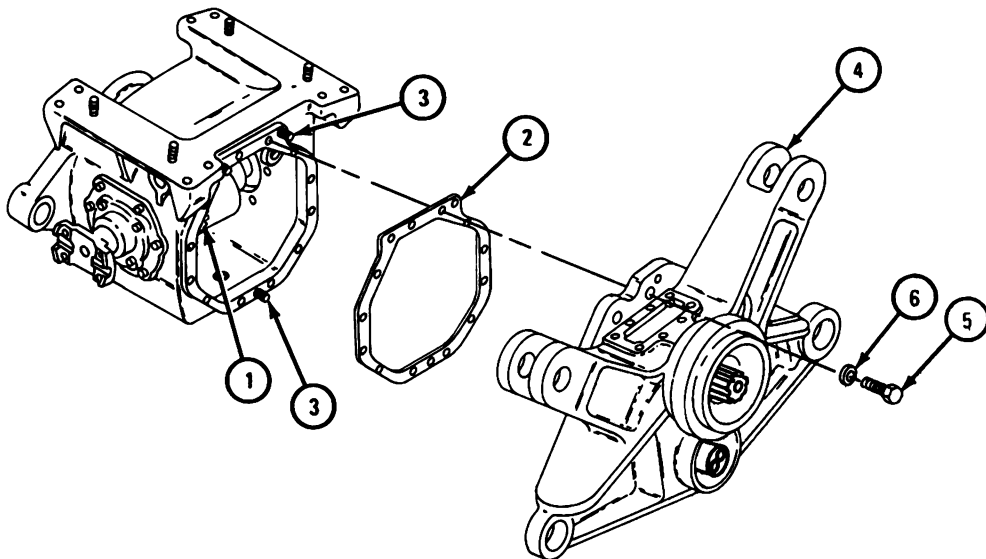


TA 088175

FRAME 12

1. Paint 10 teeth of ring gear (1) with anti-seize compound.
2. Put on gasket (2).
3. Aline pins (3) with holes in housing (4).
4. Put on housing (4) and put in 12 screws (5) and washers (6).

GO TO FRAME 13

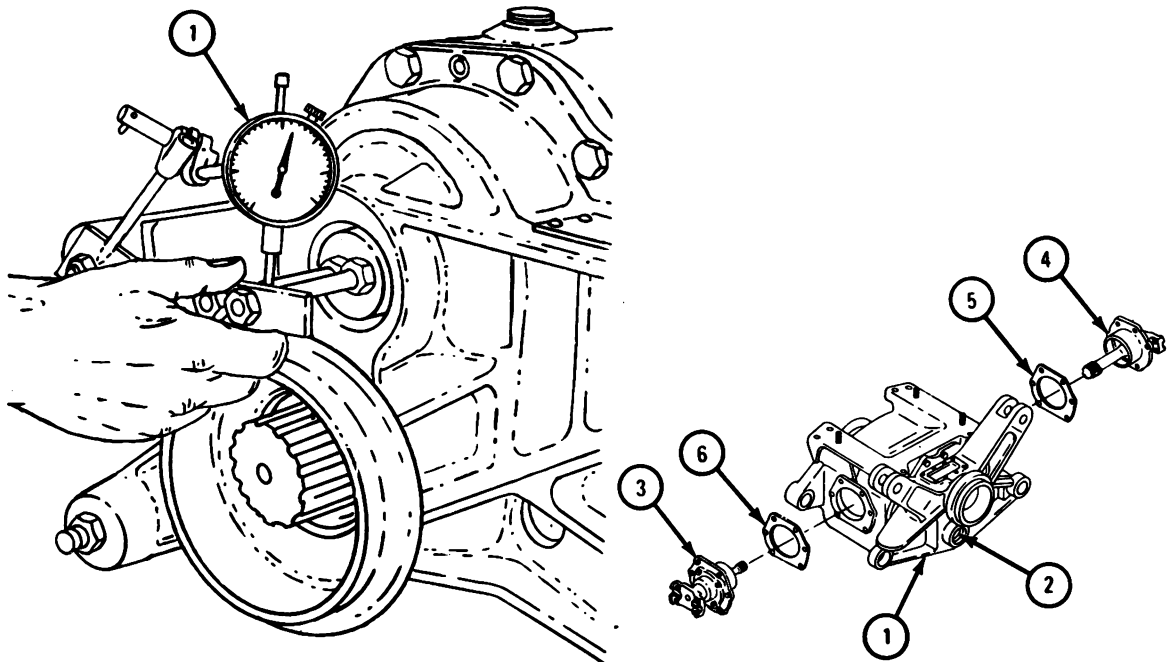


TA 088176

FRAME 13

1. Put dial indicator on housing (1) as shown.
2. Turn pinion (2) slightly and note backlash reading on dial indicator. Reading should be 0.007 to 0.012 inch.
3. If reading is within limits given, go to step 5.
4. If reading is not within limits given, do the following:
 - a. Take off housings (3 and 4) and shims (5 and 6). Refer to para 10-3c, frame 8.
 - b. If backlash is more than 0.012 inch, take away a shim (5) and put it under housing (3).
 - c. If backlash is less than 0.007 inch, take away a shim (6) and put it under housing (4).
 - d. Put back housings (3 and 4). Refer to frame 2.
5. Take off dial indicator.

GO TO FRAME 14



TA 088177

FRAME 14

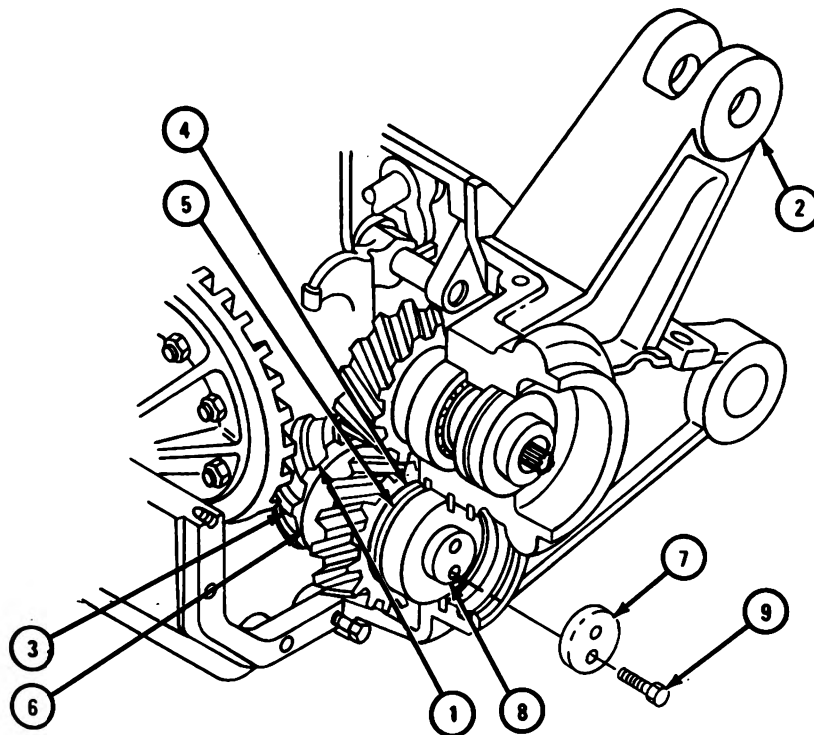
1. Turn pinion (1).
2. Refer to para 10-3c, frame 1, and take off housing (2).
3. Check contact pattern of gear tooth (3) on pinion (1).

NOTE

Tooth contact pattern should start near toe of gear teeth and run about $5/8$ inch toward root. It should be centered between top and root of gear tooth.

4. If there is not enough contact on gear tooth (3), take off shims (4 and 5), and put on the same thickness of shims (6).
5. If there is too much contact on gear tooth (3), take off shims (6) and put on the same thickness of shims (4 and 5).
6. Check backlash again. Refer to frame 13.
7. Put cap (7) on shaft (8). Put in and tighten two screws (9).

GO TO FRAME 15

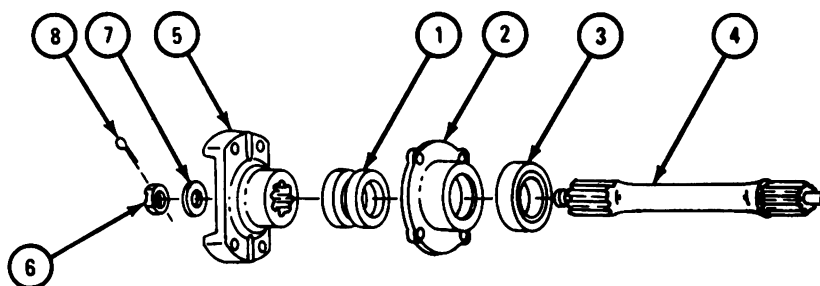


TA 088178

FRAME 15

1. Pack seal (1) with grease. Press seal into retainer (2).
2. Press bearing (3) on shaft (4).
3. Put yoke (5) and retainer (2) on shaft (4) and nut (6) and washer (7). Tighten nut to 175 to 250 pound-feet.
4. Put in cotter pin (8).

GO TO FRAME 16

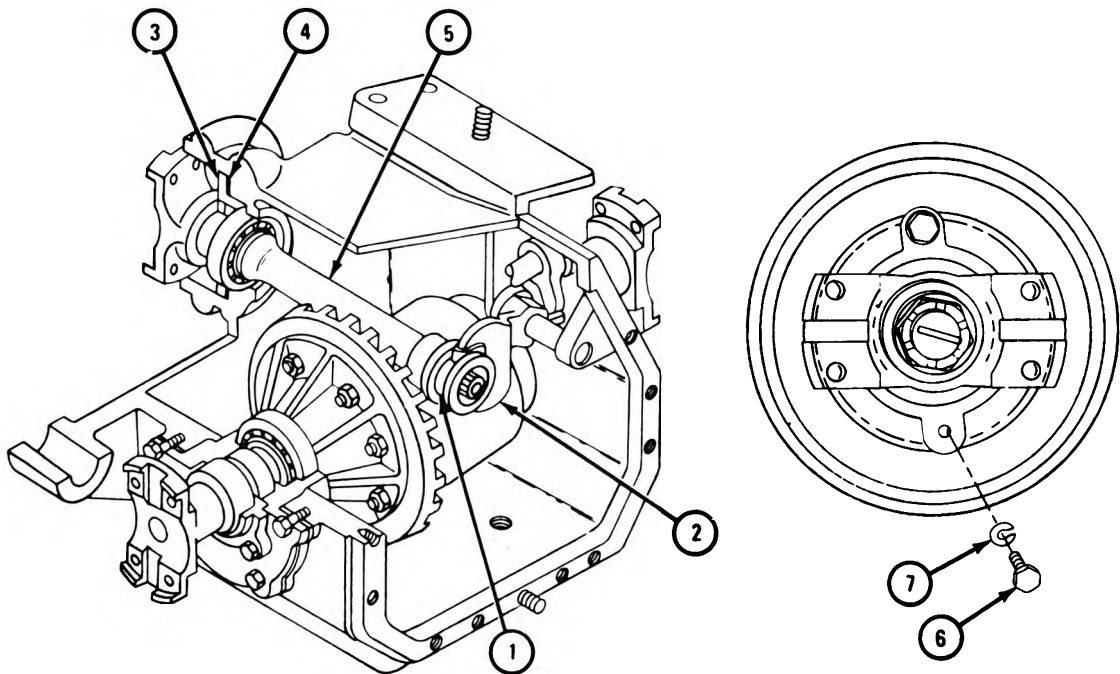


TA 088179

FRAME 16

1. Put sleeve (1) on shifter fork (2).
2. Put in thru-shaft assembly (3) and gasket (4).
3. Check that thru-shaft (5) meshes with sleeve (1).
4. Put in four screws (6) and four lockwashers (7).

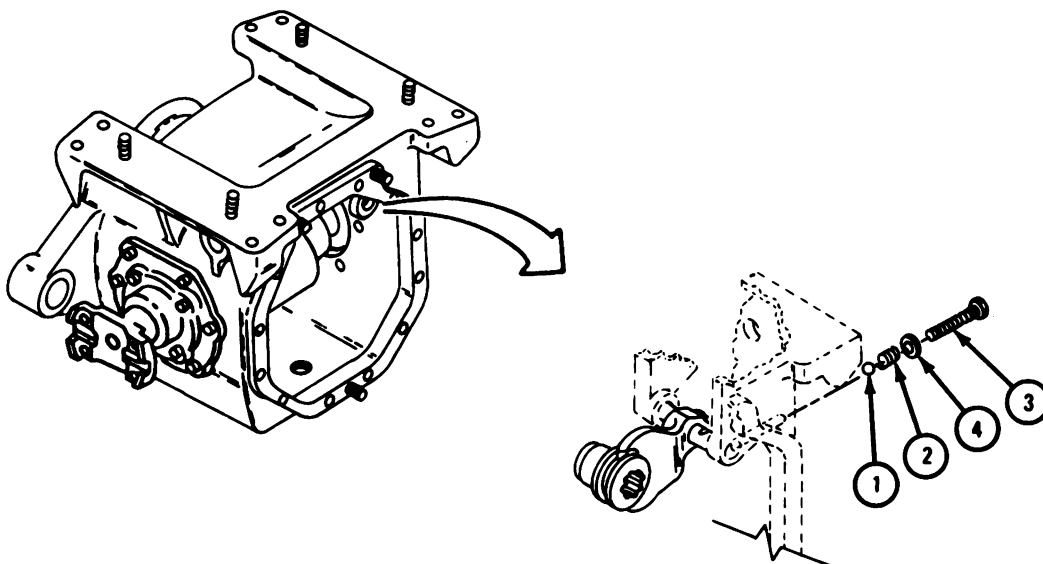
GO TO FRAME 17



TA 088180

FRAME 17

1. Put in ball (1) and spring (2).
 2. Put in screw (3) and washer (4).
- GO TO FRAME 18

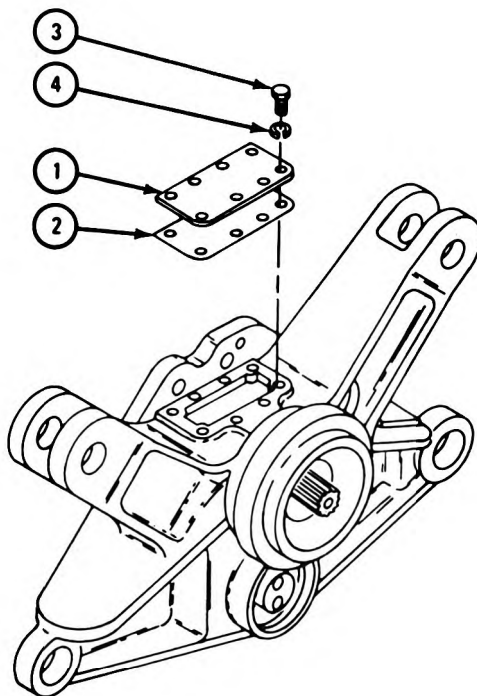


TA 088181

FRAME 18

1. Put on cover (1) and gasket (2) and put in six screws (3) and six lockwashers (4).

GO TO FRAME 19

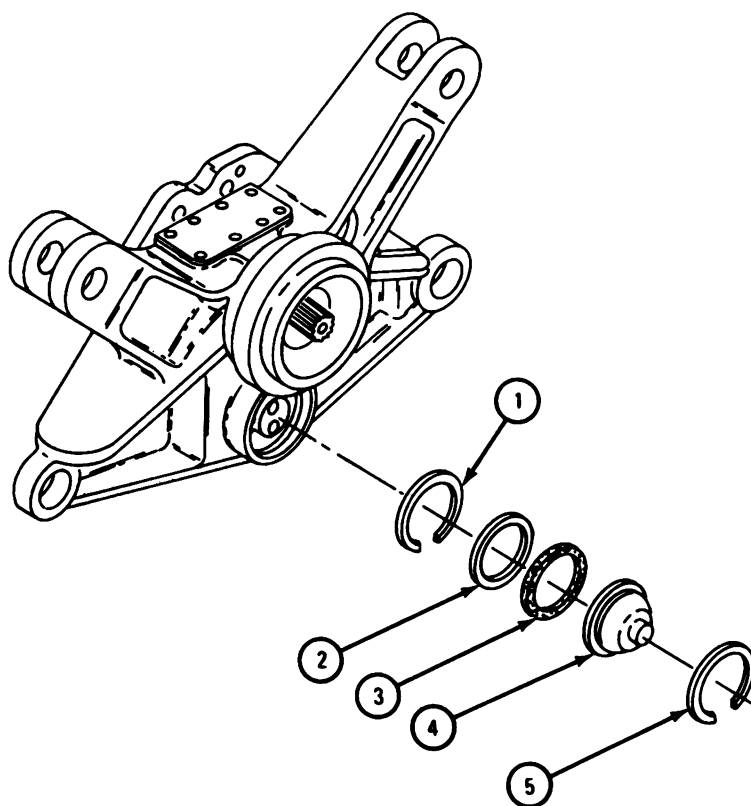


TA 088183

FRAME 19

1. Put on retaining ring (1).
2. Put on bearing cover shim (2), preformed packing (3), and cover (4).
3. Put on retaining ring (5).

GO TO FRAME 20

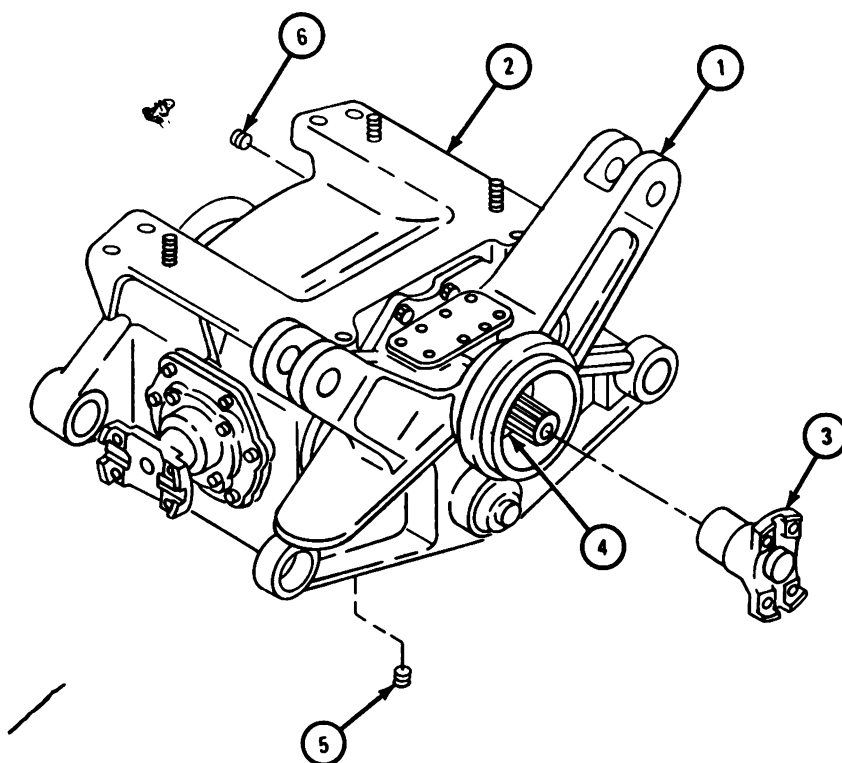


TA 088153

FRAME 20

1. Put housings (1 and 2) together. See frame 11.
2. Carefully put on yoke (3) so as not to damage seals (4).
3. Put in plug (5). Fill differential assembly (2) with lubricant. Refer to LO 9-2320-242-12.
4. Put in plug (6).

END OF TASK



TA 088184

g. Bench Test.

FRAME 1

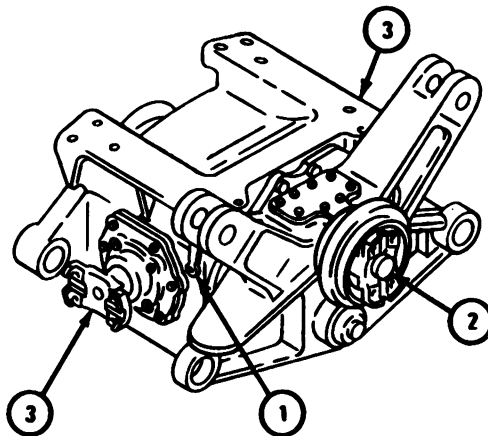
NOTE

Break-in test should last at least 10 minutes.

During test, if any grinding, clanking, or other unusual noises are heard, stop test immediately, find cause and repair it, then continue test.

1. Using a range of input torque of 0 to 200 pound-feet at 200 rpm and 2800 rpm, test drive and coast positions.
2. Check that shift lever (1) works smoothly, with no binding or grinding.
3. Lock input shaft (2) and turn each output shaft (3) three full turns. Each output shaft must have at least 400 pound-feet of running torque.
4. Drain and strain lubricant. There should be no metal chips, shavings or other foreign matter in lubricant or on drain plug.

END OF TASK



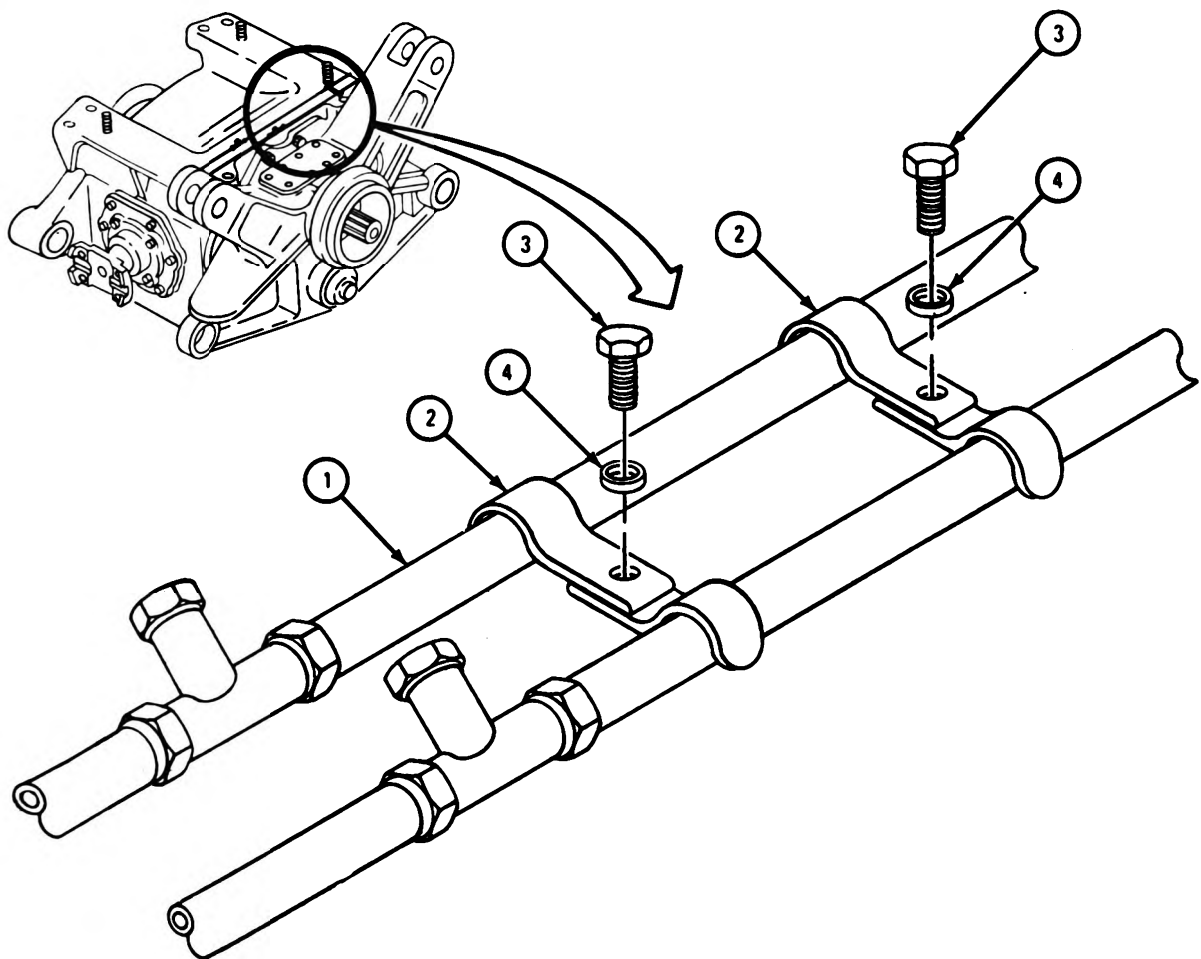
TA 105061

h. Replacement.

FRAME 1

1. Put on two hydraulic lines (1) and four clamps (2).
2. Put in two screws (3) with two washers (4).

GO TO FRAME 2



TA 089372

FRAME 2

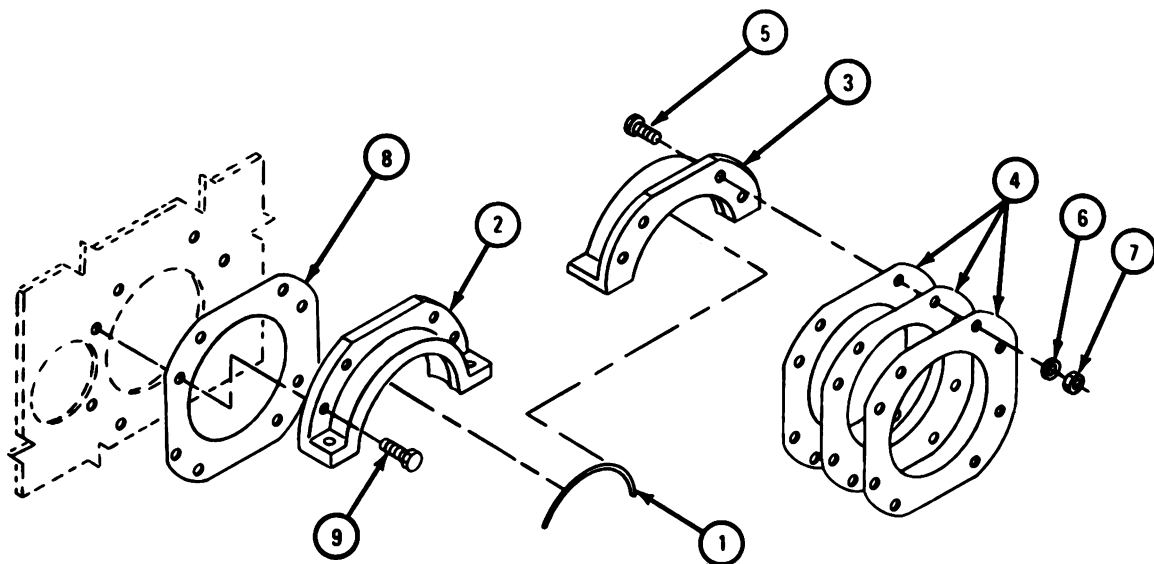
1. Put four felt pads (1) into front (2) and rear (3) upper supports.

NOTE

Number of shims (4) to be put back changes from truck to truck. Always put in size and number that were taken out.

2. Put shims (4) on rear mounting bracket.
3. Put on rear upper support (3).
4. Put in four screws (5), four lockwashers (6), and four nuts (7).
5. Put on front gasket (8).
6. Put on front upper support (2).
7. Put in four screws (9).

GO TO FRAME 3

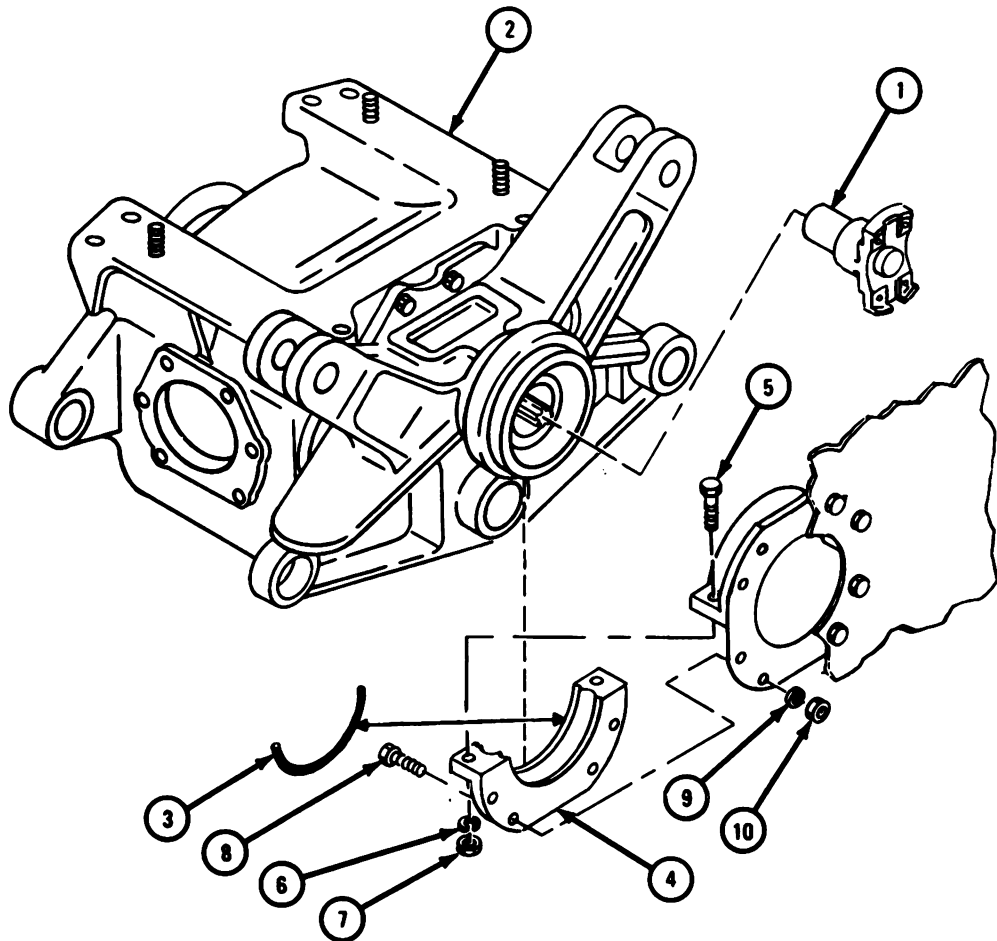


TA 089373

FRAME 3

1. Take out yoke (1).
2. Place differential assembly (2) onto jack. Move differential assembly under rear of tractor and jack into place.
3. Put two felt strips (3) into rear lower support (4).
4. Put on lower support (4).
5. Put in two screws (5), two lockwashers (6), and two nuts (7).
6. Put in four screws (8), four lockwashers (9), and nuts (10).

GO TO FRAME 4

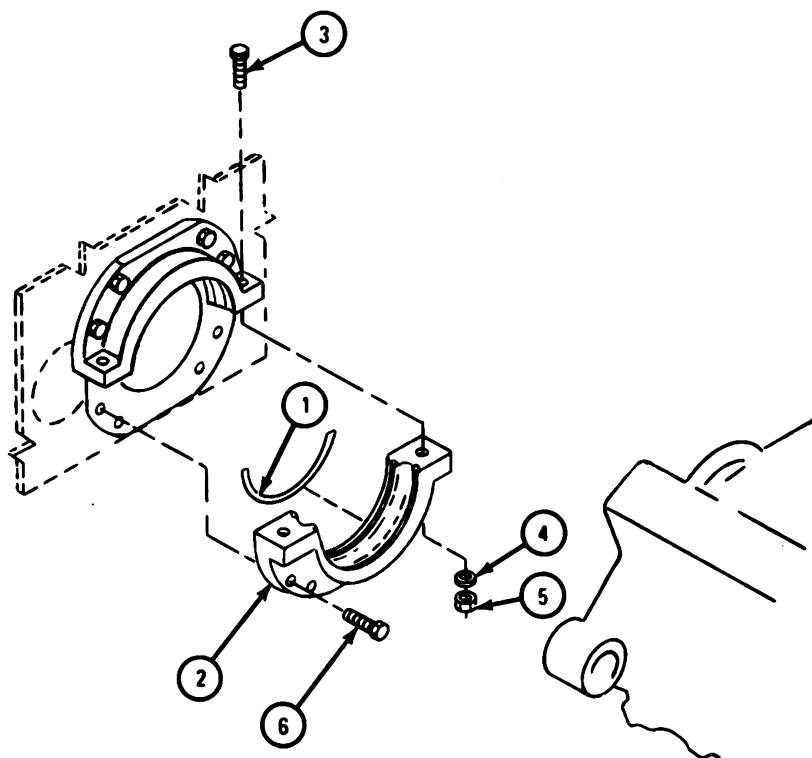


TA 089374

FRAME 4

1. Put two felt strips (1) into lower support assembly (2).
2. Put lower support assembly (2) into place.
3. Put in two screws (3), two lockwashers (4), and two nuts (5).
4. Put in four screws (6).
5. Lower and remove jack.

GO TO FRAME 5



TA 089375

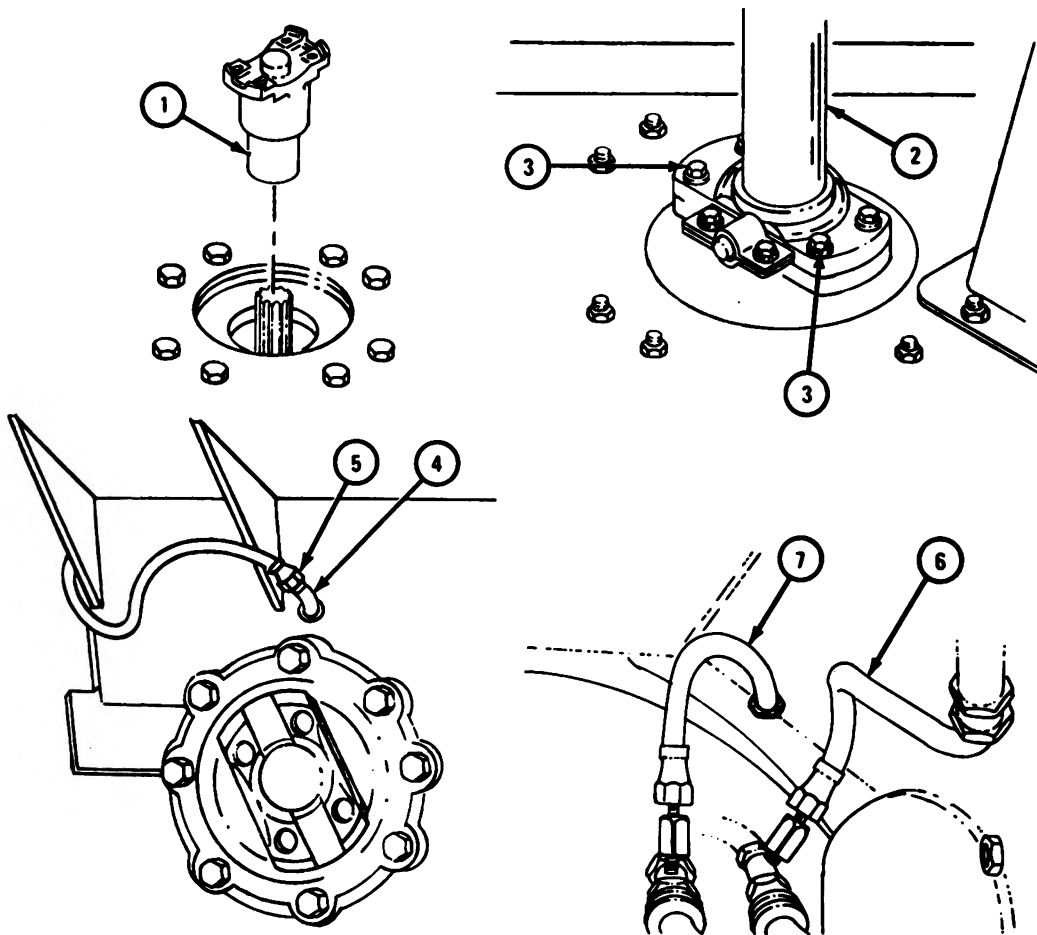
FRAME 5

NOTE

Parts (1, 2, and 3) are found from inside tractor hull.
 Parts (4, 5, 6, and 7) are found under the tractor.

1. Put in yoke (1). Move driveshaft (2) in place against yoke.
2. Put in four screws (3).
3. Put in elbow (4). Put on vent line (5).
4. Put on hydraulic line (6) and air line (7).

GO TO FRAME 6



TA 089376

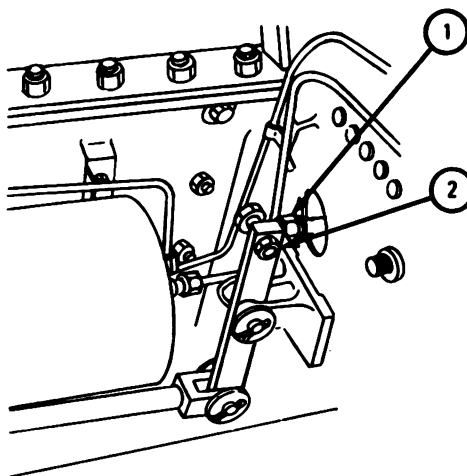
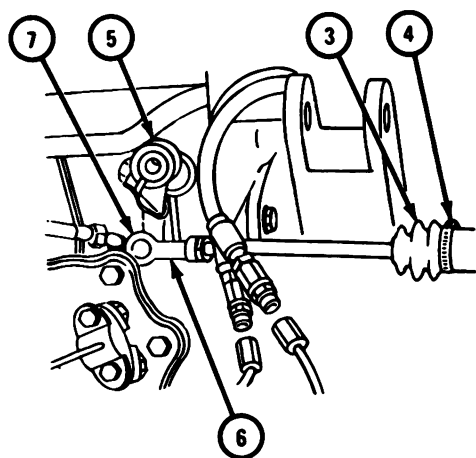
FRAME 6

1. Put in connecting link assembly (1).
2. Put on washer and nut (2).
3. Put on boot (3) and clamp (4).
4. Place center differential shift lever (5) in the out position as shown.
5. Put in connecting link assembly (6).
6. Put on washer and nut (7).

NOTE

Check if SIX-WHEEL drive lever engages and disengages.

GO TO FRAME 7

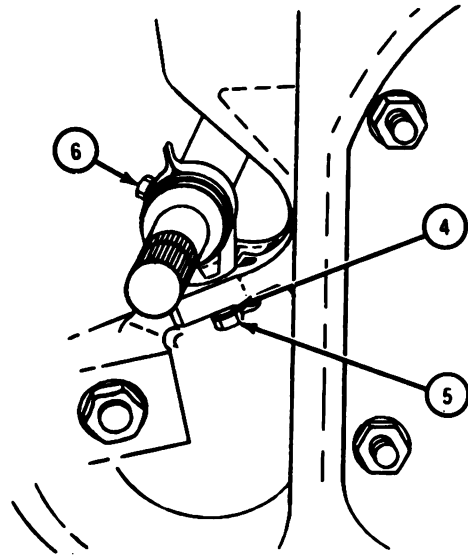
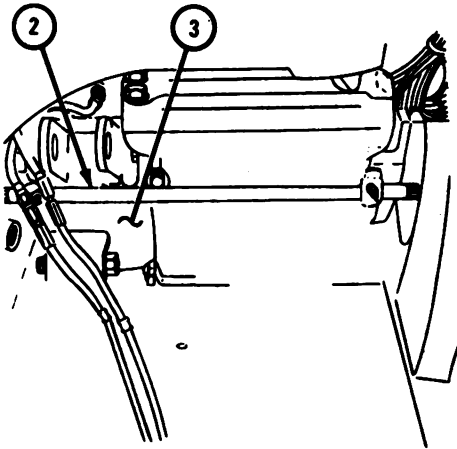
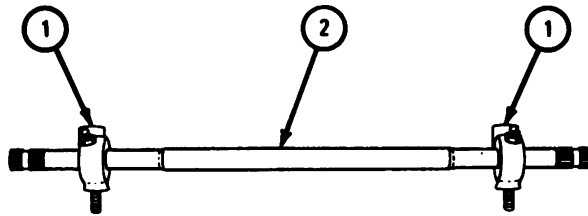


TA 089378

FRAME 7

1. Put two bearings (1) on shaft (2) as shown.
2. Put shaft (2) in place on differential (3).
3. Put two lockwashers (4) and two nuts (5) on bearing screws (6).

GO TO FRAME 8



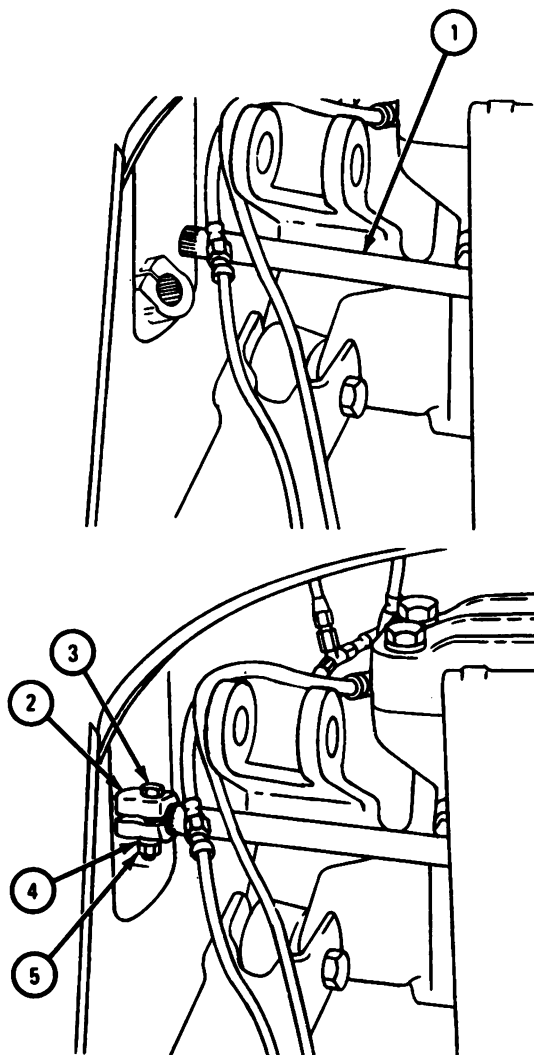
TA 089386

FRAME 8

1. Slide shaft (1) to rear enough to line up yoke (2). Push shaft (1) forward into yoke (2).

2. Put screw (3) into yoke (2). Put on lockwasher (4) and nut (5).

GO TO FRAME 9



TA 089381

FRAME 9

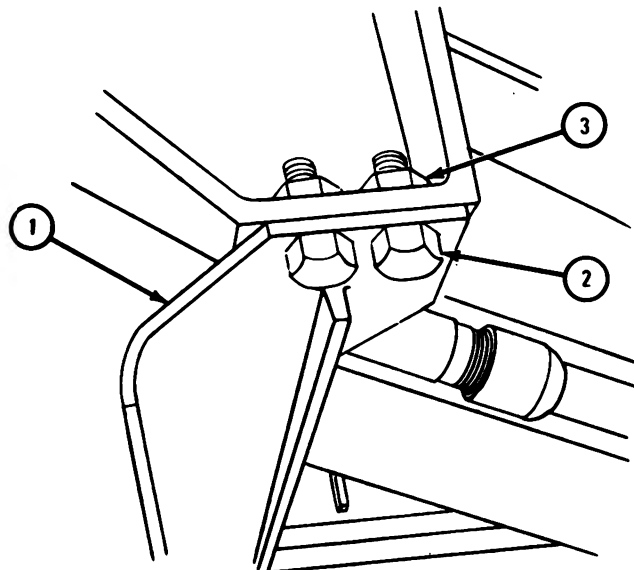
1. Put on two plate assemblies (1) and put in four screws (2) and four nuts (3).

NOTE

Follow-on Maintenance Action Required:

1. Replace A-frame suspension. Refer to TM 9-2320-242-20.
2. Replace center axle leaf spring. Refer to TM 9-2320-242-20.
3. Replace center shock absorbers. Refer to TM 9-2320-242-20.
4. Replace center axle assemblies. Refer to TM 9-2320-242-20.
5. Replace center wheel and tire assemblies. Refer to TM 9-2320-242-20.
6. Fill center differential with lubricant. Refer to LO 9-2320-242-12.
7. Replace tractor hull access panel. Refer to TM 9-2320-242-20.
8. Remove supports and lower tractor. Refer to TM 9-2320-242-20.
9. Bleed brakes. Refer to TM 9-2320-242-20.
10. Test drive truck and check operation of differential assembly. Refer to TM 9-2320-242-10.

END OF TASK



TA 105062

10-4. CENTER DIFFERENTIAL INPUT YOKE SEAL REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Input yoke seal
Artillery and automotive grease, type GAA, MIL-G-10924
Crocus cloth

PERSONNEL: One

EQUIPMENT CONDITION: Center differential assembly removed and on bench.

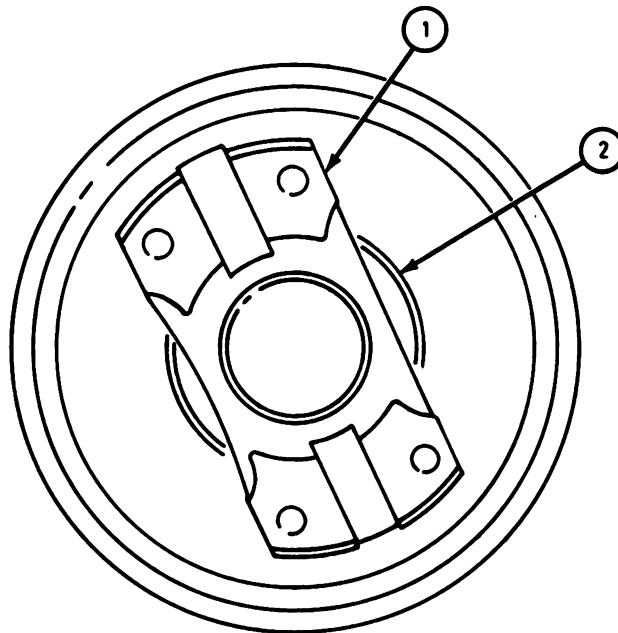
a. Removal.

FRAME 1

1. Take out input yoke (1).

2. Pry out seal (2).

END OF TASK



TA 101514

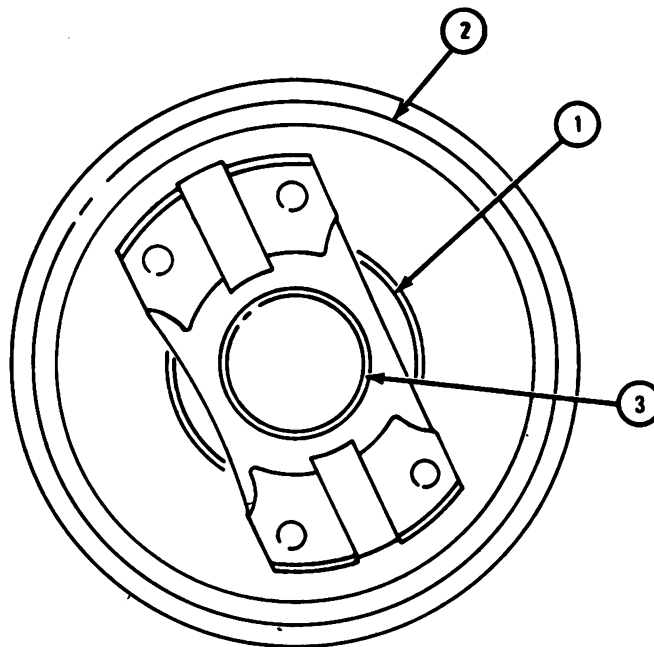
b. Inspection. Check that sealing surface in housing has no nicks or burrs. Polish out nicks or burrs with crocus cloth.

c. Replacement.

FRAME 1

1. Tap seal (1) into differential (2).
2. Coat inside of yoke (3) with grease. Put in yoke (3).

END OF TASK



TA 101515

10-5. CENTER DIFFERENTIAL OUTPUT YOKE SEAL REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Artillery and automotive grease, type GAA, MIL-G-10924
Crocus cloth
Cotter pin
Retainer gasket
Output yoke seal
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680

PERSONNEL: One

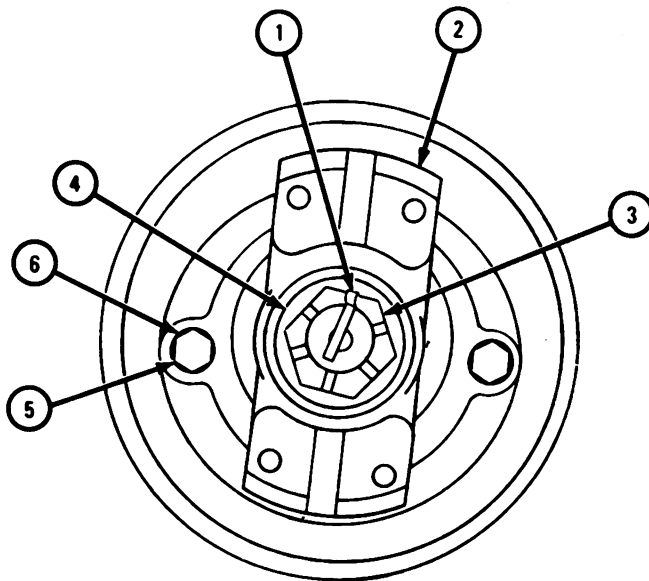
EQUIPMENT CONDITION: Center differential assembly removed from truck.

a. Removal.

FRAME 1

1. Take out cotter pin (1) and throw it away.
2. Hold yoke (2). Take out nut (3) and washer (4).
3. Pull off yoke (2).
4. Take out four capscrews (5) with lockwashers (6).

GO TO FRAME 2

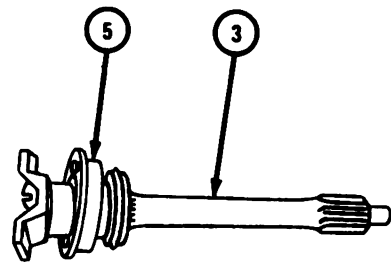
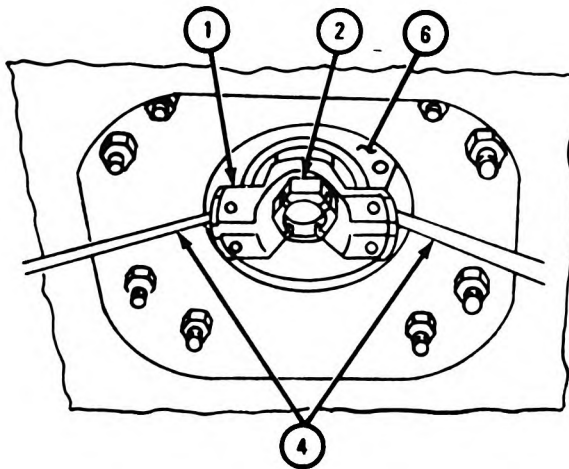


TA 101516

FRAME 2

1. Put yoke (1) and nut (2) partway on shaft assembly (3) as shown.
2. Pry out shaft assembly (3) with two prybars (4) as shown.
3. Take off nut (2), yoke (1), and retainer (5).
4. Take out gasket (6) and throw it away.

GO TO FRAME 3

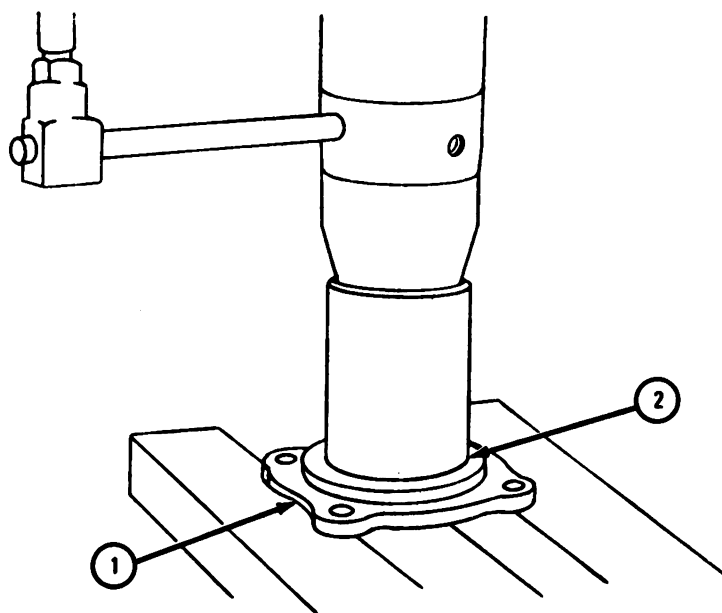


TA 101517

FRAME 3

1. Put retainer (1) on arbor press, inside face up.
2. Press out seal (2).

END OF TASK



TA 105133

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

c. Inspection and Repair.

(1) Check that retainer seal surface has no nicks or burrs. Take off nicks or burrs. Take off nicks and burrs with crocus cloth.

(2) Check that retainer has no cracks. If retainer is cracked, throw it away and get a new one.

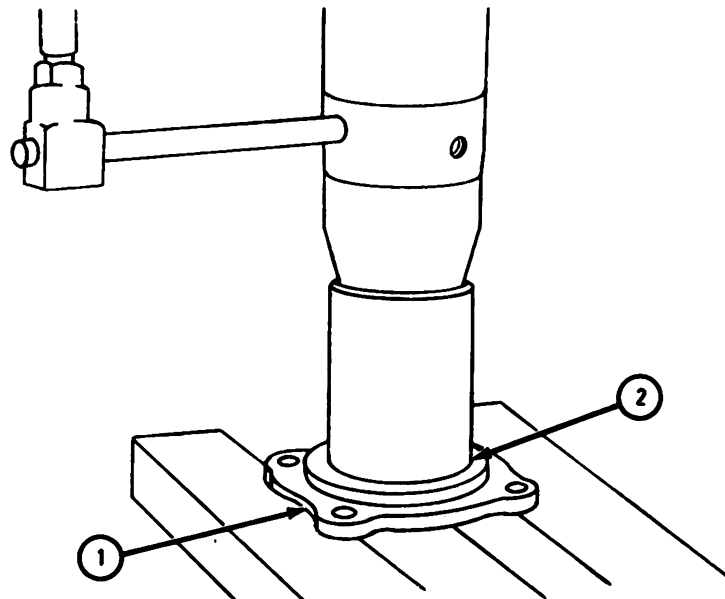
d. Replacement.

FRAME 1

1. Set retainer (1) on arbor press, outside facing up.

2. Press in seal (2).

GO TO FRAME 2

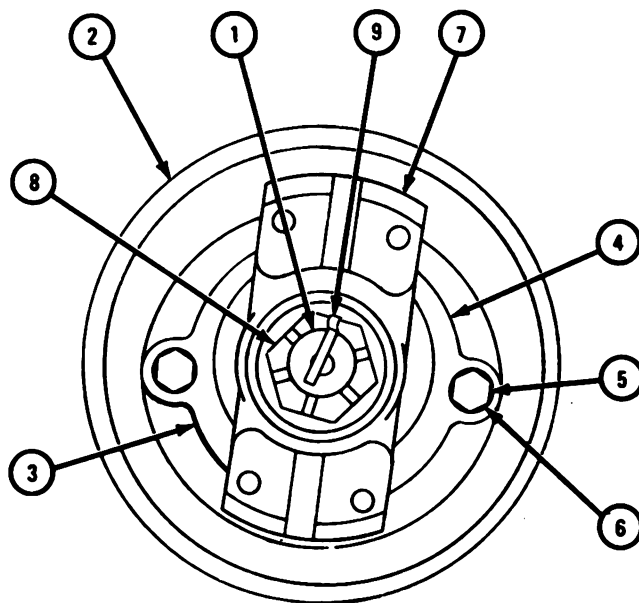


TA 101518

FRAME 2

1. Place shaft (1) into differential (2).
2. Put on gasket (3).
3. Coat outer edge of seal with grease. Put retainer seal assembly (4) over shaft (1).
4. Put in four capscrews (5) with lockwashers (6).
5. Put on output yoke (7) and nut (8). Tighten nut to 175 to 250 pound-feet.
6. Put in cotter pin (9).

END OF TASK



TA 101519

10-6. CENTER DIFFERENTIAL PROPELLER SHAFT SEAL REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
 Retainer gasket
 Propeller shaft seal
 Crocus cloth

PERSONNEL: One

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

a. Preliminary Procedures.

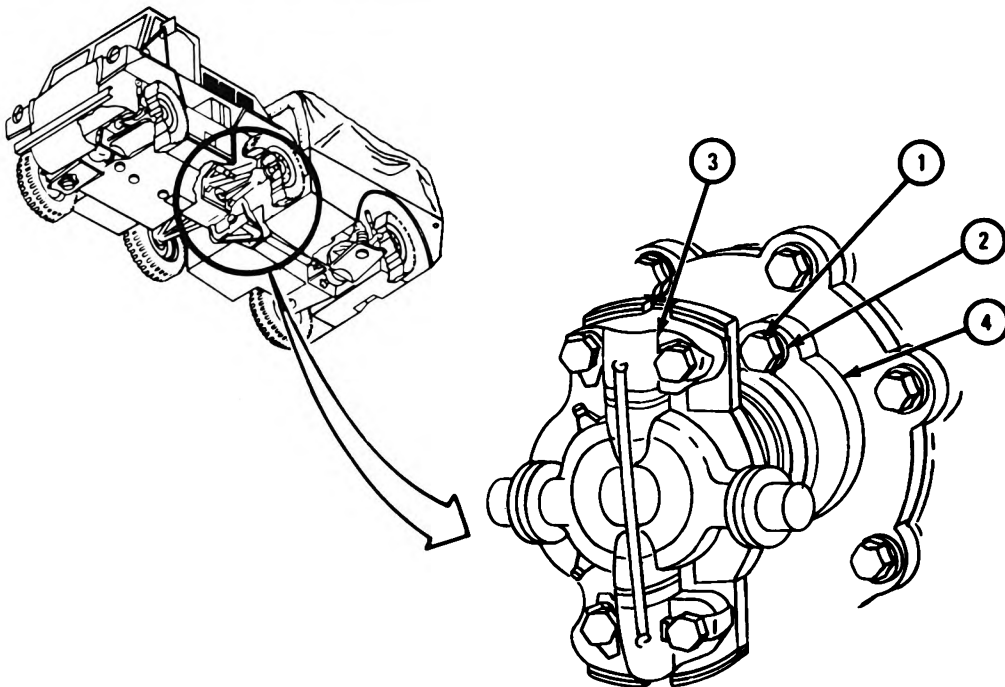
- (1) Jack up and support truck chassis. Refer to TM 9-2320-242-20.
- (2) Drain differential lubricant. Refer to LO 9-2320-242-12.
- (3) Drop drive axle. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out four capscrews (1) with lockwashers (2).
2. Take out retainer assembly (3). Take out gasket (4).

GO TO FRAME 2

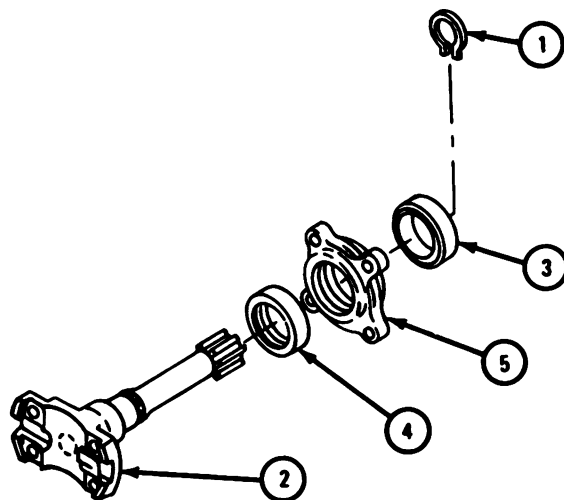


TA 101520

FRAME 2

1. Take retaining ring (1) off shaft (2).
2. Take bearing (3) off shaft (2). Take out shaft.
3. Take seal (4) out of retainer (5) and throw it away.

END OF TASK



TA 101521

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 retainer has no cracks. Get a new retainer if it is cracked.

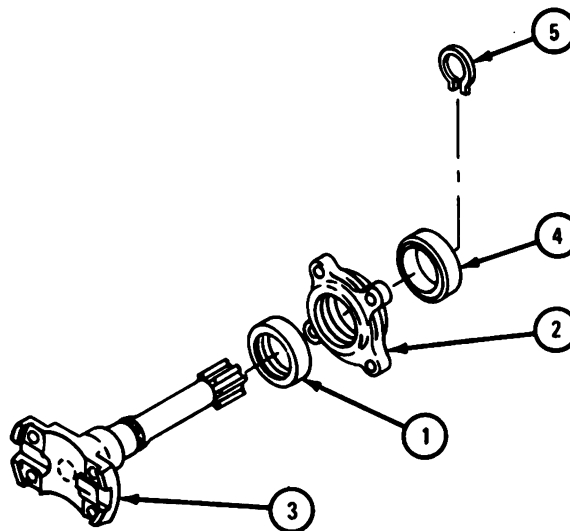
(2) Check that retainer seal surface has no nicks or burrs. Polish out nicks or burrs with crocus cloth.

e. Replacement.

FRAME 1

1. Put seal (1) into retainer (2).
2. Put in shaft (3). Press on bearing (4).
3. Put on retaining ring (5).

GO TO FRAME 2



TA 101522

FRAME 2

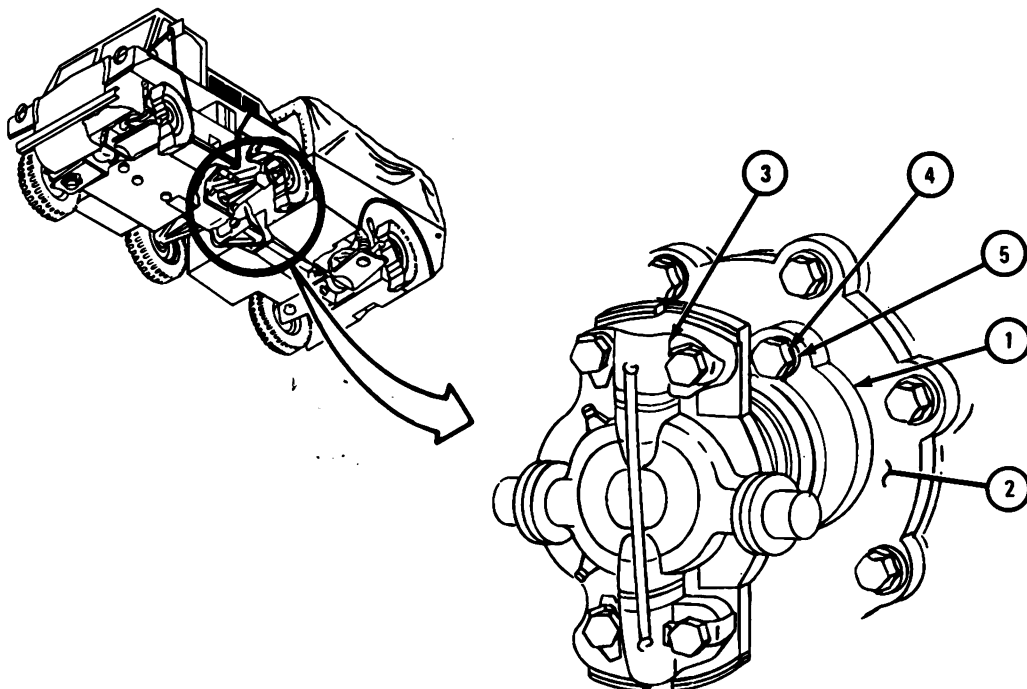
1. Put gasket (1) on differential (2).
2. Put retainer assembly (3) on differential (2).
3. Put in four capscrews (4) with lockwashers (5).

NOTE

Follow-on Maintenance Action Required:

1. Replace drive axle. Refer to TM 9-2320-242-20.
2. Fill differential. Refer to LO 9-2320-242-12.
3. Take out supports and lower truck chassis.
Refer to TM 9-2320-242-20.

END OF TASK



TA 101523

10-7. CENTER DIFFERENTIAL SHIFTER SHAFT SEAL REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Sheet metal screw (2)
Flat washer
Shifter shaft seal
Artillery and automotive grease, type GAA, MIL-G-10924
Safety wire, MS-20995E

PERSONNEL: One

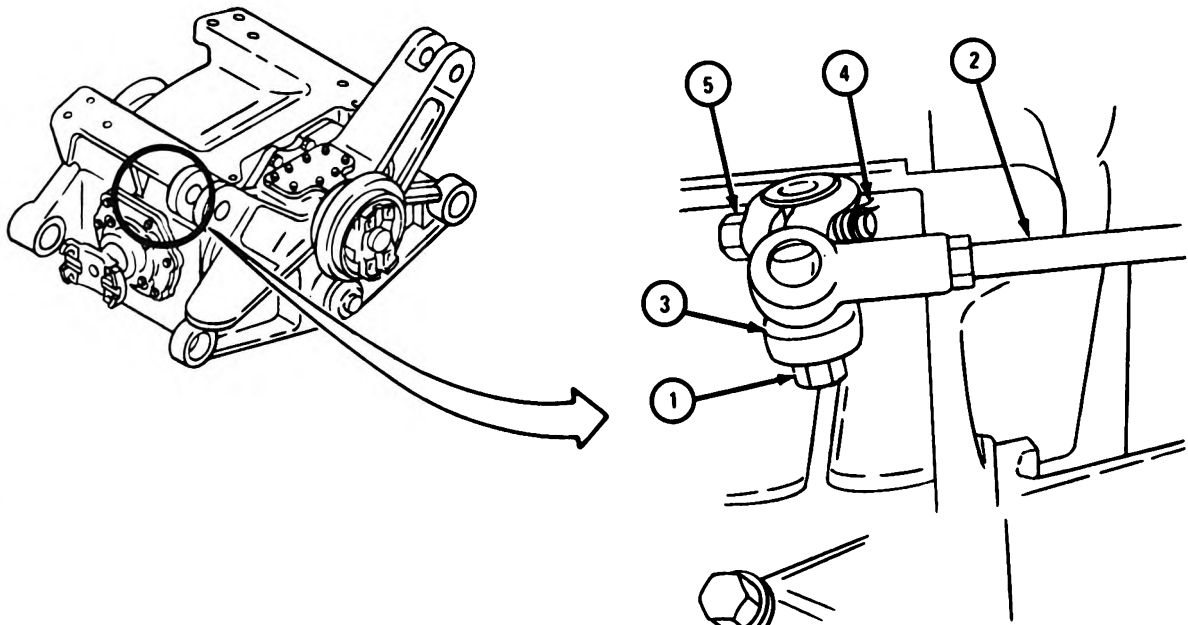
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Removal.

FRAME 1

1. Take off nut (1). Take linkage (2) off shifter lever (3).
2. Take out safety wire (4) from screw (5).
3. Take out screw (5). Take off shifter lever (3).

GO TO FRAME 2

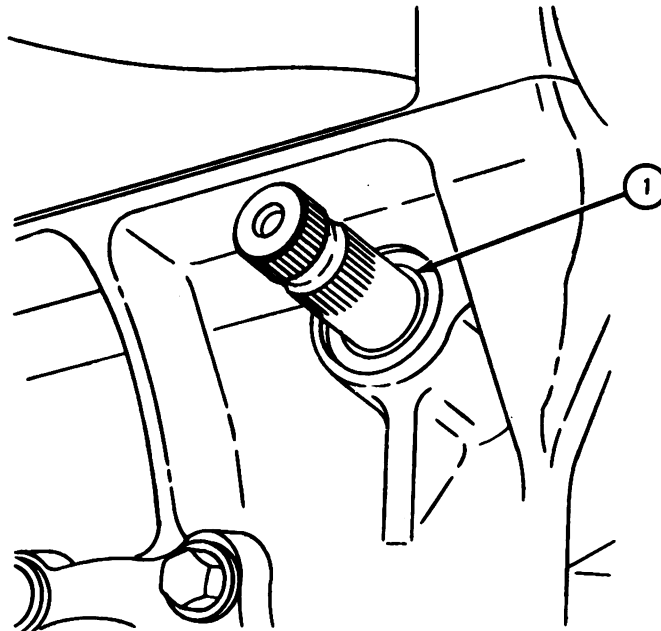


TA 088200

FRAME 2

1. Drill two holes opposite each other in casing of seal (1). Put two sheet metal screws and two flat washers in drilled holes.
2. Take out seal (1) from differential by prying against flat washers. Throw away seal.

END OF TASK



TA 088201

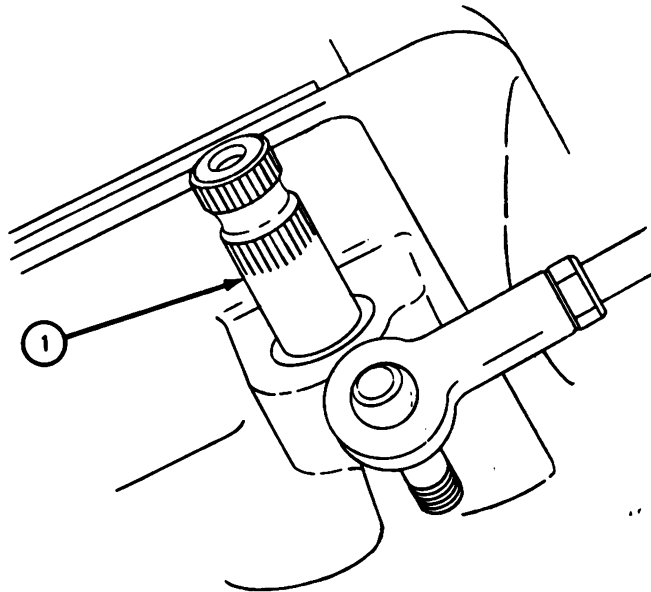
b. Cleaning. There are no special cleaning procedures needed. Refer to cleanup procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that seal contact surface of shifter shaft (1) is not rough and that it has no burrs.
2. Using fine mill file, smooth any rough spots on shifter shaft (1).

END OF TASK



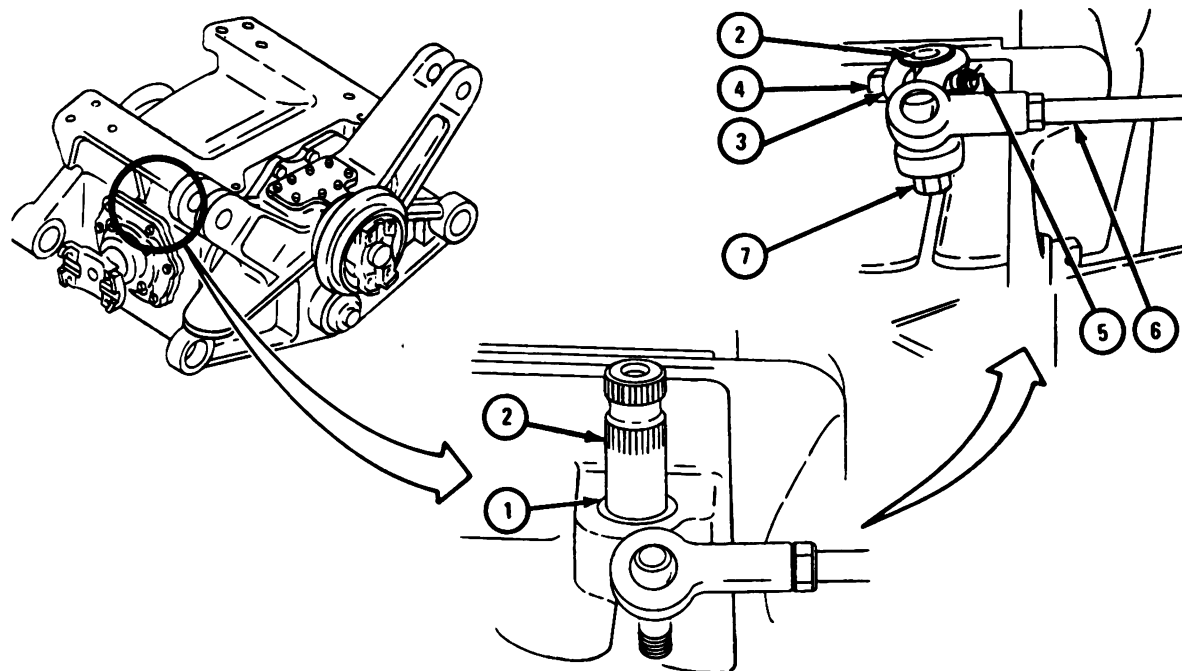
TA 088202

d. Replacement.

FRAME 1

1. Put a coat of grease on inside of seal (1).
2. Put seal (1) over shifter shaft (2) and tap it into place.
3. Line up alinement marks on shifter shaft (2) and shifter lever (3). Put shifter lever on shifter shaft.
4. Put in screw (4) and safety wire (5).
5. Put linkage (6) in place in lever (3).
6. Put on nut (7).

END OF TASK



TA 088203

10-8. CENTER DIFFERENTIAL VENT LINES AND FITTINGS REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

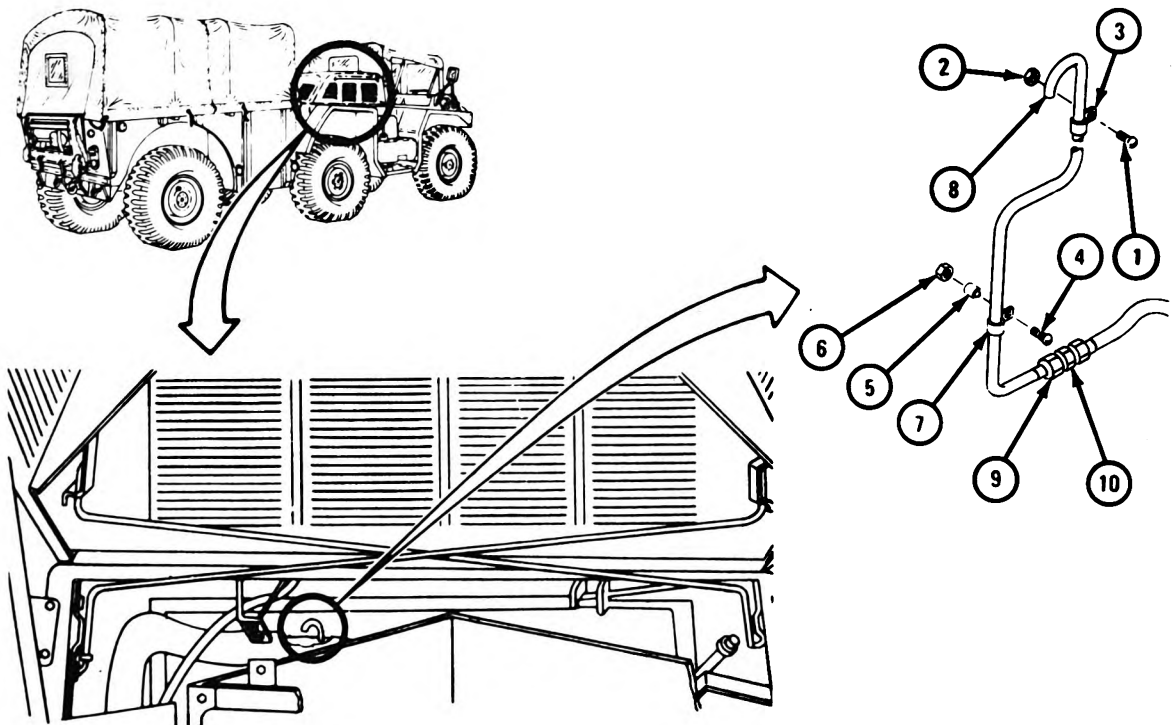
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Open engine cover. Refer to TM 9-2320-242-10.
- b. Removal.

FRAME 1

1. Working in rear of engine compartment, take out screw (1) and nut (2). Take off clamp (3).
2. Working inside right center wheel well, take out screw (4), spacer (5), and nut (6). Take off clamp (7).
3. Take tube (8) and nut (9) from coupling (10).

GO TO FRAME 2

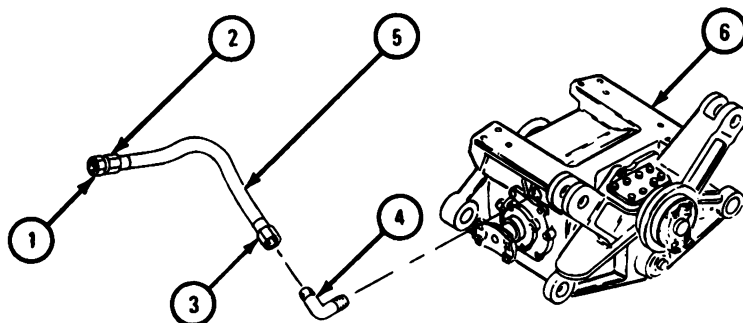


TA 088187

FRAME 2

1. Take coupling (1) from nut (2).
2. Take nut (3) from elbow (4). Take off line (5).
3. Take elbow (4) from center differential (6).

END OF TASK



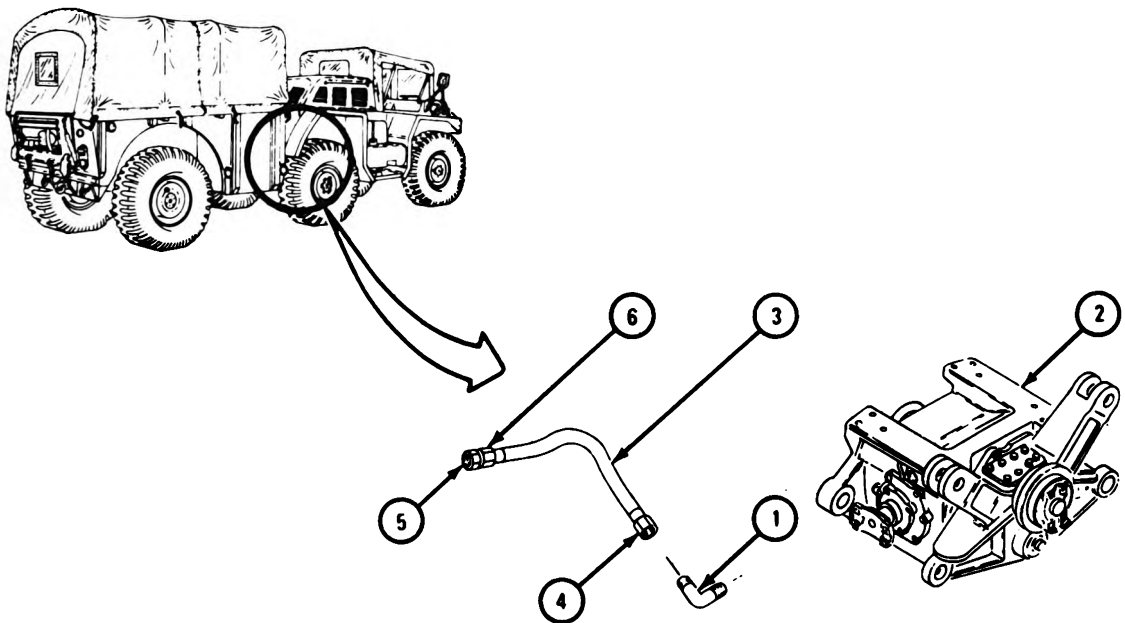
TA 088188

c. Replacement.

FRAME 1

1. Working in right center wheel well, put elbow (1) in center differential (2).
2. Put line (3) in place.
3. Put nut (4) on elbow (1).
4. Put coupling (5) on nut (6).

GO TO FRAME 2

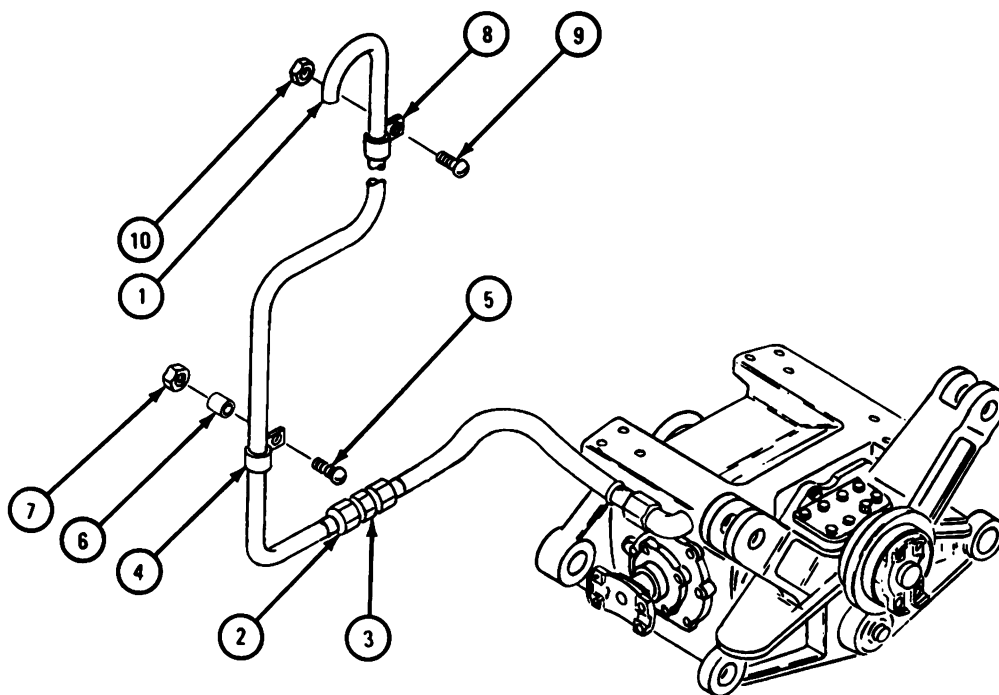


TA 088189

FRAME 2

1. Put line (1) up through tractor engine compartment.
2. Put line (1) with nut (2) on coupling (3).
3. Put on clamp (4) with screw (5), spacer (6), and nut (7).
4. Working in engine compartment, put on clamp (8) with screw (9) and nut (10).

END OF TASK



TA 088226

Section III. REAR DIFFERENTIAL ASSEMBLY

10-9. REAR DIFFERENTIAL REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: Differential tool kit, pn 11660115

SUPPLIES: Gear lubricating oil, GO 80/90, MIL-L-2105
Anti-seize compound, white lead, Fed. Spec TT-A-680-B-2
Retaining gasket (2)
Artillery and automotive grease, type GAA, MIL-G-10924
Tags
String
Safety wire, MS-20995E

PERSONNEL: Two

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

a. Preliminary Procedures.

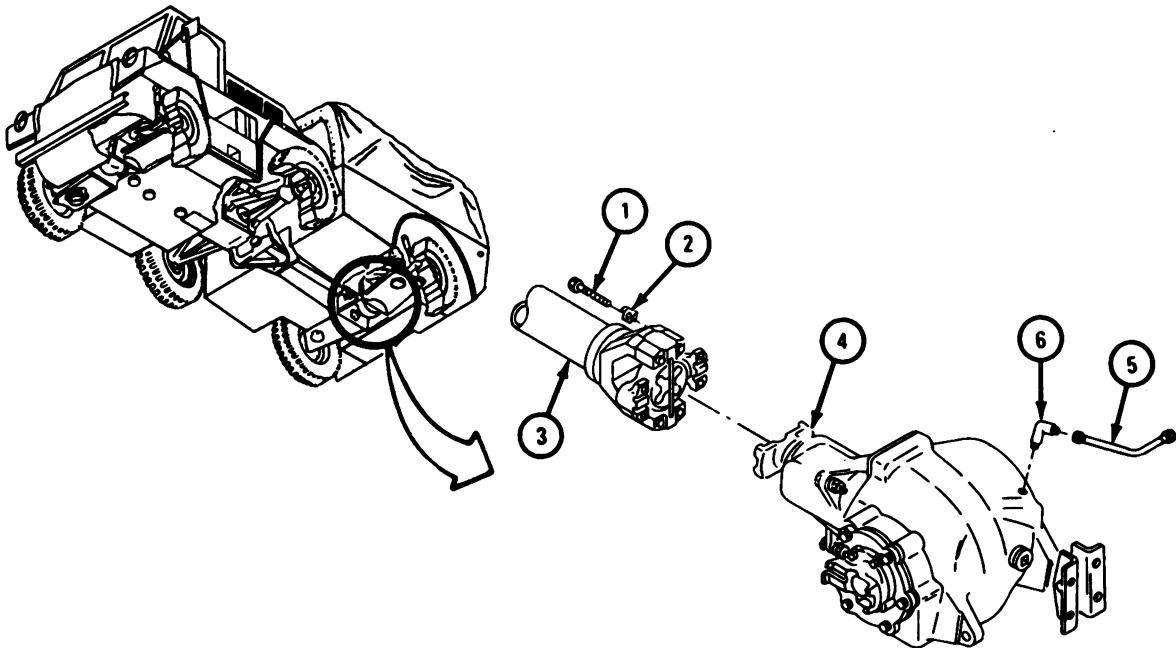
- (1) Drain differential assembly. Refer to LO 9-2320-242-12.
- (2) Raise and support rear of carrier. Refer to TM 9-2320-242-20.
- (3) Remove rear axle assemblies. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out four screws (1) and lockplates (2).
2. Push propeller shaft (3) back until it is free of input flange (4).
3. Take off vent line (5).
4. Take out elbow (6).

GO TO FRAME 2

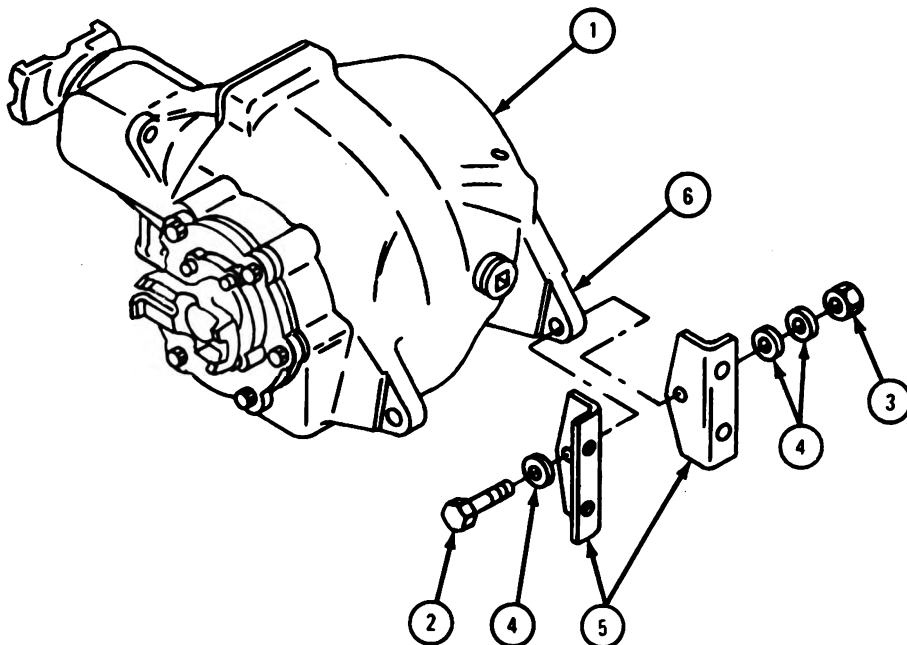


TA 084831

FRAME 2

1. Put jack under differential (1) and support it.
2. Take out two screws (2), two nuts (3), and three washers (4). Take off two support brackets (5) from two rear lugs (6).

GO TO FRAME 3



TA 084832

FRAME 3

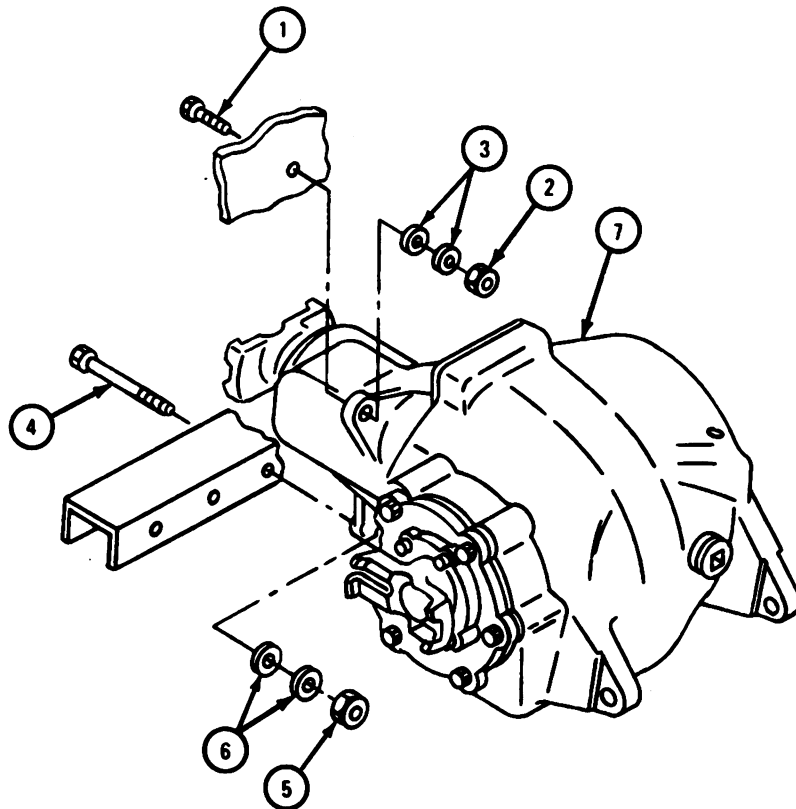
1. Take out screw (1), nut (2), and two washers (3).
2. Take out three screws (4), three nuts (5), and six washers (6).
3. Do steps 1 and 2 again on other side of differential (7).
4. Lower differential (7) on jack and slide it out from under carrier.
5. Lift differential (7) from jack and put it on workbench.

Soldiers
A and B

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.

Soldier A 6. Using solvent, clean differential (7). Refer to Part 1, para 1-3.
END OF TASK



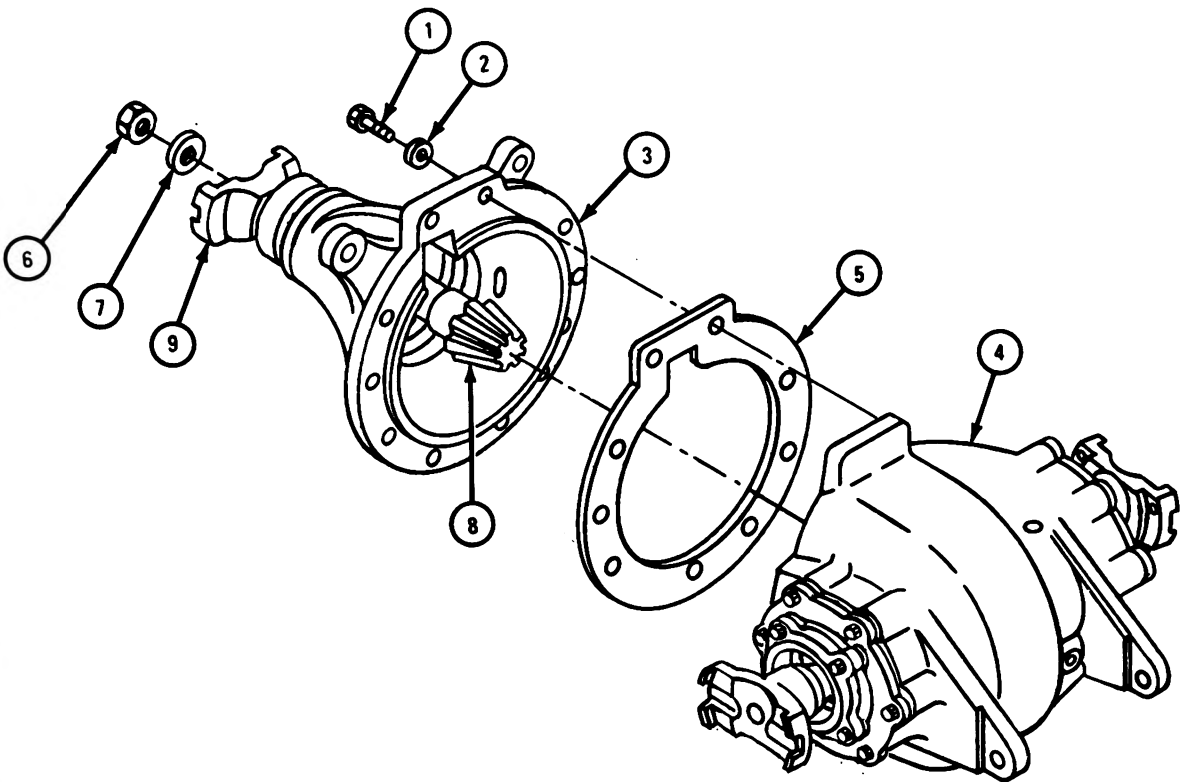
TA 084833

c. Disassembly.

FRAME 1

1. Take out 11 screws (1) and 11 washers (2). Take axle housing (3) off differential assembly housing (4).
2. Take out shims (5). Tie shims together and tag them so that they will be put back in the same place.
3. Take nut (6) and washer (7) off pinion (8).
4. Using puller, take off yoke (9).

GO TO FRAME 2

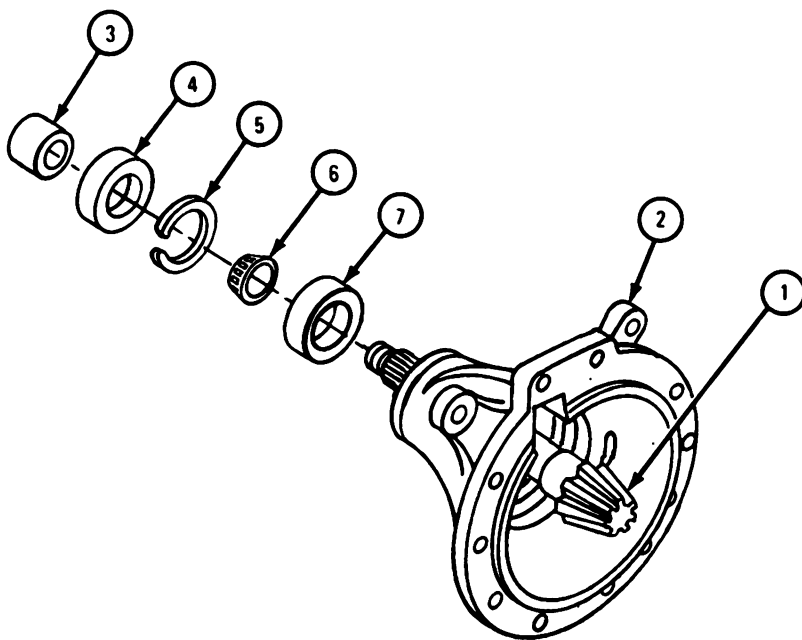


TA 084834

FRAME 2

1. Press pinion (1) out of axle housing (2).
2. Take out spacer (3).
3. Using puller, take seal (4) out of axle housing (2).
4. Take out retaining ring (5) and bearing (6).
5. Using puller, take out bearing cup (7).

GO TO FRAME 3

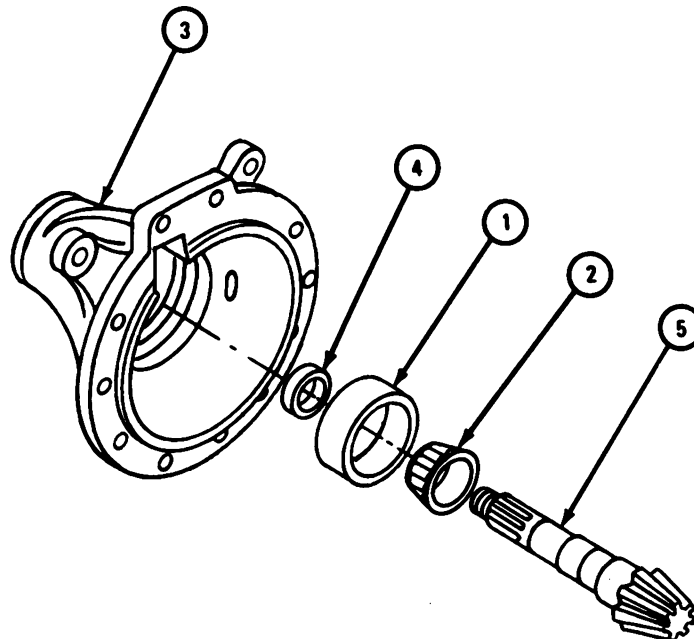


TA 084835

FRAME 3

1. Using puller, take bearing cup (1) of bearing (2) out of axle housing (3).
2. Take off spacer (4).
3. Press bearing (2) off pinion (5).

GO TO FRAME 4

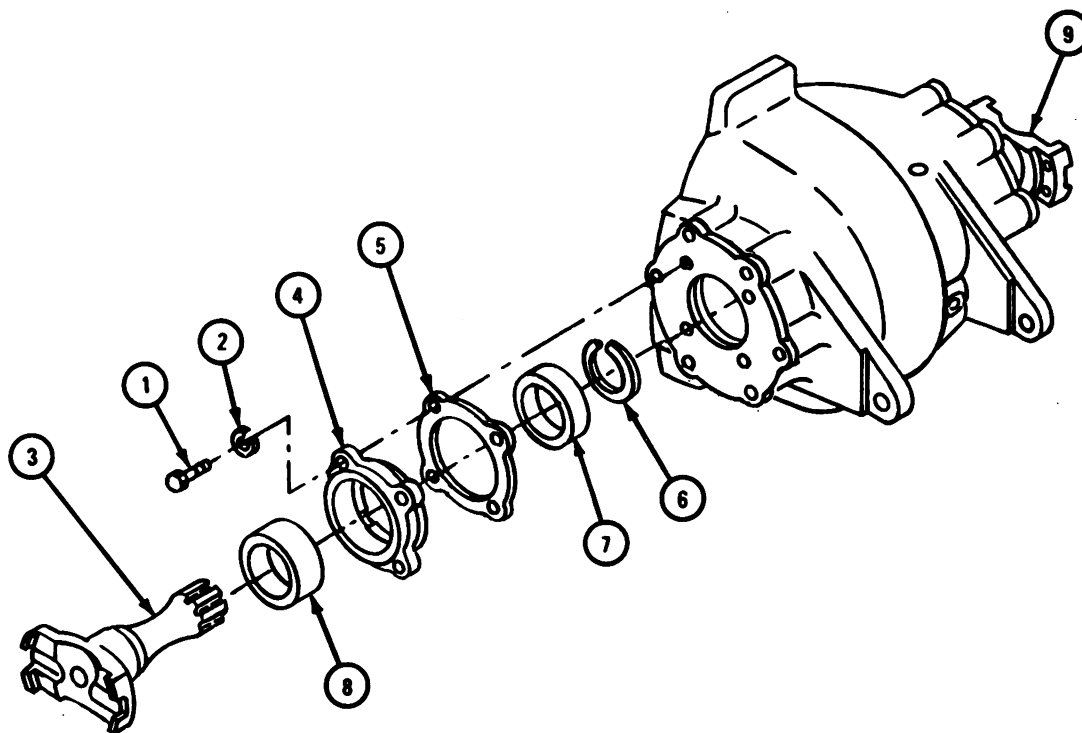


TA 084836

FRAME 4

1. Take out four screws (1) and lockwashers (2). Take out propeller shaft (3), retainer (4), and gasket (5). Throw away gasket.
2. Take off retaining ring (6).
3. Press bearing (7) off of propeller shaft (3).
4. Take propeller shaft (3) out of retainer (4). Press seal (8) out of retainer.
5. Do steps 1 through 4 again for other propeller shaft (9).

GO TO FRAME 5

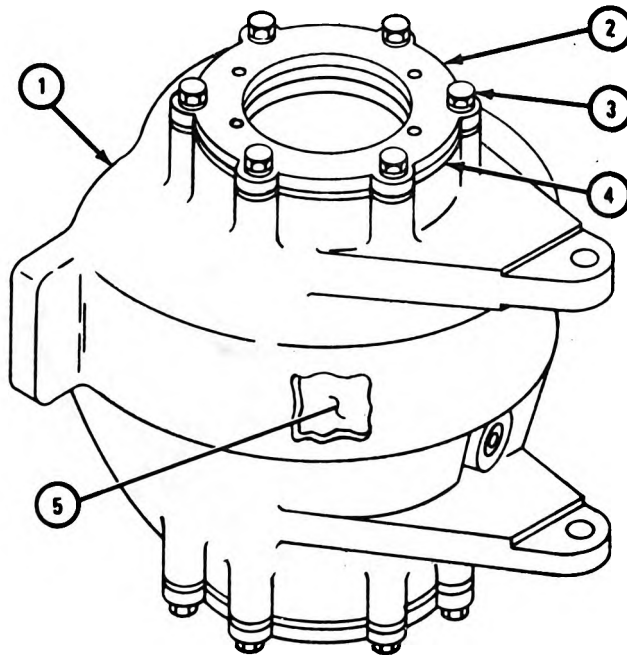


TA 084837

FRAME 5

1. Turn differential assembly housing (1) until housing (2) is on top.
2. Take out six screws and washers (3).
3. Take out housing (2) and shims (4). Tie shims together and tag them so that they will be put back in the same place.
4. Take out equalizer assembly (5).

GO TO FRAME 6

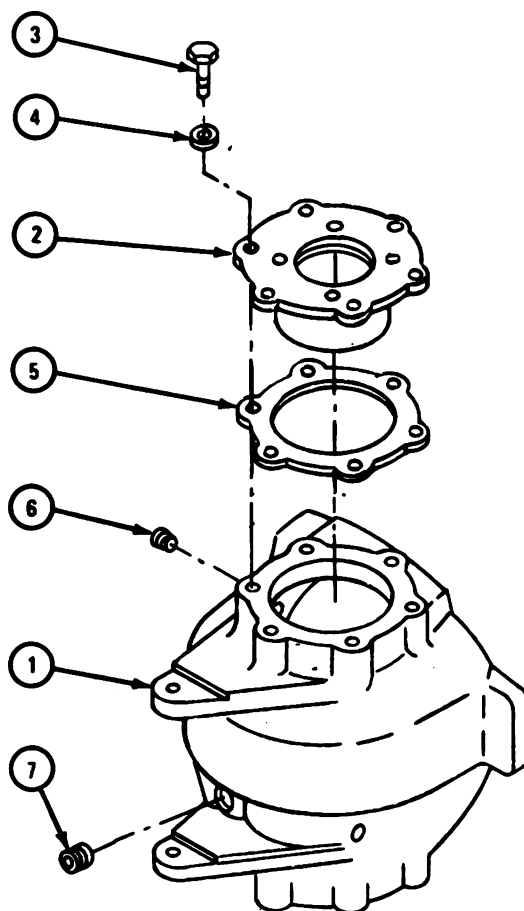


TA 084838

FRAME 6

1. Turn differential assembly housing (1) until housing (2) is on top.
2. Take out six screws (3) and washers (4).
3. Take out housing (2) and shims (5). Tie shims together and tag them so that they will be put back in the same place.
4. Take out plugs (6 and 7).

GO TO FRAME 7

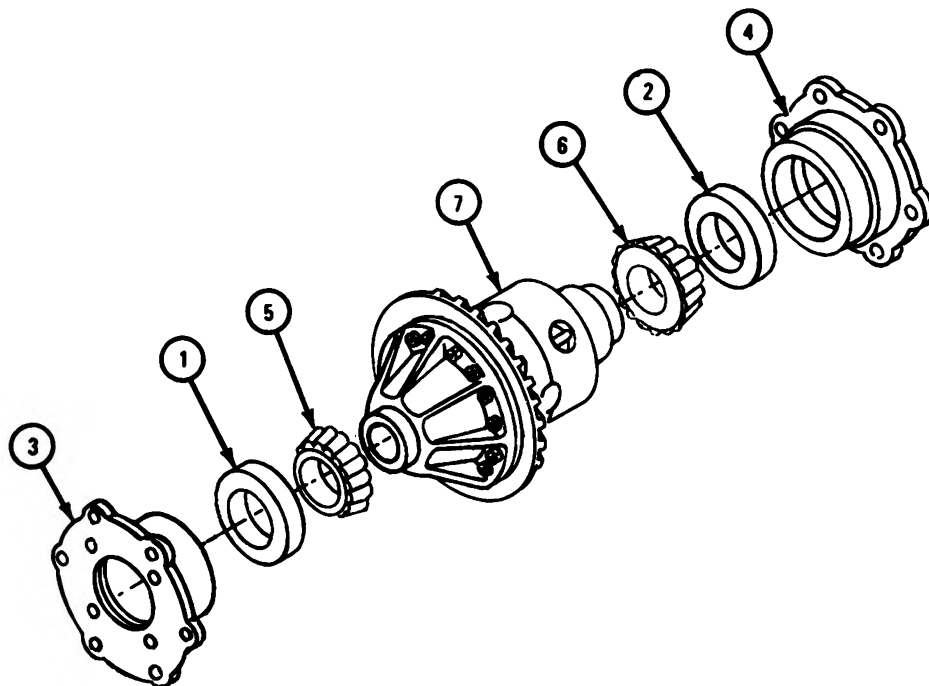


TA 084839

FRAME 7

1. Using puller, take bearing cups (1 and 2) out of housings (3 and 4). Refer to Part 1, para 7-6.
2. Using puller, take bearings (5 and 6) off equalizer assembly (7).

GO TO FRAME 8



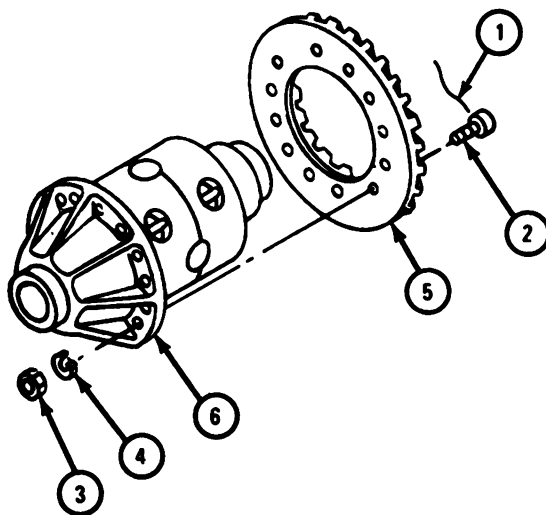
TA 084840

FRAME 8

1. Cut and take off safety wire (1), take out 12 screws (2), nuts (3), and lockwashers (4). Take ring gear (5) off equalizer assembly (6).

2. Disassemble equalizer assembly (6). Refer to Part 1, para 9-3.

END OF TASK



TA 084841

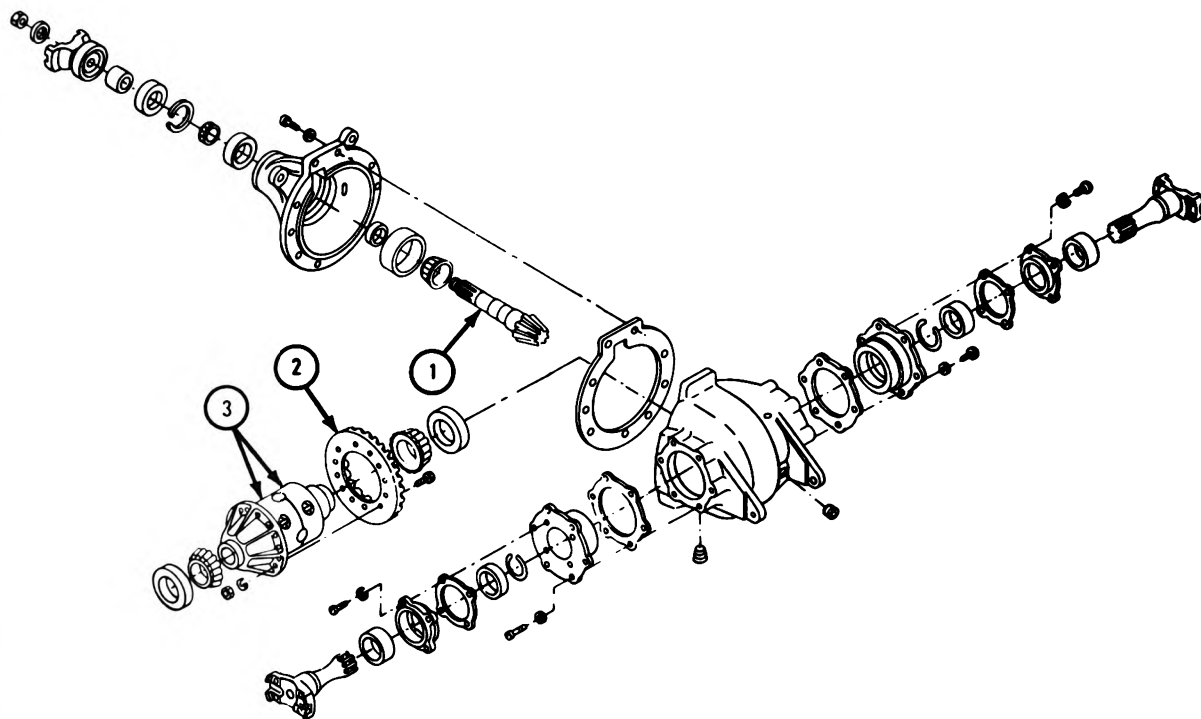
d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection and Repair.

FRAME 1

1. Check that pinion (1) and ring gear (2) are not damaged. If pinion or ring gear is damaged, get a new pinion and ring gear.
2. Check that equalizer assembly housings (3) are not damaged. If housings are damaged, get a new equalizer assembly.

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 084842

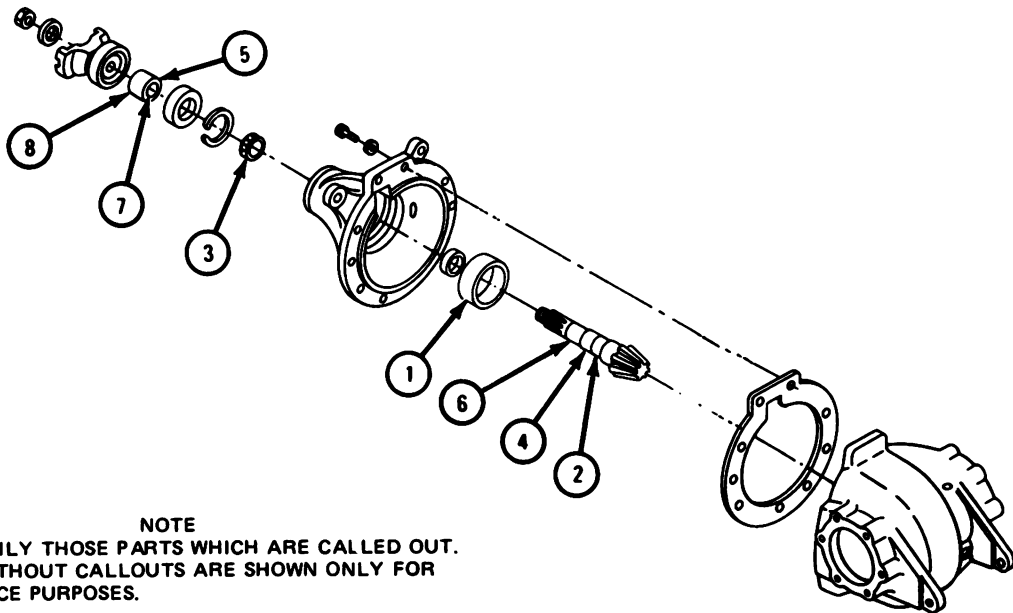
FRAME 2

NOTE

Readings must be within limits given in table 10-6. If readings are not within given limits, throw away part and get a new one.

1. Measure fit of bearing (1) on pinion (2).
2. Measure fit of bearing (3) on pinion (4).
3. Measure fit of spacer (5) on pinion (6).
4. Measure inside diameter of spacer (7).
5. Measure outside diameter of spacer (8).

GO TO FRAME 3



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

TA 084843

Figure 10-6. Rear Differential Pinion Bearing Fit and Spacer Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1 and 2	Fit of bearing on pinion	1.9390 to 1.9295	0.001
3 and 4	Fit of bearing on pinion	1.3140 to 1.3145	0.001
5 and 6	Fit of spacer on pinion	1.2425 to 1.2430	0.001
7	Spacer inside diameter	1.244 to 1.247	0.005
8	Spacer outside diameter	2.186 to 2.188	0.003

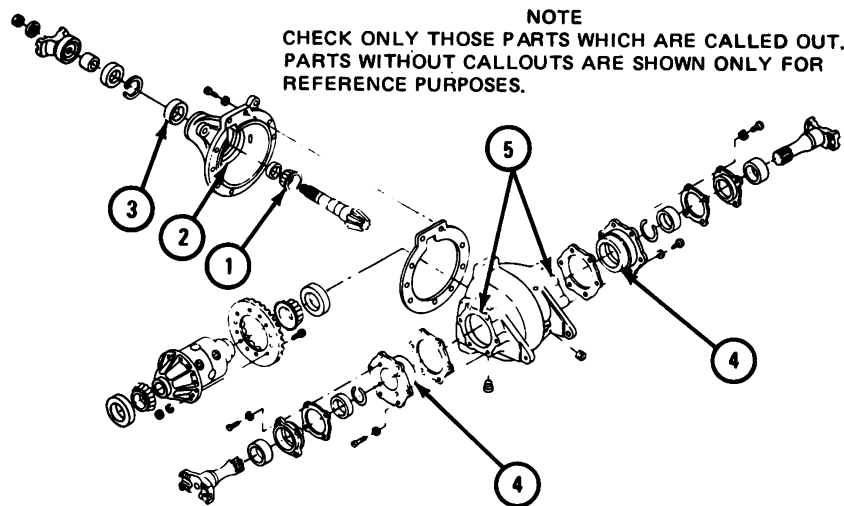
FRAME 3

NOTE

Readings must be within limits given in table 10-7. If readings are not within given limits, throw away part and get a new one.

1. Measure fit of bearing (1) in axle housing (2).
2. Measure fit of bearing (3) in axle housing (2).
3. Measure fit of propeller shaft housings (4) in differential assembly housing (5).

GO TO FRAME 4



TA 084844

Table 10-7. Rear Differential Housings Bearing Fit and Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1 and 2	Fit of bearing in axle housing	4.118 to 4.120	0.002
3 and 2	Fit of bearing in axle housing	2.993 to 2.995	0.002
4 and 5	Fit of propeller shaft housings in differential assembly housing	5.250 to 5.252	0.002

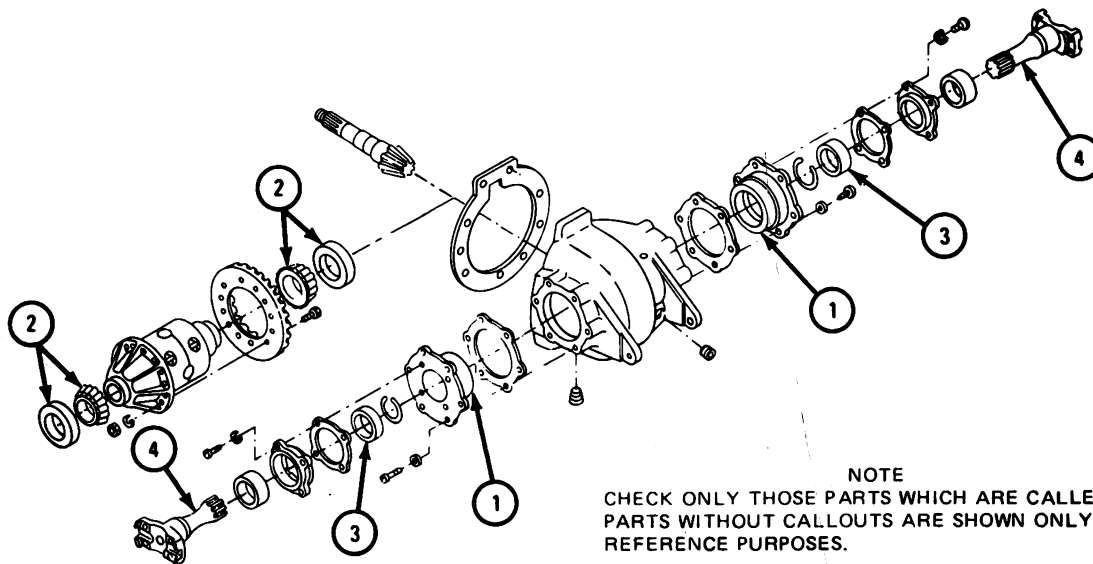
FRAME 4

NOTE

Readings must be within limits given in table 10-8. If readings are not within given limits, throw away part and get a new one.

1. Measure outside diameter of propeller shaft housings (1).
2. Measure fit of bearings (2) in propeller shaft housings (1).
3. Measure fit of bearings (3) in propeller shaft housings (1).
4. Measure fit of bearings (3) on propeller shafts (4).
5. Get new parts for all damaged parts.

END OF TASK



TA 084845

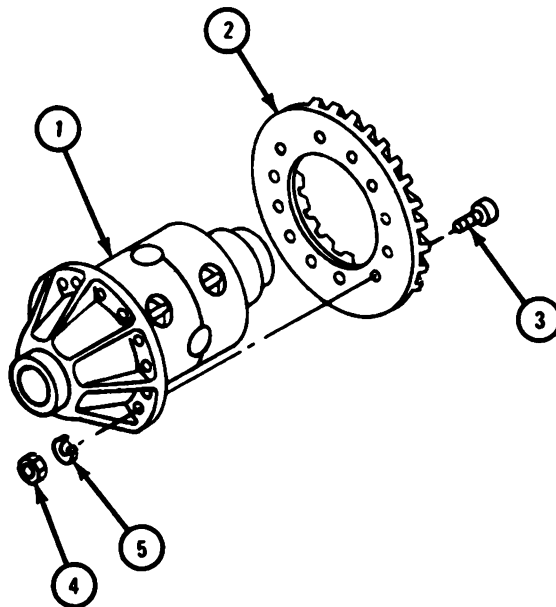
Table 10-8. Rear Differential Propeller Shaft Bearing Fit and Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Outside diameter of propeller shaft housings	5.248 to 5.249	0.002
2 and 1	Fit of bearings in propeller shaft housings	3.837 to 3.839	0.002
3 and 1	Fit of bearings in propeller shaft housings	2.9527 to 2.9533	0.002
3 and 4	Fit of bearings on propeller shafts	1.7716 to 1.7721	0.0015

f. Assembly.

FRAME 1

1. Assemble equalizer assembly (1). Refer to Part 1, para 9-3.
2. Put ring gear (2) on equalizer assembly (1) and put in 12 screws (3), nuts (4), and lockwashers (5). Tighten screws (3) to 105 to 130 pound-feet and put on safety wire.

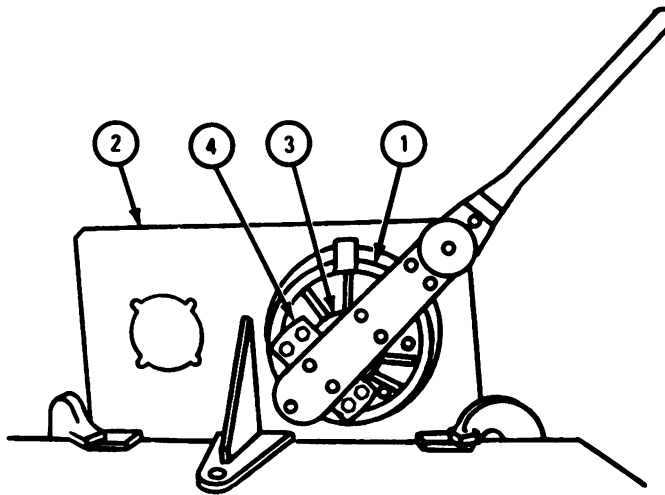
GO TO FRAME 2

TA 084846

FRAME 2

1. Put equalizer assembly (1) in fixture (2). Put propeller shaft (3) in equalizer assembly.
2. Put adapter (4) and torque wrench on propeller shaft (3) and check that running torque for three turns is at least 400 pound-feet.

GO TO FRAME 3

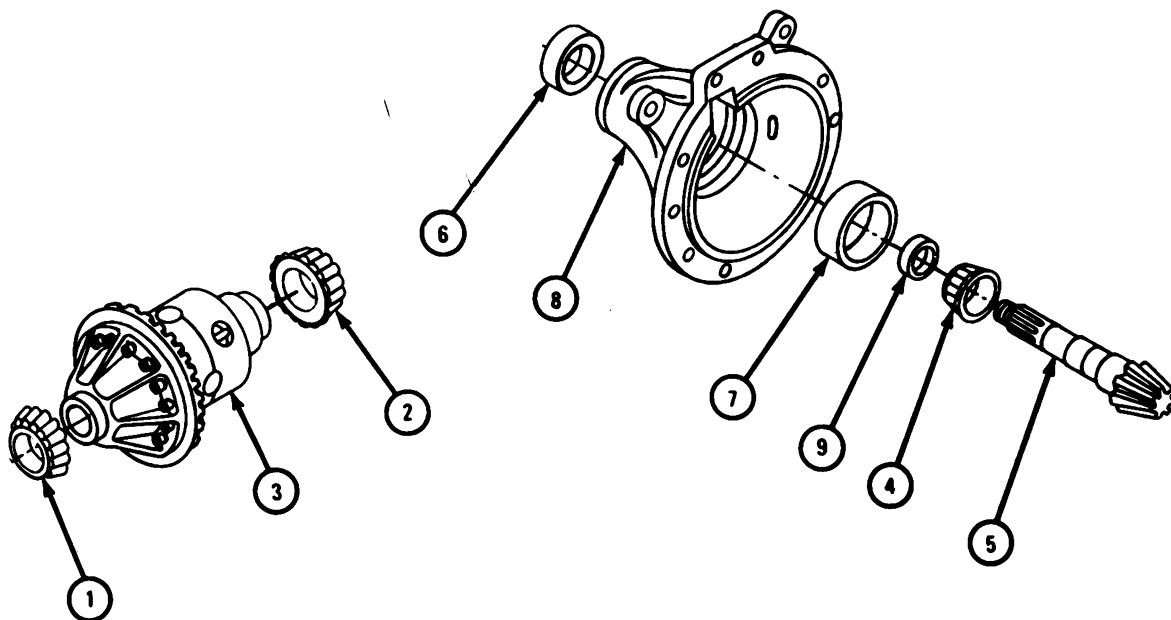


TA 084847

FRAME 3

1. Press bearings (1 and 2) onto equalizer assembly (3).
2. Press bearing (4) onto pinion (5).
3. Press bearing cups (6 and 7) into axle housing (8). Refer to Part 1, para 7-6.
4. Put spacer (9) on pinion (5).

GO TO FRAME 4

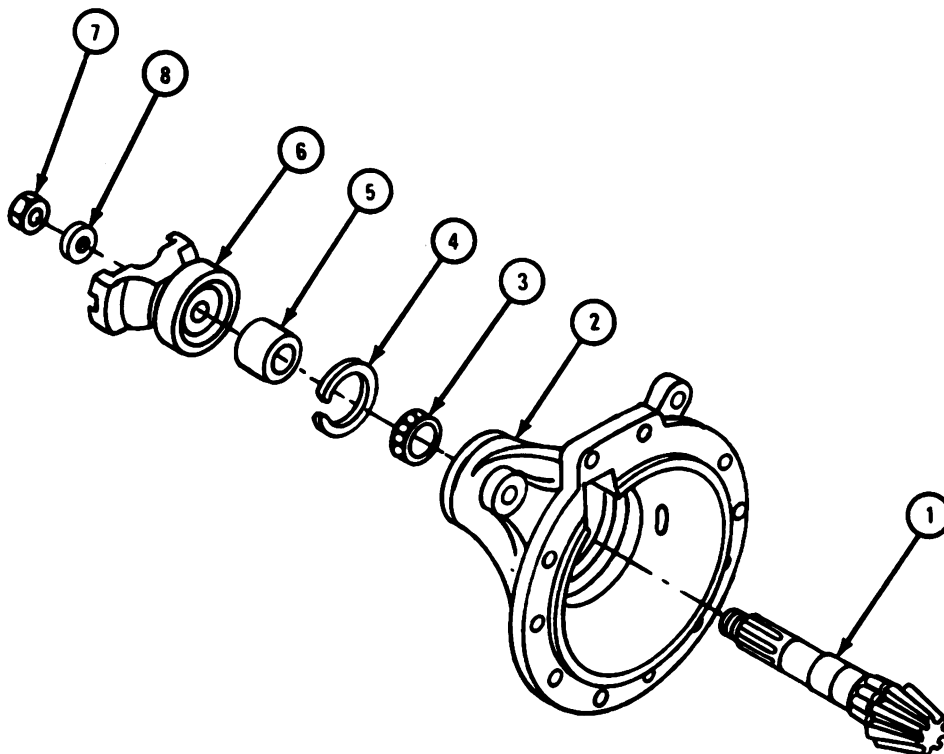


TA 084848

FRAME 4

1. Put pinion (1) into axle housing (2) and place bearing (3) on pinion.
2. Put adapter with hole large enough for pinion to go through on bearing (3) and press bearing onto pinion (1).
3. Put retaining ring (4) in place in axle housing (2).
4. Put spacer (5) and yoke (6) on pinion (1). Put in nut (7) and washer (8). Tighten nut to 175 to 250 pound-feet.

GO TO FRAME 5

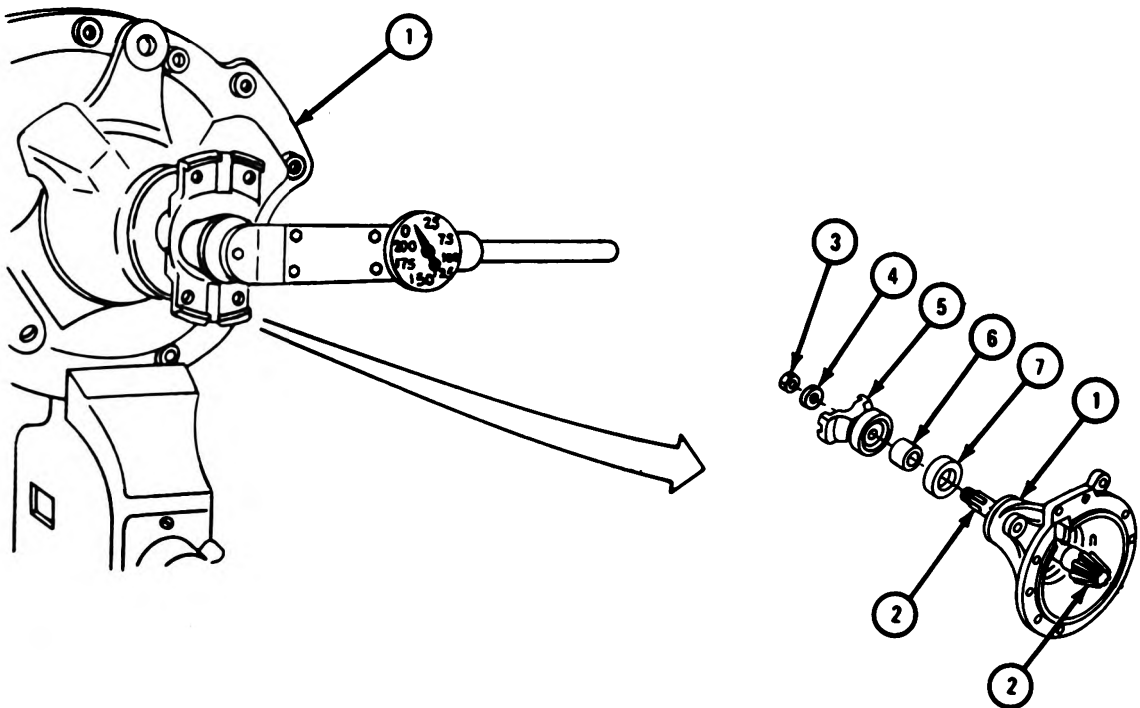


TA 084849

FRAME 5

1. Put axle housing (1) in vise and using torque wrench, check that preload in pinion (2) is 5 to 15 pound-inches. If preload is not within given limits, change torque on nut (3) until it is. Note torque on nut.
2. Take axle housing (1) out of vise and take off nut (3), washer (4), yoke (5), and spacer (6).
3. Press seal (7) into axle housing (1) until it touches retaining ring in housing (1).
4. Put spacer (6) and yoke (5) in pinion (2). Put on washer (4) and nut (3). Tighten nut as noted in step 1.

GO TO FRAME 6

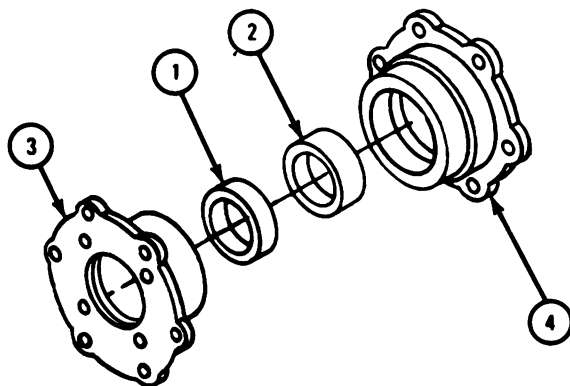


TA 084850

FRAME 6

1. Press bearing cups (1 and 2) into housings (3 and 4).

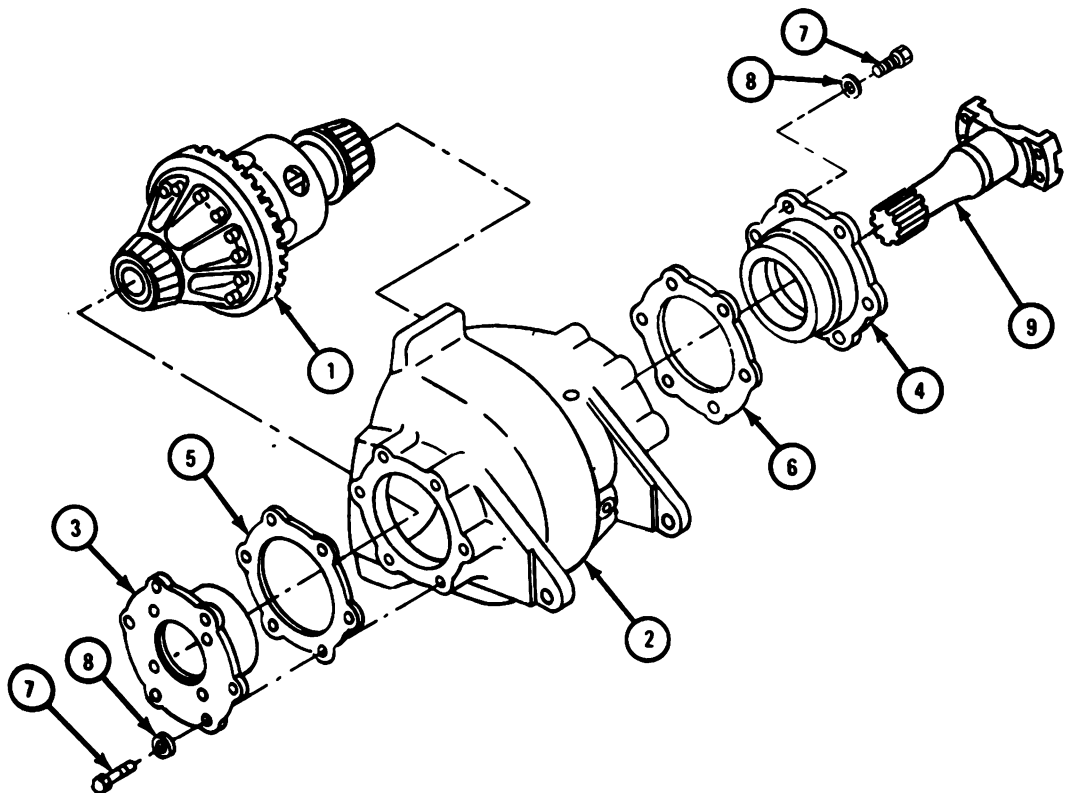
GO TO FRAME 7



TA 08485.

FRAME 7

1. Put equalizer assembly (1) into differential assembly housing (2).
2. Put housings (3 and 4) and shims (5 and 6) as noted on differential assembly housing (2) and put in 12 screws (7) and washers (8).
3. Put propeller shaft (9) into equalizer assembly (1) and put adapter on shaft. Using torque wrench, check that bearing is 15 to 35 pound-inches. If preload is not within given limits, put shims (5 and 6) on housings (3 and 4) until preload is set correctly.

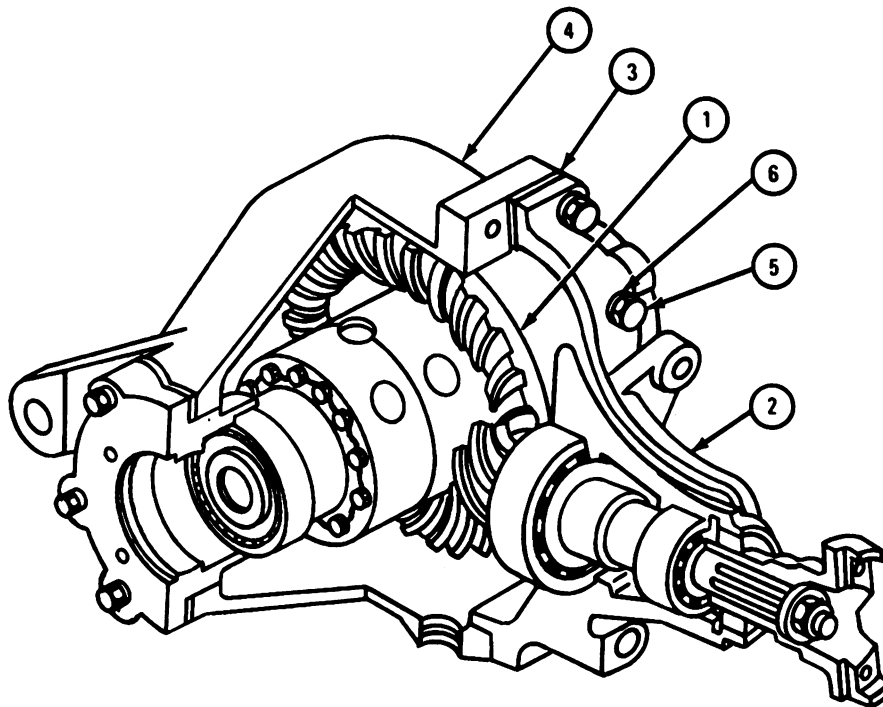
GO TO FRAME 8

TA 084852

FRAME 8

1. Paint 10 teeth of ring gear (1) with anti-seize compound.
2. Put assembled axle housing (2) and shims (3) on differential housing (4). Put in 11 screws (5) and washers (6).

GO TO FRAME 9



TA 084853

FRAME 9

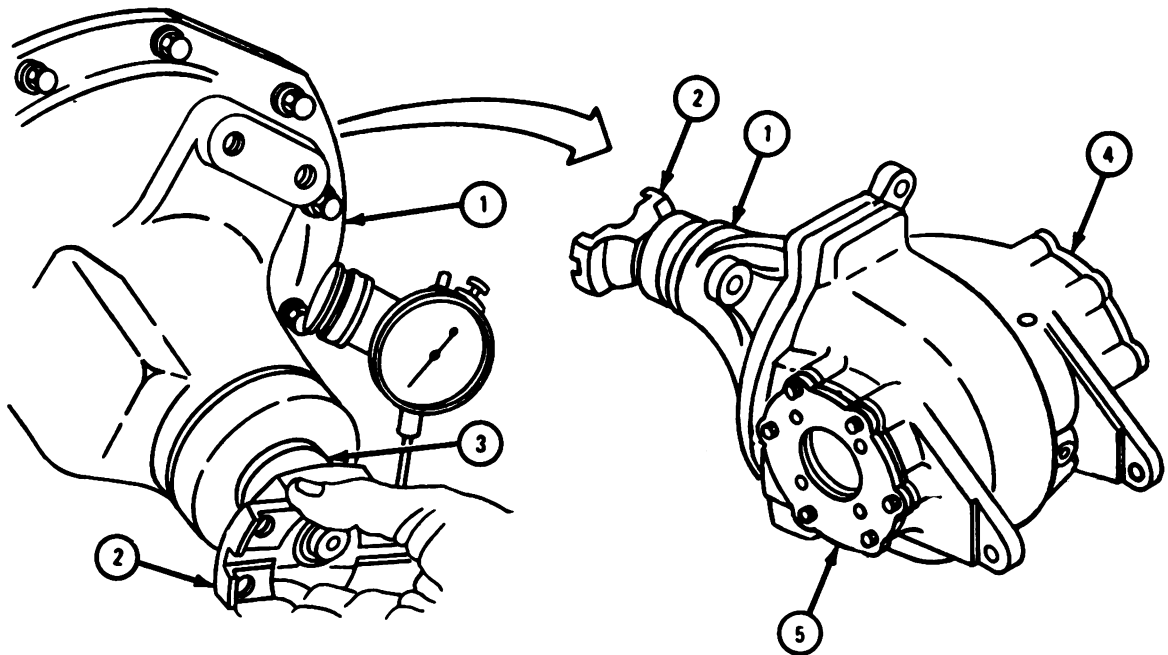
1. Put dial indicator on axle housing (1).
2. Put stem of dial indicator on flat side of yoke (2) one inch from center of pinion shaft (3).
3. Turn yoke (2) slightly and check that backlash is 0.005 to 0.009 inch.

NOTE

Set for more backlash by taking out a shim from housing (4) and putting it on housing (5). Set for less backlash by taking out a shim from housing (5) and putting it on housing (4).

4. If backlash was not within given limits, set backlash and do step 3 again.

GO TO FRAME 10

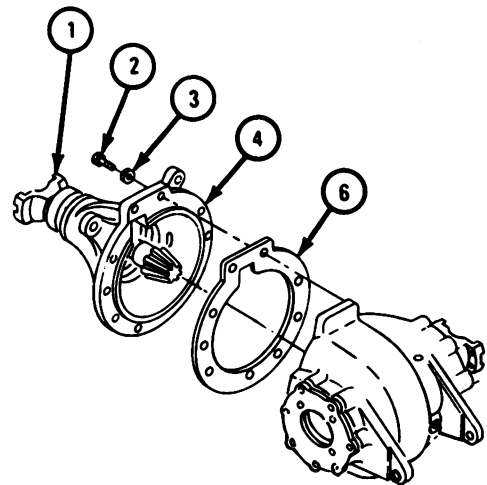
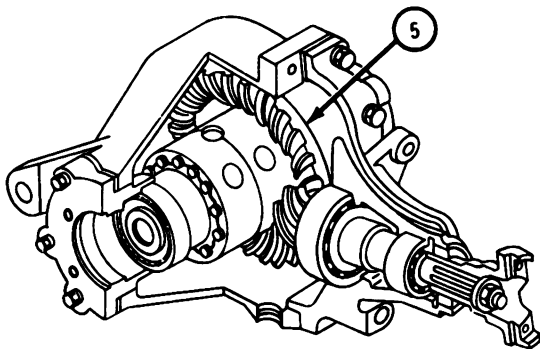


TA 084854

FRAME 10

1. Turn yoke (1).
2. Take out 11 screws (2) and washers (3). Take off axle housing (4).
3. Check that tooth contact pattern of ring gear (5) starts near toe of gear tooth and runs about three-quarters length of gear tooth. It should be centered between top and root of gear tooth, not running over top or digging into root.
4. If tooth contact pattern is not correct, take away a shim from shims (6).
5. Put back axle housing (4) with 11 screws (2) and washers (3).
6. Recheck backlash. Refer to frame 8.

GO TO FRAME 11

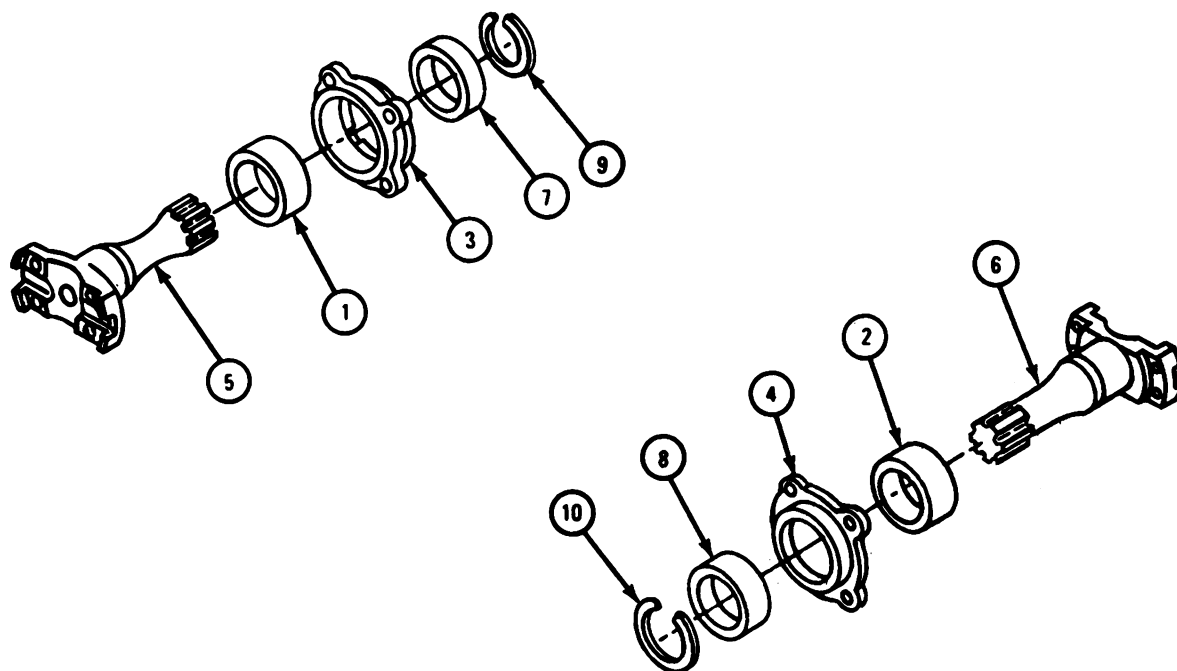


TA 084855

FRAME 11

1. Press seals (1 and 2) into retainers (3 and 4).
2. Pack seals (1 and 2) with grease and put propeller shafts (5 and 6) into retainers (3 and 4).
3. Press bearings (7 and 8) onto propeller shafts (5 and 6).
4. Put retaining rings (9 and 10) on propeller shafts (5 and 6).

GO TO FRAME 12

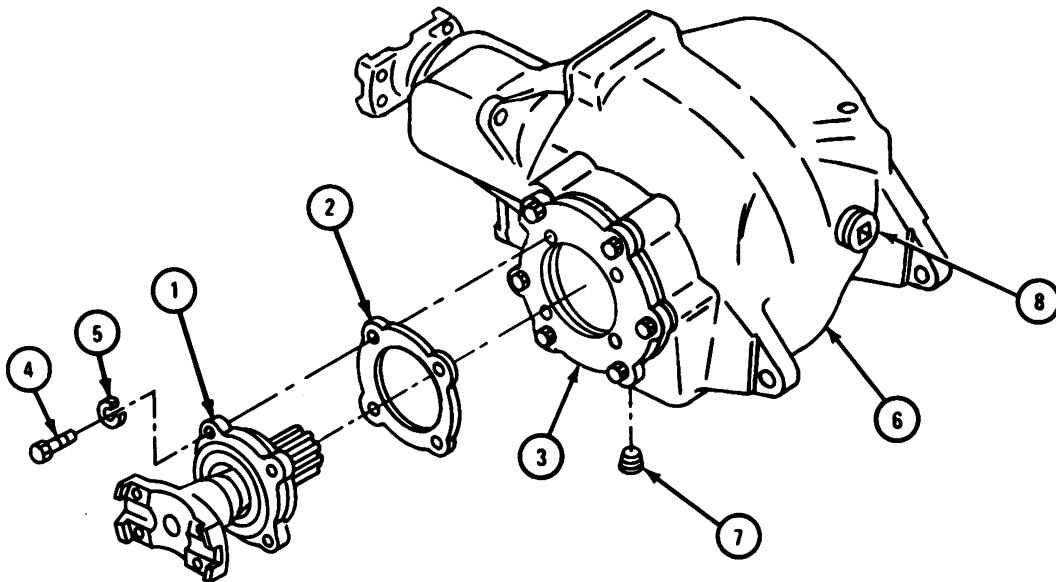


TA 084856

FRAME 12

1. Put assembled retainer (1) and gasket (2) on housing (3).
2. Put in four screws (4) and lockwashers (5). Put assembled retainer (1) in place on housing (3).
3. Do steps 1 and 2 again on other side of differential assembly housing (6).
4. Put in plug (7) and fill differential assembly (6). Refer to LO 9-2320-242-12.
5. Put in plug (8).

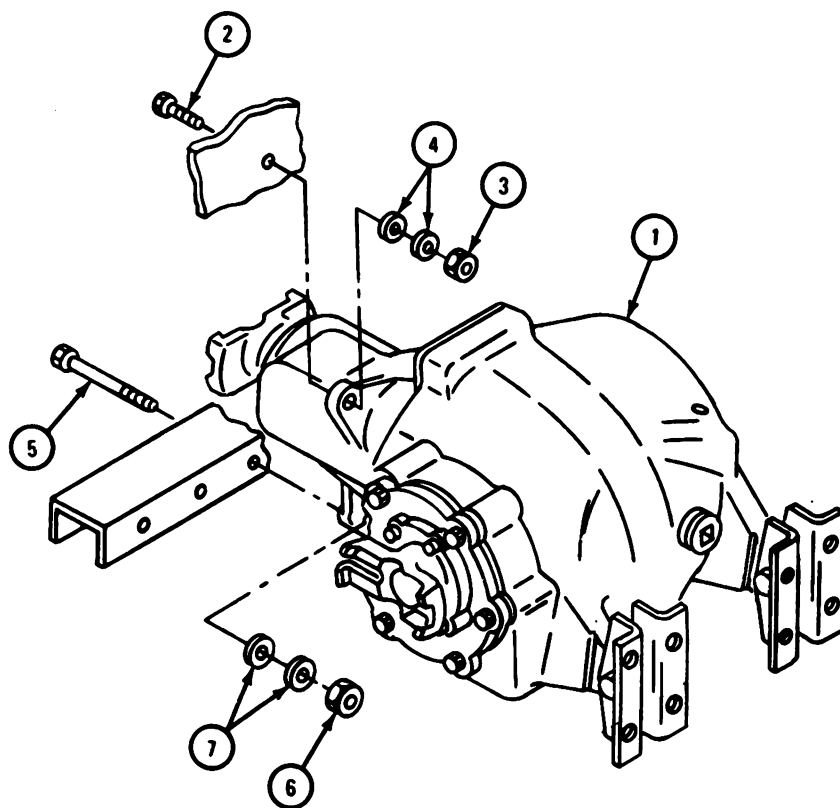
END OF TASK



TA 084857

FRAME 2

1. Aline screw holes in differential assembly (1) with screw holes in carrier frame.
 2. Put in screw (2), nut (3), and two washers (4).
 3. Put in three screws (5), three nuts (6), and six washers (7).
 4. Do steps 2 and 3 again on other side of differential assembly (1).
- GO TO FRAME 3



TA 084859

FRAME 3

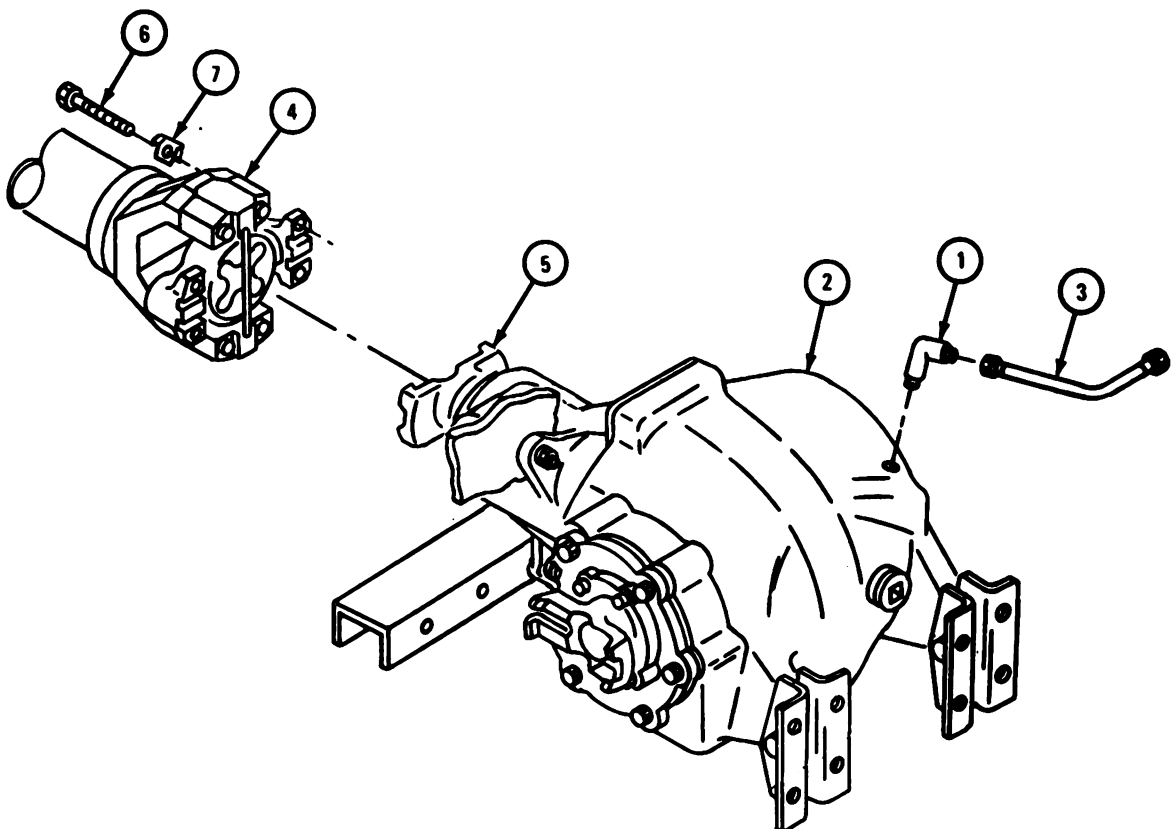
1. Put elbow (1) into differential assembly (2).
2. Put vent line (3) into elbow (1).
3. Take out jack and put carrier propeller shaft (4) on inlet flange (5). Put in four screws (6) and lockplates (7).

NOTE

Follow-on Maintenance Action Required:

1. Replace rear axle assemblies. Refer to TM 9-2320-242-20.
2. Remove supports and lower carrier. Refer to TM 9-2320-242-20.
3. Test differential assembly. Refer to para 10-9h.

END OF TASK



TA 084860

h. Test.

(1) Test drive truck for 10 minutes. Refer to TM 9-2320-242-10. Check that rear differential assembly has no grinding, clanking, or any other strange noises.

(2) During test drive, check that rear differential assembly has no leakage.

(3) After test drive, drain and strain lubricant. Refer to LO 9-2320-242-12. Check that there are no metal chips, shavings or other foreign matter in lubricant or on drain plug.

(4) Fill rear differential assembly. Refer to LO 9-2320-242-12.

10-10. REAR DIFFERENTIAL INPUT YOKE SEAL REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Gear lubricating oil, GO 80/90, MIL-L-2105
Artillery and automotive grease, type GAA, MIL-G-10924
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Input yoke seal

PERSONNEL: One

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

a. Preliminary Procedures.

(1) Jack and support truck. Refer to TM 9-2320-242-20.

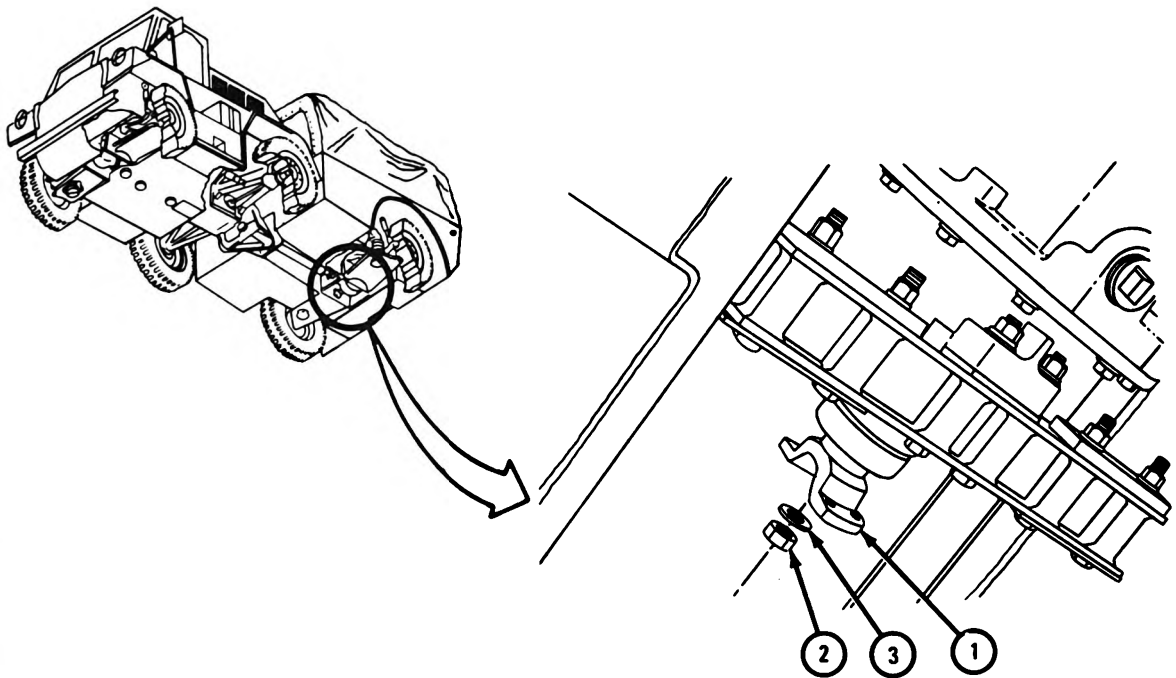
(2) Drain rear differential. Refer to LO 9-2320-242-12.

(3) Take off carrier propeller shaft. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Hold input yoke (1). Take off nut (2), washer (3), and yoke (1).
GO TO FRAME 2

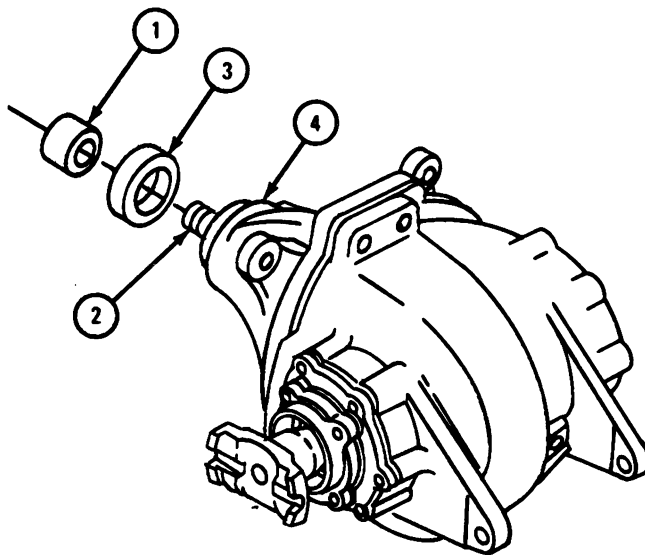


TA 088204

FRAME 2

1. Take spacer (1) off shaft (2).
2. Take seal (3) off differential (4) with prybar, prying between seal and input of differential. Throw away seal.

END OF TASK



TA 088205

c. Cleaning.WARNING

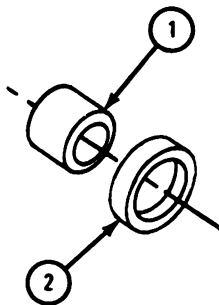
Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

- (1) Clean seal contact area with dry cleaning solvent. Dry well with clean rag.
- (2) Clean all metal chips from differential input.

d. Inspection and Repair.**FRAME 1**

1. Check that contact surface of spacer (1) for seal (2) is smooth and has no burrs.
2. If spacer (1) is damaged, get a new one.

END OF TASK



TA 088206

e. Replacement.

FRAME 1

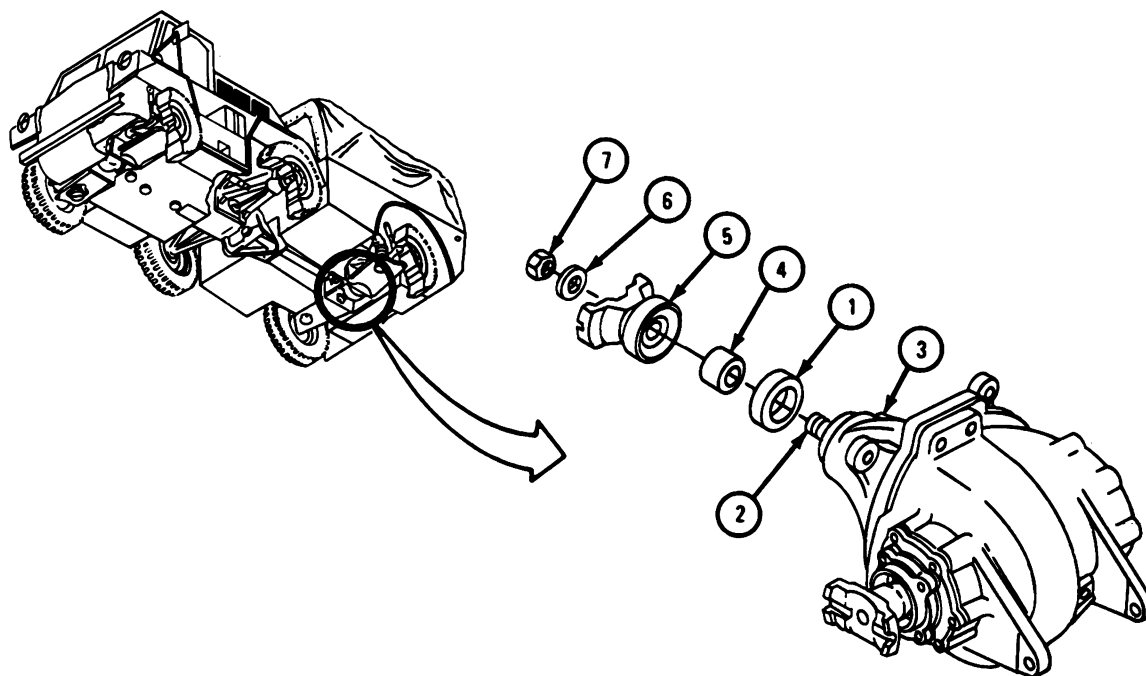
1. Put seal (1) over shaft (2). Using sleeve, tap seal (1) into differential (3).
2. Put a coat of grease on inside of seal (1). Put in spacer (4).
3. Put yoke (5) in place.
4. Put on washer (6). Put on nut (7) and tighten nut to 175 to 250 pound-feet.

NOTE

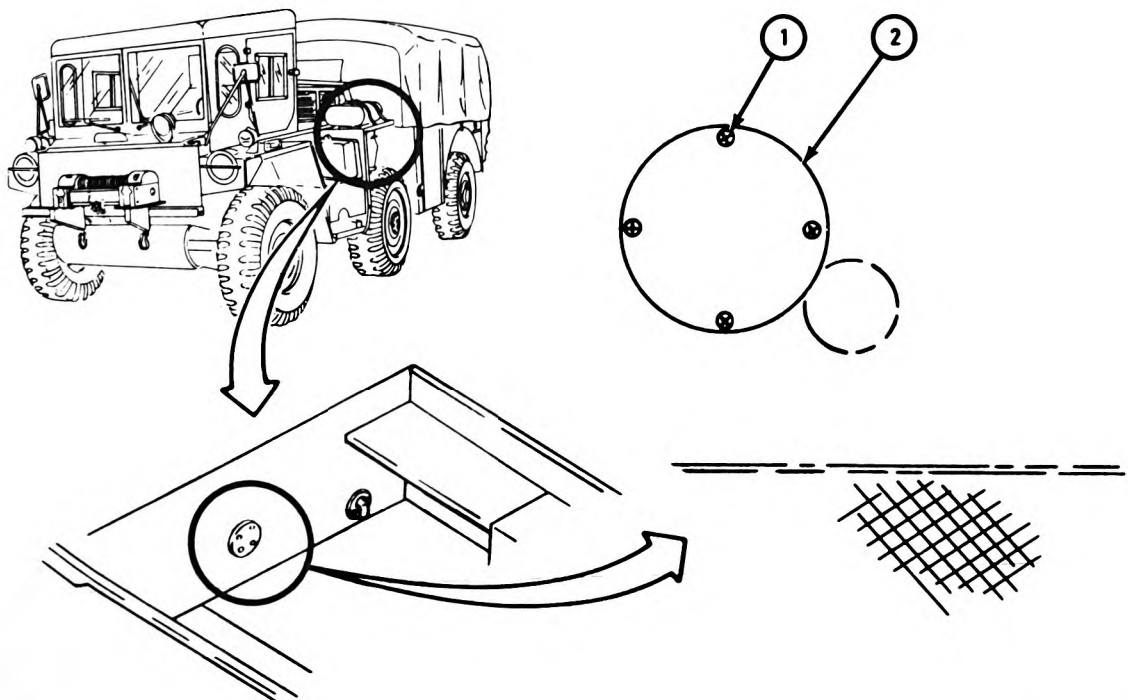
Follow-on Maintenance Action Required:

1. Replace carrier propeller shaft. Refer to TM 9-2320-242-20.
2. Take out supports and lower truck. Refer to TM 9-2320-242-20.
3. Fill differential. Refer to LO 9-2320-242-12.

END OF TASK



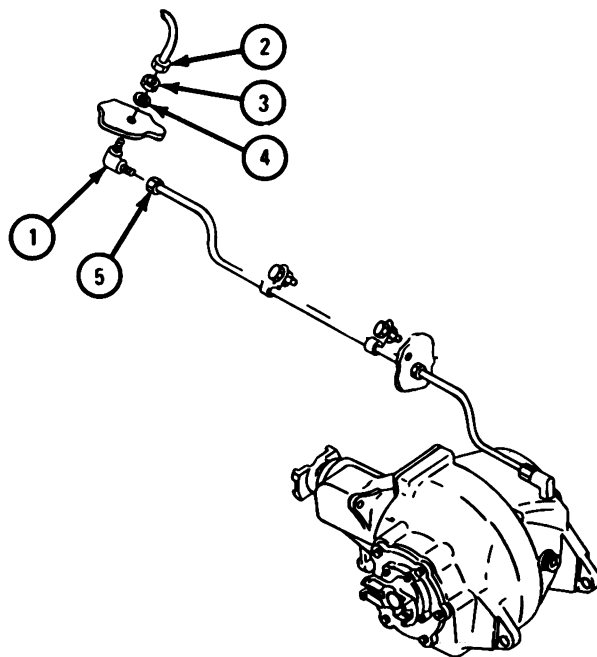
TA 088207

10-11. REAR DIFFERENTIAL VENT LINES AND FITTINGS REMOVAL AND REPLACEMENT.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** Two**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**a. Removal.****FRAME 1****1. Take out four screws (1). Take off carrier access panel (2).****GO TO FRAME 2**

TA 088194

FRAME 2

- Soldier A** 1. Working under front of carrier, hold elbow (1) to keep it from turning.
- Soldier B** 2. Working in access panel opening, take off tube nut with nipple (2), nut (3), and washer (4).
- Soldier A** 3. Take tube nut (5) from elbow (1). Take off elbow.
- GO TO FRAME 3**

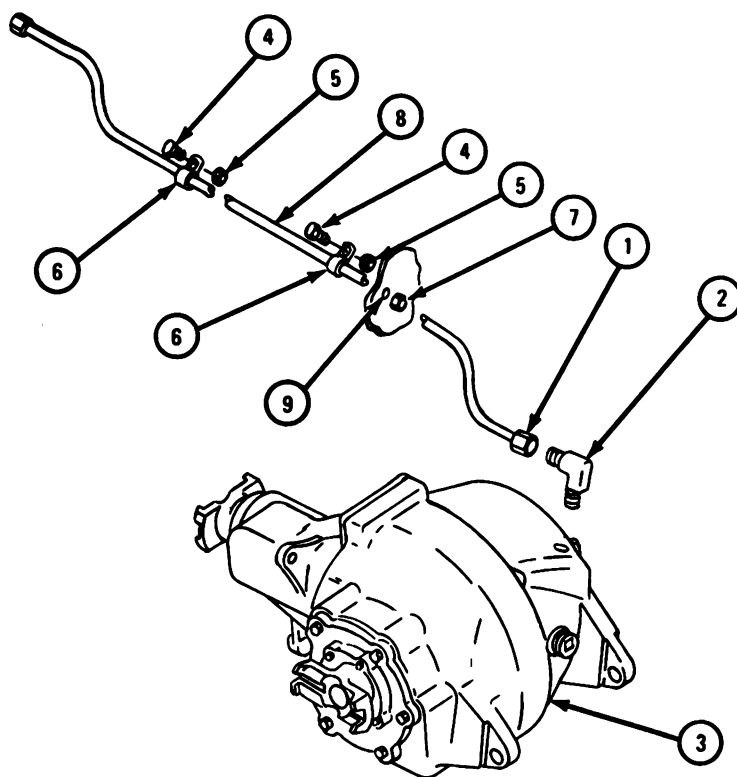


TA 088195

FRAME 3

1. Take off tube nut (1) from elbow (2). Take elbow from differential (3).
2. Take out two screws (4) and nuts (5). Take off two clamps (6).
3. Take out grommet (7). Slide vent tube (8) through hole (9). Take out vent tube.

END OF TASK

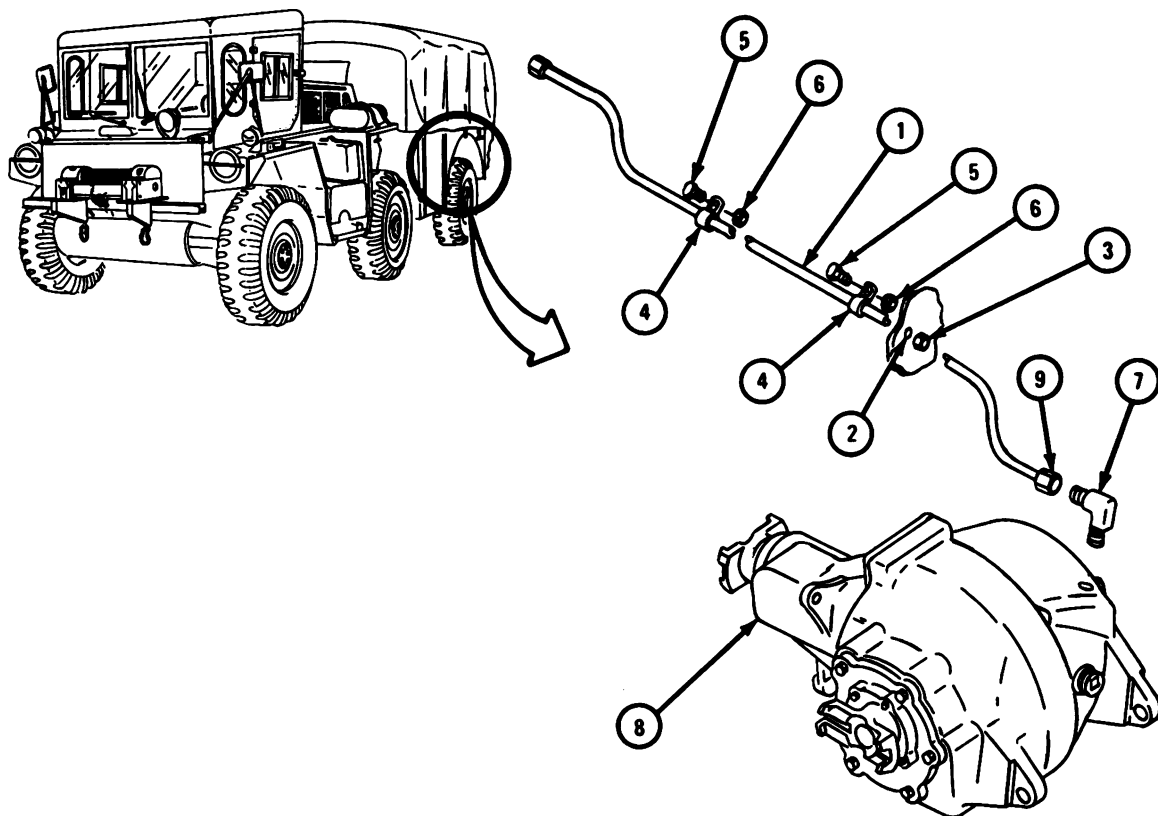


TA 088196

b. Replacement.

FRAME 1

1. Working under carrier, slide vent tube (1) into place through hole (2). Put in grommet (3).
 2. Put on two clamps (4). Put in two screws (5) and nuts (6).
 3. Put elbow (7) in differential (8). Put tube nut (9) on elbow.
- GO TO FRAME 2

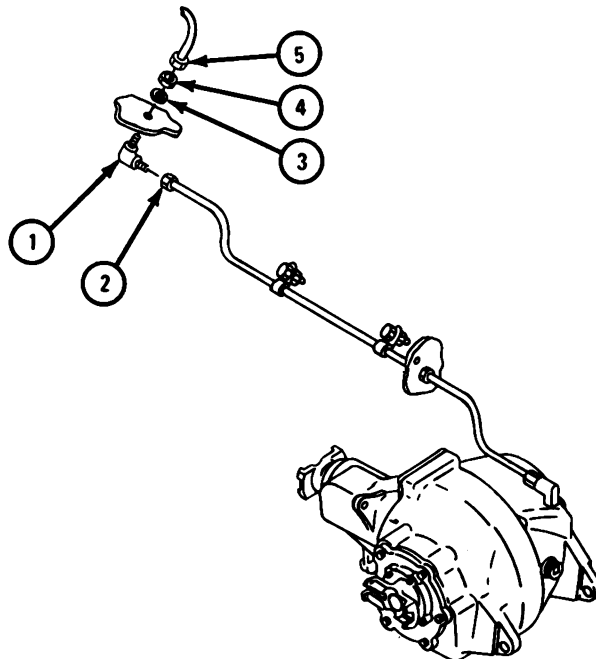


TA 088197

FRAME 2

- Soldier A 1. Working under front of carrier, put in elbow (1). Put tube nut (2) on elbow. Hold elbow to keep it from turning.
- Soldier B 2. Working in access panel opening, put on washer (3), nut (4), and tube nut with nipple (5).

GO TO FRAME 3

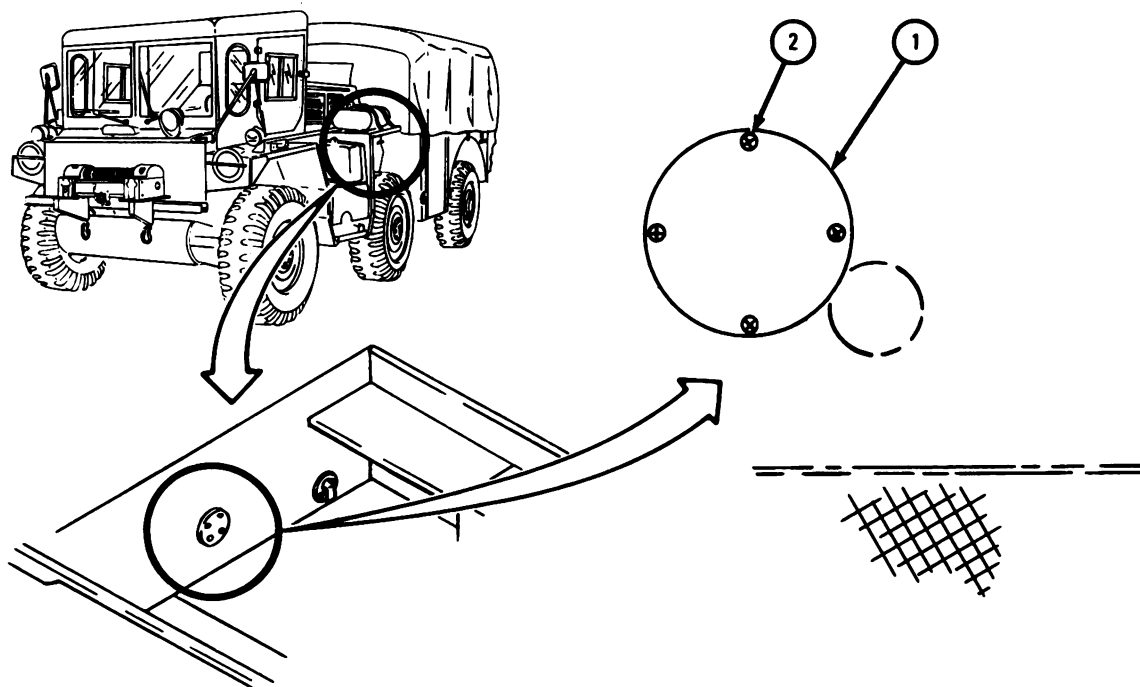


TA 088198

FRAME 3

1. Put access panel (1) in place. Put in four screws (2).

END OF TASK



TA 088199

CHAPTER 11

BRAKE SYSTEM GROUP MAINTENANCE

Section I. SCOPE

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

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

Section II. SERVICE BRAKE ASSEMBLY

11-3. BRAKE DRUM ASSEMBLY REPAIR.

TOOLS: Drum turn arbor fixture, pn 11660096

SUPPLIES: None

PERSONNEL: One

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

a. Preliminary Procedure. Remove brake drum assembly. Refer to TM 9-2320-242-20.

WARNING

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

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

c. Inspection and Repair.

FRAME 1

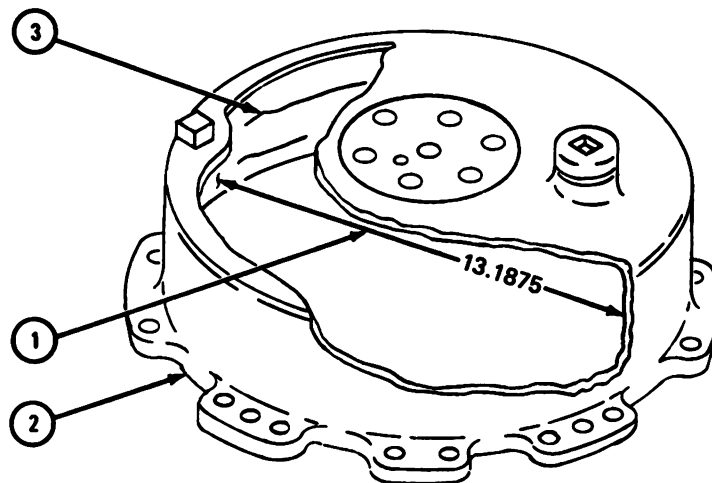
1. Measure inside diameter (1) of brake drum (2). If inside diameter is more than 13.1875 inches, get a new brake drum.
2. Check that inside of brake drum (3) is not warped, scored, rough, cracked, out-of-round, worn unevenly or damaged in any other way.
3. If brake drum (1) is damaged, send it to the machine shop for repair.

NOTE

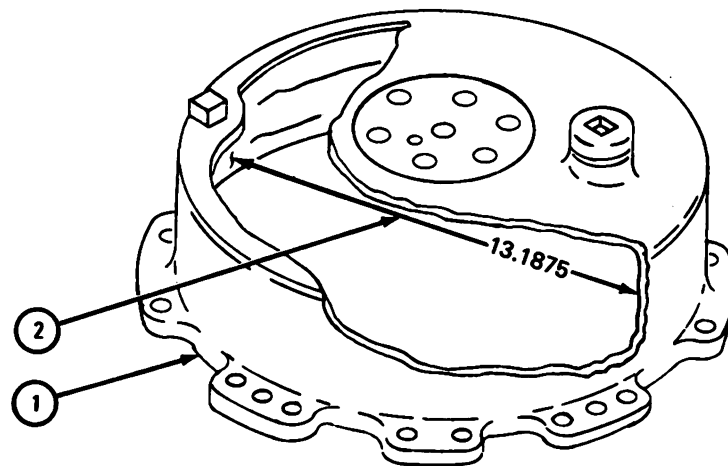
Follow-on Maintenance Action Required:

Replace brake drum assembly. Refer to TM 9-2320-242-20.

END OF TASK



TA 088140



TA 089360

NOTE: TURN BRAKE DRUM (1) ON GRINDING MACHINE AND TAKE OFF ANY DAMAGE. IF MORE REPAIR IS NEEDED, GET A NEW BRAKE DRUM. MEASURE INSIDE DIAMETER (2) OF BRAKE DRUM. IF INSIDE DIAMETER IS MORE THAN 13.1875 INCHES, GET A NEW BRAKE DRUM.

Figure 11-1. Brake Drum Assembly Repair Instructions

11-4. SERVICE BRAKE BRAKESHOE REPAIR.

TOOLS: No special tools required

SUPPLIES: Tubular rivet (12)
Brake lining

PERSONNEL: One

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

- a. Preliminary Procedure. Remove brakeshoe. Refer to TM 9-2320-242-20.
- 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

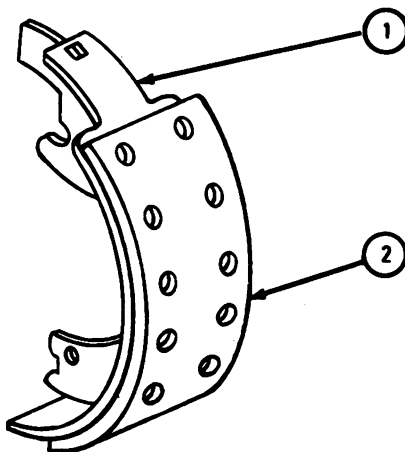
1. Check that brakeshoe (1) is not worn. If brakeshoe is worn, throw it away and get a new one.
2. If brakeshoe (1) is not worn, send brakeshoe to machine shop to replace lining (2). See figure 11-2.

NOTE

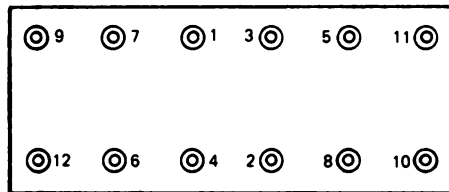
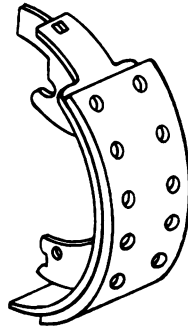
Follow-on Maintenance Action Required:

Replace brakeshoe. Refer to TM 9-2320-242-20.

END OF TASK



TA 088141



TA 088142

NOTE: TAKE OUT 12 RIVETS AND TAKE OFF LINING. CLEAN LINING CONTACT AREA ON BRAKESHOE. PUT NEW LINING ON BRAKESHOE WITH RIVETS IN PATTERN SHOWN. MAKE SURE LINING FITS FIRMLY AND RIVETS ARE PROPERLY SEATED. IF BRAKESHOE IS TO BE USED WITH BRAKE DRUM THAT HAS BEEN MACHINED, USE PROPER SIZE SHIM WITH LINING. BRING LINING TO FIT BRAKE DRUM.

Figure 11-2. Repair Instructions

11-5. SERVICE BRAKE SYSTEM AIR RESERVOIR REPAIR.

a. Removal. Refer to TM 9-2320-242-20 for removal of air reservoir.

b. Repair.

(1) Refer to Part 1, para 1-3 for cleaning procedures.

(2) Check that reservoir has no cracks. Repair cracks by welding.

Refer to TM 9-237.

c. Replacement. Refer to TM 9-2320-242-20 for replacement of air reservoir.

CHAPTER 12

WHEEL SYSTEM GROUP MAINTENANCE

Section I. SCOPE

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

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

Section II. TIRES AND WHEELS

12-3. TIRES AND WHEELS REPAIR.

a. Removal. Refer to TM 9-2320-242-20 for removal of tires and wheels.

b. Repair.

(1) Tires. Refer to TM 9-2610-200-20 for repair of tires.

(2) Wheels.

(a) Refer to TM 9-247 for cleaning procedures.

(b) Check that wheel has no runout, bends or cracks. Replace wheel if cracks, bends, or runout are found.

(c) Check that wheel mounting holes are not out-of-round. Replace wheel if holes are out-of-round.

(d) Repaint bare metal if found. Refer to TM 43-0139.

c. Replacement. Refer to TM 9-2320-242-20 for replacement of tires and wheels.

CHAPTER 13

STEERING SYSTEM GROUP MAINTENANCE

Section I. SCOPE

13-1. **EQUIPMENT ITEMS COVERED.** This chapter gives equipment maintenance procedures for tractor and carrier steering boxes for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

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

Section II. TRACTOR AND CARRIER STEERING BOXES

13-3. TRACTOR STEERING GEAR BOX REPAIR, ADJUSTMENT, AND TEST.

TOOLS: No special tools required

SUPPLIES: Tractor and carrier steering gear parts kit
Tractor steering gear parts kit

PERSONNEL: One

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

a. Preliminary Procedure. Remove tractor steering gear box. Refer to TM 9-2320-242-20.

b. Disassembly.

FRAME 1

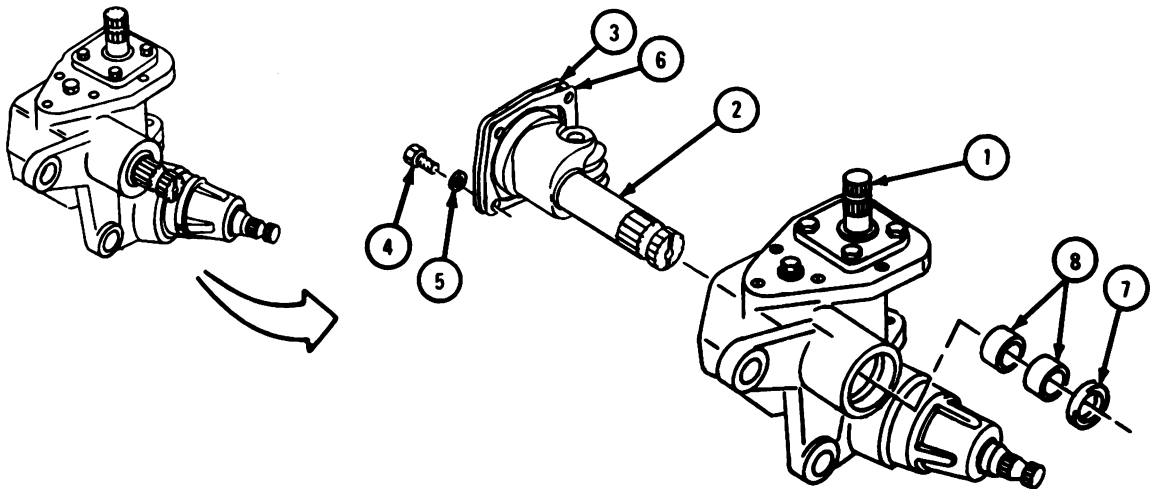
1. Turn worm gear shaft (1) until scribe marks on shaft (2) line up with scribe marks on housing cover (3).
2. Take out four screws (4) and washers (5).
3. Take off cover (3), gasket (6), and shaft (2).

NOTE

Do step 4 only if seal (7) or bushing (8) are worn or damaged.

4. Take out seal (7) and press out two bushings (8).

GO TO FRAME 2

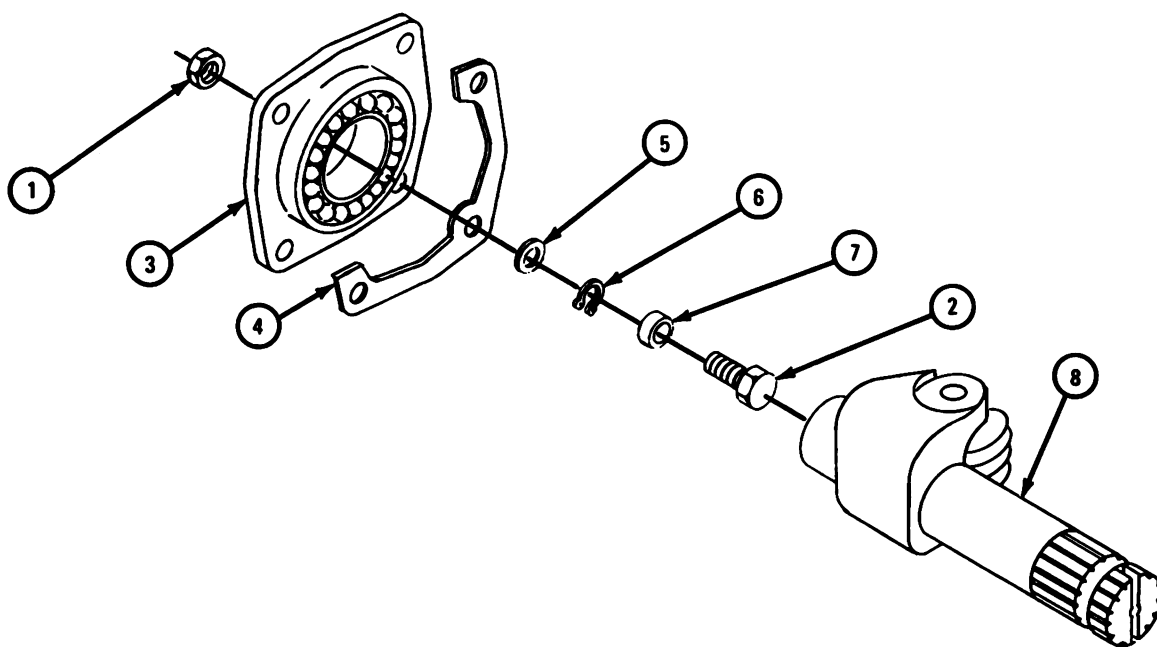


TA 084763

FRAME 2

1. Take off nut (1).
2. Hold adjusting screw (2) and unscrew cover (3).
3. Take off gasket (4) and throw it away.
4. Take off seal washer (5).
5. Take retaining ring (6) and washer (7) off adjusting screw (2).
6. Take adjusting screw (2) off shaft (8).

GO TO FRAME 3

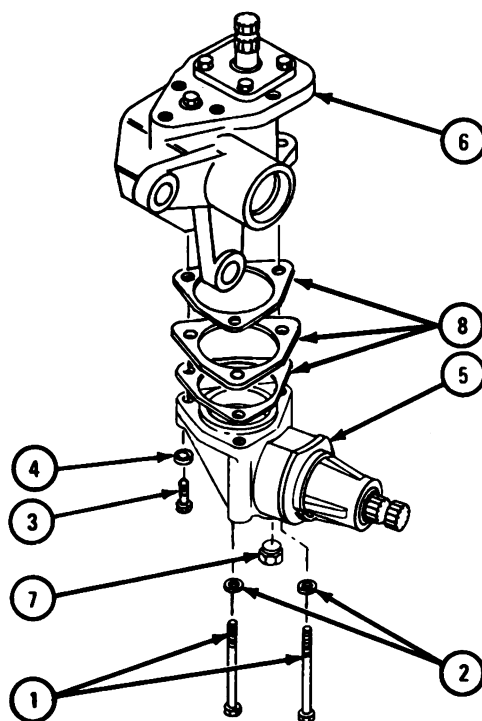


TA 084764

FRAME 3

1. Take out two screws (1), washers (2), screw (3), and washer (4) and take housing (5) off housing (6).
2. Take out plug (7) and shims (8).

GO TO FRAME 4



TA 084765

FRAME 4

1. Loosen locknut (1) two turns. Take housing (2) off lower housing (3).
2. Take out gear (4). Take off washer (5) and bearing (6).

CAUTION

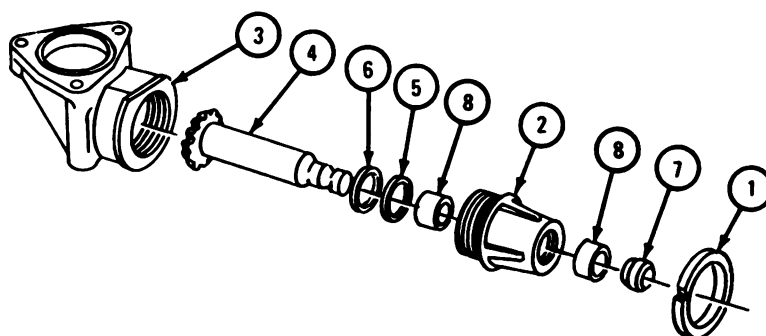
Be careful not to lose any of the needle rollers from needle bearings (8).

NOTE

Do step 3 only if inspection shows seal or needle bearing worn or damaged.

3. Take out seal (7) and press out needle bearings (8).

GO TO FRAME 5

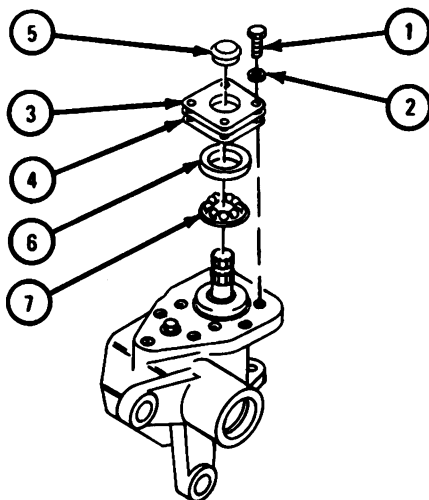


TA 084766

FRAME 5

1. Take out four screws (1) and washers (2).
2. Take off cover (3) and shims (4) and take out seal (5).
3. Take out ball cup (6) and ball bearings (7).

GO TO FRAME 6

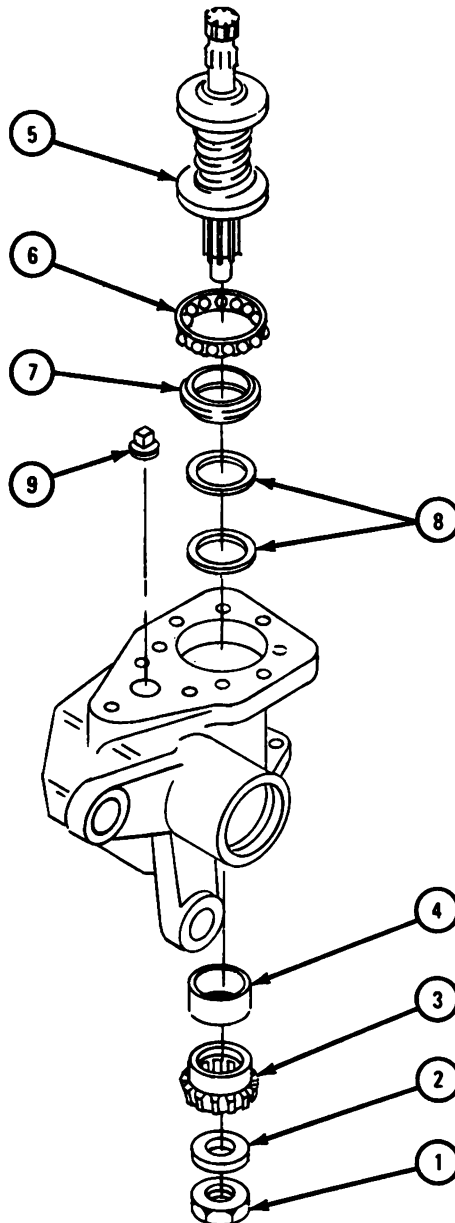


TA 084767

FRAME 6

1. Take off nut (1), washer (2), gear (3), and spacer (4) from bottom of worm gear (5).
2. Take out worm gear (5).
3. Take out ball bearings (6), ball cup (7), and shims (8).
4. Take out plug (9).

END OF TASK

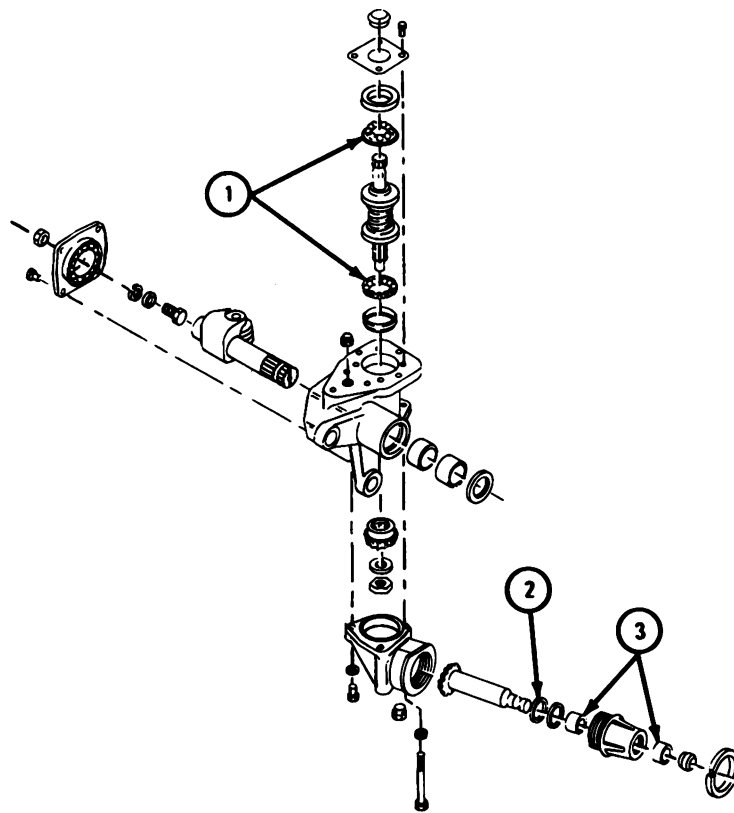


TA 084768

c. Cleaning.

FRAME 1

1. Clean ball bearings (1), bearing (2), and needle bearings (3) separately. Refer to TM 9-214.
 2. Clean all other parts. Refer to Part 1, para 1-3.
- END OF TASK



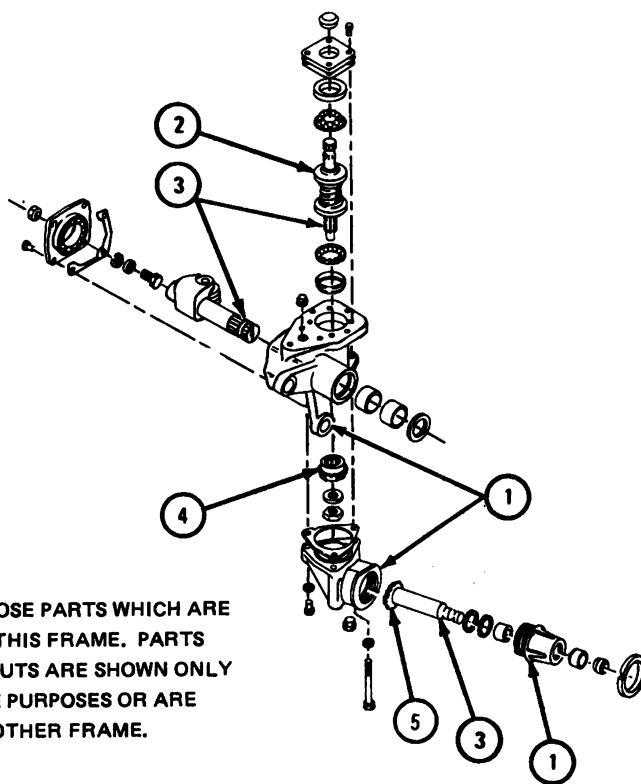
TA 084769

d. Inspection and Repair.

FRAME 1

1. Check that housings (1) are not cracked. Repair by welding. Refer to TM 9-237.
2. Check that worm gear (2), three shafts (3), gear (4), and gear (5) are not damaged. If parts are damaged, throw them away and get new ones in their place.

GO TO FRAME 2



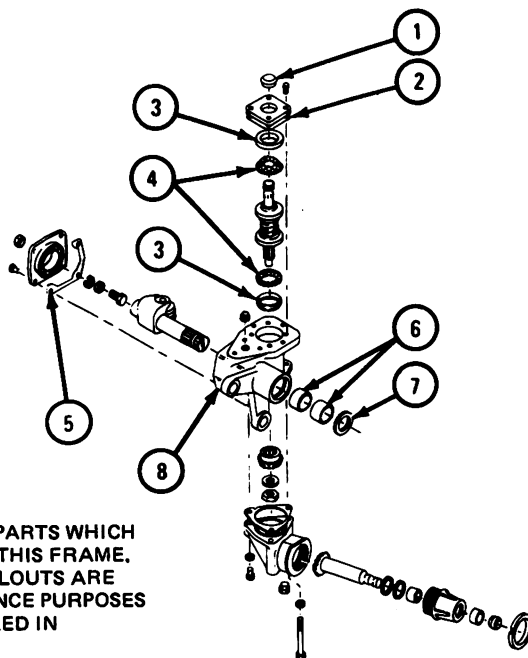
NOTE: CHECK ONLY THOSE PARTS WHICH ARE CALLED OUT IN THIS FRAME. PARTS WITHOUT CALLOUTS ARE SHOWN ONLY FOR REFERENCE PURPOSES OR ARE CHECKED IN ANOTHER FRAME.

TA 084770

FRAME 2

1. Check that parts (1 through 7) in assembly of upper housing (8) are not damaged or worn. If any part is damaged, throw out all parts and get new ones from kit.

GO TO FRAME 3



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

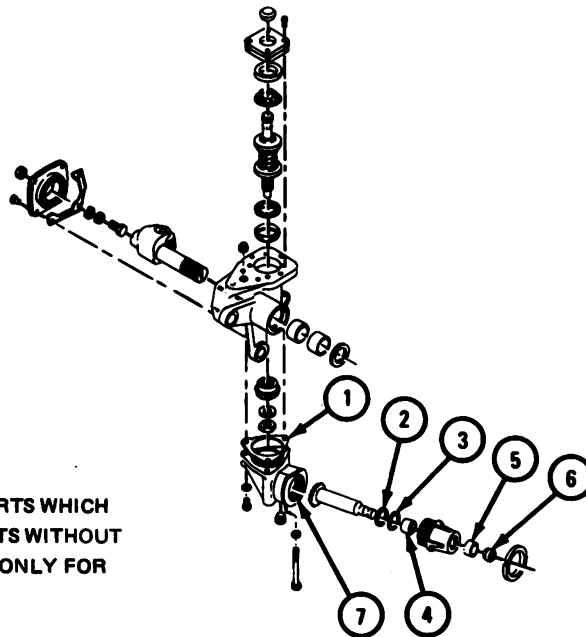
TA 084771

FRAME 3

1. Check that parts (1 through 6) are not worn or damaged. If parts are damaged, get new ones from kit.
2. Check that lower housing (7) and all other parts are not damaged. If parts are damaged, get new ones in their place.

GO TO FRAME 4

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



TA 088145

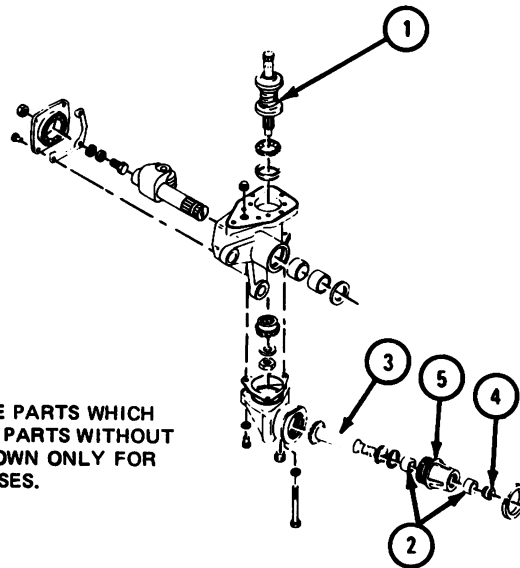
FRAME 4

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 thickness of spline teeth on worm gear (1).
2. Measure contact surface for two bearings (2) on output gear shaft (3).
3. Measure contact surface for seal (4) on output gear shaft (3).
4. Measure inside diameter of bores for bearings (2) in output housing (5).

GO TO FRAME 5



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

TA 088146

Table 13-1. Tractor Steering Gear Box Output Gear Shaft and Worm Gear Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Worm gear spline tooth thickness	0.0343 to 0.0356	0.0015
3	Output gear shaft bearing contact surface	0.9995 to 1.000	0.002
3	Output gear shaft seal contact surface	0.997 to 0.999	0.005
5	Output housing bearing bore	1.2495 to 1.2505	0.001

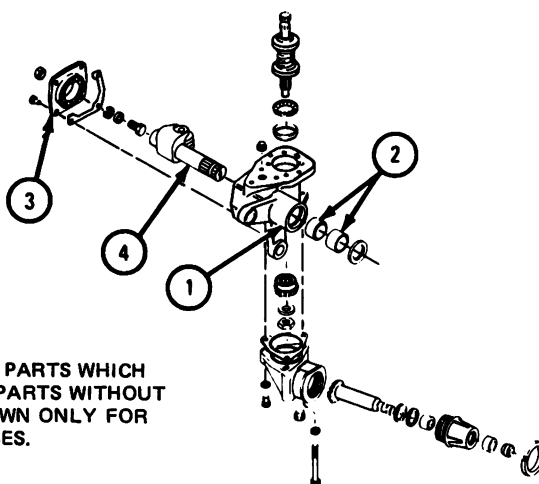
FRAME 5

NOTE

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

1. Measure inside diameter of steering box main housing sector shaft bushing bore (1).
2. Measure inside diameter of two sector shaft bushings (2).
3. Measure contact surface for sector shaft cover (3) on sector shaft (4).
4. Measure contact surface for two sector shaft bushings (2) on sector shaft (4).
5. Measure contact surface for sector shaft (4) in sector shaft cover (3).

END OF TASK



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

TA 088147

Table 13-2. Tractor Steering Gear Box Sector Shaft Wear Limits

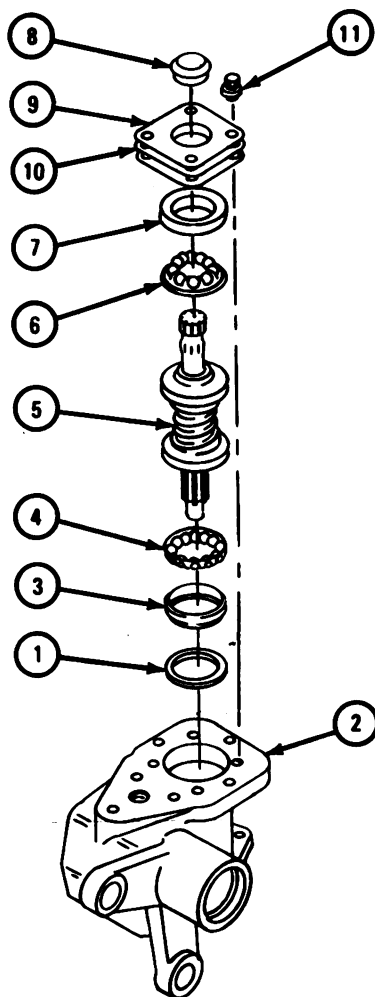
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Main housing sector shaft bushing bore	1.4985 to 1.4995	0.002
2	Sector shaft bushings	1.375 to 1.376	0.002
3	Sector shaft cover contact surface	1.373 to 1.374	0.005
4	Sector shaft bushing contact surface	1.373 to 1.374	0.005
3	Sector shaft cover shaft contact surface	1.3755 to 1.3765	0.005

e. Assembly.

FRAME 1

1. Put shim (1) into housing (2).
2. Tap ball cup (3) into housing (2). Put in ball bearing (4).
3. Put in worm gear (5). Put on ball bearings (6) and ball cup (7).
4. Press seal (8) into cover (9).
5. Put shims (10) and cover (9) on housing (2) and put in four screws and washers (11).

GO TO FRAME 2

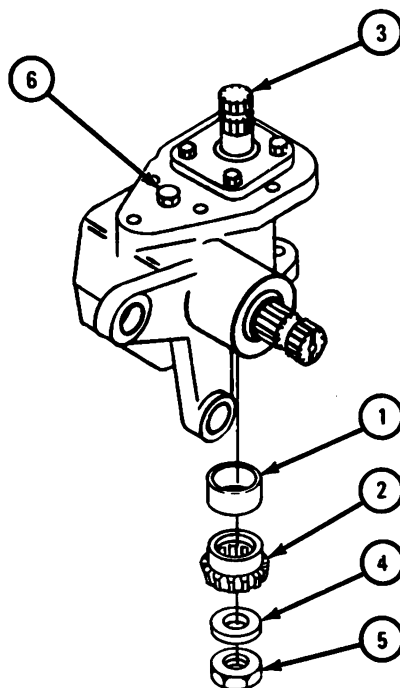


TA 084772

FRAME 2

1. Put spacer (1) and gear (2) on worm gear (3).
2. Put on washer (4) and nut (5).
3. Put in plug (6).

GO TO FRAME 3

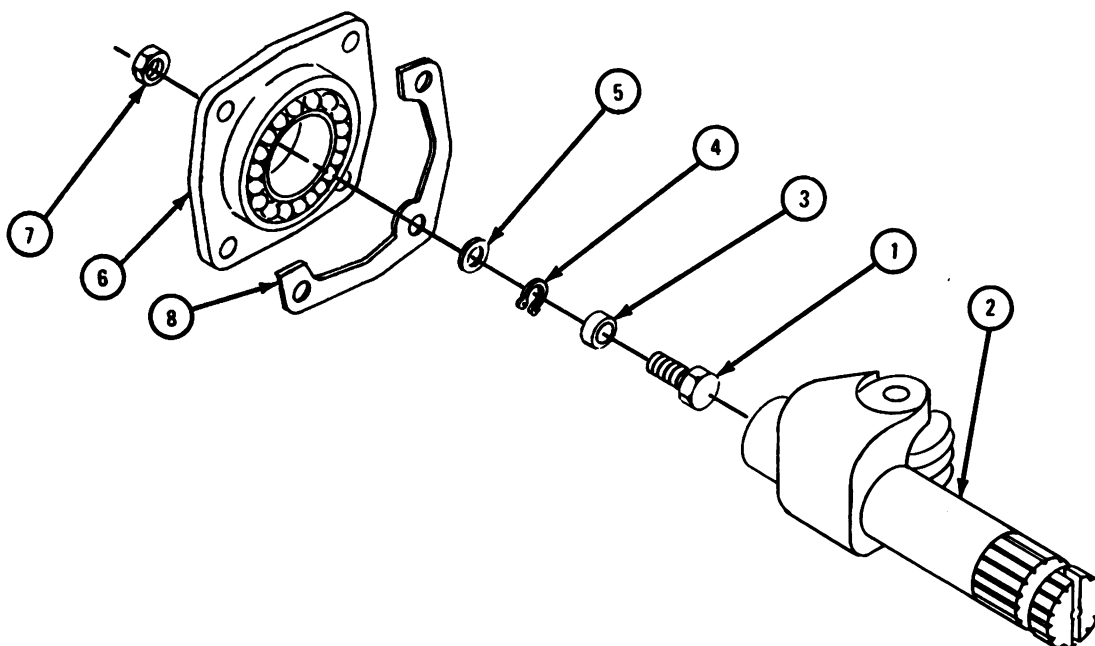


TA 084773

FRAME 3

1. Put adjusting screw (1) into shaft (2) and put on washer (3) and retaining ring (4).
2. Put in seal washer (5).
3. Holding adjusting screw (1), put on cover (6).
4. Put nut (7) on adjusting screw (1).
5. Put on gasket (8).

GO TO FRAME 4

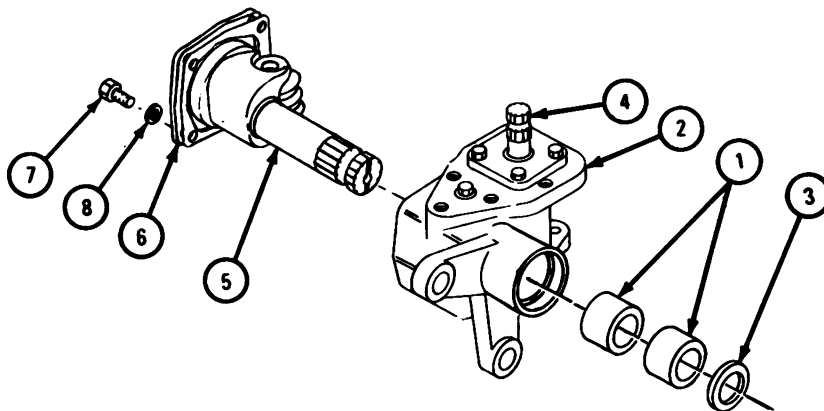


TA 084774

FRAME 4

1. If removed, press one bushing (1) into housing (2) until it is below retaining shoulder for seal (3). Turn housing over and press in other bushing.
2. Press seal (3) into housing (2).
3. Center worm gear (4). Put shaft (5) into housing (2), alining screw hole in cover (6) and housing.
4. Put in four screws (7) and washers (8).

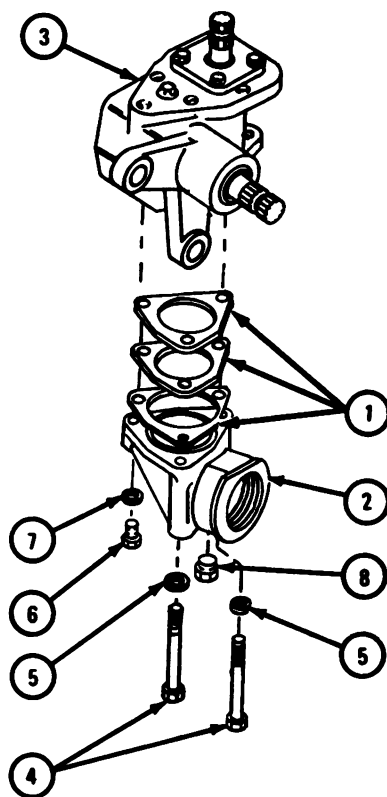
GO TO FRAME 5



TA 084775

FRAME 5

1. Put shims (1) and lower housing (2) on upper housing (3).
 2. Put in two long screws (4), washers (5), screw (6), washer (7), and plug (8).
- GO TO FRAME 6**

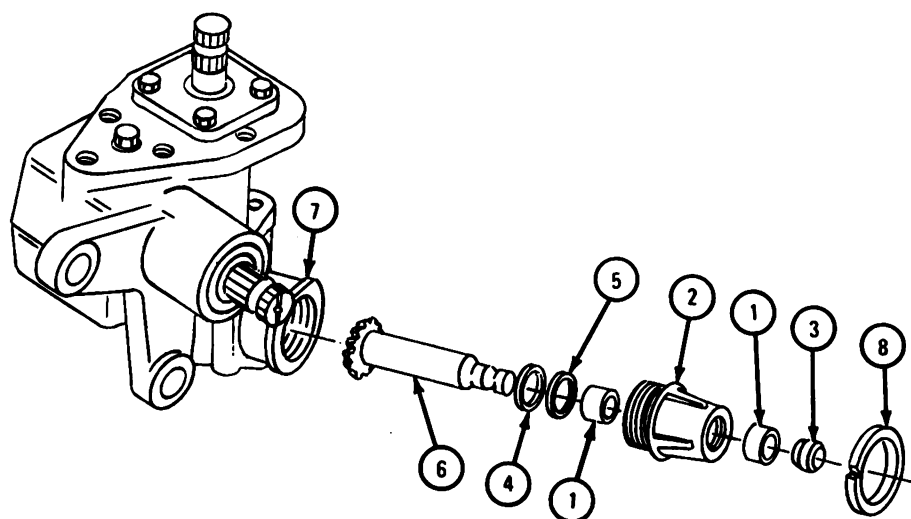


TA 084776

FRAME 6

1. Press two needle bearings (1) into housing (2) and put in seal (3).
2. Put bearing (4) and washer (5) on gear (6).
3. Put assembled gear (6) into housing (2).
4. Put housing (2) into lower housing (7).
5. Put on locknut (8).

GO TO FRAME 7



TA 084777

FRAME 7

1. Mount dial indicator on output gear shaft housing (1).

NOTE

When measuring backlash, make sure gear (2) does not turn. If gear turns, backlash readings will be wrong.

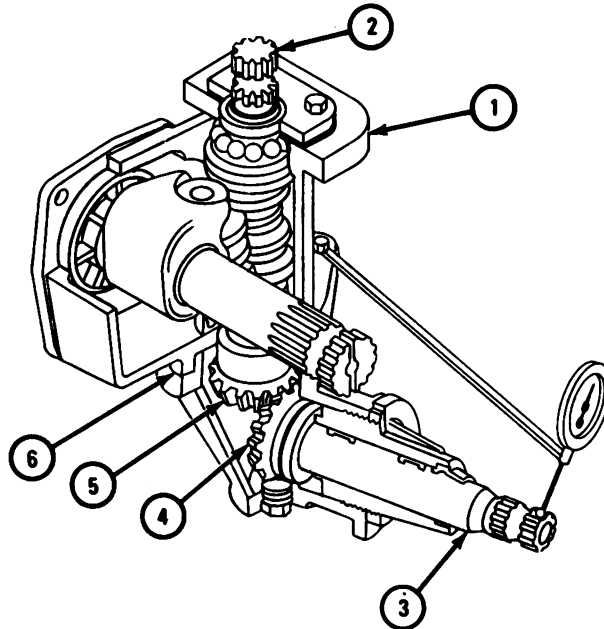
2. Turn output gear (3) away from dial indicator until gear tooth (4) touches gear tooth (5).
3. Set dial indicator to read 0.
4. Turn gear (3) towards dial indicator until gear tooth (4) touches other side of gear tooth (5).
5. Check that backlash is 0.001 to 0.005 inch.

NOTE

Adjustments to backlash can be made by adding or taking away a shim from shims (6). Refer to para 13-3b.

6. Take off dial indicator.

GO TO FRAME 8



TA 089262

FRAME 8

1. Mount dial indicator on housing (1).

NOTE

When measuring backlash, make sure gear (2) does not turn. If gear turns, backlash readings will be wrong.

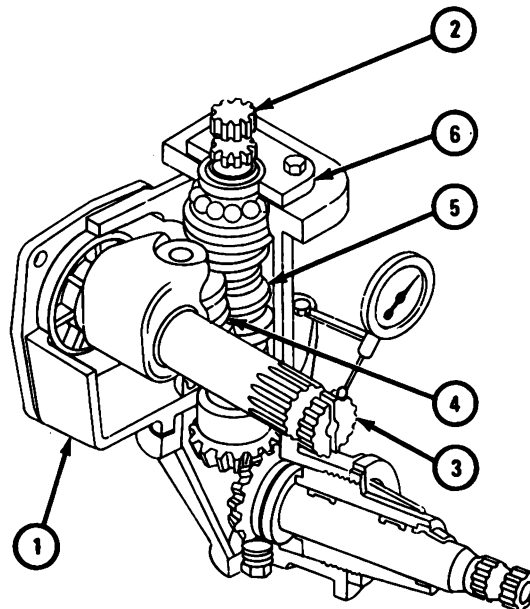
2. Turn gear (3) away from dial indicator until gear tooth (4) touches gear tooth (5).
3. Set dial indicator to read 0.
4. Turn gear (3) towards dial indicator until gear tooth (4) touches other side of gear tooth (5).
5. Check that backlash is 0.001 to 0.005 inch.

NOTE

Adjustments to backlash can be made by adding or taking away a shim from shims (6). Refer to para 13-3b.

6. Take off dial indicator.

END OF TASK

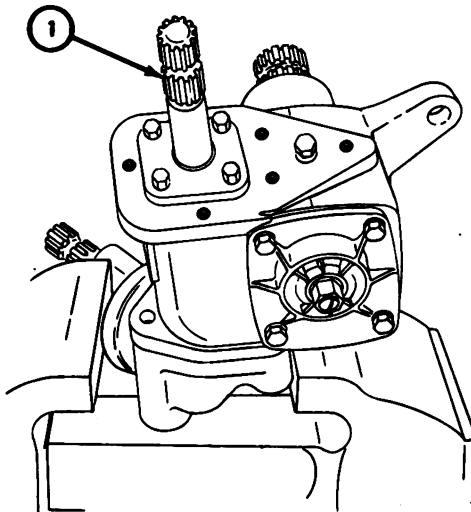


TA 089263

f. Adjustment.

FRAME 1

1. Center worm gear (1).
 2. Using torque wrench on worm gear (1), check that preload is 15 to 29 pound-inches.
- IF PRELOAD IS NOT WITHIN LIMITS GIVEN, GO TO FRAME 2.**
IF PRELOAD IS WITHIN LIMITS GIVEN, END OF TASK



TA 084778

FRAME 2

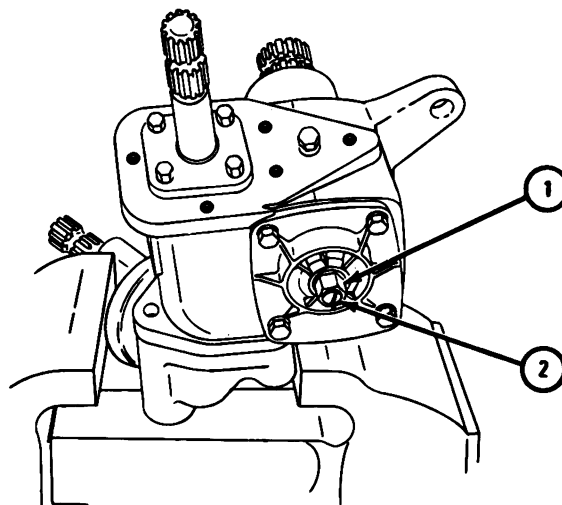
1. Loosen nut (1).

NOTE

Turn screw (2) to the right to raise preload or to the left to lower preload.

2. Turn screw (2) and check preload. Refer to frame 1.
3. Do step 2 again until preload is 15 to 29 pound-inches.
4. Hold screw (2) and tighten nut (1) to 16 to 20 pound-feet.

END OF TASK



TA 084779

g. Test.

FRAME 1

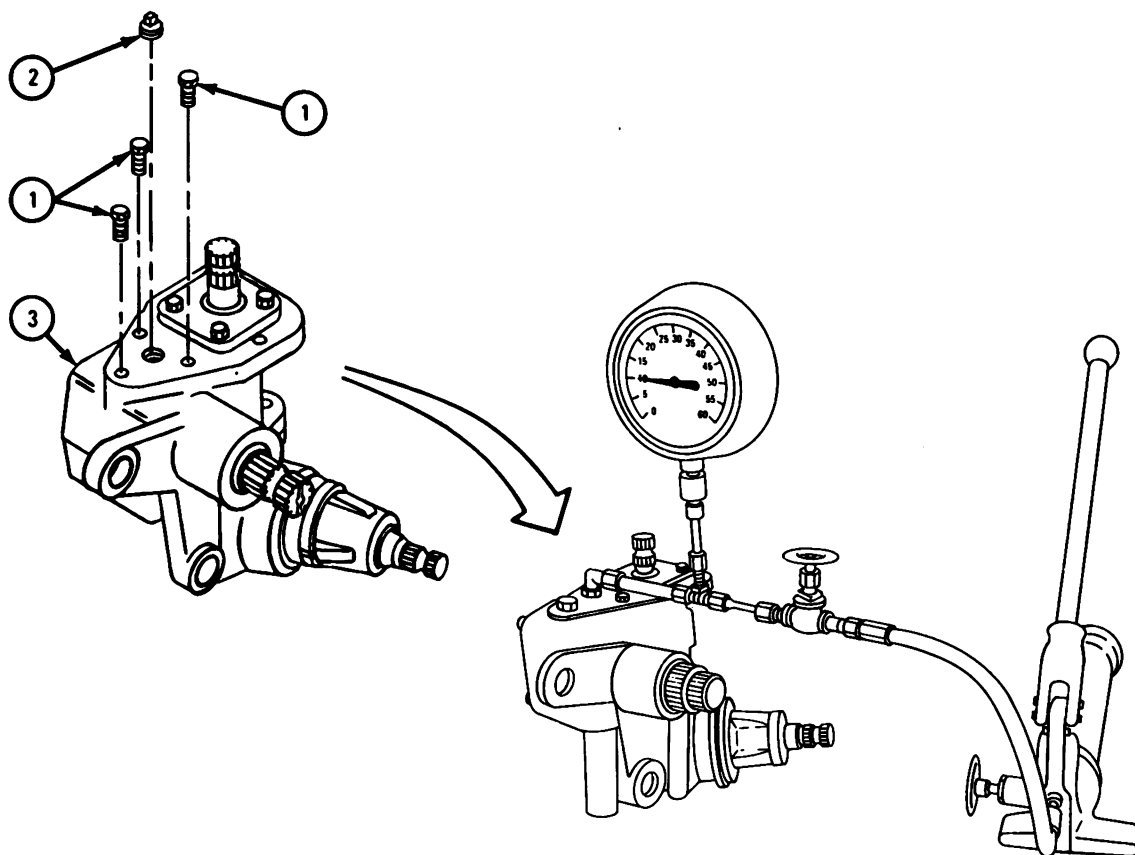
1. Put in three mounting screws (1).
2. Take out plug (2).
3. Using test equipment, put 10 psi of air pressure in steering gear box (3) for five minutes. If pressure drops, check all gaskets and tighten all screws and nuts again.
4. Put in plug (2).

NOTE

Follow-on Maintenance Action Required:

1. Replace steering gear box. Refer to TM 9-2320-242-20.
2. Fill steering gear box. Refer to LO 9-2320-242-12.

END OF TASK



TA 084780

13-4. CARRIER STEERING GEAR BOX REPAIR AND ADJUSTMENT.

TOOLS: No special tools required

SUPPLIES: Tractor and carrier steering gear parts kit

PERSONNEL: One

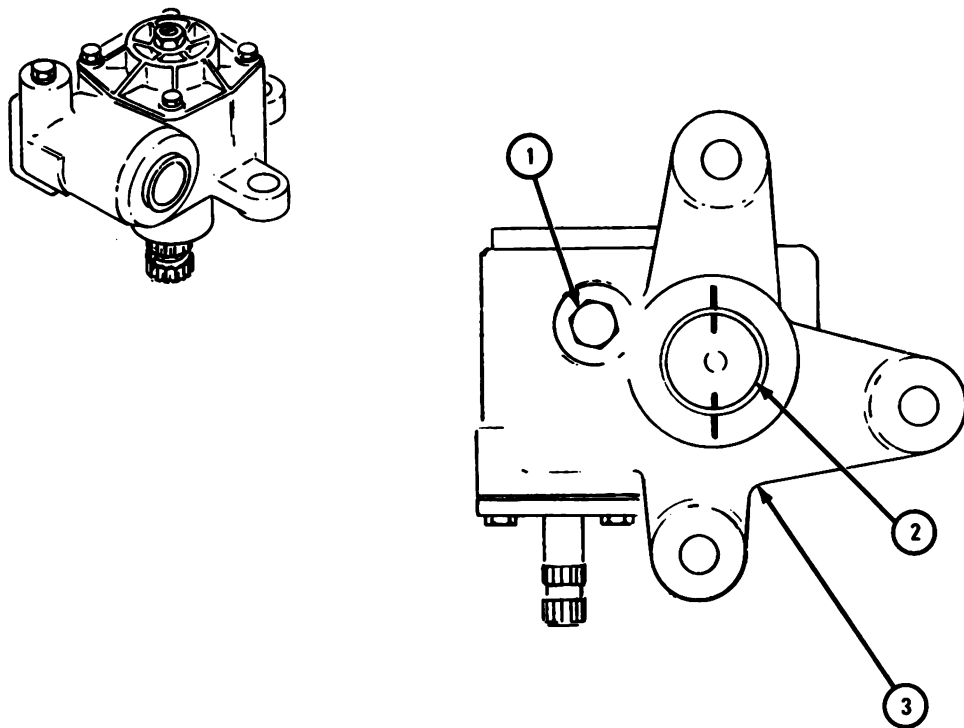
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove carrier steering gear box. Refer to TM 9-2320-242-20.

b. Disassembly.

FRAME 1

1. Take out plug (1) and drain lubricant.
 2. Align marks on worm gear (2) with marks on housing (3).
- GO TO FRAME 2

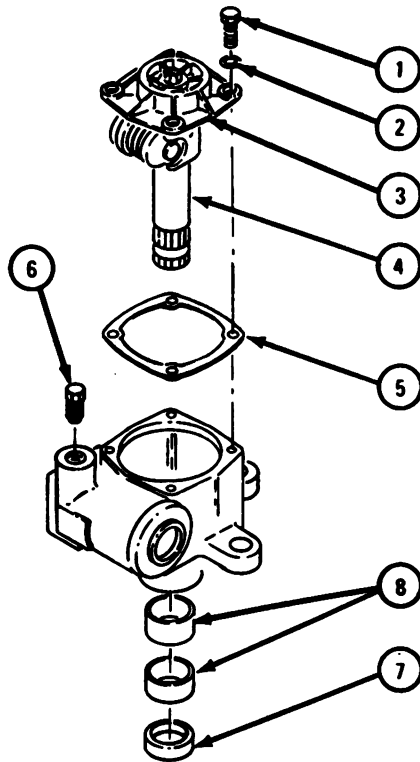


TA 088143

FRAME 2

1. Take out four screws (1) and washers (2).
2. Take off cover (3) with shaft (4) and gasket (5). Throw away gasket.
3. Take out plug (6) and seal (7).
4. Press out two bushings (8).

GO TO FRAME 3

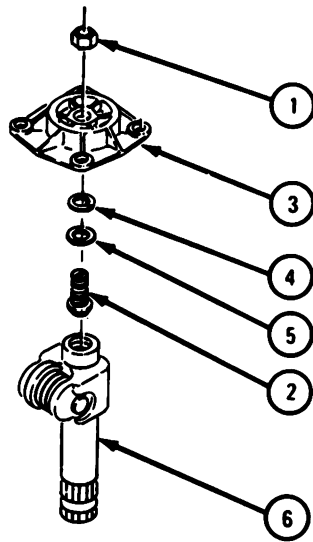


TA 084781

FRAME 3

1. Take off nut (1). Hold adjusting screw (2) and take off cover (3).
2. Take off retaining ring (4) and washer (5).
3. Take adjusting screw (2) out of shaft (6).

GO TO FRAME 4

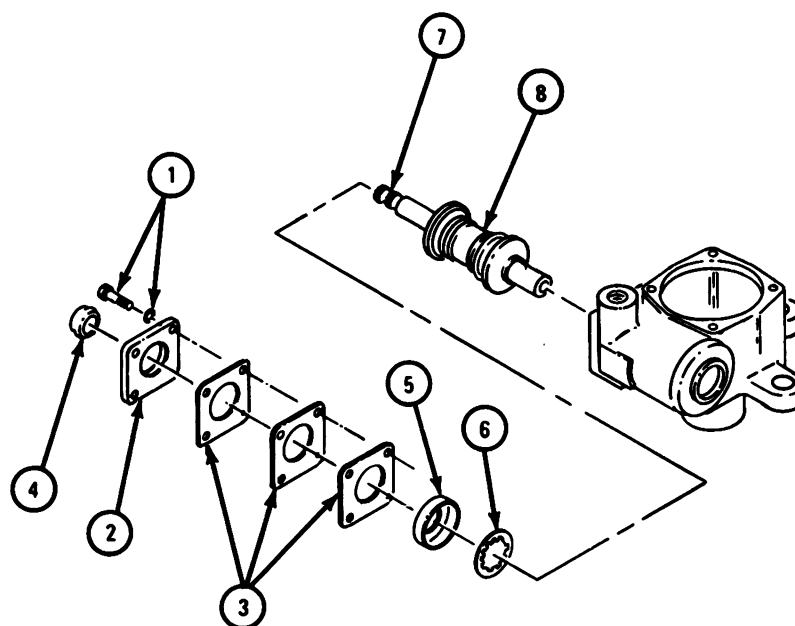


TA 084782

FRAME 4

1. Take out four screws and washers (1).
2. Take off cover (2) and shims (3) and drive out seal (4). Throw away seal.
3. Take out ball cup (5), retainer (6), and shaft (7) with worm gear (8).

GO TO FRAME 5

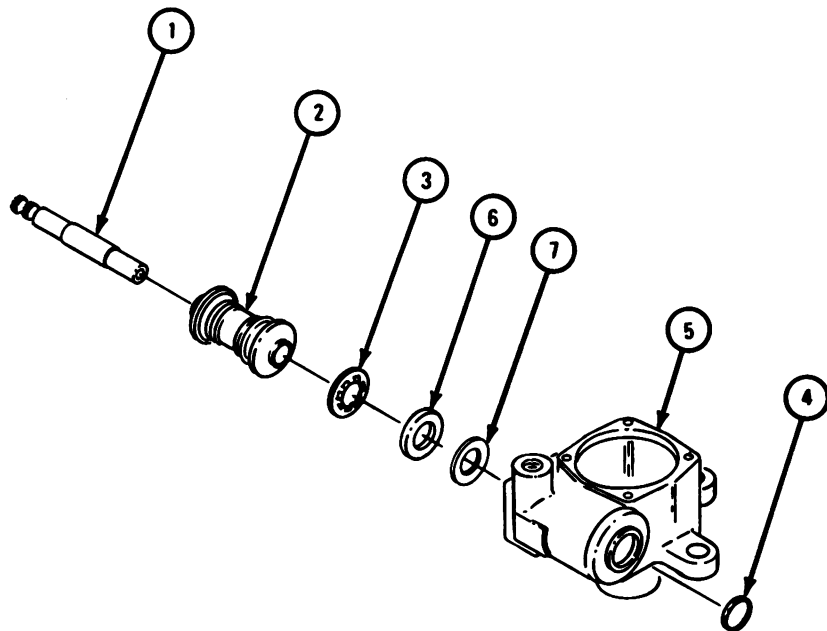


TA 084783

FRAME 5

1. Press shaft (1) from worm gear (2).
2. Take out retainer (3) and drive plug (4) out of housing (5).
3. Take out ball cup (6) and shim (7).

END OF TASK



TA 084784

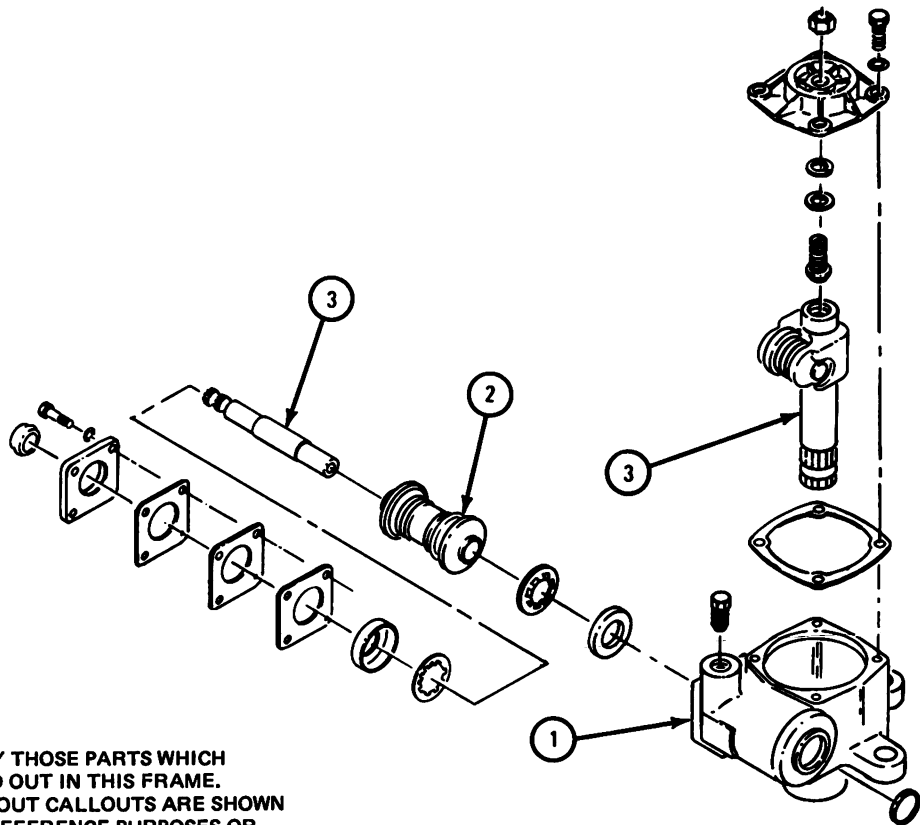
c. Cleaning. There are no special cleaning procedures needed. Refer to Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that housing (1) is not cracked. Repair by welding. Refer to TM 9-237.
2. Check that worm gear (2) has no cracks, burrs, or scoring. If cracks, burrs, or scoring are found, throw away gear. Replace with new gear.
3. Check that shaft (3) is straight and has no cracks, bends, or scoring. Throw away shaft if cracks, bends, or scoring are found. Replace with new shaft.

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.

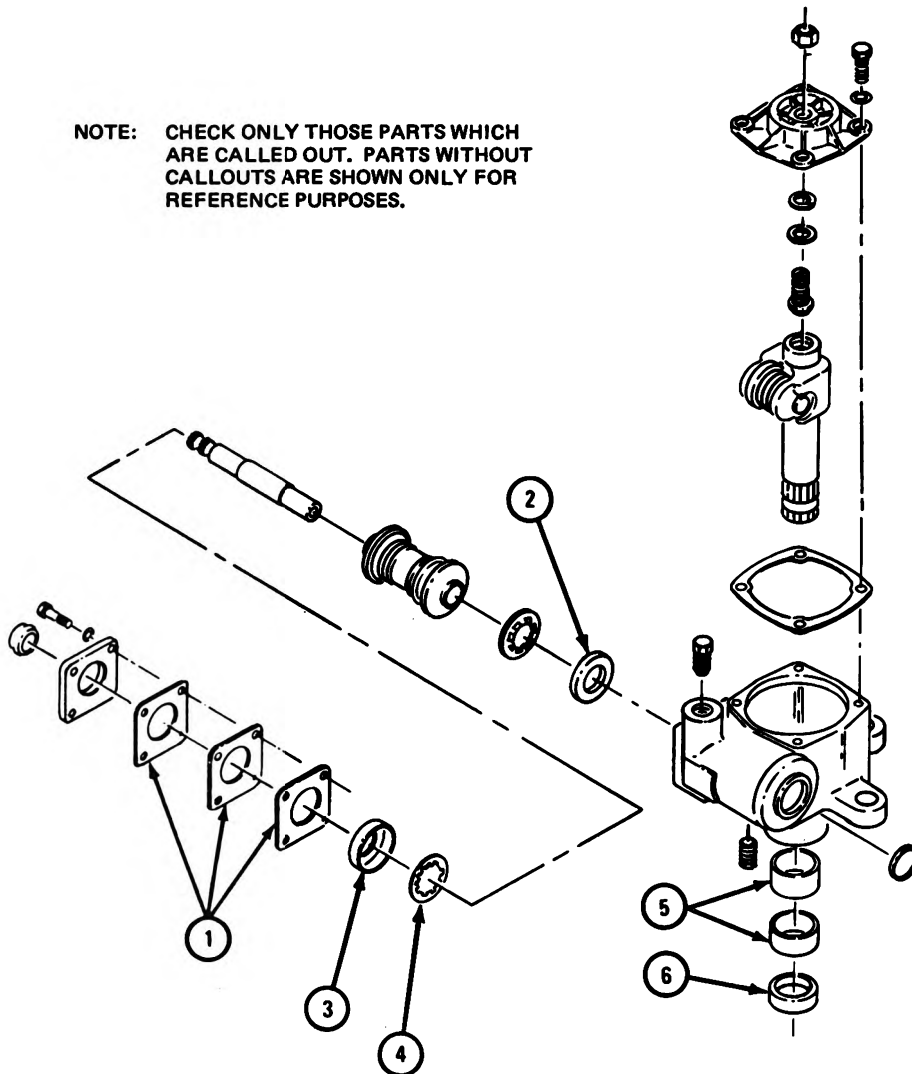
TA 084785

FRAME 2

1. Check that shims (1), two ball cups (2 and 3), and retainer (4) have no cracks or scoring. If parts are damaged, throw them away and get new ones.
2. Check that bushings (5) and plug (6) have no cracks, burrs, or scoring. If parts are damaged, throw them away and get new ones.

GO TO FRAME 3

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



TA 084786

FRAME 3

NOTE

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

1. Measure contact surface for worm gear (1) on worm gear shaft (2).
2. Measure inside diameter of two bushings (3).
3. Measure bores for two bushings (3) in housing (4).
4. Measure contact surface for cover (5) on sector shaft (6).
5. Measure contact surface for two bushings (3) on sector shaft (6).

END OF TASK

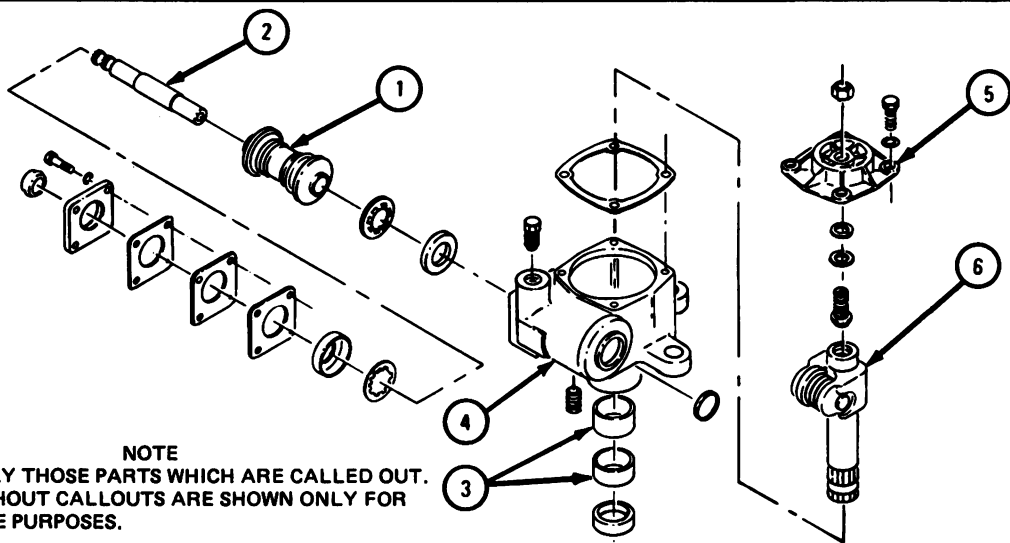


Table 13-3. Carrier Steering Gear Box and Sector Shaft Bushing Wear Limits

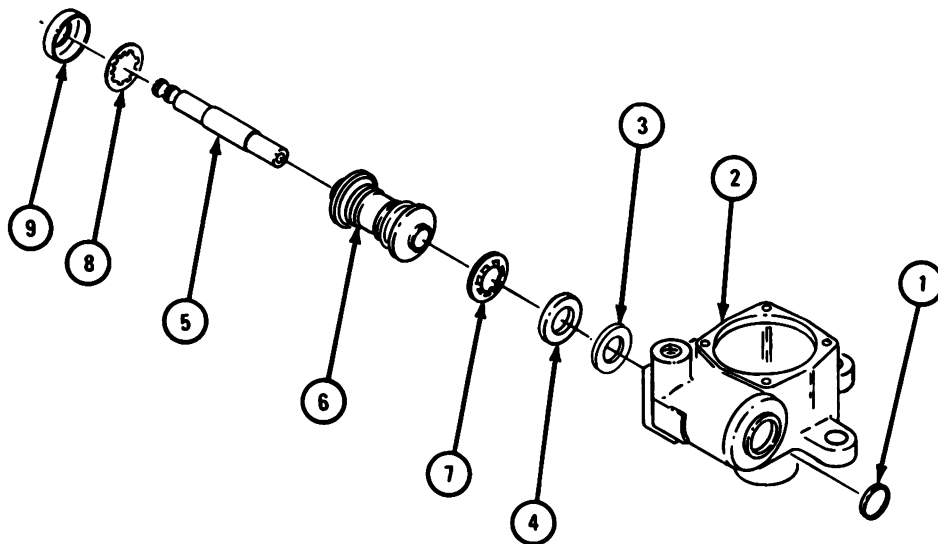
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1 and 2	Worm gear shaft contact surface	0.884 to 0.888	0.001
3	Sector shaft bushings (inside diameter)	1.375 to 1.376	0.002
4	Housing bore for sector shaft bushing	1.826 to 1.829	0.002
5	Sector shaft cover contact surface	1.373 to 1.374	0.005
6	Sector shaft bushing contact surface	1.373 to 1.374	0.002

e. Assembly.

FRAME 1

1. Put plug (1) into housing (2).
2. Put shim (3) into housing (2).
3. Tap ball cup (4) into housing (2).
4. Press shaft (5) into worm gear (6).
5. Put retainer (7), retainer (8), and ball cup (9) on worm gear (6) and put worm gear into housing (2).

GO TO FRAME 2

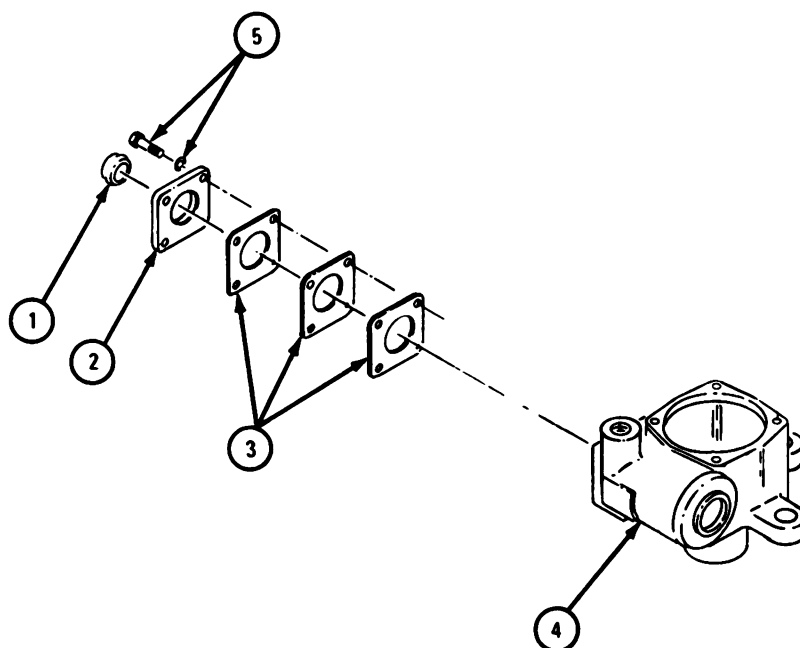


TA 084787

FRAME 2

1. Press seal (1) into cover (2).
2. Put shims (3) and cover (2) on housing (4).
3. Put four screws and washers (5) through cover (2) into housing (4). Tighten screws to 25 to 30 pound-feet torque.

GO TO FRAME 3

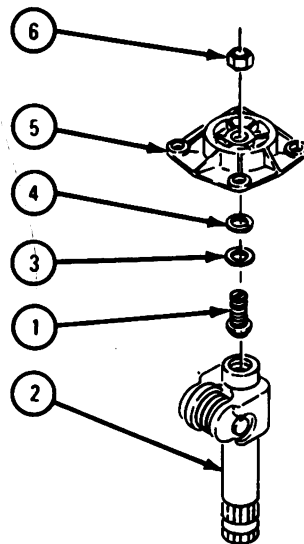


TA 084788

FRAME 3

1. Put adjusting screw (1) into shaft (2).
2. Put washer (3) and retaining ring (4) on adjusting screw (1).
3. Holding adjusting screw (1), screw on cover (5) and nut (6).

GO TO FRAME 4

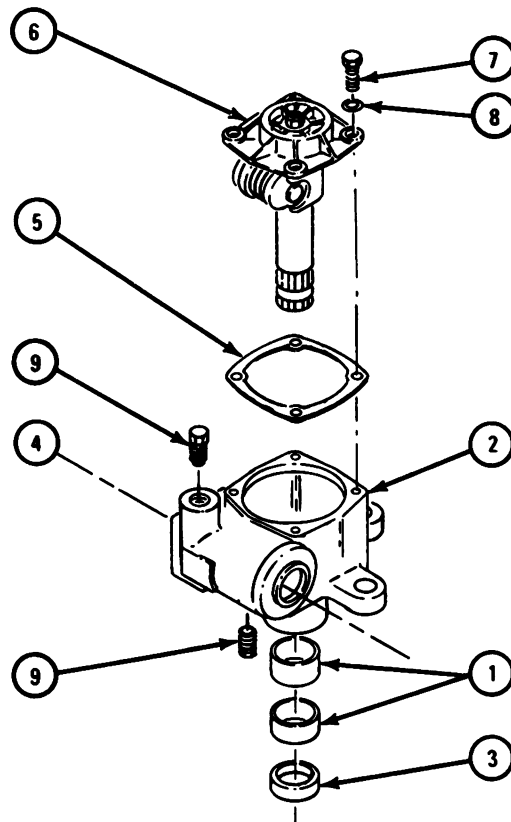


TA 084789

FRAME 4

1. Press on bushing (1) into housing (2) until it is just below retaining shoulder for seal (3). Turn housing over and press in other bushing until it is flush with inside of housing. Press in seal (3).
2. With worm gear (4) centered, put gasket (5) and cover (6) on housing (2) and put in four screws (7) and washers (8). Tighten screws to 18 to 22 pound-feet torque.
3. Put in two plugs (9).

END OF TASK



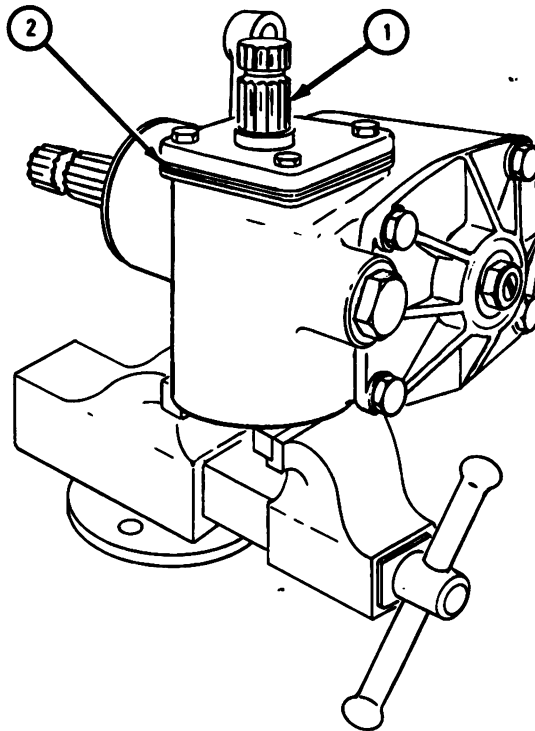
TA 084790

f. Adjustment.

FRAME 1

1. Turn worm gear (1) until centered.
2. Using torque wrench on worm gear, check that preload is 15 to 29 pound-inches. Add or take out shim (2) as needed to make preload within given limits.

GO TO FRAME 2



TA 084791

FRAME 2

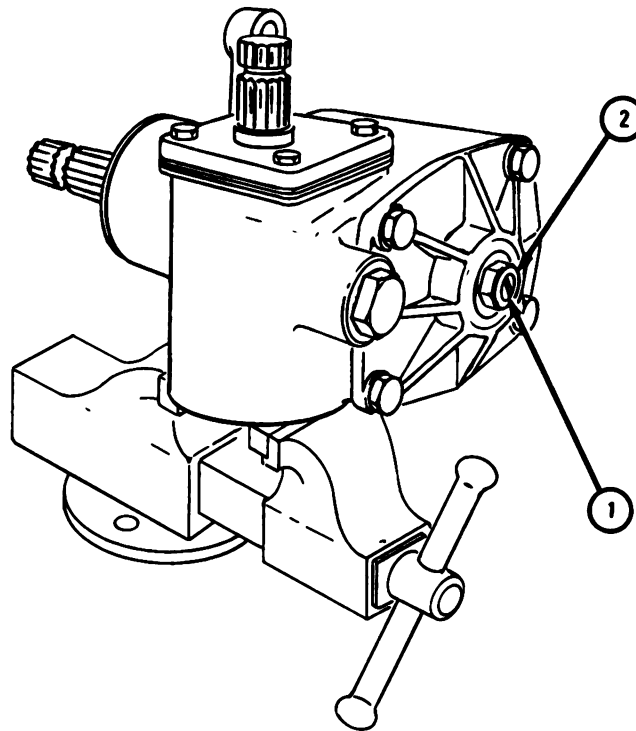
1. With worm gear centered, check that preload on shaft (1) is 15 to 29 pound-inches.

NOTE

Turn screw in shaft (1) to right for more preload or to left for less preload.

2. If preload is not within given limits, loosen nut (2). Turn screw in shaft (1) until preload is within given limits.
3. Hold screw in shaft (1) and tighten nut (2) to 16 to 20 pound-feet torque.

END OF TASK



TA 084792

g. Test.

FRAME 1

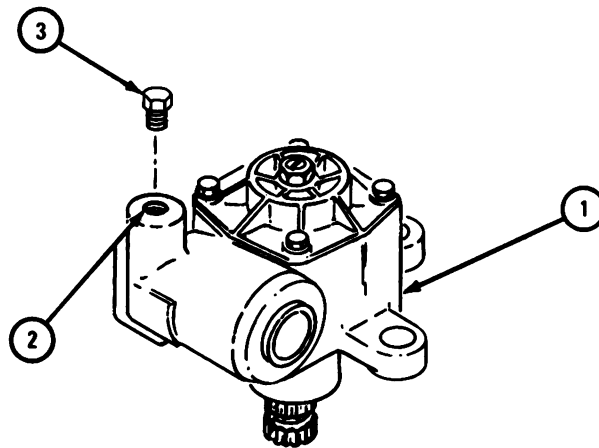
1. Put ten psi of air pressure with hand pump to steering gear box (1) through plug hole (2) for five minutes. If pressure drops, check all gaskets and tighten all screws again.
2. Put in plug (3).

NOTE

Follow-on Maintenance Action Required:

1. Replace carrier steering gear box. Refer to TM 9-2320-242-20.
2. Fill steering gear box. Refer to LO 9-2320-242-12.

END OF TASK



TA 084793

CHAPTER 14

FRAME AND TOWING ATTACHMENTS GROUP MAINTENANCE

Section I. SCOPE

14-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for the tractor-carrier coupling assembly for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

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

Section II. TRACTOR-CARRIER COUPLING ASSEMBLY

14-3. UNCOUPLING AND COUPLING OF TRACTOR AND CARRIER.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: Two

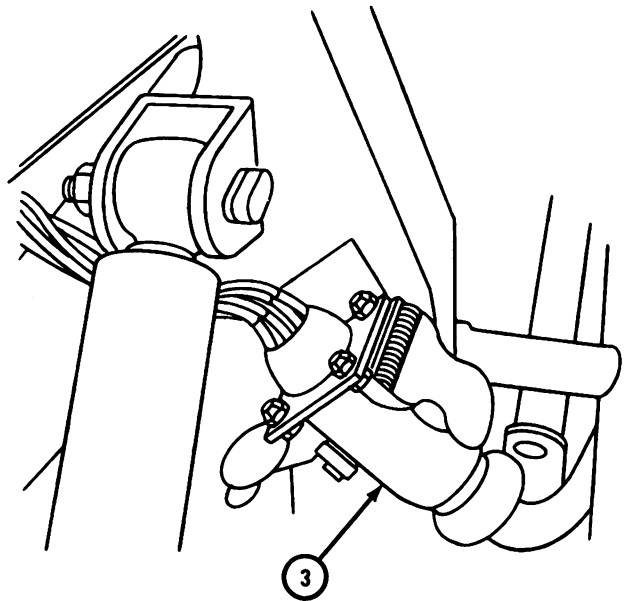
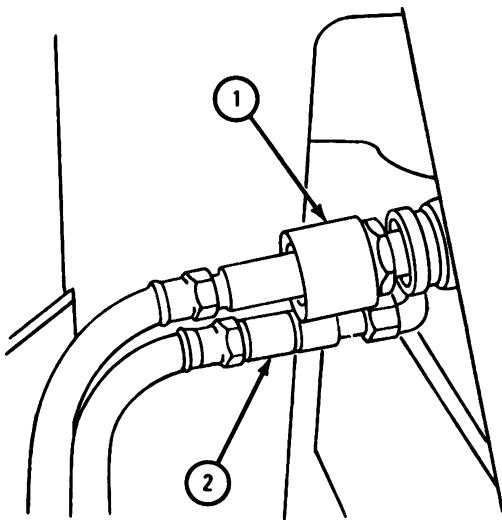
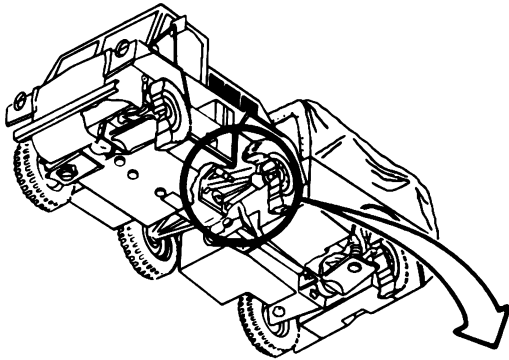
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Uncoupling.

FRAME 1

1. Take apart hydraulic quick disconnect (1) and air quick disconnect (2) lines.
2. Take apart electrical quick disconnect (3) plug.

GO TO FRAME 2

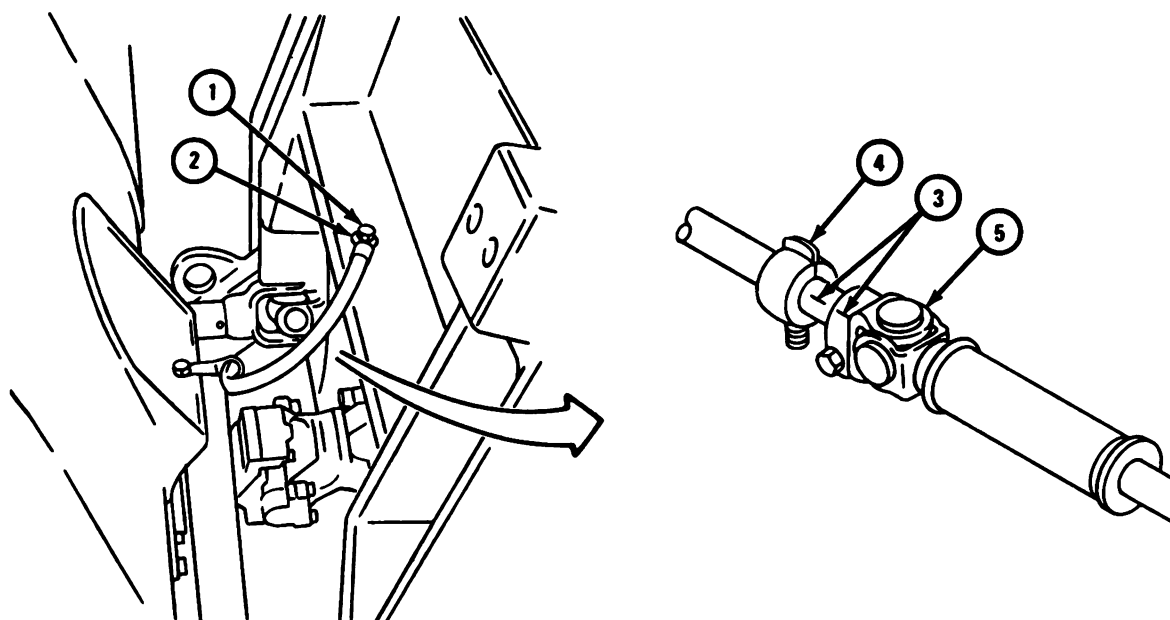


TA 105155

FRAME 2

1. Take off screw and lockwasher (1), and take off end of ground strap (2).
2. Scribe mark (3) on center steering shaft (4) and carrier steering universal joint (5).

GO TO FRAME 3



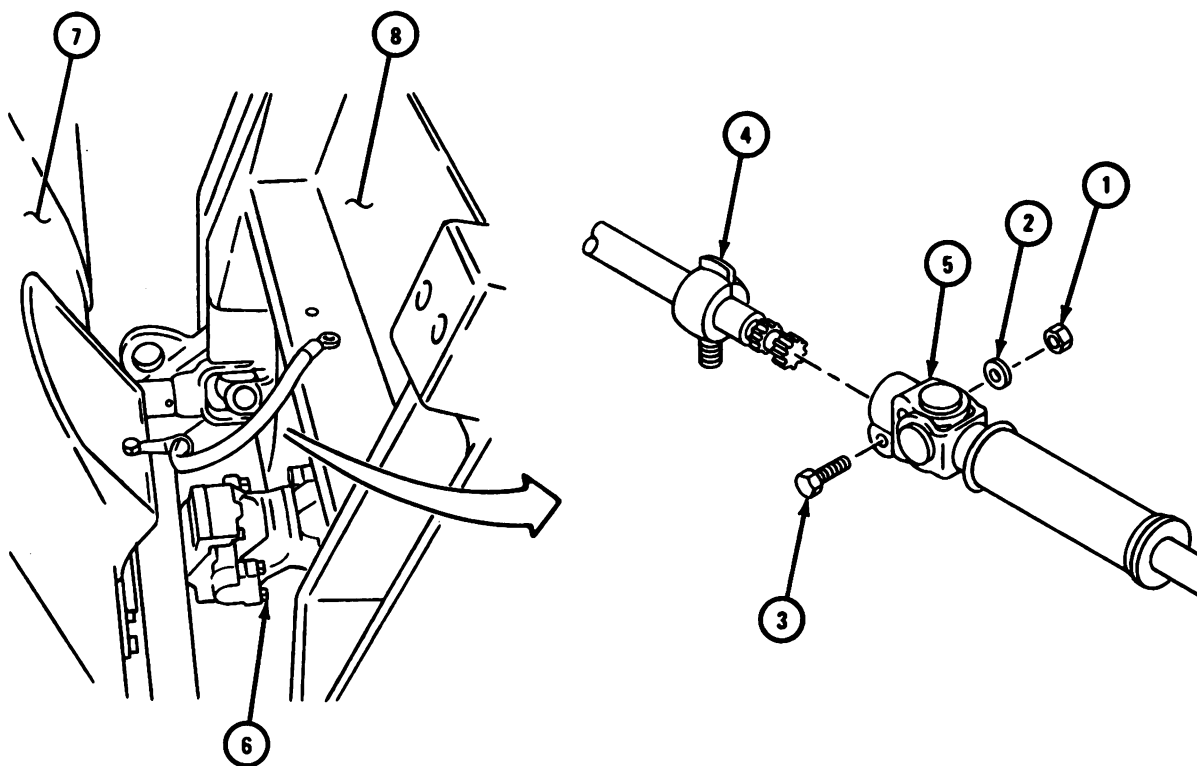
TA104829

FRAME 3

1. Take off nut (1), lockwasher (2), and screw (3).
2. Take apart center steering shaft (4) and carrier steering universal joints (5).
3. Take off four screws and lockwasher (6).
4. Push tractor (7) away from carrier (8).

Soldiers
A and B

GO TO FRAME 4

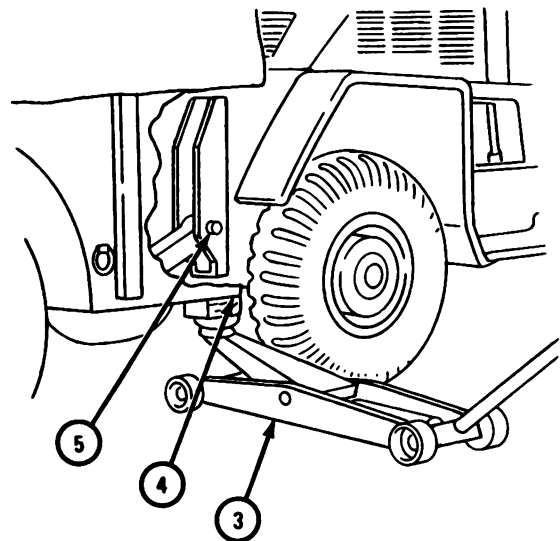
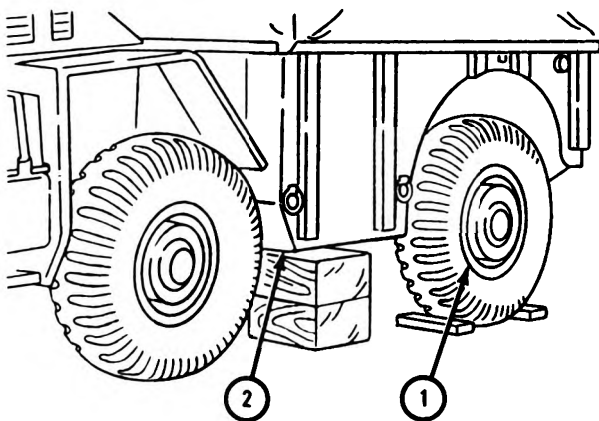


TA 104830

FRAME 4

1. Block carrier wheels (1) and one front corner (2) of carrier.
2. Place jack (3) in other front corner (4) of carrier.
3. Raise jack (3) until tension is taken off hitch pins (5).

GO TO FRAME 5



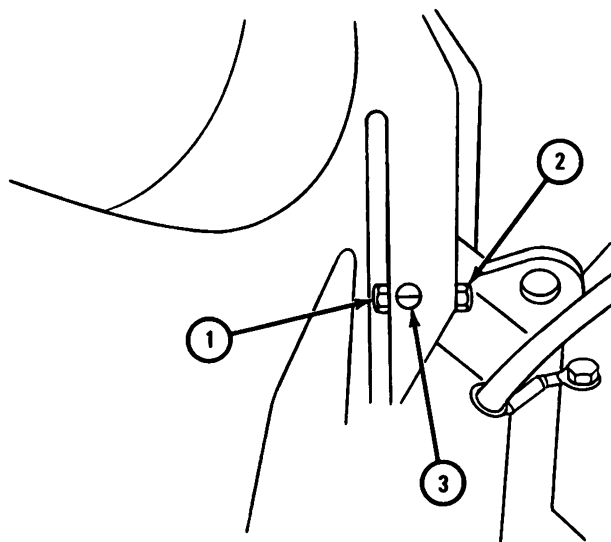
TA 104831

FRAME 5

1. Take off two nuts (1) and two screws (2).

2. Take out hitch pins (3).

END OF TASK.



TA104834

b. Coupling.

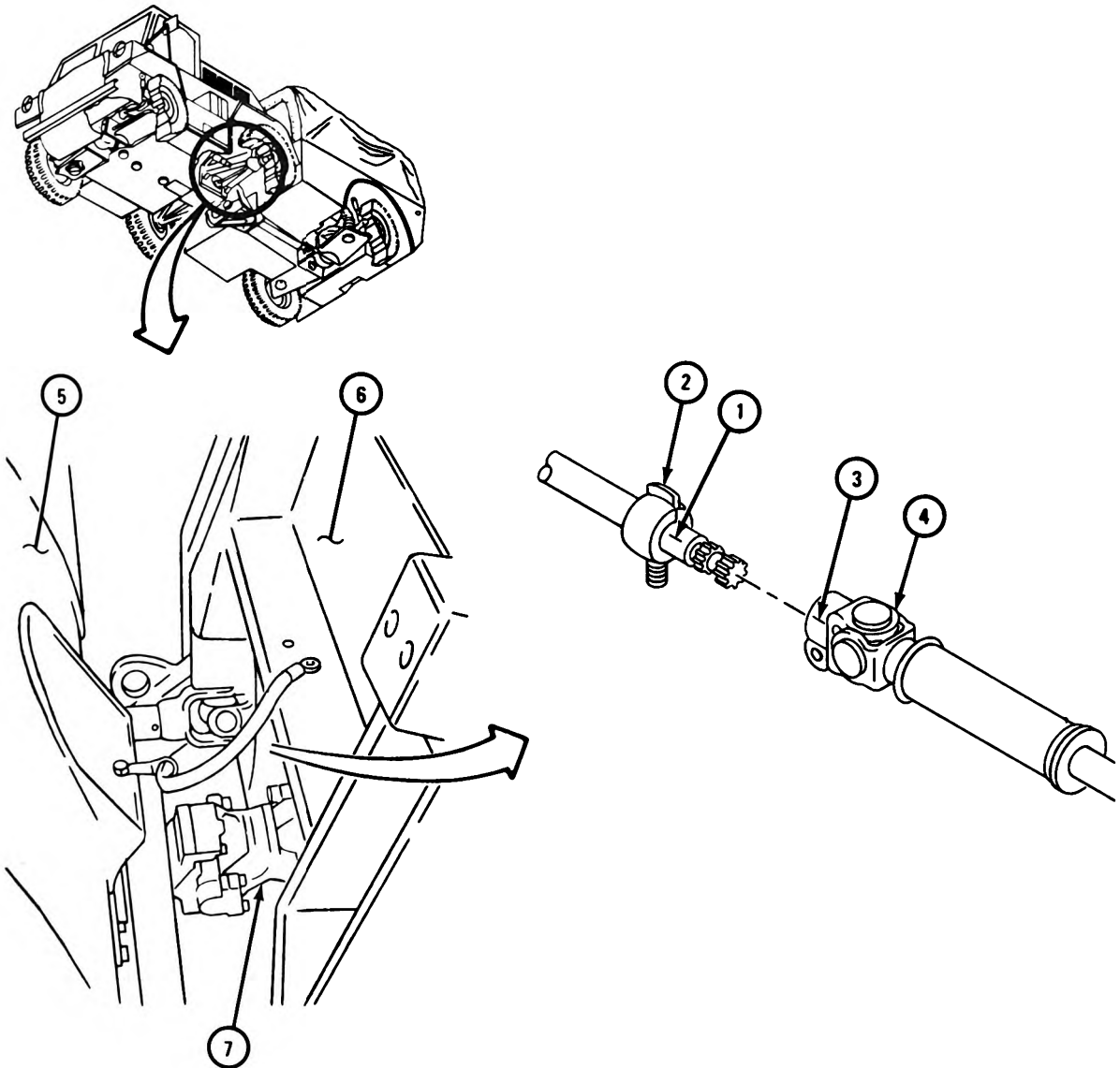
FRAME 1

1. Line up scribe mark (1) on center steering shaft (2) with scribe mark (3) on carrier steering universal joint (4).

Soldiers
A and B

2. Push tractor (5) toward carrier (6) until coupling (7) touch.

GO TO FRAME 2



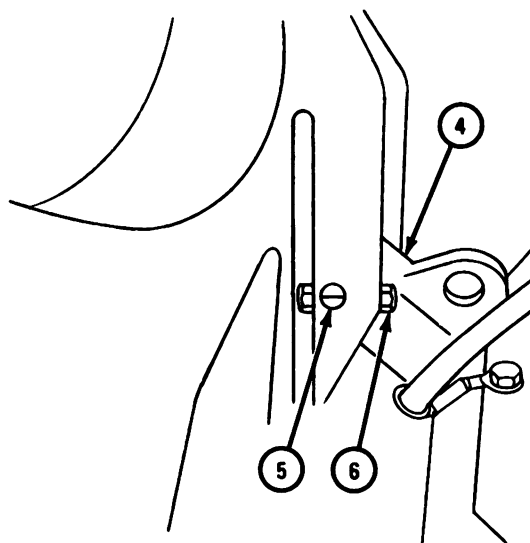
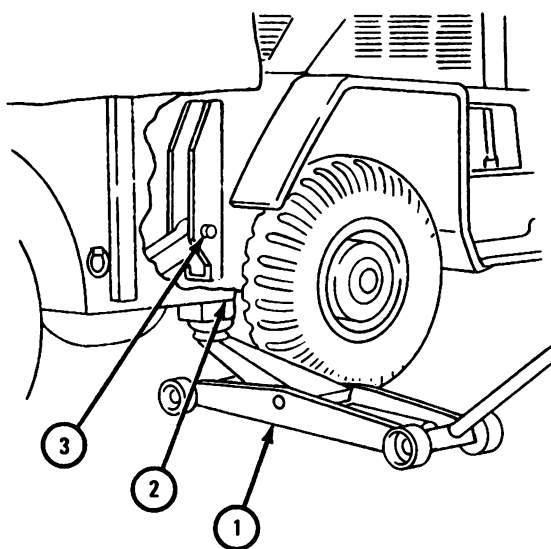
TA 104832

FRAME 2

1. Use jack (1) under carrier front corner (2) to line up holes in tractor hitch (3) with holes in carrier hitch yoke (4).

2. Put in hitch pins (5) with two screws and two nuts (6).

GO TO FRAME 3

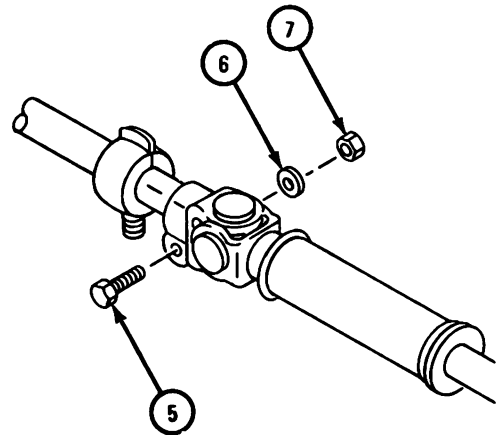
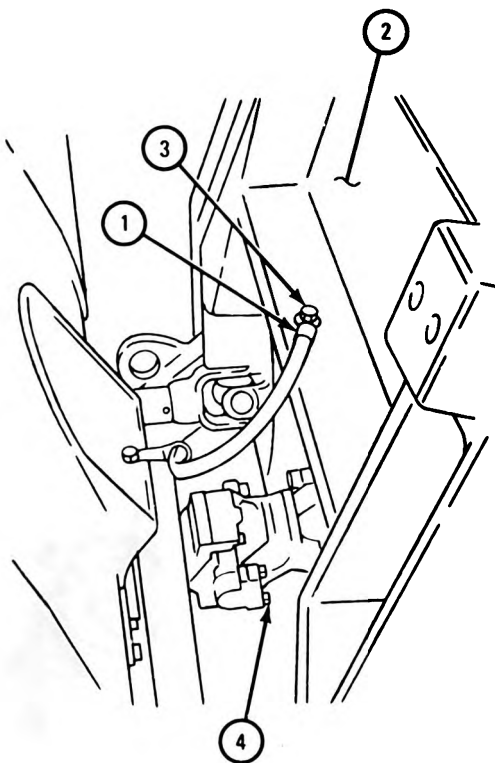


TA 104833

FRAME 3

1. Put ground strap (1) on carrier (2) and put in screw and lockwasher (3).
2. Put in four screws and lockwashers (4).
3. Put on screw (5), lockwasher (6), and nut (7).
4. Tighten nut (7) to 15 to 25 pound-feet.

GO TO FRAME 4

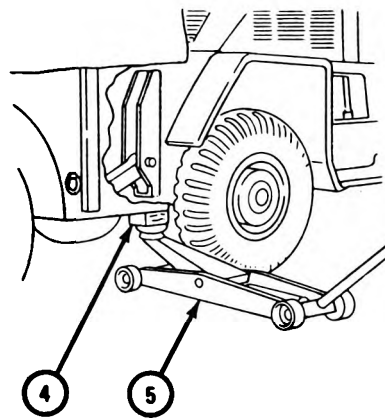
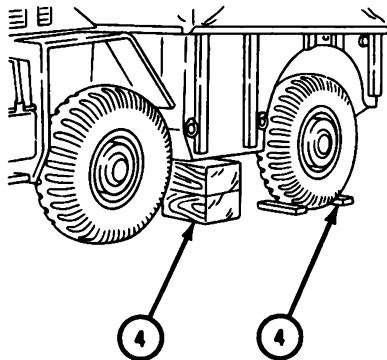
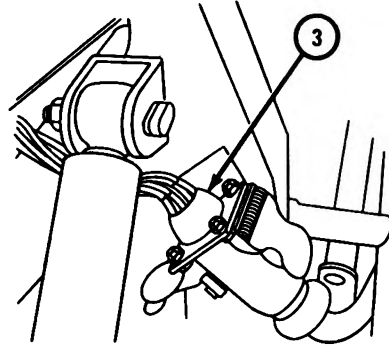
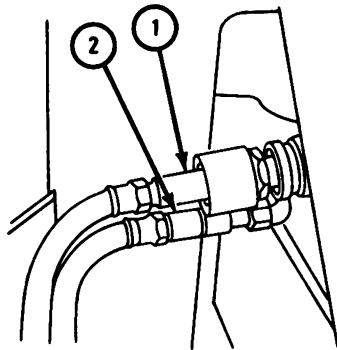


TA 104835

FRAME 4

1. Put on hydraulic quick disconnect (1), air quick disconnect lines (2), and electrical quick disconnect plug (3).
2. Take out blocks (4) and jack (5).

END OF TASK



TA 104836

14-4. ARTICULATION YOKE ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.**TOOLS:** No special tools required**SUPPLIES:** Artillery and automotive grease, type GAA, MIL-G-10924**PERSONNEL:** Two**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**a. Preliminary Procedures.**

(1) Uncouple carrier from tractor. Refer to para 14-3.

(2) Take propeller shaft out of articulation yoke assembly. Refer to TM 9-2320-242-20.

b. Removal.**FRAME 1**

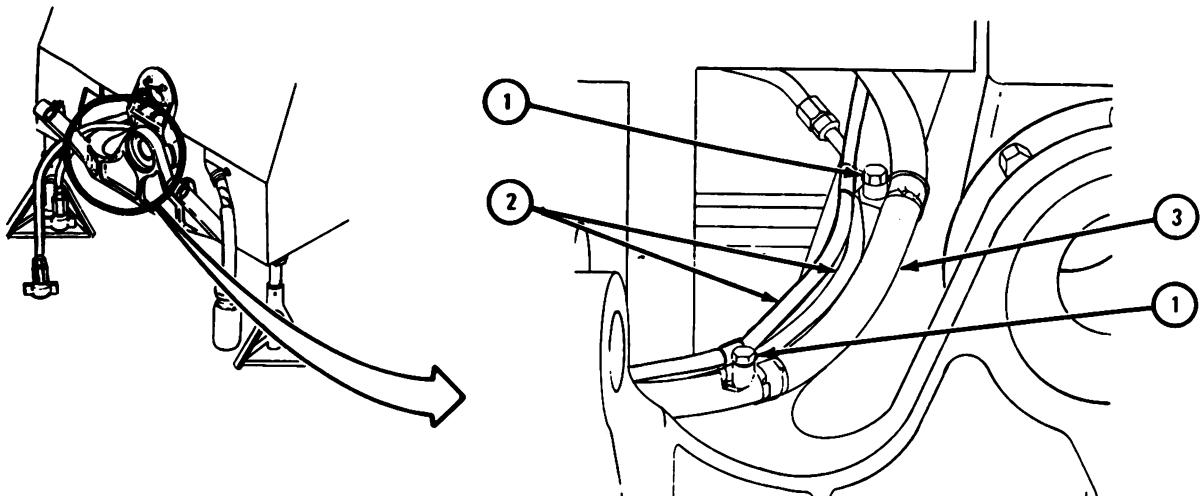
1. Take out two screws and spacers (1).

2. Tie lines (2) up out of the way.

NOTE

On truck M792, heater hose (3) will come off when clamps are taken off.

3. If working on truck M792, tie hose (3) up out of the way.

GO TO FRAME 2

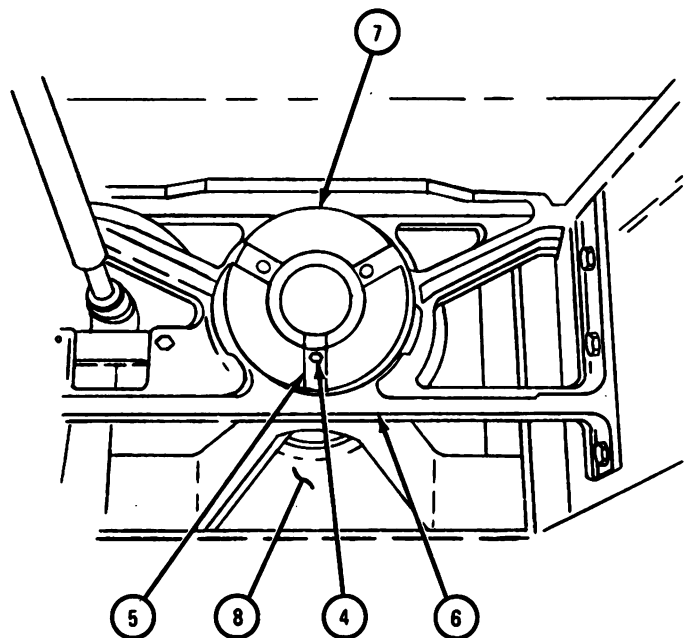
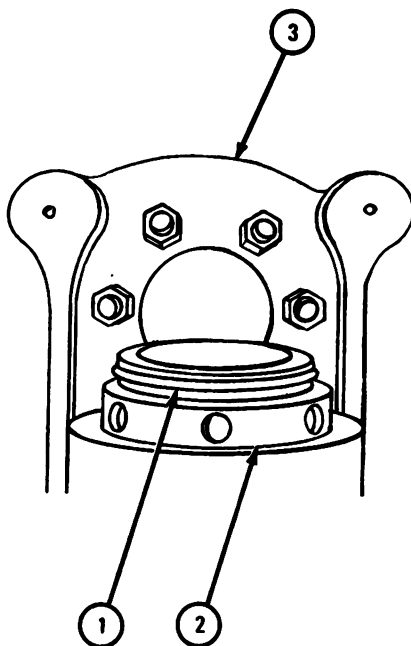
TA 084794

FRAME 2

1. Take off lockring (1) from bearing nut (2) at rear of front support (3).
2. Take off bearing nut (2).
3. Take off screw with lockwasher (4) and locking plate (5) at rear of rear support (6).
4. Take off bearing nut assembly (7).

Soldiers A and B 5. Using hydraulic jack, pull articulation yoke (8) out of front support (3) and rear support (6) and lower articulation yoke to ground.

GO TO FRAME 3

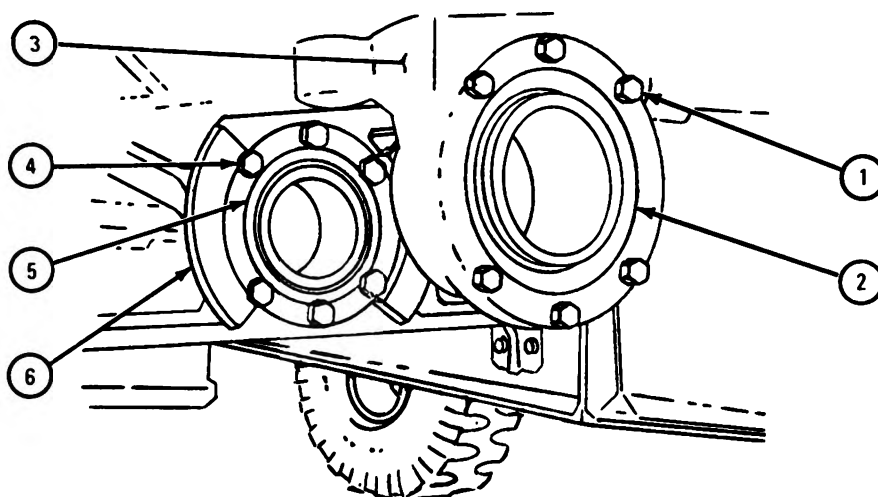


TA 084795

FRAME 3

1. Take out six screws and lockwashers (1) from front bearing (2).
2. Take front bearing (2) out of front support (3).
3. Take out six screws and lockwashers (4) from rear bearing (5).
4. Take rear bearing (5) out of rear support (6).

END OF TASK

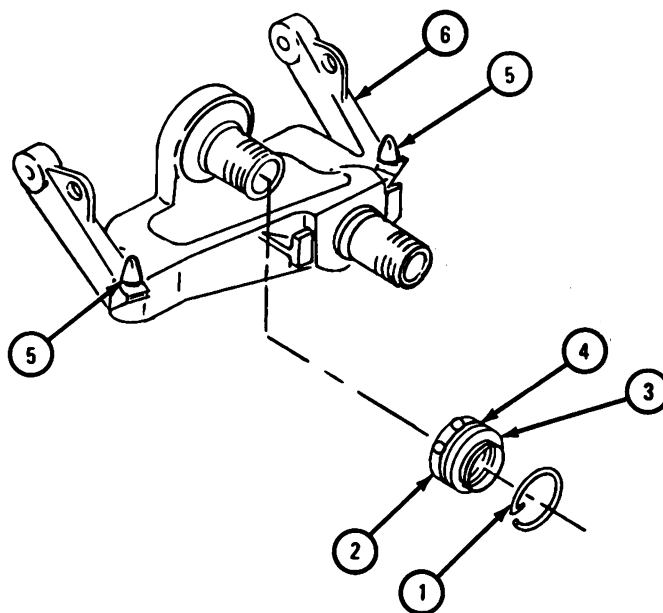


TA 084796

c. Disassembly.

FRAME 1

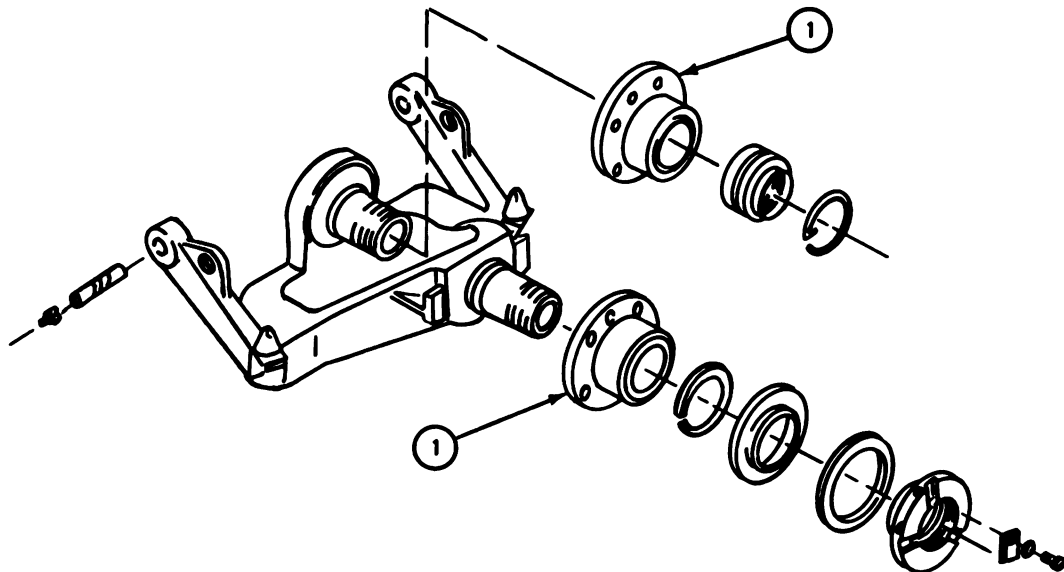
1. Take retaining ring (1) off rear bearing nut (2).
 2. Take off retainer (3) and gasket (4) from rear bearing nut (2).
 3. Unscrew two bumpers (5) from articulation yoke (6).
- END OF TASK



TA 084797

d. Cleaning.**FRAME 1**

1. Clean bearing assemblies (1). Refer to TM 9-214.
 2. Clean all other parts. Refer to Part 1, para 1-3.
- END OF TASK**



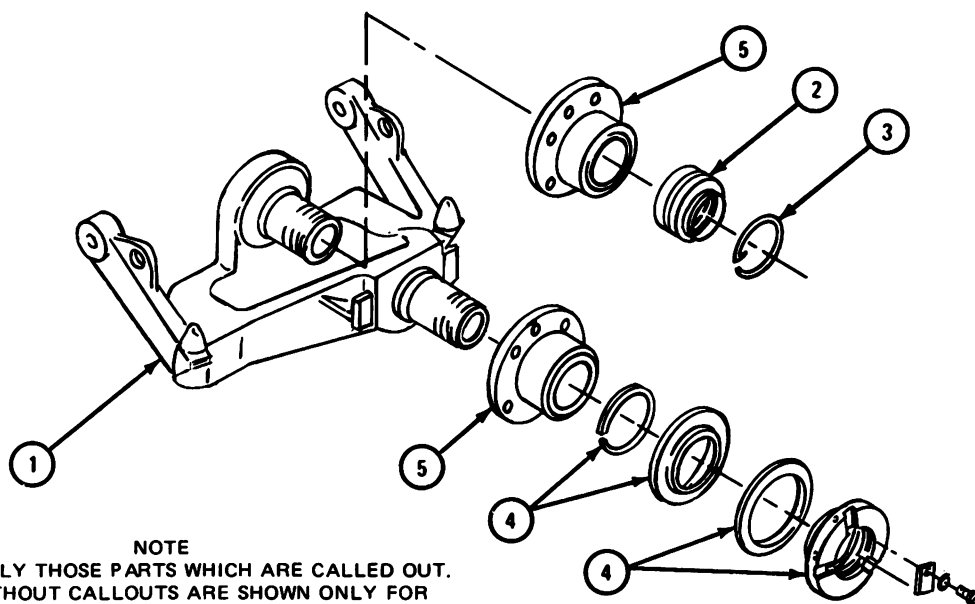
TA 084798

e. Inspection and Repair.

FRAME 1

1. Check that articulation yoke (1), bearing nut (2), retainer (3), bearing nut assembly (4), and two bearing assemblies (5) are not cracked or damaged in any other way. Repair by welding. Refer to TM 9-237. If more repair is needed, get new parts.
2. Check that all other parts are not damaged. If parts are damaged, get new ones in their place.

END OF TASK



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

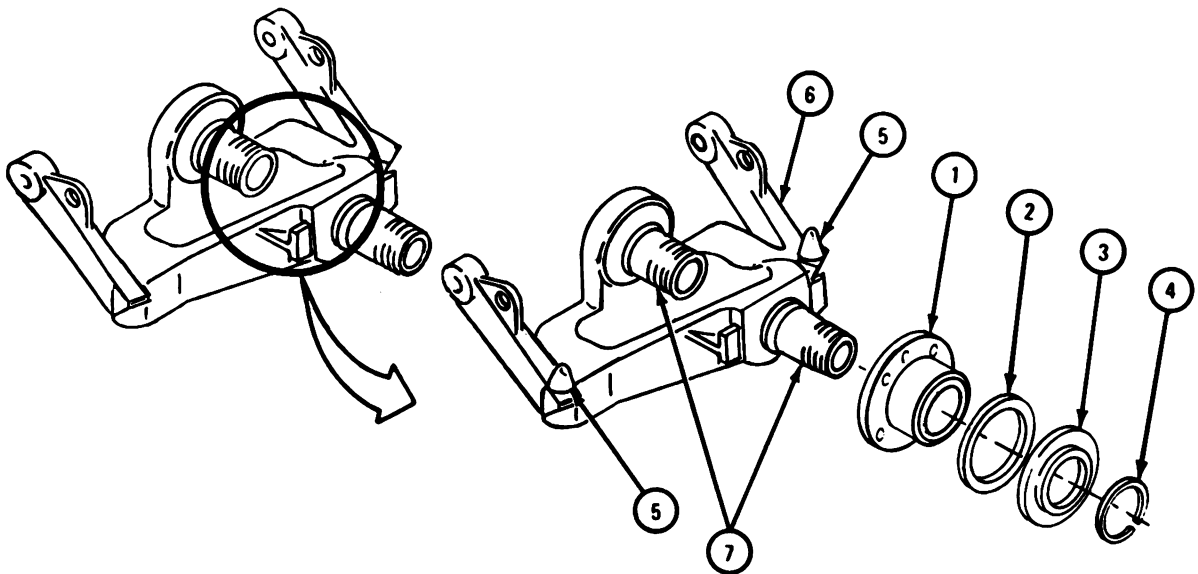
TA 084799

f. Assembly.

FRAME 1

1. With bearing nut (1) flat side down, put on gasket (2), retainer (3), and retaining ring (4).
2. Screw two bumpers (5) into articulation yoke (6).
3. Put a light coat of grease on articulation yoke threads (7).

GO TO FRAME 2

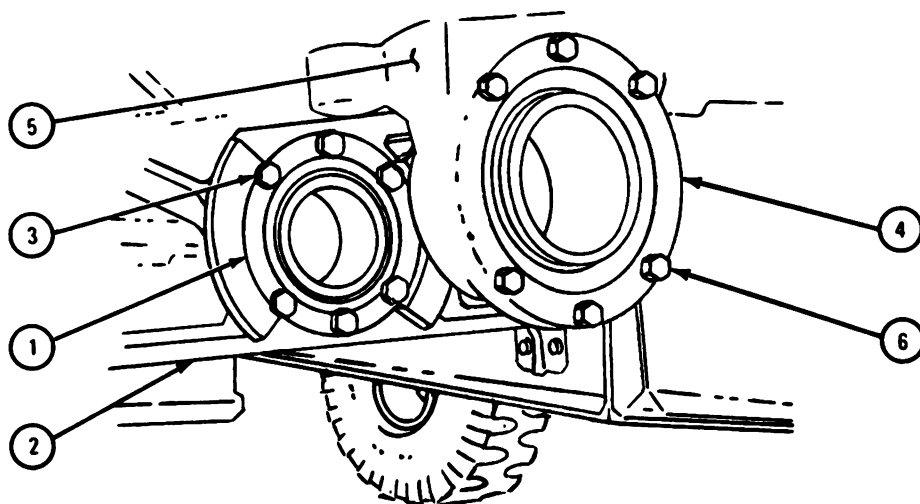


TA 084800

FRAME 2

1. Put bearing (1) in rear support (2). Aline holes in bearing and rear support and put in six screws with lockwashers (3).
2. Put bearing (4) in front support (5). Aline holes in bearing and front support and put in six screws with lockwashers (6).
3. Put a light film of grease on inside of bearings (1 and 4).

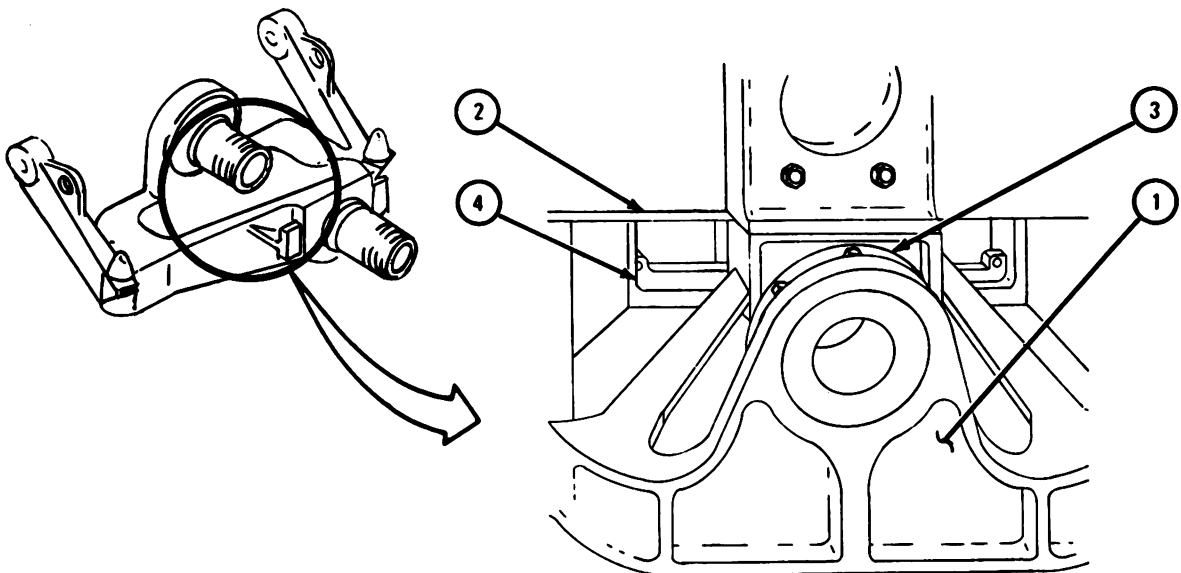
END OF TASK



TA 084801

g. Replacement.**FRAME 1**

1. Using hydraulic jack, put articulation yoke assembly (1) in front of carrier (2).
 - Soldiers A and B 2. Aline articulation yoke assembly (1) with front support bearing (3) and rear support bearing (4).
 3. Slide articulation yoke assembly (1) back until it is fully seated.
- GO TO FRAME 2**



TA 084802

FRAME 2

NOTE

Be sure articulation yoke assembly is level with carrier hull.

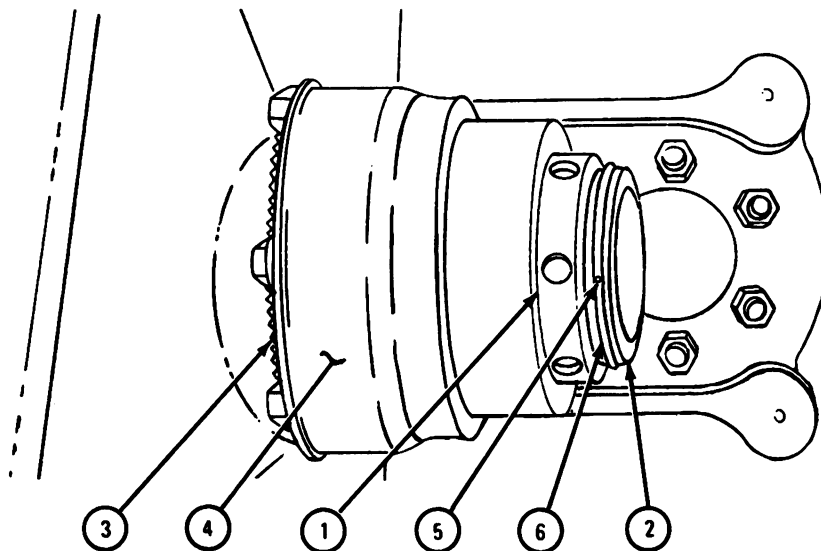
1. Screw bearing nut (1) onto rear of yoke (2) and tighten bearing nut until serrations (3) on yoke and front bearing (4) are fully meshed.
2. Tighten bearing nut (1) to nearest pilot hole (5) on bottom of bearing nut.

NOTE

If needed, drill a 3/32-inch hole in yoke (2) where lockring (6) fits into groove.

3. Put lockring (6) with tang into hole in yoke (2).

GO TO FRAME 3

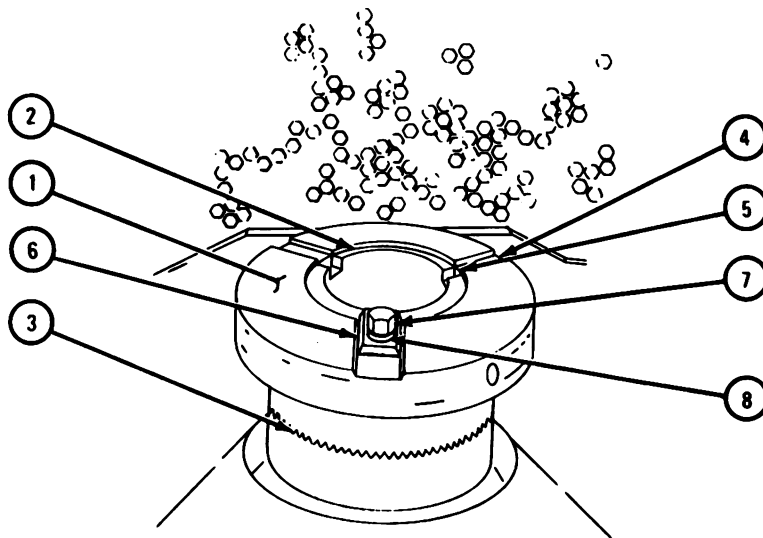


TA 084803

FRAME 3

1. Screw rear bearing nut (1) onto yoke (2) and tighten bearing nut until serrations (3) on yoke and rear bearing nut are fully meshed.
2. Tighten rear bearing nut (1) until one of the slots (4) on rear bearing nut aligns with one of the slots (5) in yoke (2).
3. Put on lockplate (6) and put in screw (7) with lockwasher (8).

GO TO FRAME 4



TA 084804

FRAME 4

NOTE

If working on truck M561, go to step 2.

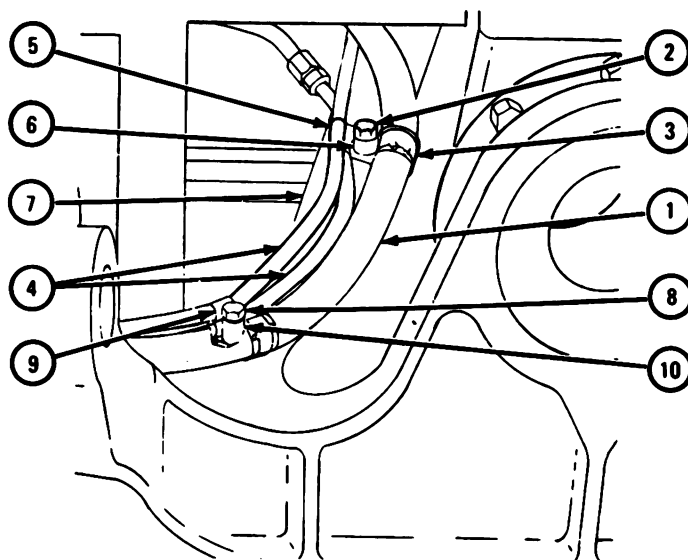
1. Untie hose (1) and put screw (2) through hose clamp (3).
2. Untie lines (4).
3. Put screw (2) through clamp (5) and spacer (6) and into yoke (7).
4. Put screw (8) through clamp (9) and spacer (10) and into yoke (7).

NOTE

Follow-on Maintenance Action Required:

1. Put propeller shaft into articulation yoke assembly. Refer to TM 9-2320-242-20.
2. Couple tractor and carrier. Refer to para 14-3.

END OF TASK



TA 088193

CHAPTER 15

BODY, CAB, AND HULL GROUP MAINTENANCE

Section I. SCOPE

15-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for tractor body components, tractor seats, and carrier body components for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

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

Section II. TRACTOR BODY COMPONENTS

15-3. HEADLIGHT BRUSH GUARDS REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

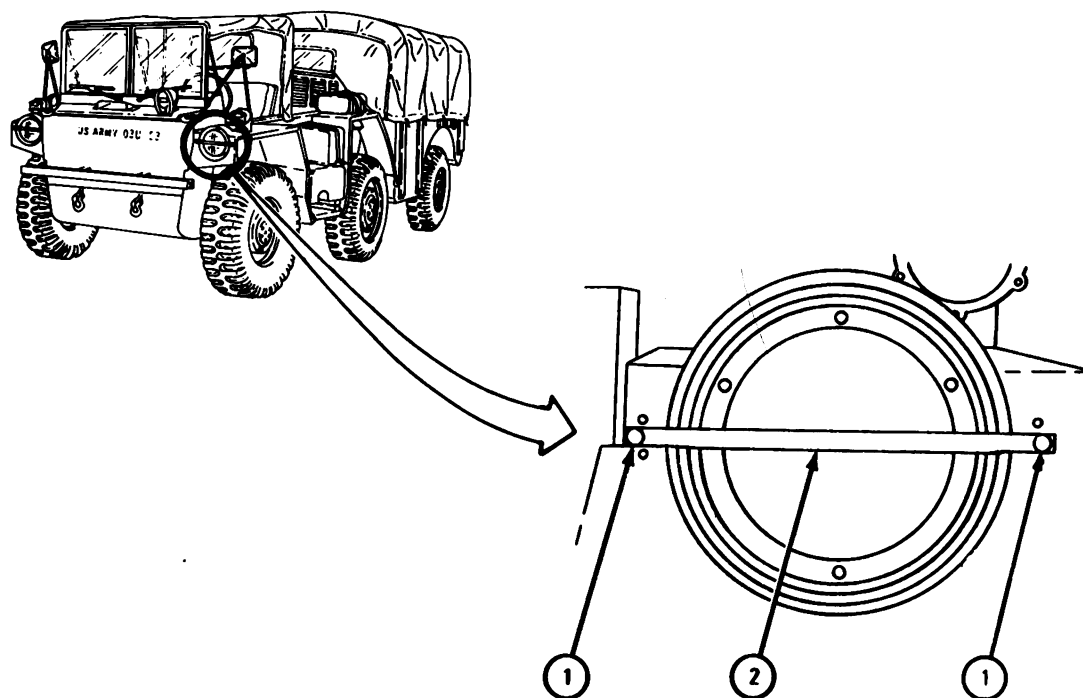
NOTE

This task is the same for both headlight brush guards. This task is for left side headlight brush guard.

a. Removal.

FRAME 1

1. Take out two screws (1).
 2. Take off brush guard (2).
- END OF TASK



TA 084828

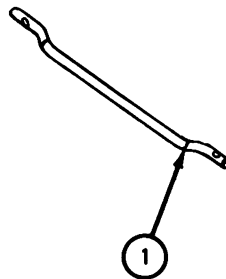
b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that brush guard (1) is not bent, dented, cracked or torn.
2. Straighten any bends or dents in brush guard (1). Refer to FM 43-2.
3. Weld any cracks or tears in brush guard (1). Refer to TM 9-237.

END OF TASK



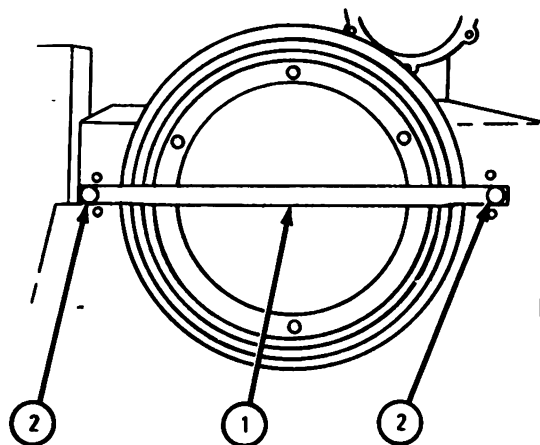
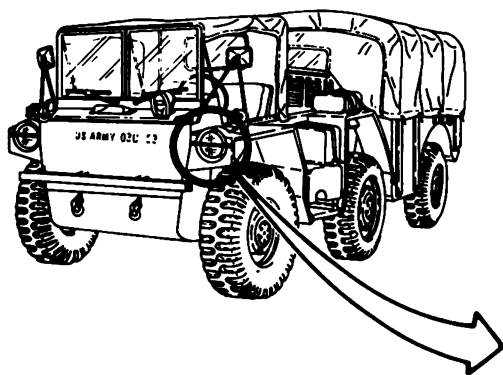
TA 101347

d. Replacement.

FRAME 1

1. Put brush guard (1) in place.
2. Put in two screws (2).

END OF TASK



TA 101348

15-4. BLACKOUT HEADLIGHT BRUSH GUARD REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: Two

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

a. Preliminary Procedures.

(1) Disconnect battery ground. Refer to TM 9-2320-242-20.

(2) Remove blackout headlight. Refer to TM 9-2320-242-20.

b. Removal.

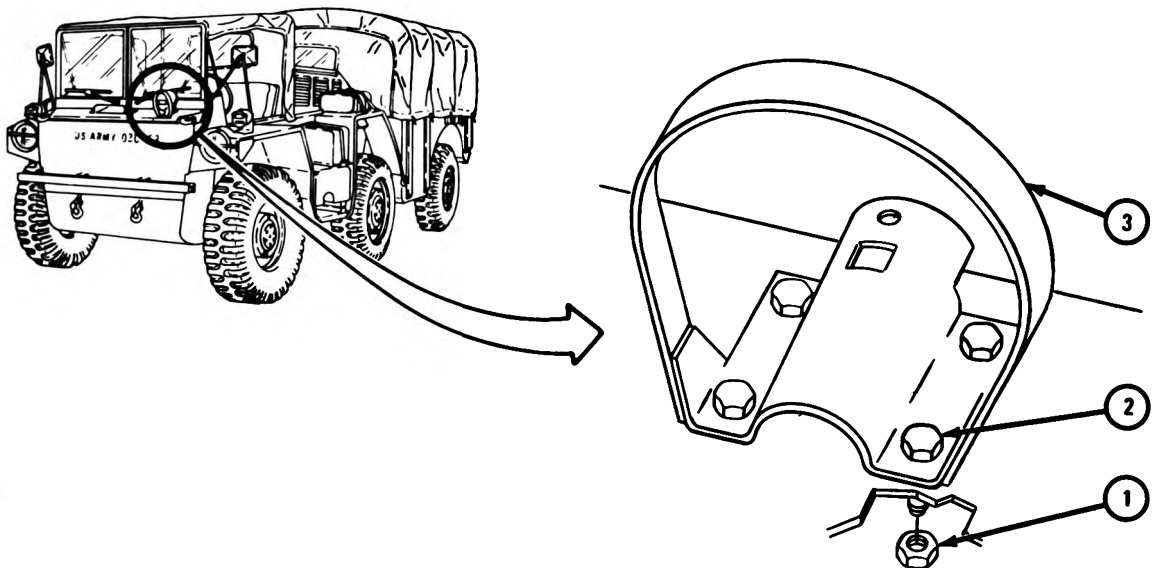
FRAME 1

Soldier A 1. Working under instrument panel in cab of truck, hold four nuts (1).

Soldier B 2. Take out four screws (2). Take off brush guard (3).

Soldier A 3. Take out four nuts (1).

END OF TASK



TA 084830

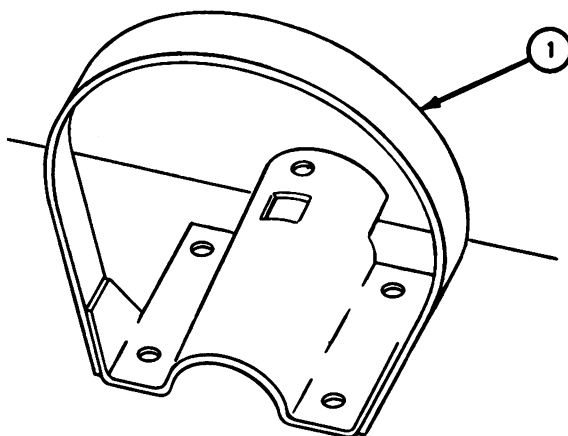
c. Cleaning. There are no special cleaning procedures required. Refer to cleaning procedures given in para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that brush guard (1) is not dented, bent, cracked or torn.
2. Straighten any bends or dents in brush guard (1). Refer to FM 43-2.
3. Weld any cracks or tears in brush guard (1). Refer to TM 9-237.

END OF TASK



TA 101351

e. Replacement.

FRAME 1

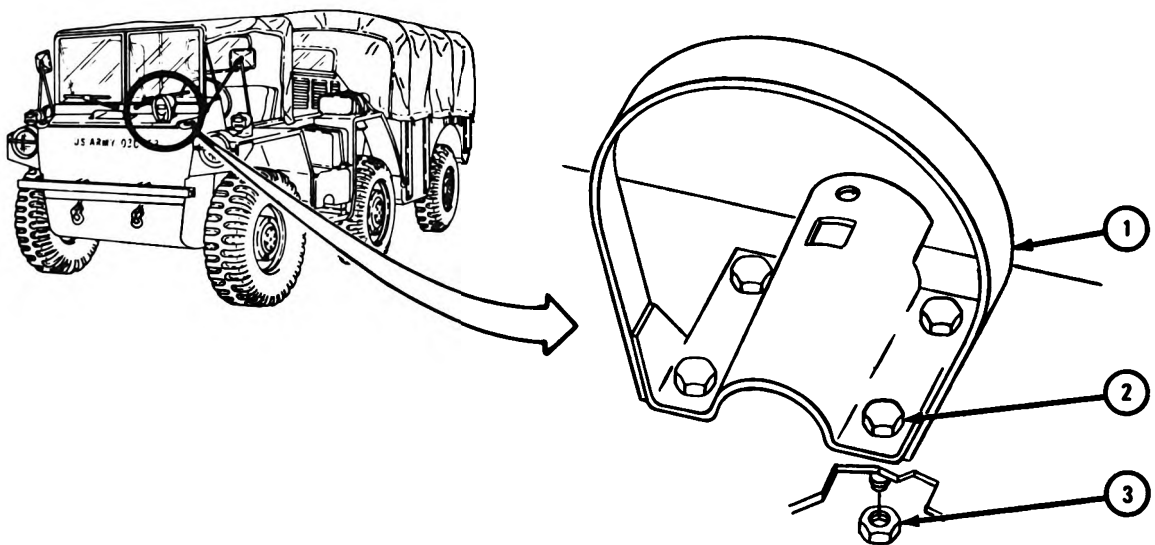
Soldier A 1. Put brush guard (1) in place. Put in four screws (2).

Soldier B 2. Put on four locknuts (3) and hold them.

Soldier A 3. Tighten four screws (2).

NOTE**Follow-on Maintenance Action Required:**

1. Replace blackout headlight. Refer to TM 9-2320-242-20.
2. Reconnect battery ground. Refer to TM 9-2320-242-20.

END OF TASK

TA 101352

15-5. HORN BRUSH GUARD REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

a. Preliminary Procedures.

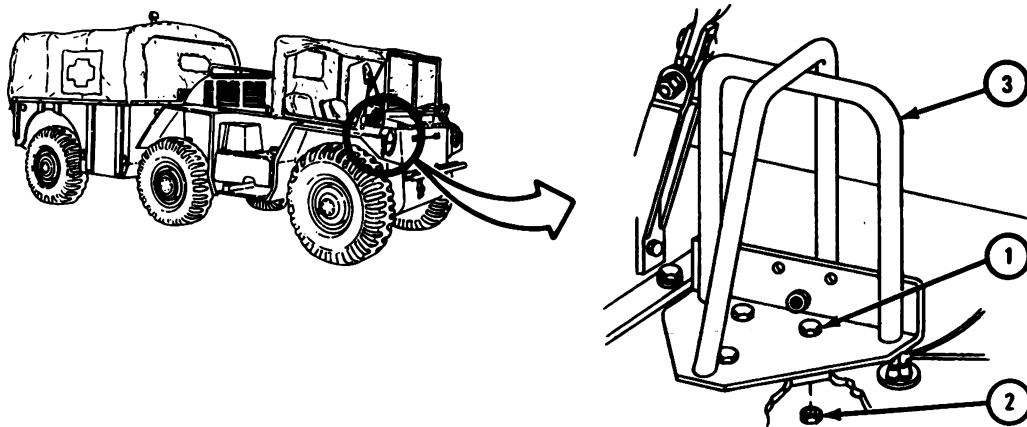
- (1) Disconnect battery ground. Refer to TM 9-2320-242-20.
- (2) Remove horn. Refer to TM 9-2320-242-20.
- (3) Remove inner fender access panel. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out three screws (1) and nuts (2).
2. Take off horn brush guard (3).

END OF TASK



TA 084829

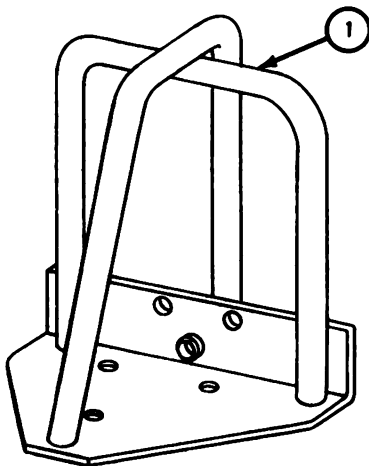
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that brush guard (1) is not bent, dented, cracked or torn.
2. Straighten any dents or bends in brush guard (1). Refer to FM 43-2.
3. Weld any cracks or tears in brush guard (1). Refer to TM 9-237.

END OF TASK



TA 101349

e. Replacement.

FRAME 1

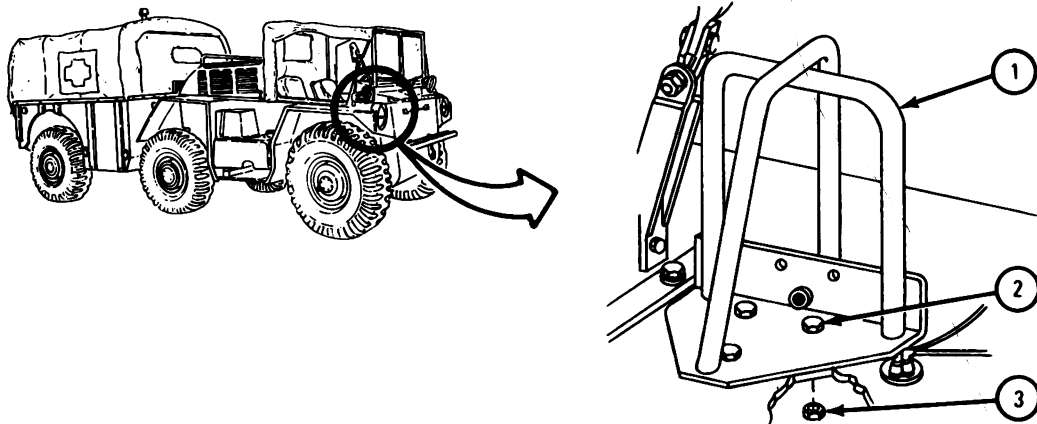
1. Put brush guard (1) in place.
2. Put in three screws (2) and nuts (3).

NOTE

Follow-on Maintenance Action Required:

1. Replace inner fender panel access plate. Refer to TM 9-2320-242-20.
2. Replace horn. Refer to TM 9-2320-242-20.
3. Reconnect battery ground. Refer to TM 9-2320-242-20.

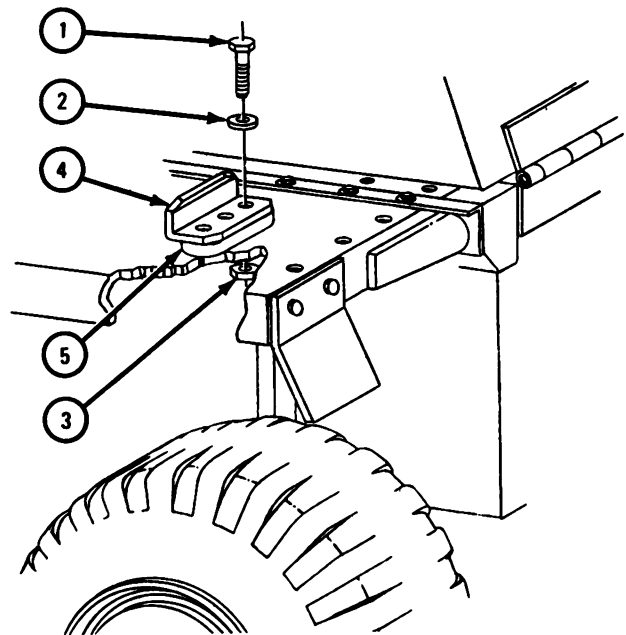
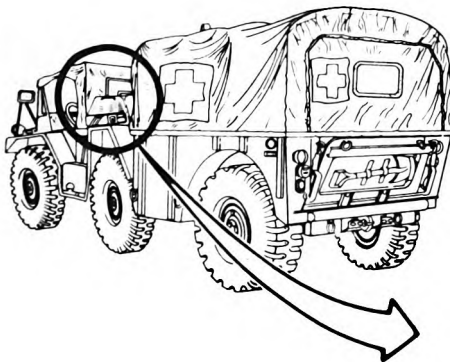
END OF TASK



TA 101350

15-6. TRACTOR LIQUID CONTAINER HOLDDOWN BRACKET REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**a. Removal.****FRAME 1**

1. Take out three screws (1) with flat washers (2) and nuts (3).
2. Take off bracket (4) and spacer (5).

END OF TASK

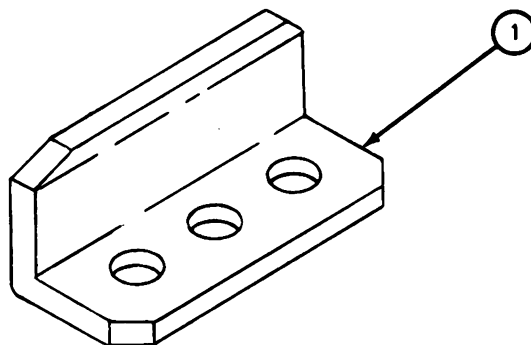
TA 089250

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 liquid container holddown bracket (1) is not bent, cracked or broken.
 2. Straighten any bends in bracket (1). Refer to FM 43-2.
 3. Weld any cracks or breaks in bracket (1). Refer to TM 9-237.
- END OF TASK



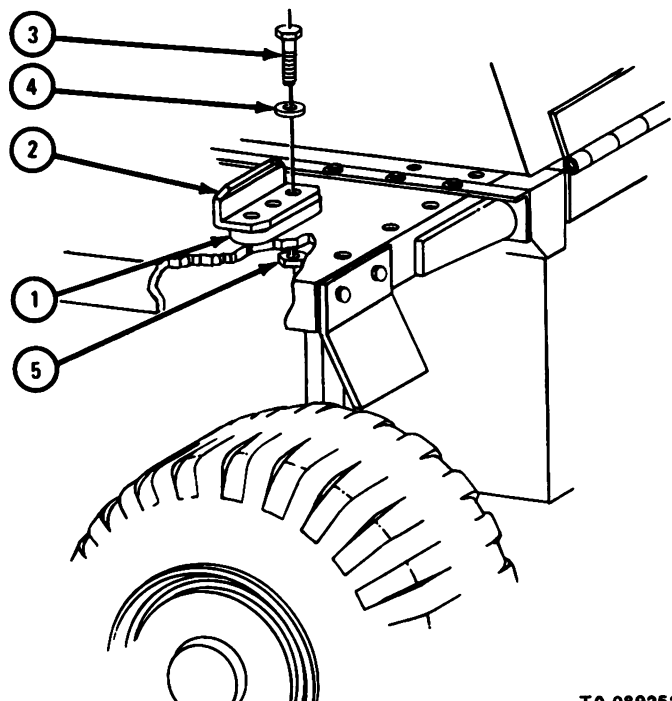
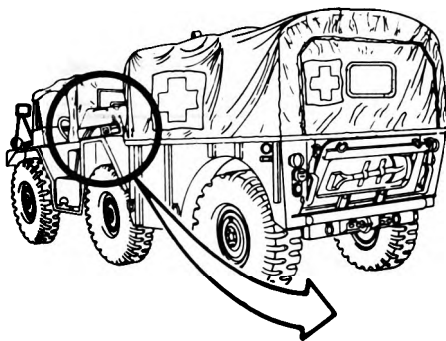
TA 089251

d. Replacement.

FRAME 1

1. Put spacer (1) and liquid holddown bracket (2) in place and aline holes.
2. Put in three screws (3) with flat washers (4).
3. Put on three nuts (5).

END OF TASK



TA 089252

15-7. STOWAGE STRAP REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Rivets, MS16535-219 (32)

PERSONNEL: One

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

a. Preliminary Procedures.

(1) Remove batteries. Refer to TM 9-2320-242-20.

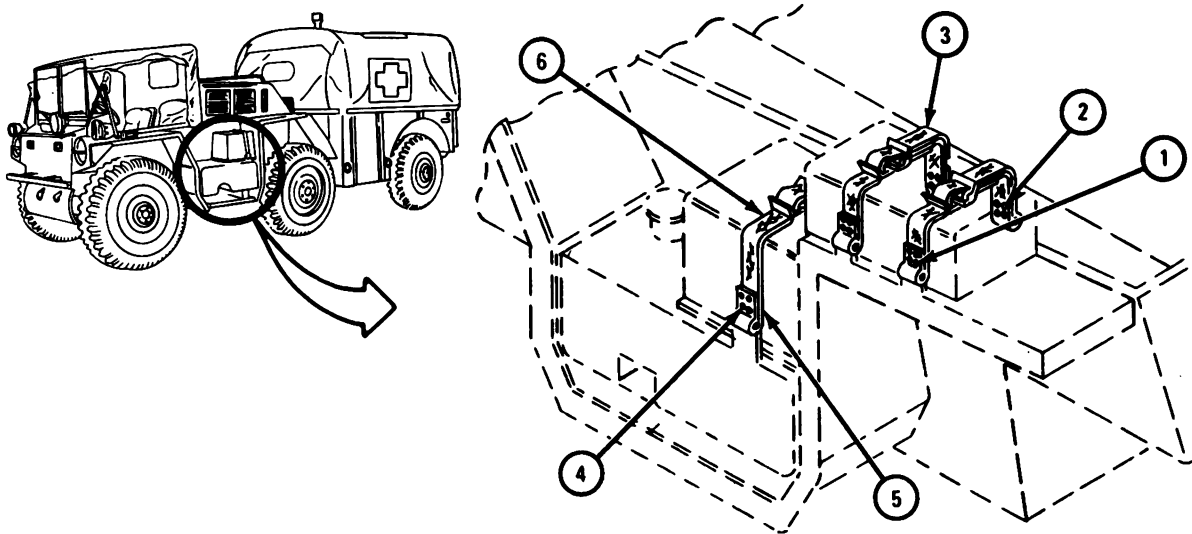
(2) Remove water cans. Refer to TM 9-2320-242-10.

b. Removal.

FRAME 1

1. Take out 16 rivets (1) with washers (2). Take off four straps (3).
2. Take out eight rivets (4) with washers (5). Take off two straps (6).
3. Do step 2 again for right battery box straps.

END OF TASK



TA 105119

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 straps have no tears or frays. Replace straps if tears or frays are found.

d. Replacement.

FRAME 1

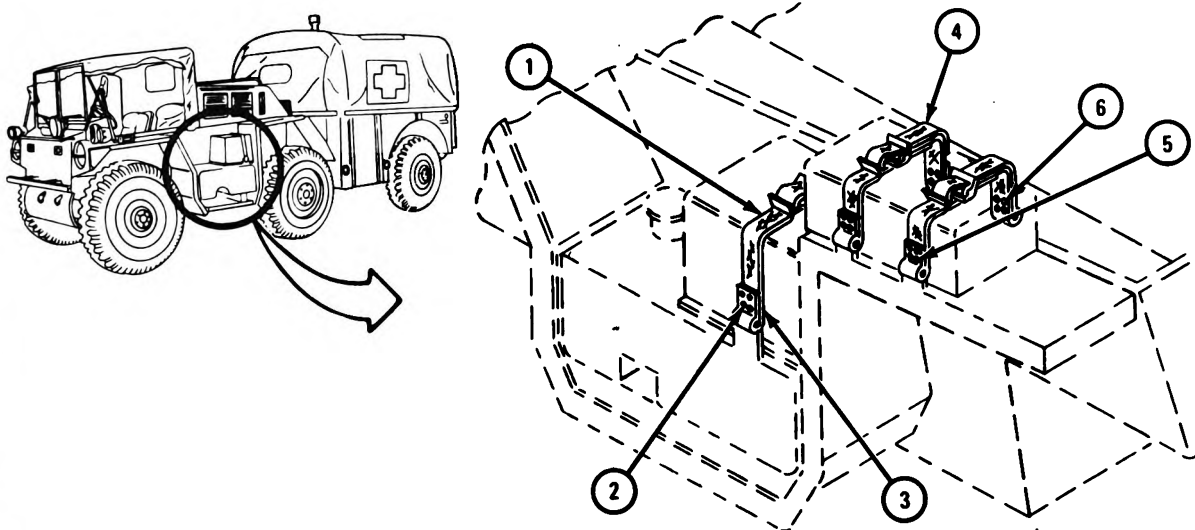
1. Put on two straps (1). Put in eight rivets (2) with washers (3).
2. Put on four straps (4). Put in 16 rivets (5) with washers (6).
3. Do step 1 again for other battery box straps.

NOTE

Follow-on Maintenance Action Required:

1. Replace water cans. Refer to TM 9-2320-242-10.
2. Replace batteries. Refer to TM 9-2320-242-20.

END OF TASK



TA 105120

15-8. RIGHT FENDER REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove right fender. Refer to TM 9-2320-242-20.
- 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

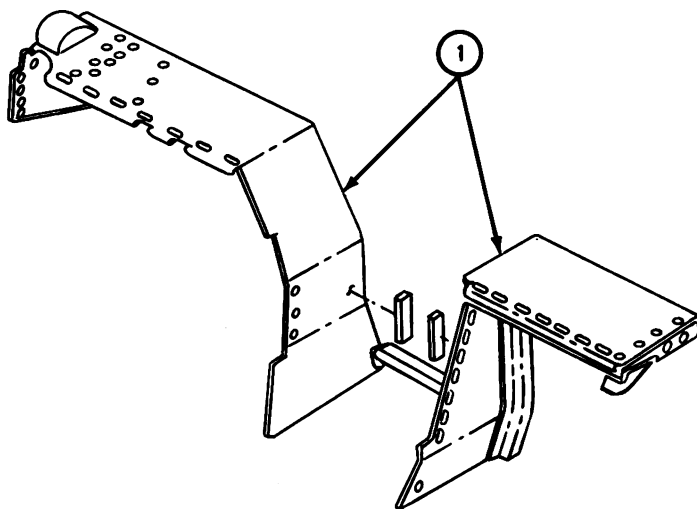
1. Check that fender (1) is not dented, bent, cracked or torn.
2. Straighten any dents or bends in fender (1). Refer to FM 43-2.
3. Weld any cracks or tears in fender (1). Refer to TM 9-237.

NOTE

Follow-on Maintenance Action Required:

Replace right fender. Refer to TM 9-2320-242-20.

END OF TASK



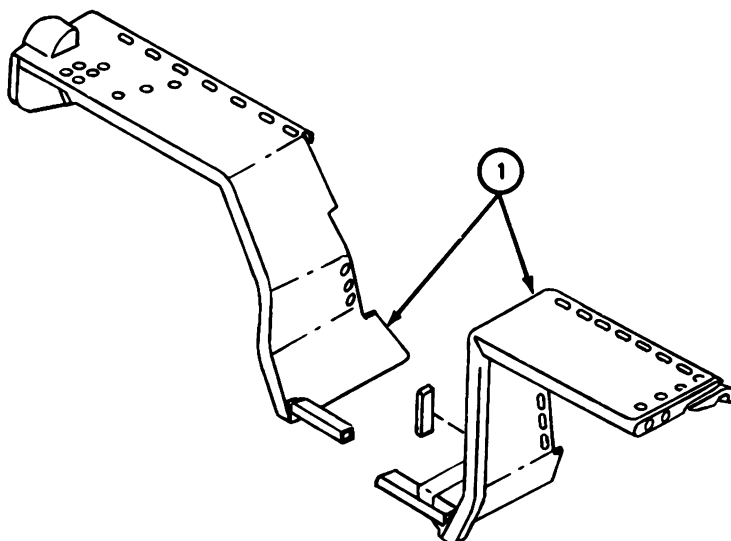
TA 084822

15-9. LEFT FENDER REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove left fender. Refer to TM 9-2320-242-20.
- 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 fender (1) is not dented, bent, cracked or torn.
2. Straighten any dents or bends in fender (1). Refer to FM 43-2.
3. Weld any cracks or tears in fender (1). Refer to TM 9-237.

NOTE**Follow-on Maintenance Action Required:****Replace left fender. Refer to TM 9-2320-242-20.****END OF TASK**

TA 084823

15-10. FENDER BRACES REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

a. Removal.

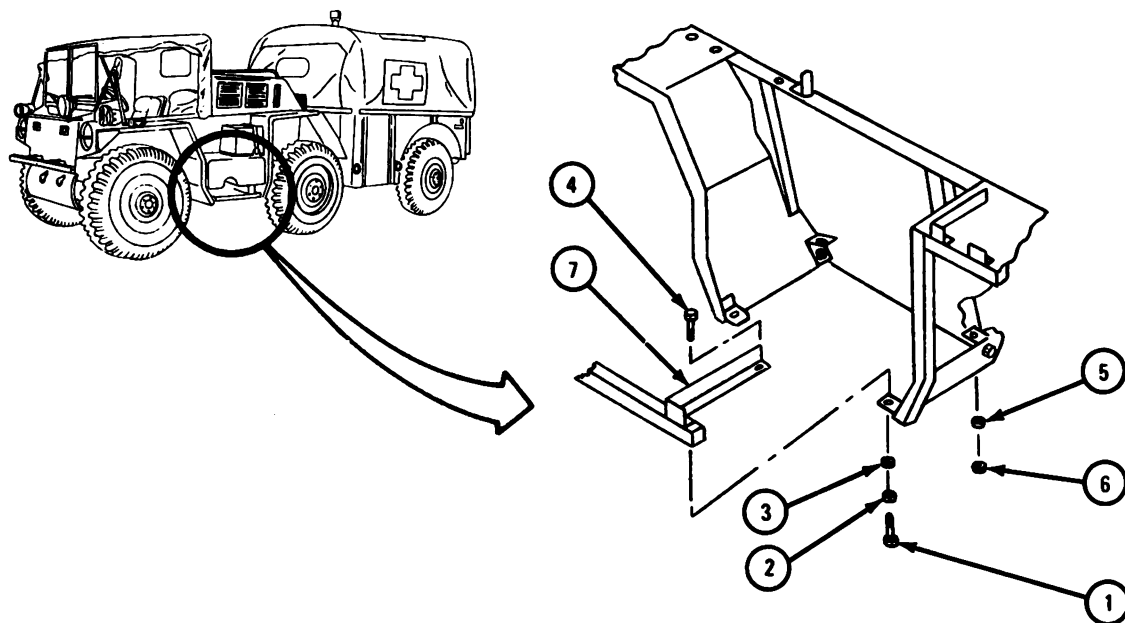
NOTE

Removal is the same for right and left braces.
Left brace is shown.

FRAME 1

1. Take out two capscrews (1) with lockwashers (2) and flat washers (3).
2. Take out capscrew (4) with lockwasher (5) and nut (6).
3. Take out brace (7).
4. Do steps 1 through 3 for right fender brace.

END OF TASK



TA 105121

b. Cleaning, Inspection, and Repair.

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

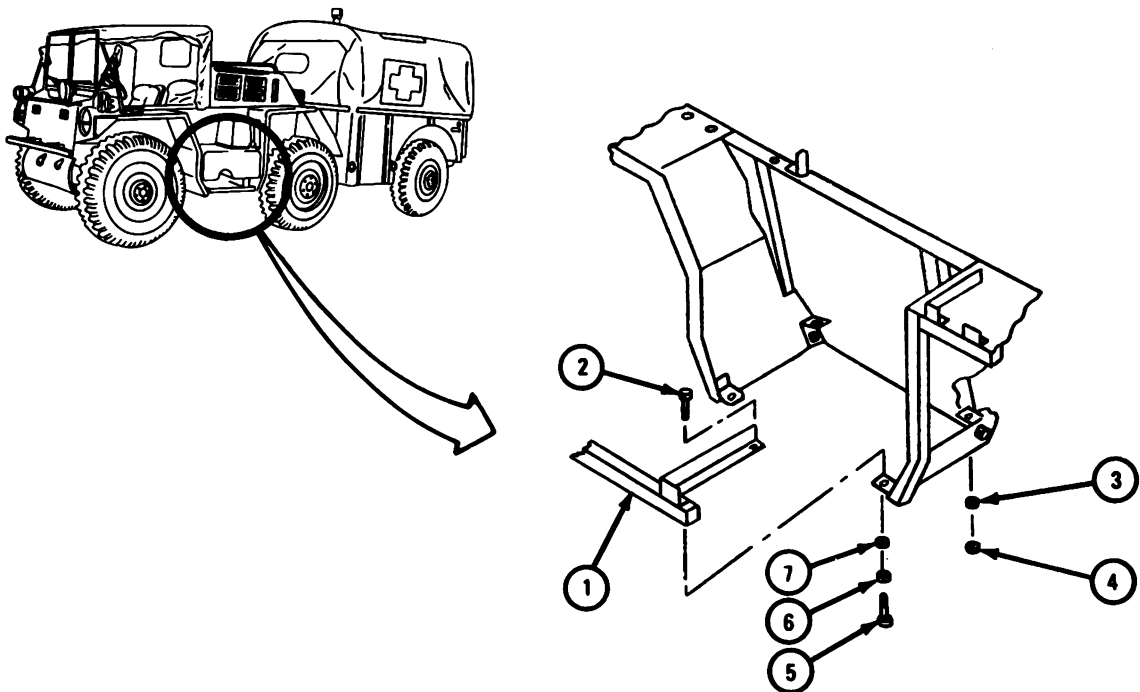
(2) Inspection and repair. Check that braces are not cracked, torn or bent. If braces are damaged, get new ones.

c. Replacement.

FRAME 1

1. Put in brace (1). Put in capscrew (2) with lockwasher (3) and nut (4).
2. Put in two capscrews (5) with lockwashers (6) and flat washers (7).
3. Do steps 1 and 2 again for right side brace.

END OF TASK



TA 105122

15-11. WINDSHIELD ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: Weatherstrip (2)
Laminated glass, 26-inches x 21-inches x 0.270 inches thick (2)

PERSONNEL: One

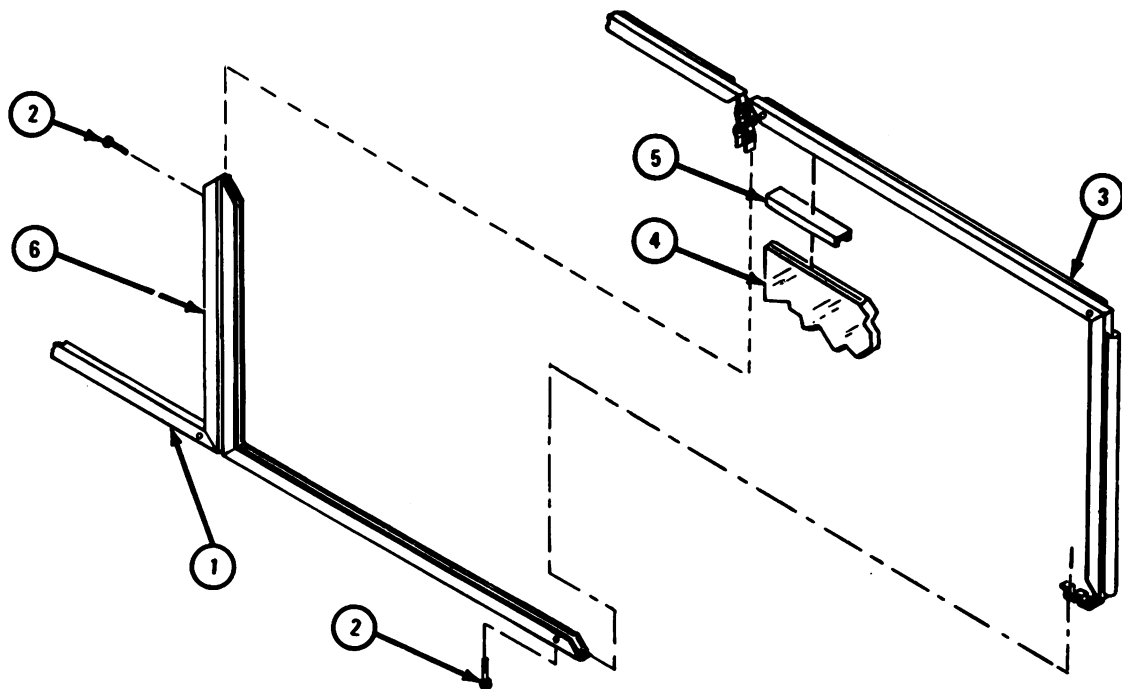
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove windshield. Refer to TM 9-2320-242-10.
- b. Disassembly.

FRAME 1

1. Fold windshield assembly (1) in half.
2. Unscrew and take out four screws (2).
3. Pry off top half of windshield frame (3).
4. Take out windshield glass (4).
5. Take weatherstrip (5) out of both windshield frame sections (3 and 6) and throw it away.
6. Do steps 1 through 5 on other half of windshield assembly.

END OF TASK



TA 101355

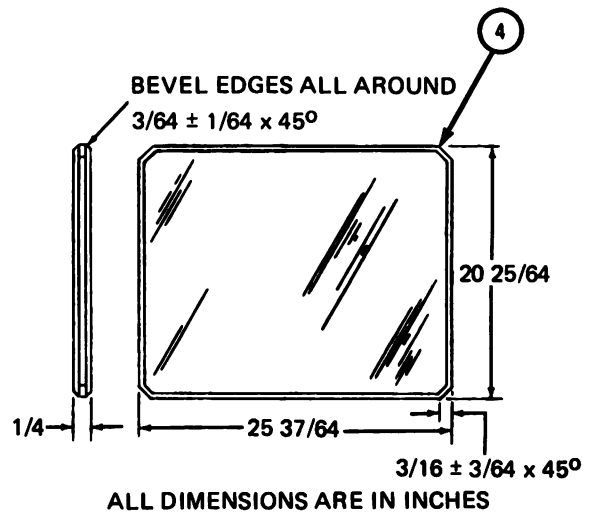
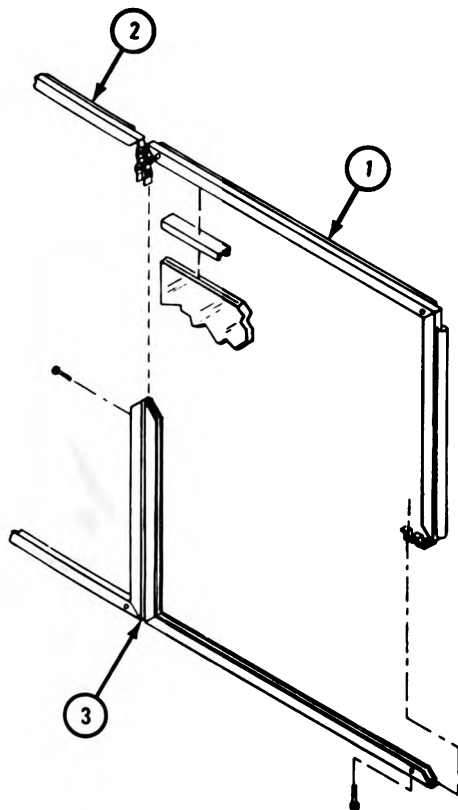
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check to see that windshield frame sections (1, 2, and 3) are not bent, cracked or badly rusted.
2. If windshield frame sections are badly rusted or cannot be fixed by straightening or welding and painting, get new parts.
3. Check windshield glass (4) to see that it is not badly scratched, cracked or broken.
4. If windshield glass is damaged, cut new windshield glass to dimensions shown.

END OF TASK



TA 101356

e. Assembly.

FRAME 1

NOTE

Use care when putting glass in frame to stop breaking glass and tearing weatherstrip.

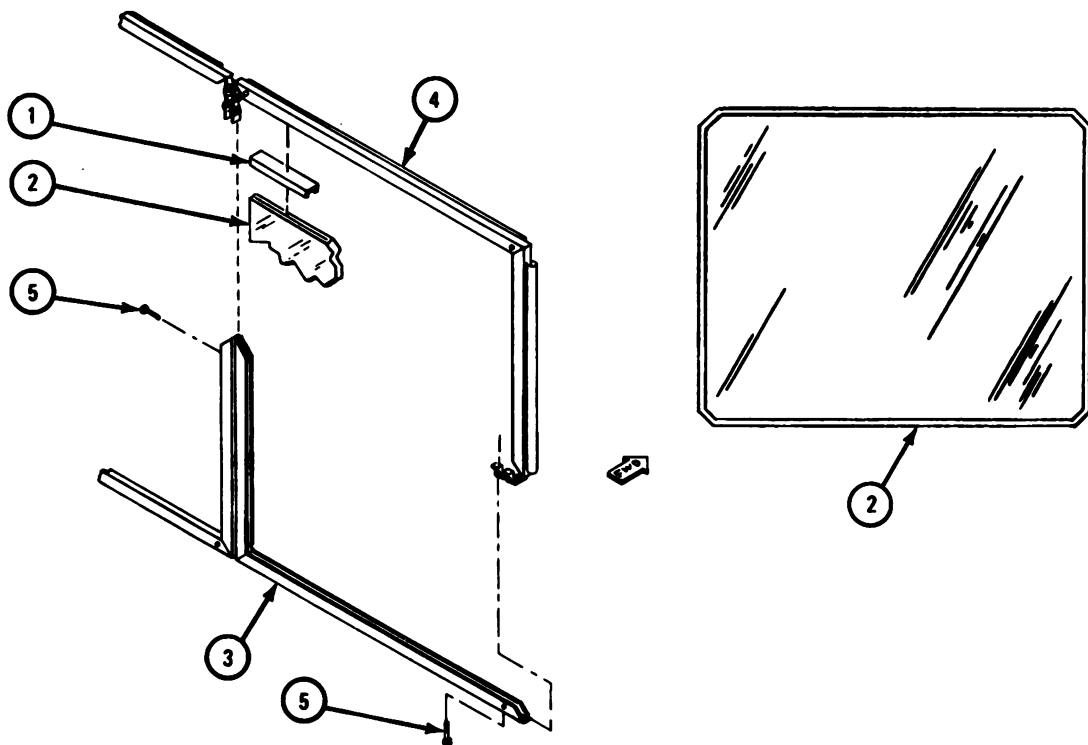
1. Put weatherstrip (1) around windshield glass (2) and put in place on bottom half of frame (3). Using rubber hammer, tap glass into place in frame channels.
2. Put upper half of frame (4) in place on glass (2). Using rubber hammer, tap frame into place on glass.
3. Fold windshield frame (3) in half and screw in and tighten four screws (5).
4. Do steps 1 through 3 on other half of windshield.

NOTE

Follow-on Maintenance Action Required:

Install windshield assembly. Refer to TM 9-2320-242-10.

END OF TASK



TA 101357

15-12. COWL ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, handbrake set, engine off.**a. Preliminary Procedures.**

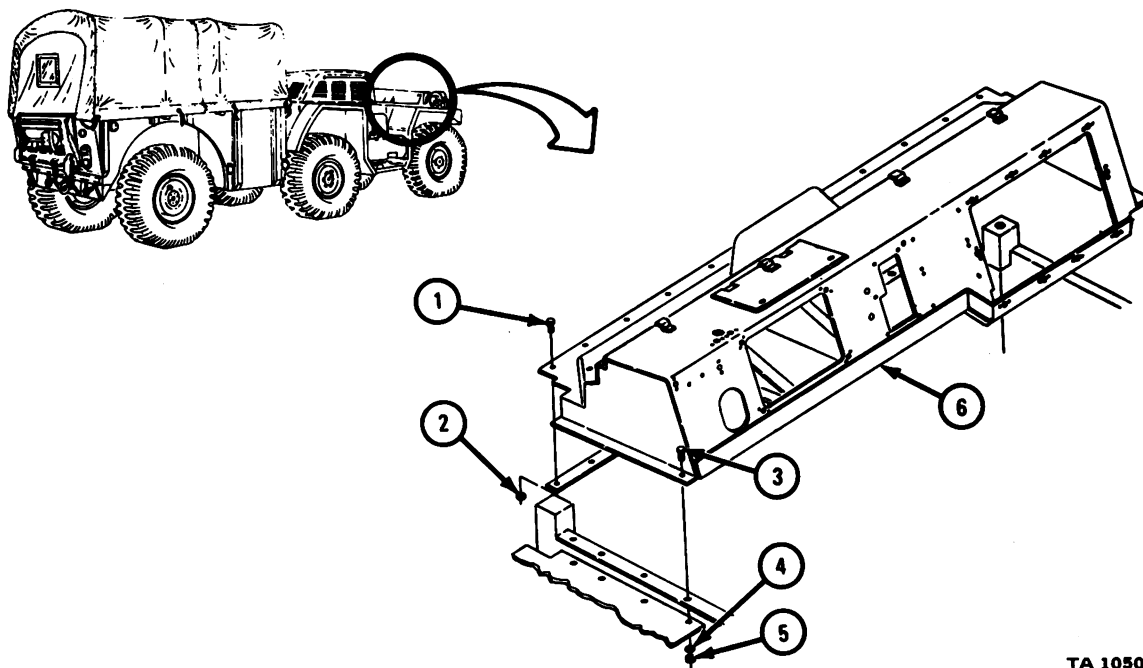
- (1) Remove engine stop cable. Refer to TM 9-2320-242-20.
- (2) Remove engine throttle cable. Refer to TM 9-2320-242-20.
- (3) Remove light switch. Refer to TM 9-2320-242-20.
- (4) Remove switch control panel. Refer to TM 9-2320-242-20.
- (5) Remove instrument cluster. Refer to TM 9-2320-242-20.
- (6) Remove distribution panel, circuit breakers, and terminal strip. Refer to TM 9-2320-242-20.
- (7) Remove rifle mounting brackets. Refer to TM 9-2320-242-20.
- (8) Remove windshield assembly. Refer to TM 9-2320-242-20.
- (9) Remove air cleaner restriction indicator and bracket. Refer to TM 9-2320-242-20.
- (10) Remove fire extinguisher bracket. Refer to TM 9-2320-242-20.
- (11) Take out wiring harness. Refer to TM 9-2320-242-20.
- (12) Remove mirror brackets. Refer to TM 9-2320-242-20.
- (13) Remove windshield wiper arms. Refer to TM 9-2320-242-20.
- (14) Remove steering wheel brace. Refer to TM 9-2320-242-20.
- (15) Remove blackout light and assembly. Refer to TM 9-2320-242-20.
- (16) Remove heater control. Refer to TM 9-2320-242-20.
- (17) Remove master cylinder. Refer to TM 9-2320-242-20.
- (18) Remove mounting bracket for pedals. Refer to TM 9-2320-242-20.
- (19) Remove defroster air duct. Refer to TM 9-2320-242-20.
- (20) If vehicle has a slave cable receptacle, remove slave cable receptacle. Refer to TM 9-2320-242-20.
- (21) Remove mud guard. Refer to TM 9-2320-242-20.
- (22) Remove windshield wiper motors. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out 11 capscrews(1) and nuts (2).
2. Take out eight capscrews (3) with flat washers (4) and nuts (5).
3. Lift off cowl assembly (6).

END OF TASK



TA 105088

c. Disassembly.**FRAME 1**

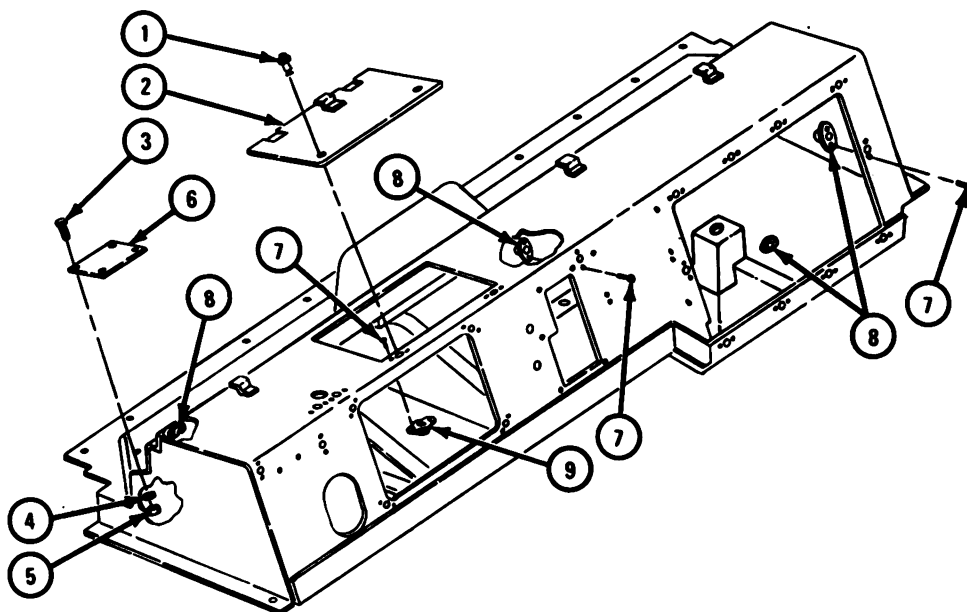
1. Take out two fasteners (1). Take off cover (2).
2. Take out four capscrews (3) with flat washers (4) and nuts (5). Take off plate (6).

NOTE

Mark nut plates before taking them out. There are three different sizes. They must be put back as marked.

4. Take out 44 rivets (7). Take out 22 nut plates (8) and two receptacles (9).

END OF TASK



TA 105089

d. Cleaning, Inspection, and Repair.

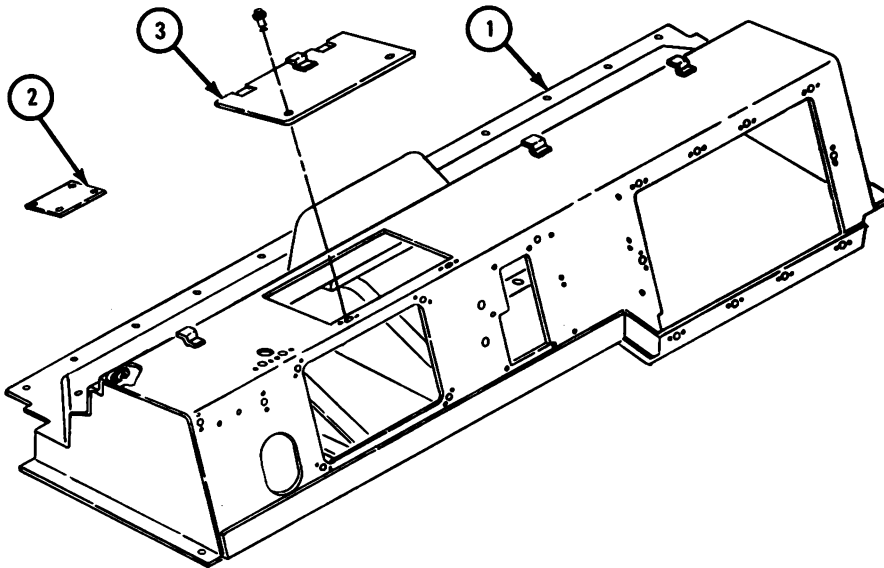
(1) Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair.

FRAME 1

1. Check that cowl (1), plate (2) and cover (3) have no bends or cracks. Refer to FM 43-2 to reform bends. Refer to TM 9-237 to repair cracks by welding.
2. Check that nut plate (2) and cover (3) have no cracks or bad threads. Get new part if cracks or bad threads are found.

END OF TASK



TA 105090

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

e. Assembly.

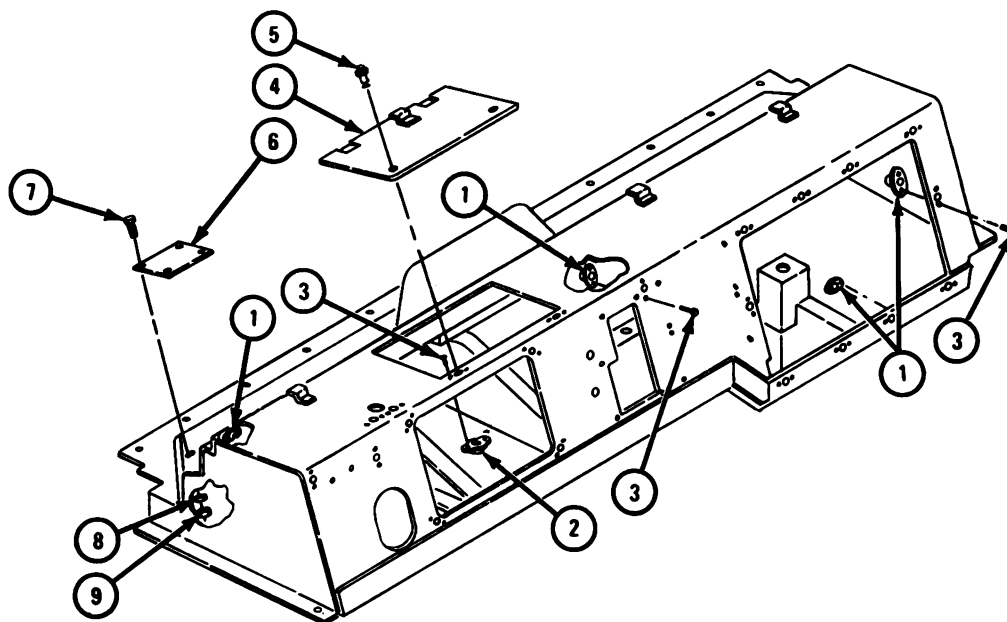
FRAME 1

NOTE

Make sure nut plates and receptacles are put back in the right place. Put back as marked during disassembly.

1. Put in 22 nut plates (1), two receptacles (2), and 44 rivets (3).
2. Put on cover (4). Put in two fasteners (5).
3. Put on plate (6). Put in four capscrews (7) with flat washers (8) and nuts (9).

END OF TASK

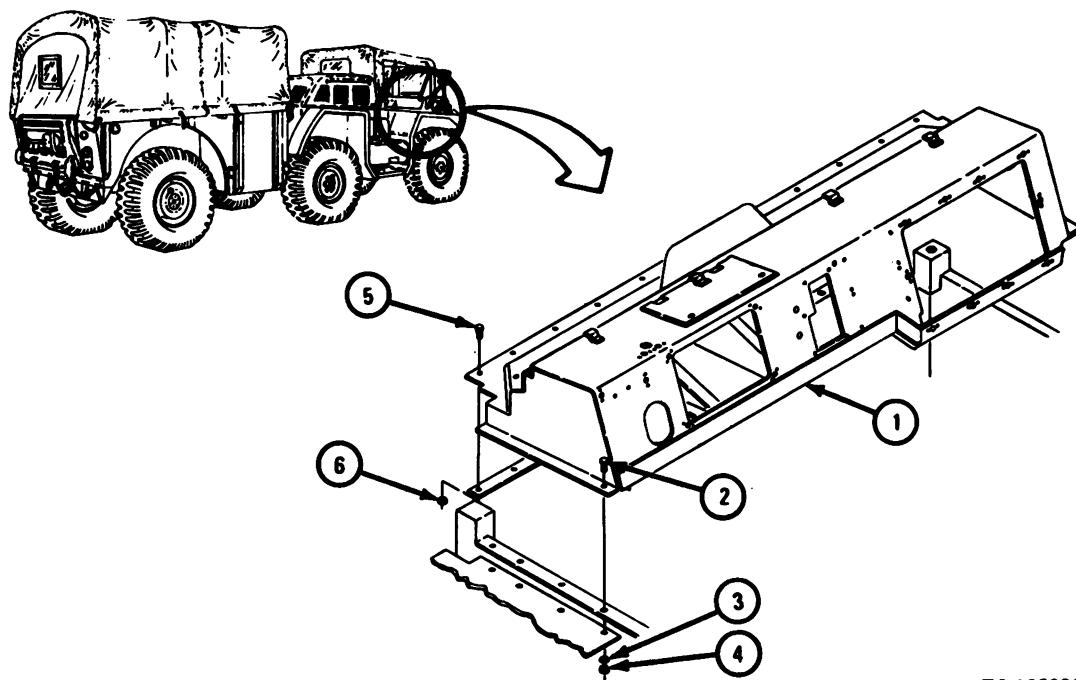


TA 105091

f. Replacement.

FRAME 1

1. Put cowl (1) into tractor.
 2. Put in eight capscrews (2) with flat washers (3) and nuts (4).
 3. Put in 11 capscrews (5) with nuts (6).
- GO TO FRAME 2



TA 105092

FRAME 2**NOTE****Follow-on Maintenance Action Required:**

1. Replace wiring harness. Refer to TM 9-2320-242-20.
2. Replace fire extinguisher bracket. Refer to TM 9-2320-242-20.
3. Replace air cleaner restriction indicator and bracket. Refer to TM 9-2320-242-20.
4. Replace windshield assembly. Refer to TM 9-2320-242-20.
5. Replace rifle mounting brackets. Refer to TM 9-2320-242-20.
6. Replace distribution panel, circuit breakers, and terminal strip. Refer to TM 9-2320-242-20.
7. Replace instrument cluster. Refer to TM 9-2320-242-20.
8. Replace switch control panel. Refer to TM 9-2320-242-20.
9. Replace light switch. Refer to TM 9-2320-242-20.
10. Replace engine throttle cable. Refer to TM 9-2320-242-20.
11. Replace engine stop cable. Refer to TM 9-2320-242-20.
12. Replace mirror brackets. Refer to TM 9-2320-242-20.
13. Replace windshield wiper arms. Refer to TM 9-2320-242-20.
14. Replace steering wheel brace. Refer to TM 9-2320-242-20.
15. Replace blackout light assembly. Refer to TM 9-2320-242-20.
16. Replace heater control. Refer to TM 9-2320-242-20.
17. Replace master cylinder. Refer to TM 9-2320-242-20.
18. Replace pedal mounting bracket. Refer to TM 9-2320-242-20.
19. Replace defroster air duct. Refer to TM 9-2320-242-20.
20. If vehicle has a slave cable receptacle, replace slave cable receptacle. Refer to TM 9-2320-242-20.
21. Replace mud guard. Refer to TM 9-2320-242-20.
22. Replace windshield wiper motors. Refer to TM 9-2320-242-20.

END OF TASK

15-13. CONSOLE ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: Rivets (12)

PERSONNEL: One

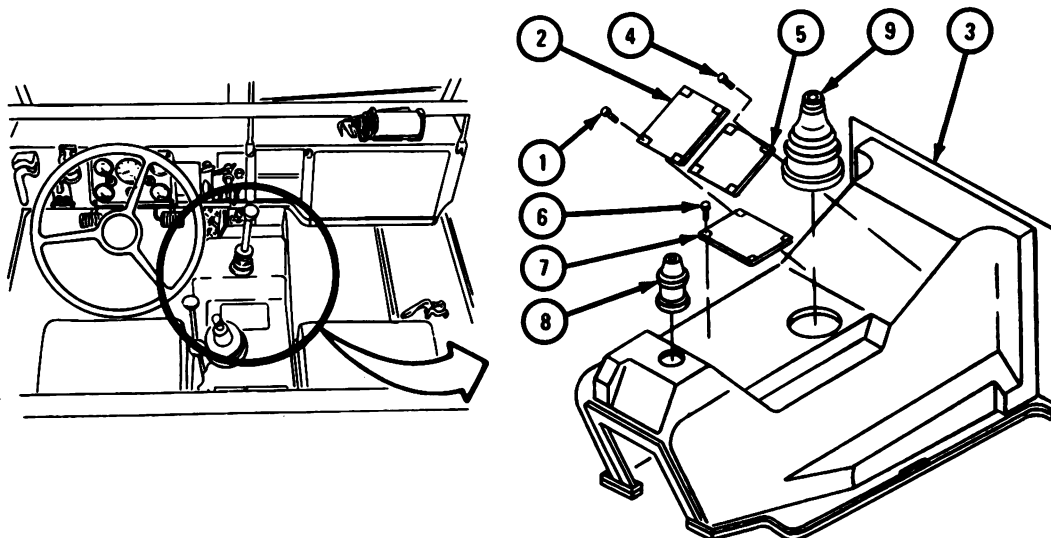
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove console. Refer to TM 9-2320-242-20.
- b. Disassembly.

FRAME 1

1. Drill out four rivets (1). Take plate (2) off console (3).
2. Drill out four rivets (4). Take off plate (5).
3. Drill out four rivets (6). Take off plate (7).
4. Take out boots (8 and 9).

GO TO FRAME 2

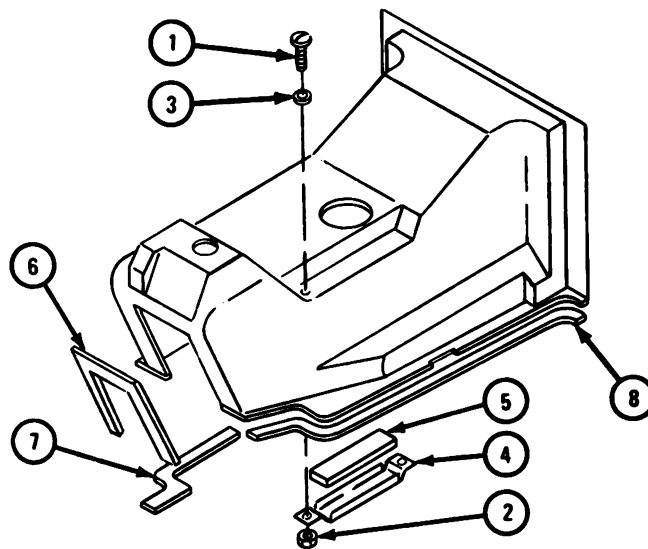


TA 084805

FRAME 2

1. Take out screws (1), nuts (2), and washers (3).
2. Take out retainer (4) and seal (5).
3. Take off seals (6, 7, and 8).

END OF TASK



TA 084806

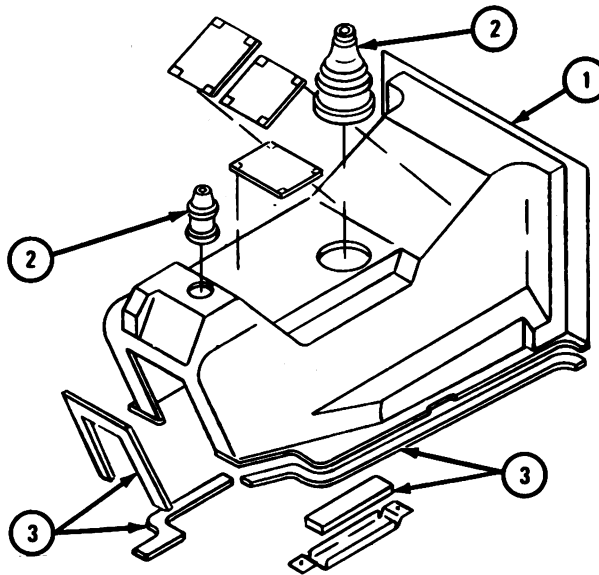
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that console (1) has no dents or cracks. Replace with new part if there are cracks or dents.
2. Check that boots (2) and seals (3) have no cracks or holes. Replace with new part if there are cracks or holes.

END OF TASK

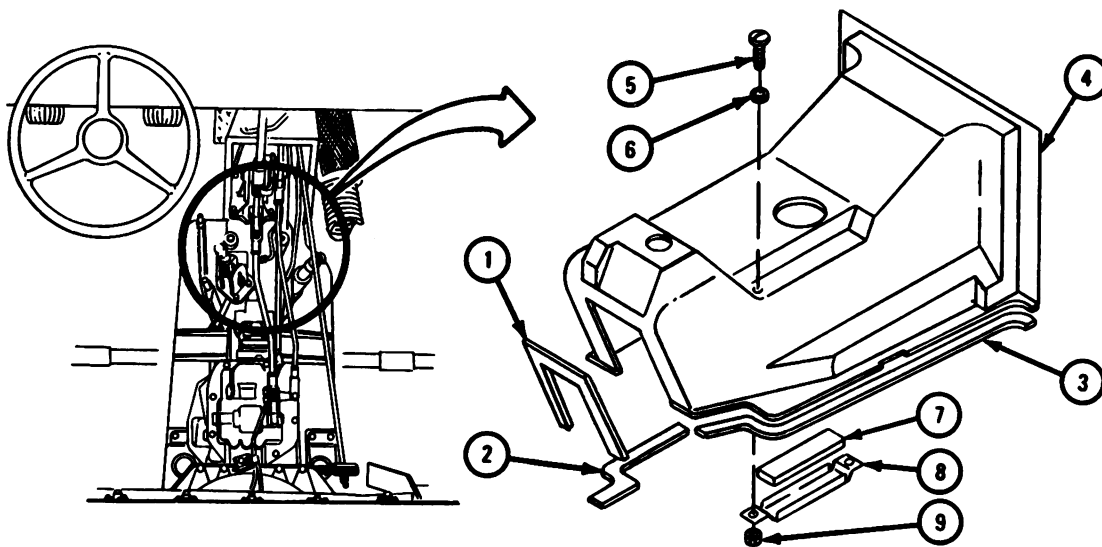


TA 084807

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

e. Assembly.**FRAME 1**

1. Put seals (1, 2, and 3) on console (4).
2. Put in two screws (5) with washers (6).
3. Put seal (7) and retainer (8) over screws (5).
4. Put on two nuts (9).

GO TO FRAME 2

TA 084808

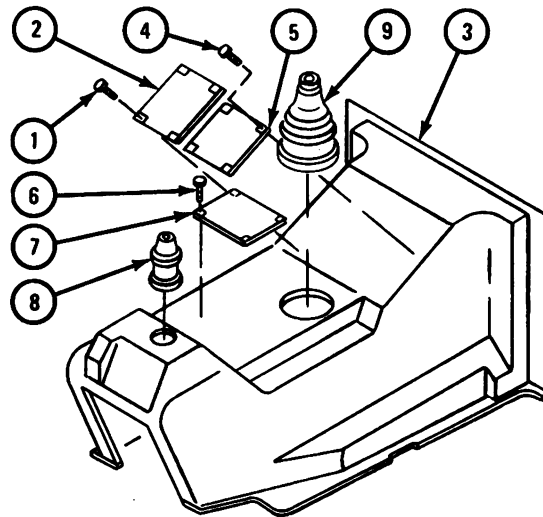
FRAME 2

1. Put four rivets (1) through plate (2) into console (3).
2. Put four rivets (4) through plate (5) into console.
3. Put four rivets (6) through plate (7) into console.
4. Put in boots (8 and 9).

NOTE

Follow-on Maintenance Action Required:
Replace console. Refer to TM 9-2320-242-20.

END OF TASK



TA 084809

15-14. ENGINE COVER REPAIR (TRUCKS M561 AND M792).

TOOLS: No special tools required

SUPPLIES: Cotter pins (3)
Rivets (2)

PERSONNEL: One

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

- a. Preliminary Procedure. Remove engine cover. Refer to TM 9-2320-242-20.
- b. Disassembly.

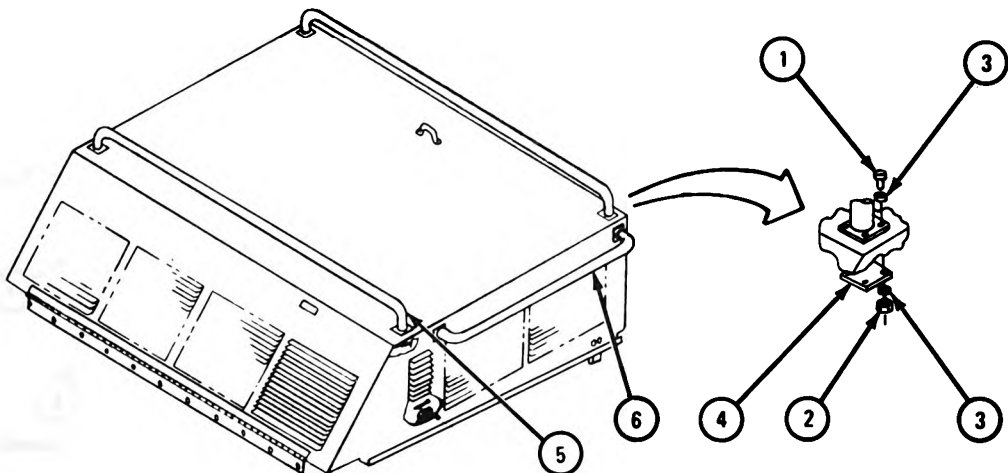
NOTE

For work on truck M792, do steps 1 and 2.
For work on truck M561, do steps 3 and 4.

FRAME 1

1. Take out 24 screws (1), nuts (2), 48 washers (3), and eight plates (4).
2. Take off four handles (5 and 6).
3. Take out eight screws (1), nuts (2), 16 washers (3) and four plates (4).
4. Take off two handles (6).

GO TO FRAME 2



TA 084811

FRAME 2

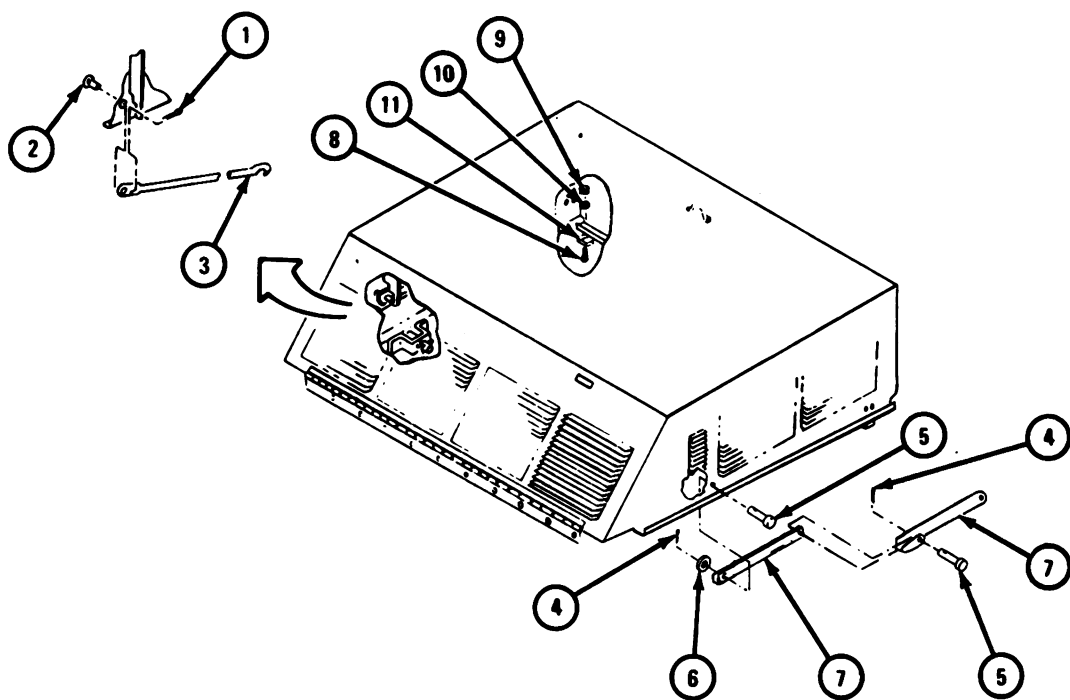
1. Take out cotter pin (1). Take out clevis pin (2) and rod (3).
2. Take out two cotter pins (4), two clevis pins (5), washer (6), and two arms (7).

NOTE

These steps are the same for left and right sides. The left side is shown in these steps.

3. Take out screw (8), nut (9), and washer (10).
4. Take out pad (11).
5. Do steps 3 and 4 again for other side.

GO TO FRAME 3



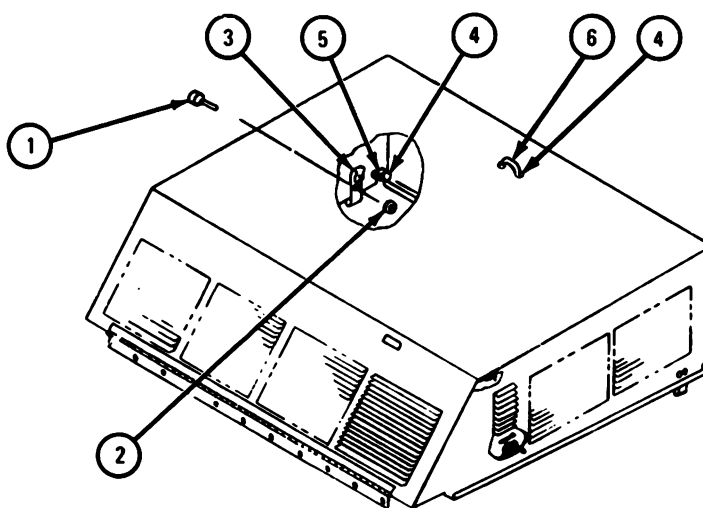
FRAME 3**NOTE**

This task is the same for left and right side. This task is shown for the left side.

1. Take out two screws (1) and nuts (2). Take out clip (3).
2. Drill out two rivets (4) and take out bracket (5).
3. Do steps 1 and 2 again for other side.
4. Drill out two rivets (4). Take off bracket (6).

IF WORKING ON TRUCK M561, GO TO FRAME 4.

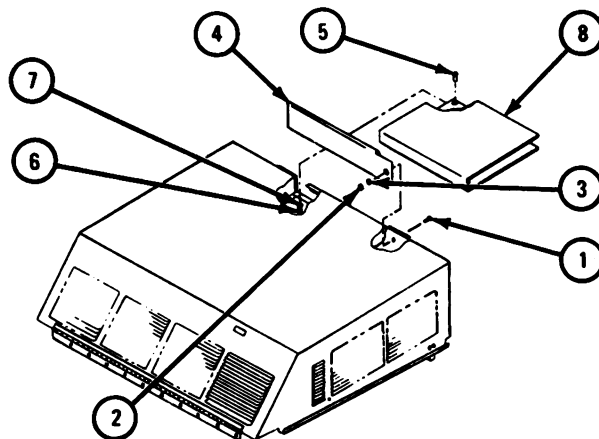
IF WORKING ON TRUCK M792, GO TO FRAME 5



TA 084813

FRAME 4

1. Take off one screw (1), nut (2), washer (3), and plate (4).
 2. Take off five screws (5), nuts (6), washers (7), and shield (8).
- END OF TASK

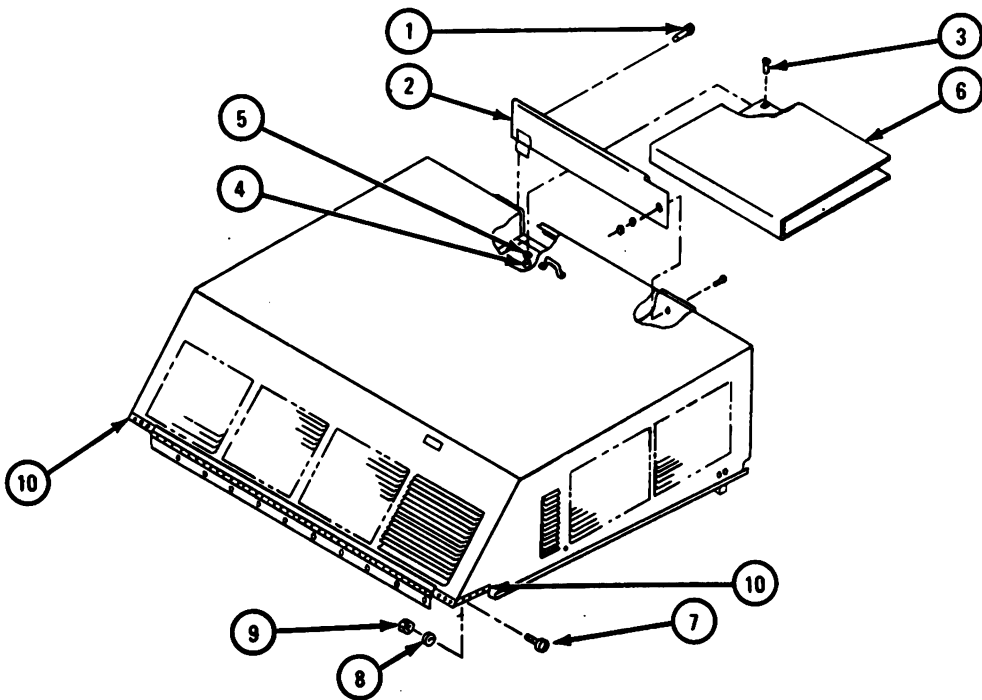


TA 084815

FRAME 5

1. Take out four screws (1). Take off plate (2).
2. Take out five screws (3), nuts (4), and washers (5). Take out shield (6).
3. Take out six screws (7), washers (8), and nuts (9). Take off bracket (10).
4. Do step 3 again for other bracket (10).

END OF TASK



TA 105095

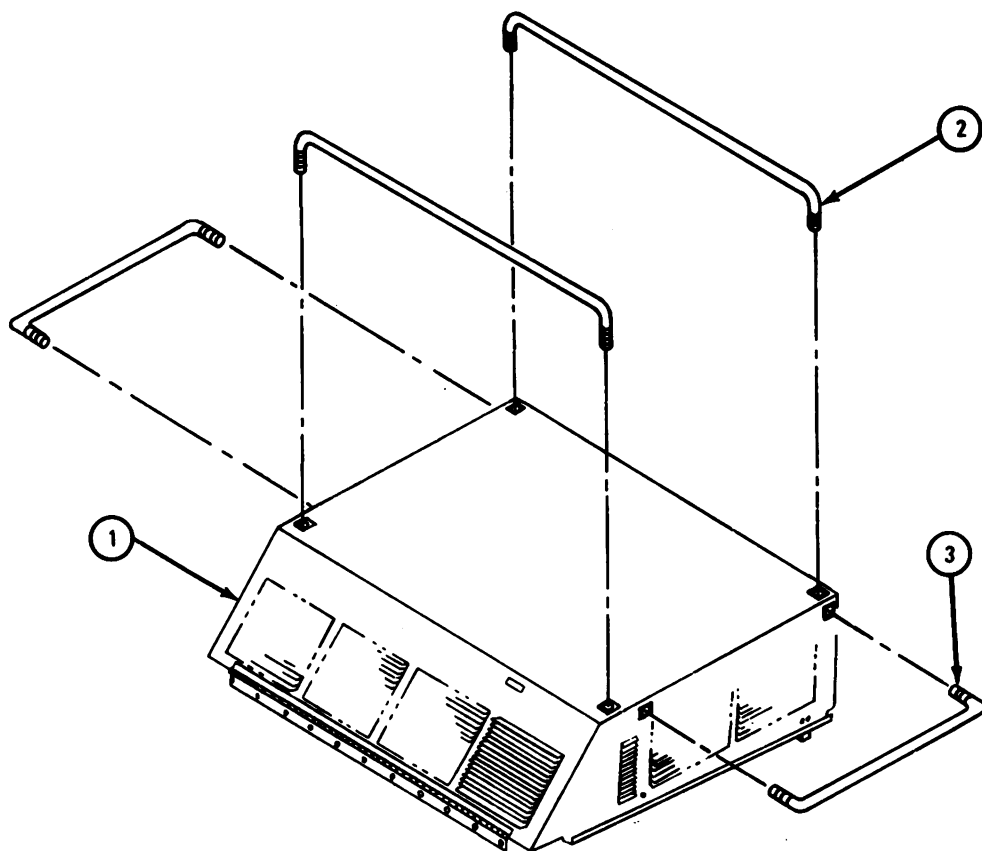
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. On truck M792, check that cover (1) and handles (2 and 3) are not bent, cracked, or torn. Refer to FM 43-2 to fix bends. Refer to TM 9-237 to weld cracks and tears.
2. On truck M561, check that cover (1) and handles (3) are not cracked and torn. Refer to TM 9-237 to fix cracks and tears.

END OF TASK



TA 084816

e. Assembly.

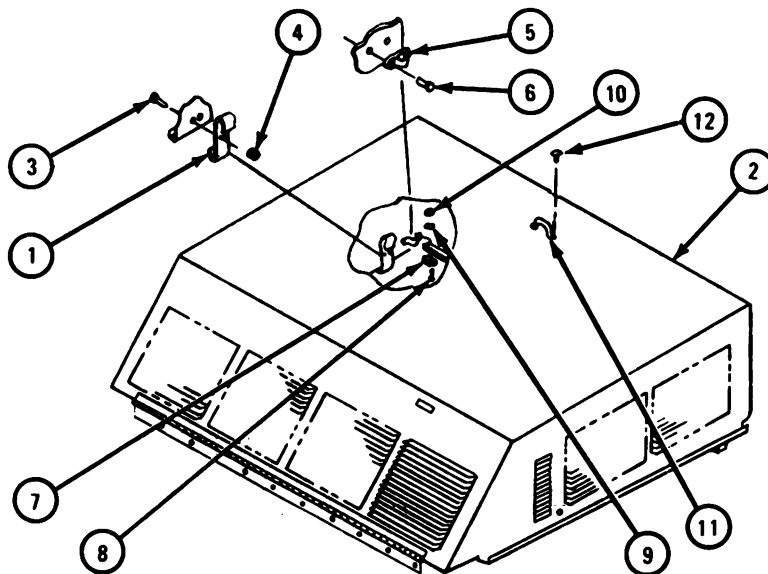
FRAME 1

NOTE

This task is the same for left and right sides. This task is shown for the left side.

1. Aline clip (1) with cover (2). Put in two screws (3) and nuts (4).
2. Aline bracket (5) with engine cover (2). Put in two rivets (6).
3. Aline pad (7) with cover (2). Put in screw (8), washer (9), and nut (10).
4. Do steps 1 through 3 again for other side.
5. Aline bracket (11) with cover (2). Put in two rivets (12).

GO TO FRAME 2

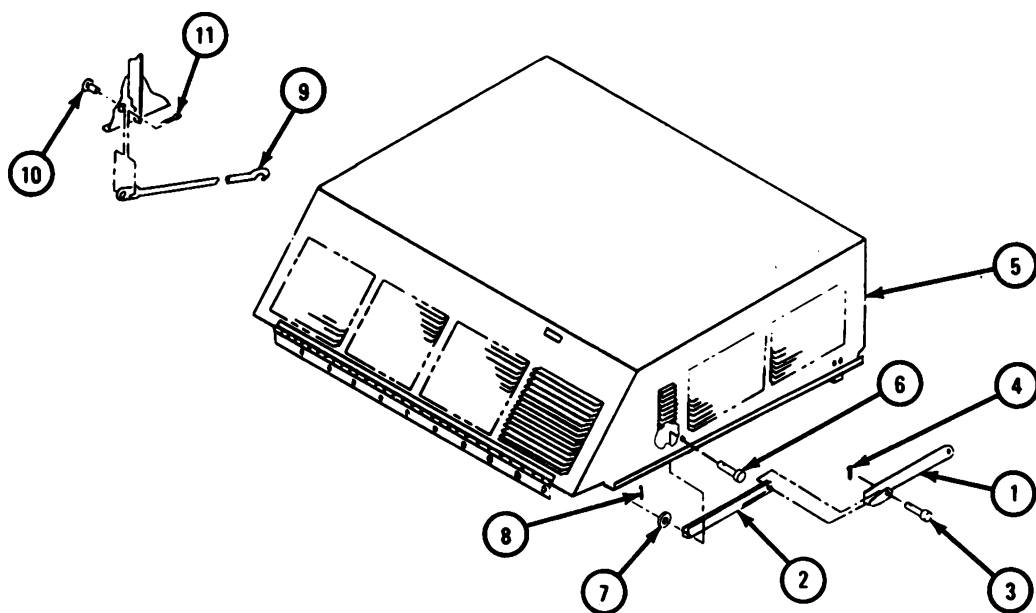


TA 084817

FRAME 2

1. Aline arm (1) with arm (2).
2. Put clevis pin (3) through arms (1 and 2). Put cotter pin (4) through clevis pin.
3. Aline arm (2) and engine cover (5). Put clevis pin (6) through engine cover and arm.
4. Put washer (7) over clevis pin (6). Put in cotter pin (8).
5. On other side of engine cover (5), aline rod (9) with engine cover.
6. Put in clevis pin (10) and cotter pin (11).

GO TO FRAME 3



TA 084819

FRAME 3

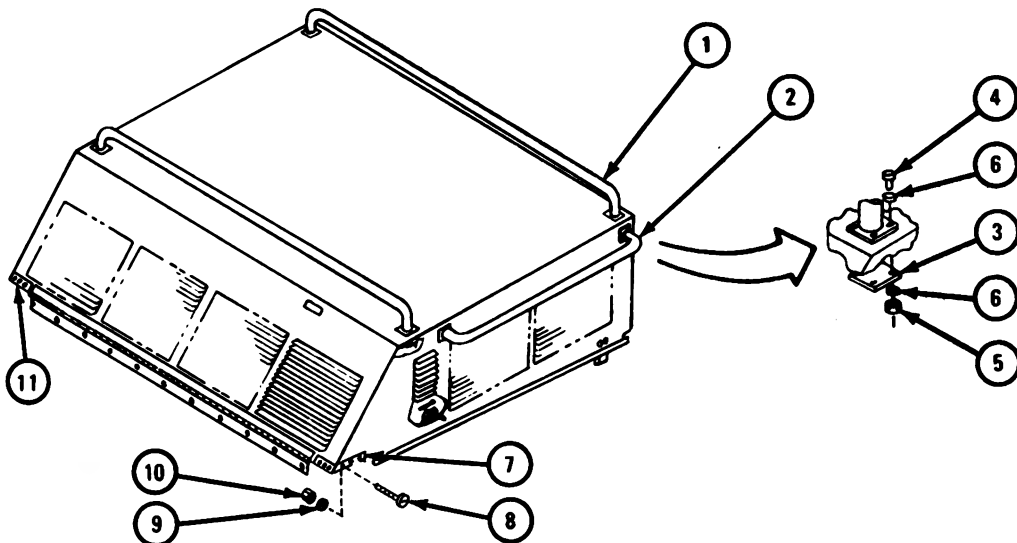
NOTE

If working on truck M792 do steps 1, 3, and 4. If working on truck M561 do steps 2, 3, and 4.

1. Put on four handles (1) and (2). Put in eight plates (3). Put in 24 screws (4) with nuts (5) and 18 washers (6).
2. Put on two handles (2). Put in five plates (3). Put in eight screws (4) with nuts (5) and 16 washers (6).
3. Put on bracket (7). Put in six screws (8) with washers (9) and nuts (10).
4. Do step 3 again for bracket (11).

IF WORKING ON TRUCK M561, GO TO FRAME 4.

IF WORKING ON TRUCK M792, GO TO FRAME 5



TA 084820

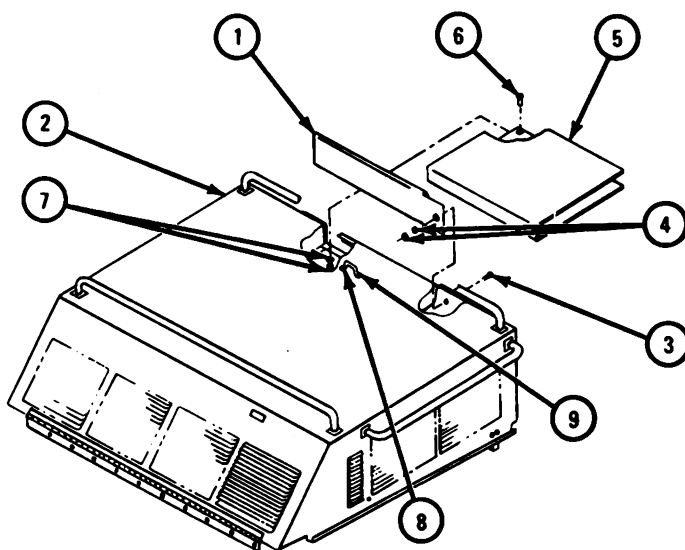
FRAME 4

1. Aline plate (1) with cover (2). Put in one screw (3) and washer and nut (4).
2. Aline shield (5) with cover (2). Put in five screws (6) and washer and nut (7).

NOTE

Follow-on Maintenance Action Required:
 Replace engine cover. Refer to TM 9-2320-242-20.

END OF TASK



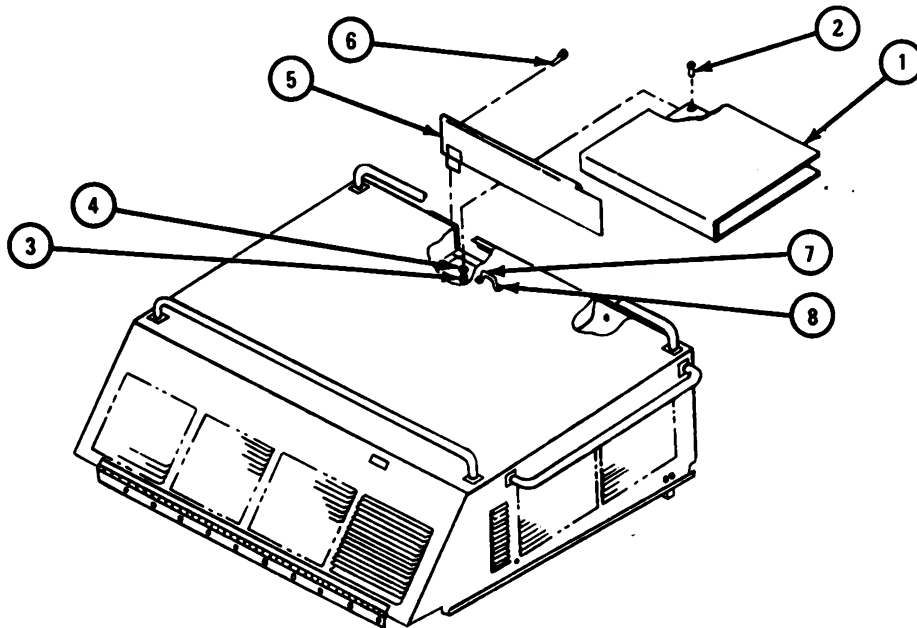
TA 084818

FRAME 5

1. Put in shield (1). Put in five screws (2) with nuts (3) and washers (4).
2. Put on plate (5). Put in four screws (6).

NOTE

Follow-on Maintenance Action Required:
Replace engine cover. Refer to TM 9-2320-242-20.

END OF TASK

TA 105096

15-15. TRACTOR COUPLER AND PLATES REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: Two

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

a. Preliminary Procedures.

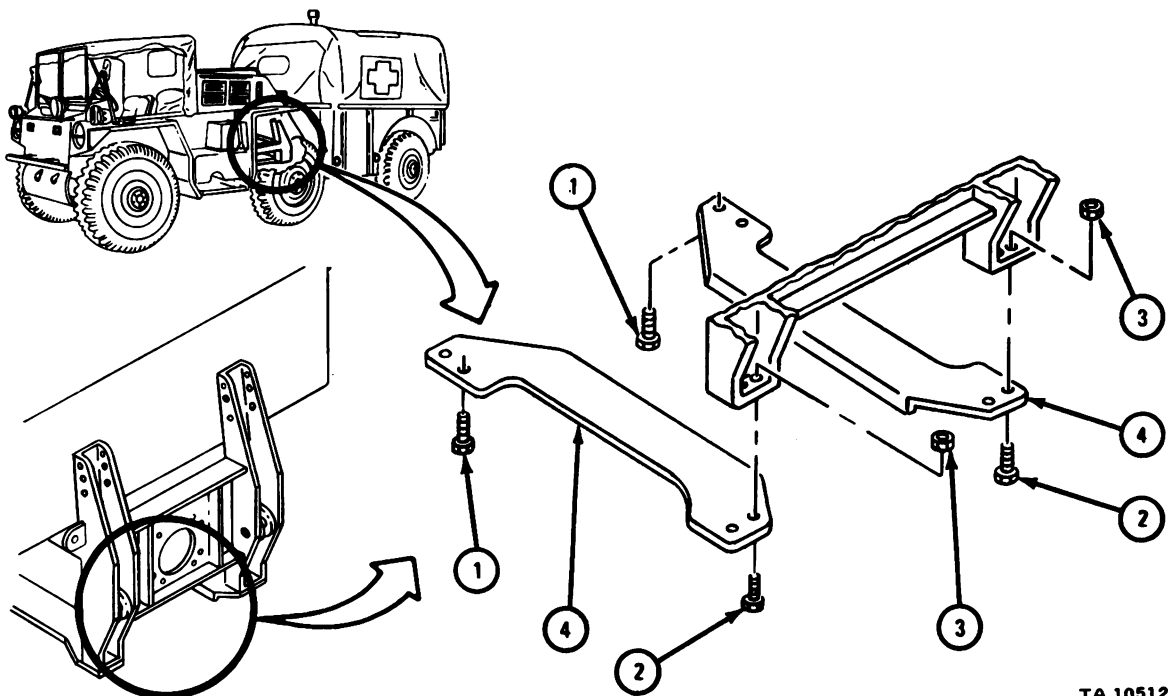
- (1) Uncouple carrier. Refer to para 14-3.
- (2) Remove tractor steering driveshaft. Refer to TM 9-2320-242-20.
- (3) Remove tractor differential driveshaft. Refer to TM 9-2320-242-20.
- (4) Remove rear tractor shock absorbers. Refer to TM 9-2320-242-20.
- (5) Remove tractor drive shaft bearing assembly. Refer to TM 9-2320-242-20.
- (6) Remove tractor steering shaft bearing assembly. Refer to

TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out four capscrews (1).
 2. Take out four capscrews (2) with nuts (3). Take out two plates (4).
- GO TO FRAME 2

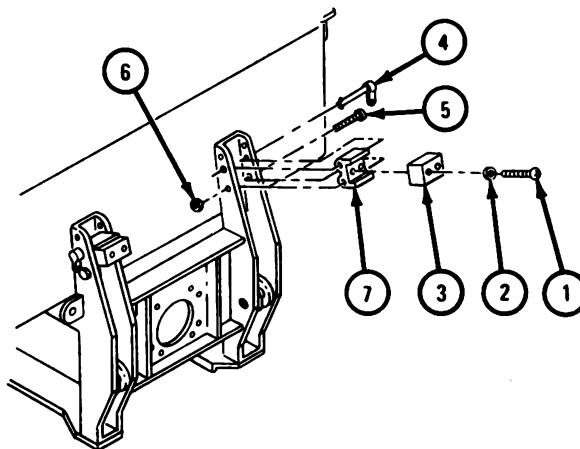


TA 105123

FRAME 2

1. Take out two screws (1) with lockwashers (2). Take out bumper (3).
2. Take out quick release pin (4). Take out capscrew (5) with nut (6). Take out bracket (7).
3. Do steps 1 and 2 again for other bracket.

GO TO FRAME 3

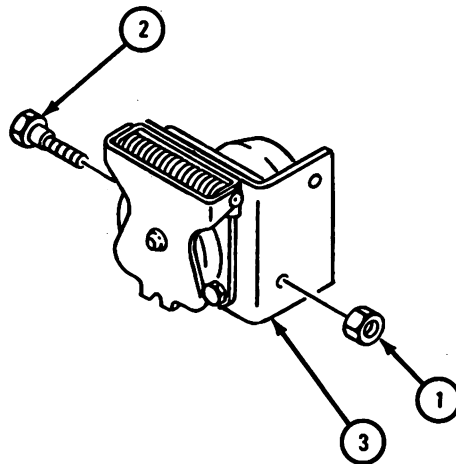
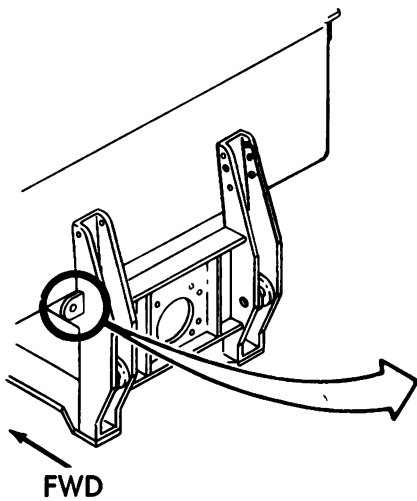


TA 105124

FRAME 3

1. Unscrew and take off two self-locking nuts (1) and take out two screws (2).
Take off inter-vehicle electrical cable receptacle and mounting bracket (3).

GO TO FRAME 4

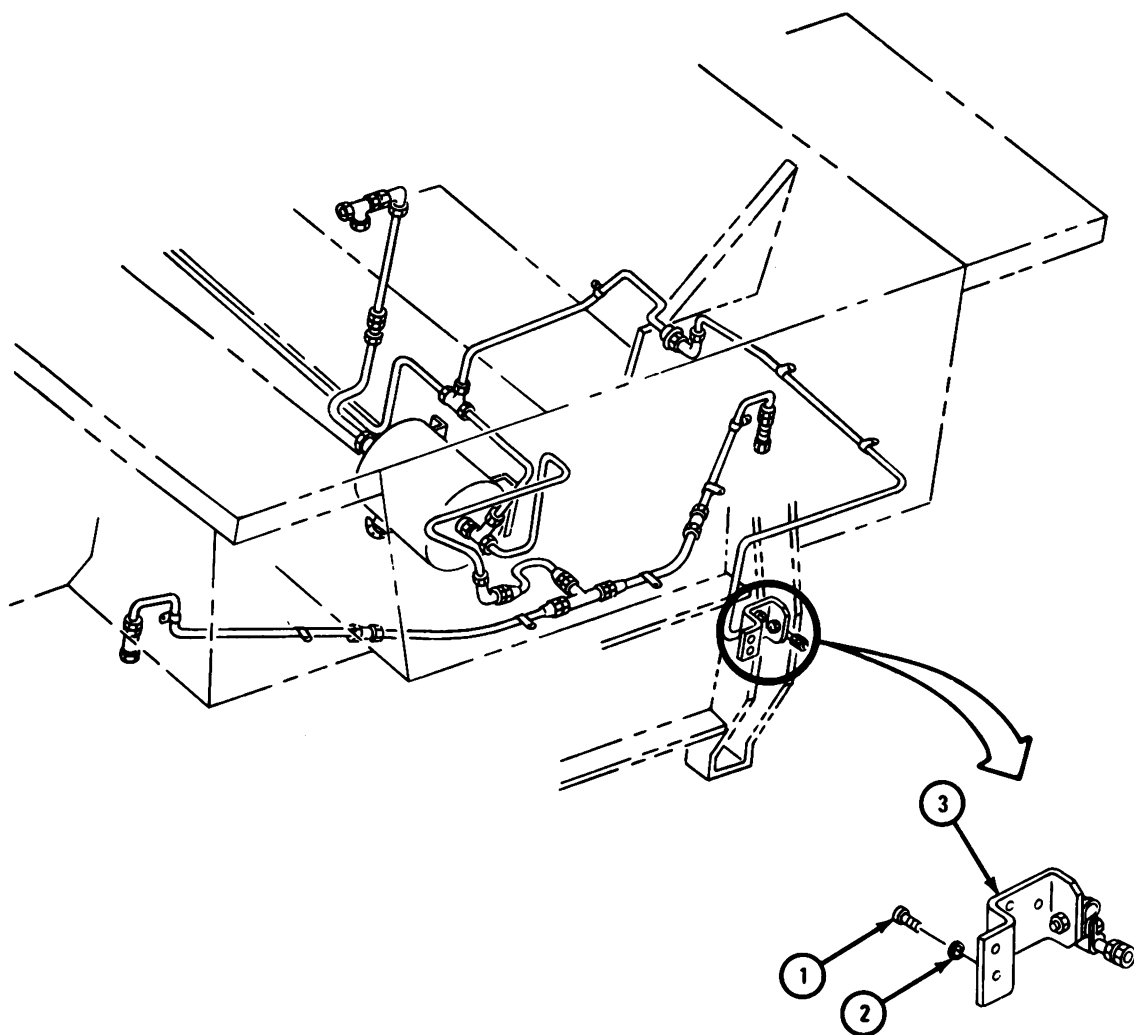


TA 105138

FRAME 4

1. Unscrew and take out two screws (1) and lockwashers (2).
2. Move bracket (3) out of the way.

GO TO FRAME 5



TA 105139

FRAME 5

- Soldier A 1. Unscrew and take off three self-locking nuts (1) and take out three capscrews (2).

NOTE

Capscrews (5) are longer than capscrews (4). Note when taken out so they will be put back in the same place.

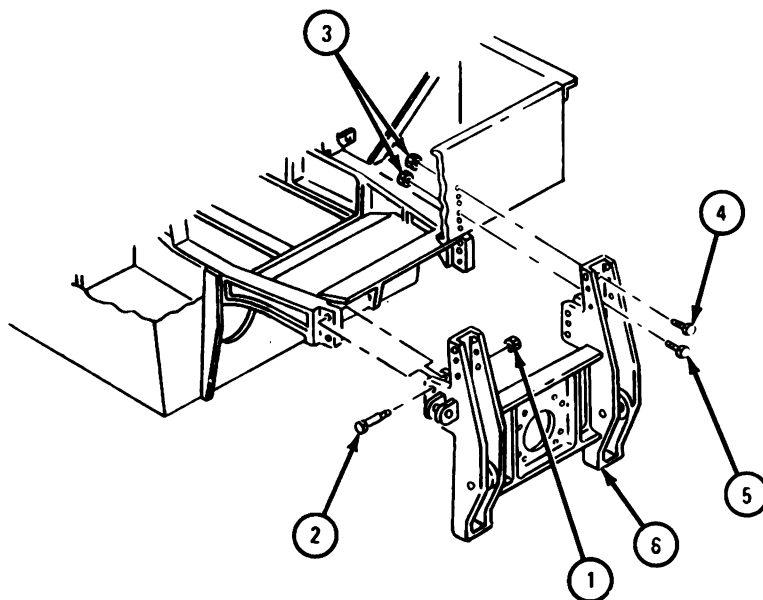
2. Unscrew and take off five self-locking nuts (3) and take out three capscrews (4) and two capscrews (5).

- Soldier B 3. Hold coupler (6) in place and keep it from falling.

- Soldier A 4. Do steps 1 and 2 on other side of coupler (6).

- Soldiers A and B 5. Take off coupler (6).

END OF TASK



TA 105125

c. Cleaning, Inspection, and Repair.

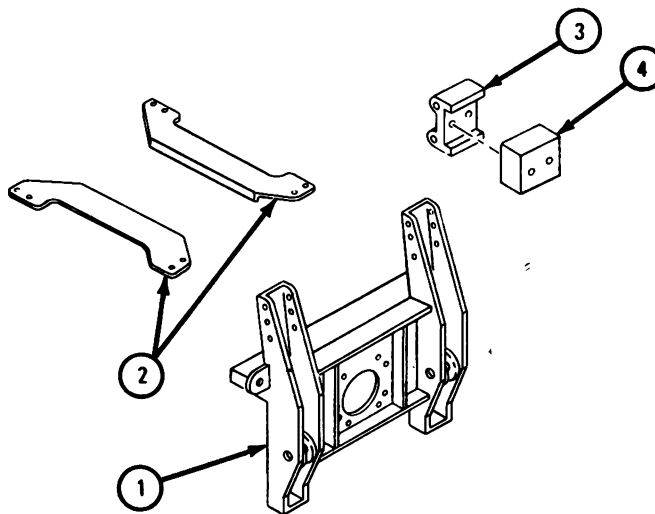
(1) **Cleaning.** There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) **Inspection and repair.**

FRAME 1

1. Check that coupler (1), plates (2), and brackets (3) have no cracks, tears, or bends. Refer to TM 9-237 to repair cracks and tears by welding. Refer to FM 43-2 to reform bends.
2. Check that bumpers (4) have no cracks, holes, or tears. Get new part if cracks, holes, or tears are found.

END OF TASK



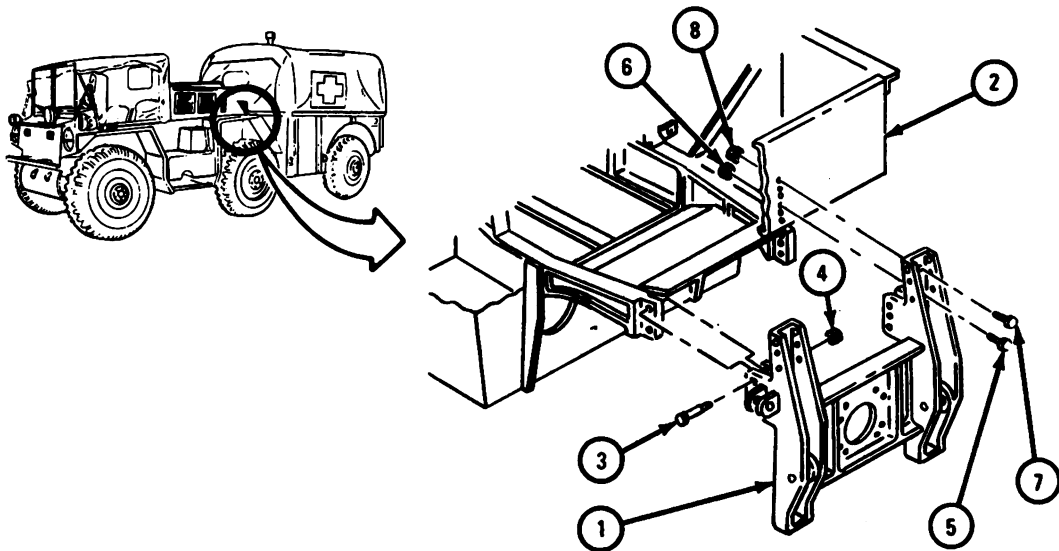
TA 105126

d. Replacement.

FRAME 1

- | | |
|-------------------------|---|
| Soldiers A and B | 1. Lift coupler (1) into place on body (2). |
| Soldier A | 2. Hold coupler (1) for soldier B. |
| Soldier B | 3. Aline holes in coupler (1) with body (2). Put in six capscrews (3) and locknuts (4). |
| Soldier A | 4. Let go of coupler (1). |
| Soldier B | 5. Put in two capscrews (5) with nuts (6). |
| | 6. Do step 5 again on other side of coupler (1). |
| | 7. Put in three capscrews (7) with nuts (8). |
| | 8. Do step 7 again on other side of coupler (1). |

GO TO FRAME 2

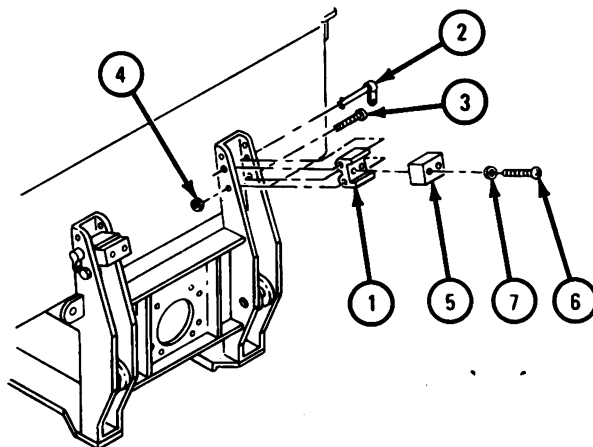


TA 105127

FRAME 2

1. Put in bracket (1). Put in locking pin (2). Put in capscrew (3) with nut (4).
2. Put pad (5) in bracket (1). Put in two screws (6) with lockwashers (7).
3. Do steps 1 and 2 again on other side.

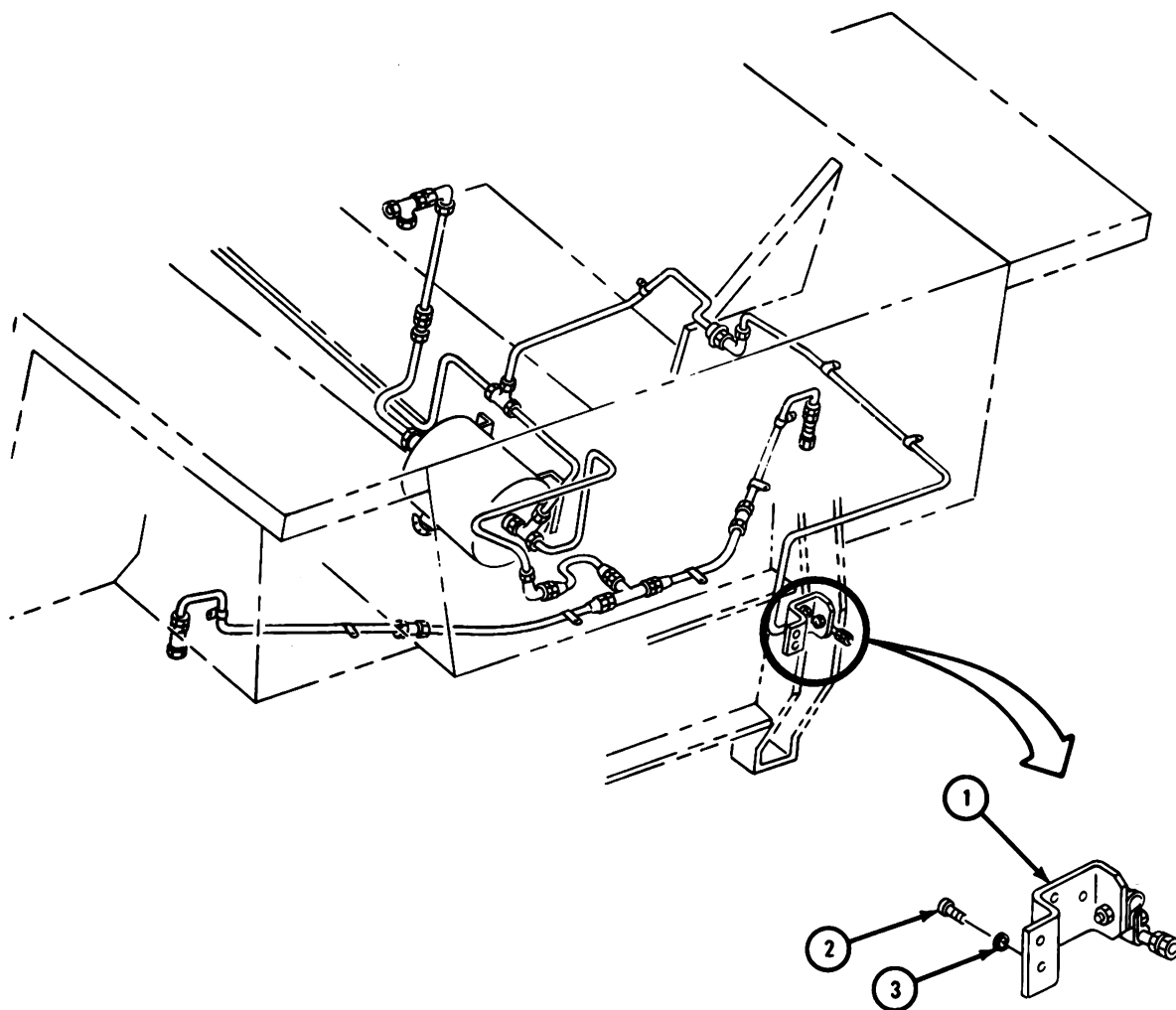
GO TO FRAME 3



TA 105128

FRAME 3

1. Put bracket (1) in place, alining holes.
 2. Screw in and tighten two capscrews (2) and two lockwashers (3).
- GO TO FRAME 4**

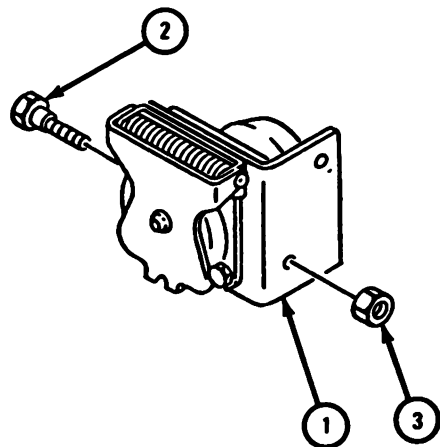
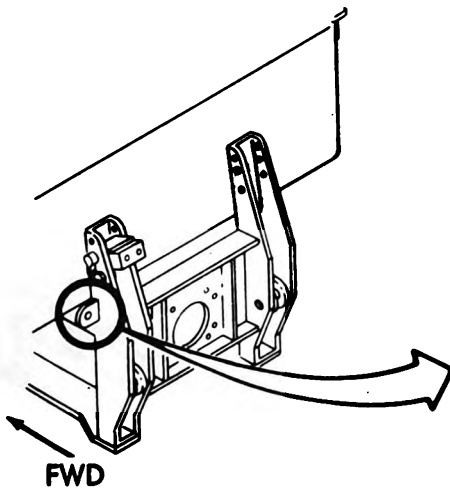


TA 105140

FRAME 4

1. Put inter-vehicle electrical cable receptacle and mounting bracket (1) in place, alining holes.
2. Put in two capscrews (2) and screw on and tighten two self-locking nuts (3).

GO TO FRAME 5



TA 105141

FRAME 5

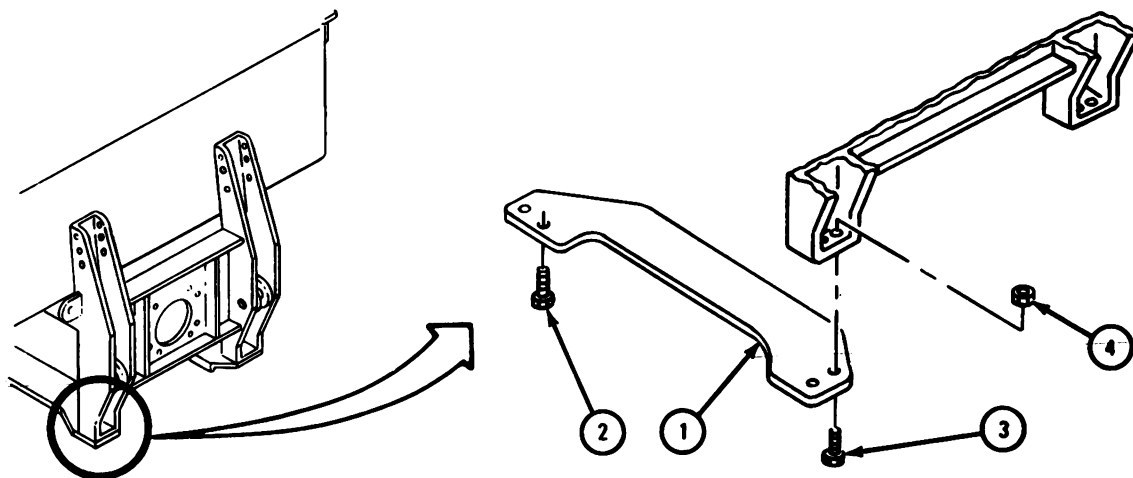
1. Put on plate (1). Put in two capscrews (2).
2. Put in two capscrews (3) with nuts (4).
3. Do steps 1 and 2 on other side.

NOTE

Follow-on Maintenance Action Required:

1. Replace tractor steering shaft assembly. Refer to TM 9-2320-242-20.
2. Replace tractor driveshaft bearing assembly. Refer to TM 9-2320-242-20.
3. Replace tractor rear shock absorbers. Refer to TM 9-2320-242-20.
4. Replace tractor differential driveshaft. Refer to TM 9-2320-242-20.
5. Replace tractor steering driveshaft. Refer to TM 9-2320-242-20.
6. Couple tractor to carrier. Refer to para 14-3.

END OF TASK



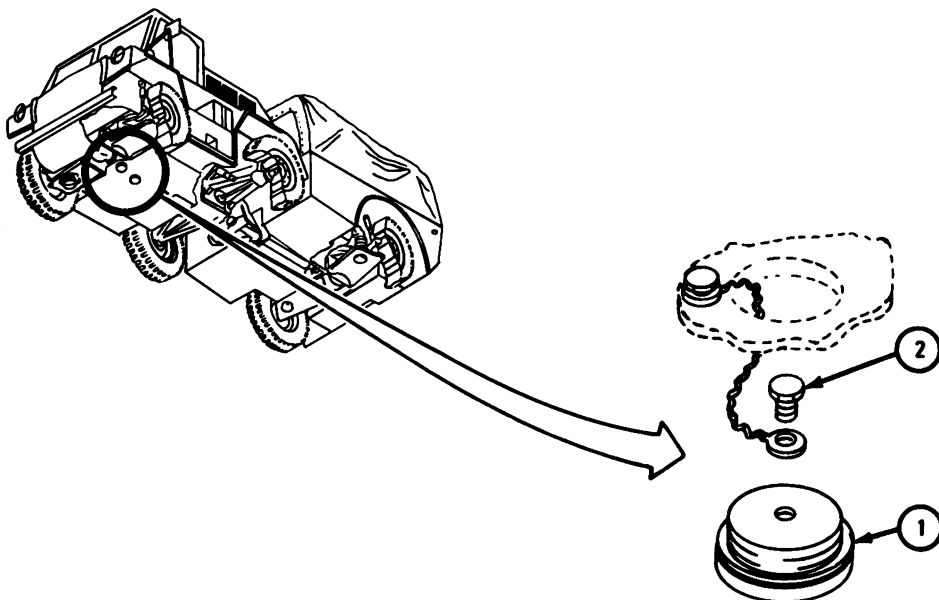
TA 105129

15-16. TRACTOR HULL DRAIN PLUGS REMOVAL, REPAIR, AND REPLACEMENT.**TOOLS:** No special tools required**SUPPLIES:** Drain plug gasket**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**NOTE**

This task is the same for all three tractor hull drain plugs.

a. Removal.**FRAME 1**

1. Unscrew drain plug (1).
2. Take out screws (2). Take off drain plug (1).
3. Do steps 1 and 2 again for two other drain plugs.

END OF TASK

TA 084821

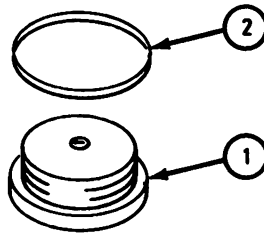
b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that drain plug (1) is not bent, dented, cracked or torn.
2. Check that threads on drain plug (1) are not damaged.
3. Check that gasket (2) is not worn or broken. Throw away damaged gasket and get a new one.
4. Straighten any bends or dents in drain plug (1). Refer to FM 43-2.
5. Weld any cracks or tears in drain plug (1). Refer to TM 9-237.
6. If threads on drain plug (1) are damaged, get a new one.

END OF TASK



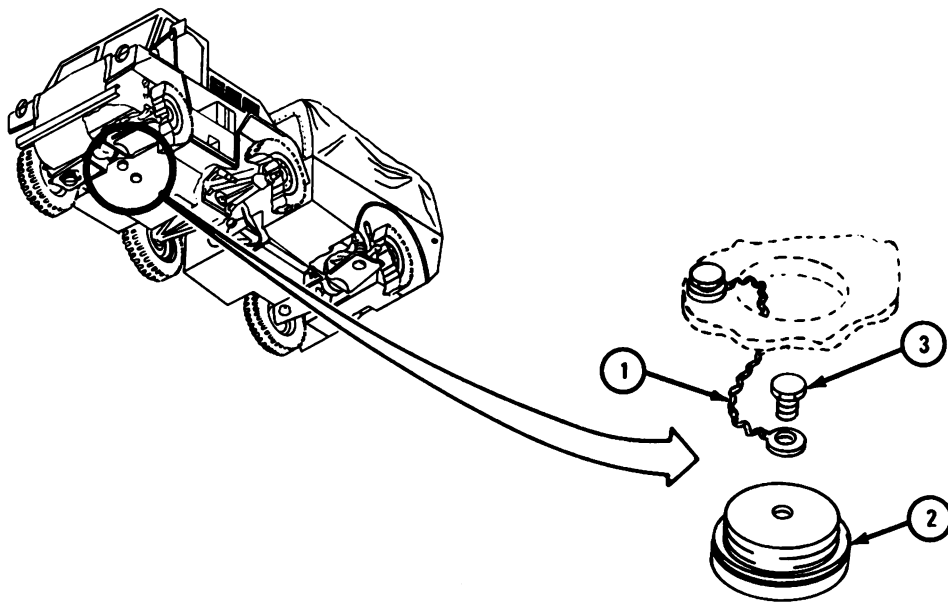
TA 101353

d. Replacement.

FRAME 1

1. Put chain (1) on drain plug (2).
2. Put in screw (3).
3. Screw drain plug (2) into hull.
4. Do steps 1, 2, and 3 again for other two drain plugs.

END OF TASK



TA 101354

15-17. TRACTOR BODY, CAB, AND HULL INSPECTION AND REPAIR.

TOOLS: No special tools required

SUPPLIES: None

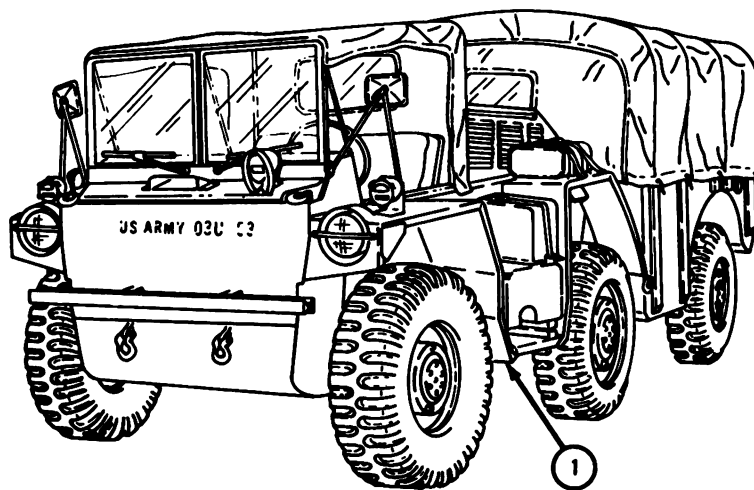
PERSONNEL: One

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

FRAME 1

1. Check that tractor body and hull (1) are not dented, cracked, or torn.
2. Straighten any dents or bends in tractor hull (1). Refer to FM 43-2.
3. Weld any cracks or tears in tractor hull (1). Refer to TM 9-237.

END OF TASK



TA 084810

Section III. TRACTOR SEATS

15-18. TRACTOR LEFT SEAT ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

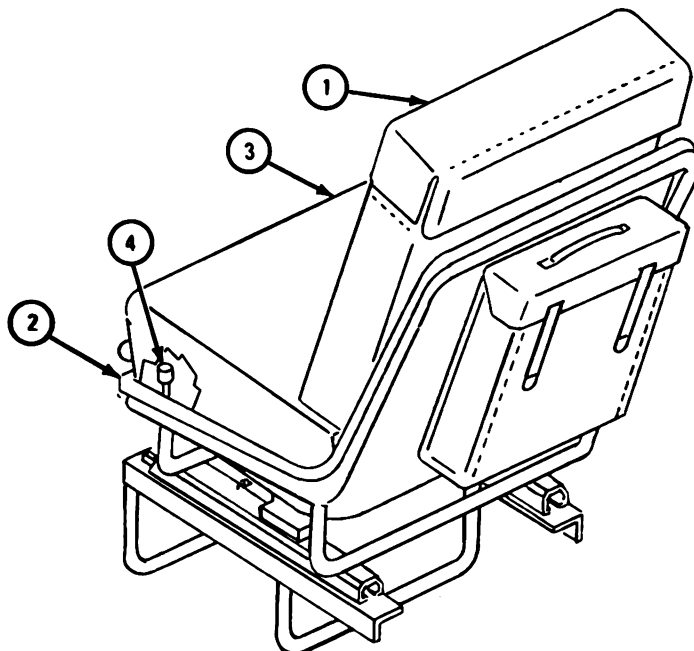
a. Preliminary Procedure. Remove left seat assembly. Refer to TM 9-2320-242-20.

b. Disassembly.

FRAME 1

1. Slide backrest cushion (1) up and off seat shell (2).
2. Unsnap seat cushion (3) from two studs (4) and take seat cushion off seat shell (2).

GO TO FRAME 2

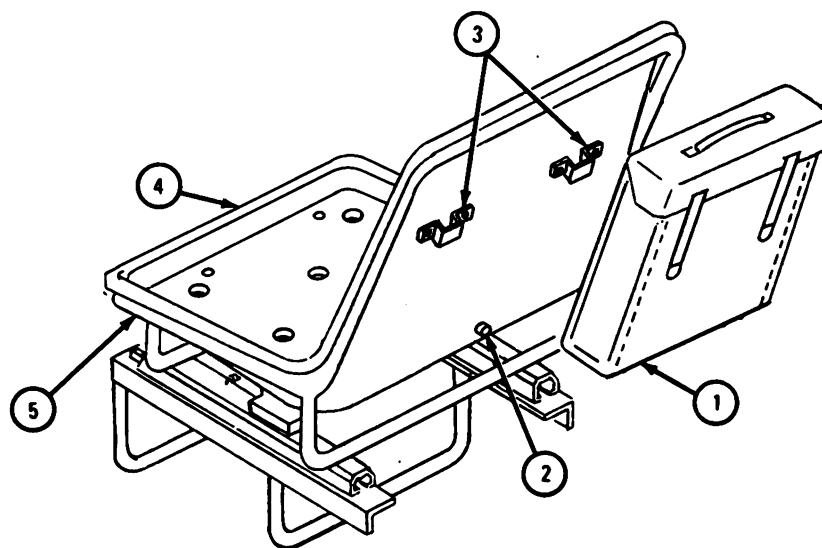


TA 084706

FRAME 2

1. Unsnap pamphlet bag (1) from stud (2) and lift bag off brackets (3).
2. Take seat shell (4) from seat frame (5).

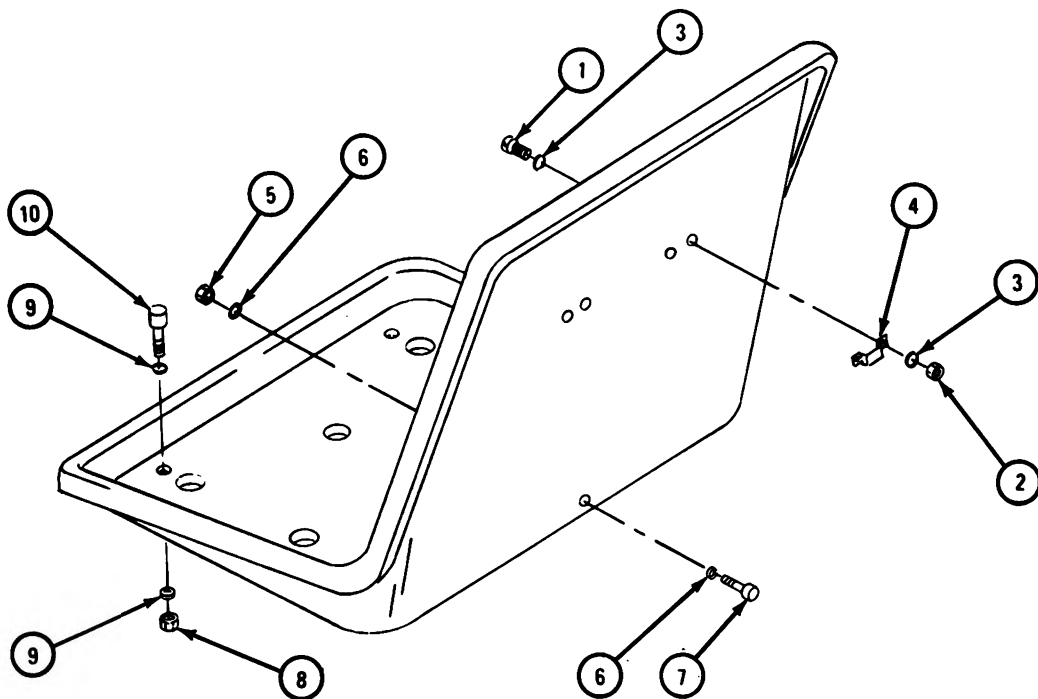
GO TO FRAME 3



TA 084707

FRAME 3

1. Take out four phillips screws (1), four nuts (2), and eight washers (3). Take off two brackets (4).
 2. Take off nut (5) and two washers (6). Take out stud (7).
 3. Take off two nuts (8) and four washers (9). Take out two front studs (10).
- GO TO FRAME 4

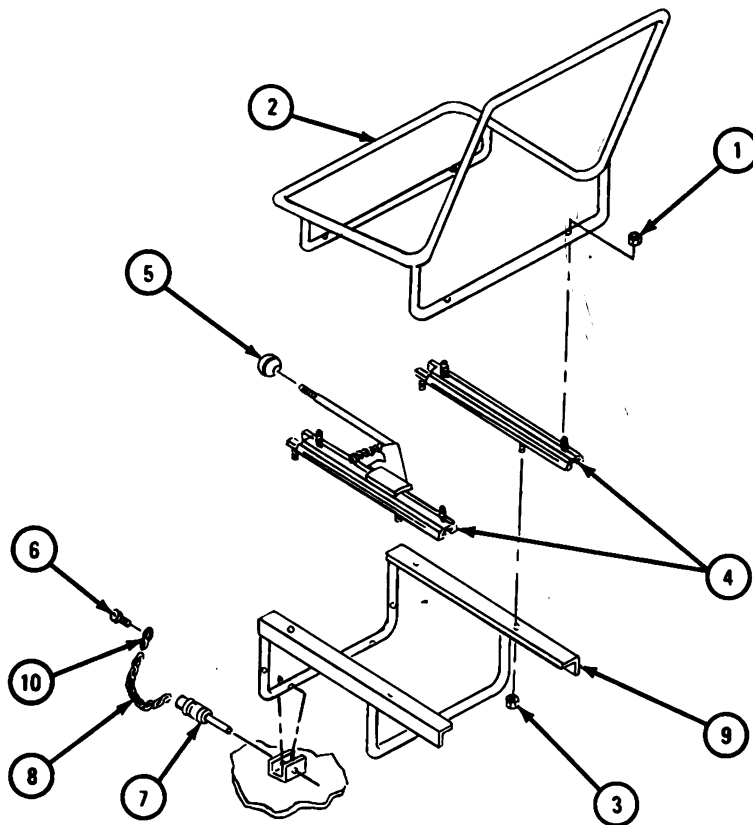


TA 084708

FRAME 4

1. Take off four nuts (1) and seat frame (2).
2. Take off four nuts (3) and two adjusters (4).
3. Take off ball adjuster (5).
4. Take out two screws (6), pins (7), and chains (8). Take off support assembly (9).
5. Take off pin (7) and hook (10) from each chain (8).

END OF TASK



TA 084709

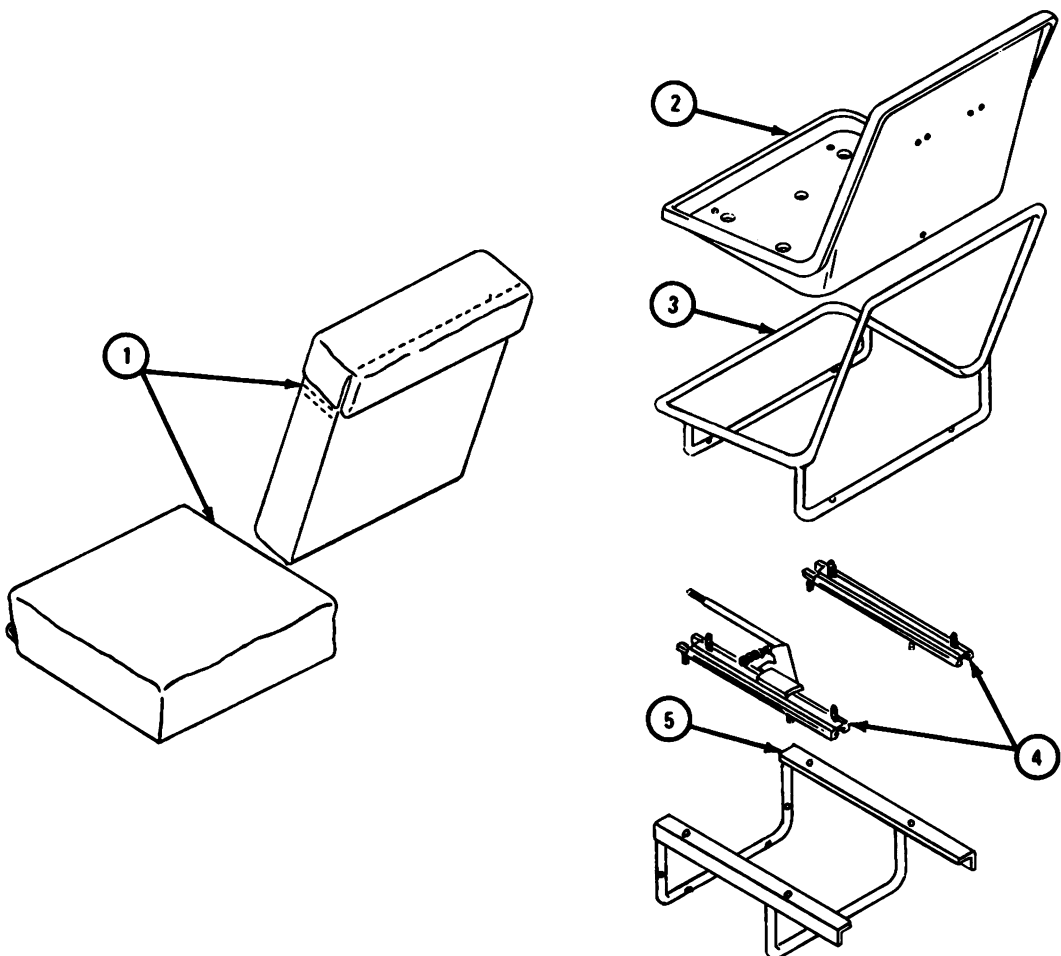
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that seat and backrest cushions (1) are not ripped or torn. Repair damaged cushions. Refer to FM 10-16.
2. Check that seat shell (2), seat frame (3), adjusters (4), and support assembly (5) are not dented, bent, or cracked. Straighten bent or dented parts. Refer to FM 43-2. Weld cracked parts. Refer to TM 9-237.

END OF TASK



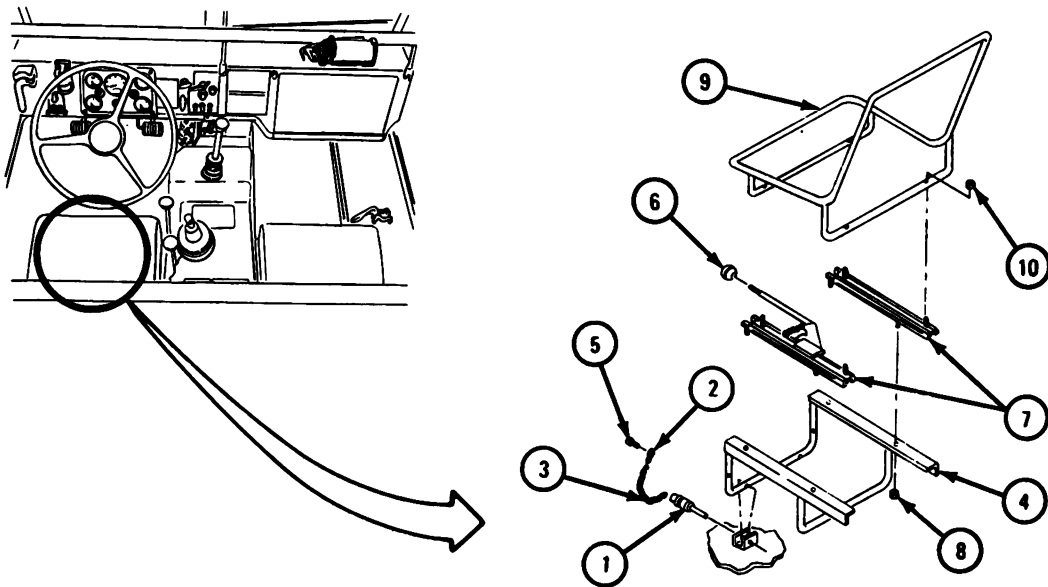
TA 084986

e. Assembly.

FRAME 1

1. Put pin (1) and hook (2) on each of two chains (3).
2. Put two pins (1) and chains (3) through support assembly (4). Put in screw (5).
3. Put on ball adjuster (6).
4. Put two adjusters (7) on support assembly (4). Put on four nuts (8).
5. Put seat frame (9) in place and put on four nuts (10).

GO TO FRAME 2

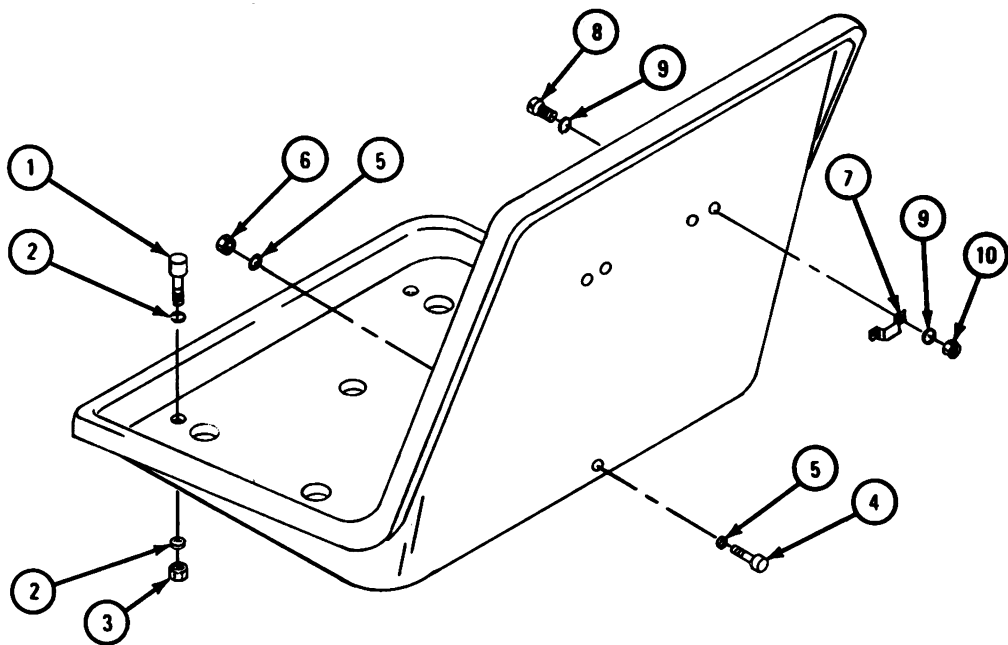


TA 084710

FRAME 2

1. Put on two studs (1), four washers (2), and two nuts (3).
2. Put on rear stud (4), two washers (5), and nut (6).
3. Put two brackets (7) in place. Put in four screws (8), eight washers (9), and four nuts (10).

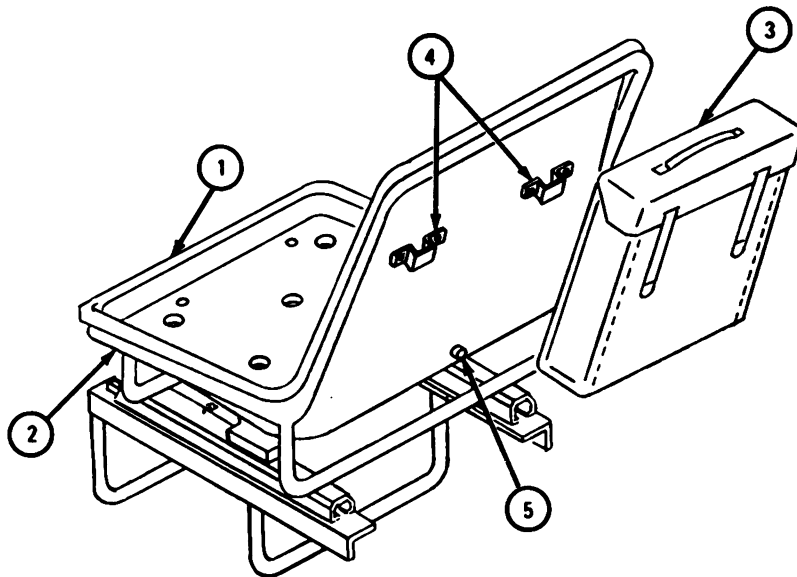
GO TO FRAME 3



TA 084711

FRAME 3

1. Put seat shell (1) on seat frame (2).
 2. Put pamphlet bag (3) on brackets (4) and snap bag onto stud (5).
- GO TO FRAME 4



TA 084712

FRAME 4

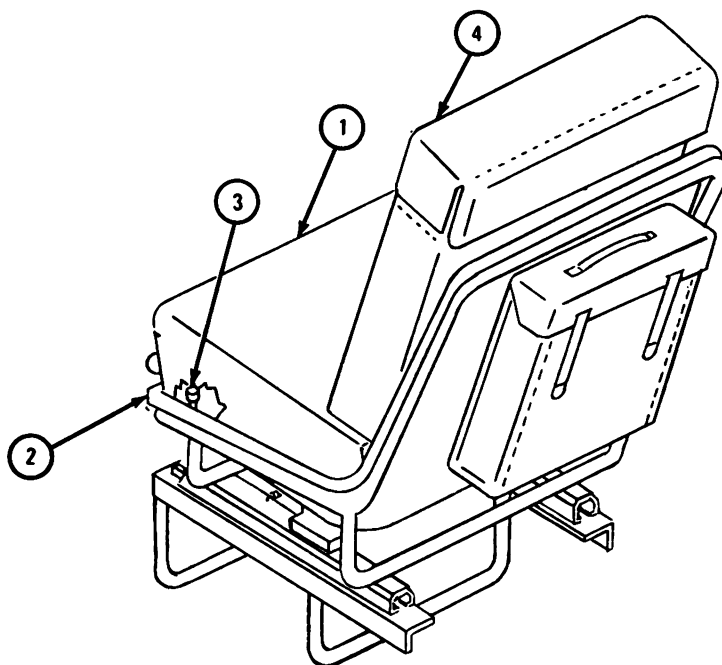
1. Place seat cushion (1) on seat shell (2). Snap cushion on two studs (3).
2. Slide backrest cushion (4) over seat shell (2).

NOTE

Follow-on Maintenance Action Required:

Replace left seat assembly. Refer to TM 9-2320-242-20.

END OF TASK



TA 084713

15-19. TRACTOR RIGHT SEAT ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

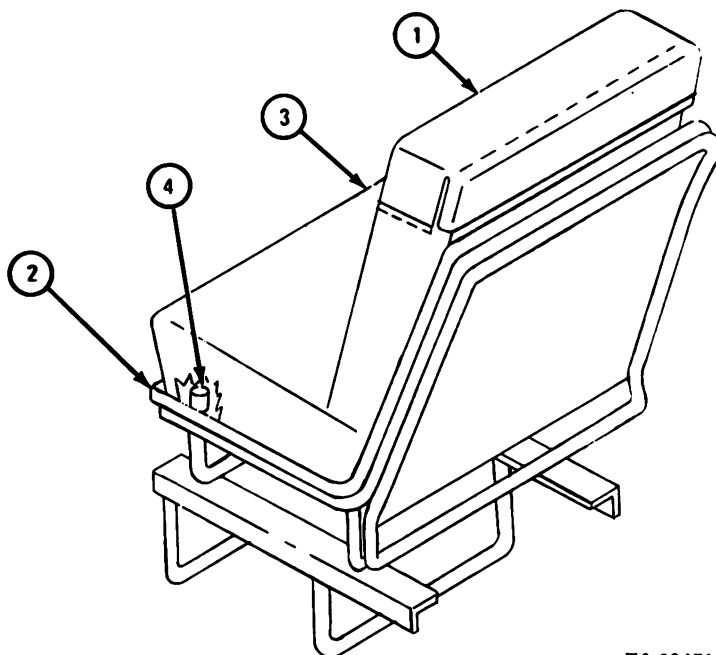
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove right seat assembly. Refer to TM 9-2320-242-20.

b. Disassembly.

FRAME 1

1. Slide backrest cushion (1) up and off seat shell (2).
 2. Unsnap seat cushion (3) from two studs (4). Take off seat cushion.
- GO TO FRAME 2

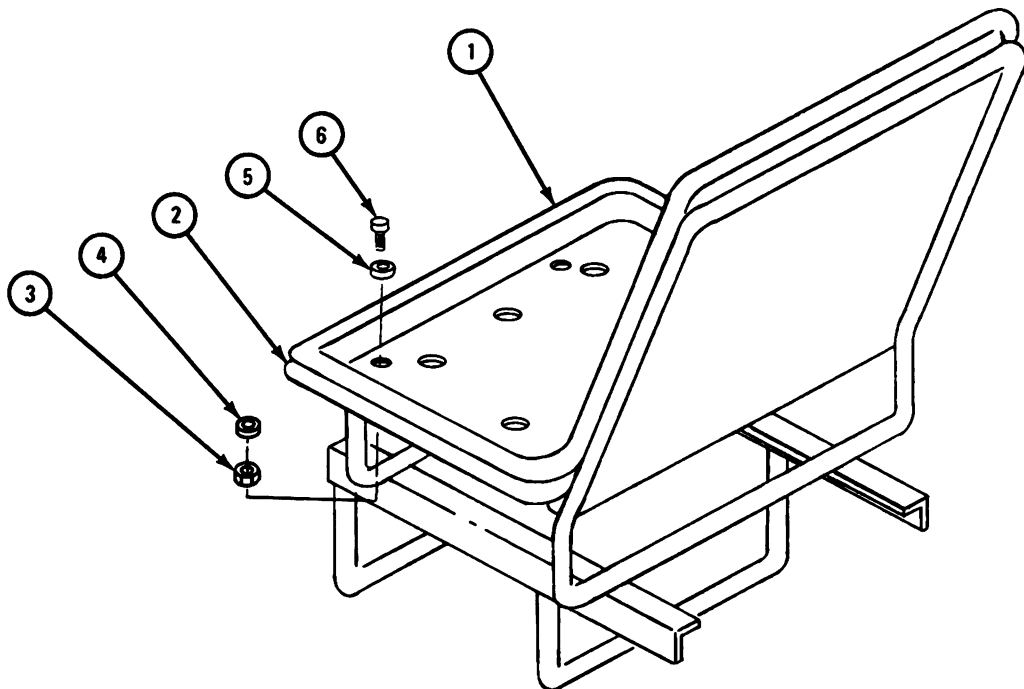


TA 084714

FRAME 2

1. Take seat shell (1) from seat frame (2).
2. Take off two nuts (3), four washers (4 and 5), and two studs (6) from seat shell (1).

GO TO FRAME 3

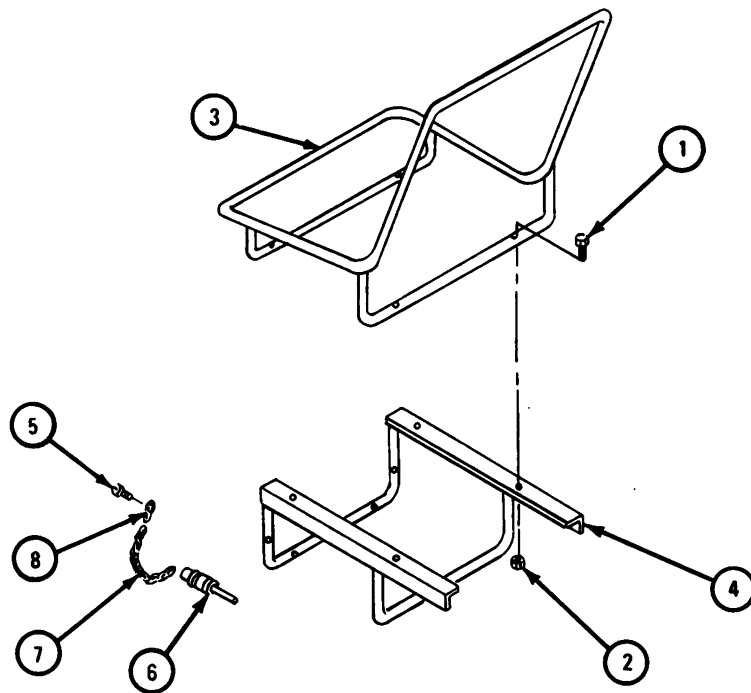


TA 084715

FRAME 3

1. Take off four screws (1) and nuts (2).
2. Take seat frame (3) off support assembly (4).
3. Take out two screws (5).
4. Take off two pins (6) and chains (7) from support assembly (4).
5. Take pin (6) and hook (8) off each of two chains (7).

END OF TASK



TA 084716

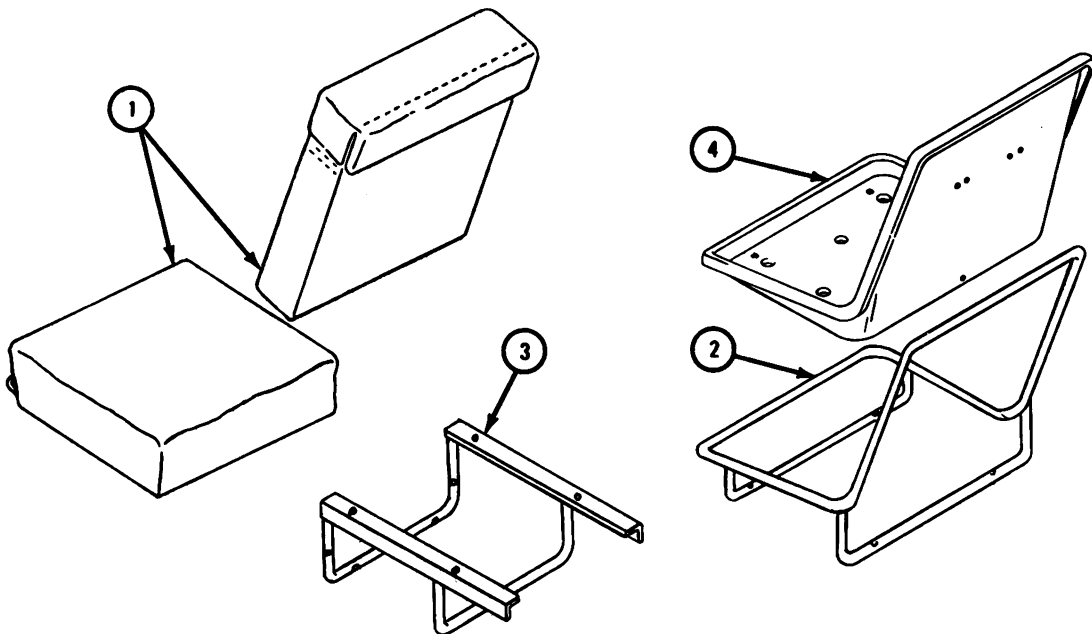
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that cushions (1) are not ripped or torn. Repair damaged cushions (1). Refer to FM 10-16.
2. Check to see that seat frame (2), support assembly (3), and seat shell (4) are not dented, bent, or cracked.
3. Straighten bends or dents in seat frame (2), support assembly (3), and seat shell (4). Refer to FM 43-2.
4. Weld cracks in seat frame (2), support assembly (3), and seat shell (4). Refer to TM 9-237.

END OF TASK



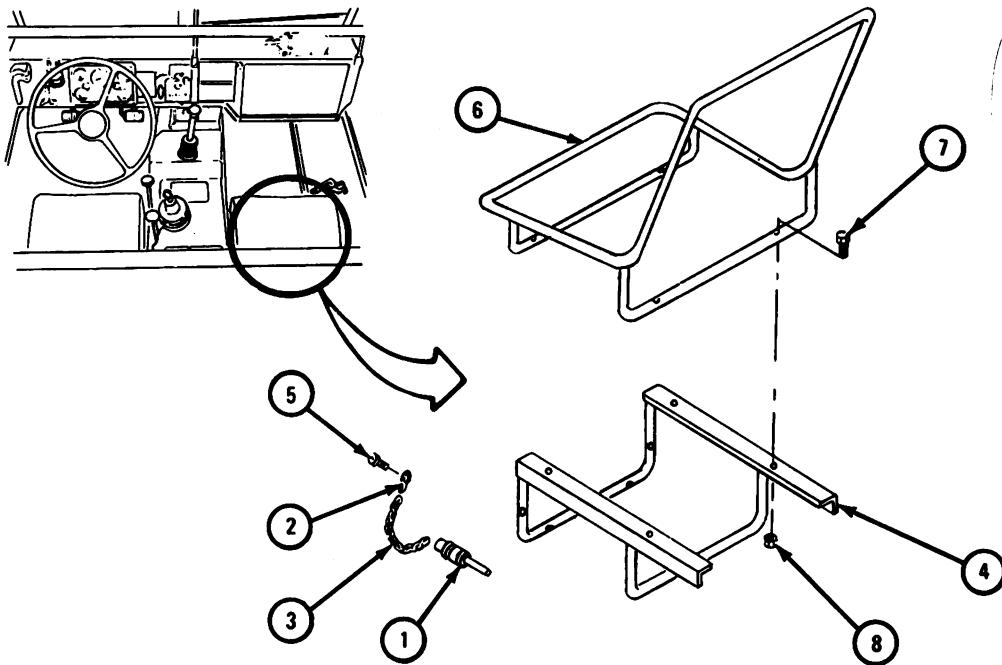
TA 084985

e. Assembly.

FRAME 1

1. Put two pins (1) and hooks (2) on two chains (3).
2. Put two pins (1) and chains (3) on support assembly (4).
3. Put in two screws (5).
4. Place seat frame (6) on support assembly (4).
5. Put in four screws (7) and nuts (8).

GO TO FRAME 2

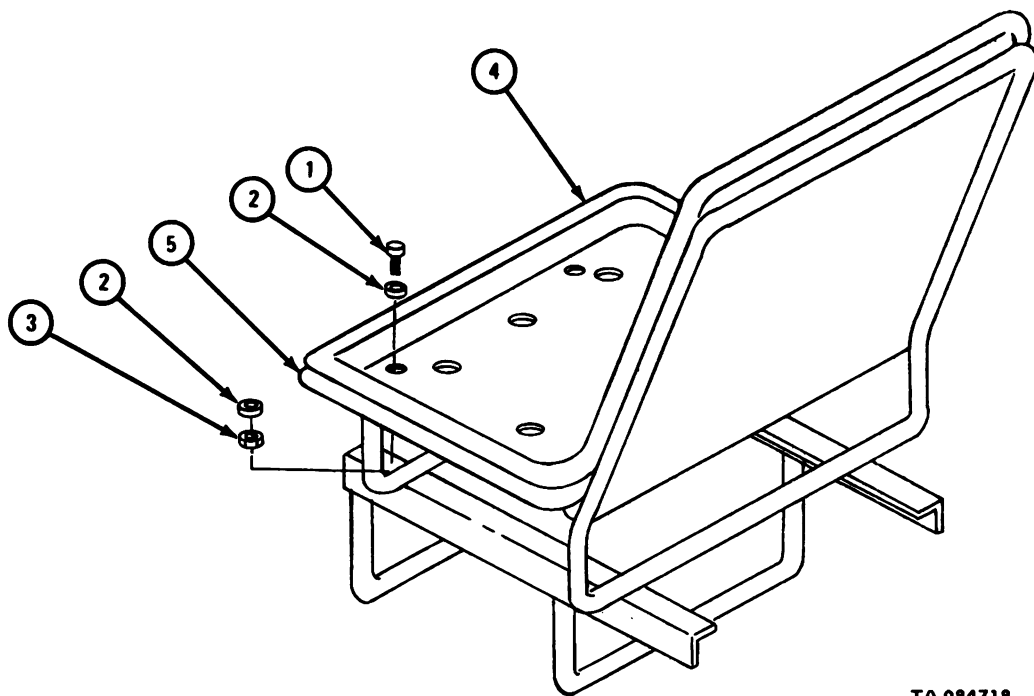


TA 084717

FRAME 2

1. Put two studs (1) with four washers (2) and two nuts (3) into seat shell (4).
2. Put seat shell (4) on seat frame (5).

GO TO FRAME 3



TA 084718

FRAME 3

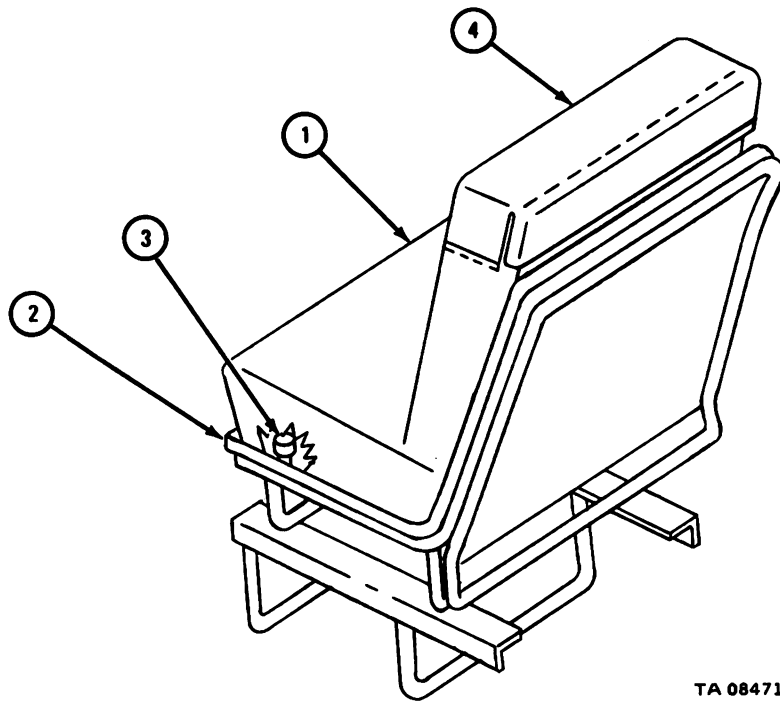
1. Put seat cushion (1) on seat shell (2).
2. Snap seat cushion (1) onto two studs (3).
3. Slide backrest cushion (4) down on back of seat shell (2).

NOTE

Follow-on Maintenance Action Required:

Replace right seat assembly. Refer to TM 9-2320-242-20.

END OF TASK



TA 084719

Section IV. CARRIER BODY COMPONENTS

15-20. ACCESS PANELS REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Access panel gasket

PERSONNEL: One

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

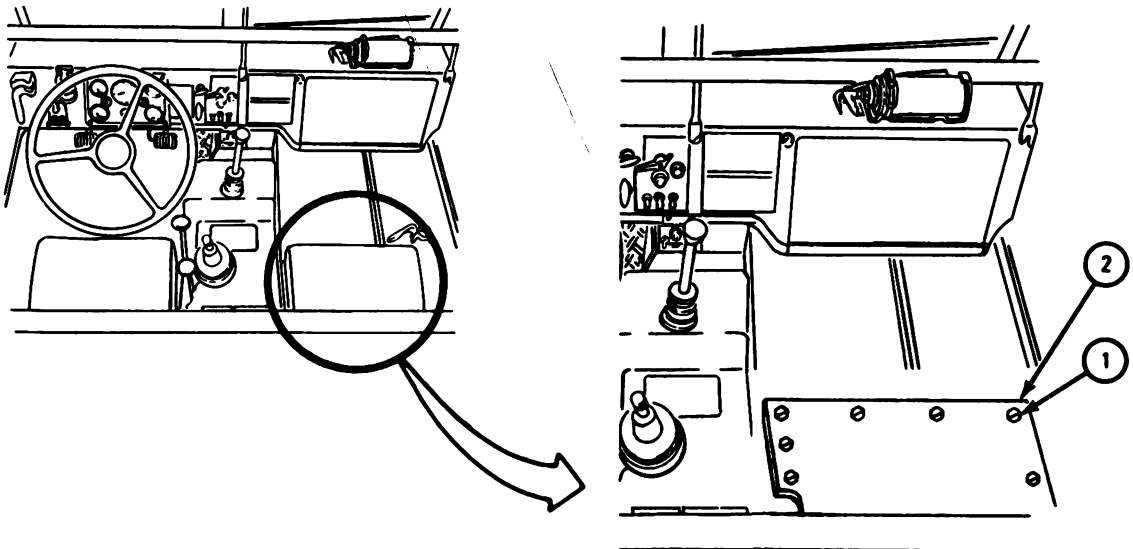
a. Preliminary Procedure. Remove tractor companion seat. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Take out 18 screws (1).
2. Take off access panel (2).

GO TO FRAME 2



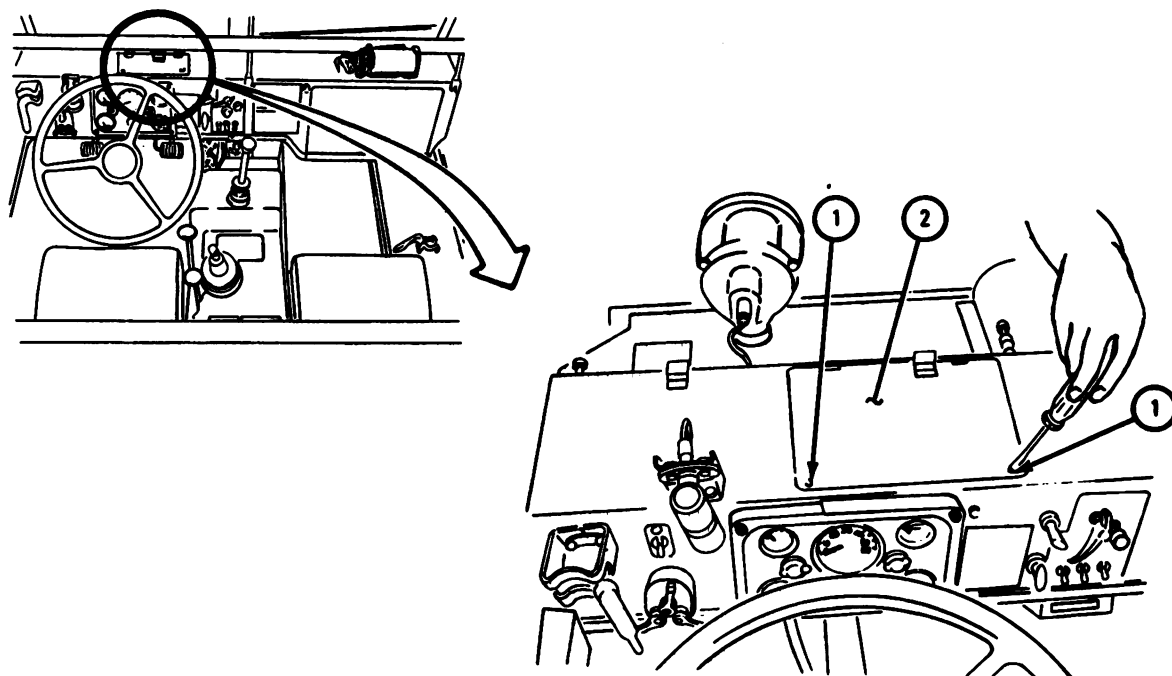
TA 084824

FRAME 2

1. Twist two fasteners (1) until they unlock.

2. Take off access panel (2).

GO TO FRAME 3

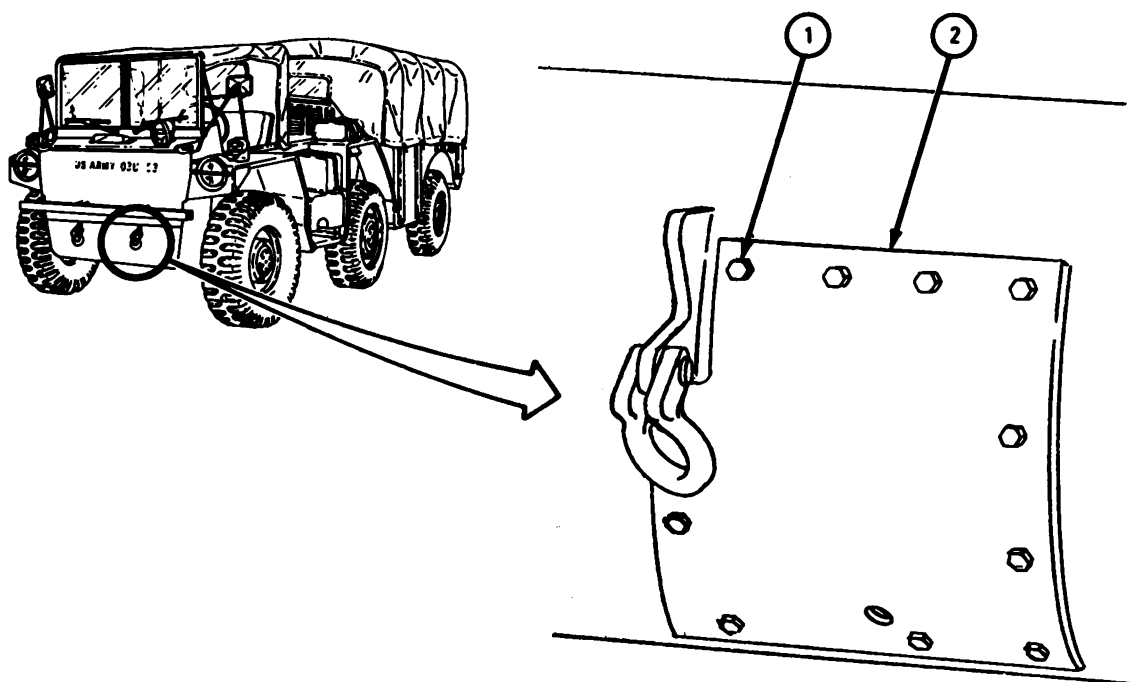


TA 084825

FRAME 3

1. Take out 11 screws (1).
2. Take off access panel (2).

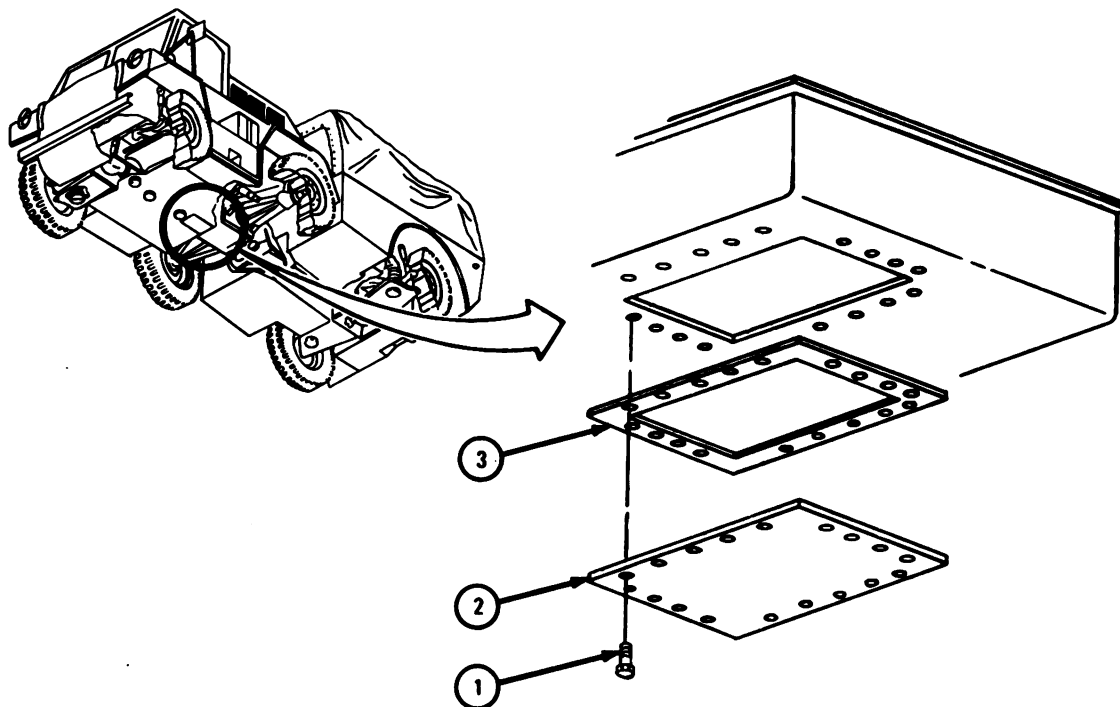
GO TO FRAME 4



TA 084826

FRAME 4

1. Take out 18 screws (1).
 2. Take off access panel (2) and gasket (3). Throw away gasket.
- GO TO FRAME 5

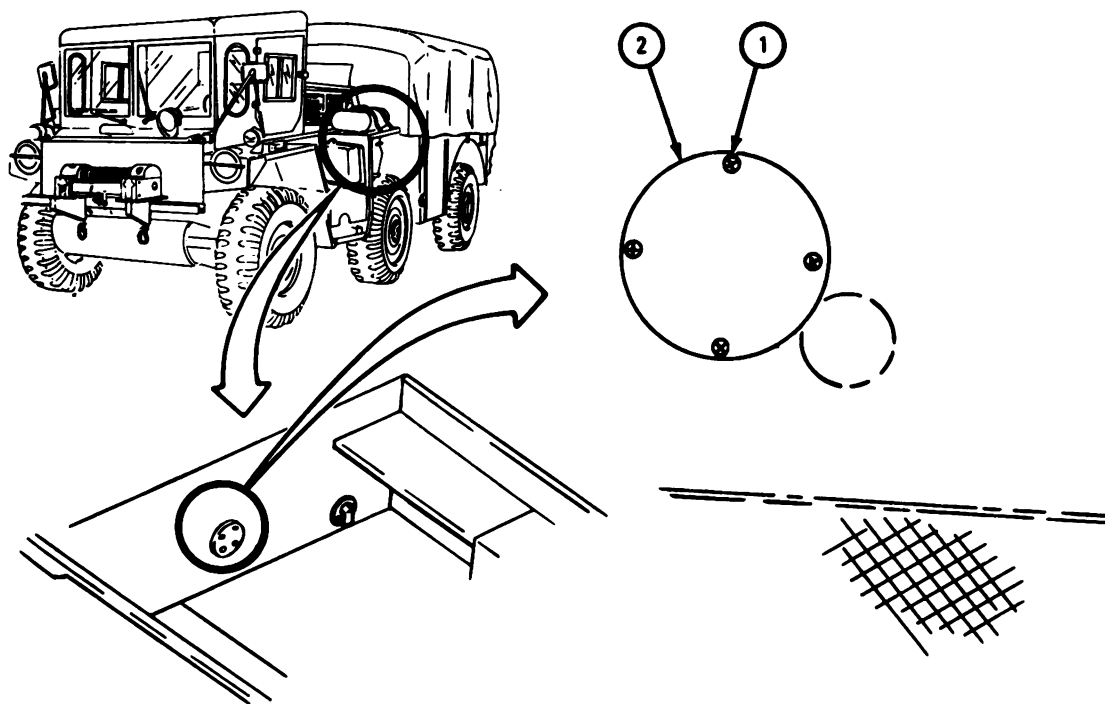


TA 084827

FRAME 5

1. Open carrier tailgate. Refer to TM 9-2320-242-10.
2. At front wall of carrier, take out four screws (1).
3. Take off access panel (2).

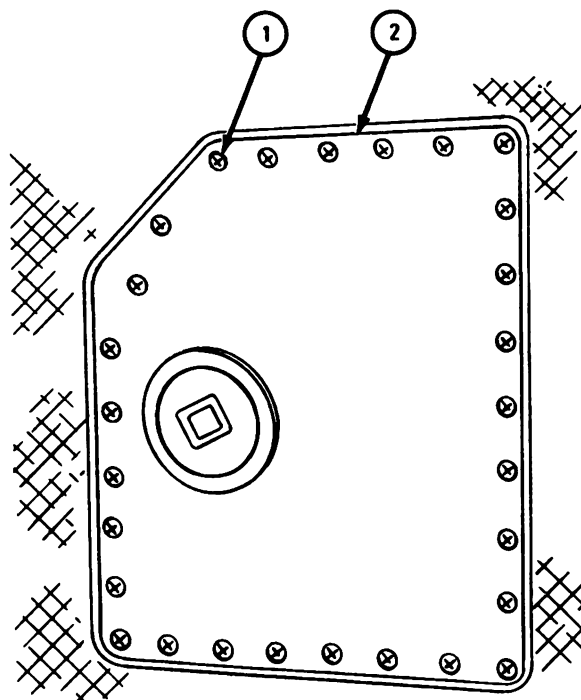
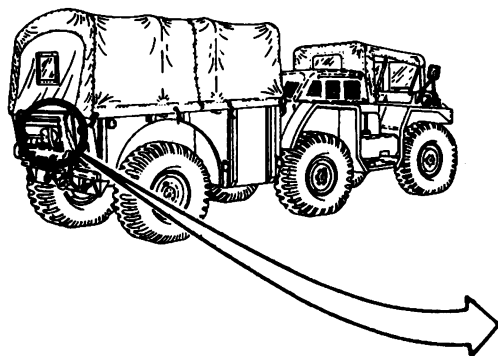
GO TO FRAME 6



TA 101336

FRAME 6

1. Working in carrier, take out 28 screws (1).
 2. Take off access panel (2).
- GO TO FRAME 7**

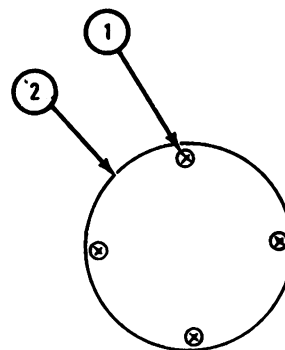
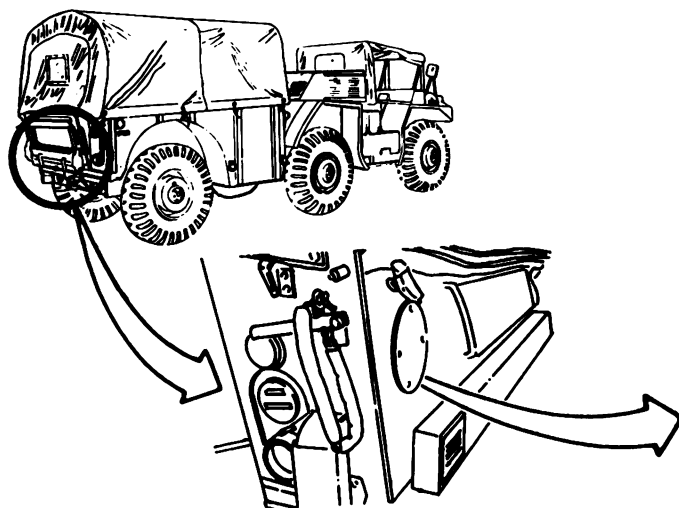


TA 101337

FRAME 7

1. Take out four screws (1).
2. Take off access cover (2).
3. Do steps 1 and 2 again for right access panel.

END OF TASK



TA 101338

c. Cleaning, Inspection, and Repair.

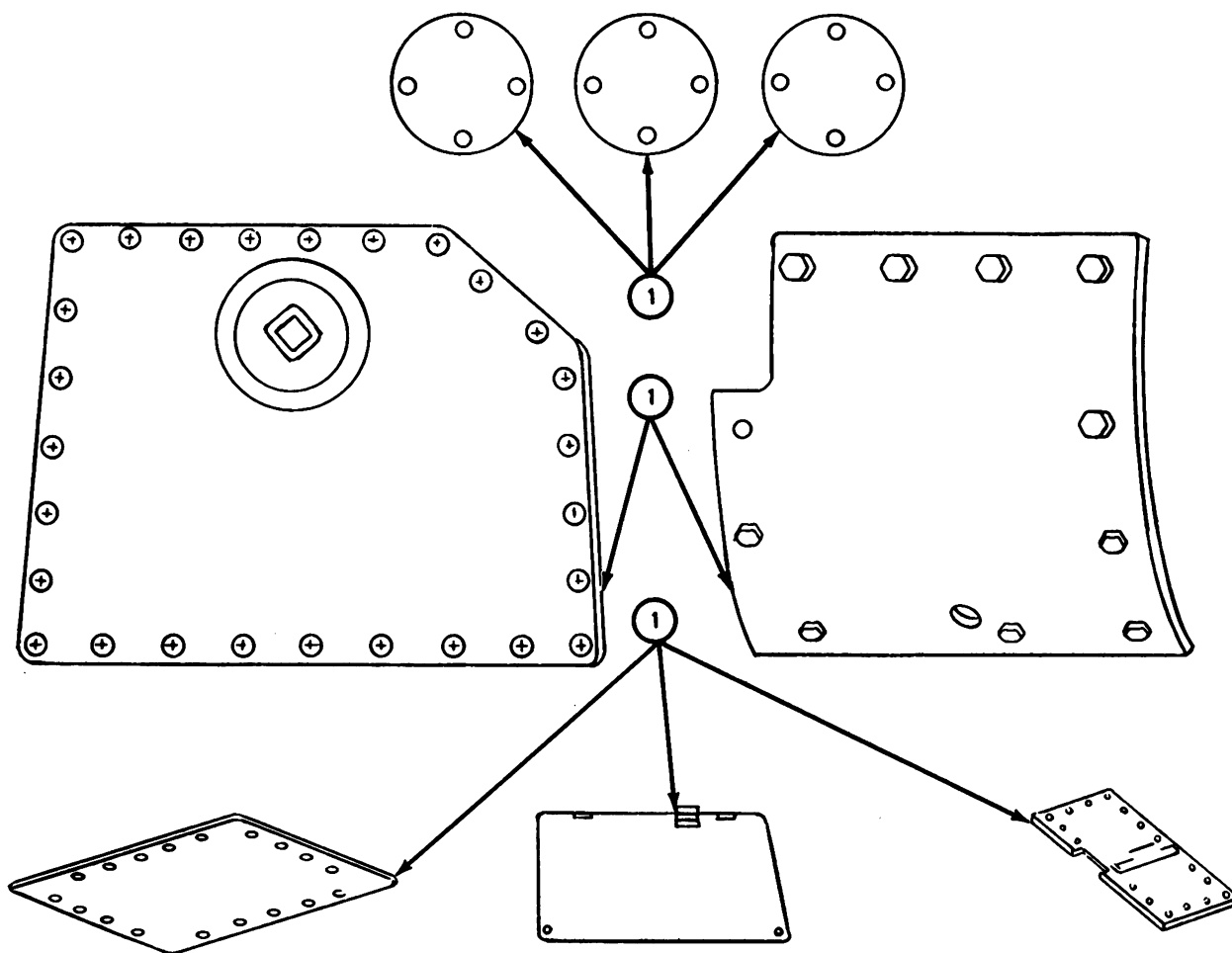
(1) Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair.

FRAME 1

1. Check that access plates (1) are not bent, dented, cracked or torn.
2. Straighten any dents or bends in access plates (1). Refer to FM 43-2.
3. Weld any cracks or tears in access plates (1). Refer to TM 9-237.

END OF TASK

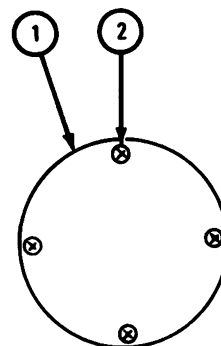
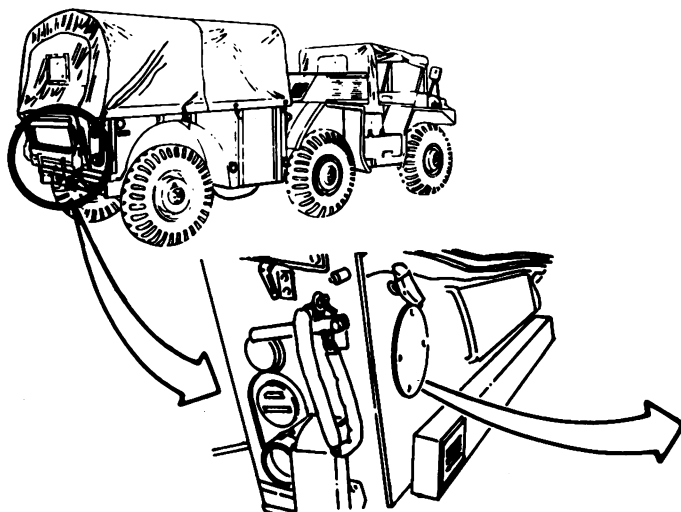


TA 101339

d. Replacement.

FRAME 1

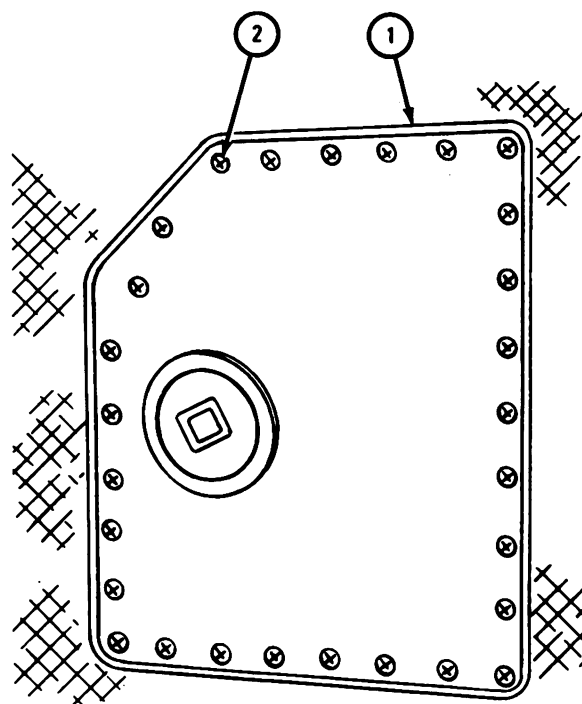
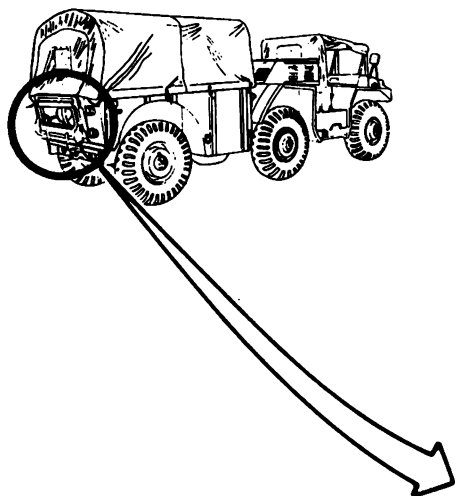
1. Put access panel (1) in place.
 2. Put in four screws (2).
 3. Do steps 1 and 2 again for right access panel.
- GO TO FRAME 2



TA 101340

FRAME 2

1. Put access panel (1) in place.
 2. Put in 28 screws (2).
- GO TO FRAME 3**

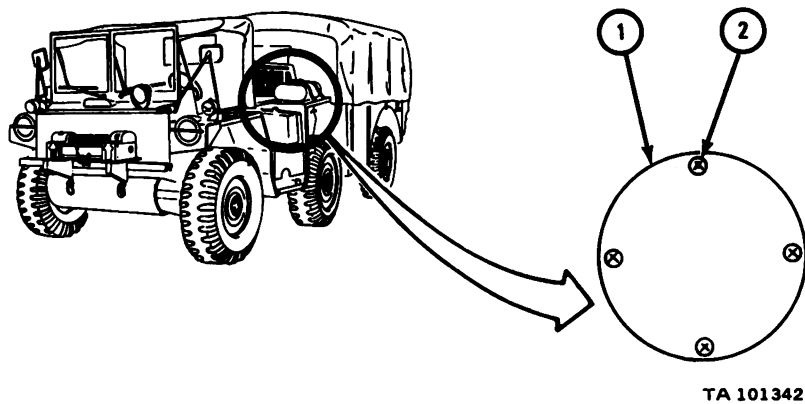


TA 101341

FRAME 3

1. Working at front wall of carrier, put on access panel (1).
2. Put in four screws (2).
3. Close tailgate. Refer to TM 9-2320-242-10.

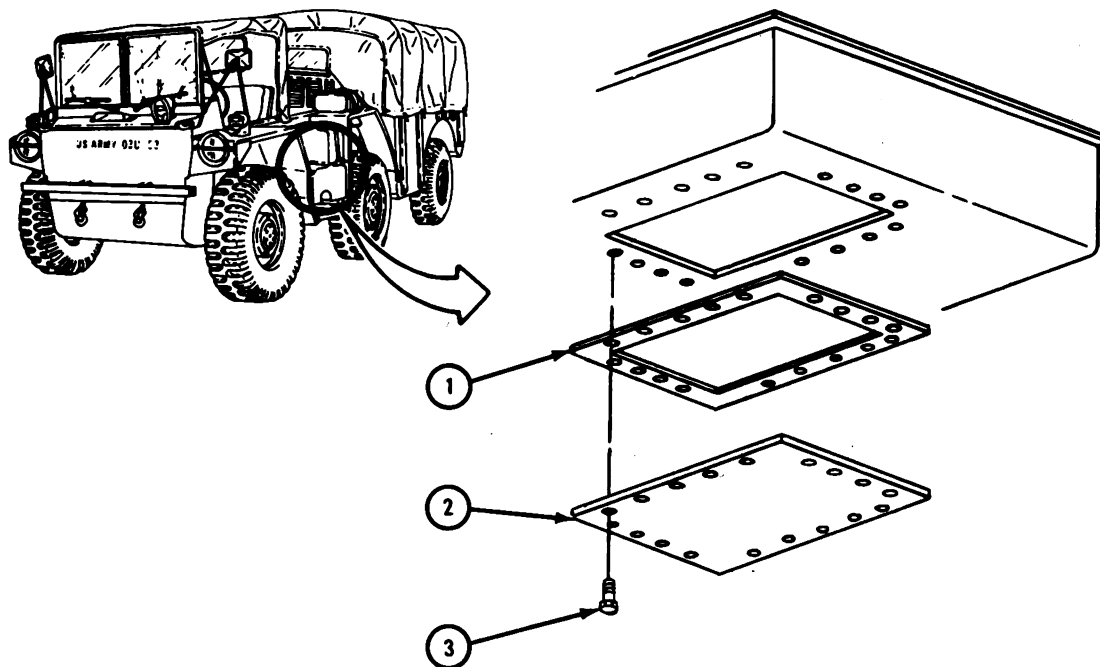
GO TO FRAME 4



FRAME 4

1. Put gasket (1) and access panel (2) in place.
2. Put in 18 screws (3).

GO TO FRAME 5

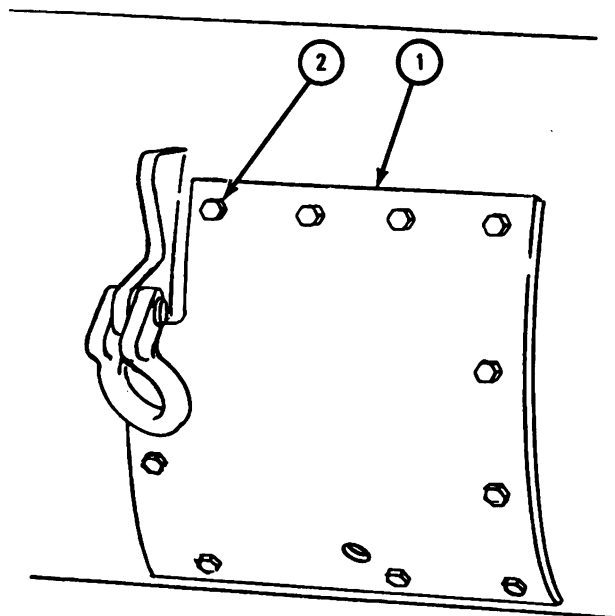
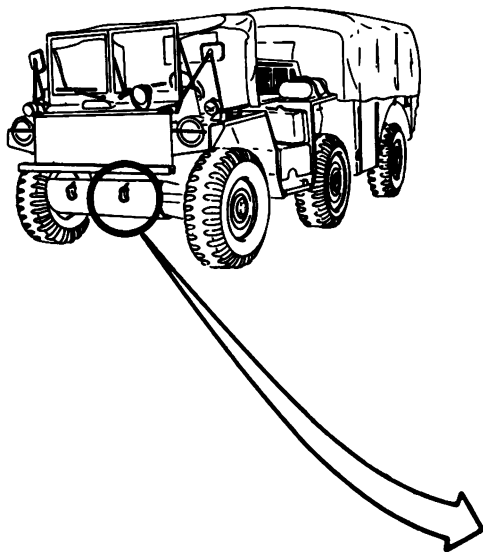


TA 101343

FRAME 5

1. Put access panel (1) in place.
2. Put in 11 screws (2).

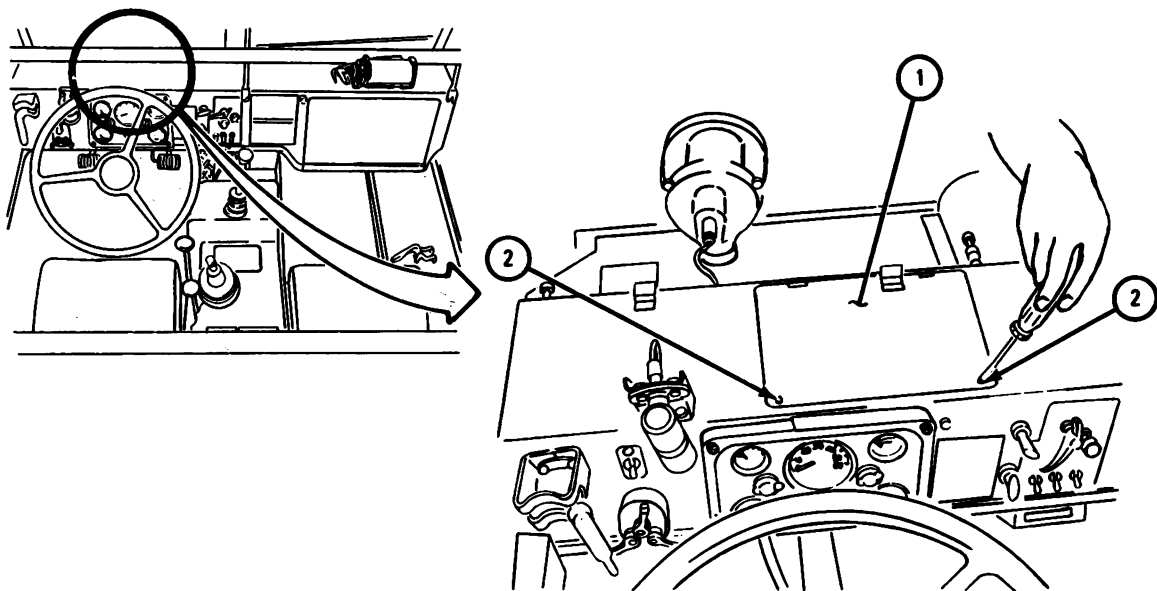
GO TO FRAME 6



TA 101344

FRAME 6

1. Put access panel (1) in place.
 2. Twist two fasteners (2) until they lock.
- GO TO FRAME 7



TA 101345

FRAME 7

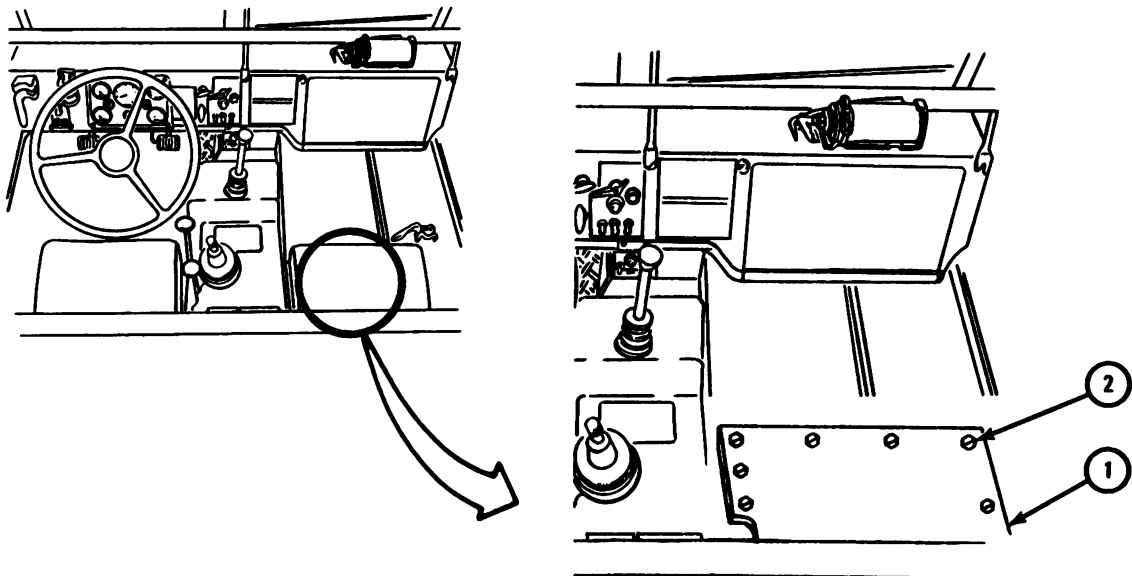
1. Put access panel (1) in place.
2. Put in 18 screws (2).

NOTE

Follow-on Maintenance Action Required:

Replace tractor companion seat. Refer to TM 9-2320-242-20.

END OF TASK



TA 101346

15-21. TAILGATE AND PIONEER BRACKETS REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove tailgate. Refer to TM 9-2320-242-20.
- 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

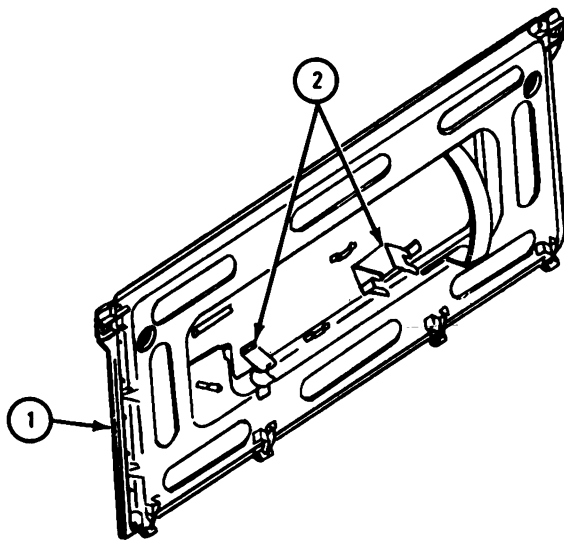
1. Check that tailgate (1) and pioneer brackets (2) are not bent, dented, or cracked. Repair by straightening or welding. Refer to FM 43-2 or TM 9-237.

NOTE

Follow-on Maintenance Action Required:

Replace tailgate. Refer to TM 9-2320-242-20.

END OF TASK



TA 084747

15-22. AMBULANCE TAILGATE STEP AND BRACKET REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove tailgate step and bracket. Refer to TM 9-2320-242-20.

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

c. Inspection and Repair.

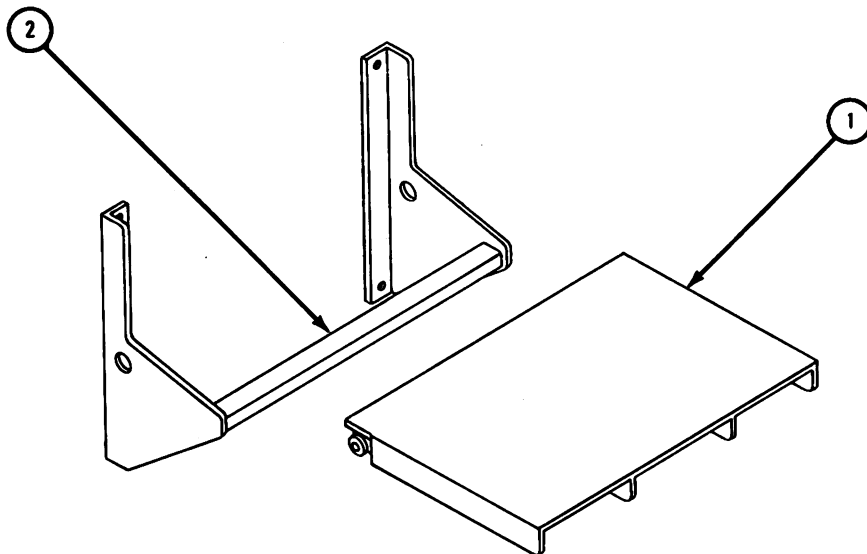
FRAME 1

1. Check that tailgate step (1) and bracket (2) are not dented, bent, or cracked.
2. Repair dents or bends in tailgate step (1) or bracket (2) by straightening. Refer to FM 43-2.
3. Repair cracks in tailgate step (1) or bracket (2) by welding. Refer to TM 9-237.

NOTE

Follow-on Maintenance Action Required:

Replace tailgate step and bracket. Refer to TM 9-2320-242-20.

END OF TASK

TA 084748

15-23. AMBULANCE DISPENSER BRACKET ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

a. Preliminary Procedure. Remove dispenser bracket from ambulance. Refer to TM 9-2320-242-20.

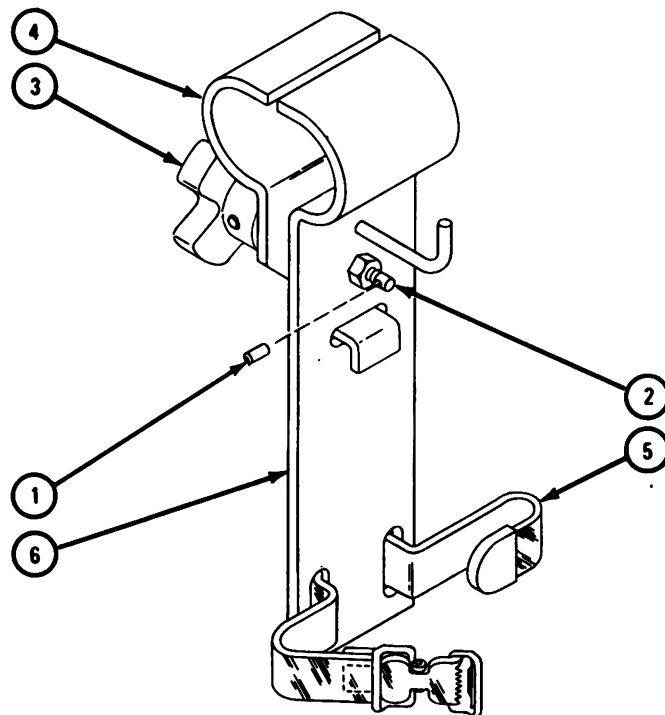
b. Disassembly.

FRAME 1

1. Take out pin (1) from stud (2) and take out knob assembly (3) and clamp (4).

2. Take off strap (5) from bracket (6).

GO TO FRAME 2

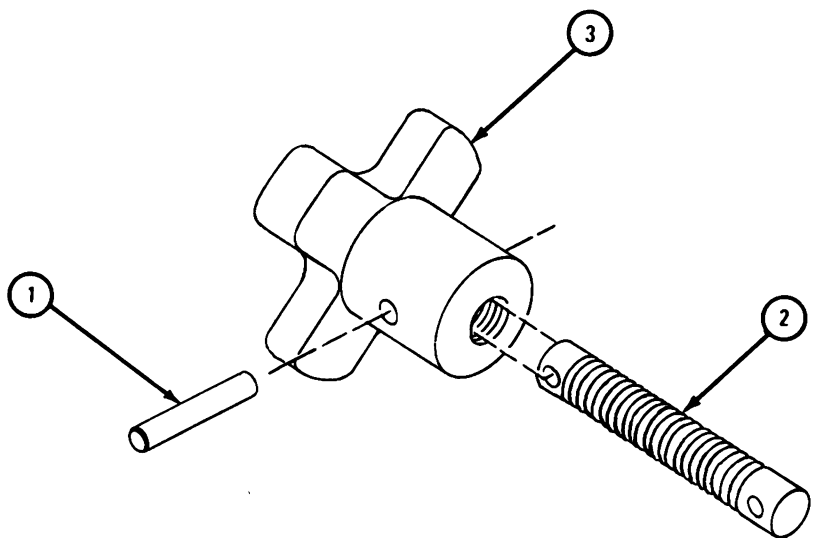


TA 084749

FRAME 2

1. Take out roll pin (1) from stud (2).
2. Take off knob (3) from stud (2).

END OF TASK



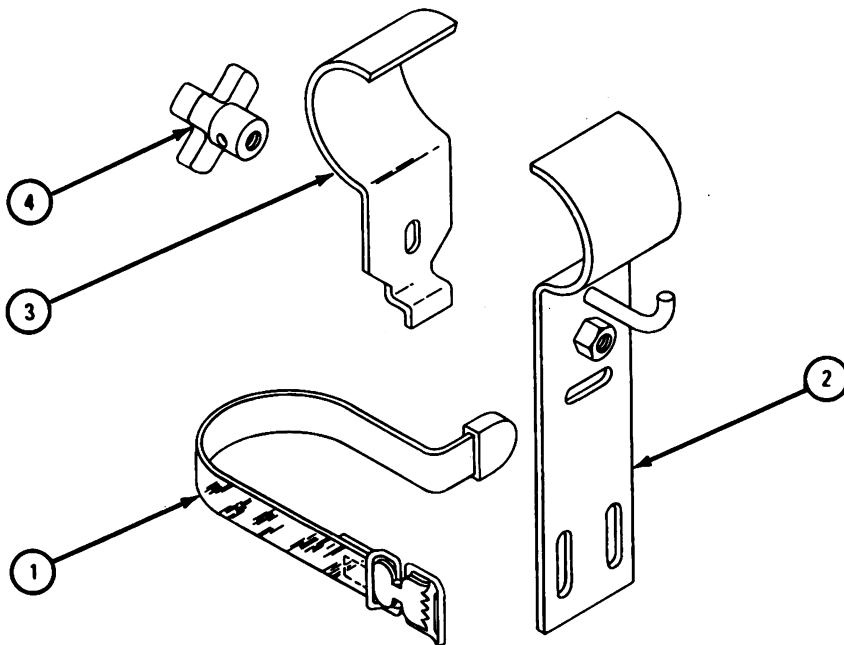
TA 084750

- c. Cleaning. Clean all parts. Refer to Part 1, para 1-3.
- d. Inspection and Repair.

FRAME 1

1. Check that strap (1) is not frayed or torn. If strap is damaged, refer to FM 10-16 for repair of damaged canvas.
2. Check that bracket (2), clamp (3), and knob (4) are not dented, bent, or cracked. If parts are damaged, repair by welding or straightening. Refer to TM 9-237 for welding.

END OF TASK



TA 084751

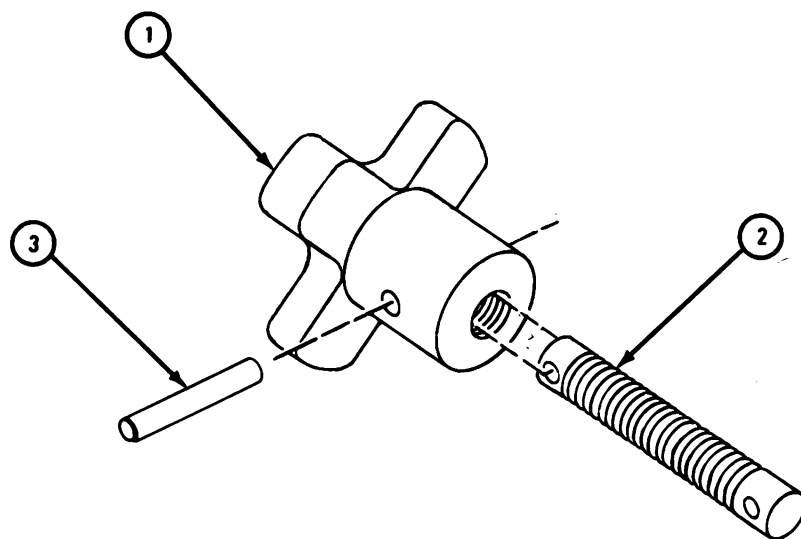
e. Assembly.

FRAME 1

1. Put knob (1) on stud (2).

2. Put in roll pin (3).

GO TO FRAME 2



TA 084752

FRAME 2

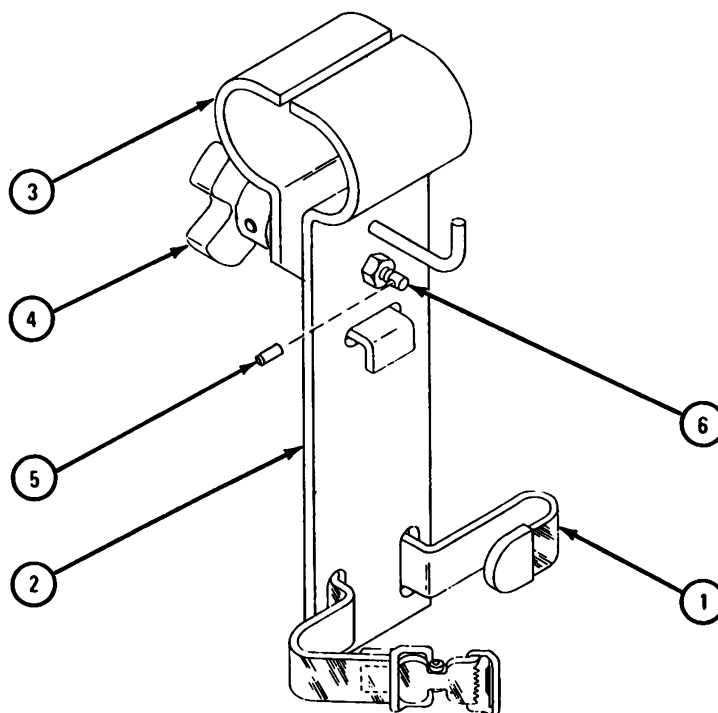
1. Put strap (1) in bracket (2).
2. Put clamp (3) into bracket (2) and put in knob assembly (4).
3. Put pin (5) into stud (6).

NOTE

Follow-on Maintenance Action Required:

Replace dispenser bracket. Refer to TM 9-2320-242-20.

END OF TASK



TA 084753

15-24. AMBULANCE ATTENDANT SEAT REPAIR.

TOOLS: No special tools required

SUPPLIES: Cotter pin

PERSONNEL: One

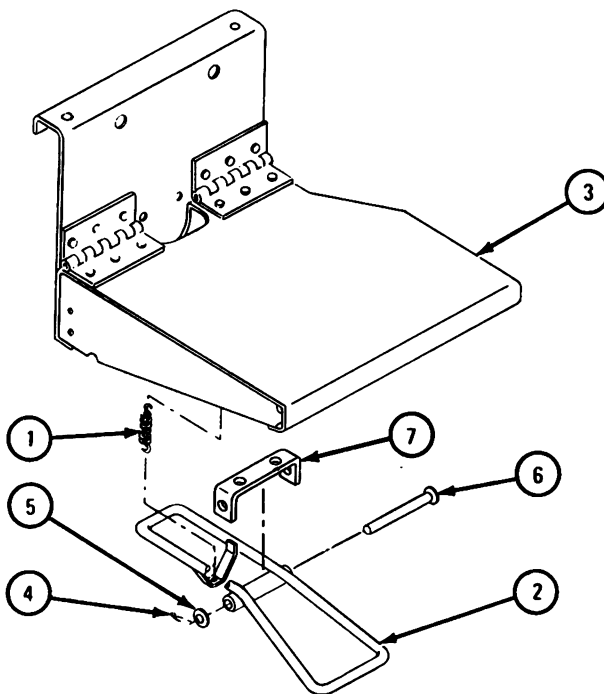
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove attendant seat. Refer to TM 9-2320-242-20.
- b. Disassembly.

FRAME 1

1. Take spring (1) out of handle (2) and seat (3).
2. Take out cotter pin (4), washer (5), and pin (6). Take off handle (2) from bracket (7). Throw away cotter pin.

GO TO FRAME 2

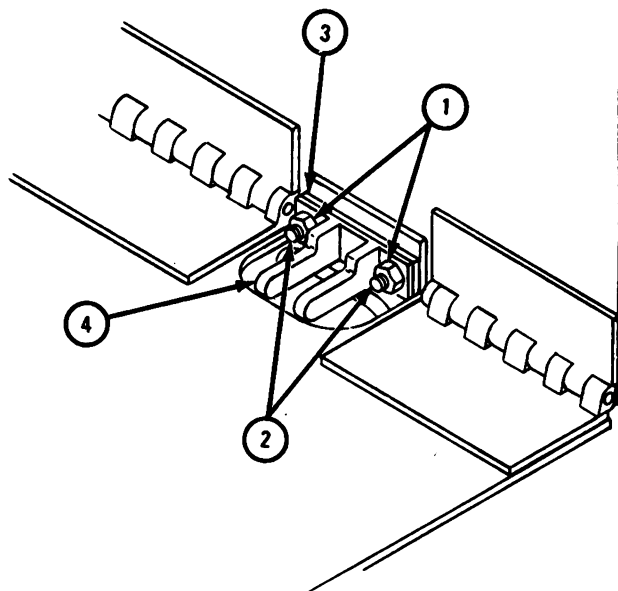


TA 084754

FRAME 2

1. Take off two nuts (1) and take out two screws (2).
2. Take off shims (3) and keeper (4).

END OF TASK



TA 105093

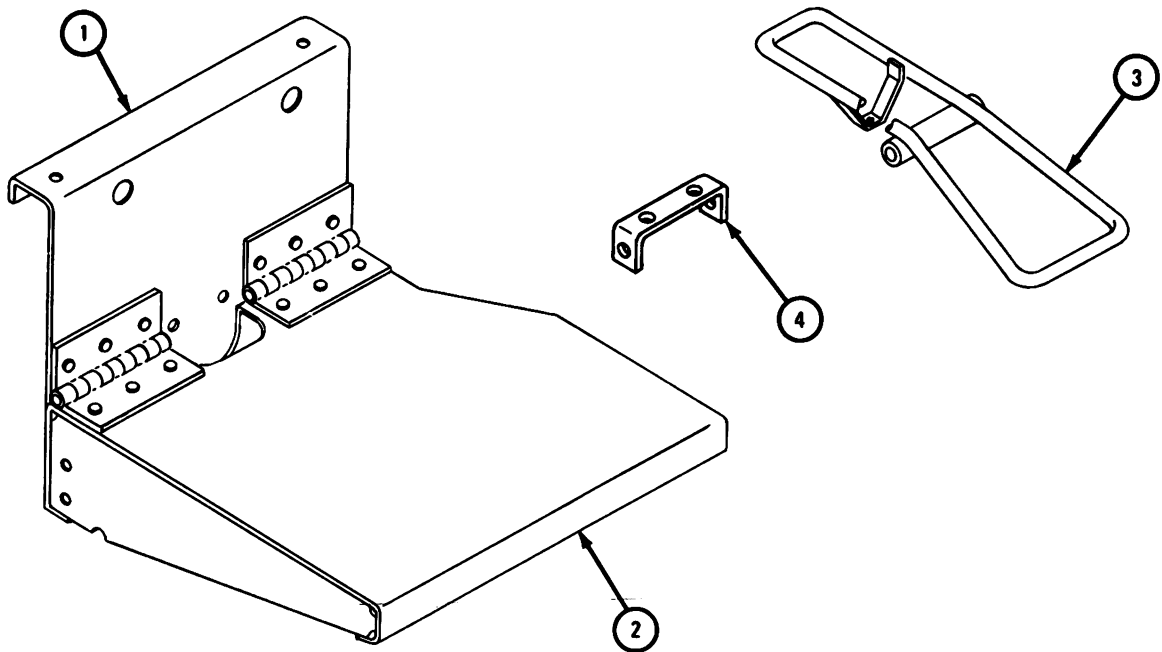
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that seat back (1), seat (2), handle (3), and bracket (4) are not dented, bent, or cracked.
2. Straighten any dents or bends in seat back (1), seat (2), handle (3), and bracket (4). Refer to FM 43-2.
3. Weld any breaks or cracks in seat back (1), seat (2), handle (3), and bracket (4). Refer to TM 9-237.

END OF TASK

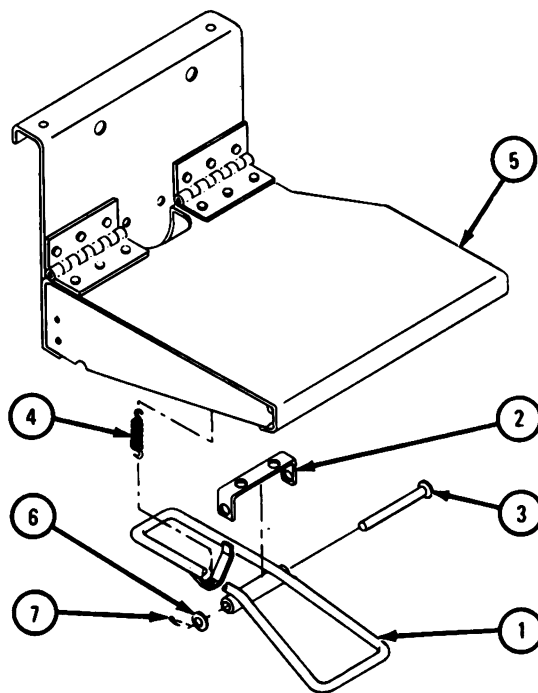


TA 084756

e. Replacement.

FRAME 1

1. Put handle (1) in bracket (2). Put pin (3) through bracket and handle.
 2. Put spring (4) on handle (1) and seat (5).
 3. Put washer (6) on pin (3) and put in cotter pin (7).
- GO TO FRAME 2



TA 084758

FRAME 2

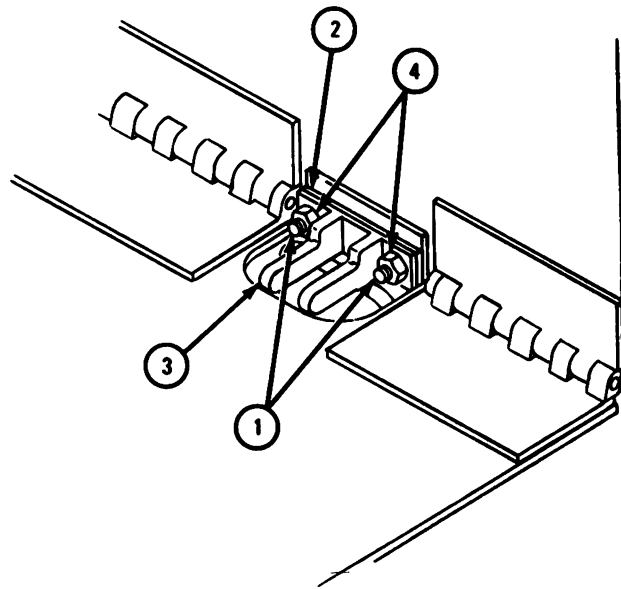
1. Put in two screws (1). Put on shims (2). Put on keeper (3).
2. Put on two nuts (4).

NOTE

Follow-on Maintenance Action Required:

Replace attendant seat. Refer to TM 9-2320-242-20.

END OF TASK



TA 105094

15-25. AMBULANCE CARRIER HEAD PAD ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

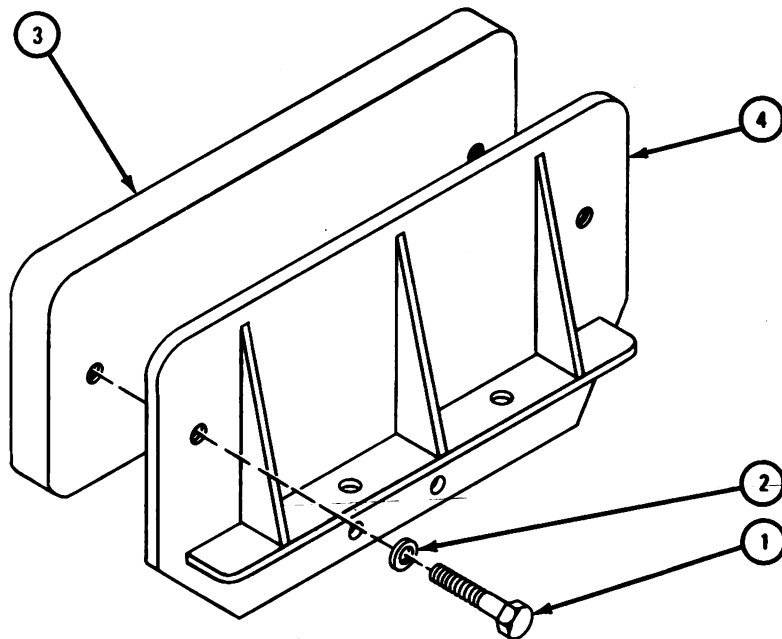
- a. Preliminary Procedure. Remove head pad. Refer to TM 9-2320-242-20.
- b. Disassembly.

FRAME 1

1. Take out two screws (1) and washers (2).

2. Take cushion (3) from bracket (4).

END OF TASK



TA 084759

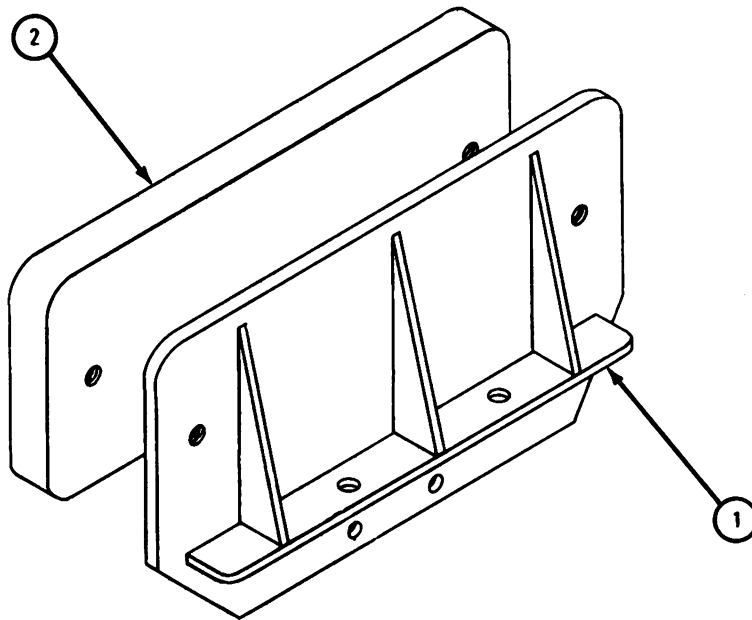
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that bracket (1) is not bent, cracked or broken. If bracket is damaged, repair by straightening or welding. Refer to TM 9-237.
2. Check that cushion (2) is not worn or damaged. If cushion needs repair, refer to FM 10-16.

END OF TASK



TA 084760

e. Assembly.

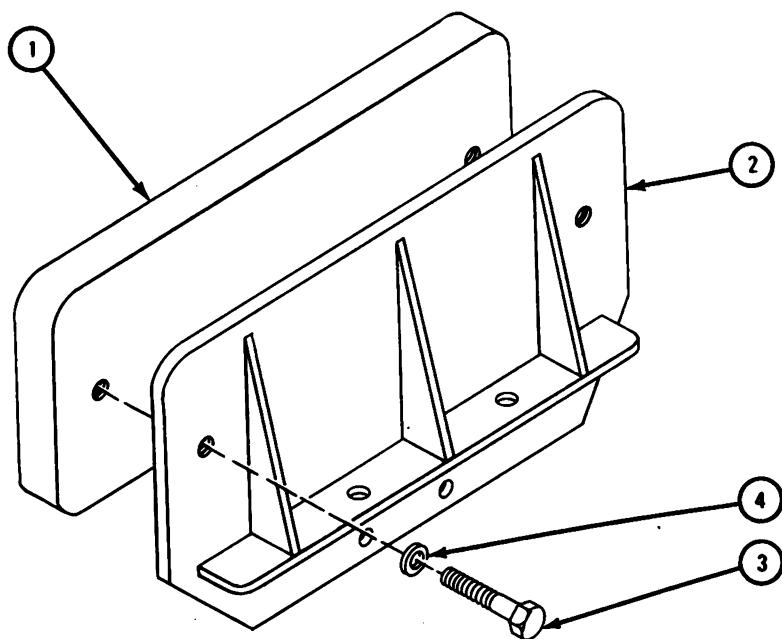
FRAME 1

1. Put cushion (1) on bracket (2).
2. Put in two screws (3) and washers (4).

NOTE

Follow-on Maintenance Action Required:
Replace head pad. Refer to TM 9-2320-242-20.

END OF TASK



TA 084761

15-26. CARRIER TROOP SEAT REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove troop seat. Refer to TM 9-2320-242-20.
- b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.
- c. Inspection and Repair.

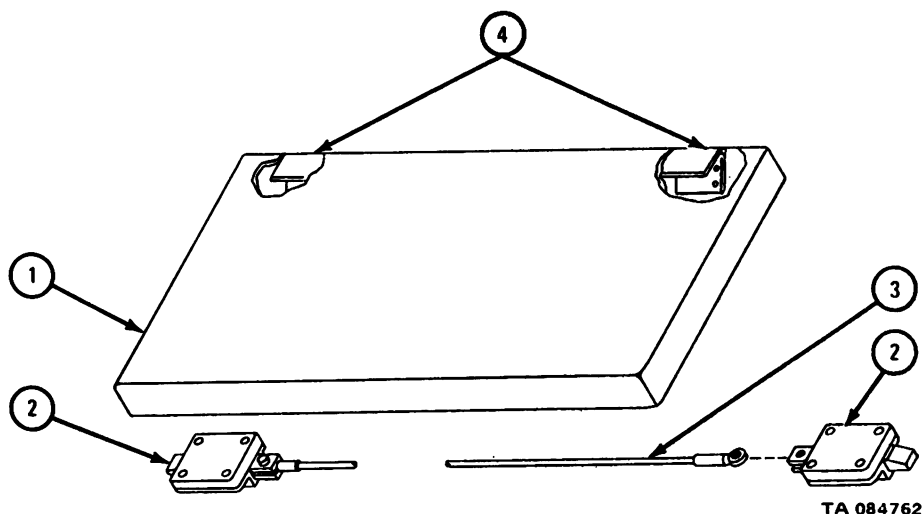
FRAME 1

1. Check that seat (1), slide bolts (2), and cable assembly (3) are not bent, dented, or cracked. Repair by straightening or welding. Refer to FM 43-2 or TM 9-237.
2. If slide bolts (2) and cable assembly (3) are damaged, get new parts in their place.
3. If hinges (4) are damaged, get new ones.

NOTE

Follow-on Maintenance Action Required:
Replace troop seat. Refer to TM 9-2320-242-20.

END OF TASK



15-27. CARRIER HULL INSPECTION AND REPAIR.

TOOLS: No special tools required

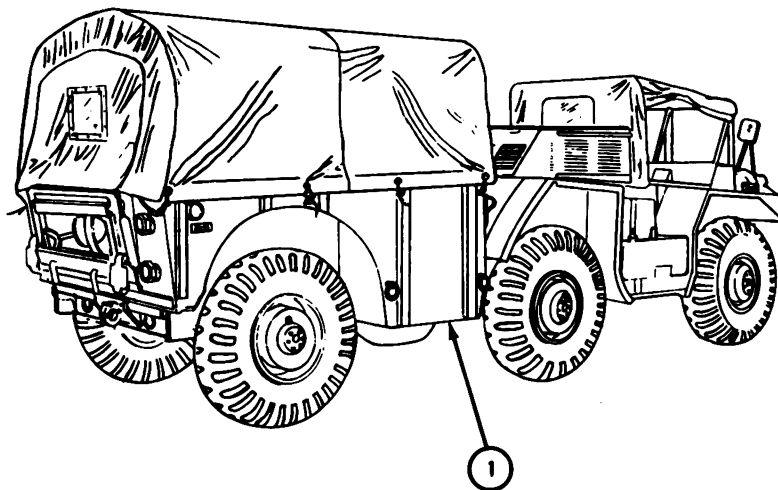
SUPPLIES: None

PERSONNEL: One

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

FRAME 1

1. Check that carrier body (1) is not dented, bent, punctured, cracked or torn.
 2. Straighten dents and bends in carrier body (1). Refer to FM 43-2.
 3. Weld punctures, cracks, and tears in carrier body (1). Refer to TM 9-237.
- END OF TASK**



TA 084746

CHAPTER 16

BODY CHASSIS AND ACCESSORY ITEMS GROUP MAINTENANCE

Section I. SCOPE

16-1. **EQUIPMENT ITEMS COVERED.** This chapter gives equipment maintenance procedures for canopy and bow assemblies and ambulance heater and bilge pump assemblies for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

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

Section II. CANOPY AND BOW ASSEMBLIES

16-3. TRACTOR CANOPY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove tractor canopy. Refer to TM 9-2320-242-10.
- 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

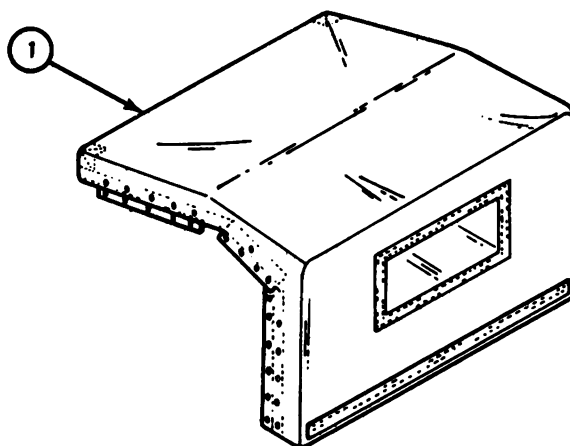
1. Check that tractor canopy (1) is not torn or frayed and that stitching is not torn. Check that eyelets and fasteners are not loose.
2. Repair damaged canopy (1). Refer to FM 10-16.

NOTE

Follow-on Maintenance Action Required:

Replace tractor canopy. Refer to TM 9-2320-242-10.

END OF TASK



TA 088208

16-4. CARRIER CANOPY REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove carrier canopy. Refer to TM 9-2320-242-10.
- 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

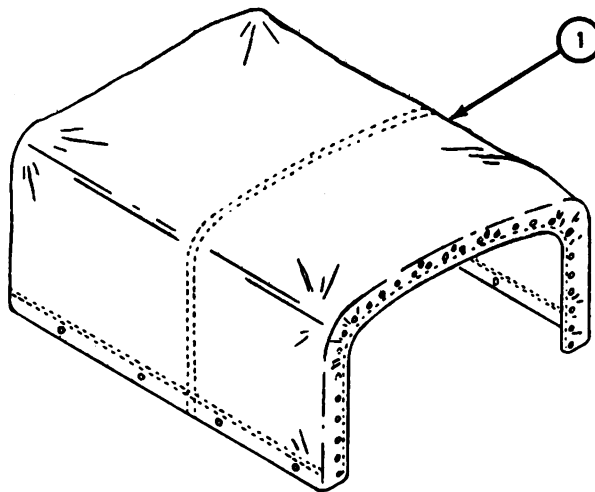
1. Check that carrier canopy (1) is not torn or frayed and that stitching is not torn. Check that eyelets and fasteners are not loose.
2. Repair damaged canopy (1). Refer to FM 10-16.

NOTE

Follow-on Maintenance Action Required:

Replace carrier canopy. Refer to TM 9-2320-242-10.

END OF TASK



TA 088210

16-5. CARRIER FRONT AND REAR CURTAINS REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

a. Preliminary Procedure. Remove front and rear curtains. Refer to TM 9-2320-242-10.

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

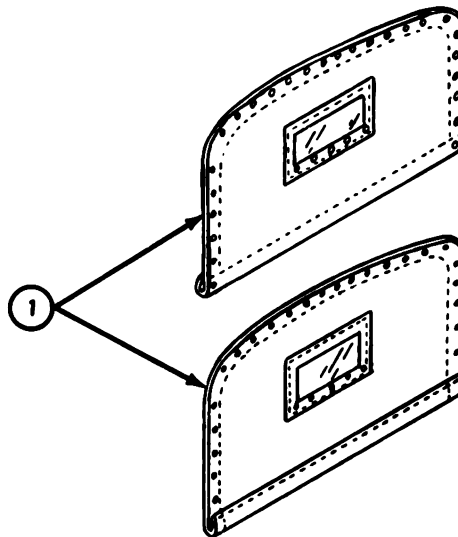
1. Check that front and rear curtains (1) are not torn or frayed and that stitching is not torn. Check that eyelets and fasteners are not loose.
2. Repair damaged curtains (1). Refer to FM 10-16.

NOTE

Follow-on Maintenance Action Required:

Replace front and rear curtains. Refer to TM 9-2320-242-10.

END OF TASK



TA 088211

16-6. TRACTOR AND CARRIER BOWS REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove and disassemble tractor and carrier bows. Refer to TM 9-2320-242-20.

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

c. Inspection and Repair.

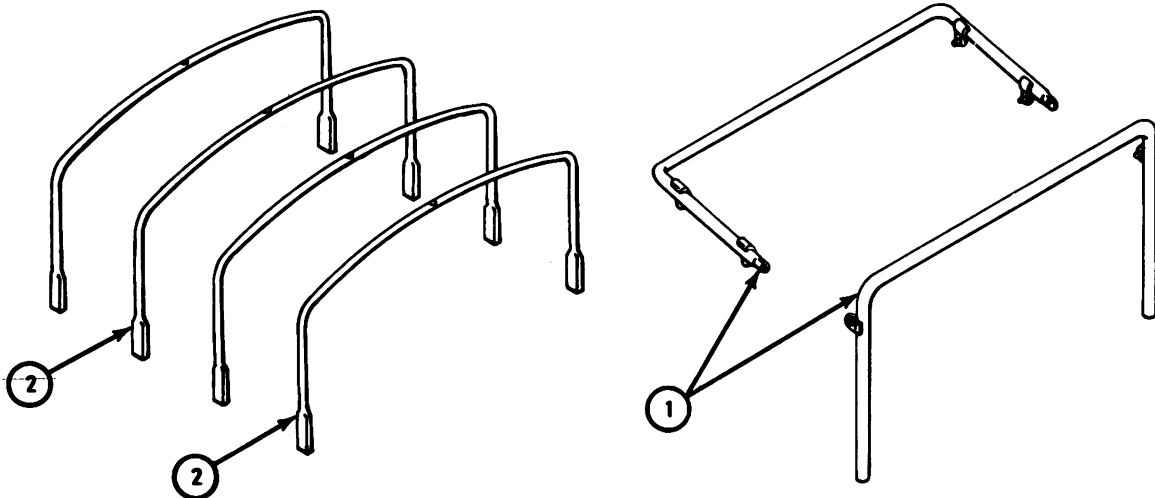
FRAME 1

1. Check that tractor bows (1) and carrier bows (2) are not bent, dented or cracked.
2. Straighten bent or dented bows (1 and 2). Refer to FM 43-2.
3. Weld cracks in bows (1 and 2). Refer to TM 9-237.

NOTE

Follow-on Maintenance Action Required:

Assemble and replace tractor and carrier bows. Refer to TM 9-2320-242-20.

END OF TASK

TA 088209

Section III. AMBULANCE HEATER ASSEMBLY

16-7. AMBULANCE HEATER CONTROL BOX 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.

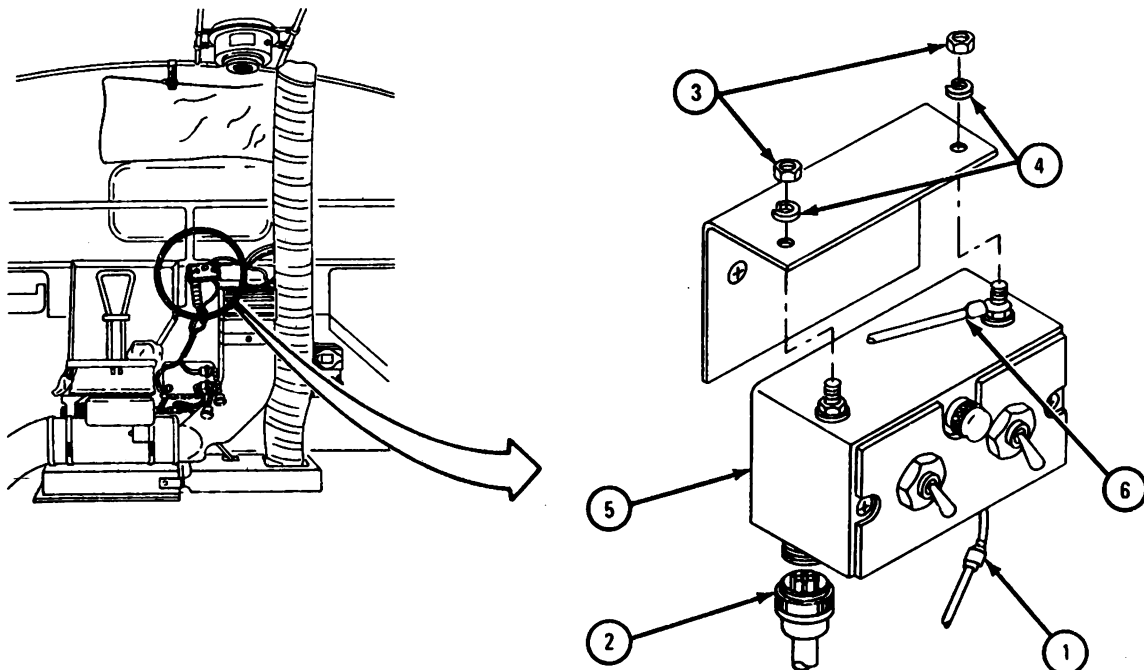
a. Preliminary Procedure. Disconnect battery ground cable. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Unplug connector (1) and shell connector (2).
2. Take off two nuts (3) and lockwashers (4). Take off control box (5).
3. Take off ground wire (6).

END OF TASK



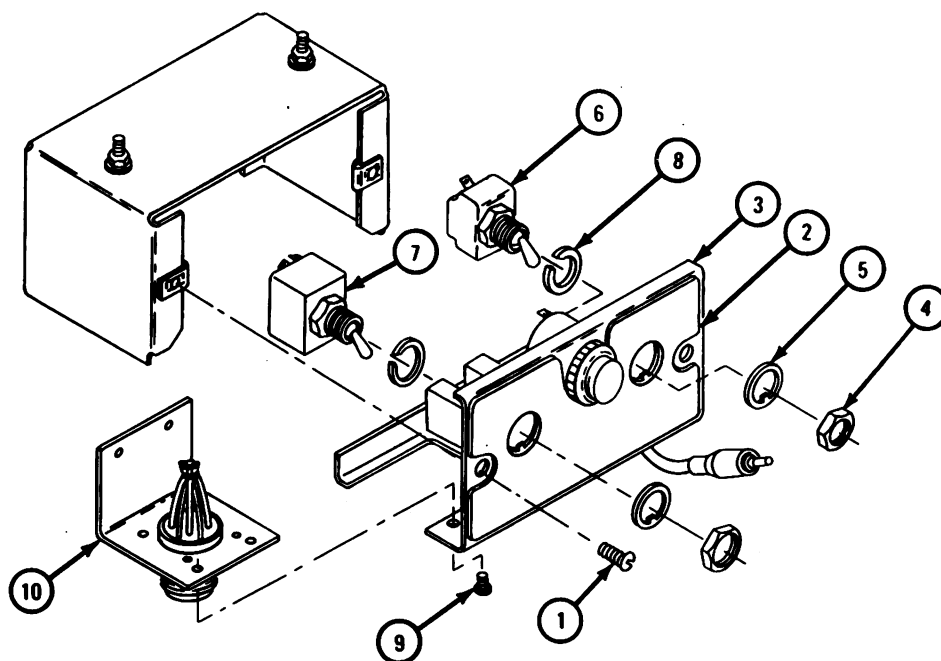
TA 084906

c. Disassembly.

FRAME 1

1. Take out two screws (1). Take off panels (2 and 3).
2. Take off two nuts (4) and key washers (5).
3. Take out switches (6 and 7) and two lockwashers (8).
4. Take out two screws (9). Take out assembled angle bracket (10).

GO TO FRAME 2

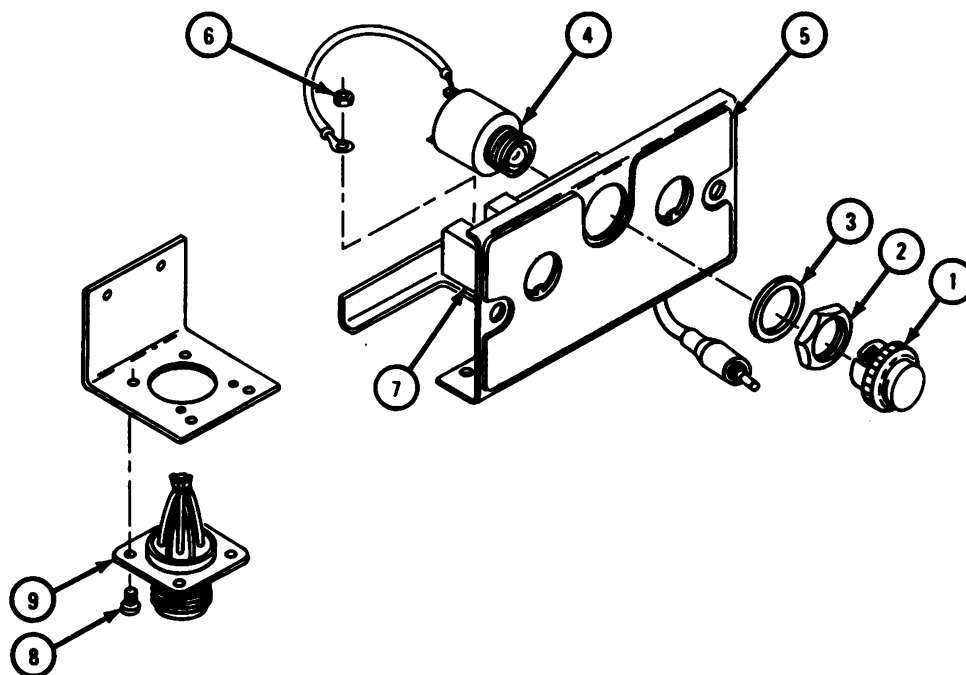


TA 084907

FRAME 2

1. Take off lens (1), nut (2), and washer (3). Take out lamp (4).
2. Take off instruction panel (5).
3. Take off two nuts (6). Take ground wire of lamp (4) off circuit breaker (7).
4. Tag and take off all electrical connections.
5. Take out four screws (8). Take out electrical lead assembly (9).

GO TO FRAME 3

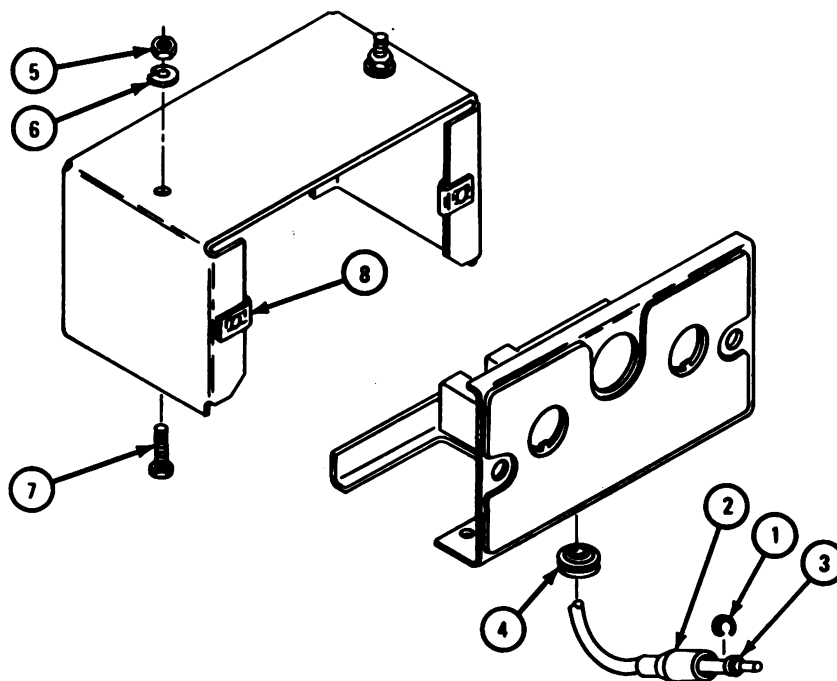


TA 084908

FRAME 3

1. Take off lockwasher (1). Slide off shell (2).
2. Take out cable (3) with grommet (4).
3. Take off two nuts (5), lockwashers (6), and screws (7).
4. Take off two sheet spring nuts (8).

GO TO FRAME 4

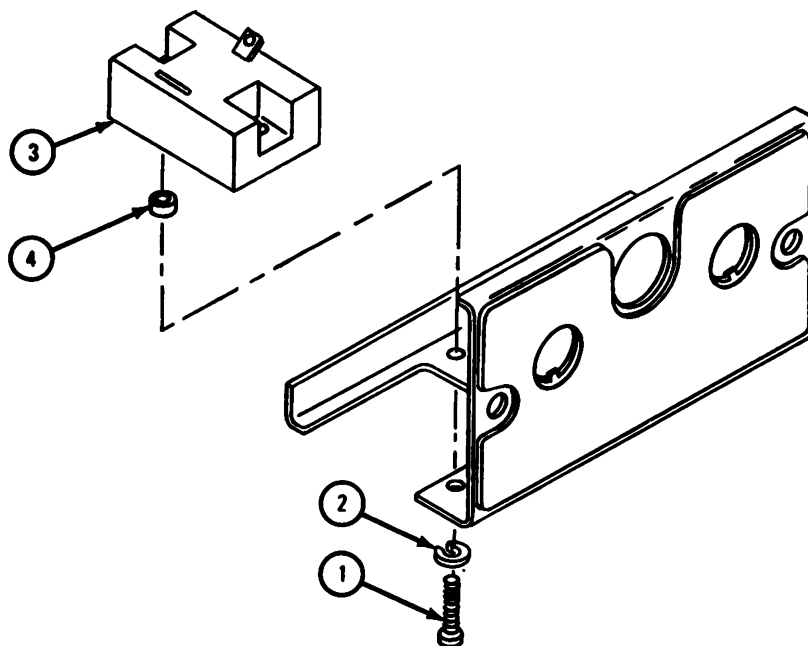


TA 084909

FRAME 4

1. Take out two screws (1) and lockwashers (2).
2. Take off circuit breaker (3) and two spacers (4).

END OF TASK



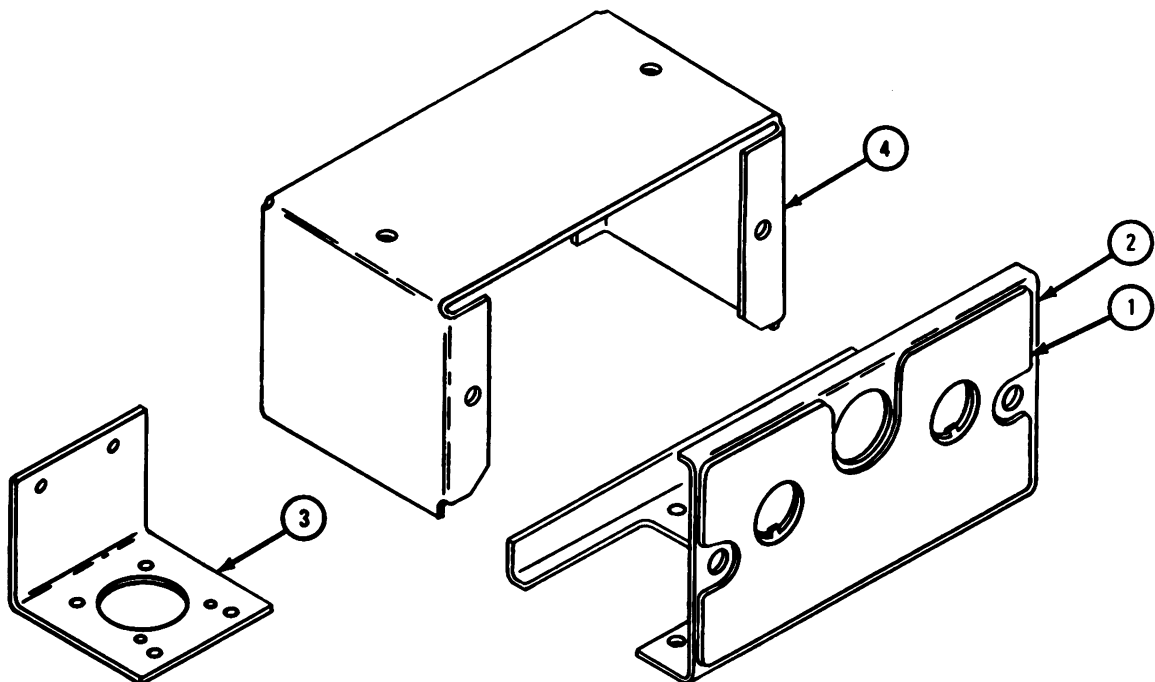
TA 101362

d. Cleaning.**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 panels (1 and 2), angle bracket (3), and control box (4) with solvent.
2. Let parts dry thoroughly.

END OF TASK



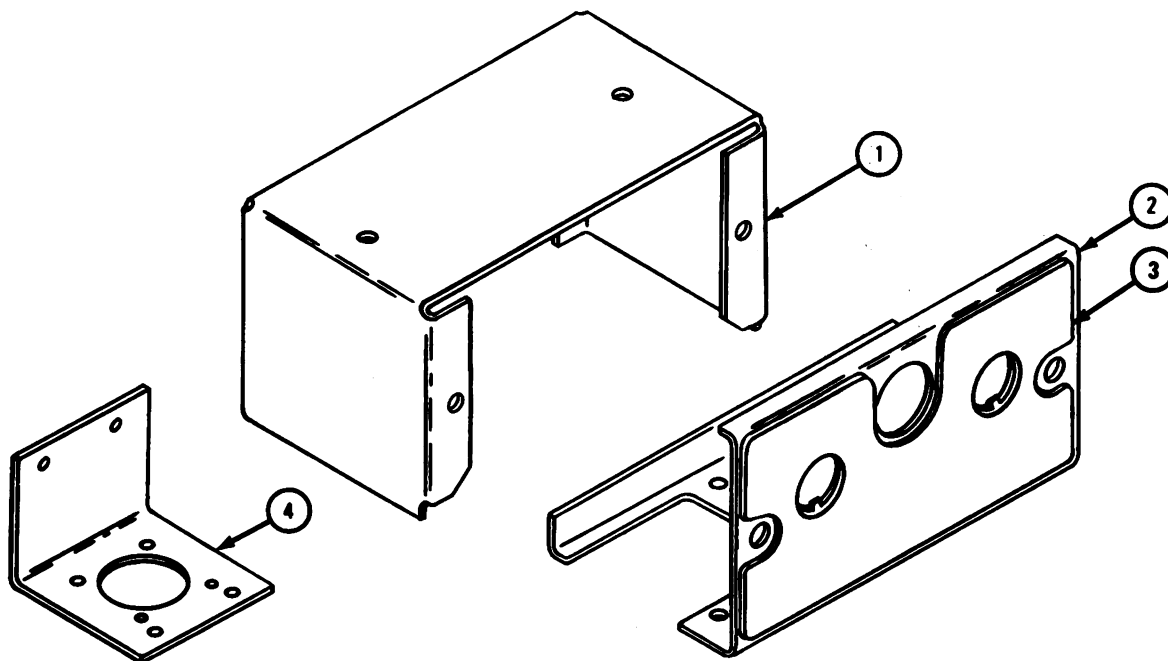
TA 101358

e. Inspection and Repair.

FRAME 1

1. Check that control box (1), panels (2 and 3), and angle bracket (4) are not dented, bent or cracked.
2. Straighten dents or bends in parts (1 through 4). Refer to FM 43-2.
3. Weld cracks or tears in parts (1 through 4). Refer to TM 9-237.

GO TO FRAME 2

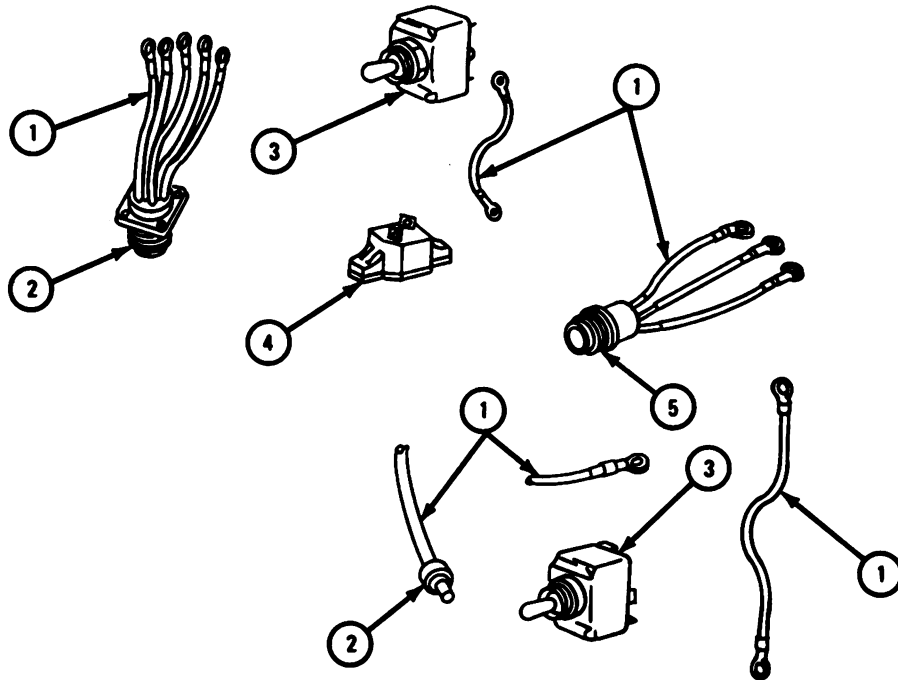


TA 084910

FRAME 2

1. Check that insulation of wiring (1) is not cracked or damaged.
2. Using multimeter, check wiring (1) for continuity.
3. Check that all connections on wiring (1) are not damaged.
4. Check that electrical connectors (2) are not damaged.
5. Check that cases of two switches (3) and circuit breaker (4) are not cracked or broken.
6. Check that two switches (3) and circuit breaker (4) have no broken insulation, stripped threads, or missing parts.
7. Using multimeter, check switches (3) and circuit breaker (4) for continuity.
8. Check that lampholder (5) is not cracked and has no stripped threads or burned out bulb.
9. If parts are damaged, get new ones.

END OF TASK

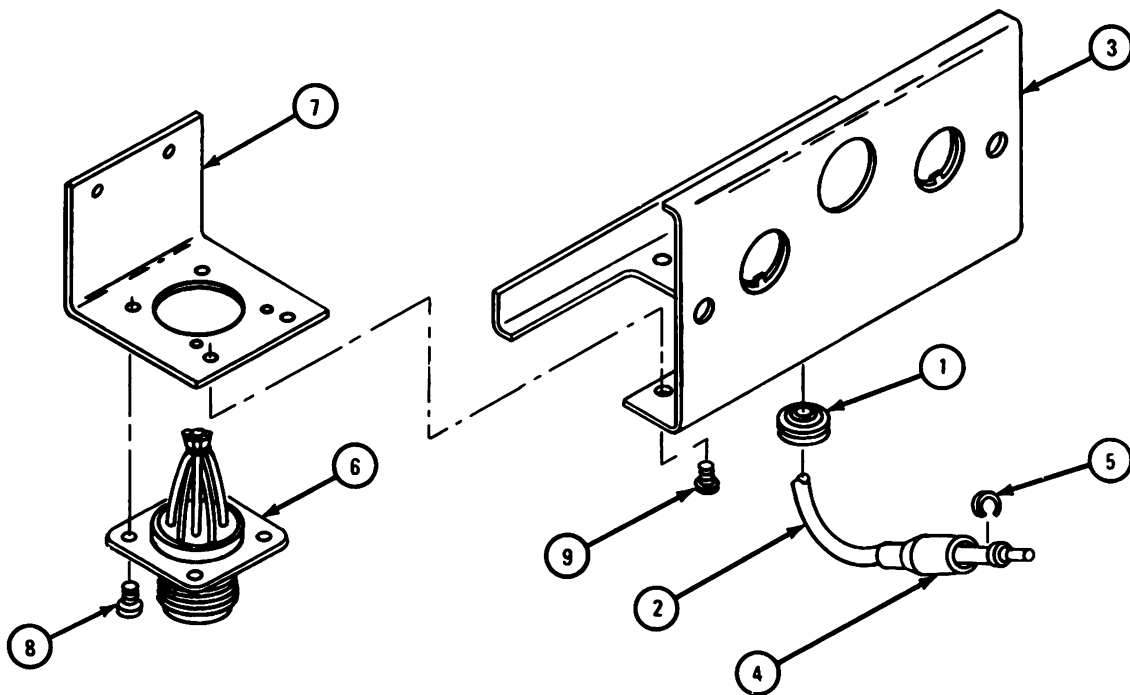


TA 101359

f. Assembly.

FRAME 1

1. Put grommet (1) on cable (2) and put cable and grommet in panel (3).
 2. Slide shell (4) on cable and put on washer (5).
 3. Put electrical lead assembly (6) on angle bracket (7), alining holes. Put in four screws (8).
 4. Put angle bracket (7) on panel (3), alining holes. Put in two screws (9).
- GO TO FRAME 2



TA 084911

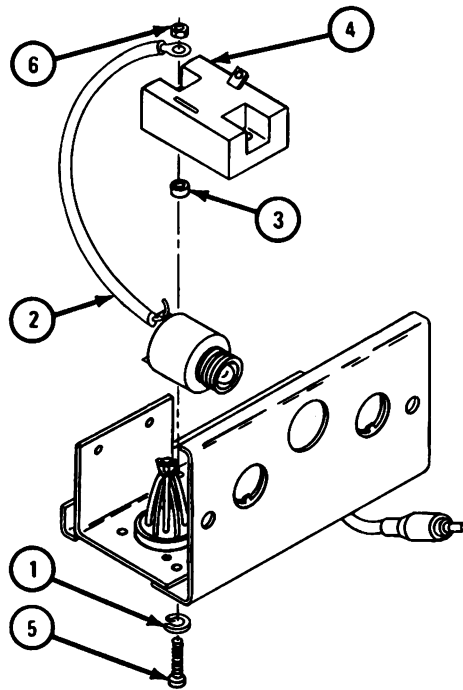
FRAME 2

NOTE

Lockwasher (1) goes on screw that holds lamp ground wire (2).

1. Put two spacers (3) and circuit breaker (4) in place.
2. Put in screws (5) and lockwashers (1).
3. Put on lamp ground wire (2).
4. Put on two nuts (6).

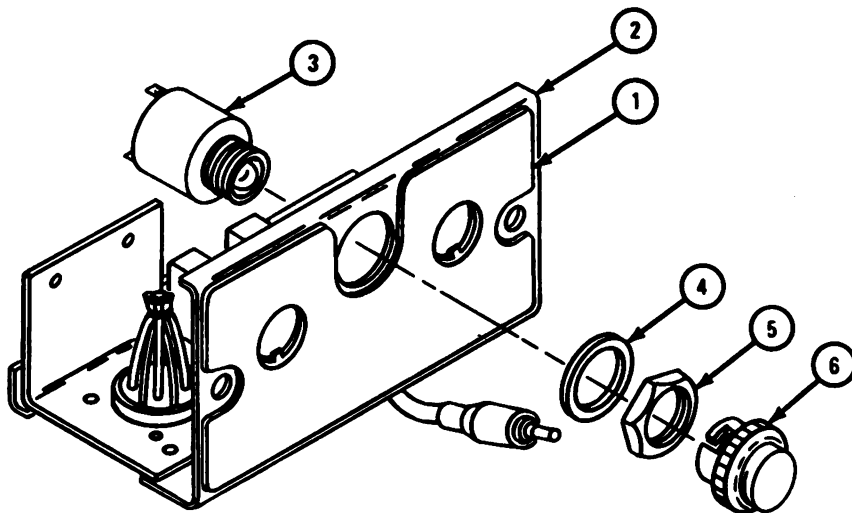
GO TO FRAME 3



TA 084912

FRAME 3

1. Put data plate (1) on panel (2).
 2. Put lamp (3) in place. Put on washer (4), nut (5), and lens (6).
- GO TO FRAME 4**

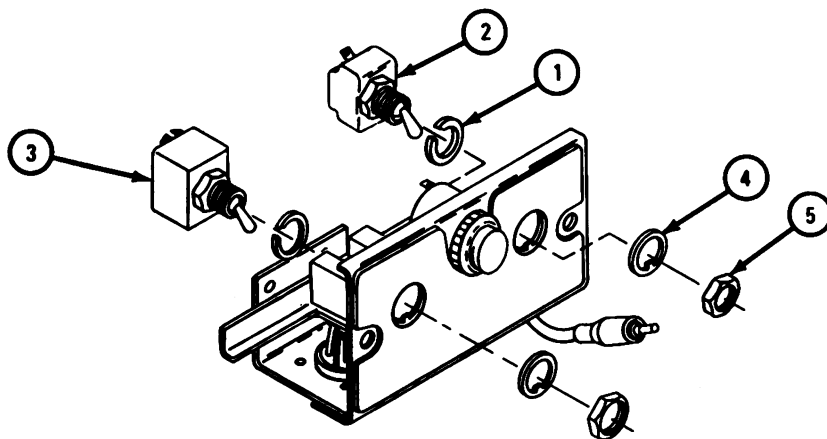


TA 101360

FRAME 4

1. Put on all tagged electrical connections.
2. Put two washers (1) on switches (2 and 3).
3. Put switches (2 and 3) in place. Put on two key washers (4) and nuts (5).

GO TO FRAME 5

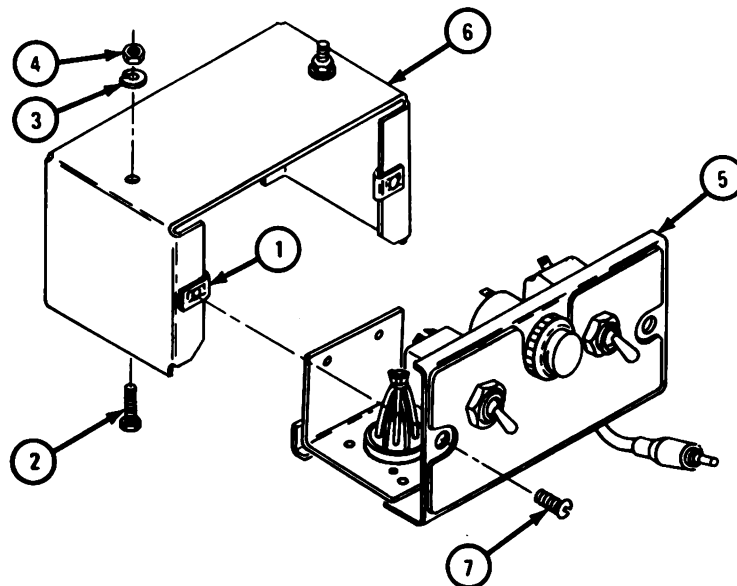


TA 084913

FRAME 5

1. Put two sheet spring nuts (1) in place.
2. Put in two screws (2), lockwashers (3), and nuts (4).
3. Slide panel assembly (5) into control box case (6).
4. Put in two screws (7).

END OF TASK



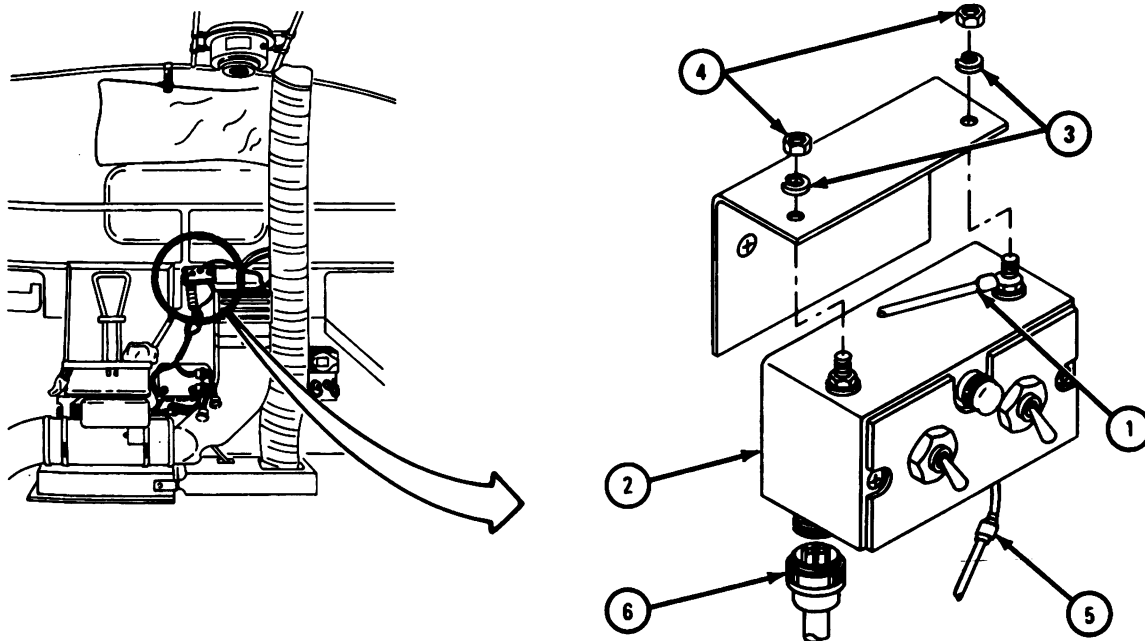
TA 101361

g. Replacement.**FRAME 1**

1. Put on ground wire (1).
2. Put control box assembly (2) in place.
3. Put on two lockwashers (3) and nuts (4).
4. Plug in connector (5) and shell connector (6).

NOTE

Follow-on Maintenance Action Required:
Reconnect battery ground cable. Refer to
TM 9-2320-242-20.

END OF TASK

TA 084914

16-8. AMBULANCE TRACTOR HEATER REPAIR AND TEST.

NOTE

This task can also be used for the winterization kit personnel heater.

TOOLS: Carbon remover set, pn J9418

SUPPLIES: Burner assembly preformed packing
Burner assembly gasket
Fuel control valve spacer plate preformed packing
Fuel control valve orifice plate preformed packing
Fuel control valve body preformed packing
Fuel control valve core gasket
Compressed air source, 30 psi max
Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Bond paper
Glyptal varnish
Chalk, SS-C-266F
Housing assembly grommet
Clean rags
Tags

PERSONNEL: One

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

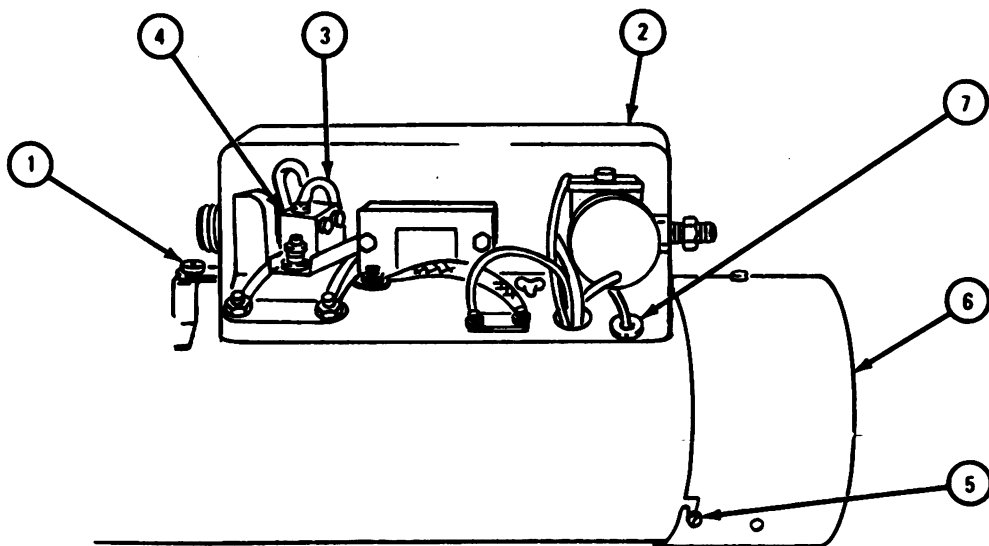
a. Preliminary Procedure. Remove heater. Refer to TM 9-2320-242-20.

b. Removal of Subassemblies.**(1) Blower assembly.****FRAME 1****NOTE**

Tag all electrical wires before taking them off so they will be put back in the same place.

1. Twist two fasteners (1). Lift off guard assembly (2).
2. Take motor lead (3) from flame detector switch (4).
3. Loosen four screws (5). Turn blower assembly (6) to left until screws clear slots. Take off blower assembly.
4. Take out and throw away grommet (7).

END OF TASK



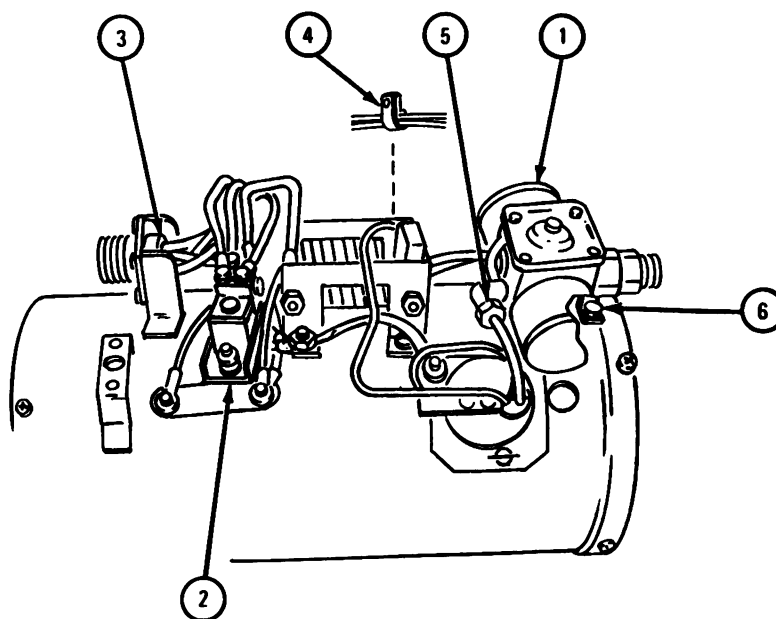
TA 104778

(2) Fuel control valve.

FRAME 1

1. Take leads from fuel control valve (1) off overhead switch (2).
2. Take leads off cable receptacle terminal (3). Take leads out of clamp (4).
3. Unscrew fuel tube nut (5).
4. Take out four screws (6). Take off valve (1).

END OF TASK



TA 104779

(3) Igniter assembly and igniter tube.

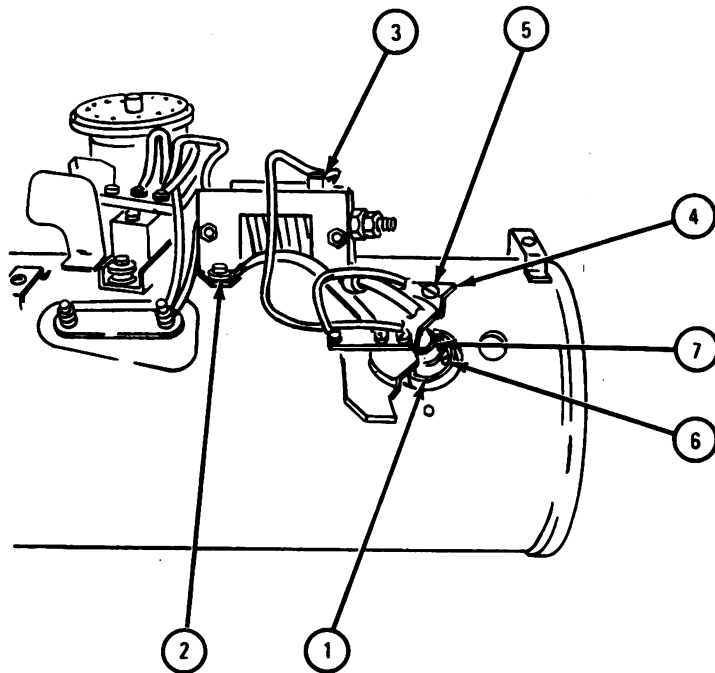
FRAME 1

CAUTION

When taking off leads, do not break leads loose from igniter assembly (1).

1. Take leads from igniter assembly (1) off terminal (2), control (3), and hatch cover (4).
2. Twist two screws (5). Take off hatch cover (4).
3. Twist igniter (1) clear of slots. Take out igniter.
4. Take out screw (6). Take out igniter tube (7).

END OF TASK



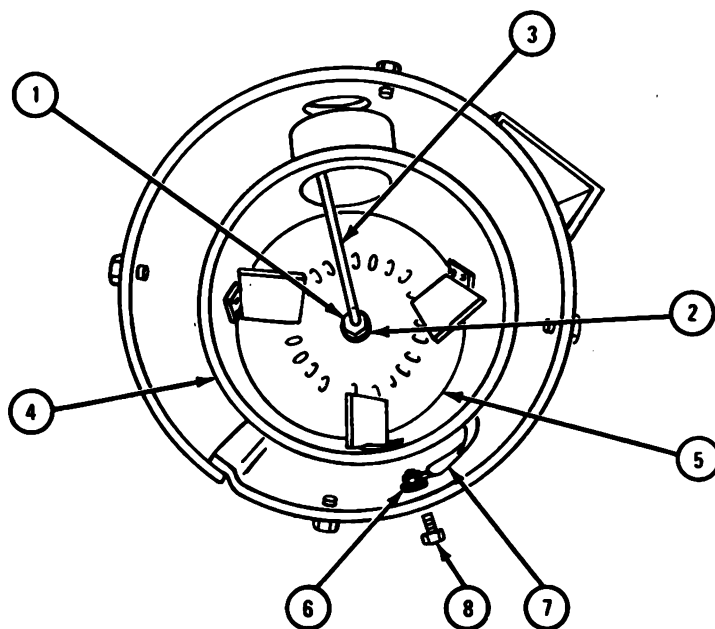
TA 104780

(4) Fuel tube assembly and secondary blower housing.

FRAME 1

1. Unscrew compression nut (1) from fuel inlet (2).
2. Take out fuel tube (3).
3. Lift secondary blower housing (4) off heat exchanger (5).
4. Remove nut (6), strap (7), and screw (8).

END OF TASK



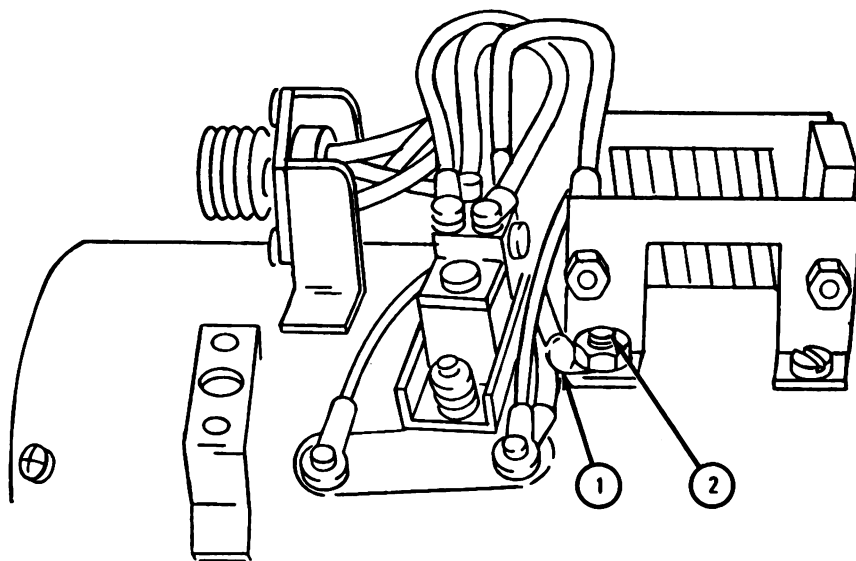
TA 104781

(5) Ignition control unit.

FRAME 1

1. Take off ground leads (1) at terminal nut (2).

GO TO FRAME 2

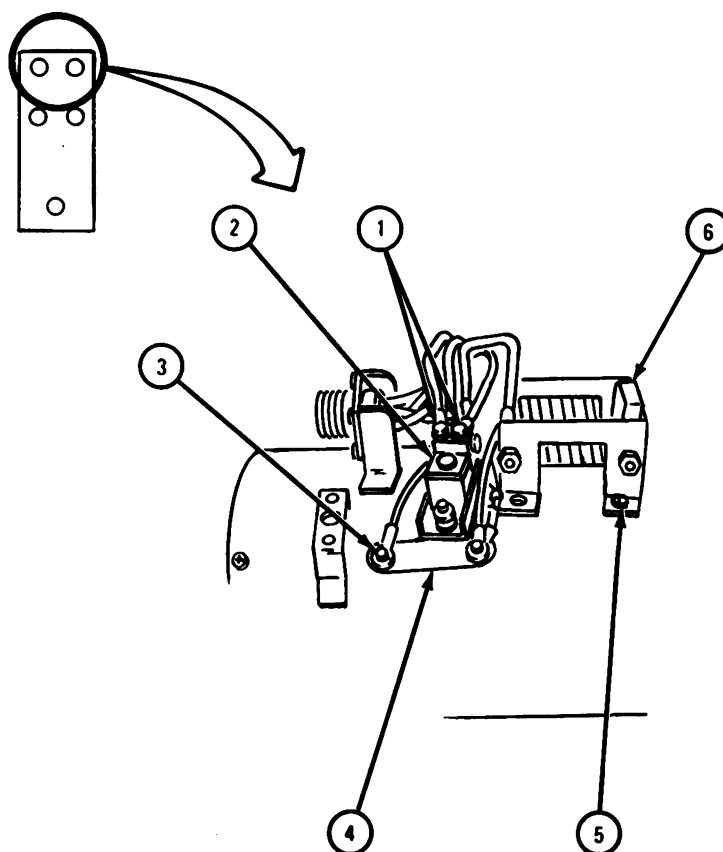


TA 104782

FRAME 2

1. Take two leads (1) off flame detector switch (2).
2. Take lead (3) off overheated switch (4).
3. Take out three screws (5). Take off ignition control unit (6).

END OF TASK



TA 104783

(6) Flame detector switch.

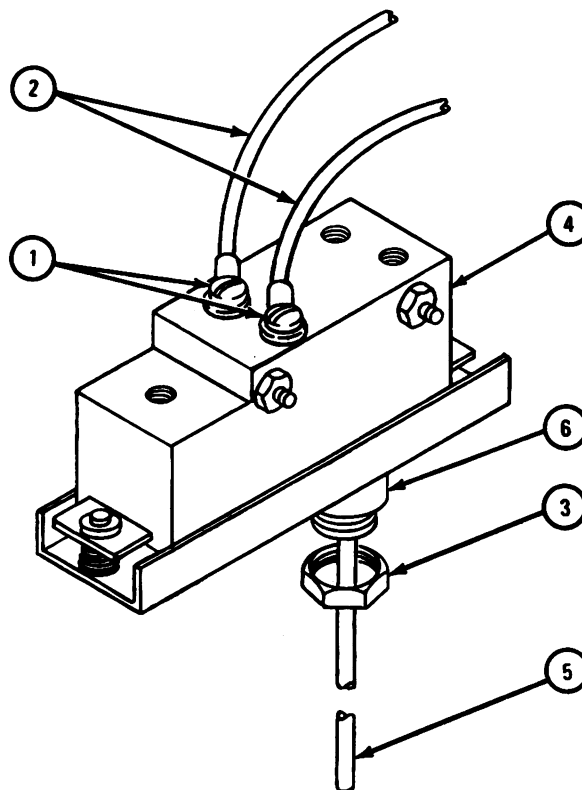
FRAME 1

1. Take out two screws (1). Take off two leads (2).
2. Unscrew nut (3) until it clears its threads. Carefully lift out flame detector switch (4) with ceramic rod (5).

NOTE

Do not take off nut (3) and sleeve (6) from tube of flame detector (4) unless they are damaged. Refer to para 16-8e for inspection procedures.

END OF TASK



TA 104784

(7) Overheat switch.

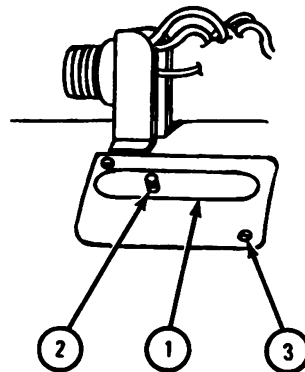
FRAME 1

CAUTION

Overheat switch (1) is preset. Do not bend or twist switch. Do not change setting of adjustment screw (2).

1. Take out two screws (3). Take off overheat switch (1).

END OF TASK



TA 104785

(8) Cable receptacle.

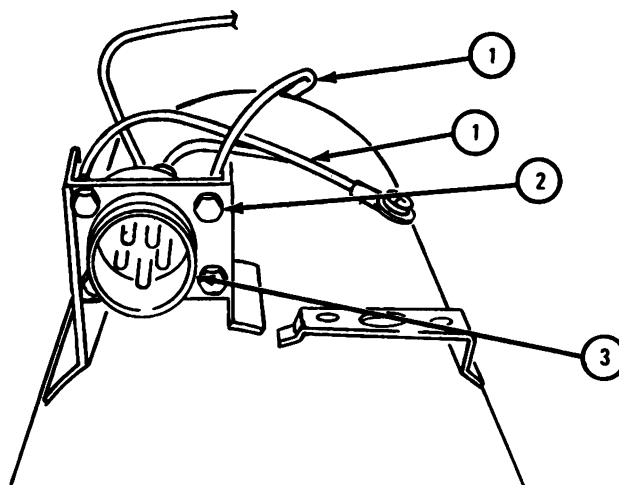
FRAME 1

NOTE

Only one lead (1) is held by screw. The other four leads (1) are soldered to receptacle.

1. Take out four screws (2).
2. Take off cable receptacle (3) with four soldered leads (1).

END OF TASK



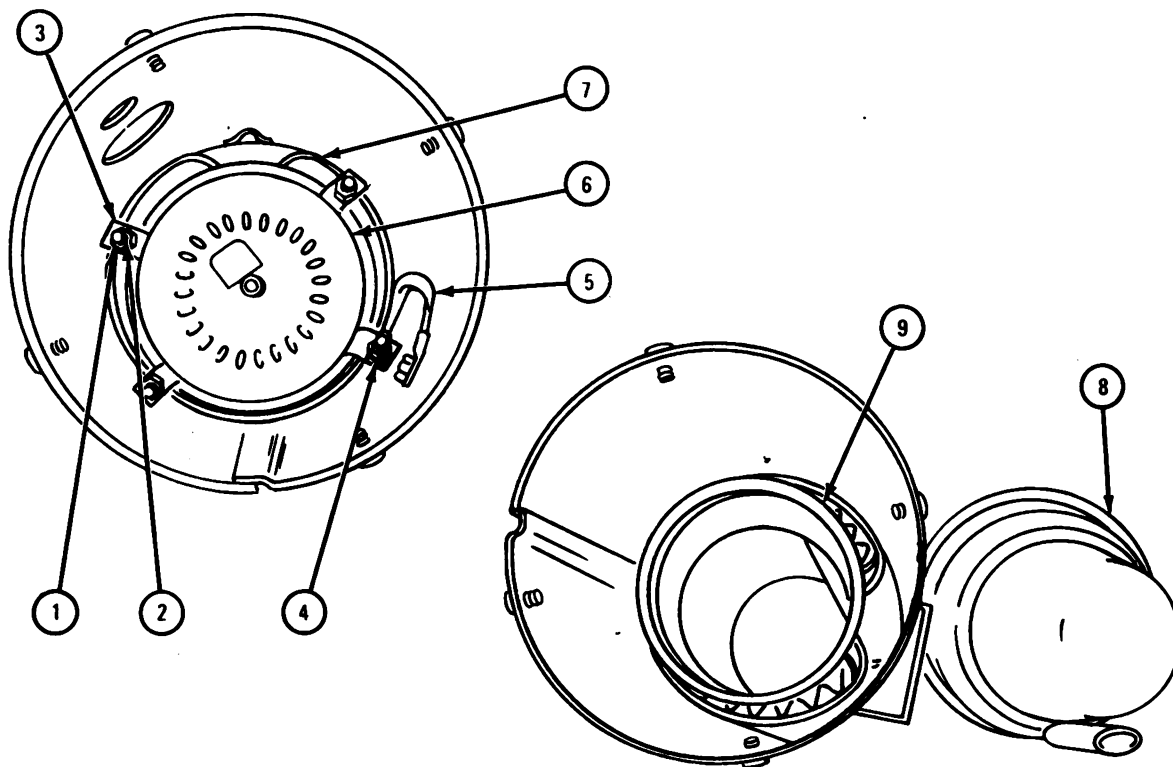
TA 104786

(9) Burner assembly.

FRAME 1

1. Loosen three nuts (1) and take off hook bolts (2) and clamps (3).
2. Take one nut (1) off hook bolt (4). Take off strap (5). Loosen second nut (1). Take off bolt (4) and clamp.
3. Take burner assembly (6) out of housing (7).
4. Take off and throw away packing (8) and gasket (9).

END OF TASK

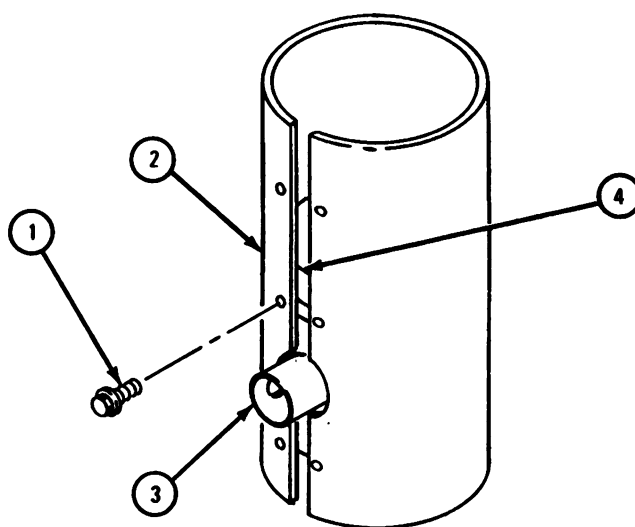


TA 104787

(10) Heater housing.

FRAME 1

1. Take out three screws (1) and open heater housing (2) enough to clear exhaust tube (3).
2. Take heater housing (2) off heat exchanger (4).

END OF TASK

TA 104788

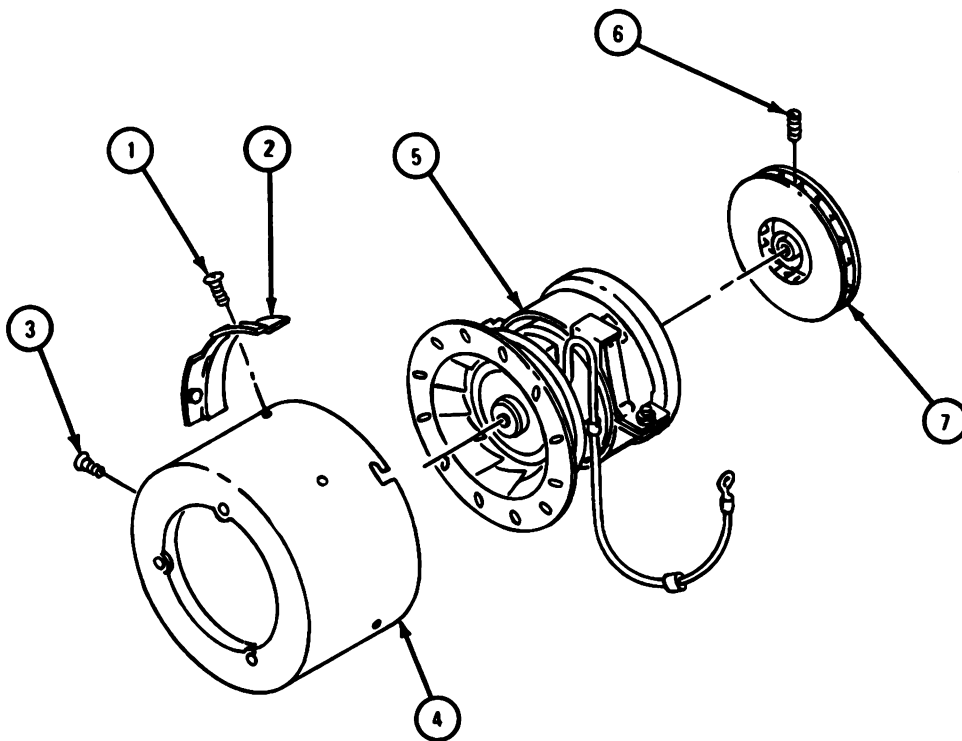
c. Disassembly of Subassemblies.

(1) Blower assembly.

FRAME 1

1. Take out two screws (1). Take off air vent baffle (2).
2. Take out three screws (3). Take out housing (4) from bracket (5).
3. Loosen setscrew (6). Take off blower wheel assembly (7).

GO TO FRAME 2

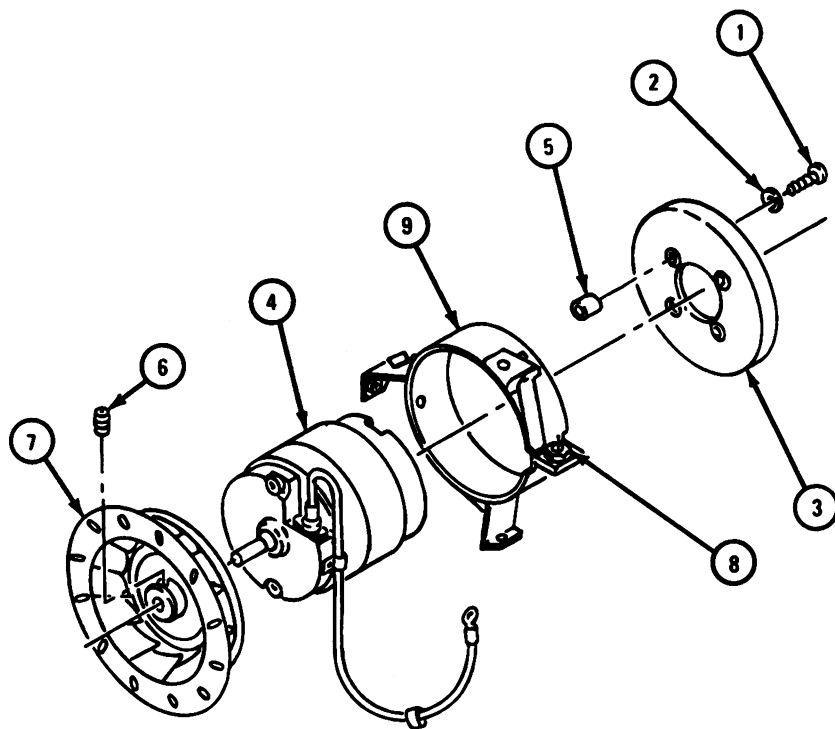


TA 104789

FRAME 2

1. Take out four screws (1) and washers (2). Take blower header (3) from motor (4). Take off spacers (5).
2. Loosen setscrew (6). Take blower wheel assembly (7) from motor (4). Loosen bracket screw (8).
3. Take motor (4) from mounting bracket (9).

END OF TASK



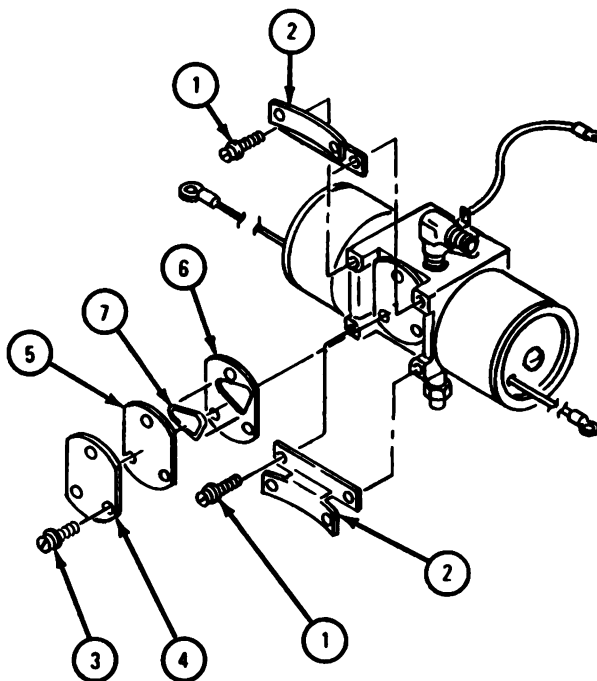
TA 104790

(2) Fuel control valve.

FRAME 1

1. Take out four screws (1). Take off two mounting brackets (2).
2. Take out three screws (3). Take off cover plate (4), insulator plate (5), and spacer plate (6).
3. Take out and throw away preformed packing (7) from spacer plate (6).

GO TO FRAME 2



TA 104791

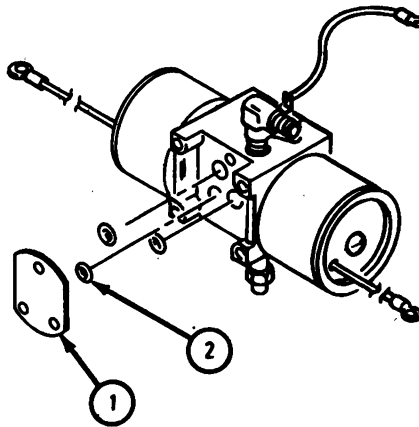
FRAME 2

CAUTION

Do not force anything through openings in orifice plate (1). Any change in these preset holes can cause serious overheating.

1. Take off orifice plate (1) and three preformed packings (2). Throw away preformed packings.

GO TO FRAME 3

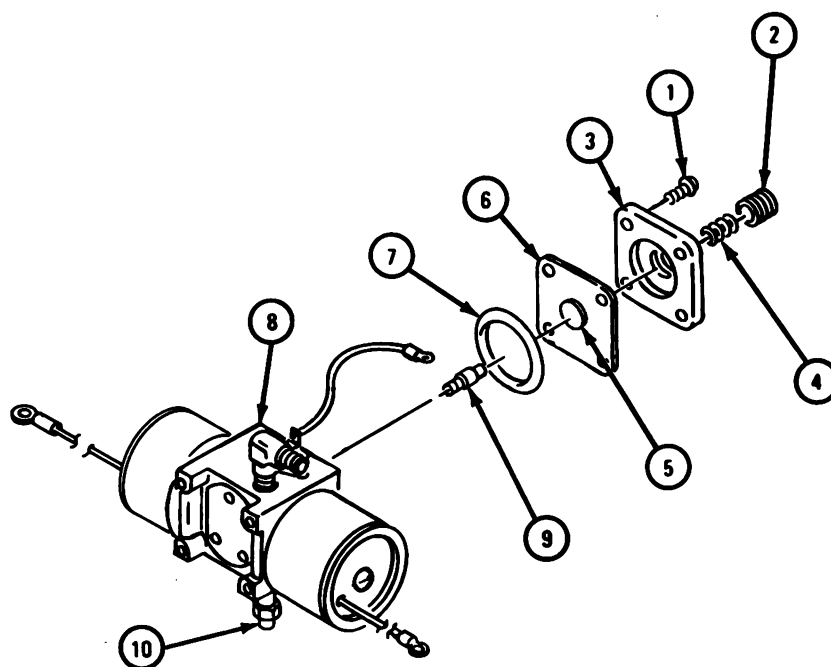


TA 104792

FRAME 3

1. Take out four screws (1) and adjusting screw (2). Take off cover (3).
2. Take off spring (4) and diaphragm cup (5) with diaphragm assembly (6).
3. Take preformed packing ring (7) from valve body (8).
4. Unscrew valve core (9) from valve body (8).
5. Take off bleed valve (10).

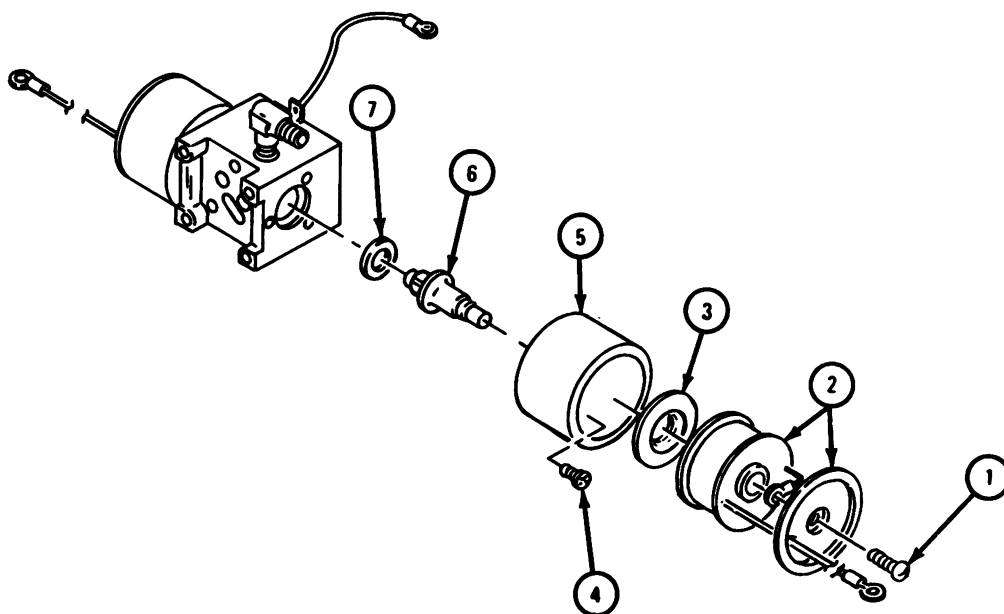
GO TO FRAME 4



TA 104793

FRAME 4

1. Take out screw (1). Take off coil assembly (2) and washer (3).
2. Take out three screws (4) and solenoid cup (5). Take out core assembly and sleeve (6) and gasket (7).
3. Do steps 1 and 2 again on other side of valve body.

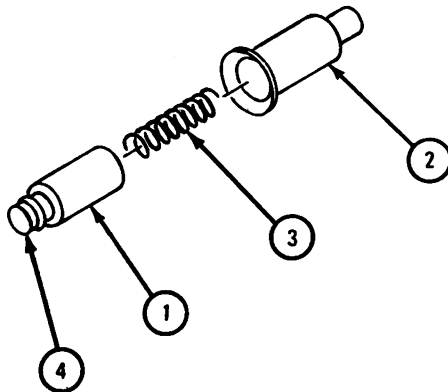
GO TO FRAME 5

TA 104794

FRAME 5

1. Take plunger (1) from sleeve (2).
2. Take spring (3) from solenoid plunger (1).
3. Take valve seal (4) from plunger (1).
4. Do steps 1 and 2 again on other side of valve body.

END OF TASK



TA 104795

d. Cleaning.

FRAME 1

1. Scrape out as much carbon as possible from heat exchanger (1).

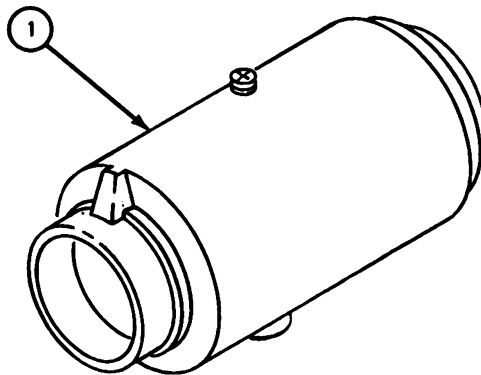
WARNING

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.

2. Soak heat exchanger (1) in solvent. Rinse off solvent and dry with clean rags.

GO TO FRAME 2



TA 104796

FRAME 2

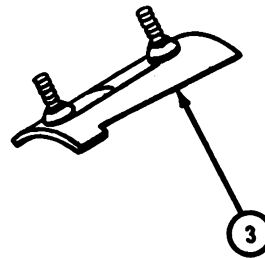
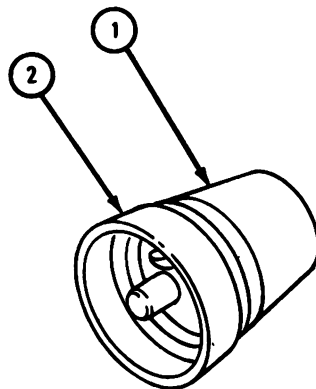
1. Scrape out carbon inside burner assembly (1).
2. Clean carbon and grease off air valve assembly (2).

CAUTION

Do not use an abrasive on overheat switch (3). Do not bend blade or contact arm. Do not change setting of adjusting screw.

3. Slide strip bond paper back and forth between points of overheat switch (3) until they are bright.

END OF TASK

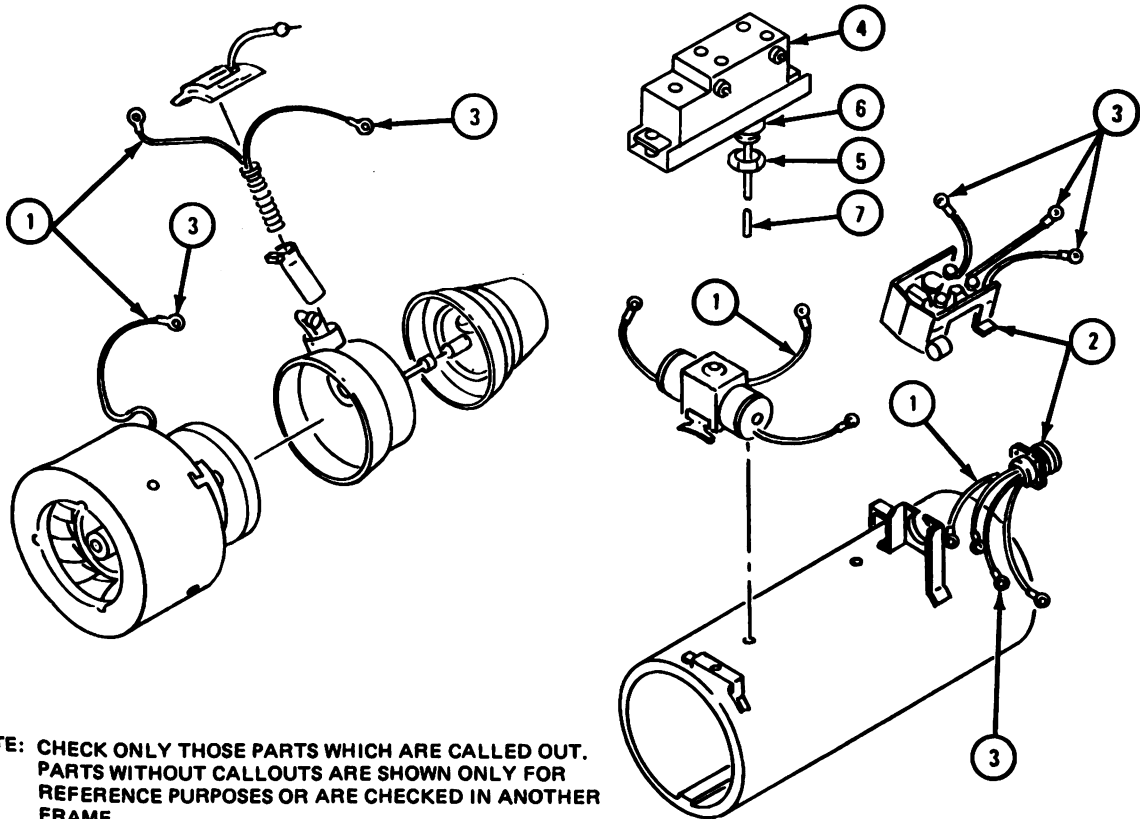


TA 104797

e. Inspection and Repair.**FRAME 1**

1. Check that insulation on wiring (1) is not cracked or worn.
2. Check that electrical connectors (2) have a tight fit.
3. Check that wires (1) and electrical connections (3) have continuity using ohmmeter.
4. If wires (1), connectors (2), and connections (3) are damaged, get new parts.
5. Check that flame detector switch (4) is not burned, cracked, or broken.
6. Check that nut (5) is not stripped or cracked.
7. Check that sleeve (6) is not worn, cracked or broken.
8. Check that ceramic rod (7) is not burned, cracked, or broken.
9. If any parts are damaged, get new ones.

GO TO FRAME 2

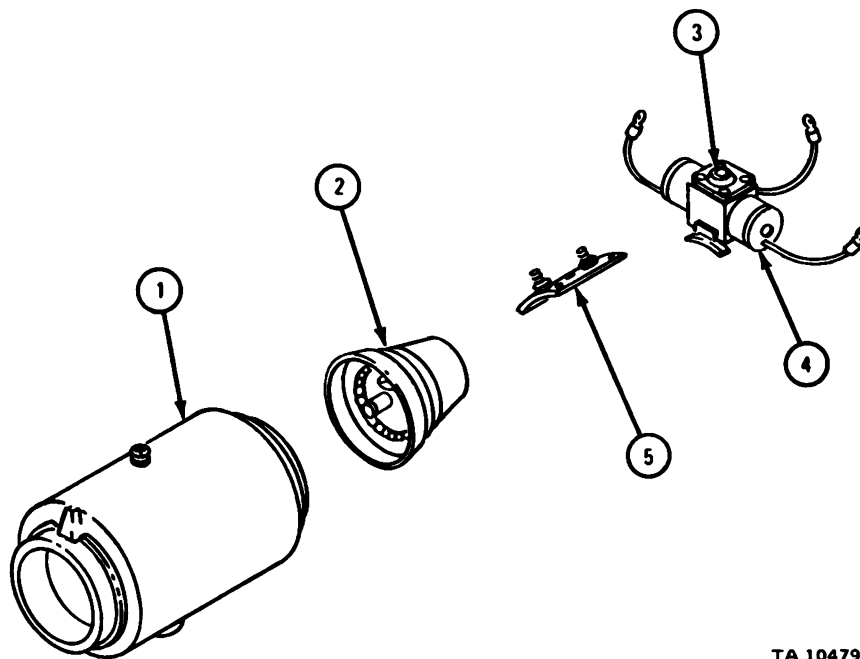


TA 104798

FRAME 2

1. Check that heat exchanger (1) has no breaks or leaks.
2. Check that scoop on burner (2) is not bent.
3. Check that valve solenoid (3) on valve assembly (4) is not damaged or burned.
4. Check that overheat switch (5) is not cracked or burned.
5. Repair cracked or burned heat exchanger (1) or burner assembly (2). Refer to para 16-13.
6. If valve solenoid (3) is damaged, get a new one.
7. If overheat switch (5) is damaged, get a new one.

END OF TASK



TA 104799

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

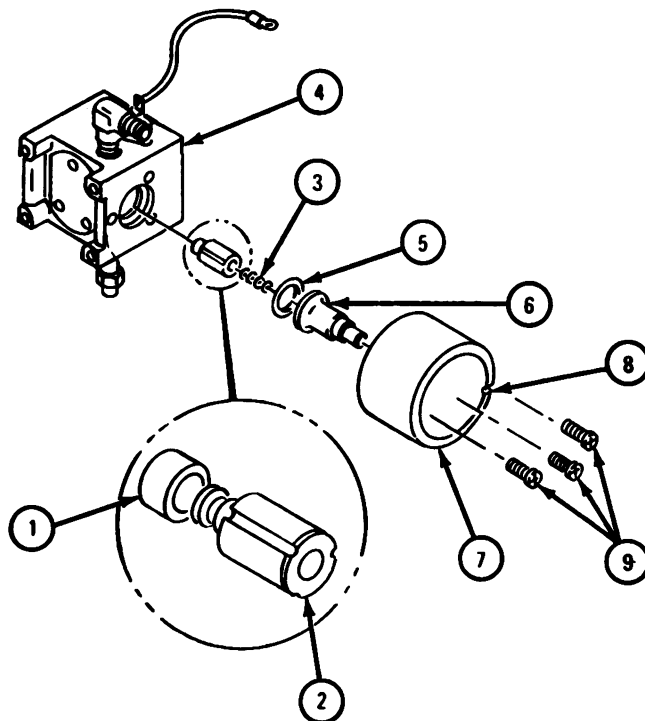
f. Assembly of Subassemblies.

(1) Fuel control valve.

FRAME 1

1. Put seal (1) into plunger (2).
2. Put spring (3) into plunger (2). Put plunger assembly into sleeve and core assembly (4).
3. Put gasket (5) into valve body (6).
4. Put in sleeve and core assembly (4).
5. Put cup (7) into body (6). Make sure notch (8) is on top.
6. Put in three screws (9).
7. Do steps 1 through 6 again on other side of valve body.

GO TO FRAME 2

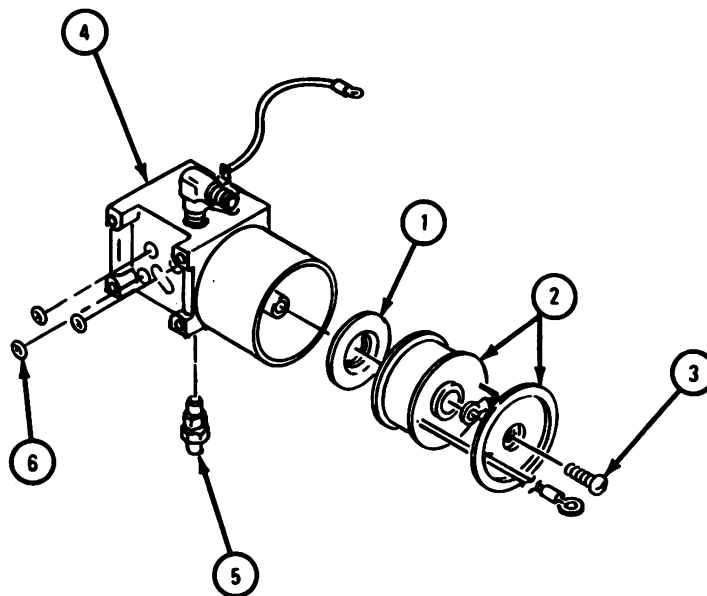


TA 104800

FRAME 2

1. Put in washer (1).
2. Put in coil assembly (2).
3. Put in screw (3).
4. Do steps 1 through 3 above again on other side of valve body (4).
5. Put in bleed valve (5).
6. Put in three preformed packings (6).

GO TO FRAME 3

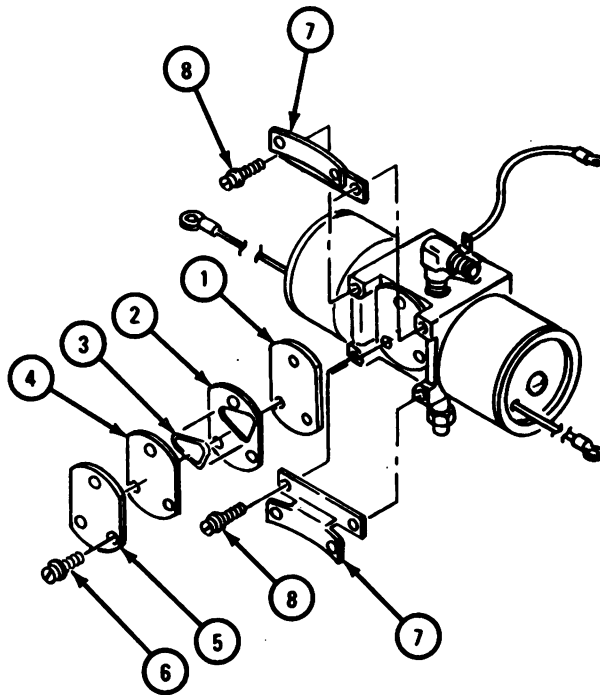


TA 104801

FRAME 3

1. Put in orifice plate (1). Put spacer plate (2) over orifice plate.
2. Put in preformed packing (3).
3. Put in insulator plate (4). Put on cover plate (5).
4. Put in three screws (6).
5. Put on two mounting brackets (7). Put in four screws (8).

GO TO FRAME 4

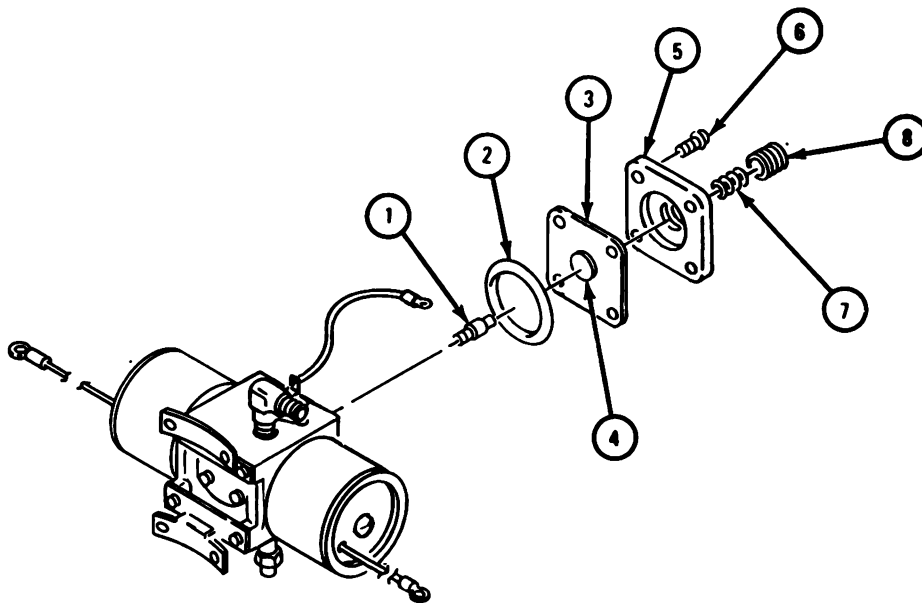


TA 104802

FRAME 4

1. Put in valve core (1).
2. Put in preformed packing (2).
3. Put in diaphragm assembly (3) with diaphragm cup (4).
4. Put on cap (5).
5. Put in four screws (6).
6. Put in spring (7). Put in screw (8).

END OF TASK

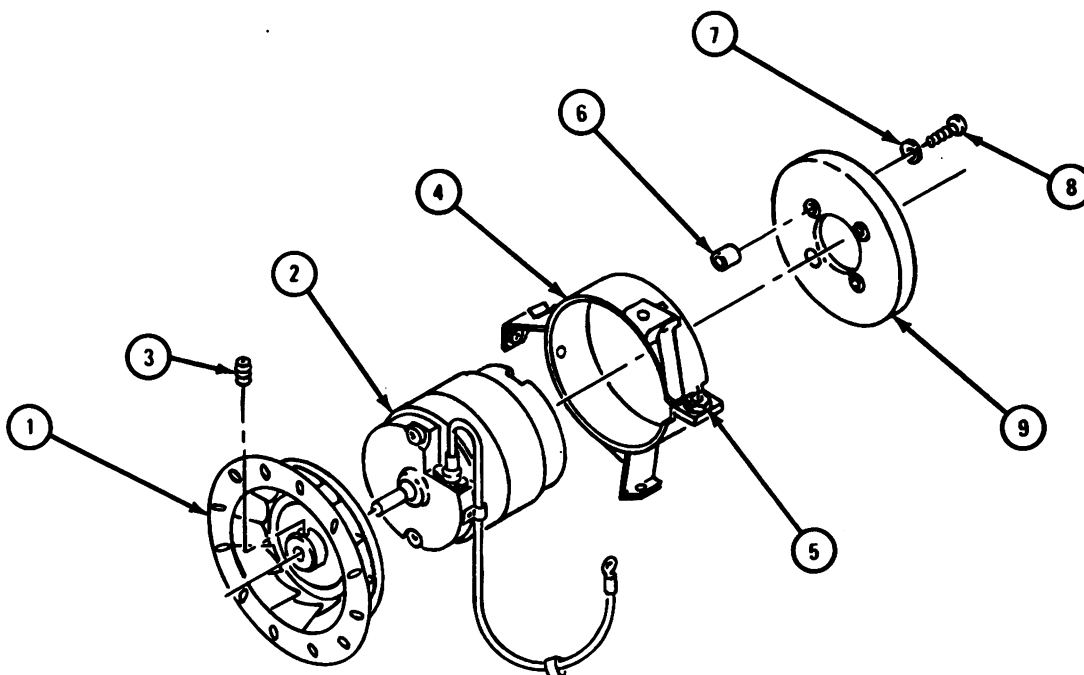


TA 104803

(2) Blower assembly.

FRAME 1

1. Put blower wheel assembly (1) on motor (2). Tighten setscrew (3).
2. Put motor (2) in place through bracket (4). Tighten bracket screw (5).
3. Put four spacers (6) on motor (2) and washers (7) and screws (8) in header assembly (9).
4. Put header assembly (9) on motor (2).

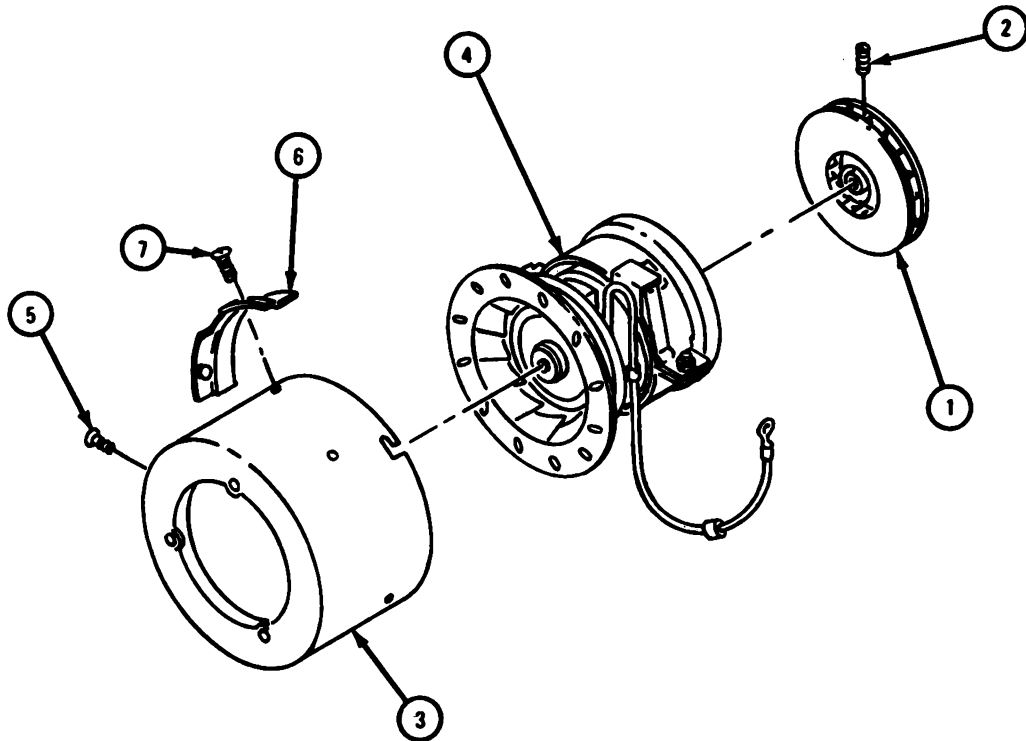
GO TO FRAME 2

TA 104804

FRAME 2

1. Put on blower wheel assembly (1). Tighten setscrew (2).
2. Put housing (3) on bracket (4). Put in three screws (5).
3. Put on air vent baffle (6). Put in two screws (7).

END OF TASK



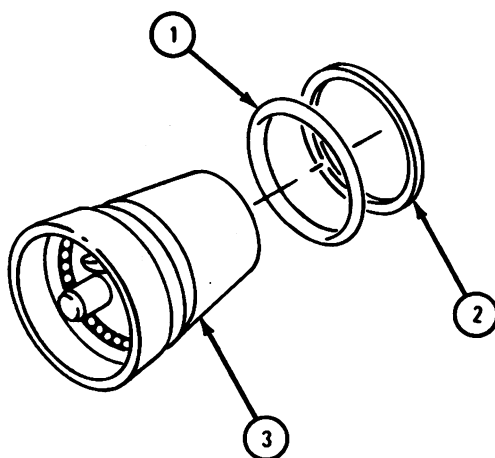
TA 104805

g. Replacement of Subassemblies.

(1) Burner assembly.

FRAME 1

- 1. Put preformed packing (1) and gasket (2) over end of burner (3).
GO TO FRAME 2**

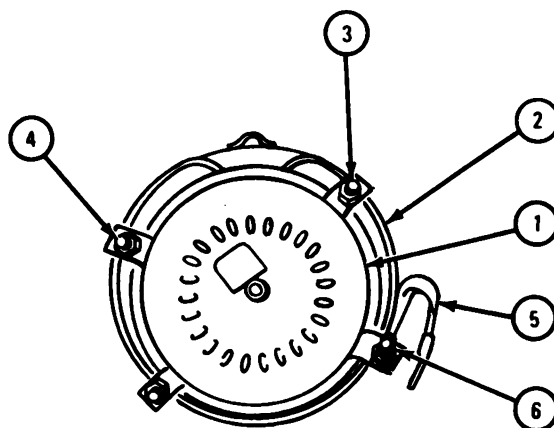


TA 104806

FRAME 2

1. Put burner assembly (1) onto heat exchanger housing (2). Put in four hook bolts (3) and clamps.
2. Put on four nuts (4).
3. Put on ground strap (5). Put on nut (6).

GO TO FRAME 3

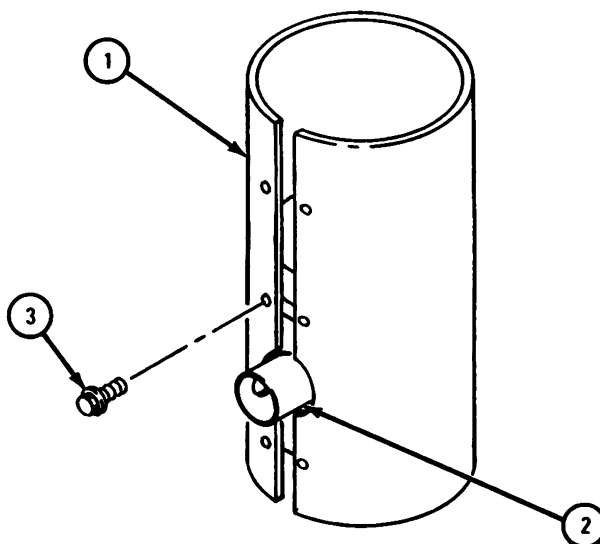


TA 104807

FRAME 3

1. Slide heater housing (1) over heat exchanger and burner (2).
2. Put in three screws (3).

END OF TASK



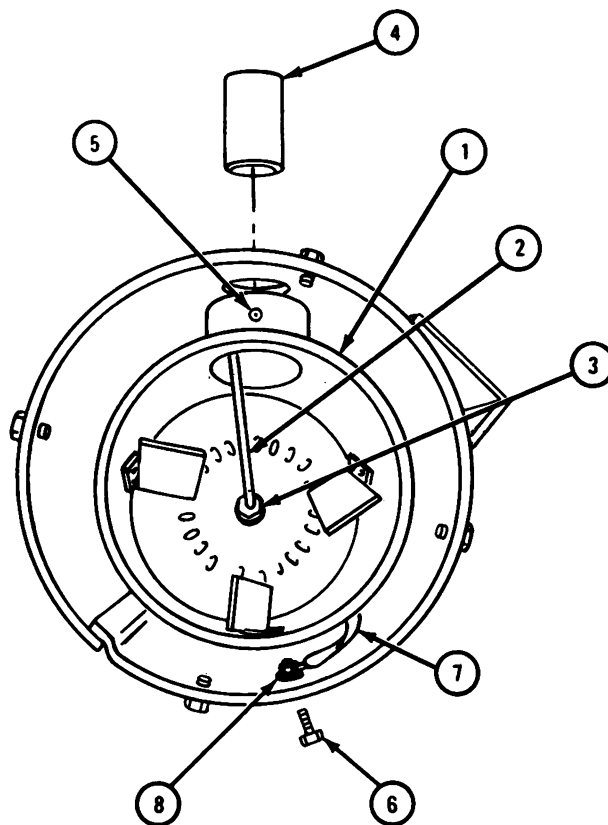
TA 104808

(2) Fuel tube and igniter tube.

FRAME 1

1. Put in secondary blower housing (1).
2. Put fuel tube (2) through secondary blower housing (1).
3. Put in compression nut (3).
4. Put in igniter tube (4). Put in setscrew (5).
5. Put in screw (6), ground strap (7), and nut (8).

END OF TASK

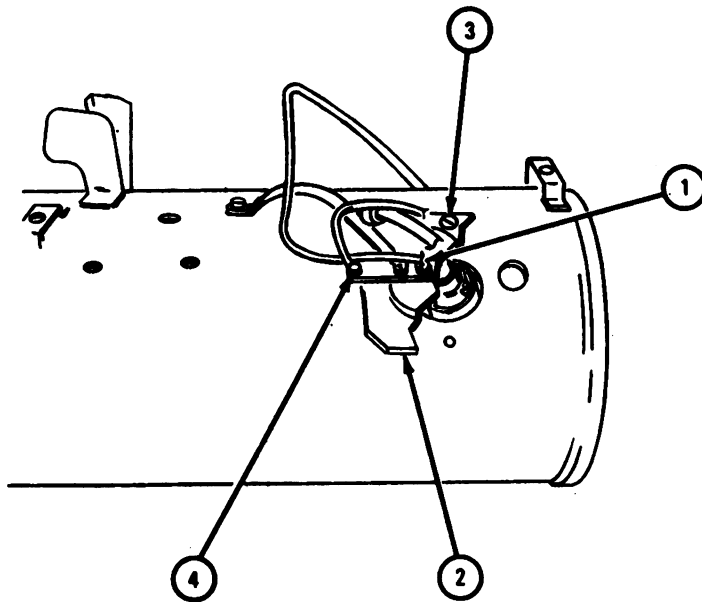


TA 104809

(3) Igniter assembly.

FRAME 1

1. Put in igniter assembly (1) and press it until fasteners catch.
2. Put on hatch cover (2). Put in two screws (3).
3. Put on ignition leads (4) as tagged. Take off tags.

END OF TASK

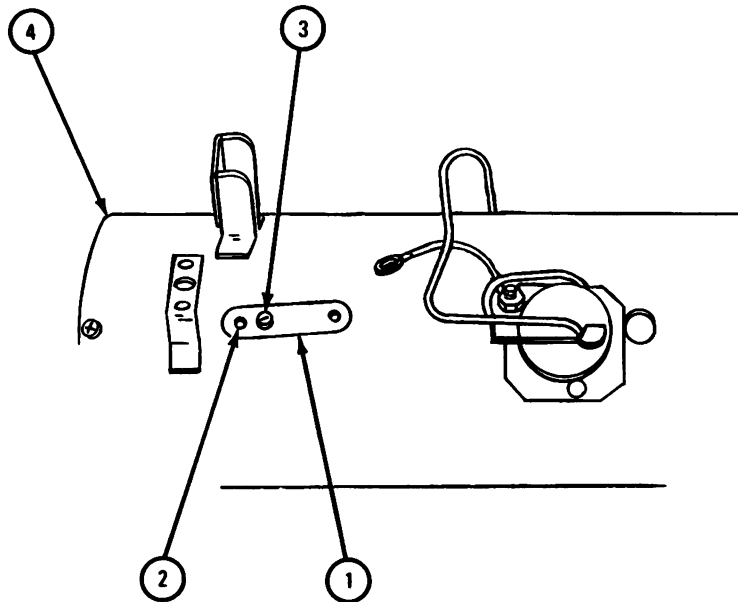
TA 104810

(4) Overheat switch.

FRAME 1

1. Put on overheat switch (1) and put in two screws (2). Make sure screw (3) faces heat exchanger end of heater (4).

END OF TASK

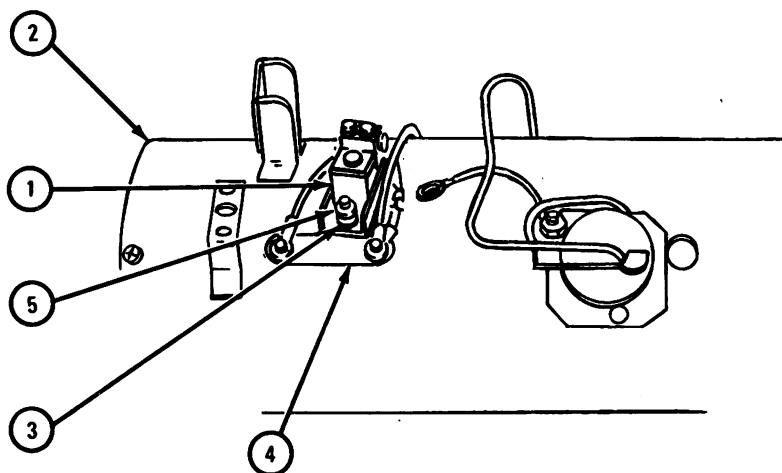


TA 104811

(5) Replacement of flame detector switch.

FRAME 1

1. Put flame detector switch (1) into heat exchanger (2). Make sure adjustment screw (3) is above overhead switch (4). Tighten nut (5).

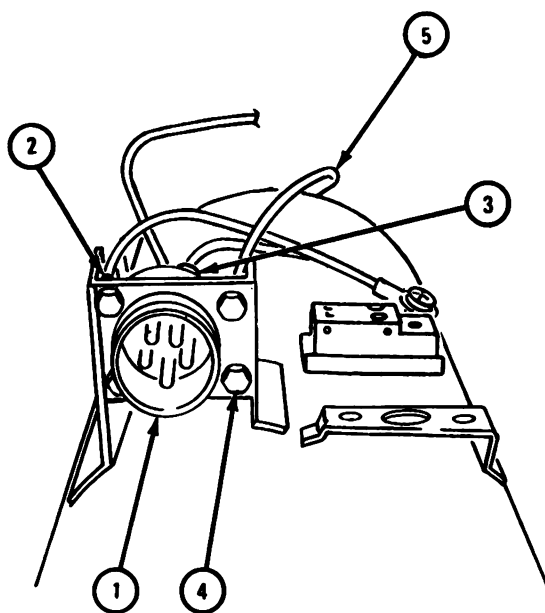
END OF TASK

TA 104812

(6) Cable receptacle.

FRAME 1

1. Place cable receptacle (1) so lead terminals (2) face blower end of heater. Make sure screw terminal (3) is on top.
 2. Put in four screws (4).
 3. Put three leads (5) on flame and overheat switches as tagged. Take off tags.
- END OF TASK**



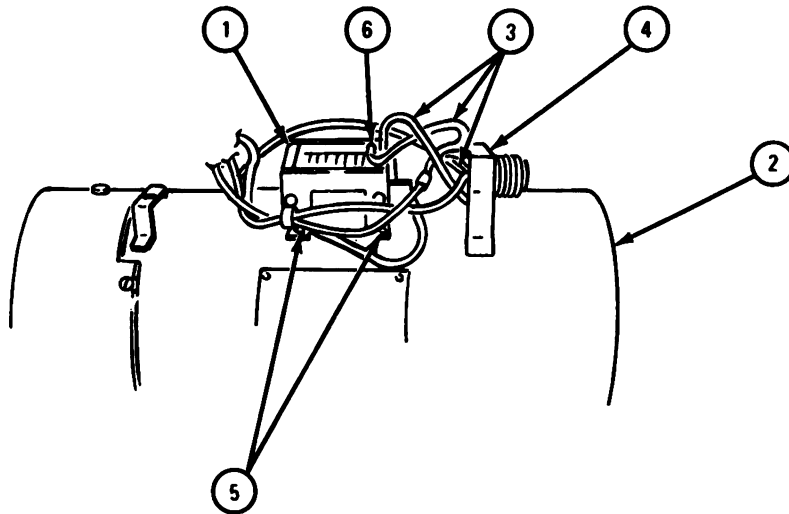
TA 104813

(7) Ignition control.

FRAME 1

1. Put ignition control (1) on heater housing (2). Place leads (3) so they face receptacle switch (4).
2. Put in three screws (5).
3. Put leads (3) on flame and overheat switches as tagged.
4. Join leads from igniter to terminal (6) as tagged. Take off tags.

END OF TASK



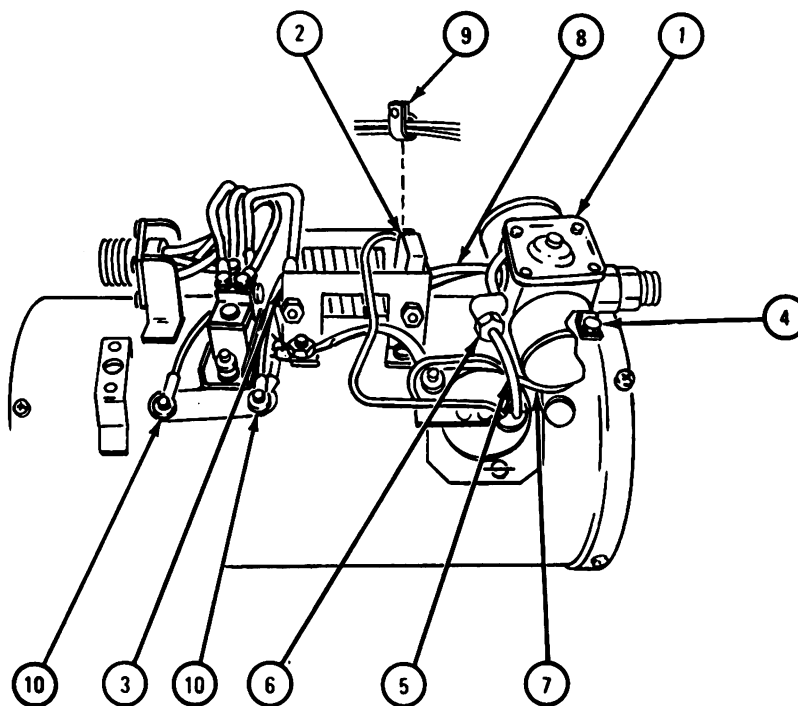
TA 104814

(8) Fuel control valve.

FRAME 1

1. Put on valve (1) with thermostat (2) facing control (3).
2. Put in four screws (4).
3. Join tube (5) to valve (1) and tighten nut (6).
4. Thread blower wire (7) under fuel control valve (1).
5. Thread three valve lead wires (8) through clamp (9) on control (3).
6. Join leads (8) to terminals (10) as tagged. Take off tags.

END OF TASK



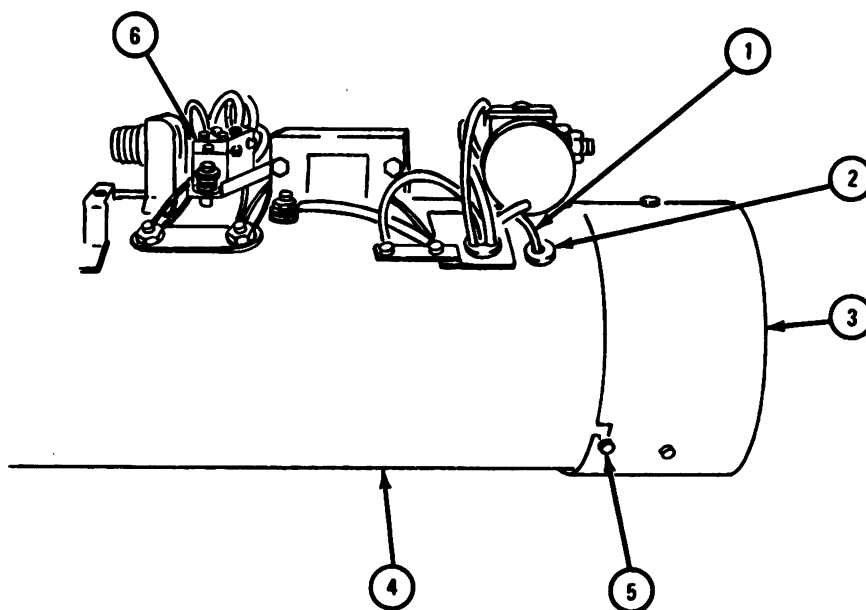
TA 104815

(9) Blower assembly.

FRAME 1

1. Put lead (1) through hole as shown.
2. Put in grommet (2).
3. Put blower assembly (3) in housing (4). Slide slots under four screws (5) and tighten screws.
4. Join lead (1) to flame detector switch (6) as tagged. Take off tags.

END OF TASK

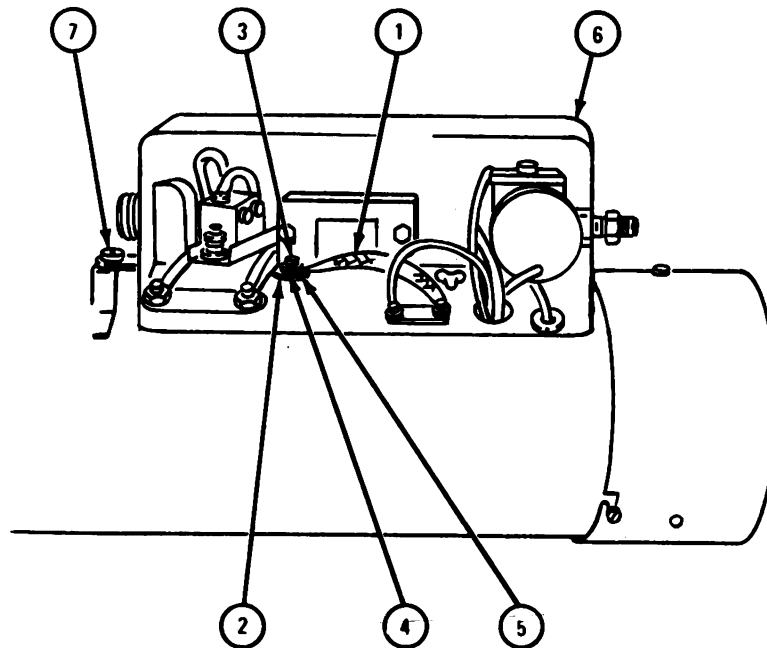


TA 104816

(10) Connections.

FRAME 1

1. Join ground (1) and ground (2) to ground head (3) on ignition control.
 2. Put on nut (4) with lockwasher (5).
 3. Put on guard assembly (6). Tighten two fasteners (7).
- END OF TASK



TA 104817

h. Test.**FRAME 1**

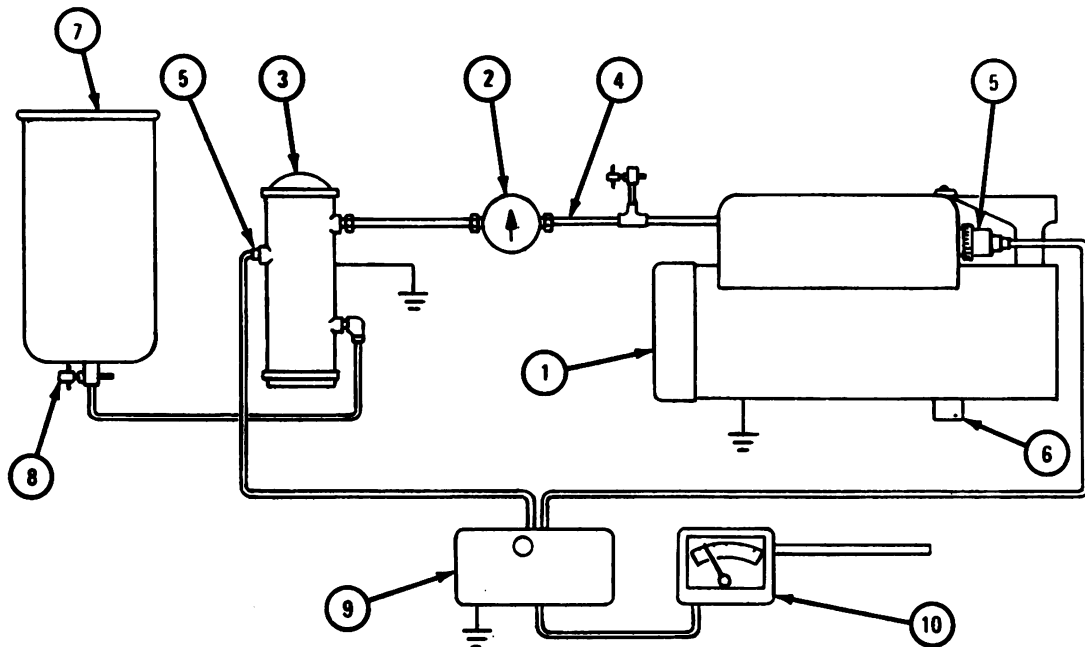
1. Put heater (1) on test stand or bench.
2. Put flowmeter (2) between fuel pump (3) and heater (1).
3. Put on a shutoff valve near outlet end of fuel line (4).
4. Put on electrical connections (5).
5. Put on exhaust connections (6).
6. Put in fuel tank (7) with shutoff valve (8).

NOTE

Do not put fuel line on heater at this time.

7. Put in control (9) and ammeter (10).

GO TO FRAME 2



TA 104818

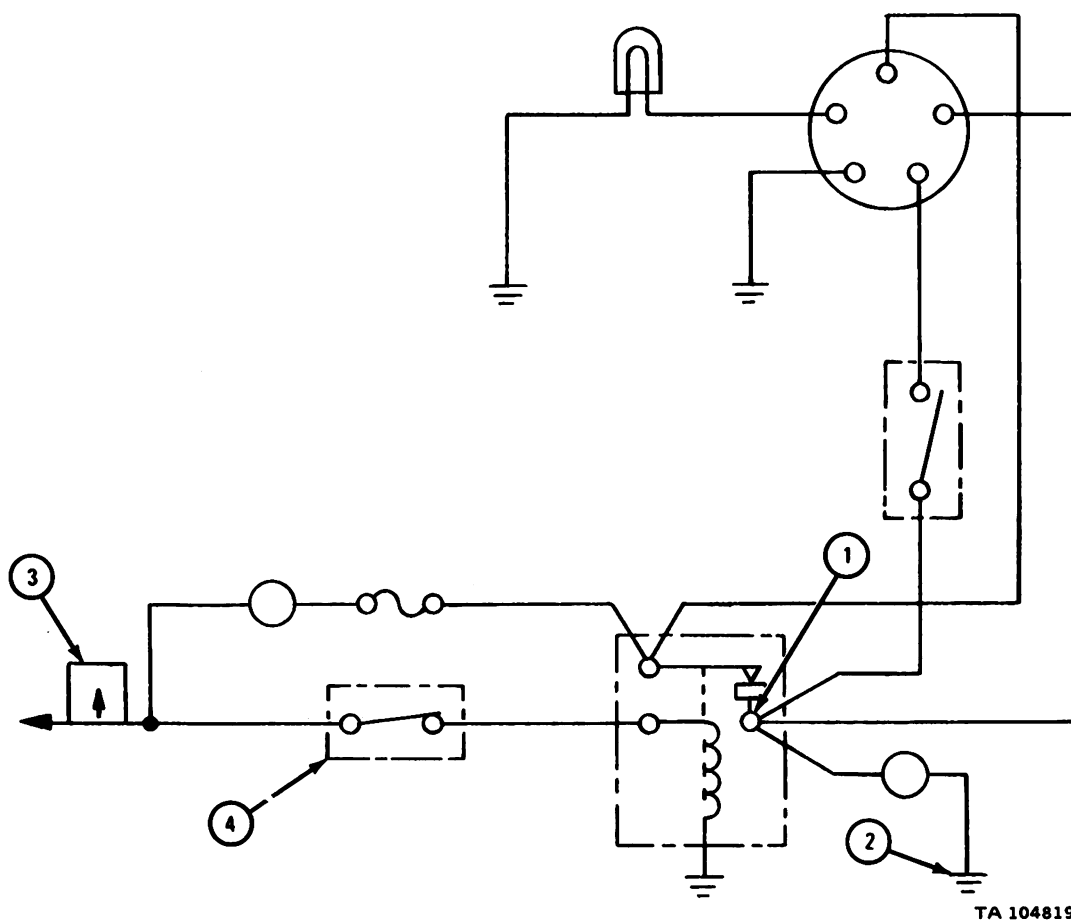
FRAME 2

CAUTION

Do not run this test for more than three minutes.
Igniter and transistor are not made for continuous use
with these voltage and current amounts and can be
damaged.

1. Put voltmeter between screw terminal of igniter (1) and ground (2). Set voltmeter on low range between 0 and 15 volts.
2. Use adjustable source of 24 volts dc. Preset voltage control (3) to 20 volts dc.
3. Put heater control switch (4) to ON position. Heater must run through whole test to cool transistor.

GO TO FRAME 3

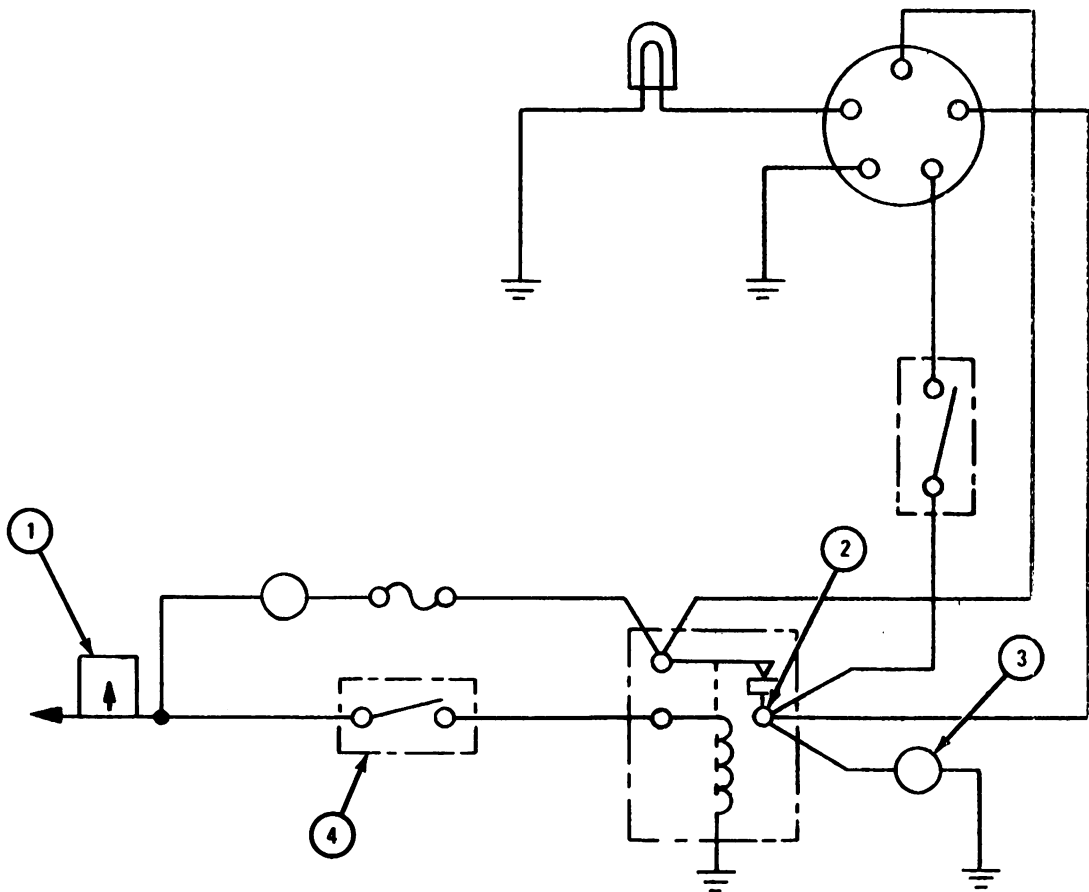


TA 104819

FRAME 3

1. Set voltage (1) from 19.5 to 20.5 volts. Check voltage at terminal of igniter (2). Voltage must be 5.8 to 6.3 vdc.
2. If voltage is not within given limits, put in a new voltage regulator (3).
3. Turn heater control switch (4) to OFF position.

GO TO FRAME 4



TA 104820

FRAME 4

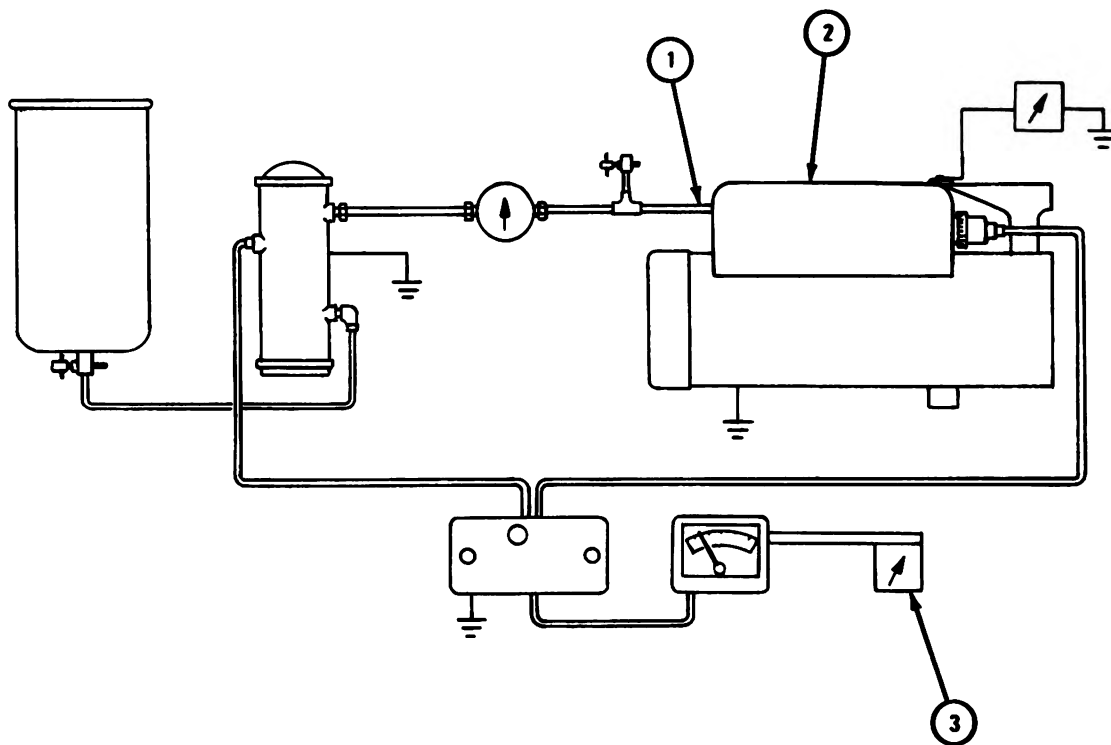
1. Put fuel line (1) on heater (2).

NOTE

Make sure heater is on stand or bench in same position as in truck. Changing mounting position will change fuel flow through control valve.

2. Set voltage control (3) to 24 vdc.

GO TO FRAME 5

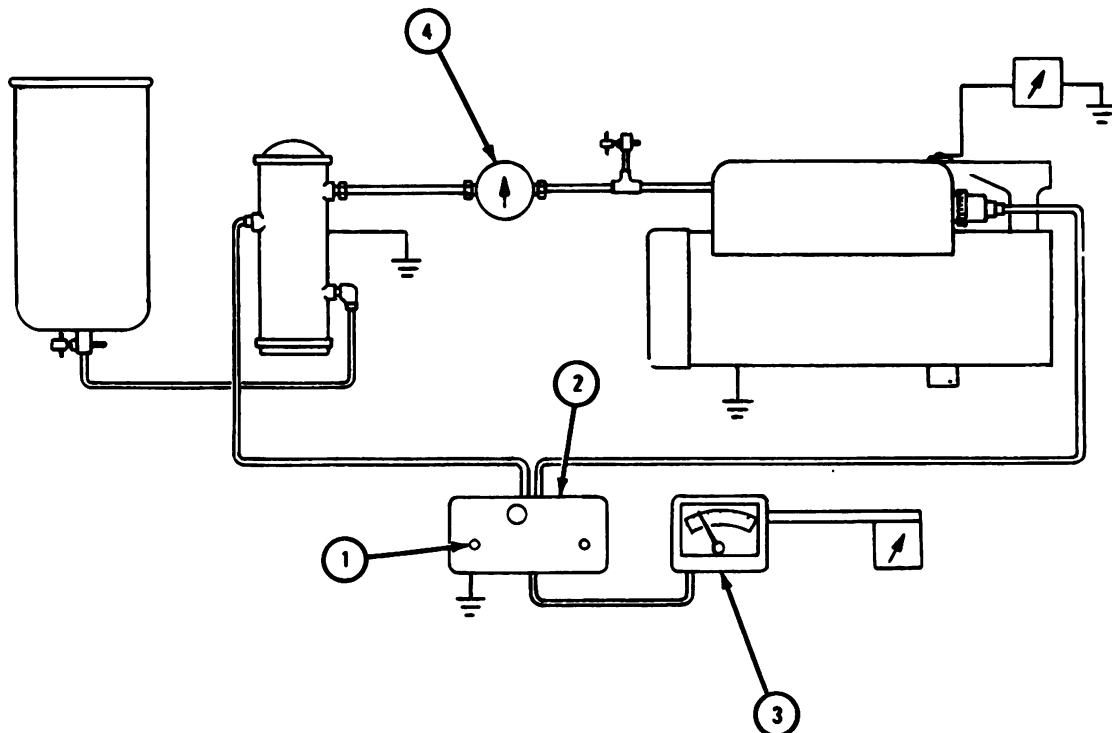


TA 104821

FRAME 5

1. Set HI-LO switch (1) to LO position.
2. Put heater control switch (2) to ON position and start timing heater operation.
3. Check that reading on ammeter (3) is not more than 16 amperes.
4. Check that fuel flow (4) during starting cycle is 0.010 to 0.014 pounds per minute (ppm).

GO TO FRAME 6



TA 104822

FRAME 6

NOTE

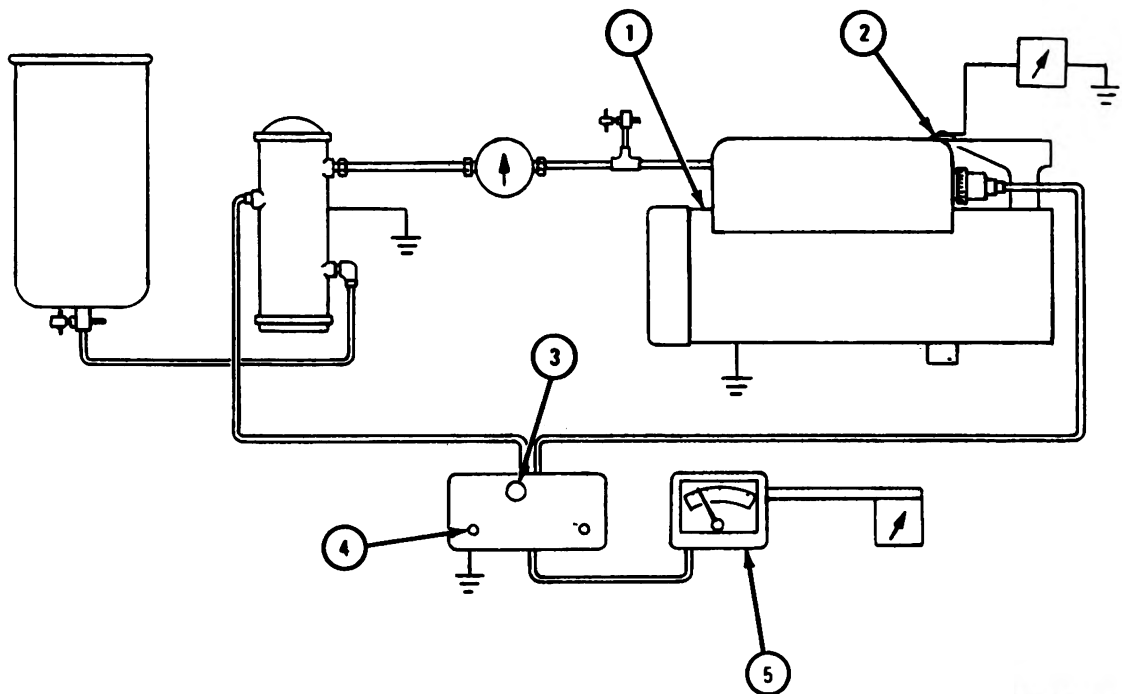
If ignition cannot be heard, take off end of exhaust and watch for puff of black smoke.

1. Heater (1) must ignite within 40 seconds.
2. Flame detector switch (2) must transfer within 150 seconds. Lamp (3) will come on when switch transfers.
3. When switch (2) transfers, put HI-LO switch (4) to HI position. Check that current (5) is not more than 6.3 amperes.

NOTE

Add three and one-half amperes to maximum current draw if test is made at a temperature that will keep fuel valve thermostat closed.

GO TO FRAME 7

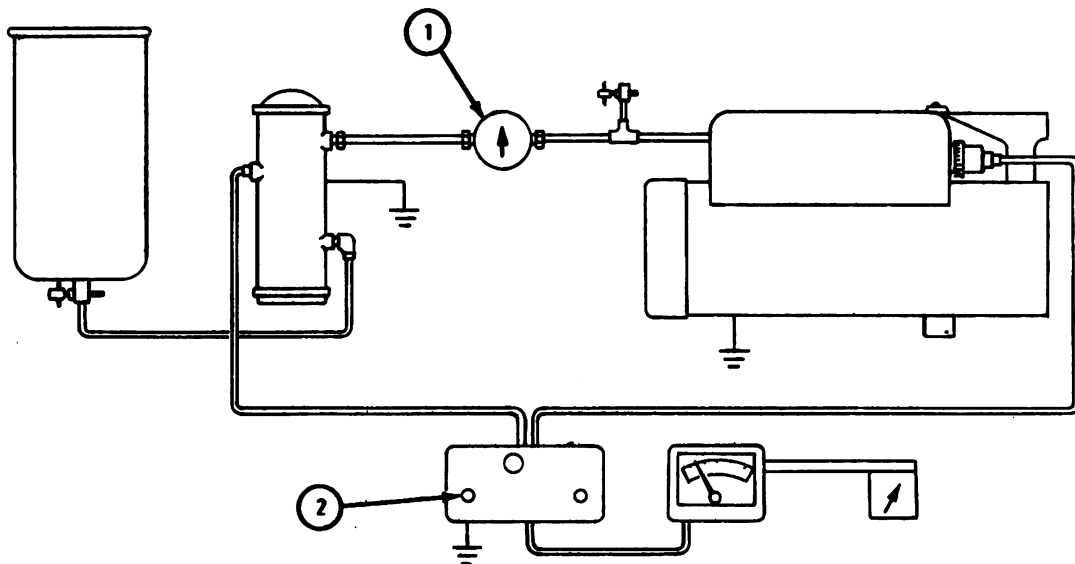


TA 104823

FRAME 7

1. Check that fuel flow (1) with switch (2) in HI position is between 0.027 and 0.033 ppm.
2. If flow is less than 0.027 ppm, turn heater fuel control valve screw to right.
3. If flow is more than 0.033 ppm, turn heater fuel control valve screw to left.
4. Do steps 1, 2, and 3 again until fuel flow is within given limits.
5. Do frame 5, step 4 again to recheck low heat fuel flow.
6. If low heat fuel is not within given limits, take out orifice plate. Clean metering holes. Refer to para 16-8c (2). Then put in orifice plate. Refer to para 16-8f (1).

GO TO FRAME 8

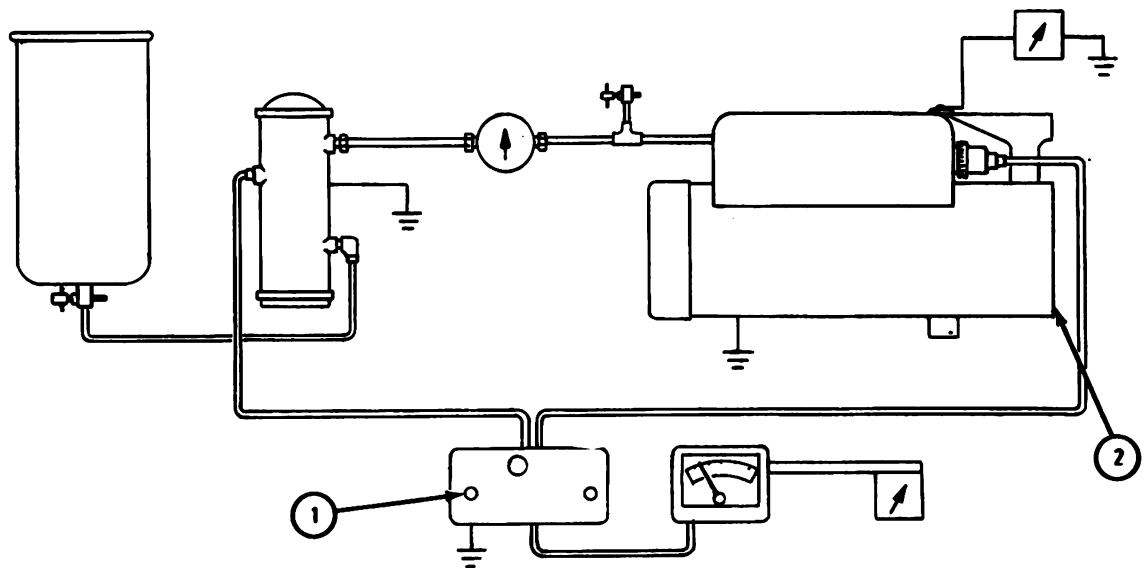


TA 104824

FRAME 8

1. With switch (1) in HI position, cover inlet (2) with cardboard or sheet metal. Overheat switch should shut off fuel in 15 to 30 seconds.
2. If shutoff time is not within given limits, put in a new overheat switch. Refer to para 16-8b (7) and para 16-8g (4). Then do step 1 again.
3. Take cover from inlet (2). Let heater run for 30 seconds to cool.

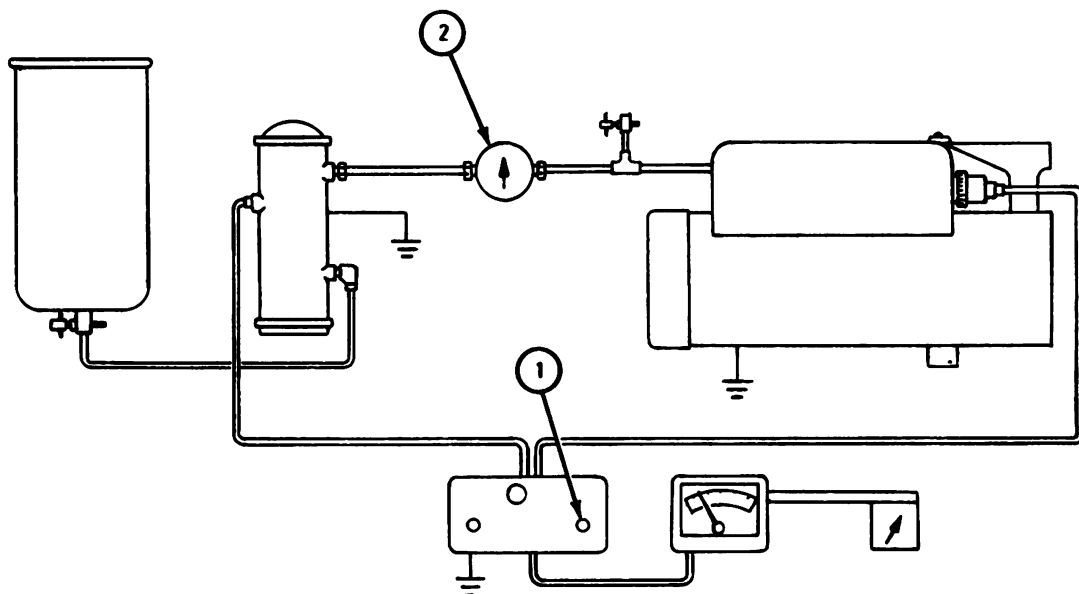
GO TO FRAME 9



TA 104825

FRAME 9

1. Let heater burn in HI position for one minute. Turn heater control switch (1) to OFF position when time is up.
2. Fuel flow (2) must drop to zero in 60 to 210 seconds.
3. If stop time is not within given limits, reset flame detector switch and go to frame 10.

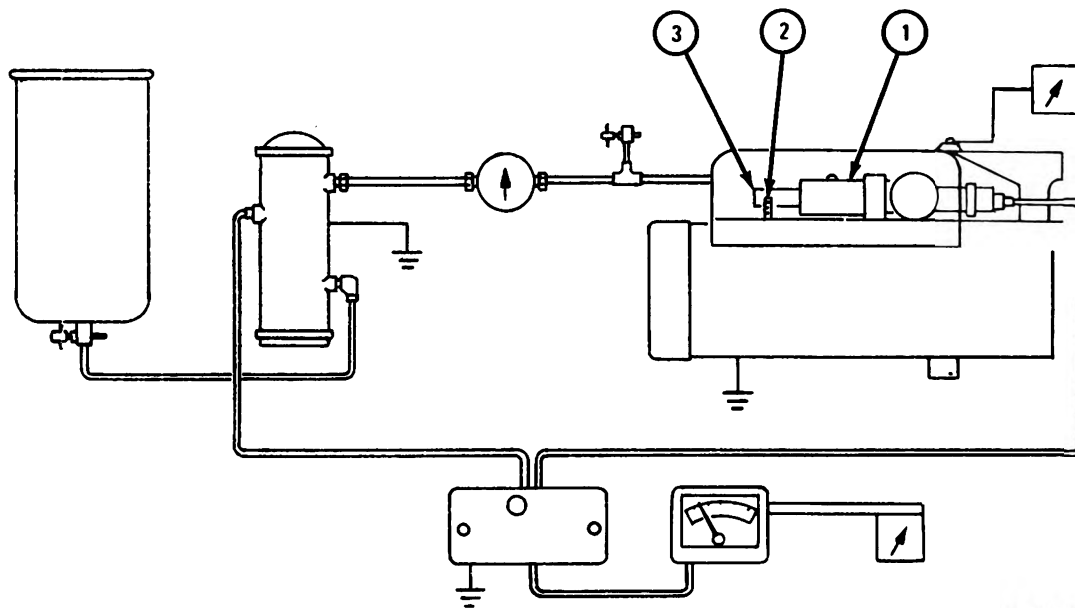
GO TO FRAME 11

TA 104826

FRAME 10

1. Take off guard assembly (1). Refer to para 16-8b (1).
2. Unscrew adjusting screw (2) on flame detector switch (3) until microswitch clicks.
3. Slowly screw in screw (2) until microswitch clicks again. Turn screw three-quarters of a turn more past click point.
4. Cement screw (1) in place with glyptal varnish.
5. Do frame 9 again. If stop time is still not within given limits, put in new switch (3). Do frame 9 and steps 1 through 4 again until stop time is within given limits.
6. Put back guard assembly (1). Refer to para 16-8g (10).

GO TO FRAME 11



TA 104827

FRAME 11

1. Mark a blade of combustion air blower fan (1) with chalk.

NOTE

Cover intake (2) during test.

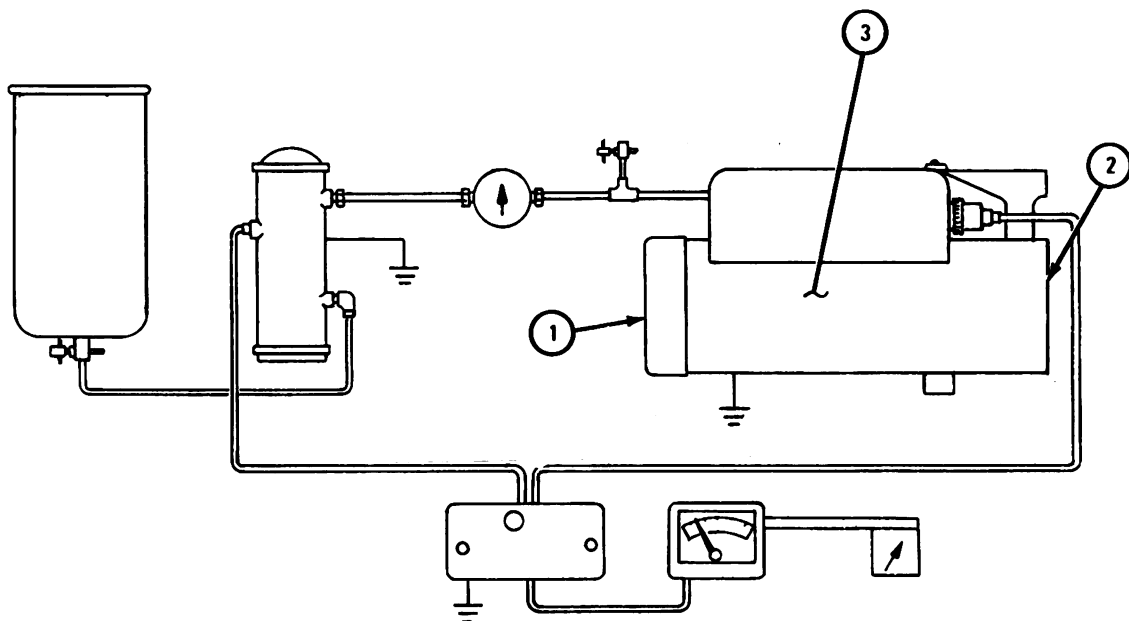
2. Start heater and time fan (1) with tachometer. Blower speed must be 6,800 to 7,800 rpm.
3. Let heater run for 30 seconds to cool after test.
4. If blower speed was not within given limits, get a new blower assembly. Refer to para 16-8c (1) and para 16-8g (9).
5. Take heater (3) off test stand or bench.

NOTE

Follow-on Maintenance Action Required:

Replace heater in truck. Refer to TM 9-2320-242-20.

END OF TASK



TA 104828

16-9. AMBULANCE HEATER MOUNT AND SHROUD REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove ambulance heater mount and shroud. Refer to TM 9-2320-242-20.
- 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

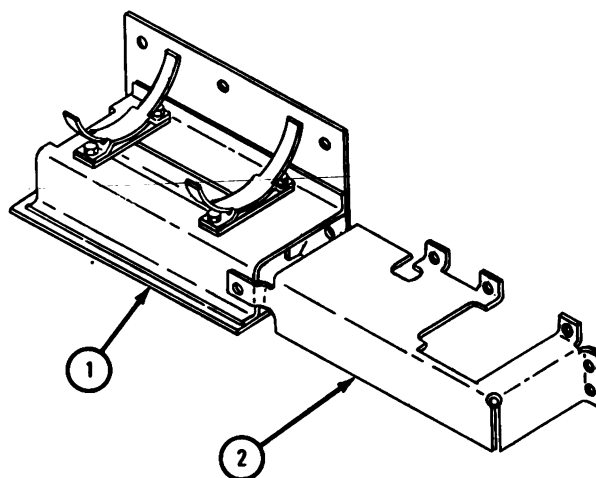
1. Check that ambulance heater mount (1) and shroud (2) are not bent, dented, cracked or torn.
2. Straighten any dents or bends in mount (1) and shroud (2). Refer to FM 43-2.
3. Weld any crack or tears in mount (1) and shroud (2). Refer to TM 9-237.

NOTE

Follow-on Maintenance Action Required:

Replace heater mount and shroud. Refer to TM 9-2320-242-20.

END OF TASK



TA 089254

16-10. AMBULANCE HEATER INLET DUCT, OUTLET DUCT, AND GRILLS REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** Two**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.a. Preliminary Procedure. Open tailgate. Refer to TM 9-2320-242-10.b. Removal.

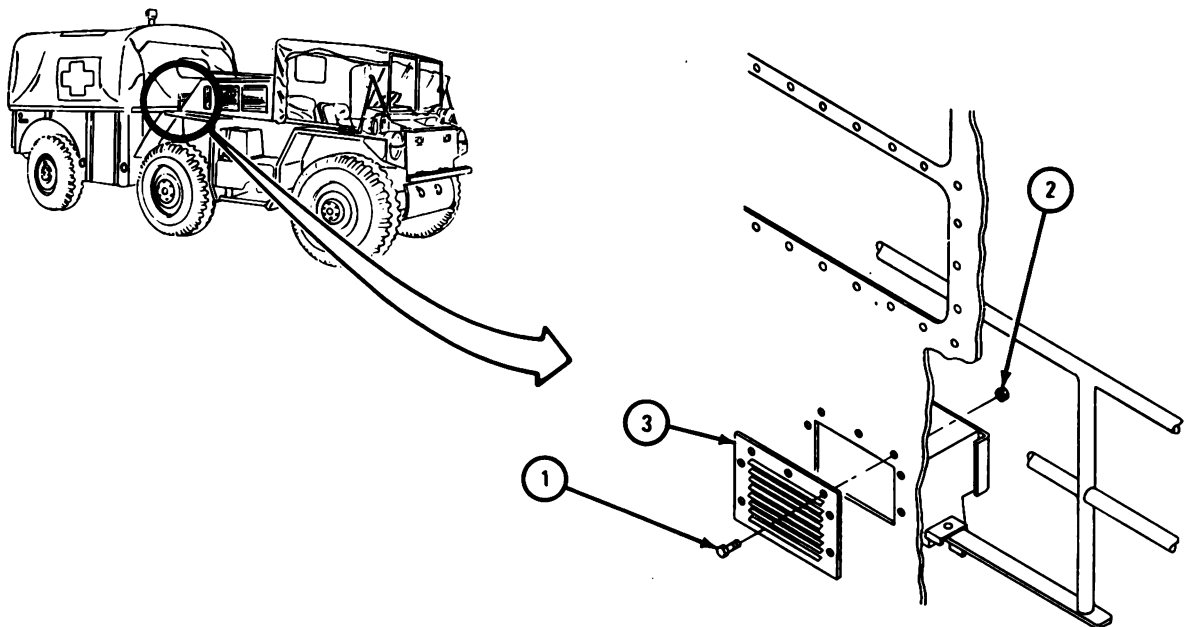
(1) Removal of inlet duct.

FRAME 1

Soldier A 1. Working outside carrier, hold seven screws (1).

Soldier B 2. Working inside carrier, take off seven nuts (2).

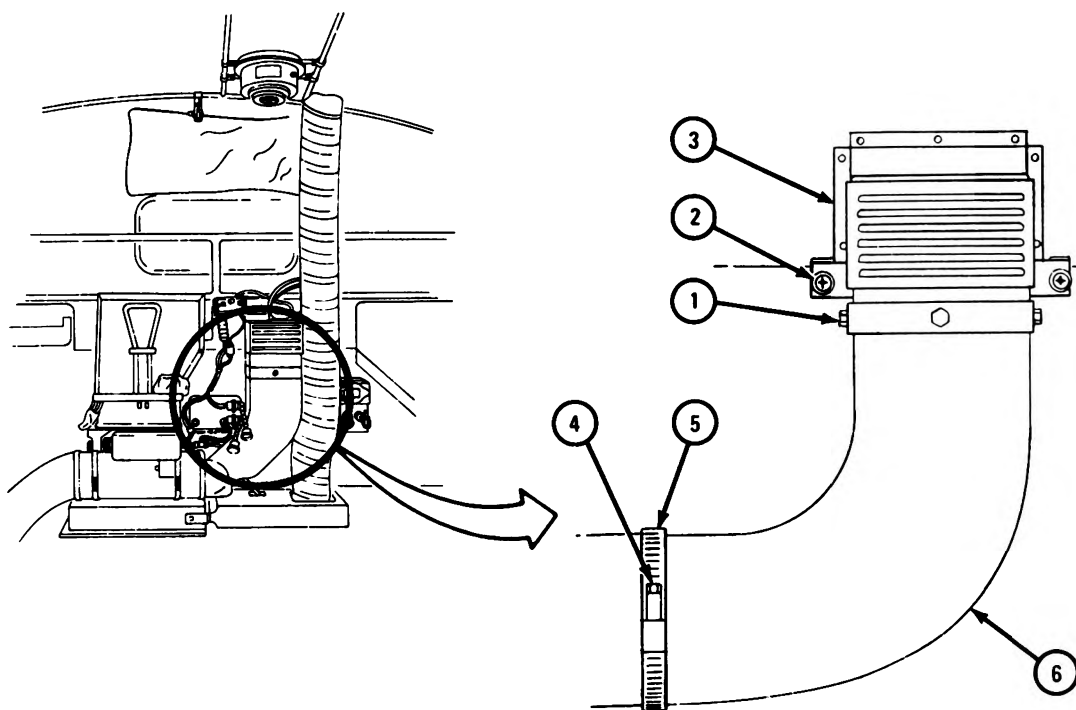
Soldier A 3. Take out seven screws (1) and take off louver (3).

GO TO FRAME 2

TA 089255

FRAME 2

1. Take out three screws with washers (1).
 2. Take out two screws with washers (2). Take off intake assembly (3).
 3. Loosen screw (4) and slide back clamp (5). Take off duct (6).
- END OF TASK



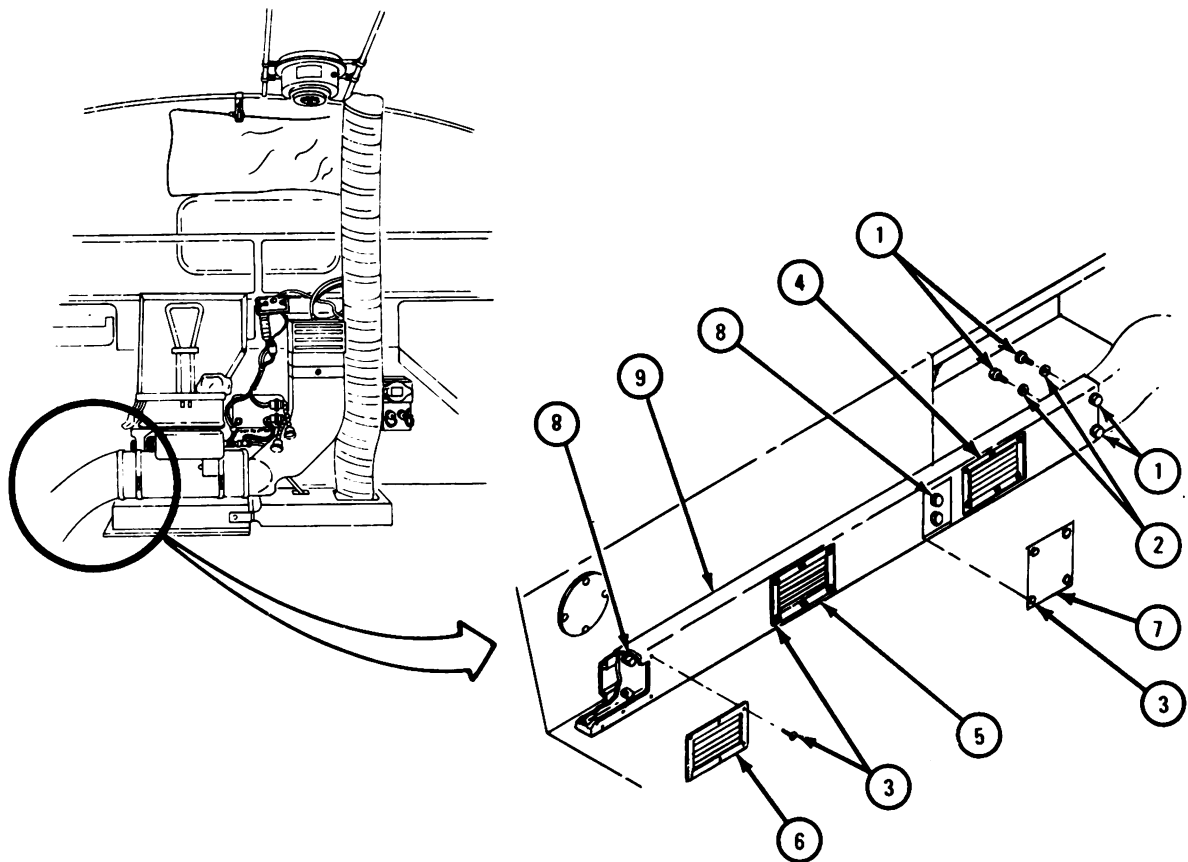
TA 089256

(2) Removal of outlet duct, grills, and access panel.

FRAME 1

1. Take out four screws (1) and washers (2).
2. Take out 22 screws (3) from three grills (4, 5, and 6) and access panel (7). Take off grills and access panel.
3. Take out four screws with washers (8) through holes for grill (6) and access panel (7).
4. Take off duct (9).

END OF TASK



TA 089257

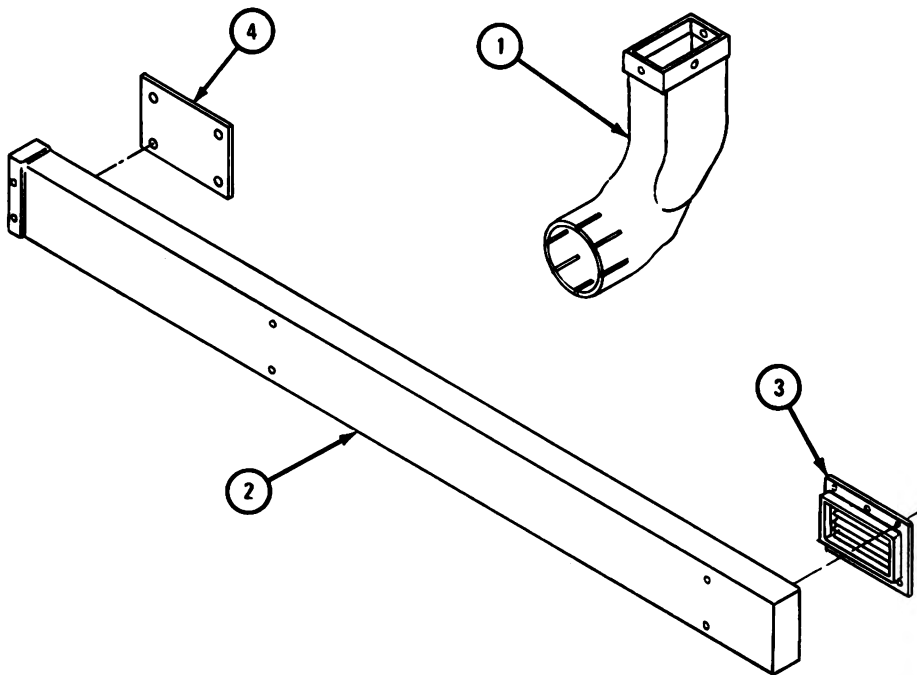
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that inlet duct (1), outlet duct (2), three grills (3), and access panel (4) are not bent, dented, cracked or torn.
2. Straighten dents or bends in ducts (1 and 2), three grills (3), and access panel (4). Refer to FM 43-2.
3. Weld cracks or tears in ducts (1 and 2), three grills (3), and access panel (4). Refer to TM 9-237.

END OF TASK



TA 089258

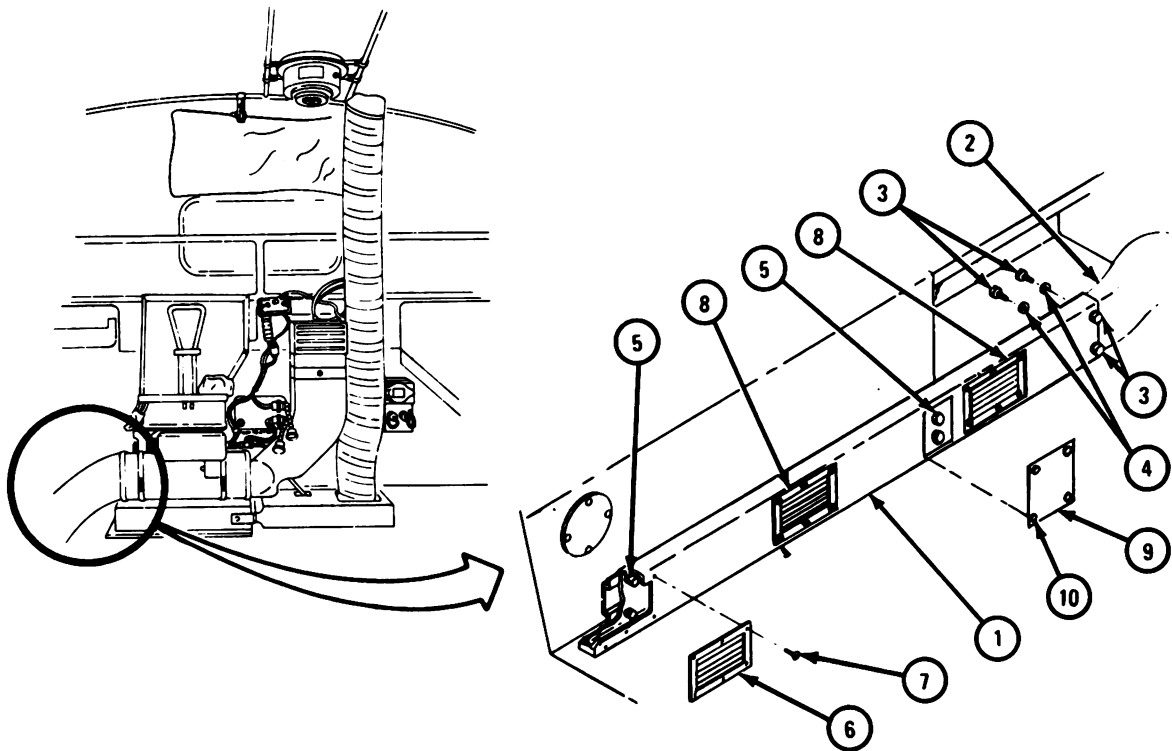
e. Replacement.

(1) Replacement of outlet duct, grills, and access panel.

FRAME 1

1. Slide outlet duct (1) over elbow (2) and hold it in place.
2. Put in four screws (3) with washers (4).
3. Put in four screws with washers (5).
4. Hold grill (6) in place and put in six screws (7).
5. Do step 4 again for two grills (8).
6. Hold access panel (9) in place and put in four screws (10).

END OF TASK



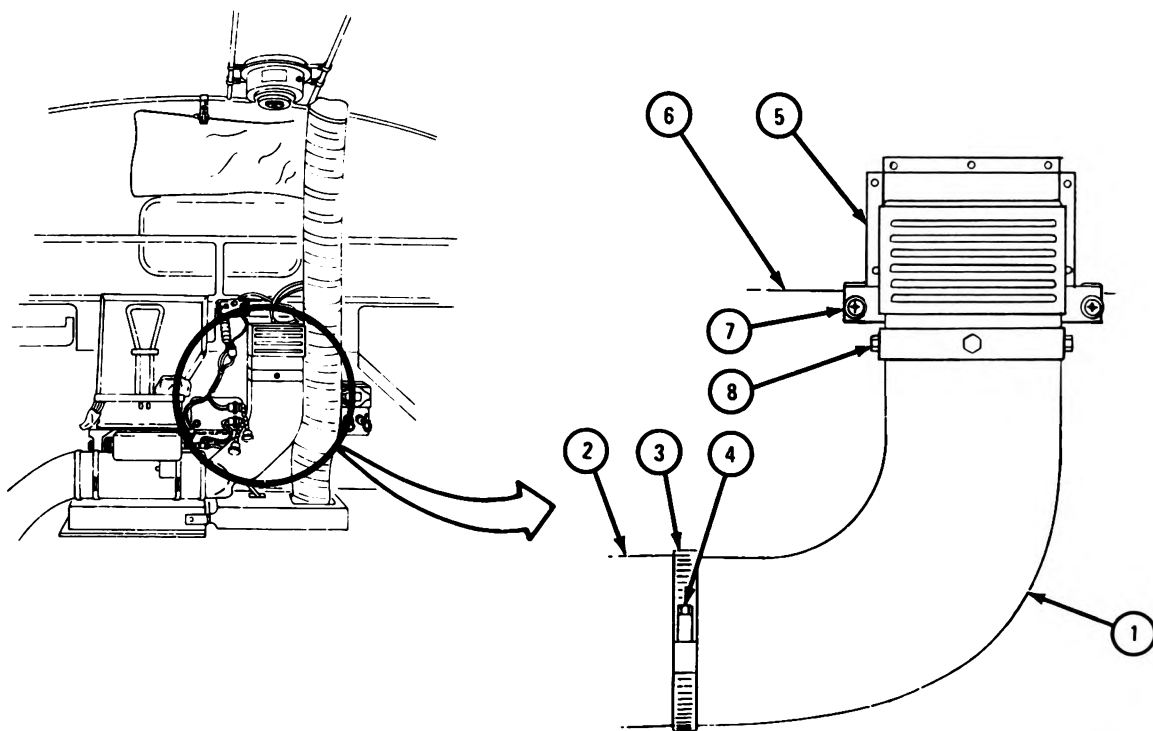
TA 089259

(2) Replacement of inlet duct.

FRAME 1

1. Put duct (1) in place on heater (2).
2. Slide clamp (3) in place. Tighten screw (4).
3. Put intake assembly (5) in place on duct (1) and carrier body (6).
4. Put in two screws with washers (7).
5. Put in three screws with washers (8).

GO TO FRAME 2



TA 089260

FRAME 2

Soldier A 1. Working outside carrier, hold louver (1) in place. Put in seven screws (2).

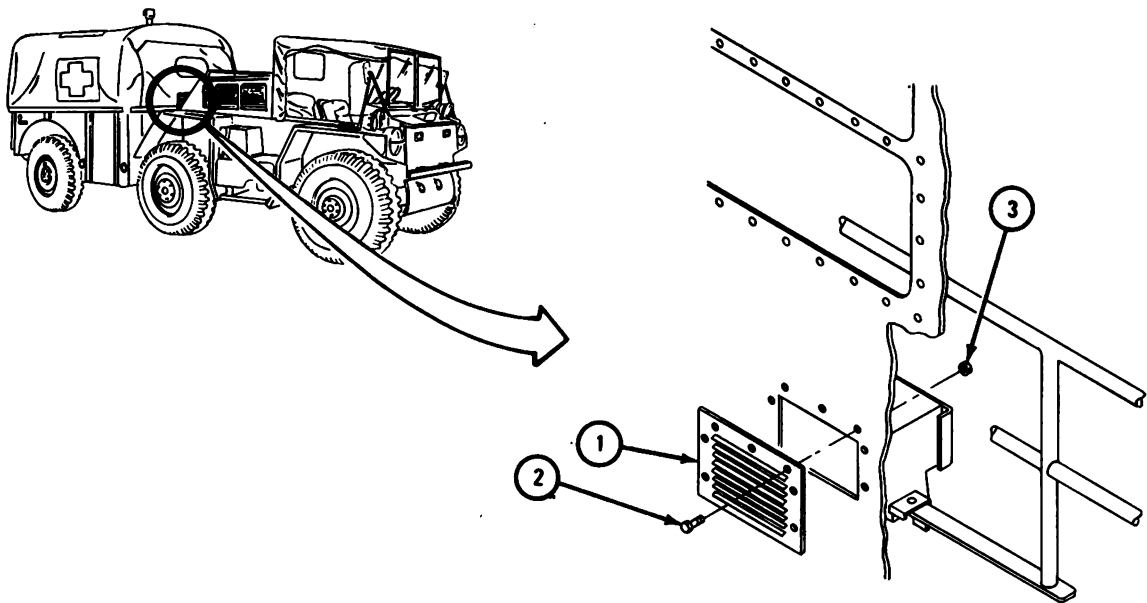
Soldier B 2. Working inside carrier, put on seven nuts (3).

NOTE

Follow-on Maintenance Action Required:

Close tailgate. Refer to TM 9-2320-242-10.

END OF TASK



TA 089261

16-11. AMBULANCE HEATER FUEL SHUTOFF VALVE REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Fuel, tubes, and cap plugs

PERSONNEL: One

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

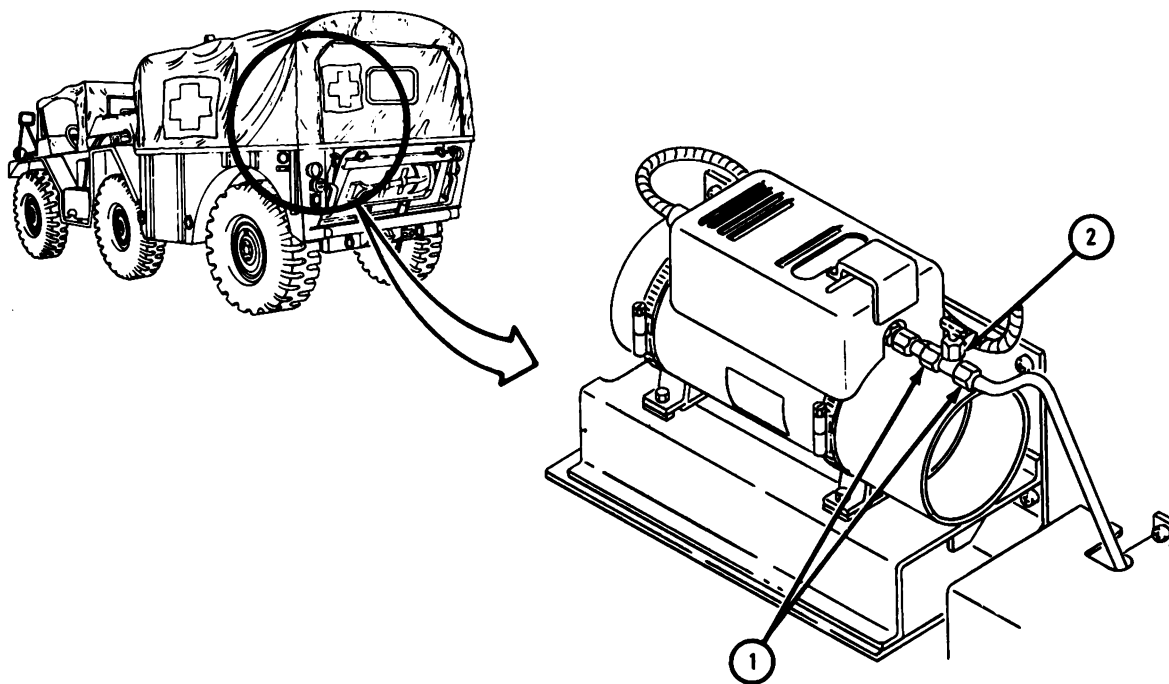
a. Removal.

FRAME 1

1. Working inside ambulance, loosen two nuts (1).

2. Take out valve (2).

END OF TASK



TA 089353

b. Test.

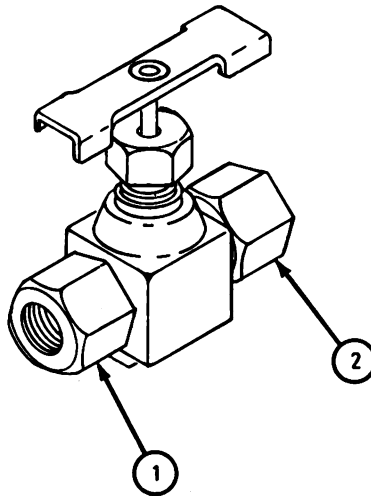
FRAME 1

NOTE

Flow arrow on valve body shows inlet and outlet ports on valve.

1. Put tubes in inlet port (1) and outlet port (2).
2. Put fuel source and gage on tube on inlet port (1).

GO TO FRAME 2

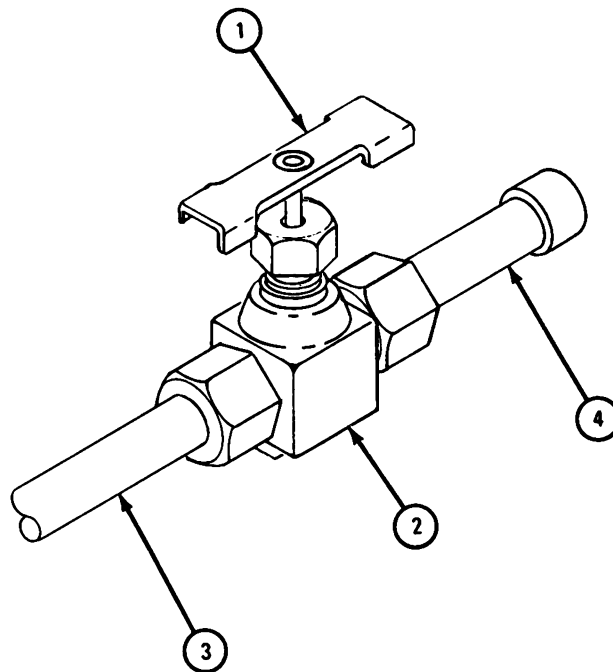


TA 089354

FRAME 2

1. Put handle assembly (1) in full open position.
2. Bleed air from valve (2) and tubes (3 and 4).
3. Plug outlet port tube (4).
4. Turn on fuel source. Leakage at valve (2) should not be more than 0.05 cc (0.003 cubic inches) per hour.

GO TO FRAME 3

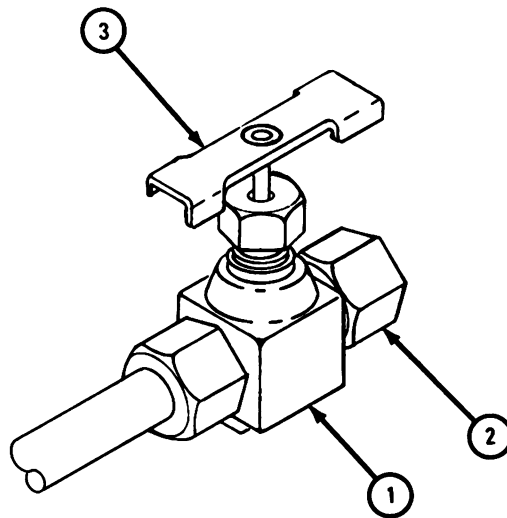


TA 089355

FRAME 3

1. Dump pressure from valve (1).
2. Take tube from outlet port (2).
3. Put handle assembly (3) in fully closed position.
4. Turn on fuel source. Leakage at valve (1) should not be more than 0.05 cc (0.003 cubic inches) per hour.

GO TO FRAME 4

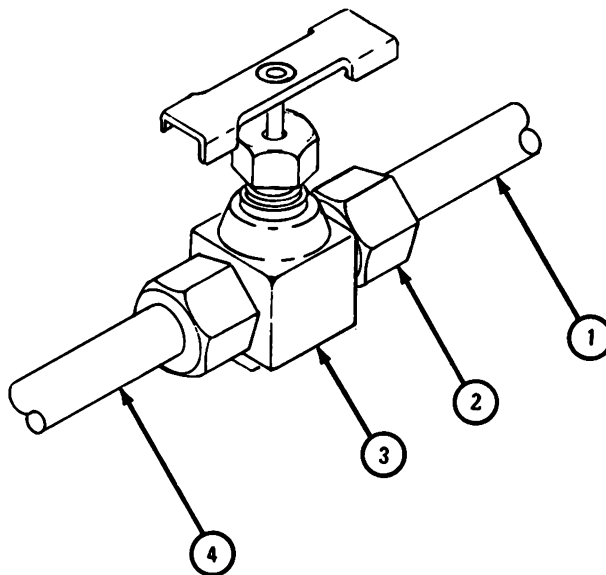


TA 089356

FRAME 4

1. Put tube (1) in outlet port (2). Join other end of tube return line of fuel source.
2. Move pressure down to 50 psi. Open and close valve (3) 20 times.
3. Do frames 2 and 3 again.
4. Take fuel source, gage, and tubes (1 and 4) from valve (3).
5. If test shows valve is bad, throw away valve and get a new one.

END OF TASK



TA 089357

- c. Repair. Repair is limited to replacement of damaged valves. Refer to para 16-13.
- d. Replacement.

FRAME 1

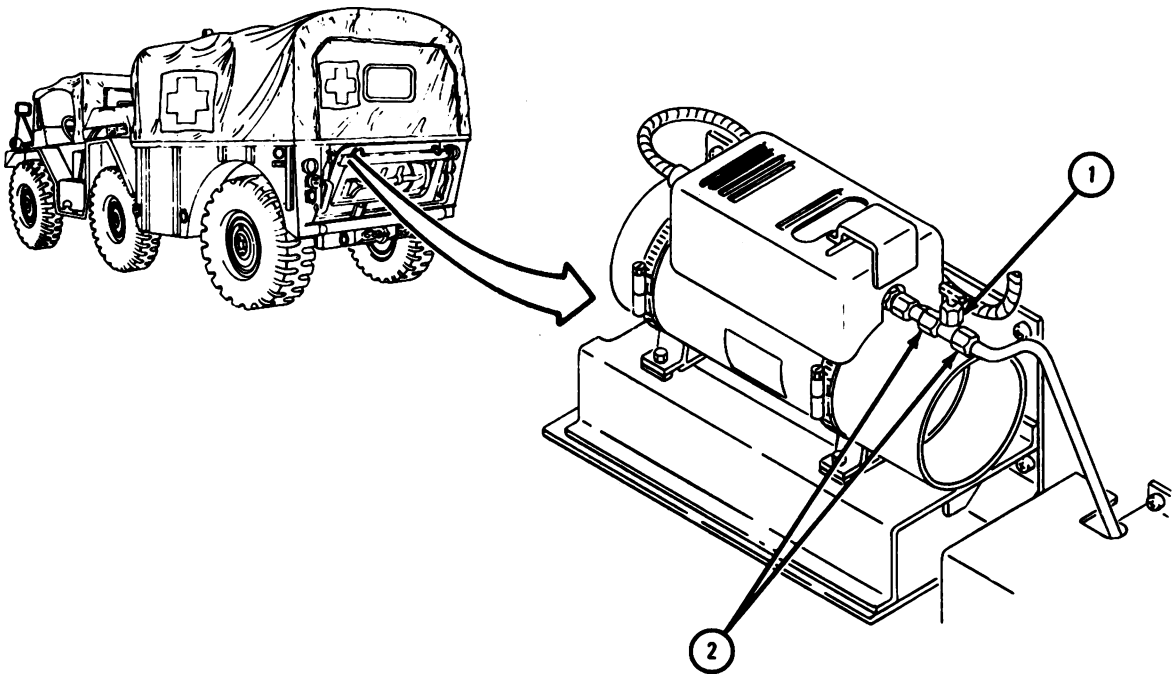
1. Working inside ambulance, put valve (1) in place.
2. Put on two nuts (2).

NOTE

Follow-on Maintenance Action Required:

Operate heater fuel pump to check for leaks. Refer to TM 9-2320-242-10.

END OF TASK



TA 089352

16-12. AMBULANCE HEATER FUEL PUMP REPAIR.

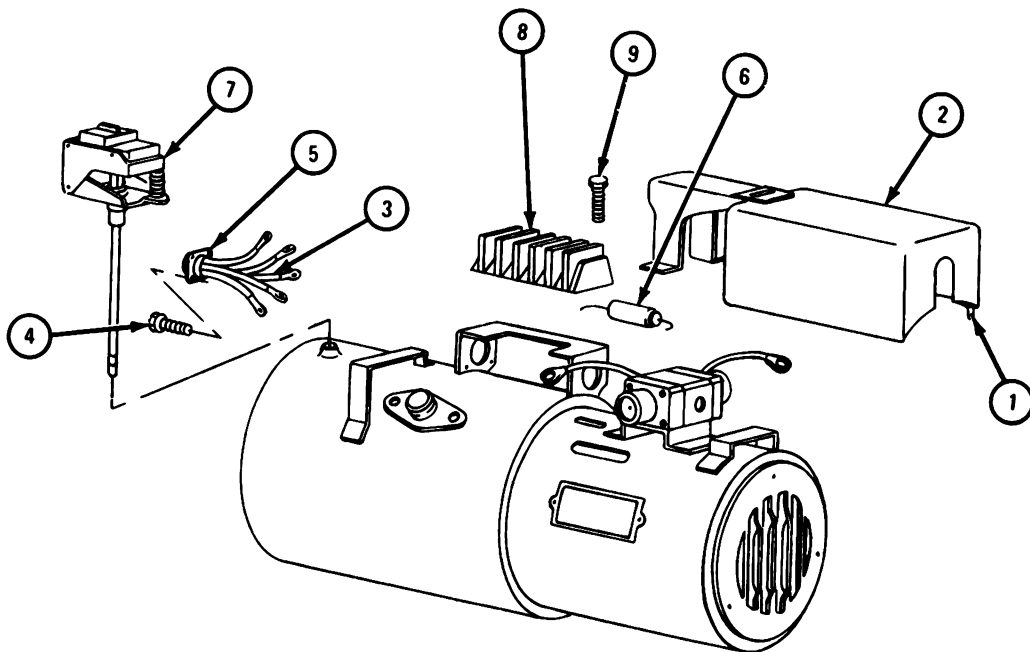
- a. Removal. Refer to TM 9-2320-242-20 to remove fuel pump.
- b. Repair. Repair is limited to getting a new fuel pump.
- c. Replacement. Refer to TM 9-2320-242-20 to replace fuel pump.

16-13. AMBULANCE CARRIER HEATER REPAIR.**TOOLS:** Fabricated bench test fixture**SUPPLIES:** Igniter gasket
Masking tape, PDP-T-426
Vaporizer**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove heater assembly. Refer to TM 9-2320-242-20.
- b. Disassembly into Subassemblies.

FRAME 1

1. Unscrew three fasteners (1) and take cover (2) off.
2. Mark tape and tag and unhook five wires (3). Take out four screws (4) and take off receptacle (5).
3. Take off capacitor (6).
4. Mark tape and tag and unhook wires on switch assembly (7). Take out switch assembly (7).
5. Mark tape and tag and unhook all wires on terminal block (8). Take out four screws (9) and terminal block (8).

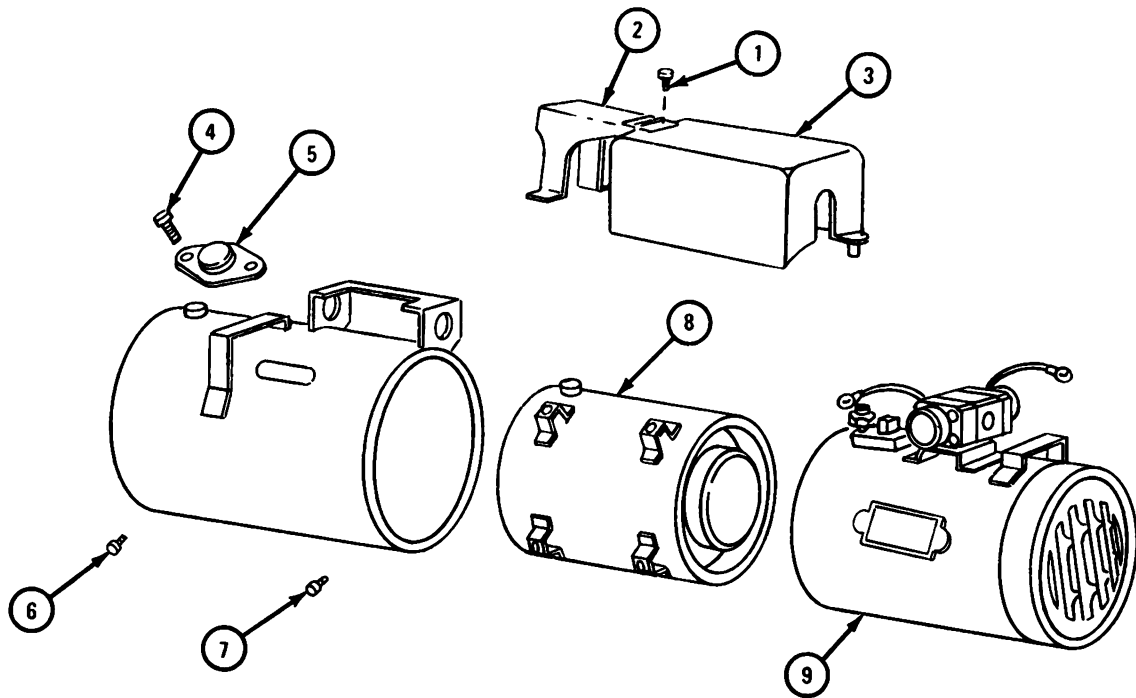
GO TO FRAME 2

TA 105097

FRAME 2

1. Take out two screws (1). Separate flame switch guard (2) from cover (3).
2. Take out two screws (4). Take out limit switch (5).
3. Take out 16 screws (6). Take out four screws (7). Take out combustion chamber (8) and burner assembly (9).

GO TO FRAME 3

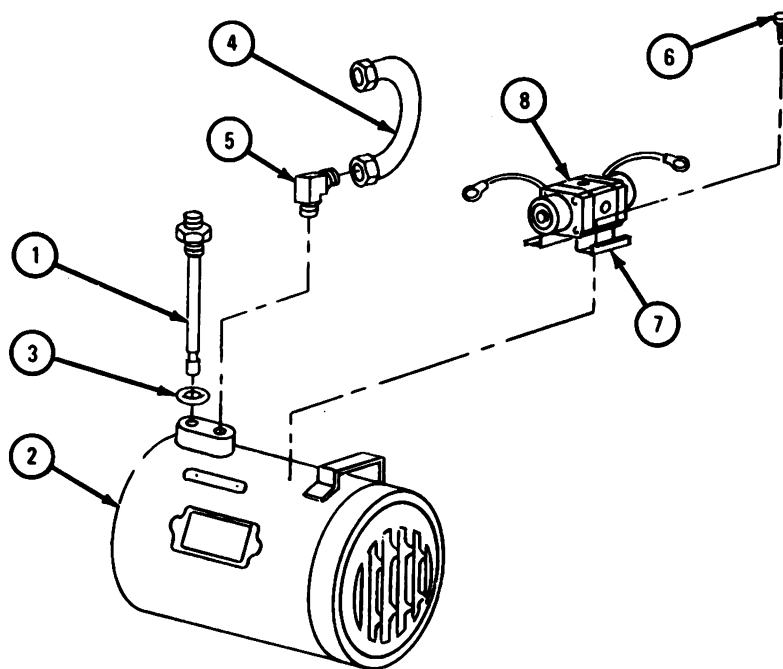


TA 105098

FRAME 3

1. Take igniter (1) out of burner (2) with gasket (3).
2. Take off fuel tube (4). Take off elbow (5).
3. Take out four screws (6). Take off bracket (7) with valve (8).

GO TO FRAME 4

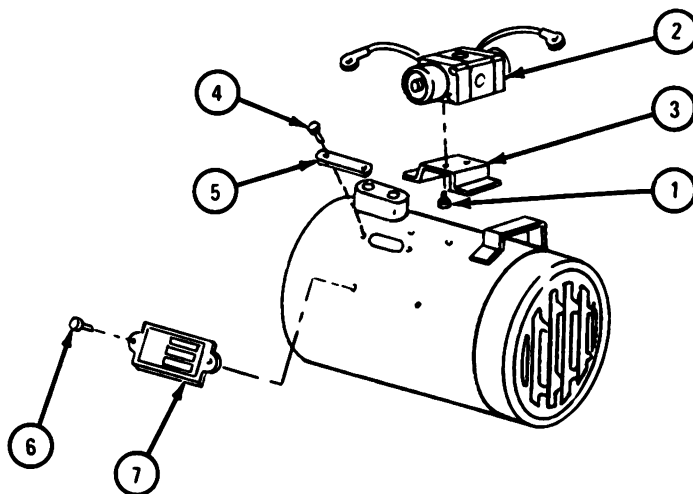


TA 105099

FRAME 4

1. Take out four screws (1). Take control valve assembly (2) off bracket (3).
2. Take out two screws (4). Take out resistor (5).
3. Take out two screws (6). Take off data plate (7).

GO TO FRAME 5

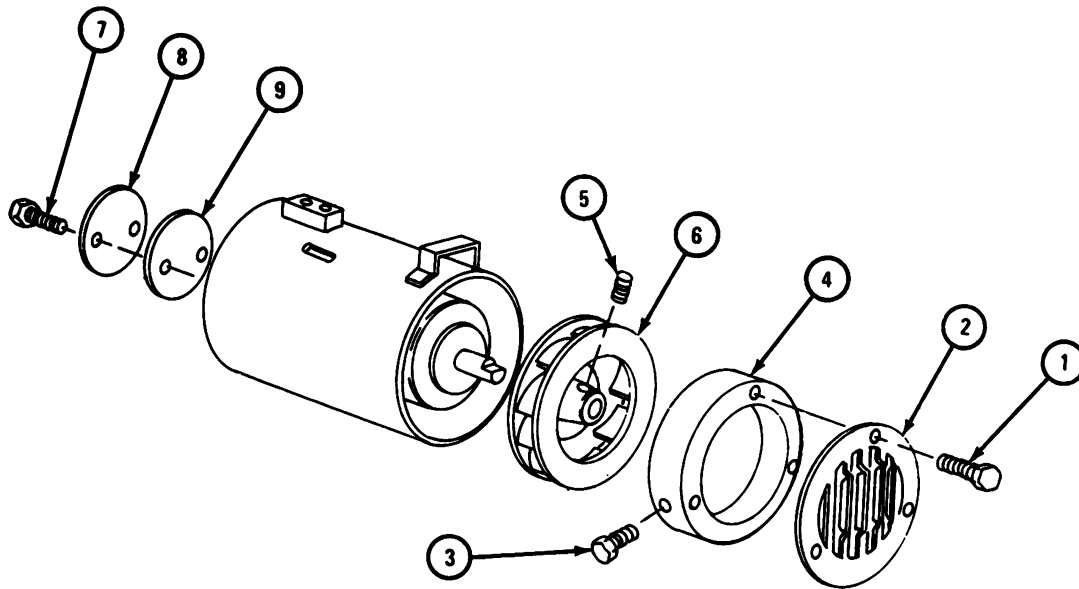


TA 105100

FRAME 5

1. Take out three screws (1). Take off plate (2).
2. Take out four screws (3). Take off cover (4).
3. Take out setscrew (5). Take off fan (6).
4. Take out two screws (7). Take off retainer (8) and vaporizer (9). Throw vaporizer away.

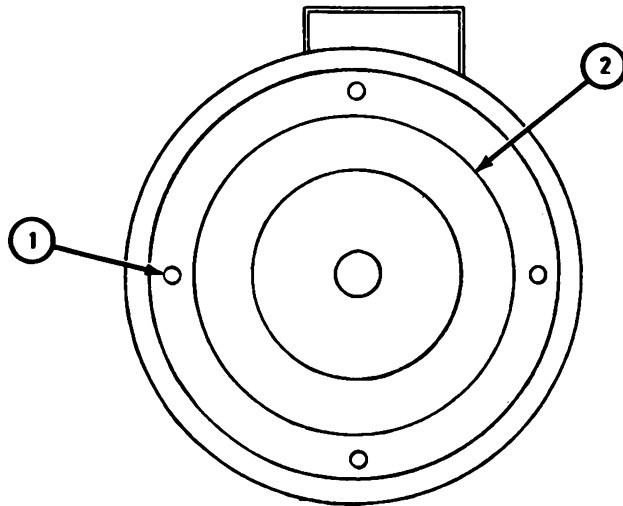
GO TO FRAME 6



TA 105101

FRAME 6

1. Take out four screws (1) from air inlet (2).
- GO TO FRAME 7

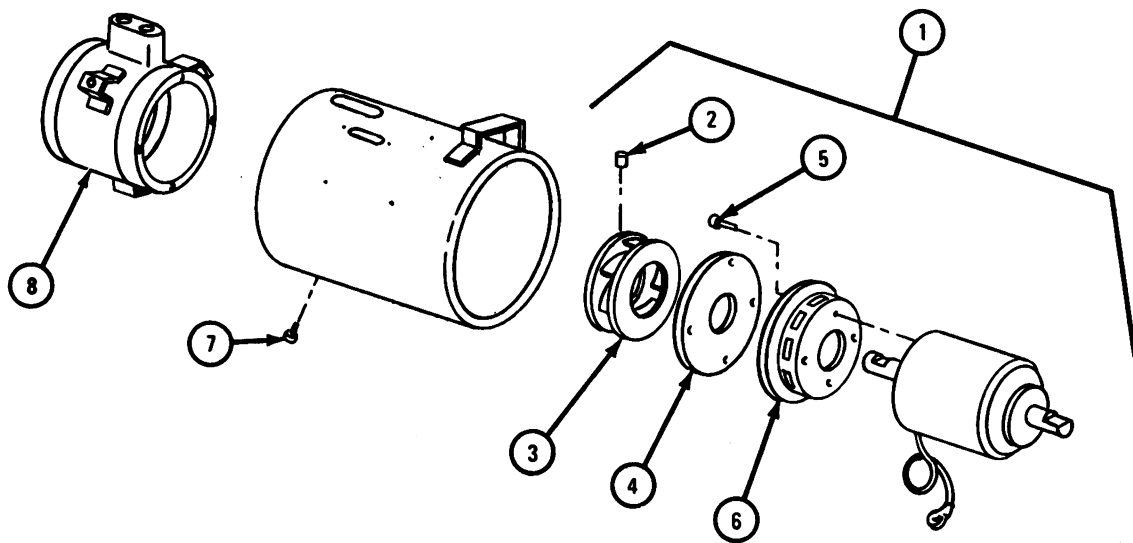


TA 105102

FRAME 7

1. Take out motor assembly (1).
2. Take out setscrew (2). Take off fan (3) and plate (4).
3. Take out four screws (5). Take off air inlet (6).
4. Take out two screws (7). Take out burner (8).

END OF TASK



TA 105145

c. Disassembly of Subassemblies.

(1) Flare switch assembly.

FRAME 1

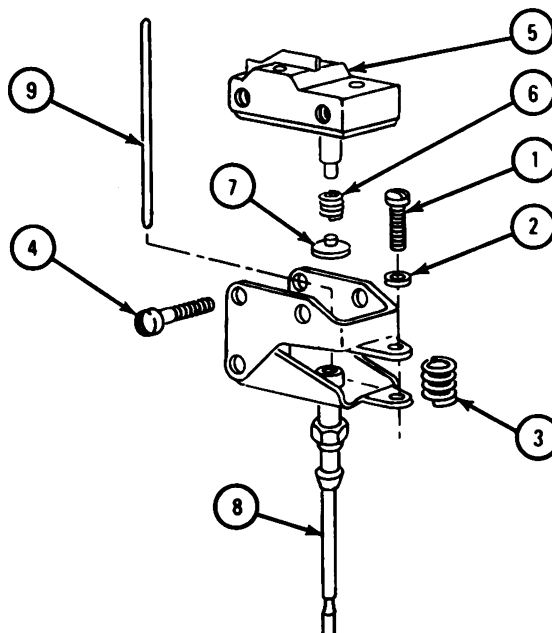
1. Take out adjusting screw (1), washer (2), and spring (3).
2. Take out two screws (4). Take out microswitch (5), spring (6), and spring pad (7).

CAUTION

Be careful when taking out quartz rod (9). Rod is very fragile.

3. Tip switch frame (8) over and take out rod (9).

END OF TASK



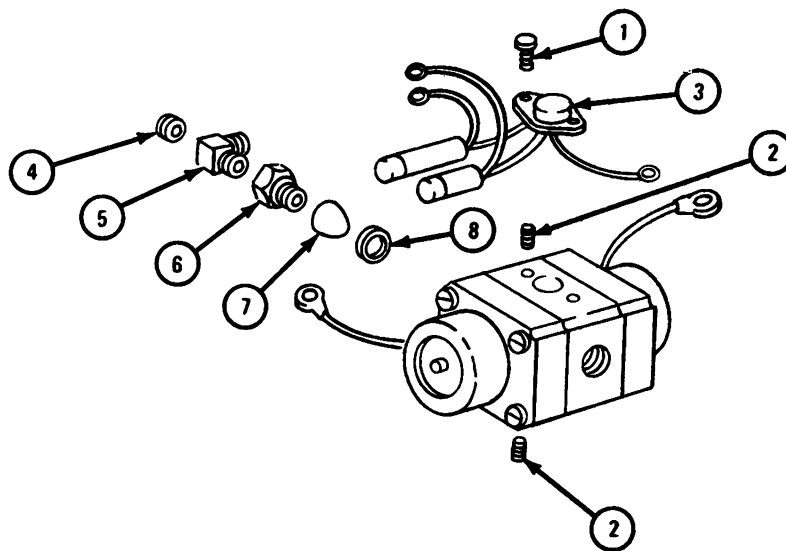
TA 105103

(2) Regulator valve assembly.

FRAME 1

1. Take out two screws (1). Take out two setscrews (2). Take out heater valve assembly (3).
2. Take out plug (4) and elbow (5).
3. Take out filter body (6) with filter (7) and gasket (8).

END OF TASK



TA 105104

d. Cleaning, Inspection, and Repair.

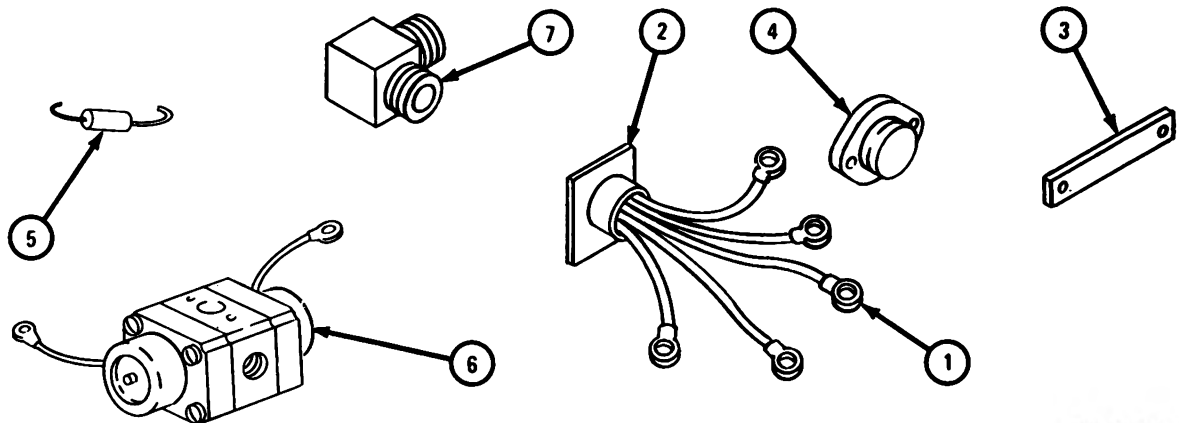
(1) Cleaning. There is no special cleaning procedure needed. Refer to cleaning procedures given in Part 1, para 1-3.

(2) Inspection and repair.

FRAME 1

1. Check continuity between wire ends (1) and receptacle pins (2). Fix or get new ones as needed.
2. Check that resistor (3) has 0.17 ohms resistance. Get a new resistor if resistor is wrong.
3. Check that limit switch (4) has continuity. Check points on limit switch for pits, welds, and burns. Clean points or get a new limit switch as necessary.
4. Check capacitor (5) for low resistance or continuity. If low resistance or continuity is found, get a new capacitor.
5. Check coil resistance in valve assembly (6) for 150 ohms. Get a new valve assembly if resistance is wrong.
6. Check if metering orifice (7) is plugged. Clean orifice with fine wire if it is found plugged.

GO TO FRAME 2



TA 105105

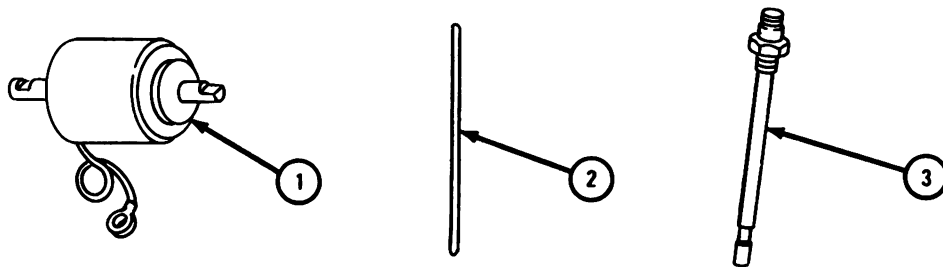
FRAME 2

WARNING

Do not touch igniter during test. Let enough time go by for igniter to cool before taking it out. Igniter may be hot and cause serious injury to personnel.

1. Hook 24 vdc ammeter and tachometer to motor (1). Check that motor draws 5.5 amps at 7700 to 8000 rpm. Get a new motor if amps or rpms are wrong.
2. Check quartz rod (2) for cracks. If cracks are found, get a new quartz rod.
3. Check igniter (3) for 2.2 ohms resistance. Hook 24 vdc and ammeter to igniter. Igniter should draw 10.5 amps and turn red in ten seconds. Get a new igniter if ohms, amps, and heat time or any one of them is wrong.

GO TO FRAME 3

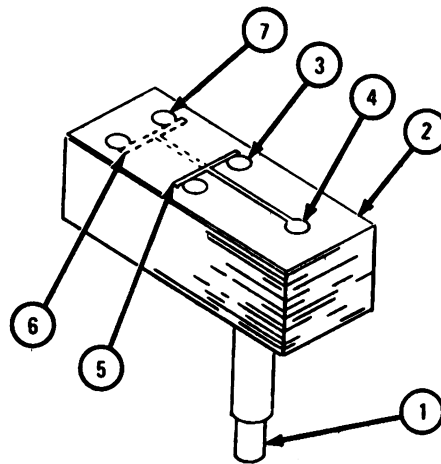


TA 105106

FRAME 3

1. Push button (1) on microswitch (2) in. Check for continuity between terminals (3, 4, and 5). Check that there is no continuity between terminals (6 and 7).
2. Let go of button (1). Check for continuity between terminals (6, 7, and 4). Check for no continuity between (3 and 5), (3 and 4) and (4 and 5).
3. Get a new switch if any continuity checks are wrong.

GO TO FRAME 4



TA 105107

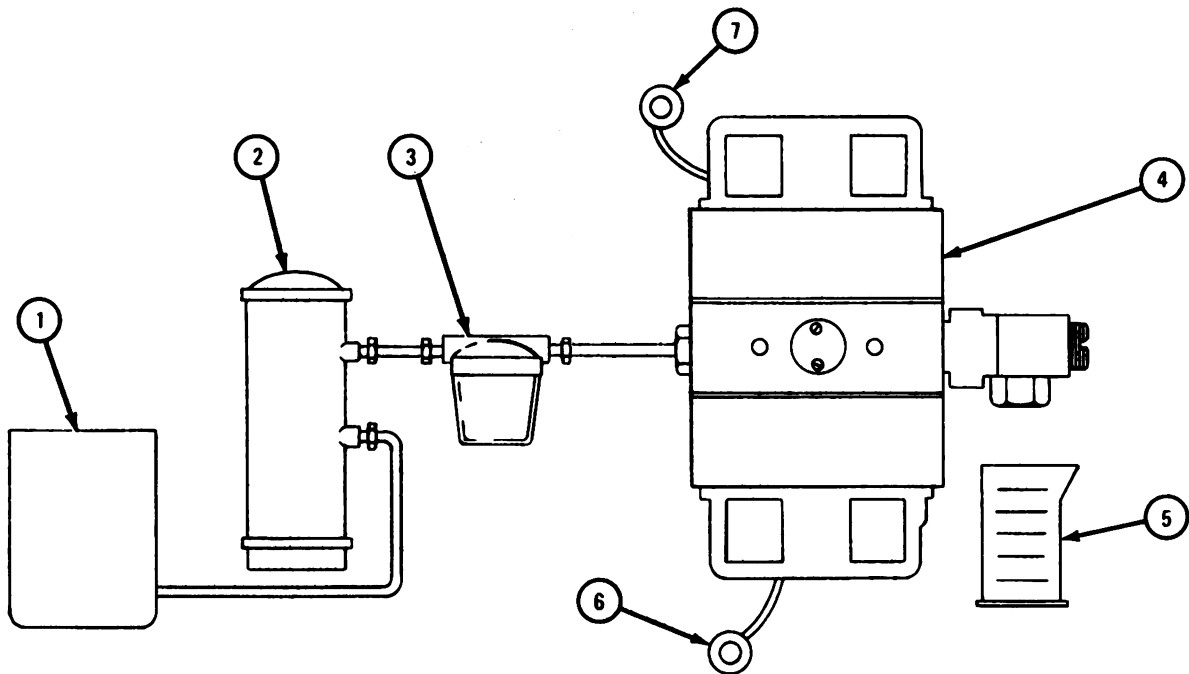
FRAME 4

NOTE

Regulator valve must be assembled for this step. Refer to para 16-13e (1).

1. Join fuel tank (1), pump (2), and filter (3) to regulator valve (4). Put graduated beaker (5) at outlet.
2. Turn on fuel pump and put on 24 vdc to low fire solenoid (6). Valve should pass 14 to 16 cc of fuel per minute.
3. Put on 24 vdc to high fire solenoid (7). Valve should pass 21 to 23 cc of fuel per minute.
4. If fuel figures are wrong, turn off voltage and fuel. For adjustment, go to frame 5.
5. If fuel figures are right, turn off voltage and fuel.

END OF TASK



TA 105108

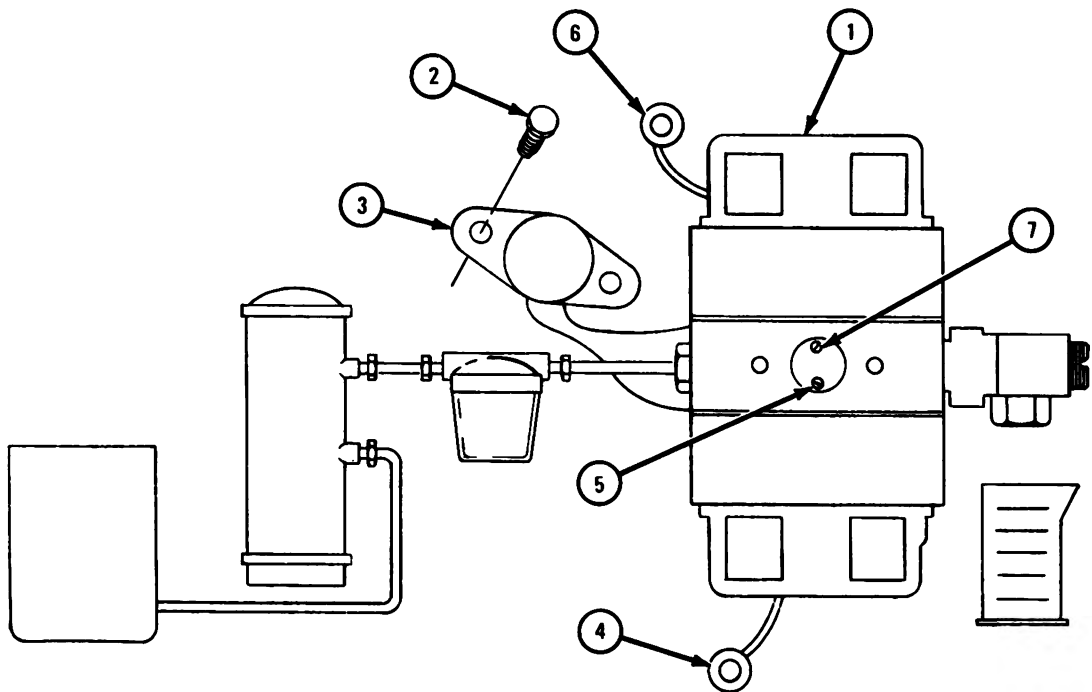
FRAME 5

NOTE

Do this frame only if regulator valve needs adjustment.

1. Hook up regulator valve (1) as shown in frame 4.
2. Take out two screws (2). Take out thermostat (3).
3. Put on 24 vdc to solenoid (4). Turn screw (5) clockwise to increase flow and counterclockwise to decrease flow. Adjust until flow is 14 to 16 cc per minute.
4. Put on 24 vdc to solenoids (4 and 6). Set screw (7) in same way as screw (5). Set until flow is 21 to 23 cc per minute.
5. Shut off fuel and voltage. Take valve (1) out of test hookup.

END OF TASK



TA 105109

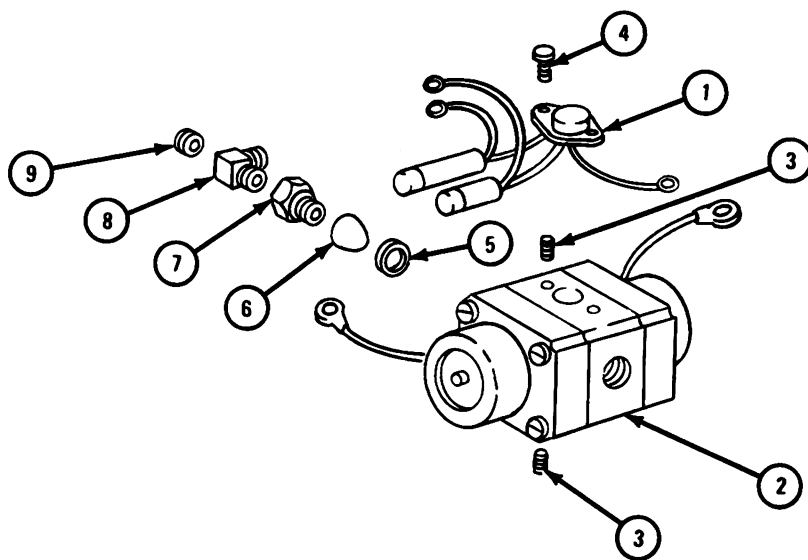
e. Assembly of Subassemblies.

(1) Fuel regulator valve.

FRAME 1

1. Put heater valve assembly (1) on regulator valve (2). Put in setscrews (3). Put in two screws (4).
2. Put in gasket (5), filter (6), and filter body (7).
3. Put in elbow (8) and plug (9).

END OF TASK



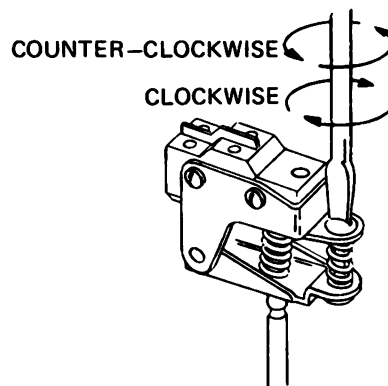
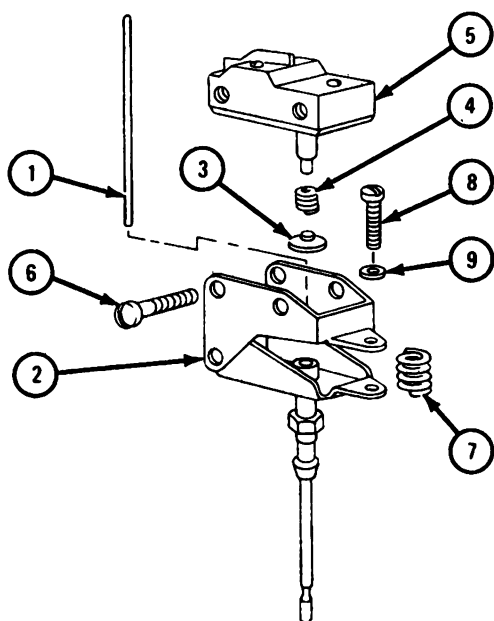
TA 105110

(2) Flame switch.

FRAME 1

1. Put quartz rod (1) into switch frame (2).
2. Put in spring pad (3), spring (4), and microswitch (5). Put in two screws (6).
3. Put in spring (7), screw (8), and washer (9). Turn screw (8) until a click is heard. Note position of slot in screw head and turn one-half turn more clockwise.

END OF TASK

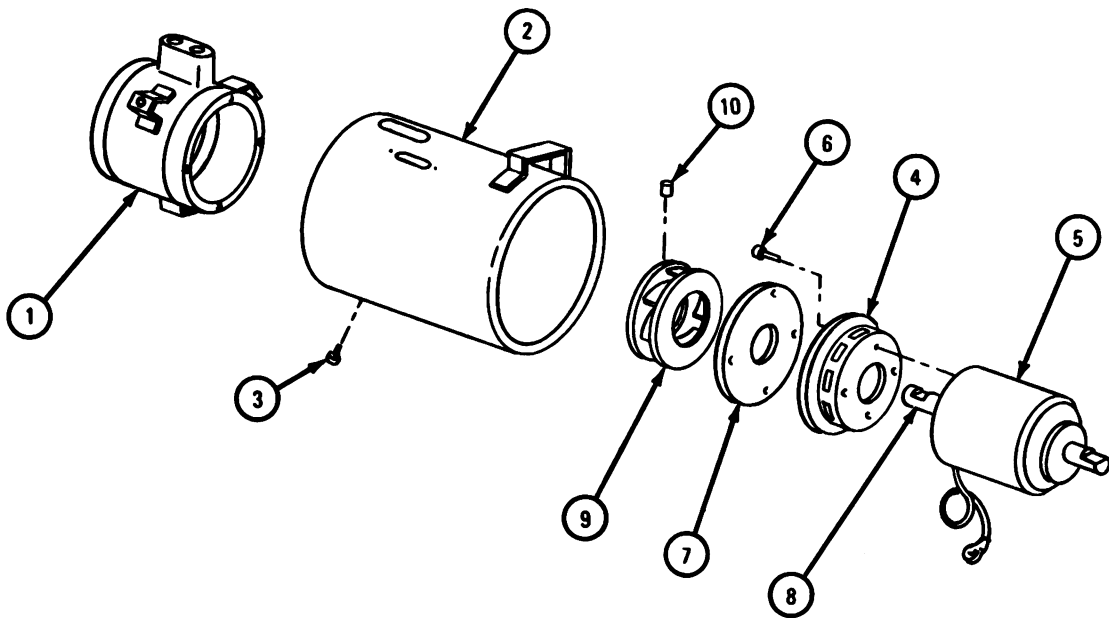


TA 105111

f. Assembly.**FRAME 1**

1. Put burner (1) in burner casing (2). Put two screws (3) in bottom and back of burner casing.
2. Put air inlet (4) on motor (5) and four screws (6) to hold them together.
3. Put inlet plate (7) on motor shaft (8).
4. Put combustion fan (9) on motor shaft (8). Put setscrew (10) into fan.
5. Measure from end of motor shaft (8) to combustion fan (9). The measurement should be one-eighth of an inch. Tighten setscrew (10) onto flat side of motor shaft (8).

GO TO FRAME 2

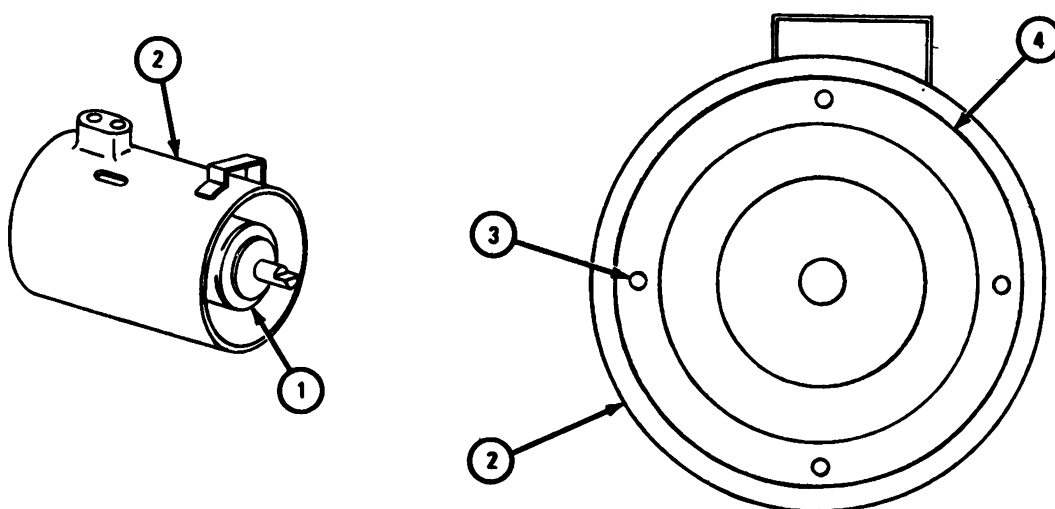


TA 105112

FRAME 2

1. Put motor assembly (1) onto burner casing (2).
2. Put four screws (3) into air inlet (4) and tighten.

GO TO FRAME 3

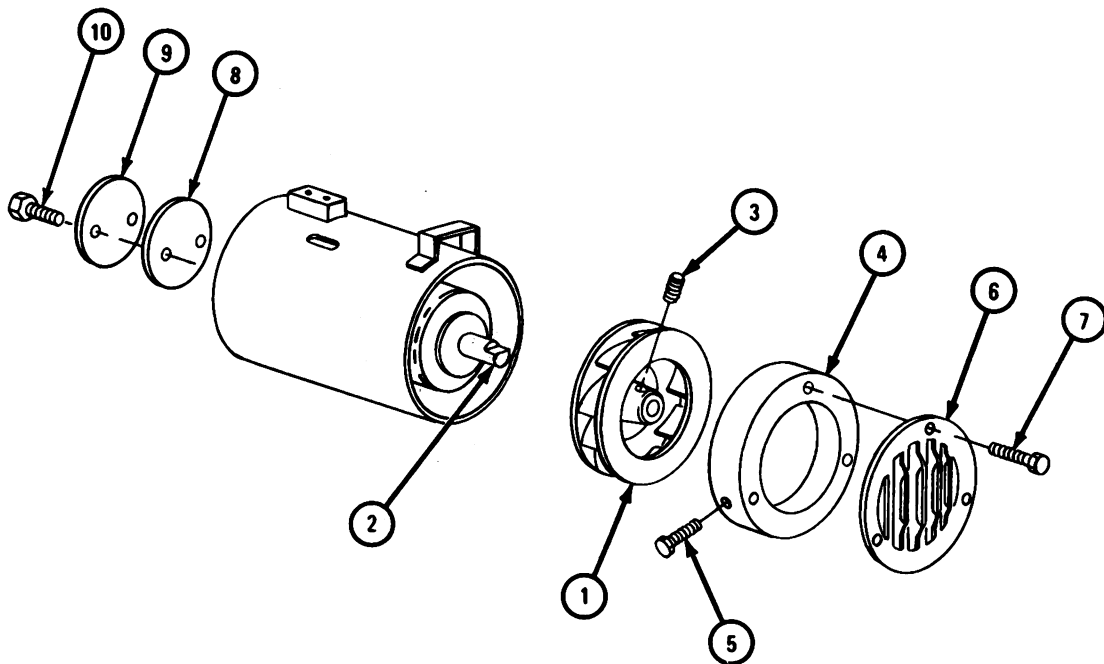


TA 105113

FRAME 3

1. Put fan (1) on motor shaft (2). Put in setscrew (3). Measure from end of shaft to fan. Measurement is $\frac{3}{8}$ inch to $\frac{7}{16}$ inch. Tighten setscrew.
2. Put on cover (4). Put in four screws (5).
3. Put on plate (6) and three screws (7).
4. Put in vaporizer (8) and retainer (9). Put in two screws (10).

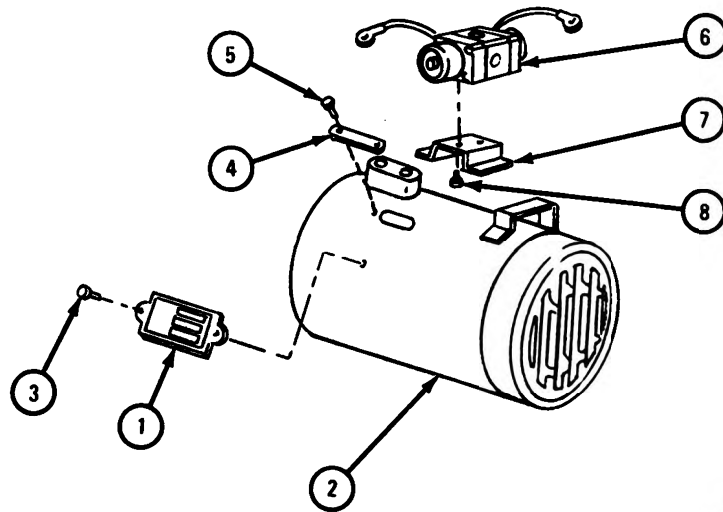
GO TO FRAME 4



TA 105114

FRAME 4

1. Put ID plate (1) on burner casing (2). Put in two screws (3).
 2. Put in resistor (4) and two screws (5).
 3. Put regulator valve (6) on bracket (7). Put in four screws (8).
- GO TO FRAME 5

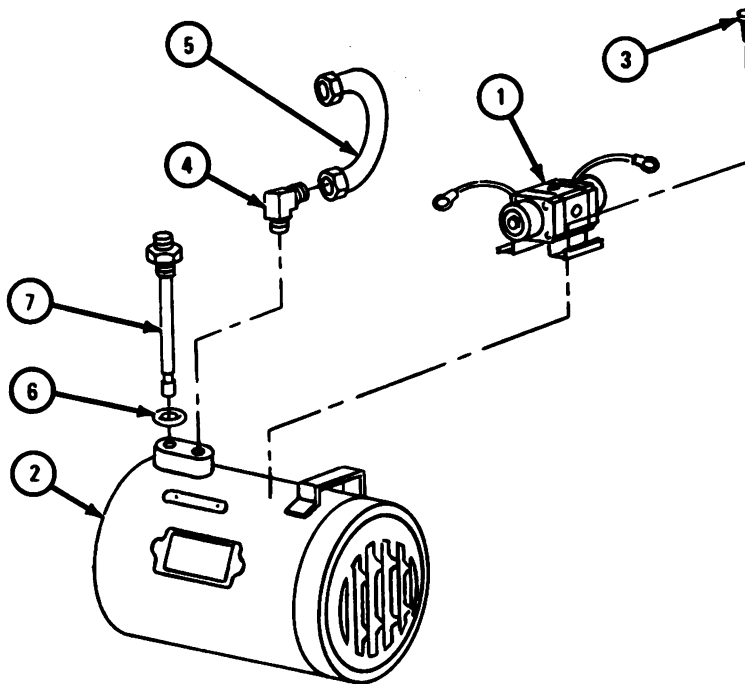


TA 105115

FRAME 5

1. Place regulator valve assembly (1) on burner casing (2). Put four screws (3) in valve assembly and casing.
2. Put in elbow (4). Put on fuel tube (5).
3. Put on new gasket (6). Put in igniter tube (7).

GO TO FRAME 6

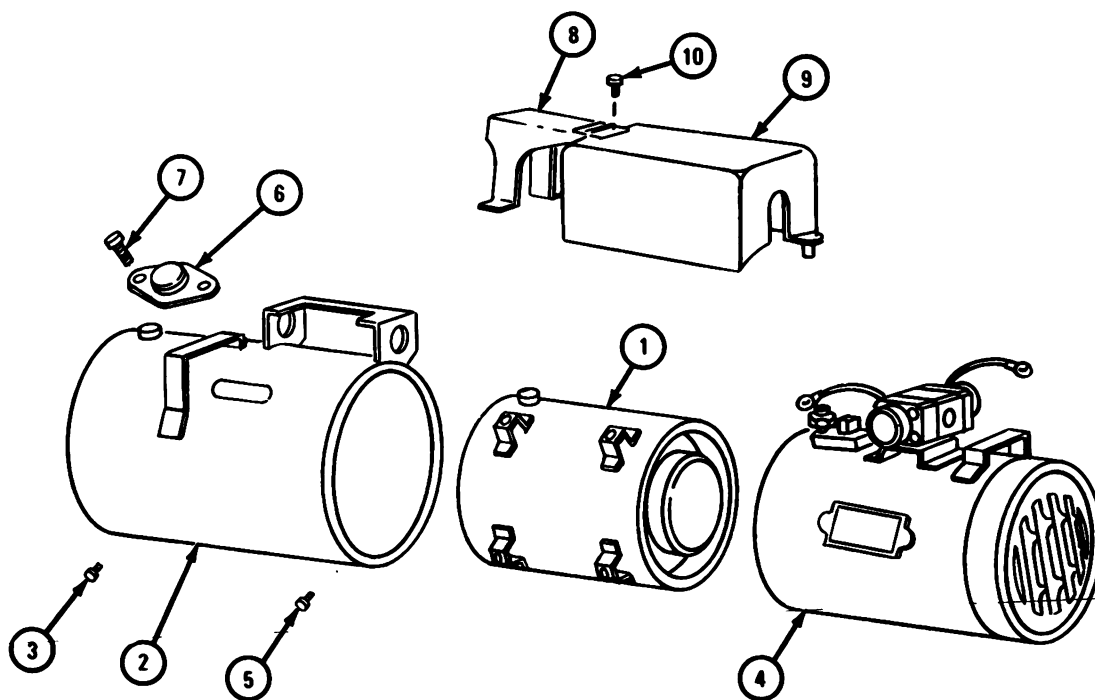


TA 105116

FRAME 6

1. Put combustion chamber (1) into casing (2). Put in 16 screws (3).
2. Put on burner assembly (4). Put in four screws (5).
3. Put switch (6) on casing (2). Put in two screws (7).
4. Put flame switch guard (8) on cover (9). Put in two screws (10).

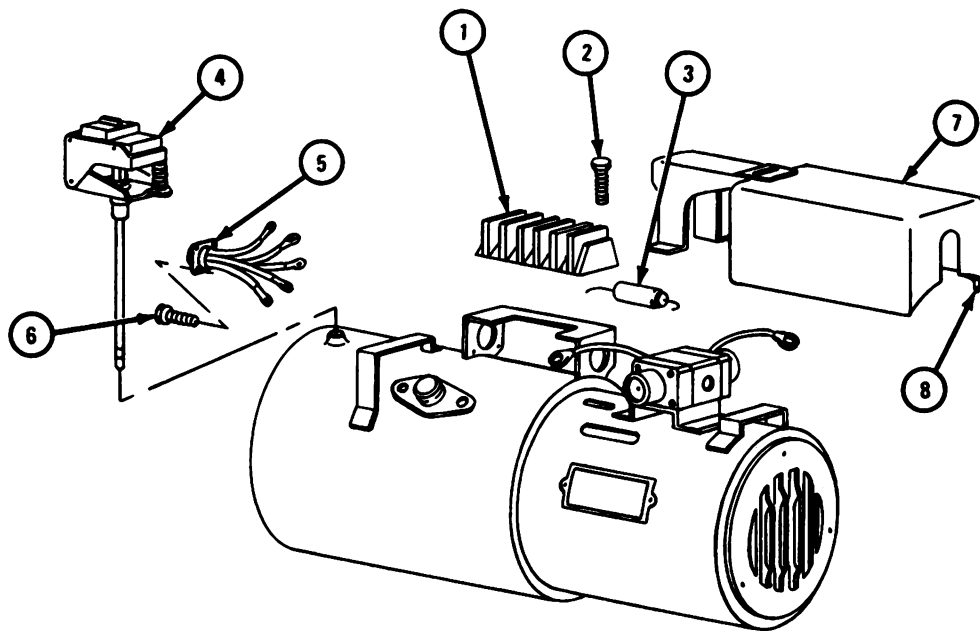
GO TO FRAME 7



TA 105117

FRAME 7

1. Put on terminal block (1). Put two screws (2) in terminal block at arrow (1). Hook up all wires.
2. Put on capacitor (3) with screws (2). Hook up two wires.
3. Put in flame switch assembly (4). Hook up five wires.
4. Put in receptacle (5) and four screws (6). Hook up five wires.
5. Put on cover assembly (7). Screw on three fasteners (8).

END OF TASK

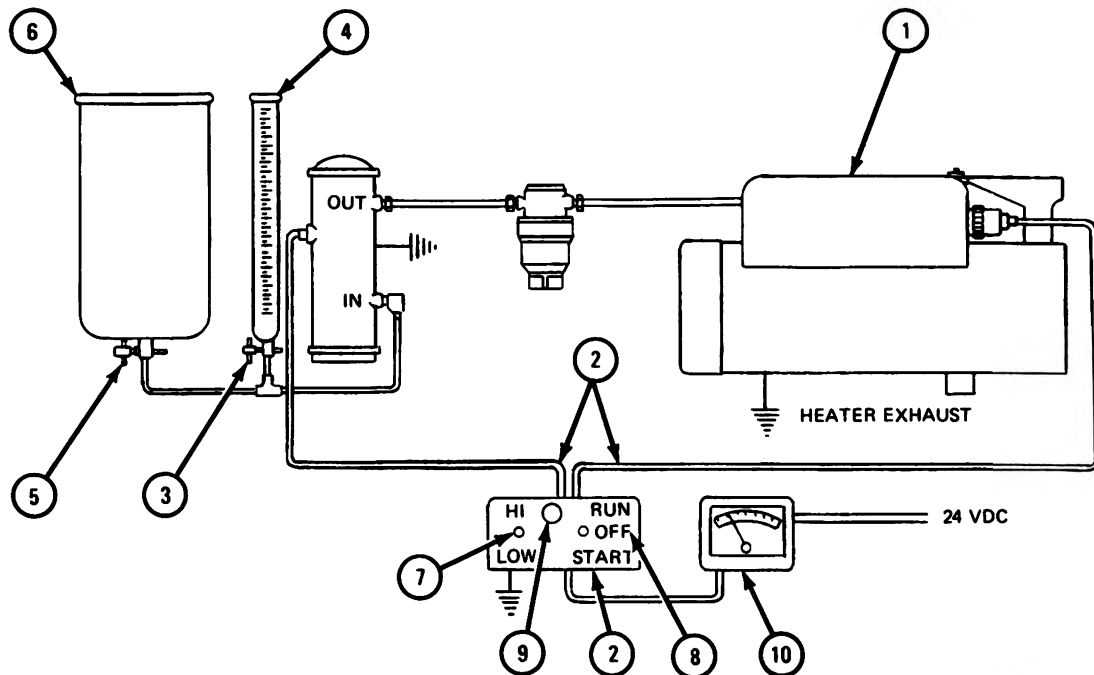
TA 105146

g. Bench Test and Adjustment.

FRAME 1

1. Hook up heater (1) as shown. Control box and wiring assembly (2) should be the same as those used on vehicle.
2. Turn valve (3) to OFF position on measured container (4). Turn valve (5) to ON position on main reservoir (6).
3. Turn HI-LOW switch (7) to LOW. Turn on 24 vdc supply. Push START-OFF-RUN switch (8) to START and hold it. Record the time taken for lamp (9) on control box (2) to light up. Ignition time should not go over 3 minutes.
4. Record ignition amperage as shown on ammeter (10). Maximum amperage should be 15 amps.

GO TO FRAME 2

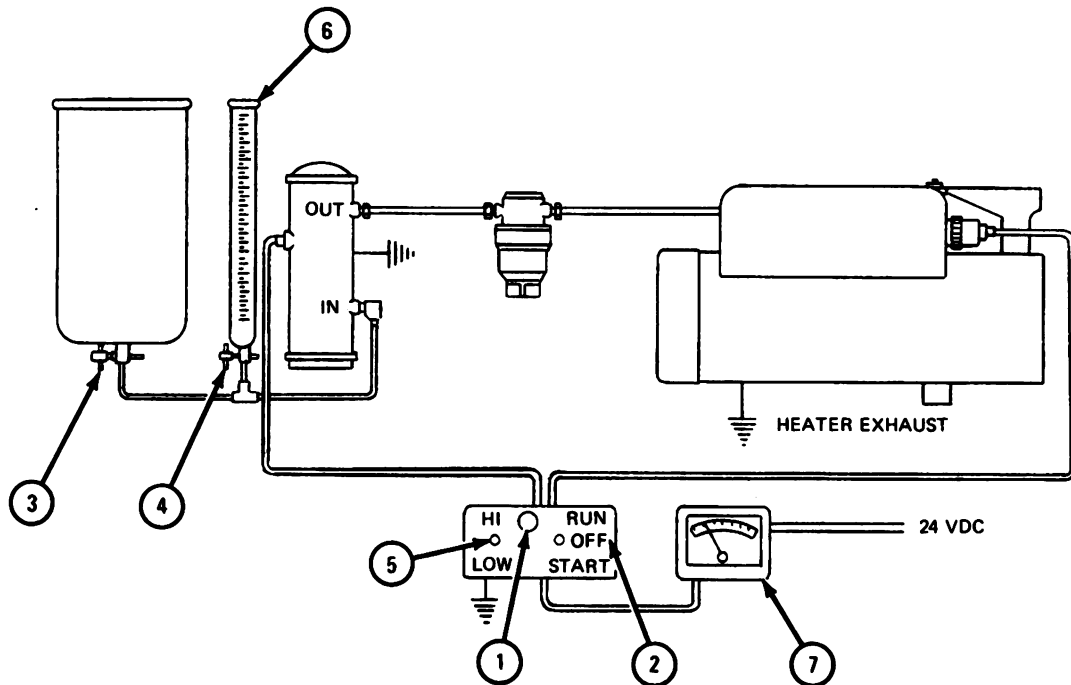


TA 105147

FRAME 2

1. When lamp (1) comes on, turn START-OFF-RUN switch (2) to RUN.
2. Turn valve (3) to OFF position. Turn valve (4) to ON position. Wait 30 seconds and check the amount of fuel being used. Fuel usage should be 15 to 16 cc (0.85 to 0.97 ci) per minute.
3. Turn HI-LO switch (5) to HI and let heater even out. Fill measured container (6) and check fuel usage for one minute. Fuel usage should be 21 to 23 cc (1.28 to 1.40 ci) per minute.
4. Turn valve (4) to OFF position. Turn valve (3) to ON position.
5. Record operating amperage as shown on ammeter (7). Maximum amperage should be 5.5 amps.

GO TO FRAME 3



TA 105148 .

FRAME 3

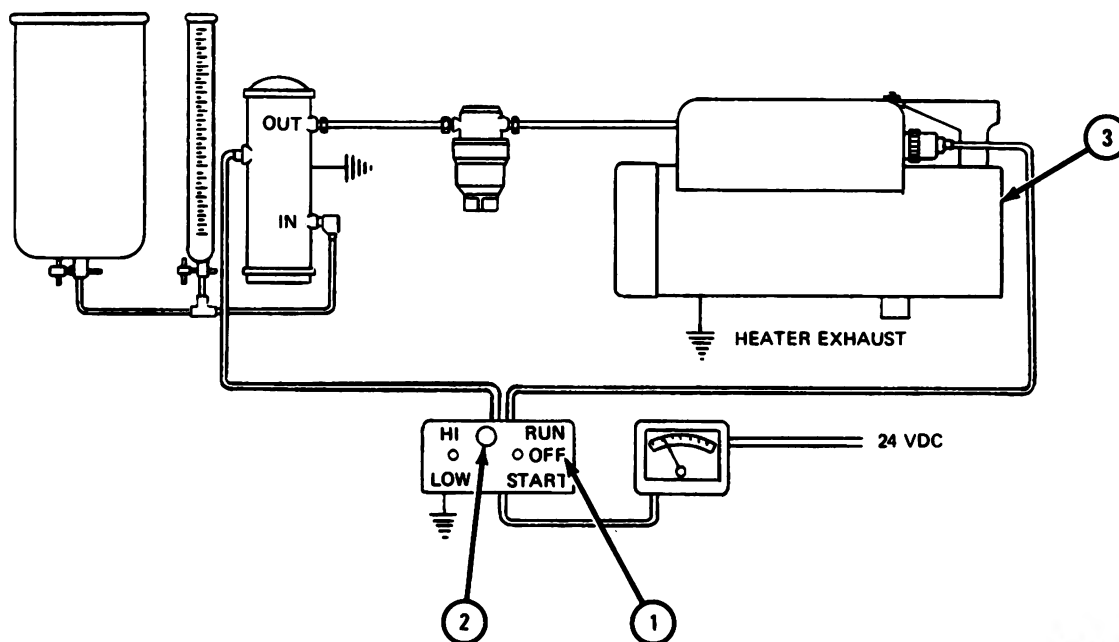
1. Push START-OFF-RUN switch (1) to OFF. Record the time it takes for the lamp (2) to go off. This time is called purge time and should not take more than 4 minutes.
2. Start the heater and partly cover air inlet (3) with a piece of cardboard or sheet metal. The limit switch is a heat sensor switch and should stop the heater in less than 5 minutes.
3. Allow heater to cool. Start heater. Unscrew one screw and flip guard over out of way. Turn adjustment screw clockwise until motor stops. Then turn another half turn. Flip guard back over and tighten screw.

NOTE

Follow-on Maintenance Action Required:

Install heater assembly in vehicle. Refer to
TM 9-2320-242-20.

END OF TASK



TA 105149

16-14. PERSONNEL/COOLANT AMBULANCE HEATER CONTROL BOX REPAIR.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.

a. Preliminary Procedure. Remove personnel/coolant heater control box. Refer to TM 9-2320-242-20.

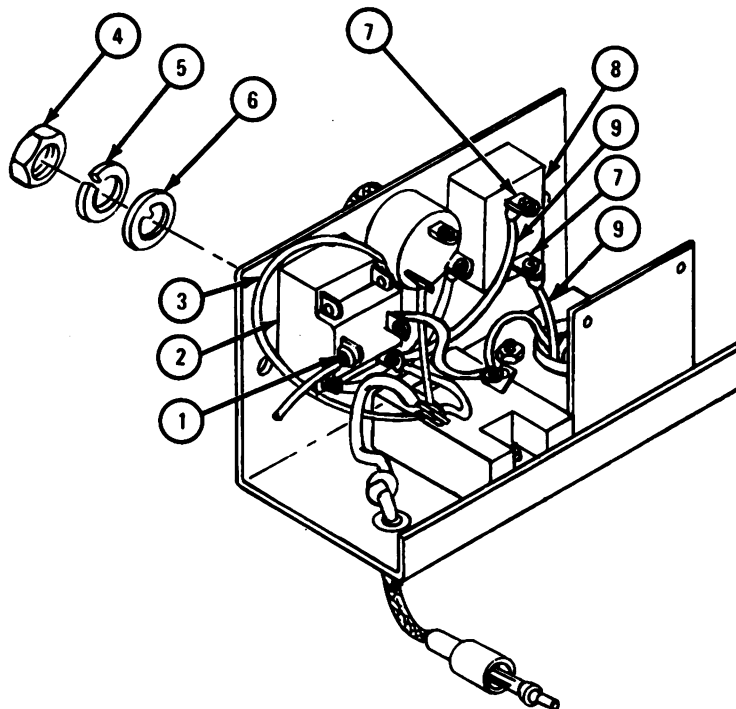
b. Disassembly.

FRAME 1**NOTE**

Tag all electrical wires so they will be put back in the right place.

1. Take off four screws (1) from back of heater motor switch (2) and take off seven wires (3).
2. Take off one nut (4), one lockwasher (5), and one key washer (6).
3. Take off heater motor switch (2).
4. Take off two screws (7) from back of blower switch (8) and take off two wires (9).

GO TO FRAME 2

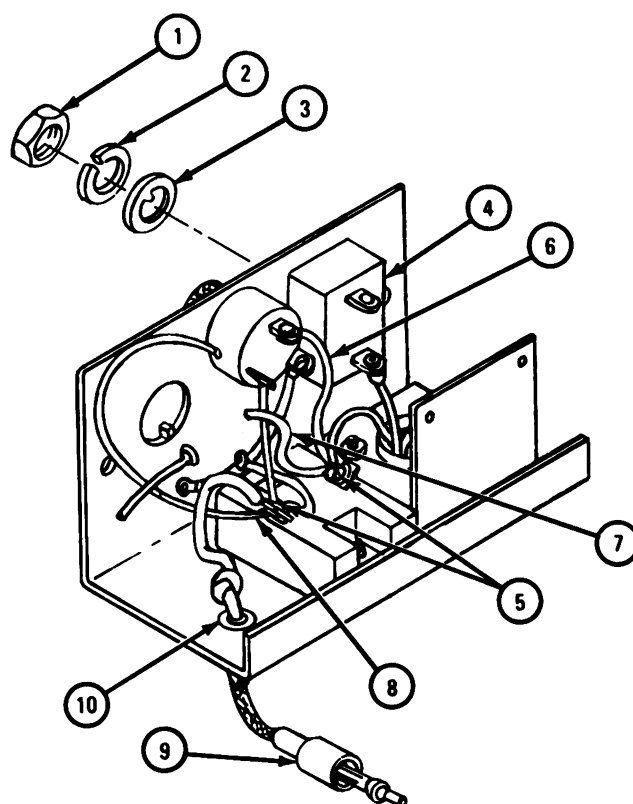


TA 103859

FRAME 2

1. Take off one nut (1), one lockwasher (2), and one key washer (3).
2. Take off blower switch (4).
3. Take off two screws (5).
4. Take off wires (6, 7, 8, and 9).
5. Take off grommet (10).

GO TO FRAME 3

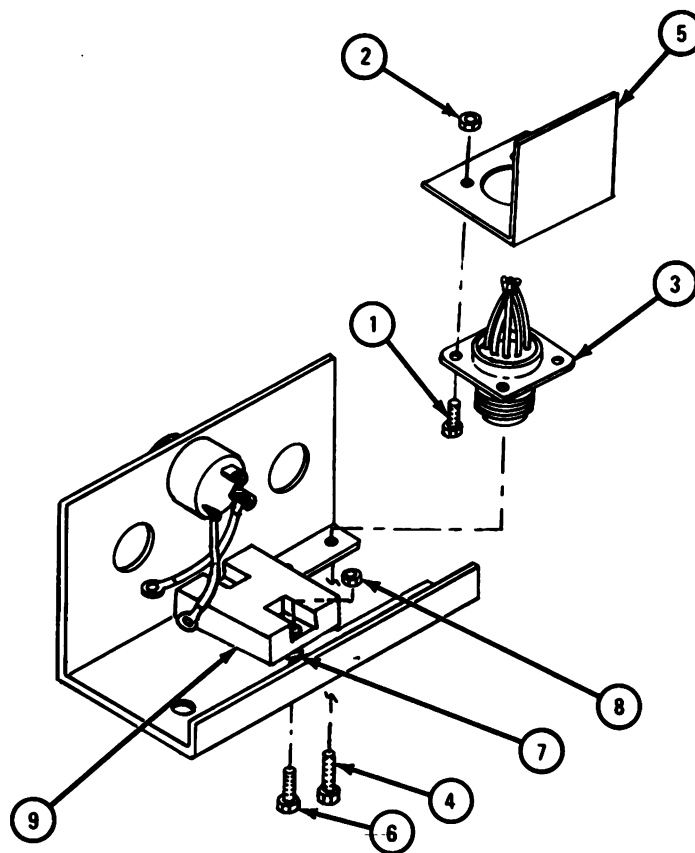


TA 103860

FRAME 3

1. Take off four screws (1) and four nuts (2).
2. Take off cable assembly (3).
3. Take off two screws (4).
4. Take off bracket (5).
5. Take off two screws (6), two spacers (7), and two nuts (8).
6. Take off circuit breaker (9).

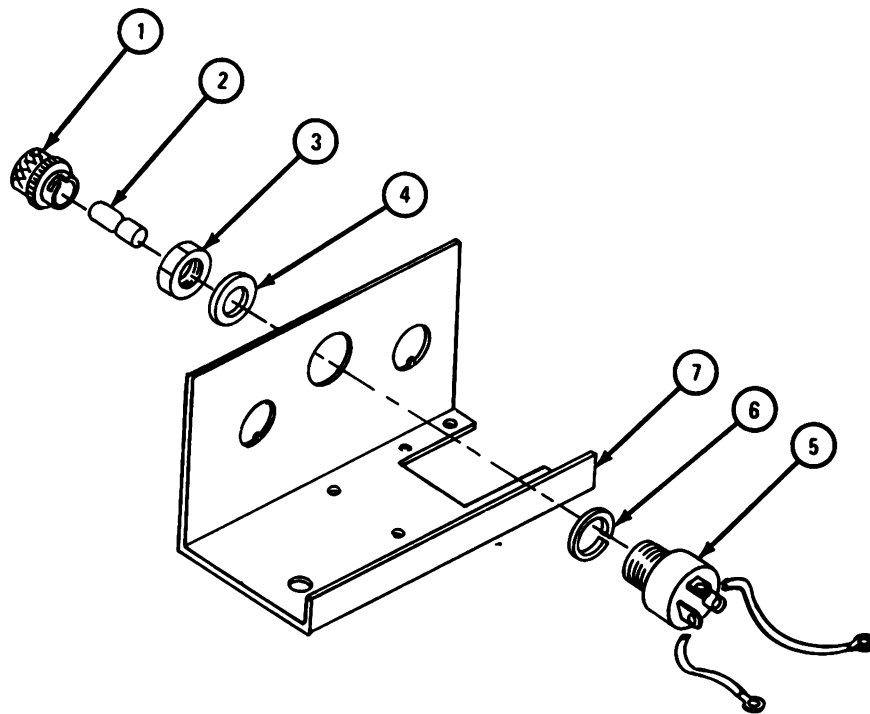
GO TO FRAME 4



TA 103861

FRAME 4

1. Take off lens cap (1).
 2. Take off lamp (2).
 3. Take off nut (3) and washer (4).
 4. Take off lamp assembly (5) and washer (6) from control box panel (7).
- END OF TASK



TA 103862

c. Inspection and Repair.

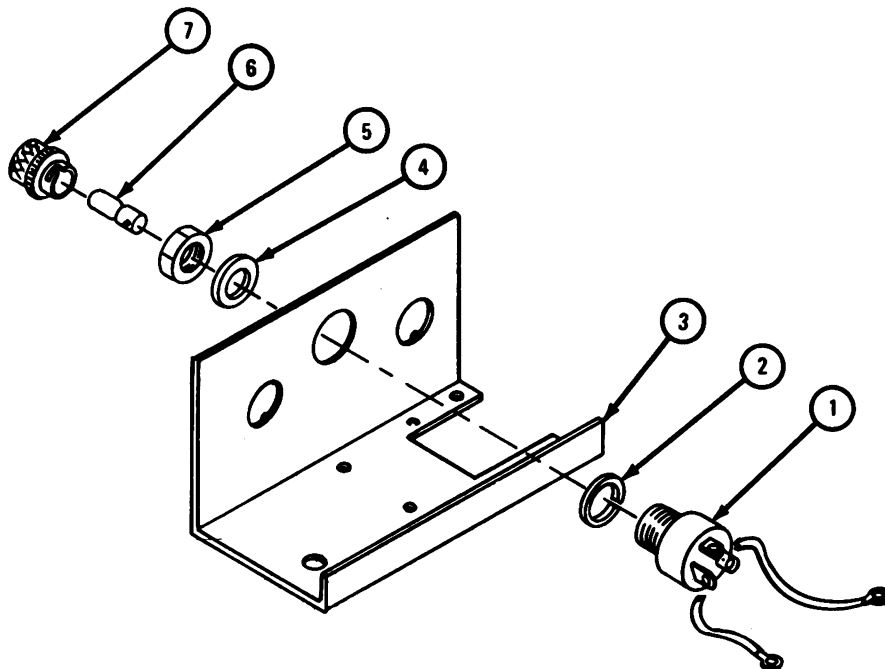
- (1) Check that all threaded parts have no stripped or damaged threads.
- (2) Check that all wiring has no cracked, burned or worn insulation.
- (3) Check that switches have no damaged, burned or cracked terminals.
- (4) Check that lamp is not burned out.
- (5) If any parts are damaged, throw away and get new ones.

d. Assembly.

FRAME 1

1. Put indicator lamp assembly (1) with washer (2) into hole in center of control box panel (3).
2. Put on washer (4) and nut (5).
3. Put in lamp (6) by pushing it in and turning it to the right.
4. Screw on lens cap (7).

GO TO FRAME 2

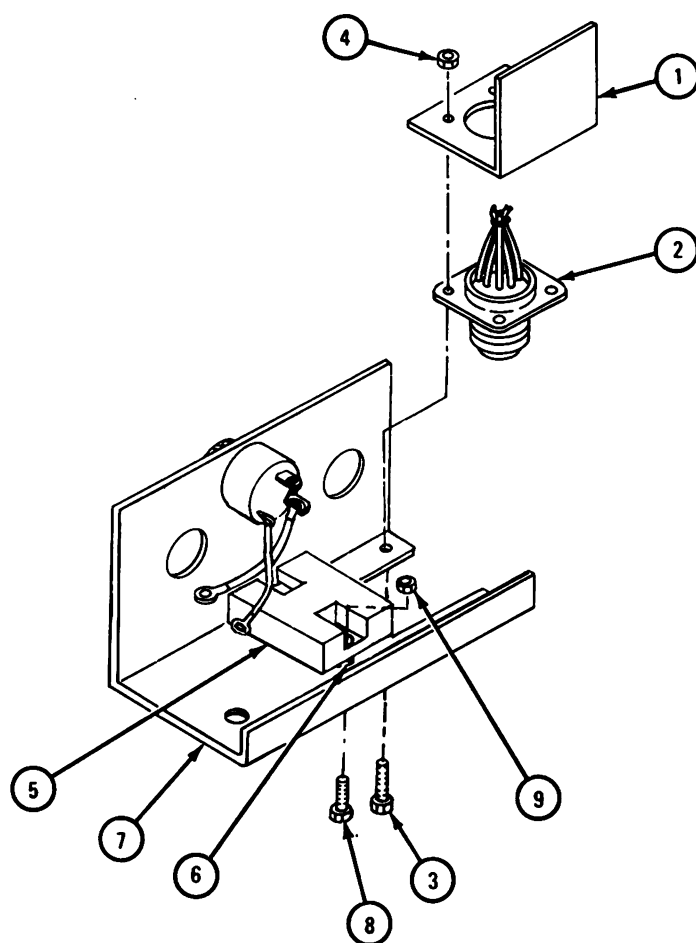


TA 103863

FRAME 2

1. Put on bracket (1) with cable assembly (2).
2. Put in four screws (3) with nuts (4).
3. Aline screw holes in circuit breaker (5) and two spacers (6) with screw holes in control box panel (7).
4. Put in two screws (8) and two nuts (9).

GO TO FRAME 3

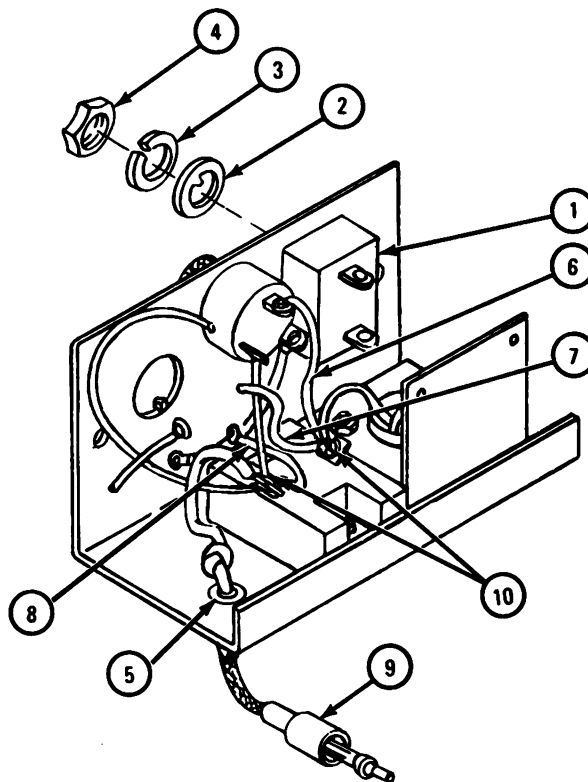


TA 103864

FRAME 3

1. Put on blower switch (1), keyed washer (2), lockwasher (3), and nut (4).
2. Put on grommet (5).
3. Put on wires (6, 7, 8, and 9).
4. Put on two screws (10).

GO TO FRAME 4



TA 103865

FRAME 4

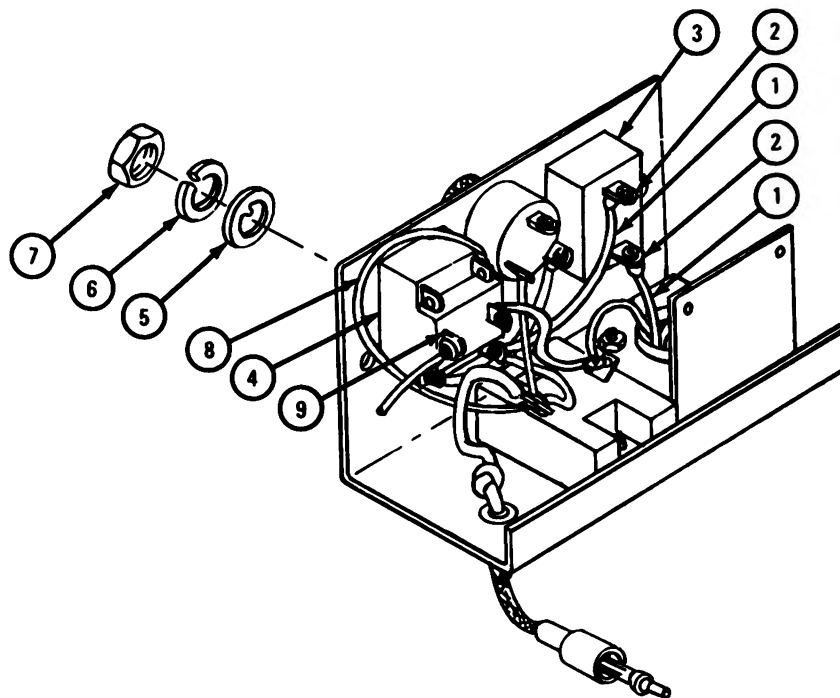
1. Put two wires (1) and two screws (2) on back of blower switch (3).
2. Put on heater motor switch (4), key washer (5), lockwasher (6), and nut (7).
3. Put seven wires (8) and four screws (9) on back of heater motor switch (4).
4. Take off all tags.

NOTE

Follow-on Maintenance Action Required:

Replace personnel/coolant heater control box. Refer to TM 9-2320-242-20.

END OF TASK



TA 103866

Section IV. BILGE PUMP ASSEMBLY

16-15. BILGE PUMP ASSEMBLY REPAIR AND TEST.

TOOLS: No special tools required

SUPPLIES: Electrical contact brush, annular ballbearing parts kit
Parts kit
Brush holder insulator retaining ring
Tag
Hose

PERSONNEL: One

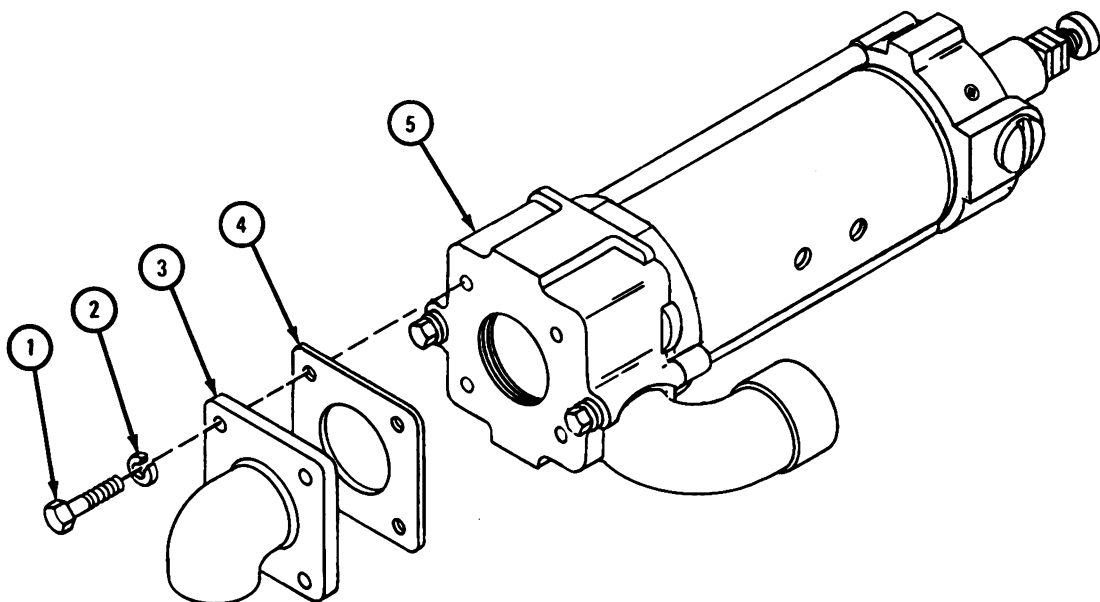
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

- a. Preliminary Procedure. Remove bilge pump. Refer to TM 9-2320-242-20.
- b. Disassembly.

FRAME 1

1. Take out four screws (1) and four lockwashers (2). Take off inlet flange (3) and gasket (4) from impeller housing (5). Throw away gasket.

GO TO FRAME 2

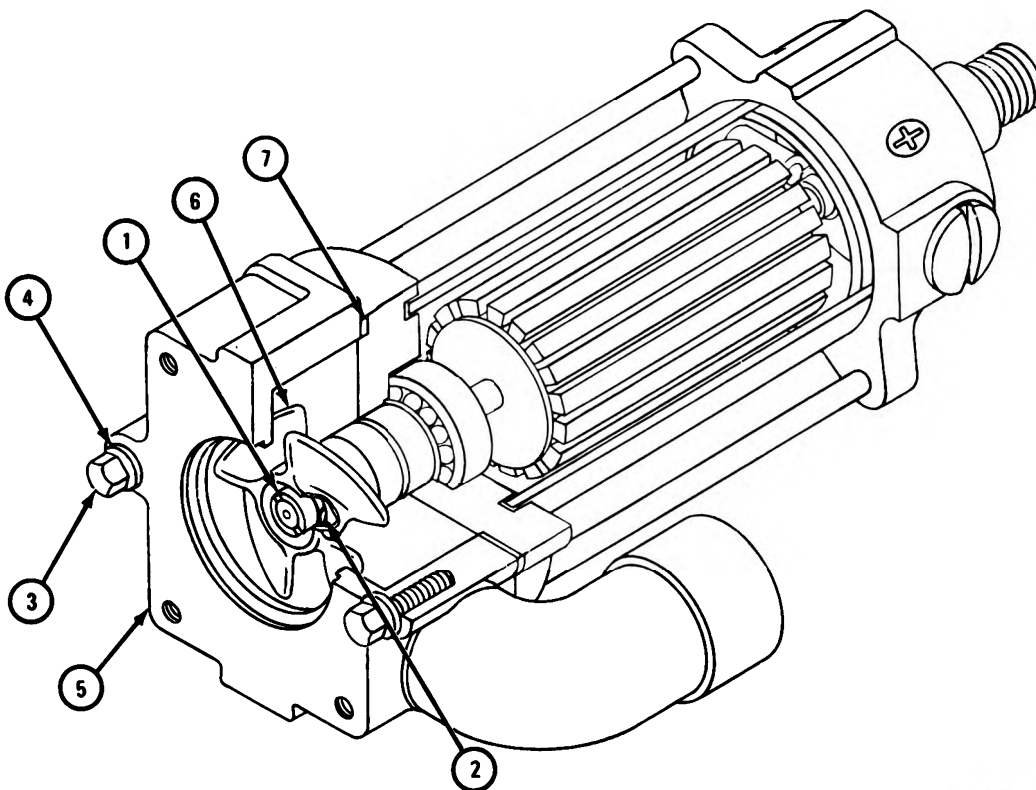


TA 084726

FRAME 2

1. Take off nut (1) and lockwasher (2). Throw away nut.
2. Take out two screws (3) and lockwashers (4). Pry off impeller housing (5) with impeller (6) and gasket (7). Throw away gasket.

GO TO FRAME 3

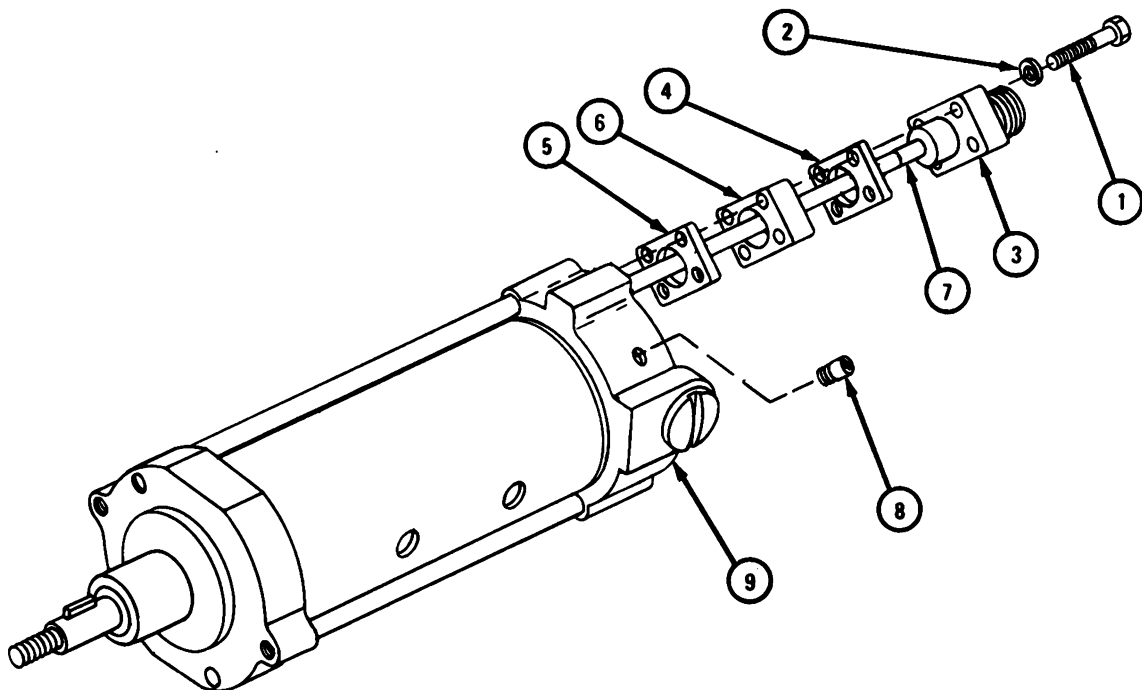


TA 084727

FRAME 3

1. Take out four screws (1) and washers (2).
2. Take out electrical connector (3), gaskets (4 and 5), and spacer (6). Tag and unsolder lead from connector at point (7). Throw away gaskets.
3. Take out pipe plug (8) from rear bell housing (9).

GO TO FRAME 4



TA 084728

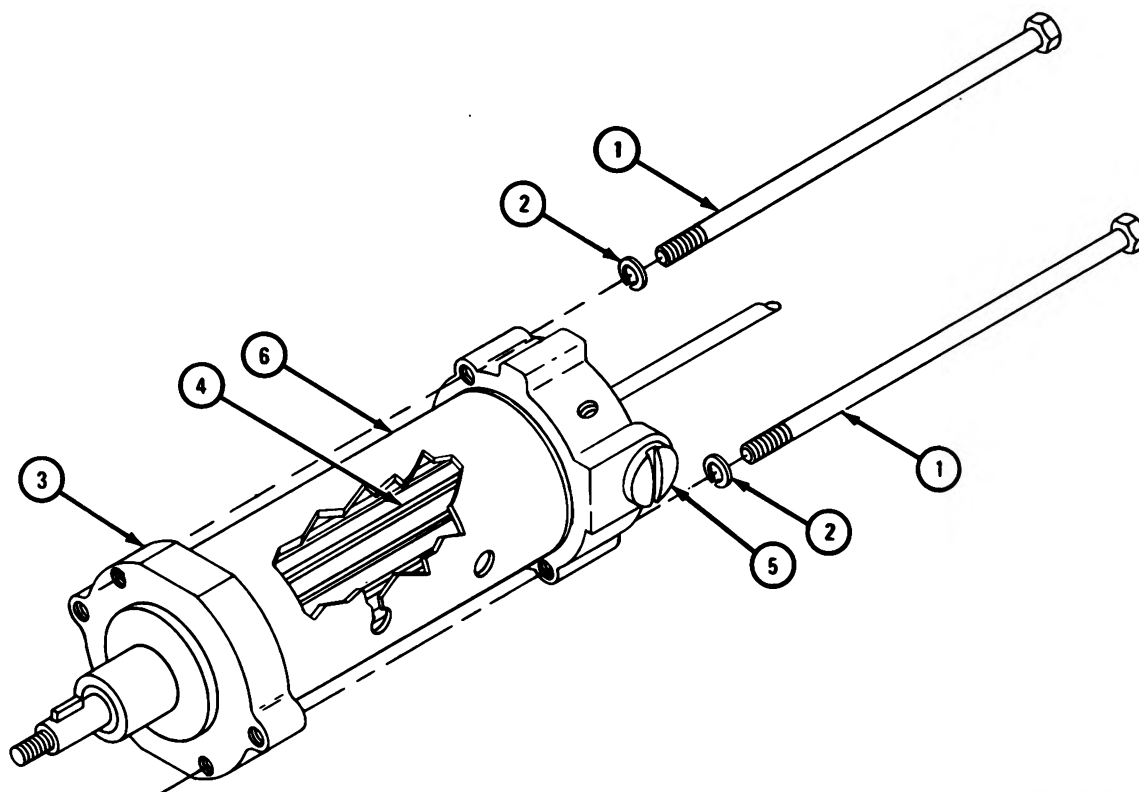
FRAME 4

NOTE

If rotor housing and rear bell housing are not stamped with arrows, scribe line across rotor housing and rear bell housing before taking them apart.

1. Take out two screws (1) and lockwashers (2). Take off front bell housing (3) with rotor (4) from rear bell housing (5) and rotor housing (6). Throw away screws.
2. Take apart rear bell housing (5) from rotor housing (6).

GO TO FRAME 5

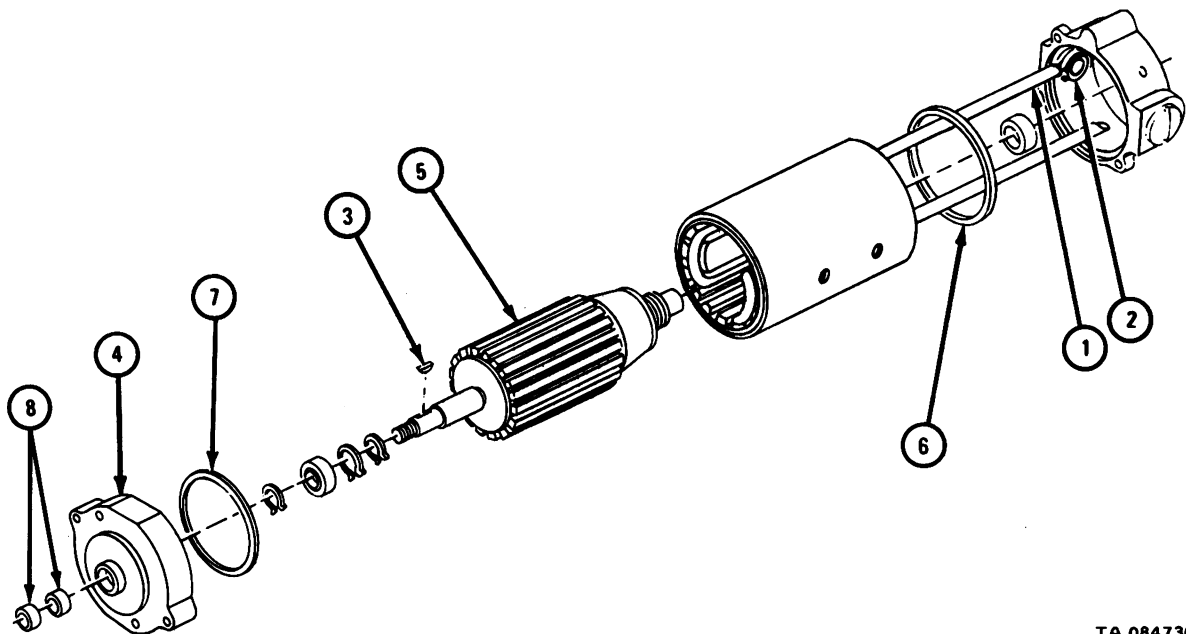


TA 084729

FRAME 5

1. Take off wire (1) from brush holder (2).
2. Take out and throw away key (3).
3. Press out front housing (4) from rotor (5).
4. Take out and throw away preformed packing (6).
5. Take out and throw away preformed packing (7) and two seals (8).

GO TO FRAME 6

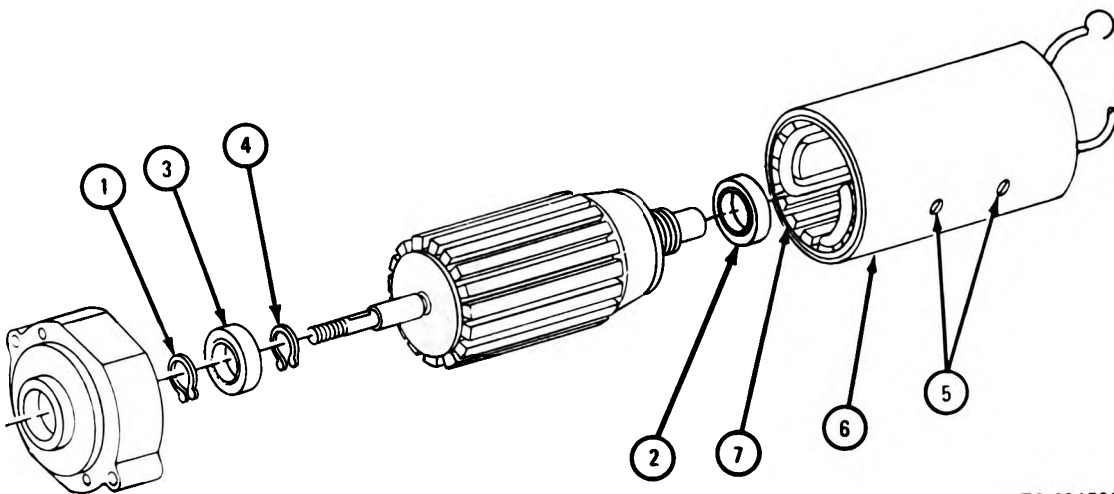


TA 084730

FRAME 6

1. Take off retaining ring (1). Press out bearings (2 and 3). Take off retaining ring (4).
2. Take out two screws (5) on each side of rotor housing (6).
3. Take out field coils (7) from rotor housing (6).

GO TO FRAME 7

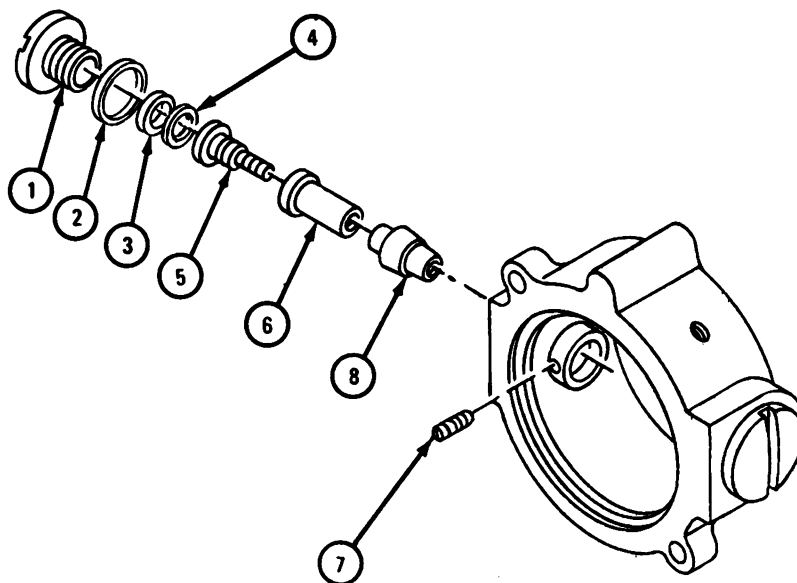


TA 084731

FRAME 7

1. Take off brush cap (1) with preformed packing (2). Take out and throw away preformed packing from brush cap.
2. Take out washer (3), insulator (4), brush (5), and brush holder (6). Throw away washer, insulator, and brush.
3. Take out setscrew (7). Take out brush holder insulator (8).

GO TO FRAME 8

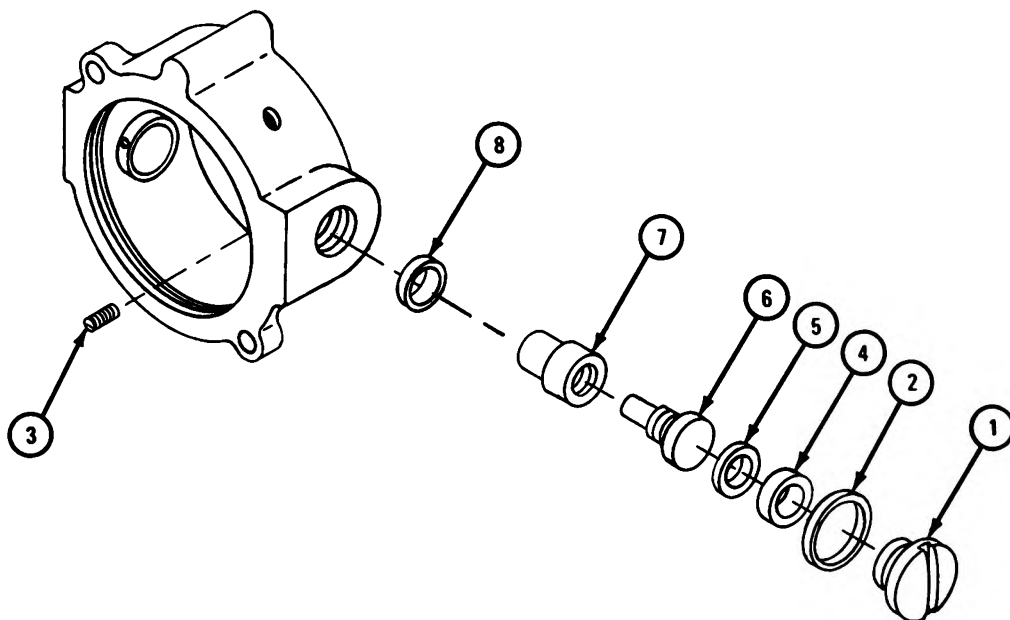


TA 084732

FRAME 8

1. Take off brush cap (1) with preformed packing (2). Take out and throw away preformed packing from brush cap.
2. Take out setscrew (3).
3. Take out washer (4), insulator (5), brush (6), and brush holder (7). Throw away washer, insulator, and brush.
4. Take out and throw away retaining ring (8) from brush holder (7).

END OF TASK



TA 089358

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 bearings are not damaged. Refer to TM 9-214.

(2) Check that metal castings are not cracked. If metal castings are cracked, repair by welding. Refer to TM 9-237.

(3) Check that all threaded parts are not stripped or damaged. If damaged, get new ones.

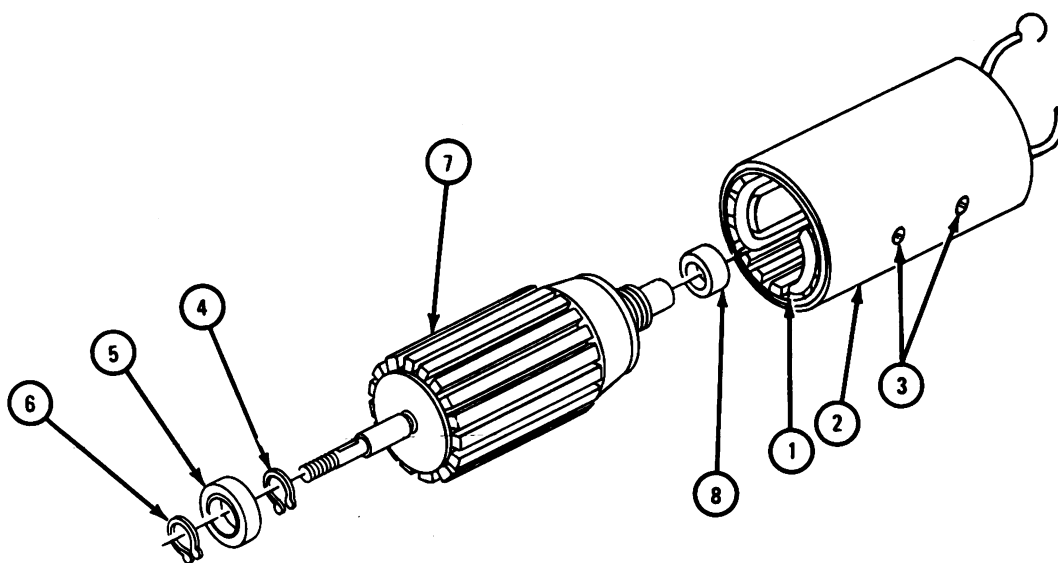
(4) If any other parts are burned, cracked, or broken, get new parts.

e. Assembly.

FRAME 1

1. Set field coils (1) in rotor housing (2) and put in two screws (3) on each side of rotor housing (2).
2. Put retaining ring (4), bearing (5), and retaining ring (6) on rotor (7).
3. Put bearing (8) on other end of rotor (7).

GO TO FRAME 2

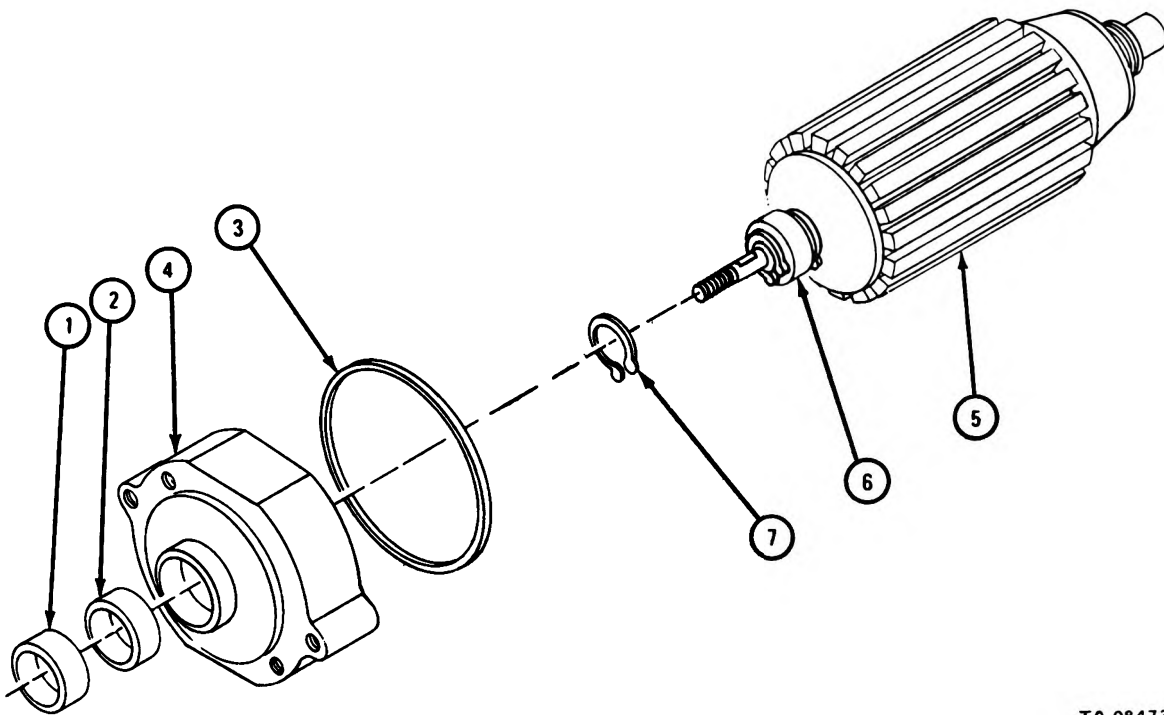


TA 084733

FRAME 2

1. Put seals (1 and 2) and preformed packing (3) in front bell housing (4).
2. Put rotor (5) with bearing (6) in front bell housing (4) and put on retaining ring (7).

GO TO FRAME 3

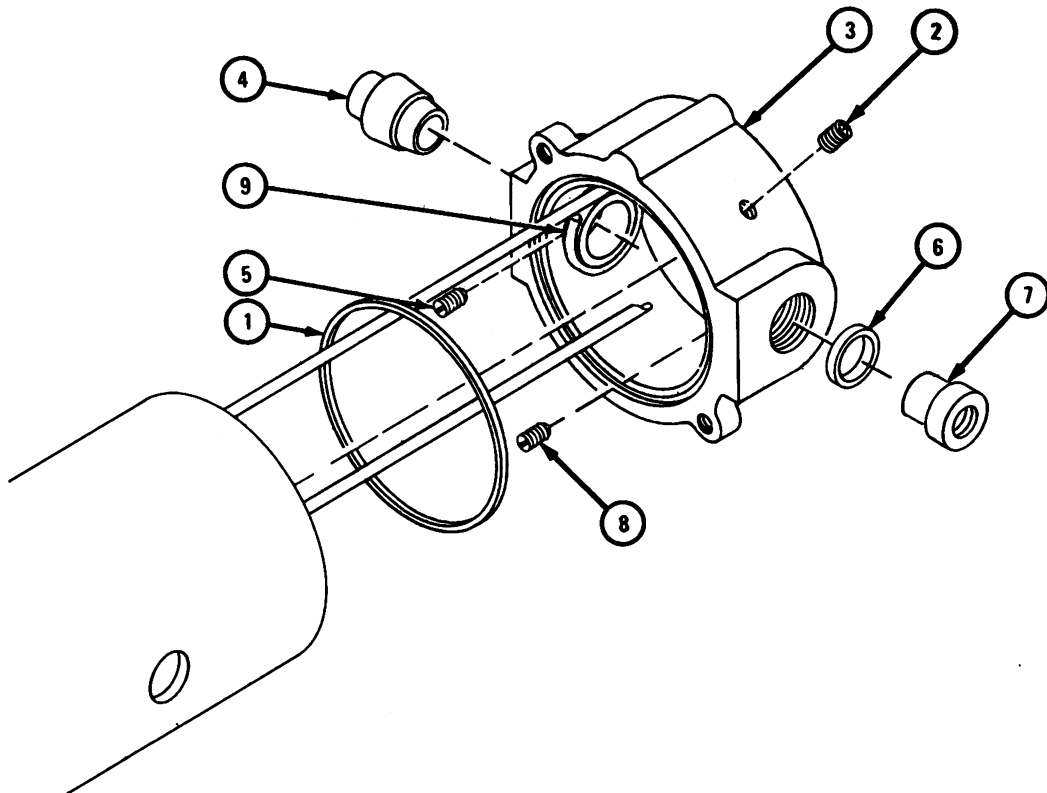


TA 084734

FRAME 3

1. Put preformed packing (1) and pipe plug (2) in rear bell housing (3).
2. Put brush holder insulator (4) in rear bell housing (3) and put in setscrew (5).
3. Put retaining ring (6) on brush holder (7).
4. Put brush holder (7) in rear bell housing (3) and put in setscrew (8).
5. Put on electrical lead (9).

GO TO FRAME 4

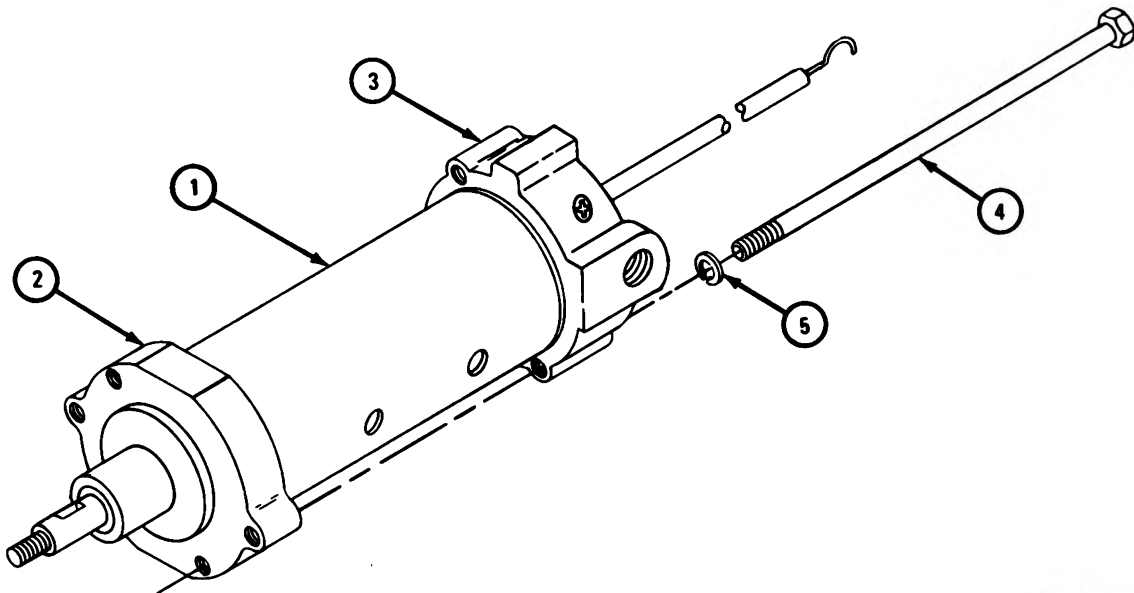


TA 084735

FRAME 4

1. Join rotor housing (1) and front bell housing (2).
2. Join rear bell housing (3) to rotor housing (1), alining arrows or scribe marks.
3. Join rear bell housing (3) to front bell housing (2). Put in two screws (4) and lockwashers (5).

GO TO FRAME 5

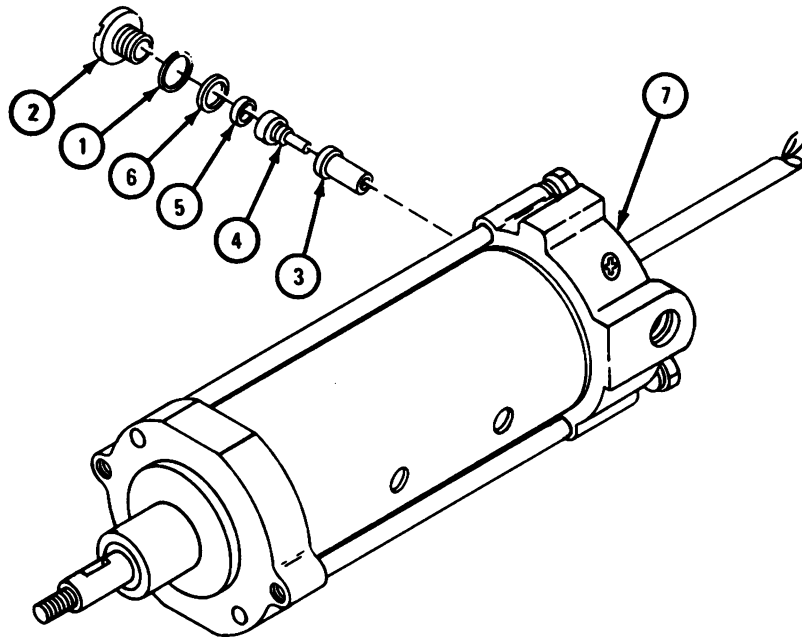


TA 084737

FRAME 5

1. Put preformed packing (1) on brush cap (2).
2. Put brush holder (3), brush (4), insulator (5), and washer (6) in rear bell housing (7).
3. Put on brush cap (2).

GO TO FRAME 6

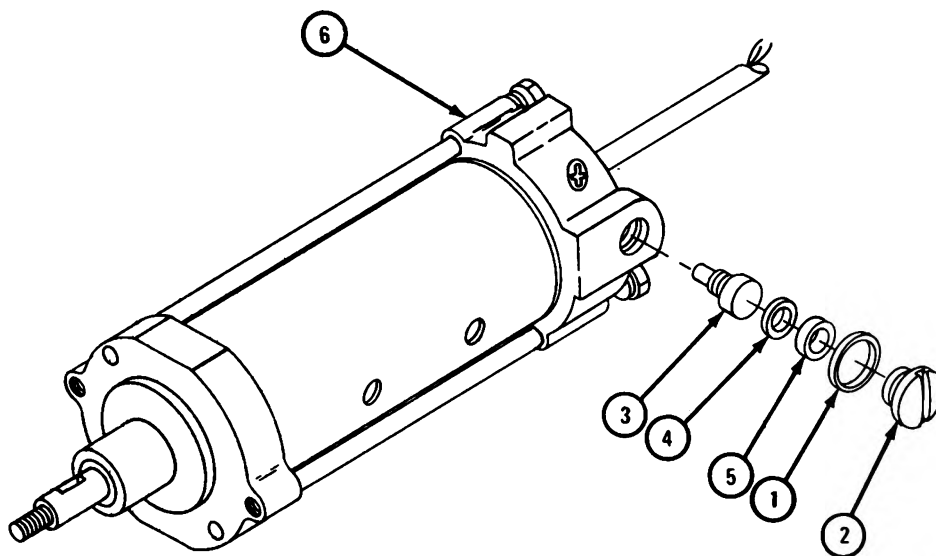


TA 084736

FRAME 6

1. Put preformed packing (1) on brush cap (2).
2. Put brush (3), insulator (4), and washer (5) in rear bell housing (6).
3. Put on brush cap (2).

GO TO FRAME 7

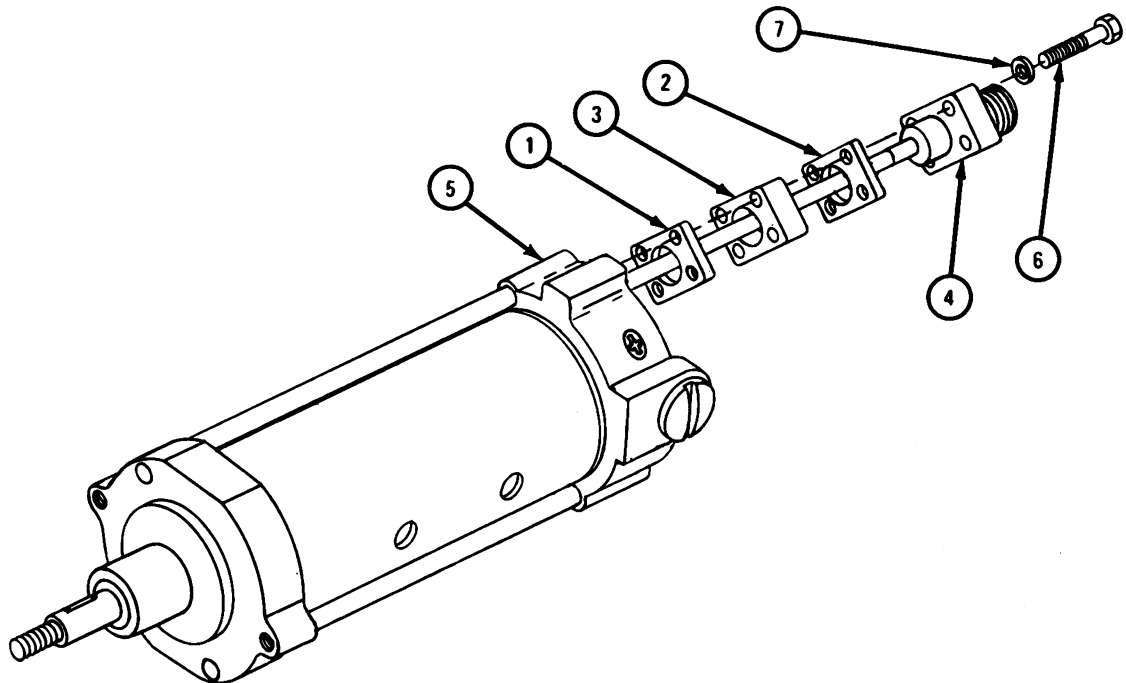


TA 089359

FRAME 7

1. Put two gaskets (1 and 2) and spacer (3) on electrical connector (4).
Solder lead from rear bell housing (5) to connector (4) as tagged.
Take off tags.
2. Put in four screws (6) and washers (7).

GO TO FRAME 8

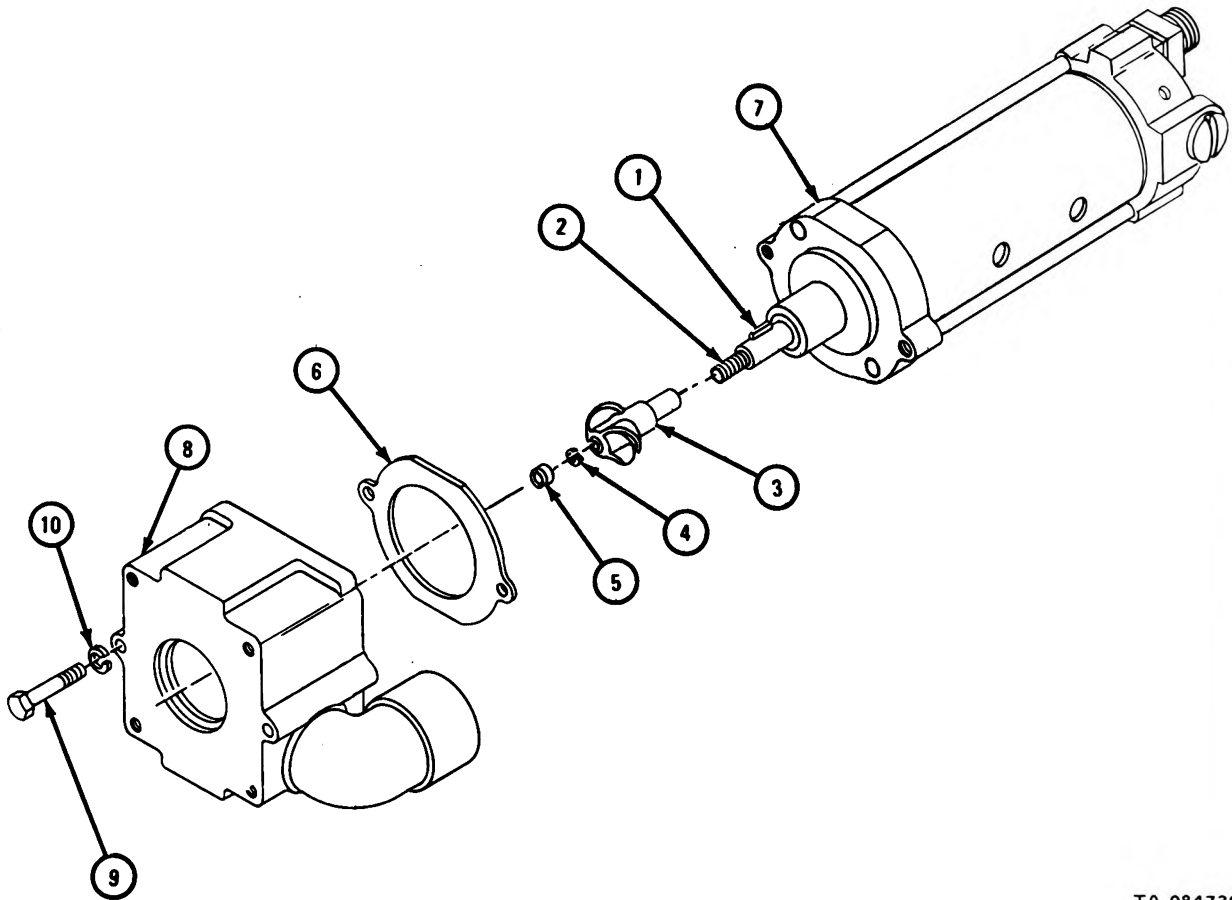


TA 084738

FRAME 8

1. Put key (1) in rotor shaft (2).
2. Put impeller (3) on rotor shaft (2) and put on lockwasher (4) and nut (5).
3. Put gasket (6) on front bell housing (7).
4. Join front bell housing (7) to impeller housing (8).
5. Put two screws (9) and lockwashers (10) in impeller housing (8) and front bell housing (7).

GO TO FRAME 9

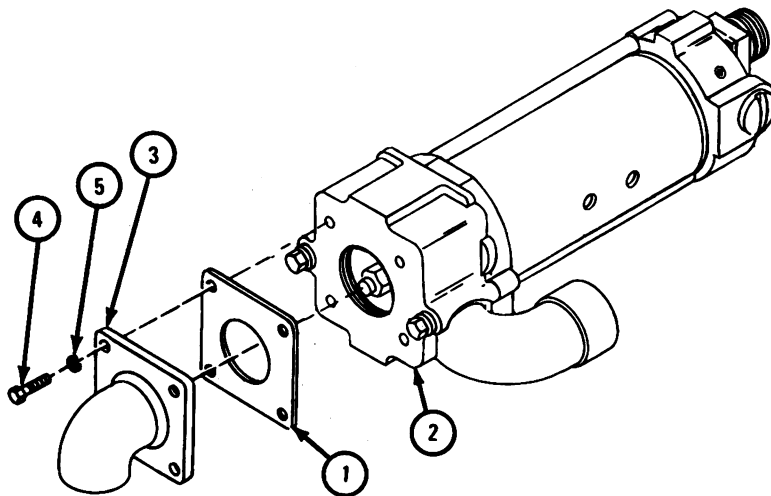


TA 084739

FRAME 9

1. Place gasket (1) on impeller housing (2).
2. Join inlet flange (3) to impeller housing (2).
3. Put four screws (4) and lockwashers (5) in inlet flange (3) and impeller housing (2).

END OF TASK



TA 084740

f. Test.

FRAME 1

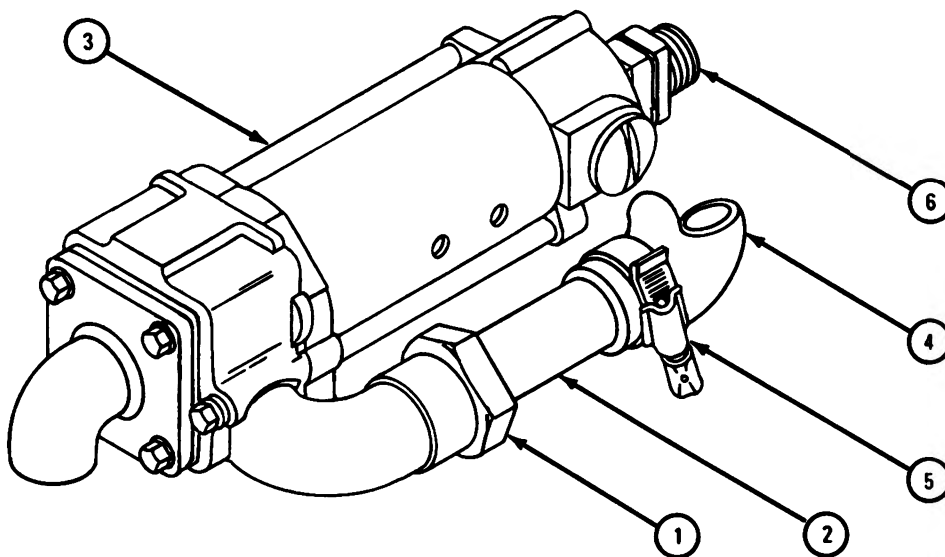
1. Put bushing (1) and nipple (2) into bilge pump (3).
2. Put hose (4) on nipple (2) and put on clamp (5). Route hose to drain point.

NOTE

Make sure there is an ON-OFF switch joined between power source and bilge pump (3).

3. Put a 24-volt direct current power source with waterproof connector onto electrical lead (6).

GO TO FRAME 2



TA 084741

FRAME 2

1. Mark a 55-gallon drum (1) at 10 gallon levers and fill with clean water.
2. Put bilge pump (2) in drum (1).

CAUTION

Do not let pump run for more than 20 seconds if water is not coming out of hose. Running pump dry will damage it.

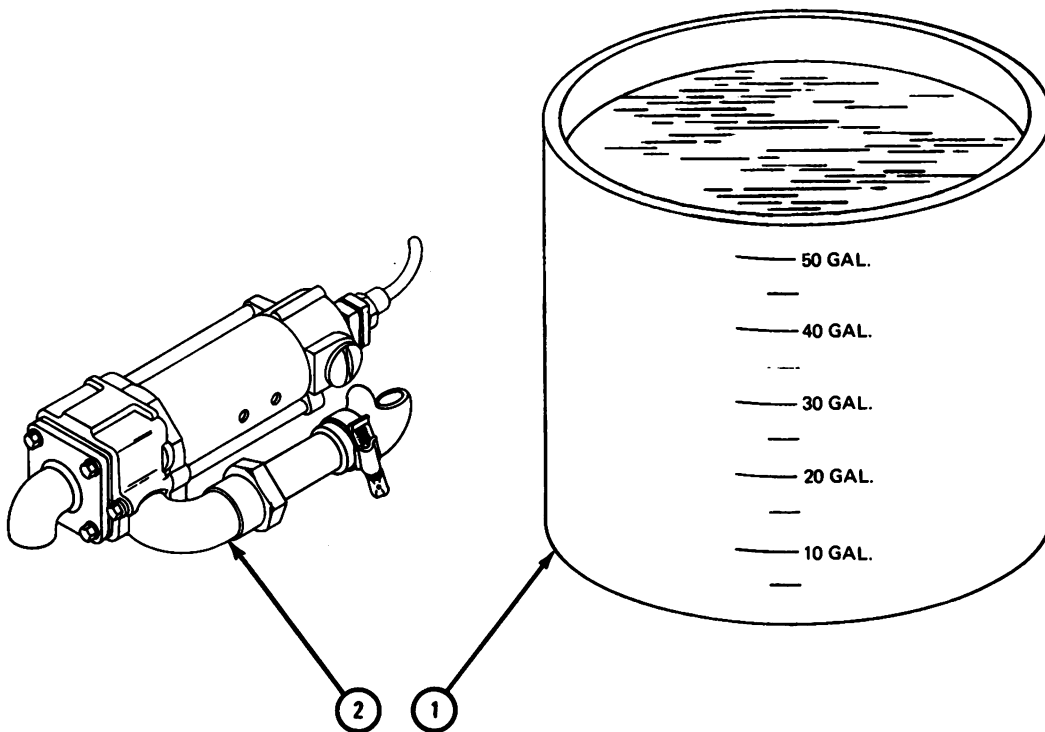
3. Put switch in ON position for one minute and check water level in drum (1). Pump should lower water level at least 40 gallons.
4. Take bilge pump (2) out of drum (1).

NOTE

Follow-on Maintenance Action Required:

Replace bilge pump. Refer to TM 9-2320-242-20.

END OF TASK



TA 084742

CHAPTER 17

MAINTENANCE OF MATERIEL USED IN CONJUNCTION WITH MAJOR ITEMS

Section I. SCOPE

17-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for the engine container assembly and winterization and special purpose kits for which there are authorized corrective maintenance tasks at the direct support and general support maintenance levels.

17-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at the direct support and general support maintenance levels are covered in this chapter.

Section II. ENGINE CONTAINER ASSEMBLY

17-3. ENGINE CONTAINER ASSEMBLY REPAIR.

TOOLS: No special tools required

SUPPLIES: Round rubber seal
Humidity indicator
Sealing compound

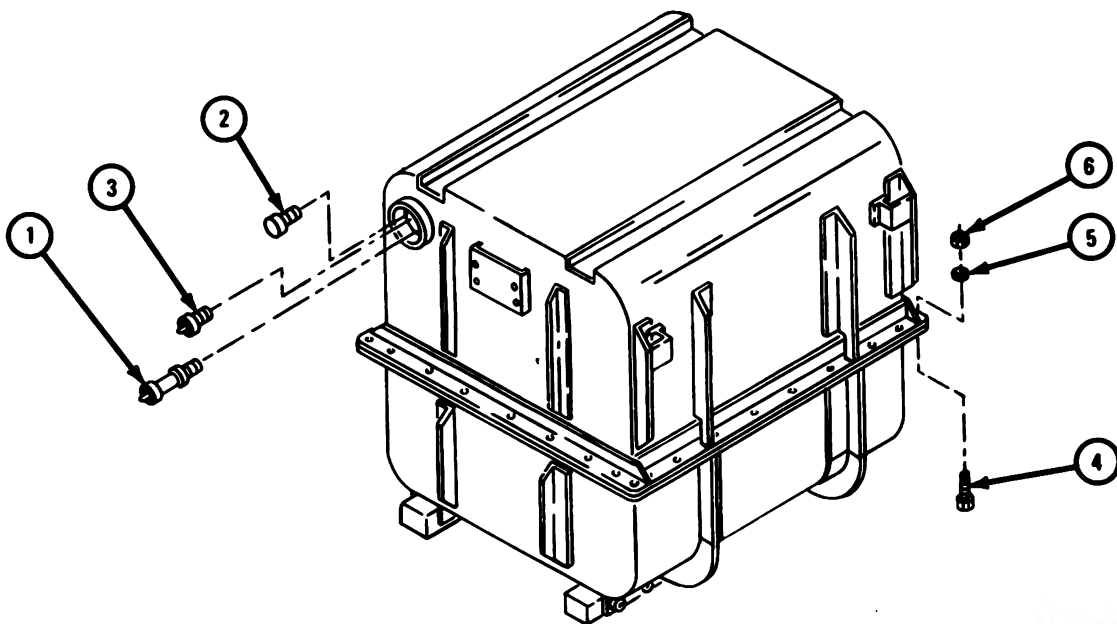
PERSONNEL: Two

EQUIPMENT CONDITION: Container sitting on flat surface at ground level.

a. Disassembly.

FRAME 1

1. Press in core of valve (1) to let air into container. Keep pressed until hiss stops.
 2. Take out valve (1), indicator (2), and safety valve (3).
 3. Take out 34 capscrews (4), lockwashers (5), and nuts (6).
- GO TO FRAME 2

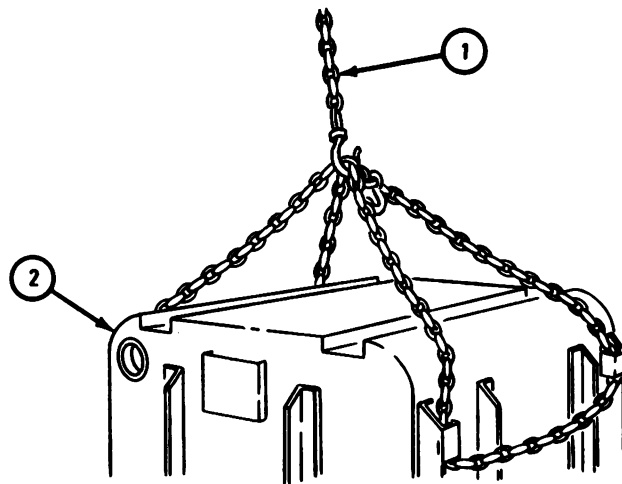


TA 105076

FRAME 2

Soldiers A and B 1. Using chain sling and hoist (1), take off top (2) and set it aside.

GO TO FRAME 3

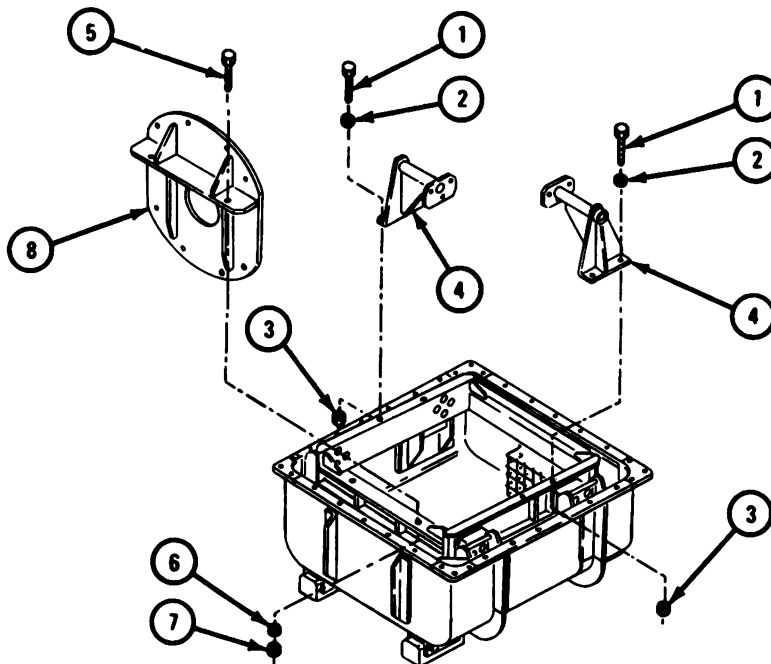


TA 105077

FRAME 3

1. Take out four capscrews (1) with lockwashers (2) and nuts (3). Take out two brackets (4).
2. Take out two capscrews (5) with lockwashers (6) and nuts (7). Take out plate (8).

GO TO FRAME 4



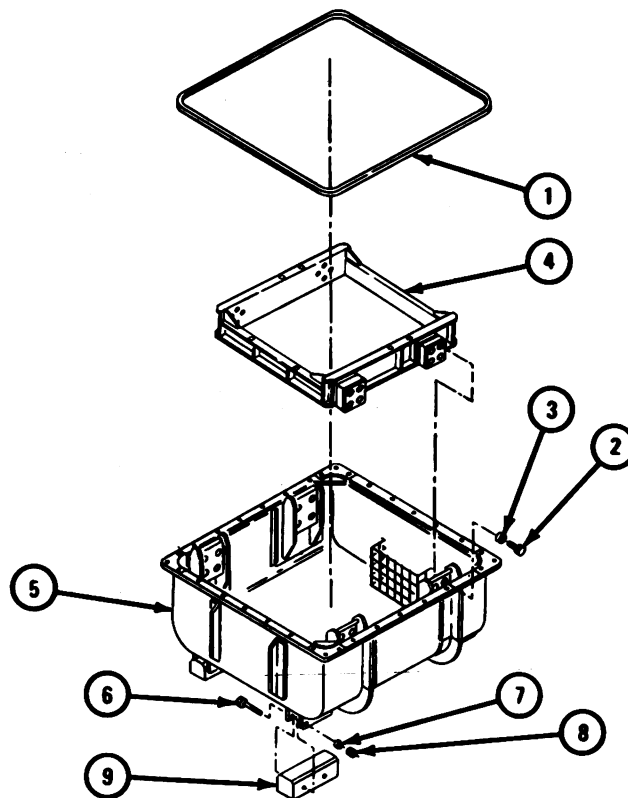
TA 105078

FRAME 4

1. Take out gasket (1) and throw it away.
2. Take out 16 capscrews (2) with lockwashers (3) joining mounting frame (4) to container base (5).
3. Lift out mounting frame (4) and set it aside.
4. Take out eight screws (6) with lockwashers (7) and nuts (8) joining skids (9) to container base (5). Take out skids.

**Soldiers
A and B**

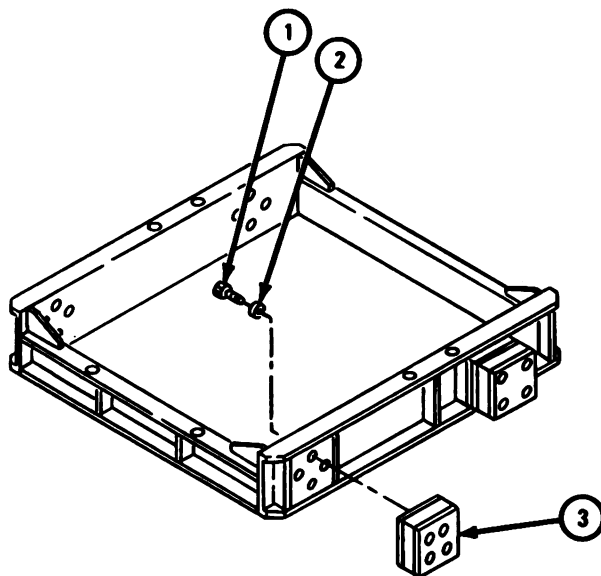
GO TO FRAME 5



TA 105079

FRAME 5

1. Take out 16 capscrews (1) with lockwashers (2). Take off four mounts (3).
END OF TASK



TA 104273

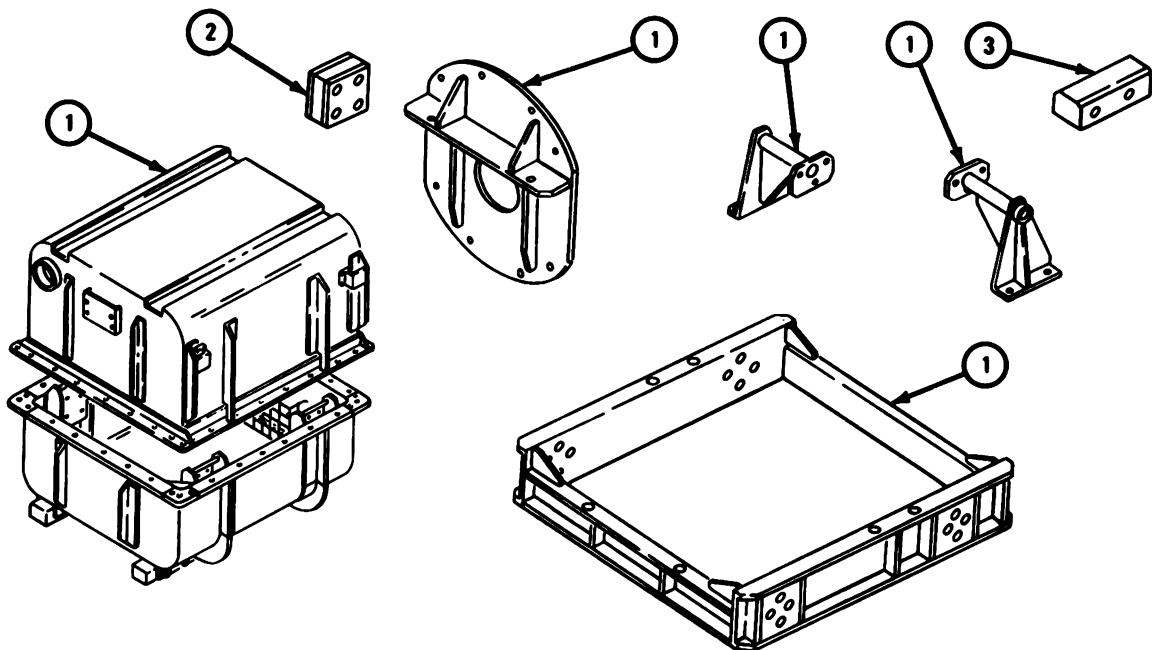
b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that all metal parts (1) have no cracks or bends. Get new parts if cracks or bends are found.
2. Check that mounts (2) have no separation of rubber and metal parts. Check that screw threads have no damage. Get new mounts if separation or thread damage is found.
3. Check that skids (3) have no cracks, rotting of wood or wear causing metal to slide on ground. Get new wooden block if damage is found.

GO TO FRAME 2

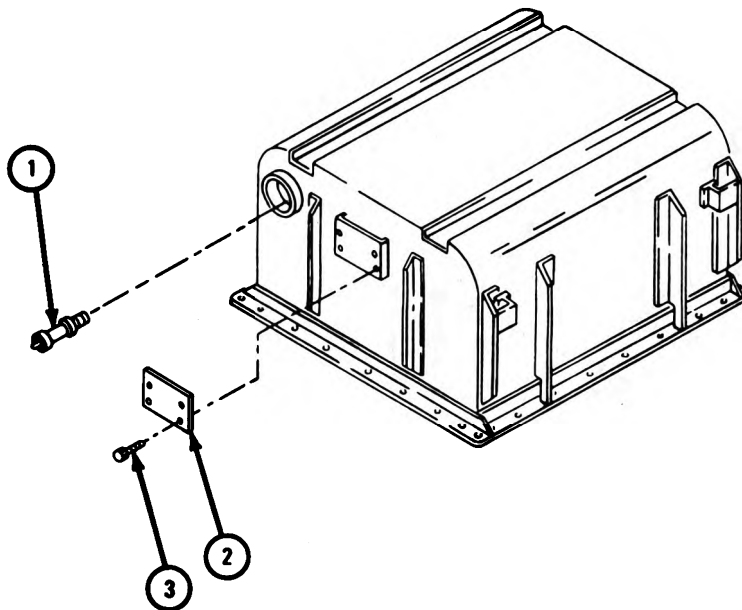


TA 105080

FRAME 2

1. Check that valve (1) works without sticking. Get new part if valve sticks.
2. Check data plate (2) for ease of reading or broken or missing screws (3) or rivets. Put in screws in place of rivets. Get new data plate if you are not able to read it.

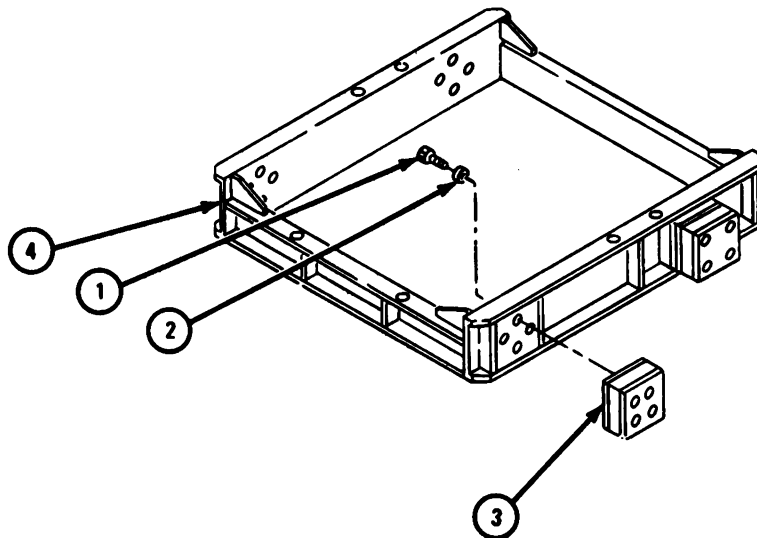
END OF TASK



TA 104274

d. Assembly.**FRAME 1**

1. Put in 16 capscrews (1) with lockwashers (2) joining four mounts (3) to mounting frame (4).

GO TO FRAME 2

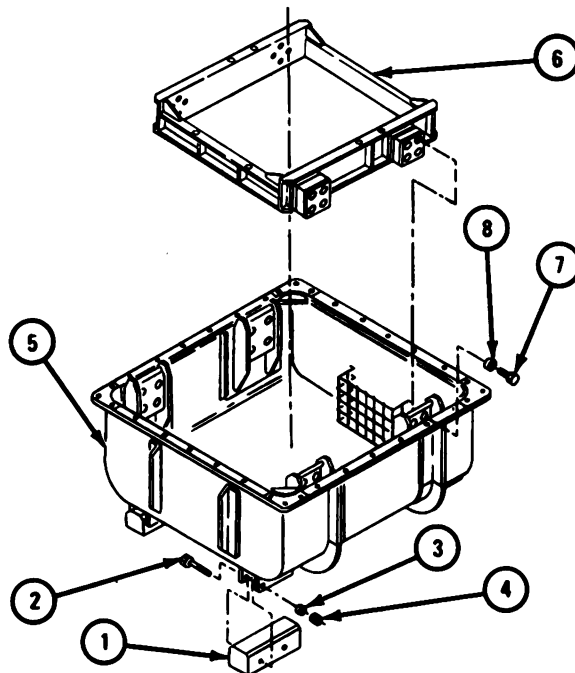
TA 105081

FRAME 2

1. Put in four skids (1). Put in eight screws (2), lockwashers (3), and nuts (4) joining skids to container base (5).

Soldiers A and B 2. Put in mounting frame (6) with 16 capscrews (7) and washers (8), joining mounting frame to container base (5).

GO TO FRAME 3

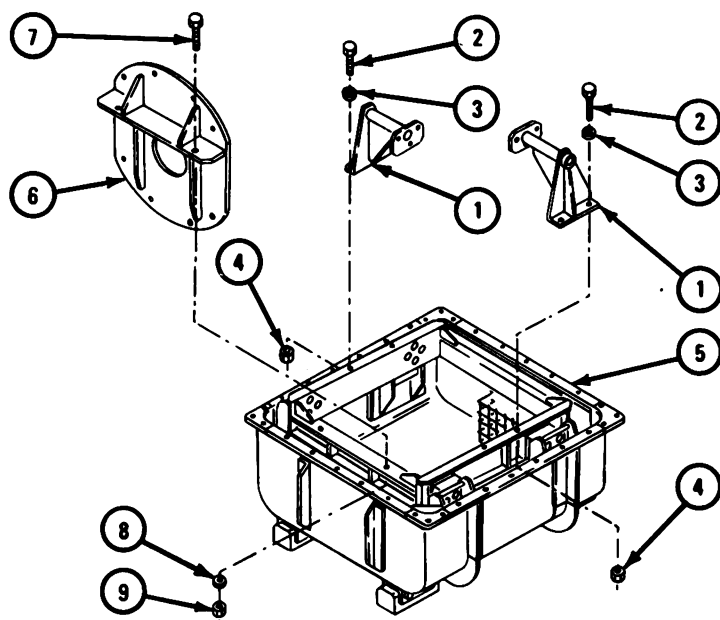


TA 105082

FRAME 3

1. Put in two brackets (1) with four screws (2), four lockwashers (3), and four nuts (4) joining brackets to base frame (5).
2. Put in plate (6) with two screws (7), two lockwashers (8), and two nuts (9), joining plate to base frame (5).

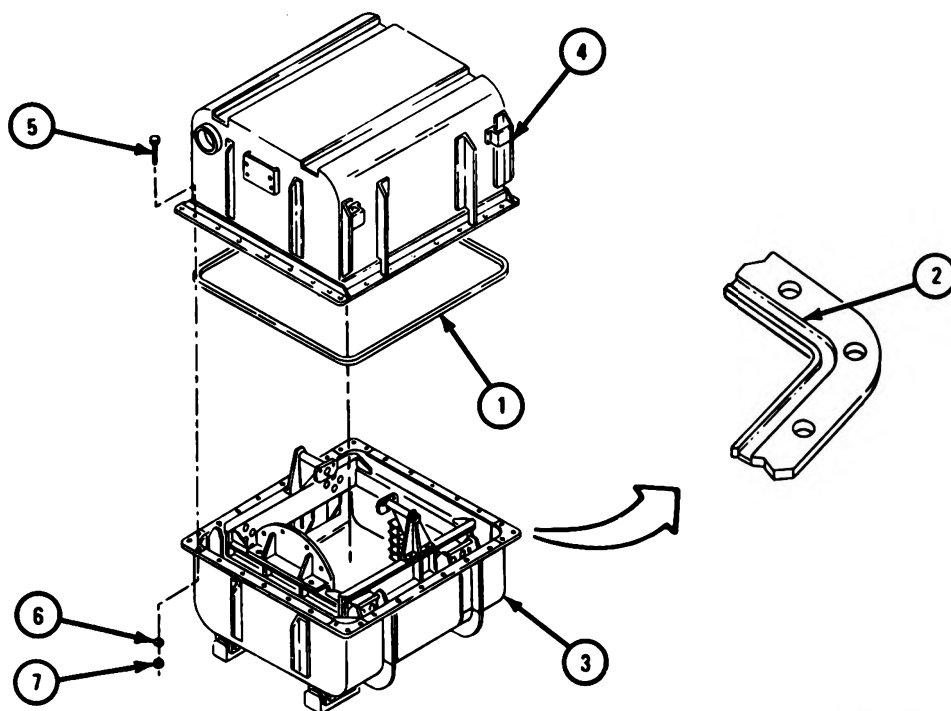
GO TO FRAME 4



TA 105083

FRAME 4

1. Put gasket (1) into groove (2) located on edge of container bottom (3). Coat gasket with sealing compound.
 - Soldiers A and B 2. Using chain sling and hoist, put container top (4) on top of container bottom (3). Put 34 capscrews (5) into holes around edge. Put washers (6) and nuts (7) on each screw and tighten.
 - Soldier A 3. Pressure test container with 5 psi of air.
- END OF TASK



TA 105084

Section III. WINTERIZATION KITS

17-4. WINTERIZATION KIT (-25°F) INSTALLATION. Install winterization kit using the instructions that come with the kit.

17-5. WINTERIZATION KIT PERSONNEL HEATER (-25°F) INSTALLATION. Install winterization kit personnel heater (-25°F) using instructions that come with the kit.

17-6. WINTERIZATION KIT PERSONNEL HEATER HOSES, DUCTING, LINES, AND TUBES INSTALLATION. Install winterization kit personnel heater hoses, ducting, lines, and tubes using instructions that come with the kit.

17-7. WINTERIZATION KIT PERSONNEL HEATER FUEL FILTER AND PUMP INSTALLATION. Install winterization kit personnel heater fuel filter and pump using instructions that come with the kit.

17-8. WINTERIZATION KIT PERSONNEL HEATER CONTROL BOX INSTALLATION. Install winterization kit personnel heater control box using instructions that come with the kit.

17-9. WINTERIZATION KIT CAB CURTAINS INSTALLATION. Install winterization kit cab curtains using instructions that come with the kit.

17-10. PERSONNEL HEATER HOSES, DUCTING, LINES, AND TUBES REPAIR.

- a. Removal. Refer to TM 9-2320-242-20 for removal of hoses, ducting, lines, and tubes.
- b. Repair. Repair is limited to getting new parts for damaged ones.
- c. Replacement. Refer to TM 9-2320-242-20 for replacement of hoses, ducting, lines, and tubes.

17-11. PERSONNEL HEATER CONTROL BOX REPAIR.

- a. Removal. Refer to TM 9-2320-242-20 for removal of heater control box.
- b. Repair. Personnel heater control box and ambulance heater control box are identical. Refer to para 16-7 for repair procedures.
- c. Replacement. Refer to TM 9-2320-242-20 for replacement of heater control box.

17-12. ARCTIC KIT (-65°F) INSTALLATION. Install arctic kit using the instructions that come with the kit.

17-13. ARCTIC KIT PERSONNEL/COOLANT HEATER ASSEMBLY INSTALLATION. Install arctic kit personnel/coolant heater using instructions that come with the kit.

17-14. ARCTIC KIT PERSONNEL/COOLANT HEATER CONTROL BOX INSTALLATION. Install arctic kit personnel/coolant heater control box using instructions that come with the kit.

17-15. ARCTIC BATTERY BOX REPAIR.

- a. Removal. Refer to TM 9-2320-242-20 for removal of arctic battery box.
- b. Repair. Repair of arctic battery box is limited to getting a new one.
- c. Replacement. Refer to TM 9-2320-242-20 for replacement of arctic battery box.

17-16. ARCTIC BATTERY BOX INSTALLATION. Install arctic battery box using instructions that come with the kit.

17-17. ARCTIC KIT HOSES, DUCTING, LINES, AND TUBES INSTALLATION. Install arctic kit hoses, ducting, lines, and tubes using instructions that come with the kit.

17-18. ARCTIC KIT FUEL FILTER AND PUMP INSTALLATION. Install arctic kit fuel filter kit using instructions that come with the kit.

17-19. MIDDLE AND REAR CAB DOOR ASSEMBLIES REPAIR.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

- a. Preliminary Procedure. Remove doors. Refer to TM 9-2320-242-20.

b. Disassembly.

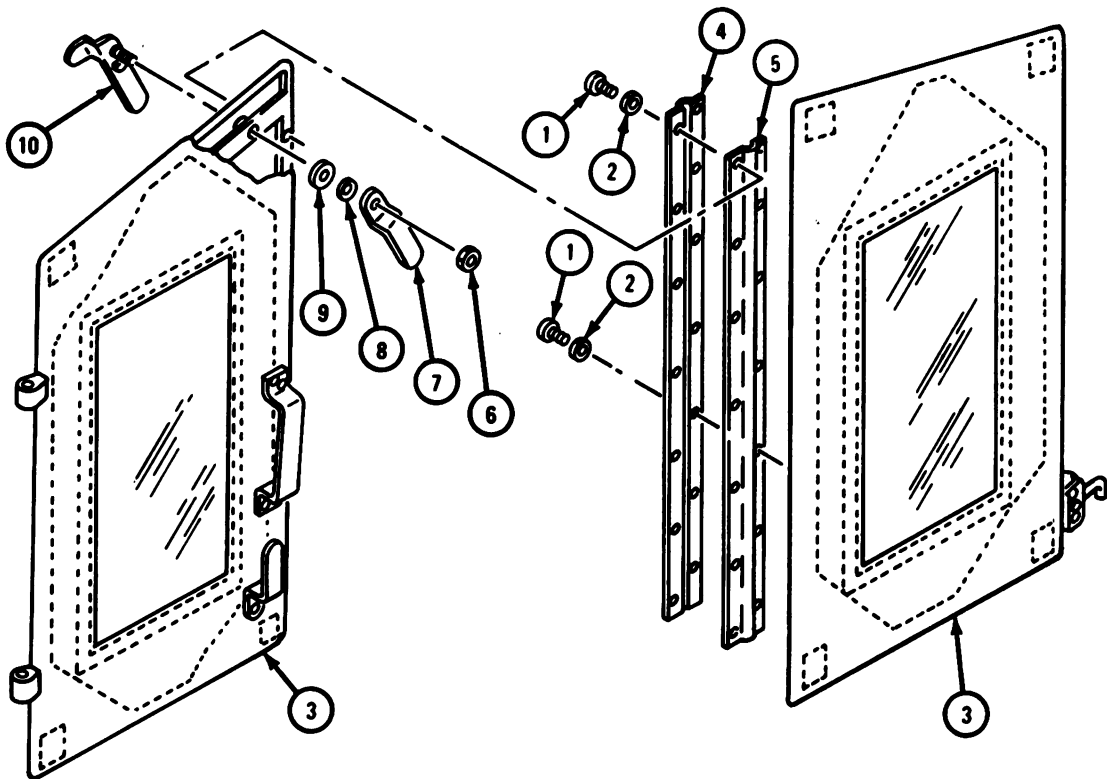
NOTE

This procedure is the same for right and left door assemblies. Only the right door assembly is shown.

FRAME 1

1. Take out 14 screws (1) with lockwashers (2). Take doors (3) apart. Take off hinge (4) and weather seal (5).
2. Take off nut (6), latch (7), spring washer (8), and flat washer (9). Take out latch (10).

GO TO FRAME 2

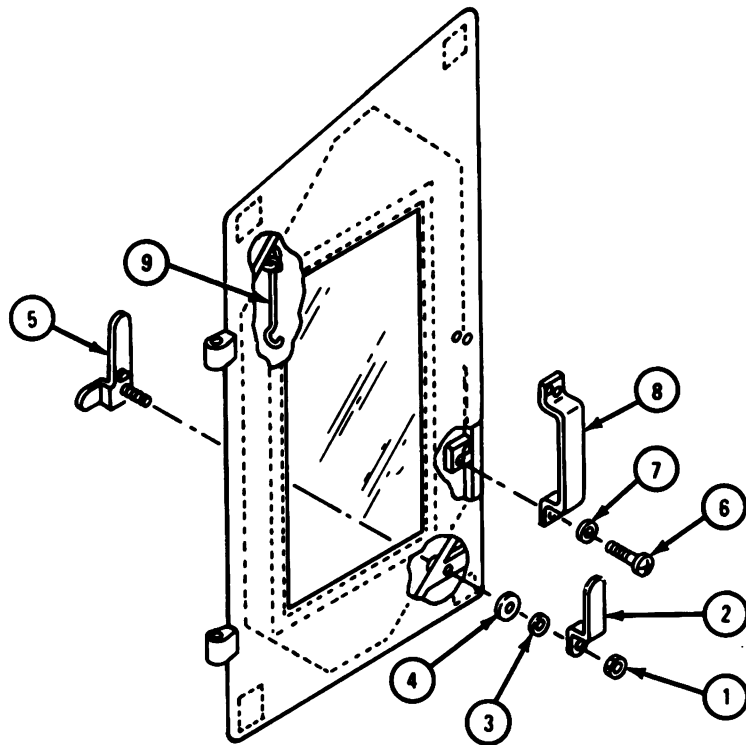


TA 105066

FRAME 2

1. Take out nut (1), latch (2), spring washer (3), and flat washer (4). Take out latch (5).
2. Take out four screws (6) with lockwashers (7). Take off handle (8).
3. Take off hook (9).

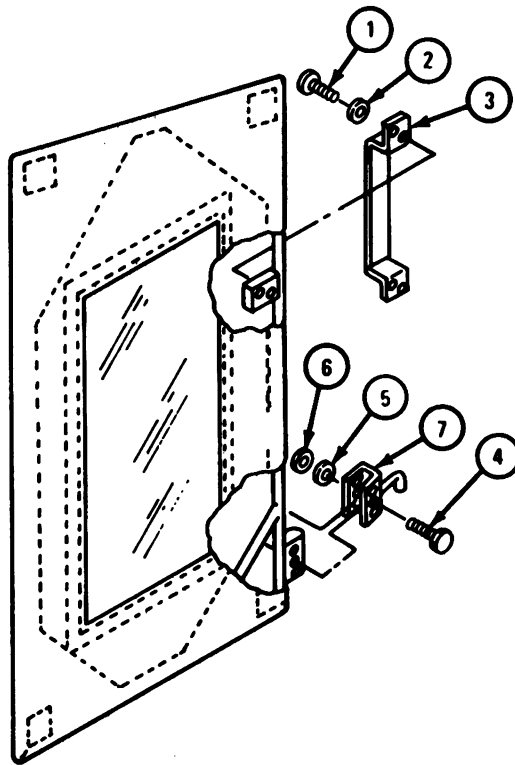
GO TO FRAME 3



TA 105067

FRAME 3

1. Take out four screws (1) with lockwashers (2). Take off handle (3).
2. Take out capscrew (4) with lockwasher (5) and nut (6). Take off catch (7).

END OF TASK

TA 105068

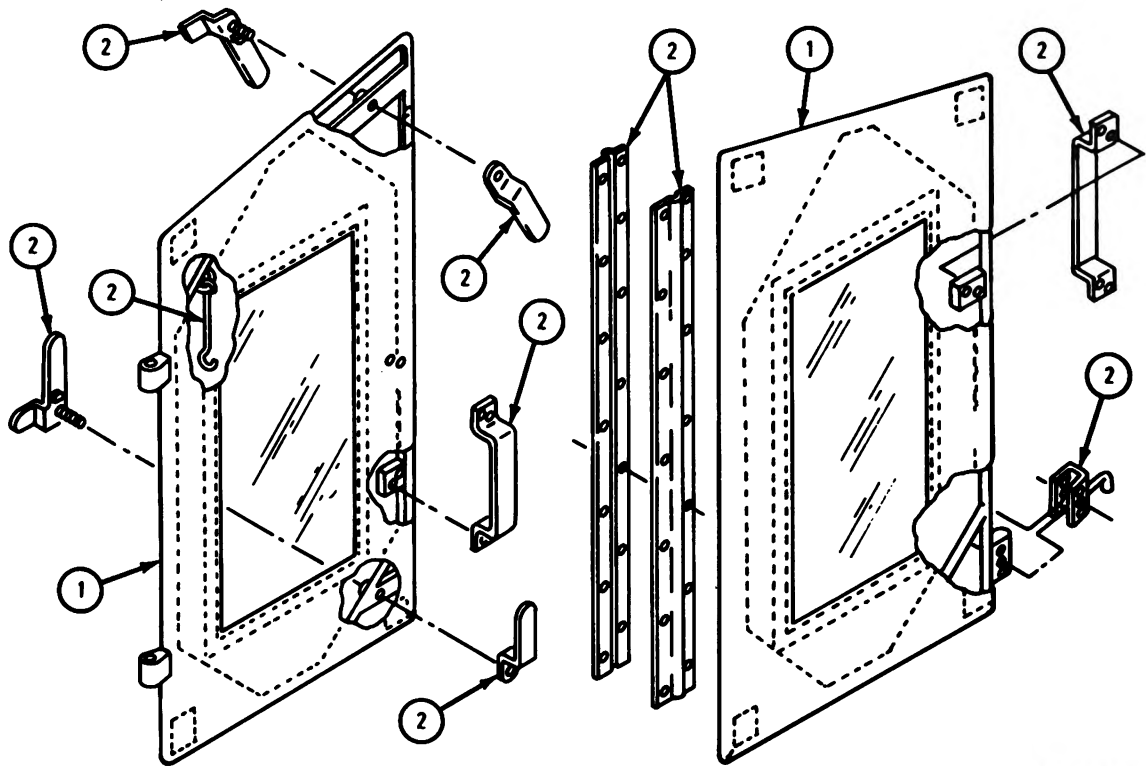
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check doors (1) and all metal parts (2) for tears, bends, cracks or breaks. Get new door or parts if tears, bends, cracks or breaks are found.

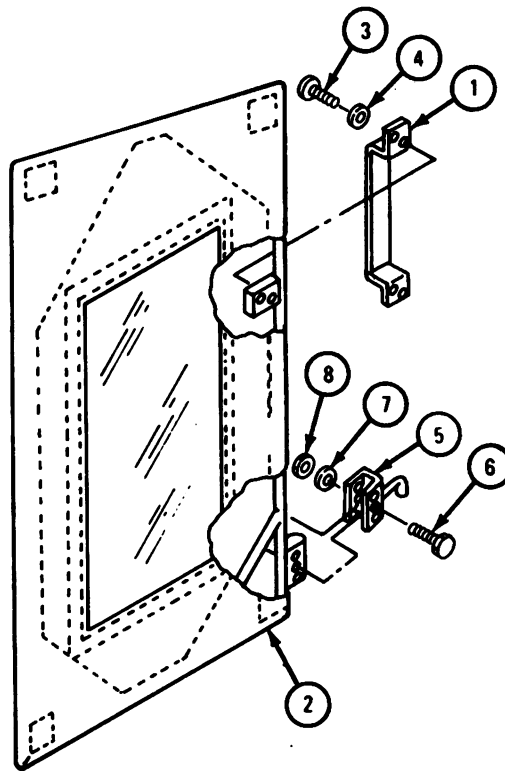
END OF TASK



TA 105069

e. Assembly.**FRAME 1**

1. Put handle (1) on middle door (2). Put in four screws (3) with lockwashers (4).
 2. Put on catch (5). Put in capscREW (6) with lockwasher (7) and nut (8).
- GO TO FRAME 2**

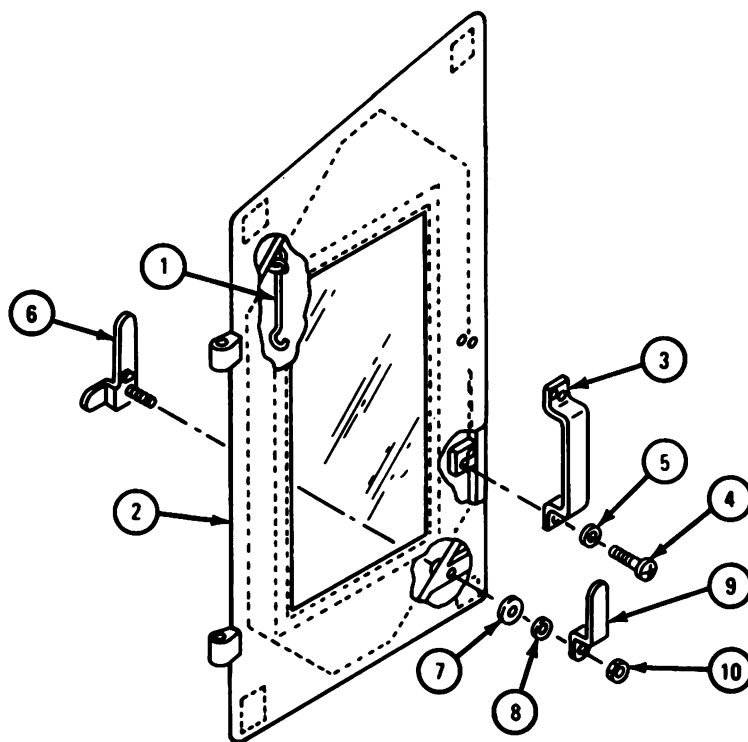


TA 105070

FRAME 2

1. Put hook (1) inside of rear door (2).
2. Put on handle (3). Put in four screws (4) with lockwashers (5).
3. Put in latch (6). Put on flat washer (7), spring washer (8), latch (9), and nut (10).

GO TO FRAME 3



TA 105071

FRAME 3

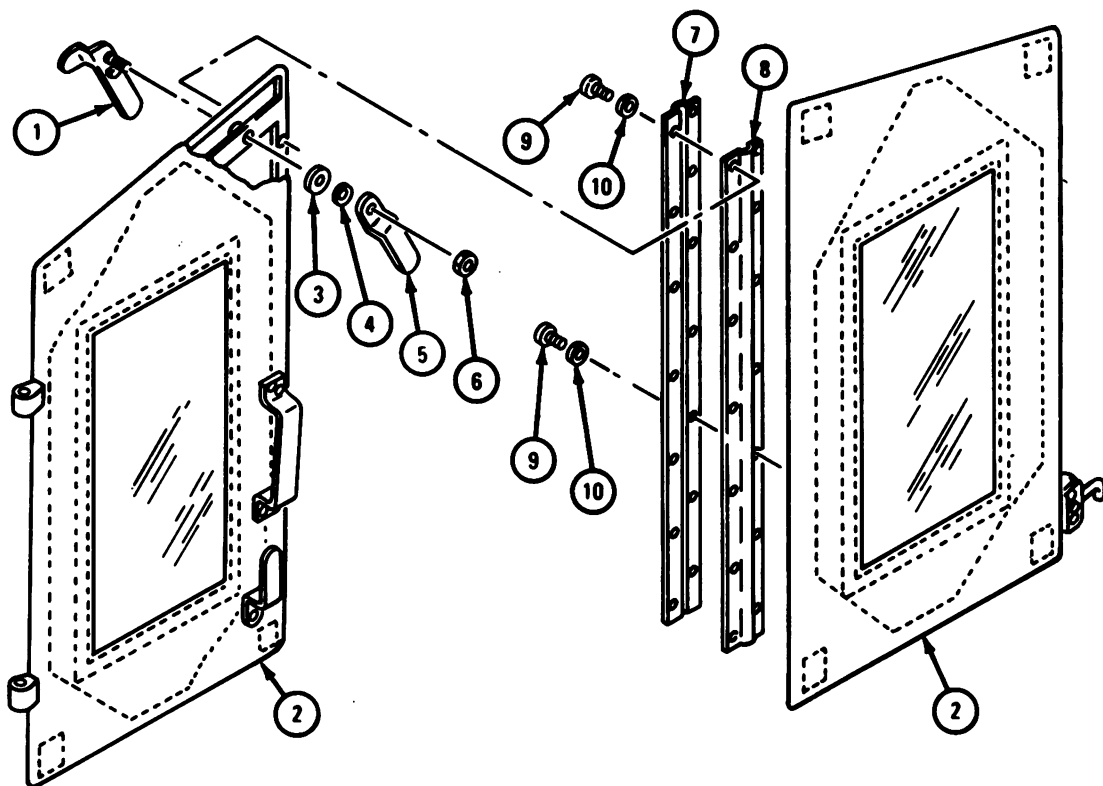
1. Put latch (1) in rear door (2). Put on flat washer (3), spring washer (4), latch (5), and nut (6).
2. Put hinge (7) and weather seal (8) on doors (2). Put in 14 screws (9) with lockwashers (10).

NOTE

Follow-on Maintenance Action Required:

Replace doors. Refer to TM 9-2320-242-20.

END OF TASK



TA 105072

17-20. ARCTIC CAB HARDTOP KIT INSTALLATION. Install arctic cab hardtop kit using instructions that come with the kit.

17-21. ARCTIC CLOSURE KIT INSTALLATION. Install arctic closure kit using instructions that come with the kit.

17-22. ARCTIC CLOSURE KIT FUEL PUMP AND FILTER REPAIR.

a. Removal. Refer to TM 9-2320-242-20 for removal of fuel pump and filter assembly.

b. Repair. Repair is limited to getting a new fuel pump.

c. Replacement. Refer to TM 9-2320-242-20 for replacement of fuel pump and filter assembly.

17-23. ARCTIC CLOSURE KIT HOSES, DUCTING, LINES, AND TUBES REPAIR.

a. Removal. Refer to TM 9-2320-242-20 for removal of hoses, ducting, lines, and tubes.

b. Repair. Repair is limited to getting new parts for damaged ones.

c. Replacement. Refer to TM 9-2320-242-20 for replacement of hoses, ducting, lines, and tubes.

17-24. ARCTIC CLOSURE KIT TAILGATE STEP REPAIR.

TOOLS: No special tools required

SUPPLIES: Cotter pin (2)

PERSONNEL: One

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

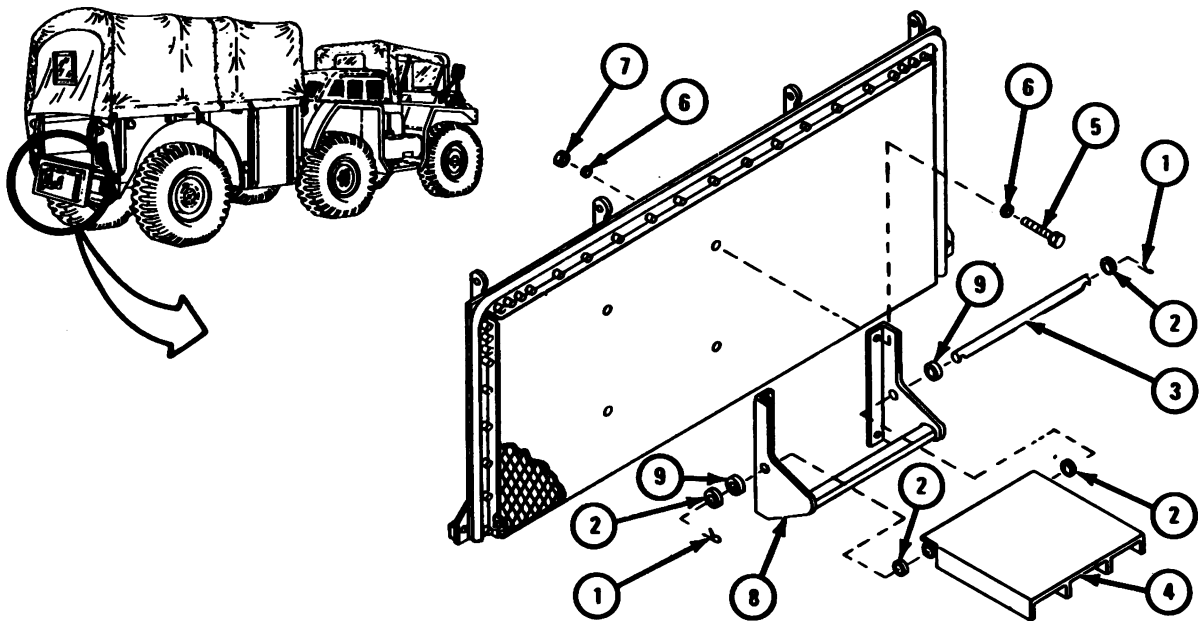
a. Preliminary Procedure. Open tailgate. Refer to TM 9-2320-242-10.

b. Removal.

FRAME 1

1. Take out and throw away two cotter pins (1).
2. Take off four washers (2) and rod (3). Take out step (4).
3. Take off four capscrews (5), eight washers (6), and four nuts (7). Take off bracket (8).
4. Press out two bushings (9).

END OF TASK



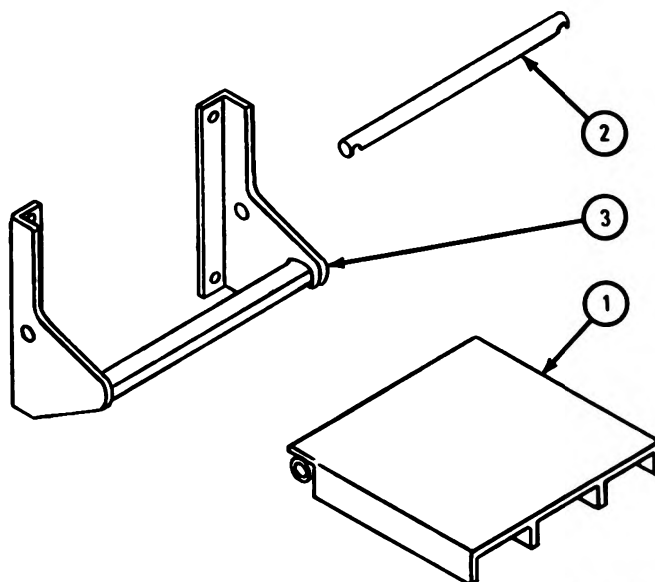
TA 101498

c. Cleaning, Inspection, and Repair.

FRAME 1

1. Take off dirt from step (1), rod (2), and bracket (3) with wire brush.
2. Check that rod (2) has no bends or cracks. Straighten bent rod. Refer to FM 43-2. If rod is cracked, get a new one.
3. Check that step (1) has no bends or cracks. Straighten bends and repair cracks by welding. Refer to TM 9-237.
4. Check that bracket (3) has no bends or cracks. Straighten bends and repair cracks by welding. Refer to TM 9-237.
5. Repaint any bare surfaces. Refer to TM 43-0319.

END OF TASK



TA 101499

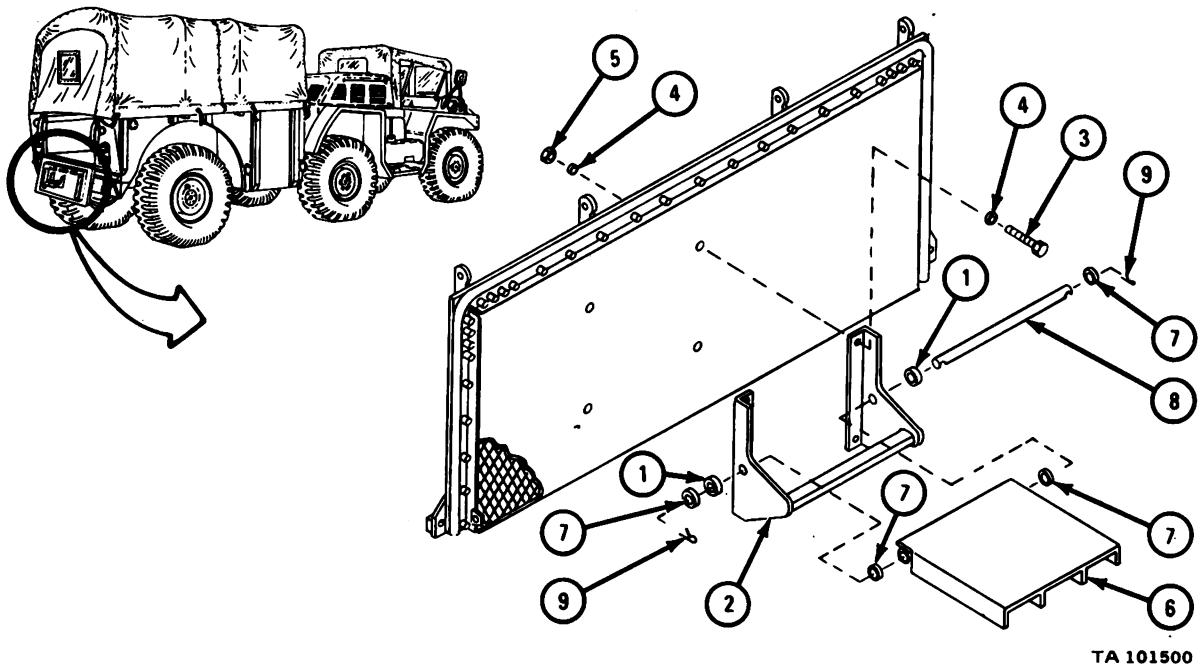
d. Replacement.**FRAME 1**

1. Press two bushings (1) into bracket (2).
2. Put on bracket (2) with four capscrews (3), eight washers (4), and four nuts (5).
3. Put on step (6) with four washers (7), rod (8), and two cotter pins (9).

NOTE

Follow-on Maintenance Action Required:

Close tailgate. Refer to TM 9-2320-242-10.

END OF TASK

17-25. ARCTIC CLOSURE KIT CANOPY REPAIR.

- a. Removal. Refer to TM 9-2320-242-20 for removal of arctic closure kit canopy.
- b. Repair. Refer to FM 10-16 for repair of canopy.
- c. Replacement. Refer to TM 9-2320-242-20 for replacement of arctic closure kit canopy.

17-26. ARCTIC CLOSURE KIT THERMAL INSULATION BLANKETS REPAIR.

- a. Removal. Refer to TM 9-2320-242-20 for removal of thermal blankets.
- b. Repair. Repair is limited to getting new thermal blankets in place of damaged ones.
- c. Replacement. Refer to TM 9-2320-242-20 for replacement of thermal blankets.

Section IV. SPECIAL PURPOSE KITS

17-27. RADIO SUPPORT ASSEMBLY REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

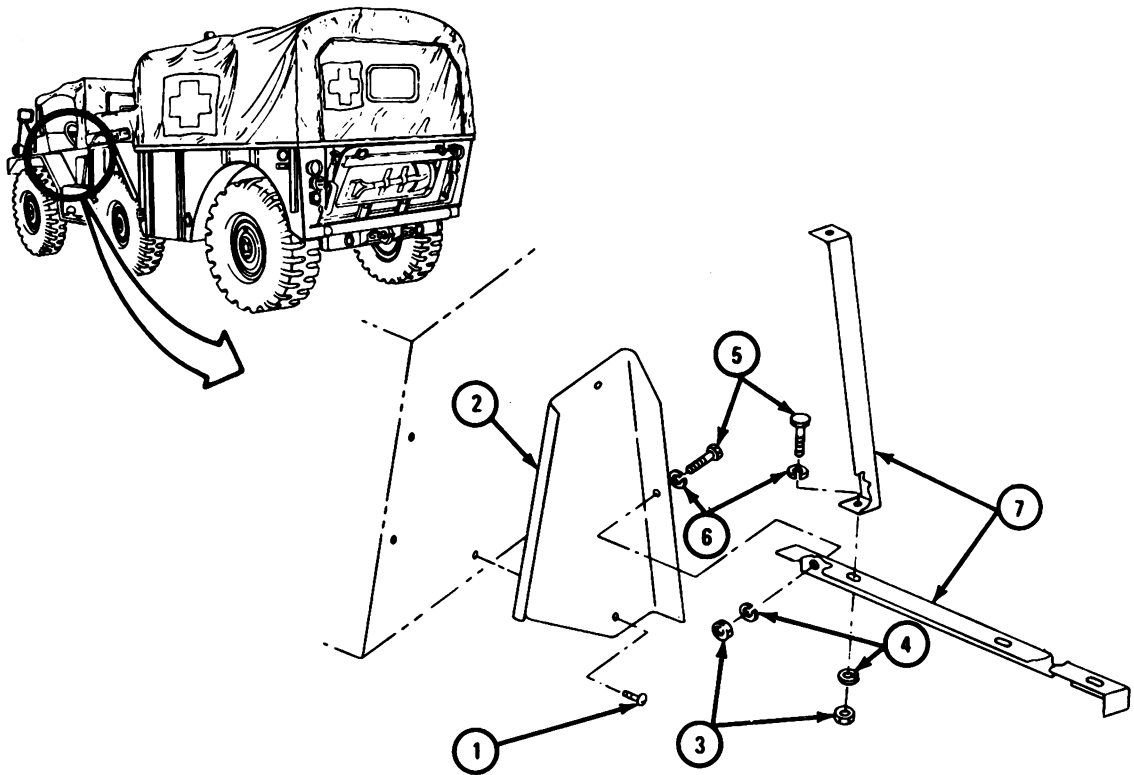
- a. Preliminary Procedures.
 - (1) Disconnect battery ground cable. Refer to TM 9-2320-242-20.
 - (2) Remove radio. Refer to TM 9-2320-242-10.

b. Removal.

FRAME 1

1. Take out four screws (1). Take off bracket (2).
2. Take off two nuts (3) and two lockwashers (4). Take out two screws (5) with two lockwashers (6).
3. Take off two angle pieces (7).

END OF TASK



TA 105073

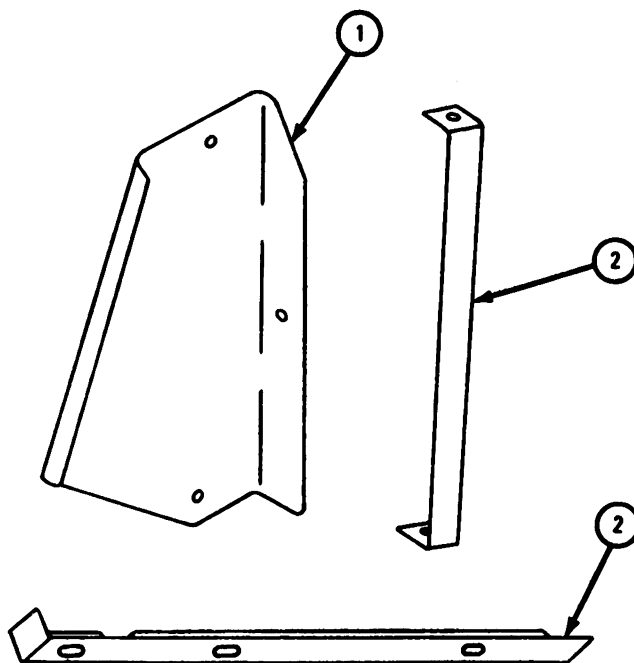
c. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

d. Inspection and Repair.

FRAME 1

1. Check that bracket (1) and angle pieces (2) have no cracks or bends. Refer to TM 9-237 to repair cracks by welding. Refer to FM 43-2 to straighten bends.

END OF TASK



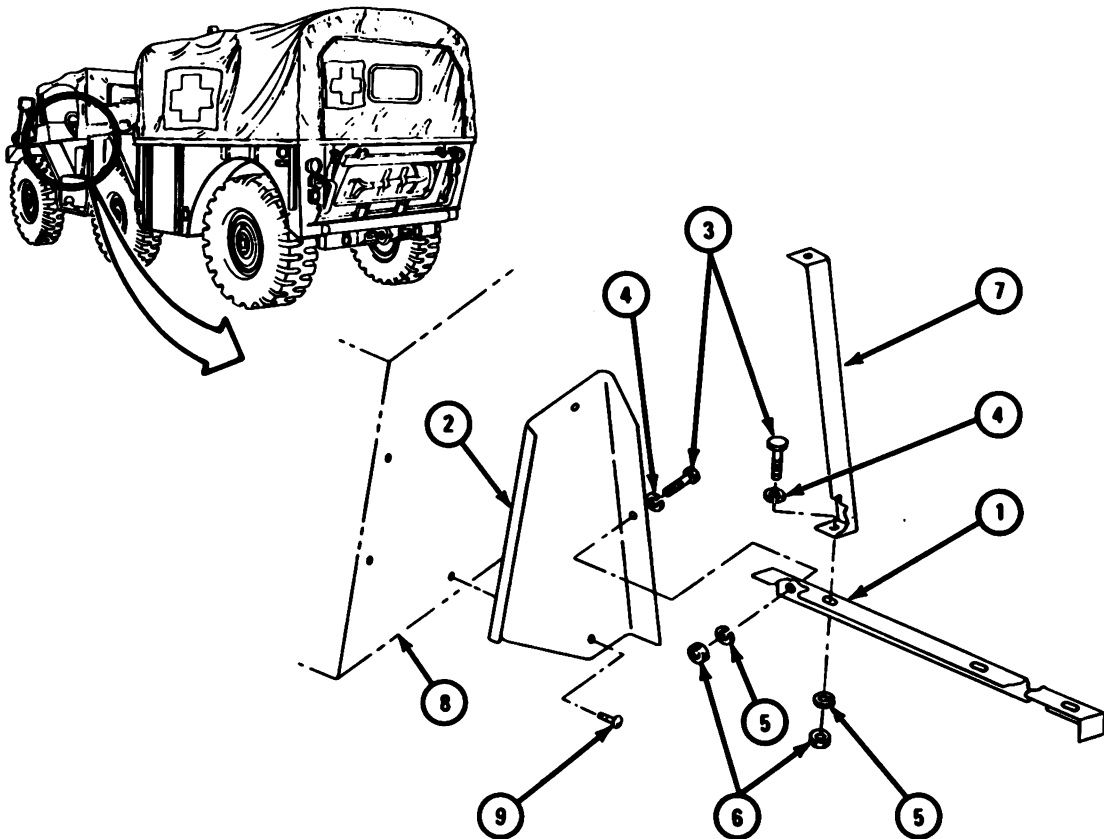
TA 105074

e. Replacement.**FRAME 1**

1. Put angle piece (1) on bracket (2) and put in screw (3) with lockwasher (4). Put on lockwasher (5) and nut (6).
2. Put angle piece (7) on angle piece (1). Put in screw (3) with lockwasher (4). Put on lockwasher (5) and nut (6).
3. Put bracket (2) in place on truck (8) and put in four screws (9).

NOTE**Follow-on Maintenance Action Required:**

1. Replace radio. Refer to TM 9-2320-242-10.
2. Reconnect battery ground cable. Refer to TM 9-2320-242-20.

END OF TASK

TA 105075

17-28. SLAVE CABLE KIT INSTALLATION. Install slave cable kit using instructions that come with the kit.

17-29. SLAVE CABLE REMOVAL AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: Two

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

a. Preliminary Procedures.

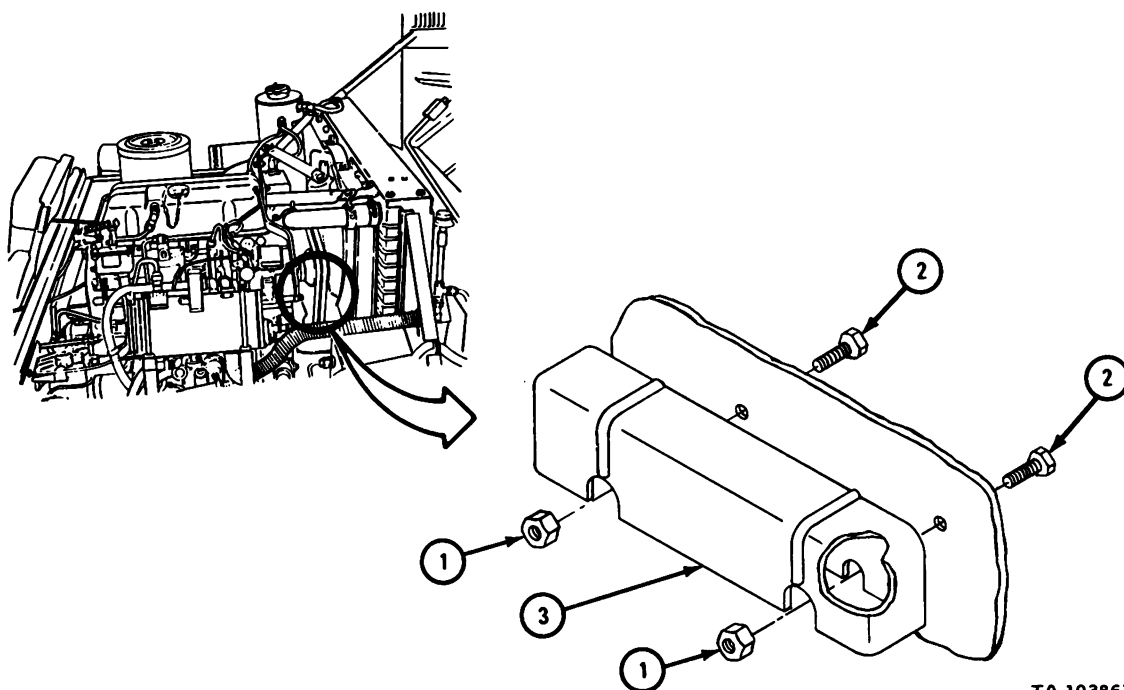
- (1) Disconnect battery ground. Refer to TM 9-2320-242-20.
- (2) Open engine cover. Refer to TM 9-2320-242-10.
- (3) Remove driver's seat. Refer to TM 9-2320-242-20.

b. Removal.

FRAME 1

1. Loosen, but do not take off, two nuts (1) from two capscrews (2).
2. Lift up and take off terminal board cover (3).

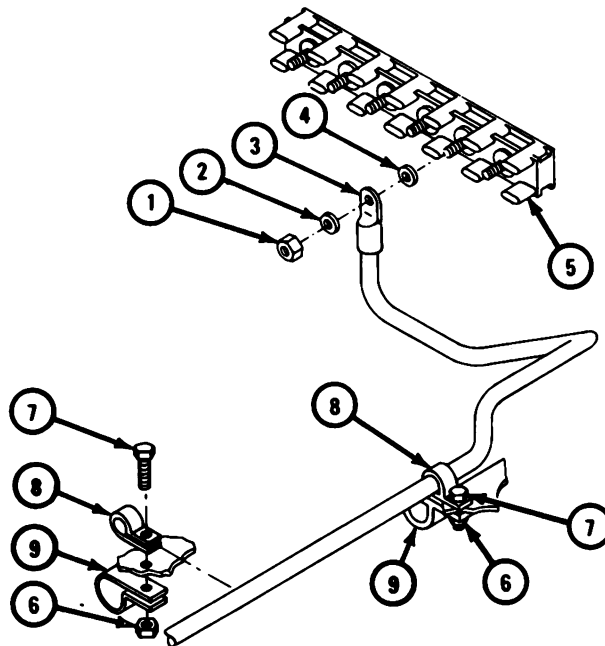
GO TO FRAME 2



FRAME 2

1. Take off nut (1) and washer (2). Take off cable (3) and washer (4) from terminal strip (5).
2. Take off two nuts (6). Take out two capscrews (7) from two loop clamps (8) and two loop clamps (9). Pull loop clamps (8) off cable (3).

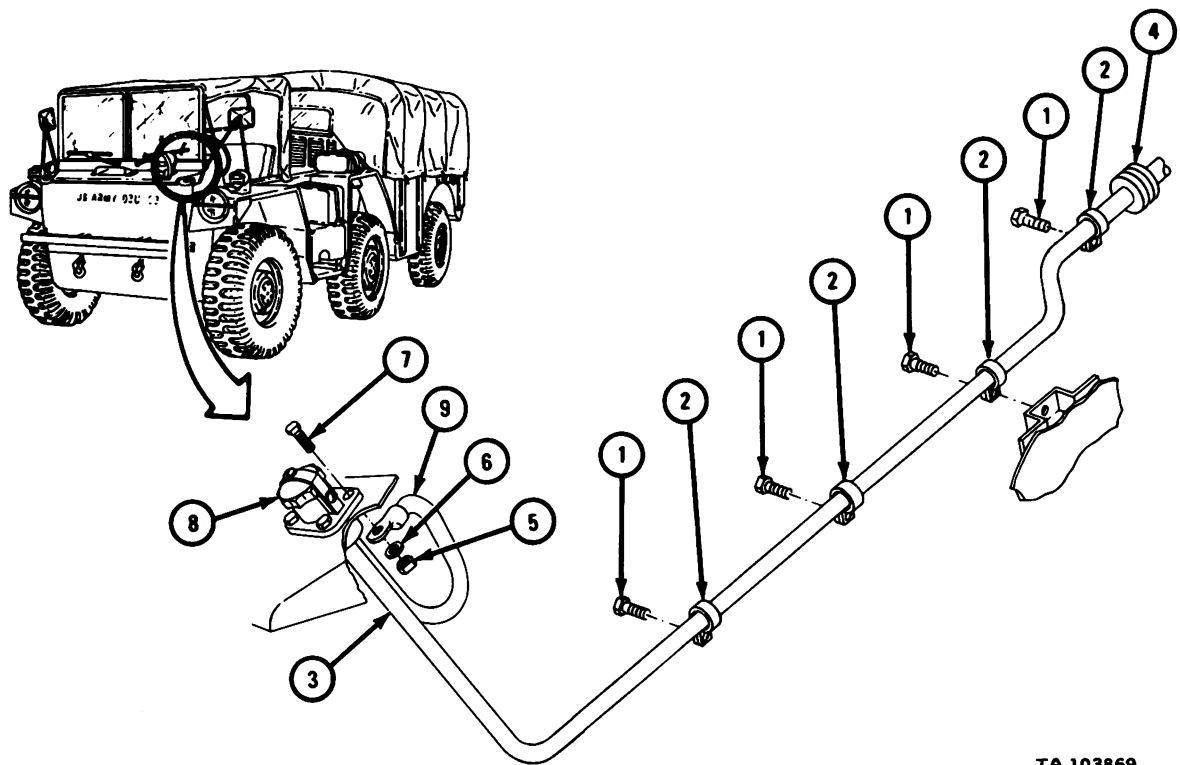
GO TO FRAME 3



TA 103868

FRAME 3

1. Take off four capscrews (1) from four loop clamps (2). Pull loop clamps (2) from positive cable (3).
2. Pull positive cable (3) through firewall grommet (4).
3. Take off four nuts (5) and washer (6) from four capscrews (7) holding receptacle connector (8) to cowl.
4. Hold negative cable (9) along positive cable (3) and pull positive and negative cables up through receptacle mounting hole of cowl.

END OF TASK

TA 103869

c. Cleaning.

(1) Clean positive and negative cables with soap and cloth. Wipe dry with clean cloth.

(2) Clean terminal end of negative cable and terminal end of positive cable with wire brush.

(3) Using wire brush, clean underside of cowl which touches negative cable terminal at receptacle mounting hole.

(4) Using wire brush, clean terminal of terminal strip which touches terminal end of positive cable.

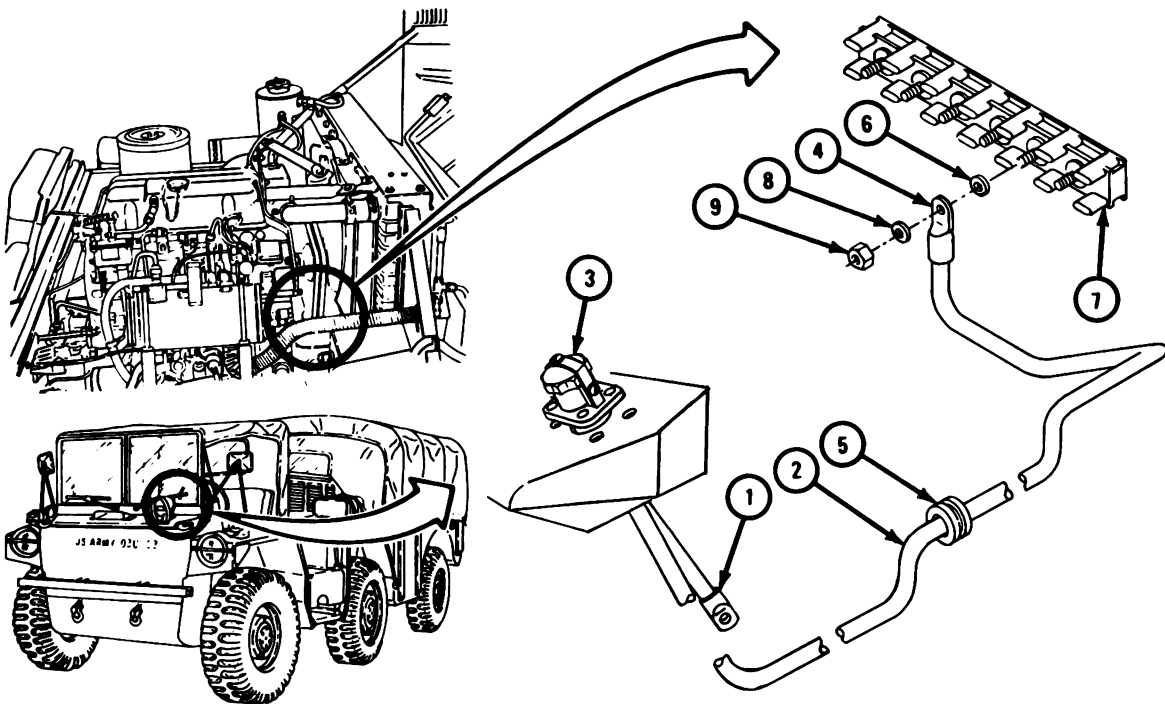
(5) Clean all washers with wire brush.

d. Inspection and Repair. Check that positive and negative cables have no cracks, loose terminals or loose receptacle connections. If insulation is cracked or terminals or receptacle are loose, get a new cable assembly.

e. Replacement.**FRAME 1**

1. Hold negative cable (1) along positive cable (2) and pull cables down through cowl mounting hole for receptacle connector (3).
2. Pull terminal end (4) of positive cable (2) through firewall grommet (5).
3. Put washer (6) and terminal end (4) of positive cable (2) on terminal of terminal strip (7). Put on washer (8) and nut (9).

GO TO FRAME 2

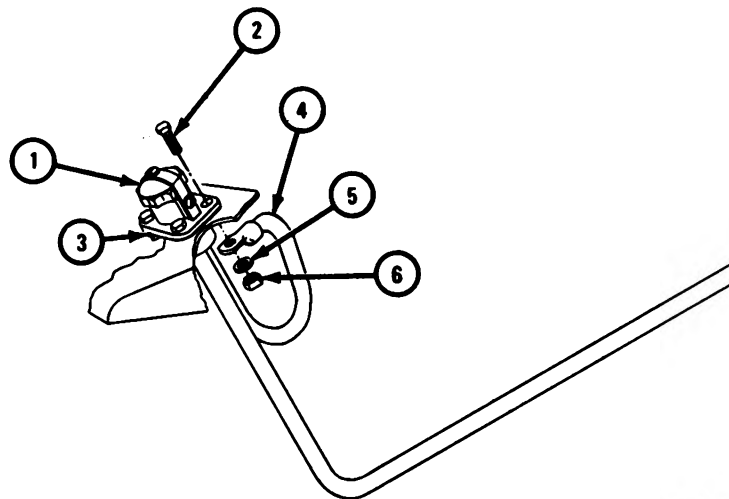


TA 103870

FRAME 2

1. Put four capscrew holes of receptacle connector (1) over matching holes of cowl receptacle hole. Put four capscrews (2) through receptacle holes.
2. Put on three nuts (3). Put on terminal end of negative cable (4), washer (5), and nut (6).

GO TO FRAME 3

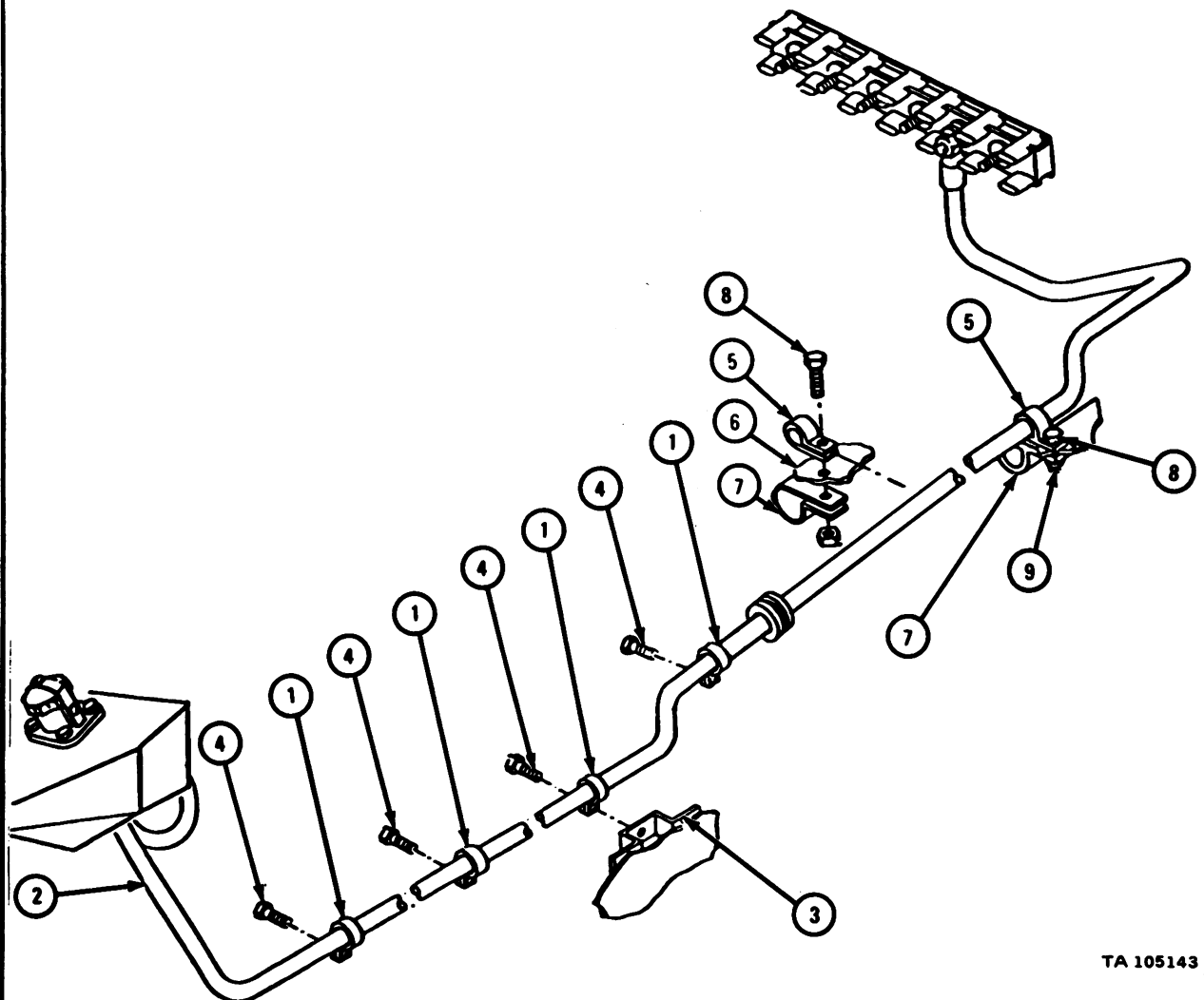


TA 105142

FRAME 3

1. Place four loop clamps (1) on cable (2) to align with capscrew mounting holes in chassis (3). Put four capscrews (4) in loop clamps.
2. Place two loop clamps (5) on cable (2) to align with capscrew holes in mounting strip (6) and loop clamps (7) on underside of mounting strip (6).
3. Put in two capscrews (8). Put on two nuts (9).

GO TO FRAME 4



TA 105143

FRAME 4

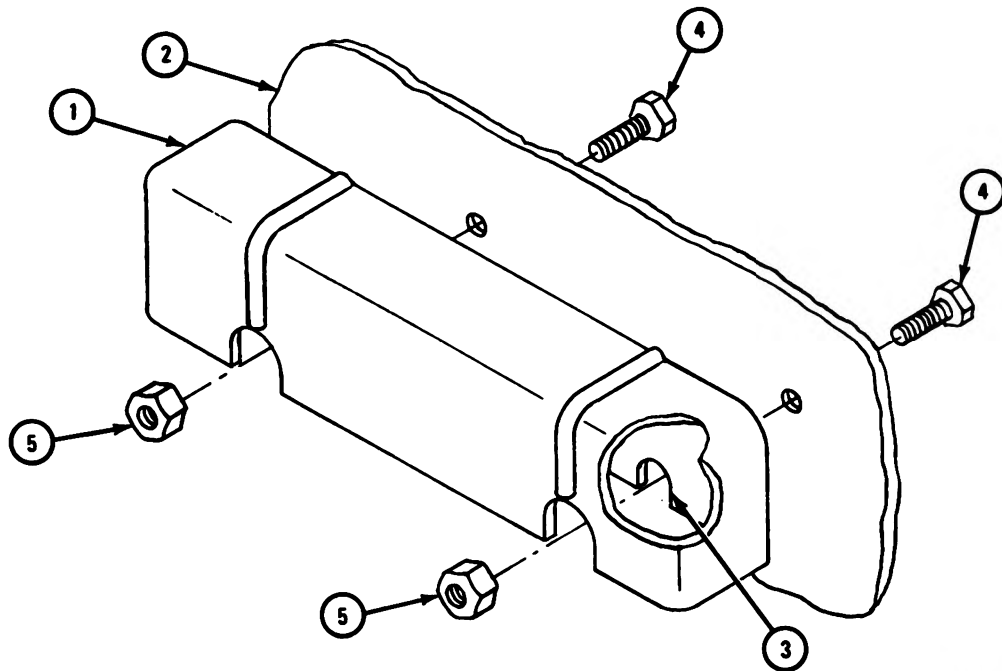
1. Place terminal board cover (1) over terminal strip. Push cover down between terminal strip and chassis (2) until slots (3) in back of cover are seated on capscrews (4).
2. Tighten nuts (5).

NOTE

Follow-on Maintenance Action Required:

1. Connect battery ground. Refer to TM 9-2320-242-20.
2. Close engine cover. Refer to TM 9-2320-242-10.
3. Replace driver's seat. Refer to TM 9-2320-242-20.

END OF TASK



TA 105144

17-30. WINCH KIT INSTALLATION. Install winch kit using instructions that come with the kit.

17-31. WINCH KIT REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: Bearing drive set, pn 11660068

SUPPLIES: Universal joint parts kit
 0.070 IN.W, DIA, 0.614 IN.ID Preformed packing (2)
 0.139 W, DIA, 6.734 IN.ID Preformed packing (2)
 0.139 W, DIA, 6.732 IN.ID Preformed packing (2)
 Power takeoff gasket
 Worm gear housing cover gasket
 Housing cover gasket (2)
 Headless straight pin
 Plain encased seal
 Shaft bushing (5)
 Sleeve
 Masking tape, PP-T-42C

PERSONNEL: Two

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

a. Power Takeoff Shaft Assembly.

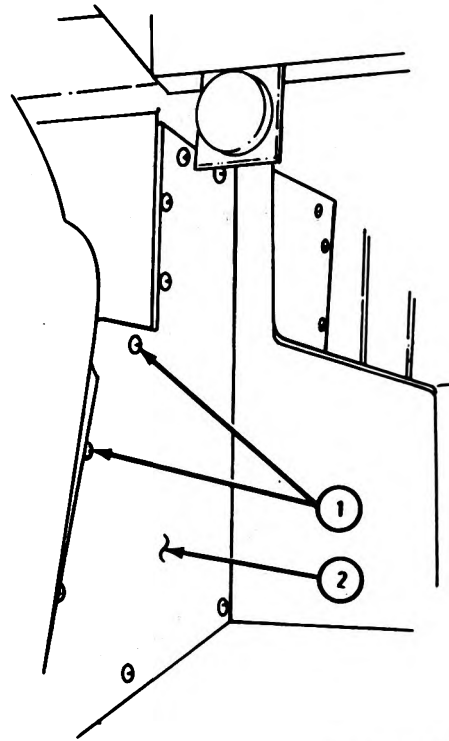
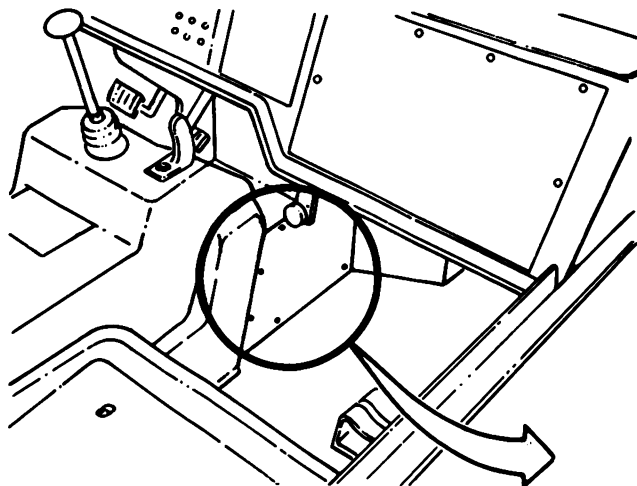
(1) Preliminary procedures.

- (a) Remove tractor seats. Refer to TM 9-2320-242-20.
- (b) Remove console. Refer to TM 9-2320-242-20.

(2) Removal.

FRAME 1

1. Take out 15 screws (1).
 2. Take off power takeoff shaft shield (2), right side.
- GO TO FRAME 2

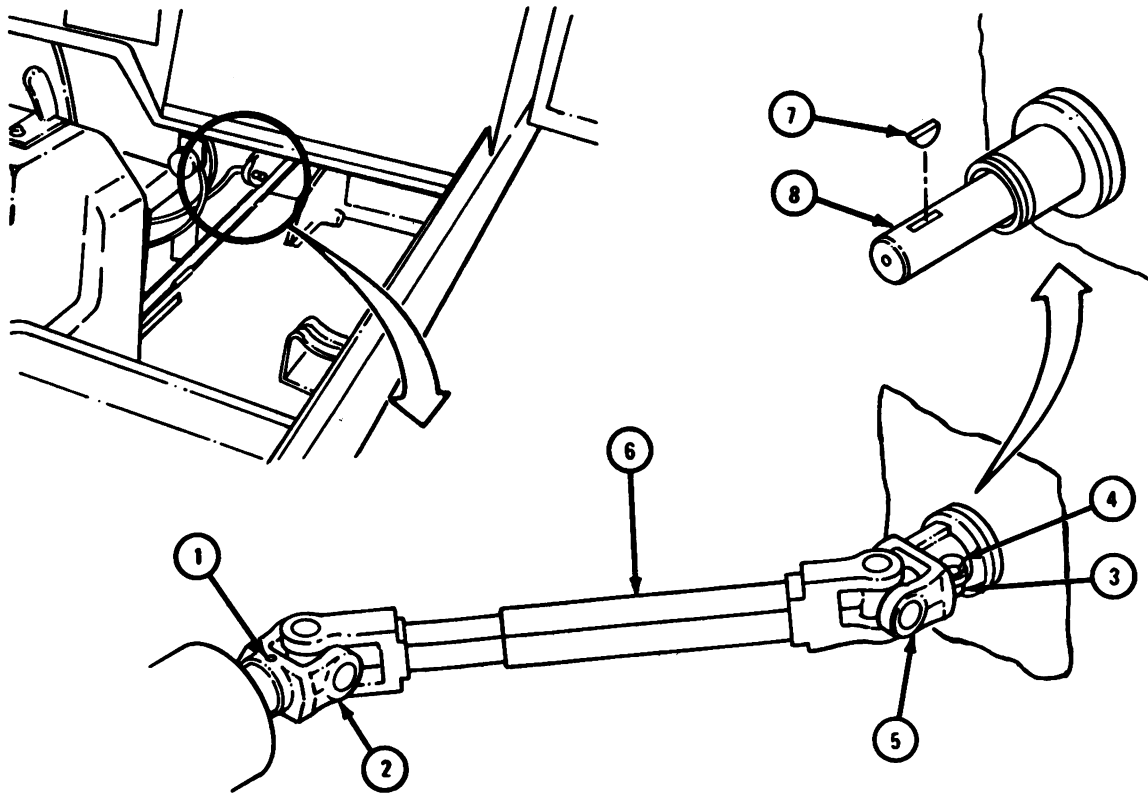


TA 089264

FRAME 2

1. Take out shear pin (1) from yoke (2).
2. Take off nut (3) from screw (4).
3. Pull yokes (2 and 5) off shafts. Take out power take off shaft assembly (6).
4. Take out key (7) from shaft (8).

END OF TASK



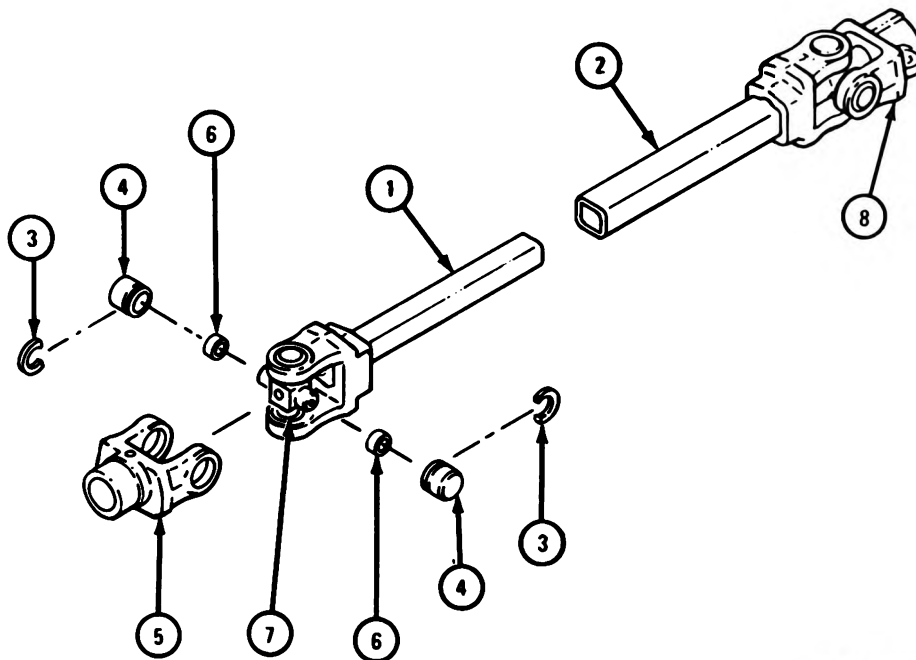
TA 104229

(3) Disassembly.

FRAME 1

1. Take shaft (1) from shaft (2).
2. Take off two retaining rings (3).
3. Pull out two bearings (4) from yoke (5).
4. Take off yoke (5) and two washers (6) from spider (7).
5. Do steps 2, 3, and 4 again for yoke (8).

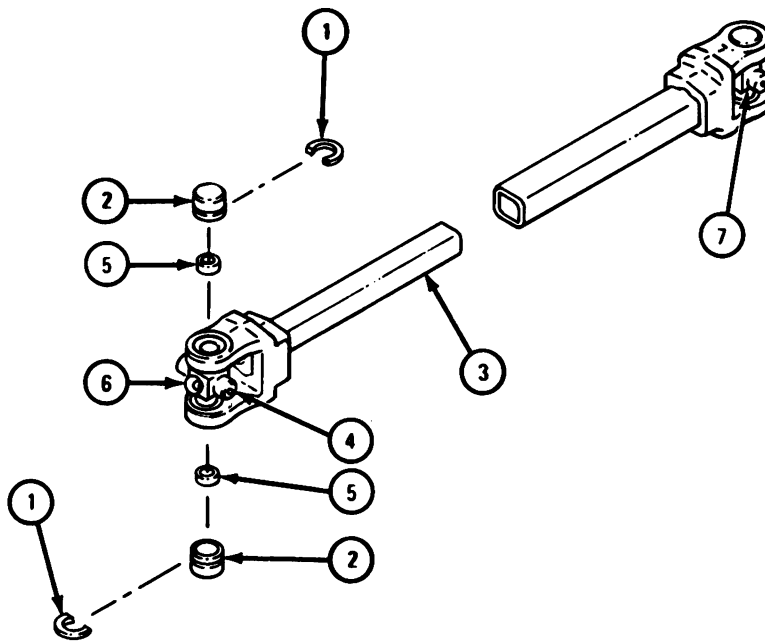
GO TO FRAME 2



TA 089265

FRAME 2

1. Take off two retaining rings (1).
2. Pull out two bearings (2) from shaft (3).
3. Take off spider (4) from shaft (3). Take off two washers (5) from spider.
4. Take off grease fitting (6) from spider (4).
5. Do steps 1 through 4 again for spider (7).

END OF TASK

TA 089266

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

(5) Inspection and repair.

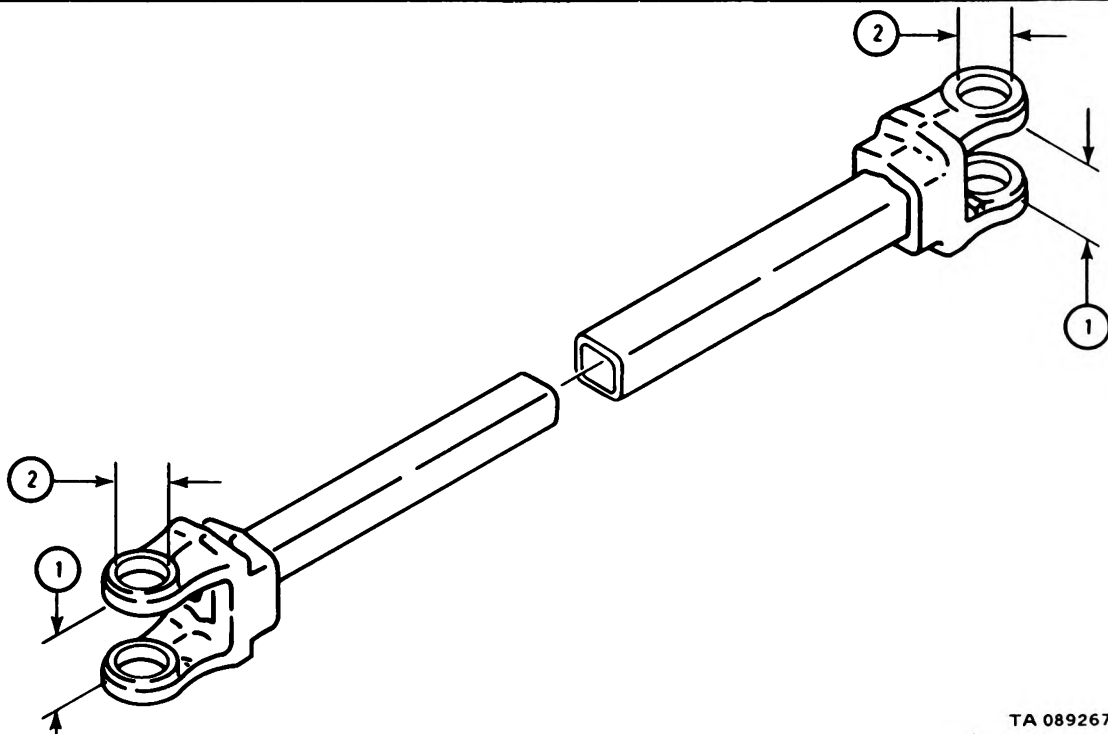
FRAME 1

NOTE

Readings must be within limits given in table 17-1. If readings are not within given limits, throw away part and get a new one.

1. Measure yoke fork opening (1).
2. Measure yoke bearing bore (2).

GO TO FRAME 2



TA 089267

Table 17-1. Power Takeoff Shaft Yoke Assembly Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
1	Yoke fork opening	1.444 to 1.448	0.010
2	Yoke bearing bore	0.968 to 0.969	0.003

FRAME 2

NOTE

Readings must be within limits given in table 17-2. If readings are not within given limits, throw away part and get a new one.

1. Measure yoke fork opening (1).
2. Measure yoke bearing bore (2).
3. Measure spider bearing contact surfaces (3).

END OF TASK

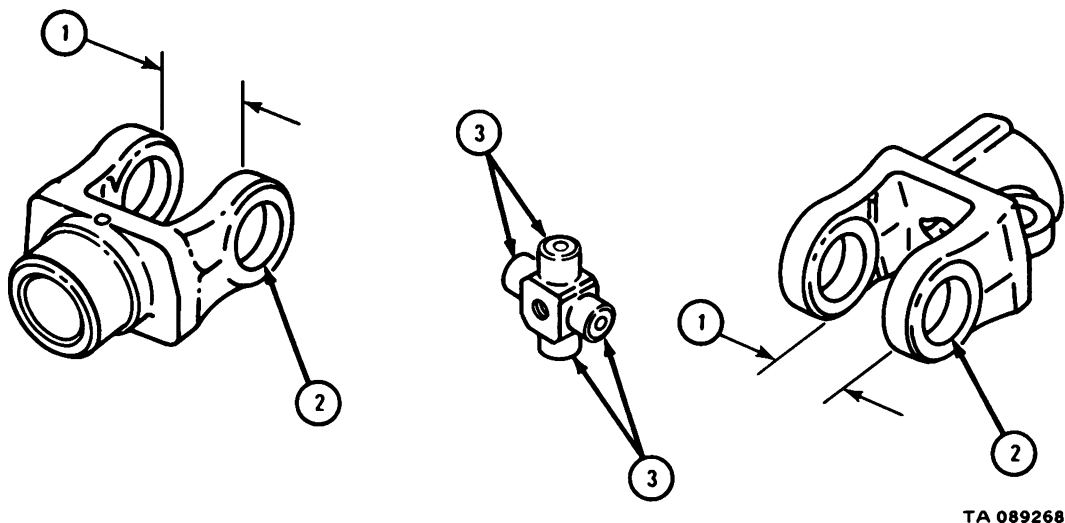


Table 17-2. Yoke and Spider Bearing Wear Limits

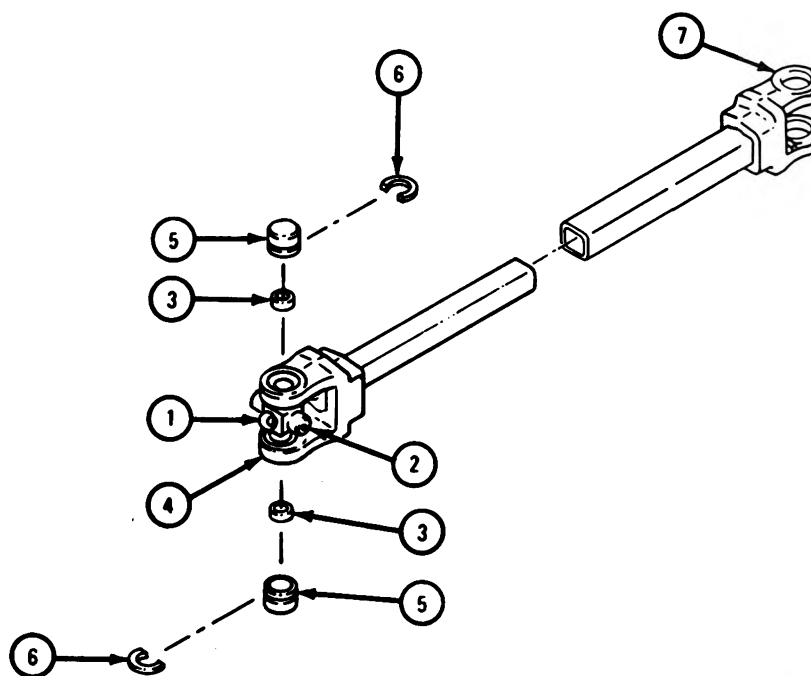
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance
1	Yoke fork opening	1.444 to 1.448	0.010
2	Yoke bearing bore	0.968 to 0.969	0.003
3	Spider bearing contact surface	0.480 to 0.481	0.002

(6) Assembly.

FRAME 1

1. Screw grease fitting (1) into spider (2).
2. Put two washers (3) on spider (2) and put spider in yoke (4).
3. Start two bearings (5) on yoke (4).
4. Press two bearings (5) on spider (2).
5. Put on two retaining rings (6).
6. Do steps 1. through 5. again for yoke (7).

GO TO FRAME 2

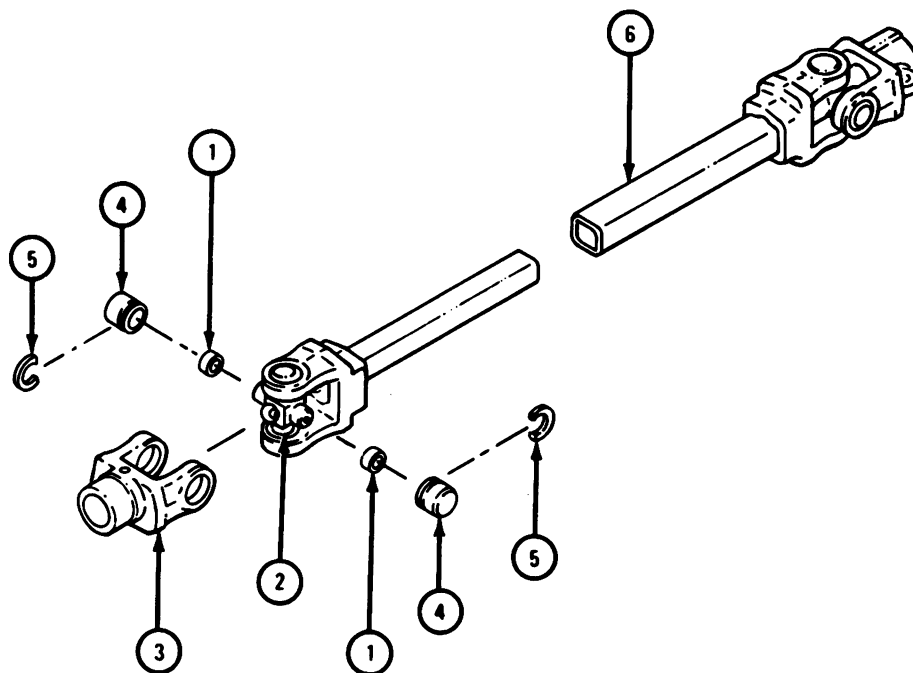


TA 089269

FRAME 2

1. Put two washers (1) on spider (2).
2. Put spider (2) in yoke (3).
3. Start two bearings (4) on yoke (3).
4. Press two bearings (4) on spider (2).
5. Put on two retaining rings (5).
6. Do steps 1 through 5 again on shaft (6). Join both shafts.

END OF TASK

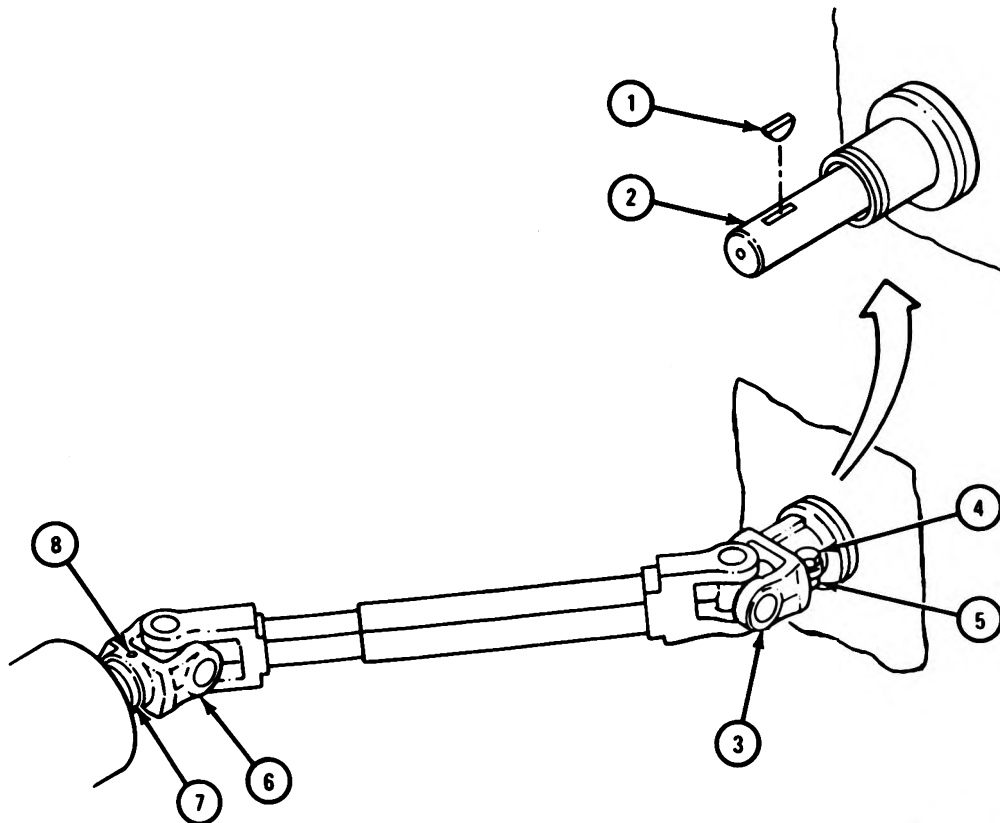


TA 089270

(7) Replacement.

FRAME 1

1. Place key (1) on winch input shaft (2) and slide yoke (3) over winch input shaft.
 2. Tighten yoke (3) with screw (4) and nut (5).
 3. Slide yoke (6) on power takeoff shaft (7).
 4. Put in shear pin (8). Wrap tape around pin to keep it from falling off.
- GO TO FRAME 2



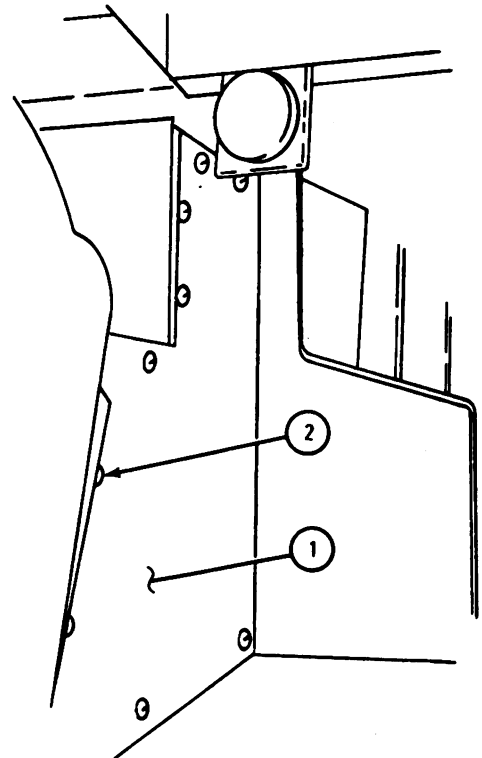
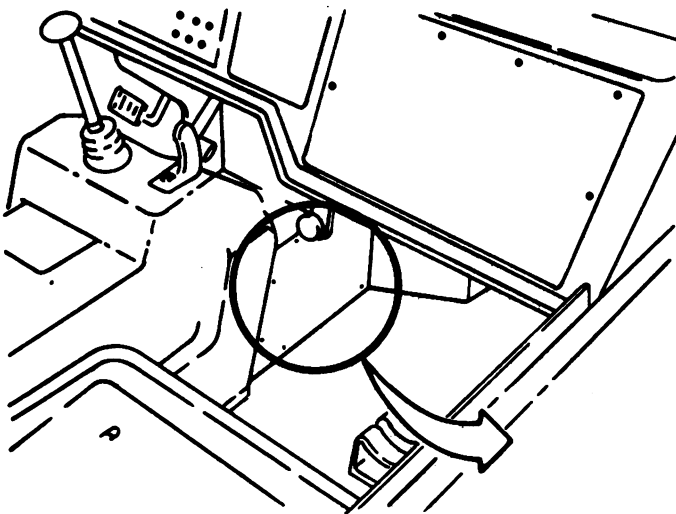
TA 089271

FRAME 2

1. Put on power takeoff shaft shield (1), right side.
2. Put in 15 screws (2).

NOTE**Follow-on Maintenance Action Required:**

1. Replace console. Refer to TM 9-2320-242-20.
2. Replace tractor seats. Refer to TM 9-2320-242-20.

END OF TASK

TA 118682

b. Power Takeoff Assembly.

(1) Preliminary procedures.

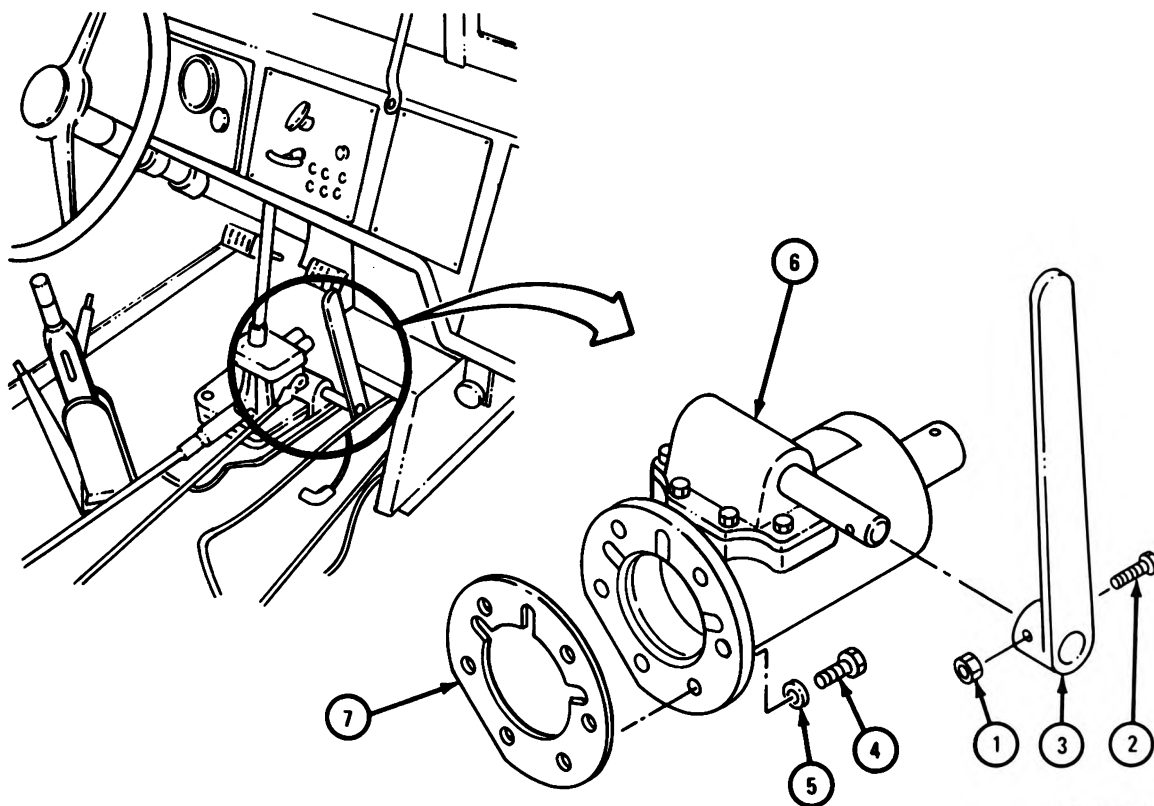
- (a) Remove tractor seats. Refer to TM 9-2320-242-20.
- (b) Remove console. Refer to TM 9-2320-242-20.
- (c) Remove power takeoff shaft assembly. Refer to para 17-31a.

(2) Removal.

FRAME 1

1. Take off nut (1) and screw (2). Take off power takeoff lever (3).
2. Take off six screws (4) and six lockwashers (5).
3. Take out power takeoff assembly (6) and gasket (7).

END OF TASK



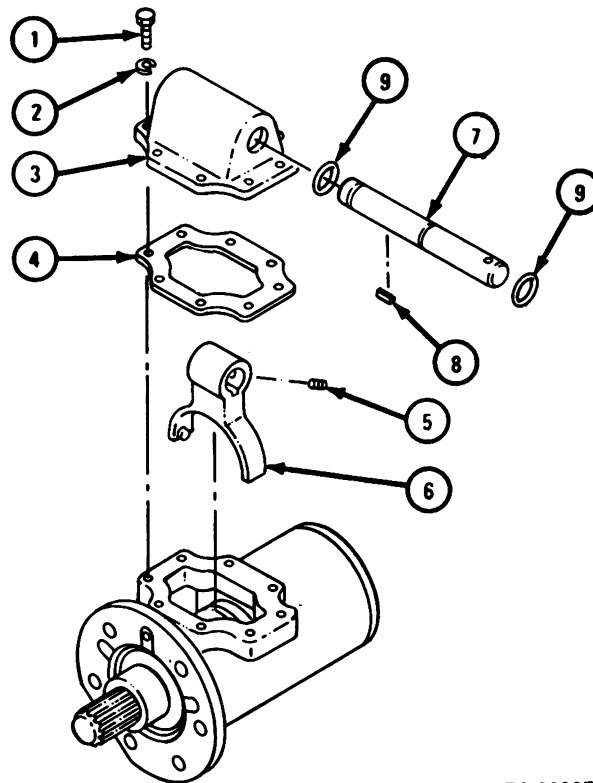
TA 089272

(3) Disassembly.

FRAME 1

1. Take out eight screws (1) and eight lockwashers (2).
2. Take off clutch lever housing (3) and gasket (4).
3. Take out setscrew (5) from clutch yoke (6). Slide clutch yoke to one side of clutch yoke shaft (7) and take out key (8).
4. Pull out clutch yoke shaft (7) from clutch lever housing (3). Take off two packings (9).
5. Take clutch yoke (6) out of clutch lever housing (3).

GO TO FRAME 2

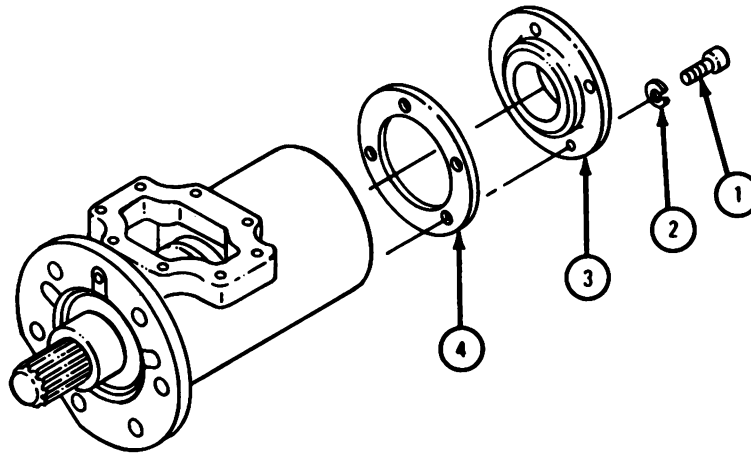


TA 089273

FRAME 2

1. Take off four screws (1) and four lockwashers (2).
2. Take off retainer cap (3) and gasket (4).

GO TO FRAME 3

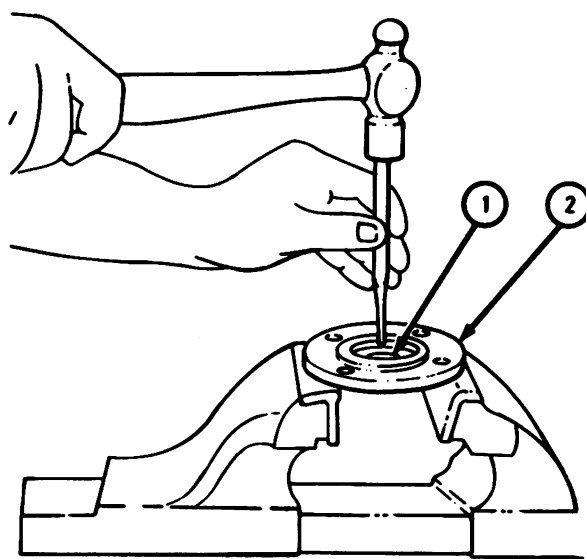


TA 089274

FRAME 3

1. Tap out seal (1) from retainer cap (2).

GO TO FRAME 4



TA 089275

FRAME 4

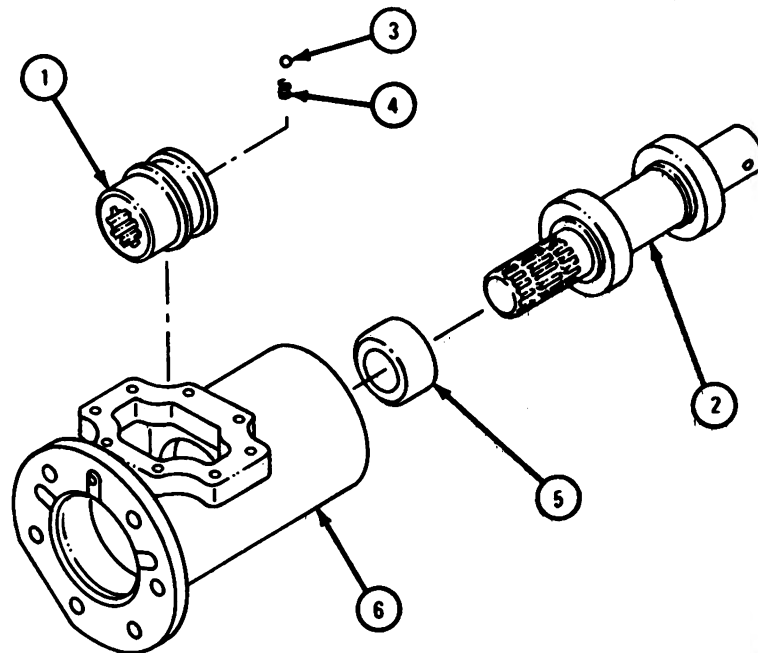
1. Pull sliding clutch (1) off output shaft (2).

CAUTION

Ball (3) and spring (4) will jump out. Use care not to lose them.

2. Pull assembled output shaft (2) and spacer (5) from power takeoff housing (6).
3. Pull spacer (5) off shaft (2).

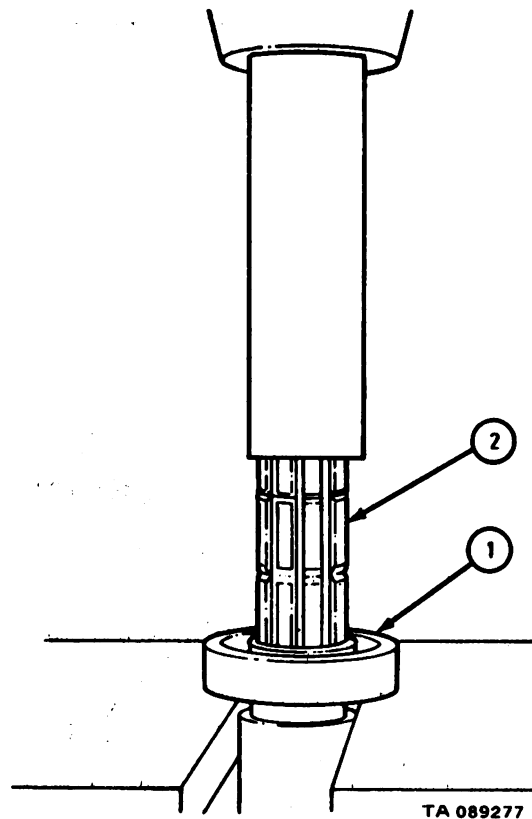
GO TO FRAME 5



TA 089276

FRAME 5

1. Press off two output shaft bearings (1) from output shaft (2).
- END OF TASK**



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

(5) Inspection and repair.

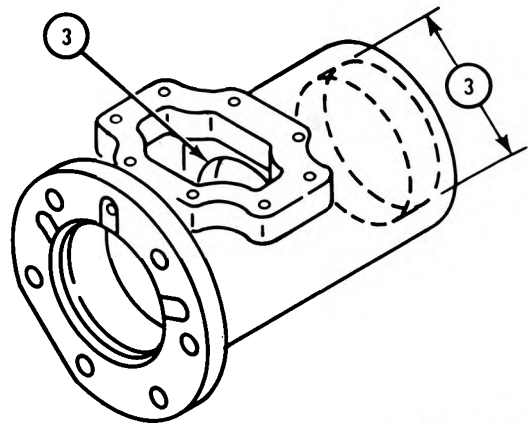
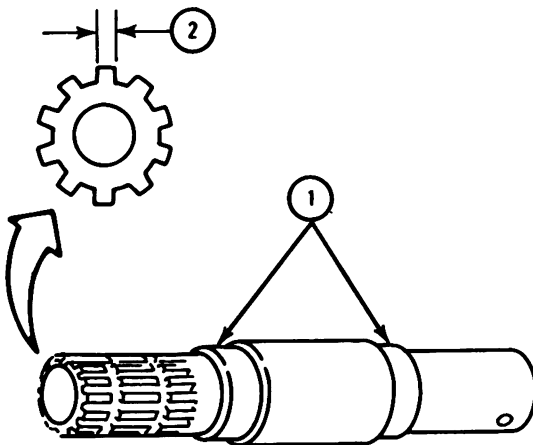
FRAME 1

NOTE

Readings must be within limits given in table 17-3. If readings are not within given limits, throw away part and get a new one.

1. Measure output shaft bearing contact surface (1).
2. Measure output shaft spline tooth thickness (2).
3. Measure housing bearing bore (3).
4. Check bearings. Refer to TM 9-214.

GO TO FRAME 2



TA 089278

Table 17-3. Output Shaft, Spline Tooth, and Housing Bearing Wear Limits

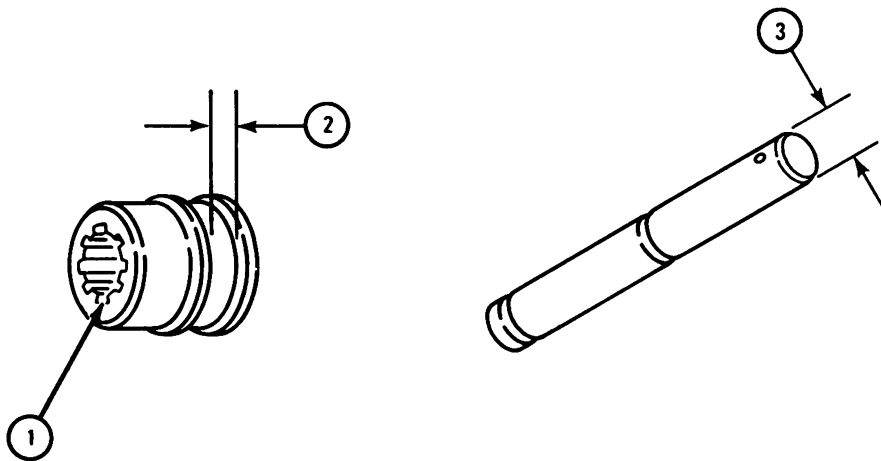
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
1	Output shaft bearing contact surface	1.1810 to 1.1814	0.0005
2	Output shaft spline tooth thickness	0.1910 to 0.1920	0.0020
3	Housing bearing bore	2.4401 to 2.4410	0.0020

FRAME 2**NOTE**

Readings must be within limits given in table 17-4. If readings are not within given limits, throw away part and get a new one.

1. Measure clutch spline groove width (1).
2. Measure fork groove (2).
3. Measure fork shaft diameter (3).

GO TO FRAME 3



TA 089279

Table 17-4. Clutch Spline, Clutch Fork, and Fork Shaft Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
1	Clutch spline groove width	0.1940 to 0.1955	0.0005
2	Clutch fork groove	0.4850 to 0.5150	0.0100
3	Fork shaft diameter	0.7480 to 0.7500	0.0020

FRAME 3

NOTE

Readings must be within limits given in table 17-5. If readings are not within given limits, throw away part and get a new one.

1. Measure clutch lever housing shaft bore (1).
2. Measure clutch yoke bore (2).
3. Measure fork opening (3).

END OF TASK

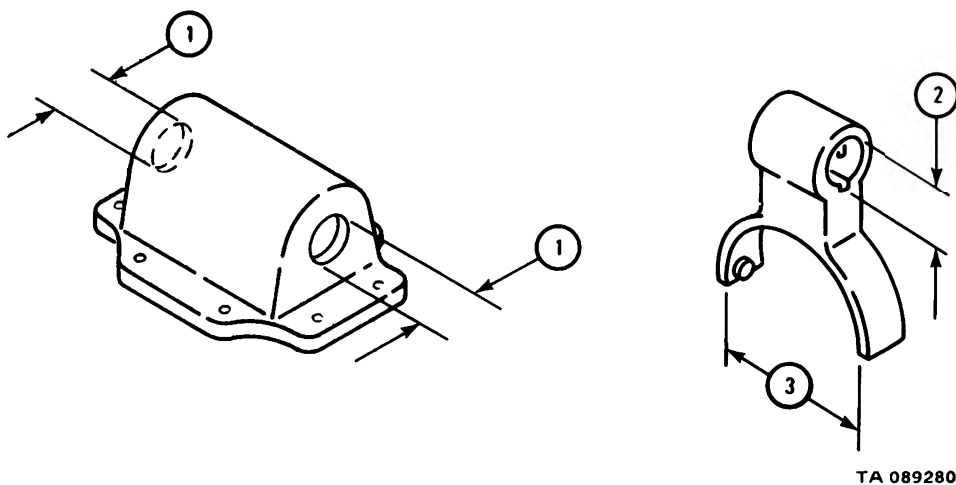


Table 17-5. Yoke and Clutch Housing Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
1	Clutch housing shaft bore	0.751 to 0.752	0.001
2	Yoke shaft bore	0.751 to 0.752	0.001
3	Fork opening	2.282 to 2.342	0.010

(6) Assembly.

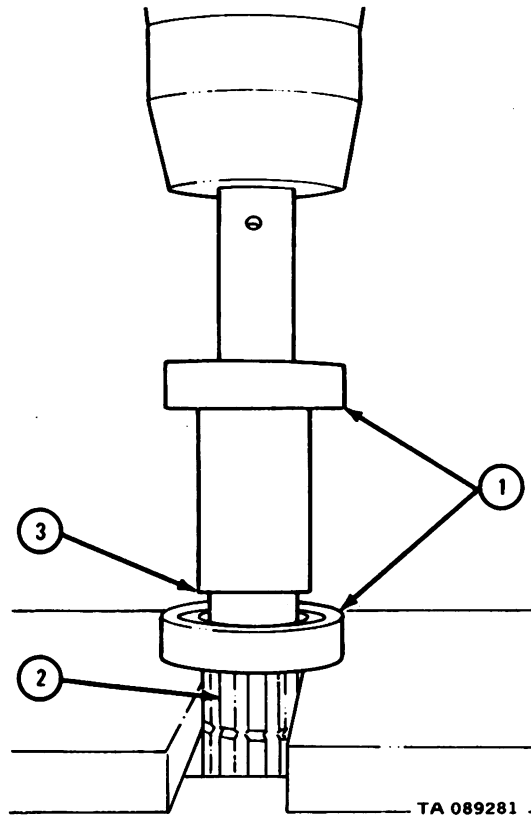
FRAME 1

1. Press two bearings (1) onto output shaft (2).

NOTE

Make sure that bearings are flush with shoulders (3) on output shaft (2).

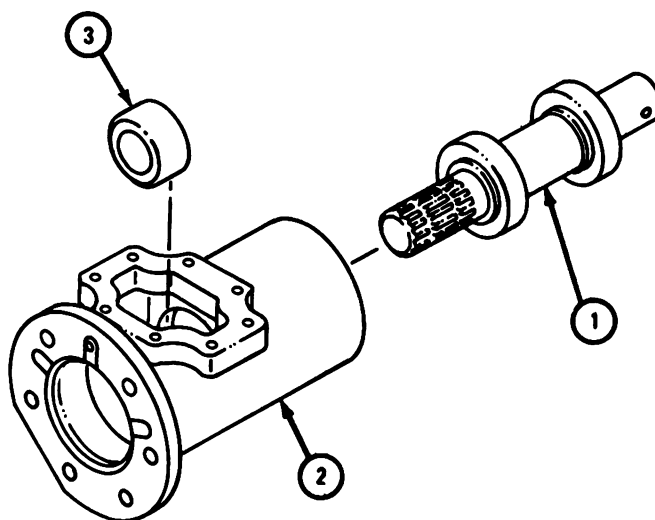
GO TO FRAME 2



FRAME 2

1. Push assembled output shaft (1) into power takeoff housing (2) just enough to slide on spacer (3).

GO TO FRAME 3

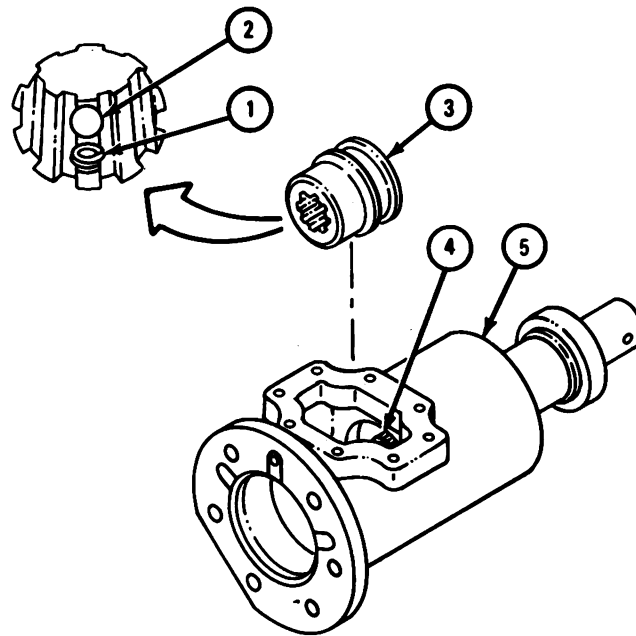


TA 089283

FRAME 3

1. Put spring (1) and ball (2) in sliding clutch (3).
2. Put sliding clutch (3) on output shaft (4).
3. Push assembled output shaft (4) the rest of the way into power takeoff housing (5).

GO TO FRAME 4

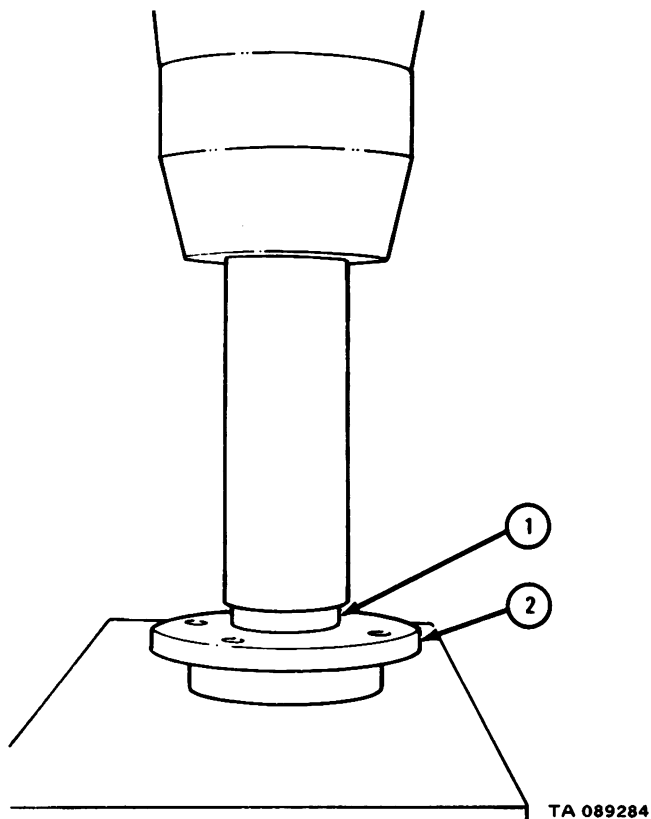


TA 104105

FRAME 4

1. Press seal (1) into retainer cap (2).

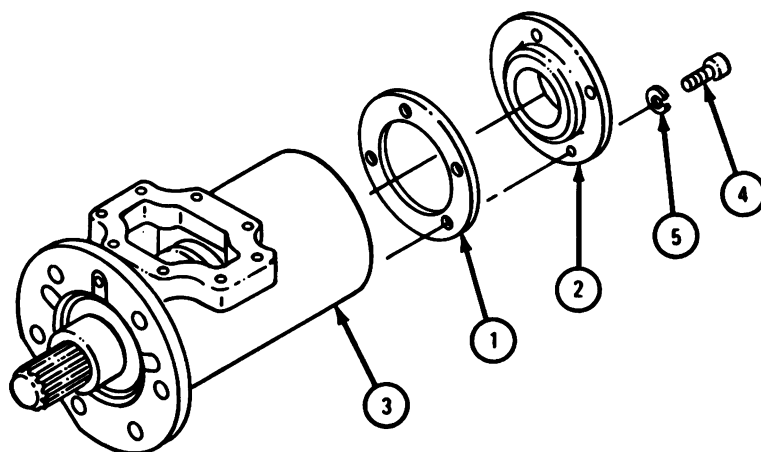
GO TO FRAME 5



FRAME 5

1. Put gasket (1) and retainer cap (2) onto power takeoff housing (3) with four screws (4) and four lockwashers (5).

GO TO FRAME 6

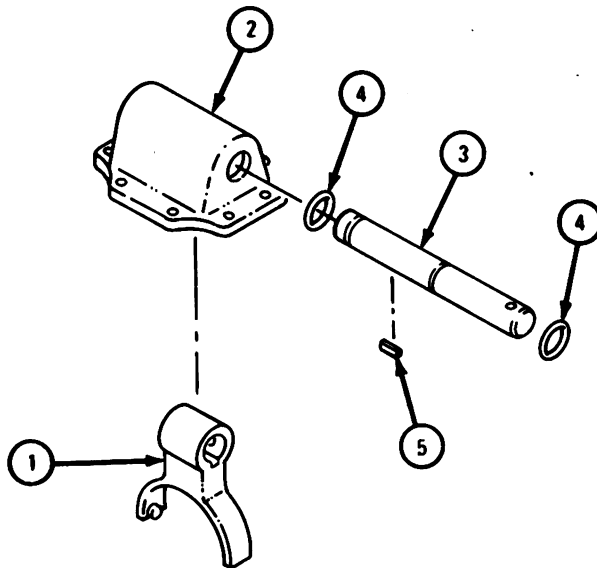


TA 089285

FRAME 6

1. Place clutch yoke (1) in clutch lever housing (2).
2. Push clutch yoke shaft (3) through hole in clutch lever housing (2) and through hole in clutch yoke (1).
3. Put two packings (4) on clutch yoke shaft (3) and push clutch yoke shaft through rear hole in clutch lever housing (2).
4. Slide clutch yoke (1) to one side and put key (5) in clutch yoke shaft (3). Slide clutch yoke back over key.

GO TO FRAME 7

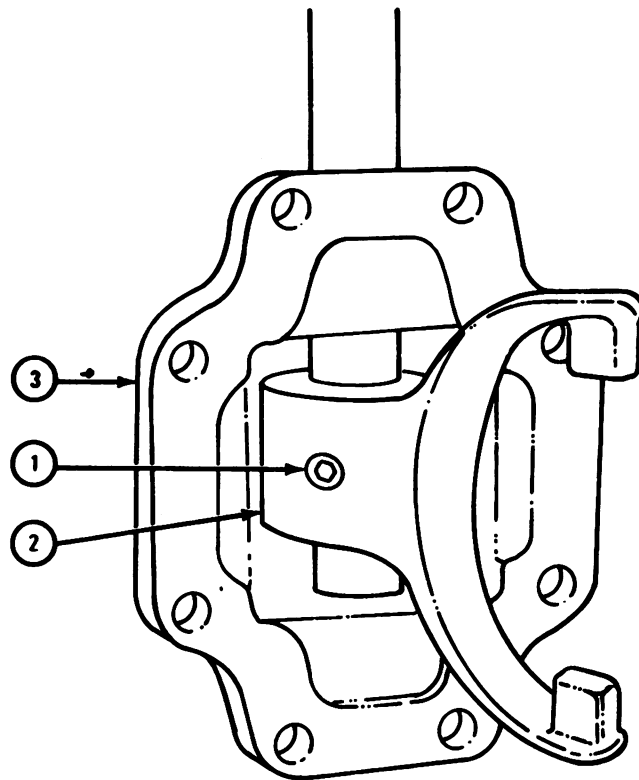


TA 089286

FRAME 7

1. Screw setscrew (1) into clutch yoke (2).
2. Put clutch yoke (2) in center of clutch lever housing (3). Tighten setscrew (1).
3. Stake setscrew (1) to clutch yoke (2).

GO TO FRAME 8

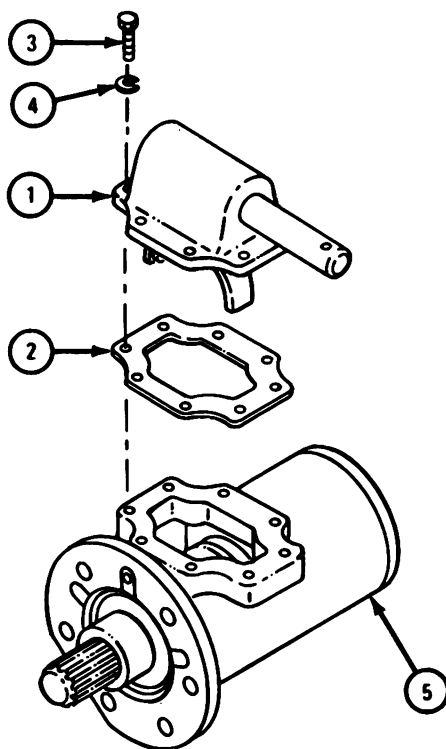


TA 089287

FRAME 8

1. Put clutch lever housing (1) and gasket (2) with eight screws (3) and eight lockwashers (4) on power takeoff assembly (5).

END OF TASK



TA 089288

(7) Replacement.

FRAME 1

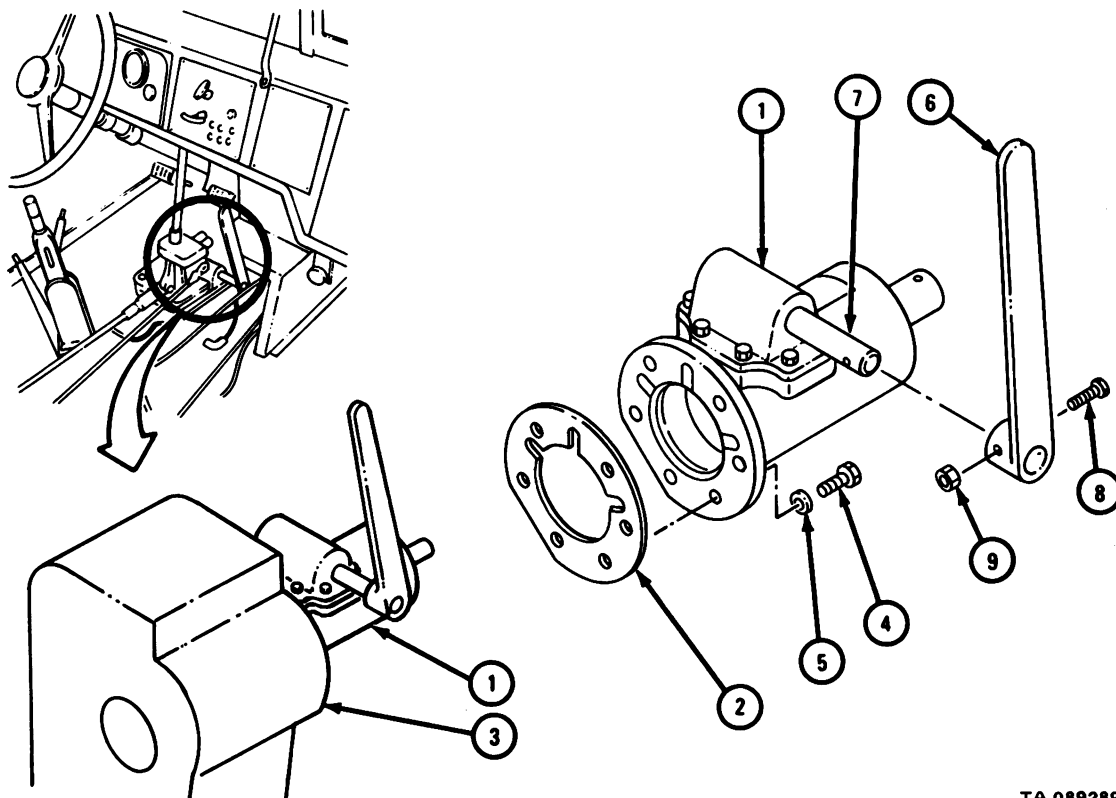
1. Replace power takeoff shaft assembly. Refer to para 17-31a (2).
2. Put power takeoff lever (6) on power takeoff shaft (7) with screw (8) and nut (9).

NOTE

Follow-on Maintenance Action Required:

1. Replace power takeoff shaft assembly. Refer to para 17-31a (2).
2. Replace console. Refer to TM 9-2320-242-20.
3. Replace tractor seats. Refer to TM 9-2320-242-20.

END OF TASK



TA 089289

c. Winch Assembly.

(1) Preliminary procedures.

(a) Remove power takeoff shaft assembly front universal joint. Refer to para 17-31a.

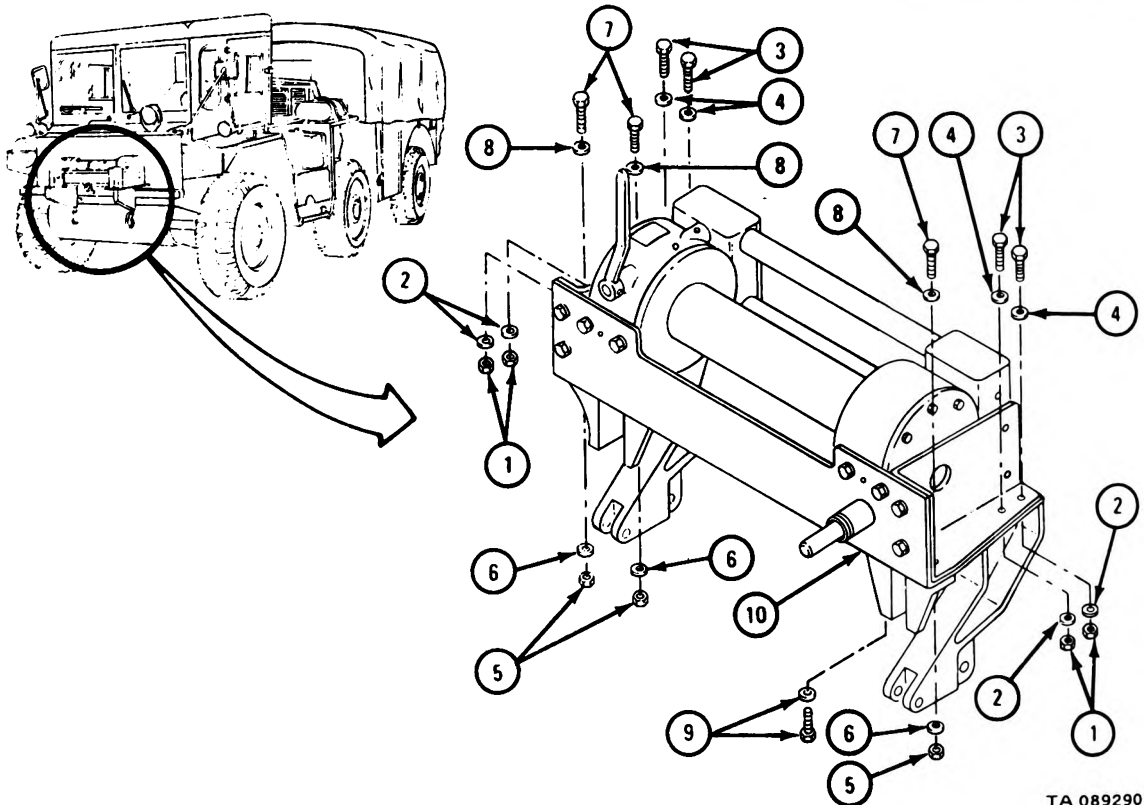
(b) Remove towing shackles. Refer to TM 9-2320-242-20.

(2) Removal.

FRAME 1

1. Take four nuts (1) and washers (2) off screws (3).
2. Take out four screws (3) and washers (4).
3. Take three nuts (5) and washers (6) off screws (7).
4. Take out three screws (7) and washers (8).
5. Take out screw and washer (9).
6. Pull off winch and support bracket assembly (10).

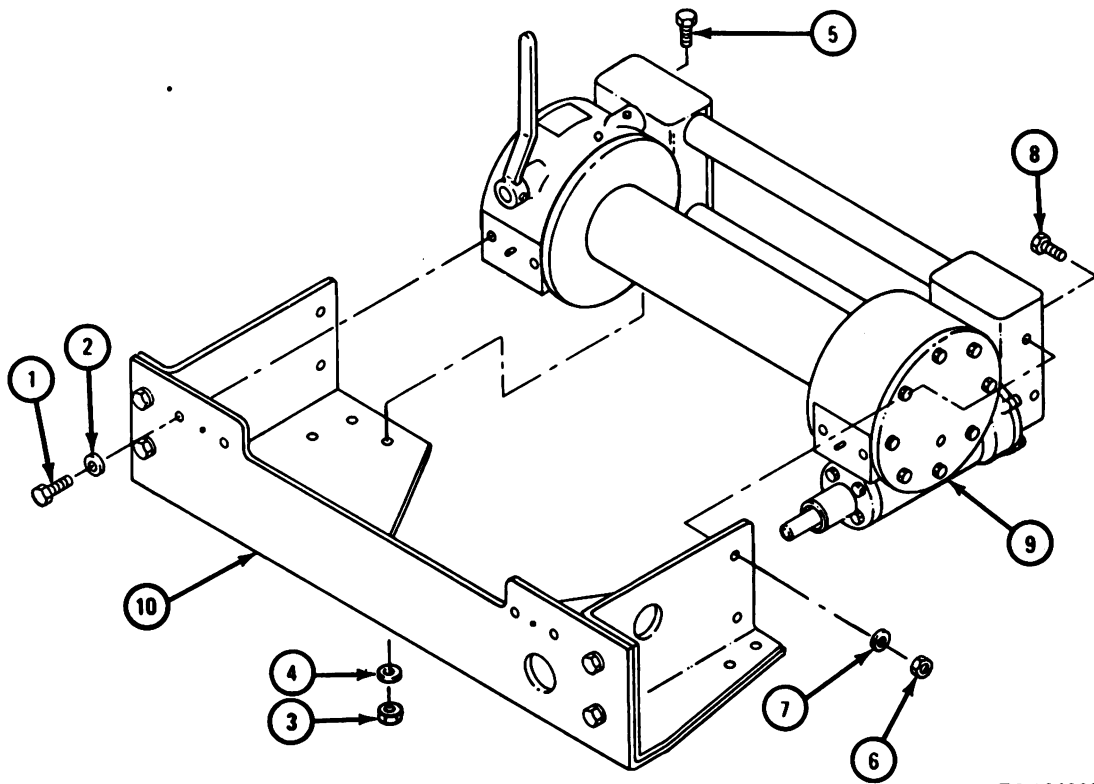
GO TO FRAME 2



TA 089290

FRAME 2

1. Take out four screws (1) and washers (2).
2. Take three nuts (3) and washers (4) off three screws (5).
3. Take four nuts (6) and washers (7) off four screws (8).
4. Take winch assembly (9) off support bracket (10).

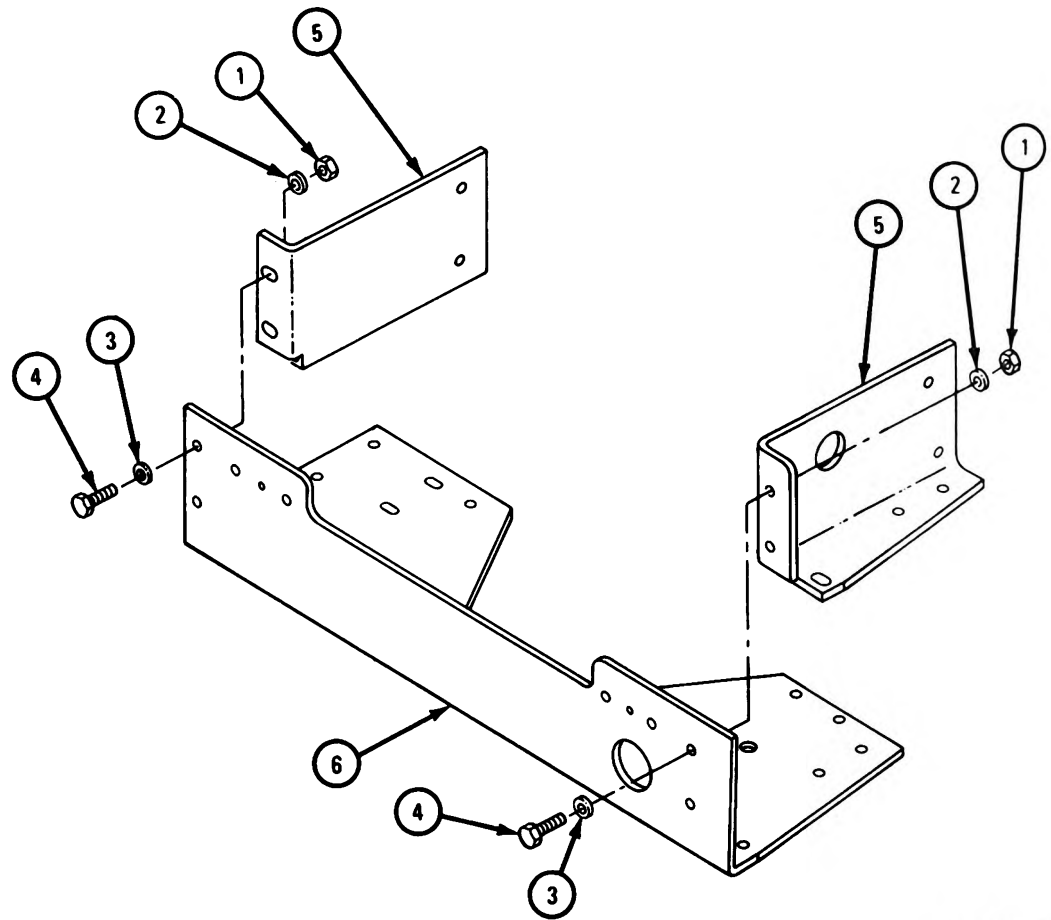
GO TO FRAME 3

TA 104000

FRAME 3

1. Take off four nuts (1), lockwashers (2), washers (3), and screws (4).
2. Take off two side plates (5) from support assembly (6).

END OF TASK



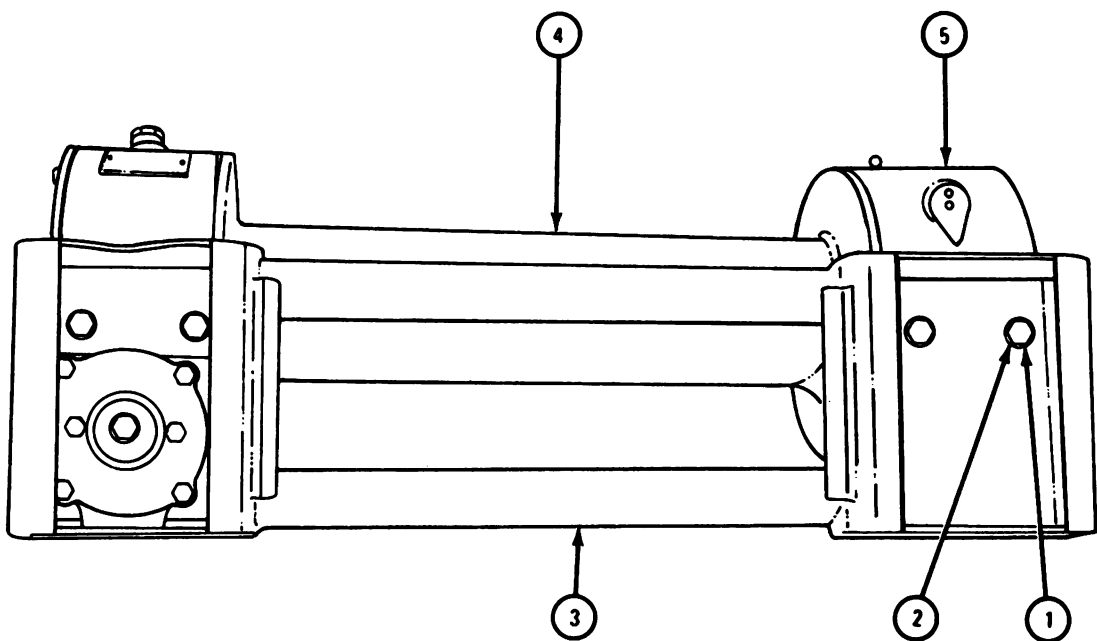
TA 104003

(3) Disassembly.

FRAME 1

1. Take out four screws (1) and four washers (2).
2. Take off bracket (3) from winch assembly (4).
3. Pull off clutch housing (5) from winch assembly (4).

GO TO FRAME 2



TA 089291

FRAME 2

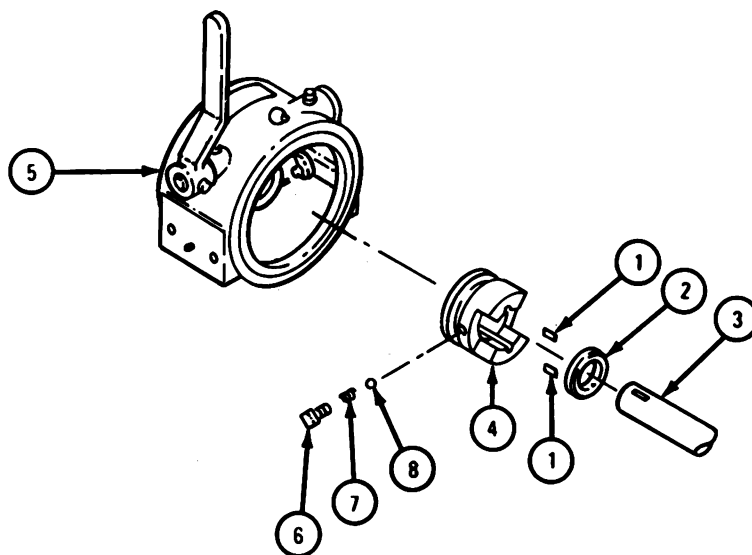
1. Take off two keys (1) and spacer (2) from drum shaft (3).
2. Take clutch jaw (4) out from clutch housing (5).

CAUTION

Spring (7) and ball (8) may pop out. Be careful not to lose them.

3. Take out setscrew (6), spring (7), and ball (8) from clutch jaw (4).

GO TO FRAME 3

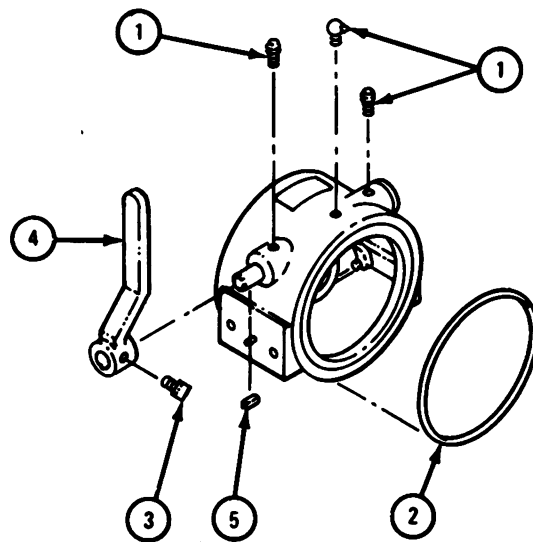


TA 089292

FRAME 3

1. Take off three grease fittings (1).
2. Take off packing (2).
3. Take off setscrew (3) and take off lever (4).
4. Take off key (5).

GO TO FRAME 4

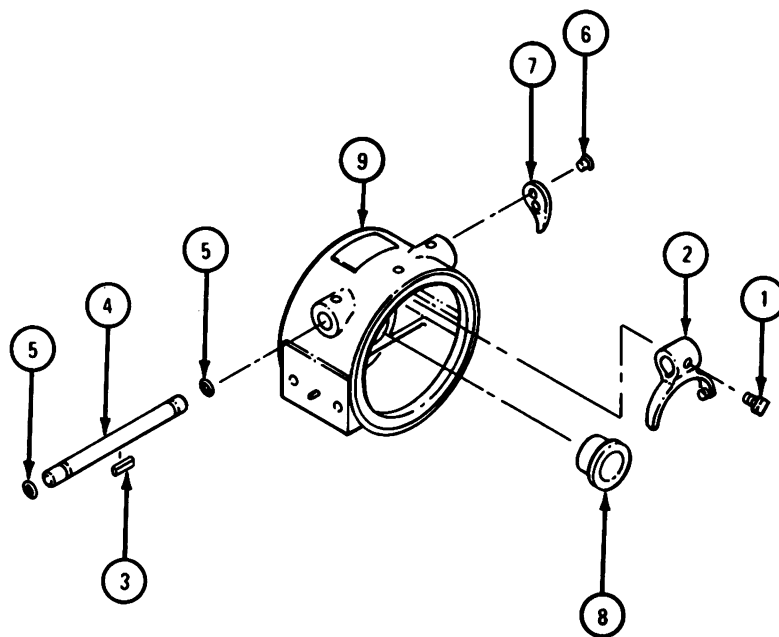


TA 089293

FRAME 4

1. Take out setscrew (1). Slide shifter fork (2) to one side and take out key (3).
2. Take out shifter shaft (4) and shifter fork (2).
3. Take out two packings (5) from shifter shaft (4).
4. Take out rivets (6) and take off pointer (7).
5. Pull out bushing (8) from clutch housing (9).

GO TO FRAME 5

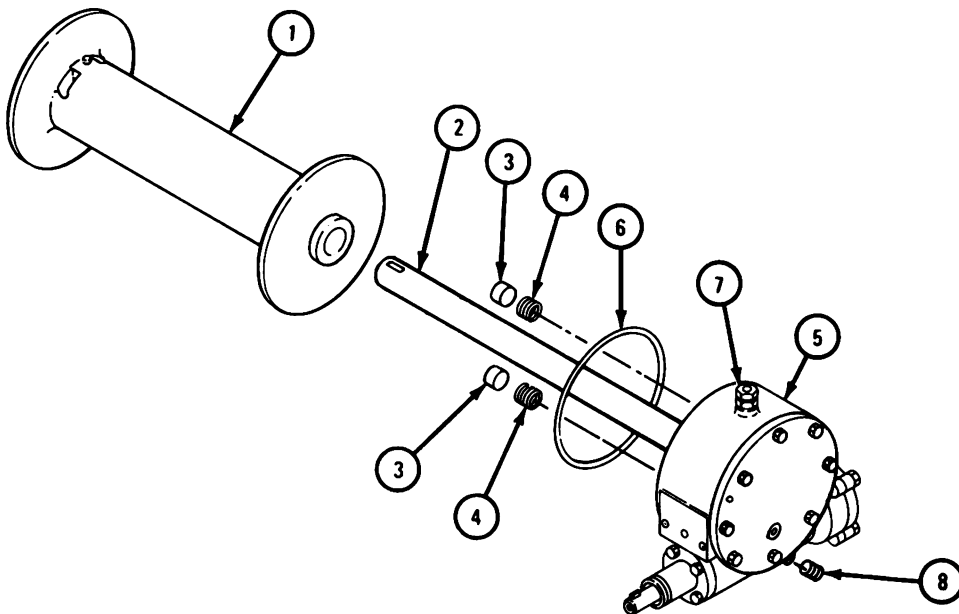


TA 089294

FRAME 5

1. Take off drum (1) from drum shaft (2).
2. Take off two disk brakes (3) and two springs (4) from gear housing (5).
3. Take out packing (6), grease fitting (7), and drain plug (8) from gear housing (5).

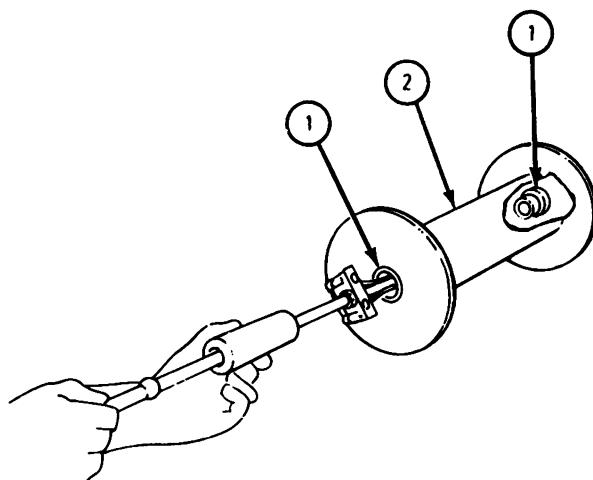
GO TO FRAME 6



TA 089295

FRAME 6

1. Pull out two bushings (1) from drum (2).
- GO TO FRAME 7

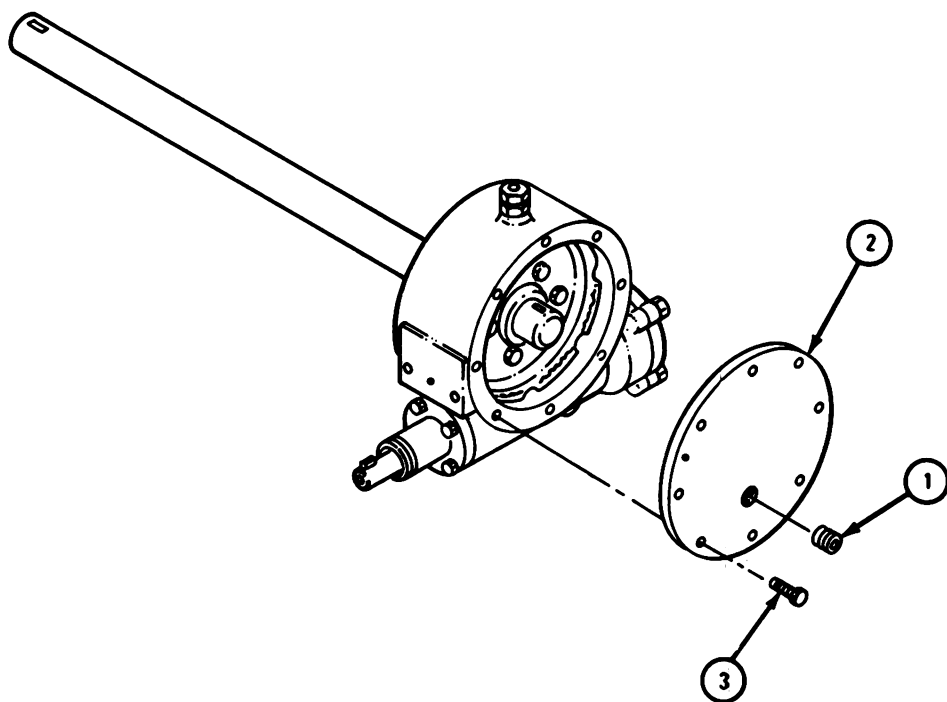


TA 089296

FRAME 7

1. Take out drain plug (1) from gear housing cover (2).
2. Take out eight screws (3).

GO TO FRAME 8

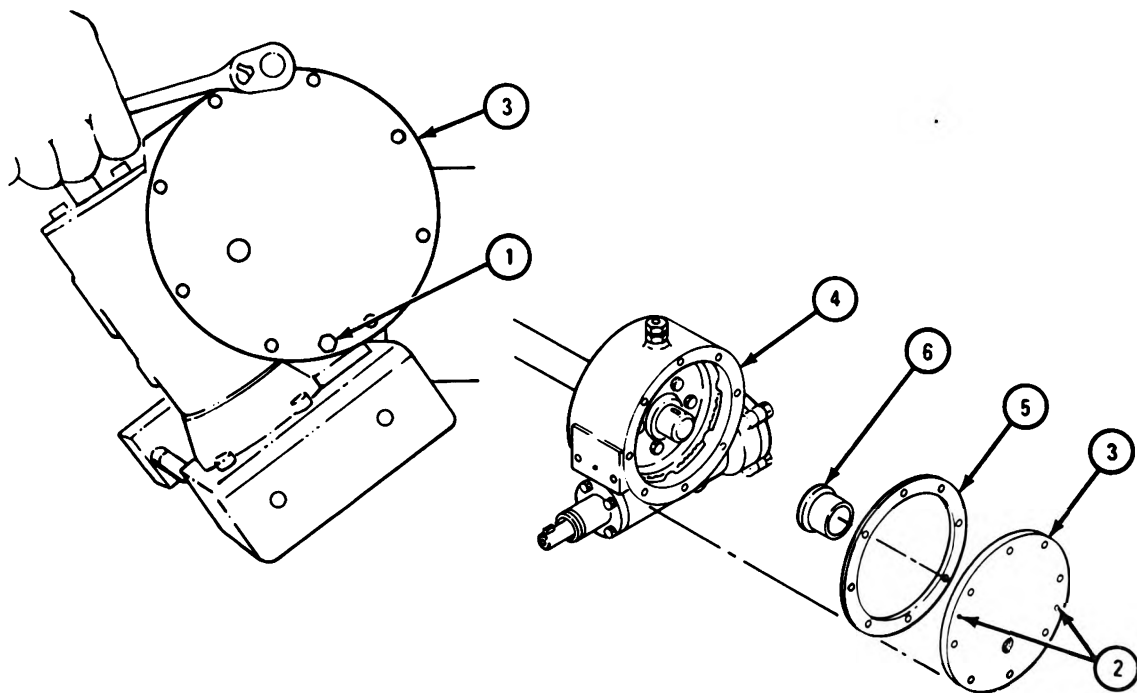


TA 089297

FRAME 8

1. Put two gear housing cover screws (1) in jacking holes (2).
2. Jack screw cover (3) from housing (4) to keep from damaging cover.
3. Take off cover (3) and gasket (5).
4. Pull out bushing (6) from cover (3).

GO TO FRAME 9

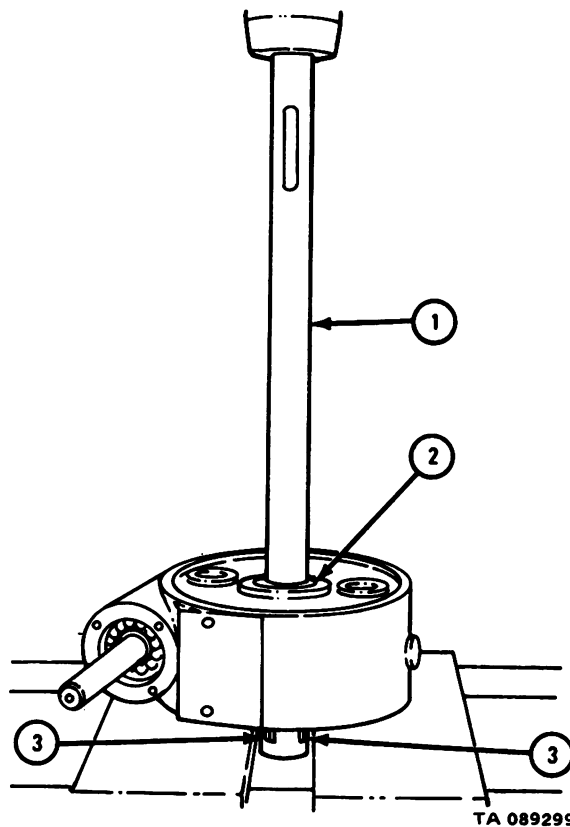


TA 089298

FRAME 9

1. Press shaft and key assembly (1) out of gear housing (2) just enough to show keys (3).
2. Take out keys (3) from key slots in shaft (1).

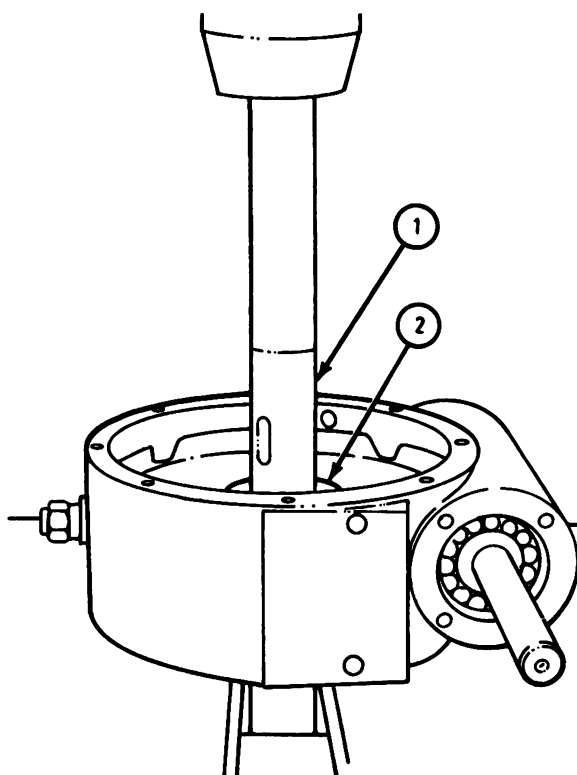
GO TO FRAME 10



FRAME 10

1. Press shaft (1) out of hub (2).

GO TO FRAME 11

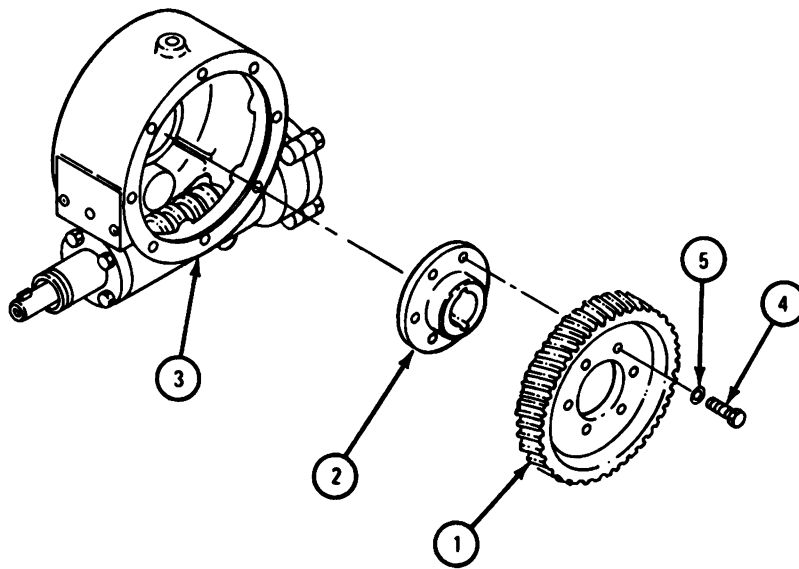


TA 089300

FRAME 11

1. Take worm wheel gear (1) and hub (2) out of gear housing (3).
2. Take out six screws (4) and washers (5).
3. Take hub (2) off worm wheel gear (1).

GO TO FRAME 12

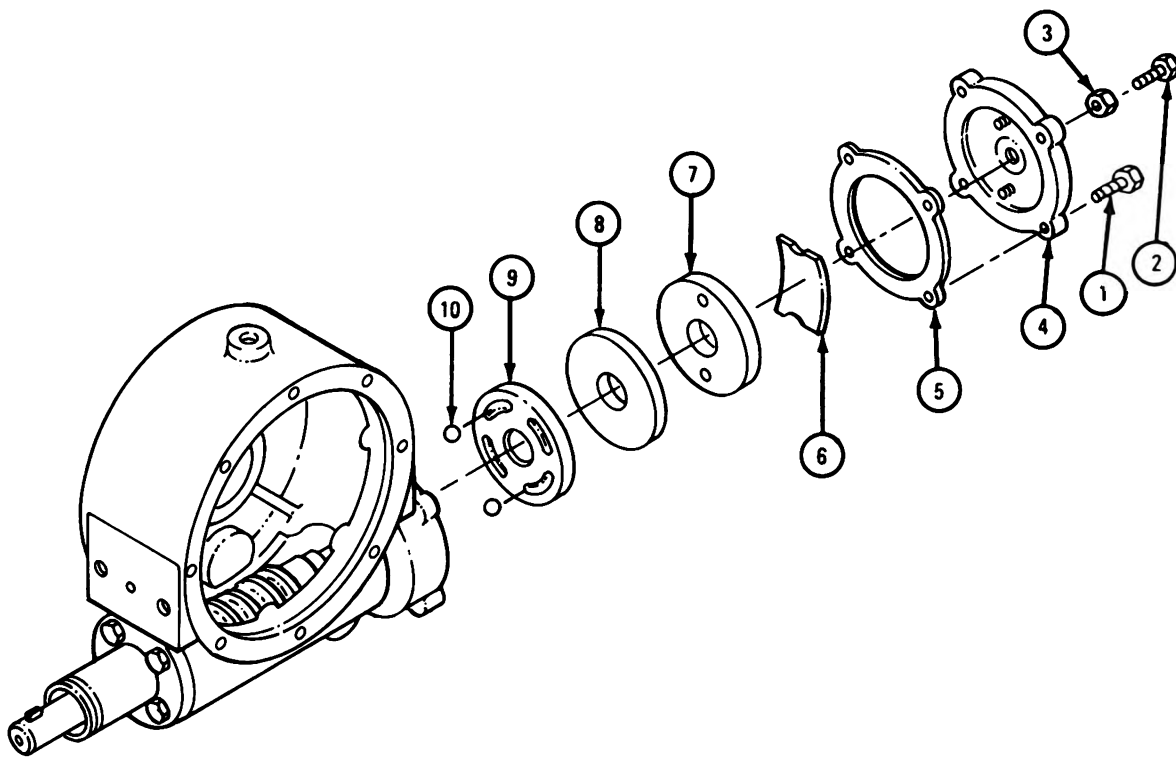


TA 104001

FRAME 12

1. Take off four screws (1).
2. Take off adjusting screw (2) and locknut (3).
3. Take off safety brake cover (4) and gasket (5).
4. Take off spring (6), retainer plate (7), and disk (8).
5. Take off cam (9) and two balls (10).

GO TO FRAME 13

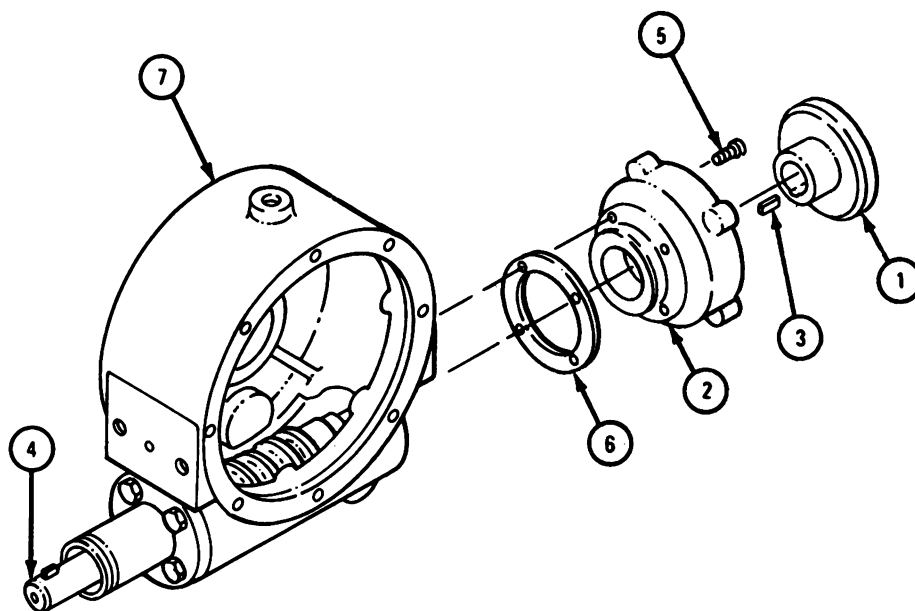


TA 089301

FRAME 13

1. Take out hub (1) from safety brake housing (2).
2. Take off key (3) from worm input shaft (4).
3. Take off four screws (5) and take off safety brake housing (2) and gasket (6) from gear housing (7).

GO TO FRAME 14



TA 089302

FRAME 14

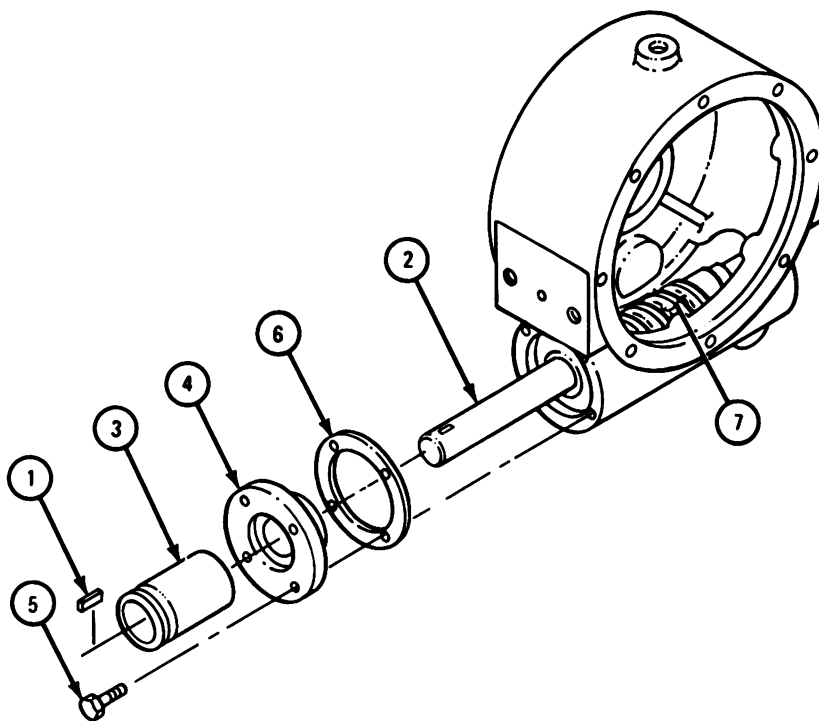
1. Take off key (1) from worm input shaft (2).

NOTE

On some units, sleeve (3) and bearing retainer (4) are one piece. On these units, do not do step 2 and go to step 3.

2. Take off sleeve (3) from bearing retainer.
3. Take out four screws (5). Take off bearing retainer (4) and gasket (6) from gear housing (7).
4. Press out worm input shaft (2) and gear assembly (7) in one piece.

GO TO FRAME 15

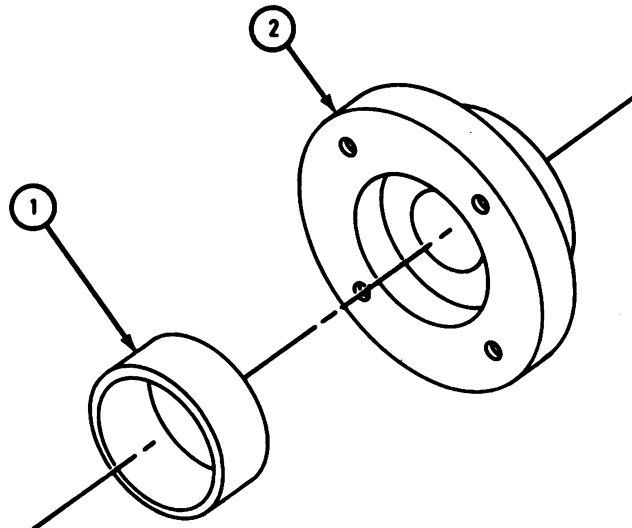


TA 089303

FRAME 15

1. Take out input shaft seal (1) as shown from bearing retainer (2). Throw away seal.

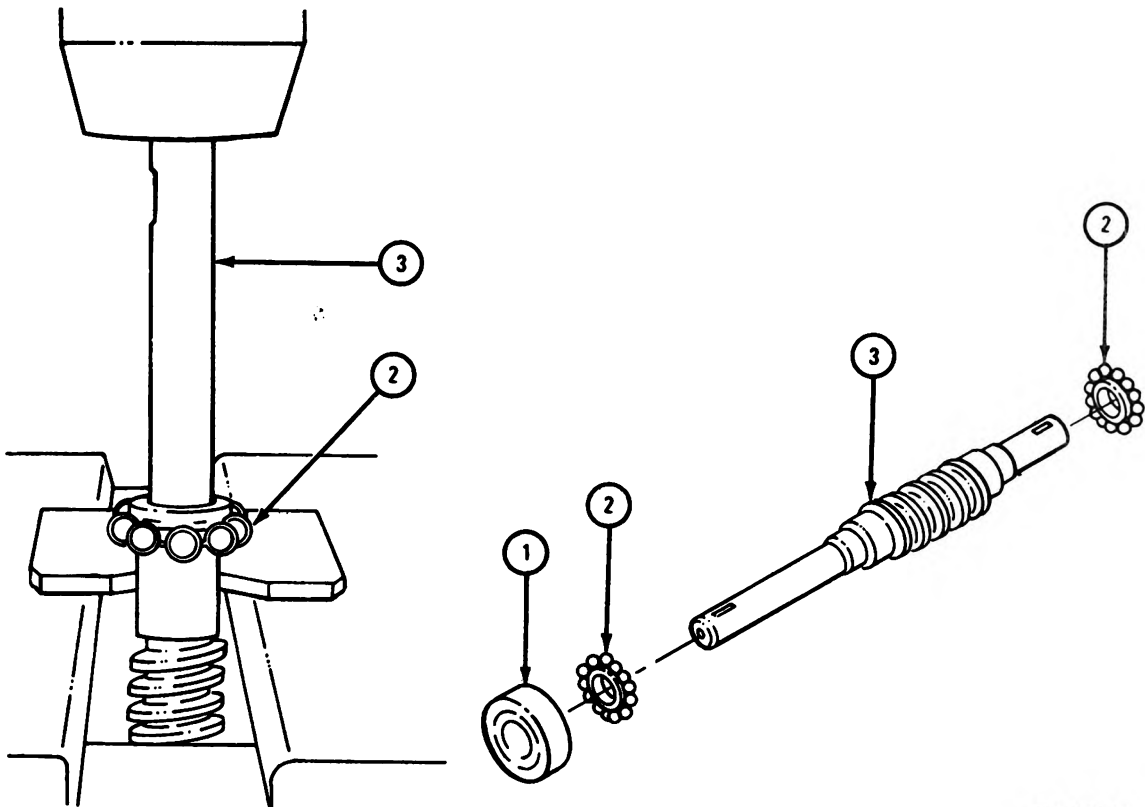
GO TO FRAME 16



TA 089304

FRAME 16

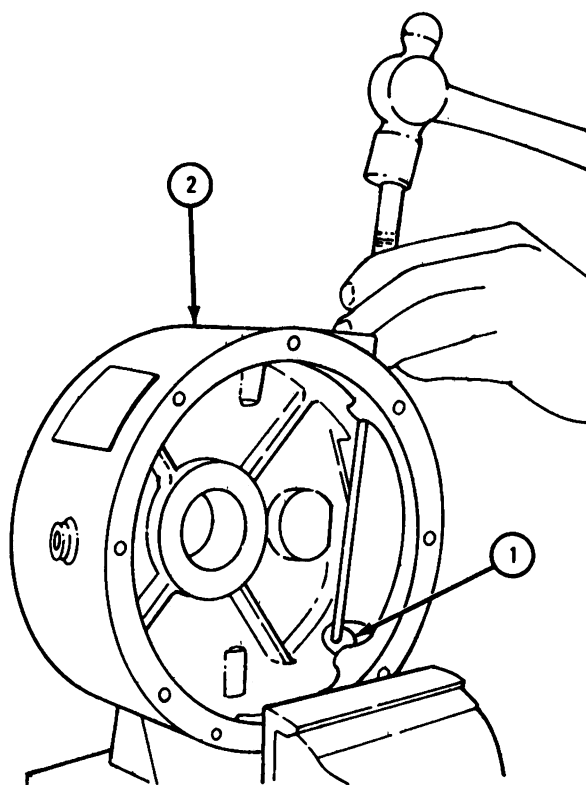
1. Take bearing cup (1) from bearing race (2).
 2. Press off two bearing races (2) from shaft (3).
- GO TO FRAME 17



TA 089305

FRAME 17

1. Take out bearing cup (1) from gear housing (2).
- END OF TASK



TA 089306

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

(5) Inspection and repair.

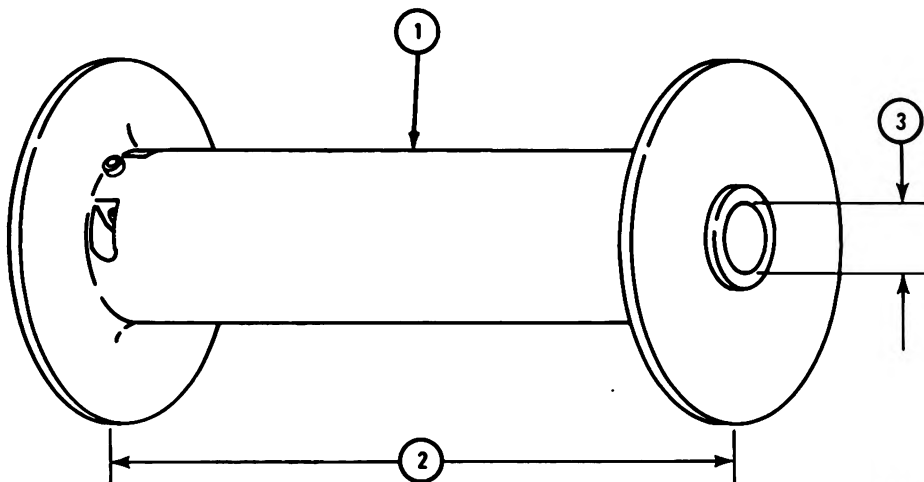
FRAME 1

NOTE

Readings must be within limits given in table 17-6. If readings are not within given limits, throw away part and get a new one.

1. Check that drum (1) has no breaks, cracks, gouges, or distortion. Gouges can be repair with mill file or honing stone.
2. Measure drum overall length (2).
3. Measure drum bushing bore (3).

GO TO FRAME 2



TA 089311

Table 17-6. Winch Drum Wear Limits

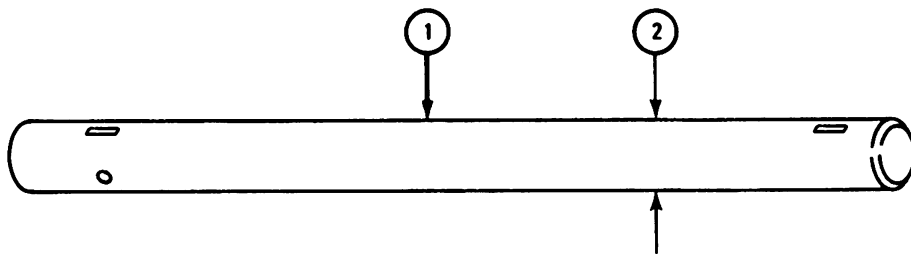
Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Drum overall length	15.437 to 15.442	0.010
3	Drum bushing bore	01.499 to 01.501	0.001

FRAME 2**NOTE**

Readings must be within limits given in table 17-7. If readings are not within given limits, throw away part and get a new one.

1. Check that drum shaft (1) is free of breaks, cracks, and gouges. Gouges can be repaired with a mill file or honing stone.
2. Measure drum shaft diameter (2).

GO TO FRAME 3



TA 089312

Table 17-7. Drum Shaft Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Drum shaft diameter	1.239 to 1.250	0.002

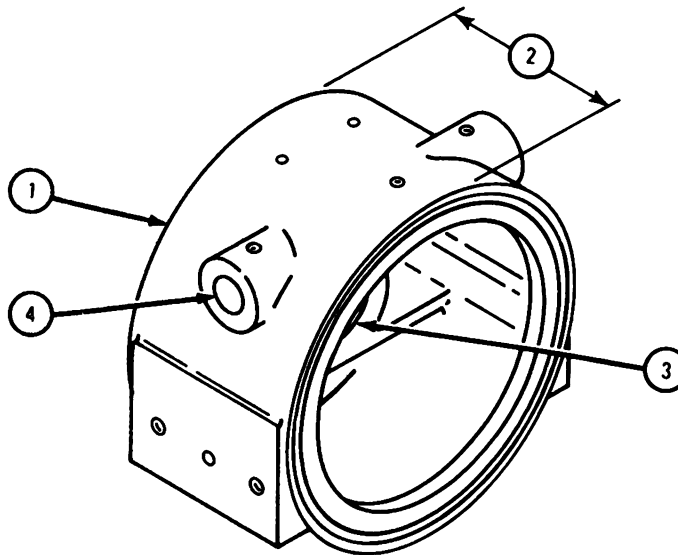
FRAME 3

NOTE

Readings must be within limits given in table 17-8. If readings are not within given limits, throw away part and get a new one.

1. Check that winch clutch housing (1) has no breaks, cracks, gouges, or damaged threads. Gouges can be repaired with mill file or honing stone.
2. Measure clutch housing length (2).
3. Measure clutch housing bushing bore (3).
4. Measure clutch housing shifter shaft bore (4).

GO TO FRAME 4



TA 089313

Table 17-8. Clutch Housing Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Clutch housing length	3.850 to 3.910	0.010
3	Clutch housing bushing bore	1.499 to 1.501	0.001
4	Clutch housing shifter shaft bore	0.752 to 0.754	0.002

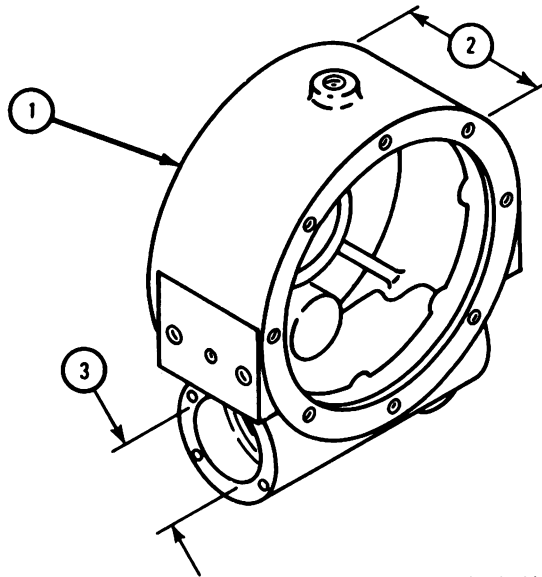
FRAME 4

NOTE

Readings must be within limits given in table 17-9. If readings are not within given limits, throw away part and get a new one.

1. Check that gear housing (1) has no breaks, cracks, gouges, or damaged threads. Gouges can be repaired with mill file or honing stone.
2. Measure gear housing length (2).
3. Measure gear housing bushing bore (3).

GO TO FRAME 5



TA 089314

Table 17-9. Gear Housing Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
2	Gear housing length	3.248 to 3.252	0.010
3	Gear housing bushing bore	1.498 to 1.500	0.001

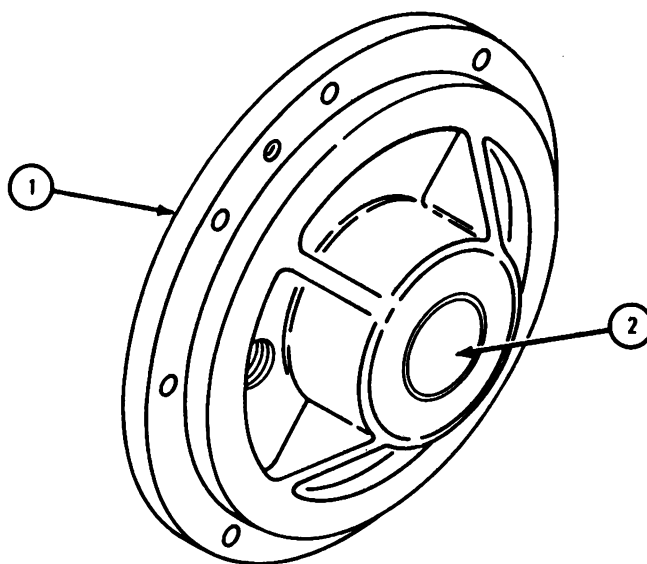
FRAME 5

NOTE

Readings must be within limits given in table 17-10. If readings are not within given limits, throw away part and get a new one.

1. Check that housing cover (1) has no breaks, cracks, gouges, faulty threads, or obstructed hole passage. Gouges can be repaired with mill file or honing stone.
2. Measure gear housing cover bushing bore (2).

GO TO FRAME 6



TA 089315

Table 17-10. Gear Housing Cover Wear Limit

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Gear housing cover bushing bore	1.498 to 1.500	0.001

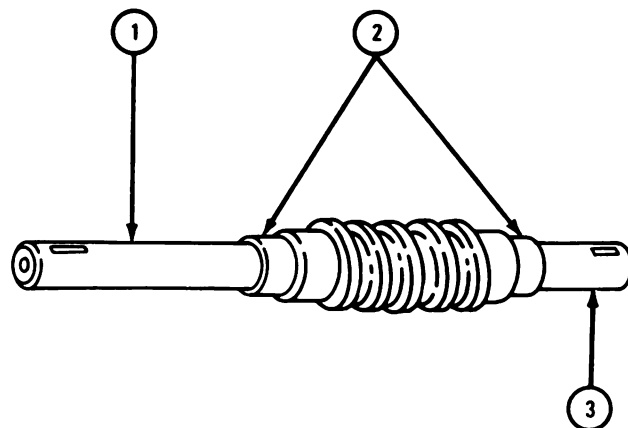
FRAME 6

NOTE

Readings must be within limits given in table 17-11. If readings are not within given limits, throw away part and get a new one.

1. Check that worm input shaft (1) has no breaks, cracks, gouges, and faulty or worn worm. Gouges can be repaired with mill file or honing stone.
2. Measure shaft bearing contact surface diameters (2).
3. Measure brake contact surface diameter (3).

GO TO FRAME 7



TA 089316

Table 17-11. Bearing and Brake Contact Surface Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Bearing contact surface diameter	0.7873 to 0.7877	0.0005
3	Brake contact surface diameter	0.7480 to 0.7490	0.0010

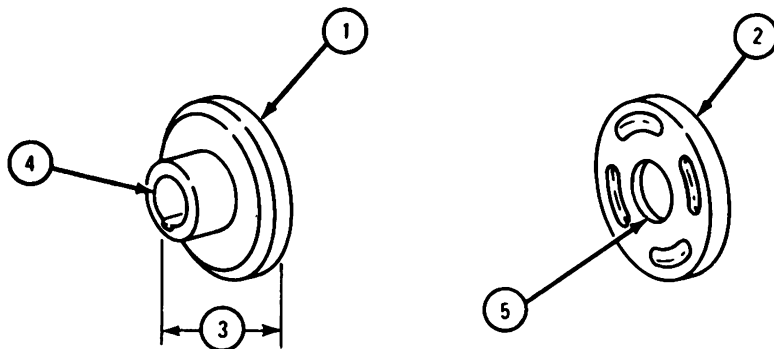
FRAME 7

NOTE

Readings must be within limits given in table 17-12. If readings are not within given limits, throw away part and get a new one.

1. Check that brake hub (1) and brake hub plate (2) have no breaks, cracks, or gouges. Gouges can be repaired with mill file or honing stone.
2. Measure brake hub length (3).
3. Measure brake hub bore diameter (4).
4. Measure brake hub plate bore (5).

GO TO FRAME 8



TA 089317

Table 17-12. Brake Hub and Hub Plate Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
3	Brake hub length	1.062 to 1.093	0.010
4	Brake hub bore diameter	0.832 to 0.842	0.002
5	Brake hub plate bore	0.752 to 0.755	0.005

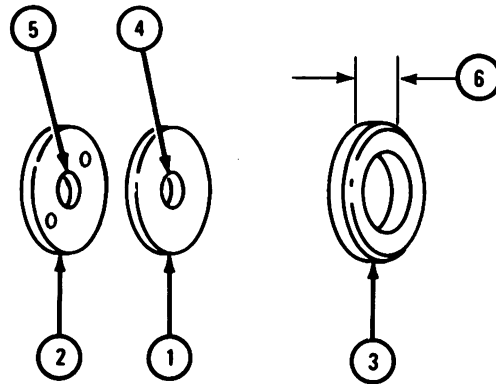
FRAME 8

NOTE

Readings must be within limits given in table 17-13. If readings are not within given limits, throw away part and get a new one.

1. Check that brake disk (1), brake plate retainer (2), and drum shaft spacer (3) have no breaks, cracks, or gouges. Gouges can be repaired with mill file or honing stone.
2. Measure brake disk bore (4).
3. Measure brake spring plate bore (5).
4. Measure drum shaft spacer thickness (6).

GO TO FRAME 9



TA 089318

Table 17-13. Brake Disk, Spring Plate, and Drum Shaft Spacer Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
4	Brake disk bore	0.766 to 0.811	0.005
5	Brake spring plate bore	0.752 to 0.755	0.005
6	Drum shaft spacer thickness	0.245 to 0.250	0.005

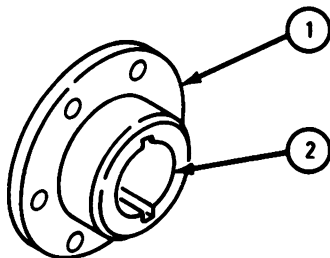
FRAME 9

NOTE

Readings must be within limits given in table 17-14. If readings are not within given limits, throw away part and get a new one.

1. Check that worm gear hub (1) has no breaks, cracks, gouges, or faulty threads. Gouges can be repaired with mill file or honing stone.
2. Measure worm gear hub bore diameter (2).

GO TO FRAME 10



TA 089319

Table 17-14. Worm Gear Hub Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Worm gear hub bore diameter	1.247 to 1.248	0.001

FRAME 10**NOTE**

Readings must be within limits given in table 17-15. If readings are not within given limits, throw away part and get a new one.

1. Check that shifter shaft (1) and clutch yoke (2) have no breaks, cracks, or gouges. Gouges can be repaired with mill file or honing stone.
2. Measure shifter shaft diameter (3).
3. Measure clutch yoke shifter shaft bore (4).
4. Measure clutch yoke fork opening (5).

GO TO FRAME 11

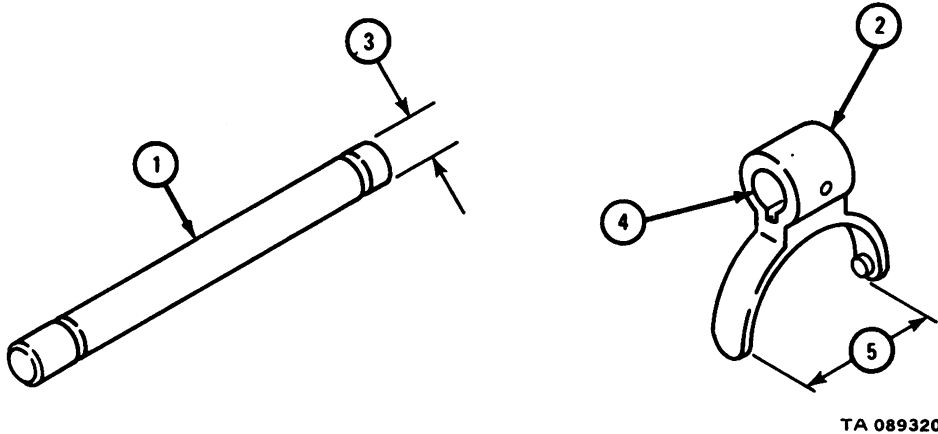


Table 17-15. Shifter Shaft and Yoke Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Wear Limit (inches)
3	Shifter shaft diameter	0.748 to 0.750	0.001
4	Clutch yoke shifter shaft bore	0.750 to 0.752	0.001
5	Clutch yoke fork opening	2.290 to 2.233	0.010

FRAME 11

NOTE

Readings must be within limits given in table 17-16. If readings are not within given limits, throw away part and get a new one.

1. Check that clutch jaw (1) has no breaks, cracks, or gouges. Gouges can be repaired with mill file or honing stone.
2. Measure clutch jaw drum shaft bore (2).
3. Measure clutch jaw fork groove width (3).
4. Measure clutch jaw drum shaft key slot width (4).

END OF TASK

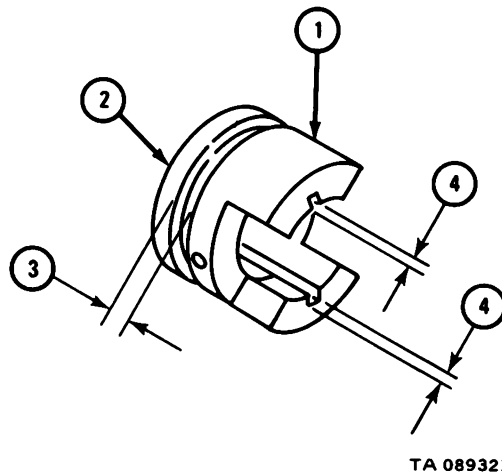


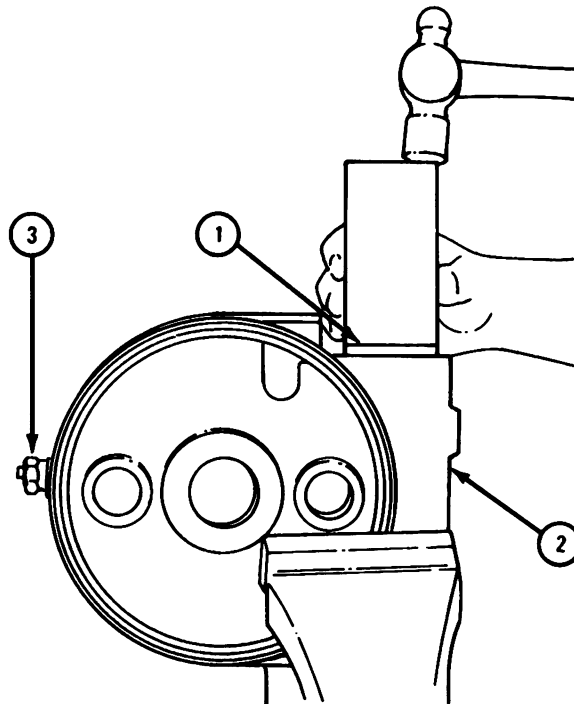
Table 17-16. Clutch Jaw Wear Limits

Index Number	Item/Point of Measurement	Size and Fit of New Parts (inches)	Maximum Allowable Wear or Clearance (inches)
2	Clutch jaw drum shaft bore	1.257 to 1.259	0.003
3	Clutch jaw fork groove	0.406 to 0.421	0.010
4	Clutch jaw drum shaft key slot	0.317 to 0.319	0.003

(6) Assembly.

FRAME 1

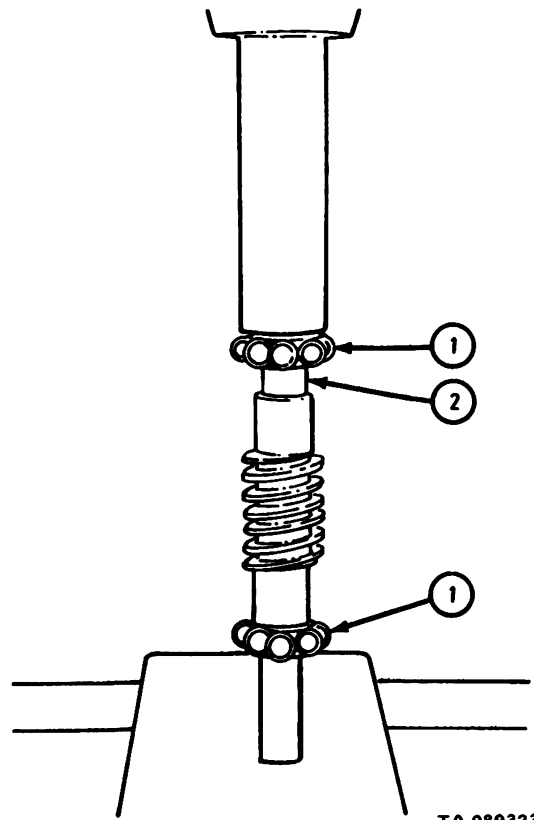
1. Drive input shaft bearing race (1) into gear housing (2).
 2. Screw grease fitting (3) into gear housing (2).
- GO TO FRAME 2



TA 089322

FRAME 2

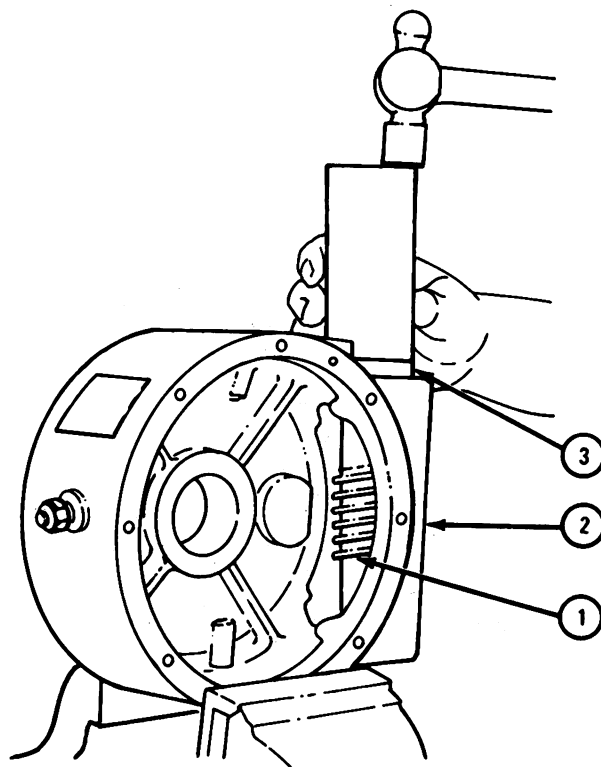
1. Press two input shaft bearings (1) on worm input shaft (2).
GO TO FRAME 3



TA 089323

FRAME 3

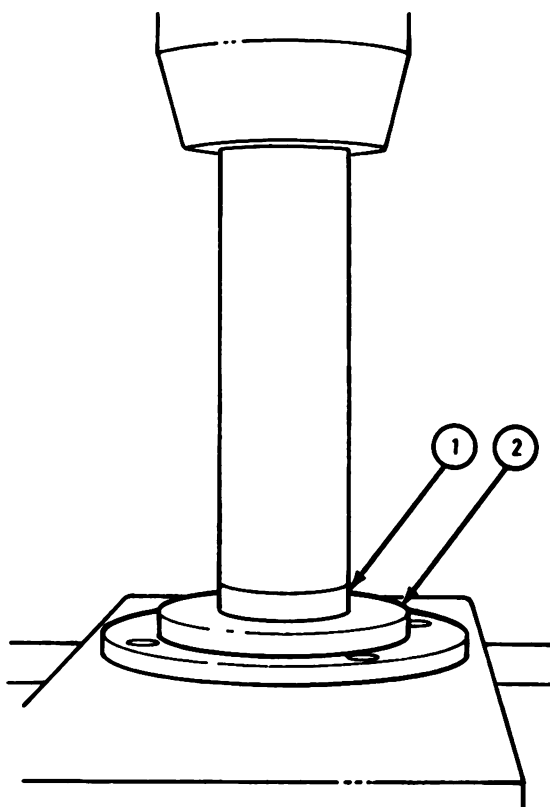
1. Place assembled worm input shaft (1) in gear housing (2).
 2. Put input shaft bearing race (3) in gear housing (2).
- GO TO FRAME 4**



TA 089324

FRAME 4

1. Press input shaft seal (1) into bearing retainer (2).
- GO TO FRAME 5



TA 089325

FRAME 5

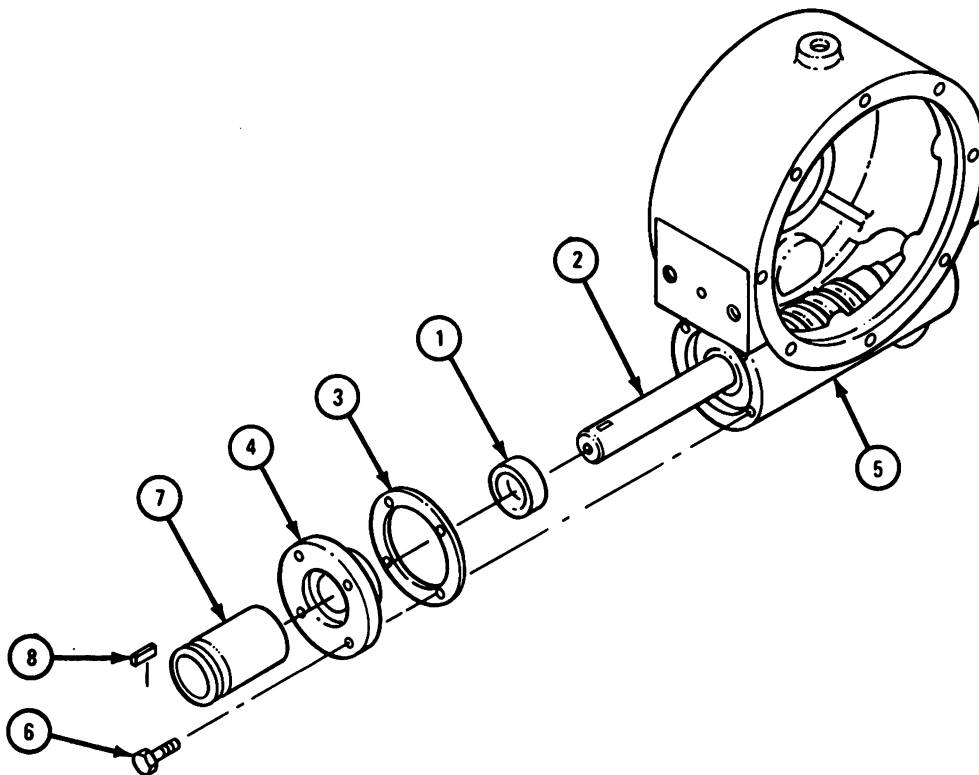
1. Put spacer (1) on worm input shaft (2).
2. Put bearing retainer gasket (3) and bearing retainer (4) on gear housing (5) with four screws (6).

NOTE

On some units, sleeve (7) and bearing retainer (4) are one piece. If they are, skip step 3 and go to step 4.

3. Put sleeve (7) in bearing retainer.
4. Put key (8) in worm input shaft (2).

GO TO FRAME 6

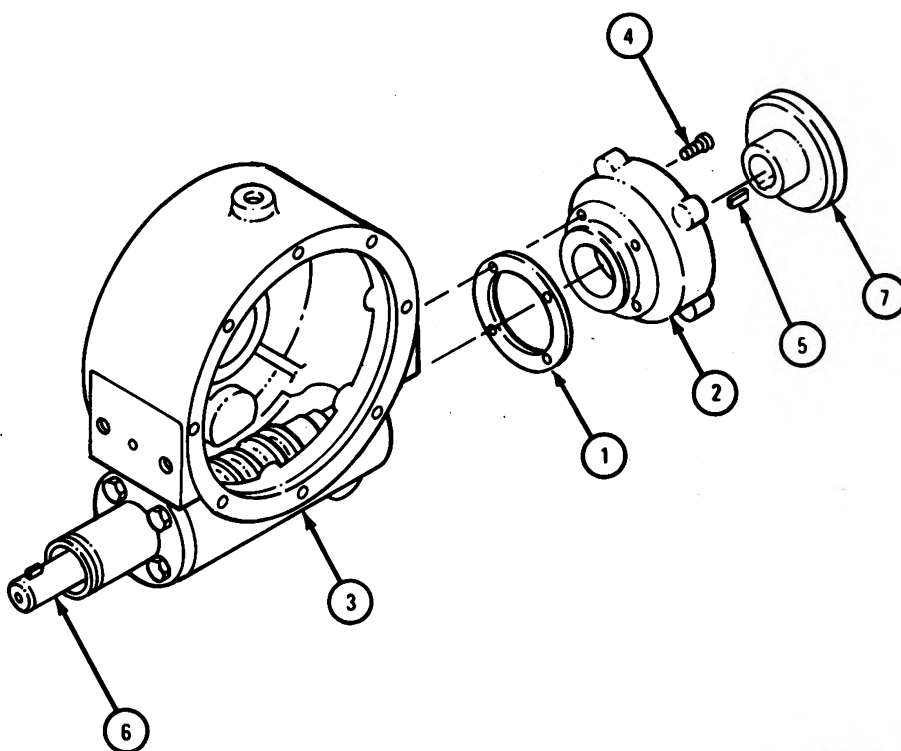


TA 089326

FRAME 6

1. Put brake housing gasket (1) and safety brake housing (2) on gear housing (3) with four screws (4).
2. Put key (5) on worm input shaft (6). Slide hub (7) over worm input shaft.

GO TO FRAME 7



TA 089327

FRAME 7

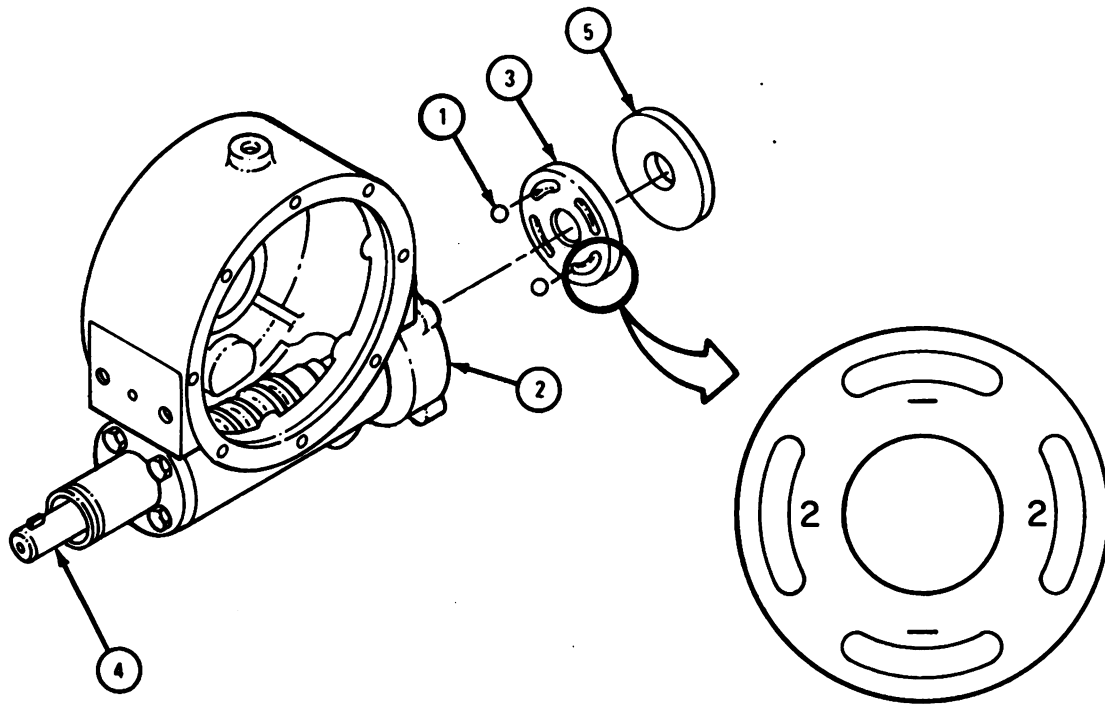
1. Place two balls (1) on hub (2) and slide cam (3) over worm input shaft (4).

NOTE

Make sure balls (1) are aligned with slots marked "2".

2. Put disk (5) on worm input shaft (4).

GO TO FRAME 8

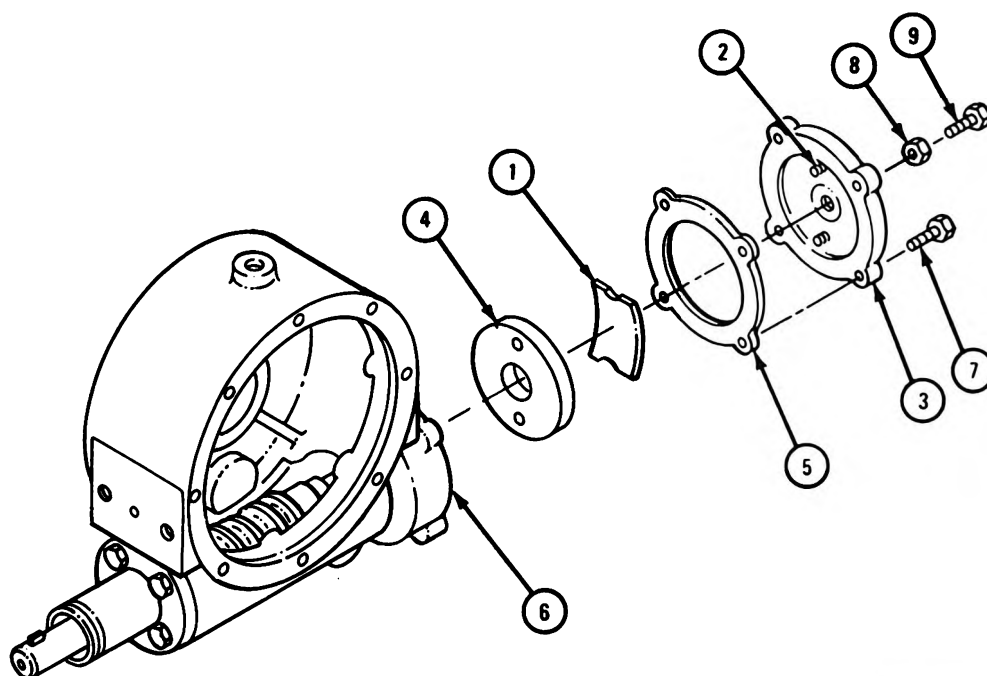


TA 104230

FRAME 8

1. Place spring (1) between alinement screws (2) in safety brake cover (3).
2. Place retainer plate (4) on alinement screws (2).
3. Put gasket (5) and assembled safety brake cover (3) on safety brake housing (6) with four screws (7).
4. Screw locknut (8) on adjusting screw (9).
5. Screw adjusting screw (9) with locknut (8) into safety brake cover (3).

GO TO FRAME 9

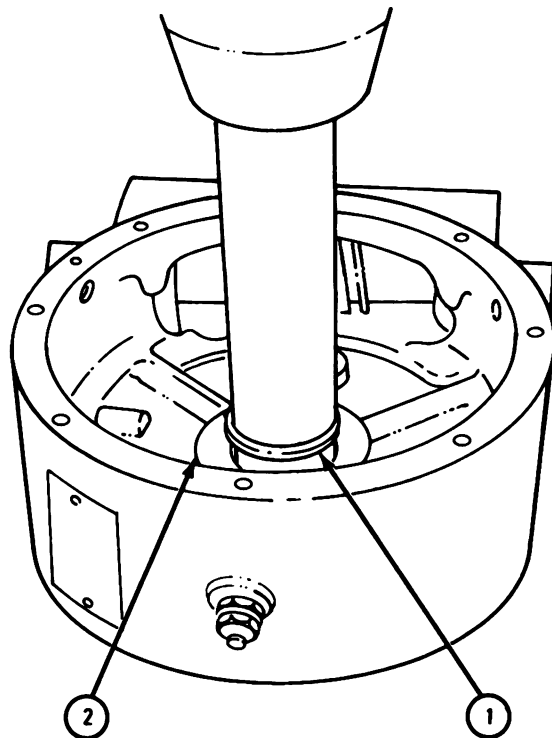


TA 089329

FRAME 9

1. Press bushing (1) into gear housing (2).

GO TO FRAME 10

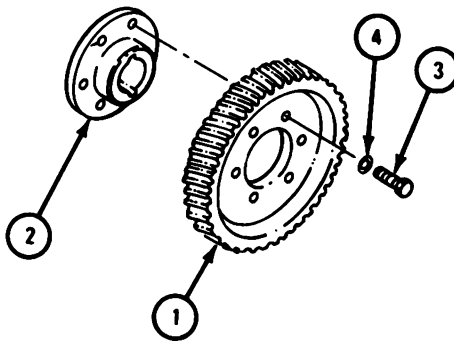


TA 089330

FRAME 10

1. Join worm wheel gear (1) to hub (2) with six screws (3) and six lockwashers (4).

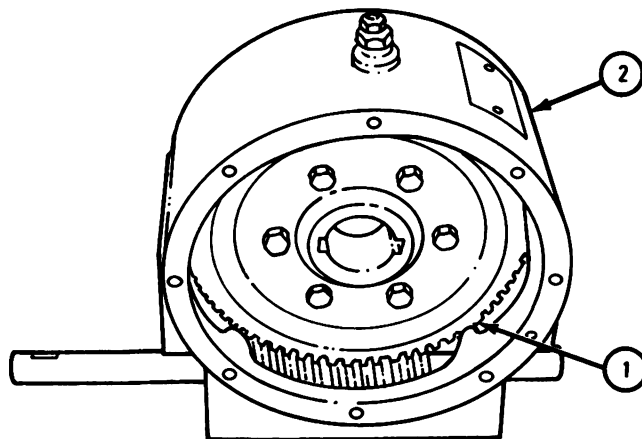
GO TO FRAME 11



TA 089331

FRAME 11

1. Place assembled worm wheel gear (1) into gear housing (2).
- GO TO FRAME 12**

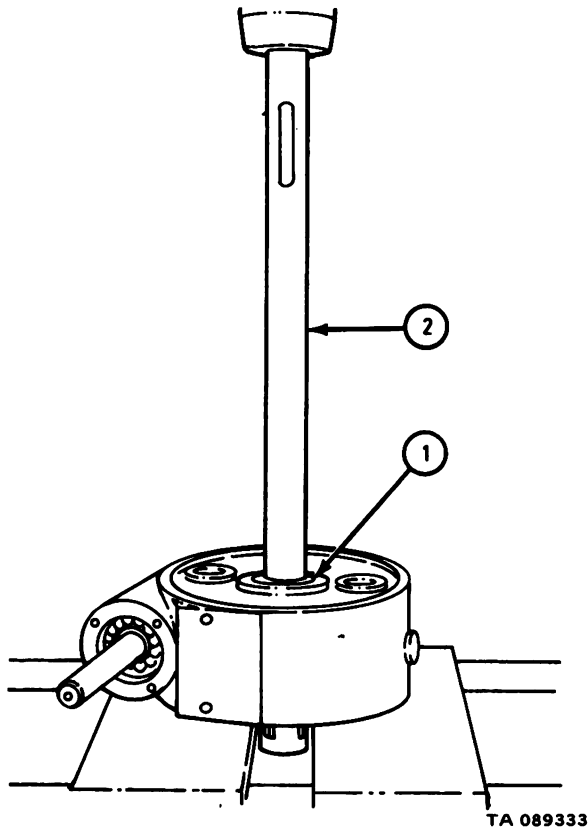


TA 089332

FRAME 12

1. Aline keyways in hub (1) with key slots in drum shaft (2).
2. Press drum shaft (2) through hub (1) until key slots on drum shaft go through hub.

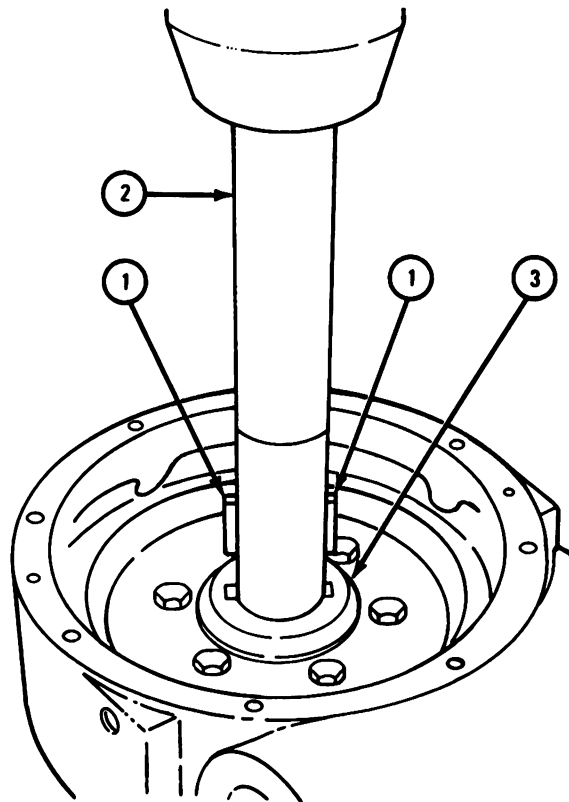
GO TO FRAME 13



FRAME 13

1. Put two keys (1) in drum shaft (2) and press drum shaft (2) into hub (3) until top of keys are flush with hub.

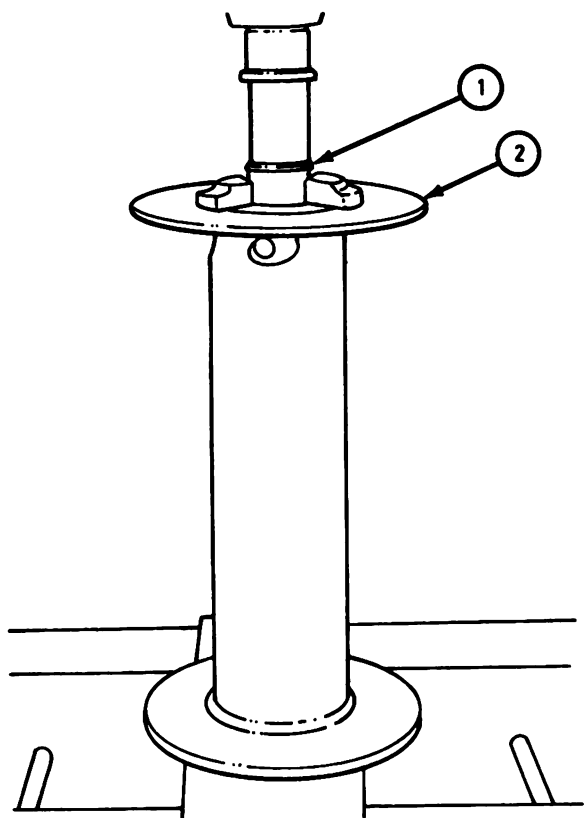
GO TO FRAME 14



TA 089334

FRAME 14

1. Press bushing (1) into drum (2) as shown.
 2. Do step 1 again on other end of drum.
- GO TO FRAME 15

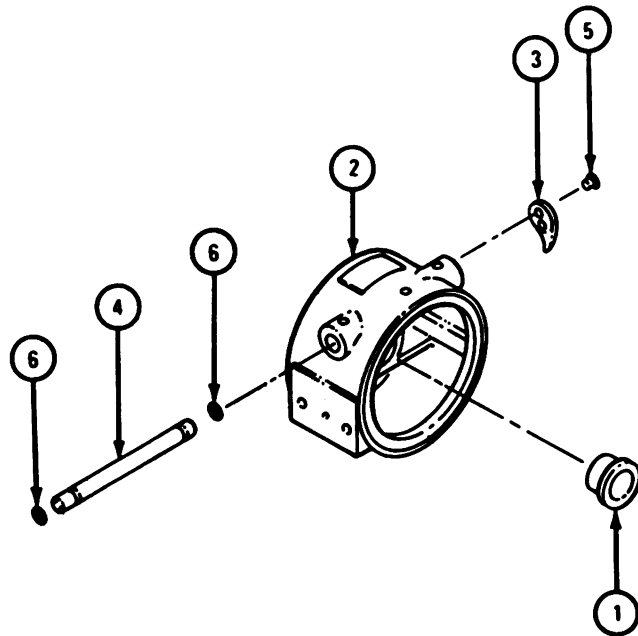


TA 089337

FRAME 15

1. Put bushing (1) in clutch housing (2).
2. Put pointer (3) on shifter shaft (4) with rivets (5).
3. Put two packings (6) on shifter shaft (4).

GO TO FRAME 16

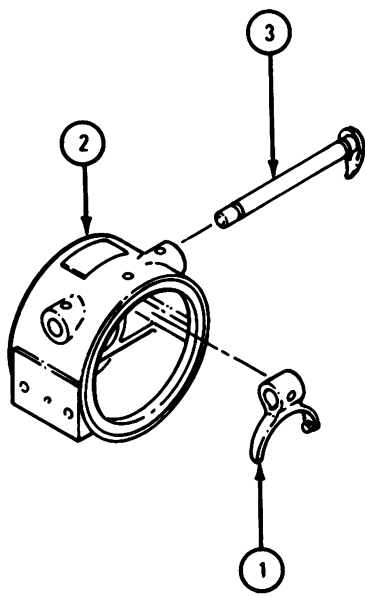


TA 089339

FRAME 16

1. Place shifter fork (1) in clutch housing (2).
2. Put shifter shaft (3) into clutch housing (2) and through shifter fork (1).
3. Seat shifter shaft (3) in clutch housing (2).

GO TO FRAME 17

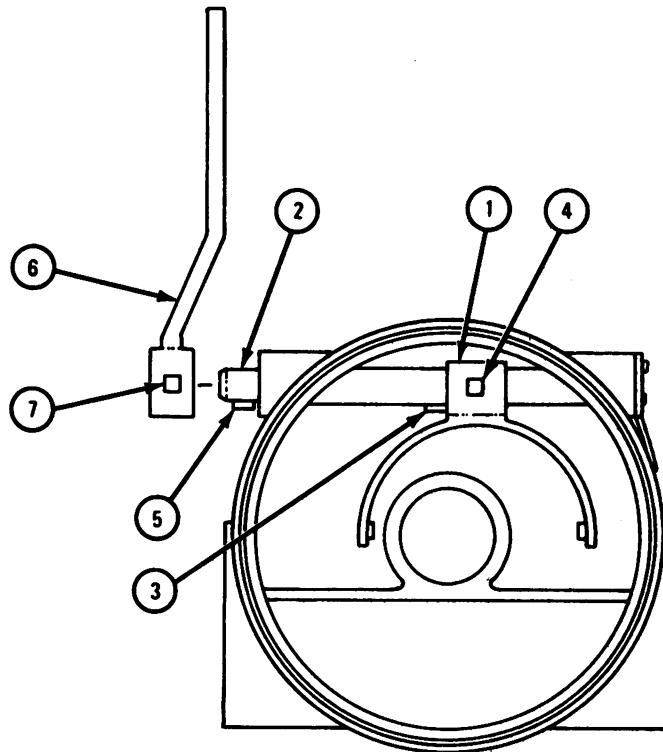


TA 089340

FRAME 17

1. Slide shifter fork (1) to one side on shifter shaft (2). Put key (3) on shifter shaft. Slide shifter fork in place over key and put in setscrew (4).
2. Put key (5) on shifter shaft (2).
3. Put lever (6) on shifter shaft (2) and put in setscrew (7).

GO TO FRAME 18

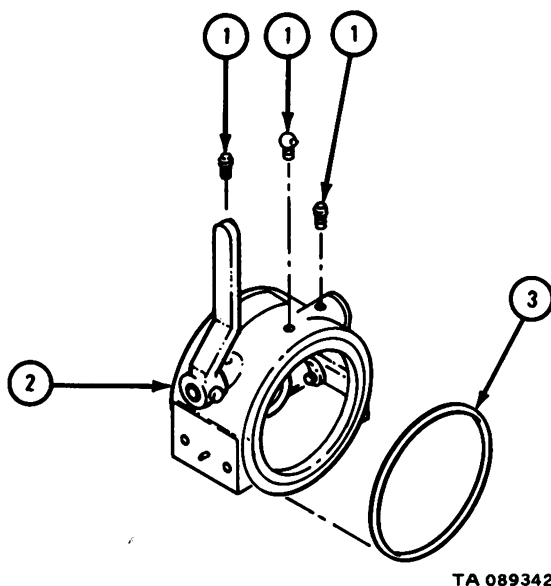


TA 089341

FRAME 18

1. Screw three grease fittings (1) into clutch housing (2).
2. Put packing (3) on clutch housing (2).

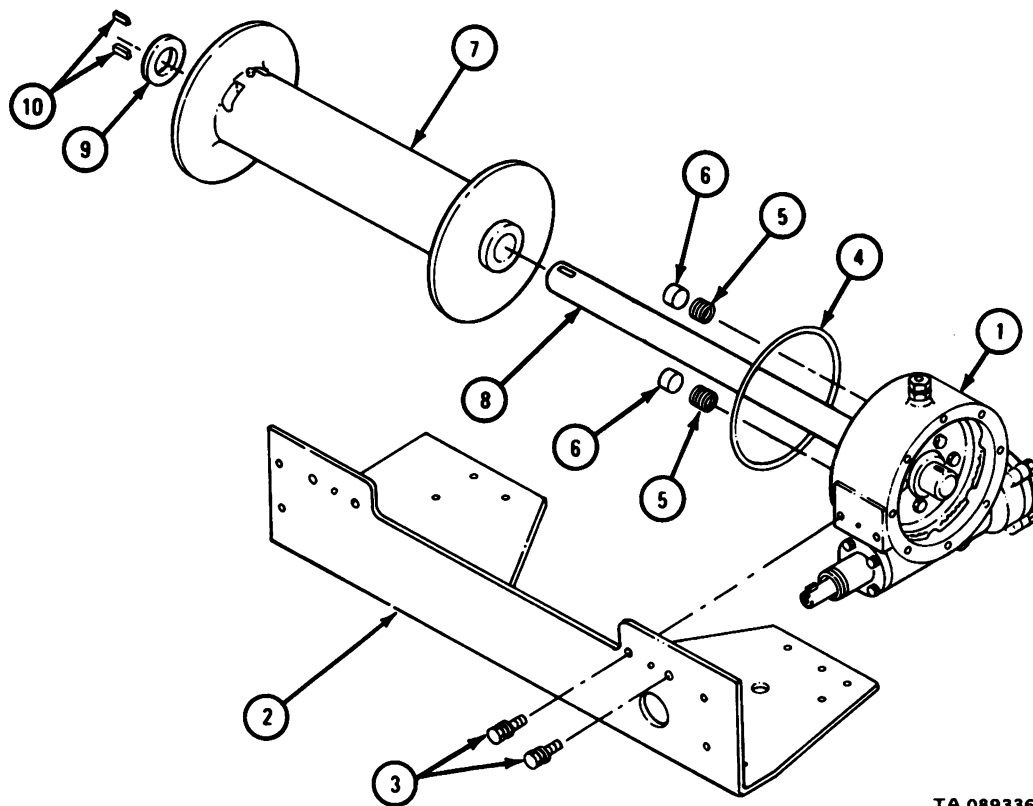
GO TO FRAME 19



FRAME 19

- Soldier A**
1. Put gear housing (1) on support assembly (2).
 2. Put in two assembled screws and lockwashers (3).
 3. Put on packing (4).
 4. Stand assembly on end, with shaft pointing upward and hold it.
- Soldier B**
5. Put two springs (5) and two brake disks (6) into gear housing (1).
 6. Put drum (7) on shaft (8).
 7. Put spacer (9) and two keys (10) on drum shaft (8).

GO TO FRAME 20

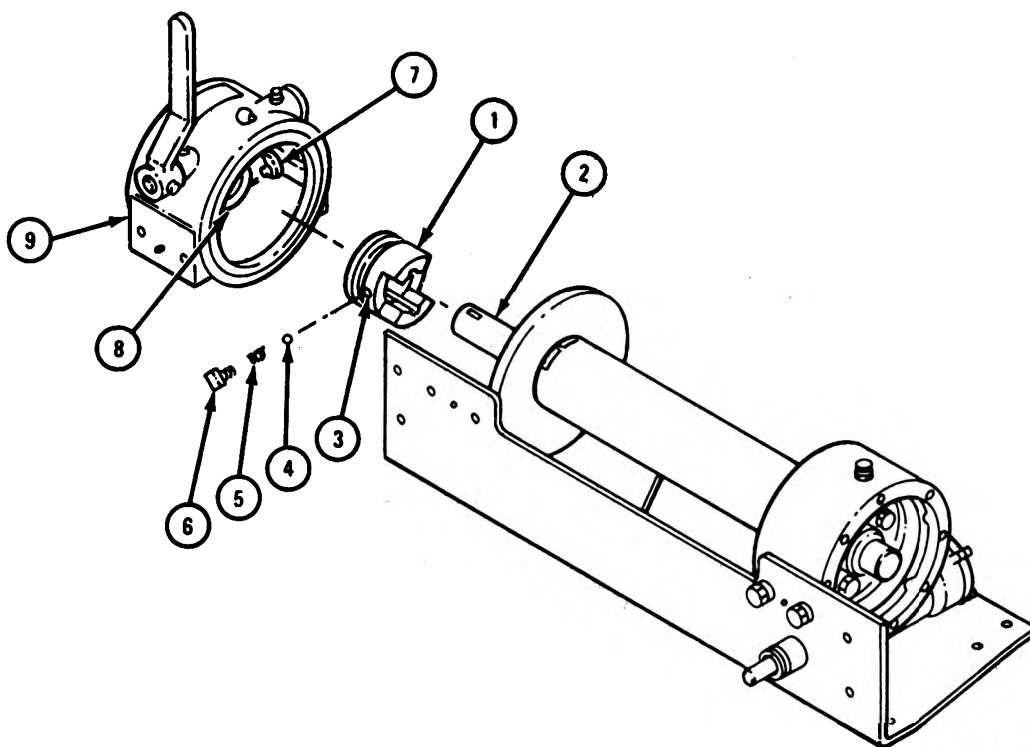


TA 089336

FRAME 20

1. Slide clutch jaw (1) on drum shaft (2) until drum shaft covers ball hole (3) in clutch jaw.
2. Put ball (4), spring (5), and setscrew (6) in clutch jaw (1).
3. Stake setscrew (6).
4. Place clutch jaw (1) in shifter fork (7).
5. Push drum shaft (2) in bushing (8) inside clutch housing (9).

GO TO FRAME 21

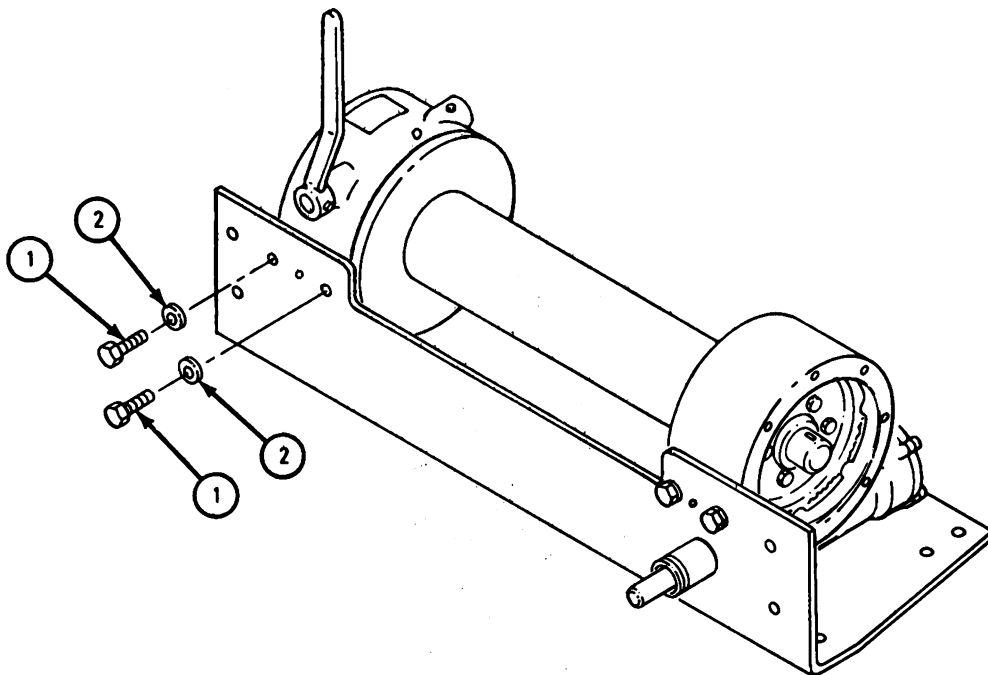


TA 089328

FRAME 21

1. Put in two screws (1) and lockwashers (2).

GO TO FRAME 22

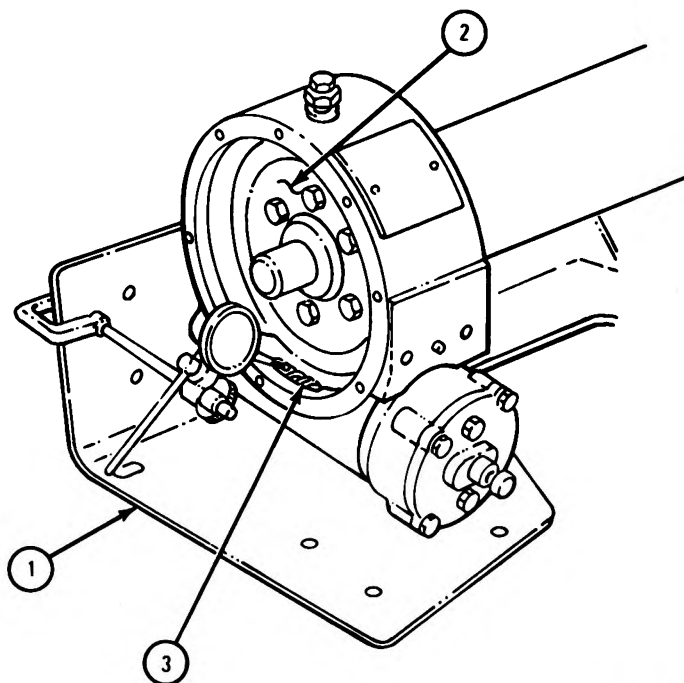


TA 121219

FRAME 22

1. Mount dial indicator on winch support assembly (1).
2. Measure backlash between worm input shaft gear (2) and worm gear (3). Refer to table 17-17.
3. If backlash is too much, take apart assembly and replace gears. Refer to para 17-31c (3).

GO TO FRAME 23



TA 089309

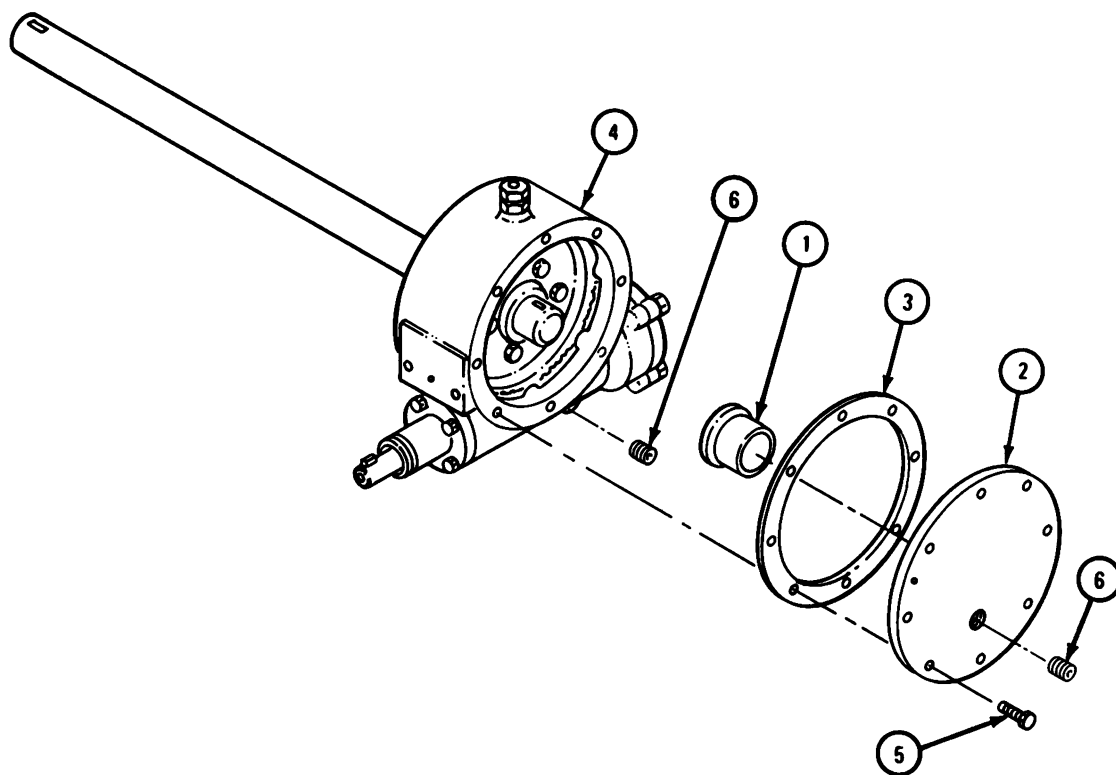
Table 17-17. Input Shaft Gear to Worm Gear Backlash

Index Number	Item/Point of Measurement	Maximum Allowable Wear or Clearance (inches)
2 and 3	Input shaft gear to worm gear	0.003 to 0.012

FRAME 23

1. Put bushing (1) in housing cover (2).
2. Put gasket (3) and housing cover (2) on gear housing (4) with eight screws (5).
3. Put in two plugs (6).

GO TO FRAME 24

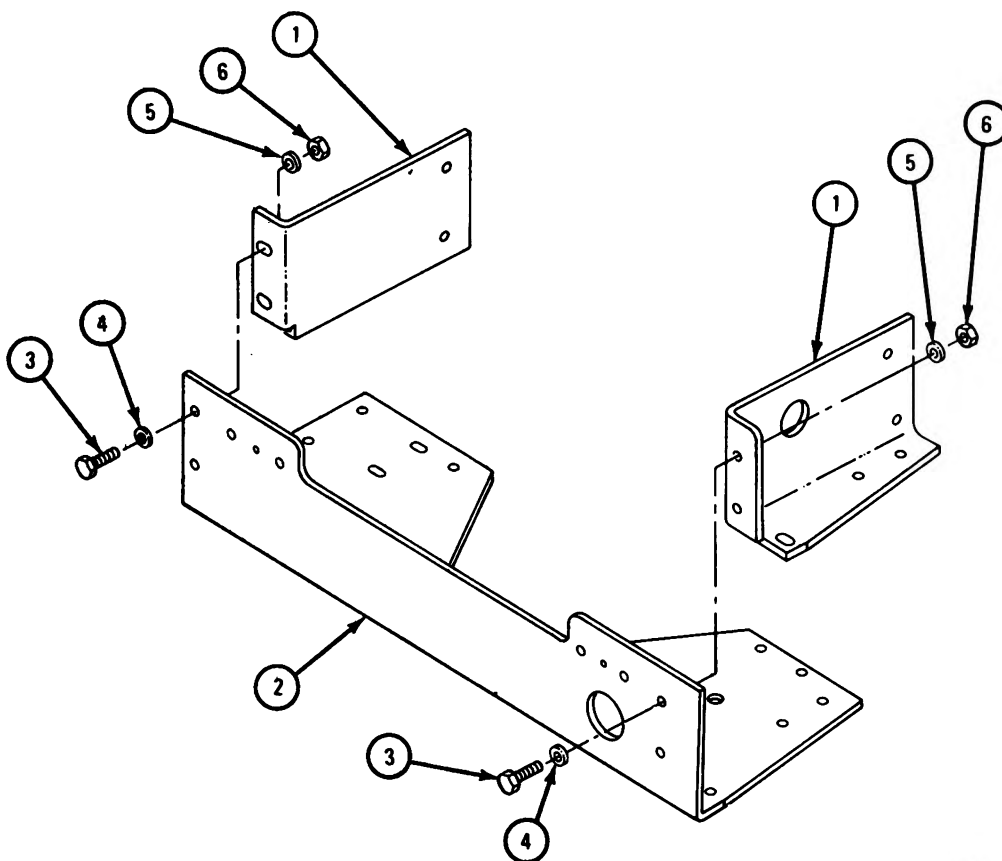


TA 089335

FRAME 24

1. Put two side plates (1) in place on support assembly (2).
2. Put on four screws (3), washers (4), lockwashers (5) and nuts (6).

GO TO FRAME 25

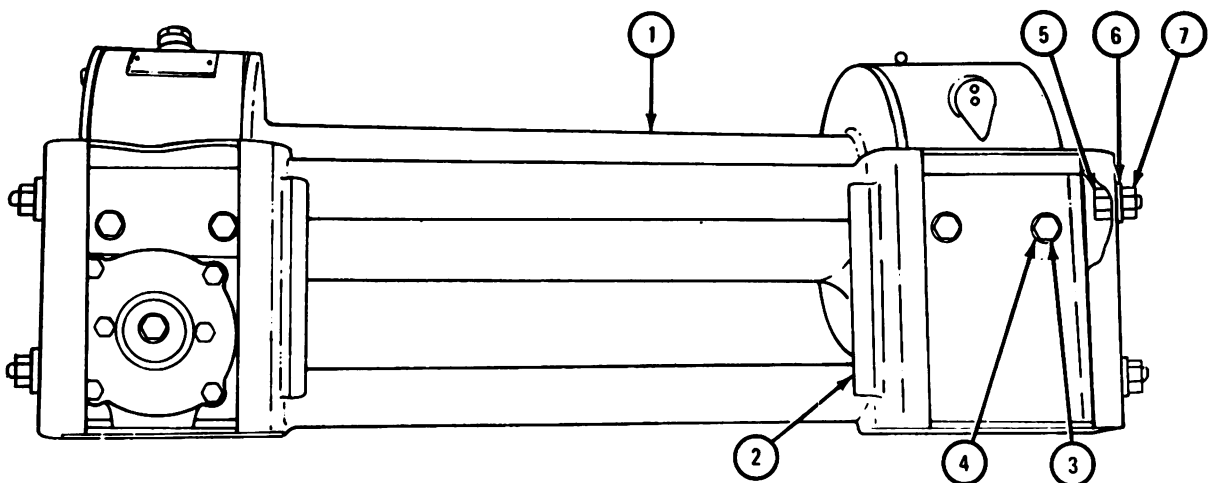


TA 105160

FRAME 25

1. Join winch assembly (1) to bracket assembly (2) with four screws (3) and four washers (4).
2. Put in four screws (5), washers, (6) and nuts (7).
3. Grease winch assembly (1). Refer to LO 9-2320-242-12.

END OF TASK



TA 089343

(7) Adjustment of winch brake.

FRAME 1

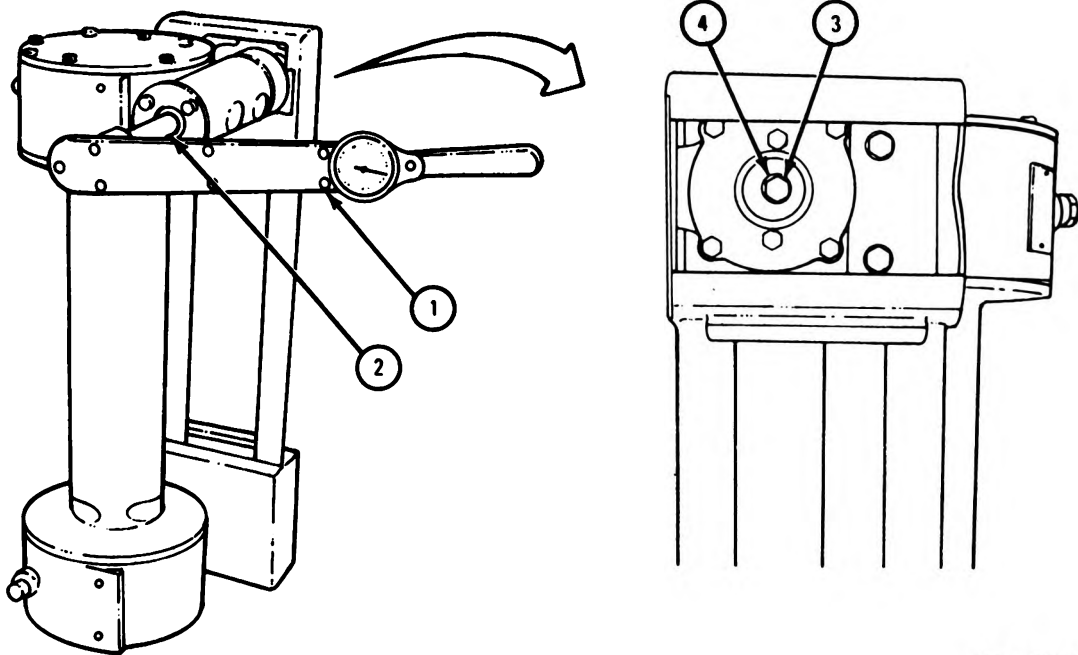
1. Hook up torque wrench and adapter (1) to end of input worm shaft (2).

NOTE

To get more torque, turn screw (3) to the right. To get less torque, turn screw to the left.

2. Set screw (3) to get reading of 12 to 15 pound-feet of torque.
3. After setting torque, lock screw (3) in place with locknut (4).

END OF TASK



TA 089344

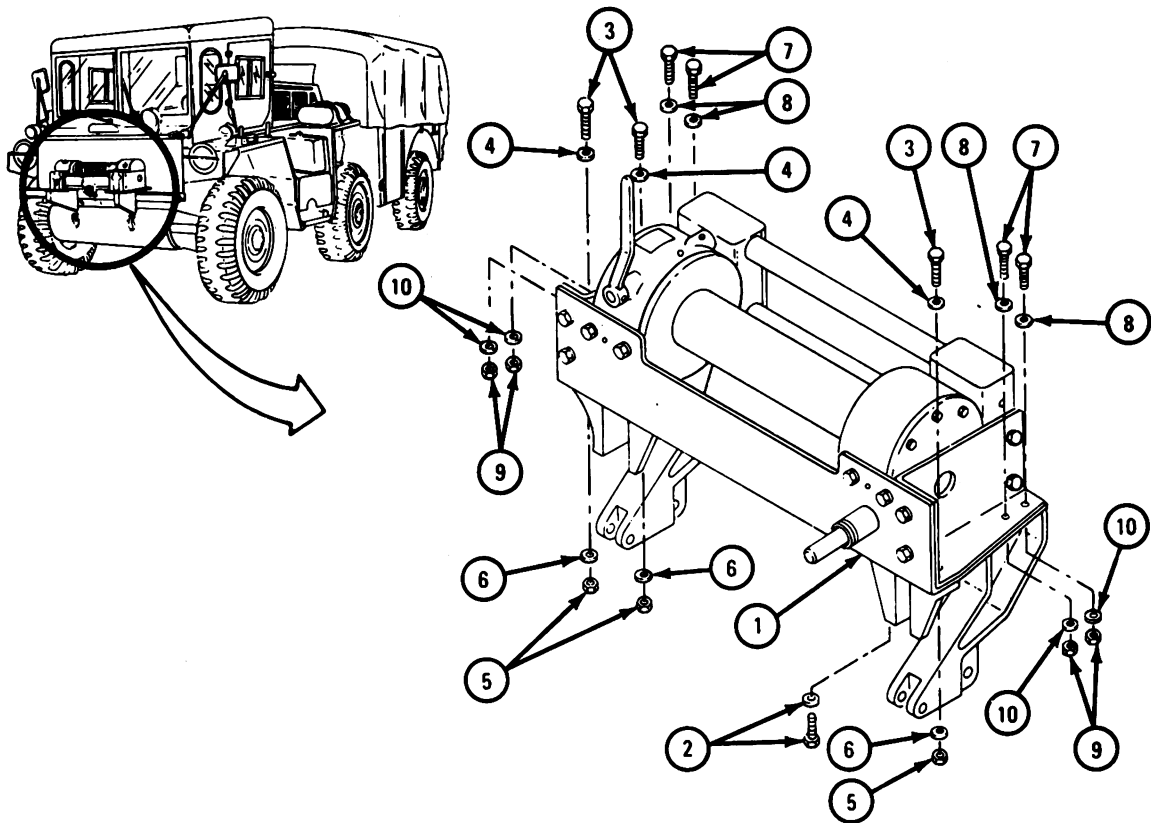
(8) Replacement.

FRAME 1

1. Put on winch and support bracket assembly (1).
2. Put in screw with washer (2).
3. Put in three screws (3) with washers (4).
4. Screw on three nuts (5) with washers (6).
5. Put in four screws (7) with washers (8).
6. Screw on four nuts (9) with washers (10).

NOTE**Follow-on Maintenance Action Required:**

1. Replace power takeoff shaft assembly. Refer to para 17-31a.
2. Replace towing shackles. Refer to TM 9-2320-242-20.

END OF TASK

TA 121154

d. Winch Support Assembly.

(1) Preliminary procedures.

(a) Remove tractor seats. Refer to TM 9-2320-242-20.

(b) Remove console. Refer to TM 9-2320-242-20.

(c) Remove power takeoff shaft assembly front universal joint. Refer to para 17-31a.

(2) Removal.

FRAME 1

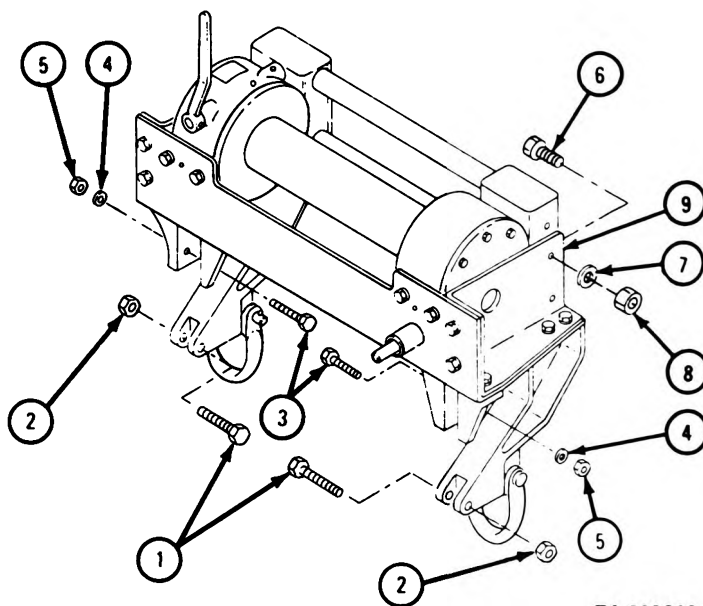
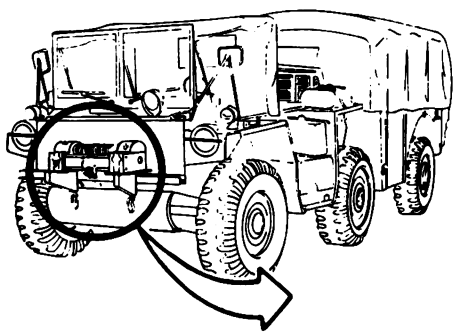
1. Take off two screws (1) and two nuts (2).
2. Take off two screws (3), two lockwashers (4) and two nuts (5).
3. Take off four screws (6), four washers (7) and four nuts (8).
4. Take out winch and support assembly (9).

Soldiers
A and B

Soldier A

5. Take apart winch assembly from winch support assembly. Refer to para 17-31c.

END OF TASK



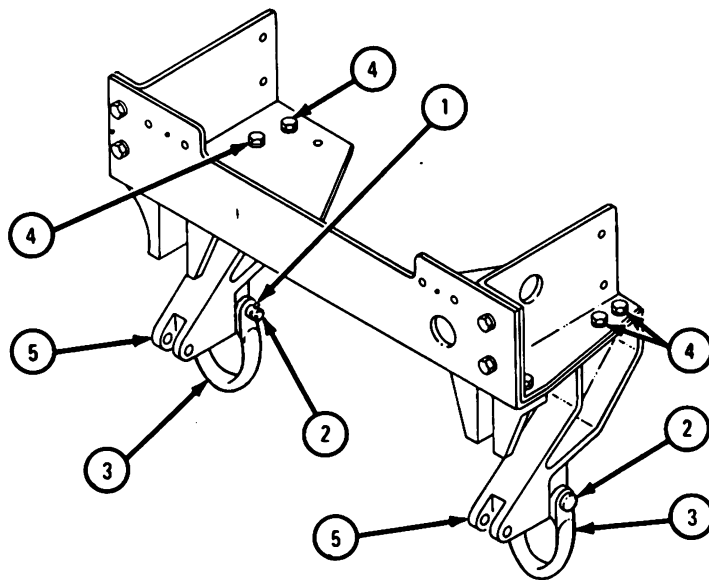
TA 089346

(3) Disassembly.

FRAME 1

1. Take out two cotter pins (1) and two clevis pins (2).
2. Take out two shackles (3).
3. Take off four screws, lockwashers and nuts (4).
4. Take off two mounting brackets (5).

GO TO FRAME 2

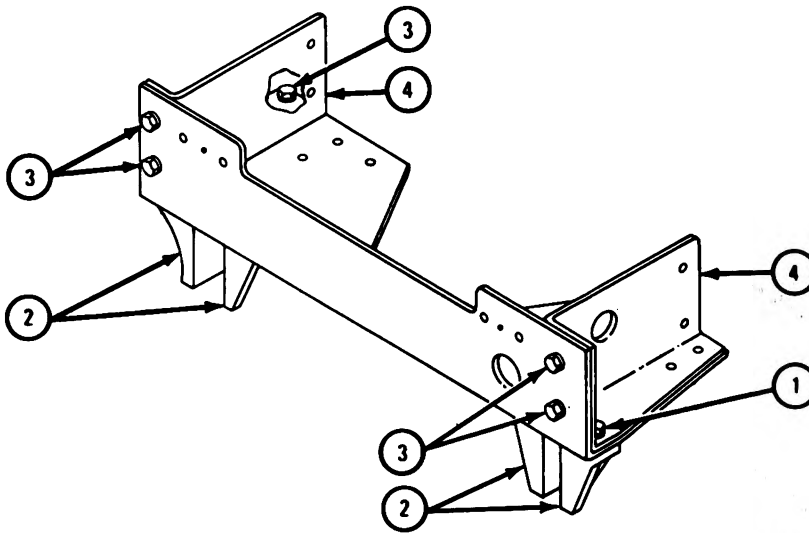


TA 089347

FRAME 2

1. Take off four screws, four washers, and three nuts (1).
2. Take out four brackets (2).
3. Take off five screws, lockwashers, and nuts (3).
4. Take off two brackets (4).

END OF TASK



TA 089348

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

(5) Inspection and repair.

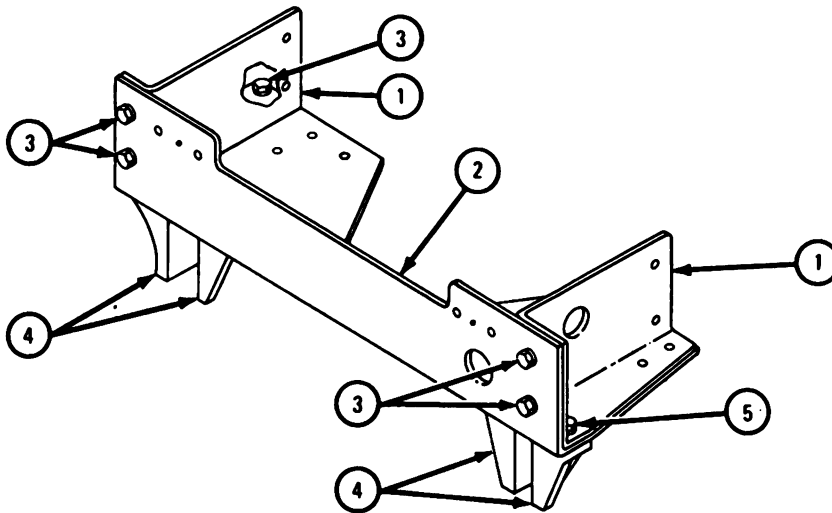
(a) Check for cracks, tears, and breaks. Weld damaged parts. Refer to TM 9-237.

(b) Check for bent parts. Straighten bends. Refer to FM 43-2.

(6) Assembly.

FRAME 1

1. Put two brackets (1) on support assembly (2) with six screws, lockwashers, and nuts (3).
 2. Put on four brackets (4) with four screws, four washers, and three nuts (5).
- GO TO FRAME 2

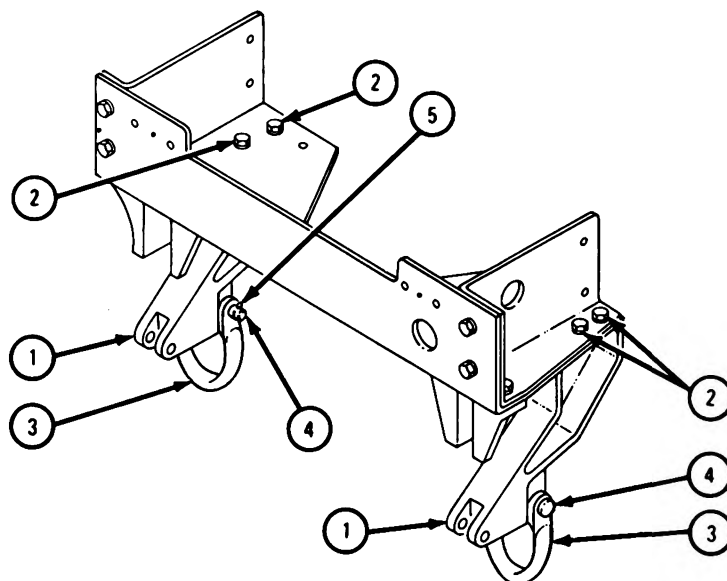


TA 089349

FRAME 2

1. Put on two brackets (1) with four screws, lockwashers, and nuts (2).
2. Put on two shackles (3) with two clevis pins (4) and two cotter pins (5).
3. Put winch assembly on support assembly. Refer to para 17-31c.

END OF TASK

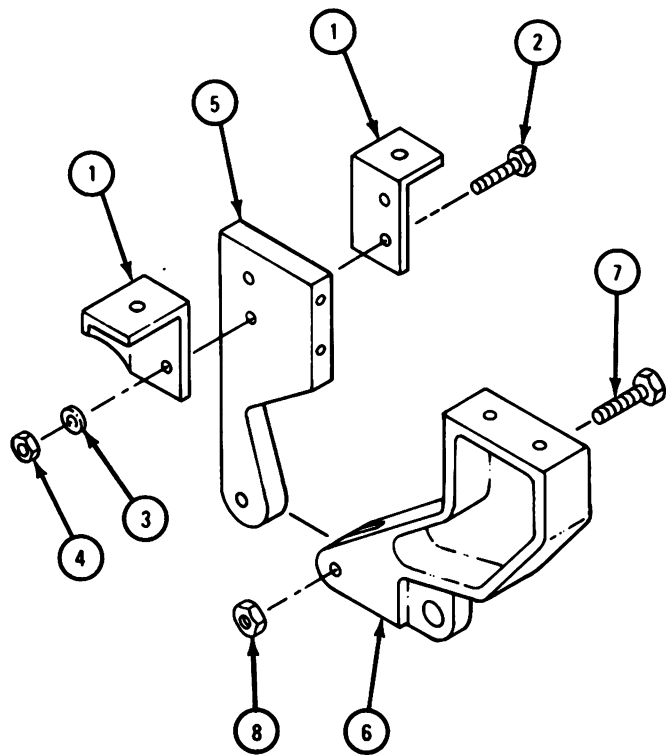
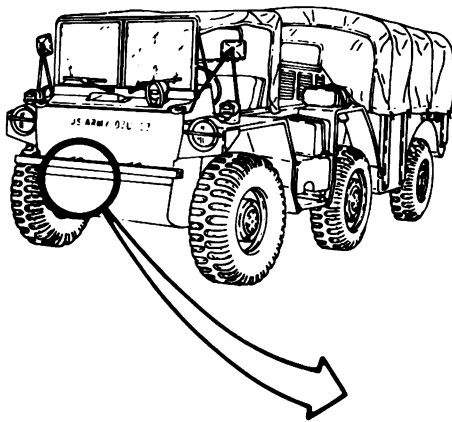


TA 089350

(7) Replacement.

FRAME 1

1. Put two brackets (1), screws (2), washers (3), and nuts (4) on bracket (5).
2. Put bracket (6), screw (7), and nut (8) on bracket (5).
3. Do steps 1 and 2 again for other bracket.

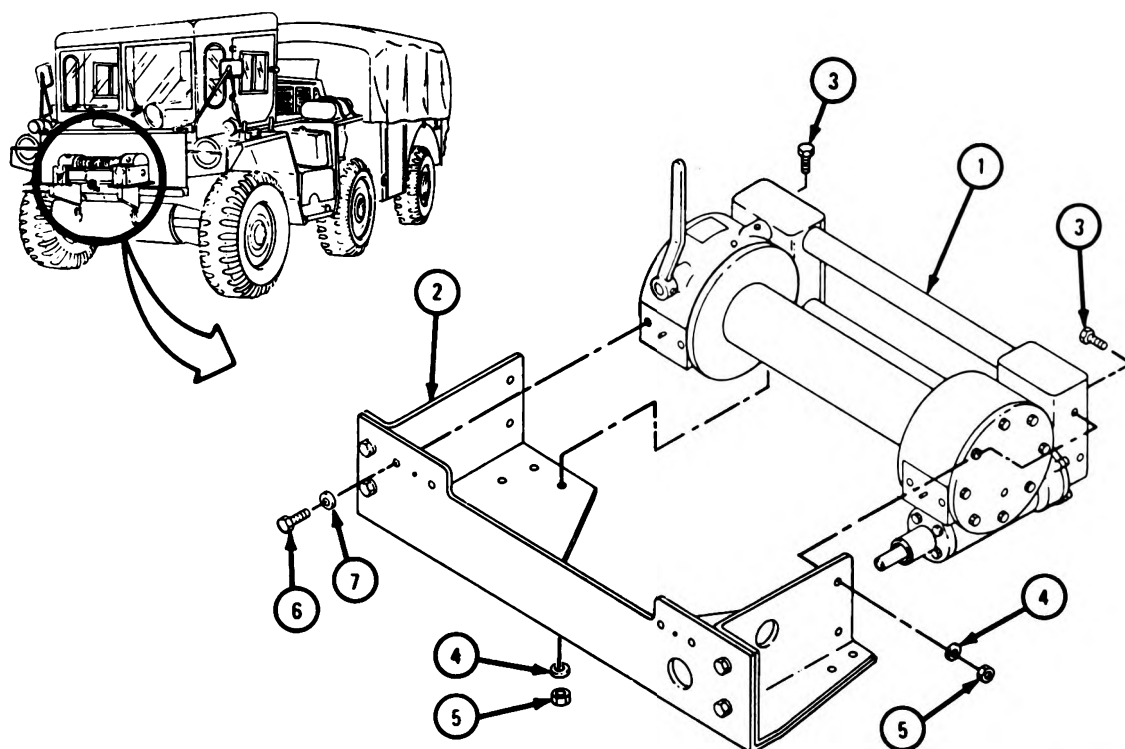
GO TO FRAME 2

TA 089338

FRAME 2

1. Put winch assembly (1) on bracket assembly (2).
2. Put on six screws (3), lockwashers (4), and nuts (5).
3. Put on four screws (6) and lockwashers (7).

GO TO FRAME 3



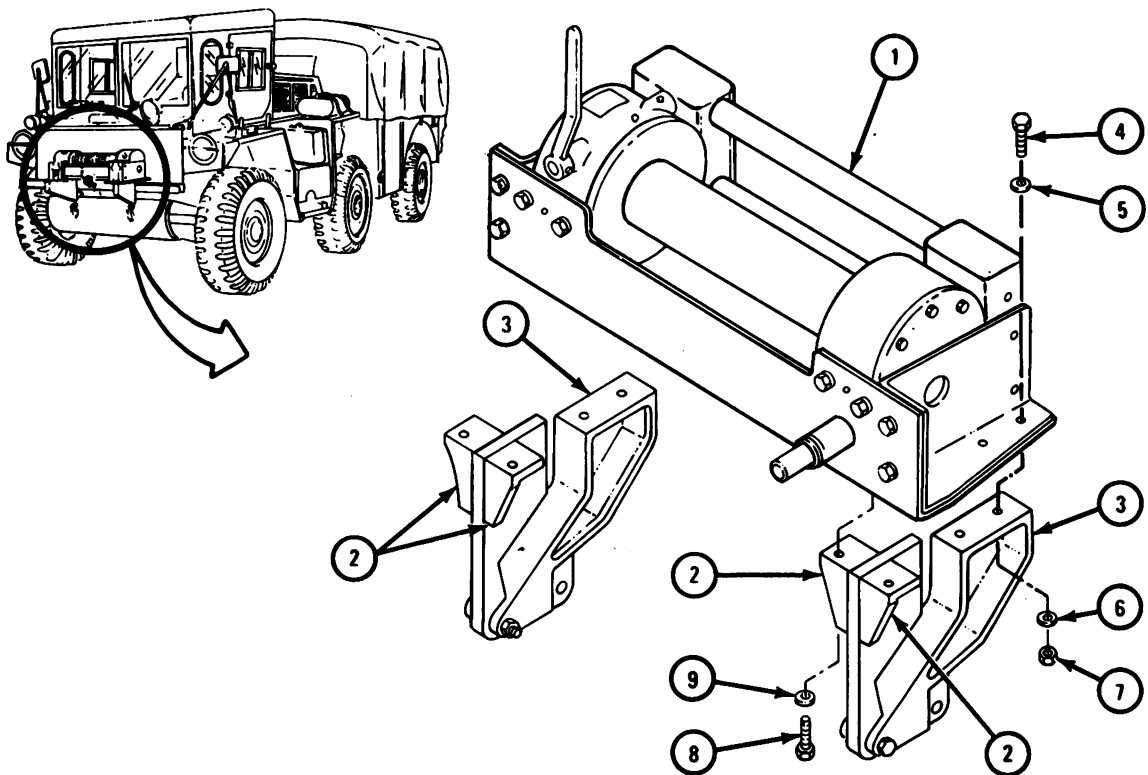
TA 089345

FRAME 3

1. Set assembled winch and bracket (1) on mounting brackets (2 and 3).
2. Put in seven screws (4), washers (5), lockwashers (6), and nuts (7).
3. Put in screw (8) and lockwasher (9).

NOTE**Follow-on Maintenance Action Required:**

1. Replace towing shackles. Refer to TM 9-2320-242-20.
2. Replace power takeoff shaft assembly front universal joint. Refer to para 17-31a.
3. Replace console. Refer to TM 9-2320-242-20.
4. Replace tractor seats. Refer to TM 9-2320-242-20.

END OF TASK

TA 089310

17-32. 81-MM MORTAR KIT INSTALLATION (TRUCK M561).

TOOLS: No special tools required

SUPPLIES: 81-mm mortar installation kit
Sealing compound, MIL-S-45180

PERSONNEL: Two

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

a. Preliminary Procedures.

- (1) Remove carrier vehicular top bows. Refer to TM 9-2320-242-20.
- (2) Remove carrier tiedown plates. Refer to TM 9-2320-242-20.
- (3) Unlatch carrier troop seats. Refer to TM 9-2320-242-10.

b. Installation.

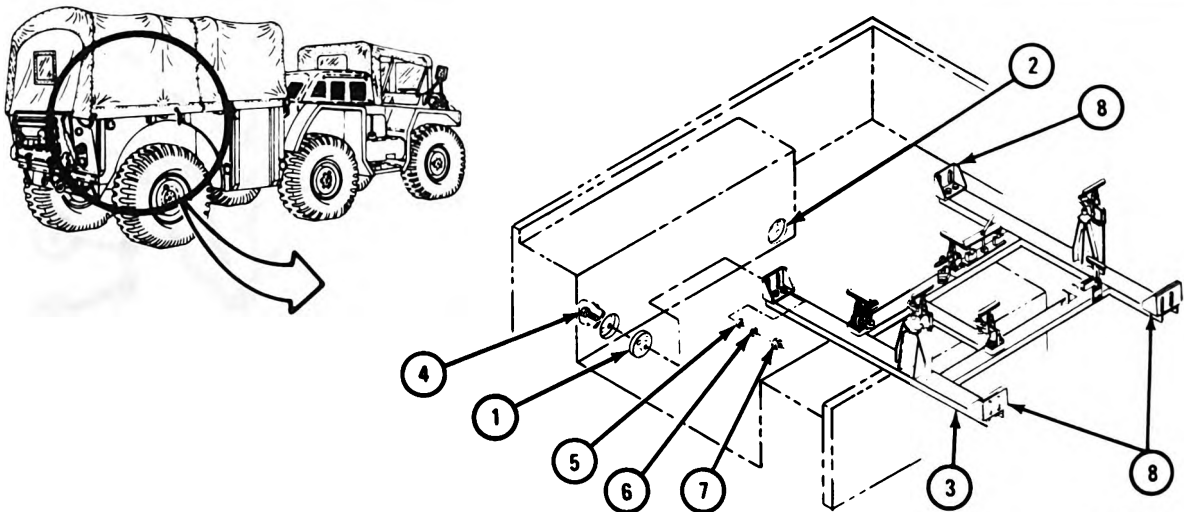
FRAME 1

CAUTION

To keep carrier watertight, put sealing compound on all parts passing through hull.

1. Put four spacers (1) on tiedown plates (2).
2. Set frame assembly (3) in carrier.
3. Put in four capscrews (4). Put on four flat washers (5), four lockwashers (6), and four nuts (7).
4. Do step 3 again for other three brackets (8).

GO TO FRAME 2



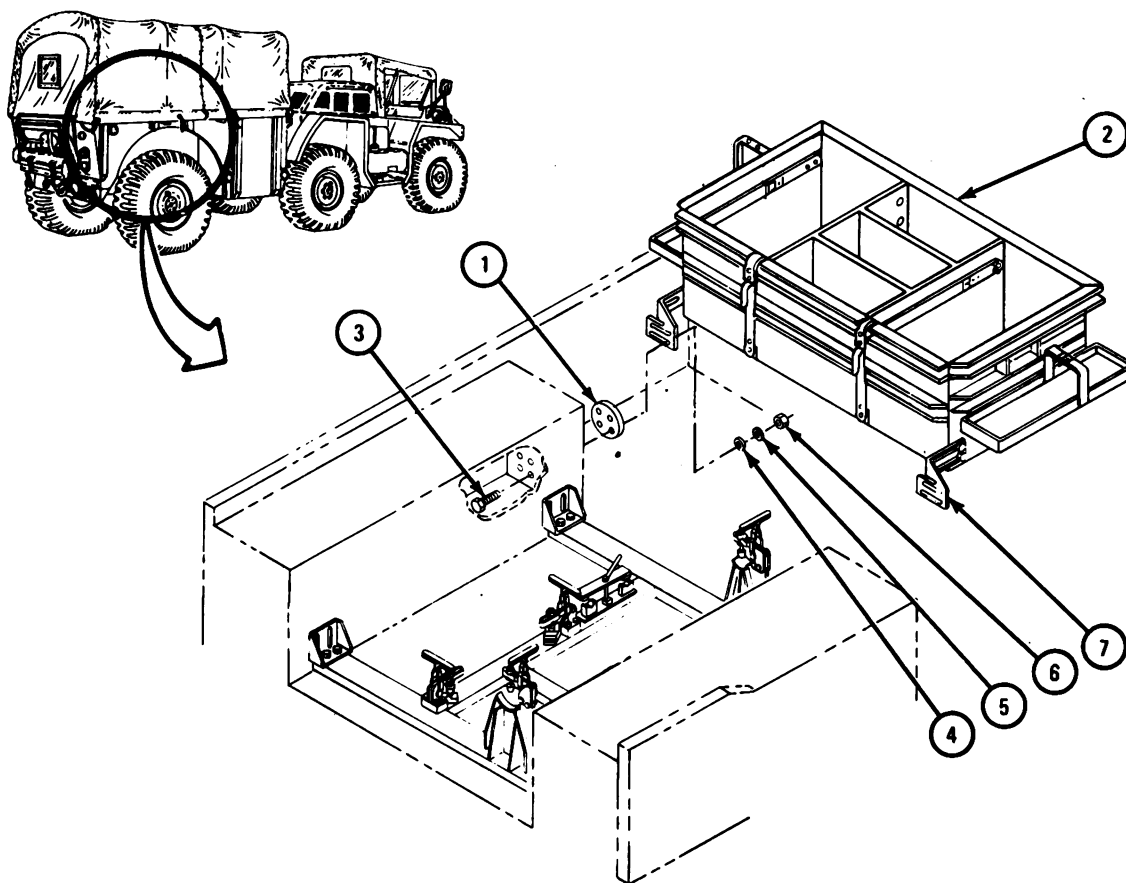
TA 101496

FRAME 2

Soldiers
A and B

1. Put four spacers (1) on tiedown plates.
2. Set ammunition rack (2) in carrier.
3. Put in four capscrews (3) and put on four flat washers (4), lock-washers (5), and nuts (6).
4. Do step 3 again for three other brackets (7).

END OF TASK



TA 101497

17-33. 81-MM MORTAR KIT REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Rivets
Adhesive, type II, MIL-A-5092

PERSONNEL: Two

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

a. Preliminary Procedure. Open carrier tailgate. Refer to TM 9-2320-242-10.

b. Removal.

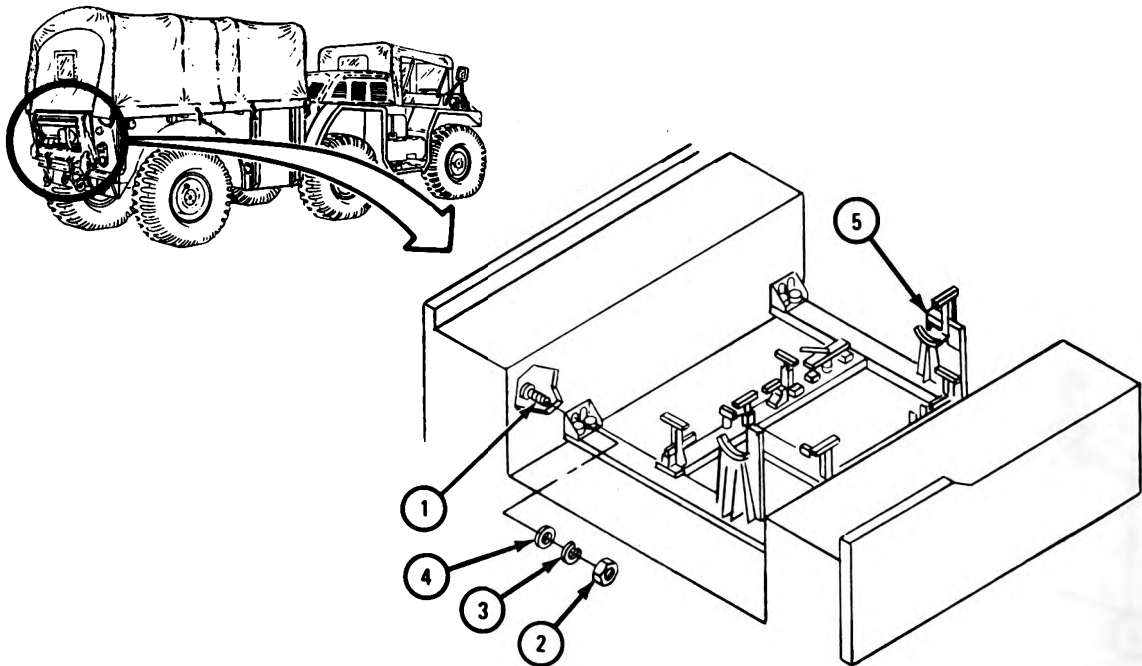
(1) Mortar frame.

FRAME 1

1. Take out four capscrews (1) with nuts (2), lockwashers (3), and flat washers (4).
2. Do step 1 again at other three brackets.
3. Lift out frame assembly (5).

Soldiers
A and B

END OF TASK



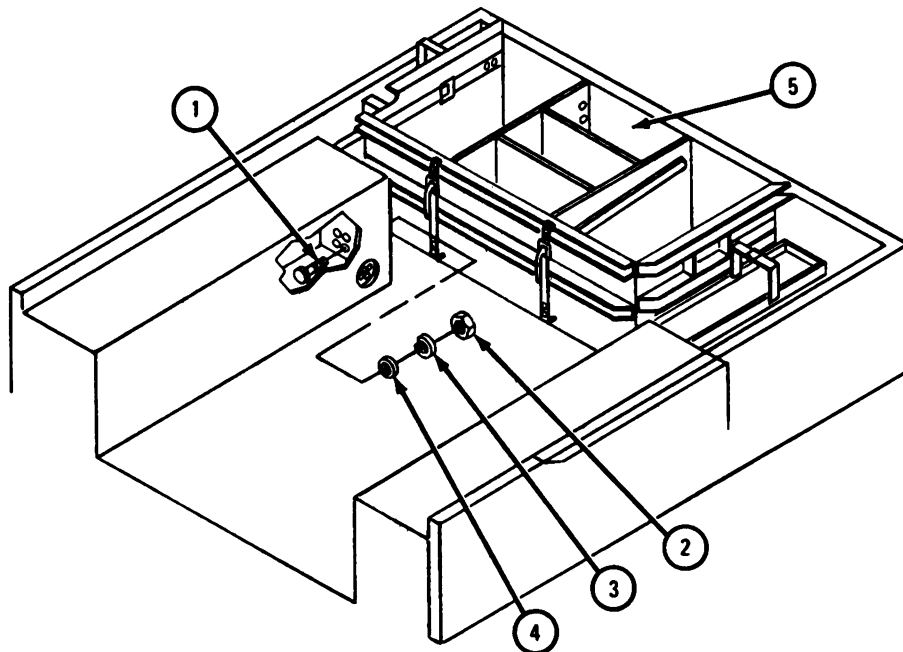
TA 104846

(2) Ammunition box.

FRAME 1

1. Take out four capscrews (1) with nuts (2), lockwashers (3), and flat washers (4).
2. Do step 1 again at three other brackets.
3. Take out ammunition box (5).

END OF TASK



TA 104847

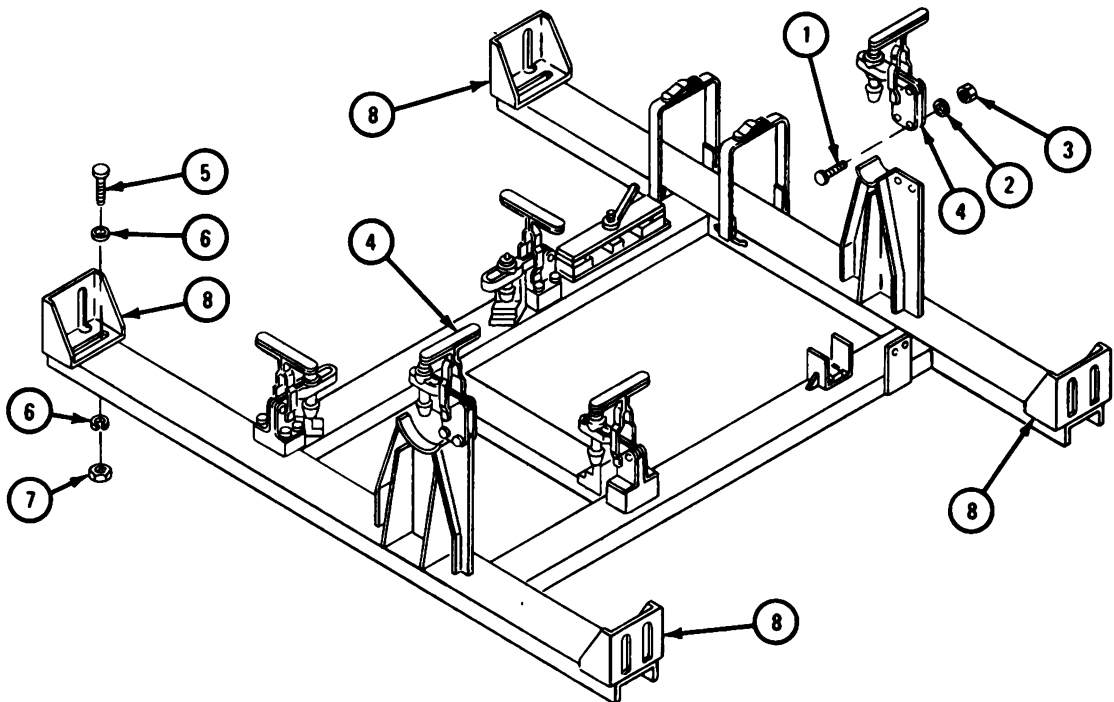
c. Disassembly.

(1) Mortar frame.

FRAME 1

1. Take out two capscrews (1) with washers (2) and nuts (3). Take off tube clamp (4).
2. Do step 1 again for other tube clamp (4).
3. Take out two capscrews (5) with washers (6) and nuts (7). Take off bracket (8).
4. Do step 3 again for three more brackets (8).

GO TO FRAME 2

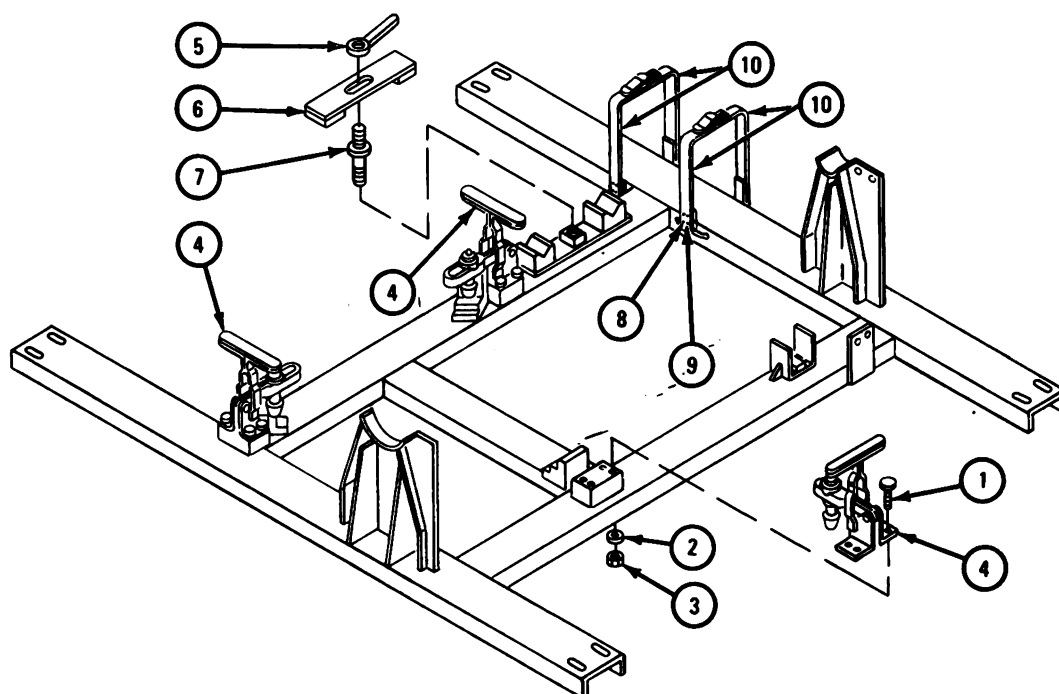


TA 104848

FRAME 2

1. Take out four capscrews (1) with washers (2) and nuts (3). Take off base plate clamp (4).
2. Do step 1 again for two more clamps (4).
3. Take handle (5) and bar (6) off stud (7). Take out stud.
4. Take out four rivets (8) with eight washers (9). Take off strap (10).
5. Do step 4 again for three more straps (10).

GO TO FRAME 3

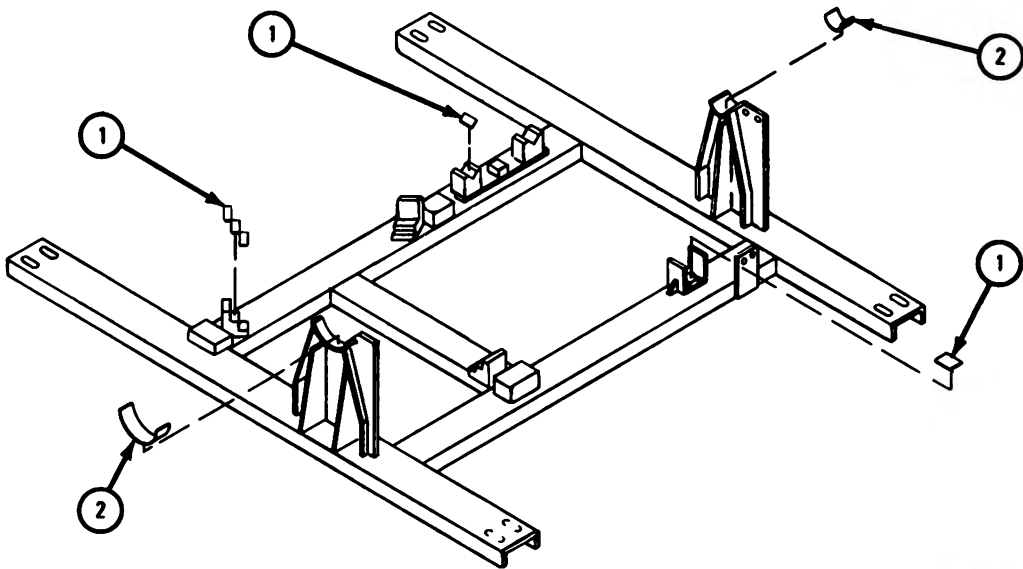


TA 104849

FRAME 3

1. Take out three base plate pads (1).
2. Take out two tube pads (2).

END OF TASK

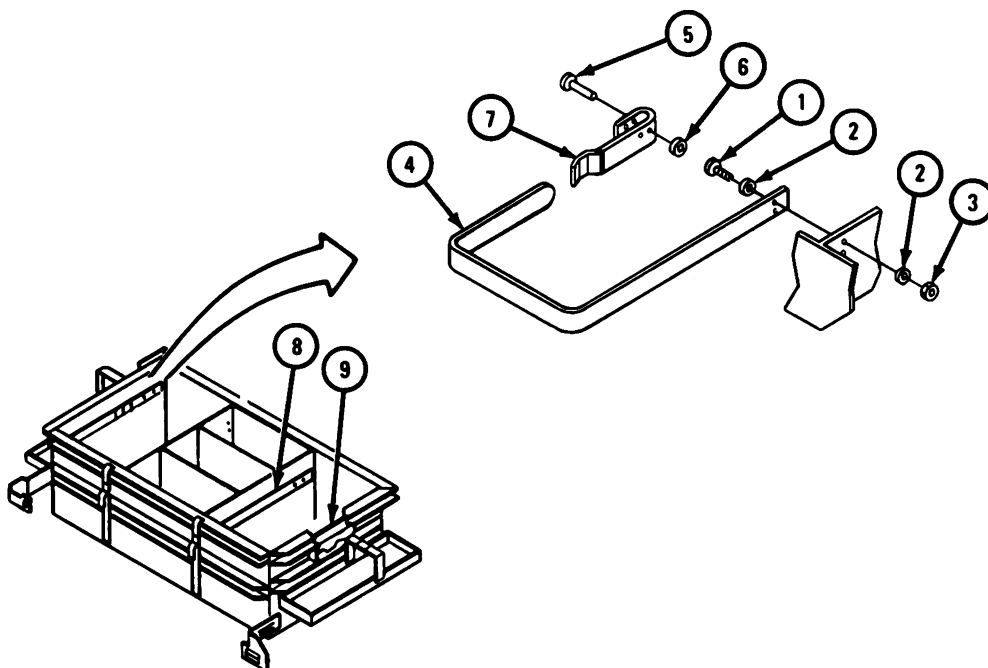


TA 104850

(2) Ammunition box.

FRAME 1

1. Take out two capscrews (1) with four washers (2) and two nuts (3). Take out strap (4).
 2. Take out four rivets (5) with washers (6). Take out strap (7).
 3. Do steps 1 and 2 again for straps (8) and (9).
- GO TO FRAME 2

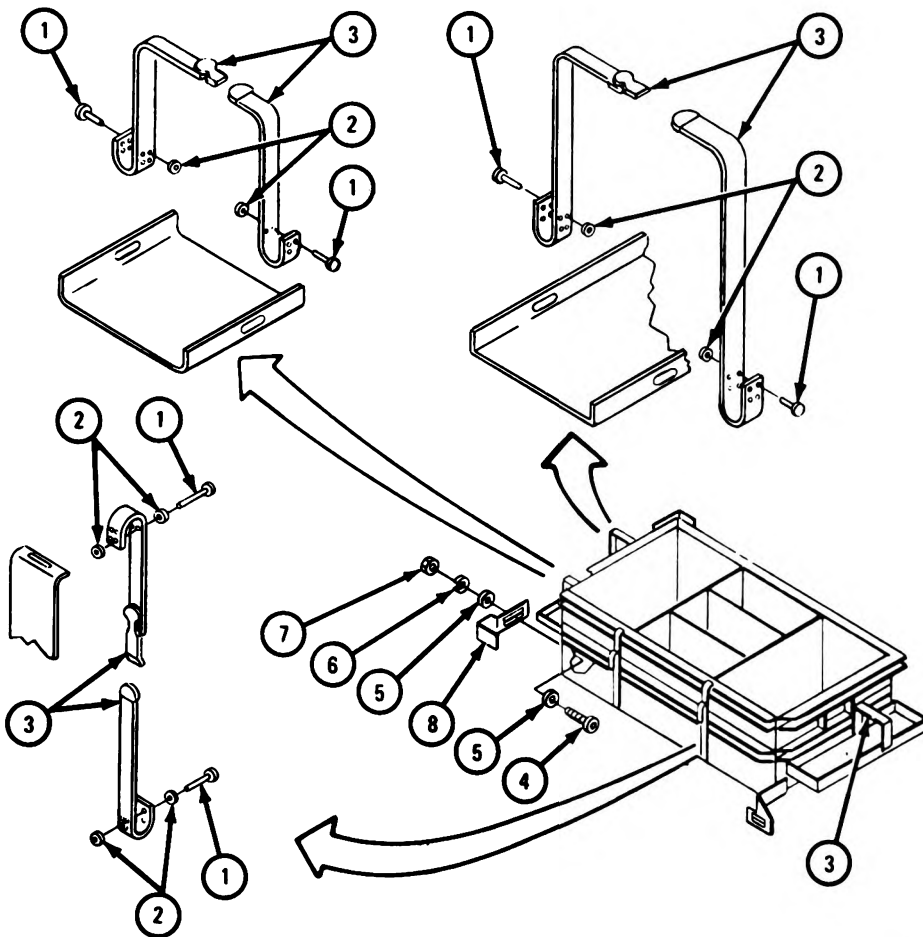


TA 104851

FRAME 2

1. Take out 40 rivets (1) with washers (2). Take off ten straps (3).
2. Take out two capscrews (4) with flat washers (5), lockwashers (6), and nuts (7). Take out bracket (8).
3. Do step 2 again for three more brackets (8).

END OF TASK



TA 104852

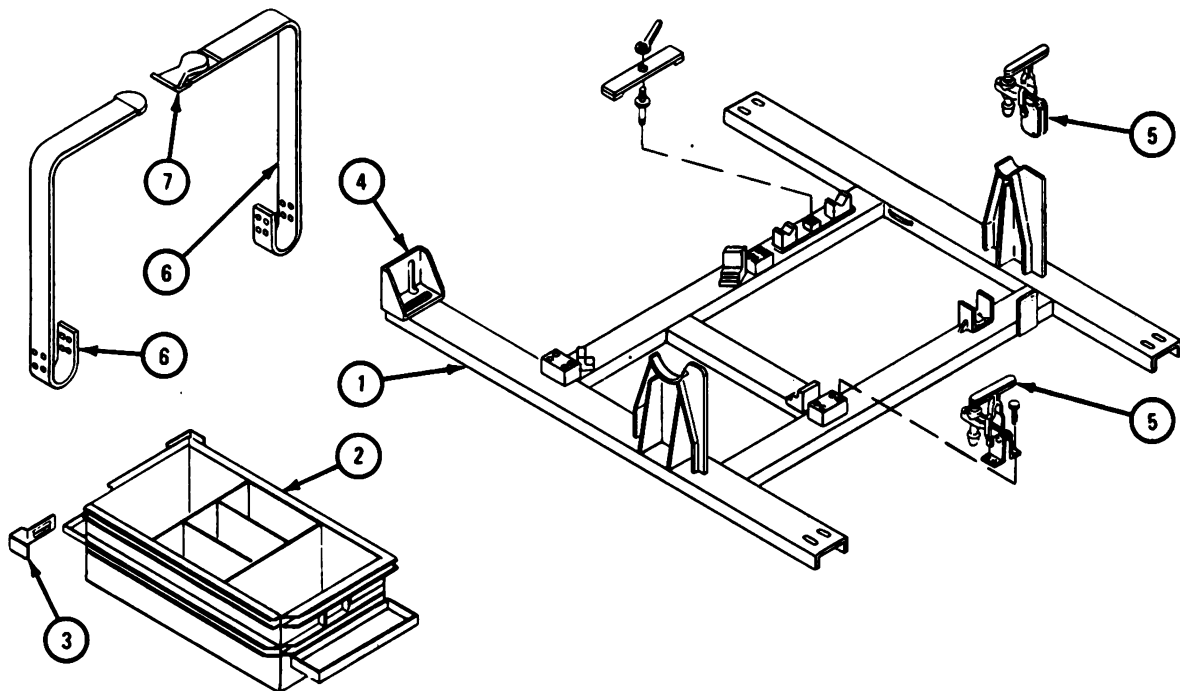
d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection and Repair.

FRAME 1

1. Check that frame (1), box (2), and brackets (3 and 4) have no cracks or bends. Straighten bends. Refer to FM 43-2. Weld cracks. Refer to TM 9-237.
2. Check that clamps (5) are not bent or broken.
3. Check that straps (6) are not frayed or broken. If straps are frayed or broken, get new ones.
4. Check that strap buckles (7) are not bent or broken. Straighten bent buckles. Refer to FM 43-2.

END OF TASK



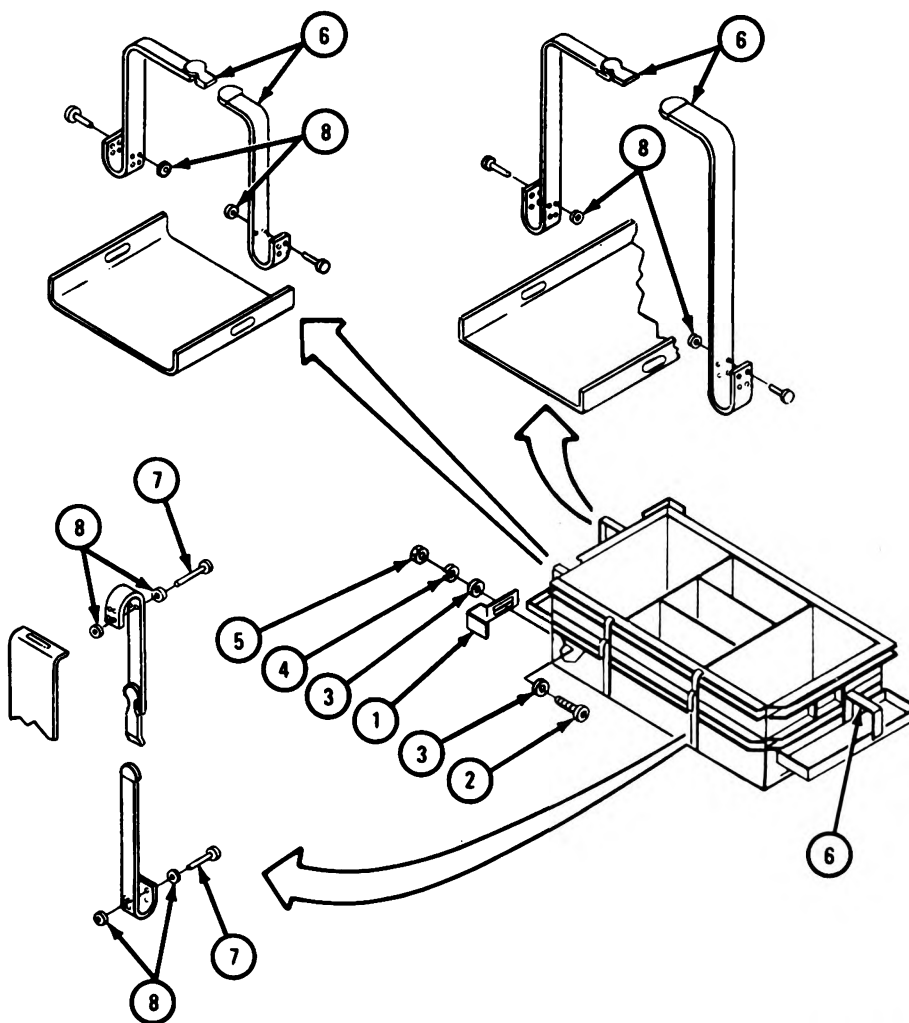
TA 104853

f. Assembly.

(1) Ammunition box.

FRAME 1

1. Put on bracket (1). Put in two capscrews (2) with four washers (3), lockwashers (4) and nuts (5).
 2. Do step 1 again for three more brackets.
 3. Put in 10 straps (6). Put in 40 rivets (7) with washers (8).
- GO TO FRAME 2

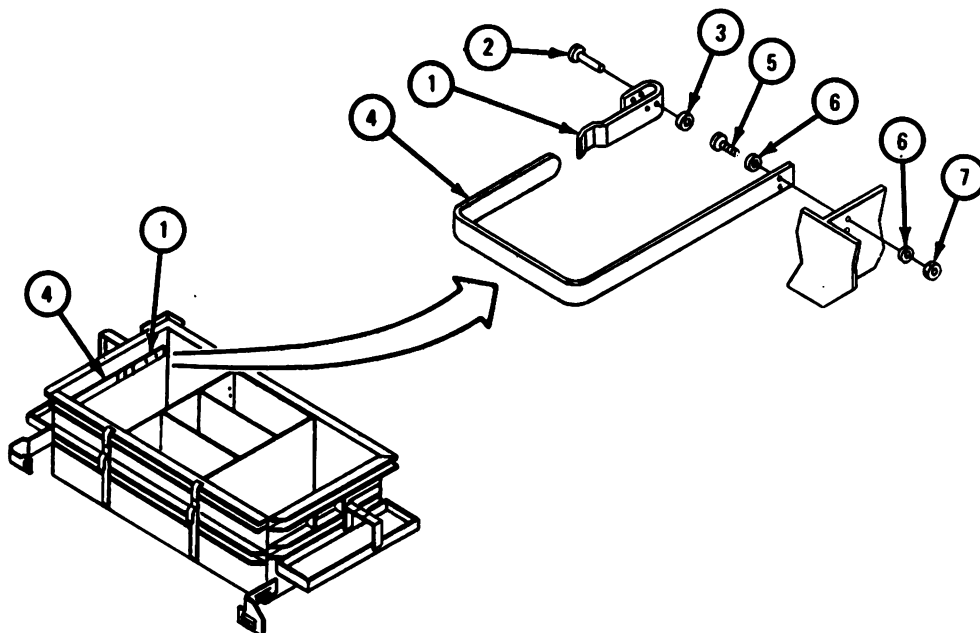


TA 104854

FRAME 2

1. Put in strap (1). Put in four rivets (2) with washers (3).
2. Put in strap (4). Put in two capscrews (5) with washers (6) and nuts (7).
3. Do steps 1 and 2 again for other side of box.

END OF TASK

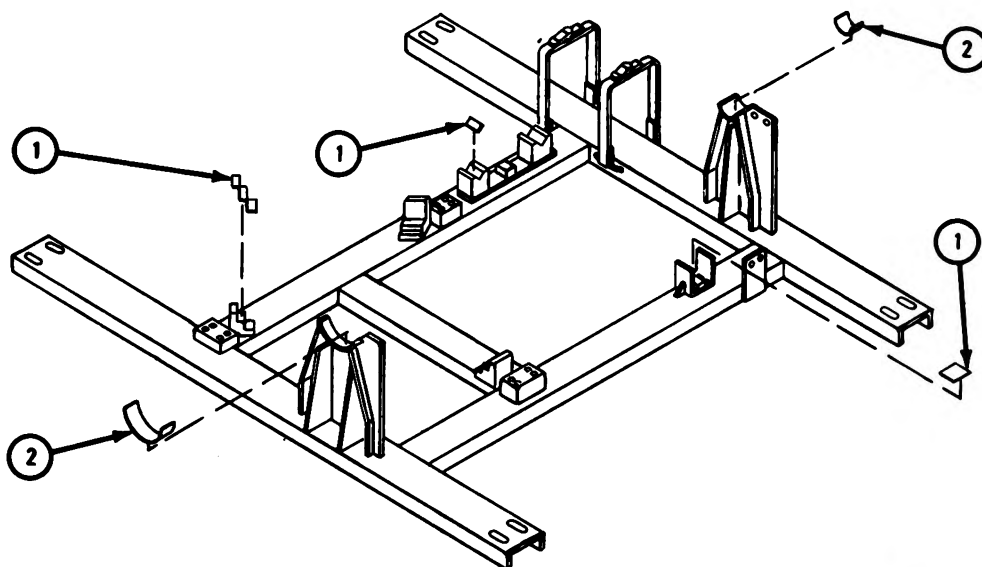


TA 104855

(2) Mortar frame.

FRAME 1

1. Put adhesive on three base plate pads (1). Press pads in place.
 2. Put adhesive on two tube pads (2). Press pads into place.
- GO TO FRAME 2

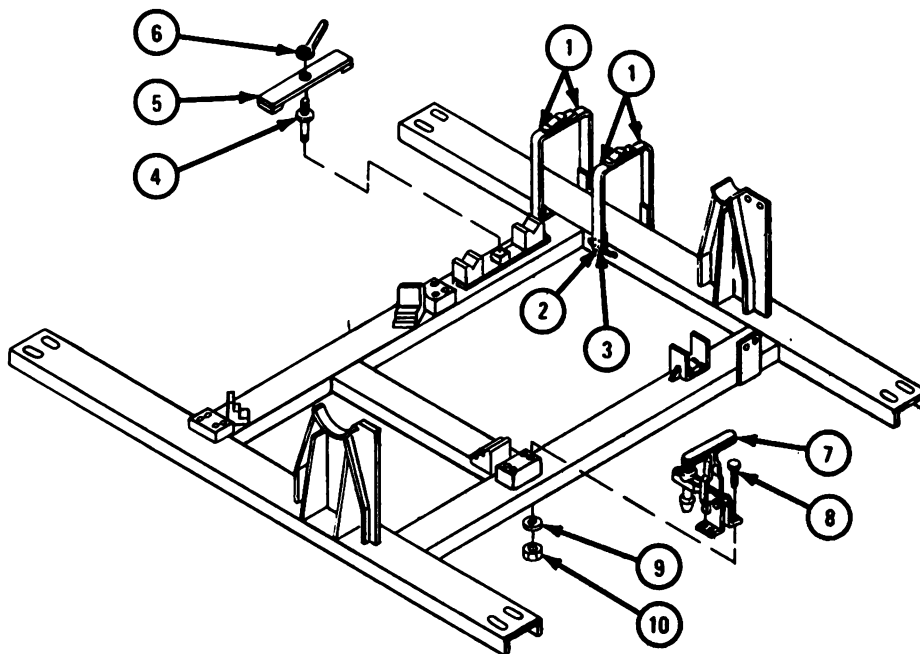


TA 104856

FRAME 2

1. Put on one strap (1). Put in four rivets (2) with eight washers (3).
2. Do step 1 again for three more straps (1).
3. Put in stud (4). Put on bar (5) and handle (6).
4. Put on baseplate clamp (7). Put in four capscrews (8) with washers (9) and nuts (10).
5. Do step 4 again for two more baseplate clamps (7).

GO TO FRAME 3

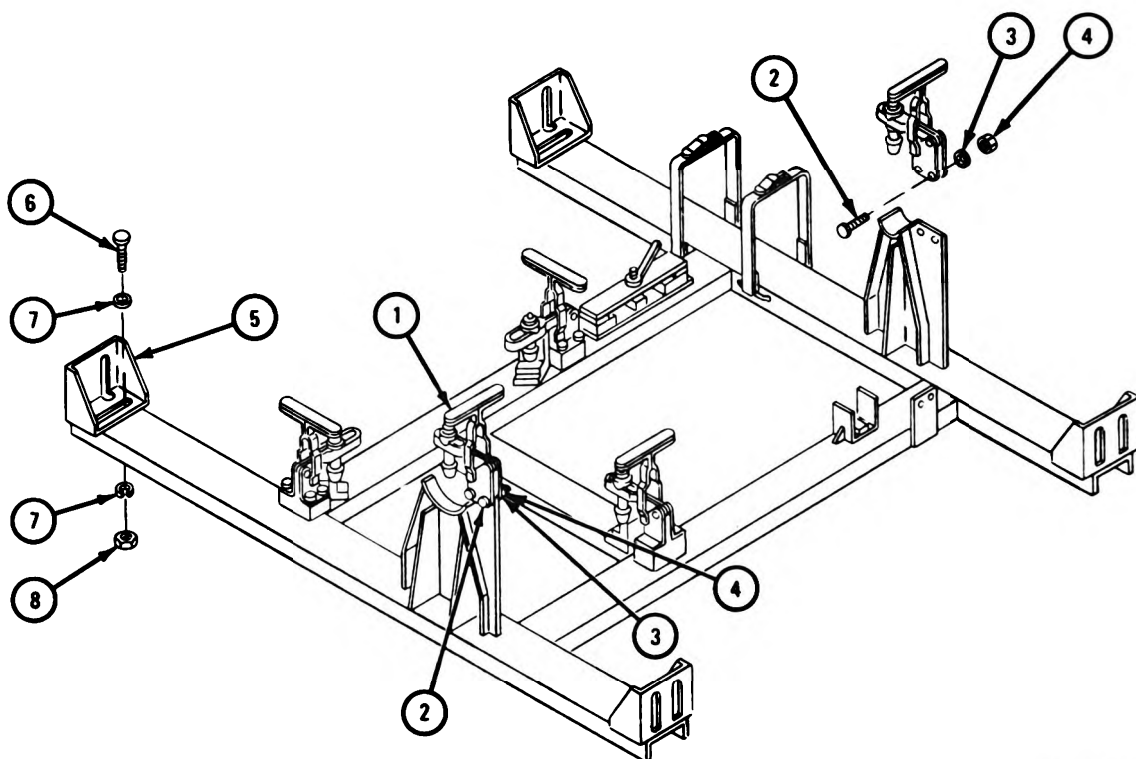


TA 104857

FRAME 3

1. Put on tube clamp (1). Put in two capscrews (2) with washers (3) and nuts (4).
2. Do step 1 again for other tube clamp (1).
3. Put on bracket (5). Put in two capscrews (6) with washers (7) and nuts (8).
4. Do step 3 again for three more brackets (5).

END OF TASK



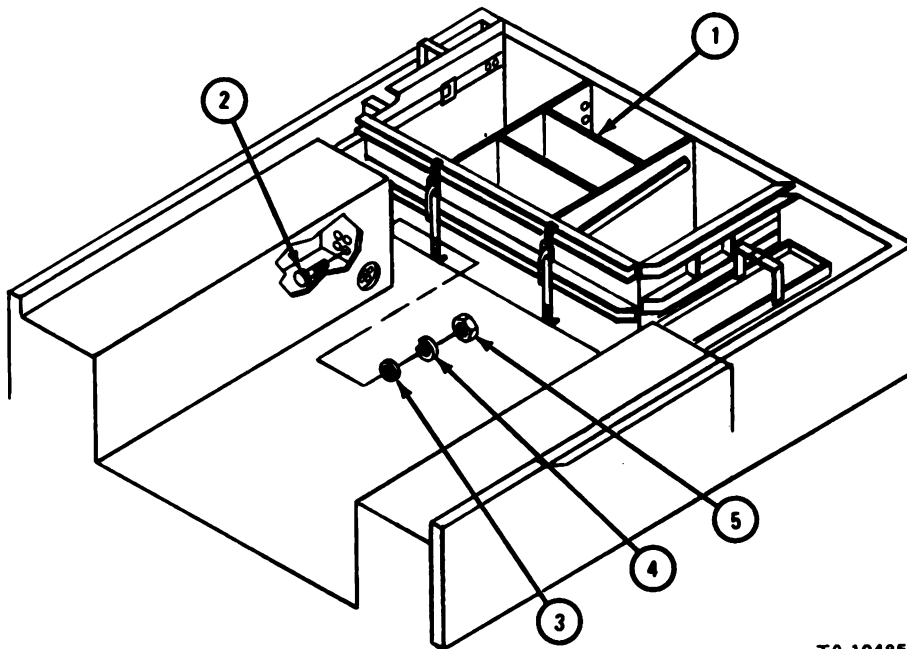
TA 104858

g. Replacement.

(1) Ammunition box.

FRAME 1

1. Put box (1) into carrier.
2. Put in four capscrews (2) with flat washers (3), lockwashers (4) and nuts (5).
3. Do step 2 again for three more brackets.

END OF TASK

TA 104859

(2) Mortar frame.

FRAME 1

Soldiers 1. Set frame (1) into carrier.

A and B

Soldier B 2. Put in four capscrews (2) with flat washers (3), lockwashers (4) and nuts (5).

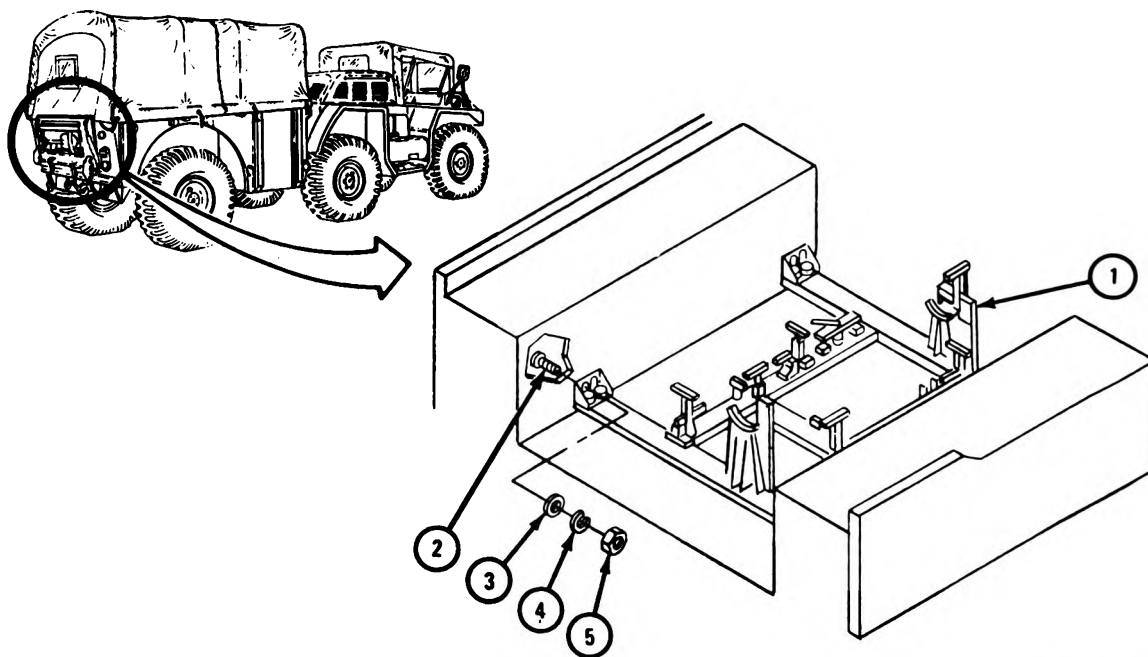
3. Do step 2 again for three more brackets.

NOTE

Follow-on Maintenance Action Required:

Close carrier tailgate. Refer to TM 9-2320-242-10.

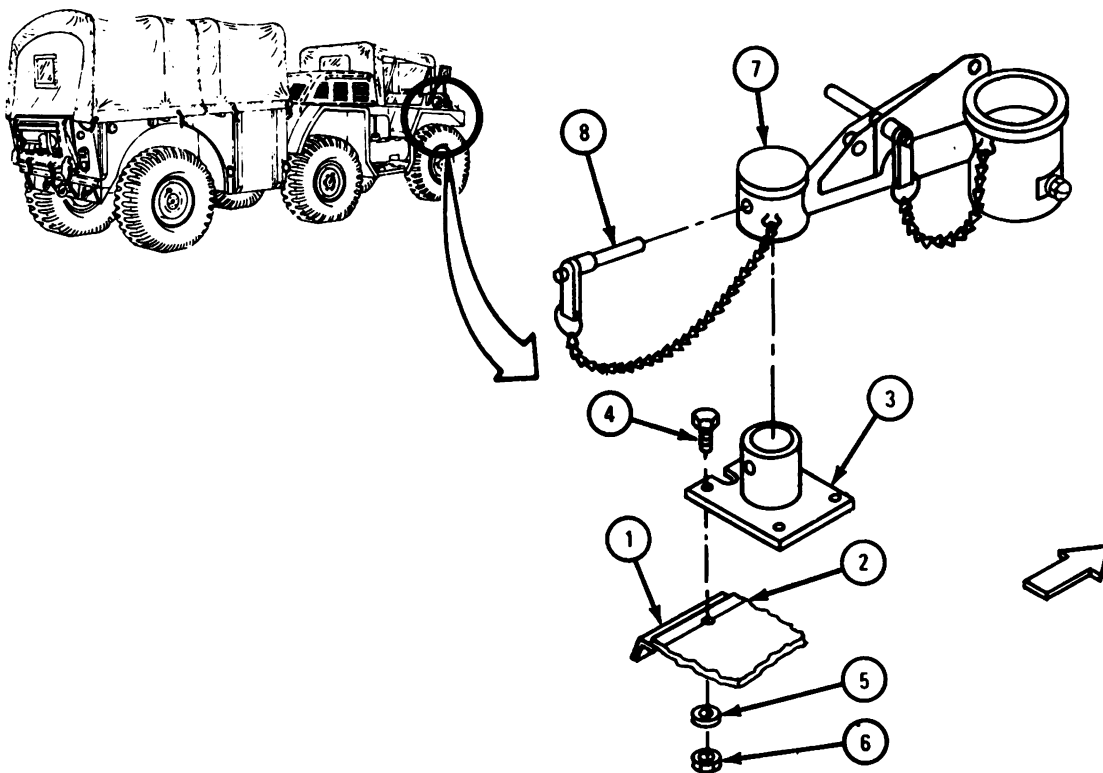
END OF TASK



TA 104860

17-34. MACHINE GUN MOUNT AND RACK INSTALLATION (TRUCK M561).**TOOLS:** No special tools required**SUPPLIES:** Machine gun mount installation kit**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**FRAME 1**

1. Measure 2 inches in from edge of right fender (1). Draw line (2).
2. Aline base (3) with fourth fender bolt from rear. Bolt should center in notch of base. Line (2) should go through center of holes in base.
3. Drill four holes through fender (1) with base (3) as guide.
4. Put in four capscrews (4) and put on four flat washers (5) and nuts (6).
5. Put on mount (7).
6. Put in pin (8).

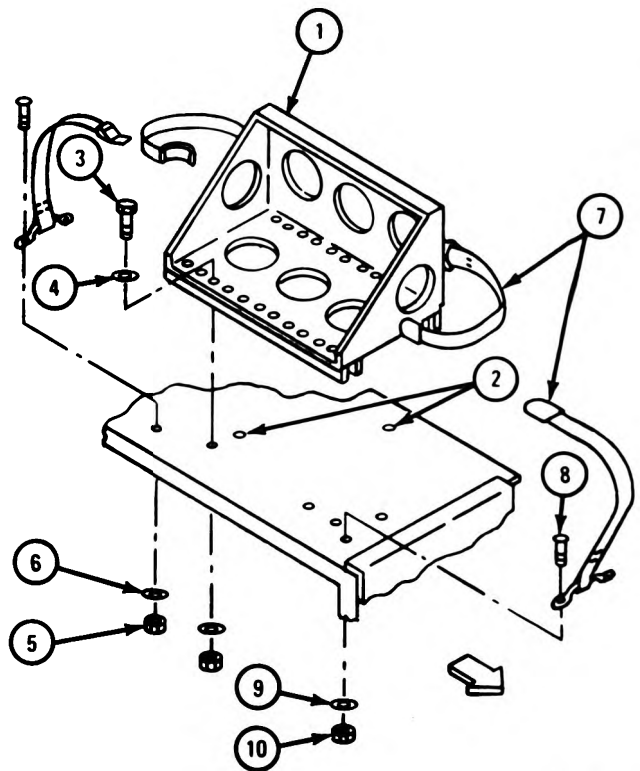
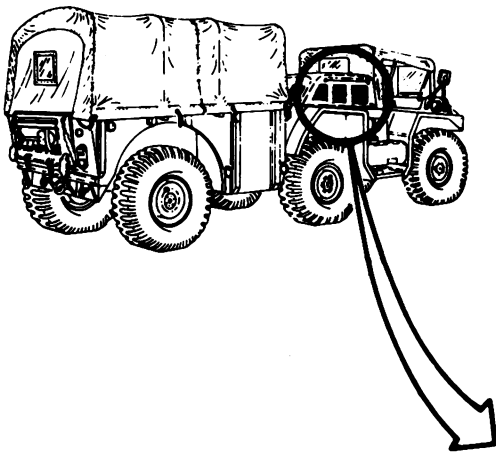
GO TO FRAME 2

TA 101490

FRAME 2

1. Put rack assembly (1) on right rear fender. Mark and drill eight holes (2).
2. Put in eight machine screws (3) with flat washers (4). Put on eight self-locking nuts (5) with flat washers (6).
3. Put straps (7) in place. Drill four holes and put in four machine screws (8). Put on flat washer (9) and self-locking nut (10).
4. Do step 3 again for other side of rack (1).

GO TO FRAME 3

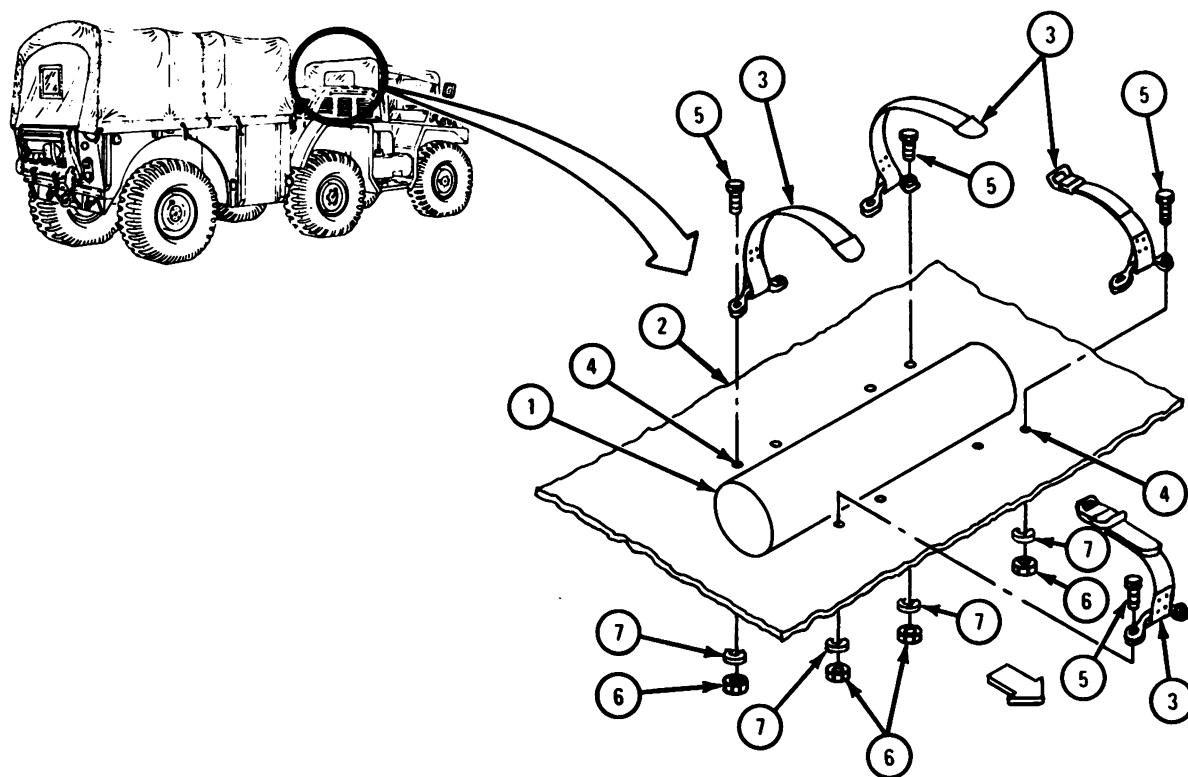


TA 101491

FRAME 3

1. Put machine gun barrel in bag (1) on center of engine cover (2).
2. Position four straps (3) so that they will hold barrel in bag (1) when they are tightened. Mark and drill eight holes (4). Put on straps (3).
3. Put in eight machine screws (5).
4. Open engine cover. Refer to TM 9-2320-242-10.
5. Put on eight nuts (6) with lockwasher (7).
6. Close engine cover. Refer to TM 9-2320-242-10.

END OF TASK



TA 101492

17-35. 7.62 MACHINE GUN KIT REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: None

PERSONNEL: One

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

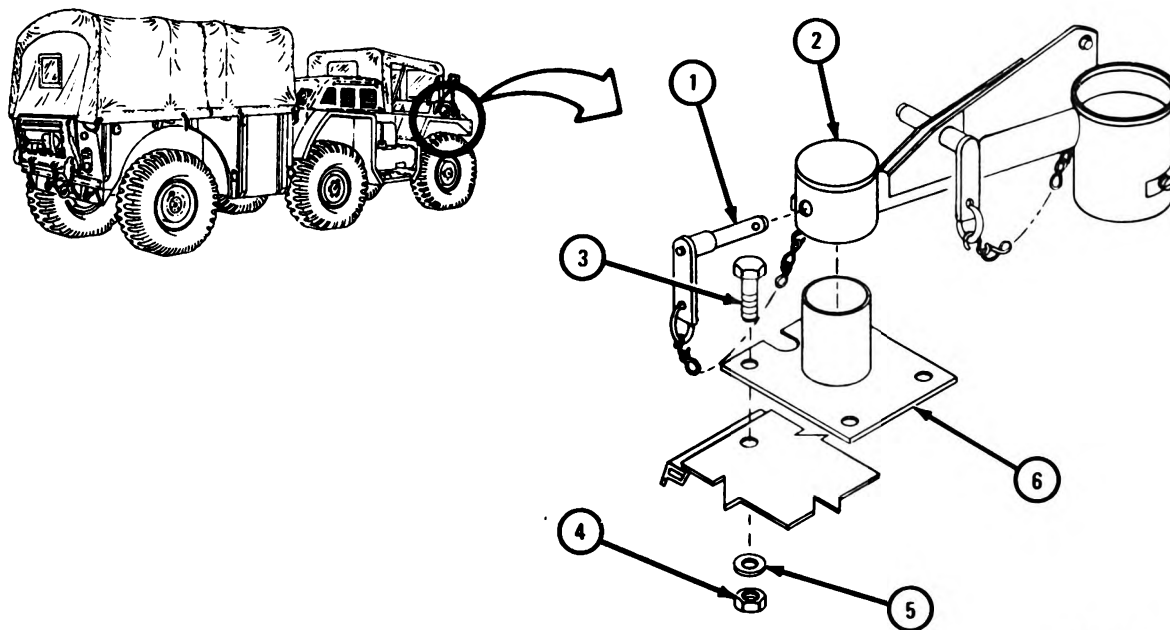
a. Removal.

(1) Machine gun mount and bracket.

FRAME 1

1. Pull out pin (1). Take out mount (2).
2. Take out four capscrews (3) with nuts (4) and washers (5).
3. Take off bracket (6).

END OF TASK

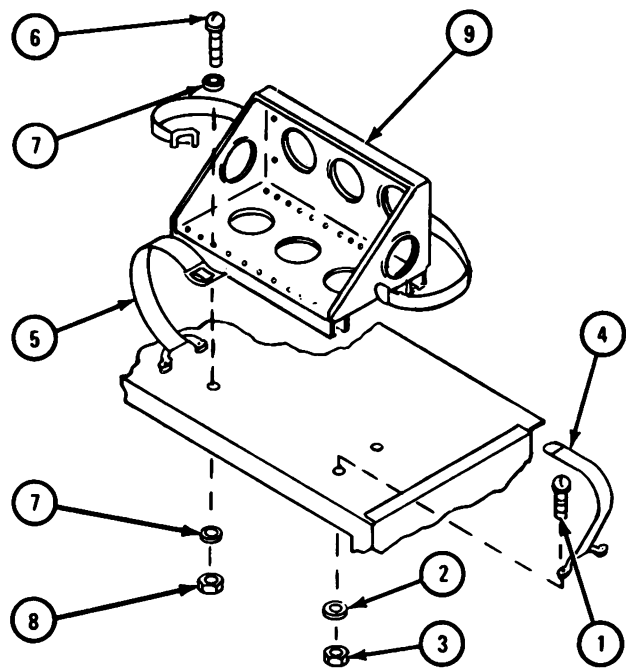
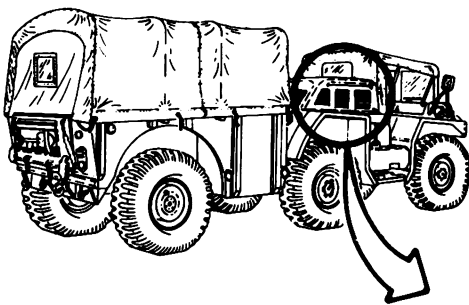


TA 104837

(2) Rack assembly.

FRAME 1

1. Take out two capscrews (1) with washers (2) and nuts (3). Take off strap (4).
2. Do step 1 again for other strap (5).
3. Take out eight capscrews (6) with washers (7) and nuts (8).
4. Take out rack assembly (9).

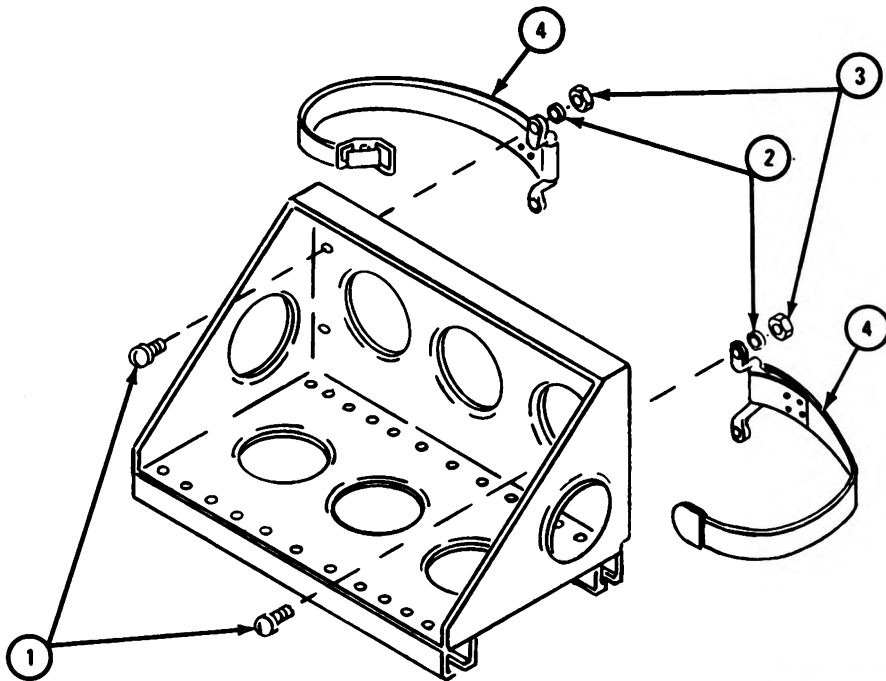
GO TO FRAME 2

TA 104838

FRAME 2

1. Take out four screws (1) with washers (2) and nuts (3).
2. Take off two straps (4).

END OF TASK



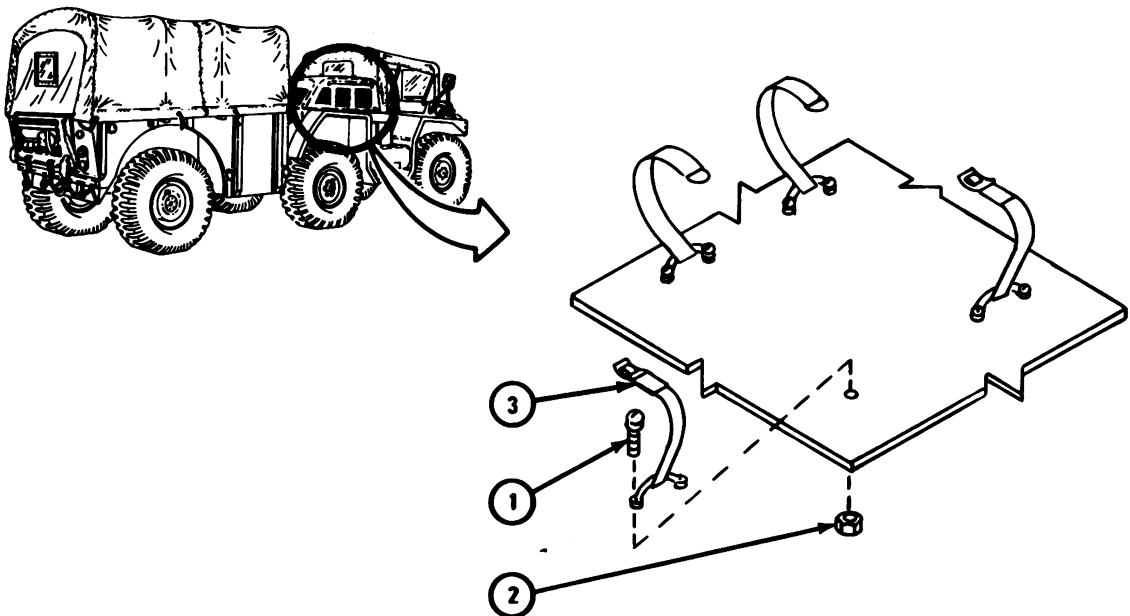
TA 104839

(3) Barrel stowage straps.

FRAME 1

1. Open engine cover. Refer to TM 9-2320-242-10.
2. Take out machine gun barrel and bag. Refer to TM 9-2320-242-10.
3. Take out two capscrews (1) with nuts (2). Take off strap (3).
4. Do step 3 again for three other straps (3).

END OF TASK



TA 104840

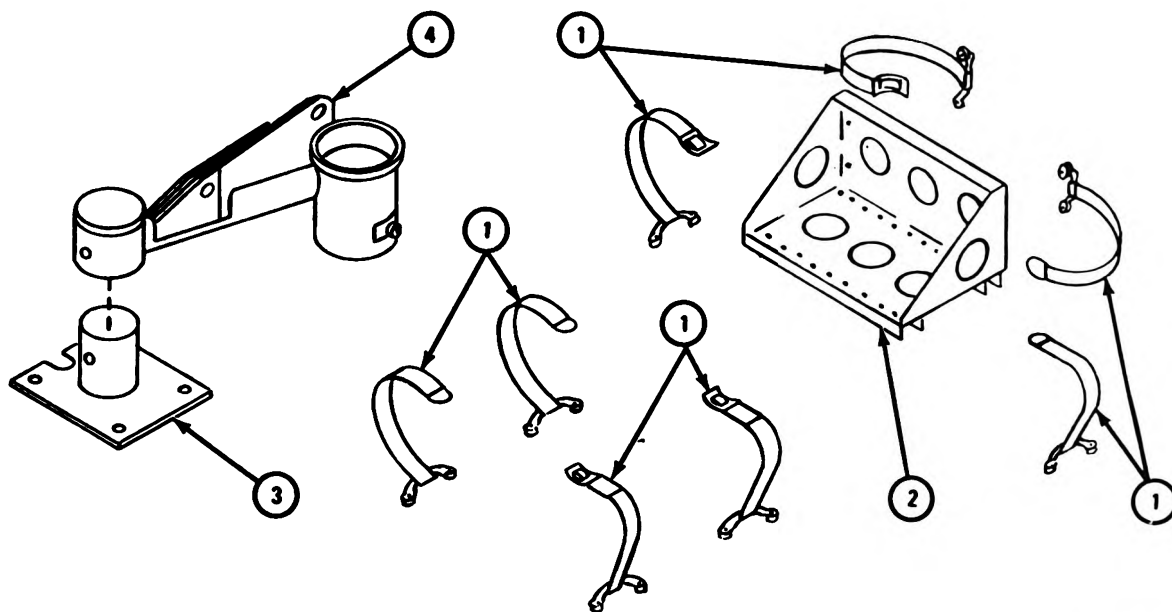
b. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

c. Inspection and Repair.

FRAME 1

1. Check that straps (1) are not frayed or torn. If straps are frayed or torn, get new ones.
2. Check that rack (2), bracket (3), and mount (4) have no cracks or bends. Straighten bends. Refer to FM 43-2. Weld cracks. Refer to TM 9-237.

END OF TASK



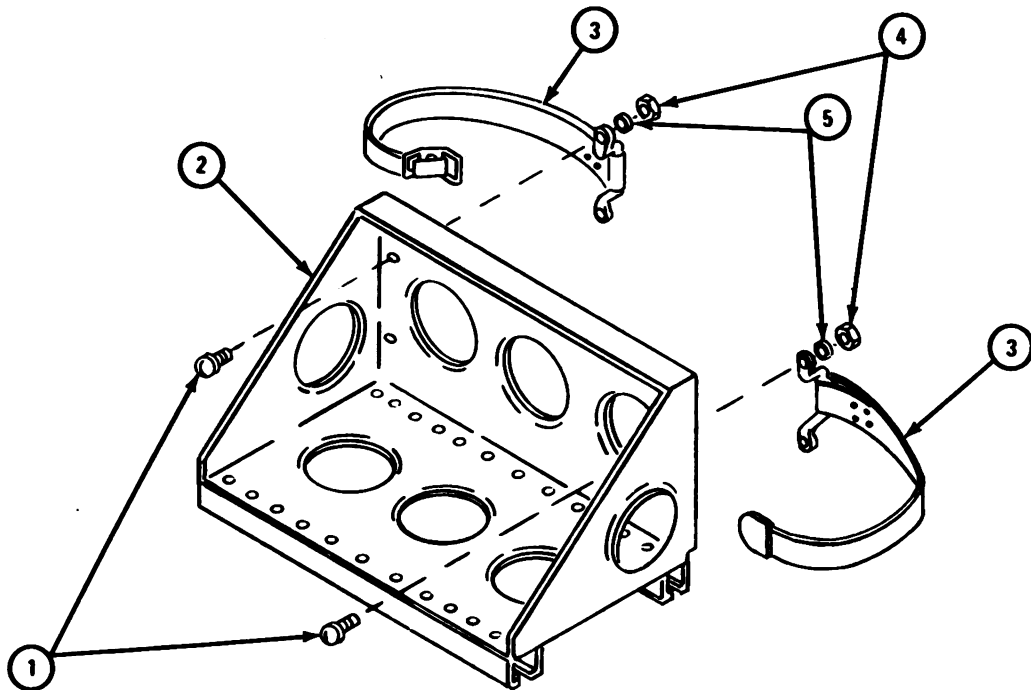
TA 104841

d. Replacement.

(1) Rack assembly.

FRAME 1

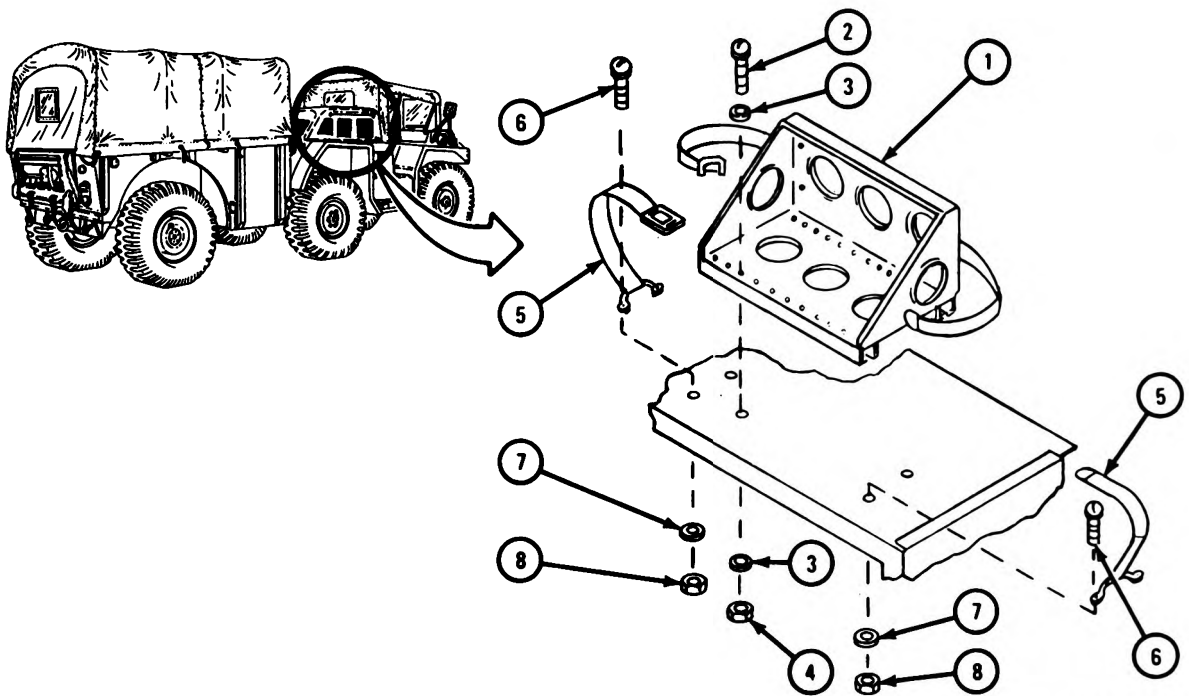
1. Put four screws (1) into rack (2).
 2. Put on two straps (3).
 3. Put on two nuts (4) with washers (5).
- GO TO FRAME 2



TA 104842

FRAME 2

1. Put rack assembly (1) on fender.
 2. Put in eight capscrews (2) with washers (3) and nuts (4).
 3. Put on two straps (5).
 4. Put in four capscrews (6) with washers (7) and nuts (8).
- END OF TASK



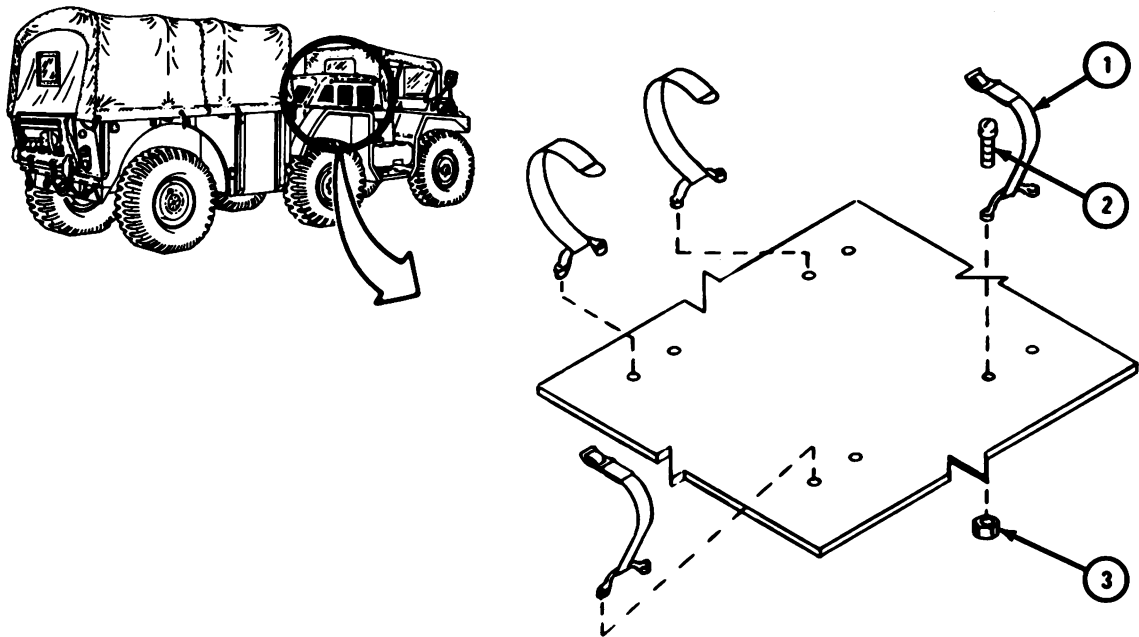
TA 104843

(2) Barrel stowage straps.

FRAME 1

1. Put on strap (1). Put in two capscrews (2) with nuts (3).
2. Do step 1 again for three other straps (1).
3. Close engine cover. Refer to TM 9-2320-242-10.
4. Replace gun barrel and bag. Refer to TM 9-2320-242-10.

END OF TASK



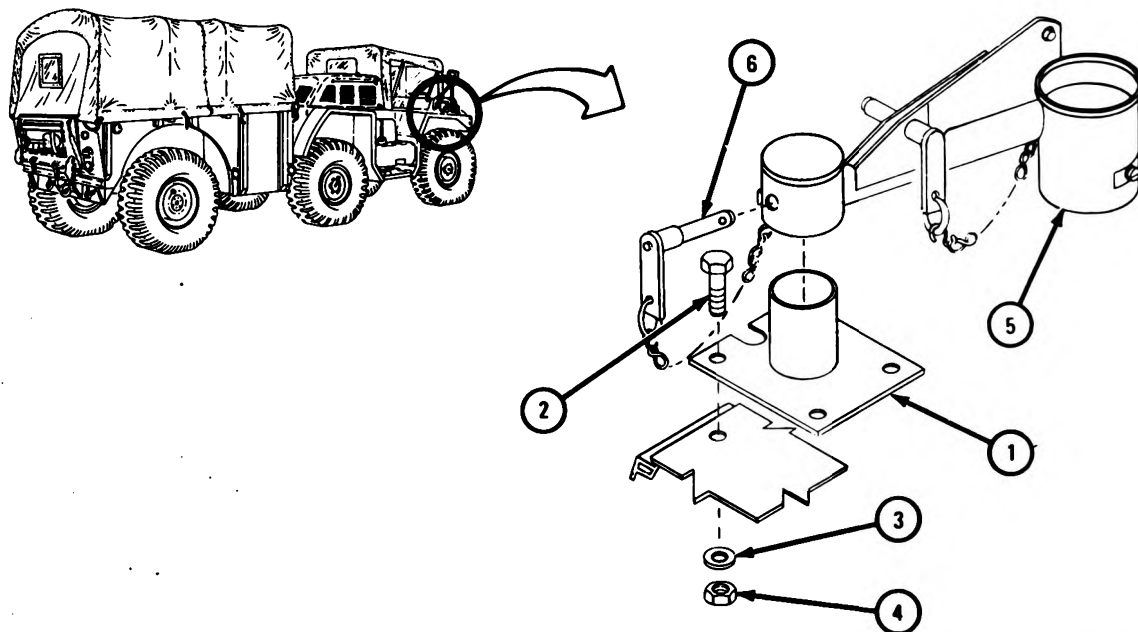
TA 104844

(3) Machine gun mount and bracket.

FRAME 1

1. Put bracket (1) on fender. Put in four capscrews (2) with washers (3) and nuts (4).
2. Put mount (5) on bracket. Put in pin (6).

END OF TASK



TA 104845

17-36. 4.2-INCH MORTAR KIT INSTALLATION (TRUCK M561).

TOOLS: No special tools required

SUPPLIES: 4.2 inch mortar kit

PERSONNEL: Two

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

a. Preliminary Procedures.

(1) Open carrier tailgate. Refer to TM 9-2320-242-10.

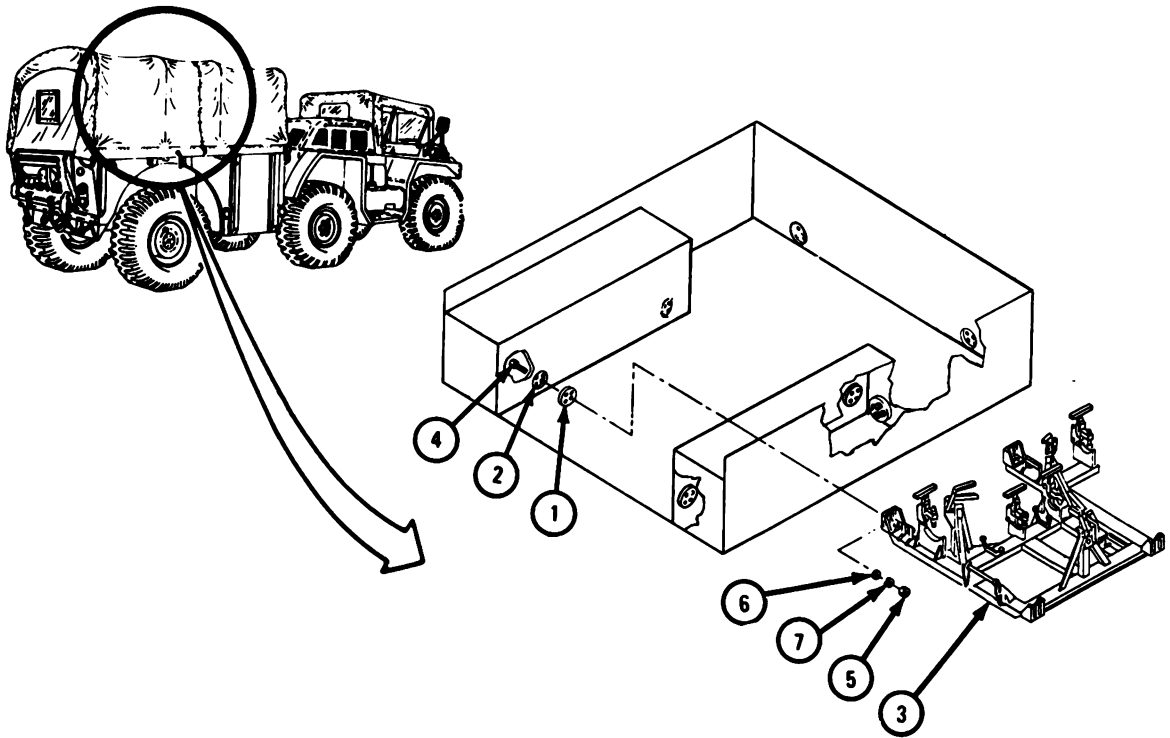
(2) Remove carrier tiedown plates. Refer to TM 9-2320-242-20.

b. Installation.

FRAME 1

1. Put four spacers (1) in tiedown plate opening (2).
- Soldiers A and B 2. Put frame assembly (3) into carrier body.
- Soldier A 3. Put four capscrews (4) through plate (2) and spacer (1).
4. Put on four nuts (5) with flat washers (6) and lockwashers (7).
5. Do steps 3 and 4 again for three other plate openings (2).

GO TO FRAME 2

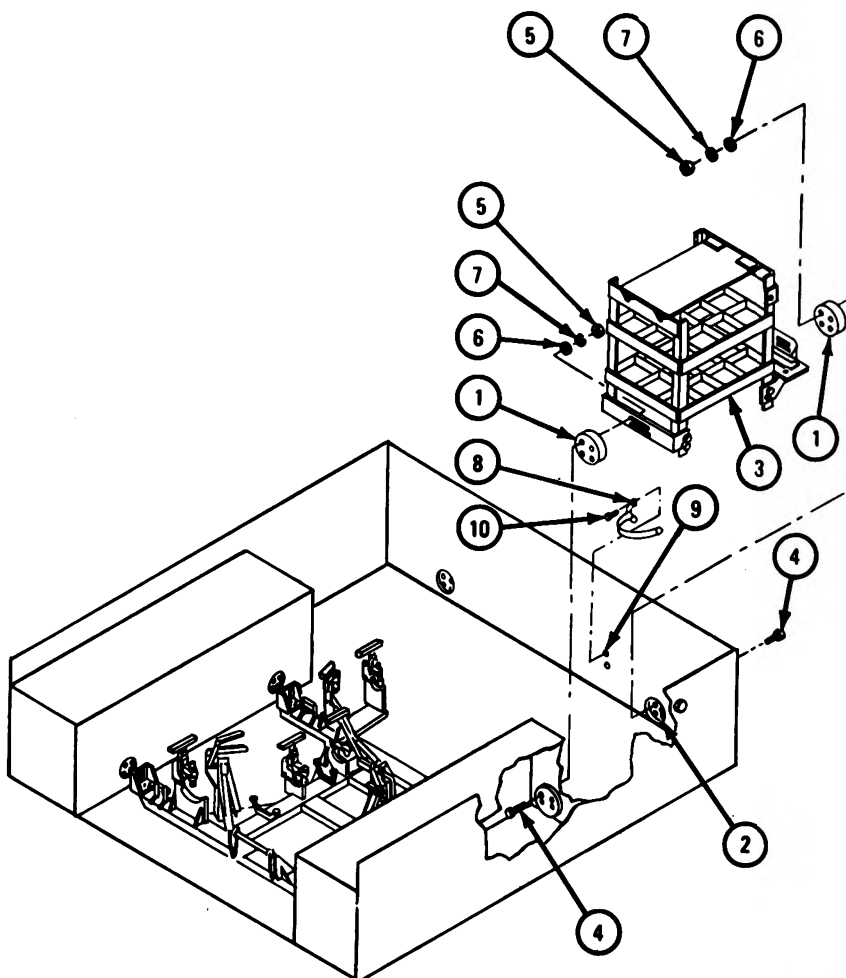


TA 101493

FRAME 2

1. Put two spacers (1) in tiedown plate openings (2).
2. Set ammunition rack (3) in place. Put in eight capscrews (4). Put on eight nuts (5) with flat washers (6) and lockwashers (7).
3. Put male barrel strap (8) in place. Drill two holes (9). Put in two self-tapping screws (10).

GO TO FRAME 3



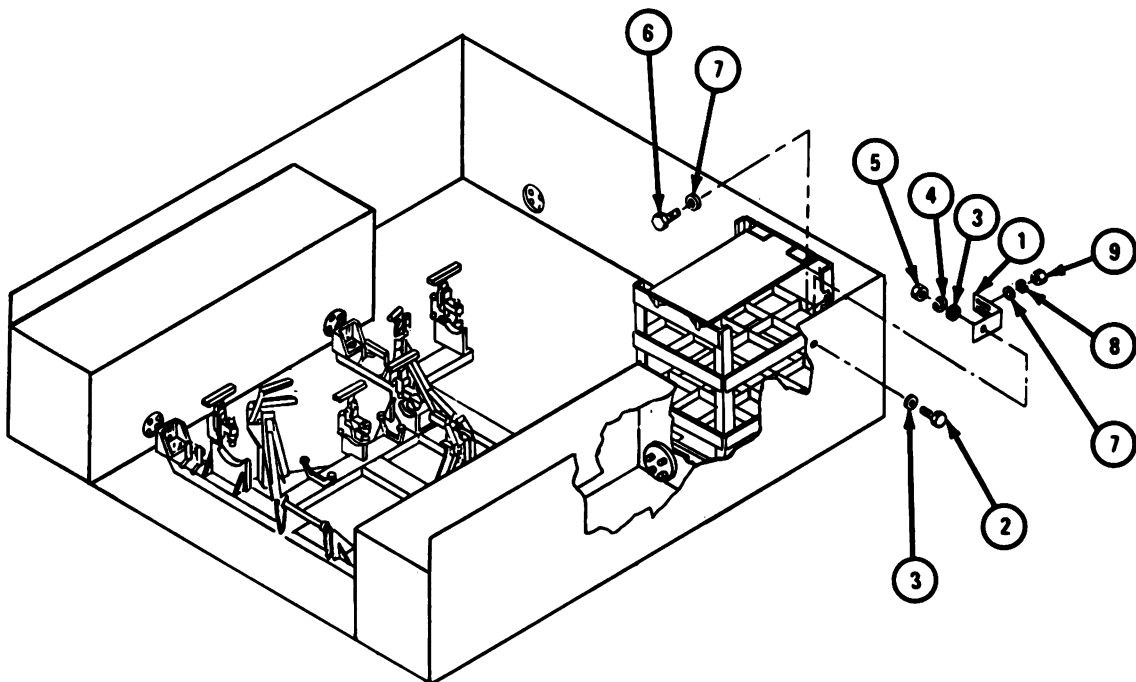
TA 101494

FRAME 3

1. Put bracket (1) between hull and ammunition rack. Put in capscrew (2) with two flat washers (3), lockwasher (4), and nut (5).
2. Put in two capscrews (6) with four flat washers (7), two lockwashers (8), and two nuts (9).
3. Do frames 2 and 3 again for other strap and rack.

NOTE**Follow-on Maintenance Action Required:**

1. Replace carrier tiedown plates. Refer to TM 9-2320-242-20.
2. Close carrier tailgate. Refer to TM 9-2320-242-10.

END OF TASK

TA 101495

17-37. 4.2-INCH MORTAR KIT REMOVAL, REPAIR, AND REPLACEMENT.

TOOLS: No special tools required

SUPPLIES: Rivets
Adhesive, type II, MIL-A-5092

PERSONNEL: Two

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

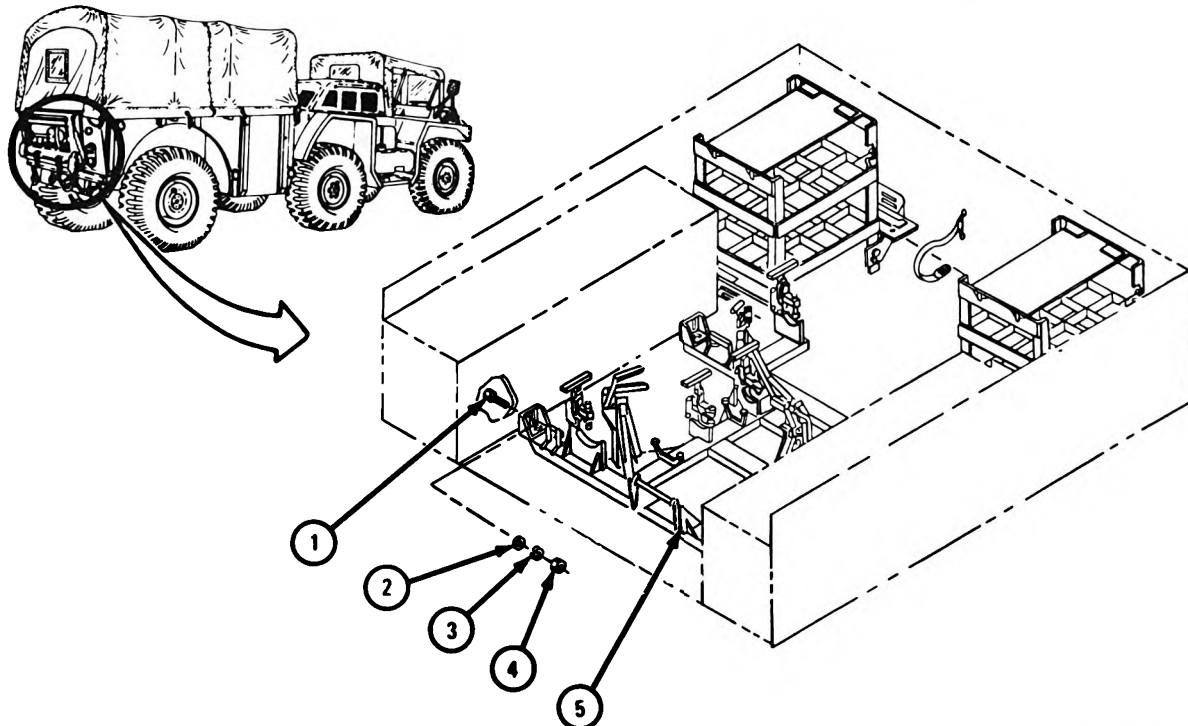
a. Preliminary Procedure. Open carrier tailgate. Refer to TM 9-2320-242-10.

b. Removal.

(1) Mortar frame.

FRAME 1

- Soldier A 1. Take out four capscrews (1) with flat washers (2), lockwashers (3), and nuts (4).
2. Do step 1 again for three more brackets.
- Soldiers A and B 3. Lift out frame (5).
- END OF TASK



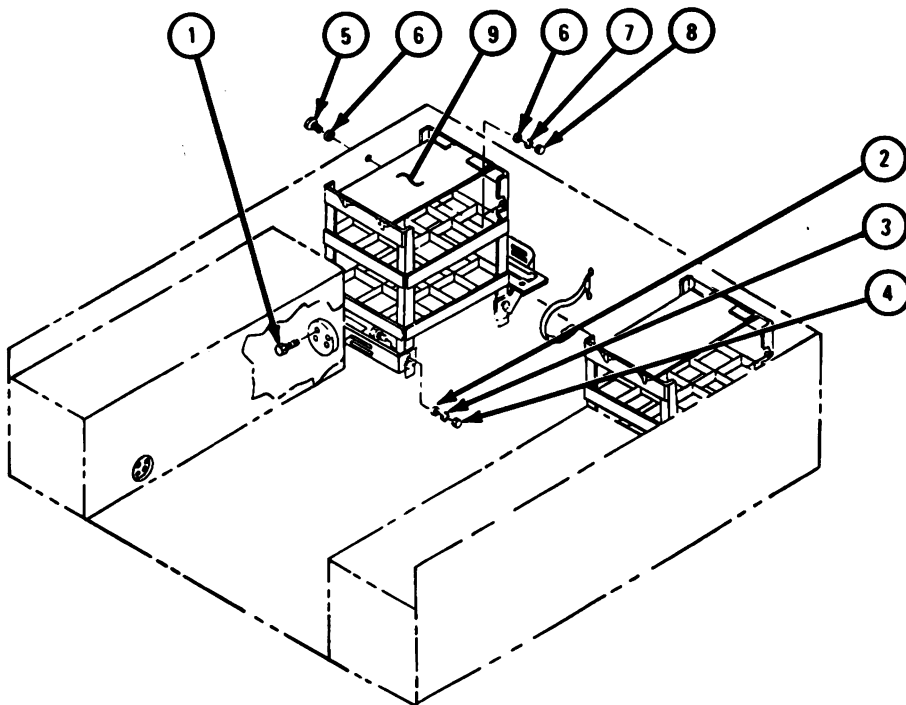
TA 104861

(2) Ammunition boxes.

FRAME 1

1. Take out four capscrews (1) with flat washers (2), lockwashers (3), and nuts (4).
2. Do step 1 again on other side of box.
3. Take out capscrew (5) with flat washers (6), lockwasher (7), and nut (8).
4. Take out ammunition box (9).
5. Do steps 1 through 4 again for other ammunition box (9).

END OF TASK



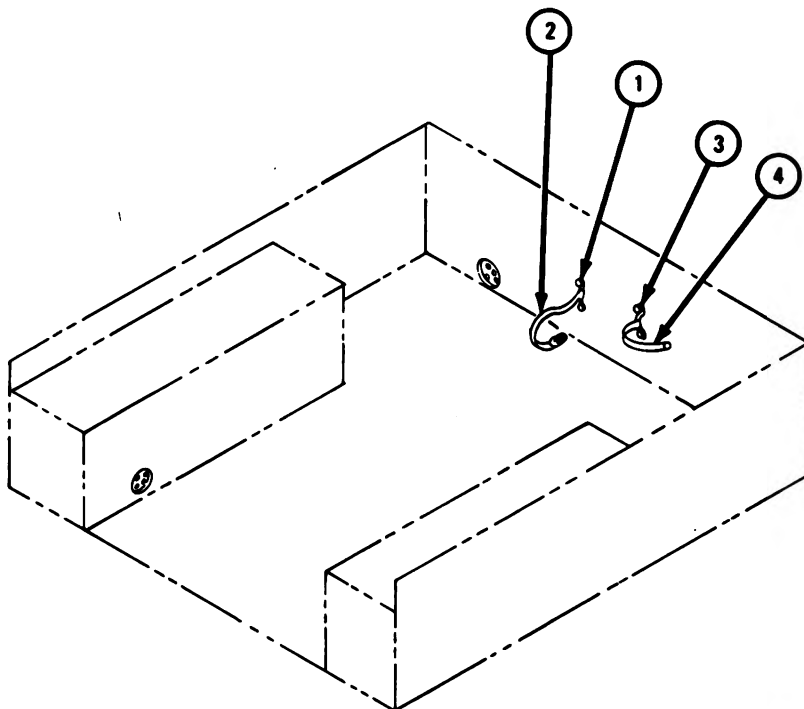
TA 104862

(3) Tube straps.

FRAME 1

1. Take out two screws (1). Take out strap (2).
2. Take out two screws (3). Take out strap (4).

END OF TASK



TA 104863

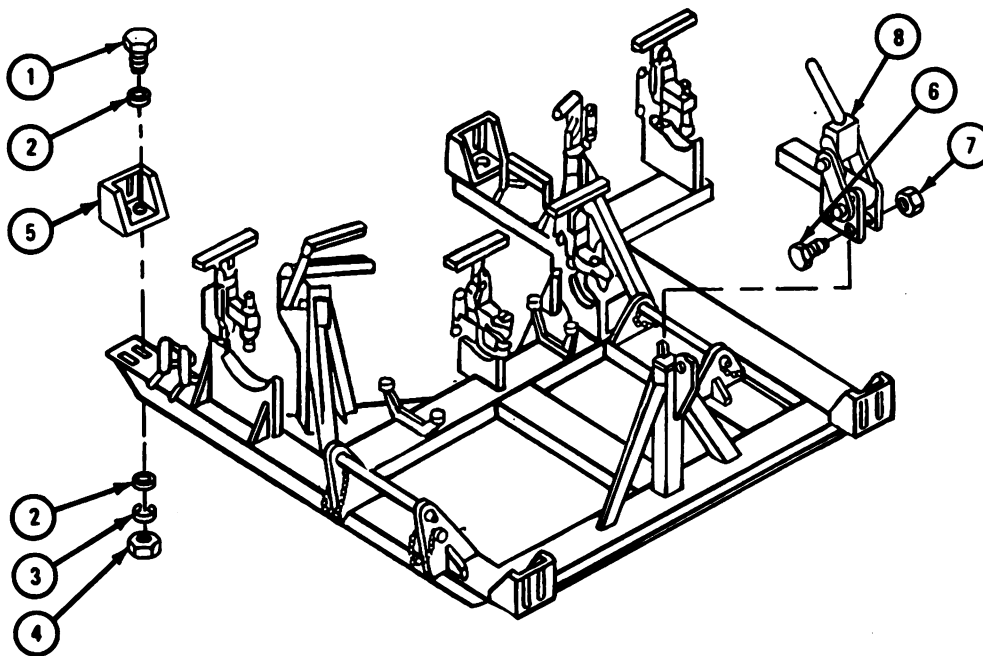
c. Disassembly.

(1) Mortar frame.

FRAME 1

1. Take out two capscrews (1) with flat washers (2), lockwashers (3), and nuts (4). Take off bracket (5).
2. Do step 1 again for three more brackets.
3. Take out two capscrews (6) with nuts (7). Take off clamp (8).
4. Do step 3 again for six more clamps (8).

GO TO FRAME 2

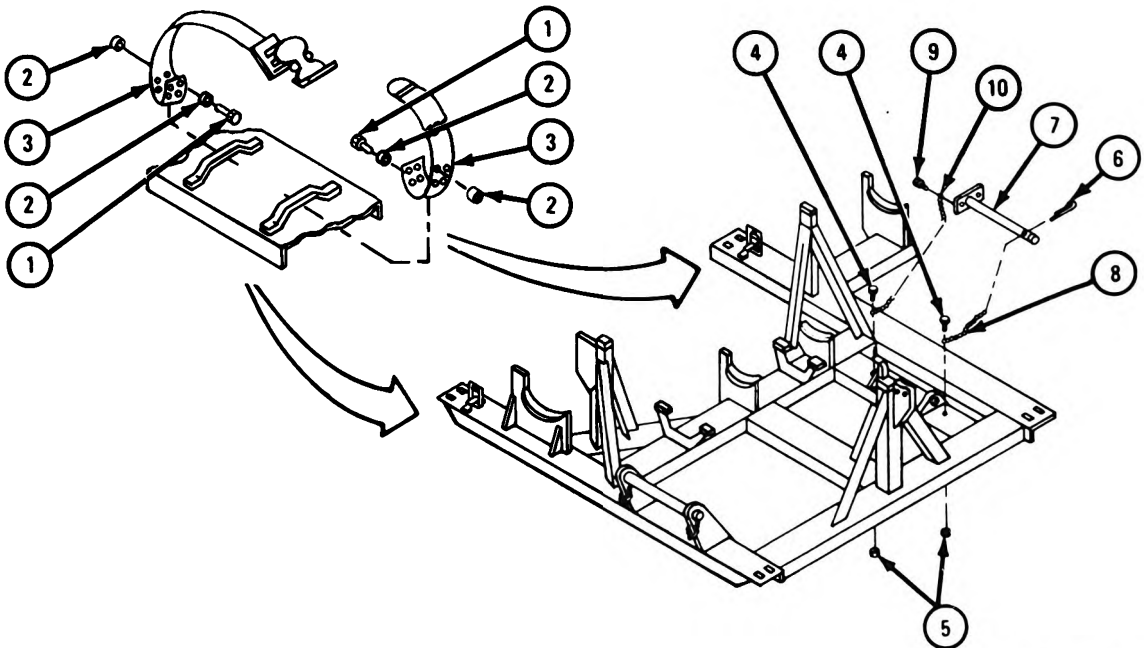


TA 104864

FRAME 2

1. Take out 16 rivets (1) with washers (2). Take off straps (3).
2. Take out two screws (4) with nuts (5). Take out pin (6).
3. Take out pin (7) and chain (8).
4. Take out screw (9). Take off chain (10).

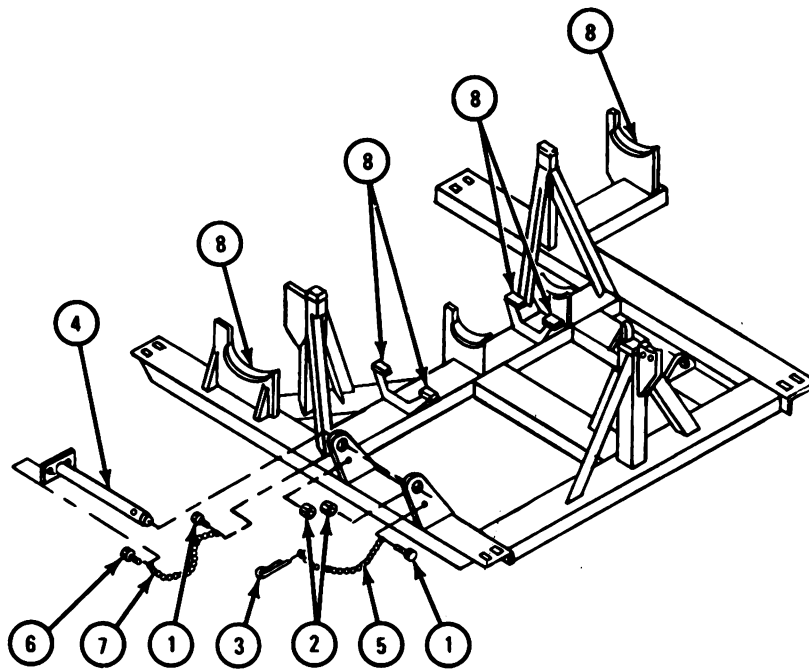
GO TO FRAME 3



TA 104865

FRAME 3

1. Take out two screws (1) with nuts (2). Take out pin (3).
2. Take out pin (4). Take out chain (5).
3. Take out screw (6) and chain (7).
4. Take off six pads (8).

END OF TASK

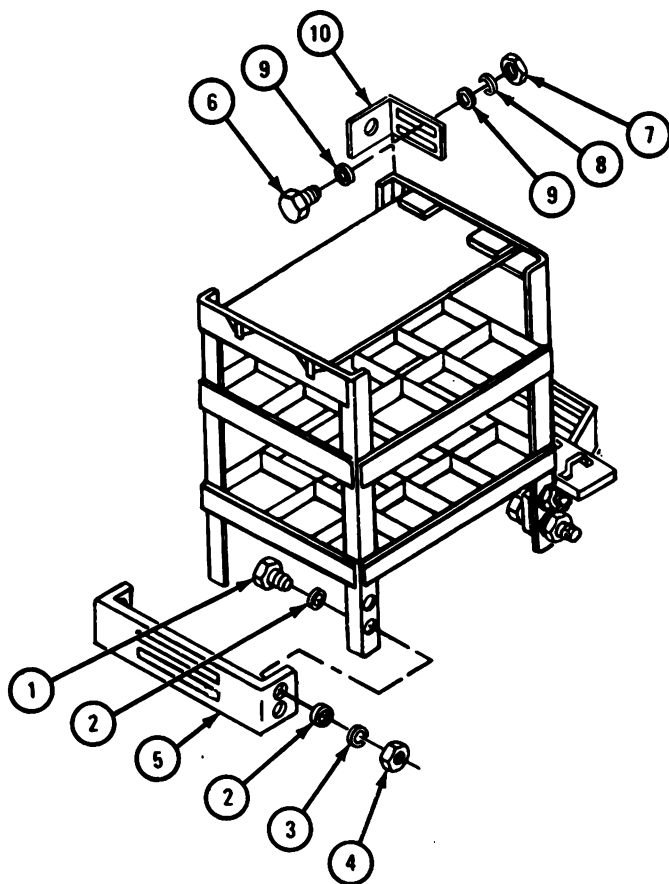
TA 104866

(2) Ammunition boxes.

FRAME 1

1. Take out four capscrews (1) with flat washers (2), lockwashers (3), and nuts (4), two on each side of bracket (5). Take out bracket.
2. Do step 1 again on other side of box.
3. Take out two capscrews (6) with nuts (7), lockwashers (8), and flat washers (9). Take off bracket (10).

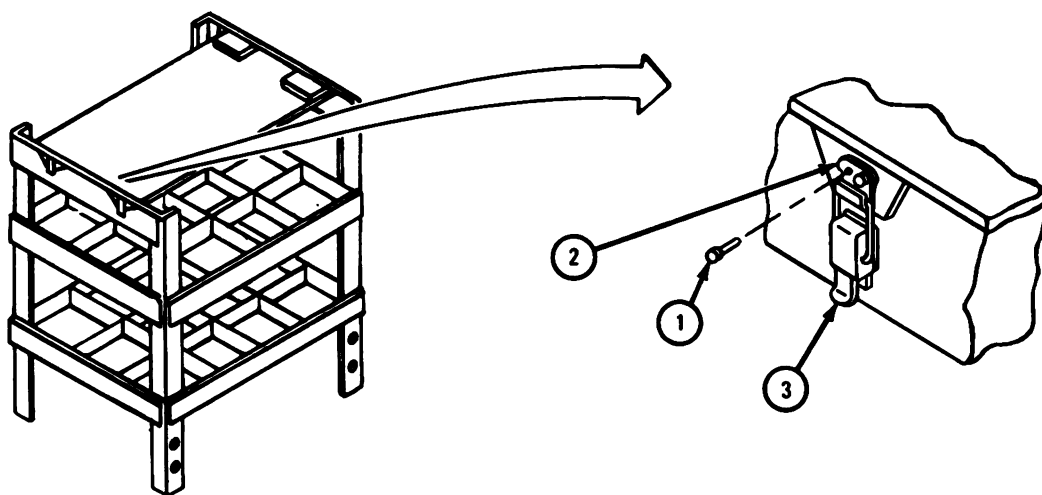
GO TO FRAME 2



TA 104867

FRAME 2

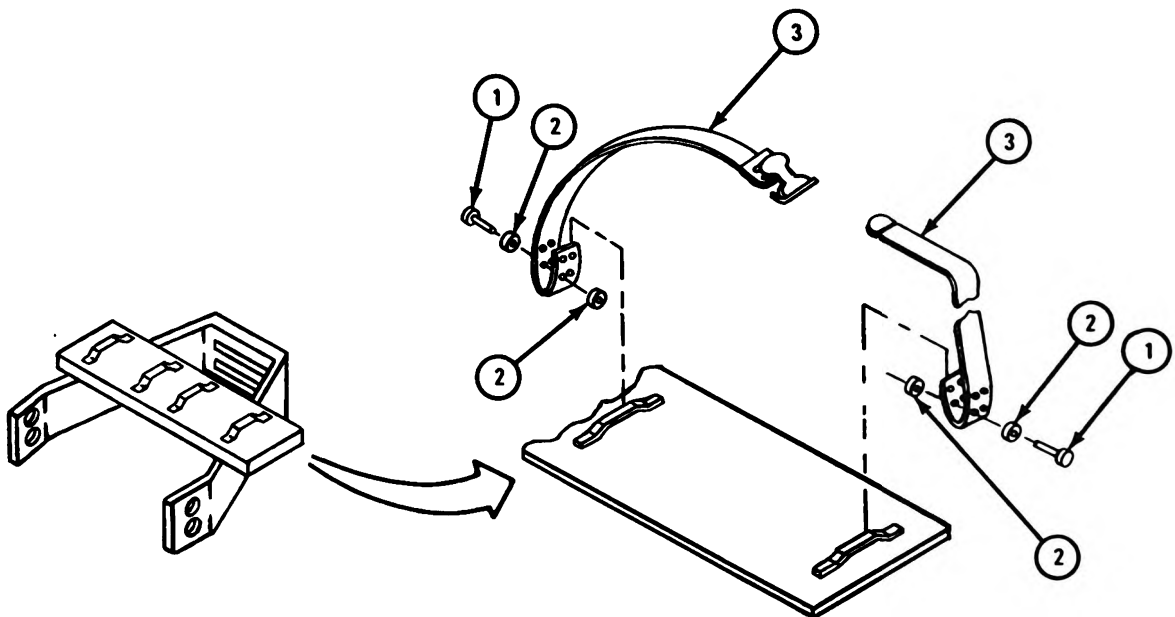
1. Drill out eight rivets (1). Take off two catches (2) and latches (3).
GO TO FRAME 3



TA 104868

FRAME 3

1. Take out 16 rivets (1) with washers (2).
 2. Take out four straps (3).
 3. Do frames 1 and 2 and steps 1 and 2 again for other box.
- END OF TASK



TA 105065

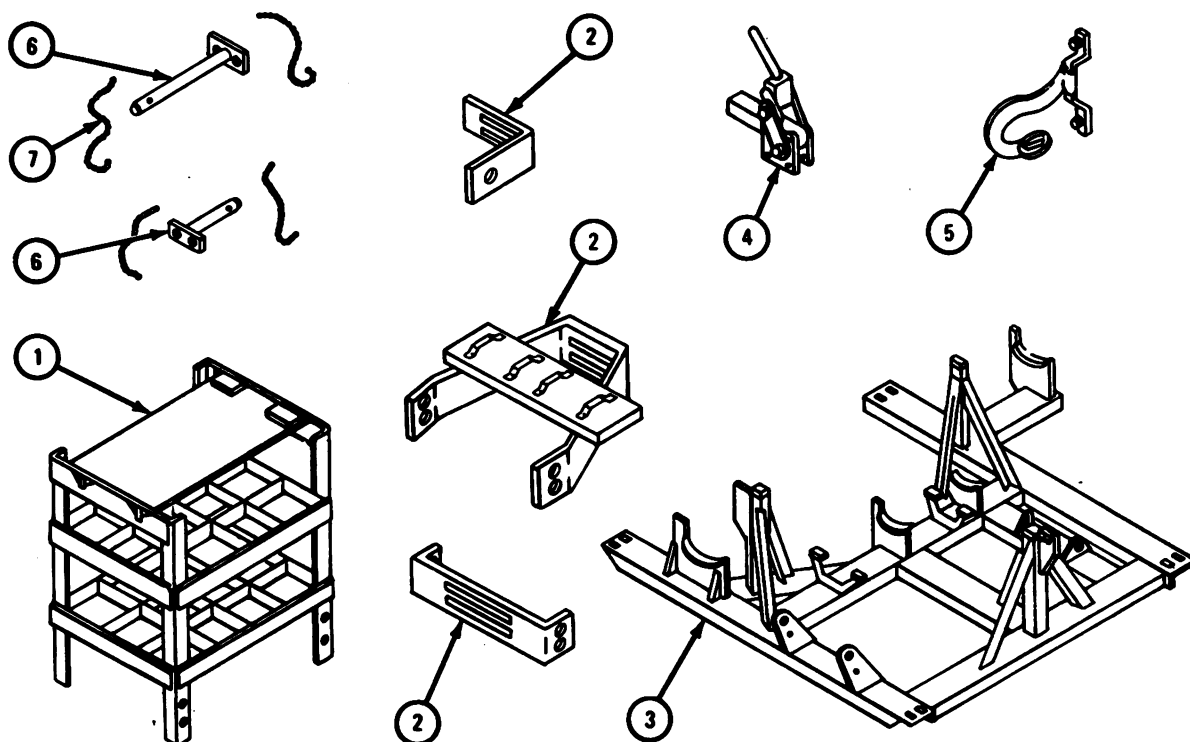
d. Cleaning. There are no special cleaning procedures needed. Refer to cleaning procedures given in Part 1, para 1-3.

e. Inspection and Repair.

FRAME 1

1. Check that boxes (1), brackets (2), and frame (3) have no bends or cracks. Straighten bends. Refer to FM 43-2. Weld cracks. Refer to TM 9-237.
2. Check that clamps (4) have no bends or breaks. If clamps are bent or broken, get new ones.
3. Check that straps (5) are not frayed or broken. If straps are frayed or broken, get new ones.
4. Check that pins (6) are straight. If pins are bent, get new ones.
5. Check that chains (7) have no broken links. If chain has broken links, get a new chain.

END OF TASK



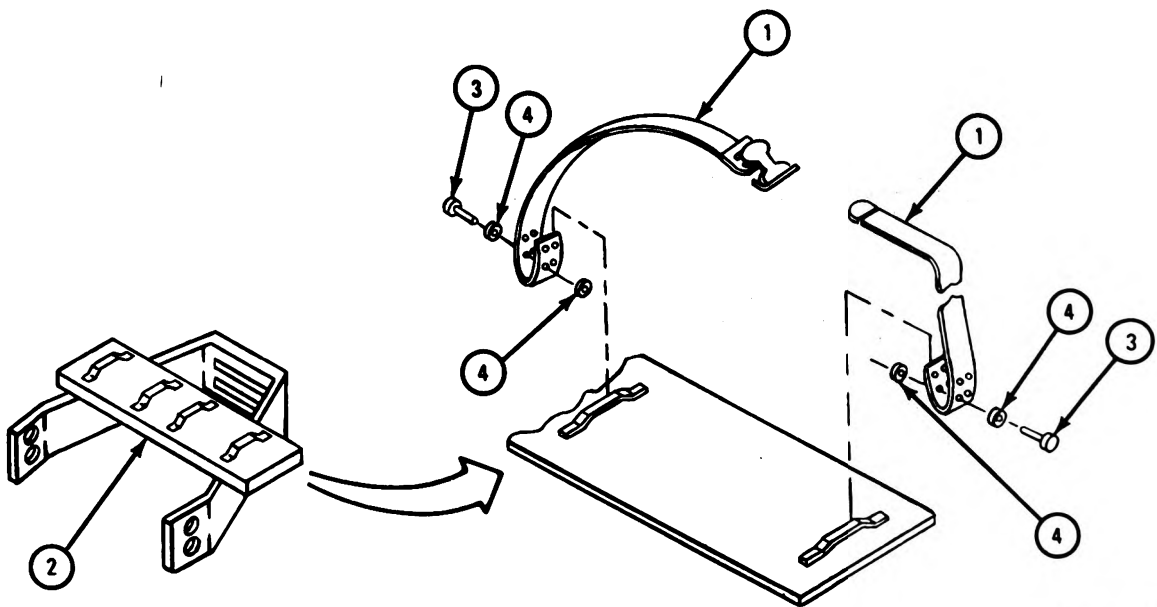
TA 104869

f. Assembly.

(1) Ammunition boxes.

FRAME 1

1. Put two straps (1) on bracket (2).
 2. Put in eight rivets (3) with washers (4).
 3. Do steps 1 and 2 again on other side of bracket (2).
- GO TO FRAME 2

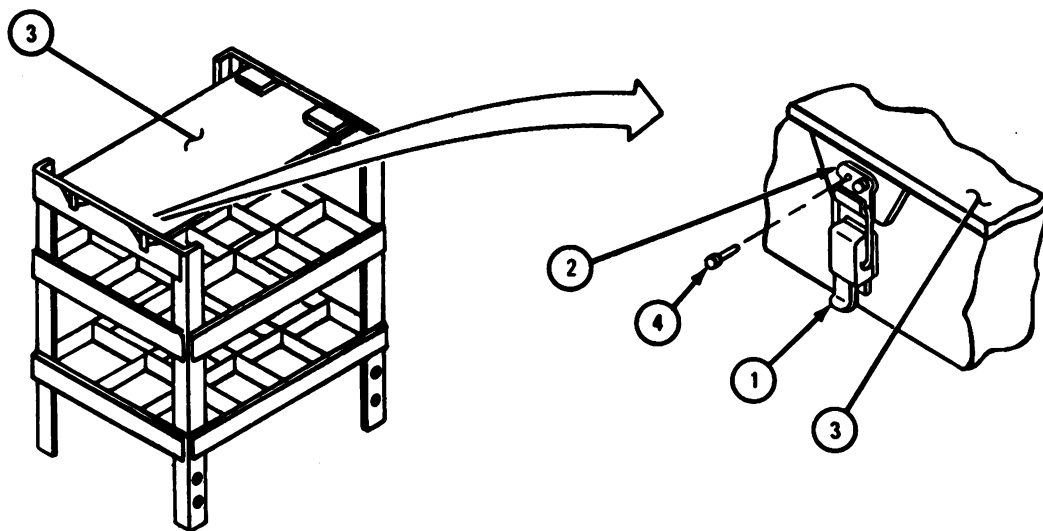


TA 104870

FRAME 2

1. Put latch (1) and catch (2) on box (3).
2. Put in four rivets (4).
3. Do steps 1 and 2 again for other latch assembly.

GO TO FRAME 3

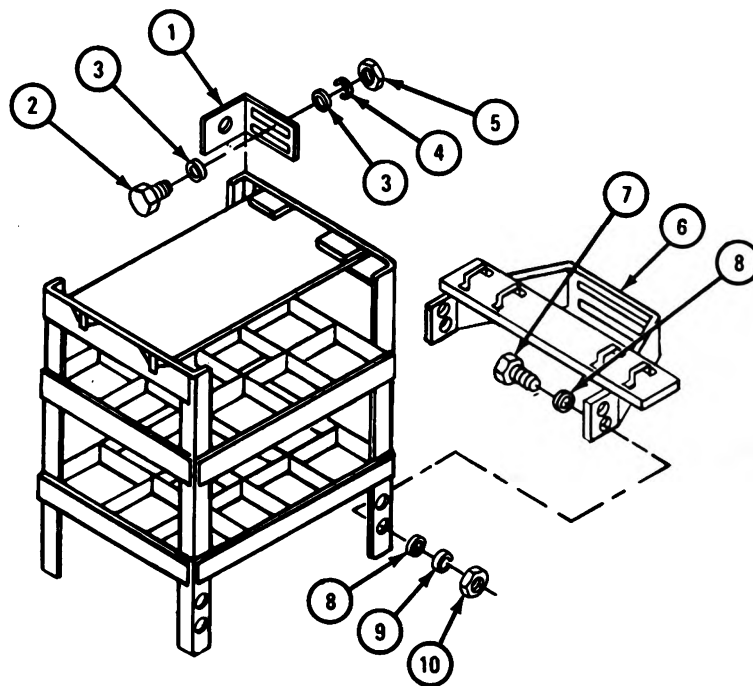


TA 104871

FRAME 3

1. Put on bracket (1). Put in two capscrews (2) with flat washers (3), lockwashers (4), and nuts (5).
2. Put in bracket (6).
3. Put in two capscrews (7) with flat washers (8), lockwashers (9), and nuts (10).
4. Do step 3 again on other side of bracket (6).
5. Do steps 2 and 3 again on other side of box.

END OF TASK



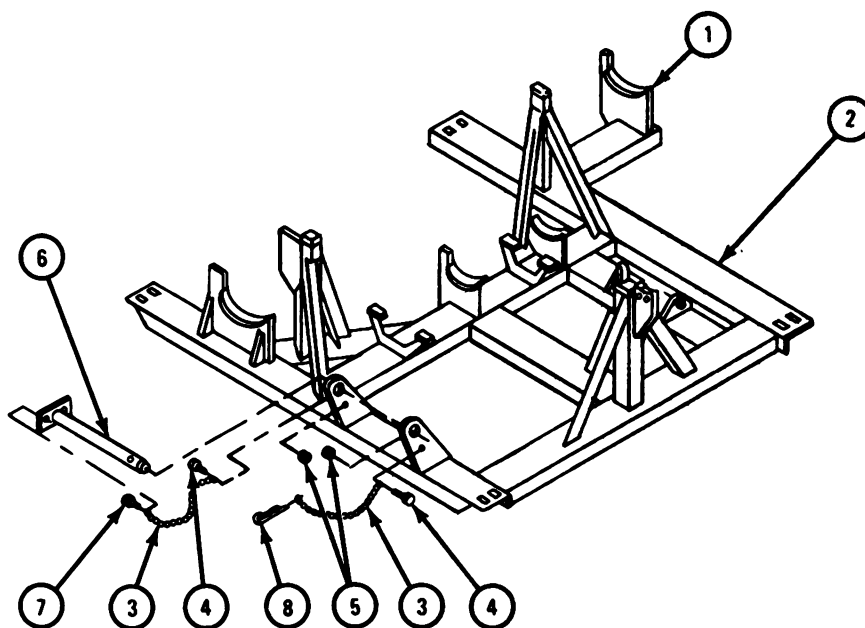
TA 104872

(2) Mortar frame.

FRAME 1

1. Put adhesive on six pads (1). Press pads on frame (2).
2. Put two chains (3) on frame. Put in two screws (4) with nuts (5).
3. Put in pin (6). Put screw (7) through chain (3) into pin (6).
4. Put pin (8) through chain (3) and into pin (6).

GO TO FRAME 2

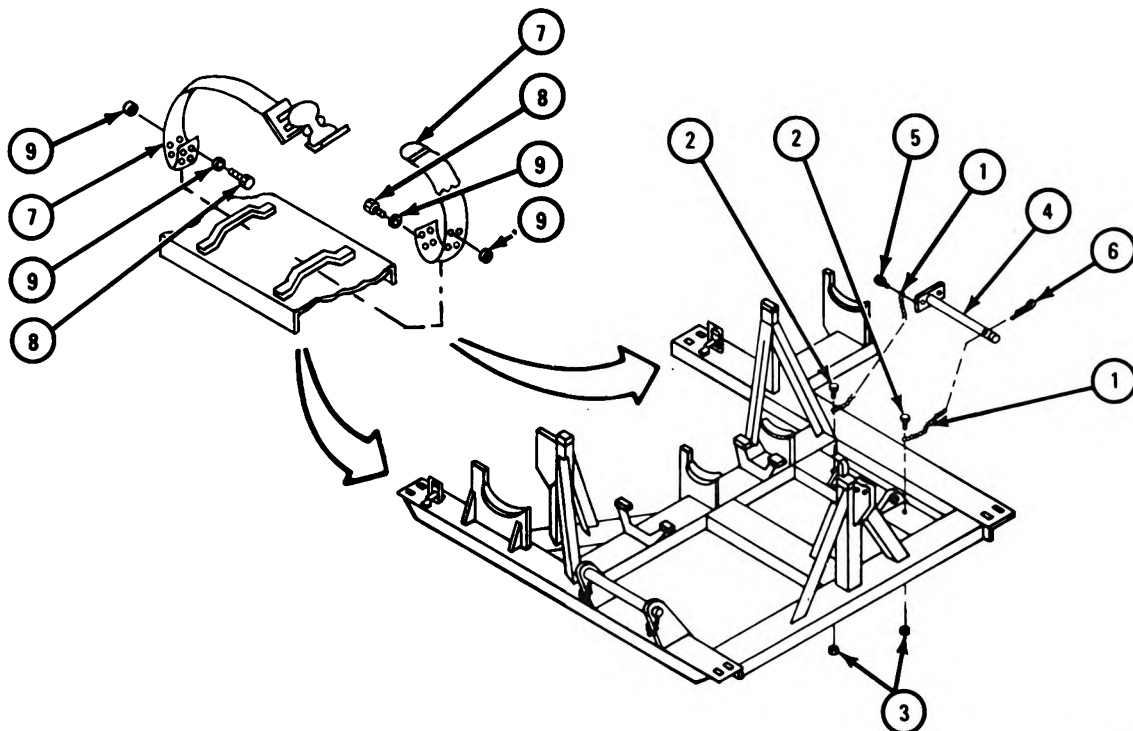


TA 104873

FRAME 2

1. Put in two chains (1). Put in two screws (2) with nuts (3).
2. Put in pin (4). Put screw (5) through chain (1) into end of pin (4).
3. Put pin (6) through other chain (1) into pin (4).
4. Put on four straps (7). Put in 16 rivets (8) with washers (9).

GO TO FRAME 3



TA 104874

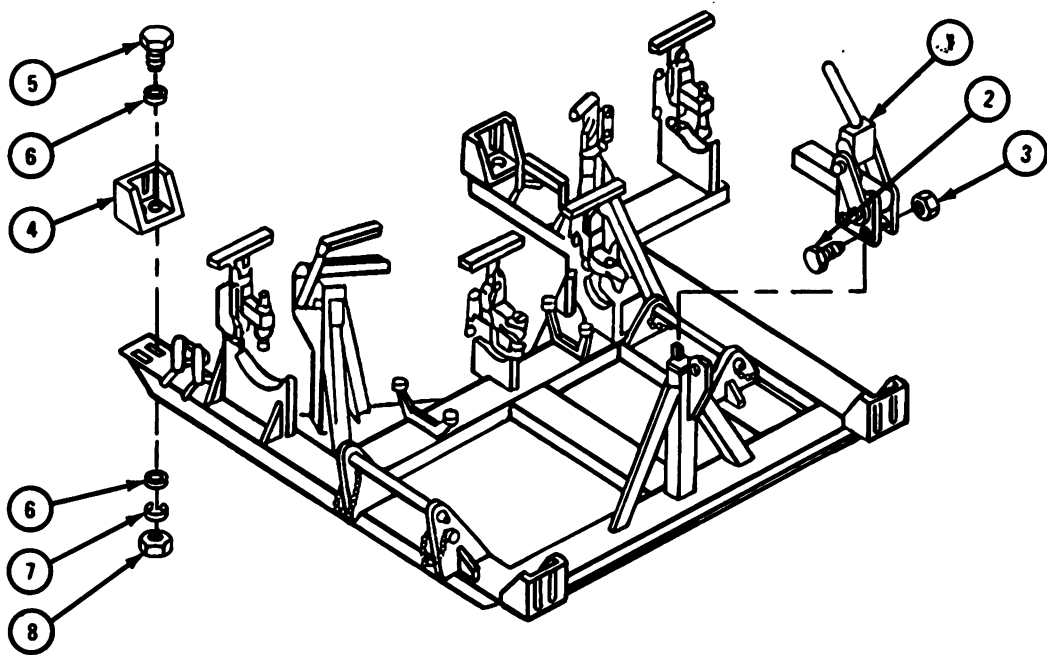
FRAME 3

NOTE

Plain handle clamps go on raised brackets. Tee handle clamps go on lower four brackets.

1. Put on clamp (1). Put in two capscrews (2) with nuts (3).
2. Do step 1 again for six more clamps (1).
3. Put on bracket (4). Put in two capscrews (5) with flat washers (6), lockwashers (7) and nuts (8).
4. Do step 3 again for three more brackets (4).

END OF TASK



TA 104875

g. Replacement.

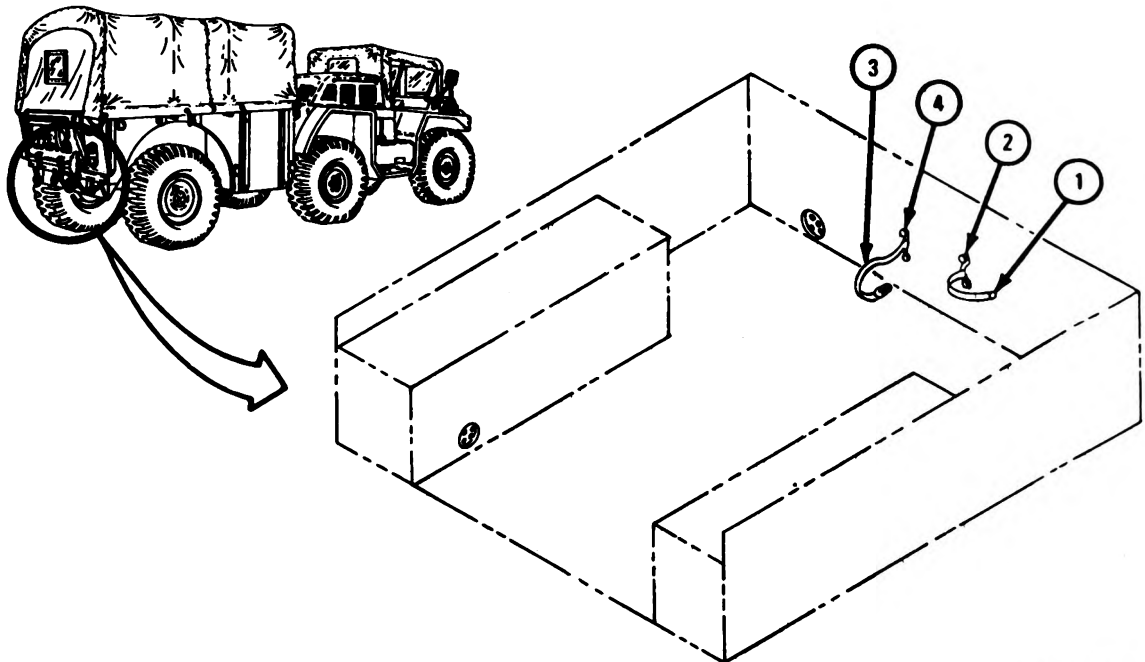
(1) Tube straps.

FRAME 1

1. Put on strap (1). Put in two screws (2).

2. Put on strap (3). Put in two screws (4).

END OF TASK

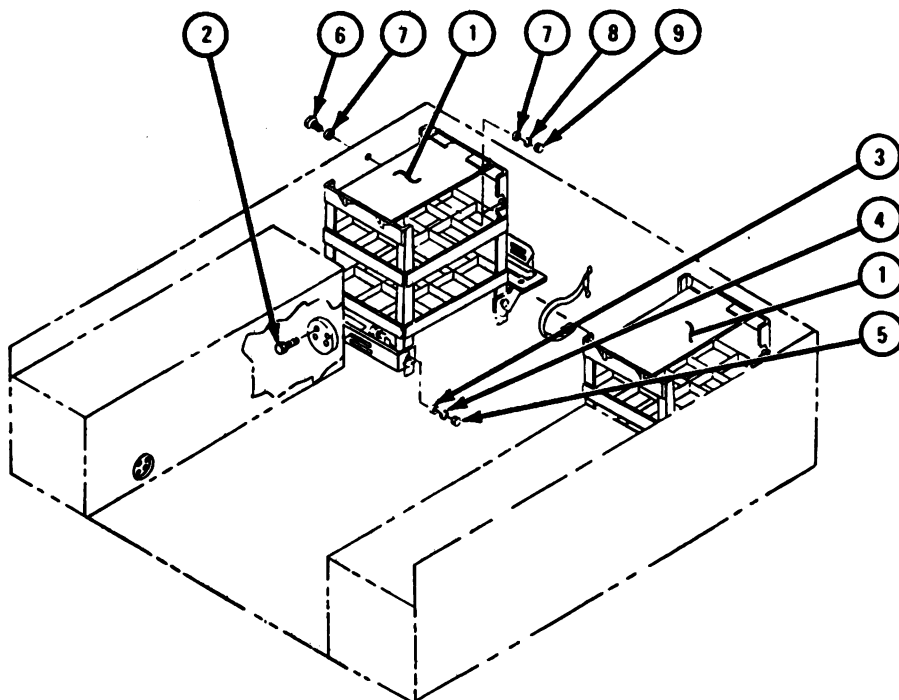


TA 104876

(2) Ammunition boxes.

FRAME 1

1. Put in two ammunition boxes (1).
2. Put in four capscrews (2) with flat washers (3), lockwashers (4), and nuts (5).
3. Do step 2 again on other side of box (1).
4. Put in capscrew (6) with two flat washers (7), lockwasher (8), and nut (9).
5. Do steps 2 through 4 again for other box (1).

END OF TASK

TA 105063

(3) Mortar frame.

FRAME 1

Soldiers A and B 1. Put frame (1) into carrier.

Soldier A 2. Put in four capscrews (2) with flat washers (3), lockwashers (4), and nuts (5).

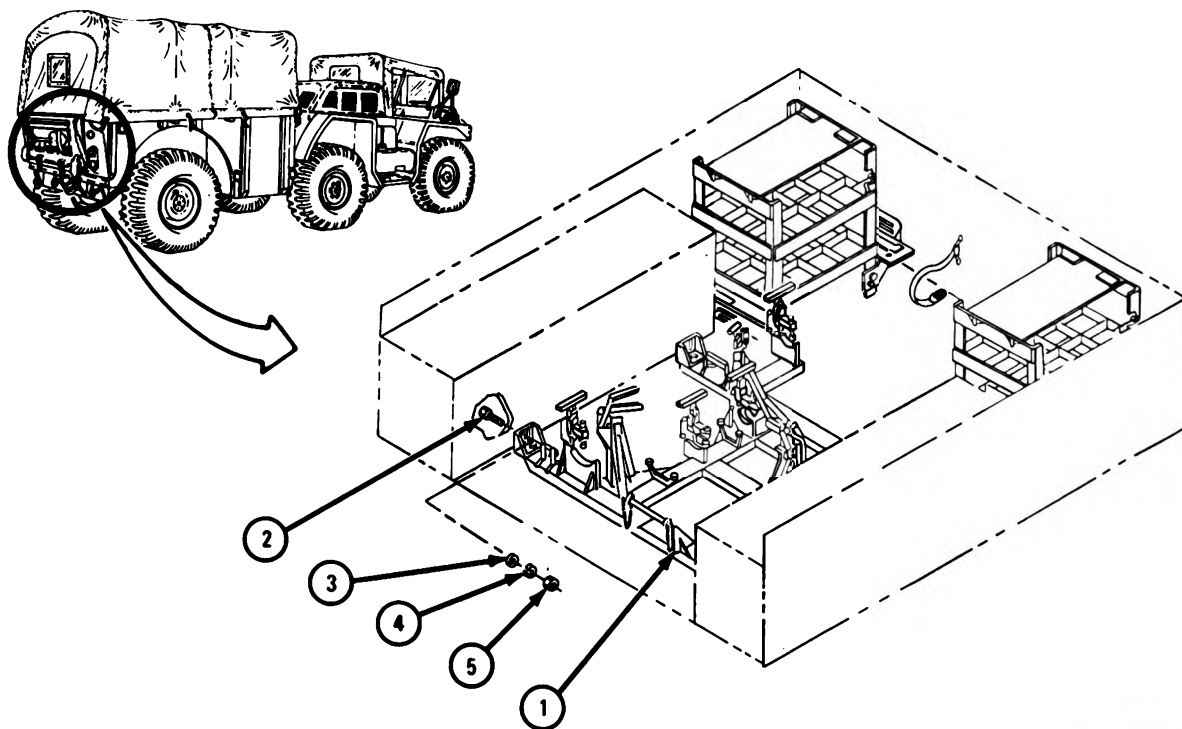
3. Do step 2 again for three more brackets.

NOTE

Follow-on Maintenance Action Required:

Close carrier tailgate. Refer to TM 9-2320-242-10.

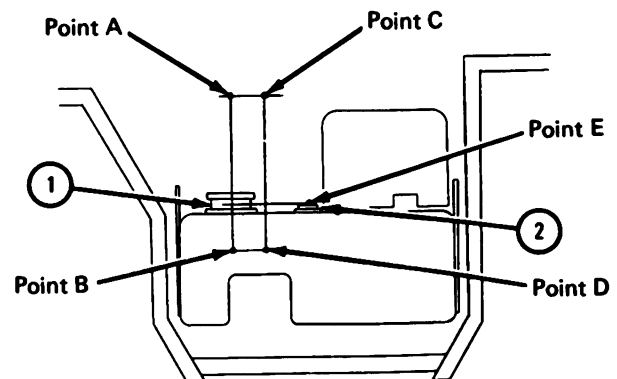
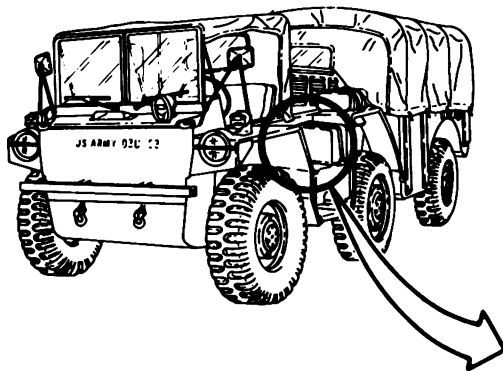
END OF TASK



TA 105064

17-38. DECONTAMINATION APPARATUS MOUNTING KIT INSTALLATION.**TOOLS:** No special tools required**SUPPLIES:** None**PERSONNEL:** One**EQUIPMENT CONDITION:** Truck parked, engine off, handbrake set.**FRAME 1**

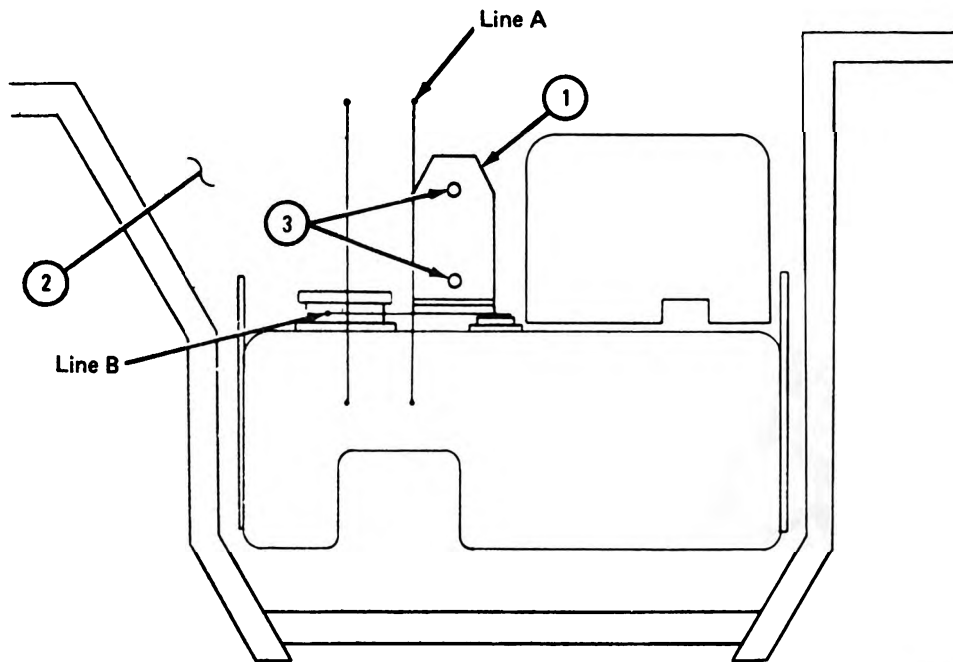
1. Find center of fuel filler cap (1). Draw a line through center of fuel filler cap from point A on truck to point B on fuel tank as shown.
2. Measure 3.50 inches from point A to point C as shown and mark point C on truck.
3. Measure 3.50 inches from point B to point D as shown and mark point D on fuel tank.
4. Draw a straight line from point C to point D as shown.
5. Measure 0.25 inch from top of fuel level transmitter (2) to point E and mark point E as shown.
6. Draw a straight line from center of fuel filler cap (1) to point E as shown.

GO TO FRAME 2

TA 103854

FRAME 2

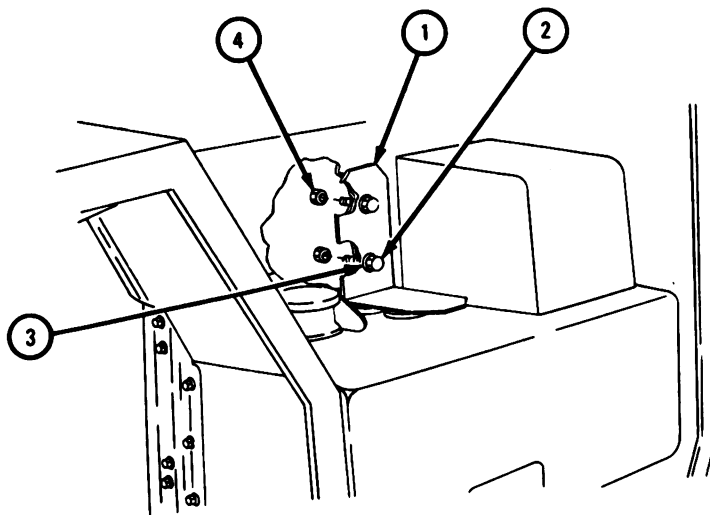
1. Put side of bracket (1) against line A and bottom of bracket (1) on line B as shown.
 2. Mark body (2) through two screw holes (3). Take away bracket (1).
 3. Drill 0.281-inch diameter hole in body (2) at two places marked in step 2.
- GO TO FRAME 3**



TA 103855

FRAME 3

1. Put mounting bracket (1) in place and align screw holes. Put in and hold two screws (2) and washers (3).
2. Reach into cab and put on two nuts (4). Tighten nuts to 5 to 9 pound-feet.

END OF TASK

TA 103856

17-39. 100-AMPERE ALTERNATOR KIT INSTALLATION. Install 100-ampere generator kit using instructions that come with the kit.

APPENDIX A

REFERENCES

A-1. PUBLICATION INDEXES AND GENERAL REFERENCE.

Indexes should be checked often for the latest changes or revisions of references given in this appendix and for new publications on materiel covered in this technical manual.

a. Military Publications Indexes.

Index of Army Motion Pictures
and Related Audio-Visual Aids DA Pam 108-1

Index of Administrative Publications DA Pam 310-1

Index of Blank Forms DA Pam 310-2

Index of Doctrinal Training and
Organizational Publications DA Pam 310-3

Index of Technical Publications, Technical
Manuals, Technical Bulletins, Supply
Manuals (Types 7, 8, and 9), Supply
Bulletins, and Lubrication Orders DA Pam 310-4

Index of Supply Catalogs and
Supply Manuals (excluding types
7, 8, and 9) DA Pam 310-6

US Army Equipment Index of
Modification Work Orders DA Pam 310-7

Military Publications:

Common Tools and Equipment
Supply Manuals DA Supply Manuals
SC-4910-95-CL-A01, A02,
A50, A63, A64, A65, A67,
A68, A72, A73, and A74.
SC-4910-95-CL-A31 and
-A32.

b. General Reference.

Authorization Abbreviations and Brevity
Codes AR 310-50

Dictionary of United States Army Terms AR 310-25

A-2. FORMS.

The following forms are for this materiel (refer to DA pamphlet 310-2 for index of blank forms and to TM 38-750 for explanation of their use).

Recommended Changes to Publications	DA Form 2028
Maintenance Request - Continuation Sheet . .	DA Form 2407-1
Quality Deficiency Report	SF 368
Processing and Deprocessing Records for Shipment, Storage, and Issue of Vehicles and Spare Engines	DA Form 1397

A-3. OTHER PUBLICATIONS.

a. Vehicle Manuals.

Lubrication Order	LO 9-2320-242-12
Operator's Manual	TM 9-2320-242-10 Volumes 1,2,3, and 4
Organizational Maintenance Manual	TM 9-2320-242-20 Volumes 1, 2, and 3
Organizational Maintenance Repair Parts and Special Tool List	TM 9-2320-242-20P
Direct Support and General Support Maintenance Repair Parts and Special Tool List	TM 9-2320-242-34P
Transportability Guidance	TM 55-2320-242-15-1
Equipment Improvement Report and Maintenance Digest (EIR MD)	TB 43-0001-39
Equipment Improvement Report and Maintenance Summary (EIR MS) for TARCOM Equipment	TM 43-0143

b. Engine Maintenance Manuals .

DS and GS Maintenance Manual for Engine Diesel GM Model 3-53	TM 9-2815-214-34
DS and GS Maintenance Repair Parts and Special Tool List for Engine GM 3-53	TM 9-2815-214-34P

c. Other Truck Equipment Maintenance Manuals.

Operator's, Organizational, Direct Support, and General Support Maintenance Manual for Lead-Acid Storage Batteries	TM 9-6140-200-14
Organizational Care, Maintenance and Repair of Pneumatic Tires and Inner Tubes	TM 9-2160-200-20
Inspection, Care, and Maintenance of Antifriction Bearings	TM 9-214
Operator's Manual: Welding Theory and Application	(TO34W4-1-5)
General Repair of Tents, Canvas, and Webbing	FM 10-16
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals	TM 9-247
Metal Body Repair and Related Operations	FM 43-2
Cooling Systems: Tactical Vehicles	TB 750-254
Purging, Cleaning, and Coating Interior Ferrous and Terne Sheet Vehicle Fuel Tanks	TB 43-0212
Painting Instructions for Field Use	TB 43-0139
Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment	TB 43-0209
Rustproofing Procedures	TB 43-0213
Security of Tactical Wheeled Vehicles	TM 9-2300-422-20
Direct Support and General Support Maintenance Manual: Generator, Engine Accessory	TM 9-2920-225-34
Elimination of Combustibles from Interiors of Metal or Plastic Gasoline and Diesel Fuel Tanks	TB 750-1047

Administrative Storage of Equipment TM 740-90-1

Procedures for Destruction of
Tank-Automotive Equipment to
Prevent Enemy Use (US Army
Tank-Automotive Command) TM 750-244-6

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FRAME 2, step 3 reads "Do step 2 again until
preload is 16 to 20 pound-feet." Should read
"Do step 2 again until preload is 15 to 29
pound-feet."

14-13

14-4
b

FRAME 3, change illustration callouts.
Reason: callouts for front bearing (2) and
rear bearing (5) are reversed.

15-30

15-13

Subparagraph a, second sentence refers
to TM 9-2320-242-10. Should refer to
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