TM 5-3895-371-24 & P

TECHNICAL MANUAL

ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL WITH REPAIR PARTS AND SPECIAL TOOLS LIST

BITUMINOUS DISTRIBUTOR BODY

M918, MODEL D-63

NSN 3895-01-028-4390

E.D. ETNYRE &CO.

(MANUAL PREPARED BY AM GENERAL C

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HEADQUARTERS, DEPARTMENT OF THE ARMY

March 1981

CHANGE 3

This change was not available from the proponent or the Publication Distribution Center at the time of the CD release. Please refer to your paper or microfiche copy as appropriate.

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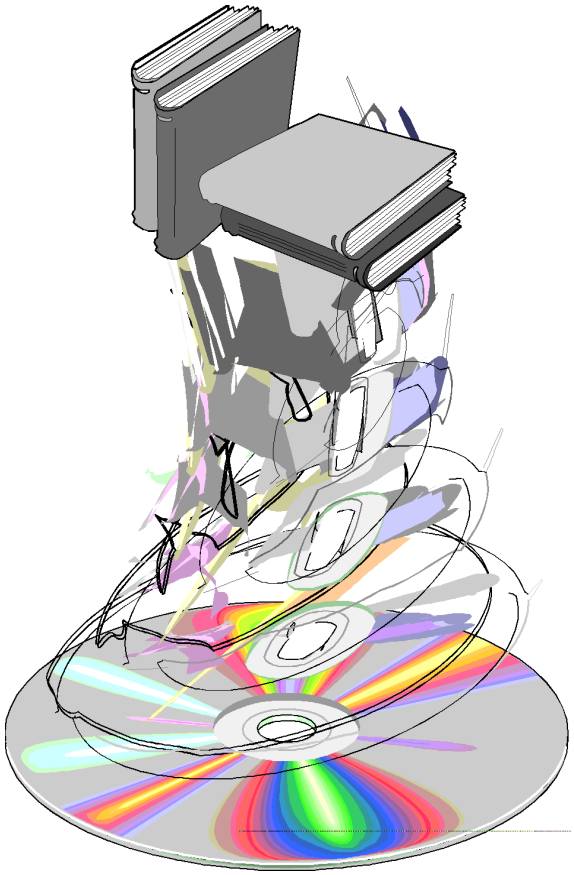

WARNING

Operation of a deadlined vehicle without a preliminary examination can cause further damage to a disabled component and possible injury to personnel. By careful inspection and troubleshooting, such damage and injury can be avoided. In addition, the causes of faulty operation of a vehicle or component can often be determined without extensive disassembly.

WARNING

Before attempting welding repairs on the asphalt tank, make sure that the tank is thoroughly clean. Use Detrox process, or equal.

WARNING

Compressed air used for cleaning purposes will not exceed 36 PSI. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

Technical Manual

Headquarters
Department of the Army
Washington, D.C., 1 March 1981

ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL WITH REPAIR PARTS AND SPECIAL TOOLS LIST

BITUMINOUS DISTRIBUTOR BODY
M918 (MODEL D-63)
NSN 3895-01-028-4390

REPORTING 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 procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications *and Blank Forms)* direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

Current As Of 1 February 1989

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CHAPTER 1

INTRODUCTION

HOW TO USE THIS MANUAL.

This manual is designed to help you maintain and repair the M918 Bituminous Distributor Body, Listed below are special features which have been included to make it easier to locate and to use the information you need.

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Section I. GENERAL

1-1. Scope.

a. This technical manual is for your use in performing Organizational, DirectSupport, and General Support maintenance of the Etnyre Bituminous Distributor, mounted on the M918 truck chassis. The instructions in this manual are divided in accordance with the Maintenance Allocation Chart (MAC) (Appendix B) to define responsibilities for Organizational Maintenance personnel (Chapter 2); and Direct Support and General Support maintenance personnel (Chapter 3 thru 12).

NOTE

See TM 9-2320-273-20 for maintenance support of the M918 truck chassis.

b. The user of this technical manual may find additional information by reffering to the technical manuals, technical bulletins, and other publications listed in Appendix A.

C. Appendix C ontains an illustrated list of all service parts and special tools with the estimated quantities of component parts and tools authorized for Organizational, Direct Support, and General Support Maintenance of the Etnyre Bituminous Distributor.

1-2. Maintenance Forms and Records. Equipment maintenance forms and procedures for their use are contained in DA PAM 738-750, The Army Maintenance Management System (TAMMS),

1-3. Destruction of Army Material to Prevent Enemy Use. Procedures outlined in TM 750-244-6 (Procedures *for Destruction of Tank-Automotive* to Prevent Enemy Use) are applicable to this equipment.

1-4. Administrative Storage. Storage information is given in TM 740-90-1) Administrative Storage.

1-5. Reporting Equipment Improvement Recommendations (EIRs). If your Bituminous Distributor needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality *Deficiency Report).* Mail it to us at: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MP, Warren, MI 48397-5000. We'll send you a reply.

1-6. Quality Assurance/Quality Control (QA/QC). No particular quality assurance or quality control pertains specifically *to* the Etnyre Bituminous Distributor.

1-7. Calibration Procedures. There are no calibration procedures authorized at Organizational, Direct Support or general Support maintenance levels.

Page C-111. Fig. number 33, item number 8, SMR code column. Change "XDOFF" to "PAOFF."

Page C-112. Fig. number 33, item number 37, SMR code column. Change "PAFZZ" to "PAFZZA."

Page C-115. Fig. number 34, immediately after item number 25, add the following:

Column	Added Data
Fig. No.	34
Item No.	26
SMR Code	PAOZZ
National Stock Number	4730-00-196-1490
Part Number	MS51953-56
FSCM	96906
Description	Nipple, Pipe 3/8" x 2 1/2" NPT
U/M	EA
Qty Inc In Unit	2

Immediately after item number 27, add the following:

Column	Added Data
Fig. No.	34
Item No.	28
SMR Code	PAOZZ
National Stock Number	4730-00-278-4240
Part Number	120063
FSCM	24617
Description	Elbow, Street 3/8" NPT
U/M	EA
Qty Inc In Unit	1

Item number 31, national stock number column. Add "4730-00-044-4587."

Immediately after item number 32, add the following:

Column	Added Data
Fig. No.	34
Item No.	33
SMR Code	PAOZZ
National Stock Number	4730-00-254-6377
Part Number	144152
FSCM	24617
Description	Cross, Pipe 3/8" NPT
U/M	EA
Qty Inc In Unit	1

Page C-125. Fig. number 38, item number 11, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 13, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 29, national stock number column. Add "5307-01-122-0804."

Page C-126. Fig. number 38, item number 38, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 46, national stock number column. Add "5320-01-111-9099."

Item number 50, national stock number column. Add "5320-01-111-9099."

Item number 54, national stock number column. Add "5365-01-108-4360."

Page C-127. Fig. number 38, item number 75, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 77, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 78, SMR code column. Change "XDOZZ" to "PAOZZ."

Page C-128. Fig. number 38, item number 102, SMR code column. Change "XAOZZ" to "PAOZZ."

Item number 117, national stock number column. Add "5315-01-114-8911."

Page C-129. Fig. number 38, item number 150, national stock number column. add "5320-01-111-9099."

Page C-131. Fig. number 39, item number 11, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 14, national stock number column. Add "5930-01-107-8683."

Page C-139. Fig. number 41, item number 7, national stock number column. Add "5330.01-109-1370."

Item number 20, SMR code column. Change "XDOZZ" to "PAOZZ."

Item number 26, SMR code column. Change "XDOZZ" to "PAOZZ."

Page C-143. Fig. number 42, item number 14, SMR code column. Change "XDHZZ" to "PAHZZ."

Page C-147. Fig. number 44, item number 8, national stock number column. Add "5330-01. 108-4323."

Item number 9, national stock number column. Add "4320-01-107-5479."

Item number 17, national stock number column. Add "5365-01-108-4348."

Item number 18, national stock number column. Add "5330-00-150-1767."

Page C-149. Fig. number 45, item number 1, national stock number column. Add "5305-0l-109-5072."

Page C-152. AU changes, additions or deletions of national stock numbers, manufacturers code numbers and manufacturers part numbers should be appropriately reflected in the parts listing and index of the manual.

By Order of the Secretary of the Army :

JOHN A. WICKHAM, JR.
General, United States ***Army***
Chief *of* ***Stuff***

Official :

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25B, Organizational, Direct Support, and General Support Maintenance Manual, Bituminous Distributor Body M918.

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CHAPTER 1

INTRODUCTION

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NOTE

See TM 9-2320-27320 for maintenance support of the M918 truck chassis.

b. The user of this technical manual may find additional information by referring to the technical manuals, technical bulletins, and other publications listed in Appendix A.

C. Appendix C contains an illustrated list of all service parts and special tools with the estimated quantities of component parts and tools authorized for Organizational, Direct Support, and General Support Maintenance of the Etnyre Bituminous Distributor.

1-2. Maintenance Forms and Records. Equipment maintenance forms and procedures for their use are contained in TM 38-760, The Army Maintenance Management System (TAMMS).

1-3. Destruction of Army Material to Prevent Enemy Use. Procedures outlined in TM 760-244-6 (Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use) are applicable to this equipment.

14. Administrative Storage. Storage information is given in TM 740-901, Administrative Storage.

1-5. Reporting Equipment Improvement Recommendations (EIR). EIR's will be prepared using DA Form 2407, Maintenance Request. Instructions for preparing ElR's are provided in TM 38-760, The Army Maintenance Management System. ElR's should be mailed directly to: Commander, U.S. Army, Tank-Automotive Materiel Readiness Command ATTN: DRSTA-MVB, Warren, Michigan 48090. A reply will be furnished directly to you.

1-6. Quality Assurance/Quality Control (QA/QC)

a. No particular quality assurance or quality control pertains specifically to the Etnyre Bituminous Distributor.

b. Defective material received through the supply system should be reported on a Quality Deficiency Report (QDR), SF368. Instructions for preparing QDR's are provided in AR 702-7, Reporting of Quality Deficiency Data. QDR's should be mailed directly to: Commander, U.S. Army, Tank-Automotive Materiel Readiness Command, ATTN: DRSTA-MVB, Warren, Michigan, 48090. A reply will be furnished directly to you.

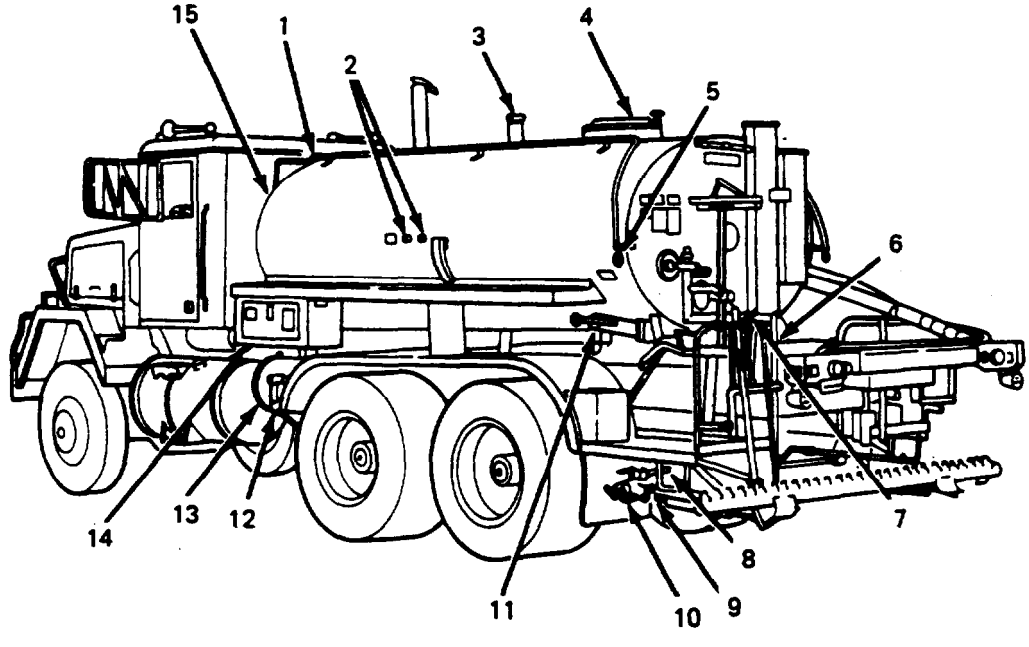
1-7. Calibration Procedures. There are no calibration procedures authorized at Organizational, Direct Support or General Support maintenance levels.

Section II. DESCRIPTION AND DATA

1-8. Description.

a. The Etnyre Bituminous Distributor consists of a storage tank with a low pressure heating system, a hydraulic-powered pumping unit, and an adjustable spray bar for distributing bituminous material (see fig. 1-1). The equipment is mounted on an M918 truck chassis. It is normally operated by a crew of two men; a driver in the cab, and an operator stationed on the rear platform.

b. The maintenance paragraphs of this manual contain descriptions of the Bituminous Distributor major components.

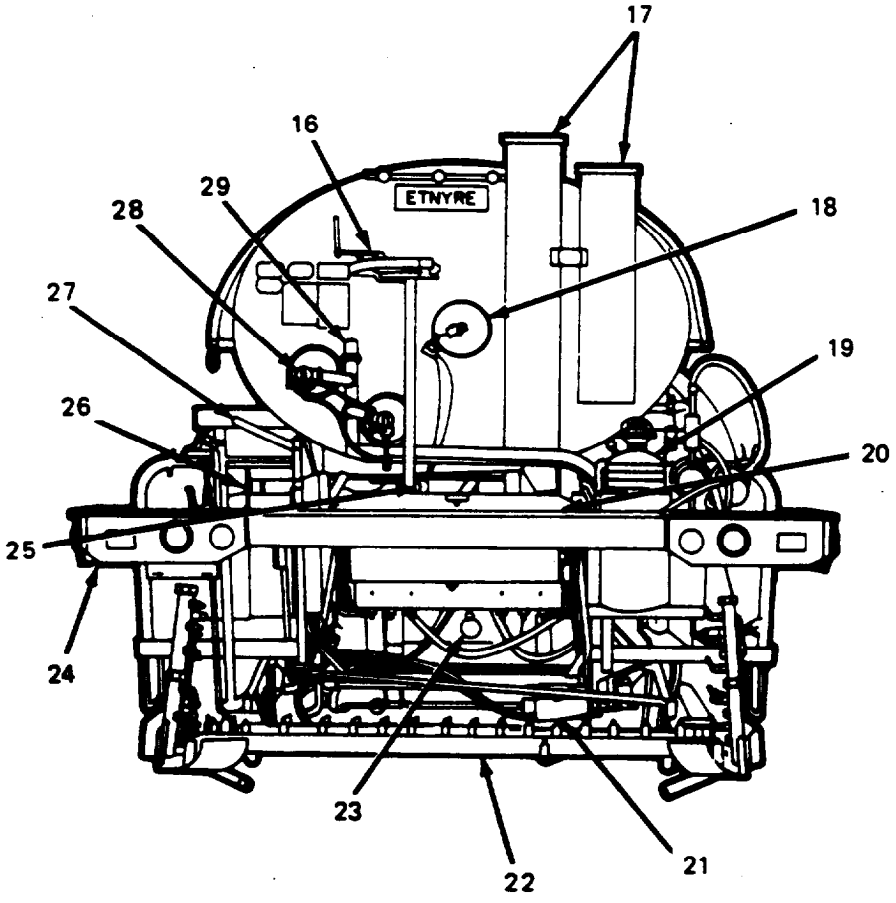


LEGEND:

1. SIGNAL BELL
2. THERMOMETER AND WELL (DRY)
3. OVERFLOW AND VENT COVER
4. MANHOLE
5. SIGNAL BELL PULL RING
6. AIR CONTROL BOX
7. BAR TURN UP LEVER
8. TRANSFER VALVE LEVER
9. HAND SPRAY CONNECTION
10. TRANSFER VALVE COVER
11. FILL LINE CAP
12. HYDRAULIC FILTER
13. HYDRAULIC RESERVOIR
14. TOOL BOX
15. MATERIAL STORAGE TANK

TA 075800

Figure 1-1. Major Components and Their Locations (Sheet 1 of 3).

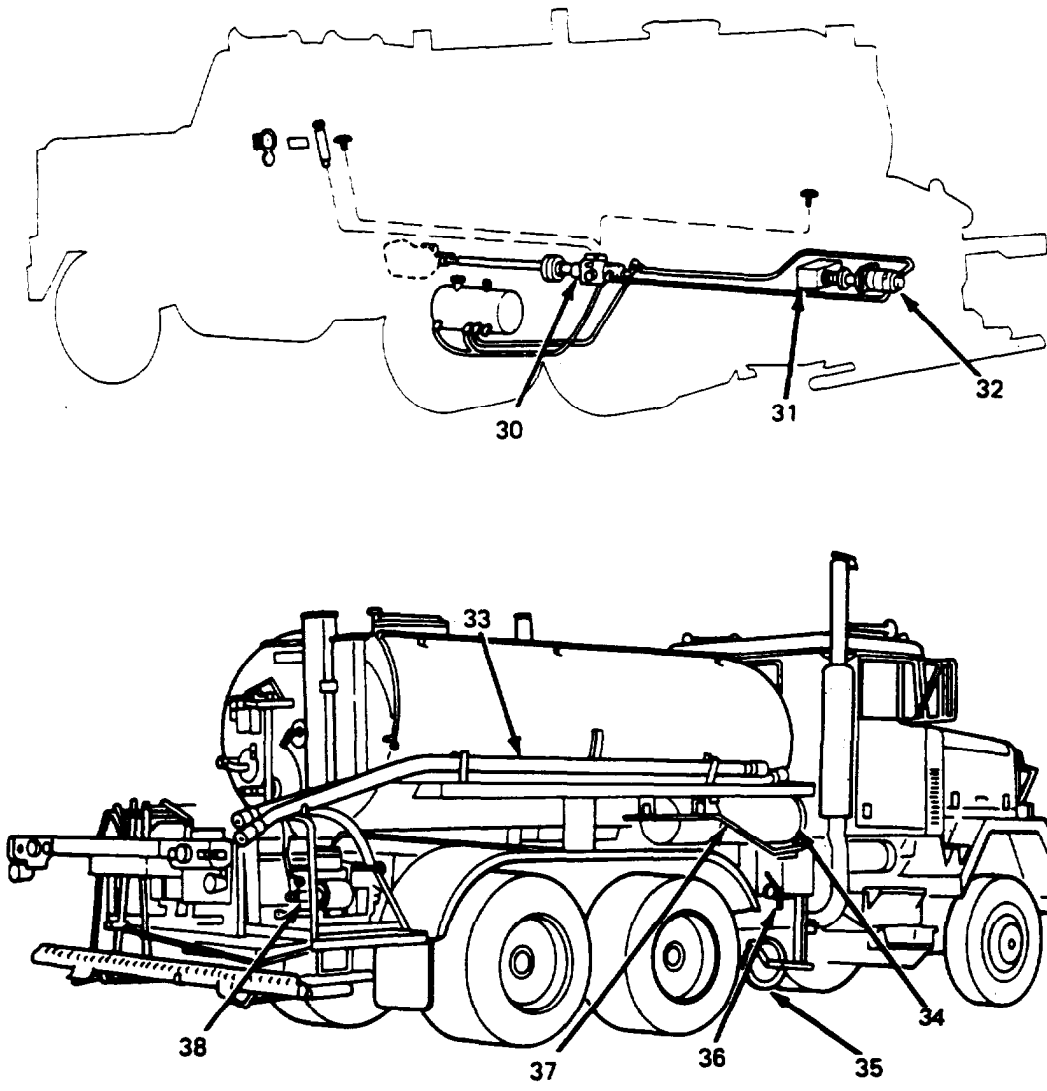


LEGEND:

16. QUADRANT CONTROL LEVER
17. EXHAUST STACKS
18. TANK GAGE
19. PORTABLE BURNER
20. EXTENSION BAR STOWAGE B0X
21. AIR CYLINDER
22. SPRAY BAR
23. DISCHARGE HEADER STRAINER
24. LOOM BUMPER
25. VACU-FL0 VALVE LEVER
26. BUTTERFLY VALVE LEVER
27. INTAKE VALVE LEVER
28. LOW PRESSURE ATOMIZING BURNERS
29. AIR RELIEF VALVE

TA 075801

Figure, 1-1. Major Components and Their Locations (Sheet 2 of 3).



LEGEND:

30. HYDRAULIC PUMP
31. BITUMEN PUMP
32. HYDRAULIC MOTOR
33. AUXILIARY HOSE (2)
34. BURNER FUEL TANK
35. BITUMETER WHEEL
36. AIR LINE LUBRICATOR
37. HAND SPRAY GUN
38. BURNER FUEL PUMP

TA 075802

Figure 1-1. Major Components and Their Locations (Sheet 3 of 3).

1-9. Tabulated Data.

Manufacturer:	E.D. Etnyre & Co., Inc.
Model:	D-63

a. Dimensions and Weight - Distributor and Truck.

Overall Length :	335 inches (8.51m)
Overall Width:	97 inches (2.46m)
Overall Height:	116 inches (2.95m)
Net Weight, Empty:	26,000 pounds (11,804 Kg)
Net Weight, Filled:	39,000 pounds (17,706 Kg)
Shipping Volume:	224 cubic yards (171 cu m)
Shipping Tonnage:	13 tons

b. Burners.

Manufacturer:	Houck Manufacturing Co.
Model No.:	580A
Type:	Low Pressure Atomizing

c. Material Storage Tank.

Capacity:	1,500 gallons (5677.5l)
Overage for Expansion:	9 percent
Manhole:	20 inch (50.8 cm) diameter
overflow:	3 inch (7.62 cm) pipe
Tank Gage:	Mechanical Float Type
Thermometer:	Armored Pencil 600^0 F (315.6^oC)

d. Spray Bar.

Length of Center Section:	*8 feet (2.44* m)
Length of Extensions:	1 foot (.305 m) and 2 foot (.61 m)
Total Length:	*24 feet (7.32* m)

e. Nozzles.

Type:	Fan
Thread:	1/2 inch national pipe thread
Slot:	1/8 inch (.32 cm)
Spacing :	4 inch (10.16 cm)

f. Bituminous Pump Data.

Make:	ED. Etnyre & Co., Inc.
Model:	P 15T
Operating Pressure:	20 pounds per square inch (6.89 kPa)
Output Capacity:	400 gallons (1514 l) per minute

g. Burner System.

Fuel Consumption (Maximum) :	12 gallons (45.42 l) per hour
Fuel Consumption (Minimum):	1-1/2 gallons (5.68 l) per hour
Each Burner:	3/4 gallons (2.84 l) per hour

h. Capacities.

Fuel Tank, Burner:	36 gallons (136.26 l)
Material Storage Tank:	1500 gallons (5677.5 l)
Portable Burner Tank:	4 gallons (15.14 l)
Hydraulic Reservoir:	20 gallons (75.7 l)

CHAPTER 2

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Scope. This chapter contains the Organizational Maintenance Instructions for inspecting, servicing, checkout, and troubleshooting the M918 Etnyre Bituminous Distributor Body,

2-2. Inspection and Service.

a. Check for leaks and damage in the lubricating oil, hydraulic system, and air lines.

b. Lubricate the distributor as specified in LO 53895-371-12.

C. Check meters and gages for damage and loose connections.

d. Check all tools and equipment assigned to the distributor to make sure they are serviceable, clean, and properly stowed or mounted.

Section II. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

2-3. Special Tools and Equipment. The special tools for organizational level personnel are listed and illustrated in Appendix C of this manual.

2-4. Repair Parts. Repair parts are listed and illustrated in the Repair Parts and Special Tool list covering Organizational Maintenance for this equipment in Appendix C of this manual.

Section Ill. LUBRICATION INSTRUCTIONS

2-5. Lubrication. Refer to LO 5-3895371-12 for lubrication and services performed at organizational level.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-6. Organizational Preventive Maintenance Checks and Services. To insure that the distributor is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. Table 2-1 contains a tabulated listing of preventive maintenance checks and services to be performed by organizational maintenance personnel. All deficiencies and shortcomings will be recorded as well as the corrective action taken on DA Form 2404 at the earliest possible opportunity.

a. The item numbers of Table 2-1 indicate the sequence of the PMCS. Perform at the intervals shown below:

(1) Do your (Q) PREVENTIVE MAINTENANCE once each 3 months.

(2) Do your (S) PREVENTIVE MAINTENANCE twice a year, or each 6 months.

(3) Do your (A) PREVENTIVE MAINTENANCE once each year.

(4) Do your (B) PREVENTIVE MAINTENANCE once each two years.

(5) Do your (H) PREVENTIVE MAINTENANCE at the hour interval listed.

(6) Do your (MI) PREVENTIVE MAINTENANCE when the mileage of the vehicle reaches the amount listed.

b. If something doesn't work, troubleshoot it with the instructions in this manual or notify your supervisor.

C. Always do your preventive maintenance in the same order, so it gets to be a habit. Once you've had some practice you'll spot anything wrong in a hurry.

d. If anything looks wrong and you can't fix it, write it down on your DA Form 2404. If you find something seriously wrong, report it to direct support as soon as possible.

WARNING

Dry cleaning solvent SD-2, used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 138^0 F.

(1) Keep it *clean:* Dirt, grease, oil, and debris only get in the way and may cover up a serious problem Clean as you work and as needed. Use dry cleaning solvent (SD-2) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) Bolts, nuts, and screws: Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. Tighten any that you find loose.

(3) Welds: Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to direct support.

(4) Electric wires and connectors: Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connections and make sure the wires are in good condition.

(5) Hoses and fluid lines: Look for wear, damage, and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, either correct it or report it to direct support (refer to MAC chart).

e. It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them and REMEMBER - When in doubt, notify your supervisor!

Leakage definitions for Organization PMCS

CLASS I	Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.
CLASS II	Leakage of fluid great enough to form drops but not enough to cause drops to drip from the item being checked/inspected.
CLASS I I I	Leakage of fluid great enough to form drops that fall from the item being checked/ inspected.

Table 2-1. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

Q--Quarterly S-Semiannually A-Annually B-Biennially H-Hours M-Miles

ITEM NO.	INTERVAL						ITEM TO BE INSPECTED
	Q	S	A		B	H	Ml PROCEDURE :Check for and have repaired,filled,or adjusted as needed.
							NOTE PERFORM OPERATOR/CREW PMCS PRIOR TO OR IN CONJUNCTION WITH ORGANIZATIONAL PMCS IF: a. There is a delay between the daily operation of the equipment and the organizational PMCS. b. Regular operator is not assisting/participating.
							ELECTRICAL SYSTEM
1		●					Check wiring harness for corrosion and bare wires. Replace defective wiring.
2	●						Check all lights for proper operation. Replace defective lamps and lights.
							DISTRIBUTOR BODY
3		●					Check material storage tank, subframe, tie downs and fasteners for obvious damage, weld breaks. Notify DS Maintenance for repair.
4		●					Check that manhole cover seals properly. Repair as needed.
5	●						Check overflow pipe. Clean any material buildup in pipe.
							UNIVERSAL DRIVE
6	●						Check universal drive and U-joints. Check for wear and cracks. Replace damaged U-joints.
							HYDRAULIC SYSTEM
7		●					Check all hydraulic lines and fittings. If damaged, replace.
							BURNER FUELSYSTEM
8		●					Check fuel lines and fittings. If damaged, replace.
9			●				Check burner fuel tank holding straps. If damaged, repair or replace.
10		●					Check burner assembly air hose for leeks. Replace if damaged.

Table 2-1. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (Continued)

Q-Quarterly S-Semiannually A-Annually B-Biennially H-Hours M-Miles

ITEM NO.	INTERVAL						ITEM TO BE INSPECTED
	Q	S	A	B	H	M	PROCEDURE: Check for and have repaired, filled, or adjusted as needed.
							BURNER FUEL SYSTEM (Continued)
11		●					Check smoke stack cover spring for damage and check operation. Replace spring if necessary.
							BITUMETER WHEEL ASSEMBLY
12		●					Check air lines and fittings. If damaged, replace.
13		●					Check power line and ground on solenoid for corrosion and bare wires, replace defective wires.
14		●					Check that bitumeter positions itself when activated. Adjust or repair as needed.
							SPRAY BAR
15		●					Check that spray bar positions itself whenever control switches are activated. Adjust as needed.
16		●					Check chains. Replace as necessary.
17		●					Check power lines to solenoids for corrosion and bare wires. Replace defective wires.
18	●						Check relation of quadrant lever position with nozzle lever position. Adjust linkage as needed.
19			●				Check recording bitumeter cable operation and service it.
20			●				Check pump tachometer cable and service it.
21	●						Check air control reservoir. Open drain cock to let out condensation.

Section V. TROUBLESHOOTING

2-7. General. Information in this chapter is for use of supporting maintenance personnel in conjunction with and as a supplement to the troubleshooting procedures in TM 9-2320273-20. It provides a continuation of instructions given in TM 9-2320-273-20.

WARNING

Operation of a deadlined vehicle without a preliminary examination can cause further damage to a disabled component and possible injury to personnel. By careful inspection and troubleshooting, such damage and injury can be avoided. In addition, the causes of faulty operation of a vehicle or component can often be determined without extensive disassembly.

2-8. General Instructions and Procedures. Table 2-2 lists possible malfunctions that may be experienced during the operation of the component or subassembly. Each malfunction is followed by a list of probable causes that may be considered in determining their corrective action.

Table 2-2. Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. BURNERS INOPERATIVE OR OPERATING IMPROPERLY:
Step 1. Clogged fuel lines.
Drain and clean the lines.
Step 2. Faulty valves.
No repair, replace valves (para 10-1).
Step 3. Fuel pump inoperative.
Repair fuel pump (para 2-35).
2. BITUMETER WHEEL FAILS TO RAISE:
Step 1. Wheel frame binding or bent.
Repair the wheel frame.
step 2. Loose air connection.
Tighten connections.
Step 3. Defective solenoid.
Replace solenoid (para 2-23).
Step 4. Defective wiring.
Check all connections and tighten as needed.
step 5. Defective cylinder daiphragm.
Replace diaphragm (para 8-1) .
3. BITUMETER WHEEL FAILS TO LOWER:
step 1. Wheel fork binding or bent.
Repair or replace the wheel fork (para 2-23).
step 2. Loose air connection.
Tighten connections.

Table 2-2. Troubleshooting (Continued}.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
3. BITUMETER WHEEL FAILS TO LOWER (Continued).
Step 3. Defective solenoid. Replace solenoid (para 2-23).
Step 4. Defective wiring. Check connections and tighten as needed.
4. BITUMETER COUNTER INOPERATIVE:
step 1. Drive cable broken. Replace drive cable (para 2-25).
step 2. Defective adapter. Replace adapter (para 2-25).
Step 3. Faulty tachometer. Replace tachometer (para 2-25).
5. BITUMETER COUNTER POINTER WHIPS:
Step 1. Bitumeter wheel broken. Replace bitumeter wheel (para 2-23).
step 2. Defective recording bitumeter. Replace the bitumeter (para 2-25).
step 3. Drive cable binding. Lubricate or replace drive cable (para 2-25).
6. QUADRANT LEVER SLOWS OR STOPS PUMP WHEN MOVING FROM “CIRCULATE IN TANK” TO “CIRCULATE IN BAR”:
step 1. Butterfly valve partially closed. Open butterfly by pulling on control link.

Table 2-2. Troubleshooting (Continued).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
6. QUADRANT LEVER SLOWS OR STOPS PUMP WHEN MOVING FROM "CIRCULATE IN TANK" TO "CIRCULATE IN BAR" (Continued): Step 2. Linkage out of adjustment. Check relation of quadrant lever position with nozzle lever position and adjust as needed (para 2-29). Step 3. Transfer valve in hand spray position. Set transfer valve to distribute position.
7. SPRAY FOGS: step 1. Pump speed too fast for size of nozzle. Check "Circulating in Tank" in TM 53895371-10 for proper relationship.
8. SPRAY STREAKS: step 1. Pump speed too slow. Check "Circulating in Tank" in TM 53895371-10 for proper relationship. Step 2. Nozzles not at proper angle. Adjust with nozzle wrench (refer to TM 5-3895-371-10). step 3. Spray bar at improper height above ground. Adjust spray bar to give nozzle height 12 in. (30.48 cm) above road. step 4. Material temperature too low. Heat material to highest temperature recommended for spraying material.
9. SPRAY LACKS PRESSURE: step 1. Pump speed too slow. Check "Circulating in Tank" (refer to TM 5-3895-371-10) for proper relationship. step 2. One of control valves in incorrect position. Lift quadrant and turn valve plugs to position relative to levers (refer to TM 5-3895-371-10).

Table 2-2. Troubleshooting (Continued).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
9. SPRAY LACKS PRESSURE (Continued):
step 3. Discharge strainer plugged. Remove and clean (para 12-6).
10. APPLICATION RATE VARIES:
Step 1. Improper reading of tank contents. Use measuring stick for accurate readings. Tank must be level when reading measuring stick.
Step 2. Defective pump tachometer. Repair or replace (para 2-25).
step 3. Defective recording bitumeter. Repair or replace (para 2-25).
step 4. Catch lever on quadrant not pulled. Pull catch lever out.
step 5. Discharge strainer plugged. Remove and clean discharge strainer on pump outlet (para 12-6).
Step 6. Hydrostatic control not firmly positioned. Adjust and tighten (TM 5-3895-371-10).
step 7. Hydrostatic override control partially engaged. Return override to neutral position.
11. DIFFICULTY IN RAISING SPRAY BAR END SECTIONS IN VERTICAL POSITIONS:
step 1. Hinge joint inoperative. Adjust or replace retaining rings and packing (para 2-38).
step 2. Damaged linkage Repair or replace linkage (para 2-38).

Table 2-2. Troubleshooting (Continued).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
12. ALL NOZZLES DO NOT CUT OFF:
Step 1. Linkage out of adjustment or worn.
Repair or replace linkage so that all spray bar levers are in appropriate position (para 2-38).
13. SPRAY BAR DOES NOT SHIFT PROPERLY:
Step 1. Loose connections.
Tighten connections.
Step 2. Defective solenoid.
Replace solenoid (para 2-20).
Step 3. Defective wiring.
Check connections and tighten as needed.
Step 4. Shift lock engaged.
Disengage shift lock.
Step 5. Linkage damaged.
Repair linkage (para 2-38).
14. SPRAY BAR DOES NOT RAISE & TURN UP PROPERLY:
Step 1. Loose connections.
Tighten.
Step 2. Defective solenoid.
Replace solenoid (para 2-20).
step 3. Defective wiring.
Check connections.

Table 2-2. Troubleshooting (Continued).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
15. INSUFFICIENT FLOW THROUGH SPRAY BAR:
step 1. Pump fails. Repair pump (para 9-1).
step 2. Damaged lines. Replace lines (para 2-38).
16. SPRAY BAR DOES NOT CIRCULATE:
step 1. Spray bar full of cold material. Heat spray bar with portable burner (refer to TM 5-3895-371-10).
step 2. Valve lever in wrong position. Adjust valve lever (para 2-38).
step 3. Damaged inner circulating tube. Replace damaged section (para 2-37).
step 4. Inner circulating tubes out of round. Check inner circulating tubes, particularly where they join at sections.
17. SPRAY BAR DOES NOT TURN UP PROPERLY:
step 1. Loose air connections. Tighten connections.
step 2. Linkage damaged or need cleaning. Clean with an approved solvent or replace.
step 3. Defective solenoid. Replace solenoid (para 2-20).
step *4.* Defective wiring. Check connections and tighten as needed.

Table 2-2. Troubleshooting (Continued).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
18. LEFT CONTROL VALVE LEAKS AT TOP:
Step 1. Worn packing. Replace packing (para 2-32).
Step 2. Circulating in bar at too great pump speed. Pump speed should not exceed 160 rpm when circulating in bar.
19. INTAKE VALVE LEAKS:
Step 1. Insufficient spring tension. Tighten spring on operating shaft (para 2-30).
Step 2. Scratched or scored valve. Replace valve (para 2-30).
20. NOZZLE VALVE STUCK OR LEAKS:
Step 1. Bar pressure seems to keep them tight. To loosen, rap end of plug stem.
Step 2. Valves scratched or scored. Replace valve (para 2-38).
Step 3. Insufficient clearance between plug and case. Loosen adjusting nut.

Section VI. MAINTENANCE OF ELECTRICAL SYSTEM

2-9. Loom Bumper and Marker Lamps.

NOTE

For ease in installation, check diagram showing wire color code and terminal location before removing wires in step (2). (See fig. 2-2.)

a. Removal.

(1) Remove terminal board cover (40, fig. 2-1) by removing two capscrews (3) and lockwashers (4).

(2) Disconnect wires from terminal board (42).

(3) Remove two screws (43) and remove terminal board (42).

(4) Remove retaining ring (19), lens (18), and gasket (16) from right hand taillamp assembly (20).

(5) Depress bulb (17), turn counterclockwise, and remove.

(6) Remove two nuts (8) and washers (7) from base (15). Cut electrical wires and remove right hand taillamp assembly (20).

(7) Remove retaining ring (19), lens (18), and gasket (16) from left hand taillamp assembly (30).

(8) Depress bulb (32), turn counterclockwise, and remove.

(9) Remove two nuts (8) and washers (7) from base (33). Cut electrical wires and remove left hand taillamp assembly (30).

(10) Remove license lamp window (31) from base (33).

(11) Remove two nuts (38), washers (39), capscrews (34), and bracket (35).

(12) Remove two screws (27), lens rim (26), lens (25) and gasket (23).

(13) Depress bulb (24), turn counterclockwise, and remove.

(14) Remove two screws (28), nuts (6), washer (7), base (22) and gasket (21). Cut wire and remove two backup lamps (29).

(15) Remove two screws (12) and lens (11).

(16) Depress bulb (10) and turn counterclockwise to remove.

(17) Remove two screws (131, cut electrical Fire, and remove four clearance lamps (9).

(18) Remove two capscrews (37) and lockwashers (36). Cut wire and remove blackout lamp (14) at both ends of bumper.

(19) For repair of blackout lamps (14) see manual TM 9-2320-273-20.

(20) Remove four capscrews (52) and two capscrews (55) with two washers (56) and nuts (57) from bracket (51). Remove lamp assembly (50).

(21) Remove lens (53). Depress bulb (54) and turn counterclockwise to remove.

(22) Remove two screws (45) and lens (46).

(23) Depress bulb (47) and turn counterclockwise to remove.

(24) Remove two capscrews (49), cut electrical wire, and remove housing (48) (four lamps).

(25) Remove twelve screws holding wiring loom and remove left and right harness assemblies (3) and (4). (See fig. 2-3.)

(26) Remove four capscrews (41), nuts (1), washers (2), and bumper (5).

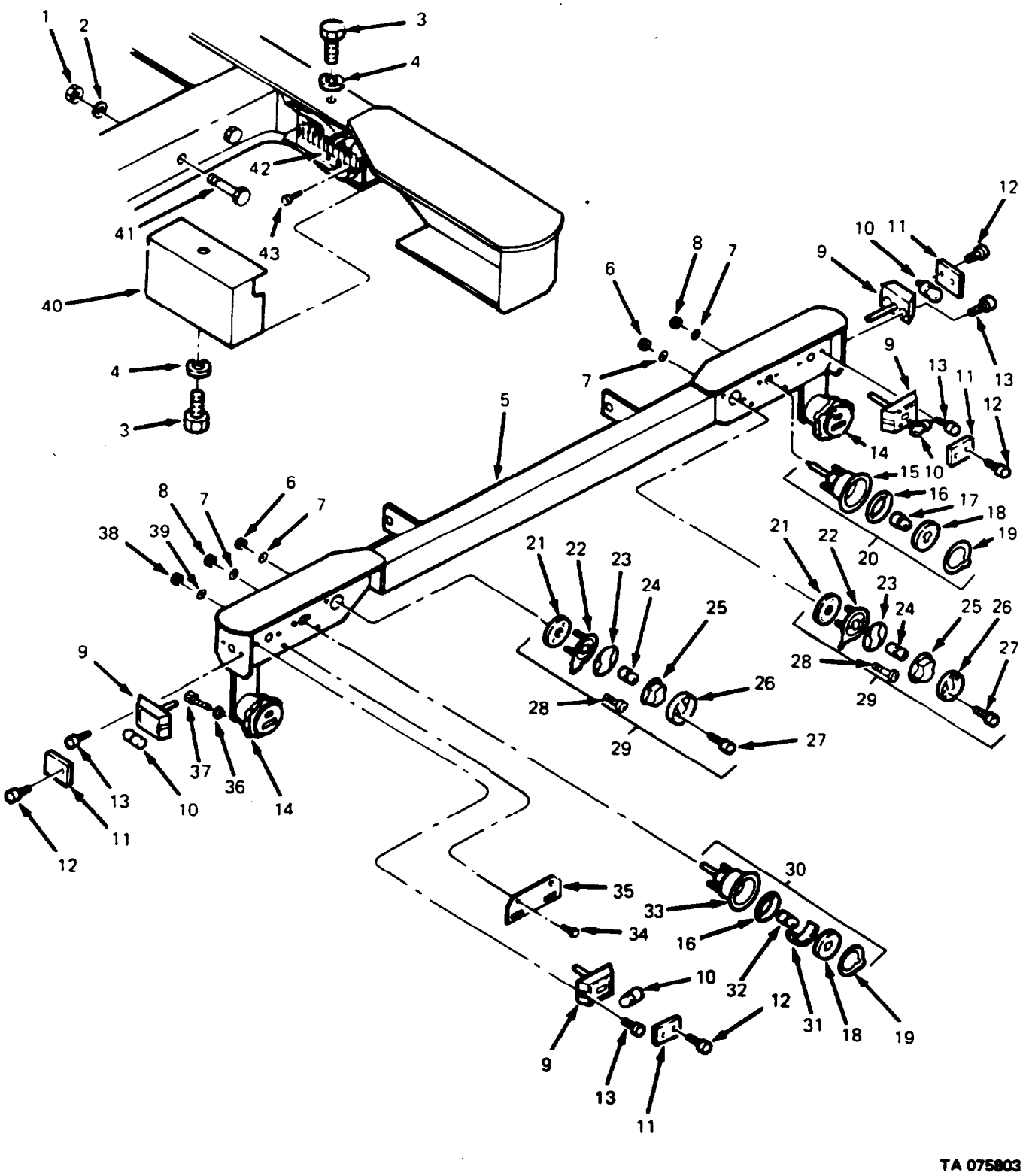
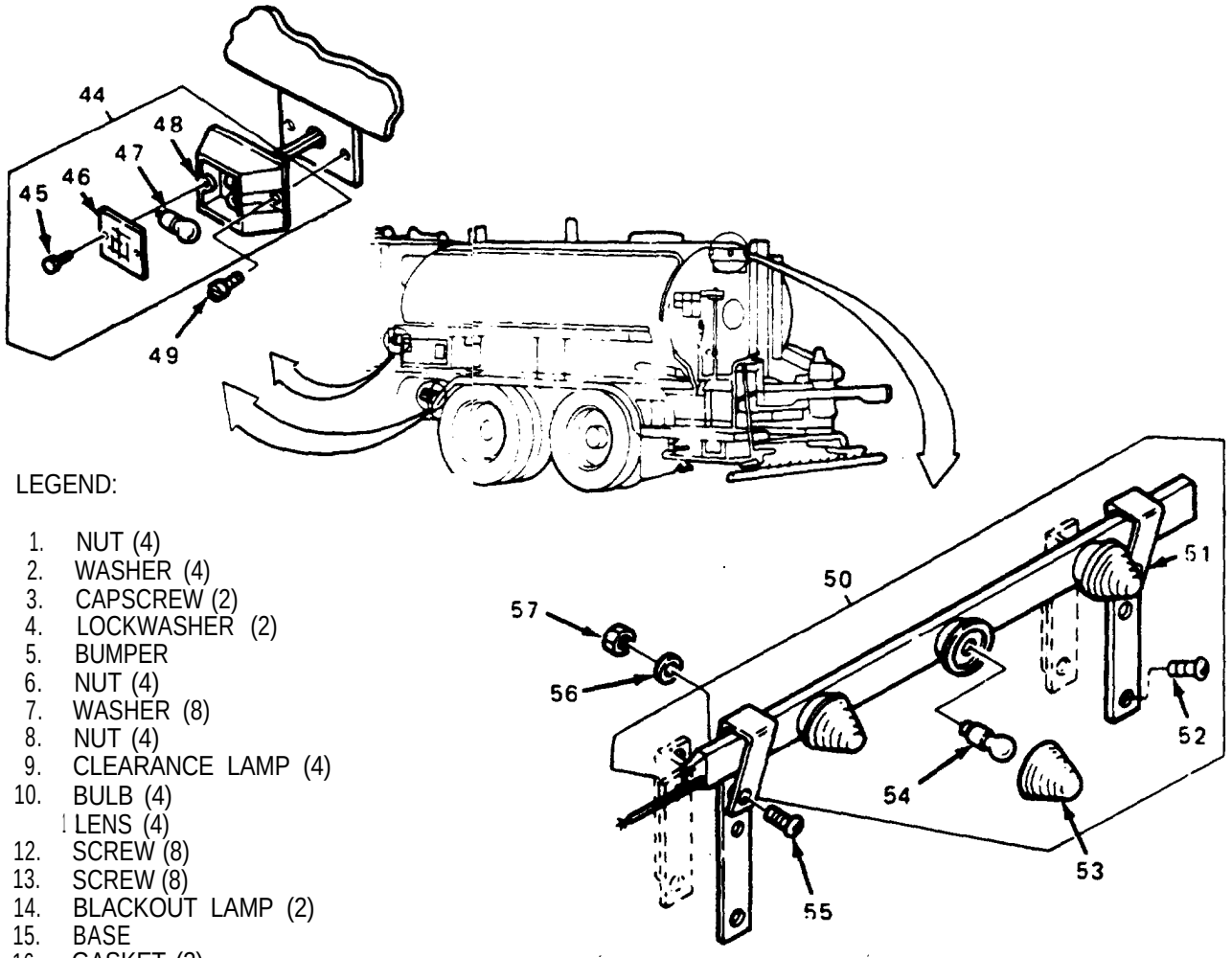


Figure 2-1. Remove/Install Loom Bumper and Marker Lamps (Sheet 1 of 2).



LEGEND:

1. NUT (4)
2. WASHER (4)
3. CAPSCREW (2)
4. LOCKWASHER (2)
5. BUMPER
6. NUT (4)
7. WASHER (8)
8. NUT (4)
9. CLEARANCE LAMP (4)
10. BULB (4)
11. LENS (4)
12. SCREW (8)
13. SCREW (8)
14. BLACKOUT LAMP (2)
15. BASE
16. GASKET (2)
17. BULB
18. LENS (2)
19. RETAINING RING (2)
20. TAILLAMP ASSEMBLY (RH)
21. GASKET (2)
22. BASE (2)
23. GASKET (2)
24. BULB (2)
25. LENS (2)
26. LENS RIM (2)
27. SCREW (4)
28. SCREW (4)
29. BACKUP LAMP (2)
30. TAILLAMP ASSEMBLY (LH)
31. LICENSE LAMP WINDOW
32. BULB
33. BASE
34. CAPSCREW (2)
35. BRACKET
36. LOCKWASHER (4)
37. CAPSCREW (4)
38. NUT 12)
39. WASHER (2)
40. TERMINAL BOARD COVER
41. CAPSCREW (4)
42. TERMINAL BOARD
43. SCREW (2)
44. LAMP ASSEMBLY (4)
45. SCREW (8)
46. LENS (4)
47. BULB (4)
48. HOUSING (4)
49. CAPSCREW (8)
50. LAMP ASSEMBLY
51. BRACKET
52. CAPSCREW (4)
53. LENS (3)
54. BULB 13)
55. CAPSCREW (2)
56. WASHER (2)
57. NUT (2)

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Figure 2- 1. Remove/Install Loom Bumper and Marker Lamps (Sheet 2 of 2).

b. Installation.

(1) Install bumper (5) with four capscrews (41), nuts (1), and washers (2).

(2) Install wiring loom and secure with twelve screws and clips.

(3) Install blackout lamps (14) to bumper (5) with two capscrews (37) and lockwashers (36). Connect wires to wiring loom with solderless connectors and tape.

(4) Install housing (48) with two capscrews (49). Connect wires to wiring loom with solderless connectors and tape.

(5) Insert bulb (47) into socket and turn clockwise to secure.

(6) Install lens (46) with two screws (45).

(7) Install lamp assembly (50) with four capscrews (52) and two capscrews (55), two washers (56) and two nuts (57).

(8) Insert bulb (54) into socket and turn clockwise to secure. Snap on lens (53).

(9) Install clearance lamp (9) with two screws (13). Connect wires to wiring loom with solderless connectors and tape.

(1O) Insert bulb (10) into socket and turn clockwise to secure.

(11) Install lens (11) with two screws (12).

(12) Install backup lamp (29) with two screws (28), washers (7), nuts (6), base (22) and gasket (21). Connect wires to wiring loom with solderless connectors and tape.

(13) Insert bulb (24) into socket and turn, clockwise to secure.

(14) Install lens (25), lens rim (26) and gasket (23) with two screws (27).

(15) Install bracket (35) with two capscrews (34), washers (39) and nuts (38).

(16) Insert license lamp window (31) into base (33).

(17) Install left hand taillamp assembly (30) with two nuts (8) and washers (7). Connect wires to wiring loom with solderless connectors and tape:

(18) Insert bulb (32) into socket and turn clockwise to secure.

(19) Install lens (18), retaining ring (19), and gasket (19).

(20) Install base (15) with two washers (7) and nuts (8). Connect wires to wiring loom with solderless connectors and tape.

(21) Insert bulb (17) into socket and turn clockwise to secure.

(22) Install lens (18), retaining ring (19), and gasket (16).

(23) Install terminal board (42) with two screws (43) and connect wires.

(24) Install terminal board cover (40) with two capscrews (3) and lockwashers (4).

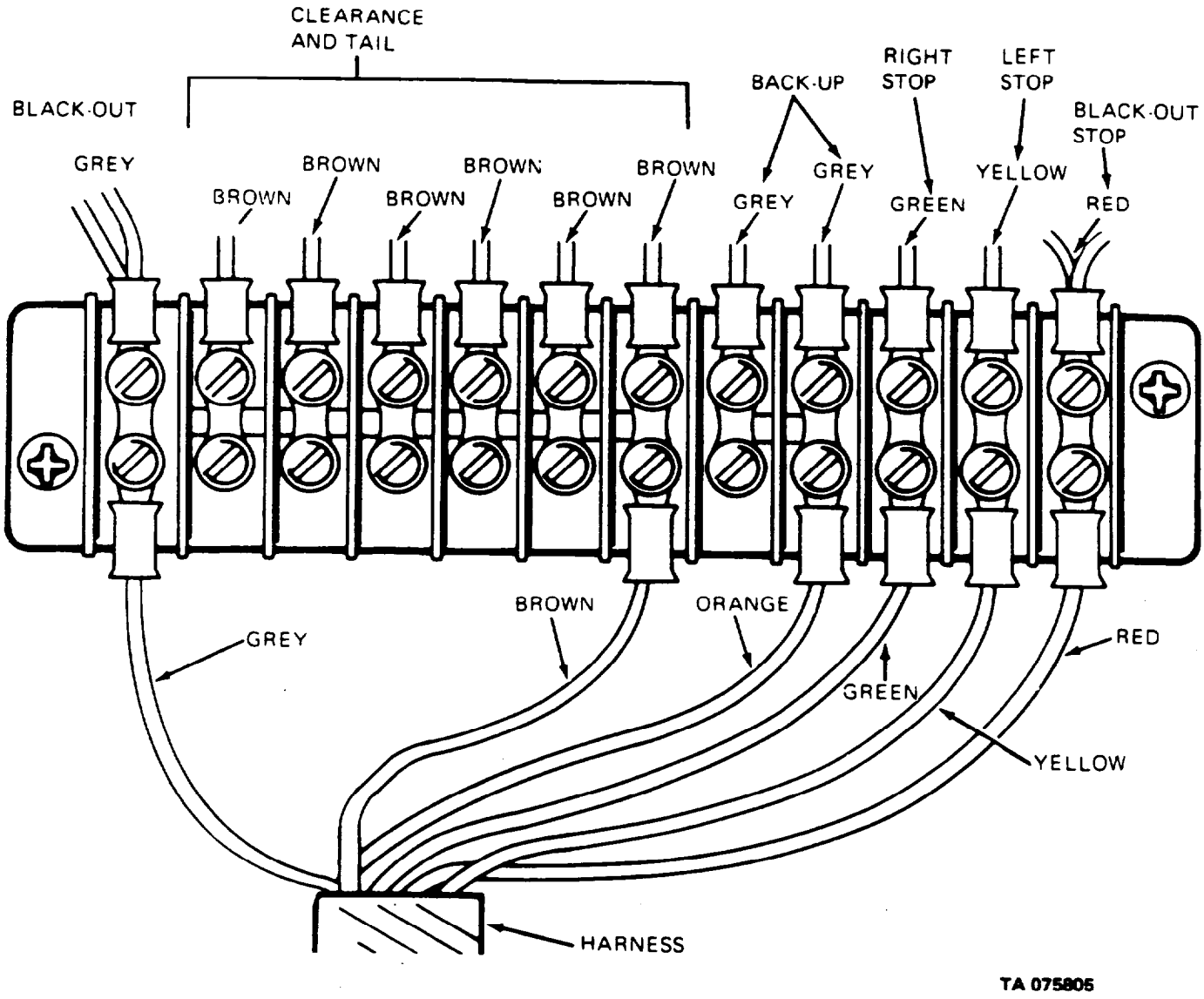


Figure 2-2. Bumper Terminal Board Wiring Connectors.

2-10. Body Lamps Wire Harness Routing.

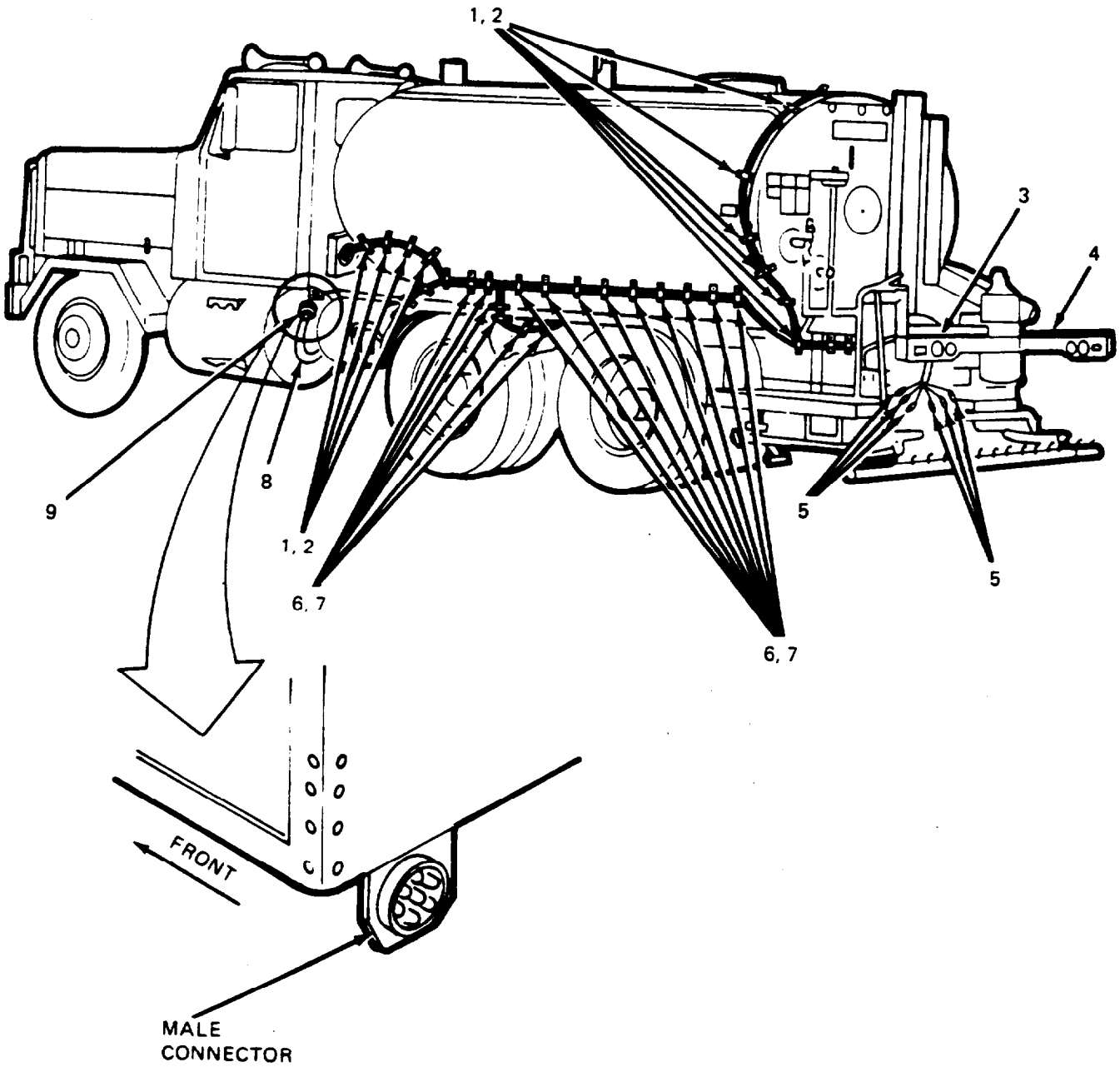
a. Removal of Harness. (See fig. 2-3.)

(1) Remove connector (9) from male connector on lower left rear corner of body by pushing in and turning lockring to the left.

(2) Drop connector (9) with body lamps harness (8) down over frame rail.

(3) Remove six wire clips (1) and screws (2).

(4) On front of walkway at amber clearance lamps, snip off brown wire at each lamp.



LEGEND:

1. WIRE CLIP, 3/8"
2. SCREW
3. HARNESS, BUMPER LEFT
4. HARMESS, BUMPER RIGHT
5. WIRE TERMINAL (6)
6. WIRE CLIP, 1/2"
7. SCREW
8. BODY LAMPS HARNESS
9. CONNECTOR

TA 075806

Figure 2-3. Body Wiring Harness Routing.

(5) Remove eleven wire clips (6) and screws (7).

(6) At the two side facing amber clearance lamp assemblies, snip off brown wire at each lamp.

(7) Remove fourteen wire clips (6) with screws (7).

(8) Remove fiie wire clips (1) and screws (2).

(9) At the upper rear tank clearance lamp, snip off brown wire.

(10) Unscrew and remove six wire terminals (5).

b. Inspection and Repair of Harness.

(1) Inspect all outer harness and exposed wire insulation for damage or cracks.

Inspect all terminal ends for tight crimp.

(3) Resolder terminal ends as necessary.

(4) Replace badly cracked or corroded wires. Slight punctures in the outer insulation may be wrapped securely with electrical tape.

C. Installation of Harness. (Refer to fig. 2-3.)

(1) Screw on six wire terminals (5).

(1) Install new crimp connector to brown wire on lamp bar at the upper rear tank clearance lamp and tape connection with waterproof electricians tape.

(3) Install five wire clips (1) and screws (2).

(4) Install fourteen wire clips (6) with screws (7).

(5) Install new crimp connector to brown wire on side clearance lamps and tape connection with waterproof electricians tape.

(6) Install eleven wire clips (6) and screws (7).

(7) Install new wire crimp connector to two forward facing clearance lamps and tape connection with waterproof electricians tape.

(8) Install six wire clips (1) and screws (2).

(9) Route connector (9) with body lamps harness (8) up over left side frame rail.

(10) Push connector (9) into male connector on lower left hand corner of body and turn to the right until ring locks in place.

(11) Test exterior body lamps for proper function.

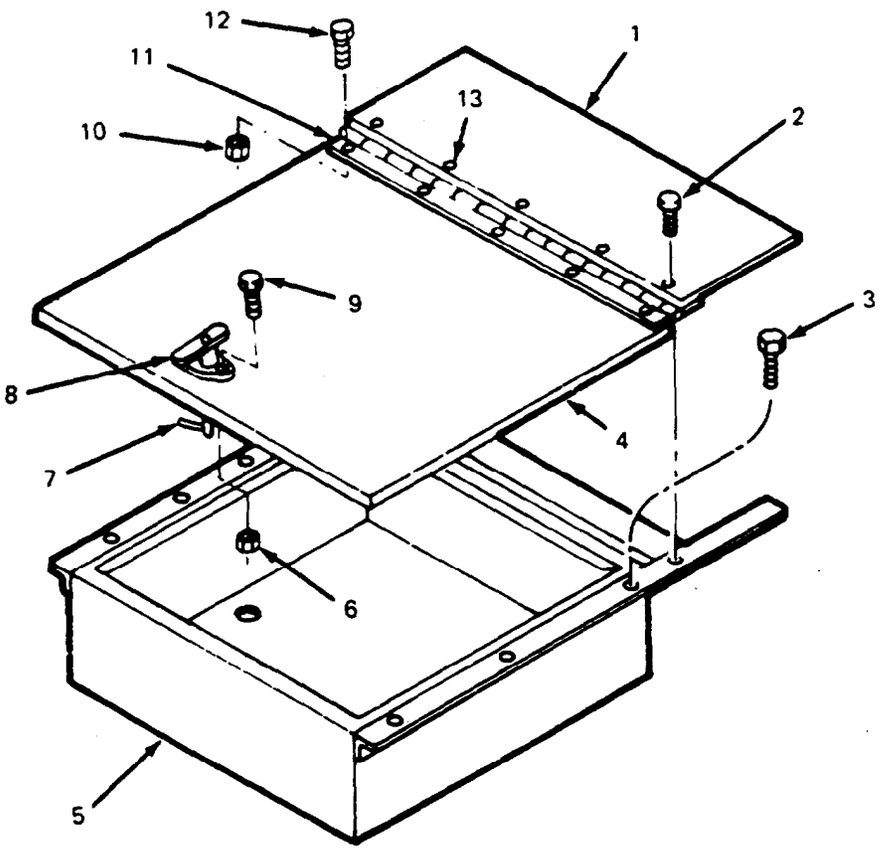
Section VII. MAINTENANCE OF STOWAGE BOX

12-11. Stowage Box.

a. Removal. (Refer to fig. 2-4.)

(1) Remove five capscrews (2) and lift off lid (4) and cover (1) as an assembly.

(2) Remove six capscrews (3) and lift out stowage box (5).



LEGEND:

1. COVER
2. CAPSCREW (15)
3. CAPSCREW (6)
4. LID
5. STOWAGE BOX
6. LOCKNUT (2)
7. LOCK ARM
8. HANDLE
9. CAPSCREW
10. NUT (5)
11. HINGE
12. BOLT (5)
13. RIVET (5)

TA 075807

Figure 24. Remove/Install Stowage Box.

b. Disassembly. Loosen set screw and remove lock arm (7), remove two nuts (6) and capscrews (9) from handle (8) and remove handle. Drill out rivets (13) from hinge (11) and remove hinge from lid (4).

C. Assembly. Install hinge (11) to lid (4) with five bolts (12) and nuts (10). Install handle (8) and secure with two nuts (6) and capscrews (9). Install lock arm (7) and tighten set screw.

d. Installation. (Refer to fig. 2-4.)

(1) Set stowage box (5) on rear frame rails and secure with six capscrews (3).

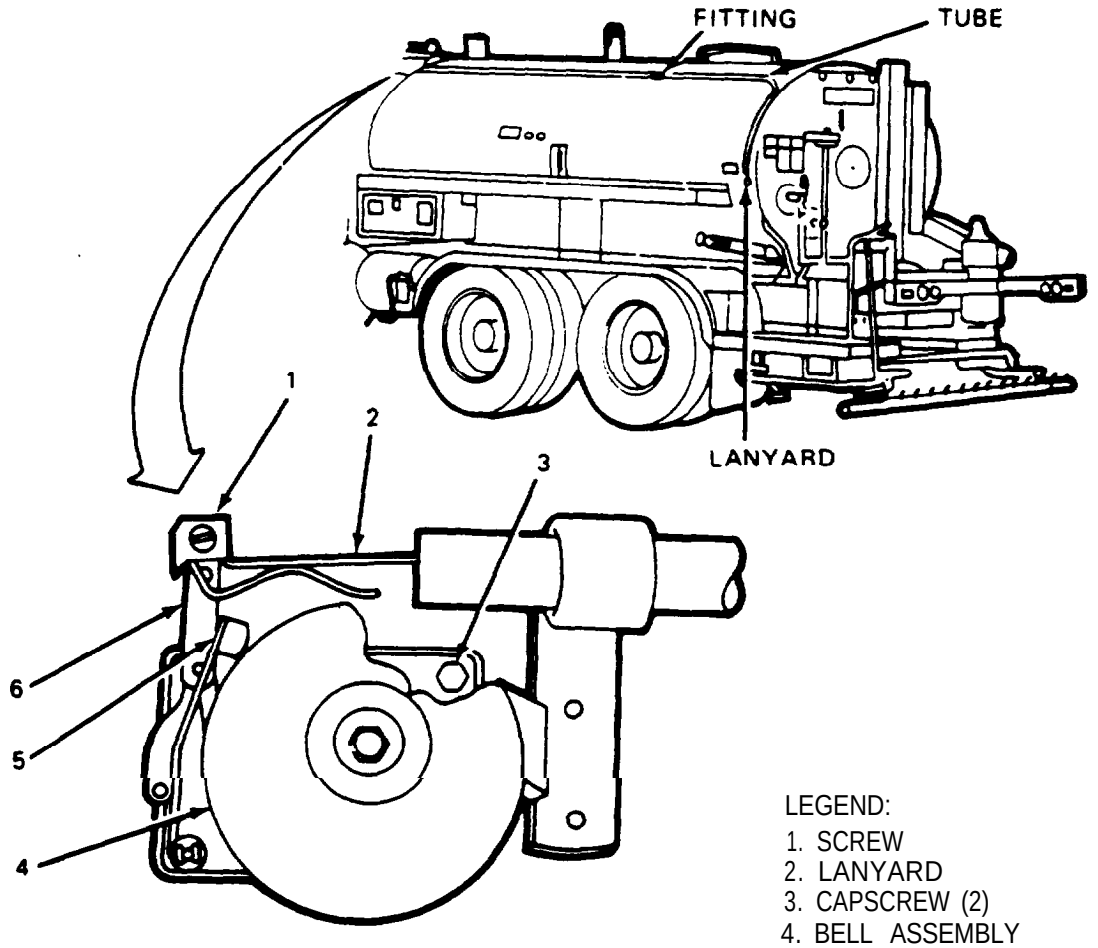
(2) Position lid (4) on stowage box (5) and secure with five capscrews (2).

Section VIII. MAINTENANCE OF BELL

2-12. Bell.

a. Removal. (Refer to fig. 2-5.)

(1) Loosen screw (1) and pull out lanyard (2).



LEGEND:
1. SCREW
2. LANYARD
3. CAPSCREW (2)
4. BELL ASSEMBLY
5. STRIKER
6. ACTUATING ARM

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Figure 2-5. Remove/Install Bell *Mechanism* and Lanyard.

(2) Remove acorn nut and washer (fig. 26) then lift off bell and washer,

(3) Remove bell assembly (4, fig. 2-5) by removing two capscrews (3), nuts, and washers.

b. Disassembly. (Refer to fig. 2-6.)

(1) Remove acorn nut and washer; then lift off bell (if not previously removed).

(2) Remove two springs by unhooking from their retaining posts.

c. Reassembly. (Refer to fig. 26.) Connect both springs to their retaining posts.

d. Installation. (Refer to fig. 2-5.)

(1) Mount bell (4) on support bracket and secure with two capscrews (3) with washers and nuts,

(2) Install bell, washer, and secure with acorn nut (fig. 26). Make sure that there is no gap between the actuating arm striker (5) and the bell (4) (fig. 2-5).

(3) Connect lanyard to actuating arm (6) and secure with screw (1).

(4) Pull lanyard at rear of vehicle to check operation of bell.

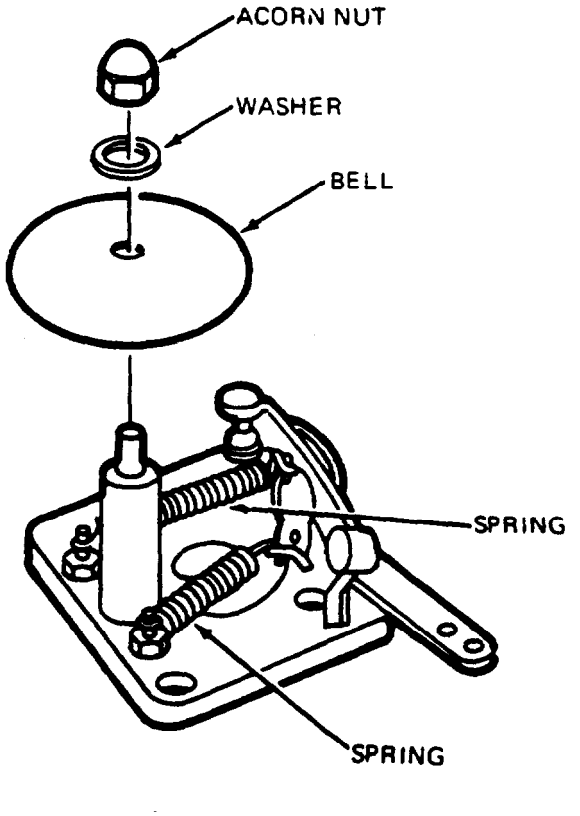


Figure 2-6. Disassemble/Assemble Bell Mechanism.

e. Replace Lanyard. (Refer to fig. 2-5.)

(1) Disconnect lanyard at bell by loosening screw (1); then pull old lanyard out of vehicle.

(2) Disconnect fitting on lanyard tube, located near the tank manhole cover.

(3) Pass new lanyard cord up through tube from rear of vehicle.

(4) Connect lanyard to bell actuating arm (6) and secure with screw (1).

(5) Connect fitting on lanyard tube (removed in step (2).

(6) Check operation of bell.

Section IX. MAINTENANCE OF HAND SPRAY GUN ASSEMBLY

2-13. Hand Spray Gun Assembly.

a. Removal. (Refer to fig. 2-7). To remove the hand spray gun tube assembly, lift it out of the two retaining clamps on vehicle.

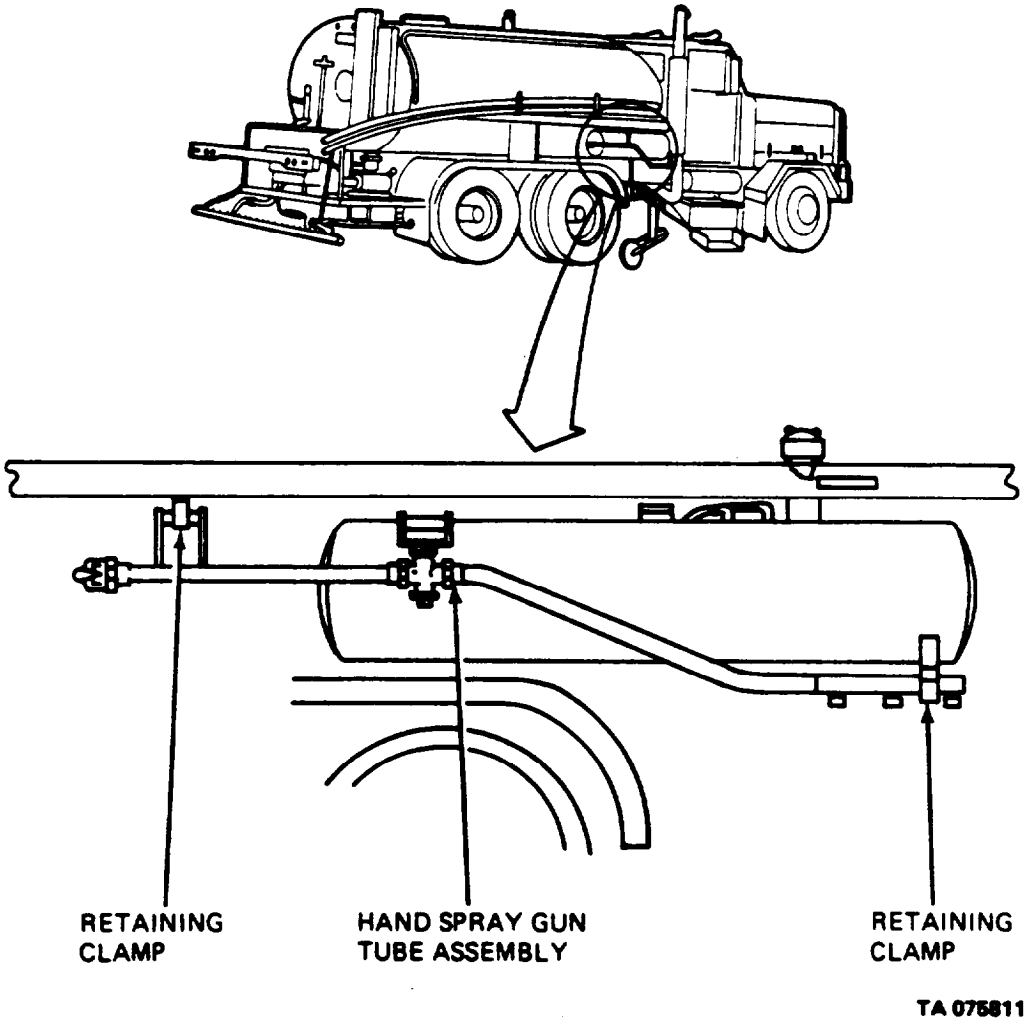


Figure 2-7. Remove/Install Hand Spray Gun.

b. Disassembly. (Refer to fig. 2-8.)

(1) Unscrew pipe coupling (5) from tube assembly (4).

(2) Unscrew tube assembly (4) from valve and handle (3).

(3) Unscrew tube assembly (2) from valve and handle (3).

(4) Remove three nozzles (1) from tube assembly (2).

c. Reassembly. (Refer to fig. 2-8.)

(1) Install three nozzles (1) into tube assembly (2), adjust slot to approximately 30^0 angle.

(2) Screw tube assembly (2) into valve and handle (3).

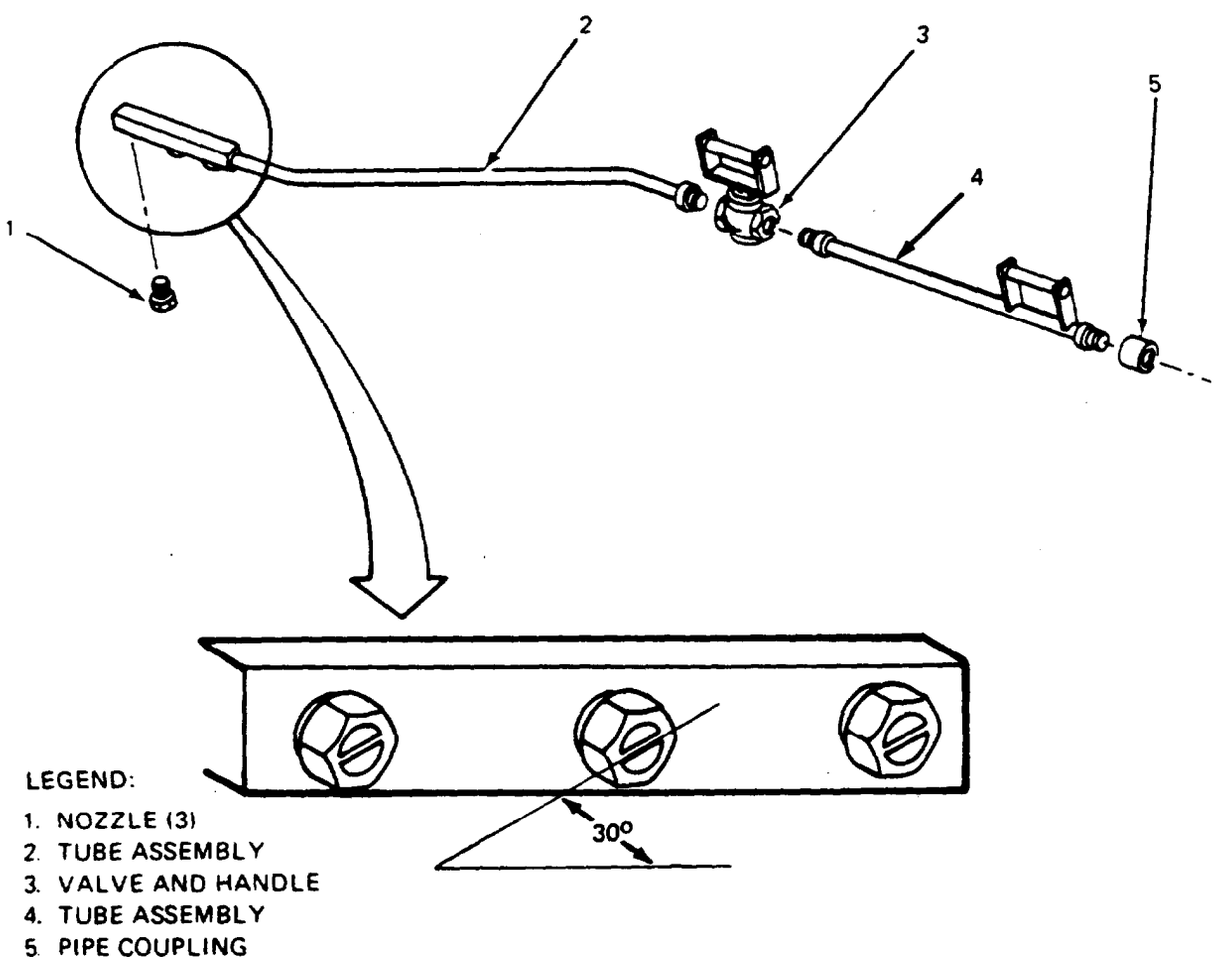


Figure 2-8. Disassemble/Assemble Hand Spray Gun.

(3) Screw tube assembly (4) into valve and handle (3).

(4) Screw pipe coupling (5) into tube assembly (4).

d. Installation. To install the assembly (fig. 2-7), insert it into the two retaining clamps on the vehicle.

Section X. MAINTENANCE OF HYDRAULIC PUMP PROPELLER SHAFT

2-14. Hydraulic Pump Propeller Shaft.

a. Removal. (Refer to fig. 2-9.)

(1) Remove four capscrews (8) and washers (7) from rear yoke (9). Loosen set screw (17) in front yoke (18) at PTO.

(2) Disconnect bracket (6) from vehicle frame by removing two capscrews (4), large washers (3), washers (2), and nuts (1). Remove hydraulic pump propeller shaft with attached bracket (6). Shaft may be disassembled into two sections by disconnecting the splined gear in the center of the shaft (14).

(3) Press out bearing assembly (5) from bracket (6) and propshaft (14) with a suitable Press.

(4) Pulley (10) can be removed by removing four capscrews (12) and washers (7) and separate pulley (10) from yoke (11).

(5) Slide rear yoke (9) out of pump shaft. For replacing of journal bearing (13) and propshaft (16), see para 2-14 c.

b. Installation.

(1) Press new bearing assembly (5) on propshaft (14) and into bracket (6).

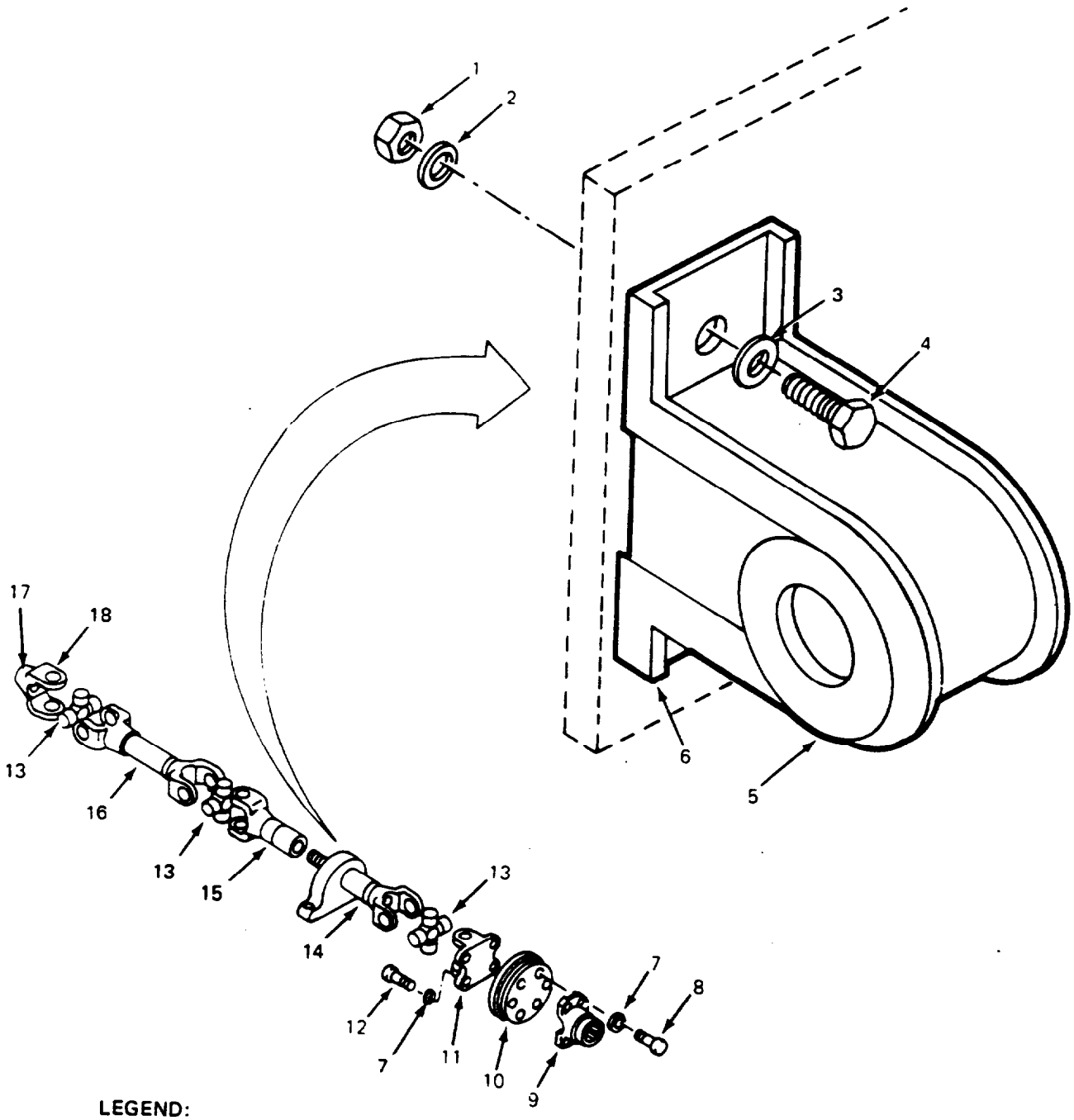
(2) Connect the two sections of the shaft with yokes in alinement, by inserting the splined gear of propshaft (14) into the yoke (15).

(3) Assemble yoke (11) to pulley (10) and secure with four capscrews (12) and washer (7).

(4) Slide rear yoke (9) on to pump shaft.

(5) Mount assembled hydraulic pump propeller shaft with bracket (6) on vehicle and secure the bracket to frame with two capscrews (4), large washers (3), washers (2), and nuts (1).

(6) Install washers (7) and capscrews (8). Tighten sat screw (17) in front yoke (18) at PTO.



LEGEND:

1. NUT (2)
2. WASHER (2)
3. LARGE WASHER (2)
4. CAPSCREW (2)
5. BEARING ASSEMBLY
6. BRACKET
7. WASHER (8)
8. CAPSCREW (4)
9. REAR YOKE
10. PULLEY
11. YOKE
12. CAPSCREW (4)
13. JOURNAL BEARING
14. PROP SHAFT
15. YOKE
16. PROP SHAFT
17. SET SCREW
18. FRONT YOKE

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Figure 2-9. Remove/Install Hydraulic Pump Propeller Shaft.

c. Repair of Universal Joint. (Refer to fig. 2-10.)

(1) To remove shaft refer to para 2-14 a.

(2) Place drive shaft section in a suitable vise.

(3) Remove four lockrings.

(4) Tap on top of yoke (as shown in illustration) to drive upper bearing out until cross bottoms on shaft.

(5) Turn drive shaft section over and repeat step (4).

(6) Lift out cross and remove two bearing cups, one from the top and one from the bottom.

(7) Repeat steps 3, 4 and 5 above to remove the other two bearing cups.

(8) Position cross in yoke.

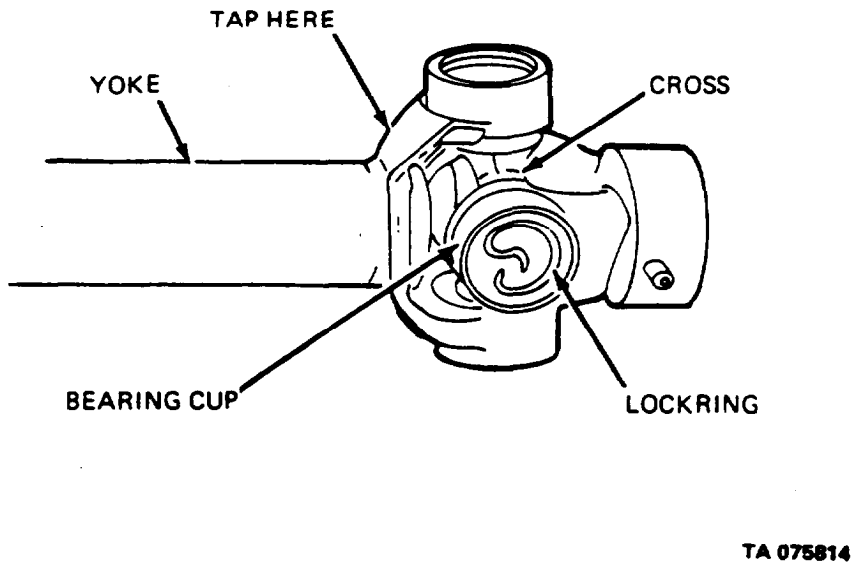

Figure 2-10. Replace Drive Shaft Universal.

(9) Tap in two bearing cups, one at the top and one at the bottom. Secure each bearing cup with a lockring.

(10) Rotate drive shaft in vise 90° and repeat step 9 above for the other two bearing cups.

Section XI. MAINTENANCE OF HYDRAULIC PUMP CONTROL AND FRONT OVERRIDE CONTROL

2-15. Hydraulic Pump Control.

a. Removal. (Refer to fig. 2-11.)

(1) Screw down vernier (3) to gain access to nut (2); then loosen nut (2) and remove shifting knob (1).

(2) Unscrew and remove shifting knob and nut (2), vernier (3), and knurled nut (4).

(3) Remove two nuts (5) and washers (7) from cable (6).

(4) From underneath vehicle, remove nut (48) that fastens lock assembly (47) to vehicle frame.

(5) Loosen locknut (45); then unscrew spring body (40) from control cable (6). Pull out control cable (6) with attaching parts; then remove lock nuts (45), bellows (46) and lock assembly (47). Loosen three lock nuts (9) and remove connector (8) and joint (12).

(6) Remove nut (44) from rod (41) and remove gland (43), spring (42) and spring body (40).

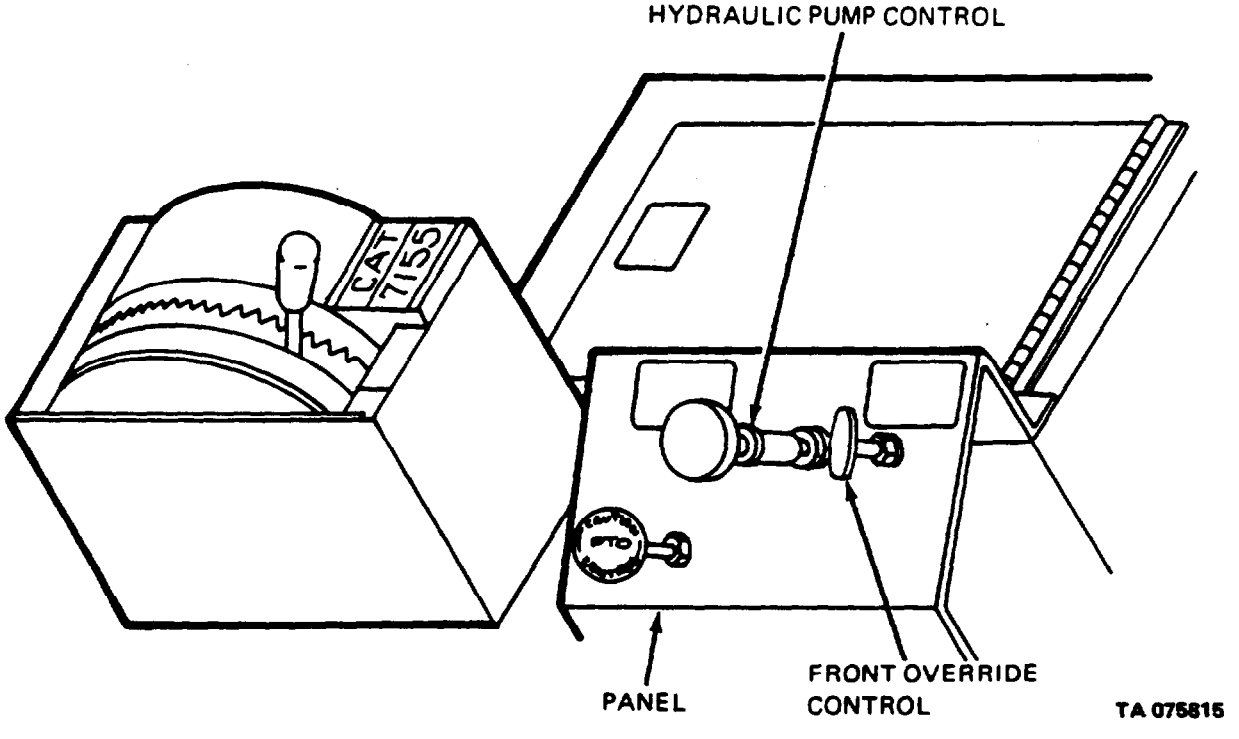

Figure 2-11. Hydraulic Pump Controls (Sheet 1 of 2).

LEGEND:

1. SHIFTING KNOB
2. NUT
3. VERNIER
4. KNURLED NUT
5. NUT (2)
6. CONTROL CABLE
7. WASHER (2)
8. CONNECTOR
9. LOCK NUT (3)
10. CONTROL ASSEMBLY
11. ROD
12. JOINT
13. WASHER
14. CHAIN LINK
15. WASHER (2)
16. NUT (2)
17. CAPSCREW (2)
18. CHAIN LINK
19. JOINT (2)
20. LEVER
21. WASHER (2)
22. NUT (2)
23. ROD
24. BUSHING
25. BRACKET
26. CABLE
27. PLATE
28. SCREW (2)
29. SCREW
30. STOP
31. ARM
32. WASHER (2)
33. BRACKET
34. NUT
35. SCREW
36. NUT (2)
37. WASHER (2)
38. BLOCK
39. OVERIDE
40. SPRING BODY
41. ROD
42. SPRING
43. GLAND
44. NUT
45. LOCK NUT (3)
46. BELLOWS
47. LOCK ASSEMBLY
48. NUT

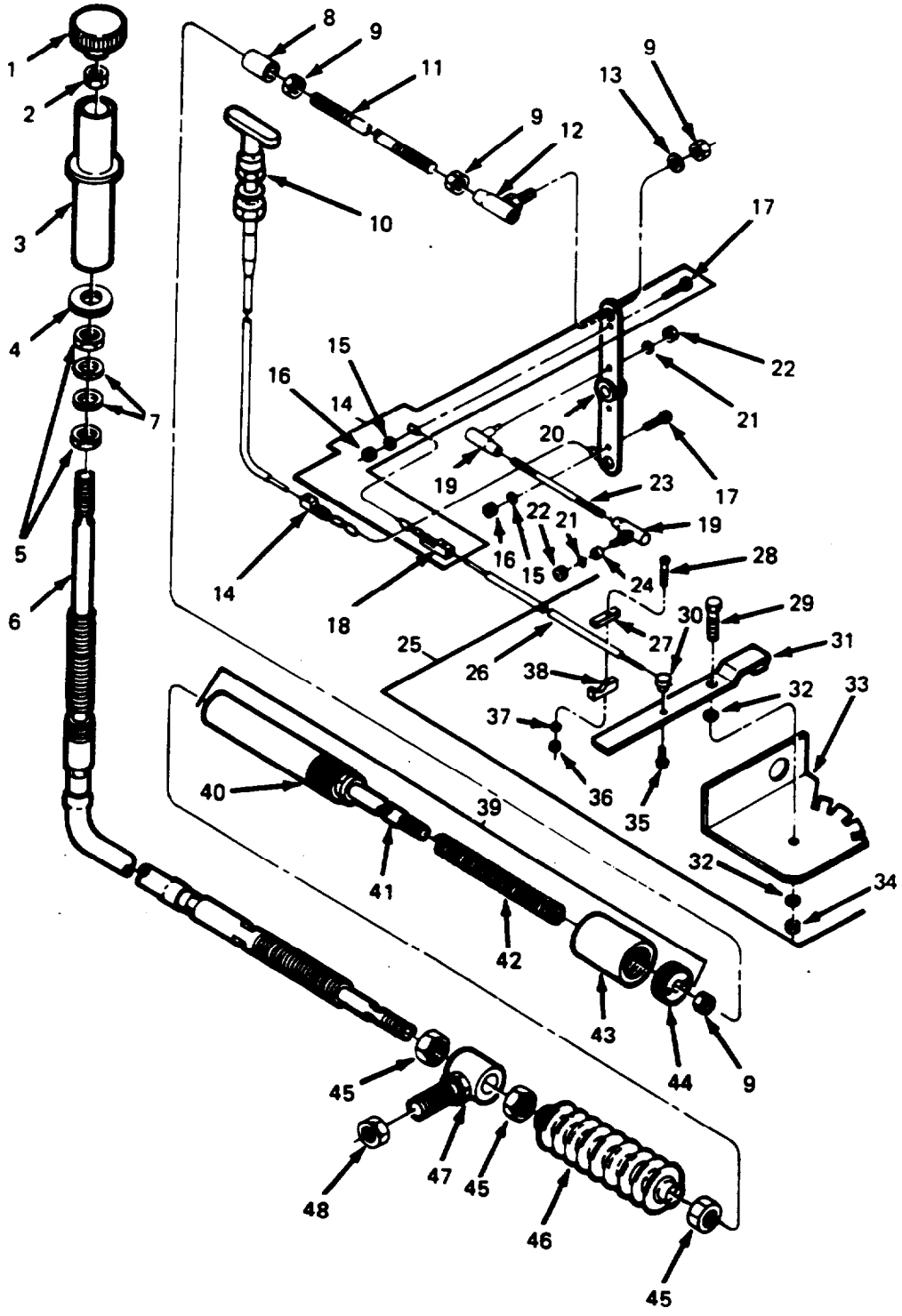

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Figure 2-11. Hydraulic Pump Controls (Sheet 2 of 2).

b. Installation. (Refer to fig. 2-11.)

(1) From underneath vehicle, push assembled control cable (6) up through panel. (The panel is shown in detail on sheet 1 of illustration).

(2) Attach control cable (6) to panel with two nuts (5) and washers (7).

(3) Install knurled nut (4), vernier (3), nut (2) and knob (1).

(4) Screw three nuts (45) on to control cable (6) with lock assembly (47) and bellows (46). Secure with spring body (40), spring (42), gland (43) and lock nut (44).

(5) Push lock assembly (47) through vehicle frame and secure with nut (48).

(6) Add lock nuts (9), connector (8) and joint (12) to rod (11) and secure with washer (13) and lock nut (9).

c. Removal of Front Override Control. (Refer to fig. 2-11.)

(1) From underneath vehicle, disconnect chain connector from vehicle mounting bracket by removing two screws (17), washers (15), nuts (16), two set screws in chain link (14) and (18).

(2) Remove cable (26) by removing screw (35), two screws (28), washers (37) and nuts (36). Remove plate (27), block (38), screw (29), two washers (32) and nut (34) from arm (31).

(3) Remove rod (23) by removing nuts (22), washers (21) and joints (19).

(4) Remove control assembly (10) by removing lock nut and pull cable assembly (10) out.

d. Installation of Front Override Cable. (Refer to fig. 2-11.)

(1) Push control assembly (10) through panel and secure with, lock nut. Install rod (23) with joints (19) and secure with nuts (22) and washers (21).

(2) Install cable (26) with plate (27) and block (38). Secure with two screws (28), washers (37) and nuts (36). Install arm (31) with screw (29), two washers (32) and nut (34). Install screw (35) into stop (30).

(3) Attach cable to vehicle mounting bracket with set screw in chain link (14), two capscrews (17), washers (15) and nuts (16).

Section XII. MAINTENANCE OF HYDRAULIC TANK AND FILTER

2-16. Hydraulic Tank and Filter.

a. Hydraulic Filter Removal. (Refer to fig. 2-12.)

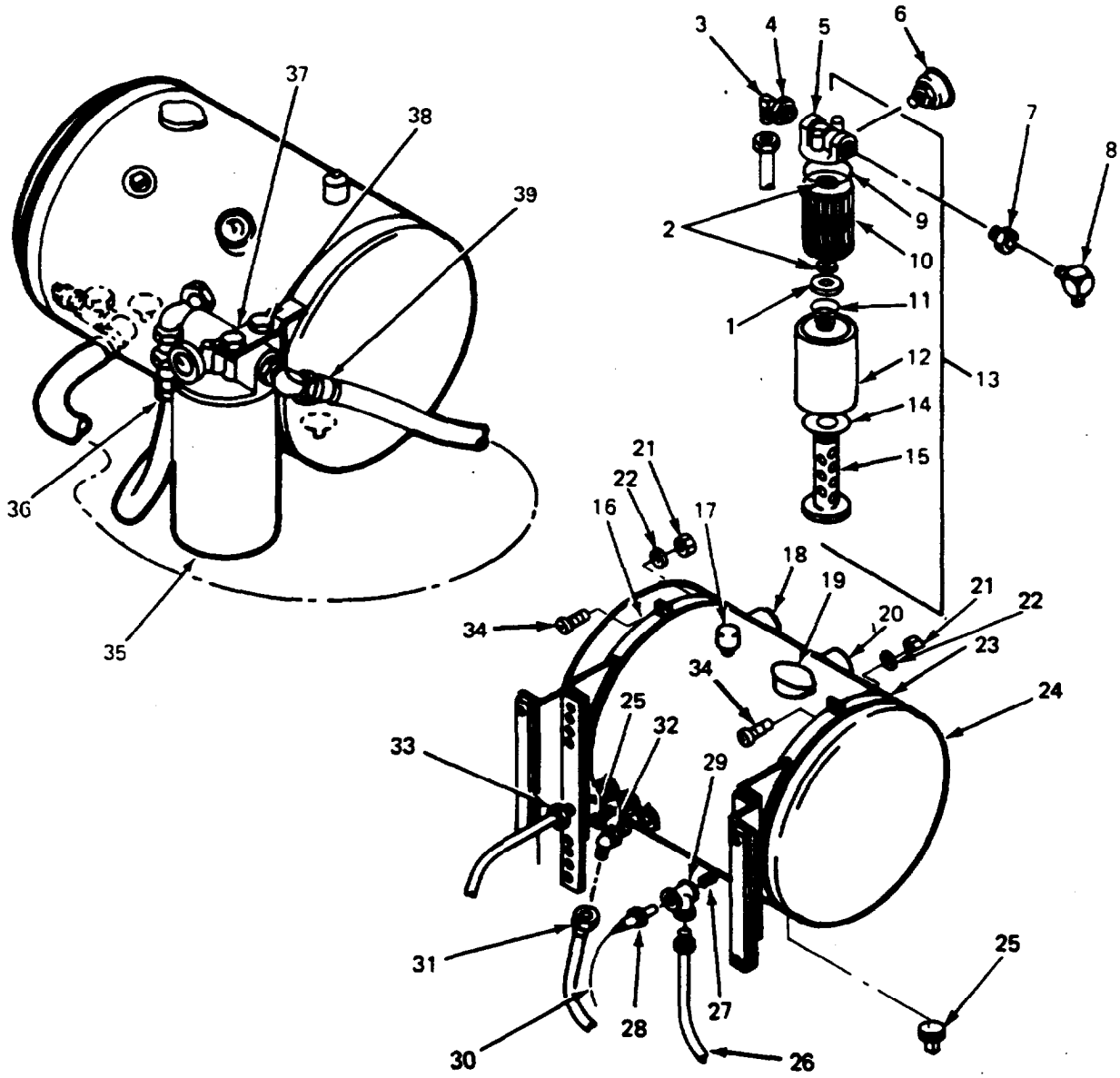
NOTE

In step (1), a clean 20-gallon (76 l) container is required.

(1) Drain oil from hydraulic tank (24) by removing one of the drain plugs (25) at bottom of the hydraulic tank.

(2) Disconnect hydraulic lines (39) and (36) at filter assembly (35) and remove elbows (3) and (8).

(3) Remove hydraulic filter assembly (35) by removing two capscrews (38).



LEGEND:

EXPLODED VIEW
FROM UNDER LEFT SIDE OF VEHICLE

1. WASHER
2. SEAL (2)
3. ELBOW
4. BUSHING
5. HEAD
6. INDICATOR
7. BUSHING
8. STREET ELBOW - 3/4
9. O-RING
10. FILTER ELEMENT
11. SPRING
12. HOUSING
13. FILTER ASSEMBLY
14. SEAL
15. CENTER POST
16. MOUNTING CLAMP
17. BREATHER
18. THERMOMETER
19. CAP - NON VENTED
20. OIL LEVEL GLASS
21. NUT (4)
22. LOCKWASHER (4)
23. MOUNTING CLAMP
24. HYDRAULIC TANK
25. DRAIN PLUG (2)
26. HYDRAULIC LINE
27. NIPPLE 1/2 x 1-3/8
28. THERMO SWITCH
29. PIPE TEE 3/4
30. ELECTRICAL WIRE
31. HYDRAULIC LINE
32. ELBOW
33. HYDRAULIC LINE
34. CAPSCREW (4)
35. FILTER ASSEMBLY
36. HYDRAULIC LINE
37. BRACKET
38. CAPSCREW (2)
39. HYDRAULIC LINE

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Figure 2-12. Hydraulic Tank and Filter.

b. Hydraulic Filter Disassembly. (Refer to fig. 2-12.)

(1) Unscrew center post (15) and pull out the following:

(a) Seal (14).

(b) Housing (12).

(c) Washer (1).

(d) Spring (11).

(e) Filter element (10) with two seals (2).

(f) O-ring (9).

(2) Unscrew indicator (6) from head (5).

(3) Remove two bushings (4 and 7) from head (5).

(4) Discard O-ring (9), filter element (10), and seal (14).

c. Hydraulic Filter Assembly Reassembly. (Refer to fig. 2-12.)

(1) Install two bushings (4 and 7) into head (5).

(2) Install indicator (6) into head (5).

(3) Insert spring (11), washer (1), and new filter element (10) with two seals (2) into housing (12).

(4) Place new O-ring (9) on head (5) and mount assembled housing (12) to head (5).

(5) Install new seal (14) and secure assembly to head (5) with center post (15).

d. Hydraulic Filter Installation.

(1) Mount assembled filter assembly (35) on bracket (37) and secure with two capscrews (38).

(2) Connect hydraulic lines (39) and (36) to filter assembly (35) and elbows (3) and (8).

(3) Install drain plug (25) and fill hydraulic tank (24) with hydraulic fluid, refer to LO 5-3895-371-12.

e. Hydraulic Tank Removal.

(1) Remove filter and oil as described in paragraph a.

(2) Loosen fittings and remove three hydraulic lines (26), (31), and (33), (fig. 2-12) from hydraulic tank assembly (24).

(3) Disconnect electrical wire (30) from thermo switch (28); than unscrew thermo switch (28) from hydraulic tank assembly (24). Remove breather (17), themometer (18), cap (19), oil level glass (20), pipe tee (29), nipple (27), and elbow (32).

NOTE

In step (4), two men are required to remove the tank.

(4) Loosen mounting clamps (23) and (16) by removing one nut (21), capscrew (34) and lockwasher (22) on top and one on bottom of each clamp; then remove hydraulic tank (24).

f. Hydraulic Tank Installation.

(1) Mount hydraulic tank (24) into two mounting clamps (23) and (16); then tighten clamps by installing one nut (21), capscrew (34) and lockwasher (23) on top and one on bottom of each clamp.

(2) Install nipple (27), pipe tee (29), plug (25) and elbow (32).

(3) Install thermo switch (28) in hydraulic tank (24) and connect electrical wire (30).

(4) Connect three hydraulic lines (26), (31), and (33) to hydraulic tank (24).

(5) Install hydraulic filter as described in paragraph d.

(6) Install breather (17), thermometer (18), cap (19), and oil level glass (20).

Section XIII. MAINTENANCE AND ROUTING OF HYDRAULIC LINES

2-17. Routing of Hydraulic Lines.

a. Removal. (Refer to fig. 2-13.)

NOTE

Plug all lines and orifices as removed.

(1) Drain hydraulic tank (4) (See para 2-16 a).

(2) Loosen hose clamps (3) and (7); remove hydraulic line (17).

(3) Loosen hose clamps (5) and (12); remove hydraulic line (15).

(4) Unscrew hydraulic fittings (1) and (9); remove hydraulic line (8).

(5) Unscrew hydraulic fitting (2) to free hydraulic line (16) from tank (4).

(6) Remove eight bolts and washers from pipe flange blocks (14) on either side of hydraulic pump (10); remove hydraulic lines (11) right side and (13) from hydraulic pump (10) left side.

(7) Cut nylon hose ties (21) from hydraulic line (16), along inside of LH frame rail; unscrew fitting from 'T' at bottom of hydraulic motor (19); remove hydraulic line (16) from vehicle.

(8) Remove hydraulic lines (11) and (13) from ‘U’ holders (20) and (22); cut nylon ties.

(a) Remove four bolts and washers from pipe flange block at side of hydraulic motor (19); remove hydraulic line (11) from vehicle.

(b) Remove four bolts and washers from pipe flange block at side of blower (18); remove hydraulic line (13) from vehicle.

(c) Remove hydraulic line (23) from hydraulic motor (19) and hydraulic drive motor at blower (18).

(d) Remove short hydraulic line from hydraulic drive blower motor to control valve.

b. Installation. (Refer to fig. 2-13.)

NOTE

Remove plugs as connections are made.

(1) Install hydraulic line (23) to hydraulic drive motor at blower (18) and hydraulic motor (19).

(2) Install hydraulic line (13) at side of blower (18) with four bolts and washers thru pipe flange block.

(3) Install hydraulic line (11) at right side of hydraulic motor (19) with four bolts and washers thru pipe flange block.

(4) Route hydraulic lines (11) and (13) thru 'U' holders (20) and (22) over frame cross rails and down to hydraulic pump (10). Install new nylon ties around hydraulic lines to 'U' holders.

(5) Install hydraulic line (16) to 'T' on bottom of hydraulic motor (19); tighten fitting.

(6) Route hydraulic line (16) along inside of LH frame rail, thru hole in main cross brace and down to hydraulic tank (4). Install new nylon ties around hydraulic line (16) to electrical harness inside frame rail; space approximately every two feet.

(7) Install and tighten hydraulic fitting (2) on hydraulic line (16) to bottom of hydraulic tank (4).

(8) Install hydraulic lines (11) right side and (13) on left side of hydraulic pump (10) as illustrated, with eight bolts and washers thru two pipe flange blocks (14).

(9) Install one end of hydraulic line (8) to bottom of hydraulic pump (10); tighten hydraulic fitting (9).

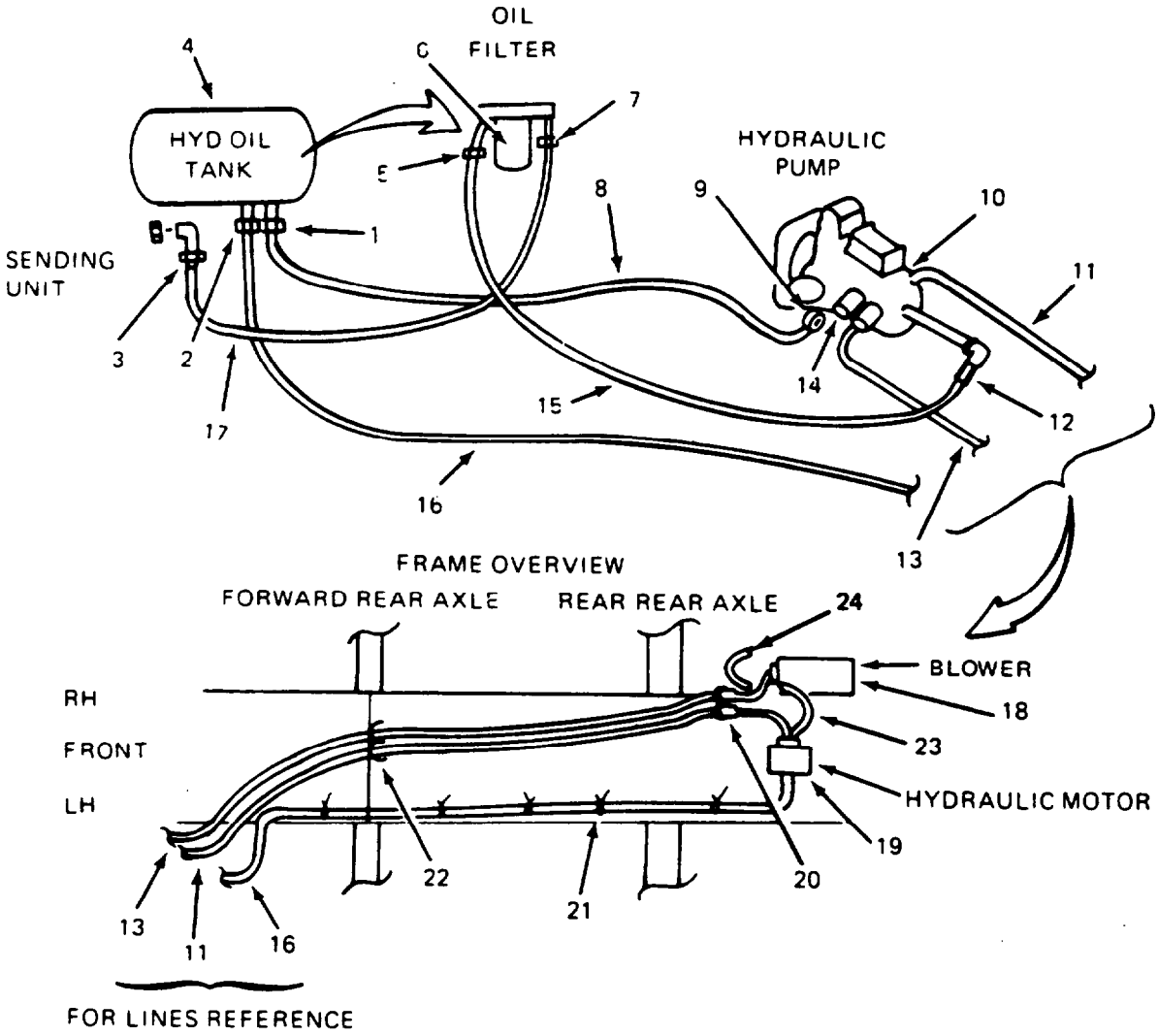
(10) Install other end of hydraulic line (8) to bottom of hydraulic tank (4) as illustrated; tighten hydraulic fitting (1).

(11) Install one end of hydraulic line (17) to oil filter (6), as illustrated; tighten hose clamp (7).

(12) Install other end of hydraulic line (17) to elbow on 'T' at hydraulic tank (4); tighten hose clamp (3).

(13) Install hydraulic line (15) to oil filter (6) and rear of hydraulic pump (10); tighten hose clamps (5) and (12).

(14) Refill hydraulic tank (4) and test for leaks.



LEGEND:

1. HYDRAULIC FITTING
2. HYDRAULIC FITTING
3. HOSE CLAMP
4. HYDRAULIC TANK
5. HOSE CLAMP
6. OIL FILTER
7. HOSE CLAMP
8. HYDRAULIC LINE
9. HYDRAULIC FITTING
10. HYDRAULIC PUMP
11. HYDRAULIC LINE
12. HOSE CLAMP
13. HYDRAULIC LINE
14. PIPE FLANGE BLOCK (2)
15. HYDRAULIC LINE
16. HYDRAULIC LINE
17. HYDRAULIC LINE
18. BLOWER
19. HYDRAULIC MOTOR
20. 'U' HOLDER
21. NYLON HOSE TIES (V)
22. 'U' HOLDER
23. HYDRAULIC LINE
24. HYDRAULIC LINE

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Figure 2-13. Maintenance and Routing of Hydraulic Lines.

Section XIV. MAINTENANCE OF HYDRAULIC CONTROL BOX

2-18. Hydraulic Control Box.

a. Disassembly. (Refer to fig. 2-14.)

(1) Remove two capscrews (44) and lockwashers (40) from bottom of cover (8) and displace as far as attaching wires permit.

(2) As you disconnect each wire, mark with the call out number referenced.

(3) Remove five hex nuts (16) on faceplate (9) and pull five toggle switches loose.

(4) Loosen screws for purple wire (20), red wire (19) and red/white wire (18); remove wires and toggle switch (17) for "TURN UP" control.

(5) Loosen screws for blue wire (25), black wire (23), and red wires (19) and (24); remove wires and toggle switch (22) for “SHIFT” control.

(6) Loosen screws for white wire (27), red wire (30), and black wires (29) and (31); remove wires and toggle switch (26) for “ON-0FF”control.

(7) Loosen screws for orange wire (33), and red wires (30) and (32); remove wires and toggle switch (34) for “Bitumeter wheel” “UP DOWN” control.

(8) Loosen screws for black wire (7) and red wires (36) and (5); remove wires and toggle switch (6) for “MATERIAL LOW LEVEL ON OFF” control.

(9) Remove bolt (1) and two lock nuts (4) from wire clip and flasher assembly (2) and black ground wire (3). Remove other end by removing capscrew and nut (43).

(10) Cut flasher wire (37) at connector and remove flasher unit.

(11) Unscrew fuse connector (28) to remove and check fuse.

(12) Pull out bulb connections (12) and (14) from two indicator lamps (11); inspect bulbs. If it is necessary/ to replace two indicator lamps (11) unscrew and remove two hex nuts and washers (35).

(13) If new toggle switches are to be installed, remove spacer (21) and install on new switch.

b. Removal. (Refer to fig. 2-14.)

(7) Remove wire (42) from box (47) by cutting wire at crimp connector, if not already done; pull wire (42) thru box (47) at bottom.

(2) Remove harness clamp (46) and pull wire harness (45) thru bottom of box (47).

(3) Remove two each bolt (41), lockwasher (40), and nut (39) from box (47) and support plate (38); box is now removed from vehicle.

c. Installation.

(1) Set box (47) in position, aline mounting holes, and install to support plate (38) with two each bolts (41), lockwashers (40) and nuts (39).

(2) Push wire harness (45) up thru bottom of box (47) and fasten with harness clamp (46).

(3) Push wire (42) up thru bottom of box (47); rejoin wires with new crimp connector.

d. Assembly. (Refer to fig. 2-14.)

(1) If new toggle switches are being installed, screw on spacer (21) taken from old switch,

(2) If indicator lamps (11) are being installed screw on two hex nuts and washers (35).

(3) Snap in bulb connections (12) and (14) to lamps (11).

(4) Install new fuse if necessary and screw fuse connector (28) together.

(5) Rejoin flasher wire (37) with new crimp connector.

(6) Install ground wire (3) to clip (2) and flasher with bolt (1) and two lock nuts (4). Connect other end with capscrew and nut (43).

(7) Install black wire (7) and red wires (36) and (5) to toggle switch (6) “MATERIAL LOW LEVEL ON OFF” control; tighten screws.

(8) Install orange wire (33) and red wires (30) and (32) to toggle switch (34) “BITUMETER WHEEL UP DOWN”; tighten screws.

(9) Install white wire (27), red wire (30) and black wires (29) and (31) to toggle switch (26) “ON OFF”; tighten screws.

(10) Install blue wire (25), black wire (23), and red wires (19) and (24) to toggle switch (22) “SHIFT”; tighten screws.

(11) Install purple wire (20), red wire (19), and red/white wire (18) to toggle switch (17) “TURN UP”; tighten screws.

(12) Insert five toggle switches thru panel faceplate (9) from back in positions illustrated; install hex nuts (16) to affix.

(13) Install panel faceplate (9) to box (47); aline holes at bottom front edge and mount with two screws (44) and lockwasher (40). As panel faceplate is set in position take care that no wires are caught between the box and panel faceplate.

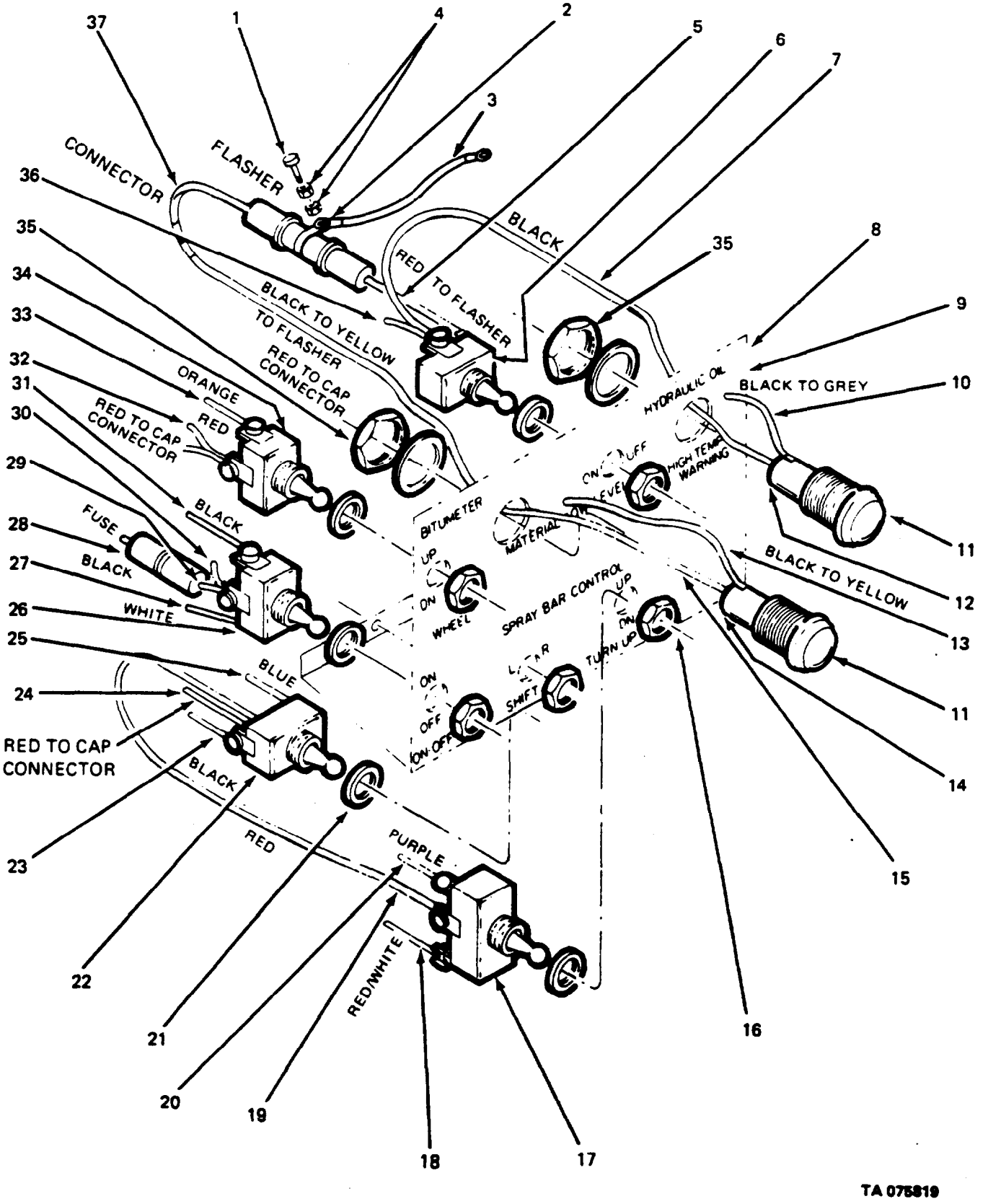

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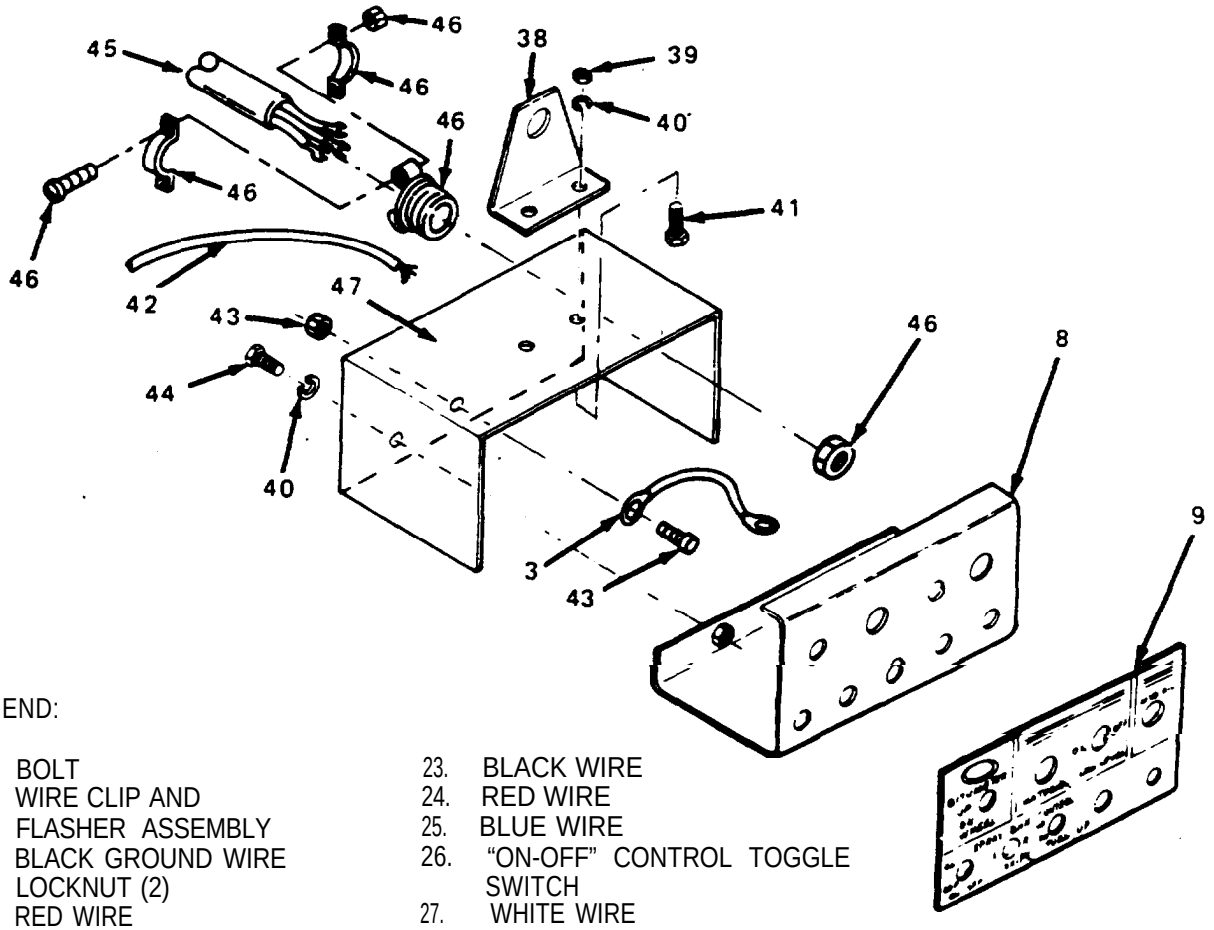
Figure 2-14. Hydraulic Control Box (Sheet 1 of 2).



LEGEND:

1. BOLT
2. WIRE CLIP AND FLASHER ASSEMBLY
3. BLACK GROUND WIRE
4. LOCKNUT (2)
5. RED WIRE
6. "MATERIAL LOW LEVEL ON-OFF" TOGGLE SWITCH
7. BLACK WIRE
8. COVER
9. FACEPLATE
10. GREY WIRE
11. INDICATOR LAMP (2)
12. BULB CONNECTION
13. YELLOW WIRE
14. BULB CONNECTION
15. BLACK WIRE
16. HEX NUT (5)
17. "TURN UP" CONTROL TOGGLE SWITCH
18. RED/WHITE WIRE
19. RED WIRE
20. PURPLE WIRE
21. SPACER
22. "SHIFT" CONTROL TOGGLE SWITCH
23. BLACK WIRE
24. RED WIRE
25. BLUE WIRE
26. "ON-OFF" CONTROL TOGGLE SWITCH
27. WHITE WIRE
28. FUSE CONNECTOR
29. BLACK WIRE
30. RED WIRE
31. BLACK WIRE
32. RED WIRE
33. ORANGE WIRE
34. "BITUMETER WHEEL UP-DOWN" TOGGLE SWITCH
35. HEX NUT WITH WASHER (2)
36. RED WIRE
37. FLASHER WIRE
38. SUPPORT PLATE
39. NUT
40. LOCKWASHER
41. BOLT
42. WIRE
43. CAPSCREW AND NUT
44. CAPSCREW (2)
45. WIRE HARNESS
46. HARNESS CLAMP

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Figure 2-14. Hydraulic Control Box (Sheet 2 of 2).

Section XV. ROUTING OF CAB HYDRAULIC CONTROL BOX TO AIR CONTROL BOX HARNESS

2-19. Air Control Box Harness.

a. Removal. (Refer to fig. 2-15.)

(1) Unscrew and remove harness clamp (1) at bottom of hydraulic control box in cab.

(2) Disconnect harness wires at box per figure 2-14.

(3) Push harness (2) thru hole in cab floor under the PTO console.

(4) Unplug wire connector (11) at bitumeter wheel assembly.

(5) Snip all nylon cable ties (10) from harness which is routed along inside of left hand frame rail.

(6) Remove wire clamp (8) by unscrewing bolt, two nuts, washer, and wire (9).

(7) Remove wire (5) from quadrant limit switch (12).

(8) Remove two wires (4) from tank gage limit switch (3).

(9) Remove harness clamp (7) from front side of air control box (6).

(10) Disconnect harness wires at air control box (6) per figure 2-18.

b. Inspection.

(1) Inspect all outer harness and exposed wire insulation for damage or cracks.

(2) Inspect all terminal ends for tight crimp.

(3) Resolder terminal ends as necessary.

(4) Replace badly cracked or corroded wires. Slight punctures in the outer insulation may be wrapped securely with electrical tape.

c. Installation.

(1) Connect all harness wires at air control box per figure 2-18.

(2) Install harness clamp (7) to front side of box (fig. 2-15).

(3) Install two wires (4) to tank gage limit switch (3).

(4) Install wire (5) to quadrant limit switch (12).

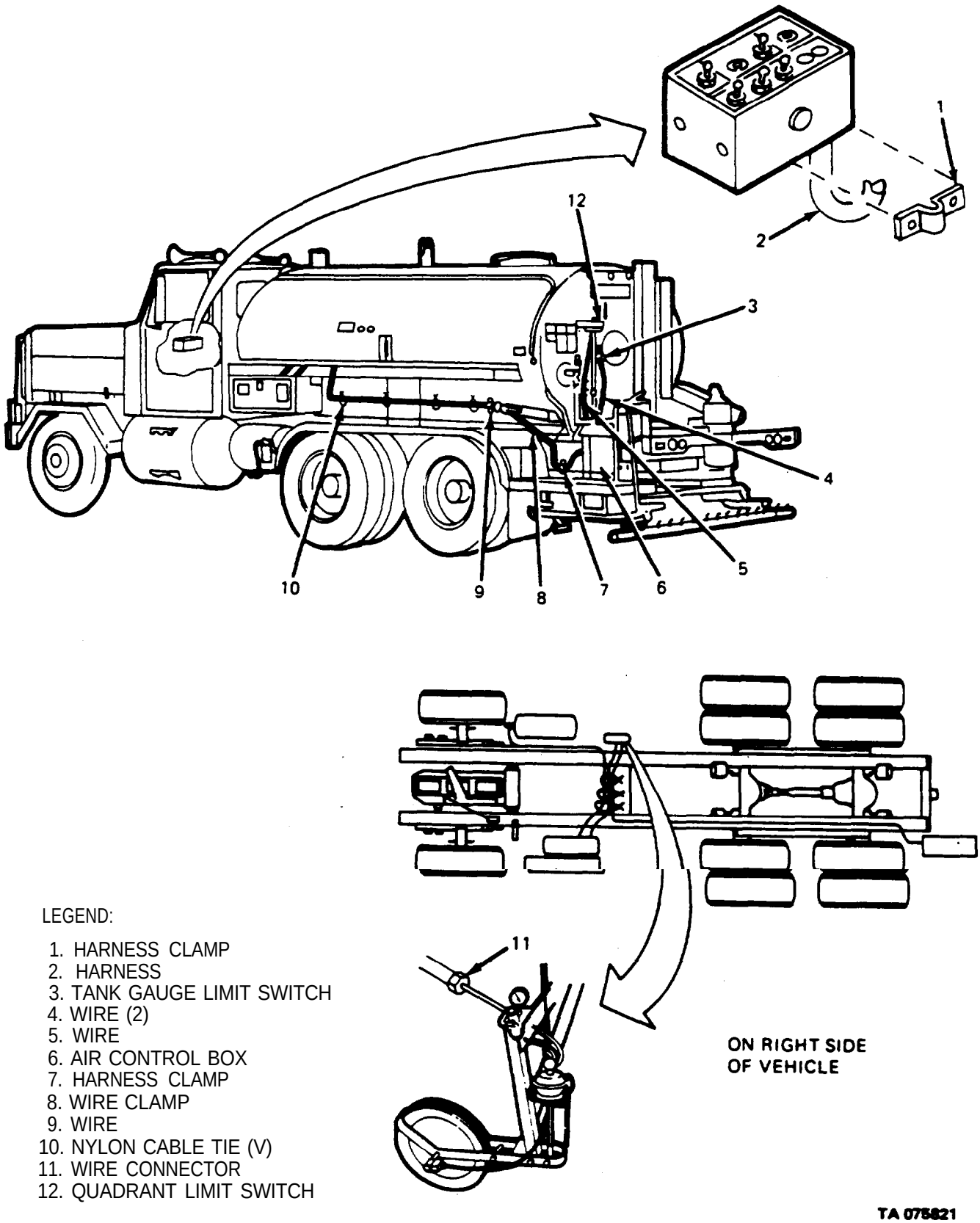
(5) Install wire (9) with bolt, washer, and two nuts to wire clamp (8).

(6) Install new nylon cable ties (10) around harness along inside of left hand frame rail. Ties should be spaced approximately every two feet where possible. Tie to other harness or lines.

(7) Plug in wire connector (11) at bitumeter wheel assembly.

(8) Push harness (2) up thru cab floor hole under the PTO console.

(9) Connect harness wires at box per figure 2-14.



LEGEND:

1. HARNESS CLAMP
2. HARNESS
3. TANK GAUGE LIMIT SWITCH
4. WIRE (2)
5. WIRE
6. AIR CONTROL BOX
7. HARNESS CLAMP
8. WIRE CLAMP
9. WIRE
10. NYLON CABLE TIE (V)
11. WIRE CONNECTOR
12. QUADRANT LIMIT SWITCH

Figure 2-15. Routing of Cab Hydraulic Control Box to Air Control Box Harness.

(10) Install harness clamp (1) at bottom of hydraulic control box in cab.

(11) Start engine, activate control box switches and have second mechanic check for proper functions.

Section XVI. MAINTENANCE OF AIR CONTROL BOX

2-20. Air Control Box.

NOTE

If a known solenoid does not function and the air pressure is normal, first check for proper voltage at the solenoid terminal with the switch applied. If no voltage is present repair electrical failure. If voltage is present and solenoid does not function, replace the solenoid.

a. Removal of Bar On-Off Solenoid Valve. (Refer to fig. 2-16.)

(1) Remove air control box assembly cover (59) as follows:

(a) Remove hex nut (45) and flat washer (46) that fastens knob (47) to control valve; then pull knob straight off.

(b) Remove cover (59) by removing sixteen screws (58).

(2) Remove center toggle switch (61) on top of air control box (64).

(3) Disconnect two lines (4) and remove two elbows (32).

(4) Remove two bolts (62), two washers (6), three nuts (40), tubing clamp (39), and carefully remove solenoid valve (43) as far as attaching wires permit.

(5) Disconnect nylon tubes (30) and (49), two male connectors (5), pipe tee (20), pipe nipple (3), globe valve assembly (44) and nipple (35).

(6) Disconnect solenoid wires at terminal strip (56). Tag wires to aid in reassembly. (Refer to fig. 2-18.)

(7) Remove capscrew (41) and washer (42); then separate bracket (60) from solenoid valve (43).

b. Installation of Bar On-Off Solenoid Value. (Refer to fig. 2-16, 2-17, and 2-18.)

(1) Install solenoid valve (43) on bracket (60) and fasten with capscrew (41) and washer (42).

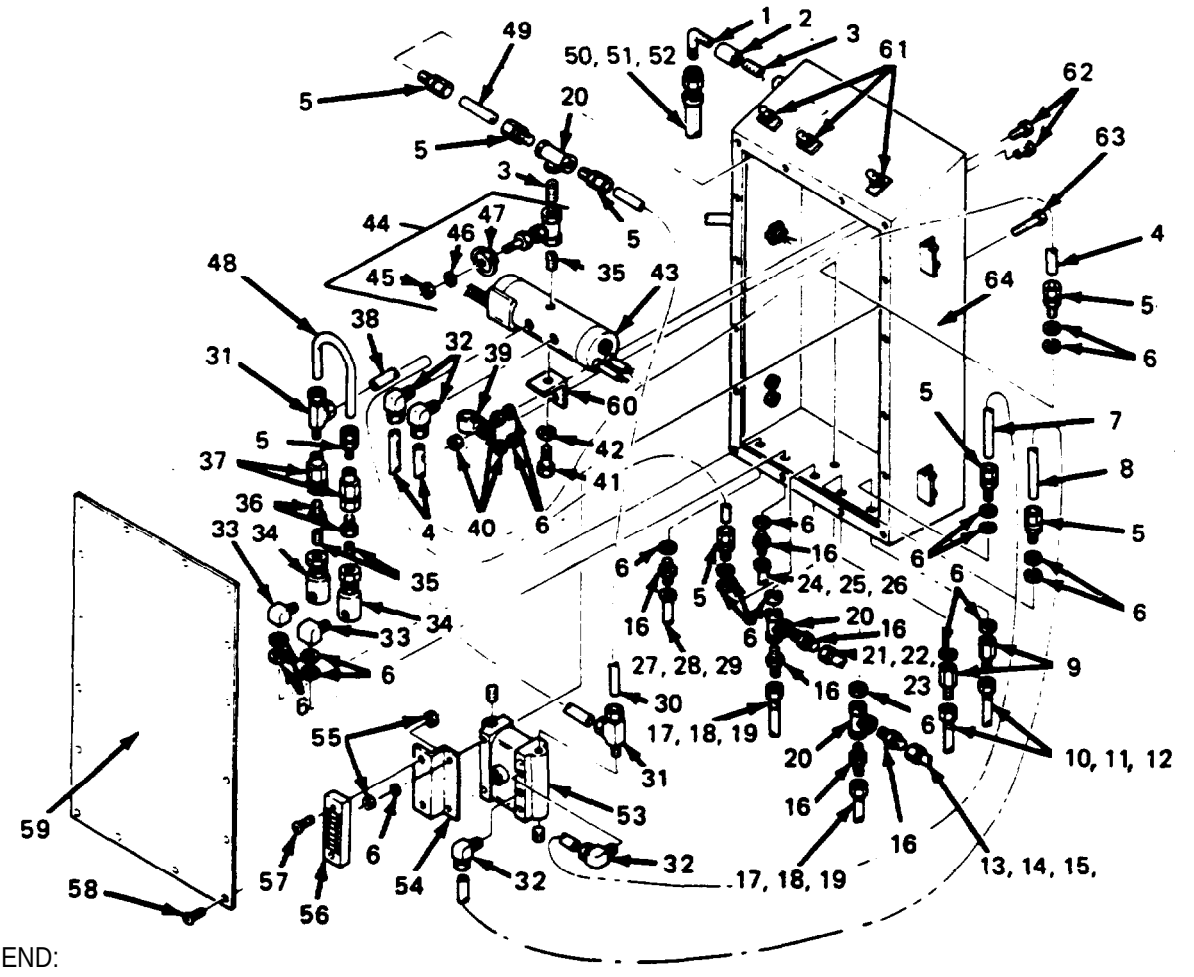
(2) Install two tubing elbows (32), nipple (35), globe valve assembly (44), pipe nipple (3), pipe tee (20) and two male connectors (5).

(3) Connect nylon tubes (30) and (49).

(4) Connect wires to terminal strip (56). (Refer to fig. 2-18.)

(5) Connect two nylon tubes (4) to tubing elbows (32) on solenoid valve (43).

(6) Install center toggle switch (61) on top of air control box (64).



LEGEND:

1. ELBOW
2. PIPE COUPLING
3. PIPE NIPPLE (2)
4. NYLON TUBE (2)
5. MALE CONNECTOR (8)
6. FLAT WASHER (21)
7. NYLON TUBE
8. NYLON TUBE
9. ADAPTER (2)
10. NYLON TUBE (2)
11. MALE CONNECTOR
12. SWIVEL CONNECTOR (2)
13. NYLON TUBE
14. MALE CONNECTOR
15. SWIVEL CONNECTOR
16. ADAPTER (4)
17. NYLON TUBE (2)
18. MALE CONNECTOR (2)
19. SWIVEL CONNECTOR (2)
20. PIPE TEE (3)
21. NYLON TUBE
22. MALE CONNECTOR
23. MALE CONNECTOR
24. NYLON TUBE
25. MALE CONNECTOR
26. SWIVEL CONNECTOR
27. NYLON TUBE
28. MALE CONNECTOR
29. SWIVEL CONNECTOR
30. NYLON TUBE
31. MALE RUN TEE (2)
32. TUBING ELBOW (4)
33. PIPE ELBOW (2)
34. SOLENOID CENTERING VALVE (2)
35. NIPPLE (3)
36. REDUCER BUSHING (2)
37. CHECK VALVE (2)
38. NYLON TUBE
39. TUBING CLAMP
40. HEX NUT (3)
41. CAPSCREW
42. LOCKWASHER
43. SOLENOID ON-OFF VALVE
44. GLOBE VALVE ASSEMBLY
45. HEX NUT
46. FLAT WASHER
47. KNOB
48. NYLON TUBE
49. NYLON TUBE
50. NYLON TUBE
51. MALE CONNECTOR
52. SWIVEL CONNECTOR
53. SOLENOID TURN-UP VALVE
54. BRACKET
55. NUT (4)
56. TERMINAL STRIP
57. SCREW (2)
58. SCREW (16)
59. COVER
60. BRACKET
61. TOGGLE SWITCH (3)
62. BOLT (2)
63. CAPSCREW (2)
64. AIR CONTROL BOX

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Figure 2-16. Disassemble/Reasemble Air Control Box.

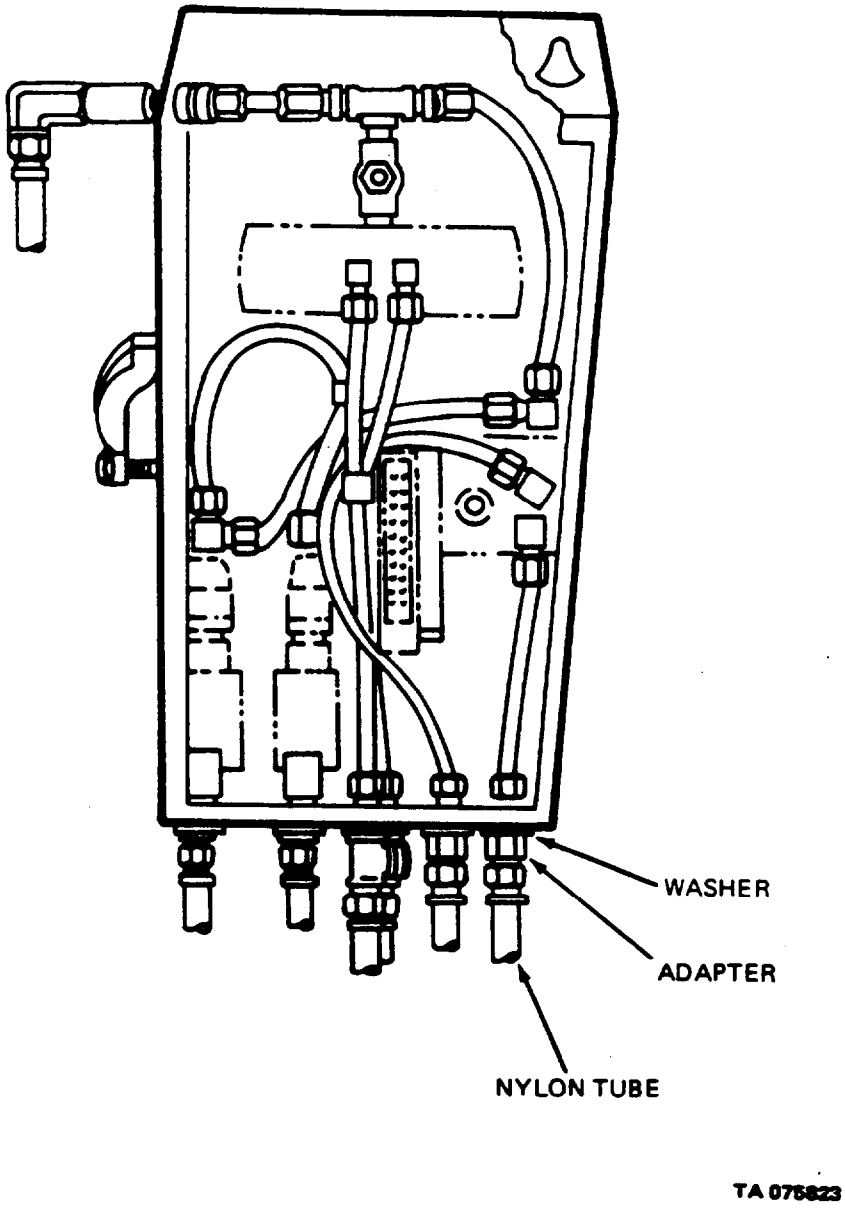


Figure 2-17. Air Control Box Piping Diagram.

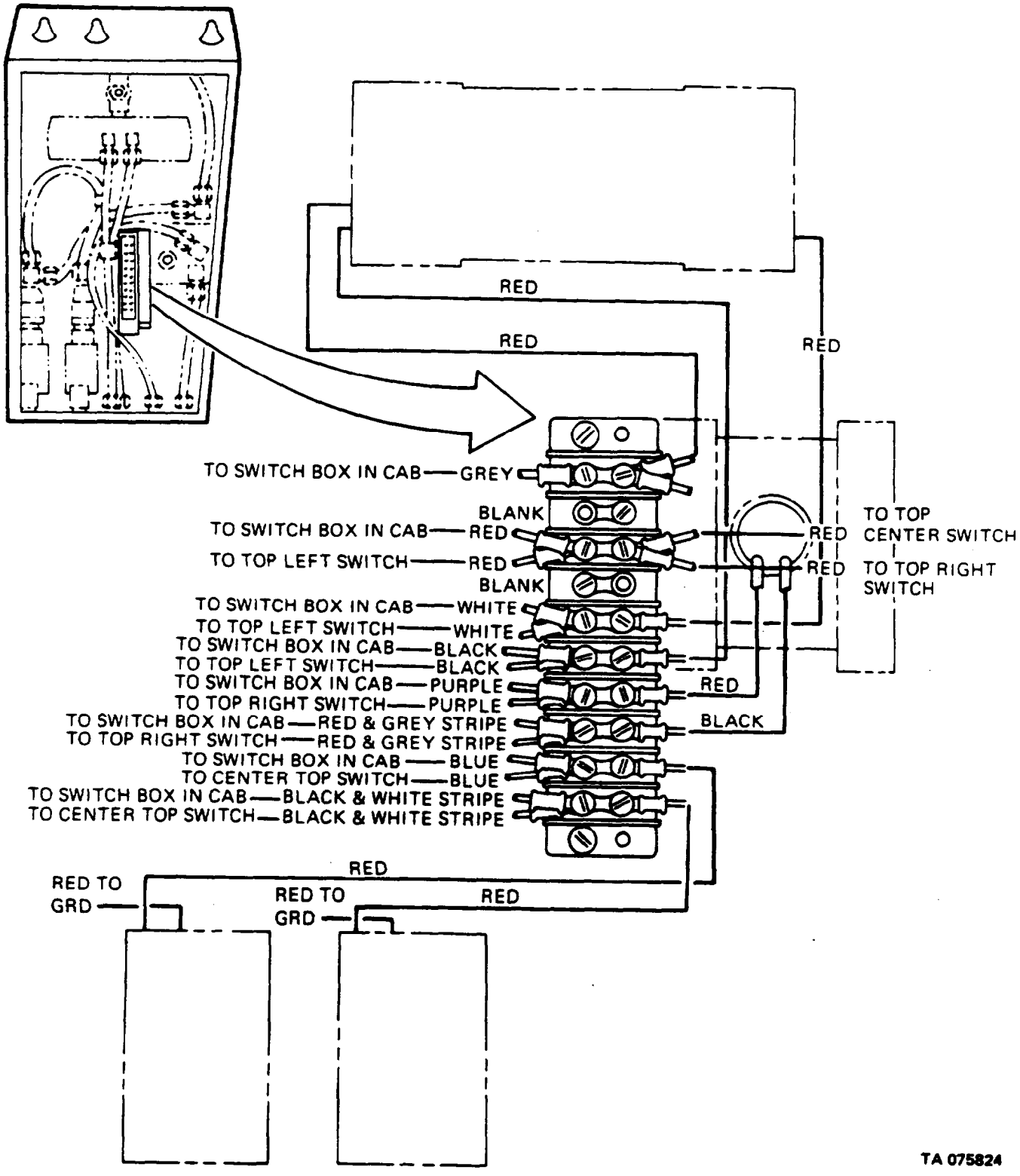


Figure 2-18. Air Control Box Wiring Connections.

(7) Install cover (59) and secure with sixteen screws (58).

(8) Install knob (47) and secure with hex nut (45) and flat washer (46).

c. Removal of 12-Volt Solenoid Valve. (Refer to fig. 2-16.)

(1) Remove control box cover (59) and knob (47) as described in paragraph 2-20 a, step (1).

(2) Disconnect nylon tubes (30) and (38) from male run tee (31).

(3) Disconnect nylon tubes (7) and (8) from two tubing elbows (32).

(4) Remove two capscrews (63), nuts (55), and washers (6) that fasten solenoid valve (53) to air control box (64). Remove bracket (54) with attached terminal strip (56); then pull out solenoid valve (53) as far as attaching wires permit.

(5) Disconnect wires. Tag wires to aid in reassembly. (Refer to fig. 2-18.)

d. Installation of 12-Volt Solenoid Valve. (Refer to fig. 2-16, 2-17, and 2-18.)

(1) Mount solenoid valve (53) in air control box (64) and position terminal strip bracket (54) on the solenoid valve with mounting holes lined up. Fasten with two capscrews (63), washers (6), and nuts (55).

(2) Connect solenoid wires. (See fig. 2-18.)

(3) Connect nylon tubes (7) and (8) to tubing elbows (32) on solenoid valve (Refer to fig. 2-16.)

(4) Connect nylon tubes (30) and (38) to solenoid valve (53).

(5) Install cover (59) and secure with sixteen screws (58).

(6) Install control knob (47) and secure with nut (45) and washer (46).

e. Removal of Circular Solenoid Valve. (Refer to fig. 2-16.)

(1) Remove control box cover (59) and knob (47) as described in paragraph 2-20 a, step (1).

(2) Disconnect nylon tube (27) with male connector (28) and swivel connector (29) from bottom of air control box; then remove adapter (16) and washer (6).

(3) Disconnect nylon tube (24) with male connector (25) and swivel connector (26) from bottom of air control box (64); then remove adapter (16) and washer (6).

(4) Disconnect nylon tubes (38) and (48) from male run tee (31) and male connector (5).

(5) Disconnect wires from terminal strip (56).

(6) Remove two assembled solenoid valves (34) and four washers (6).

(7) Disassemble solenoid valves (34) by removing pipe elbows (33), nipples (35), reducer bushings (36), one male connector (5), male run tee (31), and check valves (37).

f. Installation of Circular Solenoid Valves. (Refer to fig. 2-16, 2-17, and 2-18.)

(1) Assemble two solenoid valves (34) by installing two pipe elbows (33), nipples (35), reducer bushings (36), check valves (37), one male connector (5) and male run tee (31) as shown.

(2) Install two assembled solenoid valves (34) and four washers (6).

(3) At bottom of air control box (64), install two flat washers (6), adapters (16), nylon tubes (24) and (27) with male connectors (25) and (28) and swivel connectors (26) and (29).

(4) Connect wires to terminal strip (56). (Refer to fig. 2-18.)

(5) Connect nylon tubes (38) and (48) as shown.

(6) Install control box cover (59) and secure with sixteen screws (58).

(7) Install control knob (47) and secure with nut (45) and washer (46).

NOTE

For maintenance of other tubes, fittings, fasteners and wiring within the air control box, use standard shop practices and follow figures 2-16, 2-17, and 2-18.

Section XVII. MAINTENANCE AND ROUTING OF AIR LINES

2-21. Routing of Air Lines.

a. Removal. (Refer to fig. 2-19.)

NOTE

Bleed air reservoirs and tag each hose as removed with the call out number.

(1) Unscrew fittings at either end of hose (2) between air lubricator (1) and solenoid air valve (3); remove hose (2).

(2) Unscrew fitting of hose (5) at connection to gage on air lubricator (1) and unscrew air pressure gage (35).

(3) Unscrew fitting of hose (4) at air lubricator (1).

(4) Cut nylon ties (6) along top of frame cross angle.

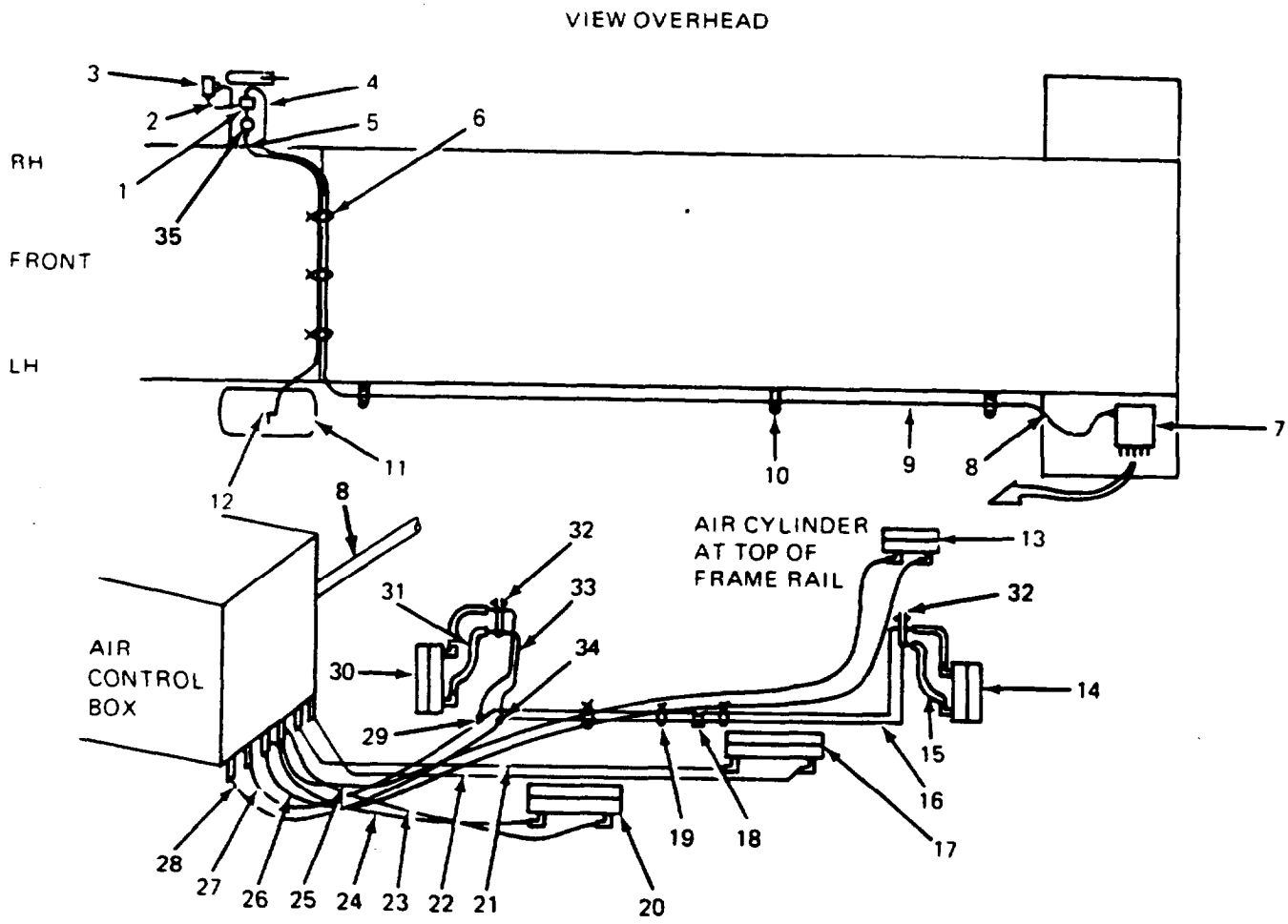
(5) Unscrew fitting of hose (5) at 'T' fitting (12) on back of air reservoir (11) located behind stowage box; remove hose (5).

(6) Unscrew fitting of hose (4) at connection to tubing (9); remove hose (4).

(7) Unscrew fitting of hose (8) at connection to air control box (7).

(8) Unscrew fitting of hose (8) at connection to tubing (9) and remove hose (8).

(9) Unscrew bolt, washer, and nut from three tubing retainers (10); remove tubing (9) from outer LH frame rail.



LEGEND:

1. AIR LUBRICATOR
2. HOSE
3. SOLENOID AIR VALVE
4. HOSE
5. HOSE
6. NYLON TIE
7. AIR CONTROL BOX
8. HOSE
9. TUBING
10. TUBING RETAINER
11. AIR RESERVOIR
12. 'T' FITTING
13. AIR CYLINDER
14. AIR CYLINDER
15. HOSE (2)
16. TUBING (2)
17. AIR CYLINDER
18. TUBING RETAINER
19. NYLON TIE
20. AIR CYLINDER
21. HOSE
22. HOSE
23. HOSE
24. HOSE
25. HOSE
26. HOSE
27. HOSE
28. HOSE
29. 'T' FITTING
30. AIR CYLINDER
31. HOSE (2)
32. TUBING RETAINER
33. TUBING (2)
34. 'T' FITTING
35. AIR PRESSURE GAGE

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Figure 2-19. Maintenance and Routing of Air Lines.

(10) Cut nylon ties (19) securing hoses to tubes above rear crossbrace.

(11) Unscrew bolt, washer, and nut from tubing retainer (18) at rear crossbrace.

(12) Unscrew fittings of hose (21) from air control box (7) and air cylinder (17); remove hose (21).

(13) Unscrew fittings of hose (22) from air control box (7) and air cylinder (17); remove hose (22).

(14) Unscrew fittings of hose (23) from 'T' fitting on air control box (7) and air cylinder (20); remove hose (23).

(15) Unscrew fittings of hose (25) from bottom of 'T' fitting on air control box (7) and 'T' fitting (34); remove hose (25).

(16) Unscrew fittings of hose (24) from 'T' fitting on air control box (7) and air cylinder (20); remove hose (24).

(17) Unscrew fittings of hose (26) from bottom of 'T' fitting on air control box (7) and air cylinder (13); remove hose (26).

(18) Unscrew fittings of hose (27) from bottom of air control box (7) and 'T' fitting (29); remove hose (27).

(19) Unscrew fittings of hose (28) from air control box (7) and air cylinder (13); remove hose (28).

(20) Unscrew fittings of two hoses (31) from air cylinder (30) and two tubes (33); remove two hoses (31).

(21) Unscrew bolt, washer, and nut from tubing retainer (32).

(22) Unscrew bolt, washer, and nut from tubing retainer (32) at air cylinder (14).

(23) Unscrew fittings of two hoses (15) from air cylinder (14) and two tubes (16); remove two hoses (15).

(24) Remove as an assembly two tubes (16); 'T' fittings (34) and (29), and two tubes (33); lift assembled tubes up and out of tubing retainers (18), and (32).

(25) Unscrew two tubes (16) and two tubes (33) from two 'T' fittings (34) and (29).

b. Installation. (Refer to fig. 2-19.)

(1) Screw two tubes (16) and two tubes (33) to two 'T' fittings (34) and (29).

(2) Set into tube retainers (18), and (32), as an assembly of two tubes (16), two 'T' fittings (34) and (29) and two tubes (33).

(3) Install bolt, nut, washer to tube retainers (18), and (32).

(4) Install fittings of two hoses (15) to air cylinder (14) and two tubes (16).

(5) Install fittings of two hoses (31) to air cylinder (30) and two tubes (33).

(6) Install hose (28) to air control box (7) and air cylinder (13).

(7) Install hose (27) to bottom of air control box (7) and 'T' fitting (29).

(8) Install hose (26) to bottom of 'T' fitting on air control box (7) and air cylinder (13).

(9) Install hose (24) to 'T' fitting on air control box (7) and air cylinder (20).

(10) Install hose (25) to bottom of 'T' fitting on air control box (7) and 'T' (34).

(11) Install hose (23) to 'T' fitting on air control box (7) and air cylinder (20).

(12) Install hose (22) to air control box (7) and air cylinder (17).

(13) Install hose (21) to air control box (7) and air cylinder (17).

(14) Install new nylon ties (19) securing hoses to tubes above rear crossbrace.

(15) Install hose (8) to side of air control box (7).

(16) Set tubing (9) into three tubing retainers (10) on outer LH frame rail; secure with three each bolts, washers, and nuts.

(17) Install hose (8) to tubing (9).

(18) Install hoses (4) to tubing (9).

(19) Install hose (5) to 'T' fitting (12) on back of air reservoir (11) located behind stowage box.

(20) Route hoses (4) and (5) along top of front crossbrace and secure to other lines with new nylon ties (6).

(21) Install hose (4) to air lubricator (1).

(22) Install hose (5) to gage on air lubricator (1) and reinstall air pressure gage (35).

(23) Install hose (2) to air lubricator (1) and solenoid air valve (3).

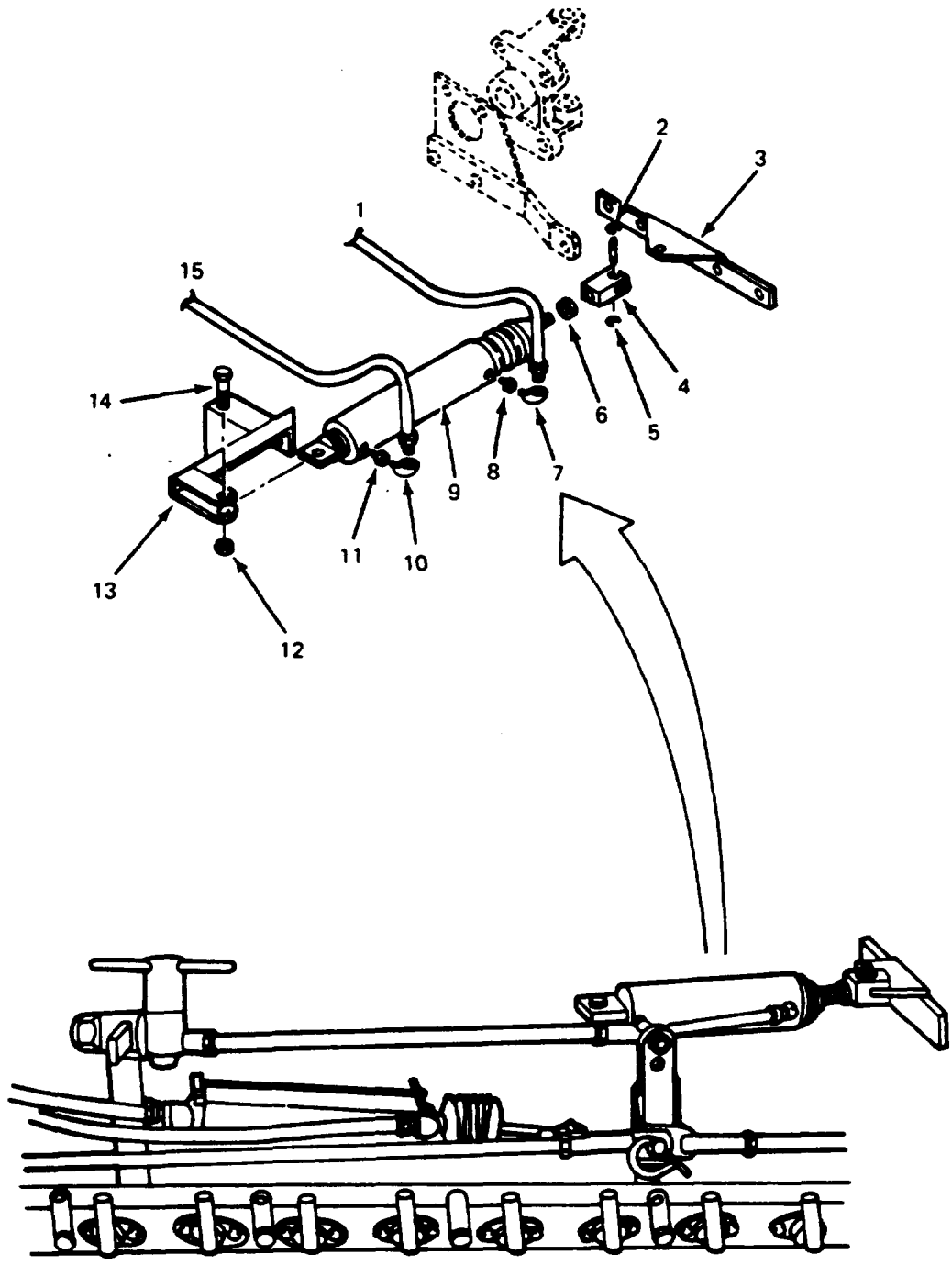
(24) Start engine, pressurize air system and check for leaks.

Section XVIII. MAINTENANCE OF SPRAY BAR CONTROL CYLINDERS

2-22. Spray Bar Control Cylinders.

a. Removal of Bar Sifting Control Cylinder. (Refer to fig. 2-20.)

(1) Disconnect air lines (15) and (1) from elbows (10) and (7). Tag each line to aid in reassembly.



LEGEND:

1. AIR LINE
2. CAPSCREW
3. BRACKET
4. CLEVIS
5. NUT
6. LOCKNUT
7. ELBOW
8. BUSHING
9. CYLINDER
10. ELBOW
11. BUSHING
12. NUT
13. BRACKET
14. CAPSCREW
15. AIR LINE

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Figure 2-20. Remove/Install Bar Shifting Control Cylinder.

(2) Remove capscrew (2) and nut (5).

(3) Remove capscrew (14) and nut (12); then lift out cylinder (9).

(4) Loosen locknut (6) and remove clevis (4); then remove locknut (6).

(5) Remove elbows (10) and (7) and bushings (11) and (8).

b. Installation of Bar Shifting Control Cylinder. (Refer to fig. 2-20.)

(1) Position cylinder as shown.

(2) Install capscrew (14) and nut (12).

(3) Install locknut (6) and clevis (4).

(4) Adjust length of clevis (4) to line up its mounting hole with hole in bracket (3); then install capscrew (2) and nut (5).

(5) Tighten locknut (6) against clevis (4).

(6) Connect air lines (15) and (1) to elbows (10) and (7).

c. Removal of Bottom Bar On-Off Cylinder. (Refer to fig. 2-21.)

(1) Disconnect air line from each fitting (9).

(2) Remove two cotter pins (2); then remove pins (1) and (6).

(3) Remove cylinder (4).

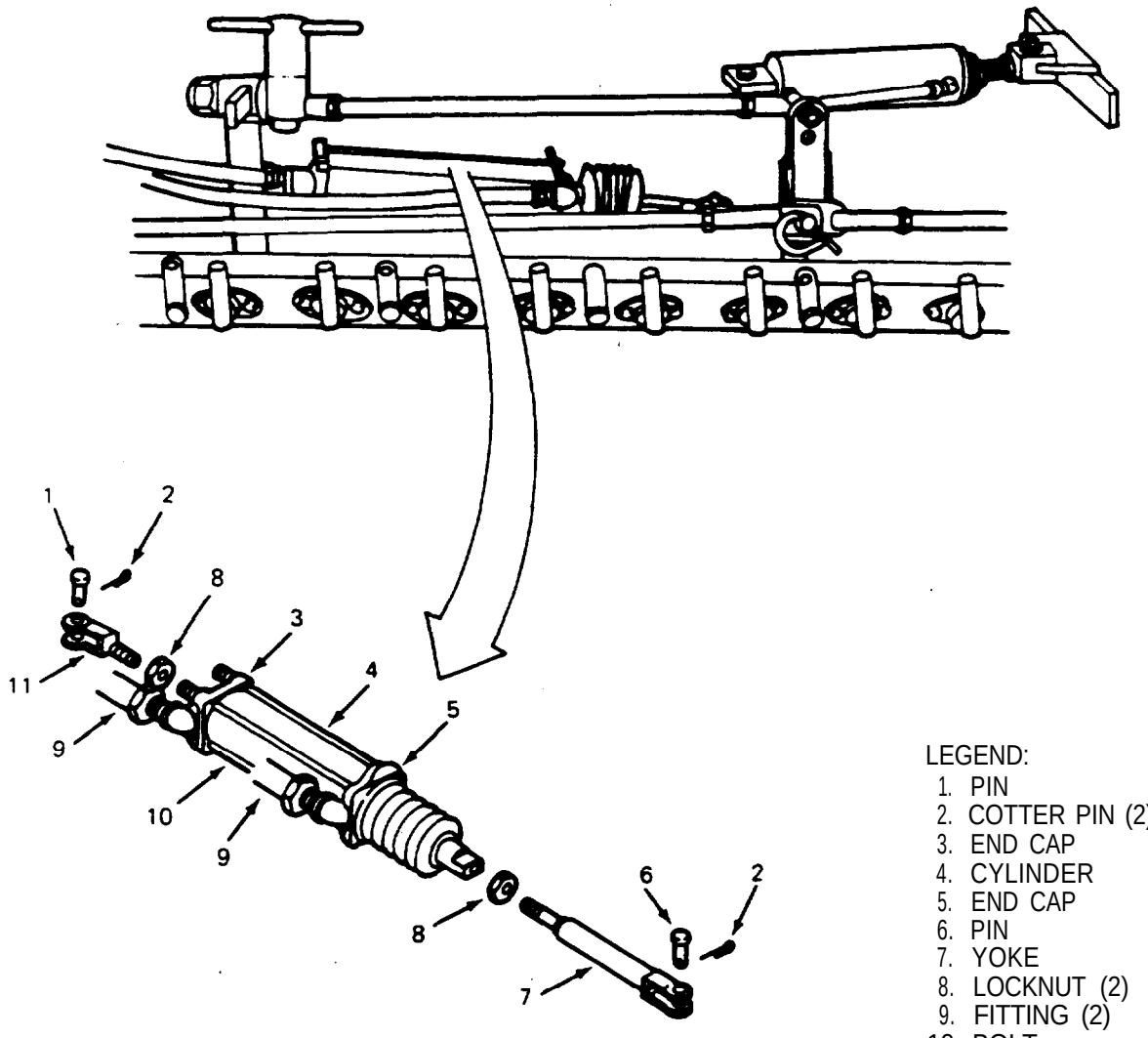

Figure 2-21. Remove/Install Bottom Bar On-Off Cylinder.

d. Installation of Bottom Bar On-Off Cylinder. (Refer to fig. 2-21.)

(1) Connect yoke (7) to control linkage and secure with pin (6) and cotter pin (2).

(2) Adjust length of yoke (11) to line up holes in yoke with hole in control linkage; then install pin (1) through yoke (11) and secure with cotter pin (2).

(3) Tighten locknut (8) on yokes (11) and (7).

(4) Reconnect two air line fittings (9).

e. Removal of fop Bar On-Off Cylinder. (Refer to fig. 2-22.)

(1) Disconnect two air lines from cylinder.

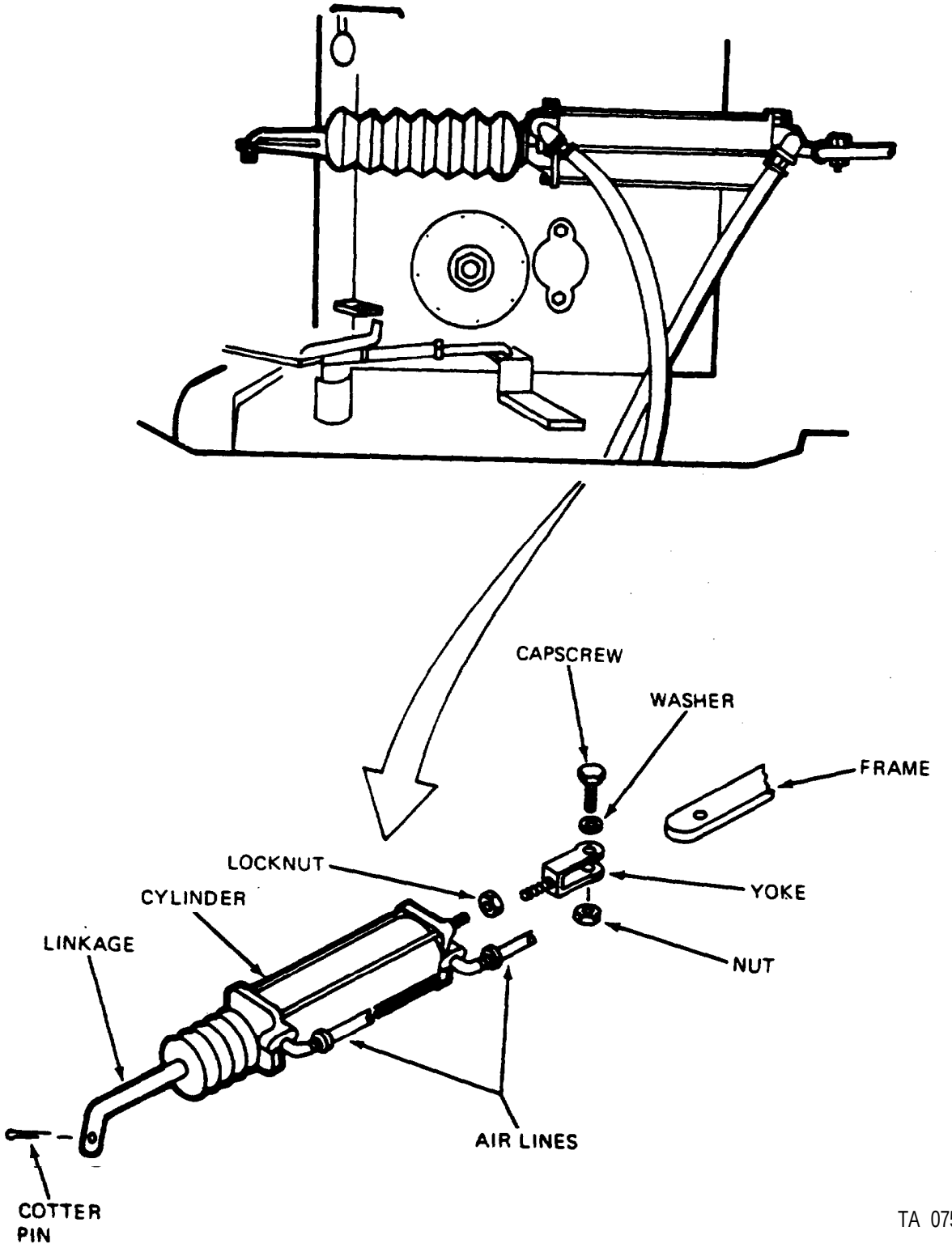

Figure 2-22. Remove/Install Top Bar On-Off Cylinder.

(2) Remove cotter pin and disconnect linkage at left side of cylinder.

(3) At opposite end of cylinder, remove capscrew, washer, and nut; then lift out cylinder.

f. Installation of Top Bar On-Off Cylinder. (Refer to fig. 2-22.)

(1) Position cylinder on vehicle frame and connect linkage at left side of cylinder. Secure with cotter pin.

(2) Adjust length of yoke at opposite end of cylinder to line up holes in yoke with hole in frame.

(3) Install capscrew, washer, and nut; then tighten locknut.

(4) Reconnect air lines to cylinder.

g. Removal of Bar Turn-Up Cylinders. (Refer to fig. 2-23.)

NOTE

Procedures for removing and installing the left and right side cylinders are identical.

(1) Disconnect two air lines from cylinder.

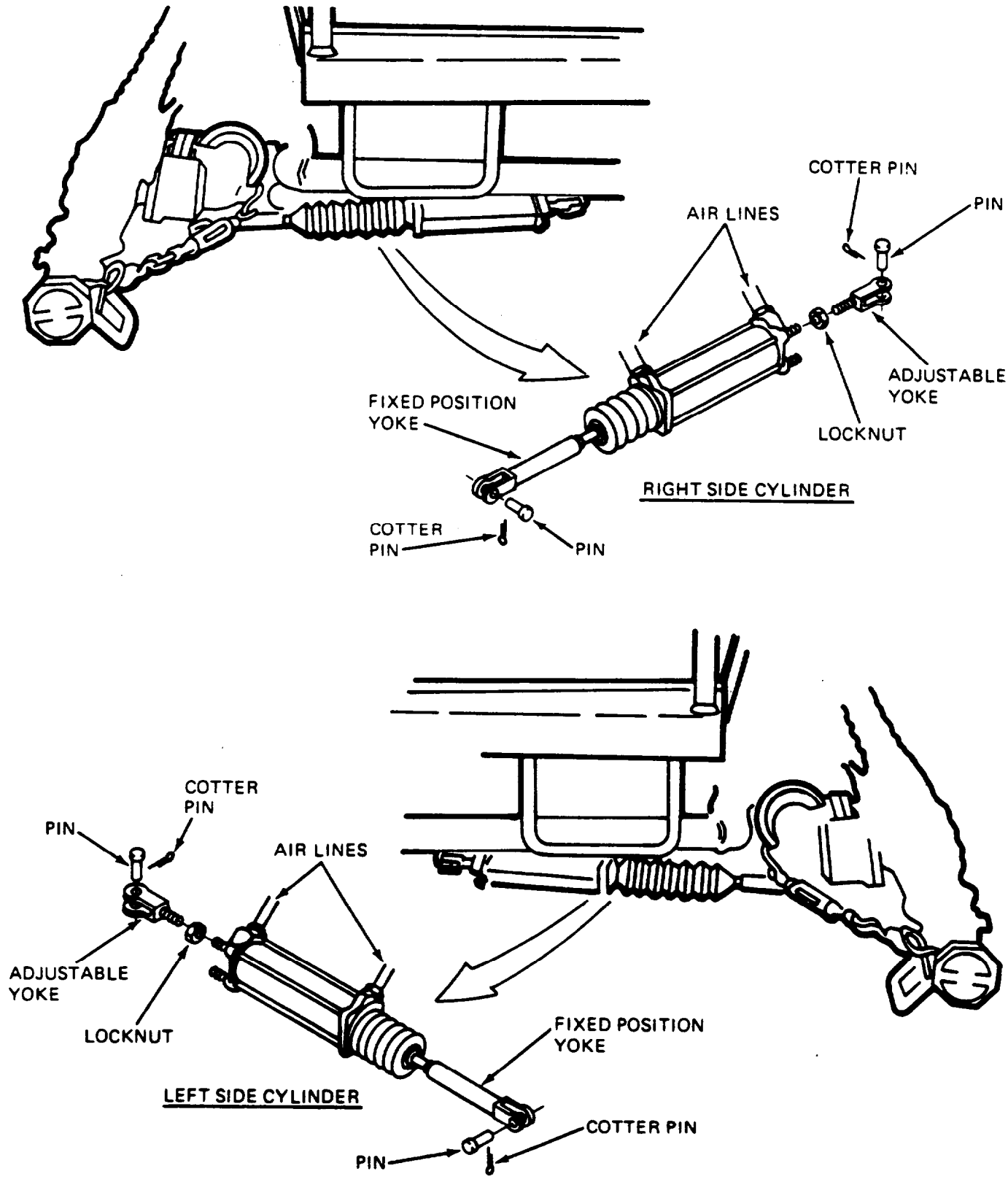

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Figure 2-23. Removal of Bar Turn-Up Cylinders.

(2) Remove cotter pin and pin from each end of cylinder; then lift out cylinder.

h. Installation of Bar Turn-Up Cylinders. (Refer to fig. 2-23.)

(1) Connect fixed position yoke to control linkage and secure with pin and cotter pin.

(2) Adjust length of yoke at opposite end of cylinder to line up holes in yoke with hole in connecting linkage; then install pin and cotter pin.

(3) Tighten locknut.

(4) Reconnect two air lines to cylinder.

(5) Repeat steps above for removal and replacement of opposite side cylinder.

Section XIX. MAINTENANCE OF BITUMETER WHEEL ASSEMBLY

2-23. Bitumeter Wheel Assembly.

a. Removal of Bitumeter Wheel Solenoid Valve and Air Chamber. (Refer to fig. 2-24.)

(1) Close main air valve; then exhaust air pressure from bituminous supply tank by opening drain petcock.

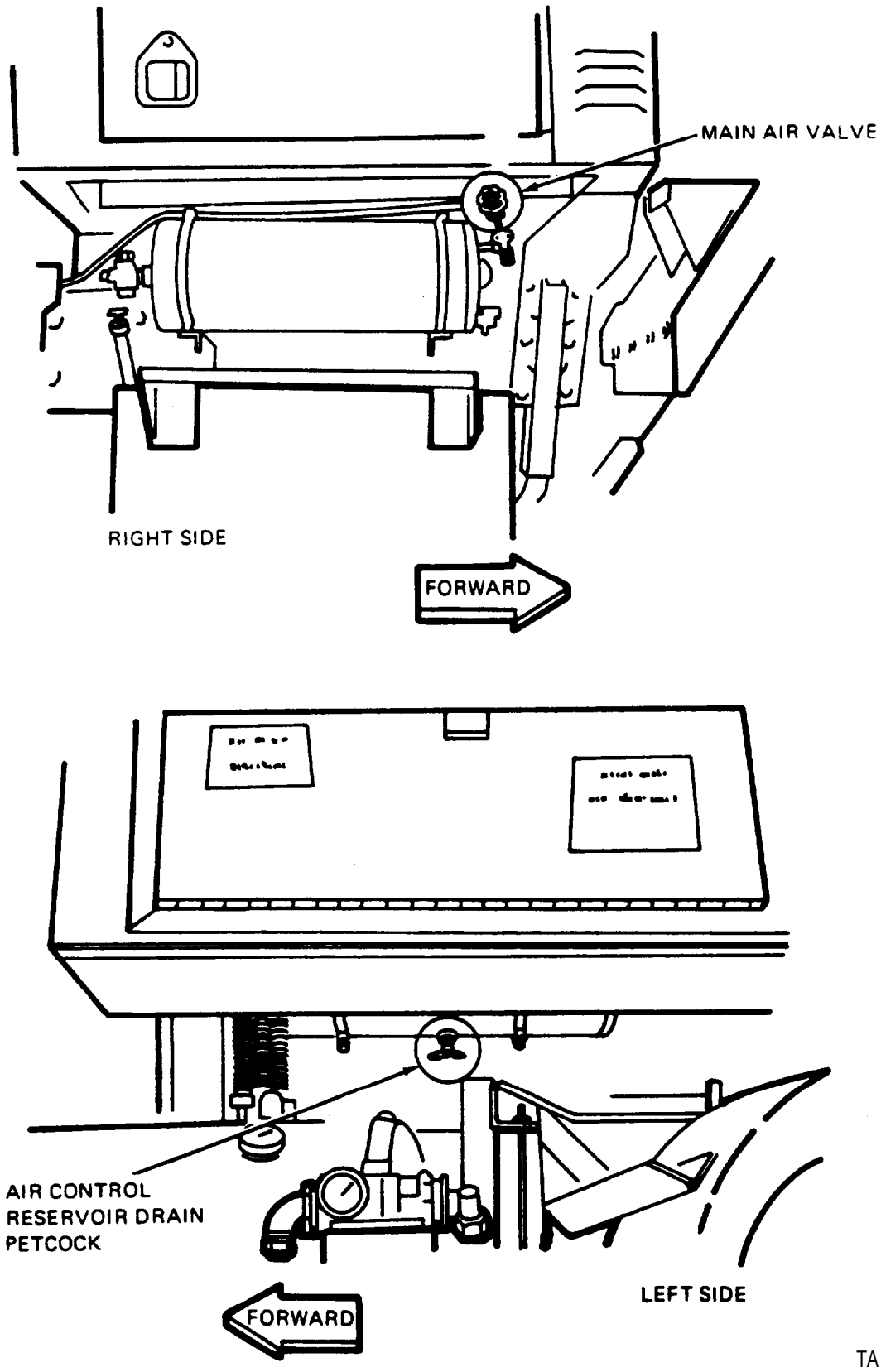
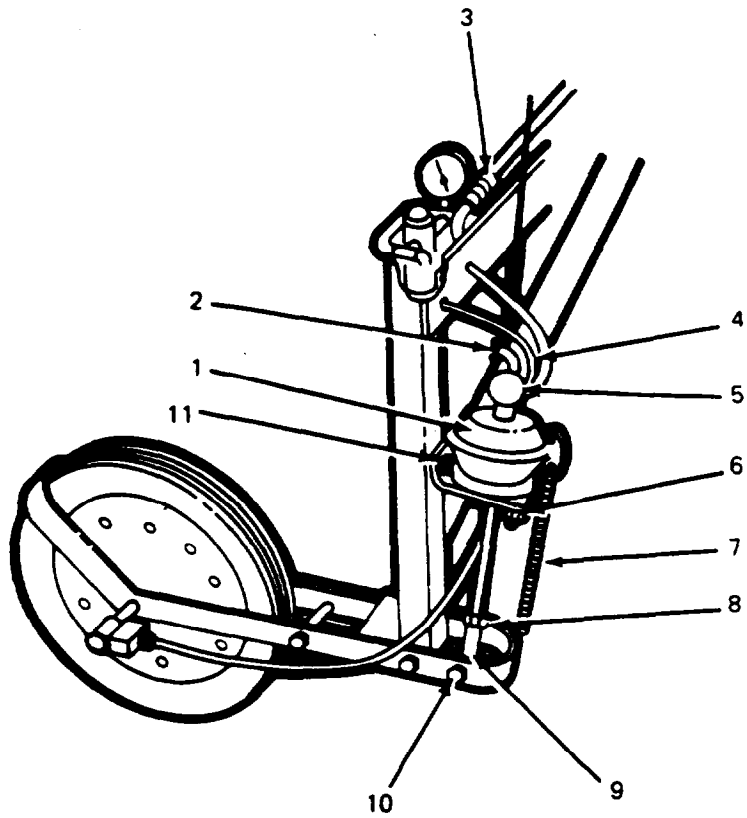


Figure 2-24. Main Air Valve and Bituminous Supply Tank Petcock.

(2) Disconnect air supply line (2, fig. 2-25) from solenoid valve (5).



LEGEND:
1. AIR CHAMBER
2. AIR SUPPLY LINE
3 QUICK DISCONNECT
4. SOLENOID GROUND WIRE
5. SOLENOID VALVE
6. NUTS
7. SPRING
8. YOKE LOCKNUT
9. AIR CHAMBER YOKE
10. CAPSCREW
11. MOUNTING BRACKET

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Figure 2-25. Remove/Install Bitumeter Wheel Solenoid Valve and Air Chamber.

(3) Disconnect solenoid ground wire (4) by removing capscrew, nut and washer. Pull apart power line at quick-disconnect (3) and remove air line (2) from solenoid valve (5).

(4) Unscrew solenoid valve (5) from air chamber (1).

(5) Disconnect spring (7) from air chamber (1).

(6) Remove two nuts (6) and washers that fasten air chamber (1) to mounting bracket (11).

(7) Remove capscrew (10) and nut that fasten air chamber yoke (9) to wheel fork.

(8) Loosen yoke locknut (8); then unscrew the yoke from air chamber (1).

(9) Pull air chamber (1) out of mounting bracket (11).

b. Installation of Bitumeter Wheel Solenoid Valve and Air Chamber. (Refer to fig. 2-25.)

(1) Mount air chamber (1) on bracket (11). Long threaded shaft should pass through center hole of bracket.

(2) Install two nuts (6) and washers that fasten air chamber (1) to mounting bracket (11).

(3) Install yoke locknut (8) and air chamber yoke (9). Screw the yoke on to the air chamber (1) until hole in yoke lines up with hole in wheel fork; then tighten yoke locknut (8).

(4) Install capscrew (10) and nut that fasten the air chamber yoke (9) to the wheel fork.

(5) Connect spring (7) to air chamber (1).

(6) Screw solenoid valve (5) into top of air chamber (1).

(7) Connect air supply line (2) to solenoid valve (5).

(8) Connect solenoid ground wire (4) to bracket and secure with capscrew, washer, and nut.

(9) Connect solenoid power line to quick-disconnect (3).

(10) Close petcock and open main air valve. (Refer to fig. 2-24.)

c. Servicing of Oiler Lubricator.

(1) Close gate valve (main air valve, fig. 2-24) then exhaust air supply from bituminous tank by opening air control reservoir drain petcock.

(2) Remove glass cup from oiler lubricator.

(3) Add OE 10 oil to cup and replace cup.

(4) Close petcock on air supply tank and open main air valve.

(5) Start engine to replenish air supply.

NOTE

The safety valve located just below the main air valve at the main air tank will allow air to pass through the bituminous air tank only after the pressure is above 65 lbs. This provides a safety factor so the truck will not be starved of air pressure for the service brakes.

d. Removal of Bitumeter Wheel, Tires, and Bearings. (Refer to fig. 2-26.)

(1) Loosen capscrew (28); then pull tachometer adapter (13) off.

(2) Remove cotter pin (15).

(3) Remove cotter pin (3); then hex nut (4) and spindle (14).

(4) Remove two screws (1) and washers (2); then pull off outer bearing (5) with bearing (6).

(5) Remove screws (26) and (11) and washers (27) and (10); then pull bearing clamp (9) with bearing (8).

(6) Remove assembled tire (16) and wheel (17) from fork assembly (7).

(7) Separate tire and wheel by removing six nuts (19), lockwashers (20), and capscrews (24). Remove wheel disks (21) and (22) and spacers (23).

e. Installation of Bitumeter Wheel, Tire, and Bearings. (Refer to fig. 2-26.)

(1) Inspect bushings (25) and (18). Replace wheel if bushings are worn or defective.

(2) Inspect ball bearings (6) and (8). Replace if defective.

(3) Assemble tire and wheel as follows:

(a) Insert six capscrews (24) through wheel disk (22). Lay disk on bench so that it rests on the capscrews.

(b) Place a spacer (23) on each capscrew.

(c) Place tire (16) on top of disk (22).

(d) Install disk (21), lockwashers (20) and nuts (19). Tighten capscrews (24) and nuts (19) securely.

(4) Mount assembled tire and wheel in fork assembly (7).

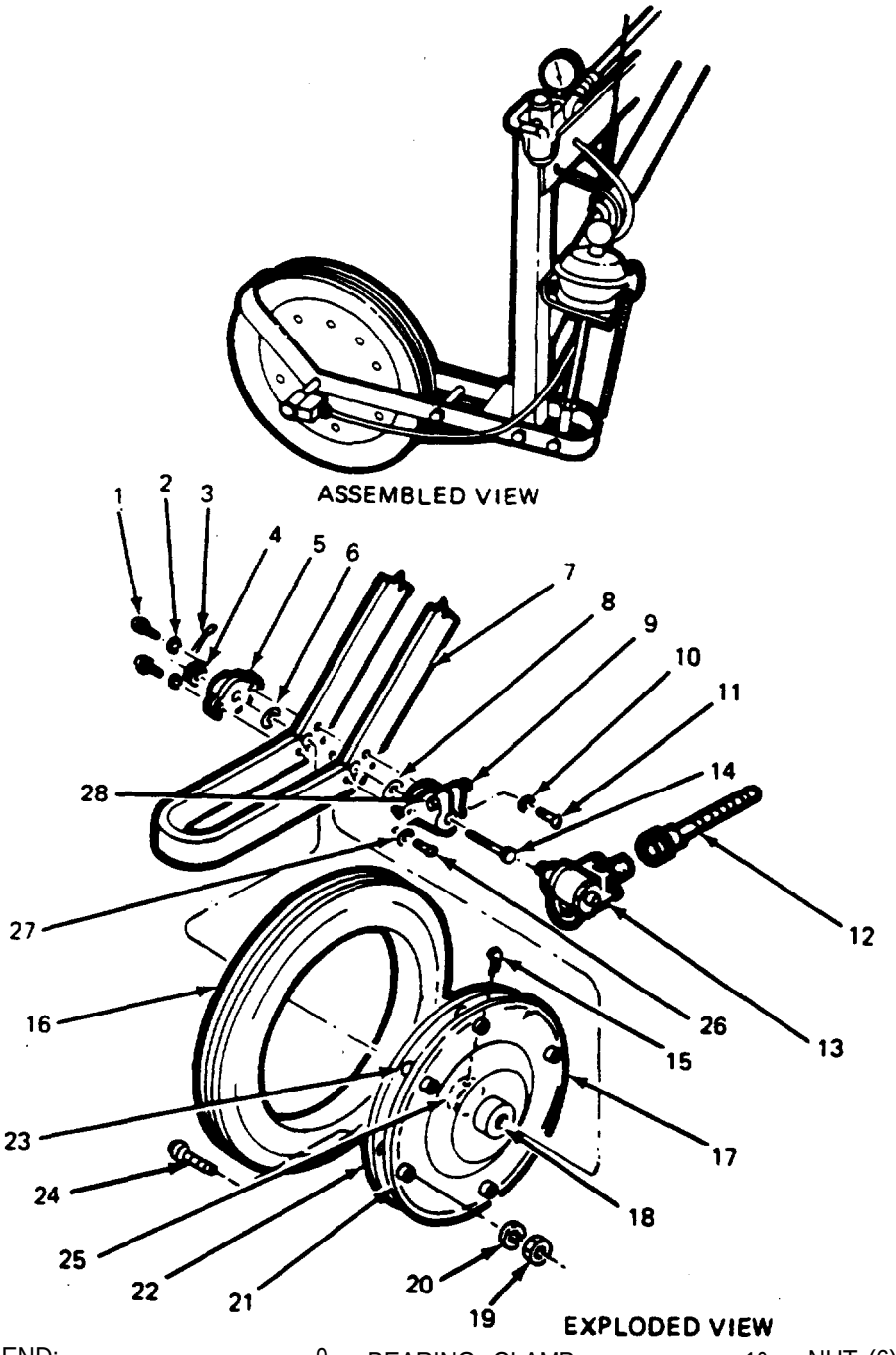
(5) Mount assembled bearing clamp (9) on fork assembly (7) and secure with screws (26) and (11) and washers (27) and (10).

(6) Mount assembled outer bearing (5) on fork assembly (7) and secure with two screws (1) and washers (2).

(7) Install spindle (14). Turn the spindle to line up hole in wheel for cotter pin (15), then install cotter pin (15).

(8) Install hex nut (4) and cotter pin (3).

(9) Install tachometer adapter (13), making sure that the drive pin on the adapter seats into the slot of spindle (14). Tighten capscrew (28).



LEGEND:

1. SCREW (2)
2. WASHER (2)
3. COTTER PIN
4. HEX NUT
5. OUTER BEARING
6. BEARING
7. FORK ASSEMBLY
8. BEARING
9. BEARING CLAMP
10. WASHER
11. SCREW
12. CABLE HOUSING
13. TACHOMETER ADAPTER
14. SPINDLE
15. COTTER PIN
16. TIRE
17. WHEEL
18. BUSHING
19. NUT (6)
20. LOCKWASHER (6)
21. WHEEL DISK
22. WHEEL DISK
23. SPACER (6)
24. CAPSCREW (6)
25. BUSHING
26. SCREW
27. WASHER
28. CAPSCREW

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Figure 2-26. Remove/Install Bitumter Wheel, Tire and Bearing.

Section XX. MAINTENANCE OF BITUMETER AIR CONTROL RESERVOIR

2-24. Bitumeter Air Control Reservoir.

NOTE

Close off main air pressure at supply tank and drain off air pressure by opening drain cock. Refer to TM 5-3895-371-10.

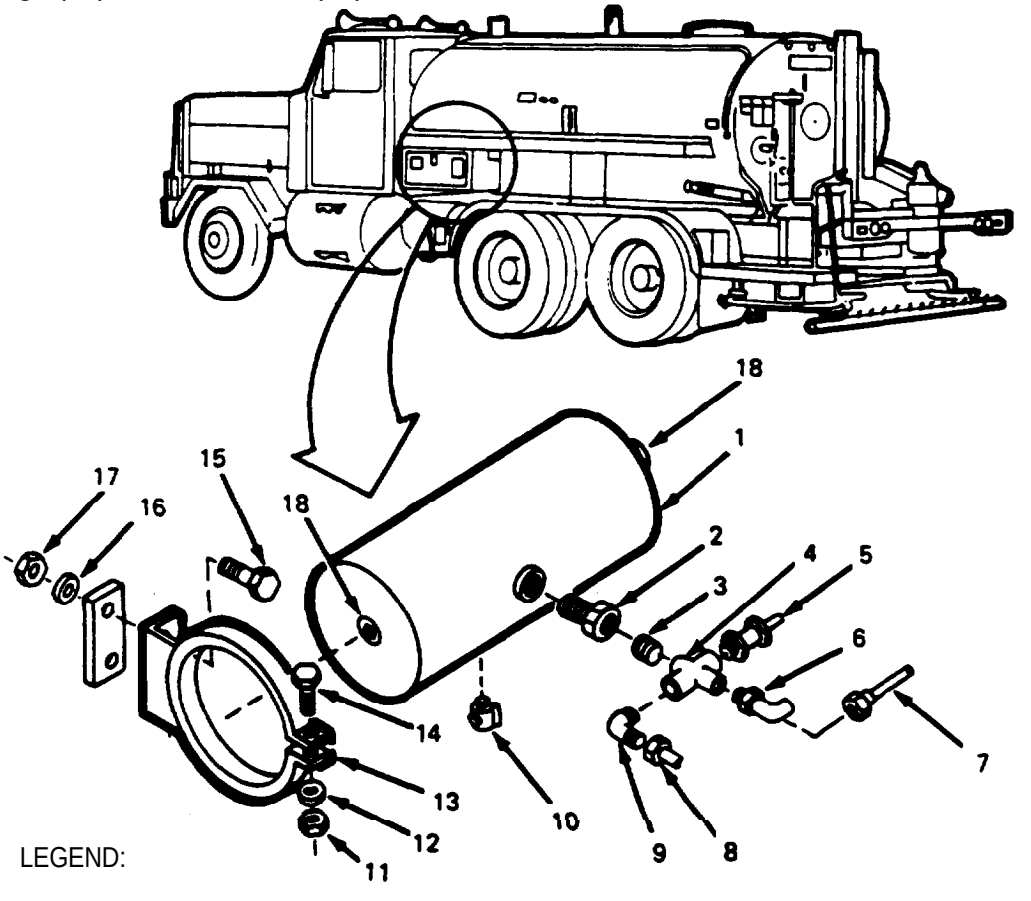
a. Removal. (Refer to fig. 2-27.)

(1) Disconnect two air lines (7) and (8) at elbows (6) and (9).

(2) Remove two nuts (11), lockwashers (12), and capscrews (14) from brackets (13).

(3) Spread air reservoir brackets (13) and remove air reservoir (1).

(4) If air reservoir (1) is to be replaced, transfer all fittings to the new reservoir including two pipe plugs (18) and drain cock (10).



LEGEND:

1. BUSHING RESERVOIR	7. AIR LINE	13. BRACKET (2)
2. BUSHING	8. AIR LINE	14. CAPSCREW (2)
3. NIPPLE	9. ELBOW	15. CAPSCREW (2)
4. CROSS PIPE	10. DRAIN COCK	16. LOCKWASHER (2)
5. VALVE	11. NUT (2)	17. CAPSCREW (2)
6. ELBOW	12. LOCKWASHER (2)	18. PIPE PLUG (2)

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Figure 2-27. Remove/Install Air Control Reservoir.

b. Installation. (Refer to fig. 2-27.)

(1) Install air reservoir (1) in air reservoir brackets (13).

(2) Aline bolt holes in air reservoir brackets (13) and install two capscrews (14), lockwashers (12) and nuts (11).

(3) Tighten nuts (11).

(4) Connect two air lines (7) and (8) to elbow (6) and (9).

Section XXI. MAINTENANCE OF PUMP TACHOMETER AND RECORDING BITUMETER

2-25. Pump Tachometer and Recording Bitumeter.

a. Removal of Pump Tachometer. (Refer to fig. 2-28.)

(1) Remove adapter (5) by loosening knurled nut (8).

(2) Disconnect cable (4) from adapter (5).

(3) Remove the pump tachometer (10) by removing two nuts (6) and lockwashers (7).

(4) Replace lens (12) if broken by cutting or prying off bezel (13) and remove lens (12) and packing (11).

(5) Install new packing (11) and new lens (12) and roll or crimp on new bezel (13).

b. Installation of Pump Tachometer. (Refer to fig. 2-28.)

(1) Mount pump tachometer (10) in bracket (9) and secure with two lockwashers (7) and nuts (6).

(2) Install adapter (5) and secure to pump tachometer (10) with knurled nut (8).

(3) Connect cable (4) to adapter (5).

c. Removal of Pump Tachometer and Recording Bitumeter Cables. (Refer to fig. 2-28.)

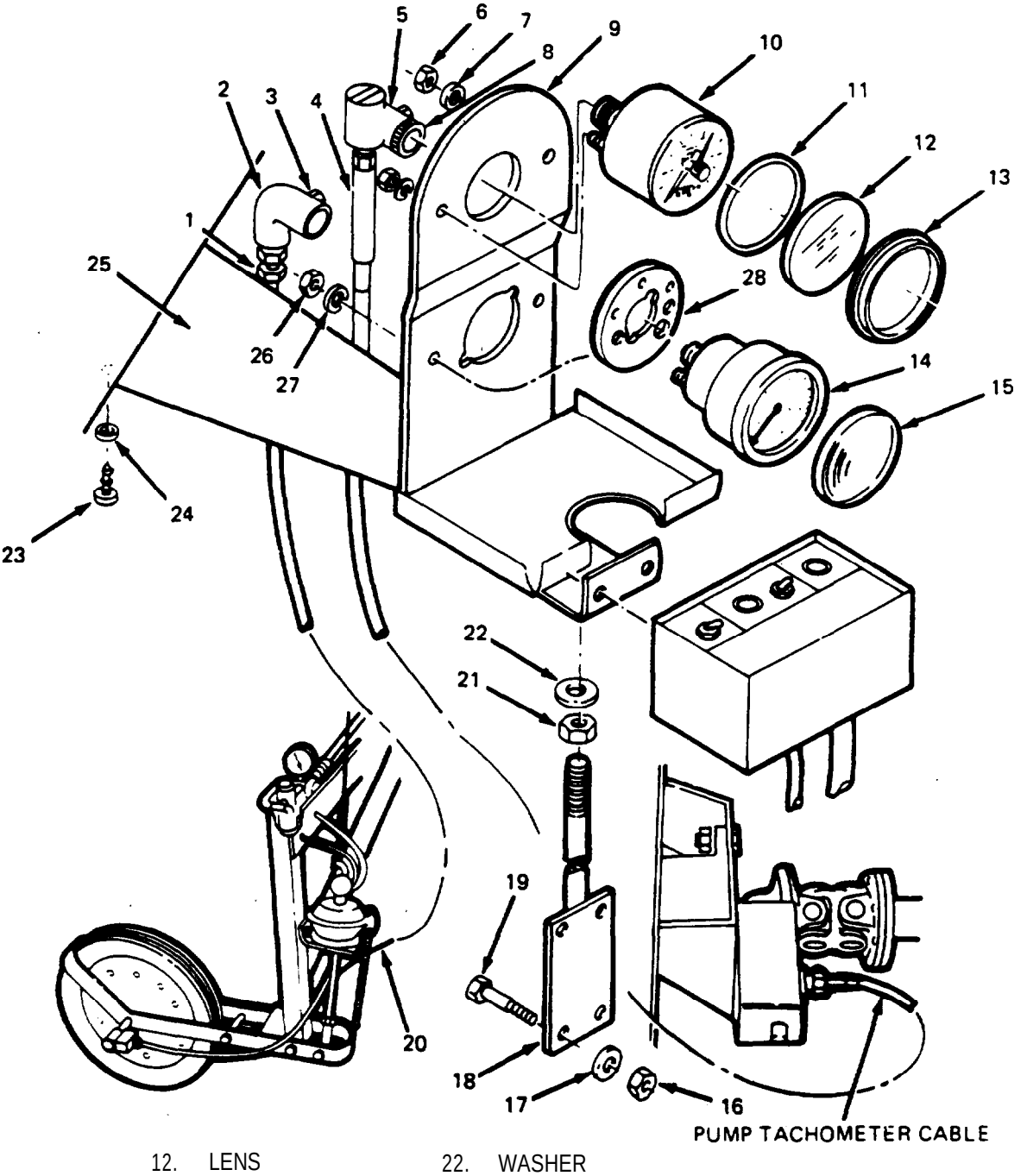
(1) Disconnect the pump tachometer cable (4) and the recording bitumeter cable (1) from their respective adapters (2) and (5).

(2) Trace the cables through holes in floor to their termination. (See lower views of illustration.) Cut all tie wraps that secure the cables.

(3) Disconnect cable from adaptor on bitumeter wheel and the cable to the drive housing off of the hydrostatic pump.

(4) Pull cables down through hole in floor to remove.

(5) Remove bracket (25) by removing screw (23), lockwasher (24), capscrew (19), lockwasher (17), and nut (16). Loosen nut (21) and turn stand (18) counterclockwise from bracket (9). Remove washer (22).



LEGEND:

1. CABLE
2. ADAPTER
3. LOCKSCREW
4. CABLE
5. ADAPTER
6. NUT (2)
7. LOCKWASHER (2)
8. KNURLED NUT
9. BRACKET
10. PUMP TACHOMETER
11. PACKING
12. LENS
13. BEZEL
14. HEAD
15. GLASS
16. NUT
17. LOCKWASHER
18. STAND
19. CAPSCREW
20. RECORDING BITUMETER CABLE
21. NUT
22. WASHER
23. SCREW
24. LOCKWASHER
25. BRACKET
26. NUT (2)
27. LOCKWASHER (2)
28. PLATE

TA 075834

Figure 2-28. Remove/Install Pump Tachometer, Recording Bitumeter, and Cables.

d. Installation of Pump Tachometer and Recording Bitumeter Cables. (Refer to fig. 2-28.)

(1) Feed the pump tachometer cable (4) and the recording bitumeter cable (1) up through holes in floor at rear of cab.

(2) Connect cables to their respective adapters (2) and (5).

(3) Connect recording bitumeter cable (1) to adapter on bitumeter wheel.

(4) Connect pump tachometer cable (4) to drive housing off of the hydrostatic pump.

(5) Trace each cable through, from hole in floor to its termination. Secure as necessary with tie wraps.

(6) Install bracket (25) to dash panel with screws (23) and lockwashers (24). Thread mounting stand (18) with nut (21) and washer (22) thru bracket (25) into bracket (9). Install capscrew (19), lockwasher (17) and nut (16). Tighten lock nut (21).

e. Removal of Recording Bitumeter. (Refer to fig. 2-28.)

(1) Disconnect cable (1) from adapter (2).

(2) Remove adapter (2) by removing lock screw (3).

(3) Remove the recording bitumeter by removing two nuts (26) and plate (28).

(4) Replace glass (15) if broken by prying off bezel from head (14) and install new glass (15) and re-crimp on bezel (13).

f. Installation of Recording Bitumeter. (Refer to fig. 2-28.)

(1) Mount recording bitumeter in bracket (9) and secure with two nuts (26) and lockwashers (27).

(2) Install adapter (2) and secure to recording bitumeter with lock screw (3).

(3) Connect cable (1) to adapter.

Section XXII. MAINTENANCE OF HYDRAULIC MOTOR UNIVERSAL DRIVE

2-26. Hydraulic Motor Universal Drive.

a. Removal. (Refer to fig. 2-29.)

(1) Remove two capscrews (16) and lockwashers (17) and slide beck chain guard (5).

(2) Remove nuts (14), lockwashers (15), and capscrews (3).

(3) Remove hex nuts (12), lockwashers (11), and capscrews (10).

(4) Lift the universal drive from between the two mounting plates and remove two spacers (2).

b. Installation. (Refer to fig. 2-29.)

(1) Place universal drive between the two mounting plates and aline bolt holes

(2) Place two spacers (2) between motor mounting plate and install three capscrews (3), lockwashers (15), and hex nuts (14).

NOTE

Install only three capscrews even though there are four bolt holes.

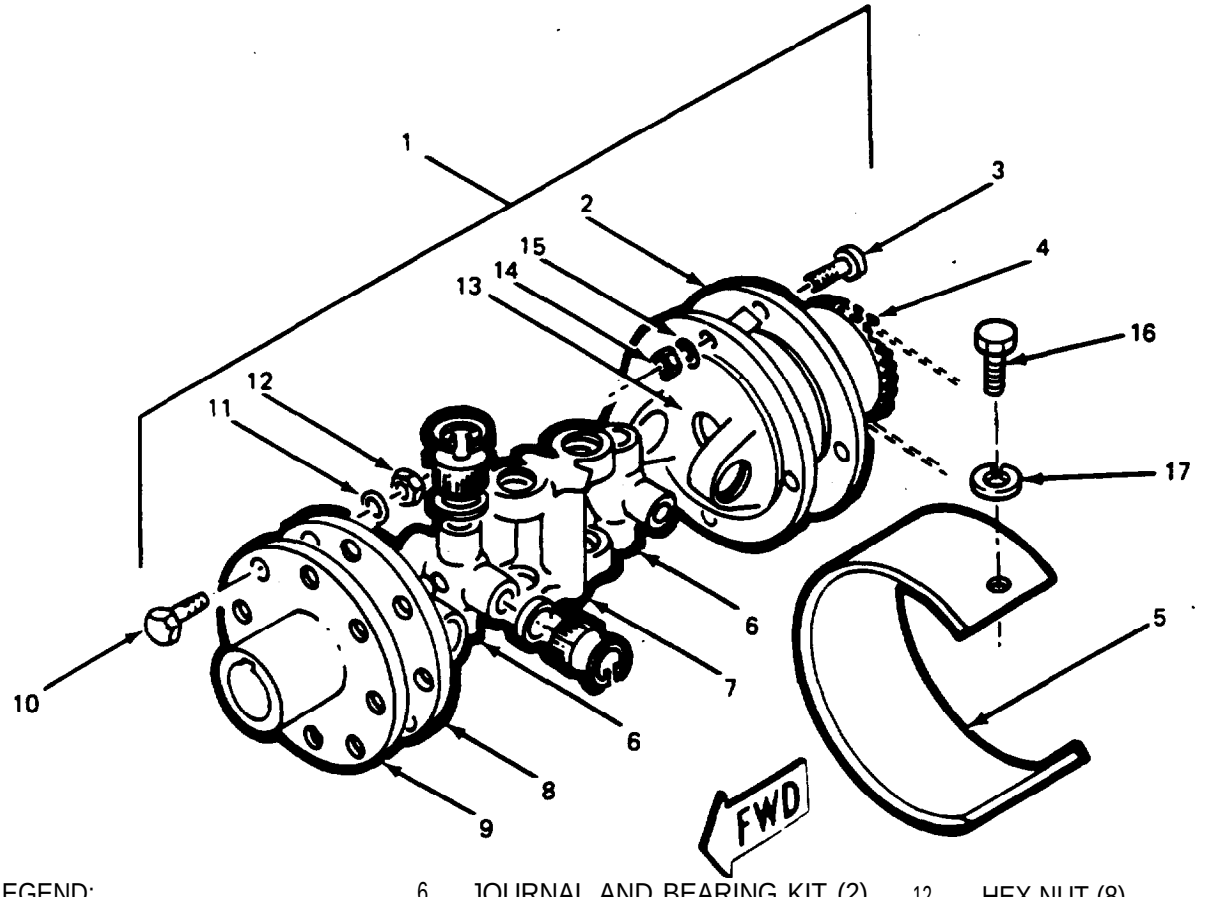
(3) Tighten hex nuts (14) evenly.

(4) Install capscrews (10), lockwashers (11) and hex nuts (12).

(5) Tighten hex nuts (12) evenly.

(6) Slide chain guard (5) over mounting plate and install two capscrews (16) and lockwashers (17); one above and one below.

c. Universal Joint Replacement. (Refer to para 2-14.)



LEGEND:
1. UNIVERSAL DRIVE
2. SPACER (2)
3. CAPSCREW (3)
4. FLANGE WITH SPROCKET
5. CHAIN GUARD
6. JOURNAL AND BEARING KIT (2)
7. DOUBLE CENTER
8. FLANGE YOKE
9. COMPANION FLANGE
10. CAPSCREW (8)
11. LOCKWASHER (8)
12. HEX NUT (8)
13. FLANGE
14. HEX NUT (3)
15. LOCKWASHER (3)
16. CAPSCREW (2)
17. LOCKWASHER (2)

TA 075835

Figure 2-29. Remove/Install Pump Universal Drive.

Section XXIII. MAINTENANCE OF BURNER FUEL TANK

2-27. Burner Fuel Tank.

a. Removal. (Refer to fig. 2-30.)

(1) Open two draincocks and drain fuel.

(2) Remove two capscrews and remove access plate.

NOTE

Mark fuel lines for re-installation identification.

(3) Disconnect two fuel lines at fuel tank.

(4) Loosen two clamps that support the tank by removing capscrew, nut, and lockwasher from each; then remove tank.

b. Installation. (Refer to fig. 2-30.)

(1) Place fuel tank in clamps and secure each clamp with a capscrew, nut, and lockwasher, but not tight at this time.

(2) Connect two fuel lines to tank.

(3) Tighten clamp capscrews and nuts.

(4) Install access plate and secure with two capscrews.

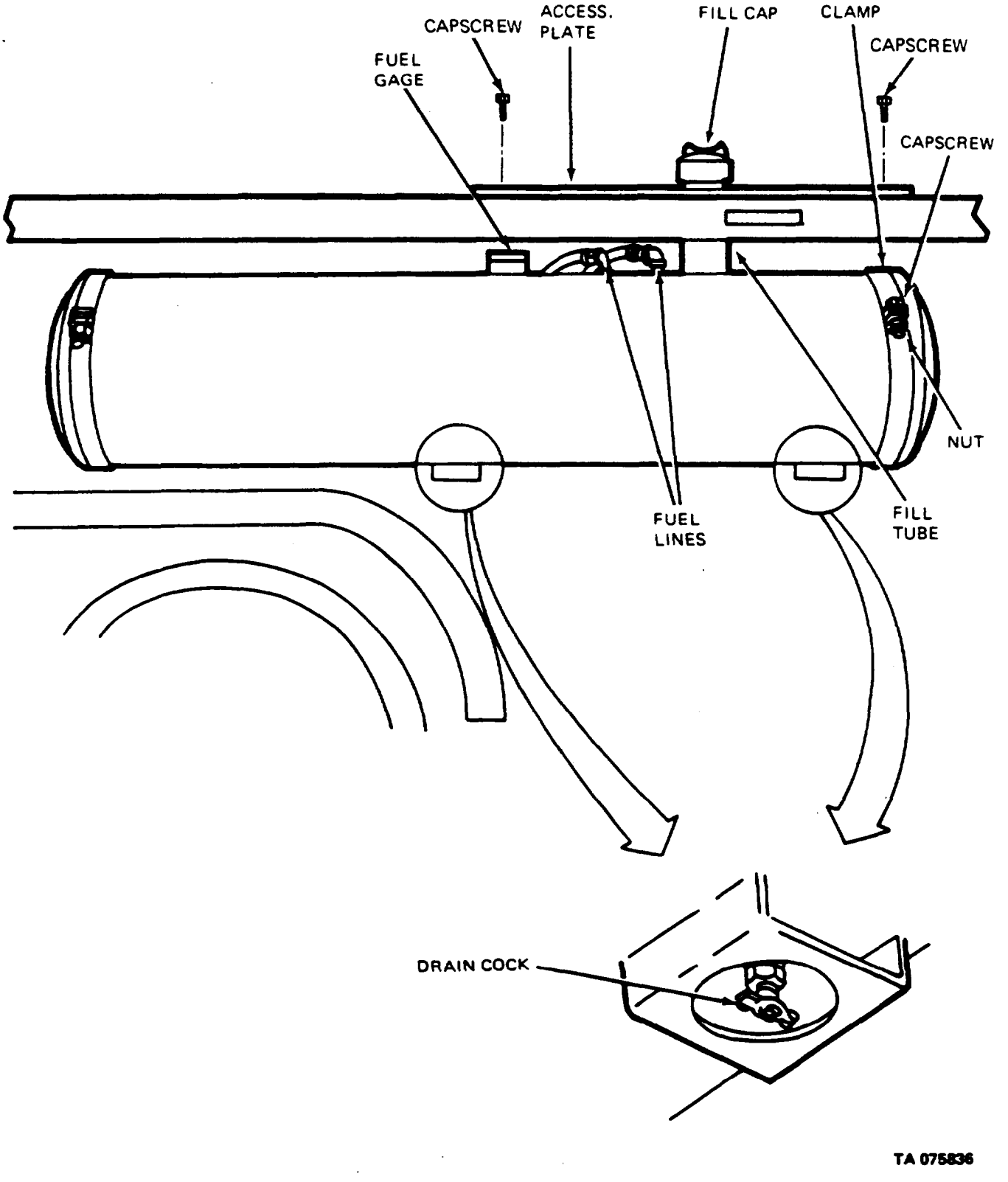


Figure 2-30. Remove/Install Burner Fuel Tank.

Section XXIV. MAINTENANCE OF EXTERNAL SMOKE STACKS

2-28. External Smoke Stacks.

NOTE

Removal and Maintenance procedures are identical for both smoke stacks.

a. Removal. (Refer to fig. 2-31.)

(1) Remove two self tapping screws (6) and remove bracket (7) from smoke stacks.

(2) Remove two hex nuts (8).

(3) Lift off smoke stack.

b. Disassembly.

(1) Remove spring (5) and two cotter pins (4).

(2) Remove two screws (2).

(3) Remove cover (3).

(4) Remove three screws (9) and mounting hook (10).

c. Inspection. Inspect both smoke stack chambers (1) and covers (3) for holes, cracks, and thin or deteriorated areas. Replace if defective.

d. Reassembly. (Refer to fig. 2-31.)

(1) Install cover (3) and secure with screws (2).

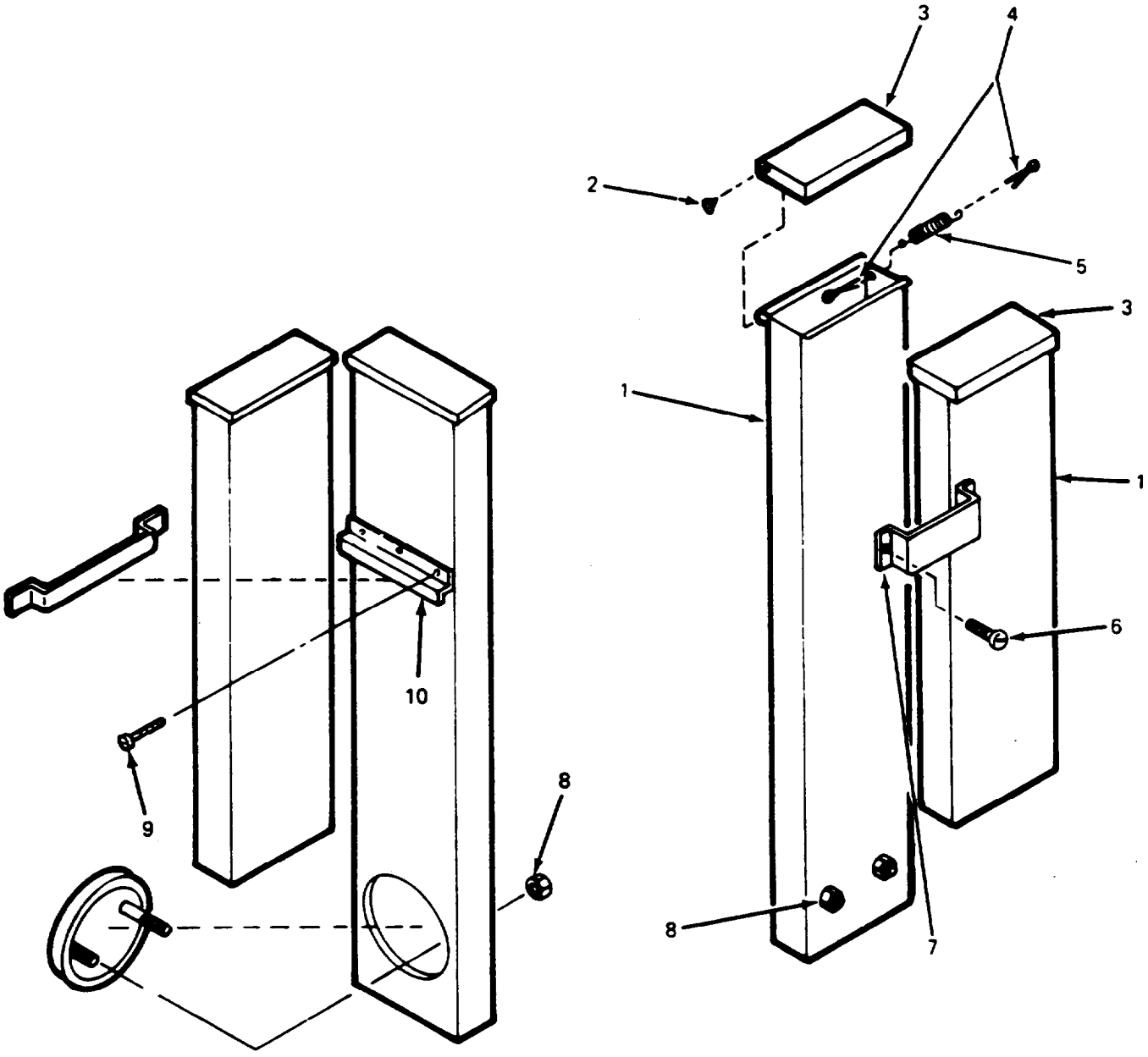
(2) Install two cotter pins (4) and spring (5).

(3) Install mounting hook (10) and secure with three screws (9).

e. Installation.

(1) Install smoke stack chamber (1) and secure with hex nuts (8).

(2) Install bracket (7) and secure with two sheet metal self tapping screws (6).



LEGEND:

1. STACK CHAMBER
2. SCREW (2)
3. COVER
4. COTTER PIN (2)
5. SPRING
6. SELF TAPPING SCREW (2)
7. BRACKET
8. HEX NUT (2)
9. SCREW (3)
10. MOUNTING HOOK

TA 075837

Figure 2-31. Remove/Install Smoke Stacks.

Section XXV. MAINTENANCE OF QUADRANT

2-29. Quadrant.

a. Removal. (Refer to fig. 2-32.)

(1) Remove cotter pin (13) and disconnect piston rod (14).

(2) Remove cotter pins (3), (9), and (12); then disconnect links (5), (6), and (10). Remove washers (4), (11), and (8).

(3) Remove micro actuating switch (2) from its mounting bracket by removing two cap-screws; then remove two screws and cover from bottom of micro actuating switch (2) to gain access to wires.

(4) Disconnect both wires from the micro actuating switch (2); then remove fitting at the end of micro actuating switch (2) and pull out wire cable.

(5) Pull micro actuating switch cable out through hole leaving the grommet (1).

(6) Remove two capscrews (15) and lift off the complete quadrant.

(7) Remove coupling (7).

b. Installation. (Refer to fig. 2-32.)

(1) Install coupling (7).

(2) Mount quadrant into coupling (7). Secure quadrant to tank with two capscrews (15).

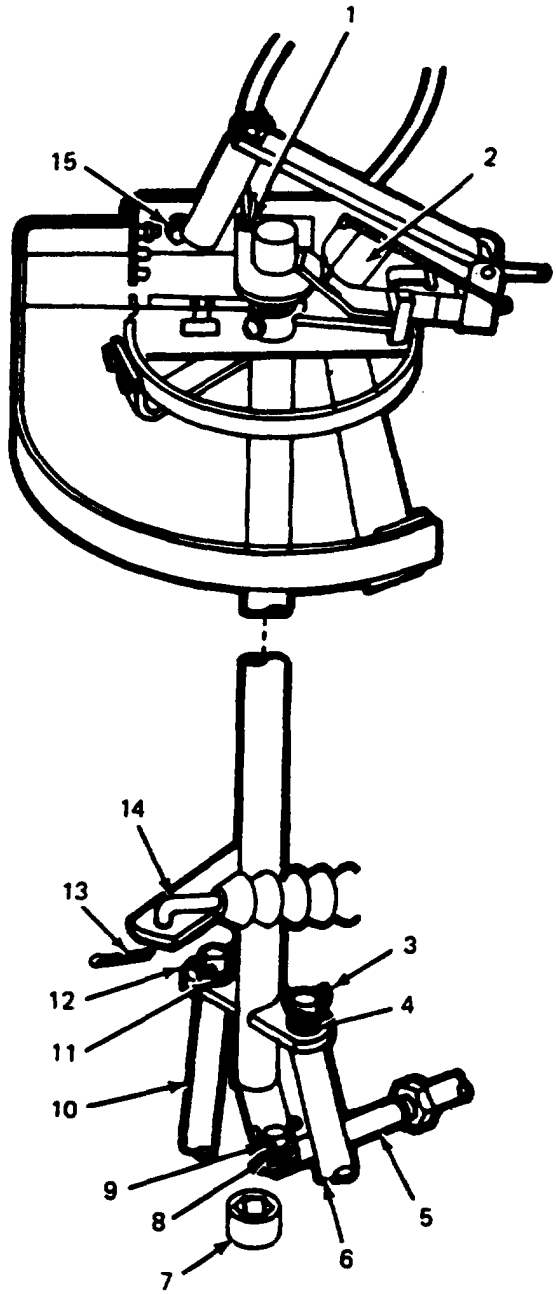
(3) Pull cable for micro actuating switch (2) through grommet (1).

(4) Connect both wires to micro actuating switch terminals and install fitting at the end of micro actuating switch (2). Install cover on micro actuating switch and secure with two screws.

(5) Install micro actuating switch (2) on its mounting bracket and Secure with two cap screws.

(6) Connect links (5), (6), and (10) to quadrant and secure with washers (11), (4), and (8) and cotter pins (3), (9), and (12).

(7) Connect piston rod (14) to quadrant and secure with cotter pin (13).



LEGEND:

1. GROMMET
2. MICRO ACTUATING SWITCH
3. COTTER PIN
4. WASHER
5. LINK
6. LINK
7. QUADRANT TANK AND COVER COUPLING
8. WASHER
9. COTTER PIN
10. LINK
11. WASHER
12. COTTER PIN
13. COTTER PIN
14. PISTON ROD
15. CAPSCREW (2)

TA 075838

Figure 2-32. Remove/Install Quadrant.

c. Disassembly. (Refer to fig. 2-33.)

(1) Loosen square set screw (19); then lift off handle assembly (1).

(2) Loosen two locknuts (17); then remove two screws and remove shaft from lever (11) and control assembly (16).

(3) Remove hub (7) with bushing (6) by removing capscrew (5), washer (8) and nut (9).

(4) Remove bushing (6) from hub (7).

(5) Tap out pin (2); then remove handle (3) and disk (4).

(6) Remove spring (10).

(7) Remove quadrant guard (14) by removing nuts (12) and (20) and capscrews (13).

(8) Remove spring retainer (18).

d. Reassembly, (Refer to fig. 2-33.)

(1) Install spring retainer (18).

(2) Install quadrant guard (14) and secure to quadrant control assembly (16) using nuts (12) and (20) and capscrews (13).

(3) Install spring (10).

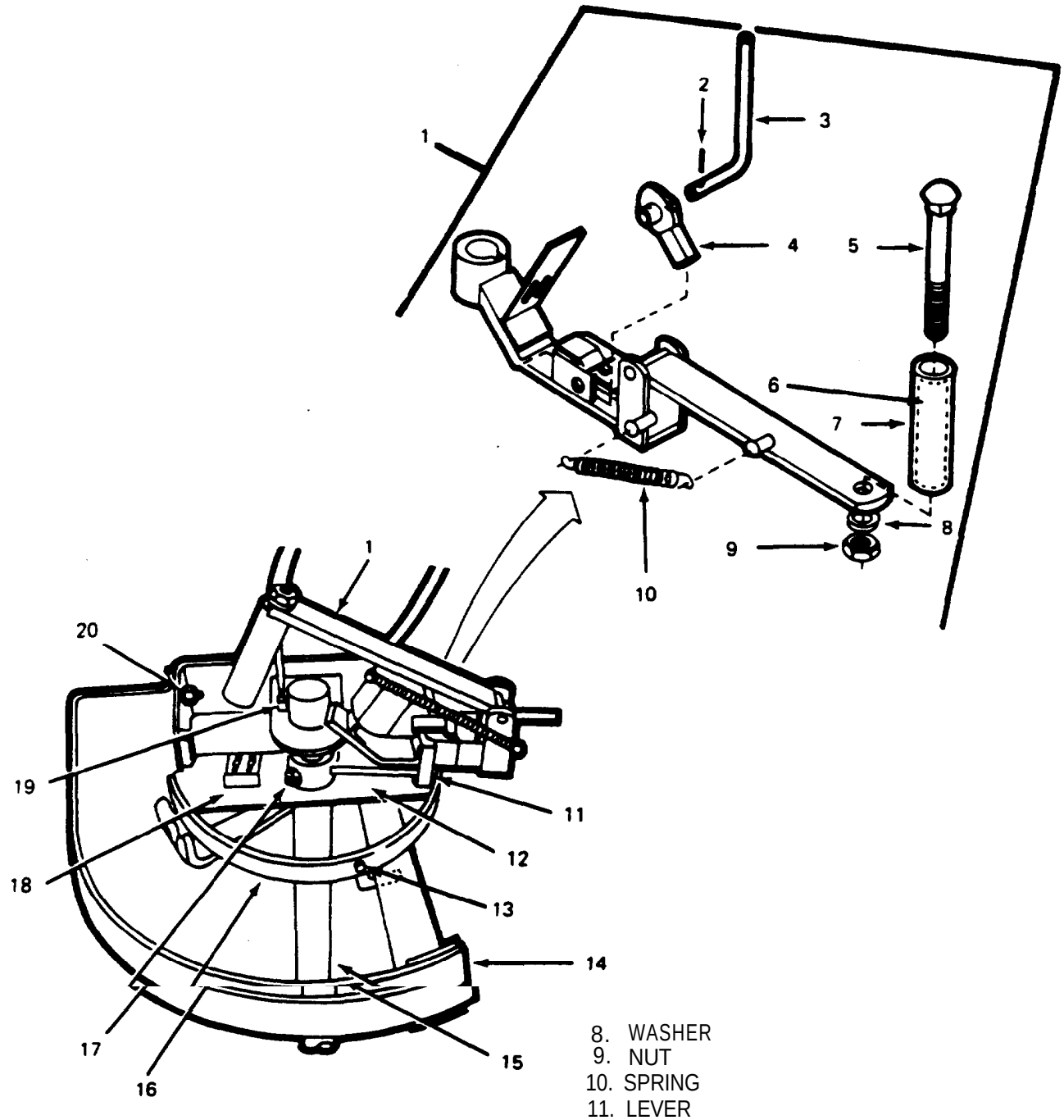
(4) Mount disk (4) and handle (3) in handle assembly (1); then secure with pin (2).

(5) Install bushing (6) in hub (7).

(6) Mount hub (7) onto handle assembly (1) and secure with capscrew (5), washer (8) and nut (9).

(7) Mount control assembly (16) and lever (11) on column (15). Locate centering hole for lockscrew; then install lockscrews and secure with lock nut (17).

(8) Mount handle assembly (1) on column (15) and secure with square set screws (19).



LEGEND:

1. HANDLE ASSEMBLY
2. PIN
3. HANDLE
4. DISC
5. CAPSCREW
6. BUSHING
7. HUB
8. WASHER
9. NUT
10. SPRING
11. LEVER
12. NUT
13. CAPSCREW
14. QUADRANT GUARD
15. COLUMN
16. CONTROL ASSEMBLY
17. LOCKNUT (2)
18. SPRING RETAINER
19. SQUARE SET SCREW
20. NUT

TA 075839

Figure 2-33. Disassemble/Reassemble Quadrant.

Section XXVI. VACU-FLO, INTAKE, AND CONTROL VALVES MAINTENANCE

2-30. Vacu-Flo, Intake, and Control Valves.

a. *Removal/Disassembly.* (Refer to fig. 2-34 and 2-35.)

(1) Remove end cover (5, fig. 2-35) by removing thirteen capscrews (7).

(2) Remove bottom cover (12) by removing attaching capscrews.

(3) Remove top cover (4) by removing twenty capscrews (19).

(4) Remove cotter pin (2) and taper pin (3).

(5) Loosen pipe nuts (6), (9), and (11) on the right hand intake valve (8), and pipe nuts (13), (18), and (16) on the left hand intakevalve (15).

(6) Remove left hand intake valve (15) and gasket (14); or right hand intake valve (8) and gasket (10) by disconnecting the pipe nuts completely on the valve being removed.

(7) To disassemble remove four bolts and lockwashers from valve bottom plate (6, fig. 2-34).

(8) Remove plate gasket (5) and compression spring (3); throw gasket away.

(9) Remove two capscrews and washers from large gland cap (2).

(10) Remove compression spring (3) and dual valve packing (4).

b. Assembly/Installation. (Refer to fig. 2-34 and 2-35.)

(1) Assemble compression spring (3, fig. 2-34) and new dual valve packing (4).

(2) Assemble large gland cap (2) with two capscrews and washers.

(3) Assemble compression spring (3) and new plate gasket (5).

(4) Assemble valve bottom plate (6) using four bolts and lockwashers.

(5) Install left hand intake valve (15, fig. 2-35) or right hand intake valve (8), making sure that the top of the valve connects to drive linkages above.

(6) Install new gaskets (10) or (14) and connect pipe nuts (13), (18) and (16) for left hand intake valve (15); connect pipe nuts (6), (9), and (11) for right hand intake valve (8).

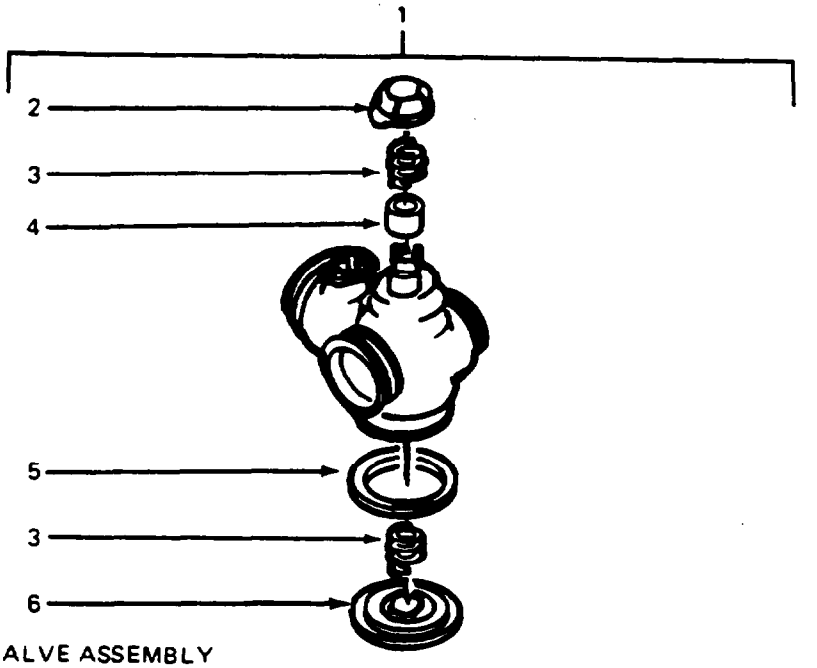
(7) Tighten all six pipe nuts.

(8) Rotate right hand intake valve (8) so that holes for tapered pin (3) line up; then install tapered pin (3) and cotter pin (2).

(9) Install top cover (4) with twenty capscrews (19).

(10) Install bottom cover (12) with capscrews.

(11) Install end cover (5) with thirteen capscrews (7).

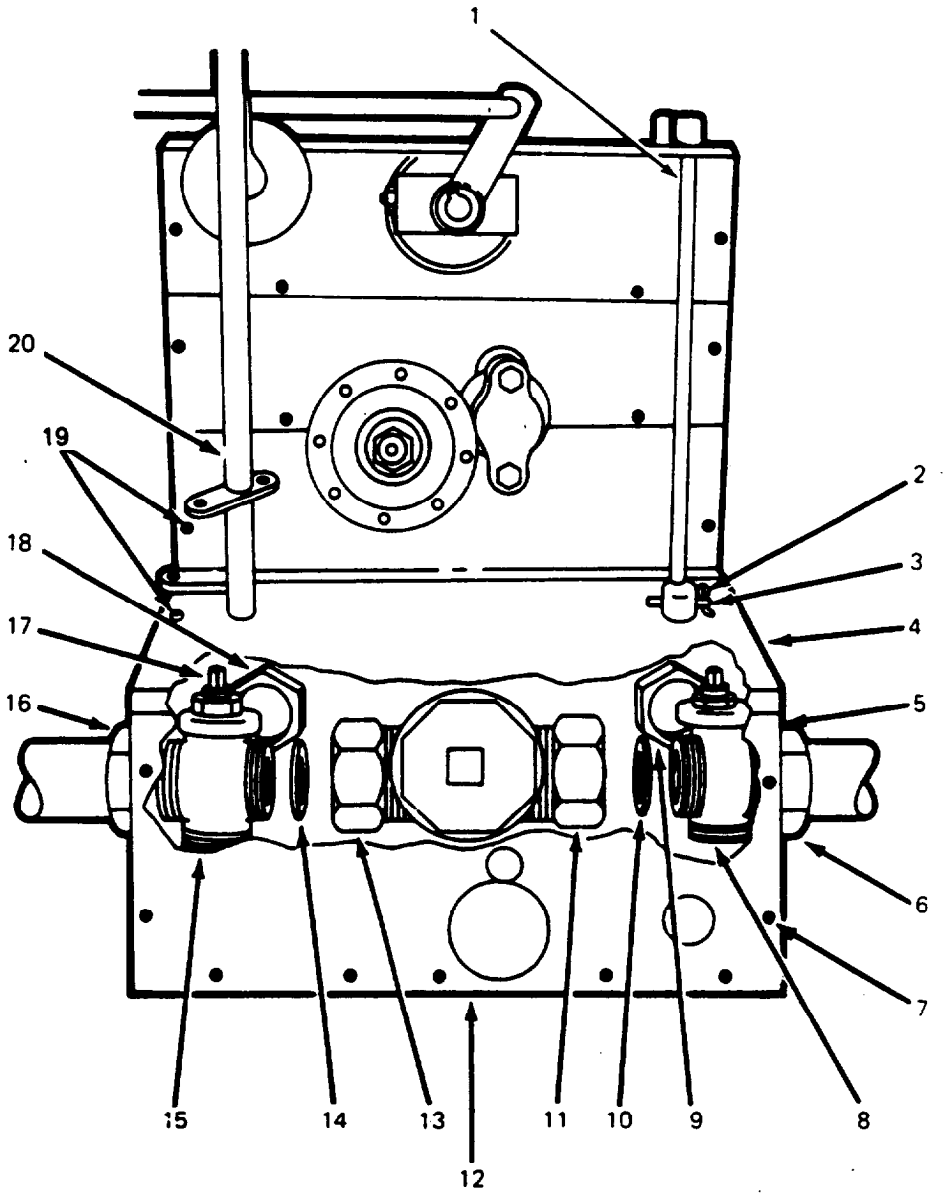


LEGEND:

1. INTAKE VALVE ASSEMBLY
2. GLAND CAP
3. COMPRESSION SPRING (2)
4. DUAL VALVE PACKING
5. PLATE GASKET
6. BOTTOM PLATE

TA 075840

Figure 2-34. Valves - Intake, Vacu-Flo and Control.



LEGEND:

1. LINKAGE
2. COTTER PIN
3. TAPER PIN
4. TOP COVER
5. END COVER
6. PIPE NUT
7. CAPSCREW (13)
8. R. H. INTAKE VALVE
9. PIPE NUT
10. GASKET
11. PIPE NUT
12. BOTTOM COVER
13. PIPE NUT
14. GASKET
15. L.H. INTAKE VALVE
16. PIPE NUT
17. STEM
18. PIPE NUT
19. CAPSCREW (20)
20. QUADRANT COLUMN

TA 075841

Figure 2-35. Remove/install Intake Valves.

Section XXVII. MAINTENANCE OF FILLING LINE

2-31. Filling Line.

a. Removal. (Refer to fig. 2-36.)

(1) Remove clamp screw (8) and two cotter pins (3); then spread hinge clamps (7) to remove it from the clamping ring (13).

(2) Remove nut washer and capscrew holding clamping ring (13) and fill cap chain.

(3) Remove fill cap (9) and slide clamping ring (13) off end of fill line (6).

(4) Using strainer hook (10), remove strainer (12), from connector (11).

(5) Remove U-bolt (2) by removing two washers and nuts (1).

(6) Remove bracket (4) by removing four screws.

(7) Unscrew fill line (6) from tank and remove gasket (5).

b. Installation. (Refer to fig. 2-36.)

(1) Install gasket (5) and fill line (6).

(2) Install bracket (4) and secure with four screws.

(3) Install U-bolt (2) and secure with two washers and nuts (1).

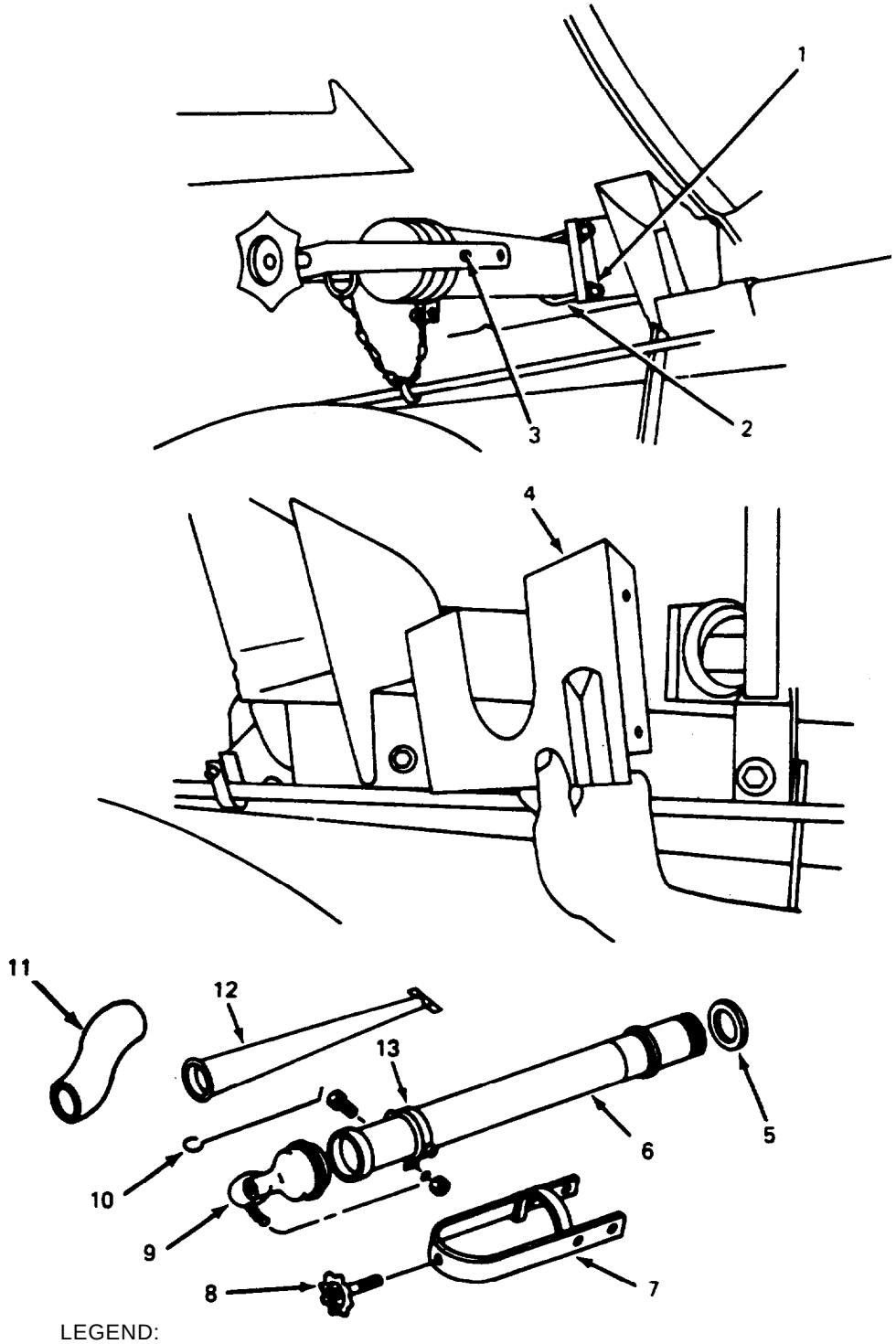
(4) Install clamping ring (13) and fill cap chain with capscrew, washer, and nut.

(5) Insert strainer (12) into connector (11).

(6) Install fill cap (9).

(7) Install hinge clamp (7) over pins on clamping ring (13) and install two, cotter pins (3).

(8) Install clamp screw (8) in hinge clamp (7) and fill cap (9).



LEGEND:

1. WASHER AND NUT (2)
2. U-BOLT
3. COTTER PIN (2)
4. BRACKET
5. GASKET
6. FILL LINE
7. HINGE CLAMP
8. CLAMP SCREW
9. FILL CAP
10. STRAINER HOOK
11. CONNECTOR
12. STRAINER
13. CLAMPING RING

TA 075842

Figure 2-36. Remove/Install Filling Line and Strainer.

Section XVIII. MAINTENANCE OF TRANSFER VALVES

2-32. Transfer Valve.

a. Removal. (Refer to fig. 2-37.)

(1) Disconnect chain (17) with support bracket (14) from valve body (26) by removing four capscrews (16) and lockwashers (15).

(2) Disconnect pipe nut (9) and remove one gasket (7).

(3) Disconnect drop pipe nut (3) and remove complete three-way valve assembly (28) with attaching piping and adapter assembly (21).

(4) Unscrew coupling (37) and remove gasket (7).

(5) Loosen handle (23) and move hinge clamp (24) to gain access to clamp ring (22).

(6) Remove clamp ring (22) by removing capscrew (38), nut (40), washer (39), and two cotter pins (25) from clamp ring (22); remove hinge clamp (24) and spread clamp ring (22) to remove. Lift out hand spray adapter (20) with attached nipple (19) and union (18). Spread ring (42) and remove chain (41).

b. Installation. (Refer to fig. 2-37.)

(I) Mount hand spray adapter (20) with attached nipple (19) and union (18) on valve body (26) and secure with clamp ring (22). Tighten clamp ring (22) with capscrew (38), nut (40) and washer (39).

(2) Install hinge clamp (24) on valve body (26) and secure with two cotter pins (25).

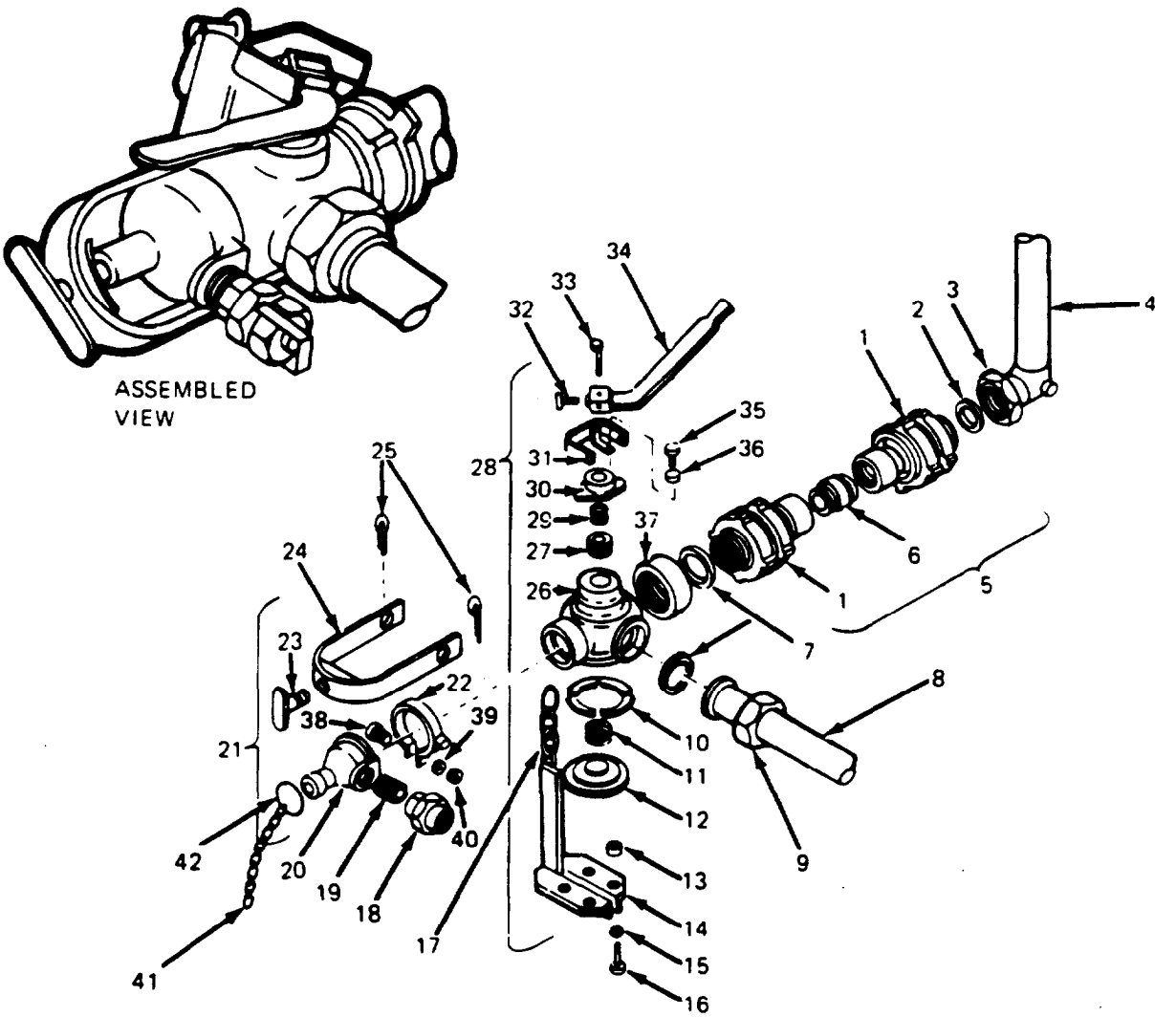
(3) Attach coupling (37) with new gasket (7) to valve body (29).

(4) Mount valve body (26) with pipe assembly (5) and gasket (7) on drop pipe (4). Secure with drop pipe nut (3).

(5) Install gasket (7) and connect pipe (8) to valve body (26). Secure with pipe nut (9).

(6) Connect chain (17) with support bracket (14) to valve body and secure with, four capscrews (16) and lockwashers (15).

(7) Install chain (41) to ring (42) and attach to handspray adapter (20).



LEGEND :

1. BALL JOINT (2)
2. GASKET
3. DROP PIPE NUT
4. DROP PIPE
5. PIPE ASSEMBLY
6. SHORT NIPPLE
7. GASKET (2)
8. PIPE
9. PIPE NUT
10. GASKET
11. SPRING
12. PLATE
13. NUT
14. SUPPORT BRACKET
15. LOCKWASHER (4)
16. CAPSCREW (4)
17. CHAIN
18. UNION
19. NIPPLE
20. HANDSPRAY ADAPTER
21. ADAPTOR ASSEMBLY
22. CLAMP RING
23. HANDLE
24. HINGE CLAMP
25. COTTER PIN (2)
26. VALVE BODY
27. PACKING
28. 3-WAY VALVE ASSEMBLY
29. SPRING
30. GLAND
31. LEVER STOP
32. SETSCREW
33. COTTER PIN
34. HAND LEVER
35. CAPSCREW
36. LOCKWASHER
37. COUPLING
38. CAPSCREW
39. WASHER
40. NUT
41. CHAIN
42. RING

TA 075843

Figure 2-37. Remove/Install Transfer Valve.

Section XXIX. MAINTENANCE OF CONTROL VALVE

2-33. Control Valve.

a. Removal. (Refer to fig. 2-38.)

(1) Remove asphalt pump. (Refer to para 3-7.)

(2) Remove filling line (17, fig. 2-38), gaskets (18) and vacu-flo valve (16).

(3) Remove vacu-flo linkage (15) by removing four capscrews.

(4) Remove cotter pin from rod (8) and remove from lever (6).

(5) Loosen set screw and nut (7) on lever (6) and remove lever.

(6) Remove six capscrews (10) and washers (11) from housing (5) and remove housing.

(7) Remove two capscrews and remove cover (25).

(8) Remove nuts securing valve (12) to tank and remove.

(9) Remove gasket (26).

(10) Unscrew vent pipe (24) from valve (12).

(11) Remove six capscrews (23), nuts (20), and separate vent pipe (24), from flanged pipe (21) and remove gasket (22).

b. Installation. (Refer to fig. 238.)

(1) Screw flanged pipe (21) into valve (12).

(2) Install new gasket (26) and add sealer to gasket surfaces.

(3) Raise valve (12) into place and secure with one nut and washer and twelve capscrews, nuts and washers.

(4) Install gasket (22) onto flanged pipe (21) and place vent pipe (24) on to gasket (22), aline holes and install capscrews (23) and nuts (20).

(5) Install cover (25) and secure with two, capscrews.

(6) Install housing (5) and secure with six capscrews.

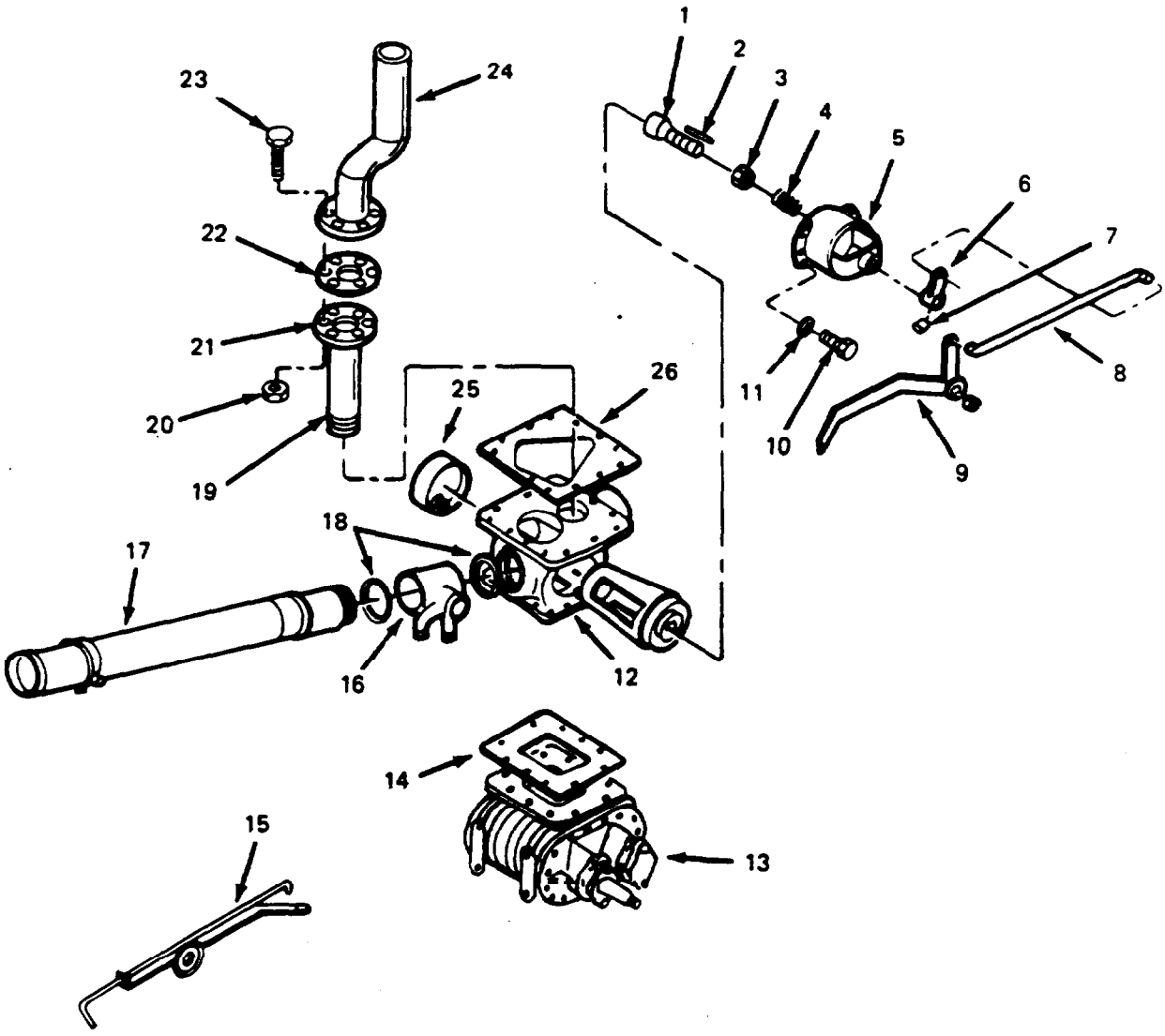
(7) Install lever (6) and tighten set screw and nut (7).

(8) Install rod (8) and cotter pin.

(9) Install filling line (17) with gasket (18) and vacu-flo valve (16).

(10) Install vacu-flo valve linkage (15) and secure with four capscrews.

(11) Install asphalt pump. (See para 3-7.)



LEGEND:

1. STEM
2 KEY
3. NUT
4. SPRING
5. HOUSING
6 LEVER
7. SET SCREW AND NUT
8. ROD
9. LEVER
10. CAPSCREW (6)
11. LOCKWASHER (6)
12. VALVE
13. ASPHALT PUMP
14. GASKET
15. VAC FLOW LINKAGE
16. VAC FLOW VALVE
17. FILLING LINE
18. GASKETS
19. PIPE
20. NUT (6)
21. FLANGED PIPE
22. GASKET
23. CAPSCREW (6)
24. VENT PIPE
25. COVER
26. GASKET

TA 075844

Figure 2-38. *Control Valve Maintenance.*

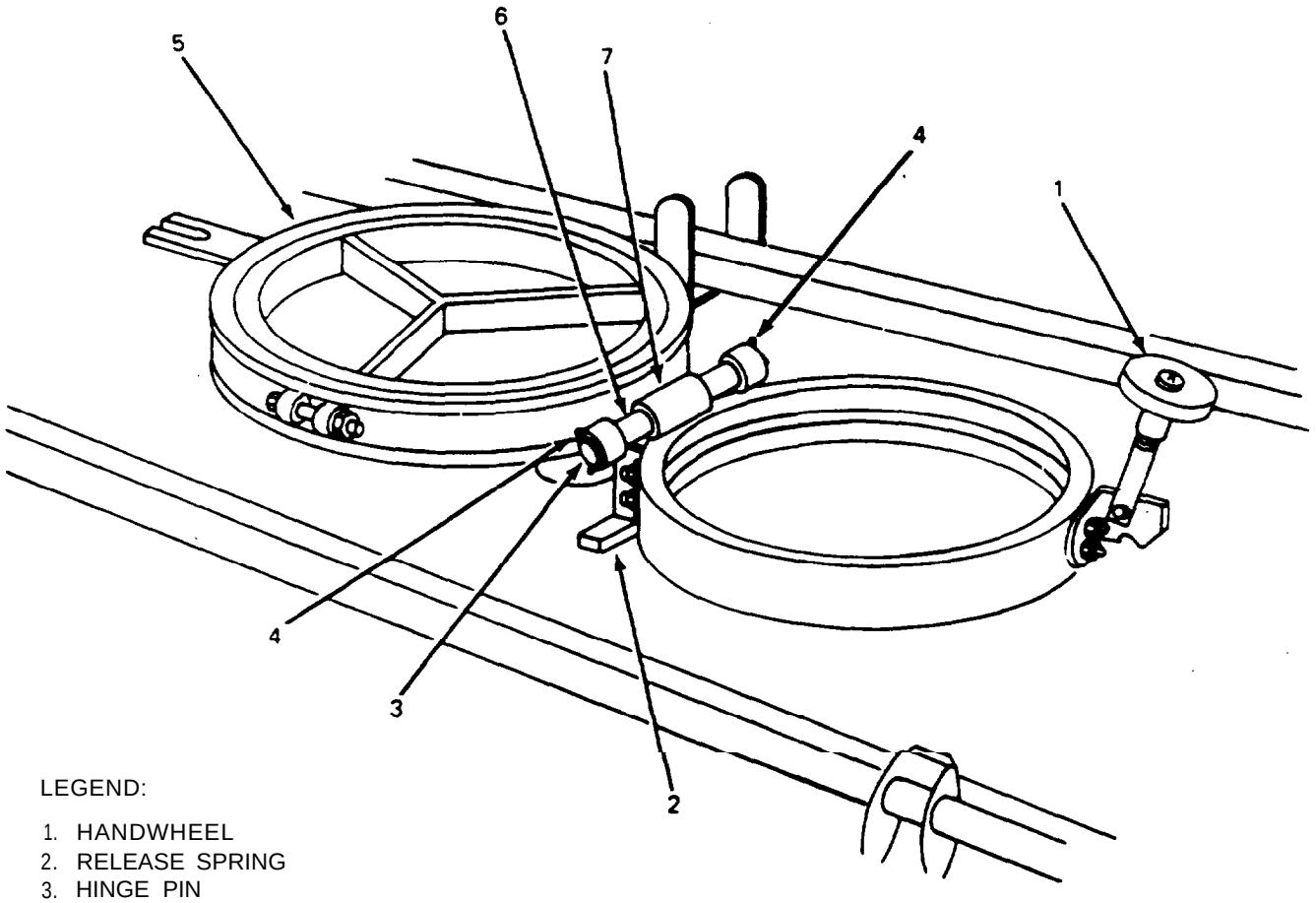
Section XXX. MAINTENANCE OF MANHOLE COVER

2-34. Manhole Cover.

a. Removal. (Refer to fig. 2-39.)

(1) Unscrew handwheel (1) to release manhole cover (5).

(2) Remove cotter pin (4) from hinge pin (3), then drive out hinge pin (3) and remove release spring (2) with sleeve yoke (7); remove manhole cover (5).



LEGEND:

1. HANDWHEEL
2. RELEASE SPRING
3. HINGE PIN
4. COTTER PIN(2)
5. MANHOLE COVER
6. PIN RETAINER
7. SLEEVE YOKE

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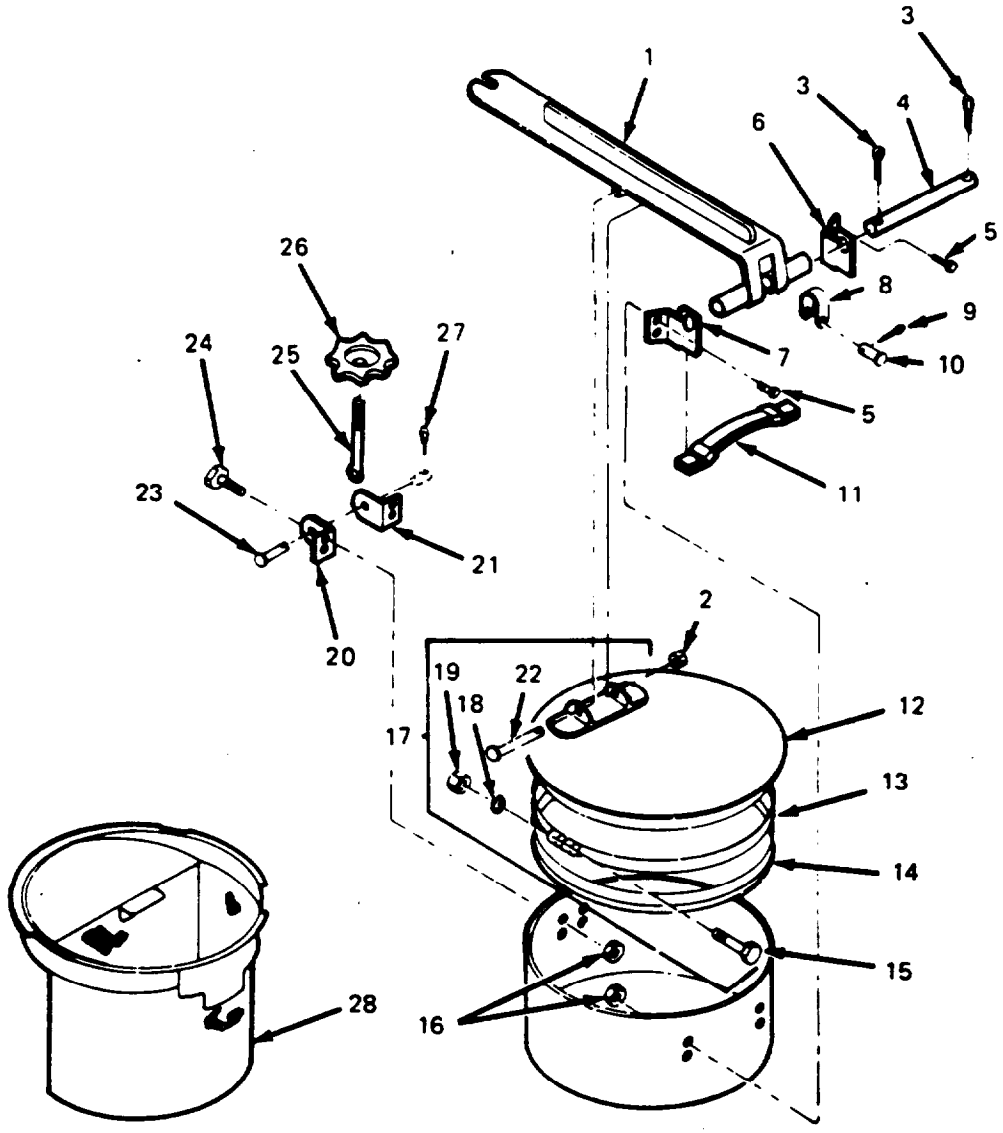
Figure 2-39. ***Remove/Install Manhole Cover.***

A Disassembly. (Refer to fig. 2-40.)

(1) Loosen nut (19), washer (18), and capscrew (15) on ring assembly (13).

(2) Remove gasket (14).



LEGEND:

1. COVER TONGUE
2. NUT
3. COTTER PIN (2)
4. HINGE PIN
5. CAPSCREW (4)
6. LEFT HINGE BRACKET
7. RIGHT HINGE BRACKET
8. SLEEVE YOKE
9. COTTER PIN
10. PIN
11. RELEASE SPRING
12. COVER
13. RING ASSEMBLY
14. GASKET
15. CAPSCREW
16. NUT (4)
17. COVER ASSEMBLY
18. WASHER
19. NUT
20. RIGHT LATCH BEARING
21. LEFT LATCH BEARING
22. BOLT
23. PIN
24. CAPSCREW (4)
25. LATCH BOLT
26. HAND WHEEL
27. COTTER PIN
28. STRAINER

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Figure 2-40. Disassemble/Assemble Manhole Cover.

(3) To remove sleeve yoke (8) from release spring (1 1), remove cotter pin (9) from pin (10) and remove from sleeve yoke (8).

(4) Lift sleeve yoke (8) from release spring (11).

(5) Remove cotter pin (27).

(6) Remove pin (23) to free latch bolt (25).

(7) Unscrew four capscrews (24) and nuts (16); remove right latch bearing (20) and left latch bearing (21).

(8) Remove cover tongue (1) by unscrewing bolt (22) from nut (2). Slide bolt (22) from cover tongue (1).

(9) Lift cover tongue (1) from cover (12).

(10) Remove four capscrews (5) and nuts (16); then remove left hinge bracket (6) and right hinge bracket (7).

(11) Remove strainer (28), inspect for damage; replace if necessary.

c. *Reassembly.* (Refer to fig. 2-40.)

(1) Replace strainer (28).

(2) Install left hinge bracket (6) and right hinge bracket (7); secure with four capscrews (5) and nuts (16).

(3) Replace cover tongue (1) on cover (12); secure with bolt (22) and nut (2).

(4) Install right latch bearing (20) and left latch bearing (21); secure with four capscrews (24) and nuts (16).

(5) Secure latch bolt (25) in position with pin (23).

(6) Replace cotter pin (27) to secure pin (23) in position.

(7) Replace sleeve yoke (8) on release spring (11).

(8) Install pin (10) through sleeve yoke (8).

(9) Secure pin (10) in position with cotter pin (9).

(10) Replace gasket (14) on cover (12).

(11) Secure ring assembly (13) by tightening capscrew (15) and nut (19).

d. Installation. (Refer to fig. 2-40.)

(1) Set manhole cover assembly (17) on the cover opening on top of tank.

(2) Position release spring (11) below the hinge, with sleeve yoke (8) in center of hinge pin (4) as shown.

(3) Install two cotter pins (3).

(4) Secure with handwheel (26).

Section XXXI. MAINTENANCE OF BLOWER ASSEMBLY

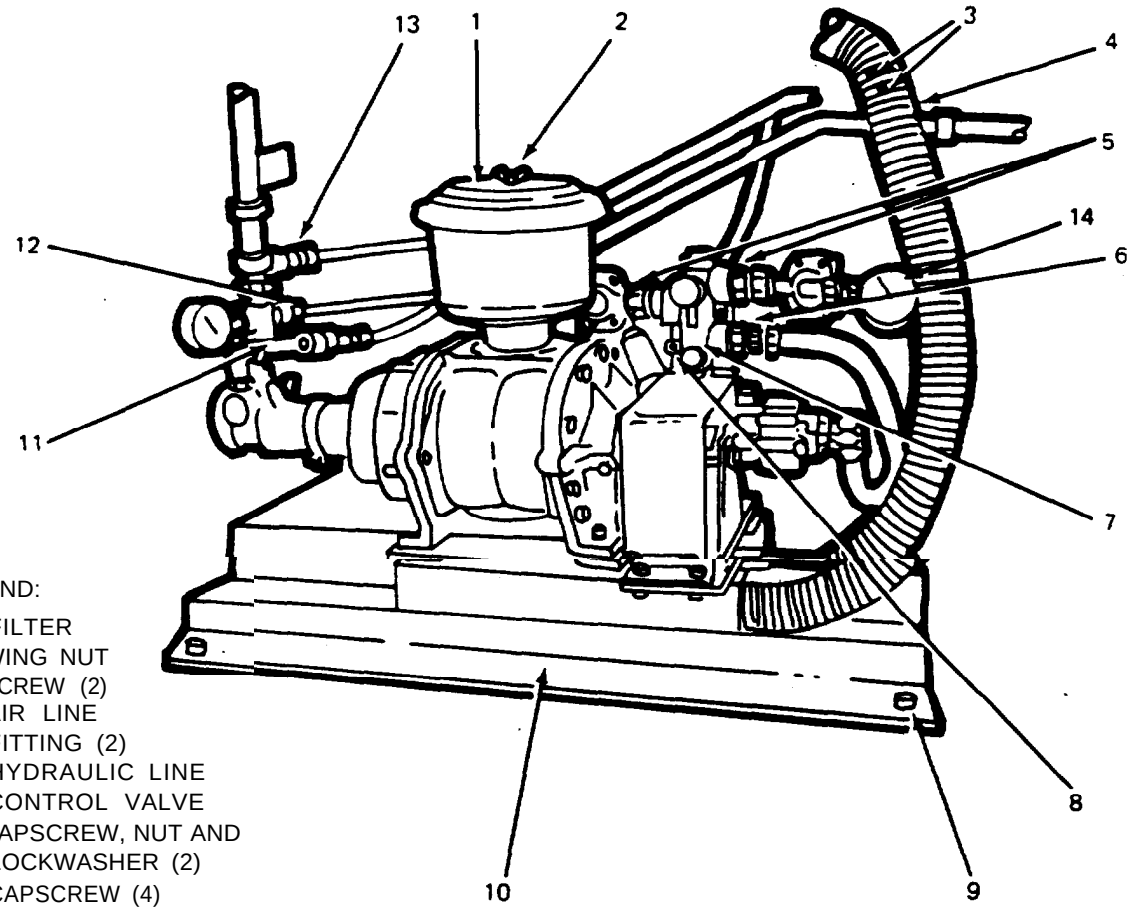
2-35. Blower Assembly.

a. Removal of Blower Assembly. (Refer to fig. 2-41.)

(1) Disconnect two fittings (5) and lines (11), (12) and (13).

(2) Disconnect air line (4) by removing two screws (3).

(3) Remove four capscrews (9) and nuts that fasten, two rails (10) to platform; then lift off complete blower assembly.



LEGEND:

1. FILTER
2. WING NUT
3. SCREW (2)
4. AIR LINE
5. FITTING (2)
6. HYDRAULIC LINE
7. CONTROL VALVE
8. CAPSCREW, NUT AND LOCKWASHER (2)
9. CAPSCREW (4)
10. RAIL (2)
11. FUEL LINE
12. FUEL LINE
13. FUEL LINE
14. PRESSURE GAGE

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Figure 2-41. ***Remove/Install Blower Assembly.***

b. Removal of Blower Motor Control Valve. (Refer to fig. 2-41.)

(1) Loosen fittings (5) to remove from control valve (7) if not previously removed and unscrew pressure gage (14).

(2) Loosen and remove hydraulic line (6).

(3) Remove two capscrews, nuts and lockwashers (8).

(4) Remove control valve (7).

C. *installation of Motor Control Valve. (fig. 2-41.1*

(1) Install new control valve (7) in place.

(2) Secure control valve (7) to bracket with two capscrews, nuts and lockwashers (8).

(3) Install and secure hydraulic line (6) and install pressure gage (14).

(4) Set complete blower assembly onto platform; attach rails (10) with capscrews (9).

(5) Install and secure fittings (5) and fuel lines (11), (12), and (13).

(6) Start motor and test for leaks and for blower operation.

d. Removal of Drive Motor and Fuel Pump. (Refer to fig. 2-42.)

(1) Remove burner blower drive motor (28).

la) Disconnect lines (25) and (26) from motor; then remove two O-rings (27).

(b) Remove two capscrews (24) and locknuts (23) with washers that fasten motor to bracket and remove motor. Loosen setscrew (20) and remove half coupling (30).

(2) Remove air filter (36) by removing win nut (37). Lift out filter element and unscrew the assembly from blower (16).

(3) Remove blower (16) as follows:

(a) Disconnect two lines from fuel pump *(35)* with attached fittings and unscrew pressure gage *(5).*

(b) Remove four capscrews (40), lockwashers (39) and nuts (17) that fasten blower to mounting rails and lift off the blower and fuel pump assembly.

(c) Remove air hose (41) by removing tap screw (43) and washer (42). Remove adapter (44), elbow (45) and bushing (46).

(d) Remove setscrew (31) from coupling (18) and remove coupling (18) with spider (19).

(4) Remove fuel pump (35) as follows:

(a) Drain grease from assembly by removing drain plug, located below blower end cap (15); then reinstall drain plug.

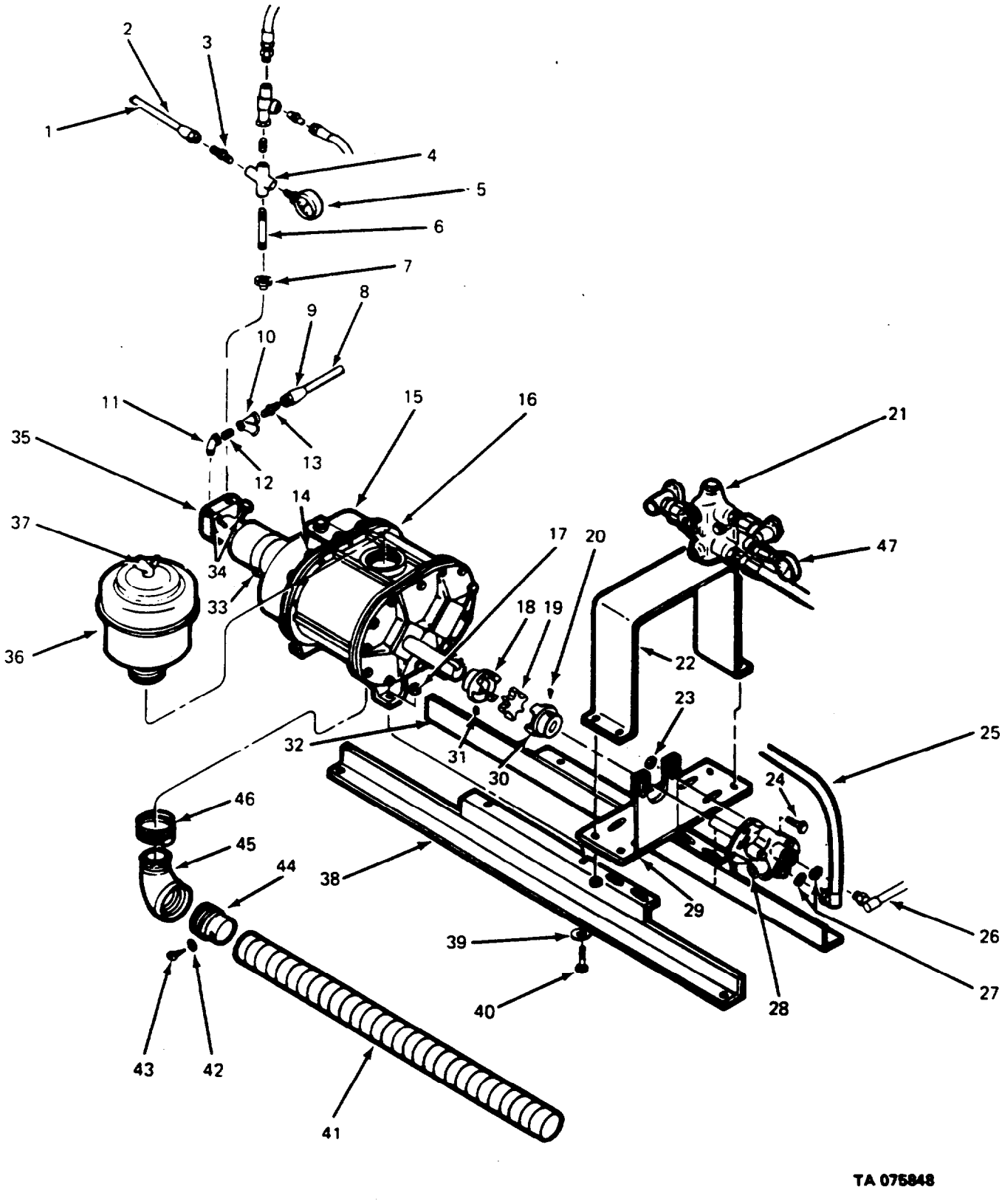

Figure 2-42. *Disassemble/Reassemble Blower Assembly (Sheet 1 of 2).*

LEGEND:

1. TUBE
2. FLARED NUT
3. CONNECTOR
4. CROSS-PIPE
5. PRESSURE GAGE
6. NIPPLE
7. BUSHING
8. TUBE
9. FLARED NUT
10. 'Y' FITTING
11. ELBOW
12. NIPPLE
13. CONNECTOR
14. CAPSCREW (10)
15. BLOWER END CAP
16. BLOWER
17. NUT (4)
18. COUPLING
19. SPIDER
20. SET SCREW
21. CONTROL VALVE
22. BRACKET ASSEMBLY
23. LOCKNUT (2)
24. CAPSCREW (2)
25. LINE
26. LINE
27. O-RING (2)
28. BLOWER DRIVE MOTOR
29. MOUNTING ASSEMBLY
30. HALF COUPLING
31. SET SCREW
32. SUPPORT ASSEMBLY
33. PLUG
34. SETSCREW (2)
35. FUEL PUMP
36. AIR FILTER
37. WING NUT
38. SUPPORT ASSEMBLY
39. LOCKWASHER (4)
40. CAPSCREW (4)
41. AIR HOSE
42. FLAT WASHER
43. TAP SCREW
44. ADAPTER
45. ELBOW
46. BUSHING
47. PRESSURE GAGE

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Figure 2-42. ***Disassemble/Reassemble Blow Assembly (Sheet 2 of 2).***

(b) Remove ten capscrews (14) that fasten blower end cap (15) to blower housing and remove the end cap with attached fuel pump (35) and gasket.

(c) Loosen two setscrews (34) and tap fuel pump (35) out approximately one fourth inch.

(d) Remove plug (refer to fig. 2-43) and locate an Allen head setscrew through hole for plug; then loosen the setscrew. It may be necessary to rotate fuel pump (35, fig. 2-42) for access to setscrew.

(e) Tap pump shaft out of collar from inside end cap. (Refer to fig. 2-43.) Remove drive key and remove pump assembly.

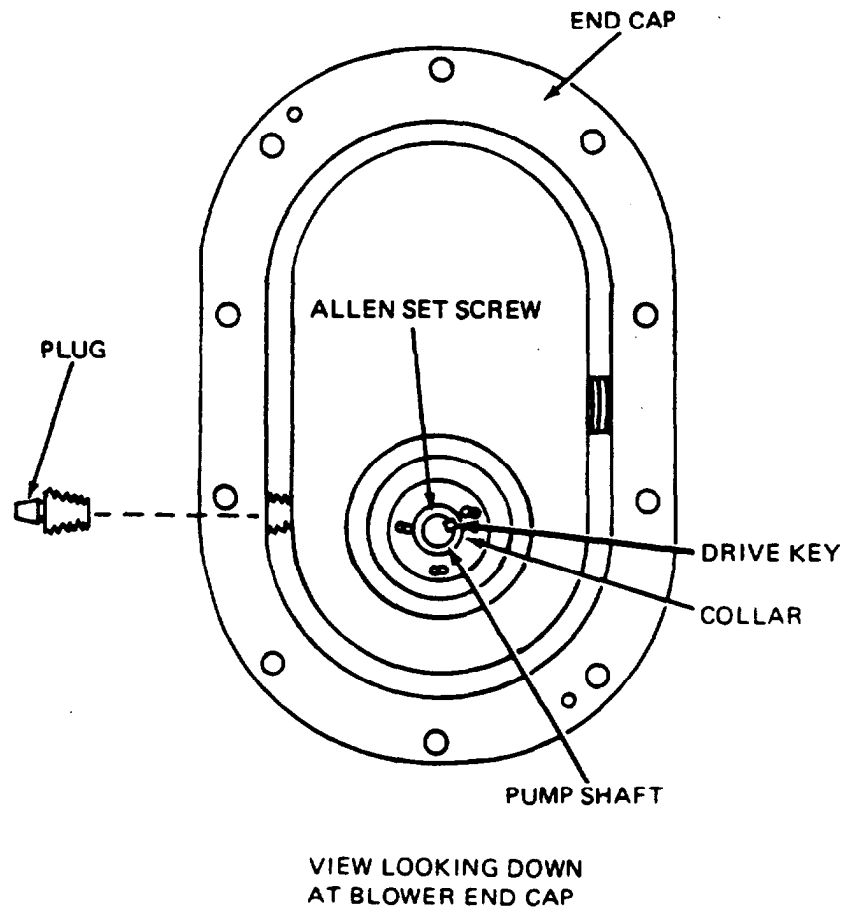


Figure 2-43. ***Remove/Install Fuel Pump From Blower End Cap.***

e. *Repair of Fuel Pump.* (Refer to fig. 2-44.)

(1) Remove six capscrews (15) from end head (14) and remove head assembly,

(2) Remove idler gear (11) from pin (13) on head (14).

(3) Remove gaskets (12) from casting (8).

(4) Pull out idler gear (11) and shaft assembly (10) from casting (8).

(5) Remove packing glands (4) and (6), packings (5) and spring (7) from casting (8).

(6) Press out bushings (9) from casting (8).

f. *Reassembly of Fuel Pump.* (Refer to fig. 2-44.)

(1) Press in two pre-fit bushings (9) into pump casting (8).

(2) Install idler gear (11) and shaft assembly (10) into bushings (9).

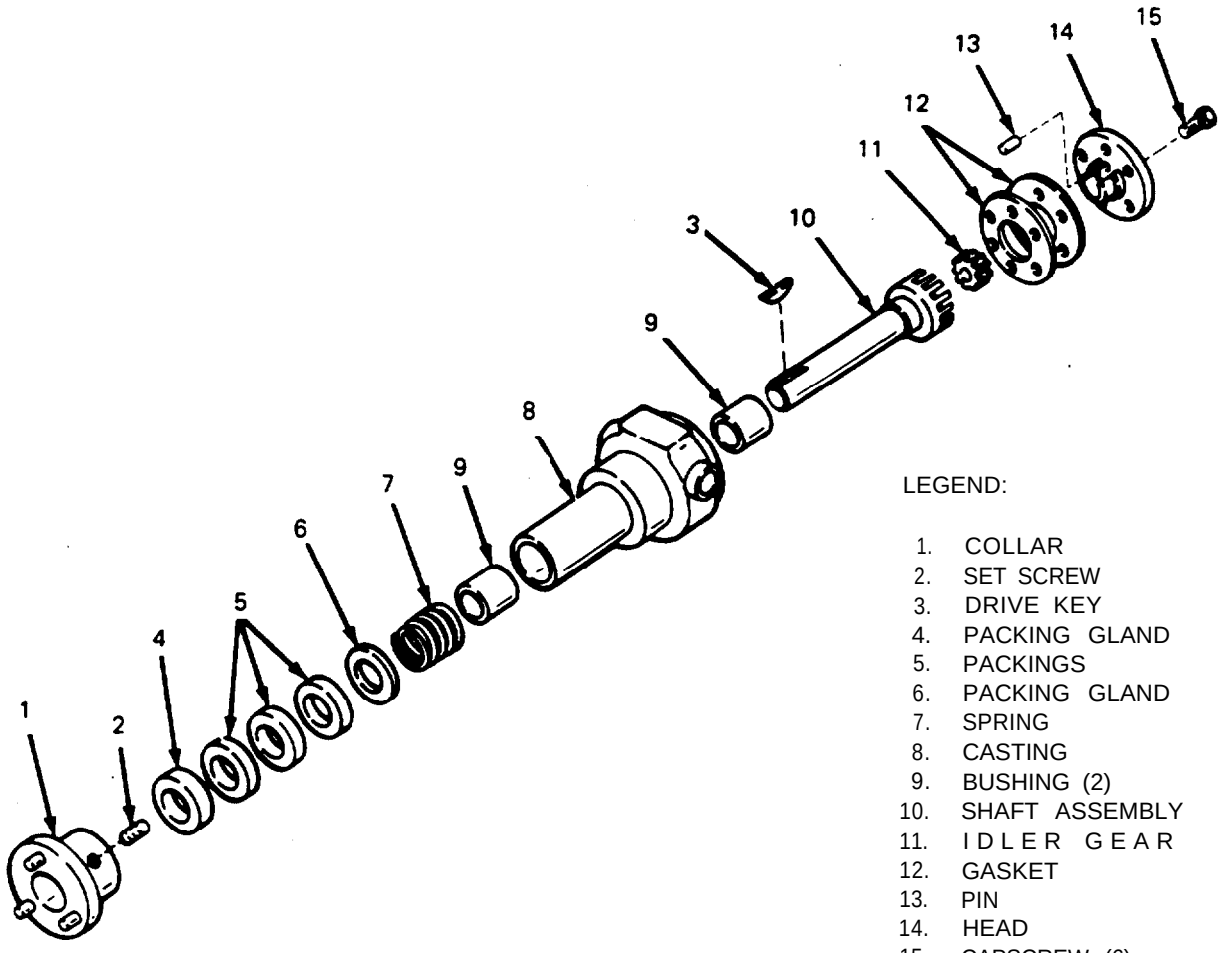
(3) Install spring (7), packing gland (6), packings (5) and packing gland (4) on shaft assembly (10) and push into place.

(4) Install gaskets (12) onto head (14) and idler gear (11) on head pin (13).

(5) Install head (14) and secure with six capscrews (15).

(6) There should be no end play in the shah assembly (10) and very little to no drag on shaft while turning by hand.

(7) If shaft binds add one more gasket (12) until the binding is eliminated with no end play.



LEGEND:

1. COLLAR
2. SET SCREW
3. DRIVE KEY
4. PACKING GLAND
5. PACKINGS
6. PACKING GLAND
7. SPRING
8. CASTING
9. BUSHING (2)
10. SHAFT ASSEMBLY
11. IDLER GEAR
12. GASKET
13. PIN
14. HEAD
15. CAPSCREW (6)

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Figure 2-44. ***Fuel Pump.***

9. *Disassembly of Burner Blower Drive Motor.*

(1) Separate motor case halves (fig. 2-45) by removing four Allen head capscrews.

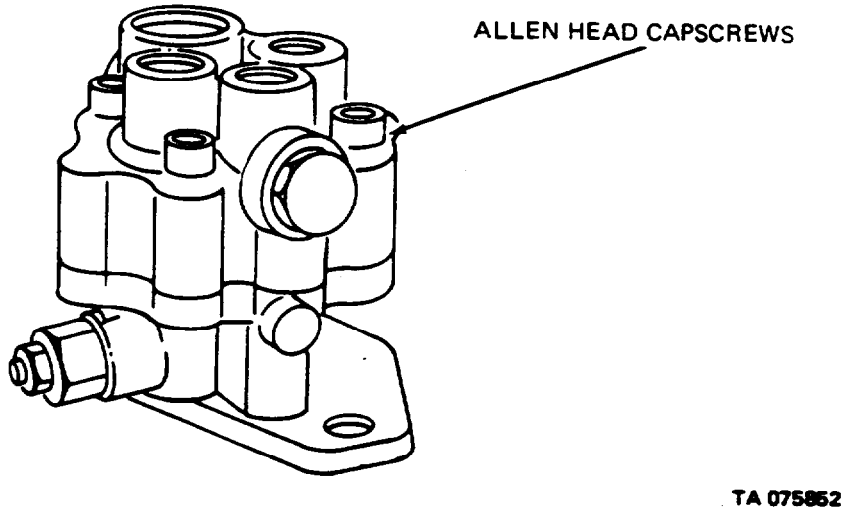


Figure 2-45. ***Remove/install Case Halves.***

(2) From top case half (fig. 2-46), remove O-ring, seal and tab.

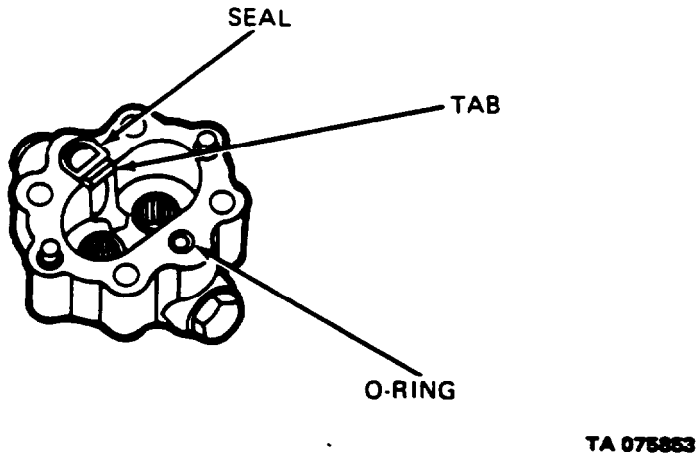


Figure 2-46. ***Remove/Install Top Case Tab, seal, and O-ring.***

(3) Remove the two needle bearings (fig. 2-47) in the top case with a suitable puller or press, only if the bearings need replacing.

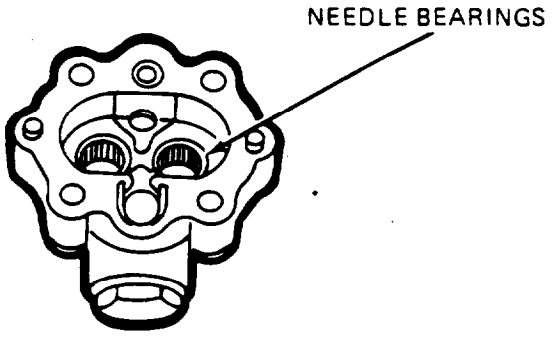


Figure 2-47. ***Remove/Install Top Case Bearings.***

(4) Remove two pump gears (fig. 2-48) from the lower case half.

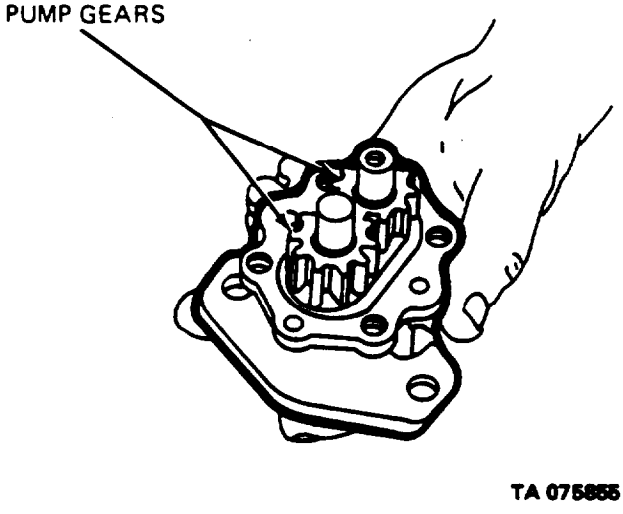


Figure 2-48. ***Remove/Install Pump Gears.***

(5) Remove plate and seal (fig. 2-49) from the lower case half.

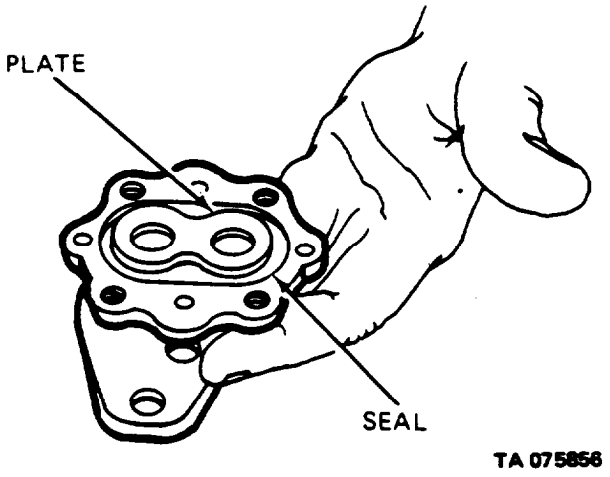


Figure 2-49. ***Remove/Install Lower Case Plate and Seal.***

(6) Remove tab (fig. 2-50).

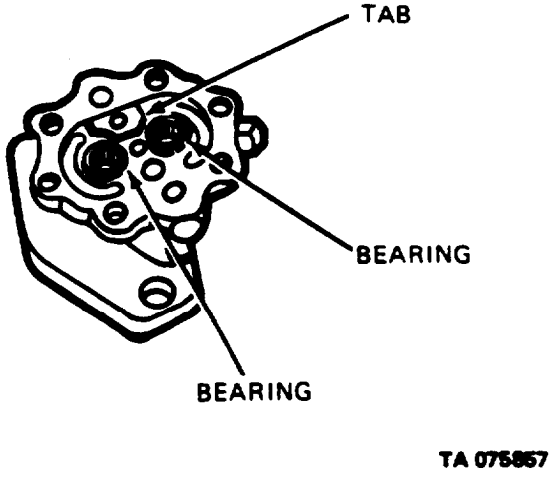


Figure 2-50. ***Remove/Install Lower Case Tab and Bearings.***

(7) Remove the two bearings in the lower case with a suitable puller or press, only if the bearings need replacing.

(8) Remove relief valve (fig. 2-51).

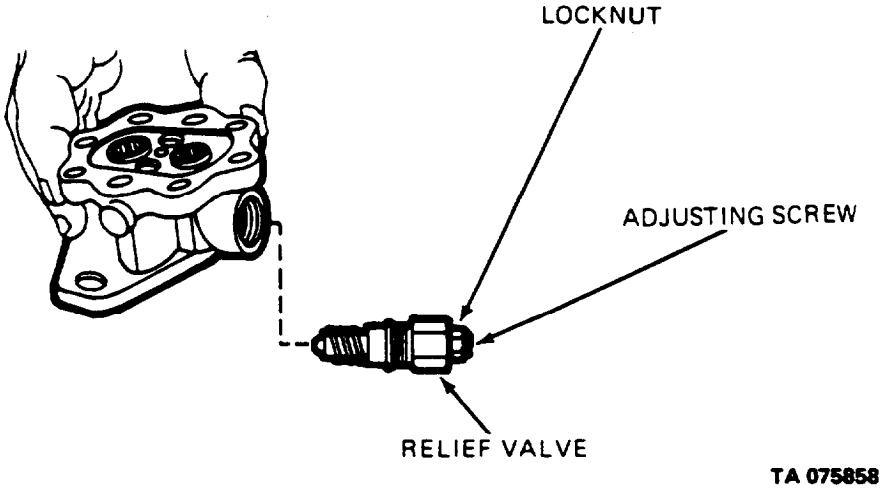


Figure 2-51. ***Remove/Install Relief Valve.***

(9) Remove retainer clip and seal (fig. 2-52) from bottom of lower case.

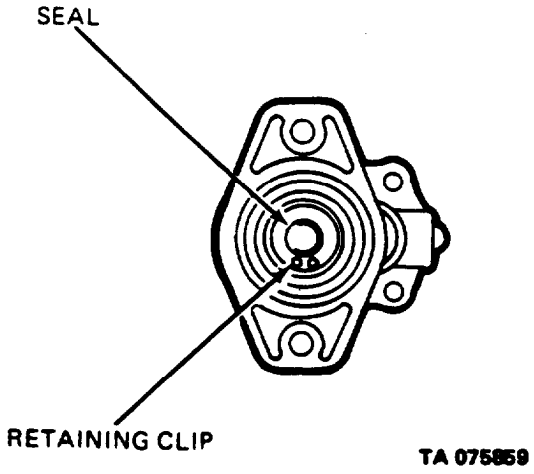


Figure 2-52. ***Remove/Install Lower Case Seal.***

h. Cleaning and Inspection of Burner Blower Drive Motor.

(1) Clean all parts in dry cleaning solution.

(2) Inspect needle bearings. Replace bearings if scored.

(3) Inspect motor gears and plate (fig. 2-48 and 2-49). Replace motor if these parts are gouged or otherwise defective.

i. Reassembly of Burner Blower Drive Motor.

(1) Install new seal (fig. 2-52) in lower case and secure with retainer clip.

(2) Install relief valve (fig. 2-51). If the same valve is being reinstalled, do not change setting.

(3) Install bearings (fig. 2-50) into lower case half. Install tab, as shown in illustration.

(4) Install new seal (fig. 2-49) and install plate, as shown in illustration.

(5) Install two pump gears (fig. 2-48).

(6) Install needle bearings in top case half (fig. 2-47).

(7) Install O-ring (fig. 2-46), tab, and seal.

(8) Mate the motor case halves (fig. 2-45) and secure the four Allen head screws.

(9) Test pump relief valve setting as follows:

(a) Reinstall motor. (Refer to para 2-35.)

(b) Start motor, engage PTO and hydraulic pump control.

(c) Apply 2600 psi pressure to motor inlet port and observe that relief valve cracks at 2250 psi ± 250.

(d) If adjustment to relief valve (fig. 2-51) is necessary, loosen locknut and turn adjusting screw.

j. *Installation of Fuel Pump and Blower.* (Refer to fig. 2-42.)

(1) Install fuel pump (35) as follows:

(a) Position pump shaft in blower end cap as shown in figure 2-43, install drive key; then drive collar on flush with shaft end.

(b) Tighten setscrew through access hole for plug; then install plug.

(c) Drive the pump in from outside end cap until pump is fully seated.

(d) Tighten two setscrews (34, fig. 2-42).

(e) Mount blower end cap (15) and gasket on blower housing and secure with ten one fourth inch capscrews (14).

(f) Install grease (8 oz. No. 30 engine oil).

(2) Install blower (16) as follows:

(a) Mount coupling (18) on blower shaft and secure with setscrew (31); install spider (10).

(b) Install bushing (46), elbow (45), adapter (44), and air hose (41) and secure with tap screw (43) and flat washer (42).

(c) Mount blower on support assembly (38) and secure with four capscrews (40), lockwashers (39), and nuts (17).

(d) Connect two lines with attached fittings and gage to fuel pump (35).

(3) Screw air filter (36) into blower. Install filter element into blower base and secure with wing nut (37).

(4) Install blower drive motor (28) as follows:

(a) Insert motor shaft into half coupling (30).

(b) Mate half coupling (30) to spider (19).

(c) Install two capscrews (24) and locknuts (23) that fasten motor to bracket and secure. Slide half coupling (30) forward until half coupling is fully seated with spider (19) and tighten setscrew (20).

(d) Install two O-rings (27) and connect lines (25) and (26) to motor.

k. Installation of Blower Assembly. (Refer to fig. 2-41.)

Mount rails (10) with assembled blower on platform and secure with four capscrews (9) and nuts.

(2) Connect air line (4) and secure with two screws (3).

(3) Connect fitting (5), and lines (6), (11), (12), and (13); then install pressure gage (47, fig 2-42).

Section XXXII. MAINTENANCE OF PORTABLE BURNER

2-36. Portable Burner.

a. Removal. (Refer to fig. 2-53.) The portable burner is contained in a canister on the vehicle right rear frame rail. To remove it, simply lift it out.

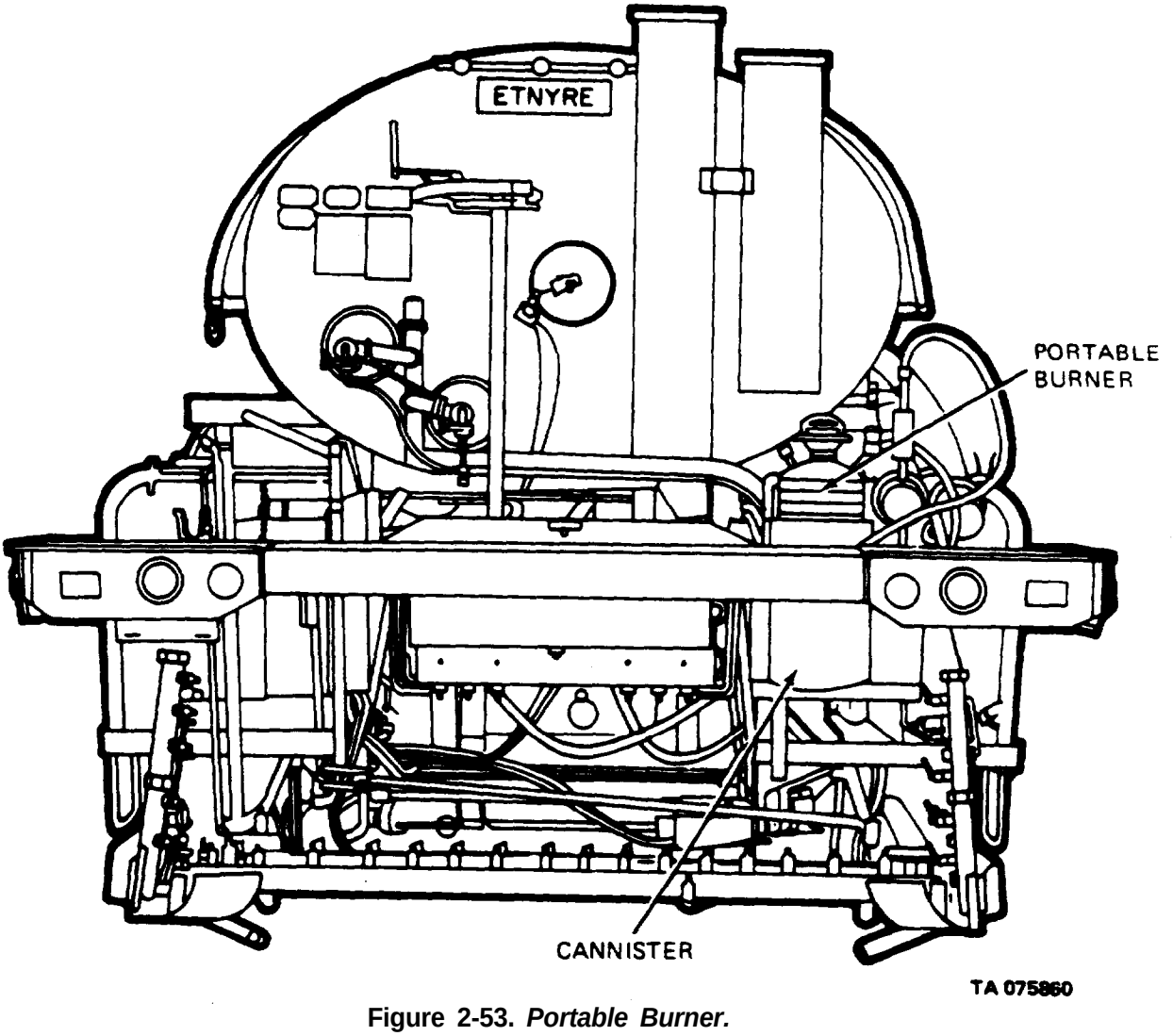


Figure 2-53. ***Portable Burner.***

b. Disassembly. (Refer to fig. 2-54.)

(1) Unscrew burner hose (24) from valve (28).

(2) Remove valve (28) from shaft of coil (7) and handgrip (29).

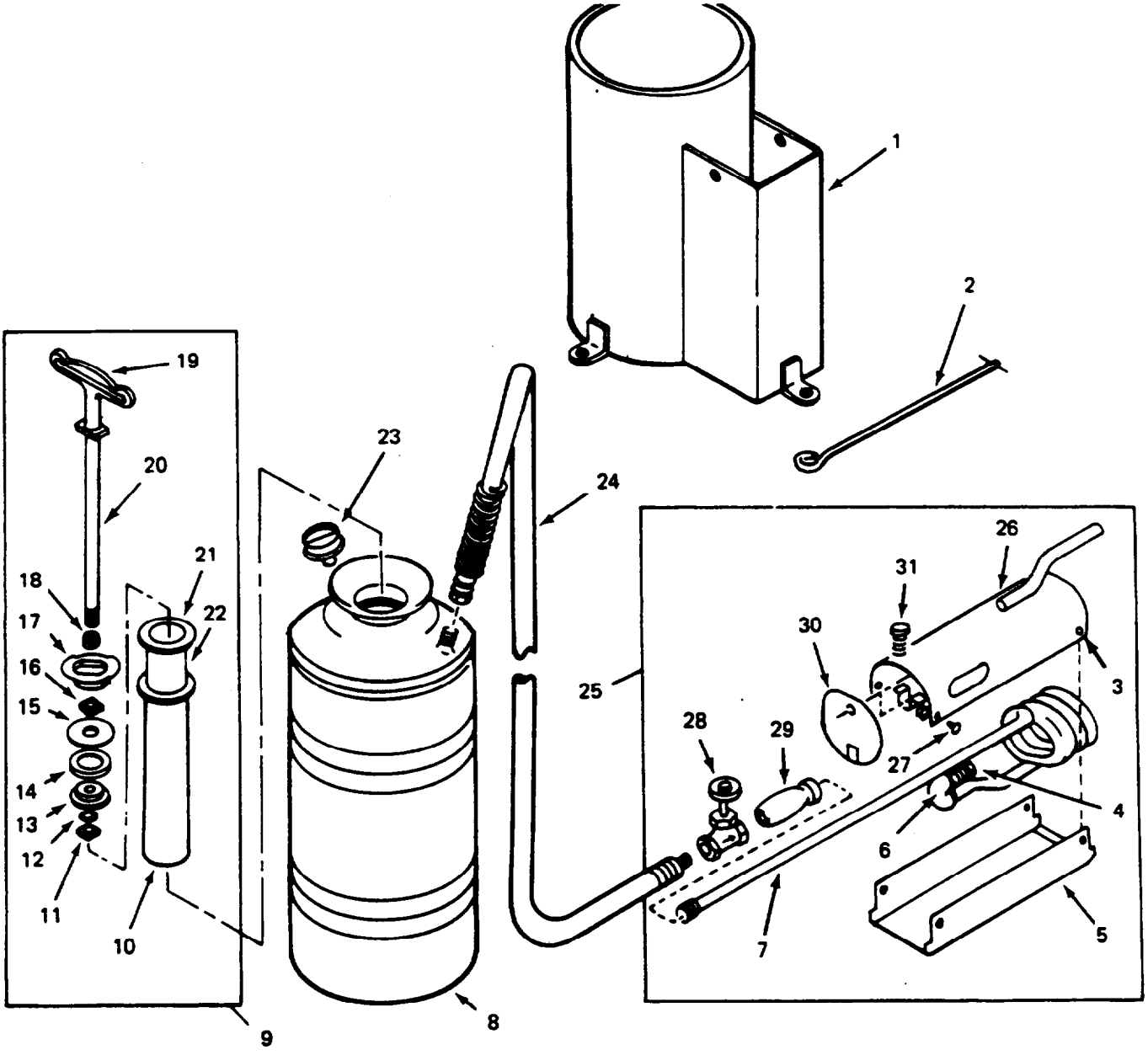
(3) Remove two machine screws and nuts (27); then lower pan (5).

(4) Remove sheetmetal screw (31) from slip inside shell (26) and remove the coil (7) and plate (30).

(5) Remove nozzle (4) from plug holder (6).

(6) Remove air pump (9) from tank by using a twisting motion.

(7) Remove gasket (22).



LEGEND:

1. BURNER CARRIER ASSEMBLY
2. NEEDLE
3. RIVET
4. NOZZLE
5. PAN
6. PLUG HOLDER
7. COIL
8. PORTABLE BURNER
9. AIR PUMP
10. VALVE
11. LOWER NUT
12. WASHER
13. WASHER
14. WASHER
15. WASHER
16. UPPER NUT
17. CAP
18. SPRING
19. HANDLE
20. ROD
21. BARREL
22. GASKET
23. PRESSURE GAGE
24. BURNER HOSE
25. PORTABLE BURNER ASSEMBLY
26. SHELL
27. MACHINE SCREW AND NUT (2)
28. VALVE
29. HANDGRIP
30. PLATE
31. SHEET METAL SCREW (2)

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Figure 2-54. ***Disassemble/Reassemble Portable Burner.***

(8) Remove rod (20) from barrel (21).

(9) Remove lower nut (11); then pull off washers (12), (13), (14), and (15).

(10) Remove upper nut (16); then pull off cap (17) and spring (18).

(11) Unscrew handle (19) from rod (20).

(12) Remove pressure gage (23) from portable burner (8).

c. *Reassembly.* (Refer to fig. 2-54.)

(1) Install pressure gage (23) in portable burner (8).

(2) Attach handle (19) to rod (20).

(3) Install spring (18) and cap (17) on rod (20). Secure with upper nut (16).

(4) Install washers (15), (14), (13), and (12). Secure with lower nut (11).

(5) Install assembled rod (20) in barrel (21).

(6) Install gasket (22).

(7) Insert complete air pump assembly into tank and use a twisting motion to fully set it.

(8) Install nozzle (4) into plug holder (6).

(9) Install coil (7) in shell (26) and secure with sheetmetal screws (31).

(10) Close pan (5) and secure to shell (26) with two machine screws and nuts (27).

(17) Connect shaft of coil (7) through hand grip (29) to valve (28).

(12) Connect burner hose (24) to valve (28).

d. Installation. (Refer to fig. 2-53.) Install portable burner in canister.

Section XXXIII. MAINTENANCE OF SPRAY BAR DISTRIBUTING LINES

2-37. Spray Bar Distributing Lines.

a. *Disassembly.* (Refer to fig. 2-55.)

NOTE

Following are procedures for disassembly and re-agembly of the left side distributing lines and components. The right side is similar and no additional detailed procedures are necessary.

CAUTION

Hinge section ball joints are spring loaded.

(1) Apply pressure on line (30) to contain spring (29); then remove nut (25), copper gasket (26), rubber gasket (27), ball (28), and spring (29).

(2) Remove line (30) and gasket (32) by disconnecting lock nut (31).

(3) Disconnect ball joint (37) from drop pipe (40) by removing lock nut (39) and removing gasket (38).

(4) Disconnect coupling (33) from transfer valve by unscrewing pipe thread; then remove gasket (34), unscrew nipple (36) and ball joints (35) and (37).

(5) Remove drop pipe (40) by disconnecting it from intake valve, nuts (42 and 41).

(6) Pry drain valve (24) free from cross shaft (23).

(7) Disconnect drain valve (24) from drop pipe (40).

b. Reassembly.

(1) Connect drain valve (24) to drop pipe (40).

(2) Connect drain valve (24) to cross shaft (23).

(3) Connect drop pipe (40) to intake valve with nuts (42 and 41).

(4) Assemble ball joints (35 and 37) with nipple (36).

(5) Mate gasket (34) to ball joint (35) nearest the transfer valve; then connect ball joint (35) to transfer valve with coupling (33).

(6) Connect ball joint (37) with gasket (38) to drop pipe (40) by tightening locknut (39).

(7) Connect line (30) with gasket (32) to transfer valve by tightening locknut (31).

(8) Insert spring (29) and ball (28) into hinge section; then set rubber gasket (27) and copper gasket (26) in assembly position. Apply pressure to line (30) to compress spring (29); then install nut (25).

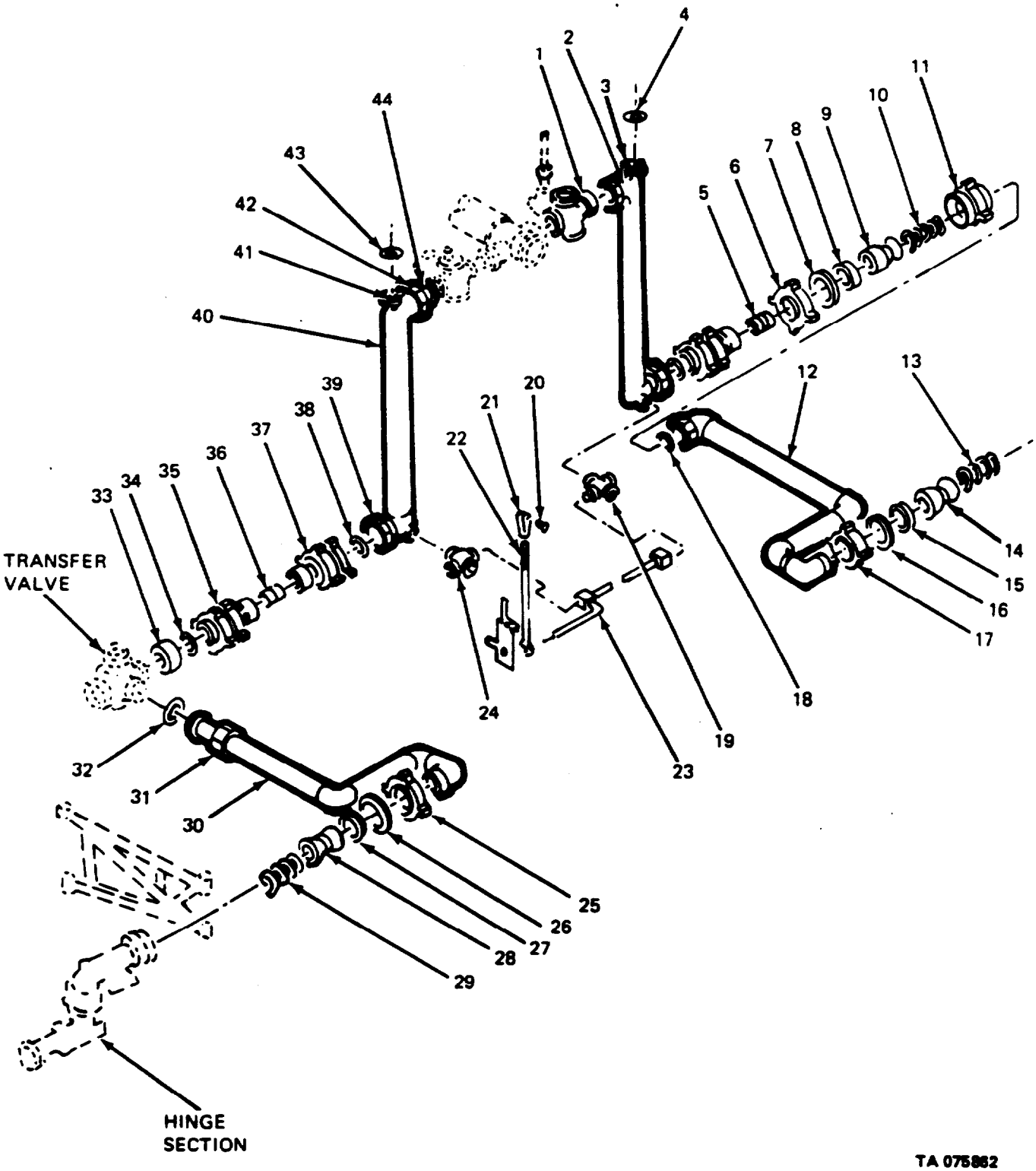

Figure 2-55. *Remove/Install Spray Bar Distributing Lines and Component Parts (Sheet 1 of 2).*

LEGEND:

1. GASKET
2. DROP PIPE
3. DROP PIPE
4. GASKET
5. NIPPLE
6. NUT
7. COPPER GASKET
8. RUBBER GASKET
9. BALL
10. SPRING
11. BALL JOINT
12. LINE
13. SPRING
14. BALL
15. RUBBER GASKET
16. COPPER GASKET
17. NUT
18. GASKET
19. DRAIN VALVE
20. CLEWS PIN
21. CLEVIS
22. CONNECTING LINK
23. CROSS SHAFT
24. DRAIN VALVE
25. NUT
26. COPPER GASKET
27. RUBBER GASKET
28. BALL
29. SPRING
30. LINE
31. LOCKNUT
32. GASKET
33. COUPLING
34. GASKET
35. BALL JOINT
36. NIPPLE
37. BALL JOINT,
38. GASKET
39. LOCKNUT
40. DROP PIPE
41. NUT
42. NUT
43. GASKET
44. GASKET

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Figure 2-55. ***Remove/Install Spray Bar Distributing Lines and Component Parts (Sheet 2 of 2).***

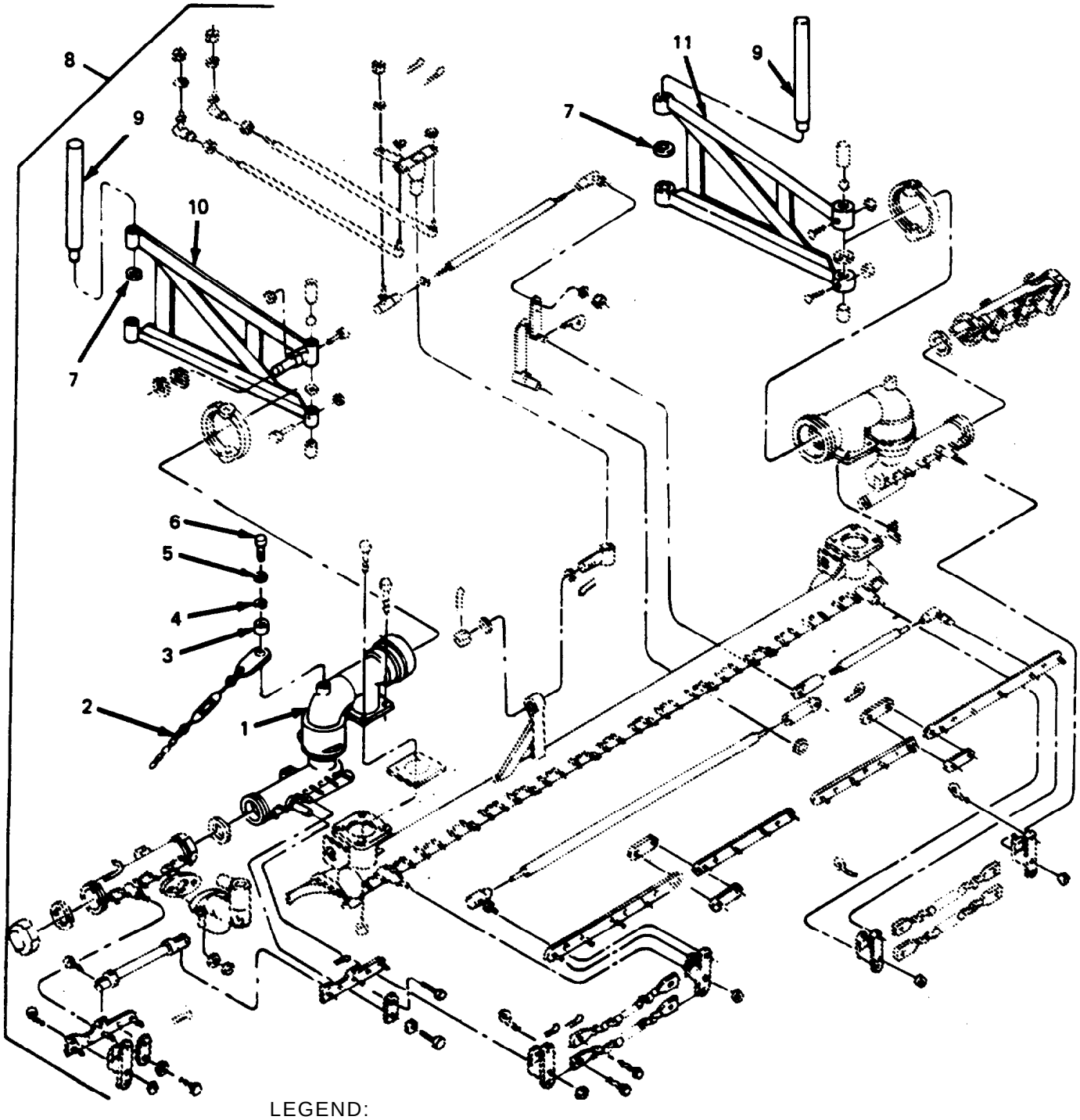
Section XXXIV. MAINTENANCE OF SPRAY BAR

2-38. Spray Bar.

NOTE

Following are procedures for disassembly and reassembly of the spray bar and component parts on the left side of the spray bar. The right side is similar and no additional procedures are necessary.

a. *Disassembly.* (Refer to 2-56.)



LEGEND:

1. LEFT HINGE SECTION
2. CHAIN
3. SLEEVE
4. WASHER
5. LOCKWASHER
6. CAPSCREW
7. THRUST WASHER
8. SPRAY BAR ASSEMBLY
9. PIN
10. LEFT CARRY ARM ASSEMBLY
11. RIGHT CARRY ARM ASSEMBLY

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Figure 2-56. ***Remove/Install Spray Bar Lines and Component Parts.***

(1) Remove left carry arm assembly (10) and left hinge section (1) as follows:

(a) Disconnect chain (2) from left hinge section (1) by removing capscrew (6), sleeve (3), washer (4), and lockwasher (5).

(6) Disconnect adjusting link (4, fig. 2-57) by removing cotter pin and clevis pin (7).

(c) Disconnect two chains (1) by removing a cotter pin and clevis pin (2) from each.

(d) Disconnect spring link (11) by removing cotter pin and clevis pin (12).

(e) Remove three nuts (13) and lockwashers that fasten the two halves of hinge section (10) together; then remove the lower half with spacer ring (5) and packing (6).

(f) Disconnect pipe nut (9) that fastens end tube assembly (8) to hinge section (10) and remove the end tube assembly (8).

(g) Support spray bar with floor jack.

(h) Remove four capscrews (17) and flange gasket (18).

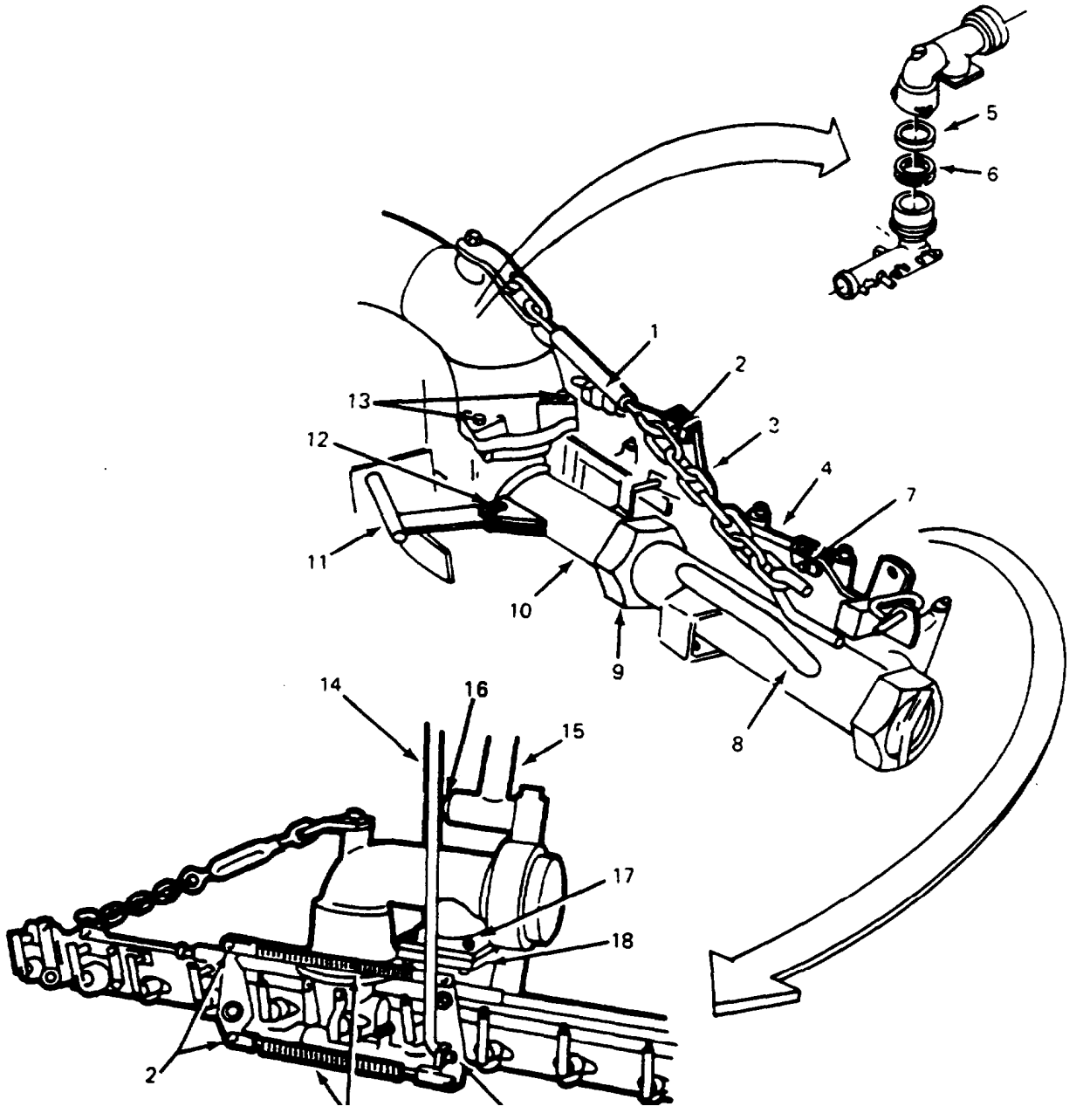
(i) Disconnect line (30, fig. 2-55) from transfer valve by removing locknut (31). Remove gasket (32).

(i) Remove hand lift lever (14, fig. 2-57) by removing cotter pin (19).

(k) Remove snap ring (16); then take off arm (15).

(l) Remove two cotter pins from swivel pin (9, fig. 2-56); then drive out pin (9) and remove thrust washer (7).

(m) Remove left carry arm assembly (10) with attached tubing and place in suitable vise.



LEGEND:

1. CHAIN (2)
2. CLEVIS PIN (2)
3. CHAIN
4. ADJUSTING LINK
5. SPACER RING
6. PACKING
7. CLEVIS PIN
8. END TUBE ASSEMBLY
9. PIPE NUT
10. HINGE SECTION
11. SPRING LINK
12. CLEVIS PIN
13. NUT (3)
14. HAND LIFT LEVER
15. ARM
16. SNAP RING
17. CAPSCREW (4)
18. FLANGE GASKET
19. COTTER PIN

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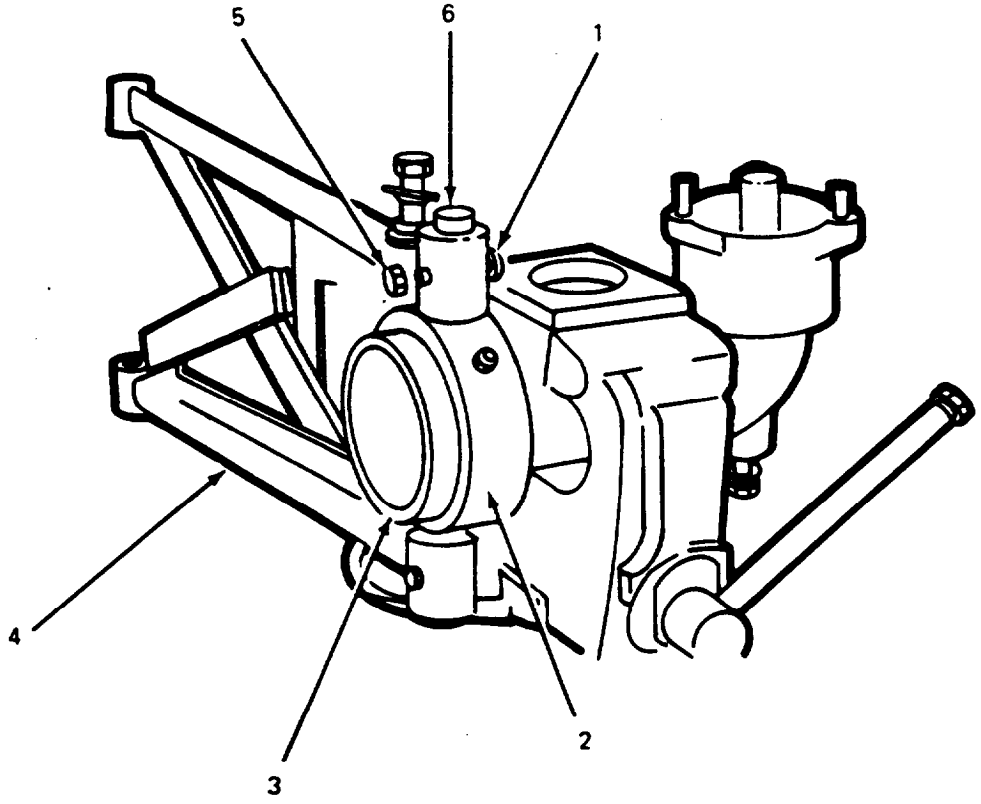
Figure 2-57. ***Remove/Install End Tube Assembly.***

(2) Replace ball bearings in carry arm assembly (4, fig. 2-58) as follows:

(a) Remove hex nut (5), screw (1), and pin (6).



LEGEND:

1. SCREW
2. OUTER BEARING RACE
3. INNER BEARING RACE
4. CARRY ARM ASSEMBLY
5. HEX NUT
6. PIN

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Figure 2-58. ***Remove/Install Bearing Balls.***

CAUTION

Be careful not to lose any bearing balls in the next step. There are 38 of them.

(b) Turn carry arm assembly (4) upside down, turn inner bearing race (3); then shake the assembly. Bearing balls will fall out.

(c) Rotate inner bearing race (3) and allow 38 balls to drop out and remove bearing race.

(d) Inspect all bearing balls and inner bearing race (3) for pitted condition, gouges, or other defects. Replace if defective.

(e) Install inner bearing race (3).

(f) Drop one ball at a time through hole for pin (6). After ball is dropped in, use small screwdriver or similar tool to force the ball down so that the next one can be dropped in until 38 balls are installed.

(g) Install pin (6) and secure with screw (1) and hex nut (5).

(3) Remove flip valves (fig. 2-59) as follows:

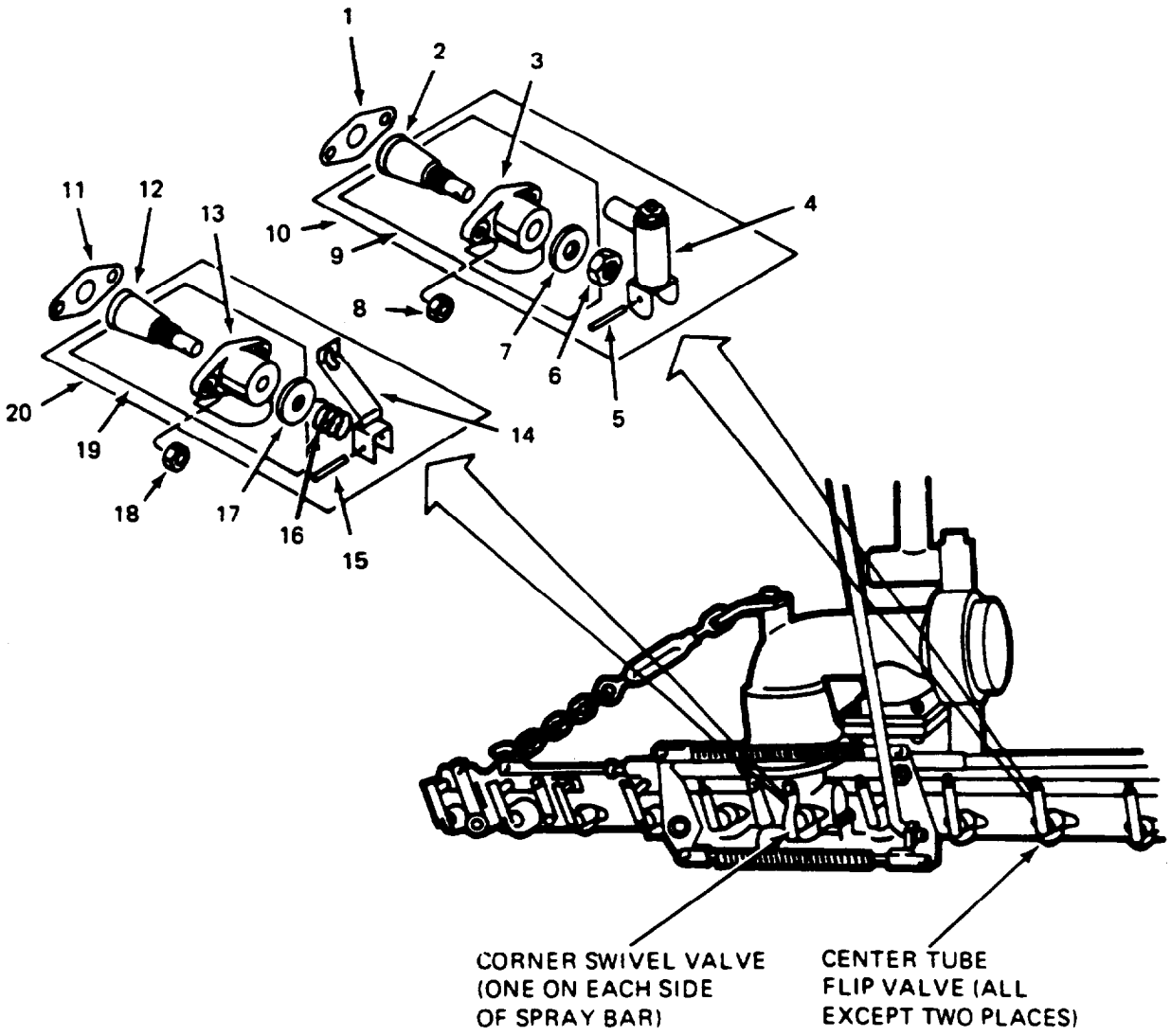
NOTE

The flip valve plug is lapped into the valve housing. Therefore, the flip valves are a non-serviceable item and must be replaced as an assembly.

(a) Remove two nuts (8) and lockwashers; remove valve assembly (9).

(b) Remove gasket (1).

(c) Remove pin (5) and lever (4) from valve assembly (9). (On valves located adjacent to end section swivel points, remove pin (15), washer (17), spring (16) and lever (14).



LEGEND:

1. GASKET
2. PLUG, VALVE
3. VALVE BODY
4. LEVER
5. PIN
6. NUT
7. WASHER
8. NUT (2)
9. VALVE ASSEMBLY
10. FLIP VALVE ASSEMBLY
11. GASKET
12. PLUG,VALVE
13. VALVE BODY
14. LEVER
15. PIN
16. SPRING
17. WASHER
18. NUT (2)
19. VALVE ASSEMBLY
20. VALVE ASSEMBLY

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Figure 2-59. ***Remove/Install Flip Valves.***

(4) Remove spray bar as follows:

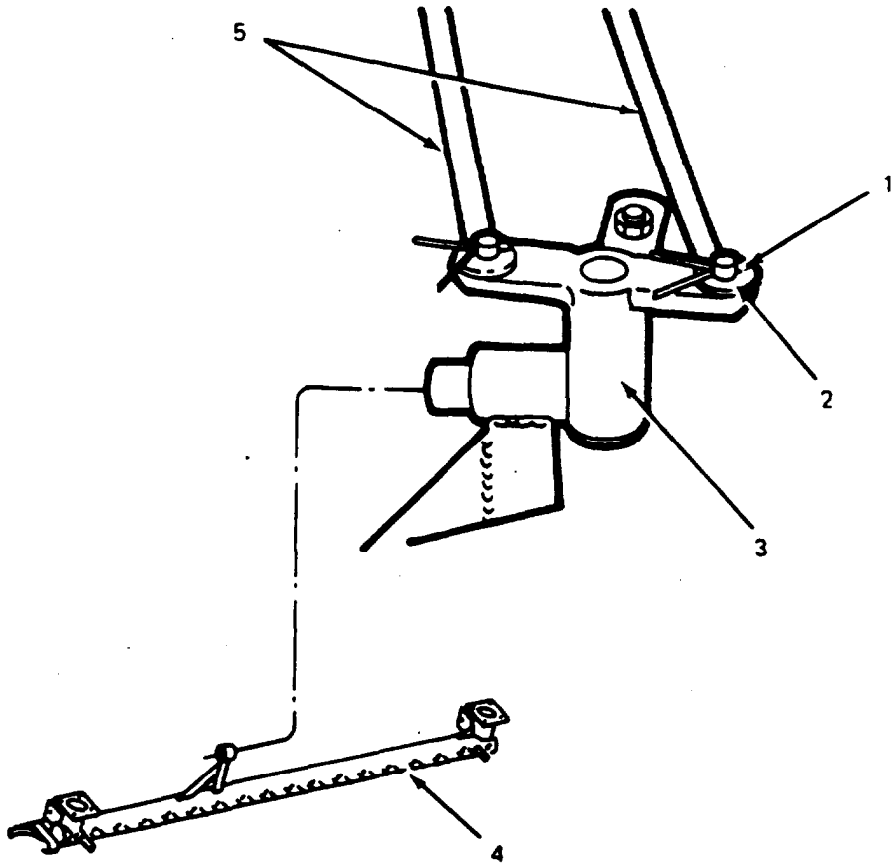
(a) Repeat steps (a) thru (g) for right side of spray bar. (Refer to para 2-38a (1).)

(b) Disconnect line (12, fig. 2-55) from ball joint (11) and remove gasket (18).

Remove two cotter pins (1, fig. 2-60) and two flat washers (2); then disconnect connecting rods%) from swivel toggle assembly (3).

(d) Remove two cotter pins from swivel pin (9, fig. 2-56) then drive out pin (9) and remove thrust washer (7).

(e) Remove carry arm assembly (10).



LEGEND:

1. COTTER PIN (2)
2. WASHER (2)
3. SWIVEL TOGGLE ASSEMBLY
4. SPRAY BAR
5. CONNECTING ROD (2)

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Figure 2-60. ***Disconnect/Connect Swivel Toggle Rods.***

(f) Remove spray bar (4, fig. 2-60) by lowering the floor jack.

(5) Remove spray nozzles by using special wrench (fig. 2-61) from tool box.

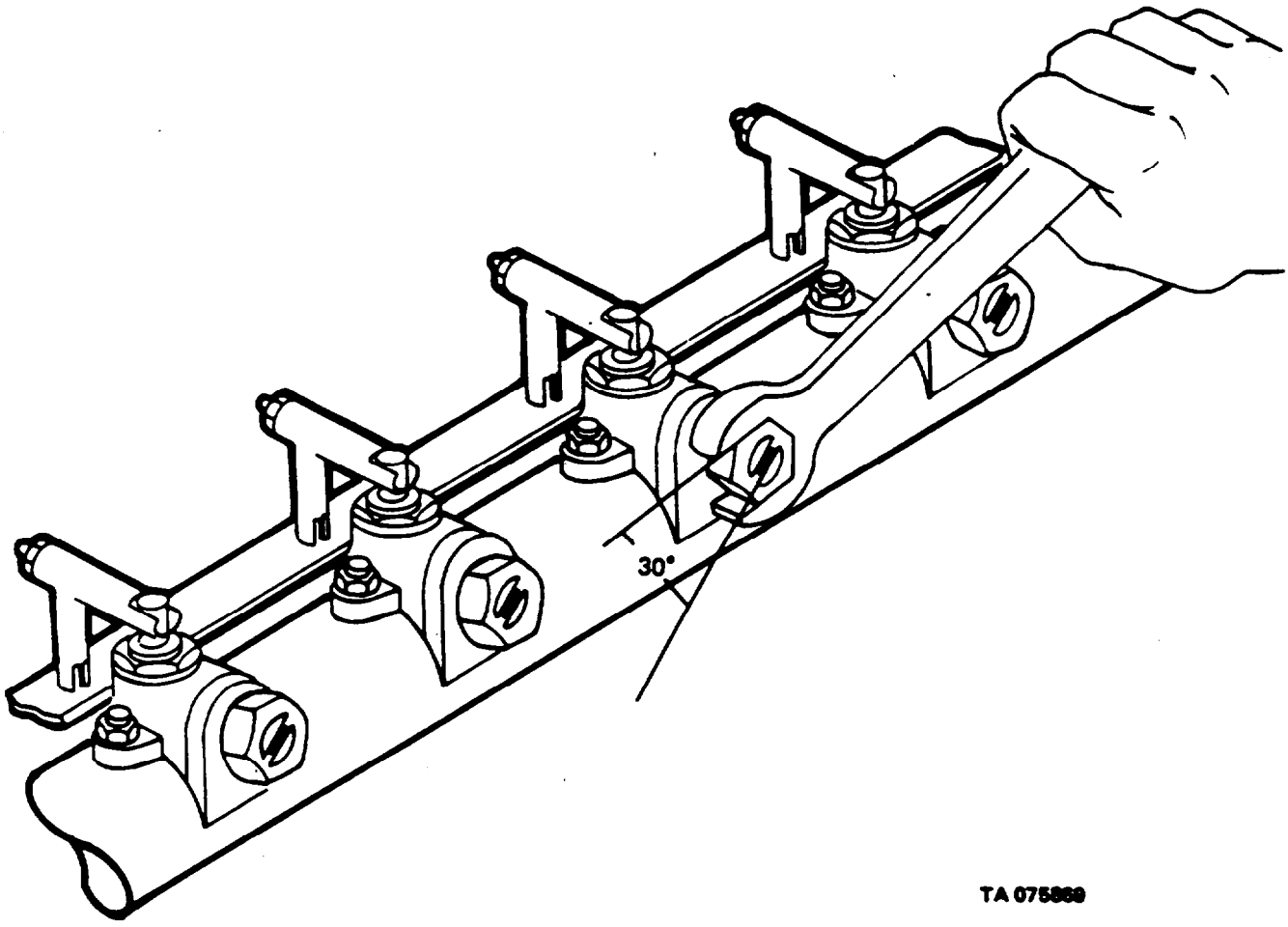


Figure 2-61. ***Remove/Install Spay Nozzles***

b. cleaning and Inspection.

(1) Clean all parts in dry cleaning solution.

(2) inspect all parts for cracks or other damage. Replace defactive parts.

c. **Reassembly.**

(1) Install spray nozzles using special wrench from tool box (fig. 2-61).

NOTE

Handle of tool should rest upon adjacent spray nozzle as shown to give the proper 30º spray overlap. (Refer to fig. 2-61.)

(2) Install spray bar (4, fig. 2-60) as follows:

(a) Support spray bar (4) on floor jack; then move spray bar into assembly position and connect rods (5) to swivel toggle assembly (3). Secure with two washers (2) and cotter pins (1).

(b) Install gasket (32, fig. 2-55) and connect line (30) to transfer valve.

(c) Install flange gasket (18, fig. 2-57) and install four capscrews (17) that fasten hinge section to spray bar.

(d) Install end tube assembly (8) and secure to hinge section (10) with pipe nut (9).

(e) Install spacer ring (5) and packing (6) into hinge section (10); then install three nuts (13) and lockwashers that fasten the two halves of hinge section together.

(f) Connect spring link (11) and secure with clevis pin (12) and cotter pin.

(g) Connect two chains (1) and secure each with clevis pin (2) and cotter pin.

(h) Connect adjusting link (4) and secure with clevis pin (7) and cotter pin.

(i) Connect chain (2, fig. 2-56) to left hinge section (1) with sleeve (3), washer (4), lockwasher (5) and capscrew (6).

(j) Install gasket (18, fig. 2-55) and connect line (12) to ball joint (11).

(k) Repeat steps (c) thru (i) above for right side of spray bar. Observe that some item numbers change, however, the procedure and parts remain the same.

(3) Install flip valves (fig. 2-59) as follows:

CAUTION

The center section flip valves and end section flip valves are not the same. When installing, the valves must be installed in their proper places or damage to valves will occur.

(a) On center tube flip valves, install lever (4) and secure with pin (5). For corner swivel valve, install lever (14), spring (16) and washer (17). Secure with pin (15).

CAUTION

Valve plug (12) protrudes slightly through the valve body (3). When installing valves, care must be taken to make certain that the valve plug is seated in the hole in spray bar.

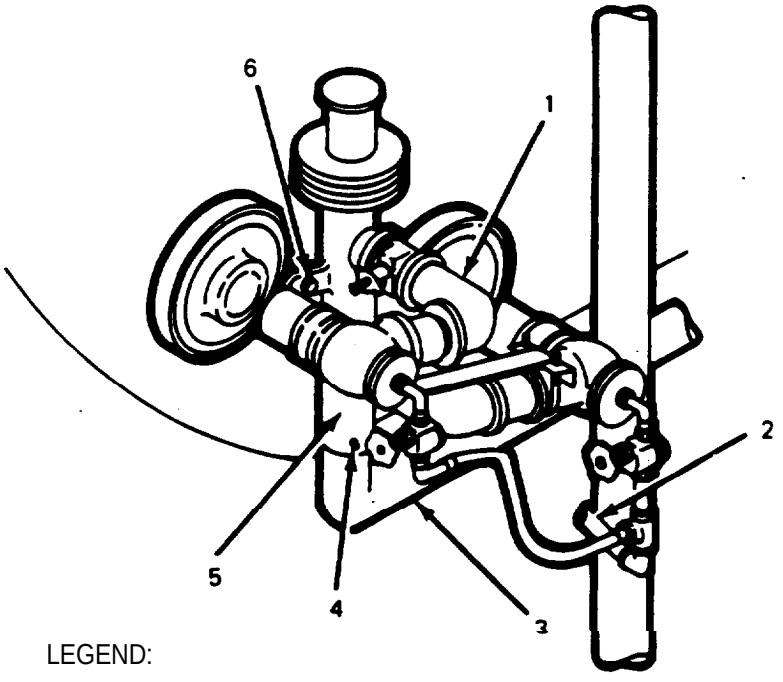
(6) Install gasket (1) and mount valve on spray bar. Secure with two lockwashers and nuts (8).

Section XXXV. MAINTENANCE OF LOW PRESSURE BURNER ASSEMBLY

2-39. Low Pressure Burner.

a. Removel. (Refer to fig. 2-62.)

(1) Remove screw (4) and fuel line (2).



LEGEND:

1. BURNER ASSEMBLY
2. FUEL LINE
3. TUBE
4. SCREW
5. TUBE
6. CAPSCREW AND WASHER (2)

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Figure 2-62. ***Remove/Install Low Pressure Burner Assembly.***

(2) Remove two capscrews and washers (6) that fasten the burner assembly to the tank; then pull out the burner assembly (1) and two tapered spacers located behind the burners.

b. Installation. (Refer to fig. 2-62.)

(1) Mount burner assembly (1) on tank with a tapered spacer between each mounting capscrew hole and the tank.

(2) Secure mounting plate to tank with two capscrews and washers (6).

(3) Join tubes (3 and 5) together with screws (4) and reconnect fuel line (2).

CHAPTER 3

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

3-1. Special Tools and Equipment. There is no special test equipment required for maintenance of the Bituminous Distributor. Special tools, which are located in the tool box, are listed in Appendix B.

3-2. Repair Parts. Repair parts are listed and illustrated in the Repair Parts and Special Tools list covering Direct Support and General Support maintenance for the equipment (Appendix C).

Section II. TROUBLESHOOTING

3-3. General.

a. This section contains Direct Support and General Support troubleshooting information for locating and correcting most of the operating troubles which may develop in the M918 Bituminous Distributor. This information supplements the information in the Organizational level troubleshooting procedure, Table 2-2. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine corrective actions to take. You should perform the test/inspections and corrective actions in the order listed.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

Table 3-1. ***Direct Support and General Support Troubleshooting.***

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. **ASPHALT PUMP FAILS TO DELIVER RATED CAPACITY:**
Step 1. Worn or damaged impeller. Replace impeller (para 9-11.
Step 2. Damaged pump bearing. Replace bearing (para 9-11.
2. **NOISY PUMP OPERATION:**
Step 1. Impeller loose on shaft. Replace impeller or shaft (para 9-1).
Step 2. Worn pump shaft bearings. Replace the bearings (para 9-1).
Step 3. Shaft seal plate or packings defective. Replace the seal plate or packings (para 9-1).
3. **PUMP WILL NOT TURN OR TURNS SLOWLY:**
Step 1. Asphalt material below pumping temperature. Reheat to pumping temperature. (Refer to TM 5-3895-371-10.)
Step 2. Air leak in suction line from hydraulic reservoir to filter to inlet of charge pump on back of hydraulic pump. Tighten all connections.
Step 3. Defective hydraulic pump or motor. Check for excessive case drain. Replace defective pump or motor (para 3-5 or 3-6).
step 4. Hydraulic system pressure low. lncrease motor bypass pressure to 4500 psi (para 3-5).

Table 3-1. ***Direct Support and General Support Troubleshooting (Continued).***

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION	
3.	PUMP WILL NOT TURN OR TURNS SLOWLY (Continued):
Step 5.	Low oil level in reservoir. Replenish oil. (Refer to LO 5-3895-371-12.)
Step 6.	Spray bar control valves set improperly. Reset controls.

Section I I I. GENERAL MAINTENANCE

3-4. General Repair Practices.

a. When maintenance is authorized for a special component or part, and no special tools are given in this manual, you should understand that only standard shop practice techniques are required to perform the task. Included in this category is the replacement of a drive shaft universal joint as shown in figure 3-1 and the procedure explained in paragraph 2-14-c where only shop tools and techniques arc used.

b. Refer to Appendix A for references to other manuals for general maintenance information. (Such as, welding, inspection and maintenance of bearings, etc.)

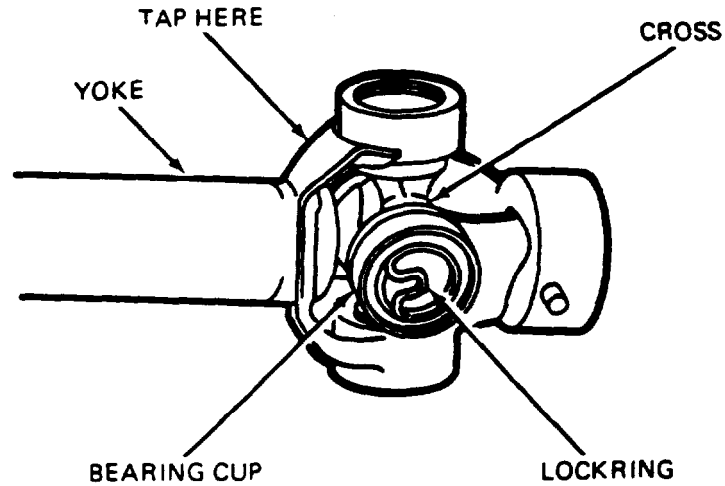

Figure 3-1. ***Replace Drive Shaft Universal.***

Section IV. REPAIR OF HYDRAULIC PUMP

3-5. Hydraulic Pump.

CAUTION

Throughout the entire operation, hands, parts, tools and immediate area must be kept clean. introduction of foreign material into the system may damage or hinder its operation.

Do not operate the hydraulic motor at maximum by-pass pressure for extended periods of time since this will cause overheating of hydraulic oil and result in system damage.

Recommended relief pressure 4000 to 4500 psi.

For accessibility, removal of bar box or center platform is recommended.

a. Equipment Required for Hydraulic Motor Pressure check:

(1) 5000 psi pressure gage with a 2 ft. length of high pressure hose to fit gage fitting and adapter.

(2) Use suitable adapter to connect 5000 psi gage to motor.

b. Initial ***Pressure*** Check.

(1) On bottom of hydraulic motor remove right hand, nine sixteenth inch plug.

(2) In this opening install a minimum capacity 5000 psi gage using appropriate adapter with high pressure hose.

(3) Lock hydraulic motor by the following means and take a pressure reading.

(4) On instrument stand in truck cab pull pump control knob to its uppermost position. Adjust fine control tube up until it is against bottom of hydraulic control knob.

(5) At the rear of distributor lock universal coupling between pump and hydraulic motor with a pipe wrench of sufficient length to lay against left distributor frame.

(6) Set tachometer to minimum of 1000 RPM.

(7) Engage PTO. (Refer to TM 5-3895-371-10.)

(8) Pull out rear override control until hydraulic motor pressure registers the highest reading. This is by-pass pressure.

c. Pressure Evaluation. With pressure gage installed and hydraulic motor locked as indicated above, determine if by-pass pressure is actually low. If pressure is not low consult Table 3-1, Malfunction 3, for other items which may cause hydraulic motor to turn slow or not at all.

d. Hydraulic Motor Relief Pressure Adjustment. (Refer to fig. 3-2.) Adjust hydraulic motor relief pressure as outlined below.

(1) Loosen jam nut one half inch hex and turn five thirty second inch Allen head screw in so as to increase pressure. A pressure of 800 psi per turn may be expected.

(2) Increase pressure to recommended level of 4000 to 4500 psi.

(3) Retighten jam nut while holding screw.

(4) Remove gage and replace nine sixteenth inch hex plug.

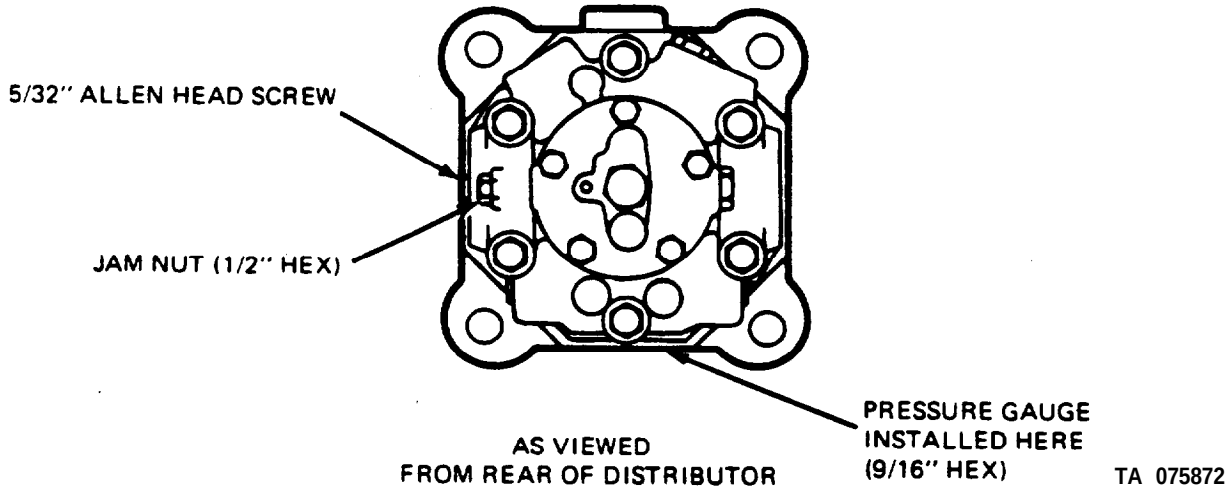

Figure 3-2. ***Hydraulic Motor Pressure Adjustment.***

e. Removal of Hydraulic Pump. (Refer to fig. 3-3.)

NOTE

In step (1), a 20-gallon (76 l) container, or larger, is required.

(1) Drain oil from tank by removing drain plug at bottom of tank. (Refer to para 2-16.)

(2) Disconnect four hoses from pump: hose (10), hose (6), and two hoses (5).

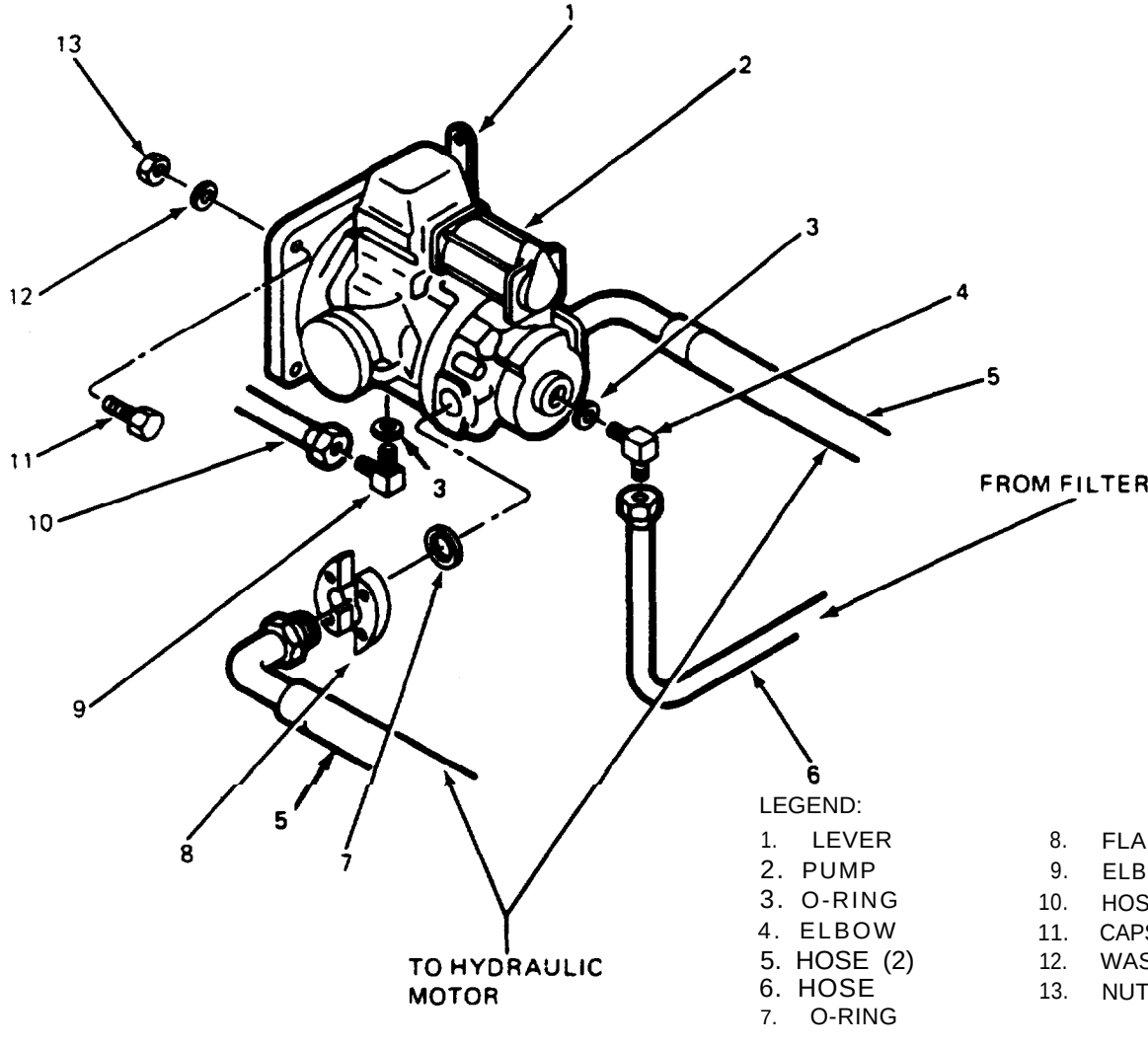

Figure 3-3. ***Remove/Install Hydraulic Pump.***

(3) Disconnect pump control from lever (1).

(4) Remove pump propeller shaft (refer to para 2-14) and remove elbow (9).

(5) Place a hydraulic jack under the pump and raise the jack so that it just touches the pump.

(6) Remove four capscrews (11), washers (12), and nuts (13) that fasten the pump to its mounting bracket; then lower pump on the hydraulic jack and remove.

f. General Instructions (Before Disassembly of Hydraulic Pump).

(1) Parts and work area must be kept absolutely clean at all times. The hydraulic pump must be cleaned externally with a commercial solvent or steam and dried with compressed air before the unit is removed from the application.

(2) Most service operations are carried out with the pump in a shaft down position. A 7 in. sq. block of wood, 4 in. thick with a 2 in. round center hole, can be used as a platform upon which the pump can be positioned. The corrugated cardboard spacer packed at the end of a new pump can be Used.

(3) When performing minor service work, do not remove bearings, dowel pins or block assembly components unless they exhibit signs of gelling, scratches, or excessive wear. On major overhaul, replace all bearings, seals, gaskets, tablocks, wear plates and bronze crescent clips.

g. Disassemble Hydraulic Pump. (Refer to fig. 3-4.)

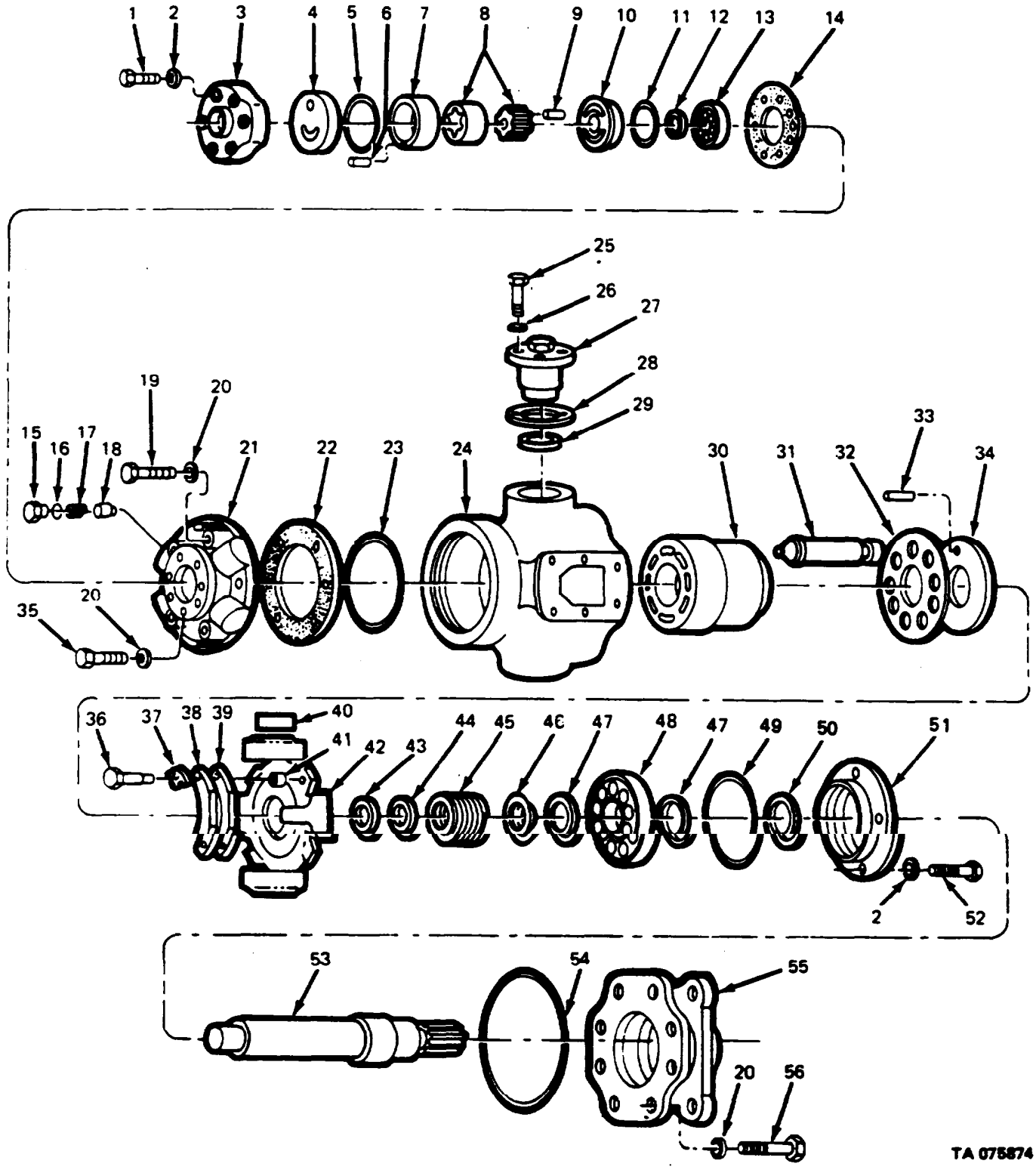

Figure 3-4. Hydraulic Pump Sectional Drawing (Sheet 1 of 2)

1. CAPSCREW (6)
2. LOCKWASHER (6)
3. PUMP COVER
4. PLATE
5. O-RING
6. DOWEL PIN
7. SPACER ASSEMBLY
8. CHARGE PUMP ASSEMBLY
9. PIN
10. VALVE PLATE
11. O-RING
12. RETAINING RING
13. BEARING
14. SHIM GASKET (AR)
15. PLUG (2)
16. O-RING (2)
17. VALVE SPRING (2)
18. PLUNGER (2)
19. LONG CAPSCREW (4)
20. LOCKWASHER (18)
21. PUMP COVER
22. COVER GASKET
23. O-RING
24. HOUSING
25. CAPSCREW (8)
26. LOCKWASHER (8)
27. TRUNNION (2)
28. GASKET (2)
29. BEARING (2)
30. BLOCK ASSEMBLY
31. PISTON ASSEMBLY (9)
32. RETURN PLATE
33. DOWEL PIN
34. WEAR PLATE
35. SHORT CAPSCREW (2)
36. CAPSCREW (4)
37. LOCK TAB (4)
38. CLIP (2)
39. BEARING PLATE (2)
40. TRUNNION BEARING (2)
41. SPACER (4)
42. CAM ASSEMBLY
43. RING
44. INNER SPRING RETAINER
45. SPRING
46. SPRING RETAINER
47. RETAINING RING (2)
48. BALL BEARING
49. O-RING
50. SHAFT SEAL
51. SEAL ASSEMBLY
52. CAPSCREW (4)
53. PUMP SHAFT
54. O-RING
55. MOUNTING FLANGE
56. CAPSCREW (12)

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Figure 3-4. Hydraulic Pump Sectional Drawing (Sheet 2 of 2)

(1) Place the pump in a shaft down position. Remove six capscrews (1) and lockwashers (2). Lift off pump cover (3).

(2) Remove plate (4), shim gasket(s) (14) and O-ring (5).

(3) Remove spacer assembly (7, fig. 3-5) which includes the spacer and a dowel pin. Do not remove the dowel pin from the spacer assembly unless damaged. Note the relationship of the valve plate (10, fig. 3-7), plate (4, fig. 3-5), and spacer assembly (7, fig. 3-5) which is determined by the alinement of the dowel pin with the recessed hole in the inner face of the pump cover (3, fig.3-4). This relationship must be preserved upon reassembly to insure the proper function of the charge pump. Remove charge pump assembly (8, fig. 3-6) consisting of inner and outer rotor.

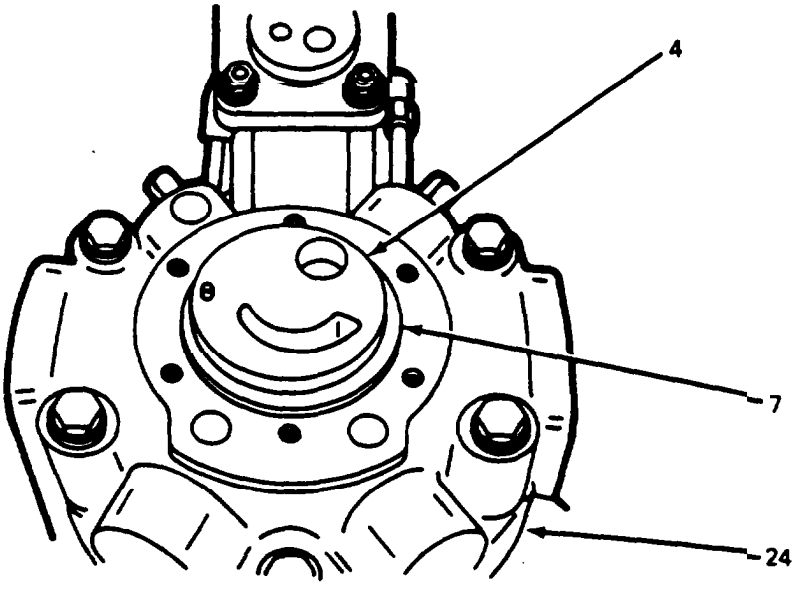


Figure 3-5. Charge Pump Upper Valve Plate.

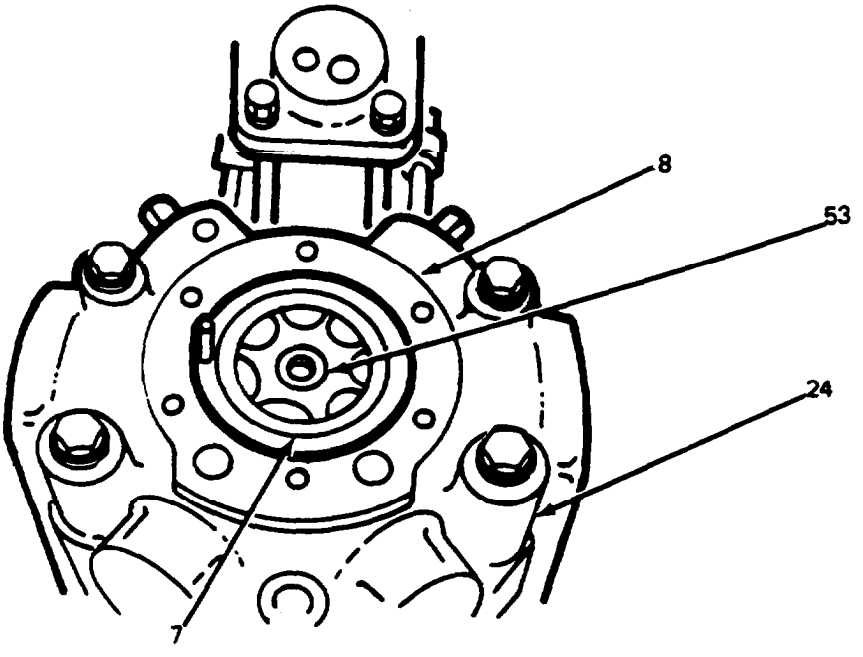


Figure 3-6. Charge Pump Eccentric, Inner and Outer Rotor.

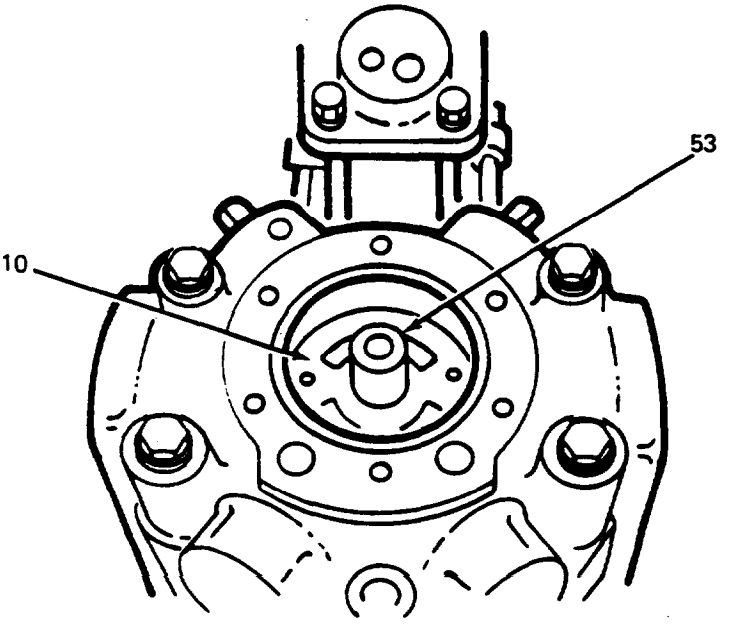


Figure 3-7. Charge Pump Lower Valve Plate.

(4) Remove pin (9, fig. 3-4) from pump shaft (53). Lift out valve plate (10, fig. 3-7).

(5) Remove check valve assemblies consisting of plug (15, fig. 3-4), O-ring (16), valve spring *(17),* and plunger (18)

(6) Mark the housing (24, fig, 3-8) and pump cover (21) to insure proper orientation upon reassembly, A scratch in the paint across the cover/housing parting line may be used.

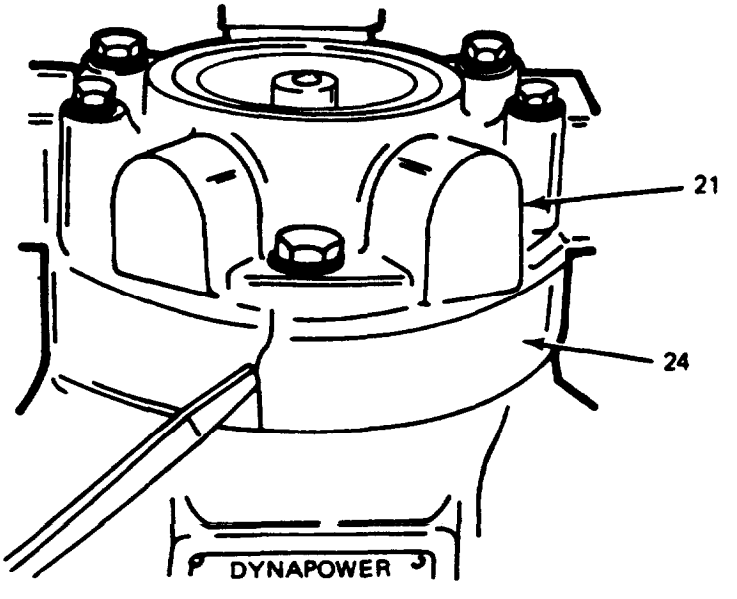


Figure 3-8. Marking Across the Cover/Housing Parting Line.

(7) Remove two short capscrews (35, fig. 3-4) and four long capscrews (19) and six lockwashers (20). Lift off the pump cover (21). If the cover should stick to the housing, jar loose with a soft faced hammer. Remove O-ring (23) and cover gasket (22) from pump cover. (See fig. 3-9.)

(8) Inspect the bearing (13, fig. 3-4) for galling of the rollers, roughness, or fracture of the cage. If any of these conditions exist, press the bearing (13) from the pump cover (21). If the bearing (13) is removed from the cover, then the bearing must also be replaced.

h. Disassemble Override Control. (Refer to fig. 3-10.)

(1) Remove locknut (17), washer (18), and lever (19).

(2) Remove two long capscrews (6), four short capscrews (8), and six lockwashers (2).

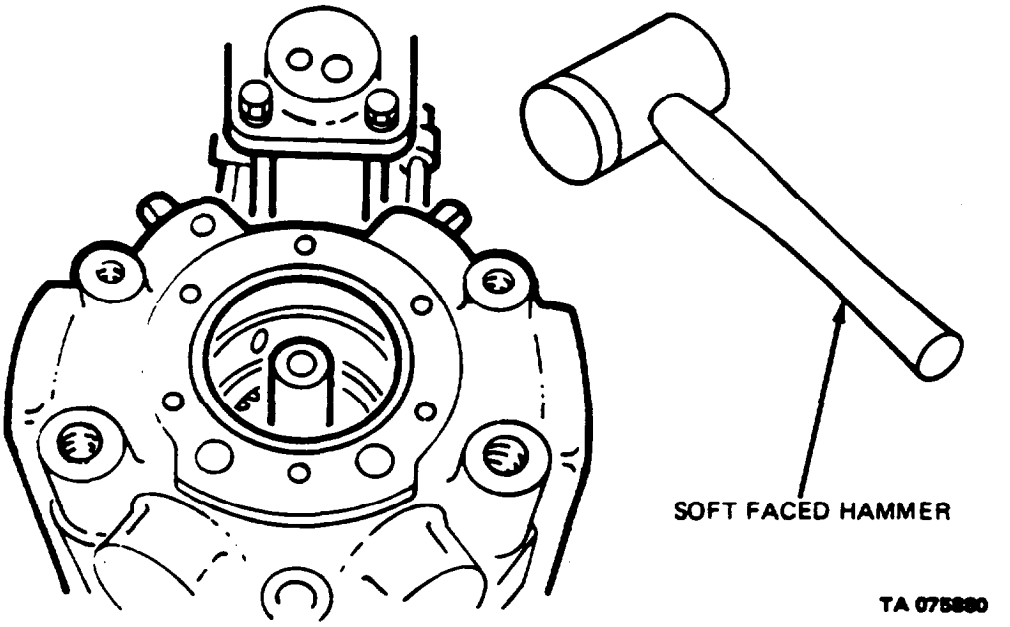
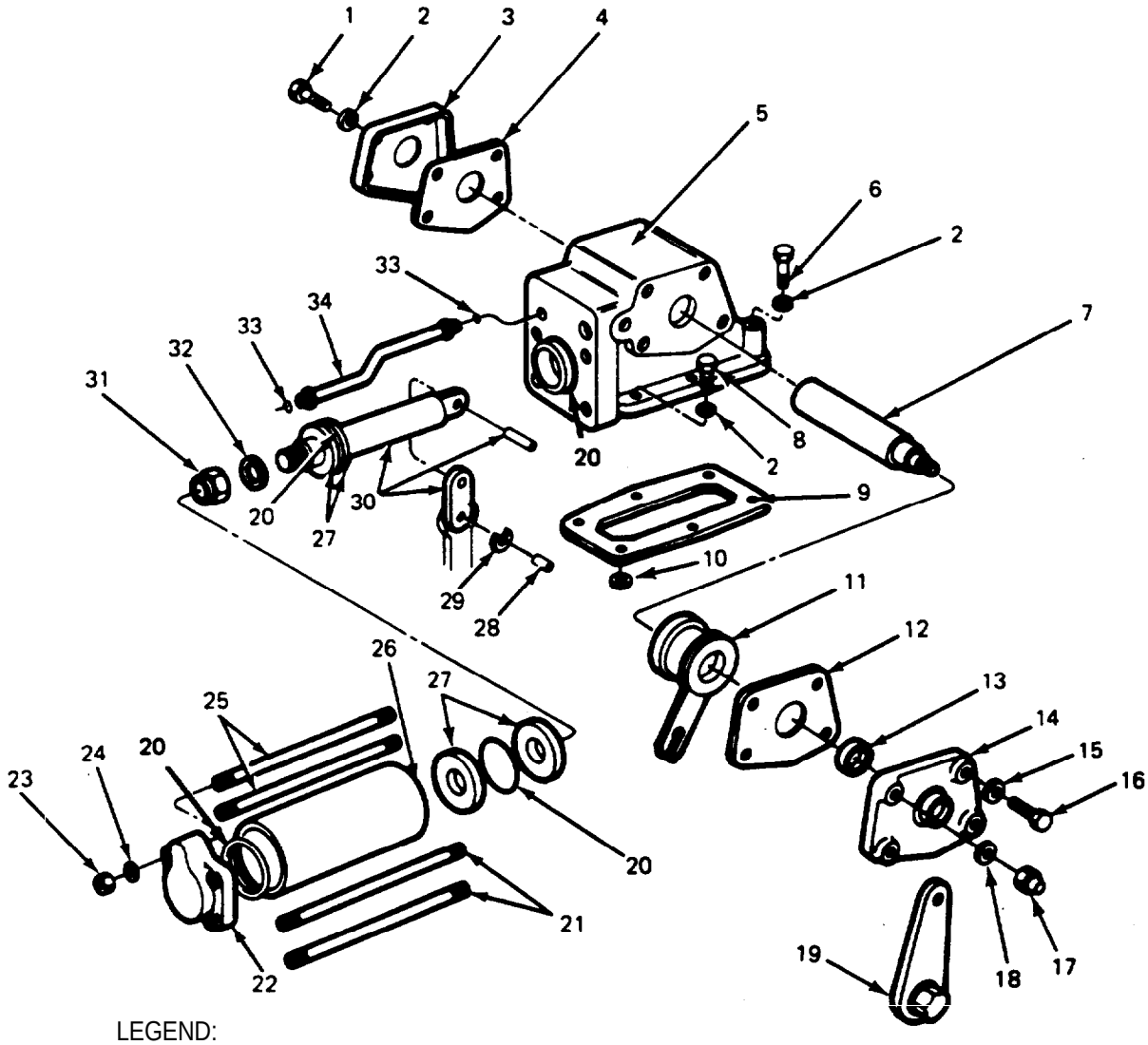


Figure 3-9. Removing the Pump Cover.



LEGEND:

1. CAPSCREW (4)
2. LOCKWASHER (10)
3. COVER
4. GASKET
5. HOUSING
6. LONG CAPSCREW (2)
7. VALVE SPOOL
8. SHORT CAPSCREW (4)
9. GASKET
10. O-RING
11. VALVE SLEEVE ASSEMBLY
12. GASKET
13. SEAL
14. SEAL PLATE ASSEMBLY
15. LOCKWASHER (4)
16. CAPSCREW (4)
17. LOCKNUT
18. WASHER
19. LEVER
20. O-RING (3)
21. STUD (4)
22. CYLINDER COVER
23. HEX NUT (4)
24. LOCKWASHER (4)
25. STUD
26. TUBE
27. PISTON ASSEMBLY
28. CLEVIS PIN
29. RETAINING RING (2)
30. PLUNGER ASSEMBLY
31. SELF-LOCKING NUT
32. WASHER
33. O-RING (2)
34. TRANSFER TUBE

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Figure 3-10. Override Control.

(3) Lift housing (5) from pump housing, breaking the seal with gasket (9). Care should be taken to avoid bending the valve sleeve assembly (11) by swinging it to one side, as illustrated in figure 3-11 before proceeding to step (4). Remove O-ring (10, fig. 3-10).

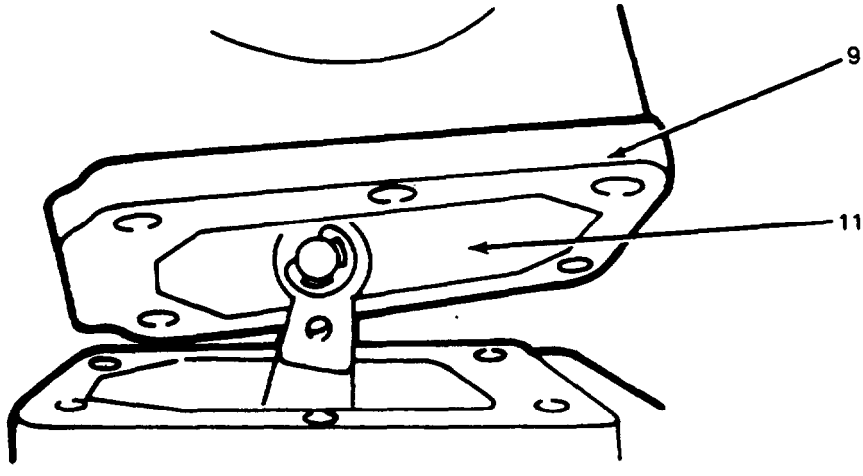

Figure 3-11. Cam Actuator Arm and Valve Sleeve.

CAUTION

A clean shop rag should be positioned around the cam arm to prevent the loss of the retaining ring into the control housing (5). (Refer to fig. 3-12.)

(4) With a small screwdriver, remove retaining ring (29) from the side of the cam arm opposite the counterbore.

(5) Remove clevis pin (28, fig. 3-10) with second retaining ring and slip the control link part of plunger assembly (30)) from the cam lever. Remove gasket (9) from control housing.

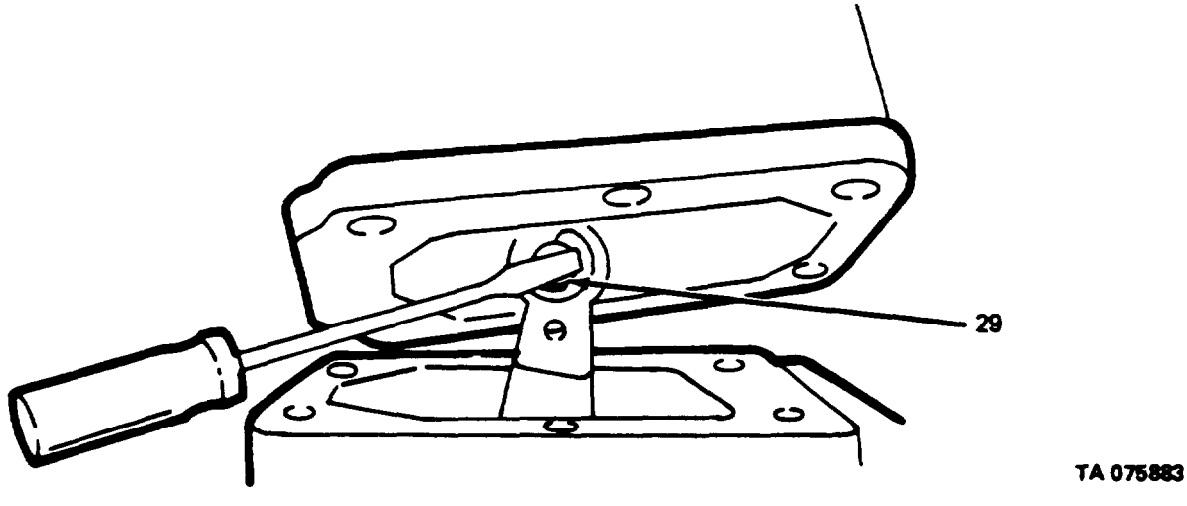

Figure 3-12. Removing Retaining Ring.

(6) Remove four capscrews (16) and four lockwashers (15). Slip seal plate assembly (14) and gasket (12) off over valve spool (7). Replace seal (13) only if damaged.

(7) Slide valve spool (7, fig. 3-13) from housing (5) and remove valve sleeve assembly (11) out through the bottom of the housing (5). (Refer to fig. 3-10.)

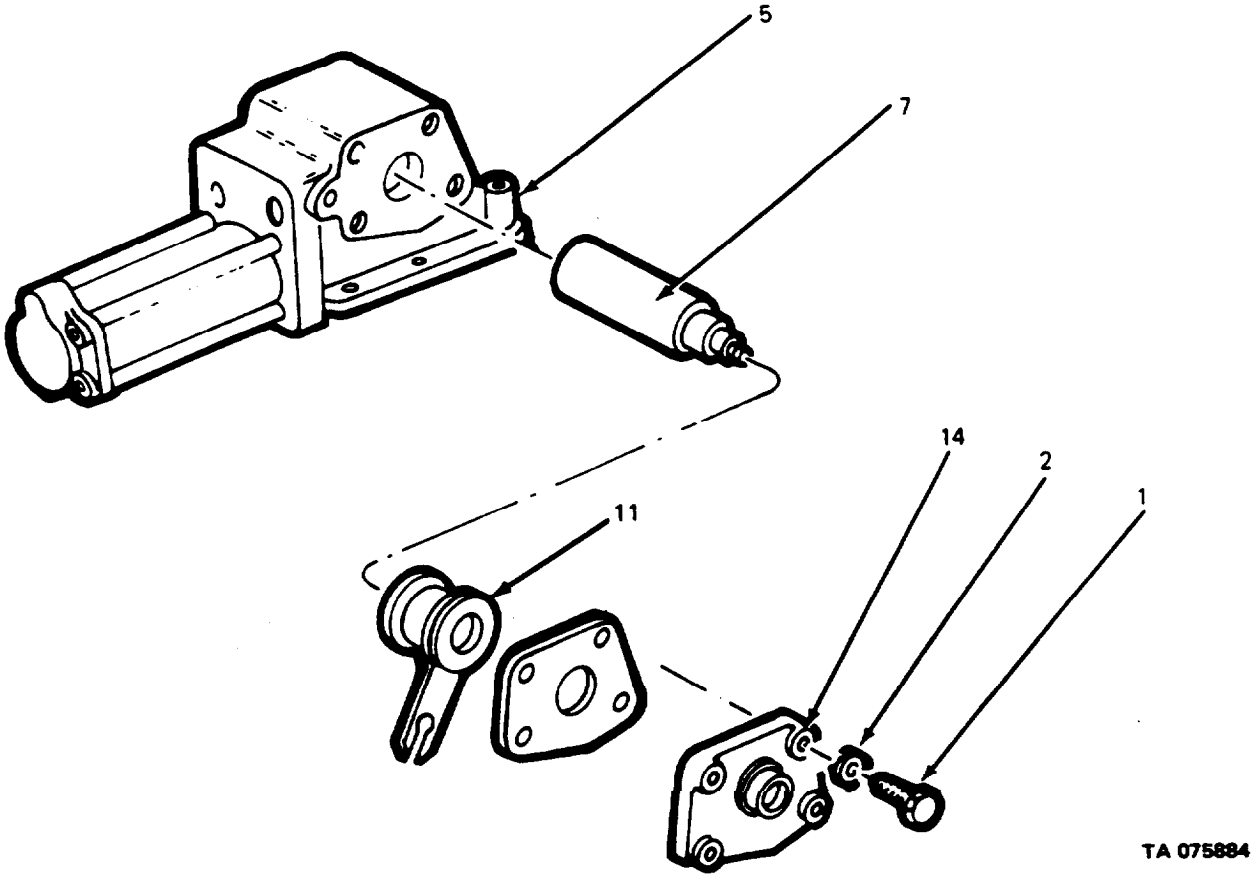

Figure 3-13. Control Valve Spool with Valve Sleeve.

(8) Carefully, remove four hex nuts (23, fig. 3-14) and lockwashers (24). Lift off cylinder cover (22) including O-ring (20). Pull transfer tube (34) and two O-rings (33) from the seat in either the housing (5) or the cylinder cover (22). (Refer to fig. 3-10.)

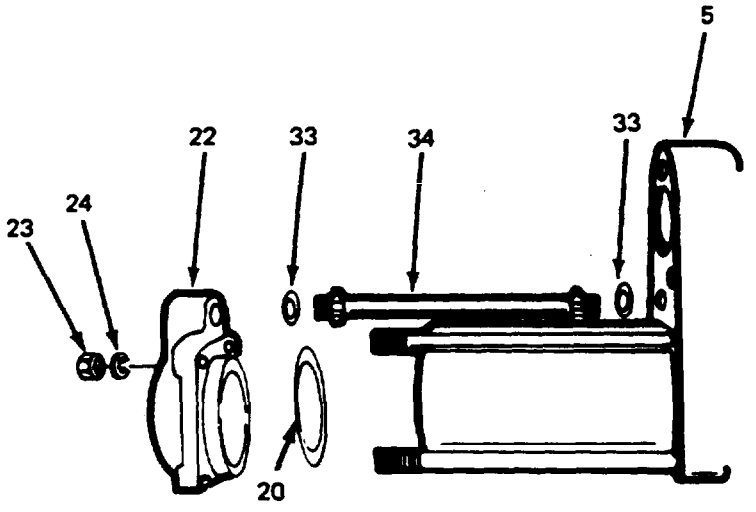

Figure 3-14. Cylinder Cover with Transfer Tube.

(9) Remove tube (26, fig. 3-15) with plunger assembly (30), from housing (5). Slide the plunger assembly (30) from tube (26) and remove two O-rings (20), one from the piston assembly (27) and one from the housing (5). (Refer to fig. 3-10.)

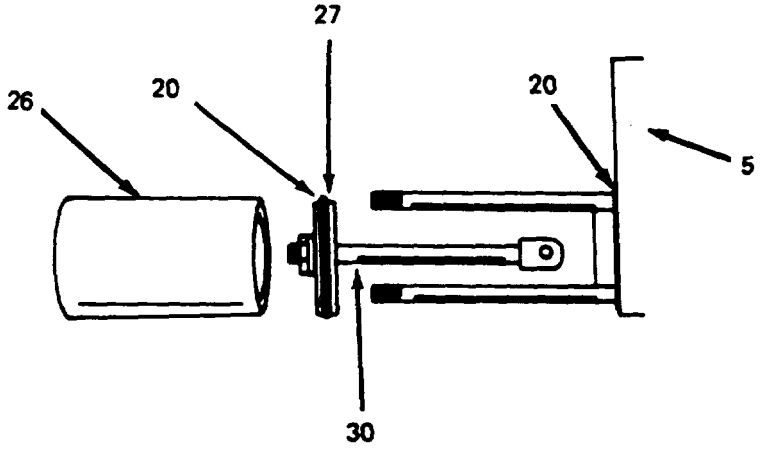

Figure 3-15. Cylinder with Servo Plunger.

(10) Remove self-locking nut (31, fig. 3-10), washer (32), and piston assembly (27) from plunger assembly (30).

(11) Inspect four studs (21). Remove only if the threads have been damaged or if the studs are twisted or broken.

(12) Remove four capscrews (1, fig. 3-16), lockwashers (2), cover (3), and gasket (4). (Refer to fig. 3-10.)

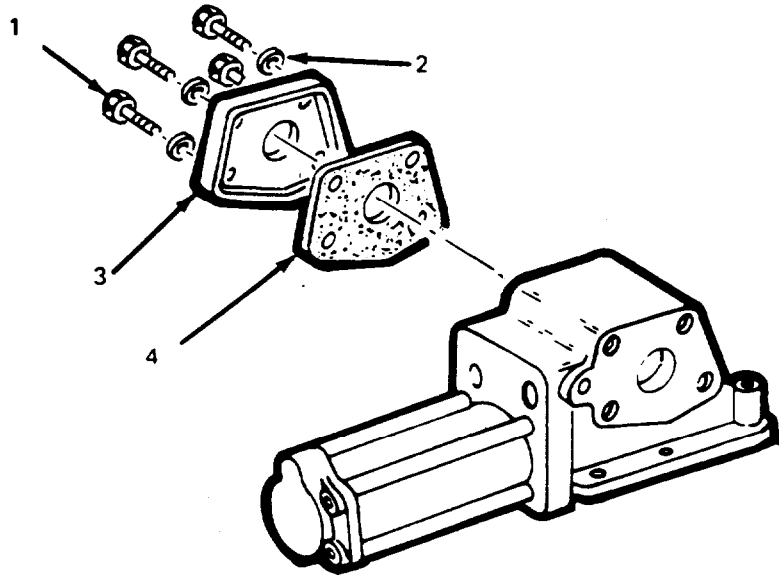

Figure 3-16. Control Housing Cover.

i. Disassemble Hydraulic Pump (Continued).

(1) From both sides of the housing (24, fig. 3-17), remove eight capscrews (25) and eight lockwashers (26). Pull out trunnions (27), gaskets (28) and bearings (29). (Refer to fig. 3-4.)

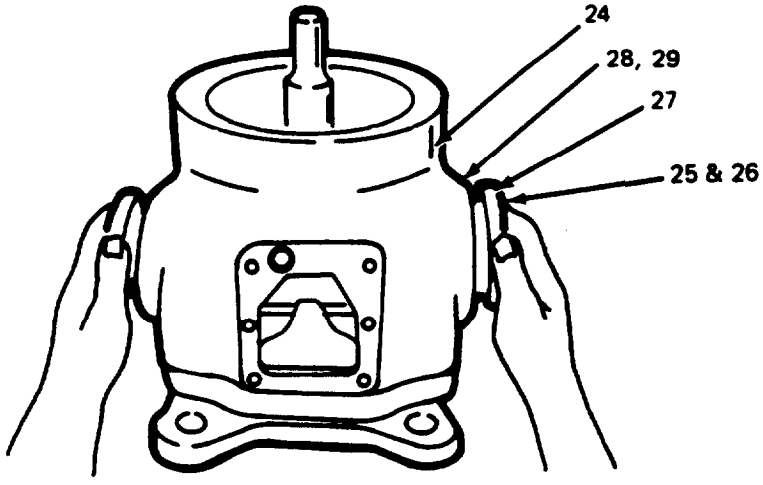

Figure 3-17. Removing Trunnions.

NOTE

At the factory each block is marked to indicate cylinder bore number 1. Mark piston number 1 with felt pen or a similar device as a convenient method-of preserving the bore/piston relationship. (Refer to fig. 3-19.)

(2) Mark No. 1 piston assembly (31, fig. 3-19) and block assembly (30) maintaining bore/piston relationship. Slide block assembly out of housing.

(3) Remove eight capscrews (56, fig. 3-4) and lockwashers (20) from mounting flange (55).

(4) Remove housing (24), as shown in figure 3-18, by lifting housing and working over cam assembly lever (42).

(5) Aline oil hole with trunnion and remove cylinder block so housing can clear control lever assembly.

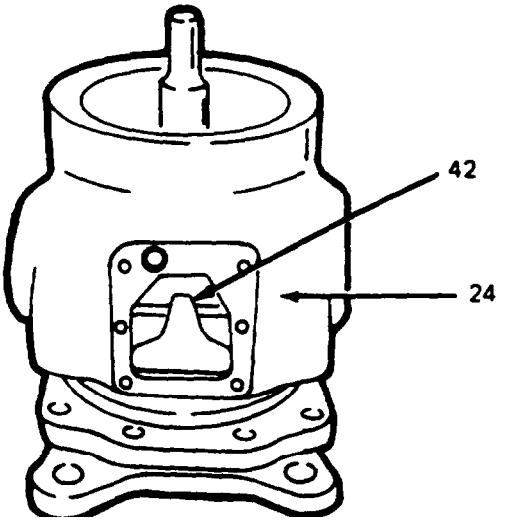

Figure 3-18. Removing Housing.

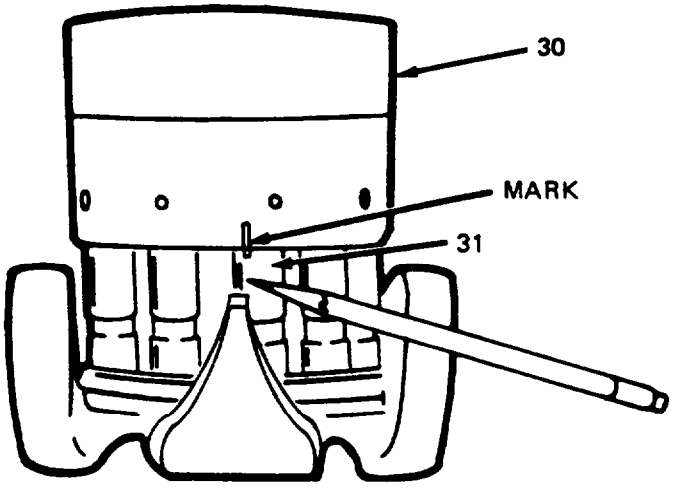

Figure 3-19. Marking Number 1 Piston.

(6) Lift off rotating group from mounting flange (55, fig. 3-20).

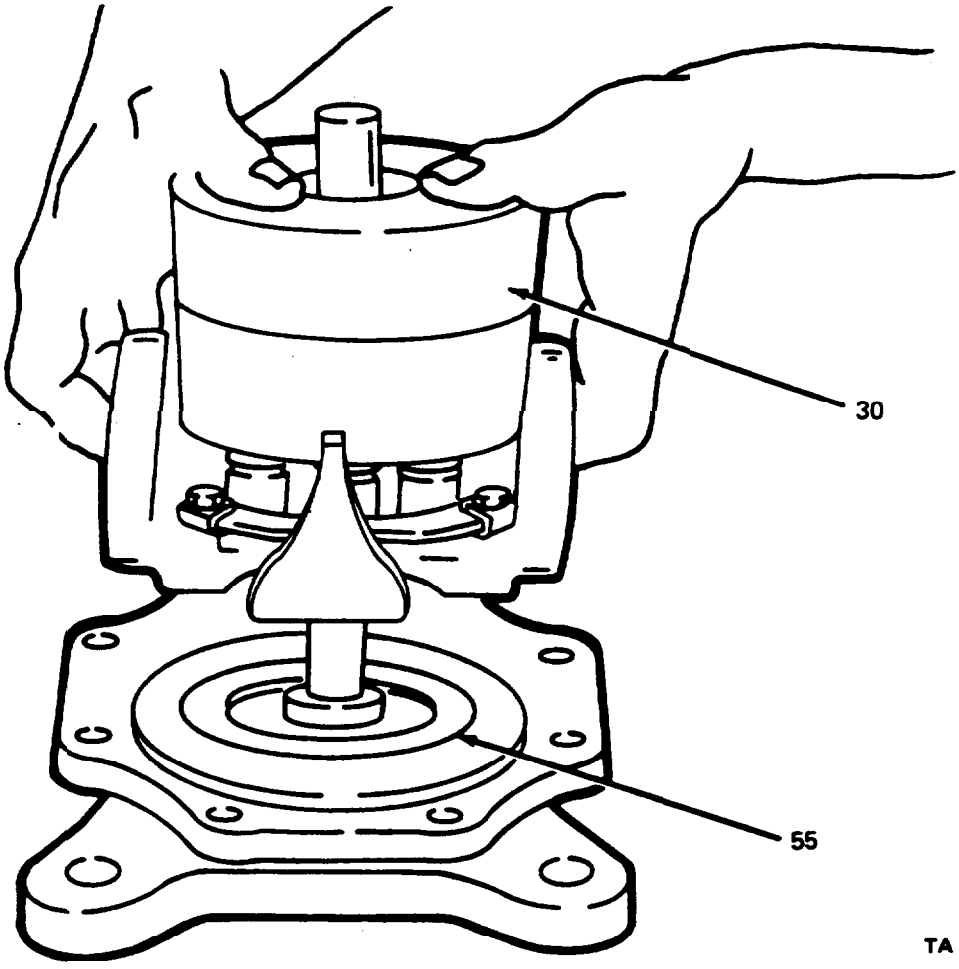

Figure 3-20. Removing Rotating Group.

WARNING

Compressed air used for cleaning purposes will not exceed 30 P.S.I. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

NOTE

Upon reassembly, all used pistons must be returned to their respective bores.

(7) Examine the block assembly (30, fig. 3-20) for excessive wear or damage. Observe the following:

(a) Cylinder bores that exhibit only slight burnishing of the bronze liners are acceptable for reuse.

(b) If the bores exhibit galling or any other irregularity in the running surface that can be felt with the fingernail, the cylinder block must be discarded. If there is evidence that the bronze liners have begun to pull out of the steel block, the block must also be discarded.

(c) Examine the upper running face of the block. Circular wear patterns that cannot be felt with the fingernail are normal.

(d) If the block is acceptable for reuse in all other respects several passes of the block over 500 grit emery paper on a flat lap surface is recommended to put the block face in a like-new condition. If circular wear patterns can be felt with the fingernail, grind or lap the running face as necessary to remove the wear pattern keeping the face parallel to the original face. Lap the reworked face on 500 grit emery as described above to remove the mat finish.

(e) Clean the block thoroughly in SD-2 and blow dry with clean compressed air. Check tolerance of refinished block outlined in figure 3-21.

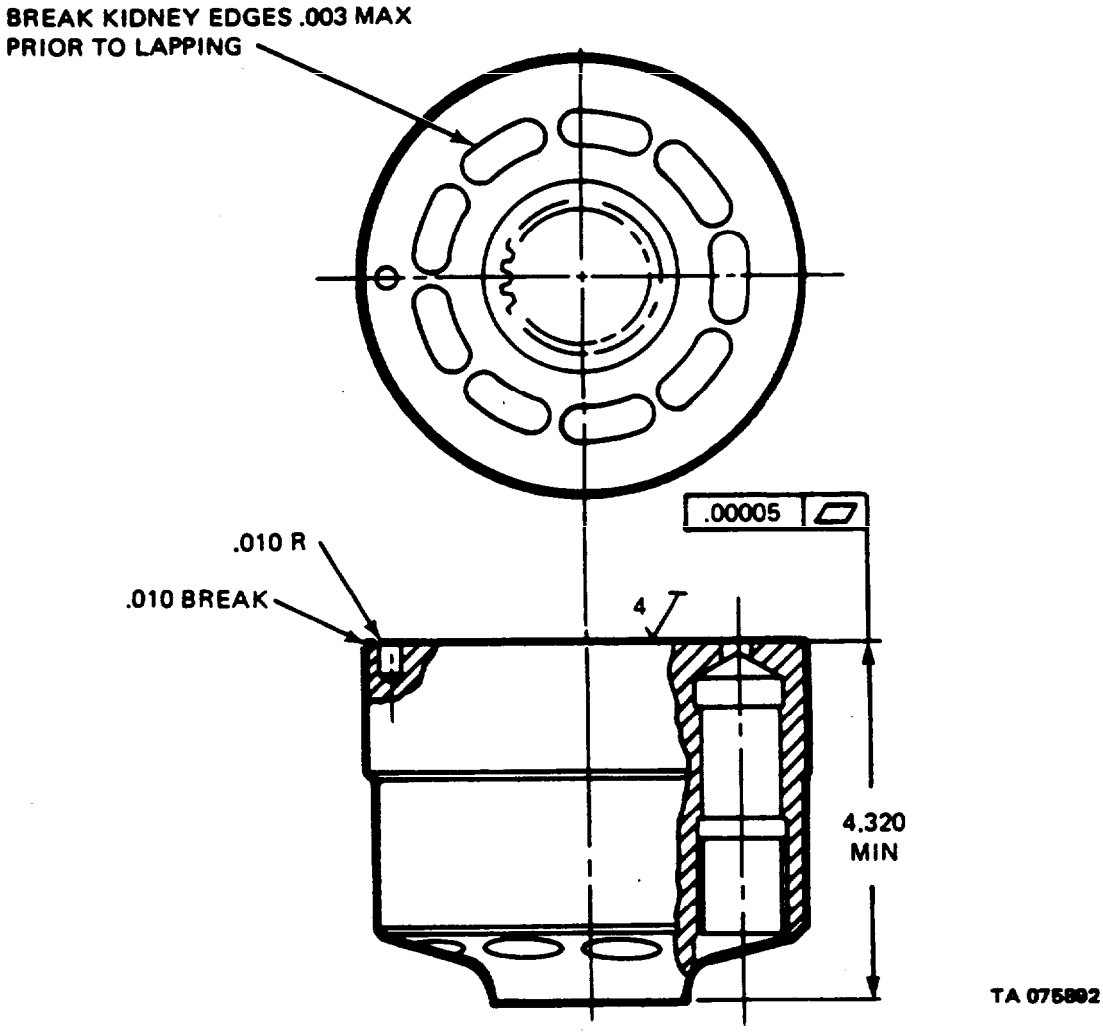

Figure 3-21. Block Rework Specifications.

(f) If damage is evident to spring (45, fig. 3-4) or spring retainers (44 and 46), use an arbor press to remove rataining ring (47).

CAUTION

Extreme care must be exercised in removing spring (45) since it is under considerable compression.

Using a plug 1-3/4" in diameter, compress spring (45) until all tension is removed from retaining-ring (47). Using snap ring pliers, remove rataining ring (47) and gradually release arbor press until spring (45) is fully extended. Remove spring retainer (46), spring (45), and inner spring retainer (44) from block assembly (30).

(8) Remove two capscrews (36), two lock tabs (37), one clip (38), one bearing plate (39) and two spacers (41). (Refer to fig. 3-22.) Inspect bearing plate (39, fig. 3-4). If wear is evident or there are scratches in the bearing surface, discard bearing plate and replace. If bearing plate (39) must be discarded, disassemble other return plate and discard second bearing plate. If bearing plate (39) is reusable, do not disassemble second return plate assembly.

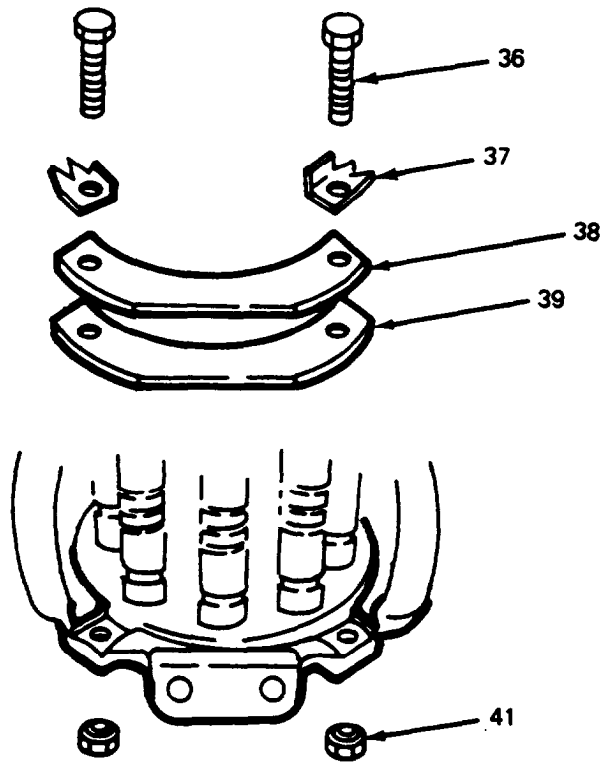

Figure 3-22. Return Plate Disassembly.

(9) Slip out return plate (32, fig. 3-23) and piston assemblies (31). Pick wear plate (34) from cam assembly (42).

NOTE

On a major overhaul, replace trunnion bearings (40, fig. 3-4), regardless of conditions.

(10) Inspect cam assembly (42) for damage. Remove any burrs or nicks from the face of the cam with a fine stone. Inspect trunnion bearings (40) for galling, roughness, or cracked cages. If damaged, press trunnion bearings from cam assembly (42) using an arbor press and a plug 1-1/2 in. in diameter.

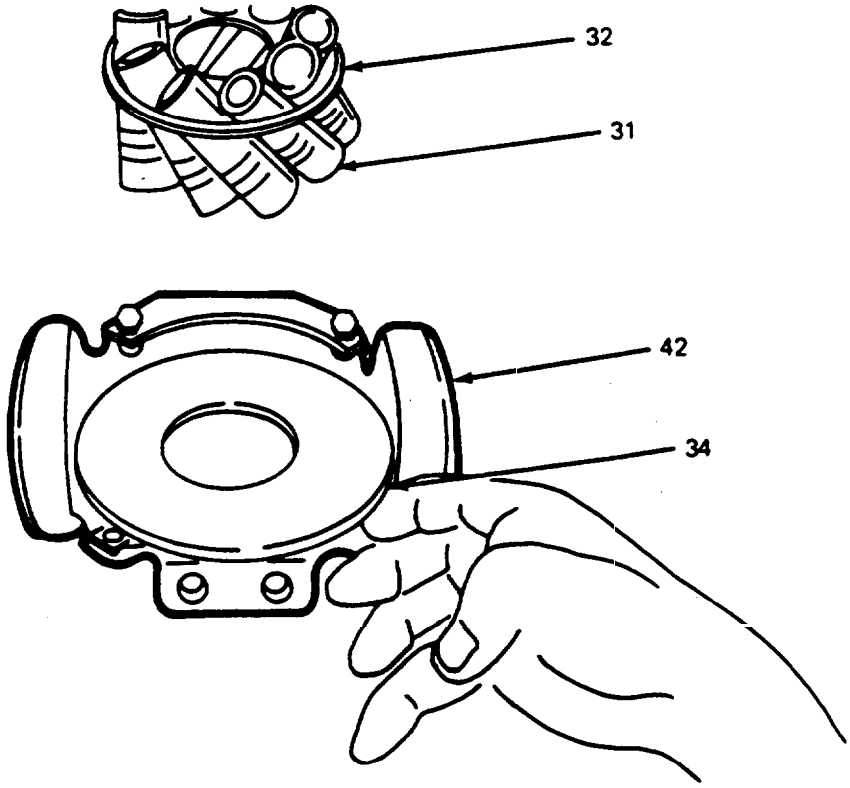

Figure 3-23. Removing Cam Reaction P/ate.

(11) Remove O-ring (54, fig. 3-24) from mounting flange (55).

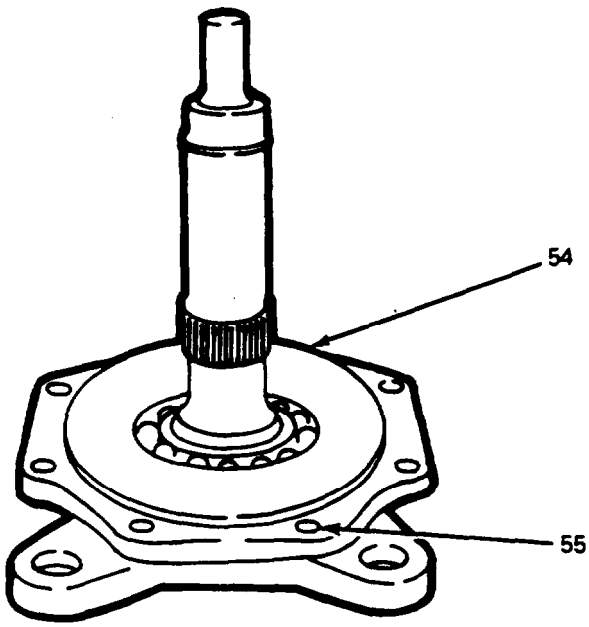

Figure 3-24. Removing Flange Square Ring.

(12) Reverse mounting flange (55, fig. 3-25) and remove four capscrews (56) and lockwashers (20).

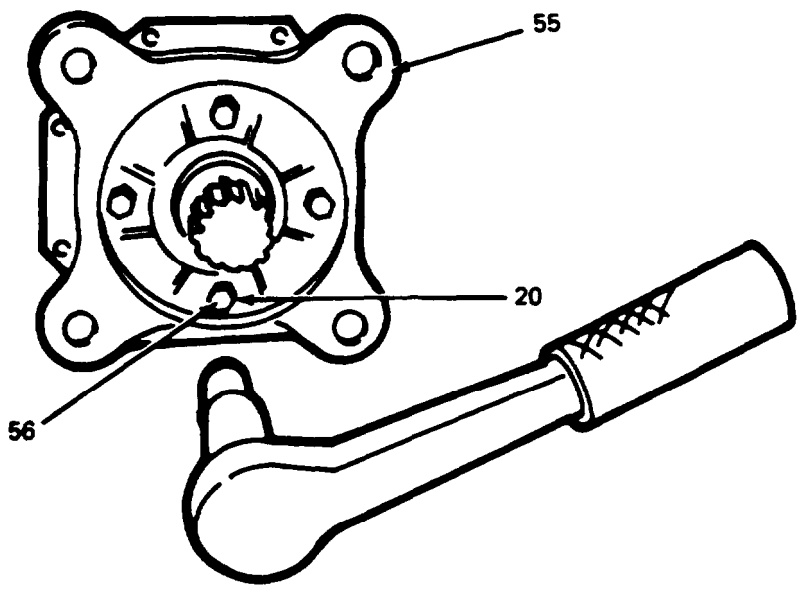

Figure 3-25. Removing Shah Seal Retainer Bolts.

(13) Tap the sides of the bolt hole counterbores lightly to break the gasket seal. Using a screwdriver, remove seal assembly (51, fig. 3-26).

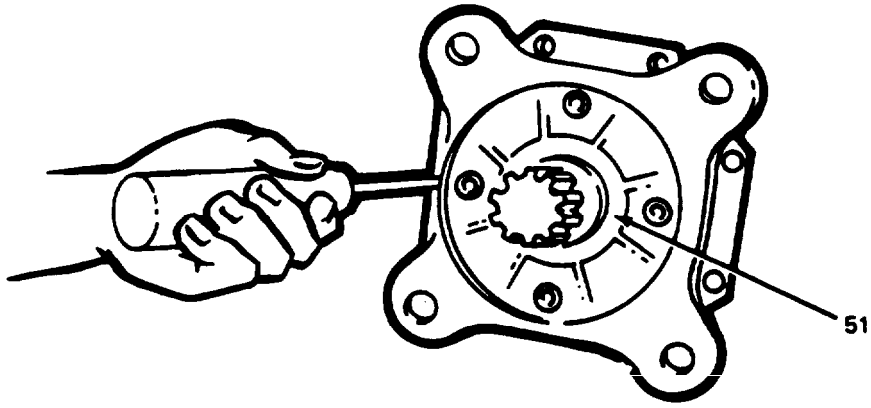

Figure 3-26. Removing Shaft Assembly.

(14) Remove shaft seal (50, fig. 3-4) from seal assembly (51) using an arbor press and a 2-1/2 in. plug.

(15) Remove O-ring (49) from flange.

(16) Remove pump shaft and assembled parts, pump shaft (53), ball bearing (48), retaining ring (47), retaining ring (12) and inner race of bearing (13) by pulling straight up from mounting flange (55), as shown in figure 3-27.

(17) Inspect bail bearing (48, fig. 3-27) for galling, roughness, or cage cracks. If damage is evident, remove retaining rings (47) using snapring pliers and press ball bearing (48) from shaft.

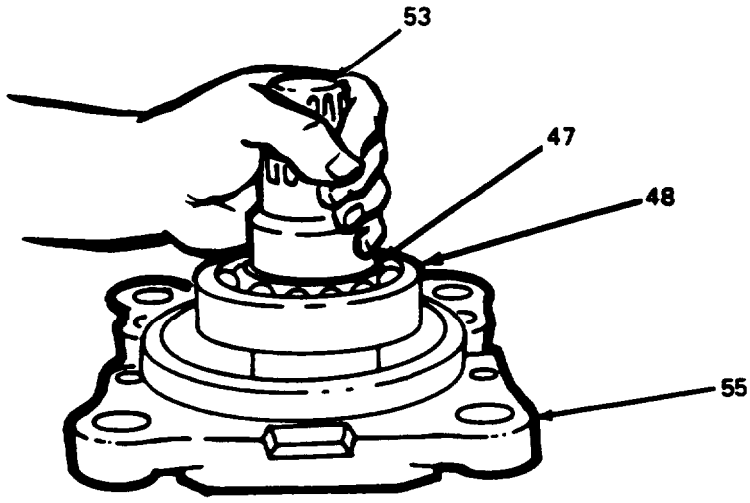

Figure 3-27. Removing Shaft Seal Retainer.

(18) Inspect the inner race of ball bearing (13, fig. 3-4) for galling or roughness If no damage is apparent and if no damage was observed when the outer race was inspected, then it is not necessary to remove the inner race from the shaft. If damage to either the inner or outer race is observed, both must be replaced. The inner and outer races are serviceable as a matched set only. Remove retainer ring (12). Slip inner face from pump shaft (53).

i. Assemble Hydraulic Pump.

(1) Inspect pump shaft (53, fig. 3-4) for excess wear or damage. If either spline shows damage or if bearing journal or seal surface shows galling, scoring or heat discoloration, replace shaft.

(2) If inner and outer races of ball bearing (13) are not damaged or won, assemble inner race on shaft (53) with retaining ring (12) using snapring pliers. If either inner or outer race is damaged, replace bearing as a set only. Install new inner race as described above.

(3) If previously removed, install inner retainer ring (47). Inspect old ball bearing. If galled or damaged, press new ball bearing (48) on pump shaft. Ball bearing (48) should seat against inner retainer ring (47).

CAUTION

Be sure not to deform inner retainer ring by forcing ball bearing (48) against it. If deformed, back ball bearing (48) off and reseat.

Care should be taken to support inner race of ball bearing (48) in arbor press while pressing in pump shaft (53). Heating the ball bearing in hot oil will aid in a smooth bearing installation. Install outer retaining ring (47).

(4) Install pump shaft (53, fig. 3-4), ball bearing (48), retaining ring (47), retaining ring (12) and inner race of bearing (13) through the front face of the mounting flange (55). (See fig. 3-28). The ball bearing (48, fig. 3-4) should fit snugly in the mounting flange (55). If ball bearing (48) doesn't seat easily, heat mounting flange (55) in hot oil and seat ball bearing in proper position. Do not drive the ball bearing (48) into place. Do not use the shaft seal assembly (51) to force bearing into seat. Check ball bearing (48) for free running by rotating pump shaft (53).

(5) Press a new shaft seal (50) into the seal assembly (51) using an arbor press with a 2-1/2 in. plug and loctite sealant. Fill cavity between oil lip and wiper lip approximately 3/4 full with multi-purpose grease. Install new O-ring (49) in mounting flange (55). To prevent possible cuts or abrasions, the O-ring (49) should be lightly coated with a multi-purpose grease. Wrap shim stock or other thin material around shaft spline and carefully slide seal assembly (51) over pump shaft (53).

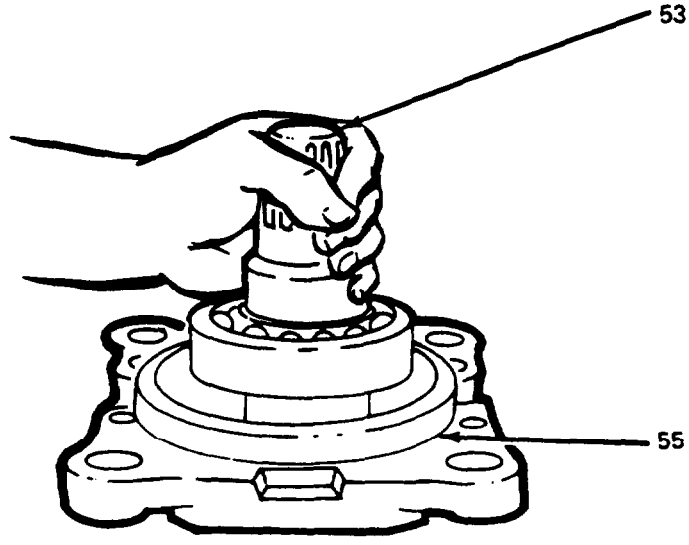

Figure *3-28. Installing Pump Shaft Assembly.*

(6) Replace O-ring (49) on mounting flange (55), line up bolt holes, and secure assembly (51) to mounting flange (55) with four capscrews (52) and lockwashers (2). Torque bolts to 11 lb-ft (14.9 N·m). (Refer to fig. 3-29.)

(7) If trunnion bearings (40, fig. 3-4) were removed from cam assembly (42) during disassembly, install new trunnion bearings (40) using an arbor press and a 1-1/2 in. plug, pressing against the lettered side of the trunnion bearing. It is extremely important that the bearing be started straight into the born. If the bearing cocks at any time during assembly, remove and discard the bearing Support the cam lug on the under side to avoid bending the lug. Outer face of trunnion bearing (40) should be pressed flush with outer face of cam assembly (42).

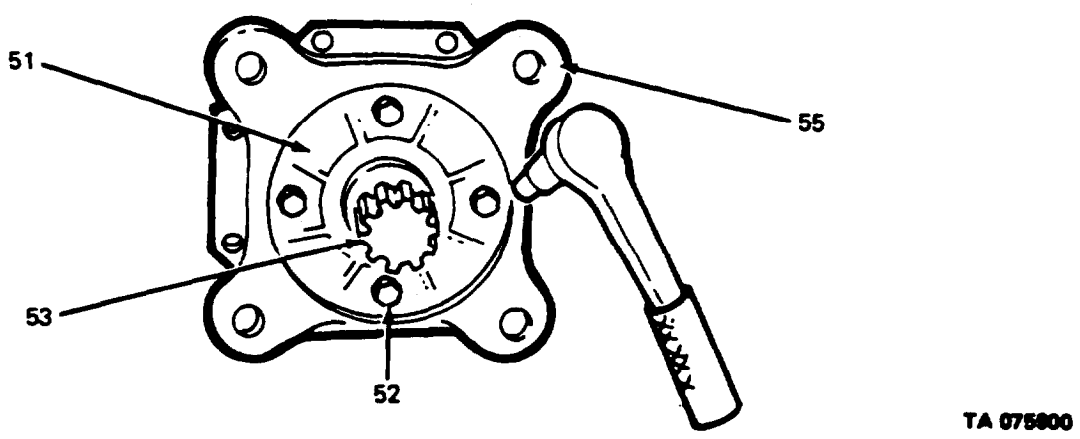

Figure 3-29. Installing Shaft Seal Retainer.

(8) Examine wear plate (34, fig. 34). Circular patterns burnished on the surface of the cam plate am normal. If circular patterns on the wear plate are extensive and can be felt with the fingernail, or if angular scratches are evident, the plate must be discarded. (Refer to fig. 3-30).

(9) Match up dowel pin (33, fig. 3-4) in cam assembly (42) with dowel pin hole in wear plate (34), and seat wear plate (34) in cam assembly (42). (Refer to fig. 3-31.) Check proper seating by pushing down on first one edge and then the opposite edge of the wear plate in a rocking motion. If any looseness is felt, remove cam plate and completely clean and compressed air dry both the cam assembly (42, fig. 3-4) and wear plate (34) to remove any foreign particles from beneath wear plate. Reposition wear plate in cam assembly (42) and repeat above procedure. If wear plate (34) refuses to seat properly, check plate for flatness and replace if necessary.

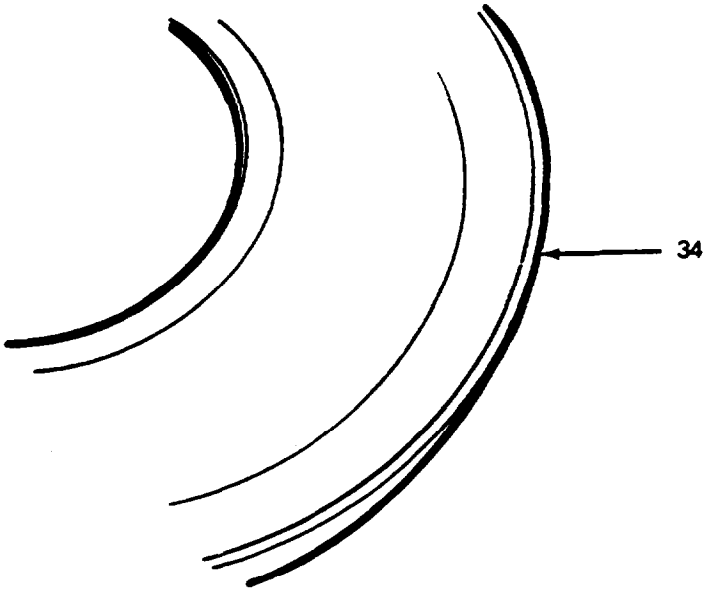

Figure 3-30. Cam 'Reaction to Wear" Plate.

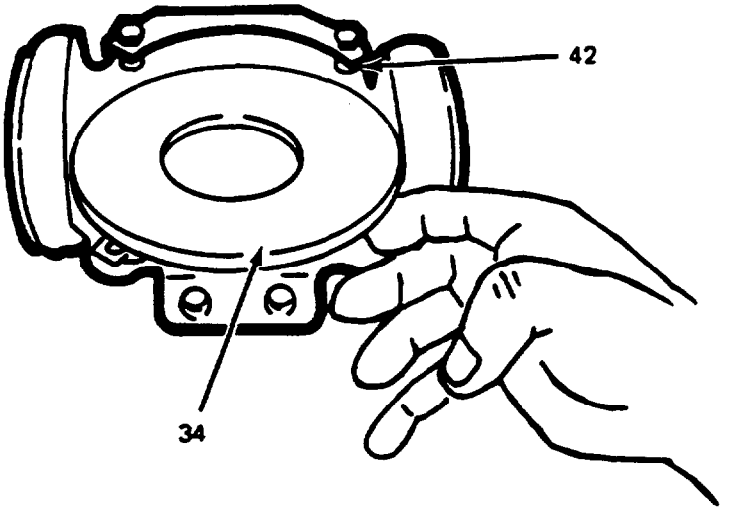

Figure 3-31. Installing Cam Wear Plate.

(10) With a push-pull motion, check for free play between bronze shoe, part of piston assembly (31) and steel piston body. If any play can be felt, the piston must be discarded. Inspect bronze piston shoes (31). During normal service, a dulling of the running surface is to be expected. If large scratches that can be felt with a fingernail are present (fig. 3-32) make several short passes over 500 grit emery paper on a lap surface. On the last few passes, place five to six sheets of emery paper as a cushion under the top sheet to obtain the proper edge sharpness. Check the reworked piston assembly (31, fig. 34) with tolerance limits in figure 3-33. If piston shoe does not fall within tolerance limits, discard reworked piston and replace. Check as follows:

(a) Check piston shoe for iron or steel particles imbedded in the running surface. If present, discard the piston.

(b) Often, large scratches on the piston shoe running surface will "heal over" if placed back in service. It is recommended, however, that all piston shoes with badly scratched running surfaces be either reworked within tolerance limits or replaced.

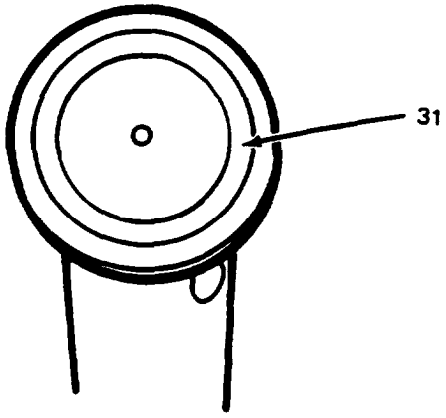

Figure 3-32. Inspecting Piston Shoe.

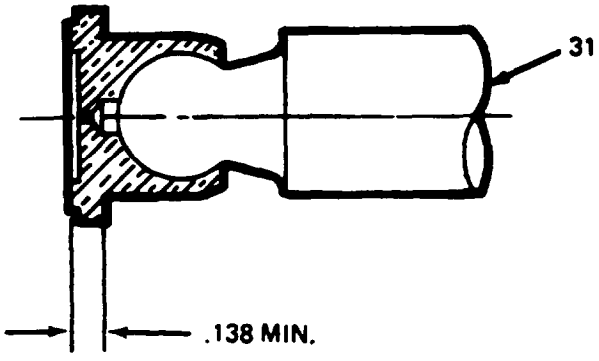

Figure 3-33. Piston Shoe Rework Tolerance.

NOTE

Hydraulic pumps may be encountered with either two groove or three groove pistons. (Refer to fig. 3-34.)

(c) Units supplied from the factory with two groove pistons may be refitted with three groove pistons as a nine piece set only.

(d) In a like manner, units supplied with three groove pistons may be refitted with two groove pistons again only as a nine piece set. Two groove and three groove pistons must not be mixed in the same unit.

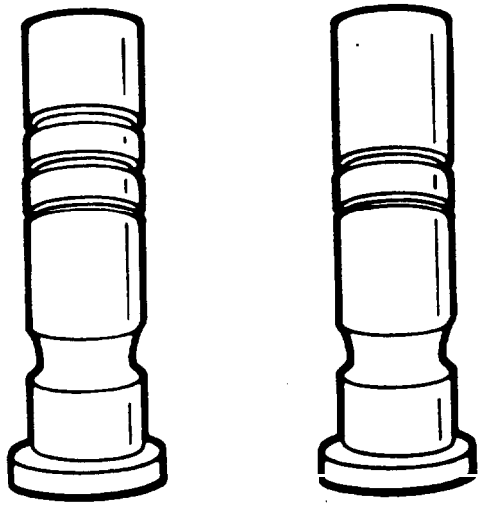

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Figure 3-34. Three Groove and Two Groove Pistons.

(11) Inspect steel piston body. If any galling is apparent or if any irregularities can be felt with the fingernail, the piston must be discarded. (Refer to fig. 3-35.) If damage is apparent, check the corresponding block assembly bore (30, fig. 3-4) for similar damage. Inspect piston return plate (32) for heat discoloration or cracks. Check for flatness. If discolored, cracked, or distorted, replace with a new return plate. (Refer to fig. 3-36.)

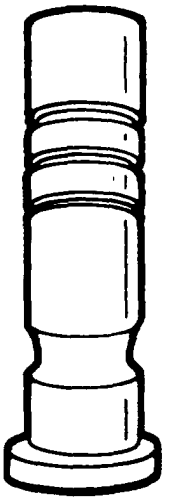


Figure 3-35. Inspecting Piston Body.

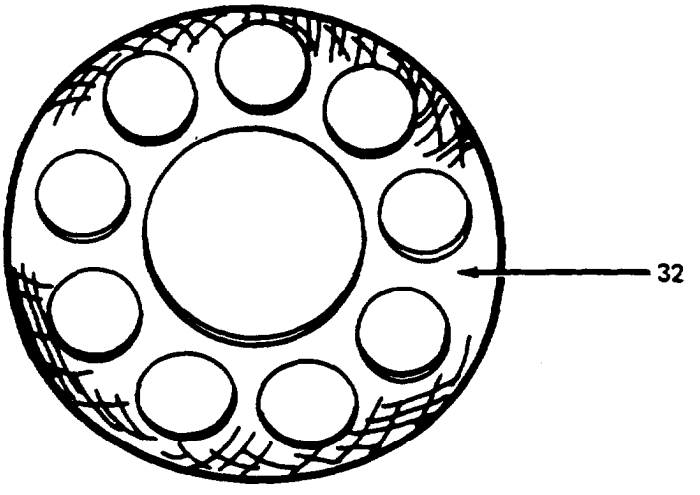


Figure 3-36. Return Plate Discolored by Heat.

(12) Install piston assemblies (31, fig. 3-4) in return plate (32). Used pistons must be so positioned in the return plate to allow placement of pistons in their respective block assembly bores as described.

(13) If return plate assembly, consisting of two spacers (41), bearing plate (39), clip (38), two new locktabs (37), and two capscrews (36), was disassembled; reassemble. Do not tighten capscrews (36).

(14) Spread a light film of oil over the surface of the wear plate (34) and slide piston (31) return plate (32) assembly into place.

(15) Assemble second of two return plate assemblies. Install two spacers (41), bearing plate (39), clip (38), two new lock tabs (37), and two capscrews (36). (Refer to fig. 3-37.) Torque four capscrews (36, fig. 3-4) to 13 lb-ft (17.6 N-m). Check clearance between each piston shoe and wear plate surface. Clearance should not be less than 0.003 or more than 0.007 in. Clearance of 0.0015 to 0.003 am acceptable only if the rotating group spins freely by hand with no binding or tight spots. Turn up locktabs (37).

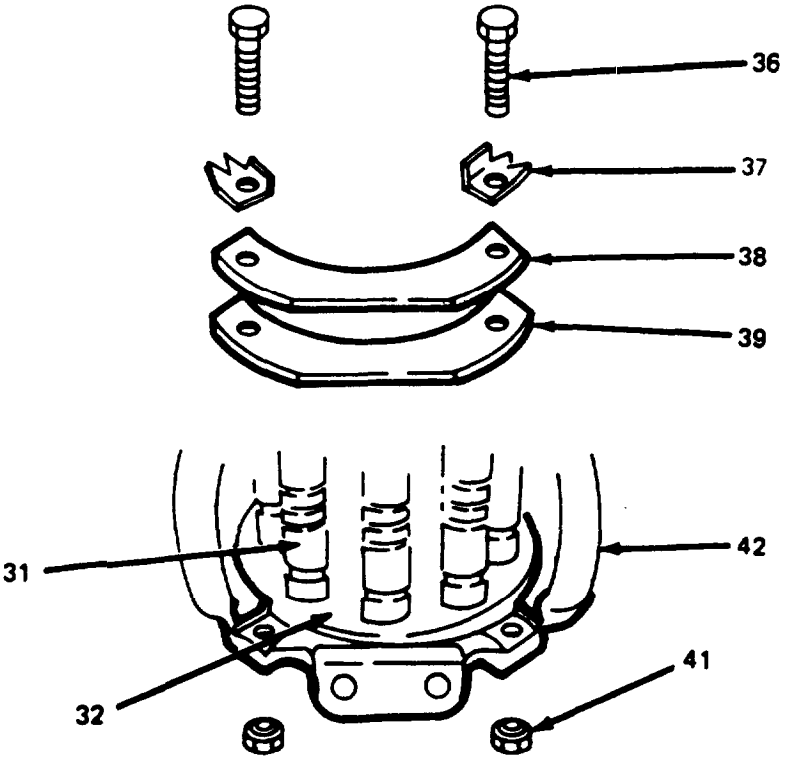


Figure 3-37. Return Plate Assembly.

(16) If block assembly (30) was completely disassembled, proceed with block reassembly as follows:

(a) Install the inner spring retainer (44), spring (45) and spring retainer (48) in block assembly (30).

(b) Place block in an arbor press and compress spring (45).

(c) Install spring retaining ring (47).

(d) Gradually release spring (45) until it seats against retaining ring (47).

(17) Place cam assembly (42) on pump shaft (53) with the block assembly (30) still removed, Insert cam assembly (42) into housing (24) and install block assembly (30) over piston assembly (31). (Refer to fig. 3-40.)

CAUTION

Be sum used pistons are returned to their original bores. A slight rotary motion of the block will often aid in positioning the block over the pistons. Do not force the block over the piston assemblies. (Refer to fig. 3-38.)

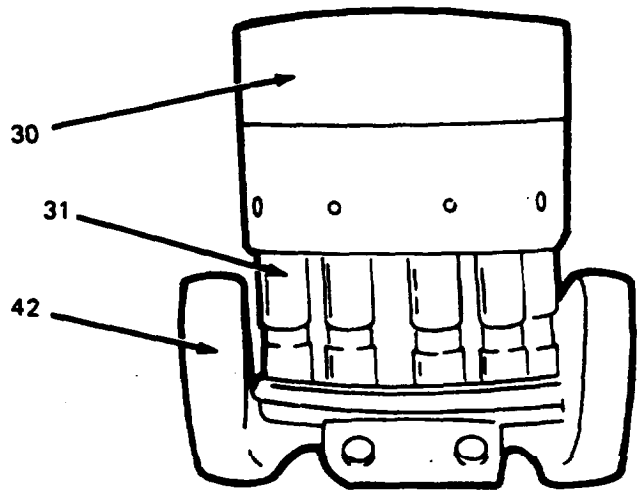


Figure 3-38. Rotating Group Assembly.

(18) Lower rotating group consisting of cam assembly (42, fig. 3-4), piston assembly (31) and block assembly (30) over pump shaft (53) and on to mounting flange (55). (Refer to fig. 3-39.) Rotate cam assembly (42, fig. 3-4) to accept trunnions (27) through holes in the housing (24).

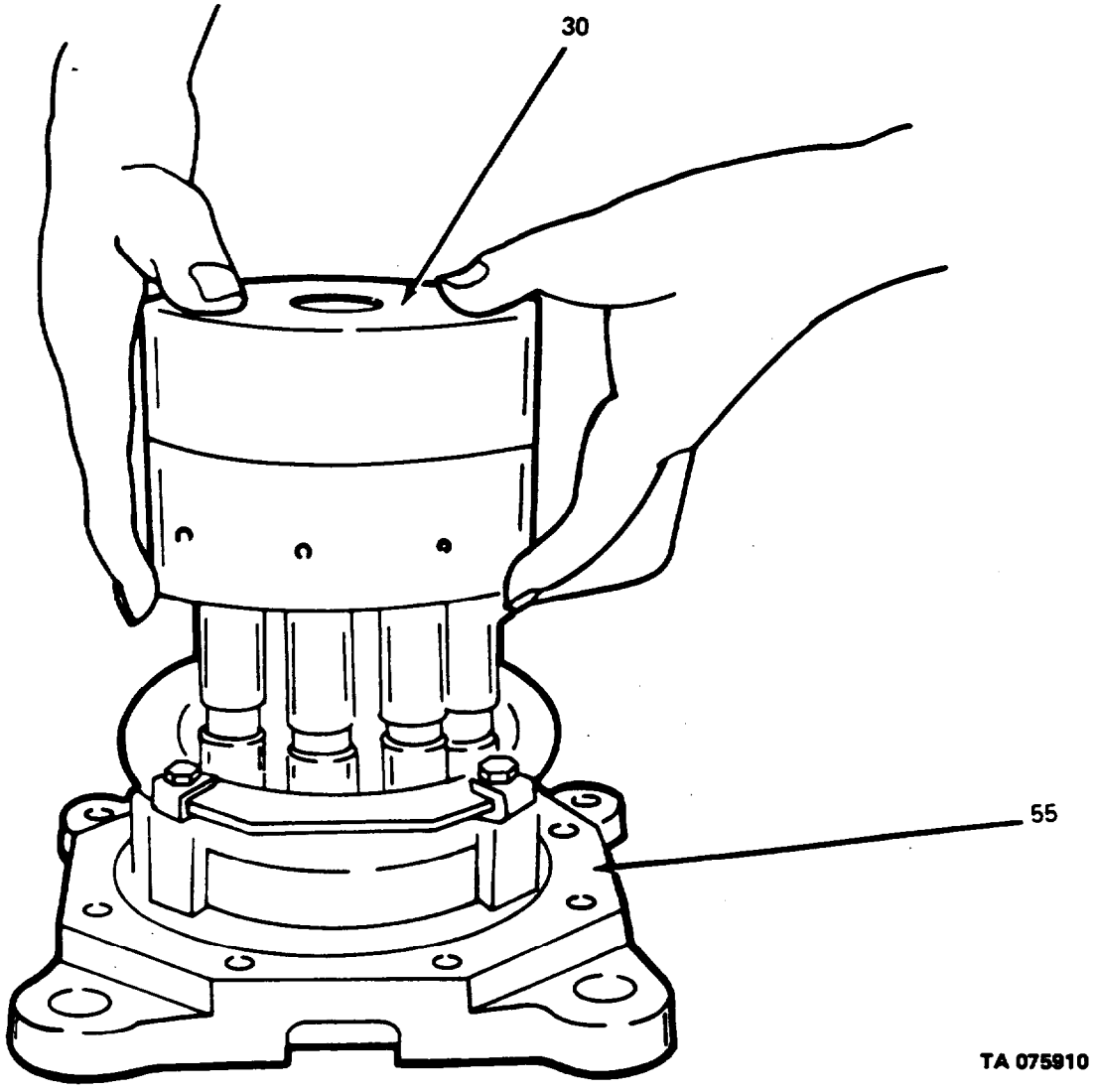


Figure 3-39. Positioning Rotating Group.

(19) Install new O-ring (54) on mounting flange (55). Lower housing (24) carefully over rotating group and on to mounting flange (55) being careful not to disturb the assembled, internal parts. (Refer to fig. 3-40.) Carefully place block assembly (30, fig. 3-4) onto pistons alining oil cavity with trunnion (27). Install capscrews (56) and lockwashers (20) and tighten, but do not torque.

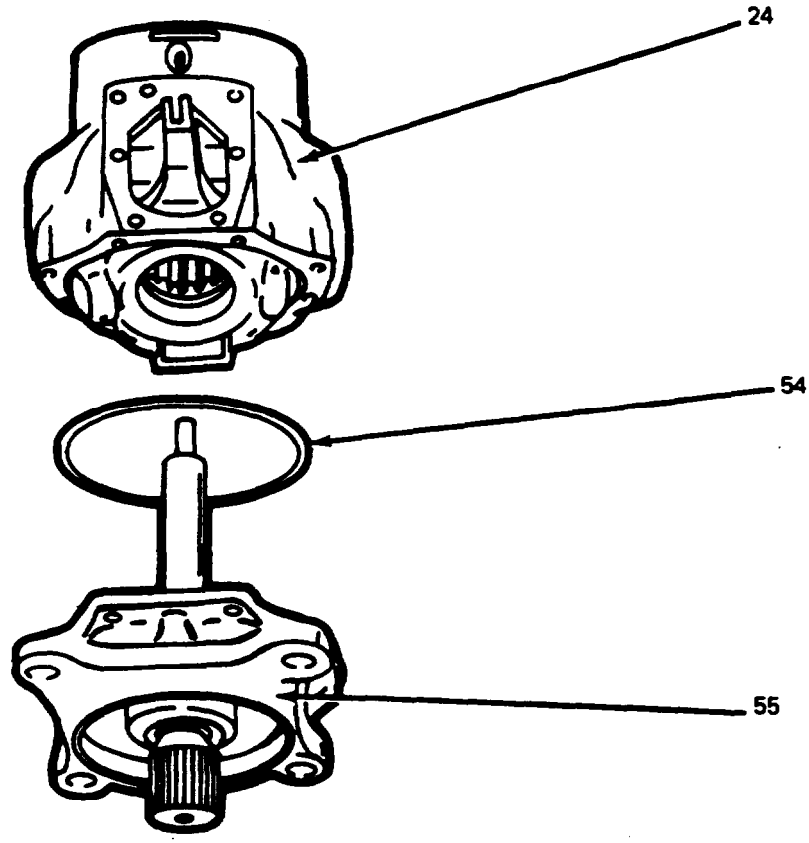


Figure 3-40. Positioning Pump Housing.

(20) Inspect the trunnions (27). Small nicks or burrs can be removed with 500 grit emery cloth. If galling or scoring can be felt with the fingernail, the trunnion should be discarded. (Refer to fig. 3-41.)

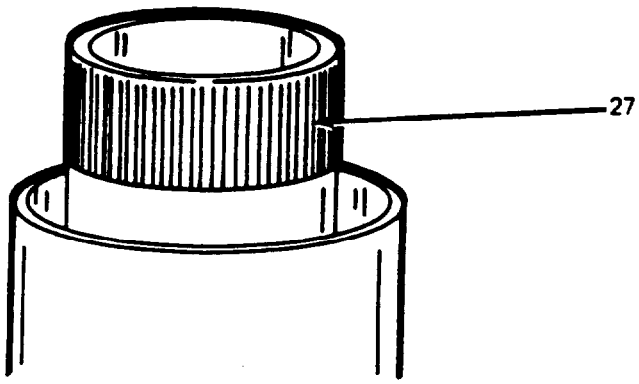


Figure 3-41. Inspecting Trunnions.

(21) Assemble new bearings (29, fig. 3-4) and gaskets (28) on trunnions (27). Insert a large screwdriver through the cam lever opening in the housing and between the cam assembly and the back face of the flange. A slight downward pressure on the screwdriver will lift the cam assembly into position. If the trunnions do not slide easily into place, rotate the trunnions slowly back and forth while repositioning the cam with the screwdriver until the trunnions seat properly. (Refer to fig. 3-42). Install eight capscrews (25, fig. 3-4) and lockwashers (26) in trunnions and torque to 11 lb-ft (14.9 N-m).

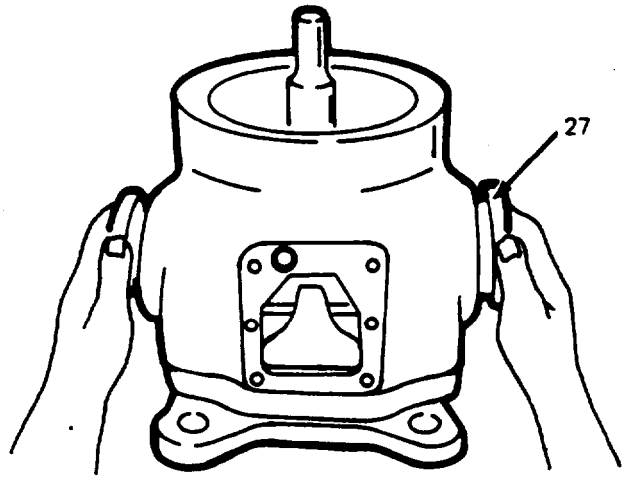


Figure 3-42. Installing Trunnions.

(22) Inspect pump cover (21) bronze face for signs of cavitation, excessive wear, contamination or other damage. (Refer to fig. 343.) Observe the following:

(a) If circular wear patterns cannot be felt with a fingernail and if there are no nicks scratches or other surface blemishes, one or two passes across 500 grit emery paper on a lap surface will put the bronze face in like-new condition. If scratches or the wear pattern can be felt with a fingernail use 500 grit emery as described above and continue to make passes until wear pattern or scratches can' no longer be felt. Removal of scratches that may cross the lands on either side of the kidney port is extremely critical. Every effort must be made to remove them.

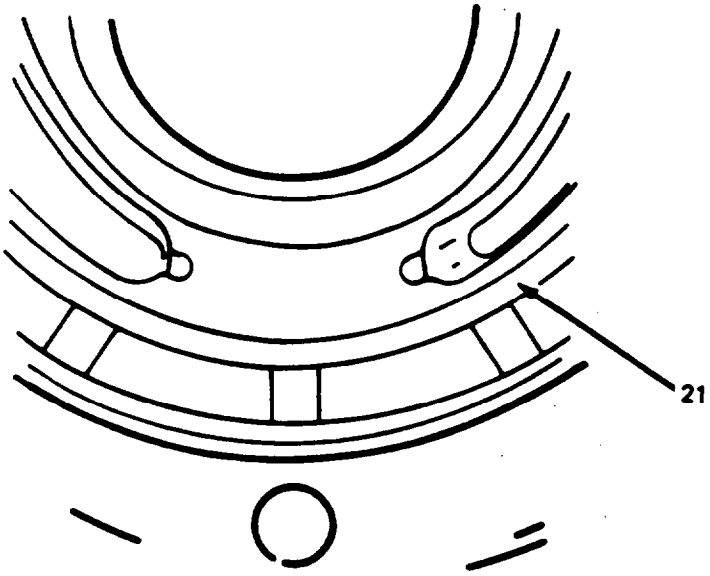


Figure 3-43. Inspecting Pump Cover.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

(b) Wash reworked cover in SD-2 solvent and dry with compressed air. Check against tolerances in figure 3-44. If the reworked pump cover (21, fig. 3-4) does not fall within the tolerance limits, it must be discarded.

NOTE

It is important that if either the inner or outer race is to be replaced, the entire bearing be replaced.

(23) If outer race of bearing (13) was removed during disassembly or if the inner race was removed and replaced, install outer race in pump cover (21) using an arbor press and plug of proper size.

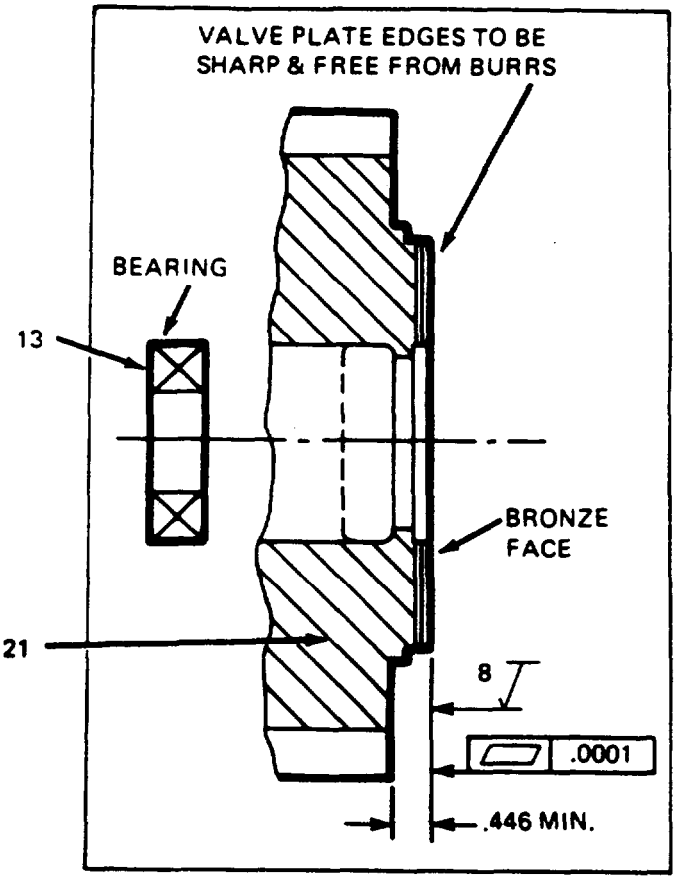


Figure 3-44. Pump Cow Rework specifications.

(24) Apply Vaseline to new O-ring (23) and position on the pump cover (21). Fill pistons with new transmission oil allowing a small excess oil to spill over the face of the block assembly (30).

(25) Place new cover gasket (22) on housing and position cover as shown in figure 3-45 utilizing reference marks in housing and cover. To operate properly, the cover must be assembled in its original position. Install two short capscrews (35, fig. 3-4), four long capscrews (19), and six lockwashers (20). Torque capscrews opposite one another to 40 lb-ft (54 N•m) until all six capscrews are tight.

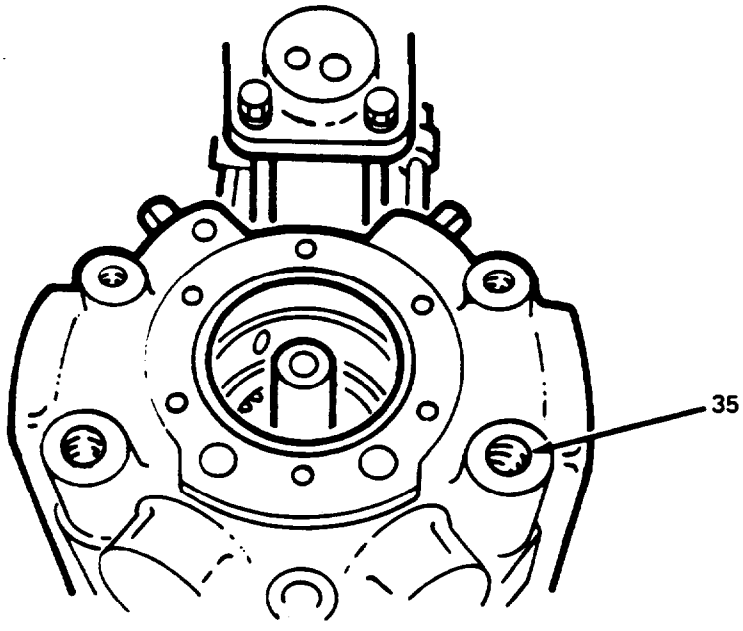


Figure 3-45. Installing Pump Cover.

(26) Position bearing (13). Lubricate the entire charge pump cavity with clean transmission oil.

(27) Install valve plate (10, fig. 3-46) over bearing (13, fig. 34). Install on to shaft assembly pump shaft (53).

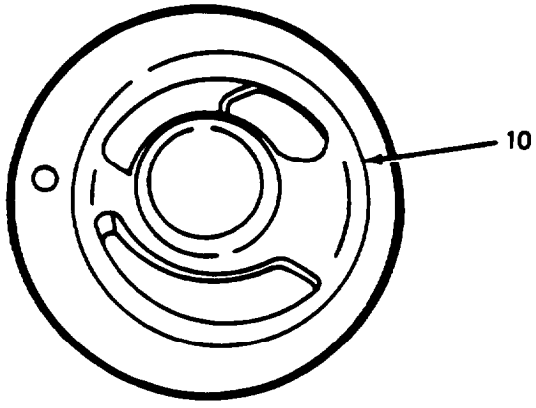


Figure 3-46. Charge Pump Lower Valve Plate.

(28) Inspect charge pump assembly (8, fig. 3-4) for damage or excess wear. If inner or outer rotor are scratched or galled, the gears must be replaced as a set. (Refer to fig. 3-47.) Rotate one gear within the other to check for free action. If action seems stiff in a particular area, use a hard Arkansas stone and lightly touch up the gear edges. Recheck for free rotation.

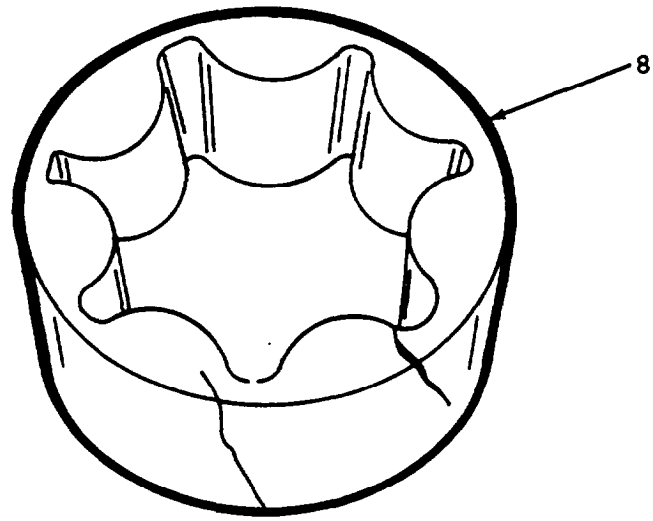


Figure 3-47. Inspecting Outer Rotor.

(29) Position pin (9, fig. 3-4) in shaft keyway. Install charge pump assembly (8) over keyway on pump shaft (53). Check for proper pin engagement by attemtping to rotate inner gear on shaft. If gear turns on shaft, remove gear, reposition pin and repeat installation of charge pump assembly.

(30) Install the spacer assembly (7) over the charge pump assembly (8) positioning the short end of the roll pin in the lower valve plate (10). (Refer to fig. 3-48.) Use a depth gage to confirm 0.001-0.0035 clearance between the top of the spacer assembly (7, fig. 3-4) and the top of the charge pump assembly (8). (Refer to fig. 3-49.)

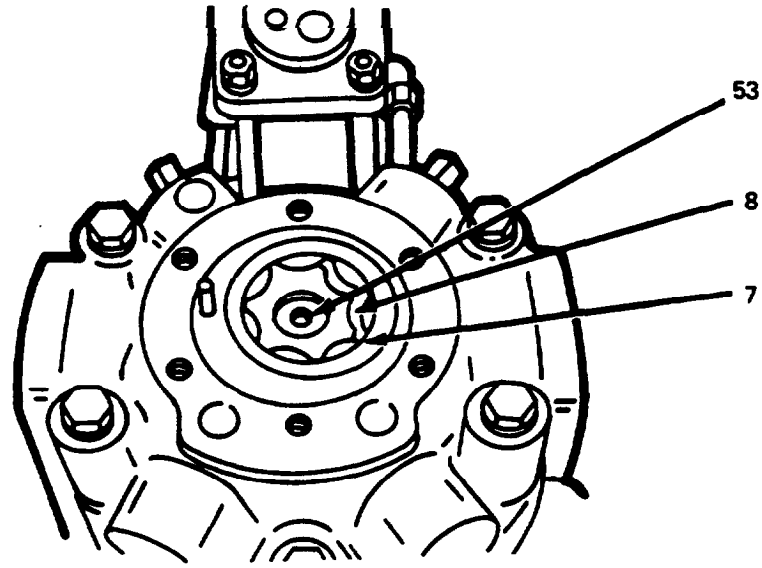


Figure 3-48. Charge Pump Eccentric Inner and Outer Rotor.

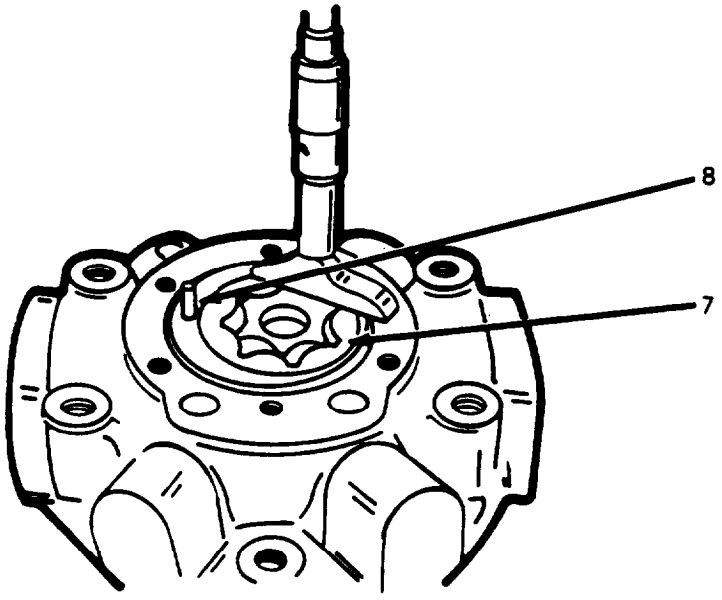


Figure 3-49. Checking Charge Pump Clearance.

(31) Install new O-ring (5, fig. 3-4) to outside of spacer assembly (7). The direction of pump rotation is Indicated by an arrow cast on the charge pump cover. To operate properly, the plate (4) must be installed to correspond with the porting in the pump cover (3). Install plate over roll pin in spacer assembly (7). (Refer to fig. 3-50.)

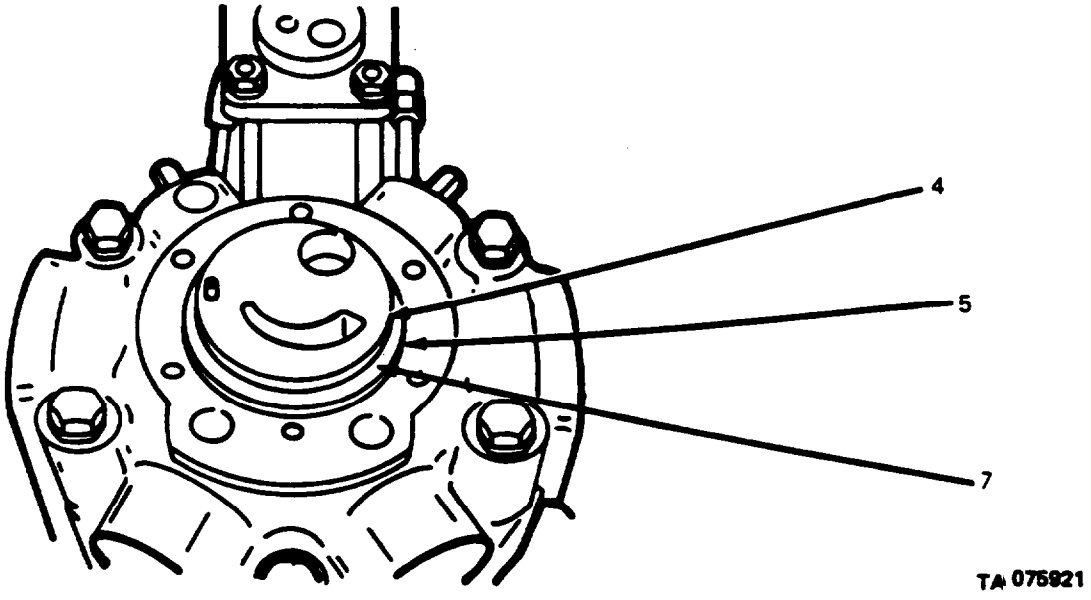


Figure 3-50. Charge Pump Upper Valve Plate.

(32) From pump cover (3, fig. 3-4), remove all shims for testing.

(33) Position pump cover (3) over plate (4) so that the spacer assembly dowel pin (6) alines with roll pin hole in the pump cover (3). (Refer to fig. 3-51.) Measure gap between pump cover (3) and pump cover (21) with feeler gage in at least four places. Remove pump cover (3, fig. 3-4) and install shim gasket (14) equal to maximum measured gap plus 0.002 in. Replace pump cover (3), capscrews (1) and lockwashers (2) and torque alternately to 11 lbs-ft (15 N·m).

(34) Install valve assemblies consisting of plugs (15), O-rings (16), valve springs (17), and plungers (18).

(35) Rotate pump shaft (53) to check for binding in the charge pump. If shaft will not turn, remove pump cover (3) and plate (4), clean all parts, reassemble with light oil and recheck charge pump tolerances as described above.

NOTE

During reassembly, check all moving parts for smooth operation. It is essential that there be no binding or interference between any internal moving parts.

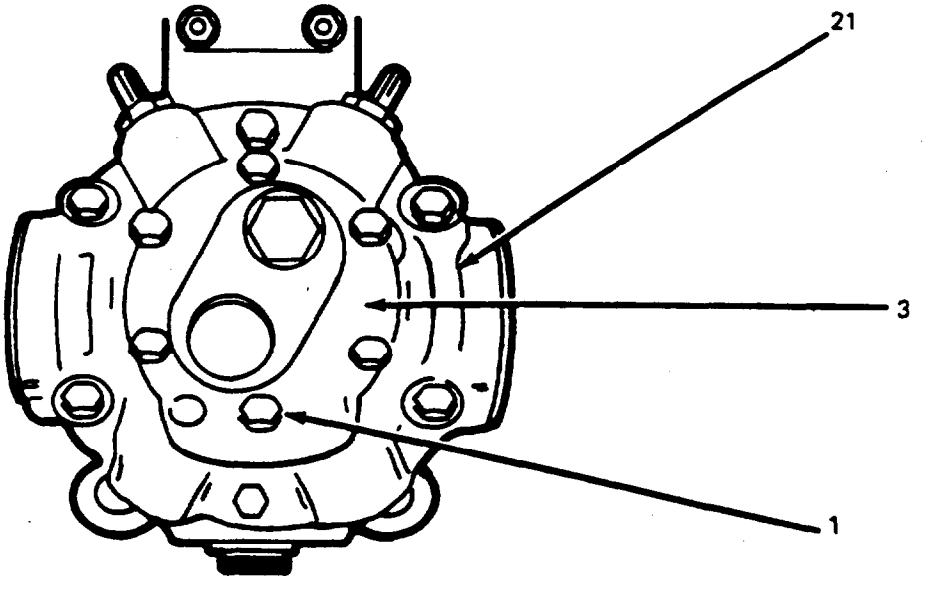


Figure 3-51. Charge Pump Cover.

k. Assemble Override Control. (Refer to fig. 3-10.)

(1) Inspect servo plunger assembly (30).

(2) Install housing cover (3) with four capscrews (1), lockwashers (2), and a new gasket (4). (Refer to fig. 3-52.) Torque capscrews to 11 lb-ft (15 N·m).

(3) If removed during disassembly, inspect four studs (21, fig. 3-10) for damaged threads, bends, twists, or cracks, and replace if necessary. Use Loctite sealant, Grade 3, on coarse threaded end of studs and install in housing (5). Torque studs down tight.

(4) Inspect piston assembly (27) for nicks or scratches around the perimeter. If observed, replace piston assembly (27). Inspect link end of plunger assembly (30) for cracks. Replace plunger assembly (30) if cracks are found. Install piston assembly (27) on plunger assembly (30) with washer (32) and self-locking nut (31). Torque self-locking nut (31) to 35 lb-ft (47 N-m).

(5) Install three new O-rings (20) on housing (5), piston assembly (27), and cylinder cover (22). Install plunger assembly (30) in housing (5).

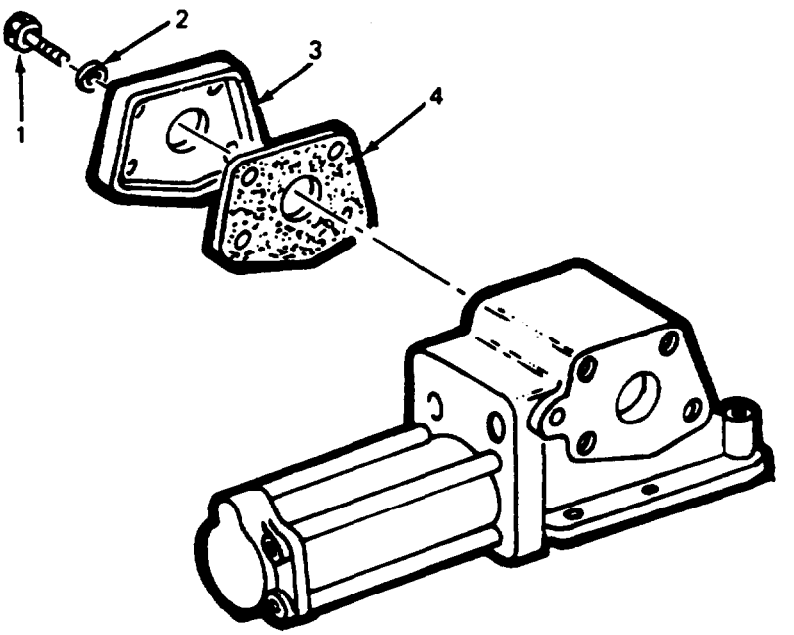


Figure 3-52. Housing Cover.

(6) Lubricate the entire inner surface of cylinder tube (26) with clean transmission oil. Install tube (261 over piston assembly (27) and seat tube (26) against housing (5). (Refer to fig. 3-53.)

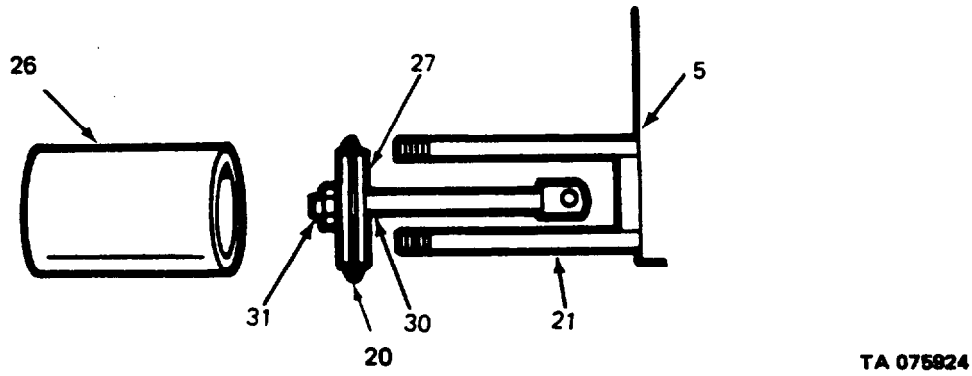


Figure 3-53. Cylinder with Servo Plunger.

(7) Install two new O-rings (33, fig. 3-54) on each end of transfer tube (34). Lubricate the ends of transfer tube (34) and insert in cylinder cover (22). Install cylinder cover (22) with new O-ring (20) and transfer tube over studs (21) and seat into end of tube (26). Care must be taken not to damage transfer tube O-ring (33) as the transfer tube (34) is being positioned in housing (5). Install four lock-, washers (24) and hex nuts (23) on studs (21) and torque. to 6 lb-ft (8 N•m). Care should be taken to torque the hex nuts (23) gradually and in sequence to insure proper seating of the cylinder cover (22) and to minimize the possibility of twisting a stud to the breaking point.

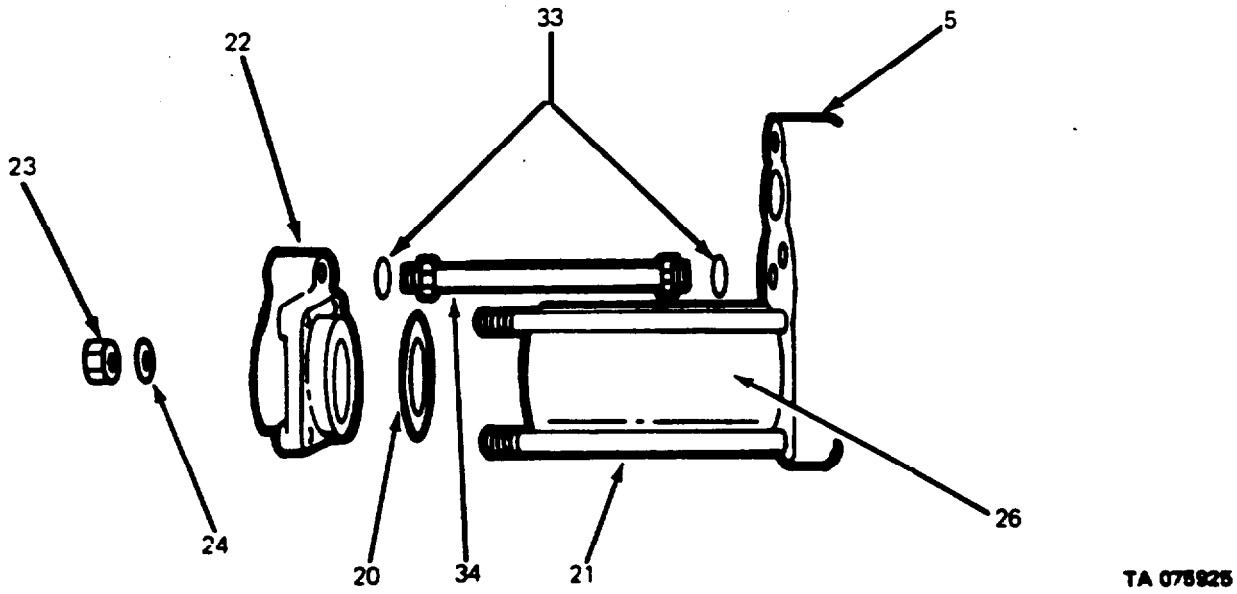


Figure 3-54. Cylinder Cover with Transfer Tube.

(8) Insert valve sleeve assembly (11) up through the bottom of the housing (5). Lubricate servo valve spool (7) with clean transmission oil and insert into control housing through valve sleeve (11). Check for free movement. Any roughness may be removed with 500 grit emery cloth. (Refer to fig. 3-55.)

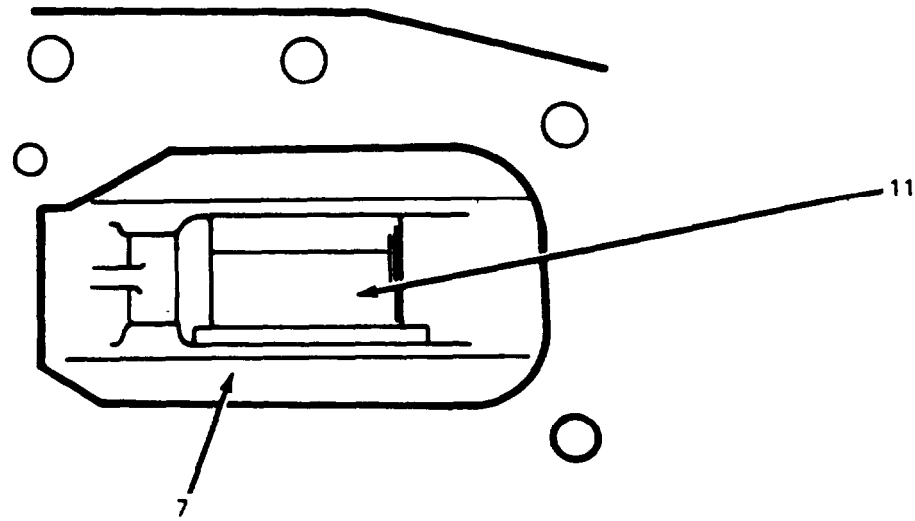


Figure 3-55. Valve Sleeve in Piston.

(9) Using seal plate assembly (14, fig. 3-56) and a new seal (13) fill the cavity between seal lips half full with multi-purpose grease. Position seal (13), plate (14), and gasket (12) on housing, being cautious not to damage the lip seal. Install upper two capscrews (16) and lockwashers (15). Torque to 11 lb-ft (15 N·m).

NOTE

To check plunger action, introduce compressed air to internal feed port. Actuate valve spool (7, fig. 3-10) forward and backward from detented position to confirm free travel to plunger assembly (30).

(10) Place a new gasket (9) on pump (or motor) housing using a thin coat of clean transmission oil to hold it in place.

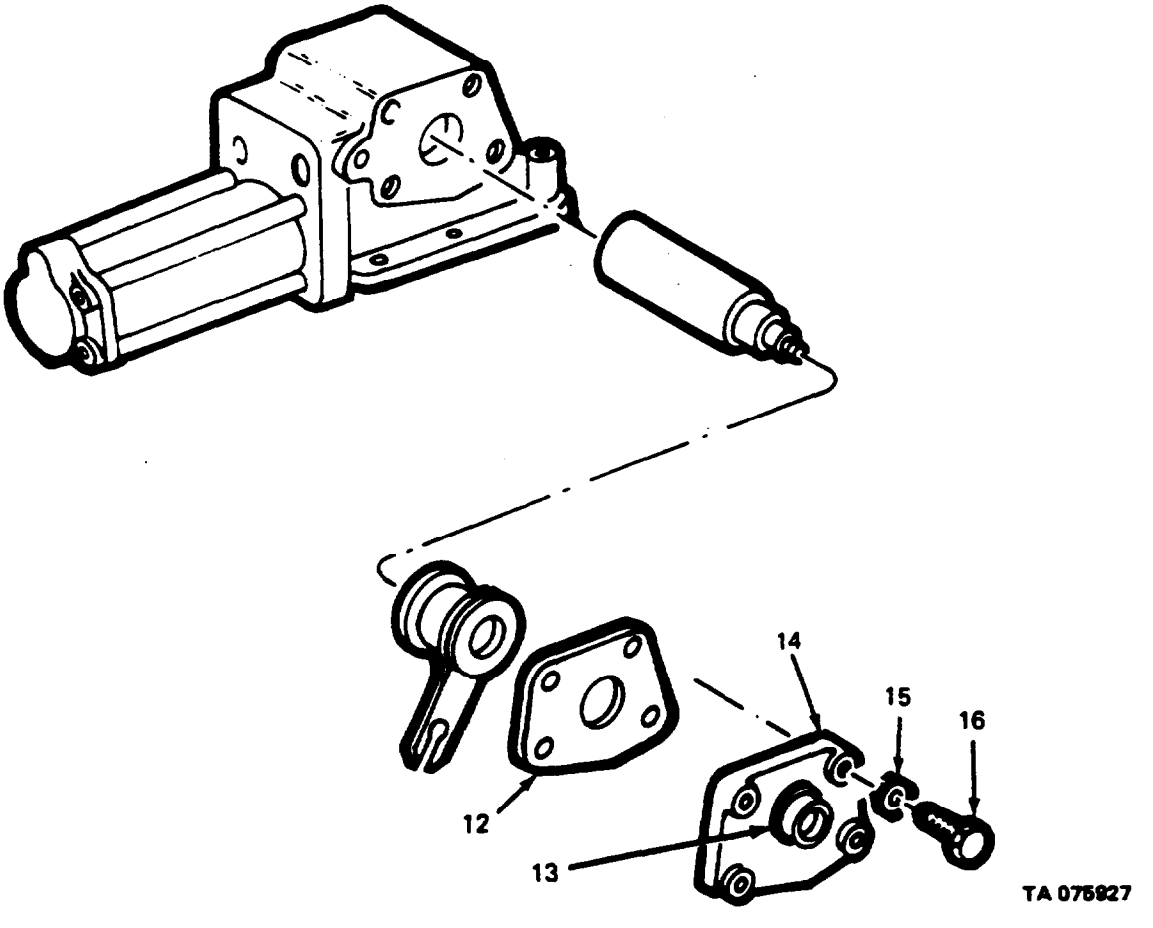


Figure 3-56. Control Valve Spool with Cam Follower.

(11) Position housing (5, fig. 3-57) so that rod link portion of plunger assembly (30) Slips into slot in pump cam arm. Place a clean shop rag around the cam arm and insert clevis pin (28) with one new retaining ring (29) attached in counterbored side of cam arm and through rod link. Install the second retaining ring (29) on clevis pin (28).

(12) Install new O-ring (10, fig. 3-10) in seat on pump housing using a thin coat of grease to hold it in place.

(13) Install control assembly to pump using four short and two long capscrews (6 and 8) and six lockwashers (2), making sure the slot in the valve sleeve assembly (11) is positioned over the pin on the cam lever assembly and that the O-ring (10) is properly seated. Torque six capscrews to 11 lb-ft (15 N-m). Replace lever and secure with locknut (17) and washer (18).

I. Installation of Hydraulic Pump. (Refer to fig. 3-3.)

(1) Support hydraulic pump on a hydraulic jack; then line up the mounting holes in the pump with mating holes in vehicle frame.

(2) Install four capscrews (11), washers (12), and nuts (13).

(3) Install pump propeller shaft. (Refer to para 2-14.)

(4) Connect pump control to lever (1, fig. 3-3).

(5) Connect four lines to pump; hose (10), hose (6), and two hoses (5).

(6) Replenish oil supply in hydraulic tank. (Refer to LO 5-3895-371-12.)

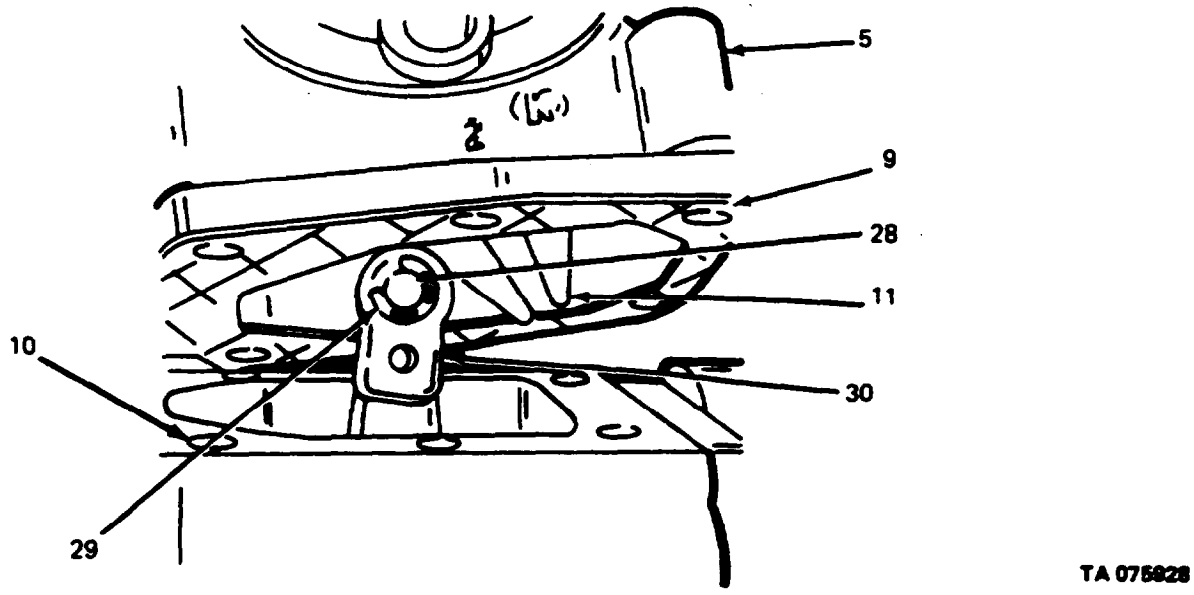


Figure 3-57. Cam Actuator Arm and Cam Follower.

Section V. REPAIR OF HYDRAULIC MOTOR

3-6. Hydraulic Motor.

a. Removal of Hydraulic Motor. (Refer to fig. 3-58.)

(1) Remove stowage box. (Refer to para 2-11.)

(2) Disconnect tachometer cable (5, fig. 3-58).

(3) Disconnect three hydraulic lines (30, (31), (32) at hydraulic motor (17).

(4) Remove hydraulic hose (27) from elbow (26) and tee (29).

(5) Remove override cable clamp (11) by removing attaching capscrew (10), nut (14), and washer (13); then lift out override cable (9) and position it out of the way for pump removal.'

(6) Disconnect universal drive by removing eight capscrews (1), nuts and washers (2).

(7) Remove capscrews (12) with nut (16) and lockwashers (15); then lift out rail (18) with attached hydraulic motor (17).

(8) Unscrew two capscrews (6) and washers (8); lift off sprocket cover (7).

(9) Remove three capscrews (19), lockwashers (21) and nuts (22) that fasten hydraulic motor (17) to its mounting bracket and separate the motor from the rail (18).

(10) Slip tachometer drive chain (20) from flange sprocket (23); separate from drive coupling (25).

(11) Remove drive coupling (25) by removing three each capscrews (24), nuts (3), and lockwashers (4).

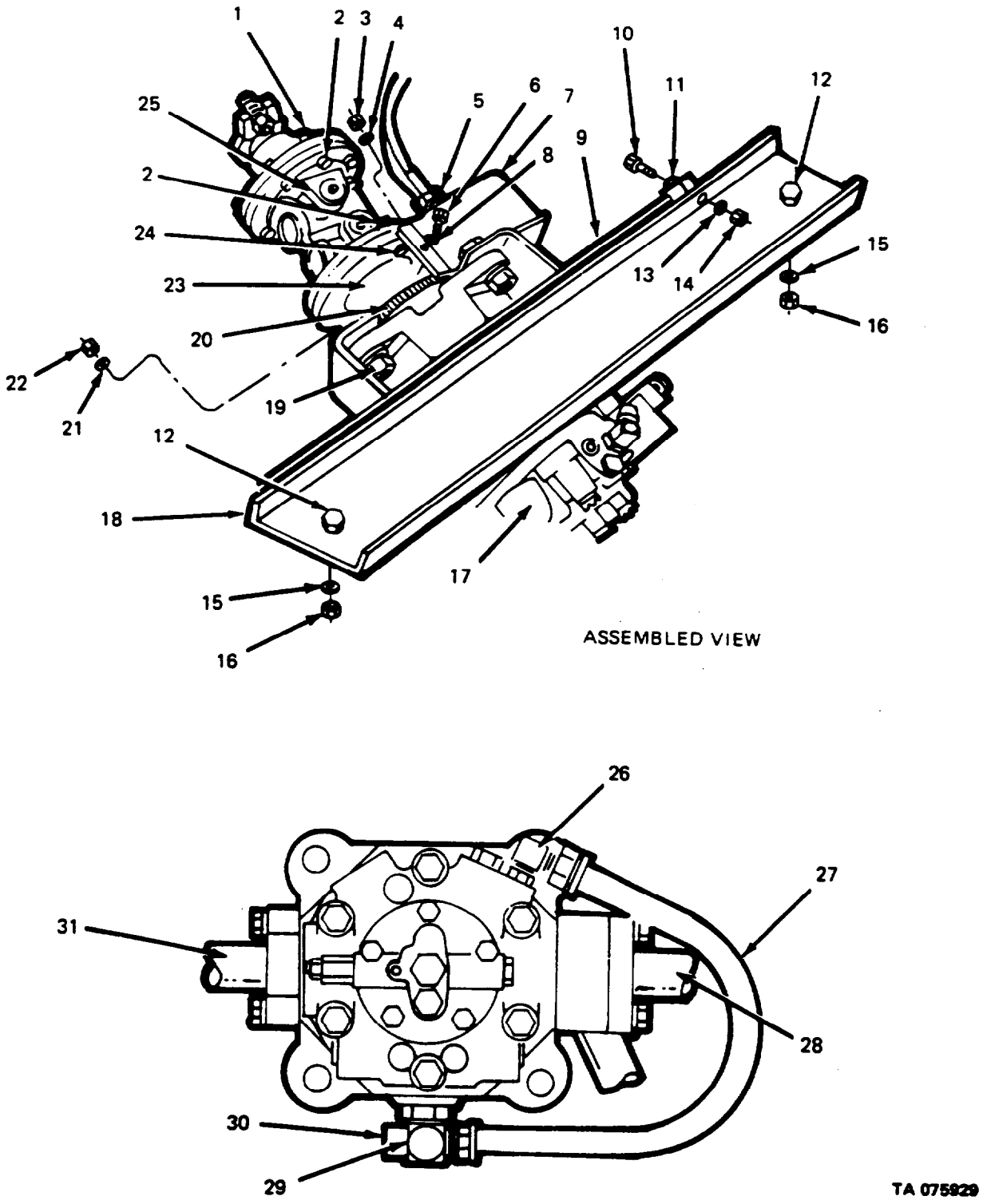
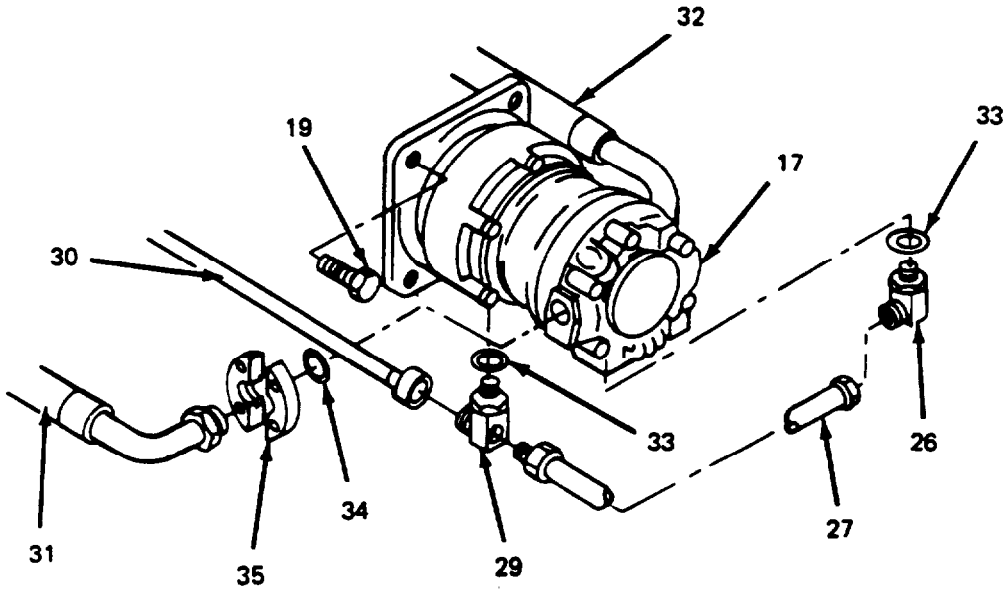


Figure 3-58. Remove/Install Hydraulic Motor (Sheet 1 of 2).



EXPLODED VIEW

LEGEND:

1. CAPSCREW (8)
2. NUT AND WASHER (8)
3. NUT (3)
4. LOCKWASHER (3)
5. TACHOMETER CABLE
8. CAPSCREW
7. SPROCKET COVER
8. WASHER
9. OVERRIDE CABLE
10. CAPSCREW
11. OVERRIDE CABLE CLAMP
12. CAPSCREW (2)
13. WASHER
14. NUT (2)
15. LOCKWASHER (2)
16. NUT
17. HYDRAULIC MOTOR
18. RAIL
19. CAPSCREW
20. TACHOMETER DRIVE CHAIN
21. LOCKWASHER
22. NUT
23. FLANGE SPROCKET
24. CAPSCREW (3)
25. DRIVE COUPLING
26. ELBOW
27. HYDRAULIC HOSE
20 LINE
29. TEE
30. LINE
31. LINE
32. LINE
33. O-RING
34. O-RING
35 SPLIT FLANGE

TA 075930

Figure 3-58. Remove/Install Hydraulic Motor (Sheet 2 of 2).

b. Disassemble Tachometer Drive Assembly. (Refer to fig. 3-59.)

(1) Remove two capscrews (1) and washers (2); remove guard (9), if not previously removed.

(2) Loosen set screw (6) from cover (5) and remove housing (7) and key (10) with chain (3) from cover (5).

(3) Loosen set screw (6) in housing assembly (7) and remove shaft and bearing assembly (8).

(4) Loosen set screw (6) in sprocket (4) and remove with key (11).

c. Assemble Tachometer Drive Assembly. (Refer to fig. 3-59.)

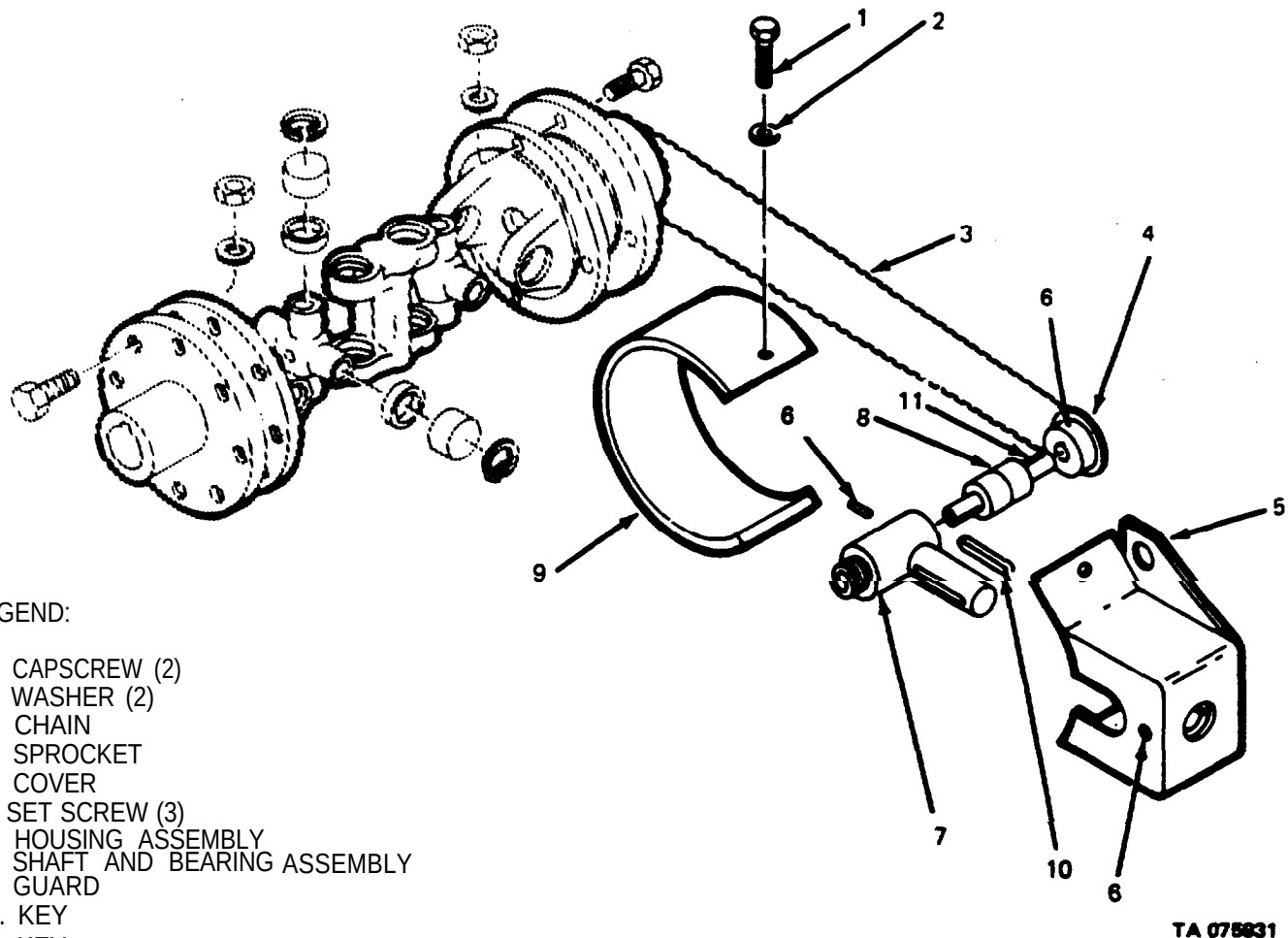
(1) Install key (11) into shaft and bearing assembly (8).

(2) Install sprocket (4) on shaft and bearing assembly (8) and tighten set screw (6).

(3) Install shaft and bearing assembly (8) into housing assembly (7) and tighten set screw (6).

(4) Install housing assembly (7) with key (10) and chain (3) into cover (5) and tighten set screw (6).

(5) Install guard (9) with two capscrews (1) and washers (2).



LEGEND:

1. CAPSCREW (2)
2. WASHER (2)
3. CHAIN
4. SPROCKET
5. COVER
6. SET SCREW (3)
7. HOUSING ASSEMBLY
8. SHAFT AND BEARING ASSEMBLY
9. GUARD
10. KEY
11. KEY

Figure 3-59. Tachometer Drive - Hydraulic.

d. General Instructions (Before Disassembly of Hydraulic Motor).

(1) Parts and work area must be kept absolutely clean at all times. The Dynapower unit must be cleaned externally with a commercial degreaser or steam and dried before hoses are disconnected and before the unit is removed from the application.

(2) Most service operations are carried out with the motor in a shaft down position. A 7 in. sq. block of wood, 4 in. thick with a 2 in. round center hole may be used as a platform upon which the motor may be positioned. A similar size hole in a work bench surface may be utilized as can the corrugated cardboard spacer packed at the end of a new Dynapower motor.

(3) When performing minor service work, do not remove bearings, dowel pins, or cylinder block components unless they exhibit signs of galling, scratching, or excessive wear. On major overhauls, replace all bearings regardless of condition.

e. Disassemble Hydraulic Motor. (Refer to fig. 3-58 and 3-60.)

(1) Place hydraulic motor assembly (1) in a shaft down position. Remove plug (61) with O-ring (50).

(2) Remove by-pass hose (27, fig. 3-58) from cover (35, fig. 3-60) and housing (28).

(3) Remove tee (29, fig. 3-58) and O-ring (33) from housing (28, fig. 3-80).

(4) Remove elbow (26, fig. 3-58) and O-ring (33) from cover (35, fig. 3-60).

(5) Remove high pressure relief valve plug (59), O-ring (31), spring (58), and high pressure relief valve plunger (57).

(6) Remove capscrew (53, fig. 3-60), hex nut (55), and spring seat assembly (54) as a unit to prevent changing of the setting (if pressure valve needs adjusting see para 3-5). Then remove O-ring (52), inner spring seat (51), O-ring (50), spring (49), valve pilot (48), and seat (47).

(7) Remove low pressure relief valve plug (30), O-ring (31), spring (32), and plunger (33). (Refer to fig. 3-61.)

(8) Remove two shuttle valve plugs (40), and O-rings (31). Slide shuttle valve assembly (39) from cover (35). (Refer to fig. 3-62.)

(9) Unless leakage is experienced, do not remove plugs (38, fig. 3-60) or O-rings (37). If leaking, replace O-rings (37).

(10) If cover (35) is to be removed it is important that the cover-housing relationship be preserved. Mark both the housing (28) and cover (35) in such a way that upon reassembly, the relationship can be maintained. For example, a scratch in the paint across the cover-housing parting line can be used. (Refer to fig. 3-63.)

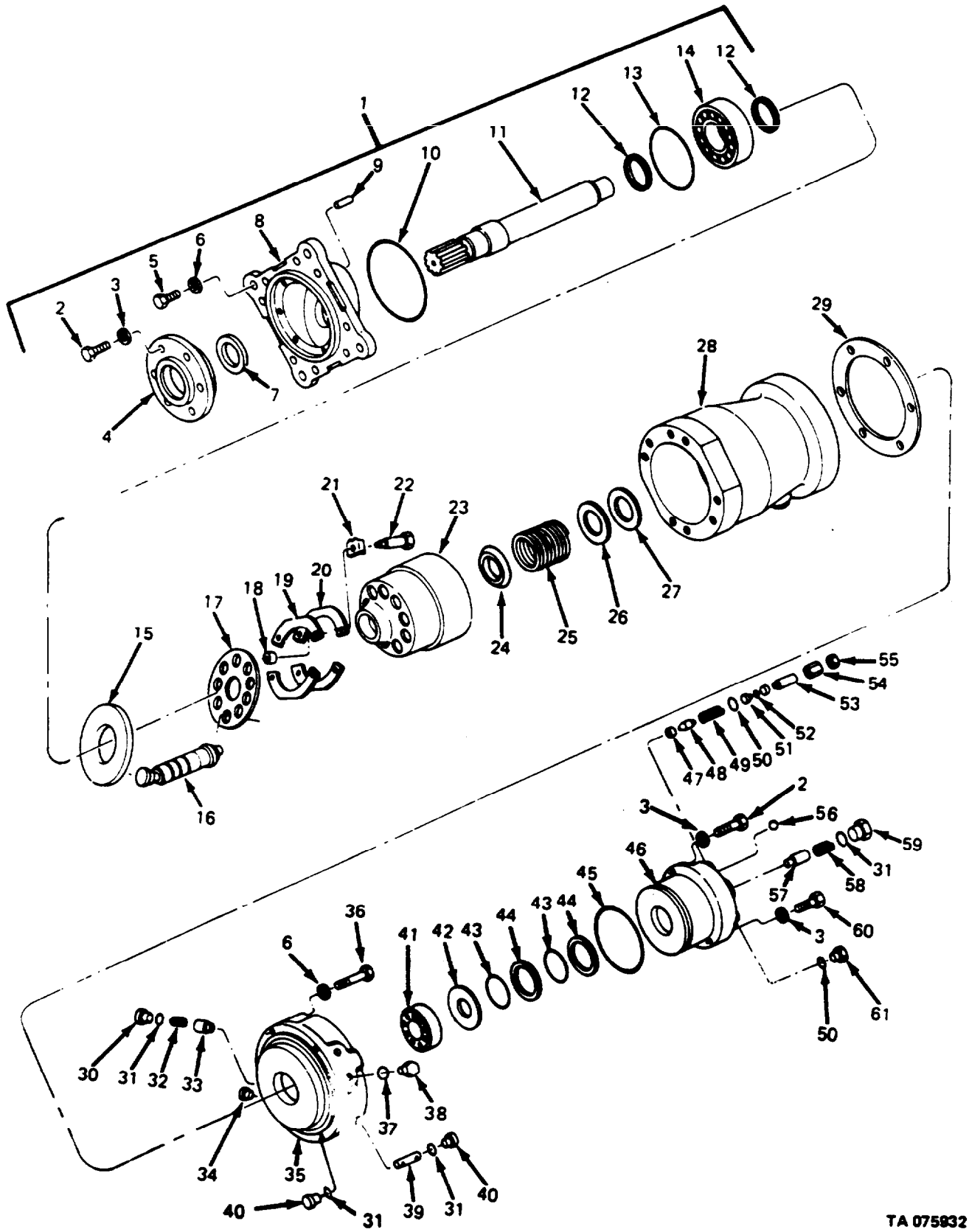


Figure 3-60. Motor - Hydraulic (Sheet 1 of 2).

LEGEND:

1. HYDRAULIC MOTOR ASSEMBLY
2. CAPSCREW (4)
3. LOCKWASHER (9)
4. SHAFT SEAL ASSEMBLY
5. CAPSCREW (8)
6. LOCKWASHER (14)
7. O-RING
8. MOUNTING FLANGE ASSEMBLY
9. DOWEL PIN
10. O-RING
11. MOTOR SHAFT
12. RETAINING RING (2)
13. PACKING
14. BALL BEARING
15. WEAR PLATE
16. PISTON (9)
17. SEAT PLATE
18. SPACER (2)
19. BEARING PLATE (2)
20. CLIP
21. LOCKTABS (2)
22. CAPSCREW (2)
23. CYLINDER BLOCK ASSEMBLY
24. RETAINING RING
25. BLOCK SPRING
26. OUTER SPRING BLOCK
27. INNER SPRING RETAINER
28. HOUSING
29. GASKET
30. LOW PRESSURE RELIEF VALVE PLUG
31. O-RING
32. SPRING
33. PLUNGER
34. SHUTTLE VALVE PLUG
35. COVER
36. CAPSCREW (6)
37. O-RING (2)
38. PLUG (2)
39. SHUTTLE VALVE ASSEMBLY
40. PLUG
41. COVER ROLLER BEARING
42. RETAINING RING
43. PACKING
44. RING
45. PACKING
46. BODY
47. SEAT
48. VALVE PILOT
49. SPRING
50. O-RING
51. INNER SPRING SEAT
52. O-RING
53. CAPSCREW
54. SPRING SEAT ASSEMBLY
55. HEX NUT
56. BALL
57. HIGH PRESSURE RELIEF VALVE PLUNGER
58. SPRING
59. HIGH PRESSURE RELIEF VALVE PLUG
60. CAPSCREW (5)
61. PLUG

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Figure 3-60. Motor - Hydraulic (Sheet 2 of 2).

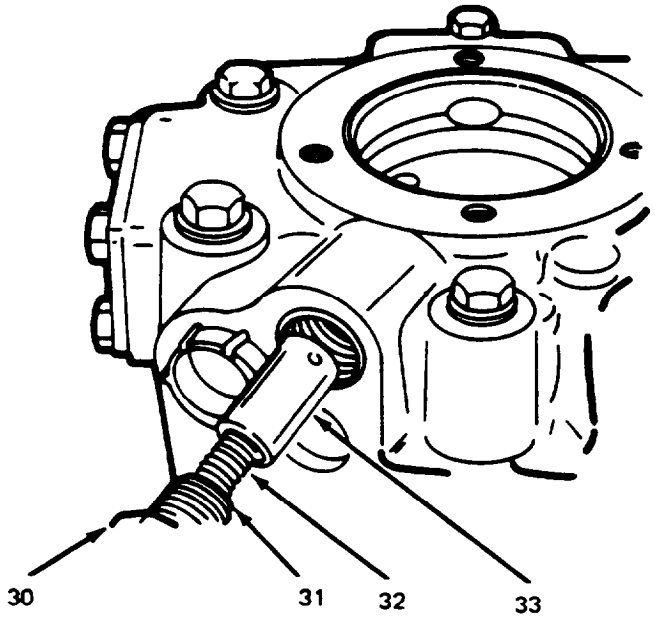

Figure 3-61. Removing Low Pressure Relief Valve.

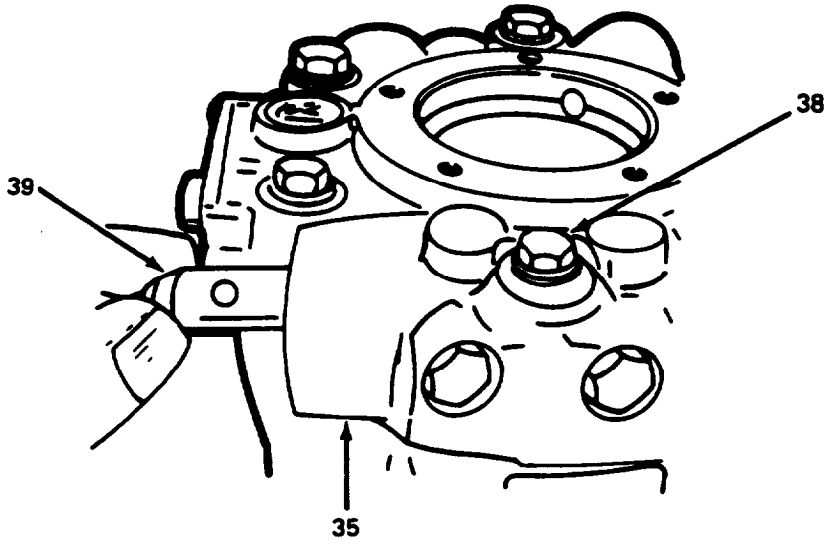

Figure 3-62. Removing shuttle Valve.

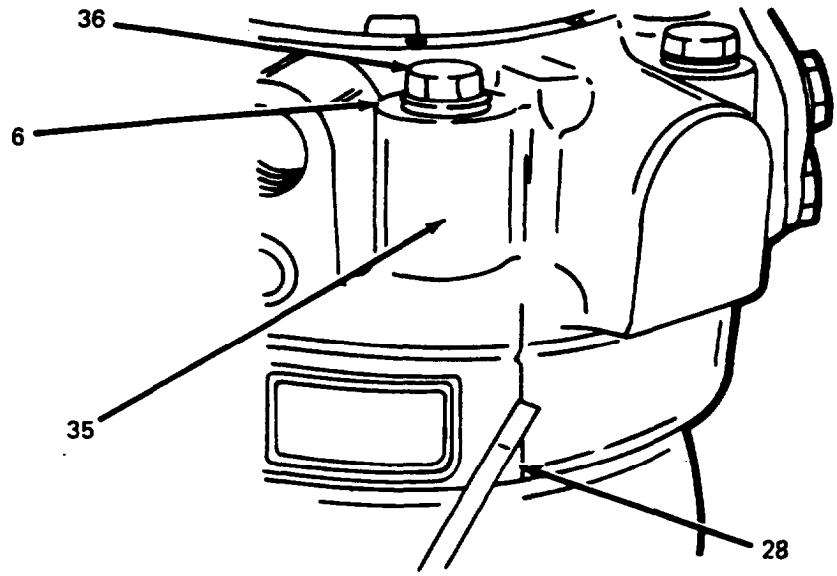

Figure 3-63. Marking Across Cover-Housing Parting Line.

Remove five capscrews (60), lockwashers (3), and remove body (46) with packing (45), (43), and ring (44). Remove six capscrews (36) and washers (6).

(11) If the motor cover (35) should stick to housing (28), jar it loose with a soft faced hammer. Remove gasket (29) from housing (28) or cover (35). (Refer to fig. 3-64.)

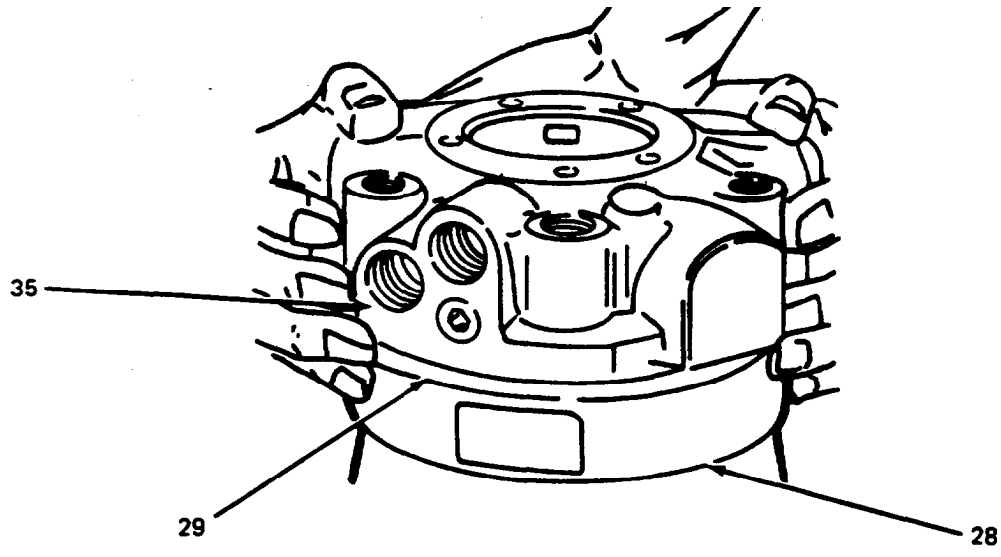

Figure 3-64. Removing Motor Cover.

(12) It is important that every precaution be taken to protect the bronze face on the cover (35) from damage. Never lay the cover down on the bronze face. Do not allow parts or tools to come in contact with the bronze face. A nick or scratch resulting from a moment's carelessness can easily damage a cover (35) beyond repair.

(13) Inspect cover roller bearing (41, fig. 3-60) for excessive wear, galling or roughness. If damaged, remove bearing outer race from cover (35) with an arbor press and a 1-7/8 in. dia plug. If roller bearing is removed, then the inner race must also be removed as they are serviced as a matched set only. If no damage is evident, do not remove outer or inner race and proceed to the next step.

CAUTION

Remove capscrews (5) with motor resting on its side.

(14) Remove eight capscrews (5) and lockwashers (6). (Refer to fig. 365.) Lift off housing *(28,* fig. 3-66) from mounting flange assembly (8). Remove O-ring (10).

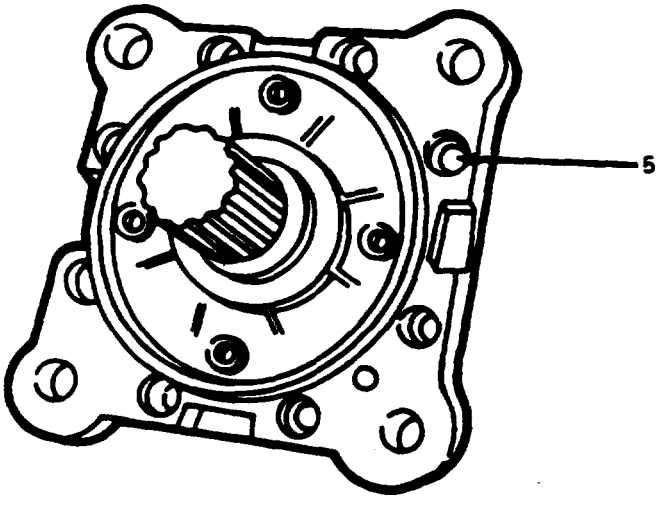

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Figure 3-65. Removing Housing Capscrews.

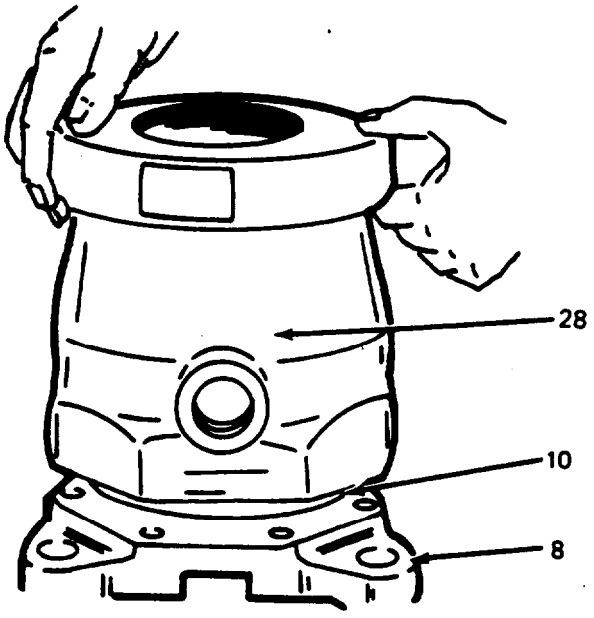

Figure 3-66. Removing Housing.

(15) At the factory, each cylinder block is marked to indicate cylinder bore number one. Mark number one piston (16, fig. 3-67) as a method of preserving the bore/piston relationship. All used pistons (16) must be returned to their respective bores upon reassembly.

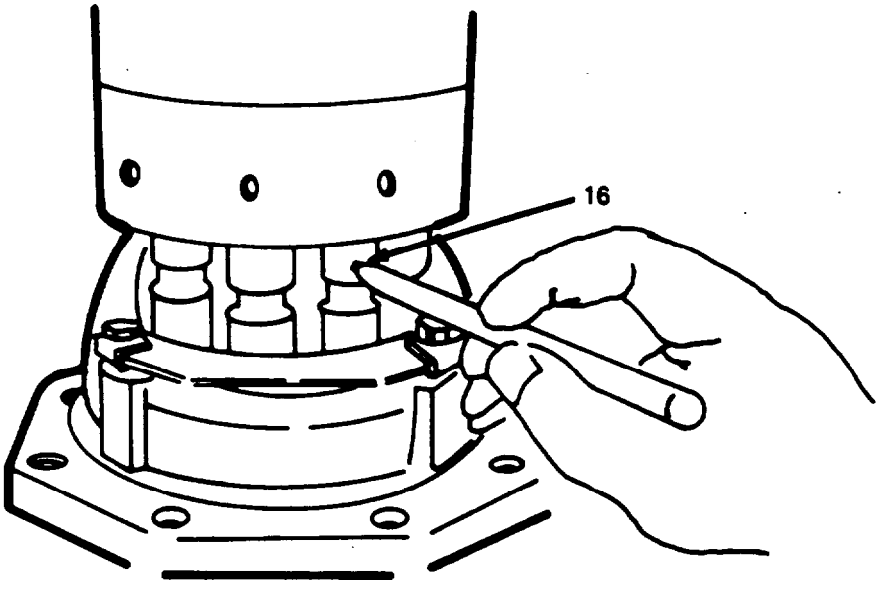

Figure 3-67. Marking Number 1 Piston.

(16) Remove the cylinder block assembly (23, fig. 3-68) by lifting it straight up off the piston assemblies. Observe the following:

(a) Examine the cylinder block assembly (23, fig. 3-60) for excessive wear or damage. Cylinder bores that exhibit only slight burnishing of the bronze liners are acceptable for reuse. If the bores exhibit galling or any other irregularity in the running surface that can be felt, the cylinder block assembly must be discarded. If there is evidence that the bronze liners have begun to pull out of the steel block, the cylinder block assembly must also be discarded.

(b) Examine the upper running face of the cylinder block assembly (23). (Refer to fig. 3-69.) Circular wear patterns or phonographing that cannot be felt with the fingernail are normal.

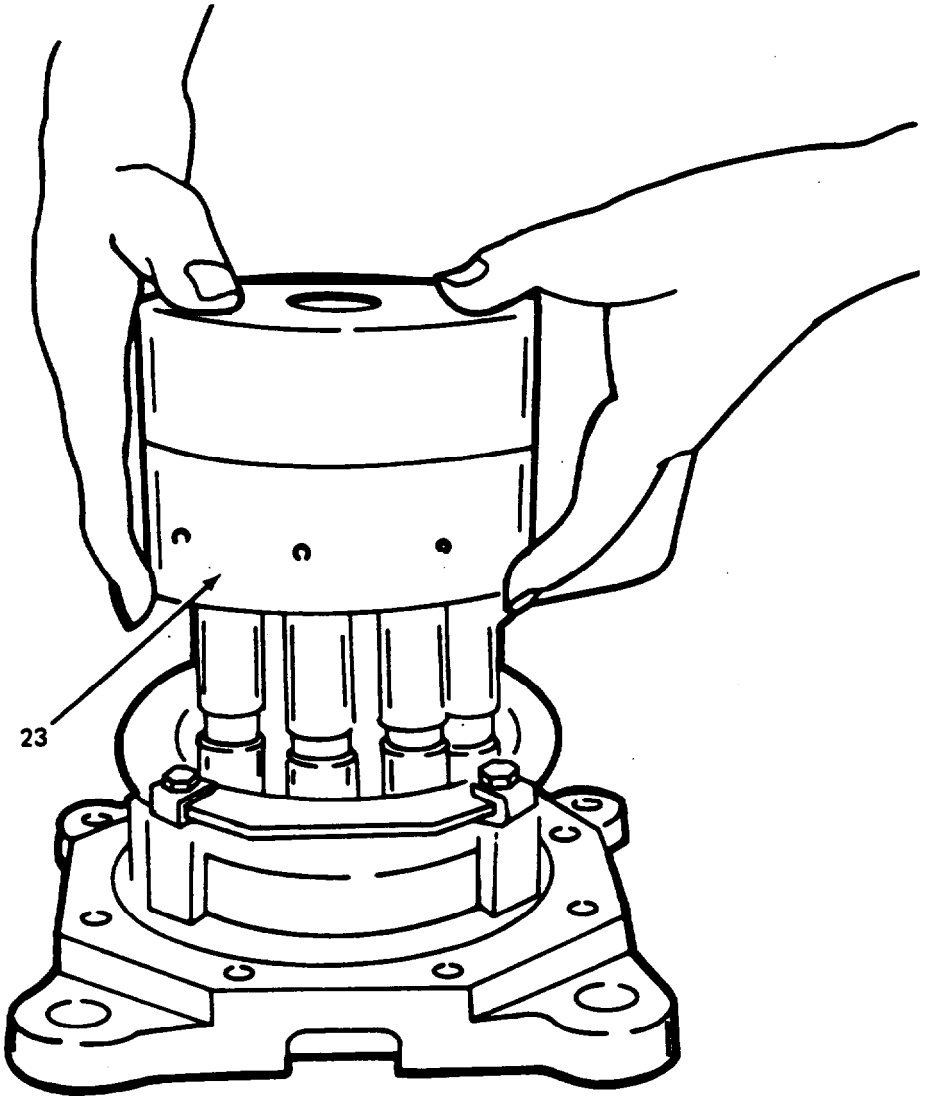

Figure 3-68. Removing Cylinder Block.

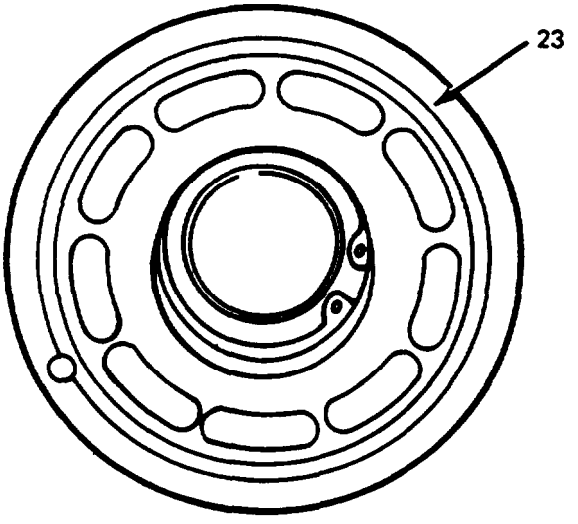

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Figure 3-69. Inspecting Cylinder Block.

(c) If the cylinder block assembly is acceptable for reuse in all other respects, several passes of the block over 500 grit emery paper on a lap table, is recommended to put the block face in a like-new condition. If circular wear patterns can be felt with the fingernail, grind the running face as necessary to remove the wear pattern keeping the face parallel to the original face. Lap the reworked face on 500 grit emery as described above to remove the mat finish. Clean the block thoroughly in a commercial degreaser such as trichloroethylene and blow dry with compressed air. Check tolerance of refinished block as outlined in figure 3-70. If reworked block does not meet the tolerances, discard block.

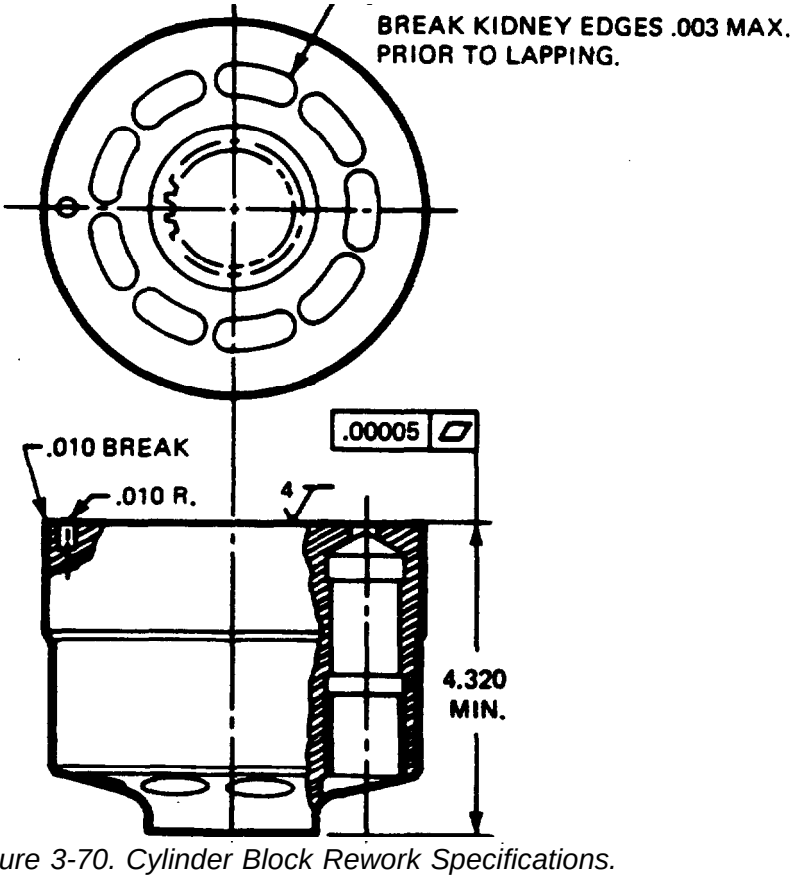

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Figure 3-70. Cylinder Block Rework Specifications.

CAUTION

Be careful when removing block spring (25, fig. 3-60). It is under considerable tension.

(d) If damage is evident to block spring (25) or spring retainers, use an arbor press to remove retaining ring (24). Using a plug 1-3/4 in. dia, compress block spring (25) until all tension is removed from retaining ring (24). Using truarc pliers, remove retaining ring (24) and gradually release arbor press until block spring (25) is fully extended. Remove outer spring block (26), block spring (25), and inner spring retainer (27) from cylinder block assembly (23).

(17) From the high side of the cam, remove two capscrews (22, fig. 3-71), two lock tabs (21), clip (20), bearing plate (19), and two spacers (18). Inspect bearing plate (19). If wear patterns can be felt, disassemble the other spacer assembly and replace both bearing plates (19).

(18) Lift out return plate (17) and pistons (16). (Refer to fig. 3-72.) If damage is evident to either pistons (16), or return plate (17), remove pistons from return plate (17).

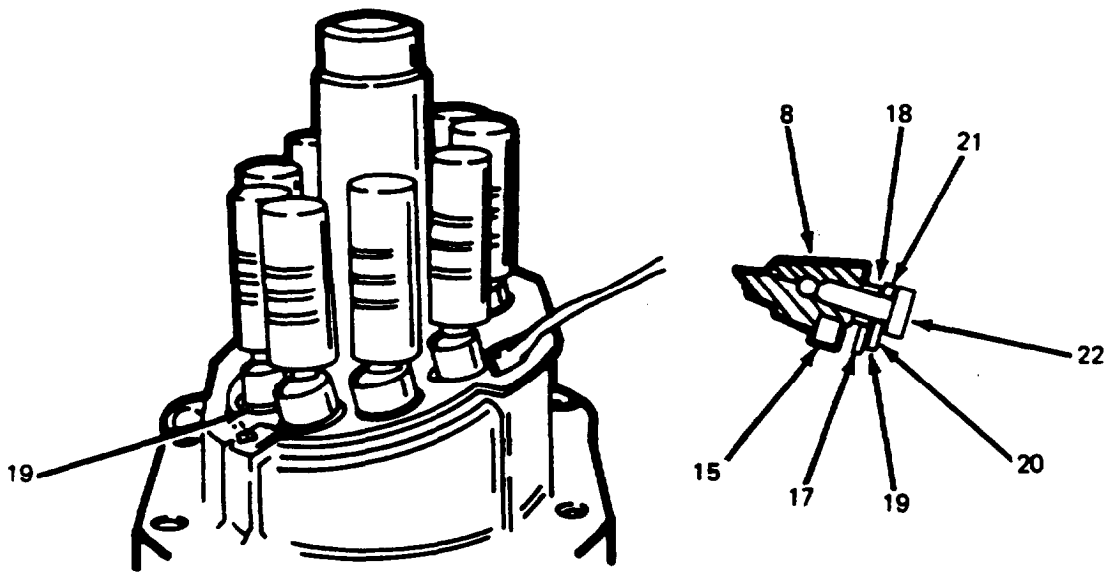

Figure 3-71. Removing Pistons and Return Plate.

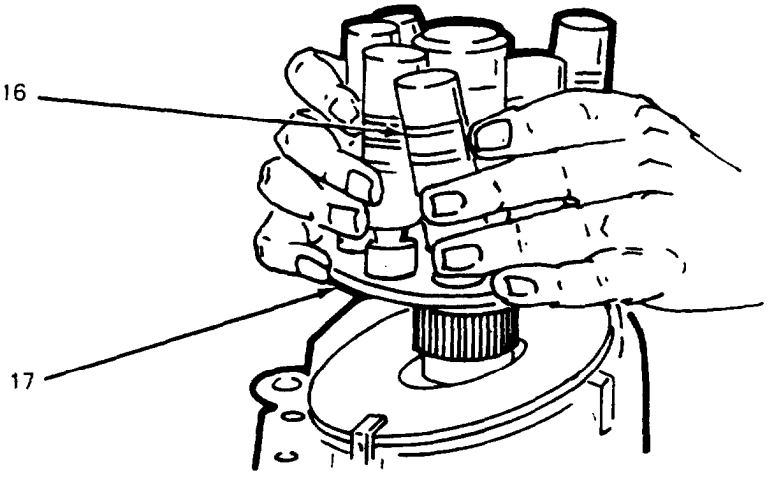

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Figure 3-72. Removing Pistons and Return Plate.

(19) Lift out wear plate (15). (Refer to fig. 3-73.) Remove dowel pin (9, fig. 3-50) only if damaged or needs replacement, by twisting and pulling with vice grip pliers.

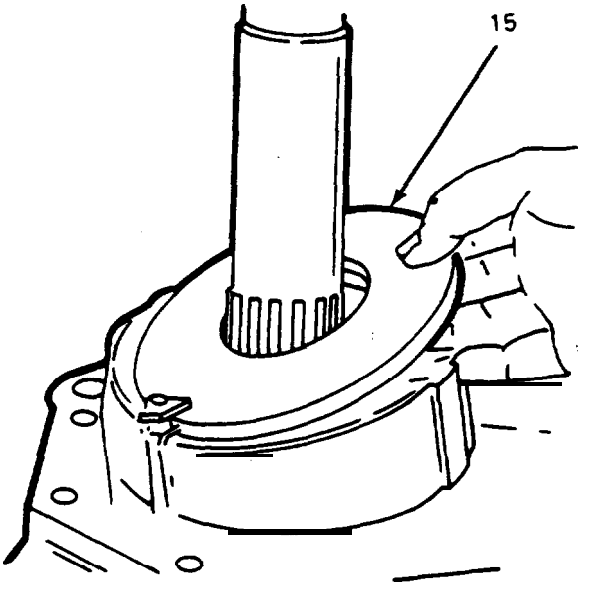

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Figure 3-73. Removing Wear Plate.

(20) Invert shaft/adapter assembly. Remove four capscrew (2, fig. 3-60) and lockwashers (3). For extra identification of capscrew (2) location refer to figure 3-74.

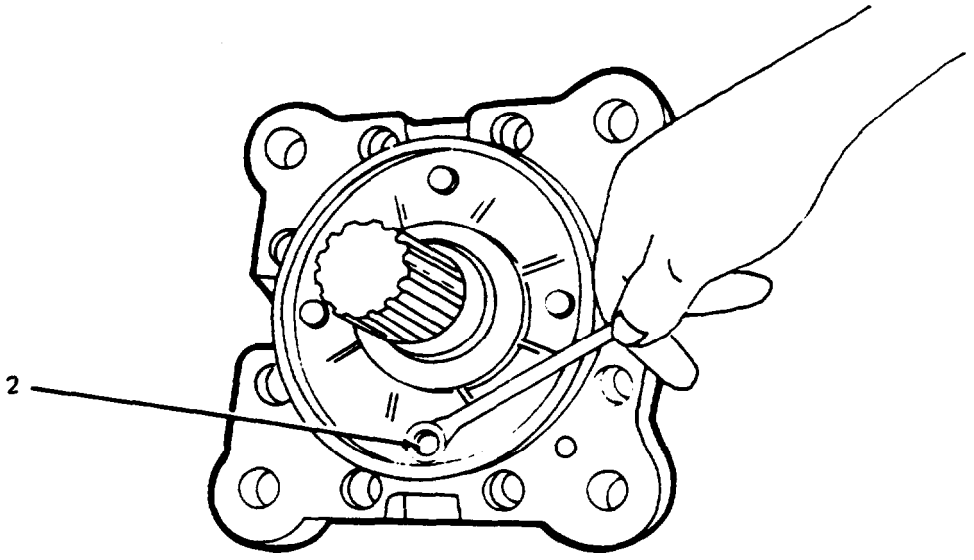

Figure 3-74. Removing Shaft Seal Retainer Capscrews.

(21) Using a small screwdriver, remove shaft seal assembly (4, fig. 3-60) from mounting flange assembly (8). (Refer to fig. 3-75.) Remove O-ring (7, fig. 3-60). Press shaft seal assembly (4) from retainer using an arbor press and a 2-1/2 in. plug.

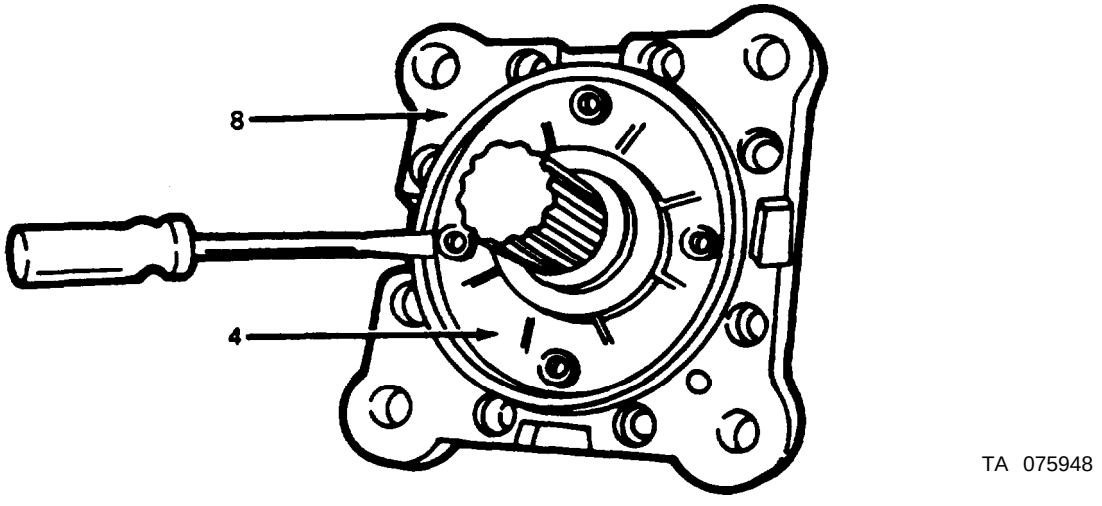

Figure 3-75. Removing Shaft Seal Retainer.

(22) Remove motor shaft (11) and assembled parts of ball bearing (14), and inner race of cover roller bearing (41), by pulling straight up from mounting flange assembly (8) as shown in figure 3-76.

(23) Inspect ball bearing (14, fig. 3-60) for galling, roughness, or cage cracks. Remove packing (13). If damaged, remove retaining rings (12) using truarc pliers and press ball bearing (14) from motor shaft (11).

(24) Inspect inner race of cover roller bearing (41) for galling or roughness. If no damage is apparent and no damage was observed when the outer race was inspected, do not remove bearing from shaft. If damage was observed on either the inner or outer race, cover roller bearing (11) must be replaced. Remove retaining ring (42) and slide cover roller bearing (41) from motor shaft (11).

f. *Reassemble Hydraulic Motor.*

NOTE

Use new gaskets and seals, except as noted.

(1) If the cover roller bearing (41, fig. 3-60) is rough or galled, replace cover roller bearing (41). Place new cover roller bearing (41) on motor shaft (11) and install retaining ring (42).

(2) If previously removed, install inner retaining ring (12). If damaged, install a new ball bearing (14) on motor shaft (11), using an arbor press. CAUTION should be exercised not to deform inner retaining ring (12) when ball bearing (14) is seated against it. If this occurs, back the ball bearing (14) off and reseat. Care should be taken to support the ball bearing (14) in the arbor press to prevent deformation of the ball bearing (14). Heating the bearing in hot oil will aid in a smooth bearing installation. install outer retaining ring (12).

(3) Install motor shaft (11), ball bearing (14) with packing (13), two retaining rings (12), retaining ring (42), and cover roller bearing (41) through the front face of the mounting flange assembly (8). (Refer to fig. 3-77.) The ball bearing (14, fig. 3-60) should fit snugly in the mounting flange assembly (8). If the ball bearing (14) doesn't seat easily, heat the mounting flange assembly (8) in hot oil and seat ball bearing (14) in proper position. Do not drive the ball bearing (14) into place. Do not use the shaft seal assembly (4) to force the ball bearing (14) into the seat. After ball bearing (14) is seated, check for free running by rotating motor shaft (11).

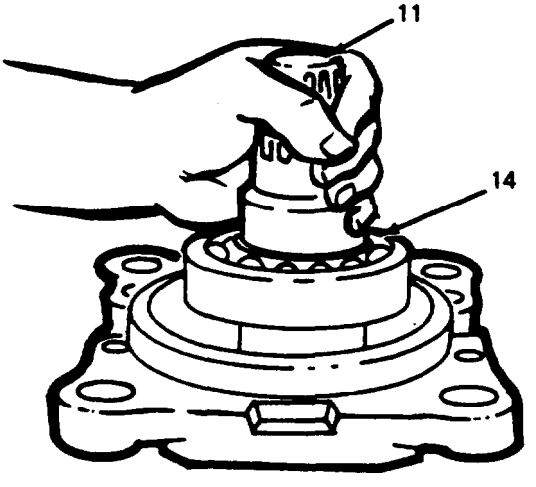

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Figure 3-76. Removing Motor Shaft Assembly.

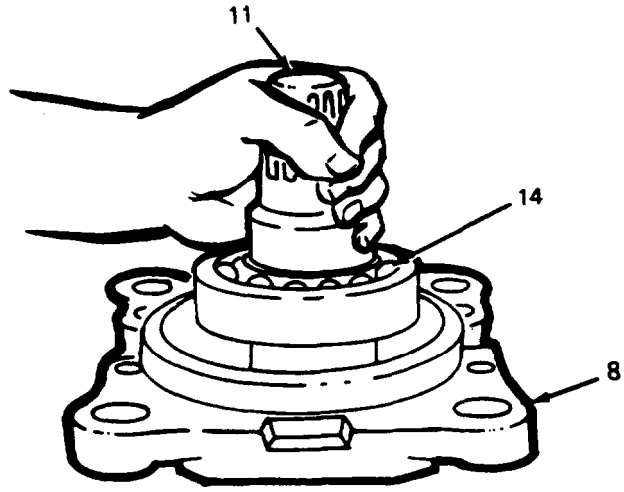

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Figure 3-77. Installing Motor Shaft Assembly.

(4) Coat the OD of seal assembly (4) with Loctite pipe sealant and press new shaft seal into shaft seal assembly (4) using an arbor press and 2-1/2 in. plug. Fill cavity in shaft seal between oil lips approximately 3/4 full with multi-purpose grease.

(a) Coat O-ring (7) lightly with a multi-purpose grease.

(b) Install motor shaft (11) and ball bearing (14) assembly into mounting flange assembly (8) using new O-ring (7) in mounting flange assembly (8).

(5) Wrap shim stock or other thin material around shaft spline and carefully slide shaft seal assembly (4) into place over motor shaft (11).

(6) Secure shaft seal assembly (4) with capscrews (2) and lockwashers (3). Torque to 11 lb ft. (15 N-m). (Refer to fig. 3-78.)

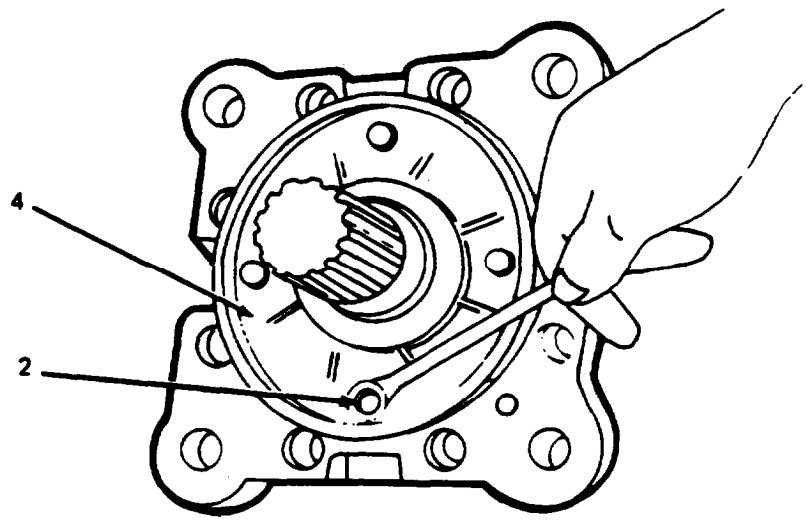

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Figure 3-78. Installing Shaft Seal Retainer.

(7) Examine wear plate (15, fig. 3-60). Circular patterns burnished on the surface of the cam plate are normal, If the circular patterns on the wear plate are extensive and can be felt with the fingernail or if angular scratches are evident, the plate must be discarded. (Refer to fig. 3-79.) Install new dowel pin (9, fig. 3-60), if previously removed, by tapping in with a light weight hammer.

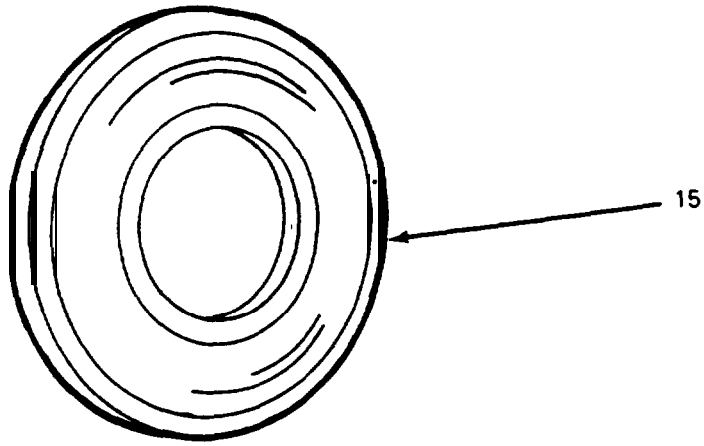

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Figure 3-79. Inspecting Cam Wear Plate.

(8) Match up dowel pin (9) with hole in wear plate (15) and seat plate (17). (Refer to fig. 3-80.) Check for proper seating by pushing down on first one edge then the other in a rocking motion. If any looseness is felt, remove wear plate (15, fig. 3-60) and clean the cam assembly and wear plate to remove any foreign particles from beneath the wear plate (15). Reposition wear plate (15) and again check for proper seating. If wear plate (15) still does not seat properly, check wear plate (15) for flatness and replace if necessary.

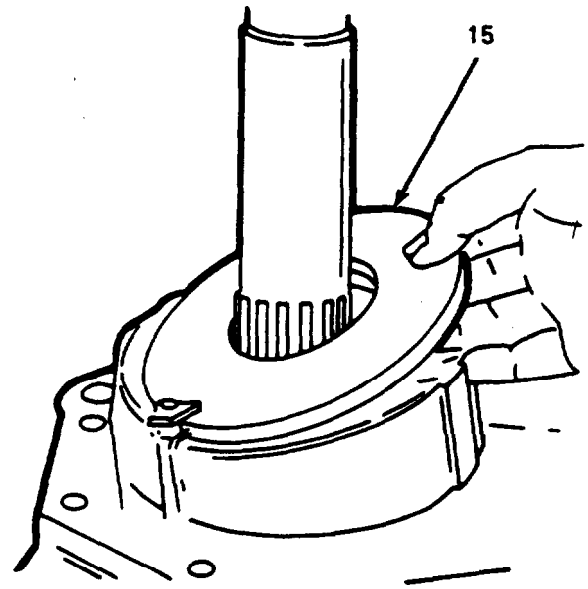

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Figure 3-80. Installing Cam Wear Plate.

(9) Check clearance between bronze piston shoe and steel piston (16) body. With a push-pull motion check for free play between shoe and body. If any free play can be felt, the piston (16) must be replaced.

(10) Inspect the bronze piston shoe running surface. During normal service, a dulling of the running surface is to be expected. If large scratches are present, make several short passes over 500 grit emery paper on a lap table. (Refer to fig. 3-81.) On the last few gasses, place five to six sheets of emery paper as a cushion under the top sheet to obtain the proper edge sharpness. Check the reworked piston (16) against the tolerance limits in figure 3-82. If the piston (16) does not fall within the tolerance limits, it must be discarded.

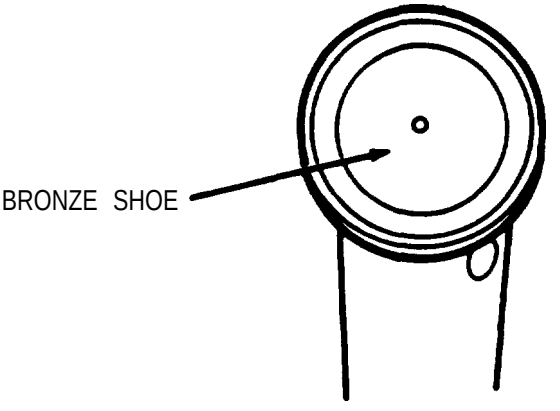

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Figure 3-81. Inspecting Piston.

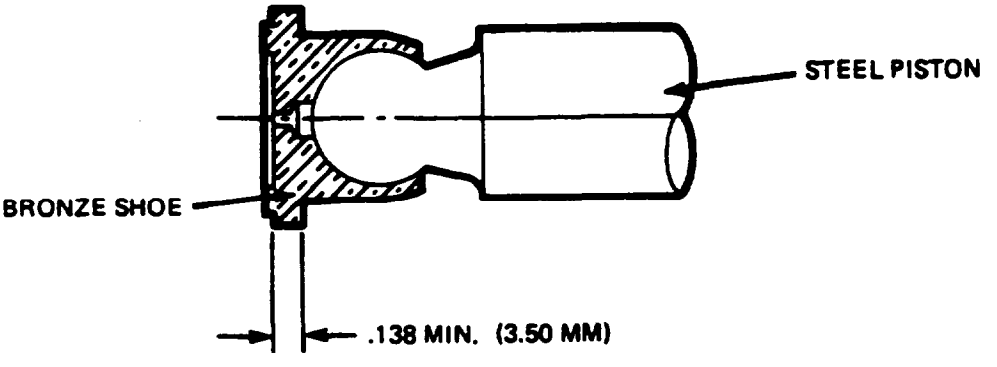

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Figure 3-82. Piston Shoe Rework Tolerance

NOTE

Often, large scratches on the piston shoe running surface will "heal over" if placed back in service. It is recommended however, that all piston shoes with badly scratched running surfaces be either reworked within tolerance limits or replaced.

(11) Inspect steel piston body. If any galling is apparent or if any irregularities can be felt, the piston must be discarded. If damage is present, check corresponding cylinder block (23, fig. 3-60) bore for similar damage. (Refer to fig. 3-83.)

NOTE

Dynapower units may be encountered with either two groove or three groove piston. (Refer to fig. 3-84.) Units supplied from the factory with two groove pistons may be fitted with three groove pistons as a nine piece set only. In a like manner, units supplied with two groove pistons may be refitted with three groove pistons again only as a nine piece set. Two groove and three groove pistons must not be mixed in the same unit.

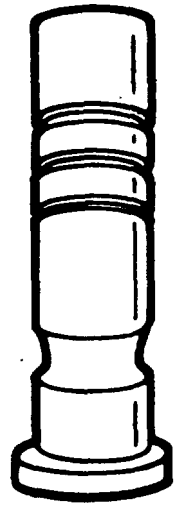

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Figure 3-83. Inspecting Piston Body.

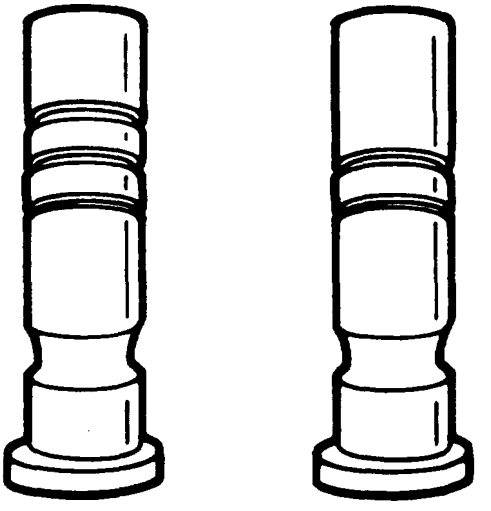

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Figure 3-84. Three Groove and Two Groove Pistons.

NOTE

Model 45 pistons are easily identified by characteristic piston shoe running surface configurations. (Refer to fig. 3-85.)

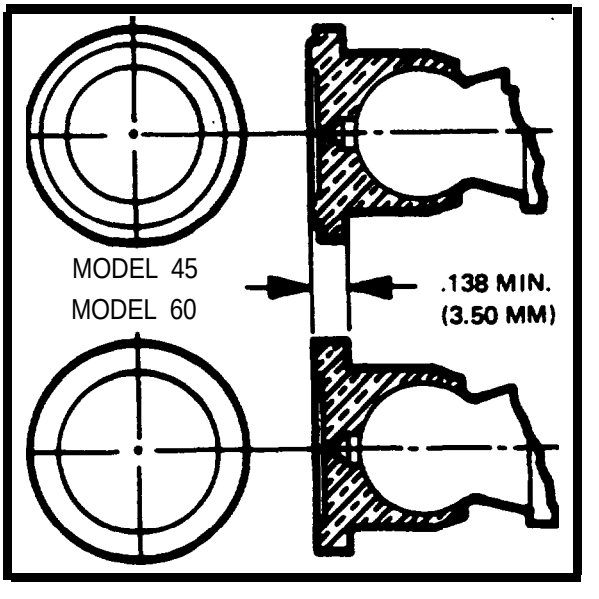

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Figure 3-85. Piston Shoe Configurations.

(12) Inspect seat plate (17, fig. 3-60) for heat discoloration or cracks. Check for flatness. If distorted, discolored or cracked, replace with a new seat plate.

(13) Install piston (16) in seat plate (17). Used pistons (16) must be so positioned in the seat plate (17) to allow placement of the pistons in their respective cylinder block bores.

(14) If both seat plate (17), two locktabs (21), spacers (18), bearing plates (19), clips (20), and capscrews (22) were disassembled, reassemble. Do not tighten capscrews (22).

(15) Spread a light film of oil on the surface of the wear plate (15) and slide piston (16) and return plate (17) assembly into place. (Refer to fig. 3-86).

(16) Install two spacers (18, fig. 3-60), bearing plate (19), clip (20), two new locktabs (21), and two capscrews (22). (Refer to fig. 3-87.) Torque four capscrews (22, fig. 3-60) to 13 lb-ft (18 N-m). Check clearance between each piston (16) and-wear plate (15) surface. Clearance should not be less than 0.003 in. (.07620 mm) nor more than 0.007 in. (0.17780 mm). Clearance of from 0.0015 (.0380 mm) to 0.003 (.07620 mm) is acceptable only if the rotating piston (16) assemblies spin freely by hand with no binding or tight spots. Turn up four locktabs (21).

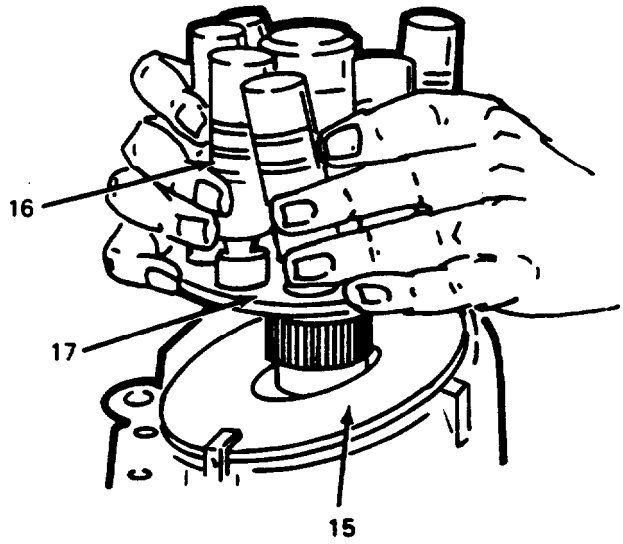

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Figure 3-86. Installing Pistons and Return Plate.

(17) If cylinder block assembly (23) was completely disassembled, proceed with the block as follows:

(a) Install the retaining ring (24), block spring (25), and outer spring block (26) in cylinder block (23).

(b) Place cylinder block assembly (23) in an arbor press and compress block spring (25).

(c) Install inner spring retainer (27).

(d) Gradually release the block spring (25) until it seats against the inner spring retainer (27).

(18) Spread a thin film of oil over the inner surface of the nine piston bores. Stand the piston (16) in an erect position and carefully lower the cylinder block assembly (23) over them being sure to return the used pistons to their respective bores. Do not force the block over the pistons, A slight rotary motion of the cylinder block assembly (23) will aid in positioning the pistons in the cylinder bores. (Refer to fig. 3-88.)

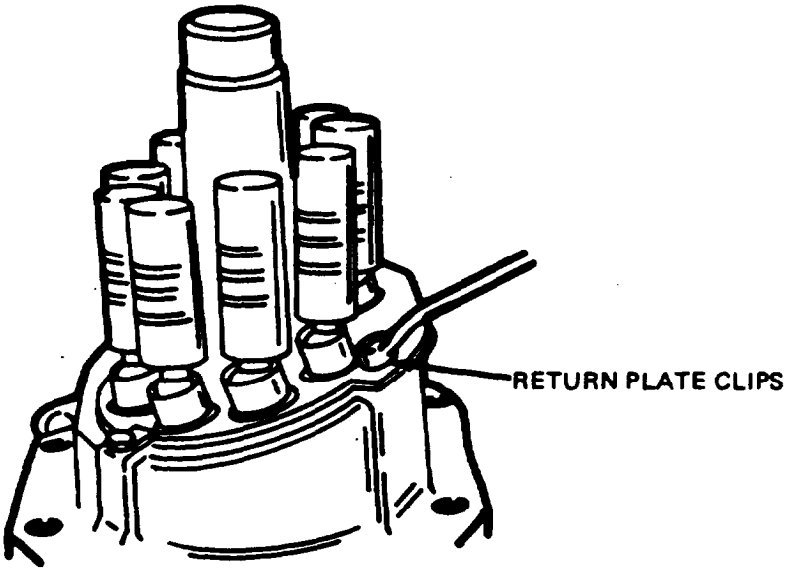

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Figure 3-87. Installing Return Plate Clips.

(19) Install O-ring (10, fig. 3-60) on mounting flange assembly (8). Lower housing (28) over rotating group onto mounting flange assembly (8) being careful not to disturb assembled parts. (Refer to fig. 3-89.) Secure housing (28) to mounting flange assembly (8) with capscrews (5, fig. 3-60) and lockwasher (6).

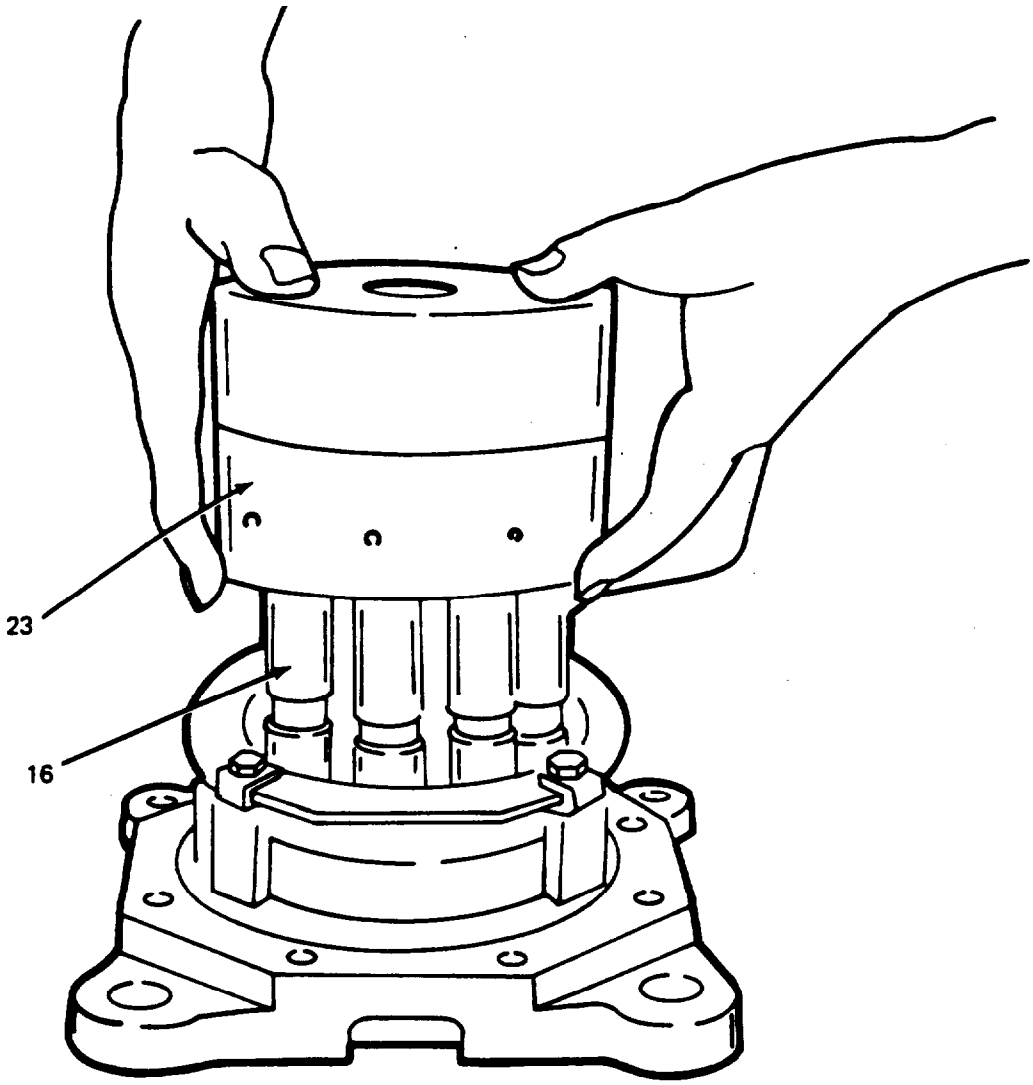

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Figure 3-88. Installing Block Assembly.

WARNING

Compressed air used for cleaning purposes will not exceed 30 PSI. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

(20) Inspect the cover (35) bronze face for signs of cavitation, excessive wear, contamination or other damage. (Refer to fig. 3-90.) If circular wear patterns cannot be felt with a fingernail and if there are no nicks, scratches, or other damage, one or two passes over 500 grit emery paper on a lap table, will put the bronze face in like-new condition. If scratches or the wear patterns can be felt, pass across 500 grit emery cloth as described above until scratches can no longer be felt. Every effort must be made to remove any scratches that cross the lands on either side of the kidneys. Degrease the cover in a commercial degreaser, such as tricholoroethylene and blow dry with compressed air. Check the reworked cover (35) against tolerances in figure 3-91. If the cover (35) does not fall within tolerance limits, it must be discarded.

(21) If cover roller bearing (41, fig. 3-60) was removed from the cover (35) during disassembly, install cover roller bearing (41) in cover (35) using an arbor press and plug of proper size. It is important that the cover roller bearing (41) be replaced as a set only.

(22) Fill pistons (16) with new transmission oil allowing a small excess to spill over the face of the cylinder block assembly (23).

(23) Place a new gasket (28) on housing (28) and position cover (35), utilizing reference marks in housing (28) and cover (35). Install six capscrews (36) and lockwashers (6) and torque bolts in an opposite pattern to 38 lb-h (52 N•m). (Refer to fig. 3-92.)

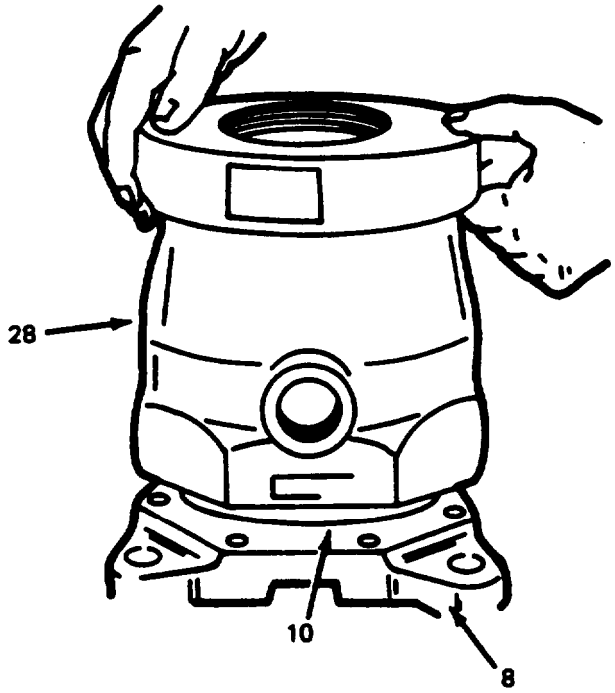

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Figure 3-89. Installing Housing.

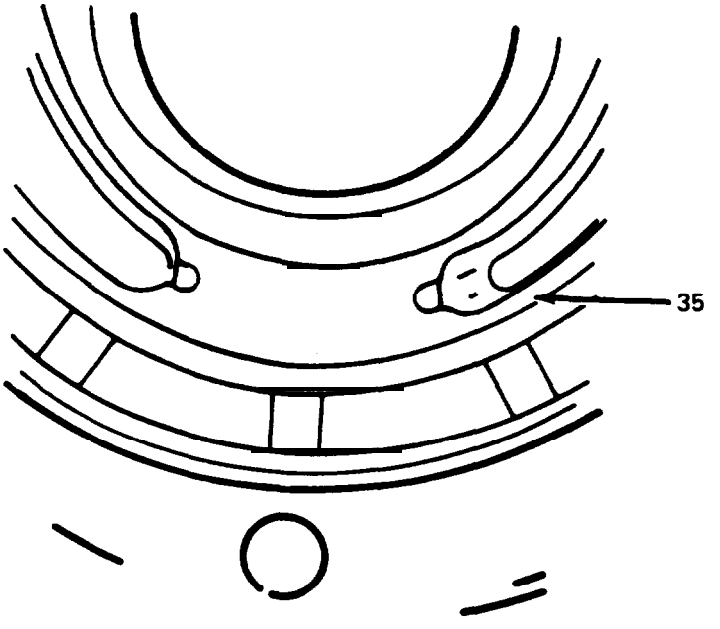

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Figure 3-90. Inspecting Motor Cover.

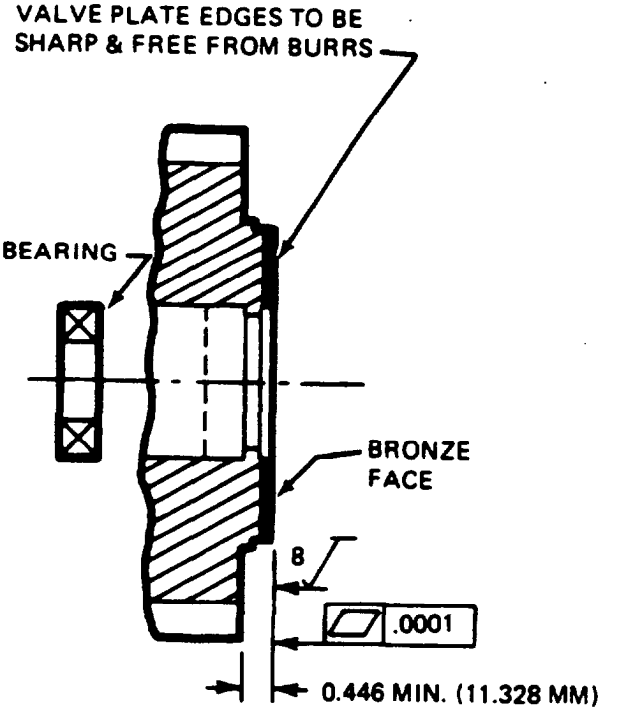

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Figure 3-91. Cover Rework Specifications.

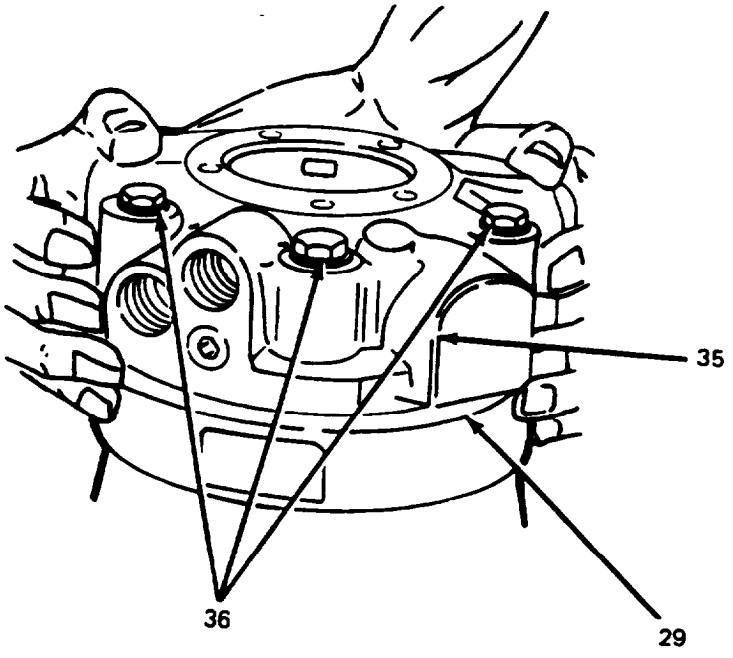

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Figure 3-92. Installing Motor Cover.

(24) If previously removed, install two plugs (38, fig. 3-93) with new O-rings (37).

(25) Install shuttle valve assembly (39) in cover (35). Check for free movement from side to side. If any tightness is felt, remove any nicks or burn with 500 grit emery. It is essential to the proper operation of the relief valve stem that the shuttle valve operate freely. Install shuttle plugs (40, fig. 3-60) with new O-rings (31).

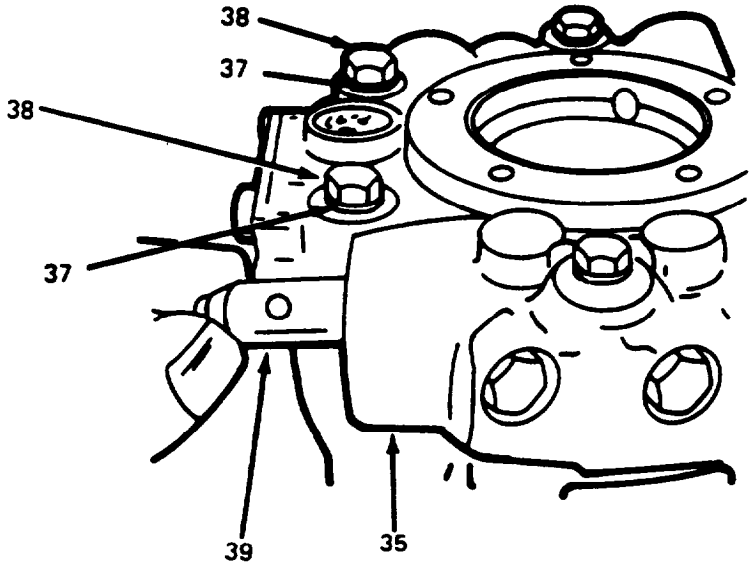

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Figure 3-93. Installing Shuttle Valve.

(26) Inspect plunger (33) for scratches, nicks or burrs. Burnishing of the plunger at the point of contact with the seats is normal. If wear can be felt, replace the plunger (33). Install the plunger *(33),* spring (32), a new O-ring (311, shuttle valve plug (34) and low pressure relief valve plug (30). (Refer to fig. 3-94.)

NOTE

Where it becomes necessary to replace the shuttle or the plugs, be certain the faulty piece is replaced with one of a like kind.

(27) Insert body (46, fig. 3-60) in cover (35) with packings (46 and 43) and rings (44) and secure with capscrews (2 and 60) and lockwashers (3). Torque to 11 lb-ft (15 N•m). (Refer to fig, 3-95.)

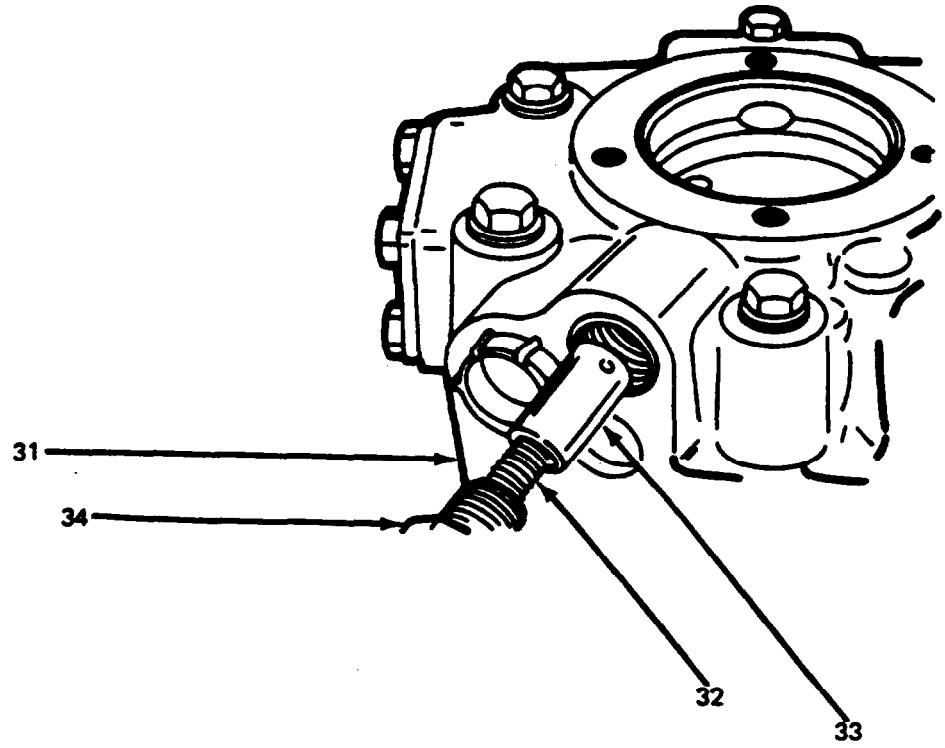

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Figure 3-94. Installing Low Pressure Relief Valve.

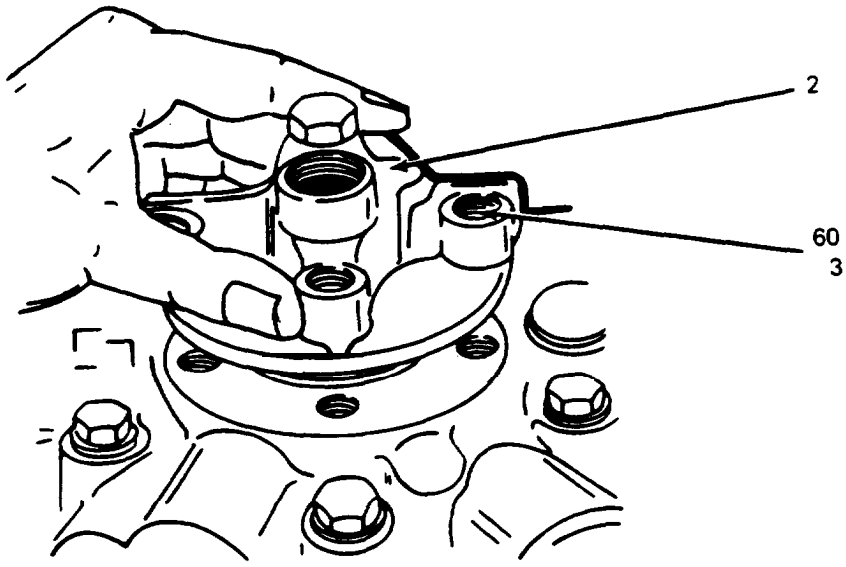

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Figure 3-95. Installing High Pressure Relief Valve Body.

(28) Inspect valve pilot (48, fig. 3-60). Under normal usage, a seating pattern will burnish on face of valve pilot (48). If seating pattern can be felt or if the valve pilot (48) is damaged in any way, it must be replaced. (Refer to fig. 3-96.)

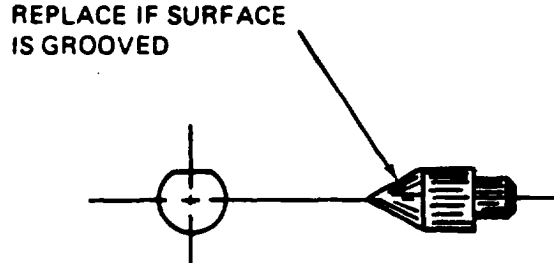

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Figure 3-96. Inspecting Pilot Valve.

(29) Install valve pilot (48, fig. 3-60), spring (49), inner spring seat (51), and a new O-ring (52). Secure with spring seat assembly (54), hex nut (55), and capscrew (53) being careful not to disturb the seat, hex hut, screw relationship. (Refer to fig. 3-98.)

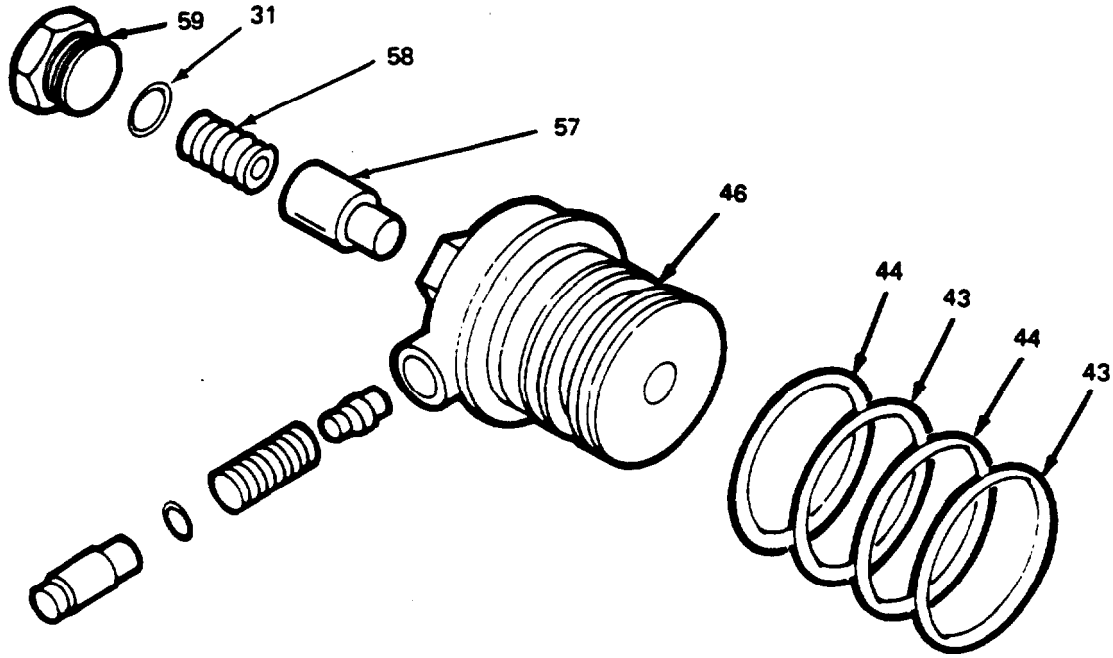


Figure 3-97. High Pressure Relief Valve and Pilot.

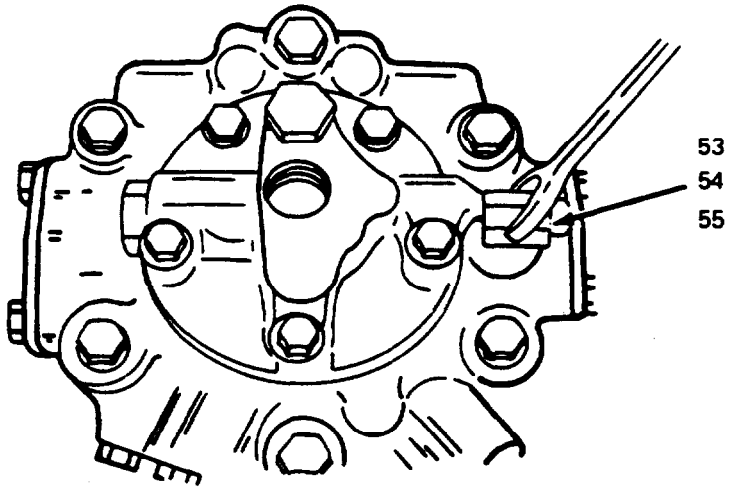


Figure 3-98. Installing High Pressure Pilot Valve.

(30) Inspect high pressure relief valve plunger (57, fig. 3-60). Check for free movement in relief valve body (46). If any tightness is felt, rework as necessary to remove nicks, scratches, or irregularities. Check body (46) against tolerance limits in figures 3-99 and 3-100. Install plunger (57, fig. 3-60), spring (58), a new O-ring (31) and secure with high pressure relief valve plug (59). Install O-ring (50) onto plug (61) and install into body (46).

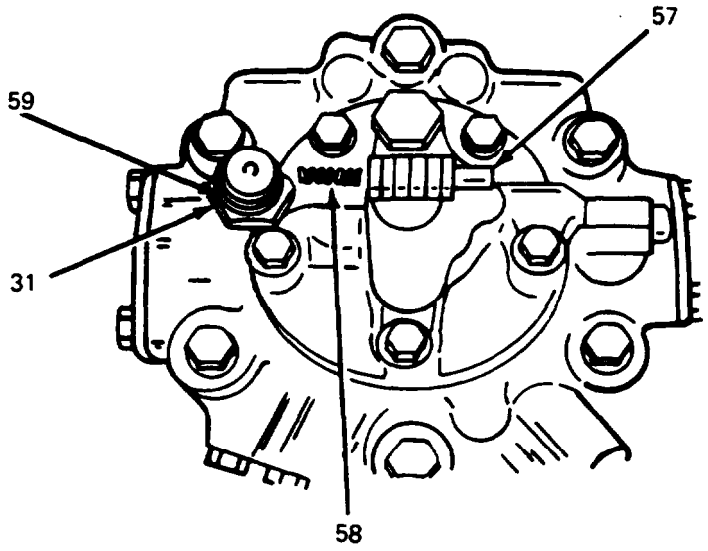


Figure 3-99. High Pressure Relief Valve.

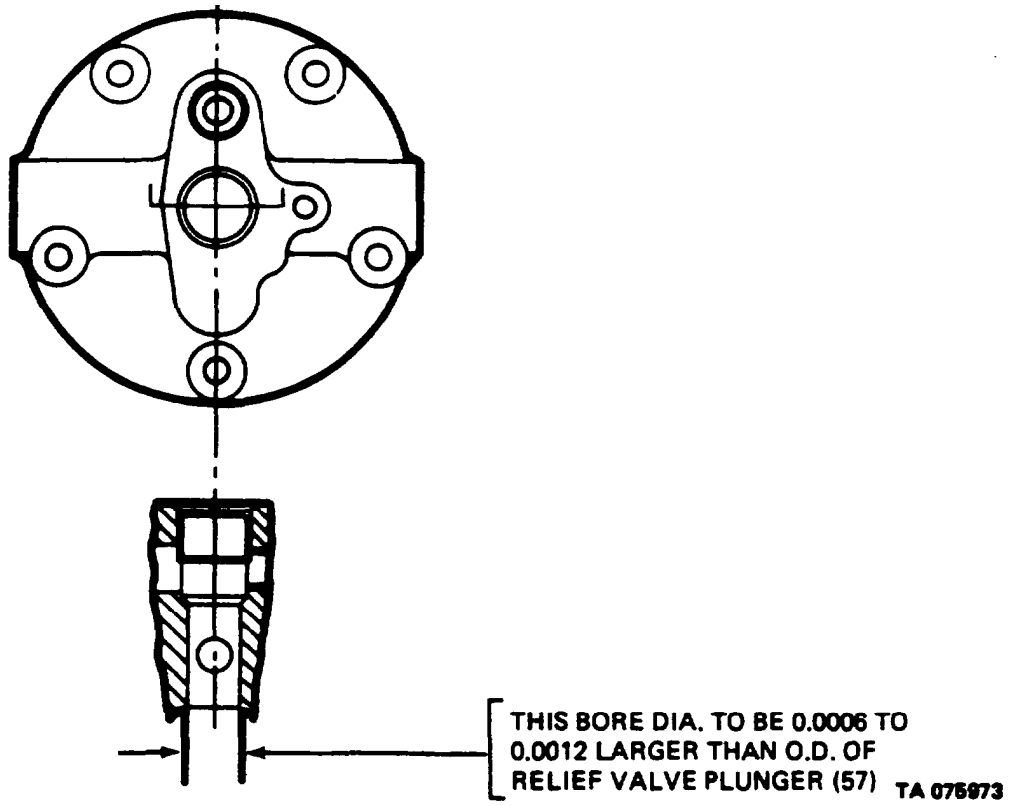


Figure 3-100. High Pressure Relief Valve Tolerance.

g. Install Motor. (Refer to fig. 3-58.)

(1) Mount rail (18) to hydraulic motor (17) with one capscrew (19), nut (22) and lockwasher (21). (Do not tighten.)

(2) Install tachometer drive housing assembly to motor (17) and rail (18) with two capscrews (19), lockwasher and nuts. (Do not tighten.)

(3) Start drive coupling (25) onto shaft of hydraulic motor (17) and install tachometer drive chain (20) onto drive coupling (25) and finish pushing drive coupling (25) into place. Install capscrews (24) with nuts and washers (2).

(4) Adjust tachometer drive chain (20) to a slight tension and finish tightening capscrews (19).

(5) Install sprocket cover (7) with two capscrews (8) and washers (8).

(6) Install hydraulic motor (17) into place and secure with capscrews (12), washers (15), and nuts (16).

(7) Connect tachometer cable (5).

(8) Connect override cable (9) to override cable clamp (11). Tighten capscrew (10), washer (13), and nut (14).

(9) Install capscrews (1) and nuts and washers (2).

(10) Connect hydraulic lines (30), (31), and (32).

(11) Install hydraulic hose (27) to elbow (26) and tee (29).

Section VI. REPLACE ASPHALT PUMP

3-7. Asphalt Pump.

a. Removal.

(1) Remove hydraulic motor. (Refer to para 3-6.)

(2) Loosen lockscrew (5, fig. 3-101). Remove C-clip (6) and remove cotter pin (13); then lift off linkage assembly (9).

(3) Remove cotter pin (15) and disconnect cylinder linkage (14) and move cylinder to the side.

(4) Remove cotter pin (3) and tapered pin (4); then lift up linkage (2) to allow removal of cover (17) located below the linkage.

(5) Remove two capscrews (1) and washers that fasten quadrant to tank; then lift up on the quadrant column and remove bushing (10).

(6) Remove all covers shown in figure 3-102 by removing twenty-three screws (15).

(7) Disconnect two pipe nuts (161, fig. 3-101).

(8) Disconnect manifold pipe nuts (7 and 11).

(9) Remove vacu-flo lines by removing pipe nuts (8 and 12).

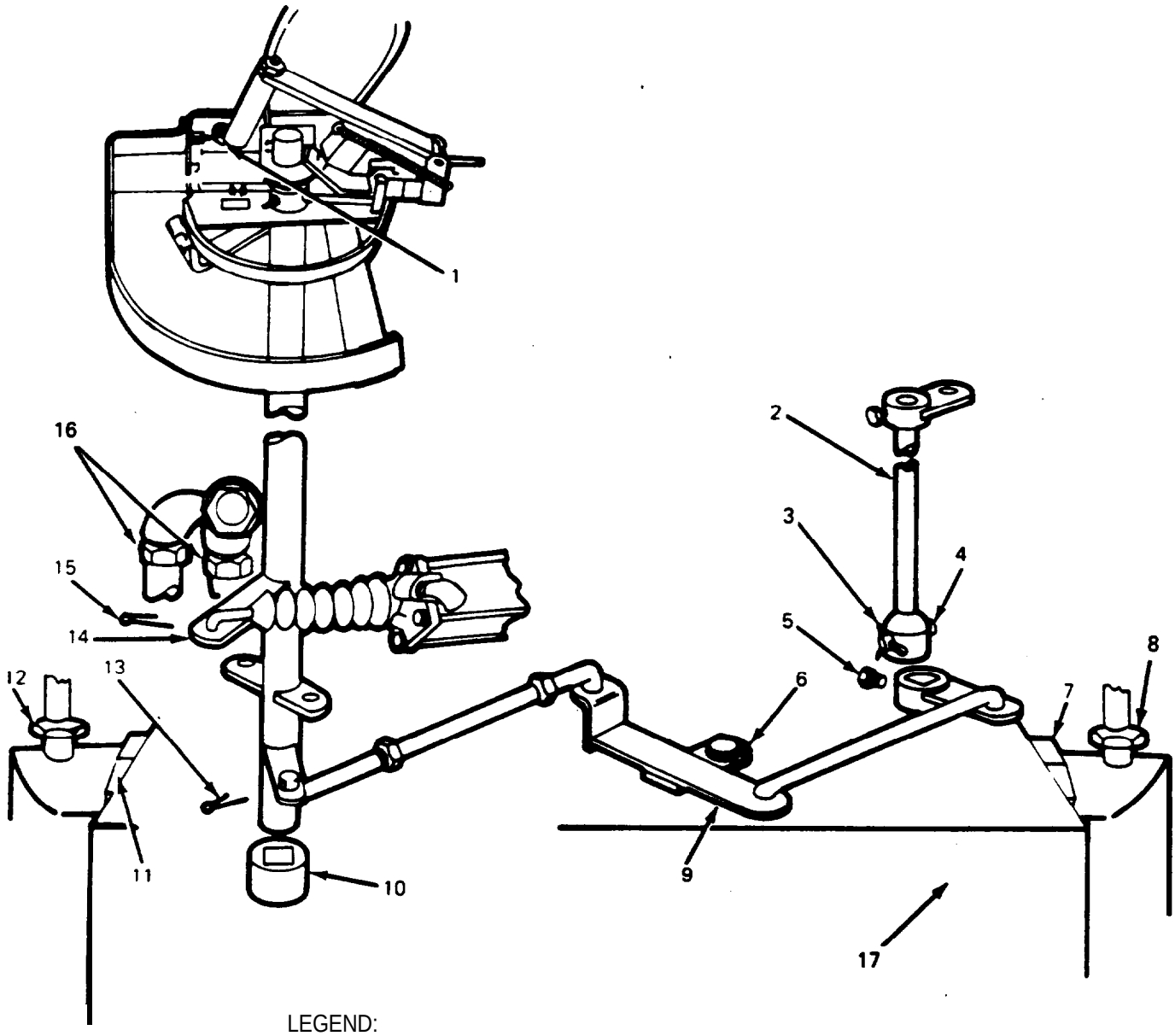
(10) Disconnect header assembly (6, fig. 3-103) from two valve assemblies (5) and asphalt pump assembly (1) by disconnecting in five places.

(11) Remove studs (7) that fasten the manifold to the asphalt pump and remove the manifold.

(12) Place a hydraulic jack under the asphalt pump. Raise the jack so that it just touches the pump. (Refer to fig. 3-113).

(13) Remove studs, nuts, and washers that fasten the asphalt pump assembly (1) to the control valve.

(14) Lower the pump on the jack as low as it will go; then remove the pump and gasket.



LEGEND:

1. CAPSCREW (2)
2. LINKAGE
3. COTTER PIN
4. TAPERED PIN
5. LOCKSCREW
6. C-CLIP
7. MANIFOLD PIPE NUT
8. PIPE NUT
9. LINKAGE ASSEMBLY
10. BUSHING
11. MANIFOLD PIPE NUT
12. PIPE NUT
13. COTTER PIN
14. CYLINDER LINKAGE
15. COTTER PIN
16. PIPE NUT (2)
17. COVER

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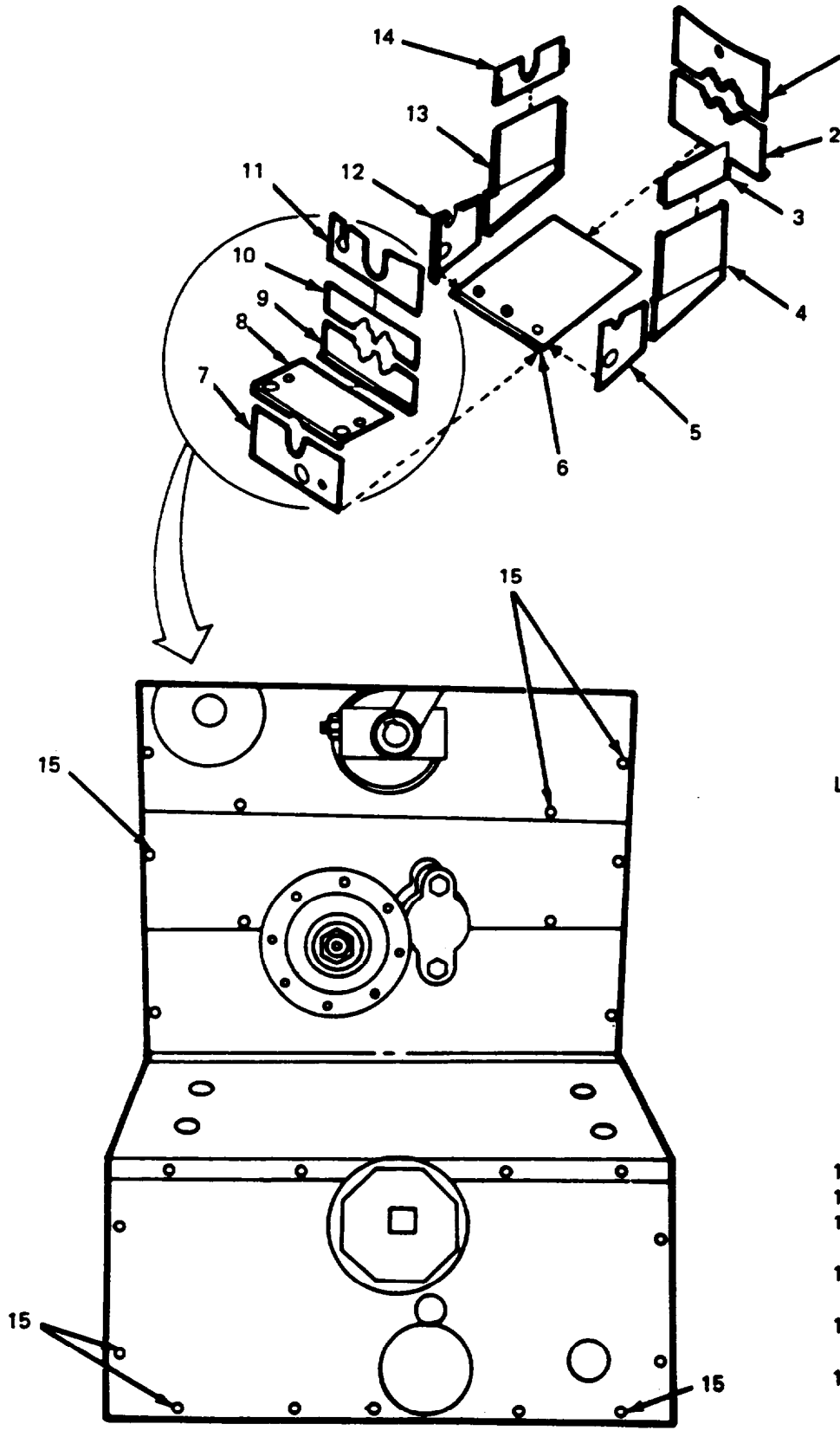
Figure 3-101. Disconnect/Connect Control Linkage and Manifold.



LEGEND:

1. TOP FRONT SECTION
2. BOTTOM FRONT SECTION
3. LEFT TOP SECTION
4. LOWER LEFT SIDE SECTION
5. BOTTOM SECTION - LEFT REAR
6. BOTTOM SECTION
7. HOUSING ASSEMBLY CONTROL VALVE
8. TOP SECTION CONTROL VALVE HOUSING
9. BOTTOM REAR SECTION
10. TOP CENTER SECTION
11. TOP REAR SECTION
12. BOTTOM SECTION RIGHT REAR
13. LOWER RIGHT SIDE SECTION
14. RIGHT TOP HOUSING SECTION
15. SCREWS (23)

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Figure 3-102. Remove/Install Covers.

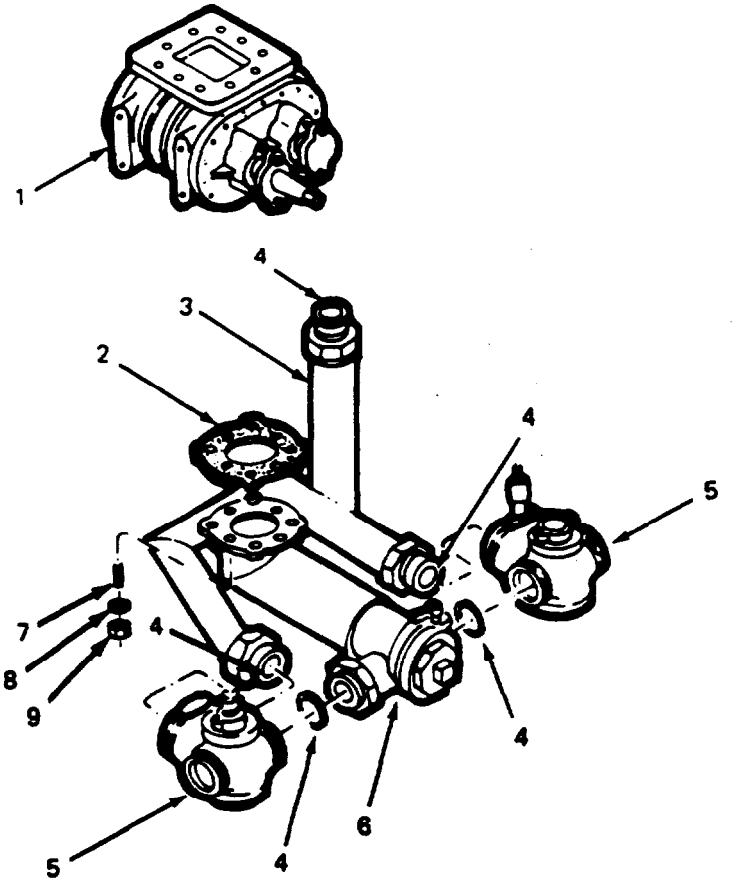
b. Installation.

(1) Place the pump on a hydraulic jack and position the asphalt pump assembly (1, fig. 3-103) with a new gasket (2) under the control valve.

(2) Install studs that fasten the asphalt pump assembly (1) to the control valve.

(3) Connect header assembly (6) in five places to two valve assemblies (5) and the asphalt pump assembly (1). Use new gaskets (4).

(4) Install stud (7), washer (8), and nut (9) that fasten header assembly to asphalt pump.



LEGEND:

1. ASPHALT PUMP ASSEMBLY
2. GASKET
3. RETURN LINE ASSEMBLY
4. GASKET (6)
5. VALVE ASSEMBLY (2)
6. HEADER ASSEMBLY
7. STUD (8)
8. WASHER (8)
9. NUT (8)

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Figure 3-103. Remove/Install Asphalt Pump.

(5) Install vacu-flo lines (fig. 3-101) by loosely connecting pipe nuts (16), (8), and (12). Loosely connecting pipe nuts (7) and (11), tighten pipe nuts (8) and (12); then securely tighten pipe nuts (16), (7), and (11).

(6) Install all covers shown in figure 3-102.

(7) Install bushing (10, fig, 3-101) then place quadrant column on bushing and secure assembly to the tank with two capscrews (1) and washers-

(8) Install linkage (2) and secure with tapered pin (4) and cotter pin (3).

(9) Connect cylinder linkage (14) to quadrant column and secure with cotter pin (15).

(10) Install linkage assembly (9). Secure by tightening lockscrew (5) and installing C-clip (6) and cotter pin (13).

(11) Install hydraulic motor. (Refer to para 3-6.)

Section VII. REPAIR OF COMBUSTION CHAMBER

3-8. Combustion Chamber.

a. Removal.

(1) Remove low pressure burner assembly to gain access to combustion chamber components. (Refer to para 2-39.)

(2) Remove two capscrews (fig. 3-104), nuts and lockwashers that secure combustion chamber components to the tank.

(3) Remove the combustion block assembly, combustion tube and combustion tube holder.

b. Inspection. Inspect combustion tube for cracks, holes, or crumbling condition. Replace if defective.

c. Installation.

Assemble combustion block assembly, combustion tube, and combustion tube holder into tank.

(2) Secure components with two capscrews, nuts and lockwasher.

(3) Re-install tow pressure burner assembly. (Refer to para 2-39.)

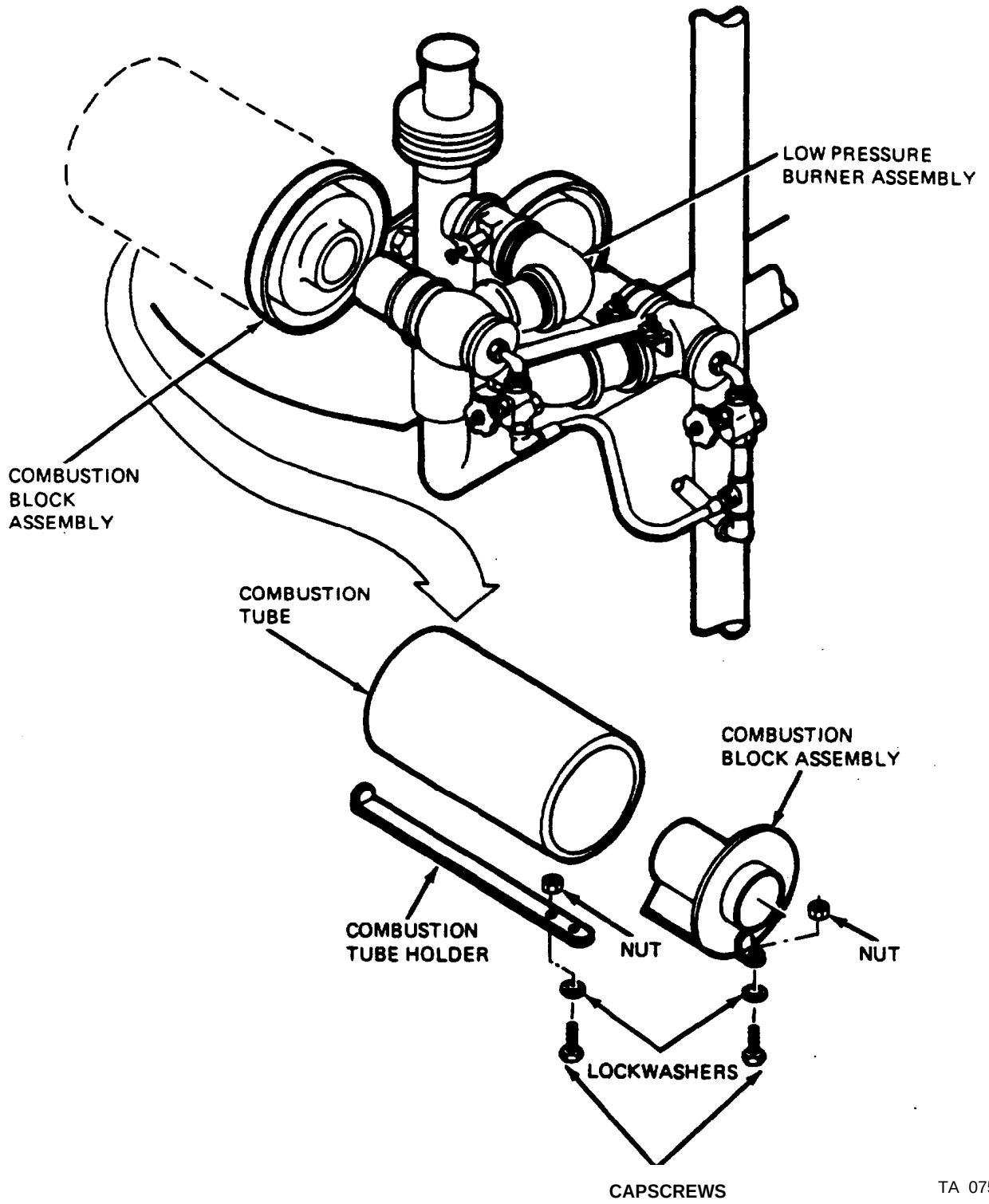


Figure 3-104. Remove/Install Combustion Chamber Components.

Section VIII. REPAIR OF ASPHALT TANK AND HOSES

3-9. Asphalt Tank.

a. *Removal.*

(1) On the right side, remove fuel tank (para 2-27).

(2) Remove eight nuts on top of spring mounting bolts securing tank to the frame (fig. 3-105).

(3) Remove three bolts holding fuel lines to tank (fig. 3-106).

(4) Remove three fender bolts at center of fender (fig. 3-107).

(5) Remove one bolt at rear of right fender brace (fig. 3-109).

(6) Remove four bolts from tank bracket to sub frame (fig. 4-11).

(7) Lift off intake hoses and hand spray hose (fig. 4-9).

(8) Remove eight bolts from walkway brackets and remove walkway (see para 4-3).

(9) Remove two smoke stacks (para 2-28).

(10) Remove quadrant (para 2-29).

(11) Remove air inlet tube (4) from low pressure burners (para 2-39).

(12) Remove low pressure burners (para 2-39).

(13) Remove asphalt pump (para 3-7).

(14) Remove intake valve lever (para 2-30).

(15) Remove vacu-flo valve indicator (10, fig. 3-109) by removing four capscrews (11), two nuts (14), and two nuts (15).

(16) On the left side, remove four bolts, tank to sub-frame (fig. 4-11).

(17) Remove step from rear fender (fig. 5-3).

(18) Remove air line (3) from control box (fig. 4.5).

(19) Remove brace bolt from fender to tank brace (fig. 5-3).

(20) Remove three bolts at center of fender (fig. 3-107).

(21) Remove three clamp bolts and nuts holding air hoses to tank (fig. 3-106).

(22) Remove two air lines from supply tank (fig. 3-114).

(23) Remove two bolts from air supply tank and remove air tank (fig. 3-114).

(24) Remove lamp wiring harness (para 2-10, fig. 2-3).

(25) Remove bell assembly (para 2-12).

(26) Remove eight bolts from driver's side walkway brackets and remove walkway (see para *4-5).*

(27) Remove eight nuts with springs securing tank to frame (Fig. 3-105).

(28) Remove electrical connector from lower corner of cab (Fig. 3-114).

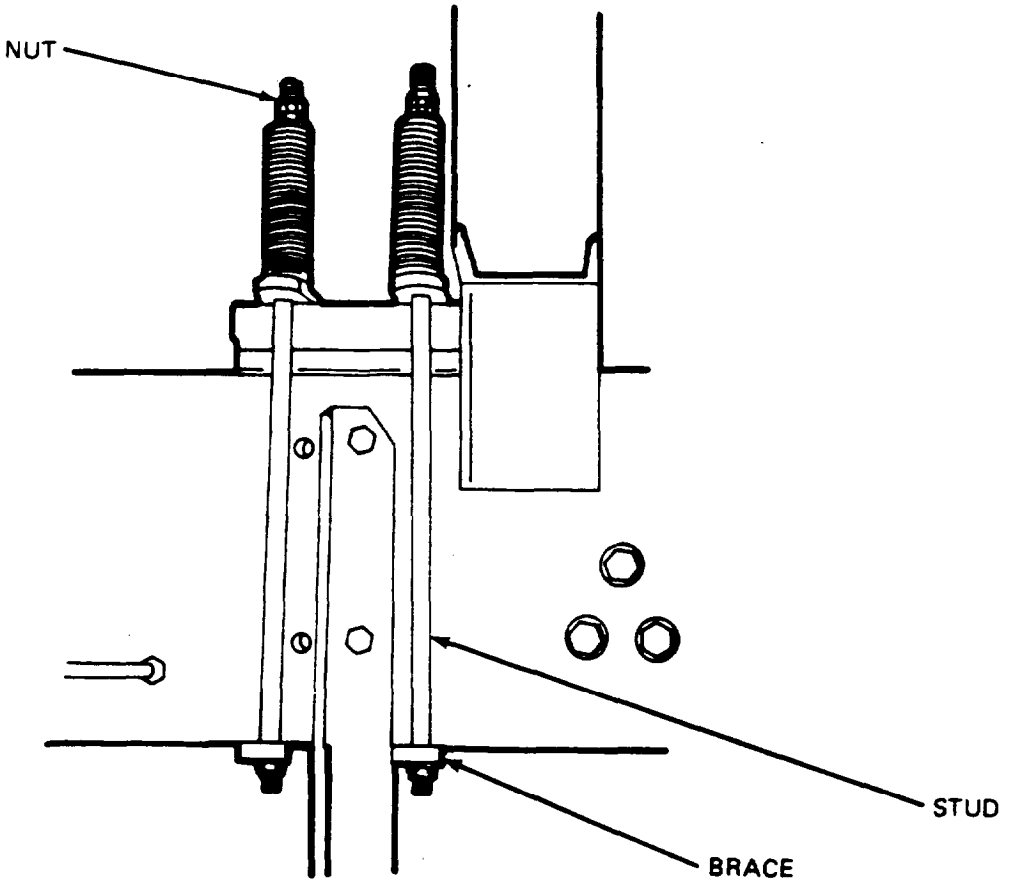


Figure 3-105. Remove/Install Tank Forward Support Braces.

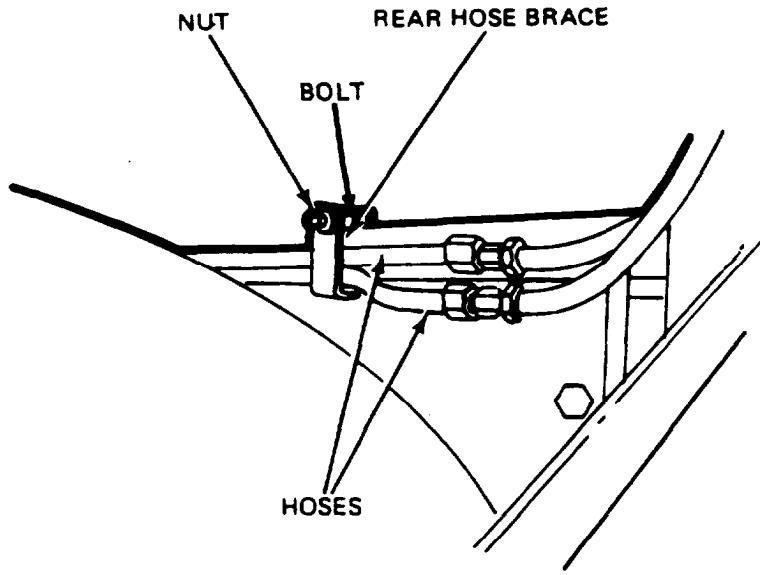


Figure 3-106. Remove/Install Hose Brace.

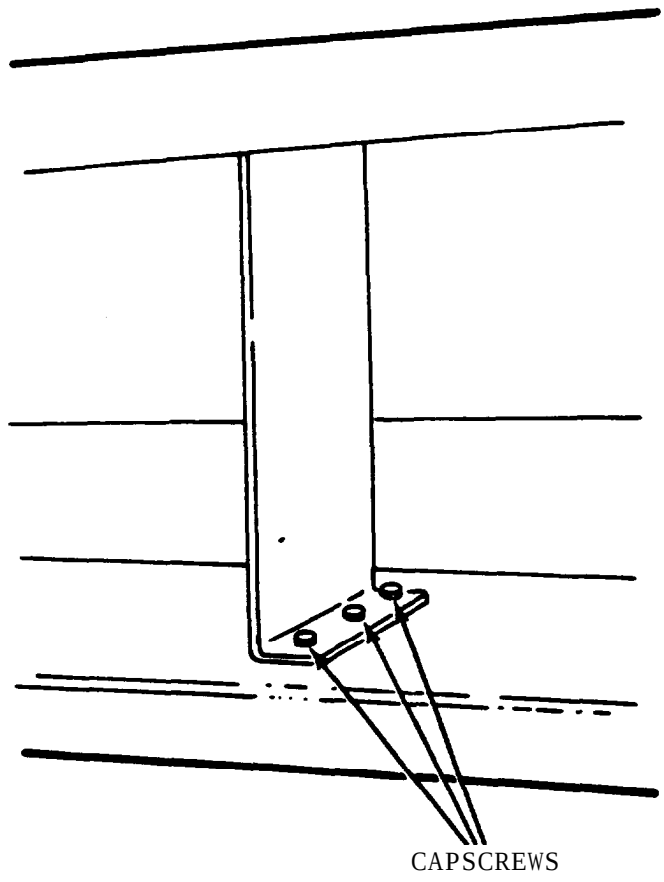


Figure 3-107. Remove/Install Tank Support Plate.

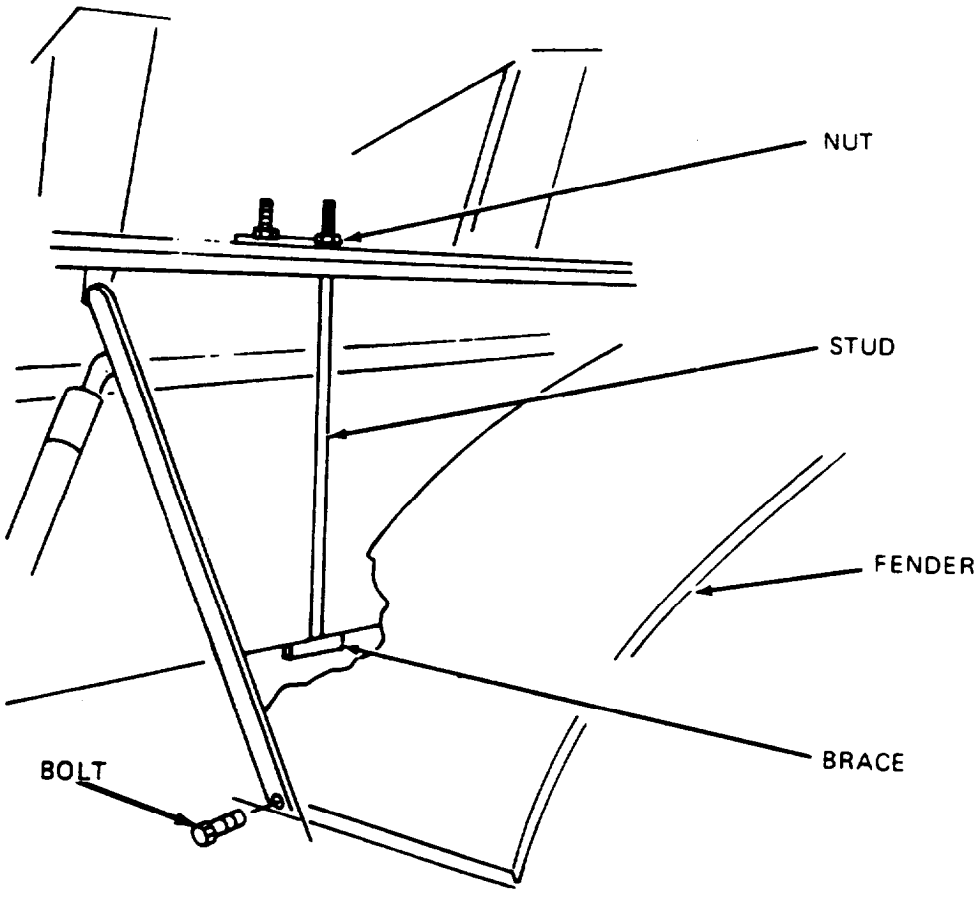
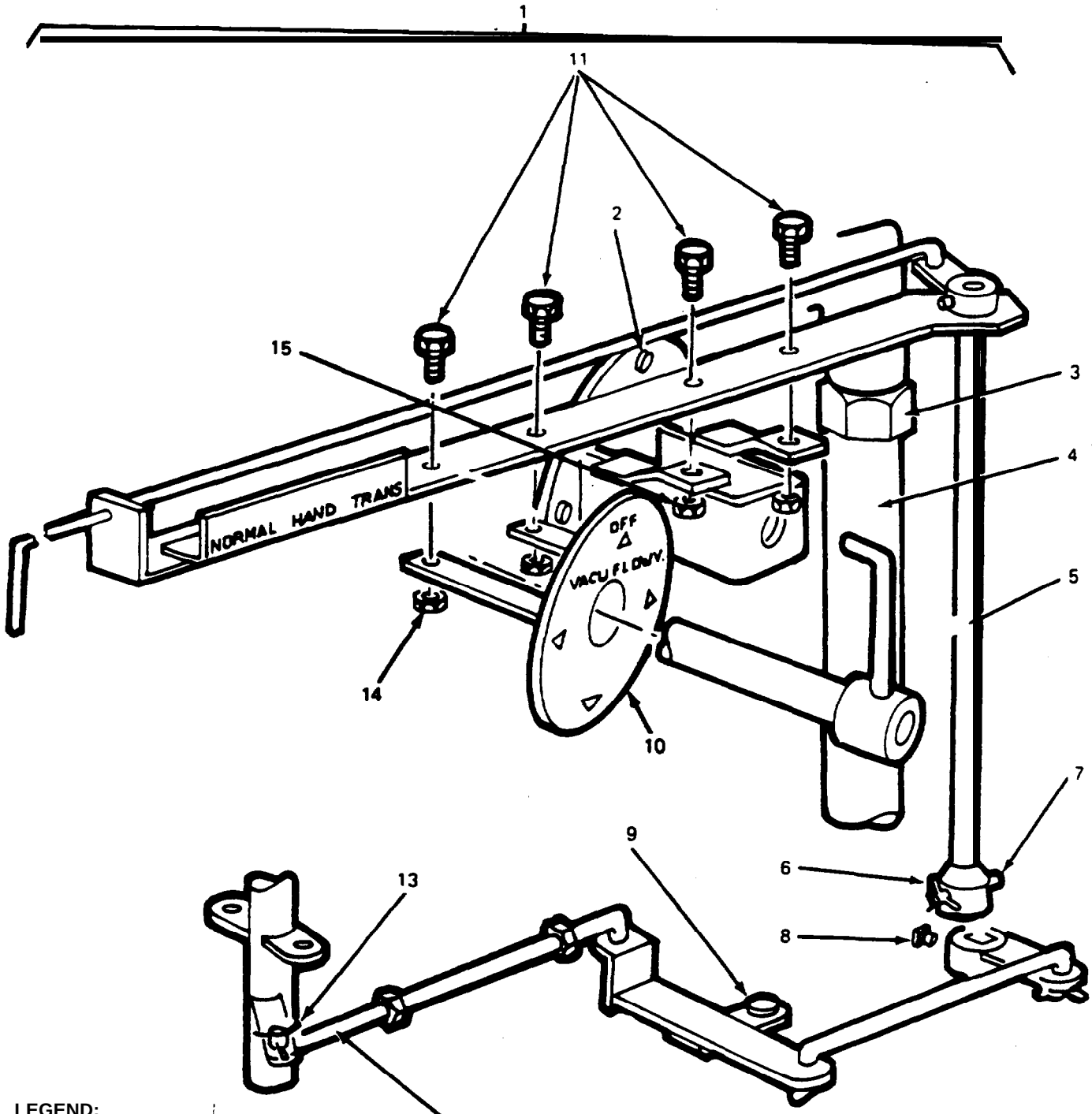


Figure 3-108. Remove/Install Tank Rear Support Braces.



LEGEND:

1. ROD ASSEMBLY
2. ROD
3. PIPE NUT
4. DOWN PIPE
5. CONTROL ROD
6. COMER PIN
7. TAPERED PIN
8. SET SCREW
9. SNAP RING
10. FLOW VALVE INDICATOR
11. CAPSCREW (4)
12. LINKAGE
13. COTTER PIN
14. NUT (2)
15. NUT (2)

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Figure 3-109. Disconnect/connect Control Linkage and Manifold.

(29) Remove micro switch (2, fig. 3-110) with attached bracket (3) by removing two screws (8).

(30) Remove screws (5 and 7) and attached clamps (4 and 6). Lay the cable aside,

(31) Remove burner assembly (1, fig. 3-111) by removing two capscrews (4) and washers that fasten the assembly to the tank; and screw (3) that joins the two tubes together. Disconnect oil feed line (2) and pull off the burner assembly (1) with the tapered spacers located behind the burners.

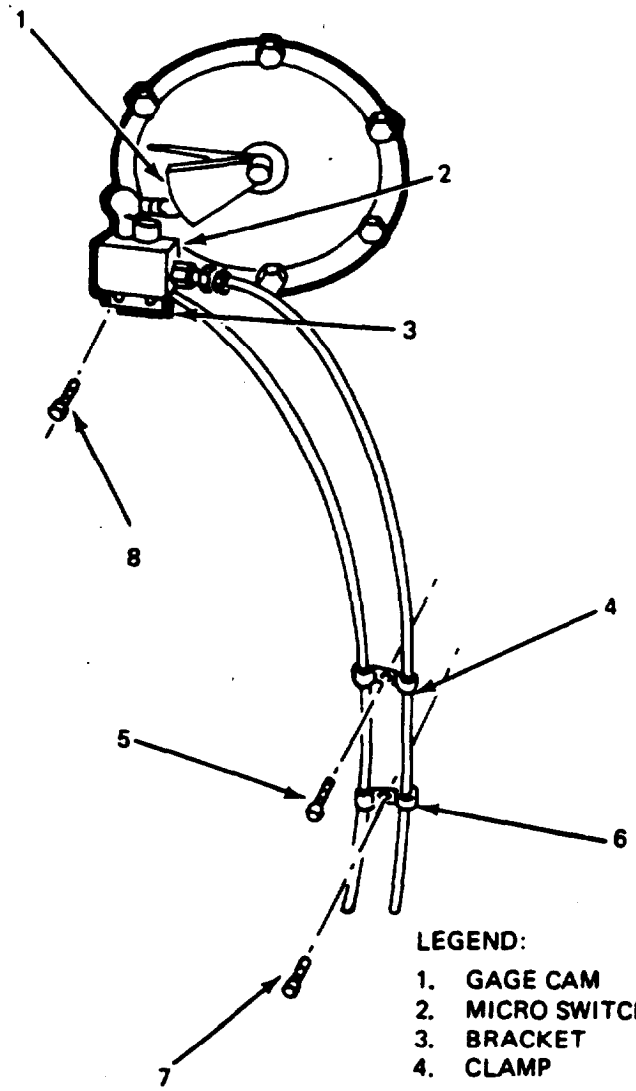
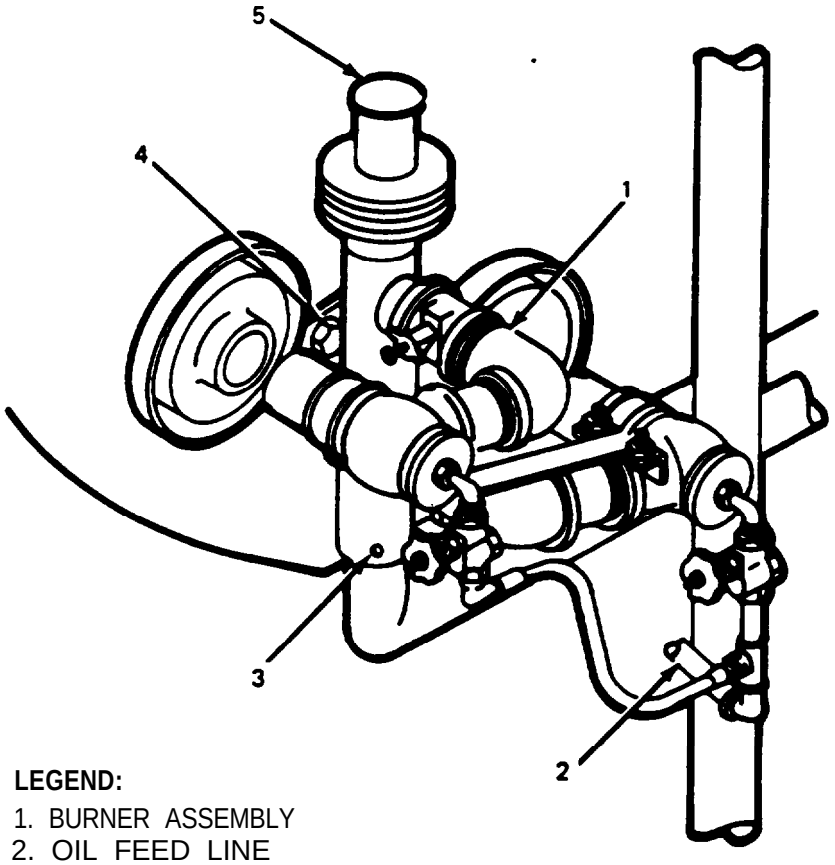


Figure 3-110. Disconnect/Connect Micro Switch and Cables.

(32) Remove manifold (fig. 3-112) by removing attaching capscrews and disconnecting two pipe nuts. Remove gasket.



LEGEND:

1. BURNER ASSEMBLY
2. OIL FEED LINE
3. SCREW
4. CAPSCREW
5. PRESSURE RELIEF VALVE

TA 075985

Figure 3-111. Remove/Install Low Pressure Burner Assembly,

(33) Place a hydraulic jack under the asphalt pump. Raise the jack so that it just touches the pump.

(34) Remove capscrews that fasten the asphalt pump (fig. 3-113) to the control valve.

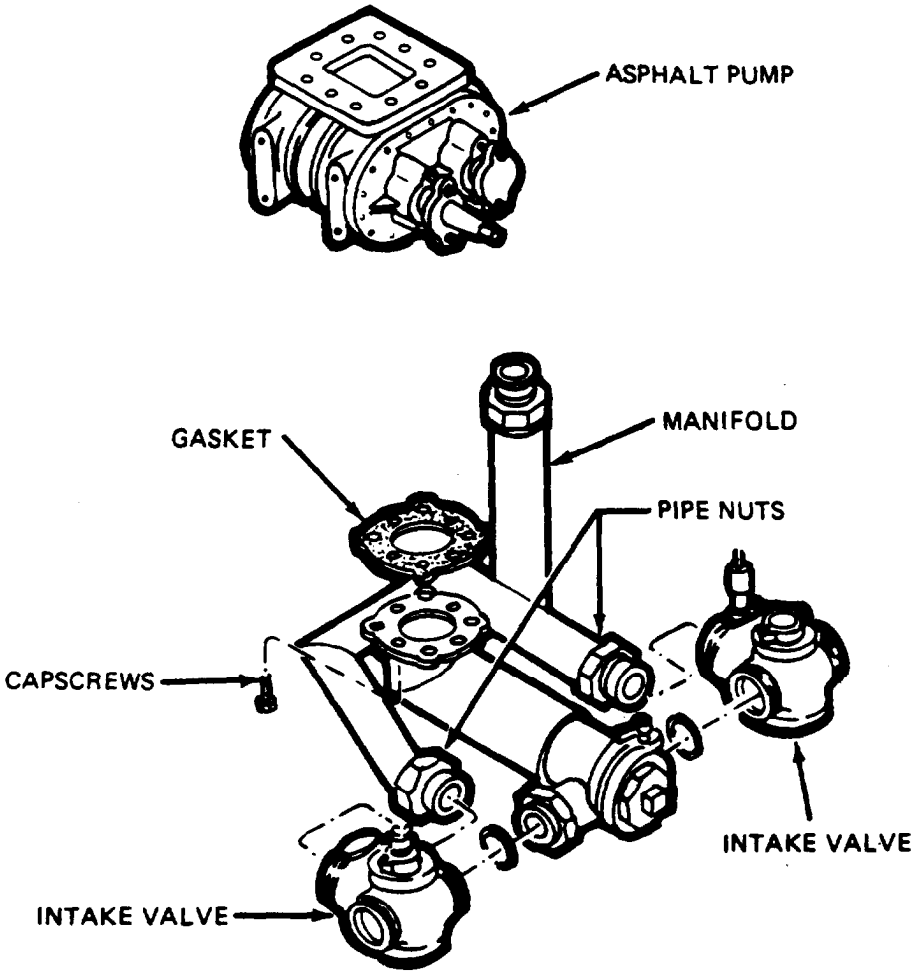


Figure 3-112. Remove/Install Manifold.

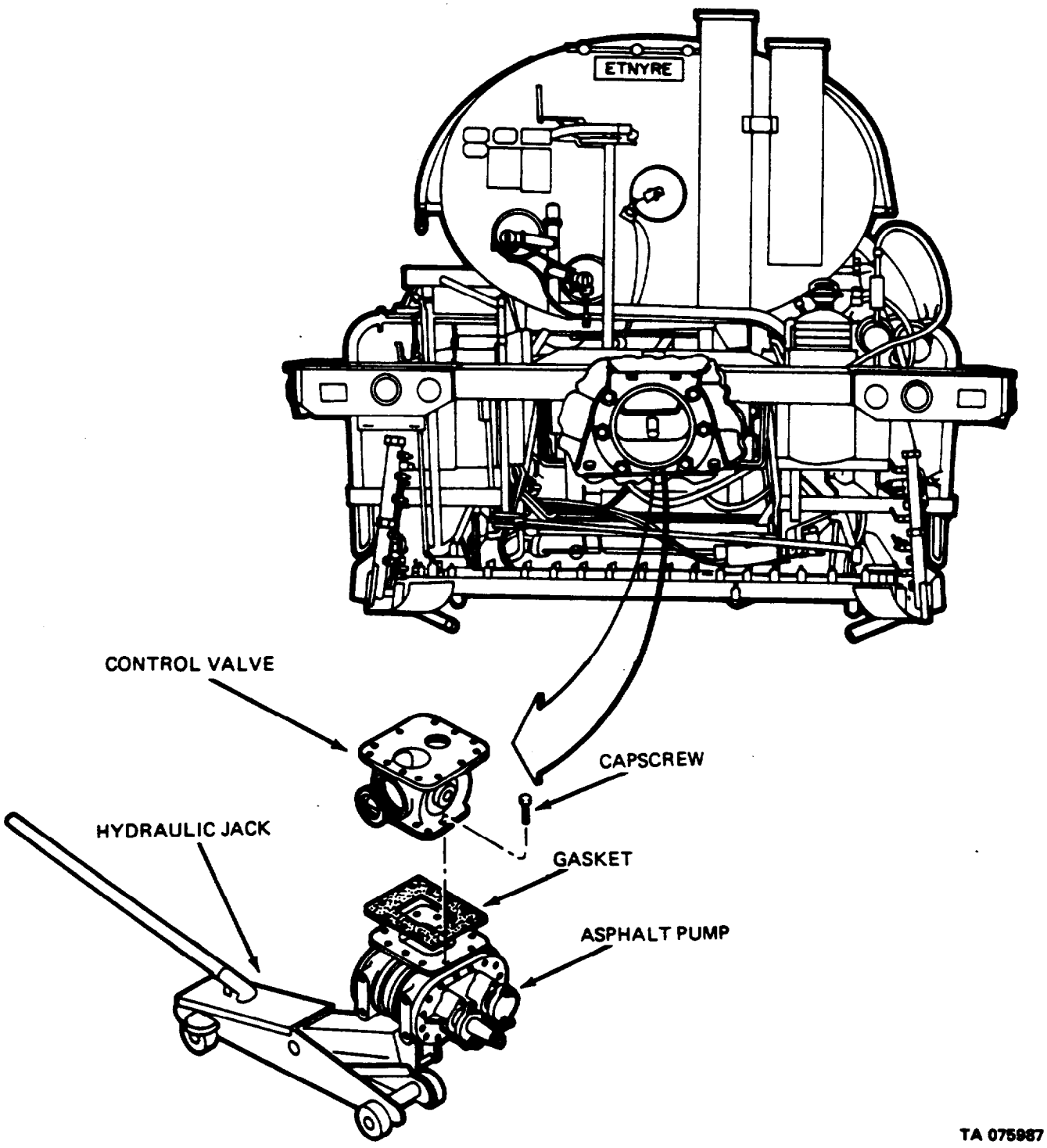


Figure 3-113. Remove/Install Asphalt Pump.

(35) Remove control valve. (Refer to para 2-33.)

(36) Attach sling and hoist to tank (fig. 3-115).

(37) Slowly raise tank off of vehicle frame.

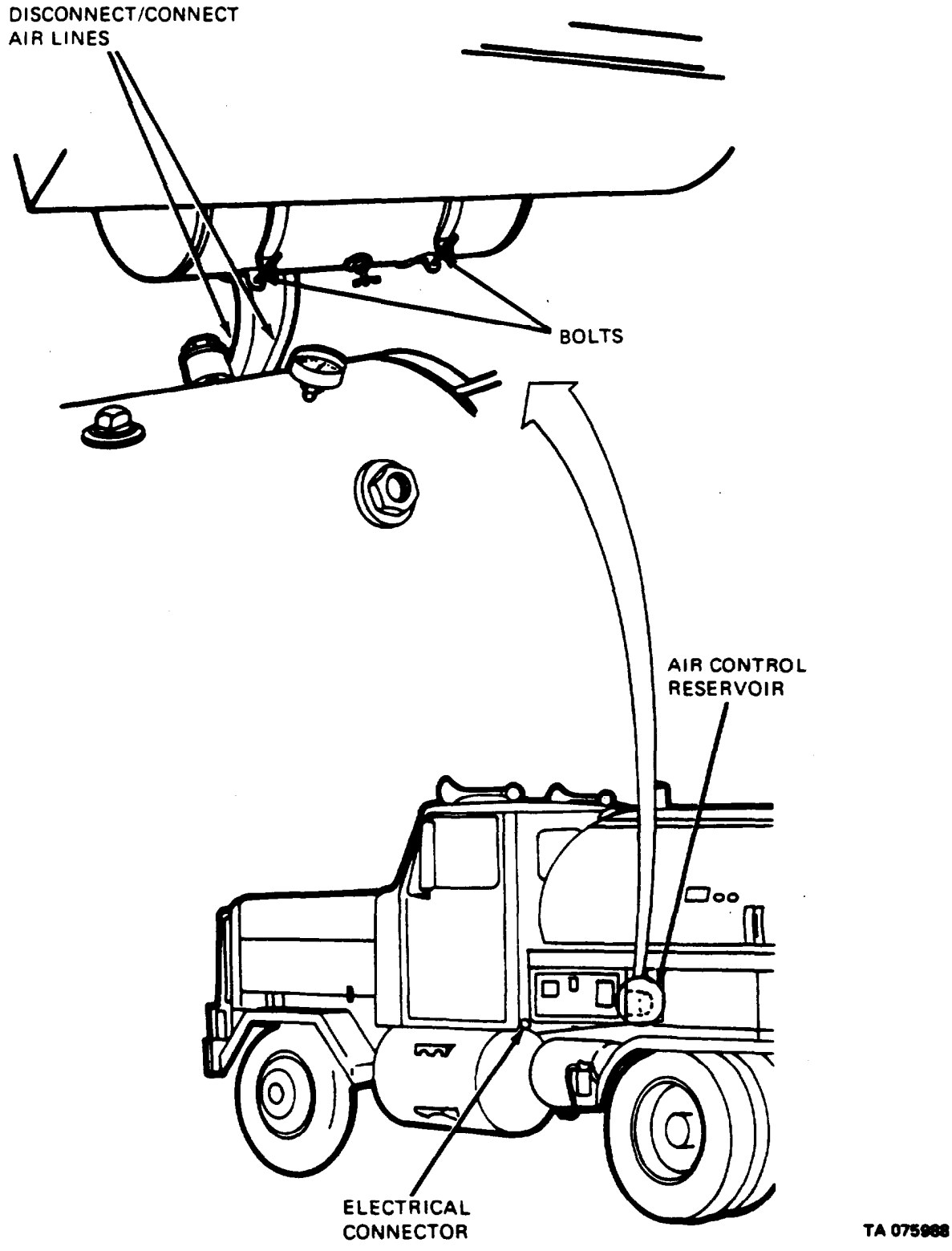


Figure 3-114. Disconnect/Connect Electrical Cable.

b. Installation. (Refer to fig. 3-115.)

(1) On the left side, lift tank into position over chassis frame with suitable hoist; aline mounts and holes; set in place.

(2) Install four tank to sub-frame bolts (1, fig. 4-11).

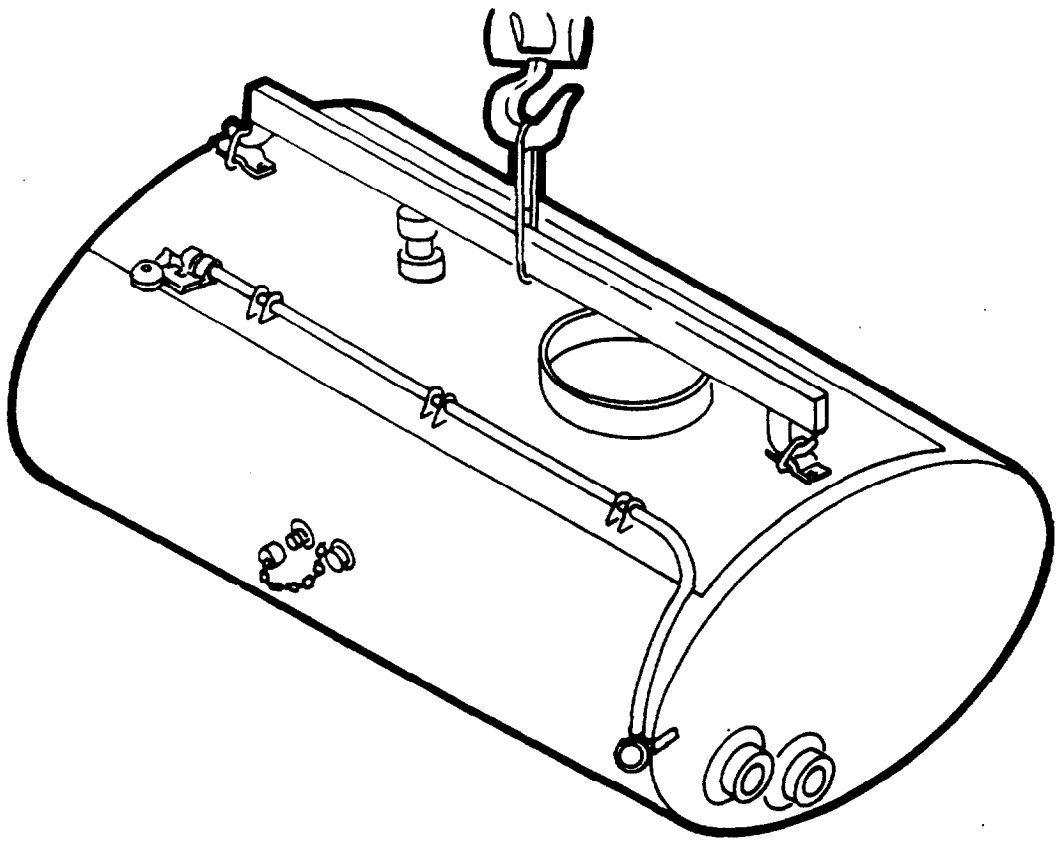
(3) Install four bolts with springs securing tank to frame. Tighten nuts until it just touches spring top then pull down one inch (fig. 3-105).

(4) Install eight bolts through walkway and brackets (para 4-6).

(5) Install wire loom to tank (para 2-10).

(6) Install wire loom to lower cab corner (fig. 3-114).

(7) Install bell assembly (para 2-12).



TA 075988

Figure 3-115. Support Tank with Sling and Hoist

(8) Install air supply tank with two bolts in clamp brackets (fig. 3-114).

(9) Install two air lines to air supply tank (fig. 3-114).

(10) Install three clamp bolts holding air lines to tank (fig. 3-106).

(11) Install three bolts at center of fender (fig. 3-107).

(12) Install fender to tank brace bolt (fig. 5-3).

(13) Install control box air line (3) (fig. 4-5).

(14) Install step to rear fender (fig. 5-3).

(15) Install asphalt pump (para 3-7).

(16) Install low pressure burners (para 2-39).

(17) Install low pressure burners air inlet tube (para 2-39).

(18) Install intake valve lever (para 2-30).

(19) Install vacuum flow lever and gage plate (fig. 3-109) with four capscrews (11), two nuts (14), and two nuts (15).

(20) Install two smoke stacks (para 2-28).

(27) Install eight bolts thru walkway and brackets (para 4-4).

(22) Install fuel tank (see para 2-27 b).

(23) Set intake hoses and hand spray hose in place (fig. 4-9).

(24) Install four tank brackets to sub-frame bolts (fig. 4-11).

(25) Install one bolt at rear of right fender brace (fig. 3-108).

(26) Install three center fender bolts (fig. 3-107).

(27) Install two fuel lines to tank and secure with three clamps and bolts (fig. 3-106).

(28) Install eight nuts to top of tank to frame spring mounting bolts (fig. 3-105). Tighten nut until it just touches spring top then pull down one inch.

(29) Install microswitch (2, fig. 3-110) with attached bracket (3) secure bracket to tank with two screws (8).

(30) Install two clamps (4 and 6, fig. 3-110) to secure cables for microswitch (2). Fasten each pair of clamps to tank with screws (5 and 7).

(37) Install hydraulic motor. (Refer to para 3-6.)

3-10. Asphalt Hose.

a. Repair of Three Inch Asphalt Hose. (Refer to fig. 3-116.)

(1) With two large pipe wrenches, remove coupler (5) from hose adapter (4).

(2) Remove adapter (4) from jam nut (2) and remove packing (3).

(3) Remove jam nut (2) from flex hose (1).

(4) With a sharp pointed tool remove gasket (6) from coupler (5).

(5) Repeat steps (1), (2), (3), and (4) for other end of same hose.

(6) Install jam nut (2) onto flex hose (1).

(7) Wrap packing (3) over jam nut (2) at flex hose (1).

(8) Install adapter (4) on to jam nut (2) and tighten with two pipe wrenches.

(9) Install coupler (5) on to adapter (4).

(10) Install new gasket (6) into coupler (5).

(11) Repeat steps (6), (7), (8), (9), and (10). on other end of hose.

b. Repair of One Inch Asphalt Hose.

(1) With two large pipe wrenches remove coupler (11) from adapter (10).

(2) Remove adapter (10) from jam nut (8) and remove packing (9).

(3) Remove jam nut (8) from flex hose (7).

(4) With a sharp pointed tool remove gasket (12) from coupler (11).

(5) Repeat steps (1), (2), (3), and (4) for other end of hose.

(6) Install jam nut (8) onto flex hose (7).

(7) Wrap pecking (9) over jam nut (8).

(8) Install adapter (10) to jam nut (8) and tighten with two pipe wrenches.

(9) Install coupling (11) on to adapter (10).

(10) Install new gasket (12) into coupler (11).

(11) Repeat steps *(6), (7), (8), (9),* and *(10)* on other end of hose.

c. *Repair of Adapter and Fittings.*

(1) Remove cap and chain assembly (16) from connector (15).

(2) With a sharp pointed tool remove gasket (6) from cap and chain assembly (16).

(3) Remove connector (15) from connector (14) and gasket (13).

(4) Remove cap and chain assembly (17) from connector (18).

(5) With a pointed tool, remove gasket (12) from cap and chain assembly (17).

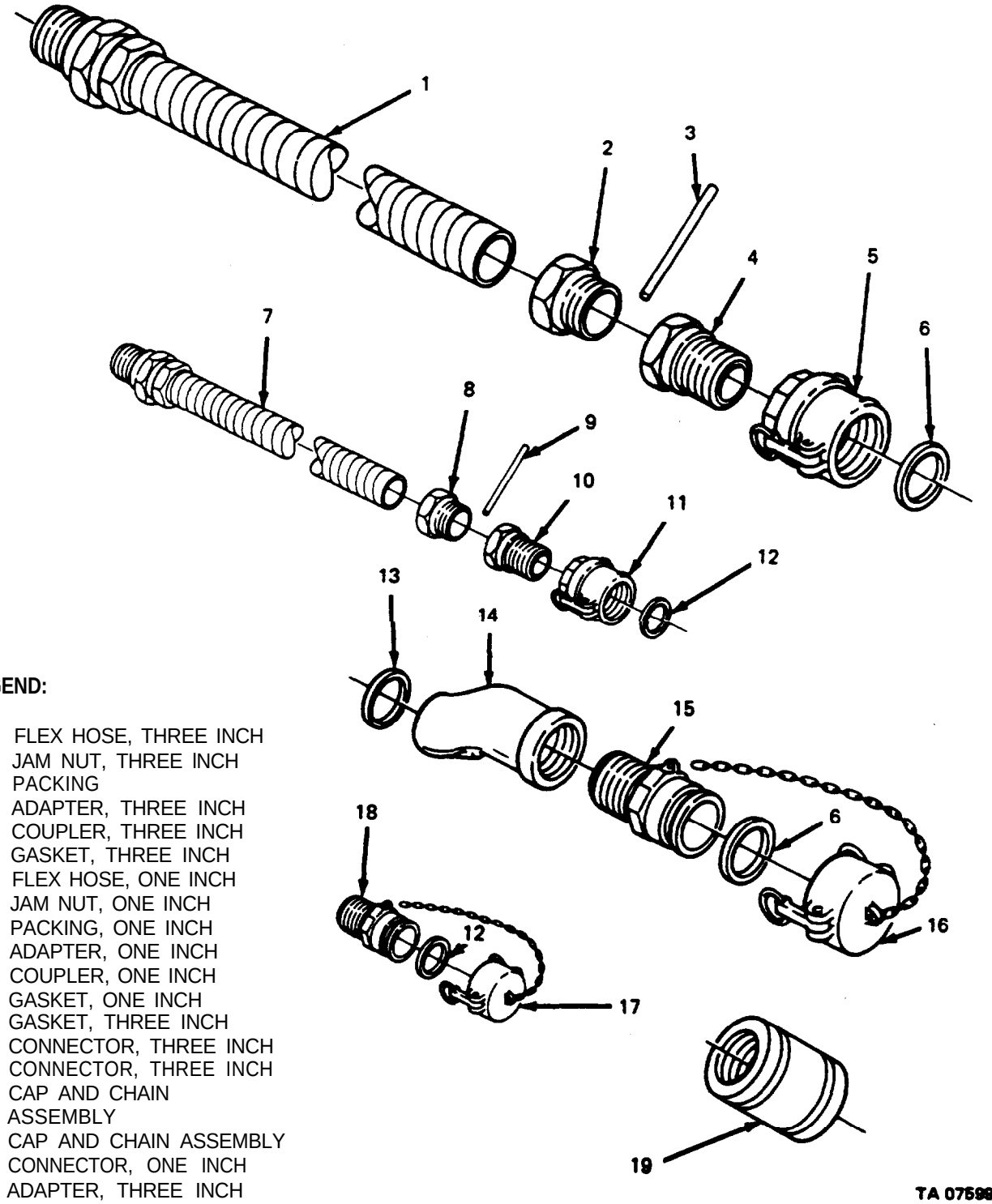
(6) Adapter (19) is used to connect two hoses together when needed.

(7) Install new gasket (6) into cap and chain assembly (16).

(8) Install cap and chain assembly (16) onto connector (15).

(9) Install connector (15) into connector (14) with gasket (13).

(10) Install gasket (12) into cap and chain assembly (17) and secure to connector (18).



LEGEND:

1. FLEX HOSE, THREE INCH
2. JAM NUT, THREE INCH
3. PACKING
4. ADAPTER, THREE INCH
5. COUPLER, THREE INCH
6. GASKET, THREE INCH
7. FLEX HOSE, ONE INCH
8. JAM NUT, ONE INCH
9. PACKING, ONE INCH
10. ADAPTER, ONE INCH
11. COUPLER, ONE INCH
12. GASKET, ONE INCH
13. GASKET, THREE INCH
14. CONNECTOR, THREE INCH
15. CONNECTOR, THREE INCH
16. CAP AND CHAIN ASSEMBLY
17. CAP AND CHAIN ASSEMBLY
18. CONNECTOR, ONE INCH
19. ADAPTER, THREE INCH

Figure 3-116. Asphalt Hoses (Metal) and Connectors.

CHAPTER 4

REPAIR OF PLATFORMS AND WALKWAYS

Section I. REPAIR OF REAR PLATFORM

4-1. Removal and Disassembly.

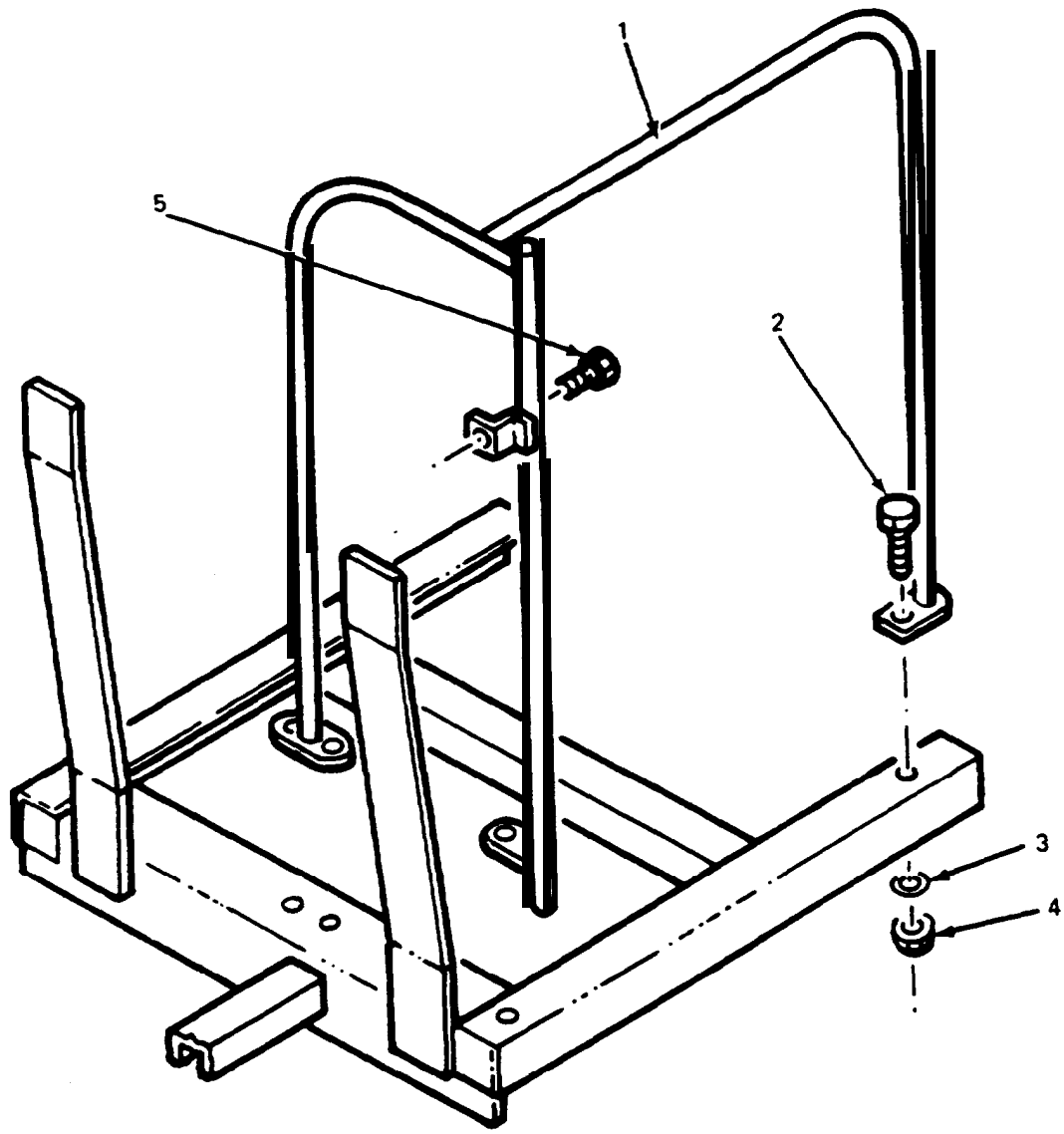
a. Remove bumper. (Refer to para 2-9.)

b. Remove stowage box. (Refer to para 2-11.)

c. Remove blower assembly. (Refer to para 2-35.)

d. Lift off rear end of two auxiliary tank hoses (fig. 4-9) so that they do not interfere with platform removal.

e. Remove right side guard rail (1, fig. 4-1) by removing three capscrews (2), lockwashers (3), and nuts (4) from top and bottom. Remove capscrews (5), nut and washer that fasten guard rail to frame.



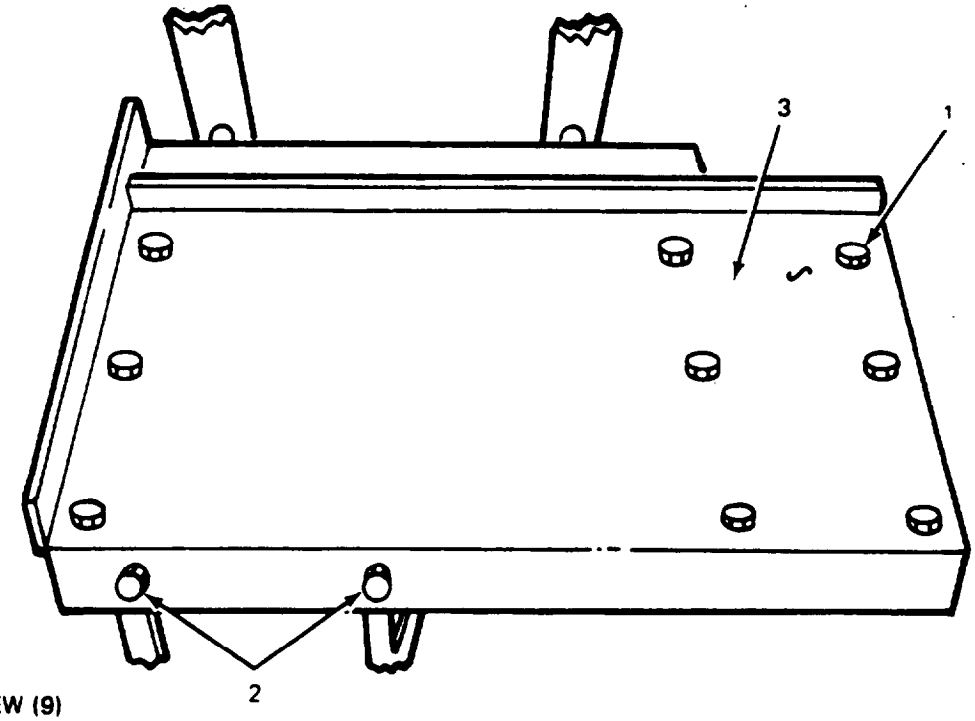
LEGEND:

1. RIGHT SIDE GUARD RAIL
2. CAPSCREW
3. LOCKWASHER
4. NUT
5. CAPSCREW

TA 075993

Figure 4-1. Remove/Install Guard Rail

f. Remove right side platform (3, fig. 4-2) by removing nine capscrews (1), nuts, and washers from top and bottom of platform; and two capscrews (2), nuts and washer from the side step.



LEGEND:

1. CAPSCREW (9)
2. CAPSCREW (2)
3. PLATFORM

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Figure 4-2. Remove/Install Platform.

g. From below platform, disconnect two pipe nuts (1 and 2, fig. 4-3).

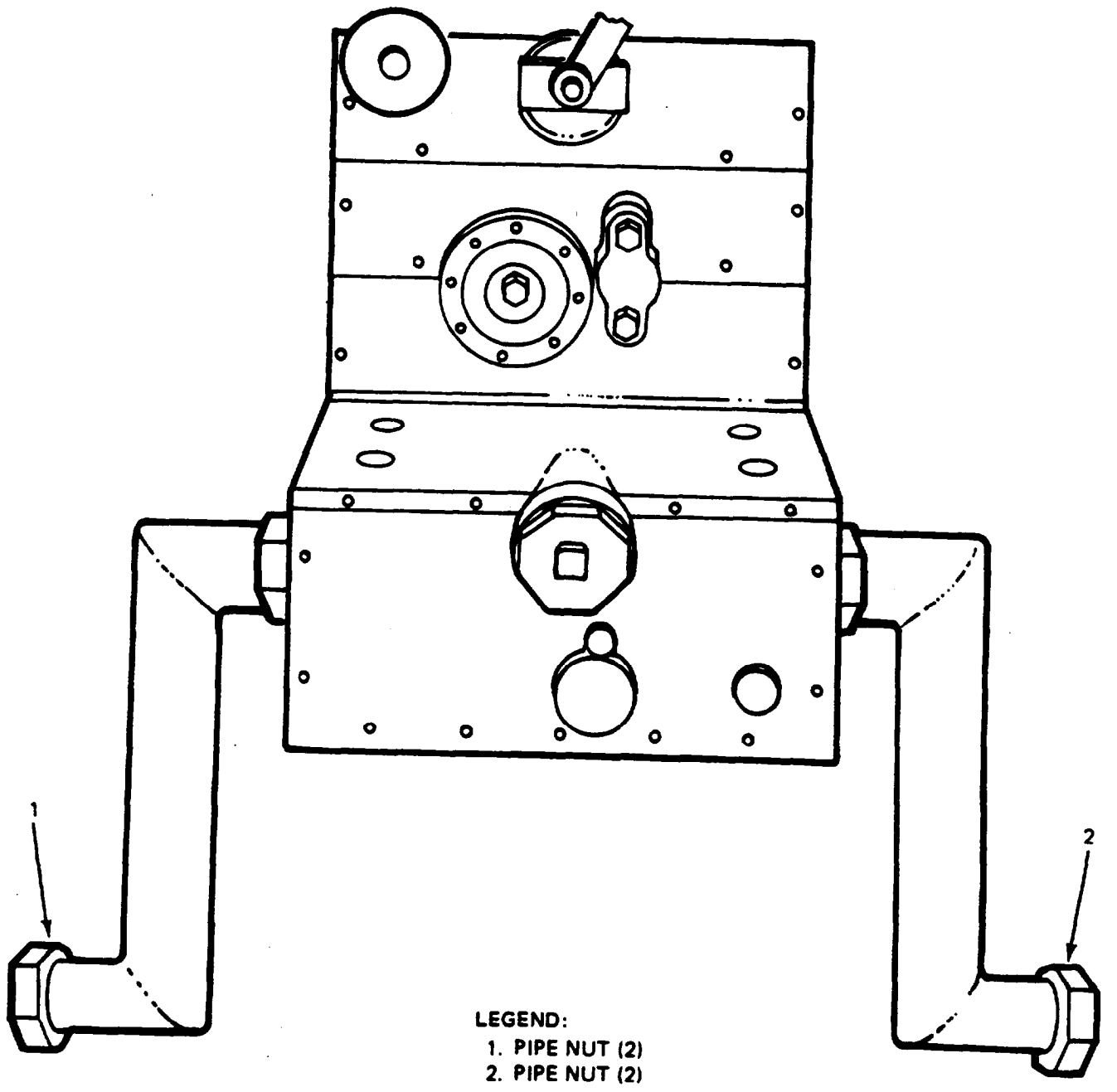
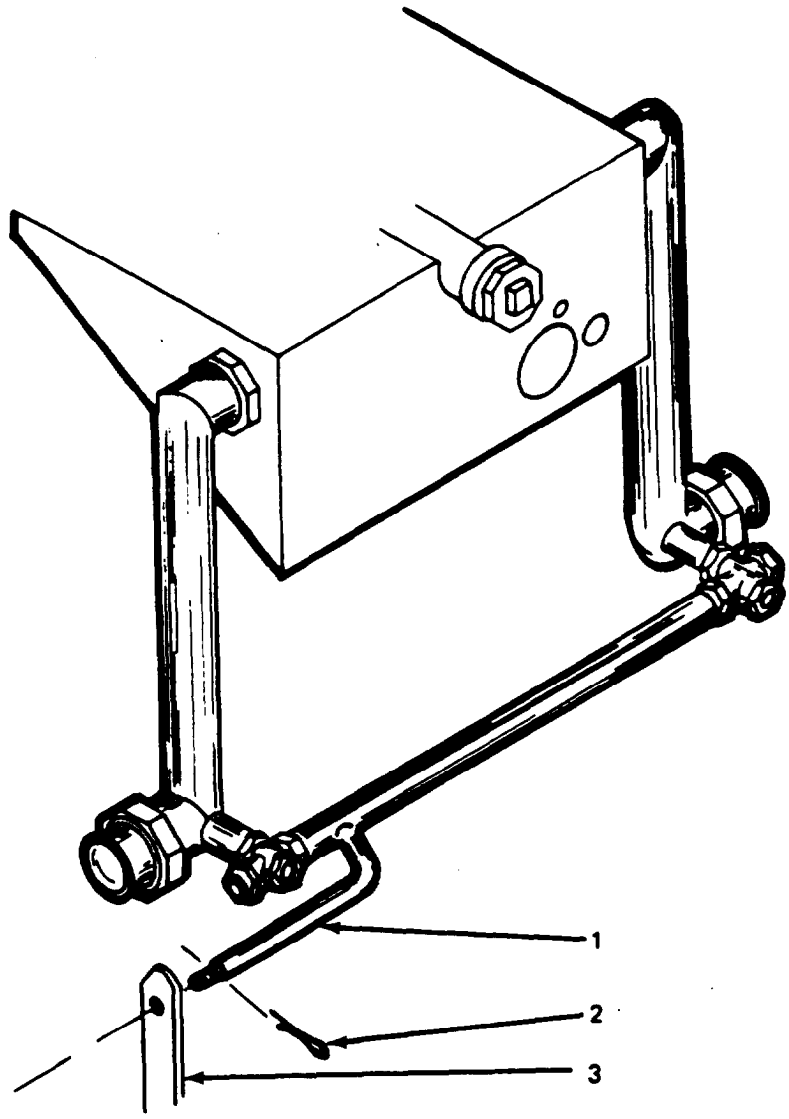


Figure 4-3. Disconnect/Connect Manifold.

h. Disconnect linkage (3, fig. 4-4) from valve control arm (1) by removing cotter pin (2) and washer.



LEGEND:
1. VALVE CONTROL ARM
2. COTTER PIN
3. LINKAGE

TA 075996

Figure 4-4. Disconnect/Connect Control Linkage.

i. Disconnect two air lines from control cylinder.

j. Disconnect air line (3, fig. 4-5).

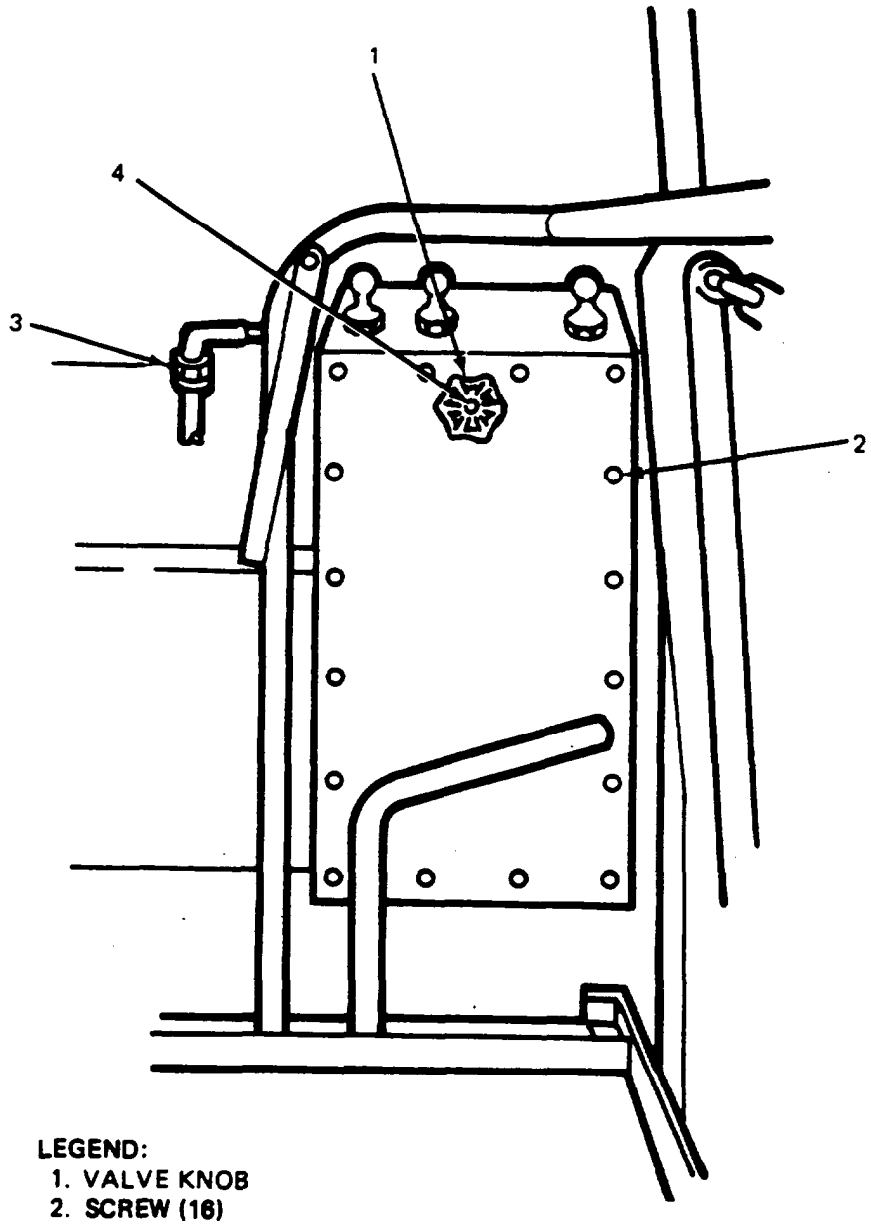


Figure 4-5. Remove/Install Air Control Box Components.

k. Remove control box cover by removing nut (4), washer, valve knob (1), and sixteen screws (2).

NOTE

In step I, observe that the wires being disconnected are the same color as the wires remaining on each terminal. Therefore it is not necessary to tag the wires for identification.

l. Disconnect eight wires (fig. 4-6) from terminal strip.

m. Disconnect electrical fitting by removing knurled nut inside control box; then pull the eight wires out of box.

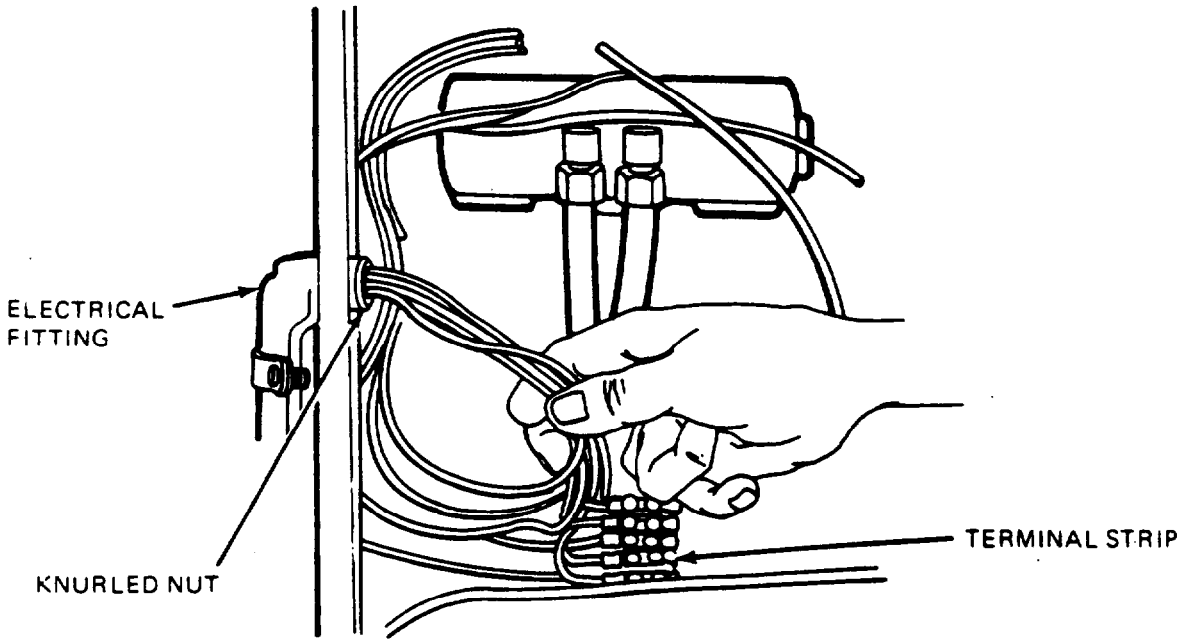


Figure 4-6. Disconnect/Connect Terminal Strip Wires.

n. Remove step (fig. 4-7) from left rear fender and platform by removing six capscrews, nuts, and washers.

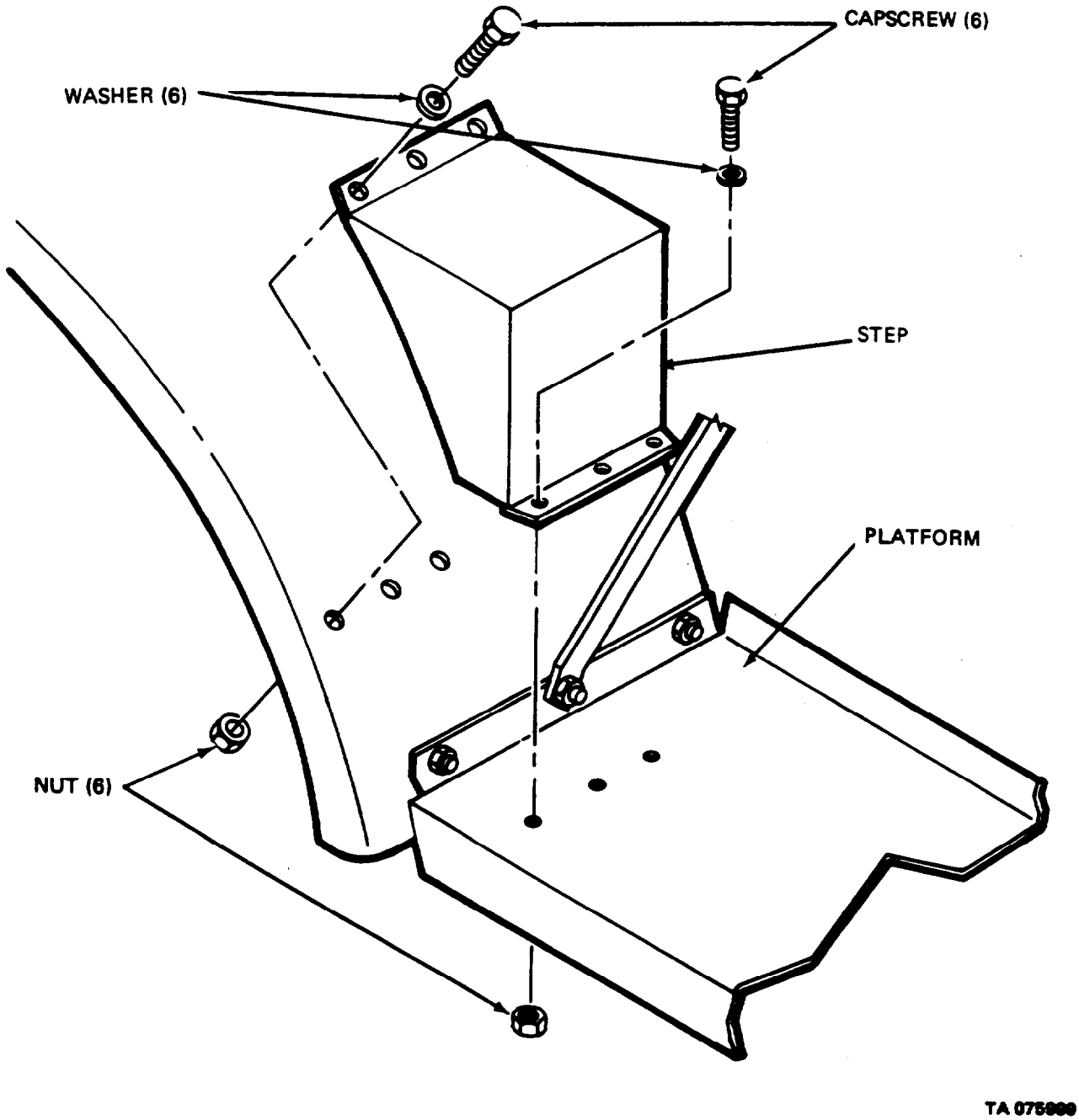


Figure 4-7. Disconnect/Connect Fender and Step.

o. Disconnect left rear fender from platform by removing three capscrews, nuts, and washers (fig. 4-7).

p. Disconnect override control cable (3, fig. 4-8). Loosen screw on top of trunnion (1) and pull out cable wire. Loosen clamp (2) and pull cable (3) out through the clamp.

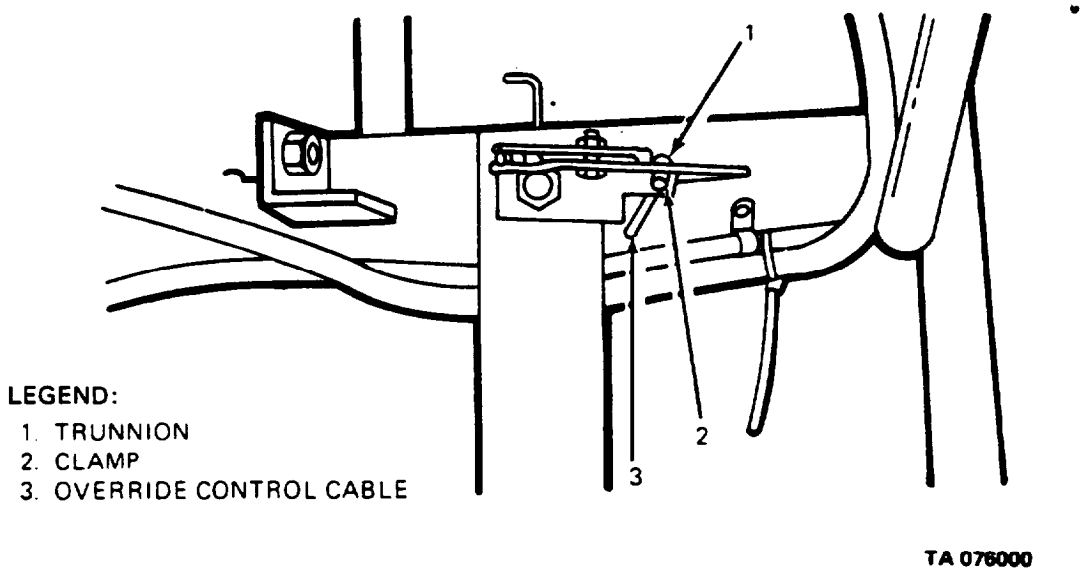


Figure 4-8. Disconnect/Connect Override Cable.

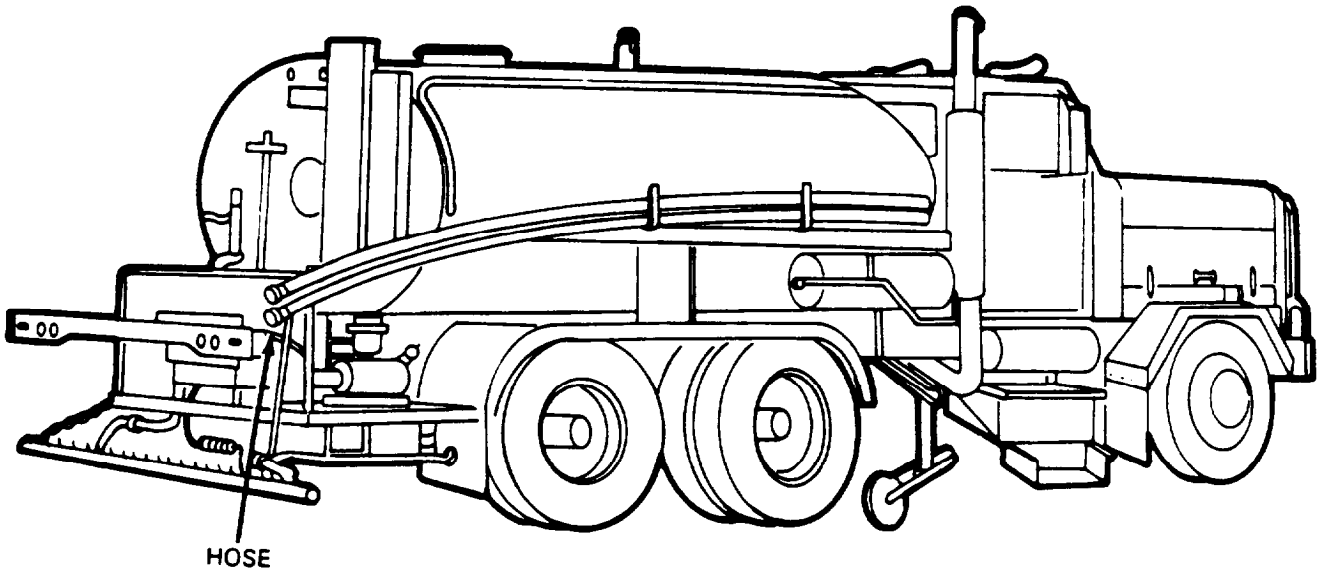


Figure 4-9. Displace/Mount Auxiliary Hoses.

q. Raise spray bar and lock in up position (fig. 4-10).

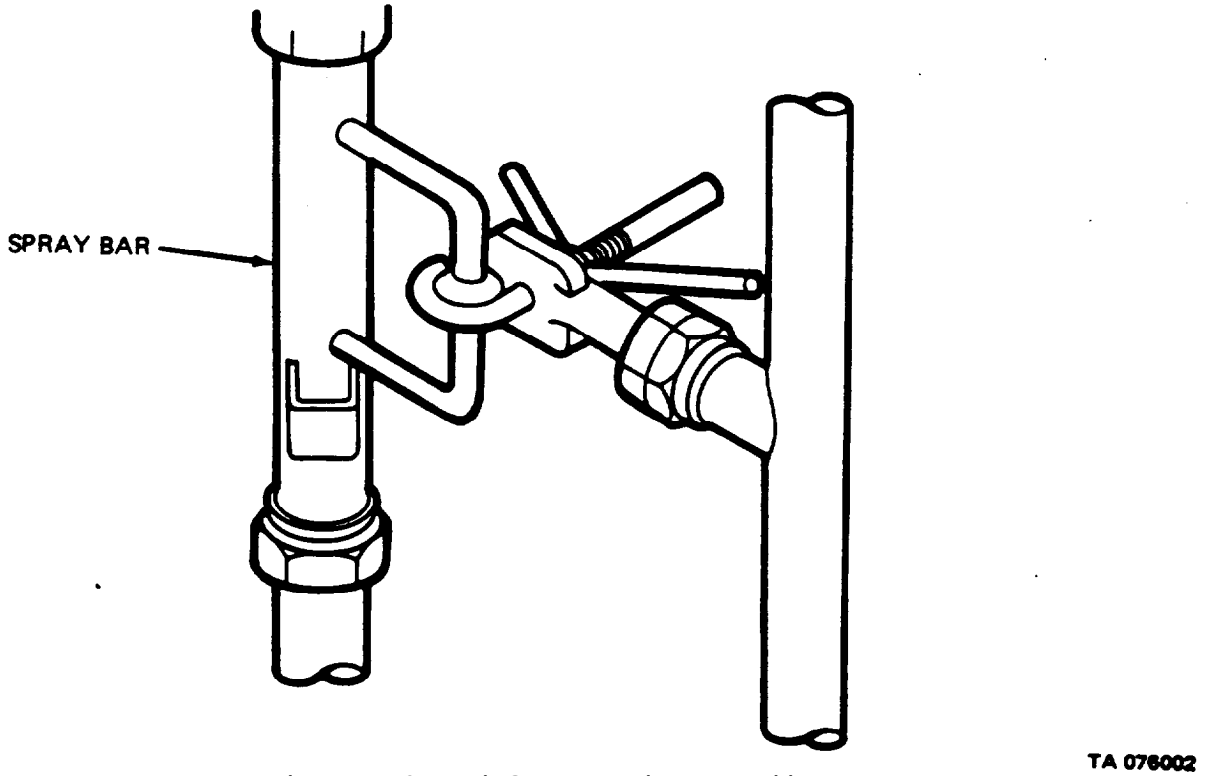


Figure 4-10. Lock Spray Bar in Up Position.

r. Position a hydraulic jack under the center of the platform. Set the jack so that it just touches the platform.

NOTE

In steps s and t, three men are required to remove the platform; one on each side and one operating the jack.

s. Remove two capscrews, nuts, and washers that fasten platform to left and right side frame rails fig. 4-11).

t. Lower the platform on the jack; then remove the platform out from the rear of the vehicle.

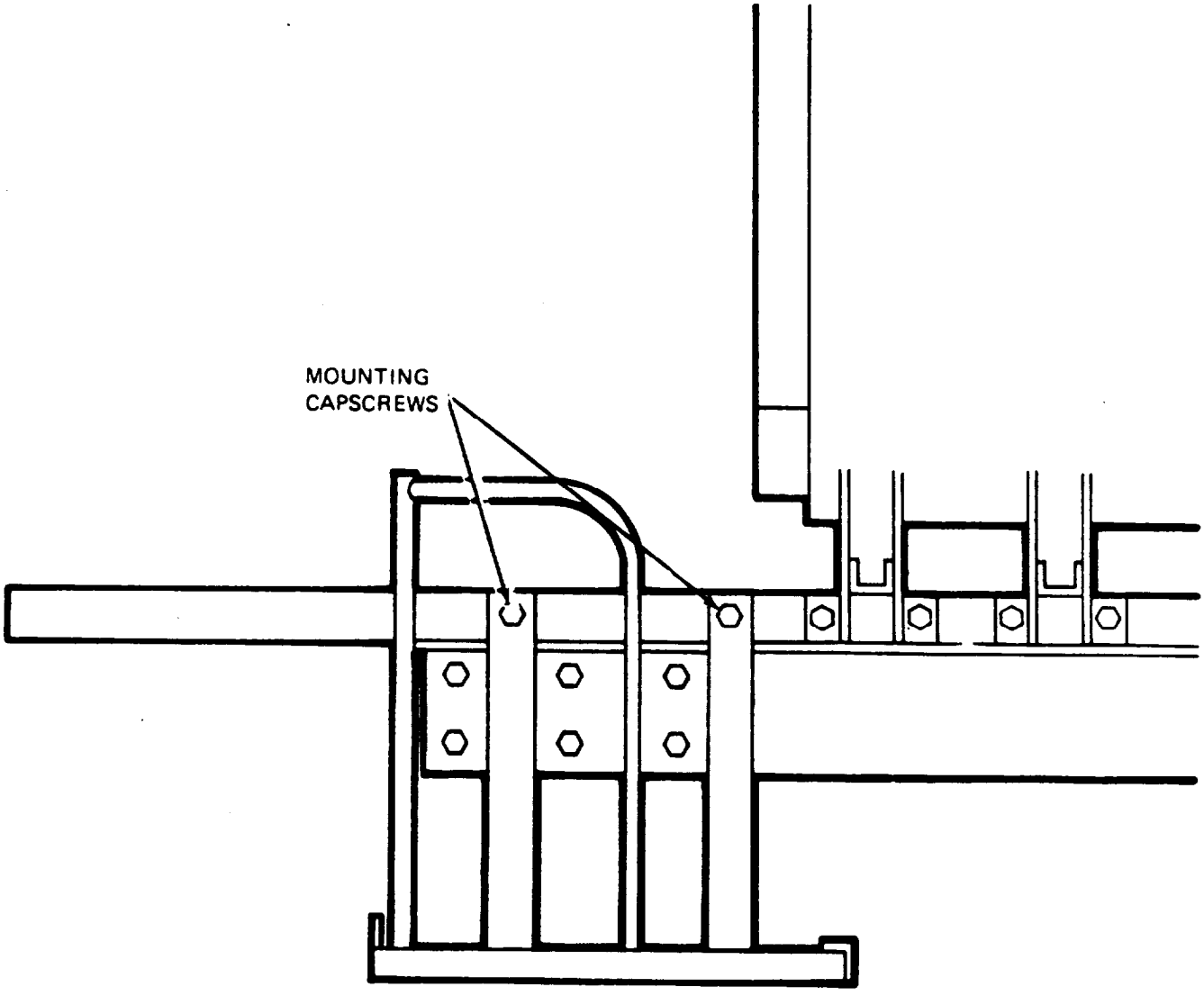


Figure 4-11. Remove/Install Platform Attaching Parts.

4-2. Installation.

a. Make sure that spray bar is set in locked-up position (fig. 4-10).

NOTE

In steps b and c, three men are required to install the platform; one on each side and one operating the jack.

b. Position a hydraulic jack under the center of the platform.

c. Position the platform (fig. 4-11) to line up its mounting holes with holes in vehicle frame; then install two capscrews, nuts, and washers that fasten the platform to each frame rail.

d. Position auxiliary tank hoses in their proper position, as shown in figure 4-9.

e. Connect override control cable (3, fig. 4-8). Pass wire through hole in trunnion (1); then tighten screws on top of the trunnion. Secure cable with clamp (2).

f. Connect platform (fig. 4-7) to left rear fender and brace and secure with three capscrews, nuts, and washers.

g. Install step and secure to left rear fender and platform with six capscrews, nuts, and washers.

h. Connect right rear fender to platform with three capscrews, nuts, and washers.

i. Connect electrical fitting (fig. 4-6) to control box and secure with knurled nut inside box.

j. Connect eight wires to terminal strip. Color of each wire must match the color of the wire that is already connected to the terminal strip. That is, the red wire must go to the terminal that has another red wire on it; the white wire to the terminal that has another white wire on it, etc.

k. Install control box cover (fig. 4-5) and secure with screws (2); then install knob (1) and secure with washer and nut (4). Connect air line (3) to control box.

l. Connect two rods (5, fig. 2-60) to valve control arm and secure wit., cotter pins.

m. Connect linkage (3, fig. 44) and secure with cotter pin (2).

n. Connect two lines to cylinder (fig. 2-22).

o. Connect pipe nuts (1 and 2, fig. 4-3).

p. Install right side platform (fig. 4-2) and secure with nine capscrews (1) nuts and washers at top and bottom of plate; and two capscrews (2), nuts, and washers through the side step.

q. Install right side guard rail (fig. 4-1) and secure with three capscrews (2), lockwashers (3), and nuts (4) at top and bottom. Install capscrews (5), nut, and washer that fasten guard rail to frame.

r. Install blower assembly. (Refer to para 2-35.)

s. Install stowage box. (Refer to para 2-11.)

t. Install bumper. (Refer to para 2-9.)

Section II. REPAIR OF SIDE WALKWAYS

4-3. Remove Passenger Side Walkway. (Refer to fig. 4-12.)

NOTE

Lift off oil fill tubes from walkway.

a. Remove four bolts, washers, and nuts (6) from two clearance lights (7). Snip wire at each light to remove from walkway.

b. Remove three bolts, washers, and nuts (8) from walkway bracket to fender connection.

c. Remove eight bolts and washers from four walkway to asphalt tank brackets (2) (3) (4) and (5). Do not remove the four lower bolts and washers from brackets (4) and (5); it is not necessary to remove the burner fuel tank.

d. Remove walkway (1).

4-4. Install Passenger Side Walkway. (Refer to fig. 4-12.)

a. Set walkway (1) in place and aline mounting holes.

b. Install eight bolts and washers thru walkway brackets (2), (3), (4), and (5).

c. Install three bolts, washers, and nuts (8) thru walkway bracket to fender connection.

d. Rejoin wires to clearance lights (7) with new wire crimp connectors.

e. Install four bolts, washers and nuts (6) to clearance lights (7).

f. Replace oil fill tubes to walkway.

4-5. Remove Driver's Side Walkway. (Refer to fig. 4-12.)

a. Bleed air system; refer to TM 9-2320-273-10.

b. Remove air lines (18) and (19) from "T" fitting (17) on back of air tank (16).

c. Remove six bolts, washers, and nuts (11); three each on either end of storage box (15). Remove storage box (15) with air tank (16) attached, from walkway (12).

d. Remove four bolts, washers, and nuts (6) from two clearance lights (7).

e. Snip wires at two clearance lights (7) and remove from walkway.

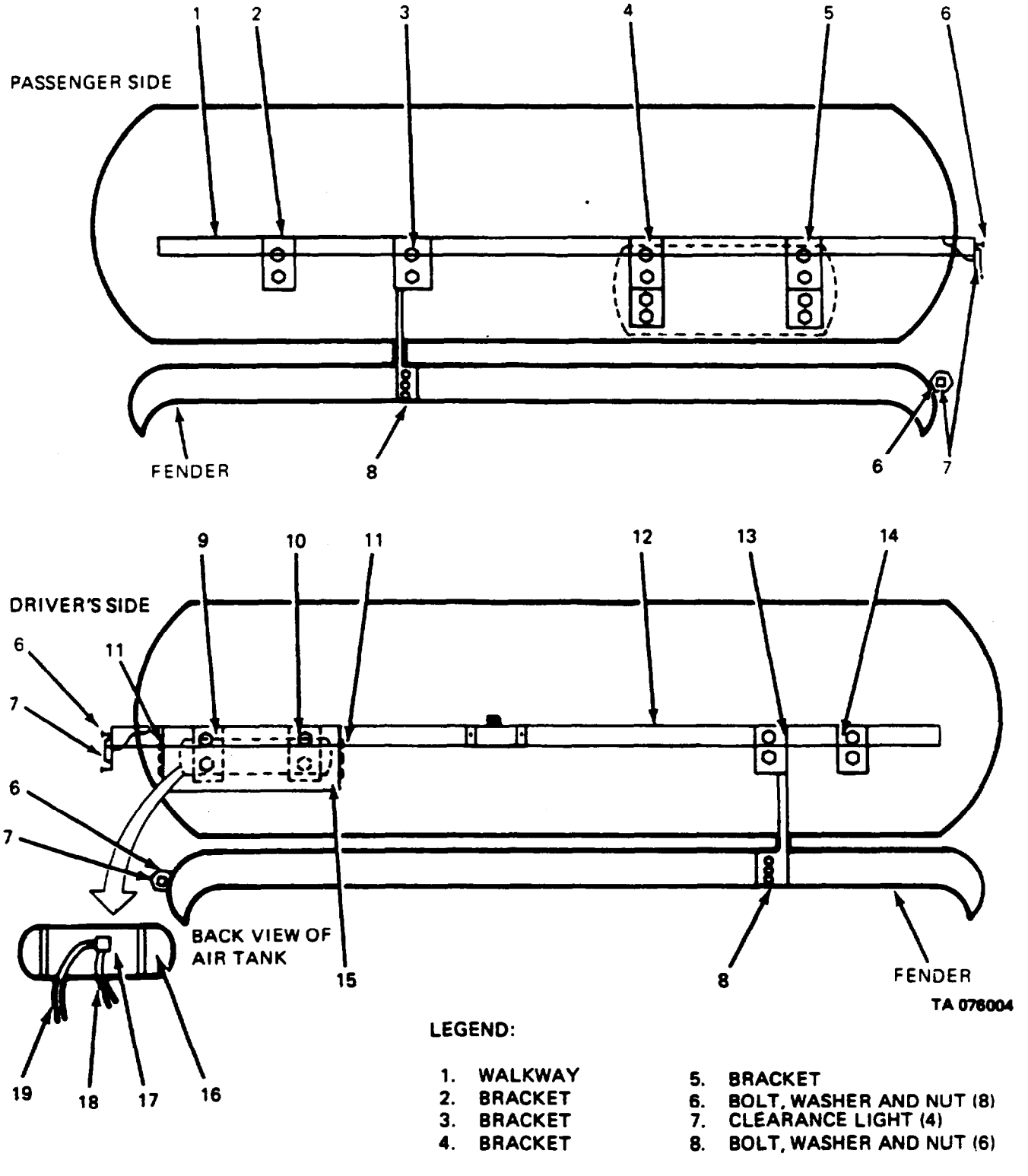
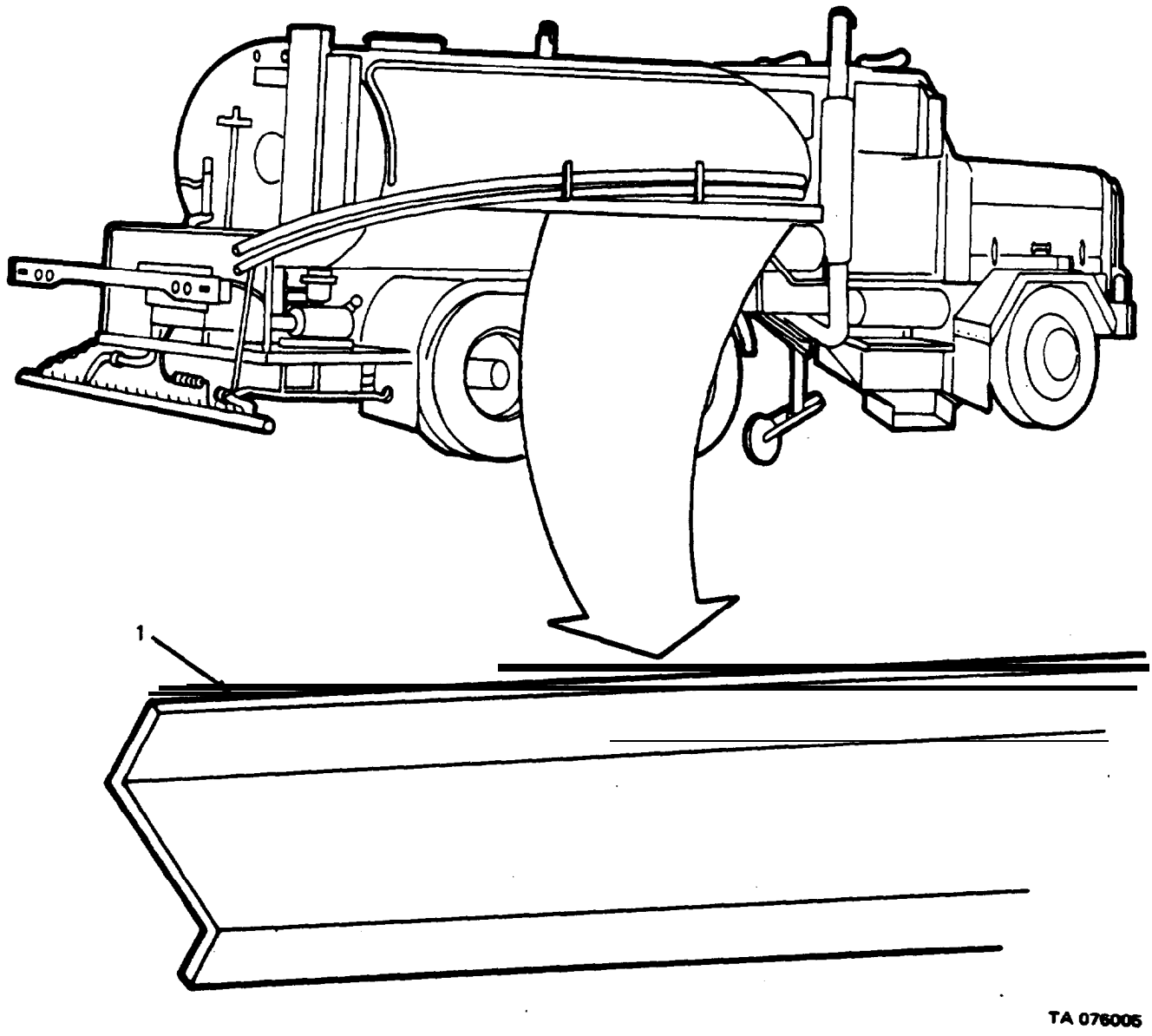


Figure 4-12. Passenger Side and Driver's Walkway (Sheet 1 of 2).



LEGEND:

9. BRACKET
10. BRACKET
11. BOLT, WASHER AND NUT (6)
12. WALKWAY
13. BRACKET
14. BRACKET
15. STORAGE BOX
16. AIR TANK
17. 'T' FITTING
18. AIR LINE
19. AIR LINE

Figure 4-12. Passenger Side and Driver's Walkway (Sheet 2 of 2).

f. Remove three bolts, washers, and nuts (8) from walkway bracket to fender connection.

g. Remove eight bolts and washers from four walkway brackets (9), (10), (13) and (14).

h. Remove walkway (12).

4-6. Install Driver's Side Walkway. (Refer to fig. 4-12.)

a. Set walkway (12) in place and aline mounting holes.

b. Install eight bolts and washers thru four walkway brackets (9), (10), (13), and (14).

c. Install three bolts, washers and nuts (8) thru walkway bracket to fender connection.

d. Rejoin wires to clearance lights (7) with new wire crimp connectors.

e. Install four bolts, washers, and nuts (6) and mount two clearance lights (7).

f. Install storage box (15) with air tank (16) attached to walkway (12) with six bolts, washers, and nuts (11); three each on either end of storage box (15).

g. Install air lines (18) and (19) to "T" fitting (17) on back of air tank (16).

h . Start engine, pressurize air system, check for air leaks and clearance light function; refer to TM 9-2329273-10.

4-7. Remove Rear Wheel Splash Guard. (Refer to fig. 4-13.)

a. Remove four bolts (1) and flat washers (4) with lockwasher (5) and nuts (6).

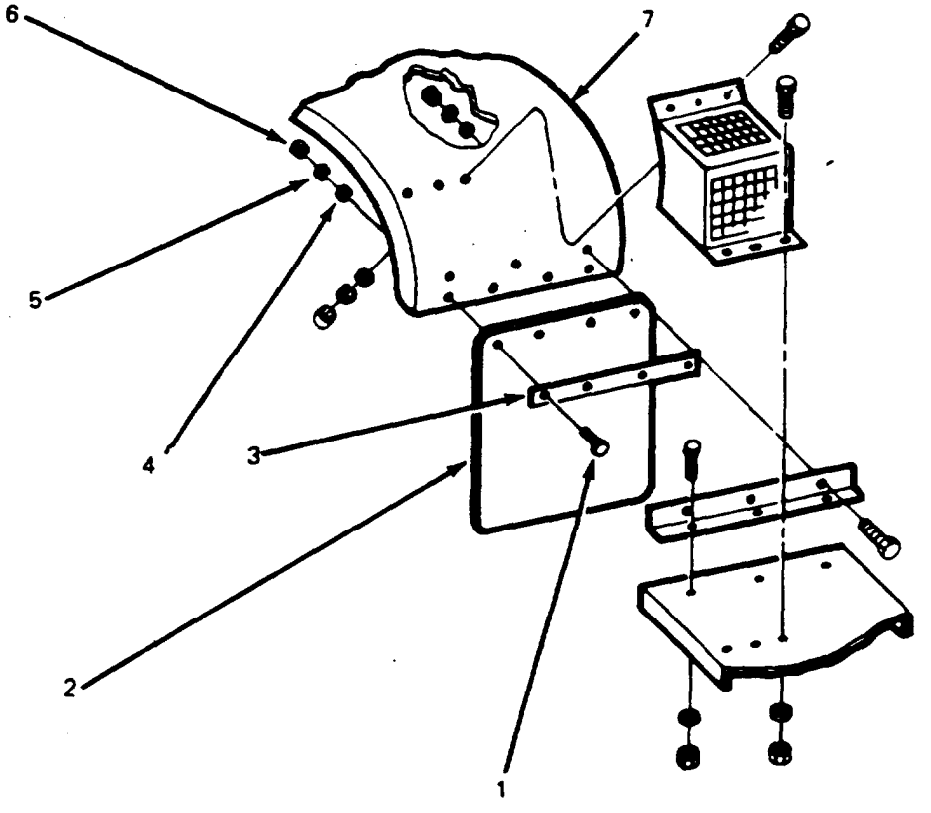
b. Remove splash guard bar (3).

c. Remove splash guard (2) from fender (7).

4-8. Install Rear Wheel Splash Guard.

a. Install splash guard (2) to fender (7).

Install splash guard bar (3) and secure with four bolts (1) with flat washers (4), lockwashers (5), and nuts (6).



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LEGEND:

1. BOLT (4)
2. SPLASH GUARD
3. SPLASH GUARD BAR
4. FLAT WASHER (4)
5. LOCKWASHER (4)
6. NUT (4)
7. FENDER

Figure 4-13. Rear Wheel Splash Guard.

4-9. Remove Tool Box. (Refer to fig. 4-14.)

a. Remove four capscrews (7), nuts, and washers in rear of box holding air tank to tool box and pull air tank away.

b. Remove three bolts, nuts, and washers (2) on each end of box and remove box from walkway (1).

c. Drill out six pop rivets (8) holding latch arm (9) to lid (10).

d. Drill out eight pop rivets (4) holding hinge to lid (10).

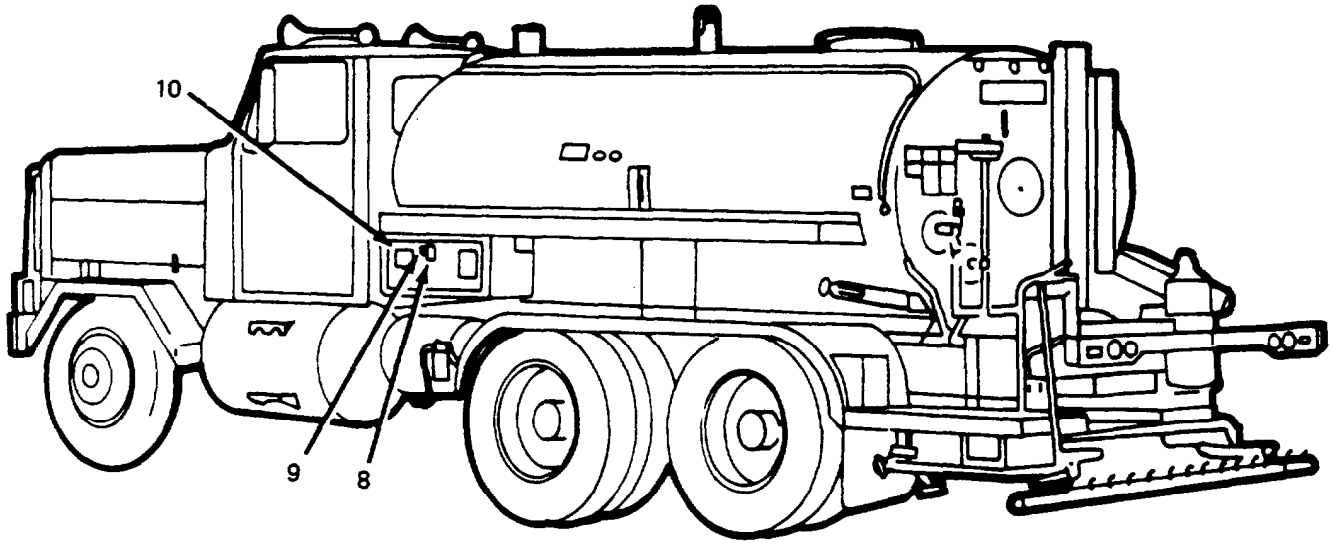
4-10. Install Tool Box.

a. Install hinge to lid with eight new pop rivets (4).

b. Install latch arm to lid (10) with six new pop rivets *(8).*

c. Install tool box to walkway (1) with three bolts, nuts and washers (2) on each end.

d. Install four capscrews (7), nuts, and washers, and secure air tank assembly to back side of tool box.



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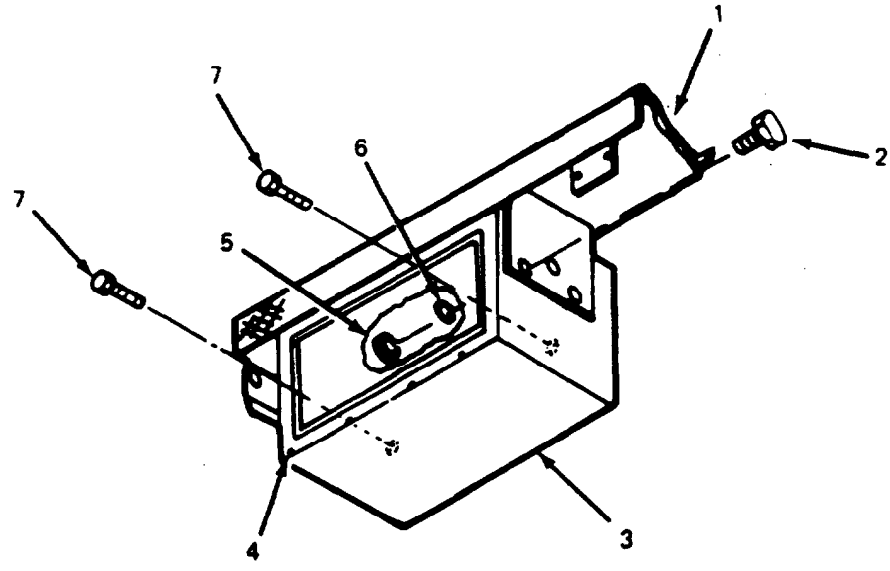

LEGEND:

1. WALKWAY
2. BOLT, NUT AND WASHER (6)
3. TOOL BOX
4. POP RIVET (8)
5. NUT (6)
6. WASHER (6)
7. CAPSCREW (4)
8. POP RIVET (6)
9. LATCH ARM
10. LID

TA 076008

Figure 4-14. Tool Box.

CHAPTER 5

REPAIR OF SPRAY BAR SUBFRAME

5-1. Disassembly.

a. Remove blower assembly. (Refer to para 2-35.)

b. Remove right side guard rail (1, fig. 5-1) by removing three capscrews (2), lockwashers (3), and nuts (4) frop top and bottom. Remove capscrew (5), nut (7) and washer (6) that fasten guard rail to frame.

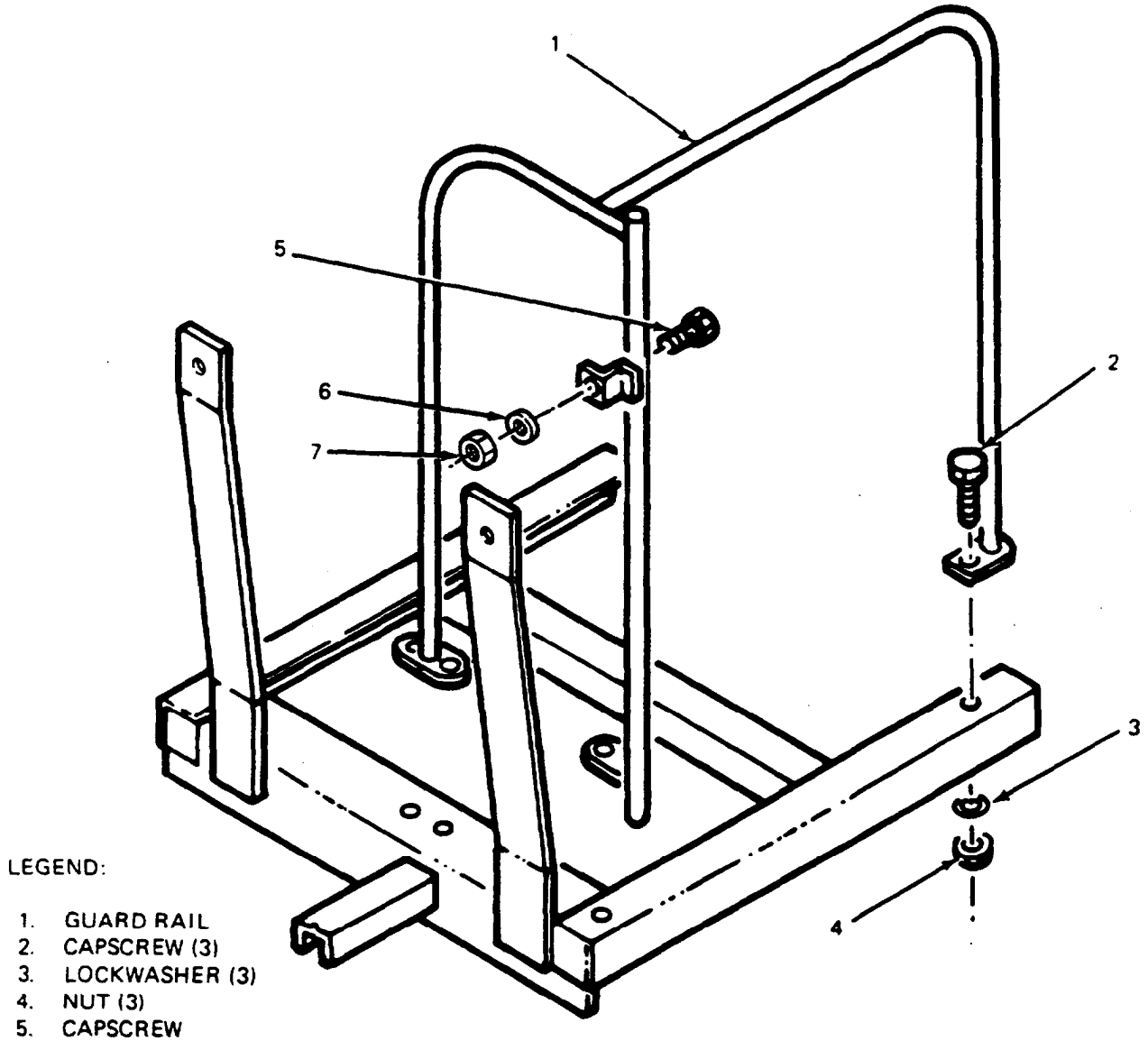

Figure 5-1. Remove/Install Guard Rail.

c. Remove left side guard rail as in step b.

d. Remove right side platform (fig. 5-2) by removing six capscrews (1), nuts (3), and washers (2) from top and bottom of platform; and two capscrews (4) and nuts (5) from the side step.

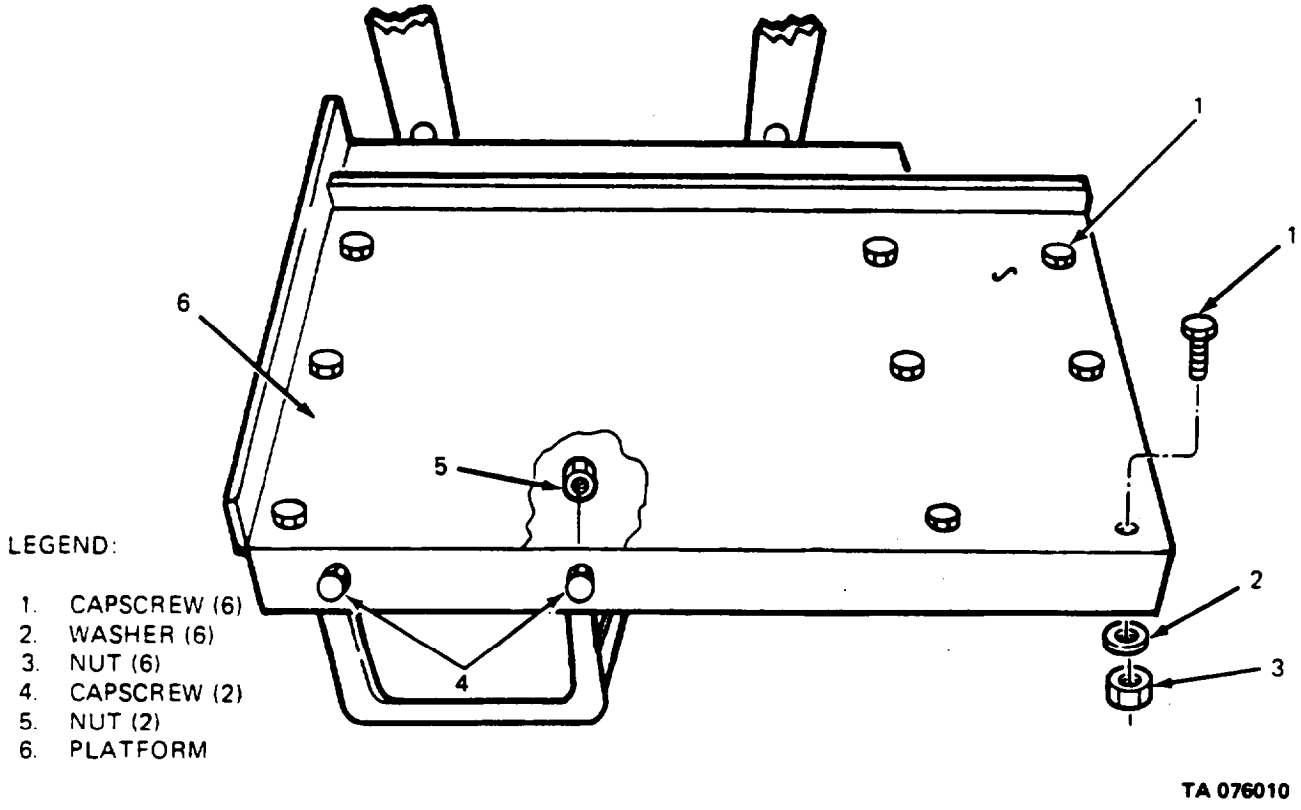

Figure 5-2. Remove/Install Platform.

e. Remove left side platform as in step d. (Refer to fig. 5-3).

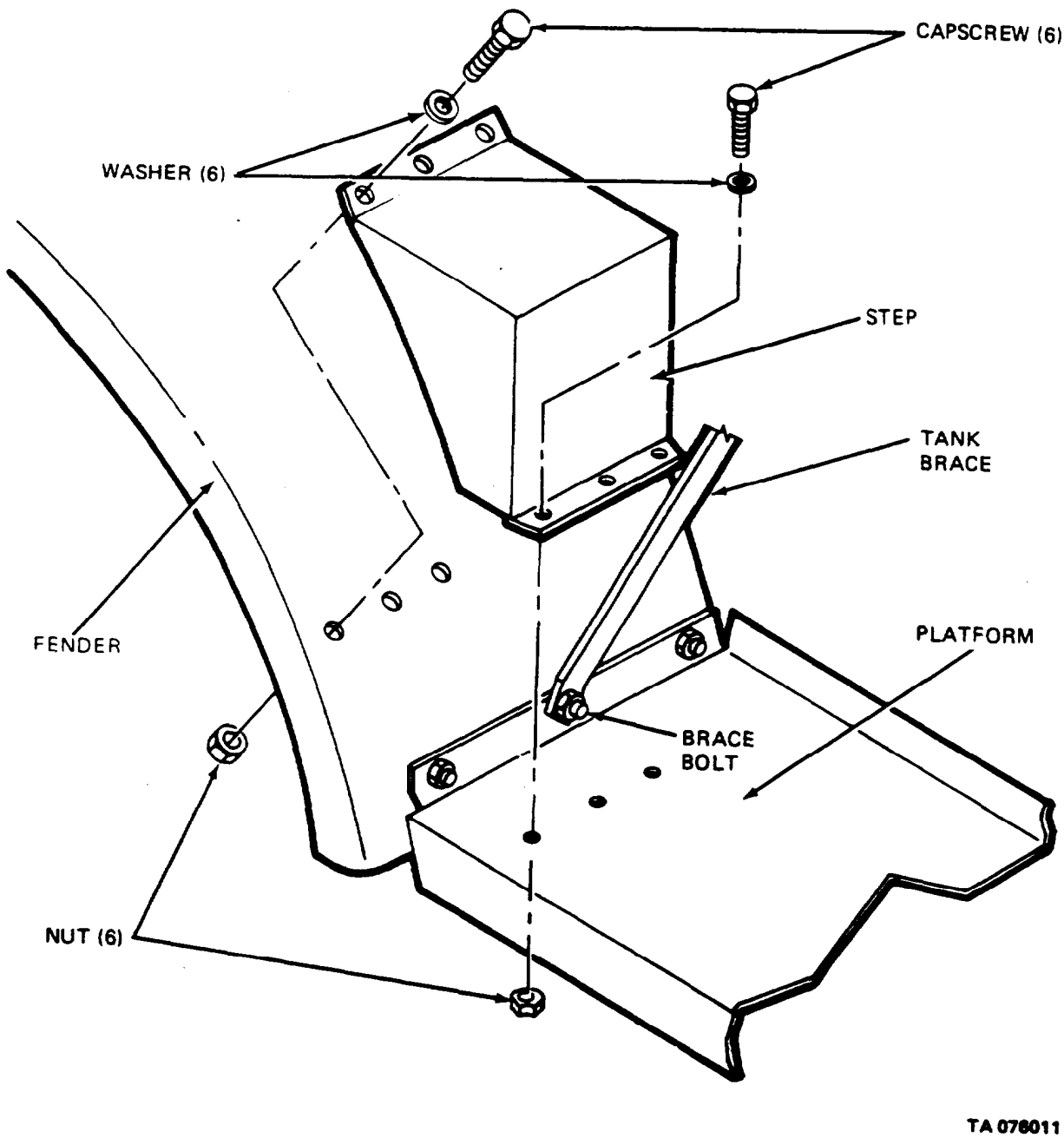

Figure 5-3. Remove/Install Left Side Platform and Step.

f. Remove step by removing six capscrews, washers, and nuts.

g. Support spray bar with floor jack.

h. Remove yoke assembly (8, fig. 5-4) right or left side as follows:

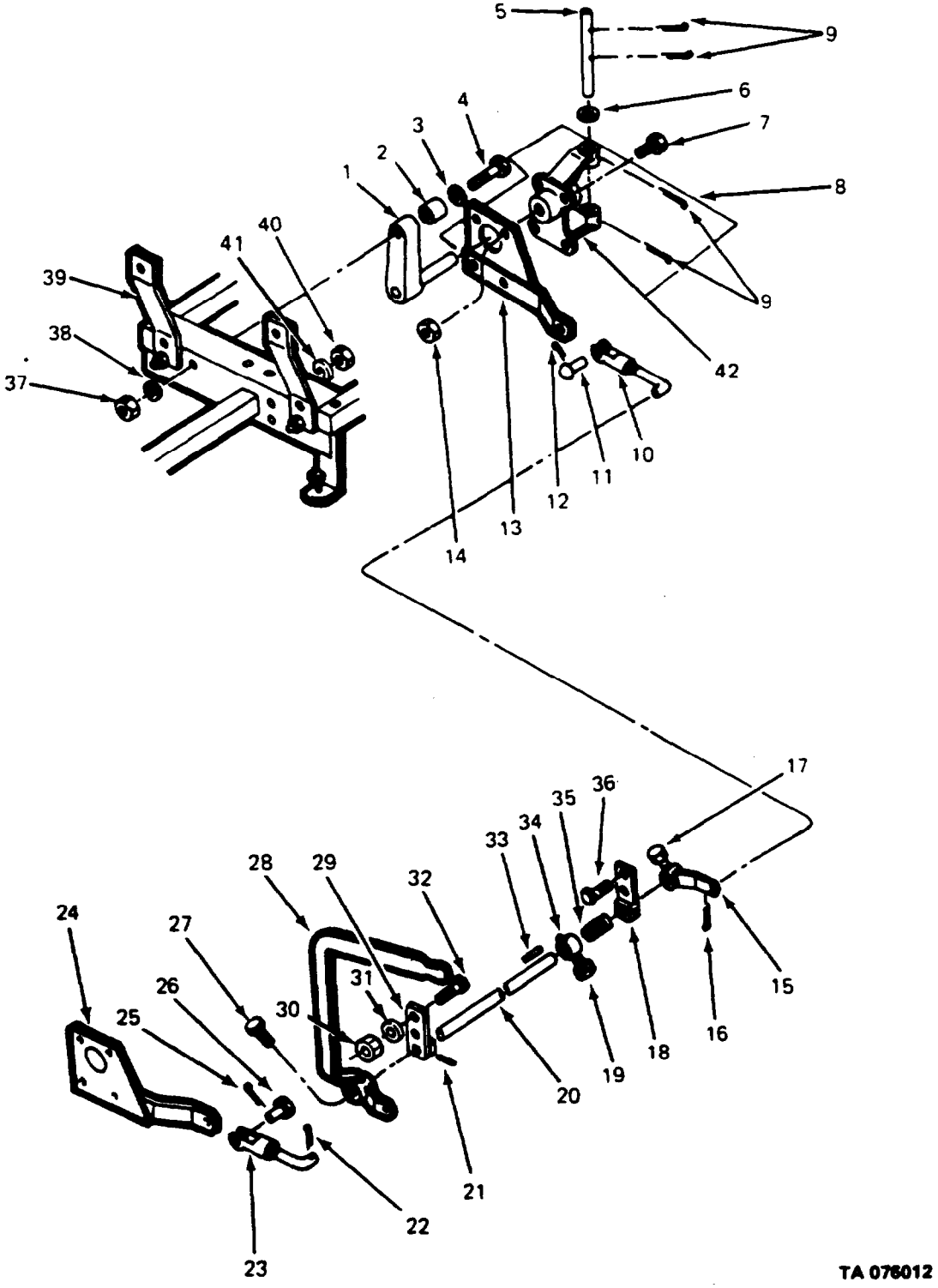

Figure 5-4. Disassemble/Assemble Sub frame (Sheet 1 of 2).

LEGEND:

1. SHAFT ASSEMBLY
2. BUSHING
3. WASHER
4. CAPSCREW
5. SWIVEL PIN
6. SPACER
7. CAPSCREW
8. YOKE ASSEMBLY
9. COTTER PIN (2)
10. CLEVIS
11. PIN
12. COTTER PIN
13. PIVOT ARM
14. NUT
15. ARM
16. COTTER PIN
17. SETSCREW
18. BEARING BLOCK
19. SETSCREW
20. SHAFT ASSEMBLY
21. PIN
22. COTTER PIN
23. CLEVIS
24. BRACKET
25. COTTER PIN
26. PIN
27. SET SCREW
28. ARM
29. BEARING BLOCK
30. NUT (2)
31. WASHER (2)
32. CAPSCREW (2)
33. SQUARE KEY
34. ARM
35. SPRING
36. CAPSCREW (2)
37. NUT
38. WASHER
39. HANGER BRACKET
40. NUT (2)
41. WASHER (2)
42. YOKE

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Figure 5-4. Disassemble/Assemble Subframe (Sheet 2 of 2).

(1) Remove two cotter pins (9) and drive out swivel pin (5) up through yoke (42). Remove spacer (6).

(2) Remove cotter pin (12) and pin (11) and disconnect clevis (10).

i. Remove cotter pin (25) and pin (26) and pull off clevis (23).

j. Remove shaft assembly (20) as follows:

WARNING

Shaft assembly (20) is under great spring tension. Exercise caution when removing.

(1) Retain spring tension on bearing block (18) with pipe wrench, as shown in figure 5-5, while removing two capscrews (36, fig. 5-4), nuts (40), and washers (41); then lower pipe wrench to relieve spring tension.

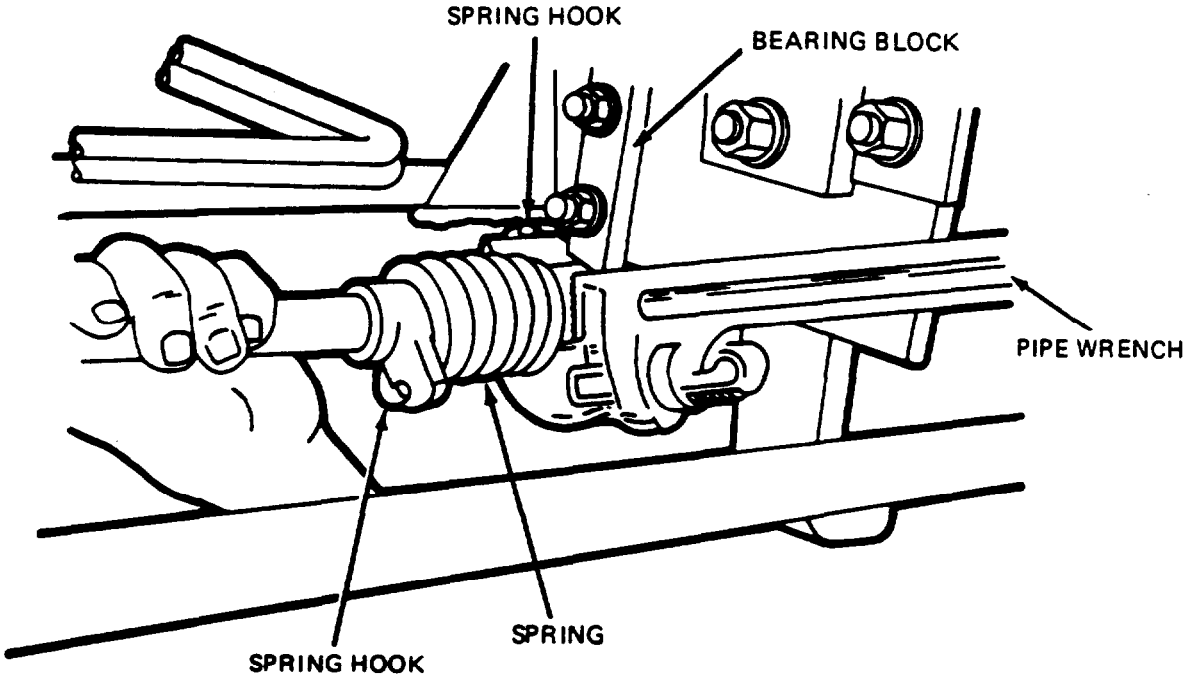


Figure 5-5. Remove/Install Raising Bar Spring.

(2) Remove shaft assembly (20) by removing two capscrews (32), washers (31), and nuts (30), and move shaft assembly to the bench for disassembly.

k. Remove arm (15) by loosening setscrew (17) and removing cotter pin (16).

l. Remove square key (33) from shaft assembly (20); then remove bearing block (18), spring (35), and arm (34).

m. Loosen setscrew (27). Remove cotter pin (22) and pull off arm (28).

n. Remove pin (21) and pull off bearing block (29).

5-2. Reassembly.

a. Install shaft assembly (20, fig, 5-4) as follows:

(1) Install bearing block (29) on shaft (20).

(2) Install arm (28). Secure with cotter pin (22) and tighten setscrew (27).

(3) Install arm (34), spring (35) and bearing block (18) on shaft assembly (20).

(4) Install arm (15) with square key (33); then tighten setscrew (17).

(5) Place shaft assembly (20) with assembled spring (35) and bearing blocks (18) and (29) on frame. Spring should not be under tension at this time.

(6) Install two capscrews (32), washers (31), and nuts (30) to fasten bearing block (29) to frame.

(7) Using a pipe wrench, as shown in figure *5-5,* wind spring *(35,* fig. 5-4) hooks to tensioned position.

(8) Install capscrews (36), nuts (40), and washers (41) to fasten bearing block (18) to frame. Remove pipe wrench.

(9) Connect clevis (23); then install pin (26) and cotter pin (25).

(10) Connect clevis (10); then install pin (11) and cotter pin (12).

(11) Install swivel pin (5) into yoke (42); then install two cotter pins (9).

b. Install right side platform (fig. 5-2) and secure with six capscrews (1), nuts (3), and washers (2) at top and bottom of platform; and two capscrews (4) and nuts (5) through the side step.

c. Install right side guard rail (1, fig. 5-1) and secure with three capscrews (2), lockwasher (3), and nuts (4) at top and bottom. Install capscrew (5), nut, and washers that fasten guard rail to frame.

d. install left side platform and left side guard rail as in steps b and c.

e. Install step (fig. 5-3) and secure with six capscrews and washers.

f. Install blower assembly. (Refer to para 2-35.)

CHAPTER 6

REPAIR OF HYDRAULIC TANK

6-1. Removal.

a . Remove drain plug (7) from tank (6) and drain fluid below sight glass level (4) Cap (1) breather (2), gage (3) and sight glass (4) may be removed and replaced. Fitting (8) tee (9) and sensor unit (10) may be disconnected and replaced. Tank (6) and mounting brackets (5) may be replaced or repaired with welds.

b. Remove four nuts (15), lockwashers (14), and hook bolts (12); remove brackets (13 and 11).

Remove mounting brackets (5) from brackets (13 and 11) by removing four capscrews (16), lockwashers (17), and nuts (18).

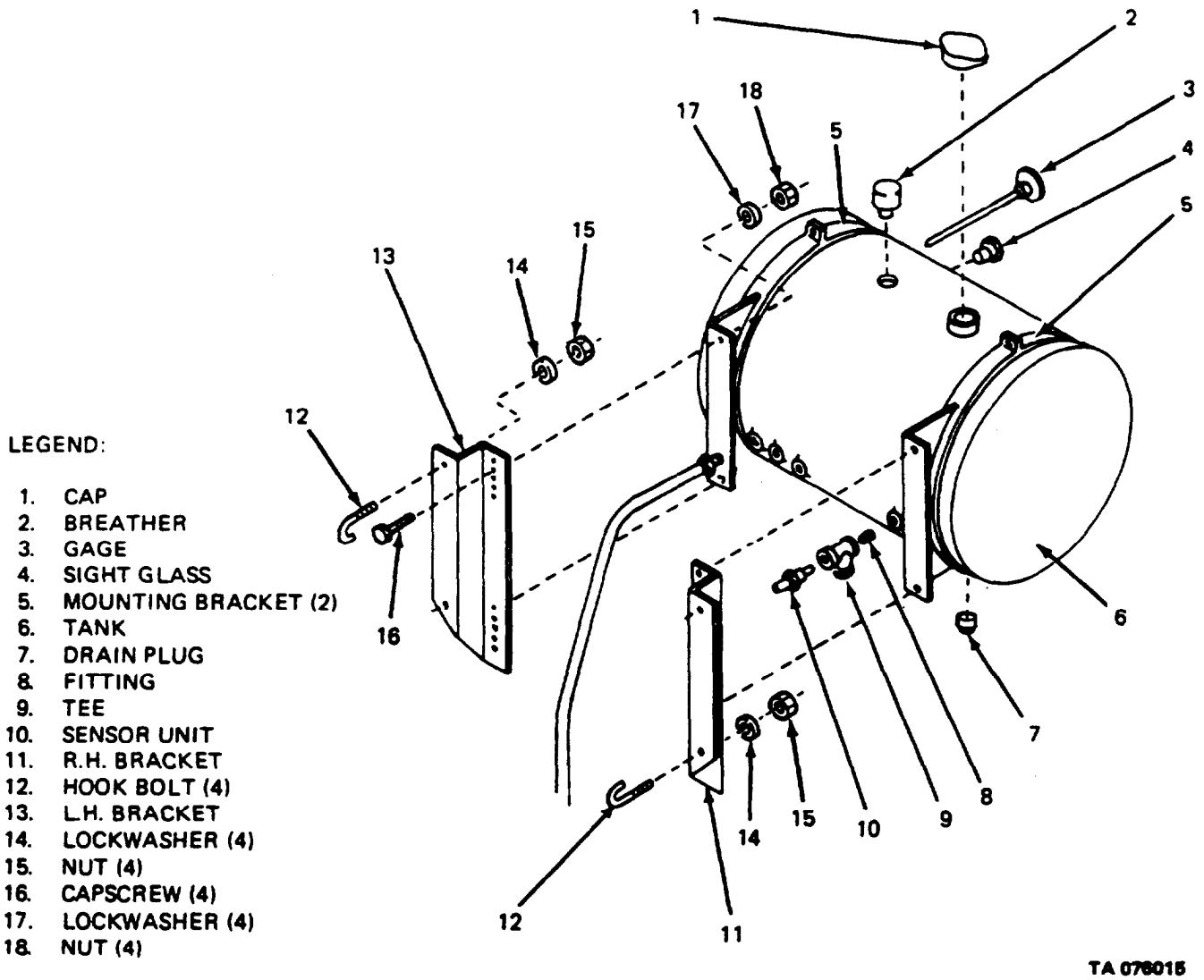


Figure 6-1. Disassemble/Reassemble Hydraulic lank.

6-2. General Repair. With the exception of the mounting brackets, frame clips and clamps, all parts may be replaced with the tank installed. To replace parts on the lower half of the tank, first drain the tank.

6-3. Installation.

a. Install brackets (11 and 13) to mounting brackets (5) by installing four capscrews (16) with lock&hers (17) and nuts (18).

b. Install brackets (13 and 11) to chassis frame by installing four hook bolts (12), lockwashers (14), and nuts (15).

c. Reinstall cap (1), breather (2), gage (3), sight glass (4), drain plug (7), fitting (8), tee (9), and sensor unit (10).

d. Install hydraulic fluid and test for leaks.

CHAPTER 7

REPAIR OF SPRAY BAR AIR CYLINDERS

7-1. Disassembly of Bar Shifting Control Cylinder. (Refer to fig. 7-1.)

a. Remove snap ring at piston end of cylinder; then pull out piston assembly.

b. Remove two seals from piston assembly.

c. Remove snap ring at opposite end of cylinder; then remove O-ring.

7-2. Reassembly of Bar Shifting Control Cylinder. (Refer to fig. 7-1.)

a. Clean cylinder and piston in dry cleaning solvent.

b. Install new seals and O-ring.

c. Install piston assembly and secure with snap ring.

d. Install O-ring at opposite end of cylinder and secure with snap ring.

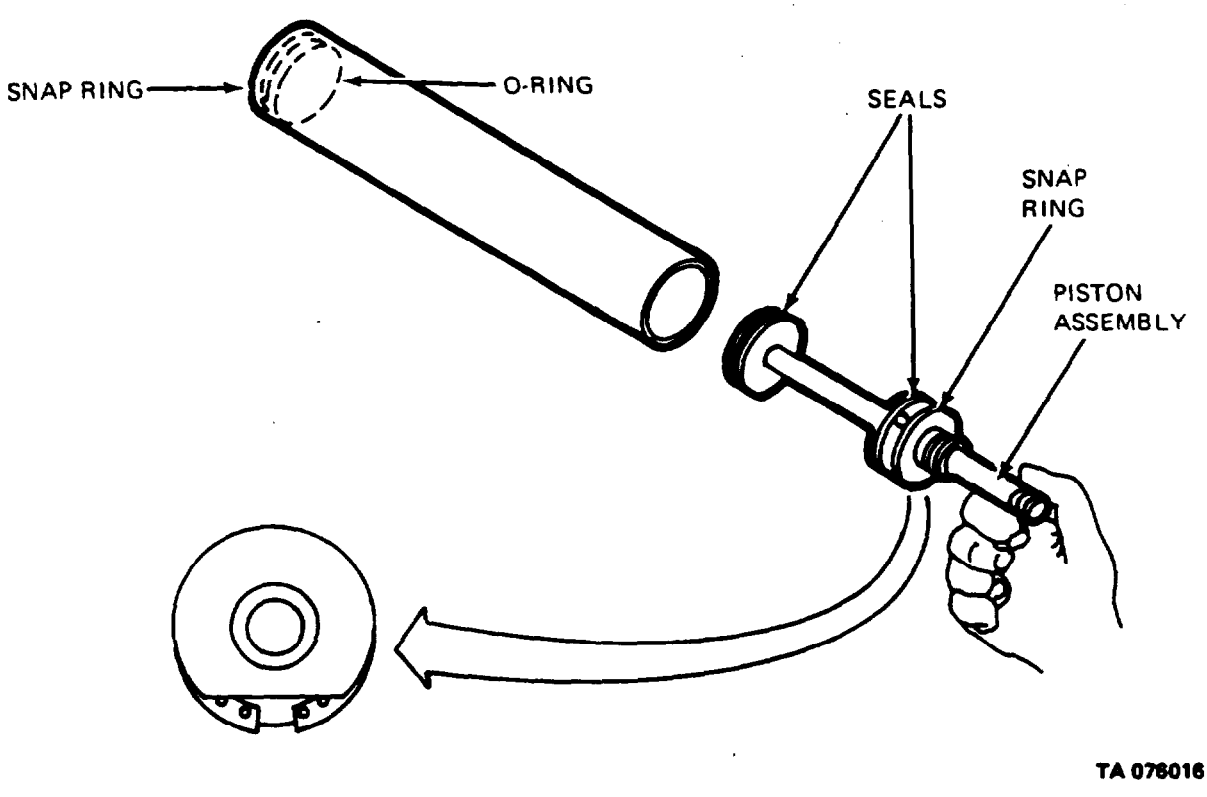


Figure 1-1. Disassemble/Assemble Bar Shifting Control Cylinder.

NOTE

Procedures for disassembly and reassembly of the two turn up cylinders and the two on-off control cylinders are identical.

7-3. Disassembly of Turn Up and On-Off Control Cylinders. (Refer to fig. 7-2.)

a. Move rubber boot back to gain access to nut (17); then loosen nut (17) and remove clevis (16).

b. Pull off rubber boot (28).

c. Remove four bolts (6), nuts (5), and washers that fasten caps (3 and 11) to cylinder (27); then pull off caps (3 and 11).

d. Pull piston rod (18) out of cylinder (27).

e. Remove sleeve (20).

f. Remove nut (7) and washers from end of piston rod (18) and pull off the following:

(1) Head (26), leather seal (9), and spring (10).

(2) Spacer (25).

(3) Leather seal (24), spring (23), and head (21).

g. Remove felt ring (8) from head (26).

h. Remove felt ring (22) from head (21).

i. Remove O-ring (4) from cap (3).

j. Remove O-ring (19) from cap (11).

k. Remove backup washer (15) and remove seal (14) and bushing (13) from cap (11).

l. Remove felt seal (12) from cap (11).

7-4. Reassembly of Turn Up and On-Off Control Cylinders. (Refer to fig. 7-2.)

a. Install new felt seal (12) into cap (11).

b. Press in bushing (13) into cap (11).

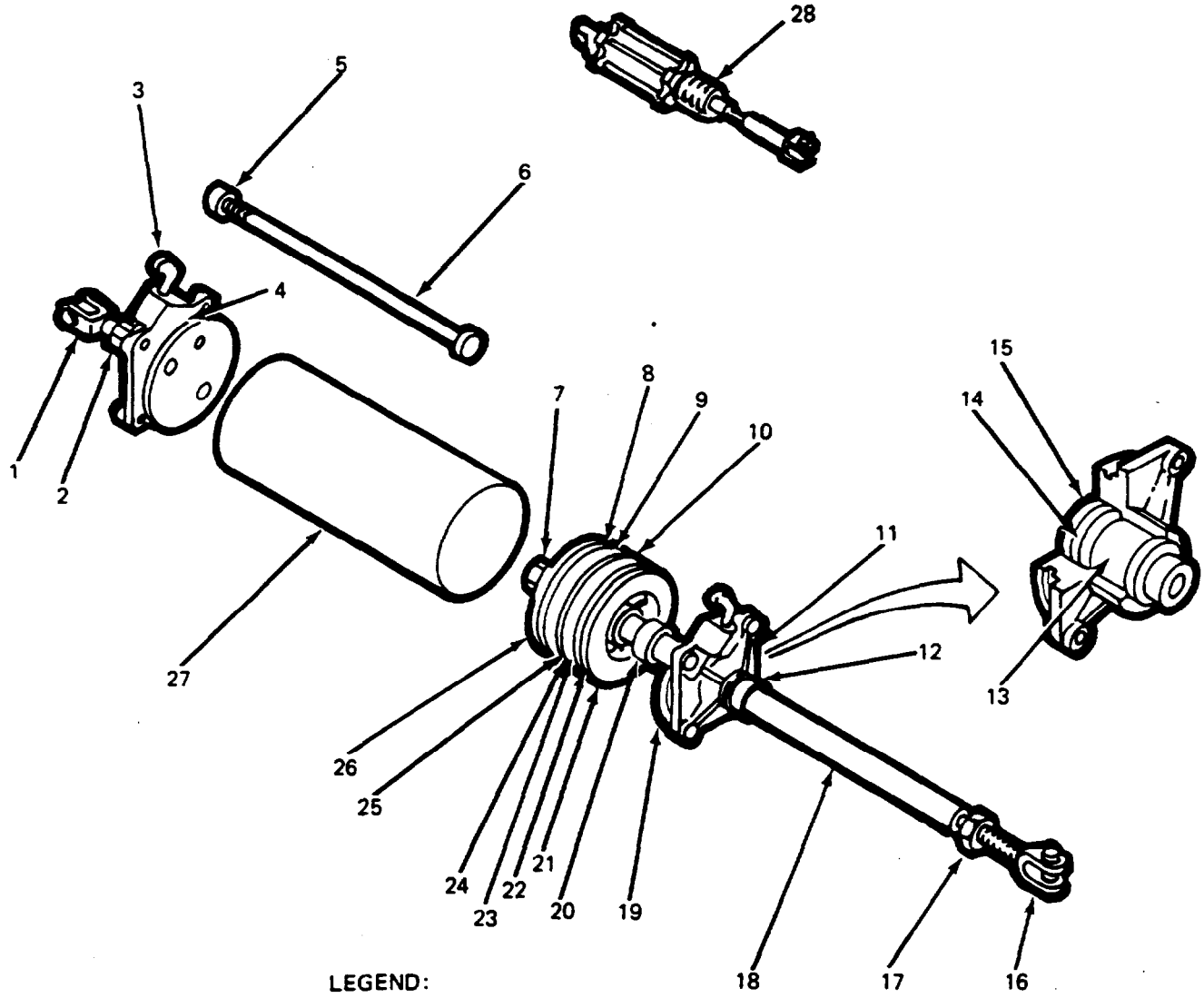
c. Press in new seal (14) and backup washer (15) into cap (11).

d. Install new O-ring (19) on cap (11).

e. Install new O-ring (4) on cap (3).

f. Install new felt ring (22) on head (21).

g. Install new felt ring (8) on head (26).



LEGEND:

1. CLEVIS
2. NUT
3. CAP
4. O-RING
5. NUTS (4)
6. BOLTS (4)
7. NUT
8. FELT RING
9. LEATHER SEAL
10. SPRING
11. CAP
12. FELT SEAL
13. BUSHING
14. SEAL
15. BACKUP WASHER
16. CLEVIS
17. NUT
18. PISTON ROD
19. O-RING
20. SLEEVE
21. HEAD
22. FELT RING
23. SPRING
24. LEATHER SEAL
25. SPACER
26. HEAD
27. CYLINDER
28. RUBBER BOOT

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Figure 7-2. Disassemble/Assemble Bar On-Off Cylinder.

h. Install new leather seal (24) and spring (23) on head (21).

i. Install spacer (25).

j. Install new leather seal (9) and spring (10) to head (26).

k. Install heads (21) and (26) on piston rod (18) and secure with flat washer and nut (7).

l. Install sleeve (20) on piston rod (18).

m. Install piston rod assembly (18) into cylinder (27).

n. Install caps (3 and 11) alining end caps square with each other and hose fittings in line.

o. Install four bolts (6), nuts (5), and lockwashers.

p. Install rubber boot (28).

q. Install clevis (16) with nut (17) and secure.

r. Place rubber boot (28) in place over nut (17).

CHAPTER 8

REPAIR OF BITUMETER AIR CHAMBER

8-1. Disassembly. (Refer to para 2-23 for removal instructions.)

a. Remove clamp (fig. 8-1) that fastens chamber cap and chamber base together by removing two capscrews and nuts.

b. Pry clamp off of chamber.

c. Lift off chamber cap and remove diaphragm, spring and piston.

8-2. Reassembly.

a. Clean assembly, except diaphragm, in dry cleaning solution.

b. Inspect diaphragm for cracks or tears. Replace if defective,

c. Assemble piston, spring and diaphragm in chamber base.

d. Press down on top of piston to compress the spring; then clamp the piston rod in a vise to hold the spring in the compressed position.

e. Install chamber cap and clamp.

f. Fasten clamp securely with two capscrews and nuts.

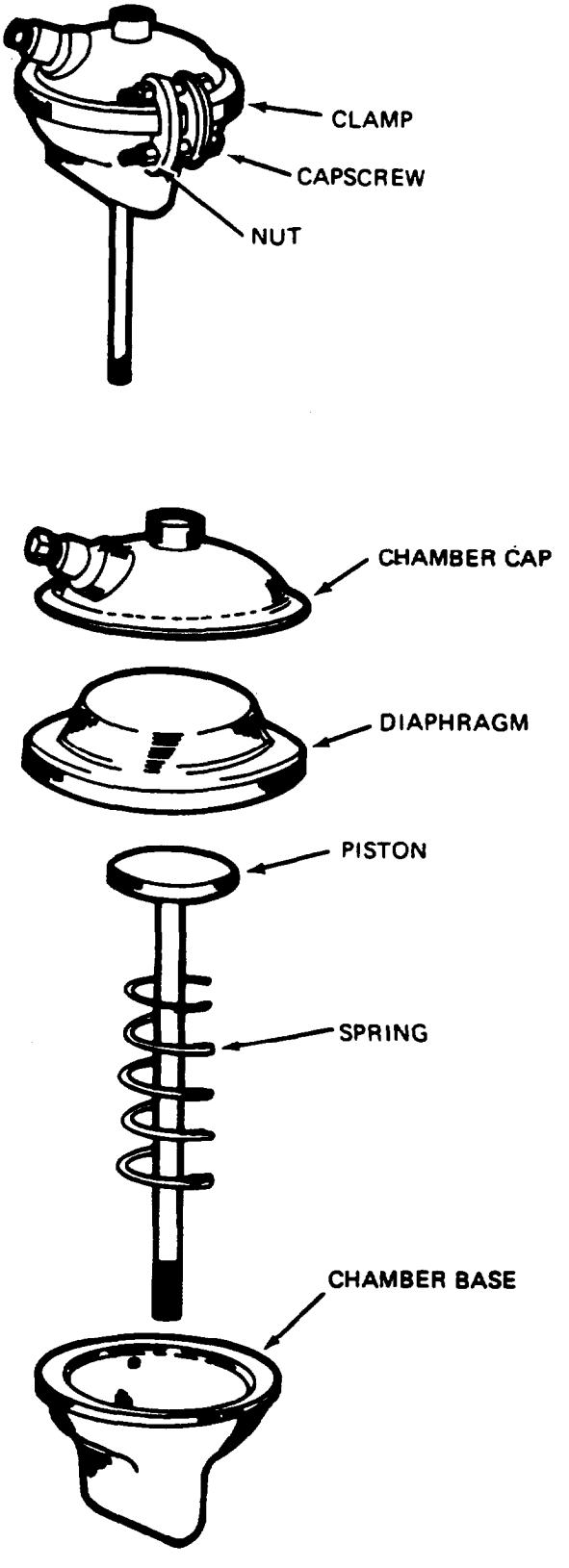


Figure 8-1. Disassemble/Reassemble Bitumeter Air Chamber.

CHAPTER 9

REPAIR OF ASPHALT PUMP

9-1. Disassambly. (Refer to fig. 9-1.)

a. Remove cotter pin (25), nut (26), flange (28), and key (27).

b. Scribe a mark on pump housing (8) and a corresponding mark on each face plate (4 and 19) to aid in reassembly.

c. Remove six capscrews (1) and pull out three blind bearings (2) and gaskets (3).

Remove two studs and nuts (21), two packing gland retainers (20), packing gland (22), packing (23), and lattern ring (24).

e. Remove capscrews (18) that fasten face plate (19) to housing.

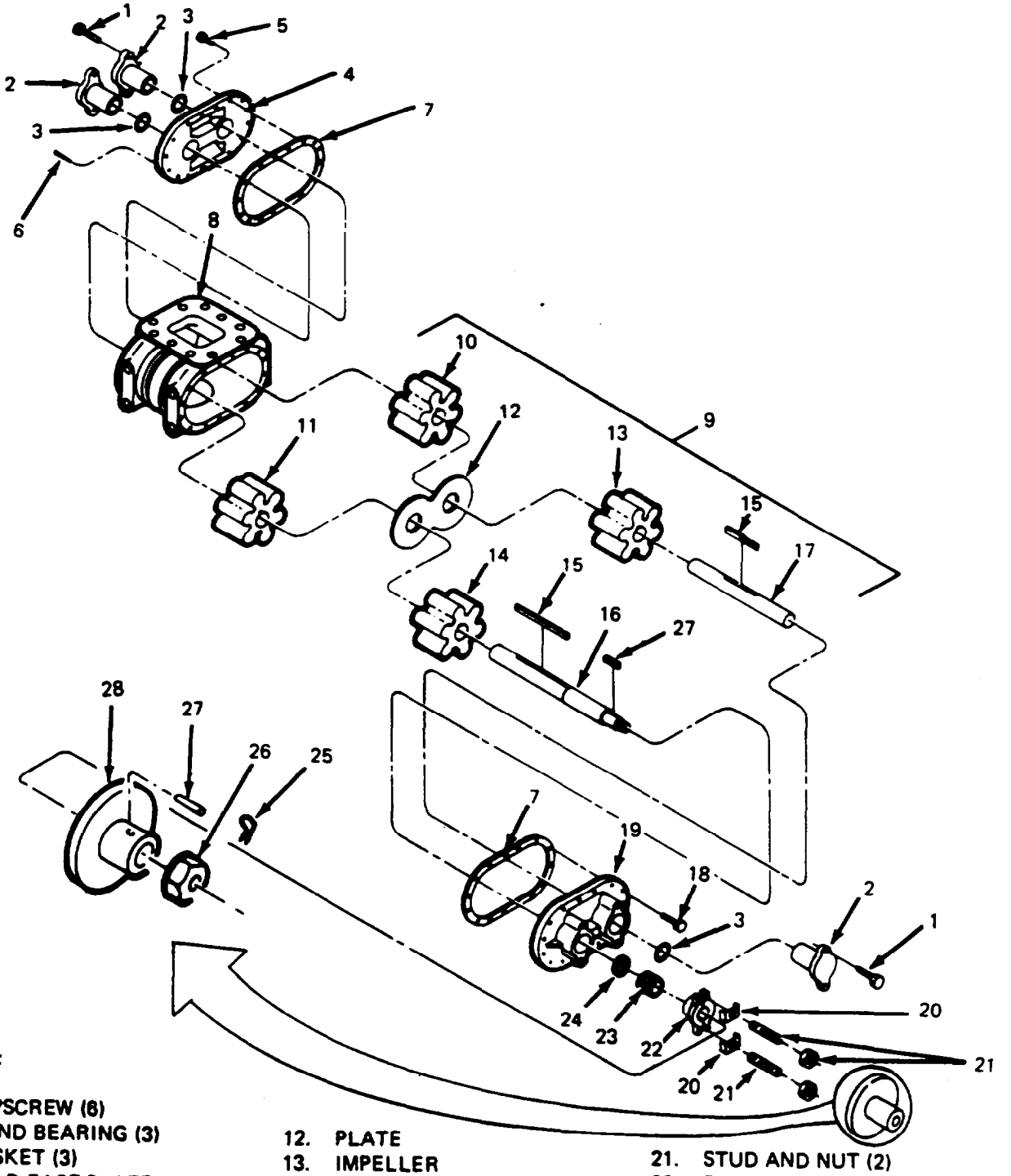
f. Pull off front face plate (19) with the four assembled impellers (10), (11), (13), and (14).

Pull off impellers (10 and (13) and key (15) from idler shaft (17) and remove idler shaft (17).

h. Remove gasket (7).

i. Tap shaft (16) out of assembly and separate plate (12) and impellers (11 and 14) and key (15).

Remove capscrews (5) that fasten rear face plate (4) to pump housing (8) and pull off the assembled rear face plate with gasket (7). Remove alinement pin (6).



LEGEND:

1. CAPSCREW (6)
2. BLIND BEARING (3)
3. GASKET (3)
4. REAR FACE PLATE
5. CAPSCREW
6. ALINEMENT PIN (4)
7. GASKET (2)
8. PUMP HOUSING
9. IMPELLER SET
10. IMPELLER
11. IMPELLER
12. PLATE
13. IMPELLER
14. IMPELLER
15. KEY (2)
16. SHAFT
17. IDLER SHAFT
18. CAPSCREW
19. FRONT FACE PLATE
20. PACKING GLAND RETAINER (2)
21. STUD AND NUT (2)
22. PACKING GLAND
23. PACKING
24. LATTERN RING
25. COTTER PIN
26. NUT
27. KEY
28. FLANGE

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Figure 9-1. Disassemble/Reassemble Asphalt Pump.

9-2. Clean and Inspect. (Refer to fig. 9-1.)

a. Clean all parts with SD-2 dry cleaning solvent.

b. Inspect the following:

(1) Impellers (10), (11), (13), and (14) for nicks or other damage.

(2) The three blind bearings (2) for damage.

c. Replace all defective parts.

9-3. Reassembly. (Refer to fig. 9-1.)

a. Install rear face plate (4) and gasket (7). Secure to pump housing (8) with capscrews (5). Drive in alinement pin (6) before tightening capscrew (5).

b. Install key (15) to shaft (16), install impeller (14) with lip of impeller towards plate (12). Tap impeller (14) down so that approximately half of key (15) is still exposed.

c. Install plate (12) and impeller (14) and press on impeller (11).

d. Install impeller (13) and key (15) on idler shaft (17) with lip of impeller mating to plate (12).

e. Install impeller (10) on idler shaft (17).

NOTE

Prior to installation of the assembled four impellers, make sure that there is no gap between the impellers and the plate (12). Check also that the impellers turn freely.

f. Install the assembled four impellers on their respective shafts into pump housing (8).

g. Install blind bearings (2) (shown at forward end of illustration) with gaskets (3). It may be necessary to move idler shafts (17 and 16) so that they set into blind bearings (2).

h. Secure blind bearings (2) with capscrews (1).

i. Install gasket (7) and front face plate (19). Secure to pump housing (8) with capscrews (18).

j. Install gasket (3) and blind bearing (2). Secure with two studs and nuts (21).

k. Install lattern ring (24) and packing (23).

l. Install pecking gland (22) and secure with two packing gland retainers (20) and two studs and nuts (21).

m. Install key (27) onto shaft (16) and install flange (28).

n. Install nut (26) and cotter pin (25).

CHAPTER 10

REPAIR OF LOW PRESSURE BURNER ASSEMBLY

10-1. Disassembly. (Refer to fig. 10-1.)

a. Remove copper tube (15) by disconnecting at both ends.

b . Remove U-bolt (22) and brace (4) by removing two lockwashers (2) and hex nuts (3) and U-bolt (22).

c. Remove burner assembly (5) with nipple (26).

d. Unscrew nipple (26) from burner (5).

e. Unscrew butterfly valve (24) from burn tube (23).

f. Unscrew elbow (25) from control valve (24).

g. Remove burner stop (20) by removing two screws (21).

h. Remove low pressure nozzle (19).

i. Remove three capscrews (17) and remove plate (7) and nozzle (6) from burner (5).

i. Remove bushing (10); then separate tip (8) and body (9) and remove from plate (7).

k. Remove elbows (16) and (11) from valve (12) on left burner and nipple (13) and tee (14) from right burner.

10-2. Reassembly. (Refer to fig. 10-1.)

a. Clean strainer in valve (12).

b. Connect elbows (11) and (16) to valve (12) on left burner and nipple (13) and tee (14) on right burner.

c. Assemble tip (8), body (9), and bushing (10) through plate (7).

d. Install nozzle (6) in burner (5).

e. Install name plate (7) and secure with three capscrews (17).

f. Install low pressure nozzle (19).

g. Install burner stop (20) and secure with two screws (21).

h. Screw in control valve (24) onto bum tube *(23).*

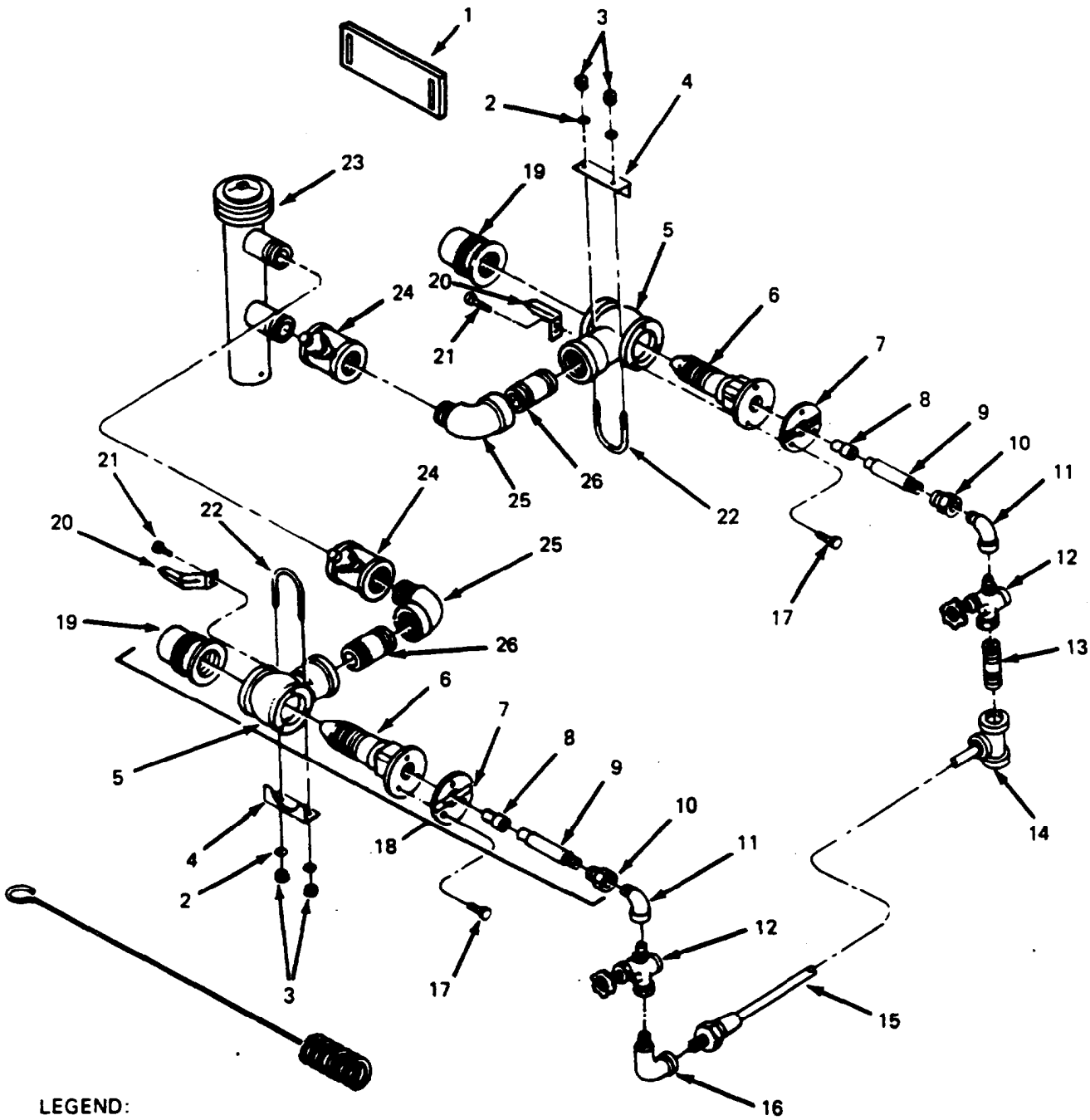
i. Screw elbow (25) into butterfly valve (24).

j. Screw nipple (26) into burner (5) and elbow (25).

k. Install U-bolt (22) and clamp (4). Secure loosely at this time with lockwashers (2) and hex nuts (3).

l. Connect copper tube (15) to elbow (16) and to connector on valve for other burner assembly.

m Aline burners with holes in tank and finish tightening hex nuts (3) on brace to hold burners in place.



LEGEND:

1. CLAMP
2. LOCKWASHER (4)
3. HEX NUT (4)
4. BRACE (2)
5. BURNER (2)
6. NOZZLE (2)
7. NAME PLATE (2)
8. TIP (2)
9. BODY (2)
10. BUSHING (2)
11. ELBOW (2)
12. VALVE (2)
13. NIPPLE
14. TEE
15. COPPER TUBE
16. ELBOW
17. CAPSCREW (6)
18. BURNER ASSEMBLY
19. LOW PRESSURE NOZZLE (2)
20. BURNER STOP (2)
21. SCREW (4)
22. U-BOLT (2)
23. MANIFOLD
24. BUTTERFLY VALVE (2)
25. ELBOW (2)
26. NIPPLE (2)

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Figure 10-1. Disassemble/Reassemble Low Pressure Burner Assembly.

CHAPTER 11

REPAIR OF BURNER FUEL TANK

NOTE

Repair is limited to replacement of the fuel line fittings (fig. 11-1), draincocks, fill cap, and fuel gage. Following are procedures for replacement of the fuel gage. Follow standard shop practice techniques for replacement of other components.

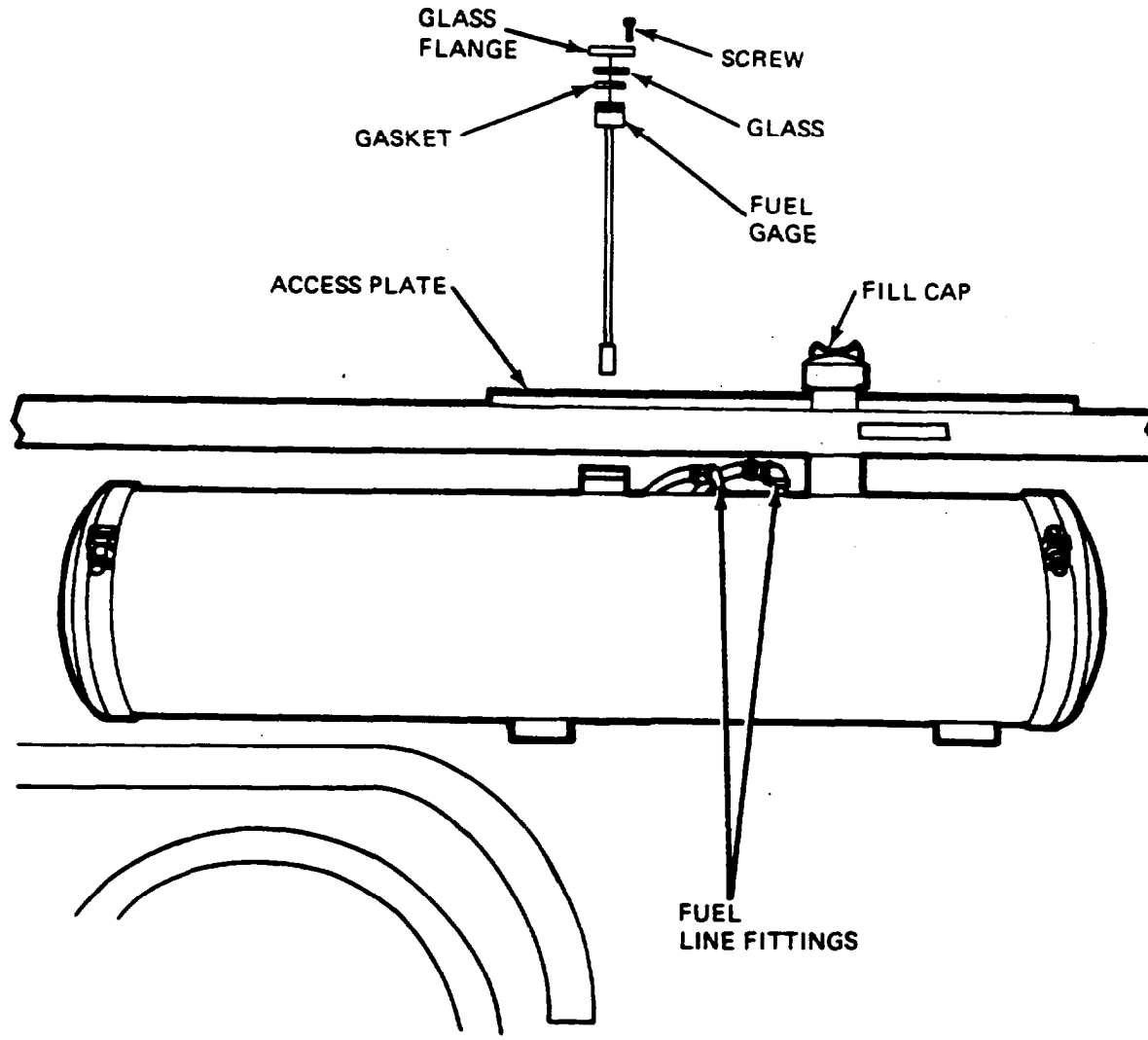


Figure 11-1. Remove/Install Fuel Gage.

11-1. Removal of Fuel Gage. (Refer to fig. 11-1.)

a. Remove two hexhead tap screws holding access plate and remove access plate.

b. Remove five capscrews from top of gage.

c. Remove gage flange, gage glass, and two gaskets.

d. Remove indicator assembly from tank.

11-2. Fuel Tank Repair and Cleaning. Repairs are limited to sheet metal straightening and welding. For repairs of this type, refer to the following:

a. Metal Body Repair and Related Operation - TM 9-450.

b. Welding Theory and Application - TM 9-237.

c. Wire brush all welded areas and remove any existing weld splatter.

d. Vacuum interior.

11-3. Inspection of Fuel Gage.

a. Inspect gage glass to see that it is clear for fuel indicator visibility. If necessary, clean fuel gage in hot water and soap. Wipe clean with a soft cloth.

b. Inspect fuel indicator assembly for free movement and deformities.

11-4. Replacement of Fuel Gage.

a. Install indicator assembly into tank.

b. Replace flange, gaskets, gage glass, and secure with five screws.

c. Line up access plate and secure with hexhead crews.

CHAPTER 12

REPAIR OF ASPHALT TANK GAGE

12-1. Removal of Gage. (Refer to fig. 12-1.)

a. Loosen setscrew (31, view B) and remove switch actuator (34).

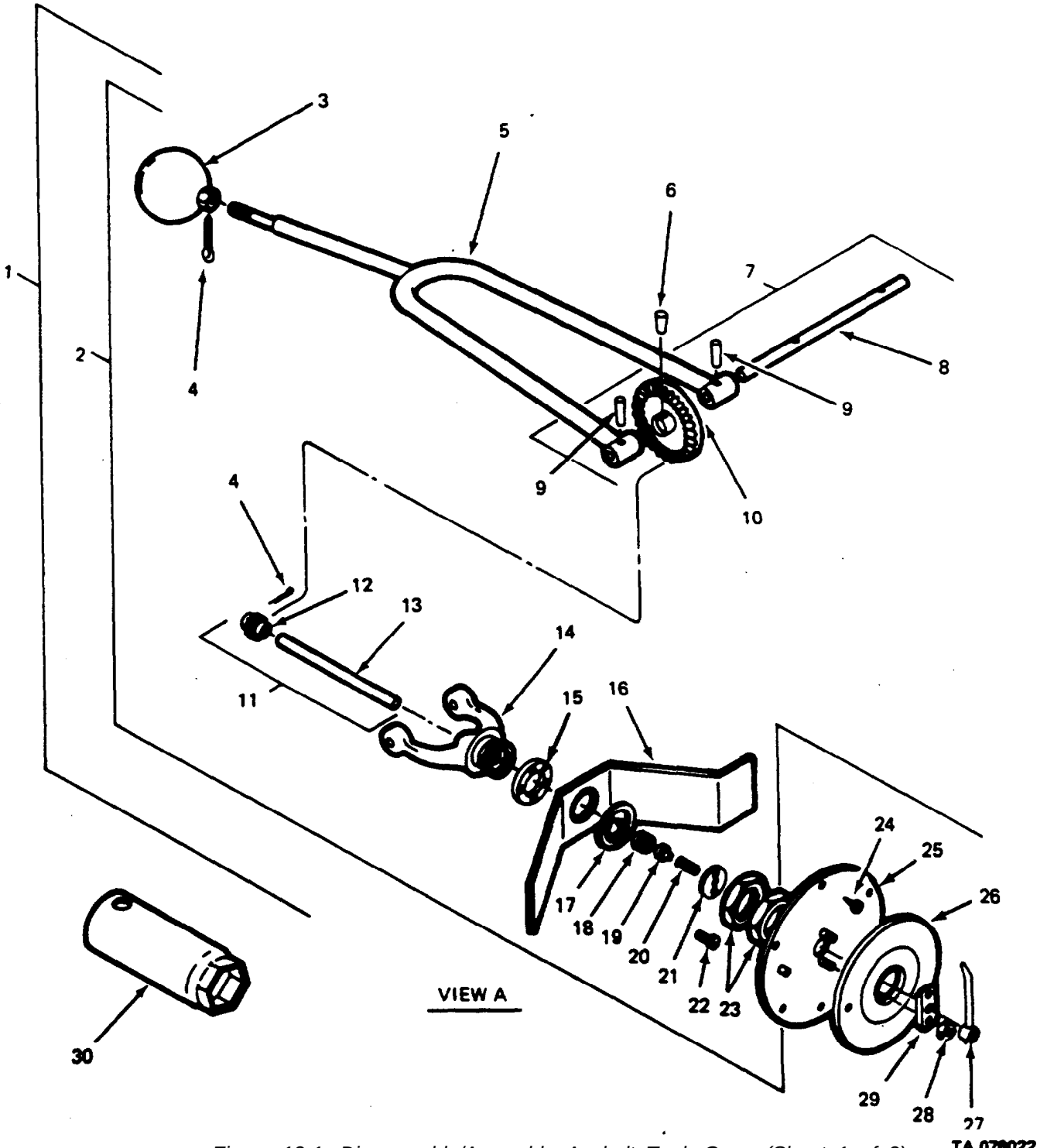
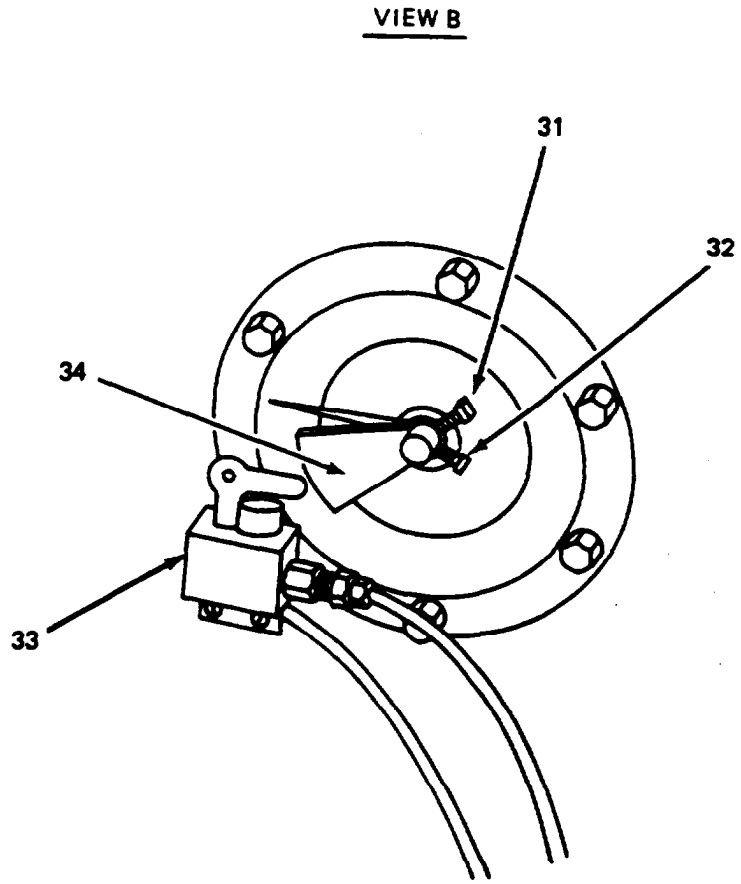


Figure 12-1. Disassemble/Assemble Asphalt Tank Gage (Sheet 1 of 2).



LEGEND:

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1. TANK GAGE ASSEMBLY
2. FLOAT STEM ASSEMBLY
3. FLOAT BALL
4. COTTER PIN
5. STEM ASSEMBLY
6. TAPERED PIN
7. SHAFT ASSEMBLY
8. SHAFT
9. TAPERED PIN (2)
10. BEVEL GEAR
11. INDICATOR SHAFT ASSEMBLY
12. PINION GEAR
13. INDICATOR SHAFT
14. FLOAT BRACKET
15. WASHER
16. SPACER
17. COPPER GASKET
18. PACKING
19. SLEEVE
20. SPRING
21. PACKING PLATE
22. MACHINE SCREW (2)
23. TANK GAGE NUT (2)
24. CAPSCREW (5)
25. DIAL PLATE ASSEMBLY
26. TANK GAGE DIAL
27. INDICATOR
28. HEX NUT (2)
29. END BEARING PLATE
30. WRENCH
31. SET SCREW
32. SET SCREW
33. MICRO SWITCH
34. SWITCH ACTUATOR

Figure 12-1. Disassemble/Assemble Asphalt Tank Gage (Sheet 2 of 2).

b. Loosen setscrew (32) and remove indicator (27, view A).

c. Remove two hex nuts (28), end bearing plate (29) and tank gage dial (26).

d. Remove five capscrews (24) and dial plate assembly (25).

e. Remove two tank gage nuts (23) by using wrench (30) located in tool box.

f. Remove tank gage assembly (1) from inside tank. (Enter tank through manhole).

g. Remove copper gasket (17).

12-2. Disassembly. (Refer to fig. 12-1.)

a. Tap out two tapered pins (9) with knock out punch and hammer.

b. Tap out tapered pin (6).

c. Remove shaft (8) from float bracket (14), stem assembly (5) and bevel gear (10).

d. Remove two machine screws (22).

e. Remove packing plate (21), spring (20), sleeve (19) and packing (18).

f. Remove indicator shaft (13) from float bracket (14).

g. Remove cotter pin (4) from float ball (3) and stem assembly (5).

h. Unscrew float ball (3) from step (5).

i. Remove pin (4) from pinion gear (12) and pull pinion gear (12) from indicator shaft (13).

12-3. Inspection.

a. Inspect all parts for cracks, holes, deterioration, and deformity.

b. Shake float ball (3). If it contains any liquid it must be replaced.

12-4. Reassembly. (Refer to fig. 12-1.)

a. Insert indicator shaft (13) through float bracket (14).

b. Install packing (18), sleeve (19), spring (20) and packing plate (21). Secure with two machine screws (22).

c. Install pinion gear (12) and tapered pin (6).

d. Place shaft (8) through step assembly (5), float bracket (14) and bevel gear (10). Install tapered pin (6).

NOTE

Check to see that, when float ball (3) is raised, indicator shaft (13) rotates in proper direction.

e. Install two tapered pins (9).

f. Screw float ball (3) onto stem assembly (5) and install cotter pin (4).

12-5. Installation of Gage. (Refer to fig. 12-1.)

a. Install copper gasket (17).

b. Insert tank gage assembly (1) through tank.

c. Install two tank gage nuts (23). Tighten nut closest to tank securely and lock with second nut.

d. Line up dial plate assembly (25) and secure with five capscrews (24).

e. Place tank gage dial (26) over dial plate assembly (25) so that dowel pin on dial plate assembly (25) is through hole in tank gage dial (26).

f. Install end bearing plate (29) and secure with two hex nuts (28).

g. Install indicator (27) with float ball (3) on bottom of tank, then tighten setscrew (32) with indicator at zero.

h. install switch actuator (34) and adjust so that micro switch (33) is activated at 50 gallons then tighten setscrew (31). This will prevent the tank from going completely dry during operation.

i. Check operation.

12-6. Discharge Header Strainer. (Refer to fig. 12-2.)

a. Preparation. Drain circulating system and spray bar. (Refer to TM 5-3895371-10.)

b. Removal.

(1) Remove the header end cap (3) and gasket (2).

(2) Remove the strainer (1).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent. Dry thoroughly with clean, dry, compressed air.

(2) Inspect the cap for cracks, breaks, damaged threads corrosion, distortion, or other damage. Inspect the strainer for bends, breaks, tears, cracks, corrosion, or other damage.

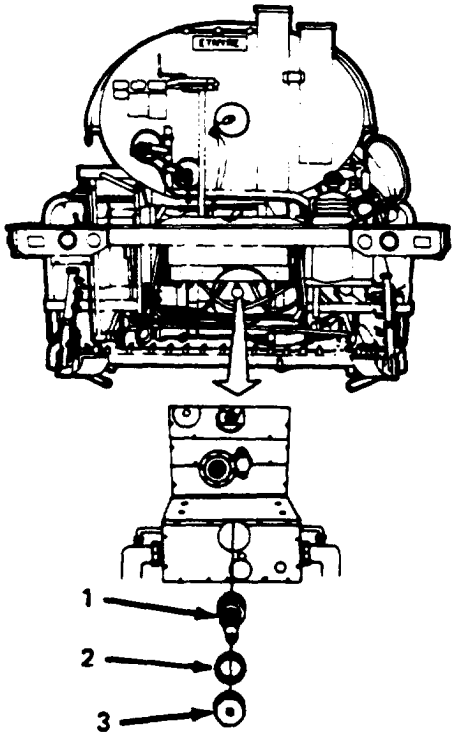
(3) Straighten bends or dents on the strainer. Replace the gasket. Replace strainer, if damaged.

d. Installation.

(1) Place strainer (1) in position inside the discharge header. Make sure the large end of strainer is properly seated.

(2) Install new gasket (2).

(3) Install and tighten header end cap (3).



LEGEND:

1. **STRAINER**
2. **GASKET**
3. **HEADER END CAP**

TA 076024

Figure 12-2. Disassemble/Assemble Header Strainer.

APPENDIX A

REFERENCES

A-1. Department of the Army Pamphlets.

Consolidated Index of Army Publications and Blank Forms . . . . . DA Pam 25-30

Index of Graphic Training Aids and Devices . . . . . DA Pam 310-5

The Army Maintenance Management System (TAMMS) . . . . . DA Pam 738-750

A-2. Forms.

U.S. Government Motor Vehicle Operator's Identification Card . . . . . SF 46

Operator's Report of Motor Vehicle Accident . . . . . SF 91

Recommended Changes to Publications and Blank Forms . . . . . DA Form 2028

Recommended Changes to Equipment Technical Publications . . . . . DA Form 2028-2

A-3 Other Publications.

The following publications contain information pertinent to the major item of material and associated equipment.

a. Vehicle.

Lubrication Order for M915, M916, M920 Truck Tractor and Chassis for M917, M918, and M919 . . . . . LO 9-2320-273-12

Lubrication Order for M918 Bituminous Distributor Truck Body . . . . . LO 5-3895-371-12

Operator's Manual for M915, M916, M920 Truck Tractor and Chassis for M917, M918, and M919 . . . . . TM 9-2320-273-10

Operator's Manual, Bituminous Distributor Truck Body . . . . . TM 5-3895-371-10

Organizational Maintenance for M915, M916, M920 Truck Tractor and Chassis for M917, M918, and M919 . . . . . TM 9-2320-273-20

Organizational Maintenance Repair Parts and Special Tools Lists for M915, M916, M920 Truck Tractor and Chassis for M917, M918, and M919 . . . . . TM 9-2320-273-20P

Organizational, Direct Support and General Support Maintenance Manual with Repair Parts and Special Tools Lists for M918 Bituminous Distributor Truck Body . . . . . TM 5-3895-371-24 & P

Direct and General Support Repair Parts and Special Tools Lists for M915, M916, M920 Truck Tractor and Chassis for M917, M918, and M919 . . . . . TM 9-2320-273-34P

Direct and General Support Maintenance Manual (including Repair Parts and Special Tools Lists) for Engine, Diesel: 6 Cylinder, In-line, Turbocharger, Cummins Model NTC-400 . . . . . TM 9-2815-222-34 & P

b. Camouflage.

Camouflage . . . . . FM 5-20

c. Decontamination.

Nuclear, Biological and Chemical (NBC) Decontamination . . . . . FM 3-5

d. General.

Operation and Maintenance of Ordnance Materiel in Extreme Cold Weather (0° to -65°F). . . . . FM 9-207

Principles of Automotive Vehicles . . . . . TM 9-8000

How to Prepare and Conduct Military Training . . . . . FM 21-6

Military Symbols . . . . . FM 21-30

Manual for Wheeled Vehicle Driver . . . . . FM 21-305

Basic Cold Weather Manual . . . . . FM 31-70

Northern Operations . . . . . FM 31-71

Army Motor Transport Units and Operations . . . . . FM 55-30

Authorized Abbreviations and Brevity Codes . . . . . AR 310-50

Accident Reporting and Records . . . . . AR 385-40

Prevention of Motor Vehicle Accidents . . . . . AR 385-55

Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use . . . . . TM 750-244-6

Cooling Systems: Tactical Vehicle . . . . . TM 750-254

e. Maintenance and Repair.

Organizational Care, Maintenance and Repair of Pneumatic Tires and Inner Tubes . . . . . TM 9-2610-200-24

Description, Use, Bonding Techniques, and Properties of Adhesives . . . . . TB ORD 1032

Inspection, Care, and Maintenance of Antifriction Bearings . . . . . TM 9-214

Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Material and Related Materials Including Chemicals . . . . . TM 9-247

Operator's, Organizational, Direct Support and General Support Maintenance Manual for Lead-Acid Storage Batteries . . . . . TM 9-6140-200-14

Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling System . . . . . TB 750-651

Operator's Manual: Welding Theory and Application . . . . . TM 9-237

f. Administrative Storage.

Administrative Storage of Equipment . . . . . TM 740-90-1

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function, as referenced from section II.

B-2. Maintenance Functions.

a. *Inspect.* To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with established standards.

b. *Test.* To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.'

C. *Service.* Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), preserve, drain, paint, or replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. *Adjust.* To maintain, within prescribed limits, bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. *Aline.* To adjust specified variable elements of an item to bring about optimum or desired performance.

f. *Calibrate.* To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being-compared.

Install. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. *Replace.* The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart

i. *Repair.* The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. *Overhaul.* That maintenance effort (services/actions) necessary to restore an item to a completely serviceable/operational condition, as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to Iike-new condition.

k. *Rebuild.* Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipments/components.

B-3. Explanation of Columns in the MAC, Section II.

a. *Column 1, Group Number.* Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. *Column 2, Component/Assembly.* Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. (For detailed explanation of these functions, see para B-2.)

d. *Column 4, Maintenance Level.* Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn (the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate "work time" figures will be shown for each level. The number of man hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

C . . . . . Operator or crew

O . . . . . Organization maintenance

F . . . . . Direct support maintenance

H . . . . . General support maintenance

D . . . . . Depot maintenance

e. *Column 5, Tools and Equipment.* Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. *Column 6, Remarks.* This column will, when applicable, contain a letter code, in alphabetic order, which will be keyed to the remarks contained in Section IV.

B-4 Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a. *Column I, Reference Code.* The tool and TMDE reference code correlates with a code used in the MAC, Section II, Column 5.

b. *Column 2, Maintenance Level.* The lowest level of maintenance authorized to use the tool or test equipment.

C. *Column 3, Nomenclature.* Name or identification of the tool or test equipment.

d. *Column 4, National Stock Number.* The National stock number of the tool or TMDE.

e. *Column 5, Tool Part Number.* The manufacturer's part number.

B-5. Explanation of Columns in Remarks Section IV. See MlL-M-63037 (page 48 and 50).

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II -ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
06	Electrical System							
0609	Lights	Inspect	0.1					
		Replace		0.2				1-2-3-4-5
0613	Wiring Harness	Inspect		0.2				
		Replace		1.0				1-2-3-4-5
15	Frame and Attachments							
1501	Loom Bumper Assembly	Replace		1.5				1-2-345
		Repair		1.5				1-2-3-4-5
	Subframe, Spray Bar	Replace			2.0			6-7-8-9-10-11
		Repair			2.0			6-7-8-9-10-11
	Stowage Box	Replace		0.5				1-2-3-4-5
		Repair		0.5				1-2-3-4-5
22	Accessory/Items							
2202	Bell Assembly	Replace		0.5				1-2-3-4-5
		Repair		0.5				1-2-3-4-5
	Hand Spray Gun	Inspect	0.1					
		Service	0.2					
		Replace		0.5				1-2-3-4-5
		Repair		0.5				1-2-3-4-5
	Asphalt Hose and Connector	Inspect	0.1					
		Replace		0.5				1-2-345
		Repair		0.5				1-2-3-4-5
2210	Data Plates	Inspect	0.1					
		Replace		0.5				

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II - ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
24	Hydraulic System							
2401	Hydraulic Pump Propeller Shafts	Service		0.5				1-2-3-4-5
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
2401	Hydraulic Pump	Test			0.2			6-7-8-9-10-11
		Replace			1.5			6-7-8-9-10-11
		Repair			2.0			6-7-8-9-10-11
2401	Hydraulic Motor	Test			0.2			6-7-8-9-10-11
		Replace			1.5			6-7-8-9-10-11
		Repair			2.0			6-7-8-9-10-11
2403	Hydraulic Controls	Service		0.5				1-2-3-4-5
		Adjust		1.0				1-2-3-4-5
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
2406	Hydraulic Filter Assembly	Inspect	0.1					
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-34-5
2406	Hydraulic Filter Element	Replace	0.4					
2406	Hydraulic Lines/Fittings	Inspect	0.1					
		Replace		1.0				1-2-3-4-5
2408	Hydraulic Tank	Service	0.2					
		Replace		1.5				1-2-3-4-5
		Repair			1.5			6-7-8-9-10-11

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II -ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
42	Electrical Equipment							
4202	Electrical Controls	Replace		1.0				1-2-3-45
		Repair		1.0				1-2-3-45
43	Air System							
4301	Air Lines/Fittings	Inspect	0.1					
		Replace		1.5				1-2-3-45
4317	Air Control Box Assembly	Replace		1.5				1-2-345
		Repair		1.0				1-2-345
4318	Air Cylinders, Spray Bar	Inspect	0.1					
		Replace		1.5				1-2-3-4-5
		Repair			1.0			6-7-8-9 10-11
4318	Air Chamber, Bitumeter	Inspect	0.1					
		Replace		1.5				1-2-3-4-5
		Repair			1.0			6-7-8-9 10-11
4321	Bitumeter Air Control Reservoir	Inspect	0.1					
		Service	0.1					
		Replace		1.0				1-2-3-4-5
47	Gages and Measuring Devices							
4701	Tachometer, Asphalt Pump	Replace		0.5				1-2-3-4-5
4701	Tank Gage	Replace		0.5				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
4701	Tachometer Drive Assembly	Service	0.1					
		Replace		2.5				1-2-3-4-5

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II - ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
4701	Ground Speed Indicator	Replace		0.5				1-2-3-4-5
4701	Ground Speed Indicator Drive	Replace		1.5				1-2-3-4-5
4701	Bitumeter, Fifth Wheel	Sew ice Replace Repair		0.2 1.0 1.0				1-2-3-4-5 1-2-3-4-5 1-2-3-4-5
4702	Hydraulic/Air System Gages (All)	Replace		1.0				1-2-3-4-5
55	Pumps							
5500	Pump, Asphalt	Replace			1.5			6-7-89 10-11
		Repair			3.0			6-7-8-9 10-11
5501	Impellers, Shafts, Bearing	Replace			3.0			6-7-8-9 10-11
5507	Pump, Universal Drive	Service Replace Repair		0.5 1.5 2.0				1-2-3-4-5 1-2-3-4-5 1-2-3-4-5
60	Burners							
6004	Burner Fuel Pump	Sew ice Replace Repair		0.5 1.0 2.0				1-2-3-4-5 1-2-3-4-5 1-2-3-4-5
6005	Burner Assembly	Service Replace Repair		0.5 0.5	 1.0			1-2-3-4-5 1-2-3-4-5 6-7-8-9 10-11
6005	Valves, Air Nozzle and Injector	Service Replace		0.5 1.0				1-2-3-4-5 1-2-3-4-5

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II -ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
6005	Portable Burner	Inspect	0.1					
		Service	0.2					
		Repair		1.0				1-2-3-4-5
6007	Burner Fuel Tank	Inspect	0.1					
		Service	0.2					
		Replace		1.0				1-2-3-4-5
		Repair			1.0			6-7-8-9-10-11
	Fuel Tank	Replace		0.5				1-2-3-4-5
6007	Fuel Tank Lines and Fittings	Inspect	0.1					
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
6010	Smoke Stacks	Sew ice	0.5					
		Replace		1.0				1-2-3-4-5
		Repair		1.5				1-2-3-4-5
6011	Combustion Chamber	Replace			2.0			6-7-8-9-10-11
	Combustion Block	Replace		1.0				1-2-3-4-5
73	Asphalt Equipment							
7317	Spray Bar	Inspect	0.1					
		Service	0.5					
		Adjust		1.0				1-2-3-4-5
		Replace		0.2				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
7317	Quadrant Assembly	Service		0.5				1-2-3-4-5
		Adjust		0.5				1-2-3-4-5
		Replace		1.0				1-2-3-4-5
		Repair		1.5				1-2-3-4-5
7318	Valves, Transfer/Filling	Replace		1.5				1-2-3-4-5

MAINTENANCE ALLOCATION CHART FOR

DISTRIBUTOR, BITUMINOUS MATERIAL, TRUCK MOUNTED

(MD SOP 700-5)

Section II - ASSIGNMENT OF MAINTENANCE FUNCTIONS.

(1)	(2)	(3)	(4)					(5)
Group Number	Component/Assembly	Maintenance Function	Maintenance Category					Tools and Equipment
			C	O	F	H	D	
7318	Valves, intake/Dual Control	Replace		1.5				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
7318	Lines/Fittings and Strainers	Inspect	0.1					
		Service	0.5					
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
7318	Valve Control Spray Bar	Service	1.0					
		Replace		2.0				1-2-3-4-5
		Repair		2.0				1-2-3-4-5
7318	Manhole/Cover	Inspect	0.1					
		Service	0.2					
		Replace		1.0				1-2-3-4-5
		Repair		1.0				1-2-3-4-5
7318	Tank,, Asphalt	Inspect	0.1					
		Service	1.0					
		Replace				16.0		6-7-8-9 10-11
		Repair				4.0		6-7-8-9 10-11
7322	Blower Assembly	Service	0.2					
		Replace		1.5				1-2-3-4-5
7322	Blower Drive	Service	0.5					
		Replace		1.5				1-2-3-4-5
		Repair		2.0				1-2-3-4-5
7322	Blower Air Cleaner	Inspect	0.1					
		Service	0.5					
7322	Blower Motor Control	Replace		1.0				1-2-3-4-5

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS				
(1) Reference Code	(2) Maintenance Level	(3) Nomenclature	(4) National/NATO Stock Number	(5) Tool Number
1	O-F-H	Tool Kit, General Mechanic-Automotive	5180-00-177-7033	LIN-W3304
2	O-F-H	Shop Equipment Auto Maintenance and Repair: Organizational Maintenance Common No. 1 Less Power	4910-00-754-0654	LIN-W32593
3	O-F-H	Shop Equipment Auto Maintenance and Repair: Organizational Maintenance Common No. 2 Less Power	4910-00-754-0650	LIN-W-32730
4	O-F-H	Shop Equipment, Organizational Repair, Light Truck Mounted	4940-00-294-9516	LIN-T13152
5	O-F-H	Shop Equipment Auto Maintenance and Repair Organizational Sup	4910-00-754-0653	LIN-W32867
6	F-H	Tool Kit, Auto Fuel and Electrical System Repair	4910-00-754-0655	LIN-W32456
7	F-H	Welding Shop Trailer Mounted		LIN-Y48323
8	F-H	Tool Kit Master Mechanic Equipment Maintenance and Repair	5810-00-699-5273	LIN-W45060
9	F-H	Shop Equipment Contract Maintenance Truck Mounted	4940-00-294-9518	LIN-T10138
10	F-H	Shop Equipment General Purpose Repair Semi Trailer Maintenance	4940-00-287-4894	LIN-T10549
11	F-H	Torque Wrench 3/4 Drive 100-500 Foot Capacity	5120-00-542-5577	LIN-Y84966

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. Scope.

This appendix lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational, direct support and general support maintenance of the M918 Bituminous Distributor Body. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. General.

This Repair Parts and Special Tools List is divided into the following sections:

Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized pats. Parts lists are composed of functional groups in numeric sequence, with the parts, in each group listed in figure and item number sequence. Bulk materials are listed in NSN sequence.

b. Section III. Special Tools List. None authorized.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all Natianal stock numbers (NSN) appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designators to figure and item numbers.

C-3. Explanation of Columns.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure of the illustration on which the item is shown.

(2) Item Number The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1)Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR code format as follows:

Code		Definition
P A	-	Item procured and stocked for anticipated or known usage.
P B	-	Item procured and stocked for insurance purpose because essentiality dicates that a minimum quantity be available in the supply system.
P C	-	Item procured and stocked and which otherwise would be coded PA except that it is detertiorative in nature.

Code	Definition
P D	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
P E	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
P F	Support equipment which will not be stocked but which will be centrally procured on demand.
P G	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
K D	An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
K F	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
K B	Item included in both a depot overhaul/repair kit and a maintenance kit.
M O	Item to be manufactured or fabricated at organizational level.
M F	Item to be manufactured or fabricated at the direct support maintenance level.
M H	Item to be manufactured or fabricated at the general support maintenance level.
M D	Item to be manufactured or fabricated at the depot maintenance level.
A O	Item to be assembled at organizational level.
A F	Item to be assembled at direct support maintenance level.
A H	Item to be assembled at general support maintenance level.
A D	Item to be assembled at depot maintenance level.
X A	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
X B	Item is not procured or stocked. If not available through salvage, requisition.
XC	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's Part number.
X D	A support item that is not stock. When required, item will be procured through normal supply channels.

NOTE

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance cods entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance cods entered in the third position will indicate one of the following levels of maintenance:

Code		Application/Explanation
C	-	Crew or operator maintenance performed within organizational maintenance.
O	-	Support item is removed, replaced, used at the organizational level.
F	-	Support item is removed, replaced, used at the direct support level.
H	-	Support item is removed, replaced, used at the general support level.
D	-	Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance cods entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

Code		Application/Explanation
O	-	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	-	The lowest maintenance level capable of complete repair of the item is the direct support level.
H	-	The lowest maintenance level capable of complete repair of the support item is the general support level.
D	-	The lowest maintenance level capable of complete repair of the support item is the depot level.
L	-	Repair restricted to Specialized Repair Activity.
Z	-	Nonreparable. No repair is authorized.
B	-	No repair is authorized. The item may reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Codes		Definition
Z	-	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	-	Reparable item. When uneconomicially reparable, condemn and dispose at organizational level.
F	-	Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H	-	Reparable item. When uneconomically reparable, condemn. and dispose at the general support level.
D	-	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	-	Reparable item. Repair, condemnation, and disposal not *authorized* below depot/specialized repair activity level.
A	-	Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous materials). Refer to appropriate manual/directives for specific instructions.

c. National *Stock* Number. Indicates the National stock number assigned to the item and which will. be used for requisitioning.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

when a stock numbered item is requisitioned, the item received may have a different number than the part being replaced.

e. Federal Supply Code Manufactured (FSCM). The FSCM is a 5-digit numeric listed in SB 708-42 which b used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item. Items that are included in kits and sets a listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column. When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description. In the Special Tools List, the initial basis of issue (BOI) appears as the bat line in the entry for each special tool, TMDE, and special equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased accordingly.

Unit of Measure (U/M). lndicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabet&al abbreviation (e.g., ea. in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity lncorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, s&functional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc).

C-4. Special Information.

Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in Appendix E. Bulk materials required to manufacture items are listed in the Bulk Material Group of this manual.

b. Repair parts kits and gasket sets are listed at the end of the repair parts, listing for the last figure containing parts of the kit.

c. (Applicable to revisions or changes only). Action change codes indicated in the left-hand margin of the listing page denote the following:

N-Indicates an added item.

C-Indicates a change in data.

R-Indicates a change in NSN only.

C-5. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents determine the functional group or subgroup within which the item belongs. This is necessary since illustrations are prepared for function groups or subgroups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group or subgroup to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known:

(1) First. Using the index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

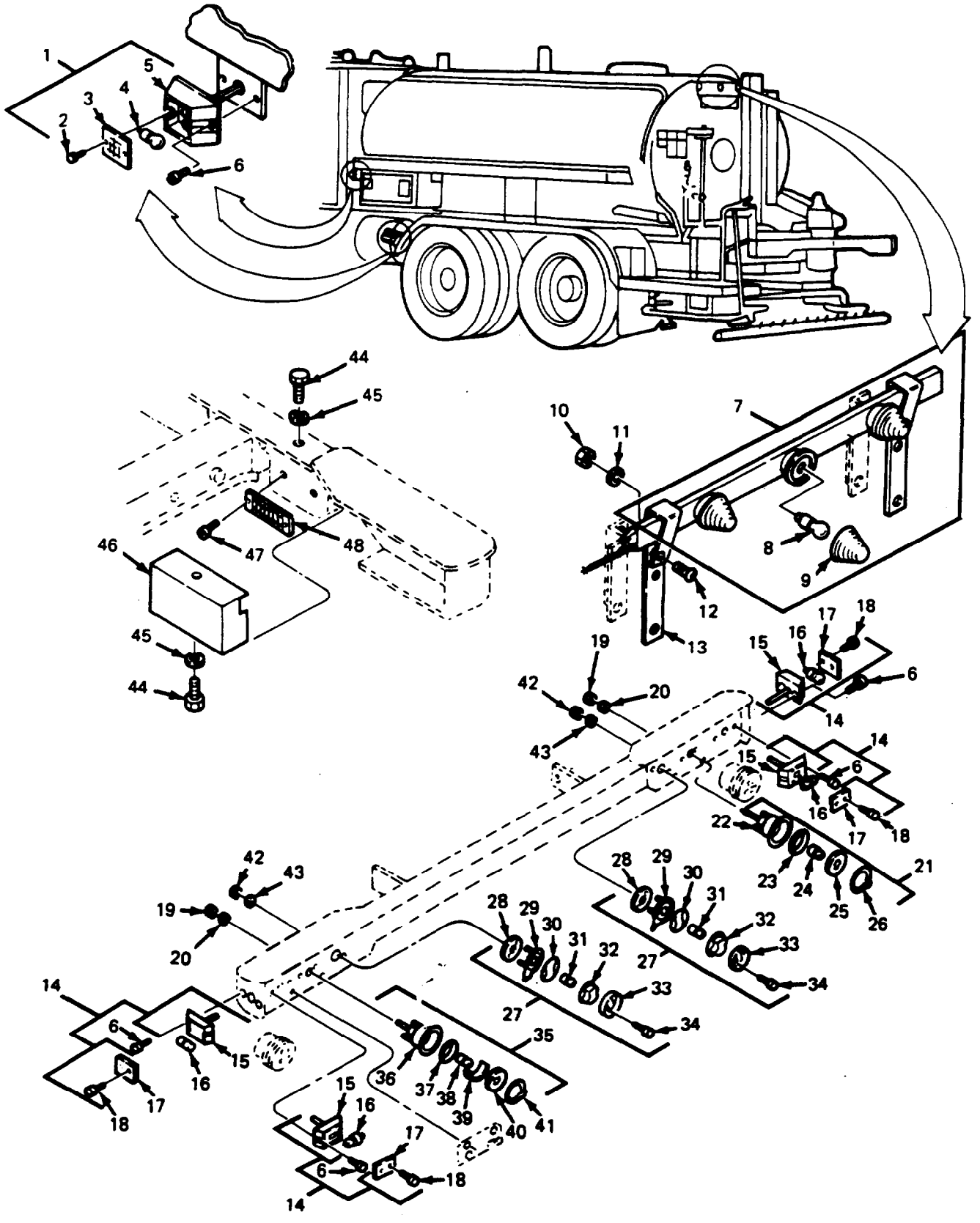
(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts, list.

C-6. Abbreviations.

Abbreviation	Explanation	Abbreviation	Explanation
ASSY	Assembly	LG	Long
DIA	Diameter	LG	Length
HD	Head	MTD	Mounted
HEX	Hexagon	MTG	Mounting
HSG	Housing	NOS	Numbers
ID	Inside Diameter	OD	Outside Diameter
IDENT	.Identification	TACH	Techometer
IN	Inch	V	Variable

NOTE

National Stock Numbers (NSN) that are missing for “P” source coded items have been applied for and will be added to this manual by a change/revision when they are entered in the Army Master Data File (AMDF). Until the NSNs are established and published, submit exception requisitions to: Commander, Defense Logistics Agency, Defense Construction Supply Center, ATTN: DCSC-LI, Columbus, Ohio 43215 for the part required to support your equipment.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(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0609 LAMPS		
1	1	PAOOO		115A	12662	LIGHT ASSY CLEARENCE, AMBER	EA	4
1	2	PAOZZ	5305-01-101-2620	115-32	12662	.SCREW, LENS	EA	2
1	3	PAOZZ	6220-01-101-7317	115A-15	12662	.LENS, ;LIGHT RED LENS FOR FRONT .	EA	1
1	4	PAOZZ	6240-00-946-9654	1895	81343	LAMP, INCANDESENT LIGHT	EA	1
1	5	XAOZZ		115-01	12662	.HOUSING VENDOR WILL NOT SUPPLY	EA	1
1	6	PAOZZ	5306-00-225-8514	MS90725-50	96906	SCREW, TAPPING, THREA SELF TEAPPING, 10/32X1/2,LIGHT ASSY TO BUMPER AND BODY, TWOSCREWS PER LAMP-TOTAL REB AND AMBERLIGHTS IS 8	EA EA	16
1	7	PBOZZ	6220-01-085-1259	6700040	80195	LIGHT ASSEMBLEY, CLEA CLEARENCE	EA	1
1	8	PAOZZ	6240-00-155-8717	67	81343	.LAMP, INCANDESCENT THREE LIGHTS ATTACHED TO LIGHT BAR	EA	3
1	9	PAOZZ	6720-01-085-2307	6700041	80195	LENS, LIGHT BAR, THREE LIGHTS ATTACHED TO LIGHT BAR	EA	3
1	10	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON 1/4-20. STOP LIGHT TO BUMPER	EA	2
1	11	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK 1/4 IN, STOP LIGHT TO BUMPER MTG	EA	2
1	12	PAOZZ	5305-00-018-6494	121900	24617	SCREW, ASSEMBLED WAS HEAD, LIGHT BAR TO TANK	EA	2
1	13	XDOZZ		3390151	80195	CLAMP, LIGHT CLUSTER LIGHT BAR TO TANK	EA	2
1	14	PAOZZ	622-01-065-7275	6700854	80195	LIGHT ASSEMBLY, CLA LIGHTS	EA	4
1	15	XAOZZ		115-01	12662	HOUSING	EA	1
1	16	PAOZZ	6240-00-946-9654	1895	81343	. LAMP, INCANDESCENT	EA	1
1	17	PAOZZ		115R-15	12662	.LENS, RED RED LENS FOR REAR-AMBER LENS FOR FRONT	EA	1
1	18	PAOZZ	5305-01-101-2620	115-32	12662	. SCREW, LENS	EA	2
1	19	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON	EA	4
1	20	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK	EA	4
1	21	PAOOO	6220-01-082-8302	50272	99588	STOP LIGHT-TAILLIGH TAIL AND TURN	EA	1
1	22	XDOZZ		68110	99588	PIGTAIL	EA	1
1	23	PAOZZ		51-9115-01	99588	GASKET	EA	1
1	24	PAOZZ	6240-00-889-1799	1157	81343	. LAMP, INCANDESCENT	EA	1
	25	PAOZZ	6220-00-300-0284	90012	99588	. LENS, LIGHT LIGHTS	EA	1
	26	XDOZZ		24-9905-03	99588	. SNAP RING	EA	1
	27	PAOOZ	6220-01-082-9082	62000021	81834	LIGHT, BACKUP 12 VOLT	EA	2
	28	XDOZZ		51-9001-01	99588	PAD MOUNTING	EA	1
	29	XDOZZ		68080	99588	. PIGTAIL	EA	1
	30	PAOZZ		51-9142-01	99588	. GASKET LIGHTS	EA	1
	31	PAOZZ	6240-00-924-7526	1156	81343	. LAMP, INCANDESCENT	EA	1
	32	PAOZZ	6220-00-001-1514	90221	81834	. LENS, LIGHT LIGHTS	EA	1
	33	XDOZZ		10-7005-02	99588	RIM, LENS LIGHTS	EA	1
	34	XDOZZ		23-0118-19	99588	. SCREW, LENS LENS TO HOUSING	EA	2
	35	PAOZZ	6220-01-082-8303	6700390	80195	STOP LIGHT-TAILLIGH TAIL-TURN AND LICENSE, BUMPER ASSY-LOOM, TRUCK MTG	EA	1
	36	XDOZZ		68110	99588	. PIGTAIL	EA	1
	37	PAOZZ		51-9115-01	99588	. GASKET LIGHTS	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
1	38	PAOZZ	6240-00-889-1799	1157	81343	. LAMP, INCANDESCENT	EA	1
1	39	XDOZZ		90321	99588	. LENS, LICENSE WINDOW LIGHTS	EA	1
1	40	PAOZZ	6220-00-300-0284	90012	81834	. LENS, LIGHT	EA	1
1	41	XDOZZ		24-9905-03	99588	. SNAP-RING, LENS RETAINER	EA	1
1	42	PAOZZ	5310-00-934-9751	MS25650-302	96906	NUT, PLAIN, HEXAGON NO. 10, BACKUP LIGHT TO BUMPER	EA	2
1	43	PAOZZ	5310-00-922-2017	120217	30379	WASHER, LOCK NO. 10, BACKUP LIGHT TO BUMPER TRUCK MTG	EA	2
1	44	XDOZZ		6000550	80195	SCREW, SELF TAPPING LIGHTS	EA	2
1	45	XDOZZ		120382	24617	WASHER, LOCK 1/ INCH TRUCK MTG	EA	2
1	46	XDOZZ		3370050	80195	COVER TERMINAL STRIP	EA	1
1	47	PAOZZ	5305-00-984-6194	132764	24617	SCREW, MACHINE NO.8-32X5/8	EA	2
1	48	XDOZZ		6700306	80195	TERMINAL STRIP LIGHTS	EA	1

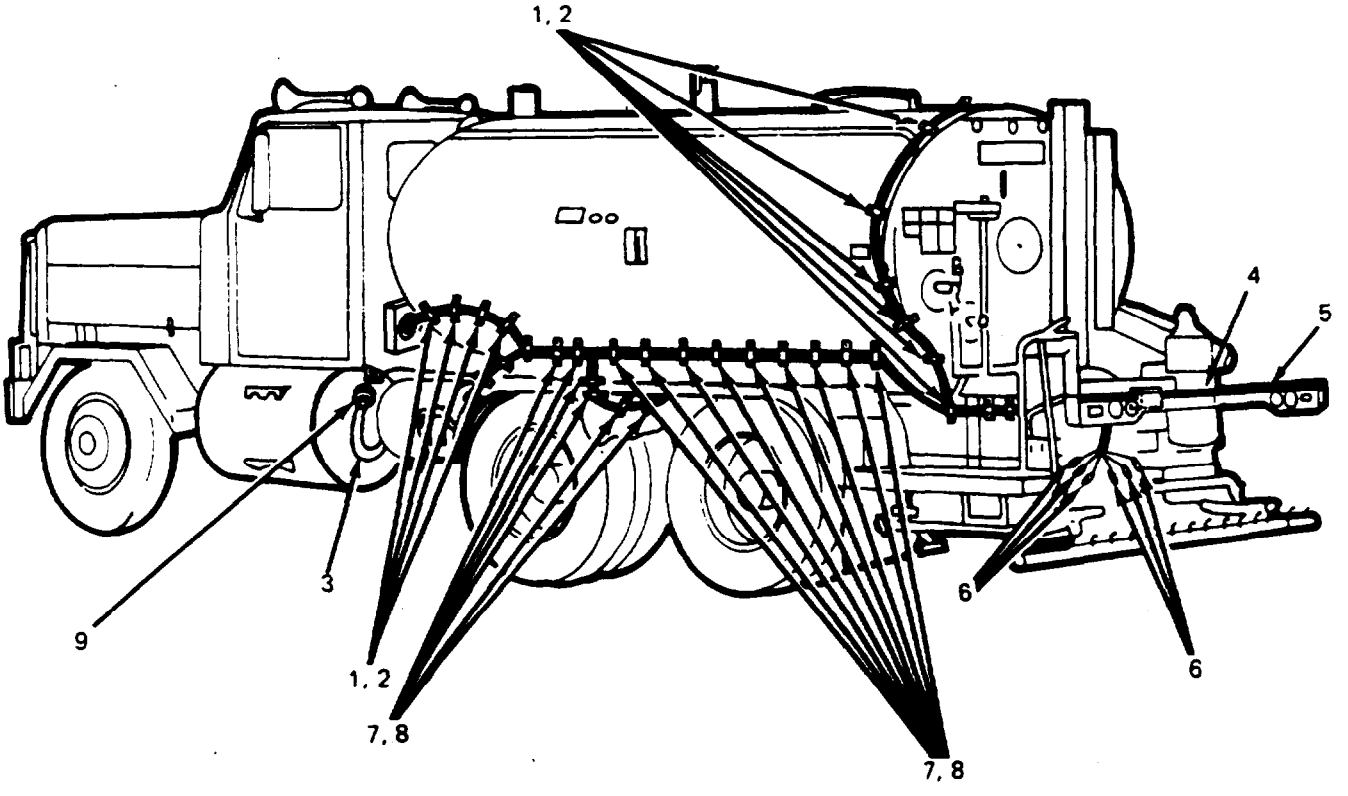

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Figure 2. Asphalt Tank Wiring Loom
Sheet 1 OF 2

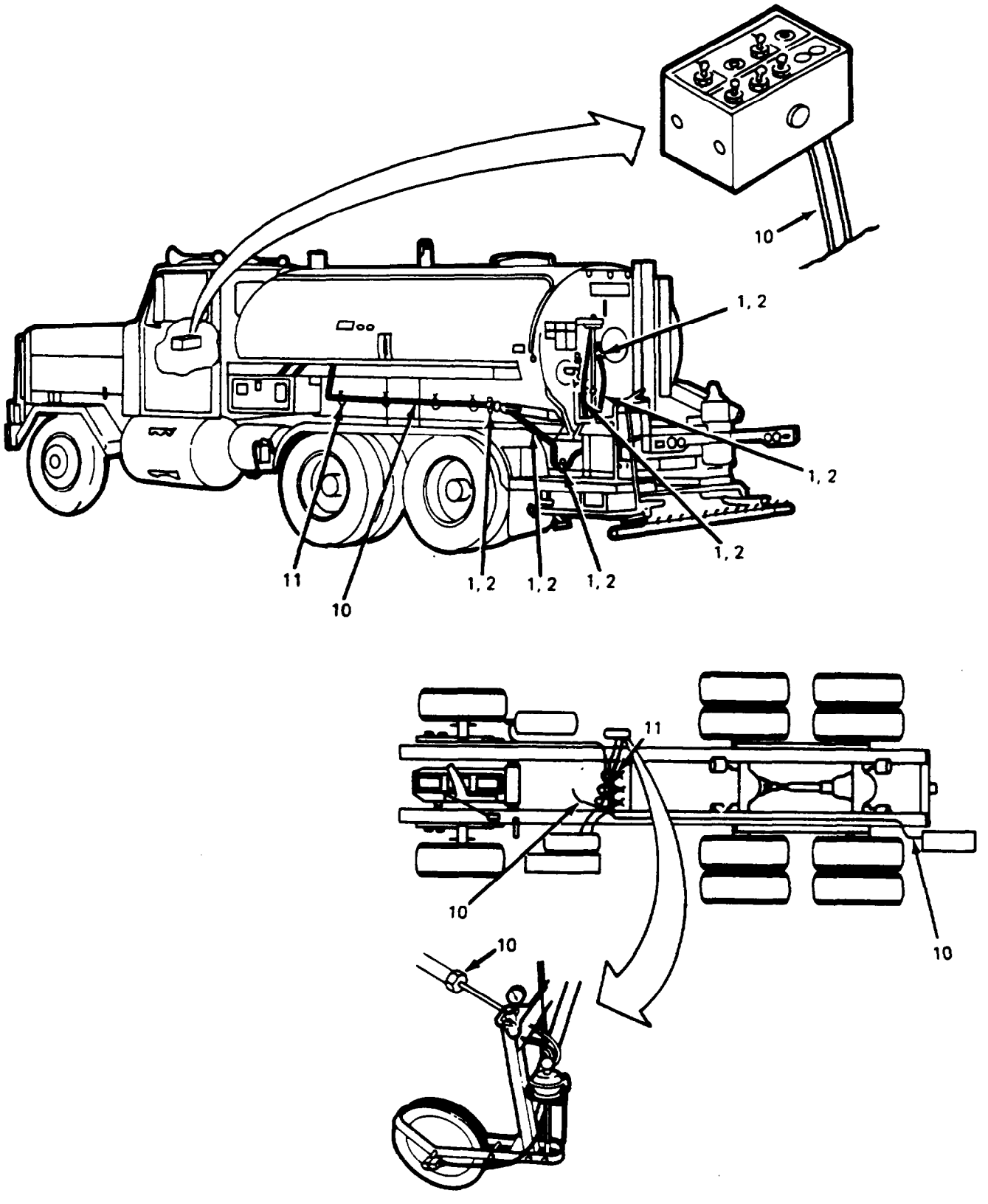

Figure 2. Asphalt Tank Wiring Loom
Sheet 2 of 2

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(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0613 ASHALT TANK WIRING LOOM		
2	1	PAOZZ	5340-01-071-6389	COV-0517	75272	STRAP, RETAINING	EA	27
2	2	PAOZZ	5305-01-097-7896	9416136	24617	SCREW, TAPPING	EA	34
2	3	PCOZZ	2590-01-100-8751	J-616239	80195	WIRING HARDNESS	EA	1
2	4	PCOZZ	2590-01-096-9327	J-616237	80195	WIRING HARDNESS	EA	1
2	5	PCOZZ	2590-01-099-0179	J-616238	80195	WIRING HARDNESS	EA	1
2	6	PAOZZ	2590-01-099-0179	R-1168S	14726	TERMINAL, WIRE	EA	6
2	7	PAOZZ	5940-01-100-3831	COV-1313	75272	CLAMP, LOOP	EA	21
2	8	PAOZZ	5340-00-404-4101	MS24617-21	96906	SCREW, TAPPING, THREA	EA	9
2	9	PBOZZ	5305-00-883-0628	MD56-18-8SN	11139	CONNECTOR, RECEPTAL	EA	1
2	10	PCOZZ	5935-01-101-3396	3370087	80195	WIRING HARDNESS	EA	1
2	11	PAOZZ	2590-01-096-9328	SST4S	06383	STRAP, RETAINING	EA	9

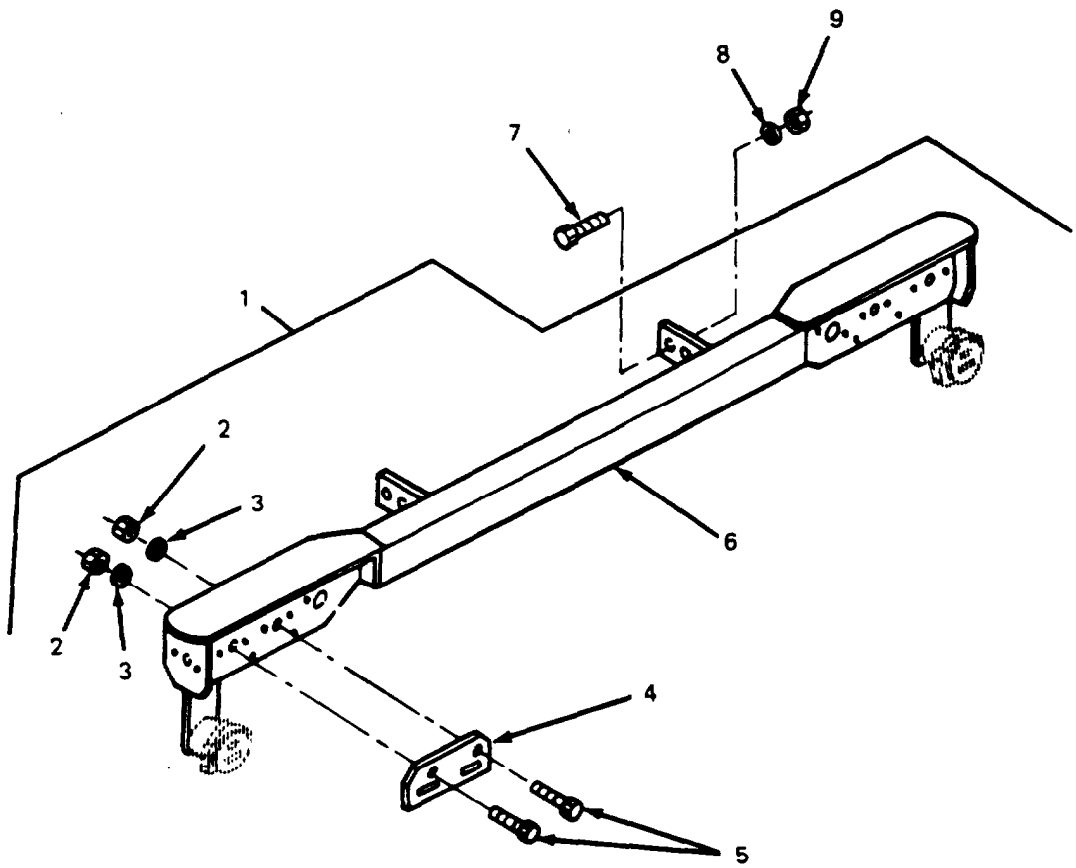

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Figure 3. Loom Bumper

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 1501 LOOM BUMPER		
3	1	XDOOO		3310907	80195	BUMPER ASSY-LOOM BUMPER ASSY-LOOM	EA	1
3	2	PAOZZ	5310-00-761-6882	120375	24617	.NUT, PLAIN, HEXAGON 1/4NC, BRACKET TO BUMPER, BUMPER ASSY-LOOM, TRUCK MTG	EA	2
3	3	PAOZZ	5310-00-637-9541	3310897	24617	. WASHER, LOCK 1/4 SPRING, BRACKET TO BUMPER, BUMPER ASSY-LOOM, TRUCK MTG	EA	2
3	4	XDOZZ		3310897	80195	. BRACKET BUMPER-LOOM ASSEMBLY	EA	1
3	5	PAOZZ	5305-00-068-0500	MS35297-3	96906	SCREW, CAP, HEXAGON H HEAD, 1/4-20X1/2IN, LG, BRACKET TO BUMPER.	EA	2
3	6	PAOZZ		3310901	80195	. BUMPER, LOOM BUMPER ASSY-LOOM, TRUCK MTG	EA	1
3	7	PAOZZ	5305-00-044-4153	122408	24617	SCREW, CAP, HEXAGON H 0.50N0X1.00IN. LG, ATTACH BUMPER TO. FRAME MTG	EA	4
3	8	PAOZZ	5310-00-584-5272	MS35338-48	96906	WASHER, LOCK 0.50, ATTACH BUMPER TO FRAME	EA	4
3	9	PAOZZ	5310-00-768-0318	120378	24617	NUT, PLAIN, HEXAGON 0.50NC, ATTACH BUMPER TO FRAME ASSY	EA	4

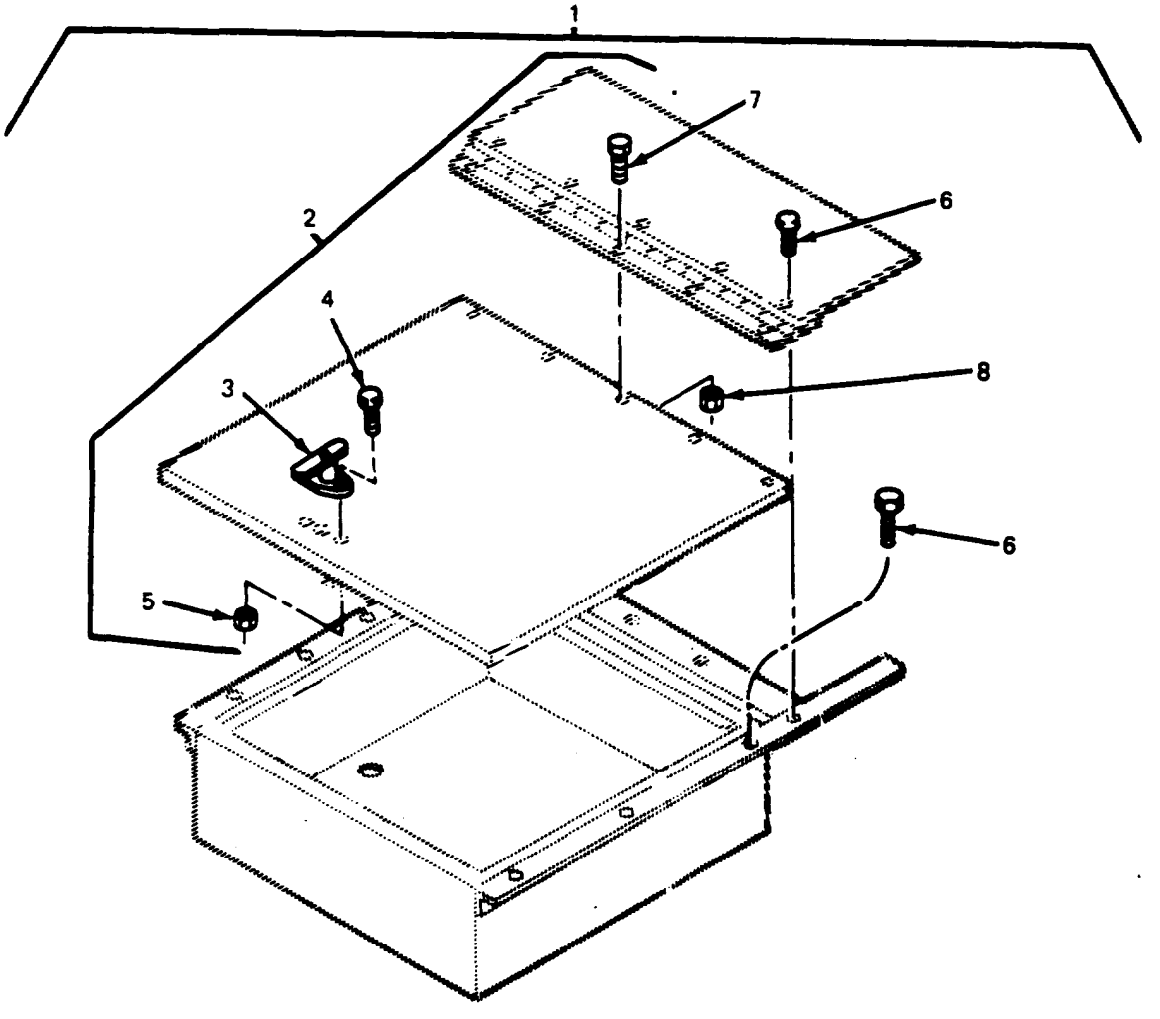

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Figure 4. Stowage Box

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 1501 STOWAGE BOX		
4	1	XDOOO		3320687	80195	BOX, STOWAGE KEROSENE BATH SECTION, STOWAGE BOX-KEROSENE BATH SECTION	EA	1
4	2	XDOOO		3320686	80195	. LID ASSEMBLY STOWAGE BOX-KEROSENE BATH SECTION	EA	1
4	3	PBOZZ	2590-01-100-6188	75	34623	..HANDLE, STOWAGE BOX	EA	1
4	4	PAOZZ	5305-00-068-0502	MS35297-6	96906	.. SCREW, CAP, HEXAGON H 0.25NCX0.75, HANDLE TO LID ASSY, STOWAGE BOX-KERSONE BATH SECTION	EA	2
4	5	PAOZZ	5310-01-097-8003	9418936	24617	.. NUT, SELF-LOCKING, HE SELF TAPPING, STOWAGE BOX TO RAILS AND HINGE TO LID ASSEMBLY STOWAGE BOX-KEROSENE BATH SECTION	EA	2
4	6	XDOZZ		6000550	80195	. SCREW, HEXAGON HEAD SELF TAPPING, STOWAGE BOX TO RAILS AND HINGE TO LID ASSEMBLY STOWAGE BOX-KEROSEN BATH SECTION	EA	22
4	7	XDOZZ		455523	24617	. BOLT 1/4-20X5/8	EA	5
4	8	PAOZZ	5310-723-4458	MS35690-404	96906	. NUT 1/4-20	EA	5

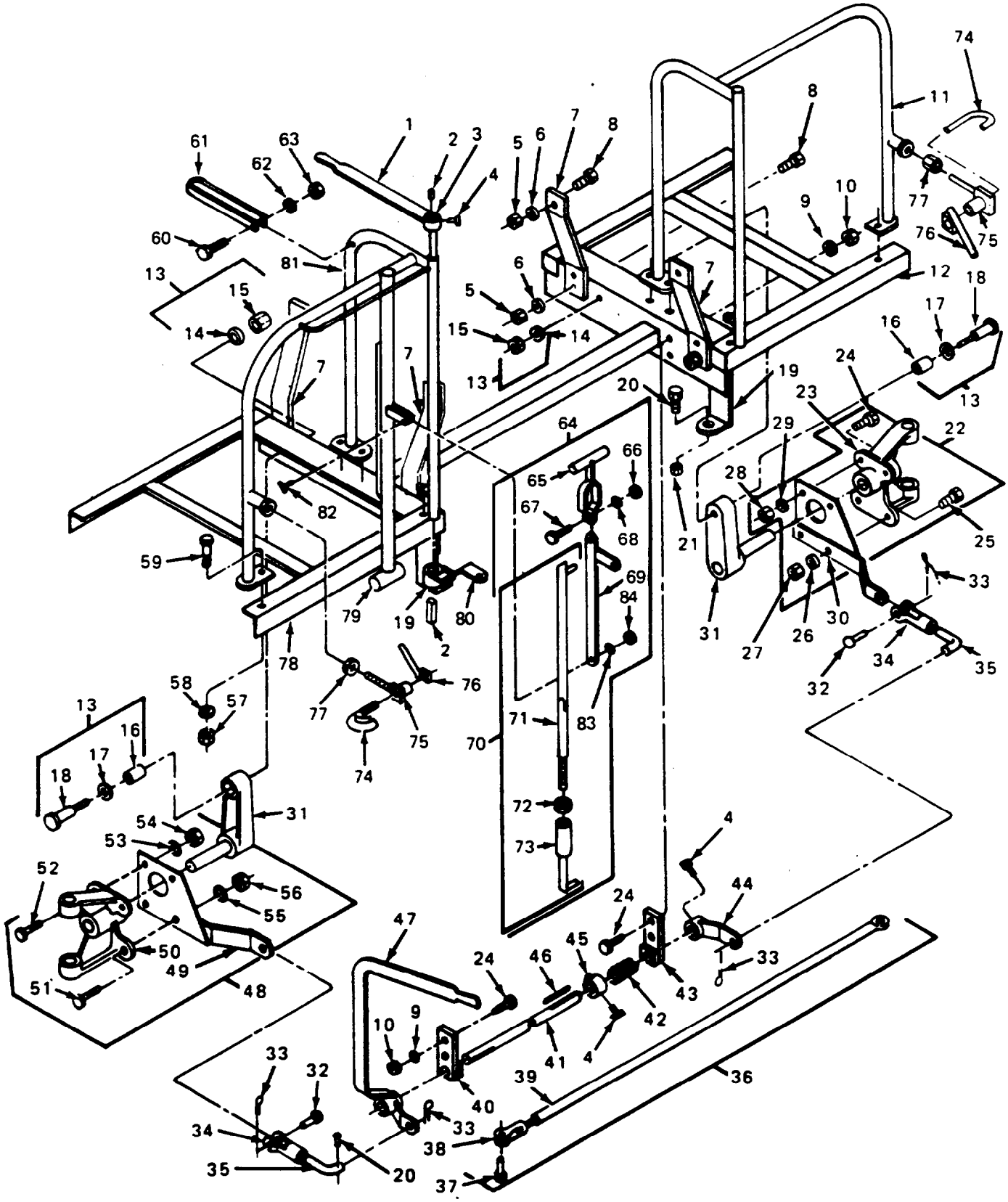

Figure 5. Tuc Bar Subframe

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 1501 TUC BAR SUBFRAME		
5	1	XDFZZ		3351059	80195	LEVER ASSEMBLY SUBFRAME-TUC BAR	EA	1
5	2	PAFZZ	5315-00-150-4843	60000011	80195	KEY, SPECIAL SUBFRAME-TUC BAR	EA	2
5	3	XDFZZ		3350272	80195	SHAFT, SHIFTING SUBFRAME-TUC BAR	EA	1
5	4	PAFZZ		106850	24617	SETSCREW 5/16X1INCH LG., SUBFRAME-TUC BAR	EA	3
5	5	PAFZZ	5310-00-763-8920	124589	24617	NUT, PLAIN, HEXAGON 5/8NC	EA	4
5	6	PAFZZ	5310-00-232-8194	121574	24617	WASHER, LOCK 5/8	EA	4
5	7	XDFZZ		3310218	80195	BRACKET, HANGER	EA	4
5	8	PAFZZ	5305-00-724-5910	MS90725-162	96906	SCREW, CAP, HEXAGON H 5/8NC X 1-1/2IN.LG	EA	4
5	9	PAFZZ	5310-00-584-5272	MS35338-48	96906	WASHER, LOCK 1/2IN..RIGHT YOKE TO RIGHT ARM ASSY,SUBFRAME-TUC BAR	EA	2
5	10	PAFZZ	5310-00-732-0560	120371	24617	NUT, PLAIN, HEXAGON 1/2IN.NC, RIGHT YOKE RIGHT ARM ASSY, SUBFRAME-TUC BAR	EA	2
5	11	XDFZZ		3351257	80195	RAIL, GUARD-RIGHT SUBFRAME-TUC BAR	EA	1
5	12	XDFZZ		3310359	80195	PLATFORM WITH ANGLE UP-RIGHT, SUBFRAME-TUC BAR	EA	1
5	13	PAFFF		3350053	80195	BUSHING ASSEMBLY BAR CARRYING SHAFT ASSYS TO PLATEFORM, SUBFRAME-TUC BAR	EA	2
5	14	PAFZZ	5310-00-232-8194	121574	24617	.WASHER, LOCK 5/8, BAR CARRYING SHAFT ASSYS TO PLATEFORM, SUBFRAME-TUC BAR	EA	1
5	15	PAFZZ	5310-00-763-8920	124589	24617	. NUT, PLAIN, HEXAGON 5/8NC, BAR CARRYING SHAFT ASSYS TO PLATFORM, SUBFRAME-TUC BAR	EA	1
5	16	PAFZZ	4730-01-089-4203	3350055	80195	.BUSHING BAR CARRYING SHAFT ASSYS TO PLATEFORM, SUBFRAME-TUC BAR	EA	1
5	17	PAFZZ	5310-00-951-7209	130999	24617	. WASHER, FLAT 11/16X1-3/4IN., BAR CARRYING SHAFT ASSYS TO PLATFORM, SUBFRAME TUC-BAR	EA	1
5	18	PAFZZ	5305-00-724-5938	MS90725-172	96917	. SCREW, CAP, HEXAGON H 5/8IN. NCX4IN.LG, BAR CARRING SHAFT ASSYS TO PLATFORM,SUBFRAMETUC BAR	EA	1
5	19	PAFZZ	5340-01-096-7019	3350901	80195	BRACKET, ANGLE	EA	2
5	20	PAFZZ	5305-01-097-8934	102912	24617	SETSCREW 0.44NC X 2.50LG	EA	2
5	21	PAFZZ	5310-00-880-7745	MS35690-723	96906	NUT, PLAIN, HEXAGON	EA	2
5	22	PAFFF	3895-00-160-3061	3350009	80195	YOKE SUBFRAME-TUC BAR	EA	1
5	23	PAFZZ	3895-01-100-3748	3350007	80195	. .YOKE, LEFT SUBFRAME-TUC BAR	EA	1
5	24	PAFZZ	5305-00-206-3519	122433	24617	SCREW, CAP, HEXAGON H 1/2IN.NCX1-1/2IN.LG.SUBFRAME TUC BAR	EA	4
5	25	PAFZZ	5305-00-727-3804	MS90725-165	96906	.SCREW, CAP, HEXAGON H 5/8NCX2-1/4,LEFT YOKE TO LEFT ARM ASSY, SUBFRAME-TUC BAR	EA	2
5	26	PAFZZ	5310-00-232-8194	121574	24617	.WASHER, LOCK 5/8INCH , SUBFRAME-TUC BAR	EA	2
5	27	PAFZZ	5310-00-763-8920	124589	24617	.NUT, PLAIN, 5/8INCH NC, LEFT YOKE TO LEFT ARM ASSY,	EA	2
5	28	PAFZZ	5310-00-732-0560	120371	24617	.NUT,PLAIN, HEXAGON 1/2IN. NC,SURFRAME-TUC BAR	EA	2
5	29	PAFZZ	5310-00-584-5272	MS35338-48	96906	.WASHER, LOCK 1/2IN.,SUBFRAME-TUC-BAR	EA	2
5	30	PAFZZ	3895-01-100-3751	3350011	80195	.ARM ASSEMBLY, RIGHT SUBFRAME-TUC BAR	EA	1
5	31	XDFZZ		3350064	80195	SHAFT ASSEMBLY BAR CARRINY, SUBFRAME-TUC BAR	EA	2
5	32	PAFZZ	5320-00-162-6038	6000403	80195	RIVET SHIFTING ROD ASSY TO SHIFTING ARM ASSY, SUBFRAME-TUC BAR	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
5	33	PAOZZ	5315-00-839-5822	MS24665-353	96906	PIN, COTTER 1/8X1 INCH. ROD END CLEVIS TO LEFT AND RIGHT ARM ASSY, SUBFRAME TUC BAR	EA	2
5	34	PAFZZ	5340-00-137-3170	6000367	80195	CLEVIS, ROD END SUBFRAME-TUC BAR	EA	2
5	35	PAFZZ	3895-00-160-3022	3351134	80195	LINK SUBFRAME-TUC BAR	EA	2
5	36	PAFFF	3895-01-100-3750	3350268	80195	ROD ASSEMBLY, SHIFT 1 SUBFRAME-TUC BAR	EA	1
5	37	PAFZZ	5320-00-162-6038	6000403	80195	. RIVET ROD END CLEVIS TO LEFT AND RIGHT ARM ASSY, SUBFRAME TUC BAR	EA	2
5	38	PAFZZ	5340-00-137-3170	6000367	80195	. CLEVIS, ROD END SUBFRAME-TUC BAR	EA	1
5	39	PAFZZ	5340-01-102-8324	3350269	80195	. ROD, SHIFTING SUBFRAME-TUC BAR	EA	1
5	40	PAFZZ		3350903	80195	BLOCK, BEARING-LEFT SUBFRAME-TUC BAR	EA	1
5	41	XDFZZ		3350045	80195	SHAFT, STRIAGHR SUBFRAME-TUC BAR	EA	1
5	42	XDFZZ	5360-00-149-8677	3350908	80195	SPRING, HELICAL, EXTE SUBFRAME-TUC BAR	EA	1
5	43	PAFZZ		350904	80195	BLOCK, BEARING-RIGHT SUBFRAME-TUC BAR	EA	1
5	44	XDFZZ		3350885	80195	ARM ASSY, BAR RAISE SUBFRAME-TUC BAR	EA	1
5	45	XDFFF		3350887	80195	ARM ASSEMBLY CENTR BALANCE, SUBFRAME-TUC BAR	EA	1
5	46	XDFZZ		3100118	80195	KEY, DRIVE	EA	1
5	47	XDFZZ	3040-01-102-4019	3350881	80195	LEVER, MANUAL CONTRO BAR RAISING, SUBFRAME-TUC BAR	EA	1
5	48	PAFZZ	3895-00-160-3060	3350008	80195	SHIFTER FORK SUBFRAME-TUC BAR	EA	1
5	49	PAFZZ	3895-01-100-3749	3350010	80195	. ARM ASSEMBLY, LEFT SUBFRAME-TUC BAR	EA	1
5	50	PAFZZ	3895-01-100-3748	3350007	80195	. YOKE, LEFT SUBFRAME-TUC BAR	EA	1
5	51	PAFZZ		428694	24617	.SCREW, CAP, HEXAGON H 5/8NCX2-1/4IN., RIGHT YOKE TO RIGHT ARM ASSY, SUBFRAME-TUC BAR	EA	2
5	52	PAFZZ	5305-00-206-3519	122433	24617	.SCREW, CAP, HEXAGON H 1/2NCX1-1/2, LEFT BEARING BLOCK TO PLATFORM SUBFRAME-TUC BAR	EA	2
5	53	PAFZZ	5310-00-584-5272	MS35338-48	96906	. WASHER, LOCK 1/2IN., LEFT BEARING BLOCK TO PLATFORM, SUBFRAME-TUC BAR	EA	2
5	54	PAFZZ	5310-00-732-0560	120371	24617	.NUT, PLAIN, HEXAGON 1/2IN.NC, LEFT BEARING BLOCK TO PLATFORM, SUBFRAME-TUC BAR	EA	2
5	55	PAFZZ	5310-00-232-8194	121574	24617	.EASHER, LOCK 5/8IN., RIGHT YOKE TO RIGHT ARM ASSY, SUBFRAME-TUC BAR	EA	2
5	56	PAFZZ	5310-00-763-8920	124589	24617	. NUT, PLAIN, HEXAGON 5/8NC, RIGHT YOKE TO RIGHT ARM ASSY, SUBFRAME TUC BAR	EA	2
5	57	PAFZZ	5310-00-880-8189	MS51967-11	96906	NUT, PLAIN, HEXAGON 0.44NC, LFT AND RIGHT GUARD RAILS TO LEFT AND RIGHT PLATFORMS SUBFRAME-TUC BAR	EA	8
5	58	PAFZZ	5310-00-209-0965	MS35338-28	96906	WASHER, LOCK 0.44, LEFT AND RIGHT GUARD RAILS TO LEFT AND RIGHT PLATEFORM SUBFRAME-TUC BAR	EA	8
5	59	PAFZZ	5305-00-042-9478	MS90725-90	96906	SCREW, CAP, HEXAGON H 0.44NCX1.75LONG, LEFT AND RIGHT GUARD RAILS TO LEFT AND RIGHT PLATFORMS, SUBFRAME-TUC BAR	EA	8
5	60	PAFZZ	5305-00-269-3220	MS90725-70	96906	SCREW, CAP, HEXAGON H 3/8IN. LG, SHIFTING LEVER LOCK TO LEFT GUARD RAIL, SUBFRAME-TUC BAR	EA	1
5	61	PAOZZ		3350046	80195	LOCK, SHIFTING LEVER SUBFRAME-TUC BAR	EA	1
5	62	PAFZZ	5310-00-637-9541	MS35338-46	96906	WASHER, LOCK 3/8IN.NC, SHIFTING LEVER LOCK TO LEFT GUARD RAIL, SUBFRAME TUC-BAR	EA	1
5	63	PAFZZ	5310-00-732-0558	120377	24617	NUT, PLAIN, HEXAGON 3/8IN. NC, SHIFTING LEVER LOCK TO LEFT GUARD RAIL, SUBFRAME- TUC BAR	EA	1
5	64	PAFZZ	3895-01-100-9997	3350494	80195	LEVER ASSEMBLY SUBFRAME-TUC BAR	EA	1
5	65	PAFFF		3350497	80195	.HANDLE, CATCH ASSEMB SUBFRAME-TUC BAR	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
5	66	PAFZZ	5315-00-409-3355	120376	24617	.NUT, PLAIN, HEXAGON 0.3INC, CATCH ASSY TO LEVER ASSY, SUBFRAME-TUC BAR	EA	1
5	67	PAFZZ	5305-00-225-9081	MS90725-36	96906	.SCREW, CAP, HEXAGON H 0.3INCX1.25LG, CATCH ASSY TO LEVER ASSY , SUBFRAME-TUC BAR	EA	1
5	68	PAFZZ	5310-00-407-9566	MS35338-45	96906	. WASHER, LOCK 0.3INC, CATCH ASSY TO LEVER ASSY, SUBFRME-TUC BAR	EA	1
5	69	PAFFF		3350495	80195	. LEVER ASSEMBLY, CATC SUBFRAME-TUC BAR	EA	1
5	70	PAFZZ	3895-01-100-9998	3350501	80195	. LINK ASSEMBLY, LEVER SUBFRAME-TUC BAR	EA	1
5	71	PAFZZ		3350502	80195	.. ROD, LINK SUBFRME-TUC BAR	EA	1
5	72	PAFZZ		124843	24617	.. NUT, JAM 9/16NC, SUBFRAME-TUC BAR	EA	1
5	73	PAFZZ		3351173	80195	.. ROD END, LINK SUBFRAME -TUC BAR	EA	1
5	74	PAFZZ		3350347	80195	HOOK BOLT ASSEMBLY SUBFRAME-TUC BAR	EA	2
5	75	PAFZZ		3350340	80195	SUPPORT ASSEMBLY SUBFRAME-TUC BAR	EA	2
5	76	PAFZZ		3350795	80195	NUT SUBFRAME-TUC BAR	EA	2
5	77	PAFZZ	5310-00-763-8921	MS51967-23	96906	NUT, PLAIN, HEXAGON 0.75NC, SUBFRAME-TUC BAR	EA	2
5	78	XDFZZ		3310358	80195	PLATFORM WITH ANGLE UP-LEFT, SUBFRAME-TUC BAR	EA	1
5	79	XDFZZ		3350499	80195	POST ASSEMBLY, BAR SUBFRAME-TUC BAR	EA	1
5	80	PAFZZ		3350270	80195	LEVER, REMOTE CONTRO SUBFRAME-TUC BAR	EA	1
5	81	XDFZZ		3350301	80195	RAIL, GUARD-LEFT SUBFRAME-TUC BAR	EA	1
5	82	PAFZZ	5305-00-206-3519	122433	24617	SCREW,CAP, HEXAGON H 1/2NCX1-1/2IN., RIGHT BEARING BLOCK TO PLATE FORM, SUBFRAME TUCBAR	EA	2
5	83	PAFZZ	5310-00-584-5272	MS35338-48	96906	WASHER, LOCK1/2IN., SUBFRAME-TUC BAR	EA	2
5	84	PAFZZ	5310-00-732-0560	120371	24617	NUT, PLAIN, HEXAGON 1/2NC, RIGHT BEARING BLOCK TO PLATFORM, SUB-FORM-TUC BAR	EA	2

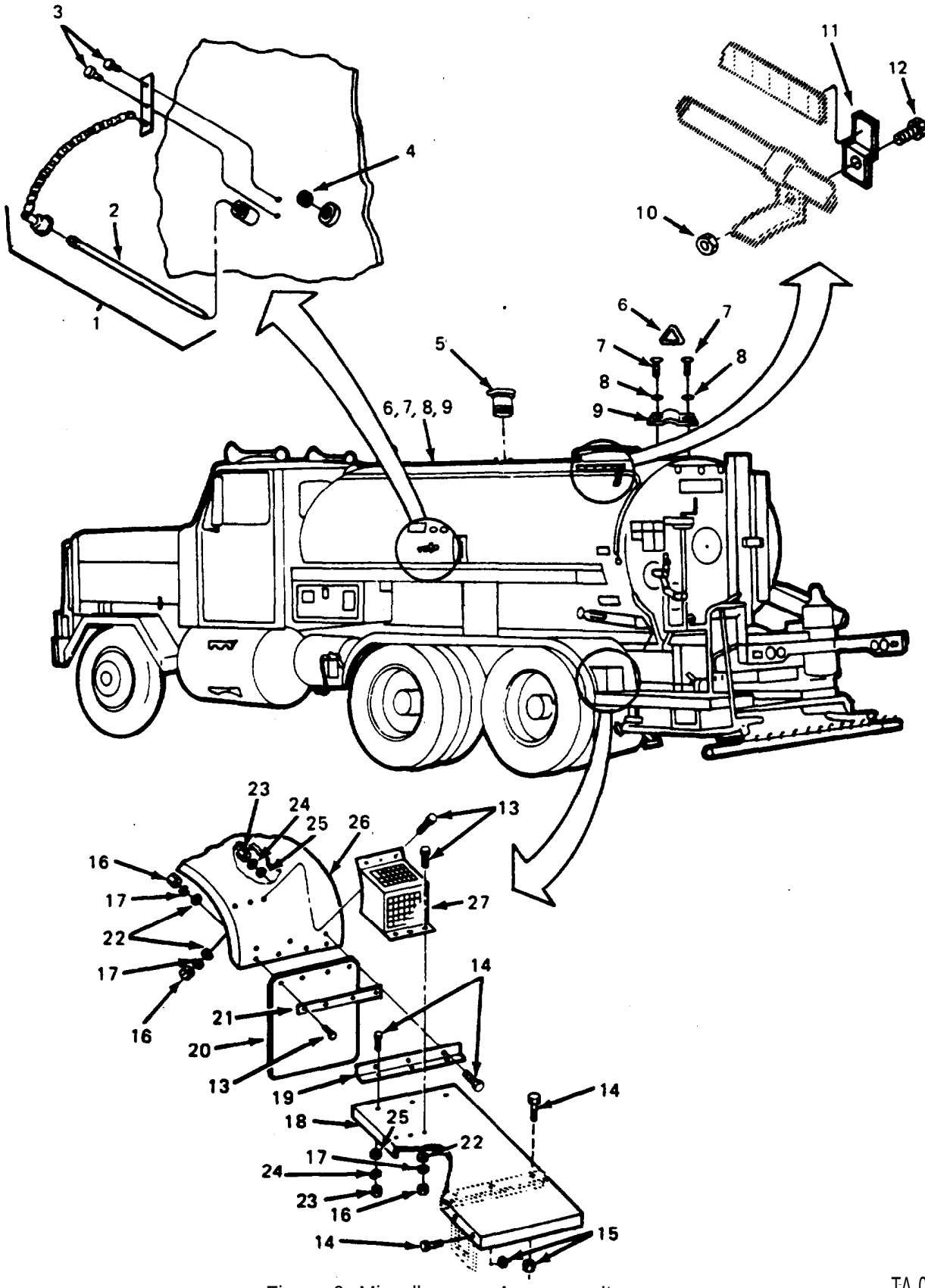

Figure 6. Miscellaneous Accessory Items
Sheet 1 of 4

TA 075759

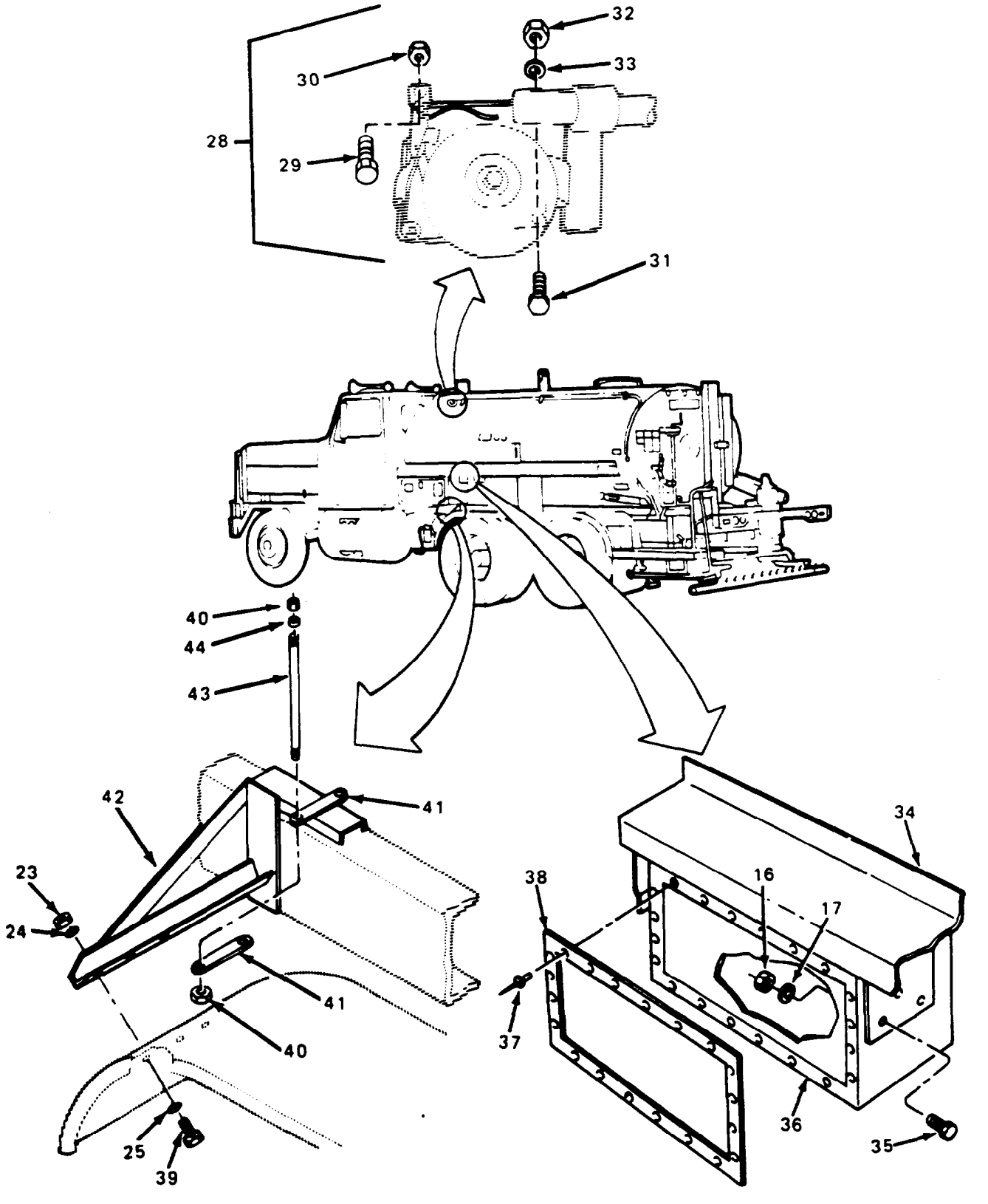

Figure 6. Miscellaneous Accessory Items
Sheet 2 of 4

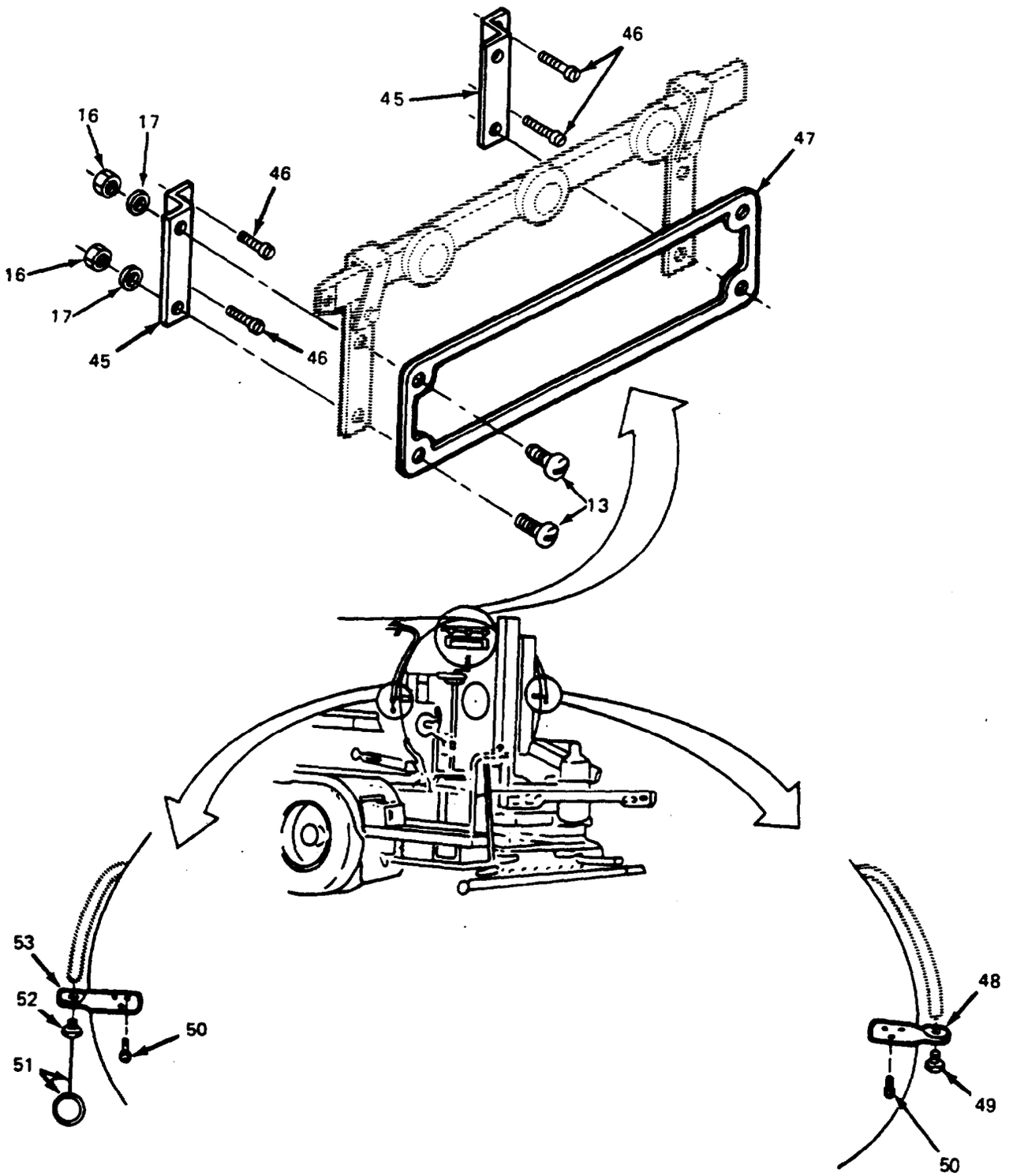

Figure 6. Miscellaneous Accessory Items
Sheet 3 of 4

TA 075757

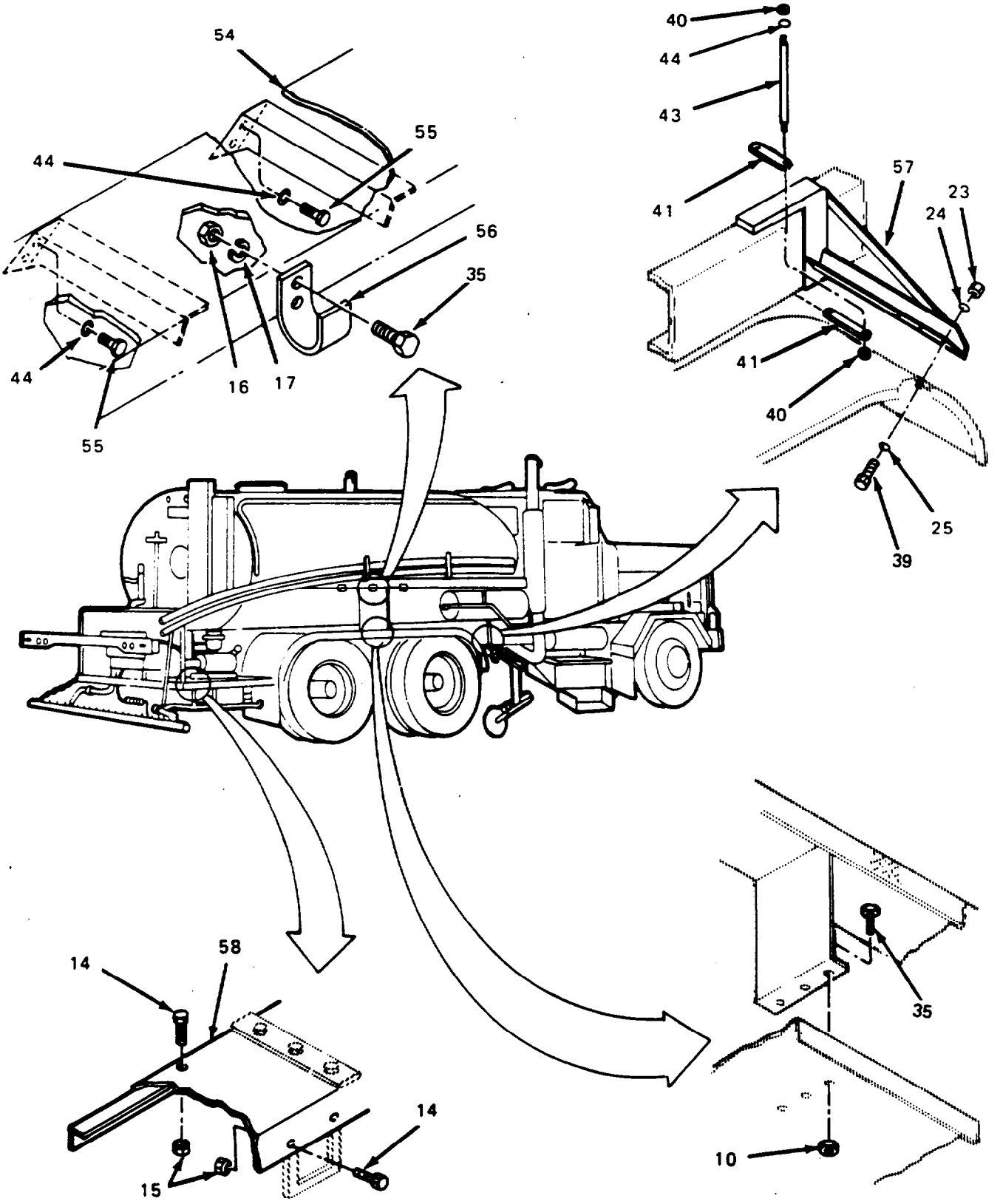

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Figure 6. Miscellaneous Accessory Item
Sheet 4 OF 4

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2202 MISCELLANEOUS ACCESSORY ITEMS		
6	1	PAOZZ	3895-00-493-8795	3300038	80195	CAP, TANK THERMOTE THEROMETER, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	2	PAOZZ	6685-00-193-0201	6500034	80195	. THERMETER, SELF-IN 50-600 DEG F	EA	1
6	3	PAOZZ	5305-00-057-9623	MS24617-61	96906	SCREW, TAPPING, THRE CAP ASSY TO ASPHALT TANK, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	4	XDOZZ		219301	24617	PLUG, PIPE 0.75NPT, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	5	PAOZZ	3895-00-160-6403	3300024	80195	DOME ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	6	XDOZZ		3300106	80195	RING LIFTING ATTACHMENT, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	7	PAOZZ	5305-00-880-4012	428271	24617	SCREW, CAP, HEXAGON H 0.75NCX1.50, LIFTING BRACKET TO TOP OF TANK, ACCESSORY ITEMS MISCELLANEOUS	EA	4
6	8	PAOZZ	5310-00-584-7888	131046	24617	WASHER, LOCK 0.75, LIFTING BRACKET TO TOP OF THE TANK, ACCESSORY ITEMS MISCELLANEOUS	EA	4
6	9	XDOZZ		3300104	80195	BRACKET LIFTING ATTACHMENT, ACCESSORU ITEMS MISCELLANEOUS	EA	2
6	10	PAOZZ	5310-01-097-8003	9418936	24617	NUT, LOCK 0.25NC, CLIPS TO WELDED HANDRAIL BRACKETS, ACCESSORY ITEMS MISCELLANEOUS	EA	8
6	11	XDOZZ		3310040	80195	CLIP, SPRING DIP STICK HOLDER, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	12	PAOZZ	5305-00-068-0500	MS35297-3	96906	SCREW CAP, HEXAGON H 0.25NCX0.50, CLIP TO WELDED HANDRAIL BRACKETS, ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	13	PAOZZ	5305-00-018-6494	121900	24617	SCREW, ASSEMBLED WAS 0.25NCX1.00, BAR TO SPLASH GUARD TO LEFT AND RIGHT FENDER ITEMS-MISCELLANEOUS	EA	18
6	14	PAOZZ	5305-00-012-0233	120233	24617	SCREW, CAP, HEXAGON H 0.38NCX1.00, LEFT PLATFORM TO SUBFRAME, ACCESSORY ITEMS MISCELLANEOUS	EA	V
6	15	PAOZZ	5310-01-101-2029	274993	24617	NUT, HEX, LOCK 0.38NC, LEFT PLATFORM TO SUB FRAME, ACCESSORY ITEMS-MISCELLANEOUS	EA	V
6	16	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON 0.25, HOSE HANGER BRACKETS TO RIGHT CAT WALK, ACCESSORY ITEMS MISCELLANEOUS	EA	V
6	17	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK 0.25, HOSE HANGER BRACKETS TO RIGHT CATWALK, ACCESSORY ITEMS MISCELLANEOUS	EA	V
6	18	XDOZZ		J626126	80195	PLATEFORM, LEFT ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	19	XDOZZ		3311313	80195	BRACKET FENDER TO SUBFRAME, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	20	PAOZZ	7540-01-092-9326	C-2420	05333	GUARD, SPLASH, WHEEL	EA	2
6	21	XDOZZ		3310742	80195	BAR, SPLASH GUARD ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	22	XDOZZ		120386	24617	WASHER, FLAT 0.25, BAR TO SPLASH GUARD TO LEFT AND RIGHT FENDER MISCELLANEOUS	EA	14
6	23	PAOZZ	5310-00-732-0558	120377	24617	NUT, PLAIN, HEXAGON 0.38NC, LEFT FENDER TO LEFT RAIL BRACKET, ACCESSORY ITEMS MISCELLANEOUS	EA	12
6	24	PAOZZ	5310-00-637-9541	MS35338-46	96906	WASHER, LOCK 0.38, LEFT FENDER TO LEFT RAIL BRACKET, ACCESSORY ITEMS MISCELLANEOUS	EA	12
6	25	PAOZZ	5310-00-809-4061	MS27183-15	96906	WASHER, FLAT 0.38, LEFT FENDER TO LEFT RAIL BRACKET, ACCESSORY ITEMS MISCELLANEOUS	EA	12
6	26	XDOZZ		J626103	80195	FENDER LEFT AND RIGHT, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	27	XDOZZ		3310076	80195	STEP, LEFT PLATFORM ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	28	PAOZZ	6350-01-096-9186	3390058	80195	SIGNAL BELL AND BRA ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	29	PAOZZ	5305-00-993-1851	MS35207-267	96906	. SCREW, MACHINE NO. 10NFX1.00, RING ASSY TO SIGNAL BELL, ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	30	PAOZZ	5310-00-934-9751	MS35650-302	96906	. NUT, PLAIN, HEXAGON NO.10NF, RING ASY TO SIGNAL BELL, ACCESSORY ITEMS MISCELLANEOUS	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
6	31	PAOZZ	5305-00-068-0502	MS35297-6	96906	CAP, TANK THERMOTE THEROMETER, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	32	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON 0.25NC, BELL TO WELDED BRACKET, ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	33	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK 0.25, BELL TO WELDED BRACKET, ACCESSORY ITEMS MISCELLANEOUS	EA	2
6	34	XDOZZ		J626128	80195	CATWALK, LEFT ACCSSORY ITEMS-MISCELLANEOUS	EA	1
6	35	PAOZZ	5305-00-068-0502	MS35297-6	96906	SCREW, CAP, HEXAGON H 0.25NXX0.75, HOSE HANGER BRACKETS TO RIGHT CATWALK, ACCESSORY ITEMS-MISCELLANEOUS	EA	18
6	36	XDOZZ		3310080	80195	BOX, TOOL WITHOUT DOOR, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	37	XDOZZ		2754-0817	19738	RIVIT, BLIND	EA	12
6	38	XDOZZ		3310087	80195	DOOR ASSY, TOOL BOX RIVITED, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	39	PAOZZ	5305-00-206-3976	122145	11868	SCREW, CAP, HEXAGON H 0.38NCX1.25, LEFT FENDER TO LEFT RAIL BRACKET, ACCESSORY ITEMS MISCELLANOUS	EA	6
6	40	PAOZZ	5310-00-768-0318	120378	24617	NUT, PLAIN, HEXAGON 0.50NC, BARS TO RIGHT FENDER BRACKETS TO RAIL MISCELLANEOUS	EA	8
6	41	XDOZZ		3310931	80195	BAR, BRACKET HOLDING	EA	4
6	42	XDOZZ		J626124	80195	BRACKET LEFT-FENDER MOUNTING, ACCESSORY ITEMS-MISCELLANEOUS…	EA	1
6	43	XDOZZ		3300337	80195	STUD 0.50NCX16IN, BARS TO RIGHT FENDER BRACKET TO RAIL MISCELLANEOUS	EA	4
6	44	PAOZZ	5310-00-584-5272	120384	24617	WASHER, LOCK 0.50, LEFT CATWALK, ACCESSORY ITEMS-MISCELLANEOUS…	EA	V
6	45	XDOZZ		3380134	80195	BRACKET, LIGHT MTG ACCESSORY ITEMS-MISCELLANEOUS	EA	2
6	46	PAOZZ	5305-00-052-8241	144744	24617	SCREW, TAPPING, THREA NO.14X0.75, LIGHT MOUNTING BRACKET TO TANK, ACCESSORY ITEM MISCELLANEOUS	EA	4
6	47	PAOZZ		3390149	80195	PLATE, IDENTIFICATION ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	48	XDOZZ		3310018	80195	BRACKET, HANDRAIL RIGHT, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	49	PAOZZ	5305-00-044-4153	122408	24617	SCREW, CAP, HEXAGON H 0.50NCX1.00, HANDRAILS TO BRACKET, ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	50	PAOZZ	5305-00-057-9623	MS24617-61	96906	SCREW, SELF TAPPING HANDRAILS BRACKETS TO TANK, ACCESSORY ITEMS-MISCELLANEOUS	EA	6
6	51	PAOZZ	3895-00-352-4493	3390061	80195	WIRE ROPE ASSY, SING SIGNAL ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	52	XDOZZ		3390063	80195	SCREW, CAP, HEX HEAD DRILLED, 0.50NCX1.00, HANDRAILS TO BRACKETS, ACCESSORY ITEMS MISCELLANEOUS	EA	1
6	53	XDOZZ		3310017	80195	BRACKET, HANDRAIL LEFT, ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	54	XDOZZ		J626129	80195	CATWALK, RIGHT ACCESSORY ITEMS-MISCELLANEOUS	EA	1
6	55	PAOZZ	5305-00-206-3519	122433	24617	SCREW, CAP, HEXAGON H 0.50, LEFT CATWALK TO TANK, ACCESSORY ITEMS MISCELLANEOUS	EA	16
6	56	XDOZZ		3390167	80195	BRACKET, HOSE HANGER ACCESSORY ITEMS-MISCELLANEOUS	EA	3
6	57	XDOZZ		J62107	80195	BRACKET RIGHT-FENDER MOUNTING-ACCESSORY ITEMS-NISCELLANEOUS.	EA	1
6	58	XDOZZ		J626127	80195	PLATFORM, RIGHT ACCESSORY ITEMS-MISCELLANEOUS	EA	1

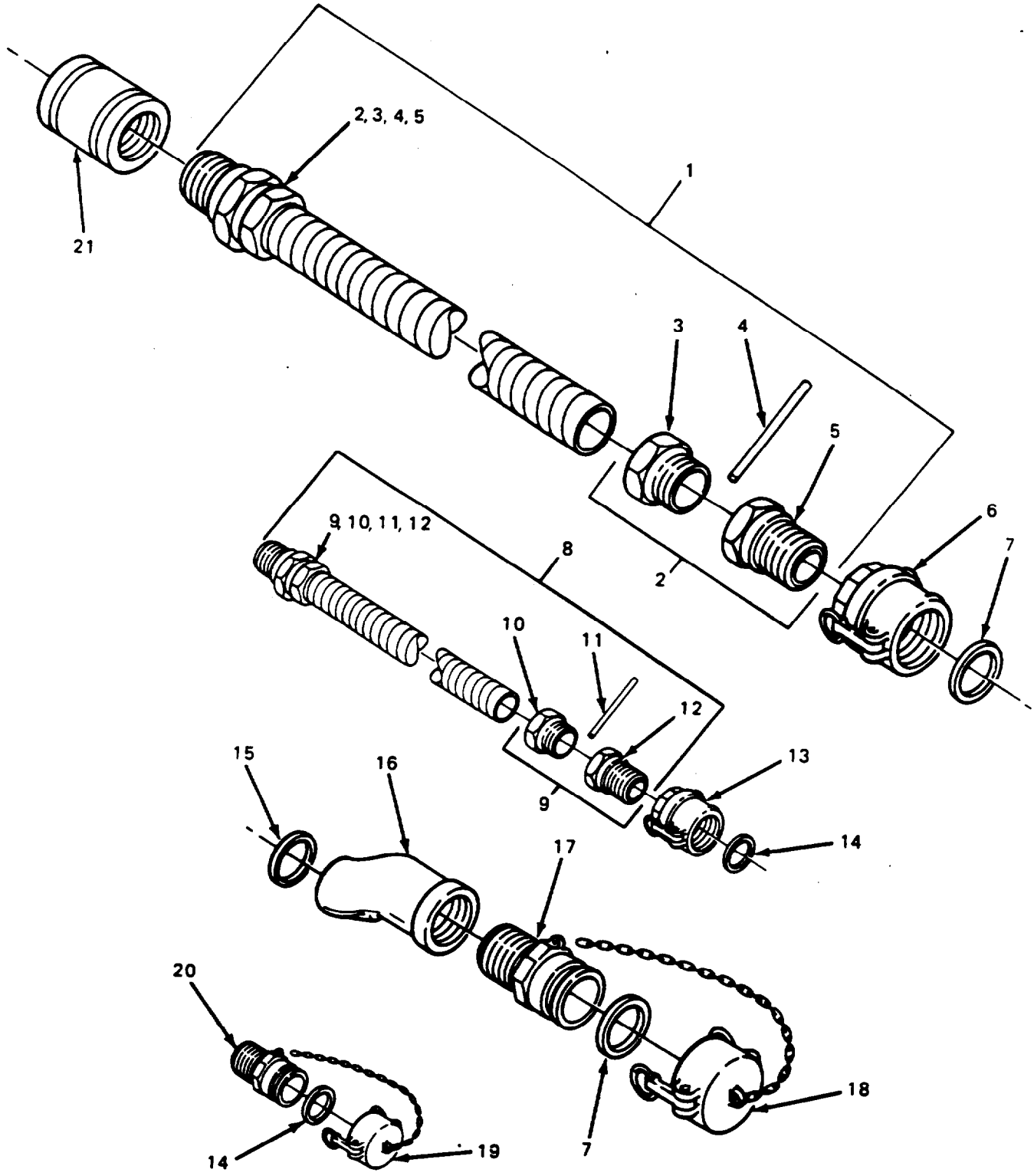

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Figure 7. Asphalt Hoses and Connectors

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2202 ASPHALT HOSES AND CONNECTORS		
7	1	PAOZZ	4720-01-082-7289	660273	80195	HOSE ASSEMBLY TA, WITH MALF, COUPLING, 15 FT FL, HOSE 3IN, T AND A, MM 15 FT LGASHALT HOSES, METAL, AND CONNECTORS	EA	2
7	2	PAOZZ	4730-01-096-9310	6600271	80195	. PARTS KIT, HOSE CONN ASSEMBLY 3 INCHES	EA	2
7	3	XDOZZ		6600271-1	80195	.. NUT, JAM 3INCH	EA	1
7	4	PAOZZ	5330-00-232-0352	7220028	80195	.. PACKING, PREFORMED	EA	1
7	5	XAOZZ		6600271-2	80195	..ADAPTER 3INCH	EA	1
7	6	PAOZZ	3895-00-714-5186	6600278	80195	COUPLING QUICK DETA 3IN. ALUMNUM, PERT 8, ASPHALT HOSES, METAL, AND CONNECTORS	EA	4
7	7	POOZZ	5330-01-082-8732	6600279	80195	GASKET 3.00 ID PIPE, SILICONE, ASPHALT HOSES, METAL, AND CONNECTORS	EA	4
7	8	PAOZZ	2895-00-425-6895	6600252	80195	HOSE ASSY, METAL TA X 25FEET WITH MALE PO COUPLING, ASPHALT HOSES, METAL, AND CONNECTORS	EA	1
7	9	PAOZZ	4730-01-096-9309	7410001	80195	. PARTS KIT, HOSE CONN ASSEMBLY	EA	2
7	10	XAOZZ		7410001-1	80195	.. NUT, JAM 1 INCH	EA	1
7	11	PAOZZ	5330-00-232-0352	7220028	80195	.. PACKING, PREFORMED	EA	1
7	12	XAOZZ		7410001-2	80195	.. ADAPTER 1 INCH	EA	1
7	13	PAOZZ		6600249	80195	COUPLER, BASS 1.00 IN PRT 8, ASPHALT HOSES-METAL AND CONNECTORS	EA	1
7	14	POOZZ	5330-00-714-5188	6600251	80195	GASKET 1.00 IN. NO PIPE, SILICONE, ASPJALT HOSES, METAL, AND CONNECTORS	EA	1
7	15	PAOZZ	5330-00-232-0548	3380103	80195	GASKET COUPLING, TANK CAR, ASPHALT HOSES, METAL, AND CONNECTORS.	EA	2
7	16	PAOZZ		3340040	80195	CONNECTOR, HOSE 3INCH	EA	1
7	17	PAOZZ	4730-00-496-7539	6600152	80195	NIPPLE, QUICK-DISCON 3IN., ASPHALT HOSES, METAL, AND CONNECTORS.	EA	1
7	18	PAOZZ	4730-00-922-5180	6600281	80195	CAP, QUICK DISCONNEC 3IN. ALUMINUM, ASPHALT HOSES, METAL, AND CONNECTORS	EA	4
7	19	PAOZZ		6600250	80195	CAP ASSEMBLY, DUST 1IN. ALUMINUM WITH GASKET AND CHAIN, ASPHALT HOSES, METAL, CONNECTORS	EA	1
7	20	PAOZZ	4730-01-082-6472	6600248	80195	ADAPTER 1.00IN, ASPHALT HOSES, METAL, AND CONNECTORS	EA	1
7	21	PAOZZ	4730-01-082-8504	6600277	80195	ADPTER 3IN. ALUMINUM, PRT 8, ASPHALT HOSES, METAL, AND CONNECTORS	EA	4

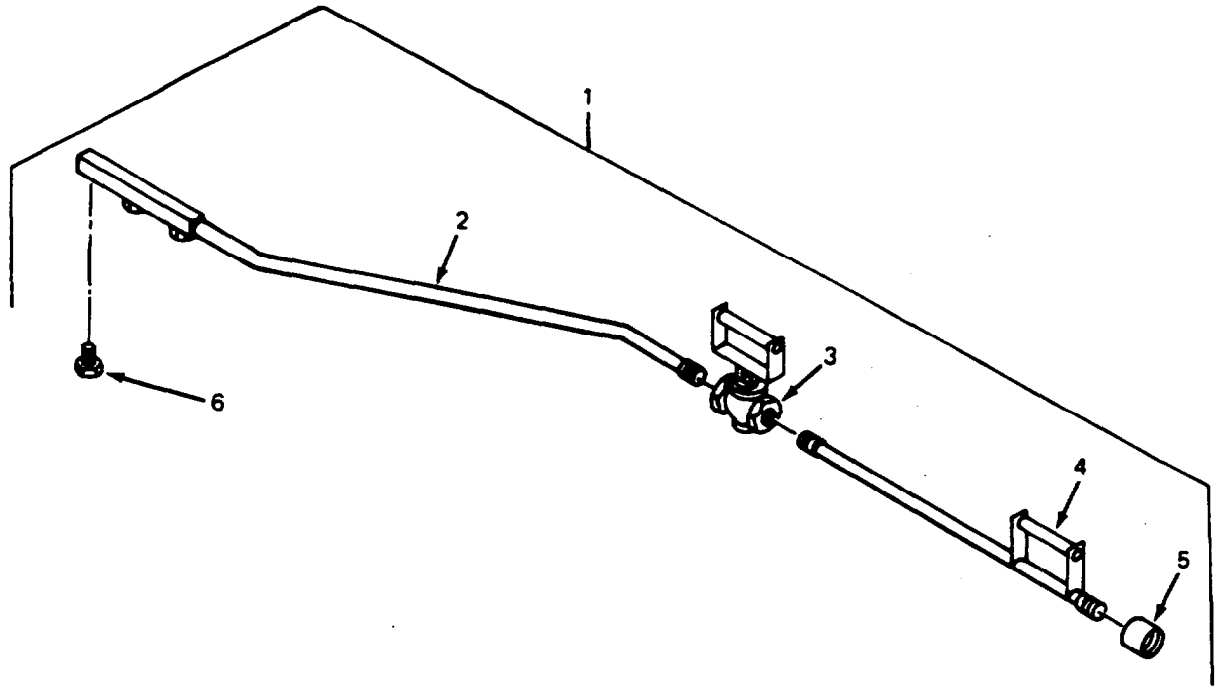

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Figure 8. Handspray Gun

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2202 HANDSPRAY GUN		
8	1	PAOOO	3895-00-160-3198	3380017	80195	GUN, HAND SPRAY	EA	1
8	2	PAOZZ	3895-01-098-1928	3380024	80195	. SPRAYER, HAND HANDSPRAY, GUN ASSEMBLY-HANDSPRAY	EA	1
8	3	PAOZZ	4820-01-082-6470	3380392	80195	. VALVE, CONTROL HANDSPRAY,GUN ASSEMBLY-HANDSPRAY	EA	1
8	4	PAOZZ	4710-01-082-6576	3380022	80195	. TUBE ASSEMBLY, METAL HANDSPRAY, GUN ASSEMBLY-HANDSPRAY	EA	1
8	5	PAOZZ	4730-00-187-7599	128137	24617	. COUPLING, PIPE 1.00NPT, GUN ASSEMPLY-HANDSPRAY	EA	1
8	6	PAOZZ	3895-00-160-3073	3351011	80195	. NOZZLE 0.12,SPRAYBAR, GUN ASSEMBLY-HANDSPRAY	EA	3

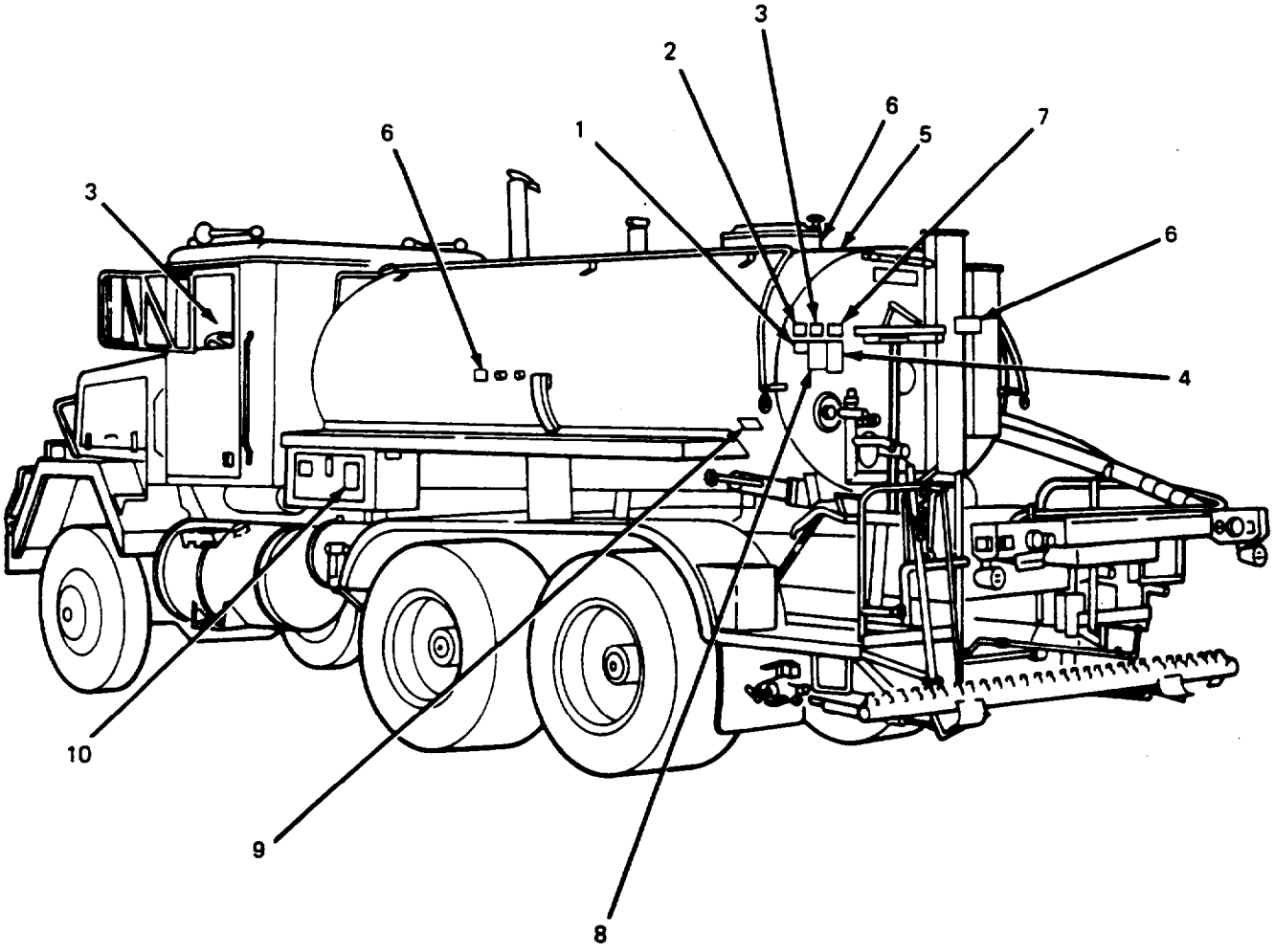

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Figure 9. Data Plates

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2210 DATA PLATES		
9	1	PAOOO	9905-01-090-7679	3561029	80195	PLATE, INSTRUCTION SHEIDS IN PLACE, PLATES, DATA	EA	1
9	2	PAOZZ	9905-01-088-2440	3561028	80195	PLATE, INSTRUCTION REMAIN CLEAR, PLATES, DATA	EA	1
9	3	PAOZZ	9905-01-088-2441	3561027	80195	PLATE, INSTRUCTION BEFORE STARTING, PLATES, DATA	EA	2
9	4	PAOZZ	9905-01-088-2442	3390537	80195	PLATE, INSTRUCTION BURNER, GENERAL, PLATES, DATA	EA	1
9	5	PAOZZ	9905-01-089-9136	3390535	80195	PLATE, INSTRUCTION MANHOLE, PLATES, DATA	EA	2
9	6	PAOZZ	9905-01-090-7680	3561030	80195	PLATE, INSTRUCTION HOT SURFACE, PLATES, DATA	EA	3
9	7	PAOZZ	9905-01-089-9137	3390536	80195	PLATE, INSTRUCTION QUAD, LEVER AIR, PLATES, DATA	EA	1
9	8	PAOZZ	9905-01-089-9138	3390539	80195	PLATE, INSTRUCTION GEN BURNER, PLATES, DATA	EA	1
9	9	PAOZZ	9905-01-089-9139	3390534	80195	PLATE, INSTRUCTION FILL, CAP, PLATES, DATA	EA	1
9	10	PAOZZ	9905-01-089-9140	3390533	80195	PLATE, INSTRUCTION SAFTEY, GENERAL, PLATES, DATA	EA	1

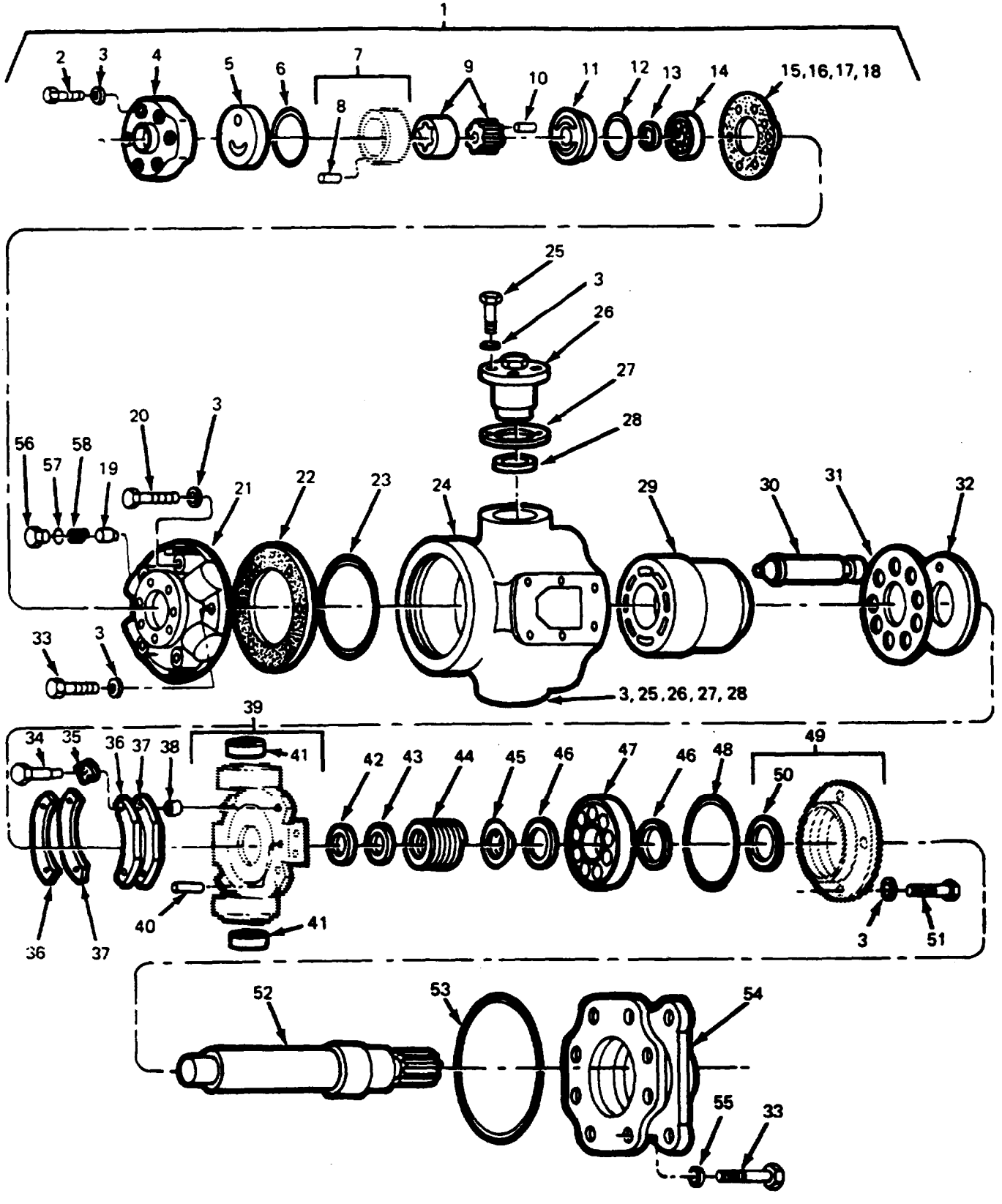

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Figure 10. Hydraulic Pump
Sheet 1 OF 3

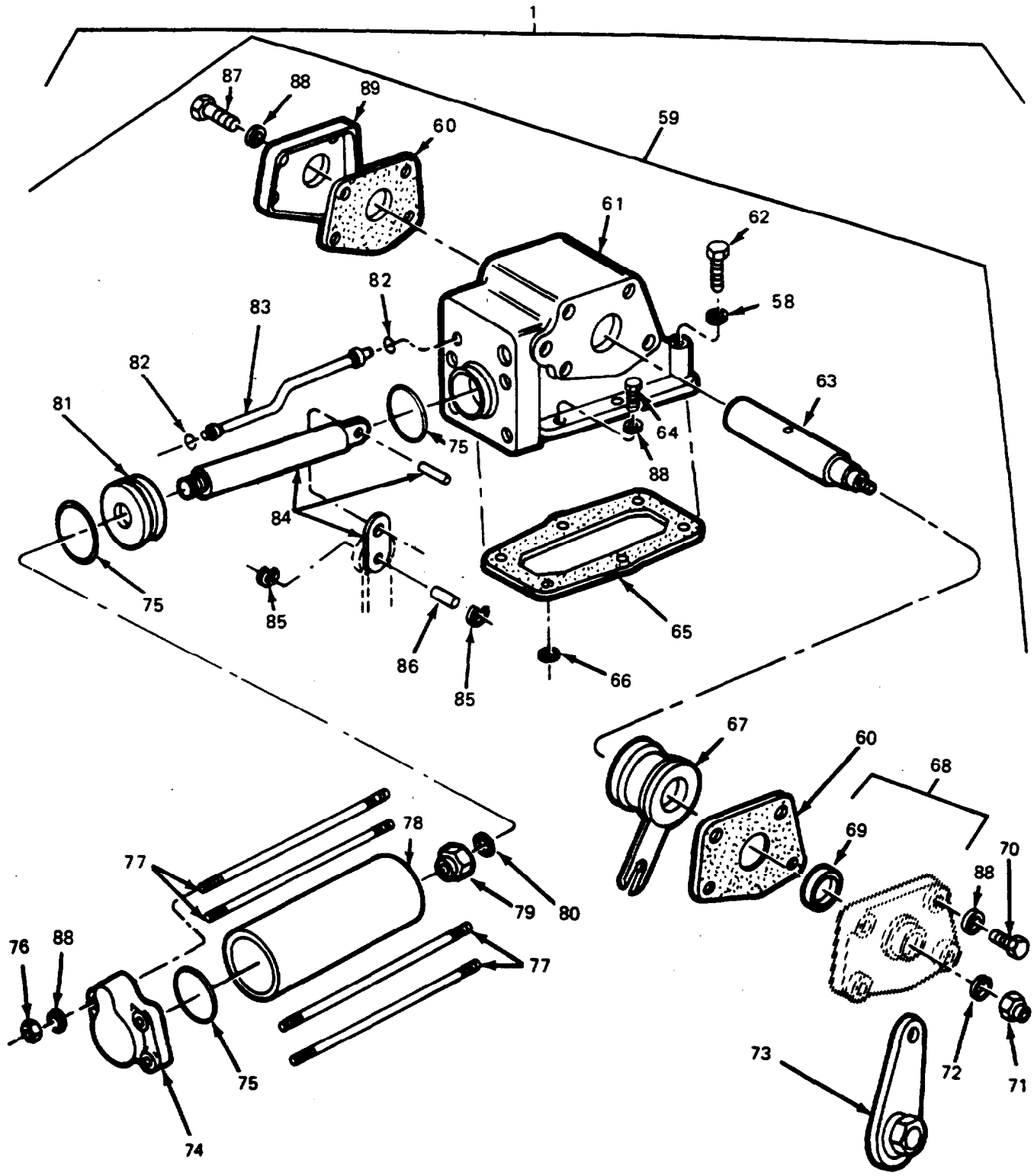

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Figure 10. Hydraulic Pump
Sheet 2 of 3

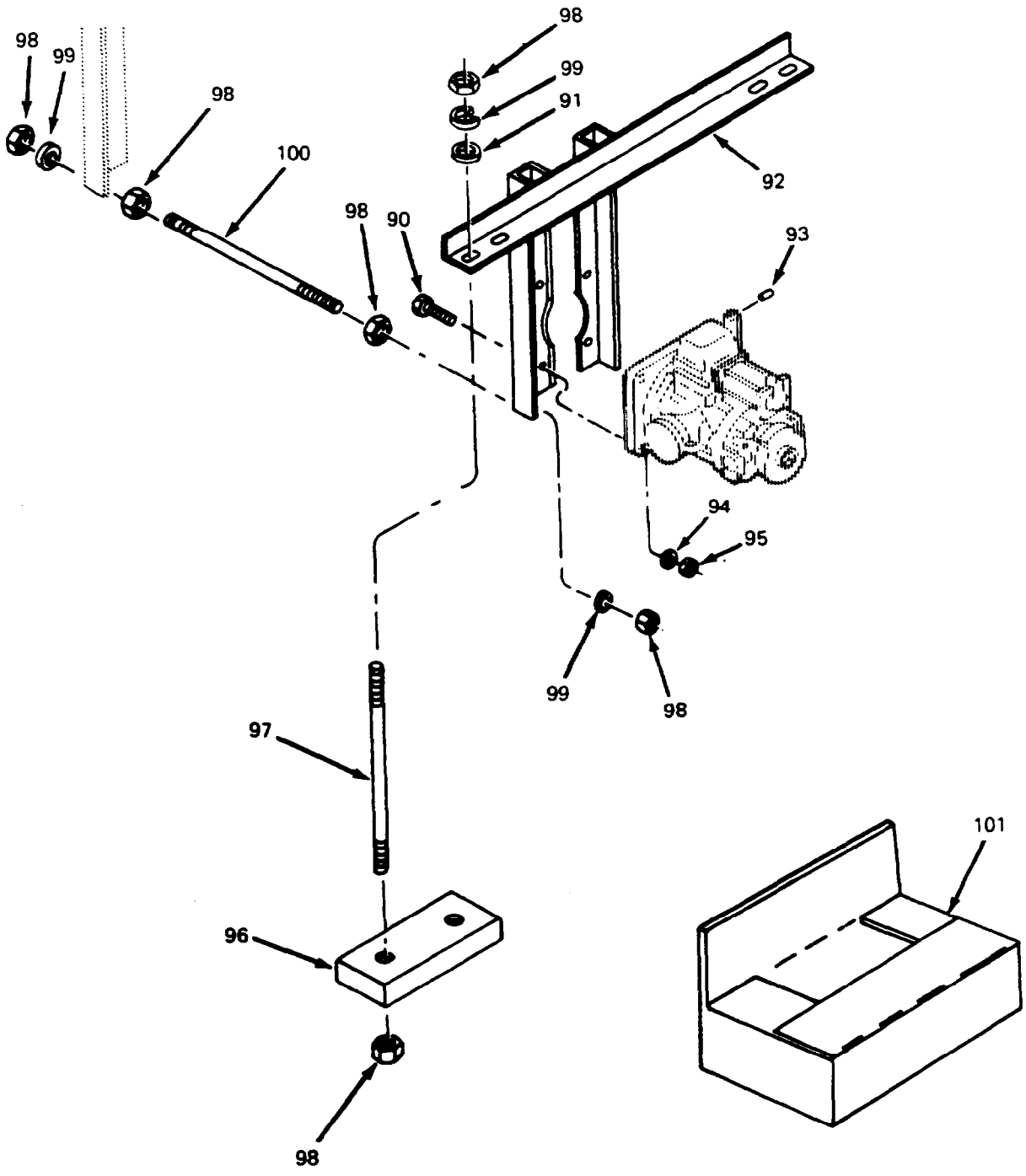

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Figure 10. Hydraulic Pump
Sheet 3 of 3

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2401 HYDRAULIC PUMP		
10	1	PAFFF	4320-01-018-5830	895001/892629	90166	PUMP,ROTARY LH ROTATION	EA	1
10	2	PAFZZ	5306-01-033-0993	870220	02892	. BOLT, MACHINE SINGLE PORT COVER TO PUMP COVER, PUMP ASSY HYDRAULIC, LH ROTATION	EA	6
10	3	PAFZZ	5310-00-559-7344	870480	02892	.WASHER, LOCK SINGLE PORT COVER TO PUMP COVER, PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	6
10	4	PAFZZ	4320-01-032-6954	840120	02892	. COVER, SINGLE PORT, H PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	1
10	5	XDFZZ	5365-00-481-0172	840185	02892	. DISK, VALVE PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	1
10	6	KFFZZ	5315-01-103-8679	871231	02892	. PACKING, PREFORMED PUMP ASSEMBLY HYDRAULIC-LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	7	PAFZZ	4320-00-427-5162	830041	02892	. SPACER ASSEMBLY PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	1
10	8	PAFZZ	5315-00-151-8886	870092	02892	.. PIN, LOCATING PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	9	PAFZZ	4820-00-001-6139	830091	02892	. ROTOR PUMP DYNAPOWE PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	10	PAFZZ	5330-00-152-3142	871054	02892	. PIN PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	11	PAFZZ	5365-00-498-2865	840038	02892	. VALVE, CONTROL PUMP ASY HYDRAULIC-LH ROTATION	EA	1
10	12	KFFZZ	3110-00-110-5611	871140	02892	. PACKING,PREFORMED PUMP ASSY HYDRAULIC-LH ROTATION PART OF KIT P/N 45KL4193	EA	1
10	13	PAFZZ		870101	02892	. RING, RETAINING PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	14	PAFZZ		870648	90166	. BEARING, ROLLER, CYLI PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	15	KFFZZ		870305	02892	. GASKET 0.001-AMBER, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	16	KFFZZ		870306	02892	. GASKET 0.002-RED, PUMP ASSEMBLY-HYDRALIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	17	KFFZZ		870307	02892	. GASKET 0.003-GREEN, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	18	KFFZZ		870308	02892	. GASKET 0.004-BLUE,PUMP ASSEMBLY-HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	19	XDFZZ	4320-00-427-5141	840035	02892	. PLUNGER, PUMP PUMP ASSY HYDRAULIC-LH ROTATION	EA	2
10	20	PAFZZ	5306-01-033-4527	870264	02892	. BOLT, MACHINE PUMP COVER TO PUMP HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	21	XAFZZ		840063	02892	. COVER, PUMP PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	22	KFFZZ	5330-00-255-5615	840073	02892	. GASKET, PUMP COVER PUMP ASSY HYDRAULIC-LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	23	KFFZZ		871158	02892	PACKING, PREFORMED PUMP ASSY HYDRAULIC-LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	24	XHFZZ		840024	02892	. HOUSING, PUMP PUMP ASSY HYDRAULIC-LH ROTATION	EA	1
10	25	PAFZZ	5306-00-563-8254	870160	02892	. BOLT TRUNNIONS TO PUMP HOUSING, PUMP ASSY HYDRULIC, LH ROTATION	EA	8
10	26	XDFZZ	4320-00-518-1214	840756	02892	. TRUNNION PUMP ASSY HYDRAULIC, LH ROTATION	EA	2
10	27	KFFZZ		840031	02892	. GASKET PUMP ASSY HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	2
10	28	PAFZZ	3120-00-104-0635	840029	90166	. BEARING, WASHER, THRU PUMP ASSY HYDRAULIC,LH ROTATION	EA	2
10	29	PAFZZ	4320-01-018-5858	830150	02892	. PUMP BLOCK ASSEMBLY PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	30	PAFZZ	4820-00-248-0575	830003	02892	. PISTON, VALVE PUMP ASSEMBLY HYDRAULIC,LH ROTATION	EA	9
10	31	PAFZZ	4320-01-018-9616	841225	02892	. PLATE, PISTON RETURN PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	32	PAFZZ	4320-01-033-1825	841226	02892	. PLATE, PUMP PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
10	33	XDFZZ	5306-00-562-6182	870194	02892	.BOLT MOUNTING FLANGE TO PUMP HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	10
10	34	PAFZZ	5306-00-169-8389	870181	02892	. BOLT CLIP, BEARING PLATE AND SPACER TO CAM ASSEMBLY, PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	4
10	35	PAFZZ	5310-00-562-3932	841163	02892	. WASHER, KEY CLIP, BEARING PLATE AND SPACER TO CAM ASSEMBLY, PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	4
10	36	PAFZZ	5340-00-605-2445	850061	02892	. CLIP PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	2
10	37	PAFZZ	3120-01-032-3401	850060	02892	. BEARING, WASHER, THRU PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	38	PAFZZ	5365-01-032-2986	841248	02892	. SPACER PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	4
10	39	XDFDZ	4320-00-518-1237	830245	02892	. CAM ASSEMBLY PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	40	PAFZZ	5315-00-151-8888	870045	02892	.. PIN PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	41	PAFZZ	3110-00-690-8987	870647	02892	.. BEARING, ROLLER, CYLI PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	2
10	42	PAFZZ	5365-00-152-0311	870103	02892	. RING PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	43	PAFZZ	5310-00-935-9041	840023	02892	. WASHER, FLAT PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	44	PAFZZ	2030-00-909-0313	840022	02892	. SPRING, STEERING GEA PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	45	PAFZZ	5340-00-476-7561	840021	02892	. RETAINER, SRING PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	46	PAFZZ	5365-00-498-2864	870102	02892	. RING, RETAINING PUMP ASSEMBLY HYDRAULIC,LH ROTATION	EA	2
10	47	PAFZZ	3110-00-554-3248	870642	90166	. BEARING BALL, ANNULA PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	48	KFFZZ	5330-00-486-4735	875243	02892	. PACKING, PREFORMED PUMP ASSEMBLY HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	49	PAFZZ	5330-00-267-0809	830231	02892	. SEAL ASSY PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	50	KFFZZ	4820-00-117-9086	870106	02892	.. PACKING, PREFORMED PUMP ASSEMBLY HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	51	PAFZZ	5306-00-562-6194	870150	02892	. BOLT SEAL ASSEMBLY TO MOUNTING FLANGE, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	4
10	52	XDXZZ	4320-01-047-3724	841247	02892	. SHAFT, SHOULDERED PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	53	KFFZZ		875261	02892	. PACKING, PREFORMED PUMP ASSEMBLY HYDRAULIC, LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	54	XAFZZ		841277	02892	. FLANGE, MOUNTING PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	1
10	55	PAFZZ	5310-00-562-3779	870492	02892	. WASHER, LOCK MOUNTING FLANGE TO PUMP HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	8
10	56	PAFZZ	5365-00-792-0809	840037	02892	. PLUG, MACHINE THREAD PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	2
10	57	PAFZZ	5330-00-486-4736	871114	02892	. D RING PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	2
10	58	PAFZZ	5360-00-169-8367	840036	02892	. SPRING, SPECIAL PUMP ASSY HYDRAULIC-LH ROTATION	EA	2
10	59	XDFFF		892629	02892	. ACTUATOR ASSEMBLY SERVO CONTROL, PUMP ASSY-HYDRAULIC,LH ROTATION	EA	1
10	60	PAFZZ	5330-00-926-6421	840088	02892	.. GASKET PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	2
10	61	XAFZZ		830119	02892	.. HOUSING WITH BUSHING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	1
10	62	PAFZZ	5305-01-097-7829	870230	02892	.. SCREW, CAP, HEXAGON H ACTUATOR HOUSING TO PUMP HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	2
10	63	PAFZZ	4820-00-926-2469	830018	02892	.. VALVE, CONTROL PUMP ASSY-HYDRAULIC,LH ROTATION	EA	1
10	64	PAFZZ	5306-00-563-8254	870160	02892	.. BOLT ACTUATOR HOUSING TO PUMP HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	65	PAFZZ	5330-00-926-6413	840058	02892	..GASKET, HOUSING PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1

*U.S. GOVERNMENT PRINTING OFFICE: 1990 743-024/20095

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
10	66	KFFZZ		871011	02892	.. PACKING, PREFORMED PUMP ASSY-HYDRAULIC,LH ROTATION PART OF KIT P/N 45K4193	EA	1
10	67	PAFZZ	4820-00-577-8002	830017	02892	.. SLEEVE PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	68	PAFZZ	5330-01-031-5050	830028	90166	..SEAL,ASSEMBLY PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	69	PAFZZ	5330-00-003-0887	870115	02892	... SEAL, LIP, PLATE ASSY PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	70	PAFZZ	5305-01-097-7828	840140	02892	.. SCREW, CAP, HEXAGON H SEAL PLATE ASSY TO HOUSING, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	4
10	71	PAFZZ	5310-01-097-7994	870705	02892	..NUT, SELF-LOCKING, HE LEVER AND SLEEVE ASSY TO CONTROL VALVE, PUMP ASSY-HYDRAULIC,LH ROTATION	EA	1
10	72	PAFZZ	5310-01-096-6736	840125	02892	.. WASHER LEVER AND SLEEVE ASSY TO CONTROL VALVE, PUMP ASSY HYDRAULIC, LH ROTATION	EA	1
10	73	XDFZZ		840419	02892	.. LEVER PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	74	XDFZZ		840299	02892	..COVER, CYLINDER PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	75	PAFZZ	5330-00-922-3395	871133	02892	.. PACKING,PREFORMED PUMP ASSY-HYDRAULIC, LH ROTATION	EA	3
10	76	PAFZZ	5310-01-097-7557	870561	02892	.. NUT, PLAIN HEXAGON CYLINDER TUBE TO COVER TO HOUSING, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	77	PAFZZ	5307-01-097-7822	840304	02892	.. STUD, PLAIN, HEXAGON CYLINDER TUBE TO COVER TO HOUSING,PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	78	PAFZZ	3895-00-610-0044	840298	02892	..CYLINDER, HYDRAULIC PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	79	PAFZZ	5310-01-097-7095	870709	02892	.. NUT, SELF-LOCKING, HE PISTON TO ROD ASSY, PUMPASSY-HYDRAULIC, LH ROTATION	EA	1
10	80	PAFZZ	5310-01-097-7814	840288	02892	.. WASHER, FLAT PISTON TO ROD ASSY, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	81	PAFZZ	5821-00-111-8054	840297	90166	.. PISTON ASSY, PUMP PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	82	PAFZZ	5330-00-926-6438	871011	02892	.. PACKING, PREFORMED PUMP ASSY-HYDRAULIC, LH ROTATION	EA	2
10	83	XDFZZ		830080	02892	.. TUBE ASSY, TRANSFER PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	84	PAFZZ	4320-01-100-3754	830067	02892	.. SHAFT ASSEMBLY, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	85	PAFZZ	5365-01-102-5392	870100	02892	.. RING, RETAINING PUMP CAM SHAFT ARM TO ACTUATOR LINK, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	2
10	86	PAFZZ	5315-00-935-9034	840059	02892	.. PIN, GROOVED, HEADLES PUMP CAM SHAFT ARM TO ACTUATOR LINK, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	87	PAFZZ	5305-01-097-7827	870140	02892	..SCREW, CAP, HEXAGON H HOUSING COVER TO HOUSING,PUMP ASSY-HYDRAULIC, LH ROTATION	EA	4
10	88	PAFZZ	5310-00-559-7344	870480	02892	.. WASHER, LOCK TRUNNIONS TO PUMP HOUSING, PUMP ASSEMBLY HYDRAULIC, LH ROTATION	EA	18
10	89	XDFZZ		840087	02892	COVER, HOUSING PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	1
10	90	PAFZZ		428694	24617	SCREW, CAP,HEXAGON H 5/8 INCH NCX2-1/4 INCHES, HYDRAULIC PUMP TO ANGLE BRACKETSPUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	91	PAFZZ	5310-00-809-3079	120390	24617	WASHER, FLAT 0.50, PUMP MOUNTING ANGLES TO RAILS, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	4
10	92	XDFZZ		J626125	80195	ANGLE HYDRAULIC PUMP MOUNTING HANGER, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	93	PAFZZ	3120-01-102-5404	3320304	80195	BUSHING, SLEEVE PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	94	PAFZZ	5310-00-232-8194	121574	24617	WASHER, LOCK HYDRAULIC PUMP TO ANGLE BRACKETS, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	4
10	95	PAFZZ	5310-00-763-8920	124589	24617	NUT, PLAIN, HEXAGON 5/8NC, HYDRAULIC PUMP TO ANGLE BRACKETS, PUMP ASSEMBLY HYDRAULIC-LH ROTATION	EA	4
10	96	XDFZZ		3310931	80195	BAR, ANGLE MOUNTING PUMP ASSY-HYDRAULIC, LH ROTATION	EA	2

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
10	97	PAFZZ	5306-01-089-2610	3300338	80195	STUD, PLAIN 14IN., PUMP MOUNTING ANGLES TO RAILS, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	4
10	98	PAFZZ	5310-00-768-0318	120378	24617	NUT, PLAIN, HEXAGON 0.50 NC, PUMP MOUNTING ANGLES TO RAILS, PUMP ASSEMBLY-HYDRAULIC LH, ROTATION	EA	12
10	99	PAFZZ	5310-00-584-5272	MS35338-48	96906	WASHER, LOCK HYDRAULIC PUMP BRACKET TO HYDRAULIC TANK BRAKET, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	6
10	100	XDFZZ		J626112	80195	ROD, TIE HYDRAULIC PUMP BRACKET TO HYDRAULIC TANK BRACKET, PUMP ASSEMBLY-HYDRAULIC, LH ROTATION	EA	1
10	101	PAFZZ	4320-00-093-5748	45K4193	02892	PARTS KIT, PUMP HYDRAULIC PUMP ASSY, PUMP ASSY-HYDRAULIC, LH ROTATION	EA	1
10	6					PACKING, PREFORMED	EA	1
10	12					PACKING, PREFORMED	EA	1
10	15					GASKET	EA	1
10	16					GASKET	EA	1
10	17					GASKET	EA	1
10	18					GASKET	EA	1
10	22					GASKET, PUMP COVER	EA	1
10	23					PACKING, PREFORMED	EA	1
10	27					GASKET	EA	2
10	48					PACKING, PREFORMED	EA	1
10	50					PACKING, PREFORMED	EA	1
10	53					PACKING, PREFORMED	EA	1
10	66					PACKING, PREFORMED	EA	1

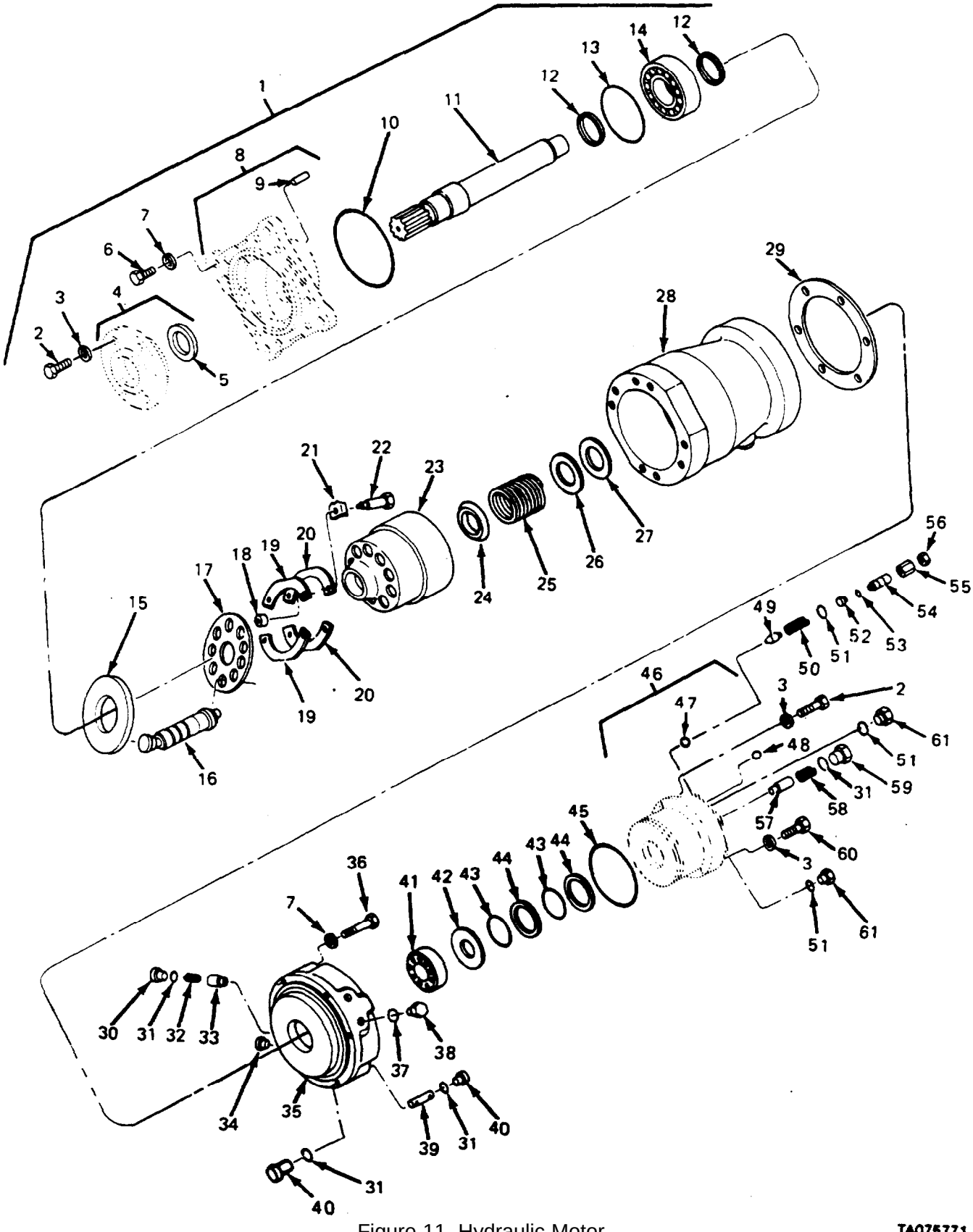

Figure 11. Hydraulic Motor
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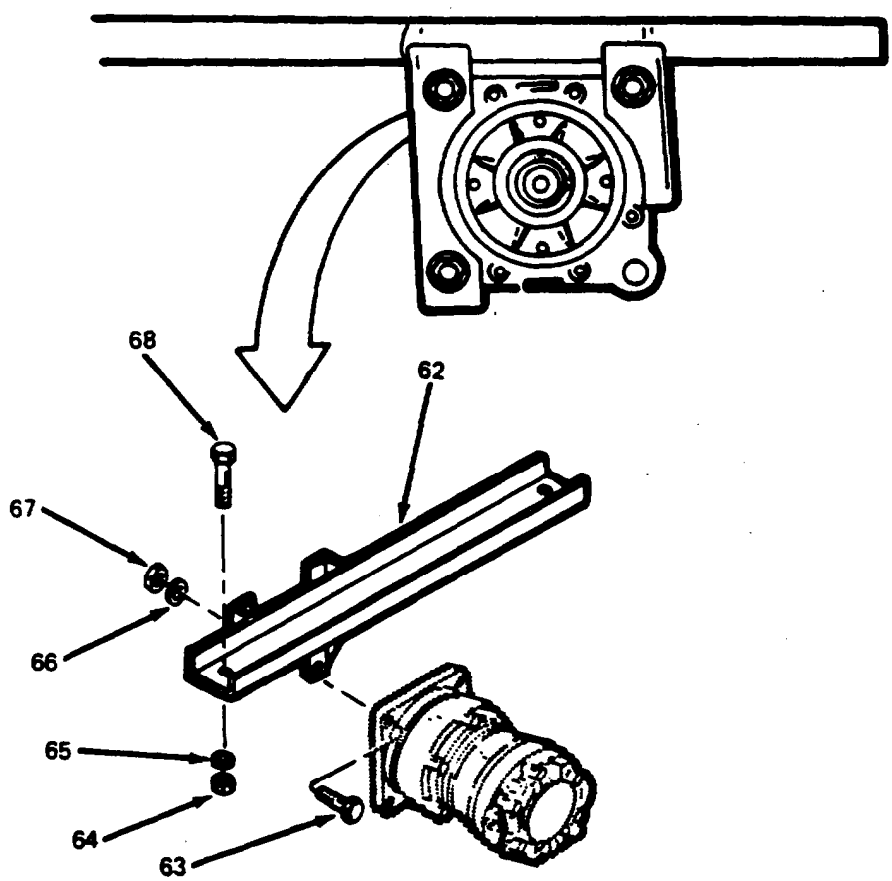

Figure 11. Hydraulic Motor
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(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2401 HYDRAULIC MOTOR		
11	1	PAFZZ	4320-01-018-4791	896003-50	33781	MOTOR, HYDRAULIC FIXED	EA	1
11	2	PAFZZ	5306-00-562-6194	870150	02892	. BOLT SEAL ASSEMBLY TO FLANGE ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	8
11	3	PAFZZ	5310-00-559-7344	870480	02892	. WASHER, LOCK SEAL ASSEMBLY TO FLANGE ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	13
11	4	PAFZZ	5330-00-267-0809	830231	02892	. SEAL ASSY MOTOR-HYDRAULIC-FIXED	EA	1
11	5	PCFZZ	4820-00-117-9086	870106	90166	.. SEAL, VALVE MOTOR-HYDRAULIC-FIXED	EA	1
11	6	PAFZZ	5305-00-587-2650	872734	02892	. SCREW CAP HEX FLANGE ASSEMBLY TO MOTOR HOUSING, MOTOR-HYDRAULIC-FIXED	EA	8
11	7	PAFZZ	5310-00-562-3779	870492	02892	. WASHER, LOCK FLANGE ASSEMBLY TO MOTOR HOUSING, MOTOR-HYDRAULIC-FIXED	EA	14
11	8	PAFZZ	4320-01-095-3101	830230	02892	. FLANGE ASSEMBLY, MOT MOTOR-HYDRAULIC-FIXED	EA	1
11	9	PAFZZ	5315-00-151-8888	870045	02892	.. PIN MOTOR-HYDRAULIC-FIXED	EA	1
11	10	PCFZZ	5330-00-235-1897	875163	02892	. PACKING, PREFORMED MOTOR-HYDRAULIC-FIXED	EA	1
11	11	PAFZZ	3040-01-096-1619	841190	02892	. SHAFT, SHOULDERED MOTOR-HYDRAULIC-FIXED	EA	1
11	12	PAFZZ	5365-00-498-2864	870102	90166	. RING, RETAINING MOTOR-HYDRAULIC-FIXED	EA	2
11	13	PAFZZ	5330-00-486-4735	875243	02892	. GASKET MOTOR-HYDRAULIC-FIXED	EA	1
11	14	PAFZZ	3110-00-554-3248	870642	90166	. BEARING, BALL, ANNULA MOTOR-HYDRAULIC-FIXED	EA	1
11	15	PAFZZ	4320-01-033-1825	841226	02892	. PLATE, PUMP MOTOR-HYDRAULIC-FIXED	EA	1
11	16	PAFZZ	4820-00-248-0575	830003	02892	. PISTON, VALVE MOTOR-HYDRAULIC-FIXED	EA	9
11	17	PAFZZ	4320-01-018-9616	841225	90166	. PLATE, PISTON RETURN MOTOR-HYDRAULIC-FIXED	EA	1
11	18	PAFZZ	5365-00-559-7725	841321	02892	. SPACER MOTOR-HYDRAULIC-FIXED	EA	4
11	19	PAFZZ	3120-01-032-3401	580060	02892	. BEARING, WASHER, THRU MOTOR-HYDRAULIC-FIXED	EA	2
11	20	PAFZZ	5340-00-605-2445	850061	02892	. CLIP MOTOR-HYDRAULIC-FIXED	EA	2
11	21	PAFZZ	5310-00-562-3932	841163	02892	. WASHER, KEY SPACERS, PLATES AND CLIPS TO FLANGE ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	4
11	22	PAFZZ	5306-01-017-9962	870151	90166	. BOLT SPACERS, PLATES AND CLIPS TO FLANGE ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	4
11	23	PAFZZ	4320-01-018-5858	830150	90166	. PUMP BLOCK ASSEMBLY MOTOR-HYDRAULIC-FIXED	EA	1
11	24	PAFZZ	5340-00-476-7561	840021	02892	. RETAINER, SPRING MOTOR-HYDRAULIC-FIXED	EA	1
11	25	PAFZZ	2030-00-909-0313	840022	02892	. SPRING, STEERING MOTOR-HYDRAULIC-FIXED	EA	1
11	26	PAFZZ	5310-00-935-9041	840023	90166	. WASHER, FLAT MOTOR-HYDRAULIC-FIXED	EA	1
11	27	PAFZZ	5365-00-152-0311	870103	02892	. RING MOTOR-HYDRAULIC-FIXED	EA	1
11	28	XDFZZ		841188	02892	. HOUSING, MOTOR MOTOR-HYDRAULIC-FIXED	EA	1
11	29	PAFZZ	5330-00-255-5615	840073	02892	. GASKET MOTOR HYDRAULIC-FIXED	EA	1
11	30	PAFZZ	5365-00-792-0809	840037	90166	. PLUG, MACHINE THREAD MOTOR-HYDRAULIC-FIXED	EA	1
11	31	PCFZZ	5330-00-486-4736	871114	02892	. D RING MOTOR-HYDRAULIC-FIXED	EA	3
11	32	PAFZZ	5360-00-498-2838	840134	90166	. SPRING, HELICAL, COMP MOTOR-HYDRAULIC-FIXED	EA	1
11	33	PAFZZ	4320-00-427-5141	840035	02892	. PLUNGER, PUMP MOTOR-HYDRAULIC-FIXED	EA	1
11	34	PAFZZ	4730-01-019-9020	872495	90166	. PLUG, PIPE MOTOR-HYDRAULIC-FIXED	EA	1
11	35	XDFZZ		840245	02892	. COVER, BACK MOTOR-HYDRAULIC-FIXED	EA	1

(a) FIG. NO.	(b) ITEM NO.	(1)(2) ILLUSTRATION SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM		(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT		
11	36	PAFZZ	5306-01-033-4527	870264	02892		. BOLT, MACHINE BACK COVER TO MOTOR HOUSING, MOTOR-HYDRAULIC-FIXED	EA	6		
11	37	PCFZZ	5330-00-486-4741	871012	02892		. D RING MOTOR-HYDRAULIC-FIXED	EA	2		
11	38	PAFZZ	5365-00-610-6325	840146	02892		. PLUG MOTOR-HYDRAULIC-FIXED	EA	2		
11	39	PAFZZ	4820-00-248-2571	830219	02892		. VALVE ASSEMBLY MOTOR-HYDRAULIC-FIXED	EA	1		
11	40	PAFZZ	4730-01-018-6281	841113	02892		. PLUG, VALVE MOTOR-HYDRAULIC-FIXED	EA	2		
11	41	PAFZZ	3110-00-110-5611	870648	02892		. BEARING, ROLLER, CYLI MOTOR-HYDRAULIC-FIXED	EA	1		
11	42	PAFZZ	5365-00-468-2865	870101	02892		. RING, RETAINING MOTOR-HYDRAULIC-FIXED	EA	1		
11	43	PCFZZ	5330-00-152-3142	871140	02892		. PACKING MOTOR-HYDRAULIC-FIXED	EA	2		
11	44	PAFZZ	5330-00-484-8804	870653	02892		. RETAINER, PACKING MOTOR-HYDRAULIC-FIXED	EA	2		
11	45	PCFZZ	5330-00-486-4751	871146	02892		.D RING MOTOR-HYDRAULIC-FIXED	EA	1		
11	46	PAFZZ	5330-01-031-5050	830028	90166		. SEAL ASSEMBLY MOTOR-HYDRAULIC-FIXED	EA	1		
11	47	PAFZZ	4820-00-248-0567	840975	02892		.. SEAT, VALVE MOTOR-HYDRAULIC-FIXED	EA	1		
11	48	PAFZZ	3110-00-900-2560	872305	02892		.. BALL, BEARING MOTOR-HYDRAULIC-FIXED	EA	1		
11	49	PAFZZ	4820-00-248-0552	840811	02892		. DISK, CONE CHECK VAL MOTOR-HYDRAULIC-FIXED	EA	1		
11	50	PAFZZ	5360-00-480-4076	841255	90166		. SPRING, HELICAL, COMP MOTOR-HYDRAULIC-FIXED	EA	1		
11	51	PAFZZ	5330-00-486-4740	871014	02892		. D RING MOTOR-HYDRAULIC-FIXED	EA	3		
11	52	PAFZZ	5340-00-540-2054	841278	02892		.RETAINER, HELICAL CO MOTOR-HYDRAULIC-FIXED	EA	1		
11	53	PAFZZ	5330-00-533-6821	871010	02892		. D RING MOTOR-HYDRAULIC-FIXED	EA	1		
11	54	PAFZZ	5305-00-567-6103	872732	02892		. SCREW MOTOR-HYDRAULIC-FIXED	EA	1		
11	55	PAFZZ	5340-01-097-5793	841279	02892		. SEAT, SPRING MOTOR-HYDRAULIC-FIXED	EA	1		
11	56	PAFZZ	5310-00-562-3978	870563	02892		. NUT, PLAIN, HEXAGON MOTOR-HYDRAULIC-FIXED	EA	1		
11	57	PAFZZ	4820-00-255-0498	841180	02892		. PLUNGER, VALVE MOTOR-HYDRAULIC-FIXED	EA	1		
11	58	PAFZZ	5360-00-538-6634	840138	02892		. SPRING MOTOR-HYDRAULIC-FIXED	EA	1		
11	59	PAFZZ	5365-00-792-0809	840037	90166		. PLUG, MACHINE THREAD MOTOR-HYDRAULIC-FIXED	EA	1		
11	60	PAFZZ	5306-01-018-5198	870210	90166		. BOLT BODY ASSEMBLY TO HOUSING COVER, MOTOR-HYDRAULIC-FIXED	EA	5		
11	61	PAFZZ	4730-01-018-1561	872675	90166		. PLUG MOTOR-HYDRAULIC-FIXED	EA	2		
11	62	XDFZZ		3320268	80195		HANGER ASSEMBLY MOTOR MOUNTING, MOTOR-HYDRAULIC-FIXED	EA	1		
11	63	PAFZZ	5305-00-724-5910	MS90725-162	96906		SCREW, CAP, HEXAGON H 0.62NCX1.50, HYDRAULIC MOTOR TO HANGER ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	3		
11	64	PAFZZ	5310-00-768-0318	120378	24617		NUT, PLAIN, HEXAGON 0.50NC, HANGER ASSEMBLY TO MOUNTING RAILS, MOTOR-HYDRAULIC-FIXED	EA	2		
11	65	PAFZZ	5310-00-584-5272	120384	24617		WASHER, LOCK HANGER ASSEMBLY TO MOUNTING RAILS, MOTOR-HYDRAULIC-FIXED	EA	2		
11	66	PAFZZ	5310-00-232-8194	121574	24617		WASHER, LOCK HYDRAULIC MOTOR TO HANGER ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	3		
11	67	PAFZZ	5310-00-763-8920	124589	24617		NUT, PLAIN, HEXAGON 0.62NC, HYDRAULIC MOTOR TO HANGER ASSEMBLY, MOTOR-HYDRAULIC-FIXED	EA	3		
11	68	PAFZZ	5305-01-030-6105	MS35291-111	96906		SCREW, CAP, HEXAGON H 0.50NCX 1.25, HANGER ASSEMBLY TO MOUNTING RAILS, MOTOR-HYDRAULIC-FIXED	EA	2		

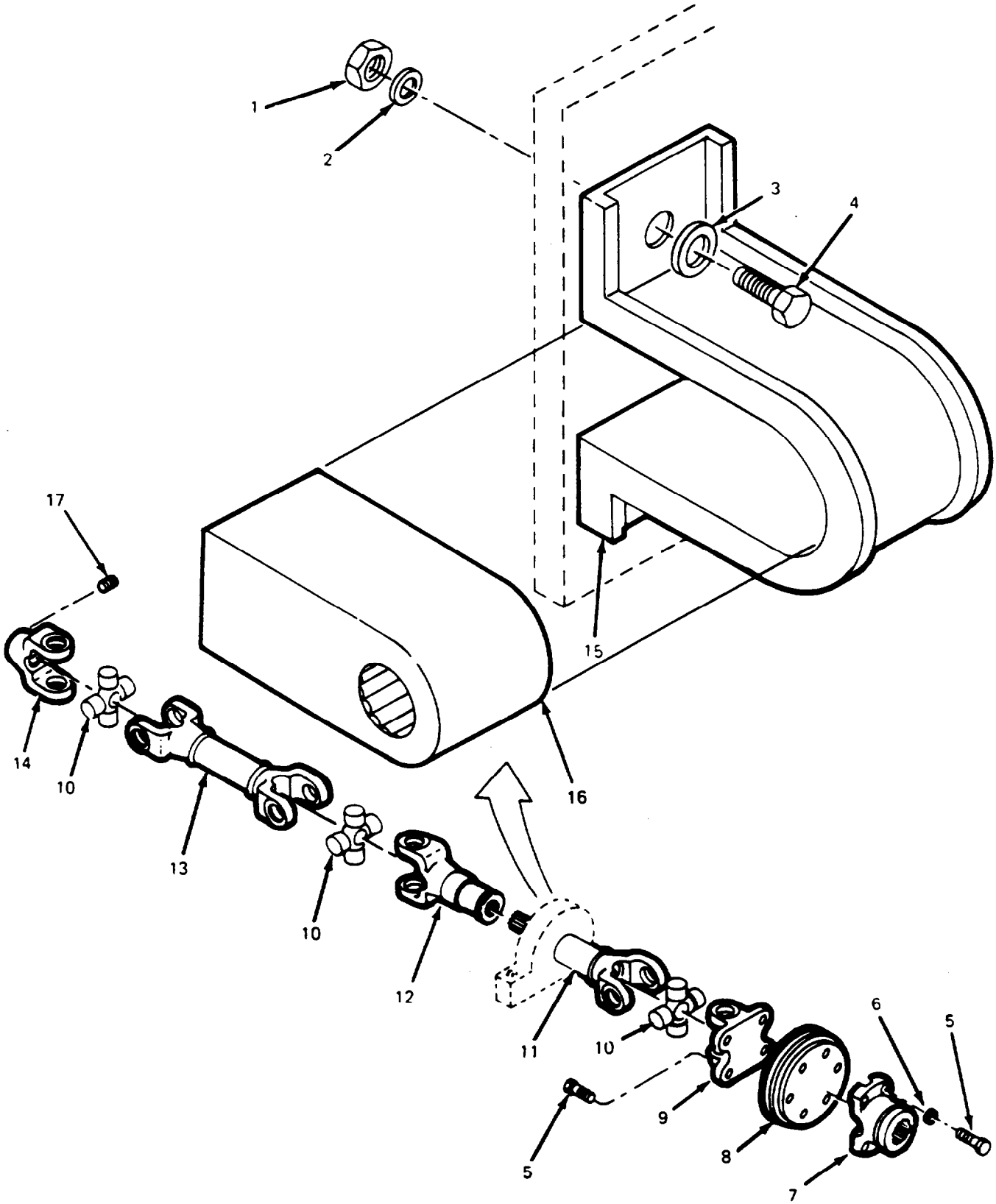

Figure 12. Hydraulic Pump Propeller Shaft

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2401 HYDRAULIC PUMP PROPELLER SHAFT		
12	1	PAOZZ	5310-00-880-7745	MS35690-723	96906	NUT, PLAIN, HEXAGON 0.50NC, BRACKET TO VEHICLE FRAME, HYDRAULIC PUMP PROPELLER SHAFT	EA	2
12	2	PAOZZ	5310-00-584-5272	MS35338-48	96906	WASHER, LOCK 0.50, BRACKET TO VEHICLE FRAME, HYDRAULIC PUMP PROPELLER SHAFT	EA	2
12	3	PAOZZ	5310-00-809-3079	120390	24617	WASHER, FLAT 0.50, BRACKET TO VEHICLE FRAME, HYDRAULIC PUMP PROPELLER SHAFT	EA	2
12	4	PAOZZ	5305-00-206-3519	122433	24617	SCREW, CAP, HEXAGON H 0.50NCX1.50IN. LG, BRAKET TO VEHICLE FRAME, HYDRAULIC PUMP PROPELLER SHAFT	EA	2
12	5	PAOZZ	5305-00-012-0233	120233	24617	SCREW, CAP, HEXAGON H 0.38NCX1.00, YOKE FLANGE TO PULLEY, HYDRAULIC PUMP PROPELLER SHAFT	EA	8
12	6	PAOZZ	5310-00-637-9541	MS35338-46	96906	WASHER, LOCK 0.38-SPRING, HYDRAULIC PUMP PROPELLER SHAFT	EA	4
12	7	PAOZZ	3010-00-958-1996	16781-J	76260	YOKE, UNIVERSAL JOIN	EA	1
12	8	PAOZZ	3020-01-083-4642	3321014	80195	PULLEY, GROOVE HYDRAULIC PUMP PROPELLER SHAFT	EA	1
12	9	PAOZZ	3010-01-083-4406	3170021	80195	YOKE, UNIVERSIAL JOIN HYDRAULIC PUMP PROPELLER SHAFT	EA	1
12	10	PAOZZ		3170013	80195	PARTS KIT, UNIVERSAL HYDRAULIC PUMP PROPELLER SHAFT	EA	3
12	11	PAOZZ	3010-01-100-6520	J-616241	80195	PROPELLER SHAFT	EA	1
12	12	PAOZZ	3010-01-083-4634	6440165	80195	YOKE, UNIVERSAL JOIN HYDRAULIC PUMP PROPELLER SHAFT	EA	1
12	13	PAOZZ	3010-01-101-9624	J-616240	80195	PROPELLER SHAFT	EA	1
12	14	PAOZZ	2520-01-083-4632	2-4-663	05598	YOKE, UNIVERSAL JOIN	EA	1
12	15	XDOZZ		3321017	80195	BRACKET PROPELLER SHAFT MOUNTING, HYDRAULIC PUMP PROPELLER SHAFT	EA	1
12	16	PAOZZ	3110-00-554-3626	210088-1X	95019	BEARING, BALL, ANNULA DRIVE LINE, PTO, HYDRAULIC PUMP PROPELLER SHAFT	EA	1
12	17	PAOZZ	5305-00-256-9544	MS51034-83	96906	SETSCREW	EA	1

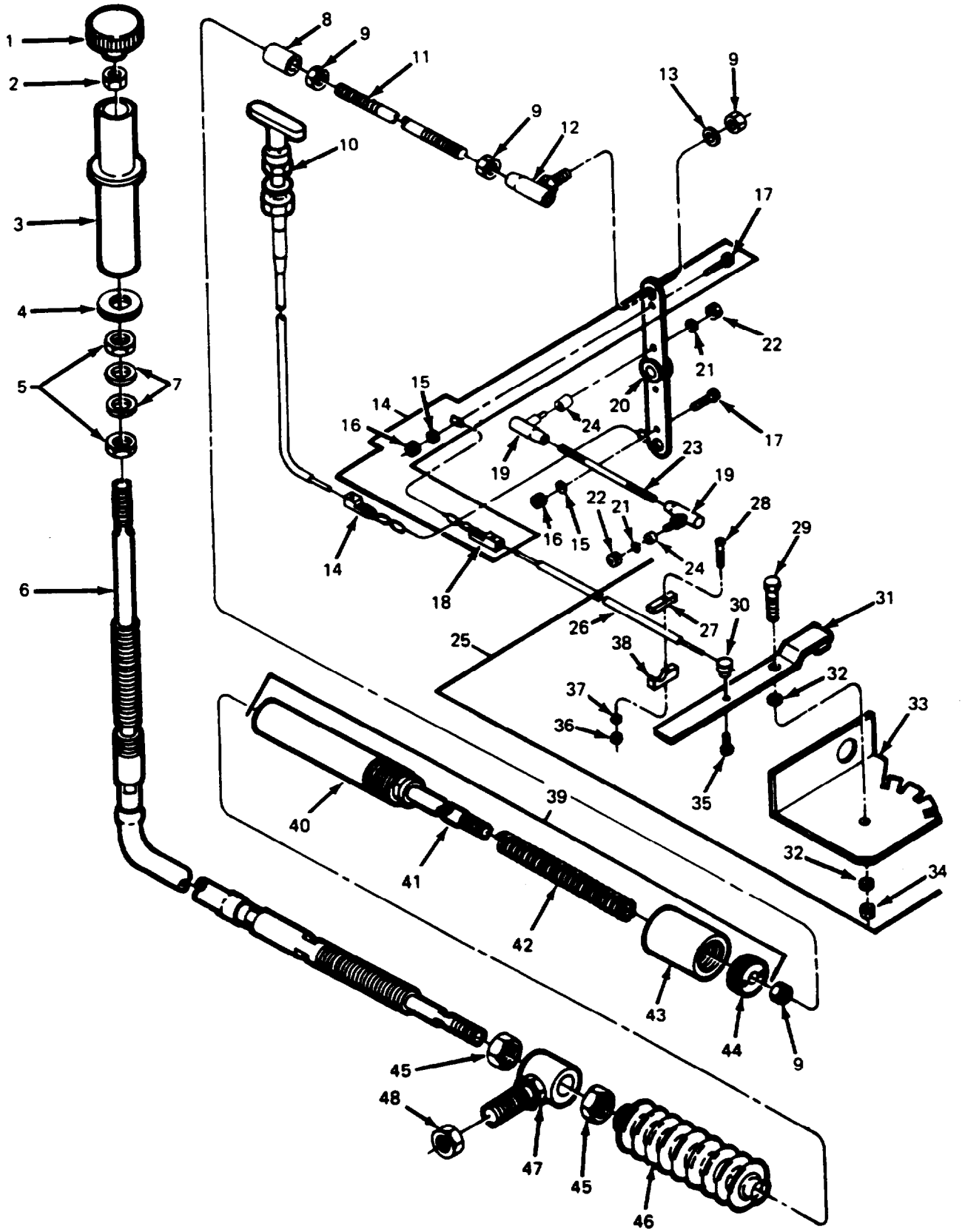

Figure 13. Hydraulic Controls

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2403 HYDRAULIC CONTROLS		
13	1	XDOZZ		3320228	80195	KNOB CONTROLS-HYDRAULIC	EA	1
13	2	PAOZZ	5310-00-732-0559	120369	24617	NUT, PLAIN, HEXAGON 0.38NF, CONTROLS-HYDRAULIC	EA	1
13	3	PAOZZ	3859-01-095-4364	3320284	80195	VERNER ASSEMBLY, CON CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1
13	4	XDOZZ		3320288	80195	NUT-THUMB, KNURLED CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1
13	5	PAOZZ	5310-00-835-2037	124944	24617	NUT, PLAIN, HEXAGON 0.62NF, CONTROLS, HYDRAULIC	EA	2
13	6	XDOZZ		3320611	80195	CABLE-CONTROL 6FT. LG.,CONTROLS-HYDRAULIC	EA	1
13	7	PAOZZ	5310-00-951-7209	130999	24617	WASHER, FLAT 0.62	EA	2
13	8	XDOZZ		3320307	80195	CONECTOR CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1
13	9	PAOZZ	5310-00-880-7746	MS35690-523	96906	NUT, PLAIN, HEXAGON 0.31 HF, BALL JOINT TO LEVER ASSEMBLY, CONTROLS-HYDRAULIC	EA	4
13	10	PAOZZ	3040-01-060-7084	6400047	80195	CONTROL ASSEMBLY, PU 18 FT, CONTROLS-HYDRAULIC	EA	1
13	11	XDOZZ		9250304	80195	ROD, BALL JOINT 8.50IN. LG., CONTROLS-HYDRAULIC	EA	1
13	12	XDOZZ		9422787	24617	JOINT, BALL WITH DUST COVER 0.31NC, CONTROLS-HYDRAULIC	EA	1
13	13	PAOZZ	5310-00-407-9566	MS35338-45	96906	WASHER, LOCK 0.31, BALL JOINT TO LEVER ASSEMBLY, CONTROLS-HYDRAULIC	EA	1
13	14	PAOZZ	4010-01-092-9226	7400042	80195	CHAIN ASSEMBLY, CONN CONNECTOR, HYDRAULIC OVERDRIVE, CONTROLS-HYDRAULIC	EA	2
13	15	PAOZZ	5310-00-083-6490	120217	24617	. WASHER, LOCK NO.10 SPRING, CONNECTOR CHAINS TO LEVER ASSY, CONTROLS HYDRAULIC	EA	1
13	16	PAOZZ	5310-00-934-9751	MS35650-302	96906	. NUT, PLAIN, HEXAGON NO.10NF, CONNECTOR CHAINS TO LEVER ASSY, CONTROLS-HYDRAULIC	EA	1
13	17	PAOZZ	5305-00-993-1849	MS35207-259	96906	. SCREW, MACHINE NO.10NFXO. 25, CONNECTOR CHAINS TO LEVER ASSY, CONTROLS HYDRAULIC	EA	1
13	18	XDOZZ		3320393	80195	. CONNECTOR-CHAIN CRANK CONTROL, CONTROLS-HYDRAULIC	EA	1
13	19	XDOZZ		6000409	80195	JOINT, BALL 10-32, CONTROLS-HYDRAULIC	EA	2
13	20	XDOZZ		2320299	80195	LEVER ASSEMBLY SWIVEL PIN, CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1
13	21	PAOZZ	5310-01-083-6490	120217	24617	WASHER, LOCK NO.10 SPRING, BALL JOINT TO PUMP ACTUATOR ARM, CONTROLS HYDRAULIC	EA	1
13	22	PAOZZ	5310-00-934-9751	MS35650-302	96906	NUT, PLAIN, HEXAON NO 10NF, BALL JOINT TO PUMP ACTUATOR ARM, CONTROLS-HYDRAULIC	EA	1
13	23	XDOZZ		3320303	80195	ROD-CONTROL 4.62IN, LG, CONTROLS-HYDRAULIC	EA	1
13	24	PAOZZ	3120-01-102-5404	3320304	80195	BUSHING CONTROL CABLE, CONTROLS-HYDRAULIC	EA	2
13	25	XDOZZ		3320815	80195	BRACKET ASSY OVERRIDE CONTROL-REAR, CONTROLS-HYDRAULIC	EA	1
13	26	PAOZZ		0-47W/W37-1	70436	. CABLE, CONTROLS, FLEX PLASTIC COATED-16FT	EA	1
13	27	XDOZZ		3320822	80195	. PLATE, CABLE CLAMP OVERRIDE, RIGHT REAR, CONTROLS-HYDRAULIC	EA	1
13	28	PAOZZ	5305-00-993-1851	MS35207-267	96906	. SCREW, MACHINE NO.10NFX1.00, FLEX CABLE TO BLOCK AND PLATE CLAMP, CONTROLS HYDRAULIC	EA	1
13	29	PAOZZ	5305-00-068-0502	MS35297-6	96906	. SCREW, CAP, HEXAGON H 0.25NCXO.75, ARM ASSEMBLY TO REAR OVERRIDE BRAKET, CONTROLS HYDRAULIC	EA	1
13	30	XDOZZ		3320034	80195	.STOP-THROTTLE CONTROLS-HYDRAULIC	EA	1
13	31	XDOZZ		3320816	80195	. ARM ASSEMBLY CONTROL OVERRIDE, REAR, CONTROLS-HYDRAULIC	EA	1
13	32	PAOZZ	5305-00-068-0502	MS15795-213	96906	. WASHER, FLAT	EA	2
13	33	XDOZZ		3320819	80195	. BRACKET OVERRIDE-REAR, CONTROLS-HYDRAULIC	EA	1

(a) FIG. NO.	(b) ITEM NO.	(1)(2) ILLUSTRATION SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM		(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT		
	13	34	XDOZZ		9413946	24617	. NUT-HEX, LOCK 0.25, ARM ASSEMBLY TO REAR OVERRIDE BRACKET, CONTROLS HYDRAULIC	EA	1		
	13	35	PAOZZ	5305-00-990-6444	436748	24617	. SCREW, MACHINE STOP THROTTLE TO ARM ASSEMBLY, CONTROLS-HYDRAULIC	EA	1		
	13	36	PAOZZ	5310-00-934-9751	MS35650-302	96906	. NUT, PLAIN, HEXAGON NO.10NF, FLEX CABLE TO BLOCK AND PLATE CLAMP, CONTROLS HYDRAULIC	EA	1		
	13	37	PAOZZ	5310-01-083-6490	120217	24617	. WASHER, LOCK NO.10, FLEX CABLE TO BLOCK AND PLATE CLAMP, CONTROLS-HYDRAULIC	EA	1		
	13	38	XDOZZ		3320821	80195	. BLOCK, CABLE CLAMP OVERRIDE, RIGHT REAR, CONTROLS-HYDRAULIC	EA	1		
	13	39	PAOOO	3895-01-092-9225	3320289	80195	OVERRIDE ASSEMBLY, C CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1		
	13	40	XDOZZ		3320290	80195	. BODY-SPRING CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1		
	13	41	XDOZZ		3320291	80195	. ROD ASSEMBLY-SPRING CONTROL CABLE, CONTROL-HYDRAULIC	EA	1		
	13	42	XDOZZ		3320296	80195	. SPRING-COMPRESSION CONTROLS-HYDRAULIC	EA	1		
	13	43	XDOZZ		3320294	80195	. GLAND-PACKING CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1		
	13	44	XDOZZ		3320295	80195	. NUT, PACKING CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1		
	13	45	PAOZZ	5310-00-763-8905	121358	24617	NUT, PLAIN, HEXAGON 0.62NF, CONTROLS-HYDRAULIC	EA	2		
	13	46	PODZZ	2530-00-981-3204	40099-2	04617	BELLOWS, PROTECTION	EA	1		
	13	47	XDOZZ	5310-00-768-0318	3320308	80195	LOCK ASSY, BUSHING CONTROL CABLE, CONTROLS-HYDRAULIC	EA	1		
	13	48	PAOZZ		120378	24617	NUT, PLAIN, HEXAGON 0.50NC, CONTROLS, HYDRAULIC	EA	1		

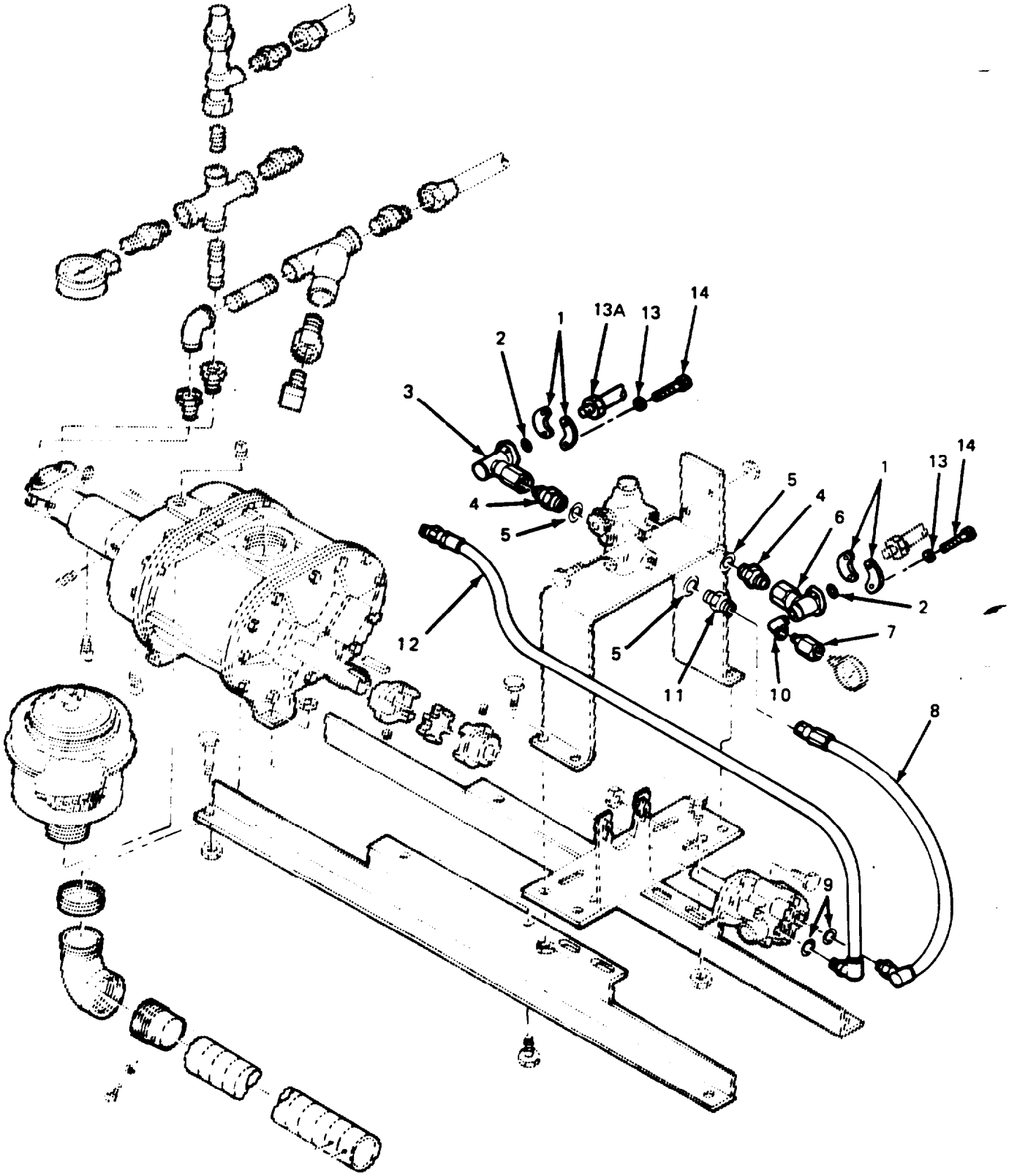

Figure 14. Lines and Fittings
Sheet 1 of 5

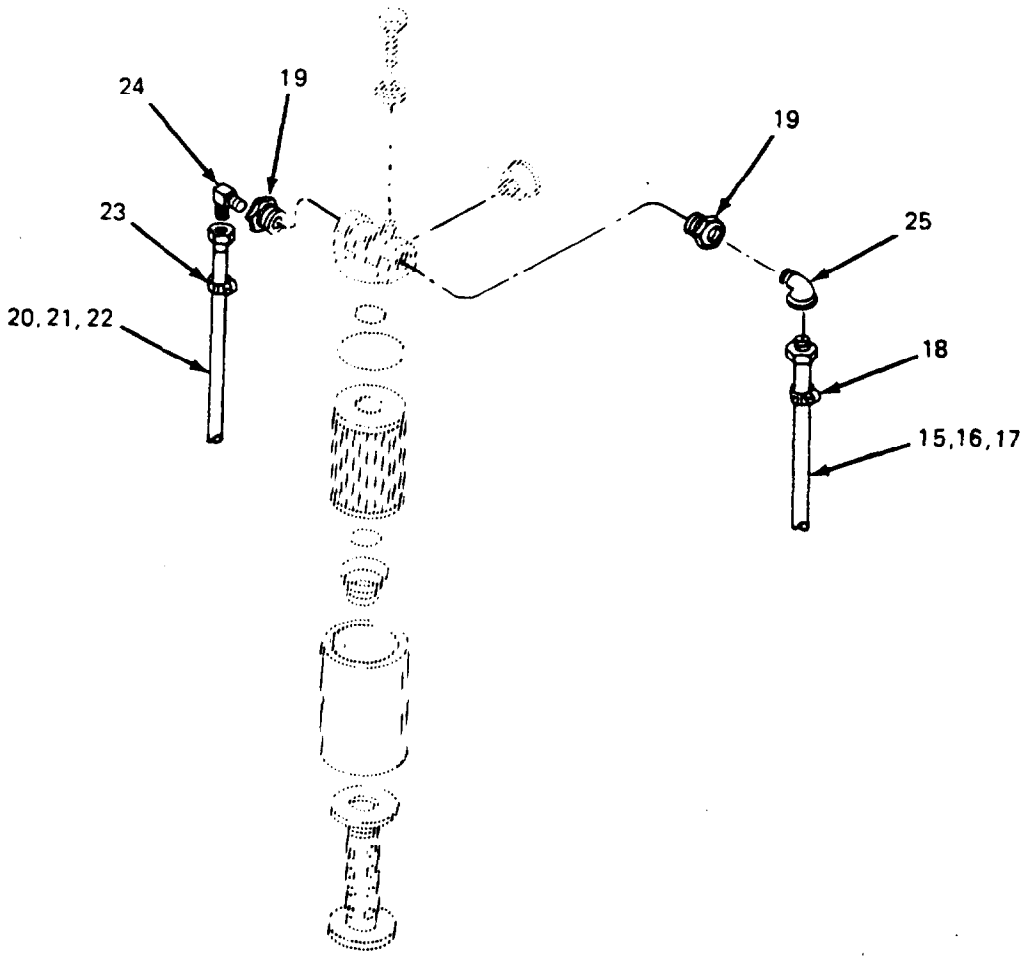

Figure 14. Hydraulic Lines and Fittings
Sheet 2 of 5

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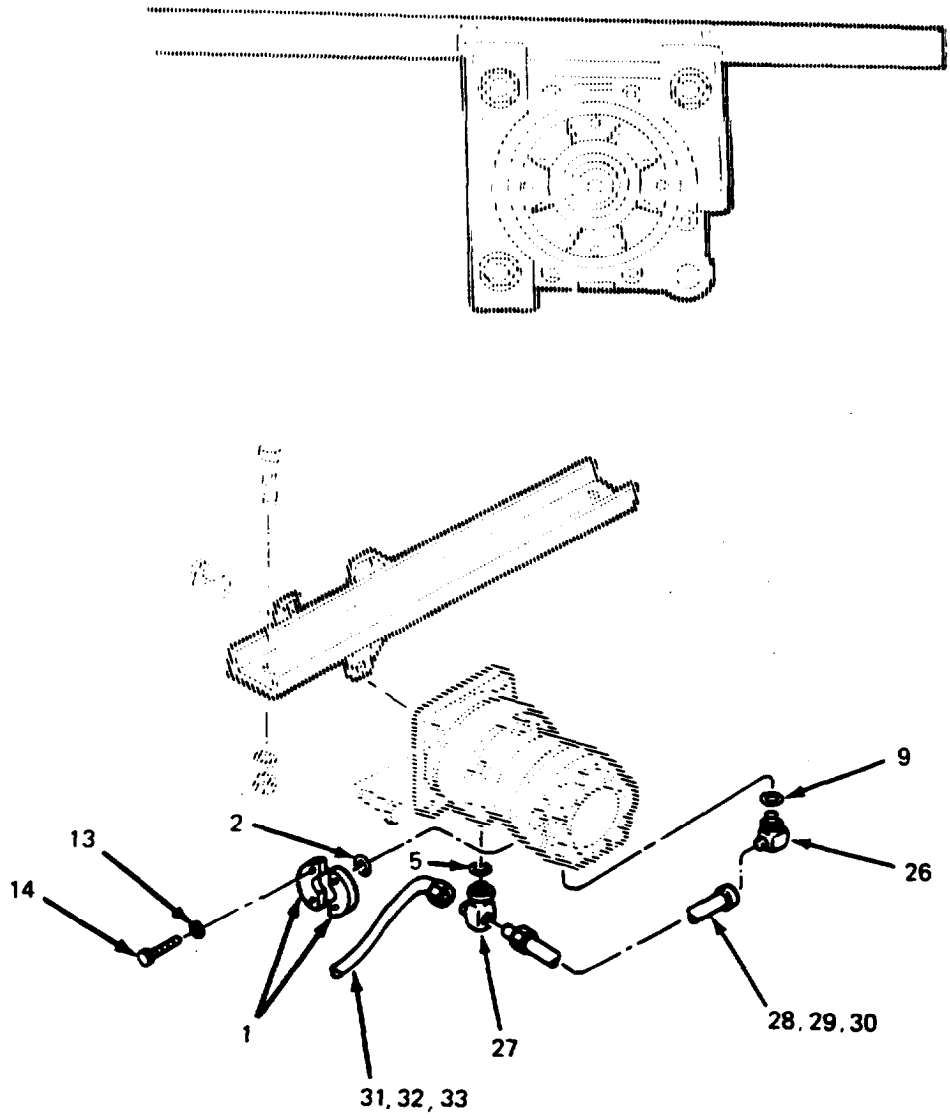

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Figure 14. Hydraulic Lines and Fittings
Sheet 3 of 5

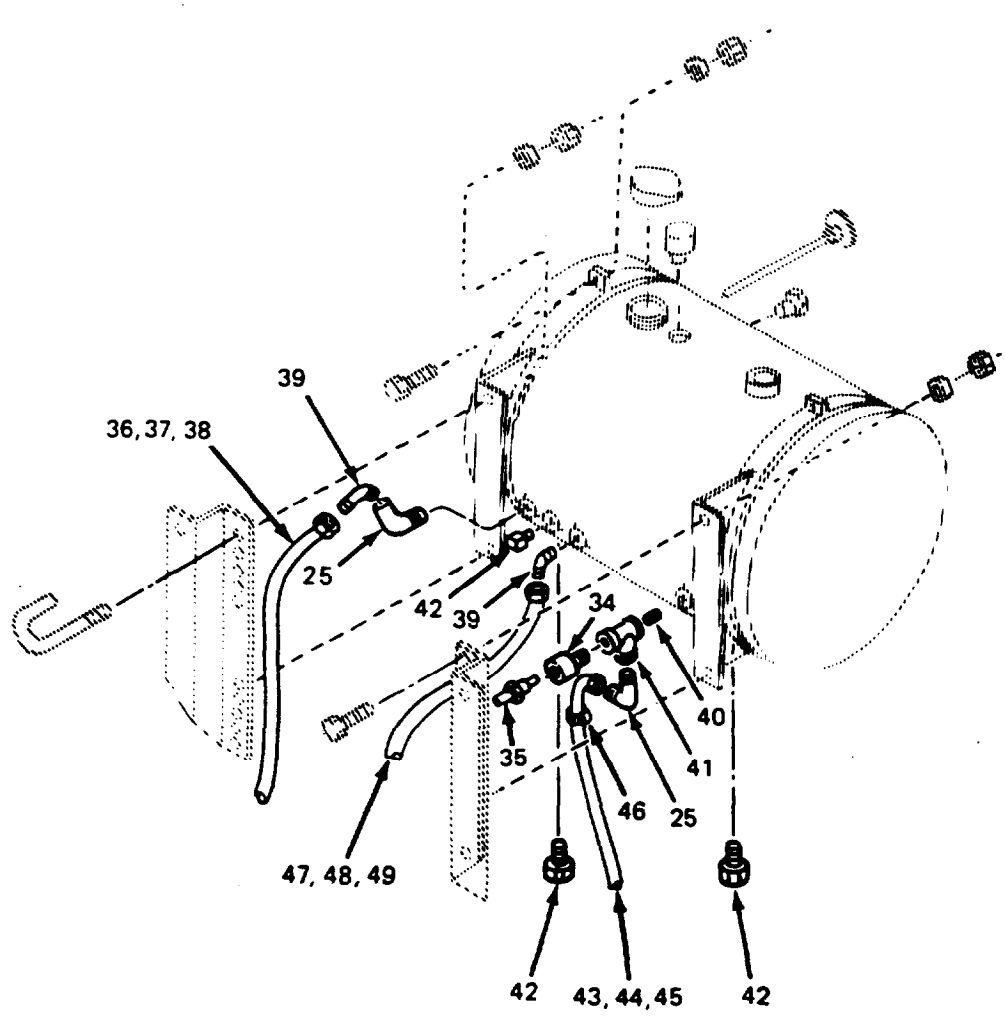

Figure 14. Hydraulic Lines and Fittings
Sheet 4 of 5

TA075791

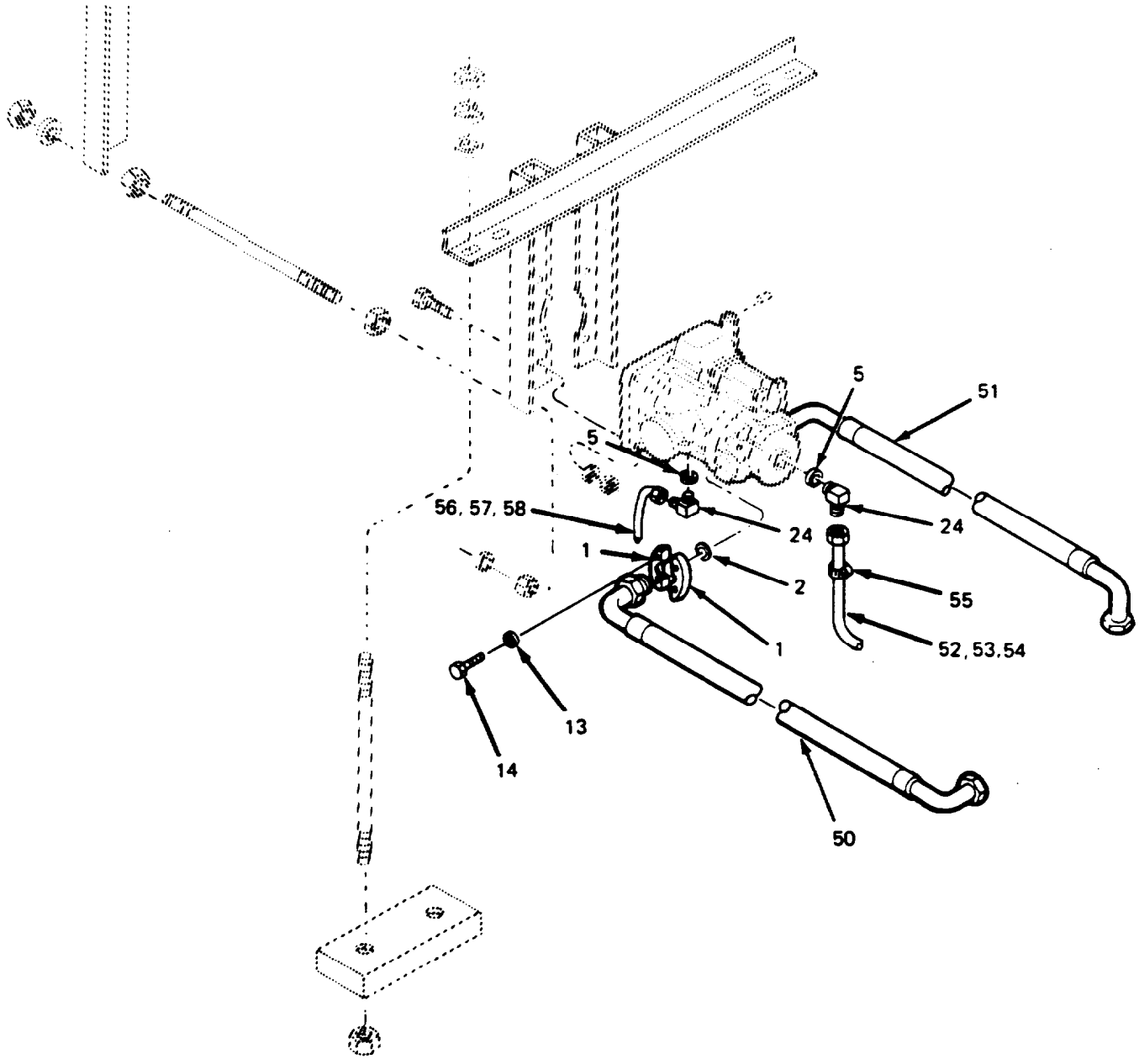

Figure 14. Hydraulic Lines and Fittings
Sheet 5 of 5

(a) FIG. NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM		(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT		
		ILLUSTRATION									
							GROUP 2406 HYDRAULIC LINES AND FITTINGS				
	14	1	XDOZZ		6600236	80195	FLANGE, SPLIT HYDRAULIC			EA	4
	14	2	PODZZ	5330-00-089-1966	274253	24617	PACKING, PREFORMED HYDR LINES AND FITTINGS			EA	4
	14	3	PAOZZ	4730-01-083-0672	3331168	80195	CONNECTOR ASSEMBLY HYDR BLOWER MOTOR			EA	1
	14	4	PAOZZ	4730-00-761-2955	9410205	24617	CONNECTOR HOSE, STRIGHT			EA	2
	14	5	PODZZ	5330-00-752-7534	274249	24617	PACKING, PREFORMED HYDRAULIC LINES AND FITTINGS			EA	6
	14	6	PAOZZ	4730-01-082-6529	3331169	80195	ADAPTER, STRAIGHT, TU HYDR BLOWER MOTOR			EA	1
	14	7	PAOZZ	4730-01-082-6477	6600874	80195	COUPLING 1/4 NPT			EA	1
	14	8	PAOZZ	4720-00-125-5453	3320861	80195	HOSE ASSEMBLY, NONME HYDRAULIC, 2 FEET LONG			EA	1
	14	9	POFZZ	5330-00-078-4701	274247	24617	PACKING, PREFORMED HYDR BLOWER MOTOR			EA	3
	14	10	PAOZZ	4730-00-246-9215	105423	24617	ELBOW, PIPE 1/4 NPT			EA	1
	14	11	PAOZZ	4730-01-082-9176	6600921	80195	CONNECTOR, STRAIGHT HOSE, STRAIGHT			EA	1
	14	12	PAOZZ	4820-00-144-4974	3320881	80195	HOSE ASSEMBLY, NONNME HYDRAULIC, 16 FEET LONG			EA	1
	14	13	PAFZZ		103321	24617	WASHER, LOCK 3/8			EA	16
	14	13A	PODZZ		6600980	80195	HOSE ASSEMBLY, NONNME 4-1/2FT LG			EA	1
	14	14	PAFZZ	5306-00-623-1595	100135	24617	BOLT, MACHINE 3/8-16X1-1/4			EA	1
	14	15	PAOZZ	4720-01-082-7221	3320863	80195	HOSE ASSEMBLY, NONME 4 FT. FILTER TO PUMP			EA	1
	14	16	PAOZZ		0188-12-12	30759	. ADAPTER, STRAIGHT, PI			EA	2
	14	17	PAOZZ	4730-00-443-8580	0688-12-12	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	18	PAFZZ	4730-00-420-0828	HF-16-SS	76599	. CLAMP			EA	1
	14	19	PAOZZ		144059	24617	BUSHING REDUCING, 1.25X0.75NPT			EA	1
	14	20	PAOZZ	4720-00-441-5928	3320862	80195	HOSE ASSEMBLY, NONME HYDRAULIC, 3 FEET LONG			EA	1
	14	21	PAOZZ		0188-12-12	30759	. ADAPTER, STRAIGHT, PI			EA	2
	14	22	PAOZZ	4730-00-443-8580	0688-12-12	30759	. ADAPTER, STRAIGHT, TU			EA	3
	14	23	PAOZZ	4730-00-420-0828	HF-16-SS	76599	. CLAMP			EA	3
	14	24	XDOZZ		9410979	24617	ELBOW, HYDRAULIC 90DEGREE			EA	1
	14	25	PAOZZ	4730-00-246-9218	141621	72582	ELBOW, PIPE STREET ELL,0.75NPT, FILTER ASSY-HYDRAULIC			EA	1
	14	26	XDOZZ		9410977	24617	ELBOW, HYDRAULIC HYDRAULIC LINES AND FITTINGS			EA	1
	14	27	PAOZZ	4730-01-098-4919	3320893	80195	ELBOW, PIPE TO HOSE 0.75NPT			EA	1
	14	28	PAOZZ	4720-01-088-4455	3320889	80195	HOSE ASSEMBLY, NONME MOTOR TO DRAIN			EA	1
	14	29	PAOZZ	4730-00-080-4005	30182-8-88	30759	. ADAPTER, STRAIGHT, PI			EA	1
	14	30	PAOZZ	4730-00-497-8280	30682-8-88	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	31	PAOZZ	4720-01-082-7859	3320882	80195	HOSE ASSEMBLY, NONME 18FT. MOTOR TO RESERVOIR			EA	1
	14	32	PAOZZ	4730-00-469-4253	30682-12-128	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	33	PAOZZ	4730-01-059-1211	30182-12-128	30759	. ADAPTER, STRAIGHT, PI			EA	1
	14	34	PAOZZ	4730-00-845-8750	144049	24617	BUSHING, PIPE 0.75X0.50NPT			EA	1
	14	35	PAOZZ	5930-00-153-8285	TG6401080	70040	SWITCH, THERMOSTATIC			EA	REF
	14	36	PAOZZ	4720-01-082-7860	3320871	80195	HOSE ASSEMBLY, NONME 2FT, PUMP TO RESERVOIR			EA	1
	14	37	PAOZZ	4730-00-469-4253	30682-12-128	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	38	PAOZZ	4730-01-059-1211	30182-12-128	30759	. ADAPTER, STRAIGHT, PI			EA	1

(a) FIG. NO.	(b) ITEM NO.	(1)(2) ILLUSTRATION SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM		(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT		
	14	39	PAOZZ	4730-01-028-8147	MS51508B12	96906	ELBOW, PIPE TO TUBE 45DEGREE, 12MI-12MP			EA	2
	14	40	PAOZZ	4730-00-196-1468	MS5195397	96906	NIPPLE, PIPE 0.75X1.38NPT			EA	1
	14	41	PAOZZ	4730-00-249-2032	125988	30379	TEE, PIPE 0.75NPT			EA	1
	14	42	PAOZZ	4730-00-044-4587	MS51884-7	96906	PLUG, PIPE 0.5NPT			EA	3
	14	43	PAOZZ	4720-01-082-7221	3320863	80195	HOSE ASSEMBLY, NONME			EA	REF
	14	44	PAOZZ		0188-12-12	87373	. ADAPTER, STRAIGHT, PI			EA	REF
	14	45	PAOZZ	4730-00-443-8580	0688-12-12	30759	. ADAPTER, STRAIGHT, TU			EA	REF
	14	46	PAOZZ	4730-00-420-0828	HF-16-SS	76599	. CLAMP			EA	REF
	14	47	PAOZZ	4720-01-082-7859	3320882	80195	HOSE ASEMBLY, NONME			EA	1
	14	48	PAOZZ	4730-00-469-4253	30682-12-128	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	49	PAOZZ	4730-01-059-1211	30182-12-128	30759	. ADAPTER, STRAIGHT, PI			EA	1
	14	50	PAOZZ	4720-00-125-5393	6600231	80195	HOSE ASSEMBLY, NONME HYDRAULIC, 13 FEET LONG			EA	1
	14	51	PAOZZ	4720-01-088-4456	6600233	80195	HOSE ASSEMBLY, HYDRAULIC HYDRAULIC, 15 FT LG			EA	1
	14	52	PAOZZ	4720-00-441-5928	3320862	80195	HOSE ASSEMBLY, NONME			EA	REF
	14	53	PAOZZ		0188-12-12	30759	. ADAPTER, STRAIGHT, PI			EA	REF
	14	54	PAOZZ	4730-00-443-8580	0688-12-12	30759	. ADAPTER, STRAIGHT, TU			EA	REF
	14	55	PAOZZ	4730-00-420-0828	HF-16-SS	76599	. CLAMP			EA	REF
	14	56	PAOZZ	4720-01-082-7860	3320871	80195	HOSE ASSEMBLY, NONME			EA	1
	14	57	PAOZZ	4730-00-469-4253	30682-12-128	30759	. ADAPTER, STRAIGHT, TU			EA	1
	14	58	PAOZZ	4730-01-059-1211	30182-12-128	30759	. ADAPTER, STRAIGHT, PI			EA	REF

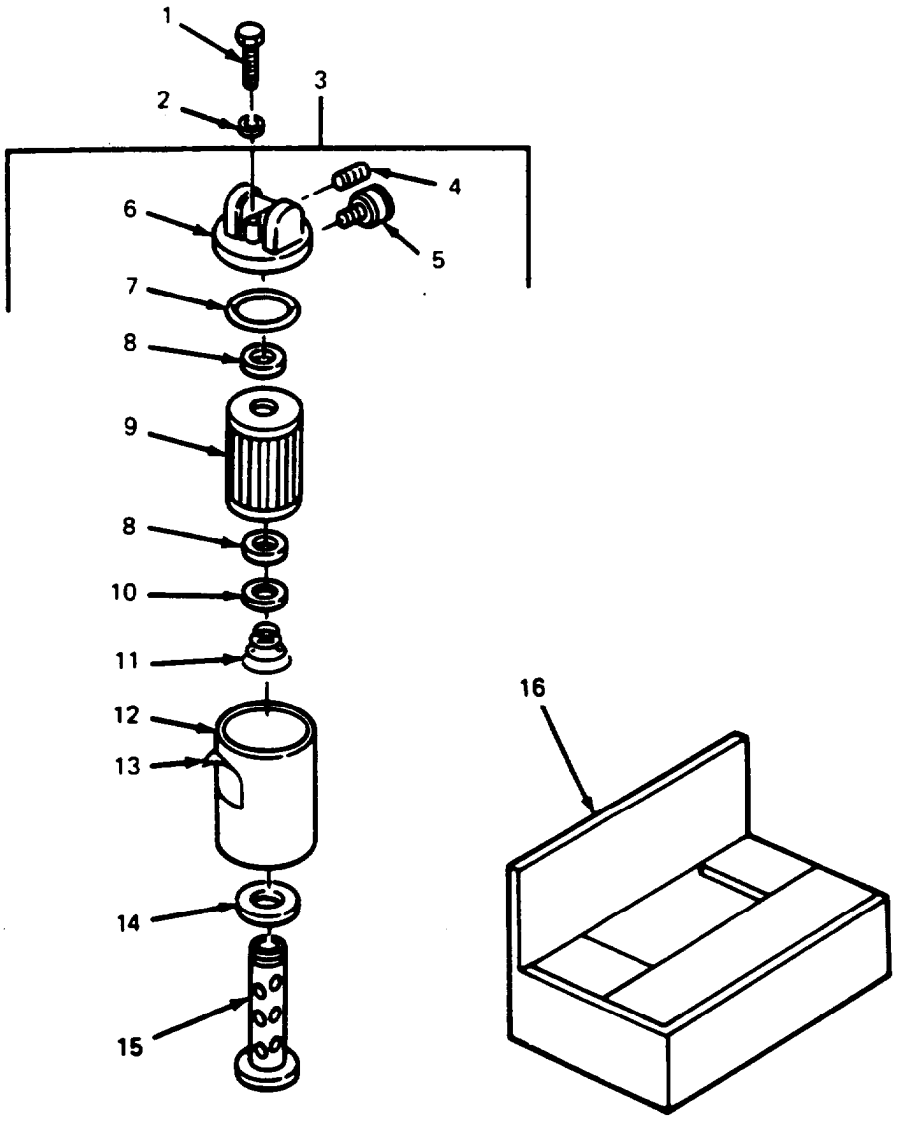

Figure 15. Hydraulic Filter

TA075769

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2406 HYDRAULIC FILTER		
15	1	PAOZZ	5305-00-225-3839	MS90725-8	96906	BOLT, MACHINE 0.25X1.00NC, FILTER TO RESERVOIR CLAMP ASSY, FILTER ASSY-HYDRAULIC	EA	2
15	2	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK 0.25, FILTER TO RESERVOIR CLAMP ASSY, FILTER ASSY-HYDRAULIC	EA	2
15	3	PAOZZ	4330-01-096-1521	FR251-1B2A	02249	FILTER, FLUID, PRESS	EA	1
15	4	PAOZZ	4730-00-018-9566	C15-001	02249	. PLUG, PIPE 1/8INCH	EA	1
15	5	PAOZZ	6685-00-476-7773	89014	61349	. GAGE, VACUUM, DIAL IN 30INCH	EA	1
15	6	XAOZZ		7506-014	02249	. HEAD	EA	1
15	7	KFOZZ		1576-001	02249	. PACKING, PREFORMED	EA	1
15	8	KFOZZ		3274-001	02249	. SEAL, RUBBER FILTER ELEMENT	EA	2
15	9	KFOZZ		3293-001	02449	. FILTER, ELEMENT FLUID	EA	1
15	10	PAOZZ	5310-00-843-3496	3277-001	02449	. WASHER	EA	1
15	11	PAOZZ	5360-01-083-1421	1563-001	02449	. SPRING COMPRESSION	EA	1
15	12	XDOZZ		1557-001	02449	. HOUSING, FILTER	EA	1
15	13	PAOZZ	9905-01-092-9245	1582-001	02449	. PLATE, INSTRUCTION	EA	1
15	14	XFOZZ		1575-001	02449	. GASKET	EA	1
15	15	PAOZZ	4730-00-137-0526	1561-001	02449	. BOLD, FLUID, PASSAGE	EA	1

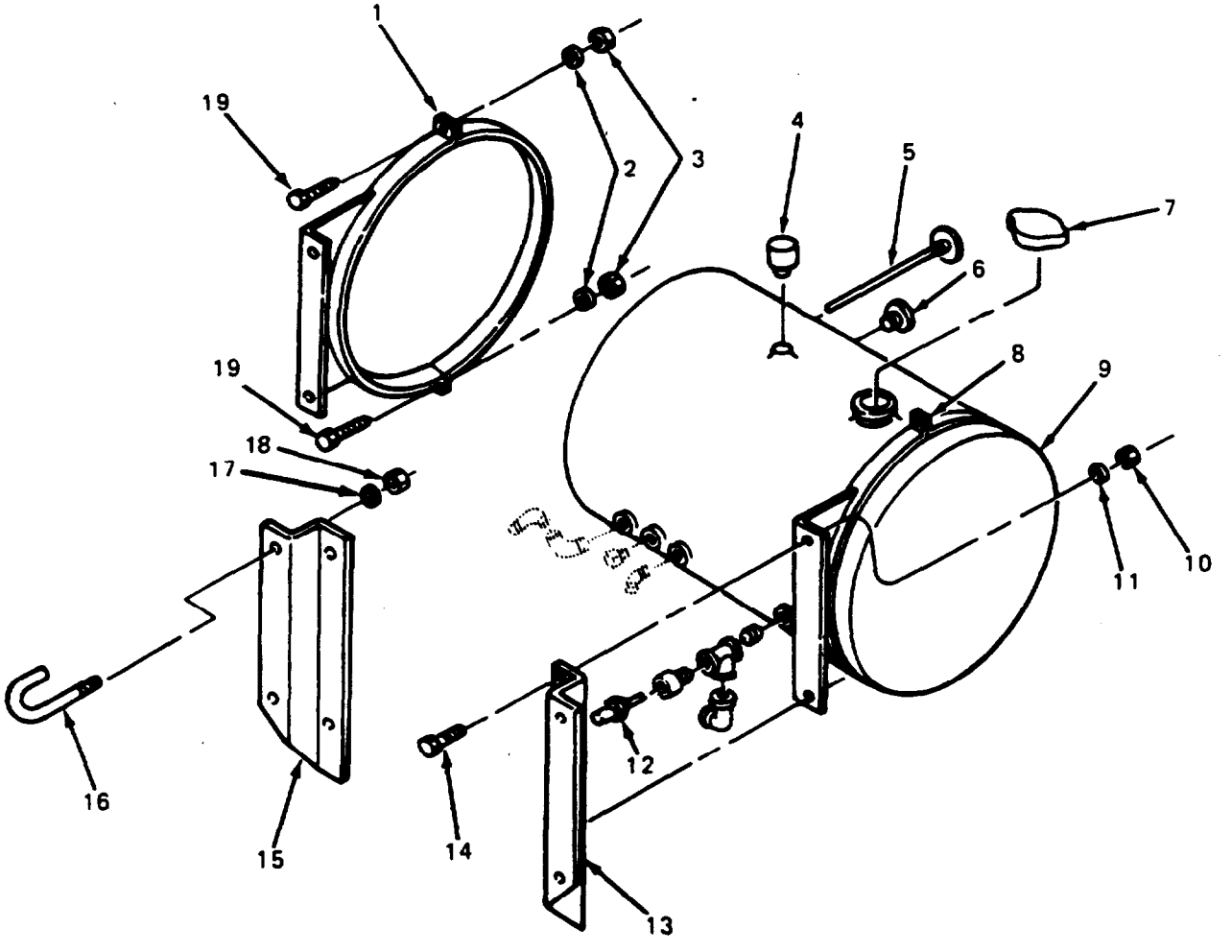

Figure 16. Hydraulic Tank

TA076736

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 2408 HYDRAULIC TANK		
16	1	XDOZZ		3320323	80195	CLAMP ASSEMBLY TANK MTG-LEFT, HYDRAULIC TANK ASSEMBLY	EA	1
16	2	PAOZZ	5310-00-768-0318	120378	24617	NUT, PLAIN, HEXAGON 0.50 SPRING, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSEMBLY	EA	4
16	3	PAOZZ	5310-00-768-0318	120378	24617	NUT, PLAIN, HEXAGON 0.50NC, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSY	EA	4
16	4	PAOZZ	2520-00-113-5509	1577AL	95993	BREATHER	EA	1
16	5	PAOZZ	3895-00-862-0367	6500039	72100	THERMOMETER, HEATER 2IN, DAIL-9IN. STEM, HYDRAULIC TANK ASSEMBLY	EA	1
16	6	PAOZZ	6680-00-009-3514	M-34-N	97484	INDICATOR, SIGHT, LIQ EYE SITE	EA	1
16	7	PAOZZ	4730-00-152-9822	H488	80195	CAP, PIPE BLANK, HYDRAULIC TANK ASSEMBLY	EA	1
16	8	XDOZZ		3320322	80195	CLAMP ASSEMBLY TANK MTG-RIGHT, HYDRAULIC TANK ASSEMBLY	EA	1
16	9	PAOFF	3895-01-095-5243	3320319	80195	TANK, OIL, HYDRAULIC HYDRAULIC TANK ASSEMBLY	EA	1
16	10	PAOZZ	5310-00-880-7745	MS35690-723	96906	NUT, PLAIN, HEXAGON 0.44NC, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSY	EA	4
16	11	PAOZZ	5310-00-209-0965	MS35338-28	96906	WASHER, LOCK 0.44 SPRING, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSEMBLY	EA	4
16	12	PAOZZ	5930-00-153-8285	TG6401080	24617	SWITCH, THERMOSTATIC	EA	1
16	13	XDOZZ		3320812	80195	BRAKET TANK MTG-RIGHT, HYDRAULIC TANK ASSEMBLY	EA	1
16	14	PAOZZ	5305-00-042-9478	MS90725-90	96906	SCREW, CAP, HEXAGON H 0.44NCX1.75IN.LG, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSEMBLY	EA	4
16	15	XDOZZ		3320813	80195	BRAKET TANK MTG-LEFT, HYDRAULIC TANK ASSEMBLY	EA	1
16	16	PAOZZ		3360304	80195	BOLT, HOOK 0.62, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSY	EA	4
16	17	PAOZZ	5310-00-232-8194	121574	24617	WASHER, LOCK 0.62, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSY	EA	4
16	18	PAOZZ	5310-00-763-8920	124589	24617	NUT, PLAIN, HEXAGON 0.62NC, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSY	EA	4
16	19	PAOZZ	5305-00-044-4153	122408	24617	SCREW, CAP, HEXAGON H 0.50NCX1.00IN.LG, CLAMPS TO TANK TO BRACKETS TO RAIL, HYDRAULIC TANK ASSEMBLY	EA	4

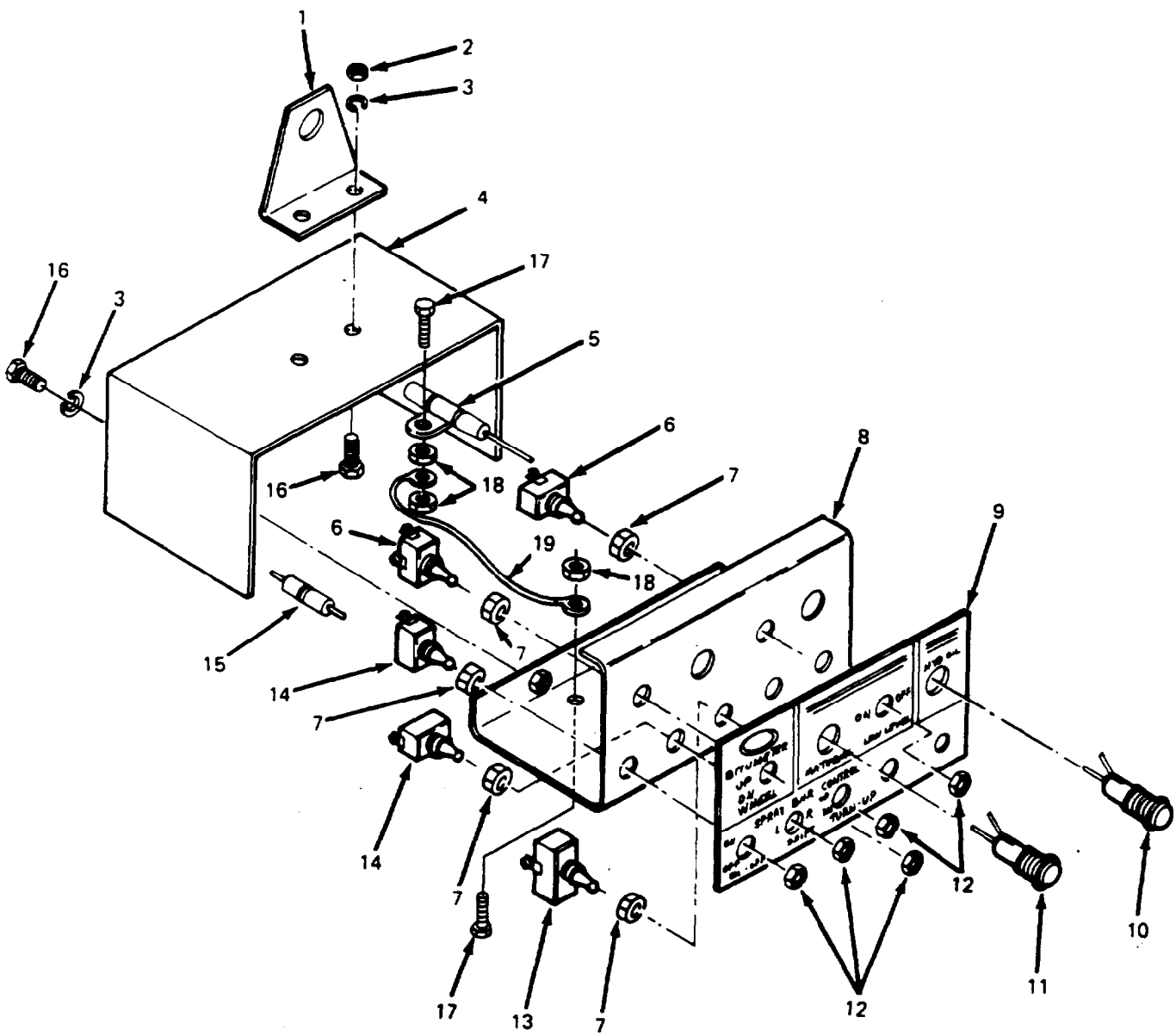

Figure 17. Cab Electric Control Box

TA075785

(a) FIG. NO.	(b) ITEM NO.	(1)(2) ILLUSTRATION SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM		(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT		
							GROUP 4202 CAB ELECTRIC CONTROL BOX				
17	1	XDOZZ		3360722	80195		BRACKET, CONTROL BOX MOUNTING, CONTROL BOX-ELECTRIC-IN CABNUT,	EA	1		
17	2	PAOZZ	5310-00-761-6882	120375	24617		PLAIN, HEXAGON 0.25NC, CONTROL BOX MOUNTING BRACKET TO PANEL CONTROL BOX, CONTROL BOX-ELECTRIC-IN CAB	EA	2		
17	3	PAOZZ	5310-00-637-9541	120380	24617		WASHER, LOCK 0.25, CONTROL BOX MOUNTING BRACKET TO PANEL CONTROL BOX, CONTROL BOX-ELECTRIC-IN CAB	EA	4		
17	4	XDOZZ		3360725	80195		BOX, CONTROL PANEL CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	5	PAOZZ	5930-01-084-2376	6700749	80195		FLASHER, SWITCH, LOW LEVEL INDICATOR, CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	6	PAOZZ	5930-01-084-2289	6700161	80195		SWITCH, PUSH CONTROL BOX-ELECTRIC-IN CAB	EA	2		
17	7	PAOZZ	5310-01-082-9395	6000103	80195		NUT, SELF-LOCKING, HE ALL SWITCHES TO PANEL, CONTROL BOX-ELECTRIC-IN CAB	EA	5		
17	8	XDOZZ		3360721	80195		COVER ASSY, CONTROL BOX, CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	9	XDOFF		3360714	80195		TAG, CONTROL PANEL CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	10	PAOZZ	6210-01-083-6258	6700750	80195		LIGHT, INDICATOR WITH NUTS, CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	11	PAOZZ	6210-00-299-4041	6700072	80195		LIGHT, INDICATOR WITH NUTS, CONTROL BOX ELECTRIC IN CAB	EA	1		
17	12	PAOZZ	5310-01-082-9396	6000100	80195		NUT, SELF-LOCKING, HE ALL SWITCHES TO PANEL, CONTROL BOX-ELECTRIC-IN CAB	EA	5		
17	13	PAOZZ	5930-00-108-5387	6700162	80195		SWITCH,TOGGLE CONTROL BOX-ELECTRIC-IN CAB	EA	1		
17	14	PAOZZ	5930-01-084-2371	6700255	80195		SWITCH, TOGGLE CONTROL BOX-ELECTRIC-IN CAB	EA	2		
17	15	PAOZZ		6700263	80195		FUSE, SPRAY BAR CONTROL, CONTROL BOX-ELECTRIC IN-CAB	EA	1		
17	16	PAOZZ	5305-00-068-0502	MS35297-6	96906		SCREW, CAP, HEXAGON H 0.25NCX0.75, CONTROL BOX MOUNTING BRACKET TO PANEL CONTROL BOX CONTROL BOX-ELECTRIC-IN CAB	EA	4		
17	17	PAOZZ	5305-00-984-6210	120221	24617		SCREW, MACHINE 10-24X1-1/2	EA	2		
17	18	PAOZZ	5310-00-009-9162	110633	24617		NUT, PLAIN, HEXAGON 10-24	EA	3		
17	19	XAOZZ		6700749-1	80195		LEAD, FLASHER	EA	1		

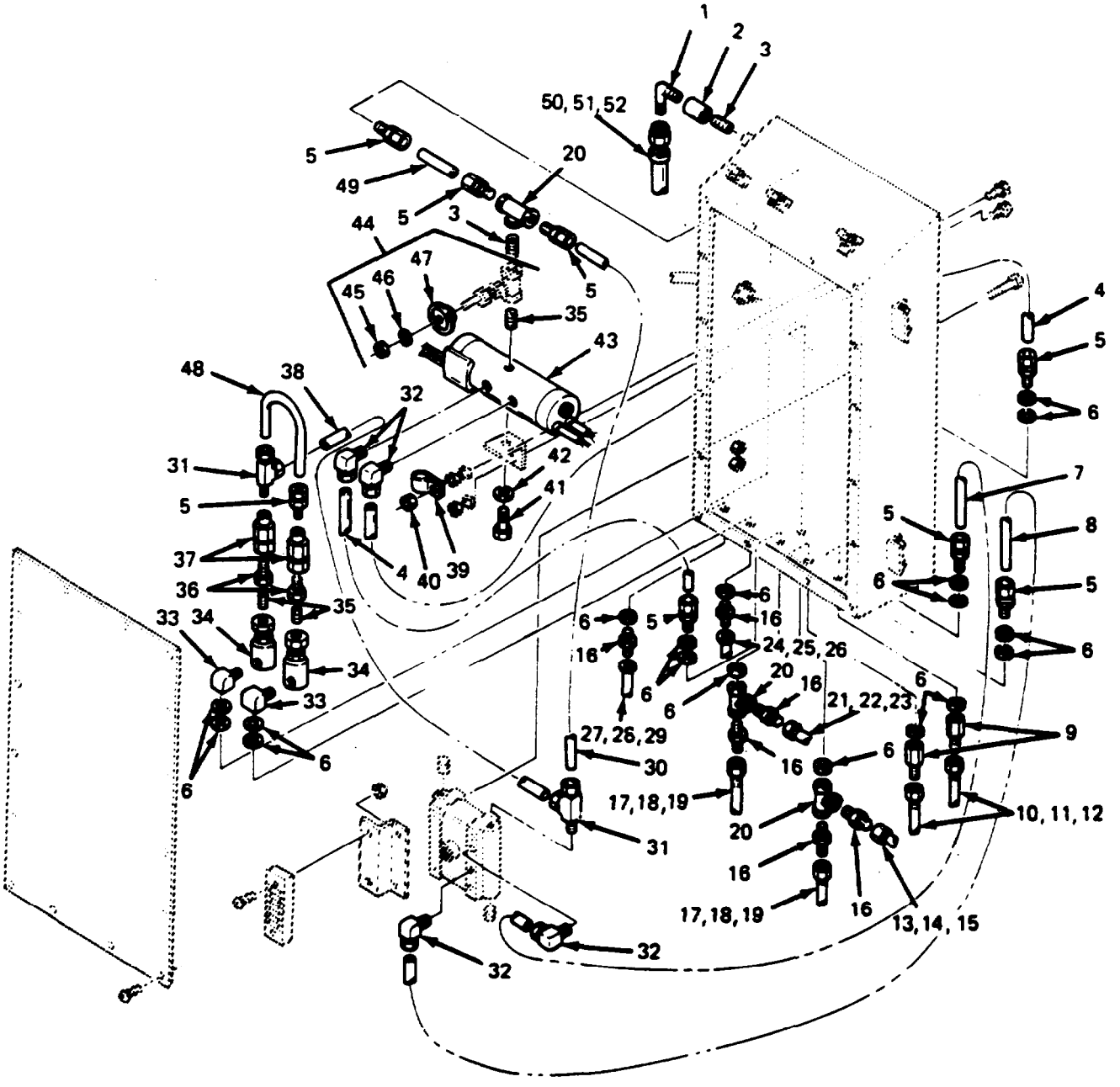

Figure 18. Air Lines and Fittings
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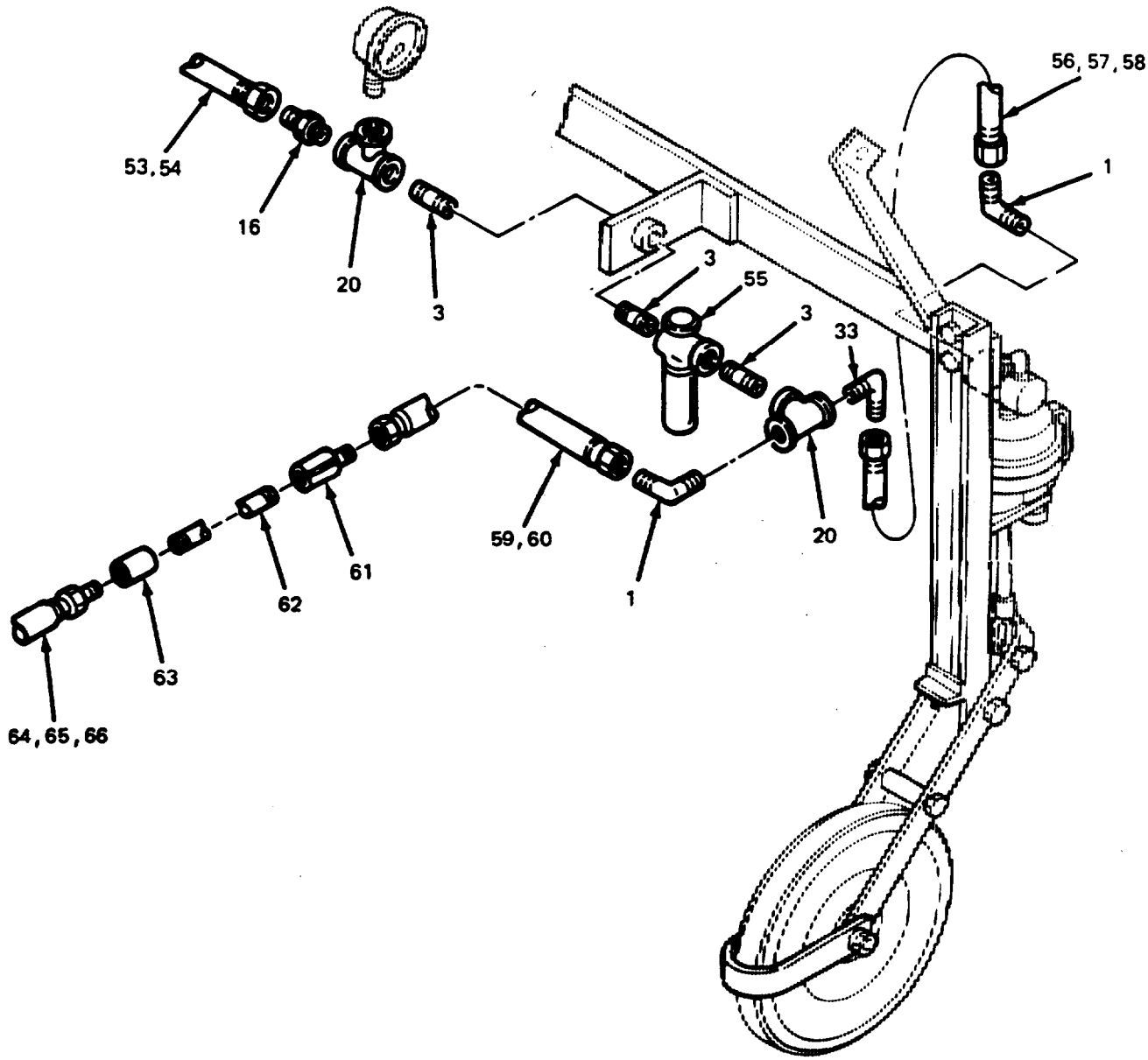

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Figure 18. Air Lines and Fittings
Sheet 2 of 5

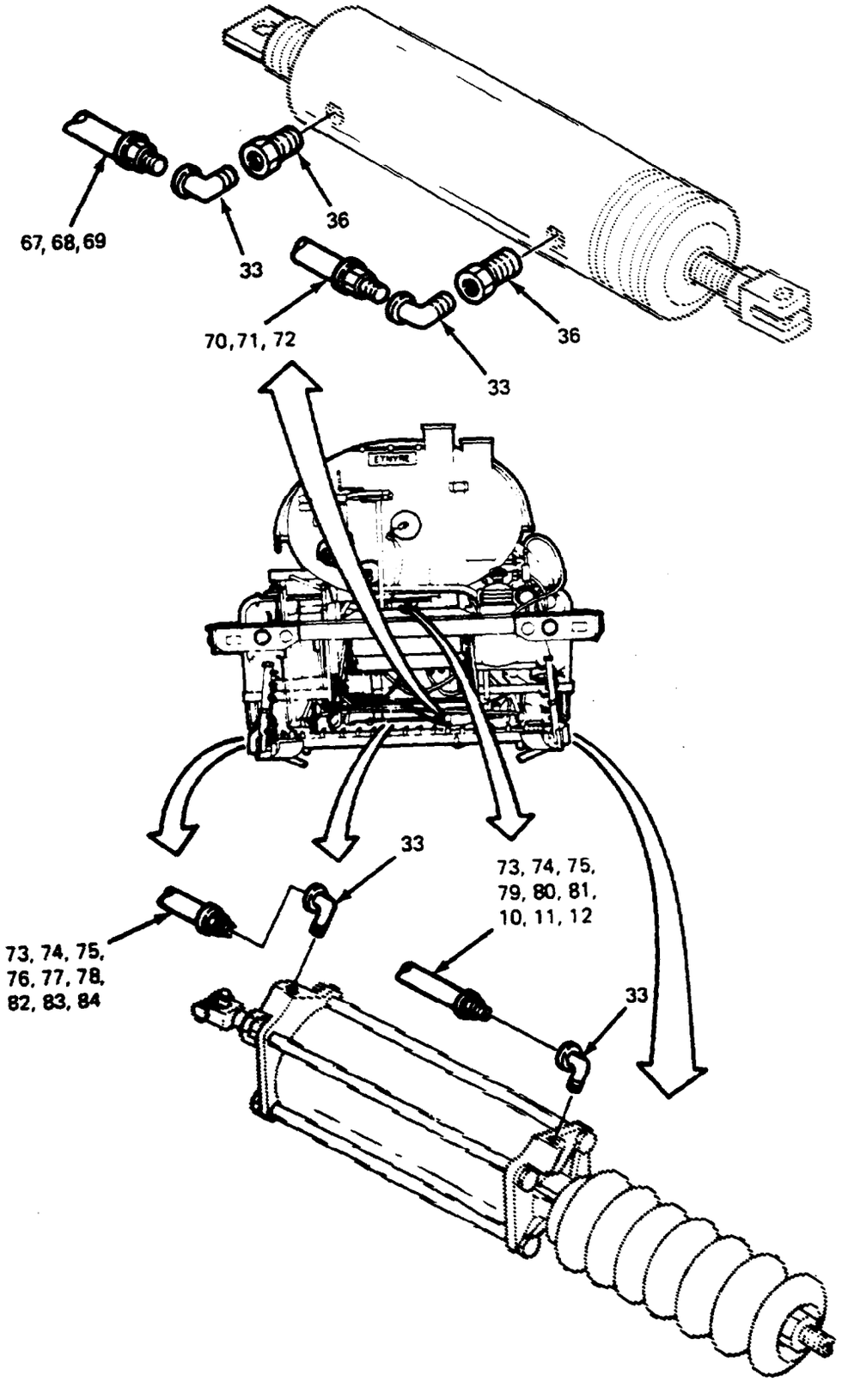

Figure 18. Air Lines and Fittings
Sheet 3 of 5

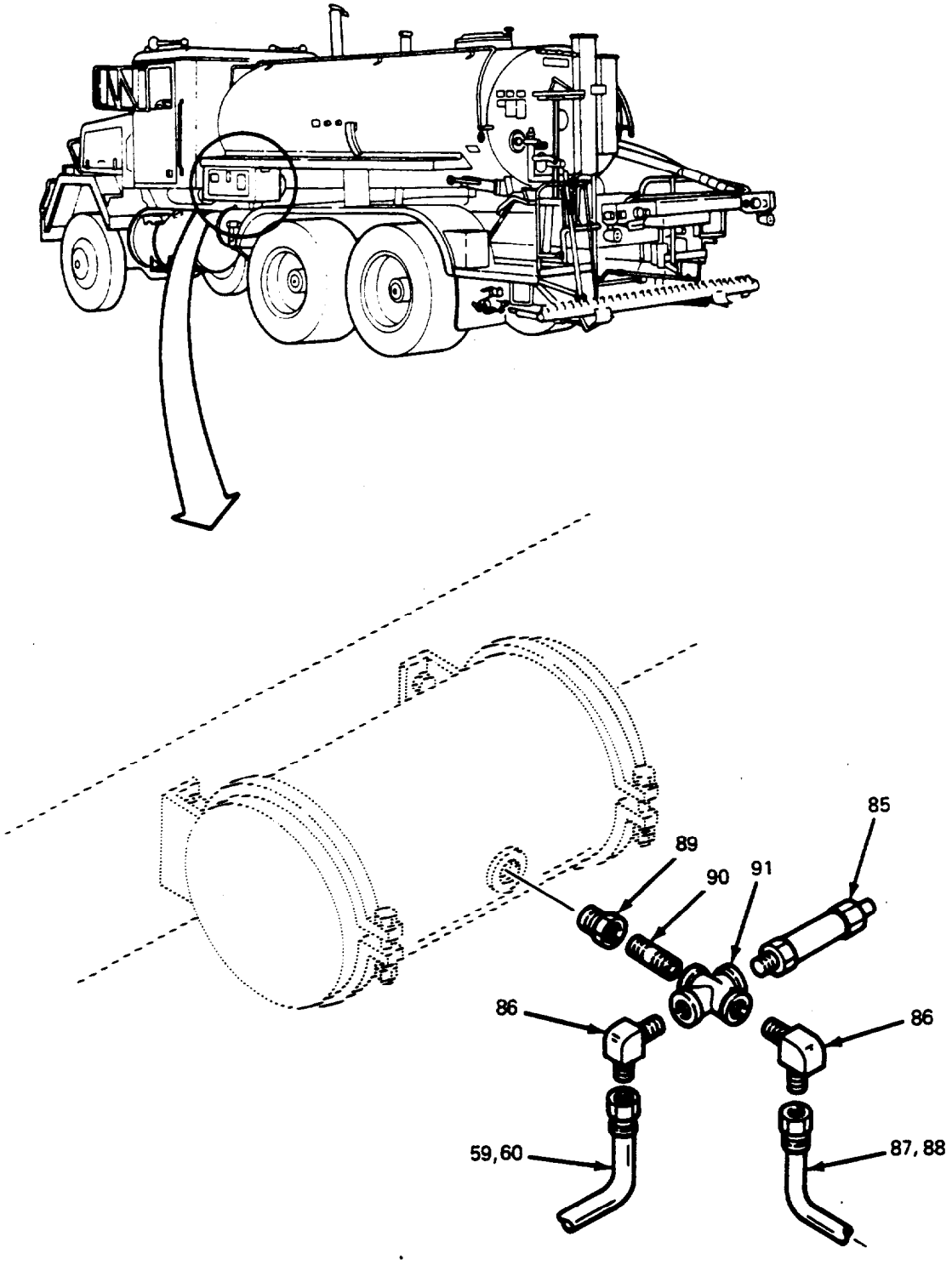

Figure 18. Air Lines and Fittings
Sheet 4 of 5

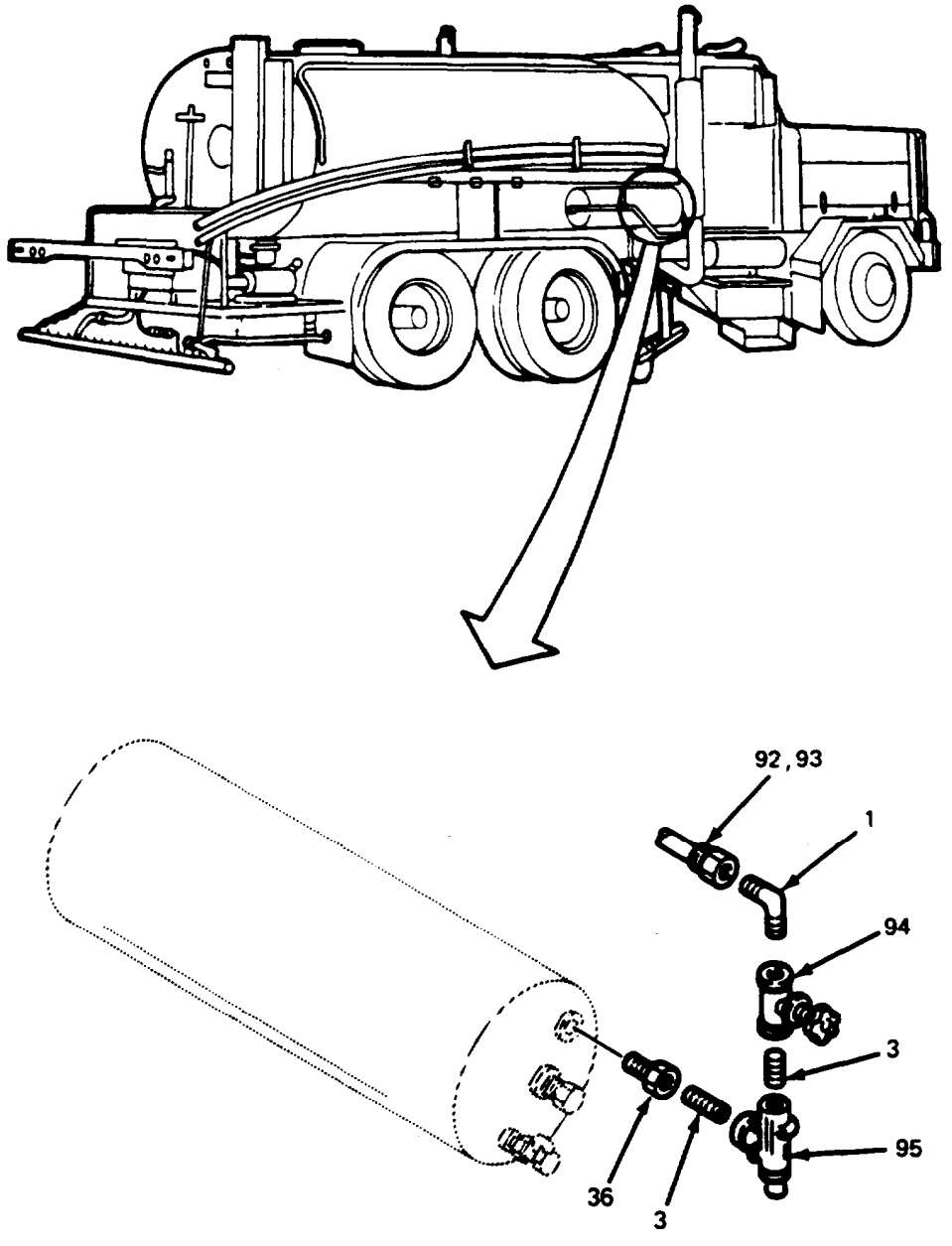

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Figure 18. Air Lines and Fittings
Sheet 5 of 5

(1) ILLUSTRATION (a) FIG. NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4301 AIR LINES AND FITTINGS		
18	1	PAOZZ	4730-00-902-8991	MS39162-5	96906	ELBOW, PIPE TO TUBE 0.25NPT X 0.38 TUBE	EA	4
18	2	PAOZZ		187355	24617	COUPLING, PIPE 1/4NPT	EA	1
18	3	PAOZZ		105407	24617	NIPPLE		
18	4	MOOZZ		MA207-22744	34623	TUBING, NYLON 13INCHES X 3/800, MFR FROM 472001-040-0591	EA	2
18	5	PAOZZ	4730-01-082-6473	6600831	80195	CONNECTOR, MALE AIR LINES/FITTINGS	EA	7
18	6	PAOZZ	5310-00-809-5997	MS15765-217	96906	WASHER, FLAT 1/2X1-1/4	EA	18
18	7	MOOZZ		MA207-22972	34623	TUBING, NYLON MFR FROM 4720-01-040-0591	EA	1
18	8	MOOZZ		MA207-22745	34623	TUBING, NYLON 14INCHES X 3/8, MFR FROM 4720-01-040-0591	EA	1
18	9	PAOZZ	4730-00-270-4606	121323	24617	ADAPTER AIR LINES AND FITTINGS	EA	1
18	10	MOOZZ		3360573	80195	HOSE ASSEMBLY MFR FROM PART NUMBER MA207-22983,6 LOLA	EA	4
18	11	PAOZZ	4730-01-083-3977	6600305	80195	. ADAPTER, STRAIGHT, PI	EA	1
18	12	PAOZZ	4730-01-082-7165	6600306	80195	. ADAPTER, STRAIGHT, TU	EA	1
18	13	MOOZZ		MA207-22918	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22948,6 LOLA	EA	REF
18	14	PAOZZ	4730-01-083-3977	6600305	80195	. ADAPTER, STRAIGHT, PI	EA	1
18	15	PAOZZ	4730-01-082-7165	6600306	80195	. ADAPTER, STRAIGHT, TU	EA	REF
18	16	PAOZZ	4730-00-266-0538	MS35869-23	96906	ADATER, STRAIGHT, PI AIR LINES AND FITTINGS	EA	7
18	17	MOOZZ		3360656	80195	HOSE ASSEMBLY MFR FROM P/N MA207-22982,6 LOLA	EA	REF
18	18	PAOZZ	4730-01-083-3977	6600305	80195	. ADAPTER, STRAIGHT, PI	EA	REF
18	19	PAOZZ	4730-01-082-7165	6600306	80195	. ADAPTER, STRAIGHT, TU	EA	REF
18	20	PAOZZ	4730-00-249-2029	105417	24617	TEE, PIPE 1/4NPT	EA	5
18	21	MOOZZ		MA207-22917	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22980,6 LOLA	EA	REF
18	22	PAOZZ	4730-01-083-3977	660305	80195	. ADAPTER, STRAIGHT, PI	EA	REF
18	23	PAOZZ	4730-01-082-7165	6600306	80195	. ADAPTER, STRAIGHT, TU	EA	REF
18	24	MOOZZ		3360569	80195	HOSE ASSEMBLY MFR FROM P/N MA 207-22977,6 LOLA	EA	REF
18	25	PAOZZ	4730-01-083-3977	6600305	80195	. ADAPTER, STRAIGHT, PI.	EA	REF
18	26	PAOZZ	4730-01-082-7165	6600306	80195	ADAPTER, STRAIGHT, TU	EA	REF
18	27	MOOZZ		3360570	80195	HOSE ASSEMBLY MFR FROM P/N MA107-22979,6 LOLA	EA	REF
18	28	PAOZZ	4730-01-083-3977	6600305	80195	. ADAPTER, STRAIGHT, PI	EA	REF
18	29	PAOZZ	4730-01-082-7165	6600306	80195	. ADAPTER, SSTRAIGHT, TU	EA	REF
18	30	MOOZZ		MA207-22971	34623	TUBING, NYLON 3/800 X 12.00IN., MFR FROM 4720-01-040-0591	EA	1
18	31	PAOZZ	4730-01-082-6474	6600829	80195	TEE MALE RUN	EA	1
18	32	PAOZZ	4730-01-082-6475	6600832	80195	ELBOW AIR LINES/FITTINGS	EA	4
18	33	PAOZZ	4730-00-246-9215	105423	24617	ELBOW, PIPE 1/4NPT, 90 DEGREE	EA	11
18	34	PAOZZ	4810-01-083-0197	6600538	80195	VALVE, SOLENOID	EA	2
18	35	PAOZZ	4730-00-937-7065	105405	24617	NIPPLE, PIPE 0.38NPTX0.25NPT	EA	10
18	36	PAOZZ	4730-00-193-0869	BM11352-77	19422	BUSHING, PIPE 0.38NPTX0.25NPT	EA	5
18	37	PAOZZ	4820-01-082-6539	6600294	80195	VALVE, CHECK	EA	2
18	38	MOOZZ		MA207-22973	34623	TUBING, NYLON 3/80D X 8.00IN., MFR FROM 4720-01-040-0591	EA	1
18	39	PAOZZ	5340-01-087-2433	128281	24617	CLAMP, TUBING AIR LINES AND FITTINGS	EA	1
18	40	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON 1/4-20	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
18	41	PAOZZ	5305-00-044-4153	122408	24617	SCREW,CAP,HEXAGON H 0.50X1.00,SOLENOID VALVE TO BRACKET	EA	1
18	42	PAOZZ	5310-00-584-5272	MS35338-48	96906	WASHER,LOCK SOLENOID VALVE TO BRACKET	EA	1
18	43	PAOZZ	4810-01-082-6559	6600764	80195	VALVE,SOLENOID BAR,ON-OFF	EA	1
18	44	PAOZZ	4820-01-088-9178	6600303	80195	VALVE ASSY,GLOBE 1/4NPT	EA	1
18	45	PAOZZ	5310-00-723-4458	MS35690-404	96906	.NUT,PLAIN,HEXAGON 1/4-20	EA	1
18	46	PAOZZ	5310-00-809-4058	MS27183-10	96906	.WASHER,FLAT 1/4	EA	1
18	47	PAOZZ	5355-01-102-5637	ASTM-A-47	14448	.HANDWHEEL	EA	1
18	48	MOOZZ		MA207-22743	34623	TUBING,NYLON 12INCHES X 3/8,MFR FROM 4720-01-040-0591	EA	1
18	49	MOOZZ		MA207-22970	34623	TUBING,NYLON 3/8OD X 3.00IN.,MFR FROM 4720-01-040-0591	EA	1
18	50	MOOZZ		MA207-22915	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22987,6 LOLA	EA	REF
18	51	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	REF
18	52	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	REF
18	53	MOOZZ		MA207-22914	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22986,6 LOLA	EA	REF
18	54	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	REF
18	55	PAOZZ	4930-01-096-9264	675009	34623	OILER,AIRLINE	EA	1
18	56	MOOZZ		MA207-22916	24617	HOSE MFR FROM P/N MA207-22975, 6 LOLA	EA	1
18	57	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI AIR LINES AND FITTINGS	EA	1
18	58	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	59	MOOZZ		MA207-22914	34623	HOSE MFR FROM P/N MA207-22975, 6 LOLA	EA	2
18	60	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU AIR LINES/FITTINGS	EA	2
18	61	PAOZZ	4730-00-270-4606	121323	24617	ADAPTER ,STRAIGHT,PI	EA	2
18	62	PAOZZ	4710-01-101-8541	3330152	80195	PIPE 1/4X118IN	EA	1
18	63	PAOZZ		187395	24617	COUPLING,PIPE	EA	1
18	64	MOOZZ		MA207-22915	34623	HOSE,RUBBER MFR FROM P/N MA07-22987, 6 LOLA	EA	1
18	65	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	1
18	66	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	67	MOOZZ		3360569	80195	HOSE,ASSEMBLY MFR FROM P/N MA207-22977,6 LOLA	EA	1
18	68	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI AIR LINES/FITTINGS	EA	8
18	69	PAOZZ	4730-01-082-7165	6600306	80195	.CONNECTOR HOSE,SWIVEL	EA	1
18	70	MOOZZ		3360570	80195	HOSE ASSEMBLY MFR FROM P/N MA207-22979, 6 LOLA	EA	1
18	71	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	1
18	72	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	73	MOOZZ		3360656	80195	HOSE ASSEMBLY MFR FROM P/N MA207-22982, 6 LOLA	EA	2
18	74	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	1
18	75	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	76	MOOZZ		MA207-22917	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22917, 6 LOLA	EA	1
18	77	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	1
18	78	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	3
18	79	MOOZZ		MA207-22918	34623	HOSE ASSEMBLY MFR FOM P/N MA207-22984, 6 LOLA	EA	1
18	80	PAOZZ	4730-01-083-3977	6600306	80195	.ADAPTER,STRAIGHT,PI	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
18	81	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	82	MOOZZ		3360574	80195	HOSE ASSEMBLY MFR FROM P/N MA207-22981, 6 LOLA	EA	2
18	83	PAOZZ	4730-01-083-3977	6600305	80195	.ADAPTER,STRAIGHT,PI	EA	1
18	84	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	1
18	85	PAOZZ	4820-00-740-8795	6600299	80195	VALVE,SAFETY RELIEF AIR LINES AND FITTINGS	EA	1
18	86	PAOZZ	4730-00-162-2858	6200179	80195	ELBOW,TUBE 90DEGREE	EA	2
18	87	MOOZZ		7230153	80195	HOSE ASSEMBLY MFR FROM P/NN MA207-22985, 6 LOLA	EA	1
18	88	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	2
18	89	PAOZZ	4730-00-202-6663	MS1887-15	96906	BUSHING	EA	1
18	90	PAOZZ	4730-00-188-1864	MS1953-498	96906	NIPPLE,PIPE 0.38NPT X 1.00	EA	1
18	91	PAOZZ		115193	24617	CROSS,PIPE 0.38NPT	EA	1
18	92	MOOZZ		7230153	80195	HOSE ASSEMBLY MFR FROM P/N MA207-22985,FSCM 34623,6 LOLA, FSCM 24161	EA	REF
18	93	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	REF
18	94	PAOZZ	4820-01-096-9108	6600194	80195	VALVE,GLOBE	EA	1
18	95	PAOZZ	4810-01-026-6208	6600304	80195	VALVE,SAFETY RELIEF PRESSURE REGULATOR	EA	1

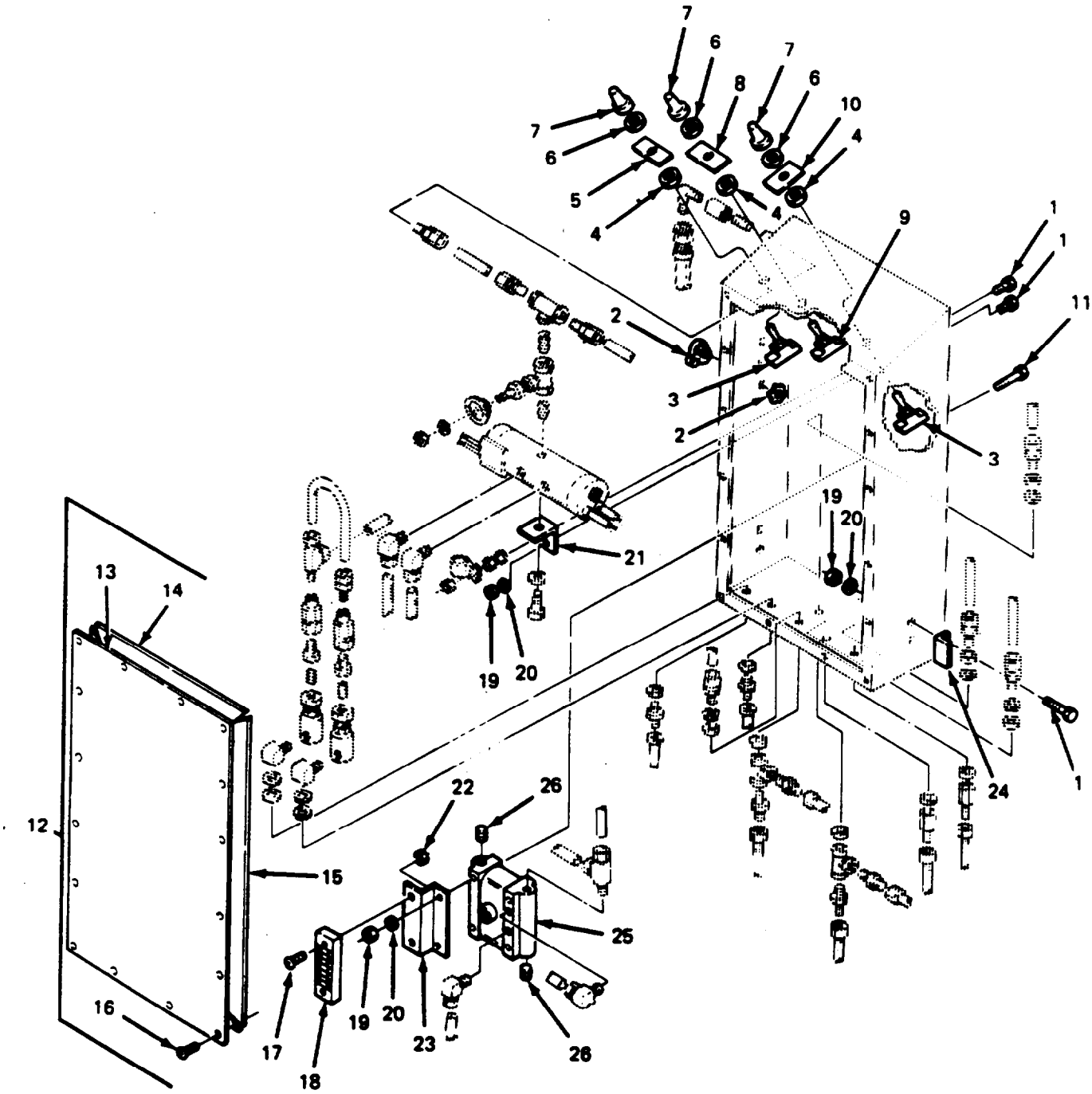

Figure 19. Air Control Box

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4317 AIR CONTROL BOX		
19	1	PAOZZ	5305-00-068-0500	MS35297-3	96906	SCREW,CAP,HEXAGON H 1/4-1/2IN.LG,BRACKET TO CONTROL BOX	EA	10
19	2	PAOZZ		6700310	80195	CONNECTING LINK,RIG ELECTRICAL,AIR CONTROL BOX ASSEMBLY	EA	1
19	3	PAOZZ	5930-01-084-2289	6FC54	34623	SWITCH,TOGGLE SHIFT AND ON-OFF SPOT,AIR CONTROL BOX ASSEMBLY	EA	2
19	4	PAOZZ	5310-01-082-9396	6000100	80195	NUT,SELF-LOCKING,HE AIR CONTROL BOX ASSEMBLY	EA	3
19	5	PAOZZ		3360103	80195	PLATE,TOGGLE SWITCH TO AIR CONTROL BOX ASSEMBLY	EA	1
19	6	PAOZZ	5310-01-082-9395	6000103	73559	NUT,LOCK SWITCH TO AIR CONTROL BOX,AIR CONTROL BOX ASSEMBLY	EA	3
19	7	POOZZ	5930-01-085-8375	N1930	13226	LEVER,TOGGLE SWITCH AIR CONTROL BOX ASSEMBLY	EA	3
19	8	PAOZZ	5340-01-094-1987	Y-05	04638	PLATE,TOGGLE SWITCH AIR CONTROL BOX ASSEMBLY	EA	1
19	9	PAOZZ		6700162	73559	SWITCH,TOGGLE AIR CONTROL BOX ASSEMBLY	EA	1
19	10	PAOZZ	5975-01-082-7807	3360104	80195	PLATE,WALL,ELECTRIC AIR CONTROL BOX ASSEMBLY	EA	1
19	11	PAOZZ	5305-00-071-2236	MS90725-15	96906	SCREW,CAP,HEXAGON H 1/4IN.-20X2 1/4IN.LG,BRACKET TO SOLENOID TO AIR CONTROL BOX,AIR CONTROL BOX ASSEMBLY	EA	2
19	12	PAOOO		3360594	80195	AIR CONT BOX ASSY AIR CONTROL BOX ASSEMBLY	EA	1
19	13	XDOZZ		3360437	80195	.COVER,CONTROL BOX AIR CONTROL BOX ASSEMBLY	EA	1
19	14	POOZZ	5975-01-082-8139	3360438	80195	.GASKET 10IN.LG,AIR CONTROL BOX ASSEMBLY	EA	2
19	15	POOZZ	5330-01-082-8140	3360439	80195	.GASKET 16-3/4IN.LG,AIR CONTROL BOX ASSEMBLY	EA	2
19	16	PAOZZ		9424110	24617	.SCREW,TAPPING,THREA N0.10X0.75LG,CONTROL BOX COVER TO CONTROL BOX,AIR CONTROL BOXASSEMBLY	EA	16
19	17	PAOZZ	5305-00-984-6193	436695	24617	SCREW,MACHINE TERMINAL STRIP TO MOUNTING BRACKET,AIR CONTROL BOX ASSEMBLY	EA	2
19	18	PAOZZ	5940-01-082-7447	3160001	80195	TERMINAL STRIP AIR CONTROL BOX ASSEMBLY	EA	1
19	19	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON BRACKET TO SOLENOID TO AIR CONTROL BOX,AIR CONTROL BOX ASSY	EA	12
19	20	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK BRACKET TO SOLENOID TO AIR CONTROL BOX,AIR CONTROL BOX ASSY	EA	12
19	21	XDOZZ		3360648	80195	BRKT,VALVE MTG AIR CONTROL BOX ASSEMBLY	EA	1
19	22	PAOZZ	5310-00-934-9757	120622	24617	NUT,PLAIN,HEXAGON TERMNAL STRIP TO MOUNTING BRACKET,AIR CONTROL BOX ASSEMBLY	EA	2
19	23	XDOZZ		3360508	80195	BRKT,TERM STRIP MR AIR CONTROL BOX ASSEMBLY	EA	1
19	24	PAOZZ	5340-01-101-4875	3360436	80195	BRACKET,ANGLE	EA	4
19	25	PAOZZ	4810-01-082-6666	6600040	80195	VALVE,SOLENOID 12 VOLT	EA	1
19	26	PAOZZ		MS49005-004	96906	PLUG,PIPE	EA	2

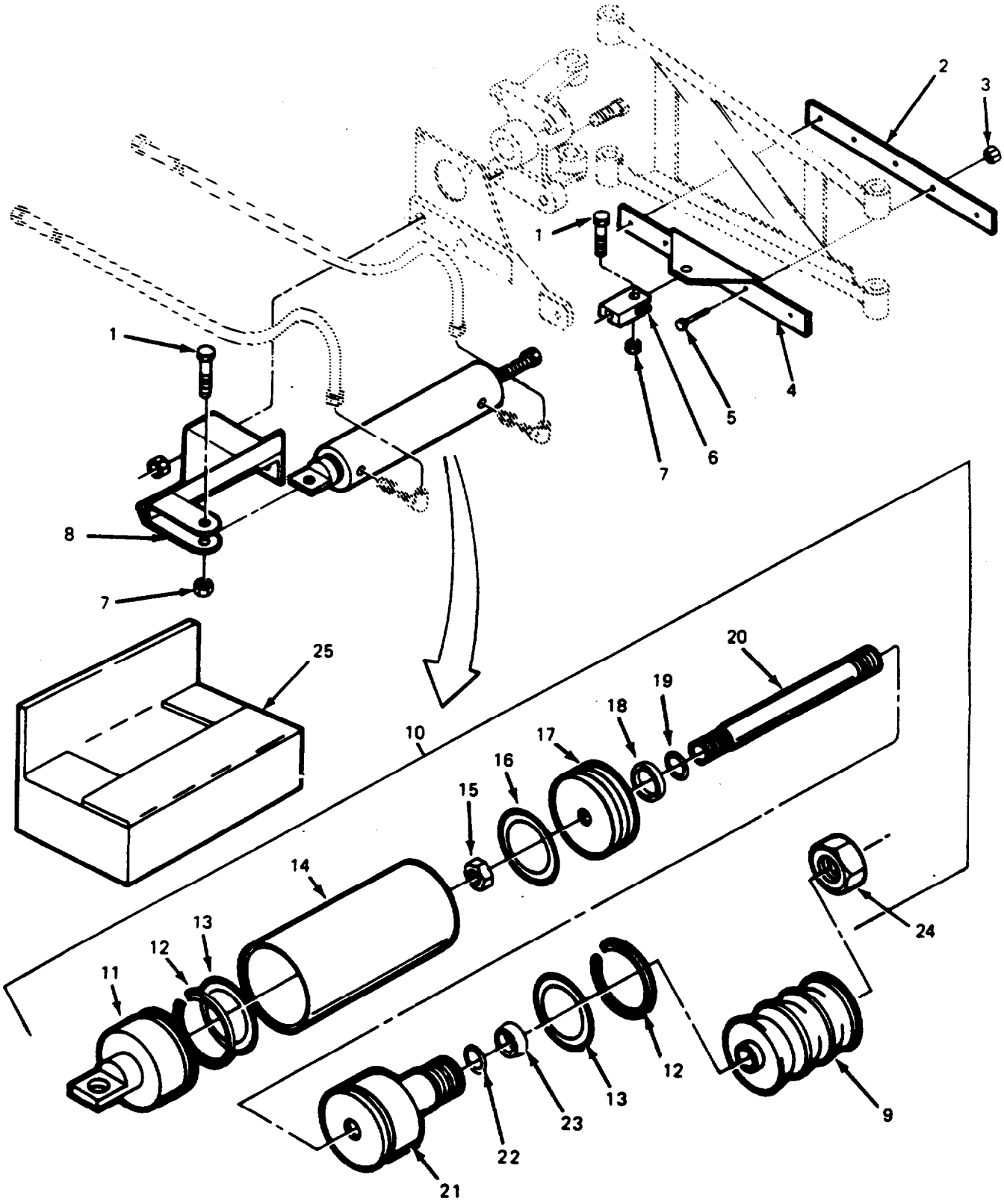

Figure 20. Spray Bar Shifting Air Cylinder

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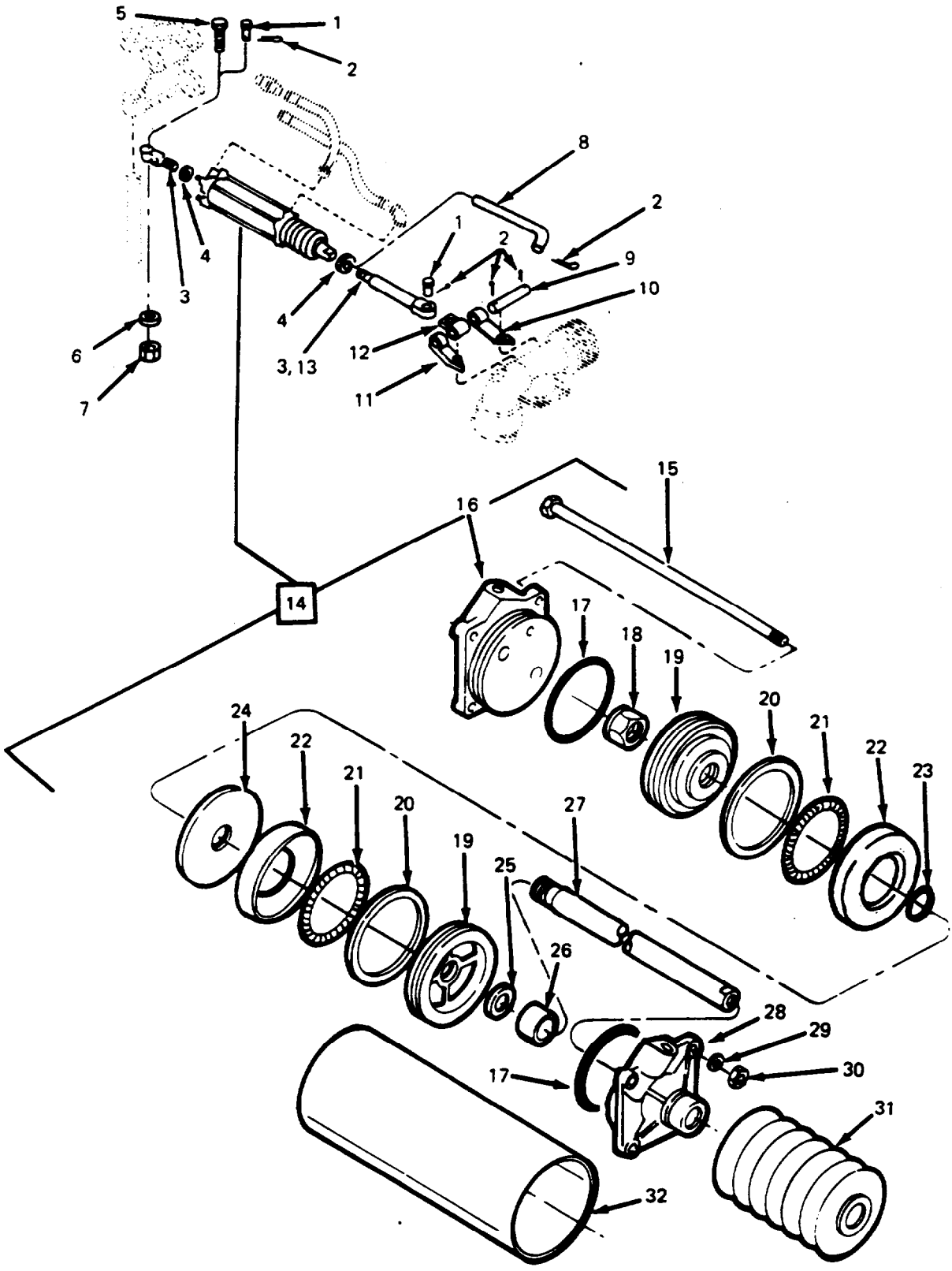
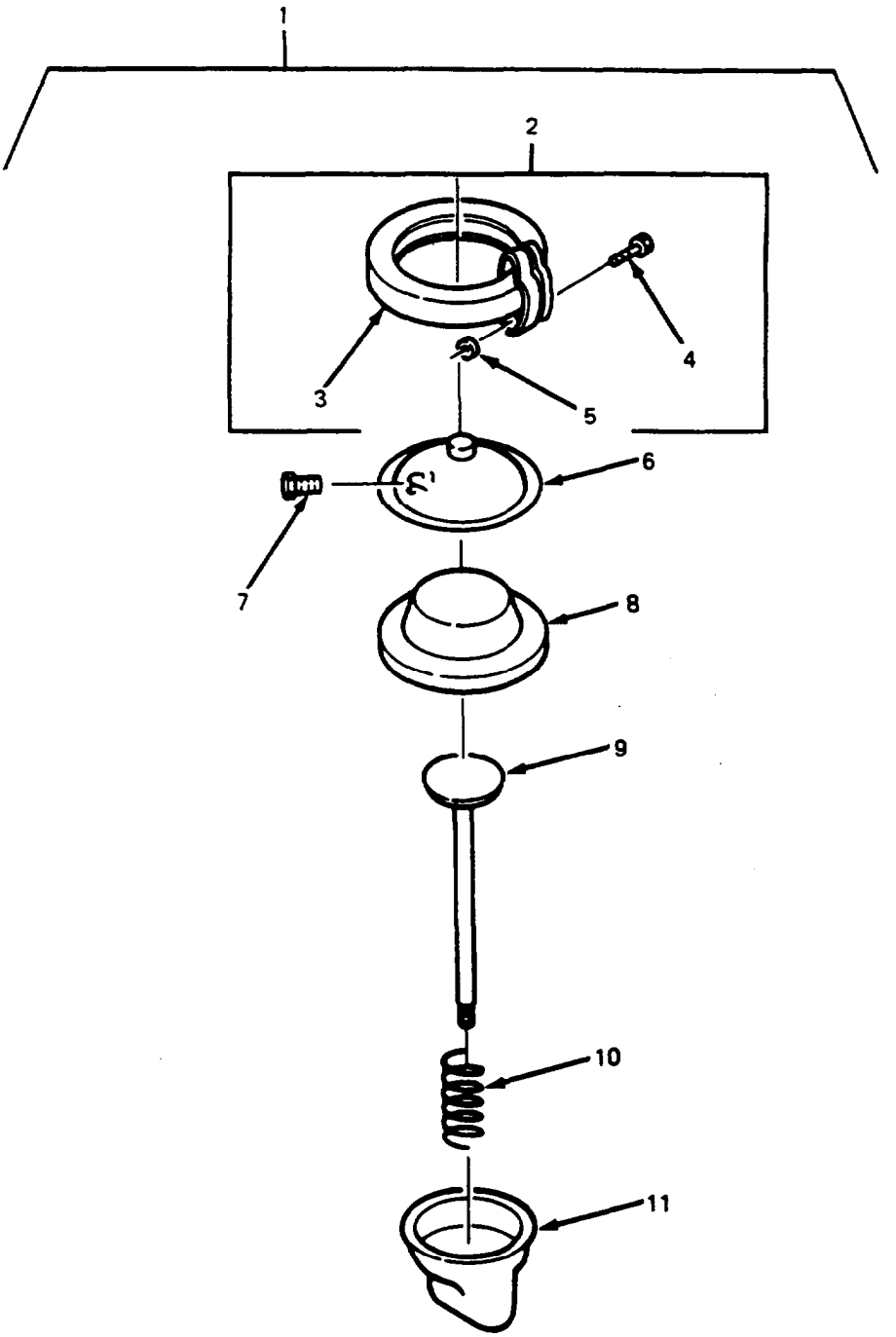
(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4318 SPRAY BAR SHIFTING AIR CYLINDER		
20	1	PAOZZ	5305-00-042-9478	MS90725-90	96906	SCREW,CAP,HEXAGON H 0.44NCX1.75,REAR CYLINDER HEAD TO CYLIINDER MTG BRKT,CYLINDER AIR-SPRAY BAR SHIFTING	EA	2
20	2	XDOZZ	5310-00-732-0558	3360399	80195	PLATE,PRESSURE CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	3	PAOZZ		120377	24617	NUT,PLAIN,HEXAGON 0.38NC,CONNECTOR PLATE TO PRESSURE PLATE, CYLINDER-AIR-SPRAYBAR SHIFTING	EA	5
20	4	XDOZZ		3360397	80195	BRACKET CONNECTOR PLATE,CYLINDER-AIR-SPRAY BAR	EA	1
20	5	PAOZZ	5305-00-206-3976	122145	11862	SCREW,CAP,HEXAGON H 0.38N0X1.25,CONNECTOR PLATE TO PRESSURE PLATE,CYLINDER-AIR-SPRAY BAR SHIFTING	EA	5
20	6	PAOZZ		345	05735	CLEVIS,CYLINDER CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	7	PAOZZ		9418981	24617	NUT,HEX,LOCK 0.44NC,REAR CYLINDER HEAD TO CYLINDET MTG BRKT CYLINDER-AIRSPRAY BAR SHIFTING	EA	2
20	8	XDOZZ		3360405	80195	BRACKET CYLINDER MOUNTING,CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	9	POFZZ	2590-00-125-5456	NC-256	06721	BOOT,DUST AND MOIST CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	10	PADFF	3040-01-083-1050	0330-1006-060	03990	CYLINDER ASSEMBLY,A AIR-W/JAM NUT 3/4NF,CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	11	PAFZZ	3895-01-101-5031	5305	03990	.HEAD,LEFT AIR CYLIN CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	12	PAFZZ	5365-01-102-4359	5312	03990	.RING RETAINING CYLINDER-AIR-SPRAY BAR SHIFTING	EA	2
20	13	KFFZZ		Y325-232	03990	.PACKING,PREFORMED HEAD,CYLINDER-AIR-SPRAY BAR SHIFTING PART OF KIT P/N 7016	EA	2
20	14	PAFZZ		5808-060	03990	.BARREL,AIR CYLINDEER CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	15	PAFZZ		30012	03990	.NUT,SELF-LOCKING,HE CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	16	KFFZZ		Y325-334	03990	.PACKING,PREFORMED PISTON,CYLINDER-AIR-SPRAY BAR SHIFTING PART OF KIT P/N 7016	EA	1
20	17	PAFZZ	3895-01-101-0002	3205	03990	.PISTON,AIR CYLINDER CYLINDER-AIR-SPRAY BAR SHIFTING	EA	8
20	18	PAFZZ		5913	03990	.SPACER CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	19	KFFZZ		Y325-014	03990	.PACKING,PREFORMED ROD,CYLINDER-AIR-SPRAY BAR SHIFTING PART OF KIT P/N 7016	EA	1
20	20	PAFZZ	3040-01-102-5005	5810-060	03990	.SHAFT,SHOULDERED CYLINDR-AIR-SPRAY BAR SHIFTING	EA	8
20	21	PAFZZ	3895-01-101-5017	5304	03990	.HEAD,FRONT AIR CYLI CYLINDER-AIR-SPRAY BAR SHIFTING	EA	1
20	22	KFFZZ		Y325-210	03990	.PACKING,PREFORMED ROD GLAND,CYLINDER-AIR-SPRAY BAR SHIFTING PART OF KIT P/N 7016	EA	1
20	23	KFFZZ		95-16	03990	.WIPER CYLINDER-AIR-SPRAY BAR SHIFTING PART OF KIT P/N 7016	EA	1
20	24	PAOZZ		Y175-1120	03990	.NUT,HEXAGON CYLINDER-AIR-SPRAY BAR SHFTING	EA	1
20	25	PAFZZ	3040-01-089-1953	7016	03990	KIT,CYLINDER REPAIR CYLINDER-AIR-SPRAY BAR SHIFTIING	EA	1
20	13					PACKING,PREFORMED	EA	2
20	16					PACKING,PREFORMED	EA	1
20	19					PACKING,PREFORMED	EA	1
20	22					PACKING,PREFORMED	EA	1
20	23					WIPER	EA	1



TA075768

Figure 21. Spray Bar Turn Up and on-Off Air Cylinder

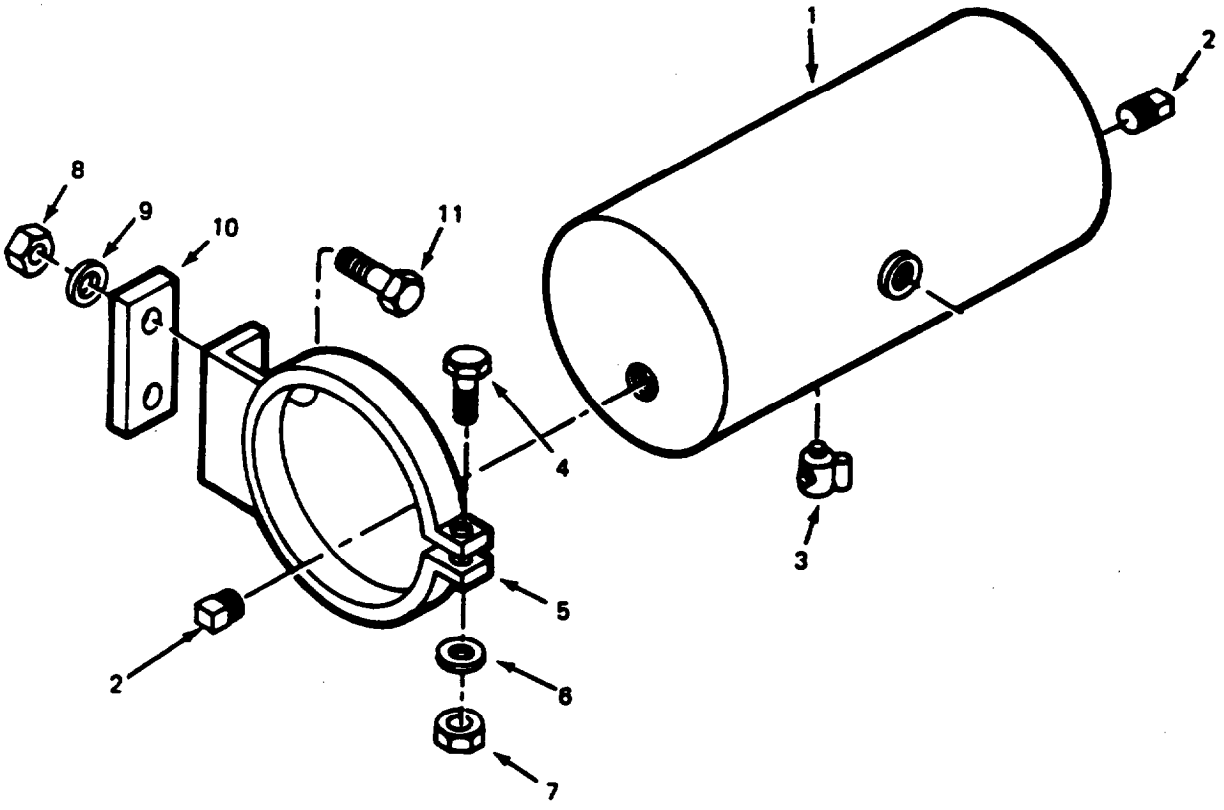
(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4318 SPRAY BAR TURN UP AND ON-OFF		
						AIR CYLINDER		
21	1	PAOZZ	5315-01-102-1786	N5X122	40342	PIN,STRAIGHT,HEADED CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	7
21	2	PAOZZ	5315-00-816-1794	MS24665-285	96906	PIN,COTTER CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	11
21	3	PAOZZ	5340-01-102-8387	N-13-X-669	40342	CLEVIS,ROD END CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	5
21	4	PAOZZ	5310-00-732-0560	120371	24617	NUT,HEX 0.50NF,CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	8
21	5	PAOZZ	5305-00-042-9478	MS90725-90	96906	SCREW,CAP,HEXAGON H 0.44NC X 1.75	EA	1
21	6	PAOZZ	5310-00-809-5997	MS15795-217	96906	WASHER,FLAT 7/16	EA	1
21	7	PAOZZ		9418981	24617	LOCKNUT,HEXAGON 0.44NC	EA	1
21	8	PAOZZ	3895-01-093-8255	3360564	80195	LINK,ADJUSTING	EA	1
21	9	PAOZZ		3360552	80195	PIN,STRAIGHT,HEADLE CYLINDERS-BAR TURN UP AND TOC-ON-OFF	EA	2
21	10	XDOZZ		3360556	80195	PLATE,PIVOT-RIGHT CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	11	XDOZZ		3360561	80195	PLATE,PIVOT,LEFT CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	12	XDOZZ		3360554	80195	CONNECTOR-PIVOT CYLINDERS-BAR TURN UP AND TOC-ON-OFF	EA	2
21	13	PAOZZ		3360550	80195	ROD,YOKE EXTENSION CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	14	PAOFF	3040-01-028-1495	N3859	06721	CYLINDER ASSEMBLY,A CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	4
21	15	PAFZZ	5306-01-102-1780	3-X-812	40342	.BOLT CYLINDER TUBE AND PISTON TO FRONT AND REAR HEADS, CYLINDERSBAR TURN UP AND TUC-ON-OFF	EA	4
21	16	PAFZZ	4310-01-078-6277	N-10976-A	06721	.COVER ASSY,AIR CYLI CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	17	PAFZZ	5330-00-548-6124	N-11728-AJ	06721	.PACKING,PREFORMED CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	18	PAFZZ	5310-01-102-5447	2-X-5504	40342	.NUT,SELF-LOCKING,EX CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	19	PAFZZ	4310-01-078-6275	N-13660	06721	.PISTON FOLLOWER CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	20	POFZZ	5330-00-549-7695	N-10848-W	06721	.FELT,MECHANICAL,PRE CYLINDRS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	21	PAFZZ	5360-00-429-2085	N-12697-C	40342	.SPRING,RETURN CYLINDERS-BAR TURN-UP AND TUC-ON-OFF	EA	2
21	22	POFZZ	4310-01-078-6276	N-13497	06721	.CUP,PISTON CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	2
21	23	PAFZZ	5330-00-548-6129	N-11728-F	06721	.PACKING,PREFORMED CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	24	PAFZZ		N-1888-B	40342	.SPACER CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	25	PAFZZ		4-X-2392	40342	.SPACER CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	26	PAFZZ		N-10193-AD	40342	.BUSHING,SLEEVE CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	27	PAFZZ		N-1884-BG	40342	.SHAFT,SHOULDERED CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	28	PAFZZ	3895-01-100-3753	N-10930-F	40342	.HEAD,FRONT,AIR CYLI CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	29	PAFZZ	5310-00-255-6809	4-X-11	40342	.WASHER,LOCK CYLINDERS TUBE AND PISTON TO FRONT AND REAR HEADS,CYLINDERSBAR TURN UP AND TUC-ON-OFF	EA	4
21	30	PAFZZ	5310-01-102-4350	2-X-303	40342	.NUT,PLAIN,HEXAGON CLYLINDER TUBE AND PISTON TO FRONT AND REAR HEADS,CYLINDERSBAR TURN UP AND TUC-ON-OFF	EA	4
21	31	POFZZ		C-256	40342	.BELLOWS,UBBER CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1
21	32	PAFZZ	4710-01-101-7167	N-1882	40342	.TUBE,CYLINDER,SPRAY CYLINDERS-BAR TURN UP AND TUC-ON-OFF	EA	1



TA075743

Figure 22. Bitumeter Air Chamber

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4318 BITUMETER AIR CHAMBER		
22	1	PAOFF	3895-01-098-1923	3360673	80195	CHAMBER,AIR BITUMETER-RAISE,BITUMETER ASSY-AIR CONTROL	EA	1
22	2	PAFZZ	5365-00-236-6665	228280	06853	.CLAMP ASSEMBLY BITUMETER ASSY-AIR CONTROL	EA	1
22	3	PAFZZ	5365-00-717-6936	238373	06853	..RING,CLAMP BITUMETER ASSY-AIR CONTROL	EA	1
22	4	PAFZZ	5306-00-844-5685	237886	06853	..BOLT,MACHINE 12 POINT,CLAMP RING TO PRESSURE PLATE, BITUMETER ASSEMBLY-AIR CONTROL	EA	2
22	5	PAFZZ	5310-00-638-2599	237887	06853	..NUT,PLAIN,HEXAGON CLAMP RING TO PRESSURE PLATE,BITUMETER ASSY-AIR CONTROL	EA	2
22	6	PAFZZ	2530-00-421-7099	225733	06853	.PLATE,PRESSURE BITUMETER ASSY-AIR CONTROL	EA	1
22	7	PAFZZ	4730-00-012-7951	230111	06853	.PLUG,PIPE 1/4PNT HEX HD,BITUMETER ASSY-AIR CONTROL	EA	1
22	8	PCFZZ	2530-00-765-8902	234433	06853	.DIAPHRAGM,CLUTCH CY BITUMETER ASSY-AIR CONTROL	EA	1
22	9	XDFZZ		239086	06853	.ROD,PUSH BITUMETER ASSY-AIR CONTROL	EA	1
22	10	PAFZZ	5360-00-255-6907	234435	06853	.SPRING,HELICAL,COMP BITUMETER ASSY-AIR CONTROL	EA	1
22	11	XDFZZ		290053	06853	.NON-PRESSURE PLATE BITUMETER ASSY-AIR CONTROL	EA	1



TA076742

Figure 23. Air Reservoir

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4321 AIR RESERVOIR		
23	1	PAOZZ	3895-01-100-3752	6450357	80195	AIR RESERVOIR,SPRAY	EA	1
23	2	PAOZZ	4730-00-278-3054	219191	24617	PLUG,PIPE SQUARE HD,0.38NPT,RESERVOIR-AAIR CONTROL	EA	2
23	3	PAOZZ		6600162	80195	DRAIN COCK 0.25NPT,RESERVOIR-AIR CONTROL	EA	1
23	4	PAOZZ	5305-00-018-6494	121900	24617	SCREW,ASSEMBLED WAS 0.25NCX1.00,BRACKETS TO AIR RESERVOIR RESERVOIR-AIR CONTROL	EA	2
23	5	XDOZZ		3360008	80195	BRACKET ASSEMBLY AIR RESERVOIR MTG,RESERVOIR-AIR CONTROL	EA	2
23	6	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK 0.25,BRACKETS TO AIR RESERVOIR,RESERVOIR-AIR CONTROL	EA	2
23	7	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 0.25NC,BRACKETS TO AIR RESERVOIR, RESERVOIR-AIR CONTROL	EA	2
23	8	PAOZZ	5310-00-880-8189	MS1967-11	96906	NUT,PLAIN,HEXAGON 0.44NC,PLATE TO BRACKET TO REAR OF TOOL BOX,RESERVOIR-AIRCONTROL	EA	4
23	9	PAOZZ	5310-00-209-0965	MS35338-28	96906	WASHER,LOCK 0.44,PLATE TO BRACKET TO REAR OF TOOL BOX, RESERVOIR-AIRCONTROL	EA	4
23	10	XDOZZ		3311155	80195	PLATE BRACKET BACKING,RESRVOIR-AIR CONTROL	EA	2
23	11	PAOZZ	5305-00-069-5573	122253	24617	SCREW,CAP,HEXAGON H PLATE TO BRACKET TO REAR OF TOOL BOX, RESERVOIR-AIR CONTROL	EA	4

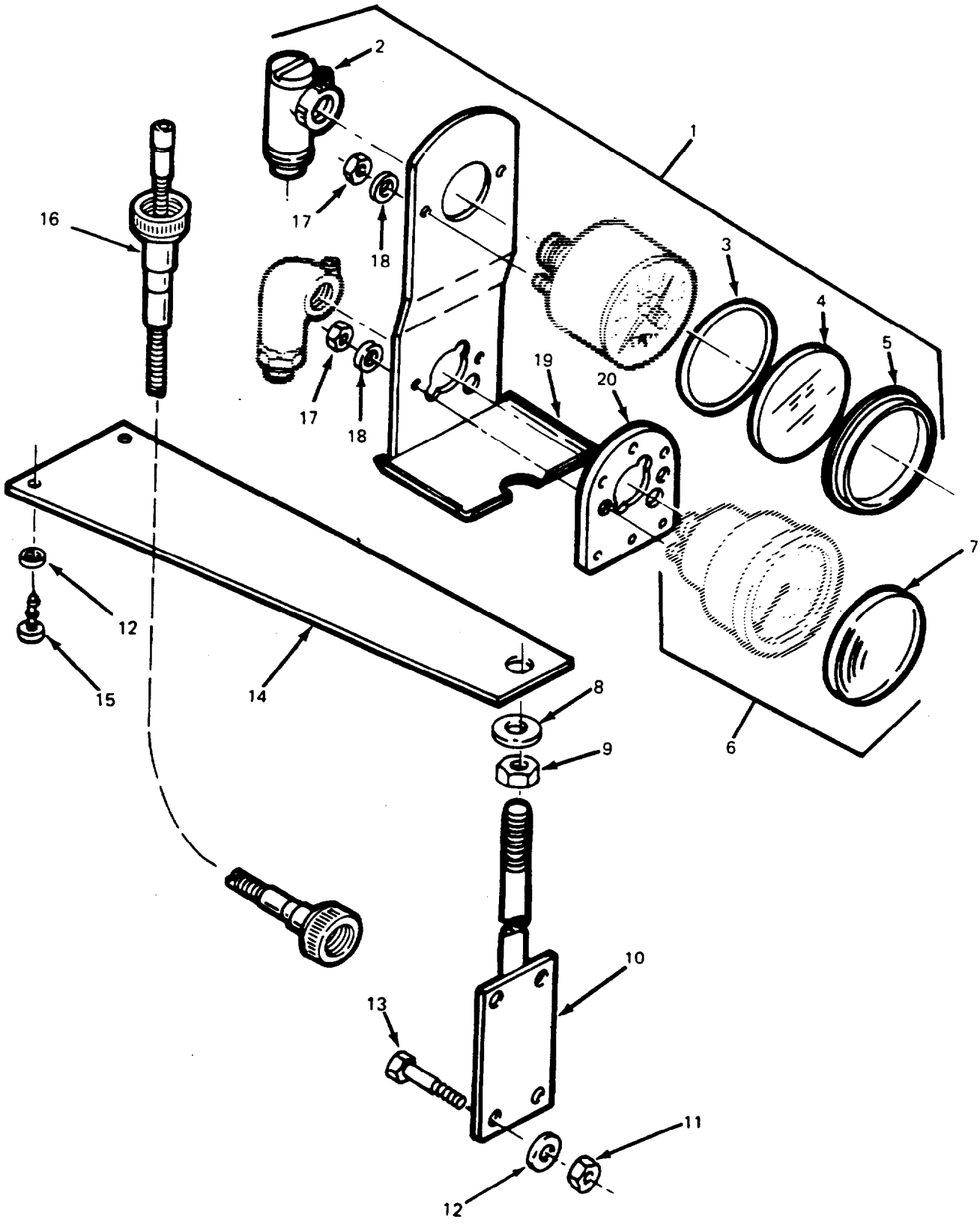


Figure 24. Pump and Drive Tachometers
Sheet 1 of 2

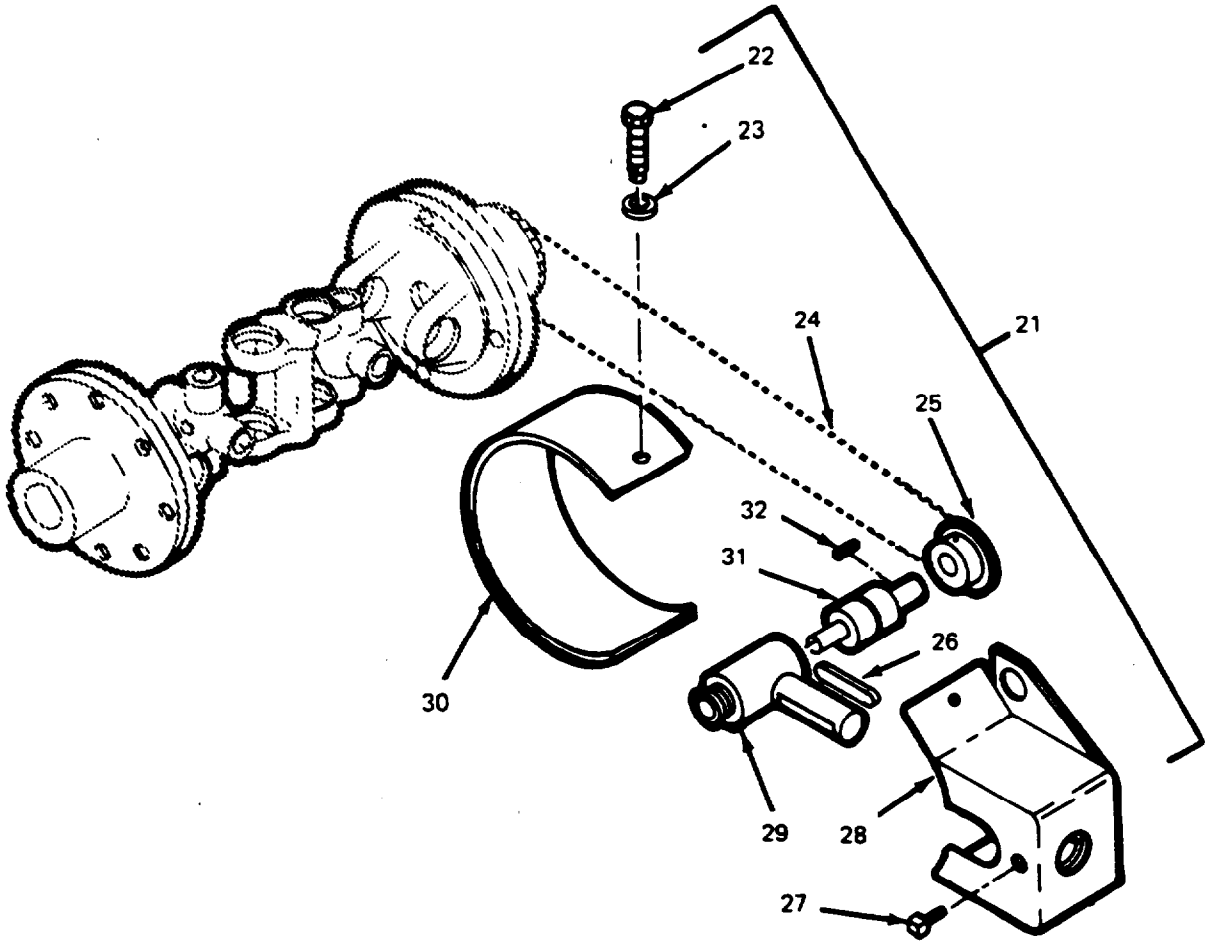


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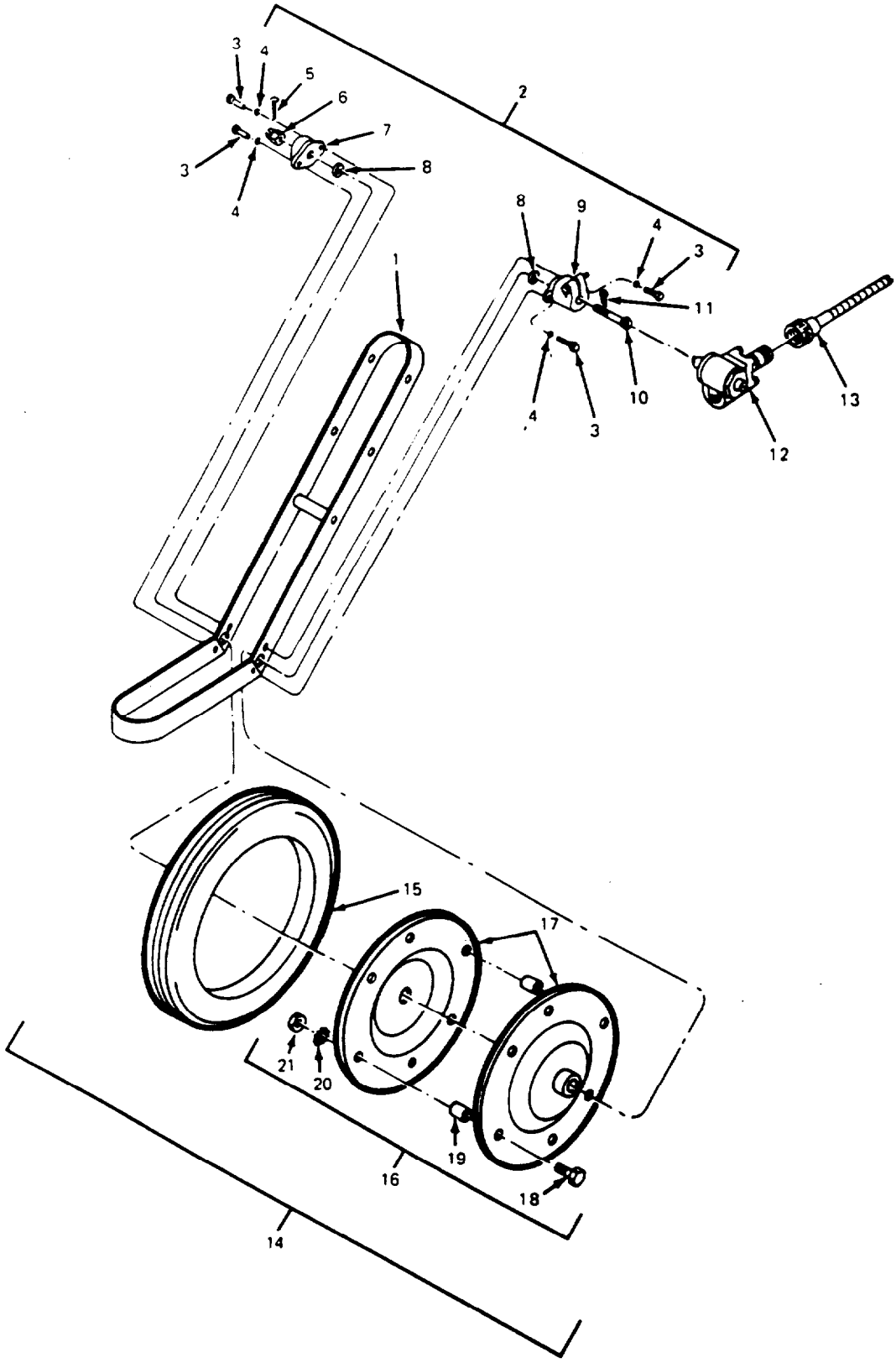
Figure 24. Pump and Drive Tachometers
Sheet 2 of 2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4701 PUMP AND DRIV TACHOMETERS		
24	1	PAOZZ	6680-01-083-6320	7850094	80195	TACHOMETER,MECHANIC ASSY-PUMP TACH,TACHOMETERS-PUMP AND DRIVE	EA	1
24	2	XDOZZ		7850092	80195	.ADAPTER,FLEX DRIVE TACHOMETERS-PUMP AND DRIVE	EA	1
24	3	PCOZZ	5330-01-083-7044	660330	80195	.PACKING,PREFORMED TACHOMETERS-PUMP AND DRIVE	EA	1
24	4	XDOZZ		7850057	80195	.LENS,HEAD TACHOMETERS-PUMP AND DRIVE	EA	1
24	5	XDOZZ		6000374	80195	.BEZEL TACHOMETERS-PUMP AND DRIVE	EA	1
24	6	PAOZZ		7850095	80195	HEAD AND ADAPTER,TA ASSY BITUMETER,TACHOMETERS-PUMP AND DRIVE	EA	1
24	7	XDOZZ		7850010	80195	.WINDOW,DIAL WIITH INDICATOR,TACHOMTERS-PUMP AND DRIVE	EA	1
24	8	PAOZZ	5310-00-232-8194	121574	24617	WASHER,LOCK 0.62,TACHOMETER AND DASH BRACKET TO MOUNTING STANDTACHOMETERS-PUMP ANDDRIVE	EA	1
24	9	PAOZZ	5310-00-763-8920	124589	24617	NUT,PLAIN,HEXAGON 0.62NC,TACHOMETER AND DASH BRACKET TO MOUNTING STANDTACHOMETERS-PUMP AND DRIVE	EA	1
24	10	XDOZZ		J626131	80195	STAND TACH AND AIR CONTROL BOX MOUNTING,TACHOMETERS-PUMP AND DRIVE	EA	1
24	11	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 0.25NC,MTG STAND TO JACK AND CHAIN BOX, TACHOMETERS-PUMP ANDDRIVE	EA	4
24	12	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK 0.25,MTG STAND TO JACK AND CHAIN BOX TACHOMETERS-PUMP AND DRIVE	EA	6
24	13	PAOZZ	5305-00-071-2241	121913	24617	SCREW,CAP,HEXAGON H 0.25NCX1.25,MTG STAND TO JACK AND CHAIN BOX,TACHOMETERS-PUMP AND DRIVE	EA	4
24	14	XDOZZ		J626102	80195	BRACKET MOUNTING STAND TO DASH,TACHOMETERS-PUMP AND DRIVE	EA	1
24	15	PAOZZ	5305-01-101-2621	447835	24617	SCREW,TAPPING,THREA STAND MOUNTING BRACKET TO DASH, TACHOMETERS-PUMP AND DRIVE	EA	2
24	16	PAOZZ	6680-01-096-2279	6460061	80195	SHAFT,FLEXIBLE FLEXIBLE,288INCH LG	EA	1
24	17	PAOZZ	5310-00-934-9751	MS35650-302	96906	NUT,PLAIN,HEXAGON N0.1ONC,HEAD AND ADAPTER ASSY,PUMP,TO BRACKET,TACHOMETERPUMP AND DRIVE	EA	4
24	18	PAOZZ	5310-01-083-6490	120217	24617	WASHER,LOCK NO.10,HEAD AND ADAPTER ASSY,PUMP,TO BRACKET, TACHOMETERS-PUMP AND DRIVE	EA	4
24	19	XDOZZ		3320310	80195	BRACKET TACHOMETER MOUNTING,TACHOMETERS-PUMP AND DRIVE	EA	1
24	20	XDOZZ		3360317	80195	PLATE MOUNTING BITUMETER HEAD,TACHOMETERS-PUMP AND DRIVE	EA	1
24	21	XDOZZ		3320368	80195	DRIVE ASSEMBLY 24 TOOTH	EA	1
24	22	PAOZZ	5305-00-068-0502	MS35297-6	96906	.SCREW,CAP,HEXAGON H 1/4NC X 3/4	EA	1
24	23	XDOZZ		120386	24617	.WASHER,FLAT 1/4	EA	1
24	24	PAOZZ	3020-01-053-2851	3320892	80195	.CHAIN,SILENT 66 PITCHES	EA	1
24	25	XDOZZ		25	19382	.SPROCKET 24 TOOTH	EA	1
24	26	XDOZZ		6000303	80195	.KEY 0.250X0.25X2.38LG	EA	1
24	27	PAOZZ	5305-00-054-9271	128228	24617	.SETSCREW 3/8NC X 3/4	EA	1
24	28	XDOZZ		3320363	80195	.HOUSING ASSEMBLY TACH DRIVE ASSY	EA	1
24	29	XDOZZ		3320340	80195	.HOUSING ASSEMBLY BEARING	EA	1
24	30	XDOZZ		3320339	80195	.COVER-TACH DRIVE TACH DRIVE	EA	1
24	31	PAOZZ		3320343	80195	.BEARING TACH DRIVE ASSY	EA	1
24	32	XDOZZ		3100302	80195	.KEY 0.250X2.00LONG	EA	1



TA075744

Figure 25. Bitumeter
Sheet 1 of 2

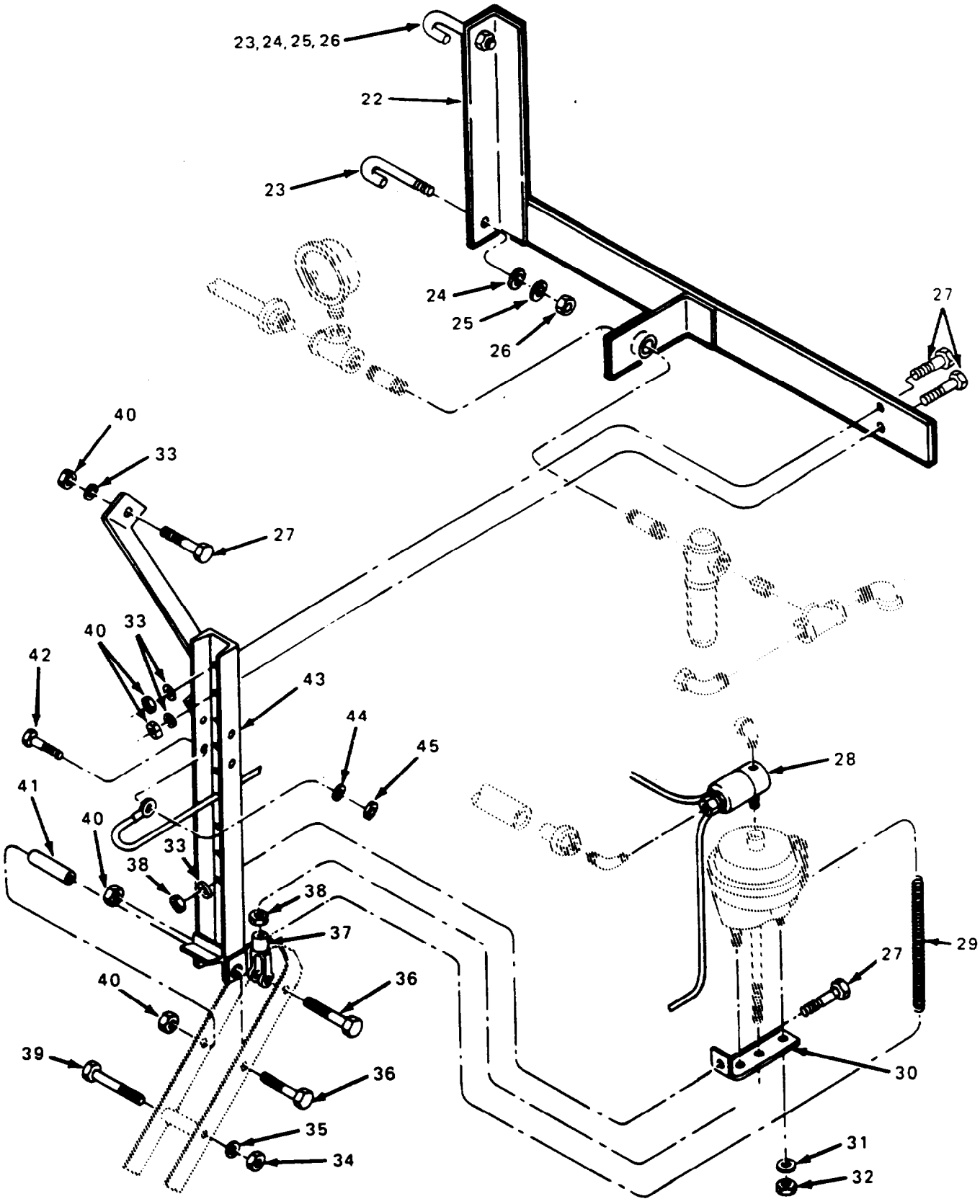


Figure 25. Bitumeter
Sheet 2 of 2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4701 BTUMETER		
25	1	PBOZZ	3895-01-096-9306	3360282	80195	FORK ASSEMBLY BITUMETER ASSEMBLY-AIR CONTROL	EA	1
25	2	PAOOO	3895-00-248-4368	3360348	80195	PARTS KIT,BITUMETER BITUMER ASSY-AIR CONTROL	EA	1
25	3	PAOZZ	5305-00-984-6193	436695	24617	.SCREW,MACHINE OUTER BEARING TO FORK,BITUMETER ASSY-AIR CONTROL	EA	4
25	4	PAOZZ	5310-01-083-6490	120217	24617	.WASHR,LOCK BEARING CLAMP TO FORK,BITUMETER ASSY-AIR CONTROL	EA	4
25	5	PAOZZ	5315-00-816-1794	MS24665-285	96906	.PIN,COTTER 0.09x1.00 IN.LG,SPINDLE TO SPINDLE ASSY	EA	1
25	6	PAOZZ	5310-00-842-1488	MS35692-21	96906	.NUT,PLAIIN,SLOTTED,H SPINDLE TO SPINDLE ASSY	EA	1
25	7	PAOZZ	3120-01-097-7752	3360344	80195	..BEARNG,OUTER BITUMETER ASSY-AIR CONTROL	EA	1
25	8	PAOZZ	3110-00-293-8120	BA722441	64959	.BEARING,BALL,ANNULA BITUMETER ASSY-AIR CONTROL	EA	2
25	9	PAOZZ		3360347	80195	BEARING CLAMP,RETAI BTUMETER ASSY-AR CONTROL	EA	1
25	10	PAOZZ	3895-01-095-5197	3360281	80195	.SPINDLE,BITUMEETER WHEEL,BTUMETER ASSY-AIR CONTROL	EA	1
25	11	PAOZZ		103389	24617	.PIN,COTTER	EA	1
25	12	PAOZZ	3010-00-125-8632	660-A	98738	GEAR ASSEMBLY,SPEED	EA	1
25	13	PAOZZ	6680-01-036-8513	6460047	80195	SHAFT ASSEMBLY,FLEX 144IN	EA	1
25	14	AOOOO		3360632	80195	TIRE AND WHEEL ASSY	EA	1
25	15	PAOZZ		DA-1504	22337	.TIRE 16-1.75F	EA	1
25	16	PAOOO	2530-00-425-6950	3360312	80195	.WHEEL BITUMETER,BITUMETER ASSY-AIR CONTROL	EA	1
25	17	PAOZZ	2530-01-092-9224	0626120	80195	..WHEEL ASSEMBLY,WELD BUSHING,BITUMETER ASSY-AIR CONTROL	EA	2
25	18	PAOZZ	5305-00-071-2241	121913	24617	..SCREW,CAP,HEX HEAD 1/4-20NCX1-1/4IN.LG,COVERS TO TIRECONTROL	EA	6
25	19	PAOZZ	5365-01-097-5770	3360315	80195	..SPACER,SLEEVE COVERS TO TIRES	EA	6
25	20	PAOZZ	5310-00-209-0786	MS35335-19	96906	..WASHER,LOCK TOOTH,COVERS	EA	6
25	21	PAOZZ	5310-00-761-6882	120375	24617	..NUT,PLAN,HEXAGON 1/4-20ONC,COVERS TO TIRE	EA	6
25	22	PAOZZ	3895-01-095-3100	3360363	80195	BRACKET,MOUNTING CHANNEL	EA	1
25	23	PAOZZ			80195	BOLT,HOOK BITUMETER MOUNTING BRACKET TO FRAME,BITUMETER ASSEMBLY-AIRCONTROL	EA	2
25	24	PAOZZ	5310-00-951-7209	130999	24617	WASHER,FLAT 5/8IN.BITUMETER MOUNTING BRACKET TO FRAME, BITUMETER ASSEMBLY AIR CONTROL	EA	2
25	25	PAOZZ	5310-00-232-8194	121574	24617	WASHER,LOCK 5/8IN.BITUMETER MOUNTING BRACKET TO FRAME, BITUMETER ASSEMBLY AIR CONTROL	EA	2
25	26	PAOZZ	5310-00-763-8920	124589	24617	NUT,PLAIN,HEXAGON 5/8IN.BITUMETER MOUNTING BRACKET TO FRAME, BITUMETER ASSEMBLY AIR CONTROL	EA	2
25	27	PAOZZ	5305-00-206-3519	122433	24617	SCREW,CAP,HEXAGON H 1/2IN.X1-1/2IN,CHANNEL SUPPORT ASSEMBLY TO FRAME ASSEMBLY,BITUMETER ASSEMBLY-AIR CONTROL	EA	4
25	28	PAOZZ	4810-01-095-5665	V55-LA2-100	34623	VALVE,SOLENOID	EA	1
25	29	PAOZZ	5360-01-096-6872	3360672	80195	SPRING,HELICAL WHEEL,BITUMETER ASSY-AIR CONTROL	EA	1
25	30	XDOZZ		3360671	80195	BRACKET,PANCAKE CYLINDER MOUNTING,BITUMETER ASSEMBLY-AIR CONTROL	EA	2
25	31	PAOZZ	5310-00-209-0965	MS35338-28	96906	WASHER,LOCK AIR CHAAMBER TO BRACKET	EA	2
25	32	PAOZZ	5310-00-880-8189	MS51967-11	96906	NUT,PLAIN,HEXAGON 0.44NC,AIR CHAMBER TO BRACKET CONTROL	EA	2
25	33	PAOZZ	5310-00-584-5272	MS35338-48	96906	WASHER,LOCK 1/2IN,CHANNEL SUPPORT ASSEMBLY TO FRAMEBITUMETER ASSEMBLY-AIR CONTROL	EA	4

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
25	34	PAOZZ	5310-00-409-3355	120376	24617	NUT,PLAIN,HEXAGON 0.31NC,TO STRENGTHEN FORK THROUGH WELDED SPACERAIR CONTROL	EA	1
25	35	PAOZZ	5310-00-407-9566	MS35338-45	96906	WASHER,LOCK 0.31INC,TO STRENGTHEN FORK THOUGH WELDED SPACERAIR CONTROL	EA	1
25	36	PAOZZ	5305-00-071-1778	MS90725-125	96906	SCREW,CAP,HEXAGON H 0.50NCCX4.50IN.LG,FORK ASSY TO BRAKE CHAMBER YOKE	EA	1
25	37	PAOZZ		2708-LA	34623	YOKE,UNIVERSAL JOIN	EA	1
25	38	PAOZZ	5310-00-732-0560	120371	24617	NUT,PLAIN,HEXAGON 1/2IN.NC,PANCAKE CYL MTG BRACKET TO CHANNEL SUPPORT ASSYAIR CONTROL	EA	2
25	39	PAOZZ	5306-00-225-8514	MS90725-50	96906	BOLT,MACHINE 0.31NCX4.50IN.LG,TO STRENGTHEN FORK THROUGH WELDED SPACERAIR CONTROL	EA	1
25	40	PAOZZ	5310-01-097-7993	6100068	80195	NUT,HEX,LOCK 1/2IN.,CHANNEL SUPPORT ASSY TO FRAMEBITUMETER ASSEMBLY-AIR CONTROL	EA	5
25	41	PAOZZ	5365-01-097-5769	3360284	80195	SPACER,SLEEVE FORK ASSY TO CHANNEL SUPPORT ASSYCONTROL	EA	1
25	42	PAOZZ	5305-00-068-0500	MS35297-3	96906	SCREW,CAP,HEXAGON H 1/4 INCH-20X1/2 INCH LG,SOLENOID VALVE GROUND WIRE TO CHANNEL SUPPORT,BTUMETER ASSEMBLY-AIR CONTROL	EA	1
25	43	PAOZZ	3895-00-160-2651	3360264	80195	BRACKET CHANNEL,BITUMETER ASSEMBLY-AIR CONTROL	EA	1
25	44	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK 1/4IN.ID,SOLENOID VALVE GROUND WIRE TO CHANNEL SUPPORT,BITUMTER ASSY-AIR CONTROL	EA	1
25	45	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 1/4IN.-20,SOLENOID VALVE GROUND WIRE TO CHANNEL SUPPORT,BITUMETER ASSY-AIR CONTROL	EA	1

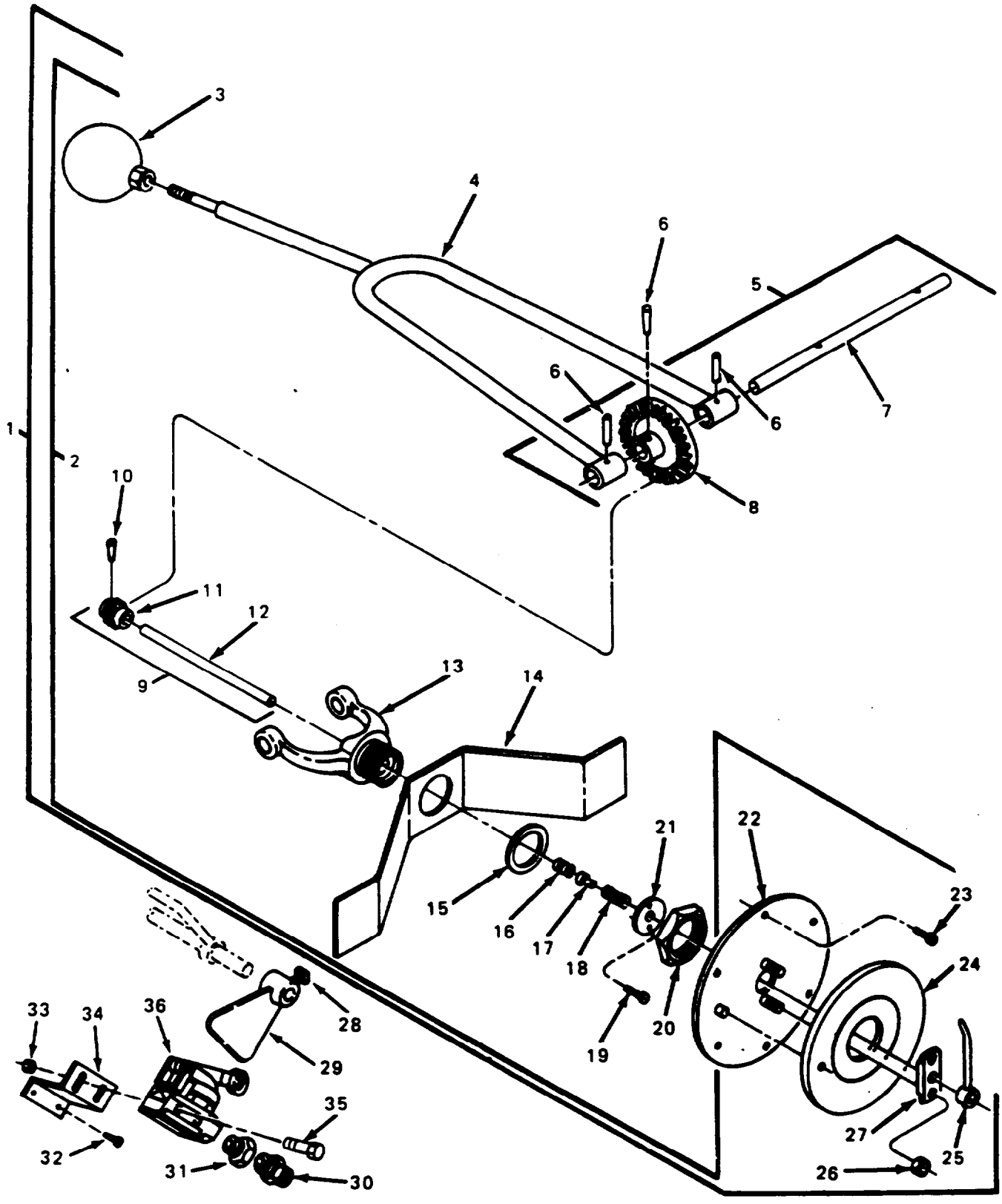


Figure 26. Tank Gage

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4701 TANK CAG		
26	1	XDOFF		3360377	80195	GAUGE ASSY-TANK 34 INCH STEM,GAUGE,TANK-REAR	EA	1
26	2	XDOFF		3360210	80195	.FLOAT STEM ASSEMBLY GAUGE,TANK-REAR	EA	1
26	3	PAOZZ	4510-01-082-9687	6600335	80195	..FLOAT BALL,TANK GAG 5 INCH DIA,0.25 FEM CONN AL,GAUGGE, TANK-REAR	EA	1
26	4	XDOZZ		3360215	80195	..STEAM ASSEMBLY 34 INCHES LONG,GAUGE,TANK REAR	EA	1
26	5	XDOFF		3360184	80195	..SHAFT ASSEMBLY FLOAT,TANK GAUGE,GAUGE,TANK-REAR	EA	1
26	6	PAOZZ	5315-00-221-6006	103564	24617	...PIN,TAPERED,PLAN NO.0.0x1.00,GAUGE, TANK-REAR	EA	3
26	7	XDOZZ		3360185	80195	...SHAFT-FLOAT TANK GAUGE,GAUGE,TANK-REAR	EA	1
26	8	PAOZZ	3020-00-160-2590	6425001	80195	...GEAR,BEVEL FOR 34 IN.STEM,GAUGE,TANK REAR	EA	1
26	9	XDOFF		3360188	80195	..SHAFT ASSEMBLY TANK GAUGE,GAUGE,TANK-REAR	EA	1
26	10	PAOZZ	5310-00-761-6882	120375	24617	.NUT,PLAIN,HEXAGON 0.25NC	EA	2
26	11	XDOZZ		6425009	80195	...GEAR,PINION FOR 34 INCH STEM,GAUGE,TANK,REAR	EA	1
26	12	XDOZZ		3360189	80195	...SHAFT,INDICIAOR TANK GAUGE,GAUGE,TANK-REAR	EA	1
26	13	XDOZZ		3360193	80195	..BRACKET,FLAOT TANK GAUGE,GAUGE,TANK-REAR	EA	1
26	14	XDOZZ		3360615	80195	..SPACER,REAR HEAD EXT STACKS,GAUGE,TANK-REAR	EA	1
26	15	PAOZZ	5330-00-247-6918	6600336	80195	..GASKET 2.50x1.75,GAUGE,TANK-REAR	EA	1
26	16	PAOZZ	3895-00-561-8442	3360204	80195	..PACKING,GAGE,BITUMI GAUGE,TANK-REAR	EA	1
26	17	PAOZZ	3895-01-082-8490	3360187	80195	..SLEEVE,TANK GUAGE TANK GAUGE,GAUGE,TANK REAR	EA	1
26	18	PAOZZ	5360-01-082-9161	3360192	80195	..SPRING TANK GAUGE,GAUGE,TANK REAR	EA	1
26	19	PAOZZ	5305-00-984-6193	436695	24617	..SCREW,MACHINE NO.8NCX0.50 LG,PACKING PLATE TO BRACKET, GAUGE,TANK REAR	EA	2
26	20	XDOZZ		3360186	80195	..NUT,HEX,TANK GAUGE GAUGE,TANK REAR	EA	1
26	21	XDOZZ		3360195	80195	..PLATE,PACKING TANK GAUGE,GAUGE,TANK REAR	EA	1
26	22	XDOZZ		3360199	80195	.PLATE ASSY-DIAL MTG TANK GAUGE ITH/NUT,GAUGE,TANK REAR	EA	1
26	23	PAOZZ		9426128	24617	.SCREW,TAPPING THREA 0.25X0.50,DIAL PLATE ASSY TO TANK, GAUGE,TANK-REAR	EA	6
26	24	XDOZZ		3360194	80195	.DIAL,DISTRIBUTOR GAUGE,TANK-REAR	EA	1
26	25	XDOZZ		3360190	80195	.INDICATOR ASSEMBLY TANK GAUGE,GAUGE,TANK REAR	EA	1
26	26	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON	EA	2
26	27	XDOZZ		3360202	80195	.PLATE-END BEARING GAUGE,TANK REAR	EA	1
26	28	PBOZZ	5305-00-054-9260	127796	24617	SETSCREW 1/4-20X3/8	EA	1
26	29	PBOZZ	3895-01-093-8267	3360680	80195	INDICATOR,ACTUATOR,	EA	1
26	30	XDOZZ		6700368	80195	CONNECTOR	EA	1
26	31	PAOZZ	4730-00-193-0871	MS51887-7	96904	BUSHING,PIPE 1/2X3/8	EA	1
26	32	PAOZZ	5305-01-097-7895	9426105	24617	SCREW,TAPPING NO.10X1/2	EA	2
26	33	PAOZZ	5310-00-934-9757	120622	24617	NUT,PLAIN,HEXAGON 8-32	EA	2
26	34	PBOZZ	5340-01-098-6284	3360677	80195	BRACKET,DOUBLE ANGL SWITCH MTG	EA	1
26	35	PAOZZ	5305-00-984-6199	MS35206-251	96906	SCREW,MACHINE 8-32X1-1/2	EA	2
26	36	PAOZZ	2895-01-094-8988	6700748	80195	ACTUATOR,SWITCH,BIT	EA	1

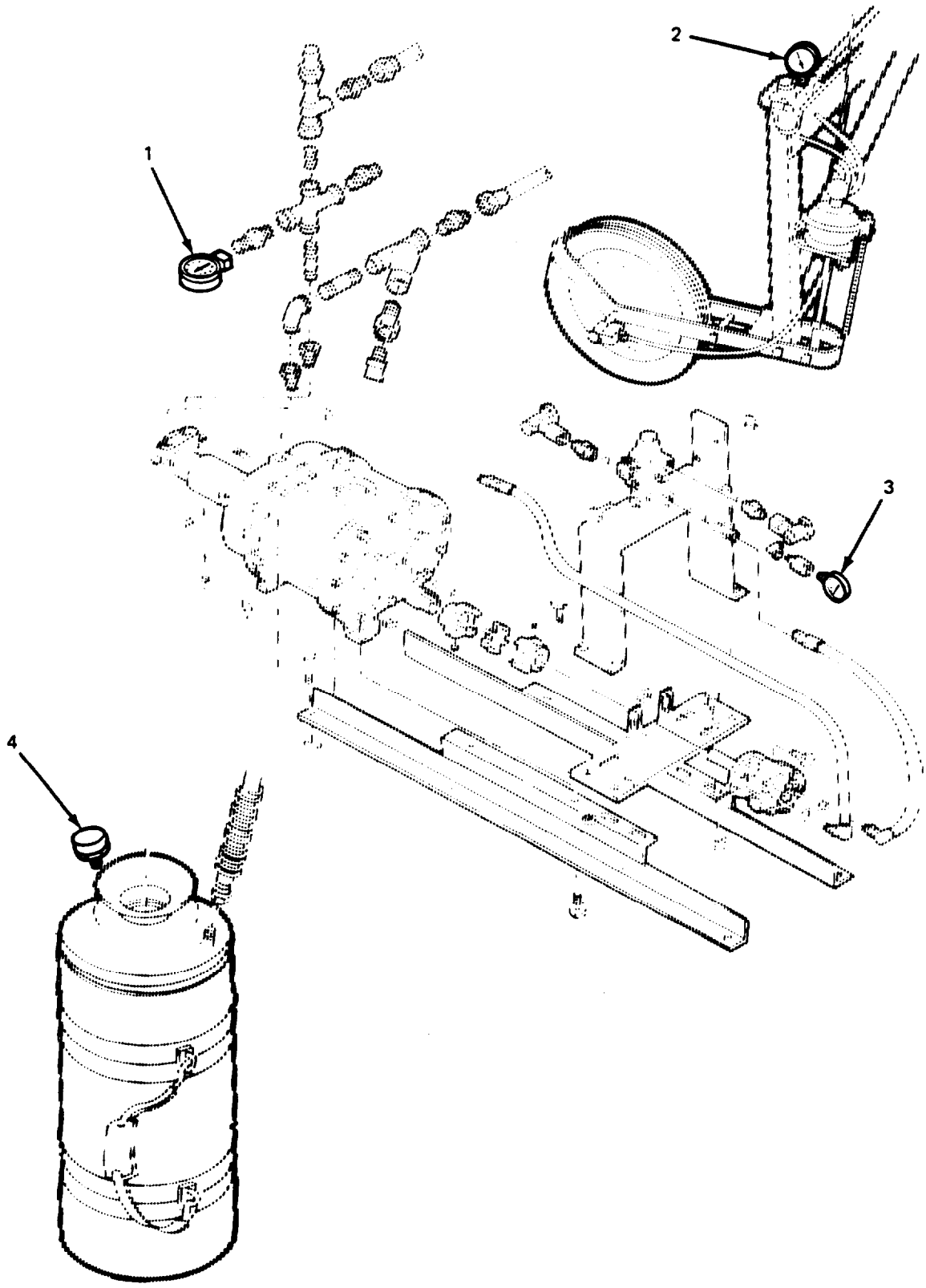


Figure 27. Non-Electrical Gages

TA075796

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 4701 NON-ELECTRICAL GAGES		
27	1	PAOZZ	6685-00-901-8712	1000	38056	GAGE,PRESSURE,DIAL 2INCH-100LBS	EA	1
27	2	PAOZZ	6685-01-055-0828	6600168	80195	GAGE,PRESSURE,DIAL 2INCH-100LBS	EA	1
27	3	PAOZZ	6685-01-082-8513	6600873	80195	GAGE,PRESSURE HYDRAULIC/AIR SYSTEM GAGES	EA	1
27	4	PAOZZ	6685-00-574-7538	7700046	80195	GAGE PRESSURE DIAL BURNER-PORTABLE	EA	1

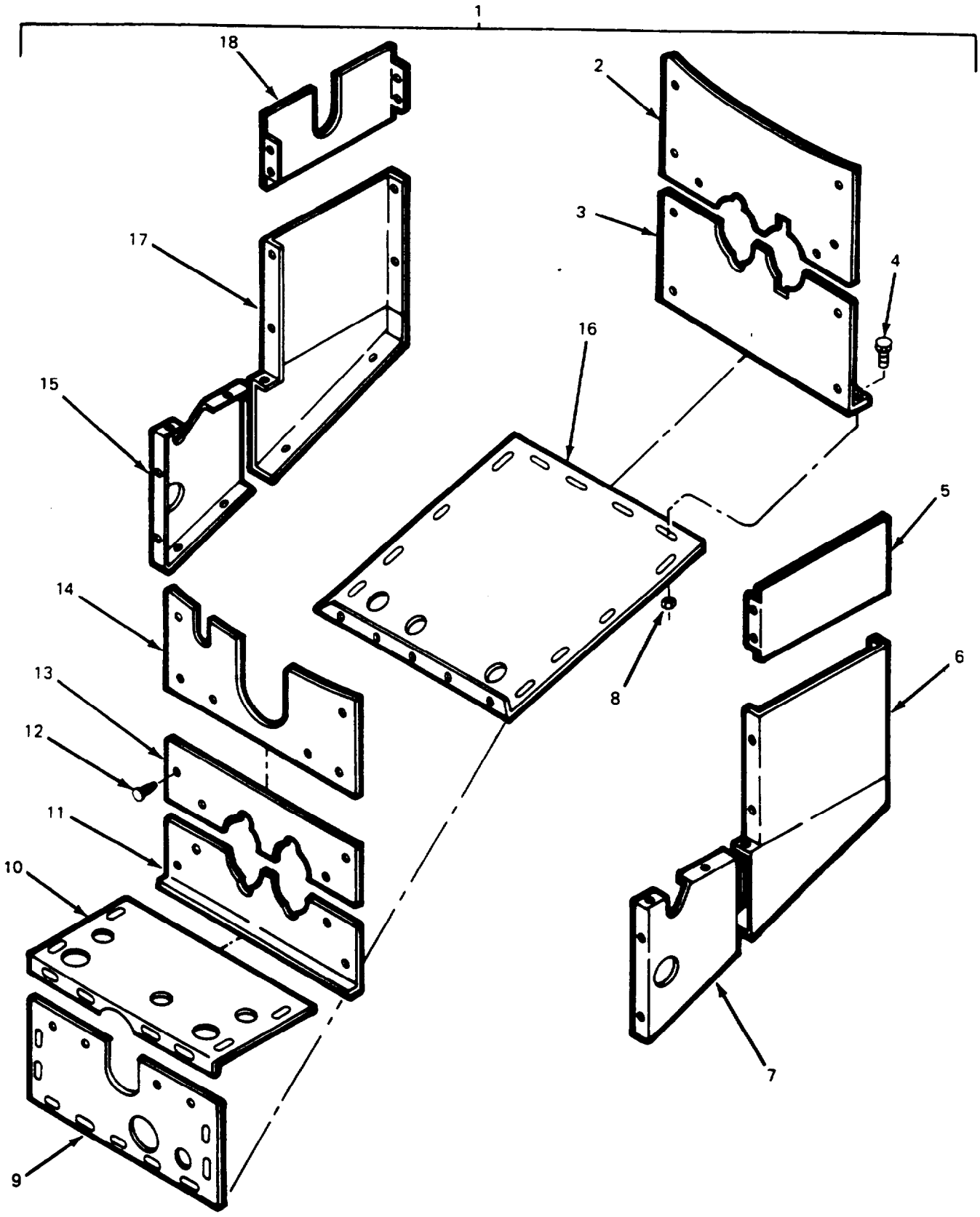


Figure 28. Pump Housing

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 5522 PUMP HOUSING		
28	1	XDOOO		3330031	80195	HOUSING ASSY,DISTR P-15 PUMP	EA	1
28	2	XDOZZ		3330033	80195	.TOP FRONT SECTION HOUSING ASSEMBLY P-15 PUMP	EA	1
28	3	XDOZZ		3330032	80195	.BOTTOM,FRONT SECTION HOUSING ASSEMBLY P-15 PUMP	EA	1
28	4	XDOZZ		436750	24617	.SCREW,MACHINE SLOTTED	EA	4
28	5	XDOZZ		3330046	80195	.TOP SECTION,RIGHT HOUSING ASSEMBLY P-15 PUMP	EA	1
28	6	XDOZZ		3330047	80195	.LOWER RIGHT SIDE ASSEMBLY,HOUSING ASSEMBLY P-15 PUMP	EA	1
28	7	XDOZZ		3330049	80195	.BOTTOM SECTON RIGHT REAR,HOUSING FRONT SECTION,HOUSING ASSY	EA	1
28	8	XDOZZ		120614	24617	.NUT,HEX BOTTOM SECTION TO BOTTOM FRONT SECTION,HOUSING ASSY P-15 PUMP	EA	4
28	9	XDOZZ		3330037	80195	.HOUSING ASSY,FRONT HOUSING ASSMBLY P-15 PUMP	EA	1
28	10	XDOZZ		3330039	80195	.PLATE,PUMP HOUSING VALVE HOUSING,HOUSING ASSEMBLY P-15 PUMP	EA	1
28	11	XDOZZ		3330036	80195	.BOTTOM SECTION,REAR HOUSING ASSEMBLY P-15 PUMP	EA	1
28	12	XDOZZ		6000550	80195	.SCREW,SELF TAPPING ALL SECTION TO EACH OTHER,HOUSING ASSEMBLY P-15 PUMP	EA	50
28	13	XDOZZ		3330035	80195	.MIDDLE REAR SECTION HOUSING ASSEMBLY P-15 PUMP	EA	1
28	14	XDOZZ		3330034	80195	.TOP SECTION,REAR HOUSING	EA	1
28	15	XDOZZ		3330045	80195	.BOTTOM SECTION,LEFT REAR,HOUSING ASSEMBLY P-15 PUMP	EA	1
28	16	XDOZZ		3330040	80195	.BOTTOM SECTION HOUSING ASSEMBLY P-15 PUMP	EA	1
28	17	XDOZZ		3330042	80195	.LOWER LEFT SIDE ASSEMBLY,HOUSING ASSEMBLY P-15 PUMP	EA	1
28	18	XDOZZ		3330041	80195	.HOUSING SECTION LEFT	EA	1

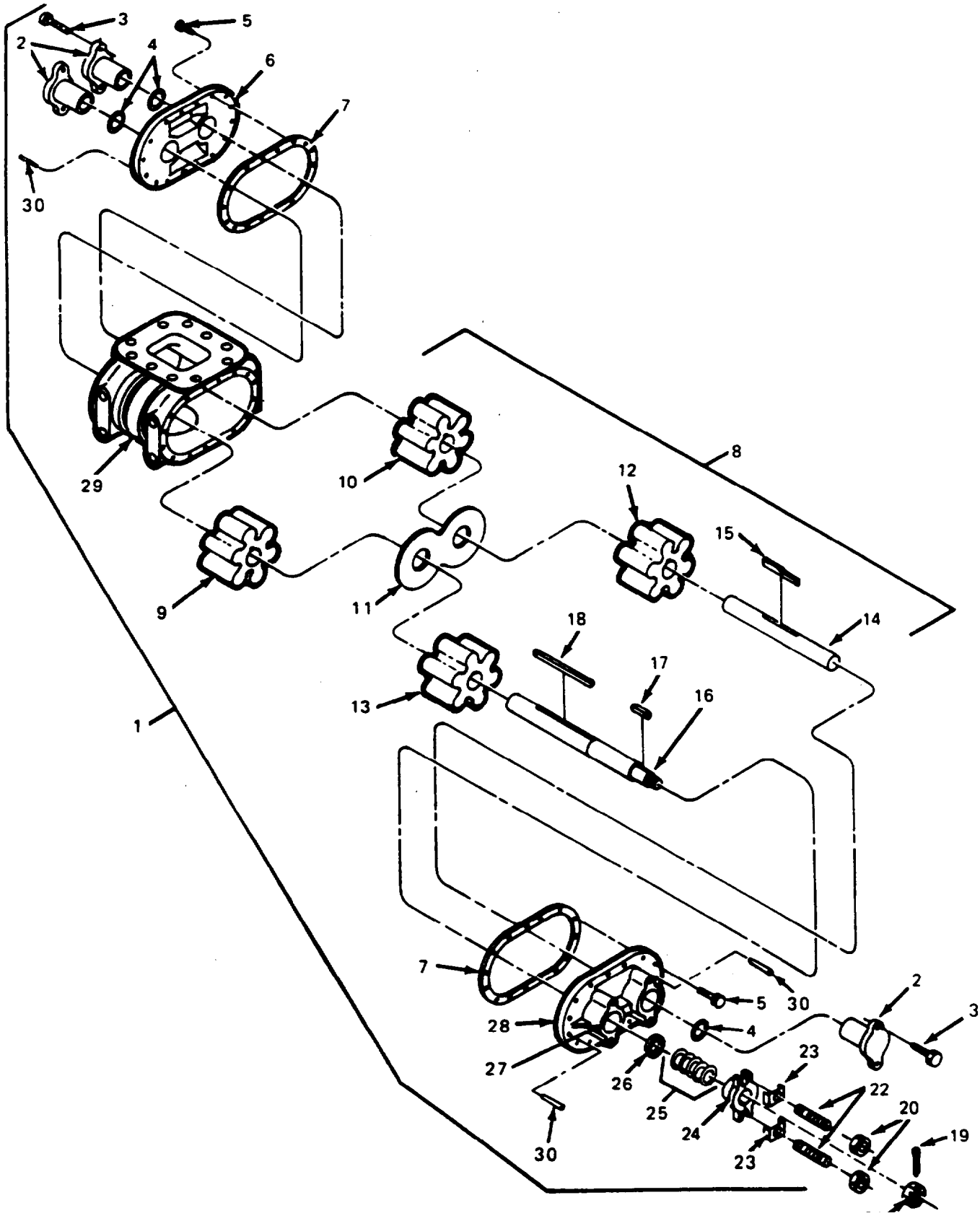


Figure 29. Asphalt Pump

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 5500 ASPHALT PUMP		
29	1	PBFFF	4320-00-779-2359	3340645	80195	PUMP,ROTARY ASPHALT WITH TAPERED SHAFT,PUMP-ASPHALT	EA	1
29	2	PAFZZ	3120-00-160-5654	3340286	80195	.BEARING,SLEEVE PUMP-ASPHALT	EA	3
29	3	XDFZZ		6000373	80195	.SCREW,CAP BLIND BEARING TO FRONT AND REAR FACE PLATES, PUMP- ASPHALT	EA	6
29	4	POFZZ	5330-00-197-7762	6600308	80195	.GASKET PUMP-ASPHALT	EA	3
29	5	PAFZZ	5305-00-012-0233	120233	24617	.SCREW,CAP,HEX HEAD 0.38NCX1.00,REAR FACE PLATE TO PUMP CASE,PUMP-ASPHALT	EA	V
29	6	XDFZZ		3340281	80195	.PLATE PUMP-ASPHALT	EA	1
29	7	PAFZZ	5330-00-160-5655	3340287	80195	.GASKET PUMP-ASPHALT	EA	2
29	8	PAFZZ	3895-00-865-3014	3370271	80195	.IMPELLER SET PUMP-ASPHALT	EA	1
29	9	XAFZZ		3340279	80195	..IMPELLER PUMP-ASPHALT	EA	1
29	10	XAFZZ		3340277	80195	..IMPELLER PUMP-ASPHALT	EA	1
29	11	XDFZZ		3340298	80195	..PLATE,DIVISION PUMP-ASPHALT	EA	1
29	12	XAFZZ		3340275	80195	..IMPELLER WITH SHLDR PUMP-ASPHALT	EA	1
29	13	XAFZZ		3340272	80195	..IMPELLER WITH SHLDR PUMP-ASPHALT	EA	1
29	14	PAFZZ	3040-01-102-1582	3340289	80195	..SHAFT,STRAIGHT PUMP-ASPHALT	EA	1
29	15	PAFZZ		3340300	80195	..KEY,MACHINE PUMP-ASPHALT	EA	1
29	16	PAFZZ	3040-01-101-4155	3340293	80195	..SHAFT,SHOULDERED PUMP-ASPHALT	EA	1
29	17	PAFZZ		6000468	80195	..KEY,MACHINE PUMP-ASPHALT	EA	1
29	18	PAFZZ		6000466	80195	..KEY,MACHINE PUMP-ASPHALT	EA	1
29	19	XDFZZ		103373	24617	.PIN,COTTER 3/32IN.X3/4IN.,PUMP-ASPHALT	EA	1
29	20	XDFZZ		6100069	80195	.NUT,PLAIN,HEXAGON RETAINER TO GLAND TO FRONT FACE PLATE, PUMP-ASPHALT	EA	2
29	21	XDFZZ		6440018	80195	.NUT,CASTLE PUMP-ASPHALT	EA	1
29	22	XDFZZ		6600311	80195	.STUD-FACE PLATE RETAINER TO GLAND TO FRONT FACE PLATE,PUMP-ASPHALT	EA	2
29	23	PAFZZ		3340308	80195	.RETAINER PACKING GLAND,PUMP-ASPHALT	EA	2
29	24	PAFZZ	3895-00-253-0919	3340307	80195	.GLAND PUMP-ASPHALT	EA	1
29	26	PAFZZ	4320-00-493-8559	3340305	80195	.RING,LANTERN PUMP-ASPHALT	EA	1
29	27	PAFZZ	3120-01-102-5403	3340294	80195	.BUSHING,SLEEVE PUMP-ASPHALT	EA	1
29	28	XDFZZ		3340283	80195	.PLATE,FACE-FRONT PUMP-ASPHALT	EA	1
29	29	PAFZZ	3895-00-491-4961	3340267	80195	.HOUSING,PUMP PUMP-ASPHALT	EA	1
29	30	PAFZZ		103615	24617	.PIN,TAPERED N0.5X1.25LG,PUMP ASPHALT	EA	4

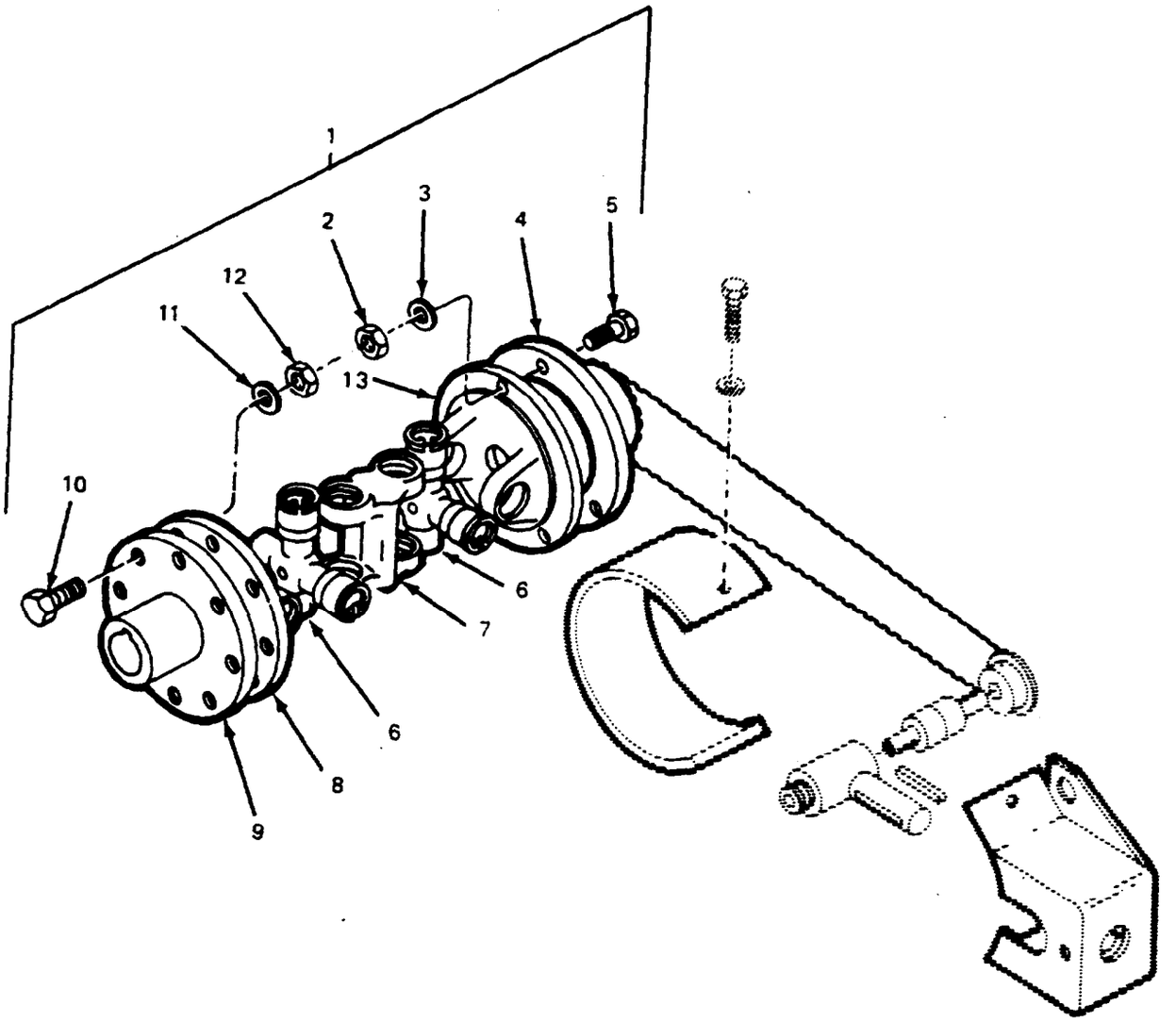
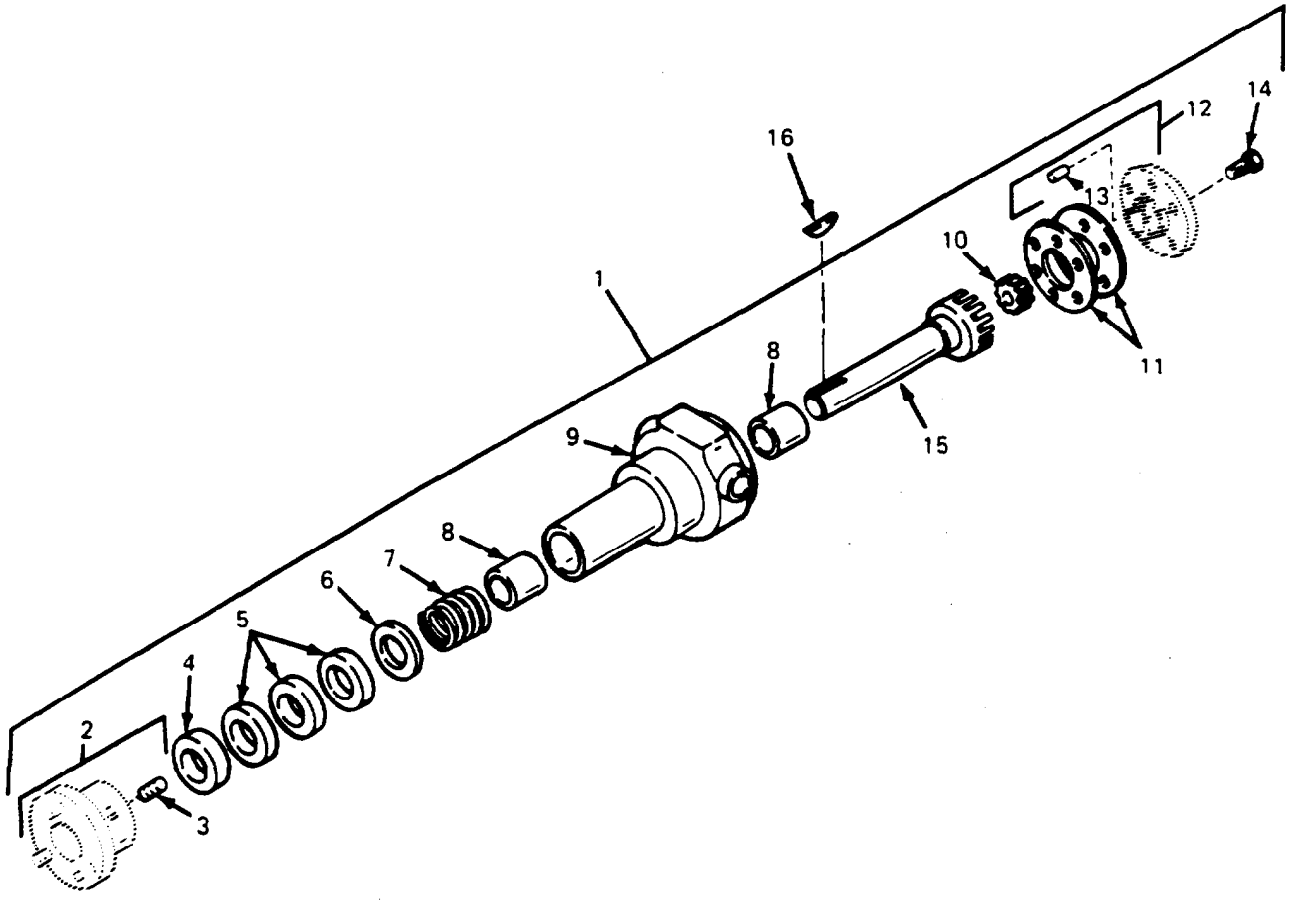


Figure 30. Hydraulic Pump Universal Drive

TA075775

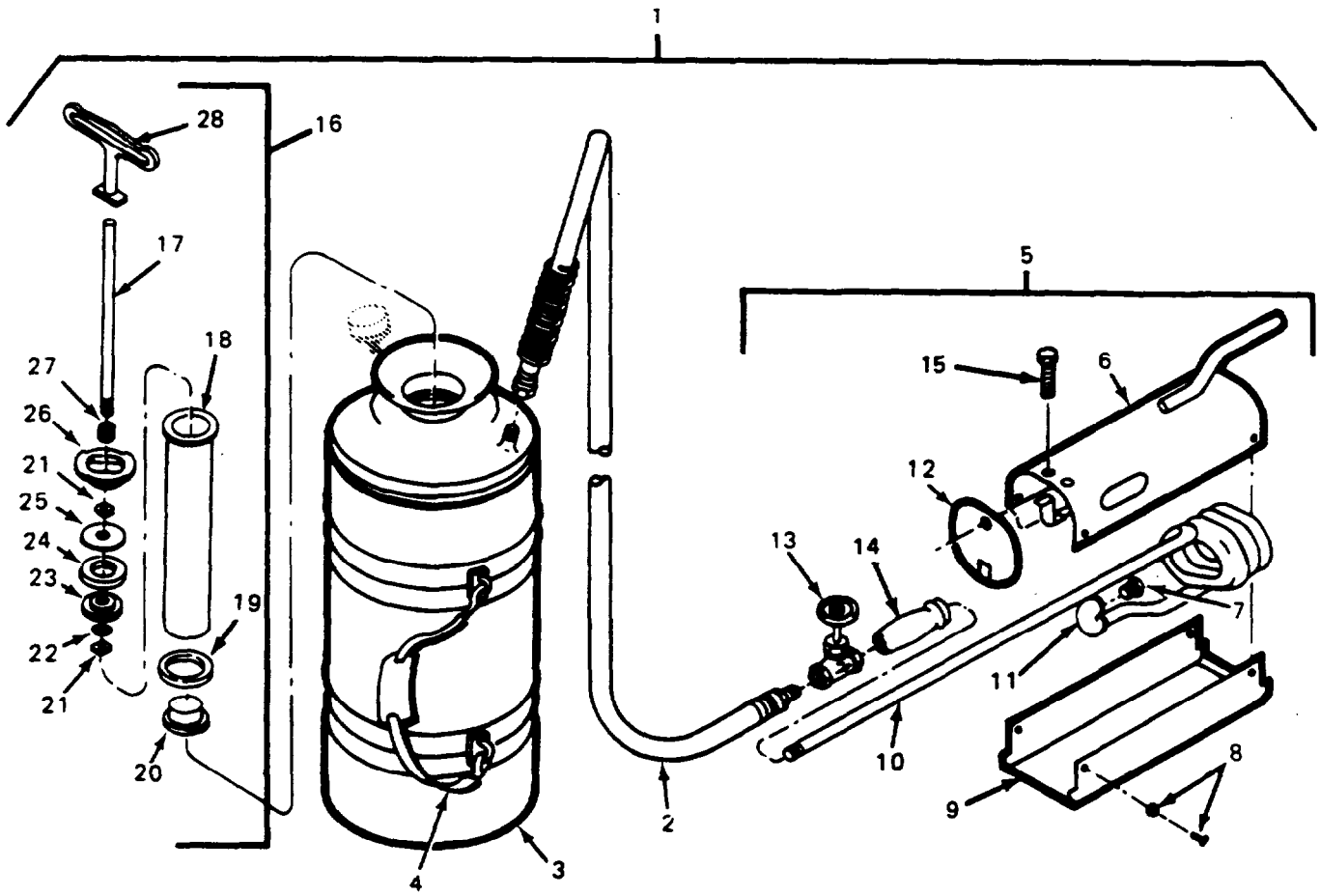
(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 5507 HYDRAULIC PUMP UNIVERSAL DRIVE		
30	1	PBOOO	4320-01-101-6715	3320934	80195	SPROCKET ASSEMBLY,H UNIVERSAL DRIVE-HYDR PUMP	EA	1
30	2	XDOZZ		120367	24617	.NUT,HEX 0.25NF,FLANGE YOKE TO FLANGE ASSY,UNIVERSAL DRIVE-HYDR PUMP	EA	3
30	3	XDOZZ		120380	24617	.WASHER,LOCK 0.25,FLANGE YOKE TO FLANGE ASSY,UNIVERSAL DRIVE-HYDR PUMP	EA	3
30	4	XDOZZ		3320714	80195	.FLANGE ASSEMBLY UNIIVERSAL JOINT,UNIVERSAL DRIVE-HYDR PUMP	EA	1
30	5	PAOZZ	5305-00-267-8976	123743	24617	.SCREW,CAP,HEX HEAD 0.25NFX1.38,FLANGE OKE TO FLANGE ASSY, UNIVERSAL DRIVE-HYDRPUMP	EA	3
30	6	PAOZZ	2520-00-217-9322	CP-35N-4	70960	.PARTS KIT,UNIVERSAL UNIVERSAL DRVE-HYDR PUMP	EA	2
30	7	XDOZZ		3N171-1	70960	.YOKE,DOUBLE UNIVERSAL DRIVE-HYDR PUMP	EA	1
30	8	XDOZZ		L-16SF9	70960	.YOKE-FLANGE UNIVERSAL DRIVE-HYDR PUMP	EA	1
30	9	XDOZZ		2WCT2412	70960	.FLANGE UNIVERSAL DRIVE-HYDR PUMP	EA	1
30	10	XDOZZ		106282	24617	.SCREW,CAP,HEX HEAD 0.31NFX1.38,FLANGE TO FLANGE YOKE, UNIVERSAL DRIVE-HYDR PUMP	EA	8
30	11	PAOZZ	5310-00-012-0214	120214	24617	.WASHER,LOCK 0.31IN.,FLANGE TO FLANGE YOKE,UNIVERSAL DRIVE HYDR PUMP	EA	8
30	12	PAOZZ	5310-00-012-0368	120368	24617	.NUT,HEX 0.31NF,FLANGE TO FLANGE YOKE,UNIVERSAL DRIVE-HYDR PUMP	EA	8
30	13	XDOZZ		L16SF8	70960	.YOKE,FLANGE UNIVERSAL DRIVE-HYDR PUMP	EA	1



TA075749

Figure 31. Fuel Pump Burner

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6004 FUEL PUMP BURNER		
31	1	PAOOO	4320-00-444-9013	7030029	80195	PUMP,ROTARY BURNER,FUEL PUMP	EA	1
31	2	PAOZZ	3040-01-101-7493	3-291-050-465	63097	.COUPLING WITH SETSCREW	EA	1
31	3	XDOZZ		2-569-005-375	63097	..SETSCREW	EA	1
31	4	XDOZZ		2-555-006-560	63097	.PACKING	EA	1
31	5	PAOZZ	5330-00-585-0840	2-520-001-830	63097	.PACKING,PREFORMED	EA	1
31	6	XDOZZ		2-522-007-610	63907	.GLAND INNER PACKING	EA	1
31	7	PAOZZ	5360-00-784-5312	2-766-005-371	63097	.SPRING,HELCAL,COMP	EA	1
31	8	PAOZZ	3120-00-138-0203	2-094-008-880	63097	.BUSHING,SLEEVE	EA	2
31	9	XDOZZ		3-172-806-080	63097	.CASING	EA	1
31	10	PAOZZ	4320-01-017-4424	2-416-006-354	63097	.ROTOR,PUMP	EA	1
31	11	PAOZZ	5330-00-758-7374	3-310-002-999	63097	.GASKET	EA	1
31	12	XDOZZ		3-360-014-011	63097	.HEAD AND IDLR PIN	EA	1
31	13	PAOZZ	5315-00-401-3678	2-430-005-321	63097	..PIN,STRAIGHT,HEADLE	EA	1
31	14	PAOZZ	5305-01-101-8038	2-150-001-255	63097	.SCREW,CAP,HEXAGON H	EA	6
31	15	PAOZZ	4320-01-017-4423	3-563-001-563	63097	.ROTOR ASSEMBLY,PUMP 5-1/8IN.LG	EA	1
31	16	PAOZZ	5315-00-010-6749	106749	24617	KEY,WOODRUFF N0.3,1/8X1/2	EA	1



TA075773

Figure 32. Portable Burner

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6005 PORTABLE BURNER		
32	1	PAOOO	3825-00-970-0021	FG4-B	95484	BURNER,WEED,MANUALL	EA	1
32	2	PAOZZ	4720-00-228-1216	7700065	80195	.HOSE ASSEMBLY,BURNE 6FT,BURNER-PORTABLE	EA	1
32	3	PBOZZ	3895-00-758-9710	770086	80195	.TANK,DISTRIBUTOR BI BURNER-PORTABLE	EA	1
32	4	PAOZZ	5340-01-086-3939	7700050	80195	.STRAP,CARRYING BURNER-PORTABLE	EA	1
32	5	XDOZZ		3330447	80195	.BURNER ASSEMBLY BURNER-PORTABLE	EA	1
32	6	XDOZZ		3330461	80195	.SHELL BURNER-PORTABLE	EA	1
32	7	PAOZZ	4530-00-496-1554	7700030	80195	..NOZZLE,OIL BURNER,P BURNER-PORTABLE	EA	1
32	8	PAOZZ	5305-01-087-0689	7700027	80195	..SCREW,MACHINE WITH NUT,BURNER SHELL TO BURNER PAN,BURNER-PORTABLE	EA	4
32	9	PAOZZ	3895-00-496-1556	7700032	80195	..PAN,PREHEATING BURNER-PORTABLE	EA	1
32	10	PAOZZ	3895-00-717-4003	7700087	80195	..COIL ASSEMBLY,DISTR BURNER-PORTABLE	EA	1
32	11	PAOZZ	5340-01-085-8076	7700028	80195	..HOLDER,PLUG BURNER-PORTABLE	EA	1
32	12	XDOZZ		7700026	80195	..PLATE BURNER-PORTABLE	EA	1
32	13	PAOZZ	4820-00-459-6197	7700024	80195	..VALVE,GLOBEE BURNER,PORTABLE	EA	1
32	14	XDOZZ		7700025	80195	..HANDE GRIP BURNER-PORTABLE	EA	1
32	15	PAOZZ	5305-00-005-6204	7700035	80195	..SCREW SELF TAPPING	EA	2
32	16	PAOOO	3895-00-444-9015	3330462	80195	.PUMP,AIR,BURNER BURNER-PORTABLE	EA	1
32	17	XDOZZ		7700089	80195	..ROD,PUMP BURNER-PORTABLE	EA	1
32	18	XDOZZ		7700048	80195	..BARREL BURNER-PORTABLE	EA	1
32	19	POOZZ	5330-00-232-0551	7700047	80195	..GASKET BURNER-PORTABLE	EA	1
32	20	PAOZZ	3825-00-871-2694	7700062	80195	..VALVE AIR CYLINDER BURNER-PORTABLE	EA	1
32	21	XDOZZ		7700092	80195	..NUT,HEX WASHERS AND LEATHER CUP TO ROD,BURNER-PORTABLE	EA	2
32	22	XDOZZ		7700060	80195	..WASHER,LOCK WASHERS AND LEATHER CUP TO ROD,BURNER-PORTABLE	EA	1
32	23	PAOZZ	5310-01-086-9745	7700058	80195	..WASHER FLAT BURNER-PORTABLE	EA	1
32	24	POOZZ	3895-00-529-6805	7700057	80195	..CUP COMPRESSION BURNER-PORTABLE	EA	1
32	25	PAOZZ	5310-01-085-6738	7700056	80195	..WASHER,FLAT BURNER-PORTABLE	EA	1
32	26	XDOZZ		7700091	80195	.CAP BURNER-PORTABLE	EA	1
32	27	PAOZZ	5360-01-091-0792	7700090	80195	..SPRING,ROD BURNER,PORTABLE	EA	1
32	28	XDOZZ		7700093	80195	..HANDLE,PUMP BURNER-PORTABE	EA	1

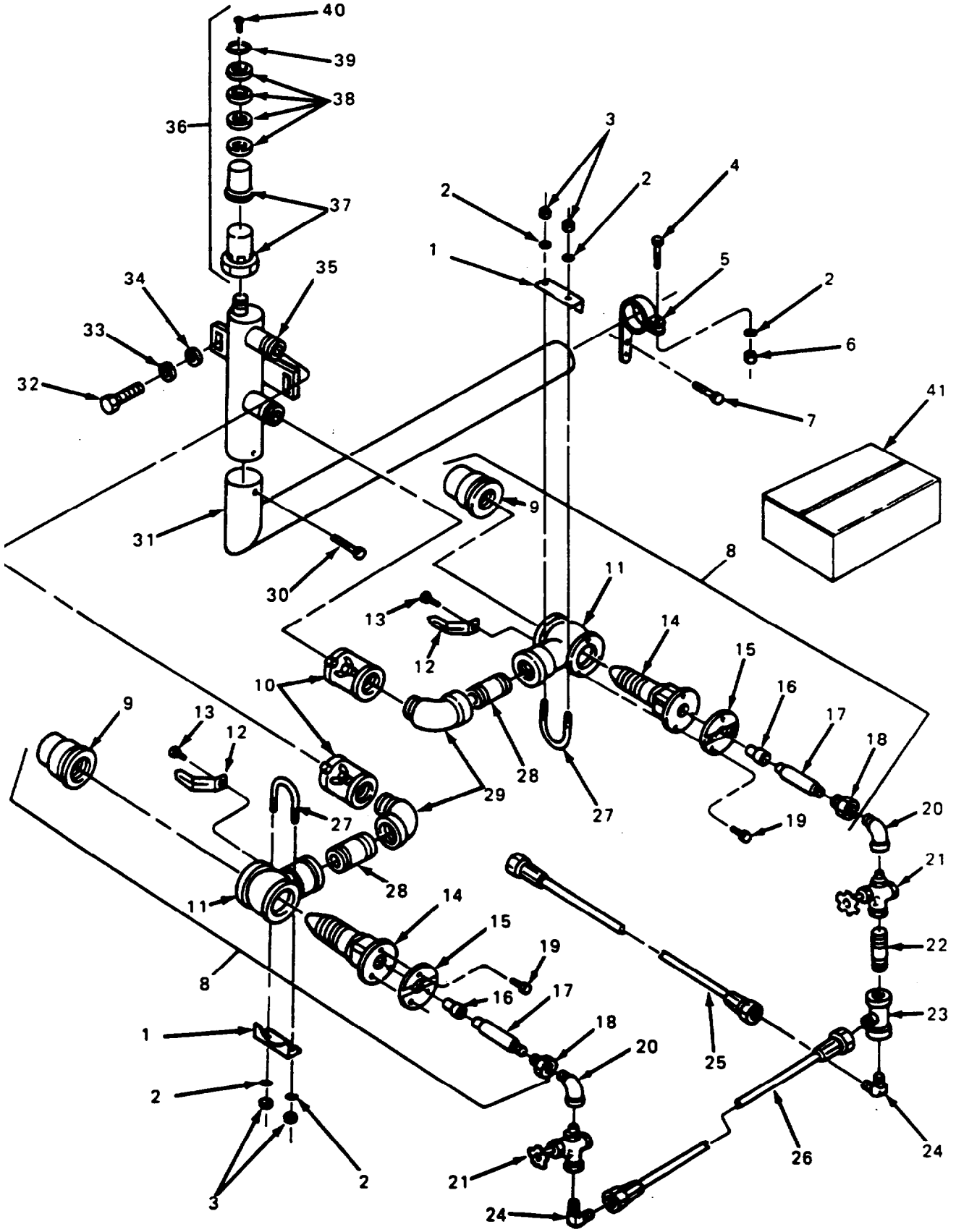


Figure 33. Low Pressure Burners

TA075737

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6006 LOW PRESSURE BURNER		
33	1	PAOZZ	3895-01-095-4363	3330218	80195	CLAMP,BURNER BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	2	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK SUPPORT BAR AND CLAMP TO BODIES,BURNER ASSEMBLY-LOW PRESSURE	EA	5
33	3	PAOZZ	5310-01-097-8002	9413946	80195	NUT,SELF-LOCKING HE SUPPORT BAR AND CLAMP TO BODIES,BURNER ASSEMBLY-LOW PRESSURE	EA	4
33	4	PAOZZ	5305-00-071-2241	121913	24617	SCREW,CAP,HEXAGON H 1/4-20X1 1/4,CRADLEE ASSEMBLY TO BURN TUBE TUBE TO TANK REAR,BURNERASSEMBLY-LOW PRESSURE	EA	1
33	5	PAFZZ	5340-00-173-3019	3330214	80195	HANGER,PIPE BURN TUBE,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	6	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 1/4 INCH-20,CRADLE ASSEMBLY TO BURN TUBE TO TANK REAR,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	7	PAOZZ		9426110	80195	SCREW,TAPPING,THREA CRADLE ASSEMBLY TO BURN TUBE TO TANK REAR,BURNER ASSEMBLY-LOWPRESSURE	EA	2
33	8	XDOFF		3331143	80195	BURNER ASSEMBLY,BIT BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	9	PAFZZ	4530-01-085-3793	7700129	80195	.NOZZLE,LOW PRESSURE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	10	PAFZZ	4820-01-018-4720	6600204	80195	.VALVE,CONTROL 1.25,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	11	KFFZZ		7700128-1	80195	.HOLDER,NOZZLE PART OF KIT P/N 7700238	EA	1
33	12	KFFZZ		3331144	80195	.STOP,INDICATOR BURNER ASSEMBLY-LOW PRESSURE PART OF KIT P/N 7700128	EA	1
33	13	PAFZZ	5305-01-097-7798	7700069	80195	.SCREW,CROSS HEAD 8/32X0.3/8,STOP TO BURNER BODY,BURNER ASSEMBLY-LOW PRESSURE PART OF KIT P/N 7700128	EA	2
33	14	PAFZZ	4530-00-425-7005	7700037	80195	.NOZZLE,OIL BURNER,P BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	15	XDFZZ		7700068	80195	.PLATE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	16	PAFZZ	3895-00-496-1575	7700039	80195	.TIP,OIL INJECTOR TU BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	17	PAFZZ	3895-01-095-3099	7700038	80195	.BODY,NOZZLE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	18	XDFZZ		7700067	80195	.BUSHING,NOZZLE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	19	XDFZZ		7700040	80195	.SCREW,SLOTTED PLATE TO NOZZLE,BURNER ASSEMBLY-LOW PRESSURE	EA	3
33	20	PAFZZ	4730-00-246-9215	105423	24617	ELBOW,PIPE 90DEG,0.25NPT,BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	21	PAFZZ	4820-00-431-0277	6600205	80195	VALVE,GLOBE BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	22	PAFZZ	4730-00-188-1855	119920	24617	NIPPLE,PIPE 0.25NPTX2.00IN.LG,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	23	PAFZZ	4730-00-249-2029	105417	31007	TEE,PIPE 0.25NPT,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	24	PAFZZ	4730-00-254-6226	142664	24617	ELBOW,PIPE TO TUBE 90DEG,0.31 TUBE X 0.75NPT,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	25	XDFZZ		9250128	80195	TUBE ASSEMBLY 0.31X72 INCHES LONG,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	26	XDFZZ		9250128	80195	TUBE ASSEMBLY 0.31X24 INCHES LONG,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	27	PAOZZ	5306-01-086-3529	3330220	80195	BOLT,U SUPPORT BAR AND CLAMP TO BODIES,BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	28	PAFZZ	4730-00-196-2073	219358	24617	NIPPLE,PPE 1.25X2.50 LG NPT,BURNER ASSEMBLY-LOW PRESSURE	EA	2
33	29	PAFZZ	4730-00-012-7823	MS39230-7	96906	ELBOW,PIPE 90DEG,1.25NPT,BURNEER ASSEMBLY-LOW PRESSURE	EA	2
33	30	XDFZZ		9426110	80195	SCREW,TAP 10X10.75,BURN TUB TO FEED TUBE,BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	31	XDFZZ		3330591	80195	TUBE,BURN BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	32	PAOZZ	5305-00-044-4153	122408	24617	SCREW,CAP,HEXAGON H	EA	2
33	33	PAOZZ	5310-00-232-8194	121574	24617	WASHER,LOCK	EA	2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
33	34	PAOZZ	5310-00-951-7209	130999	24617	WASHER,FLAT	EA	2
33	35	XDFZZ		7700130	80195	TUBE,FEED-LOW PRESS BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	36	PAFFF	4820-00-160-5726	3330073	80195	DISK,VALVE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	37	PAFZZ		7430065	80195	.VALVE,AIR PRESSURE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	38	PAFZZ	4820-01-085-8093	7430064	80195	.RING,AIR RLF VALVE BURNER ASSEMBLY-LOW PRESSURE	EA	4
33	39	PAFZZ	4820-01-085-3029	3330074	80195	.DISC,AIR RLF VALVE BURNER ASSEMBLY-LOW PRESSURE	EA	1
33	40	PAFZZ	5305-00-984-6208	436730	24617	.SCREW,MACINE 10NC X 0.38,DISC TO AIR RELIEF RING,BURNER ASSEMBLY-LOWPRESSURE	EA	1
33	41	PAFZZ	4530-01-085-2583	7700128	80195	BODY KIT,LOW PRESS LOW PRESSURE BURNER	EA	1
33	11					HOLDER,NOZZLE	EA	1
33	12					STOP,INDICATOR	EA	1
33	13					SCREW,CROSS HEAD	EA	2

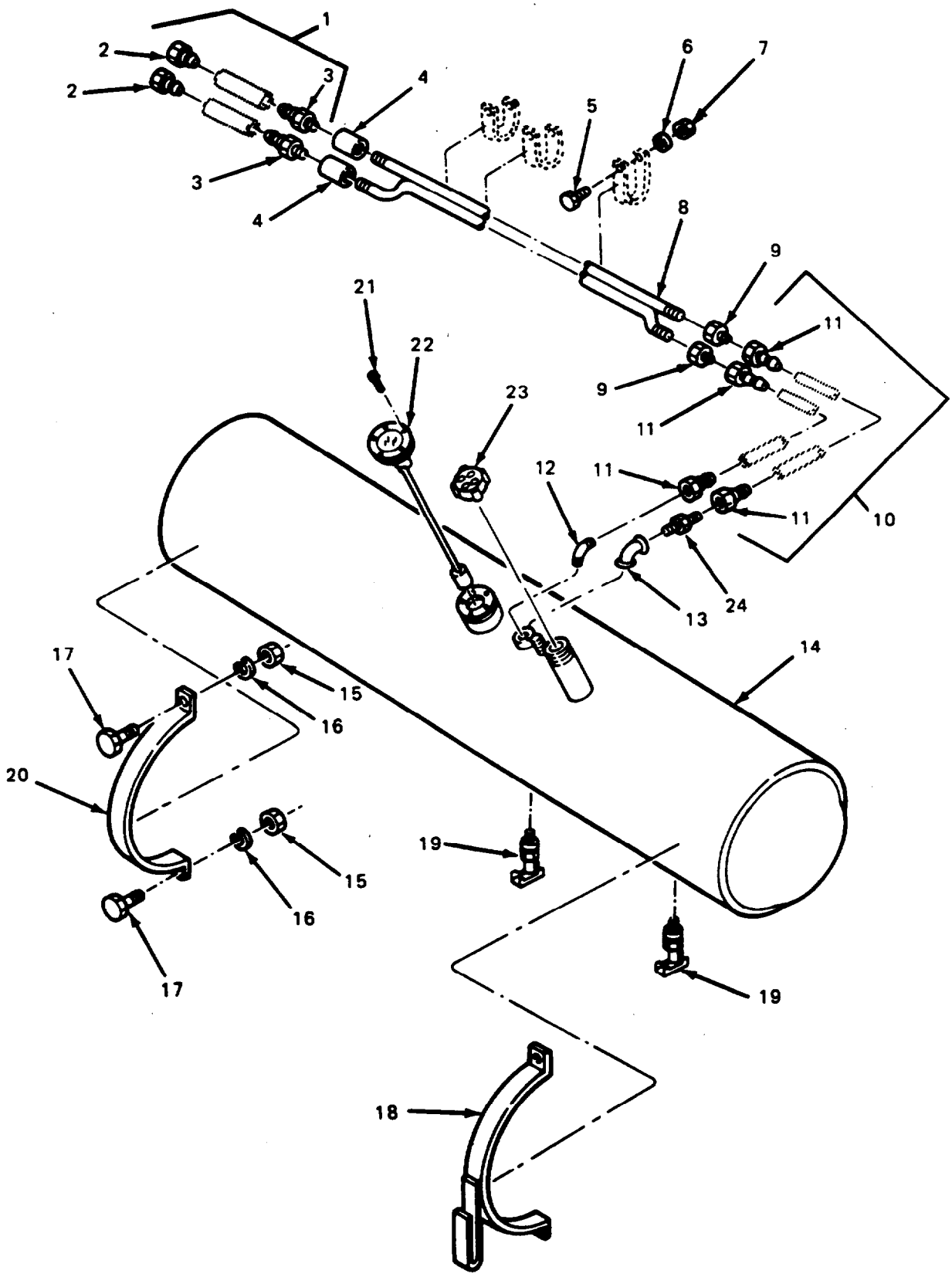


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Figure 34. Fuel Tank and Lines
Sheet 1 of 2

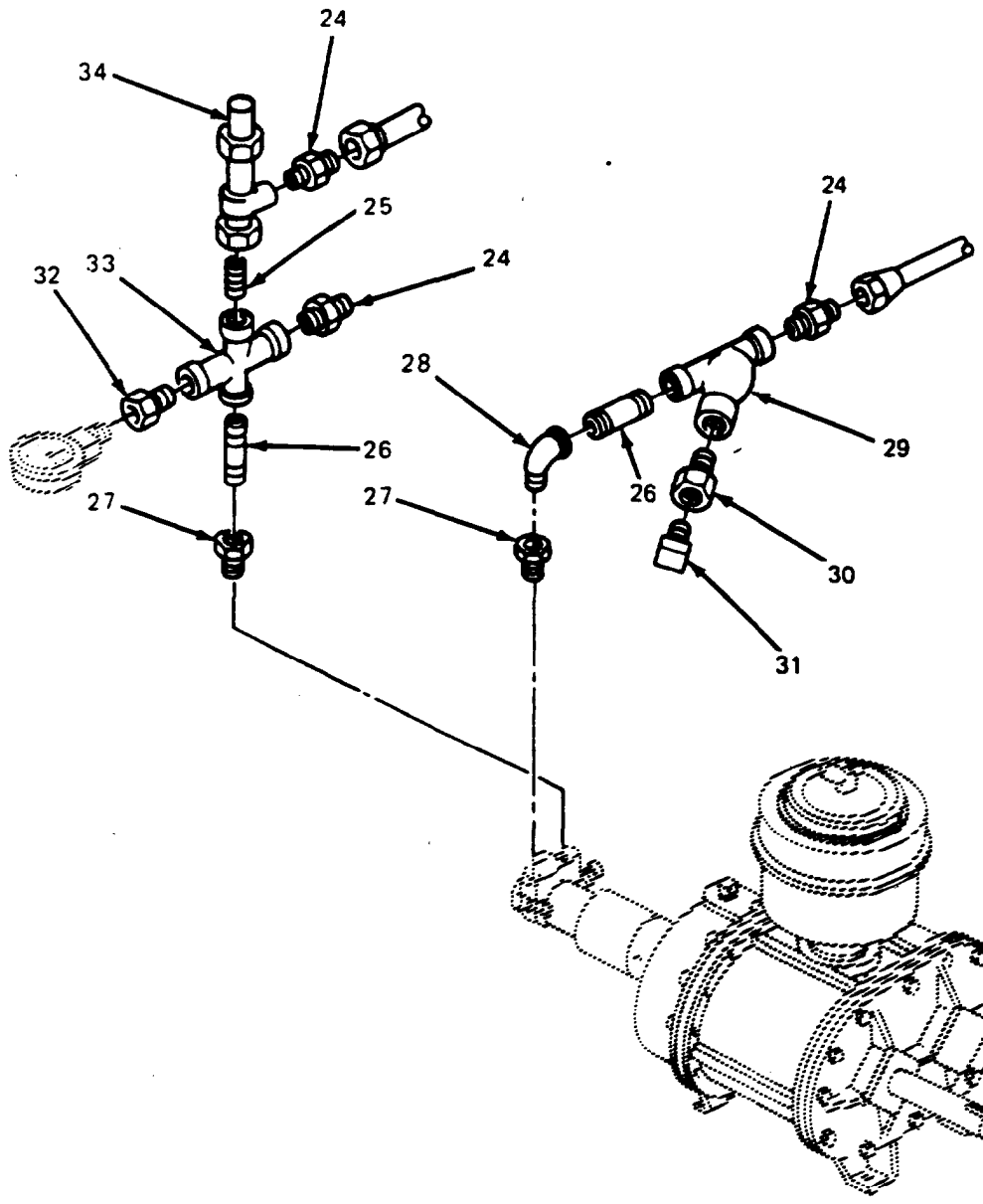

Figure 34. Fuel Tank and Lines
Sheet 2 of 2

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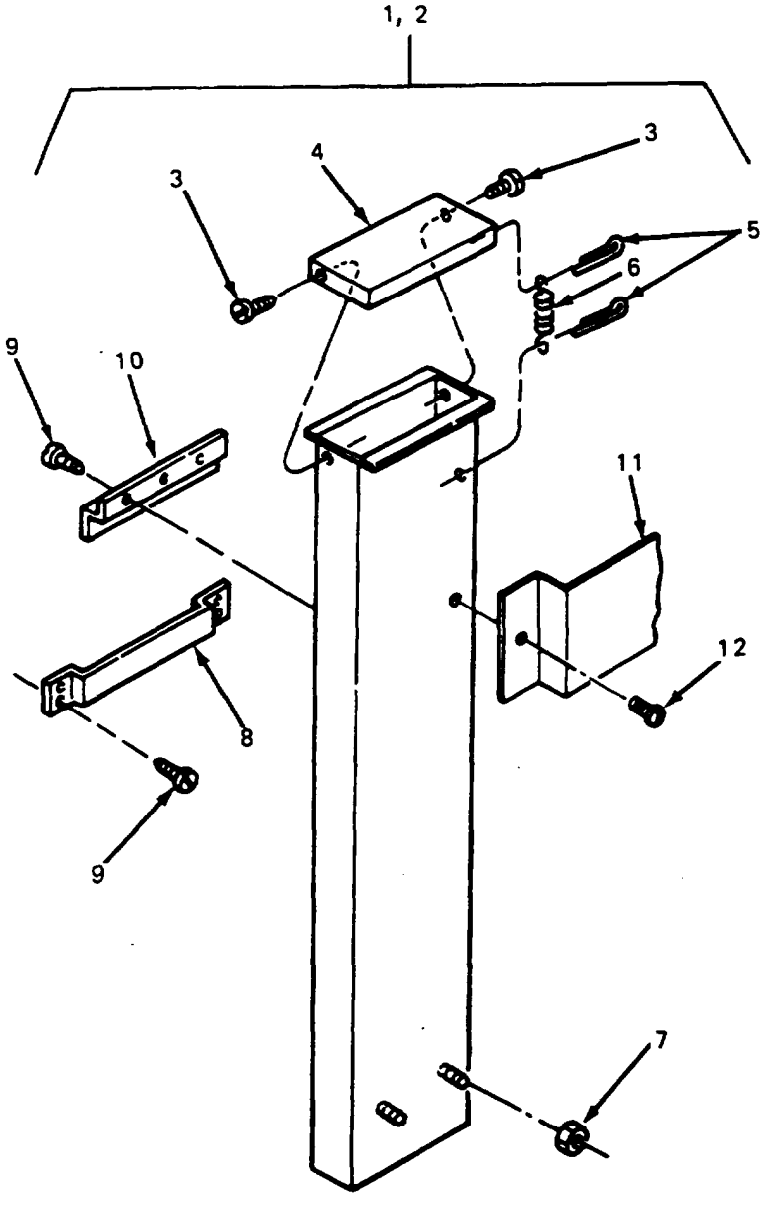
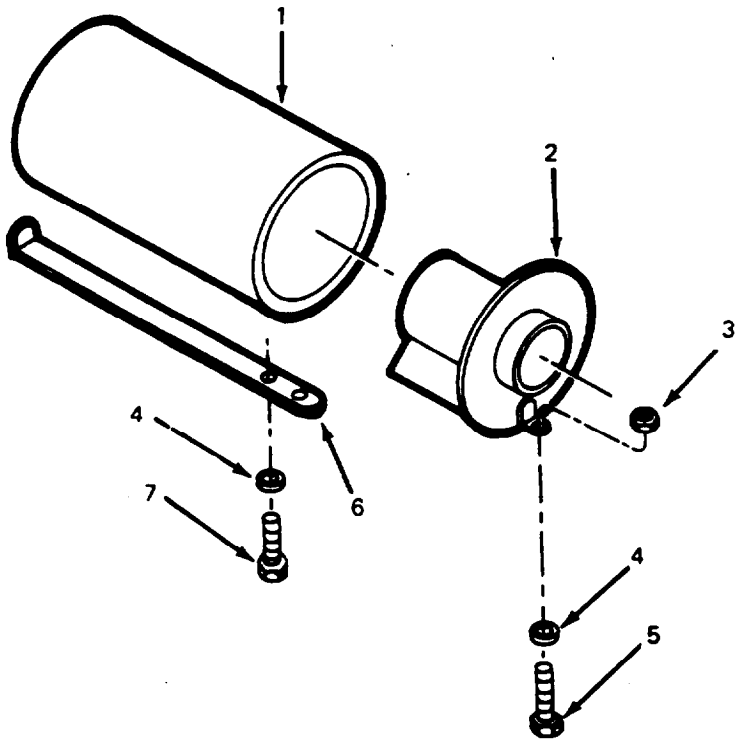
(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6007 FUEL TANK AND LINES		
34	1	MOOZZ		MA207-22913	34623	HOSE,RUBBER MFR FROM P/N MA207-2988,6 LOLA	EA	1
34	2	PAOZZ	4730-01-082-7165	6600306	80195	.CONNECTOR,SWIVEL FUEL TANK AND LINES-TOP DRAW	EA	1
34	3	PAOZZ	4730-01-083-3977	6600305	80195	.CONNECTOR,MALE FUEL TANK AND LINES-TOP DRAW	EA	1
34	4	PAOZZ		120755	24617	COUPLING,PIP 3/8NPT	EA	2
34	5	PAOZZ	5305-00-071-2241	121913	24617	SCREW SHEAR 1/4-20NCX1 1/4LG,PIPE TO WELDED TAIL CLAMPSLINES-TOP DRAW	EA	3
34	6	XDOZZ		120380	24617	WASHER,LOCK 0.25,PIPE TO WELDED RAIL CLAMPS	EA	3
34	7	PAOZZ	5310-00-761-6882	120375	24617	NUT,HEXAGON 0.25NC,PIPE TO WELDED RAIL CLAMPSDRAW	EA	3
34	8	XDOZZ		3331225	80195	PIPE ASSEMBLY INLET AND OUTLET FUEL LINES,FUEL TANK AND LINES-TOP DRAW	EA	1
34	9	PAOZZ	4730-00-270-4606	121323	24617	ADAPTER,STRAIGHT,PI	EA	2
34	10	MOOZZ		MA207-22974	34623	HOSE ASSEMBLY MFR FROM P/N MA207-22989,6 LOLA	EA	2
34	11	PAOZZ	4730-01-082-7165	6600306	80195	.ADAPTER,STRAIGHT,TU	EA	2
34	12	PAOZZ	4730-00-902-8991	MS39162-5	96906	ELBOW,PIPE TO TUBE 90DEG,0.38TBX0.25NPT	EA	1
34	13	PAOZZ	4730-00-249-3915	DX533AC	56442	ELBOW,PIPE 90DEG,1/4NPT	EA	1
34	14	PBOFF	3895-01-094-8987	3331116	80195	TANK ASSEMBLY FUEL	EA	1
34	15	PAOZZ	5310-00-732-0560	120371	24617	NUT,HEX 0.50NC,SUPPORTS TO TANK TO RAIL WELDED SUPPORT,FUEL TANK AND LINES-TOP DRAW	EA	4
34	16	XDOZZ		120384	24617	WASHER,LOCK SUPPORTS TO TANK TO RAIL WELDED SUPPORT DRAW	EA	4
34	17	XDOZZ		122459	24617	SCREW,CAP,HEX HEAD 0.5NCX2.00,SUPPORTS TO TANK TO RAIL WELDED SUPPORTTANK AND LINES-TOP DRAW	EA	4
34	18	XDOZZ		J626121	80195	BAND,SUPT,WITH HGR FUEL TANK AND LINES-TOP DRAW	EA	1
34	19	PAOZZ	4820-00-752-9040	MS35782-4	96906	COCK,DRAIN FUEL TAK AND LINES-TOP DRAW	EA	1
34	20	XDOZZ		3311022	80195	BAND,SUPT,FUEL, TANK FUEL TANK AND LINES-TOP DRAW	EA	1
34	21	XDOZZ		9426113	80195	SCREW,TAP N0.10X7/8IN.LG,GAUGE TO FUEL TANK,FUEEL TANK AND LINES-TOPDRAW	EA	5
34	22	PAOZZ	6680-01-083-6329	3331190	80195	GAUGE,LIQUID QUANTIT FUEL TANK AND LINES-TOP DRAW	EA	1
34	23	PAOZZ	2910-01-083-7318	6100235	80195	CAP,FILLR FUEL TANK AND LINES-TOP DRAW	EA	1
34	24	PAOZZ	4730-00-270-4616	W05824	79470	ADAPTER,STRAIGHT,PI 0.38X0.38	EA	4
34	25	PAOZZ	4730-00-188-1864	MS51953-49B	96906	NIPPLE,PIPE 3/8NPT,FUEL TANK LINES AND FITTINGS	EA	1
34	27	PAOZZ	4730-00-193-0871	MS51887-7	96906	BUSHING,PIPE 1/2NPT TO 3/8NPT,FUEL TANK LINES AND FITTINGS	EA	2
34	29	PAOZZ	3895-00-425-6903	STYLE B	01292	STRAINER	EA	1
34	30	PAOZZ	4730-00-845-8750	144049	24617	BUSHING,PIPE 3/4NPT TO 1/2NPT,FUEL TANK LINES AND FITTINGS	EA	1
34	31	PAOZZ		7030034	80195	PLUG,PIPE 1/2NPT,FUEL TANK LINES AND FITTING	EA	1
34	32	PAOZZ	4730-00-014-4043	144C43	24617	BUSHING,PIPE 3/8NPT TO 1/4NPT,FUEL TANK LINES AND FITTINGS	EA	1
34	34	PAOZZ	4810-00-160-6654	6600197	80195	VALVE,RELIEF 3/8NPT,FUEL TANK LINES AND FITTINGS	EA	1



TA075754

Figure 35. Smoke Stacks

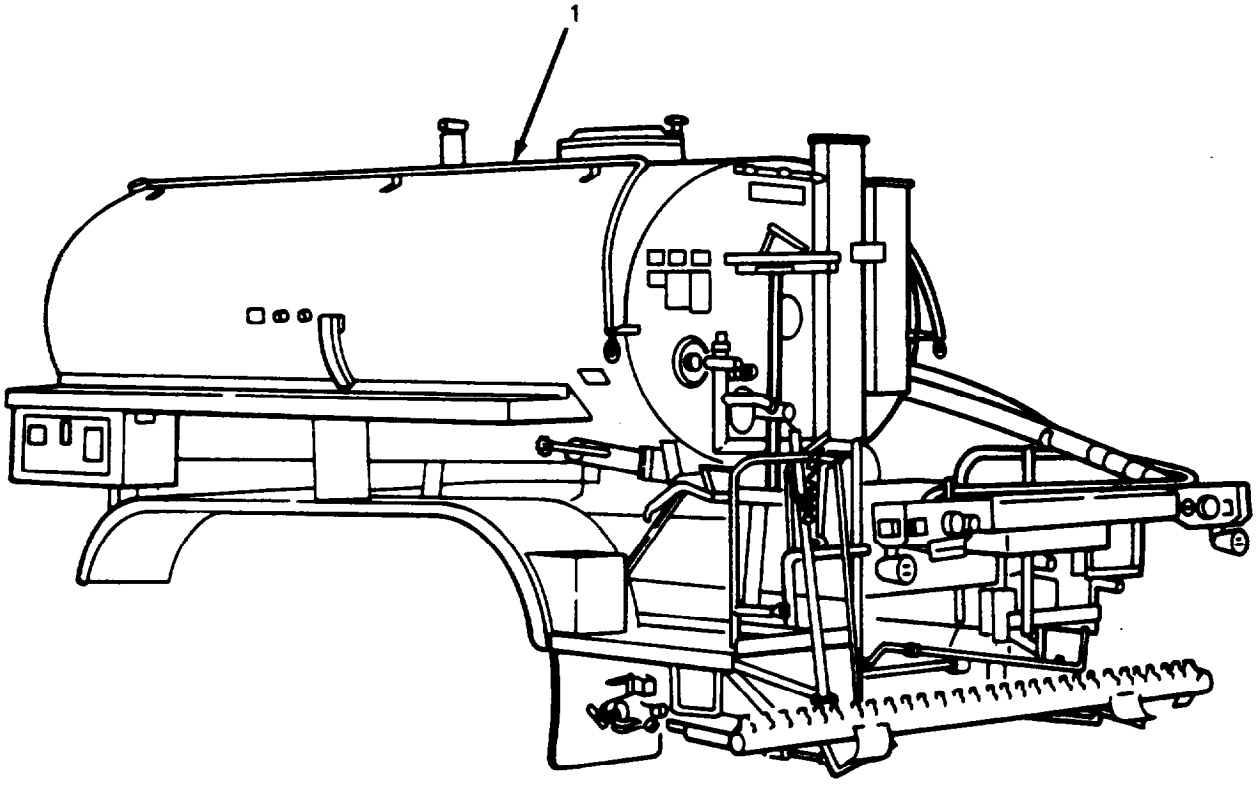
(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6010 SMOKE STCKS		
35	1	XDOOO		3380218	80195	STACK ASSEMBLY SMOKE-EXTERNAL 53IN	EA	1
35	2	XDOOO		3380194	80195	STACK ASSEMBLY SMOKE-EXTERNAL 36IN	EA	1
35	3	PAOZZ	5305-00-057-9623	MS24617-61	96906	.SCREW,METAL COVER TO SMOKE STACK,SMOKE STACKS-EXTERNAL	EA	2
35	4	XDOZZ		3380140	80195	.COVER SMOKE STACKS-EXTERNAL	EA	1
35	5	PAOZZ	5315-00-012-0123	MS24665-355	96906	.PIN,COTTER SPRING TO STACK,SMOKE STACKS-EXTERNAL	EA	2
35	6	PAOZZ	5360-01-096-6871	3330050	80195	.SPRING,HELICAL,SEN SMOKE STACKS-EXTERNAL	EA	1
35	7	XDOZZ		9418871	24617	.NUT 3/8 NC	EA	2
35	8	XDOZZ		3380136	80195	.BRACKET SMOKE STACKS-EXTERNAL	EA	1
35	9	PAOZZ	5305-00-052-8241	144744	24617	.SCREW,TAPPING,THREA N0.14X3/4IN.,BRACKET TO TANK,SMOKE STACKS-EXTERNAL	EA	11
35	10	XDOZZ		3380135	80195	.HOOK,MOUNTING SMOKE STACKS-EXTERNAL	EA	1
35	11	PAOZZ	5340-01-083-3888	3390562	80195	BRACKET	EA	1
35	12	PAOZZ	5305-00-883-0628	MS24617-21	96906	SCREW,TAPPING,THREA	EA	2



TA075783

Figure 36. Low Pressure Combustion Chamber

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 6011 LOW PRESSURE COMBUSTION CHAMBER		
36	1	PAFZZ	4520-01-085-2582	6500041	05073	TUBE,COMBUSTION COMBUSTION CHAMBER-LOW PRESSURE	EA	2
36	2	PBOZZ	3895-00-160-5723	3330062	80195	BLOCK,COMBUSTION COMBUSTION CHAMBER-LOW PRESSURE	EA	2
36	3	PAOZZ	5310-00-409-3355	120376	24617	NUT,PLAIN,HEXAGON 0.31NC,HOLDER TO BLOCK ASSEMBLY,COMBUSTION CHAMBER-LOW PRESSURE	EA	2
36	4	PAOZZ	5310-00-407-9566	MS35338-45	96906	WASHER,LOCK 0.31,HOLDER TO BLOCK ASSEMBLY,COMBUSTION CHAMBER-LOW PRESSURE	EA	4
36	5	PAOZZ	5305-00-225-9081	MS90725-36	96906	SCREW,CAP,HEXAGON H 0.3INCHX1.25,HOLDER TO BLOCK ASSEMBLY, COMBUSTION CHAMBER-LOWPRESSURE	EA	2
36	6	PBOZZ	3895-00-160-5722	3330061	80195	7 HOLDER COMBUSTION TUBE,COMBUSTION CHAMBER-LOW PRESSURE	EA	2
36	7	PAOZZ		120741	24617	BOLT,MACHINE 0.31NCX0.75 LG,HOLDER TO COMBUSTION TUBE, COMBUSTION CHAMBER-LOW PRESSURE	EA	2



TA075741

Figure 37. Bituminous Body

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7300 BITUMINOUS BODY		
37	1	AHHHH		D-63-J-6261	80195	BODY ASSEMBLY BITUMINOUS DISTRIBUTOR	EA	1

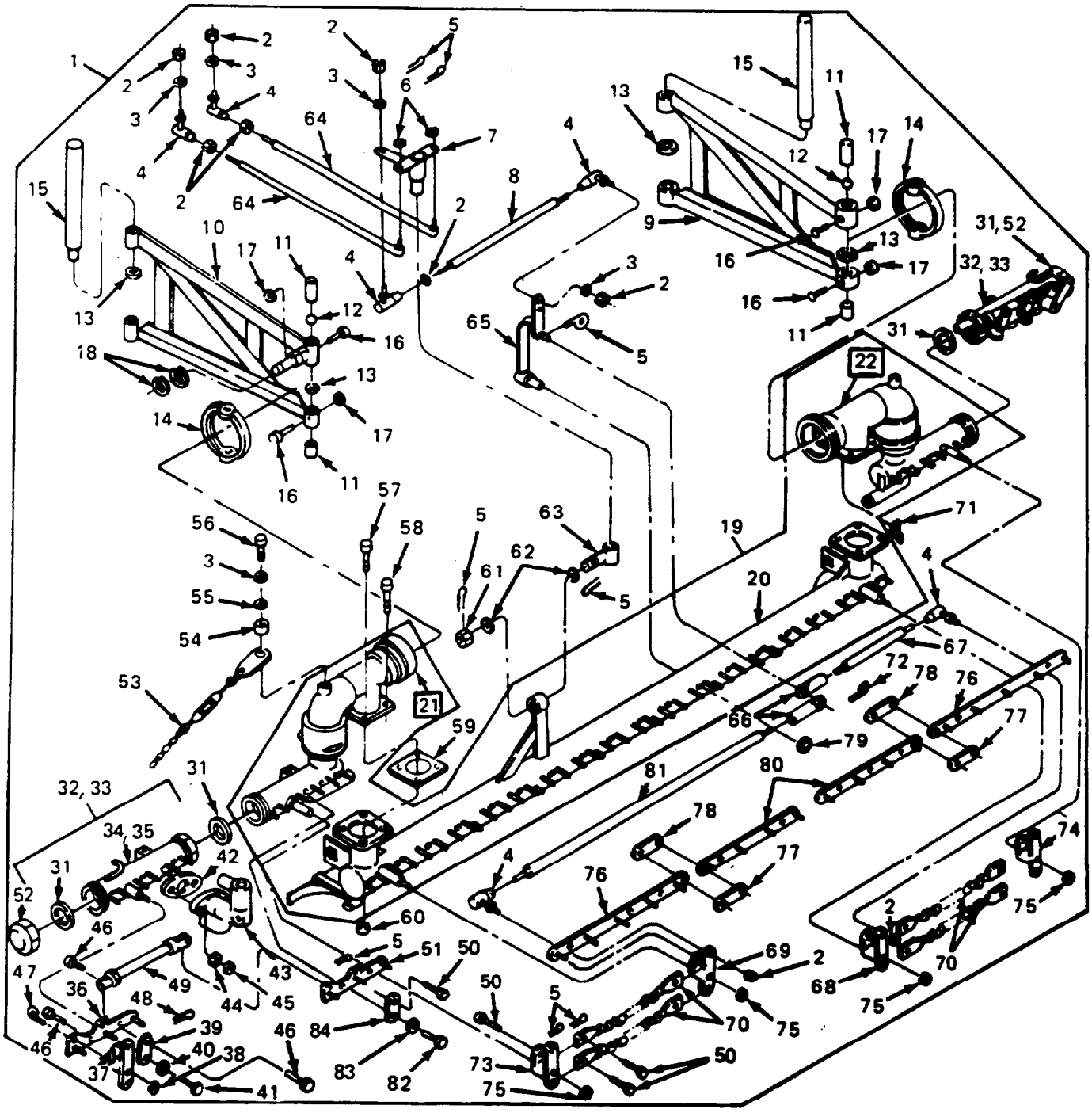


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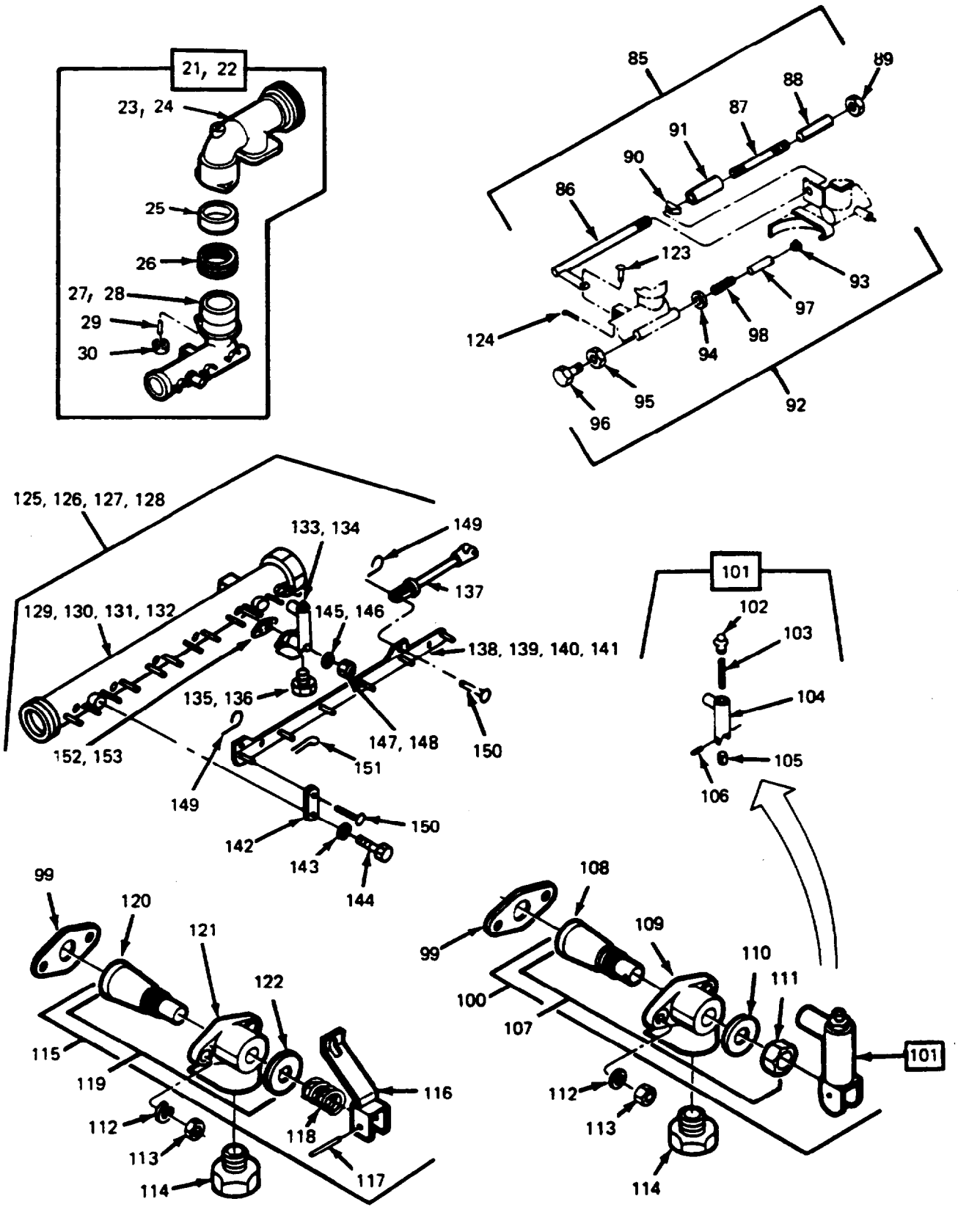
Figure 38. Spray Bar
Sheet 1 of 2



TA075739

Figure 38. Spray Bar
Sheet 2 of 2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7317 SPRAY BAR		
38	1	XDOOO		3350580	80195	SPRAY BAR ASSEMBLY TUC-ALL FLIP VALVES	EA	1
38	2	PAOZZ	5310-00-880-7745	MS35690-723	96906	.NUT,PLAIN,HEXAGON 0.44NF,CONNECTOR LINKS TO BOTTOM OF QUADRANT,SPRAY BAR ASSY TUC-ALL FLIP VALVES	EA	9
38	3	PAOZZ	5310-00-209-0965	MS35338-28	96906	WASHER,LOCK 0.44NF	EA	6
38	4	PAOZZ		107376	24617	.BALL JOINT 0.44-20,TYPE C,SPRAY BAR ASSY-TUC-ALL FLIP VALVS	EA	6
38	5	PAOZZ	5315-00-839-5822	MS24665-353	96906	.PIN,COTTER 0.12X1.00LG,ADJUSTABLE LINKS TO TOGGLE SWIVEL, SPRAY BAR ASSY-TUC ALL FLIP VALVS	EA	1
38	6	PAOZZ	5310-00-809-3079	120390	24617	WASHER,FLAT 0.50IN.,ADJUSTABL LIKS TO TOGGLE SWIVEL,SPRAY BAR ASSY-TUC ALL FLIP VALVES	EA	2
38	7	XDOZZ		3350186	80195	.TOGGLE ASSY-SWIVEL SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	8	XDOZZ		3350192	80195	.ROD ADJUSTABLE CONTROL,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	9	PAOZZ	3895-00-922-0321	3350332	80195	.ARM,CARRYING SPRAY BAR ASSMBLY-TUC-ALL FLIP VALVES	EA	1
38	10	XDOZZ		3350331	80195	ARM ASSY-CRYG-LEFT SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	1
38	11	XDOZZ		3350138	80195	.PIN,STRAIGHT,HEADLE SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	4
38	12	PAOZZ	3895-00-763-0688	6000290	80195	.BALL,METALLIC 0.38 G 500 C/STL,SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	V
38	13	XDOZZ		6100015	80195	.WASHER,BRASS SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	4
38	14	PAOZZ	5365-00-146-7139	3350135	80195	.RING,RETAINING SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	2
38	15	XDOZZ		3350047	80195	.PIN-SIVEL,LONG SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	2
38	16	PAOZZ	5305-00-988-1728	MS35206-287	96906	.SCREW,MACHINE SLOTTED,..25NCX2.00IN.LG,PINS TO ARM ASSEMBLIES,SPRAY BARASSEMBLY-TUV-ALL FLIP VALVES	EA	4
38	17	PAOZZ	5310-00-761-6882	120375	24617	.NUT,PLAIN,HEXAGON 0.25NC,PINS TO ARM ASSEMBLIES,SPRAY BAR ASSEMBLY-TUC-ALL FLIPVALVES	EA	4
38	18	PAOZZ	5365-01-102-4358	5160-98	70788	.RING,RETAINING SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	2
38	19	PBOOO	3895-01-100-9999	3350520	80195	.TUBE ASSEMBLY,SPRAY CTR,WITH STUDS,FLIIP VALVE,SPRAY BAR ASSEMBLY-TUC-ALL FLIPVALVES	EA	1
38	20	XDOZZ		7230118	80195	..TUBE,CTR,WITH STUDS FLP VALVE,SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVE	EA	1
38	21	XDOOO		7230124	80195	..HINGE SECTON,COMP FLIP VALVE,LEFT,SPRAY BAR ASSYEMBLY-TUC ALL FLIP VALVE	EA	1
38	22	XDOOO		7230125	80195	..HINGE SECTION,COMP FLIP,RIGHT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	23	XDOZZ		7230126	80195	...ELBOW-SPRAY BAR-L SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	1
38	24	XDOZZ		7230127	80195	...ELBOW-SPRAY BAR RIGHT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	25	PAOZZ	5365-00-147-6184	3350131	80195	...RING,RETAINING SWIVEL JOINT,SPRAY BAR ASSY-TUC-ALL FLIP VALVE	EA	1
38	26	POOZZ	5330-00-112-1289	6000265	80195	...PACKING ASSEMBLY SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	27	PAOZZ	3895-01-083-9923	7230115	80195	...SWIVEL ASSY-LEFT SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	28	PAOZZ	3895-01-083-9924	7230116	80195	...SWIVEL ASSEMBLY,RING SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	29	PAOZZ		6000697	80195	...STUD,SWIVEL JOINT 0.38NC,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	30	PAOZZ	5310-00-851-2682	MS35691-17	96906	...NUT,PLAIN,HEXAGON 0.38NC,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	31	PAOZZ		J-M920-2.50X2.12	92764	.GASKET 2.50X2.12,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	4
38	32	XDOZZ		3351250	80195	.HOOK SECTIION ASSY RIGHT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
38	33	XDOZZ		3350493	80195	.HOOK SECTION ASSY LEFT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	34	XDOZZ		3351251	80195	..TUBE ASSEMBLY LEFT HOOK SECTION,FLIP,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	35	XDOZZ		3351252	80195	..TUBE ASSEMBLY RIGHT HOOK SECTION,FLIP,SPRAY BAR ASSY-TUC ALL FLIP VALVES	EA	1
38	36	XDOZZ		3350225	80195	..BAR ASSY,CONTROL VALVE-LEFT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	37	XDOZZ		3350294	80195	..TOGGLE ASSEMBLY HOOK SECTION,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	38	XDOZZ		6000571	80195	..RING,SNAP SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	39	XDOZZ		3350324	80195	..LEVER,GUIDE DETACH LEVER,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	40	PAOZZ	5310-00-809-4061	MS27183-15	96906	..WASHER,FLAT 0.375,LEVER GUIDE TO LEFT AND RIGHT END BARS, SPRAY BAR ASSYTUC -ALL FLIP VALVES	EA	1
38	41	PAOZZ	5306-00-604-8006	122119	24617	..BOLT 0.38NCX0.75LG,LEVER GUIDE TO LEFT AND RIGHT END BARS, SPRAYBAR ASSY-UC-ALL FLIP VALVES	EA	1
38	42	PAOZZ	5330-00-413-4782	3350316	80195	..GASKET SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	3
38	43	PAOOO	4820-00-493-8581	3350579	80195	..VALVE,SPRAYER SPRAYY BAR ASSY-TUC-ALL FLIP VALVES	EA	3
38	44	PAOZZ	5310-00-407-9566	MS35338-45	96906	..WASHER,LOCK 0.31,VALVE BODY TO CENTER BAR STUDS,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	6
38	45	PAOZZ	5310-00-409-3355	120376	24617	..NUT,PLAIN,HEXAGON 0.31NC,VALVE BODY TO CENTER BAR STUDS, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	6
38	46	PAOZZ		6000423	80195	..RIVET,DRILLED TOGGLE BALL JOINTS TO CONTROL BARS,SPRAY BAR ASSY-TUC-ALLFLIP VALVES	EA	3
38	47	PAOZZ	5315-00-150-4819	3350708	80195	..PIN.SPECIAL,HOOK SPRAY BAR ASSYY-TUC-ALL FLIP VALVES	EA	1
38	48	PAOZZ	5315-00-839-5822	AN380-4-4	88044	..PIN,COTTER TOGGLE BALL JOINTS TO CONTROL BARS,SPRAY BAR ASSY-TUC-ALLFLIP VALVES	EA	3
38	49	XDOZZ		3350567	80195	..LINK ASSY,ADJUSTING SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	50	PAOZZ		6000423	80195	.RIVET,DRILLED 0.25X0.75LG,ADJUSTABLE LINKS TO CONTROL BARS, SPRAY BAR ASSYTUC-ALL FLIP VALVES	EA	V
38	51	XDOZZ		3350226	80195	.BAR ASSY CONTROL VALVE-RIGHT,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	52	PAOZZ	3895-01-082-8494	3351477	80195	.END CAP,SPRAY BAR SPRRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	53	PAOZZ	3895-00-231-6596	3350262	80195	.CHAIN,SUPPORT SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	54	PAOZZ		3350264	80195	.SLEEVE CHAIN HOLDING ASSY TO HINGE SECTIONS-SPRAY BAR ASSY-TUC-ALLFLIP VALVES	EA	2
38	55	PAOZZ	5310-01-082-8494	MS15795-217	96906	.WASHER,FLAT 0.44,CHAIN HOLDING ASSY TO HINGE SECTIONS,SPRAY BAR ASSYY-TUC ALL FLIP VALVES	EA	2
38	56	PAOZZ	5305-00-045-1988	122267	24617	.SCREW,CAP,HEXAGON H 0.44NCX1.25LG,CHAIN HOLDING ASSY TO HINGE SECTIONS,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	57	PAOZZ	5305-00-206-3519	122433	24617	.SCREW 1/2IN.NC.X1-1/2IN.LG,HINGE SECTIONS TO CTR TUBE ASSY, SPRAYBAR ASSY-TUC-ALL FLIP VALVES	EA	4
38	58	PAOZZ	5305-00-071-1769	122459	24617	.SCREW,CAP,HEXAGON H 1/2IN.NCX2.00IN.LG,HINGE SECTIONS TO CTR TUBE ASSY,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	4
38	59	PAOZZ	5330-00-868-7912	3350553	80195	.GASKET SPRAY BAR ASSEMBLY-TUC-ALL FLIP VALVES	EA	2
38	60	PAOZZ	5310-00-732-0560	120371	24617	.NUT,PLAIN,HEXAGON 1/2NC,HINGE SECTIONS TO CTR TUBE ASSY, SPRAY BAR ASSY-UC-ALL FLIP VALVES	EA	8
38	61	PAOZZ	5310-00-297-3260	272336	24617	.NUT,PLAIN,SLOTTED H BEARING ASSY TO CENTER BAR,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
38	62	PAOZZ	5310-01-082-9163	3350195	80195	.WASHER BEARING ASSY TO CENTER BAR, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	63	PAOZZ	5130-00-149-9194	3350183	80195	. BEARING ASSEMBLY SPRAY BAR ASSY-TUC-ALLL FLIP VALVES	EA	1
38	64	XDOZZ		3350621	80195	. LINK ADJUSTABLE CONNECTOR, SPRAY BAR ASSY, TUC-ALL FLIP VALVES	EA	2
38	65	PAOZZ	3040-00-086-4374	33500169	80195	. LEVER ASSY-FULCRUM SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	66	PAOZZ		3350178	80195	. ROD, END ASSEMBLY ADJUSTABLE, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	67	XDOZZ		3350177	80195	. ROD,CONTROL,SHORT SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	68	XDOZZ		3350561	80195	. TOGGLE ASSEMBLY CENTER TUC BAR-RIGHT-, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	69	XDOZZ		3350560	80195	. TOGGLE ASSEMBLY CENTER TUC BAR-LEFT, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	70	PAOZZ	3020-00-231-6595	3350228	80195	.CHAIN,DISTRIBUTOR SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	4
38	71	XDOZZ		3350583	80195	.BAR,STOP HINGE SECTION, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	72	PAOZZ	5310-01-082-9164	3350708	80195	.PIN.SPECIAL, HOOK	EA	3
38	73	XDOZZ		3350563	80195	. TOGGLE ASSEMBLY BALL JOINT-TUC BAR-LEFT, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	74	XDOZZ		3350564	80195	. TOGGLE ASSEMBLY BALL JOINT-TUC BAR-RIGHT, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	75	XDOZZ		6000571	80195	. RING, SNAP SPRAY BAR ASSY-TUC ALL FLIP VALVES	EA	4
38	76	XDOZZ		3350155	80195	. BAR, CONTROL OUTBOARD,CENTER,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	77	XDOZZ		3350160	80195	.LINK,DISTRIBUTOR SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	78	XDOZZ		3350159	80195	. LINK ASSEMBLY CONNECTING,SPRY BARR ASSY-TUC-ALL FLIP VALVES	EA	2
38	79	PAOZZ		610058	80195	. WASHER LONG AND SHORT RODS TO FULCRUM LEVERR ASSY, SPRAY BAR ASSY-TUC ALL FLIP VALVES	EA	1
38	80	XDOZZ		3350157	80195	.BAR CONTROL-INBOARD CENTER, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	81	XDOZZ		3350182	80195	.ROD,CONTROL,LONG SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	82	PAOZZ	5306-00-604-8006	122119	24617	. BOLT 0.38X0.75G, LEVERS TO BAR ASSY-TUC ALL FLIP VALVES FLIPVALVES	EA	1
38	83	PAOZZ	5310-00-809-4061	MS27183-15	96906	.WASHER, FLAT 0.375, LEVERS TO BAR ASSY, SPRAY BAR ASSY-TUC ALL FLIP VALVES	EA	2
38	84	XDOZZ		3350324	80195	.GUIDE, LEVER DETACH LEVER, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	85	XDOOO		3350641	80195	.SPRING ASSY-RETURN SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2
38	86	PAOZZ	3895-01-082-8491	3350399	80195	.. LINK ASSEMBLY, PISTO BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	87	PAOZZ	5360-01-082-9162	3350403	80195	SPRING BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	88	PAOZZ	3895-01-082-8493	3350406	80195	..COVER,RETURN SPRING BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	89	PAOZZ	5310-00-763-8920	124589	24617	.. NUT,PLAIN,HEXAGON 0.62NC,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	90	PAOZZ	3895-01-082-7166	3350398	80195	.. ROCKER,SPRAY BAR RE SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	91	PAOZZ	3895-01-082-8492	3350404	80195	.... COVER,OUTER BAR RET BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	92	PBOZZ	3895-01-083-0904	7230112	80195	. LOCK ASSEMBLY,PISTO PISTON RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
38	93	PAOZZ	3895-00-148-5093	3350393	80195	.. LOCK,PISTON BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES.	EA	1
38	94	PAOZZ		MS15795-213	96906	..WASHER,FLAT 0.25, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	95	PAOZZ	5310-00-768-0318	120378	24617	.. NUT,PLAIN,HEXAGON 0.50NC, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	96	PAOZZ	5305-00-206-3519	122433	24617	.. SCREW 0.50NCX1.50LG,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	97	PAOZZ	3895-00-145-6345	3350396	80195	.. PISTON, SPRING BAR RETURN, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	98	PAOZZ	5360-01-082-9375	3310353	80195	.. SPRING,HELICAL,COMP SPRAY BAR ASSY-TUC-ALL FLIPP VALVES	EA	1
38	99	PAOZZ	5330-00-413-4782	3350316	80195	. GASKET	EA	V
38	100	PBOZZ	4820-00-493-8581	3350579	80195	. VALVE, SPRAYER	EA	V
38	101	PAOZZ	3895-00-122-2024	3351241	80195	.. LEVER ASSY, DETACH NOZZLE VALVE, SPRAY BAR ASSY-TUC-ALL FLIP	EA	V
38	102	XAOZZ		127800	24617	... FITTING,LUBRICATION C.12PTFX0.69, SPRAY BAR ASSY-TUC-ALL-FLIP VALVES	EA	1
38	103	PAOZZ	5360-00-148-3798	3350319	80195	... SPRING,HELICAL,COMP SB NOZZLE, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	104	XAOZZ		3350318	80195	... LEVER,DETACH,NOZZLE DETACH NOZZLE VALVE, SPRAYY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	105	PAOZZ	5360-00-149-8688	3350325	80195	... PLUNGER DETACH LEVER SB NOZZLE, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	106	PAOZZ	5315-00-854-8709	MS35677-24	96906	... PIN,GROOVED,HEADLES 0.16X0.75, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	107	PBOOO	4730-01-082-7167	3351572	80195	VALVES ASSEMBLY 1.562 RADIUS, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	108	PAOZZ		3350454	80195	... PLUG,NOZZLE WITH 3.50 TAPER, SECTION,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	109	XDOZZ		3350453	80195	... BODY-VALVE,NOZZLE 1.56 RADIUS, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	110	XDOZZ		3351480	80195	... WASHER,VALVE NOZZLE SPRAY BAR, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	111	XDOZZ		274637	24617	... NUT,HEX LOCK 0.50NF, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	112	PAOZZ	5310-00-407-9566	MS35338-45	96906	. WASHER,LOCK	EA	V
38	113	PAOZZ	5310-00-409-3355	120376	24617	. NUT,PLAIN,HEXAGON	EA	V
38	114	PAOZZ	3895-00-248-4370	3351009	80195	. NOZZLE,SPRAY BAR 0.31 SPRAY BAR, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	V
38	115	PAOZZ	4820-00-227-9715	3350572	80195	. COCK,PLUG CORNER SWIVEL,SPRAY BAR ASSY-TUC-ALL FLIPP VALVES.	EA	2
38	116	PAOZZ	3895-00-268-1300	3350573	80195	... LEVER ASSEMBLY SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	117	PAOZZ		6100233	80195	.. PIN,GROOVED,DRIVE DRIVE LOCK,0.156X1C,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	118	PAOZZ	5360-01-101-8410	3350704	80195	.. SPRING, HELICAL, COMP SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	119	PAOZZ		3351572	80195	..VALVE ASSEMBLY 1.562 RAD., TUC,SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	120	PAOZZ	4730-01-082-7167	3350454	80195	...PLUG,NOZZLE WITH 3.50 TAPER	EA	1
38	121	XDOZZ		3350453	80195	... BODY, VALVE 1.56 RADIUS, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	122	XDOZZ		3351480	80195	... WASHER, VALVE NOZZLE SPRAY BARR ASSY-TUC-ALL FLIP VALVES	EA	1
38	123	XDOZZ		6000399	80195	. RIVET	EA	2
38	124	PAOZZ	5315-00-839-5822	137185	24617	.PIN, COTTER	EA	2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
38	125	PBOZZ	4710-00-444-7427	3350490	80195	PIPE, SECTIO FLIP 1FT, RIGHT	EA	1
38	126	PBOZZ		3350489	80195	PIPE, SECTION FLIP LEFT,1FT	EA	1
38	127	PBOZZ	3895-01-101-0000	3350492	80195	BAR SECTION, RIGHT 2FEET, FLIP,RIGHT,SHIPPED LOOSE, SPRAY BAR ASSY-TUC-ALL FLIPVALVES	EA	3
38	128	PBOZZ	3895-01-101-0001	3350491	80195	BAR SECTION, LEFT 2FEET .FLIP, LEFT, SHIPPED LOOSE, SPRAY BAR ASSY-TUC-ALL FLIPVALVES	EA	3
38	129	PBOZZ	4710-00-421-7166	3351254	80195	. TUBE ASSY 1FT, RIGHT	EA	1
38	130	XDOZZ		3351253	80195	. TUBE ASSEMBLY 1FT, LEFT	EA	1
38	131	XDOZZ		3351245	80195	. TUBE ASSEMBLY 2FEET, FLIP,RIGHTTSHIPPED LOOSE, SPRAY BAR ASSY-TUC-ALL FLIPVALVES	EA	1
38	132	XDOZZ		3351244	80195	. TUBE ASSEMBLY 2FEET,FLIP,LEFT,SHIPPED LOOSE, SPRAY BAR ASSY-TUC-ALL FLIPVALVES	EA	1
38	133	XDOZZ		3350579	80195	. VALVE, SPRAY	EA	6
38	134	PBOZZ	4820-00-493-8581	3350579	80195	. VALVE, SPRAYER 1FT	EA	3
38	135	PAOZZ	3895-00-248-4370	3351009	80195	. NOZZLE, SPRAY BAR	EA	6
38	136	PAOZZ	3895-00-748-4370	3351009	80195	. NOZZLE, SPRAY BAR 0.31,1FT	EA	3
38	137	XDOZZ		3350567	80195	. LINK ASSY-ADJUSTING SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	138	XDOZZ		3350205	80195	. BAR ASSY, CONTROL RIGHT, SPRAY BAR ASSY-TUC-ALL FLIP VALVES	EA	1
38	139	XDOZZ		3350204	80195	. BAR ASSY, CONTROL LEFT, SPRAY BAR ASSY-YUC-ALL FLIPP VALVES	EA	1
38	140	XDOZZ		3350226	80195	. BAR ASSEMBLY CONTROL, RIGHT, 1FT	EA	1
38	141	XDOZZ		3350225	80195	. BAR ASSEMBLY CONTROL, LEFT, 1FT	EA	1
378	142	XDOZZ		3350324	80195	. LEVER, GUIDE	EA	2
38	143	PAOZZ	5310-00-809-4061	MS27183-15	96906	. WASHER, FLAT 0.375	EA	2
38	144	PAOZZ	5306-00-604-8006	122119	24617	. BOLT 0.38 X 0.75LG	EA	2
38	145	PAOZZ	5310-00-012-0214	120214	24617	. WASHER, LOCK	EA	12
38	146	PAOZZ	5310-00-012-0214	120214	24617	WASHER, LOCK	EA	6
38	147	PAOZZ	5310-00-409-3355	120376	24617	. NUT, PLAIN, HEXAGON	EA	12
38	148	PAOZZ	5310-00-409-3355	120376	24617	NUT, PLAIN, HEXAGON	EA	6
38	149	PAOZZ	5315-00-150-4819	3350708	80195	. PIN.SPECIAL, HOOK	EA	1
38	150	PAOZZ		6000423	80195	. RIVET, DRILLED 0.25X0.75LG, LEVER GUIDES TO CONTROL BARS SPRAY BAR ASSY-TUCALL FLIP VALVES	EA	3
38	151	PAOZZ	5315-00-839-5822	AN380-4-4	88044	. PIN, COTTER 012X1.00LG, LEVER GUIDES TO CONTROL BARS, SPRAY BAR ASSY-TUCALL FLIP VALVES	EA	4
38	152	PAOZZ	5330-00-413-4782	3350316	80195	. GASKET	EA	6
38	153	PAOZZ	5330-00-413-4821	3350316	80195	. GASKET	EA	3

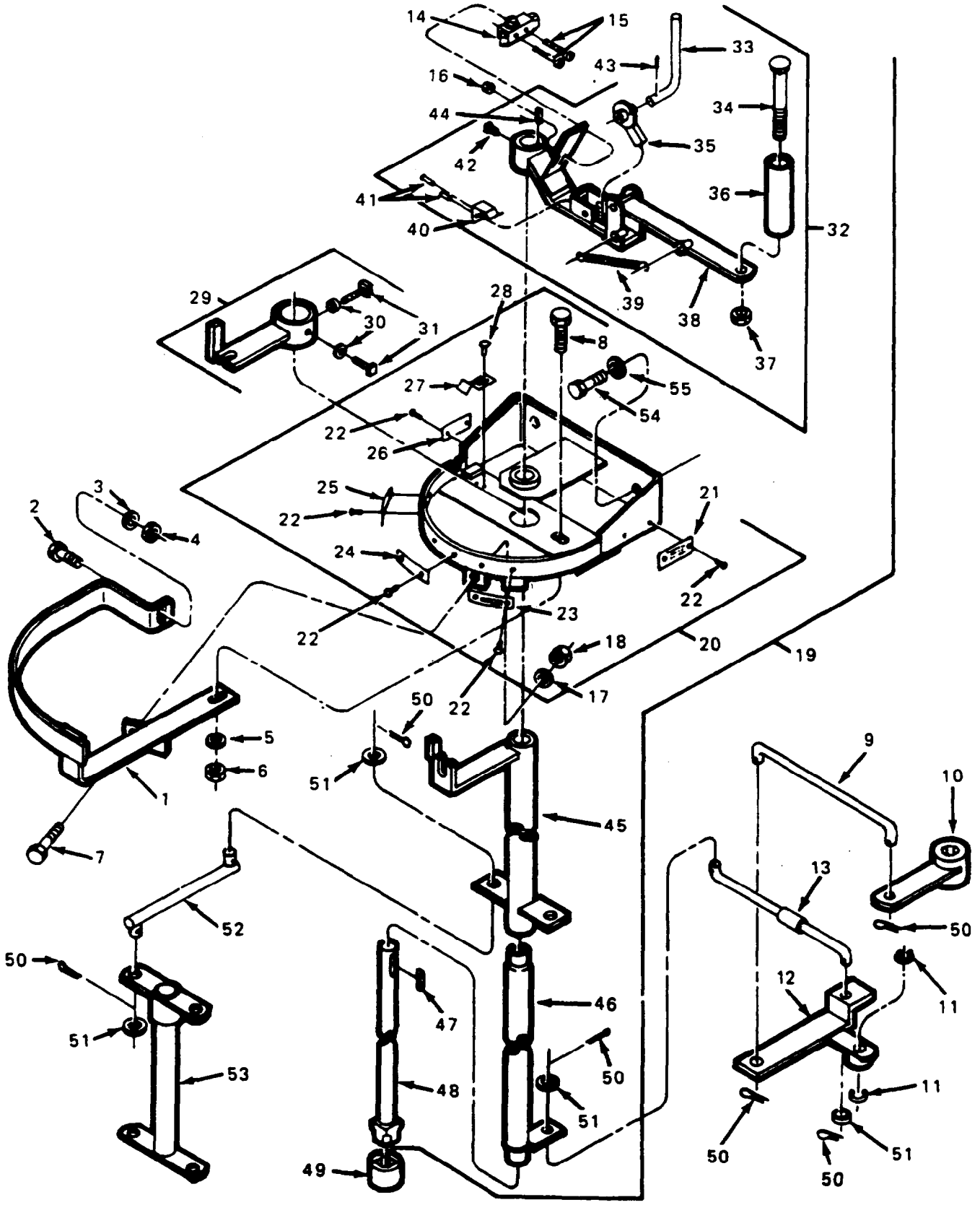


Figure 39. Quadrant Assembly

TA075755

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7317 QUADRANT ASSEMBLY		
39	1	XDOZZ		3351624	80195	GUARD, QUAD SINGLE SHAFT, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	2	PAOZZ	5305-00-012-0233	120233	24617	SCREW, CAP, HEXAGON H 0.38NCX1.00LG, GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSEMBLYTUC, COMPLETE	EA	1
39	3	PAOZZ	5310-00-637-9541	MS35338-46	96906	WASHER, LOCK 0.38, GUARD TO QUADRANT ASSY, QUADRANT ASSY-TUC COMPLETE	EA	1
39	4	PAOZZ	5310-00-732-0559	120369	24617	NUT, PLAIN, HEXAGON 0.38NC, GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	5	PAOZZ	5310-00-637-9541	120380	24617	WASHER, LOCK 0.25, GUARD TO QUADRANT ASSY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	6	PAOZZ	5310-00-761-6882	120375	24617	NUT, PLAIN, HEXAGON 0.25NC, GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	7	PAOZZ	5305-00-045-1988	122267	24617	SCREW, CAP, HEXAGON H 0.44NCX1/25LG. GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSEMBLY-TUC, COMPLETE	EA	1
39	8	PAOZZ	5305-00-071-2241	121913	24617	SCREW, CAP, HEXAGON H 0.25NCX1.25LG, GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	9	PAOZZ	4820-01-082-6471	3350855	80195	LINK, CONTROL VALVE QUADRANT ASSY-TUC, COMPLETE	EA	1
39	10	PAOZZ	3895-01-091-8132	3351599	80195	ARM ASSEMBLY CONTROL VALVE, RIGHT, QUADRANT ASSY TUC-COMPLETE.	EA	1
39	11	XDOZZ		6000571	80195	RING, SNAP TOGGLE ASSY TO HEADER ASSY, QUADRANT ASSY-TUC, COMPLETE	EA	2
39	12	XDOZZ		3351590	80195	TOGGLE ASSEMBLY CONTROL VALVES, QUADRANT ASSY-TUC, -COMPLETE	EA	1
39	13	PAOZZ	3040-01-083-9922	3351617	80195	LINK ASSEMBLY TOGGLE TO VALVE, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	14	PAZZO		6700785	80195	SWITCH, ACTUATING BAR, ON-OFF, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	15	PAOZZ	5305-00-993-1851	MS35207-267	96906	SCREW, MACHINE NUMBER 10NFX1.OOPD, SWITCH TO BRACKET, QUADRANT ASSY-TUC, COMPLETE	EA	2
39	16	PAOZZ	5310-00-934-9751	MS35650-302	96906	NUT, PLAIN, HEXAGON NUMBER 10NF, SWITCH TO BRACKET, QUADRANT ASSY-TUC, COMPLETE	EA	2
39	17	PAOZZ	5310-00-209-0965	MS35238-28	96906	WASHER, LOCK 0.44. GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	18	PAOZZ	5310-00-880-8189	MS51967-11	96906	NUT, PLAIN, HEXAGON 0.44NC, GUARD TO QUADRANT ASSEMBLY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	19	XDOZZ		3351609	80195	QUADRANT ASSY-TUC- COMPLETE	EA	1
39	20	XDOZZ		3351694	80195	. QUADRANT ASSEMBLY QUADRANT ASSY-TUC, COMPLETE	EA	1
39	21	PAOZZ	9905-00-321-8855	3360174	80195	.. PLATE, INSTRUCTION CIRCULATE AND FILL, QUADRANT ASSY-TUC, COMPLETE	EA	10
39	22	PAOZZ	5305-00-253-5616	145377	24617	.. SCREW, DRIVE ROUND HEAD, 4X0.31PD, NAAME PLATE TO QUADRANT, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	23	PAOZZ	3895-00-160-6363	3360175	80195	.. PLATE HANDSPRAY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	24	PAOZZ	9905-00-305-9087	3360176	80195	.. PLATE, INSTRUCTION DISTRIBUTE, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	25	PAOZZ	9905-00-321-8856	3360173	80195	.. PLATE, INSTRUCTION QUADRANT ASSY-TUC,COMPLETE	EA	1
39	26	PAOZZ	9905-01-083-3887	3360474	80195	.. PLATE, INSTRUCTION CIRCLE IN BAR, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	27	PAOZZ	5360-01-083-3887	3351696	80195	.. SPRING LEVER,QUAD, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	28	PAOZZ	5305-00-989-7434	MS35207-263	96906	.. SCREW, MACHINE 10/32X1/2,SPRING TO QUADRANT,QUADRANT ASSY-TUC, COMPLETE	EA	2
39	29	XDOZZ		3351293	80195	. LEVER ASSY-ACT PIPE INNER, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	30	PAOZZ	5310-00-732-0558	120377	24617	.. NUT, PLAIN, HEXAGON 0.38 NC, LEVER ASSY TO OUTER CONTROL ASSY, QUADRANT ASSY-TUCCOMPLETE	EA	2

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
39	31	PAOZZ		106850	24617	.. SETSCREW 0.38X1.00, LEVER ASSY TO OUTER CONTROL ASSY, QUADRANT ASSY-TUC, COMPLETE	EA	2
39	32	XDOZZ		3351626	80195	. HANDLE ASSEMBLY QUADRANT, SAFETY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	33	PAOZZ	3895-01-092-8478	3351684	80195	.. LEVER, MANUAL CONTR QUADRANT ASSY-TUC, COMPLETE	EA	1
39	34	PAOZZ		3350917	80195	.. BOLT, CARRIAGE 0.50X5.00LG,HUB TO HANDLE ASSEMBLY, QUADRANT ASSEMBLY-TUC, COMPLETE	EA	1
39	35	PAOZZ	3895-01-091-7754	3351687	80195	.. DISC ASSEMBLY QUADRANT ASSY-TUC, COMPLETE	EA	1
39	36	XDOZZ		3350919	80195	.. HUB, HANDLE QUADRANT ASSY-TUC, COMPLETE	EA	1
39	37	PAOZZ	5310-01-089-2553	9411727	24617	.. NUT, SELF-LOCKING, HE 0.50NC,HUB TO HAANDLE ASSY, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	38	XDOZZ		78000441	80195	.. HANDLE ASSEMBLY QUADRANT ASSY-TUC, COMPLETE	EA	1
39	39	PAOZZ	5360-01-083-6852	6000802	80195	.. SPRING HANDLE, QUADRANT, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	40	PAOZZ	5360-01-082-9160	3351685	80195	.. SPRING QUADRANT ASSY-TUC, COMPLETE	EA	1
39	41	PAOZZ		6100232	80195	.. RIVET, SOLID 0.12X0.19LG, DETENT SPRING TO HANDLE ASSY QUADRANT ASSY-TUC, COMPLETE	EA	2
39	42	PAOZZ	5305-00-089-1294	MS51955-34	96906	.. SETSCREW 0.38NCX0.50CUP, HANDLE ASSY T CONTRL ASSY QUADRANT ASSY-TUC, COMPLETE	EA	1
39	43	PAOZZ	5360-01-083-1420	455105	24617	.. PIN, SPRING 0.09X0.50LG, QUADRANT ASSY-TUC,COMPLETE	EA	1
39	44	PAOZZ	5315-00-152-5388	6000005	80195	. KEY NUMBER 3,0.25X0.25X1.25LG, HANDLE ASSY TO CONTROL ASSY QUADRANT ASSY-TUC, COMPLETE	EA	1
39	45	XDOZZ		33512999	80195	. CONTROL ASSY-OUTER TUC QUADRANT, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	46	XDOZZ		3351606	80195	. PIPE ASSY-INNER QUADRANT, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	47	PAOZZ	5315-00-152-5388	6000005	80195	. KEY NUMBER 3,0.25X0.25CRX1.25, QUARANT ASSY-TUC, COMPLETE	EA	1
39	48	PAOZZ	3895-00-160-5733	3351067	80195	. SHAFT OPERATING, QUADRANT ASSY-TUC,COMPLETE	EA	1
39	49	XDOZZ		3350906	80195	COUPLING, SQUARE VALVE, QUADRANT ASSY-TUC, COMPLETE	EA	1
39	50	PAOZZ	5315-00-012-0123	MS24665-355	96906	PIN,COTTER 1/8X1-1/4IN, LINKS TO CONTROL ASSY AND SHAFT ASSY QUADRANTASSY-TUC, COMPLETE	EA	8
39	51	PAOZZ	5310-00-809-3079	120390	24617	WASHER, FLAT 1/2INCH, LINKS TO CONTROL ASSEMBLY AND SHAFT ASSEMBLY, QUADRANTASSY-TUC, COMPLETE	EA	6
\39	52	PAOZZ	3040-01-095-7800	3351607	80195	CONNECTING LINK, RIG JACK SHAFT, QUADRANT, QUADRANT ASSY-TUC COMPLETE	EA	2
39	53	XDOZZ		3350246	80195	SHAFT ASSY-JACK 20IN.,QUADRANT ASSY-TUC, COMPLETE	EA	1
39	54	PAOZZ	5305-00-044-4153	122408	24617	SCREW, CAP, HEXAGON H 0.50NCX1.00,QUADRANT ASSY TO TANK REAR QUADRANT ASSY-TUC, COMPLETE	EA	2
39	55	PAOZZ	5310-00-809-3079	1220390	24617	WASHER, FLAT QUADRANT ASSY TO TANK REAR, QUADRANT ASSY-TUC COMPLETE	EA	2

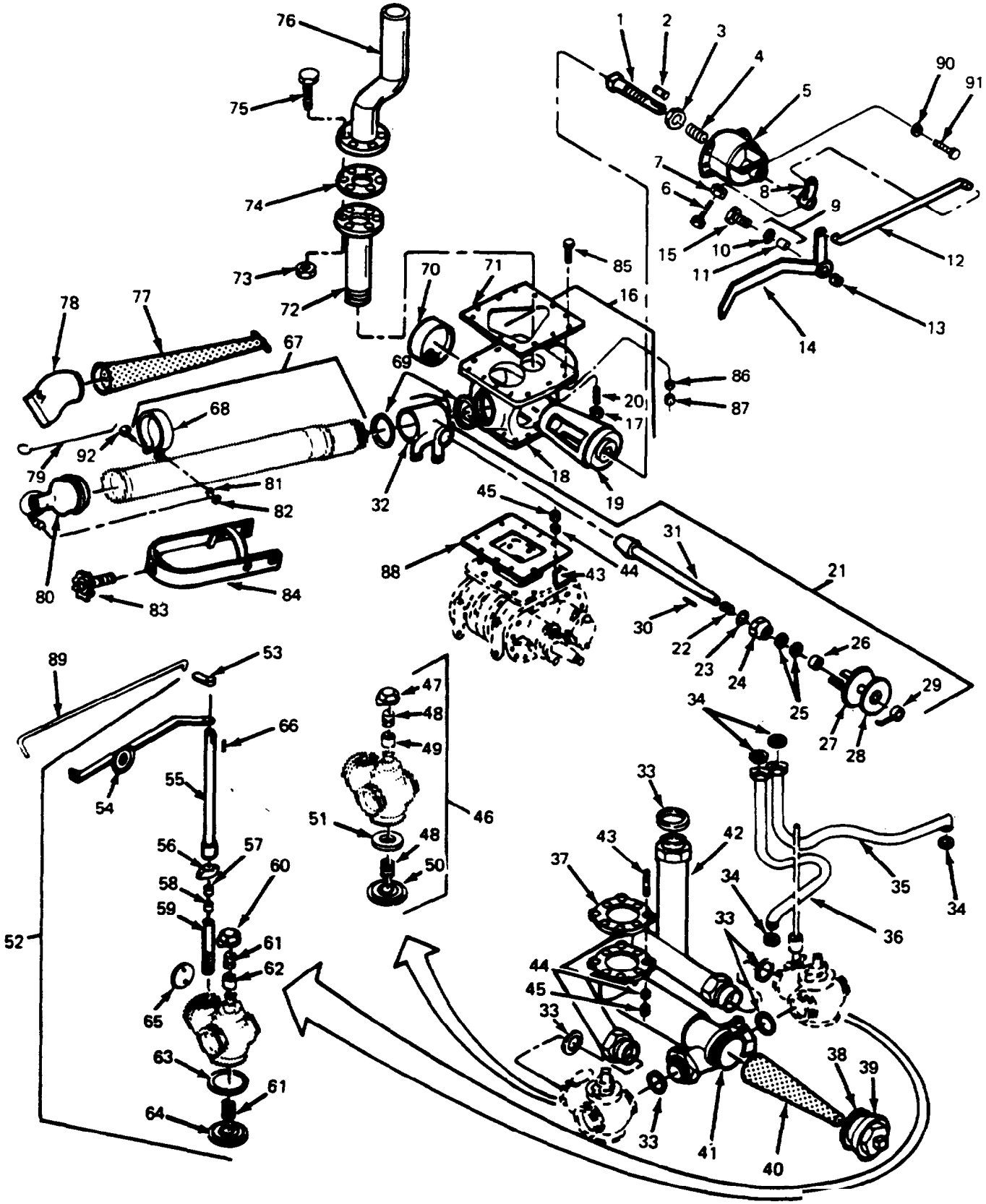


Figure 40. Vacu-Flow and Control Intake Valves

TA075752

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7318 VACU-FLOW AND CONTROL INTAKE VAKVES		
40	1	PAOZZ	4820-01-100-8884	3360036	80195	STEM,INTAKE VALVE GUIDE ASSEMBLY TO VALVE PLUG,VALVES, INTAKE,VACU-FLO ANDCONTROL	EA	1
40	2	PAOZZ	5315-00-421-9351	6000465	80195	KEY 0.25X0.25CR X 1.19,GUIDE ASSY TO VALVE PLUG,VALVES-INTAKEVACU-FLO AND CONTROL	EA	1
40	3	PAOZZ	5310-01-101-3145	6100090	80195	NUT,INTAKE VALVE GUIDE ASSEMBLY TO VALVE PLUG,VALVES-INTAKE, VACU-FLO ANDCONTROL	EA	1
40	4	PAOZZ		3360169	80195	SPRING VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	5	XDOZZ		3340491	80195	GUIDE ASSY-BEARING INTAKE VALVE LEVER,VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	6	XDOZZ		102913	24617	SCREW,SQUARE HEAD 0.44NC X 3.00,ADJUSTING,VALVES-INTAKE, VACU-FLO AND CONTROL	EA	1
40	7	PAOZZ	5310-00-880-8189	MS51967-11	96906	NUT,PLAIN,HEXAGON 0.44NC	EA	1
40	8	XDOZZ		3351169	80195	ARM ASSEMBLY SHAFT,INTAKE LEVER	EA	1
40	9	XDOOO		3320849	80195	SLEEVE ASSEMBLY CLUTCH CONTROL	EA	1
40	10	PAOZZ	5310-00-951-7209	130999	24617	.WASHER,FLAT 0.62IN	EA	1
40	11	XDOZZ		3320850	80195	.SLEEVE-CLUTCH CONT	EA	1
40	12	XDOZZ		3351171	80195	LINK,CONTROL INTAKE VALVE LEVER	EA	1
40	13	PAOZZ	5310-00-768-0318	120378	24617	NUT,PLAIN,HEXAGON 0.50NC,SLEEVE ASSY TO LEVER ASSY TO MOUNT	EA	1
40	14	XDOZZ		3351178	80195	LEVER ASSEMBLY INTAKE VALVE	EA	1
40	15	XDOZZ		122472	24617	SCREW,CAP,HEX HEAD 0.50NCX2.50	EA	1
40	16	XDOOO		3340609	80195	VALVE ASSY-INTAKE VALVES-INTAKE,VACUU-FLO AND CONTROL	EA	1
40	17	PAOZZ	5310-00-842-1490	MS35692-37	96906	.NUT,PLAIN,SLOTTED H VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	18	XDOZZ		3340582	80195	.CASE,INTAKE VALVE VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	19	XDOZZ		3340385	80195	.PLUG,VALVE VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	20	PAOZZ	5307-01-098-5830	7220036	80195	.STUD,DRILLED 0.50NFRD.CRX11.75 LG,VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	21	PBOZZ	4820-01-096-9311	3340575	80195	VALVE ASSEMBLY,VACU	EA	1
40	22	XDOZZ		3340045	80195	.SPRING,COMPRESSION	EA	1
40	23	XDOZZ		6600340	80195	.GASKET 1.88X1.62,COPPER ASBESTOS	EA	1
40	24	XDOZZ		3340423	80195	.CAP-VAC LINE VALVE	EA	1
40	25	XDOZZ		6000295	80195	.PACKING,PREFORMED	EA	2
40	26	XDOZZ		3330029	80195	.GLAND,PACKING	EA	1
40	27	XDOZZ		3340432	80195	.DISC ASSEMBLY MOUNT VACU-FLO DIAL	EA	1
40	28	XDOZZ		3340433	80195	.PLATE,INSTRUCTION	EA	1
40	29	XDOZZ		3340429	80195	.LEVER,VALVE VACU-FLO	EA	1
40	30	XDOZZ		103646	24617	.KEY,WOODRUFF N0.7,0.12X0.75	EA	1
40	31	XDOZZ		3340620	80195	.PLUG ASSY-VACU-FLO	EA	1
40	32	XDOZZ		3340618	80195	.BODY-VALVE SLEEVE	EA	1
40	33	PAOZZ	5330-00-448-6832	6600208	80195	GASKET 3.12X2.75,COPPER ASBESTOS	EA	5
40	34	POOZZ	5330-00-589-5759	6600341	80195	GASKET 1.13X0.88	EA	4
40	35	XDOZZ		3340381	80195	TUBE ASSEMBLY RIGHT-VACU-FLO	EA	1
40	36	XDOZZ		3340378	80195	TUBE ASSEMBLY LFT-VACU-FLO	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
40	37	PAOZZ	5330-00-160-3190	3340048	80195	GASKT	EA	1
40	38	PAOZZ	5330-00-413-4781	6600210	80195	GASKKET COPPER ASBESTOS,3.88X3.88	EA	1
40	39	XDOZZ		3340074	80195	CAP	EA	1
40	40	PAOZZ	3895-00-352-4490	3340003	80195	STRAINER ELEMENT,SE	EA	1
40	41	XDOZZ		3341019	80195	HEADER ASSEMBLY P-15 PUMP	EA	1
40	42	XDOZZ		3340158	80195	LINE ASSY-RETURN	EA	1
40	43	PAOZZ	5307-01-098-5830	7220036	80195	STUD,LOCK PIN FASTE 0.50NF DCR X 1.75IN.LG	EA	18
40	44	PAOZZ	5310-00-584-5272	120384	24617	WASHER,LOCK	EA	18
40	45	PAOZZ	5310-00-842-1490	MS35692-37	96906	NUT,PLAIN,SLOTTED,H 0.50NF	EA	18
40	46	PBOOO	4820-00-492-4281	3340199	80195	VALVE,PLUG CONTROL-LEFT,WITHOUT BUTTERFLY	EA	1
40	47	XDOZZ		3340028	80195	.RETAINER,PACKING	EA	1
40	48	PAOZZ	5360-01-102-5360	3340046	80195	.SPRING,VALVE	EA	2
40	49	PAOZZ	5330-00-411-9134	3340029	80195	.PACKING,VALVE	EA	1
40	50	XDOZZ		3340026	80195	.PLATE	EA	1
40	51	PAOZZ	5330-00-411-9350	3340027	80195	.GASKET	EA	1
40	52	PBOOO	4820-00-492-4280	3340231	80195	COCK,PLUG CONTROL-RIGHT	EA	1
40	53	PAOZZ	3040-01-100-6523	3380062	80195	.LEVER,BUTTERFLY VAL BUTTERFLY VALV	EA	1
40	54	XDOZZ		3380112	80195	.CONTROL ASSEMBLY BUTTERFLY VALVE	EA	1
40	55	XDOZZ		3380059	80195	.EXTENSION ASSEMBLY BUTTERFLY VALVE STEM	EA	1
40	56	XDOZZ		3340022	80195	.RETAINER,PACKING DUAL VALV,2.50IN	EA	1
40	57	XDOZZ		3340023	80195	.PACKING,VALVE 2.50INCHES	EA	1
40	58	XDOZZ		3340045	80195	.SPRING,COMPRESSION	EA	1
40	59	XDOZZ		3340024	80195	.STEM,BUTTERFLY	EA	1
40	60	XDOZZ		33400028	80195	.RETAINR,PACKING	EA	1
40	61	PAOZZ	5360-01-102-5360	3340046	80195	.SPRING,VALVE	EA	2
40	62	PAOZZ	5330-00-411-9134	3340029	80195	.PACKING,VALVE	EA	1
40	63	PAOZZ	5330-00-411-9350	3340027	80195	.GASKEET	EA	1
40	64	XDOZZ		3340026	80195	.PLATE	EA	1
40	65	XDOZZ		3340025	80195	.DISC-BUTTERFLY	EA	1
40	66	XDOZZ		3100284	80195	.KEY 0.12X0.12 CRX0.50 ROD ENDS	EA	1
40	67	XDOZZ		3340405	80195	TUBEE,FILLER,ASPHALT	EA	1
40	68	XDOZZ		3340671	80195	.CLAMPING RING ASSY TRANSFER VALVE	EA	1
40	69	PAOZZ	5330-00-413-4778	6600339	80195	GASKET 4.00X3.50	EA	2
40	70	XDOZZ		3340823	80195	SPOUT ASSEMBLY,FR	EA	1
40	71	PAOZZ	5330-00-160-2998	3340411	80195	GASKET VALVES-INTAKE,VACU-FLO AND CONTROL	EA	1
40	72	XDOZZ		3300002	80195	PIPE	EA	1
40	73	PAOZZ	5310-01-101-2029	274993	24617	NUT,SELF-LOCKING HE	EA	6
40	74	PAOZZ	5330-00-244-2410	3390001	80195	GASKET	EA	1
40	75	PAOZZ		MS35291-081	96906	SCREW,CAP,HEXAGON H	EA	6
40	76	XDOZZ		3300629	80195	PIPE,FLANGED-OFFSET VALVES-INTAKE,VACU-FLU AND CONTROL	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
40	77	PAOZZ	3895-00-160-3150	3340004	80195	STRAINR	EA	1
40	78	POOZZ		3340040	80195	CONNECTOR,HOSE 3.00INCH	EA	1
40	79	PAOZZ	5120-00-425-6920	3390030	80195	HOOK, STRAINER	EA	1
40	80	XDOZZ		3380388	80195	CAP ASSY-FILL LINE	EA	1
40	81	PAOZZ	5310-00-637-9541	120380	24617	WASHER,LOCK 0.25,CAP ASSY CHAIN TO RING ASSY TO FILL LINE	EA	1
40	82	PAOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 1/4-20NC,CAP ASSY CHAIN TO RING ASSY TO FILL LINE	EA	1
40	83	XDOZZ		3340033	80195	SCREW,CLAMP ASSY FILL LINE	EA	1
40	84	XDOZZ		3340867	80195	HINGE,CLAMP ASSY FILL LINE	EA	1
40	85	PAOZZ	5305-00-206-3519	122433	24617	SCREW,CAP,HEXAGON H	EA	13
40	86	PAOZZ	5310-00-809-3079	120390	24617	WASHER,FLAT	EA	13
40	87	PAOZZ	5310-01-097-7993	6100068	80195	NUT,SELF-LOCKING,HE	EA	13
40	88	PAOZZ	5330-00-160-6682	3340386	80195	GASKET INTAKE VALVE TO PUMP	EA	1
40	89	XDOZZ		338011	80195	SHAFT	EA	1
40	90	PAOZZ	5310-00-012-0214	120214	24617	WASHER,LOCK 5/16	EA	6
40	91	PAOZZ	5306-00-226-4831	MS90728-38	96906	BOLT,MACHINE 5/16-18X1.50IN.LG	EA	6
40	92	PAOZZ	5305-00-071-2241	121913	24617	SCREW,CAP,HEXAGON H 1/4IN.-20NCX1-1/4IN.LG,CAP ASSY CHAIN TO RING ASSY TO FILLLINE	EA	1

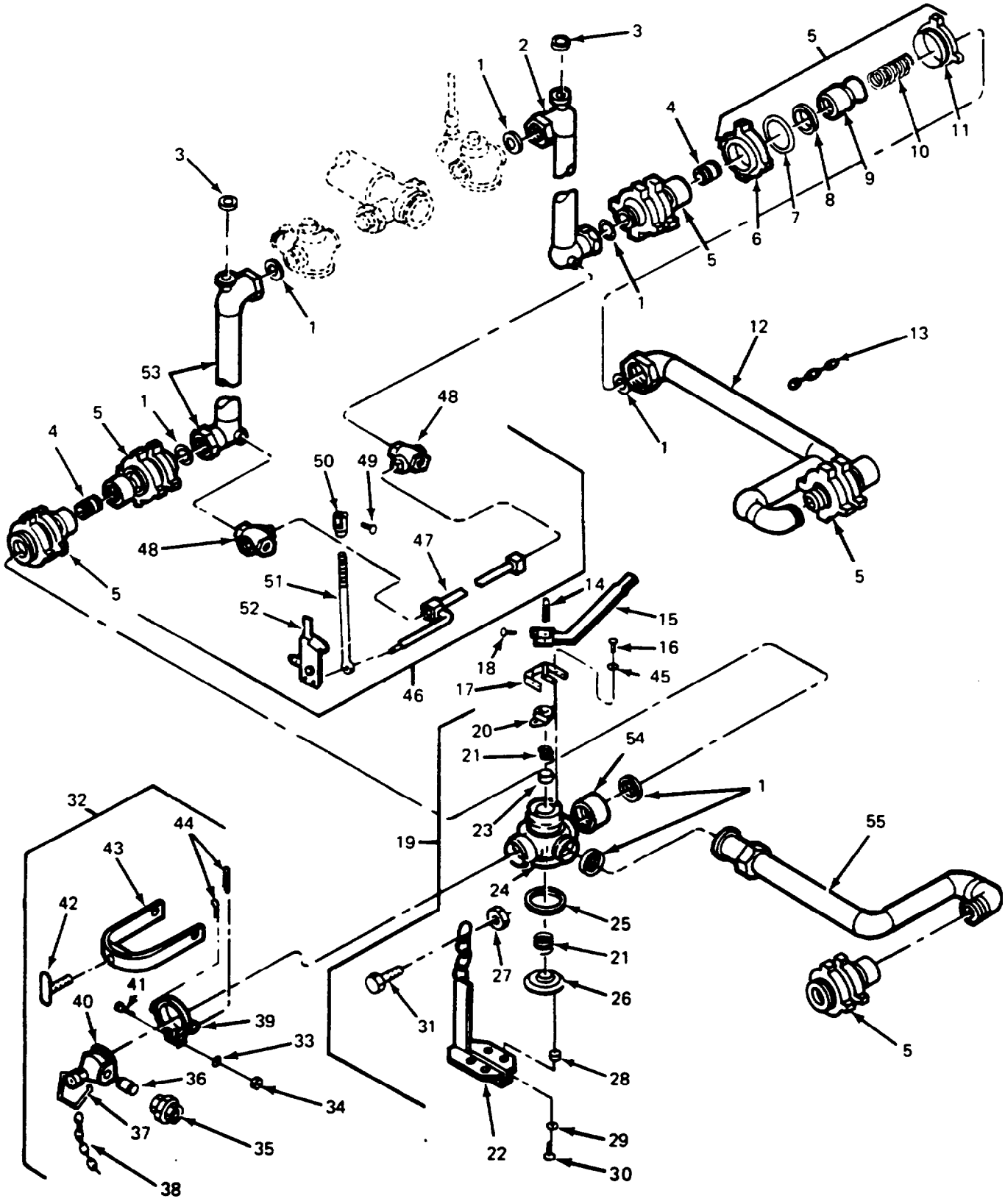


Figure 41. Transfer Filling and Distributing Valves

TA075784

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						CROUP 7318 TRANSFER, FILLING AND DISTRIBUTING VALVES		
41	1	PAOZZ		J-MS20-3.12X2.75	92764	GASKET FILLING DISTRIBUTING 3-1/8 INCHES X 2-3/4 INCHES,VALVES,TRANSFER-	EA	7
41	2	XDOZZ		3340136	80195	PIPE,DROP,RIGHT VALVES,TRANSFER-FILLING-DISRTIBUTING	EA	1
41	3	PAOZZ	5330-00-589-5759	6600341	80195	GASKET 1.13X0.88,VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	2
41	4	XDOZZ		6200106	80195	NIPPLE,PIPE SHOULDER,VALVES,TRANSFER-FILLING-DISITRIBUTING.	EA	2
41	5	PBOZZ	3895-00-321-8799	3350058	80195	CASE ASSEMBLY,BALL VALVES,TRANSFER-FILLING-DISTRIBUTING.	EA	6
41	6	XDOZZ		3350062	80195	.NUT,BALL JOINT, VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	7	PAOZZ		J-MS20-4.38X3.88	92764	.GASKET BALL JOINT,4-3/8 INCHES X3-7/8 INCHES,VALVES, TRANSFER-FILLINGDISTRIBUTING	EA	1
41	8	PAOZZ	5330-00-160-3385	6600258	80195	GASKET VALVES,TRANSFER-FILLING-DISTRIBUTING.	EA	1
41	9	PBOZZ	3895-00-160-3386	6600259	80195	.BODY,SWIVEL JOINT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	10	PAOZZ	5360-00-664-2998	3351186	80195	.SPRING,HELICAL,COMP VALVES,TRANSFER-FILLING-DISITRIBUTING	EA	1
41	11	XDOZZ		3350059	80195	.CASE,BALL JOINT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	12	XDOZZ		3350329	80195	LIME ASSEMBLY-RIGHT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	13	PAOZZ		3351243	80195	CHAIN RIGHT,VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	14	PAOZZ	5315-00-849-9854	AN380-6-8	88044	PIN,COTTER 3/16x2 INCHES LG,HAND LEVER TO PACKING GLAND VALVES,TRANSFER FILLING-DISTRIBUTING	EA	1
41	15	XDOZZ		3350338	80195	LEVER,HAND VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	16	PAOZZ	5306-00-225-8499	122017	24617	BOLT,MACHINE 5/16 NCX1 INCH LG,LEVER STOP TO PACKING GLAND, VALVES,TRANSFERFILLING-DISTRIBUTING	EA	2
41	17	XDOZZ		3350337	80195	LEVER,STOP VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	18	PAOZZ	5305-00-018-4365	104365	24617	SETSCREW 3/8NCX1 INCH LG,HAND LEVER TO PACKING GLAND,VALVES, TRANSFERFILLING-DISTRIBUTING	EA	1
41	19	PBOZZ	4820-01-083-7254	3340666	80195	VALVE,CROSS 3-WAY,VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	20	XDOZZ		3340028	80195	.RETAINER,PACKING VALVES,TRANSFER-FILLING-DISITRIBUTING	EA	1
41	21	PAOZZ	5360-01-102-5360	3340046	80195	.SPRING,VALVE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	2
41	22	XDOZZ		3350296	80195	.BRACKET,SUPPORT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	23	PAOZZ	5330-00-411-9134	3340029	80195	.PACKING,VALVE VALVES,TRANFER-FILLING-DISTRIBUTING	EA	1
41	24	XDOZZ		3340664	80195	.VALVE CASE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	25	PAOZZ	5330-00-411-9350	3340027	80195	.GASKET VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	26	XDOZZ		3340026	80195	.PLATE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	27	PAOZZ	5310-00-409-3355	120376	24617	.NUT,PLAIN,HEXAGON 5/16NC,SUPPORT BRACKET CHAIN TO PLATFORM. VALVES,TRANSFERFILLING-DISTRIBUTING	EA	1
41	28	PAOZZ	3120-01-102-8412	3340171	80195	.BUSHING SUPPORT BRACKET TO VALVE PLATE AND CASE,VALVES, TRANSFERFILLING-DISTRIBUTING	EA	4
41	29	PAOZZ	9310-00-012-0214	120214	24617	.WASHER,LOCK 5/16,SUPPORT BRACKET TO VALVE PLATE AND CASE, VALVES,TRANSFERFILLING-DISTRIBUTING	EA	4
41	30	PAOZZ	5305-00-225-9081	MS90725-36	96906	.SCREW,CAP,HEXAGON H 5/16 INCH NCX1-1/4 INCHES LG,SUPPORT BRACKET TO VALVE PLATEAND CASE,VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	4
41	31	PADZZ	5310-00-209-0965	MS35338-28	96906	.WASHER,LOCK 5/16 INCH MCX1 INCH LG,SUPPORT BRACKET CHAIN TO PLATFORMVALVES,TRANSFER,-FILLING-DISTRIBUTING	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
41	32	XDOOO		7230079	80195	ADAPTER ASSEMBLY DISTRIBUTING LINE,TUC BAR,VALVES,TRANSFER-FILLINGDISTRIBUTING	EA	1
41	33	PADZZ	5310-00-637-9541	120380	24617	WASHER,LOCK 1/4 INCH,CLAMP RING ASSEMBLY TO HANDSPRAY ADAPTER,VALVESTRANSFER-FILLING-DISTRIBUTING	EA	1
41	34	XDOZZ	5310-00-761-6882	120375	24617	NUT,PLAIN,HEXAGON 1/4 INCH-20NC,CLAMP RING ASSEMBLY TO HANDSPRAY ADAPTER,VALVESTRANSFER-FILLING-DISTRIBUITNG.	EA	1
41	35	XDOZZ		6000416	80195	UNION,PIPE 1 INCH NPT,VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	36	PAOZZ	4130-00-196-2059	BW1043	93480	NIPPLE,PIPE,CLOSE 1 INCH NPTX1-1/2 INCHES LG,VALVES, TRANSFER-FILLINGDISTRIBUTING	EA	1
41	37	PAOZZ	4010-01-102-5381	3380386	80195	CHAIN ENDLINK VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	38	PAOZZ		338389	80195	CHAIN VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	39	XDOZZ		3340671	80195	CLAMP,RING ASSEMBLY VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	40	XDOZZ		3380074	80195	ADAPTER,HANDSPRAY VALVES,TRANSFER-FILLNG-DISTRIBUTING	EA	1
41	41	PAOZZ	5305-10-071-2241	121913	24617	SCREW,CAP,HEXGON H 1/4 INCH-20X1-1/4 INCH LG,CLAMP RING ASSEMBLY TO HANDSPRAY ADAPTER,VALVES,TRANSFER-FILLLING-DISTRIBUTING	EA	1
41	42	PAOZZ	3895-00-160-3187	3380042	80195	HANDWHEEL VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	43	XDOZZ		3340041	80195	CLAMP,HINGE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	44	PAOZZ		103389	24617	PIN,COTTER HINGE CLAMP TO CLAMP RING,VALVES,TRANSFER-FILLINGDISTRIBUTING	EA	2
41	45	PAOZZ	5310-0-407-9566		96906	WASHER,LOCK 5/16,LEVER STOP TO PACKING GLAND,VALVES, TRANSFER-FILLINGDISTRIBUTING	EA	2
41	46	XDOOO		3340210	80195	QUADRANT ASSEMBLY VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	47	XDOZZ		3340979	80195	SHAFT,CROSS VALVES,TRANSFER-FILLINGS-DISTRIBUTING	EA	1
41	48	XDOZZ		3340992	80195	VALVE,DRAIN VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	2
41	49	XDOZZ		6000398	80195	RIVET,DRILLED VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	50	XDOZZ		3340220	80195	YOKE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	51	XDOZZ		3340219	80195	LINK,CONNECTING VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	52	XDOZZ		3340211	80195	QUADRANT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	53	XDOZZ		3340135	80195	PIPE,DROP,LEFT VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	54	XDOZZ		3350063	80195	NUT,TRANSFER VALVE VALVES,TRANSFER-FILLING-DISTRIBUTING	EA	1
41	55	XDOZZ		3350326	80195	LINE ASSEMBLY-LEFT VALVES,TRANSFER-FILLING-DISTRIBUITNG	EA	1

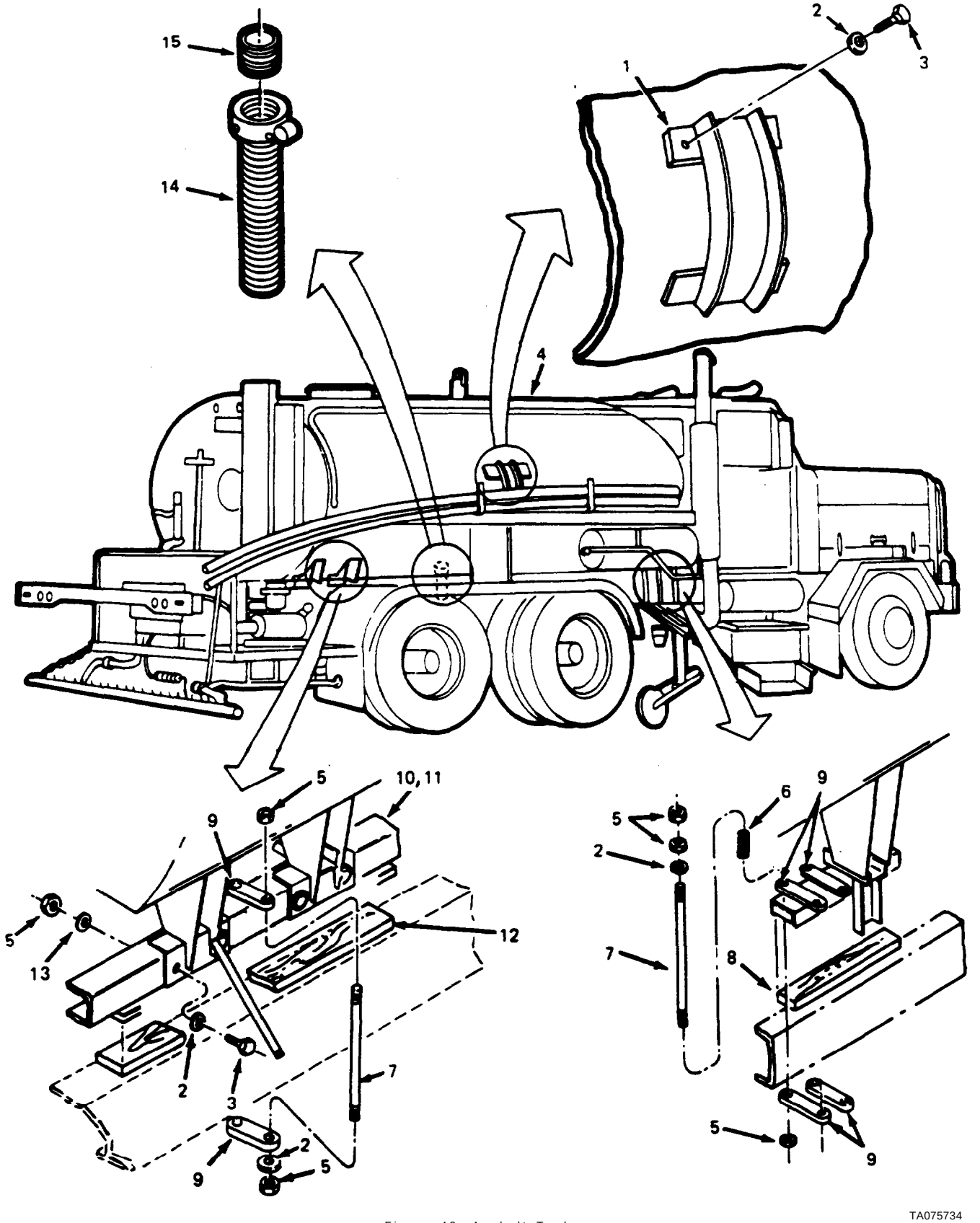


Figure 42. Asphalt Tank

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7318 ASPHALT TANK		
42	1	XDHZZ		3390589	80195	GUIDE,CENTER LIFTING SLING, TANK, ASPHALT-1500 GALLONS	EA	2
42	2	XDHZZ		120390	24617	WASHER, FLAT 0.50,FRONT WELDED SADDLES TO PAILS, TANK, ASPHALT-1500 GALLONS	EA	V
42	3	PAHZZ	5305-00-206-3519	122433	24617	SCREW,CAP,HEX HEAD 0.50NCX1.50,REAR WELDED SADDLES TO RAILS, TANK, ASPHALT 1500GALLONS	EA	16
42	4	XDHHH		J626130	80195	TANK, ASPHALT 1500 GALLONS	EA	1
42	5	PAHZZ	5310-00-768-0318	120378	24617	NUT, HEXAGON 0.50NC, FRONT WELDED SADDLES TO RAILS, TANK, ASPHALT-1500 FAL	EA	V
42	6	XDHZZ		3310354	80195	SPRING, STUD TIE DN TANK, ASPHALT-1500 GALLONS	EA	8
42	7	XDHZZ		3300623	80195	STUD, TANK TIE DOWN 0.50NCX22.0IN.,FRONT WELDED SADDLES TO RAILS, TANK,ASPHALT 1500 GAL	EA	8
42	8	XDHZZ		3310985	80195	BLOCK,WOOD-RONT TANK,ASPHALT-1500 GALLONS	EA	4
42	9	XDHZZ		3310931	80195	BAR,STUD TIE DOWN TANK, ASPHALT-1500 GAL	EA	12
42	10	XDHZZ		3310749	80195	RAIL,FRAME-LEFT HYDRAULIC MOTOR, TANK,ASPHALT-1500 GALLONS	EA	1
42	11	XDHZZ		3310750	80195	RAIL,WOOD-REAR TANK, ASHPHALT-1500 GALLONS	EA	1
42	12	XDHZZ		3310984	80195	BLOCK,WOOD-REAR TANK,ASPHALT-1500 GALLONS	EA	2
42	13	XDHZZ		120384	24617	WASHER, LOCK 0.50,REAR WELDED SADDLES TO RAILS,TANK, ASPHALT-1500 GAL	EA	8
42	14	XDHZZ		3300036	80195	PIPE OVERFLOW OUTLET,TANK,ASPHALT-1500 GALLONS	EA	1
42	15	XDHZZ		6200120	80195	NIPPLE,CLOSE 3.00IN.NPT.TANK,ASPHALT-1500 GALLONS	EA	1

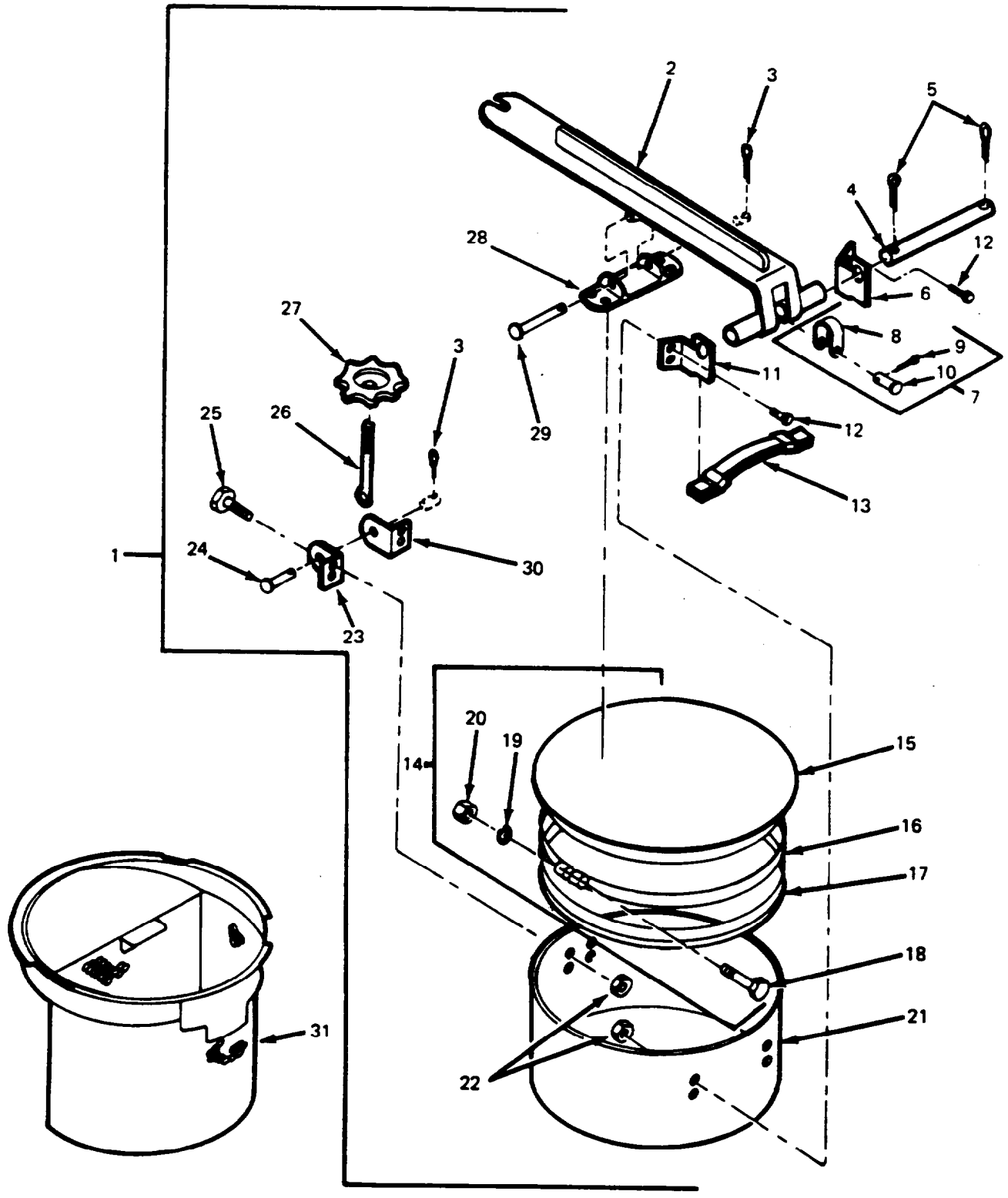


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Figure 43. Manhole Assembly

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FCSM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7318 MANHOLE ASSEMBLY		
43	1	XDOOO		3300135	80195	MANHOLE ASSEMBLY MANHOLE ASSEMBLY	EA	1
43	2	XDOZZ		3300136	80195	TONGUE,COVER MANHOLE ASSEMBLY	EA	1
43	3	PAOZZ	5315-00-842-3044	103373	72582	PIN,COTTER 0.09X0.75,LATCH BOLT TO RIGHT AND LEFT LATCHES, MANHOLE ASSY	EA	2
43	4	XDOZZ		3300121	80195	PIN,HINGE TONGUE TO HINGE BRACKETS,MANHOLE ASSEMBLY	EA	1
43	5	PAOZZ	5315-00-083-6597	0103385	80195	PIN,COTTER 0.12X1.00,TONGUE TO HINGE BRACKETS,MANHOLE ASSEMBLY	EA	2
43	6	XDOZZ		3300018	80195	BRACKET,HINGE,LEFT MANHOLE ASSEMBLY	EA	1
43	7	XDOOO		3300152	80195	SLEEVE YOKE ASSY RELEASE SPRING TO BOTTOM OF HINGE BRACKETS, MANHOLE ASSEMBLY	EA	1
43	8	PAOZZ	3895-01-098-5201	3300154	80195	CLAMP RELEASE SPRING TO BOTTOM OF HINGE BRACKETS,MANHOLE ASSEMBLY	EA	1
43	9	PAOZZ	5315-00-187-9550	MS24665-419	96906	PIN,COTTER 0.12X1.25,RELEASE SPRING TO BOTTOM OF HINGE BRACKETS, MANHOLE ASSEMBLY	EA	1
43	10	PAOZZ	5315-00-425-6954	3300294	80195	PIN, STRAIGHT,HEADED RELEASE SPRING TO BOTTOM OF HINGE BRACKETS, MANHOLE ASSEMBLY	EA	1
43	11	XDOZZ		3300019	80195	BRACKET,HINGE,RIGTHT MANHOLE ASSEMBLY	EA	1
43	12	PAOZZ		120741	24617	BOLT,MACHINE 0.31NCX0.75,RIGHT AND LEFT HINGE BRACKETS TO COLLAR, MANHOLEASSEMBLY	EA	4
43	13	XDOZZ		3300151	80195	SPRING,RELEASE MANHOLE ASSEMBLY	EA	1
43	14	XDOOO		3300301	80195	MANHOLE COVER ASSY MANHOLE ASSEMBLY	EA	1
43	15	XDOZZ		3300142	80195	COVER MANHOLE MANHOLE ASSEMBLY	EA	1
43	16	PAOZZ	5340-01-084-1059	3300146	80195	RING ASSEMBLY,RET MANHOLE ASSEMBLY	EA	1
43	17	PAOZZ	5330-00-232-0549	6600334	80195	GASKET MANHOLE ASSEMBLY	EA	1
43	18	PAOZZ	5305-00-225-8507	MS90725-43	96906	BOLT,MACHINE 0.31OMCX2.75,GASKET AND GASKET RETAINER TO COVER, MANHOLE ASSY	EA	1
43	19	PAOZZ	5310-00-407-9566	MS35338-45	96906	WASHER,LOCK 0.31,GASKET AND GASKET RETAINER TO COVER, MANHOLE ASSY	EA	1
43	20	PAOZZ	5310-00-409-3355	120376	24617	NUT, PLAIN,HEXAGON 0.31INC, GASKET AND GASKET RETAINER TO COVER,MANHOLE ASSY	EA	1
43	21	XDOZZ		3300159	80195	COLLAR,MANHOLE 20IN.MANHOLE ASSEMBLY	EA	1
43	22	PAOZZ	5310-00-880-7746	MS35690-523	96906	NUT,PLAIN,HEXAGON 0.3INC,BEARING LATCHES TO MANHOLE COLLAR, MANHOLE ASEMBLY	EA	8
43	23	PAOZZ	3895-00-150-1516	3300149	80195	BEARING LATCH, RH MANHOLE ASSEMBLY	EA	1
43	24	XDOZZ		3300293	80195	PIN,LATCH LATCH BOLT TO RIGHT AND LEFT LATCHES, MANHOLE ASSEMBLY	EA	1
43	25	PAOZZ	5306-00-225-8499	122017	24617	BOLT MACHINE 0.31NCX1.00,BEARING LATCHES TO MNAHOLE COLLAR, MANHOLE ASSY	EA	4
43	26	XDOZZ		3300150	80195	BOLT,LATCH MANHOLE ASSEMBLY	EA	1
43	27	PAOZZ	5340-00-627-4729	3300120	80195	HANDWHEEL MANHOLE ASSEMBLY	EA	1
43	28	PAOZZ	3895-00-150-1514	3300122	80195	PLATE,COVER LATCH	EA	1
43	29	PAOZZ	5315-01-083-6851	3300125	80195	PIN TONGUE TO TOP OF MANHOLE COVER,MANHOLE ASSEMBLY	EA	1
43	30	PAOZZ	3895-00-150-1515	3300148	80195	BRACKET,EYE,COVER L MANHOLE ASSEMBLY	EA	1
43	31	PAOZZ	4730-01-085-2612	3390095	80195	STRAINER MANHOLE ASSEMBLY	EA	1

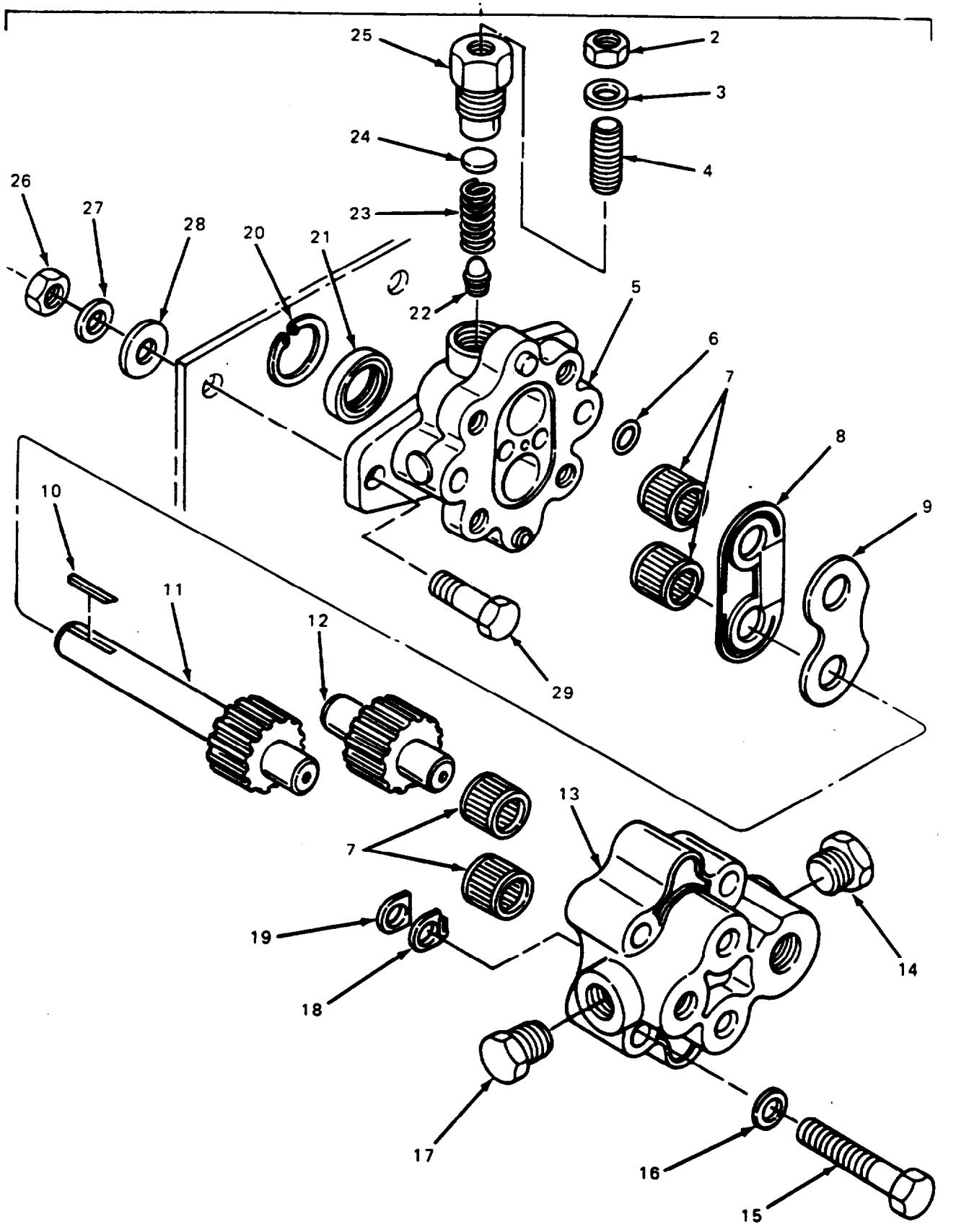

Figure 44. Blower Drive Motor

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7322 BLOWER DRIVER MOTOR		
44	1	PAFFF	4320-01-083-2816	152-45222-2	64294	MOTOR,HYDRAULIC	EA	1
44	2	PAOZZ	5310-00-007-0261	39536	64294	NUT,RELIEF V ¼-28	EA	1
44	3	PAOZZ	5330-00-006-6676	39538	64294	SEAL	EA	1
44	4	PAOZZ	5305-00-007-6313	39537	99128	SETSCREW	EA	1
44	5	XAOZZ		45217-4	64294	BODY ASSEMBLY	EA	1
44	6	POOZZ	5330-00-150-1653	29791-011	64294	PACKING PREFORMED	EA	1
44	7	PAOZZ	3110-00-902-1649	36154	64294	BEARING,ROLLER,NEED	EA	4
44	8	PAOZZ		48000	64294	SEAL ASSEMBLY	EA	1
44	9	PAOZZ		36163-1	64294	WEARPLATE	EA	1
44	10	PAOZZ	5315-00-007-6282	21021	64294	KEY,MACHINE	EA	1
44	11	PAOZZ	3040-01-100-9197	37417-12	64294	SHAFT,STRAIGHT	EA	1
44	12	PAOZZ	3020-01-020-7259	36172-12	64294	GEAR,SPUR	EA	1
44	13	XAOZZ		36180-19	64294	COVER ASSEMBLY	EA	1
44	14	PAOZZ		39607-1	64294	PLUG,MACHINE	EA	1
44	15	XDOZZ		29531-18	64294	CAPSCREW	EA	4
44	16	PAOZZ	5310-01-101-3146	29602-163	64294	WASHER	EA	4
44	17	PAOZZ		80717	64294	PLUG,MACHINE	EA	1
44	18	PAOZZ		38028	64294	GASKET	EA	1
44	19	XDOZZ		38027	64294	INSERT-TAB	EA	1
44	20	PAOZZ	5365-01-101-5918	296657-112	64294	RING,RETAINING	EA	1
44	21	PAOZZ	5330-01-102-1819	45401	64294	SEAL ASSEMBLY	EA	1
44	22	PAOZZ	4820-00-006-4013	25002	64294	DISK,VALVE	EA	1
44	23	PAOZZ	5360-00-007-6265	37606-4	64294	SPRING,SPECIAL	EA	1
44	24	PAOZZ	5340-00-005-8260	39535	64294	DISC,RELIEF VALVE	EA	1
44	25	PAOZZ	2530-01-060-9049	39534	99218	CAP,RELIEF VALVE	EA	1
44	26	PAOZZ	5310-01-101-2029	274993	24617	NUT,SELF-LICKING HE SELF LOCKING, 3/8-16IN.MOTOR TO MOTOR MTG BRKTTO BLOWER SUPPORT BRACKETS BLOWER AND HYDROSTATIC DRIVE MOTOR	EA	2
44	27	PAOZZ	5310-00-637-9541	120381	24617	WASHER LOCK	EA	2
44	28	PAOZZ	5310-00-809-4061	MS27183-15	96906	WASHER,FLAT	EA	2
44	29	PAOZZ	5305-00-012-0233	120233	24617	SCREW,CAP,HEXAGON H 3/8-16X1IN.LG, MOTOR MTG BRKTBRACKETS,BLOWER AND HYDROSTATIC DRIVE MOTOR	EA	2

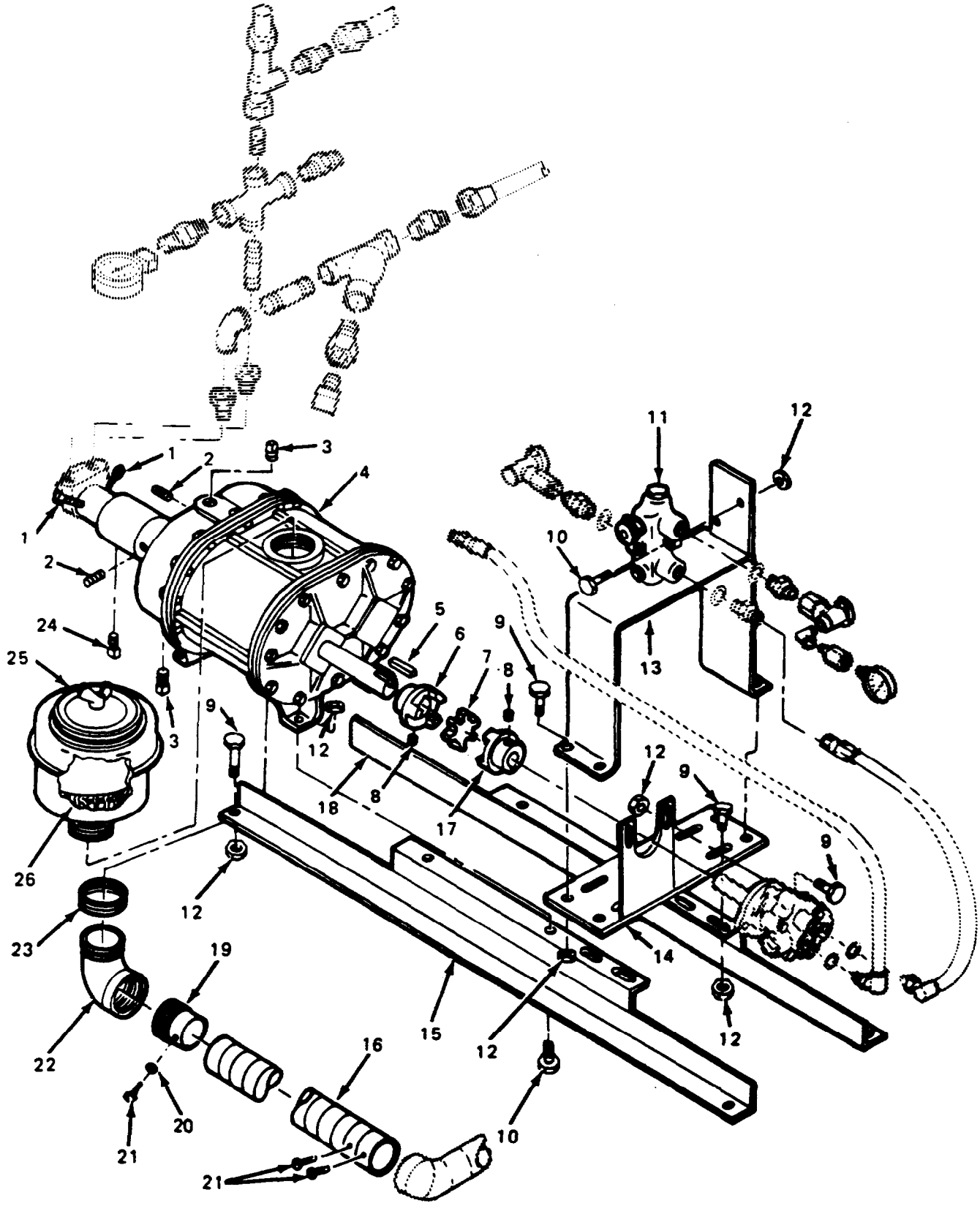

Figure 45. Blower Assembly

TA075772

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 7322 BLOWER DRIVER MOTOR		
45	1	PAOZZ		7030045	80195	SCREW.SQIARE JEAD ¼-20X1 IN	EA	2
45	2	XDOZZ		129187	24617	PLUG,PIPE 1/8NPT.SQUARE HEAD	EA	1
45	3	XDOZZ		7030034	80195	PLUG,PIPE SQUARE HD,1/2NPT	EA	2
45	4	PAODL	3895-00-160-3220	6600313	80195	BLOWER ASSEMBLY BLOWER ASSEMBLY	EA	1
45	5	PAOZZ		7030038	80195	KEY,MACHINE 0.19X2.25	EA	1
45	6	PAOZZ	3040-01-102-1648	3320976	80195	COUPLING HALF,SHAFT BLOWER DRIVE HALF	EA	1
45	7	PAOZZ	3010-01-102-0175	1A090-A	75665	DISK,FLEXIBLE COUPL NEOPRFNE	EA	1
45	8	PAOZZ	5305-00-724-5896	MS51963-82	96906	SETSCREW COUPLING HALVES-SOCKET,0.31X0.31,MOTOR	EA	2
45	9	PAOZZ	5305-00-012-0233	120233	24617	SCREW,CAP,HEXAGON H 3/8-16X1IN.LG,VALVE MTG BRKT TO MOTOR MTG BRKT AND HYDROSTATIC DRIVE MOTOR	EA	10
45	10	PAOZZ	5305-00-269-3214	MS90725-64	96906	SCREW.CAP.HEXAGON H 3/8-16X1-1/2IN.LG,VALVE TO VALVE MOUNTING BRACKET,AMG REF NOLG120918	EA	1
45	11	PAOZZ	4810-01-082-6476	2FV2V0356J	64294	VALVE	EA	16
45	12	PAOZZ	5310-01-101-2029	274993	24617	NUT,SELF-LOCKING HE SELF LOCKING,3/8-16IN,VALVE TO VALVE MOUNTING BRACKET,AMG REFNO.G274993	EA	1
45	13	XDOZZ		3331162	80195	BRACKET ASEMBLY CONTROL VALVE MTG	EA	1
45	14	XDOZZ		3331159	80195	BRACKET HYDROSTATIC MOTOR MOUNTING	EA	1
45	15	XDOZZ		3331155	80195	SUPPORT ASSEMBLY BLOWER MOUNTING RIGHT HAND	EA	1
45	16	PAOZZ		6309099-48IN	80195	TUBE,NONMETALLIC BLOWER ASSEMBLY	EA	1
45	17	PAOZZ		3320983	80195	COUPLING HALF,SHAFT HYDRAULIC MOTOR HALF	EA	1
45	18	XDOZZ		3331154	80195	SUPPORT ASSEMBLY BLOWER MOUNTING LEFT HAND	EA	1
45	19	XDOZZ		3330202	80195	ADAPTER BLOWER DISCHARGE	EA	1
45	20	PAOZZ		0120386	80195	WASHER,FLAT FLEX HOSE TO BLOWER ADAPTER DRIVE MOTOR	EA	1
45	21	PAOZZ		9426110	24617	SCREW, TAPPING,THREA NO.10X0.75IN,FLEX HOSE TO BLOWER BURNER TUBEHYDROSTATIC DRIVE MOTOR	EA	2
45	22	PAOZZ	4730-00-253-4414	MS39230-9	96906	ELBOW,PIPE 2IN.NPT	EA	1
45	23	PAOZZ	4730-01-082-7424	6200047	80195	BUSHING,PIPE 2 ½IN.NPTDRIVE MOTOR	EA	1
45	24	XDOZZ		7030036	80195	PLUG,PIPE ¼ NPT	EA	1
45	25	XDOZZ		F140S	04225	FILTER,AIR MAZE	EA	1
45	26	PAOZZ	2940-00-358-4636	6600154	80195	FILTER ELEMENT, INTA BLOWER AIR CLEANER	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 9503 BULK MATERIAL		
BUL	BULK	PAOZZ		6 LOLA	24617	HOSE,NONMETALLIC 3/8ID	EA	1
BUL	BULK	PAOZZ	4720-01-014-4915	CPR104420-2	19207	TUBING,NONMETALLIC 4720-01-040-0591	EA	1

(1) ILLUSTRATION (A) FIG. NO.	(1) ILLUSTRATION (B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 9503 BULK MATERIAL		
		PAOZZ	5120-01-090-7734	3330030	80195	WRENCH,SPANNER	EA	1

STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
6220-00-001-1514	1	32	5305-00-089-1294	39	42
4820-00-001-6139	10	11	5330-00-089-1966	14	2
5330-00-003-0887	10	69	4320-00-093-5748	10	101
5305-00-005-6204	32	15	3120-00-104-0635	10	238
5340-00-005-8260	44	24	5930-00-108-5387	17	13
4820-00-006-4013	44	22	3110-00-110-5611	10	14
5330-00-006-6676	44	3	3110-00-110-5611	11	41
5310-00-007-0261	44	2	5821-00-111-8054	10	81
5360-00-007-6265	44	23	5330-00-112-1289	38	26
5315-00-007-6282	44	10	2520-00-113-5509	16	4
5305-00-007-6313	44	4	4820-00-117-9086	11	5
6680-00-009-3514	16	6	3895-00-122-2024	38	101
5310-00-009-9162	17	18	4720-00-125-5393	14	50
5315-00-010-6749	31	16	4720-00-125-5453	14	8
5315-00-012-0213	35	5	2590-00-125-5456	20	9
5310-00-012-0213	39	50	3010-00-125-8632	25	12
5310-00-012-0214	30	11	4730-00-137-0526	15	15
5310-00-012-0214	38	145	5340-00-137-3170	5	34
5310-00-012-0214	38	146	5340-00-137-3170	5	38
5310-00-012-0214	40	90	3120-00-138-0203	31	8
5310-00-012-0214	41	29	4820-00-144-4974	14	12
5305-00-012-0233	6	14	3895-00-145-6345	38	97
5305-00-012-0233	12	5	5365-00-146-7139	38	14
5305-00-012-0233	29	5	5365-00-147-6184	38	25
5305-00-012-0233	39	2	5365-00-148-3798	38	103
5305-00-012-0233	44	29	3895-00-148-5093	38	93
5305-00-012-0233	45	9	5360-00-149-8677	5	42
5310-00-012-0368	30	12	5340-00-149-8688	38	105
4730-00-012-7823	33	29	3130-00-149-9194	38	63
4730-00-012-7951	22	7	3895-00-150-1514	43	28
4730-00-014-4043	34	32	3895-00-150-1515	43	30
5305-00-018-4365	41	18	3895-00-150-1516	43	23
5305-00-018-6494	1	12	5330-00-150-1653	44	6
5305-00-018-6494	6	1.3	5315-00-150-4819	38	47
5305-00-018-6494	23	4	5315-00-150-4819	38	72
4730-00-018-9566	15	4	5315-00-150-4819	38	149
5305-00-042-9478	5	59	5315-00-150-4843	5	2
5305-00-042-9478	16	14	5315-00-151-8886	10	10
5305-00-042-9478	20	1	5315-00-151-8888	10	40
5305-00-042-9478	21	5	5315-00-151-8888	11	9
5305-00-044-4153	3	7	5365-00-152-0311	10	42
5305-00-044-4153	6	49	5365-00-152-0311	11	27
5305-00-044-4153	16	19	5330-00-152-3142	11	43
5305-00-044-4153	18	41	5315-00-152-5388	39	44
5305-00-044-4153	33	32	5315-00-152-5388	39	47
5305-00-044-4153	39	54	4730-00-152-9822	16	7
4730-00-044-4587	14	42	5930-00-153-8285	14	35
5305-00-045-1988	38	56	5930-00-153-8285	16	12
5305-00-045-1988	39	7	6240-00-155-8717	1	8
5305-00-052-8241	6	46	3020-00-160-2590	26	8
5305-00-052-8241	35	9	3895-00-160-2651	25	43
5305-00-054-9260	26	28	5330-00-160-2998	40	71
5305-00-054-9271	24	27	3895-00-160-3022	5	35
5305-00-057-9623	6	3	3895-00-160-3060	5	48
5305-00-057-9623	6	50	3895-00-160-3061	5	22
5305-00-057-9623	35	3	3895-00-160-3073	8	6
5305-00-068-0500	3	5	3895-00-160-3150	40	77
5305-00-068-0500	6	12	3895-00-160-3187	41	42
5305-00-068-0500	19	1	5330-00-160-3190	40	37
5305-00-068-0500	25	42	3895-00-160-3198	8	1
5305-00-068-0502	4	4	3895-00-160-3220	45	4
5305-00-068-0502	6	31	5330-00-160-3385	41	8
5305-00-068-0502	6	35	3895-00-160-3386	41	9
5305-00-068-0502	13	29	3120-00-160-5654	29	2
5305-00-068-0502	13	32	5330-00-160-5655	29	7
5305-00-068-0502	17	16	3895-00-160-5722	36	6
5305-00-068-0502	24	22	3895-00-160-5723	36	2
5305-00-069-5573	23	11	4820-00-160-5726	33	36
5305-00-071-1769	38	58	3895-00-160-5733	39	48
5305-00-071-1778	25	36	3895-00-160-6363	39	23
5305-00-071-2236	19	11	3895-00-160-6403	6	5
5305-00-071-2241	24	13	4810-00-160-6654	34	34
5305-00-071-2241	25	18	5330-00-160-6682	40	88
5305-00-071-2241	33	4	4730-00-162-2858	18	86
5305-00-071-2241	34	5	5320-00-162-6038	5	32
5305-00-071-2241	39	8	5320-00-162-6038	5	37
5305-00-071-2241	40	92	5360-00-169-8367	10	58
5305-00-071-2241	41	41	5306-00-169-8389	10	34
5330-00-079-4701	14	9	5340-00-173-3019	33	5
4730-00-080-4005	14	29	4730-00-187-7599	8	5

STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
5315-00-187-9550	43	9	4730-00-249-2029	33	23
4730-00-188-1855	33	22	4730-00-249-2032	14	41
4730-00-188-1864	18	90	4730-00-249-3915	34	13
4730-00-188-1864	34	25	3895-00-255-0919	29	24
6685-00-193-0201	6	2	4730-00-253-4414	45	22
4730-00-193-0869	18	36	5305-00-253-5616	39	22
4730-00-193-0871	26	31	4730-00-254-6226	33	24
4730-00-193-0871	34	27	4820-00-255-0498	11	57
4730-00-196-1468	14	40	5330-00-255-5615	11	29
4730-00-196-2059	41	36	5310-00-255-6809	21	29
4730-00-196-2073	33	28	5360-00-255-6907	22	10
5330-00-197-7762	29	4	5305-00-256-9544	12	17
4730-00-202-6663	18	89	4730-00-266-0538	18	16
5305-00-206-3519	5	24	5330-00-267-0809	10	49
5305-00-206-3519	5	52	5330-00-267-0809	11	4
5305-00-206-3519	5	82	5305-00-267-8976	30	5
5305-00-206-3519	6	55	3895-00-268-1300	38	116
5305-00-206-3519	12	4	5305-00-269-3214	45	10
5305-00-206-3519	25	27	5305-00-269-3220	5	60
5305-00-206-3519	38	57	4730-00-270-4606	18	9
5305-00-206-3519	38	96	4730-00-270-4606	18	61
5305-00-206-3519	40	85	4730-00-270-4606	34	9
5305-00-206-3519	42	3	4730-00-270-4616	34	24
5305-00-206-3976	6	39	4730-00-278-3054	23	2
5305-00-206-3976	20	5	3110-00-293-8120	25	8
5310-00-209-0786	25	20	5310-00-297-3260	38	61
5310-00-209-0965	5	58	6210-00-299-4041	17	11
5310-00-209-0965	16	11	6220-00-300-0284	1	25
5310-00-209-0965	23	9	6220-00-300-0284	1	40
5310-00-209-0965	25	31	9905-00-305-9087	39	24
5310-00-209-0965	38	3	3895-00-321-8799	41	5
5310-00-209-0965	39	17	9905-00-321-8855	39	21
5310-00-209-0965	41	31	9905-00-321-8856	39	25
2520-00-217-9322	30	6	3895-00-352-4490	40	40
5315-00-221-6006	26	6	3895-00-352-4493	6	51
5305-00-225-3839	15	1	2940-00-358-4636	45	26
5306-00-225-8499	41	16	5315-00-401-3678	31	13
5306-00-225-8499	43	25	5340-00-404-4101	2	7
5305-00-225-8507	43	18	5310-00-407-9566	5	68
5306-00-225-8514	25	39	5310-00-407-9566	13	13
5305-00-225-9081	5	67	5310-00-407-9566	25	35
5305-00-225-9081	36	5	5310-00-407-9566	36	4
5305-00-225-9081	41	30	5310-00-407-9566	38	44
5306-00-226-4831	40	91	5310-00-407-9566	41	45
4820-00-227-9715	38	115	5310-00-407-9566	43	19
4720-00-228-1216	32	2	5310-00-409-3355	5	66
3020-00-231-6595	38	70	5310-00-409-3355	25	34
3895-00-231-6596	38	53	5310-00-409-3355	36	3
5330-00-232-0352	7	4	5310-00-409-3355	38	45
5330-00-232-0352	7	11	5310-00-409-3355	38	147
5330-00-232-0548	7	15	5310-00-409-3355	38	148
5330-00-232-0549	43	17	5310-00-409-3355	41	27
5330-00-232-0551	32	19	5310-00-409-3355	43	20
5310-00-232-8194	5	6	5330-00-411-9134	40	49
5310-00-232-8194	5	14	5330-00-411-9134	40	62
5310-00-232-8194	5	26	5330-00-411-9134	41	23
5310-00-232-8194	5	55	5330-00-411-9350	40	51
5310-00-232-8194	10	94	5330-00-411-9350	40	63
5310-00-232-8194	11	66	5330-00-411-9350	41	25
5310-00-232-8194	16	17	5330-00-413-4778	40	69
5310-00-232-8194	24	8	5330-00-413-4781	40	38
5310-00-232-8194	25	25	5330-00-413-4782	38	42
5310-00-232-8194	33	33	5330-00-413-4782	38	99
5330-00-235-1897	11	10	5330-00-413-4782	38	153
5365-00-236-6665	22	2	4730-00-420-0828	14	23
5330-00-244-2410	40	74	4730-00-420-0828	14	46
4730-00-246-9215	14	10	4730-00-420-0828	14	55
4730-00-246-9215	18	33	2530-00-421-7099	22	6
4730-00-246-9215	33	20	4710-00-421-7166	38	129
4730-00-246-9218	14	25	5315-00-421-9351	40	2
5330-00-247-6918	26	15	3895-00-425-6895	7	8
4820-00-248-0552	11	449	3895-00-425-6903	34	29
4820-00-248-0567	11	47	2530-00-425-6950	25	16
4820-00-248-0571	11	39	5315-00-425-6954	43	10
4820-00-248-0575	10	30	4530-00-425-7005	33	14
4820-00-248-0575	11	16	4320-00-427-5141	10	19
3895-00-248-4368	25	2	4320-00-427-5141	11	33
3895-00-248-4370	38	114	4320-00-427-5162	10	9
3895-00-248-4370	38	136	5360-00-429-2085	21	21
4730-00-249-2029	18	20	4820-00-431-0277	33	21

STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
4720-00-441-5928	14	20	5310-00-584-5272	10	99
4720-00-441-5928	14	52	5310-00-584-5272	11	65
4730-00-443-8580	14	17	5310-00-584-5272	12	2
4730-00-443-8580	14	22	5310-00-584-5272	18	42
4730-00-443-8580	14	45	5310-00-584-5272	25	33
4730-00-443-8580	14	54	5310-00-584-5272	40	44
4710-00-444-7427	38	125	5310-00-584-7888	6	8
4320-00-444-9013	31	1	5330-00-585-0840	31	5
3895-00-444-9015	32	16	5305-00-587-2650	11	6
5330-00-448-6832	40	33	5330-00-589-5759	40	34
4820-00-459-6197	32	13	5330-00-589-5759	41	3
4730-00-469-4253	14	32	5306-00-604-8006	38	41
4730-00-469-4253	14	37	5306-00-604-8006	38	82
4730-00-469-4253	14	48	5306-00-604-8006	38	144
4730-00-469-4253	14	57	5340-00-605-2445	10	36
5340-00-476-7561	10	45	5340-00-605-2445	11	20
5340-00-476-7561	11	24	3895-00-610-0044	10	78
6685-00-476-7773	15	5	5365-00-610-6325	11	38
5360-00-480-4076	11	50	5306-00-623-1595	14	14
5365-00-481-0172	10	7	5340-00-627-4729	43	27
5330-00-484-8804	11	44	5310-00-637-9541	1	11
5330-00-486-4735	11	13	5310-00-637-9541	1	20
5330-00-486-4736	10	57	5310-00-637-9541	3	3
5330-00-486-4736	11	31	5310-00-637-9541	5	62
5330-00-486-4740	11	51	5310-00-637-9541	6	17
5330-00-486-4741	11	37	5310-00-637-9541	6	24
5330-00-486-4751	11	45	5310-00-637-9541	6	33
3895-00-491-4961	29	29	5310-00-637-9541	12	6
4820-00-492-4280	40	52	5310-00-637-9541	15	2
4820-00-492-4281	40	46	5310-00-637-9541	17	3
4320-00-493-8559	29	26	5310-00-637-9541	19	20
4820-00-493-8581	38	43	5310-00-637-9541	23	6
4820-00-493-8581	38	100	5310-00-637-9541	24	12
4820-00-493-8581	38	134	5310-00-637-9541	25	44
3895-00-493-8795	6	1	5310-00-637-9541	33	2
4530-00-496-1554	32	7	5310-00-637-9541	39	3
3895-00-496-1556	32	9	5310-00-637-9541	39	5
3895-00-496-1575	33	16	5310-00-637-9541	40	81
4730-00-496-7539	7	17	5310-00-637-9541	41	33
4730-00-497-8280	14	30	5310-00-637-9541	44	27
5360-00-498-2838	11	32	5310-00-638-2599	22	5
5365-00-498-2864	10	46	5360-00-664-2998	41	10
5365-00-498-2864	11	12	3110-00-690-8987	10	41
5365-00-498-2865	10	13	3110-00-690-8988	10	47
5365-00-498-2865	11	42	3895-00-714-5186	7	6
4320-00-518-1214	10	26	5330-00-714-5188	7	14
4320-00-518-1237	10	39	3895-00-717-4003	32	10
3895-00-529-6805	32	24	5365-00-717-6936	22	3
5330-00-533-6821	11	53	5310-00-723-4458	4	8
5360-00-538-6634	11	58	5310-00-723-4458	18	45
5340-00-540-2054	11	52	5305-00-724-5896	45	8
5330-00-548-6124	21	17	5305-00-724-5910	5	8
5330-00-548-6129	21	23	5305-00-724-5910	11	63
5330-00-549-7695	21	20	5305-00-724-5938	5	18
3110-00-554-3248	11	14	5305-00-727-3804	5	25
3110-00-554-3626	12	16	5310-00-732-0558	5	63
5310-00-559-7344	10	3	5310-00-732-0558	6	23
5310-00-559-7344	10	88	5310-00-732-0558	20	3
5310-00-559-7344	11	3	5310-00-732-0558	39	30
5365-00-559-7725	11	18	5310-00-732-0559	13	2
3895-00-561-8442	26	16	5310-00-732-0559	39	4
5310-00-562-3779	10	55	5310-00-732-0560	5	10
5310-00-562-3779	11	7	5310-00-732-0560	5	28
5310-00-562-3932	10	35	5310-00-732-0560	5	54
5310-00-562-3932	11	21	5310-00-732-0560	5	84
5310-00-562-3978	11	56	5310-00-732-0560	21	4
5306-00-562-6182	10	33	5310-00-732-0560	25	38
5306-00-562-6194	10	51	5310-00-732-0560	34	15
5306-00-562-6194	11	2	5310-00-732-0560	38	60
5306-00-563-8254	10	25	4820-00-740-8795	18	85
5306-00-563-8254	10	64	5330-00-752-7534	14	5
5305-00-567-6103	11	54	4820-00-752-9040	34	19
6685-00-574-7538	27	4	5330-00-758-7374	31	11
4820-00-577-8002	10	67	3895-00-758-9710	32	3
5310-00-584-5272	3	8	4730-00-761-2955	14	4
5310-00-584-5272	5	9	5310-00-761-6882	1	10
5310-00-584-5272	5	29	5310-00-761-6882	1	49
5310-00-584-5272	5	53	5310-00-761-6882	3	2
5310-00-584-5272	5	83	5310-00-761-6882	6	16
5310-00-584-5272	6	44	5310-00-761-6882	6	32

STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
5310-00-761-6882	17	2	5330-00-868-7912	38	59
5310-00-761-6882	18	40	3825-00-871-2694	32	20
5310-00-761-6882	19	19	5305-00-880-4012	6	7
5310-00-761-6882	23	7	5310-00-880-7745	5	21
5310-00-761-6882	24	11	5310-00-880-7745	12	1
5310-00-761-6882	25	21	5310-00-880-7745	16	10
5310-00-761-6882	25	45	5310-00-880-7745	38	2
5310-00-761-6822	26	10	5310-00-880-7746	13	9
5310-00-761-6882	26	26	5310-00-880-7746	43	22
5310-00-761-6882	33	6	5310-00-880-8189	5	57
5310-00-761-6882	34	7	5310-00-880-8189	23	8
5310-00-761-6882	38	17	5310-00-880-8189	25	32
5310-00-761-6882	39	6	5310-00-880-8189	39	18
5310-00-761-6882	40	82	5310-00-880-8189	40	7
5310-00-761-6882	41	34	5305-00-883-0628	2	8
3895-00-763-0688	38	12	5305-00-883-0628	35	12
5310-00-763-8905	13	45	6240-00-889-1799	1	24
5310-00-763-8920	5	5	6240-00-889-1799	1	38
5310-00-763-8920	5	15	3110-00-900-2560	11	48
5310-00-763-8920	5	27	6685-00-901-8712	27	1
5310-00-763-8920	5	56	3110-00-902-1649	44	7
5310-00-763-8920	10	95	4730-00-902-8991	18	1
5310-00-763-8920	11	67	4730-00-902-8991	34	12
5310-00-763-8920	16	18	2030-00-909-0313	10	44
5310-00-763-8920	24	9	2030-00-909-0313	11	25
5310-00-763-8920	25	26	3895-00-922-0321	38	9
5310-00-763-8920	38	89	5310-00-922-2017	1	43
5310-00-763-8921	5	77	5330-00-922-3395	10	75
2530-00-765-8902	22	8	4730-00-922-5180	7	18
5310-00-768-0318	3	9	6240-00-924-7526	1	31
5310-00-768-0318	6	40	4820-00-926-2469	10	63
5310-00-768-0318	10	98	5330-00-926-6413	10	65
5310-00-768-0318	11	64	5330-00-926-6421	10	60
5310-00-768-0318	13	48	5330-00-926-6438	10	82
5310-00-768-0318	16	2	5310-00-934-9751	1	42
5310-00-768-0318	16	3	5310-00-934-9751	6	30
5310-00-768-0318	38	95	5310-00-934-9751	13	16
5310-00-768-0318	40	13	5310-00-934-9751	13	22
5310-00-768-0318	42	5	5310-00-934-9751	13	36
4320-00-779-2359	29	1	5310-00-934-9751	24	17
5360-00-784-5312	31	7	5310-00-934-9751	39	16
5365-00-792-0809	10	56	5310-00-934-9757	19	22
5365-00-792-0809	11	30	5310-00-934-9757	26	33
5365-00-792-0809	11	59	5315-00-935-9034	10	86
5310-00-809-3079	10	91	5310-00-935-9041	10	43
5310-00-809-3079	12	3	5310-00-935-9041	11	26
5310-00-809-3079	38	6	4730-00-937-7065	18	35
5310-00-809-3079	39	51	6240-00-946-9654	1	4
5310-00-809-3079	39	55	6240-00-946-9654	1	16
5310-00-809-3079	40	86	5310-00-951-7209	5	17
5310-00-809-4058	18	46	5310-00-951-7209	13	7
5310-00-809-4061	6	25	5310-00-951-7209	25	24
5310-00-809-4061	38	40	5310-00-951-7209	33	34
5310-00-809-4061	38	83	5310-00-951-7209	40	10
5310-00-809-4061	38	143	3010-00-958-1996	12	7
5310-00-809-4061	44	28	3825-00-970-0021	32	1
5310-00-809-5997	18	6	2530-00-981-3204	13	46
5310-00-809-5997	21	6	5305-00-984-6193	19	17
5310-00-809-5997	38	55	5305-00-984-6193	25	3
5306-00-811-5685	22	4	5305-00-984-6193	16	19
5315-00-816-1794	21	2	5305-00-984-6194	1	47
5315-00-816-1794	25	5	5305-00-984-6199	26	35
5310-00-835-2037	13	5	5305-00-984-6208	33	40
5315-00-839-5822	5	33	5305-00-984-6210	17	17
5315-00-839-5822	38	5	5305-00-988-1728	38	16
5315-00-839-5822	38	48	5305-00-989-7434	39	28
5315-00-839-5822	38	124	5305-00-990-6444	13	35
5315-00-839-5822	38	151	5305-00-993-1849	13	17
5310-00-842-1488	25	6	5305-00-993-1851	6	29
5310-00-842-1490	40	17	5305-00993-1851	13	28
5310-00-842-1490	40	45	5305-00-993-1851	39	15
5315-00-842-3044	43	3	4720-01-014-4915	BUL	BULK
5310-00-843-3496	15	10	4320-01-017-4423	31	15
4730-00-845-8750	14	37	4320-01-017-4424	31	10
4730-00-845-8750	34	30	5306-01-017-9962	11	22
5315-00-849-9854	41	14	4730-01-018-1561	11	61
5310-00-851-2682	38	30	4820-01-018-4720	33	10
5315-00-854-8709	38	106	4320-01-018-4791	11	1
3895-00-862-0367	16	5	5306-01-018-5198	11	60
3895-00-865-3014	29	8	4320-01-018-5830	10	1

STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
4320-01-018-5858	10	29	4720-01-082-7859	14	31
4320-01-018-5858	11	23	4720-01-082-7859	14	47
4730-01-018-6281	11	40	4720-01-082-7860	14	36
4320-01-018-9616	10	31	4720-01-082-7860	14	56
4320-01-018-9616	11	17	5330-01-082-8139	19	14
4730-01-019-9020	11	34	5330-01-082-8140	19	15
3020-01-020-7259	44	12	6220-01-082-8302	1	21
4810-01-026-6208	18	95	6220-01-082-8303	1	35
3040-01-028-1495	21	14	3895-01-082-8490	26	17
4730-01-028-8147	14	39	3895-01-082-8491	38	86
5305-01-030-6105	11	68	3895-01-082-8492	38	91
5330-01-031-5050	10	68	3895-01-082-8493	38	88
5330-01-031-5050	11	46	3895-01-082-8494	38	52
5365-01-032-2986	10	38	4730-01-082-8504	7	21
3120-01-032-3401	10	37	6685-01-082-8513	27	3
3120-01-032-3401	11	19	5330-01-082-8732	7	7
4320-01-032-6954	10	5	6220-01-082-9082	1	27
5306-01-033-0993	10	2	5360-01-082-9160	39	40
4320-01-033-1825	10	32	5360-01-082-9161	26	18
4320-01-033-1825	11	15	5360-01-082-9162	38	87
5306-01-033-4527	10	20	5310-01-082-9163	38	62
5306-01-033-4527	11	36	5310-01-082-9164	38	79
6680-01-036-8513	25	13	4730-01-082-9176	14	11
4320-01-047-3724	10	52	5360-01-082-9375	38	98
3020-01-053-2581	24	24	5310-01-082-9395	17	7
6685-01-055-0828	27	2	5310-01-082-9395	19	6
4730-01-059-1211	14	33	5310-01-082-9396	17	12
4730-01-059-1211	14	38	5310-01-082-9396	19	4
4730-01-059-1211	14	49	4510-01-082-9687	26	3
4730-01-059-1211	14	58	4810-01-083-0197	18	34
3040-01-060-7084	13	10	4730-01-083-0672	14	3
2530-01-060-9049	44	25	3895-01-083-0904	38	92
6220-01-065-7275	1	14	3040-01-083-1050	20	10
5340-01-071-6389	2	1	5360-01-083-1420	39	43
4310-01-078-6275	21	19	5360-01-083-1421	15	11
4310-01-078-6276	21	22	4320-01-083-2816	44	1
4310-01-078-6277	21	16	5360-01-083-3887	39	27
4820-01-082-6470	8	3	5340-01-083-3888	35	11
4820-01-082-6471	39	9	4730-01-083-3977	18	11
4730-01-082-6472	7	20	4730-01-083-3977	18	14
4730-01-082-6473	18	5	4730-01-083-3977	18	18
4730-01-082-6474	18	31	4730-01-083-3977	18	22
4730-01-082-6475	18	32	4730-01-083-3977	18	25
4810-01-082-6476	45	11	4730-01-083-3977	18	28
4730-01-082-6477	14	7	4730-01-083-3977	18	51
4730-01-082-6529	14	6	4730-01-083-3977	18	57
4820-01-082-6539	18	37	4730-01-083-3977	18	65
4810-01-082-6559	18	43	4730-01-083-3977	18	68
4710-01-082-6576	8	4	4730-01-083-3977	18	71
4810-01-082-6666	19	25	4730-01-083-3977	18	74
4730-01-082-7165	18	12	4730-01-083-3977	18	77
4730-01-082-7165	18	15	4730-01-083-3977	18	80
4730-01-082-7165	18	19	4730-01-083-3977	18	83
4730-01-082-7165	18	23	4730-01-083-3977	34	3
4730-01-082-7165	18	26	3010-01-083-4406	12	9
4730-01-082-7165	18	29	2520-01-083-4632	12	14
4730-01-082-7165	18	52	3010-01-083-4634	12	12
4730-01-082-7165	18	54	3020-01-083-4642	12	8
4730-01-082-7165	18	58	6210-01-083-6258	17	10
4730-01-082-7165	18	60	6680-01-083-6320	24	1
4730-01-082-7165	18	66	6680-01-083-6329	34	22
4730-01-082-7165	18	69	5310-01-083-6490	13	15
4730-01-082-7165	18	72	5310-01-083-6490	13	21
4730-01-082-7165	18	75	5310-01-083-6490	13	37
4730-01-082-7165	18	78	5310-01-083-6490	24	18
4730-01-082-7165	18	81	5310-01-083-6490	25	4
4730-01-082-7165	18	84	5315-01-083-6597	43	5
4730-01-082-7165	18	88	5315-01-083-6851	43	29
4730-01-082-7165	18	93	5360-01-083-6852	39	39
4730-01-082-7165	34	2	5330-01-083-7044	24	3
4730-01-082-7165	34	11	4820-01-083-7254	41	19
3895-01-082-7166	38	90	2910-01-083-7318	34	23
4730-01-082-7167	38	108	3040-01-083-9922	39	13
4730-01-082-7167	38	120	3895-01-083-9923	38	27
4720-01-082-7221	14	15	3895-01-083-9924	38	28
4720-01-082-7221	14	43	5340-01-084-1059	43	16
4720-01-082-7289	7	1	5930-01-084-2289	17	6
4730-01-082-7424	45	23	5930-01-084-2289	19	3
5940-01-082-7447	19	18	5930-01-084-2371	17	14
5975-01-082-7807	19	10	5930-01-084-2376	17	5

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STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
6220-01-085-1259	1	7	5310-01-097-7814	10	80
6220-01-085-2307	1	9	5307-01-097-7822	10	77
4520-01-085-2582	36	1	5305-01-097-7827	10	87
4530-01-085-2583	33	41	5305-01-097-7828	10	70
4730-01-085-2612	43	31	5305-01-097-7829	10	62
4820-01-085-3029	33	39	5305-01-097-7895	26	32
4530-01-085-3793	33	9	5305-01-097-7896	2	2
5310-01-085-6738	32	25	5310-01-097-7957	10	76
5340-01-085-8076	32	11	5310-01-097-7993	25	40
4820-01-085-8093	33	38	5310-01-097-7993	40	87
5930-01-085-8375	19	7	5310-01-097-7994	10	71
5306-01-086-3529	33	27	5310-01-097-7995	10	79
5340-01-086-3939	32	4	5310-01-097-8002	33	3
3040-01-086-4374	38	65	5310-01-097-8003	4	5
5310-01-086-9745	32	23	5310-01-097-8003	6	10
5305-01-087-0689	32	8	5305-01-097-8934	5	20
5340-01-087-2433	18	39	3895-01-098-1923	22	1
9905-01-088-2440	9	2	3895-01-098-1928	8	2
9905-01-088-2441	9	3	4730-01-098-4919	14	27
9905-01-088-2442	9	4	3895-01-098-5201	43	8
4720-01-088-4455	14	28	5307-01-098-5830	40	20
4720-01-088-4456	14	51	5307-01-098-5830	40	43
4820-01-088-9178	18	44	5340-01-098-6284	26	34
3040-04-089-1953	20	25	2590-01-099-0179	2	5
5310-01-089-2553	39	37	3895-01-100-3748	5	23
5306-01-089-2610	1	97	3895-01-100-3748	5	50
4730-01-089-4203	5	16	3895-01-100-3749	5	49
9905-01-089-9135	39	26	3895-01-100-3750	5	36
9905-01-089-9136	9	5	3895-01-100-3751	5	30
9905-01-089-9137	9	7	3895-01-100-3752	23	1
9905-01-089-9138	9	8	3895-01-100-3753	21	28
9905-01-089-9139	9	9	4320-01-100-3754	10	84
9905-01-089-9140	9	10	5940-01-100-3831	2	6
9905-01-090-7679	9	1	2590-01-100-6188	4	3
9905-01-090-7680	9	6	3010-01-100-6520	12	11
5120-01-090-7734	40	79	3040-01-100-6523	40	53
5360-01-091-0792	32	27	2590-01-100-8751	2	3
3895-01-091-7754	39	35	4820-01-100-8884	40	1
3895-01-091-8132	39	10	3040-01-100-9197	44	11
3895-01-092-8478	39	33	3895-01-100-9997	5	64
2530-01-092-9224	25	17	3895-01-100-9998	5	70
3895-01-092-9225	13	39	3895-01-100-9999	38	19
4010-01-092-9226	13	14	3895-01-101-0000	38	127
9905-01-092-9245	15	13	3895-01-101-0001	38	128
2540-01-092-9326	6	20	3895-01-101-0002	20	17
3895-01-093-8255	21	8	5310-01-101-2029	6	15
3895-01-093-8267	26	29	5310-01-101-2029	40	73
5340-01-094-1987	19	8	5310-01-101-2029	44	26
3895-01-094-8987	34	14	5310-01-101-2029	45	12
3895-01-094-8988	26	36	5305-01-101-2620	1	2
3895-01-095-3099	33	17	5305-01-101-2620	1	18
3895-01-095-3100	25	22	5305-01-101-2621	1	6
4320-01-095-3101	11	8	5305-01-101-2621	24	15
3895-01-095-4363	33	1	5360-01-101-3145	40	4
3895-01-095-4364	13	33	5310-01-101-3146	44	16
3895-01-095-5197	25	10	5310-01-101-3189	40	3
3895-01-095-5243	16	9	5935-01-101-3396	2	9
4810-01-095-5665	25	28	3040-01-101-4155	29	16
3040-01-095-7800	39	52	5340-01-101-4875	19	24
4330-01-096-1521	15	3	3895-01-101-5016	20	14
3040-01-096-1619	11	11	3895-01-101-5017	20	21
6680-01-096-2279	24	16	3895-01-101-5031	20	11
5310-01-096-6736	10	72	5365-01-101-5918	44	20
5360-01-096-6871	35	6	4320-01-101-6715	30	1
5360-01-096-6872	25	29	4710-01-101-7167	21	32
5340-01-096-7019	5	19	6220-01-101-7317	1	3
4820-01-096-9108	18	94	3040-01-101-7493	31	2
6350-01-096-9186	6	28	5305-01-101-8038	31	14
4930-01-096-9264	18	55	5360-01-101-8410	38	118
3895-01-096-9306	25	1	4710-01-101-8541	18	62
4730-01-096-9309	7	9	3010-01-101-9624	12	13
4730-01-096-9310	7	2	3010-01-102-0715	45	7
4820-01-096-9311	40	21	3040-01-102-1582	29	14
2590-01-096-9327	2	4	3040-01-102-1648	45	6
2590-01-096-9328	2	10	5306-01-102-1780	21	15
5365-01-097-5769	25	41	5315-01-102-1786	21	1
5365-01-097-5770	25	19	5330-01-102-1819	44	21
5340-01-097-5793	11	55	3040-01-102-4019	5	47
3120-01-097-7752	25	7	5310-01-102-4350	21	30
5305-01-097-7798	33	13	5365-01-102-4358	38	18

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STOCK NUMBER	FIG. NO.	ITEM NO.	STOCK NUMBER	FIG. NO.	ITEM NO.
5365-01-102-4359	20	12	3120-01-102-5403	29	27
3040-01-102-5005	20	22	3120-01-102-5404	10	93
5360-01-102-5360	40	48	3120-01-102-5404	13	24
5360-01-102-5360	40	61	5310-01-102-5447	21	18
5360-01-102-5360	41	21	5355-01-102-5637	18	47
5310-01-102-5379	20	15	5340-01-102-8324	5	39
4010-01-102-5381	41	37	5340-01-102-8387	21	3
5365-01-102-5392	10	85	3120-01-102-8412	41	28

PART NUMBER	FSCM	FIG. NO..	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
AN380-4-4	88044	38	48	MS15795-213	96906	38	94
AN380-4-4	88044	38	151	MS15795-217	96906	18	6
AN380-6-8	88044	41	14	MS15795-217	96906	21	6
ASTM-A-47	14448	18	47	MS15795-217	96906	38	55
BA722441	64959	25	8	MS24617-21	96906	2	8
BM11352-77	19422	18	36	MS24617-21	96906	35	12
BW1043	93480	41	36	MS24617-61	96906	6	3
C-2420	05333	6	20	MS24617-61	96906	6	50
C-256	40341	21	31	MS24617-61	96906	35	3
COV-0517	75272	2	1	MS24665-285	96906	21	2
COV-1313	75272	2	7	MS24665-285	96906	25	5
CP-35N-4	70960	30	6	MS24665-353	96906	5	33
CPR104220-2	19207	BUL	BULK	MS24665-353	96906	38	5
D-63-J-6261	80195	37	1	MS24665-355	96906	35	5
DA-1504	22337	25	15	MS24665-355	96906	39	50
DX533AC	56442	34	13	MS24665-419	96906	43	9
FG4-B	95484	32	1	MS27183-10	96906	18	46
FR251-1B2A	02249	15	3	MS27183-15	96906	6	25
F140S	04225	45	25	MS27183-15	96906	38	40
HD56-18-8SN	11139	2	9	MS27183-15	96906	38	83
HF-16-SS	76599	14	23	MS27183-15	96906	38	143
HF-16-SS	76599	14	46	MS27183-15	96906	44	28
HF-16-SS	76599	14	55	MS35206-251	96906	26	35
H48B	80195	16	7	MS35206-287	96906	38	16
J-M920-2.50X2.12	92764	38	31	MS35207-259	96906	13	17
J-M920-3-12X2.75	92764	41	1	MS35207-263	96906	39	28
J-M920-4.38X3.88	92764	41	7	MS35207-267	96906	6	29
J-616237	80195	2	4	MS35207-267	96906	13	28
J-616238	80195	2	5	MS35207-267	96906	39	15
J-616239	80195	2	3	MS35291-061	96906	40	75
J-616240	80195	12	13	MS35291-111	96906	11	68
J-616241	80195	12	11	MS35297-3	96906	3	5
J626102	80195	24	14	MS35297-3	96906	6	12
J626103	80195	6	26	MS35297-3	96906	19	1
J626107	80195	6	57	MS35297-3	96906	25	42
J262112	80195	10	100	MS35297-6	96906	4	4
J626120	80195	25	17	MS35297-6	96906	6	31
J626121	80195	34	18	MS35297-6	96906	6	35
J626124	80195	6	42	MS35297-6	96906	13	29
J626125	80195	10	92	MS35297-6	96906	17	16
J626126	80195	6	18	MS35297-6	96906	24	22
J626127	80195	6	58	MS35335-19	96906	25	20
J626128	80195	6	34	MS35338-28	96906	5	58
J626129	80195	6	54	MS35338-28	96906	16	11
J626130	80195	42	4	MS35338-28	96906	23	9
J626131	80195	24	10	MS35338-28	96906	25	31
L-16SF9	70960	30	8	MS35338-28	96906	38	3
L16SF8	70960	30	13	MS35338-28	96906	39	17
M-34-N	97484	16	6	MS35338-28	96906	41	31
MA207-22743	34623	18	48	MS35338-45	96906	5	68
MA207-22744	34623	18	4	MS35338-45	96906	13	13
MA207-22745	34623	18	8	MS35338-45	96906	25	35
MA207-22913	34623	34	1	MS35338-45	96906	36	4
MA207-22914	34623	18	53	MS35338-45	96906	38	44
MA207-22914	34623	18	59	MS35338-45	96906	41	45
MA207-22915	34623	18	50	MS35338-45	96906	43	19
MA207-22915	34623	18	64	MS35338-46	96906	5	62
MA207-22916	24617	18	56	MS35338-46	96906	6	24
MA207-22917	34623	18	21	MS35338-46	96906	12	6
MA207-22917	34623	18	76	MS35338-46	96906	39	3
MA207-22918	34623	18	13	MS35338-48	96906	3	8
MA207-22918	34623	18	79	MS35338-48	96906	5	9
MA207-22970	34623	18	49	MS35338-48	96906	5	29
MA207-22971	34623	18	30	MS35338-48	96906	5	53
MA207-22972	34623	18	7	MS35338-48	96906	5	83
MA207-22973	34623	18	38	MS35338-48	96906	10	99
MA207-22974	34623	34	10	MS35338-48	96906	12	2

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
MS35338-48	96906	18	42	N3859	06721	21	14
MS35338-48	96906	25	33	N5X122	40342	21	1
MS35650-302	96906	1	42	R-1168S	14726	2	6
MS35650-302	96906	6	30	SST4S	06383	2	11
MS35650-302	96906	13	16	STYLE B	01292	34	29
MS35650-302	96906	13	22	TG6401080	24617	16	12
MS35650-302	96906	13	36	TG6401080	70040	14	35
MS35650-302	96906	24	17	V55-LA2-100	34623	25	28
MS35650-302	96906	39	16	W05824	79470	34	24
MS35677-24	96906	38	106	Y-05	04638	19	8
MS35690-404	96906	4	8	Y175-112C	03990	20	24
MS35690-404	96906	18	45	Y325-014	03990	20	19
MS35690-523	96906	13	9	Y325-210	03990	20	22
MS35690-523	96906	43	22	Y325-232	03990	20	13
MS35690-723	96906	5	21	Y325-334	03990	20	16
MS35690-723	96906	12	1	0-47EW/W37-1	70436	13	26
MS35690-723	96906	16	10	0103385	80195	43	5
MS35690-723	96906	38	2	0120386	80195	45	20
MS35691-17	96906	38	30	015-001	02249	15	4
MS35692-21	96906	25	6	0188-12-12	30759	14	21
MS35692-37	96906	40	17	0188-12-12	30759	14	53
MS35692-37	96906	40	45	0188-12-12	30759	14	16
MS35782-4	96906	34	19	0188-12-12	87373	14	44
MS35869-23	96906	18	16	0330-1009-060	03990	20	10
MS39162-5	96906	18	1	0688-12-12	30759	14	17
MS39162-5	96906	34	12	0688-12-12	30759	14	22
MS39230-7	96906	33	29	0688-12-12	30759	14	45
MS39230-9	96906	45	22	0688-12-12	30759	14	54
MS49005-004	96906	19	26	1A090-A	75665	45	7
MS51034-83	96906	12	17	10-7005-02	99588	1	33
MS51508812	96906	14	39	1000	38056	27	1
MS51884-7	96906	14	42	100135	24617	14	14
MS51887-15	96906	18	89	102912	24617	5	20
MS51887-7	96906	26	31	102913	24617	40	6
MS51887-7	96906	34	27	103321	24617	14	13
MS51953-49B	96906	18	90	103373	24617	29	19
MS51953-49B	96906	34	25	103373	72582	43	3
MS51953-97	96906	14	40	103389	24617	25	11
MS51955-34	96906	39	42	103389	24617	41	44
MS51963-82	96906	45	8	103564	24617	26	6
MS51967-11	96906	5	57	103615	24617	29	30
MS51967-11	96906	23	8	103646	24617	40	30
MS51967-11	96906	25	32	105405	24617	18	35
MS51967-11	96906	39	18	105417	24617	18	20
MS51967-11	96906	40	7	105417	31007	33	23
MS51967-23	96906	5	77	105423	24617	14	10
MS90725-125	96906	25	36	105423	24617	18	33
MS90725-15	96906	19	11	105423	24617	33	20
MS90725-162	96906	5	8	106282	24617	30	10
MS90725-162	96906	11	63	106749	24617	31	16
MS90725-165	96906	5	25	106850	24617	5	4
MS90725-172	96906	5	18	106850	24617	39	31
MS90725-36	96906	5	67	107376	24617	38	4
MS90725-36	96906	36	5	110633	24617	17	18
MS90725-36	96906	41	30	115-01	12662	1	5
MS90725-43	96906	43	18	115-01	12662	1	15
MS90725-50	96906	25	39	115-32	12662	1	2
MS90725-64	96906	45	10	115-32	12662	1	18
MS90725-70	96906	5	60	115A	12662	1	1
MS90725-8	96906	15	1	115A-15	12662	1	3
MS90725-90	96906	5	59	115B-15	12662	1	17
MS90725-90	96906	16	14	115193	24617	18	91
MS90725-90	96906	20	1	1156	81343	1	31
MS90725-90	96906	21	5	1157	81343	1	24
MS90728-38	96906	40	91	1157	81343	1	38
N-10193-AD	40342	21	26	119920	24617	33	22
N-10848-W	06721	21	20	120214	24617	30	11
N-10930-F	40342	21	28	120214	24617	38	145
N-10976-A	06721	21	16	120214	24617	38	146
N-11728-AJ	06721	21	17	120214	24617	40	90
N-11728-F	06721	21	23	120214	24617	41	29
N-12697-C	40342	21	21	120217	24617	13	15
N-13-X-669	40342	21	3	120217	24617	13	21
N-13497	06721	21	22	120217	24617	13	37
N-13660	06721	21	19	120217	24617	24	18
N-1882	40342	21	32	120217	24617	25	4
N-1884-BG	40342	21	27	120217	30379	1	43
N-1888-B	40342	21	24	120221	24617	17	17
NC-256	06721	20	9	120233	24617	6	14
N1930	13226	19	7	120233	24617	12	5

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
120233	24617	29	5	120384	24617	40	44
120233	24617	39	2	120384	24617	42	13
120233	24617	44	29	120386	24617	6	22
120233	24617	45	9	120386	24617	13	32
120367	24617	30	2	120386	24617	24	23
120368	24617	30	12	120390	24617	10	91
120369	24617	13	2	120390	24617	12	3
120369	24617	39	4	120390	24617	38	6
120371	24617	5	10	120390	24617	39	51
120371	24617	5	28	120390	24617	39	55
120371	24617	5	54	120390	24617	40	86
120371	24617	5	84	120390	24617	42	2
120371	24617	21	4	120614	24617	28	8
120371	24617	25	38	120622	24617	19	22
120371	24617	34	15	120622	24617	26	33
120371	24617	38	60	120741	24617	36	7
120375	24617	1	10	120741	24617	43	12
120375	24617	1	19	120755	24617	34	4
120375	24617	3	2	121323	24617	18	9
120375	24617	6	16	121323	24617	18	61
120375	24617	6	32	121323	24617	34	9
120375	24617	17	2	121358	24617	13	45
120375	24617	18	40	121574	24617	5	6
120375	24617	19	19	121574	24617	5	14
120375	24617	23	7	121574	24617	5	26
120375	24617	24	11	121574	24617	5	55
120375	24617	25	21	121574	24617	10	94
120375	24617	25	45	121574	24617	11	66
120375	24617	26	10	121574	24617	16	17
120375	24617	26	26	121574	24617	24	8
120375	24617	33	6	121574	24617	25	25
120375	24617	34	7	121574	24617	33	33
120375	24617	38	17	121900	24617	1	12
120375	24617	39	6	121900	24617	6	13
120375	24617	40	82	121900	24617	23	4
120375	24617	41	34	121913	24617	24	13
120376	24617	5	66	121913	24617	25	18
120376	24617	25	34	121913	24617	33	4
120376	24617	36	3	121913	24617	34	5
120376	24617	38	45	121913	24617	39	8
120376	24617	38	147	121913	24617	40	92
120376	24617	38	148	121913	24617	41	41
120376	24617	41	27	122017	24617	41	16
120376	24617	43	20	122017	24617	43	25
120377	24617	5	63	122119	24617	38	41
120377	24617	6	23	122119	24617	38	82
120377	24617	20	3	122119	24617	38	144
120377	24617	39	30	122145	11862	6	39
120378	24617	3	9	122145	11862	20	5
120378	24617	6	40	122253	24617	23	11
120378	24617	10	98	122267	24617	38	56
120378	24617	11	64	122267	24617	39	7
120378	24617	13	48	122408	24617	3	7
120378	24617	16	2	122408	24617	6	49
120378	24617	16	3	122408	24617	16	19
120378	24617	38	95	122408	24617	18	41
120378	24617	40	13	122408	24617	33	32
120378	24617	42	5	122408	24617	39	54
120380	24617	1	11	122433	24617	5	24
120380	24617	1	20	122433	24617	5	52
120380	24617	3	3	122433	24617	5	82
120380	24617	6	17	122433	24617	6	55
120380	24617	6	33	122433	24617	12	4
120380	24617	15	2	122433	24617	25	27
120380	24617	17	3	122433	24617	38	57
120380	24617	19	20	122433	24617	38	96
120380	24617	23	6	122433	24617	40	85
120380	24617	24	12	122433	24617	42	3
120380	24617	25	44	122459	24617	34	17
120380	24617	30	3	122459	24617	38	58
120380	24617	33	2	122472	24617	40	15
120380	24617	34	6	123743	24617	30	5
120380	24617	39	5	124589	24617	5	5
120380	24617	40	81	124589	24617	5	15
120380	24617	41	33	124589	24617	5	27
120381	24617	44	27	124589	24617	5	56
120382	24617	1	45	124589	24617	10	95
120384	24617	6	44	124589	24617	11	67
120384	24617	11	65	124589	24617	16	18
120384	24617	34	16	124589	24617	24	9

PART NUMBER	FSCM	FIG. NO.	ITEM NO.
124589	24617	25	26
124589	24617	28	89
124843	24617	5	72
124944	24617	13	5
125988	30379	14	41
127796	24617	26	28
127800	24617	38	102
128137	24617	8	5
128228	24617	24	27
128281	24617	18	39
129187	24617	45	2
130999	24617	5	17
130999	24617	13	7
130999	24617	25	24
130999	24617	33	34
130999	24617	40	10
131046	24617	6	8
132764	24617	1	47
137185	24617	38	124
141621	72582	14	25
142664	24617	33	24
144043	24617	34	32
144049	24617	14	34
144049	24617	34	30
144059	24617	14	19
144744	24617	6	46
144744	24617	35	9
145377	24617	39	22
152-45222-2	64294	44	1
1557-001	02249	15	12
1561-001	02249	15	15
1563-001	02249	15	11
1575-001	02249	15	14
1576-001	02249	15	7
1577AL	95993	16	4
1582-001	02249	15	13
16781-J	76260	12	7
184365	24617	41	18
187395	24617	18	2
187395	24617	18	63
1895	81343	1	4
1895	81346	1	16
2-X-303	40342	21	30
2-X-5504	40342	21	18
2-094-008-880	63097	31	8
2-150-001-255	63097	31	14
2-4-663	05598	12	14
2-416-006-354	63097	31	10
2-430-005-321	63097	31	13
2-520-001-830	63097	31	5
2-522-006-560	63097	31	4
2-522-007-610	63097	31	6
2-569-005-375	63097	31	3
2-766-005-371	63097	31	7
2FV2V0356J	64294	45	11
2WCT2412	70960	30	9
210088-1X	95019	12	16
21021	64294	44	10
219191	24617	23	2
219301	24617	6	4
219358	24617	33	28
225733	06853	22	6
228280	06853	22	2
23-0118-19	99588	1	34
230111	06853	22	7
234433	06853	22	8
234435	06853	22	10
237886	06853	22	4
237887	06853	22	5
238373	06853	22	3
239086	06853	22	9
24-9905-03	99588	1	26
24-9905-03	99588	1	41
25	19382	24	25
25002	64294	44	22
2708-LA	34623	25	37
272336	24617	38	61
274247	24617	14	9
274249	24617	14	5
274253	24617	14	2
274637	24617	38	10
274993	24617	6	16
274993	24617	40	18
274993	24617	44	17
274993	24617	45	15
290053	06853	22	5
29531-18	64294	44	6
29602-163	64294	44	7
29657-112	64294	44	6
29791-011	64294	44	6
3-X-812	40342	21	2
3-172-806-080	63097	31	36
3-291-050-465	63097	31	39
3-310-002-999	63097	31	62
3-360-014-011	63097	31	19
3-563-001-563	63097	31	5
3N171-1	70960	30	1
30012	03990	20	27
30182-12-12B	30759	14	5
30182-12-128	30759	14	6
30182-12-12B	30759	14	16
30182-12-12B	30759	14	31
30182-8-8B	30759	14	14
30682-12-12B	30759	14	8
30682-12-12B	30759	14	12
30682-12-12B	30759	14	18
30682-12-12B	30759	14	15
30682-8-8B	30759	14	14
3100118	80195	5	13
3100284	80195	40	3
3100302	80195	24	6
3160001	80195	19	22
3170013	80195	12	8
3170021	80195	12	40
3205	03990	20	77
3274-001	02249	15	56
3277-001	02249	15	57
3293-001	02249	15	59
3300002	80195	40	65
3300018	80195	43	50
3300019	80195	43	64
3300024	80195	6	26
3300036	80195	42	51
3300038	80195	6	63
3300104	80195	6	25
3300106	80195	6	47
3300120	80195	43	60
3300121	80195	43	20
3300122	80195	43	49
3300125	80195	43	62
3300135	80195	43	23
3300136	80195	43	83
3300142	80195	43	16
3300146	80195	43	78
3300148	80195	43	43
3300149	80195	43	22
3300150	80195	43	58
3300151	80195	43	48
3300152	80195	43	61
3300154	80195	43	21
3300159	80195	43	37
3300293	80195	43	39
3300294	80195	43	53
3300301	80195	43	2
3300337	80195	6	42
3300338	80195	10	28
3300623	80195	42	46
3300629	80195	40	46
3310017	80195	6	52
3310018	80195	6	51
3310040	80195	6	50
3310076	80195	6	52
3310080	80195	6	29
3310087	80195	6	8
3310218	80195	5	13
3310353	80195	38	12
3310354	80195	42	10
3310358	80195	5	9
3310359	80195	5	6
3310742	80195	6	28

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
3310749	80195	42	10	3330039	80195	28	10
3310750	80195	42	11	3330040	80195	28	16
3310897	80195	3	4	3330041	80195	28	18
3310901	80195	3	6	3330042	80195	28	17
3310907	80195	3\	1	3330045	80195	28	15
3310931	80195	6	41	3330046	80195	28	5
3310931	80195	10	96	3330047	80195	28	6
3310931	80195	42	9	3330049	80195	28	7
3310984	80195	42	12	3330050	80195	3365	6
3310985	80195	42	8	3330061	80195	36	6
3311022	80195	34	20	3330062	80195	33	2
3311155	80195	23	10	3330073	80195	33	36
3311313	80195	6	19	3330074	80195	18	39
3320034	80195	13	30	3330152	80195	45	62
3320228	80195	13	1	3330202	80195	33	19
3320268	80195	11	62	3330214	80195	33	5
3320284	80195	13	3	3330218	80195	33	1
3320288	80195	13	4	3330220	80195	32	27
3320289	80195	13	39	3330447	80195	32	5
3320290	80195	13	40	3330461	80195	32	6
3320291	80195	13	41	3330462	80195	33	16
3320294	80195	13	43	3330591	80195	34	31
3320295	80195	13	44	3331116	80195	33	14
3320296	80195	13	42	3331143	80195	33	8
3320299	80195	13	20	3331144	80195	33	12
3320303	80195	13	23	3331154	80195	45	18
3320304	80195	10	93	3331155	80195	45	15
3320304	80195	13	24	3331159	80195	45	14
3320307	80195	13	8	3331162	80195	45	13
3320308	80195	13	47	3331168	80195	14	3
3320310	80195	24	19	3331169	80195	14	6
3320319	80195	16	9	3331190	80195	34	22
3320322	80195	16	8	3331225	80195	34	8
3320323	80195	16	1	3340003	80195	40	40
3320339	80195	24	30	3340004	80195	40	77
3320340	80195	24	29	3340022	80195	40	56
3320343	80195	24	31	3340023	80195	40	57
3320363	80195	24	28	3340024	80195	40	59
3320368	80195	24	21	3340025	80195	40	65
3320393	80195	13	18	3340026	80195	40	50
3320611	80195	13	6	3340026	80195	40	64
3320686	80195	4	2	3340026	80195	41	26
3320687	80195	4	1	3340027	80195	40	51
3320714	80195	30	4	3340027	80195	40	63
3320812	80195	16	13	3340027	80195	41	25
3320813	80195	16	15	3340028	80195	40	47
3320815	80195	13	25	3340028	80195	40	60
3320816	80195	13	31	3340028	80195	41	20
3320819	80195	13	33	3340029	80195	40	49
3320821	80195	13	38	3340029	80195	40	62
3320822	80195	13	27	3340029	80195	41	23
3320849	80195	40	9	3340033	80195	40	83
3320850	80195	40	11	3340040	80195	7	16
3320861	80195	14	8	3340040	80195	40	78
3320862	80195	14	20	3340041	80195	41	43
3320862	80195	14	52	3340045	80195	40	22
3320863	80195	14	15	3340045	80195	40	58
3320863	80195	14	43	3340046	80195	40	48
3320871	80195	14	36	3340046	80195	40	61
3320871	80195	14	56	3340046	80195	41	21
3320881	80195	14	12	3340048	80195	40	37
3320882	80195	14	31	3340074	80195	40	39
3320882	80195	14	47	3340135	80195	41	53
3320889	80195	14	28	3340136	80195	41	2
3320892	80195	24	24	3340158	80195	40	42
3320893	80195	14	27	3340171	80195	41	28
3320934	80195	30	1	3340199	80195	40	46
3320976	80195	45	6	3340210	80195	41	46
3320983	80195	45	17	3340211	80195	41	52
3321014	80195	12	8	3340219	80195	41	51
3321017	80195	12	15	3340220	80195	41	50
3330029	80195	40	26	3340231	80195	40	52
3330030	80195	40	79	3340267	80195	29	29
3330031	80195	28	1	3340271	80195	29	8
3330032	80195	28	3	3340272	80195	29	13
3330033	80195	28	2	3340275	80195	29	12
3330034	80195	28	14	3340277	80195	29	10
3330035	80195	28	13	3340279	80195	29	9
3330036	80195	28	11	3340281	80195	29	6
3330037	80195	28	9	3340283	80195	29	28

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
3340286	80195	29	2	3350270	80195	5	80
3340287	80195	29	7	3350272	80195	5	3
3340289	80195	29	14	3350294	80195	38	37
3340293	80195	29	16	3350296	80195	41	22
3340294	80195	29	27	3350301	80195	5	81
3340298	80195	29	11	3350316	80195	38	42
3340300	80195	29	15	3350316	80195	38	99
3340305	80195	29	26	3350316	80195	38	153
3340307	80195	29	24	3350318	80195	38	104
3340308	80195	29	23	3350319	80195	38	103
3340378	80195	40	36	3350324	80195	38	39
3340381	80195	40	35	3350324	80195	38	84
3340385	80195	40	19	3350324	80195	38	142
3340386	80195	40	88	3350325	80195	38	105
3340405	80195	40	67	3350326	80195	41	55
3340411	80195	40	71	3350329	80195	41	12
3340423	80195	40	24	3350331	80195	38	10
3340429	80195	40	29	3350332	80195	38	9
3340432	80195	40	27	3350337	80195	41	17
3340433	80195	40	28	3350338	80195	41	15
3340491	80195	40	5	3350340	80195	5	75
3340575	80195	40	21	3350347	80195	5	74
3340582	80195	40	18	3350393	80195	38	93
3340609	80195	40	16	3350396	80195	38	97
3340618	80195	40	32	3350398	80195	38	90
3340620	80195	40	31	3350399	80195	38	86
3340645	80195	29	1	3350403	80195	38	87
3340664	80195	41	24	3350404	80195	38	91
3340666	80195	41	19	3350406	80195	38	88
3340671	80195	40	68	3350453	80195	38	109
3340671	80195	41	39	3350453	80195	38	121
3340823	80195	40	70	3350454	80195	38	108
3340867	80195	40	84	3350454	80195	38	120
3340979	80195	41	47	3350489	80195	38	126
3340992	80195	41	48	3350490	80195	38	125
3341019	80195	40	41	3350491	80195	38	128
3350007	80195	5	23	3350492	80195	38	127
3350007	80195	5	50	3350493	80195	38	33
3350008	80195	5	48	3350494	80195	5	64
3350009	80195	5	22	3350495	80195	5	69
3350010	80195	5	49	3350497	80195	5	65
3350011	80195	5	30	3350499	80195	5	79
3350045	80195	5	41	3350501	80195	5	70
3350046	80195	5	61	3350502	80195	5	71
3350047	80195	38	15	3350520	80195	38	19
3350053	80195	5	13	3350553	80195	38	59
3350055	80195	5	16	3350560	80195	38	69
3350058	80195	41	5	3350561	80195	38	68
3350059	80195	41	11	3350563	80195	38	73
3350062	80195	41	6	3350564	80195	38	74
3350063	80195	41	54	3350567	80195	38	49
3350064	80195	5	31	3350567	80195	38	137
3350131	80195	38	25	3350572	80195	38	115
3350135	80195	38	14	3350573	80195	38	116
3350138	80195	38	11	3350579	80195	38	43
3350155	80195	38	76	3350579	80195	38	100
3350157	80195	38	80	3350579	80195	38	134
3350159	80195	38	78	3350580	80195	38	1
3350160	80195	38	77	3350583	80195	38	71
3350169	80195	38	65	3350641	80195	38	85
3350177	80195	38	67	3350704	80195	38	118
3350178	80195	38	66	3350708	80195	38	47
3350182	80195	38	81	3350708	80195	38	72
3350183	80195	38	63	3350708	80195	38	149
3350186	80195	38	7	3350795	80195	5	76
3350192	80195	38	8	3350855	80195	39	9
3350195	80195	38	62	3350881	80195	5	47
3350204	80195	38	139	3350885	80195	5	44
3350205	80195	38	138	3350887	80195	5	45
3350225	80195	38	36	3350901	80195	5	19
3350225	80195	38	141	3350903	80195	5	40
3350226	80195	38	51	3350904	80195	5	43
3350226	80195	38	140	3350906	80195	39	49
3350228	80195	38	70	3350908	80195	5	42
3350246	80195	38	53	3350917	80195	39	34
3350261	80195	38	64	3350919	80195	39	36
3350262	80195	38	53	3351009	80195	38	114
3350264	80195	38	54	3351009	80195	38	136
3350268	80195	5	36	3351011	80195	8	6
3350269	80195	5	39	3351059	80195	5	1

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
3351067	80195	39	48	3360437	80195	19	13
3351134	80195	5	35	3360438	80195	19	14
3351169	80195	40	8	3360439	80195	19	15
3351171	80195	40	12	3360474	80195	39	26
3351173	80195	5	73	3360508	80195	19	23
3351178	80195	40	14	3360550	80195	21	13
3351186	80195	41	10	3360552	80195	21	9
3351241	80195	38	101	3360554	80195	21	12
3351243	80195	41	13	3360556	80195	21	10
3351244	80195	38	132	3360561	80195	21	11
3351245	80195	38	131	3360564	80195	21	8
3351250	80195	38	32	3360569	80195	18	24
3351251	80195	38	34	3360569	80195	18	67
3351252	80195	38	35	3360570	80195	18	27
3351253	80195	38	130	3360570	80195	18	70
3351254	80195	38	129	3360573	80195	18	10
3351257	80195	5	11	3360574	80195	18	82
3351293	80195	39	29	3360594	80195	19	12
3351299	80195	39	45	3360615	80195	26	14
3351477	80195	38	52	3360632	80195	25	14
3351480	80195	38	110	3360648	80195	19	21
3351480	80195	38	122	3360656	80195	18	17
3351572	80195	38	107	3360656	80195	18	73
3351572	80195	38	119	3360671	80195	25	30
3351590	80195	39	12	3360672	80195	25	29
3351599	80195	39	10	3360673	80195	22	1
3351606	80195	39	46	3360677	80195	26	34
3351607	80195	39	52	3360680	80195	26	29
3351609	80195	39	19	3360714	80195	17	9
3351617	80195	39	13	3360721	80195	17	8
3351624	80195	39	1	3360722	80195	17	1
3351626	80195	39	32	3360725	80195	17	4
3351684	80195	39	33	3370050	80195	1	46
3351685	80195	39	40	3370087	80195	2	10
3351687	80195	39	35	3380017	80195	8	1
3351694	80195	39	20	3380022	80195	8	4
3351696	80195	39	27	3380024	80195	8	2
3360008	80195	23	5	3380042	80195	41	42
3360036	80195	40	1	3380059	80195	40	55
3360103	80195	19	5	3380062	80195	41	53
3360104	80195	19	10	3380074	80195	7	40
3360169	80195	40	4	3380103	80195	40	15
3360173	80195	39	25	338011	80195	40	89
3360174	80195	39	21	3380112	80195	6	54
3360175	80195	39	23	3380134	80195	35	45
3360176	80195	39	24	3380125	80195	35	10
3360184	80195	26	5	3380136	80195	35	8
3360185	80195	26	7	3380140	80195	35	4
3360186	80195	26	20	3380194	80195	35	2
3360187	80195	26	17	3380218	80195	35	1
3360188	80195	26	29	3380386	80195	41	37
3360189	80195	26	12	3380388	80195	40	80
3360190	80195	26	25	3380392	80195	8	3
3360192	80195	26	18	3388389	80195	41	38
3360193	80195	26	13	3390001	80195	40	74
3360194	80195	26	24	3390058	80195	6	28
3360195	80195	26	21	3390061	80195	6	51
3360199	80195	26	22	3390063	80195	6	52
3360202	80195	26	27	3390095	80195	43	31
3360204	80195	26	16	3390149	80195	6	47
3360210	80195	26	2	3390151	80195	1	13
3360215	80195	26	4	3390167	80195	6	56
3360264	80195	25	43	3390533	80195	9	10
3360281	80195	25	10	3390534	80195	9	9
3360282	80195	25	1	3390535	80195	9	5
3360284	80195	25	41	3390536	80195	9	7
3360304	80195	16	16	3390537	80195	9	4
3360304	80195	25	23	3390539	80195	9	8
3360312	80195	25	16	3390562	80195	35	11
3360315	80195	25	19	3390589	80195	42	1
3360317	80195	24	20	345	05735	20	6
3360344	80195	25	7	3561027	80195	9	3
3360347	80195	25	9	3561028	80195	9	2
3360348	80195	25	2	3561029	80195	9	1
3360363	80195	25	22	3561030	80195	9	6
3360377	80195	26	1	36154	64294	44	7
3360397	80195	20	4	36163-1	64294	44	9
3360399	80195	20	2	36172-12	64294	44	12
3360405	80195	20	8	36180-19	64294	44	13
3360436	80195	19	24	37417-12	64294	44	11

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
37606-4	64294	44	23	6100068	80195	25	40
38027	64294	44	19	6100068	80195	40	87
38028	64294	44	18	6100069	80195	29	20
39534	99218	44	25	6100090	80195	40	3
39535	64294	44	24	6100232	80195	39	41
39536	64294	44	2	6100233	80195	38	117
39537	99218	44	4	6100235	80195	34	23
39538	64294	44	3	6200047	80195	45	23
39607-1	64294	44	14	6200106	80195	41	4
4-X-11	40342	21	29	6200120	80195	42	15
4-X-2392	40342	21	25	6200179	80195	18	86
40099-2	04638	13	46	62021	80195	1	27
428271	24617	6	7	6309099-48IN	80195	45	16
428694	24617	5	51	6400047	80195	13	10
428694	24617	10	90	6425001	80195	26	8
436695	24617	19	17	6425006	80195	26	11
436695	24617	25	3	6440018	80195	29	21
436695	24617	26	19	6440165	80195	12	12
436730	24617	33	40	6450357	80195	23	1
436748	24617	13	35	6460047	80195	25	13
436750	24617	28	4	6460061	80195	24	16
447835	24617	1	6	6500034	80195	6	2
447835	24617	24	15	6500039	72100	16	5
45K4193	02892	10	101	6500041	05073	36	1
45217-4	62494	44	5	660-A	98738	25	12
45401	62494	44	21	6600040	80195	19	25
455105	24617	39	43	6600152	80195	7	17
455523	24617	4	7	6600154	80195	45	26
48000	64294	44	8	6600162	80195	23	3
50272	99588	1	21	6600168	80195	27	2
51-9001-01	99588	1	28	6600194	80195	18	94
51-9115-01	99588	1	23	6600197	80195	34	34
51-9115-01	95588	1	37	6600204	80195	33	10
51-9142-01	99588	1	30	6600205	80195	33	21
5160-98	70788	38	18	6600208	80195	40	33
5304	03990	20	21	6600210	80195	40	38
5305	03990	20	11	6600231	80195	14	50
5312	03990	20	12	6600233	80195	14	51
5808-060	03990	20	14	6600236	80195	14	1
5810-060	03990	20	20	6600248	80195	7	20
5913	03990	20	18	6600249	80195	7	13
6 LOLA	24161	BULK	BULK	6600250	80195	7	19
6FC54	34623	19	3	6600251	80195	7	14
6000005	80195	39	44	6600252	80195	7	8
6000005	80195	39	47	6600258	80195	41	8
6000011	80195	5	2	6600259	80195	41	9
6000100	80195	17	12	6600271	80195	7	2
6000100	80195	19	4	6600271-1	80195	7	3
6000103	80195	19	6	6600271-2	80195	7	5
6000103	80195	17	7	6600273	80195	7	1
6000265	80195	38	26	6600277	80195	7	21
6000290	80195	38	12	6600278	80195	7	6
6000295	80195	40	25	6600279	80195	7	7
6000303	80195	24	26	6600281	80195	7	18
6000367	80195	5	34	6600294	80195	18	37
6000367	80195	5	38	6600299	80195	18	85
6000374	80195	24	5	6600303	80195	18	44
6000398	80195	41	49	6600304	80195	18	95
6000399	80195	38	123	6600305	80195	18	11
6000403	80195	5	32	6600305	80195	18	14
6000403	80195	5	37	6600305	80195	18	18
6000409	80195	13	19	6600305	80195	18	22
6000416	80195	41	35	6600305	80195	18	25
6000423	80195	38	46	6600305	80195	18	28
6000423	80195	38	50	6600305	80195	18	51
6000423	80195	38	150	6600305	80195	18	57
6000465	80195	40	2	6600305	80195	18	65
6000466	80195	29	18	6600305	80195	18	68
6000468	80195	29	17	6600305	80195	18	71
6000550	80195	1	44	6600305	80195	18	74
6000550	80195	4	6	6600305	80195	18	77
6000550	80195	28	12	6600305	80195	18	80
6000571	80195	38	38	6600305	80195	18	83
6000571	80195	38	75	6600305	80195	34	3
6000571	80195	39	11	6600306	80195	18	12
6000573	80195	29	3	6600306	80195	18	15
6000697	80195	38	29	6600306	80195	18	19
6000802	80195	39	39	6600306	80195	18	23
6100015	80195	38	13	6600306	80195	18	26
6100058	80195	38	79	6600306	80195	18	29

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
6600306	80195	18	52	7400042	80195	13	14
6600306	80195	18	54	7410001	80195	7	9
6600306	80195	18	58	7410001-1	80195	7	10
6600306	80195	18	60	7410001-2	80195	33	12
6600306	80195	18	66	7430064	80195	33	38
6600306	80195	18	69	7430065	80195	4	37
6600306	80195	18	72	75	34623	15	6
6600306	80195	18	75	7506-014	02249	32	3
6600306	80195	18	78	7700024	80195	32	13
6600306	80195	18	81	7700025	80195	32	14
6600306	80195	18	84	7700026	80195	32	12
6600306	80195	18	88	7700027	80195	32	8
6600306	80195	18	93	7700028	80195	32	11
6600306	80195	34	2	7700030	80195	32	7
6600306	80195	34	11	7700032	80195	32	9
6600308	80195	29	4	7700035	80195	33	15
6600311	80195	29	22	7700037	80195	33	14
6600313	80195	45	4	7700038	80195	33	17
6600330	80195	24	3	7700039	80195	33	16
6600334	80195	43	17	7700040	80195	27	19
6600335	80195	26	3	7700046	80195	32	4
6600336	80195	26	15	7700047	80195	32	19
6600339	80195	40	69	7700048	80195	32	18
6600340	80195	40	23	7700050	80195	32	4
6600341	80195	40	34	7700056	80195	32	25
6600341	80195	41	3	7700057	80195	32	24
6600538	80195	18	34	7700058	80195	32	23
6600764	80195	18	43	7700060	80195	32	33
6600829	80195	18	31	7700062	80195	32	20
6600831	80195	18	5	7700065	80195	33	2
6600832	80195	18	32	7700067	80195	33	18
6600873	80195	27	3	7700068	80195	33	15
6600874	80195	14	7	7700069	80195	32	13
6600921	80195	14	11	7700086	80195	32	3
6600980	80195	14	13A	7700087	80195	32	10
67	80195	1	8	7700089	80195	32	17
6700040	80195	1	7	7700090	80195	32	27
6700041	80195	1	9	7700091	80195	32	26
6700072	80195	17	11	7700092	80195	32	21
6700161	80195	17	6	7700093	80195	33	28
6700162	80195	19	9	7700128	80195	33	41
6700162	73559	17	13	7700128-1	80195	33	11
6700255	80195	17	14	7700129	80195	33	9
6700263	80195	17	15	7700130	80195	29	35
6700306	80195	1	48	78000441	80195	24	38
6700310	80195	19	2	7850010	80195	24	7
6700368	80195	26	30	7850057	80195	24	4
6700390	80195	1	35	7850092	80195	24	2
6700748	80195	26	36	7850094	80195	24	1
6700749	80195	17	5	7850095	80195	44	6
6700749-1	80195	17	19	80717	80195	10	17
6700750	80195	17	10	830003	80195	11	30
6700785	80195	39	14	830003	80195	10	16
6700854	80195	1	14	830017	80195	10	67
675009	34623	18	55	830018	80195	10	63
68080	99588	1	29	830028	80195	11	68
68110	99588	1	22	830028	80195	10	46
68110	99588	1	36	830041	80195	10	7
7016	03990	20	25	830067	64294	10	84
7030029	80195	31	1	830080	02892	10	83
7030034	80195	34	31	830091	02892	10	9
7030034	80195	45	3	830119	02892	10	61
7030036	80195	45	24	830150	90166	10	29
7030038	80195	45	5	830150	90166	11	23
7030045	80195	45	1	830219	02892	11	39
7220028	80195	7	4	830230	02892	11	8
7220028	80195	7	11	830231	02892	10	49
7220036	80195	40	20	830231	02892	11	4
7220036	80195	40	43	830245	02892	10	39
7230079	80195	41	32	840021	02892	10	45
7230112	80195	38	92	840021	02892	11	24
7230115	80195	38	27	840022	02892	10	44
7230116	80195	38	28	840022	02892	11	25
7230118	80195	38	20	840023	02892	10	43
7230124	80195	38	21	840023	90166	11	26
7230125	80195	38	22	840024	02892	10	24
7230126	80195	38	23	840029	90166	10	28
7230127	80195	38	24	840031	02892	10	27
7230153	80195	18	87	840035	02892	10	19
7230153	80195	18	92	840035	02892	11	33

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
840036	02892	10	58	870264	02892	11	36
840037	02892	10	56	870305	02892	10	15
840037	90166	11	30	870306	02892	10	16
840037	90166	11	59	870307	02892	10	17
840038	90166	10	11	870308	02892	10	18
840058	02892	10	65	870480	02892	10	3
840059	02892	10	86	870480	02892	10	88
840063	02892	10	21	870480	02892	11	3
840073	02892	10	22	870492	02892	10	55
840073	02892	11	29	870492	02892	11	7
840087	02892	10	89	870561	02892	10	76
840088	02892	10	60	870563	02892	11	56
840120	02892	10	4	870642	02892	10	47
840125	02892	10	72	870642	90166	11	14
840134	90166	11	32	870647	02892	10	41
840138	02892	11	58	870648	02892	10	14
840140	02892	10	70	870648	90166	11	41
840146	02892	11	38	870653	02892	11	44
840485	02892	10	5	870705	02892	10	71
840245	02892	11	35	870709	02892	10	79
840288	02892	10	80	871010	02892	11	53
840297	90166	10	81	871011	02892	10	66
840298	02892	10	78	871011	02892	10	82
840299	02892	10	74	871012	02892	11	37
840304	02892	10	77	871014	02892	11	51
840419	02892	10	73	871054	02892	10	10
840756	02892	10	26	871114	02892	10	57
840811	02892	11	49	871114	02892	11	31
840975	02892	11	47	871133	02892	10	75
841113	90166	11	40	871140	02892	10	12
841163	02892	10	35	871140	02892	11	43
841163	02892	11	21	871146	02892	11	45
841180	02892	11	57	871158	02892	10	23
841188	02892	11	28	871231	02892	10	6
841190	02892	11	11	872305	02892	11	48
841225	02892	10	31	872495	90166	11	34
841225	90166	11	17	872675	90166	11	61
841226	02892	10	32	872732	02892	11	54
841226	02892	11	15	872734	02892	11	6
841247	02892	10	52	875163	02892	11	10
841248	02892	10	38	875243	02892	10	48
841255	90166	11	50	875243	02892	11	13
841277	02892	10	54	875261	02892	10	53
841278	02892	11	52	89014	61349	15	5
841279	02892	11	55	892629	02892	10	59
841321	02892	11	18	895001/892578	33781	10	1
850060	02892	10	37	896003-50	33781	111	1
850060	02892	11	19	90012	81834	1	40
850061	02892	10	35	90012	99588	1	25
850061	02892	11	20	90221	81834	1	32
870045	02892	10	40	90321	99588	1	39
870045	02892	11	9	9250128	80195	33	25
870092	02892	10	8	9250128	80195	33	26
870100	02892	10	85	9250304	80195	13	11
870101	02892	10	13	9410205	24617	14	4
870101	90166	11	42	9410977	24617	14	26
870102	02892	10	46	9410979	24617	14	24
870102	90166	11	12	9411727	24617	39	37
870103	02892	10	42	9413946	24617	13	34
870103	02892	11	27	9413946	80195	33	3
870106	02892	10	50	9416136	24617	2	2
870106	90166	11	5	9418871	24617	35	7
870115	02892	10	69	9418936	24617	4	5
870140	02892	10	87	9418936	24617	6	10
870150	02892	10	51	9418981	24617	20	7
870150	02892	11	2	9418981	24617	21	7
870151	90166	11	22	9422787	24617	13	12
870160	02892	10	25	9426105	24617	26	32
870160	02892	10	64	9426110	24617	19	16
870181	02892	10	34	9426110	24617	45	21
870194	02892	10	33	9426110	80195	33	7
870210	90166	11	60	9426110	80195	33	30
870220	02892	10	2	9426113	80195	34	21
870230	02892	10	62	9426128	24617	26	23
870264	02892	10	20	95-16	03990	20	23

APPENDIX D

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. Scope.

This appendix lists expendable supplies and materials you will need to operate and maintain the Concrete Mobile Mixer. These items are authorized to you by CTA 5-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. Explanation of Columns.

a. Column 1- Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2- Level. This column identifies the lowest level of maintenance that requires the listed item.

c. Column 3- National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.

d. Column 4- Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5- Unit of Measure (U/M). indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) (U/M)
1	F, H		Grease, Automotive Artillery, GAA (MIL-G-10924C)	
		9150-00-015-0029	2-1/4-oz tube	OZ
		9150-00-935-1017	1/4-oz cartridge	OZ
		9150-00-190-0904	1-lb can	LB
		9150-00-190-0905	5-lb can	LB
		9150-00-190-0907	35-lb can	LB
2	F, H		Oil, Lubricating, Exposed Gear, CW VV-L-751)	
		9150-00-234-5197	5-lb can	LB
		9150-00-261-7891	35-lb pail	LB
3	F , H		Oil, Lubricating, OC/HDO-10 (MIL-L-2104C)	
		9150-00-265-9425	1-qt can	QT
		9150-00-265-9428	5-gal drum	GAL
		9150-00-265-9429	55-qal drum, 16 ga.	GAL
		9150-00-265-9430	55-gal drum, 18 ga.	GAL
4	F, H		Oil, Lubricating, OE/HDO-30 (MIL-L-2104C)	
		9150-00-265-9433	1-qt can	QT
		9150-00-265-9435	5-gal drum	GAL
		9150-00-265-9436	55-gal drum, 16 ga.	GAL
		9150-00-265-9437	55-gal drum, 18 ga.	GAL
5	F, H		Oil, Lubricating, OE/HDO-50 MIL-L-2104C)	
		9150-00-265-9440	1-qt can	QT
		9150-00-265-9442	5-gal drum	GAL
		9150-00-265-9441	55-gal drum, 16 ga.	GAL
6	F, H		Fluid, Hydraulic Type A, Transmission	
		9150-00-657-4959		
7	F, H		Oil, Lubricating, Sub-Zero OEA (MIL-L-46167)	
		9150-00-402-4478	1-qt can	QT
		9150-00-402-2372	5-gal can	GAL
		9150-00-491-7197	55-qal drum	GAL
8	F, H		Lubricant, Gear, Universal (MIL-L-2105C)	
9	O,F,H		Loctite Pipe Sealant, Tube	

APPENDIX E

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section I. INTRODUCTION

E-1. General. This appendix contains all the information you need to assemble, manufacture or fabricate the items that appear in this manual's RPSTL (Appendix C) that are source coded MO or MF; that is, the items authorized to be manufactured by organizational or direct support maintenance personnel.

E-2. Contents.

a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at organizational or direct support maintenance.

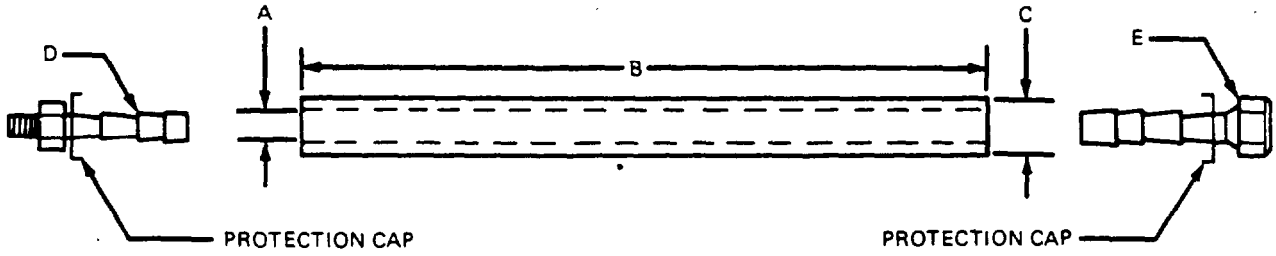
b. A part number index in alphanumeric order is provided for cross referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

c. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Section II. PART NUMBER INDEX

Part Number	Fig. No.	Part Number	Fig. No.
MA207-22743	E-2	MA207-22971	E-2
MA207-22744	E-2	MA207-22972	E-2
MA207-22745	E-2	MA207-22973	E-2
MA207-22913	E-1	MA207-22974	E-1
MA207-22914	E-1	3360569	E-1
MA207-22915	E-1	3360570	E-1
MA207-22916	E-1	3360573	E-1
MA207-22917	E-1	3360574	E-1
MA207-22918	E-1	3360656	E-1
MA207-22970	E-2	7230153	E-1

Section III. ILLUSTRATED MANUFACTURING INSTRUCTIONS



Hose Assembly Number	Manufacture From P/N (FSCM)	Dimension A Inches (mm)	Dimension B Inches (mm)	Dimension C Inches (mm)	Connector D P/N (FSCM)	Connector E P/N (FSCM)
MA207-22913	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	28.00 (711.2)	.61 (15.5)	6600305 (80195)	6600306 (80195)
MA207-22914	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	72.00 (1905.0)	.61 (15.5)	6600306 (80195)	6600306 (80195)
MA207-22915	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	24.00 (609.6)	.61 (15.5)	6600305 (80195)	6600306 (80195)
MA207-22916	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	13.00 (330.2)	.61 (15.5)	6600305 (80195)	6600306 (80195)
MA207-22917	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	31.00 (787.4)	.61 (15.5)	6600305 (80195)	6600306 (80195)
MA207-22918	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	40.00 (1016.0)	.61 (15.5)	6600305 (80195)	6600306 (80195)
MA207-22974	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	40.00 (1016.0)	.61 (15.5)	6600306 (80195)	6600306 (80195)
3360569	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	42.00 (1016.0)	.61 (15.5)	6600305 (80195)	6600306 (80195)
3360570	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	48.00 (1219.2)	.61 (15.5)	6600305 (80195)	6600306 (80195)
3360573	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	21.00 (533.4)	.61 (15.5)	6600305 (80195)	6600306 (80195)
3360574	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	12.00 (304.8)	.61 (15.5)	6600305 (80195)	6600306 (80195)
3360656	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	46.00 (1168.4)	.61 (15.5)	6600305 (80195)	6600306 (80195)
7230153	6 LOLA MESA ZG-11C (24161)	.375 (9.525)	120.00 (3048.0)	.61 (15.5)	6600306 (80195)	6600306 (80195)

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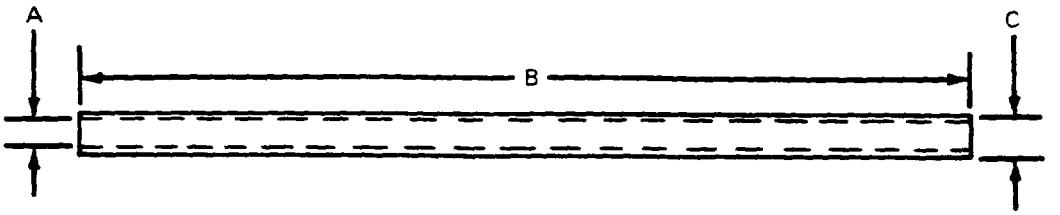
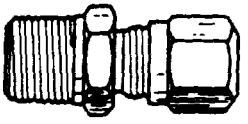
NOTES:

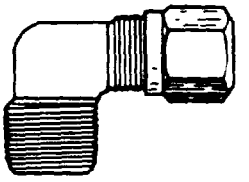
1. The connectors shown are for reference purposes only. In some instances, the same connector will be used on both ends of the hose.
2. Insert the connectors into the hose ends until the hose makes contact with the protection cap on the connector.

Figure E-1. Hose Assemblies

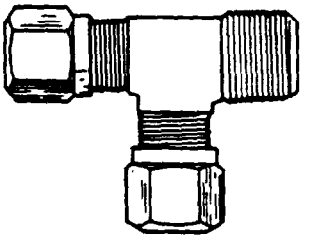




MALE CONNECTOR



MALE ELBOW



MALE RUN TEE

Nylon Tubing No.	Manufacture From NSN	Dimension A Inches (mm)	Dimension B Inches (mm)	Dimension C Inches (mm)	Male Connector P/N (FSCM)	Male Elbow P/N (FSCM)	Male Run Tee P/N (FSCM)
MA207-22743	4720-01-040-0591	.25 (6.35)	11.00 (279.4)	.375 (9.525)	6600831 (80195)	N/A	6600829 (80195)
MA207-22744	4720-01-040-0591	.25 (6.35)	13.00 (330.2)	.375 (9.525)	6000831 (80195)	6600832 (80195)	N/A
MA207-22745	4720-01-040-0591	.25 (6.35)	14.00 (355.6)	.375 (9.525)	6600831 (80195)	6600832 (80195)	N/A
MA207-22970	4720-01-040-0591	.25 (6.35)	3.00 (76.2)	.375 (9.525)	*6600831 (80195)	N/A	N/A
MA207-22971	4720-01-040-0591	.25 (6.35)	12.00 (304.8)	.375 (9.525)	6600831 (80195)	N/A	6600829 (80195)
MA207-22972	4720-01-040-0591	.25 (6.35)	6.00 (152.4)	.375 (9.525)	6600831 (80195)	6600832 (80195)	N/A
MA207-22973	4720-01-040-0591	.25 (6.35)	8.00 (203.2)	.375 (9.525)	N/A	N/A	*6600829 (80195)

*Quantity of two (2) required.

NOTES:

1. Select tubing and cut squarely to specified length.
2. Select the proper end fittings for the tubing.
3. Install fittings on tubing. Do not overtighten.

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Figure E-2. Nylon Tubing and Fittings.

INDEX

INDEX (Continued)

INDEX (Continued)

.U.S. GOVERNMENT PRINTING OFFICE: 1981-750002/1010

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

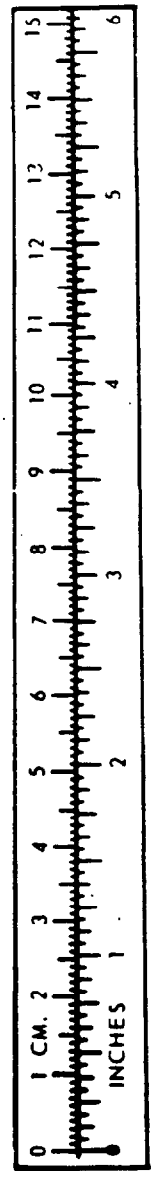
TEMPERATURE

$5/9\,(^0F - 32) = {}^0C$
212^0 Fahrenheit is equivalent to 100^0 Celsius
90^0 Fahrenheit is equivalent to 32.2^0 Celsius
32^0 Fahrenheit is equivalent to 0^0 Celsius
$9/5\,C^0 + 32 = F^0$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



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