

**TECHNICAL MANUAL
ORGANIZATIONAL MAINTENANCE MANUAL**

**CONCRETE-MOBILE®MIXER BODY
M919, MODEL 8CM-24/F
NSN 3895-01-028-4391**

**This copy is a reprint which includes current
pages from Change 1.**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
AUGUST 1980**

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DAFFIN MOBILE PRODUCTS DIV'ISION OF BARBER GREENE COMPANY

(MANUAL PREPARED BY AM GENERAL CORPORATION)

DAAE07-77-C-4211

WARNING AND FIRST AID DATA**WARNING****WET CEMENT AND CONCRETE CAN CAUSE BURNS.****WARNING****CARBON MONOXIDE POISONING CAN BE DEADLY.**

Carbon monoxide is a colorless, odorless, poisonous gas, which, when breathed, deprives the body of oxygen and causes suffocation. Exposure to air contaminated with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, or coma. Permanent brain damage or death can result from severe exposure.

Carbon monoxide occurs in the exhaust fumes of fuel-burning internal combustion engines and can become dangerous under conditions of inadequate ventilation. The following precautions must be observed to insure the safety of personnel:

DO NOT operate the engine of a vehicle in an enclosed area unless it is ADEQUATELY VENTILATED.

DO NOT idle the engine for long periods without maintaining ADEQUATE VENTILATION in the personnel compartments and immediate area.

DO NOT operate any vehicle with inspection plates, cover plates, or engine compartment doors removed unless it is necessary for maintenance purposes.

BE ALERT at all times during vehicle operation for exhaust odors, and exposure symptoms. If either are present, IMMEDIATELY VENTILATE the area. If symptoms persist, remove affected personnel from the area and treat as follows:

Expose to fresh air.

Keep warm.

DO NOT PERMIT EXERCISE.

If necessary, administer artificial respiration.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS ADEQUATE VENTILATION.**WARNING****EXHAUST SYSTEM COMPONENTS CAN CAUSE SEVERE BURNS**

During normal operation the exhaust pipe and muffler can become very hot. Be careful not to touch these components with your bare hands. Do not allow your body to come in contact with the pipe or muffler. Exhaust system components may be hot enough to cause serious burns.

WARNING**AVOID CONTACT WITH WET CONCRETE**

Prolonged contact with wet concrete can cause skin irritation or burns. Skin areas that have been exposed either directly or through saturated clothing should be thoroughly washed with water. If any concrete material gets into the eye, flush immediately with water and GET PROMPT MEDICAL ATTENTION.

WARNING**CEMENT DUST CAN BE HARMFUL**

During loading operations or at any time there is cement dust in the air take precautions to avoid direct inhalation of the dust. If you must be in the immediate vicinity of the dust, wear a dust mask or if none are available, cover your nose and mouth with a cloth. CEMENT DUST CAN CAUSE SERIOUS LUNG PROBLEMS.

WARNING**MOVING MACHINERY IS DANGEROUS**

When working in the area of the belt drives on the main conveyor, the chain drives for the cement and dry admix bins, or the mixing trough auger be extremely careful to avoid contact or catching clothing in moving parts. Serious injury or loss of life can result from entanglement in moving machinery.

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.).

Change 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 30 November 1990

ORGANIZATIONAL MAINTENANCE MANUAL

CONCRETE-MOBILE ® D MIXER BODY
M919, MODEL 8CM-24/F
NSN 3895-01-028-4391

TM 5-3895372-20, 15 August 1980, is changed as follows:

1. Remove old pages and insert new pages.
2. New or changed material is indicated by a vertical bar in the margin and by a vertical bar adjacent to the TA number.

Remove Pages

1 thru 1-2
3-1 and 3-2
3-5 and 3-6
6-45 thru 6-50
7-11 thru 7-18
14-19/(14-20 Blank)
A-1 thru A-3(A-4 Blank)
B-1 thru B-10
Index-1 and Index-2

Insert Pages

i thru 1-2
3-1 and 3-2
3-5 and 3-6
6-45 thru 6-50
7-11 thru 7-18
14-19 thru 14-22
A-1 thru A-3(A-4 Blank)
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3. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

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Chief of Staff

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Distribution:

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ORGANIZATIONAL MAINTENANCE MANUAL

**M919 CONCRETE-MOBILE® MIXER BODY
MODEL 8CM-24/F
NSN 3895-01-0284391**

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, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

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HOW TO USE THIS MANUAL.

This manual contains the following information to help you understand how the Concrete-Mobile mixer body works, how to service it, and how to make authorized repairs.

WHAT THIS MANUAL CONTAINS.

This manual is divided into chapters which provide the following information:

CHAPTER 1 INTRODUCTION.

This chapter contains general information about the Concrete-Mobile mixer body. It also tells you where to find maintenance forms.

CHAPTER 2 PRINCIPLES OF OPERATION.

This chapter contains information on how the vehicle works. It is divided into sections by function: Power train, water system, etc. (see Table of Contents for complete listing).

CHAPTER 3 INTEGRATED MAINTENANCE.

This chapter includes information that applies to all the maintenance chapters that follow (chapters 4 thru 14). It tells:

- a. When to inspect, test, and service the vehicle. Preventive Maintenance Checks and Services)
- b. Where to find the troubleshooting procedures for a specific problem. (Troubleshooting Symptom Index.)

CHAPTER 4 THRU 14 INDIVIDUAL MAINTENANCE CHAPTERS.

These chapters give you the following information:

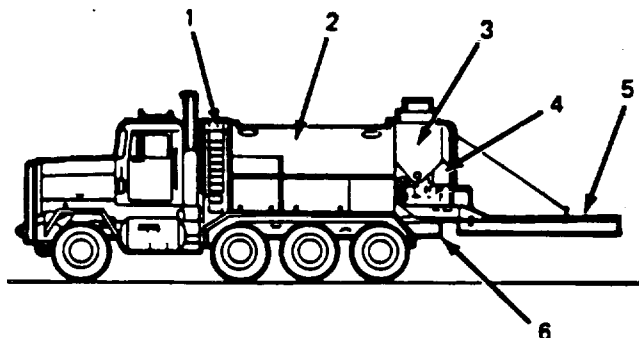
- a. How to find out what's causing a problem (Troubleshooting Procedures).
- b. A list of authorized maintenance procedures (Maintenance Task Summaries).
- c. Detailed procedures for replacing and servicing component parts (Task Procedures). Procedures include a list of special tools that you'll need (if any), materials required and references to other manuals, if needed.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S).

If your mixer 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. Tell us why a procedure is hard to perform. 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.

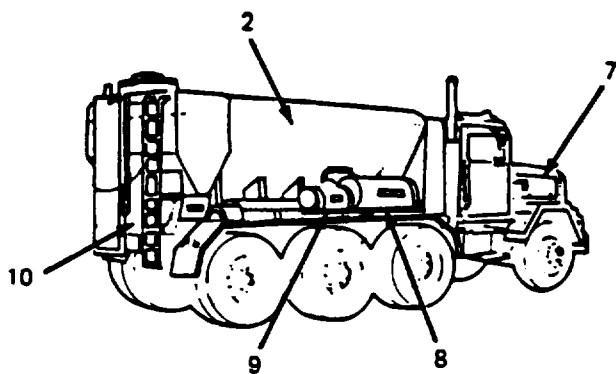
EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE DIGEST (EIR MD) AND EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE SUMMARY (EIR MS).

Maintenance Digest, TB 43-0001-39 series, contains valuable field information on the equipment covered in this manual. The information in the TB 43-0001-39 series is compiled from some of the Equipment Improvement Reports that you prepared on the vehicles covered in this manual. Many of these articles result from comments, suggestions, and improvement recommendations that you submitted to the EIR program. The TB 43-0001-39 series contains information on equipment improvements, minor alterations, proposed Modification Work Orders (MWO's), warranties (if applicable), actions taken on some of your DA Form 2028's (Recommended Changes to Publications), and advance information on proposed changes that may affect this manual. In addition, the more maintenance significant articles, including minor alterations, field-fixes, etc., that have a more permanent and continuing need in the field are republished in the Equipment Improvement Report and Maintenance Summary (EIR MS) for TARCOM Equipment (TM 43-0143). Refer to both of these publications (TB 43-0001-39 series and TM 43-0143) periodically, especially the TB 43-0001-39 series, for the most current and authoritative information on your equipment. The information will help you in doing your job better and will help in keeping you advised of the latest changes to this manual. Also refer to DA Pam 25-30, Consolidated Index of Army Publications and Blank Forms, and Appendix A. 'References', of this manual.



LEGEND:

- 1. WATER TANK
- 2. SAND AND STONE BINS
- 3. CEMENT BIN
- 4. ELECTRIC WINCH
- 5. MIXING TROUGH
- 6. CONTROL AREA
- 7. M919 TRUCK CHASSIS
- 8. HI-FLOW LIQUID ADMIX TANK
- 9. LOW FLOW LIQUID ADMIX TANK
- 10. DRY ADMIX BIN



TA 076156

Major Components of the Concrete-Mobile® Mixer Body.

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CHAPTER 1

INTRODUCTION

1-1. OVERVIEW.

This chapter provides you with the following information:

- a. Forms and record data required for maintenance.
- b. Features and specifications of Concrete-Mobile® mixer body.

Section I GENERAL INFORMATION

1-2 SCOPE.

Type of Manual: Organizational Maintenance.

Model Number and Equipment Name: M919 - Concrete-Mobile Mixer Body.

Purpose of Equipment: Mixes and delivers concrete at a maximum rate of 40 cu ft per minute.

1-3. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by DA Pam 738750.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Requirements and procedures for destruction of army materiel to prevent enemy use are given in TM 750-244-6.

1-5 ADMINISTRATIVE STORAGE.

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

Section II EQUIPMENT DESCRIPTION AND DATA

1-6. PURPOSE, CAPABILITIES, AND FEATURES .

The Concrete-Mobile® mixer body carries water, admixtures, dry aggregates, and cement. It mixes these to make concrete fresh at the jobsite.

Change 1 1-1

1-6. PURPOSE, CAPABILITIES, AND FEATURES (Continued).

Features important for maintenance are:

- a.* Cement stays dry until it enters the mixing trough. There should be no wet concrete inside the mixer body.
- b.* Moving parts are guarded by metal shields. These shields can be removed for maintenance.
- c.* Draincocks are provided for venting air pressure and draining water from Concrete Mobile systems.
- d.* Plastic caps on lube points keep cement dust out of fittings.
- e.* Concrete-Mobile'mixer body is calibrated at the factory. You can easily check calibration if there is doubt about yields (refer to TM 53895372-10).

CHAPTER 2**PRINCIPLES OF OPERATION**

2-1. OVERVIEW.

This chapter explains the functioning of mixer body components you will be maintaining at the Organizational level, and shows how they relate to each other. The explanation is broken down into the following sections:

- a.* Concrete-Mobile Mixer Body (paras 2-2 and 2-3).
- b.* Power Train (paras 2-4 and 2-5).
- c.* Water System (paras 2-6 and 2-7).
- d.* Admix Systems (paras 2-8, 2-9 and 2-10).
- e.* Aggregate Supply System (paras 2-11 and 2-12).
- f.* Cement System (paras 2-13 and 2-14).
- g.* Mixer-Auger System (paras 2-15 and 2-16).
- h.* Hydraulic System (paras 2-17 and 2-18).
- i.* Air System (paras 2-19 and 2-20).
- l.* Electric Winch (paras 2-21 and 2-22).
- k.* Lamps (paras 2-23 and 2-24).

You can find other basic information about the Concrete-Mobile Mixer Body in:

- a.* Appendix D (Schematic Diagrams).
- b.* TM 5-3895-372-10 (Operator's Manual for the M919 Concrete-Mobile® Mixer Body).

Section I CONCRETE-MOBILE MIXER BODY

2-2. INTRODUCTION.

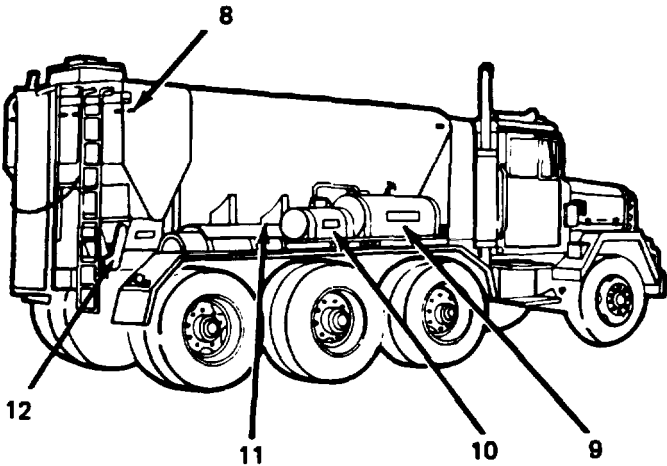
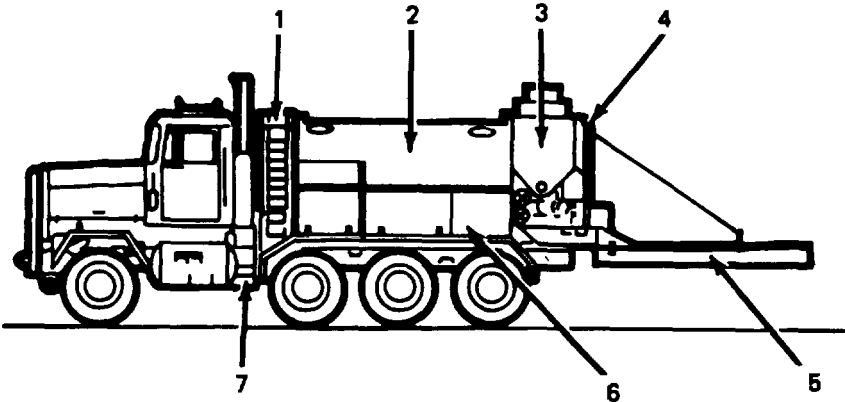
This section identifies the major systems of the Concrete-Mobile Mixer Body (hereafter referred to as the mixer body). It explains the function of each system and how the systems relate to each other.

For a description of the components of each system, see sections II thru XI.

2-3. DESCRIPTION.

1. WATER SYSTEM. (Section III) supplies water for mixing concrete and for washing the
2. AGGREGATE SUPPLY SYSTEM. (Section V) includes bins for carrying sand and stone, controls and gates for proportioning the aggregates, and a conveyor to carry dry materials to
3. CEMENT SYSTEM. (Section VI) stores dry cement, meters it out for concrete production, and registers the amount of cement used.
4. ELECTRIC WINCH. (Section X) raises mixer trough for storage, lowers it for concrete
5. MIXER-AUGER SYSTEM. (Section VII) mixes aggregates, cement, and water to form concrete. During mixing, concrete is carried from conveyor belts to delivery chute at end of
6. HYDRAULIC SYSTEM. (Section VIII) hydraulic pump, driven by belts from power train, turns mixer-auger motor.
7. POWER TRAIN. (Section II) driven by truck engine, through PTO. Provides direct mechanical drive for sand and stone conveyor, cement bin auger and meter, and dry admix auger and meter. Belts from main drive turn water and hydraulic pumps.
8. LAMPS. (Section XI) clearance lamps mark top and sides of mixer body.
9. HI-FLOW LIQUID ADMIX SYSTEM. (Section IV) used for adding relatively large amounts of chemical admixtures to concrete. Air pressure forces admixture from 42 gal (160 l) tank
10. LOW-FLOW LIQUID ADMIX SYSTEM. (Section IV) same as the hi-flow, except tank has smaller capacity (12 gal, 45 l).
11. AIR SYSTEM. (Section IX) pressurized air from chassis air system. Powers vibrators to shake dry materials from bins, and air pads to loosen settled cement. Also supplies pressure to liquid admix systems. Air hose attachment can be used to blow water system dry in cold
12. DRY ADMIX SYSTEM. (Section IV) injects powdered admixtures and colorings into concrete.

2-3. DESCRIPTION (Continued).



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Section II POWER TRAIN

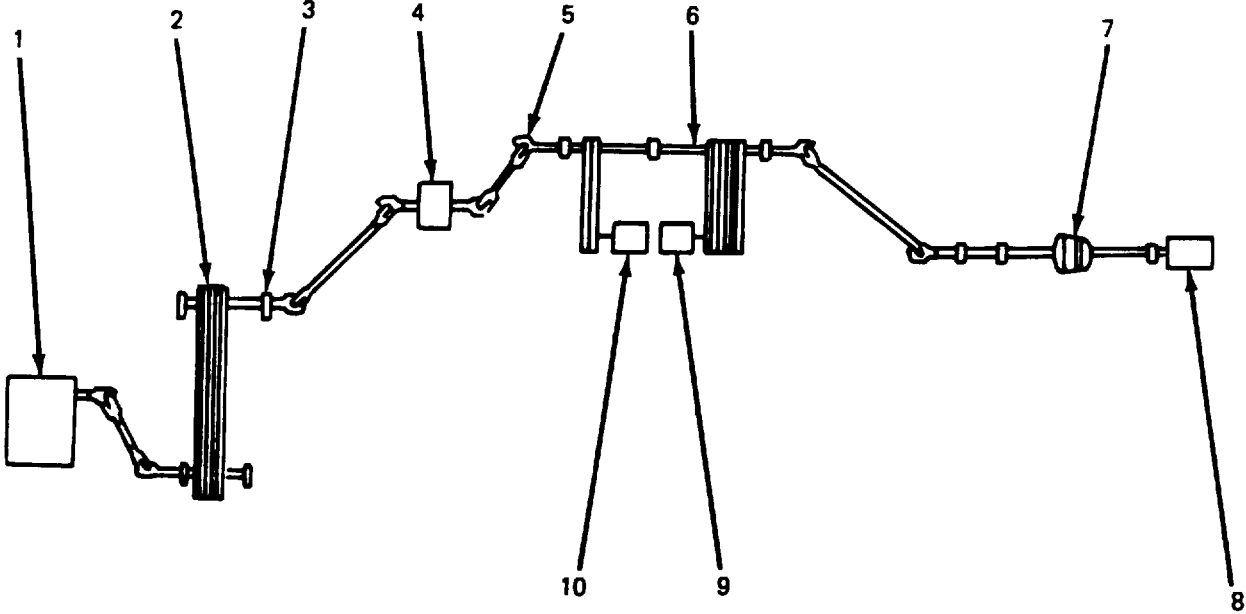
2-4. INTRODUCTION.

The mixer body is mechanically driven by the truck engine. The power train is located on the left side of the unit. It provides power for all mixer body systems except the lamps and the electric winch.

2-5. DESCRIPTION.

1. POWER TAKEOFF (PTO). Supplies engine power to mixer body. When engaged, meshes with transmission gears to turn PTO shaft. (See TM 9-2320273-20).
2. PTO V-BELTS (5). Driven by PTO jackshaft. Turn main drive.
3. BEARINGS BLOCKS (10). Hold PTO jackshaft and main drive in place. Bearings allow shafts to turn freely.
4. REVERSING GEAR BOX. Reverses direction of shaft rotation.
5. UNIVERSAL JOINTS (8). Transmit rotation between two shafts mounted at an angle.
6. MAIN DRIVE. Driven by PTO V-belts. Rotating shaft powers water pump, hydraulic pump, and angle drive gear box.
7. MAIN CLUTCH. When engaged, connects main drive to angle drive gear box. Manually
8. ANGLE DRIVE GEAR BOX. Powered by main drive when main clutch is engaged. Turns sand and stone conveyor belt, cement meter-feeder, and dry admix feeder. Output shaft mounted at right angle to main drive.
9. HYDRAULIC PUMP. Driven by six V-belts from main drive. Powers mixer-auger.
10. WATER PUMP. Driven by two V-belts from main drive. Pumps water for concrete mixing and cleanup.

2-3. DESCRIPTION (Continued).



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Section III WATER SYSTEM

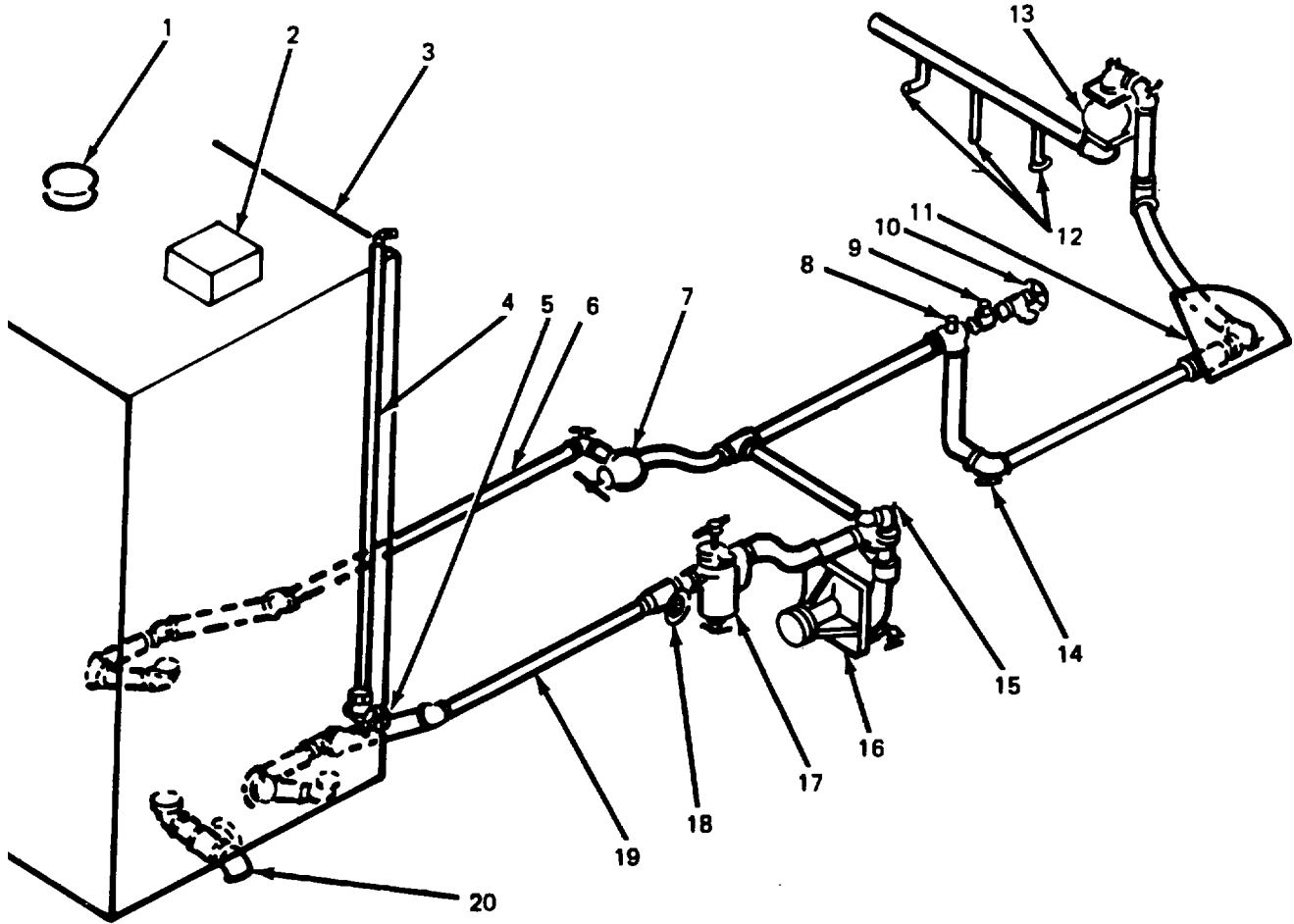
2-6. INTRODUCTION.

The mixer body carries enough water to mix a full load of concrete and clean up afterwards. Pressure should be maintained at 60 psi (414 kPa). The wet admix systems (paras 2-8 and 2-9) are separate from the main system.

2-7. DESCRIPTION.

1. FILLER CAPS. Used when potable water is available.
2. INLET WATER STRAINER. Filters out leaves, stones, and other large particles as water enters tank. Used when water supply is impure.
3. WATER TANK. Holds 400 gal (1514 liters). Carries water for concrete mixing and cleanup. Coated inside with water-repellent paint to prevent leaks and rust.
4. SIGHT GAGE. Allows operator to check tank water level.
5. GAGE VALVE. Used to shut off water supply to gage if gage is broken or being removed.
6. WATER RETURN LINE. Allows water to return from pump through relief valve to tank.
7. PRESSURE RELIEF VALVE. Adjustable valve controls water pressure by regulating flow in return line. Normal pressure is 60 psi (414 kPa).
8. AIR FITTING. Used to blow water out of system to prevent freeze-up.
9. VENT. Used in draining system in cold weather.
10. HOSE VALVE. Controls water flow to washout hose.
11. WATER CONTROL. Controls water flow into mixer trough. Pointer attached to valve handle indicates water flow.
12. SPRAY NOZZLES (3). Spray water into cement and aggregate mixture as it enters mixer trough. Outside nozzles spray at an angle for better mixing action. Admixture solutions are injected into center nozzle.
13. QUICK-OPENING VALVE. Mechanical link to main clutch control automatically opens valve when main clutch is engaged. Allows water from flow control valve to enter spray
14. DRAINCOCKS (8). Located at low points of system. Allow water drainage to prevent freeze-up. Must be opened before compressed air is blown into system.
15. AIR FITTING. Used to blow water out of system to prevent freeze-up.
16. WATER PUMP. Supplies pressure to water system. Belt-driven from main drive.
17. SCREEN STRAINER. Filters water flowing into pump.
18. SHUTOFF VALVE. Controls water flow from tank to pump.
19. WATER SUPPLY LINE. Carries water from tank through shutoff valve to pump.
20. DRAIN VALVE. Opens to allow drainage of water from tank.

2-7. DESCRIPTION (Continued).



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Section IV ADMIX SYSTEMS

2-8. INTRODUCTION.

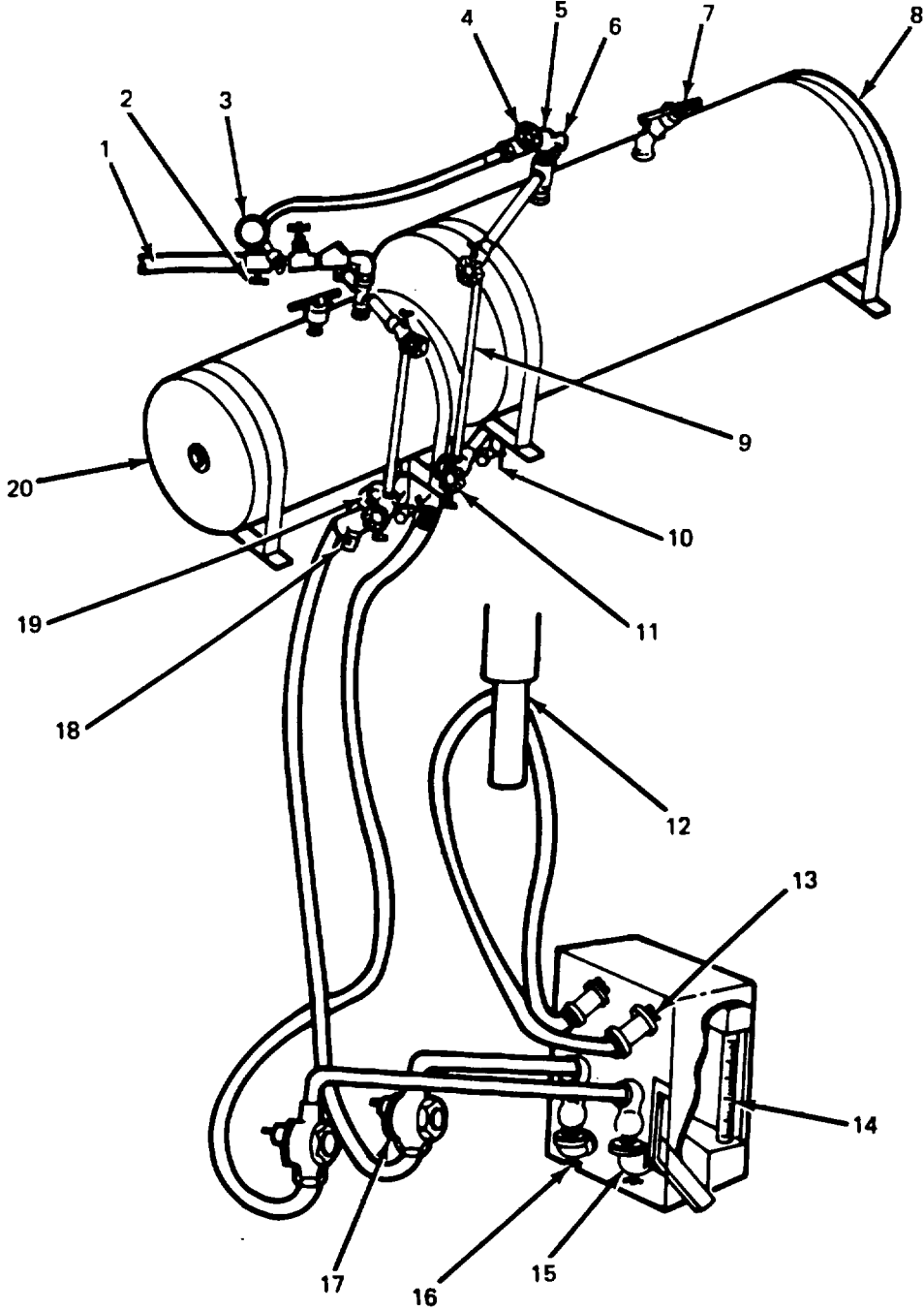
The mixer body has three admix systems for adding chemicals or coloring to concrete. The two liquid admix (exactorate) systems are identical except for the tank capacities. Both tanks are mounted on the right side of the mixer. The liquid admix systems are described in paragraph 2-9.

The dry admix system, mounted on the right rear of the cement bin, adds powdered chemicals and colorings to concrete. It is maintained at the Organizational level.

2-9. DESCRIPTION (LIQUID ADMIX SYSTEMS).

1. AIR SUPPLY LINE. Supplies dry compressed air from mixer body air system.
2. AIR REGULATOR. Controls air pressure to admix systems. Operator turns handle to adjust pressure to 15 psi (103 kPa).
3. AIR PRESSURE GAGE. Indicates air pressure to admix tanks. Normal reading is 141' 15%1 psi (100-109 kPa).
4. AIR GATE VALVES (2). Block air pressure to each admix tank when that system is not in use. Open to admit pressure when admixture is needed.
5. CHECK VALVES (2). One-way valves prevent admixture solutions from backing up into
6. RELIEF VALVES (2). Automatically vent air when pressure exceeds 18-20 psi (124-138 kPa).
7. FILL CAPS (2). Used to fill admix tanks. Vent on each cap allows operator to release pressure before removing cap.
8. HI-FLOW TANK. Pressure-tight tank holds 42 gal (160 liters) of liquid admixture.
9. SIGHT GAGES (2). Show level of liquid in each tank.
10. DRAIN VALVES (2). Allow draining of admixtures from tanks. Also used when pumping admixture under pressure into tanks.
11. GAGE VALVES (4). Close to prevent air and liquid from entering sight gages. Top gage valves have vents for bleeding pressure. Bottom gage valves have draincocks.
12. SPRAY NOZZLE. Inject water and liquid admixture solutions into dry ingredients as they enter mixer-auger trough.
13. VENTS (4). Open to prevent suction blocks when flowmeters and sight gages are drained.
14. FLOWMETERS (2). Floats in calibrated glass tubes indicate admixture flow.
15. CONTROL VALVES (2). Control liquid admixture flow. Adjusted by control levers extending to front of flowmeter assembly.
16. DRAINCOCKS (6). Used to drain admixture solutions from flowmeter assemblies and sight
17. QUICK-ACTING VALVES (2). Allow admixtures to flow from tanks through flowmeter to spray nozzle. Mechanically linked to main clutch, opens automatically when main clutch is
18. STRAINERS (2). Wire screens filter admixtures flowing from tanks to flowmeter assembly.
19. SOLUTION GATE VALVES (2). Control flow of solutions from tanks to flowmeter assembly.
20. LOW-FLOW TANK. Pressure-tight tank holds 12 gal (45 liters) of liquid admixture.

2-9. DESCRIPTION (LIQUID ADMIX SYSTEM) (Continued).

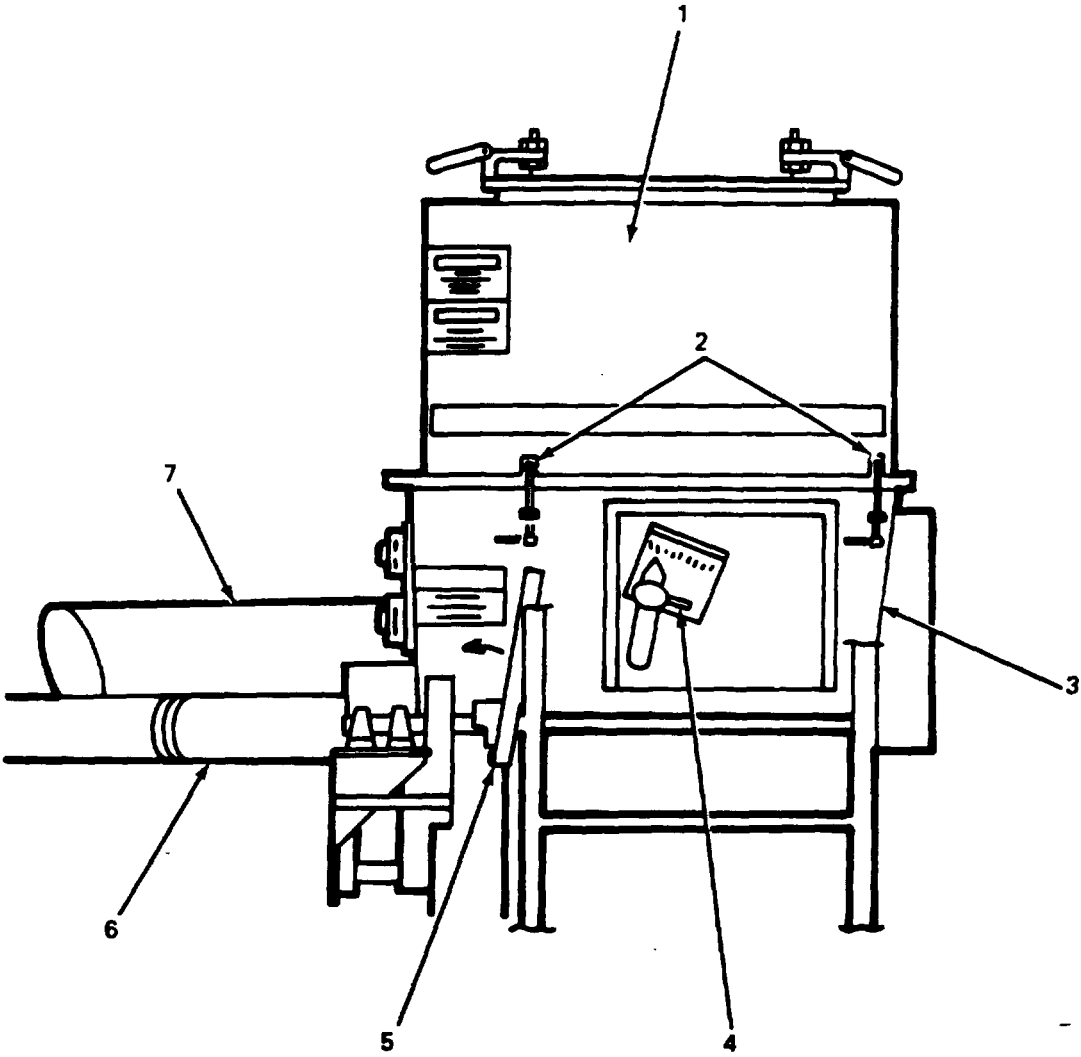


TA 078181

2-10. DRY ADMIX SYSTEM DESCRIPTION.

1. DRY ADMIX BIN. Mounted on rear of cement bin. Powdered admixtures drop from bin into feeder.
2. C-CLAMPS (4). Hold dry admix feeder to bin. Two in front, two in rear.
3. DRY ADMIX FEEDER. Feeder shaft delivers metered amounts of dry admix to main conveyor belt. Entire feeder assembly is removable for cleaning.
4. DRY ADMIX CONTROL. Knob and pointer assembly adjusts amount of admix delivered to main conveyor.
5. DRY ADMIX CLUTCH. Engages dry admix feeder with admix drive shaft. Dog type clutch.
6. ADMIX DRIVE SHAFT. Chain driven from main conveyor shaft. When dog clutch is engaged, powers dry admix feeder shaft and augers in feeder.
7. FEEDER TUBE. Shaft inside tube carries admix to main conveyor.

2-10. DRY ADMIX SYSTEM DESCRIPTION.



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Section V AGGREGATE SUPPLY SYSTEM

2-11. INTRODUCTION.

The aggregate supply system is composed of:

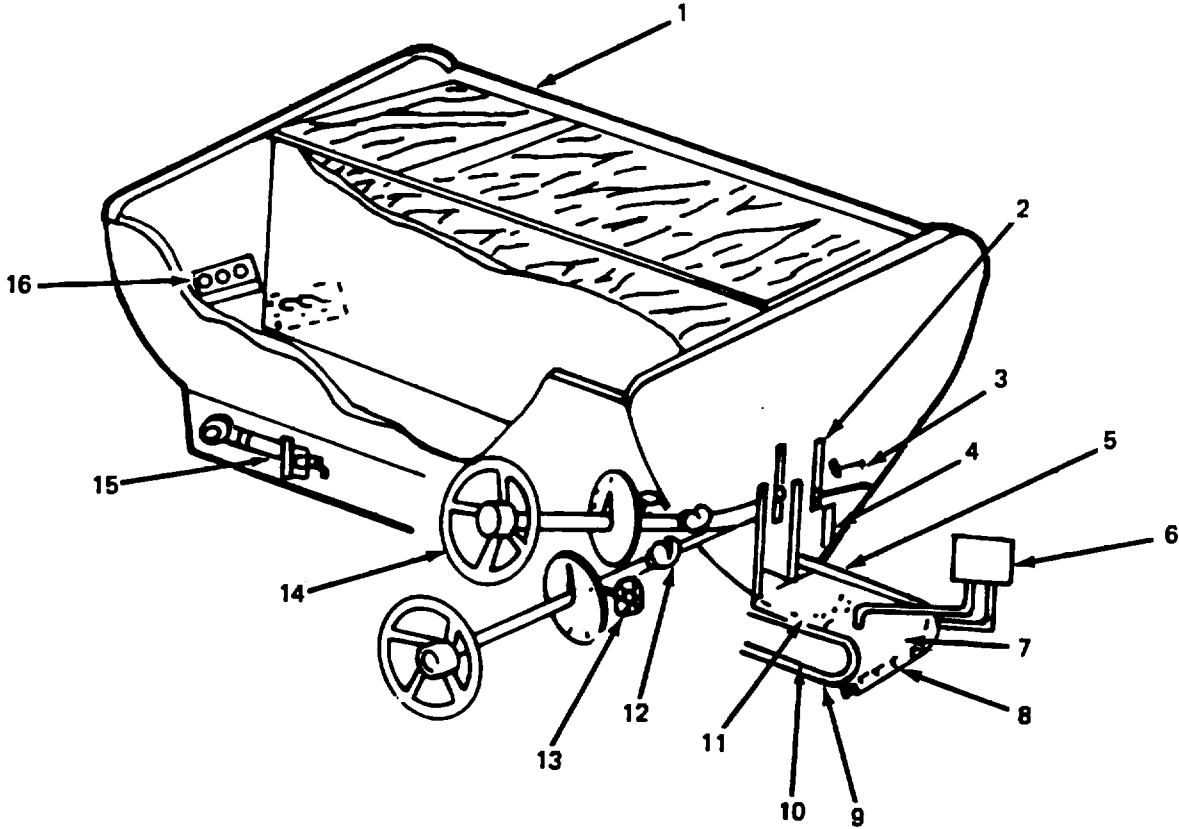
- a. A sand bin (on the left).
- b. A stone bin (on the right).
- c. Gates controlling sand and stone delivery.
- d. A conveyor assembly which carries aggregates to the mixing trough.

Although the bins are called "sand" and "stone" bins, their controls are the same. The vibrators mounted on the bins are described in paragraph 2-20.

2-12. DESCRIPTION.

1. SCREENS (6). Sift sand and stone as they are loaded into the hopper. Keep large lumps and foreign objects out of bins.
2. RACKS (2). Welded to gates on bins. Open and close gates as pinions turn.
3. PINIONS (2). Mesh with racks to raise and lower gates when hand wheels are turned.
4. RUBBER GUIDES (5). Keep sand and stone on belt and prevent mixing between bins. Two on eachside and one in center.
5. METAL GUIDES (2). Keep aggregates and dry cement from falling off belt. (One on each side.)
6. CHAIN OILER. Drips oil onto chains as belt turnms.
7. BELT. Carries sand and stone from bins through gates to mixer trough. Rubber belt is bolted to cross bars.
8. BELT WIPER. Adjustable rubber scraper removes aggregates and cement stuck to belt.
9. SAND DEFLECTOR. Channels sand onto center of belt
10. BELT CHAIN. Used for belt rotation.
11. BELT LACER. Used for adjoining ends of belt
12. UNIVERSAL JOINTS (2). Transmit rotation of handwheel shafts to pinion shafts.
13. STOP SCREWS(2). Hold handwheel shafts at proper setting. Loosen to allow turning of handwheels
14. HANDWHEELS (2). Allow operator-to set gate openings through rack and pinion action. Pointers attached to handwheel shafts indicate settings on dials.
15. BELT TENSIONING DEVICES (2). Hold front sprocket in place. Used to adjust belt tension.
16. FRONT SEALS (2). Prevent aggregates from falling through conveyor belt openings in front of bins.

2-12. DESCRIPTION (Continued).



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Section VI CEMENT SYSTEM

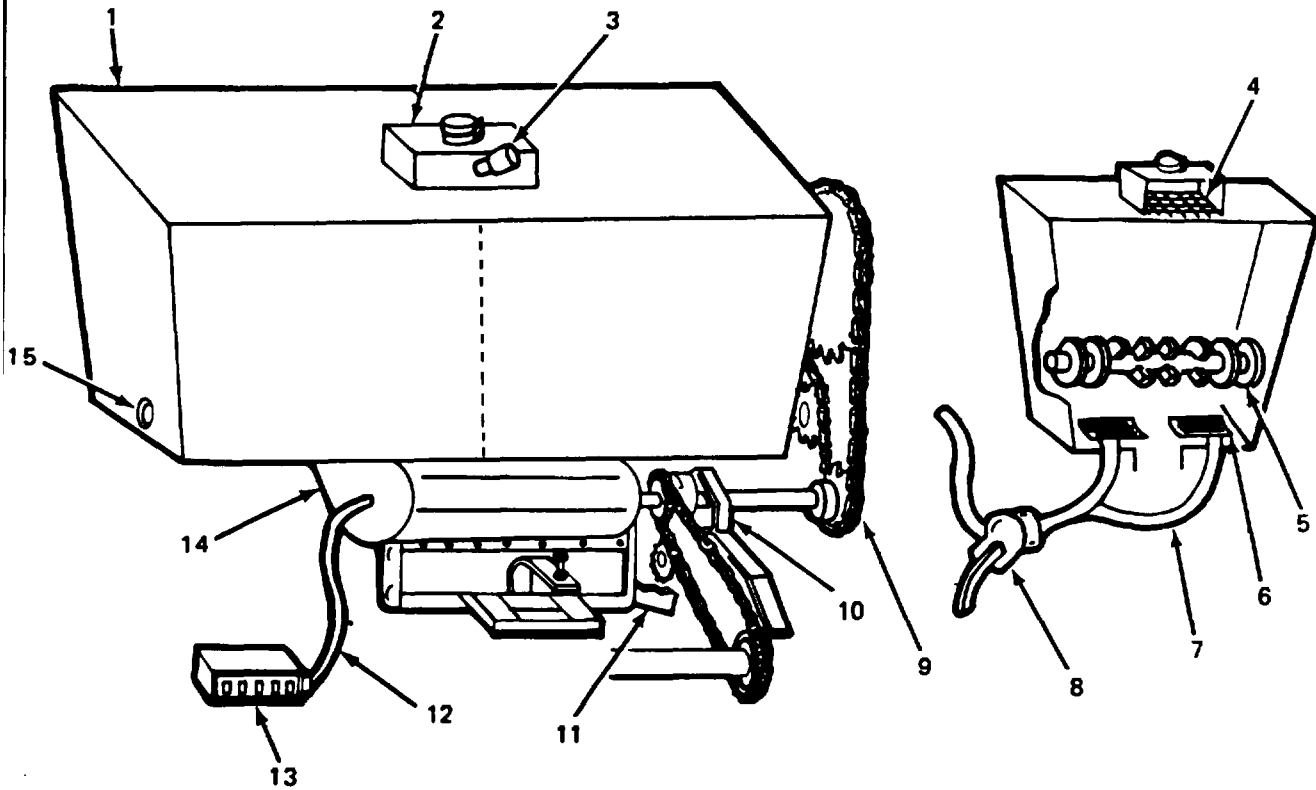
2-13. INTRODUCTION.

The cement system is calibrated to deliver cement at a known, constant rate, while the other ingredients are varied to produce different mixes. For information about the cement bin vibrators, see Section IX.

2-14. DESCRIPTION.

1. CEMENT BIN. Holds 63 cu ft (1.76 m³) of dry cement.
2. QUICK-LOADING HOPPER. Mounted on cement bin top. Small top opening to accept "elephant trunk," removable lid for bulk loading. Lid gasket seals out moisture.
3. VIBRATOR. Shakes screen to sift cement during loading. Powered by compressed air from chassis air reservoirs. Air line equipped with quick-disconnect fitting.
4. SCREEN. Breaks up cement and strains out large lumps during loading. Connected to
5. CEMENT BIN AUGER. Loosens cement and channels it into meter-feeder. Auger blades at ends carry cement to center. Fingers in center break up packed cement. Supported by hardwood bearing block.
6. AIR PADS (2). Loosen settled cement with blasts of air. Air passes through cloth pads held by metal screens.
7. FLUFFER AIR LINES. Carry pressurized air to air pads.
8. FLUFFER CONTROL VALVE. When operated, allows dry air from filter to go to air pads.
9. CEMENT METER DRIVE CHAINS. Driven by sprockets on conveyor drive shaft. Turn cement bin auger and meter feeder. Actuated automatically when main clutch is engaged.
10. CEMENT FEEDER CLUTCH. Normally engaged. When disengaged allows cement meter to be turned independently of sand and stone conveyor. Dog type clutch.
11. SPRING TINE ASSEMBLY. Knocks cement out of meter pockets Spring tension causes hammers on tines to snap against turning meter wheel.
12. METER REGISTER CABLE. Connects meter-register to feeder.
13. METER REGISTER. Shows units of cement delivered. Large resettable readout indicates cement delivered per job. Smaller readout shows total cement delivered.
14. CEMENT METER-FEEDER. Measures and delivers cement from bin to conveyor belt. Cement is carried in pockets of rotating wheel. Exact capacity varies between units, but will be approximately 2.4 cu ft/min (0.067 m³/min).
15. BEARINGS (5). Support cement bin auger and meter-feeder shaft. Allow them to turn freely.

2-14. DESCRIPTION (Continued).



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Section VII MIXER-AUGER SYSTEM

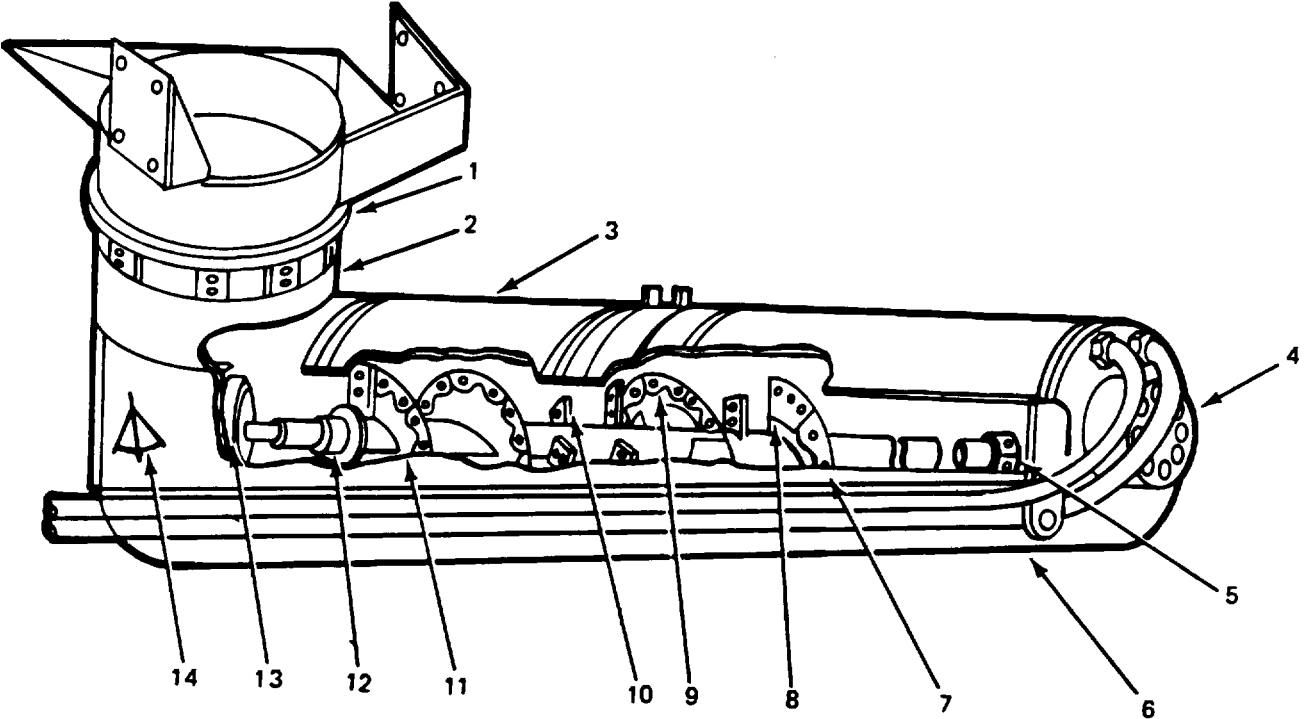
2-15. INTRODUCTION.

The mixer-auger combines the wet and dry ingredients to make concrete. The system consists of a hydraulically-powered auger turning in the mixer trough. (Further information about the hydraulic motor may be found in Section VI II). The assembly is raised and lowered by an electric winch (Section X).

2-16. DESCRIPTION.

1. SWIVEL ASSEMBLY. Supports front of mixer assembly. Fixed frame is bolted to main body. Rotating ring holds trough, allows it to pivot on swivel frame.
2. MINISKIRT. Rubber guard channels concrete ingredients from conveyor into mixing trough.
3. TROUGH COVERS. Prevent splashing and protect personnel from auger. Lift up for access to auger.
4. HYDRAULIC MOTOR. Turns auger. Driven by hydraulic pump.
5. AUGER DRIVE BUSHING. Connects auger core to hydraulic motor.
6. RUBBER BOTTOM. Flexible trough bottom "gives" to prevent auger from breaking on lumps and large stones.
7. TROUGH FRAME. Metal frame supports rubber bottom, hydraulic motor, and auger. Held to swivel ring by a cotter-key and pin assembly. Can be swung left or right to about 85°.
8. BLADES (8). Replaceable blades protect ends of flighting. (Bolted on.)
9. SECTIONAL BLADES (9). Replaceable blades protect flighting edge. (Bolted on.)
10. PADDLES (26). Mix aggregates, cement, water, and admixture to form concrete. A replaceable wear paddle bolts onto each paddle.
11. FLIGHTING. Spiral blades push concrete through mixing trough as auger turns. Welded to auger core. Flighting is reinforced by replaceable blades and sectional blades.
12. MIXING AUGER. Mixes concrete ingredients, carries them to rear of trough. Paddles and flighting are welded onto core of hollow pipe. Pipe has 2 1/8 in. (5.7 cm) outside diameter, 7 ft (2.1 meters) long.
13. BEARING. Supports front end of auger. Allows it to turn freely.
14. INCLINOMETER. Indicates angle of elevation of mixing trough. Auger is normally operated at a 15° - 25° angle.

2-16. DESCRIPTION (Continued).



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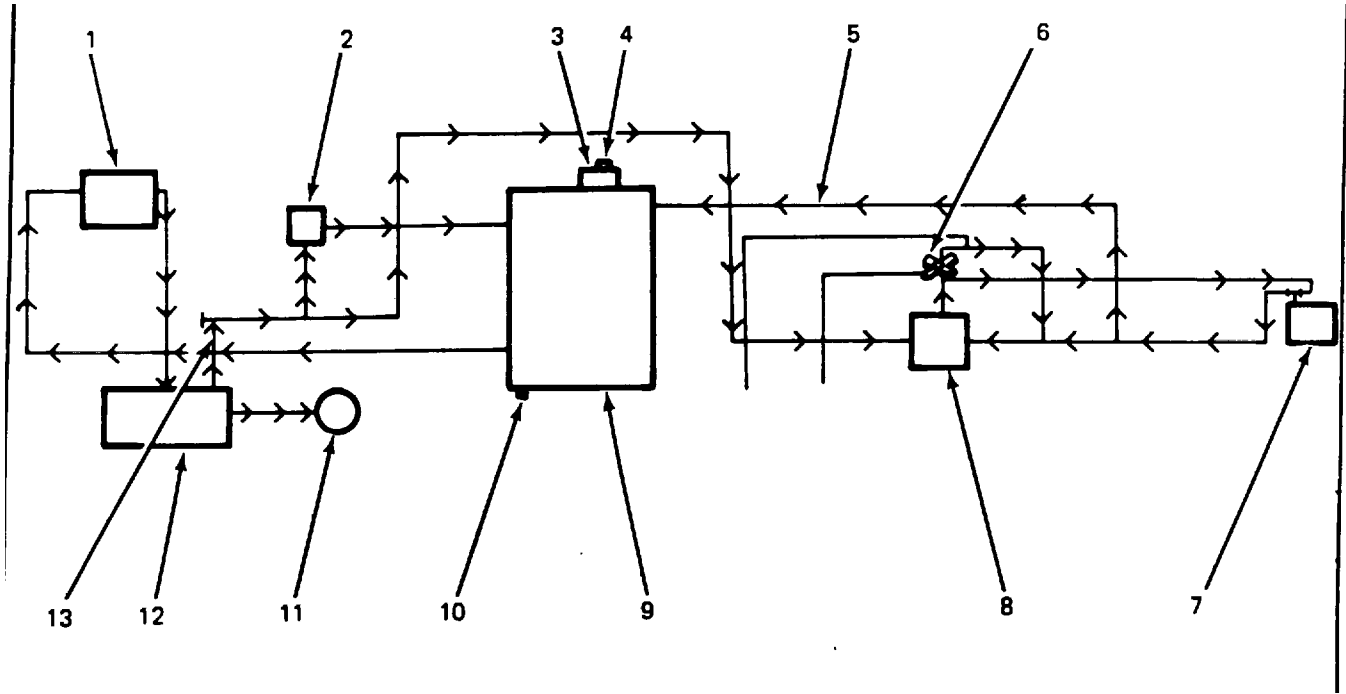
Section VIII HYDRAULIC SYSTEM**2-17. INTRODUCTION.**

The hydraulic system is driven by belts from the main drive (Section II) and provides power for the mixer-auger (Section VII).

2-18. DESCRIPTION.

1. OIL FILTER. Removes impurities from oil entering pump. Throw-away 33 micron paper element.
2. RELIEF VALVE. Adjusted to control pressure in hydraulic system. When pressure rises above 1900-2000 psi (13100-13800 kPa), diverts oil to reservoir instead of control valve.
3. FILLER CAP. Has dipstick for checking reservoir oil level.
4. BREATHER. Allows air and fumes from hot oil to escape.
5. RETURN LINE. Carries oil back to reservoir from control and bypass valves, relief valve, and motor.
6. BYPASS VALVE. (Normally closed). Used to slow mixer-auger during cleanup. When open, allows some oil from motor supply line to escape to reservoir. Color coded bands on stem aid in establishing proper rate of bypass.
7. HYDRAULIC MOTOR. Turns mixer-auger. Driven by oil under pressure from pump.
8. CONTROL VALVE. When lever is pushed forward, oil is blocked from motor and returns to reservoir through return line. When lever is pulled back, return line is blocked. Oil goes to motor and mixer-auger operates.
9. HYDRAULIC RESERVOIR. Holds reserve supply of oil for system. 34 gal (129 liter) capacity.
10. DRAIN PLUG. Used to drain reservoir.
11. TACHOMETER. Indicates hydraulic pump speed. Normal range is 1620-1720 rpm. Driven by cable from center of hydraulic pump pulley.
12. HYDRAULIC PUMP. Supplies pressure to drive hydraulic motor. Driven by six V-belts from main drive. Pump speed depends on truck engine speed. Will vary as main clutch and mixer-auger are engaged.
13. GAGE POINT. (Normally plugged). Plug can be removed and gage inserted to test hydraulic pressure. Pressure should be 1900-2000 psi (13100-13800 kPa). Located so gage can be read while relief valve is adjusted.

2-18. DESCRIPTION (Continued).



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Section IX AIR SYSTEM

2-19. INTRODUCTION.

The mixer body air system draws pressure from the chassis air reservoir. A safety valve at the reservoir cuts off the mixer body air supply if reservoir pressure drops below 65 psi (448 kPa).

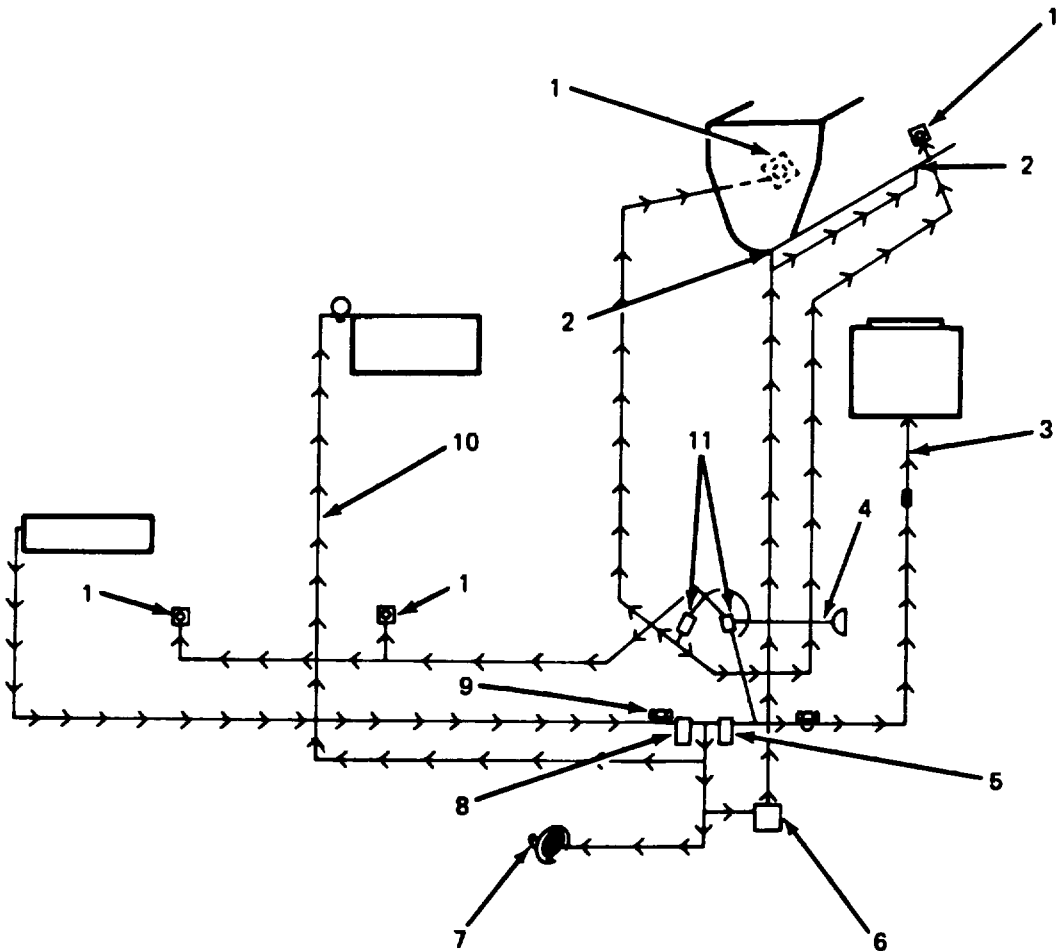
NOTE

The cement screen vibrator is described in para 2-14.

2-20. DESCRIPTION.

1. VIBRATORS (4). Shake the sand and cement bins. Keep aggregates and cement loose; prevent bridging. (Two on each bin.)
2. AIR PADS (2). Loosen settled cement with blasts of air.
3. CEMENT SCREEN VIBRATOR AIR LINE. Carries lubricated air to quick-disconnect fitting for cement screen vibrator (see para 2-14).
4. MANUAL VIBRATOR CONTROL. Allows manual activation of aggregate bin vibrators. Handle connects to rear vibrator air valve.
5. AIR LUBRICATOR. Sprays fine oil mist into vibrator air lines. Should be adjusted to one drop every 3rd vibration.
6. FLUFFER CONTROL VALVE. Manually operated valve controls air supply to air pads. Mounted "upside down" to prevent cement dust from clogging valve.
7. AUXILIARY AIR HOSE. May be used on air fittings of water system to blow moisture out in cold weather.
8. AIR FILTER. Removes moisture from incoming air. Petcock in bottom for draining trapped liquid.
9. GATE VALVE. Controls air flow from chassis reservoir to mixer body air system.
10. LIQUID ADMIX AIR SUPPLY LINE. Carries dry air from filter to liquid admix system (para 2-9).
11. VIBRATOR AIR VALVES. Control air supply on vibrators. Mounted above cam attached to cement meter-feeder. Open when contacted by cam lobe.

2-20. DESCRIPTION (Continued).



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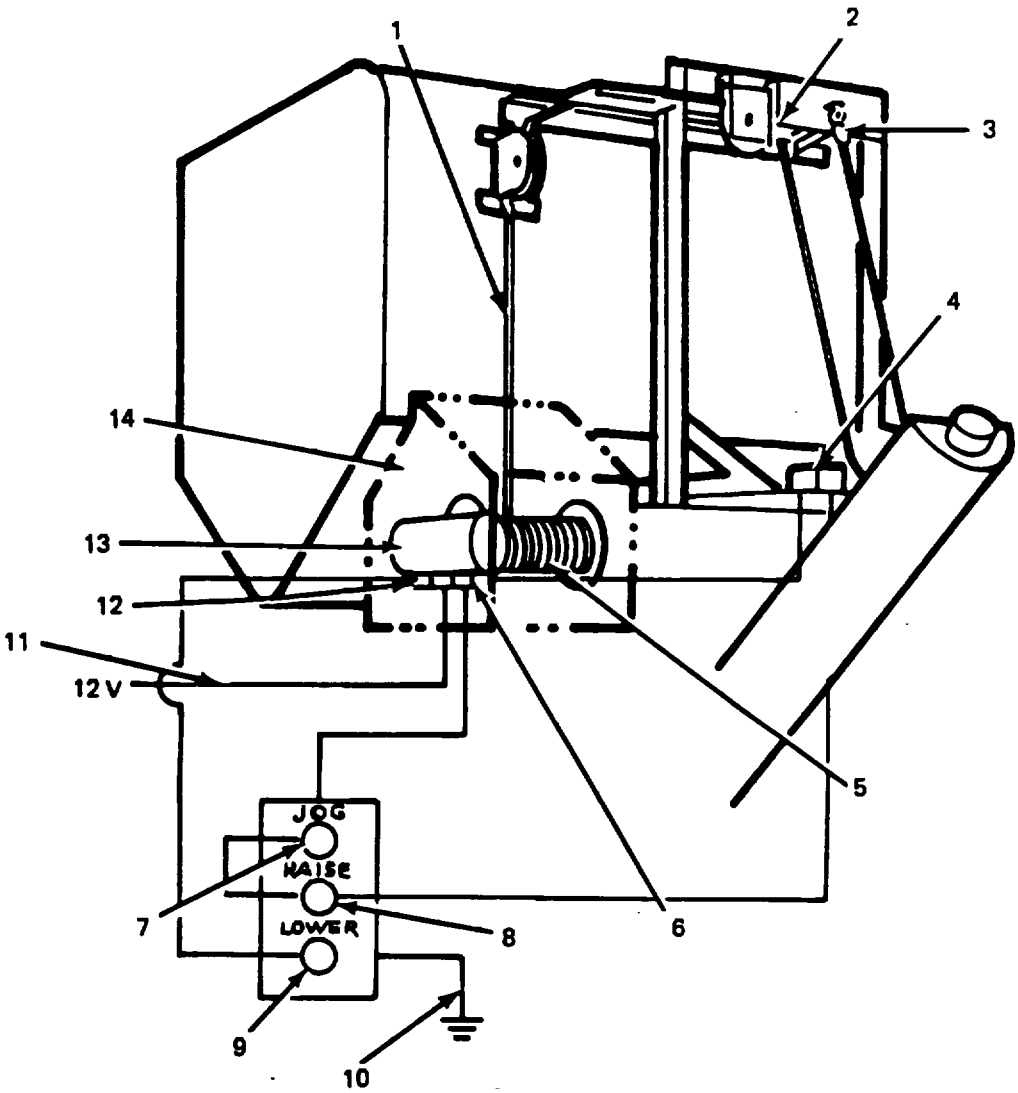
Section X ELECTRIC WINCH**2-21. INTRODUCTION.**

The electric winch raises and lowers the mixing trough. It draws power from the chassis electrical system.

2-22. DESCRIPTION.

1. WINCH CABLE. Raises, lowers, and supports mixing trough.
2. PULLEYS (4). Guide winch cable. Three on body, one on trough.
3. CABLE END. Anchored to loop on trough support frame.
4. LIMIT SWITCH. Normally closed. Opened by bar on trough when trough is pulled up against the support frame. Breaks circuit between RAISE button and IN solenoid.
5. CABLE REEL. Pays out and winds in cable. Chain driven by winch motor.
6. IN SOLENOID. Activated by signal from RAISE button through limit switch or JOG switch. Causes cable to be sealed in.
7. JOG BUTTON. When pressed at the same time as RAISE button, completes circuit to IN solenoid. Provides alternative pathway to raise trough slightly after limit switch opens.
8. RAISE BUTTON. When pressed, partially closes circuit to IN solenoid. Circuit must be completed through limit switch or JOG button.
9. LOWER BUTTON. When pressed, closes circuit to the OUT solenoid. Used to lower trough.
10. GROUND CABLE. Grounds winch circuit to chassis frame.
11. POWER UNIT CABLE. Supplies winch with 12V power from starter solenoid of chassis electrical system. (See TM 9-2320-273-20 for a description of the chassis electrical system.)
12. OUT SOLENOID. Activated by signal from LOWER button. Causes cable to be paid out.
13. WINCH MOTOR. 12-volt electrical motor turns cable reel. Energized by IN and OUT solenoids.
14. WINCH GUARD. Sheet metal box covers winch motor, solenoids, and reel. Bolted to rear of cement bin.

2-22. DESCRIPTION (Continued).



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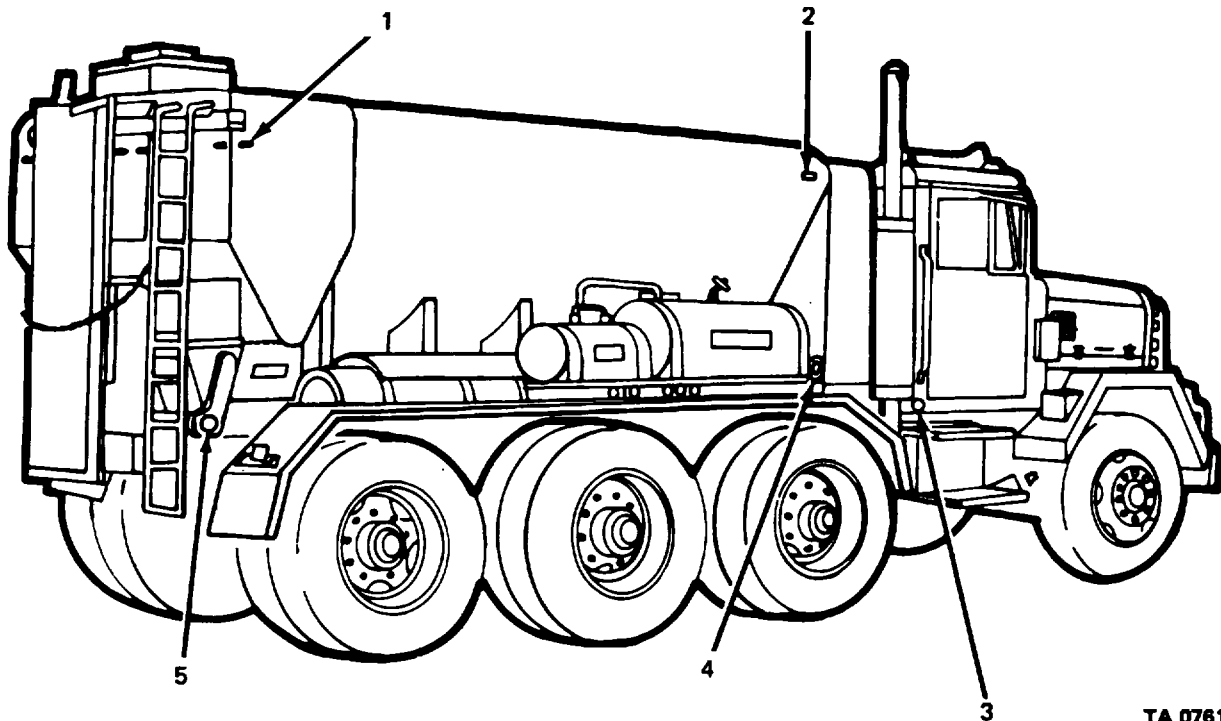
Section XI LAMPS

2-23. INTRODUCTION.

The lamps on the mixer body are an extension of the chassis marker and clearance lamps system. The lamps go on automatically when the chassis blackout switch is set to NORMAL and the headlamp switch is in either of its two "ON" positions. (See TM 9-2320-273-20 for a description of chassis marker and clearance lamps).

2-24. DESCRIPTION.

1. MARKER LAMPS. Five red lamps across the back of the cement bin and one on each side of the bin. Mark the rear of the mixer body. Wired from inside the cement bin.
2. CLEARANCE LAMPS. Four yellow lamps on the upper front corners of the aggregate bins. Two face forward, one faces to each side. Mark width of mixer body.
3. 12-VOLT CONNECTOR. Supplies power for the mixer body lamps from the chassis marker and clearance lamp circuit.
4. YELLOW REFLECTOR. Two, one located at front of mixer body on each side. Reflect light to other vehicle(s) for visual safety, if lamps are not functioning.
5. RED REFLECTOR. Two, one located at rear of mixer body on each side. Reflect light to other vehicle(s) for visual safety, if lamps are not functioning.



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CHAPTER 3**INTEGRATED MAINTENANCE**

13-1. OVERVIEW.

This chapter provides you with the following information related to overall mixer body maintenance.

- a. All required special tools and equipment.
 - b. Troubleshooting procedures.
 - c. Maintenance procedures.
-

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

13-2 COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

13-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for mixer body integrated maintenance procedures described in this chapter are limited to the following item. (Refer to Organizational Maintenance RPSTL, TM 5-3895372-20P for tool description and illustration.)

- a. Hydraulic pressure gage, 0-5000 psi (0-34475 kPa).
- b. Air pressure gage, 0-150 psi (0-1000 kPa).
- c. Water pressure gage, 0-75 psi (0500 kPa).

13-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for the equipment (TM 5-3895-372-20P).

Section II SERVICE UPON RECEIPT

13-5. CHECKING UNPACKED EQUIPMENT.

- a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6, Packaging Improvement Report.
- b. Check the equipment against the packaging slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA Pam 738-750.

3-6. SERVICE UPON RECEIPT CHECKLIST - M919 MIXER BODY.

LOCATION/ITEM	ACTION	REMARKS
1. Protective wrappings.	Remove.	
2. Parts and cartons.	Remove from sand, stone, and cement bins.	
3. Hold-down bolts	Tighten.	
4. Meter-feeder.	Turn with hand crank. Check for: a. Free feeder movement. b. Meter-register operation.	See para 8-5 for instructions on use of the hand crank.
5. Main clutch, cement bin clutch, dry admix dog clutch.	Check for: a. Free operation. b. Proper lubrication.	See LO 5-3895-372-12 and TM 5-3895-372-10.
6. Liquid admix tanks.	Fill with water. Check for leaks. Check flowmeters calibration.	See TM 5-3895-372-10 and see para 6-10.
7. Water tank.	Fill. Check system for leaks. Check water control calibration.	
8. PTO.	Engage. Make dry run.	See TM 5-3895-372-10
9. Mixer body.	a. Fill with sand, stone, cement, and admixtures b. Using mix setting chart, check yield of each mix.	See TM 5-3895-372-10. See TM 5-3895-372-10.

Section III PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-7. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES. |

To insure that the mixer body 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 3-1 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 3-1 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 1380F.

(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 Organizational 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 III Leakage of fluid great enough to form drops that fall from the item being checked/ inspected.

<p align="center"><i>Table 3-1. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES</i></p> <p align="center">Q - Quarterly S - Semiannually A - Annually B - Biennially H - Hours M - Miles</p>							
ITEM NO	INTERVAL						ITEM TO BE INSPECTED PROCEDURE: Check for and have repaired, filled, adjusted as needed
	Q	S	A	B	H	MI	
							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.
							BODY
3		•					Replace all mounting tie downs and fasteners that are badly damaged or broken. Replace all broken reflectors.
							MAIN DRIVE
4	•						Check belts for wear and damage. Replace defective belts.
5	•						Check all U-joints. Check for wear and cracks. Replace defective U-joints.
6		•					Service reversing gear box.
7		•					Service angle drive gear box.
8	•						Adjust main clutch, if necessary.
							WATER SYSTEM
9			•				Check for deterioration and leaks in coolant lines, hoses, fittings, valves, filter and tank. Repair leaks or replace items as needed.
10		•					Service water system strainer.
11	•						Service system for lowest freezing temperature expected.
							SAND AND STONE BINS
12		•					Check screens and repair or replace broken rods.
13	•						Check sand and stone bin front seal cracked or damaged seals/

Table 3-1. 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 PROCEDURE: Check for and have repaired, filled, adjusted as needed
	Q	S	A	B	H	MI	
							CEMENT BIN
14	•						Adjust meter-feeder spring tines.
15	•						Check filter cloth operation. If torn or badly clogged, replace.
16		•					Check cement meter register cable for free operation. Lubricate cable.
							MIXING TROUGH
17	•						Check and replace worn auger wear plates.
18	•						Check auger alignment. If wobbly, repair.
19	•						Check rubber trough. Repair tears or replace entire trough.
							WINCH
20		•					Check wiring harness for corrosion and bare wires. Replace defective wiring.
21		•					Check cable for fraying, kinks, or broken strands Replace, if necessary.
22			•				Service gear box.
							CONVEYOR
23	•						Adjust conveyor belt.
24	•						Hammer down loose prongs on belt lacers Check that all bolts are in place.
							HYDRAULIC SYSTEM
25				•			Change oil filter.
							NOTE
							Change oil filter after 6 months, then every 2 years
26	•						Check hydraulic system for 1900-2000 psi pressure. Adjust valve, if necessary.
27		•					Replace any faulty lines or fittings.

Table 3-1. 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 PROCEDURE: Check for and have repaired, filled, adjusted as needed
	Q	S	A	B	H	MI	
28	•						AIR SYSTEM Check for air leaks in lines, valves and fittings with vehicle pressure of 60-120 psi. Repair or replace leaking lines, valves or fittings.
29	•						LIQUID ADMIX Service liquid admix strainer.
30	•						DRY ADMIX Check auger alignment. If wobbly, repair.

Section IV TROUBLESHOOTING SYMPTOM INDEX

3-8. INTRODUCTION.

Detailed troubleshooting procedures are provided in chapters 4 thru 13 of this manual. The procedures are arranged by malfunctions within each system. The following Malfunction Symptom Index will help you find the procedure you need.

Table 3-2. Composite Troubleshooting Symptom Index.

	<u>Troubleshooting Procedures</u>	
	<u>Table</u>	<u>Page Number</u>
ADMIX SYSTEMS.		
Air pressure cannot be maintained at 15 psi (103 kPa).	6-1	6-3
Liquid admix flows unevenly.	6-1	6-3
Liquid admix flows too quickly.	6-1	6-5
Liquid admix flows too slowly or not at all.	6-1	6-5
Quick-opening valve sticks.	6-1	6-7
Flowmeter does not return to zero.	6-1	6-8
Dry admix system inoperative.	6-1	6-8
AGG REGATE SUPPLY SYSTEM.		
Conveyor belt does not move.	7-1	7-3
Conveyor belt is loose.	7-1	74
Conveyor belt is torn or damaged.	7-1	74
Sand or stone drops on ground beneath concrete mobile during mixing. 7-1	7-	
Sand or stone controls out of adjustment.	7-1	7-6
Excessive wear on chains.	7-1	7-7
AIR SYSTEM.		
Air pressure is low (below 65 psi, 448 kPa)	11-1	11-3
Cement in bin is not properly aerated.	11-1	11-3
Vibrators do not function properly.	11-1	11-4
CEMENT SYSTEM		
Hard lumps of cement in bin.	8-1	8-6
Cement delivery uneven.	8-1	8-7
Meter-feeder does not turn.	8-1	8-10
Cement bin auger will not turn.	8-1	8-12

Table 3-2. Composite Troubleshooting Symptom Index (Continued).

	<u>Troubleshooting Procedures</u>	
	<u>Table Number</u>	<u>Page</u>
CEMENT SYSTEM (Continued).		
Cement meter feeder blocked in place.	8-1	8-13
Cement counter does not operate.	8-1	8-13
Cement screen does not vibrate.	8-1	8-14
ELECTRIC WINCH		
Trough does not raise or lower.	12-1	12-3
Trough does not raise.	12-1	12-3
Trough does not lower.	12-1	12-3
HYDRAULIC SYSTEM.		
Hydraulic motor does not operate.	101	102
Hydraulic pump is noisy.	101	103
Hydraulic pressure is low.	10-1	103
Hydraulic motor vibrates.	10-1	103
Tachometer does not work properly.	101	103
LAMPS.		
See paragraphs 13-5 and 13-6.		13-2
MIX-AUGER SYSTEM		
Mixer-auger stalls, will not rotate.	9-1	92
Mixer-auger vibrates.	9-1	9-2
Swivel ring binds - chute hard to move.	91	9-2
POWER TRAIN.		
Noisy shaft bearings.	4-1	4
Power train V-belt slippage.	4-1	42
Main clutch slips.	41	4-2
Angle drive gear box runs hot, is noisy.	41	4-2

Table 3-2. Composite Troubleshooting Symptom Index (Continued).

	<u>Troubleshooting Procedures</u>	
	<u>Table</u>	<u>Page Number</u>
WATER SYSTEM.		
Mix water does not flow at a steady rate.	5-1	5-3
Water line valves leak.	5-1	5-4
Quick Opening valve sticks.	5-1	5-4

CHAPTER 4

POWER TRAIN

4-1. OVERVIEW.

This chapter provides you with the following information related to power train maintenance.

- a. All required special tools and equipment.
 - b. Troubleshooting procedures.
 - c. Maintenance procedures.
-

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

14-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

14-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

No special tools, TMDE, or support equipment are required for power train maintenance procedures described in this chapter.

14-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

4-5. INTRODUCTION.

Troubleshooting procedures for the power train are given in table 4-1. It is arranged by malfunctions, in the following order:

- a. Noisy shaft bearings (Malfunction No. 1).
- b. Power train V-belt slippage (Malfunction No. 2).
- c. Main clutch slips (Malfunction No. 3).
- d. Angle drive gear box runs hot, is noisy (Malfunction No. 4).

Table 4-1. Power Train Troubleshooting.

MALFUNCTION	
TEST OR INSPECTION	CORRECTIVE ACTION
1. NOISY SHAFT BEARINGS:	
Step 1.	Inspect for signs of excessive heat and dryness. Lubricate bearings. (See LO 53895372-12).
Step 2.	Inspect for vibrating, seized, cracked or worn bearings. Replace shaft bearings (para 4-12 and 4-13).
2. POWER TRAIN V-BELT SLIPPAGE:	
Step 1.	Inspect for loose V-belts. Adjust V-belts (paras 4-11, 4-16, and 4-17).
Step 2.	Inspect for worn or oil saturated V-belts. Replace V-belts (paras 4-11, 4-16, and 4-17).
Step 3.	Inspect drive shafts, water pump, and hydraulic pump for binding or seizure. <ul style="list-style-type: none"> a. Replace drive shaft bearings (paras 4-12 and 4-13). b. Inspect and repair water pump (para 5-10). c. Inspect and repair hydraulic pump. Notify Direct Support Maintenance.
3. MAIN CLUTCH SLIPS:	
Step 1.	Inspect for signs of excessive heat, burning, and lost motion. Adjust main clutch (para 418).
Step 2.	Inspect clutch discs for excessive wear, oil saturation, contamination. Repair main clutch, Notify Direct Support Maintenance.
4. ANGLE DRIVE GEAR BOX RUNS HOT, IS NOISY:	
Step 1.	Check oil level in gear box. Add oil. (Refer to TM 5-3895-372-10 and LO 5-3895-372-12).
Step 2.	Check gear box for plugged breather holes in cap. <ul style="list-style-type: none"> a. Use wire to unplug holes. b. If problem still persists, notify Direct Support Maintenance.

Section III MAINTENANCE PROCEDURES.

4-6. INTRODUCTION.

This section provides you with Organizational level maintenance procedures for the power train of the mixer body. Paragraph 4-7 summarizes the maintenance tasks. Paragraphs 4-8 thru 4-19 contain detailed instructions for each task.

4-7. MAIN DRIVE ASSEMBLY MAINTENANCE TASK SUMMARY.

INITIAL SETUP:

<u>APPLICABLE CONFIGURATIONS</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
M919.	4-8A.	4-8A. Cement Register Removed. Reversing Gear Box Removed (as needed).
<u>TEST EQUIPMENT</u> None.	4-16A & 4-17A.	Belts Loosened.
	4-16B & 4-17B	Belts Removed 4-10A. Universal Joints Removed (as needed).
<u>SPECIAL TOOLS</u> None.	4-12A.	Shaft Assemblies Removed.
	10-12A.	Tachometer and Mounting Bracket Removed.
	4-15A Steps 1 & 2	Covers Removed.

MATERIALS/PARTS (P/N)

Lubricant - (Refer to Appendix C).	V-Belts - Water Pump, NP 5032 010, (50663).
GAA - (Refer to Appendix C).	V-Belts - Hyd Pump NP 5032 002, (50663).
Dry Cleaning Solvent-(Refer to Appendix C).	Penetrating Oil (Refer to Appendix C).
Universal Kits, 2675 X 28188, (50663).	Liquid Teflon - (See Appendix C).
Universal Kit, 1875 X, (50663).	
V-Belts - Drive; NP-5032-120, (50663).	SPECIAL ENVIRONMENTAL CONDITIONS
Lock Wire (Refer to Appendix C).	Vehicle Parked on Level Ground.

PERSONNEL REQUIRED

Two (MOS-63B20).

REFERENCES (TM)

LO 5-3895-372-12.
 TM 5-3895-372-10.
 TM 9-2320-273-10.
 TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
 Transmission in Neutral.

REFERENCES (TROUBLESHOOTING)

Table 4-1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Reversing Gear Box Maintenance: A. Removal. B. Installation. C. Checking oil level.	4-8 4-8A 4-8B 4-8C	4-1
2.	PTO to PTO Belts Shaft - Universal Joints Maintenance: A. Removal. B. Disassembly. C. Cleaning and inspection.	4-9 4-9A 4-9B 4-9C	4-1

4-7. MAIN DRIVE ASSEMBLY MAINTENANCE TASK SUMMARY (Continued).			
LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
2.	PTO to PTO Belts Shaft - Universal Joints Maintenance (Continued):		
	D. Assembly.	49D	
	E. Installation.	4-9E	
3.	Universal Joints Maintenance:	410	4-1
	A. Removal.	410A	
	B. Disassembly.	4-10B	
	C. Cleaning and inspection.	410C	
	D. Assembly.	4-10D	
	E. Installation.	410E	
4.	PTO Belts Maintenance:	411	4-1
	A. Removal.	4-11A	
	B. Installation.	411 B	
	C. Adjustment.	4-11C	
5.	Main Shaft Maintenance:	412	41
	A. Removal.	412A	
	B. Disassembly.	412B	
	C. Cleaning and inspection.	412C	
	D. Assembly.	4-12D	
	E. Installation.	4-12E	
	F. Checking alignment.	412F	
6.	PTO Belts Shaft Assemblies Maintenance:	413	41
	A. Disassembly.	4-13A	
	B. Cleaning and inspection.	413B	
	C. Assembly.	413C	

4-7. MAIN DRIVE ASSEMBLY MAINTENANCE TASK SUMMARY (Continued).			
LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
7.	Reversing Gear Box Output Shaft Maintenance: A. Removal. B. Disassembly. C. Cleaning and inspection. D. Assembly. E. Installation.	4-14 4-14A 4-14B 4-14C 4-14D 4-14E	4-1
8.	Rear Incline Shaft Maintenance A. Removal. B. Disassembly. C. Cleaning and inspection. D. Assembly. E. Installation.	4-15 4-15A 4-15B 4-15C 4-15D 4-15E	4-1
9.	Water Pump Belts Maintenance: A. Loosening. B. Removal. C. Installation. D. Adjustment.	4-16 4-16A 4-16B 4-16C 4-16D	4-1
10.	Hydraulic Pump Belts Maintenance A. Loosening. B. Removal. C. Installation. D. Adjustment.	4-17 4-17A 4-17B 4-17C 4-17D	4-1
11.	Main Clutch Adjustment: Clutch adjustment.	4-18	4-1

4-7. MAIN DRIVE ASSEMBLY MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
12.	Angle Drive Gear Box Maintenance: A. Removal. B. Installation. C. Operational check.	4-19 4-19A 4-19B 4-19C	4-1

POWER TRAIN.

4-8. REVERSING GEAR BOX MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Installation. (25)
 - c. Checking Oil Level. (5)
- 45 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

**EQUIPMENT
CONDITION
PARAGRAPH**

None.

CONDITION DESCRIPTION

None.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Lubricant - (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895-372-12.
TM 92320-273-10.
Park Brake set.

GENERAL SAFETY INSTRUCTIONS

Engine off.
Transmission in Neutral.

TROUBLESHOOTING REFERENCES

Table 4-1.

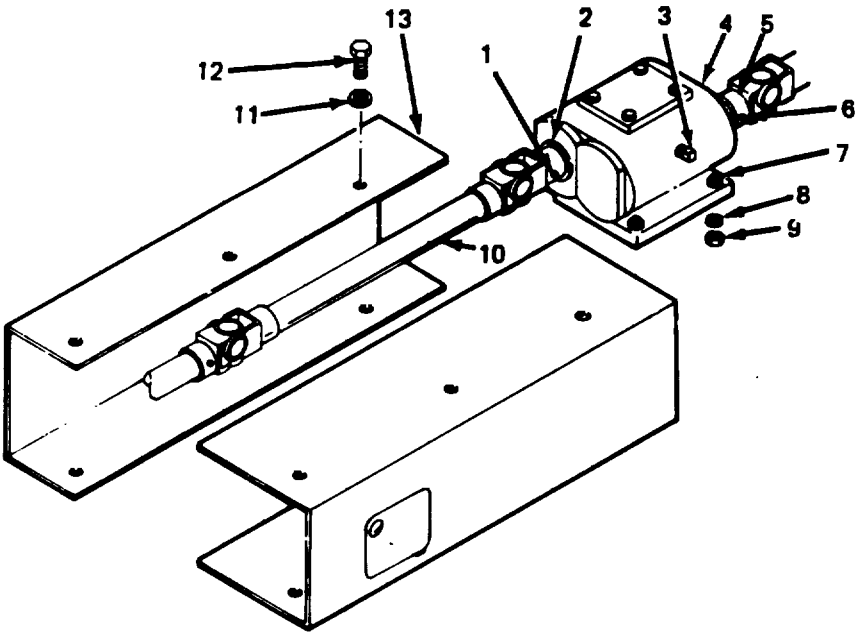
POWER TRAIN.

4-8. REVERSING GEAR BOX MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|----|---|----------------------|
| 1. | Five cap screws (12) and five lock washers (11). | Remove. |
| 2. | Cover (13). | Remove. |
| 3. | Lockwires (2) and (5). | Remove. |
| 4. | Set screws (1) and (6). | Loosen. |
| 5. | Shaft (10).
reversing box shaft. | Slide forward off of |
| 6. | Four hex bolts (7),
hex nuts (9), and
lock washers (8). | Remove. |
| 7. | Reversing gear box (4). | Remove. |



LEGEND:

- 1. SET SCREW
- 2. LOCKWIRE
- 3. OIL LEVEL PLUG
- 4. REVERSING GEAR BOX
- 5. LOCKWIRE
- 6. SET SCREW
- 7. HEX BOLT (4)
- 8. LOCK WASHER (4)
- 9. HEX NUT (4)
- 10. SHAFT
- 11. LOCK WASHER (8)
- 12. CAP SCREW (5)
- 13. COVER

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POWER TRAIN.

4-8. REVERSING GEAR BOX MAINTENANCE (Continued).

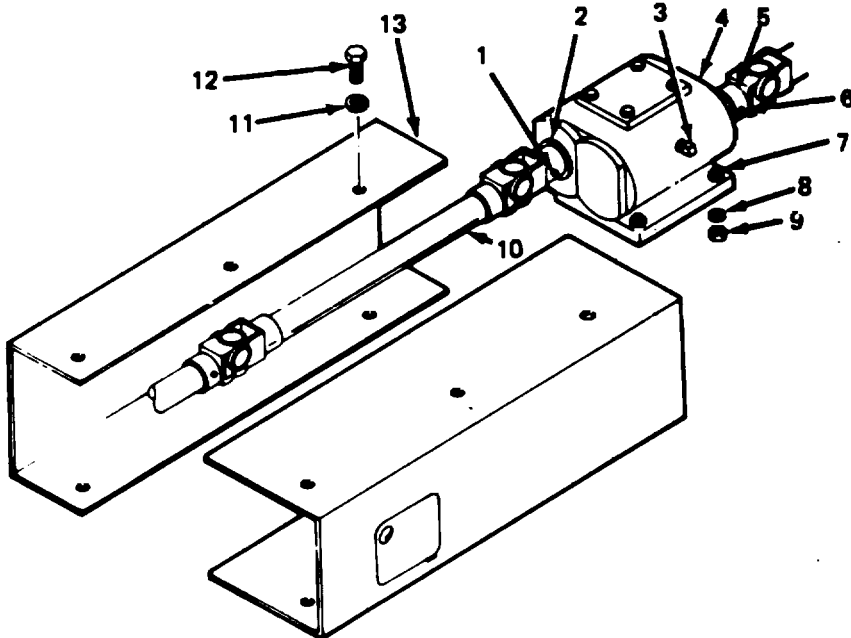
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION. I

- | | | |
|--|--|--|
| 8. Reversing gear box (4). | Set in place. | |
| 9. Four hex bolts (7), hex nuts (9), and lock washers (8). | Install and tighten. | |
| 10. Shaft (10). | Slide onto reversing gear box shafts. | |
| 11. Set screws (1) and (6). | Tighten. | |
| 12. Lockwires (2) and (5). | Install. | |
| 13. Cover (13). | a. Place on vehicle.
b. Install cap screws (12) and lock washers (11).
c. Tighten. | |

C. CHECKING OIL LEVEL.1

- | | | |
|-------------------------|--|--|
| 14. Oil level plug (3). | a. Remove.
b. Check that oil in reversing gear box (4) is up to level of plug hole.
c. Screw in and tighten plug | Add oil if necessary. (refer to LO 5-3895-372-12). |
|-------------------------|--|--|



LEGEND:

- 1. SETSCREW
- 2. LOCKWIRE
- 3. OIL LEVEL PLUG
- 4. REVERSING GEAR BOX
- 5. LOCKWIRE
- 6. SETSCREW
- 7. HEX BOLT (4)
- 8. LOCKWASHER (4)
- 9. HEX NUT (4)
- 10. SHAFT
- 11. LOCKWASHER (8)
- 12. CAPSCREW (5)
- 13. COVER

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POWER TRAIN.

4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Disassembly. (20).
 - c. Cleaning and Inspection. (20)
 - d. Assembly. (20)
 - e. Installation. (30)
- 120 Minutes Total.

INITIAL SETUP

PARAGRAPH
None.

**EQUIPMENT
CONDITION
CONDITION DESCRIPTION**
None.

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
SD-2 Dry Cleaning Solvent (Refer to Appendix C).
Universal Joint Kits, 2675 X 28188 (50663).
GAA - (Refer to Appendix C).
Lockwire (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
LO 5-3895-372-12.
TM 5-389-5372-20P
TM 9-2320-273-10.

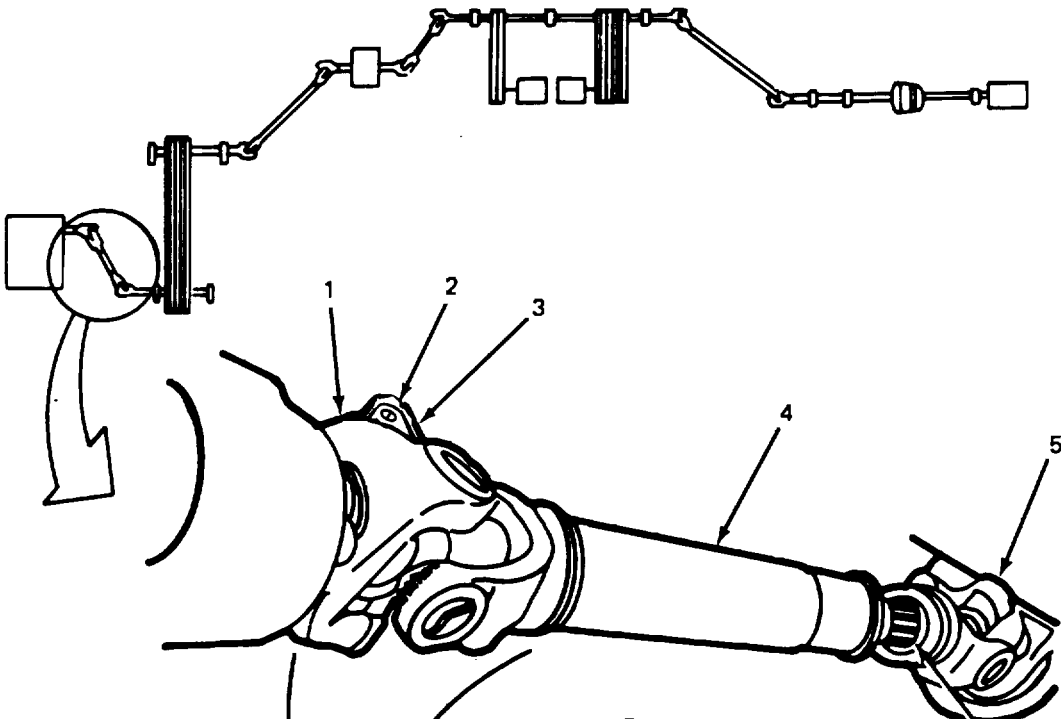
GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 4-1.

POWER TRAIN.

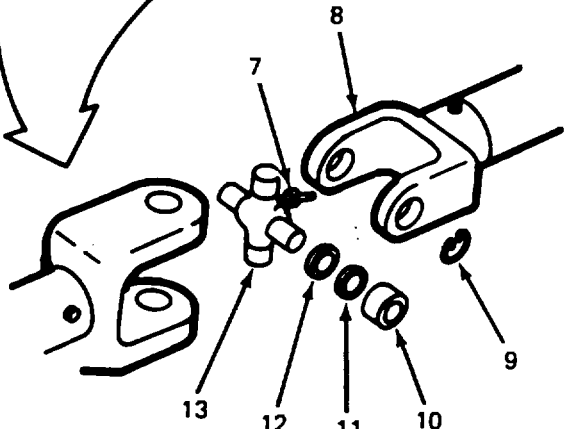
4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. YOKE
- 2. SETSCREW (2)
- 3. LOCKWIRE (2)
- 4. FEMALE SHAFT
- 5. YOKE
- 6. MALE SHAFT
- 7. GREASE FITTING (2)
- 8. YOKE
- 9. RETAINER (8)
- 10. BEARING (8)
- 11. SEAL (8)
- 12. SEAL (8)
- 13. CROSS (2)



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POWER TRAIN.

4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|------------------------|-----------------|---------------------------|
| 1. Two lock wires (3). | Cut and remove. | One on each end of shaft. |
| 2. Two setscrews (2). | Loosen. | One on each yoke. |



Before removing female shaft (4) and male shaft (6), punch mark shafts for reassembly alignment. Damage to universal joints may occur if shafts are not alined.

- | | | |
|-------------------------|--|---|
| 3. Yoke (1). | Remove with attached female shaft (4). | It may be necessary to tap off PTO shaft with hammer. |
| 4. Yoke (5). shaft (6). | Remove with attached male bearing shaft with hammer. | It may be necessary to tap off |

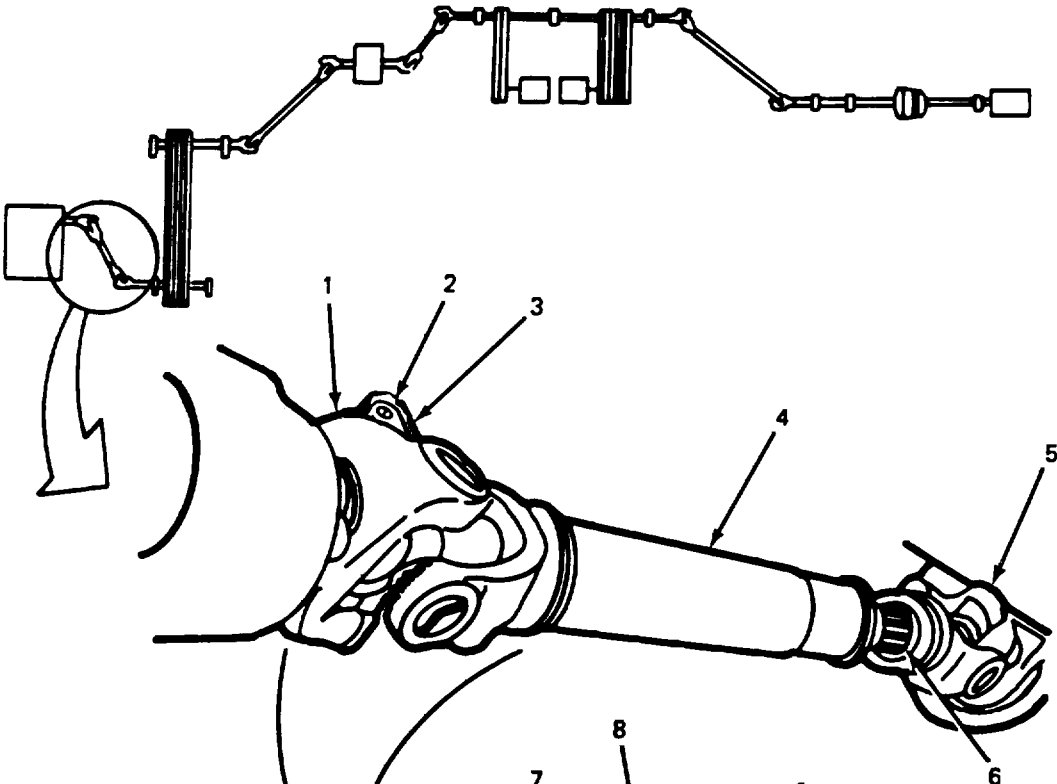
B. DISASSEMBLY.

- | | | |
|---------------------------|-----------|--|
| 5. Eight retainers (9). | Remove. | |
| 6. Eight bearings (10). | Remove. | Remove the first bearing by tapping gently on the opposite bearing. Remove bearing and tap cross back toward first bearing. Repeat until all bearings are removed. |
| 7. Yoke (1) and yoke (8). | Separate. | |

POWER TRAIN.

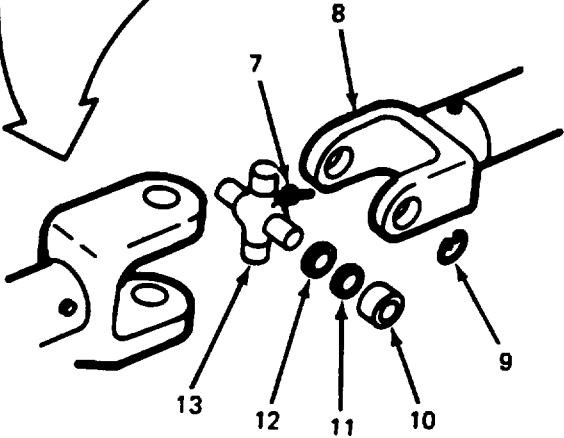
4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. YOKE
- 2. SETSCREW (2)
- 3. LOCKWIRE (2)
- 4. FEMALE SHAFT
- 5. YOKE
- 6. MALE SHAFT
- 7. GREASE FITTING (2)
- 8. YOKE
- 9. RETAINER (8)
- 10. BEARING (8)
- 11. SEAL (8)
- 12. SEAL (8)
- 13. CROSS (2)



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POWER TRAIN.

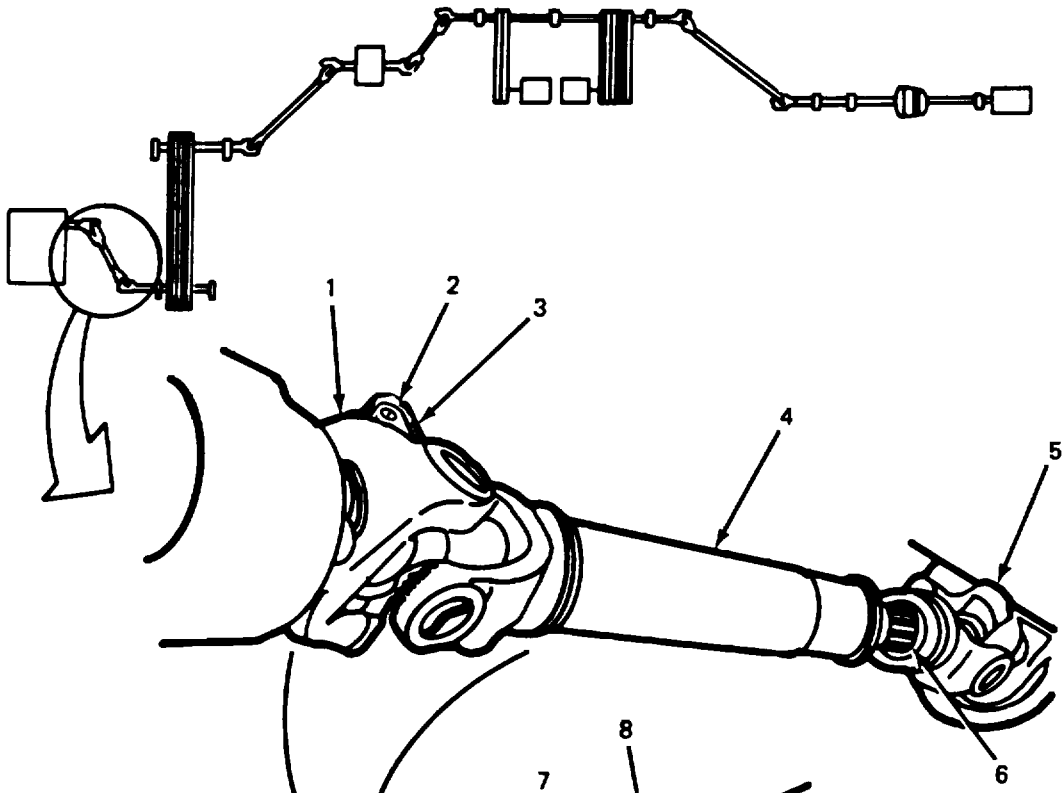
4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).		
8. Two crosses (13) and eight seals (11) and (12).	Remove.	
9. Two grease fittings (7).	Remove.	
C. CLEANING AND INSPECTION.		
10. All parts.	Clean in SD-2 dry cleaning solvent.	
11. Three yokes (5), (1), and (8).	Inspect for: a. b. Breaks c. Wear. d. Deformities.	Replace if necessary. Cracks.
12. Two crosses (13).	Inspect for: a. Nicks. b. Burrs. c. Scratches. d. Needle marks.	Use fine stone to remove light marks. Replace if necessary.
13. Eight bearings (10).	Inspect for: a. Missing needles. b. Flat spots. c. Nicked surface. d. Deformities.	
D. ASSEMBLY.		
14. Sixteen seals (11) and (12).	Install on crosses (13).	
15. Two crosses (13) and eight bearings (10).	Apply clean grease (GAA).	
16. Two crosses (13).	Install.	

POWER TRAIN.

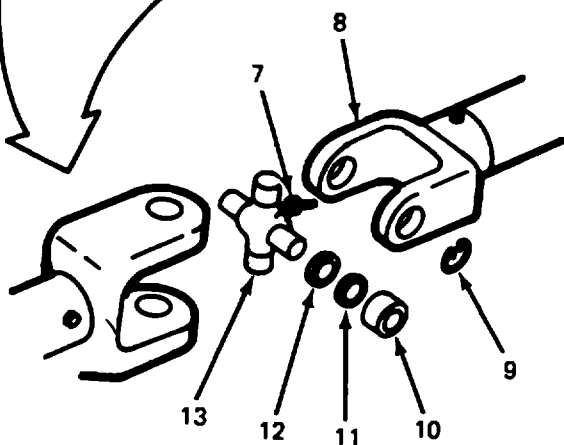
49. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. YOKE
- 2. SETSCREW (2)
- 3. LOCKWIRE (2)
- 4. FEMALE SHAFT
- 5. YOKE
- 6. MALE SHAFT
- 7. GREASE FITTING (2)
- 8. YOKE
- 9. RETAINER (8)
- 10. BEARING (8)
- 11. SEAL (8)
- 12. SEAL (8)
- 13. CROSS (2)



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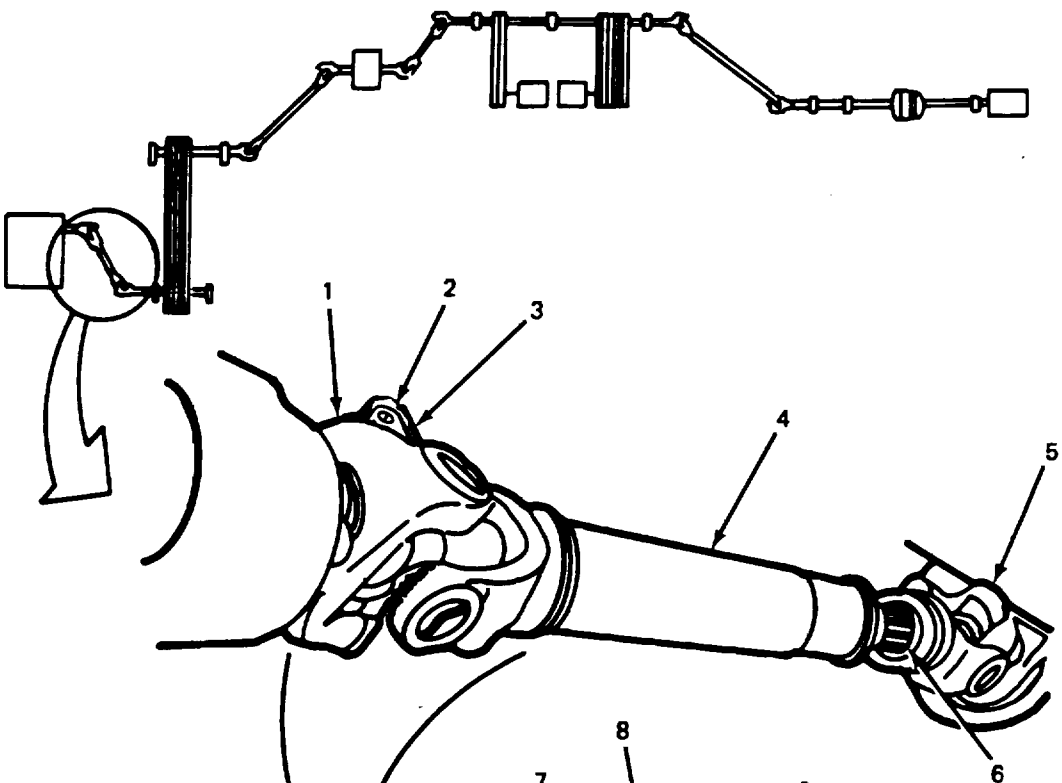
POWER TRAIN.

4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
17. Eight bearings (10).	Tap gently into place.	
18. Eight retainers (9).	Install.	
E. INSTALLATION.		
19. Yoke (5) with attached male shaft (6).	Tap onto bearing shaft.	
20. Setscrew (2).	Tighten. Install lock wire (3).	
21. Female shaft (4).	Aline punch mark with punch mark on male shaft (6) and slide together.	Be sure yokes are in alinement.
22. Yoke (1).	Tap onto PTO shaft.	
23. Setscrew (2).	Tighten. Install lock wire (3).	
NOTE		
Follow-on maintenance required:		
Grease (LO 5-3895-372-12).		

POWER TRAIN

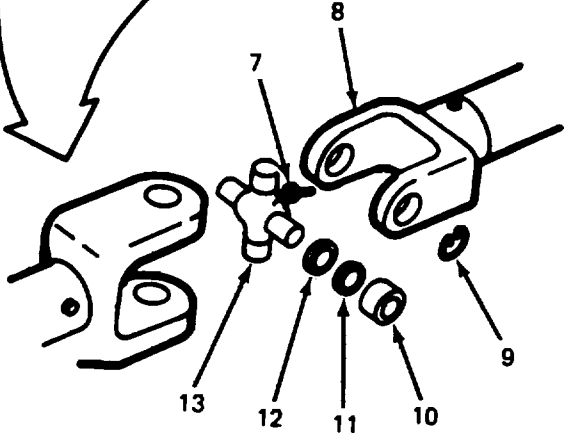
4-9. PTO TO PTO BELTS SHAFT - UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. YOKE
- 2. SETSCREW (2)
- 3. LOCKWIRE (2)
- 4. FEMALE SHAFT
- 5. YOKE
- 6. MALE SHAFT
- 7. GREASE FITTING (2)
- 8. YOKE
- 9. RETAINER (8)
- 10. BEARING (8)
- 11. SEAL (8)
- 12. SEAL (8)
- 13. CROSS (2)



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POWER TRAIN.

4-10. UNIVERSAL JOINTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (25)
 - b. Disassembly. (15)
 - c. Cleaning and Inspection. (15)
 - d. Assembly. (20)
 - e. Installation. (30)
- 105 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

M919.

4-8A.

Reversing Gear Box Removed
(as Needed).
4-16A & 4-17A. Belts Loosened.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

GAA (Refer to Appendix C).
Universal Joint Kit, 1875X (50663).
Lock wire (Refer to Appendix C).

**PERSONNEL REQUIRED
CONDITIONS**

One (MOS-62B20).

SPECIAL ENVIRONMENTAL

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895-372-12.
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Tablet-1.

POWER TRAIN.

4-10. UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

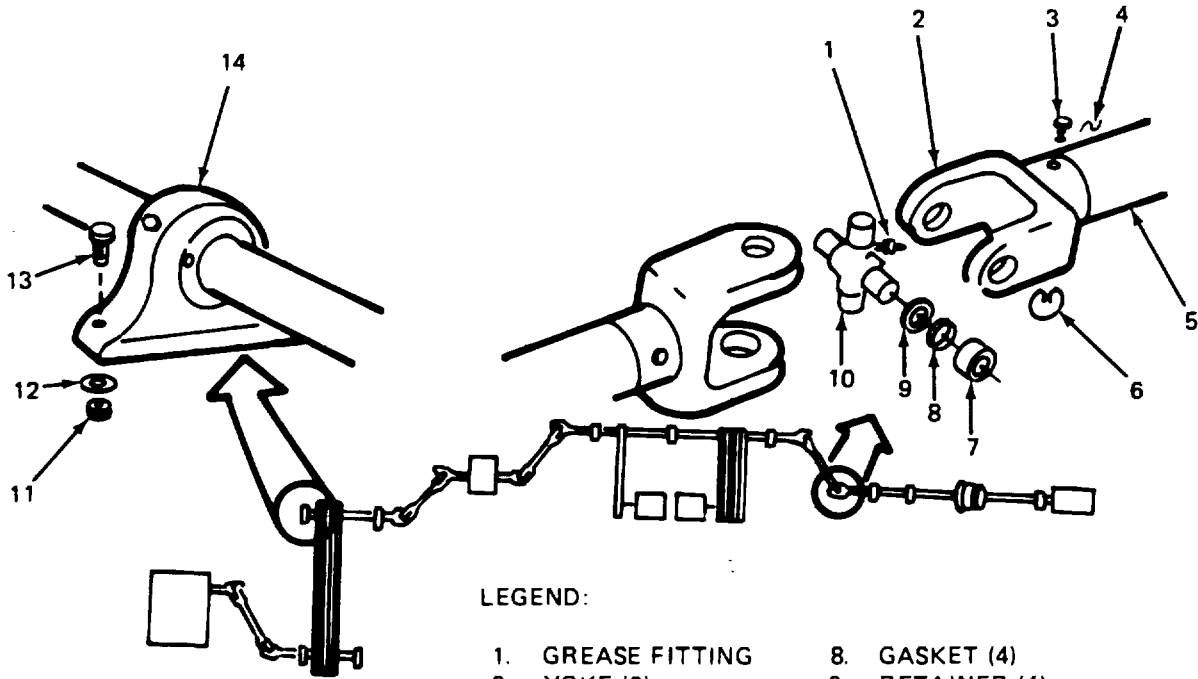
A. REMOVAL

NOTE

The illustration shows all bearings (14) and universal joints of the power train. Use it to decide which bearings you will need to loosen to allow slack in the drive system.

CAUTION

Before removing U-joints, be sure that shafts (5) and yokes (2) are punch marked.



LEGEND:

- | | |
|-------------------|------------------|
| 1. GREASE FITTING | 8. GASKET (4) |
| 2. YOKE (2) | 9. RETAINER (4) |
| 3. SETSCREW (2) | 10. CROSS |
| 4. SETSCREW | 11. HEX NUT (2) |
| LOCKWIRE (2) | 12. WASHER (2) |
| 5. SHAFT | 13. HEX BOLT (2) |
| 6. SNAP RING (4) | 14. BEARING |
| 7. BEARING (4) | |

TA 076176

POWER TRAIN.

4-10. UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
1. Two hex bolts (13), hex nuts (11), and washers (12).	Remove as needed.	
2. Two set screw lock wires (4).	Remove.	
3. Two yoke collar set-screws (3).	Loosen	Two on each U-joint.
NOTE		
The two U-joints at the rear of the vehicle have roll pins. Tap out these roll pins with a drift and hammer.		
4. Shafts (5) and universal joint.	Slide apart. Remove universal joint assembly.	It may be necessary to tap loose with a hammer.
B. DISASSEMBLY.		
5. Grease fitting (1).	Remove from cross (10).	
CAUTION		
Tap bearings only hard enough to break them away from snap rings.		
6. Four bearings (7).	Use a soft drift to break away from snap rings (6).	
7. Four snap rings (6).	Remove.	
8. Four bearings (7).	Remove.	You can push the first bearing out of each yoke by tapping gently on the opposite bearing. Tap cross end to push out second bearing.
9. Four gaskets (8) and retainers (9).	Remove.	
10. Cross (10) and-two yokes (2).	Separate.	

POWER TRAIN.

410. UNIVERSAL JOINTS MAINTFNANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
1. GREASE FITTING	8. GASKET (4)	
2. YOKE (2)	9. RETAINER (4)	
3. SETSCREW (2)	10. CROSS	
4. SETSCREW	11. HEX NUT (2)	
LOCKWIRE (2)	12. WASHER (2)	
5. SHAFT	13. HEX BOLT (2)	
6. SNAP RING (4)	14. BEARING	
7. BEARING (4)		

TA 078177

POWER TRAIN.

4-10. UNIVERSAL JOINTS MAINTENANCE (Continued).

LOCATION	ACTION	REMARKS
----------	--------	---------

C. CLEANING AND INSPECTION.

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.).

- | | | | |
|-----|------------|----|---------------------------------------|
| 11. | Yokes (2). | a. | Clean with SD-2 dry cleaning solvent. |
| | | b. | Dry with compressed air. |

CAUTION

Bearings (7) and cross (10) should be replaced as a set. If the cross or any bearing is damaged, replace the set.

- | | | | |
|-----|------------|--------------|---------|
| 12. | Yokes (2). | Inspect for: | |
| | | a. | Cracks. |
| | | b. | Wear. |
| | | c. | Nicks. |
| | | d. | Burrs. |

D. ASSEMBLY.

- | | | | |
|-----|---|--|--|
| 13. | Four new retainers (9) and gaskets (8). | Place on cross (10). | |
| 14. | Cross (10). | Place between two yokes (2). | |
| 15. | Four bearings (7). | Use rawhide mallet to tap bearings into yokes. | |
| 16. | Four snap rings (6). | Set in grooves of yoke (2). | |
| 17. | grease fitting (1). | Install in cross (10). | |

E. INSTALLATION.

- | | | | |
|-----|--------------------|--|--|
| 18. | Two yokes (2). | a. | Press onto shaft (5). |
| | | b. | Aline punch marks. |
| 19. | Two setscrews (3). | Tighten firmly, then install two setscrew lockwires (4). | Check that shafts do not slip in joints. |

POWER TRAIN.

4-10. UNIVERSAL JOINTS MAINTENANCE (Continued),

LOCATION ACTION REMARKS

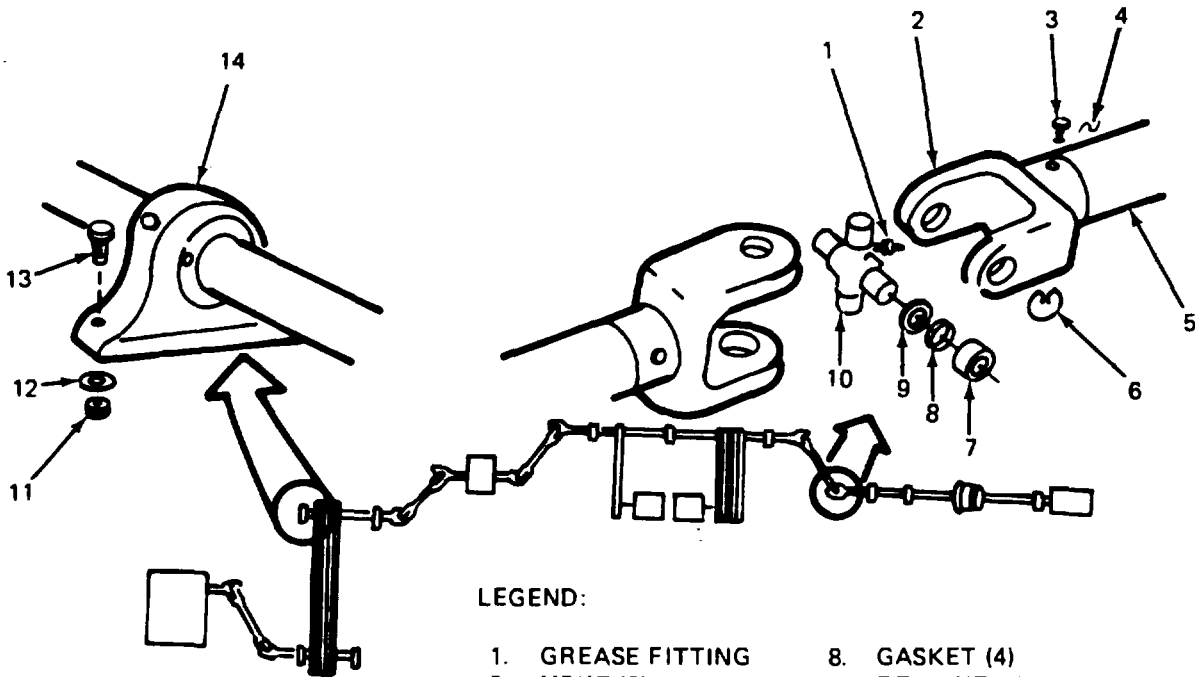
E. INSTALLATION (Continued).

- 20. Hex bolts (13), washers (12), and hex nuts (11). Install and tighten.

NOTE

Follow-on maintenance required, as applicable:

- a. Reversing gear box installed (para 4-8B).
- b. Adjust V-belts (para 4-16D or 4-17D).
- c. Lubricate (refer to LO 5-3895-372-12).
- d. Check operation (refer to TM 5-3895-372-10).



LEGEND:

- | | |
|-------------------|------------------|
| 1. GREASE FITTING | 8. GASKET (4) |
| 2. YOKE (2) | 9. RETAINER (4) |
| 3. SETSCREW (2) | 10. CROSS |
| 4. SETSCREW | 11. HEX NUT (2) |
| LOCKWIRE (2) | 12. WASHER (2) |
| 5. SHAFT | 13. HEX BOLT (2) |
| 6. SNAP RING (4) | 14. BEARING |
| 7. BEARING (4) | |

TA 076178

POWER TRAIN.

4-11. PTO BELTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (45)
 - b. Installation. (60)
 - c. Adjustment. (10)
- 115 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
V-Belts, Drive, NP5032-120 (50663).
Lockwire (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM 5-3895-372-20P.
Parking Brake Set.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.

TROUBLESHOOTING REFERENCES
Table 4-1.

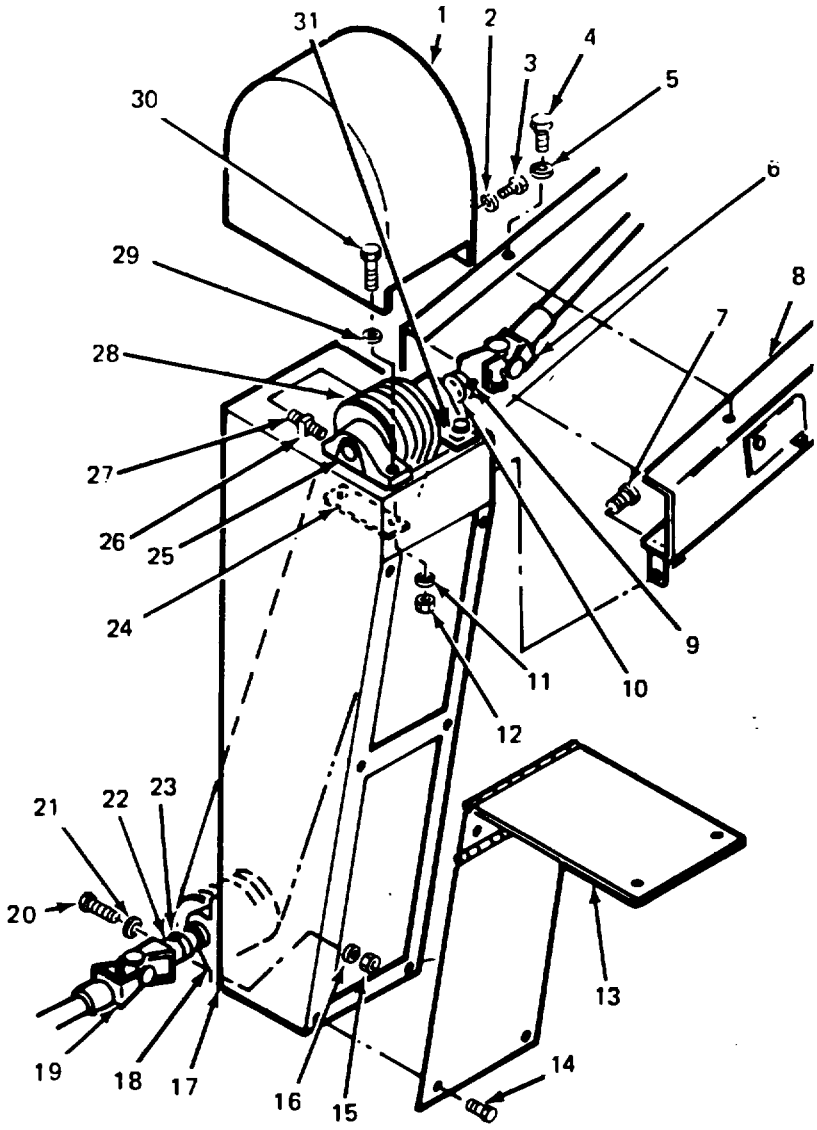
POWER TRAIN.

4-11. PTO BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|--|---------|--|
| 1. Four hex bolts (3) and lockwashers (2). | Remove. | |
| 2. Hex bolt (7). | Remove. | |
| 3. Cover (1). | Remove. | |
| 4. Six hex bolts (4) and lockwashers (5) | Remove. | |



LEGEND:

- 1. COVER
- 2. LOCKWASHER (4)
- 3. HEX BOLT (4)
- 4. HEX BOLT (6)
- 5. LOCKWASHER (6)
- 6. UPPER YOKE ASSEMBLY
- 7. HEX BOLT
- 8. COVER
- 9. SETSCREW
- 10. LOCKWIRE
- 11. LOCKWASHER (4)
- 12. HEX NUT (4)
- 13. ACCESS COVER (2)
- 14. HEX BOLT (6)
- 15. HEX NUT (4)
- 16. LOCKWASHER (4)
- 17. LOWER BEARING ASSEMBLY
- 18. PLATE
- 19. LOWER YOKE ASSEMBLY
- 20. HEX BOLT (4)
- 21. FLATWASHER (4)
- 22. LOCKWIRE
- 23. SETSCREW
- 24. BOTTOM PLATE
- 25. UPPER BEARING ASSEMBLY
- 26. HEX LOCKNUT (2)
- 27. ADJUSTING SCREW (2)
- 28. V-BELTS (5)
- 29. FLATWASHER (4)
- 30. HEX BOLTS (4)
- 31. UPPER ASSEMBLY AND PLATE

TA 076179

POWER TRAIN.

4-11. PTO BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued)		
5.	Cover (8).	Remove.
6.	Six hex bolts (14).	Remove.
7.	Access covers (13).	Remove.
8.	Lockwire (10).	Cut and remove.
9.	Setscrew (9).	Loosen.
10.	Upper yoke assembly (6).	Remove. Tap off with hammer.
11.	Four hex nuts (12), lockwashers (11), and bottom plate (24).	Remove.
12.	Four hex bolts (30) and and flat washers (29).	Remove.
13.	Two hex locknuts (26).	Loosen.
14.	Adjusting screws (27).	Loosen evenly.
15.	Lockwire (22).	Cut and remove.
16.	Setscrew (23).	Loosen.
17.	Lower yoke assembly (19).	Remove. Tap off with hammer.
18.	Four hex nuts (15) and lockwashers (16).	Remove.
19.	Four hex bolts (20) and flat washers (21).	Remove.
20.	Two lower bearing assemblies (17) and plate (18).	Remove.
21.	Two upper bearing assemblies (25) and bottom plate (24).	Remove.
22.	V-beits (28).	Remove and discard.
B. INSTALLATION.		
23.	Two upper bearing assemblies (25) and plate (24).	Set in place.

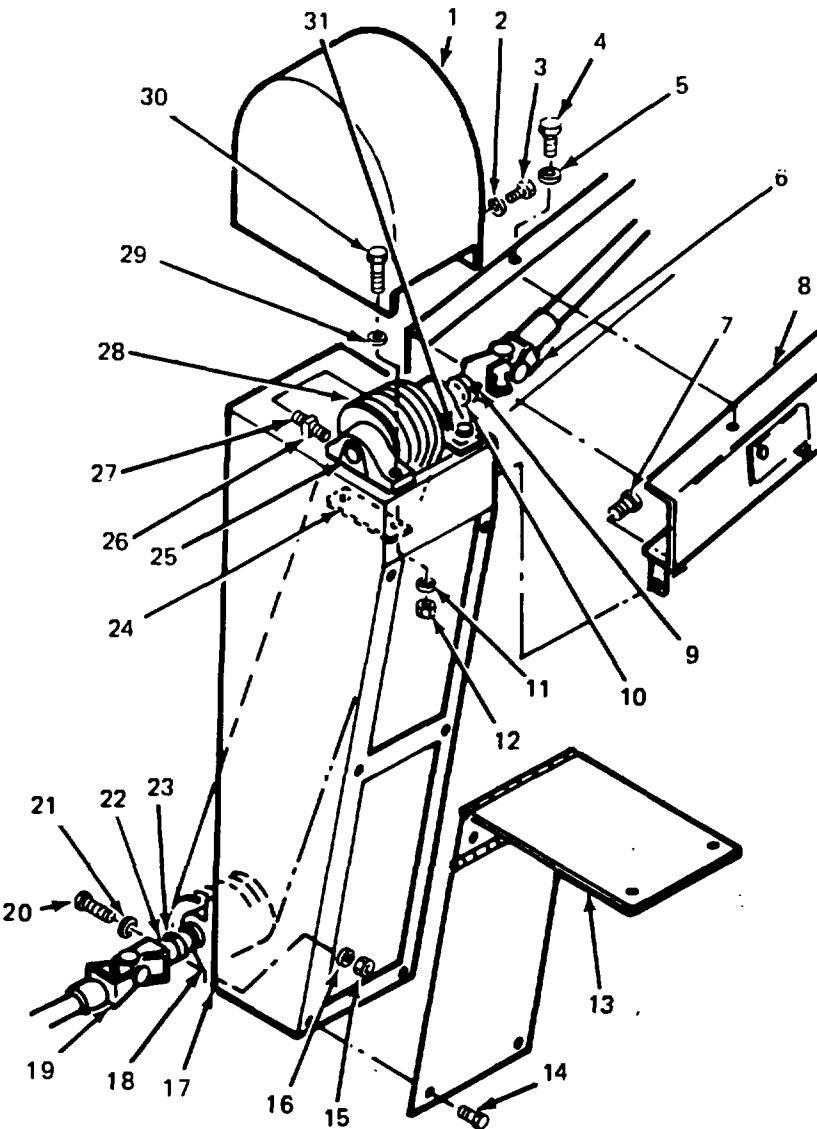
POWER TRAIN.

4-11. PTO BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION (Continued).

- | | | |
|-----|--|---|
| 24. | Five V-belts (28).
assembly (25). | Place over upper bearing |
| 25. | Two lower bearing
assemblies (17). | Place in V-belts (28). |
| 26. | Two lower bearing assem-
blies (17) and plate (18). | Line up and install four hex bolts
(20) and flat washers (21). |



LEGEND:

- 1. COVER
- 2. LOCKWASHER (4)
- 3. HEX BOLT (4)
- 4. HEX BOLT (6)
- 5. LOCKWASHER (6)
- 6. UPPER YOKE ASSEMBLY
- 7. HEX BOLT
- 8. COVER
- 9. SETSCREW
- 10. LOCKWIRE
- 11. LOCKWASHER (4)
- 12. HEX NUT (4)
- 13. ACCESS COVER (2)
- 14. HEX BOLT (6)
- 15. HEX NUT (4)
- 16. LOCKWASHER (4)
- 17. LOWER BEARING ASSEMBLY
- 18. PLATE
- 19. LOWER YOKE ASSEMBLY
- 20. HEX BOLT (4)
- 21. FLATWASHER (4)
- 22. LOCKWIRE
- 23. SETSCREW
- 24. BOTTOM PLATE
- 25. UPPER BEARING ASSEMBLY
- 26. HEX LOCKNUT (2)
- 27. ADJUSTING SCREW (2)
- 28. V-BELTS (5)
- 29. FLATWASHER (4)
- 30. HEX BOLTS (4)
- 31. UPPER ASSEMBLY AND PLATE

TA 076181

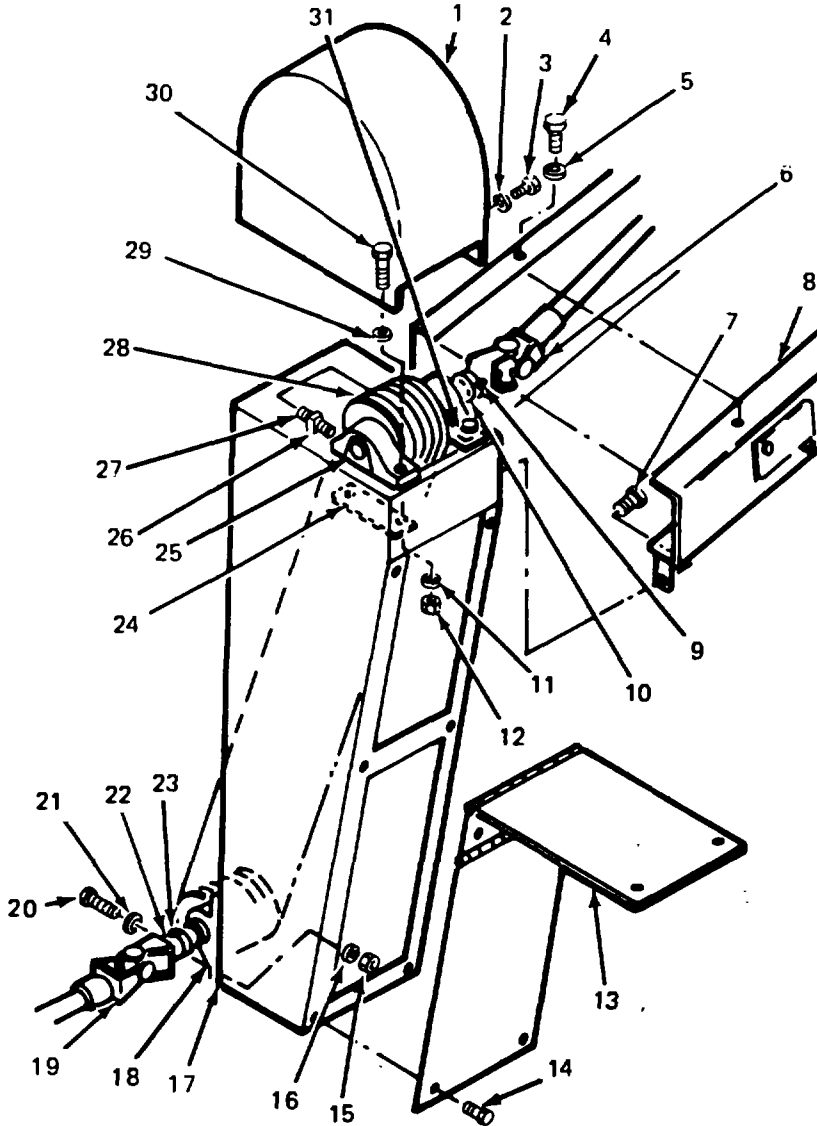
POWER TRAIN.

4-11. PTO BELTS MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).I		
27. Four hex nuts (15). and lockwashers (16).	Install. Tighten securely.	
28. Lower yoke assembly (19).		
29. Setscrew (23).	Tighten and install lock wire (22).	
30. Bottom plate (24).	Place under upper pulley assembly and aline holes.	
31. Four hex bolts (30) and flat washers (29).	Install.	
32. Four hex nuts (12) lockwashers (11), and bottom plate (24).	Install	
C. ADJUSTMENT. I		
33. Adjusting screws (27).	Tighten evenly until 1/2 in. deflection occurs at center of V-belts, while applying approxi- mately six pounds pressure at center. Use straight edge and ruler to determine this reading.	
34. Locknuts (26).	Tighten.	
35. Four hex nuts (12). and hex bolts (30).	Tighten securely.	
36. Upper yoke assembly (6).	Slide onto shaft.	
37. Setscrew (9).	Tighten. Install lockwire (10).	
38. Access covers (13).	Set in place and secure with six hex bolts (14). Tighten.	
39. Cover (8).	Set in place and secure with six hex bolts (4) and lockwashers (5). Tighten.	
40. Cover (1).	Set in place and secure with four hex bolts (3) and lockwashers (2). Tighten.	
41. Hex bolt (7).	Tighten securely.	

POWER TRAIN.

4-11. PTO RFI TS MAINTFNANCE (Continued).

LOCATION/ITEM ACTION REMARKS



LEGEND:

- 1. COVER
- 2. LOCKWASHER (4)
- 3. HEX BOLT (4)
- 4. HEX BOLT (6)
- 5. LOCKWASHER (6)
- 6. UPPER YOKE ASSEMBLY
- 7. HEX BOLT
- 8. COVER
- 9. SETSCREW
- 10. LOCKWIRE
- 11. LOCKWASHER (4)
- 12. HEX NUT (4)
- 13. ACCESS COVER (2)
- 14. HEX BOLT (6)
- 15. HEX NUT (4)
- 16. LOCKWASHER (4)
- 17. LOWER BEARING ASSEMBLY
- 18. PLATE
- 19. LOWER YOKE ASSEMBLY
- 20. HEX BOLT (4)
- 21. FLATWASHER (4)
- 22. LOCKWIRE
- 23. SETSCREW
- 24. BOTTOM PLATE
- 25. UPPER BEARING ASSEMBLY
- 26. HEX LOCKNUT (2)
- 27. ADJUSTING SCREW (2)
- 28. V-BELTS (5)
- 29. FLATWASHER (4)
- 30. HEX BOLTS (4)
- 31. UPPER ASSEMBLY AND PLATE

TA 076181

POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE'

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Disassembly. (30)
 - c. Cleaning and Inspection. (25)
 - d. Assembly. (35)
 - e. Installation. (10)
 - f. Checking Alinement. (5)
- 115 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

M919.

4-8A.
4-16B & 4-17B.

4-10A.

Reversing Gear Box Removed.
Water Pump & Hydraulic Pump
Belts Removed.
Universal Joint Removed
(as Needed).

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Oil (Refer to Appendix C).

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-38953-72-12.
TM 9-38937273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.

TROUBLESHOOTING REFERENCES

Table 4-1.

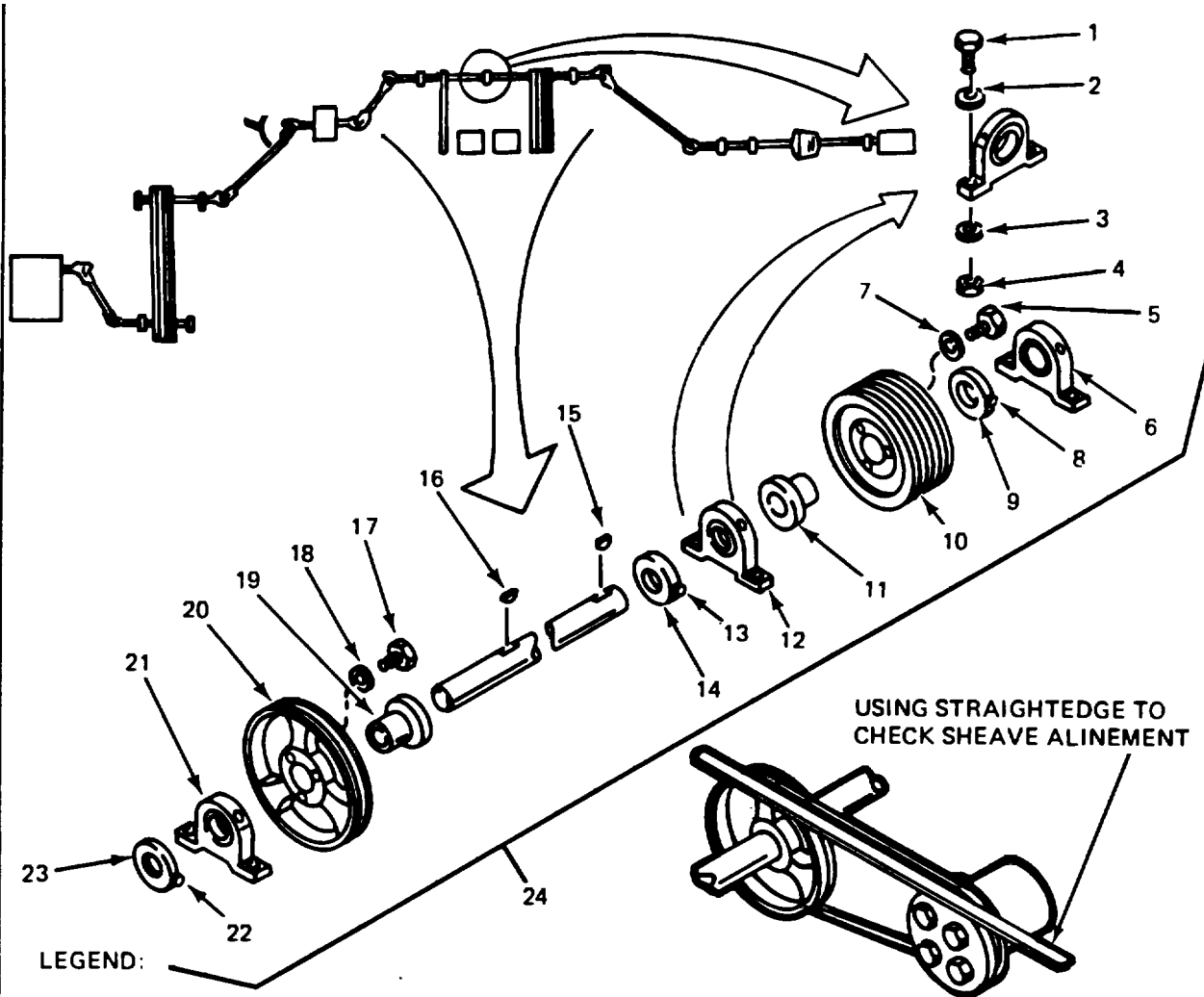
POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|--|--|
| 1. Six hex bolts (1), nuts (4), washers (2) and lockwashers (3). | Remove from bearings (6), (12) and (21). |
| 2. Main shaft assembly (24). Remove. | |



LEGEND:

- | | | | |
|-------------------|-----------------|--------------------|-------------------------|
| 1. HEX BOLT (6) | 7. WASHER (3) | 13. SETSCREW | 19. BUSHING |
| 2. WASHER (6) | 8. SETSCREW (2) | 14. RETAINER RING | 20. SHEAVE |
| 3. LOCKWASHER (6) | 9. RETAINER | 15. WOODRUFF KEY | 21. BEARING |
| 4. NUT (6) | 10. SHEAVE | 16. WOODRUFF KEY | 22. SETSCREW (2) |
| 5. HEX BOLT (3) | 11. BUSHING | 17. HEX BOLT (3) | 23. RETAINER RING |
| 6. BEARING | 12. BEARING | 18. LOCKWASHER (3) | 24. MAIN SHAFT ASSEMBLY |

TA 076182

POWER TRAIN.

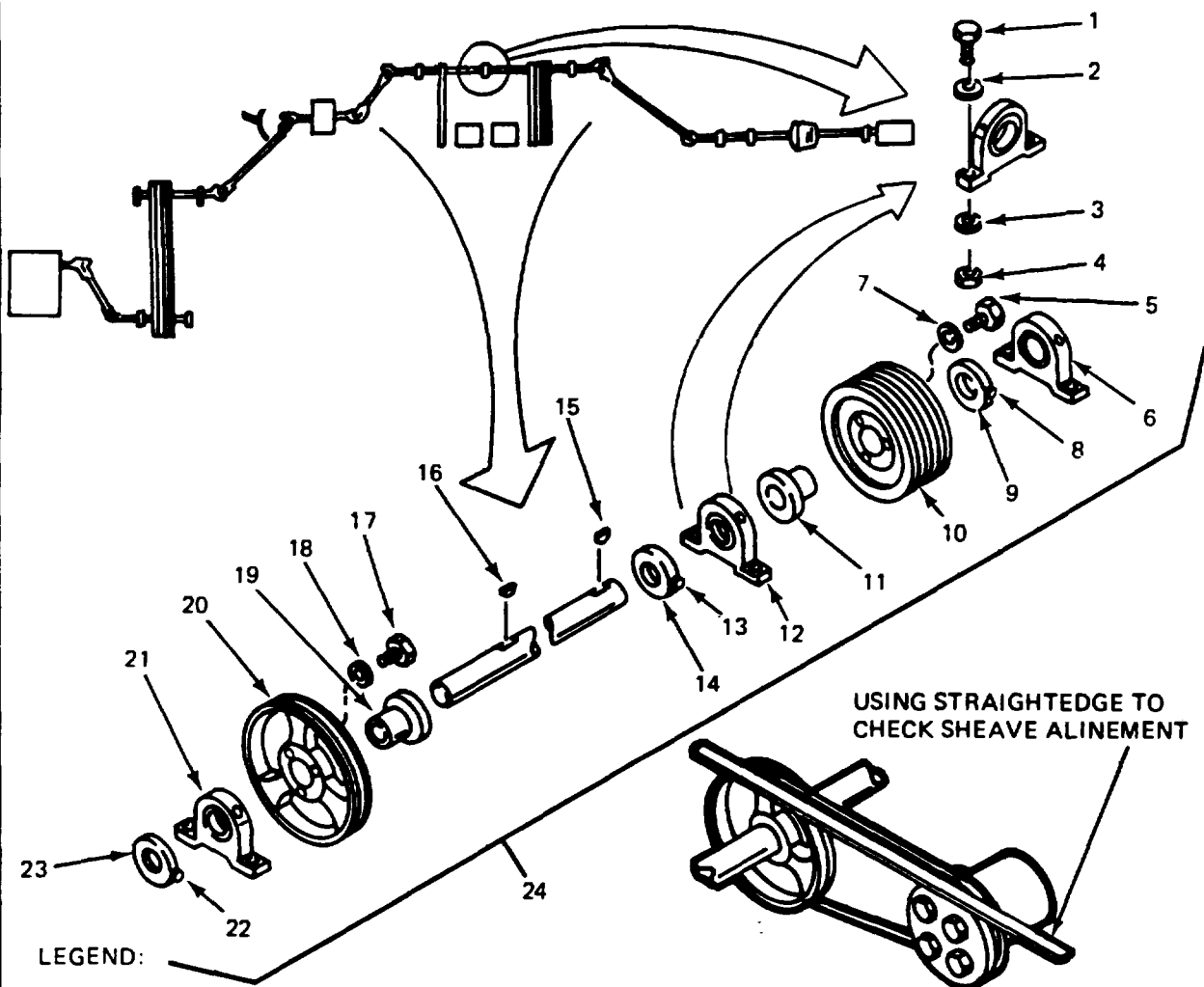
4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY		
NOTE		
Prior to the disassembly of the main shaft assembly, all paint must be removed from shaft. A light coat of oil applied to the shaft will aid in the removal of the component parts. Punch mark shaft, adjacent to bearing retainer rings and sheave bushings, so that they can be re-aligned properly at time of assembly.		
3. Two setscrews (22).	Loosen.	
4. Bearing (21) and retainer (23).	Remove.	Tap off gently, using soft headed hammer.
5. Hex bolts (17) and lockwashers (18).	Remove.	
6. Hex bolts (17) holes.	Install in tapered pusher and bushing separate.	Tighten evenly until sheave
7. Sheave (20).	Remove.	
8. Bushing (19)	Remove.	Tap off gently, using soft
9. Woodruff key (16).	Remove.	
10. Setscrew (13).	Loosen.	There are two setscrews.
11. Bearing (12) and retainer ring (14).	Remove.	Tap off gently, using soft headed hammer.
12. Three hex bolts (5) and three washers (7).	Remove.	
13. Three hex bolts (5).	Install in tapered pusher holes.	Tighten evenly until sheave and bushing separate.
14. Sheave (10).	Remove.	
15. Bushing (11) and woodruff key (15).	Remove.	Tap off gently, using soft headed hammer.
16. Setscrew (8).	Loosen.	
17. Bearing (6) and retainer (9).	Remove.	Tap off gently, using soft headed hammer.

POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | | | |
|-------------------|-----------------|--------------------|-------------------------|
| 1. HEX BOLT (6) | 7. WASHER (3) | 13. SETSCREW | 19. BUSHING |
| 2. WASHER (6) | 8. SETSCREW (2) | 14. RETAINER RING | 20. SHEAVE |
| 3. LOCKWASHER (6) | 9. RETAINER | 15. WOODRUFF KEY | 21. BEARING |
| 4. NUT (6) | 10. SHEAVE | 16. WOODRUFF KEY | 22. SETSCREW (2) |
| 5. HEX BOLT (3) | 11. BUSHING | 17. HEX BOLT (3) | 23. RETAINER RING |
| 6. BEARING | 12. BEARING | 18. LOCKWASHER (3) | 24. MAIN SHAFT ASSEMBLY |

TA 076183

POWER TRAIN.

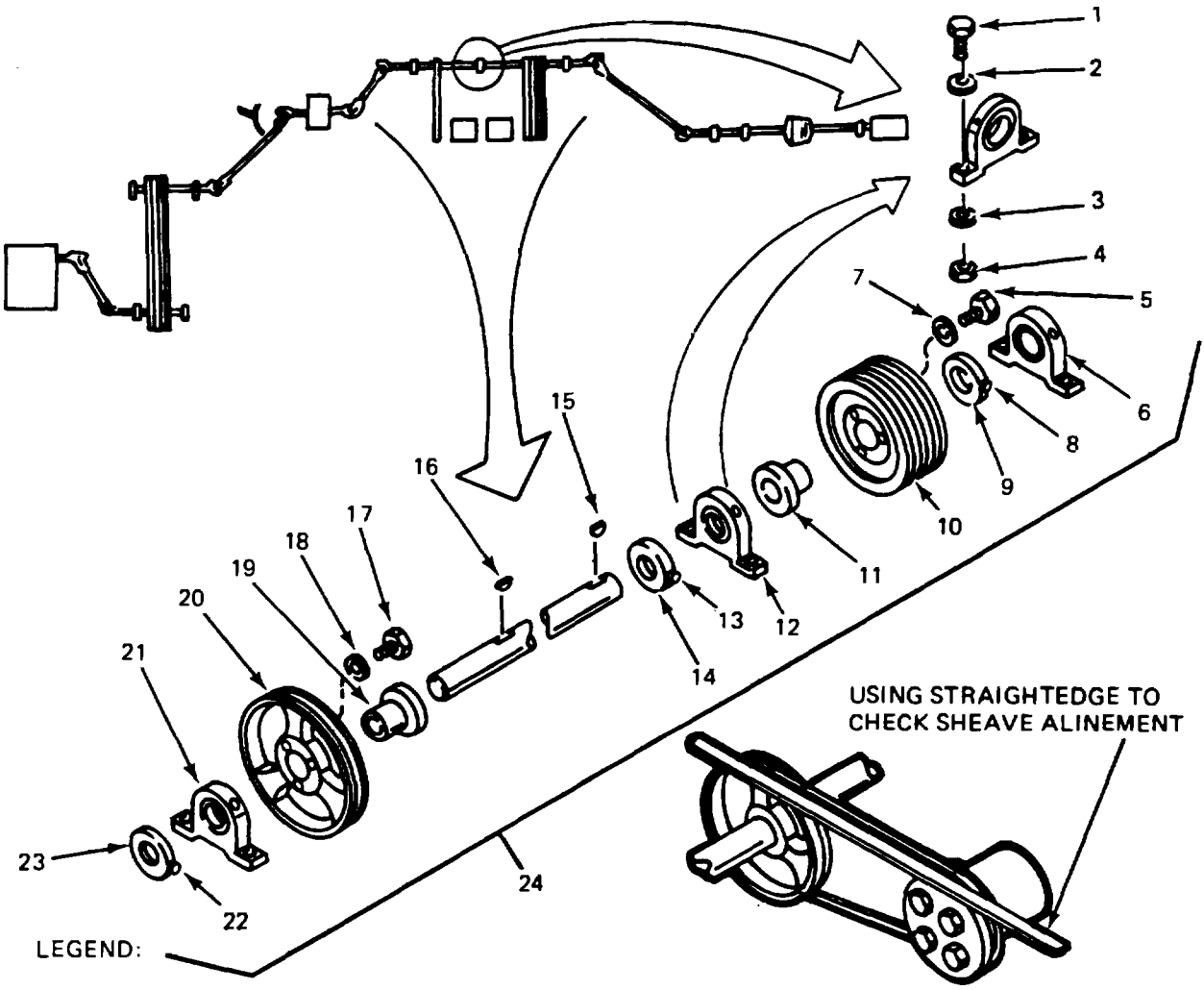
4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
C. CLEANING AND INSPECTION		
18. All parts.	Clean in SD-2 dry cleaning solvent.	
19. Bearings.	Inspect for: a. Wear. b. Cracks. c. Breaks. d. Deformities. e. Smooth operation.	
20. Sheaves, retainers, bushings and shaft.	Inspect for: a. Wear. b. Cracks. c. Breaks. d. Bends. e. Deformities.	
D. ASSEMBLY		
NOTE		
A light coat of oil, applied to the shaft and mating surface of component parts, will aid in the reassembly.		
21. Bearing (6) and Install retainer (9).	Tap on gently, using soft	headed hammer.
22. Retainer (9).	Aline with punch marks.	
23. Setscrew (8).	Tighten.	
24. Bushing (11) and woodruff key (15).	Install.	
25. Bushing (11). Aline with punch marks.	Tap on gently, using soft	headed hammer.
26. Sheave (10).	Install.	
27. Hex bolts (5) and washers (7).	Tighten bolts evenly.	
28. Retainer (14) and Install bearing (12).		
29. Retainer ring (14).	Aline with punch marks.	
30. Setscrew (13).	Tighten.	

POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM ACTION REMARKS



LEGEND:

- | | | | |
|-------------------|-----------------|--------------------|-------------------------|
| 1. HEX BOLT (6) | 7. WASHER (3) | 13. SETSCREW | 19. BUSHING |
| 2. WASHER (6) | 8. SETSCREW (2) | 14. RETAINER RING | 20. SHEAVE |
| 3. LOCKWASHER (6) | 9. RETAINER | 15. WOODRUFF KEY | 21. BEARING |
| 4. NUT (6) | 10. SHEAVE | 16. WOODRUFF KEY | 22. SETSCREW (2) |
| 5. HEX BOLT (3) | 11. BUSHING | 17. HEX BOLT (3) | 23. RETAINER RING |
| 6. BEARING | 12. BEARING | 18. LOCKWASHER (3) | 24. MAIN SHAFT ASSEMBLY |

TA 076184

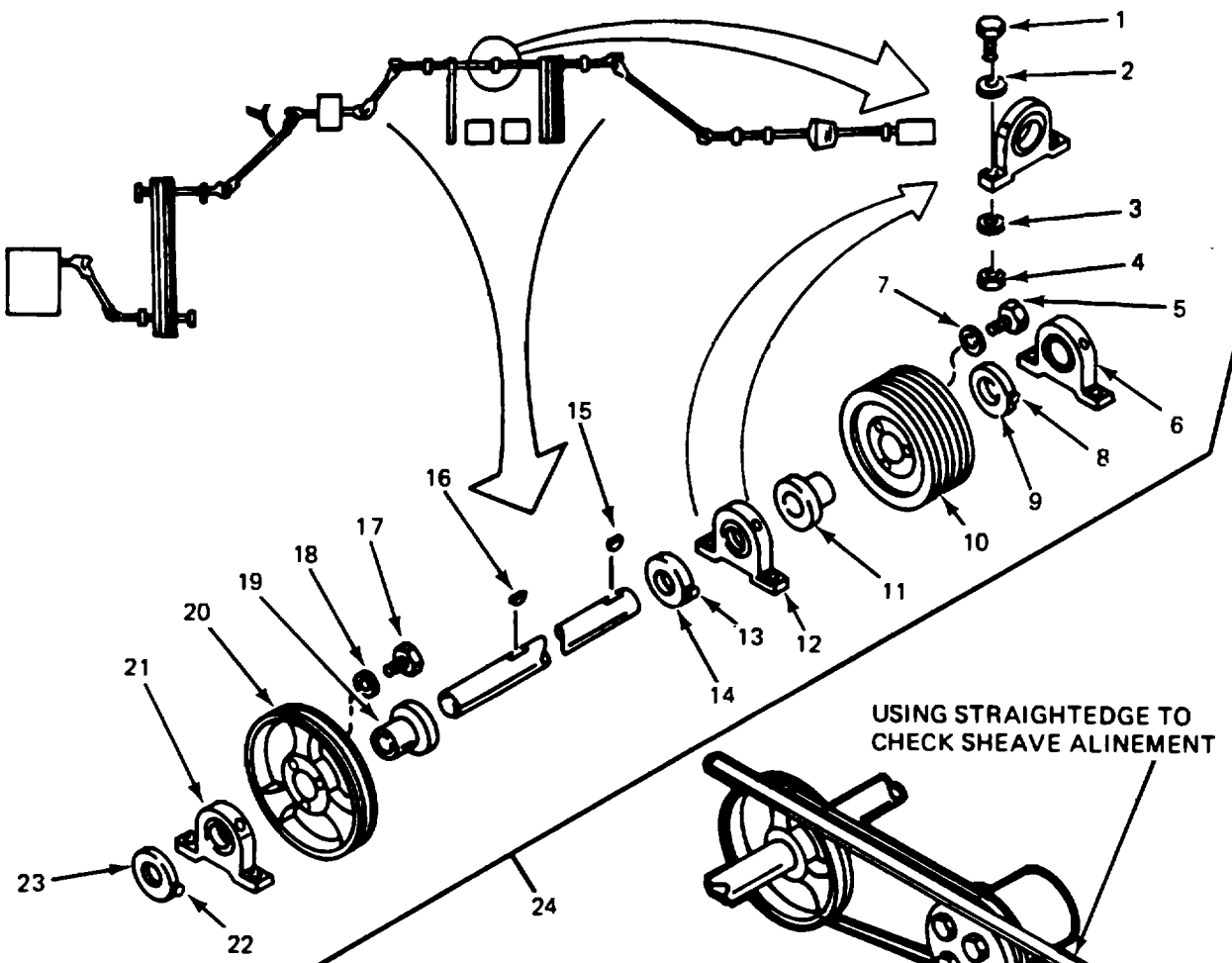
POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued)		
31. Bushing (19).	Install.	Tap on gently, using soft headed hammer.
32. Bushing (19).	Aline with punch marks.	
33. Sheave (20).	Install.	
34. Hex bolts (17) and lockwashers (18).	Tighten bolts evenly.	
35. Bearing (21) and retainer ring (23).	Install.	Tap on gently, using soft headed hammer.
36. Retainer ring (23).	Aline with punch marks.	
37. Setscrew (22).	Tighten.	
E. INSTALLATION.		
38. Main shaft assembly (24).	Place in vehicle and aline bearing mounting holes.	
39. Hex bolts (1), nuts (4), washers (2) and lockwashers (3).	Install finger tight.	
40. Universal joints.		Install those removed. Refer to paragraph 4-10.
41. Hydraulic pump belts.	Install.	Refer to paragraph 4-17.
42. Water pump belts.	Install.	Refer to paragraph 4-16.
43. Reversing gear box.	Install.	Refer to paragraph 4-8.
44. Lubricate.	Refer to LO 5-3895-372-12.	

POWER TRAIN.

412. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



USING STRAIGHTEDGE TO CHECK SHEAVE ALINEMENT

LEGEND:

- | | | | |
|-------------------|-----------------|--------------------|-------------------------|
| 1. HEX BOLT (6) | 7. WASHER (3) | 13. SETSCREW | 19. BUSHING |
| 2. WASHER (6) | 8. SETSCREW (2) | 14. RETAINER RING | 20. SHEAVE |
| 3. LOCKWASHER (6) | 9. RETAINER | 15. WOODRUFF KEY | 21. BEARING |
| 4. NUT (6) | 10. SHEAVE | 16. WOODRUFF KEY | 22. SETSCREW (2) |
| 5. HEX BOLT (3) | 11. BUSHING | 17. HEX BOLT (3) | 23. RETAINER RING |
| 6. BEARING | 12. BEARING | 18. LOCKWASHER (3) | 24. MAIN SHAFT ASSEMBLY |

TA 076185

POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM ACTION REMARKS

F. CHECKING ALINEMENT.

NOTE

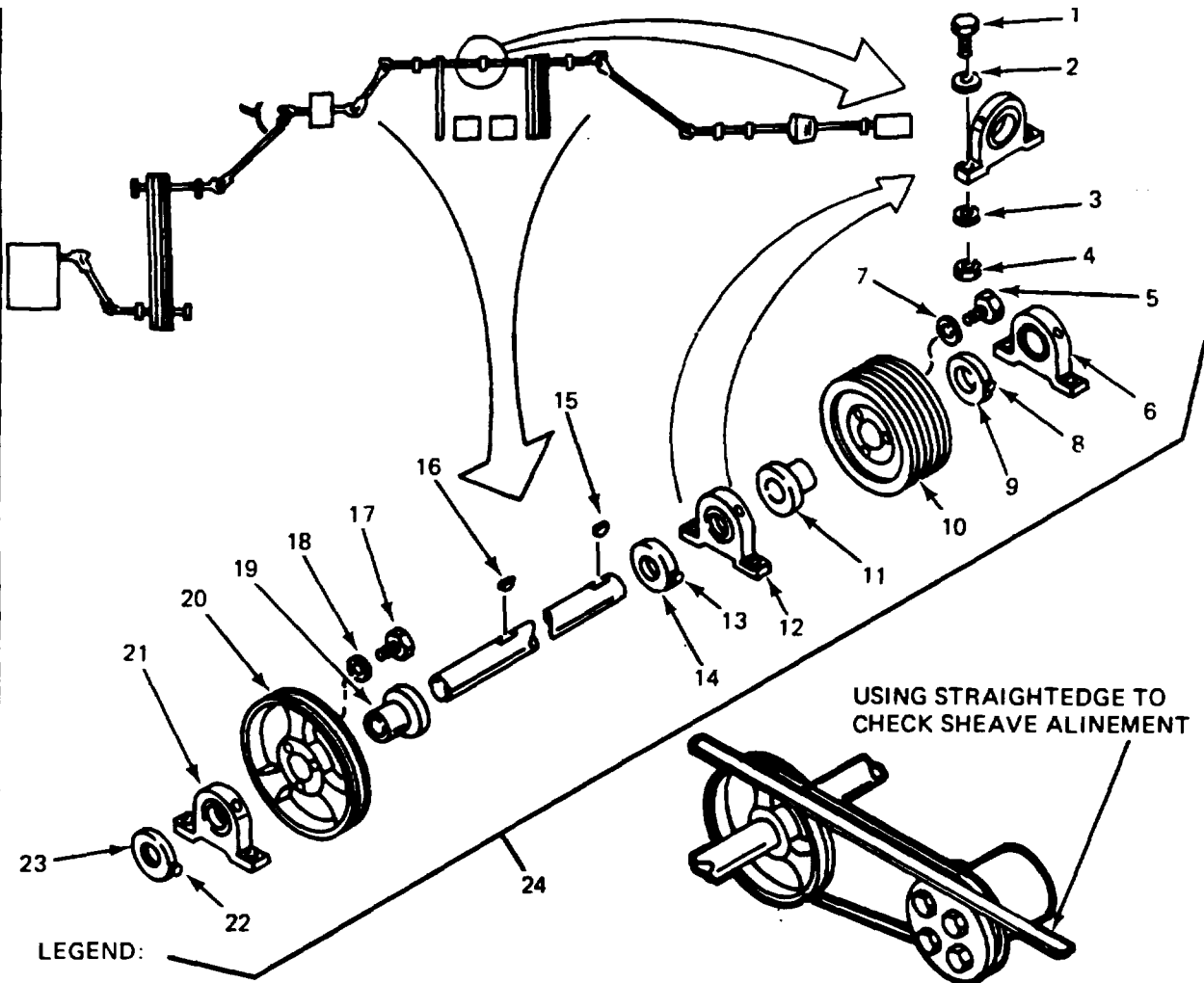
Check the alinement of both sheaves as shown in illustration. If alinement is correct, this procedure is completed. If it is necessary to re-align the sheaves, follow steps below and re-check alinement.

45.	V-belts.	Remove as needed.	Refer to paragraph 4-16 or 4-17.
46.	Hex bolts (5) and washers (7) or hex bolts (17) and washers (18).	Remove.	
47.	Sheave (10) or (20).	Remove.	
48.	Bushing (11) or (19).	Tap with soft headed hammer to aline.	
49.	Sheave (10) or (20).	Install.	
50.	Three hex bolts (5) and washers (7) or hex bolts (17) and washers (18).	Install and tighten.	
51.	V-belts.	Install	Refer to paragraph 4-16 or 4-17.
52.	Re-check alinement.		

POWER TRAIN.

4-12. MAIN SHAFT MAINTENANCE (Continued).

LOCATION/ITEM ACTION REMARKS



USING STRAIGHTEDGE TO CHECK SHEAVE ALINEMENT

LEGEND:

- | | | | |
|-------------------|-----------------|--------------------|-------------------------|
| 1. HEX BOLT (6) | 7. WASHER (3) | 13. SETSCREW | 19. BUSHING |
| 2. WASHER (6) | 8. SETSCREW (2) | 14. RETAINER RING | 20. SHEAVE |
| 3. LOCKWASHER (6) | 9. RETAINER | 15. WOODRUFF KEY | 21. BEARING |
| 4. NUT (6) | 10. SHEAVE | 16. WOODRUFF KEY | 22. SETSCREW (2) |
| 5. HEX BOLT (3) | 11. BUSHING | 17. HEX BOLT (3) | 23. RETAINER RING |
| 6. BEARING | 12. BEARING | 18. LOCKWASHER (3) | 24. MAIN SHAFT ASSEMBLY |

TA 076186

POWER TRAIN.

4-13. PTO BELTS SHAFT ASSEMBLIES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Disassembly. (30)
 - b. Cleaning and Inspection. (20)
 - c. Assembly. (30)
- Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

M919.

4-12A.

Shaft Assemblies Removed.
(as Needed).
4-16A & 4-17A. Belts Loosened.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

SD-2 Dry Cleaning Solvent (Refer to Appendix C).

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895372-12.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 4-1.

POWER TRAIN.

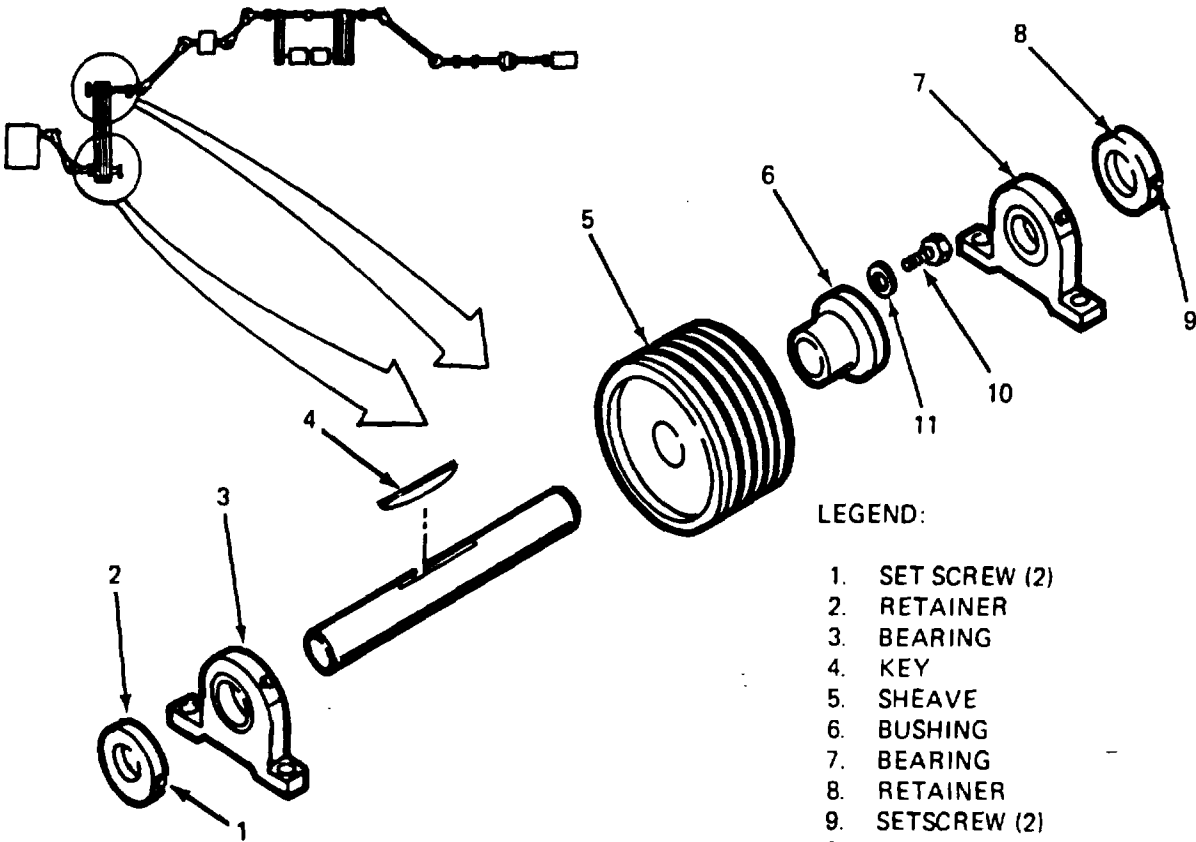
4-13. PTO BELTS SHAFT ASSEMBLIES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. DISASSEMBLY.

NOTE

Prior to the disassembly of shaft assemblies, shafts must be cleaned thoroughly. Use emery paper to remove all paint. Punch mark the shafts, adjacent to the bearing retainers and split bushing, to aid in the alinement of the sheaves and bearings at time of assembly.



LEGEND:

- 1. SET SCREW (2)
- 2. RETAINER
- 3. BEARING
- 4. KEY
- 5. SHEAVE
- 6. BUSHING
- 7. BEARING
- 8. RETAINER
- 9. SETSCREW (2)
- 10. HEX BOLT (3)
- 11. WASHER (3)

TA 076187

POWER TRAIN.

4-13. PTO BELTS SHAFT ASSEMBLIES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. DISASSEMBLY (Continued).		
1. Two retainer setscrews	Loosen.	Two on each retainer. (1) and (9).
2. Bearings (3) and (7) and retainers (2) and	Remove.	Tap off gently using soft headed hammer. (8).
3. Three hex bolts (10)	Remove. and washers (11).	
4. Three hex bolts (10).	Install in three tapered pusher holes and tighten evenly until sheave (5) and bushing (6) separate.	
5. Sheave (5).	Remove.	
6. Bushing (6) and key (4).	Remove.	Tap off gently using soft headed hammer.
B. CLEANING AND INSPECTION.		
7. All parts.	Clean all parts in SD-2 dry cleaning solvent.	
8. All parts.	Inspect for: a. Cracks. b. Breaks. c. Burrs. d. Excessive wear. e. Deterioration.	
C. ASSEMBLY.		
9. Bushing (6) and key (4).	Install.	Tap onto shaft gently using soft headed hammer. Aline bushing with punch marks.
10. Sheave (5).	Install.	
11. Three hex bolts (10) and washers (11).	Install. Tighten evenly.	
12. Bearings (3) and (7).	Install.	Tap on gently using soft headed
13. Retainers (2) and (8).	Install.	Tap on gently using soft headed
4-44		

POWER TRAIN.

4-13. PTO BELTS SHAFT ASSEMBLIES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

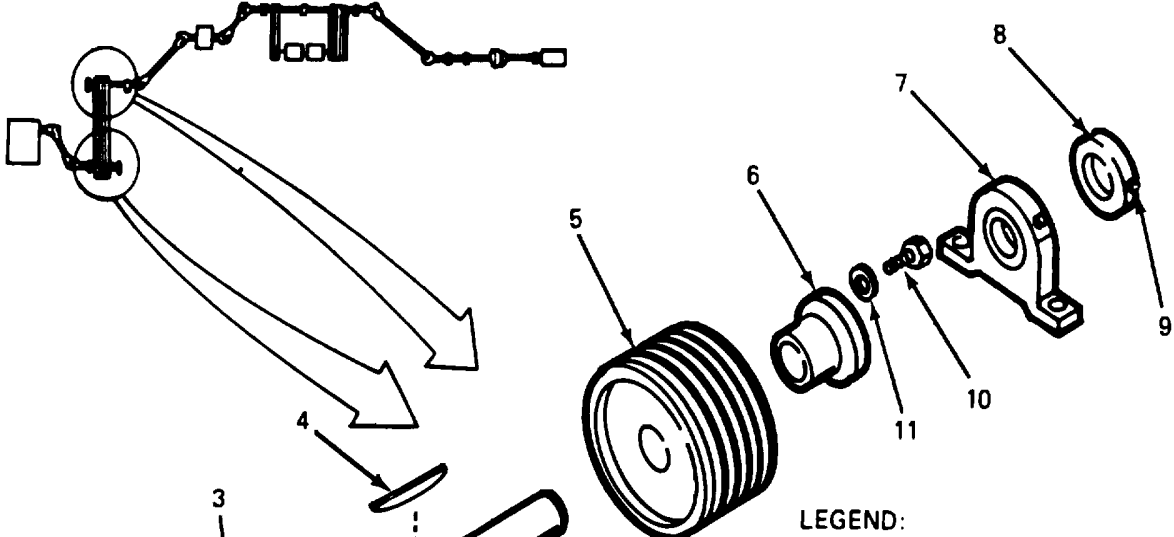
C. ASSEMBLY (Continued).

14. Retainers (2) and (8).
 Align with punch marks and tighten two setscrews (1) and (9).

NOTE

Follow-on maintenance required:

Install shaft assemblies (refer to para 4-12 E and F).
 Lubricate (refer to LO 5-3895-372-12).



- LEGEND:
- 1. SET SCREW (2)
 - 2. RETAINER
 - 3. BEARING
 - 4. KEY
 - 5. SHEAVE
 - 6. BUSHING
 - 7. BEARING
 - 8. RETAINER
 - 9. SETSCREW (2)
 - 10. HEX BOLT (3)
 - 11. WASHER (3)

TA 076188

POWER TRAIN.

4-14. REVERSING GEAR BOX OUTPUT SHAFT MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Disassembly. (10)
 - c. Cleaning and Inspection. (15)
 - d. Assembly. (10)
 - e. Installation. (15)
- 60 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

4-BA.

Reversing Gear Box Removed.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Lockwire (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 4-1.

POWER TRAIN.

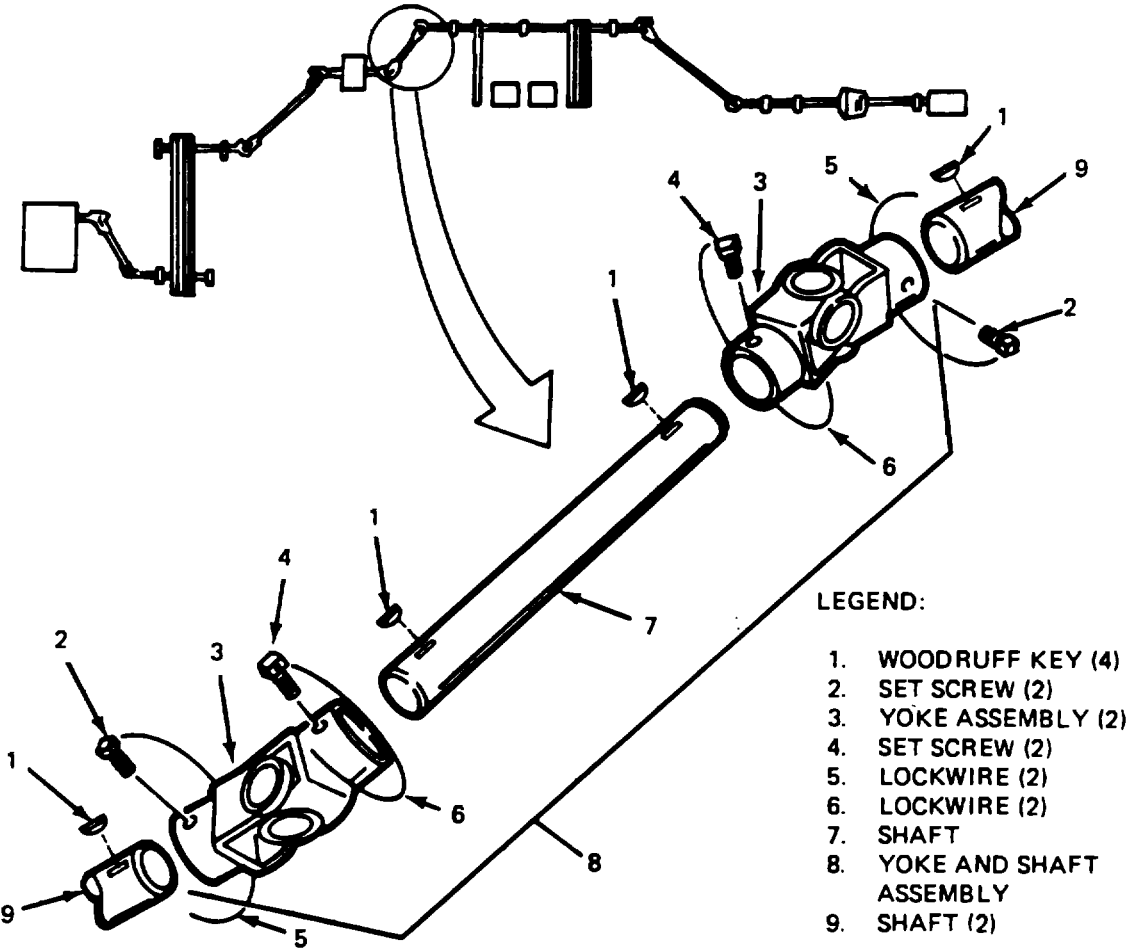
4-14. REVERSING GEAR BOX OUTPUT SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

1. Two lockwires (5).	Cut and remove.	Tap off with hammer. assembly (8).
2. Two setscrews (2).	Loosen.	
3. Yoke and shaft	Remove.	

NOTE
Be careful not to lose the two woodruff keys from the shafts (9).



TA 076189

POWER TRAIN.

4-14. REVERSING GEAR BOX OUTPUT SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Yoke and shaft assembly (8).	Place in suitable vise. shaft.	Be careful not to damage the
B. DISASSEMBLY.		
5. Two lockwires (6)	Cut and remove.	
6. Two setscrews (4).	Loosen.	
7. Two yoke assemblies (3).	Remove by tapping off with hammer.	Be careful not to lose the woodruff keys (1) from shaft (7).
C. CLEANING AND INSPECTION.		
8. Shaft.	Inspect for: a. Worn keyways. b. Wear. c. Bends. d. Cracks. e. Breaks.	Replace if necessary.
9. Yokes.	Inspect for: a. Worn keyways. b. Wear. c. Cracks. d. Breaks. e. Deformities.	
10. Universal joints.	Inspect for: a. Wear. b. Missing parts. c. Damage.	Replace if necessary (refer to para 410).
D. ASSEMBLY.		
11. Yoke assemblies (3).	Install.	Make sure two woodruff keys (1) are in place on shaft (7). Tap on with hammer.
12. Setscrews (4).	Tighten.	
13. Lockwires (6).	Install.	

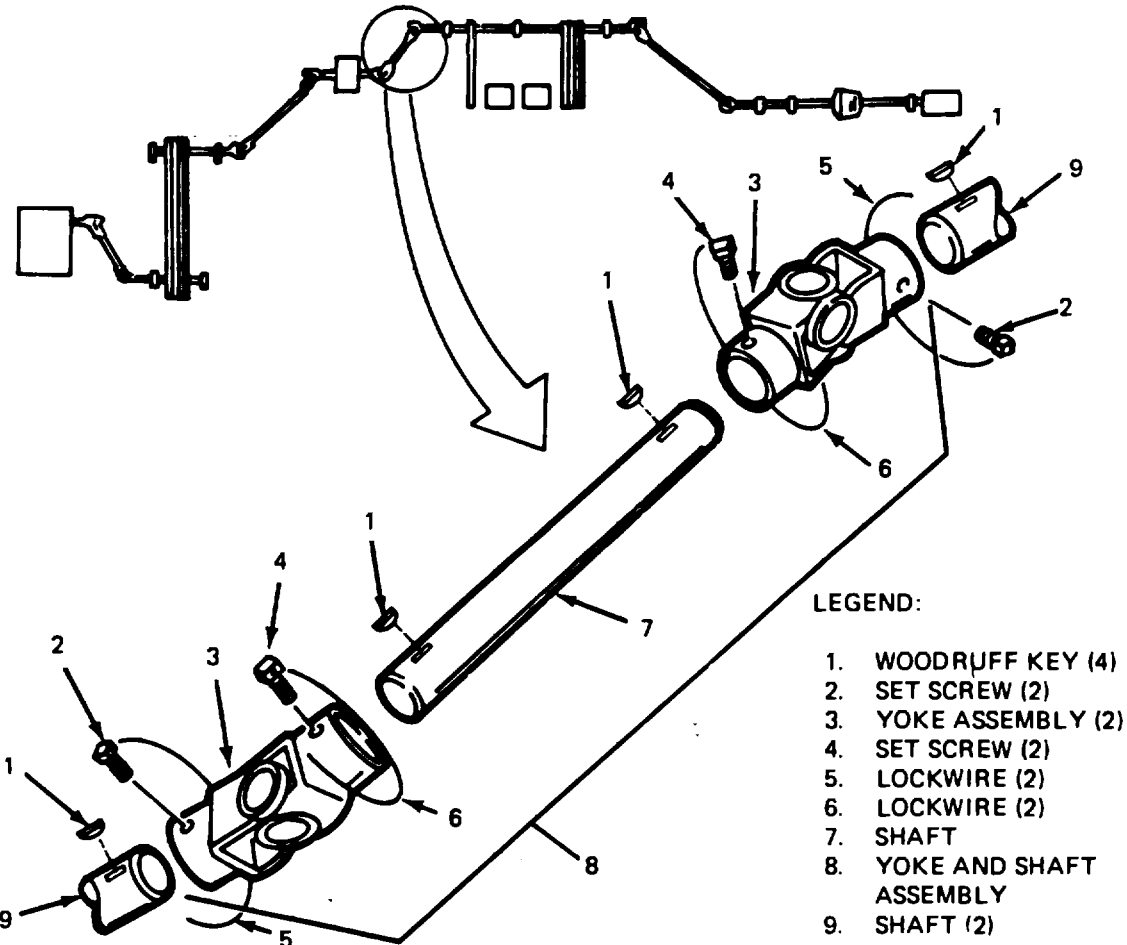
POWER TRAIN.

4-14. REVERSING GEAR BOX OUTPUT SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

E. INSTALLATION.

- | | | |
|----------------------------------|--|---|
| 14. Yoke and shaft assembly (8). | Install. | Make sure two woodruff keys (1) are in place on shafts (9). Tap on with hammer. |
| 15. Two setscrews (2). | Tighten and install two lockwires (5). | |



TA 076190

POWER TRAIN.

4-15. REAR INCLINE SHAFT MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS DESCRIPTION.)

- a. Removal. (30)
 - b. Disassembly. (10)
 - c. Cleaning and Inspection. (10)
 - d. Assembly. (10)
 - e. Installation. (30)
- 90 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH
None

CONDITION DESCRIPTION
None

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (PIN)
Lockwire (Refer to Appendix C).
SD-2 Dry Cleaning Solvent (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 4-1.

POWER TRAIN.

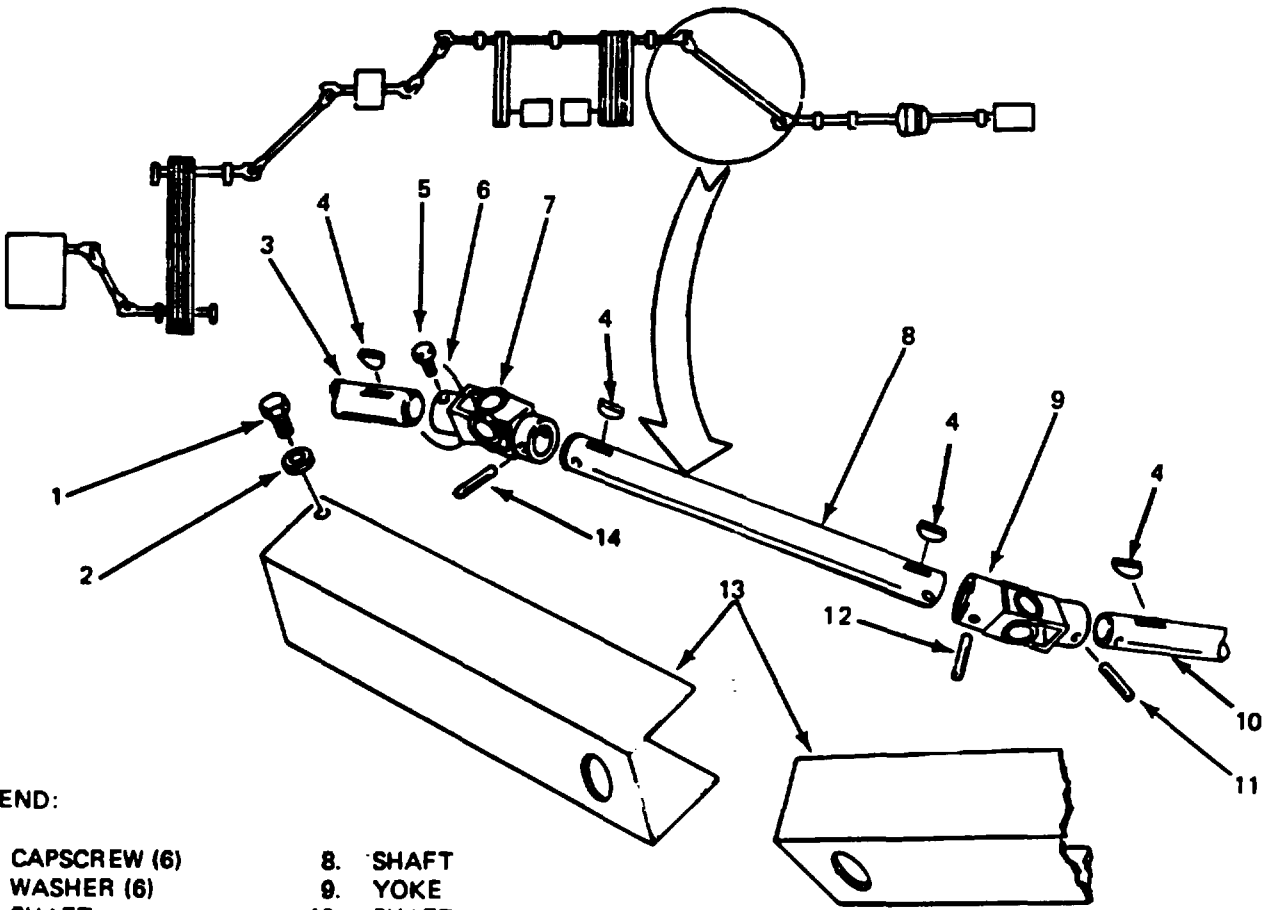
4-15. REAR INCLINE SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE
Punch mark yokes and shafts prior to removal.

A. REMOVAL.

- | | |
|--|-----------------|
| 1. Six capscrews (1)
and washers (2). | Remove. |
| 2. Covers (13). | Remove. |
| 3. Lockwire (6). | Cut and remove. |



LEGEND:

- | | |
|---------------------|---------------|
| 1. CAPSCREW (6) | 8. SHAFT |
| 2. WASHER (6) | 9. YOKE |
| 3. SHAFT | 10. SHAFT |
| 4. WOODRUFF KEY (4) | 11. ROLL PIN |
| 5. SET SCREW | 12. ROLL PIN |
| 6. LOCKWIRE | 13. COVER (2) |
| 7. YOKE | 14. ROLL PIN |

TA 076191

POWER TRAIN.

4-15. REAR INCLINE SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Setscrew (5).	Loosen.	
5. Yoke (7) and woodruff key (4).	Using hammer, tap yoke (7) off of shaft (3).	Be careful not to lose woodruff key (4).
6. Roll pin (12).	Remove.	Tap out with drift and hammer.
7. Shaft (8).	Remove from yoke (9) and key (4) from shaft (8).	Tap out with drift and hammer.
8. Shaft (8) with attached yoke (7).	Remove from vehicle.	
9. Roll pin (11).	Remove.	Tap out with drift and hammer.
10. Yoke (9).	Remove from shaft and remove key (4).	Tap off with hammer.
B. DISASSEMBLY.		
11. Shaft (8) with attached yoke (7).	Place in suitable vise.	
12. Roll pin (14).	Remove.	Tap out with drift and hammer.
13. Yoke (7).	Tap off of shaft (8) with hammer and remove key (4).	
C. CLEANING AND INSPECTION.		
14. All parts.	Clean in dry cleaning solvent.	
15. Shaft.	Inspect for: a. Cracks. b. Breaks. c. Bends. d. Abnormal wear. e. Worn keyway.	Replace if necessary.
16. Universal joints.	Inspect for: a. Cracks. b. Breaks. c. Wear. d. Missing parts.	Replace if necessary (refer to para 4 1 0).

POWER TRAIN.

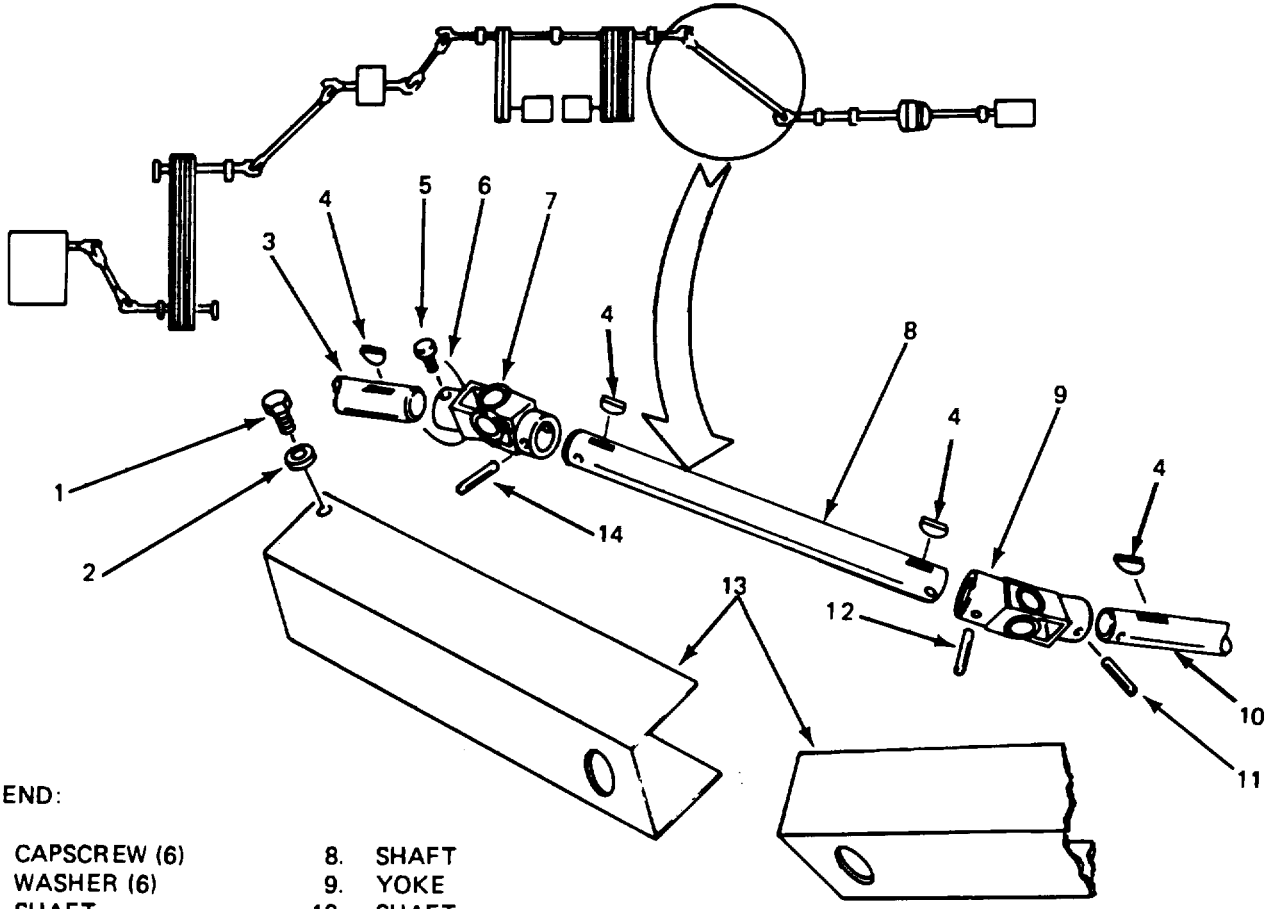
4-15. REAR INCLINE SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

D. ASSEMBLY.

NOTE

When installing yokes, make certain that punch marks on yokes and shafts are lined up.



LEGEND:

- | | |
|---------------------|---------------|
| 1. CAPSCREW (6) | 8. SHAFT |
| 2. WASHER (6) | 9. YOKE |
| 3. SHAFT | 10. SHAFT |
| 4. WOODRUFF KEY (4) | 11. ROLL PIN |
| 5. SET SCREW | 12. ROLL PIN |
| 6. LOCKWIRE | 13. COVER (2) |
| 7. YOKE | 14. ROLL PIN |

TA 076192

POWER TRAIN.**4-15. REAR INCLINE SHAFT MAINTENANCE (Continued).**

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued)		
17. Yoke (7) and woodruff key (4).	Install on shaft (8).	Tap onto shaft with a hammer.
18. Roll pin (14).	Install.	
E. INSTALLATION.		
19. Yoke (9) and woodruff key (4).	Install on shaft (10).	Tap onto shaft with a hammer.
20. Roll pin (11).	Install through shaft (10).	
21. Shaft (8) with attached yoke (7).	Place in vehicle.	
22. Shaft (8).	Install in yoke (9).	Tap in with hammer and drift, from above, while one man aligns yoke (9) and shaft (8).
23. Roll pin (12).	Install through shaft (8).	
24. Yoke (7) and woodruff key (4).	Install on shaft (3).	Tap on with hammer.
25. Setscrew (5).	Tighten and install lockwire (6).	Tap on with hammer.
26. Covers (13).	Install.	
27. Six capscrews (1) and washers (2).	Install and tighten.	

POWER TRAIN.

4-15. REAR INCLINE SHAFT MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
1. CAPSCREW (6)	8. SHAFT	
2. WASHER (6)	9. YOKE	
3. SHAFT	10. SHAFT	
4. WOODRUFF KEY (4)	11. ROLL PIN	
5. SET SCREW	12. ROLL PIN	
6. LOCKWIRE	13. COVER (2)	
7. YOKE	14. ROLL PIN	

TA 076193

POWER TRAIN.

4-16. WATER PUMP BELTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Loosening. (5)
 - b. Removal. (45)
 - c. Installation. (60)
 - d. Adjustment. (10)
- 120 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

4-8A.
4-17A.

Reversing Gear Box Removed.
Hydraulic Pump Belts Loosened.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
V-Belts, NP5032-010 (50663).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM -2325-2732-210.
Parking Brake Set.

GENERAL SAFETY INSTRUCTIONS
Transmission in Neutral.

TROUBLESHOOTING REFERENCES
Table 4-1.

POWER TRAIN.

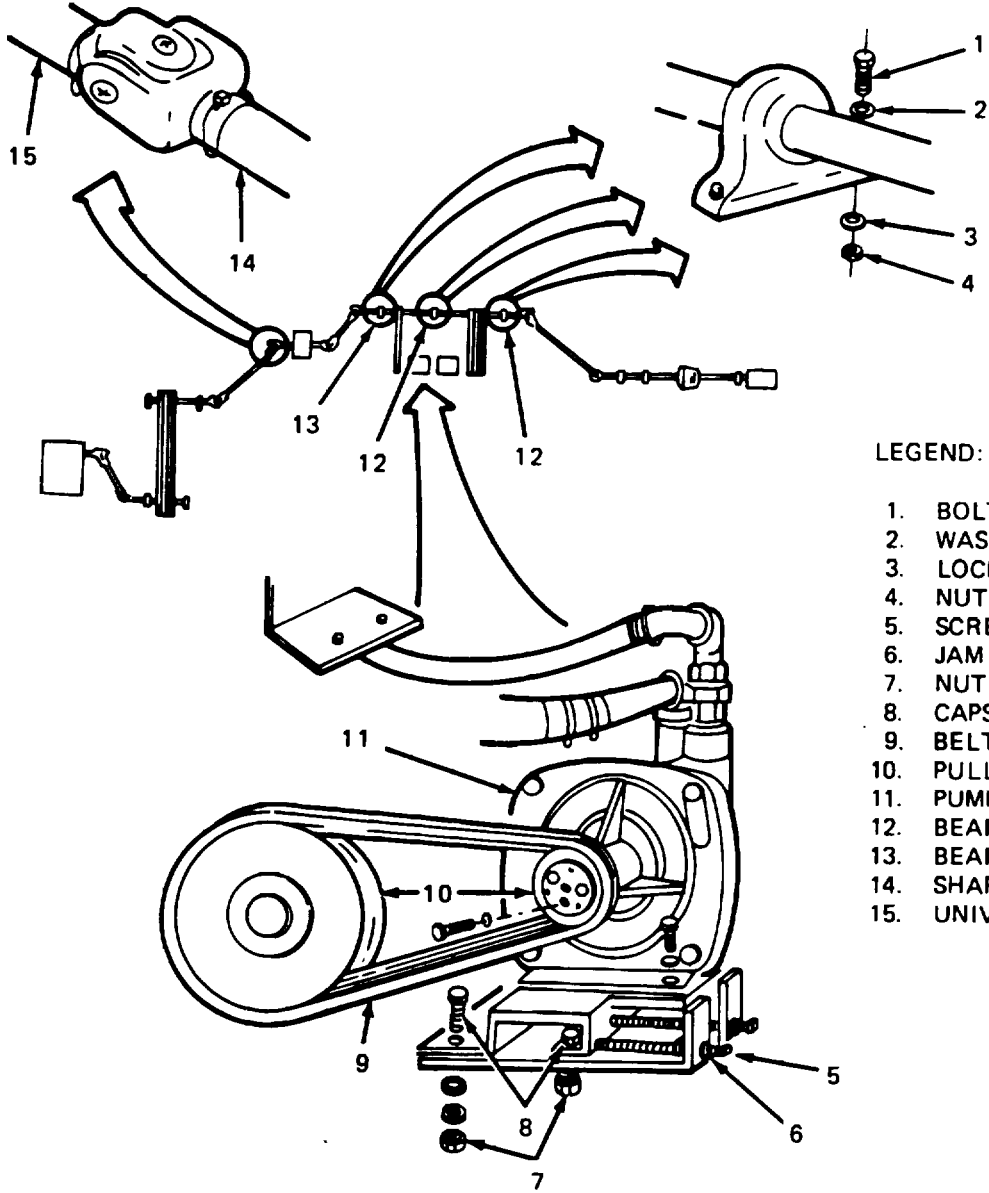
4-16. WATER PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. LOOSENING.

1. Two nuts (7) and capscrews (8).

Loosen.



LEGEND:

- 1. BOLT (6)
- 2. WASHER (6)
- 3. LOCKWASHER (6)
- 4. NUT (6)
- 5. SCREW (2)
- 6. JAM NUT (2)
- 7. NUT (2)
- 8. CAPSCREW (2)
- 9. BELT (2)
- 10. PULLEY (2)
- 11. PUMP
- 12. BEARING (2)
- 13. BEARING
- 14. SHAFT
- 15. UNIVERSAL

TA 076194

POWER TRAIN.

4-16. WATER PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. LOOSENING (Continued).

- | | | |
|----------------------|---------------|------------------------|
| 2. Two jam nuts (6). | Loosen. | One on each screw (5). |
| 3. Pump (11). | Slide inward. | |

NOTE

You may slide two belts (9) off of pulleys at this point.

B. REMOVAL.



Always replace the two belts (9) as a set.

- | | | |
|-----------------------|--|----------------------|
| 4. Two bearings (12). | Loosen four nuts (4) and bolts (1). | Two on each bearing. |
| 5. Bearing (13). | Remove two nuts (4), lockwashers (3), washers (2), and capscrews (1). | |
| 6. Two belts (9). | Slide under bearing (13) and off forward end of shaft (14) and universal (15). | |

C. INSTALLATION.

- | | | |
|--|---|--|
| 7. Two belts (9). | Slide over universal shaft (15). Under bearing (13) and over shaft (14). Install belts (9) on two pulleys (10). | |
| 8. Two bearings (12) and bearing (13). | a. Install bolts (1), washers (2), lockwashers (3), and nuts (4) on front bearing (13). | |
| | b. Use a straightedge to check that pulley sheaves are aligned. Tighten nuts (4) and bolts (1) on all three bearings. | |

POWER TRAIN.

4-16. WATER PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none">1. BOLT (6)2. WASHER (6)3. LOCKWASHER (6)4. NUT (6)5. SCREW (2)6. JAM NUT (2)7. NUT (2)8. CAPSCREW (2)9. BELT (2)10. PULLEY (2)11. PUMP12. BEARING (2)13. BEARING14. SHAFT15. UNIVERSAL		

TA 076195

POWER TRAIN.

4-16. WATER PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

D. ADJUSTMENT.



Measure belt tension at a point halfway between the pulleys.
Tighten adjusting nuts evenly.

9. Two adjusting nuts	a. Turn until belts (9) deflect (6). 9/64 in. (3.6 mm) under 6 lb (27 N-m) pressure. b. Use a straightedge to be sure pulleys (10) are alined. c. Tighten jam nuts (6).	If pulleys (10) are misalined, the nuts were tightened unevenly. One on each screw.
10. Two nuts (7) and capscrews (8).	Tighten.	
11. Two belts (9).	Make a final check on tension and pulley alinement.	

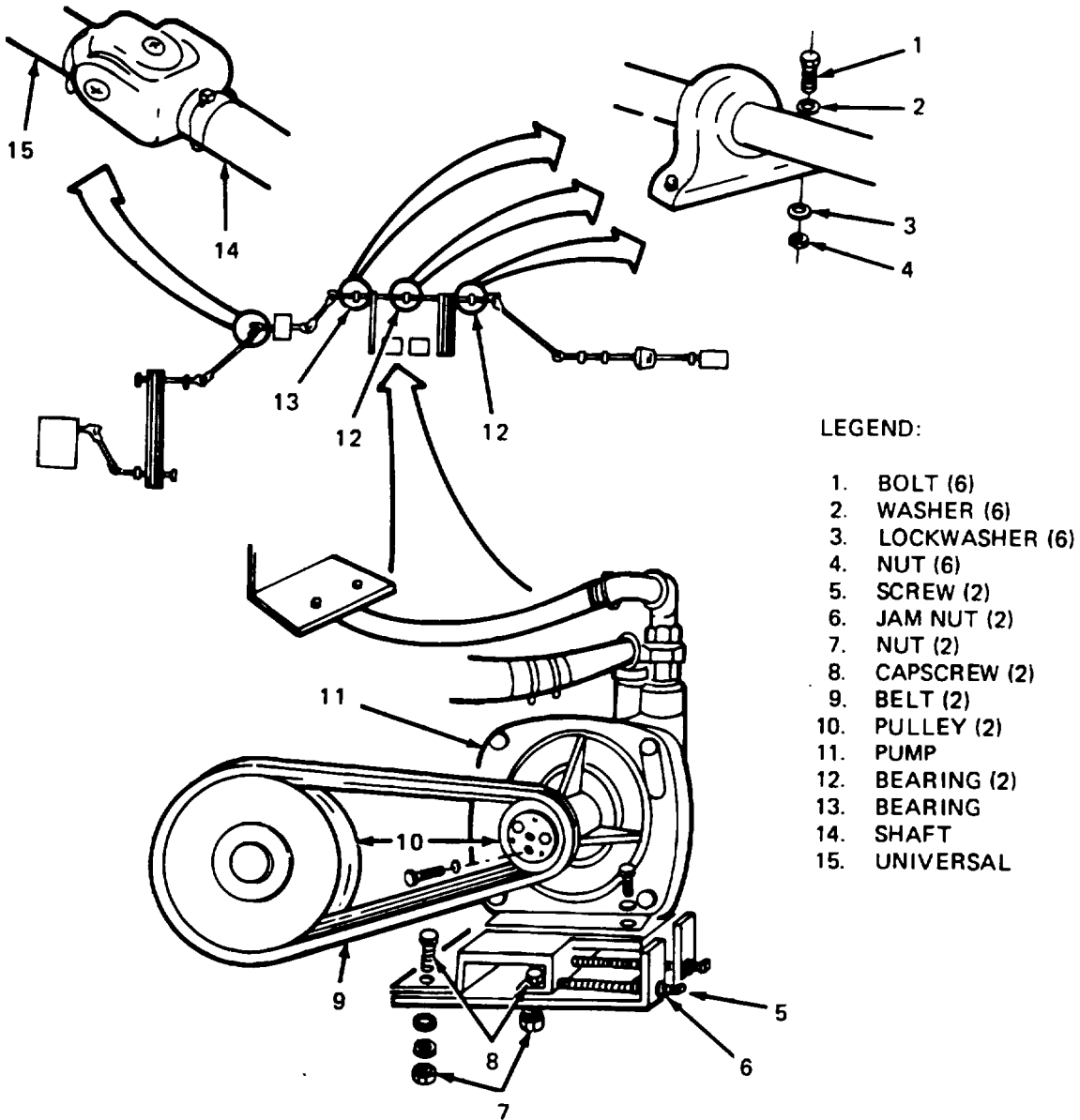
NOTE

Follow-on maintenance required:

Adjust hydraulic pump belts (para 4-17D).
Install reversing gear box (para 4-8B).

POWER TRAIN.

4-16. WATER PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1. BOLT (6)2. WASHER (6)3. LOCKWASHER (6)4. NUT (6)5. SCREW (2)6. JAM NUT (2)7. NUT (2)8. CAPSCREW (2)9. BELT (2)10. PULLEY (2)11. PUMP12. BEARING (2)13. BEARING14. SHAFT15. UNIVERSAL		

TA 076196

POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Loosening. (5)
 - b. Removal. (45)
 - c. Installation. (60)
 - d. Adjustment. (10)
- 120 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

4-16A.
10-12A.

Water Pump Belts Loosened.
Tech Cable Disconnected.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
V-Belts, NP5032002 (50663).
Lockwire (Refer to Appendix C).

PERSONNEL REQUIRED
Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 4-1.

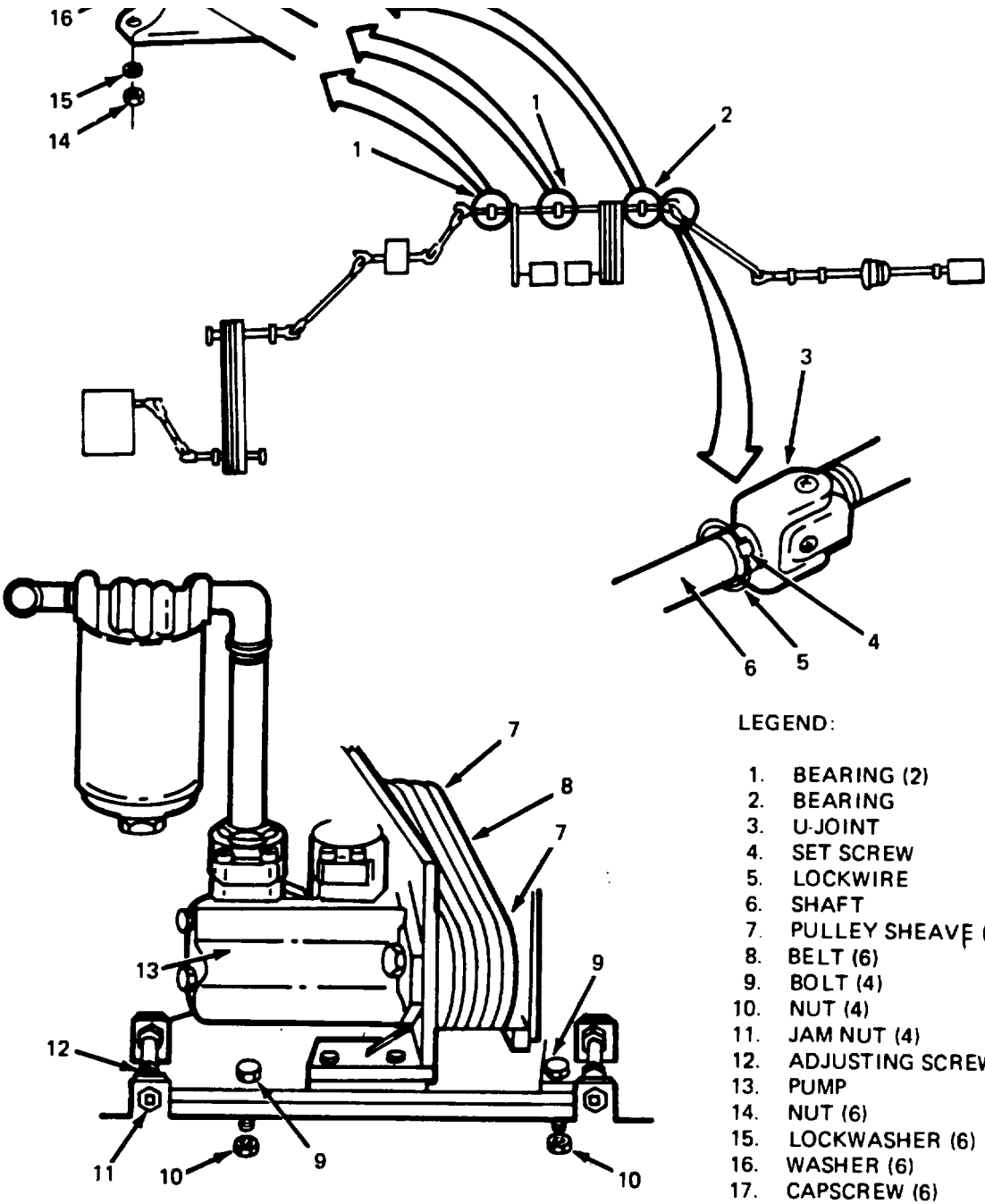
POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. LOOSENING.

- | | | |
|----------------------------------|---------|-----------------------------|
| 1. Four nuts (10) and bolts (9). | Loosen. | |
| 2. Four jam nuts (11). | Loosen | One on each adjusting screw |



- LEGEND:
- 1. BEARING (2)
 - 2. BEARING
 - 3. U-JOINT
 - 4. SET SCREW
 - 5. LOCKWIRE
 - 6. SHAFT
 - 7. PULLEY SHEAVE (2)
 - 8. BELT (6)
 - 9. BOLT (4)
 - 10. NUT (4)
 - 11. JAM NUT (4)
 - 12. ADJUSTING SCREW (2)
 - 13. PUMP
 - 14. NUT (6)
 - 15. LOCKWASHER (6)
 - 16. WASHER (6)
 - 17. CAPSCREW (6)

POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. LOOSENING (Continued).		
3. Pump (13).	Slide inward.	
<p>NOTE</p> <p>You may remove belts (8) from two pulleys sheaves (7) at this point.</p>		
B. REMOVAL.		
<p>NOTE</p> <p>Always replace the six belts (8) as a set.</p>		
4. Two bearings (1), and bearing (2).	Remove six nuts (14), lockwashers (15), washers (16) and bolts (17).	Two each bearing.
5. U-joints (3).	Be sure U-joints (3) and shaft (6) are punch marked.	
6. Lockwire (5).	Remove from setscrew (4).	
7. Setscrew (4).	Loosen.	
8. U-joint (3).	Slide rearwards off of shaft. Remove.	
C. INSTALLATION.		
9. Six belts (8).	Slide over shaft (6) and under bearing (2).	
10. U-joint (3).	Slide shaft (6) into U-joint (3). Be sure punchmarks are alined.	
11. Setscrew (4).	Tighten.	Shaft must not slip in collar.
12. Lockwire (5).	Install.	
13. Two bearings (1), and (2).	<p>a. Loosely install six cap-screws (17), washers (16), lockwashers (15), and nuts (14).</p> <p>b. Use a straightedge to check that two pulley sheaves (7) are alined.</p> <p>c. Tighten nuts (14) and bolts (17) on all three bearings.</p>	

POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
		<p>LEGEND:</p> <ul style="list-style-type: none"> 1. BEARING (2) 2. BEARING 3. U-JOINT 4. SET SCREW 5. LOCKWIRE 6. SHAFT 7. PULLEY SHEAVE (2) 8. BELT (6) 9. BOLT (4) 10. NUT (4) 11. JAM NUT (4) 12. ADJUSTING SCREW (2) 13. PUMP 14. NUT (6) 15. LOCKWASHER (6) 16. WASHER (6) 17. CAPSCREW (6)

TA 076198

POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ADJUSTMENT.		
<p style="text-align: center;">NOTE Measure belt tension at a point halfway between the pulleys.</p>		
14. Two adjusting screws (12).	<p>a. Tighten adjusting screws evenly.</p> <p>b. Position pump so that belts deflect 5/32 in. (4.0 mm) under 6 lb. (27 N-m) pressure.</p> <p>c. Use a straightedge to check pulley sheave alignment.</p>	If pulley sheaves are misaligned, adjusting screws (12) were not tightened evenly.
15. Four jam nuts (11).	Tighten.	Two on each screw.
16. Four nuts (10) and bolts (9).	Tighten.	
17. Six belts (8).	Make a final check on tension and pulley alignment.	
<p style="text-align: center;">NOTE</p> <p>Follow-on maintenance required: Adjust water pump belts (para 4-16D). Install tachometer cable (para 10- 12B).</p>		

POWER TRAIN.

4-17. HYDRAULIC PUMP BELTS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none"> 1. BEARING (2) 2. BEARING 3. U-JOINT 4. SET SCREW 5. LOCKWIRE 6. SHAFT 7. PULLEY SHEAVE (2) 8. BELT (6) 9. BOLT (4) 10. NUT (4) 11. JAM NUT (4) 12. ADJUSTING SCREW (2) 13. PUMP 14. NUT (6) 15. LOCKWASHER (6) 16. WASHER (6) 17. CAPSCREW (6) 		
<p>TA 076199</p>		

POWER TRAIN.

4-18. MAIN CLUTCH ADJUSTMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

Clutch Adjustment. (5)
5 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
4-15A Steps 1 & 2.

CONDITION DESCRIPTION
Covers Removed.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Penetrating Oil (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM ~53895-372-20P.

GENERAL SAFETY INSTRUCTIONS
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 4-1.

POWER TRAIN.

4-18. MAIN CLUTCH ADJUSTMENT (Continued).

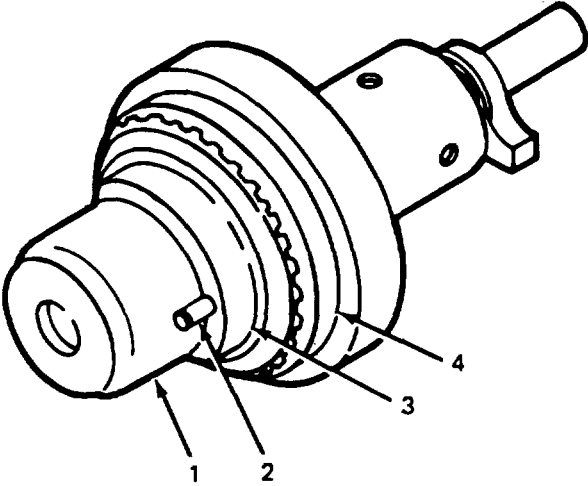
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

CLUTCH ADJUSTMENT.

- | | | |
|-----------------------------|---|---|
| 1. Pin (2). | a. Pull out.
b. Insert a small nail or wire through hole in pin. | |
| 2. Plate (4) and cover (1). | Hold plate in place. Turn cover clockwise to tighten clutch. | a. If cover will not turn, put penetrating oil at oil point (3).
b. Adjust so clutch lever snaps or locks tight. |

NOTE

Clutch will not hold until pin is pushed back in.



- LEGEND:
- 1. COVER
 - 2. PIN
 - 3. OILPOINT
 - 4. PLATE

TA 076200

POWER TRAIN.

4-18. MAIN CLUTCH ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

CLUTCH ADJUSTMENT.

- 3. Pin (2). a. Remove nail or wire.
- b. Turn cover (1) until Test under load.
pin locks into plate (4).

NOTE

If clutch slips quickly out of adjustment, check to see if pin (2) has slipped out of hole. If pin is broken, refer problem to Direct Support Maintenance.

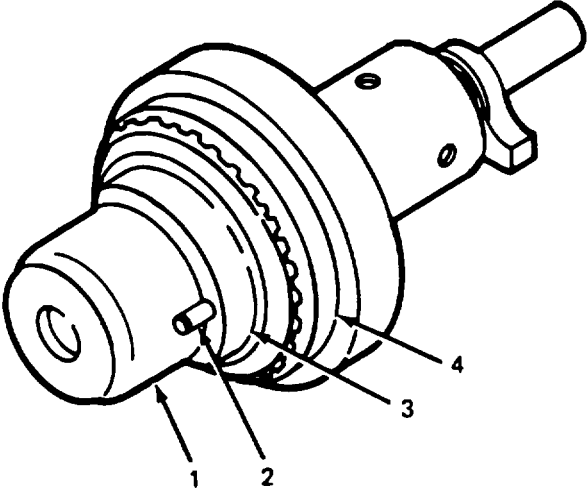
Follow-on maintenance action required:

Install covers (refer to para 4-15, steps 26 and 27).

POWER TRAIN.

4-18. MAIN CLUTCH ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. COVER
- 2. PIN
- 3. OILPOINT
- 4. PLATE

TA 076201

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Installation. (30)
 - c. Operational Check. (5)
- 65 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

EQUIPMENT
CONDITION
PARAGRAPH

8-14A.

10-12A.

4-15A Steps 1 & 2.

CONDITION DESCRIPTION

Cement Register Removed.
Tachometer and Mounting
Bracket Removed.
Cover Removed.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895-372-12.
TM 9-2320-273-10.
TM 5-3895-372-10.
TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 4-1.

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL. 1		
1. Water control valve lever (21).	Close.	Rotate clockwise.
2. Drain cock (16).	Open.	Use drain pan to catch water.
LEGEND:		
<ul style="list-style-type: none"> 1. SETSCREW 2. BOSTON COUPLER 3. HEX BOLT (8) 4. SETSCREW (4) 5. COUPLING 6. PIPE ASSEMBLY 7. CLAMP (4) 8. SHEAR BOLT 9. HOSE 10. LOCKWASHER (8) 11. HEX NUT (8) 12. NUT 13. FLATWASHER (4) 14. GEAR BOX 15. PIPE NIPPLE 16. DRAIN COCK 17. MOUNTING BRACKET 18. HEX NUT (2) 19. LOCKWASHER (2) 20. U-BOLT 21. WATER CONTROL VALVE LEVER 22. HEX NUT 23. U-BOLT (2) 24. LOCKWASHER (4) 25. HEX NUT (4) 		
TA 076202		

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
3. Four clamps (7).	Loosen.	
4. Hose (9).	Remove.	
5. Pipe nipple (15).	Remove.	
6. Pipe assembly (6).	Swing upward.	For added clearance.
7. Eight hex bolts (3), lockwashers (10), hex nuts (11) and four flatwashers (13).	Remove.	Flatwashers on lower bolts only.
8. Shear bolt (8) and nut (1 2).	Remove.	Relieve tension on bolt by turning input shaft on gear box.
9. One U-bolt (20), two hex nuts (18) and lockwashers (19).	Remove.	
10. Mounting bracket (17).	Remove.	
11. Hex nut (22).	Remove.	
12. Two U-bolts (23), four hex nuts (25) and lockwashers (24).	Remove.	
13. Water control valve lever.	Remove.	
14. Setscrew(1).	Loosen.	
15. Boston coupler (2).	Separate.	Slide rearward.
16. Four setscrews (4).	Loosen.	
17. Couplings (5).	Separate.	
18. Gear box (14).	Remove.	

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

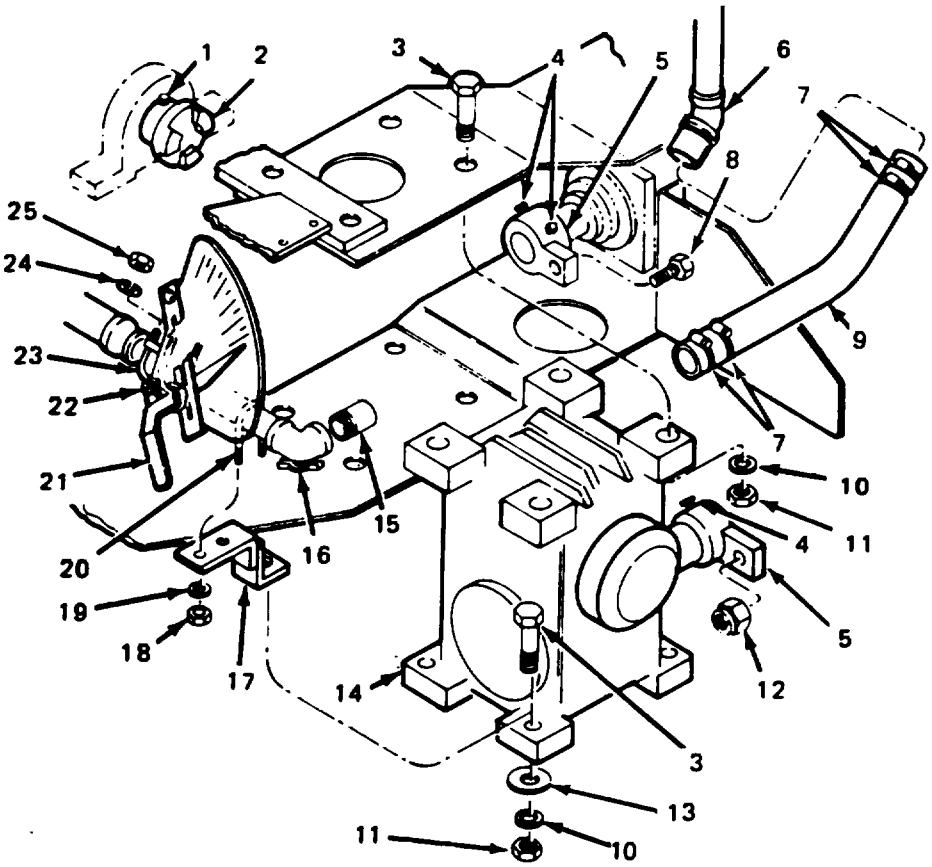
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. SETSCREW
- 2. BOSTON COUPLER
- 3. HEX BOLT (8)
- 4. SETSCREW (4)
- 5. COUPLING
- 6. PIPE ASSEMBLY
- 7. CLAMP (4)
- 8. SHEAR BOLT
- 9. HOSE
- 10. LOCKWASHER (8)
- 11. HEX NUT (8)
- 12. NUT
- 13. FLATWASHER (4)
- 14. GEAR BOX
- 15. PIPE NIPPLE
- 16. DRAIN COCK
- 17. MOUNTING BRACKET
- 18. HEX NUT (2)
- 19. LOCKWASHER (2)
- 20. U-BOLT
- 21. WATER CONTROL VALVE LEVER
- 22. HEX NUT
- 23. U-BOLT (2)
- 24. LOCKWASHER (4)
- 25. HEX NUT (4)



TA 076203

POWER TRAIN.**4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).**

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
19. Gear box (14).	Set in place.	
20. Couplings (5).	Slide together.	
21. Boston couplings (2).	Slide into place.	
22. Four setscrews (4).	Tighten securely.	
23. (1). Tighten securely.		
24. Water control valve lever (21).	Set in place.	
25. Two U-bolts (23), four hex nuts (25) and lockwashers (24).	Install.	Do not tighten.
26. Hex nut (22).	Install and tighten securely.	
27. Mounting bracket (17).	Set in place.	
28. One U-bolt (20), two hex nuts (18) and lockwashers (19).	Install.	Do not tighten.
29. Eight hex bolts (3), lockwashers (10), hex nuts (11) and four flatwashers (13).	Install and tighten securely.	Flatwashers on lower bolts only.
30. One U-bolt (20), two hex nuts (18), and lockwashers (19).	Tighten securely.	
31. Two U-bolts (23), four hex nuts (25), and lockwashers (24).	Tighten securely.	
32. Shear bolt (8) and nut (12).	Install and tighten securely.	Aline holes in coupling by turning input shaft on gear box.
33. Pipe assembly (6).	Swing downward into place.	
34. Pipe nipple (15).	Install and tighten.	Coat threads with liquid Teflon.

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

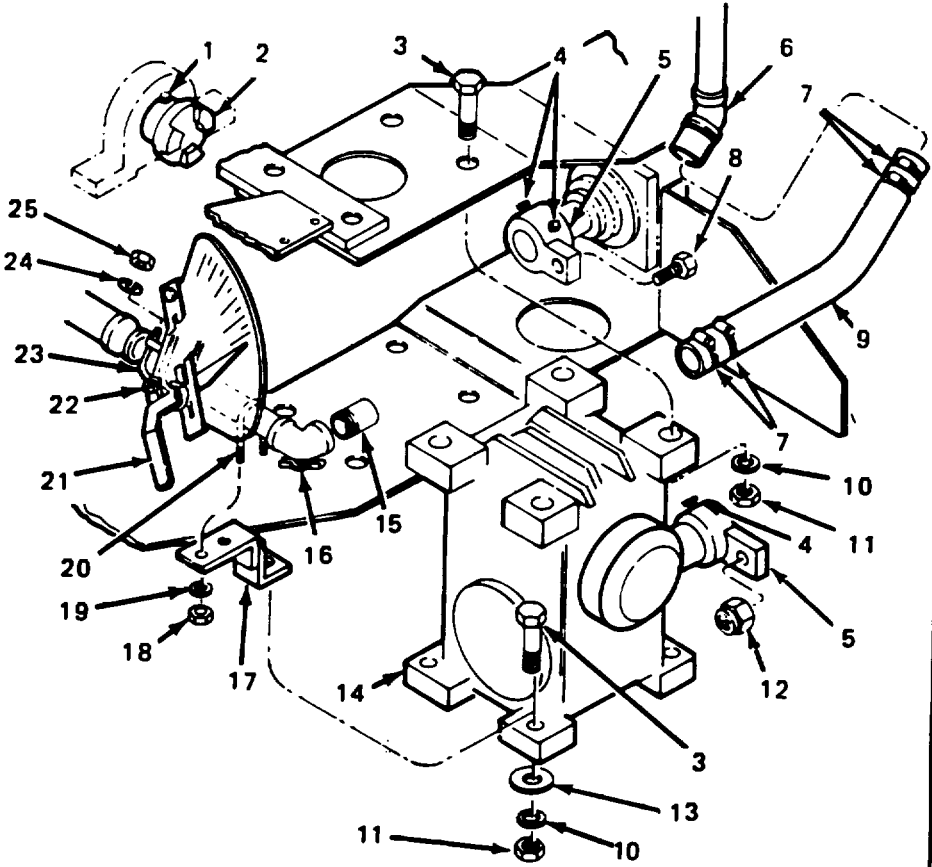
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. SETSCREW
- 2. BOSTON COUPLER
- 3. HEX BOLT (8)
- 4. SETSCREW (4)
- 5. COUPLING
- 6. PIPE ASSEMBLY
- 7. CLAMP (4)
- 8. SHEAR BOLT
- 9. HOSE
- 10. LOCKWASHER (8)
- 11. HEX NUT (8)
- 12. NUT
- 13. FLATWASHER (4)
- 14. GEAR BOX
- 15. PIPE NIPPLE
- 16. DRAIN COCK
- 17. MOUNTING BRACKET
- 18. HEX NUT (2)
- 19. LOCKWASHER (2)
- 20. U-BOLT
- 21. WATER CONTROL VALVE LEVER
- 22. HEX NUT
- 23. U-BOLT (2)
- 24. LOCKWASHER (4)
- 25. HEX NUT (4)



TA 076204

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
35. Hose (9).	Install.	
36. Four clamps (7).	Tighten securely.	
37. Drain cock (16).	Close.	
C. OPERATIONAL CHECK.		
38. Mixer body.	Start up and engage PTO. (Refer to TM 92320-273-10.)	
39. Main clutch.	Engage.	
40. Angle drive gear box.	Check for free operation while increasing tachometer rpm up to 1650.	Close sand and stone gates if bins are full.
41. Main clutch.	Disengage.	
42. Mixer body.	Shut down. (Refer to TM 92320-273-10.)	
NOTE		
Follow-on maintenance action required:		
Install cement meter register; refer to para -14B. Install tach and mounting bracket; refer to pare 10-12B. Install covers; refer to para 4-15E, steps 26 and 27.		

POWER TRAIN.

4-19. ANGLE DRIVE GEAR BOX MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ol style="list-style-type: none"> 1. SETSCREW 2. BOSTON COUPLER 3. HEX BOLT (8) 4. SETSCREW (4) 5. COUPLING 6. PIPE ASSEMBLY 7. CLAMP (4) 8. SHEAR BOLT 9. HOSE 10. LOCKWASHER (8) 11. HEX NUT (8) 12. NUT 13. FLATWASHER (4) 14. GEAR BOX 15. PIPE NIPPLE 16. DRAIN COCK 17. MOUNTING BRACKET 18. HEX NUT (2) 19. LOCKWASHER (2) 20. U-BOLT 21. WATER CONTROL VALVE LEVER 22. HEX NUT 23. U-BOLT (2) 24. LOCKWASHER (4) 25. HEX NUT (4) 		
		TA 076205

CHAPTER 5

WATER SYSTEM

5-1. OVERVIEW.

This chapter provides you with the following information related to water system maintenance:

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedures.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

5-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

5-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for maintenance procedures described in this chapter are limited to water pressure gage, 0-75 psi (0-500 kPa). (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

5-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

5-5. INTRODUCTION.

Troubleshooting procedures for the water system are given in table 5-1. It is arranged by malfunctions, in the following order:

- a. Mix water does not flow at a steady rate (Malfunction No. 1).
- b. Water line valves leak (Malfunction No. 2).
- c. Quick-opening valve sticks (Malfunction No. 3).

Most water system problems are caused by dirt or ice in the water lines. If you find sediment, remind the operator to use clean water and to use the inlet strainer when filling the tank.

Freezing damage could occur. Caution operator to open draincocks and blow water out of system when he is finished with cleanup. Check for clogged draincocks.

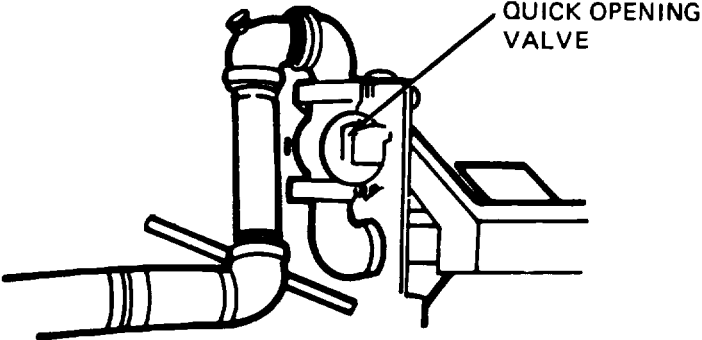
Table 5-1. Water System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1	MIX WATER DOES NOT FLOW AT A STEADY RATE:	<p>Step 1. Check that:</p> <ul style="list-style-type: none"> a. Tank is filled. b. Water shutoff valve is open. <p>Fill tank, open valve.</p> <p>Step 2. Check water pump V-belt tension. Belt should deflect 9/64 in. (3.6 mm) when 6 lbs (27 N) pressure is applied.</p> <p>Adjust belt (para 4-16D).</p> <p>Step 3. Check that tachometer reads 1620-1720 rpm.</p> <p>Use throttle to adjust pump speed.</p> <p>Step 4. Check for dirt or sediment in water tank.</p> <p>Flush system with clean water.</p> <p>Step 5. Check for blocked strainer.</p> <p>Clean strainer (para 5S).</p> <p>Step 6. Check water lines for leaks.</p> <p>Replace leaking lines (para 5-12).</p> <p>Step 7. Check water system pressure.</p> <p>Adjust pressure relief valve (TM 5-3895372-10).</p>

Table 5-1. Water System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>1. MIX WATER DOES NOT FLOW AT A STEADY RATE (Continued):</p>
<p>NOTE</p>
<p>If a pressure gage is not available, adjust pressure so that water can be sprayed about 35 ft with washout hose.</p>
<p>Step 8. Check for air trapped in water lines.</p>
<p>Bleed air by squirting water from the washout hose until it flows in a steady stream.</p>
<p>Step 9. If temperature is below 320F (0°C) check for frozen water lines.</p>
<ul style="list-style-type: none"> a. Open draincocks. b. Apply heat to melt ice. c. When system is free of ice, close draincocks.
<p>2. WATER LINE VALVES LEAK:</p>
<ul style="list-style-type: none"> a. Engage PTO. Pump speed should be 1620-1720 rpm. b. Check each valve for leakage. <p>Replace leaking valves (para 5-12 & 5-13).</p>
<p>3. QUICK-OPENING VALVE STICKS;</p>
<p>Step 1. Check for sticking or binding as valve is opened and closed.</p>
<ul style="list-style-type: none"> a. Lubricate valve stem with engine oil. Repack rubber boot, if necessary.

Table 5-1. Water System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
3. QUICK-OPENING VALVE STICKS (Continued):

<p>b. Check tightness of packing nut.</p> <ul style="list-style-type: none">(1) Tighten nut until valve sticks.(2) Back it off just until valve works freely.
Step 2. Check for sediment blocking valve.
<ul style="list-style-type: none">a. Flush system with clean water.b. Clean strainer screen (see para 5-8).

TA 076206

Section III MAINTENANCE PROCEDURES

5-6. INTRODUCTION. I

This section provides you with Organizational Level maintenance procedures for the water system of the mixer body. Paragraph 5-7 summarizes the maintenance tasks. Paragraphs 5-8 thru 5-16 contain detailed instructions for each task.

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WATER SYSTEM.

5-7. WATER SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

<u>APPLICABLE CONFIGURATIONS</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
M919.	5-12A. TM 5-3895-372-10.	Shutoff Valve Closed. Water Pump Drained.
<u>TEST EQUIPMENT</u>	5-9A.	Pump Removed.

None. 5-14A. Water Tank Removed.

SPECIAL TOOLS

Eye Bolt (4).
Chain Bridle, Four Leg.
1500 Lb Hoist.

MATERIALS/PARTS (P/N)

Soap Solution (Refer to Appendix C).	Water Pump:
Liquid Teflon (Refer to Appendix C).	Seal, 1, 9501-3 (94001).
Dry Cleaning Solvent (Refer to Appendix C).	O-Ring, 1, 1720-83 (94001).
Lockwire (Refer to Appendix C).	Seal Retainer, 1, 1830-40 (94001).
Strainer Gasket, NP3703004 (50663).	Slinger Ring, 1, 1410A-56 (94001).

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-20P.
TM 5-3895-372-10.
TM 9-2320273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

LIST OF TASKS

TASK NO.	TASK REF	TASK REF (TABLE)	TROUBLESHOOTING
1.	Strainer Maintenance: a. Removal. b. Cleaning and Inspection. c. Installation.	58 5-8A 5-8B 5-8C	5-1
2.	Water Pump Maintenance: a. Removal. b. Installation. c. Adjustment.	5-9 59A 5-9B 5-9C	5-1

WATER SYSTEM

5-7. WATER SYSTEM MAINTENANCE TASK SUMMARY (Continued).			
TASK NO.	TASK	LIST OF TASKS	
		TASK REF	TROUBLESHOOTING (REF (TABLE))
3.	Water Pump Repair: a. Disassembly. b. Inspection. c. Assembly.	5-10 5-10A 5-10B 5-10C	5-1
4.	Sight Gage Maintenance: a. Removal. b. Cleaning. c. Installation.	5-11 5-11A 5-11B 5-11C	5-1
5.	Valves and Water Lines Maintenance: a. Removal. b. Inspection. c. Installation. d. Checking for Leaks.	5-12 512A 5-12B 5-12C 5-12D	5-1
6.	Flow Control Valve Maintenance: a. Removal. b. Installation. c. Operational Check.	5-13 5-13A 5-13B 5-13C	5-1
7.	Water Tank Maintenance: a. Removal. b. Repair. c. Installation. d. Operational Check.	5-14 5-14A 5-14B 514C 5-14D	5-1
8.	Water Tank Components Maintenance: a. Removal. b. Installation.	5-15 5-15A 5-15B	5-1
9.	Water Tank Sub-Frames Maintenance: a. Removal. b. Installation.	516 516A 5-16B	5-1
		5-9	

WATER SYSTEM.

58. STRAINER MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Cleaning and Inspection. (10)
 - c. Installation. (5)
-
- 20 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Soap Solution (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 5-389372-10.
- TM 5-3895-372-20P.
- TM 9-232-0273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 51.

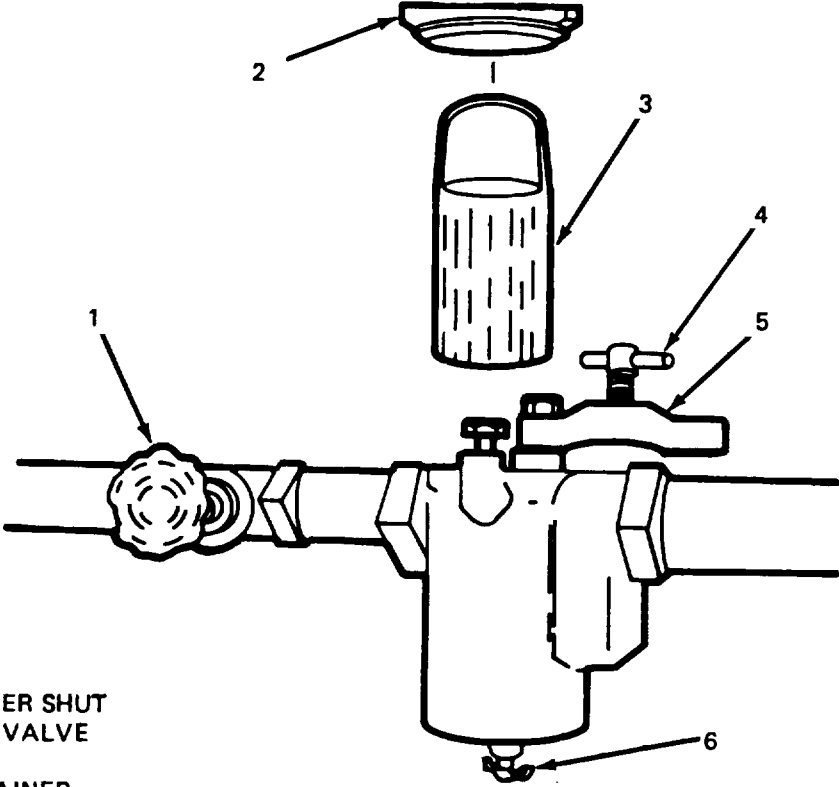
WATER SYSTEM.

58. STRAINER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|----|--------------------------|------------------------|
| 1. | Water shutoff valve (1). | Close. |
| 2. | Draincock (6). | Open. |
| 3. | T-handle (4). | Turn counterclockwise. |
| 4. | Clamp (5). | Swing aside. |
| 5. | Cap (2). | Lift off. |
| 6. | Strainer (3). | Lift out. |



LEGEND:

- 1. WATER SHUT OFF VALVE
- 2. CAP
- 3. STRAINER
- 4. T-HANDLE
- 5. CLAMP
- 6. DRAIN COCK

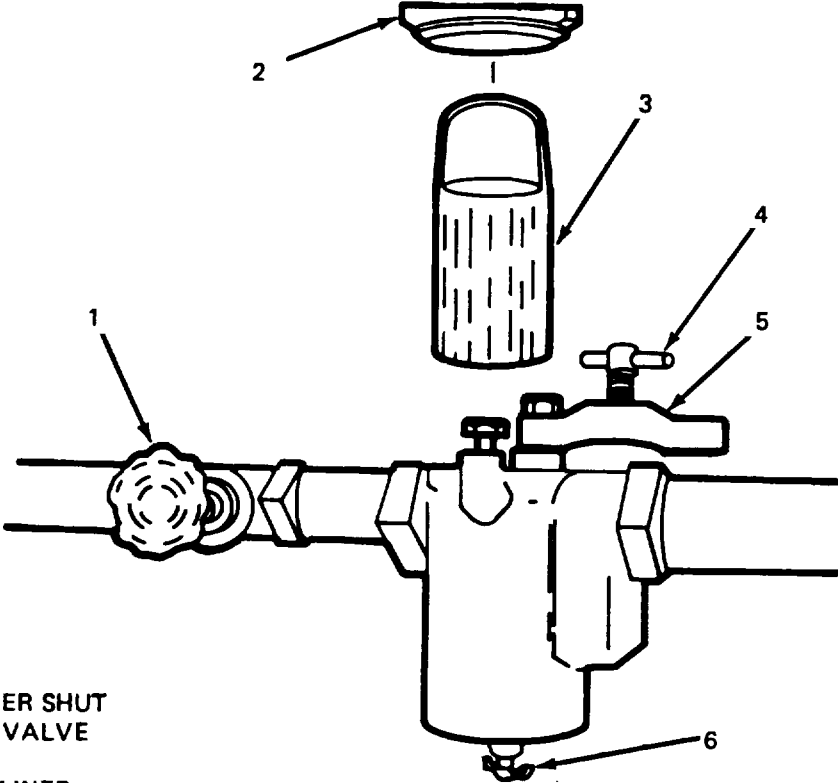
WATER SYSTEM.

5-8. STRAINER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. CLEANING AND INSPECTION.		
7. Strainer (3).	a. Shake off large pieces of dirt. b. Clean with soap and water and brush. c. Allow to dry. d. Inspect for holes.	If it can't be cleaned, replace.
8. Water shutoff valve (1).	Open slightly. When all dirt is rinsed out of strainer housing, close.	
C. INSTALLATION.		
9. Strainer (3).	Place in position.	
10. Cap (2).	Put on.	
11. Bracket (5).	Swing into place.	
12. T-handle (4).	Turn clockwise to tighten.	
13. Draincock (6).	Close.	
14. Water shutoff valve (1).	Open. Check for leaks.	

WATER SYSTEM.

5-8. STRAINER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
<p>LEGEND:</p> <ul style="list-style-type: none">1. WATER SHUT OFF VALVE2. CAP3. STRAINER4. T-HANDLE5. CLAMP6. DRAIN COCK		

TA 076208

WATER SYSTEM.

5-9. WATER PUMP MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Installation. (30)
 - c. Adjustment. (15)
- 75 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

5-12A.
TM 92320-273-10.

Shut Off Valve Closed.
Pump Drained.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 9 N232S273-10.
TM -3295-37273-10

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 5-1.

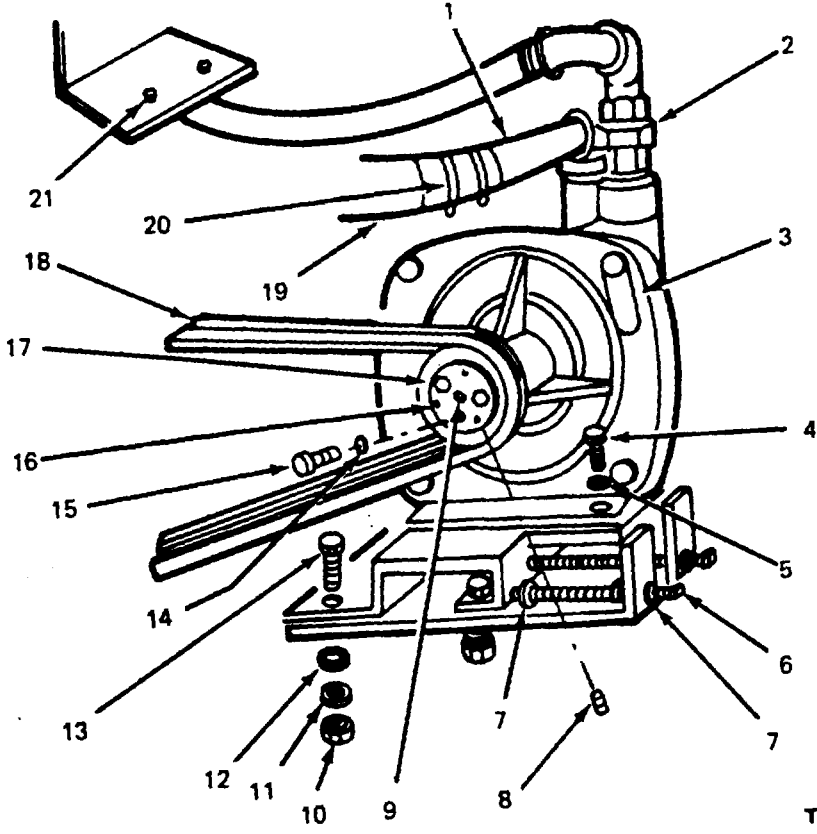
WATER SYSTEM.

5-9. WATER PUMP MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Two hex nuts (10).	Loosen.	
2. Two U-bolt hex nuts (21).	Loosen.	
3. Four hex nuts (7).	Loosen	
4. Water pump (3).	Slide inward to release belt tension.	Tap with rawhide mallet.
5. Two V-belts,(18)'	Remove.	
6. Two hose clamps (20).	Loosen.	
7. Inlet hose (19).Remove.	Remove	
8. Union ring (2)	Remove	

LEGEND:

- 1. INLET NIPPLE
- 2. UNION RING
- 3. WATER PUMP
- 4. CAPSCREW (2)
- 5. LOCKWASHER (2)
- 6. SETSCREW (2)
- 7. NUT (4)
- 8. SETSCREW
- 9. KEY
- 10. NUT (2)
- 11. LOCKWASHER (2)
- 12. FLAT WASHER (2)
- 13. CAPSCREW (2)
- 14. LOCKWASHER (3)
- 15. CAPSCREW (3)
- 16. BUSHING
- 17. SHEAVE
- 18. V-BELT (2)
- 19. INLET HOSE
- 20. HOSE CLAMP (2)
- 21. NUT (2)



TA 07620

WATER SYSTEM.

5-9. WATER PUMP MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
9. Two hex head capscrews (4) and lockwashers (5).	Remove.	
10. Water pump (3). bench.	Remove and place on work	Allow excessive water to drain.
11. Three capscrews (15) and lockwashers (14).	Remove.	
12. Three capscrews (15) and lockwashers (14).	Install in three tapped holes in bushing (16).	Tighten evenly until sheave (17) and bushing (16) separate.
13. Setscrew (8).	Remove.	
14. Bushing (16), key (9) and sheave (17).	Remove.	
NOTE		
Mark attaching nipple and fittings before removing. This will aid in assembling them in their proper places, and the directions at which they point, at time of assembly.		
15. Attaching nipples and fittings.	Remove	Clamp pump in vise.
B. INSTALLATION.		
NOTE		
Apply liquid teflon to all pipe threads.		
16. Attaching nipples and fittings.	Install and tighten.	Clamp pump in vise.
17. Woodruff key (9)	Install in keyway in pump shaft.	
18. Sheave (17) and bushing (16).	Assemble and aline holes.	
19. Bushing (16).	Spread slightly with screw- driver tip and install on shaft.	

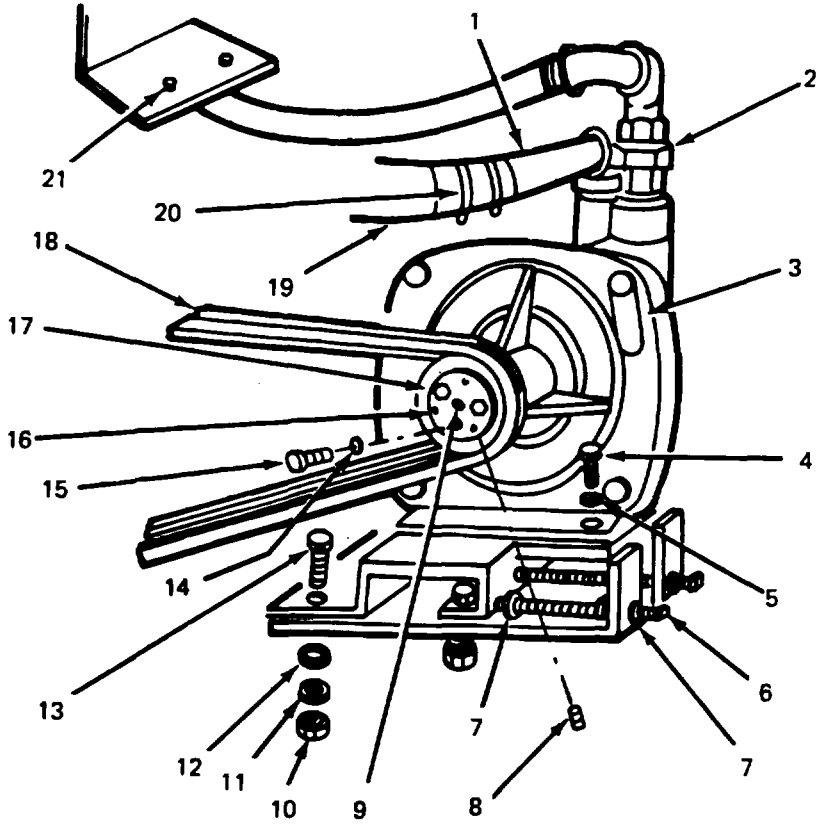
WATER SYSTEM.

5-9. WATER PUMP MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
20. Three capscrews (15) and lockwashers (14).	Install. Tighten securely.	
21. Setscrew (8).	Install and tighten.	
22. Water pump (3).	Place in vehicle and aline mounting holes.	
23. Two capscrews (4)	Install. Tighten securely. and lockwashers (5).	
24. Union ring (2).	Coat union faces and threads with liquid teflon. Install ring (2) and tighten.	

LEGEND:

- 1. INLET NIPPLE
- 2. UNION RING
- 3. WATER PUMP
- 4. CAPSCREW (2)
- 5. LOCKWASHER (2)
- 6. SETSCREW (2)
- 7. NUT (4)
- 8. SETSCREW
- 9. KEY
- 10. NUT (2)
- 11. LOCKWASHER (2)
- 12. FLAT WASHER (2)
- 13. CAPSCREW (2)
- 14. LOCKWASHER (3)
- 15. CAPSCREW (3)
- 16. BUSHING
- 17. SHEAVE
- 18. V-BELT (2)
- 19. INLET HOSE
- 20. HOSE CLAMP (2)
- 21. NUT (2)



TA 076210

WATER SYSTEM.

5-9. WATER PUMP MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
25. Hose (19).	Install.	
26. Hose clamps (20).	Slide into position and tighten.	
27. V-belts (18).	Install.	
C. ADJUSTMENT		
28. Refer to para 4-11.		

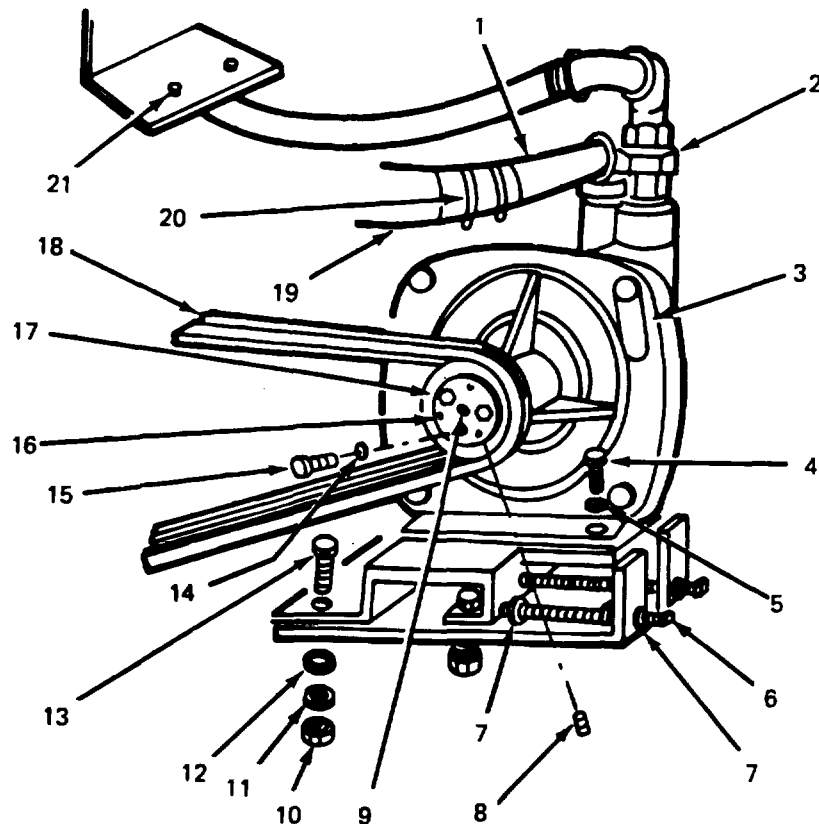
NOTE

Follow-on maintenance action required:

- a. Close water pump draincock. Refer to TM 5-3895-372-10.
- b. Open shut-off valve. Refer to para 5-12.

LEGEND:

- 1. INLET NIPPLE
- 2. UNION RING
- 3. WATER PUMP
- 4. CAPSCREW (2)
- 5. LOCKWASHER (2)
- 6. SETSCREW (2)
- 7. NUT (4)
- 8. SETSCREW
- 9. KEY
- 10. NUT (2)
- 11. LOCKWASHER (2)
- 12. FLAT WASHER (2)
- 13. CAPSCREW (2)
- 14. LOCKWASHER (3)
- 15. CAPSCREW (3)
- 16. BUSHING
- 17. SHEAVE
- 18. V-BELT (2)
- 19. INLET HOSE
- 20. HOSE CLAMP (2)
- 21. NUT (2)



TA 076210

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WATER SYSTEM.

5-10. WATER PUMP REPAIR.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | |
|-----------------|------------------|
| a. Disassembly. | (30) |
| b. Inspection. | (10) |
| c. Assembly. | (30). |
| | 70 Minutes Total |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

5-A.

Pump Removed.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

- Seal, 1, 9501-3 (94001).
- O-Ring, 1, 1720-83 (94001).
- Seal, 1, 9501-4 (94001).
- Slinger Ring, 1, 1410-56 (94001).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 9-2320-273-10.
- TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 5-1.

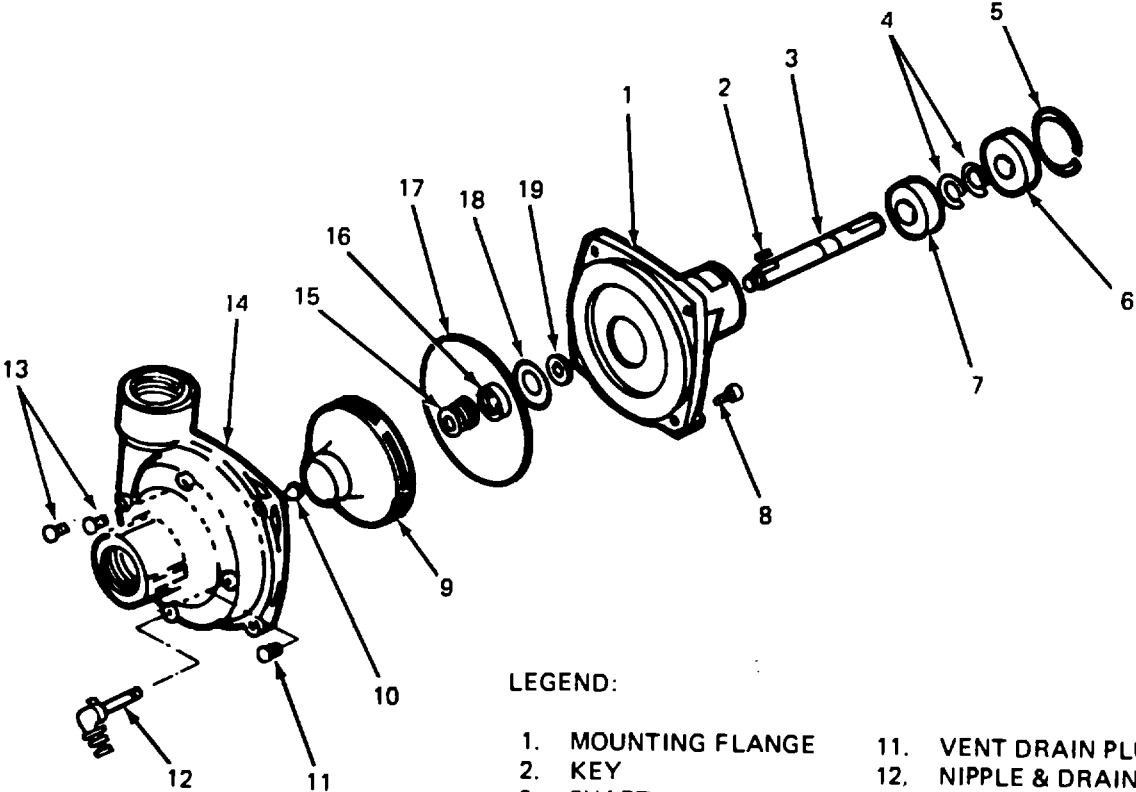
WATER SYSTEM.

5-10. WATER PUMP REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. DISASSEMBLY.

1.	Nipple and draincock (12).	Remove.	
2.	Four capscrews (8).	Remove.	
3.	Pump casing (14).	Remove	Tap with soft head hammer to break seal if required.
4.	O-ring (17).	Remove	Discard.
5.	Mounting flange (1).	Clamp in vise.	
6.	Impeller nut (10).	Remove.	



- LEGEND:**
- | | |
|--------------------|-------------------------|
| 1. MOUNTING FLANGE | 11. VENT DRAIN PLUG |
| 2. KEY | 12. NIPPLE & DRAIN COCK |
| 3. SHAFT | 13. VENT DRAIN PLUG |
| 4. SNAPRING (2) | 14. PUMP CASING |
| 5. SNAPRING | 15. SEAL |
| 6. BEARING | 16. SEAL |
| 7. BEARING | 17. O-RING |
| 8. CAPSCREW (4) | 18. SEAL RETAINER |
| 9. IMPELLER | 19. SLINGER RING |
| 10. IMPELLER NUT | |

TA 076212

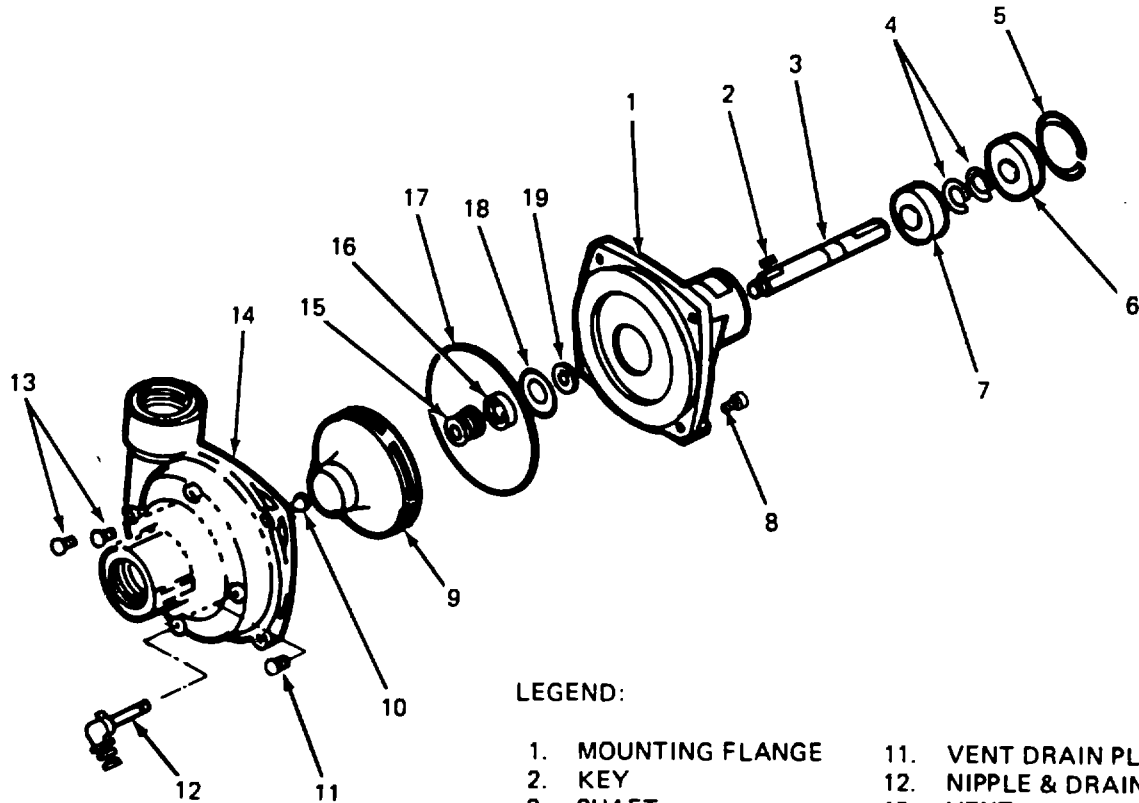
WATER SYSTEM.

5-10. WATER PUMP REPAIR (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. DISASSEMBLY (Continued).		
7. Impeller (9).	Remove.	Pry up with two small pry bars, 180° apart, to break loose from shaft.
8. Shaft key (2).	Remove.	
9. Seals (15) and (16).	Remove.	Discard.
10. Seal retainer (18).	Remove.	
11. Slinger ring (19).	Remove.	Discard.
12. Snap ring (5).	Remove.	
13. Shaft (3) with bearings (6) and (7) and snap rings (4).	Remove.	Remove components by tapping threaded end of shaft with soft head hammer.
14. Bearing (7).	Remove from shaft (3).	Using press.
15. Two snap rings (4).	Remove from shaft (3).	
16. Bearing (6).	Remove from shaft (3).	Using press.
17. Vent drain plugs (13) and (11).	Remove if necessary.	
B. INSPECTION.		
18. Bearings (7) and (6).	Check for roughness in rotation.	Replace if necessary.
19. Mounting flange (1).	Check for cracks or chipped casting.	Replace if necessary.
20. Impeller (9).	Check for cracks or broken casting.	Replace if necessary.
21. Pump casing (14).	Check for cracks or broken casting.	Replace if necessary.
C. ASSEMBLY.		
22. Mounting flange (1).	Remove from vise.	Set in press impeller side down.
23. Slinger ring (19).	Install in mounting flange (1).	

WATER SYSTEM.

5-10. WATER PUMP REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|--------------------|-------------------------|
| 1. MOUNTING FLANGE | 11. VENT DRAIN PLUG |
| 2. KEY | 12. NIPPLE & DRAIN COCK |
| 3. SHAFT | 13. VENT DRAIN PLUG |
| 4. SNAPRING (2) | 14. PUMP CASING |
| 5. SNAPRING | 15. SEAL |
| 6. BEARING | 16. SEAL |
| 7. BEARING | 17. O-RING |
| 8. CAPSCREW (4) | 18. SEAL RETAINER |
| 9. IMPELLER | 19. SLINGER RING |
| 10. IMPELLER NUT | |

TA 076213

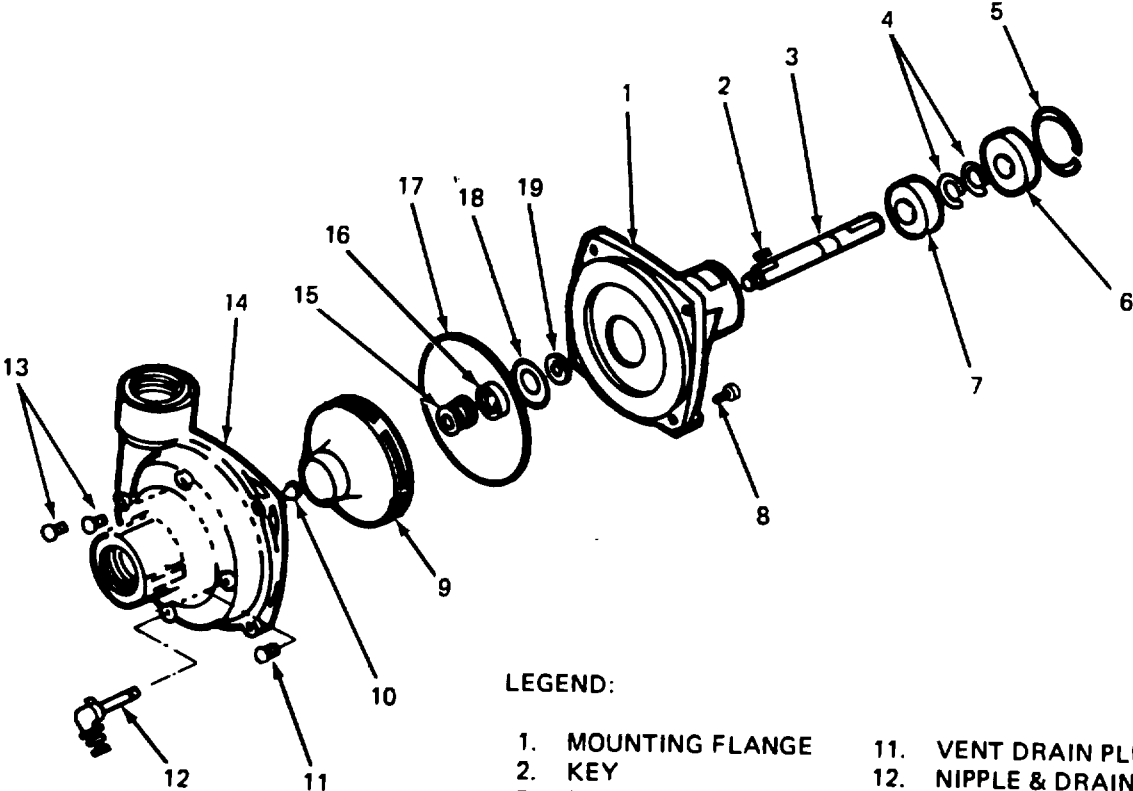
WATER SYSTEM.

5-10. WATER PUMP REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
C. ASSEMBLY (Continued).		
24. Bearing (7).	Install in mounting flange (1).	Tap on outer race only with punch and hammer.
25. Mounting flange (1).	Clamp in vise.	
26. Two snap rings (4).	Install on shaft (3).	
27. Shaft (3).	Install until snap ring (4) is against bearing (7).	Threaded end toward impeller end.
28. Mounting flange (1) and shaft (3).	Install in press.	Threaded shaft supported.
29. Bearing (6).	Press bearing (6) onto shaft (3) and mounting flange (1).	Use press.
30. Snap ring (5).	Install.	
NOTE		
31. Seal retainer (18) and seal (16).	Lubricate seals with a light coat of oil prior to installation. Install seal retainer (18) into seal(s) and press into mounting flange (1).	
32. Seal (165).	Install.	
33. Key (2).	Install.	
34. Impeller (9).	Install.	
35. Impeller nut (10).	Install.	Torque to 4050 lb-in (5-7 N-m).
36. O-ring (17).	Install.	
37. Pump casing (14).	Install.	
38. Four cap screws (8).	Install.	Torque to 31 b-ft (42 N-m).
39. Vent drain plugs (13) and (11).	Install.	
40. Nipple and draincock (12).	Install.	
41. Waterpump.	Remove from vise.	
42. Water pump.	Install.	Refer to para 59.

WATER SYSTEM.

5-10. WATER PUMP REPAIR (Continued).	LOCATION/ITEM	ACTION	REMARKS
--------------------------------------	---------------	--------	---------



LEGEND:

- | | |
|--------------------|-------------------------|
| 1. MOUNTING FLANGE | 11. VENT DRAIN PLUG |
| 2. KEY | 12. NIPPLE & DRAIN COCK |
| 3. SHAFT | 13. VENT DRAIN PLUG |
| 4. SNAPRING (2) | 14. PUMP CASING |
| 5. SNAPRING | 15. SEAL |
| 6. BEARING | 16. SEAL |
| 7. BEARING | 17. O-RING |
| 8. CAPSCREW (4) | 18. SEAL RETAINER |
| 9. IMPELLER | 19. SLINGER RING |
| 10. IMPELLER NUT | |

TA 076214

WATER SYSTEM.

5-11. SIGHT GAGE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Cleaning. (10)
 - c. Installation. (10)
- 30 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

None. None.

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

Dry Cleaning Solvent SD-2 (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 9-2320-273-10.
- TM 5-3895-372-20P.
- TM 53895372-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

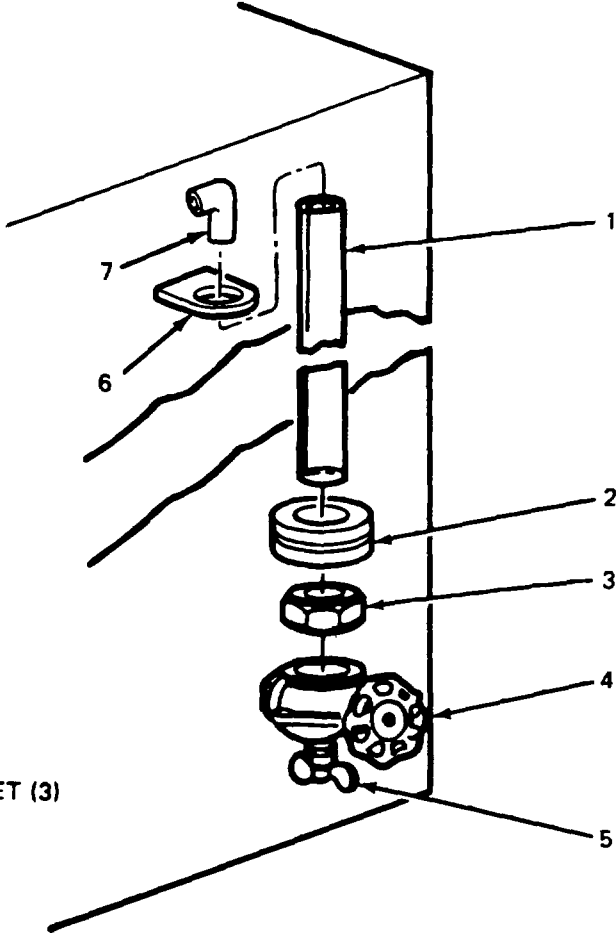
TROUBLESHOOTING REFERENCES

Table 5-1.

WATER SYSTEM.

5-11. SIGHT GAGE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Gage valve (4).	Turn handle clockwise to close.	
2. Draincock (5).	Open and drain gage tube (1).	
3. Gage collar nut (3).	Unscrew from gage valve (4).	
4. Gage tube (1).	Remove from gage valve (4).	Remove by lifting up through three gage tube brackets (6).
5. Three grommets (2).	Remove from three gage tube brackets (6).	Replace if deteriorated.



- LEGEND:
- 1. GAGE TUBE
 - 2. GROMMET (3)
 - 3. GAGE COLLAR NUT
 - 4. GAGE VALVE
 - 5. DRAIN COCK
 - 6. GAGE TUBE BRACKET (3)
 - 7. AIR VENT

TA 076215

WATER SYSTEM.

5-11. SIGHT GAGE MAINTENANCE (Continued)		
LOCATION/ITEM	ACTION	REMARKS
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">B. CLEANING.</div> <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">WARNING</div> <p>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.).</p> <div style="border: 2px dashed black; padding: 5px; display: inline-block; margin: 10px 0;">CAUTION</div> <p>Do not allow dry cleaning solvents, such as SD-2, to come in contact with seals or flexible hoses. These cleaners may damage leather, rubber, and synthetic materials.</p> </div>		
6. Gage-tube (1).	a. Clean with soap and water. b. If dirt or scum remains, use dry cleaning solvent SD-2. Dry with compressed air.	
7. Air vent (7).	Pull from gage tube (1) and inspect for blockage and deterioration.	Replace as necessary.
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">C. INSTALLATION.</div>		
8. Air vent (7).	Install onto top of gage tube (1).	
9. Three grommets (2).	Install into three gage tube brackets (6).	
10. Gage collar nut (3) and gage tube (1). (6) and grommets (2).	a. Slide gage tube (1) down thru the gage tube brackets b. Slide gage collar nut (3) over bottom end of gage tube (1). c. Insert gage tube (1) into top of gage valve (4) and secure with gage collar nut (3).	Install with red line in gage tube toward center of vehicle.
11. Draincock (5) and gage valve (4).	Close draincock (5) and open gage valve (4). Gage tube (1) should fill to level of water in tank.	Check for leaks and retighten gage collar nut (3) as necessary.

WATER SYSTEM.

5-11. SIGHT GAGE MAINTENANCE (Continued).

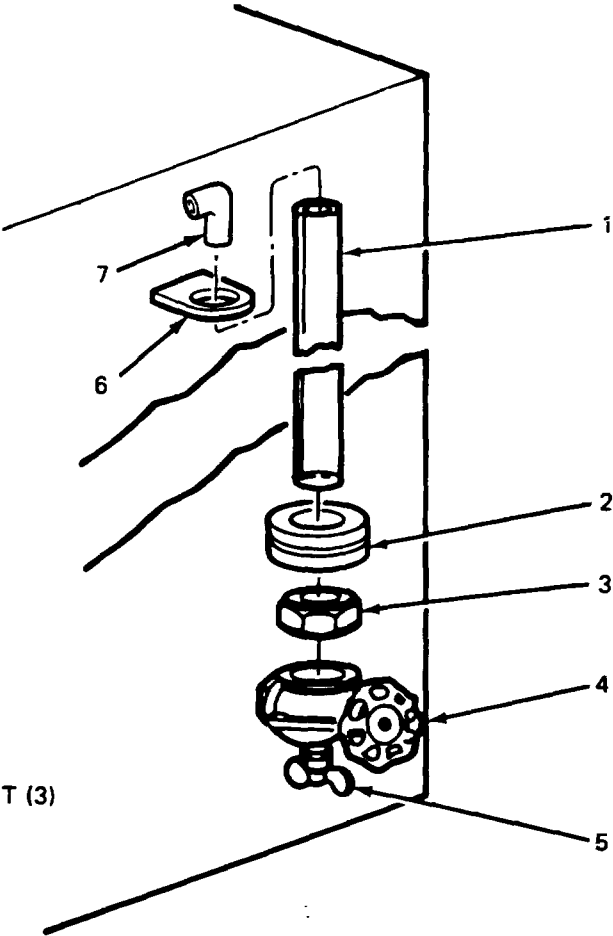
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. GAGE TUBE
- 2. GROMMET (3)
- 3. GAGE COLLAR NUT
- 4. GAGE VALVE
- 5. DRAIN COCK
- 6. GAGE TUBE BRACKET (3)
- 7. AIR VENT



TA 076216

WATER SYSTEM.

5-12. VALVES AND WATER LINES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Inspection. (5)
 - c. Installation. (5)
 - d. Checking for leaks. (5)
- 20 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

**EQUIPMENT
CONDITION
PARAGRAPH**
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Liquid Teflon (Refer to Appendix C).
Masking Tape.
Marking Pen.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM 5-3895-372-20P.
Parking Brake Set.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.

TROUBLESHOOTING REFERENCES

Table 5-1.

WATER SYSTEM.

5-12. VALVES AND WATER LINES MAINTENANCE (Continued).

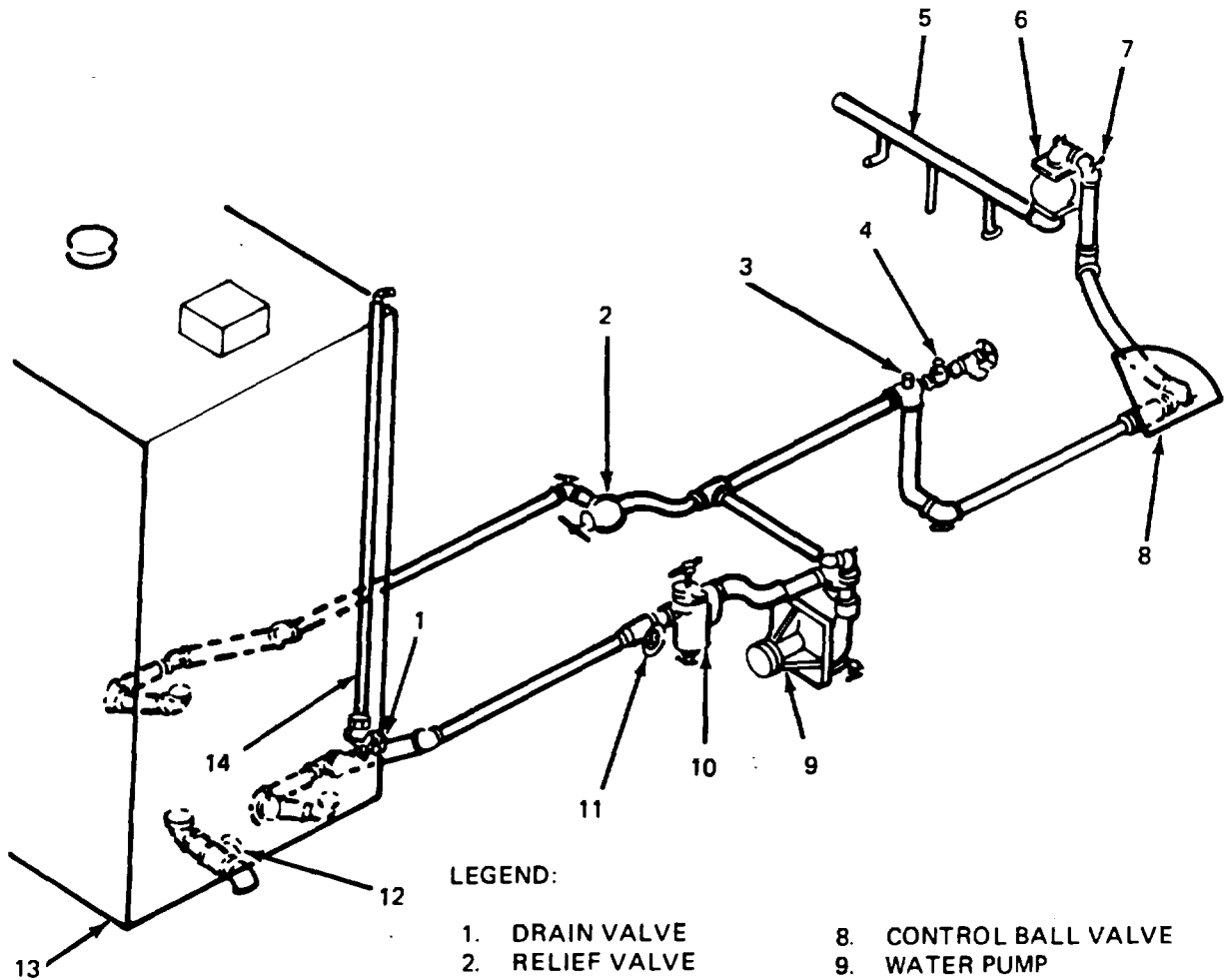
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

NOTE

The layout and major components of the water system are illustrated below. To replace any valve, water line, or fitting, follow these general steps using general shop practices.

1. Shutoff valve (11). Close.



LEGEND:

- | | |
|-----------------------|-----------------------|
| 1. DRAIN VALVE | 8. CONTROL BALL VALVE |
| 2. RELIEF VALVE | 9. WATER PUMP |
| 3. BLOWOUT VALVE | 10. STRAINER |
| 4. PIPE PLUG | 11. SHUTOFF VALVE |
| 5. NOZZLE ASSEMBLY | 12. DRAIN VALVE |
| 6. QUICK ACTING VALVE | 13. WATER TANK |
| 7. DRAIN COCK | 14. LEVEL TUBE |

TA 076217

WATER SYSTEM.

5-12. VALVES AND WATER LINES MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
NOTE		
When replacing shutoff valve (11), relief valve (2) or any component between these valves and the water tank (13), the water tank must be drained. Proceed to the pipe union or hose clamp nearest the component which is to be removed and start removal of attaching lines at this point.		
2. Attaching lines and hoses. lines and fittings.	Unscrew and remove.	Use tape and marking pencil to identify hoses,
3. Valve, fittings, or line to be replaced.	Remove.	
B. INSPECTION.		
4. Valve, line, or fittings. water flow.	a. Inspect for dirt or sediment blocking water.	You may be able to remove blockage with running
	b. Inspect fittings, valves, and lines for: 1. Cracks. 2. Breaks. 3. Deformities.	Replace if necessary.
C. INSTALLATION.		
NOTE		
Apply liquid teflon to all threads.		
5. Valve, line, hose, or fittings.	Screw onto attaching hardware.	Install as marked at removal.

WATER SYSTEM.

5-12. VALVES AND WATER LINES MAINTENANCE (Continued).

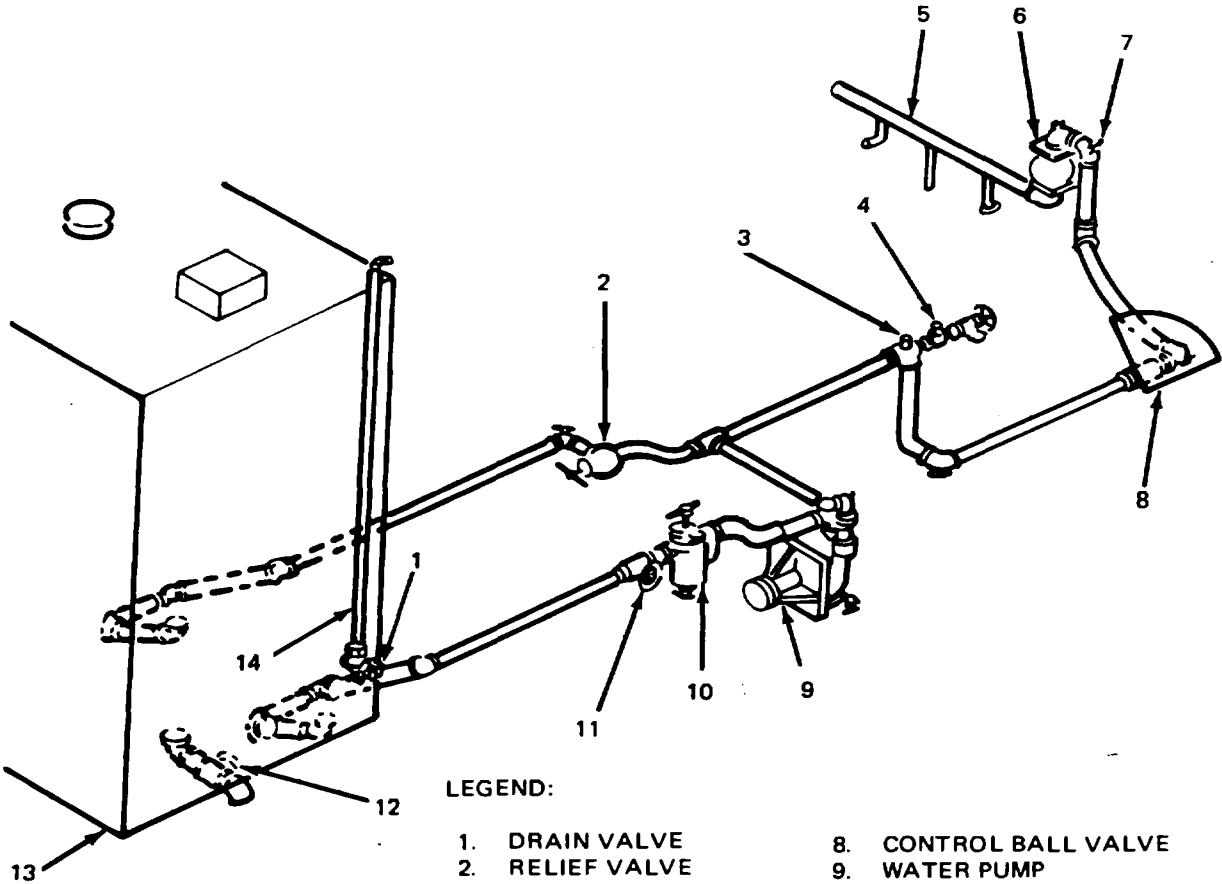
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

D. CHECKING FOR LEAKS.

NOTE

If water tank has been drained, refill at this time. Refer to TM 5-3895-372-10.

6. Shutoff valve (11).	Open.
7. Water system.	Check operation. Check for leaks.



LEGEND:

- | | |
|-----------------------|-----------------------|
| 1. DRAIN VALVE | 8. CONTROL BALL VALVE |
| 2. RELIEF VALVE | 9. WATER PUMP |
| 3. BLOWOUT VALVE | 10. STRAINER |
| 4. PIPE PLUG | 11. SHUTOFF VALVE |
| 5. NOZZLE ASSEMBLY | 12. DRAIN VALVE |
| 6. QUICK ACTING VALVE | 13. WATER TANK |
| 7. DRAIN COCK | 14. LEVEL TUBE |

TA 076218

WATER SYSTEM.

5-13. FLOW CONTROL VALVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
 - b. Installation. (20)
 - c. Operational Check. (5)
- 45 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**
5-12A.

CONDITION DESCRIPTION
Shut Off Valve Closed.

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 9-2320-273-10.
TM 5-3895-372-10.
TM 5-3895372-20P.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 5-1.

WATER SYSTEM.

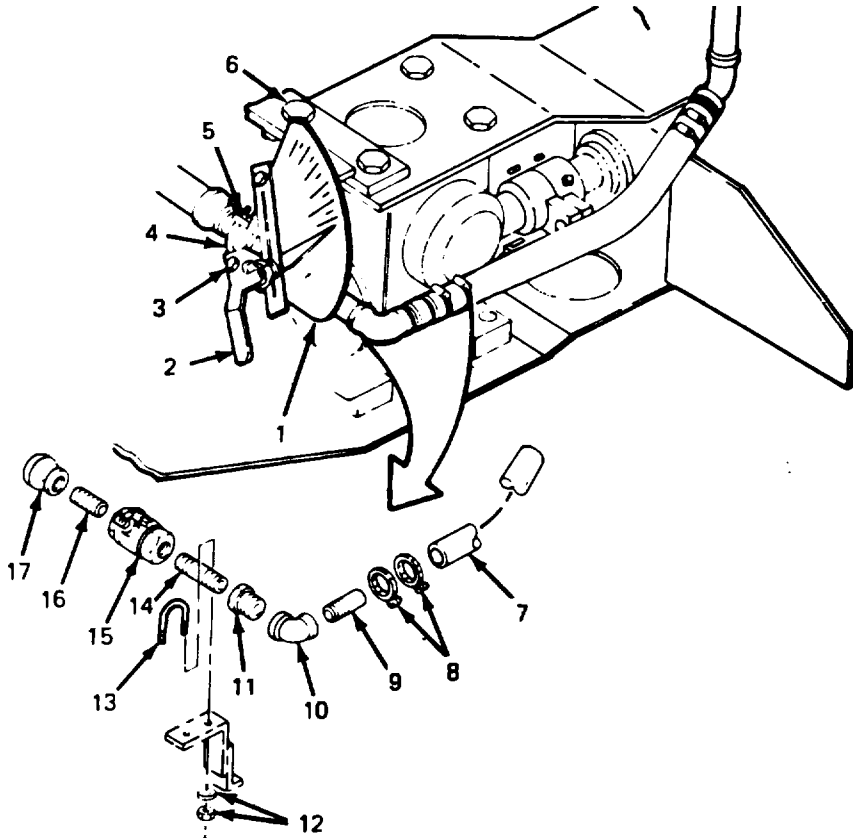
5-13. FLOW CONTROL VALVE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		

NOTE

Before beginning service, shut-off water shutoff valve. Refer to paragraph 5-12.

- | | |
|---|---------|
| 1. Four nuts and Lock washers (5). | Remove. |
| 2. Two U-bolts (4). | Remove. |
| 3. One cap screw and three spacers (6). | Remove. |
| 4. Gage assembly (1). | Remove. |
| 5. Nut (3). | Remove. |
| 6. Lever and pointer (2). | Remove. |



LEGEND:

- 1. GAGE ASSEMBLY
- 2. LEVER AND POINTER
- 3. NUT
- 4. U-BOLT (2)
- 5. NUT AND LOCKWASHER (4)
- 6. CAPSCREW AND THREE SPACERS
- 7. HOSE
- 8. RING CLAMP (2)
- 9. NIPPLE
- 10. ELBOW
- 11. BUSHING
- 12. NUT AND WASHER (2)
- 13. U-BOLT
- 14. NIPPLE
- 15. VALVE
- 16. NIPPLE
- 17. BUSHING

TA 076219

WATER SYSTEM.

5-13. FLOW CONTROL VALVE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
8. Hose (7). 9. Nipple (9).	Remove from nipple (9) only. Remove.	Catch excess water in drain pan.
10. Two nuts and lock-washers (12).	Remove.	
11. U-bolt (13).	Remove.	
12. Elbow (10).	Remove.	
13. Bushing and nipple (11 and 14).	Remove.	
14. Valve (15).	Remove from nipple and reducer (16 and 17).	Catch excess water in drain pan.
B.INSTALLATION.		
15. Valve (15)	Install in nipple and reducer (16 and 17).	Coat threads with liquid teflon.
16. Bushing and nipple	Install and tighten.	Coat threads with liquid teflon.
17. Elbow (10).	Install and tighten.	Coat threads with liquid teflon.
18. U-bolt (13).	Install.	
19. Two nuts and lock-washers (12).	Install and tighten.	
20. Nipple (9).	Install and tighten	Coat threads with liquid teflon.
21. Hose (7).	Slip over nipple (9).	
22. Two ring clamps (8).	Tighten securely.	
23. Gage assembly (1).	Set in place.	
24. Two U-bolts (4).	Install.	
25. Four nuts and lock-washers (5).	Install and tighten securely.	
26. Lever and pointer (2).	Set in place.	
27. One cap screw and three spacers (6).	Install and tighten.	
28. Nut (3).	Install and tighten.	

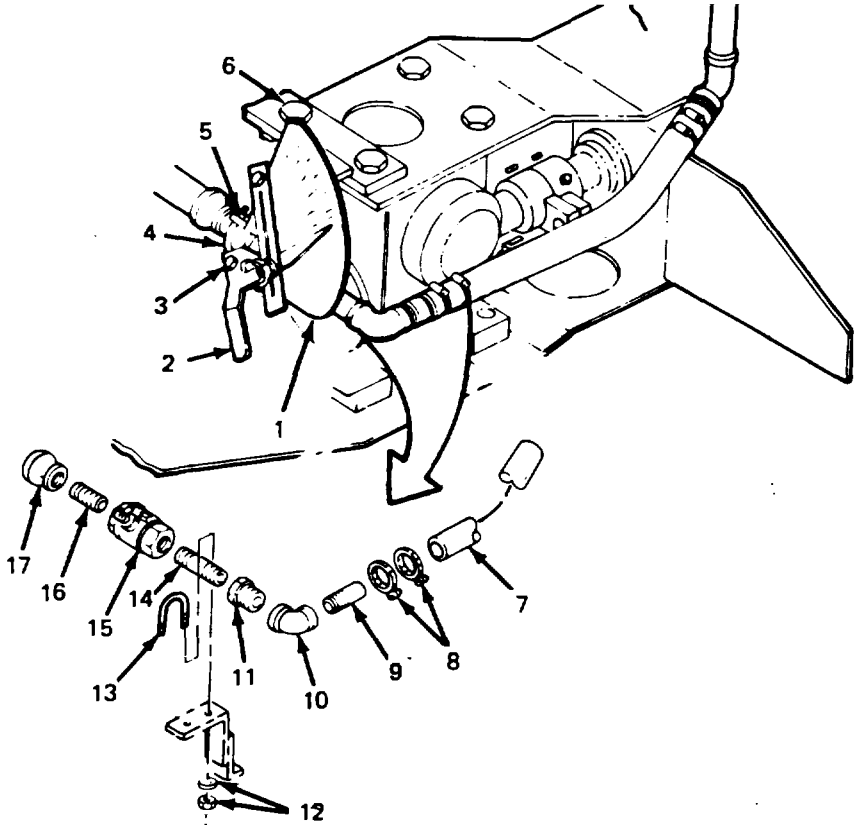
WATER SYSTEM.

5-13. FLOW CONTROL VALVE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. OPERATIONAL CHECK.

29. Water shut-off valve.	Open.	
30. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10).	
31. Valve (15).	Open.	
32. Main clutch.	Activate.	
33. Valve (15).	a. Check for leaks. b. Water flow from nozzles.	
34. Mixer body.	Shut-down (see TM 9-2320-273-10 and TM 5-3895-372-10).	



- LEGEND:**
- 1. GAGE ASSEMBLY
 - 2. LEVER AND POINTER
 - 3. NUT
 - 4. U-BOLT (2)
 - 5. NUT AND LOCKWASHER (4)
 - 6. CAPSCREW AND THREE SPACERS
 - 7. HOSE
 - 8. RING CLAMP (2)
 - 9. NIPPLE
 - 10. ELBOW
 - 11. BUSHING
 - 12. NUT AND WASHER (2)
 - 13. U-BOLT
 - 14. NIPPLE
 - 15. VALVE
 - 16. NIPPLE
 - 17. BUSHING

TA 076220

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (60)
 - b. Repair. (60)
 - c. Installation. (60)
 - d. Operational Check. (10)
- 190 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

- Eye Bolts (4).
- Four Point Sling.
- Overhead Winch.

MATERIALS/PARTS (P/N)

- Liquid Teflon (See Appendix C).
- Tank to Frame Gasket, NP5033029 (50663).

**EQUIPMENT
CONDITION**

PARAGRAPH

TM 5-3895-372-10.

CONDITION DESCRIPTION

Water Tank Empty.

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 9-2320-273-10.
- TM 3895-23727-10.
- TM 5-3895-372-20P.
- TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 5-1.

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

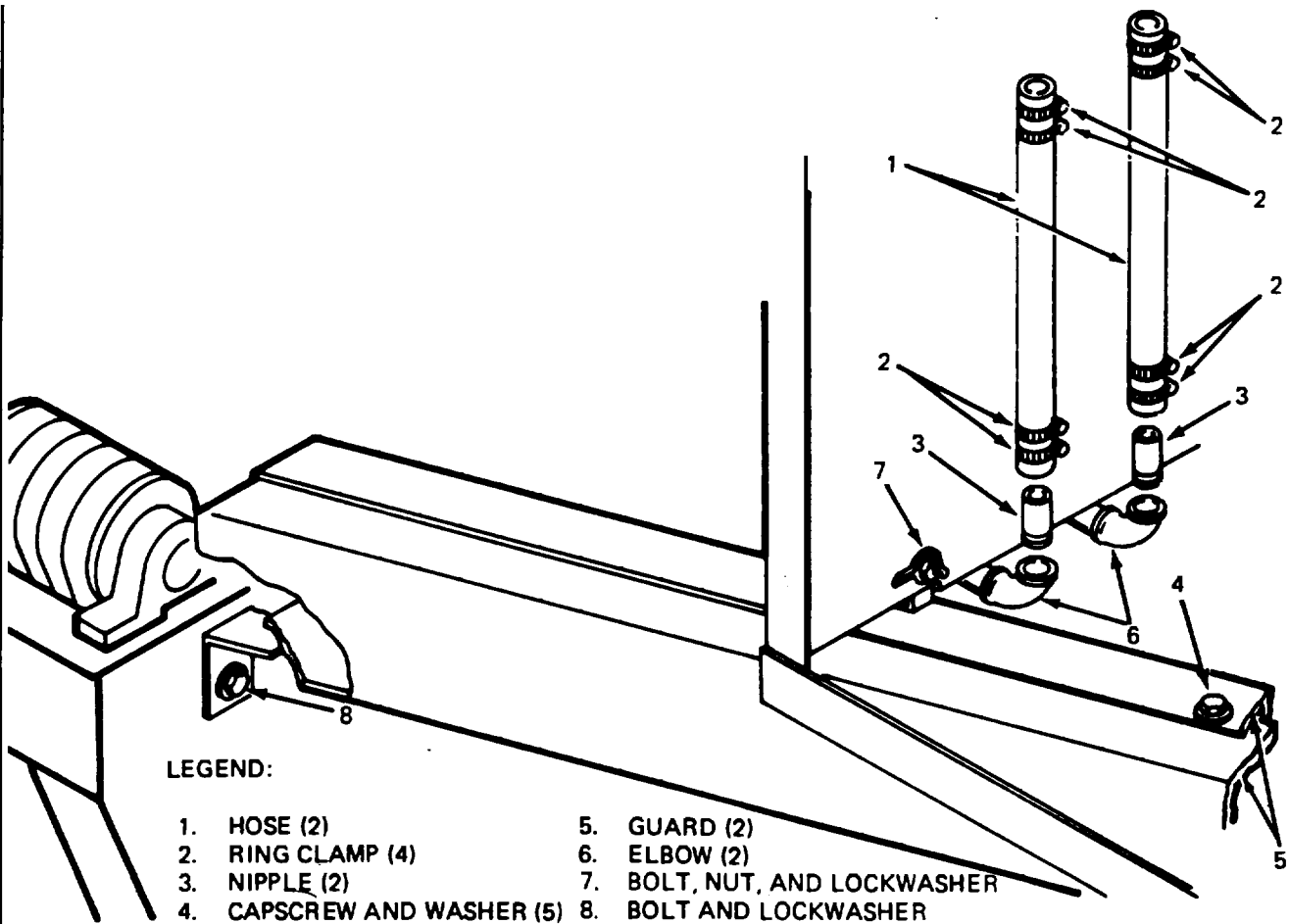
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE

Before beginning service, drain water tank.

A. REMOVAL.

- | | |
|--|---------|
| 1. Five cap screws and washers (4). | Remove. |
| 2. One bolt and lock washer (8). | Remove. |
| 3. One bolt, nut, and Lock washer (7). | Remove. |

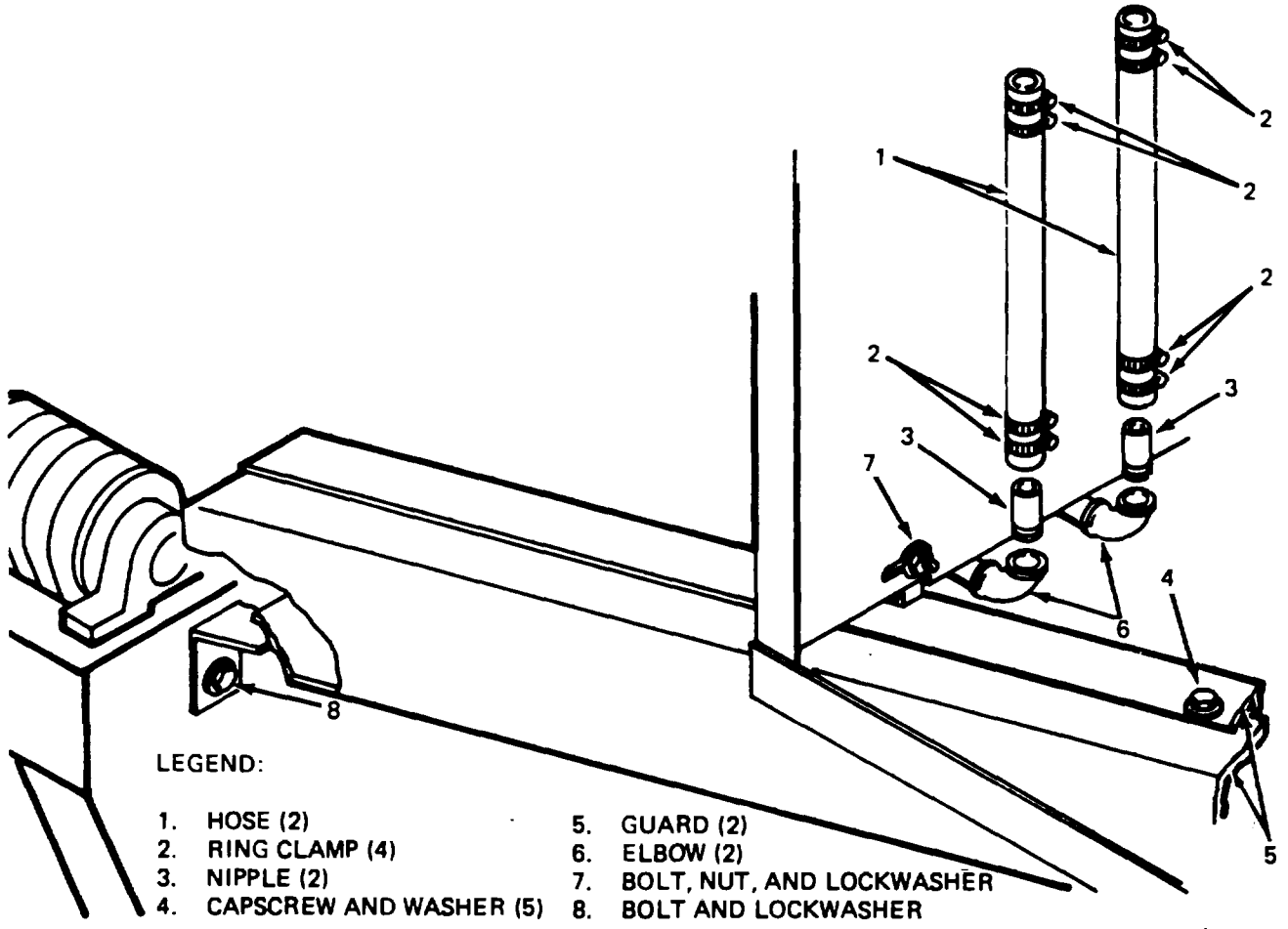


TA 076221

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
5. Four ring clamps (2).	Loosen.	
6. Two hoses (1).	Remove from two nipples (3).	Replace if necessary.
7. Two nipples (3).	Remove.	
8. Two elbows (6).	Remove.	



TA 076222

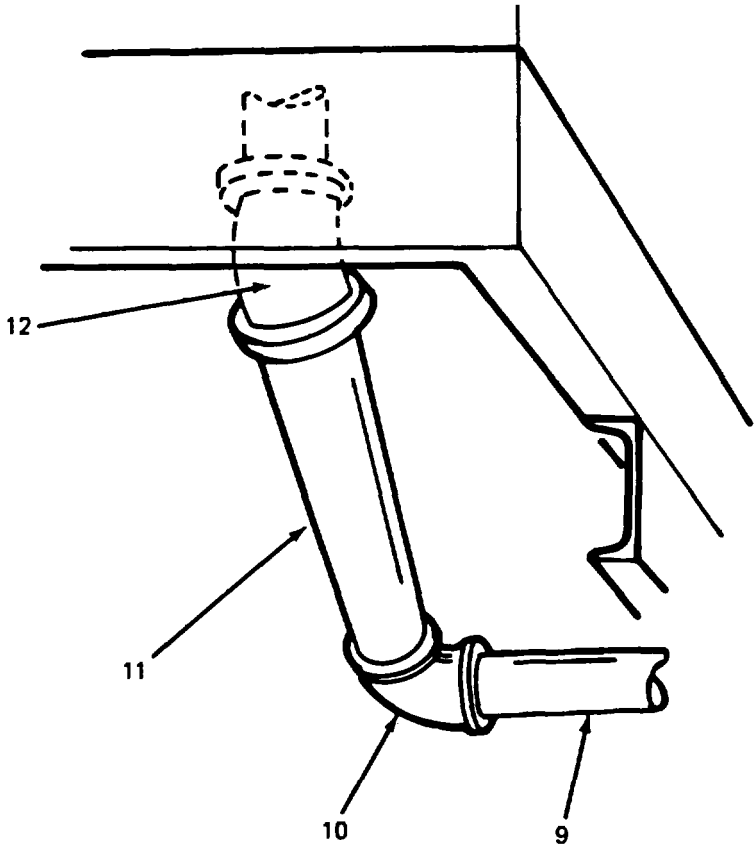
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- 9. Two elbows (10) and pipes (9) and (11). Remove.
- 10. Two elbows (12).



- LEGEND:
- 9. PIPE (2)
 - 10. ELBOW (2)
 - 11. PIPE (2)
 - 12. ELBOW (2)

TA 076223

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

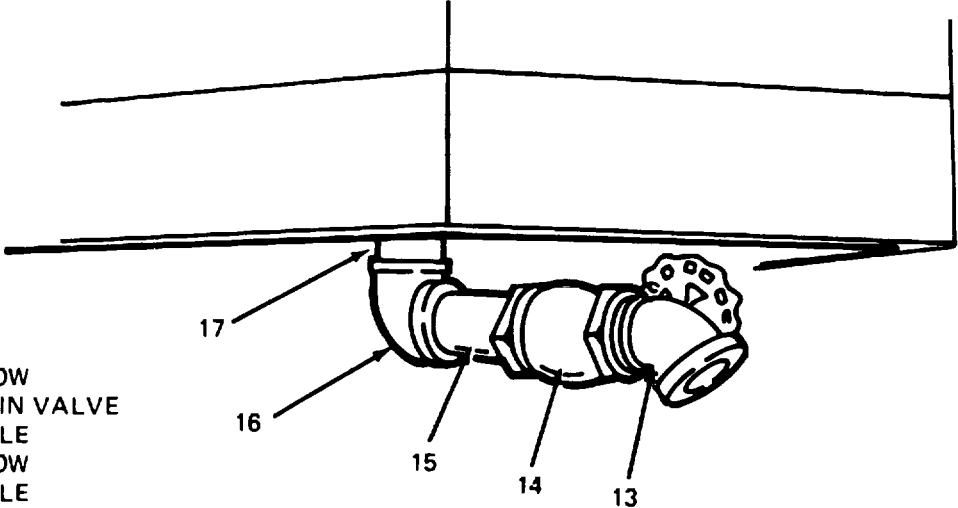
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued). I

- 11. Elbow(13). Remove.
- 12. Drain valve (14), nipple (15) and elbow (16).
- 13. Nipple (17).

LEGEND:

- 13. ELBOW
- 14. DRAIN VALVE
- 15. NIPPLE
- 16. ELBOW
- 17. NIPPLE



TA 076224

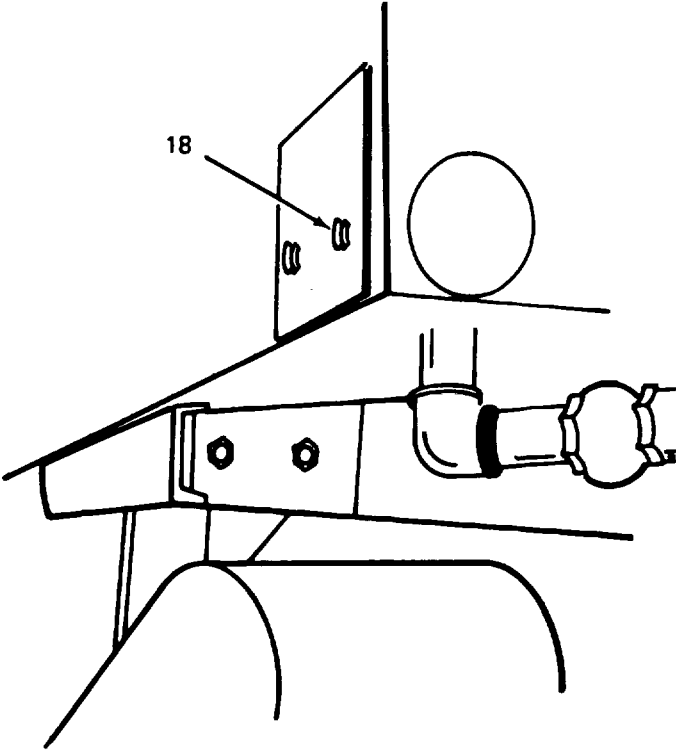
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

14. Ten leg bolts, nuts, and lock washers (18). Remove.



LEGEND:

18. LEG BOLT, NUT, AND LOCKWASHER (10)

TA 076225

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

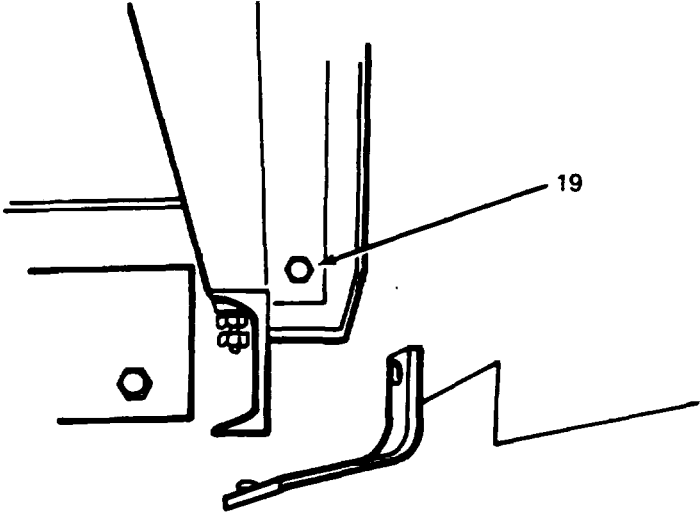
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

15. Two bolts, lock washers, and nuts (19).

Remove.

Located between water tank and sand and stone bin.



LEGEND:

19. BOLT, LOCKWASHER, AND NUT (2)

TA 076226

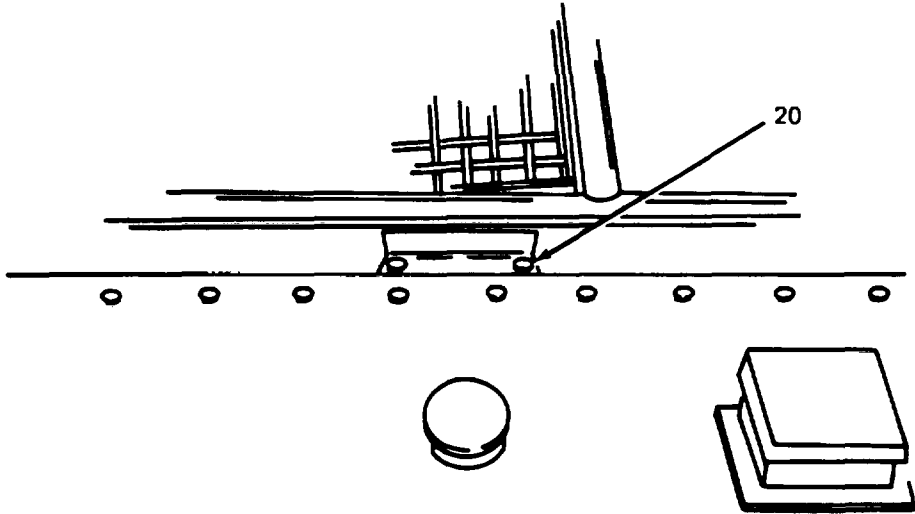
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

16. Two bolts, flatwashers, Lock washers, and nuts (20).	Remove	Top back-side of water tank.
--	--------	------------------------------



LEGEND:

20. BOLT, FLATWASHER, LOCKWASHER, AND NUT (2)

TA 076227

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

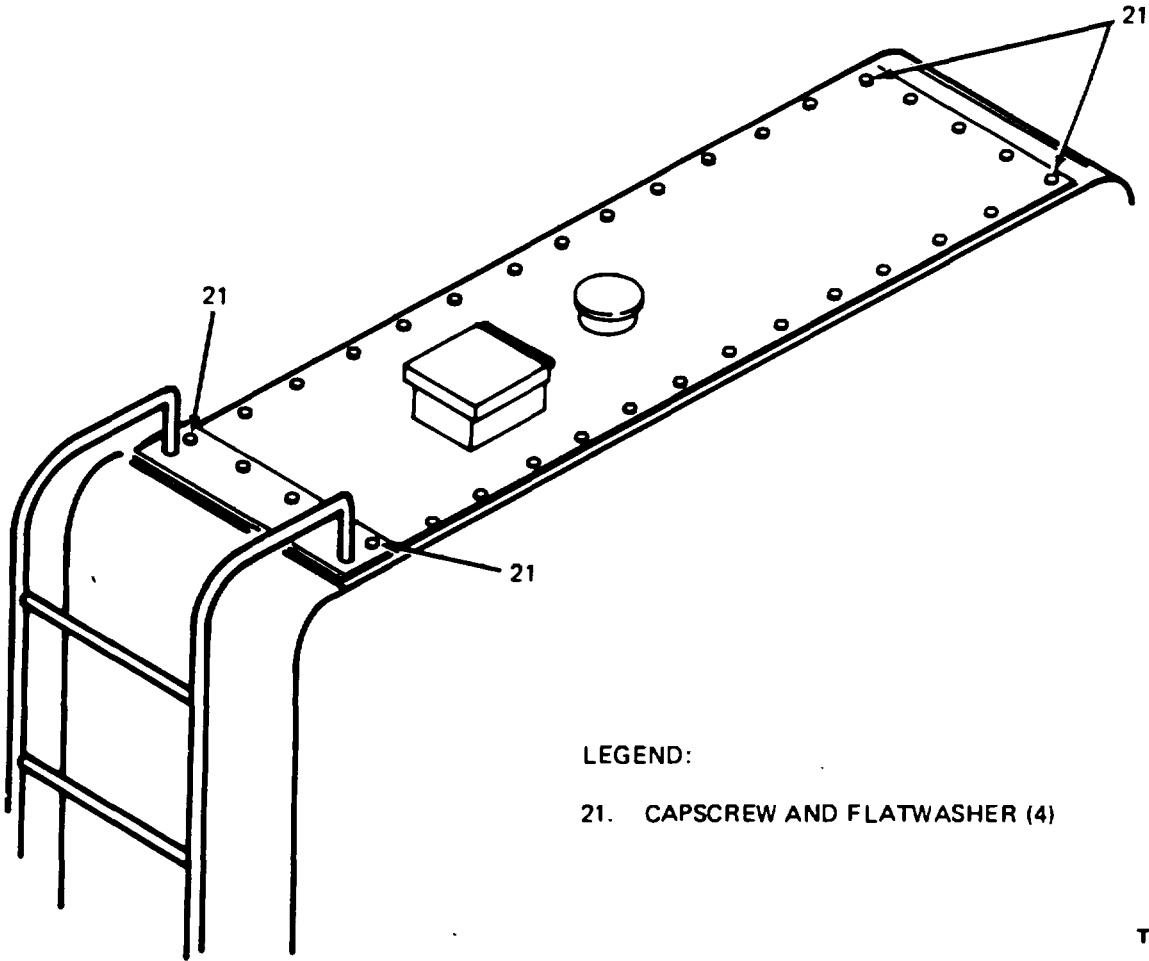
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

17. Four cap screws and flatwashers (21).

Remove.

One in each corner.



LEGEND:

21. CAPSCREW AND FLATWASHER (4)

TA 076228

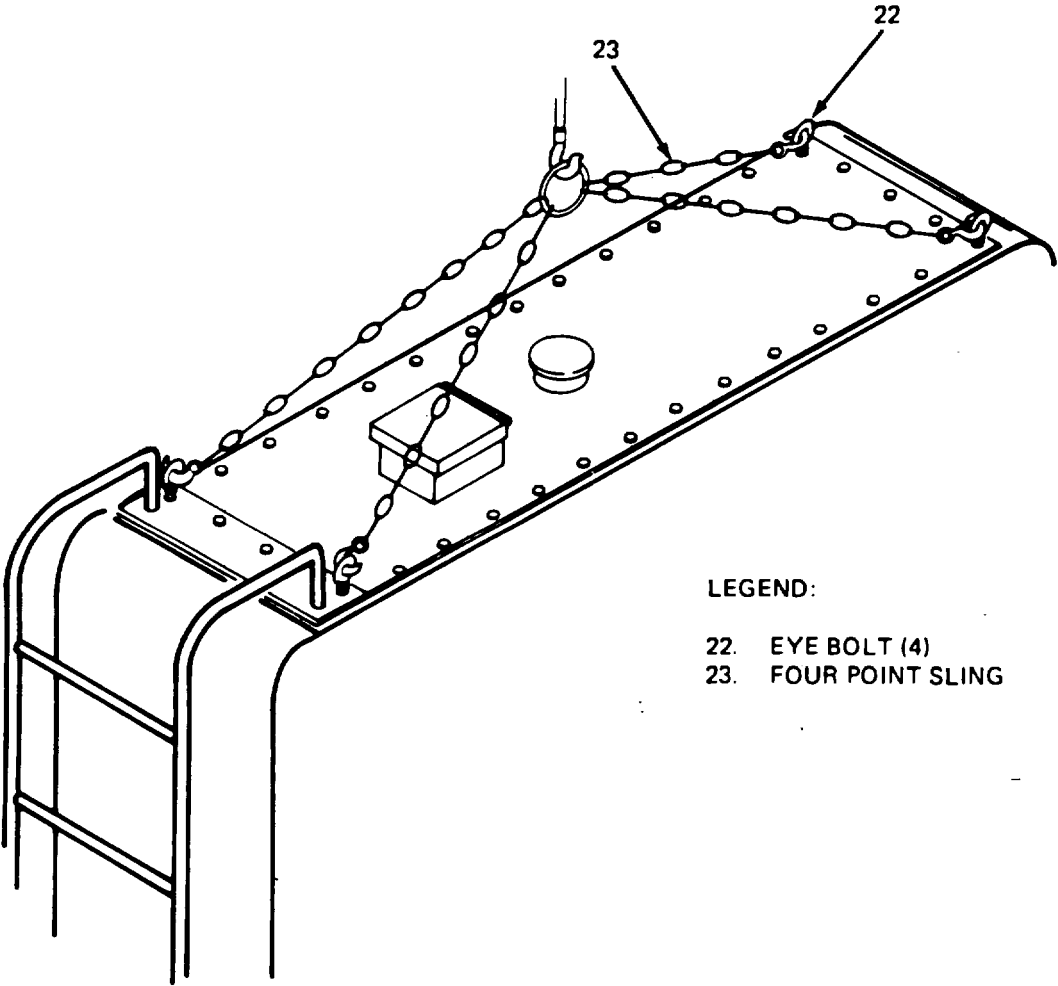
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- | | | |
|----------------------------|--|---------------------|
| 18. Four eye bolts (22). | Install. | One in each corner. |
| 19. Four point sling (23). | Install. | |
| 20. Overhead winch. | Raise water tank approximately 10 in. and remove through left side of vehicle. | |



TA 076229

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

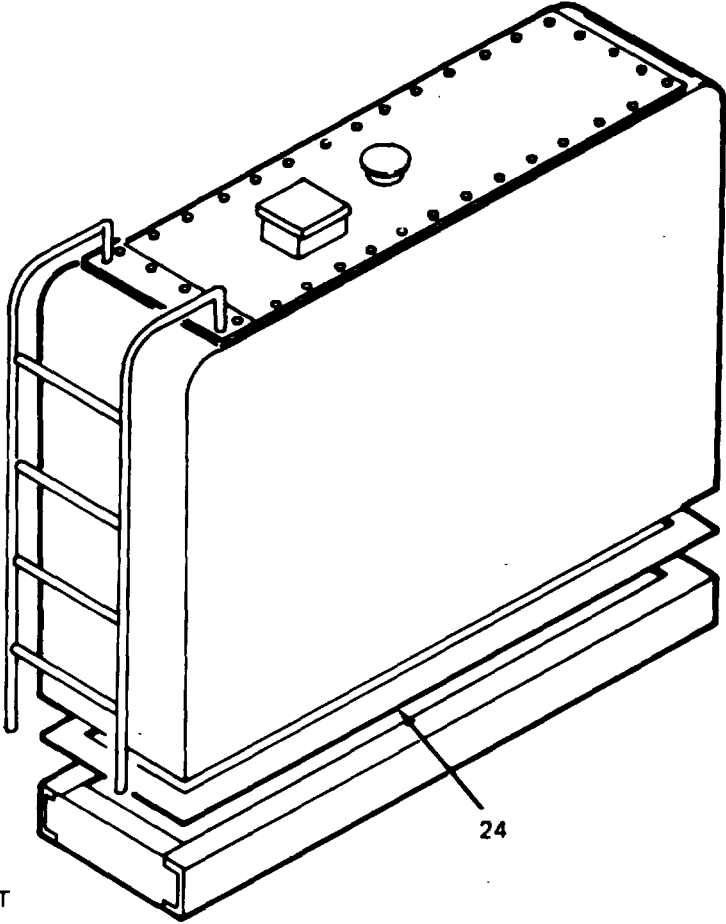
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. REPAIR

- | | | |
|---------------------------|---|--|
| 21. Mounting gasket (24). | Inspect and replace if necessary. | |
| 22. Cracks. | Weld cracks inside and outside of tank using standard shop practices and techniques for galvanized steel. | After welding, recoat the inside of the tank with bitumask paint |

NOTE

If necessary, abnormally large holes or cracks may be patched and welded with galvanized steel.



LEGEND:
24. MOUNTING GASKET

TA 076230

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

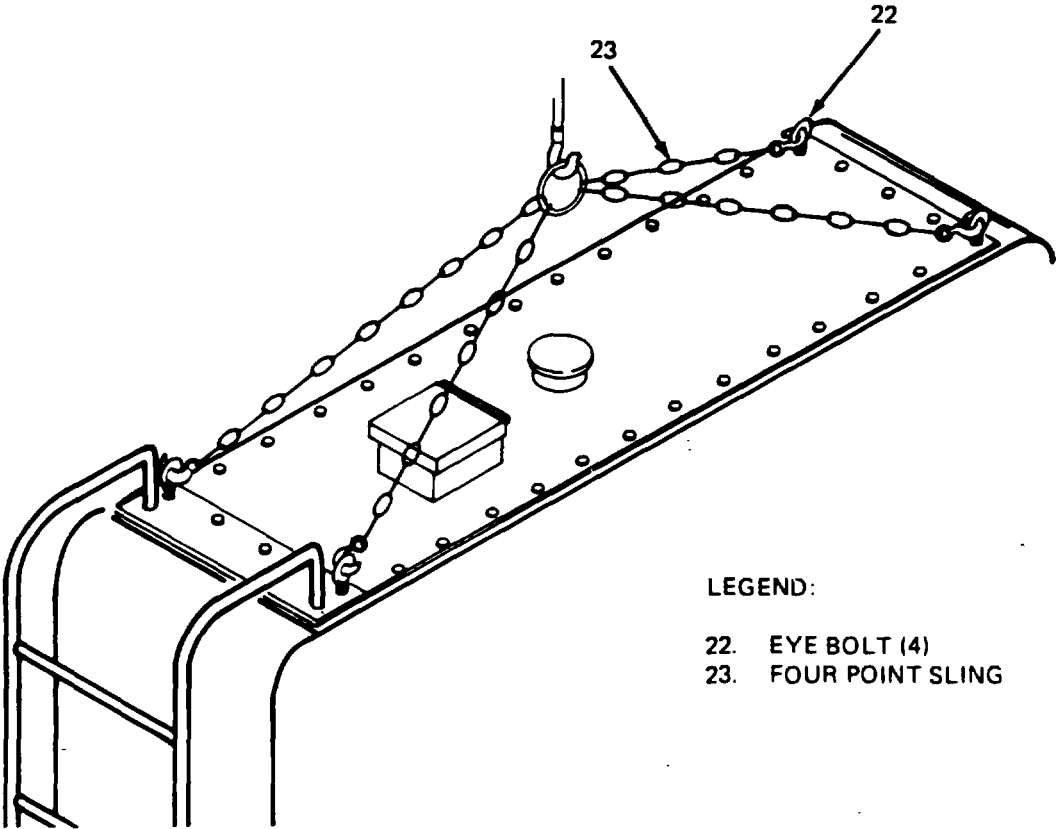
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION.

NOTE

If installing a new water tank, transfer usable components from damaged tank to replacement tank.

- | | | |
|----------------------------|--|----------------------------------|
| 23. Four eye bolts (22). | Install and tighten securely. | One in each corner, top of tank. |
| 24. Four point sling (23). | Install. | |
| 25. Overhead winch. | Raise water tank approximately 10 in. over water tank mounting frame and install through left side of vehicle and set in position. | |
| 26. Four point sling (23). | Remove. | |
| 27. Four eye bolts (22) | Remove. | |



TA 076231

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

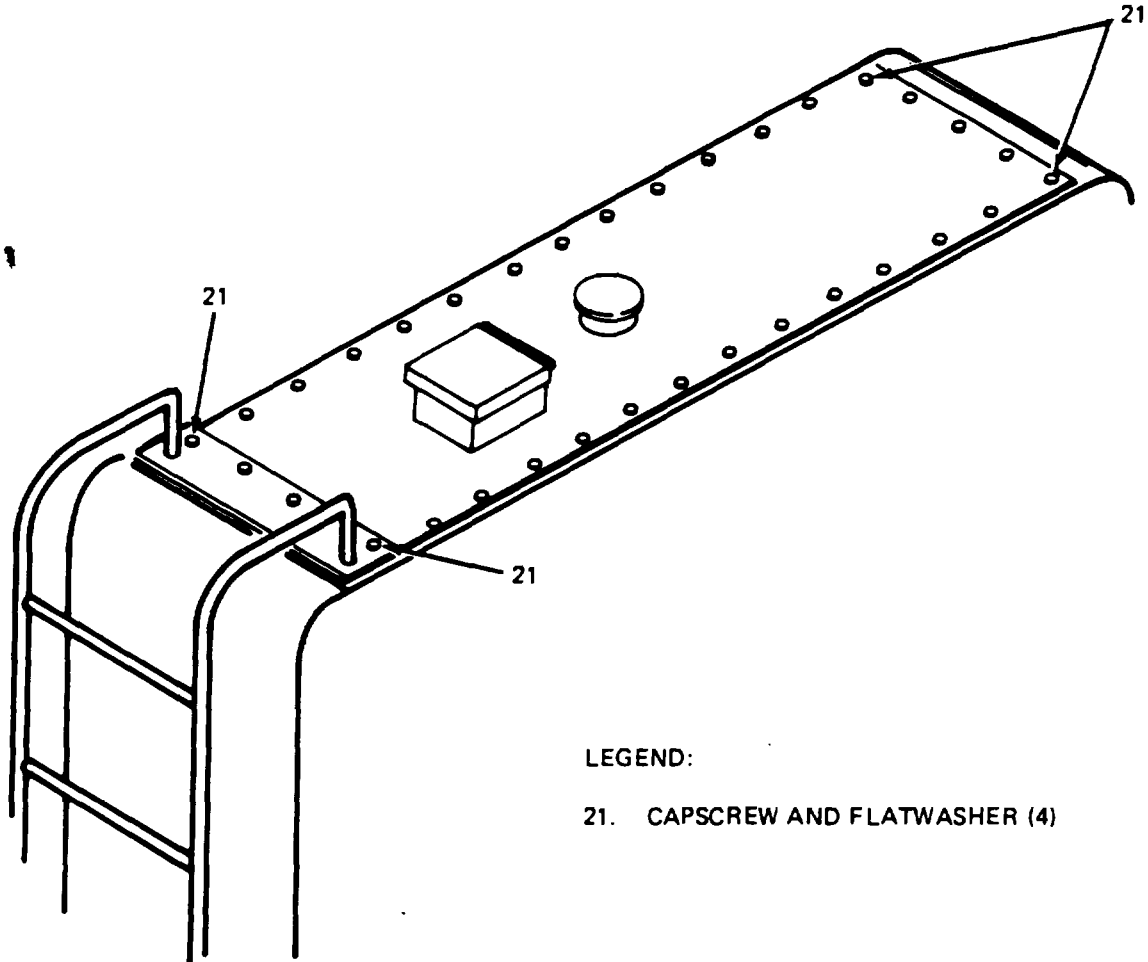
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

28. Four capscrews and flatwashers (21).

Install and tighten.

One in each corner.



LEGEND:

21. CAPSCREW AND FLATWASHER (4)

TA 076232

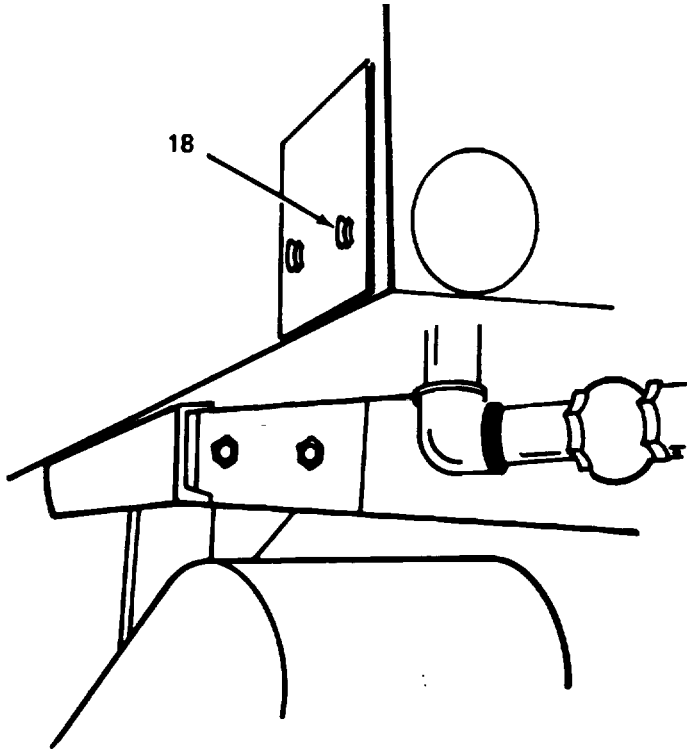
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS

C. INSTALLATION (Continued).

29. Ten leg bolts, nuts and lockwashers (18).

Install and tighten securely.



LEGEND:

18. LEG BOLT, NUT, AND LOCKWASHER (10)

TA 076233

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

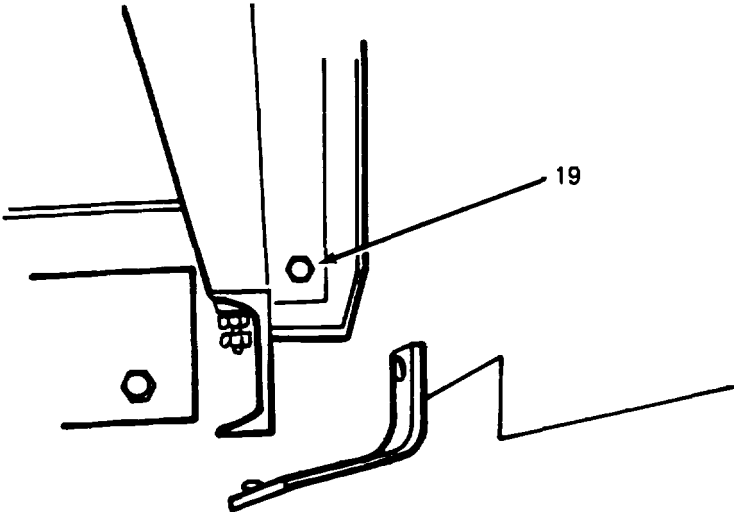
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

30. Two bolts, lockwashers, and nuts (19).

Install and tighten securely.

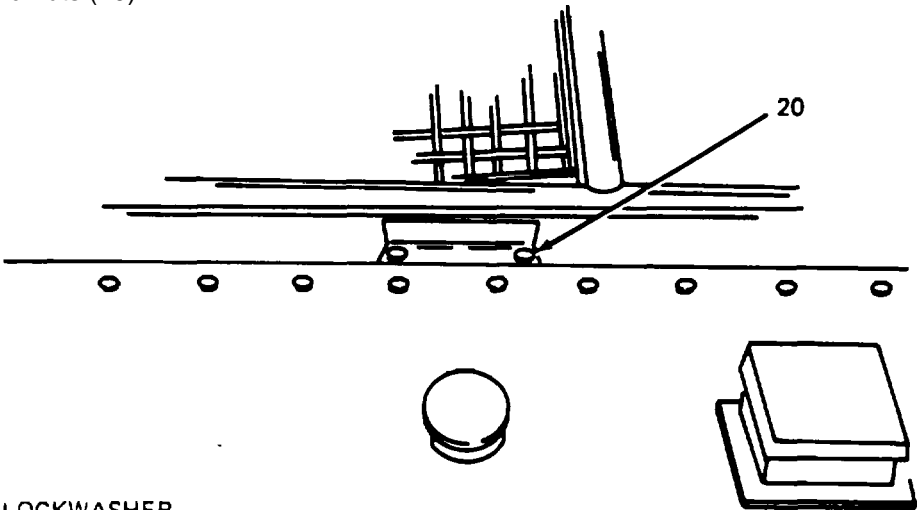
Located between water tank



31. Two bolts, flatwashers, lockwashers and nuts (20).

Install and tighten securely.

Top backside of water tank.



LEGEND:

- 19 BOLT, LOCKWASHER, AND NUT (2)
- 20 BOLT, FLATWASHER, LOCKWASHER, AND NUT (2)

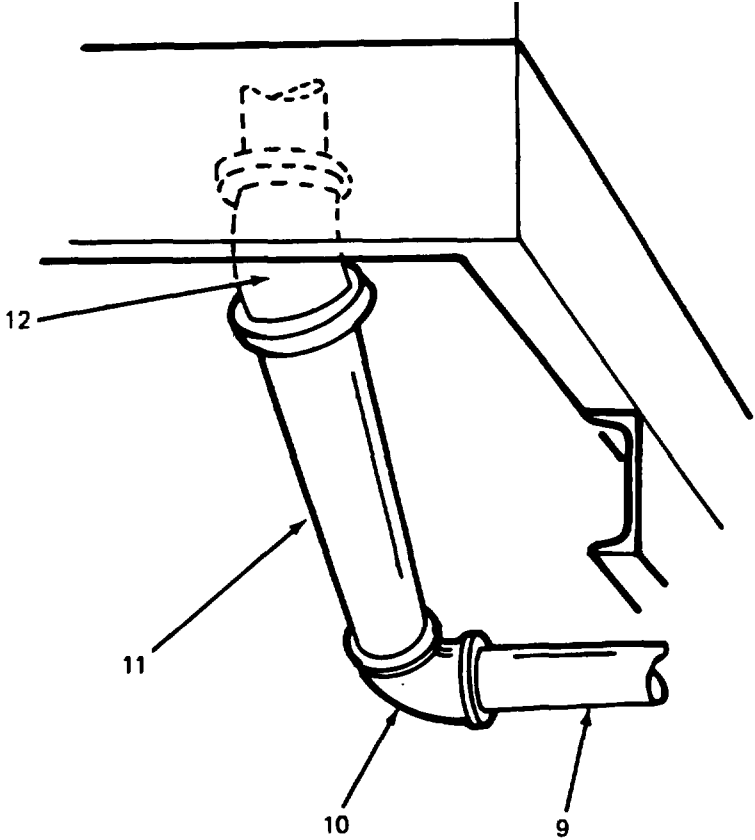
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

- | | | |
|--|----------|----------------------------------|
| 32. Two elbows (12). | Install. | Coat threads with liquid teflon. |
| 33. Two elbows (10) and pipes (11) and (12). | Install. | Coat threads with liquid teflon. |



- LEGEND:
- 9. PIPE (2)
 - 10. ELBOW
 - 11. PIPE (2)
 - 12. ELBOW (2)

TA 076235

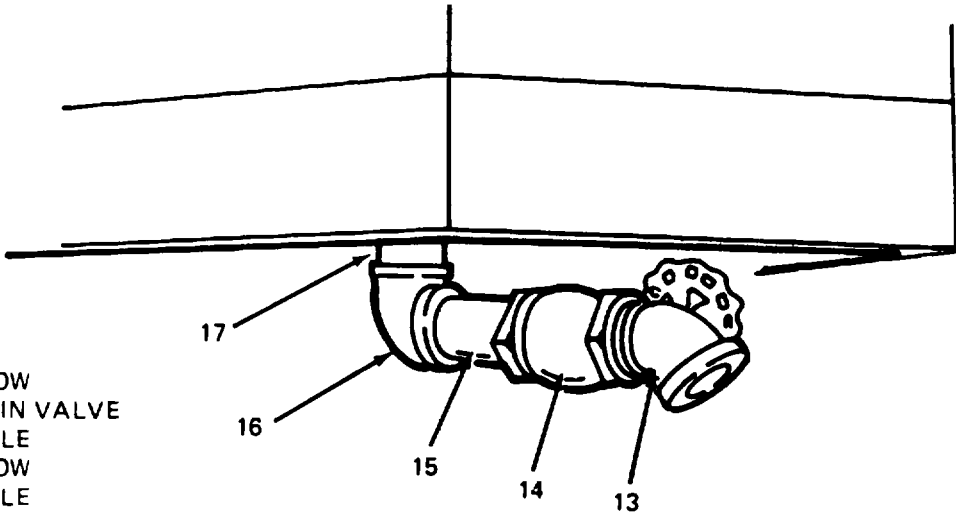
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

- 34. Nipple (17). Install. Coat threads with liquid teflon.
- 35. Drain valve (14), nipple (15), and elbow (16). Install on nipple (17). Coat threads with liquid teflon.
- 36. Elbow (13). Install. Coat threads with liquid teflon.



- LEGEND:
- 13. ELBOW
 - 14. DRAIN VALVE
 - 15. NIPPLE
 - 16. ELBOW
 - 17. NIPPLE

TA 078236

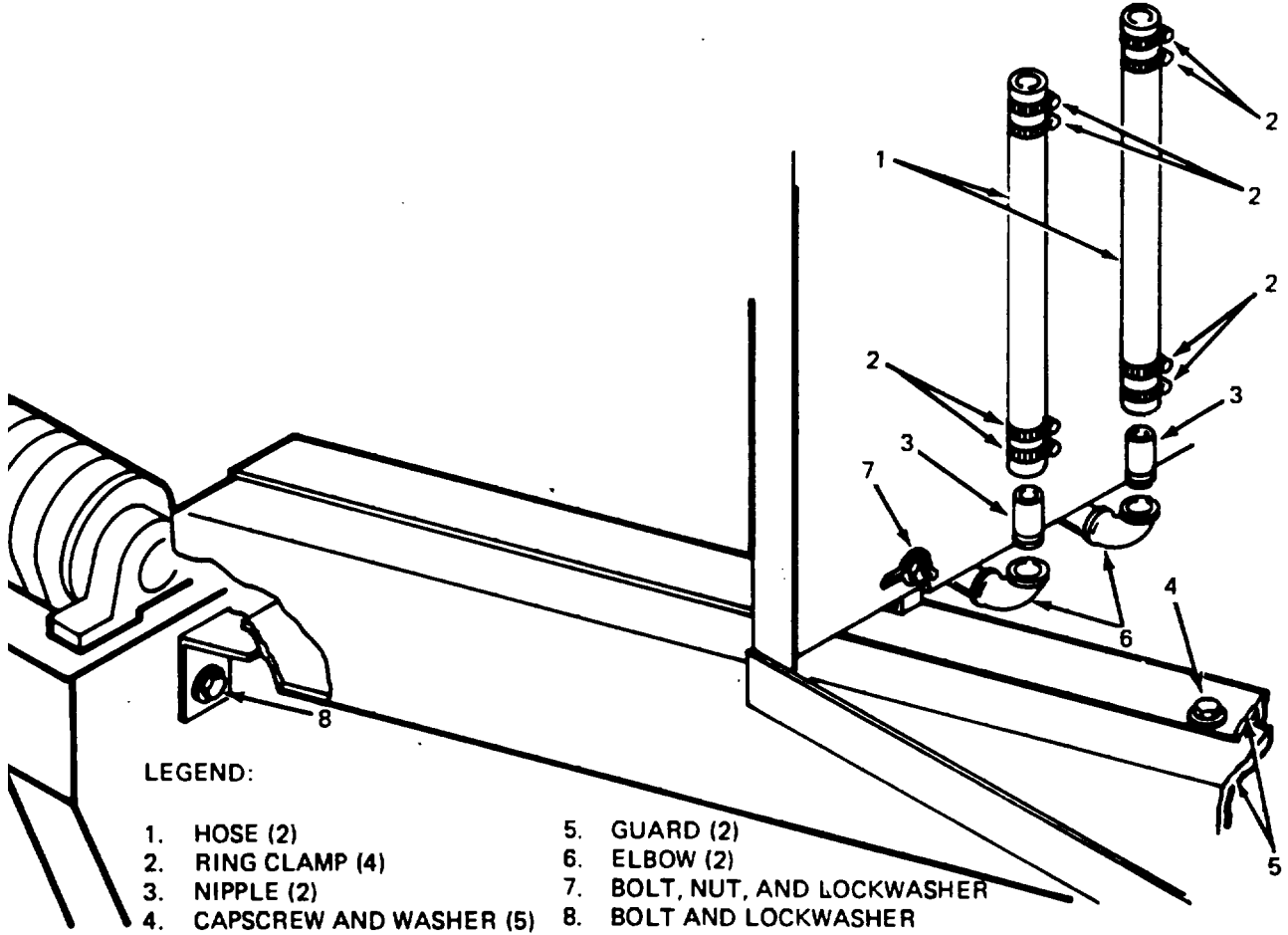
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

- | | | |
|---------------------------------------|-------------------|----------------------------------|
| 37. Two elbows (6). | Install. | Coat threads with liquid teflon. |
| 38. Two nipples (3). | Install. | Coat threads with liquid teflon. |
| 39. Two hoses (1). | Install. | |
| 40. Four ring clamps (2). | Tighten securely. | |
| 41. Guards (5). | Set in place. | |
| 42. One bolt, nut and lockwasher (7). | Install. | |



TA 076237

WATER SYSTEM.

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

43. One bolt and lock-Install.
washer (8).

44. Five capscrews and
washers (4). Install.

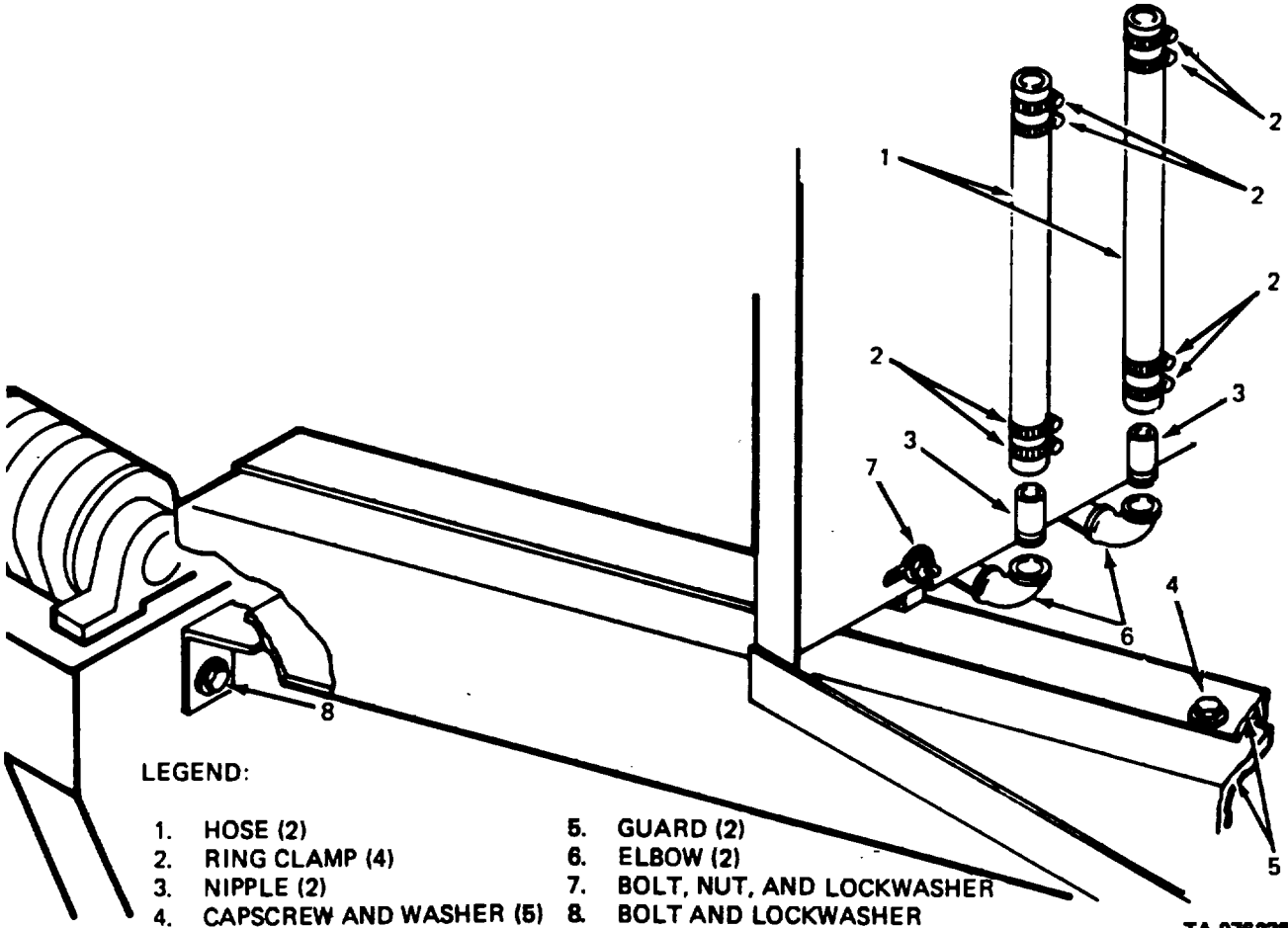
NOTE

Tighten all bolts and nuts securely after alinement.

C. OPERATIONAL CHECK.

45. Water tank. Fill with potable water and
check for leaks.

Retighten connections as



TA 076238

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WATER SYSTEM.

5-14. WATER TANK COMPONENTS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Installation. (30)
- 60 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
1500 Lb Hoist.

MATERIALS/PARTS (P/N)
Strainer Assembly Gasket, NP3703004 (50663).

PERSONNEL REQUIRED
Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
None.

WATER SYSTEM.

5-14. WATER TANK COMPONENTS MAINTENANCE (Continued).

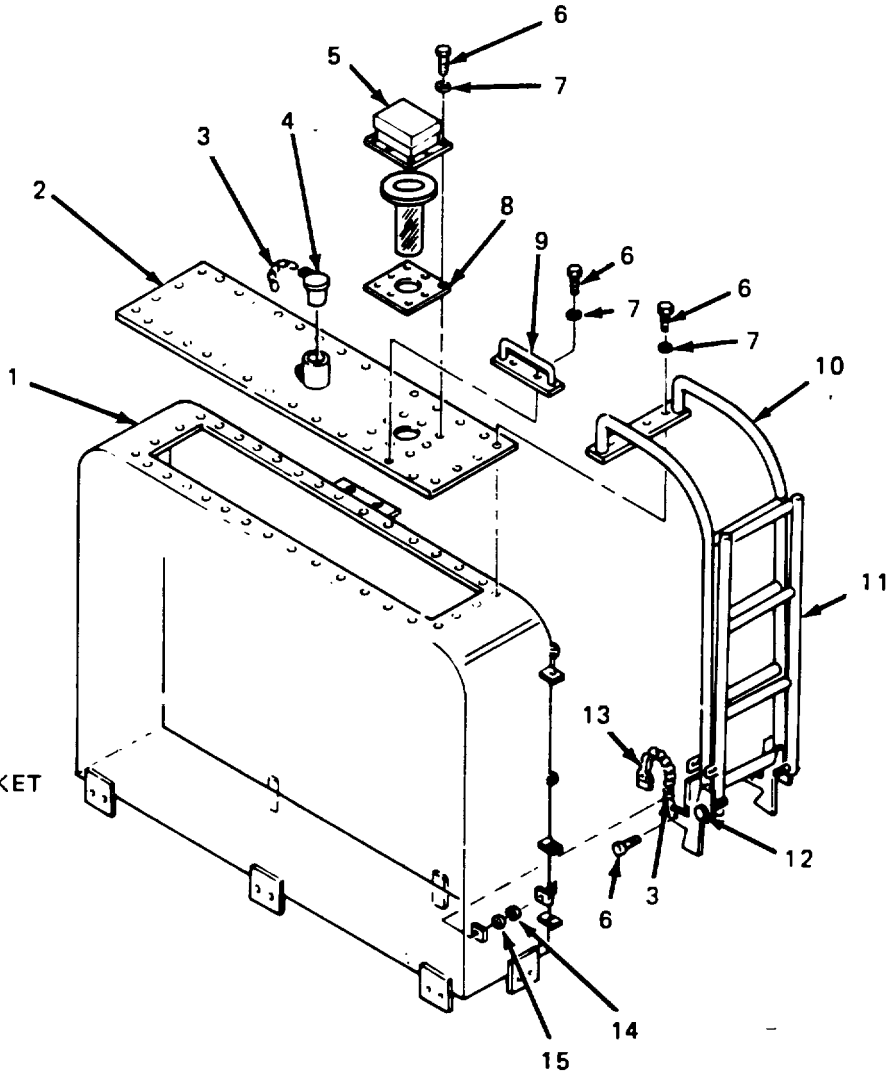
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

1. Ten screws (6) and washers (7).

Unscrew and remove strainer assembly (5), strainer assembly gasket (8), and handle (9).

Discard gasket.



LEGEND:

- 1. WATER TANK
- 2. WATER TANK COVER
- 3. CHAIN (2)
- 4. WATER TANK CAP
- 5. STRAINER ASSEMBLY
- 6. SCREW (44)
- 7. WASHER (42)
- 8. STRAINER ASSEMBLY GASKET
- 9. HANDLE
- 10. UPPER LADDER SECTION
- 11. LOWER LADDER SECTION
- 12. HINGE BOLT (2)
- 13. SNAP HOOK
- 14. NUT (2)
- 15. WASHER (2)

TA 076240

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- | | | |
|--|---|--|
| 2. One chain (3) and water tank cap (4). | a. Inspect for damage.
b. If damaged, refer to Direct Support Maintenance as welding will be required. | |
|--|---|--|

WARNING

If the water tank cover and/or ladder is to be removed, do not stand on the water tank ladder. Use a suitable platform or step ladder. Use a suitable overhead hoist with a rope or chain attached thru the strainer assembly hole and around the end of the water tank cover.

- | | | |
|--|--|--|
| 3. Thirty-four screws (6), thirty-two washers (7), two washers (15) and nuts (14). | a. Unscrew from water tank cover (2), upper ladder section (10), and lower ladder section (11).
b. Remove upper ladder section (10) and lower ladder section (11) with one chain (3) and snap hook (13) attached. | |
| 4. Water tank cover (2). | Attach a suitable chain or rope from an overhead hoist thru the strainer assembly hole and around the end of the water tank cover. Raise up and away from vehicle, then lower to ground. | Second mechanic guides to ground and detaches chain or rope. |
| 5. One chain (3) and snap hook (13). | Inspect for damage. | Replace as necessary. |
| 6. Two hinge bolts (12). | Remove and separate upper ladder section (10) from lower ladder section (11). | Welded in place. |

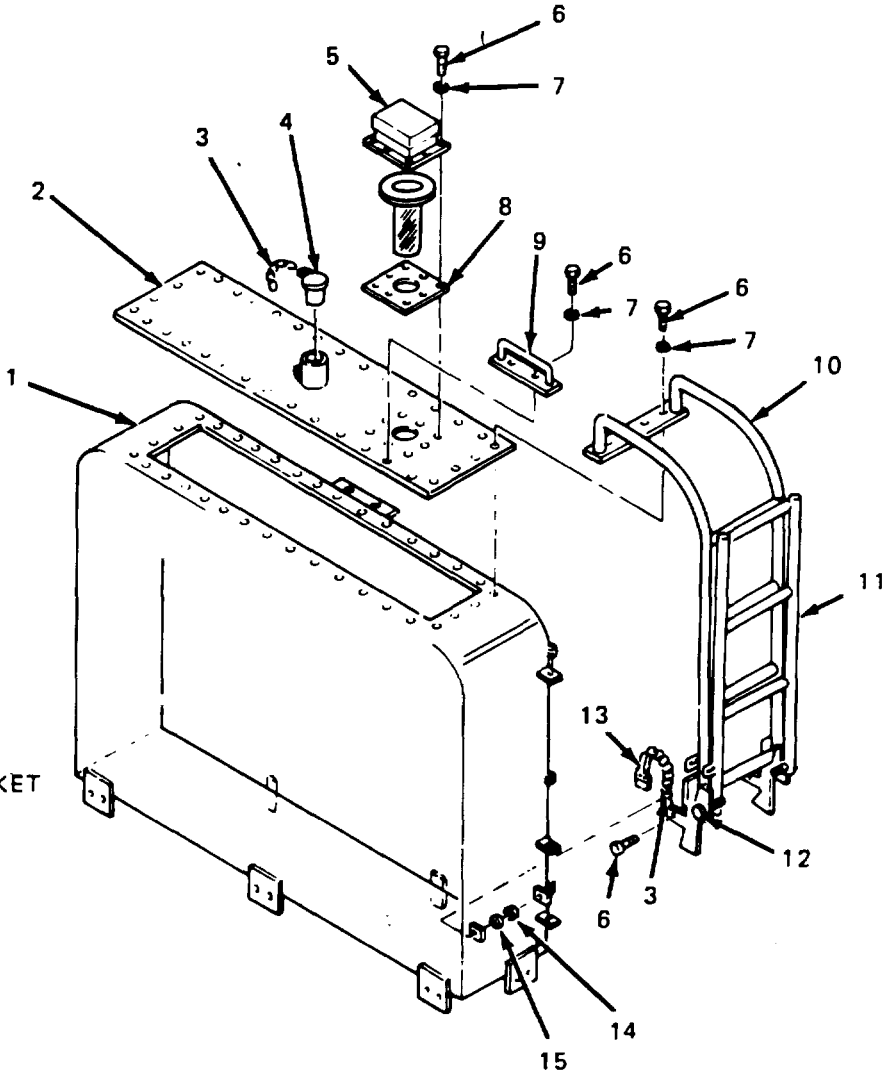
NOTE

Inspect upper ladder section, lower ladder section, handle, and water tank cover for cracks or breaks. Repair as necessary by welding, or replace.

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. WATER TANK
- 2. WATER TANK COVER
- 3. CHAIN (2)
- 4. WATER TANK CAP
- 5. STRAINER ASSEMBLY
- 6. SCREW (44)
- 7. WASHER (42)
- 8. STRAINER ASSEMBLY GASKET
- 9. HANDLE
- 10. UPPER LADDER SECTION
- 11. LOWER LADDER SECTION
- 12. HINGE BOLT (2)
- 13. SNAP HOOK
- 14. NUT (2)
- 15. WASHER (2)

TA 076241

WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
7. Upper ladder section (10) and lower ladder section (11).	Mount together by welding with two hinge bolts (12), if removed.	One chain (3) and snap hook (13) is weld mounted to upper ladder section (10).
8. Water tank cover (2).	a. Attach a suitable rope or chain from an overhead hoist and install as done for removal. b. Raise into position on top of water tank (1). c. Detach hoist hook-up.	One mechanic on suitable platform or ladder and second mechanic on ground to guide into position.
9. Upper ladder section (10), lower ladder section (11), and water tank cover (2).	a. Aline mounting holes with those in water tank (1). b. Mount to water tank (1) (6), thirty-two washers (7), two washers (15) and nuts (14)	Tighten securely. with thirty-four screws
10. New strainer assembly gasket (8), strainer assembly (5), and handle (9).	a. Position on water tank cover (2). b. Secure with ten screws (6)	and washers (7).

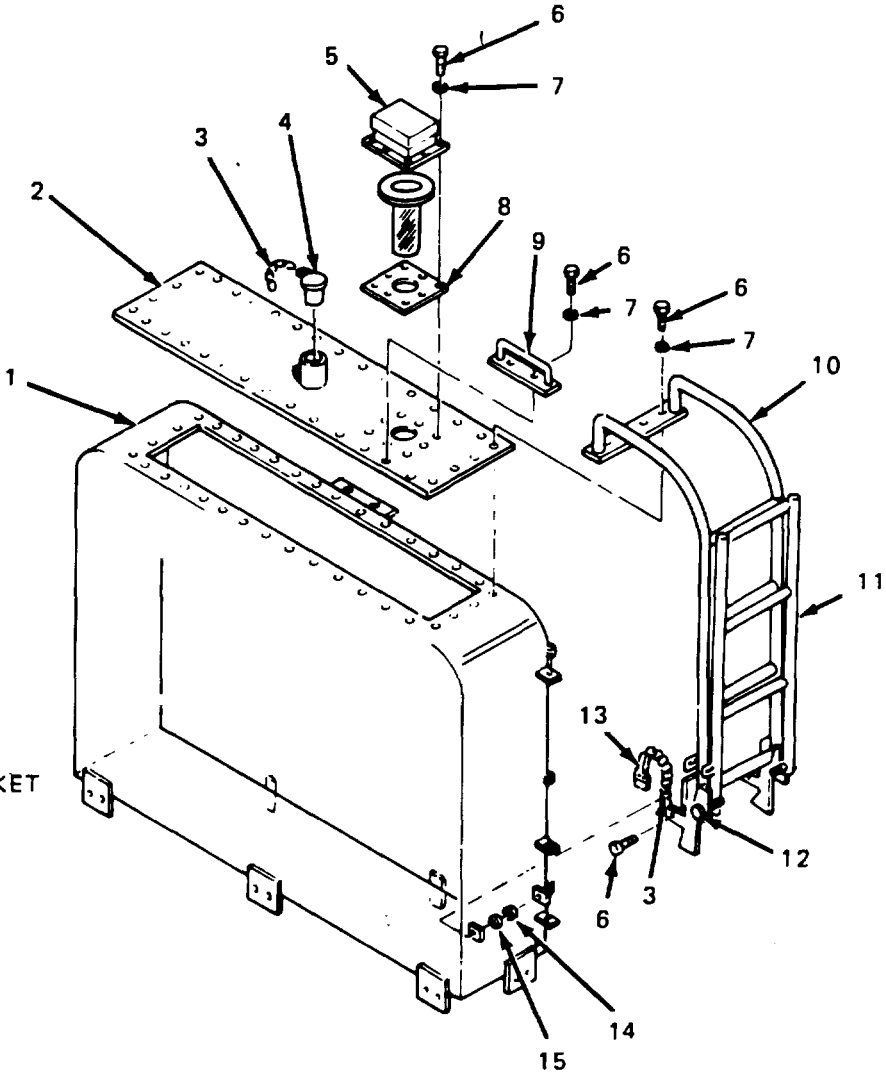
WATER SYSTEM.

5-14. WATER TANK MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

LEGEND:

- 1. WATER TANK
- 2. WATER TANK COVER
- 3. CHAIN (2)
- 4. WATER TANK CAP
- 5. STRAINER ASSEMBLY
- 6. SCREW (44)
- 7. WASHER (42)
- 8. STRAINER ASSEMBLY GASKET
- 9. HANDLE
- 10. UPPER LADDER SECTION
- 11. LOWER LADDER SECTION
- 12. HINGE BOLT (2)
- 13. SNAP HOOK
- 14. NUT (2)
- 15. WASHER (2)



TA 076241

WATER SYSTEM.

5-14. WATER TANK SUB-FRAMES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Installation. (30)
- 60 Minutes Total.

<p><u>INITIAL SETUP</u></p> <p><u>APPLICABLE CONFIGURATIONS</u> M919.</p> <p><u>TEST EQUIPMENT</u> None.</p> <p><u>SPECIAL TOOLS</u> 1500 Lb Hoist.</p> <p><u>MATERIALS/PARTS (P/N)</u> None.</p> <p><u>PERSONNEL REQUIRED</u> One (MOS-62B20).</p> <p><u>REFERENCES (TM)</u> TM 5-3895-372-10. TM 5-3895-372-20P. TM 9-2320-273-10.</p> <p><u>TROUBLESHOOTING REEERENCES</u> None.</p>	<p><u>EQUIPMENT CONDITION PARAGRAPH</u> 5-14A.</p>	<p><u>CONDITION DESCRIPTION</u> Water Tank Removed.</p> <p><u>SPECIAL ENVIRONMENTAL CONDITIONS</u> Vehicle Parked on Level Ground.</p> <p><u>GENERAL SAFETY INSTRUCTIONS</u> Engine Off. Transmission in Neutral. Parking Brake Set.</p>
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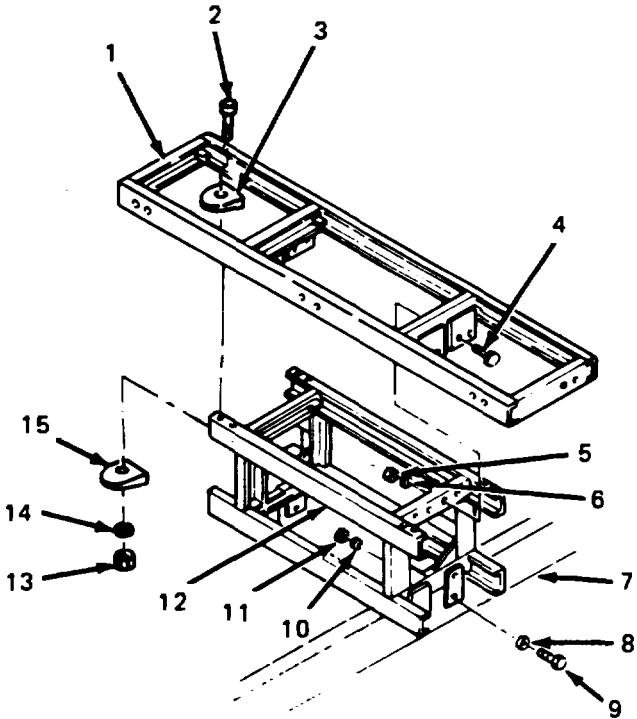
WATER SYSTEM.

5-14. WATER TANK SUB-FRAMES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Eight bolts (2), tapered shims (3), tapered shims (15), washers (14), and nuts (13).	Unscrew and remove.	
2. Eight bolts (4), washers (6), and nuts (5).	Unscrew and remove.	Lift top sub-frame (1) from vehicle with suitable hoist.
3. Eight bolts (9), washers (8), washers (10), and nuts (11).	Unscrew and remove.	Lift bottom sub-frame (12) from chassis frame (7) with suitable hoist.
4. Top sub-frame (1) and bottom sub-frame (12).	a. Inspect for broken welds. b. Repair by welding as necessary.	

LEGEND:

- 1. TOP SUB-FRAME
- 2. BOLT (8)
- 3. TAPERED SHIM (8)
- 4. BOLT (8)
- 5. NUT (8)
- 6. WASHER (8)
- 7. CHASSIS FRAM.
- 8. WASHER (8)
- 9. BOLT (8)
- 10. WASHER (8)
- 11. NUT (8)
- 12. BOTTOM SUB-FRAME
- 13. NUT (8)
- 14. WASHER (8)
- 15. TAPERED SHIM (8)



TA 076242

WATER SYSTEM.

5-14. WATER TANK SUB-FRAMES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.

- | | | |
|---------------------------|---|----------------------|
| 5. Bottom sub-frame (12). | a. Set in position on chassis frame (7).
b. Install with eight bolts (9), washers (8), washers (10), and nuts (11). | Use a suitable hoist |
| 6. Top sub-frame (1). | a. Set in position on bottom sub-frame (12).
b. Install eight bolts (4), washers (6), and nuts (5).
c. Install eight bolts (2), tapered shims (3), tapered shims (15), washers (14), and nuts (13). | Use a suitable hoist |

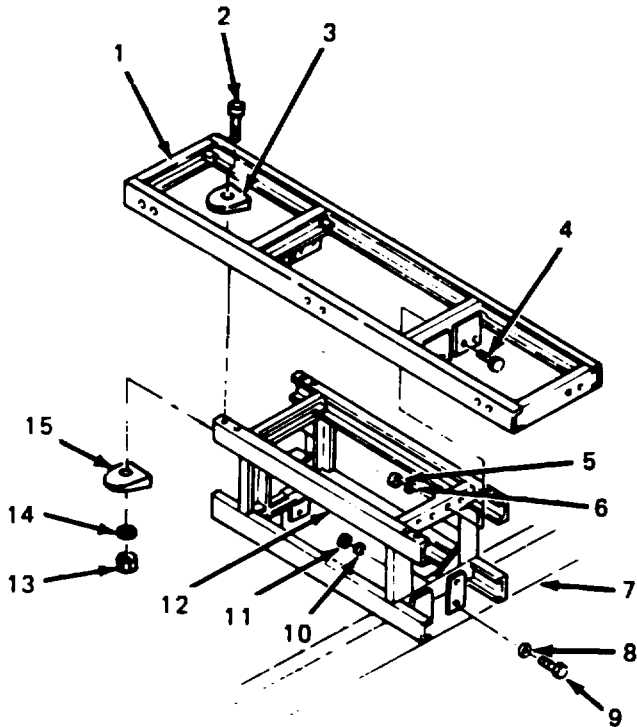
NOTE

Follow-on maintenance action required:

Install water tank (refer to para 5-14C)

LEGEND:

- 1. TOP SUB-FRAME
- 2. BOLT (8)
- 3. TAPERED SHIM (8)
- 4. BOLT (8)
- 5. NUT (8)
- 6. WASHER (8)
- 7. CHASSIS FRAME
- 8. WASHER (8)
- 9. BOLT (8)
- 10. WASHER (8)
- 11. NUT (8)
- 12. BOTTOM SUB-FRAME
- 13. NUT (8)
- 14. WASHER (8)
- 15. TAPERED SHIM (8)



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CHAPTER 6

ADMIX SYSTEMS

6-1. OVERVIEW.

This chapter provides you with the following information related to liquid admix systems maintenance.

- a.* All required special tools and equipment.
- b.* Troubleshooting procedures.
- c.* Maintenance procedures.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

6-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

6-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for liquid and dry admix systems maintenance procedures described in this chapter are as follows. (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

- a.* Air pressure gage, 0-25 psi (0-172 kPa).
- b.* Stop watch.
- c.* Measuring container, 7 qt (6.6 l) minimum, calibrated in qts (or liters).
- d.* Measuring container, 150 oz (4436 ml) minimum, calibrated in oz (or milliliters).

6-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

6-5. INTRODUCTION.

Troubleshooting procedures for the wet admix systems are given in table 6-1. It is arranged by malfunctions, in the following order:

- a.* Air pressure cannot be maintained at 15 psi (Malfunction No. 1).
- b.* Liquid admix flows unevenly (Malfunction No. 2).
- c.* Liquid admix flows too quickly (Malfunction No. 3).
- d.* Liquid admix flows too slowly or not at all (Malfunction No. 4).
- e.* Quick opening valve sticks (Malfunction No. 5).
- f.* Flowmeter does not return to zero (Malfunction No. 6).
- g.* Dry admix system inoperative (Malfunction No. 7).

If only one liquid admix system malfunctions, apply the troubleshooting steps to that system only. If both systems malfunction, troubleshoot both of them.

You will find that most malfunctions are caused by a gelatinous or gummy sediment from the admixtures themselves. Remove sediment with the cleaning agent recommended by the admixture manufacturer.

Remind the operator:

- a.* Never mix admixtures in tanks.
- b.* Always flush and drain each system after use.

Table 6-1. Admix Systems Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1.	AIR PRESSURE CANNOT BE MAINTAINED AT 15 PSI (103 kPa):	
	Step 1. Check for open draincocks and vents.	Close all draincocks and vents.
	Step 2. Use soap solution to check for air leaks.	Tighten loose fittings. Replace leaking valves or lines (para 6-14).
	Step 3. Turn regulator in both directions. Watch gage for pressure response.	Replace faulty regulator (para 6-14).
	Step 4. Attach pressure gage between regulator and gate valves. Check that it reads the same as pressure gage installed on regulator.	Replace pressure gage (pare 6-14).
	Step 5. Increase pressure to 18-20 psi (124-138 kPa). Check that relief valves vent when pressure reaches 18-20 psi (124-138 kPa).	Adjust relief valve (para 6-17).
	Step 6. Check for blockage in supply line.	Remove obstruction or replace line (para 6=14).
	Step 7. Check compressed air system for leaks.	Troubleshoot compressed air system (para 11-5).
2.	LIQUID ADMIX FLOWS UNEVENLY:	
	Step 1. Check for 14½ - 15' psi (100-107 kPa) air pressure.	See Malfunction No. 1.
	Step 2. Check for leaks.	Tighten loose connections. Replace leaking lines or valves (para 6-14).
	Step 3. Check for dirt or sediment in system.	Flush system. First use cleaning agent recommended by admixture manufacturer. Then use clean water.

Table 6-1. Admix Systems Troubleshooting Procedures (Continued).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. LIQUID ADMIX FLOWS UNEVENLY (Continued):		
Step 4.	Check for blocked strainer.	Clean strainer (para 6-8).
Step 5.	If temperature is below 320F (OOC) check for frozen admix lines.	a. Open draincocks. b. Apply heat to melt ice. c. When ice is melted, close draincocks.
Step 6.	Working from nozzles to tanks, check individual elements for blockage.	Clean or replace blocked lines or valves (para 6-14).
Step 7.	Check down pipe for breakage or blocked breather.	Clean breather or replace pipe as needed.

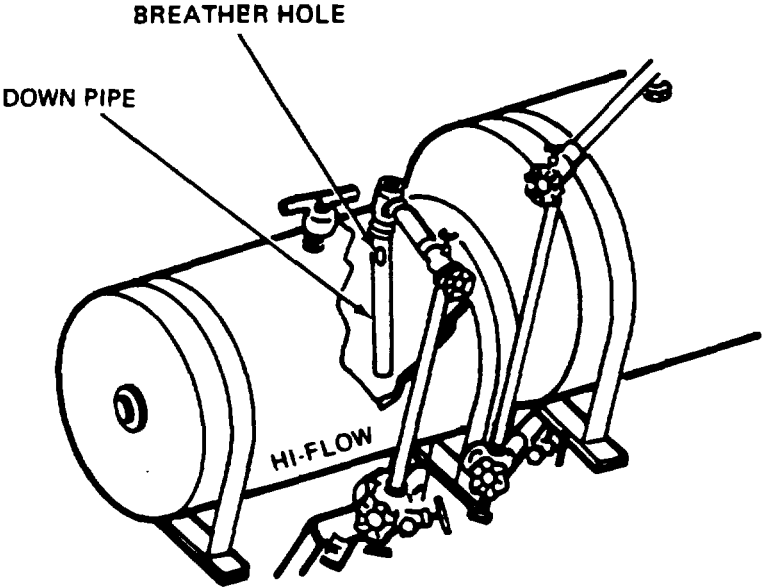
The diagram shows a side view of a concrete mixer truck. A vertical pipe, labeled 'DOWN PIPE', extends from the top of the drum. A small opening on the drum is labeled 'BREATHER HOLE'. The drum itself is labeled 'HI-FLOW'. The truck is shown on a set of wheels.

Table 6-1. Admix Systems Troubleshooting Procedures (Continued).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. LIQUID ADMIX FLOWS TOO QUICKLY:	Step 1. Check for 14%1 - 15Y2 psi (100-107 kPa) air pressure.	See Malfunction No. 1.
	Step 2. Check for relief valves venting at 15 psi (103.5 kPa).Bleed pressure. Remove vent and install test gage with 1/8 in. thread. Check pressure.	If gage is faulty, replace. Otherwise, adjust relief valve (para 6-17).
	Step 3. Check flowmeter calibration (see para 6-10).	Replace faulty flowmeter (see para 6-10).
4. LIQUID ADMIX FLOWS TOO SLOWLY OR NOT AT ALL:	Step 1. Check for 14%' - 15% psi (100-107 kPa) air pressure.	See Malfunction No. 1.
	Step 2. Check for leaks.	Tighten loose connections. Replace leaking lines or valves (para 6-14).
	Step 3. Check for dirt or sediment blocking system.	Flush system. First use cleaning agent recommended by admixture manufacturer. Then use clean water.
	Step 4. Check for blocked strainer.	Clean strainer (para 6-8).
	Step 5. If temperature is below 320F (0°C) check for frozen admix lines.	<ul style="list-style-type: none"> a. Open draincocks. b. Apply heat to melt ice. c. When ice is melted, close draincocks.
	Step 6. Check flowmeter calibration (para 6-10).	Repair or replace flowmeter. (See para 6-11 or 6-10).

Table 6-1. Admix Systems Troubleshooting Procedures (Continued).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. LIQUID ADMIX FLOWS TOO SLOWLY OR NOT AT ALL (Continued):		
Step 7.	Check mechanical linkage between quick acting valve and main clutch lever. Valve should be opened fully when clutch is engaged.	Repair linkage. Check for broken down pipe or clogged breather in pipe.
Step 8.	Beginning at nozzles and working back to tanks, check individual components for blockage. Be sure to check down pipes in tanks for blocked breather holes.	Clean or replace blocked lines or valves (para 6-14).



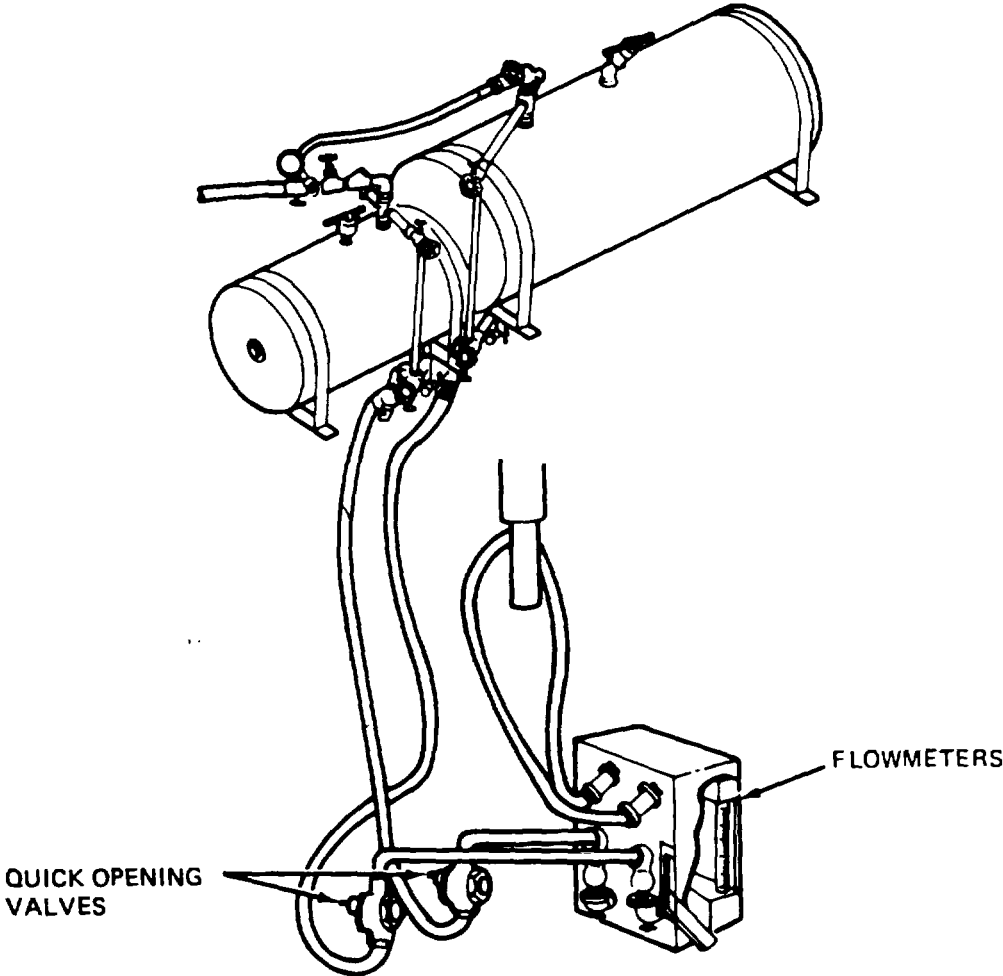
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Table 6-1. Admix Systems Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

5. QUICK OPENING VALVE STICKS:

- Step 1. for sticking or binding as valve is opened and closed.
 - a. Lubricate valve stem with engine oil.



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Table 6-1. Admix Systems Troubleshooting Procedures (Continued).

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

5. QUICK OPENING VALVE STICKS (Continued):

- b. tightness of packing nut. Tighten until valve sticks, then back off just until valve operates freely.

Step 2. for sediment or gelatinous mass blocking valve.

- a. Flush system. First use cleaning agent recommended by admixture manufacturer. Then use clean water.
- b. Clean strainer screen (para 6-8).

6. FLOWMETER DOES NOT RETURN TO ZERO:

Step 1. Check whether quick acting valve is sticking. See Malfunction No. 5.

Step 2. Check for dirt in flowmeter. Disassemble and clean flowmeter (para 6-11).

7. DRY ADMIX SYSTEM INOPERATIVE:

Step 1. Check for main clutch engagement. Adjust if necessary (para 4-18).

Step 2. Check for dry admix bin clutch engagement and if chains and sprockets are in operating condition. Engage clutch.

Step 3. Check operation and correct dial setting. Set dial indicator (refer to para 6-19).

Step 4. Check operation of dry admix bin. Repair as necessary (refer to para 6-19).

Section III MAINTENANCE PROCEDURES

6-6. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for the liquid admix systems of the mixer body. Paragraph 6-7 summarizes the maintenance tasks. Paragraphs 6-8 thru 6-19 contain detailed instructions for each task.

6-7. LIQUID ADMIX SYSTEMS MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Cleaning Agent.
Liquid Teflon (Refer to Appendix C).
GAA - (Refer to Appendix C).
Silicone Grease (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

REFERENCES (TM)
TM 5-3895-372-20P
TM 9-2320-273-10.

TM 5-3895-372-10.
REFERENCES (TROUBLESHOOTING)
Table 6-1.

EQUIPMENT CONDITION PARAGRAPH
TM 5-3895-372-10.
M 5-3895-372-10.

TM 5-3895-372-10.
TM 9-2320-273-10.
M 5-3895-372-10.

TM 5-3895-372-10.

CONDITION DESCRIPTION
Solution Gate Valve Closed.
Admixture Tanks Filled With diluted Admixture Solution or water.
Admix System Drained.
Air Pressure Drained.
Liquid Admix Systems Drained and Flushed.
6-9A. Sight Gage Removed.
Bin Empty.

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

GENERAL SAFETY INSTRUCTIONS
Transmission in Neutral.
Engine Off.
Parking Brake Set.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Strainer Service; A. Removal. B. Cleaning and Inspection. C. Installation.	6-8 6-8A 6-8B 6-8C	6-1
2.	Sight Gages Maintenance: A. Removal B. Cleaning C. Installation.	6-9 6-9A 6-9B 6-9C	6-1

6-7. LIQUID ADMIX SYSTEMS MAINTENANCE TASK SUMMARY (Continued).			
<u>LIST OF TASKS</u>			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
3.	Flowmeters Maintenance: A. Removal B. Installation. Operational Check. C.	6-10 6-10A 6-10B 6-10C	6-1
4.	Flowmeters Repair: A. Disassembly. B. Cleaning and Inspection. C. Assembly.	6-11 6-11A 6-11B 6-11C	6-1
5.	Flowmeter Hose Maintenance: A. Removal. B. Installation.	6-12 6-12A 6-12B	6-1
6.	Flowmeter Valve Maintenance: A. Removal. B. Installation.	6-13 6-13A 6-13B	6-1
7.	Valves, Lines, and Fittings Maintenance: A. Removal. B. Inspection. C. Installation D. Checking for Leaks.	6-14 6-14A 6-14B 6-14C 6-14D	6-1
8.	Liquid Admix Tanks Maintenance (Hi-Flow): A. Removal. B. Repair. C. Installation. D. Checking for Leaks.	6-15 6-15A 6-15B 6-15C 6-15D	6-1

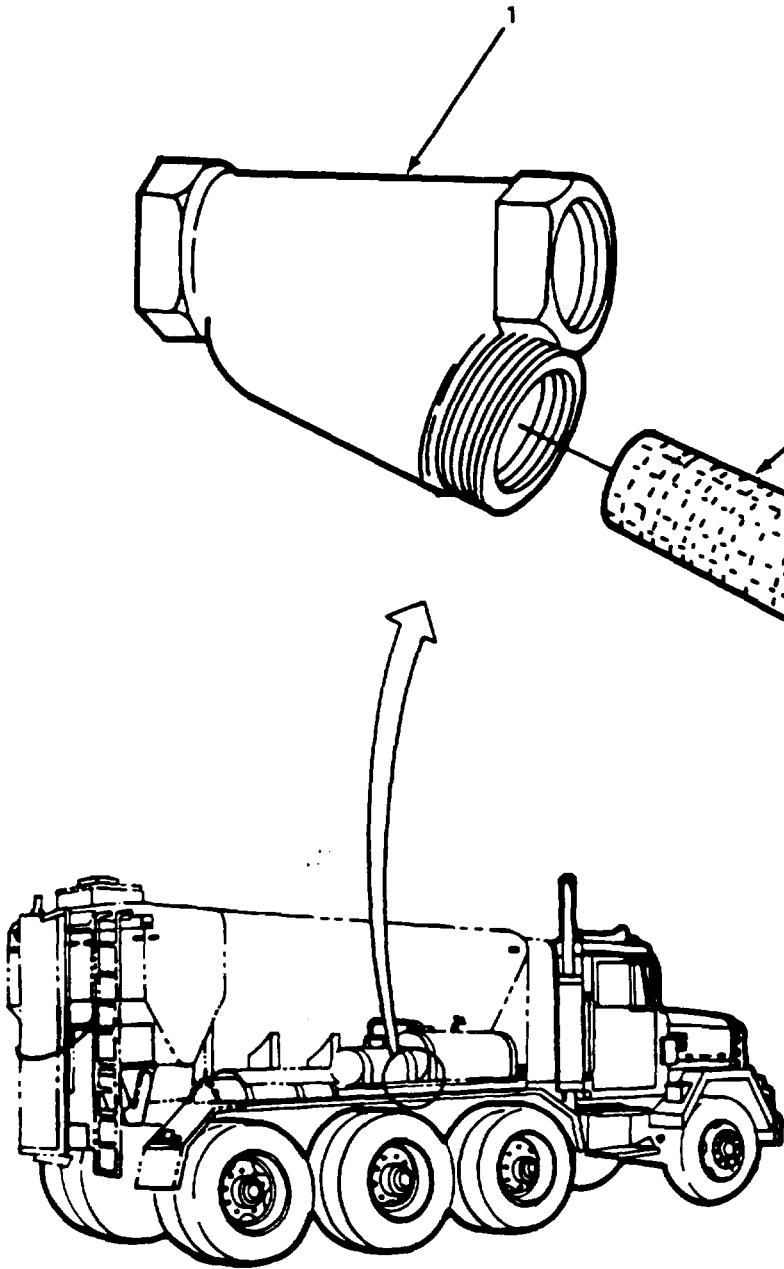
6-7. LIQUID ADMIX SYSTEMS MAINTENANCE TASK SUMMARY (Continued).			
LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
9.	Liquid Admix Tank Maintenance (Low-Flow):	6-16	6-1
A.	Removal.	6-16A	
B.	Repair.	6-16B	
C.	Installation.	6-16C	
D.	Checking for Leaks.	6-16D	
10.	Air Relief Valve Maintenance and Adjustment:	6-17	6-1
A.	Removal.	6-17A	
B.	Disassembly.	617B	
C.	Inspection.	6-17C	
D.	Assembly.	6-17D	
E.	Installation.	617E	
F.	Adjustment.	617F	
11.	Admix Injector Maintenance:	618 61	
A.	Removal.	618A	
B.	Installation.	-18B	
C.	Operational Clock.	6-8C	
12.	Dry Admix Bin Maintenance:	6-19	61
A.	Removal.	6-19A	
B.	Disassembly.	619B	
C.	Cleaning and Inspection.	6-19C	
D.	Assembly.	619D	
E.	Installation.	619E	
F.	Test.-	619F	

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ADMIX SYSTEMS.		
6-8. STRAINER SERVICE.		
THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)		
a. Removal.	(5)	
b. Cleaning and Inspection.	(10)	
c. Installation.	(5)	
	20 Minutes Total.	
<u>INITIAL SETUP</u>	<u>EQUIPMENT</u>	
	<u>CONDITION</u>	
	<u>PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
<u>APPLICABLE CONFIGURATIONS</u>	TM 53895-372-10.	Solution Gate Valve Closed.
M919.		
<u>TEST EQUIPMENT</u>		
None.		
<u>SPECIAL TOOLS</u>		
None.		
<u>MATERIALS/PARTS (P/N)</u>		
Cleaning Agent (Refer to Appendix C).		
<u>PERSONNEL REQUIRED</u>	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>	
One (MOS-62B20).	Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u>	<u>GENERAL SAFETY INSTRUCTIONS</u>	
TM 5-3895-372-10.	Engine Off.	
TM 5-3895-372-20P.	Transmission in Neutral.	
TM 92320-273-10.	Parking Brake Set.	
<u>TROUBLESHOOTING REFERENCES</u>		
Table 6-1.		

ADMIX SYSTEMS.

6-8. STRAINER SERVICE. (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
		<p>LEGEND:</p> <ul style="list-style-type: none">1. HOUSING2. SCREEN3. CAP4. BUSHING5. DRAIN COCK

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ADMIX SYSTEMS.

6-8. STRAINER SERVICE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
NOTE		
Each liquid admix system has a strainer screen. The procedure below may be used to clean the hi-flow or the low-flow strainer.		
NOTE		
Close solution gate valve adjacent to strainer, if tank is full.		
1. Draincock (5). 2. Draincock (5) and bushing (4). 3. Cap (3).	Open. Remove. Unscrew and remove. Remove screen (2).	Use a six point socket.
B. CLEANING AND INSPECTION.		
4. Screen (2).	a. recommended by admixture manufacturer. Then use water. b. Inspect for: (1) Cracks (2) Breaks (3) Deformities.	Clean. Use cleaning agent Replace if necessary.
5. Housing (1).	Wash out any sediment.	
C. INSTALLATION.		
6. Screen (2).	Place in housing (1).	
7. Cap (3).	Screw on and tighten.	Use a six point socket
8. Draincock (5) and	Install bushing (4).	
9. Draincock (5).	Close.	

ADMIX SYSTEMS.

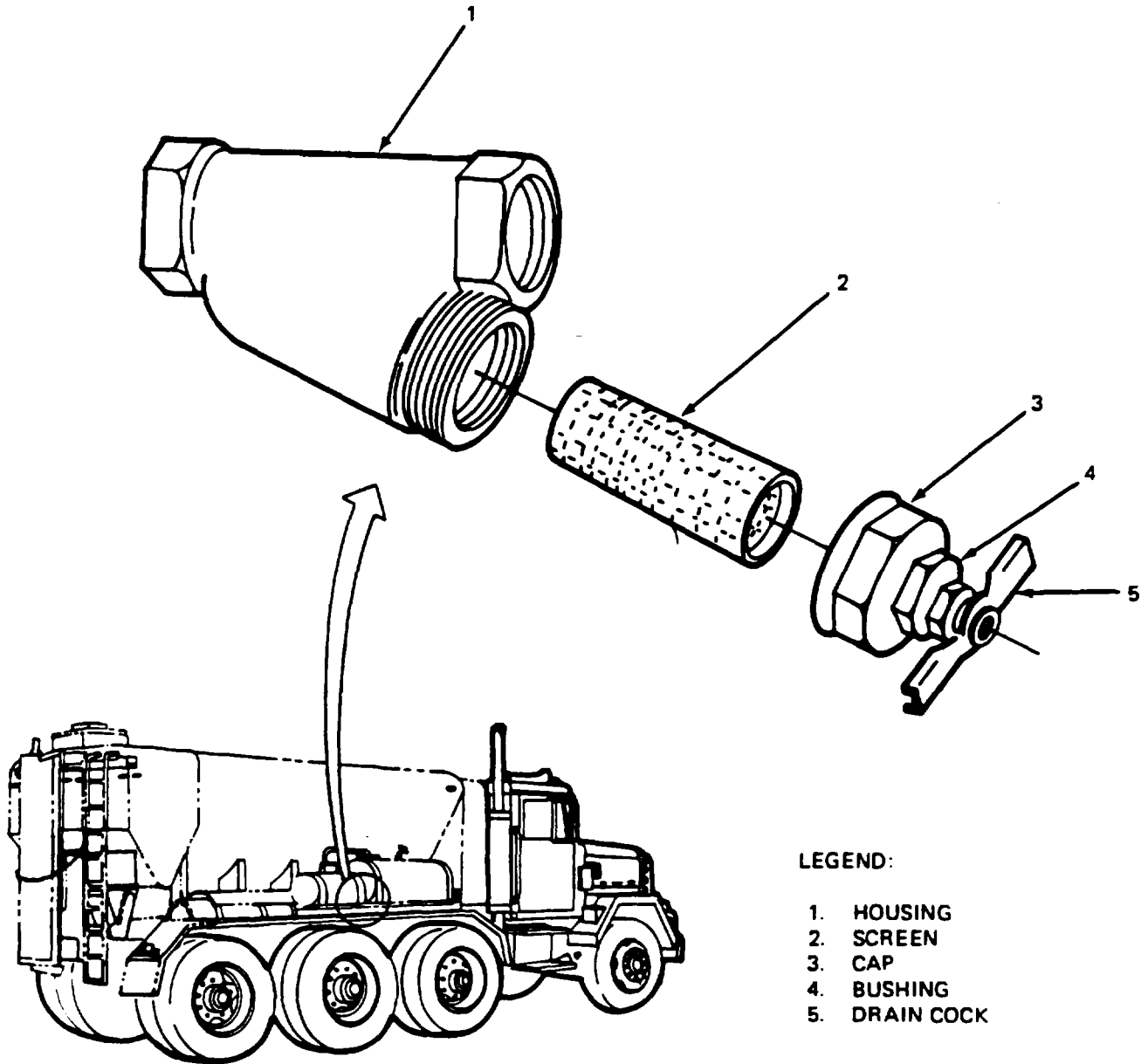
6-8. STRAINER SERVICE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued)

NOTE

After draincock is closed, you may open the solution gate valve and check operation.



LEGEND:

- 1. HOUSING
- 2. SCREEN
- 3. CAP
- 4. BUSHING
- 5. DRAIN COCK

TA 076248

ADMIX SYSTEMS.

6-9, SIGHT GAGES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | |
|------------------|-------------------|
| a. Removal. | (21 |
| b. Cleaning. | (6). |
| c. Installation. | (2) |
| | 10 Minutes Total. |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Cleaning Agent.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895-372-10.
TM 53895372-20P.
TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

ADMIX SYSTEMS.

6-9. SIGHT GAGES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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A. REMOVAL.

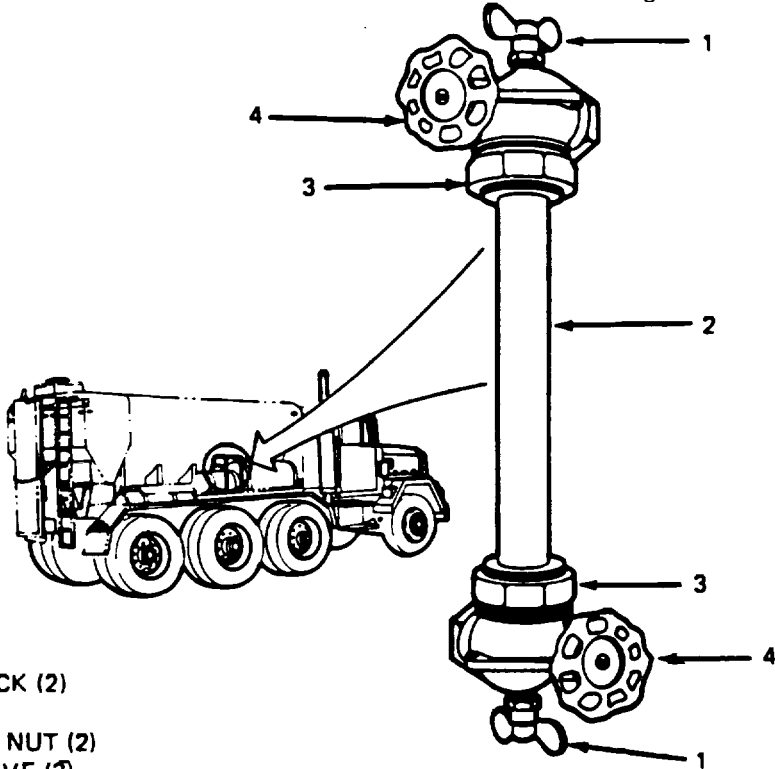
NOTE

The two liquid admix sight gages are identical except for the length of the tube. Use the procedure below for the hi-flow or the lo-flow sight gage.

- | | |
|--------------------------|-----------------------------------|
| 1. Two gage valves (4). | Close. |
| 2. Two draincocks (1). | Open. |
| 3. Two grommet nuts (3). | a. Loosen.
b. Remove tube (2). |

B. CLEANING.

- | | |
|--------------|--|
| 4. Tube (2). | Clean. Use cleaning agent recommended by admixture manufacturer. Rinse thorough- |
|--------------|--|



LEGEND:

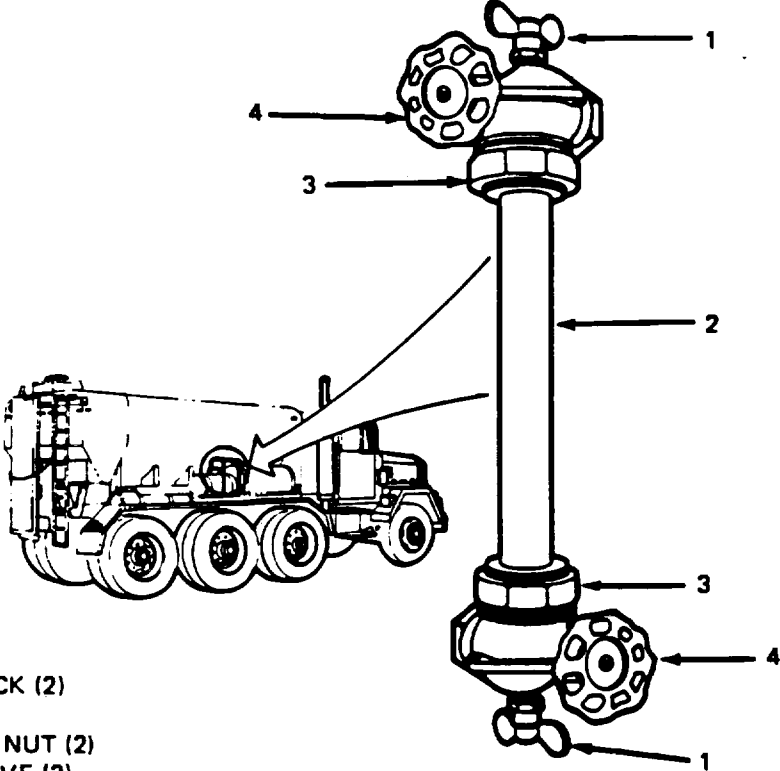
- 1. DRAIN COCK (2)
- 2. TUBE
- 3. GROMMET NUT (2)
- 4. GAGE VALVE (2)

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ADMIX SYSTEMS.

6-9. SIGHT GAGES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
C. INSTALLATION.		
5. Tube (2). 6. Two grommet nuts (3). 7. Two gage valves (4). 8. Two draincocks (1).	Set in place. Tighten to hold tube (2). Open. Close.	



LEGEND:

- 1. DRAIN COCK (2)
- 2. TUBE
- 3. GROMMET NUT (2)
- 4. GAGE VALVE (2)

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ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. (10)
 - c. Operational Check. (20)
- 40 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 53805372-10.

Admixture Tanks Filled With Diluted Admixture Solution or Water.
Air Pressure Drained.

M919.

TM 9232027310.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REOQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

vehicle Parked on Level Ground.

REFERENCES (TM)

- TM S3895372-10.
- TM S3895372-20P.
- TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Bru Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

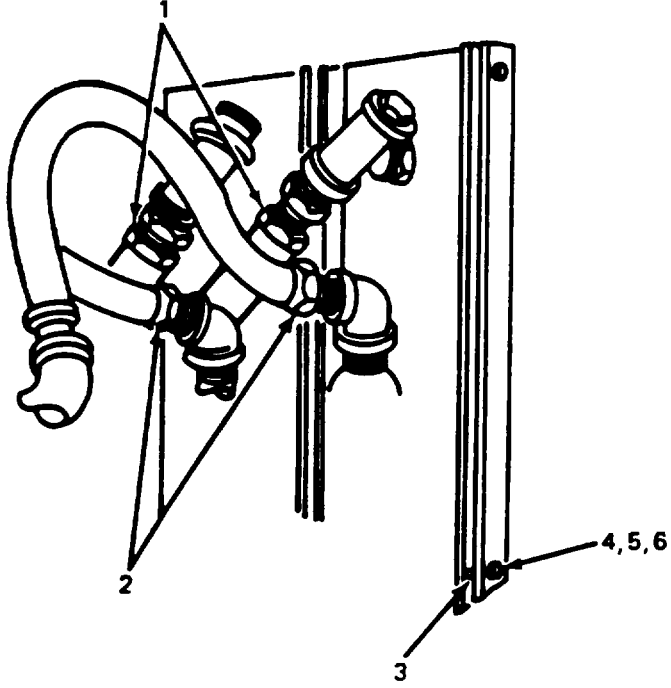
ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|--|---------|-------------------------|
| 1. Two swivel nuts (2). | Remove. | Tag hoses for location. |
| 2. Two swivel nuts (1). | Remove. | Tag hose for location. |
| 3. Four bolts (5), nuts (6) and lockwashers (4). | Remove. | |
| 4. Four spacers (3). | Remove. | |



LEGEND:

- 1. SWIVEL NUT (2)
- 2. SWIVEL NUT (2)
- 3. SPACER (4)
- 4. LOCKWASHER (4)
- 5. BOLT (4)
- 6. NUT (4)

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ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
5. Two flowmeters (23).	Remove from vehicle.	
6. Two bolts (19), nuts (20) and six spacers (21).	Remove.	Separate flowmeters (23).
<p>NOTE The following describes the removal of any one of the flowmeters.</p>		
7. Tee (16), adapter (17) and nipple (18).	Remove.	
8. Two screws (13), nut (14) and lockwasher (15).	Remove.	
9. Lever (7).	Remove.	
10. Elbow (8) and adapter (9).	Remove.	
11. Four screws (10), lockwasher (11) and flatwasher (12).	Remove.	Separate flowmeter (23) from bracket (22).
B. INSTALLATION.		
12. Four screws (10), lockwasher (11) and flatwasher (12).	Install through bracket (22) and into flowmeter (23) and tighten securely.	
13. Two bolts (19), nuts (20) and spacers (21).	Install through brackets (22) and tighten.	
14. Elbow (8) and adapter (9).	Install.	Use liquid teflon on threaded joints.
15. Lever (7).	Install.	
16. Two screws (13), nut (14) and lockwashers (15).	Install.	
17. Tee (16), adapter (17) and nipple (18).	Install.	Coat threads with liquid teflon.
18. Two flowmeters (23).	Install in vehicle.	

ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
7.	LEVER	
8.	ELBOW	
9.	ADAPTER	
10.	SCREW (4)	
11.	LOCKWASHER (4)	
12.	FLAT WASHER (4)	
13.	SCREW (2)	
14.	NUT (2)	
15.	LOCKWASHER (2)	
16.	TEE	
17.	ADAPTER	
18.	NIPPLE	
19.	BOLT (2)	
20.	NUT (2)	
21.	SPACER (6)	
22.	BRACKET (2)	
23.	FLOWMETER (2)	

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ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
19. Four spacers (3).	Install.	
20. Four bolts (5), nuts (6) and lockwashers (4).	Install and tighten.	
21. Two swivel nuts (1).	Install and tighten.	Outlet hoses.
22. Two swivel nuts (2).	Install and tighten.	Inlet hoses.
C. OPERATIONAL CHECK.		
23. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10).	
24. Air shut-off valve.	Open.	
25. Air pressure regulator.	Set to exactly 15 psi (103 kPa).	
NOTE		
The PTO should be disengaged during the following check. The two flowmeters are identical. Use the following procedure to check either of them.		
26. Air and solution gate valves.	Open on system being checked.	See TM 5-3895-372-10.
27. Flowmeter (23).	Set to exactly 5.8 quarts per minute.	
28. Container.	Position to catch all liquid from nozzles.	
29. Main clutch lever.	a. Pull towards rear to open valve. Start the stopwatch at the same time. b. Push forward after exactly one minute. Stop stopwatch.	

ADMIX SYSTEMS.

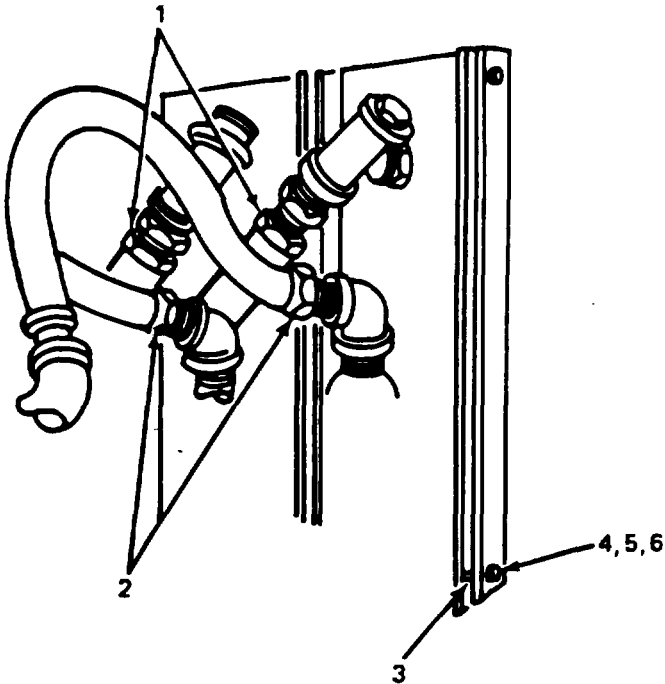
6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. OPERATIONAL CHECK (Continued)

- 30. Container.
 - a. Record amount of admixture solution in container.

- b. Empty container.



LEGEND:

- 1. SWIVEL NUT (2)
- 2. SWIVEL NUT (2)
- 3. SPACER (4)
- 4. LOCKWASHER (4)
- 5. BOLT (4)
- 6. NUT (4)

TA 076253

ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C . OPERATIONAL CHECK (Continued).

NOTE

Repeat steps 28 thru 30 four more times.

- | | |
|----------------|--|
| 31. Worksheet. | <ul style="list-style-type: none"> a. Add the five amounts you wrote down. b. Divide by five. Your answer should be 6 qts, + 1/8 qt, (or 4 oz), (5.68 liters i 0.12 liters). |
|----------------|--|

NOTE

If your answer is not within acceptable limits perform steps 32 thru 36.

- | | | |
|----------------------------|--|--|
| 32. Air pressure gage. | Check pressure.
15X psi (100-107 kPa). | Must be 14' - Adjust pressure. |
| 33. Solution tank. | Check for air or liquid leaks. | Replace, if necessary. |
| 34. Pipes, flexible hoses, | Check for leaks or blockage and connections. | Remove blockage or replace part. |
| 35. Valves and tank | Check for leaks or blockage down pipe. | Remove blockage or and functioning. replace part. |
| 36. Pressure gage. | Insert test gage between admix air pressure gage and gate valves.
readings. | If admix air pressure gage is faulty, replace it.
Compare |

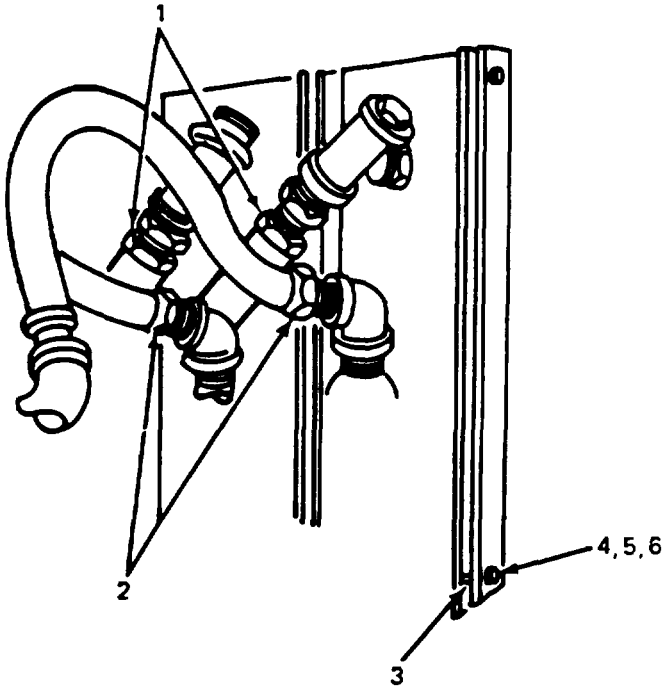
NOTE

Recheck operation check after performing steps 32 thru 36.

ADMIX SYSTEMS.

6-10. FLOWMETERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. SWIVEL NUT (2)
- 2. SWIVEL NUT (2)
- 3. SPACER (4)
- 4. LOCKWASHER (4)
- 5. BOLT (4)
- 6. NUT (4)

TA 076254

ADMIX SYSTEMS.

6-11. FLOWMETERS REPAIR.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION)

- a. Disassembly. (10)
 - b. Cleaning and Inspection. (10)
 - c. Assembly. (10)
- 30 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Silicone Grease (Refer to Appendix C).

Dry Cleaning Solvent (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895372-10.

TM 5-3895-372-20P.

TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.

Transmission in Neutral.

Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

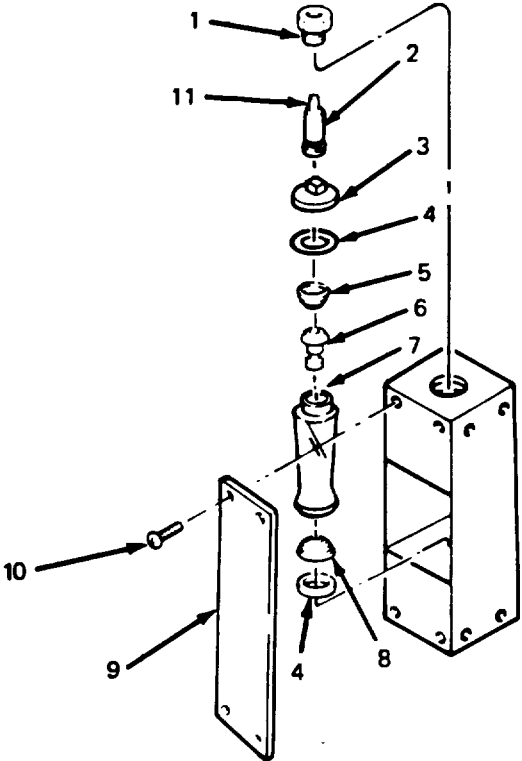
ADMIX SYSTEMS.

6-11. FLOWMETERS REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. DISASSEMBLY.		
1. Four screws (10).	Remove.	
2. Plexiglass (9).	Remove.	
3. Jam nut (1).	Loosen.	
4. Meter tube (7).	Remove.	
5. Upper spring (5).	Remove from tube.	
6. Float (6).	Remove from tube.	
7. Lower spring (8).	Remove from tube.	
8. Jam nut (1).	Remove.	Hold setscrew (11) with hex key wrench while turning nut
9. Retainer stem (2) and retainer (3).	Remove.	Through inside of housing.
10. O-rings (4)	Remove	Lubricate with silicone grease

LEGEND:

- 1. JAM NUT
- 2. RETAINER STEM
- 3. RETAINER
- 4. O-RING (2)
- 5. UPPER SPRING
- 6. FLOAT
- 7. METER TUBE
- 8. LOWER SPRING
- 9. PLEXIGLASS
- 10. SCREW (4)
- 11. SETSCREW



TA 076255

ADMIX SYSTEMS.

6-11. FLOWMETERS REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. CLEANING AND INSPECTION.		
11. Flowmeter.	a. Clean all parts of sediment and admix build-up to come in contact with solvent. b. Replace any parts that are damaged and/or are not able to be cleaned sufficiently.	Clean in solvent. Do not allow rubber components
C. ASSEMBLY.		
12. Retainer stem (2) and retainer (3).	Install.	Through inside of housing.
13. Jam nut (1).	Install.	Hold setscrew (11) with hex key wrench while turning nut. Do not tighten.
14. Retainer stem (2) and retainer (3).	Retract into end fitting until retainer is flush with bottom of end fitting.	
15. Lower spring (8).	Install in meter tube.	
16. Float (6).	Install in meter tube.	Pin wheel towards spring.
17. Upper spring (5).	Install in meter tube.	
18. Meter tube (7).	Install in housing and center in O-rings (4).	Calibration numbers toward the front.
CAUTION		
If tube is not centered in O-rings when tightening, damage to the meter tube will occur.		
19. Retainer stem (2).	Tighten carefully until meter cannot be rotated with fingers.	Use hex key wrench.

ADMIX SYSTEMS.

6-11. FLOWMETERS REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. ASSEMBLY (Continued).

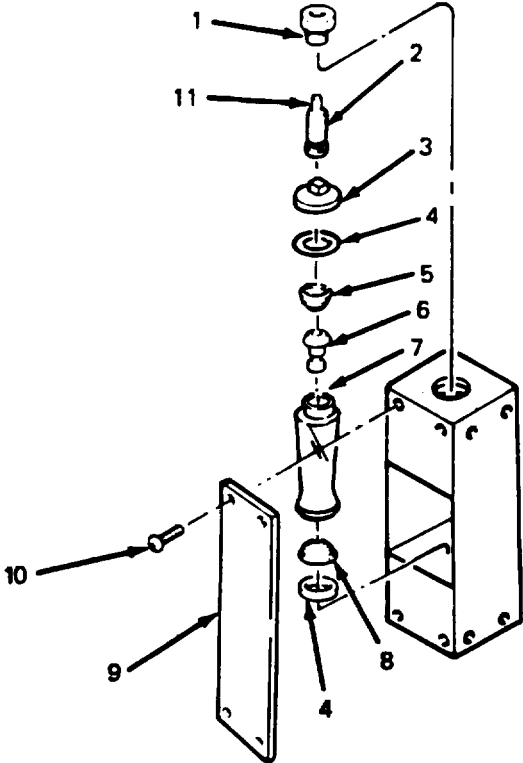
- 20. Jam nut (1).
- 21. Plexiglass (9).

Tighten.
Install with four screws
(10).

Do not overtighten.

LEGEND:

- 1. JAM NUT
- 2. RETAINER STEM
- 3. RETAINER
- 4. O-RING (2)
- 5. UPPER SPRING
- 6. FLOAT
- 7. METER TUBE
- 8. LOWER SPRING
- 9. PLEXIGLASS
- 10. SCREW (4)
- 11. SETSCREW



TA 078256

ADMIX SYSTEMS.

6-12. FLOWMETER HOSE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
- 10 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH
TM 5-3895-372-10.

CONDITION DESCRIPTION
Admixture Tanks Filled With
Diluted Admixture Solution or
Water.
Air Pressure Drained.

APPLICABLE CONFIGURATIONS
M919.

TM 9232273-10.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895372-20P.
TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

ADMIX SYSTEMS.

6-12. FLOWMETER HOSE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

NOTE

The following procedure describes removal and installation for hose (1). Similar procedures can be used for removal and installation of hoses (3), (5) and (8).

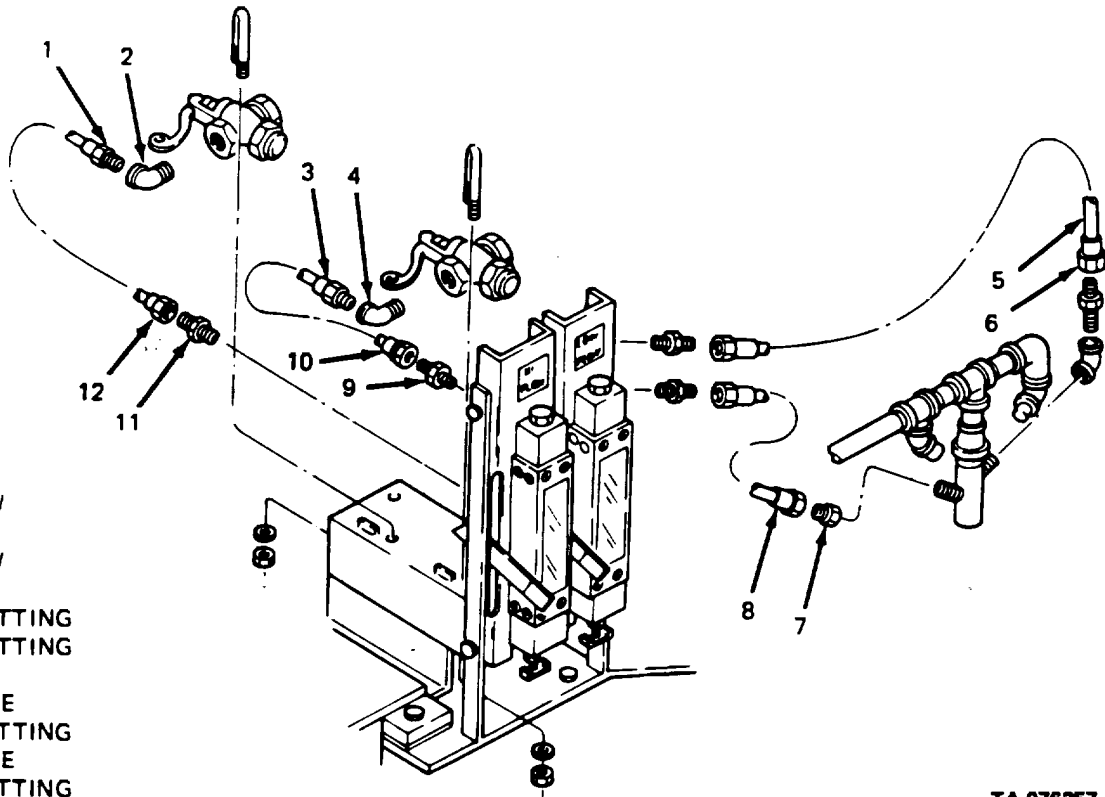
- 1. Swivel fitting (12). Remove from hex nipple (11).
- 2. Hose (1). Remove from 90° elbow (2).

B. INSTALLATION.

- 3. Hose (1). Install on 90° elbow (2).
- 4. Swivel fitting (12). Install on hex nipple (11).

LEGEND:

- 1. HOSE
- 2. 90° ELBOW
- 3. HOSE
- 4. 90° ELBOW
- 5. HOSE
- 6. SWIVEL FITTING
- 7. SWIVEL FITTING
- 8. HOSE
- 9. HEX NIPPLE
- 10. SWIVEL FITTING
- 11. HEX NIPPLE
- 12. SWIVEL FITTING



TA 076257

ADMIX SYSTEMS.

6-13. FLOWMETER VALVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
- 10 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

6-12A.
TM 9-2320-273-10.

Hoses Removed.
Air Pressure Drained.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

Liquid Teflon (See Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 53895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

ADMIX SYSTEMS.

6-13. FLOWMETER VALVE MAINTENANCE (Continued).

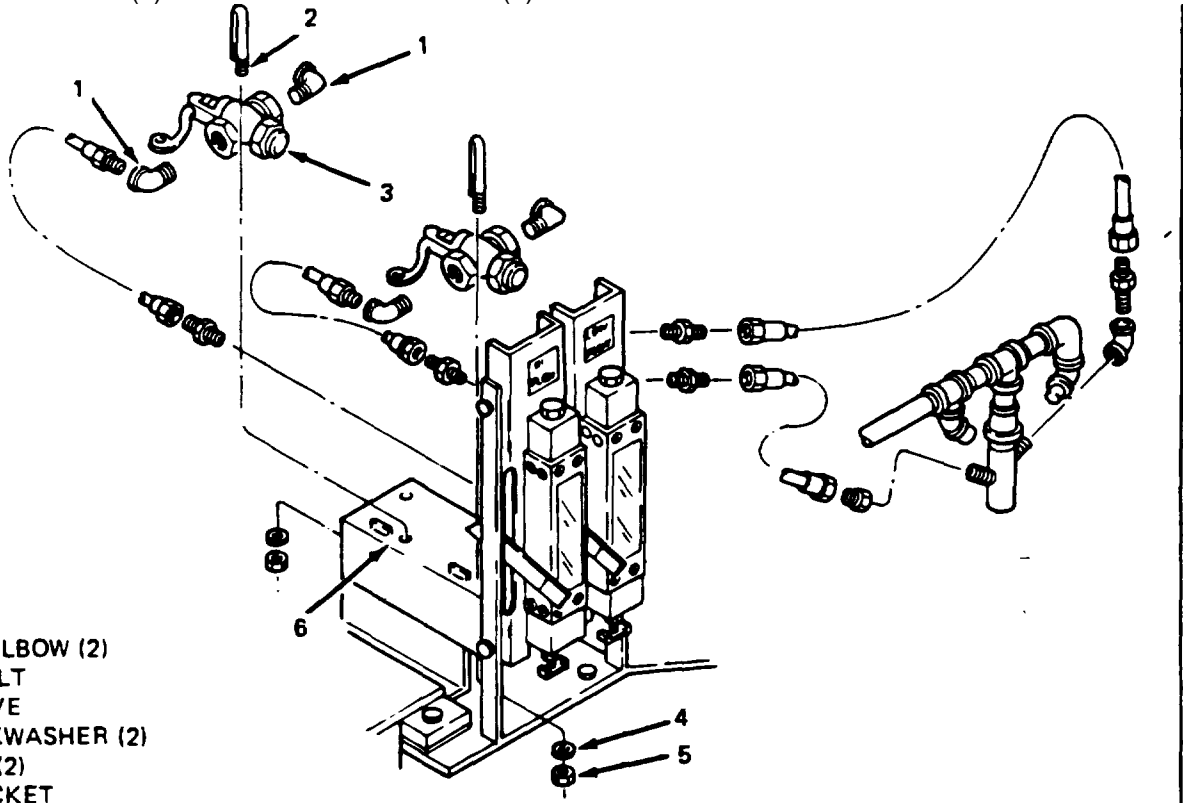
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|---------------------------------------|--------------------------|
| 1. Two 90° elbows (1). | Remove from valve (3). |
| 2. Two nuts (5) and lock-washers (4). | Remove from U-bolt (2). |
| 3. U-bolt (2). | Remove from valve (3). |
| 4. Valve (3). | Remove from bracket (6). |

B. INSTALLATION.

- | | |
|--------------------------------------|-------------------------|
| 5. Valve (3). | Install on bracket (6). |
| 6. U-bolt (2). | Install on valve (3). |
| 7. Two nuts (5) and lockwashers (4). | Install on U-bolt (2). |
| 8. Two 90° elbows (1). | Install on valve (3). |



LEGEND:

- 1. 90° ELBOW (2)
- 2. U-BOLT
- 3. VALVE
- 4. LOCKWASHER (2)
- 5. NUT (2)
- 6. BRACKET

TA 076258

ADMIX SYSTEMS.

6-14. VALVES. LINES. AND FITTINGS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Inspection. (15)
 - c. Installation. (5)
 - d. Checking for leaks. (5)
- 30 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

TM 53895372-10.
TM 9-2320-273-10.
M919.

Admix System Drained.
Drain Air System.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Cleaning Agent (See Appendix C).
Masking Tape.
Marker Pen.
Liquid Teflon (See Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

ADMIX SYSTEMS

6-14. VALVES, LINES, AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ol style="list-style-type: none"> 1. AIR LINE 2. HEX ADAPTER 3. GATE VALVE (2) 4. CLOSE NIPPLE (9) 5. CHECK VALVE (2) 6. 90° STREET ELBOW 7. PIPE NIPPLE 8. RELIEF VALVE (2) 9. PIPE NIPPLE 10. PIPE NIPPLE 11. 45° ELBOW 12. PIPE NIPPLE 13. FILL CAP (2) 14. HI-FLOW TANK 15. REDUCER BUSHING 16. CLOSE NIPPLE (4) 17. TEE (2) 18. REDUCER BUSHING 19. CLOSE NIPPLE 20. TEE (2) 21. 90° STREET ELBOW 22. COUPLING (4) 23. GATE VALVE (2) 24. GAUGE VALVE (4) 25. BUSHING 26. DRAIN COCK (4) 27. REDUCER BUSHING (2) 28. BUSHING (4) 29. STRAINER (2) 30. REDUCER BUSHING (2) 31. DRAIN COCK (2) 32. HI-FLOW HOSE 33. LO-FLOW HOSE 34. AIR LINE 35. PRESSURE REGULATOR 36. PRESSURE GAUGE 37. 90° STREET ELBOW 38. REDUCER BUSHING (2) 39. PIPE CROSS 40. CLOSE NIPPLE (2) 41. REDUCER BUSHING (2) 42. PIPE NIPPLE 43. PIPE NIPPLE 44. PIPE NIPPLE 45. LO-FLOW TANK 46. SIGHT GLASS (2) 47. GATE VALVE (2) 48. TEE 		
<p>TA 078259</p>		

ADMIX SYSTEMS

6-14. VALVES, LINES, AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>NOTE</p> <p>The illustration shows layout and main components of the liquid admix systems. To replace any valve, line, or flitting of the liquid admix systems, follow these general steps.</p> <p>Be sure the system is drained and air pressure is bled before you start.</p>		
<p>A. REMOVAL.</p>		
1. Attached lines and fittings.	Disconnect.	Use tape and marker pen to identify lines for reassembly.
2. Valves and fittings.	Remove using standard shop practices.	
<p>B. INSPECTION.</p>		
3. Line, valve, or fitting.	a. Inspect for blockage.	Clean if needed. First use cleaning agent recommended by admixture manufacturer. Then use clean water.
	b. Check for leaks or damaged	Replace, if necessary. fittings. Also inspect threads on attaching hardware.
<p>C. INSTALLATION.</p>		
4. Attaching lines, fittings, and valves.	Reconnect using standard shop practices.	Install in locations as marked at disassembly.
<p>D. CHECKING FOR LEAKS</p>		
5. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895372-10).	
6. Liquid admix systems.	Check for air or admix leaks.	

ADMIX SYSTEMS

6-14. VALVES, LINES, AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ul style="list-style-type: none"> 1. AIR LINE 2. HEX ADAPTER 3. GATE VALVE (2) 4. CLOSE NIPPLE (9) 5. CHECK VALVE (2) 6. 90° STREET ELBOW 7. PIPE NIPPLE 8. RELIEF VALVE (2) 9. PIPE NIPPLE 10. PIPE NIPPLE 11. 45° ELBOW 12. PIPE NIPPLE 13. FILL CAP (2) 14. HI-FLOW TANK 15. REDUCER BUSHING 16. CLOSE NIPPLE (4) 17. TEE (2) 18. REDUCER BUSHING 19. CLOSE NIPPLE 20. TEE (2) 21. 90° STREET ELBOW 22. COUPLING (4) 23. GATE VALVE (2) 24. GAUGE VALVE (4) 25. BUSHING 26. DRAIN COCK (4) 27. REDUCER BUSHING (2) 28. BUSHING (4) 29. STRAINER (2) 30. REDUCER BUSHING (2) 31. DRAIN COCK (2) 32. HI-FLOW HOSE 33. LO-FLOW HOSE 34. AIR LINE 35. PRESSURE REGULATOR 36. PRESSURE GAUGE 37. 90° STREET ELBOW 38. REDUCER BUSHING (2) 39. PIPE CROSS 40. CLOSE NIPPLE (2) 41. REDUCER BUSHING (2) 42. PIPE NIPPLE 43. PIPE NIPPLE 44. PIPE NIPPLE 45. LO-FLOW TANK 46. SIGHT GLASS (2) 47. GATE VALVE (2) 48. TEE 		
TA 076280		

ADMIX SYSTEMS

6-15. LIQUID ADMIX TANKS MAINTENANCE (HI-FLOW).

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Repair. (20)
 - c. Installation. (15)
 - d. Checking for Leaks. (5)
- 55 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

EQUIPMENT
CONDITION
PARAGRAPH

TM 5-3895372-10.

6-9A

CONDITION DESCRIPTION

Liquid Admix Systems
Drained and Flushed.
Sight Gage Removed.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 53895-372-10.
- TM 53B95-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 6-1.

ADMIX SYSTEMS

6-15. LIQUID ADMIX TANKS MAINTENANCE (HI-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

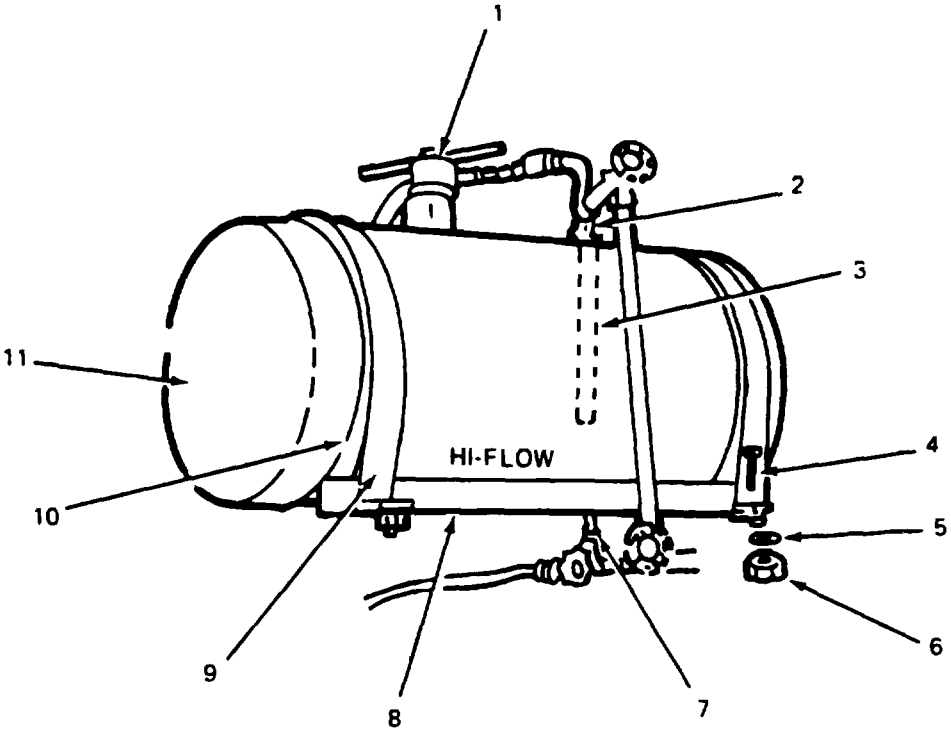
NOTE

Close main air valve at filter. Be sure the system is drained and air pressure bled before you start.

- | | |
|------------------------|--|
| 1. Fill cap (1). | Unscrew and remove. |
| 2. Inlet fitting (2). | Unscrew. Lift down tube (3) from tank. |
| 3. Outlet fitting (7). | Unscrew. Push piping out of way. |

LEGEND:

- 1. FILL CAP
- 2. INLET FITTING
- 3. DOWN TUBE
- 4. BOLT (4)
- 5. LOCKWASHER (4)
- 6. NUT (4)
- 7. OUTLET FITTING
- 8. CRADLE
- 9. STRAP (2)
- 10. BELT (2)
- 11. TANK



TA 076261

ADMIX SYSTEMS

6-15. LIQUID ADMIX TANKS MAINTENANCE (HI-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- | | | |
|--|--|--|
| 4. Two bolts (4), lock washers (5) and nuts (6). | Unscrew and remove. Move two straps (9) aside. | |
| 5. Tank (11). | Remove. | |
| 6. Two belts (10). | Remove. | |

B. REPAIR.

- | | | |
|---------------|---|---|
| 7. Tank (11). | Weld any cracks using standard practices for welding of galvanized steel. | See also TM 9237, Welding Theory and Application. |
|---------------|---|---|

C. INSTALLATION.

NOTE
Use liquid teflon on all threaded joints at assembly.

- | | | |
|--|---|--|
| 8. Two belts (10). | Put around tank (11). | Place belts so that they will lie under straps (9) when tank is mounted. |
| 9. Tank (11). | Place in cradle (8). | |
| 10. Two straps (9). | Put around tank. Straps should lie over belts (10). | |
| 11. Two bolts (4), lock-washers (5), and nuts (6). | Put on and tighten. | |
| 12. Outlet fitting (7). | Screw in and tighten. | |
| 13. Down tube (3). | Place in tank (11).
Tighten inlet fitting (2). | |
| 14. Fill cap (1). | Screw on and tighten. | |

NOTE
Install sight gage (para 6-9) before checking for leaks.

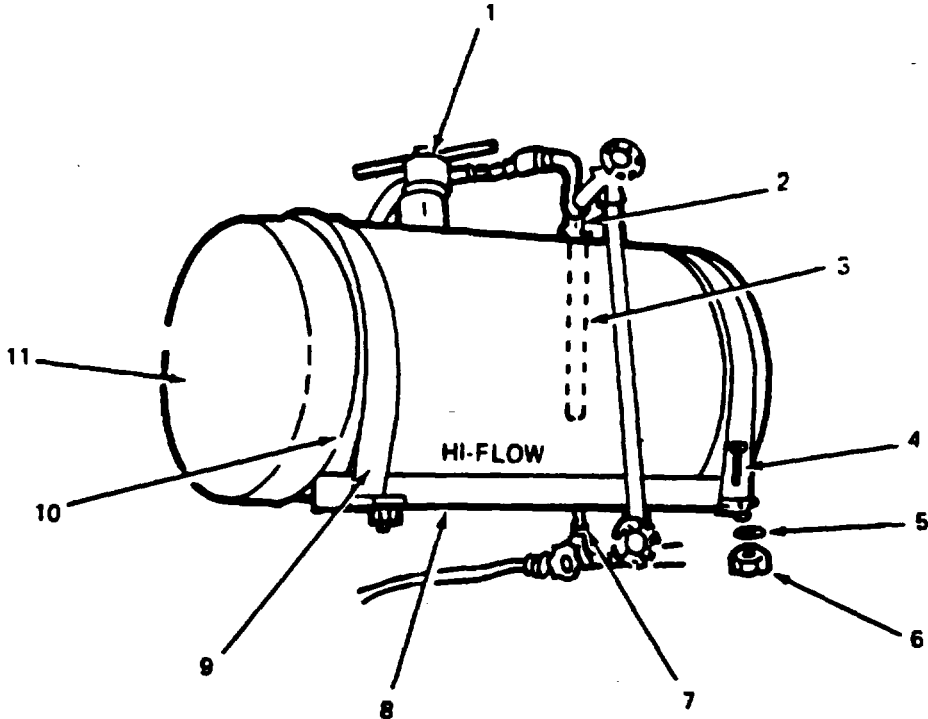
D. CHECKING FOR LEAKS

- | | | |
|----------------|--|--|
| 15. Tank (11). | <ul style="list-style-type: none"> a. Fill. b. Pressurize (see TM 5-3895-372-10). c. Check for air or liquid leaks. | |
|----------------|--|--|

ADMIX SYSTEMS

6-15. LIQUID ADMIX TANKS MAINTENANCE (HI-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



- 1. FILLCAP
- 2. INLET FITTING
- 3. DOWN TUBE
- 4. BOLT (4)
- 5. LOCKWASHER 14)
- 6. NUT (4)
- 7. OUTLET FITTING
- 8. CRADLE
- 9. STRAP (2)
- 10. BELT (2)
- 11. TANK

TA 076262

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANK MAINTENANCE (LOW-FLOW).

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Installation. (20)
 - c. Checking for Leaks. (5)
- 40 Minutes Total.

<u>INITIAL SETUP</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
<u>APPLICABLE CONFIGURATIONS</u> M919	TM 5-3895372-10. 6-9A Sight Gage Removed.	Liquid Admix Systems Drained
<u>TEST EQUIPMENT</u> None.		
<u>SPECIAL TOOLS</u> None.		
<u>MATERIALS/PARTS (P/N)</u> Liquid Teflon (Se Appendix C).		
<u>PERSONNEL REQUIRED</u> One (MOS-62B20).	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u> Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u> TM 5-3895-372-10. TM 5-389372-20P. TM 5-3895372-20P. TM 92320-273-10.	<u>GENERAL SAFETY INSTRUCTIONS</u> Engine Off. Transmission In Neutral. Parking Br	
<u>TROUBLESHOOTING REFERENCES</u> Table 6-1.		

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANKS MAINTENANCE (LOW-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

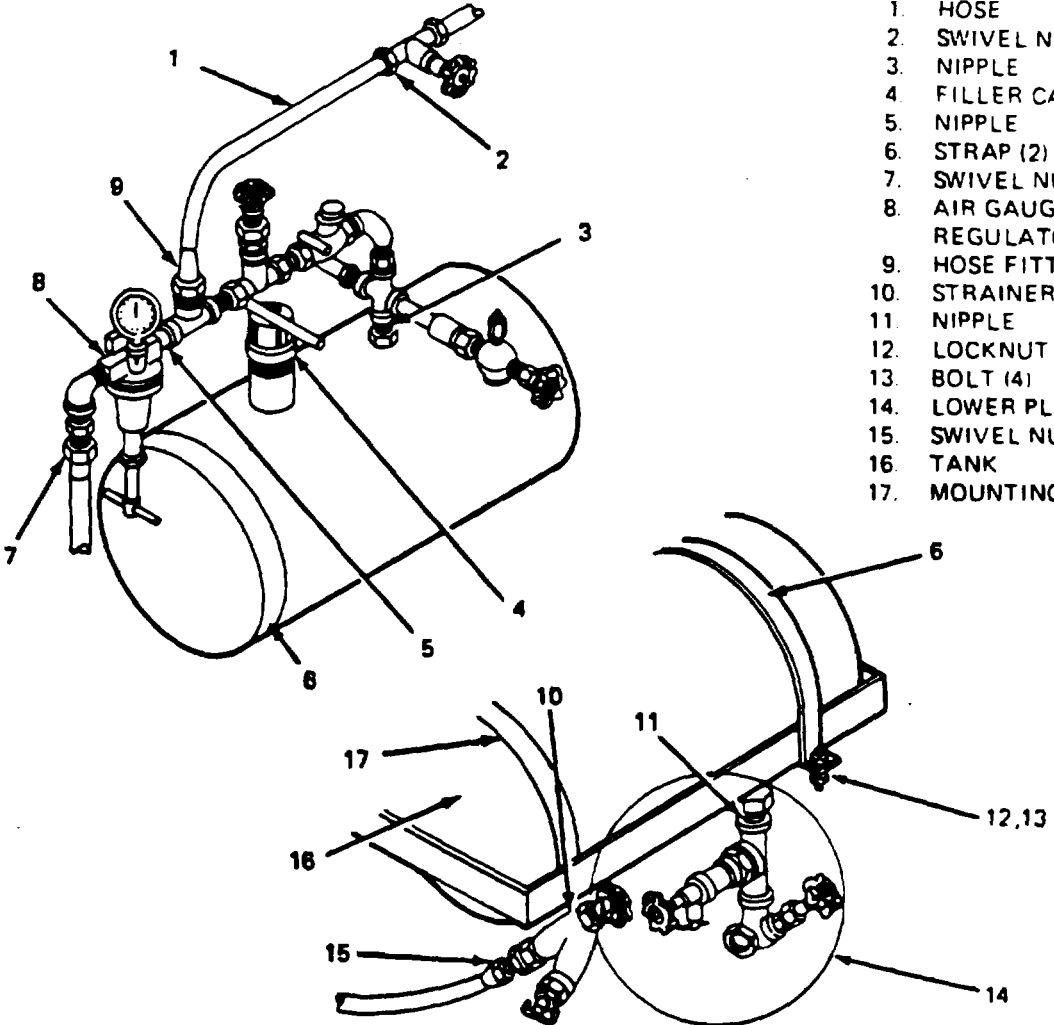
A. REMOVAL.

NOTE

Close main air valve at filter. Be sure the system is drained and air pressure bled before beginning service.

LEGEND

- 1. HOSE
- 2. SWIVEL NUT
- 3. NIPPLE
- 4. FILLER CAP
- 5. NIPPLE
- 6. STRAP (2)
- 7. SWIVEL NUT
- 8. AIR GAUGE & REGULATOR
- 9. HOSE FITTING
- 10. STRAINER
- 11. NIPPLE
- 12. LOCKNUT (4)
- 13. BOLT (4)
- 14. LOWER PLUMBING
- 15. SWIVEL NUT
- 16. TANK
- 17. MOUNTING PADS



TA 076263

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANKS MAINTENANCE (LOW-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
1. Swivel nut (2).	Disconnect.	
2. Hose fitting (9).	Remove. Remove hose (1) from vehicle.	
3. Swivel nut (7).	Disconnect.	
4. Swivel nut (15).	Disconnect.	
5. Strainer (10).	Remove.	
6. Lower plumbing (14).	Revolve counterclockwise until parallel with tank.	
7. Four bolts (13) and locknuts (12).	Remove two straps (6) and mounting pads (17).	
8. Tank (16).	Remove.	
9. Air gage and regulator (8).	Remove at nipple (5).	
10. Filler cap (4).	Remove.	
11. Air valve and plumbing components.	Remove at nipple (3).	
12. Lower plumbing (14).	Remove at nipple (11).	
B. INSTALLATION.		
NOTE		
Use liquid teflon on all threaded joints at assembly.		
13. Valve and lower plumbing (14).	Install at nipple (11) and parallel with tank.	Plumbing should face the rear

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANKS MAINTENANCE (LOW-FLOW) (Continued).

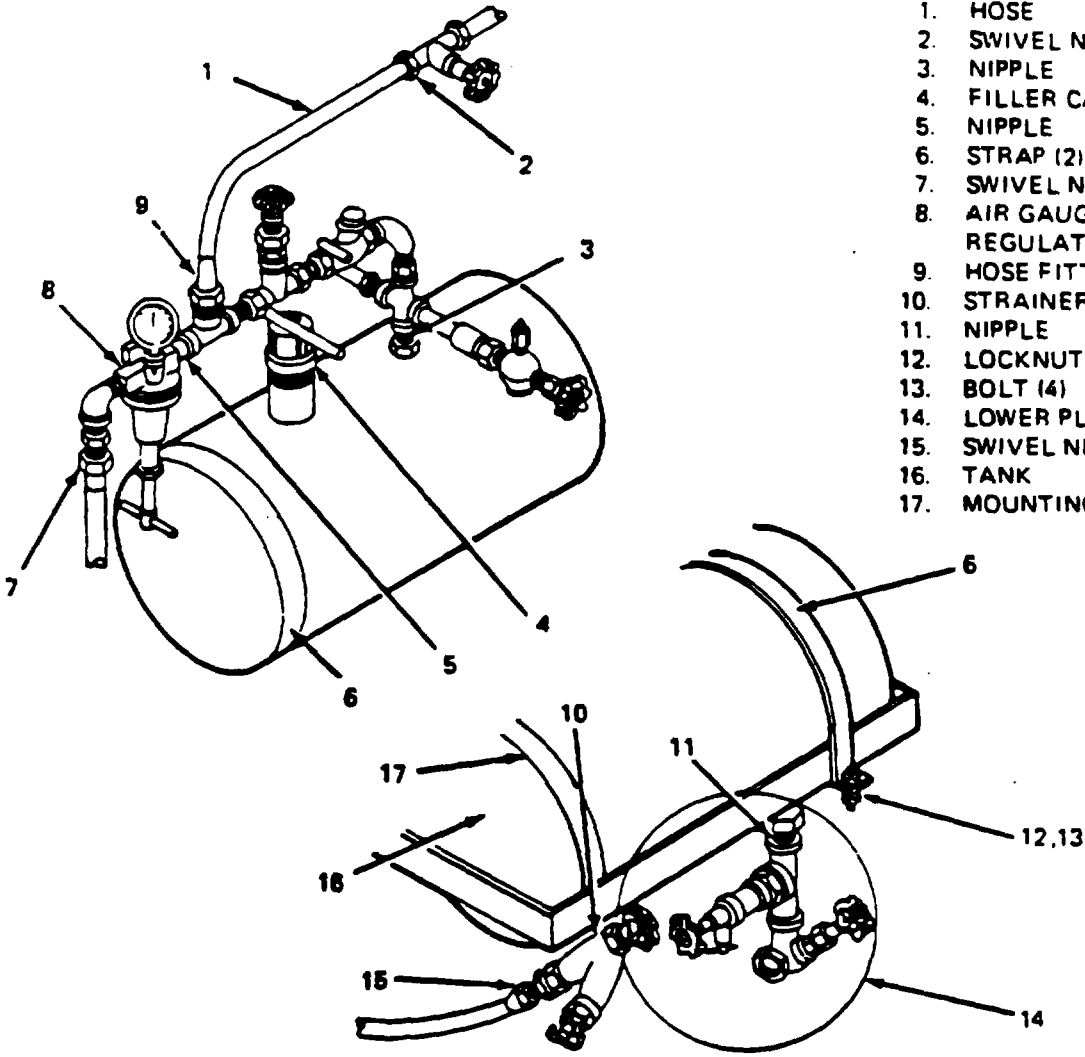
LOCATION/ITEM	ACTION	REMARKS
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B. INSTALLATION (Continued).

- | | |
|--|------------------------|
| 14. Air valve and plumbing components. | Install at nipple (3). |
| 15. Filler cap (4). | Install. |
| 16. Air gage and Regulator (8). | Install at nipple (5). |

LEGEND:

- 1. HOSE
- 2. SWIVEL NUT
- 3. NIPPLE
- 4. FILLER CAP
- 5. NIPPLE
- 6. STRAP (2)
- 7. SWIVEL NUT
- 8. AIR GAUGE & REGULATOR
- 9. HOSE FITTING
- 10. STRAINER
- 11. NIPPLE
- 12. LOCKNUT (4)
- 13. BOLT (4)
- 14. LOWER PLUMBING
- 15. SWIVEL NUT
- 16. TANK
- 17. MOUNTING PADS



TA 076284

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANKS MAINTENANCE (LOW-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
17. Mounting pads (17) and straps (6).	Position on tank.	
18. Tank (16).	Install in vehicle.	
19. Four bolts (13) and locknuts (12).	Install and tighten.	
20. Lower plumbing (14).	Revolve clockwise until valves are accre ible and tight.	
21. Strainer (10).	Install.	
22. Swivel nut (15).	Install.	
23. Swivel nut (7).	Install.	
24. Hose fitting (9).	Install.	
25. Swivel nut (2).	Install.	
26. Sight gage.	Install.	Refer to pa 6-9.
C. CHECKING FOR LEAKS.		
27. Tank (16).	a. Fill (me TM 5-3895372-10). b. Pressurize (see TM 5-3895-372-10). c. Check for air or liquid leaks	

ADMIX SYSTEMS

6-16. LIQUID ADMIX TANKS MAINTENANCE (LOW-FLOW) (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<p>1. HOSE 2. SWIVEL NUT 3. NIPPLE 4. FILLER CAP 5. NIPPLE 6. STRAP (2) 7. SWIVEL NUT 8. AIR GAUGE & REGULATOR 9. HOSE FITTING 10. STRAINER 11. NIPPLE 12. LOCKNUT (4) 13. BOLT (4) 14. LOWER PLUMBING 15. SWIVEL NUT 16. TANK 17. MOUNTING PADS</p>		
TA 076285		

ADMIX SYSTEMS

6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Disassembly. (10)
 - c. Inspection. (5)
 - d. Assembly. (10)
 - e. Installation. (5)
 - f. djustment. (10)
- 45 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

TM 9-2320-273-10.
TM 5-3895-372-10.

Air Pressure Drained.
Air Valve Shut Off.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Liquid Teflon (See Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 6-1.

ADMIX SYSTEMS

6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT (Continued).

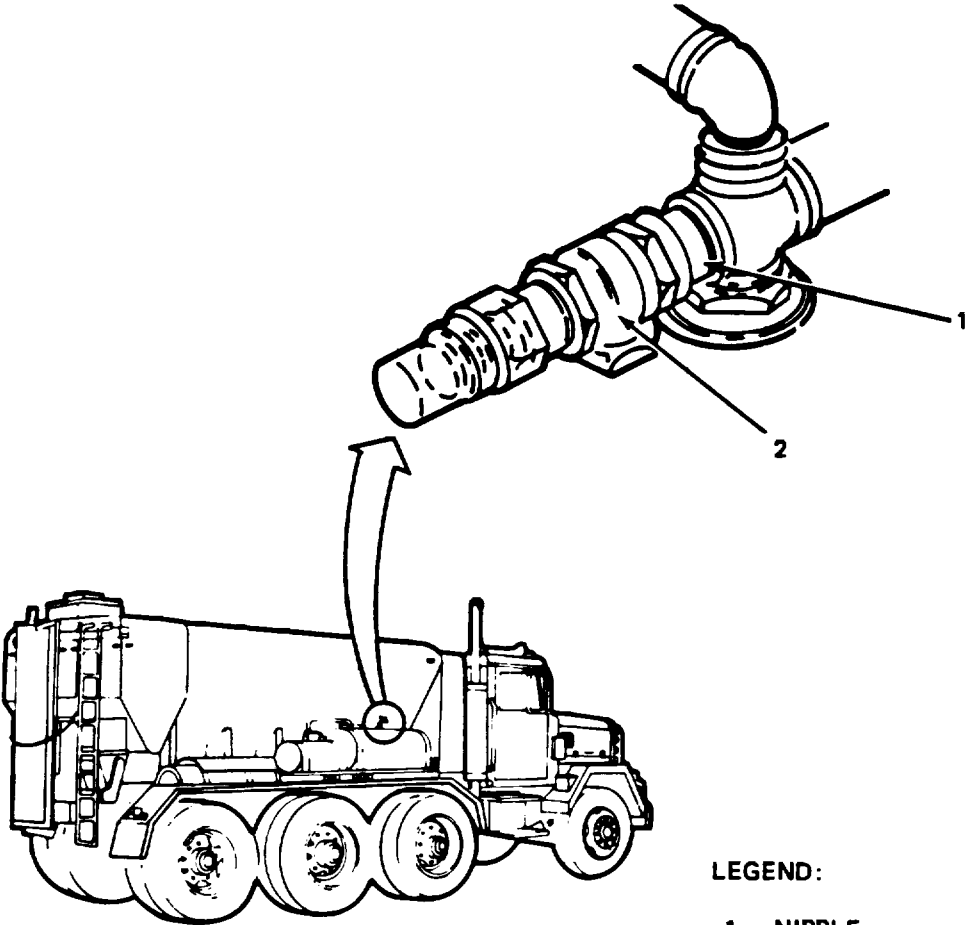
LOCATION/ITEM	ACTION	REMARKS
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A. REMOVAL.

NOTE

The following procedure may be used for both liquid admix tank air relief valves. Make certain that the air shutoff valve is closed and pressure is drained from liquid admix tanks before proceeding.

- | | | |
|--------------------------|-------------------------|----------------|
| 1. Air relief valve (2). | Remove from nipple (1). | Place in vise. |
|--------------------------|-------------------------|----------------|



- LEGEND:
- 1. NIPPLE
 - 2. AIR RELIEF VALVE

TA 078286

ADMIX SYSTEMS

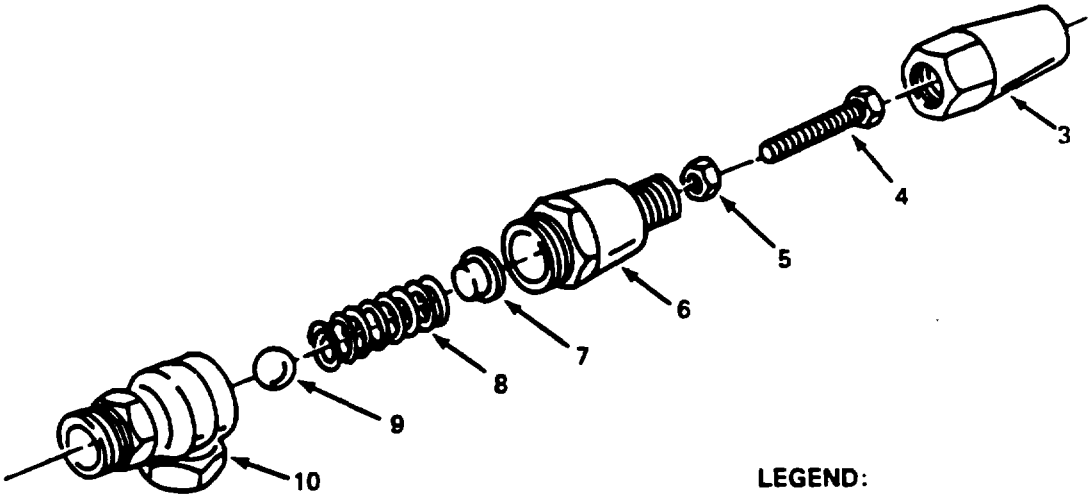
6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY.		
2. Acorn cap (3).	Remove.	
3. Jam nut (5).	Loosen.	
4. Adjusting screw (4).	Remove.	Coat threads and note for installation.
5. Relief body (6).	Remove.	
6. Spring seat (7).	Remove.	
7. Spring (8).	Remove.	
8. Ball (9).	Remove.	
C. INSPECTION.		
9. Relief valve components.	Inspect for:	
a. Cracks.		
b. Breaks.		
c. Clogged inlet.		
d. Clogged outlet.		
e. Sediment.		
f. Corrosion.		
NOTE		
Replace relief valve if defective components are found.		
D. ASSEMBLY.		
10. Ball (9).	Install in housing (10).	
11. Spring (8).	Install in housing (10).	
12. Spring seat (7).	Install.	
13. Relief body (6).	Install.	
14. Adjusting screw (4).	Install.	As noted at removal. Do not tighten jam nut (5).

ADMIX SYSTEMS

6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:**
- 3. ACORN CAP
 - 4. ADJUSTING SCREW
 - 5. JAM NUT
 - 6. RELIEF BODY
 - 7. SPRING SEAT
 - 8. SPRING
 - 9. BALL
 - 10. HOUSING

TA 076267

ADMIX SYSTEMS

6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
15. Relief valve (2).	Install on nipple (1).	Coat threads with liquid teflon.

F. ADJUSTMENT.

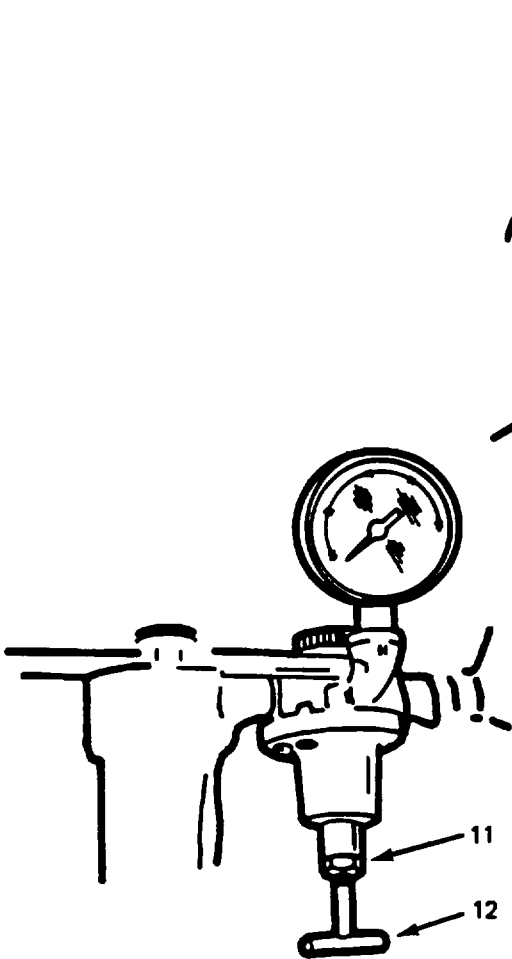
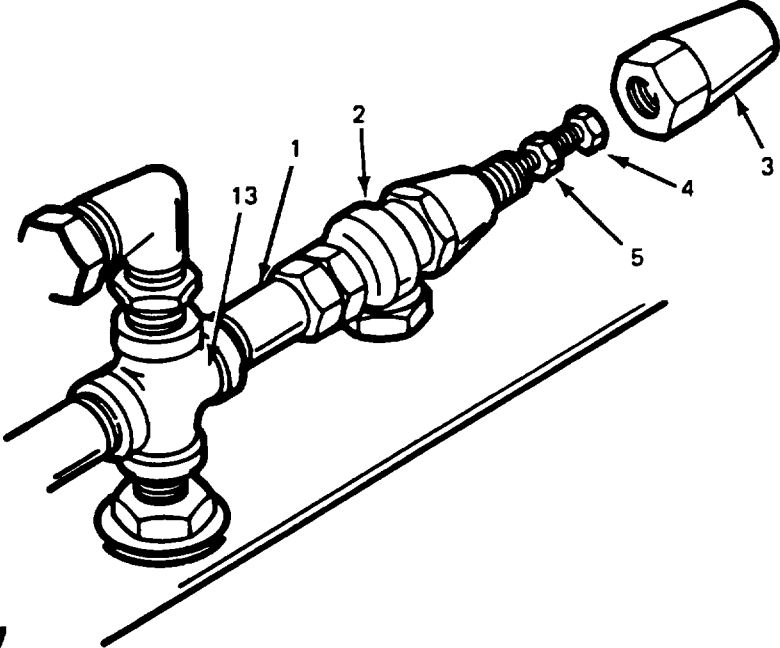
NOTE

The following adjustment procedure pertains to both relief valves. Each valve must be adjusted individually with the other system shut-off valve closed.

16. Mixer body.	Start-up (see TM 3895372-10 and TM 9-2320-273-10).	Allow vehicle to reach operating pressure.
17. Air hutoff valve (13).	Open.	
18. Acor cap (3).	Remove.	If not removed in disassembly
19. Jam nut (11).	Loosen.	
20. Regulator handle (12).	Turn until gage reads 1820 psi (124-138 kPa).	
21. Jam nut (5).	Loosen.	If not loosened in disassembly
22. Adjusting screw (4).	Turn until valve begins to vent.	Turn in to increas pressure. Turn out to decrease pressure.
23. Jam nut (5).	Tighten securely.	
24. Regulator handle (12).	Turn until gage reads 14½ - 15½ psi (100 107 kPa).	Relief valve should stop venting when pressure drops below 18-20 psi (124-138 kPa).
25. Jam nut (1 1).	Tighten securely.	
26. Acorn cap (3).	Install and tighten securely.	
27. Mixer body.	Shut-down (see TM 9-2320-273-10 and TM 5-3895-372-10).	

ADMIX SYSTEMS

6-17. AIR RELIEF VALVE MAINTENANCE AND ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>A diagram showing a vertical air relief valve assembly. Callout 11 points to a jam nut on the stem, and callout 12 points to the regulator handle at the bottom.</p>	 <p>An exploded view diagram of the air relief valve assembly. Callout 13 points to the shut-off valve on the left. Callout 1 points to the nipple, 2 to the air relief valve, 3 to the acorn cap, 4 to the adjusting screw, and 5 to the jam nut.</p>	

- LEGEND:
- 1. NIPPLE
 - 2. AIR RELIEF VALVE
 - 3. ACORN CAP
 - 4. ADJUSTING SCREW
 - 5. JAM NUT
 - 11. JAM NUT
 - 12. REGULATOR HANDLE
 - 13. SHUT OFF VALVE

TA 076268

ADMIX SYSTEMS

6-18. ADMIX INJECTOR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
 - c. Operational Check. (5)
- 15 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH
TM 5-3895-372-10.

CONDITION DESCRIPTION
Liquid Admix System
Filled and Pressurized.

APPLICABLE CNFIGURATIONS

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (PIN)
Liquid Teflon (See Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 53895372-20P.
TM 92320273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

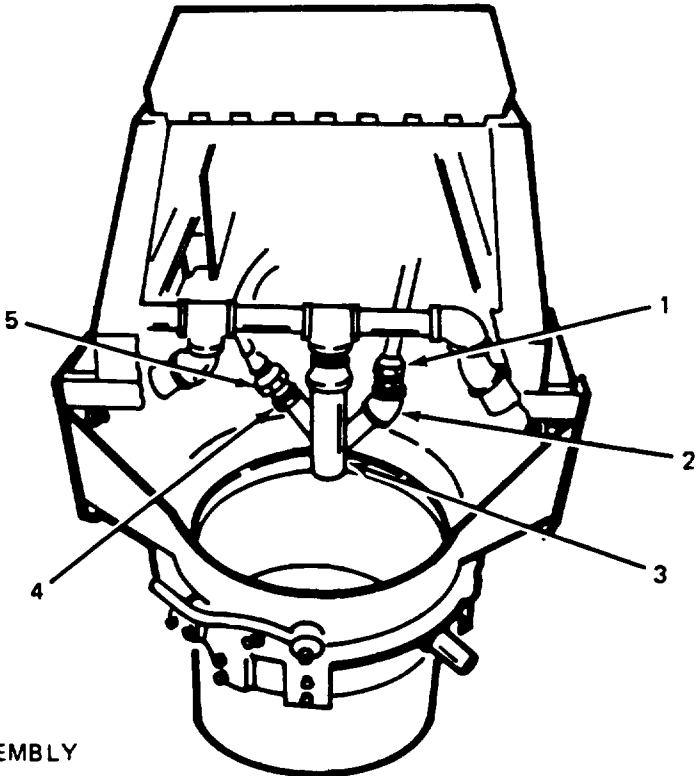
TROUBLESHOOTING REFERENCES

Table 6t.

ADMIX SYSTEMS

6-18. ADMIX INJECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:
- 1. SWIVEL NUT
 - 2. 45° ELBOW
 - 3. INJECTOR ASSEMBLY
 - 4. ADAPTER
 - 5. SWIVEL NUT

TA 076289

ADMIX SYSTEMS

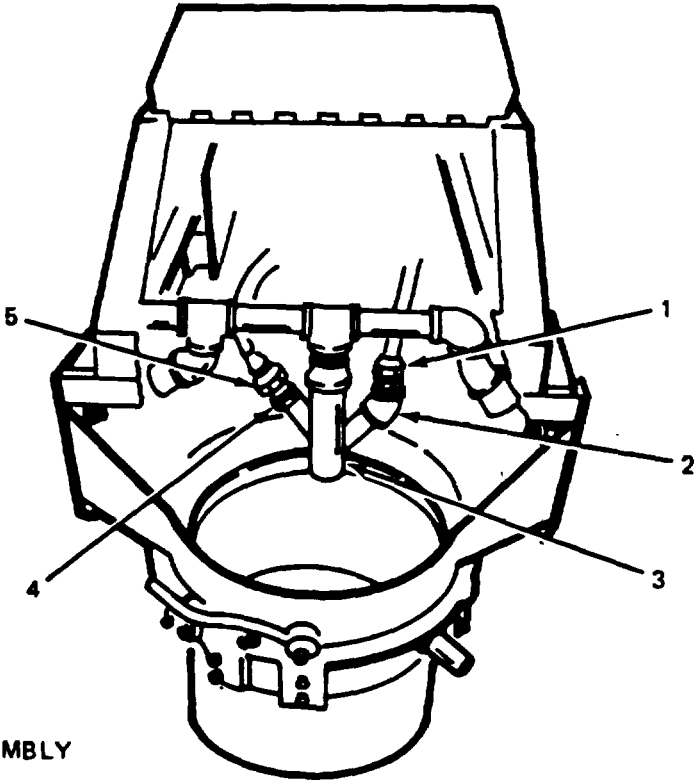
6-18. ADMIX INJECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Swivel nut (1).	Remove.	
2. Swivel nut (5).	Remove.	
3. Injector assembly (3).	Remove.	
4. Adapter (4).	Remove.	
5. 450 elbow (2).	Remove.	
B. INSTALLATION.		
6. 450° elbow (2).	Install.	Coat threads with liquid teflon.
7. Adapter (4).	Install.	Coat threads with liquid teflon.
8. Injector assembly (3).	Install.	Coat with liquid teflon.
9. Swivel nut (5).	Install.	
10. Swivel nut (1).	Install.	
C. OPERATIONAL CHECK.		
11. Air and solution gate valves.	Open.	
12. Flowmeters.	Set to 5.8 gallons per minute approximately.	
13. Quick opening valve.	Open. a. Check for leaks at hose joints. b. Check that admix solution flows freely.	

ADMIX SYSTEMS

6-18. ADMIX INJECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. SWIVEL NUT
- 2. 45° ELBOW
- 3. INJECTOR ASSEMBLY
- 4. ADAPTER
- 5. SWIVEL NUT

TA 078270

ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Disassembly. (30)
 - c. Cleaning and Inspection. (10)
 - d. Assembly. (30)
 - e. Installation. (5)
 - f. Test. (10)
- 90 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
TM 538372-10.

CONDITION DESCRIPTION
Bin Empty.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Marking Pen.
Masking Tape.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-20P.
TM -3w895-372-10r.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES
Table 6-1.

ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

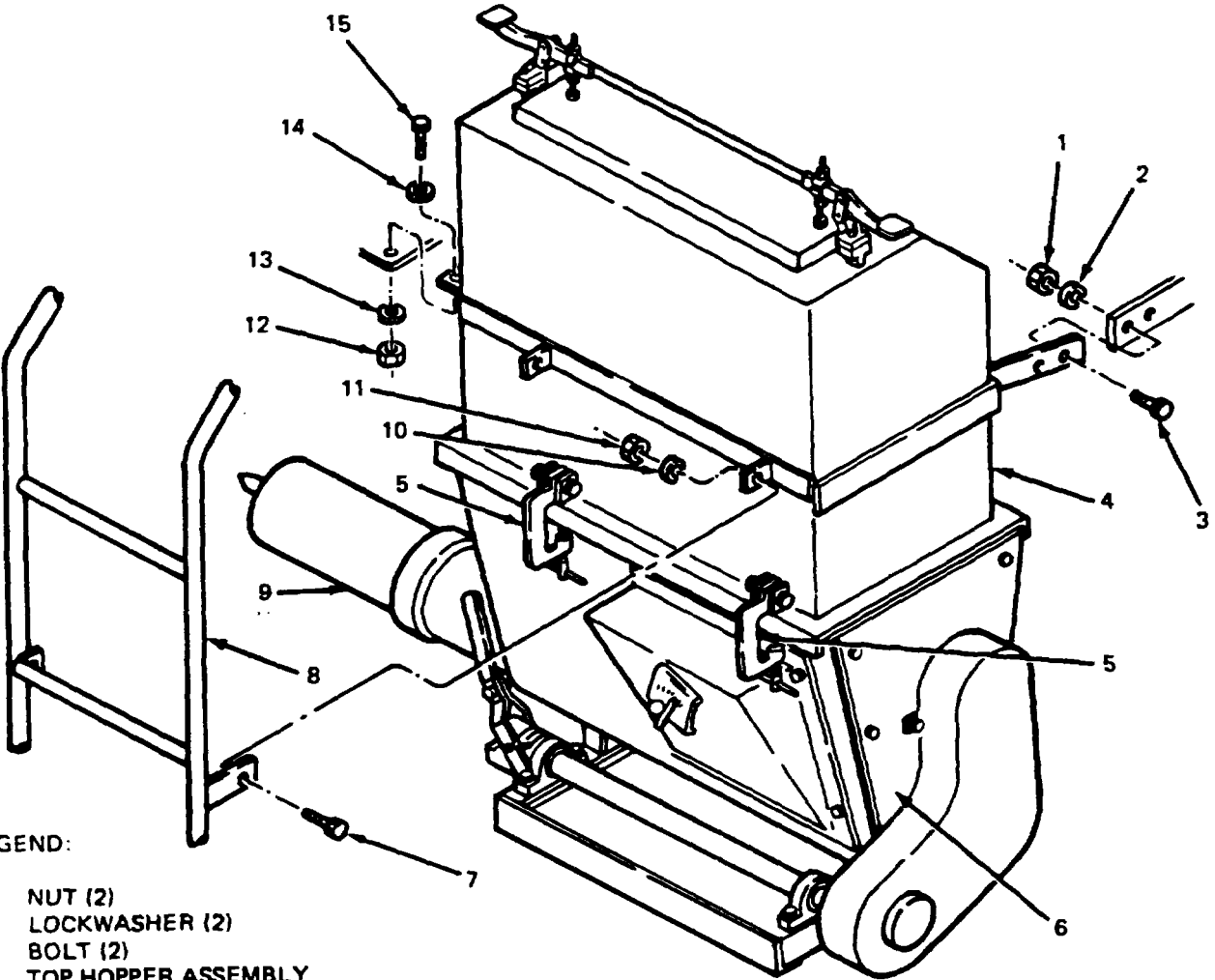
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

NOTE

Support the dry admix bin (6) and the top hopper assembly (4) before performing the following steps.

- | | |
|-----------------------|---|
| 1. Four C-clamps (5). | Unclamp and swing upwards out of the way. |
|-----------------------|---|



LEGEND:

- | | | |
|---------------------------|--------------------|---------------------|
| 1. NUT (2) | 8. LADDER | 12. NUT (2) |
| 2. LOCKWASHER (2) | 9. AUGER COVER | 13. LOCKWASHER (2) |
| 3. BOLT (2) | 10. LOCKWASHER (2) | 14. FLAT WASHER (2) |
| 4. TOP HOPPER ASSEMBLY | 11. NUT(2) | 15. BOLT(2) |
| 5. C-CLAMP (4) | | |
| 6. DRY ADMIX BIN ASSEMBLY | | |
| 7. BOLT | | |

ADMIX SYSTEMS

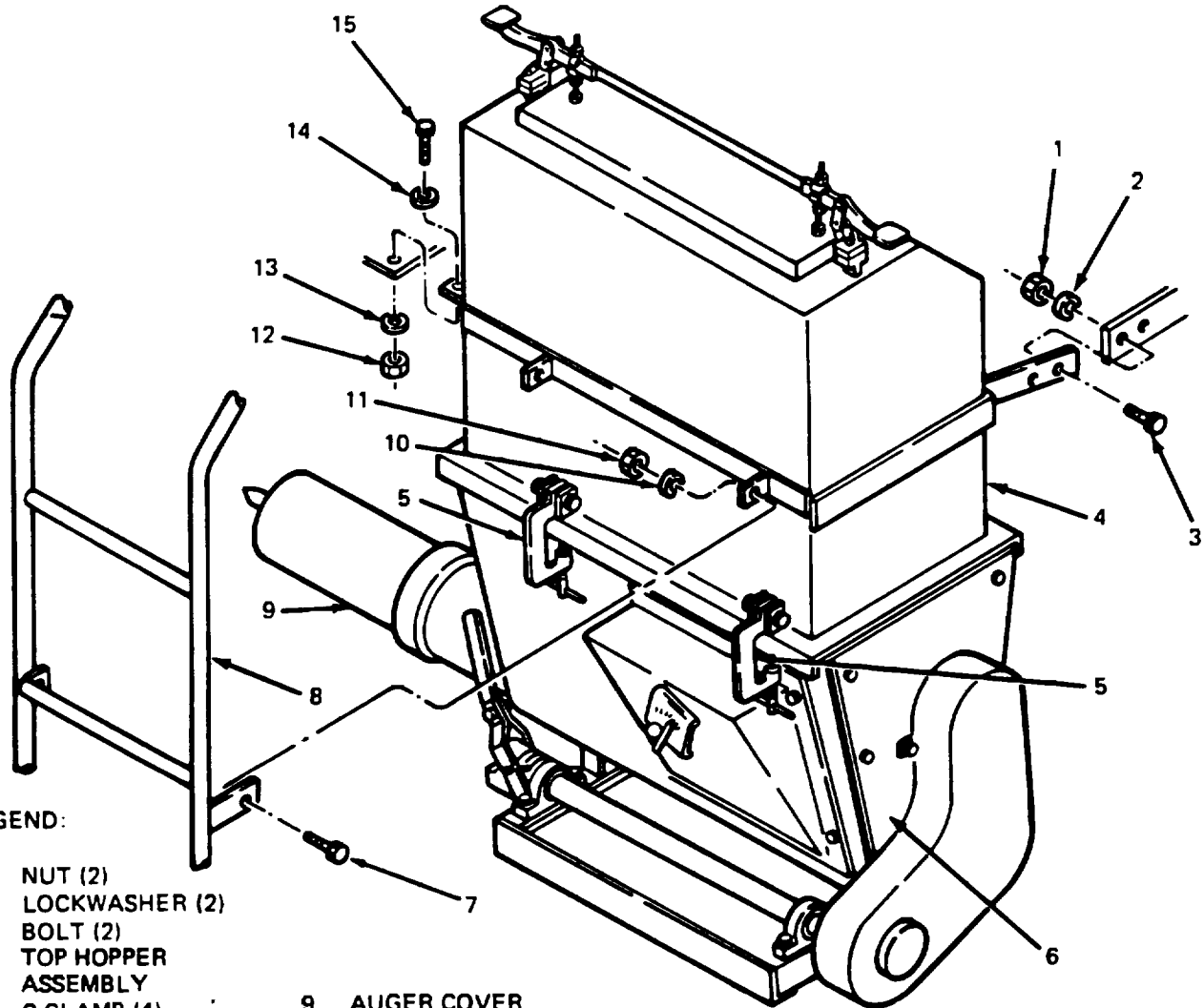
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
2. Dry admix bin assembly (6).	Lower slightly to unseat from Top hopper assembly (4). Slide to right to disengage auger and auger cover (9) from vehicle and remove dry admix bin assembly (6).	
3. Two bolts (7), two lockwashers (10) and two nuts (11).	Remove from ladder (8).	
4. Two bolts (15), two flat washers (14), two lockwashers (13), and two nuts (12).	Remove	
5. Two bolts (3), two lockwashers (2), and two nuts (1).	Loosen and remove top hopper assembly (4).	

ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. NUT (2)
- 2. LOCKWASHER (2)
- 3. BOLT (2)
- 4. TOP HOPPER ASSEMBLY
- 5. C-CLAMP (4)
- 6. DRY ADMIX BIN ASSEMBLY
- 7. BOLT (2)
- 8. LADDER
- 9. AUGER COVER
- 10. LOCKWASHER (2)
- 11. NUT (2)
- 12. NUT (2)
- 13. LOCKWASHER (2)
- 14. FLAT WASHER (2)
- 15. BOLT (2)

TA 076272

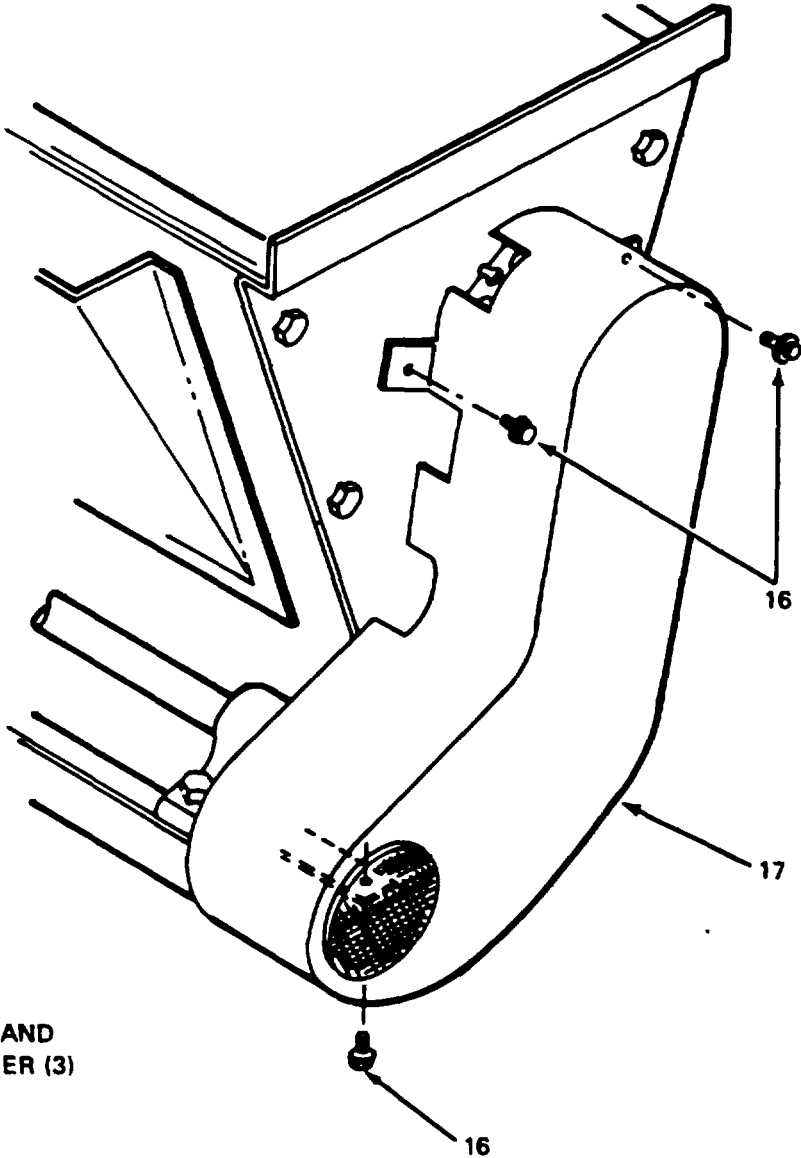
ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. DISASSEMBLY.

- 6. Three capscrews and lockwashers (16).
- 7. Cover 17.



LEGEND:

- 16. CAPSCREW AND LOCKWASHER (3)
- 17. COVER

TA 076273

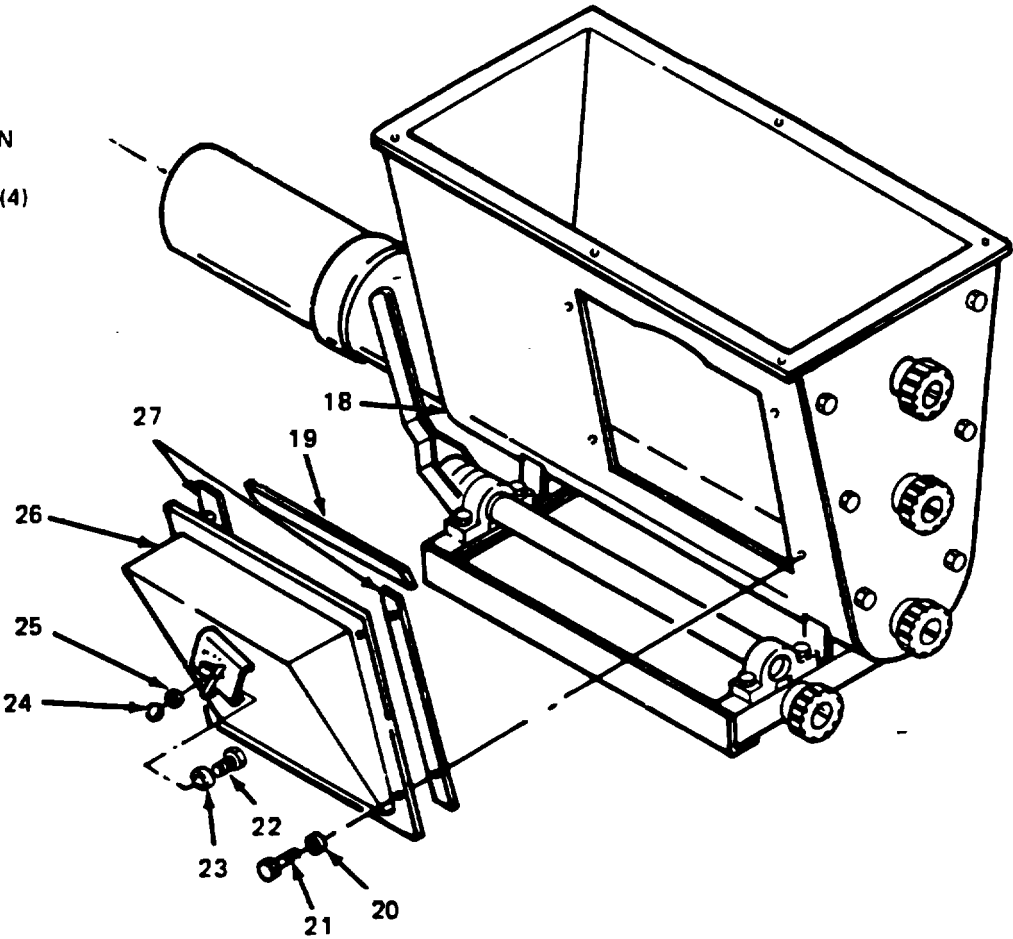
ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).		
8. Four screws (21) and four lockwashers (20).	Loosen and remove side cover (26) from dry admix bin (18).	
9. Two gaskets (27) and gasket (19).	Remove from side cover (26).	Replace if necessary.
10. Screw (22), lockwasher (23), flat washer (25) and knob (24).	Loosen and remove from side cover (26).	

LEGEND:

- 18 DRY ADMIX BIN
- 19 GASKET
- 20 LOCKWASHER (4)
- 21 SCREW (4)
- 22 SCREW
- 23 LOCKWASHER
- 24 KNOB
- 25 FLAT WASHER
- 26 SIDE COVER
- 27 GASKET (2)



TA 076274

ADMIX SYSTEMS

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

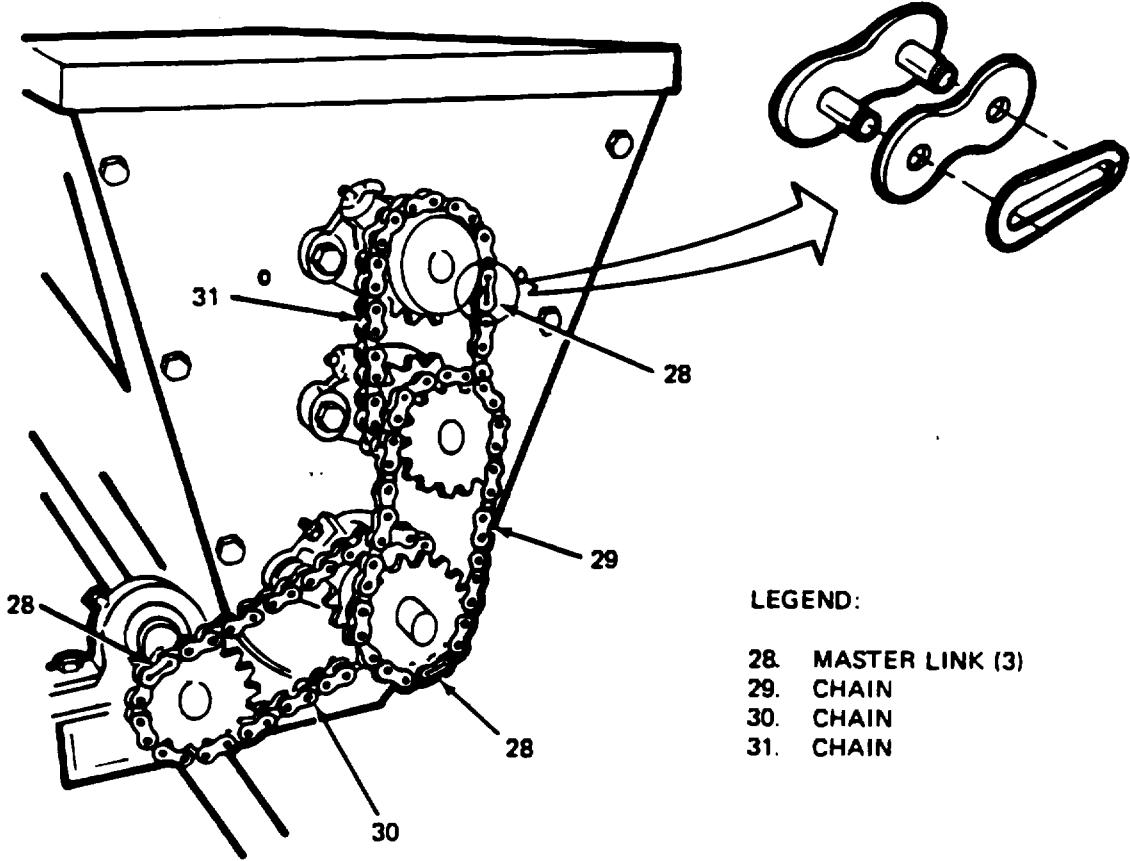
LOCATION/ITEM	ACTION	REMARKS
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B. DISASSEMBLY (Continued)

NOTE

Tag chains to aid in reassembly. Chains are of different lengths.

- 11. Three master links (28). Remove.
- 12. Three chains (29, 30, and 31). Remove.



TA 076276

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

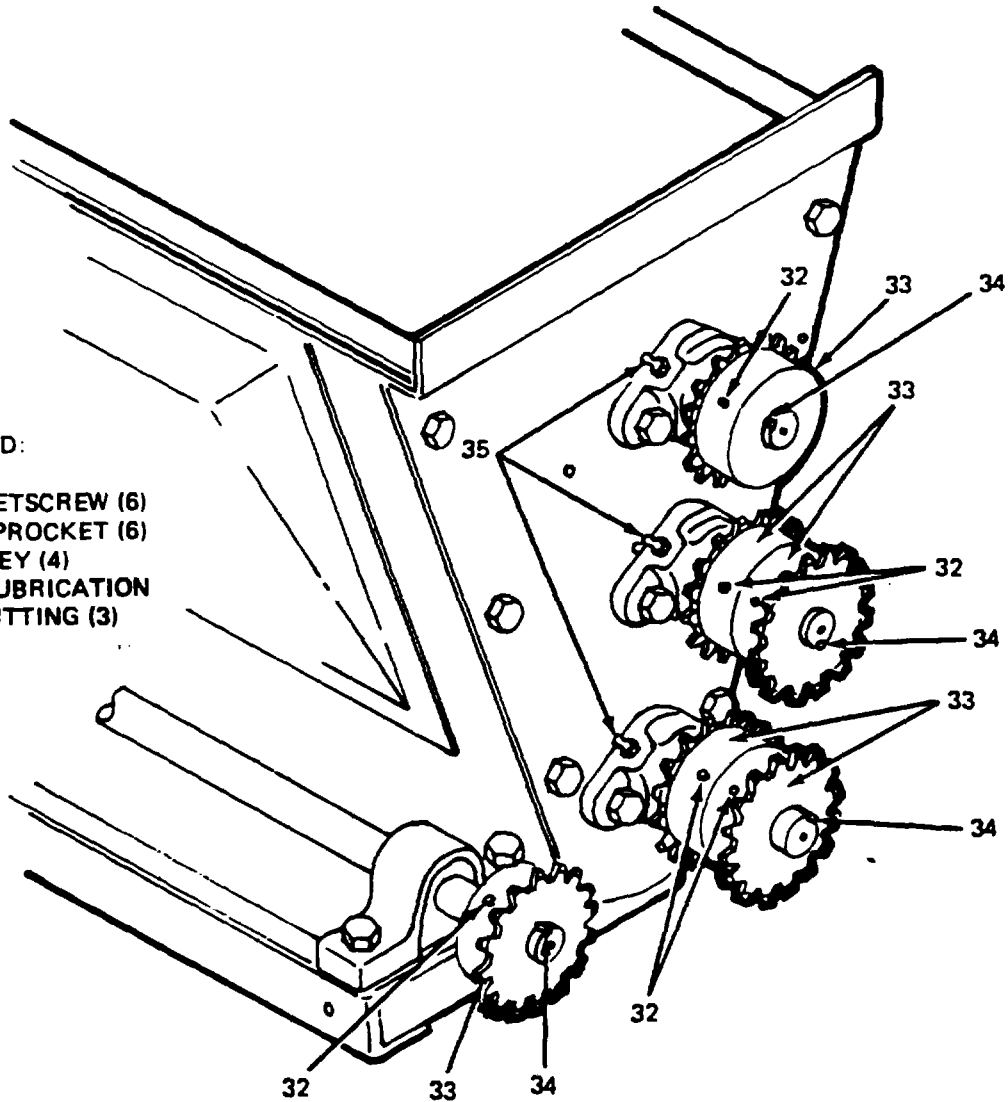
LOCATION/ITEM	ACTION	REMARKS
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B. DISASSEMBLY (Continued). I

13. Six setscrews (32).	Loosen.	
14. Six sprockets (33).	Remove.	Pry apart with a tapered tool.
15. Four keys (34).	Remove.	Mark keys for assembly.
16. Three lubrication fittings (35).	Remove.	

LEGEND:

- 32. SETSCREW (6)
- 33. SPROCKET (6)
- 34. KEY (4)
- 35. LUBRICATION FITTING (3)

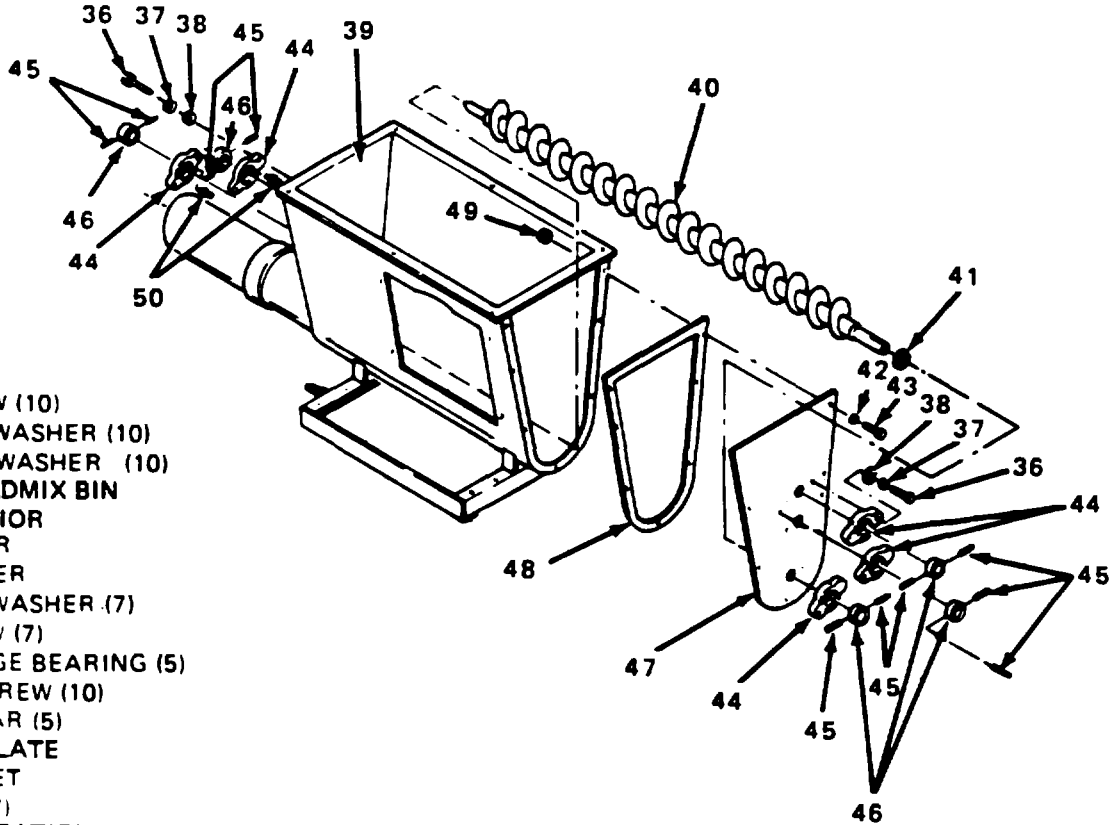


TA 076774

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).j		
17. Ten screws (36), ten lock-washers (37), and ten flat washers (38).	Remove.	
18. Five collars (46) and ten set screws (45).	Loosen ten setscrews (45), remove five collars (46), and five flange bearings (44).	
19. Two lubrication fittings (50).	Remove.	
20. Seven screws, 43, seven lock-washers (42), and seven nuts (49).	Loosen and remove end plate (47), and gasket (48).	
21. Auger (40). Remove from dry admix bin interior (39).		



LEGEND

- 36 SCREW (10)
- 37 LOCKWASHER (10)
- 38 FLAT WASHER (10)
- 39. DRY ADMIX BIN INTERIOR
- 40 AUGER
- 41 WASHER
- 42 LOCKWASHER (7)
- 43 SCREW (7)
- 44 FLANGE BEARING (5)
- 45 SETSCREW (10)
- 46 COLLAR (5)
- 47. END PLATE
- 48. GASKET
- 49. NUT (7)
- 50. LUBRICATION FITTING (2)

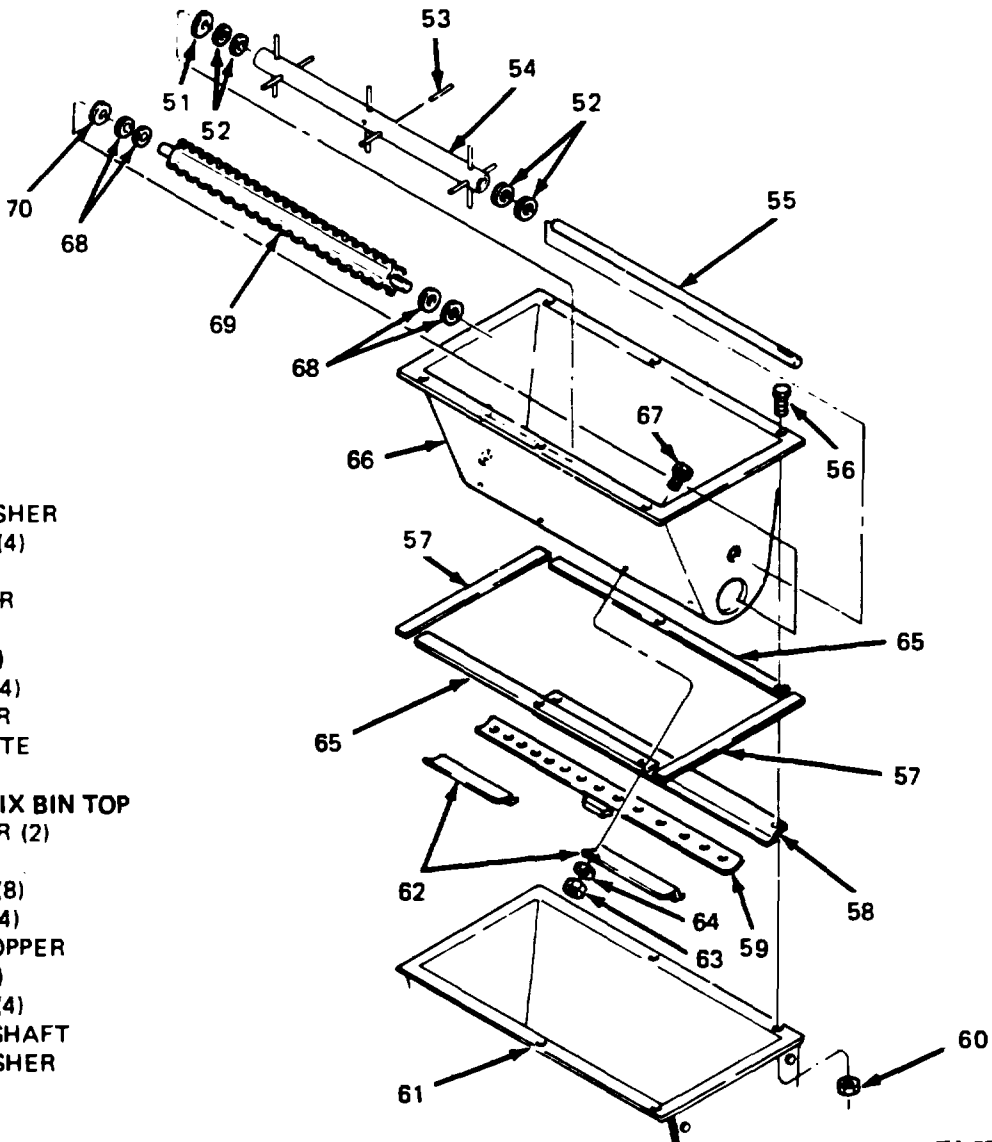
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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B. DISASSEMBLY (Continued).

22.	Roll pin (53).	Remove.	
23.	Shaft (55).	Remove.	Remove from sprocket end while supporting agitator (54).
24.	Agitator (54).	Remove.	Mark for right and left side.



LEGEND:

- 51. FELT WASHER
- 52. WASHER (4)
- 53. ROLL PIN
- 54. AGITATOR
- 55. SHAFT
- 56. SCREW (6)
- 57. GASKET (4)
- 58. RETAINER
- 59. SLIDE GATE
- 60. NUT (6)
- 61. DRY ADMIX BIN TOP
- 62. RETAINER (2)
- 63. NUT (8)
- 64. WASHER (8)
- 65. GASKET (4)
- 66. INNER HOPPER
- 67. SCREW (8)
- 68. WASHER (4)
- 69. FEEDER SHAFT
- 70. FELT WASHER

TA 076278

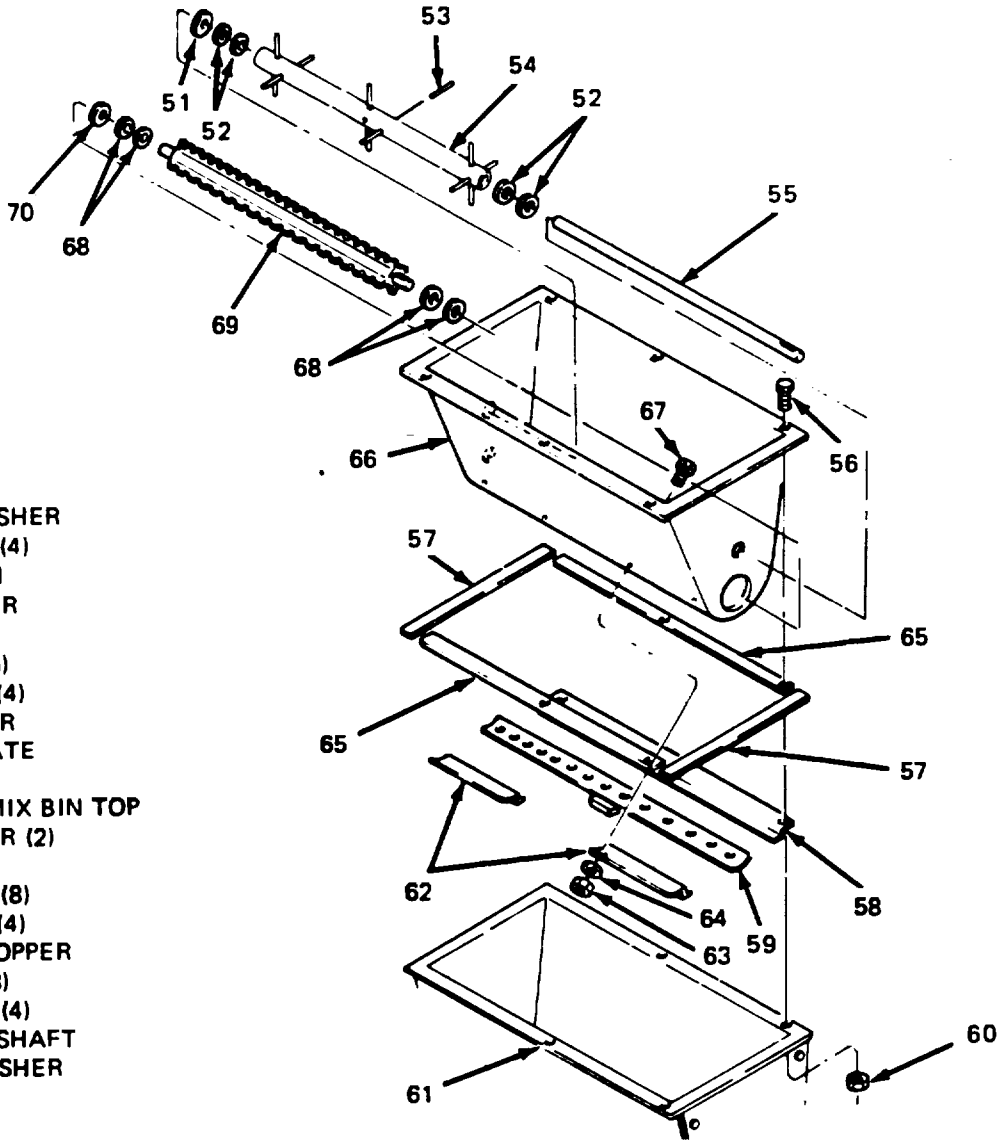
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).		
25. Felt washer (51), and four washers (52).	Remove from inner hopper (66).	
26. Feeder shaft (69).	Remove.	
27. Four washers (68), and felt washers (70).	Remove.	
28. Six screws (56), and nuts (60).	Loosen and remove screws and nuts. Lift inner hopper (66), from dry admix bin (61).	
29. Four gaskets (57) and four gaskets (65).	Remove if ton.	
30. Eight screws (67), eight lockwashers (64), and eight nuts (63).	Remove.	
31. Retainer (58), two retainers (62), and slide plate (59).	Remove.	

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 51. FELT WASHER
- 52. WASHER (4)
- 53. ROLL PIN
- 54. AGITATOR
- 55. SHAFT
- 56. SCREW (6)
- 57. GASKET (4)
- 58. RETAINER
- 59. SLIDE GATE
- 60. NUT (6)
- 61. DRY ADMIX BIN TOP
- 62. RETAINER (2)
- 63. NUT (8)
- 64. WASHER (8)
- 65. GASKET (4)
- 66. INNER HOPPER
- 67. SCREW (8)
- 68. WASHER (4)
- 69. FEEDER SHAFT
- 70. FELT WASHER

TA 076279

ADMIX SYSTEMS.

6-19. DRY ADMIX BINIMAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).		
32. Four screws (79), four lockwashers (80), four flat washers (83) and four nuts (82).	Remove.	
33. Two screws (73 and 74), two lockwashers (72), two lockwashers (86) and two nuts (85).	Remove handle (71).	
34. Clutch half (88) and key (78).	Remove.	
35. Two setscrews (87).	Remove.	
36. Two lubrication fittings (81).	Remove.	
37. Four set screws (75), two collars (76), and two bearings (77).	Remove from shaft (84).	Clean and polish shaft

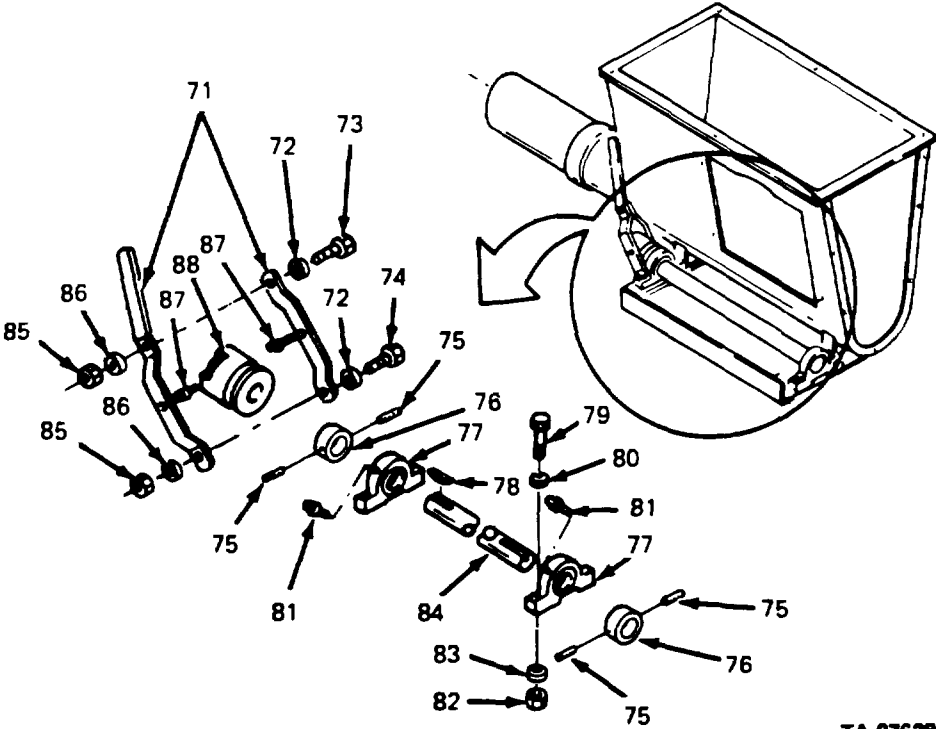
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 71. HANDLE
- 72. LOCKWASHER (2)
- 73. SCREW
- 74. SCREW
- 75. SETSCREW (4)
- 76. COLLAR (2)
- 77. BEARING (2)
- 78. KEY
- 79. SCREW (4)
- 80. LOCKWASHER (4)
- 81. LUBRICATION FITTING (2)
- 82. NUT (4)
- 83. FLAT WASHER (4)
- 84. SHAFT
- 85. NUT (2)
- 86. LOCKWASHER (2)
- 87. SETSCREW (2)
- 88. CLUTCH HALF



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ADMIX SYSTEMS.

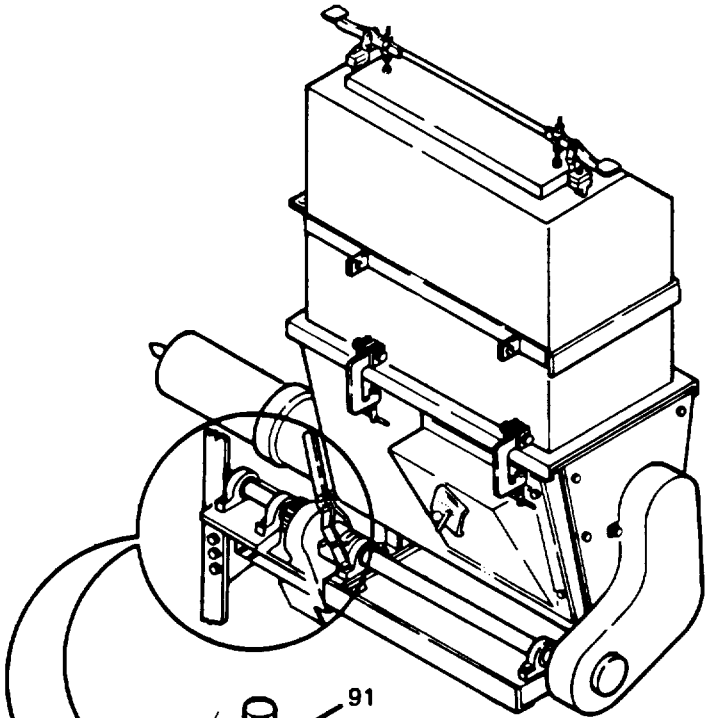
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued).		
38. Master link (111) and chain (110). (109 and clutch half (97).	Remove from chain (110); chain from drive sprocket	Mark chain to aid assembly.
39. Two screws (99), lock-washers (101, nuts (100), and setscrew (96).	Unscrew and remove cover (98) and clutch half (97).	
40. Four setscrews (89), four screws (91), flat washers (92), lockwashers (105) and nuts (104).	Loosen set screws (89) and remove two collars (90).	
41. Two bearings (93) and lubrication fittings (95). lubrication fittings (95) from bearings (93).	Remove bearings (93) from shaft (94); remove	Clean and polish shaft.
42. Three screws (106), lockwashers (103), and nuts (102).	Unscrew and remove jackshaft support (108) and frame (107).	

ADMIX SYSTEMS.

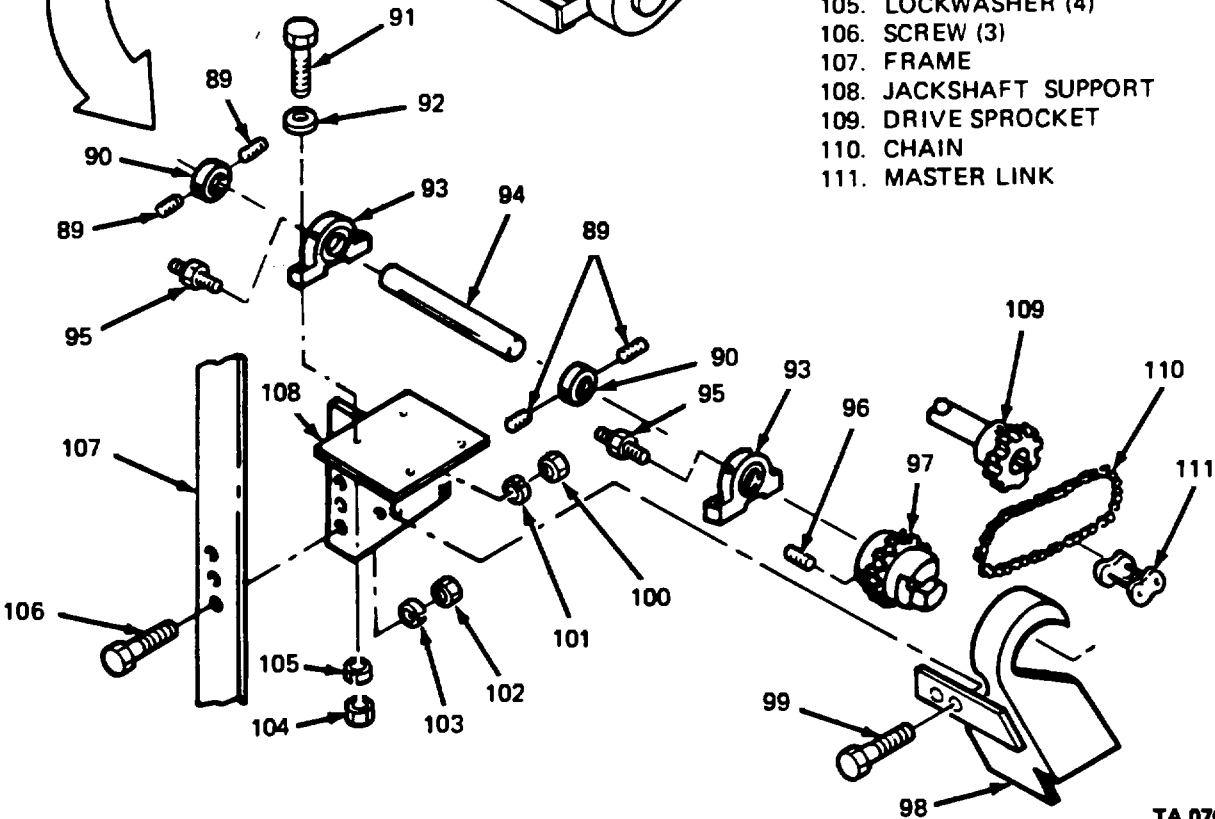
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 89. SETSCREW (4)
- 90. COLLAR (2)
- 91. SCREW (4)
- 92. FLAT WASHER (4)
- 93. BEARING (2)
- 94. SHAFT
- 95. LUBRICATION FITTING (2)
- 96. SETSCREW
- 97. CLUTCH HALF
- 98. COVER
- 99. SCREW (2)
- 100. NUT (2)
- 101. LOCKWASHER (2)
- 102. NUT (3)
- 103. LOCKWASHER (3)
- 104. NUT (4)
- 105. LOCKWASHER (4)
- 106. SCREW (3)
- 107. FRAME
- 108. JACKSHAFT SUPPORT
- 109. DRIVE SPROCKET
- 110. CHAIN
- 111. MASTER LINK



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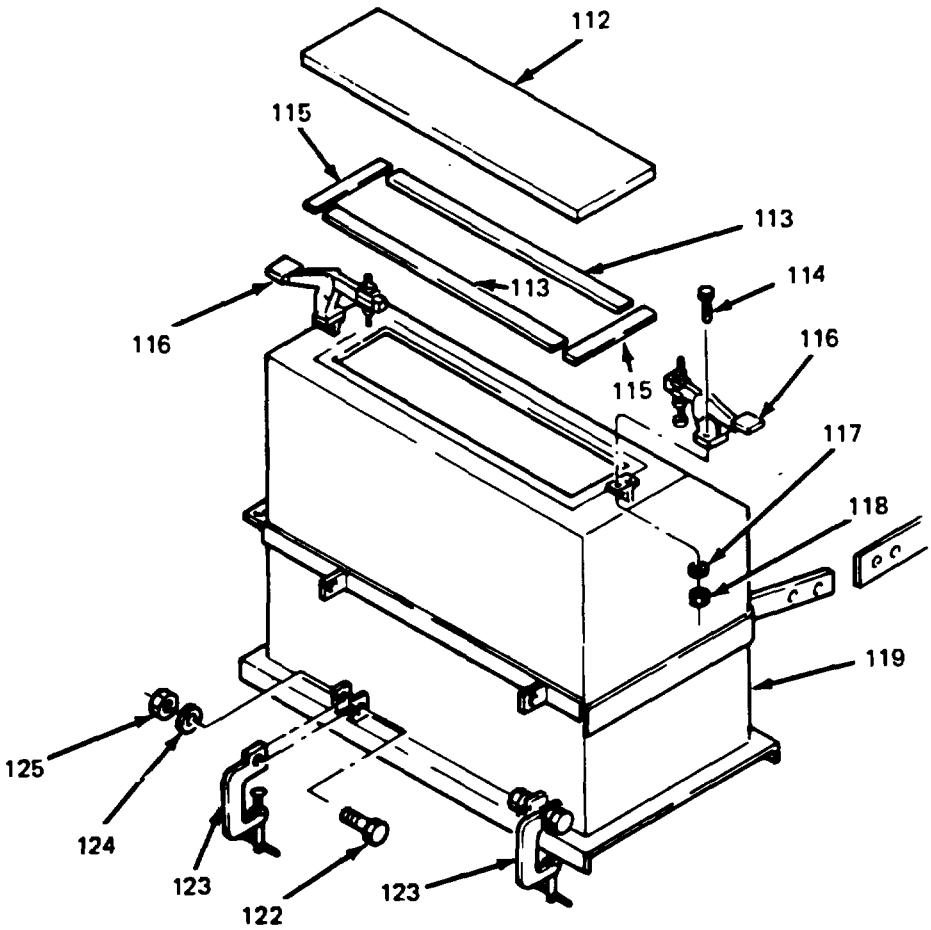
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY (Continued)		
43. Eight screws (114), lock-washers (117) and nuts (118).	Loosen and remove two lid clamps (116).	
44. Hopper lid (112).	Lift from top hopper (119).	
45. Two gaskets (113), and two gaskets (115).	Remove if necessary.	
46. Four screws (122), lock-washers (124), and nuts (125).	Loosen and remove four C-clamps (123).	
47. Two gaskets (120), and two gaskets (121).	Remove if necessary.	
C. CLEANING AND INSPECTION.		
48. All metal parts. broken welds, rust and broken pieces.	lean and inspect for cracks, required.	Paint, weld or replace as required.
49. All bearings.	Check for roughness and looseness.	Replace as required.
D. ASSEMBLY.		
50. Two gaskets (112) and (115). removed during disassembly.	Install in hopper lid (112) if	
51. Hopper lid (112).	Install on top hopper (119).	
52. Two lid clamps (116).	Position lid clamps (116), and secure with eight screws (114), lockwashers (117) and nuts (118).	
53. Four C-clamps (123).	Aline C-clamps and secure with four screws (122), lockwashers (124), and nuts (125).	
54. Two gaskets (120) and 121).	Install if removed during dis-assembly.	

ADMIX SYSTEMS.

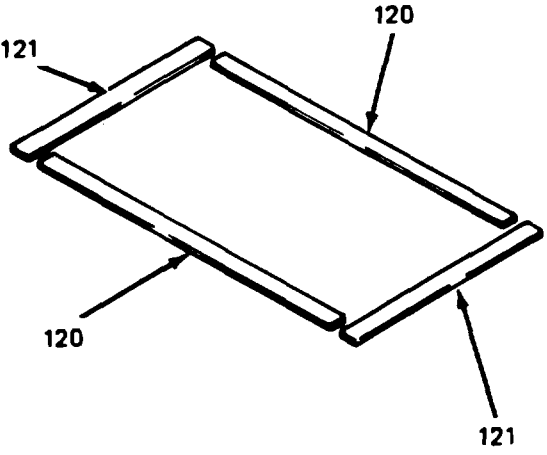
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 112. HOPPER LID
- 113. GASKET (2)
- 114. SCREW (8)
- 115. GASKET (2)
- 116. LID CLAMP (2)
- 117. LOCKWASHER (8)
- 118. NUT (8)
- 119. TOP HOPPER
- 120. GASKET (2)
- 121. GASKET (2)
- 122. SCREW (4)
- 123. C-CLAMP (4)
- 124. LOCKWASHER (4)
- 125. NUT (4)



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ADMIX SYSTEMS.

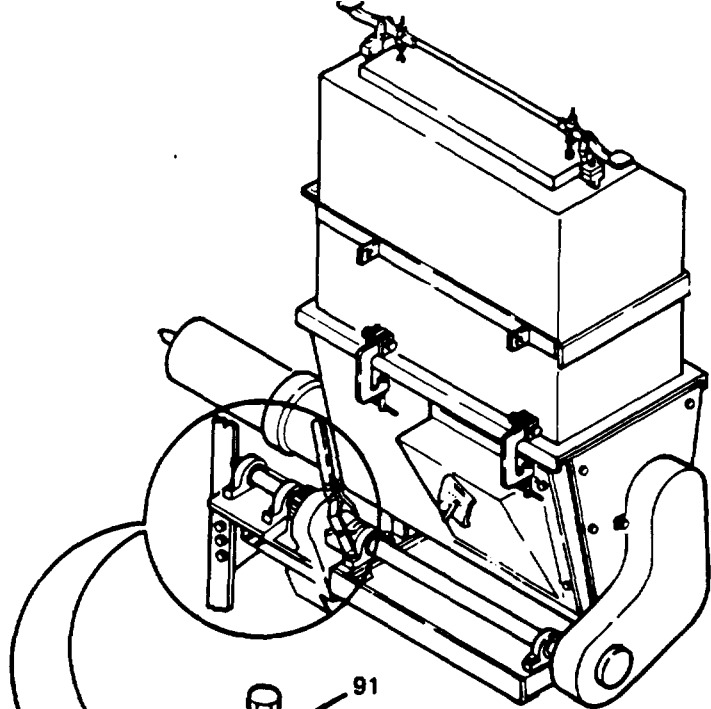
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
55. Jack shaft support (108).	Position to frame (107) and secure with three screws (106), lockwashers (101), and nuts (102).	
56. Two bearings (93) and two collars (90)	Position on shaft (94). Position bearing (93) over holes in jack shaft support (108) and install four screws (91), flat washers (92), lockwashers (105), and nuts (104).	
57. Clutch half (97).	Install and secure with set screw (96).	
58. Four setscrews (89) and	Install. two lubrication fittings /95).	
59. Chain (11 0).	Position chain (110) on clutch half (97), and drive sprocket (109). Secure with master link (111).	
60. Cover (98).	Position cover (98), and install two screws (99), lockwashers (101), and nuts (100).	

ADMIX SYSTEMS.

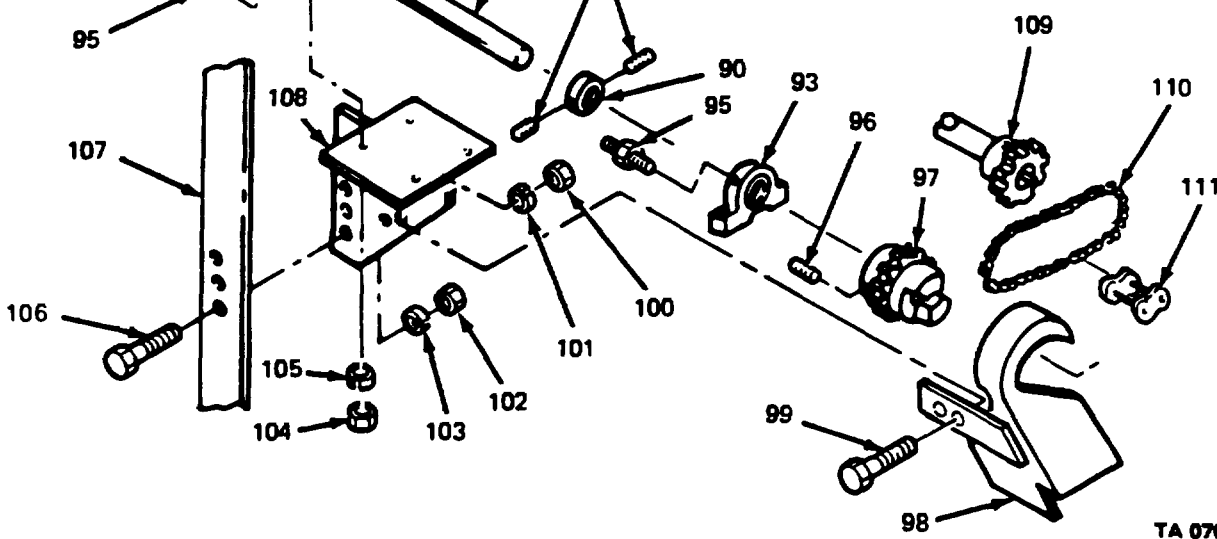
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 89. SETSCREW (4)
- 90. COLLAR (2)
- 91. SCREW (4)
- 92. FLAT WASHER (4)
- 93. BEARING (2)
- 94. SHAFT
- 95. LUBRICATION FITTING (2)
- 96. SETSCREW
- 97. CLUTCH HALF
- 98. COVER
- 99. SCREW (2)
- 100. NUT (2)
- 101. LOCKWASHER (2)
- 102. NUT (3)
- 103. LOCKWASHER (3)
- 104. NUT (4)
- 105. LOCKWASHER (4)
- 106. SCREW (3)
- 107. FRAME
- 108. JACKSHAFT SUPPORT
- 109. DRIVE SPROCKET
- 110. CHAIN
- 111. MASTER LINK



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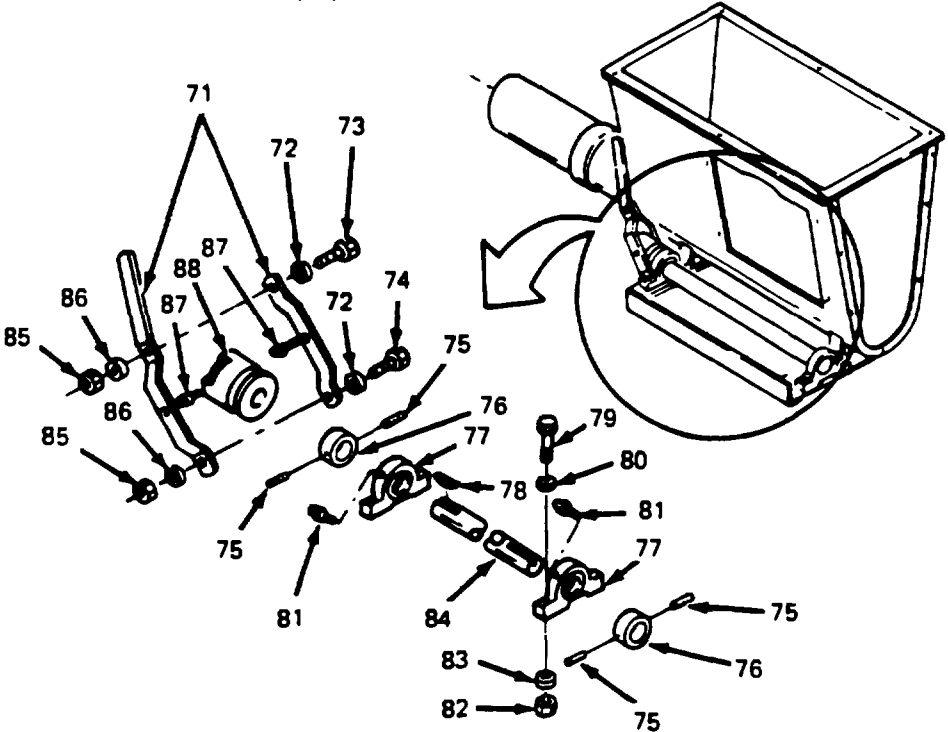
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
61. Two lubrication fittings (81).	Install.	
62. Two bearings (77), and collars (76).	Position on shaft (84) and install four screws (79), lockwashers (80), flat washers (83) and nuts (82).	
63. Clutch half (88). shaft (84).	Install with key (78), on	
64. Four set screws (75).	Install.	
65. Two Setscrews (87).	install and adjust to fit in groove of clutch half (88).	
66. Handle (71).	Position on clutch half (88), and install two screws (73 and 74), four lockwashers (72 and 86), and two nuts (85).	

LEGEND:

- 71. HANDLE
- 72. LOCKWASHER (2)
- 73. SCREW
- 74. SCREW
- 75. SETSCREW (4)
- 76. COLLAR (2)
- 77. BEARING (2)
- 78. KEY
- 79. SCREW (4)
- 80. LOCKWASHER (4)
- 81. LUBRICATION FITTING (2)
- 82. NUT (4)
- 83. FLAT WASHER (4)
- 84. SHAFT
- 85. NUT (2)
- 86. LOCKWASHER (2)
- 87. SETSCREW (2)
- 88. CLUTCH HALF



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ADMIX SYSTEMS.

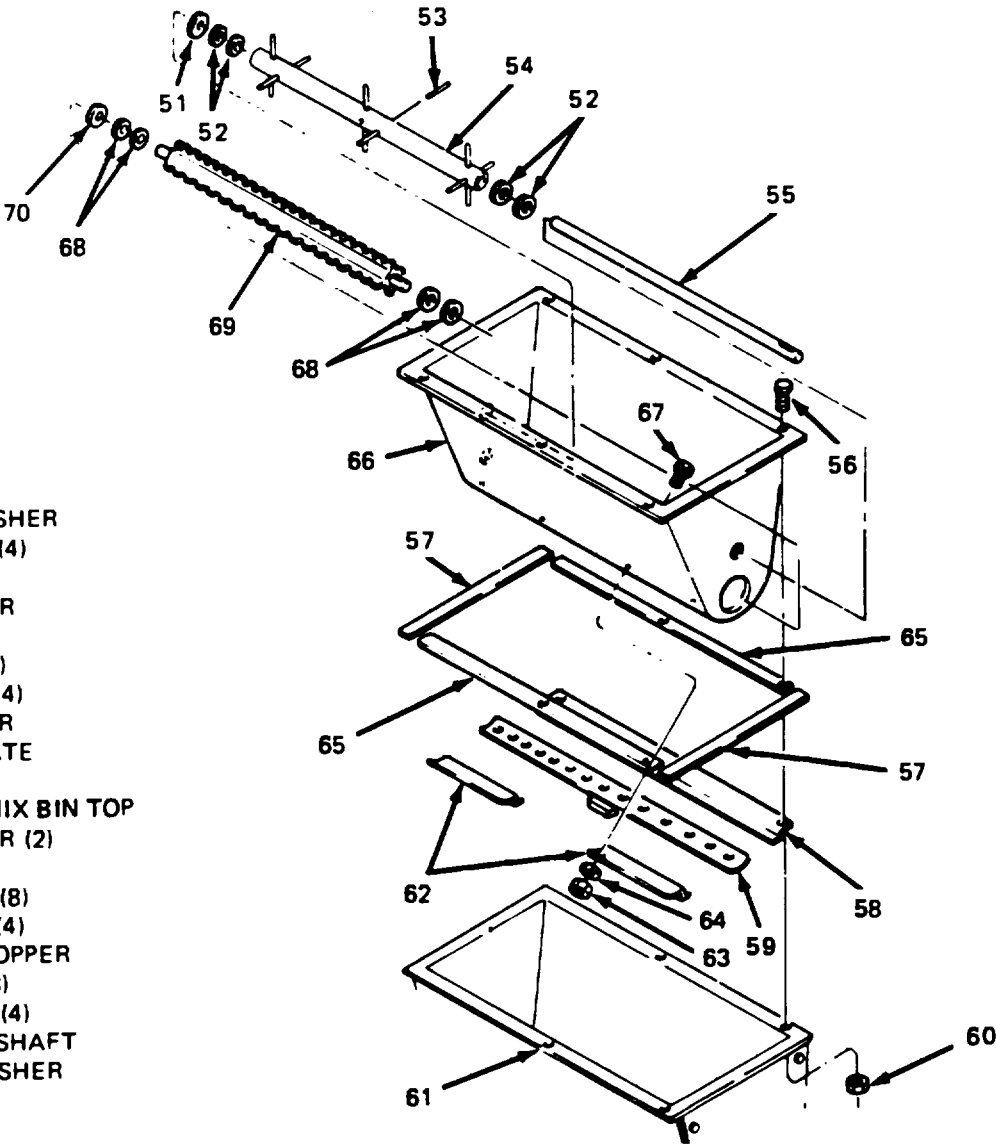
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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D. ASSEMBLY (Continued).I

67. Retainer (58), two retainers (62), and slide gate (59). (64), and nuts (63).

Install on bottom of inner hopper (66), with eight screws (67), lockwashers



LEGEND:

- 51. FELT WASHER
- 52. WASHER (4)
- 53. ROLL PIN
- 54. AGITATOR
- 55. SHAFT
- 56. SCREW (6)
- 57. GASKET (4)
- 58. RETAINER
- 59. SLIDE GATE
- 60. NUT (6)
- 61. DRY ADMIX BIN TOP
- 62. RETAINER (2)
- 63. NUT (8)
- 64. WASHER (8)
- 65. GASKET (4)
- 66. INNER HOPPER
- 67. SCREW (8)
- 68. WASHER (4)
- 69. FEEDER SHAFT
- 70. FELT WASHER

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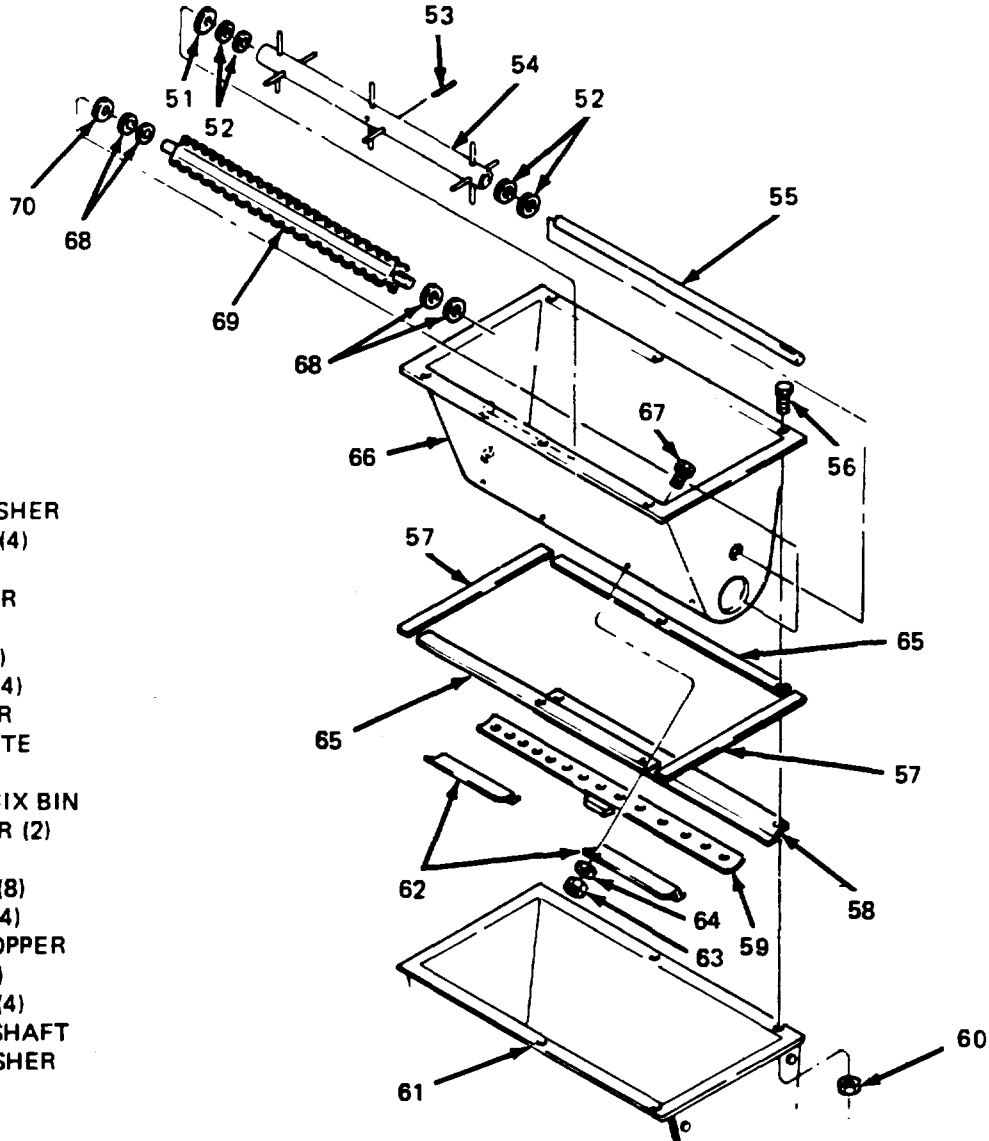
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
68. Four gaskets (57) and four gaskets (65). during disassembly.	Install on bottom edge of inner hopper (66), if removed	Two each side.
69. Inner hopper (66).	Install with six screws (56), and six nuts (60) to dry admix bin top (61).	
70. Felt washer (70), four washers (68), and feeder shaft (69).	Position felt washer (70), and two washers (68) on feeder shaft (69). Install feeder shaft (69) and two washers (68).	Support feeder shaft so that it stays level.
71. Felt washer (51), four washers (52), and agitator (54).	Position in inner hopper (66) and drive shaft (55) thru inner hopper (66), two washers (52), agitator (54), two washers (52), inner hopper (66).	felt washer (51), and
72. Roll pin (53).	Aline holes in agitator (54) and shaft (55). Install roll pin (53).	

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

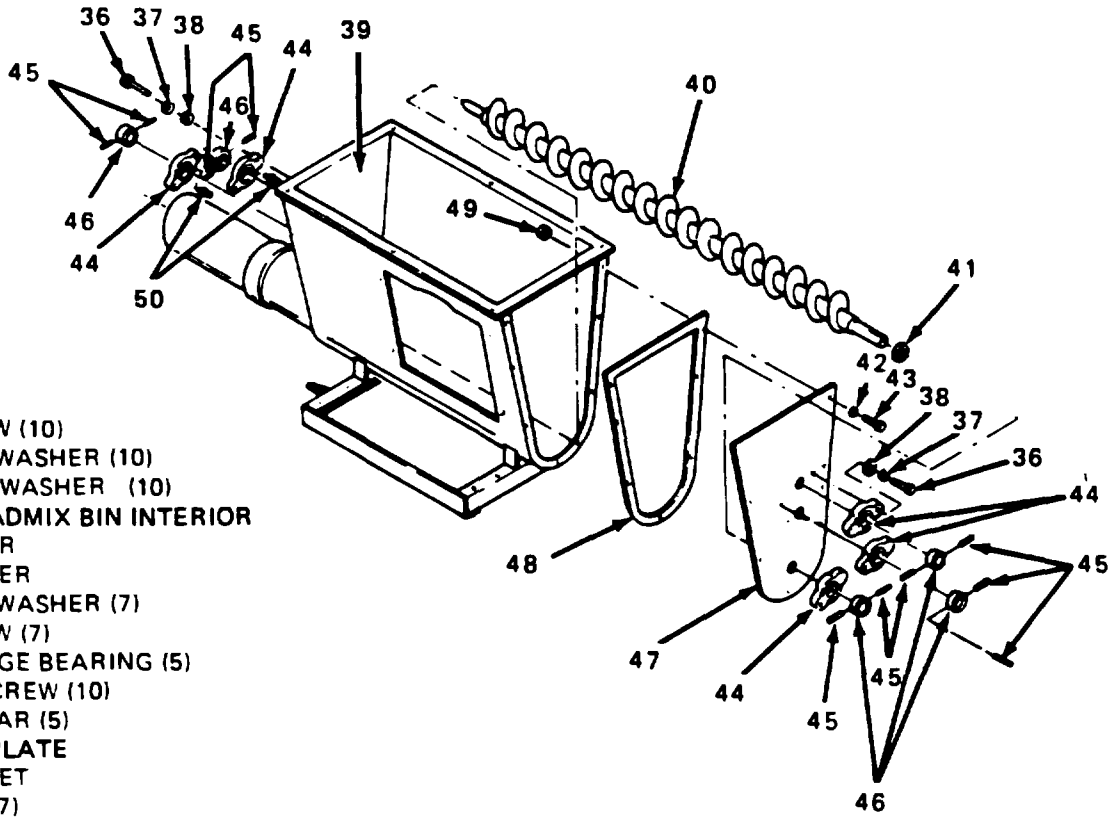
- 51. FELT WASHER
- 52. WASHER (4)
- 53. ROLL PIN
- 54. AGITATOR
- 55. SHAFT
- 56. SCREW (6)
- 57. GASKET (4)
- 58. RETAINER
- 59. SLIDE GATE
- 60. NUT (6)
- 61. DRY ADMIX BIN
- 62. RETAINER (2)
- 63. NUT (8)
- 64. WASHER (8)
- 65. GASKET (4)
- 66. INNER HOPPER
- 67. SCREW (8)
- 68. WASHER (4)
- 69. FEEDER SHAFT
- 70. FELT WASHER

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ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MALNTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
73. Auger (40).	Install.	
74. Washer (41).	Install on sprocket end of auger (40).	
75. Gasket (48), and plate (47).	Position on dry admix bin interior (39) over shafts and install seven screws (43), lockwashers (42), and nuts (49).	
76. Five flange bearings (44) and two lubrication fittings (50).	Position and install ten screws (36), lockwashers (37), and flat washers (38). Install two lubrication fittings (50) in the two bearings (44) on left end of dry admix bin interior (39).	
77. Five collars (46) and setscrews (45).	Install collars (46), against bearings (44) and tighten ten set screws (45).	



LEGEND:

- 36. SCREW (10)
- 37. LOCKWASHER (10)
- 38. FLAT WASHER (10)
- 39. DRY ADMIX BIN INTERIOR
- 40. AUGER
- 41. WASHER
- 42. LOCKWASHER (7)
- 43. SCREW (7)
- 44. FLANGE BEARING (5)
- 45. SETSCREW (10)
- 46. COLLAR (5)
- 47. END PLATE
- 48. GASKET
- 49. NUT (7)
- 50. LUBRICATION FITTING (2)

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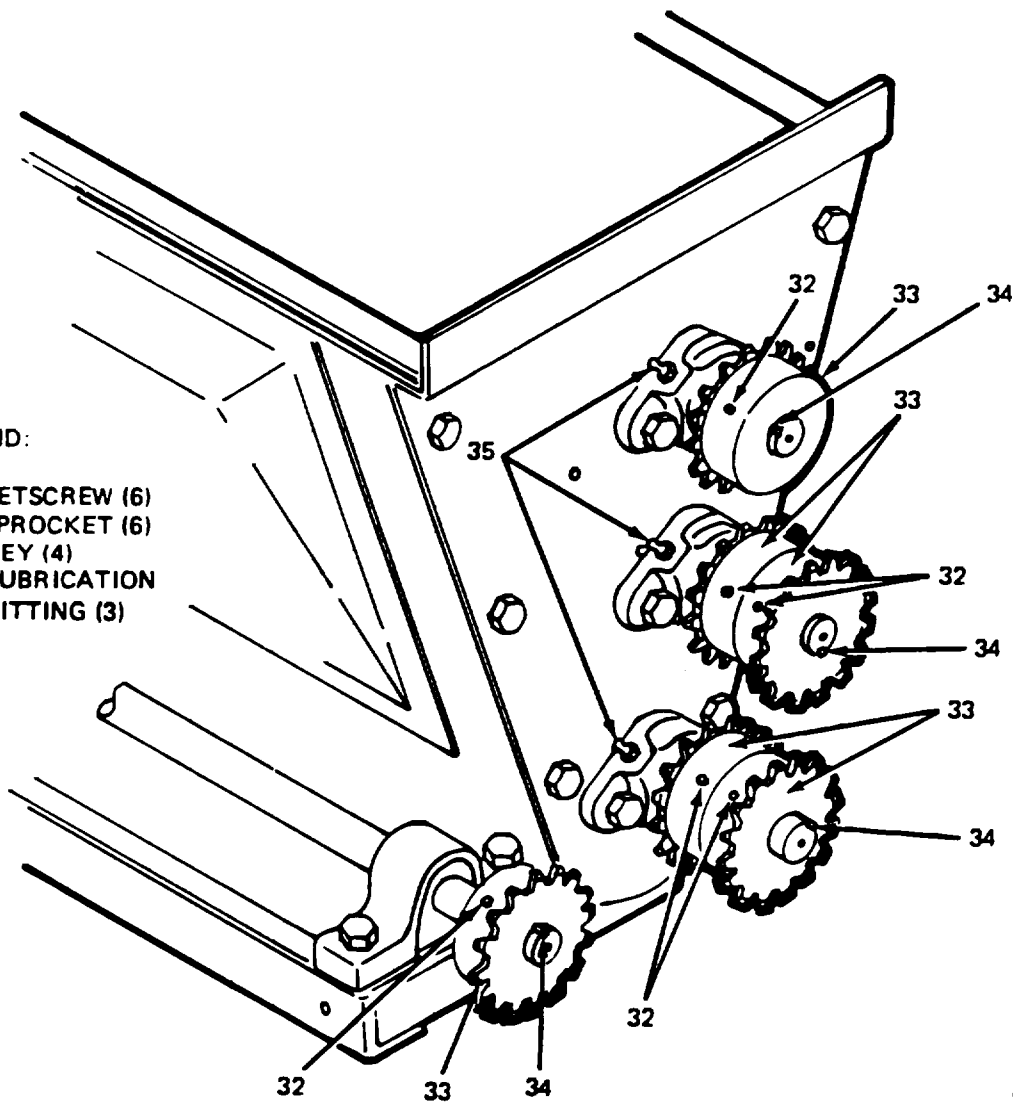
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
78. Four keys (34).	Install.	Refer to mark on shaft from disassembly.
79. Three lubrication fittings (35).	Install.	
80. Six sprockets (33).	Install.	Align inner sprockets with the upper sprocket and outer sprockets with each other.
81. Six setscrews (32)	Tighten.	

LEGEND:

- 32. SETSCREW (6)
- 33. SPROCKET (6)
- 34. KEY (4)
- 35. LUBRICATION FITTING (3)



TA 076288

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
82. Three chains (29, 30, Install. and 31) . 83.and 31).	Install as marked during dis-assembly. Install inner chains .first.	
83. Three master links (28).	Connect chains.	
LEGEND: 28. MASTER LINK (3) 29. CHAIN 30. CHAIN 31. CHAIN		
TA 076289		

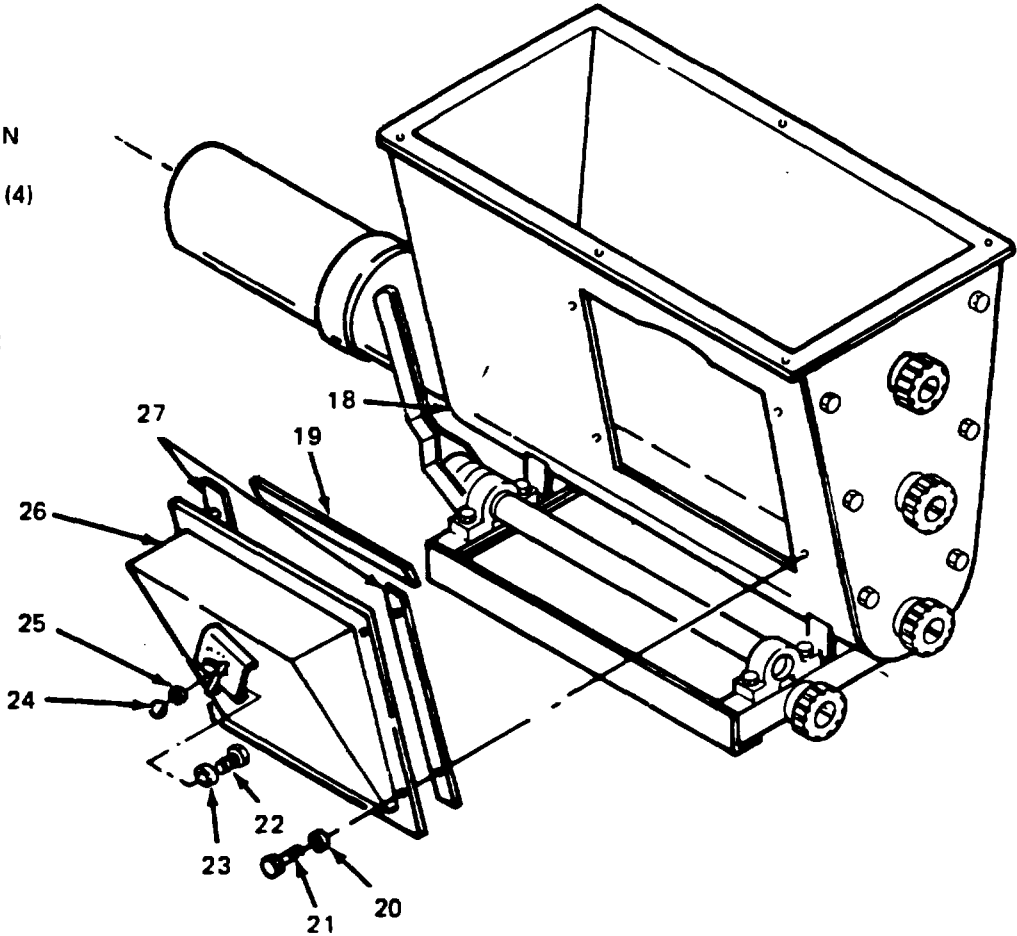
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
84. Screw (22), lock washer (23), flat washer (25), and knob (24).	Install screw (22) and lock washer (23), thru back side of indicator on side cover. Position flat washer (25) on screw (22), and install knob (24).	
85. Two gaskets (27), and gasket (19).	Install on side cover (26).	
86. Side cover (26).	Position side cover (26), on dry admix bin (18), and install four screws (21), and lock washers (20).	

LEGEND:

- 18. DRY ADMIX BIN
- 19. GASKET
- 20. LOCKWASHER (4)
- 21. SCREW (4)
- 22. SCREW
- 23. LOCKWASHER
- 24. KNOB
- 25. FLAT WASHER
- 26. SIDE COVER
- 27. GASKET (2)



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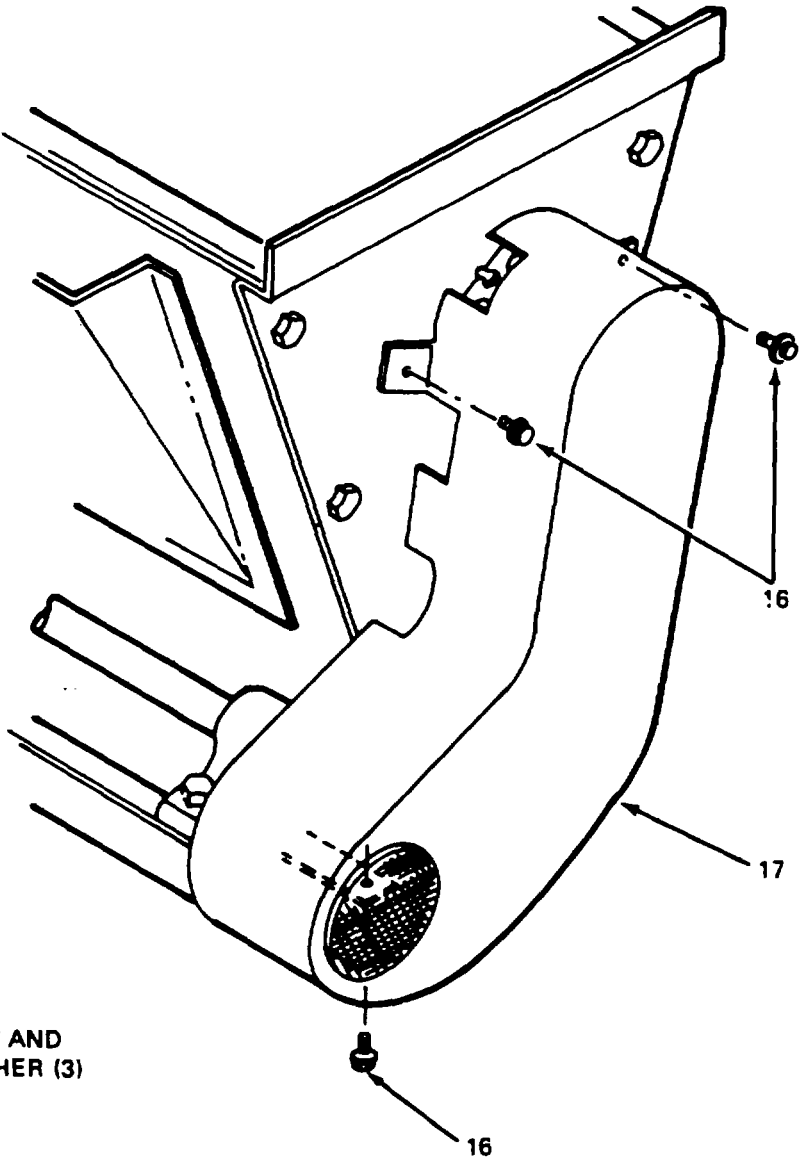
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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D. ASSEMBLY (Continued).

- 87. Cover (17). Set in place.
- 88. Three cap screws and washers (16). Install and tighten.



- LEGEND:
- 16. CAPSCREW AND LOCKWASHER (3)
 - 17. COVER

TA 076291

ADMIX SYSTEMS.

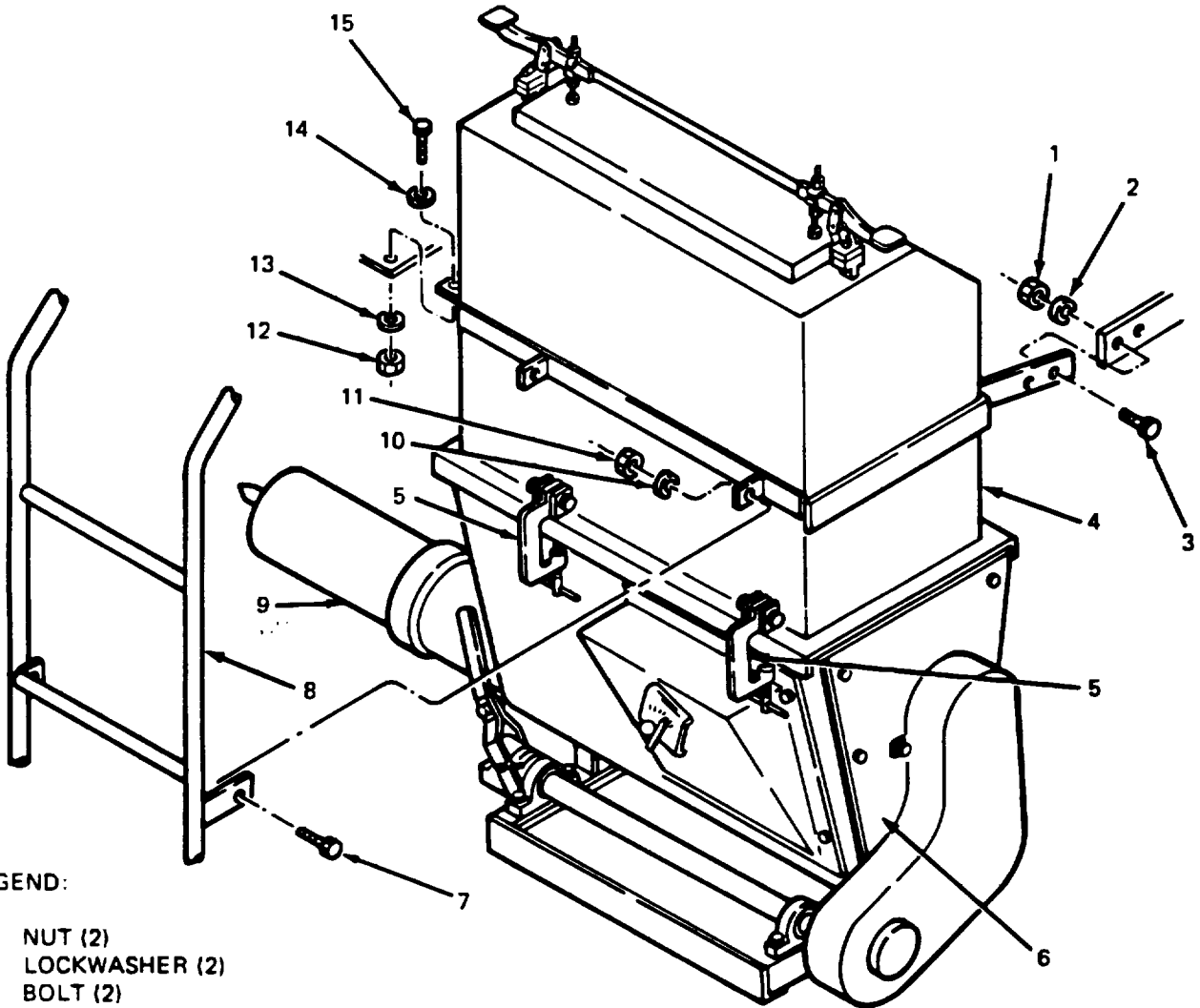
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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E. INSTALLATION.

89. Top hopper (4).

Position top hopper (4), and install four bolts (3 and 15), two flat washers (14), four lockwashers (2 and 13), and four lockwashers (2 and 13), and four nuts (1 and 12).



LEGEND:

- | | | |
|-------------------|--------------------|---------------------|
| 1. NUT (2) | 8. LADDER | 12. NUT (2) |
| 2. LOCKWASHER (2) | 9. AUGER COVER | 13. LOCKWASHER (2) |
| 3. BOLT (2) | 10. LOCKWASHER (2) | 14. FLAT WASHER (2) |
| 4. TOP HOPPER | 11. NUT (2) | 15. BOLT (2) |
| 5. C-CLAMP (4) | | |
| 6. DRY ADMIX BIN | | |
| 7. BOLT (2) | | |

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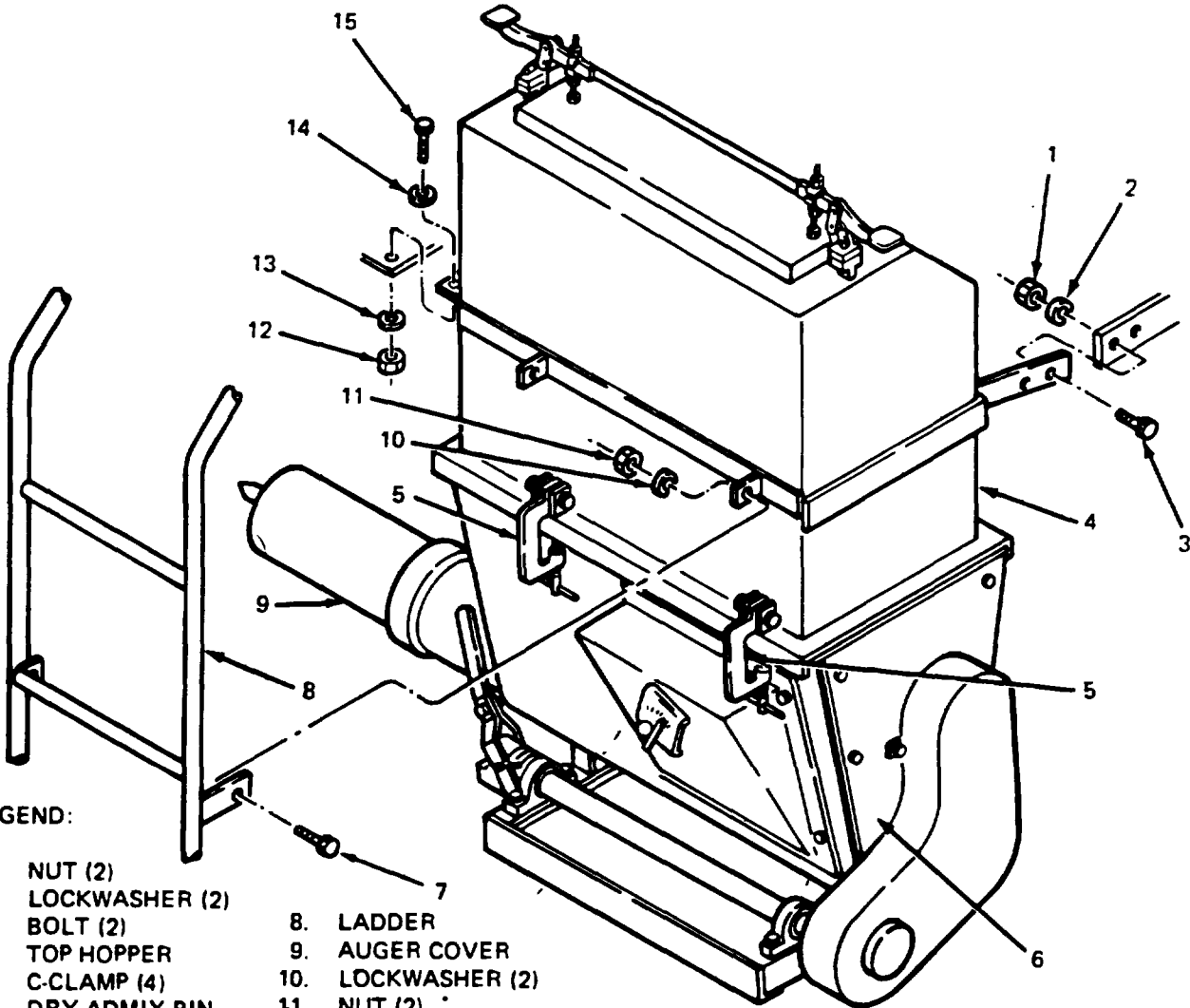
ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
E. INSTALLATION (Continued).		
90. Ladder (8).	Position and install two bolts (7), lock washers (10), and nuts (11).	
91. Dry admix bin assembly (6), and four C-clamps (5).	Insert auger cover (9) first, then raise and push the dry admix bin assembly (6), to the left and seat against top hopper (4) and clamp in place with four C-clamps (5).	

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 1. NUT (2)
- 2. LOCKWASHER (2)
- 3. BOLT (2)
- 4. TOP HOPPER
- 5. C-CLAMP (4)
- 6. DRY ADMIX BIN ASSEMBLY
- 7. BOLT (2)
- 8. LADDER
- 9. AUGER COVER
- 10. LOCKWASHER (2)
- 11. NUT (2)
- 12. NUT (2)
- 13. LOCKWASHER (2)
- 14. FLAT WASHER (2)
- 15. BOLT (2)

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ADMIX SYSTEMS.

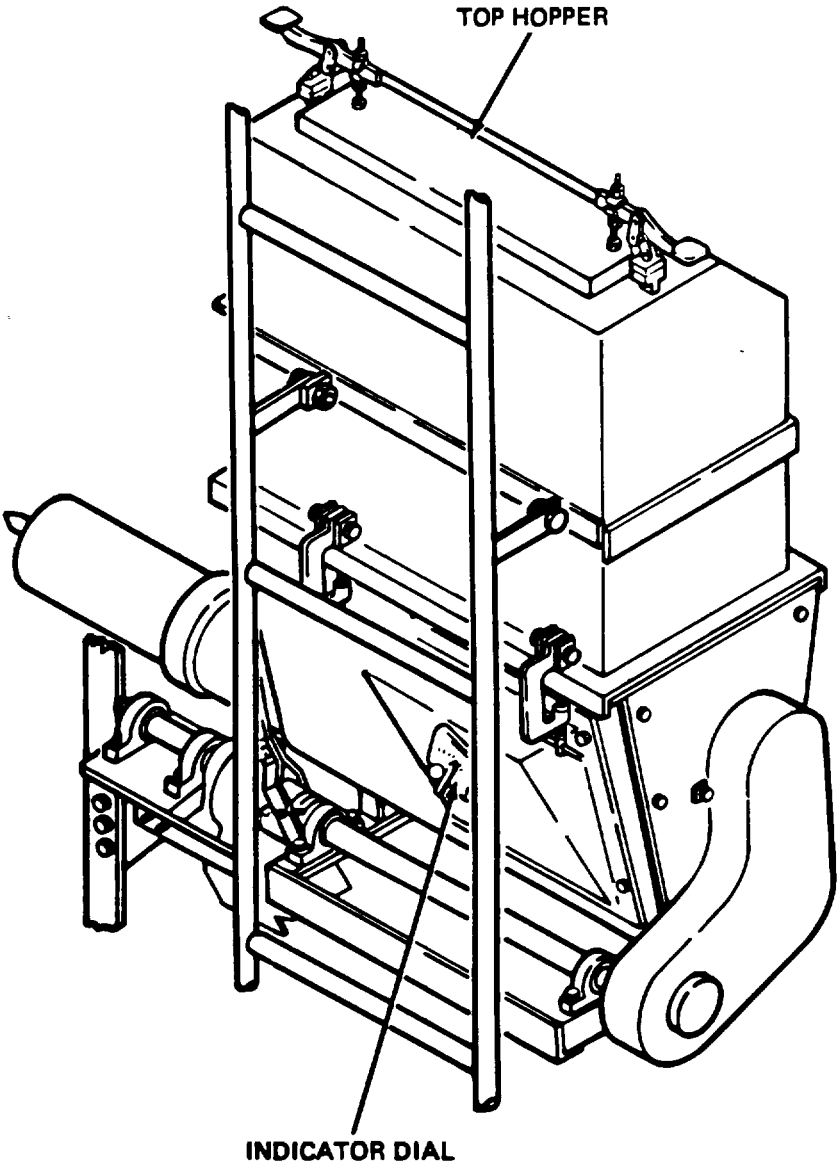
6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
F. TEST.		
NOTE		
<p>Due to the wide variation of weights of the materials and the amounts required, the calibration must be made with the materials to be used. In order to calibrate the exactorate system, the sand, stone, and cement bin on the mixer must be empty. The clutch operating the cement metering wheel must be engaged. When calibrating, the mixer must be operating at its regular speed, refer to TM 5-3895-372-10.</p>		
92. Top hopper. 93. Indicator dial.	Fill with material to be used. Place in half open position.	
NOTE		
<p>Prepare an empty container to catch the material as it falls from the belt. Weigh container before using.</p>		
94. Mixer.	Place in operation TM 5-3895372-10.	Run off enough material to give a true weight when starting to calibrate. Catch the material in container as it drops off belt

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
F. TEST (Continued).		
95. Cement meter register.	Use count as shown in TM 53895372-10 to deliver 1 bag of cement.	Multiply this count by 4.
96. Container with material.	Weigh.	Deduct the weight of the container to obtain material weight only.
97. Material weight.	Divide by 4.	This is then the amount of material being delivered for each bag of cement used.

NOTE

Do this at various settings on the indicator dial as required by the amount of material to be used in the mix.

EXAMPLE:

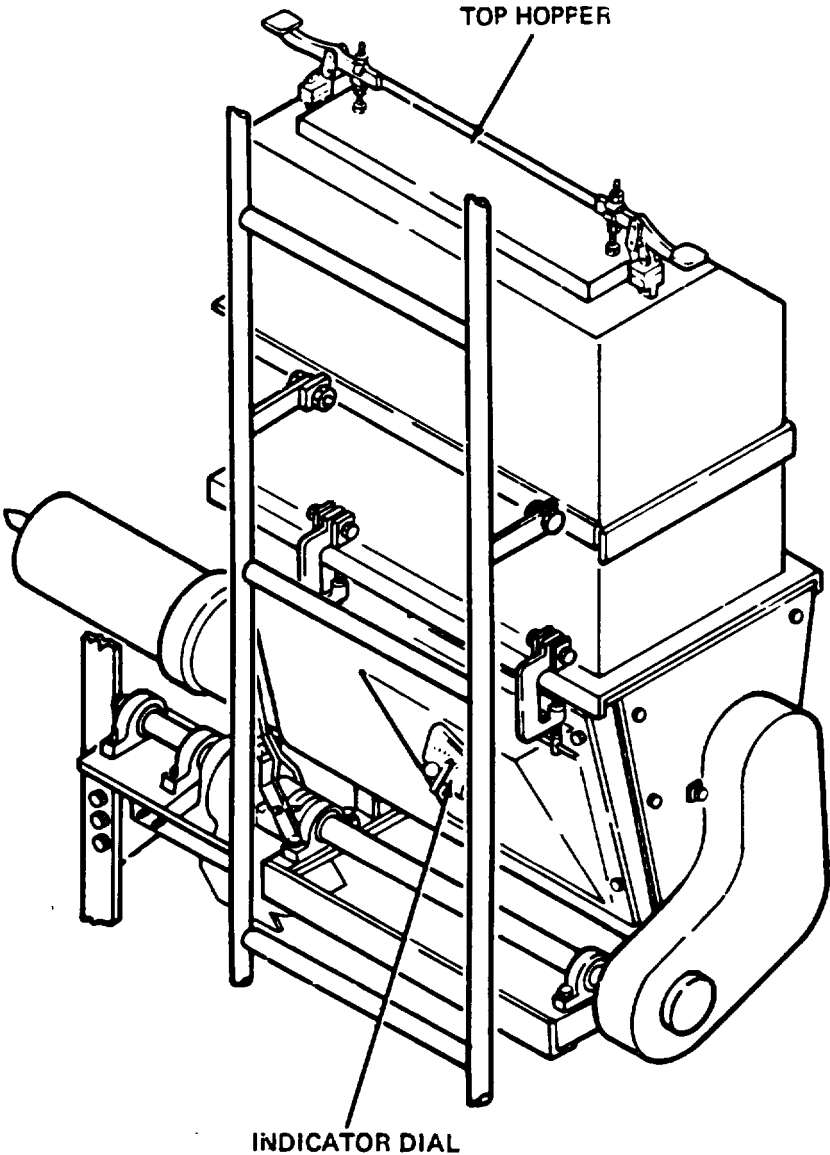
The metering wheel on the mixer is 66. Four (4) times 66 equals 264 count on the meter. Discharge this amount in the container at the exactorate dial setting selected, weigh container and material, deduct the weight of the container and divide by 4. This will give you the amount of material per bag of cement. Repeat at various settings as often as required to determine amounts to be discharged per bag of cement.

The exactorate system may also be calibrated by using the time required to discharge one (1) bag of cement. The time will be shown in front of the manual. This method is not as accurate as the 4 bag method previously described.

ADMIX SYSTEMS.

6-19. DRY ADMIX BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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TA 076295

CHAPTER 7

AGGREGATE SUPPLY SYSTEM

7-1. OVERVIEW.

This chapter provides you with the following information related to aggregate supply system maintenance.

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedures.

Section I EPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

7-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

7-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for aggregate supply system maintenance procedures described in this chapter are limited to gate opening gage, 3 x 3 x 8 in. (76 x 76 x 203 mm). (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

7-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

7-5. INTRODUCTION.

Troubleshooting procedures for the aggregate supply system are given in table 7-1. It is arranged by malfunctions, in the following order:

- a.* Conveyor belt does not move (Malfunction No. 1).
- b.* Conveyor belt is loose (Malfunction No. 2).
- c.* Conveyor belt is torn or damaged (Malfunction No. 3).
- d.* Sand or stone drops on ground beneath Concrete Mobile during mixing (Malfunction No. 4).
- e.* Sand or stone controls out of adjustment (Malfunction No. 5).
- f.* Excessive wear on chains (Malfunction No. 6).

Table 7-1. Aggregate Supply System Troubleshooting Procedures.

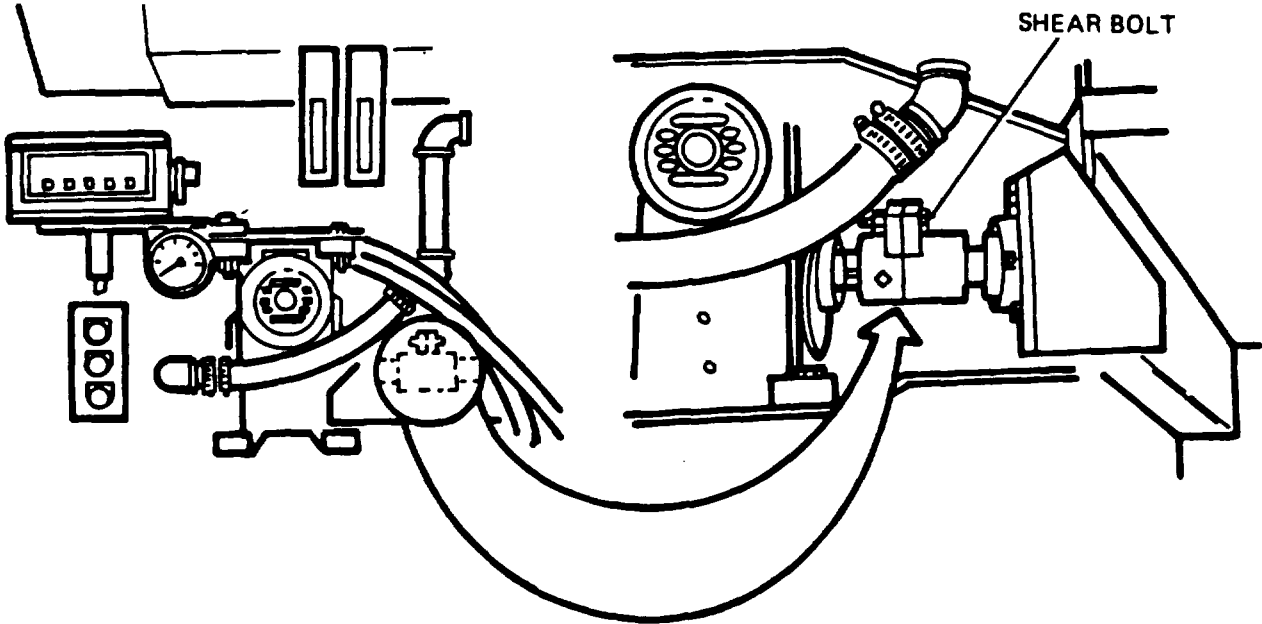
MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
1. CONVEYOR BELT DOES NOT MOVE:
Step 1. Check that PTO and main clutch are engaged. Engage PTO and main clutch.
Step 2. Check for broken shear bolt.
NOTE
A broken bolt is caused by some other problem. Often something is caught on the belt or chain. Unless you correct this problem, shear bolts will continue to break.
a. Find cause of shearing. Correct problem. b. Replace shear bolt.

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Table 7-1. Aggregate Supply System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>1. CONVEYOR BELT DOES NOT MOVE (Continued).</p> <p>Step 3. Check belt tension (para 7-13).</p> <p style="padding-left: 40px;">Adjust.</p> <p>Step 4. Refer problem to Direct Support Maintenance.</p> <p>2. CONVEYOR BELT IS LOOSE:</p> <p>Check belt tensioning bolts for maladjustment.</p> <p style="padding-left: 40px;">Adjust bolts (para 7-13).</p> <p>3. CONVEYOR BELT IS TORN OR DAMAGED:</p> <p>Step 1. Check belt tension (para 7-13).</p> <p style="padding-left: 40px;">Adjust.</p> <p>Step 2. Check for material stuck between belt and guides or underneath belt.</p> <p style="padding-left: 20px;">a. Remove sand and stone from bins.</p> <p style="padding-left: 20px;">b. Remove:</p> <p style="padding-left: 40px;">(1) Large stones.</p> <p style="padding-left: 40px;">(2) Lumps of frozen sand.</p> <p style="padding-left: 40px;">(3) Wood.</p> <p style="padding-left: 40px;">(4) Metal.</p> <p style="padding-left: 40px;">(5) Tools.</p> <p style="padding-left: 20px;">c. Check belt tension (para 7-13).</p> <p style="padding-left: 40px;">Adjust.</p> <p>Step 3. Check gates for blockage.</p> <p style="padding-left: 40px;">Remove blocks. Check gates for smooth operation.</p>

Table 7-1. Aggregate Supply System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
3. CONVEYOR BELT IS TORN OR DAMAGED (Continued):
Step 4. Check for 1/16 in. (1.59 mm) clearance between metal guides, and top of belt.
Adjust guides (para 7-10).
Step 5. Check operation of vibrators.
Troubleshoot air system (para 11-5).
Step 6. Check for damaged cross bars.
<i>a.</i> Empty sand and stone bins.
<i>b.</i> Operate belt. Use low operating speed.
<i>c.</i> As each cross bar passes inspection ports, check for:
(1) Bends.
(2) Breaks.
(3) Twists.
(4) Looseness.
<i>d.</i> Refer problem to Direct Support Maintenance.
Step 7. Check for damaged chain.
<i>a.</i> Empty sand and stone bins.
<i>b.</i> Operate belt. Use low operating speed.
<i>c.</i> Check for proper lubrication of chain.
(See TM 5-3895-372-10 and LO 5-3895-372-12).
<i>d.</i> As each link passes sprocket at rear, check for:
(1) Loose crossbars.
(2) Crossbars attached to wrong links.
(3) Broken links.
<i>e.</i> Refer problem to Direct Support Maintenance.

Table 7- 1. Aggregate Supply System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>3. CONVEYOR BELT IS TORN OR DAMAGED (Continued):</p>
<p>Step 8. Check for bridging or arching in sand and stone bins. Use clean aggregates for good quality. (See TM 5-3895-372-10).</p>
<p>4. SAND OR STONE DROPS ON GROUND BENEATH CONCRETE MOBILE DURING MIXING.</p>
<p>Step 1. Check for 1/16 in. (1.59 mm) clearance between metal guides and top of belt. Adjust metal guides (para 7-10).</p>
<p>Step 2. Check that rubber guides touch belt. Adjust rubber guides (para 7-9).</p>
<p>Step 3. Check that belt wiper is funneling all material into chute. Adjust wipers (para 7-11 and 7-12).</p>
<p>5. SAND OR STONE CONTROLS OUT OF ADJUSTMENT:</p>
<p>Step 1. Check that drilled holes on shaft handwheels and pointer collars are aligned. (See TM 5-3895-372-10).</p> <ul style="list-style-type: none"> a. Loosen collar set screw. b. Align holes. c. Tighten set crew.
<p>Step 2. Use Gate Opening Gage to check sand and stone gate openings (See TM 5-3895-372-10). Gates should be open 3 in. (76 mm) when dials read 6.4 + 0.2. Adjust gate openings.</p>
<p>Step 3. Check universal joints for:</p> <ul style="list-style-type: none"> a. Looseness. b. Breakage. c. Alignment of drill holes. <p>Tighten, align, or replace universal joints (para 7-18).</p>

Table 7-1. Aggregate Supply System Troubleshooting Procedures (Continued).

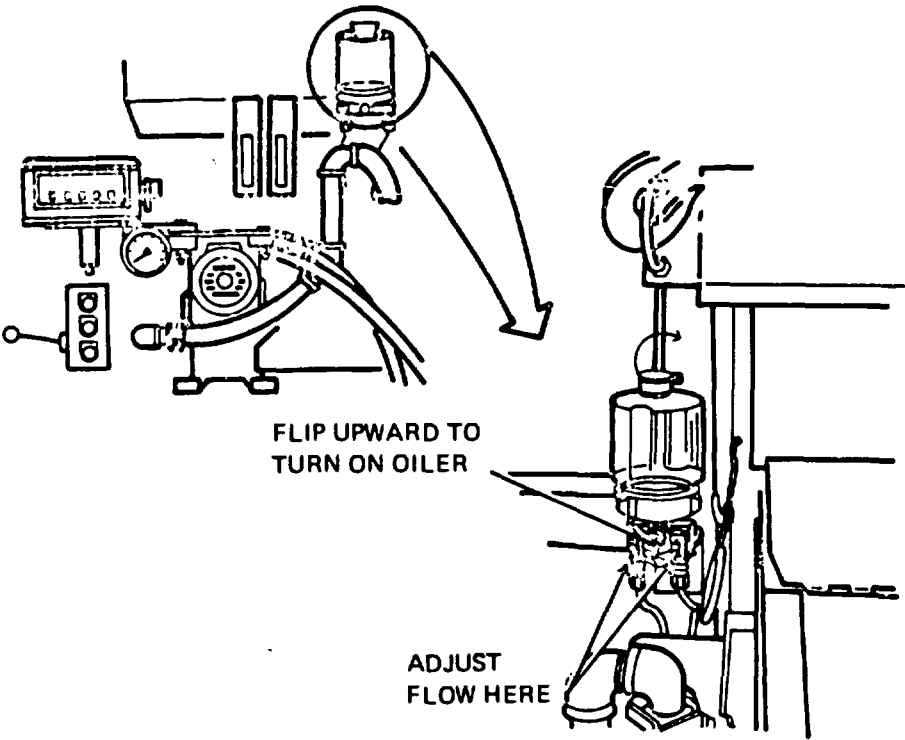
MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
5. SAND OR STONE CONTROLS OUT OF ADJUSTMENT (Continued):
Step 4. Check pinion gear for damage.
Refer problem to Direct Support Maintenance.
6. EXCESSIVE WEAR ON CHAINS:
Step 1. Check chain oiler. It should be full and set to deliver 5 drops/min.
Adjust delivery by turning the square headed screws.
NOTE
Remind operator to turn chain oiler on when he operates conveyor belt.
 <p>The diagram illustrates a chain oiler system. On the left, a control panel features a digital display showing '5.0000', a pressure gauge, and a control knob. A hose connects this panel to a vertical oiler unit. A circular inset shows a close-up of the oiler's top, with an arrow pointing to a lever that can be flipped upward. Below this inset, the text reads 'FLIP UPWARD TO TURN ON OILER'. The main oiler unit is a cylindrical container with a nozzle at the bottom. An arrow points to the nozzle area with the text 'ADJUST FLOW HERE'. The oiler is mounted on a metal frame.</p>
TA 076297

Table 7-1. Aggregate Supply System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
6. EXCESSIVE WEAR ON CHAINS (Continued):
Step 2. Check for plugged oil lines.
Clean out or replace oil lines.
Step 3. Check for broken chain rail.
Refer problem to Direct Support Maintenance.

Section III MAINTENANCE PROCEDURES

7-6. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for the aggregate supply system of the mixer body. Paragraph 7-7 summarizes the maintenance tasks. Paragraphs 7-8 thru 7-18 contain detailed instructions for each task.

7-7. AGGREGATE SUPPLY SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.
TM 5-3895372-10.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

1'/. O.D. x 4 ft Long Pipe.
50 ft Rope (High Strength).
Mechanics Wire.
Towing Vehicle.
½ in. x 1 3/4 in. Bolts.
½ in. Nuts.
½ in. Flat Washers.
Fire Extinguisher.
Acetylene Torch.
Razor Knife.
Belt Lacer, NP5010 003 (50663).
Belt Lacer Pin, NP 5010 004 (50663).
Rubber Belt, NP 5028 027 (50663).
Nuts and Bolts, NP5043001 (50663).
Oil - (See Appendix C).
Sand Belt Wiper, NP2887002 (50663).
Stone Belt Wiper, NP2887000 (50663).
Conveyor Belt Assembly, NS3817007 (50663).
Conveyor Chain, NP3817008 (50663).

PERSONNEL REQUIRED

Three (MOS-62B20).

REFERENCES (TM)

TM 5-3895-372-20P.
TM 5-3895-372-10.
TM 9-2320-273-10.
LO 5-3895-372-12.

REFERENCES (TROUBLESHOOTING)

Table 7-1.

**EQUIPMENT
CONDITION**

PARAGRAPH

TM 9-2320-273-10.

TM 5-3895-372-10.

TM 5-3895372-10.

9-9A.

7-14A.

TM 5-3895372-10.

TM 5-3895372-10.

TM 5-3895372-10.

4-10A.

CONDITION DESCRIPTION

Engine Running. P.T.O. Engaged.
Screens Open Aggregate
Bins Empty.
Aggregate Bins Empty and
Front Seals Open.
Sand and Stone Gates Open.
Cement Bin Clutch Disengaged.
Admix Bin Clutch Disengaged.
Mix Auger Assembly Removed.
Conveyor Belt Removed.
Bin Gates Closed.
Gate Adjustment.
Access Panels Removed.
Universal Joint Removed.

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

GENERAL SAFETY INSTRUCTIONS

Parking Brake Set.
Be Extremely Careful to Avoid Moving Parts.
Exhaust System Components Can Cause Severe Burns.
Carbon Monoxide Poisoning Can Be Deadly.

7-7. AGGREGATE SUPPLY SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK REF	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Screens Maintenance: A. Removal. B. Installation.	7-8 7-8A 7-8B	7-1
2.	Rubber Guides Maintenance: A. Removal. B. Installation. C. Adjustment.	7-9 7-9A 7-9B 7-9C	7-1
3.	Metal Guides and Sand Deflector Maintenance: A. Removal. B. Installation. C. Adjustment.	7-10 7-10A 7-10B 7-10C	7-1
4.	Front Wipers Maintenance: A. Inspection. B. Removal. C. Installation. D. Adjustment.	7-11 7-11A 7-11B 7-11 C 7-1 D	7-1
5.	Rear Wiper Maintenance: A. Removal. B. Installation. C. Adjustment.	7-12 7-12A 7-12B 7-12C	7-1
6.	Conveyor Belt Adjustment: A. Adjustment of belt. B. Even tension check.	7-13 7-13A 7-13B	7-1

7-7. AGGREGATE SUPPLY SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
7.	Conveyor Belt Replacement: A. Removal. B. Installation. C. Operational check. D. Removal of broken belt.	7-14 7-14A 7-14B 7-14C 7-14D	7-1
8.	Conveyor Belt and Belt Lacer: Repair	7-15	7-1
9.	Chain Oiler: A. Removal. B. Installation. C. Operational check.	7-16 7-16A 7-16B 7-16C	7-1
10.	Sand or Stone Gates Maintenance: A. Removal. B. Inspection. C. Installation. D. Adjustment.	7-17 7-17A 7-17B 7-17C 7-17D	7-1
11.	Sand and Stone Controls Maintenance: A. Inspection. B. Removal. C. Repair. D. Installation.	7-18 7-18A 7-18B 7-18C 7-18D	7-1

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AGGREGATE SUPPLY SYSTEM.

7-8. SCREENS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (60)
 - b. Installation. (30)
- 90 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919

**EQUIPMENT
CONDITION
PARAGRAPH**
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None

SPECIAL TOOLS
None

MATERIALS/PARTS (P/N)
None.

PERSONNEL REQUIRED
One IMOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 53895-372-10.
TM 5-3895372-20P
TM 9-2320273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

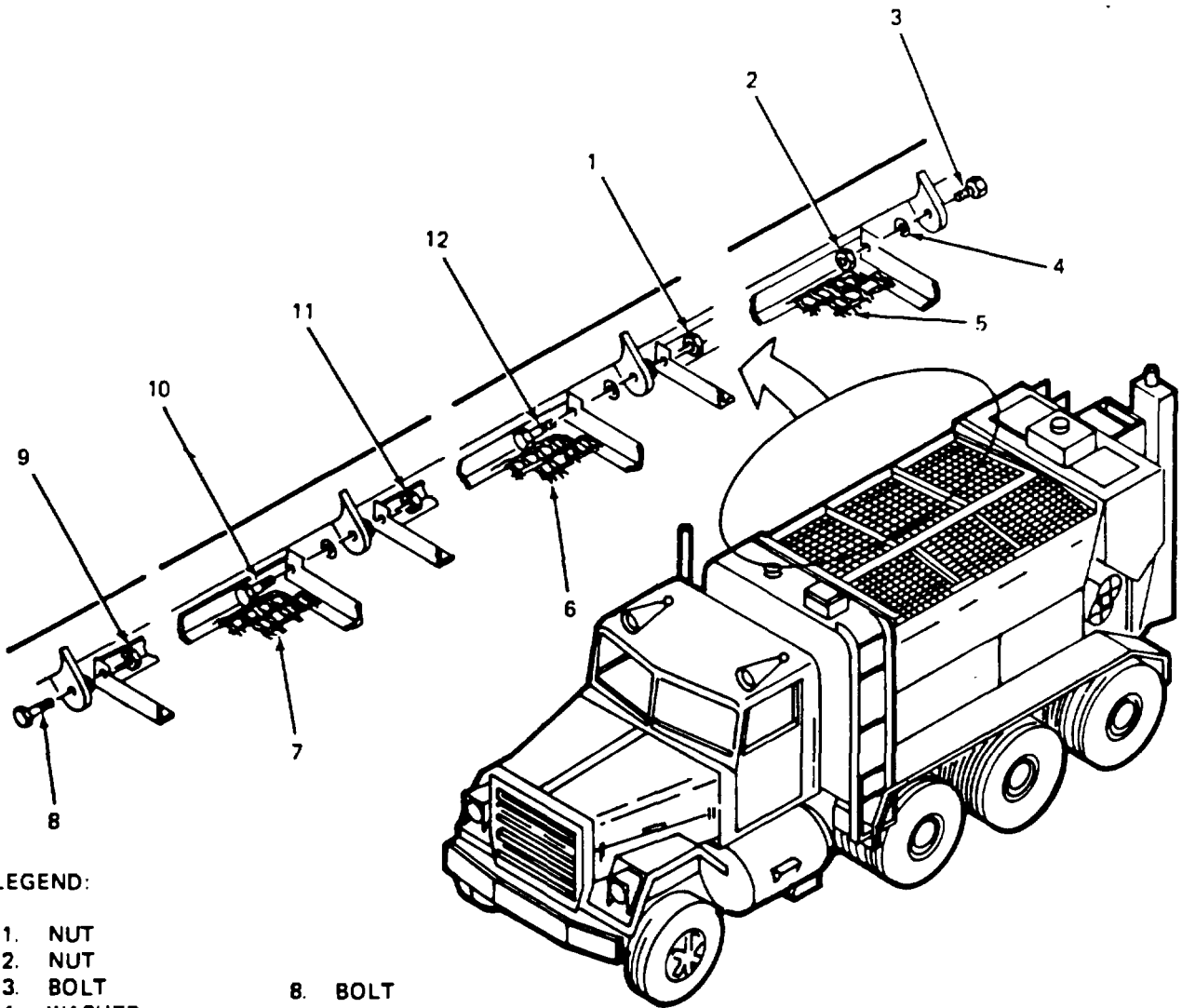
AGGREGATE SUPPLY SYSTEM.

7-8. SCREENS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE

The following procedure describes removal and installation of the stone bin screens. Sand bin screens are removed in the same manner. Washers (4) are used as spacers and will vary from vehicle to vehicle. When removed, tag so they can be installed in the same location.



LEGEND:

- | | |
|------------------|----------|
| 1. NUT | 8. BOLT |
| 2. NUT | 9. NUT |
| 3. BOLT | 10. BOLT |
| 4. WASHER | 11. NUT |
| 5. REAR SCREEN | 12. BOLT |
| 6. CENTER SCREEN | |
| 7. FRONT SCREEN | |

TA 076298

AGGREGATE SUPPLY SYSTEM.

7-8. SCREENS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Nut (2) and bolt (3).	Remove.	
2. Nut(1).	Remove.	
3. Rear screen (5).	Slide off bolt (12) and remove.	
4. Nut(11).	Remove.	
5. Bolt (10).	Remove.	
6. Center screen (6).	Slide off bolt (10) and remove.	
7. Nut (9).	Remove.	
8. Bolt (10).	Remove.	
9. Front screen (7).	Slide off bolt (8) and remove.	
10. Bolt (8).	Remove.	
B. INSTALLATION.		
11. Bolt (8).	Set in place.	
12. Front screen (7).	a. Slide onto bolt (8). b. Support rear side by inserting bolt (10).	
13. Nut (9).	Screw on and tighten.	
14. Center screen (6).	a. Slide onto bolt (10). b. Support ear side by inserting bolt (12).	
15. Nut(1 1).	Screw on and tighten.	

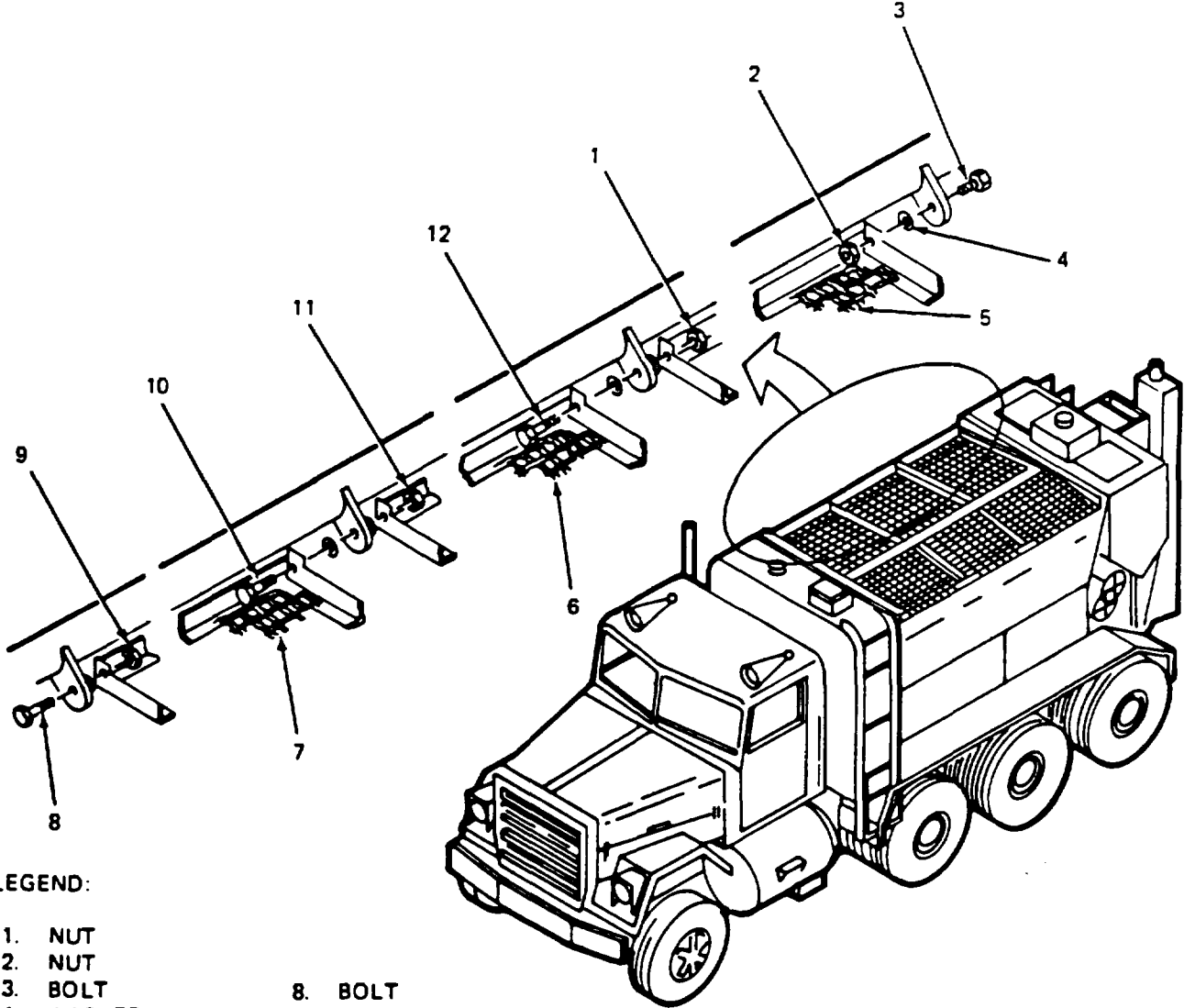
AGGREGATE SUPPLY SYSTEM.

7-8. SCREENS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION (Continued).

- 16. Rear screen (5).
 - a. Slide onto bolt (12).
 - b. Install and tighten bolt (2) and nut (3).
- 17. Nut (1).
 - Screw on and tighten.



LEGEND:

- 1. NUT
- 2. NUT
- 3. BOLT
- 4. WASHER
- 5. REAR SCREEN
- 6. CENTER SCREEN
- 7. FRONT SCREEN
- 8. BOLT
- 9. NUT
- 10. BOLT
- 11. NUT
- 12. BOLT

TA 076299

AGGREGATE SUPPLY SYSTEM.

7-9. RUBBER GUIDES MAINTENANCE (Continued).

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. (10)
 - c. Adjustment. (30)
- 50 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

None.

**EQUIPMENT
CONDITION
PARAGRAPH**

TM 5-3895372-10.

CONDITION DESCRIPTION

Screens Open.
Aggregate Bins Empty.

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

AGGREGATE SUPPLY SYSTEM.

7-9. RUBBER GUIDES MAINTENANCE (Continued).

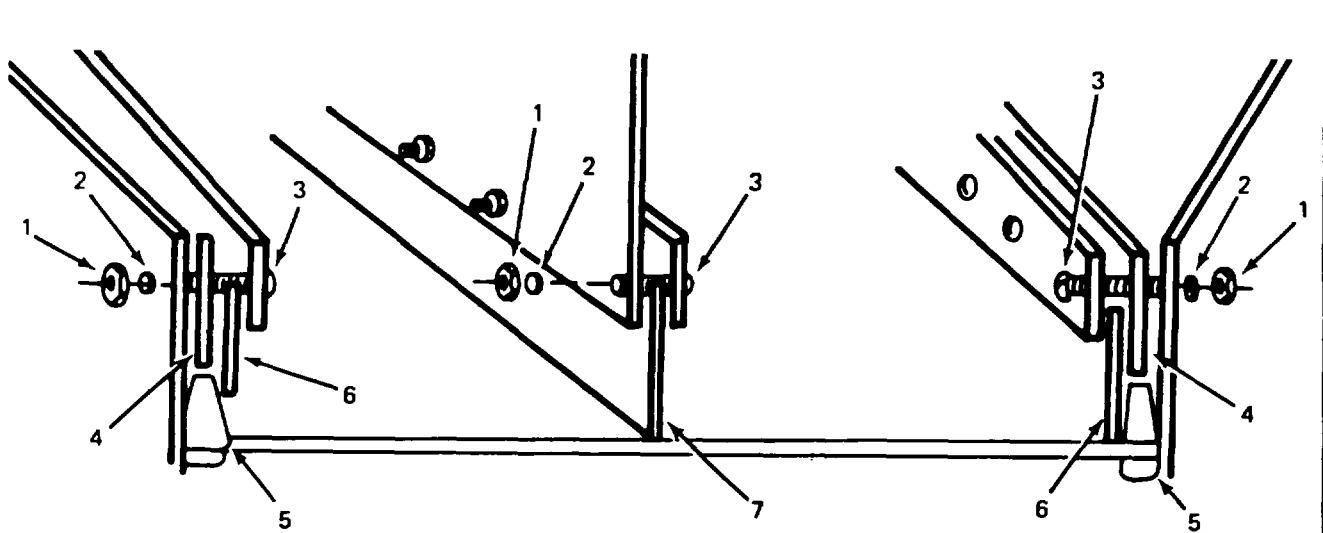
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE

Guide maintenance requires two mechanics, one on each side of the bin wall. For routine adjustment, go directly to procedure C (step 5). Use procedures A and B only if you need to replace a damaged guide.

A. REMOVAL.


- | | | |
|--|------------------------|--|
| 1. Thirteen nuts (1) and washers (2). | Remove. | |
| 2. Thirteen bolts (3), damaged guides (4) and (7) and three guide retainers (6). | Remove from bolts (3). | Thirteen bolts are welded to retainer. |



- LEGEND:**
- | | |
|----------------|-----------------------|
| 1. NUT (13) | 5. VANNER EDGE |
| 2. WASHER (13) | 6. GUIDE RETAINER (3) |
| 3. BOLT (13) | 7. GUIDE |
| 4. GUIDE (5) | |

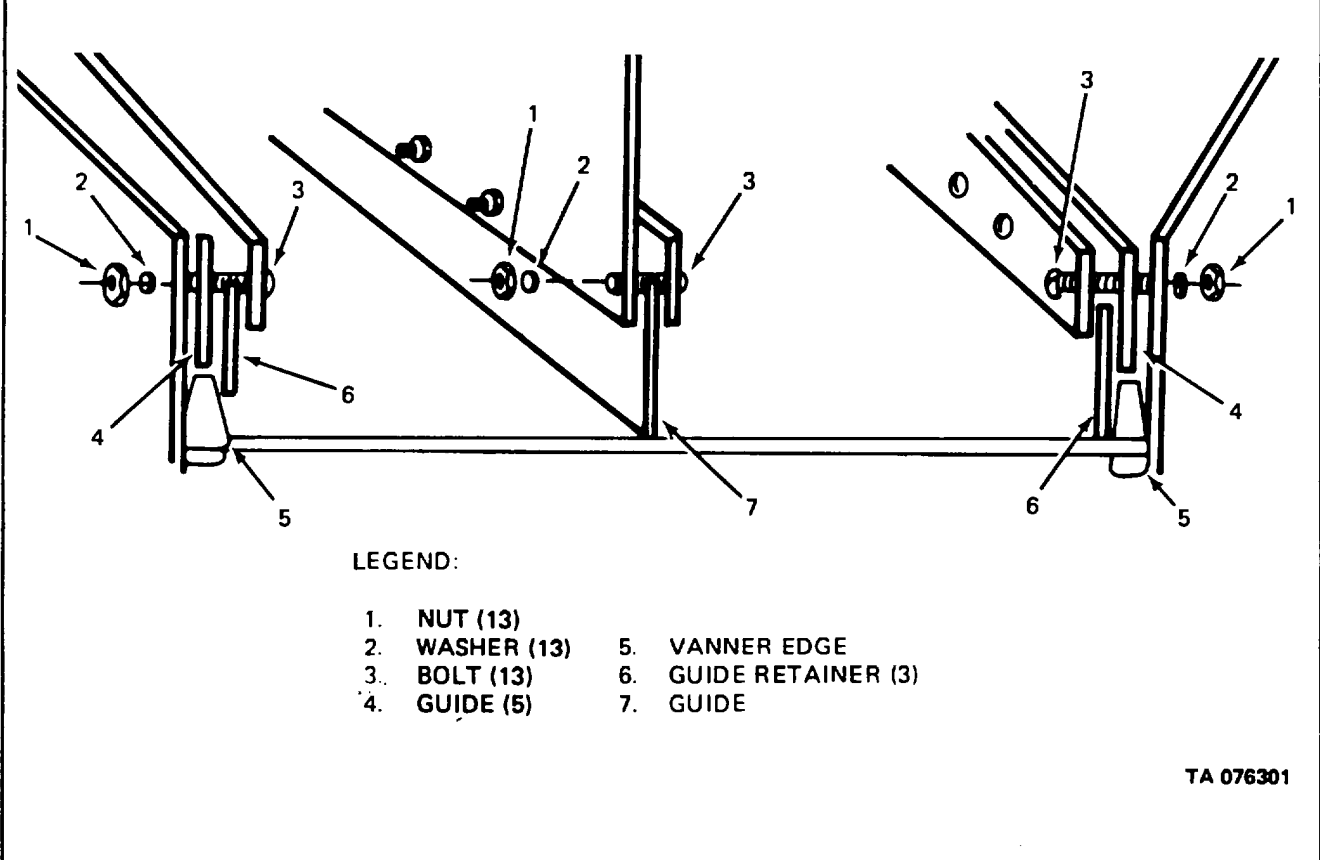
TA 076300

AGGREGATE SUPPLY SYSTEM.

7-9. RUBBER GUIDES MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
3. New guides (4 and 7) three guide retainers (6), and thirteen bolts (3).	Set in place. Push screws on retainer through holes in bin wall.	
4. Thirteen washers (2) and nuts (1).	Install but do not tighten.	
 <p>CAUTION</p>		
<p>Adjust guides to touch belt lightly. If they are too high sand and stone will fall out. If they are pressed down too hard, guides and belt will be damaged.</p>		
C. ADJUSTMENT.		
5. Sand bin wall.	Loosen thirteen nuts (1).	If you replaced a guide, nuts will already be loose.
6. Five sand bin guides (4) and three guide retainers (6).	a. Starting at one end, tap guides down. <ol style="list-style-type: none"> 1. Outer guide (4) rests on vanner edge (5) of belt. 2. Guide retainer (6) rests on flat surface of belt. b. Tighten nuts (1) as you work.	
7. Center divider.	Loosen thirteen nuts (1).	
8. Center guide (7).	a. Starting at one end, tap guide down. Guide should rest on belt surface. b. Tighten nuts (1) as you work.	
9. Stone bin wall.	Loosen thirteen nuts (1).	
10. Stone bin edge guide (4) and guide retainer (6).	a. Starting at one end, tap guides down. <ol style="list-style-type: none"> 1. Adjust outer guide (4) to vanner edge (5). 2. Adjust guide retainer (6) to belt surface. b. Tighten nuts (1) as you go.	

AGGREGATE SUPPLY SYSTEM.

7-9. RUBBER GUIDES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>The diagram illustrates the assembly of rubber guides on a Vanner edge. It shows two side views of the assembly. In the left view, a guide (7) is being positioned against a Vanner edge (5). A guide retainer (6) is used to hold the guide in place. The assembly is secured with bolts (3), washers (2), and nuts (1). The right view shows the completed assembly. The legend identifies the components: 1. NUT (13), 2. WASHER (13), 3. BOLT (13), 4. GUIDE (5), 5. VANNER EDGE, 6. GUIDE RETAINER (3), and 7. GUIDE.</p> <p>LEGEND:</p> <ul style="list-style-type: none">1. NUT (13)2. WASHER (13)3. BOLT (13)4. GUIDE (5)5. VANNER EDGE6. GUIDE RETAINER (3)7. GUIDE		

TA 076301

AGGREGATE SUPPLY SYSTEM.

7-10. METAL GUIDES AND SAND DEFLECTOR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
 - c. Adjustment. (10)
- 20 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
None.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

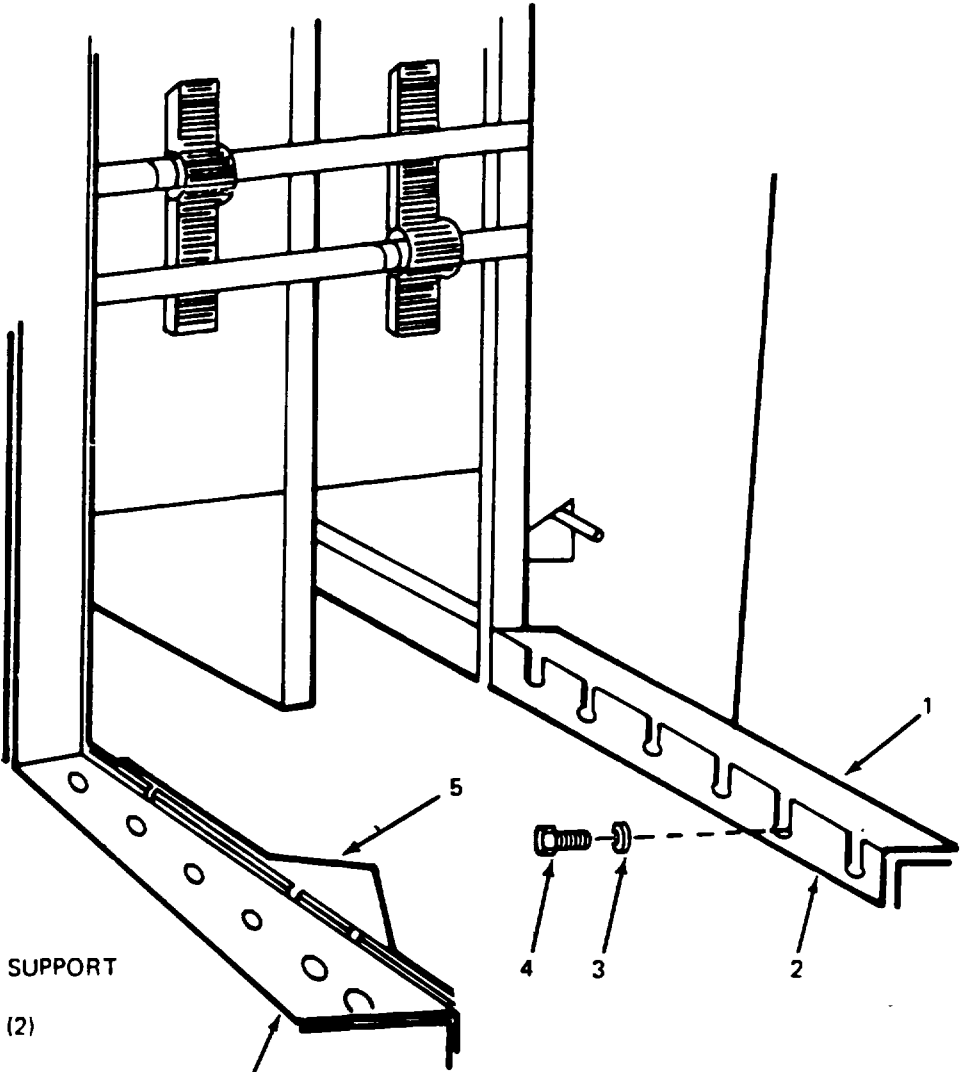
AGGREGATE SUPPLY SYSTEM.

7-10. METAL GUIDES AND SAND DEFLECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE

For routine adjustment, go directly to procedure C (step 4). Use procedures A and B only if you need to replace a damaged guide.




LEGEND:

- 1. RIGHT HAND SUPPORT GUIDE
- 2. REAR GUIDE (2)
- 3. WASHER (16)
- 4. CAPSCREW (16)
- 5. DEFLECTOR
- 6. LEFT HAND SUPPORT GUIDE

TA 076302

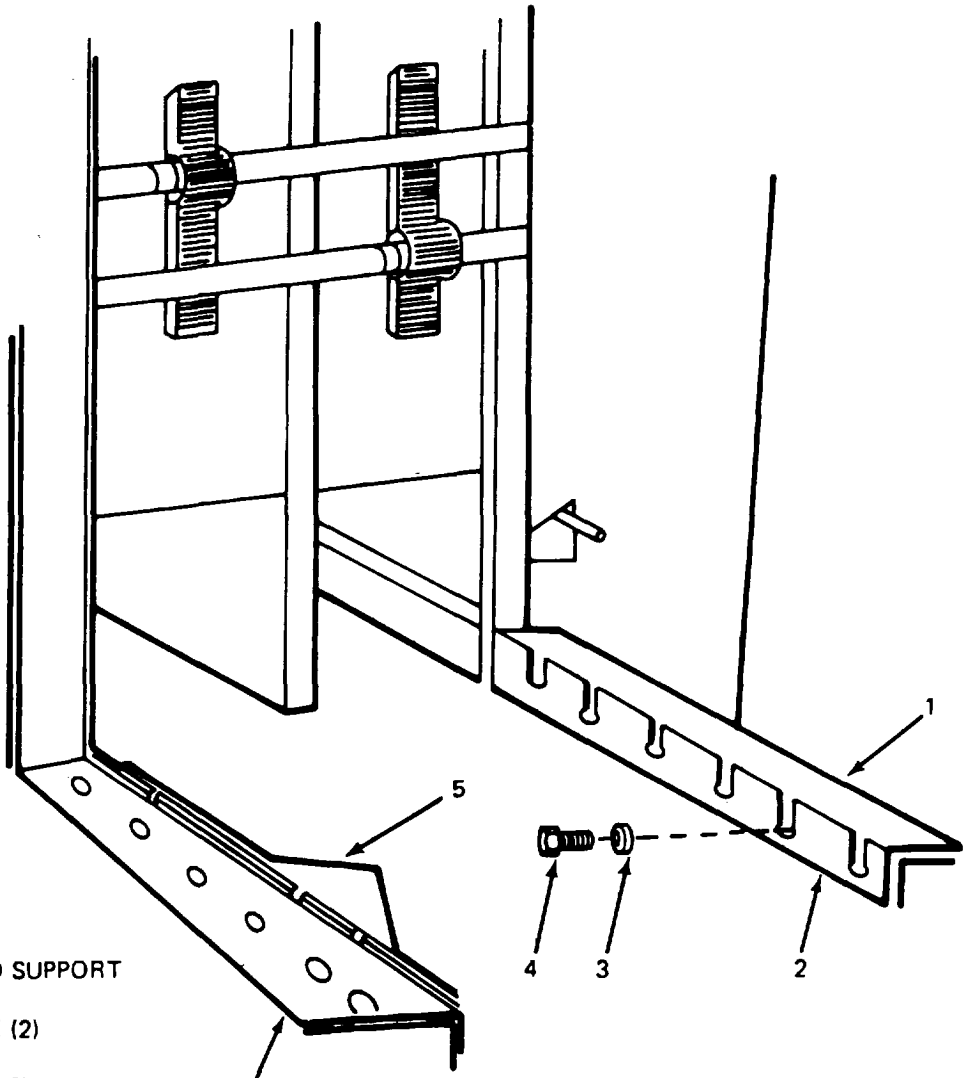
AGGREGATE SUPPLY SYSTEM.

7-10. METAL GUIDES AND SAND DEFLECTOR MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Sixteen cap screws (4) and washers (3).	Unscrew and remove two rear guides (2) and deflector (5).	
B. INSTALLATION.		
2. Two rear guides (2) and deflector (5).	Align slots with holes in RH support guide (1) and LH sup-	Slots should face upward.
3. Sixteen cap screws (4) and washers (3).	Screw in and tighten.	
C. ADJUSTMENT.		
		
<p>Adjust guides carefully. If they are too high, sand and stones will spill. If they are too low, they will damage the belt.</p>		
4. Two rear guides (2) and deflector (5).	<ol style="list-style-type: none"> a. Place 1/16 in. (1.6 mm) flat washers between guides and belt. Also place them between deflector and belt. b. Tap guides and deflector down to rest on flatwashers. Work from one end to the other. Check cap screws (4) for tightness as you go. c. Remove flat washers. 	

AGGREGATE SUPPLY SYSTEM.

7-10. METAL AND SAND DEFLECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. RIGHT HAND SUPPORT GUIDE
- 2. REAR GUIDE (2)
- 3. WASHER (16)
- 4. CAPSCREW (16)
- 5. DEFLECTOR
- 6. LEFT HAND SUPPORT GUIDE

TA 076303

AGGREGATE SUPPLY SYSTEM.

7-11. FRONT WIPERS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Inspection (5)
 - b. Removal. (5)
 - c. Installation. (5)
 - d. Adjustment (5)
- 20 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

TM 5-3895-372-10.

Aggregate Bins Empty,
Front Screens Open.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Strainer Assembly Gasket, NP3703004 (50663).

PERSONNEL REQUIRED
Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
Table 7-1.

AGGREGATE SUPPLY SYSTEM.

7-11. FRONT WIPERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. INSPECTION

1. Stone belt wiper (3) and sand belt wiper (6).	Check for: a. Cracks. b. Tears. c. Improper adjustment.	Replace. Replace. Adjust.
--	--	---------------------------------

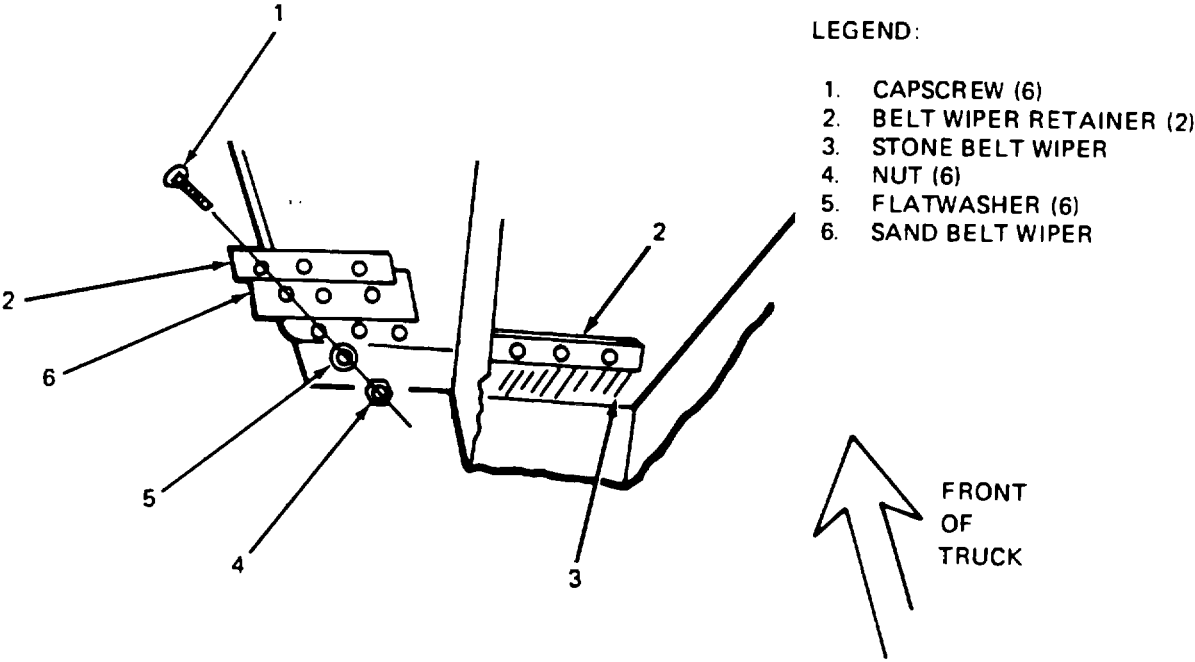
NOTE

If wiper seals are to be replaced, complete steps B, C and D. For horizontal adjustment only, go to step D.

B. REMOVAL.

NOTE

Front seal replacement requires two mechanics; one inside bin and one outside.



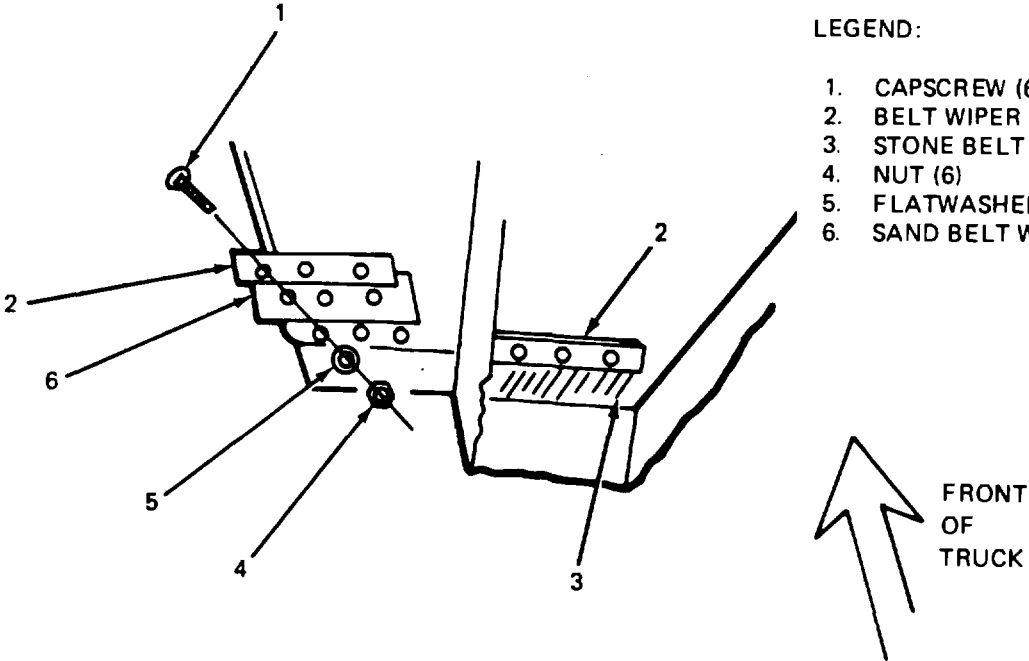
TA 076304

AGGREGATE SUPPLY SYSTEM.

7-11. FRONT WIPERS MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. REMOVAL (Continued).		
3. Belt wiper retainers (2).	Remove.	
4. Stone belt wiper (3) and sand belt wiper (6).	Remove.	
C. INSTALLATION.		
5. New stone belt wiper (3) and sand belt wiper (6).	Aline bolt holes in retainers (2), stone belt wiper (3), sand belt wiper (6), and bin wall.	
6. Six nuts (4), flat washers (5) and capscrews (1).	Install.	Do not tighten.
D. ADJUSTMENT.		
7. Six nuts (4).	Loosen.	If seal was replaced, nuts will already be loose.
8. Stone belt wiper (3) and sand belt wiper (6). divider and sand or stone bin wall. Wiper should ride against conveyor belt.	Adjust horizontally between sand and stone bin	
9. Six nuts (4). Tighten securely.		

AGGREGATE SUPPLY SYSTEM.

7-11. FRONT WIPERS MAINTENANCE (Continued).



- LEGEND:
- 1. CAPSCREW (6)
 - 2. BELT WIPER RETAINER (2)
 - 3. STONE BELT WIPER
 - 4. NUT (6)
 - 5. FLATWASHER (6)
 - 6. SAND BELT WIPER

TA 076305

AGGREGATE SUPPLY SYSTEM.

7-11. FRONT WIPERS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
 - c. Adjustment (5)
- 15 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
None

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
Table 7-1.

AGGREGATE SUPPLY SYSTEM.

7-12. REAR WIPER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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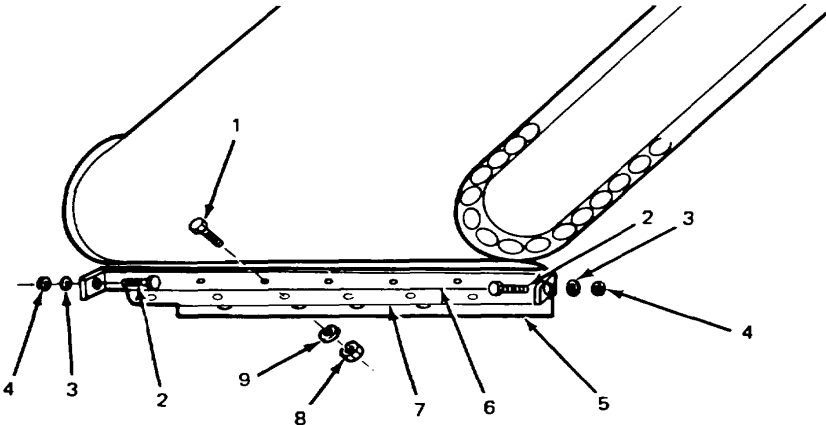
NOTE

For routine adjustment, go directly to procedure C (step 7). Use procedures A and B only if you need to replace a damaged belt wiper.

- | | | |
|--|---|------------------------|
| 1. Two nuts (4), lockwashers (3), and capscrews (2). | Remove. Remove belt wiper assembly from unit. | Capscrew on each side. |
| 2. Six nuts (8), and washers and capscrews (1). | Remove. Separate belt wiper (6) and belt wiper rubber (7) from belt wiper retainer (5). | |

B. INSTALLATION.

- | | |
|--|---|
| 3. Belt wiper rubber (7) and belt wiper bar (6). | Install over screws on belt wiper retainer (5). |
|--|---|



TA 076307

LEGEND:

- | | |
|------------------------|----------------------|
| 1. CAPSCREW (6) | 6. BELT WIPER BAR |
| 2. CAPSCREW (2) | 7. BELT WIPER RUBBER |
| 3. LOCKWASHER (2) | 8. NUT (6) |
| 4. NUT (2) | 9. LOCKWASHER (6) |
| 5. BELT WIPER RETAINER | |

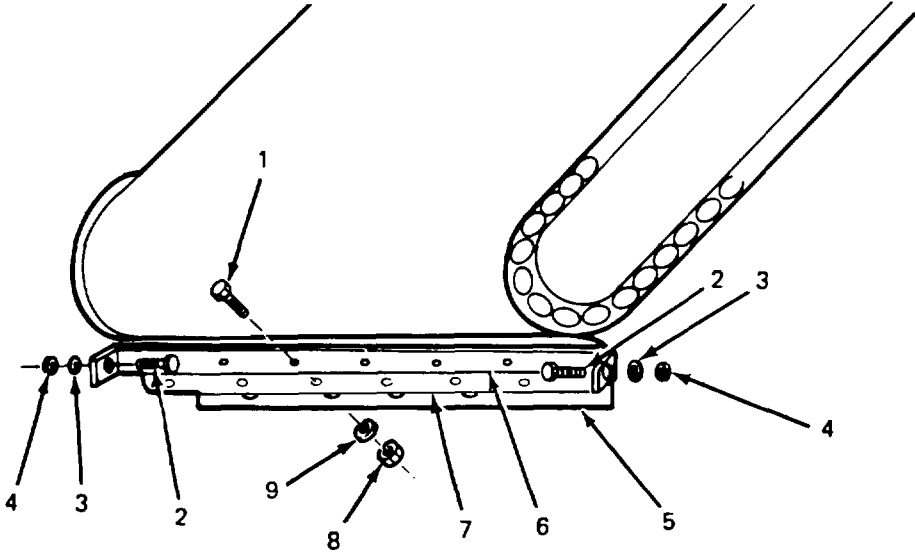
AGGREGATE SUPPLY SYSTEM.

7-12. REAR WIPER MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
5. Wiper assembly.	Set in place.	
6. Two nuts (4), lock-washers (3) and capscrews (2).	Install and tighten.	
C. ADJUSTMENT.		
7. Six capscrews (1).	Loosen.	If you replaced belt wiper rubber (7), capscrews (1) will already be loose.
8. Belt wiper rubber (7).	Drive firmly against belt..	If concrete sticks to belt bottom when equipment is operated, wiper is too loose.
9. Six capscrews (1).	Tighten.	

AGGREGATE SUPPLY SYSTEM.

7-12. REAR WIPER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



TA 076307

LEGEND:

- 1. CAPSCREW (6)
- 2. CAPSCREW (2)
- 3. LOCKWASHER (2)
- 4. NUT (2)
- 5. BELT WIPER RETAINER
- 6. BELT WIPER BAR
- 7. BELT WIPER RUBBER
- 8. NUT (6)
- 9. LOCKWASHER (6)

AGGREGATE SUPPLY SYSTEM.

7-13. CONVEYER BELT ADJUSTMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Adjustment of Belt. (5)
 - b. Even Tension Check. (5)
- 10 Minutes Total.

<p><u>INITIAL SETUP</u></p> <p><u>APPLICABLE CONFIGURATIONS</u> M919.</p> <p><u>TEST EQUIPMENT</u> None.</p> <p><u>SPECIAL TOOLS</u> None.</p> <p><u>MATERIALS/PARTS (P/N)</u> None.</p>	<p><u>EQUIPMENT CONDITION PARAGRAPH</u> None.</p>	<p><u>CONDITION DESCRIPTION</u> None.</p>
<p><u>PERSONNEL REQUIRED</u> One (MOS-62B20).</p>	<p><u>SPECIAL ENVIRONMENTAL CONDITIONS</u> Vehicle Parked on Level Ground.</p>	
<p><u>REFERENCES (TM)</u> TM 5-3895372-10. TM 5-3895372-20P. TM 9-2320-273-10.</p>	<p><u>GENERAL SAFETY INSTRUCTIONS</u> Engine Off. Transmission in Neutral. Parking Brake Set.</p>	
<p><u>TROUBLESHOOTING REEERENCES</u> Table 7-1.</p>		

AGGREGATE SUPPLY SYSTEM.

7-13. CONVEYOR BELT ADJUSTMENT (Continued).

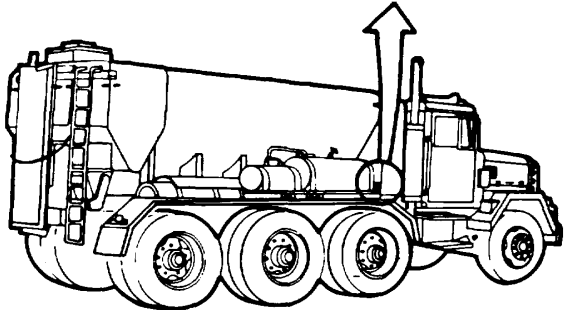
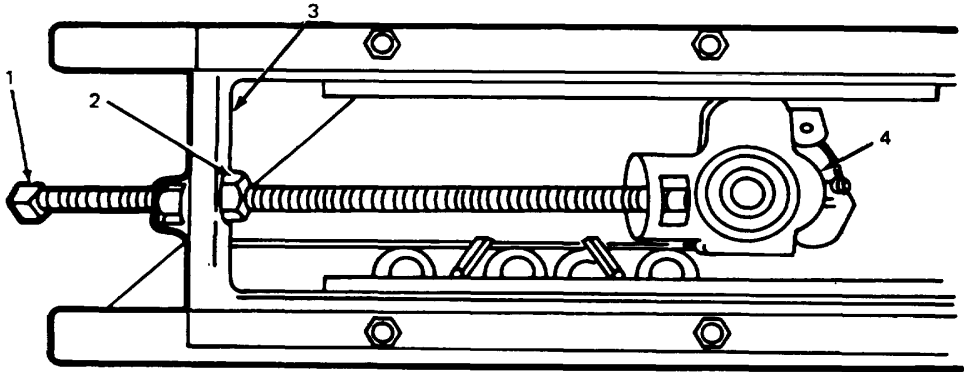
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. ADJUSTMENT OF BELT.

- | | | |
|----------------------------|-------------------------------|----------------------------|
| 1. Two nuts (2). | Loosen. | One on each side of mixer. |
| 2. Two adjusting rods (1). | Tighten to 20 lb-ft (27 N-m). | |

B. EVEN TENSION CHECK

- | | | |
|---|---|------------------------------------|
| 3. Two brackets (3) and roller bearing cages (4). | Use ruler to measure distances between bracket and roller bearing cage on each side. If there is more than 1/4 in. (0.6 cm) difference between distances, loosen bolts. Readjust until distances are within 1/4 in. (0.6 cm) of each other. | |
| 4. Two nuts (2). | Tighten securely. Hold adjusting rod (1) to prevent turning while tightening. | One nut (2) on each side of mixer. |



- LEGEND:
- 1. ADJUSTING ROD (2)
 - 2. NUT (2)
 - 3. BRACKET (2)
 - 4. ROLLER BEARING CAGE (2)

TA 076308

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (45)
 - b. Installation. (45)
 - c. Operational Check. (5)
 - d. Removal of Broken Belt. (45)
- 140 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

9-9A.
TM 5-3895-372-10.
TM 5-3895-372-10.
TM 5-3895-372-10.
7-13A.

Mix Auger Assembly Removed
Sand and Stone Gates Open.
Cement Bin Clutch Disengaged.
Admix Bin Clutch Disengaged.
Belt Adjustment.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
1 ¼ O.D. x 4 ft. Long Pipe.
50 ft. Rope (High Strength).
Mechanics Wire.
Towing Vehicle.
½ in. Nuts.
½ in. Flat Washers.

Fire Extinguisher.
Acetylene Torch.
Razor Knife.
Conveyer Belt Assembly, NS3817007 (50663).

PERSONNEL REQUIRED
Three (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Be Extremely Careful to Avoid Moving Parts.
Exhaust System Components Can Cause Severe Burns.
Carbon Monoxide Poisoning Can Be Deadly.

TROUBLESHOOTING REEERENCES
Table 7-1.

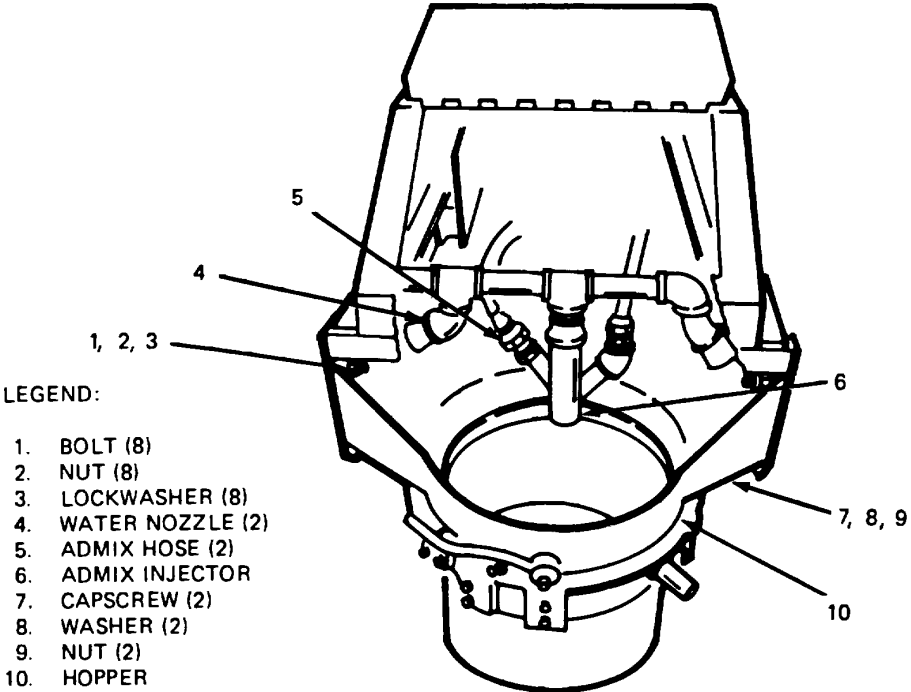
AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|---|---|--|
| 1. Eight bolts (1), nuts (2) and lockwashers (3). | Remove. | |
| 2. Two capscrews (7), washers (8) and nuts (9). | Remove. | |
| 3. Hopper (10). | Remove. | Remove front conveyor door and safety guard door simultaneously. |
| 4. Two admix hoses (5). | Remove. Tag for identification. | |
| 5. Admix injector (6). | Remove. | |
| 6. Two water nozzles (4). | Remove. | |
| 7. Mixer body. | Start up (see TM 9-2320-273-10 and TM 5-3895-372-10). | Run engine at idle speed. |



TA 076309

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

NOTE

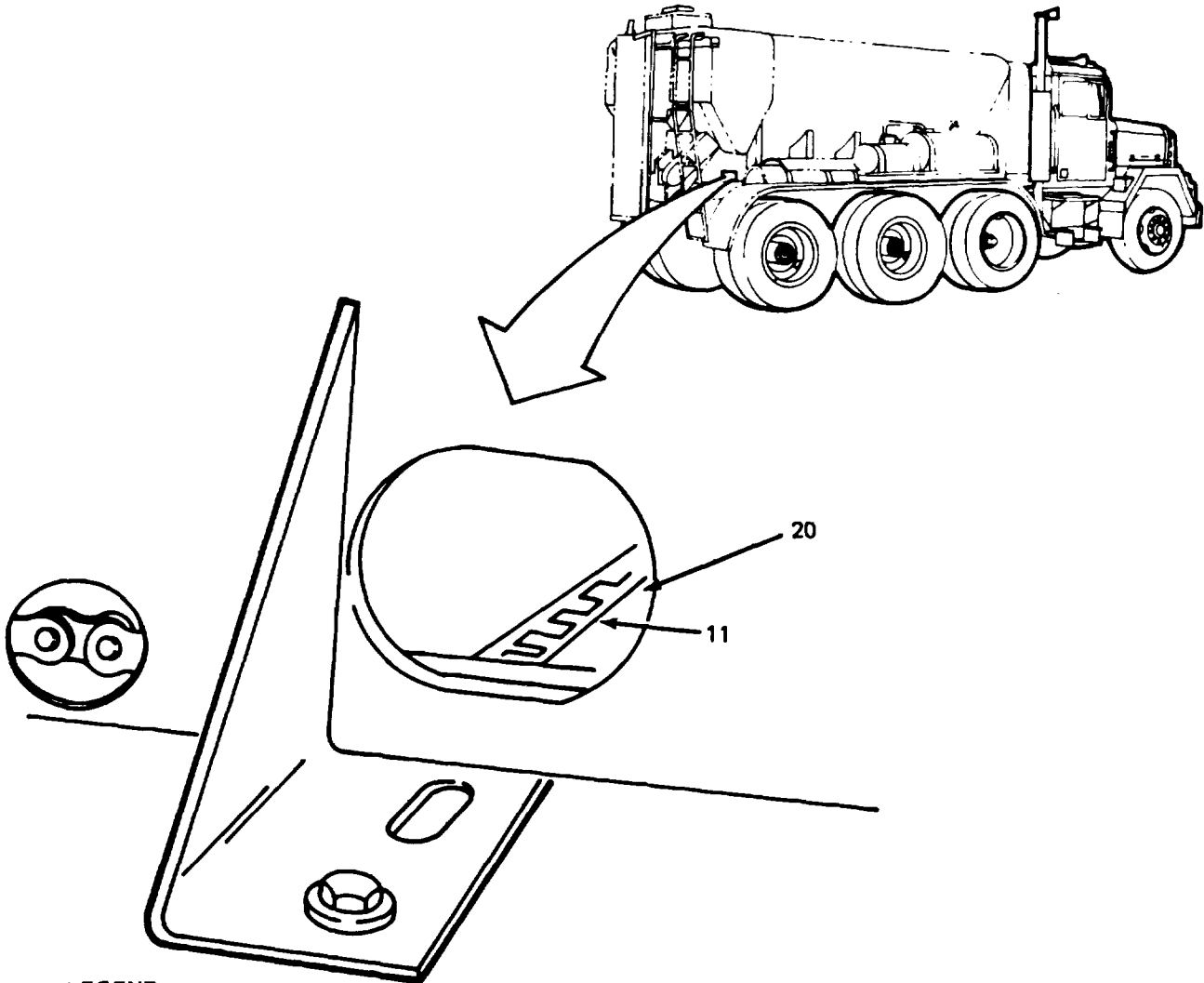
Before performing step 8, remove oval inspection window cover.

- | | | |
|---------------------|--|--|
| 8. Belt lacer (11). | Run engine at idle speed.
Engage the main clutch and roll the conveyor belt (20) around until the belt lacer (11) is visible in the oval inspection window at the rear of the conveyor frame. | |
| 9. Mixer body. | Disengage clutch and turn off engine (see TM 9-2320-273-10 and TM 5-3895-372-10). | |

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 11. BELT LACER
- 20. CONVEYOR BELT

TA 076310

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

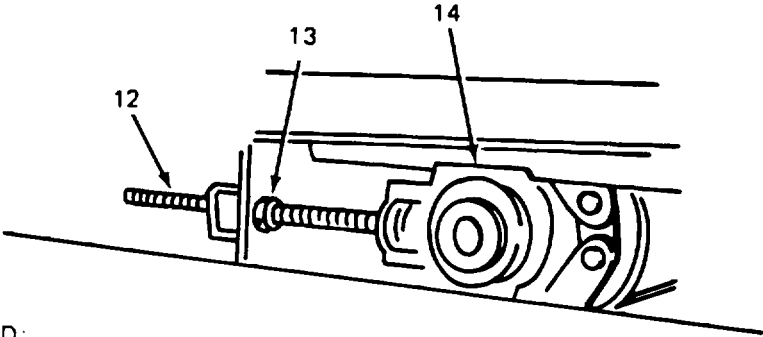
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- | | | |
|---------------------------------------|---|--|
| 10. Two locknuts (13). | Loosen approximately 1-1/2 in. (38 mm). | Both sides of vehicle. |
| 11. Two belt tensioning devices (14). | Loosen bolts (12) until locknuts (13) meet flanges. | Lubricate bolts and bearing slides for easy operation. |

CAUTION

Do not turn bolts (12) farther than 1-1/2 in. (38 mm), or the sprockets will catch in the cross angles.



LEGEND:

- 12. BOLT (2)
- 13. LOCKNUT (2)
- 14. BELT TENSIONING DEVICE (2)

TA 076311

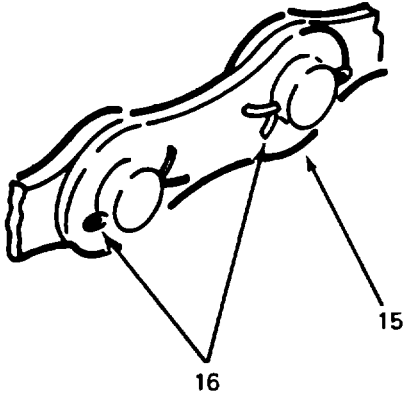
AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

- | | | |
|--|---|------------------------------------|
| 12. Four cotter pins (16).
the two master links (15). | Remove from back plates of
Both sides of conveyor. | Underside rear of conveyor. |
| 13. Two master links (15). | Remove. | Through oval openings in
frame. |



- LEGEND:
- 15. MASTER LINK (2)
 - 16. COTTER PIN (4)

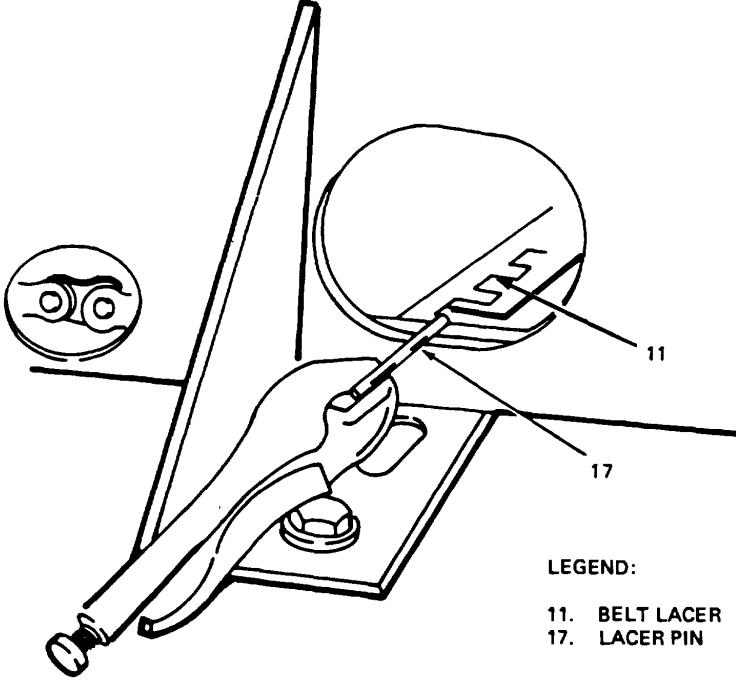
TA 076312

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).		
LOCATION/ITEM	ACTION	REMARKS

A. REMOVAL (Continued).

14. Lacer pin (17).	Remove from belt lacer (11).	Use vise grips to work it loose.
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TA 076313

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).		
LOCATION/ITEM	ACTION	REMARKS

A. REMOVAL (Continued).

15. Two winch line pulleys (21).	a. Remove by pulling pins. b. Mount to lower rear frame holes with two bolts (23), nuts (24) and twelve flat washers (22).	Use four flatwashers (22) on each side for spacers between the pulley and frame.
----------------------------------	---	--

16. Conveyor belt (20).

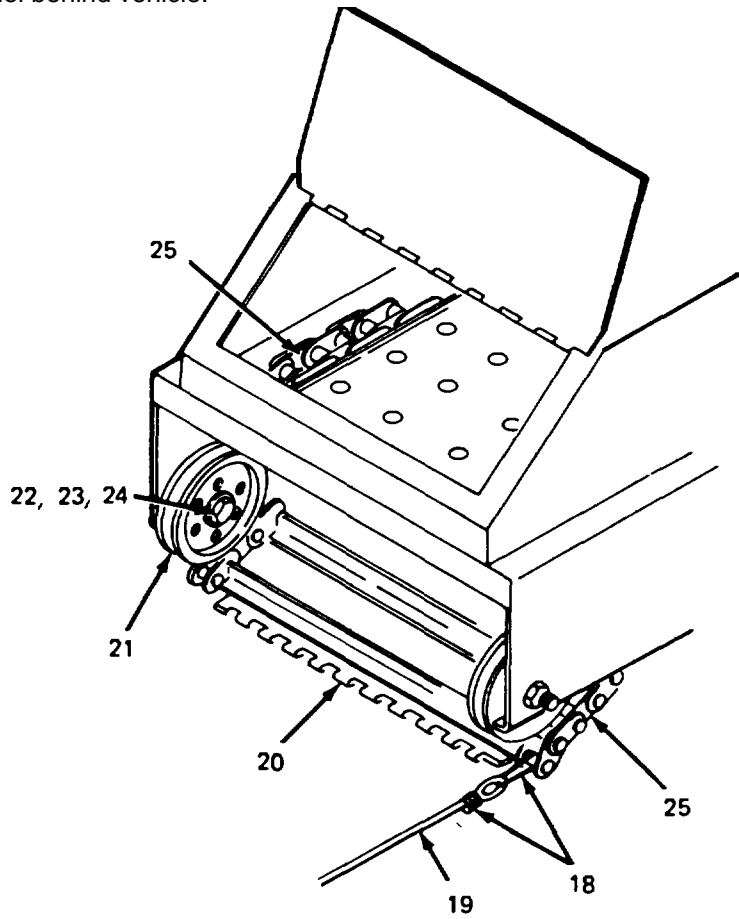
Let the end down over the winch line pulleys (21).

17. Two ropes (19) and four wires (18).

Secure to end chain link at either side of conveyor belt (20) and lay ropes (19) out parallel behind vehicle.

LEGEND:

- 18. WIRE (4)
- 19. ROPE (2)
- 20. CONVEYOR BELT
- 21. WINCH LINE PULLEY (2)
- 22. FLATWASHER (12)
- 23. BOLT (2)
- 24. NUT (2)
- 25. CHAIN (2)



TA 07631

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

18. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10).	Run engine at idle speed.
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CAUTION

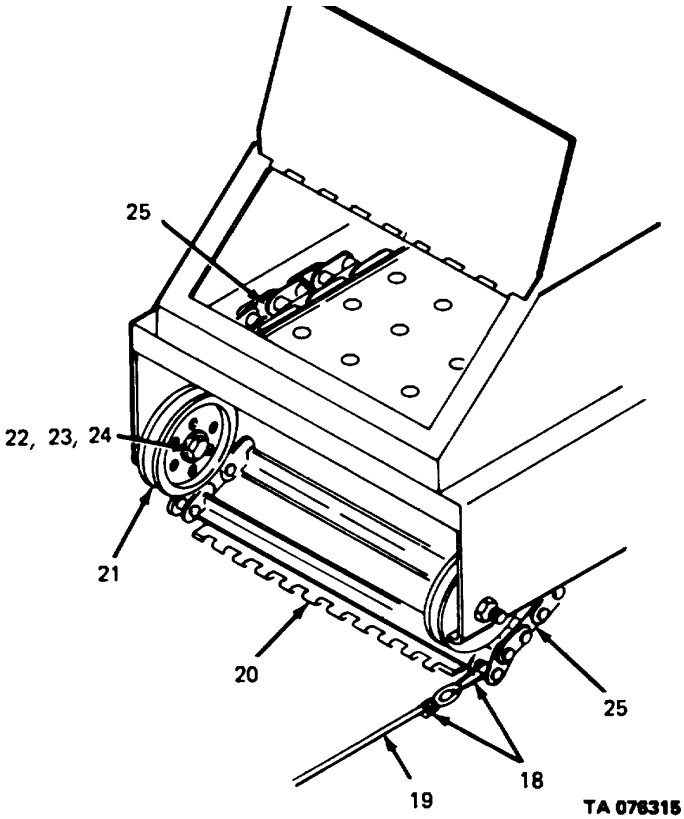
Run the engine at idle speed and run the belt out slowly. Shut off immediately if the conveyor belt (20) jams.

19. Main clutch.	Engage and run the conveyor belt (20) out.	Have an assistant hold the free end as it's run out.
------------------	--	--

20. Conveyor belt (20).	When completely removed, disengage main clutch and shut down mixer body (see TM 9-	
-------------------------	--	--

LEGEND:

- 18. WIRE (4)
- 19. ROPE (2)
- 20. CONVEYOR BELT
- 21. WINCH LINE PULLEY (2)
- 22. FLATWASHER (12)
- 23. BOLT (2)
- 24. NUT (2)
- 25. CHAIN (2)



AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.

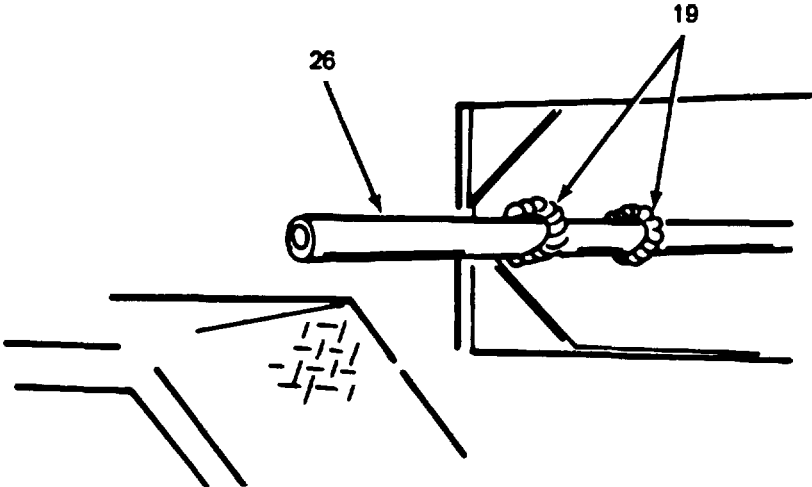
NOTE

If new conveyor belt (20) is being installed, transfer wires (18) and ropes (19) to new conveyor belt and chains (25).

21.	Pipe (26).	Slacken ropes (19) and insert pipe (26) through frame and ropes.	Located under water tank.
-----	------------	--	---------------------------

CAUTION

Be sure rope is in upper chain rail for ease of installation.



- LEGEND:**
- 19. ROPE (2)
 - 26. PIPE

TA 075316

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
22. Conveyor belt (20).	Manually feed end of belt up and over winch line pulleys (21) to drive sprockets and mate link to sprocket.	Two mechanics required.
23. Towing vehicle (27).	Straddle conveyor belt (20) and attach ropes.	
24. Shear bolt (28) and nut (29).	Remove from drive gear box coupling	
25. Towing vehicle (27).	Slowly pull the ropes (19) while inserting the conveyor belt (20) into the mixer body.	Two assistants to help feed conveyor belt (20) and keep ropes (19) from binding on sides of chain (25). One assistant required to monitor belt travel around front sprockets.
CAUTION		
Proceed with special care when chains (25) are going around front sprockets to prevent binding and damage to the chains or sprockets.		
26. Conveyor belt (20).	Allow to travel approximately eight inches past front sprockets.	
27. Pipe (26).	Slacken the ropes (19) and remove pipe (26).	
28. Conveyor belt (20).	Manually wrap belt around front sprockets and mate link to sprocket.	
29. Towing vehicle (27).	Continue pulling ropes (19). Stop the conveyor belt (20) when the belt lacer reaches the rear oval inspection window.	
30. Two ropes (19) and four wires (18).	Remove from chain links.	
31. Two bolts (23), nuts (24) and twelve washers (22).	Remove.	

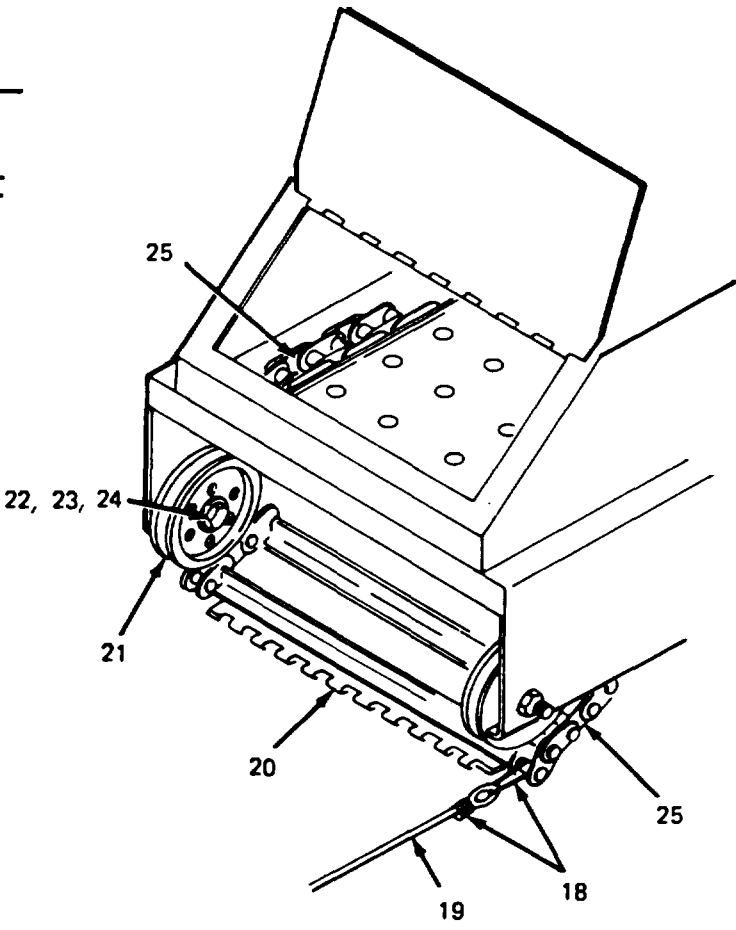
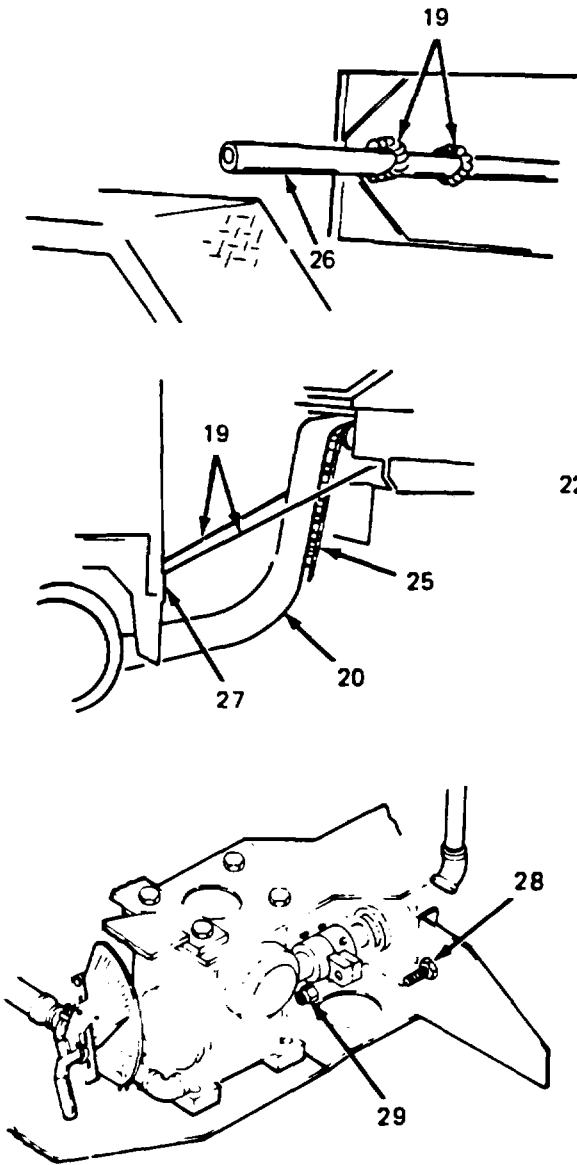
AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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B. INSTALLATION (Continued).

32. Two winch line pulleys (21).
 Remove. Install back in proper location securing with clevis pins and cotter pins.



LEGEND:

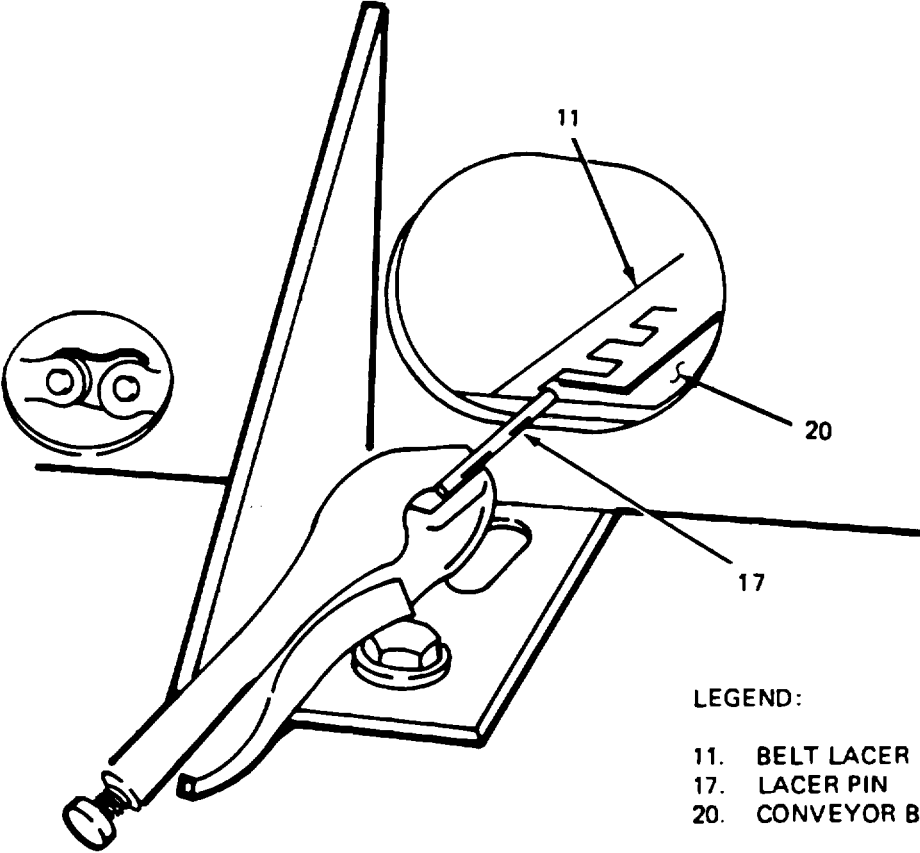
- | | |
|---------------------------|--------------------|
| 18. WIRE (4) | 24. NUT (2) |
| 19. ROPE (2) | 25. CHAIN (2) |
| 20. CONVEYOR BELT | 26. PIPE |
| 21. WINCH LINE PULLEY (2) | 27. TOWING VEHICLE |
| 22. FLATWASHER (12) | 28. SHEAR BOLT |
| 23. BOLT (2) | 29. NUT |

TA 076317

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
33. Conveyor belt (20).	Push conveyor belt (20) in at bottom of front sprockets and hold in place. Wrap around rear sprockets and mate belt lacer (11).	Requires three personnel at front of truck.
34. Lacer pin (17).	Install.	



LEGEND:

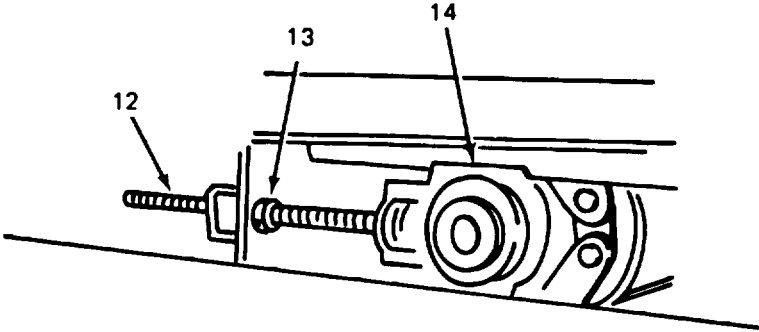
- 11. BELT LACER
- 17. LACER PIN
- 20. CONVEYOR BELT

TA 076318

AGGREGATE SUPPLY SYSTEM.

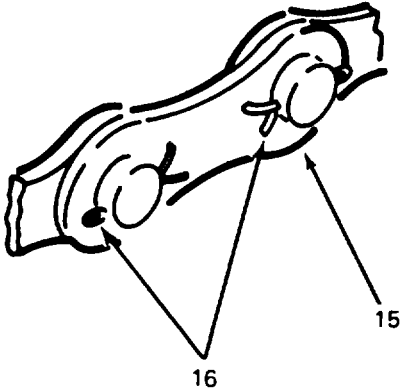
7-14. CONVEYOR BELT REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
35. Two master links (15).	Install.	Through oval openings in frame. Side plates installed from under side of conveyor.
36. Four cotter pins (16)	Install in master link.	Under side rear of conveyor.
CAUTION		
Correct tension is highly important. Tighten both bolts equally.		
37. Two belt tensioning devices (14).	Refer to paragraph 7-13 for adjustment.	
38. Two locknuts (13).	Tighten securely.	



LEGEND:

- 12. BOLT (2)
- 13. LOCKNUT (2)
- 14. BELT TENSIONING DEVICE (2)
- 15. MASTER LINK (2)
- 16. COTTER PIN (4)

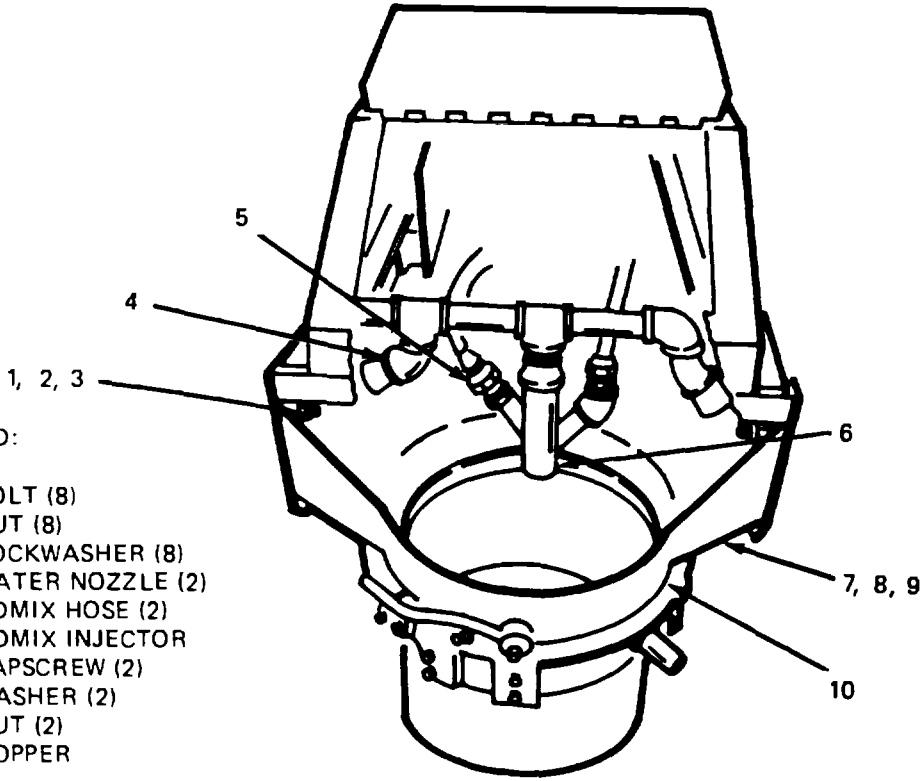


TA 076319

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
39. Two water nozzles (4).	Install.	
40. Admix injector (6).	Install.	
41. Two admix hoses (5).	Install.	
42. Hopper (10).	Set in place.	
43. Eight bolts (1), nuts (2), and lockwashers (3).	Install and tighten securely.	Prior to installing bolts, set front conveyor door and safety guard door in place.
44. Two capscrews (7), washers (8), and nuts (9).	Install and tighten securely.	



LEGEND:

- 1. BOLT (8)
- 2. NUT (8)
- 3. LOCKWASHER (8)
- 4. WATER NOZZLE (2)
- 5. ADMIX HOSE (2)
- 6. ADMIX INJECTOR
- 7. CAPSCREW (2)
- 8. WASHER (2)
- 9. NUT (2)
- 10. HOPPER

TA 076320

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
45. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10).	Let engine idle.
46. Main clutch.	Activate until drive gear box couplings line up.	
47. Shear bolt (28) and nut (29).	Install and tighten securely.	
C. OPERATIONAL CHECK.		
48. Conveyor belt (20).	Test run the conveyor belt at normal operating rpm (see TM 5-3895-372-10).	
49. Mixer body.	Shut down (see TM 9-2320 273-10 and TM 5-3895-372-10).	
50. Oval inspection cover.	Install.	

A technical line drawing of a mixer body assembly. The drawing shows a complex mechanical structure with various components. Two specific parts are highlighted with callout lines and numbers: '28' points to a shear bolt on the right side of the assembly, and '29' points to a nut on the bottom center. The drawing is a perspective view showing the front and right side of the component.

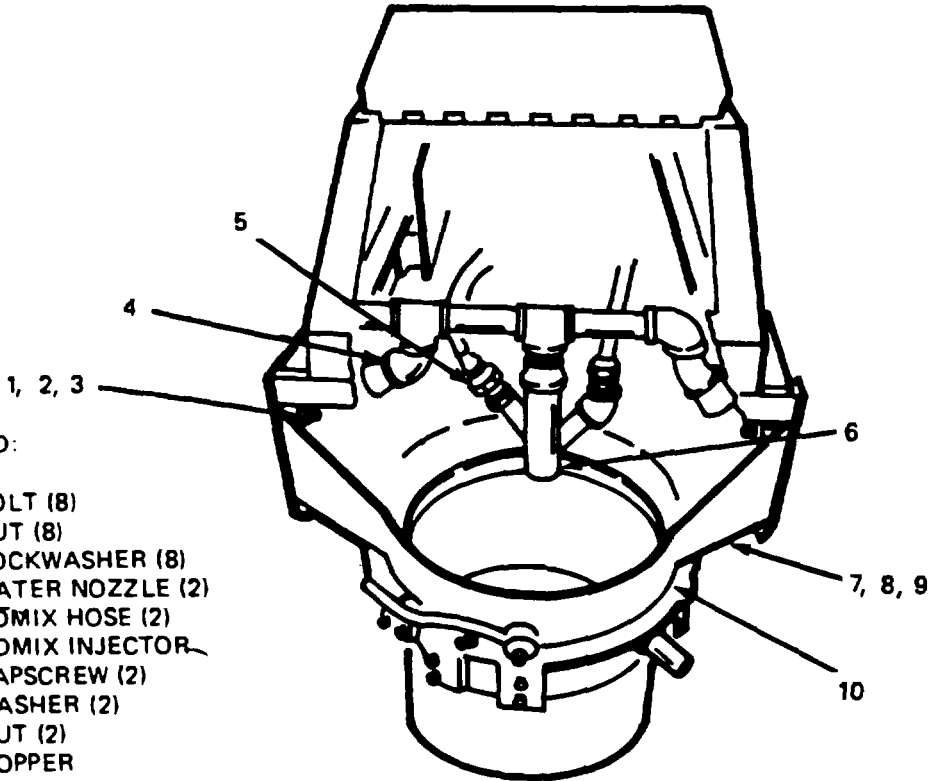
LEGEND:
28. SHEAR BOLT
29. NUT

TA 076321

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR PELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. REMOVAL OF BROKEN BELT.		
NOTE		
If conveyor belt is to be removed when aggregate bins are full, shovel out materials before beginning service.		
51. Eight bolts (1), nuts (2) and lockwashers (3).	Remove.	
52. Two capscrews (7), washers (8), and nuts (9).	Remove.	
53. Hopper (10).	Remove.	Remove front conveyor door and safety guard door simultaneously.
54. Two admix hoses (5).	Remove from admix injector (6).	
55. Admix injector (6).	Remove.	



LEGEND:

- 1. BOLT (8)
- 2. NUT (8)
- 3. LOCKWASHER (8)
- 4. WATER NOZZLE (2)
- 5. ADMIX HOSE (2)
- 6. ADMIX INJECTOR
- 7. CAPSCREW (2)
- 8. WASHER (2)
- 9. NUT (2)
- 10. HOPPER

TA 076322

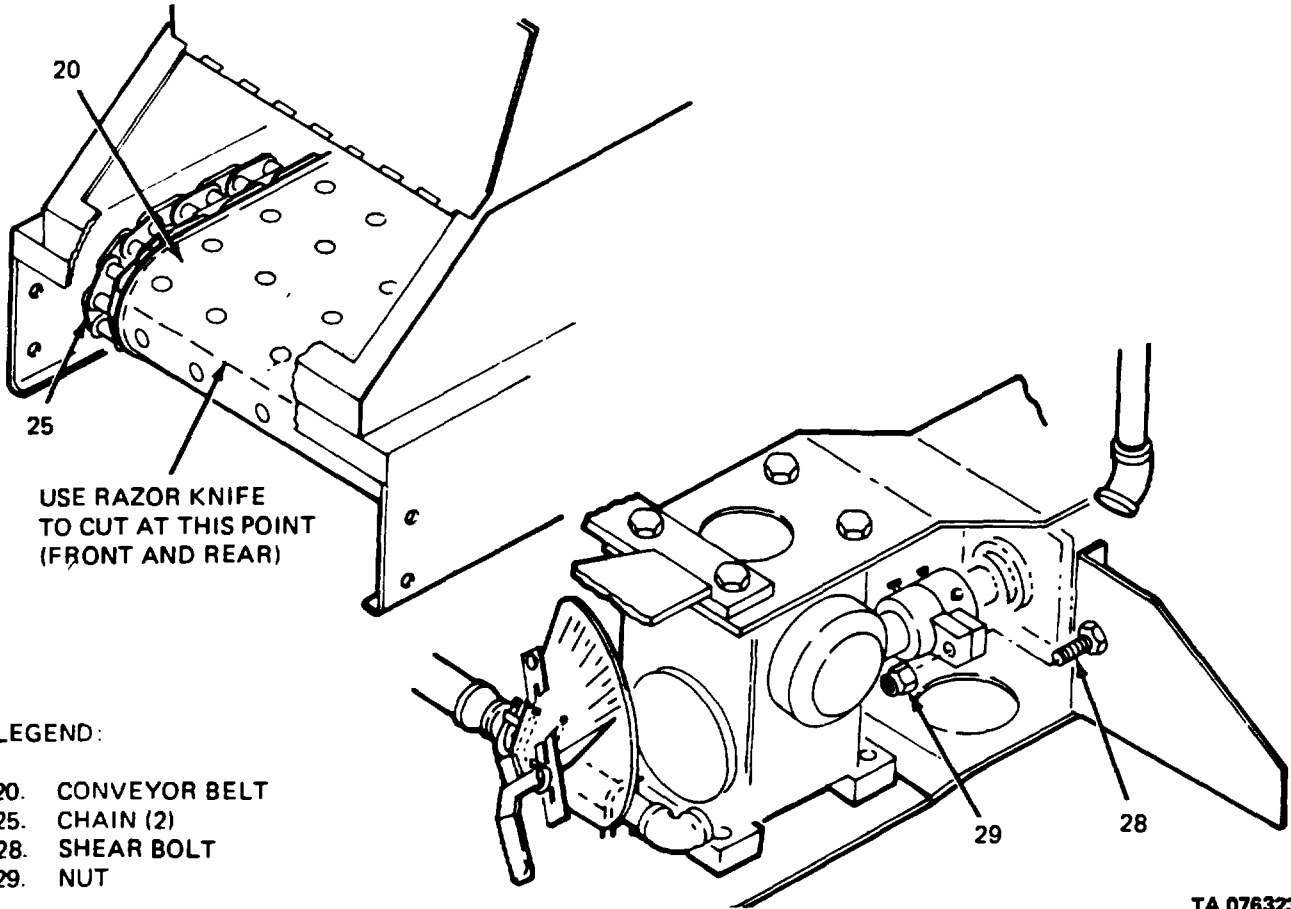
AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. REMOVAL OF BROKEN BELT (Continued).		
57. Shear bolt (28) and nut (29).	Remove from drive gear box coupling.	
58. Conveyor belt (20).	Use a razor knife to cut the belt at the front and rear.	If belt is broken completely from side to side, cut only in rear.

WARNING

During chain cutting, grease, or the belt itself will usually catch on fire. Have a fire extinguisher within easy reach. The fuel tank is close to the front end of the belt. Quench all flames in this area immediately.



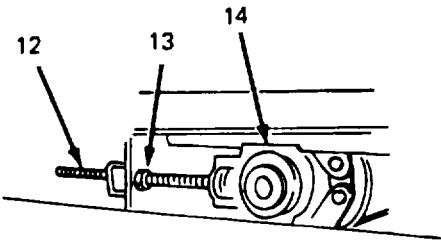
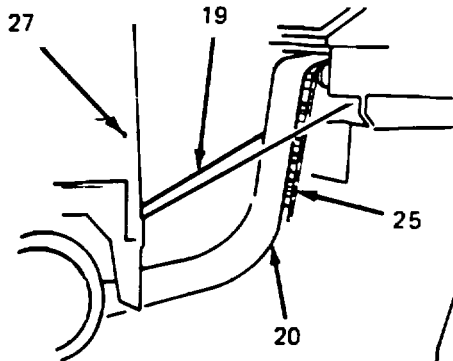
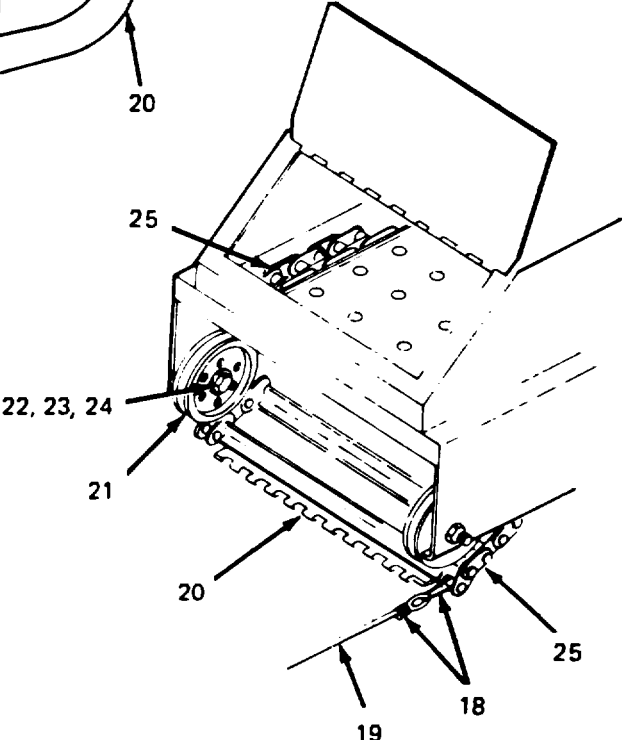
AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. REMOVAL OF BROKEN BELT (Continued).		
60. Two winch line pulleys (21).	a. Remove pins holding pulleys in place. b. Mount pulleys with two bolts (23), nuts (24), and twelve washers (22) to the lower rear frame holes.	Use four washers each for spacers between pulleys and frame.
61. Conveyor belt (20).	Let the end of the belt down over the winch line pulleys (21).	
62. Two ropes (19) and four wires (18).	a. Attach to upper and lower half of chain links. b. Attach other end of ropes (19) to towing vehicle (27). c. Pull both halves of conveyor belt (20) from mixer body.	First pull one half out, then attach ropes and wires to other half.
63. Two locknuts (13).	Loosen.	
64. Two belt tensioning devices (14).	Loosen bolts (12) approximately 1-1/2 in. (38 mm).	Lubricate bolts and bearing slides for easy operation.
CAUTION		
Do not turn bolts (12) farther than 1-1/2 in. (38 mm) or the sprockets will catch in the cross angles.		
65. Conveyor belt (20).	Install. (Refer to procedure B.)	

AGGREGATE SUPPLY SYSTEM.

7-14. CONVEYOR BELT REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
		

LEGEND:

- 12. BOLT (2)
- 13. LOCKNUT (2)
- 14. BELT TENSIONING DEVICE (2)
- 18. WIRE (4)
- 19. ROPE (2)
- 20. CONVEYOR BELT
- 21. WINCH LINE PULLEY (2)
- 22. FLAT WASHER (12)
- 23. BOLT (2)
- 24. NUT (2)
- 25. CHAIN (2)
- 27. TOWING VEHICLE

TA 076324

AGGREGATE SUPPLY SYSTEM.

7-15. CONVEYOR BELT AND BELT LACER REPAIR.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

Repair. (30)
30 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

7-14A.

Conveyor Belt Removed.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/NI)

- Belt Lacer, NP5010003 (50663).
- Belt Lacer Pin, NP5010004 (50663).
- Rubber Belt, NP5028027 (50663).
- Conveyor Chain, NP3817008 (50663).
- Bolt and Nut, NP6043001 (50663).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 5-3895-372-20P.
- TM 5-3895-372-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

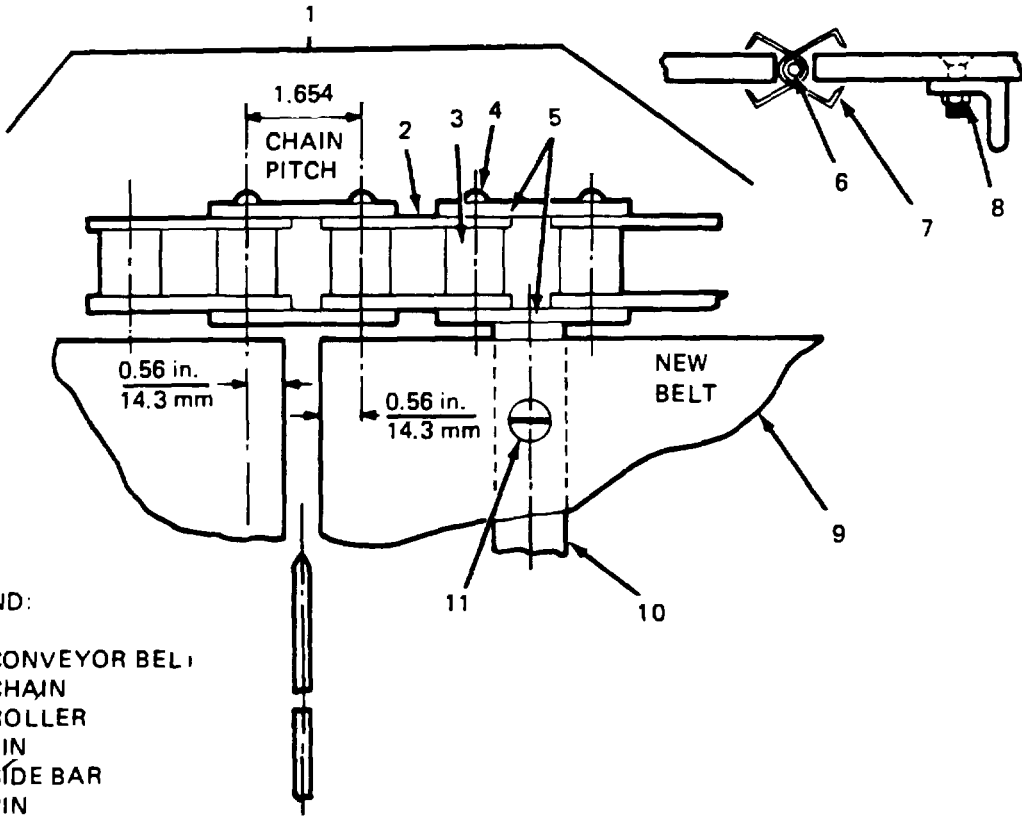
AGGREGATE SUPPLY SYSTEM.

7-15. CONVEYOR BELT AND BELT LACER REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

REPAIR.

- | | | |
|----|--------------------|---|
| 1. | Conveyor belt (1). | Stretch (rubber down) and count back three crossbars (10) at each end of the rubber belt (9) for replacement of belt lacer (7). |
|----|--------------------|---|



- LEGEND:
- 1. CONVEYOR BELT
 - 2. CHAIN
 - 3. ROLLER
 - 4. PIN
 - 5. SIDE BAR
 - 6. PIN
 - 7. BELT LACER
 - 8. NUT
 - 9. RUBBER BELT
 - 10. CROSS BAR
 - 11. BOLT

TA 076325

AGGREGATE SUPPLY SYSTEM.

7-15. CONVEYOR BELT AND BELT LACER REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
REPAIR (Continued).		
NOTE		
For replacement of belt sections, count back three crossbars (10) from the damaged section at each end.		
2. Rubber belt (9).	Cut belt between the third and fourth crossbars (10) at each end.	
3. Bolts (11) and nuts (8).	Unscrew and remove the old rubber belt (9) from the crossbars (10).	If necessary, shear off nuts (8) with a chisel and hammer.
4. Chain (2). with two pins (4).	Connect the chain and secure	If replacing belt lacer (7) only.
NOTE		
There cannot be any crossbars at the lacer/lacers. If necessary, remove crossbars. The chain will be left the same length.		
5. Rubber belt (9).	<ul style="list-style-type: none"> a. Stretch the area to be repaired. b. Lay damaged rubber belt (9) on top of new rubber belt and cut to same length. c. Clamp one end of the new rubber belt (9) onto the first crossbar (10). 	
NOTE		
Be sure that 0.56 in. (14.3 mm) of the rubber belt (9) is extending beyond the centerline of the second roller (3). The thicker coating of rubber should be on the conveying side of the rubber belt.		
	<ul style="list-style-type: none"> d. Using the crossbar (10) as a jig, drill 0.28 (7.1 mm) holes in the new rubber belt (9). 	
6. Bolts (11) and nuts (8).	Install thru new rubber belt (9) and crossbar (10). Tighten bolts until flat head is flush with its surface.	

AGGREGATE SUPPLY SYSTEM.

7-15. CONVEYOR BELT AND BELT LACER REPAIR (Continued).

LOCATION/ITEM

ACTION

REMARKS

REPAIR (Continued).

NOTE

Repeat steps 5d and 6 with the balance of the crossbars. Be certain that 0.56 in. (14.3 mm) of the new rubber belt is extending beyond the centerline of the second roller (2)

- 7. Rubber belt (9). After installing nuts (8) and bolts (11) in the last crossbar (10), cut extra length of the rubber belt (9) so that it is extending 0.56 in. (14.3 mm) beyond the centerline of the second roller (3).
- 8. Bolts (11). Cut off the excess length with a bolt cutter or chisel. This distorts the treads and Prevents the nuts (11) from coming off.

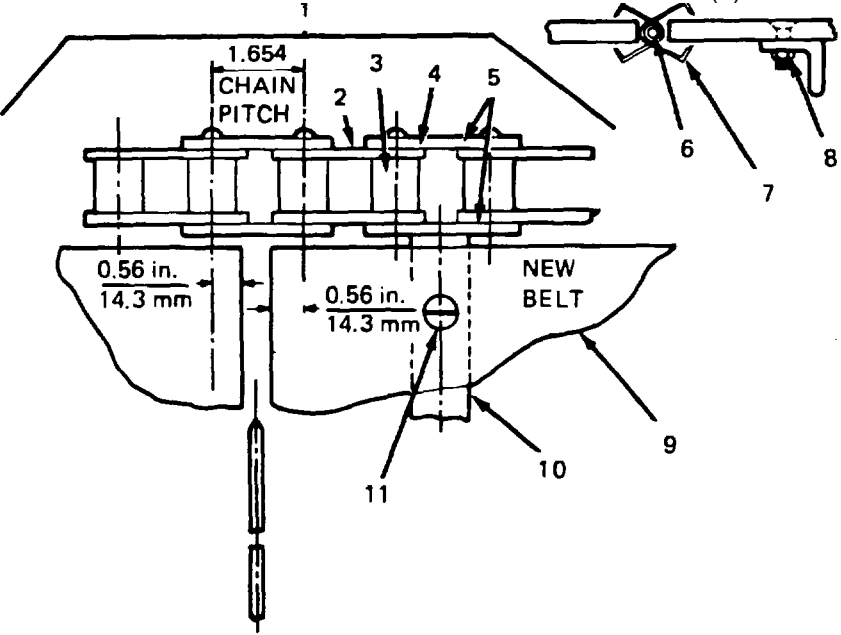
NOTE

The center of the pin (6) should be in the center of the side bars (5).

- 9. Belt lacers (7). Use the pin (6) to space belt lacers between the ends of Hammer teeth of belt lacer into rubber belt (9).

LEGEND:

- 1. CONVEYOR BELT
- 2. CHAIN
- 3. ROLLER
- 4. PIN
- 5. SIDE BAR
- 6. PIN
- 7. BELT LACER
- 8. NUT
- 9. RUBBER BELT
- 10. CROSS BAR
- 11. BOLT



TA 076326

AGGREGATE SUPPLY SYSTEM.

7-16. CHAIN OILER.

THIS TASK COVEBS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

a.	Removal.	(10)
b.	Installation.	(10)
c.	Operational Check.	(5)
		25 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

TM 5-3895-372-10.

Chain Oiler Turned Off

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 53895372-12.
TM 9-2320-273-10.
TM 53895-372-10.
TM 53895372-20P.

GENERAL SAFTEY INSTRUCTIONS

Engine Off.
Transmission in Neutral
Parking Brake Set

TROUBLESHOOTING REFERENCES

Table 7-1.

AGGREGATE SUPPLY SYSTEM.

7-16. CHAIN OILER (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

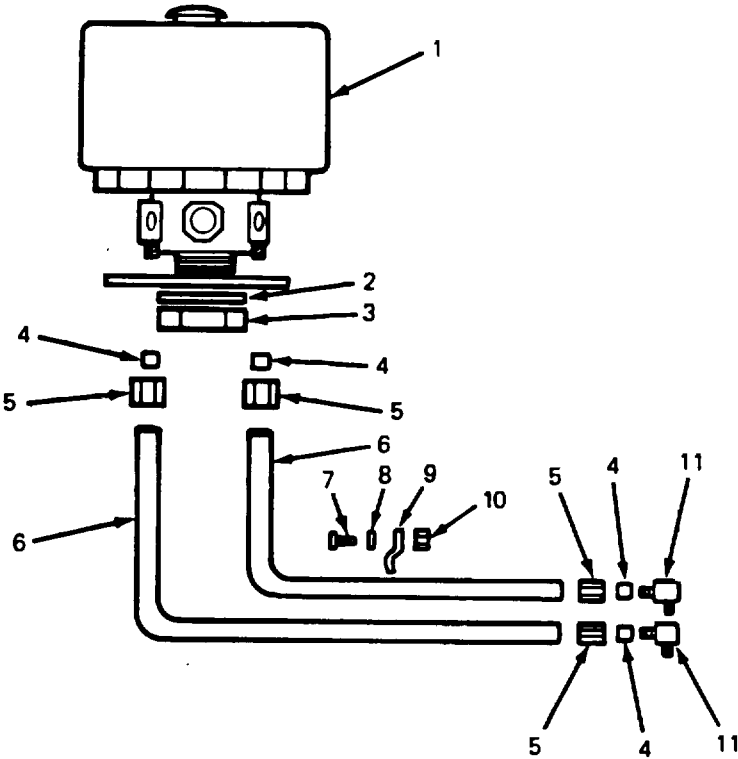
NOTE

Before beginning service, ensure chain oiler is turned OFF.

- | | | |
|----|---|---|
| 1. | Two nuts (5) and sleeves (4), with two tubes (6). | Unscrew from chain oiler (1). |
| 2. | Nut (3) and washer (2). | Remove |
| 3. | Chain oiler (1). | Remove |
| 4. | Screw (7), flatwasher (8), clamp (9), and nut (10). | Remove |
| 5. | Two nuts (5), and sleeves (4). | Unscrew and remove with Two tubes (6) from two elbows (11). |

LEGEND:

- 1. CHAIN OILER
- 2. WASHER
- 3. NUT
- 4. SLEEVE (4)
- 5. NUT (4)
- 6. TUBE (2)
- 7. SCREW
- 8. FLATWASHER
- 9. CLAMP
- 10. NUT
- 11. ELBOW (2)



TA 076327

AGGREGATE SUPPLY SYSTEM.

7-16. CHAIN OILER (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
6. Chain oiler (1).	Install to body with washer (2) and nut (3).	
7. Four nuts (5) and sleeves (4), with two tubes (6).	a. Screw onto chain oiler (1). b. Screw onto two elbows (11).	
8. Clamp (9).	Install and secure with screw (7), washer (8) and nut (10).	
C. OPERATIONAL CHECK.		
9. Chain oiler (1)	a Turn on and check for five drops per minute. b. Check for leakage at Connections. c. Turn off chain oiler (1).	Retighten as necessary.
NOTE		
Installation of a new chain oiler necessitates filling reservoir with fresh oil (refer to LO 53895-372-12).		

AGGREGATE SUPPLY SYSTEM.

7-16. CHAIN OILER (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND: 1. CHAIN OILER 2. WASHER 3. NUT 4. SLEEVE (4) 5. NUT (4) 6. TUBE (2) 7. SCREW 8. FLATWASHER 9. CLAMP 10. NUT 11. ELBOW (2)</p>		
TA 076327		

AGGREGATE SUPPLY SYSTEM.

7-17. SAND OR STONE GATES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
- b. Inspection. (10)
- c. Installation. (20)
- d. Adjustment. (10)

60 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 53895372-10.

Access Panels On Side of Vehicle Removed.
Sand and Stone Bins Empty as Needed.

M919

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5-3895-372-12.
- TM 9-2320-273-10.
- TM 5-3895-372-10.
- TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

AGGREGATE SUPPLY SYSTEM.

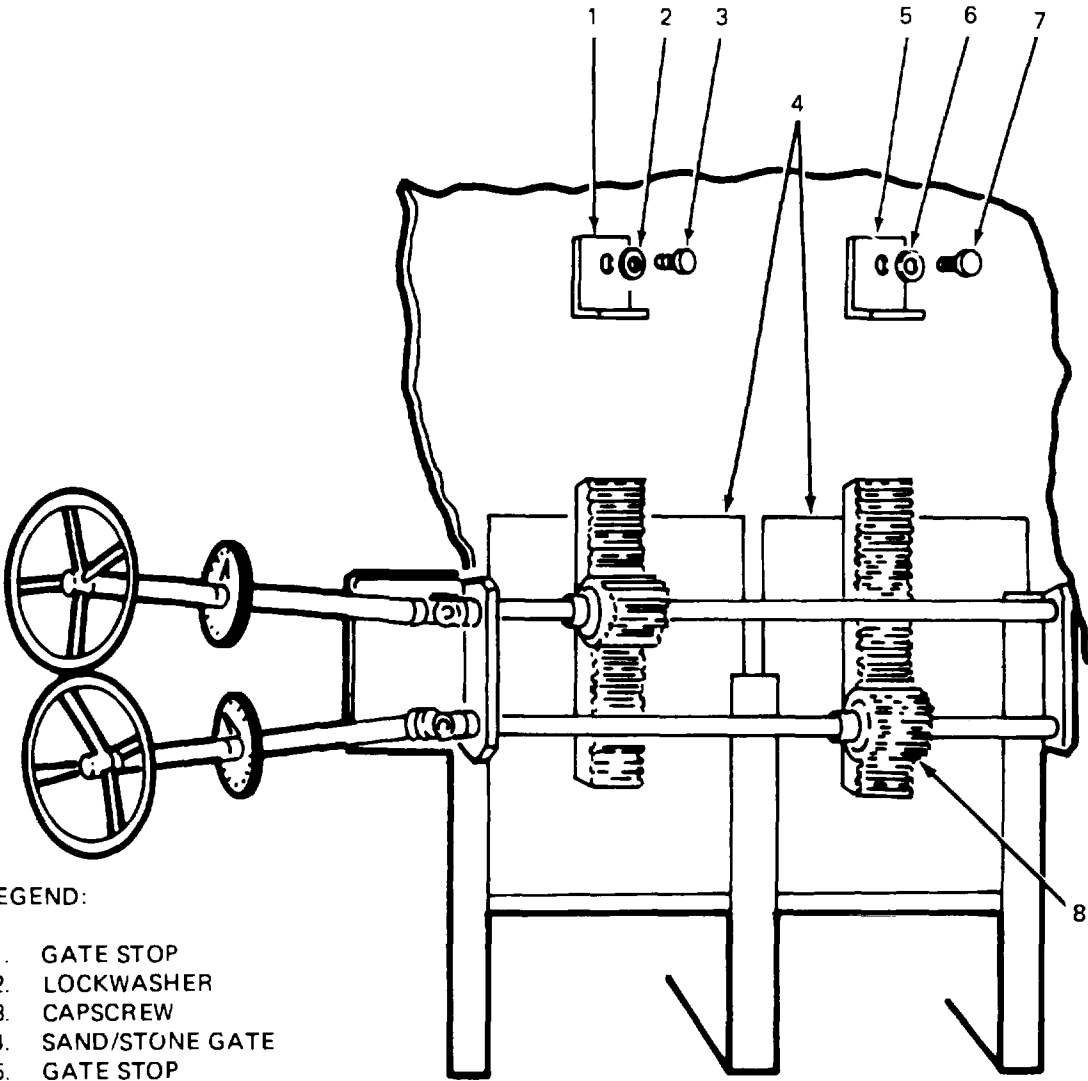
7-17. SAND OR STONE GATES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL

NOTE

The following procedure is applicable to both the sand and stone gates.



LEGEND:

- 1. GATE STOP
- 2. LOCKWASHER
- 3. CAPSCREW
- 4. SAND/STONE GATE
- 5. GATE STOP
- 6. LOCKWASHER
- 7. CAPSCREW
- 8. RACK AND PINION TEETH

TA 076329

AGGREGATE SUPPLY SYSTEM.

7-17. SAND OR STONE GATES MAINTENANCE (Continued).

LOCATION/ITEM ACTION REMARKS

A. REMOVAL (Continued)

- 1. Capscrew (3) or (7) and lockwasher (2) or (6). Remove.
- 2. Gate stop (1) or (5). Remove.
- 3. Sand/stone gate (4) Remove.. With one man raising gate by turning wheel the other may support gate from falling.

B. INSPECTION.

- 4. Sand/stone gate (4). Inspect for:
 - a. Cracks.
 - b. Breaks.
 - c. Chips.
 - d. Wear.
- 5. Rack and pinion teeth (8). Inspect for wear.

C. INSTALLATION.

- 6. Sand/stone gate (4). Install.
- 7. Gate stop (1) or (5). Aline. With one man starting the gate in place, the other may lower gate by turning wheel
- 8. Capscrew (3) or (7) and lockwasher (2) or (6). Install and tighten

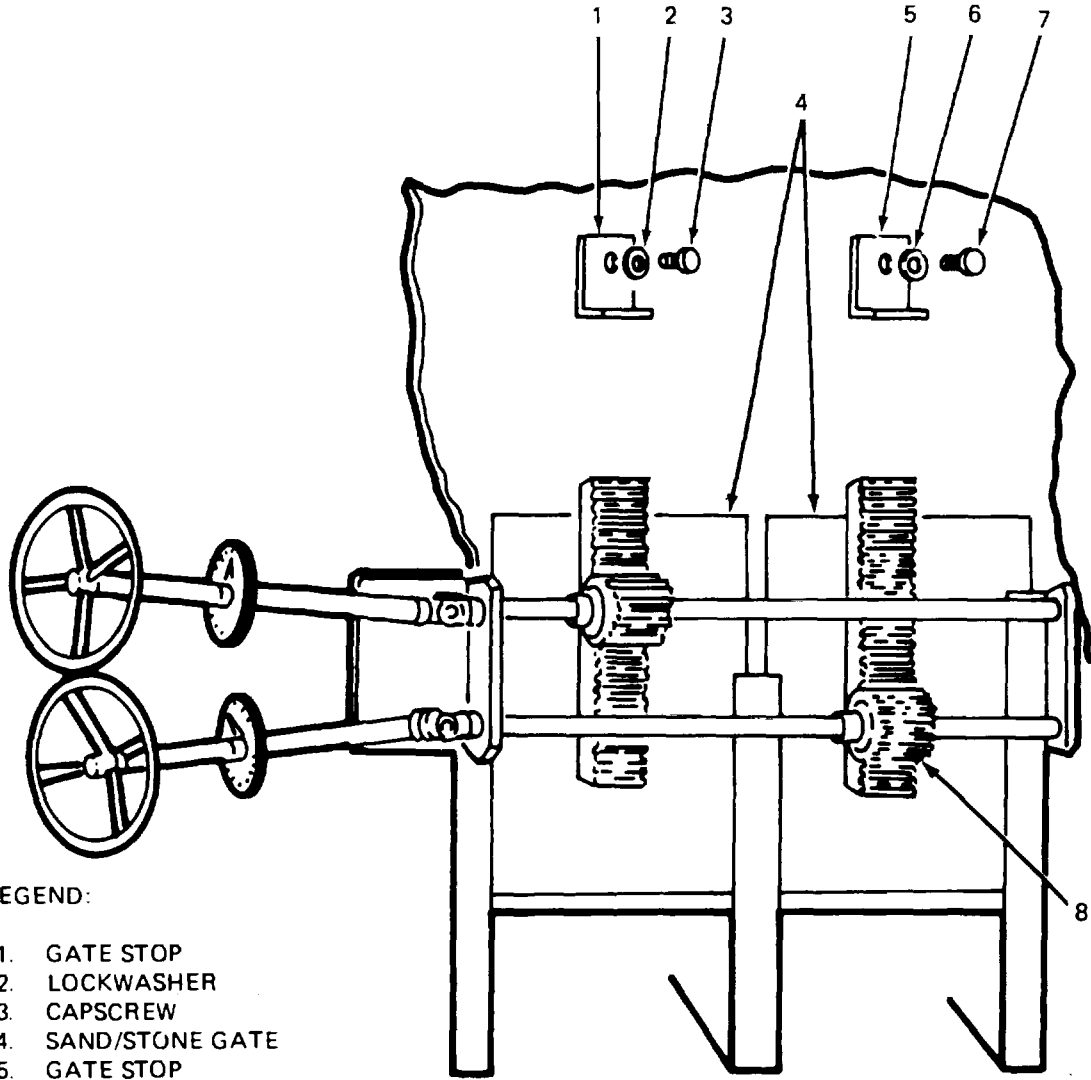
D ADJUSTMENT.

Refer to TM 5-3895-372-10.

AGGREGATE SUPPLY SYSTEM

7-17. SAND OR STONE GATES MAINTENANCE (Continued).

LOCATION/ITEM ACTION REMARKS



LEGEND:

- 1. GATE STOP
- 2. LOCKWASHER
- 3. CAPSCREW
- 4. SAND/STONE GATE
- 5. GATE STOP
- 6. LOCKWASHER
- 7. CAPSCREW
- 8. RACK AND PINION TEETH

TA 076330

AGGREGATE SUPPLY SYSTEM.

7-18. SAND AND STONE CONTROLS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Inspection. (5)
 - b. Removal. (5)
 - c. Repair. (AR)
 - d. Installation. (10)
- 20 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 5-3895-372-10.

Sand and Stone Bins Empty.
Bin Gates Closed.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5.3895-372-12.
- TM 9-2320-273-10.
- TM 5-3895-372-10.
- TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 7-1.

AGGREGATE SUPPLY SYSTEM.

7-18. SAND AND STONE CONTROLS MAINTENANCE (Continued).

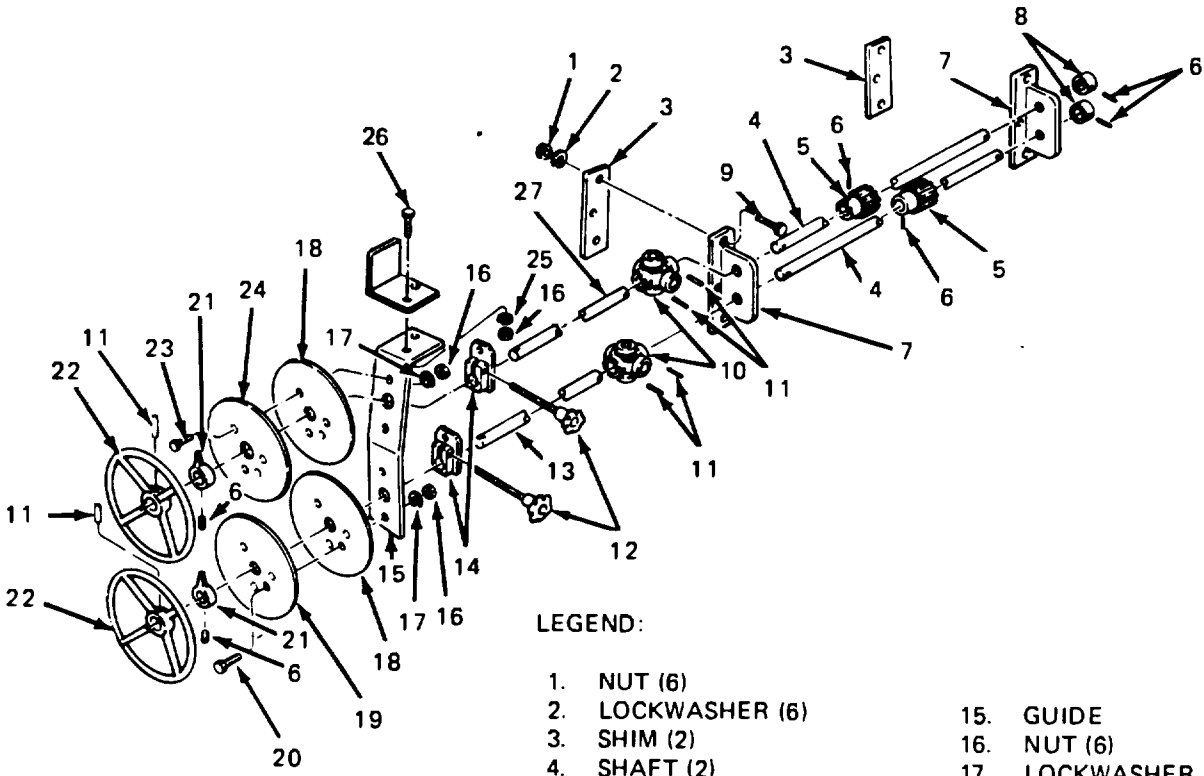
LOCATION/ITEM ACTION REMARKS

A. INSPECTION.

NOTE

The universal joints of the sand and stone gate controls have been permanently lubricated by the manufacturer.

- | | | | | |
|----|---|----|---|---|
| 1. | Two universal joints (10), two shafts (4), shaft (1) and shaft (97) | a. | Check whether shafts slip inside two collars (8). | If shafts slip, check for worn or missing pins (11). Replace pins (11) as needed. |
|----|---|----|---|---|




LEGEND:

- | | |
|-------------------------|--------------------|
| 1. NUT (6) | 15. GUIDE |
| 2. LOCKWASHER (6) | 16. NUT (6) |
| 3. SHIM (2) | 17. LOCKWASHER (4) |
| 4. SHAFT (2) | 18. PLATE (2) |
| 5. GEAR (2) | 19. DIAL FACE |
| 6. SETSCREW (6) | 20. SCREW (4) |
| 7. ANGLE (2) | 21. POINTER (2) |
| 8. COLLAR (2) | 22. WHEEL (2) |
| 9. SCREW (6) | 23. SCREW (4) |
| 10. UNIVERSAL JOINT (2) | 24. DIAL FACE |
| 11. PIN (6) | 25. LOCKWASHER (2) |
| 12. LOCKWASHER (2) | 26. SCREW (2) |
| 13. SHAFT | 27. SHAFT |
| 14. LOCK (2) | |

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AGGREGATE SUPPLY SYSTEM.

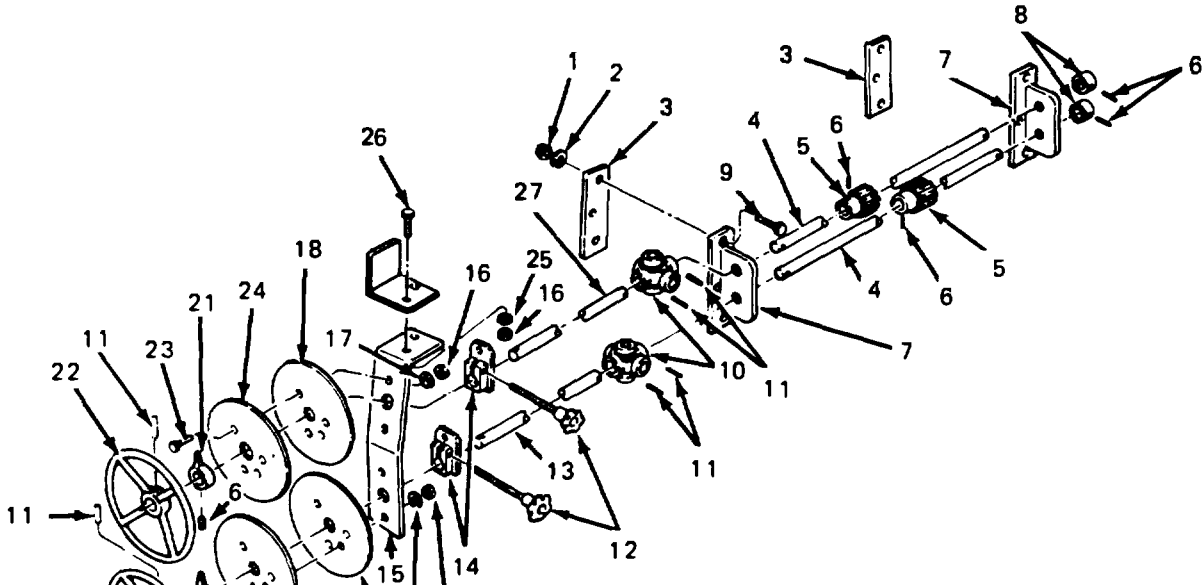
7-18. SAND AND STONE CONTROLS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. INSPECTION (Continued)		
	b. Check for binding, sticking, or grinding as universal joints turn.	
		
<p>Before removing universal joints, check that collars and shafts are punch marked. If they are not, mark them for proper position at assembly.</p>		
B. REMOVAL.		
2. Two pins (11).	Drive out and remove two wheels (22) from shaft (13) and (27).	
3. Two set screws (6).	Unscrew and remove two pointers (21).	
4. Four screws (20), lock-washers (17), and nuts (16).	Remove.	
5. Four screws (23), lock-washers (17), and nuts (16).	Unscrew and remove two plates (18), dial face (19), and dial face (24).	
6. Two screws (26), lock-washers (25), and nuts (16)	Unscrew and remove guide (15) by sliding from shafts (13) and (27).	
7. Two lock screws (12	Unscrew and remove; slide locks (14) from shafts (13) and (27).	
8. Four pins (11).	Drive out and remove two universal joints (10).	
9. Two setscrews (6)	Back out and remove two collars (8).	
10. Six screws (9), lock-washers (2), and nuts (1).	Unscrew and remove two angles (7) with two shims (3).	
11. Two setscrews (6).	Loosen and remove two gears (5) from two shafts (4).	
C. REPAIR.		
Refer to para 4-10 for repair of universal joints.	Repair service is limited to the universal joints. All other control components are simply replaced if worn or damaged.	
D. INSTALLATION.		
12. Two angles (7) and shims (3).	Aline holes and secure with six screws (9), lockwashers (2), and nuts (1).	

AGGREGATE SUPPLY SYSTEM.

7-18. SAND AND STONE CONTROLS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------------|--------------------|
| 1. NUT (6) | 15. GUIDE |
| 2. LOCKWASHER (6) | 16. NUT (6) |
| 3. SHIM (2) | 17. LOCKWASHER (4) |
| 4. SHAFT (2) | 18. PLATE (2) |
| 5. GEAR (2) | 19. DIAL FACE |
| 6. SETSCREW (6) | 20. SCREW (4) |
| 7. ANGLE (2) | 21. POINTER (2) |
| 8. COLLAR (2) | 22. WHEEL (2) |
| 9. SCREW (6) | 23. SCREW (4) |
| 10. UNIVERSAL JOINT (2) | 24. DIAL FACE |
| 11. PIN (6) | 25. LOCKWASHER (2) |
| 12. LOCKWASHER (2) | 26. SCREW (2) |
| 13. SHAFT | 27. SHAFT |
| 14. LOCK (2) | |

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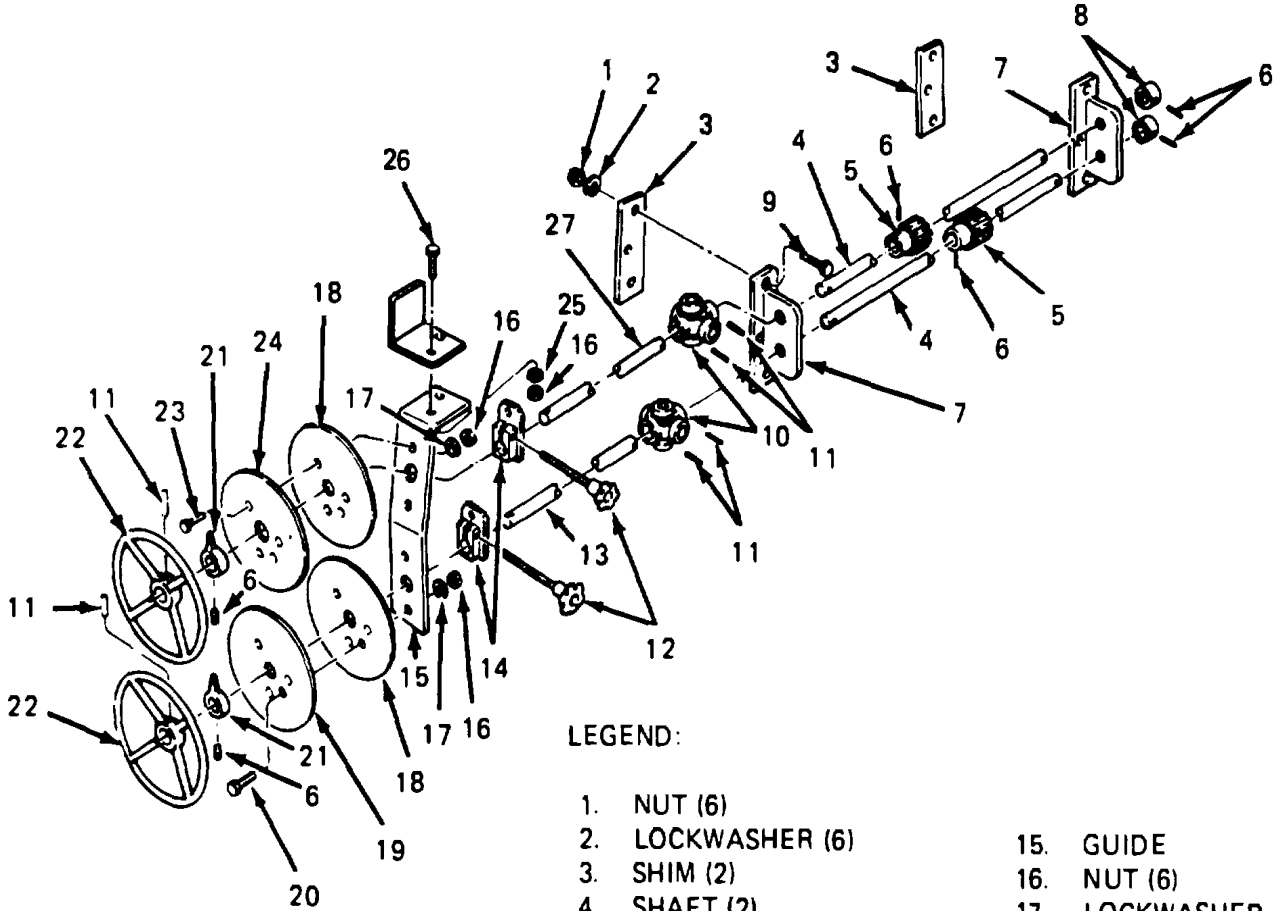
AGGREGATE SUPPLY SYSTEM.

7-18. SAND AND STONE CONTROLS MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
D. INSTALLATION (Continued).		
13. Two shafts (4).	Position thru two angles (7) and install two gears (5) with two setscrews (6).	
14. Two collars (8).	Slide onto shafts (4) and secure with two setscrews (6).	
15. Two universal joints (10).	Install on two shafts (4) and secure with two pins (11).	Be sure punch marks are properly aligned.
16. Shaft (13) and (27).	Install in two universal joints (10), and secure with two pins (11).	Be sure punch marks are properly aligned.
17. Two locks (14).	Slide over shafts (13) and (27) and install two lock screws (12).	
18. Guide (15).	Slide onto shafts (13) and (27), aligning with holes in bracket welded to sand bin; secure with two screws (26), two lockwashers (25), and two nuts (16).	
19. Two plates (18), dial face (19), and dial face (24).	<p>a. Aline holes and secure with four screws (20), lockwashers (17), and nuts (16).</p> <p>b. Slide over shafts (13) and (27), aline holes and secure to guide (15) with four screws (23), lockwashers (17) and nuts (16).</p>	
20. Two pointers (21).	Slide onto shafts (13) and (27); secure with two setscrews (6).	
21. Two wheels (22).	Slide onto shafts (13) and (27); secure by driving in two pins (11).	
NOTE		
Check gate adjustment after installation is completed (see TM 5-3895-372-10).		

AGGREGATE SUPPLY SYSTEM.

7-18. SAND AND STONE CONTROLS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------------|--------------------|
| 1. NUT (6) | 15. GUIDE |
| 2. LOCKWASHER (6) | 16. NUT (6) |
| 3. SHIM (2) | 17. LOCKWASHER (4) |
| 4. SHAFT (2) | 18. PLATE (2) |
| 5. GEAR (2) | 19. DIAL FACE |
| 6. SETSCREW (6) | 20. SCREW (4) |
| 7. ANGLE (2) | 21. POINTER (2) |
| 8. COLLAR (2) | 22. WHEEL (2) |
| 9. SCREW (6) | 23. SCREW (4) |
| 10. UNIVERSAL JOINT (2) | 24. DIAL FACE |
| 11. PIN (6) | 25. LOCKWASHER (2) |
| 12. LOCKWASHER (2) | 26. SCREW (2) |
| 13. SHAFT | 27. SHAFT |
| 14. LOCK (2) | |

TA 076332

CHAPTER 8

CEMENT SYSTEM

8-1. OVERVIEW.

This chapter provides you with the following information related to cement system maintenance:

- a. All required special tools and equipment.
 - b. Troubleshooting procedures.
 - c. Maintenance procedures.
-

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

8-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

8-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for maintenance procedures described in this chapter are as follows. (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

- a. Stopwatch.
- b. Scales 0-400 lb, accurate to 1 lb
(0-180 kg, accurate to 0.5 kg).

8-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

CEMENT SYSTEM.

8-5. TURNING THE METER FEEDER MANUALLY.

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

CAUTION

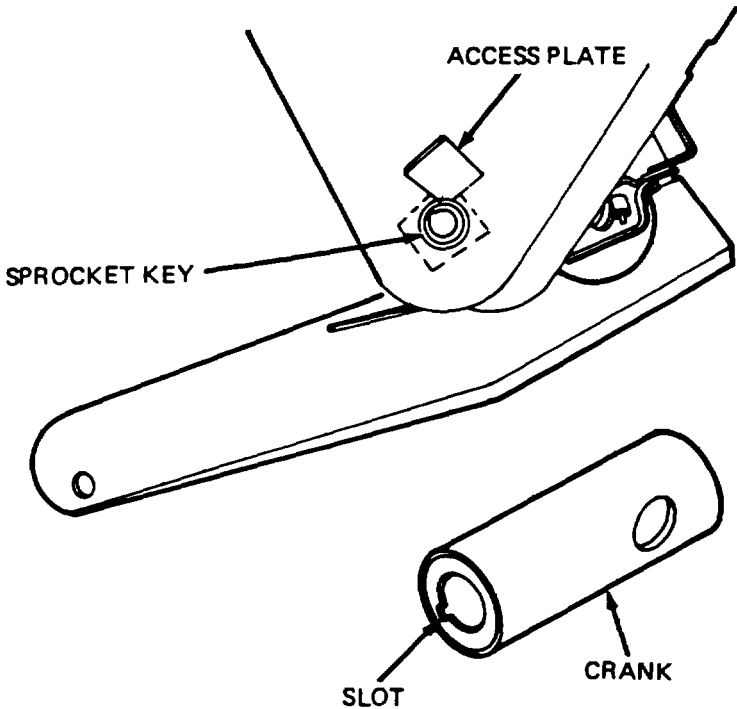
Always turn the meter feeder counterclockwise (in the direction of normal operation). Never turn it backwards (clockwise).

NOTE

Many of the procedures in this chapter tell you to turn the meter feeder manually. A bar and crank is provided with each mixer body for this purpose. To use them, follow the instructions below.

MANUAL POSITIONING.I

- | | | |
|------------------|------------------|---|
| 1. Access plate. | Swing open. | On right hand side of cement bin. |
| 2. Crank | Plance on shaft. | The slot in the crank fits over the sprocket key. |

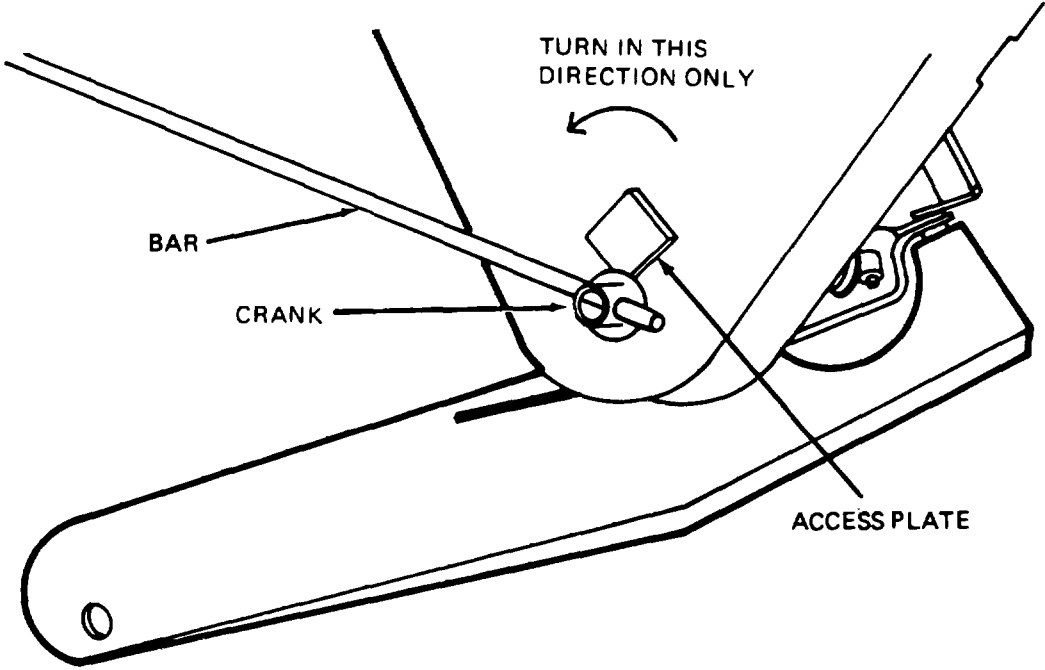


TA 076334

CEMENT SYSTEM.

8-5. TURNING THE METER FEEDER MANUALLY (Continued).

LOCATION/ITEM	ACTION	REMARKS
MANUAL POSITIONING (Continued)		
3. Bar.	a. Slide thru hole in crank. b. Turn meter feeder counterclockwise.	
4. Bar and crank.	Remove.	
5. Access plate.	Close.	



TA 076335

Section II TROUBLESHOOTING

8 6. INTRODUCTIONI

Troubleshooting procedures for the cement system are given in table 8-1. It is arranged by m functions, in the following order:

- a. Hard lumps of cement in bin (Malfunction No. 1).
- b. Cement delivery uneven (Malfunction No. 2).
- c. Meter feeder does not turn (Malfunction No. 3).
- d. Cement bin auger will not turn (Malfunction No. 4).
- e. Cement meter feeder locked in place (Malfunction No. 5).
- f. Cement counter does not operate (Malfunction No. 6).
- g. Cement screen does not vibrate (Malfunction No. 7).

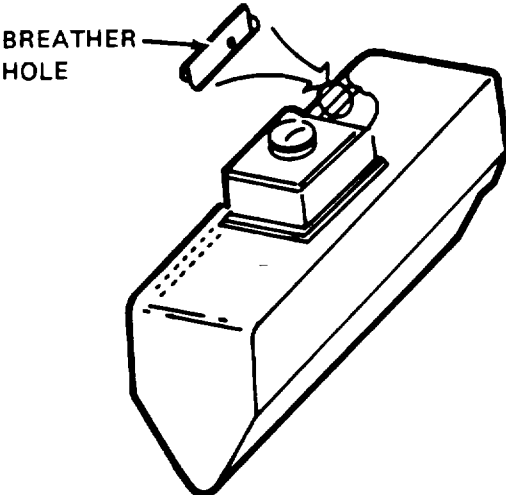
NOTE

Troubleshooting procedures for air pads and bin vibrators are contained in table 11-1, para 11-5.

Table 8-1. Cement System Troubleshooting Procedures

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>1. HARD LUMPS OF CEMENT IN BIN:</p>
<p>NOTE</p>
<p>Lumps of hardened cement result from moisture in bin. If this problem occurs remove cement. Clean and dry bin. Find what caused the problem. Follow the steps below. They will tell you how to keep the problem from happening again. Remember that bin should be emptied if mixer is left standing for more than a few days.</p>
<p>Step 1. Check for bent or warped cover. Straighten cover and hammer out dents. Cover must fit tightly on all sides. Replace if necessary.</p>
<p>Step 2. Check for broken or loose cover gasket. Replace gasket (refer to para 8-10).</p>
<p>Step 3. Check latch tensions. Latches should hold cover tightly against gasket on all sides. Refer problem to Direct Support Maintenance.</p>
<p>2. CEMENT DELIVERY UNEVEN:</p>
<p>Step 1. Check for proper aeration. See table 11-1, Malfunction No. 2.</p>
<p>Step 2. Check vibrators for proper operation. See table 11-1, Malfunction No. 3.</p>

Table 8-1. Cement System Troubleshooting Procedures (Continued)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. CEMENT DELIVERY UNEVEN (Continued):	Step 3. Check for plugged breather. Use a stiff wire to unplug breather.	 <p>The diagram shows a perspective view of a rectangular cement meter feeder. On top of the feeder is a cylindrical component with a circular opening. A small rectangular plug is shown being pulled out of this opening. A label 'BREATHER HOLE' with an arrow points to the opening. The feeder has a series of small holes along its front edge.</p>
	Step 4. Check to be sure meter feeder pockets are clean.	<ul style="list-style-type: none"> a. Remove side access doors. b. Loosen spring tines. c. Disengage clutch. d. Rotate feeder. Use metal scraper to clean each pocket.
		NOTE
		If hard deposits of cement repeatedly build up in pockets, they are probably caused by condensation. To prevent this, place a lighted 100-watt electric bulb under the meter feeder when the mixer is parked overnight.

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Table 8-1. Cement System Troubleshooting Procedures (Continued)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. CEMENT DELIVERY UNEVEN (Continued):	e. Readjust spring tines (para 8-12).	
	Step 5 Check spring tines for:	
	a. Bends.	
	b. Breaks.	
	c. Missing tines.	
	d. Missing hammers.	
	e. Proper tension (para 8-12).	
		Replace tines or hammers, adjust tension.
	Step 6. Make sure cross-auger fingers are straight and in place.	
		Inspect and replace auger fingers (para 9-8).
	Step 7. Check that meter-register cable turns.	
		Tighten setscrews in cable ends (para 8-13).
	Step 8. Check meter-register cable for loose play.	
		Adjust or replace cable (para 8-13).
	Step 9. Check that ground straps are in good condition and touch ground.	
		Properly position or replace straps.

Table 8-1. Cement System Troubleshooting Procedures (Continued)

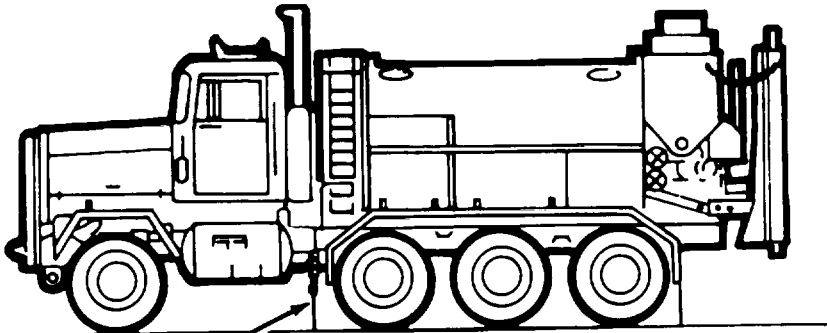
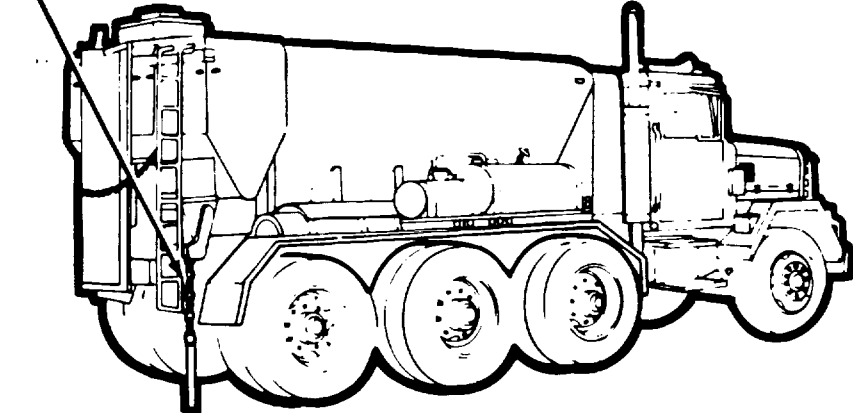
MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
2. CEMENT DELIVERY UNEVEN (Continued):

GROUNDING STRAPS

TA 076337

Table 8-1. Cement System Troubleshooting Procedures (Continued)

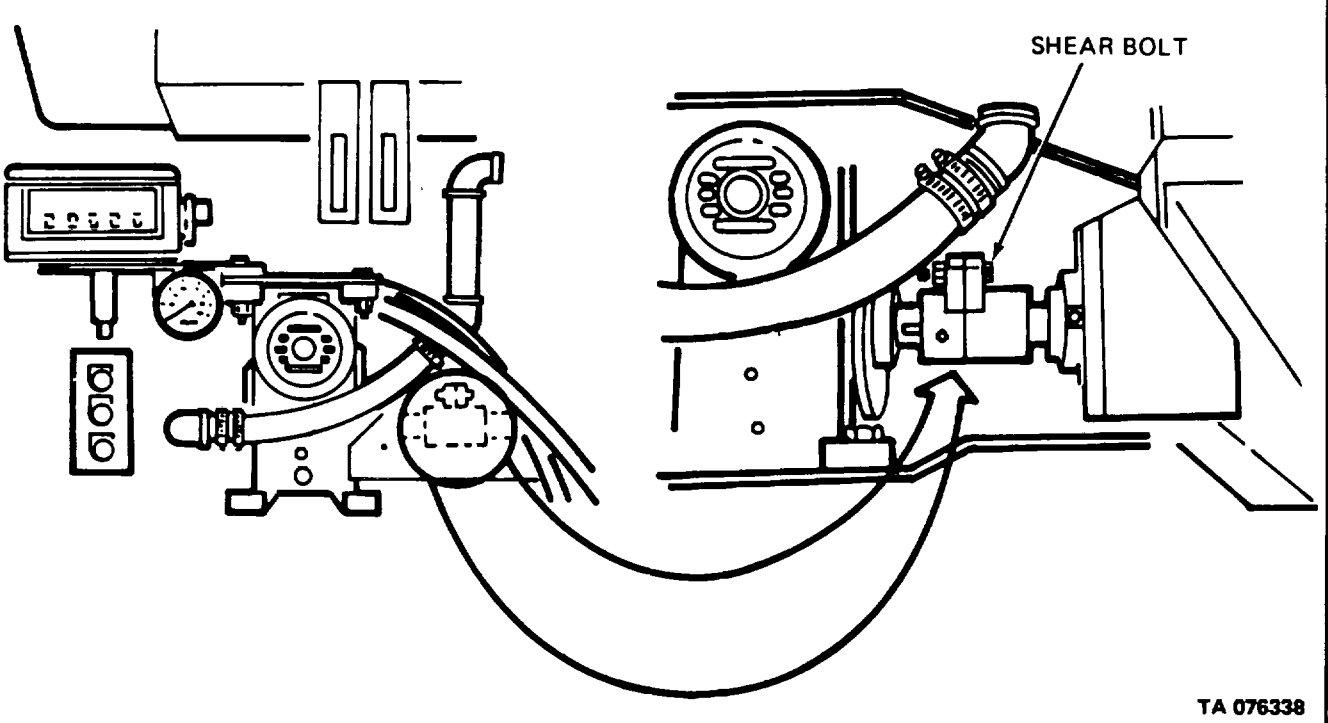
MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
3. METER-FEEDER DOES NOT TURN:
Step 1. Make sure that clutch is engaged.
Engage clutch.
Step 2. Check for broken shear bolt on main conveyor.
NOTE
A broken shear bolt results from some other problem. Often something is caught on the belt or chain. Unless you correct this problem, shear bolts will continue to break.
a. Find cause of shearing. Correct problem. b. Replace shear bolt.

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Table 8-1. Cement System Troubleshooting Procedures (Continued)

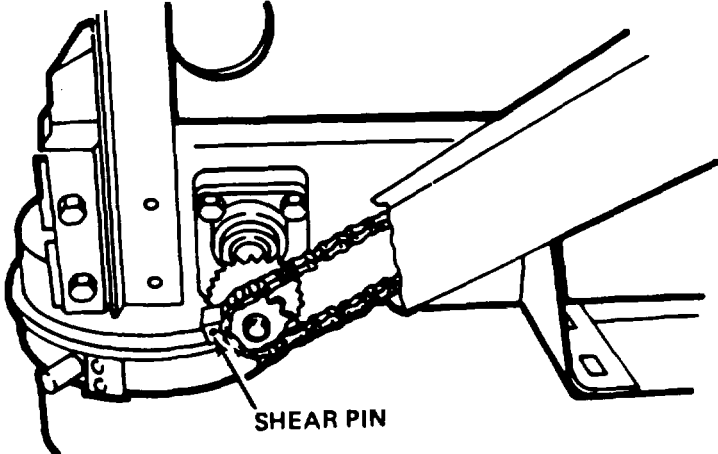
MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
3. METER-FEEDER DOES NOT TURN (Continued):
Step 3. Check for broken shear pin on meter-feeder drive, caused by objects stuck between vanes and housing of meter-feeder.
<ul style="list-style-type: none"> a. Raise rear access door. b. Remove plate above housing.
<div style="border: 2px dashed black; padding: 5px; width: fit-content; margin: 0 auto;"> CAUTION </div>
Do not turn meter-feeder backwards unless spring tines are released.
<ul style="list-style-type: none"> c. Rotate feeder slowly in operating direction. Check for objects stuck between vanes and housing. Remove objects. If necessary, release spring tines so that you can rock meter-feeder back and forth. d. Replace shear pin.

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Table 8-1. Cement System Troubleshooting Procedures (Continued)

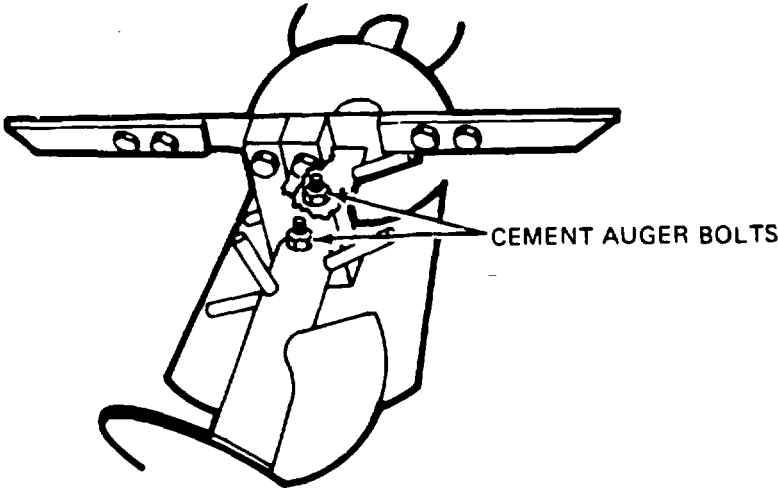
MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

4. CEMENT BIN AUGER WILL NOT TURN:

- Step 1. Remove cement from bin. Check for loose or missing bolts holding auger tube to shaft.
Tighten or replace bolts.



TA 076340



These are special, grade 5 machine bolts. Be sure you use the same kind of replacement.

- Step 2. Check for broken key in sprocket.

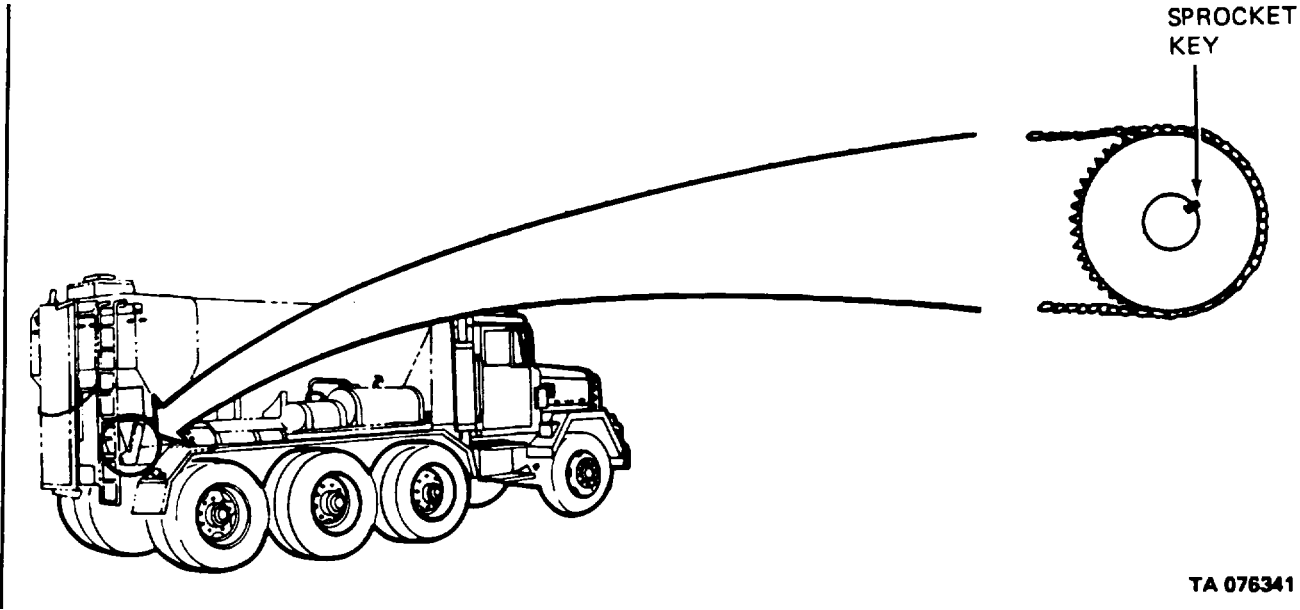
NOTE

A broken key results from some other problem. Usually the auger is jammed by hardened cement. Unless you correct the problem, keys will continue to break.

- a. Find cause of breakage. Correct problem.
- b. Replace key.

Table 8-1. Cement System Troubleshooting Procedures (Continued)

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION



5. CEMENT METER-FEEDER BLOCKED IN PLACE:

Refer problem to Direct Support Maintenance.

6. CEMENT COUNTER DOES NOT OPERATE:

Step 1. Check cable for:
a. Breaks.

b. Kinks.

Straighten or replace cable (para 813).

Step 2. Check drive system for free movement.

Use manual control to actuate air pads. Give several sharp blasts of air.

Table 8-1. Cement System Troubleshooting Procedures (Continued)

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>6. CEMENT COUNTER DOES NOT OPERATE (Continued):</p> <div> </div> <div> <p>TA 076342</p> </div> <p>Step 3. Check that cable connectors are unbroken and properly seated. Tighten connectors or replace cable (para 8-13).</p> <p>Step 4. Be sure setscrews are tight. Tighten setscrews (para 8-13).</p> <p>7. CEMENT SCREEN DOES NOT VIBRATE:</p> <p>Step 1. Check that arm between vibrator and screen is unbroken, firmly attached. Attach or replace arm.</p> <p>Step 2. Check that vibrator is properly lubricated. Lubricate vibrator. (See para 11-8).</p>

Table 8-1. Cement System Troubleshooting Procedures (Continued)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. CEMENT SCREEN DOES NOT VIBRATE (Continued):		
	Step 3. Check that chassis air pressure is over 65 psi (448 kPa). Start up truck and allow pressure to build up. If pressure remains low, trouble-shoot chassis air system (see TM 9-2320-273-20).	
	Step 4. Check for air leaks. Tighten connections or replace leaking part (para 11-12).	
	Step 5. Check air supply at vibrator. Find blocked line or valve. Remove block or replace part (para 11-12).	
	Step 6. Replace vibrator (para 11-8).	

Section III MAINTENANCE PROCEDURES

8-7. INTRODUCTION. I

This section provides you with Organizational Level maintenance procedures for the cement system of the mixer body. Paragraph 8-8 summarizes the maintenance tasks. Paragraphs 8-9 thru 8-15 contain detailed instructions for each task.

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88. CEMENT SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

**EQUIPMENT
CONDITION**

PARAGRAPH

TM 5-3895372-10.

CONDITION DESCRIPTION

Cement Bin Empty.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Oil (See Appendix C).
 Filter Cloth, NP5033034 (50663).
 GAA (See Appendix C).
 Cement Meter Register, NP5016-004 (50663).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

PERSONNEL REQUIRED

Two One (MOS-62B20).

REFERENCES (TM)

REFERENCES (TM)
 LO 5-3895-372-12
 TM 53895372-10.
 TM 53895372-20P.
 TM 9-232027310

GENERAL SAFETY INSTRUCTIONS

Engine Off.
 Transmission in Neutral.
 Parking Brake Set.
 Safety Glasses Should be Worn When Working
 Around Cement

REFERENCES (TROUBLESHOOTING)

Table -1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Cement Screen Maintenance: a. Removal. b. Installation.	89 8-9A 89B	8-1
2.	Screen Vibrator Maintenance: a. Removal. b. Installation. c. Operational check.	8-10 8-10A 8-10B 8-10C	8-1

8-8. CEMENT SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
3.	Filter Cloth Replacement:	8-11	8-1
	a. Operational check.	8- 11A	
	b. Removal.	8-11 B	
	c. Installation.	8-11C	
4.	Spring Tine Maintenance:	8-12	8-1
	a. Inspection.	8-12A	
	b. Hammer replacement.	8-12B	
	c. Adjustment.	8-12C	
5.	Meter Register Cable Maintenance:	8-13	8-1
	a. Removal.	8-13A	
	b. Lubrication.	8-13B	
	c. Installation.	8-13C	
	d. Operational check.	8-13D	
	<p>NOTE Maintenance procedures for the fluffer air supply and bin vibrators are listed in paragraphs 11-8, 11-12, and 11-14.</p>		
6.	Cement Meter Register Replacement:	8-14	8-1
	a. Removal.	8-14A	
	b. Installation.	8-14B	
7.	Cement System Drive Maintenance:	8-15	8-1
	a. Removal.	8-15A	
	b. Disassembly.	8-15B	
	c. Cleaning and inspection.	8-15C	
	d. Assembly.	8-15D	
	e. Installation.	8-15E	

CEMENT SYSTEM.

8-9. CEMENT SCREEN MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (10)
- 15 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

None.

None

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5.3895-372-12.
- TM 9-2320-273-10.
- TM 5-3895-372-10.
- TM 5-3895-372-20P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 8-1.

CEMENT SYSTEM.

8-9. CEMENT SCREEN MAINTENANCE (Continued).

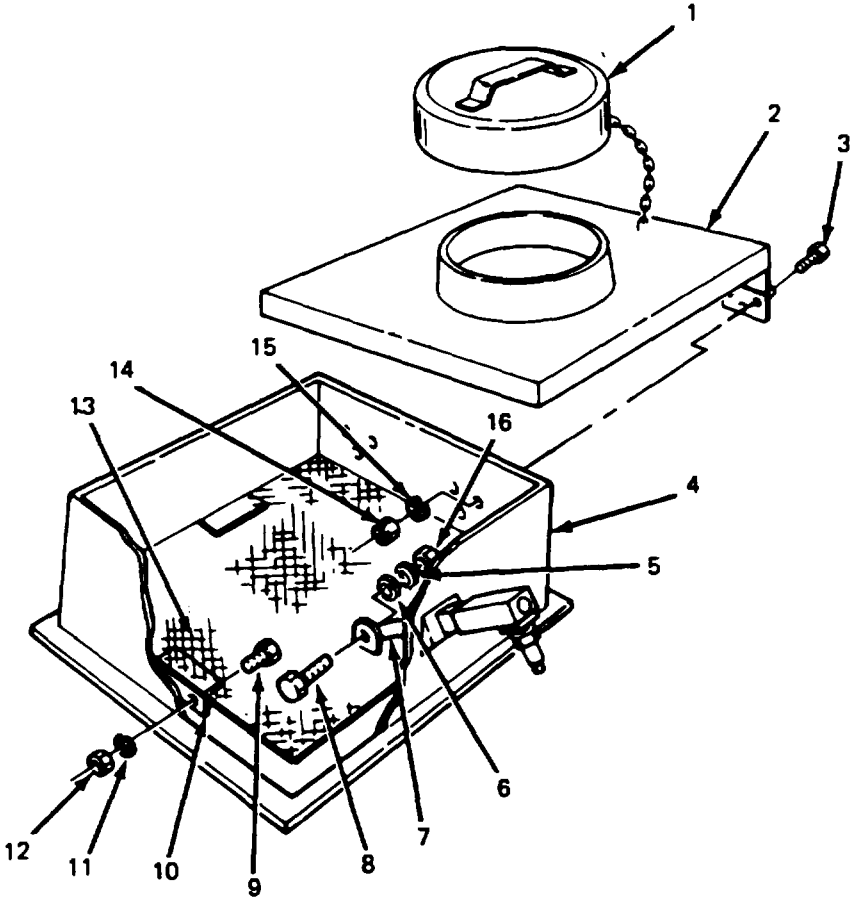
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|--|---|
| 1. Hopper (4). | Remove from bin. |
| 2. Screw (8), lockwasher (6), flat washer (5), and nut (16). | Unscrew and remove arm (7) from screen (13). |
| 3. Eight screws (9), lockwashers (11), and eight nuts (12). | Turn hopper (4) up-side-down to loosen and remove four brackets (10) and screen (13). |

LEGEND:

- 1. LID
- 2. LID
- 3. SCREW (6)
- 4. HOPPER
- 5. FLAT WASHER
- 6. LOCKWASHER
- 7. ARM
- 8. SCREW
- 9. SCREW (8)
- 10. BRACKET (4)
- 11. LOCKWASHER (8)
- 12. NUT (8)
- 13. SCREEN
- 14. NUT (6)
- 15. LOCKWASHER (6)
- 16. NUT



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CEMENT SYSTEM.

8-9. CEMENT SCREEN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL (Continued).

NOTE

If necessary, use the following steps to remove lids.

4.	Six screws (3), lock-washers (15), and nuts (14).	Unscrew and remove lid (2) from hopper (4).
----	---	---

5.	Lid (1).	Pull up and remove from lid (2).
----	----------	----------------------------------

B. INSTALLATION.

6.	Screen (13).	Turn hopper (4) up-side-down and set screen (13) in place.
----	--------------	--

7.	Four brackets (10).	Install to hopper (4) with eight screws (9), lock-washers (11), and nuts (12).
----	---------------------	--

8.	Arm (7). I	Install to screen (13) with screw (8), lockwasher (6), flat washer (5), and nut (16).
----	------------	---

9.	Lid (2).	Install to hopper (4) with six screws (3), lockwashers (15), and nuts (14).
----	----------	---

10.	Lid (1).	Set in place on lid (2).
-----	----------	--------------------------

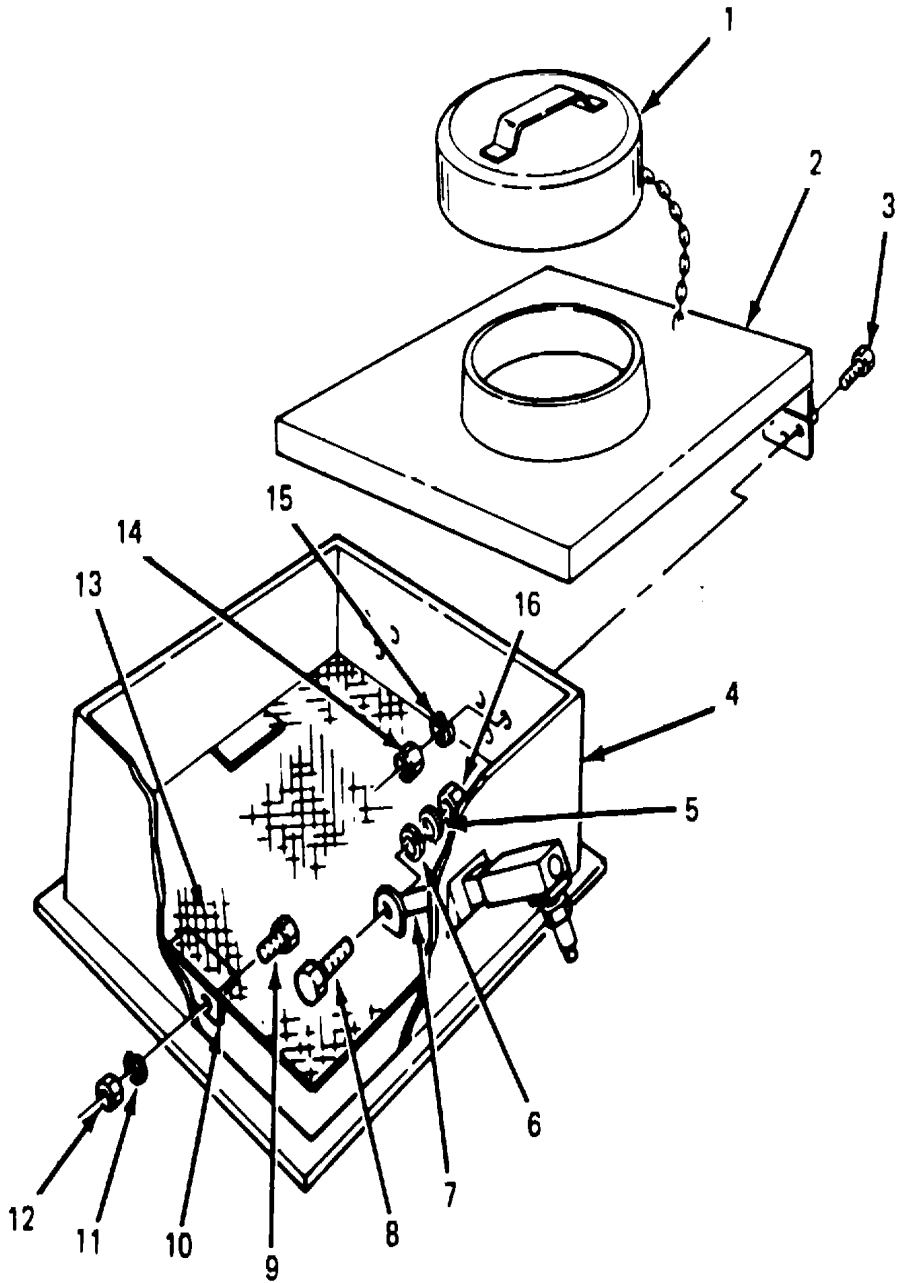
CEMENT SYSTEM

89. CEMENT SCREEN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

LEGEND:

- 1. LID
- 2. LID
- 3. SCREW (6)
- 4. HOPPER
- 5. FLAT WASHER
- 6. LOCKWASHER
- 7. ARM
- 8. SCREW
- 9. SCREW (8)
- 10. BRACKET (4)
- 11. LOCKWASHER (8)
- 12. NUT (8)
- 13. SCREEN
- 14. NUT (6)
- 15. LOCKWASHER (6)
- 16. NUT



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CEMENT SYSTEM.

8-10. SCREEN VIBRATOR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
 - c. Operational Check. (5)
- 15 Minutes Total

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**
None.

CONDITION DESCRIPTION
None..

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Oil (See Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 53895-372-12.
- TM 5-3895-372-10.
- TM 5-3895372-2P.
- TM 923285-273-10P.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.
- Safety Glasses Should be Worn When Working Around Cement.

TROUBLESHOOTING REFERENCES

Table 61.

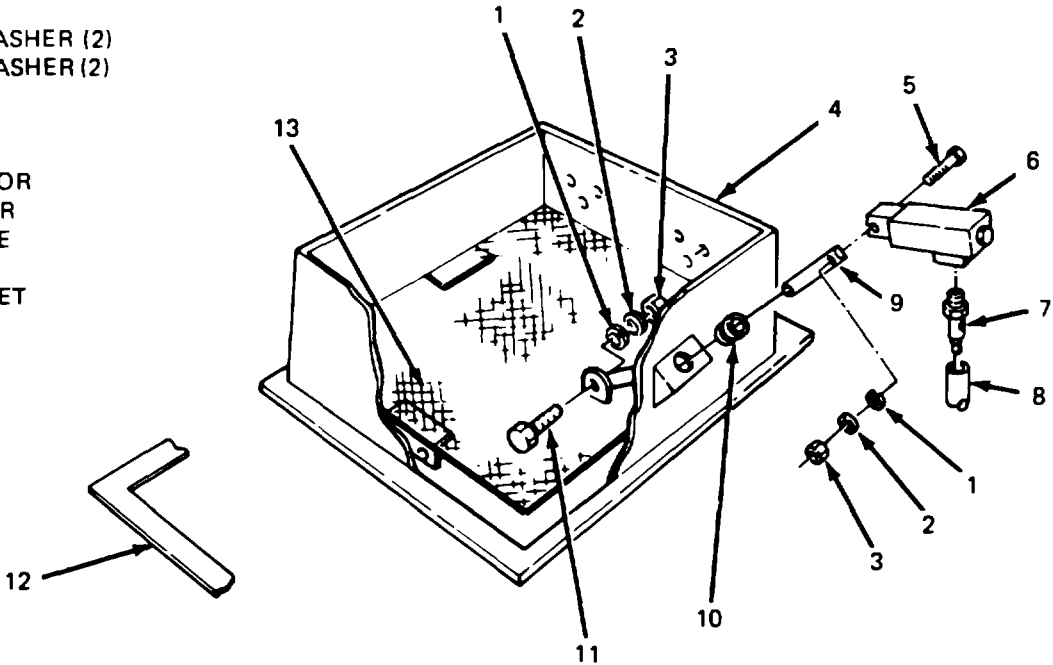
CEMENT SYSTEM.

8-10,. SCREEN VIBRATOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL		
1. Air line (8).	Twist and pull off of coupler (7).	
2. Coupler (7).	Unscrew from vibrator (6).	
3. Screw (5), lockwasher (1), flat washer (2), and nut (3).	Unscrew and remove vibrator (6).	
4. Screw (11), lockwasher (1), flat washer (2), and nut (3).	Unscrew and remove arm (9) and grommet (10).	
5. Gasket (12)	Remove from hopper (4).	Replace if damaged.

LEGEND:

- 1. LOCKWASHER (2)
- 2. FLAT WASHER (2)
- 3. NUT (2)
- 4. HOPPER
- 5. SCREW
- 6. VIBRATOR
- 7. COUPLER
- 8. AIR LINE
- 9. ARM
- 10. GROMMET
- 11. SCREW
- 12. GASKET
- 13. SCREEN



TA 076345

CEMENT SYSTEM.

8-10. SCREEN VIBRATOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
6. Gasket (12).	Position on bottom of hopper (4).	
7. Grommet (10) and arm (9).	a. Install grommet (10) into hopper (4) as shown.	
	b. Install arm (9) thru grommet (10) and secure inside hopper at screen (13) with screw (11), lockwasher (1), flat washer (2) and nut (3).	
8. Vibrator (6).	Aline with arm (9) and secure with screw (5), lockwasher (1), flat washer (2), and nut (3).	
9. Coupler (7).	Screw into vibrator (6).	
10. Air line (8).	Twist and push onto coupler (7).	
C. OPERATIONAL CHECK		
11. Air line (8).	a. Use quick-disconnect fitting to connect to supply line (see TM 5-3895-372-10).	
	b. Check for screen vibration.	
NOTE		
If screen does not vibrate, check for:		
If screen does not vibrate, check for:		
a.	Chassis air pressure less than 65 psi (448 kPa).	
b.	Arm (9) broken or not bolted to screen.	
c.	Unlubricated vibrator. (Vibrator may rust due to moisture in air lines.)	
d.	Blocked or leaking air lines.	

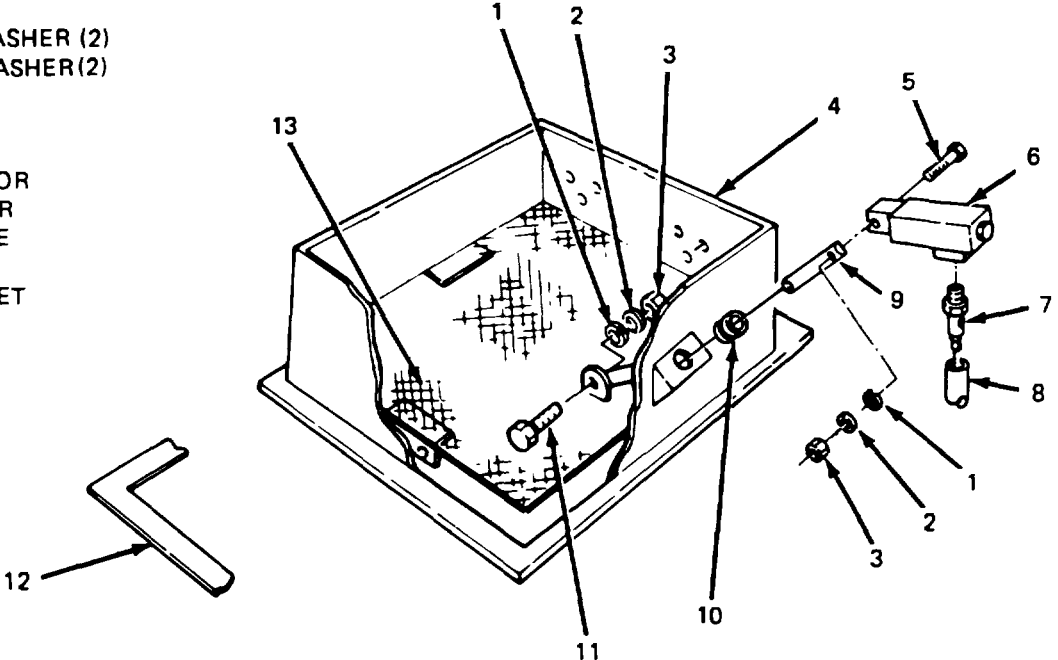
CEMENT SYSTEM.

8-10. SCREEN VIBRATOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

LEGEND:

- 1. LOCKWASHER (2)
- 2. FLAT WASHER(2)
- 3. NUT (2)
- 4. HOPPER
- 5. SCREW
- 6. VIBRATOR
- 7. COUPLER
- 8. AIR LINE
- 9. ARM
- 10. GROMMET
- 11. SCREW
- 12. GASKET
- 13. SCREEN



TA 076346

CEMENT SYSTEM.

8-11. FILTER CLOTH REPLACEMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Operational Check. (10)
 - b. Removal. (5)
 - c. Installation. (10)
- 25 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 5-3895-372-10.
TM 9-2320-273-10.

Cement Bin Empty.
Air System Charged.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Filter Cloth, NP5033034 (50663).

PERSONNEL REQUIRED

Two (MOSR62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.
Safety Glasses Should be Worn When Working
Around Cement.

TROUBLESHOOTING REFERENCES

Table 8-1.

CEMENT SYSTEM.

8-11. FILTER CLOTH REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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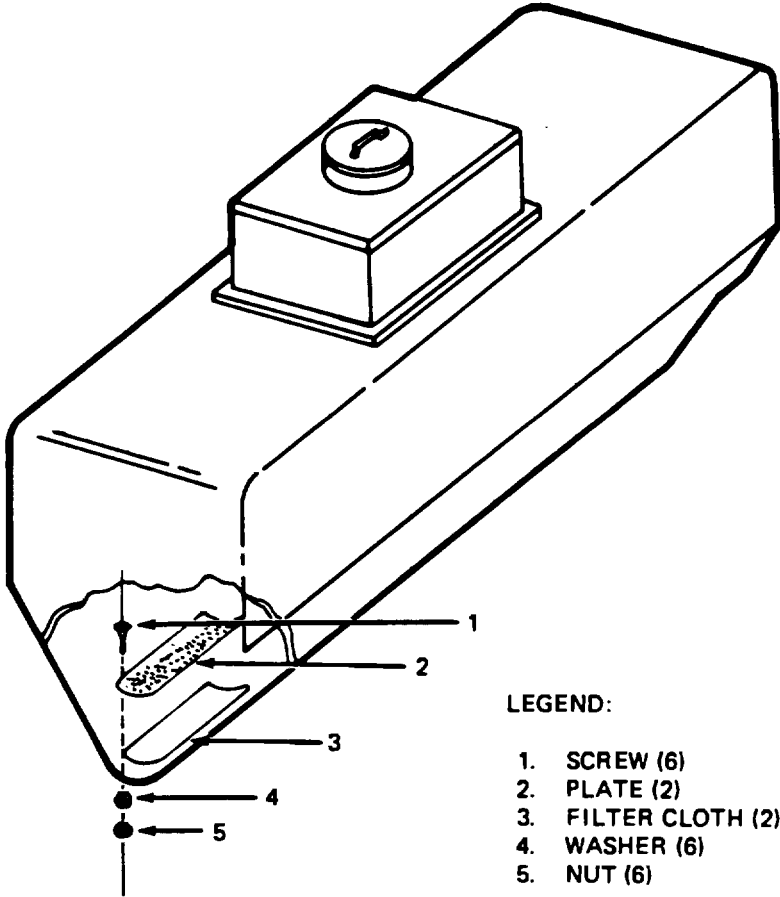
A. OPERATIONAL CHECK.

- 1. Cement bin.
- 2. Two filter cloths (3).

Fill 3-5 in.
deep with cement.
Actuate with several short
sharp blasts. Watch for
gentle puffs of cement.

- a. Torn cloth gives sharp
blast.
- b. Clogged cloth gives no
air action.

(8-13 cm)
One mechanic at fluffer con-
trol, one at top of cement
bin.



TA 076347

CEMENT SYSTEM.

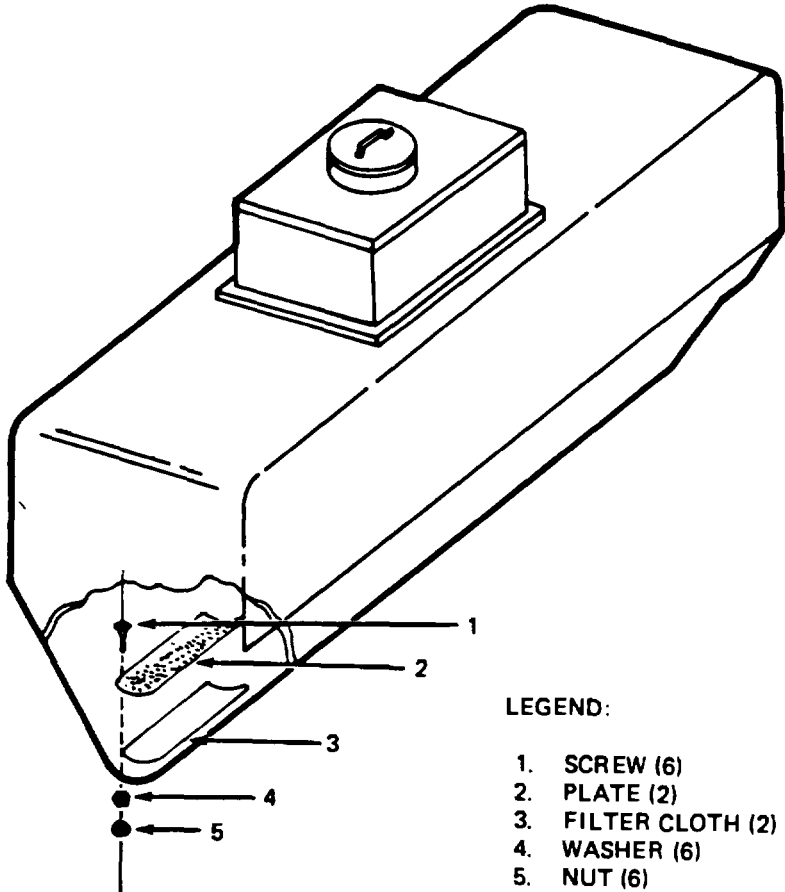
8-11. FILTER CLOTH REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. REMOVAL		
3. Cement bin.	Empty.	Refer to TM 5-3895-372-10.
4. Six screws (1), washers (4), and nuts (5).	Unscrew and remove.	One mechanic in bin, one outside.
5. Plate (2) and filter cloth (3).	Remove.	
C. INSTALLATION.		
6. Filter cloth (3) and plate (2).	Place in bin.	
7. Six screws (1), washers (4), and nuts (5)	Screw in and tighten.	One mechanic in bin, one outside.
<p>NOTE When procedure is finished, recheck operation (part A).</p>		

CEMENT SYSTEM.

8-11. FILTER CLOTH REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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TA 076348

CEMENT SYSTEM.

8-12. SPRING TINE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Inspection. (5)
 - b. Hammer Replacement. (5)
 - c. Adjustment. (5)
- 15 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**
8-15.

CONDITION DESCRIPTION
Panels Removed.

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 53895-372-20P.
- TM 5-3895-372-10.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.
- Safety Glasses Should be Worn When Working Around Cement.

TROUBLESHOOTING REFERENCES

Table 81.

CEMENT SYSTEM.

8-12. SPRING TINE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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NOTE

Before you begin maintenance, be sure hammers (6) have 1/8 in. to 1/4 in. clearance from drum (1), not being lifted by vane (2).

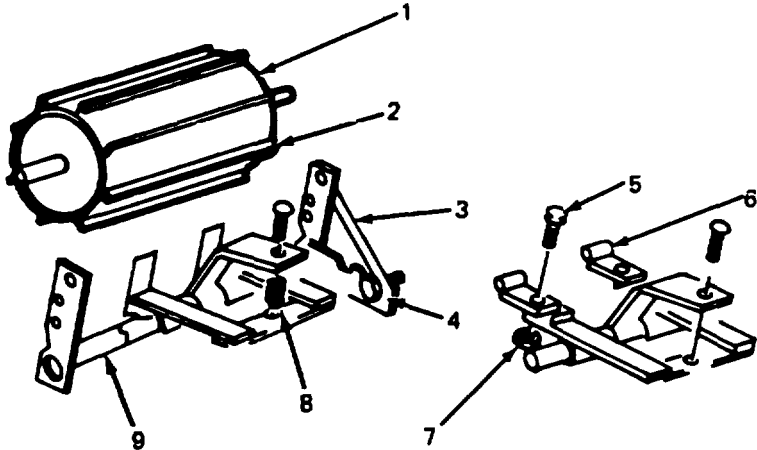
A. INSPECTION.

1. Two hammers (6).

Inspect for:

- Worn heads.
- Breaks.
- Bends.
- Missing parts.
- Hammer to drum clearance of 1/8 in. to 1/4 in.

Replace if necessary (Part B).



LEGEND:

- DRUM
- VANE
- SHAFT LINK
- ARM
- SCREW
- HAMMER (2)
- NUT
- SPRING
- SHAFT

TA 076349

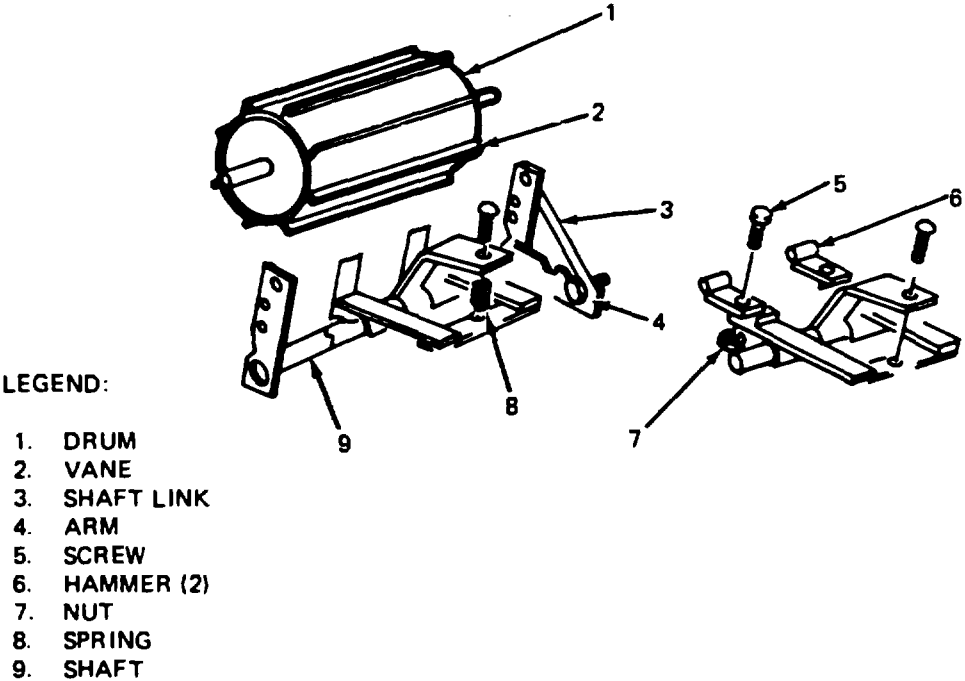
CEMENT SYSTEM.

B-12. SPRING TINE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. INSPECTION (Continued).		
2. Notched arm (4).	Check that arm can be pressed down 3/4-1 in. (19-25 mm) when shaft link (3) is in notch.	Adjust if necessary (Part C).
B. HAMMER REPLACEMENT.		
CAUTION		
Always check adjustment after replacing a hammer.		
3. Shaft link (3).	Remove from notch.	
4. Screw (5) and nut (7).	Unscrew and remove hammer (6).	Remove
5. Hammer (6).	Attach to spring tine with screw (5) and nut (7).	Tighten.
C. ADJUSTMENT.		
6. Shaft link (3).	Try placing link in a different notch of arm (4). be able to press arm down 3/4-1 in. spring tension.	If this does not work, go to You should Step 7. (19-25 mm) against
7. Shaft (9).	Turn with pipe wrench until arm goes down 3/4-1 in. (19-25 mm) against spring (8) when shaft link (3) is in a notch.	

CEMENT SYSTEM.

8-12. SPRING TINE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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TA 076350

CEMENT SYSTEM.

8-13. METER REGISTER CABLE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Lubrication. (5)
 - c. Installation. (10)
 - d. Operational Check. (5)
- 25 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

GAA (See Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5-3895372-12.
- TM 5-3895-372-10.
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 81.

CEMENT SYSTEM.

8-13. METER REGISTER CABLE MAINTENANCE (Continued).

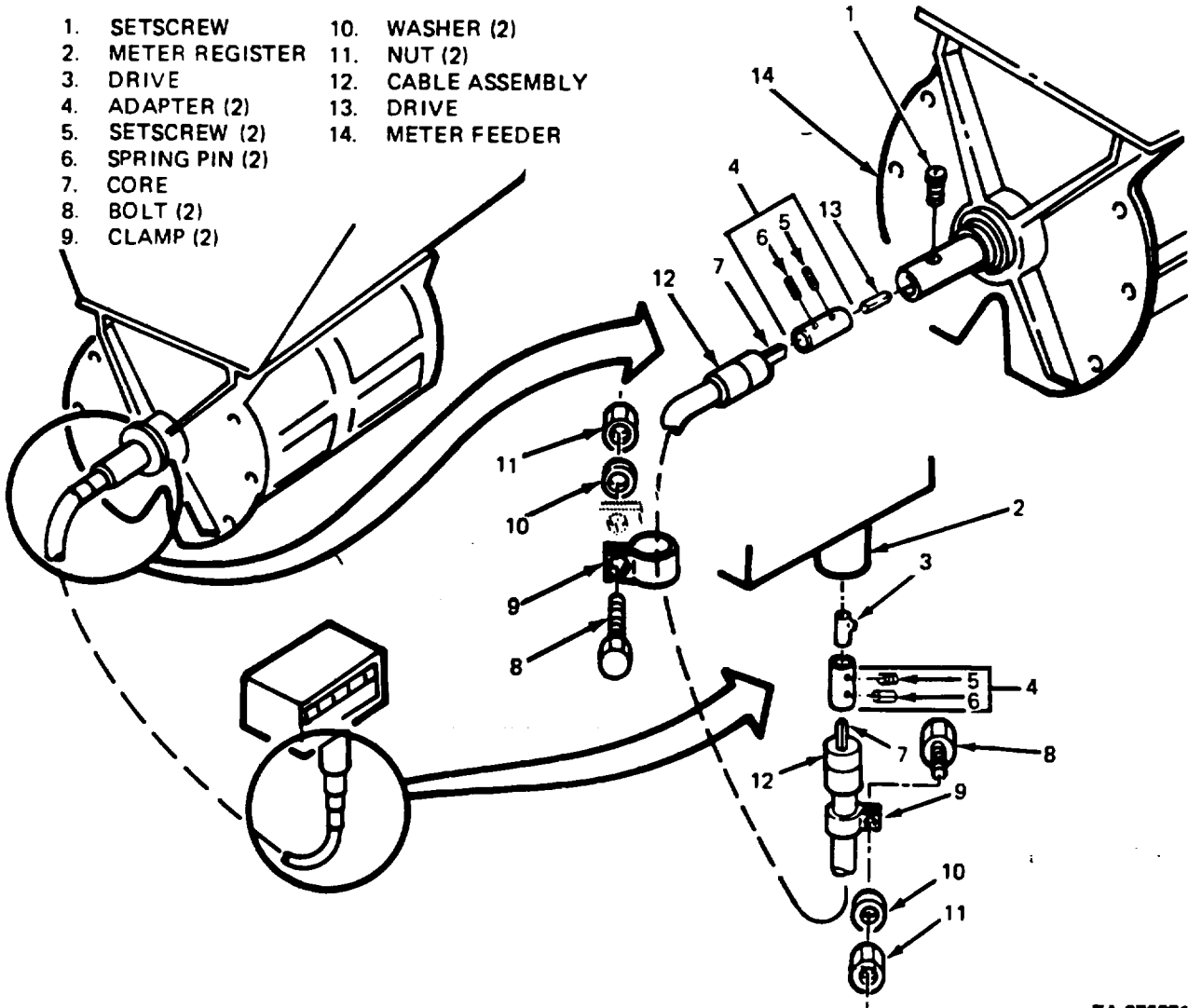
LOCATION/ITEM	ACTION	REMARKS
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A. REMOVAL.

- | | | |
|--|---------------------------------|--------------------------------------|
| 1. Clamp (9), bolt (8), washer (10), and nut (11). | Loosen and remove. | At meter register (2). |
| 2. Cable assembly (12). | Remove from meter register (2). | |
| 3. Access panel to meter feeder cable | Open | Cable passes through slot in bottom. |

LEGEND:

- | | |
|-------------------|--------------------|
| 1. SETSCREW | 10. WASHER (2) |
| 2. METER REGISTER | 11. NUT (2) |
| 3. DRIVE | 12. CABLE ASSEMBLY |
| 4. ADAPTER (2) | 13. DRIVE |
| 5. SETSCREW (2) | 14. METER FEEDER |
| 6. SPRING PIN (2) | |
| 7. CORE | |
| 8. BOLT (2) | |
| 9. CLAMP (2) | |



TA 076351

CEMENT SYSTEM.

8-13. METER REGISTER CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Setscrew (1).	Loosen.	Turn meter feeder (14) until setscrew (1) is accessible.
5. Clamp (9), bolt (8), washer (10), and nut (11).	a. Loosen and remove. b. Pull cable assembly (12) from meter feeder (14).	
6. Two adapters (4).	Loosen two setscrews (5) and remove two drives (3) and (13).	
7. Two spring pins (6).	Push from adapters (4) and remove adapters from cable assembly (12).	
B. LUBRICATION.		
8. Core (7).	Remove from cable assembly (12) and grease thoroughly with GAA.	
C. INSTALLATION.		
9. Core (7).	Reinstall.	Do not tighten bolts (8) at this time.
10. Cable assembly (12).	a. Position into two clamps (9). b. Install two bolts (8), washers (10), and nuts (11).	
11. Two adapters (4).	Position on core (7) and install two spring pins (6).	
12. Two drives (3) and (13).	a. Position into two adapters (4) and lock with two setscrews (5). b. Insert drive (13) into meter feeder (14) and lock with setscrew (1). c. Insert drive (3) into meter register (2).	
13. Two bolts (8).	Tighten at clamps (9) to secure cable assembly (12).	
D. OPERATIONAL CHECK.		
14. Meter feeder (14).	a. Disengage cement bin clutch. b. Turn meter feeder manually. c. Check that meter register count changes with each turn.	See TM 5-3895-372-10.

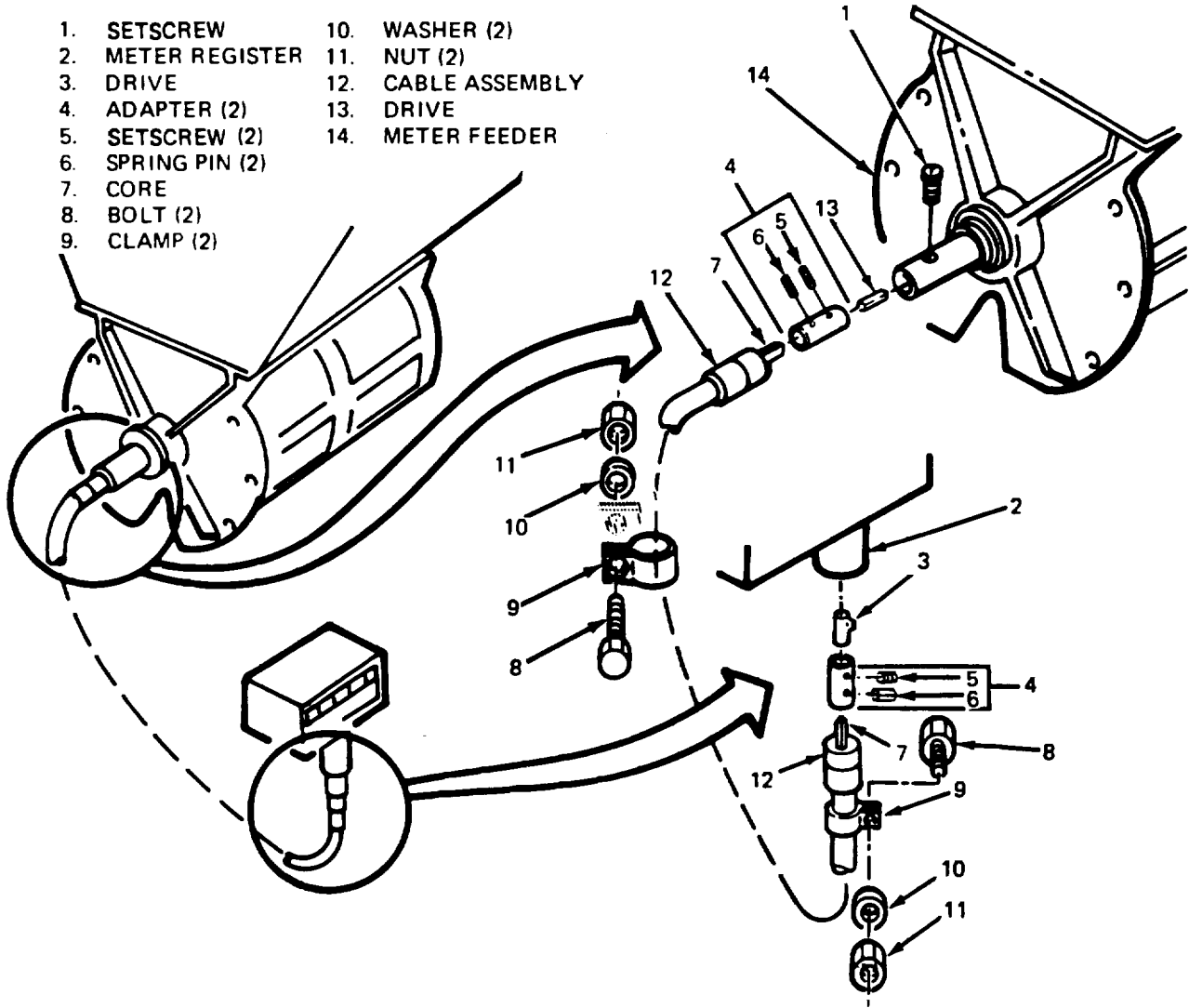
CEMENT SYSTEM.

8-13. METER REGISTER CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- | | |
|-------------------|--------------------|
| 1. SETSCREW | 10. WASHER (2) |
| 2. METER REGISTER | 11. NUT (2) |
| 3. DRIVE | 12. CABLE ASSEMBLY |
| 4. ADAPTER (2) | 13. DRIVE |
| 5. SETSCREW (2) | 14. METER FEEDER |
| 6. SPRING PIN (2) | |
| 7. CORE | |
| 8. BOLT (2) | |
| 9. CLAMP (2) | |



TA 076352

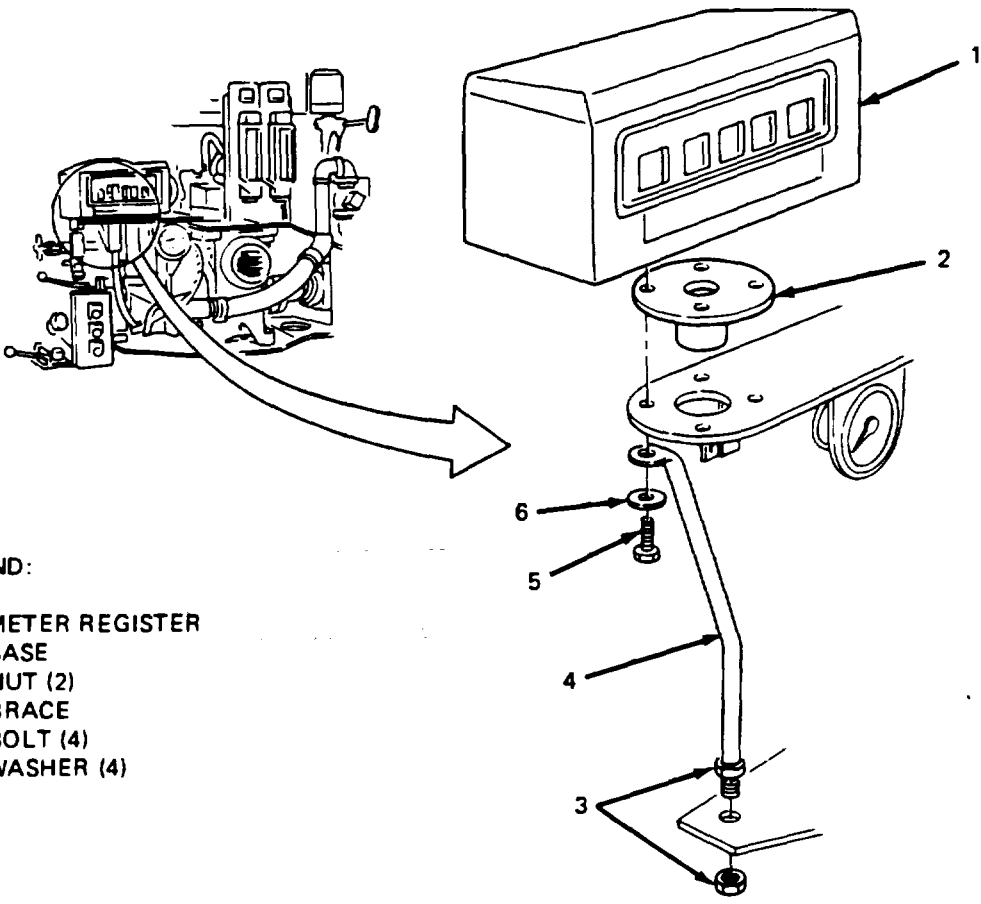
CEMENT SYSTEM.

8-14. CEMENT METER REGISTER REPLACEMENT.		
LOCATION/ITEM	ACTION	REMARKS
a. Removal.	(10)	
b. Installation.	(10)	
	20 Minutes Total.	
<u>INITIAL SETUP</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
	8-13.	Cable Assembly Removed.
<u>APPLICABLE CONFIGURATIONS</u>		
M919.		
<u>TEST EQUIPMENT</u>		
None.		
<u>SPECIAL TOOLS</u>		
None.		
<u>MATERIALS/PARTS (P/N)</u>		
Cement Meter Register, NP5016004 (50663).		
<u>PERSONNEL REQUIRED</u>	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>	
One (MOS-62B20).	Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u>	<u>GENERAL SAFETY INSTRUCTIONS</u>	
TM 53895372-20P.	Engine Off.	
TM 9-2320-273-10.	Transmission in Neutral.	
	Parking Brake Set.	
<u>TROUBLESHOOTING REFERENCES</u>		
Table -1.		

CEMENT SYSTEM.

8-14. CEMENT METER REGISTER REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Four bolts (5) and washers (6).	Remove.	
2. Meter register (1) and base (2).	Remove.	
3. Brace (4) and two nuts (3).	Remove if necessary.	
B. INSTALLATION.		
4. Brace (4) and two nuts (3).	Install.	
5. Meter register (1)	Set in place	
6. Four bolts (5) and washers(6).	Install.	Tighten.



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CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Disassembly. (20)
 - c. Cleaning and Inspection. (15)
 - d. Assembly. (20)
 - e. Installation. (30)
- 115 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM R389(372-20P).
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 81.

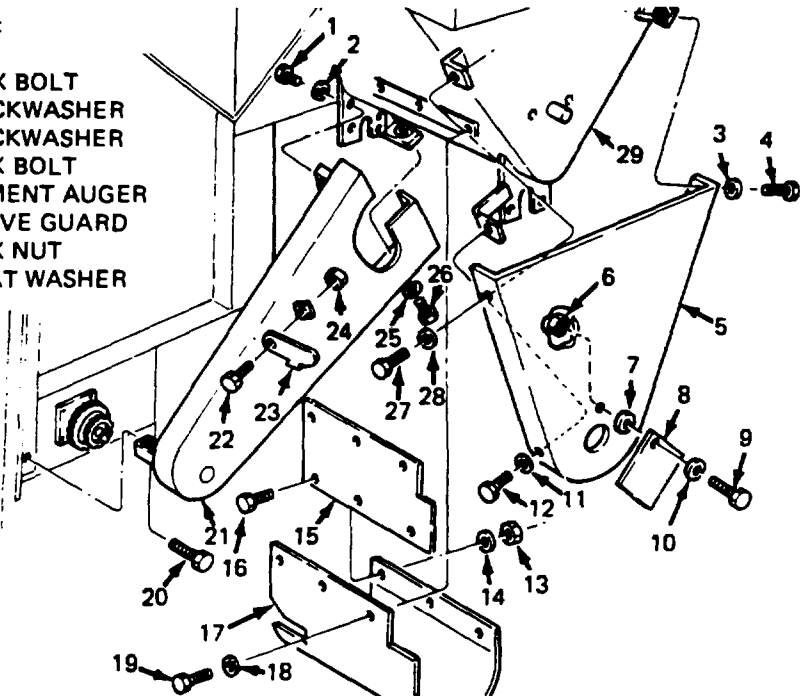
CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Cement auger drive guard (5).	a. Remove three hex bolts (4), (12), and (27) with lockwashers (3), (11), and (28). b. Remove cement auger drive guard (5) from end of cement bin (29). c. If necessary, remove access cover (8) by removing hex bolt (9), flat washer (10) and hex nut (6).	
2. Front guard (15) and rear guard (17).	a. Unscrew six hex bolts (19) and lockwashers (18) and remove assembled front guard (15) and rear guard (17). b. If necessary, separate by removing three hex bolts (16), lockwashers (14), and hex nuts (13).	

LEGEND:

- 1. HEX BOLT
- 2. LOCKWASHER
- 3. LOCKWASHER
- 4. HEX BOLT
- 5. CEMENT AUGER DRIVE GUARD
- 6. HEX NUT
- 7. FLAT WASHER



- 8. ACCESS COVER
- 9. HEX BOLT
- 10. FLAT WASHER
- 11. LOCKWASHER
- 12. HEX BOLT
- 13. HEX NUT (3)
- 14. LOCKWASHER (3)
- 15. FRONT GUARD
- 16. HEX BOLT (3)
- 17. REAR GUARD
- 18. LOCKWASHER (6)
- 19. HEX BOLT (6)
- 20. HEX BOLT
- 21. BIN DRIVE GUARD
- 22. HEX BOLT
- 23. JAW CLUTCH LATCH
- 24. LOCKNUT
- 25. LOCKWASHER
- 26. HEX BOLT
- 27. HEX BOLT
- 28. LOCKWASHER
- 29. CEMENT BIN

TA 076354

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Idler spring (39).	Remove.	
5. Idler Bracket (40).	Unscrew hex bolt (42) with locknut (98).	
6. Idler sprocket (43).	Remove hex bolt (44), two hex nuts (37) and (41), and lockwasher (38).	
7. Two chains (47) and (65).	Unfasten two chain link connections (66) from offset chain links (64) and remove.	
8. Sprocket (97).	Loosen socket setscrew (46) and pry sprocket (97) and square key (48) off shaft (90).	
9. Idler spring (84).	Remove.	
10. Idler bracket (88).	Unscrew hex bolt (33) from locknut (98) and remove.	
11. Idler sprocket (89).	Remove hex bolt (91), hex nut (85), lockwasher (86) and flat washer (87).	
12. Coupling cover (76) and (82).	Separate by removing four screws (95) and square nuts (83).	
13. Chain (80).	Unfasten chain link connection (66) from offset chain link (64) and remove.	
14. Clutch handle (51).	a. Remove two hex bolts (32) and (50) with hex nuts (59) and (60). b. Separate halves and remove from pins on yoke (54).	
15. Shaft (90).	a. Support shaft (90) and remove four hex bolts (94) and (31), flat washers (30) and (36), lockwashers (72) and (35) with hex nuts (73) and (34). b. Lower shaft (90) sliding the two flange bearings (71) and (93) in the slots.	

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
30. FLAT WASHER	58. SET COLLAR	90. SHAFT
31. HEX BOLT	59. HEX NUT	91. HEX BOLT
32. HEX BOLT	60. HEX NUT	92. GREASE FITTING
33. HEX BOLT	61. HEX BOLT (2)	93. FLANGE BEARING
34. HEX NUT	62. GREASE FITTING	94. HEX BOLT
35. LOCKWASHER	63. SET COLLAR	95. SCREW (4)
36. FLAT WASHER	64. OFFSET CHAIN LINK (2)	96. SOCKET SETSCREW
37. HEX NUT	65. CHAIN	97. SPROCKET
38. LOCKWASHER	66. CHAIN LINK	98. LOCKNUT
39. IDLER SPRING	67. GREASE FITTING	99. SET COLLAR
40. IDLER BRACKET	68. CLUTCH SPROCKET HALF	
41. HEX NUT	69. SET COLLAR	
42. HEX BOLT	70. SOCKET SETSCREW	
43. IDLER SPROCKET	71. FLANGE BEARING	
44. HEX BOLT	72. LOCKWASHER (2)	
45. SOCKET SETSCREW	73. HEX NUT (2)	
46. SOCKET SETSCREW	74. SET COLLAR	
47. CHAIN	75. GREASE FITTING	
48. SQUARE KEY	76. COUPLING COVER	
49. SOCKET SETSCREW	77. SQUARE KEY	
50. HEX BOLT	78. COUPLING HALF	
51. CLUTCH HANDLE	79. SOCKET SETSCREW	
52. HEX NUT (2)		
53. FLAT WASHER (2)		
54. YOKE		
55. CLUTCH SLIDE HALF		
56. SQUARE KEY		
57. SOCKET SETSCREW		
	80. CHAIN	
	81. COUPLING HALF	
	82. COUPLING COVER	
	83. SQUARE NUT (4)	
	84. IDLER SPRING	
	85. HEX NUT	
	86. LOCKWASHER	
	87. FLAT WASHER	
	88. IDLER BRACKET	
	89. IDLER SPROCKET	

TA 076355

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY.		
16. Socket setscrew (79).	Loosen.	Mark location on shaft (90) to aid in reassembly.
17. Coupling half (78).	Remove.	
18. Square key (77).	Remove.	
19. Coupling cover (76).	Remove.	
20. Shaft (90).	a. Remove all paint from set collar (74) to end. b. Clean and polish with emery paper.	
21. Set collar (74).	Loosen socket setscrew (96) and remove.	Mark location on shaft (90) to aid in reassembly.
22. Flange bearing (71).	Remove.	
23. Set collar (69).	Loosen socket setscrew (70) and remove.	Mark location on shaft (90) to aid in reassembly.
24. Clutch sprocket half (68).	Remove.	
25. Set collar (63).	Loosen socket setscrew (49) and remove.	Mark location on shaft (90) to aid in reassembly.
26. Yoke (54).	Unscrew two hex bolts (61), flat washers (53) and hex nuts (52) and remove.	
27. Clutch slide half (55).	Remove.	
28. Square key (56).	Remove.	
29. Set collar (58).	Loosen socket setscrew (57) and remove.	Mark location on shaft (90) to aid in reassembly.
NOTE		
In steps 30 and 31, the parts are removed from the right end of the shaft (90).		
30. Set collar (99).	Loosen socket setscrew (45) and remove.	Mark location on shaft (90) to aid in reassembly.
31. Flange bearing (93)	Remove.	

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p>		
30. FLAT WASHER	58. SET COLLAR	90. SHAFT
31. HEX BOLT	59. HEX NUT	91. HEX BOLT
32. HEX BOLT	60. HEX NUT	92. GREASE FITTING
33. HEX BOLT	61. HEX BOLT (2)	93. FLANGE BEARING
34. HEX NUT	62. GREASE FITTING	94. HEX BOLT
35. LOCKWASHER	63. SET COLLAR	95. SCREW (4)
36. FLAT WASHER	64. OFFSET CHAIN LINK (2)	96. SOCKET SETSCREW
37. HEX NUT	65. CHAIN	97. SPROCKET
38. LOCKWASHER	66. CHAIN LINK CONNECTION (2)	98. LOCKNUT
39. IDLER SPRING	67. GREASE FITTING	99. SET COLLAR
40. IDLER BRACKET	68. CLUTCH SPROCKET HALF	
41. HEX NUT	69. SET COLLAR	
42. HEX BOLT	70. SOCKET SETSCREW	
43. IDLER SPROCKET	71. FLANGE BEARING	
44. HEX BOLT	72. LOCKWASHER (2)	
45. SOCKET SETSCREW	73. HEX NUT (2)	
46. SOCKET SETSCREW	74. SET COLLAR	
47. CHAIN	75. GREASE FITTING	
48. SQUARE KEY	76. COUPLING COVER	
49. SOCKET SETSCREW	77. SQUARE KEY	
50. HEX BOLT	78. COUPLING HALF	
51. CLUTCH HANDLE	79. SOCKET SETSCREW	
52. HEX NUT (2)		
53. FLAT WASHER (2)		
54. YOKE		
55. CLUTCH SLIDE HALF		
56. SQUARE KEY		
57. SOCKET SETSCREW		

TA 076356

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
C. CLEANING AND INSPECTION.		
32. Two flange bearings (71) and (93).	Clean and inspect for roughness and looseness.	Replace, if required.
33. Four grease fittings (62), (67), (75), and (92).	Inspect for damaged or broken fittings.	Replace, if required.
34. Sprocket (97), clutch sprocket half (68), and two idler sprockets (43) and (89).	Inspect for excessively worn or broken cogs.	Replace, if required.
35. Three chains (47), (65), and (80).	Clean and inspect for damaged or excessively worn links.	
D. ASSEMBLY.		
36. Flange bearing (93).	Install.	
37. Set collar (99).	Install and tighten socket set-screw (45).	Position in location marked during disassembly.
38. Square key (48).	Install on shaft (90).	
39. Sprocket (97).	Install and tighten socket setscrew (46).	Position in location marked during disassembly.
40. Set collar (58).	Install and tighten socket setscrew (57).	
41. Square key (56).	Install.	
42. Clutch slide half (55).	Install.	
43. Yoke (54).	Install and secure with two hex bolts (61), flat washers (53), and hex nuts (52).	
44. Set collar (63).	Install and tighten socket set-screw (49).	Position in location marked during disassembly.
45. Clutch sprocket half (68).	Install.	
46. Set collar (69).	Install and tighten socket set-screw (70).	Position in location marked during disassembly.
47. Flange Bearing (71).	Install.	
48. Set collar (74).	Install and tighten socket setscrew (96).	Position in location marked during disassembly.

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p>		
30. FLAT WASHER	58. SET COLLAR	90. SHAFT
31. HEX BOLT	59. HEX NUT	91. HEX BOLT
32. HEX BOLT	60. HEX NUT	92. GREASE FITTING
33. HEX BOLT	61. HEX BOLT (2)	93. FLANGE BEARING
34. HEX NUT	62. GREASE FITTING	94. HEX BOLT
35. LOCKWASHER	63. SET COLLAR	95. SCREW (4)
36. FLAT WASHER	64. OFFSET CHAIN LINK (2)	96. SOCKET SETSCREW
37. HEX NUT	65. CHAIN	97. SPROCKET
38. LOCKWASHER	66. CHAIN LINK	98. LOCKNUT
39. IDLER SPRING	67. GREASE FITTING	99. SET COLLAR
40. IDLER BRACKET	68. CLUTCH SPROCKET HALF	
41. HEX NUT	69. SET COLLAR	
42. HEX BOLT	70. SOCKET SETSCREW	
43. IDLER SPROCKET	71. FLANGE BEARING	
44. HEX BOLT	72. LOCKWASHER (2)	
45. SOCKET SETSCREW	73. HEX NUT (2)	
46. SOCKET SETSCREW	74. SET COLLAR	
47. CHAIN	75. GREASE FITTING	
48. SQUARE KEY	76. COUPLING COVER	
49. SOCKET SETSCREW	77. SQUARE KEY	
50. HEX BOLT	78. COUPLING HALF	
51. CLUTCH HANDLE	79. SOCKET SETSCREW	
52. HEX NUT (2)		
53. FLAT WASHER (2)		
54. YOKE		
55. CLUTCH SLIDE HALF		
56. SQUARE KEY		
57. SOCKET SETSCREW		
	80. CHAIN	
	81. COUPLING HALF	
	82. COUPLING COVER	
	83. SQUARE NUT (4)	
	84. IDLER SPRING	
	85. HEX NUT	
	86. LOCKWASHER	
	87. FLAT WASHER	
	88. IDLER BRACKET	
	89. IDLER SPROCKET	

TA 076357

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. ASSEMBLY (Continued).		
49. Coupling cover (76). 50. Square key (77). 51. Coupling half (78).	Install. Install. Install and tighten socket setscrew (79)	Position in location marked during disassembly.
E. INSTALLATION		
52. Shaft (90).	a. Install and support. b. Install four hex bolts (94) and (31), flat washer (30) and (36), lockwashers (72) and (35) with hex nuts (73) and (34) and tighten.	Be sure two flange bearings (71) and (93) are outside of the mounting bracket
53. Clutch handle (51).	a. Install two halves on pins of yoke (54). b. Install and tighten two hex bolts (32) and 50) with hex nuts (59) and (60).	
54. Chain (80).	a. Install on sprockets of coupling halves (78) and (81). b. Install offset chain link (64) and chain link connection (66).	
55. Coupling cover (76) and (82).	Assemble with four screws (95) and square nuts (83).	
56. Idler sprocket (89).	Install and tighten hex bolt (91), hex nut (85), lockwasher (86) and flat washer (87).	
57. Idler bracket (88).	Install and tighten hex bolt (33) and locknut (98).	
58. Idler spring (84).	Install.	
59. Idler sprocket (43).	Install hex bolt, two hex nuts (37) and (41), and lockwasher (38).	
60. Idler bracket (40).	Install and tighten hex bolt (42) and locknut (98).	
61. Idler spring (39).	Install.	
62. Two chains (47) and (65).	a. Install around sprockets and over top of two idler sprockets (43) and (89). b. Install two offset chain links (64) and chain link connections (66).	

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
30. FLAT WASHER	58. SET COLLAR	90. SHAFT
31. HEX BOLT	59. HEX NUT	91. HEX BOLT
32. HEX BOLT	60. HEX NUT	92. GREASE FITTING
33. HEX BOLT	61. HEX BOLT (2)	93. FLANGE BEARING
34. HEX NUT	62. GREASE FITTING	94. HEX BOLT
35. LOCKWASHER	63. SET COLLAR	95. SCREW (4)
36. FLAT WASHER	64. OFFSET CHAIN LINK (2)	96. SOCKET SETSCREW
37. HEX NUT	65. CHAIN	97. SPROCKET
38. LOCKWASHER	66. CHAIN LINK CONNECTION (2)	98. LOCKNUT
39. IDLER SPRING	67. GREASE FITTING	99. SET COLLAR
40. IDLER BRACKET	68. CLUTCH SPROCKET HALF	
41. HEX NUT	69. SET COLLAR	
42. HEX BOLT	70. SOCKET SETSCREW	
43. IDLER SPROCKET	71. FLANGE BEARING	
44. HEX BOLT	72. LOCKWASHER (2)	
45. SOCKET SETSCREW	73. HEX NUT (2)	
46. SOCKET SETSCREW	74. SET COLLAR	
47. CHAIN	75. GREASE FITTING	
48. SQUARE KEY	76. COUPLING COVER	
49. SOCKET SETSCREW	77. SQUARE KEY	
50. HEX BOLT	78. COUPLING HALF	
51. CLUTCH HANDLE	79. SOCKET SETSCREW	
52. HEX NUT (2)		
53. FLAT WASHER (2)		
54. YOKE		
55. CLUTCH SLIDE HALF		
56. SQUARE KEY		
57. SOCKET SETSCREW		
80. CHAIN	81. COUPLING HALF	82. COUPLING COVER
83. SQUARE NUT (4)	84. IDLER SPRING	85. HEX NUT
86. LOCKWASHER	87. FLAT WASHER	88. IDLER BRACKET
89. IDLER SPROCKET		

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CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).'		
LOCATION/ITEM	ACTION	REMARKS
E. INSTALLATION (Continued).		
63. Bin drive guard (21).	a. If removed, install jaw clutch latch (23) with hex bolt (22) and locknut (24). b. Install bin drive guard (21) with hex bolts (1), (20) and (26) and two lockwashers (2) and (25).	
64. Front guard (15) and rear guard (17).	a. If separated, install three hex bolts (16), lockwashers (14), and hex nuts (13). b. Install with six hex bolts (19), and lockwashers (18).	
65. Cement auger drive guard (5).	a. If removed, install access cover (8) with hex bolt (9), flat washer (10) and hex nut (6). b. Install with three hex bolts (4), (12) and (27) and lockwashers (3), (11), and (28).	

CEMENT SYSTEM.

8-15. CEMENT SYSTEM DRIVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ul style="list-style-type: none">1. HEX BOLT2. LOCKWASHER3. LOCKWASHER4. HEX BOLT5. CEMENT AUGER6. DRIVE GUARD7. HEX NUT8. ACCESS COVER9. HEX BOLT10. FLAT WASHER11. LOCKWASHER12. HEX BOLT13. HEX NUT (3)14. LOCKWASHER (3)15. FRONT GUARD16. HEX BOLT (3)17. REAR GUARD18. LOCKWASHER (6)19. HEX BOLT (6)20. HEX BOLT21. BIN DRIVE GUARD22. HEX BOLT23. JAW CLUTCH LATCH24. LOCKNUT25. LOCKWASHER26. HEX BOLT27. HEX BOLT28. LOCKWASHER29. CEMENT BIN		

CHAPTER 9

MIXER-AUGER SYSTEM

9-1. OVERVIEW.

This chapter provides you with the following information related to mixer-auger system maintenance:

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedures.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

9-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

9-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for mixer-auger system maintenance procedures described in this chapter are limited to mixer-auger wear gage. (Refer to Organizational Maintenance RPSTL, TM 5-3895372-20P for tool description and illustration.)

9-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).


Section II TROUBLESHOOTING

9-5. INTRODUCTION.

Troubleshooting procedures for the mixer-auger system are given in Table 9-1. It is arranged by multifunctions in the following order:

- a. Mixer-auger stalls, will not rotate or rotates slowly (Malfunction No. 1).
- b. Mixer-auger vibrates (Malfunction No. 2).
- c. Swivel ring binds - chute hard to move (Malfunction No. 3).

Table 9 1. Mixer-Auger System. Troubleshooting Procedures

MALFUNCTION	
TEST OR INSPECTION	CORRECTIVE ACTION
1. MIXER-AUGER STALLS, WILL NOT ROTATE, OR ROTATES SLOWLY:	<p>Step 1. Check that key between motor and auger is in place by locking auger with a pipe wrench and activating control valve slowly.</p> <p>Step 2. Check hydraulic pressure.</p> <p>Troubleshoot hydraulic system. See Table 10(1, Malfunction No. 3. Hydraulic pressure should be set at 19002000 psi (13,100-13,800 kPa).</p> <p>Step 3. Inspect for buildup of hardened concrete on auger. Clean all hardened concrete from auger.</p>
2. MIXER-AUGER VIBRATES:	<p>Step 1. Inspect for buildup of hardened concrete on auger. Clean all hardened concrete from auger.</p> <p>Step 2. Inspect bearing and motor attaching hardware for tightness. Tighten fastening hardware as required (refer to para 910).</p>
3. SWIVEL RING BINDS-CHUTE HARD TO MOVE:	<p>Check for dirt, stones, or cement on swivel rings.</p> <p>Remove material blockage as necessary.</p>
	
<p>Raise jack slowly. Place wood block and jack under rear plate of mixer-auger. Raise jack until dust seal is broken. Lubricate rings liberally with heavy machine oil. Slowly lower jack.</p>	

Section III MAINTENANCE PROCEDURES

9-6. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for the mixer-auger system of the mixer body. Paragraph 9-7 summarizes the maintenance tasks. Paragraphs 9-8 thru 9-17 contain detailed instructions for each task

9-7. MIXER-AUGER SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

M919.	TM 5-3895372-10. TM 5-3895-372-10.	Mixer Trough Lowered. Cleanup Water Hose Removed From Auger.
TEST EQUIPMENT	9-9A.	Mixer Trough Removed.
None.	9-10A.	Mix Auger Removed.

SPECIAL TOOLS

Mixer-Augur Wear Gage, NP2727000 (50663).

MATERIALS/PARTS (P/N)

- Wear Blades Kit, NS3427-001 (50663).
- Vee Blocks.
- Surface Plate.
- Tri-Square.
- Stub-Shaft, NP3352002 (50663).
- Drive Bushing, NP5033056 (50663).
- Rubber Trough Repair Kit, NP2923000 (50663).
- Miniskirt, NP2730004 (50663).
- Shouldered Shaft, NP3352003 (50663).
- Rubber Trough Patch Kit, NP3013000 (50663).
- Rubber Trough Bottom, NP2186000 (50663).

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES

- LO 5-3895-372-12.
- TM 5-3895-372-10.
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Park Brake Set.
- Wet Cement and Concrete Can Cause Burns.
- Safety Glasses Should be Worn When Working Around Cement.

TROUBLESHOOTING REFERENCES

Table 9-1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Wear Blades Replacement: A. Removal B. Installation	9-8 9-8A 9-8B	9-1
2.	Mixing Auger Assembly Maintenance: A. Removal B. Installation C. Operational Check	9-9 99A 99B 99C	9-1

9-7. MIXER-AUGER SYSTEM MAINTENANCE TASK SUMMARY (Continued).			
LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
3.	Mixer-Auger Maintenance:	9-10	91
	A. Removal.	9-10A	
	B. Installation.	9-10B	
4.	Mixer-Auger Repair:	9-11	9-1
	A. Straightening.	911A	
	B. Replacement of stub or shouldered shaft.	911B	
5.	Rubber Trough Maintenance:	912	9-1
	A. Removal.	9-12A	
	B. Installation.	9-12B	
6.	Rubber Trough Repair:	9-13	9-1
	A. Repair at bearing end.	9-13A	
	B. Repair of other areas.	9-13B	
7.	Swivel Ring Maintenance:	914	9-1
	A. Removal of trough.	9-14A	
	B. Removal of swivel ring.	9-14B	
	C. Installation of swivel ring.	9-14C	
	D. Installation of trough.	9-14D	
8.	Miniskirt Assembly Maintenance:	9-15	9-1
	A. Removal.	9-15A	
	B. Installation.	9-15B	
9.	Chute Maintenance:	9-16	91
10.	Trough Guard Maintenance:	9-17	9-1
	A. Removal.	9-17A	
	B. Installation.	9-17B	

MIXER AUGER SYSTEM.

9-8. WEAR BLADES REPLACEMENT.
THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5) (Each)
 - b. Installation. (10) (Each)
- 15 Minutes Total (Each).

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Wear Blades Kit, NS3427001 (50663).

EQUIPMENT
CONDITION
PARAGRAPH

TM 538;372-10.

CONDITION DESCRIPTION

Mixer Trough Lowered.
Trough Guards Open.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.

TM 5-3895-372-20P.

TM 9-2320273-10.

TROUBLESHOOTING REFERENCES

Table 9-1.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.
Safety Glasses Should be Worn When Working
Around Cement.
Wet Cement and Concrete Can Cause Burns.

MIXER-AUGER SYSTEM.

9-8. WEAR BLADES REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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A. REMOVAL

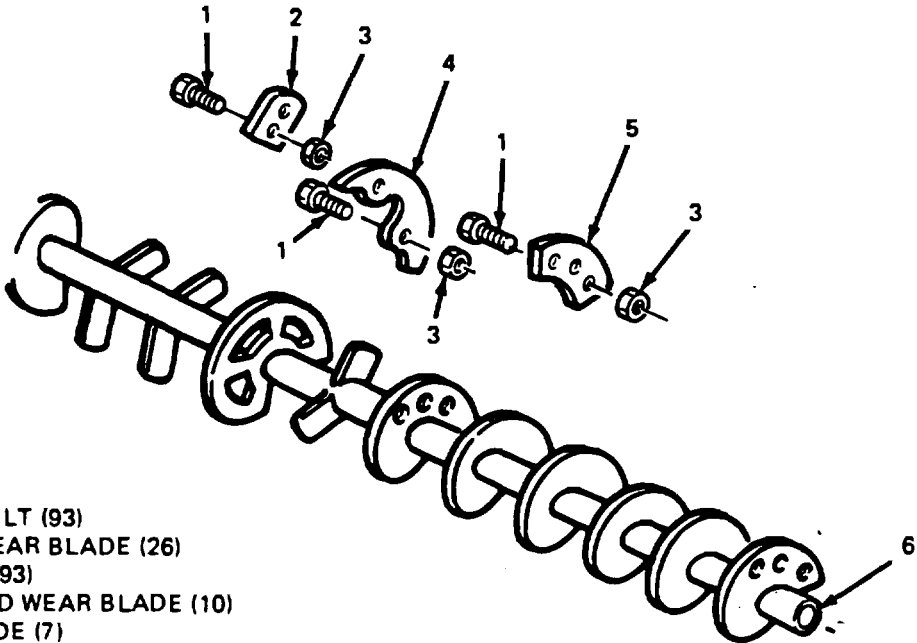


Do not damage rubber trough bottom when removing nuts.

NOTE

This procedure covers removal and replacement of one of each of the three different blade configurations. Follow the same procedure for any quantity to be replaced. The legend contains the total quantities per auger assembly. For replacement of all wear blades, use kit NS 3427001 (50663).

- | | | |
|---|--|------------------------------------|
| 1. Two socket bolts (1) and locknuts (3). | Unscrew and remove paddle wear blade (2). | It may be necessary to chisel off. |
| 2. Two socket bolts (1) and locknuts (3). | Unscrew and remove segmented wear blade (4). | It may be necessary to chisel off. |
| 3. Three socket bolts (1) and locknuts (3). | Unscrew and remove wear blade (5). | It may be necessary to chisel off. |



LEGEND:

- 1. SOCKET BOLT (93)
- 2. PADDLE WEAR BLADE (26)
- 3. LOCKNUT (93)
- 4. SEGMENTED WEAR BLADE (10)
- 5. WEAR BLADE (7)
- 6. AUGER

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MIXER-AUGER SYSTEM.

9-8. WEAR BLADES REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.



Wear blades are made of hardened steel and may break if bent during tightening. Use washers if there is a large gap between auger and blade.

NOTE

After installation is completed, adjust blades (refer to TM 5-3895-372-10).

- 4. Wear blade (5).
 - a. Aline with mounting holes in auger (6).
 - b. Install with three socket bolts (1) and locknuts (3).

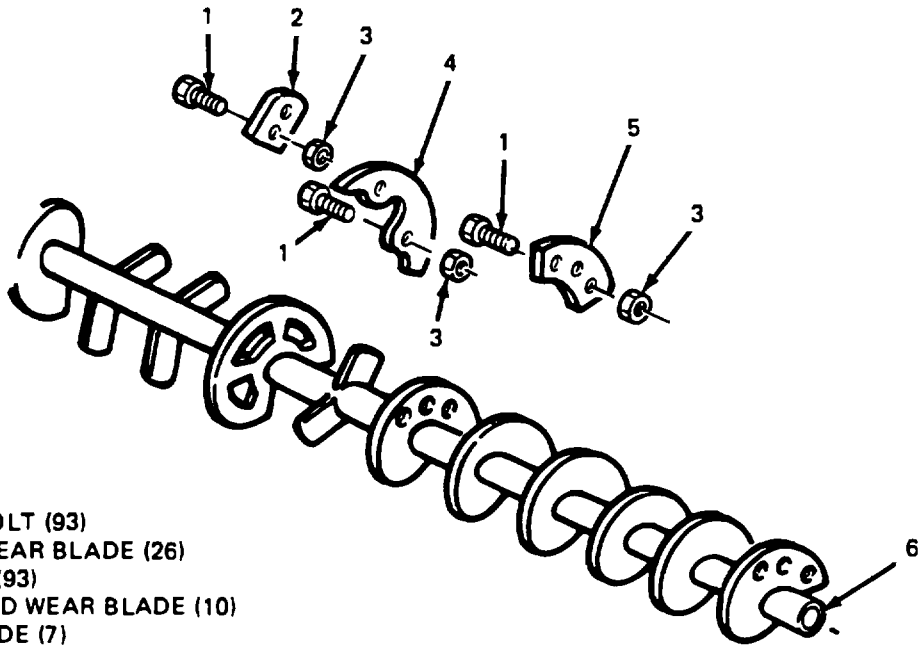
- 5. Segmented wear blade (4).
 - a. Aline with mounting holes in auger (6).
 - b. Install with two socket bolts (1) and locknuts (3).

- 6. Paddle wear blade (2).
 - a. Aline with mounting holes in auger (6).
 - b. Install with two socket bolts (1) and locknuts (3).

MIXER-AUGER SYSTEM.

9-8. WEAR BLADES REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. SOCKET BOLT (93)
- 2. PADDLE WEAR BLADE (26)
- 3. LOCKNUT (93)
- 4. SEGMENTED WEAR BLADE (10)
- 5. WEAR BLADE (7)
- 6. AUGER

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MIXER-AUGER SYSTEM.

9-9. MIXING AUGER ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20).
 - b. Installation. (20)
 - c. Operational Check. (5)
- 45 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 5-3895372-10.

Clean Up Water Hose Removed From Trough.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

- Plug. 2.
- Drain Pan.
- Marking Pen.
- Masking Tape.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5-3895-372-12.
- TM 5-3895-372-10
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.
- Wet Cement and Concrete Can Cause Burns.

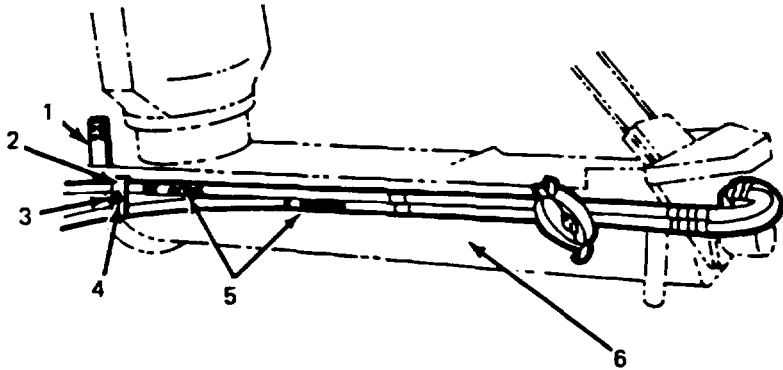
TROUBLESHOOTING REFERENCES

Table 91.

MIXER-AUGER SYSTEM.

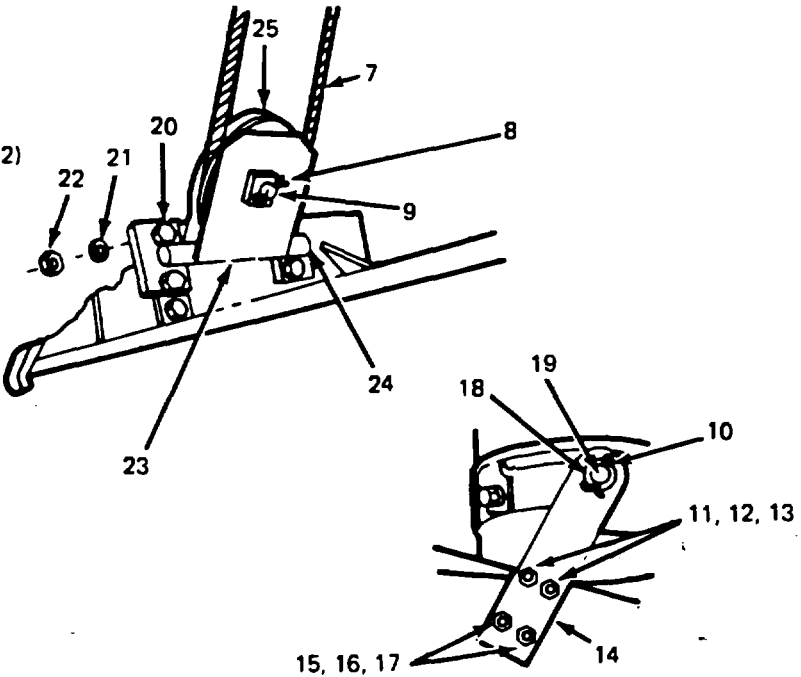
9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Mixing auger (6).	Lower to horizontal position and support with suitable hoist.	
2. Nut (3) and lock-washer (4).	Unscrew and remove clamp (2).	
3. Two hydraulic hoses	Disconnect and plug	Drain oil from hoses into s pan. Tag for correct location at installation.



LEGEND:

- 1. BRACKET
- 2. CLAMP
- 3. NUT
- 4. LOCKWASHER
- 5. HYDRAULIC HOSE (2)
- 6. MIXING AUGER
- 7. CABLE
- 8. COTTER PIN
- 9. PIN
- 10. COTTER PIN (2)
- 11. BOLT (2)
- 12. NUT (2)
- 13. LOCKWASHER (2)
- 14. BRACKET (2)
- 15. BOLT (2)
- 16. NUT (2)
- 17. LOCKWASHER (2)
- 18. WASHER (2)
- 19. PIVOT PIN (2)
- 20. BOLT (4)
- 21. WASHER (4)
- 22. NUT (4)
- 23. PULLEY HOUSING
- 24. PULLEY BRACKET
- 25. PULLEY



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MIXER-AUGER SYSTEM.

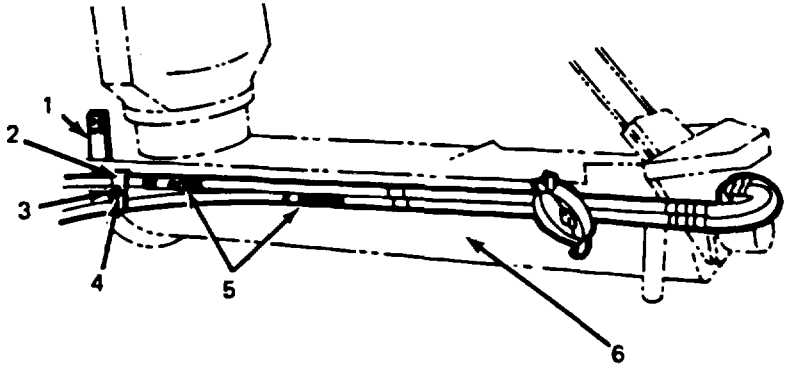
9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Cotter pin (8) and pin (9).	a. Remove. b. Lift out pulley (25) and cable (7).	Take tension off cable (7) and secure to ladder.
5. Four bolts (20), washers (21), and nuts (22).	a. Unscrew and remove pulley bracket (24). b. Remove pulley housing (23) from pulley bracket (24).	
6. Two nuts (12), lockwashers (13), and bolts (11).	Unscrew and remove.	On right hand side.
7. Two nuts (16), lockwashers (17), and bolts (15).	Unscrew and remove bracket (14).	On right hand side.
8. Two cotter pins (10) and washers (18).	Remove from two pivot pins (19).	
9. Mixing auger (6).	Lift mixing auger (6) with welded bracket (1) off pivot pin (19). Once clear, lower to ground.	
10. Nuts (12), and (16), lockwashers (13) and (17), and bolts (11) and (15).	Reinstall and tighten bracket (14) to mixing auger (6).	
11. Mixing auger (6).	Roll over and brackets (14) and (1) will support mixing auger (6).	
B. INSTALLATION.		
12. Mixing auger (6).	Roll over with brackets (14) and (1) facing upwards.	
13. Two nuts (12), lockwashers (13) and bolts (11).	Remove.	
14. Two nuts (16), lockwashers (17) and bolts (15).	Loosen.	
15. Mixing auger (6).	Lift with suitable hoist and slide brackets (14) and (1) onto two pivot pins (19).	

MIXER-AUGER SYSTEM.

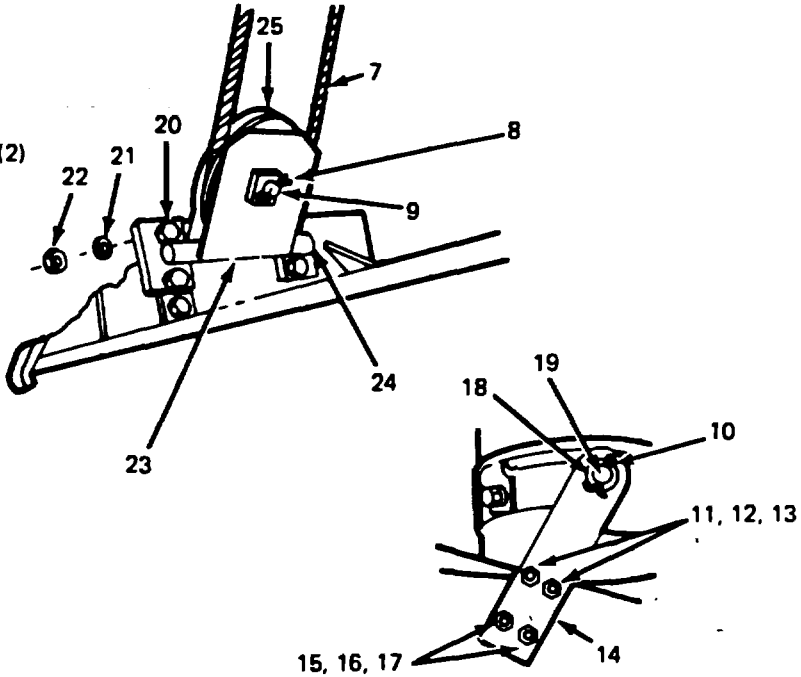
9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
16. Two washers (18) and cotter pins (10).	Install in two pivot pins (19).	
17. Two nuts (12), nuts (16), lockwashers (13) and (17), and bolts (11) and (15).	Install and tighten.	
18. Pulley housing (23) and Pulley bracket (24).	Install with four bolts (20). Washers (21), and nuts (22).	



LEGEND:

- 1. BRACKET
- 2. CLAMP
- 3. NUT
- 4. LOCKWASHER
- 5. HYDRAULIC HOSE (2)
- 6. MIXING AUGER
- 7. CABLE
- 8. COTTER PIN
- 9. PIN
- 10. COTTER PIN (2)
- 11. BOLT (2)
- 12. NUT (2)
- 13. LOCKWASHER (2)
- 14. BRACKET (2)
- 15. BOLT (2)
- 16. NUT (2)
- 17. LOCKWASHER (2)
- 18. WASHER (2)
- 19. PIVOT PIN (2)
- 20. BOLT (4)
- 21. WASHER (4)
- 22. NUT (4)
- 23. PULLEY HOUSING
- 24. PULLEY BRACKET
- 25. PULLEY



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MIXER-AUGER SYSTEM.

9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
19. Cable (7) and pulley (25).	a. Install cable (7) around pulley (25). b. Install pulley (25) into pulley housing (23) with pin (9) and cotter pin (8). c. Raise until there is tension on cable and remove hoist.	
20. Two hydraulic hoses (5).	Remove plugs and install.	Be sure to connect hoses as you marked at removal.
21. Clamp (2).	a. Position over two hydraulic hoses (5). b. Install with lockwasher (4) and nut (3).	

C. OPERATIONAL CHECK.

22. Mixing auger (6).	Raise and lower. Lubricate if necessary (refer to LO 5-3895-372-12).	
23. Mixer body.	Start up (refer to TM 9-2320-273-10 and TM 5-3895-372-10).	
24. Hydraulic motor.	Activate; check connections of two hydraulic hoses (5) for leaks and proper functioning.	Retighten connections as necessary.
25. Mixer body.	Shut down (refer to TM 9-2320-273-10 and TM 5-3895-372-10).	
26. Mixing auger (6).	Raise and latch (refer to TM 5-3895-372-10).	

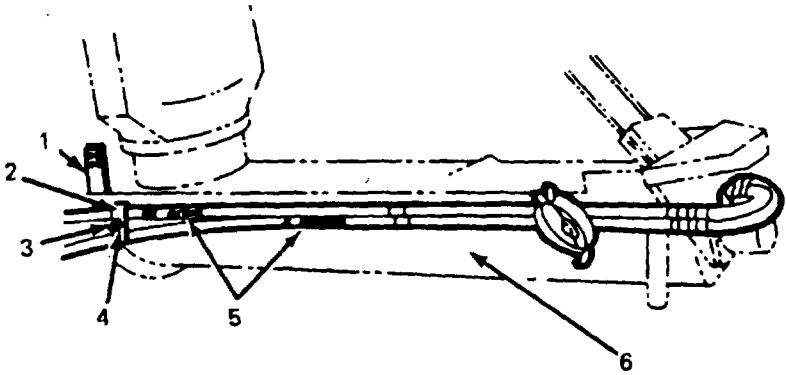


Always latch mixing auger in vertical position and utilize safety chain

MIXER-AUGER SYSTEM.

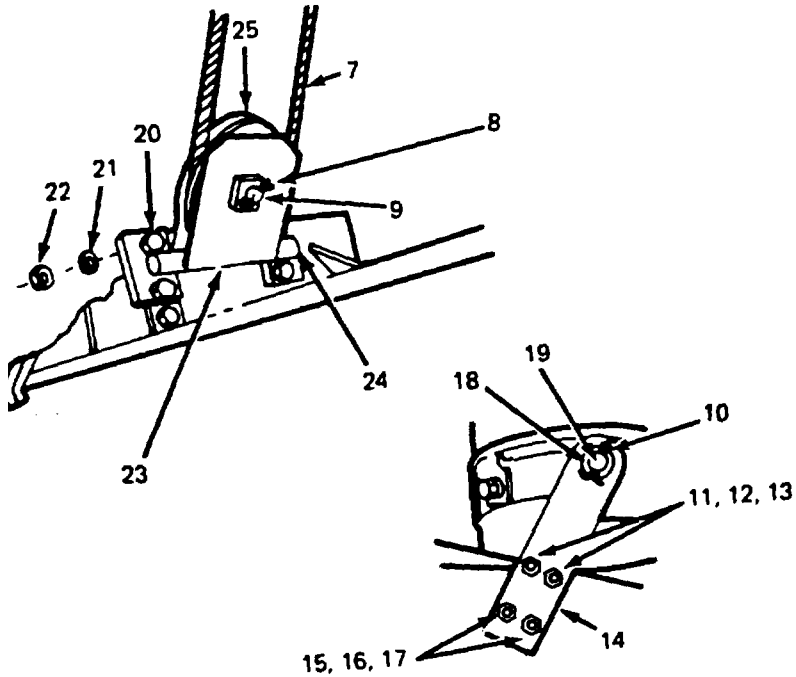
9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 1. BRACKET
- 2. CLAMP
- 3. NUT
- 4. LOCKWASHER
- 5. HYDRAULIC HOSE (2)
- 6. MIXING AUGER
- 7. CABLE
- 8. COTTER PIN (2)
- 9. PIN
- 10. COTTER PIN (2)
- 11. BOLT (2)
- 12. NUT (2)
- 13. LOCKWASHER (2)
- 14. BRACKET (2)
- 15. BOLT (2)
- 16. NUT (2)
- 17. LOCKWASHER (2)
- 18. WASHER (2)
- 19. PIVOT PIN (2)
- 20. BOLT (4)
- 21. WASHER (4)
- 22. NUT (4)
- 23. PULLEY HOUSING
- 24. PULLEY BRACKET
- 25. PULLEY



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MIXER-AUGER SYSTEM.

9-10. MIXER-AUGER MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
 - b. Installation. (20)
 - c. Operational Check. (10)
- 50 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Marking Pen.
Masking Tape.
Plug (2).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.

TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.
Wet Cement and Concrete Can Cause Burns.
Safety Glasses Should be Worn When Working
Around Cement.

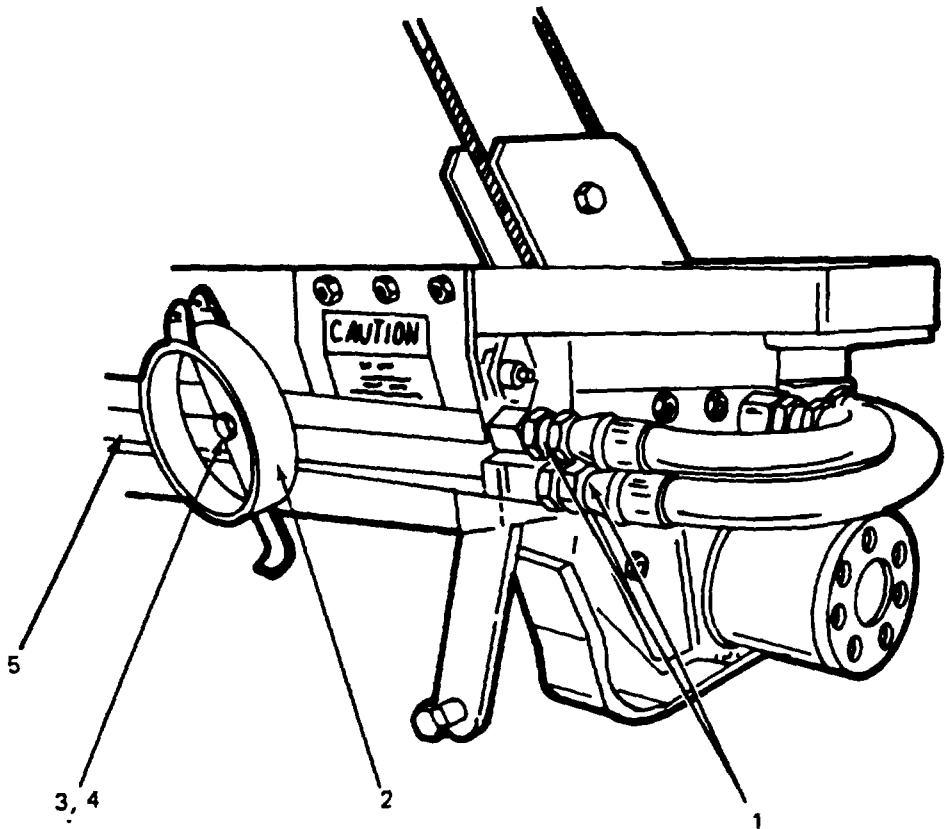
TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-9. MIXING AUGER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Auger assembly (5).	Lower to horizontal position and support under frame.	
2. One nut (4) and lock-washer (3).	Remove.	
3. Hose support bracket (2).	Remove.	
4. Two swivel nuts (1).	Remove	Plug pipe ends and mark location for reassembly.



- LEGEND:
- 1. Swivel nut (2)
 - 2. HOSE SUPPORT BRACKET
 - 3. LOCKWASHER
 - 4. NUT
 - 5. AUGER ASSEMBLY

TA 076365

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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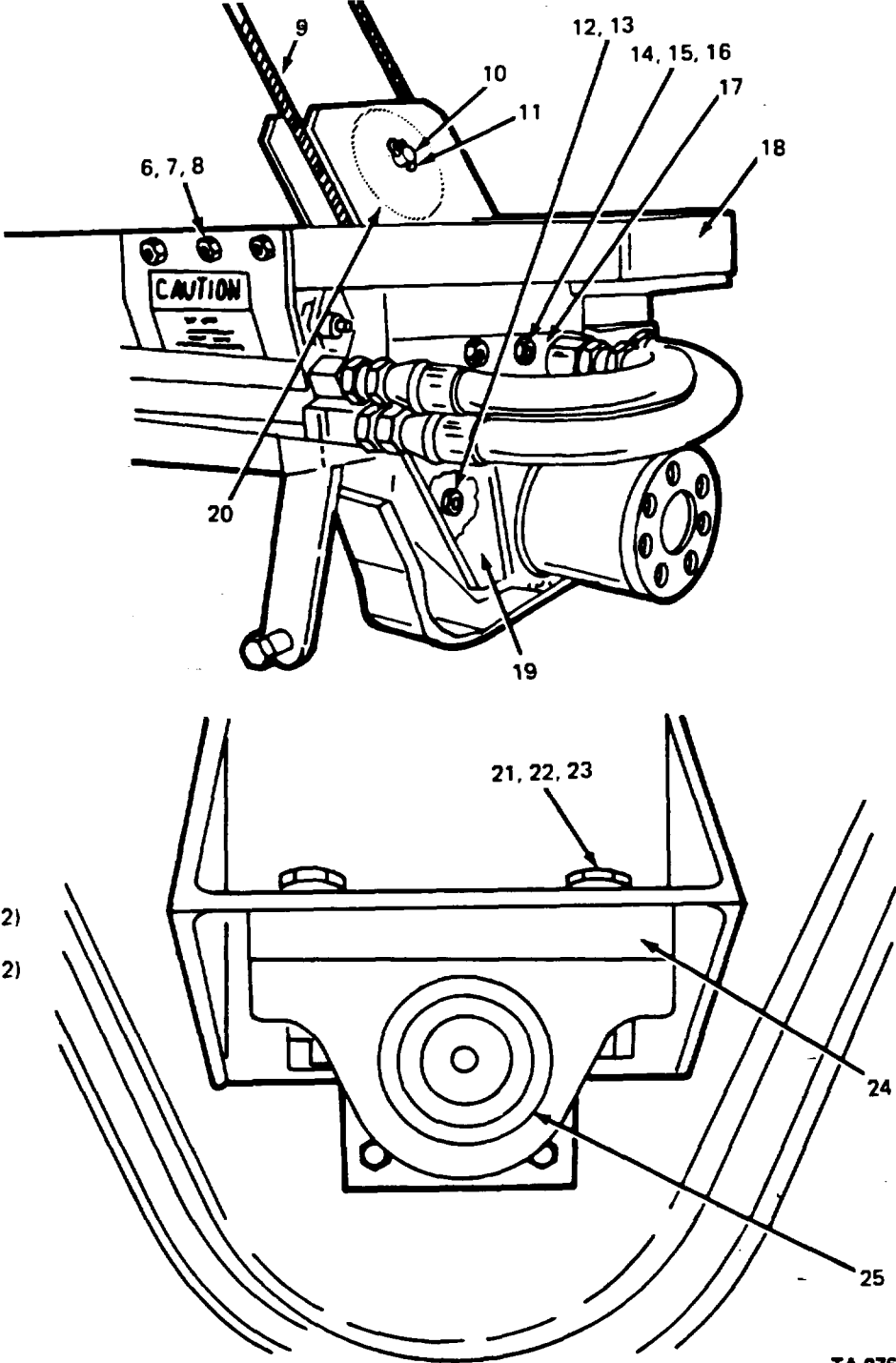
A. REMOVAL (Continued).

- | | | |
|--|---|--|
| 5. Six bolts (6), lockwashers (7) and nuts (8). | Remove. | |
| 6. Bracket (18). | Remove. | |
| 7. Four bolts (14), lockwashers (15), and nuts (16). | Remove. | |
| 8. Two retainer strips (17). | Remove. | |
| 9. Cotter pin (11) and pin (10). | Remove. | |
| 10. Pulley (20) and cable (9). | Remove. | |
| 11. Four nuts (12) and lockwashers (13). | Unscrew and remove two rubber baffles (19). | |
| 12. Two bolts (21), nuts (22), and lockwashers (23). | Unscrew and remove. | |
| 13. Spacer block (24). | Remove. | |
| 14. Bearing (25). | a. Clean end of shaft.
b. Remove bearing (25). | |

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:
- 6. BOLT (6)
 - 7. LOCKWASHER (6)
 - 8. NUT (6)
 - 9. CABLE
 - 10. PIN
 - 11. COTTER PIN
 - 12. NUT (4)
 - 13. LOCKWASHER (4)
 - 14. BOLT (4)
 - 15. LOCKWASHER (4)
 - 16. NUT (4)
 - 17. RETAINER STRIP (2)
 - 18. BRACKET
 - 19. RUBBER BAFFLE (2)
 - 20. PULLEY
 - 21. BOLT (2)
 - 22. NUT (2)
 - 23. LOCKWASHER (2)
 - 24. SPACER BLOCK
 - 25. BEARING

TA 076386

MIXER-AUGER SYSTEM.

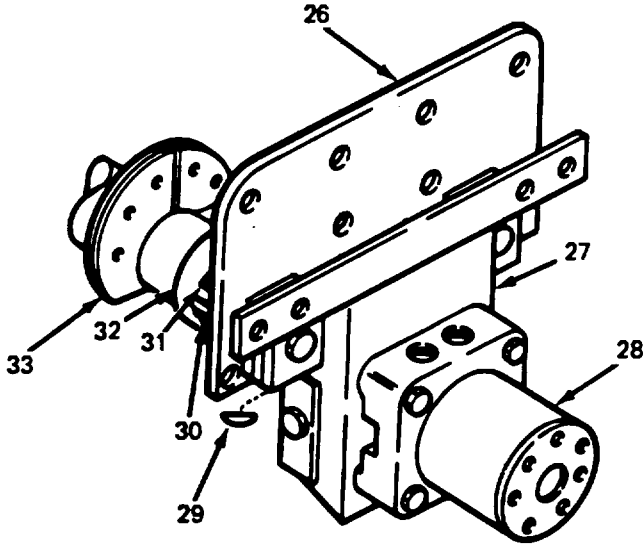
9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued)		
15. Motor (28) and mixer-auger (33).	Remove from trough.	
16. Two bolts (31) and locknuts (30).	Loosen.	
17. Mixer-auger hub (32).	Wedge a screwdriver into the slots.	Be careful not to split the hub, or "lock" tool into hub.
18. Motor (28), key (29), flexible mount (27), and end plate (26).	Remove from mixer-auger (33).	
B. INSTALLATION.		
19. Motor (28), key (29), flexible mount (27), and end plate (26).	a. Place key in motor shaft. b. Install motor (28) with flexible mount (27) and end plate (26) attached, into mixer-auger hub (32).	Remove screwdriver from slots of mixer-auger hub, if used.
20. Two bolts (31) and locknuts (30).	Install thru mixer-auger hub (32) and tighten.	
21. Motor (28) and mixer-auger (33).	Install in trough.	

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:**
- 26. END PLATE
 - 27. FLEXIBLE MOUNT
 - 28. MOTOR
 - 29. KEY
 - 30. LOCKNUT (2)
 - 31. BOLT (2)
 - 32. MIXER-AUGER HUB
 - 33. MIXER-AUGER

TA 076367

MIXER-AUGER SYSTEM.

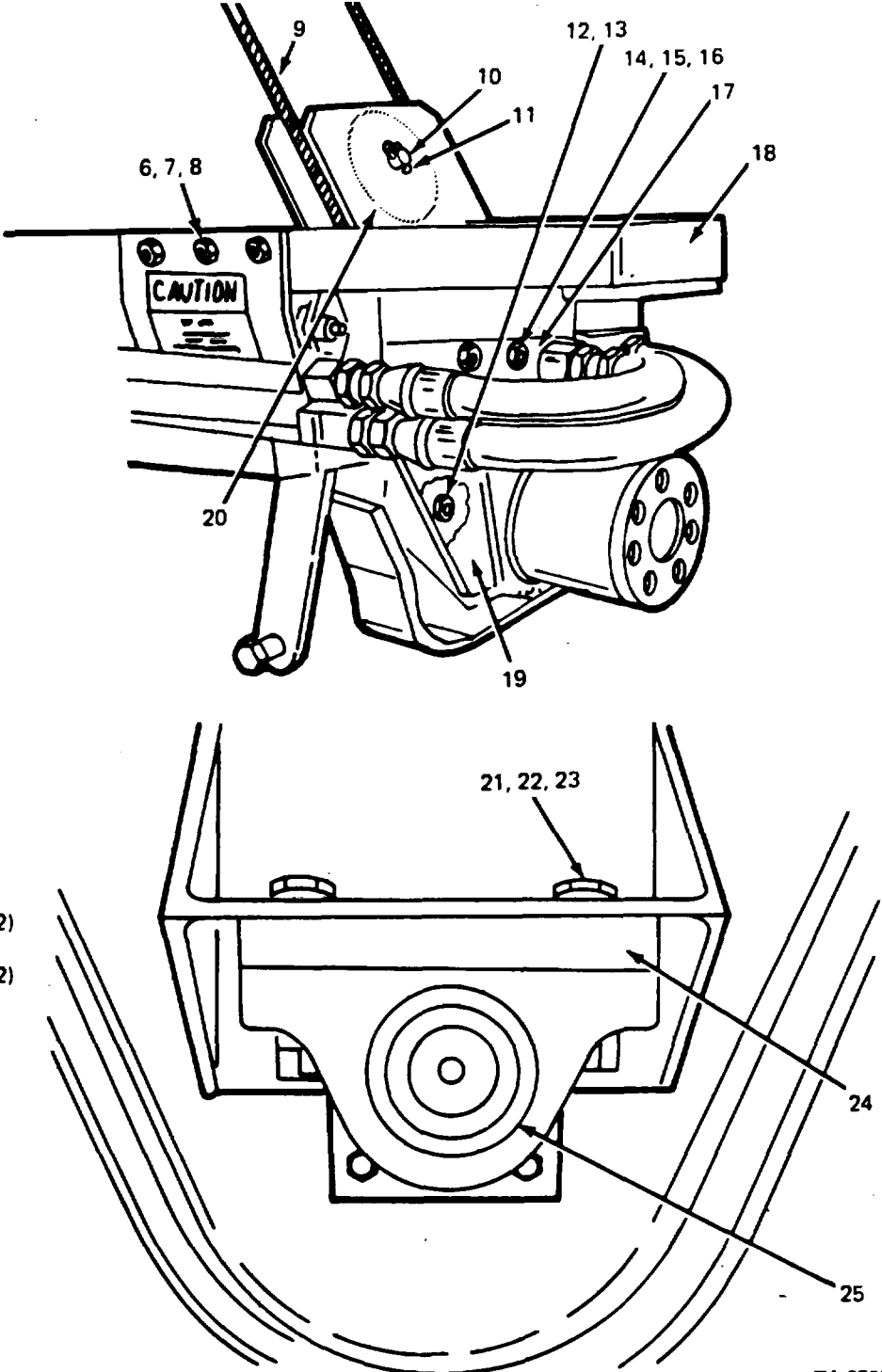
9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued)		
22. Four nuts (12) and lockwashers (13).	Install.	
23. Bearing (25).	Install over rear of auger shaft.	
24. Spacer block (24).	Install.	
25. Two bolts (21), lockwashers (23), and nuts (22).	Install.	
26. Cable (9) and pulley (20).	Install and secure with pin (10) and cotter pin (11).	
27. Two retainer strips (17) and rubber baffles (19).	Install and secure with four bolts (14), lockwashers (15), and nuts (16).	
28. Bracket (18).	Install and secure with six bolts (6), lockwashers (7) and nuts (8).	

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 6. BOLT (6)
- 7. LOCKWASHER (6)
- 8. NUT (6)
- 9. CABLE
- 10. PIN
- 11. COTTER PIN
- 12. NUT (4)
- 13. LOCKWASHER (4)
- 14. BOLT (4)
- 15. LOCKWASHER (4)
- 16. NUT (4)
- 17. RETAINER STRIP (2)
- 18. BRACKET
- 19. RUBBER BAFFLE (2)
- 20. PULLEY
- 21. BOLT (2)
- 22. NUT (2)
- 23. LOCKWASHER (2)
- 24. SPACER BLOCK
- 25. BEARING

TA 076368

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION (Continued).

- | | | |
|-------------------------------|---|--|
| 29. Two swivel nuts (1). | a. Unplug connections.
b. Install and tighten. | Install in correct locations as you marked during removal. |
| 30. Hose support bracket (2). | Install with nut (4) and lockwasher (3). | |

C. OPERATIONAL CHECK.

- | | | |
|-------------------------|---|--|
| 31. Mixer body. | Start up (refer to TM 92320-273-10 and TM 5-3895-372-10). | |
| 32. Mixer-auger. | Activate; check for:
a. Leaks.
b. Auger turning true (no wobble). | |
| 33. Mixer body. | Shut down (refer to TM 9-2320-273-10 and TM 5-3895-372-10). | |
| 34. Auger assembly (5). | Raise and latch. | |

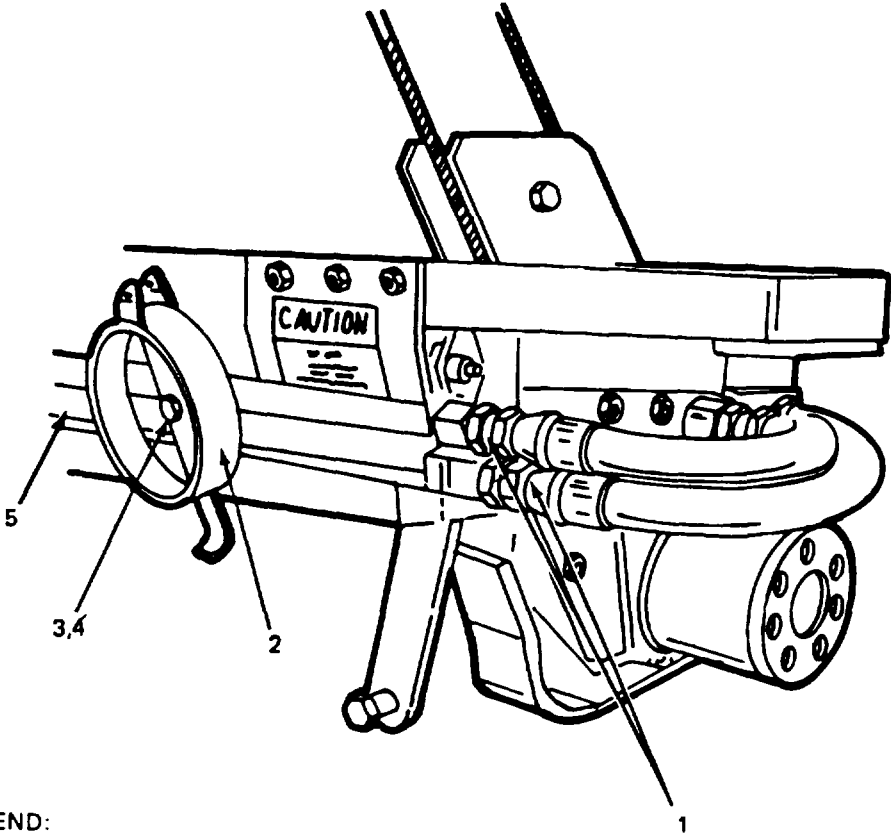
WARNING

Always utilize safety chain when auger assembly is latched.

MIXER-AUGER SYSTEM.

9-10. MIXER AUGER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 1. SWIVEL NUT (2)
- 2. HOSE SUPPORT BRACKET
- 3. LOCKWASHER
- 4. NUT
- 5. AUGER ASSEMBLY

TA 073368

MIXER-AUGER SYSTEM.

9-11. MIXER-AUGER REPAIR.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Straightening. (60)
 - b. Replacement of Stub or Shouldered Shaft. (60)
 - c. Replacement of Drive Bushing. (30)
- 150 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

910A.

Mixer-Auger Removed.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)

- Vee Block, 2.
- Surface Plate.
- Tri-Square.
- Stub Shaft, NP3352002 (50663).
- Shouldered Shaft, NP3352003 (50663).
- Drive Bushing, NP5033056 (50663).
- Hammer.
- Chisel.

PERSONNEL REQUIRED
One (MOSE62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 5-3892372-20P.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Safety Glasses Should be Worn When
Hitting Shaft with Hammer.

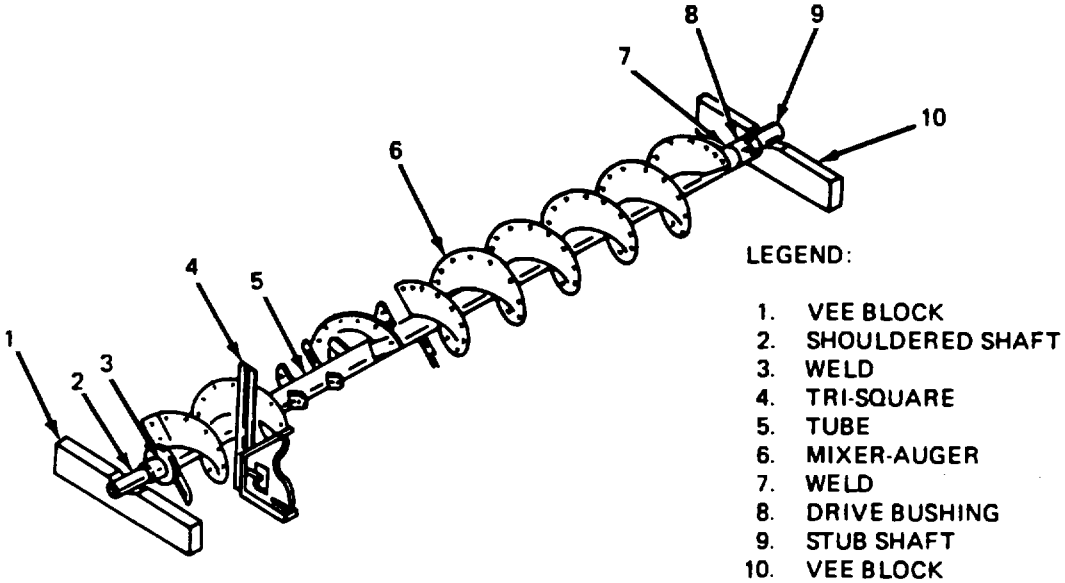
TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-11. MIXER AUGER REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. STRAIGHTENING.		
1. Mixer-auger (6).	Place in position, as shown, with stub shaft (9) and shouldered shaft (2) resting on two vee blocks (1) and (10).	Vee blocks must be on a level surface; use a surface plate if available.
2. Tri-square (4).	Position on surface plate with arm close to tube (5), but not touching.	Start near either end.
3. Mixer-auger (6).	a. Slowly turn while watching the point where tri-square (4) was placed. b. Select another point about one-third towards the opposite end and check again.	If distance remains the same for 3600 rotation, auger is OK at that point.



TA 076370

MIXER-AUGER SYSTEM.

9-11. MIXER AUGER REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
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A. STRAIGHTENING (Continued).

- 4. Mixer-auger (6).
 - a. If distance increases or decreases between tube (5) and tri-square (4), mark the spot where the distance is the least.
 - b. Place the marked spot at top and hit with a heavy hammer; then recheck with tri-square until distance remains constant.

NOTE

Perform the straightening procedure at three or four points along the length of the mixer-auger (6), until all high spots have been eliminated. If mixer-auger (6) cannot be straightened in this manner, replace it.

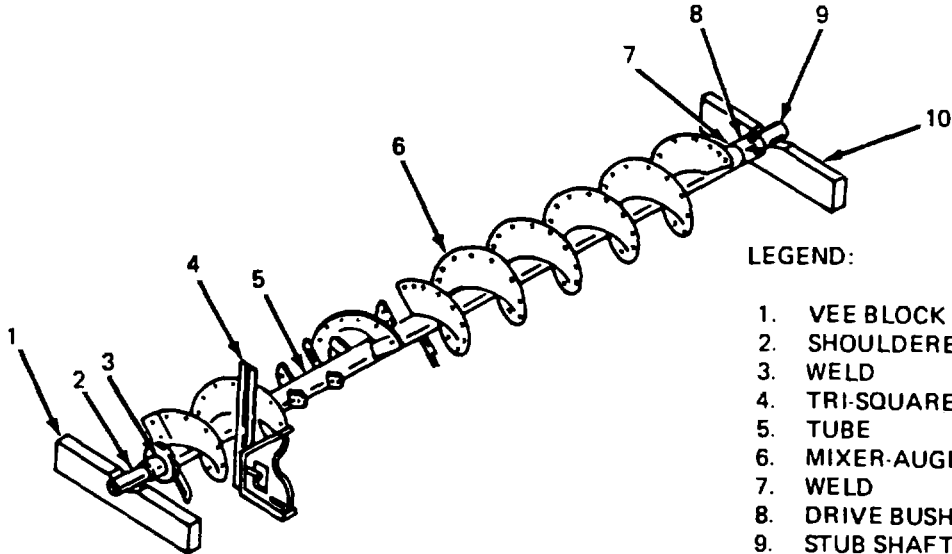
B. REPLACEMENT OF STUB OR SHOULDERED SHAFT.

- 5. Shouldered shaft (2) or stub shaft (9) and drive bushing (8).
 - a. Using a suitable hammer and chisel break weld (3) or (7).
 - b. Remove all old weld and clean area.
 - c. Position new shouldered shaft (2) or stub shaft (9) and drive bushing (8) in position to tube (5).
 - d. Weld in place.

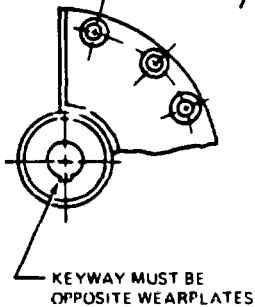
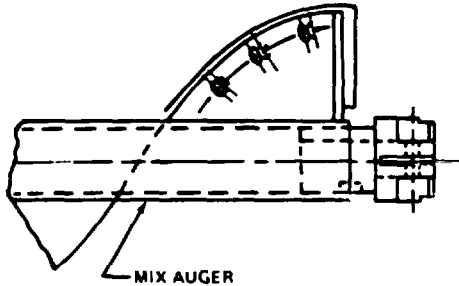
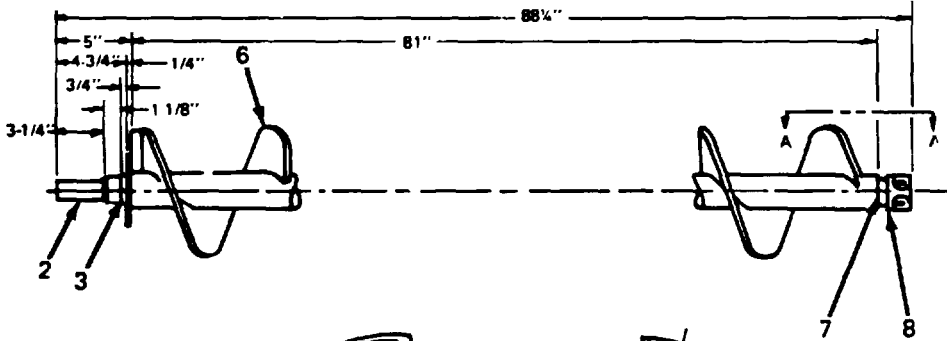
MIXER-AUGER SYSTEM.

9-11. MIXER AUGER REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:
- 1. VEE BLOCK
 - 2. SHOULDERED SHAFT
 - 3. WELD
 - 4. TRI-SQUARE
 - 5. TUBE
 - 6. MIXER-AUGER
 - 7. WELD
 - 8. DRIVE BUSHING
 - 9. STUB SHAFT
 - 10. VEE BLOCK



VIEW A A

TA 075371

MIXER-AUGER SYSTEM.

9-12. RUBBER TROUGH MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
 - b. Installation. (30)
- 50 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

9A. Mixer Trough Removed.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

- Rubber Trough Bottom, NP2186000 (50663).
- Hammer.
- Chisel.
- Marking Pen.
- C-Clamp, 4.

PERSONNEL REQUIRED

One (MOS62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

None.

REFERENCES (TM)

TM 53895372-20P.

GENERAL SAFETY INSTRUCTIONS

None.

TROUBLESHOOTING REFERENCES

Table 9-1.

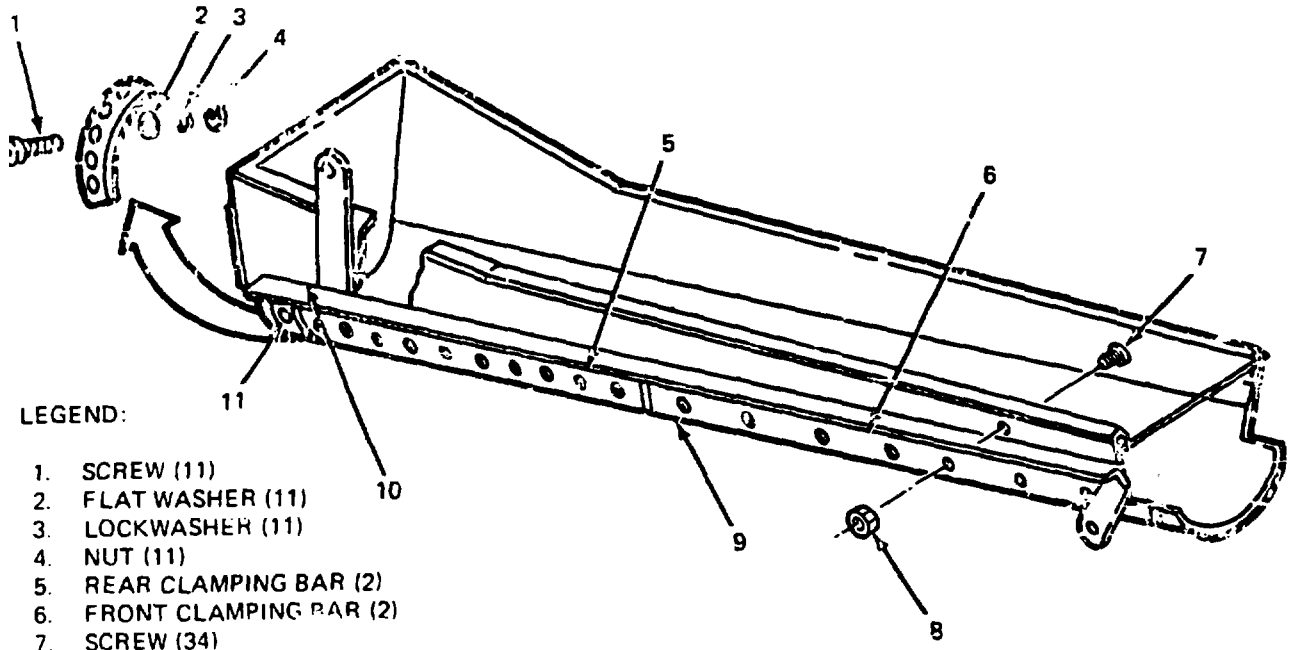
MIXER-AUGER SYSTEM.

9-12. RUBBER TROUGH MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|--|---|---|
| 1. Thirty-four nuts (8) and screws (71). | Unscrew and remove; press to remove screws. | Under severe conditions, i, may be necessary to shear off |
| 2. Eleven screws (1), flat washer (2), lockwashers (3) and nuts (4). | Unscrew and remove. | |
| 3. Two rear clamping bars (5), front clamping bars (6), clamping ring (11), and rubber bottom (9). | Remove from trough (10). | |



LEGEND:

- 1. SCREW (11)
- 2. FLAT WASHER (11)
- 3. LOCKWASHER (11)
- 4. NUT (11)
- 5. REAR CLAMPING BAR (2)
- 6. FRONT CLAMPING BAR (2)
- 7. SCREW (34)
- 8. NUT (34)
- 9. RUBBER BOTTOM
- 10. TROUGH
- 11. CLAMPING RING

TA 076372

MIXER-AUGER SYSTEM.

9-12. RUBBER TROUGH MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.

- | | | |
|-----------------------|---|--|
| 4. Rubber bottom (9). | a. Lay new rubber down on wood backing.
b. Place old rubber over new rubber and mark holes.
c. Remove old rubber.
d. Using a 5/16 inch punch, punch holes in new rubber. | |
|-----------------------|---|--|

NOTE

When installing and tightening screws, start at the front of trough (10) and work towards the rear.

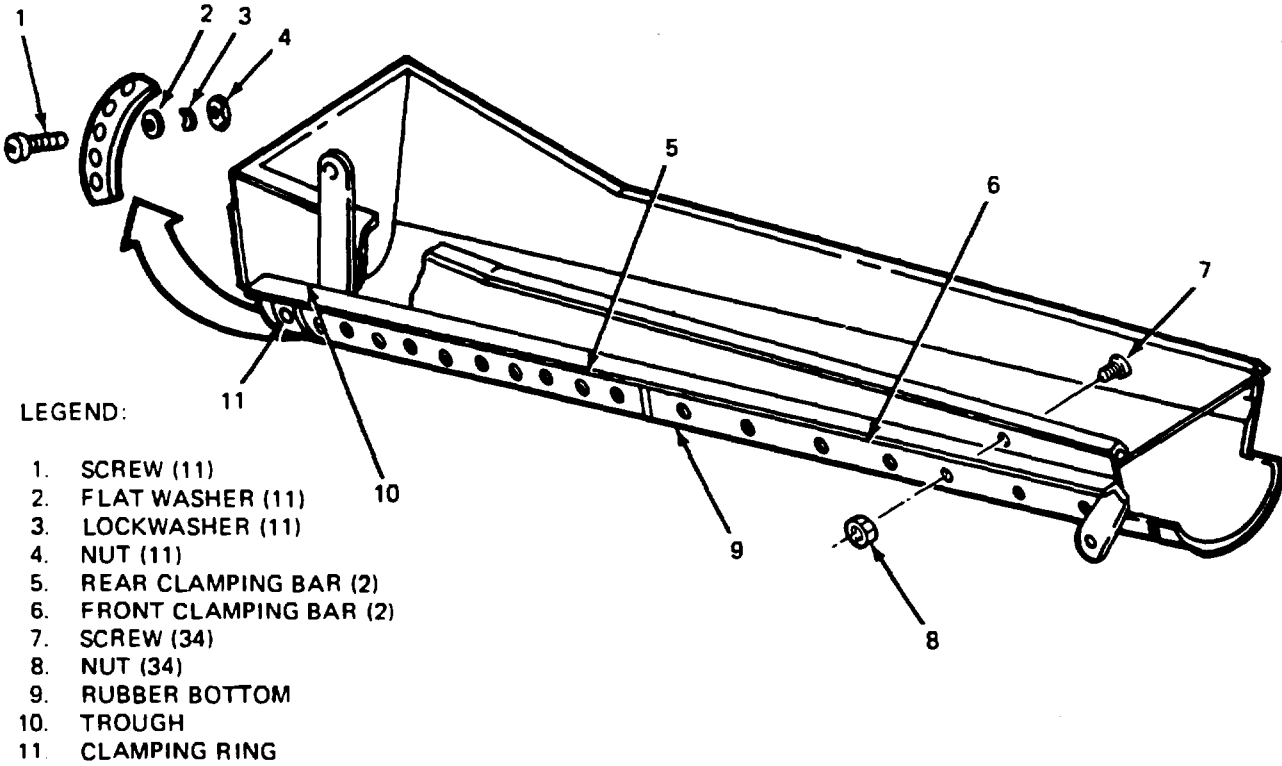
- | | | |
|---------------------------------|---|-----------------------------------|
| 5. Rubber bottom (9) (new). | a. Place in trough (10).
b. Aline holes with a punch. | Use C-clamps to hold in position. |
| 6. Two front clamping bars (6). | Secure in position with fourteen screws (7) and nuts (8). | |
| 7. Two rear clamping bars (5). | Secure in position with twenty screws (7) and nuts (8). | Remove Cclamps if used. |
| 8. Clamping ring (11). | Secure in position with eleven screws (1), flat washers (2), lockwashers (3), and nuts (4). | |

NOTE

Follow-on maintenance required;
 Install mixer trough; refer to para 9-9B.

MIXER-AUGER SYSTEM.

9-12. RUBBER TROUGH MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1. SCREW (11)2. FLAT WASHER (11)3. LOCKWASHER (11)4. NUT (11)5. REAR CLAMPING BAR (2)6. FRONT CLAMPING BAR (2)7. SCREW (34)8. NUT (34)9. RUBBER BOTTOM10. TROUGH11. CLAMPING RING		

TA 076373

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | | |
|----|-------------------------|---------------------------|
| a. | Repair at Bearing L-nd. | (120) |
| b. | Repair of Other Areas. | (60) |
| | | <u>180 Minutes Total.</u> |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

9-9A.

Mixer Trough Removed.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Rubber Trough Repair Kit, NP2923000 (50663).
 Rubber Trough Patch Kit, NP3013000 (50663).
 Marking Pen.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

None

REFERENCES (TM)

TM 5-3895372-10.
 TM 5-3895-372-20P.
 TM 9-23'20 27.3-10.

GENERAL SAFETY INSTRUCTIONS

None.

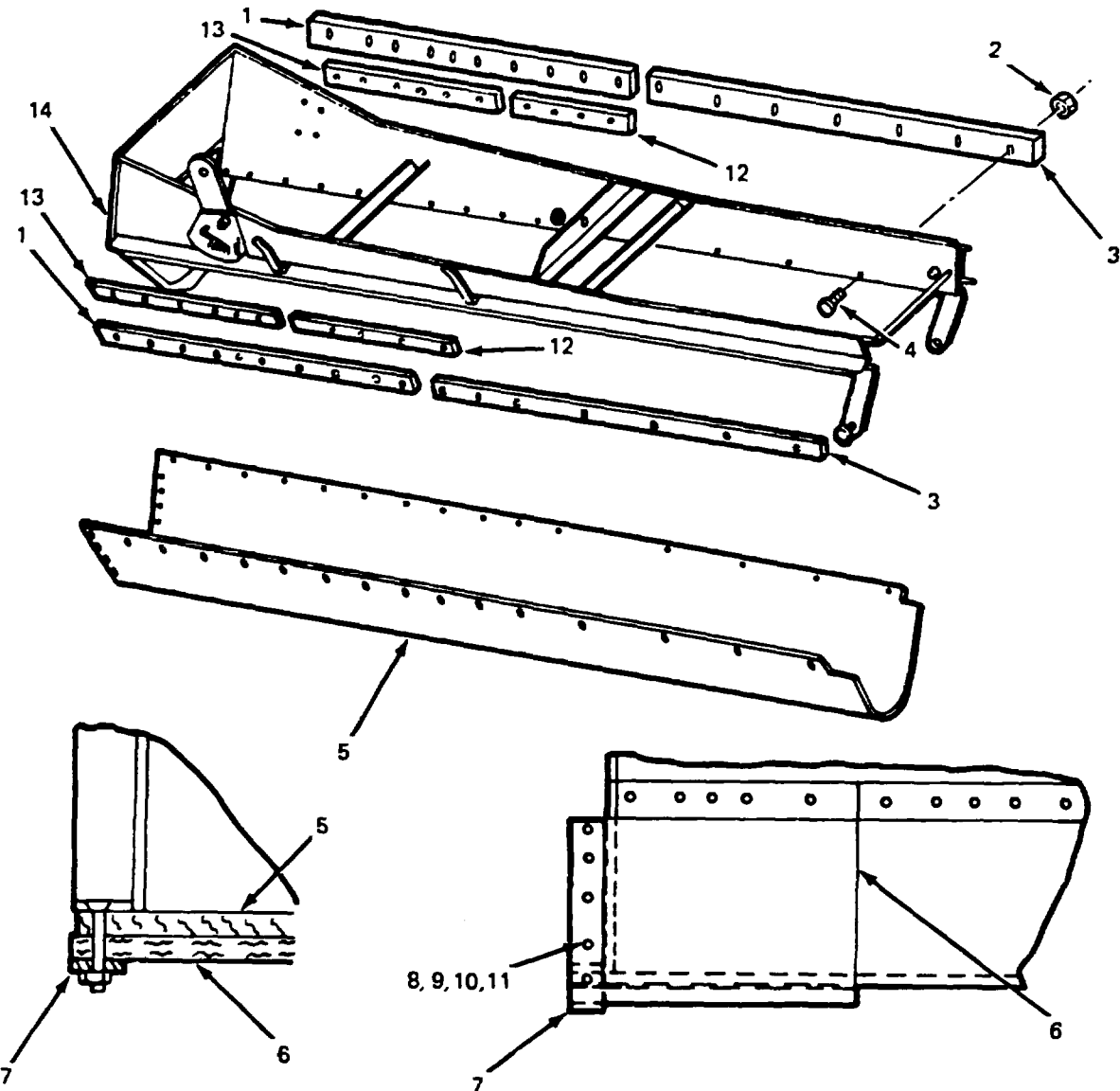
TROUBLESHOOTING REFERENCES

Table 9-1

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|---------------------------|-----------------------------|
| 1. REAR CLAMPING BAR (2) | 8. SCREW (11) |
| 2. NUT (34) | 9. FLAT WASHER (11) |
| 3. FRONT CLAMPING BAR (2) | 10. LOCKWASHER (11) |
| 4. SCREW (34) | 11. NUT (11) |
| 5. RUBBER TROUGH BOTTOM | 12. FRONT CLAMPING BAND (2) |
| 6. REINFORCEMENT RUBBER | 13. REAR CLAMPING BAND (2) |
| 7. CLAMPING RING | 14. TROUGH |

TA 676374

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REPAIR AT BEARING END.		
NOTE		
For this procedure, use kit NP 2923000.		
1. Two rear clamping bars (1).	Mark dimension of repair area on the two rear clamping bars (1).	Mark repair area so that at least three screws (4) and nuts (2) attach each rear clamping bar (1).
2. Twenty screws (4) and nuts (2).	Unscrew and remove two rear clamping bars (1).	
3. Eleven screws (8), flat washers (9), lockwashers (10), and nuts (11).	Unscrew and remove clamping ring (7).	
4. Two rear clamping bars (1)	Cut at dimension you marked in step 1, to make two front clamping bands (12) and two rear clamping bands (13).	
5. Reinforcement rubber (6).	Cut to fit the damaged area and drill holes to aline with those in front clamping bands (12) and rear clamping bands (13).	
6. One front clamping band (12), one rear clamping band (13), and cut to fit reinforcement rubber (6).	Install on one side of trough (14) with ten screws (4) and nuts (2).	
7. Reinforcement rubber (6) and rubber trough bottom (5).	Coat with rubber cement from kit.	
8. One front clamping band (12), one rear clamping band (13), and free end of reinforcement rubber (6).	Install on other side of trough (14) with ten screws (4) and nuts (2).	
9. Reinforcement rubber (6).	Drill to fit holes in clamping ring (7).	
10. Clamping ring (7).	Install with eleven screws (8), flat washers (9), lockwashers (10) and nuts (11).	

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
1. REAR CLAMPING BAR (2)	8. SCREW (11)	
2. NUT (34)	9. FLAT WASHER (11)	
3. FRONT CLAMPING BAR (2)	10. LOCKWASHER (11)	
4. SCREW (34)	11. NUT (11)	
5. RUBBER TROUGH BOTTOM	12. FRONT CLAMPING BAND (2)	
6. REINFORCEMENT RUBBER	13. REAR CLAMPING BAND (2)	
7. CLAMPING RING	14. TROUGH	

TA 076375

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. REPAIR OF OTHER AREAS.		
NOTE For this procedure, use kit NP 3D 13000.		
11. Damaged area (3).	Measure area as shown to determine patch size required.	
12. Patch (2).	Cut to size and mark trough area where patch will be applied.	
13. Patch (2) and trough bottom (1).	Apply rubber cement from kit.	Follow instructions on container
14. Patch (2).	a. Apply to trough bottom (1) over damaged area (3) b. Drill 9/32" holes as shown thru patch (2) and trough Bottom (1) around damaged area (3) and around outer edge of patch (2)	Keep patch tightly against trough bottom. holes should be a maximum of two inches apart.
15. Screws (6), washers (4), and nuts (5).	Install in each hole you drilled Thru the patch (2) and trough bottom (1).	Tighten securely.

MIXER-AUGER SYSTEM.

9-13. RUBBER TROUGH REPAIR (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
1. TROUGH BOTTOM 2. PATCH 3. DAMAGED AREA 4. WASHER (V) 5. NUT (V) 6. SCREW (V)		

MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal of Trough. (15)
 - b. Removal of Swivel Ring. (10)
 - c. Installation of Swivel Ring. (15)
 - d. Installation of Trough. (20)
 - e. Operational Check. (5)
- 65 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

None

None

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 5-3895372-10.
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine off.
- Transmission in Neutral.
- Parking Brake Set.
- Wet Cement and Concrete Can Cause Burns.
- Safety Glasses should be Worn When Working Around Cement.

TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

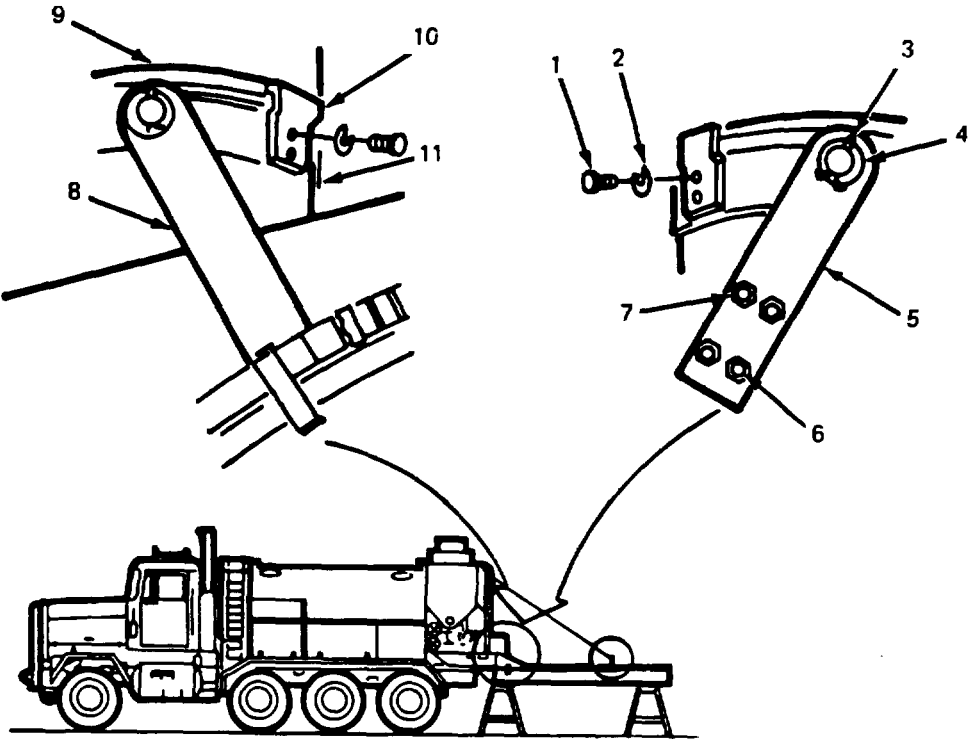
REMARKS

A. REMOVAL OF TROUGH.

1. Mixer trough.

a. Lower to horizontal position.
b. Support with suitable hoist.
Put slack in winch cable.

Refer to TM 5-3895372-10.



LEGEND:

- | | |
|------------------------------|------------------------------|
| 1. CAPSCREW (18) | 7. NUT (4) |
| 2. LOCKWASHER (18) | 8. SWIVEL FRAME |
| 3. COTTER PIN (2) | 9. SWIVEL RING RETAINER |
| 4. WASHER (2) | 10. SWIVEL RING |
| 5. RIGHT HAND HANGER BRACKET | 11. LEFT HAND HANGER BRACKET |
| 6. CAPSCREW (4) | |

TA 076377

MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL OF TROUGH (Continued).		
2. Two cotter pins (3) and washers (4).	Remove.	One cotter pin on each side of trough.
3. Four nuts (7) and capscrews (6).	Remove two on top and loosen two on bottom.	Right hand side.
4. Right hand hanger bracket (5). chute pivot pins.	Slide off of pin. Pivot trough and remove from not under rubber bottom.	Lift trough and push to left Support trough under frame
B. REMOVAL OF SWIVEL RING.		
5. Eighteen capscrews (1) and lockwashers (2).	Unscrew and remove. Remove swivel ring (10) and swivel ring retainer (9).	
C. INSTALLATION OF SWIVEL RING.		
6. Swivel frame (8)	Lubricate with heavy machine oil and remove rust and scale with a wire brush.	Weld cracks using standard shop practices and techniques.
7. Swivel ring retainer (9)	a. Place eighteen capscrews (1) and lockwashers (2) through holes. b. Slide up around swivel frame (8).	Do not tighten yet.
8. Swivel ring (10).	Place under swivel frame (8).	
9. Eighteen capscrews (1) and lockwashers (2).	Screw in and tighten.	
10. Swivel ring (10).	Check for binding or sticking.	
D. INSTALLATION OF TROUGH.		
11. Trough.	a. Place in position. b. Lift front end and slide left hanger bracket (11) onto pin.	

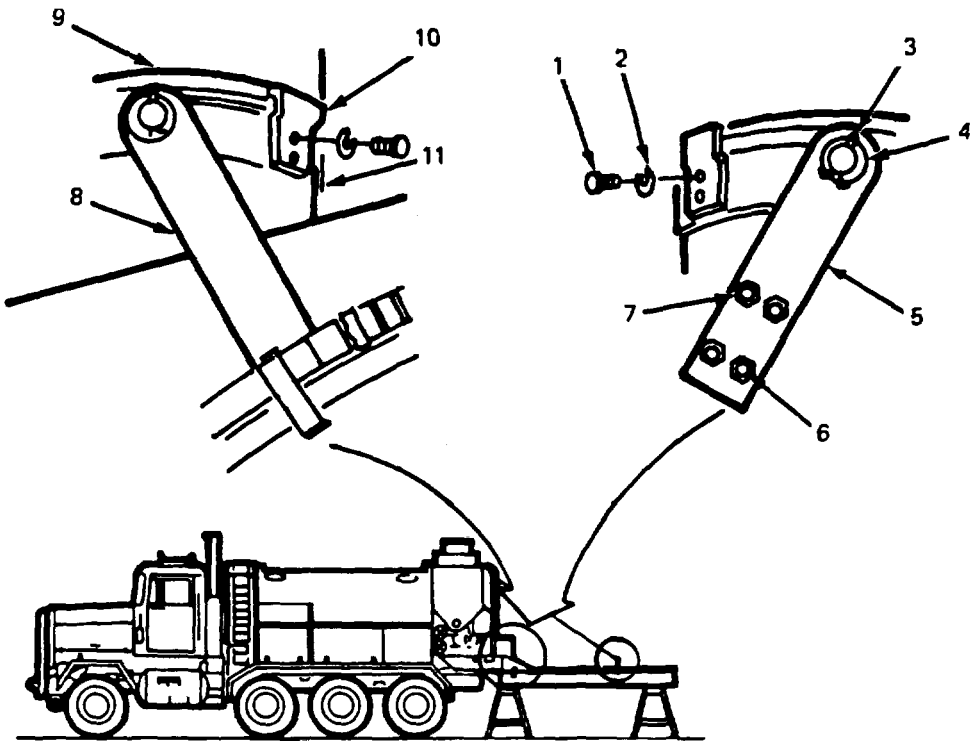
MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS



LEGEND:

- 1. CAPSCREW (18)
- 2. LOCKWASHER (18)
- 3. COTTER PIN (2)
- 4. WASHER (2)
- 5. RIGHT HAND HANGER BRACKET
- 6. CAPSCREW (4)
- 7. NUT (4)
- 8. SWIVEL FRAME
- 9. SWIVEL RING RETAINER
- 10. SWIVEL RING
- 11. LEFT HAND HANGER BRACKET

TA 076378

MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. INSTALLATION OF TROUGH (Continued).		
12. Right hanger bracket (5).	a. Slide onto pin. b. Attach to trough with four nuts (7) and capscrews (6). Tighten nuts.	Capscrews are installed from the inside.
13. Two washers (4).	Slide over pins.	
14. Two cotter pins (3).	Slide through pins. Bend cotter pins to hold pins in place.	
15. Winch cable.	Draw up slack and remove hoist from trough.	
E. OPERATIONAL CHECK.		
16. Mixer trough.	a. Turn trough from side to side. Check for sticking or binding of swivel ring. b. Raise trough and latch. Always utilize safety chain.	

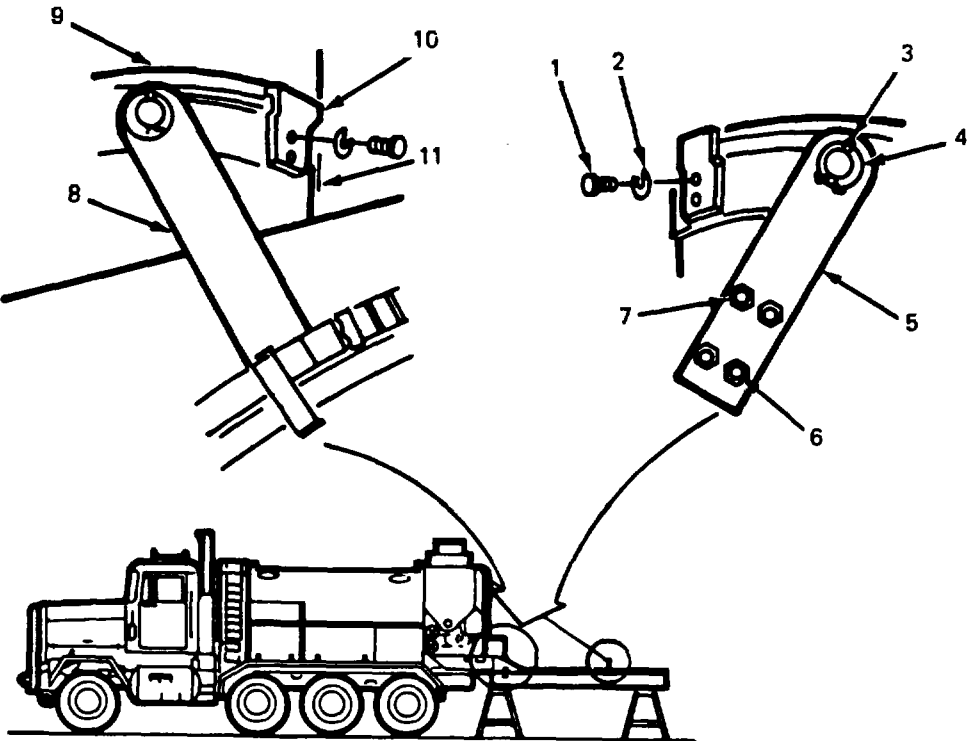
MIXER-AUGER SYSTEM.

9-14. SWIVEL RING MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS



LEGEND:

- 1. CAPSCREW (18)
- 2. LOCKWASHER (18)
- 3. COTTER PIN (2)
- 4. WASHER (2)
- 5. RIGHT HAND HANGER BRACKET
- 6. CAPSCREW (4)
- 7. NUT (4)
- 8. SWIVEL FRAME
- 9. SWIVEL RING RETAINER
- 10. SWIVEL RING
- 11. LEFT HAND HANGER BRACKET

TA 076379

MIXER-AUGER SYSTEM.

9-15. MINISKIRT ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. ~~(15)~~
- 25 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Miniskirt, NP2730004 (50663).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground

REFERENCES (TM)

- TM 53895-372-20P.
- TM 5-3895-372-10.
- TM 92320273-10.

TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-15. MINISKIRT ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

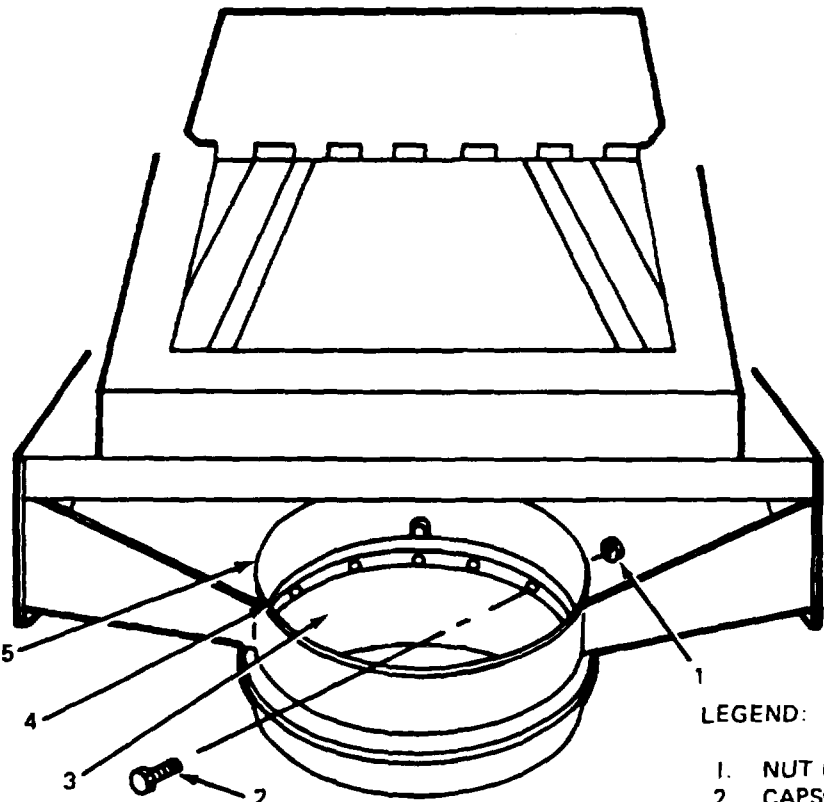
REMARKS

NOTE

Auger should be lowered approximately 1/3 of the way from top to aid removal.

A. REMOVAL.

- | | | |
|----|---|--|
| 1. | Inner ring (3), rubber (4), and outer ring (5). | Disconnect three hooks from pegs by rotating assembly. |
| 2. | Thirteen nuts (1) and capscrews (2). | Unscrew and remove. Separate inner ring (3), rubber (4), and outer ring (5). |



- LEGEND:
- 1. NUT (13)
 - 2. CAPSCREW (13)
 - 3. INNER RING
 - 4. RUBBER
 - 5. OUTER RING

TA 076380

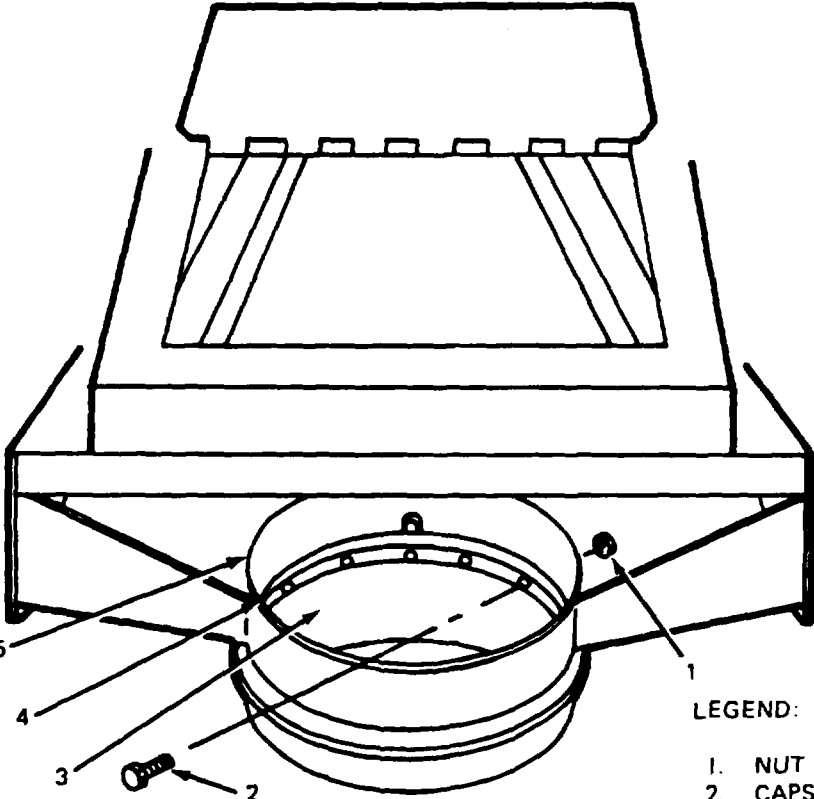
MIXER-AUGER SYSTEM.

9-15. MINISK IRT ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
3. New rubber (4).	a. Place under old rubber and mark holes with pencil. b. Cut out holes with a 5/16 in. punch or equivalent.	
4. Inner ring (3), rubber (4), and outer ring (5).	Assemble and aline bolt holes.	Opening in rubber must face forward when hooks are laid over pegs.
5. Thirteen capscrews (2) and nuts (1).	Install and tighten evenly.	
6. Inner ring (3), rubber (4), and outer ring (5).	Lift into swivel frame. Hook onto pegs.	
7. Mixer auger.	Raise and latch. Always utilize safety chain.	

MIXER-AUGER SYSTEM.

9-15. MINISKIRT ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
LEGEND:		
<ul style="list-style-type: none">1. NUT (13)2. CAPSCREW (13)3. INNER RING4. RUBBER5. OUTER RING		

TA 076380

MIXER-AUGER SYSTEM.

9-16. CHUTE MA;NTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

Repair. (20)
20 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (M0S62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895372-20P.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.
Wet Cement and Concrete Can Cause Burns.
Safety Glasses Should be Worn When Working
with Cement.
Hitting Hard Concrete with Hammer Will Cause
Chips to Fly.

TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-16. CHUTE MAINTENANCE (Continued).

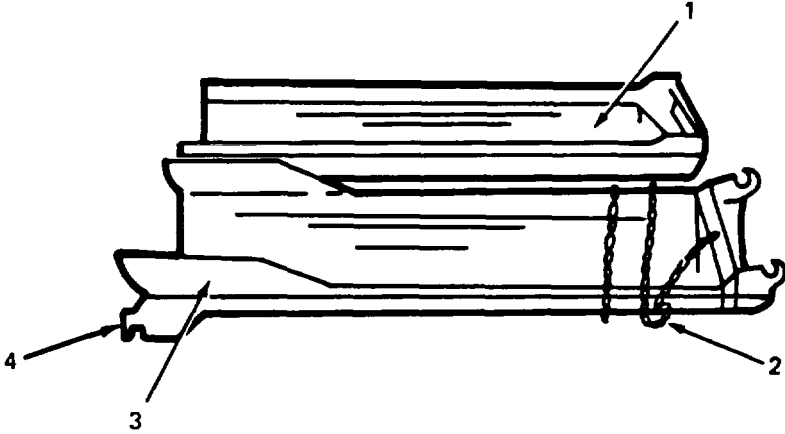
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

REPAIR.

- | | | |
|-----------------------------------|---|---|
| 1. Chutes (1) or (3) and ear (4). | a. Hammer out any dents.
b. Weld any cracks which are found using standard shop practices. | Refer to TM 9-237 for further welding guidance. |
| 2. Chain (2). | Replace chain which has any broken links. | |

NOTE

Chutes should be replaced if they do not fit properly after repairs have been made.



LEGEND:

- 1. CHUTE
- 2. CHAIN
- 3. CHUTE
- 4. EAR

TA 076382

MIXER-AUGER SYSTEM.

9-17. TROUGH GUARD MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. ~~(10)~~
- 20 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 5-3895-372-10.

Trough Lowered in a Horizontal Position.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P'N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 53895372-12.
- TM 5-3895g37210P.
- TM 53895372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.
- Wet Cement and Concrete Can Cause Burns.

TROUBLESHOOTING REFERENCES

Table 9-1.

MIXER-AUGER SYSTEM.

9-17. TROUGH GUARD MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS

A. REMOVAL.

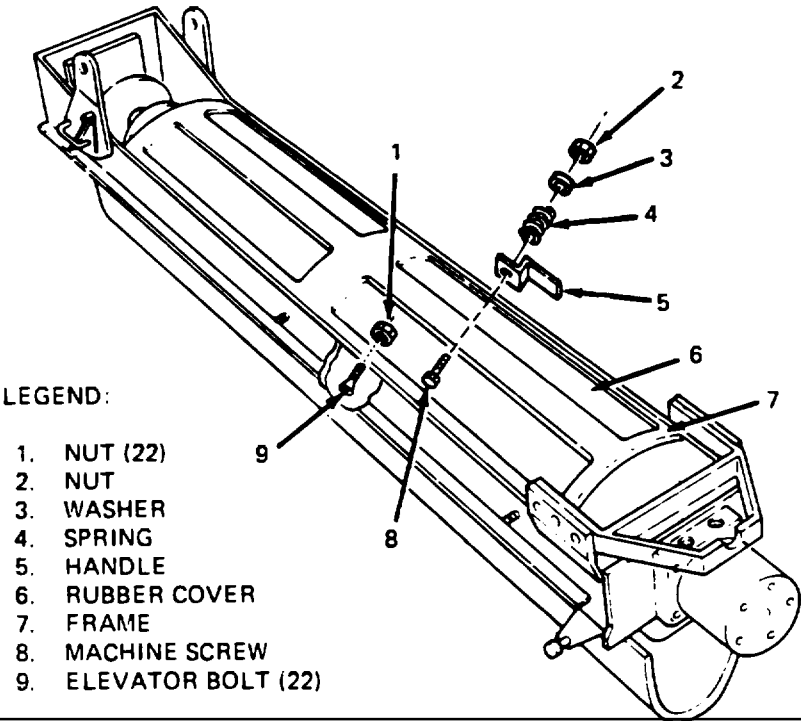
NOTE

This procedure may be used for either trough guard.

- 1. Twenty-two elevator bolts (9) and nuts (1). Remove.
- 2. Rubber cover (6). Remove from frame (7). Replace rubber cover (6) if deteriorated.
- 3. Machine screw (8) and nut (2). Unscrew and remove handle (5), spring (4), and washer (3).

B. INSTALLATION.

- 4. Handle (5), spring (4), and washer (3).
 - a. Place in position.
 - b. Install with machine screw (8) and nut (2).
- 5. Rubber cover (6).
 - a. Position on frame (7).
 - b. Install with twenty-two elevator bolts (9) and nuts (1).



LEGEND:

- 1. NUT (22)
- 2. NUT
- 3. WASHER
- 4. SPRING
- 5. HANDLE
- 6. RUBBER COVER
- 7. FRAME
- 8. MACHINE SCREW
- 9. ELEVATOR BOLT (22)

TA 076383

CHAPTER 10

HYDRAULIC SYSTEM

10-1. OVERVIEW.

This chapter provides you with the following information related to hydraulic system maintenance.

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedures.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

10-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

10-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for hydraulic system maintenance procedures described in this chapter are limited to hydraulic pressure gage, 0-2500 psi (0-17200 kPa). Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

10-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools list covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

10-5. INTRODUCTION.

Troubleshooting procedures for the hydraulic system are given in table 10-1. It is arranged by malfunctions, in the following order:

- a. Hydraulic motor does not operate (Malfunction No. 1).
- b. Hydraulic pump is noisy (Malfunction No. 2).
- c. Hydraulic pressure is low (Malfunction No. 3).
- d. Hydraulic motor vibrates (Malfunction No. 4).
- e. Tachometer does not work properly (Malfunction No. 5).

Table 10- 1. Hydraulic System Troubleshooting Procedures.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>1. HYDRAULIC MOTOR DOES NOT OPERATE:</p> <p>Step 1 Check that tachometer reads 1620-1720 rpm. Use throttle to adjust engine speed.</p> <p>Step 2 Check to be sure bypass valve is closed. Close bypass valve.</p> <p>Step 3 Check oil level by removing cap and checking dipstick in hydraulic tank. Add oil if needed (see LO 5-3895-372-12).</p> <p>Step 4 Check filter for clogging. Replace clogged filter (see TM 5-3895-372-10).</p> <p>Step 5 Check hydraulic pump drive belt tension. Belts should deflect 5/32 in. (4.0mm) when 6 lb (27 N-m) pressure is applied. Adjust drive belts (para 417).</p> <p>Step 6. Check PTO drive belt tension. Belts should deflect 5/32 in. (1.0 mm) when 6 lb (27 N-m) pressure is applied. Adjust drive belts (para 4-11).</p> <p>Step 7 Check that proper type of hydraulic oil is being used. (See LO 5-3895-372-12.) Fill system with correct oil.</p> <p>Step 8 Check hydraulic lines for oil leaks. Replace leaking lines on couplings (para 10-15).</p> <p>Step 9 Check for air leaks at hydraulic pump intake. Replace leaking line or coupling (para 10-15).</p> <p>Step 10 Check hydraulic line oil pressure (10-10). Pressure should be 1900-2000 psi (13,100-13,800 kPa). Adjust pressure valve (para 10-10).</p>

Table 10-1. Hydraulic System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>2. HYDRAULIC PUMP IS NOISY:</p> <p>Step 1 Check for clogged filter.</p> <p style="padding-left: 40px;">Replace clogged filter (see TM 5-3895-372-10).</p> <p>Step 2. Check that lines are tight.</p> <p style="padding-left: 40px;">Tighten.</p> <p>Step 3. Rebuild hydraulic pump.</p> <p style="padding-left: 40px;">Refer problem to Direct Support Maintenance.</p> <p>3. HYDRAULIC PRESSURE IS LOW:</p> <p>Step 1 Check that tachometer reads 1620-1720 rpm.</p> <p style="padding-left: 40px;">Use throttle to adjust engine speed.</p> <p>Step 2 When oil is hot, check hydraulic bypass valve for heat and leakage.</p> <p style="padding-left: 40px;">Clean hydraulic bypass valve para 10-9).</p> <p>Step 3 Check pressure relief valve adjustment (para 10-10).</p> <p style="padding-left: 40px;">a. Adjust pressure relief valve.</p> <p style="padding-left: 40px;">b. Refer problem to Direct Support Maintenance.</p> <p>4. HYDRAULIC MOTOR VIBRATES:</p> <p style="padding-left: 40px;">Refer problem to Direct Support Maintenance.</p> <p>5. TACHOMETER DOES NOT WORK PROPERLY:</p> <p>Step 1 Be sure setscrews at cable ends are tight.</p> <p style="padding-left: 40px;">Tighten setscrews.</p> <p>Step 2 Check hydraulic pump belts. Deflection should be 5/32 in. (4.0 mm) under 6 lb (27 N-m) pressure.</p> <p style="padding-left: 40px;">Adjust pump belts (para 4-17).</p>

Table 10-1. Hydraulic System Troubleshooting Procedures (Continued).

MALFUNCTION
TESTS OR INSPECTION
CORRECTIVE ACTION
5. TACHOMETER DOES NOT WORK PROPERLY (Continued): Step 3. Remove cable and check for damage (para 10-12). Replace damaged cable core or assembly. Step 4. Replace tachometer. Refer to para 10-12.

Section III MAINTENANCE PROCEDURES

10-6. INTRODUCTION. I

This section provides you with Organizational Level maintenance procedures for the hydraulic system of the mixer body. Paragraph 107 summarizes the maintenance tasks. Paragraphs 108 thru 10-16 contain detailed instructions for each task.

10-7. HYDRAULIC SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

EQUIPMENT
CONDITION
PARAGRAPH

LO 53895372-12.

CONDITION DESCRIPTION

Oil Tank Drained.

TEST EQUIPMENT

Hydraulic Gage.
0-5000 psi (0-34475 kPa).

SPECIAL TOOLS

Auger Stop Tool. NP3817116 (50663).

MATERIALS/PARTS (P/N)

Filter Assembly. NP5014003 (50663).
Oil - (See Appendix C).
Teflon Tape - (See Appendix C).
Drain Pan.
GAA-Grease - (See Appendix C).
Tachometer, NP5016003 (50663).
Liquid Teflon - (See Appendix C).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

PERSONNEL REQUIRED

Two (MOS-62B20).

REFERENCES (TM)

TM 53895372-10.
TM 5-3895372-20P.
TM 9-232(0273-10).

GENERAL SAFETY INSTRUCTIONS

Engine OFF.
Transmission in Neutral.
Park Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.
Wet Cement and Concrete Can Cause Burns.

TROUBLESHOOTING REFERENCES

Table 10-1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Oil Filter Assembly Maintenance:	108	10-1
	A. Removal.	10S8A	
	B. Disassembly.	10-BB	
	C. Assembly.	10-8C	
	D. Installation.	10-8D	
	E. Operational Check.	10-8E	

10-7. HYDRAULIC SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
2.	Bypass Valve Maintenance:	10-9	10-1
	A. Removal.	10 9A	
	B. Installation.	10-9B	
	C. Operational check.	10-9C	
3.	Relief Valve Adjustment:	10-10	10-1
	A. Test pressure.	10-10A	
	B. Adjustment	10-10B	
	C. Gage removal.	10-10C	
4.	Relief Valve Maintenance:	10-11	10-1
	A. Removal.	10-11A	
	B. Installation.	1011B	
	C. Operational check.	1011C	
5.	Tachometer and Tachometer Cable Maintenance:	10-12	10-1
	A. Removal.	10-12A	
	B. Installation.	10-12B	
	C. Operational check.	10-12C	
6.	Lines and Fittings Maintenance	10-13	10-1
	Removal and installation.	10-13	

10-7. HYDRAULIC SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
7.	Oil Reservoir Maintenance: A. Removal. B. Repair. C. Installation. D. Operational check.	10-14 10-14A 10-14B 10-14C 10-14D	10-1
8.	Control Valve Maintenance: A. Removal. B. Installation. C. Operational check.	10-15 1015A 10-15B 10-15C	10-1
9	Hydraulic Motor Maintenance: A. Removal. B. Installation. C. Operational check.	10-16 10-16A 10-16B 10-16C	10-1

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HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | | |
|----|--------------------|-------------------|
| a. | Removal. | (20) |
| b. | Disassembly. | (10) |
| d. | Assembly. | (10) |
| d. | Installation. | (20) |
| e. | Operational Check. | <u>(5)</u> |
| | | 65 Minutes Total. |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Hydraulic Oil (Refer to Appendix C).
 Repair Kit (4330-01-044-2888).
 Repair Kit, K23022 (09249).
 Liquid Teflon (See Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895-372-12.
 Transmission in Neutral.
 TM -5-3895372-10P.
 TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
 Parking Brake Set.
 Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REFERENCES

Table 10-1.

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).

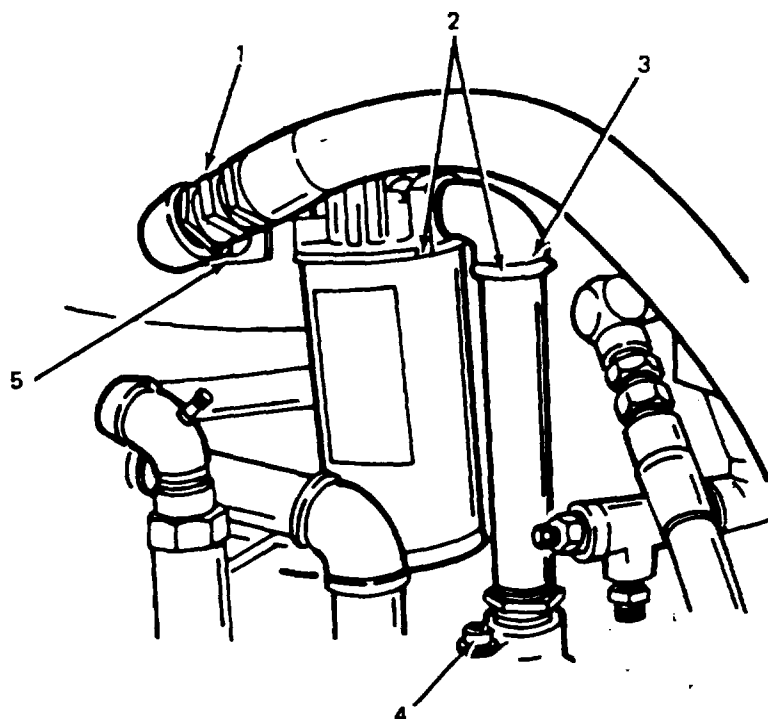
LOCATION/ITEM	ACTION	REMARKS
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NOTE

Before beginning service drain oil reservoir and raise rear access panel (refer to LO 5-3895-372-12).

A. REMOVAL.

1. Swivel nut (1).	Remove.	Swing hose upward around access panel.
2. Four allen-head bolts and lock washers (4).	Remove.	
3. Oil filter and pump inlet pipe (2).	Remove from vehicle.	Use drain pan to catch excess oil.
4. Street elbow (5).	Remove from filter head.	
5. Street elbow (3).	Remove from filter head.	



LEGEND:

- 1. SWIVEL NUT
- 2. OIL FILTER AND PUMP INLET PIPE
- 3. STREET ELBOW
- 4. ALLEN HEAD BOLT AND LOCKWASHER (4)
- 5. STREET ELBOW

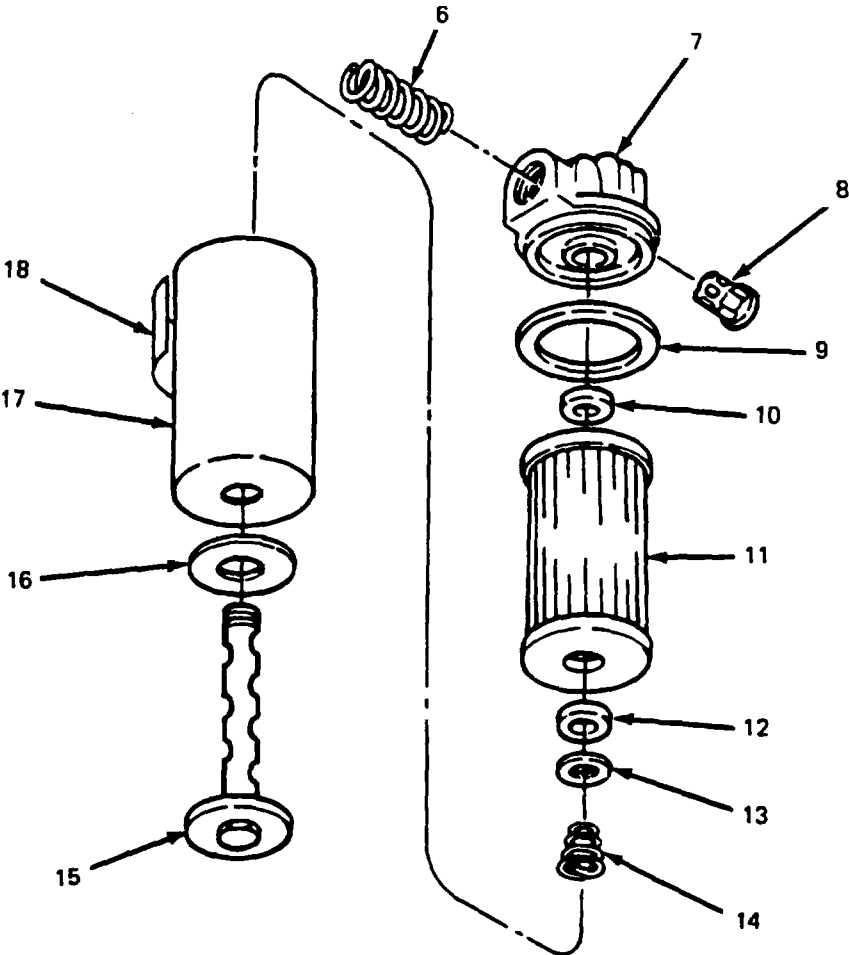
TA 076384

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY.		
6. Center post (15).	Remove from head (7).	Leave center post (15) inserted through filter housing (17).
7. Preformed Packing (9) and filter element top seal (10).	Remove.	
8. Filter element (11).	Remove from filter housing (17).	
9. Filter element bottom seal (12), backup washer (13) and conical spring (14).	Remove.	
10. Center post (15) and center post gasket (16).	Remove from filter housing (17).	
11. Relief valve spring (6) and relief valve poppet (8).	Remove from head (7).	
12. Decal (18). housing (17) if necessary.	Remove decal from filter	Use a sharp tool.

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
LEGEND:		
<ul style="list-style-type: none">6. RELIEF VALVE SPRING7. HEAD8. RELIEF VALVE POPPET9. PREFORMED PACKING10. FILTER ELEMENT TOP SEAL11. FILTER ELEMENT12. FILTER ELEMENT BOTTOM SEAL13. BACK-UP WASHER14. CONICAL SPRING15. CENTER POST16. CENTER POST GASKET17. FILTER HOUSING18. DECAL		
TA 076385		

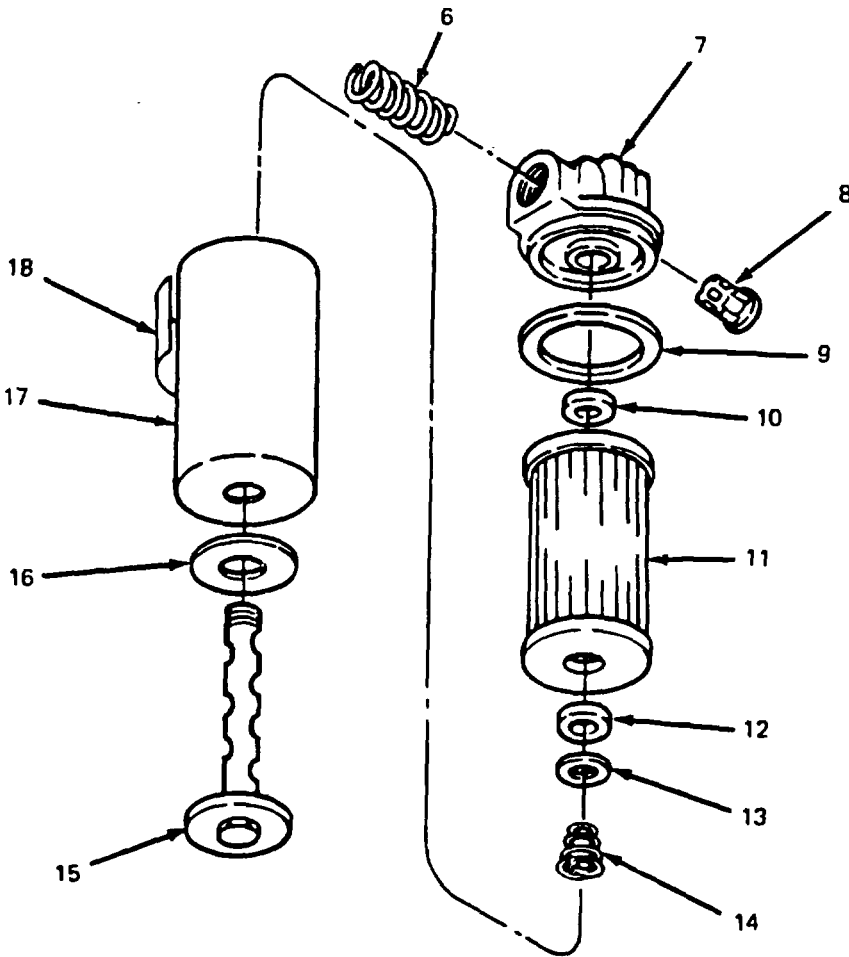
HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
C. ASSEMBLY.		
13. Relief valve spring (6) and relief valve poppet (8).	Install in head (7).	
14. Center post (15) and center post gasket (16).	Install in filter housing (17).	
15. Filter element bottom seal (12), backup washer (13) and conical spring (14).	Install.	
16. Filter element (11).	Install.	
17. Preformed packing (9) and filter element top seal (10).	Install.	
18. Center post (15).	Install in head (7).	
19. Decal (18).	If removed, install a new	decal (18) on filter housing (17).
10-14		

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 6. RELIEF VALVE SPRING
- 7. HEAD
- 8. RELIEF VALVE POPPET
- 9. PREFORMED PACKING
- 10. FILTER ELEMENT TOP SEAL
- 11. FILTER ELEMENT
- 12. FILTER ELEMENT BOTTOM SEAL
- 13. BACK-UP WASHER
- 14. CONICAL SPRING
- 15. CENTER POST
- 16. CENTER POST GASKET
- 17. FILTER HOUSING
- 18. DECAL

TA 076386

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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D. INSTALLATION.

NOTE

Apply liquid teflon to threaded joints at installation.

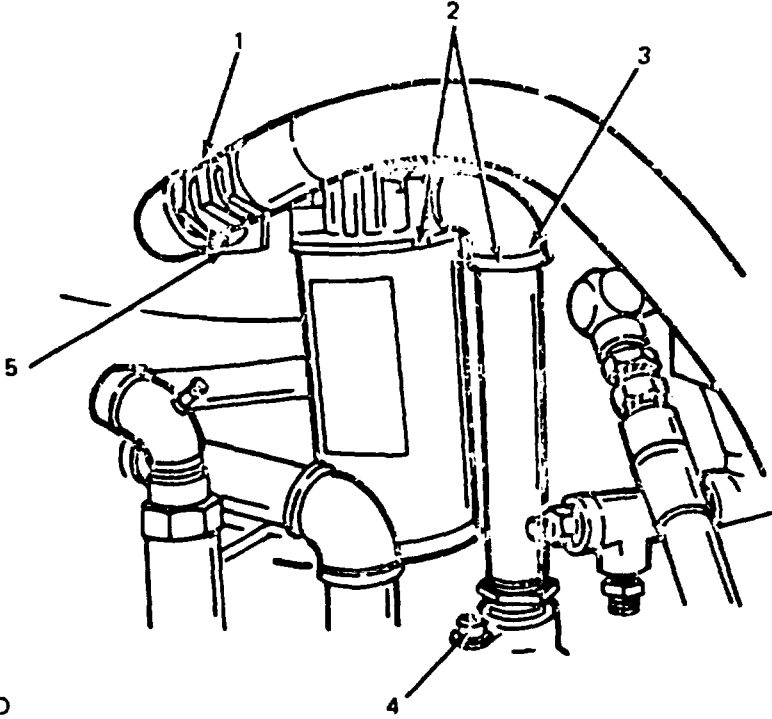
- | | | |
|-----|---|-------------------------------|
| 20. | Street elbow (3). | Install in filter head. |
| 21. | Street elbow (5). | Install in filter head. |
| 22. | Oil filter and pump inlet pipe (2). | Install in vehicle. |
| 23. | Four allen-head bolts and Lock washers (4). | Install and tighten securely. |
| 24. | Swivel nut (1). | Install. |

E. OPERATIONAL CHECK.

- | | | |
|-----|----------------------|--|
| 25. | Oil reservoir. | Fill (see LO 5-3895372-12). |
| 26. | Mixer. | Start up (see TM 9-2320-273-10 and TM 5-3895-372-10). |
| 27. | Auger. | Lower auger and activate. |
| 28. | Oil filter assembly. | Check for leaks. |
| 29. | Mixer. | Shut down (see TM 9-2320-273-10 and TM 5-3895-372-10). |
| 30. | Auger. | Raise and secure with safety chain. |

HYDRAULIC SYSTEM.

10-8. OIL FILTER ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1. SWIVEL NUT2. OIL FILTER AND PUMP INLET PIPE3. STREET ELBOW4. ALLEN HEAD BOLT AND LOCKWASHER (4)5. STREET ELBOW		

TA 076387

HYDRAULIC SYSTEM.

10-9. BYPASS VALVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. (10)
 - c. Operational Check. (5)
- 25 Minutes Total.

INITIAL SETUP:

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Teflon Tape (Refer to Appendix C).
Drain Pan.

**EQUIPMENT
CONDITION**

PARAGRAPH

LO 5-3895-372-12.

CONDITION DESCRIPTION

Hydraulic Oil Reservoir Drained.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895-372-12.
TM 53895-372-10.
TM 5-3895372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REFERENCES

Table 10-1.

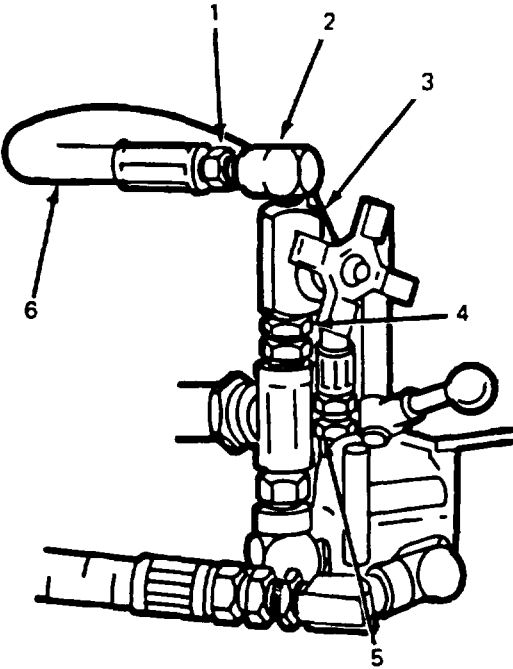
HYDRAULIC SYSTEM.

10-9. BYPASS VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

1. Swivel nut (5).	Disconnect.	Catch excess oil in drain pan.
2. Fitting (1).	Remove. Remove hose (6) from vehicle.	Catch excess oil in drain pan.
3. 90° elbow (2).	Remove.	
4. Bypass valve (3).	Remove from adapter (4).	



- LEGEND:
- 1. FITTING
 - 2. 90° ELBOW
 - 3. BYPASS VALVE
 - 4. ADAPTER
 - 5. SWIVEL NUT
 - 6. HOSE

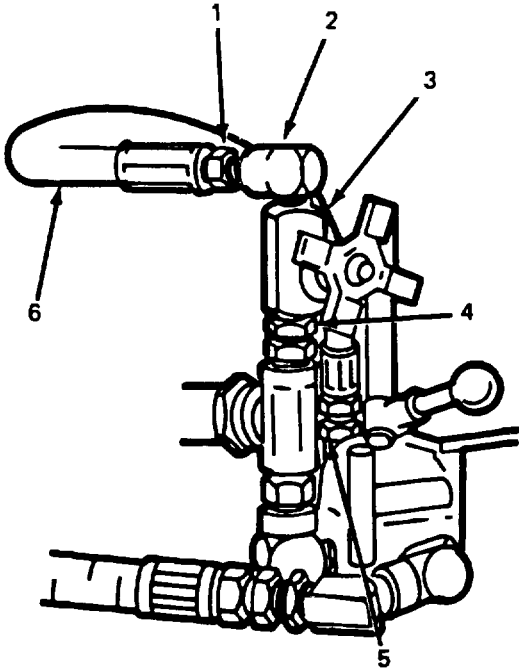
TA 076388

HYDRAULIC SYSTEM.

10-9. BYPASS VALVE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
NOTE		
Apply liquid teflon to threaded joints at assembly.		
5. Bypass valve (3).	Install in adapter (4).	
6. 90° elbow (2).	Install.	
7. Hose (C).	Install fitting (1) in 90° elbow (2).	
8. Swivel nut (5).	Connect.	
C. OPERATIONAL CHECK.		
9. Oil reservoir.	Fill. (Refer to LO 5-3895-372-12).	
10. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895372-10).	
11. Auger.	Unlatch and lower.	
12. Bypass valve (3).	a. Activate auger. Check to see if bypass valve will limit auger rotation speed. b. Check for leaks.	
13. Auger.	Shut down. Raise and latch.	
14. Mixer body.	Shut down (see TM 9-2320-273-10 and TM 5-3895-372-10).	
10-20		

HYDRAULIC SYSTEM.

10-9. BYPASS VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1. FITTING2. 90° ELBOW3. BYPASS VALVE4. ADAPTER5. SWIVEL NUT6. HOSE		

TA 076389

HYDRAULIC SYSTEM.

10-10. RELIEF VALVE ADJUSTMENT.

THIS TASK COVERS: APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Test Pressure. (5)
 - b. Adjustment. (10)
 - c. Gage Removal. (5)
- 20 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None

M919.

TEST EQUIPMENT

Hydraulic Test Gage.
0-5000 PSI (0-34475 kPa).

SPECIAL TOOLS

Auger Stop Tool, NP3817116 (50663).

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895372-20P.
TM 5-38952372-20P.

GENERAL SAFETY INSTRUCTIONS

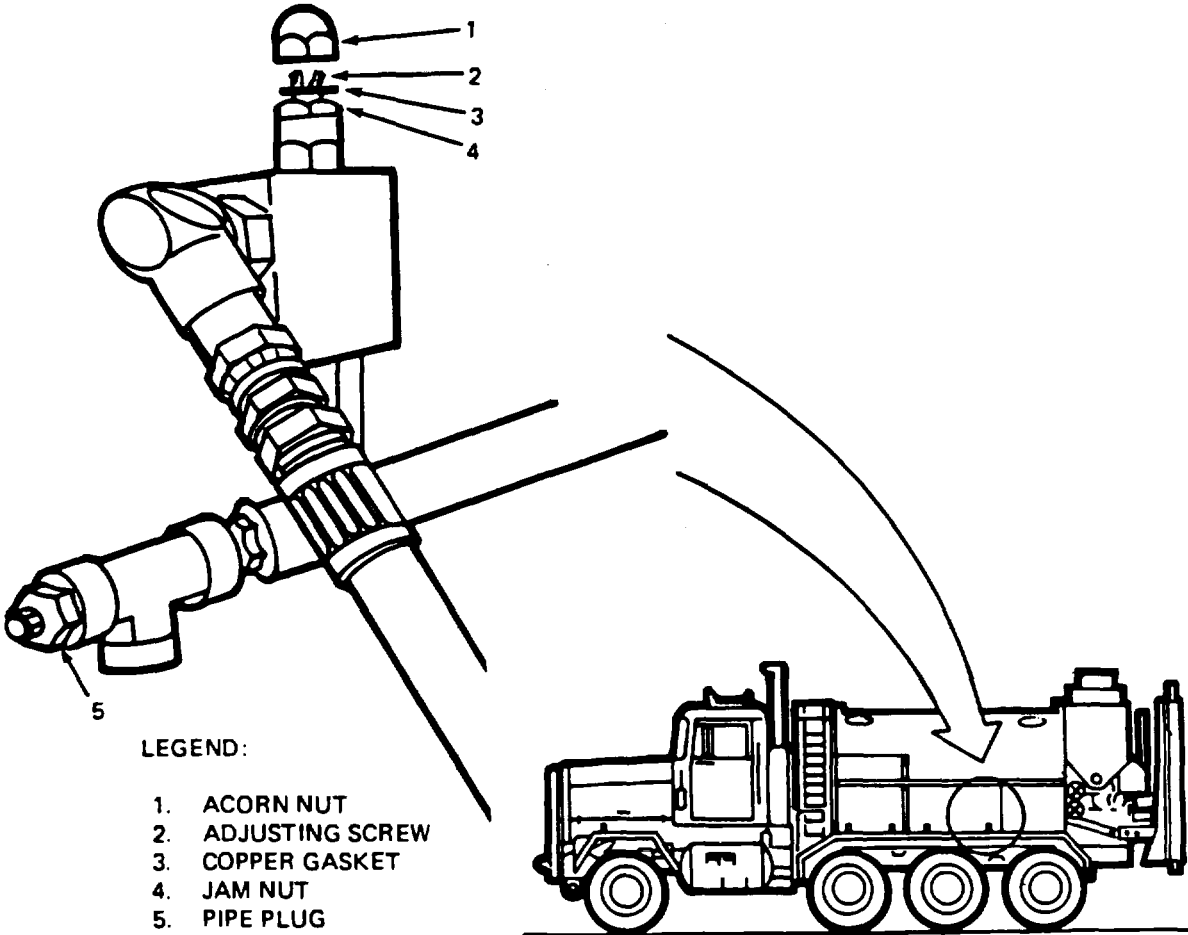
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REFERENCES

Table 10-1.

HYDRAULIC SYSTEM.


10-10. RELIEF VALVE ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. TEST PRESSURE.		
NOTE		
Perform test with engine running and hydraulic oil warmed up.		
1. Pipe plug (5).	a. Remove. b. Screw in hydraulic gage.	
2. Bypass valve.	Open.	
		
LEGEND: 1. ACORN NUT 2. ADJUSTING SCREW 3. COPPER GASKET 4. JAM NUT 5. PIPE PLUG		

TA 076390

HYDRAULIC SYSTEM.

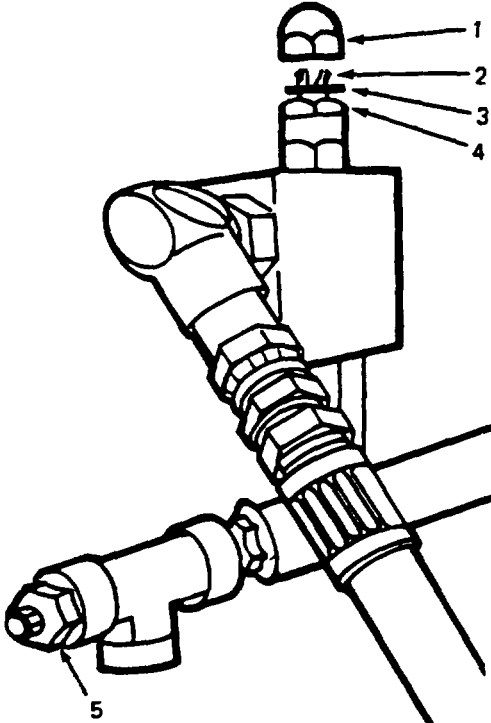
10-10. RELIEF VALVE ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
A TEST PRESSURE (Continued).		
3. Mixer-auger.	Hold with auger stop tool, turn slowly until wrench lodges against side of trough. Do not allow auger to turn while you test hydraulic pressure.	
4. Mixer body.	Start up and engage PTO. (Refer to TM 9-2320-273-10.)	
5. Hand throttle, tachometer.	Adjust throttle until tachometer reads 1250.	Maintain this pump speed throughout test.
WARNING		
Do not open valve quickly or wrench will be thrown free. Turn valve slowly until completely open.		
6. Hydraulic control valve.	Open as if starting hydraulic motor.	
7. Bypass valve.	Close slowly.	Continue until valve is completely closed.
8. Pressure gage.	Read. Pressure should be 1900C2000 psi (13,10 13,800 kPa).	a. If pressure is correct, go to Part C. b. If pressure needs adjustment, go to Part B.
		
Do not lose copper gasket.		
B. ADJUSTMENT.		
9. Acorn nut (1) and copper gasket (3).	Remove.	
10. Jam nut (4).	Loosen.	
11. Adjusting screw (2). 1950 (13,450 kPa).	Turn until pressure reaches pressure.	Turn clockwise to increase
10-24		

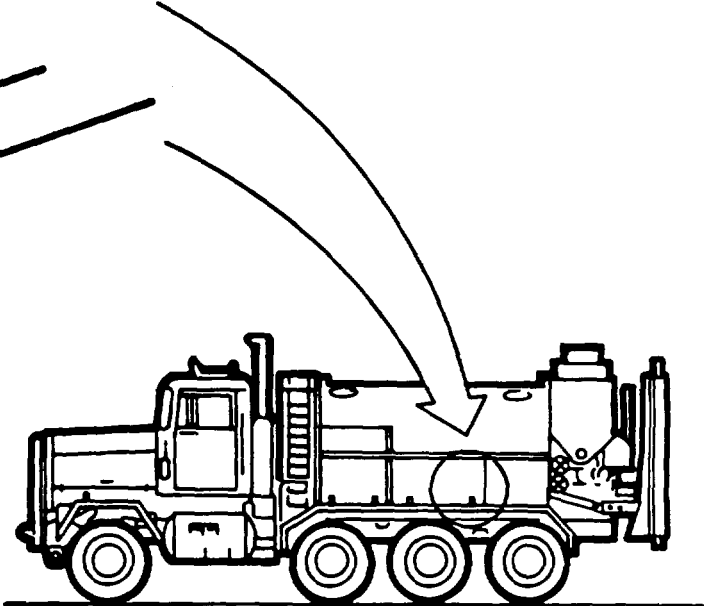
HYDRAULIC SYSTEM.

10-10. RELIEF VALVE ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
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- LEGEND:
- 1. ACORN NUT
 - 2. ADJUSTING SCREW
 - 3. COPPER GASKET
 - 4. JAM NUT
 - 5. PIPE PLUG



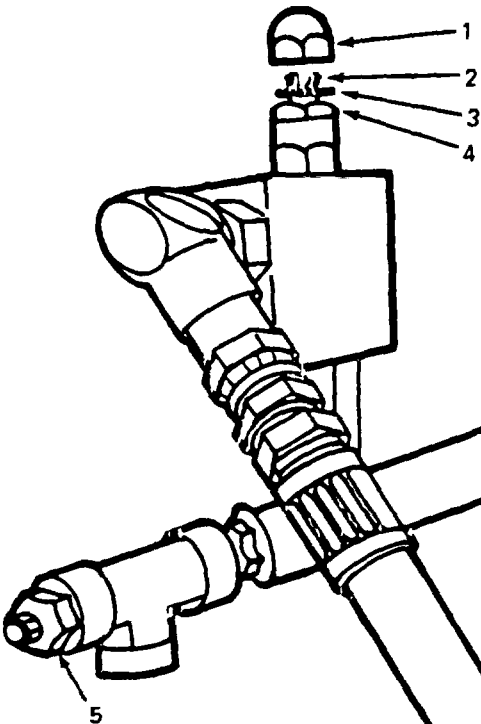
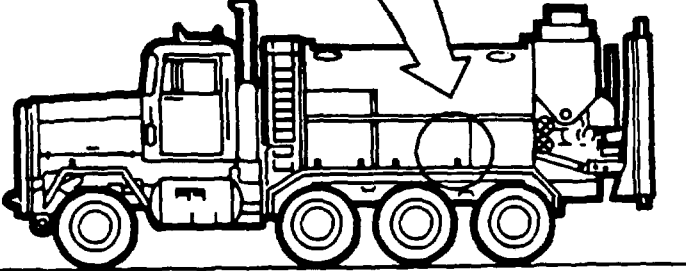
TA 076391

HYDRAULIC SYSTEM.

10-10. RELIEF VALVE ADJUSTMENT (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. ADJUSTMENT (Continued).		
12. Jam nut (4).	Tighten.	
13. Copper gasket (3) and acorn nut (1).	Screw on and tighten.	
14. Pressure gage.	Read. Pressure should be 1900-2000 psi (13,100-13,800 kPa).	
NOTE		
If you are unable to obtain proper pressure, refer problem to Direct Support Maintenance.		
C. GAGE REMOVAL.		
15. Control valve.	Close.	
16. Engine.	Shut down. Refer to ^{Ta1} 9-2320-273-10.	
17. Auger stop-tool.	Remove from auger.	
18. Pressure gage.	Remove.	
19. Pipe plug (5).	Install.	

HYDRAULIC SYSTEM.

10-10. RELIEF VALVE ADJUSTMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
		
<p>LEGEND:</p> <ul style="list-style-type: none">1. ACORN NUT2. ADJUSTING SCREW3. COPPER GASKET4. JAM NUT5. PIPE PLUG		
		

TA 076392

HYDRAULIC SYSTEM.

10-11. RELIEF VALVE MAINTENANCE.		
<u>THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)</u>		
a. Removal.	(10)	
b. Installation.	(10)	
c. Operational Check.	(10)	
	30 Minutes Total.	
<u>INITIAL SETUP</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
<u>APPLICABLE CONFIGURATIONS</u>	LO 5-3895-372-12.	Oil Reservoir Drained.
M919.		
<u>TEST EQUIPMENT</u>		
None		
<u>SPECIAL TOOLS</u>		
None.		
<u>MATERIALS/PARTS (PIN)</u>		
Liquid Teflon (Refer to Appendix C).		
Oil (Refer to Appendix C).		
<u>PERSONNEL REQUIRED</u>	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>	
One (MOS-62B20).	Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u>	<u>GENERAL SAFETY INSTRUCTIONS</u>	
LO 5-3895-372-12.	Engine Off.	
OTM 53895-372-10.	Transmission in Neutral.	
TM 53895-372-20P.	Parking Brake Set.	
TM 9-2320-273-10.	Hydraulic Oil May Be Hot Enough to Burn Skin.	
<u>TROUBLESHOOTING REFERENCES</u>		
Table 10-1.		

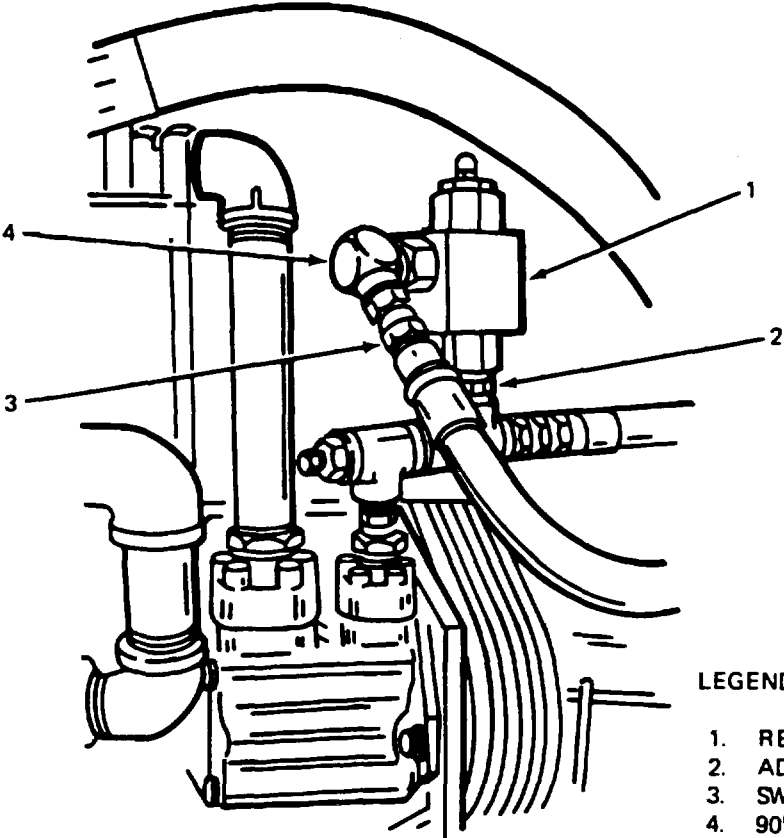
HYDRAULIC SYSTEM.

10-11. RELIEF VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|----------------------|--------------------------|
| 1. Swivel nut (3). | Remove. |
| 2. 90° elbow (4). | Remove. |
| 3. Relief valve (1). | Remove from adapter (2). |



TA 076393

HYDRAULIC SYSTEM.

10-11. RELIEF VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.

NOTE

Apply liquid teflon to threaded joints at installation.

- | | |
|----------------------|-------------------------------|
| 4. Relief valve (1). | Install in adapter (2). |
| 5. 900 elbow (4). | Install. |
| 6. Swivel nut (3). | Install and tighten securely. |

NOTE

Follow on maintenance action required: Fill oil reservoir; refer to LO 5-3895-372-12.

C. OPERATIONAL CHECK.

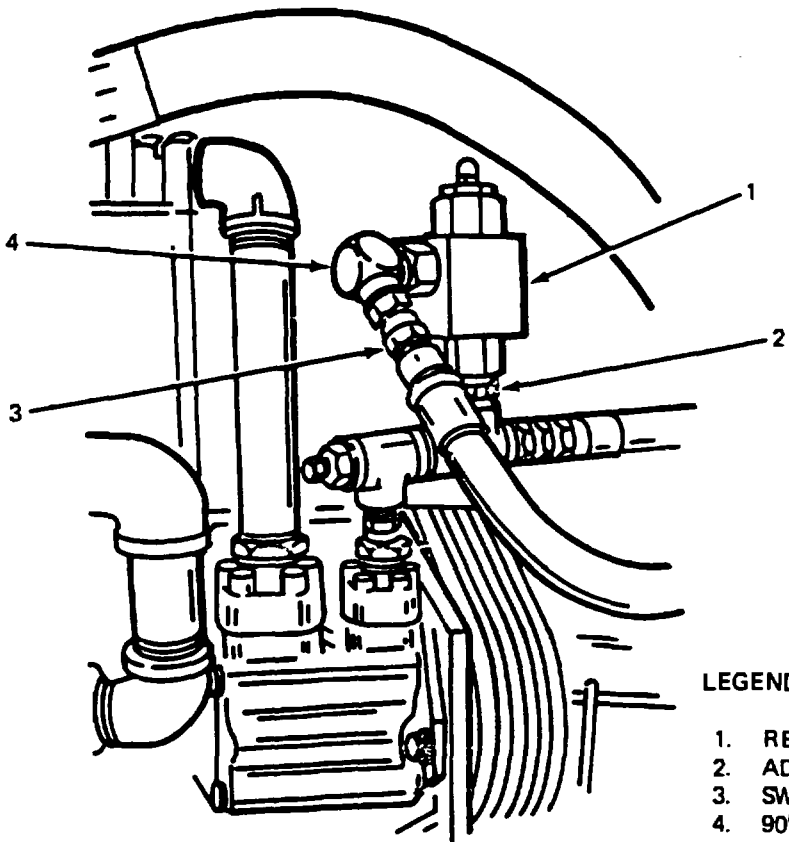
NOTE

After installing a new relief valve, always test and adjust to specifications For this procedure refer to paragraph 1010.

HYDRAULIC SYSTEM.

10-11. RELIEF VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 1. RELIEF VALVE
- 2. ADAPTER
- 3. SWIVEL NUT
- 4. 90° ELBOW

TA 076394

HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. (10)
 - c. Operational Check. (5)
- 25 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

None.

None.

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

GAA Grease (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5-3895-372-12.
- TM 5-3895372-10.
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 10-1.

HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE (Continued).

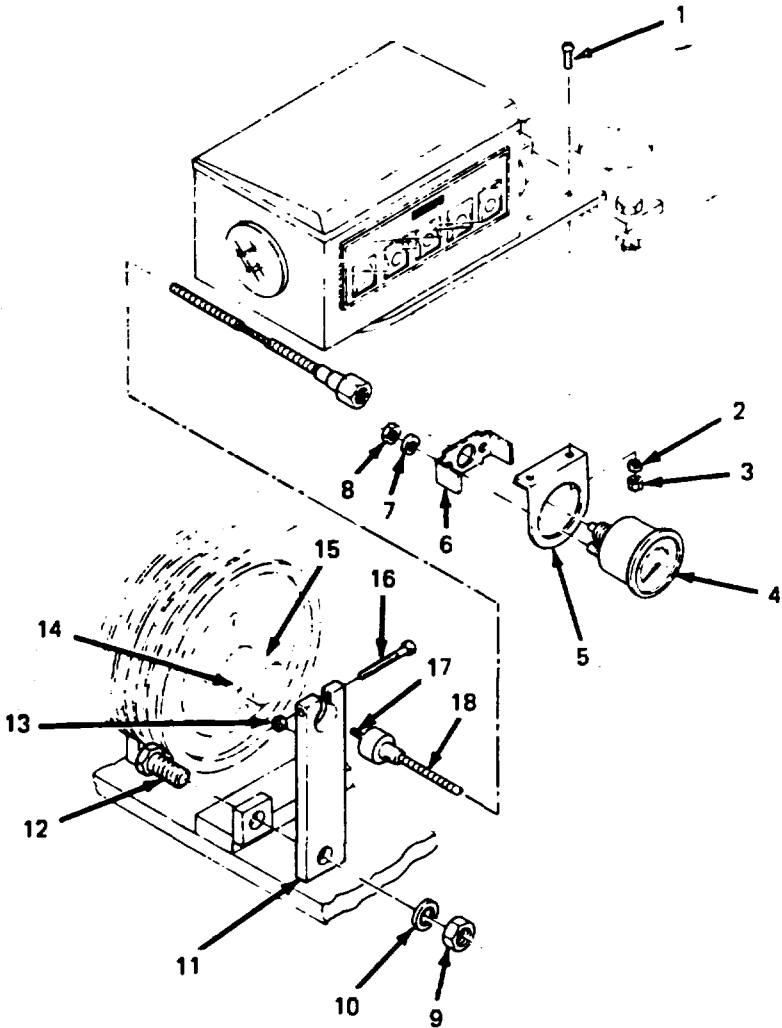
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|--|---------------------------------|
| 1. One set screw (14). | Loosen. |
| 2. Screw (16) and nut (13). | Loosen. |
| 3. Cable (18). | Slide out of bracket (11). |
| 4. Screw (12), lock washer (10) and nut (9). | Remove and remove bracket (11). |

LEGEND:

- 1. SCREW (2)
- 2. LOCKWASHER (2)
- 3. NUT (2)
- 4. TACHOMETER
- 5. BRACKET
- 6. BRACKET
- 7. WASHER (2)
- 8. NUT (2)
- 9. NUT
- 10. LOCKWASHER
- 11. BRACKET
- 12. SCREW
- 13. NUT
- 14. SETSCREW
- 15. TACH DRIVE
- 16. SCREW
- 17. INNER CABLE
- 18. CABLE



TA 076395

HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
5. Inner cable (17).	Pull out of tach drive (15).	
6. Cable (18).	Remove from tachometer.	
7. Screw (1), lock washer	Remove from bracket (5). (2) and nut (3).	
8. Nut (8) and washer (7).	Unscrew and remove bracket (6).	
9. Bracket (5).	Remove from tachometer (4).	
10. Inner cable (17) and cable (18).	Pull internal cable (17) from cable (18).	
B. INSTALLATION.		
NOTE		
If the inner cable (17) is damaged, you may pull it out and put a new inner cable in the old cable (18). Make certain new cable is the same length as the old one. You may also replace inner cable and cable as a unit.		
11. Inner cable (17). cable (18).	Apply grease and install in	
12. Bracket (5).	Install and secure using two screws (1), two lock washers (2). and three nuts (3).	
13. Tachometer (4).	Install through bracket (5) and secure with bracket (6), two lock washers (7) and two nuts (8).	
14. Bracket (11).	Install and secure with screw (12), lock washer (10), and nut (9).	
15. Cable (18).	Install on tachometer (4).	

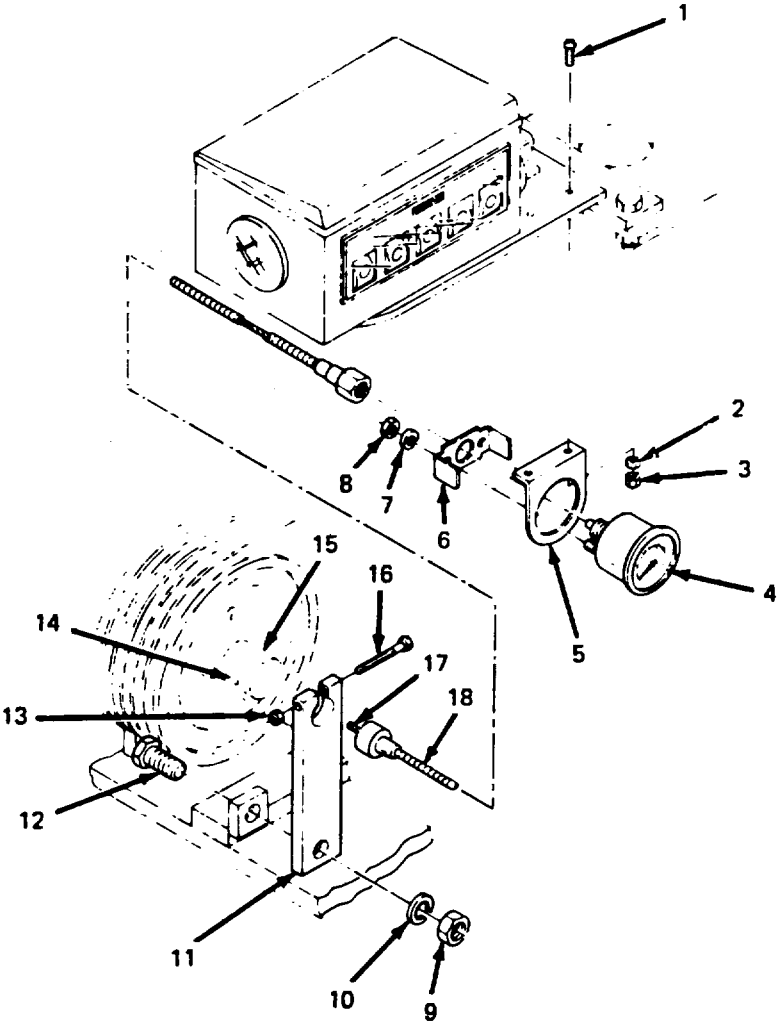
HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

LEGEND:

- 1. SCREW (2)
- 2. LOCKWASHER (2)
- 3. NUT (2)
- 4. TACHOMETER
- 5. BRACKET
- 6. BRACKET
- 7. WASHER (2)
- 8. NUT (2)
- 9. NUT
- 10. LOCKWASHER
- 11. BRACKET
- 12. SCREW
- 13. NUT
- 14. SETSCREW
- 15. TACH DRIVE
- 16. SCREW
- 17. INNER CABLE
- 18. CABLE



TA 076396

HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
16. Cable (18).	Slide through bracket (11) and install inner cable (17) into tach drive (15).	
17. Set screw (14).	Tighten.	
18. Screw (16) and nut (13).	Tighten securely.	
C. OPERATIONAL CHECK.		
19. Mixer body.	Start up (see TM 9-2320-273-10 and TM 53895372-10). Check for normal tachometer reading. Vary engine speed and check tachometer response.	
NOTE		
If set screw (14) and cable (18) are secure and tachometer still does not operate, disconnect cable at tachometer end and replace tachometer (4).		
20. Mixer body.	Shut down (see TM 92320-273-10 and TM 5-3895372-10).	

HYDRAULIC SYSTEM.

10-12. TACHOMETER AND TACHOMETER CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ul style="list-style-type: none">1. SCREW (2)2. LOCKWASHER (2)3. NUT (2)4. TACHOMETER5. BRACKET6. BRACKET7. WASHER (2)8. NUT (2)9. NUT10. LOCKWASHER11. BRACKET12. SCREW13. NUT14. SETSCREW15. TACH DRIVE16. SCREW17. INNER CABLE18. CABLE		

TA 076397

HYDRAULIC SYSTEM.

10-13. LINES AND FITTINGS MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

Removal and Installation. (AR)

 (AR) Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

LO 53895372-12.

Oil Reservoir Drained.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

Liquid Teflon (Refer to Appendix C).
 Marking Pen.
 Masking Tape.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895372-10.
 TM 5-3895-372-20P.
 LO 53895-372-12.
 TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
 Transmission in Neutral.
 Parking Brake Set.
 Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REFERENCES

Table 101.

HYDRAULIC SYSTEM.

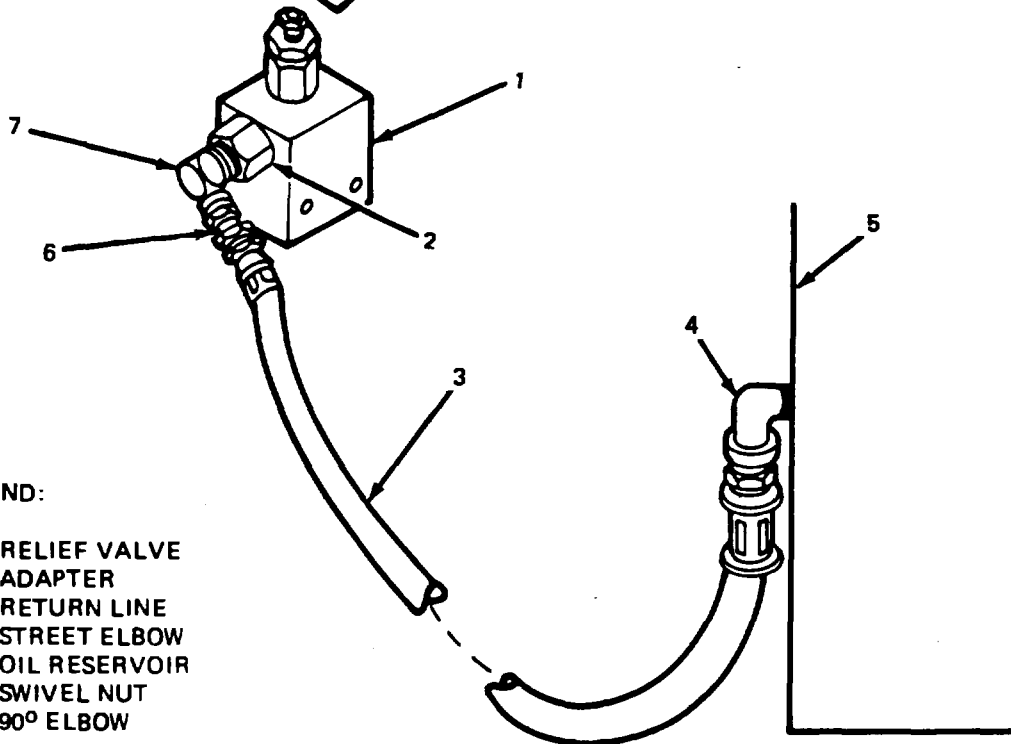
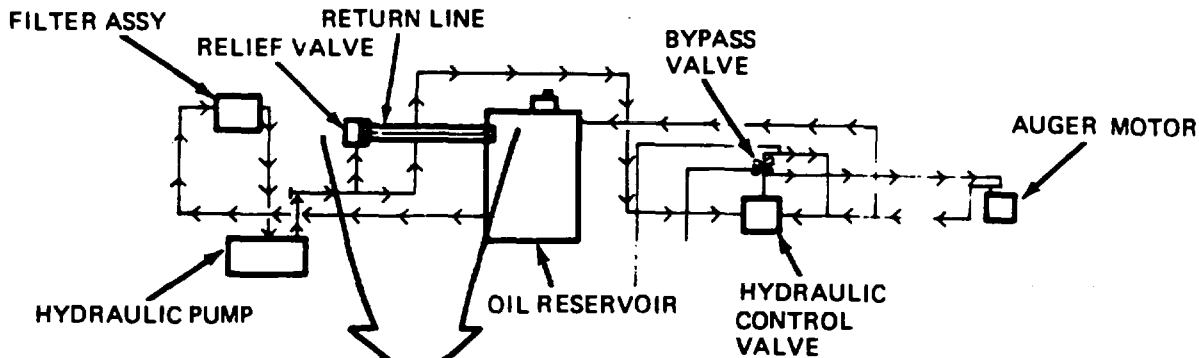
10-13. LINES AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

REMOVAL AND INSTALLATION.

NOTE

All hydraulic lines are removed and installed using standard shop practices. On lines with swivel nut on one end only, remember that the swivel nut must be removed first. Drain oil reservoir before beginning service and apply liquid teflon to all threaded joints at installation. Mark each line at removal for ease of proper installation.



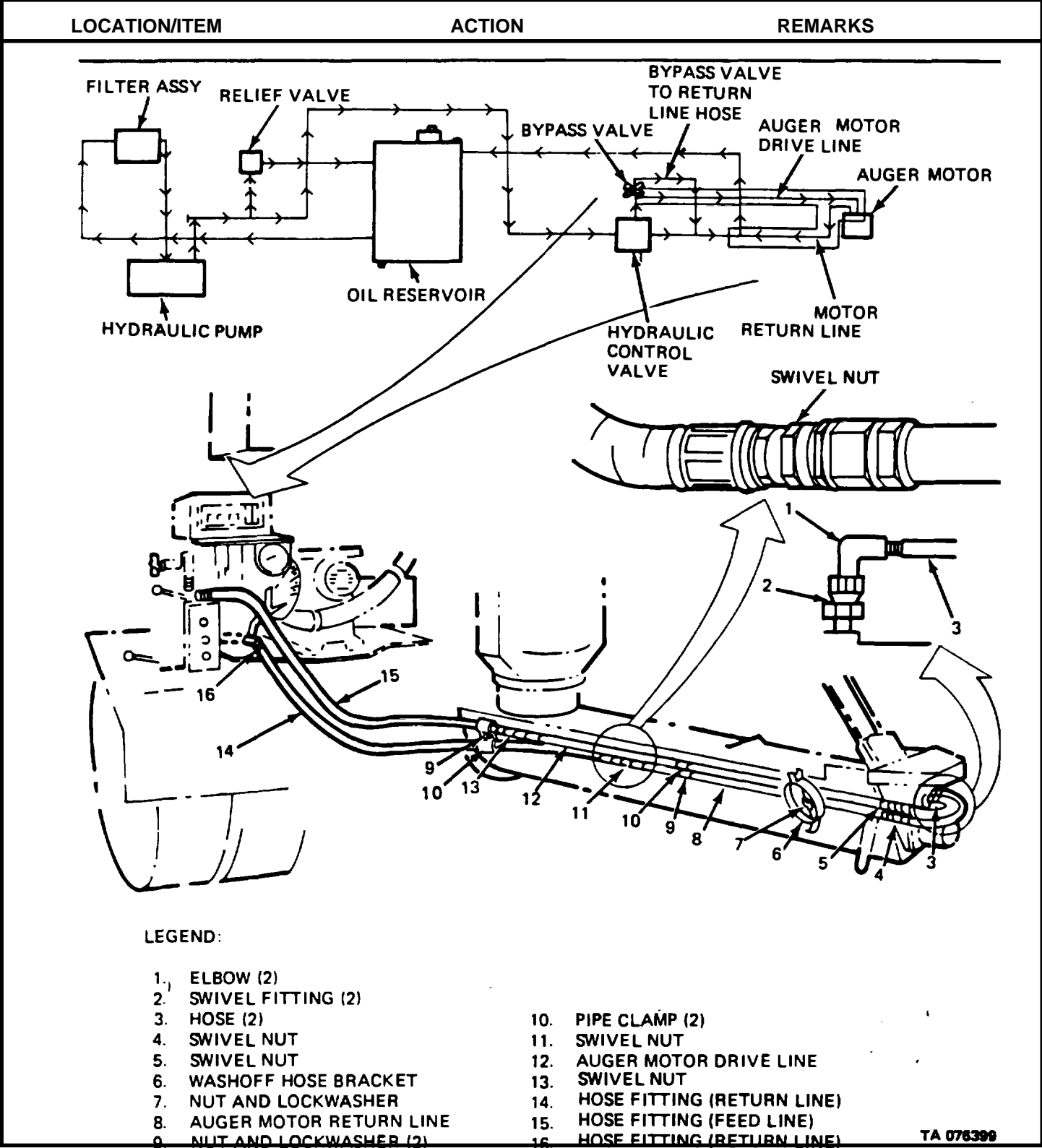
LEGEND:

- 1. RELIEF VALVE
- 2. ADAPTER
- 3. RETURN LINE
- 4. STREET ELBOW
- 5. OIL RESERVOIR
- 6. SWIVEL NUT
- 7. 90° ELBOW

TA 076398

HYDRAULIC SYSTEM.

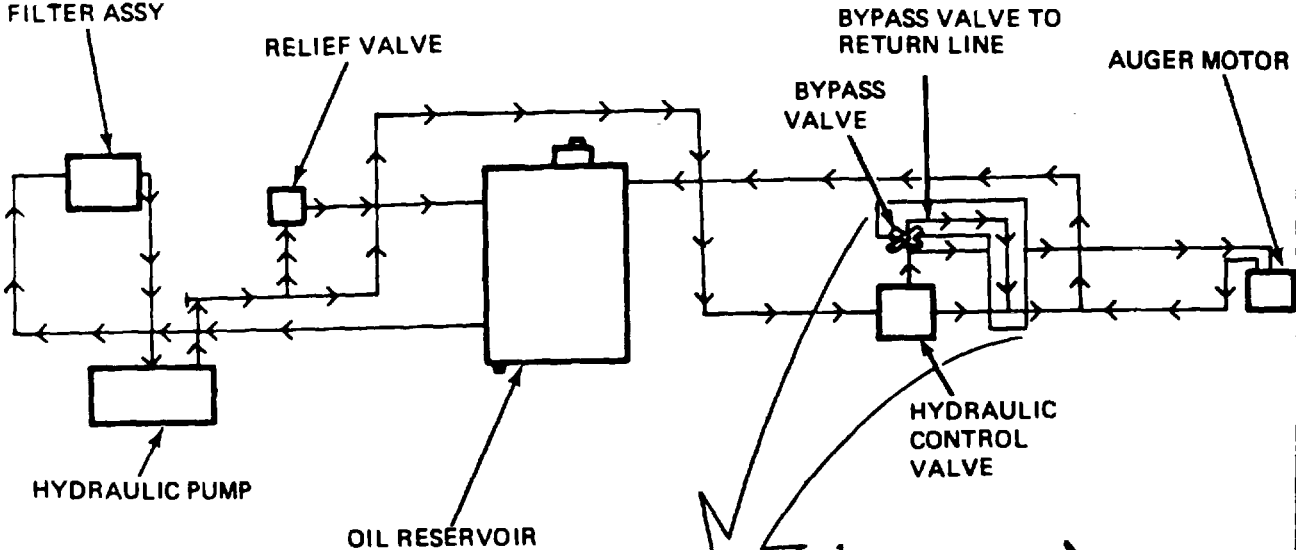
10-13. LINES AND FITTINGS MAINTENANCE (Continued).



HYDRAULIC SYSTEM.

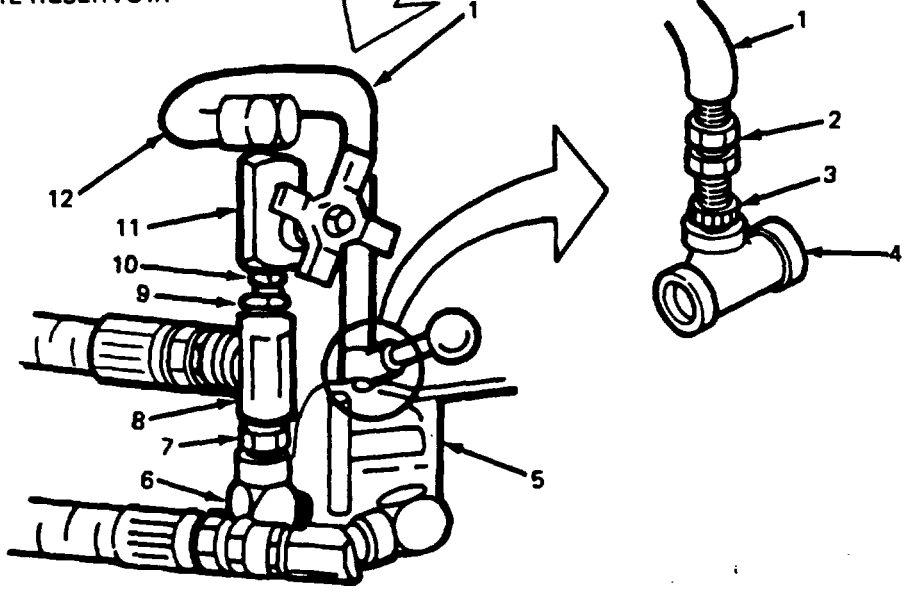
10-13. LINES AND FITTINGS MAINTENANCE.

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

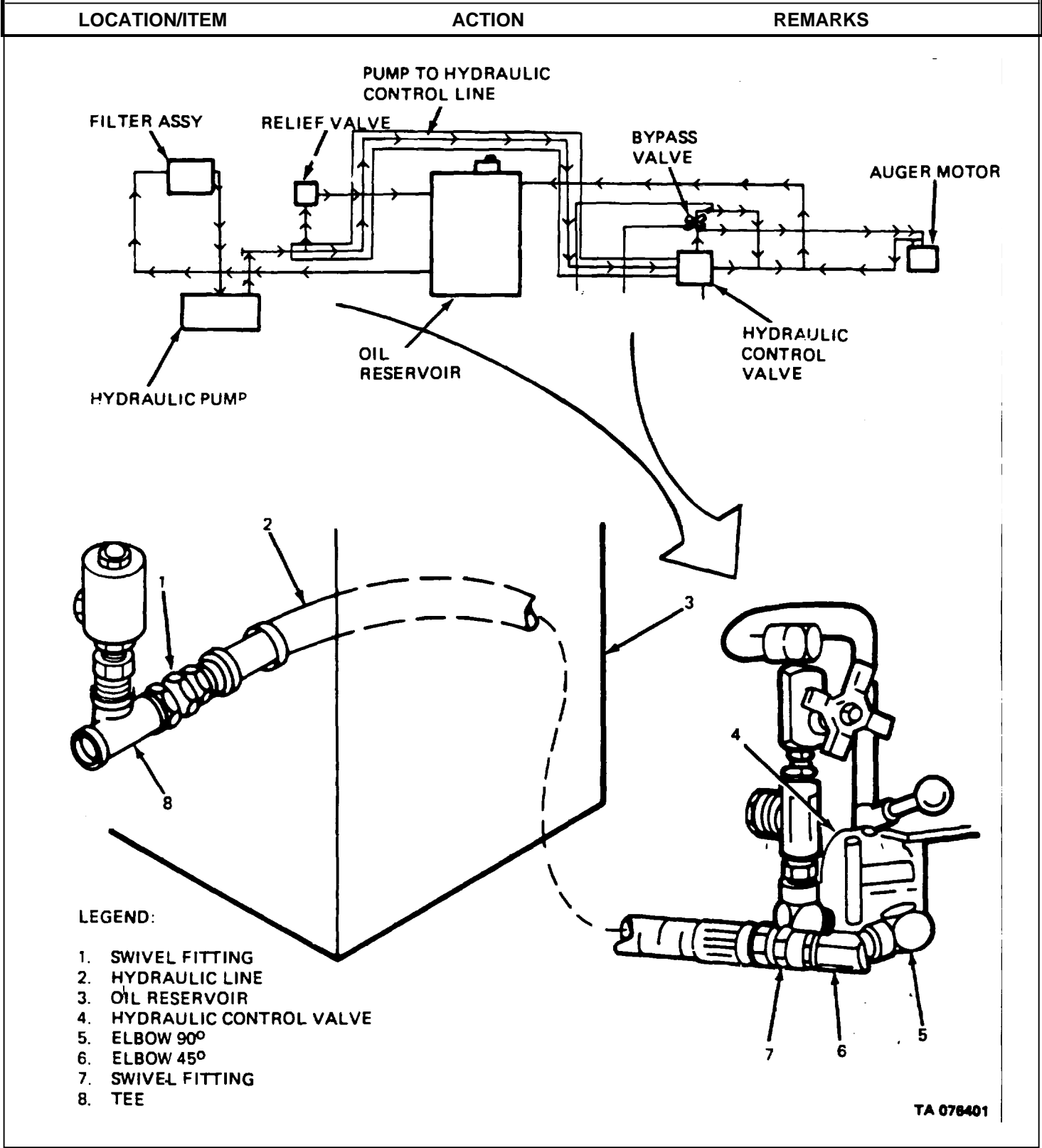
- 1. HYDRAULIC LINE
- 2. SWIVEL FITTING
- 3. BUSHING
- 4. TEE
- 5. HYDRAULIC CONTROL VALVE
- 6. ELBOW 90°
- 7. NIPPLE
- 8. TEE
- 9. BUSHING
- 10. CONNECTOR
- 11. BYPASS VALVE
- 12. ELBOW 90°



TA 078400

HYDRAULIC SYSTEM.

10-13. LINES AND FITTINGS MAINTENANCE (Continued).

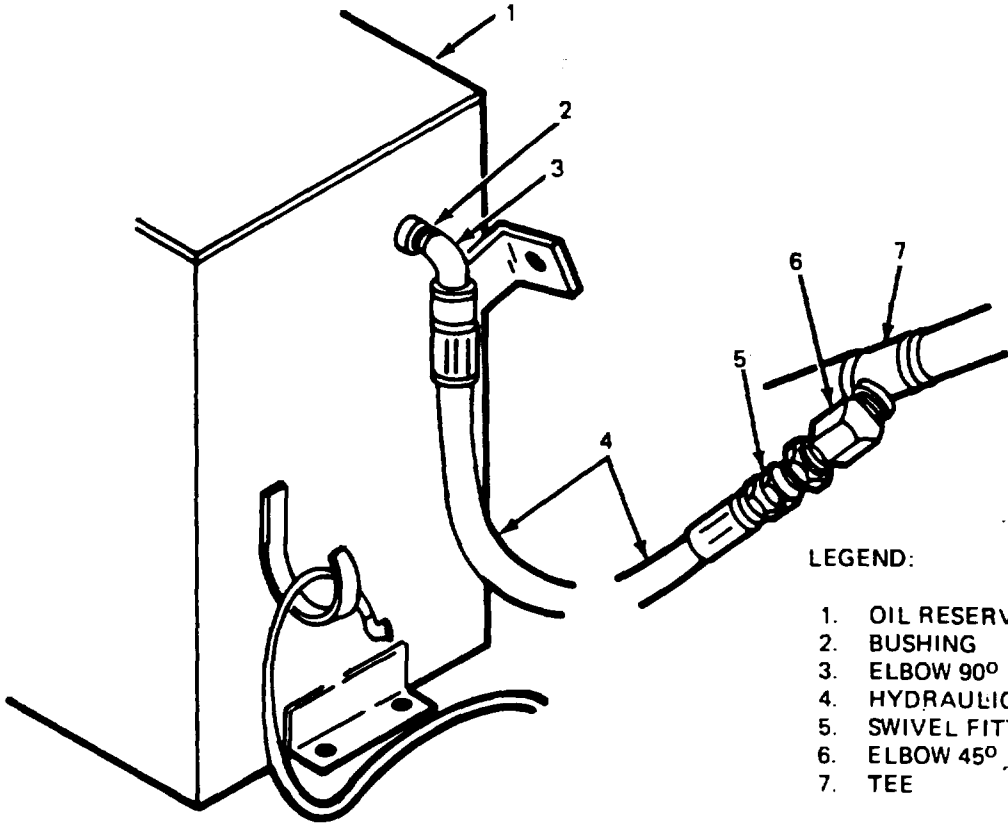
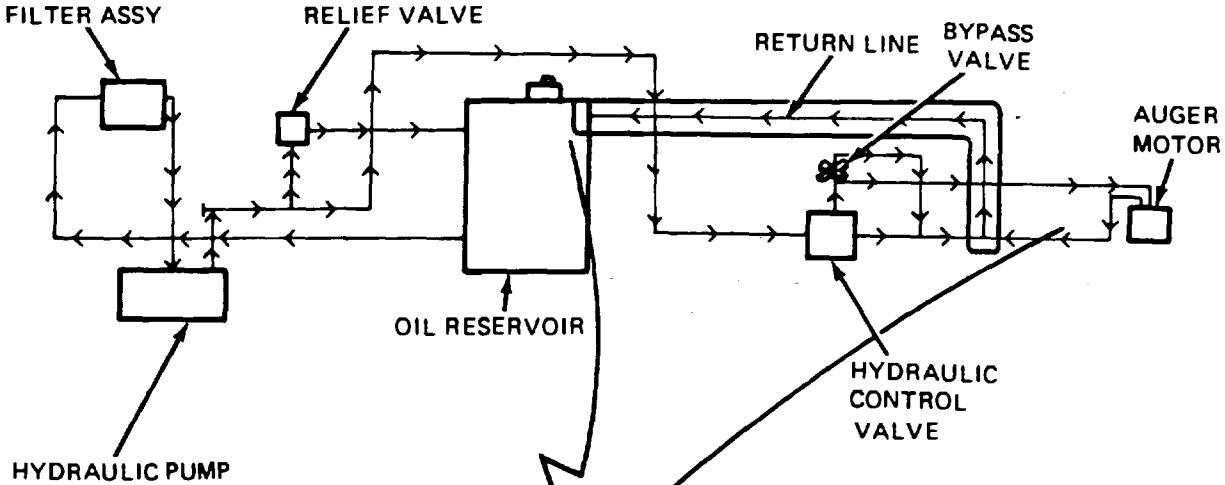


TA 076401

HYDRAULIC SYSTEM.

10-13. LINES AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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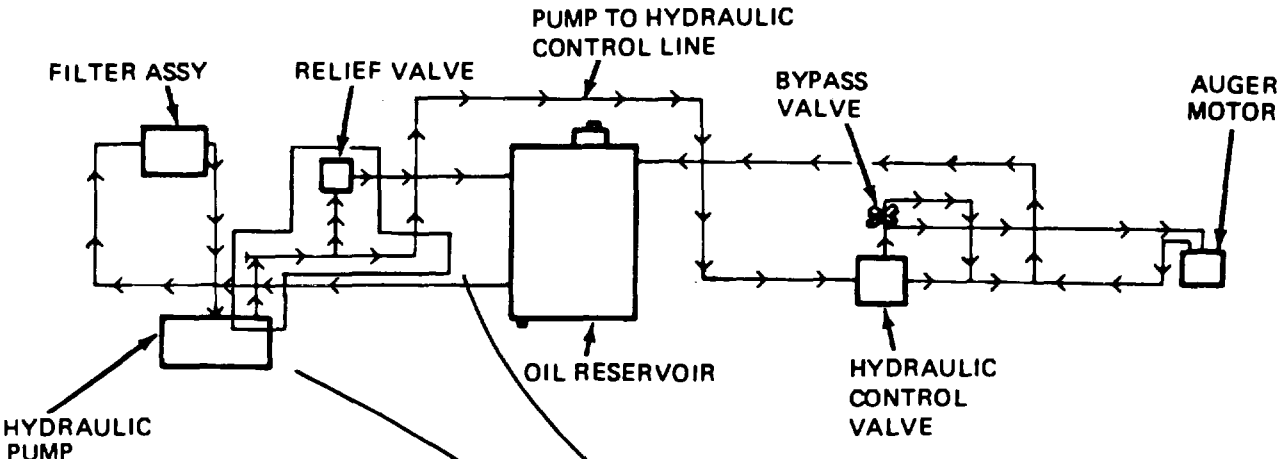
- LEGEND:
- 1. OIL RESERVOIR
 - 2. BUSHING
 - 3. ELBOW 90°
 - 4. HYDRAULIC LINE
 - 5. SWIVEL FITTING
 - 6. ELBOW 45°
 - 7. TEE

TA 076402

HYDRAULIC SYSTEM.

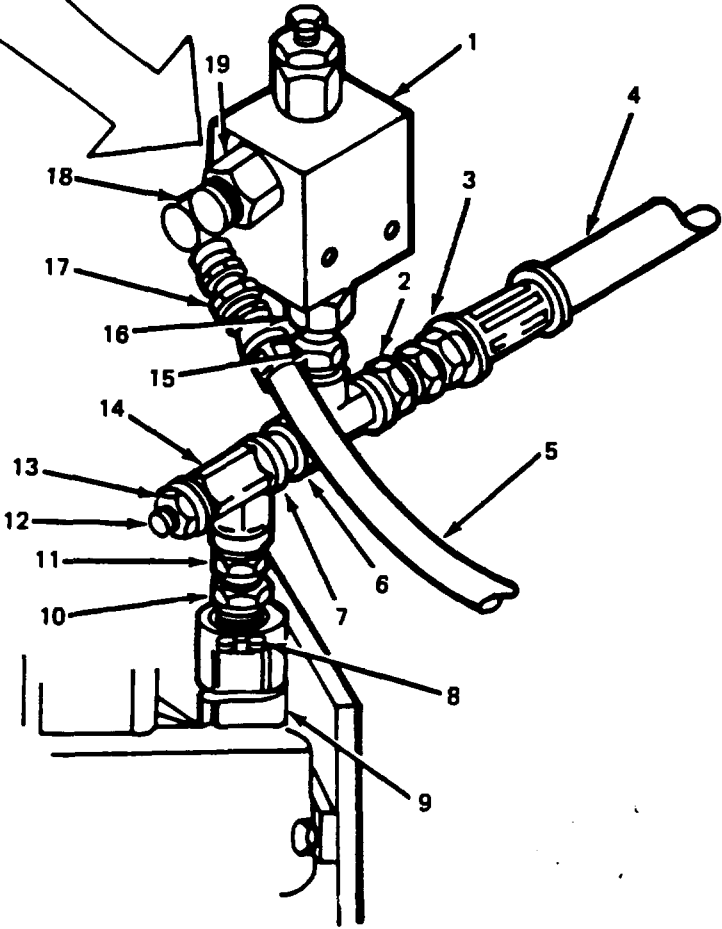
10-13. LINES AND FITTINGS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

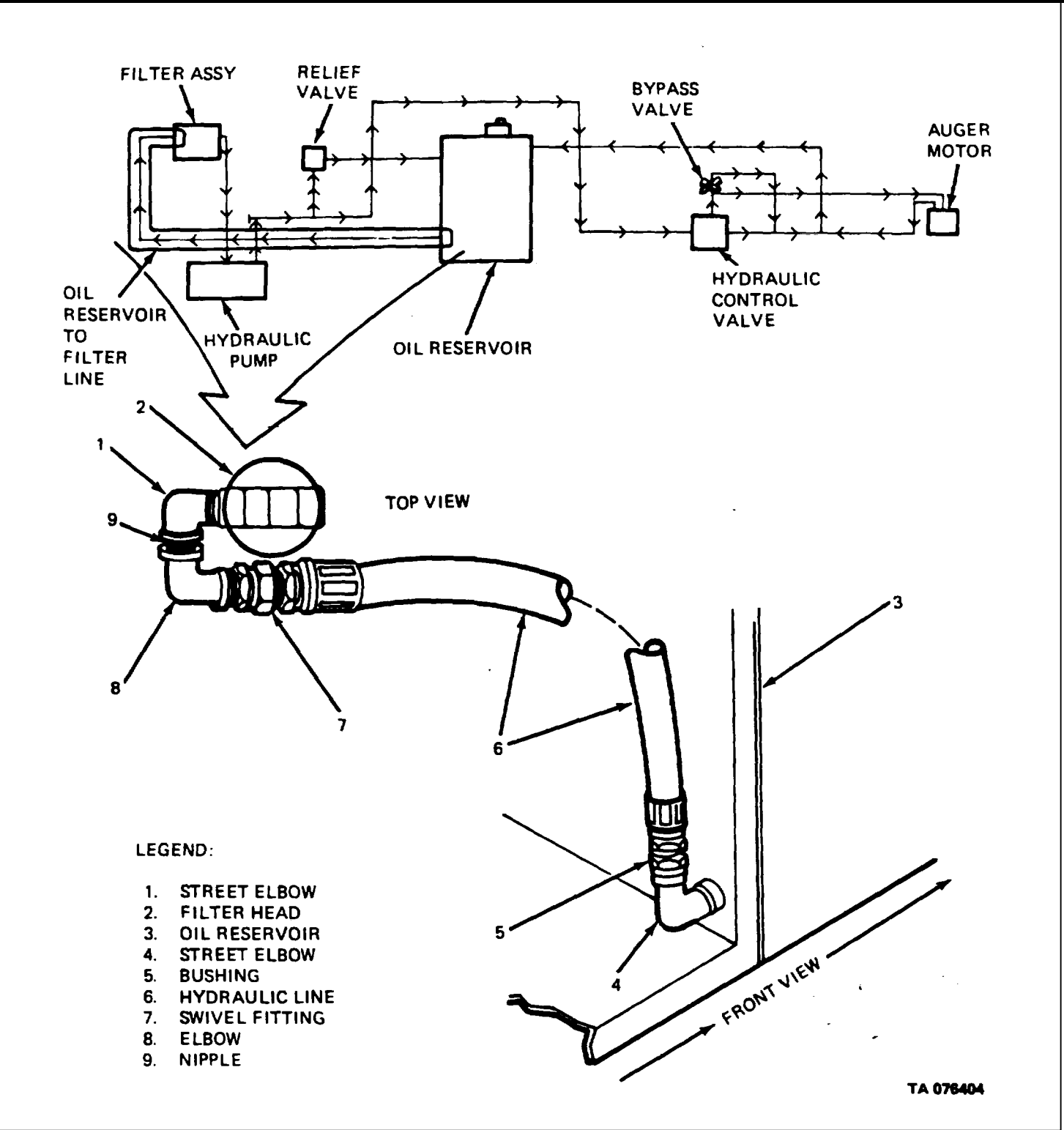
- 1. RELIEF VALVE
- 2. BUSHING
- 3. SWIVEL FITTING
- 4. HYDRAULIC LINE
- 5. HYDRAULIC LINE
- 6. TEE
- 7. BUSHING
- 8. ALLEN HEAD CAPSCREW AND WASHER (4)
- 9. PUMP OUTLET FLANGE
- 10. REDUCER
- 11. BUSHING
- 12. PIPE PLUG
- 13. BUSHING
- 14. TEE
- 15. BUSHING
- 16. ADAPTER NUT
- 17. SWIVEL FITTING
- 18. ELBOW
- 19. ADAPTER NUT



TA 076403

HYDRAULIC SYSTEM.

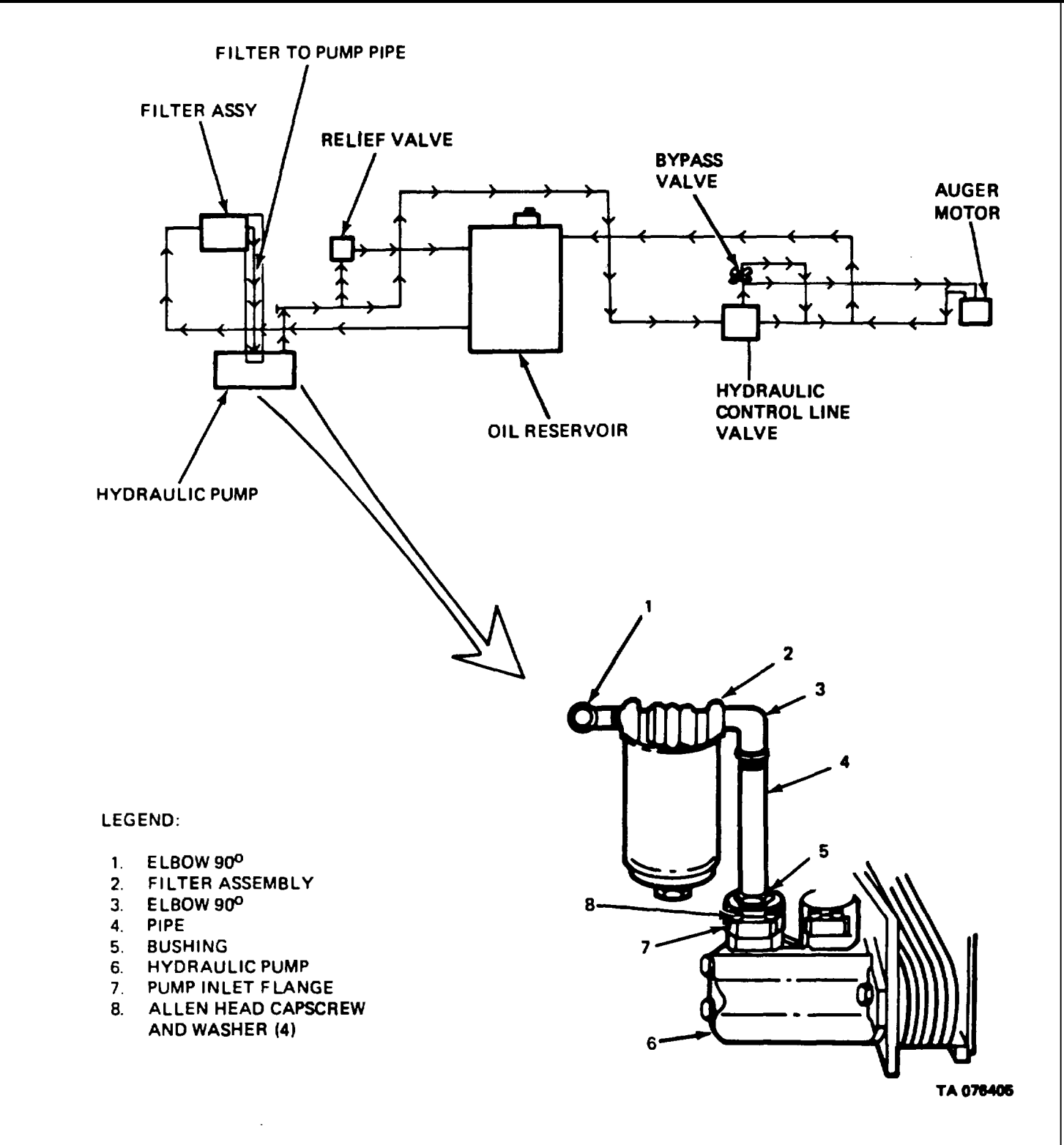
10-13. LINES AND FITTINGS MAINTENANCE (Continued).



TA 076404

HYDRAULIC SYSTEM.

10-13. LINES AND FITTINGS MAINTENANCE (Continued).



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10-47

HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Repair. (20)
 - c. Installation. (20)
 - d. Operational Check. (10)
- 65 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Drain Pan.
Oil (refer to Appendix C).
Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

REFERENCES (TM)
LO 5-3895-372-12.
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

TROUBLESHOOTING REEERENCES
Table 10-1.

EQUIPMENT
CONDITION
PARAGRAPH

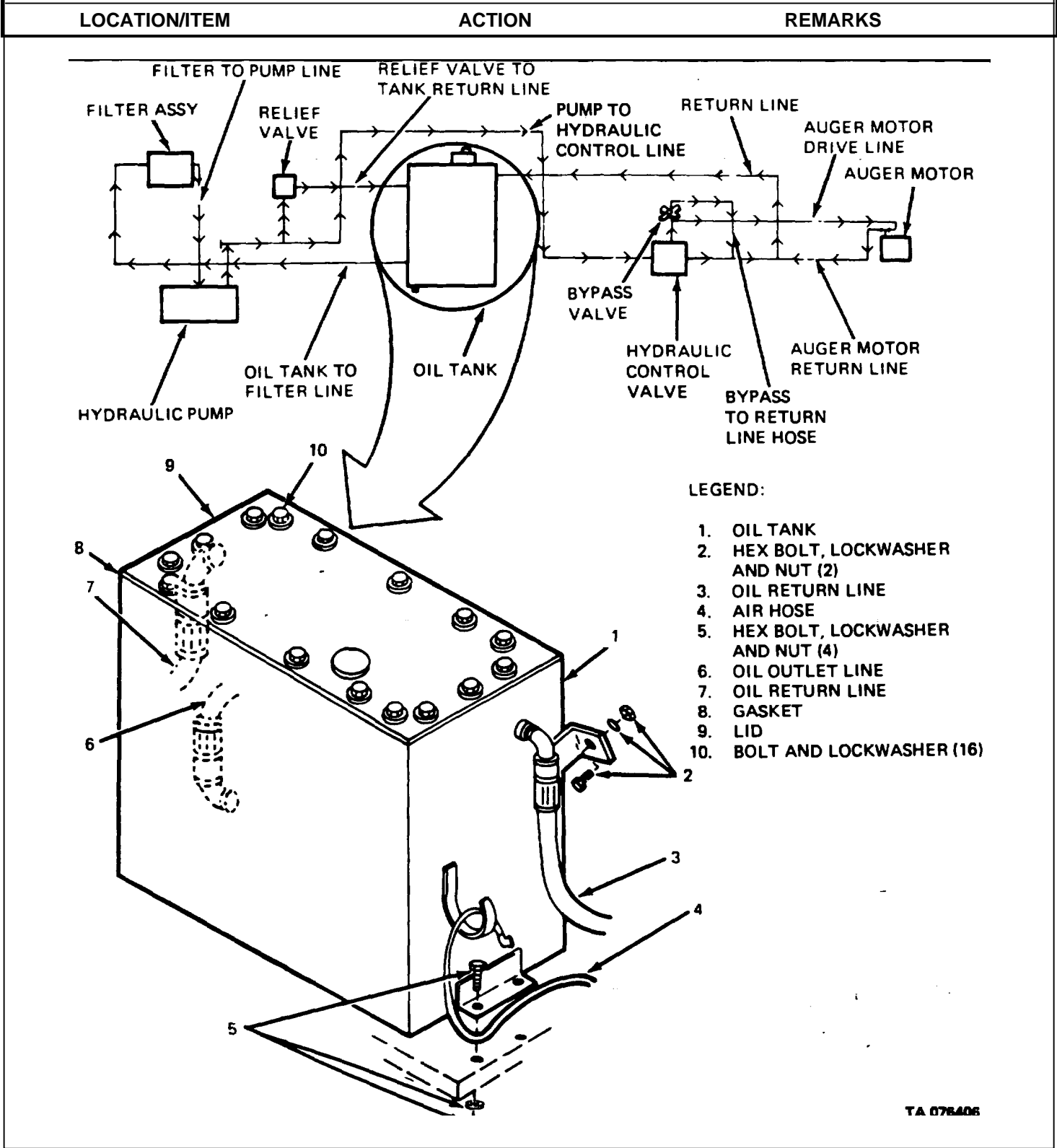
CONDITION DESCRIPTION
None.

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.

HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE (Continued).

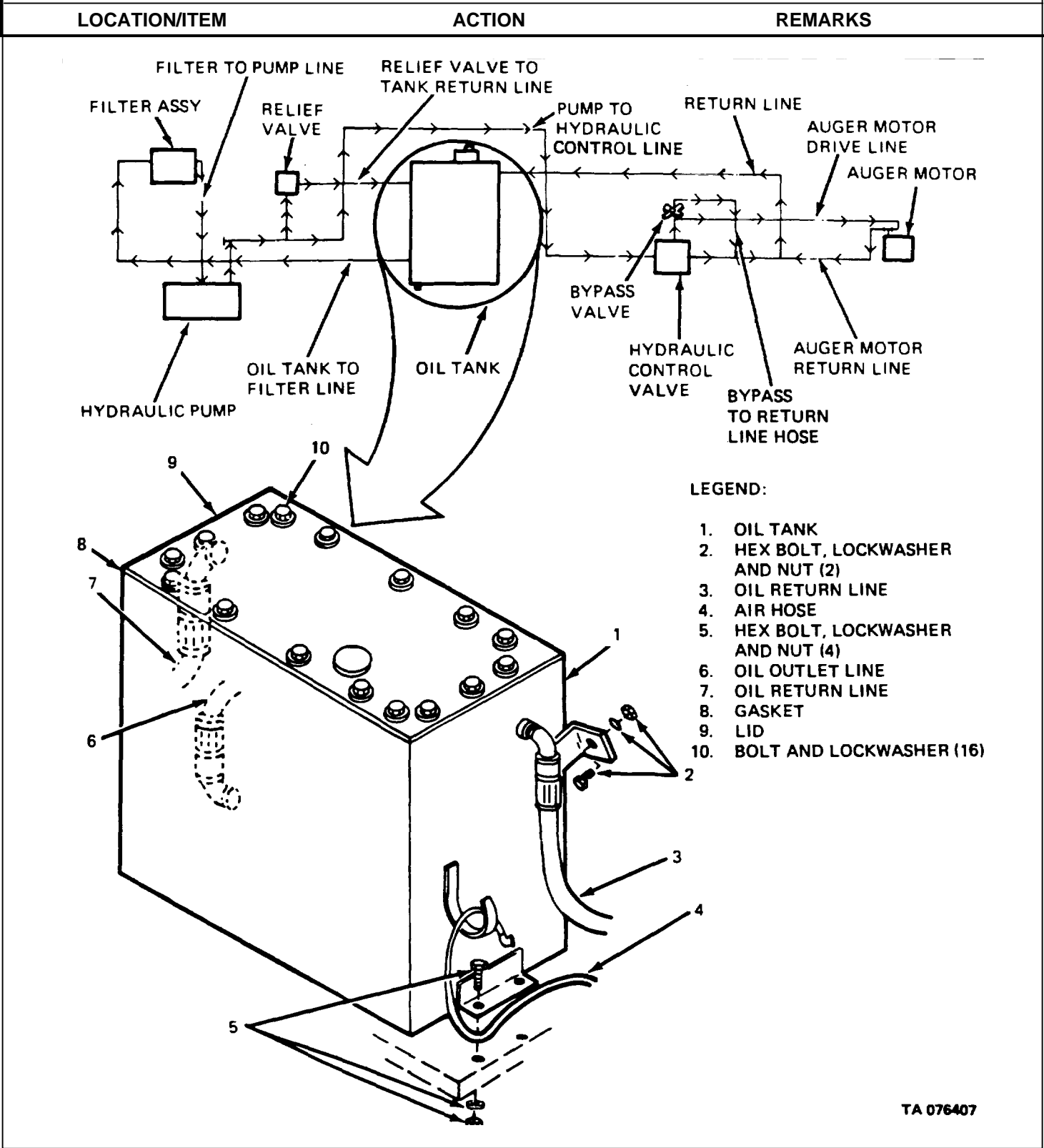


HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
NOTE		
<p>Before beginning service, raise and prop access panel. If gasket (8) is to be replaced, complete steps 1, 2, and 3 only. Proceed with steps 4 thru 10 if the oil reservoir is to be removed.</p>		
A. REMOVAL.		
1. Sixteen bolts and washers (10).	Remove.	
2. Lid (9).	Remove.	
3. Gasket (8).	Remove.	Use sharp tool if necessary.
4. Oil tank (1).	Drain oil.	Refer to LO 5-3895372-12.
5. Air hose (4).	Remove from bracket.	
6. Oil return line (3) and (7).	Remove.	Drain excess oil in drain pan.
7. Oil outlet line (6).	Remove.	Drain excess oil in drain pan.
8. Hex bolts and lockwashers (2).	Remove two bolts and lockwashers.	
9. Hex bolts, lockwashers, and hex nuts (5).	Remove four hex bolts, lockwashers and hex nuts.	
10. Oil tank (1).	Remove from vehicle.	
NOTE		
Use liquid teflon on all threaded joints at installation.		
B. REMOVAL.		
11. Oil tank (1).	Weld cracks using standard shop practices and techniques for welding galvanized steel.	
NOTE		
<p>In extreme cases with abnormally large cracks, it may be necessary to patch the damaged area with galvanized steel stock.</p>		

HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE (Continued).



TA 076407

HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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C. INSTALLATION.

NOTE

If a new oil tank is being installed, transfer the fittings from the damaged tank to the new tank.

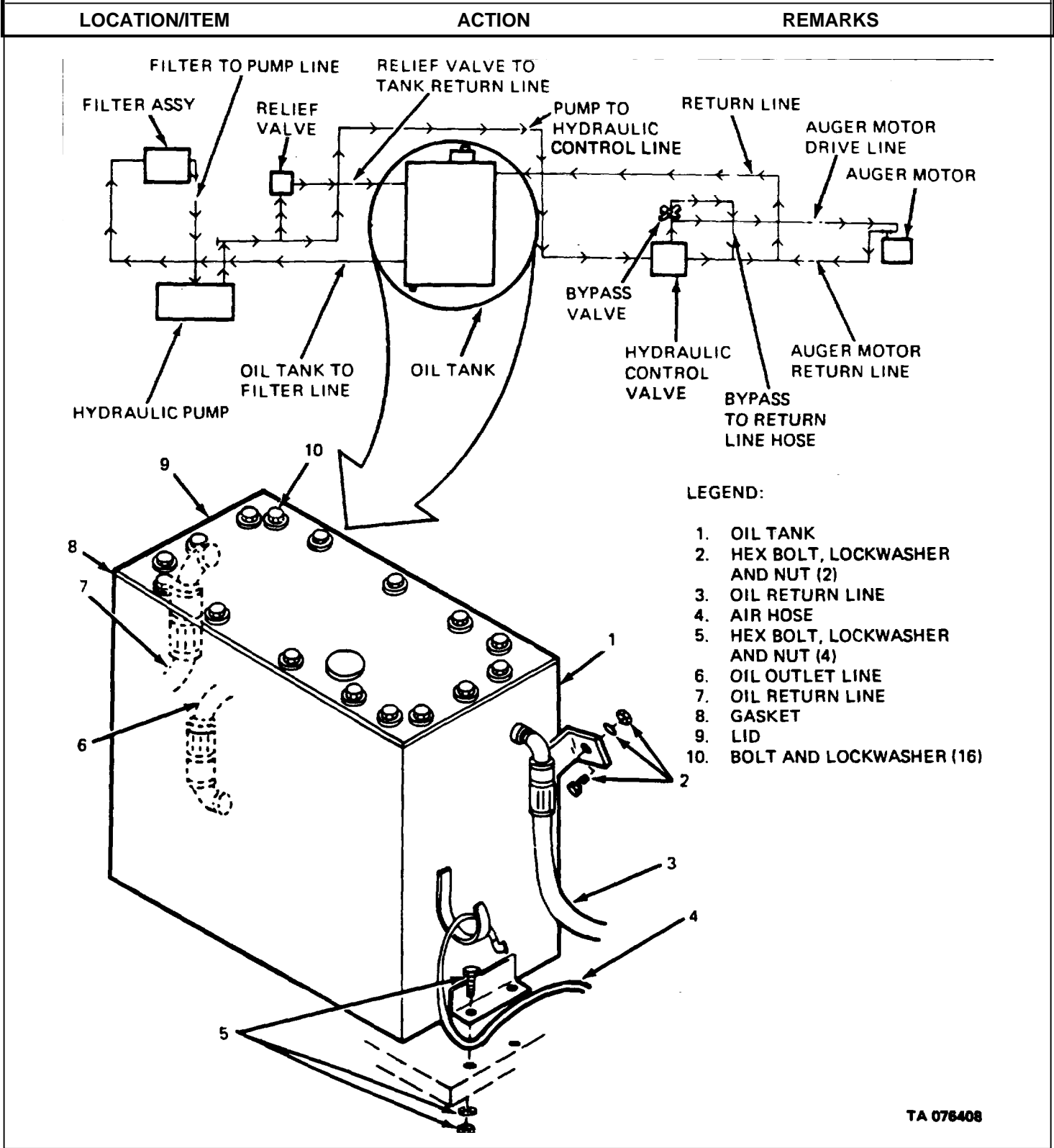
12. Gasket (8).	Set in place.	If removed.
13. Lid (9).	Set in place.	If removed.
14. Sixteen bolts and lockwashers (10).	Install and tighten securely.	If removed.
15. Oil tank (1).	Install in vehicle.	
16. Hex bolts, lockwashers, and hex nuts (5).	Install four hex bolts, lockwashers, and hex nuts.	
17. Hex bolts and lockwashers (2).	Install two hex bolts and lockwashers (2).	
18. Oil outlet line (6).	Install outlet line (6) in oil tank.	
19. Oil return lines (3) and (7).	Install in oil tank.	
20. Air hose (4).	Install on bracket.	
21. Oil tank (1).	Fill tank with oil (see LO 5-3895372-12).	

D. OPERATIONAL CHECK.

22. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10). Activate auger and check for leaks. Shut down auger and stop engine.	
23. Oil tank (1).	Check oil level with dipstick in hydraulic oil tank cap. Add oil if needed.	
24. Access panel.	Close and latch.	

HYDRAULIC SYSTEM.

10-14. OIL RESERVOIR MAINTENANCE (Continued).



HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
 - b. Installation. (20)
 - c. Operational Check. (10)
- 50 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Drain Pan
Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
LO 5-3895-372-12.
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

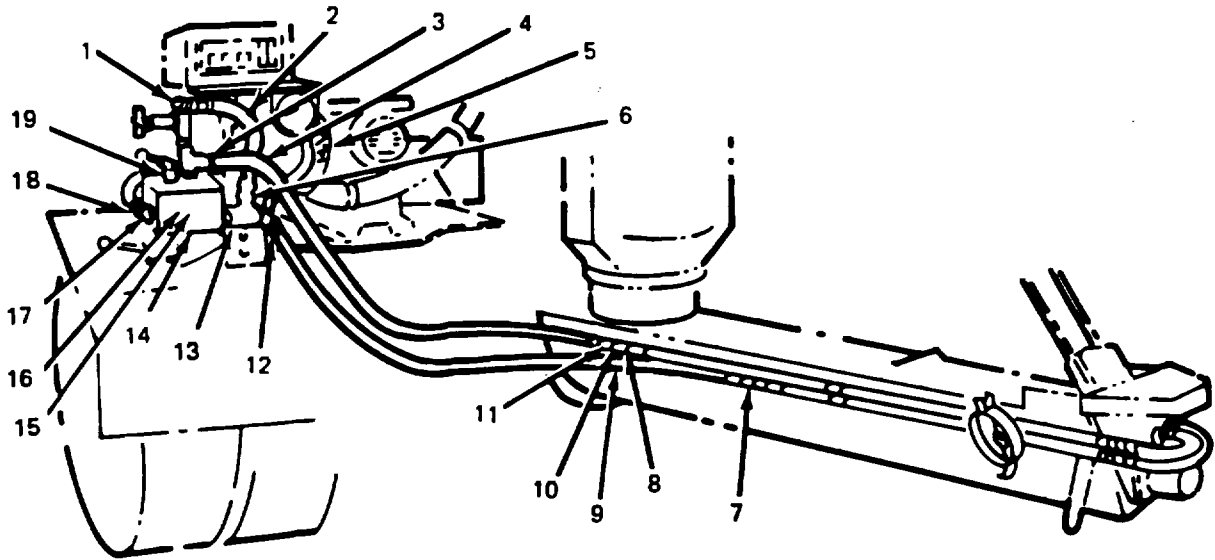
GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REEERENCES
Table 10-1.

HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------|------------------------|
| 1. HOSE FITTING | 11. MOUNTING CLAMP (2) |
| 2. HOSE | 12. HOSE FITTING |
| 3. HOSE FITTING | 13. ADAPTER |
| 4. HOSE | 14. CONTROL VALVE |
| 5. SWIVEL NUT | 15. CAPSCREW (2) |
| 6. SWIVEL NUT | 16. LOCKWASHER (2) |
| 7. SWIVEL NUT | 17. ELBOW |
| 8. SWIVEL NUT | 18. SWIVEL NUT |
| 9. LOCKWASHER (2) | 19. ELBOW |
| 10. NUT (2) | |

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HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

NOTE

Before beginning service lower auger to horizontal position and have access to drain pan.

A. REMOVAL.

1. Two nuts (10) and lockwashers (9).	Remove from mounting studs.	Front and intermediate clamps.
2. Two mounting clamps (11).	Remove from mounting studs.	Front and intermediate clamps.
3. Swivel nut (18).	Loosen and remove hose.	Cap end of hose.
4. Swivel nut (7).	Loosen and remove hose.	Drain excess oil in pan.
5. Swivel nut (8).	'Loosen and remove hose.	Drain excess oil in pan.
6. Hose fitting (12).	Remove.	
7. Hose fitting (3).	Remove hose (4).	
8. Swivel nut (6).	Loosen and remove hose (2).	Drain excess oil in pan.
9. Two capscrews (15) and lockwashers (16).	Remove.	
10. Hydraulic control valve (14).	Remove from vehicle and place in a vise.	
11. Swivel nut (5).	Loosen.	
12. Hose fitting (1).	Loosen and remove hose (2).	
13. Elbow(17).	Remove from valve (14).	
14. Elbow (19).	Remove from valve (14).	
15. Adapter (13).	Remove from valve (14).	

B. INSTALLATION.

NOTE

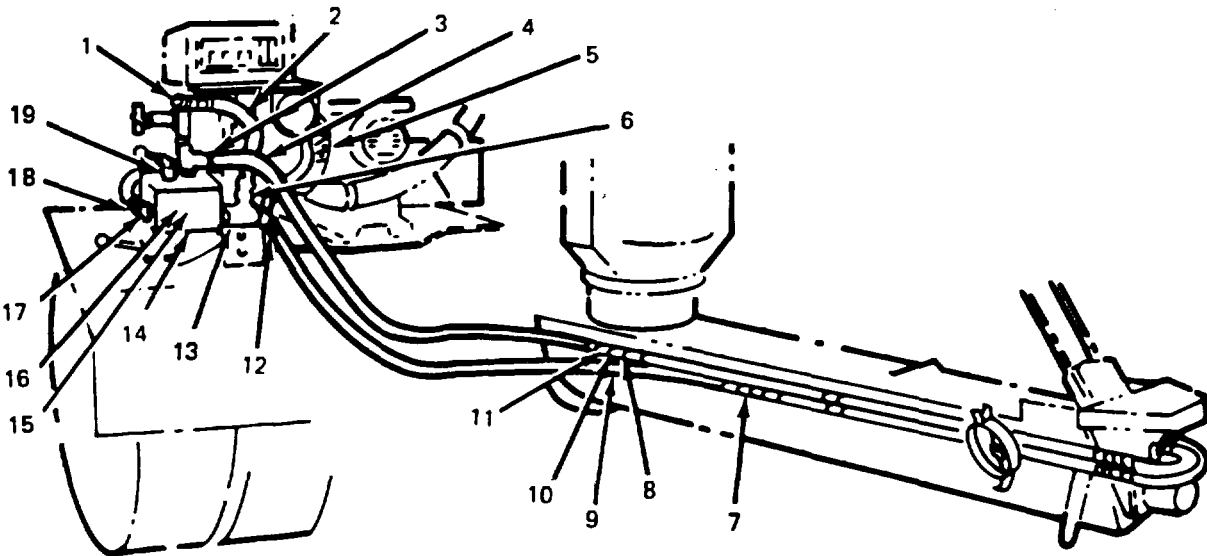
Apply liquid teflon on all threaded joints at installation.

16. Adapter (13).	Install in valve (14).
17. Elbow (19).	Install in valve (14).

HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------|------------------------|
| 1. HOSE FITTING | 11. MOUNTING CLAMP (2) |
| 2. HOSE | 12. HOSE FITTING |
| 3. HOSE FITTING | 13. ADAPTER |
| 4. HOSE | 14. CONTROL VALVE |
| 5. SWIVEL NUT | 15. CAPSCREW (2) |
| 6. SWIVEL NUT | 16. LOCKWASHER (2) |
| 7. SWIVEL NUT | 17. ELBOW |
| 8. SWIVEL NUT | 18. SWIVEL NUT |
| 9. LOCKWASHER (2) | 19. ELBOW |
| 10. NUT (2) | |

TA 076412

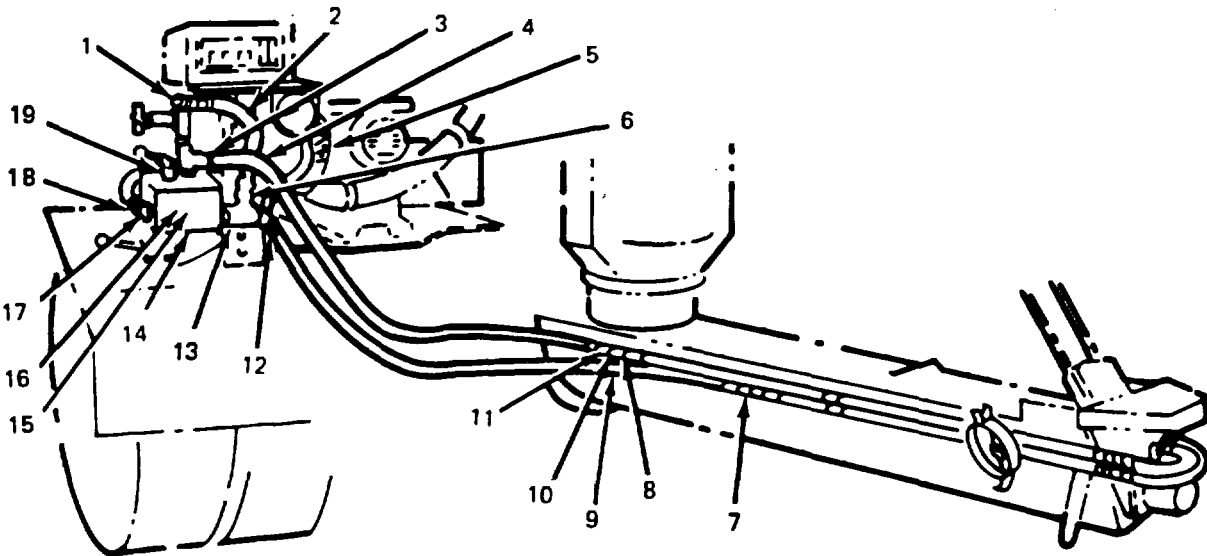
HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
18. Elbow (17).	Install in valve (14).	
19. Hose fitting (1).	Install hose (2) and fitting (1).	
20. Swivel nut (5).	Install on nipple and tighten.	
21. Hydraulic control valve (14).	Remove from vise and install in vehicle.	
22. Two capscrews (15) and lockwashers (16).	Install.	
23. Swivel nut (6).	Install on nipple and tighten.	
24. Hose (4) and hose fitting (3).	Install and tighten.	
25. Hose fitting (12).	Install and tighten.	
26. Swivel nut (8).	Install and tighten.	
27. Swivel nut (7).	Install and tighten.	
28. Mounting clamps (11).	Install two clamps on mounting studs.	Front and intermediate studs.
29. Nut (10) and lockwasher (9).	Install and tighten.	Front and intermediate studs.
30. Swivel nut (18).	Install on nipple and tighten.	
31. Oil reservoir.	Fill reservoir with oil (see LO 5-3895-372-12).	

HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------|------------------------|
| 1. HOSE FITTING | 11. MOUNTING CLAMP (2) |
| 2. HOSE | 12. HOSE FITTING |
| 3. HOSE FITTING | 13. ADAPTER |
| 4. HOSE | 14. CONTROL VALVE |
| 5. SWIVEL NUT | 15. CAPSCREW (2) |
| 6. SWIVEL NUT | 16. LOCKWASHER (2) |
| 7. SWIVEL NUT | 17. ELBOW |
| 8. SWIVEL NUT | 18. SWIVEL NUT |
| 9. LOCKWASHER (2) | 19. ELBOW |
| 10. NUT (2) | |

TA 076412

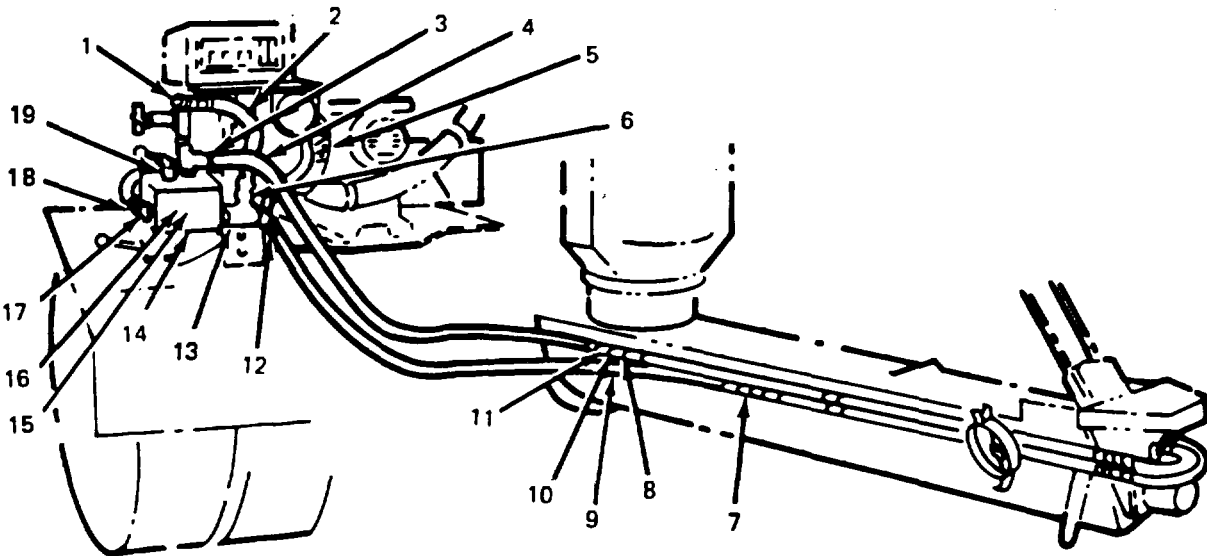
HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
C. OPERATIONAL CHECK.		
32. Mixer body.	Start up (see TM 9-2320-273-10 and TM 5-3895-372-10). Activate auger by hydraulic control valve and check for leaks. Shut down auger and stop engine.	
33. Oil reservoir.	Check oil level with dipstick in hydraulic oil tank cap. Add oil if needed. Refer to LO 5 3895-372-12.	
34. Mixer body.	Shut down (see TM 9-2320-273-10 and TM 5-3895-372-10).	

HYDRAULIC SYSTEM.

10-15. CONTROL VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|-------------------|------------------------|
| 1. HOSE FITTING | 11. MOUNTING CLAMP (2) |
| 2. HOSE | 12. HOSE FITTING |
| 3. HOSE FITTING | 13. ADAPTER |
| 4. HOSE | 14. CONTROL VALVE |
| 5. SWIVEL NUT | 15. CAPSCREW (2) |
| 6. SWIVEL NUT | 16. LOCKWASHER (2) |
| 7. SWIVEL NUT | 17. ELBOW |
| 8. SWIVEL NUT | 18. SWIVEL NUT |
| 9. LOCKWASHER (2) | 19. ELBOW |
| 10. NUT (2) | |

TA 076412

HYDRAULIC SYSTEM.

10-15. HYDRAULIC MOTOR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (20)
 - b. Installation. (20)
 - c. Operational Check. (5)
- 45 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Drain Pan
Liquid Teflon (Refer to Appendix C).
Plugs.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.
Hydraulic Oil May Be Hot Enough to Burn Skin.

TROUBLESHOOTING REEERENCES
Table 10-1.

HYDRAULIC SYSTEM.

10-16. HYDRAULIC MOTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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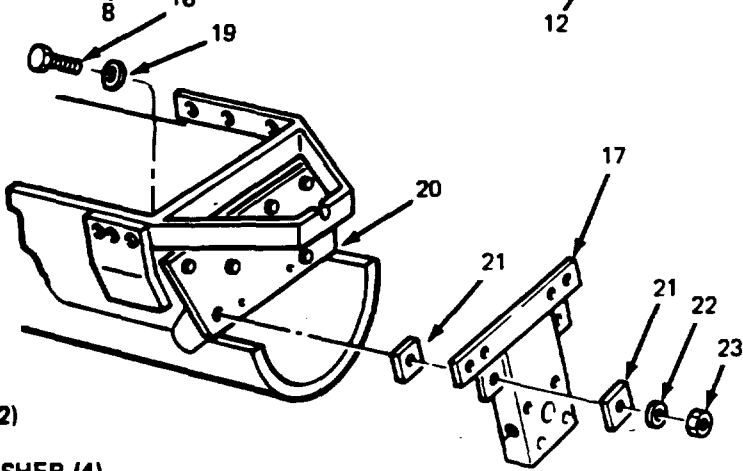
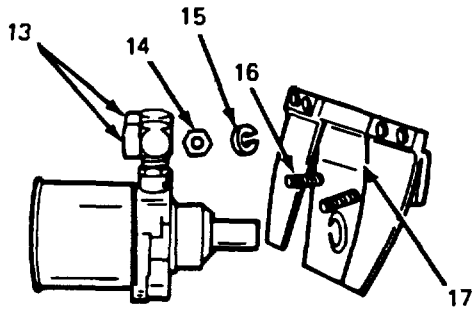
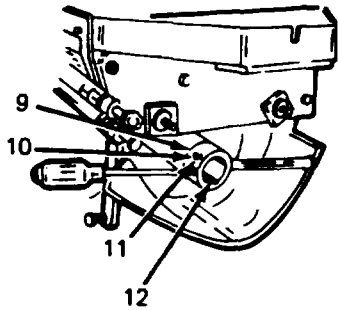
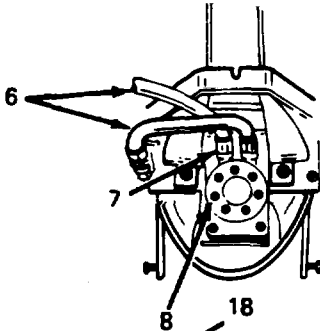
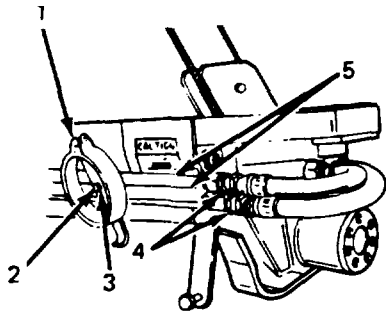
NOTE

Before beginning service, lower auger until motor can be reached easily.

A. REMOVAL.

- | | |
|---------------------------------|--------------------------------------|
| 1. Nut (2) and lock-washer (3). | Unscrew and remove hose bracket (1). |
| 2. Two swivel nuts (4). | Unscrew from two pipes (5). |

Catch excess oil in drain pan and plug pipes (5).



LEGEND:

- | | |
|---------------------|-----------------------|
| 1. HOSE BRACKET | 13. ELBOW (2) |
| 2. NUT | 14. NUT (4) |
| 3. LOCKWASHER | 15. LOCKWASHER (4) |
| 4. SWIVEL NUT (2) | 16. BOLT (4) |
| 5. PIPE (2) | 17. MOUNTING BRACKET |
| 6. HOSE (2) | 18. BOLT (2) |
| 7. HOSE FITTING (2) | 19. FLAT WASHER (2) |
| 8. HYDRAULIC MOTOR | 20. END PLATE |
| 9. SHAFT COUPLING | 21. RUBBER SPACER (4) |
| 10. NUT (2) | 22. FLAT WASHER (2) |
| 11. BOLT (2) | 23. NUT (2) |
| 12. WOODRUFF KEY | |

TA 076413

HYDRAULIC SYSTEM.

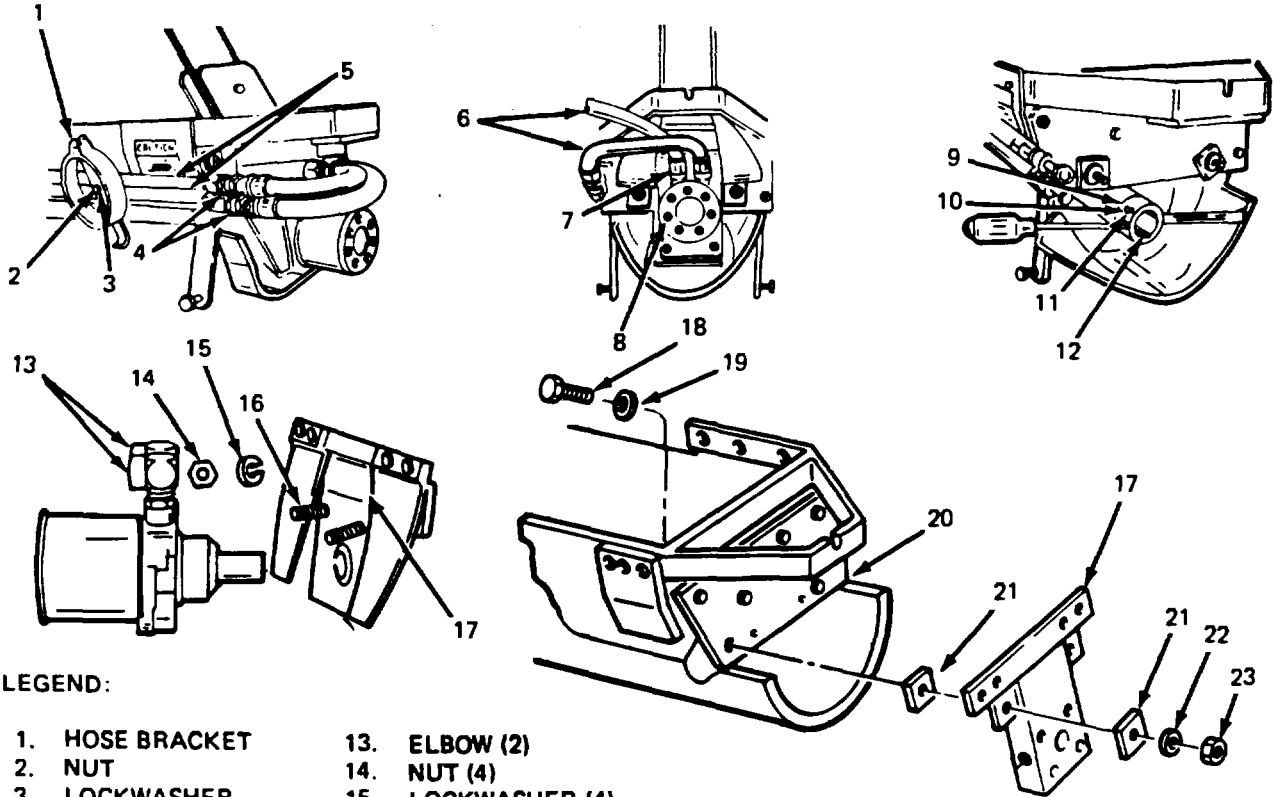
10-16. HYDRAULIC MOTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
3. Two hose fittings (7).	Unscrew and remove two hoses (6) from vehicle.	Note location for ease of installation.
4. Two nuts (23), flat washers (22), flat washers (19), bolts (18), and four rubber spacers (21).	Remove from end plate (20).	Located behind rubber flaps.
5. Two bolts (11) and nuts (10).	Loosen.	
6. Shaft coupling (9).	Wedge a tapered tool into slots on sides of coupling.	
7. Hydraulic motor (8).	Remove from shaft coupling (9).	
8. Woodruff key (12).	Remove from motor shaft.	
9. Four bolts (16), nuts (14) and lockwashers (15).	Remove.	
10. Mounting bracket (17).	Remove from hydraulic motor (8).	
11. Two elbows (13).	Remove from hydraulic motor (8).	Note location for ease of installation.
B. INSTALLATION.		
NOTE		
Apply liquid teflon to all threaded joints at assembly.		
12. Two elbows (13).	Install in hydraulic motor (8).	Coat threads with liquid teflon.
13. Mounting bracket (17).	Install on hydraulic motor (8) with four bolts (16), lockwashers (15) and nuts (14).	
14. Woodruff key (12).	Install in motor shaft.	
15. Hydraulic motor (8).	Install in shaft coupling (9).	Once installed, remove wedge tool from slot.
16. Two bolts (11) and nuts (10).	Tighten securely.	

HYDRAULIC SYSTEM.

10-16. HYDRAULIC MOTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | |
|---------------------|-----------------------|
| 1. HOSE BRACKET | 13. ELBOW (2) |
| 2. NUT | 14. NUT (4) |
| 3. LOCKWASHER | 15. LOCKWASHER (4) |
| 4. SWIVEL NUT (2) | 16. BOLT (4) |
| 5. PIPE (2) | 17. MOUNTING BRACKET |
| 6. HOSE (2) | 18. BOLT (2) |
| 7. HOSE FITTING (2) | 19. FLAT WASHER (2) |
| 8. HYDRAULIC MOTOR | 20. END PLATE |
| 9. SHAFT COUPLING | 21. RUBBER SPACER (4) |
| 10. NUT (2) | 22. FLAT WASHER (2) |
| 11. BOLT (2) | 23. NUT (2) |
| 12. WOODRUFF KEY | |

TA 076414

HYDRAULIC SYSTEM.

10-16. HYDRAULIC MOTOR MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION (Continued).		
17. Two nuts (23), flat washers (22), flat washers (19), bolts (18) and four rubber spacers (21).	Install per illustration to end plate (20).	
18. Two hoses (6).	Install in hydraulic motor (8) and tighten two hose fittings (7).	
19. Two swivel nuts (4).	Unplug two pipes (5) and tighten two swivel nuts (4) to two hoses (6).	
20. Hose bracket (1).	Install with lockwasher (3) and nut (2).	
C. OPERATIONAL CHECK.		
21. Mixer body.	Start up (see TM 9-2320-273-10 and TM 53895372-10).	
22. Auger.	Activate and check for leaks.	Tighten connections as necessary.
NOTE		
If auger is not rotating in correct direction, switch hose (6) connections.		
23. Mixer body.	Shut down (see TM 9-2320-273-10 and TM 53895-372-10).	Raise and latch auger.

HYDRAULIC SYSTEM

10-16. HYDRAULIC MOTOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<p>1. HOSE BRACKET 2. NUT 3. LOCKWASHER 4. SWIVEL NUT (2) 5. PIPE (2) 6. HOSE (2) 7. HOSE FITTING (2) 8. HYDRAULIC MOTOR 9. SHAFT COUPLING 10. NUT (2) 11. BOLT (2) 12. WOODRUFF KEY</p>	<p>13. ELBOW (2) 14. NUT (4) 15. LOCKWASHER (4) 16. BOLT (4) 17. MOUNTING BRACKET 18. BOLT (2) 19. FLAT WASHER (2) 20. END PLATE 21. RUBBER SPACER (4) 22. FLAT WASHER (2) 23. NUT (2)</p>	

TA 076415

CHAPTER 11**AIR SYSTEM**

11-1. OVERVIEW.

This chapter provides you with the following information related to air system maintenance:

- a. All required special tools and equipment.
 - b. Troubleshooting procedures.
 - c. Maintenance procedures.
-

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

11-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

11-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

The special tools, TMDE, and support equipment for air system maintenance procedures described in this chapter are limited to air pressure gage, 0-150 psi (0-1000 kPa). (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P for tool description and illustration.)

11-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

11-5. INTRODUCTION.

Troubleshooting procedures for the air system are given in table 11-1. It is arranged by malfunctions, in the following order:

- a. Air pressure is low (below 65 psi, 448 kPa) (Malfunction No. 1).
- b. Cement in bin is not properly aerated (Malfunction No. 2).
- c. Vibrators do not function properly (Malfunction No. 3).

NOTE

Troubleshooting procedures for low admix air pressure are contained in table 6-1.

Troubleshooting procedures for cement screen vibrator are contained in table 81.

Table 11-1. Air System Troubleshooting Procedures.

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

1. AIR PRESSURE IS LOW (Below 65 psi, 448 kPa):

Step 1. Check that air tank draincock is closed.

Close draincock.

Step 2. Check that air control valve is open.

Open valve.

Step 3. Check that fluffer valve and vibrator valves are not stuck (para 11-11 and 11-14).

Lubricate valves. Replace if necessary.

Step 4. Check air filter for loose or broken bowl or defective O-ring.

Tighten bowl or replace filter (para 11-13).

Step 5. Use soap solution to check for leaks in air system.

Replace leaking lines or valves.

Step 6. Troubleshoot chassis air system (refer to TM 9-2320-273-20).

2. CEMENT IN BIN IS NOT PROPERLY AERATED.

Step 1. Check that air pressure is above 65 psi (448 kPa) (see TM 9-2320-273-10).

Refer to Malfunction No. 1.

Step 2. Check air supply to air pads.

a. Remove air hoses at bottom outside of bin.

b. Actuate manual control valve. Check for air from hoses.

c. If no air comes out, disconnect hose from manual control valve. Actuate valve.

(1) If air comes out, hose is blocked. Remove block or replace hose (para 11-12).

(2) If no air comes out, valve is blocked or broken. Clean or replace valve (para 11-12).

Step 3. Check filter cloth.

a. Empty bin until cement is 3-5 in. (7.6-12.7 cm) deep.

Table 11-1. Air System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>2. CEMENT IN BIN IS NOT PROPERLY AERATED (Continued):</p> <ul style="list-style-type: none"> b. Actuate air pads. <ul style="list-style-type: none"> 1. If filter cloth is torn, you will see a blast of air. 2. If filter cloth is clogged, no air action will be visible 3. If filter cloth is in good condition, you will see gentle puffs of cement. <p>Replace torn or clogged filter cloth (para 8-11).</p> <p>Step 4. Open draincocks of truck air reservoirs (see TM 9-2320273-20) and mixer body moisture trap. Check for moisture in air system.</p> <p style="padding-left: 40px;">Drain completely, then close cocks.</p> <p>3. VIBRATORS DO NOT FUNCTION PROPERLY:</p> <p>Step 1. Check that air pressure is above 65 psi (448 kPa).</p> <p style="padding-left: 40px;">Refer to Malfunction No. 1.</p> <p>Step 2. Check that lubricator bowl is full of oil.</p> <p style="padding-left: 40px;">Fill lubricator (see TM 5-3895-372-10).</p> <p>Step 3. Check for a fine mist of oil at the vibrators as they are operated.</p> <p style="padding-left: 40px;">If there is no mist, replace lubricator.</p> <p>Step 4. Check for cam follower clearance of 1/16 in. (1.6 mm) (para 11-10).</p> <p style="padding-left: 40px;">Adjust timing device.</p> <p>Step 5. Open draincocks of truck air reservoirs (see TM 9-2320-273-20) and mixer body moisture trap. Check for moisture in air system.</p> <p style="padding-left: 40px;">Drain completely, then close cocks.</p> <p>Step 6. Use soap solution to check for air line leaks.</p> <p style="padding-left: 40px;">Replace leaking lines.</p>

Table 1 1-1. Air System Troubleshooting Procedures (Continued).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
3. VIBRATORS DO NOT FUNCTION PROPERLY (Continued):
Step 7. Disconnect air hoses at vibrators and check for air supply.
Find blockage. Clear out or replace blocked line or valve (para 11-12).
Step 8. Lubricate vibrator.
a. Disconnect air hose at vibrator.
b. Put several drops of penetrating oil into vibrator.
NOTE
If vibrator end of hose is hard to reach, disconnect other end. Put the penetrating oil into the hose.
c. Reconnect hose and check vibrator operation.
d. Remove and clean vibrator (para 118).
e. If vibrator still does not work, replace it.

Section III MAINTENANCE PROCEDURES

11-6. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for the air system of the mixer body. Paragraph 11-7 summarizes the maintenance tasks. Paragraphs 11-8 thru 11-14 contain detailed instructions for each task.

11-7. AIR SYSTEM MAINTENANCE TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT CONDITION
PARAGRAPH
TM 9-2320-273-10.

CONDITION DESCRIPTION
Air System Bled.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Penetrating Oil (Refer to Appendix C).
No. 320 Emery Paper.
Oil (Refer to Appendix C).
Liquid Teflon (Refer to Appendix C).
Dry Cleaning Solvent SD-2 (Refer to Appendix C).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

PERSONNEL REQUIRED
Two (MOS-62B20).

REFERENCES (TM)
LO 53895-372-12.
TM 5-3895372-10.
TM 5-3895372-20P.
TM 9-2320-273-10

GENERAL SAFETY INSTRUCTIONS
Engine Off
Transmission in Neutral
Park Brake Set.

REFERENCES (TROUBLESHOOTING)
Table 11-1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Vibrator Maintenance and Replacement: A. Removal. B. Cleaning and lubrication. C. Installation. D. Operational check.	11-8 11-8A 11-8B 11-BC 11-8D	11-1

11-7. AIR SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
2.	Lubricator Maintenance: A. Removal. B. Disassembly. C. Assembly. D. Installation. E. Operational check.	11-9 11-9A 11-9B 11-9C 11-9D 11-9E	11-1
3.	Timing Device Adjustment: A. Inspection. B. Adjustment. C. Operational check.	11-10 11-10A 11-10B 11-10C	11-1
4.	Timing Device Maintenance: A. Removal. B. Cleaning. C. Installation. D. Operational check.	11-11 11-11A 11-11B 11-11C 11-11D	11-1
5.	Air Valves and Hoses Maintenance: A. Removal. B. Inspection. C. Installation. D. Operational check.	11-12 11-12A 11-12B 11-12C 11-12D	11-1
6.	Air Filter Maintenance: A. Removal. B. Disassembly. C. Assembly. D. Installation. E. Operational check.	11-13 11-13A 11-13B 11-13C 11-13D 11-13E	11-1

11-7. AIR SYSTEM MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
7.	Fluffer Valve Maintenance: A. Removal. B. Inspection. C. Installation. D. Operational check.	11-14 11-14A 11-14B 11-14C 11-14D	11-1

AIR SYSTEM.

11-8. VIBRATOR MAINTENANCE AND REPLACEMENT.		
<u>THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)</u>		
a. Removal.	(20)	
b. Cleaning and Lubrication.	(20)	
c. Installation.	(20)	
d. Operational Check.	(5)	
	65 Minutes Total.	
<u>INITIAL SETUP</u>	<u>EQUIPMENT</u>	
	<u>CONDITION</u>	
	<u>PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
<u>APPLICABLE CONFIGURATIONS</u>	TM 9-2320-273-10.	Air System Bled.
M919.		
<u>TEST EQUIPMENT</u>		
None.		
<u>SPECIAL TOOLS</u>		
None.		
<u>MATERIALS/PARTS (PIN)</u>		
Penetrating Oil (Refer to Appendix C).		
No. 320 Emery Paper.		
Oil (Refer to Appendix C).		
Liquid Teflon (See Appendix C).		
<u>PERSONNEL REQUIRED</u>	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>	
Two (MOS-62B20i).	Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u>	<u>GENERAL SAFETY INSTRUCTIONS</u>	
LO 5-3895-372-12.	Engine Off.	
TM LO3895372-10.	Engine Off.	
TM 5-3895-372-20P.	Transmission in Neutral.	
TM 53895-372-20P.	Parking Brake Set.	
TM 92320273-10.		
<u>TROUBLESHOOTING REFERENCES</u>		
Table 11-1.		

AIR SYSTEM.

11.8, VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none"> 1. BOLT (2) 2. VIBRATOR 3. AIR LINE 4. END PLATE 5. GUARD 6. LOCKWASHER 7. SCREW (4) 8. PISTON 9. NUT (2) 10. LINE 11. NUT (2) 12. VIBRATOR 13. BOLT (2) 14. SCREW 15. VIBRATOR 16. FLAT WASHER 17. NUT 18. LOCKWASHER 19. HOPPER 		

TA 07641f

AIR SYSTEM.

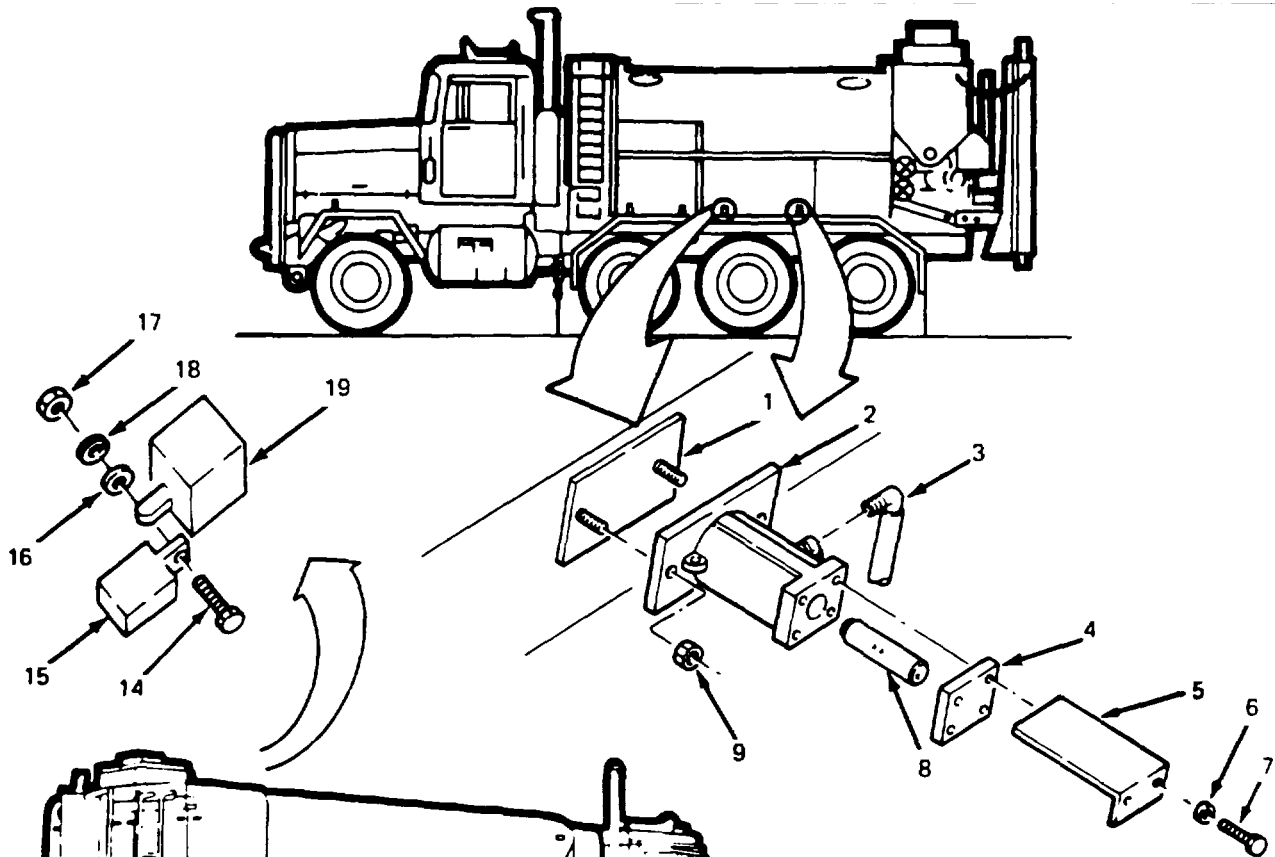
11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
WARNING		
Before removing vibrator, be sure that air gate valve is closed. Check that draincocks have been opened to relieve pressure.		
A. REMOVAL.		
1. Air line (3).	a. Disconnect. b. Inspect for: 1. Cracks. 2. Leaks. 3. Damaged fittings.	Replace if necessary.
2. Two nuts (9).	Loosen and remove vibrator (2).	If necessary, tap vibrator loose with a hammer.
3. Line (10).	a. Disconnect. b. Inspect for:	Replace if necessary.
1. Cracks. 2. Leaks. 3. Damaged fittings.		
4. Two nuts (11).	Loosen and remove vibrator (12).	If necessary, tap vibrator loose with a hammer.
5. One screw (14), flat washer (16), lockwasher (18), and nut (17).	Loosen and remove vibrator (15) from hopper (19).	
NOTE		
If vibrators are to be replaced, advance to installation procedure "C".		

AIR SYSTEM.

11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



- LEGEND**
- 1. BOLT (2)
 - 2. VIBRATOR
 - 3. AIR LINE
 - 4. END PLATE
 - 5. GUARD
 - 6. LOCKWASHER
 - 7. SCREW (4)
 - 8. PISTON
 - 9. NUT (2)
 - 10. LINE
 - 11. NUT (2)
 - 12. VIBRATOR
 - 13. BOLT (2)
 - 14. SCREW
 - 15. VIBRATOR
 - 16. FLAT WASHER
 - 17. NUT
 - 18. LOCKWASHER
 - 19. HOPPER TA 078417

AIR SYSTEM.

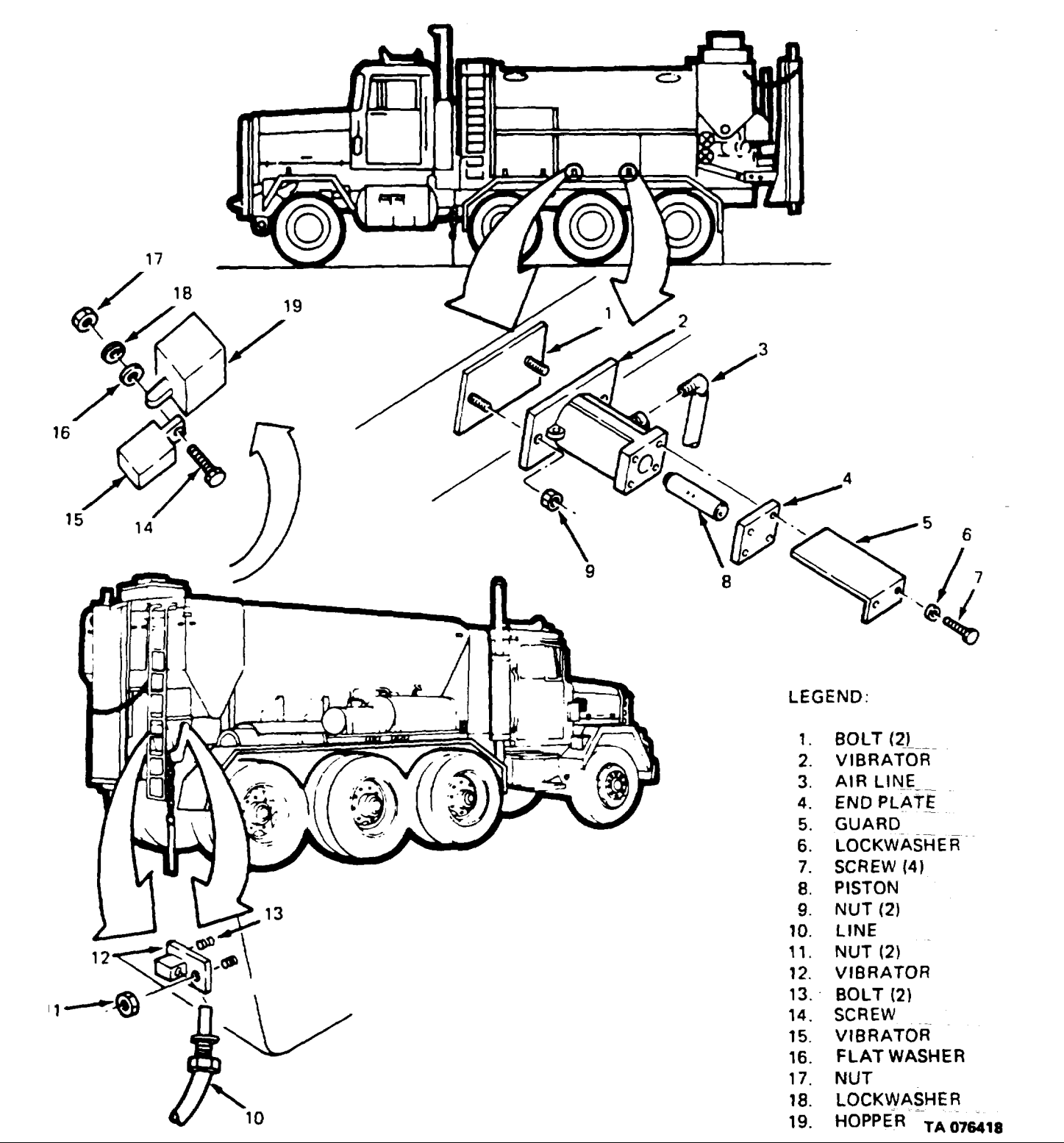
11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
B. CLEANING AND LUBRICATION.		
<p>NOTE The following procedure is for cleaning only. Components are not available for service.</p>		
6. Four screws (7) and lockwashers (6).	Remove.	
7. Guard (5) (sand bin vibrators only).	Remove.	
8. End plate (4).	Remove.	If necessary, tap loose with hammer.
9. Piston (8).	Add a drop of penetrating oil.	Piston located inside of vibrator.
10. Piston (8).	Remove from vibrator (2).	
11. Piston (8) and vibrator (2).	Remove rust.	Use No. 320 emery paper.
12. Piston (8).	Oil piston with machine oil and replace in vibrator (2).	
13. End plate (4).	Install.	
14. Guard (5).	Install.	
15. Four screws (7) and lockwashers (6).	Install and tighten.	

AIR SYSTEM.

11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



AIR SYSTEM.

11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
C. INSTALLATION.		
<p>NOTE If vibrators (2) and (12) are replaced, transfer elbow from defective vibrator to the replacement vibrator. Apply liquid teflon to all threaded air fittings.</p>		
16. Vibrator (2).	Aline to bolts (1) on sand bin and secure with two nuts (9).	
17. Air line (3).	Install and tighten.	
18. Vibrator (12).	Aline to bolts (13) on cement bin and secure with two nuts (11).	
19. Line (10).	Install and tighten.	
20. Vibrator (15).	Aline to hopper (19) and secure with one screw (14), flat washer (16), lock-washer (18), and nut (17).	
D. OPERATIONAL CHECK.		
21. Mixer body.	Start up (see TM 5-3895-372-10 and TM 9232(0273-10).	
22. Vibrators (2), (12) and (15).	a. Check operation. b. Check for air leaks.	
23. Mixer body.	Shut down (see TM 5-3895 372-10 and TM 92320-273-10).	

AIR SYSTEM.

11-8. VIBRATOR MAINTENANCE AND REPLACEMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none"> 1. BOLT (2) 2. VIBRATOR 3. AIR LINE 4. END PLATE 5. GUARD 6. LOCKWASHER 7. SCREW (4) 8. PISTON 9. NUT (2) 10. LINE 11. NUT (2) 12. VIBRATOR 13. BOLT (2) 14. SCREW 15. VIBRATOR 16. FLAT WASHER 17. NUT 18. LOCKWASHER 19. HOPPER TA 076419 		

AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | |
|-----------------------|-------------------|
| a. Removal. | (15) |
| b. Disassembly. | (10) |
| c. Assembly. | (10) |
| d. Installation. | (15) |
| e. Operational Check. | (5) |
| | 55 Minutes Total. |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 92320-273-10.

Air System Bled.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Dry Cleaning Solvent (Refer to Appendix C).

Liquid Teflon (Refer to Appendix C).

Oil (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

LO 5-3895372-12.

TM 5-3895-372-10.

TM 5-3895-372-20P.

TM 92320273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.

Transmission in Neutral.

Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 11-1.

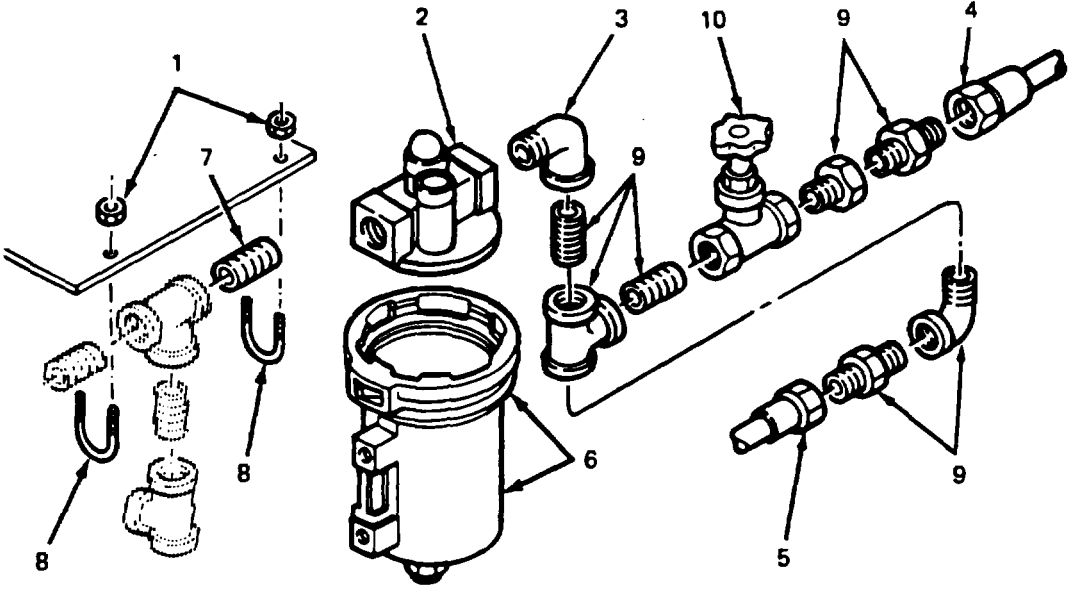
AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|---|---|
| 1. Lubricator, lock ring and canister (6). | Unlock and remove and empty oil in clean container. |
| 2. Air hose (4). | Remove. |
| 3. Air hose (5). | Remove. |
| 4. Four nuts(1). | Remove. |
| 5. Two U-bolts (8). | Remove. |
| 6. Lubricator head (2).
unscrew from nipple (7). | Swing out from vehicle and |
| 7. Street elbow (3) and
attached components
(9 and 10). | Unscrew from lubricator
head (2). |



LEGEND:

- | | |
|--------------------|------------------------|
| 1. NUT (4) | 6. LOCKRING & CANISTER |
| 2. LUBRICATOR HEAD | 7. NIPPLE |
| 3. ELBOW | 8. U-BOLT (2) |
| 4. AIR HOSE | 9. FITTING |
| 5. AIR HOSE | 10. FEMALE GATE VALVE |

TA 076420

AIR SYSTEM.

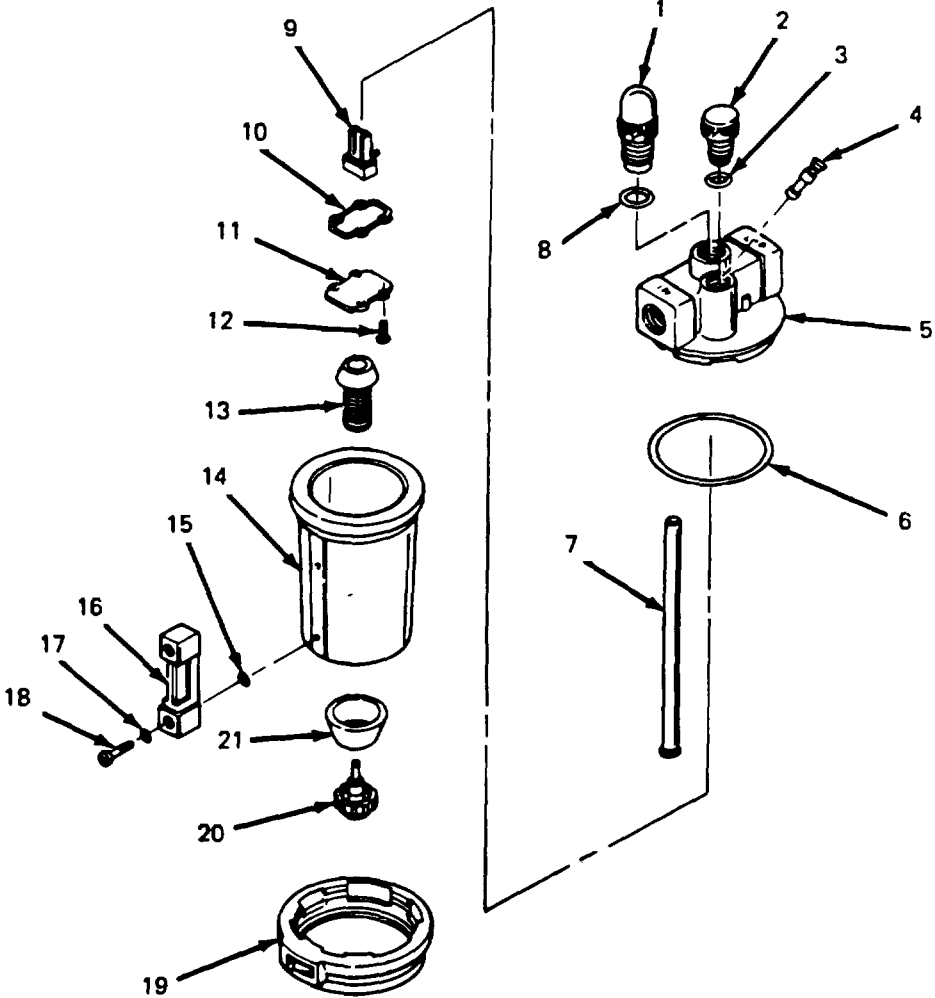
11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY.		
8. Sight glass (1).	Remove from head (5).	
9. O-ring (18).	Remove.	
10. Fill plug (2).	Remove.	
11. O-ring (3).	Remove.	
12. Valve (4).	Remove.	
13. O-ring (6).	Remove.	
14. Tube (7).	Remove.	
15. Four screws(12).	Remove.	
16. Plate (11) and gasket (10).	Remove.	
17. Servo vane (9).	Remove.	
18. Two screws (18).	Remove.	
19. Level gage (16).	Remove.	
20. Four O-rings (15) and (17).	Remove.	
21. Lock ring (19).	Slide off of canister (14).	
22. Retainer (13). (21) from canister (14)	Unscrew and disassemble cap	

AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | | |
|----------------|---------------|-----------------|
| 1. SIGHT GLASS | 8. O-RING | 15. O-RING (2) |
| 2. FILL PLUG | 9. SERVO-VANE | 16. LEVEL GAUGE |
| 3. O-RING | 10. GASKET | 17. O-RING (2) |
| 4. VALVE | 11. PLATE | 18. SCREW |
| 5. HEAD | 12. SCREW (4) | 19. LOCK RING |
| 6. O-RING | 13. RETAINER | 20. DRAIN VALVE |
| 7. TUBE | 14. CANISTER | 21. CAP |

TA 0764

AIR SYSTEM.

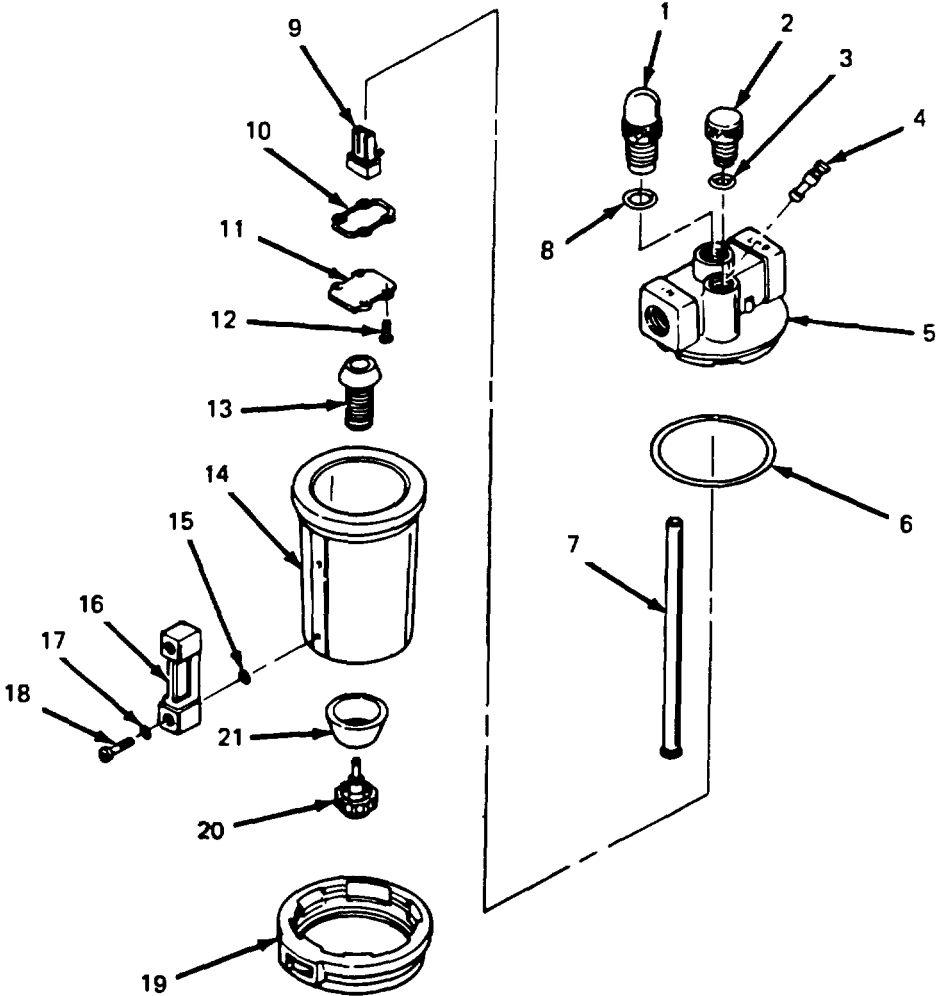
11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
C. ASSEMBLY.		
23. Retainer (13) and cap (21).	Assemble to canister (14).	
24. Lock ring (19).	Slide on canister (14).	
25. Two screws (18).	Install two O-rings (17) over screws.	
26. Level gage (16).	Install screws (18) through gage.	
27. Two O-rings (15).	Slide over screws (18) and mount level gage (16) to canister (14).	
28. Servo-vane (9).	Position in head (5).	
29. Plate (11) and gasket (10).	Secure to head (5) with four screws (12) mounting servo-vane (9).	
30. Tube (7).	Install in head (5).	
31. O-ring (6).	Install on head (5).	
32. O-ring (8).	Slide over sight glass (1).	
33. Sight glass (1).	Screw into head (5).	
34. O-ring (3).	Slide over fill plug (2).	
35. Fill plug (4).	Screw into head (5).	
36. Valve (4).	Install in head (5).	

AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- | | | |
|----------------|---------------|-----------------|
| 1. SIGHT GLASS | 8. O-RING | 15. O-RING (2) |
| 2. FILL PLUG | 9. SERVO-VANE | 16. LEVEL GAUGE |
| 3. O-RING | 10. GASKET | 17. O-RING (2) |
| 4. VALVE | 11. PLATE | 18. SCREW |
| 5. HEAD | 12. SCREW (4) | 19. LOCK RING |
| 6. O-RING | 13. RETAINER | 20. DRAIN VALVE |
| 7. TUBE | 14. CANISTER | 21. CAP |

TA 078422

AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS
D. INSTALLATION		
NOTE		
Apply liquid teflon on threaded joints at installation.		
37. Street elbow (3) and attached components (9, 10).	Install in lubricator head (2).	
38. Lubricator head (2).	Install on nipple (7).	
39. Two U-bolts (8).	Install U-bolts with four nuts (1).	
40. Air hose (5).	Install.	
41. Lubricator lockring and canister (6).	Install on lubricator head (2).	
42. Air hose (4).	Install.	
43. Air lubricator.	Add oil, see LO 5-3895 372-12.	
E. OPERATIONAL CHECK.		
44. Mixer body.	Close all draincocks and open valve. Start up. (See TM 53895 372-10. Operate vibrators.	
45. Air lubricator.	Check for fine drop of oil as vibrators operate. if necessary.	There should be one drop of oil every 3rd vibration. Adjust, (See TM 5-389 372-10.)
46. Mixer body.	Shut down (See TM 5-3895 372-10 and TM 9-2320-273-10).	

AIR SYSTEM.

11-9. LUBRICATOR MAINTENANCE (Continued)

LOCATION/ITEM	ACTION	REMARKS										
<p>LEGEND:</p> <table><tbody><tr><td>1. NUT (4)</td><td>6. LOCKRING & CANISTER</td></tr><tr><td>2. LUBRICATOR HEAD</td><td>7. NIPPLE</td></tr><tr><td>3. ELBOW</td><td>8. U-BOLT (2)</td></tr><tr><td>4. AIR HOSE</td><td>9. FITTING</td></tr><tr><td>5. AIR HOSE</td><td>10. FEMALE GATE VALVE</td></tr></tbody></table>			1. NUT (4)	6. LOCKRING & CANISTER	2. LUBRICATOR HEAD	7. NIPPLE	3. ELBOW	8. U-BOLT (2)	4. AIR HOSE	9. FITTING	5. AIR HOSE	10. FEMALE GATE VALVE
1. NUT (4)	6. LOCKRING & CANISTER											
2. LUBRICATOR HEAD	7. NIPPLE											
3. ELBOW	8. U-BOLT (2)											
4. AIR HOSE	9. FITTING											
5. AIR HOSE	10. FEMALE GATE VALVE											

TA 076423

AIR SYSTEM.

11-10. TIMING DEVICE ADJUSTMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Inspection. (5)
 - b. Adjustment. (5)
 - c. Operational Check. (5)
- 15 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895-372-20P.

TM 53895-372-10.

TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.

Transmission in Neutral.

Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 11 -1.

AIR SYSTEM.

11-10. TIMING DEVICE ADJUSTMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
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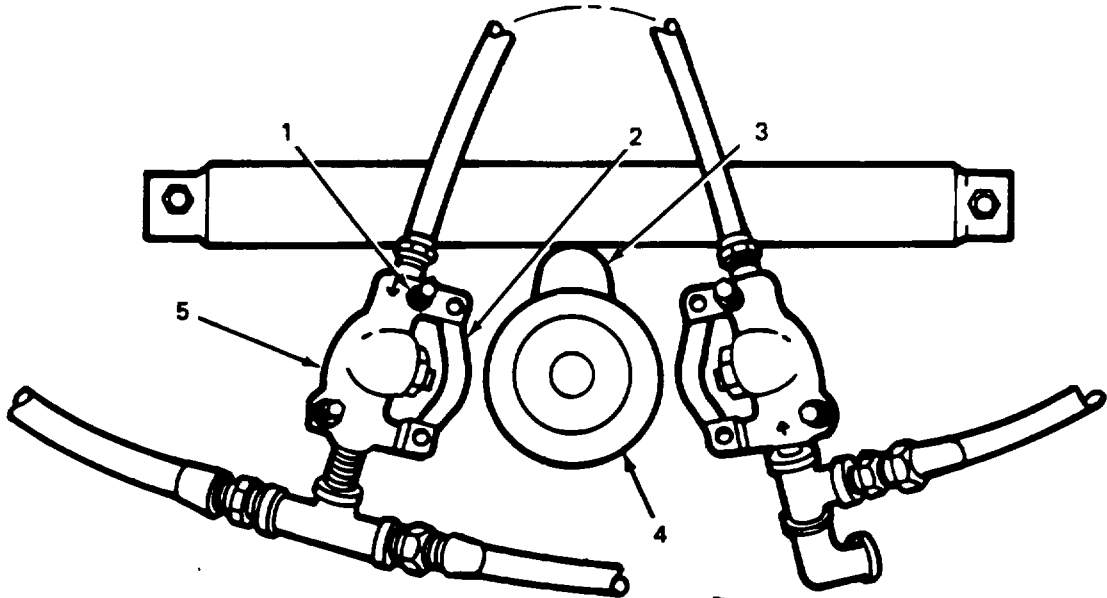
A. INSPECTION.

NOTE

Before beginning service, open cam and air valve access panel.

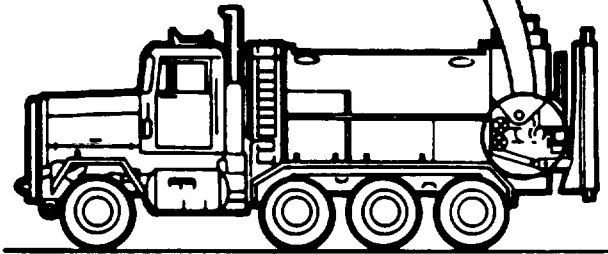
NOTE

The two cam followers (2) should not be lifted by cam lobe (3) when clearance is checked.



LEGEND:

- 1. NUT (4)
- 2. CAM FOLLOWER (2)
- 3. CAM LOBE
- 4. CAM
- 5. AIR VALVE (2)



TA 076424

AIR SYSTEM.

11-10. TIMING DEVICE ADJUSTMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
A. INSPECTION (Continued).		
1. Two cam followers (2) and cam (4).	Check for 1/16 in. (1.6 mm) clearance.	Use 1/16 in. (1.6 mm) steel plate or suitable measuring device.
<p style="text-align: center;">NOTE If clearance does not comply to specified tolerance, proceed to adjustment procedures.</p>		
B. ADJUSTMENT.		
2. Four nuts (1). (two per valve).	Loosen.	
3. Air valve (5).	Slide valve until 1/16 in. (1.6 mm) clearance is obtained between cam and follower.	
4. Four nuts (1).	Tighten.	After tightening, check to be sure clearance has not changed.
C. OPERATIONAL CHECK.		
5. Mixer body.	Start up (see TM 5-3895-372-10 and TM 9-2320-273-10). Check operation of vibrators. Shut down vehicle and close access panel.	

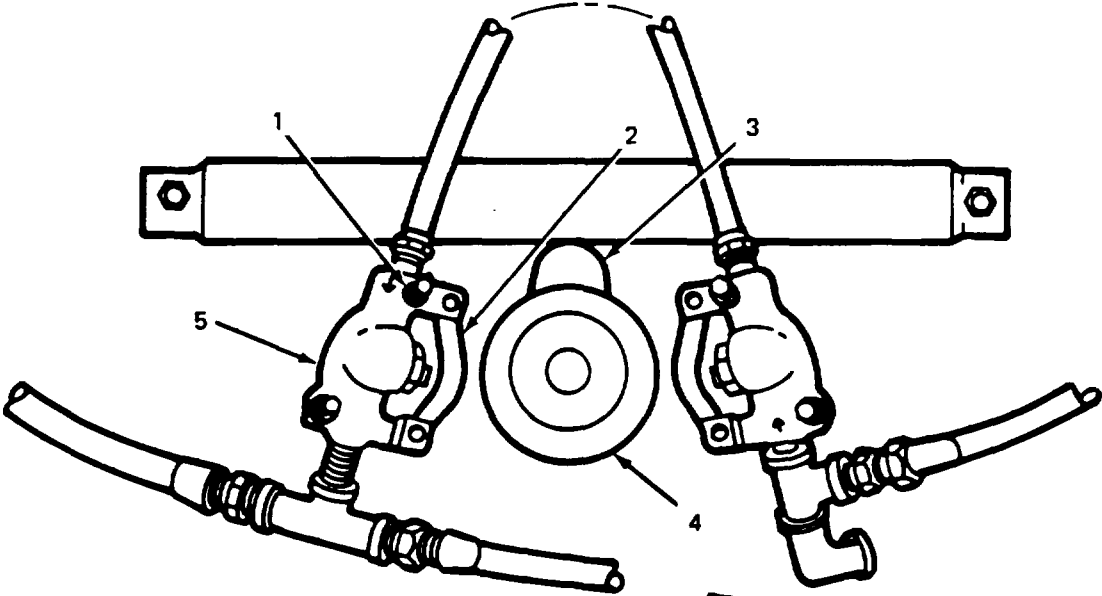
AIR SYSTEM.

11-10. TIMING DEVICE ADJUSTMENT (Continued)

LOCATION/ITEM	ACTION	REMARKS
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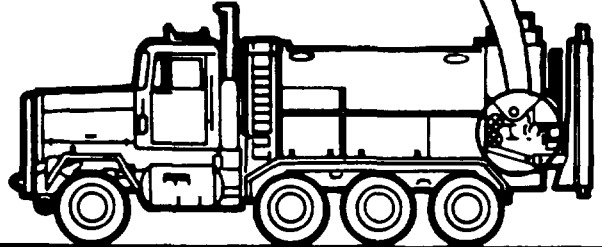
NOTE

These valves show air flow by means of an embossed directional arrow. If valves are to be replaced, be sure the flow is in the correct direction.



LEGEND:

- 1. NUT (4)
- 2. CAM FOLLOWER (2)
- 3. CAM LOBE
- 4. CAM
- 5. AIR VALVE (2)



TA 076425

AIR SYSTEM.

11-11. TIMING DEVICE MAINTENANCE

LOCATION/ITEM	ACTION	REMARKS
a. Removal. b. Cleaning. c. Installation. d. Operational Check.	(15) (15) (15) (5) 50 Minutes Total.	
<u>INITIAL SETUP</u>	<u>EQUIPMENT</u>	
	<u>CONDITION</u>	
	<u>PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
<u>APPLICABLE CONFIGURATIONS</u>	11-12A.	Air Lines Disconnected.
M919.		
<u>TEST EQUIPMENT</u>		
None.		
<u>SPECIAL TOOLS</u>		
None.		
<u>MATERIALS/PARTS (P/N)</u>		
None.		
<u>PERSONNEL REQUIRED</u>	<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>	
One (MOS-62B20).	Vehicle Parked on Level Ground.	
<u>REFERENCES (TM)</u>	<u>GENERAL SAFETY INSTRUCTIONS</u>	
TM 5-3895372-10.	Engine Off.	
TM 5-3895372-20P.	Transmission in Neutral.	
TM 9-2320-273-10.	Parking Brake Set.	
<u>TROUBLESHOOTING REFERENCES</u>		
Table 11-1.		

AIR SYSTEM.

11-11. TIMING DEVICE MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS

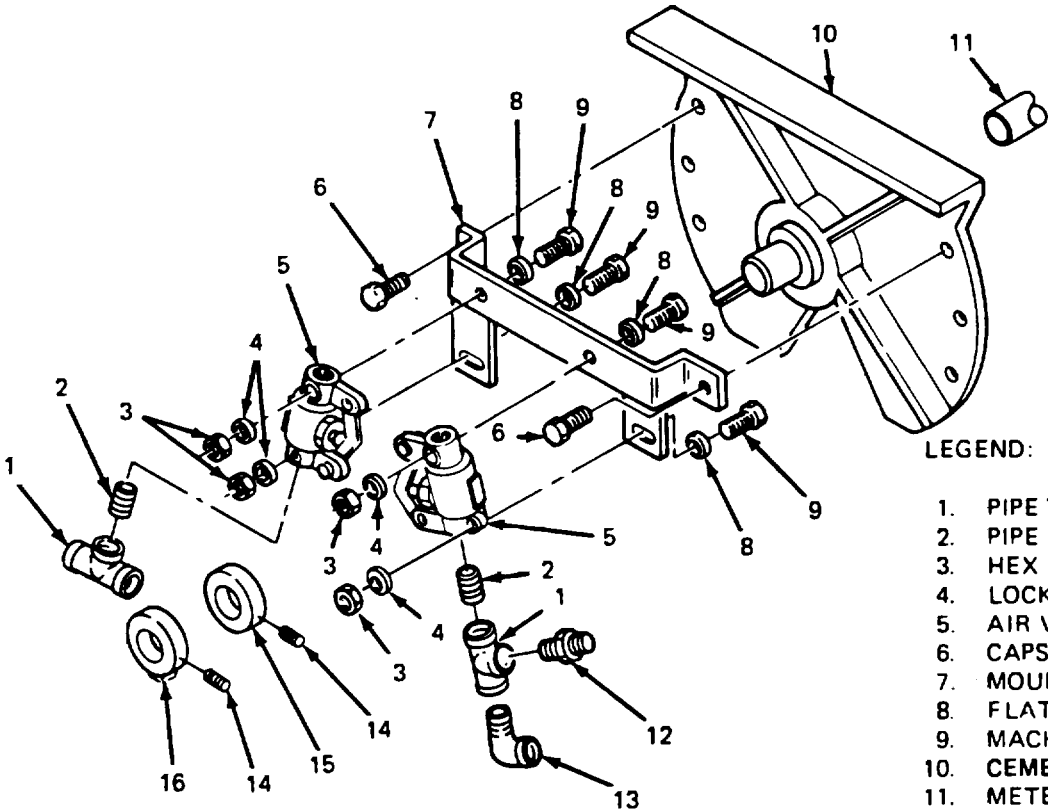
A. REMOVAL.

NOTE

Before beginning service, open cam and air valve access panel.

1. Two air valves (5)

- a. Remove pipe tee (1) and pipe nipple (2) from left hand air valve (5).
- b. Remove pipe elbow (13), pipe nipple (12), pipe tee (1) and pipe nipple (2) from right hand air valve (5).
- c. Remove four hex nuts (3), lock-washers (4), flat washers (8), and machine screws (9).
- d. Remove two air valves (5)



LEGEND:

- 1. PIPE TEE (2)
- 2. PIPE NIPPLE (2)
- 3. HEX NUT (4)
- 4. LOCKWASHER (4)
- 5. AIR VALVE (2)
- 6. CAPSCREW (2)
- 7. MOUNTING BRACKET
- 8. FLAT WASHER (4)
- 9. MACHINE SCREW (4)
- 10. CEMENT METER FEEDER
- 11. METER FEEDER SHAFT
- 12. PIPE NIPPLE
- 13. PIPE ELBOW
- 14. SETSCREW (2)
- 15. LOCKING COLLAR
- 16. CAM COLLAR

TA 676426

AIR SYSTEM.

11-11. TIMING DEVICE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
2. Cam collar (16) and locking collar (15).	Loosen two set screws (14) and remove from meter feeder shaft (11).	
3. Mounting bracket (7).	Remove two capscrews (6) and lift off end of cement meter feeder (10).	
B. CLEANING AND INSPECTION.		
4. All parts.	<ul style="list-style-type: none"> a. Remove cement build-up with a wire brush or scraper. b. Inspect for damage and excessive wear and replace as necessary. 	
C. INSTALLATION.		
5. Mounting bracket (7).	Aline mounting holes with holes in cement meter feeder (10) and install two capscrews (6).	
6. Cam collar (16) and locking collar (15).	Install on meter feeder shaft (11) and tighten two setscrews (14)-	
7. Two air valves (5).	<ul style="list-style-type: none"> a. Install on mounting bracket (7) and loosely secure with four machine screws (9), flat washers (8), lock-washers (4), and hex nuts (3). b. Apply liquid teflon to threads and install two pipe nipples (2), pipe tees (1), pipe nipple (12), and pipe elbow (13). c. Adjust timing device, refer to para 11-10. 	
NOTE		
Follow-on maintenance action required: Install air lines, refer to para 11-12C.		
D. OPERATIONAL CHECK.		
8. Mixer body.	Start up (refer to TM 5-3895-372-10 and TM 9-2320-27:10). Check operation of vibrators. Shut down vehicle and close access panel,	

AIR SYSTEM.

11-11. TIMING DEVICE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none"> <li>1. PIPE TEE (2) <li>2. PIPE NIPPLE (2) <li>3. HEX NUT (4) <li>4. LOCKWASHER (4) <li>5. AIR VALVE (2) <li>6. CAPSCREW (2) <li>7. MOUNTING BRACKET <li>8. FLAT WASHER (4) <li>9. MACHINE SCREW (4) <li>10. CEMENT METER FEEDER <li>11. METER FEEDER SHAFT <li>12. PIPE NIPPLE <li>13. PIPE ELBOW <li>14. SETSCREW (2) <li>15. LOCKING COLLAR <li>16. CAM COLLAR 		

TA 076427

AIR SYSTEM.

11-12. AIR VALVES AND HOSES MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (AR)
 - b. Inspection. (AR)
 - c. Installation. (AR)
 - d. Operational Check. (AR)
- AR Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

TM 92320-2710.

Air System Bled.

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 5-3895-372-10.
- TM 5-3895-372-20P
- TM 9-23-20273-10

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 11-1.

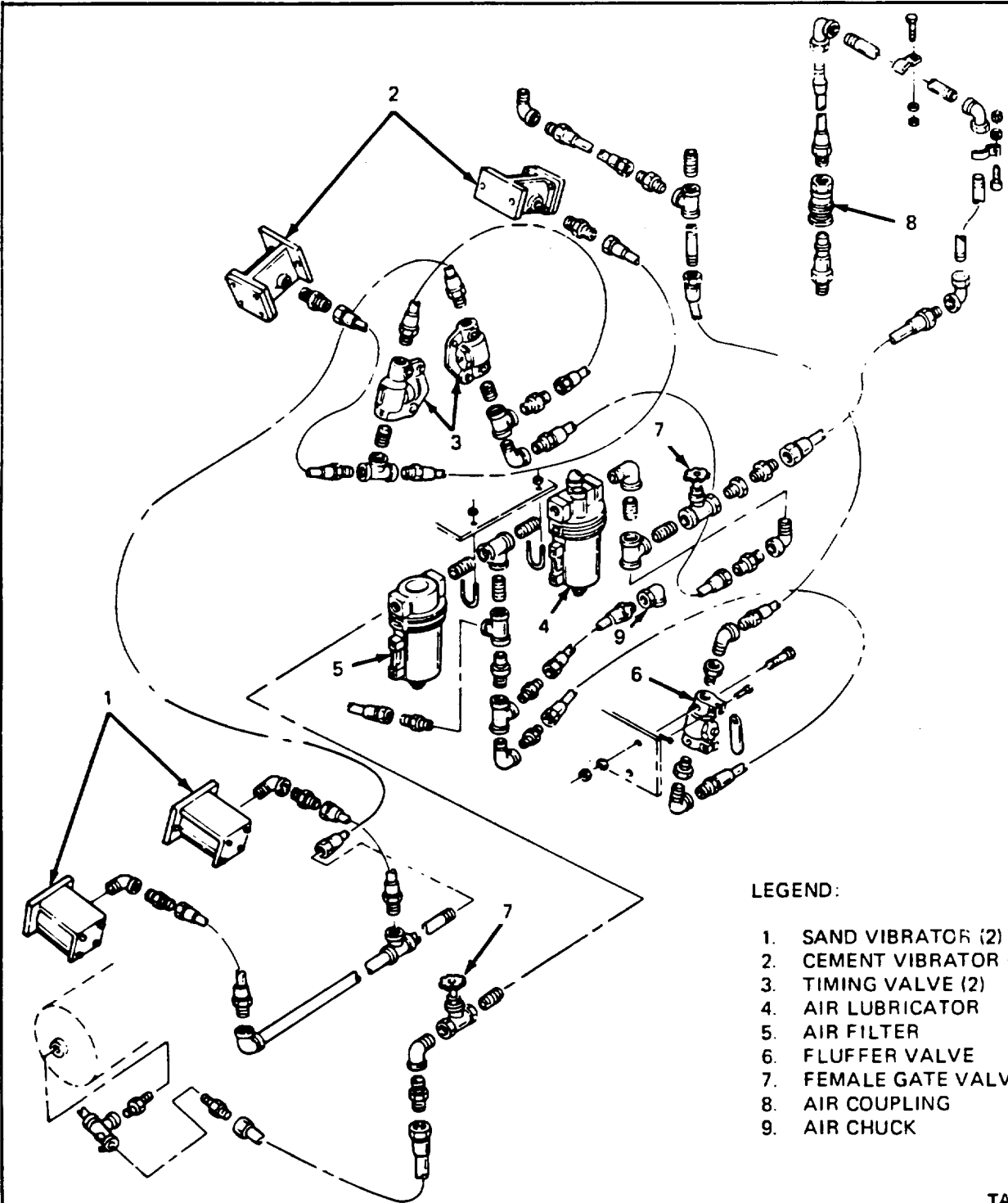
AIR SYSTEM

11-12. AIR VALVES AND HOSES MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS



LEGEND:

- 1. SAND VIBRATOR (2)
- 2. CEMENT VIBRATOR (2)
- 3. TIMING VALVE (2)
- 4. AIR LUBRICATOR
- 5. AIR FILTER
- 6. FLUFFER VALVE
- 7. FEMALE GATE VALVE (2)
- 8. AIR COUPLING
- 9. AIR CHUCK

TA 076425

AIR SYSTEM.

11-12. AIR VALVES AND HOSES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

NOTE

The layout and main components of the air system are illustrated in para 2-20. To replace any air valve, hose, or fitting, follow general shop practices and techniques as described below.

WARNING

Before beginning maintenance, be sure air gate valve is closed. Check that draincocks have been opened to relieve pressure.

- | | | | |
|----|---------------------------------|---------------------|--|
| 1. | Attached valves and hoses. | Unscrew and remove. | |
| 2. | Mounting bolts (if applicable). | Unscrew and remove. | |
| 3. | Valve, hose, or fitting | Remove. | |

B. INSPECTION.

- | | | | |
|----|--------------------------|---|---|
| 4. | Valve, line, or fitting. | Inspect for:
a. Leaks.
b. Cracks.
c. Blockage.
d. Damaged fittings.
Also inspect fittings on attaching valves and hoses. | Remove blockage or replace, if necessary. |
|----|--------------------------|---|---|

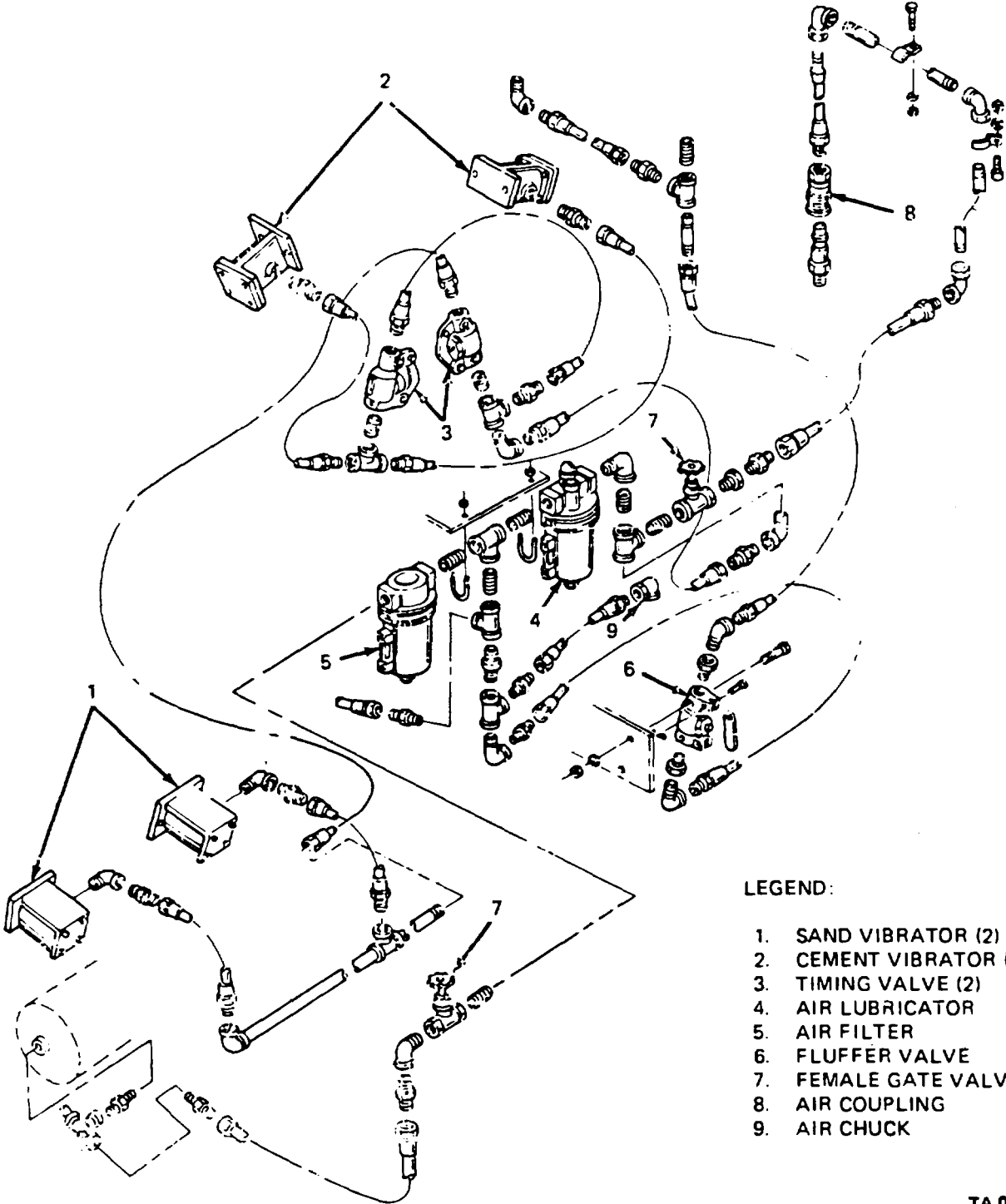
AIR SYSTEM.

11-12. AIR VALVES AND HOSES MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS



LEGEND:

- 1. SAND VIBRATOR (2)
- 2. CEMENT VIBRATOR (2)
- 3. TIMING VALVE (2)
- 4. AIR LUBRICATOR
- 5. AIR FILTER
- 6. FLUFFER VALVE
- 7. FEMALE GATE VALVE (2)
- 8. AIR COUPLING
- 9. AIR CHUCK

TA 076429

AIR SYSTEM.

11-12. AIR VALVES AND HOSES MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
NOTE		
Valves are directional. Be sure air flows through them in the correct direction. Apply liquid teflon to all threaded joints at installation.		
C. INSTALLATION.		
5. Valve, line, or fitting.	Mount in position with mounting bolts or screws (if applicable).	
6. Attaching valves and hoses.	Screw on and tighten to the proper ports.	Be sure hoses are connected
D. OPERATIONAL CHECK.		
7. Draincocks.	Close.	
8. Female gate valve (7).	Open.	
9. Mixer body.	Start up (see TM 9-2320273-10 and TM 5-3895372-10).	Be sure chassis pressure is over 65 psi (448 kPa).
10. Valve, line, or fitting.	Check for leaks.	
11-38		

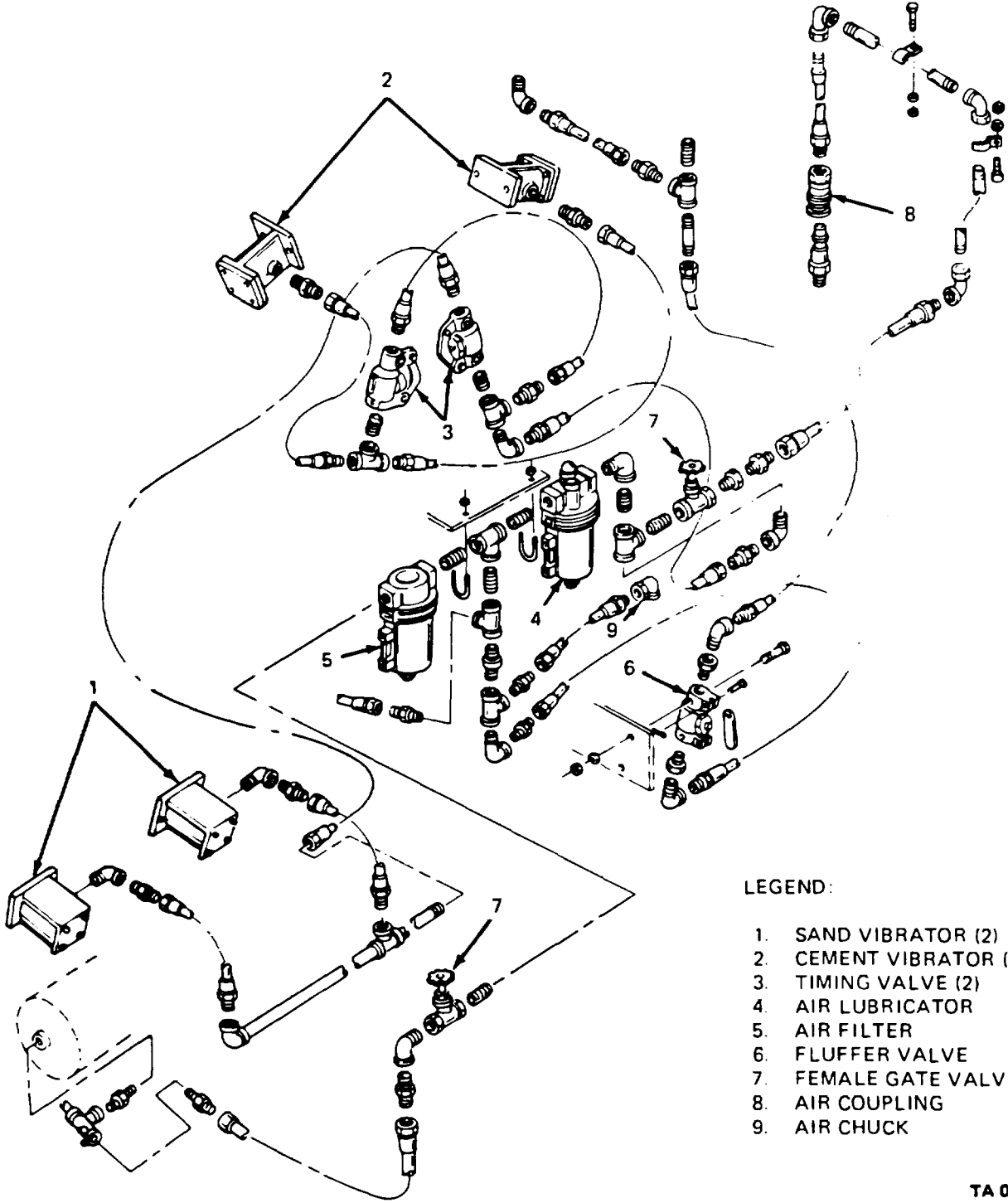
AIR SYSTEM.

11-12. AIR VALVES AND HOSES MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS



LEGEND:

- 1. SAND VIBRATOR (2)
- 2. CEMENT VIBRATOR (2)
- 3. TIMING VALVE (2)
- 4. AIR LUBRICATOR
- 5. AIR FILTER
- 6. FLUFFER VALVE
- 7. FEMALE GATE VALVE (2)
- 8. AIR COUPLING
- 9. AIR CHUCK

TA 076430

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Disassembly. (10)
 - c. Assembly. (10)
 - d. Installation. (15)
 - e. Operational Check. (5)
- 55 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 92320-273-10.

Air System Bled.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS623a20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895-372-20P
TM 59-2320-273-10

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 11-1

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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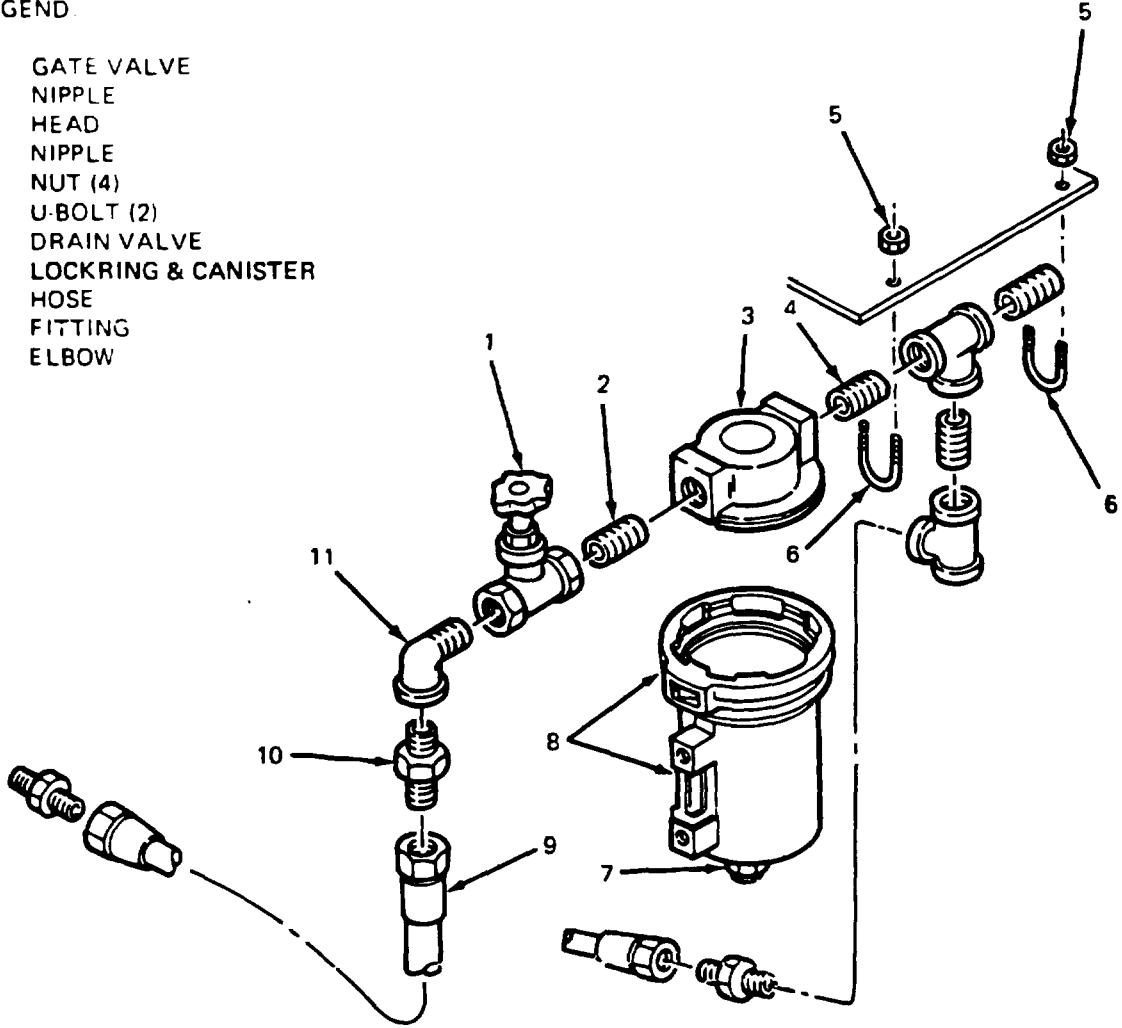
A. REMOVAL.

WARNING

Before removal of air filter, be sure that all drain valves have been opened to relieve air pressure in system.

LEGEND

- 1. GATE VALVE
- 2. NIPPLE
- 3. HEAD
- 4. NIPPLE
- 5. NUT (4)
- 6. U-BOLT (2)
- 7. DRAIN VALVE
- 8. LOCKRING & CANISTER
- 9. HOSE
- 10. FITTING
- 11. ELBOW



TA 076431

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL Continued		
1. Drain valve (7).	Open.	Drain out water.
2. Air hose (9).	Remove.	
3. Four nuts (5).	Remove.	
4. Two U-bolts (6).	Remove.	
5. Air filter lock ring and canister (8).	Unlock and remove.	
6. Air filter head (3).	Remove from nipple (4).	
7. Nipple (2), gate valve (1), elbow (11), and fitting (10).	Remove from head (3).	

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

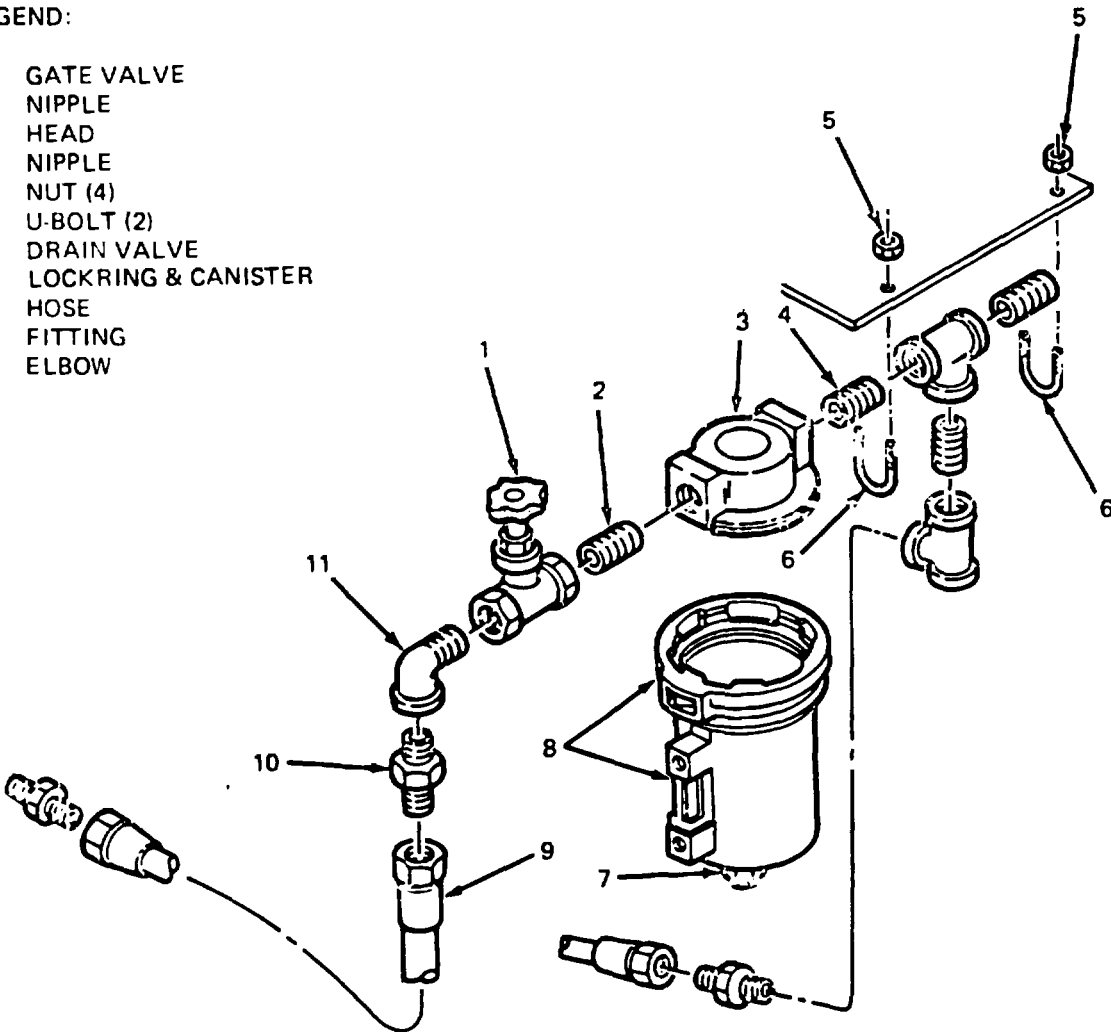
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. GATE VALVE
- 2. NIPPLE
- 3. HEAD
- 4. NIPPLE
- 5. NUT (4)
- 6. U-BOLT (2)
- 7. DRAIN VALVE
- 8. LOCKRING & CANISTER
- 9. HOSE
- 10. FITTING
- 11. ELBOW



TA 076432

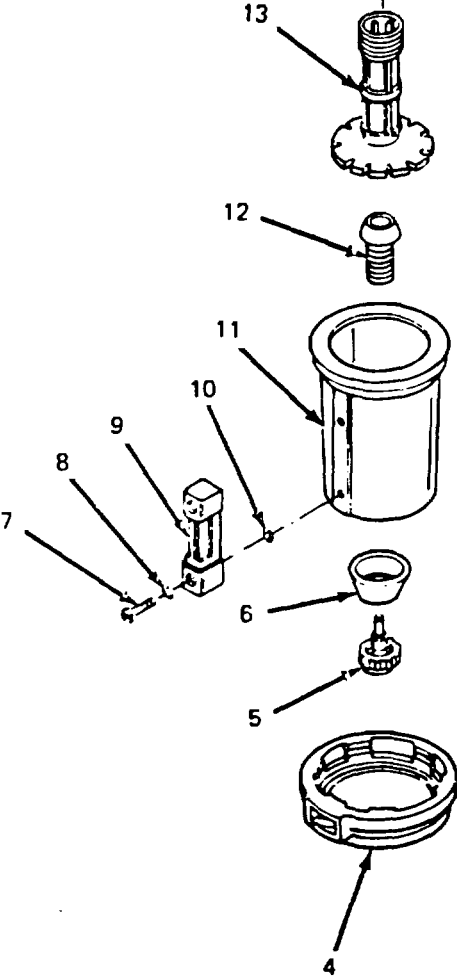
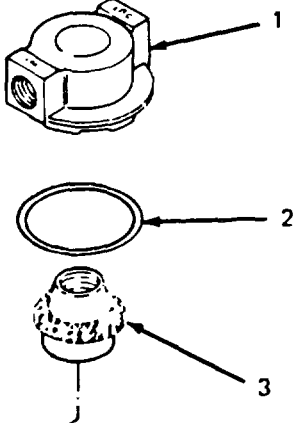
AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. DISASSEMBLY.		
8. O-ring (2).	Remove from head (1).	
9. Deflector (3) and filter (13).	Remove from head (1).	
10. Deflector (3) and filter (13).	Disassemble.	
11. Two screws (7).	Remove.	
12. Level gage (9).	Remove.	
13. Four O-rings (8) and (10).	Remove.	
14. Lock ring (4).	Remove from canister (11).	
15. Drain valve (5).	Remove.	
16. Retainer (12) and cap (6).	Disassemble from canister (11).	

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

LOCATION	ITEM	ACTION	REMARKS
			
			<p>LEGEND:</p> <ul style="list-style-type: none"> 1. HEAD 2. O-RING 3. DEFLECTOR 4. LOCK RING 5. DRAIN VALVE 6. CAP 7. SCREW (2) 8. O-RING (2) 9. LEVEL GAUGE 10. O-RING (2) 11. CANISTER 12. RETAINER 13. FILTER

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
C. ASSEMBLY.		
17. Retainer (12) and cap (6).	Assemble to canister (11).	
18. Drain valve (5).	Install.	
19. Lock ring (4).	Slide on canister (11).	
20. Four O-rings (8) and (10) and two screws (7).	Mount level gage (9) to canister (11).	
21. Deflector (3) and filter (13).	Assemble.	
22. Deflector (3) and filter (13).	Install on head (1).	
23. O-ring (2).	Install on head (1).	

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none">1. HEAD2. O-RING3. DEFLECTOR4. LOCK RING5. DRAIN VALVE6. CAP7. SCREW (2)8. O-RING (2)9. LEVEL GAUGE10. O-RING (2)11. CANISTER12. RETAINER13. FILTER		

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
D. INSTALLATION.		
<p>NOTE Apply liquid teflon on all threaded joints at installation.</p>		
24. Nipple (2), gate valve (1), elbow (11), and fitting (10).	Install in head (3).	
25. Air filter head (3).	Install on nipple (4).	
26. Air filter lock ring and canister (8).	Install on air filter head (3).	
27. Two U-bolts (6) and and four nuts (5).	Install.	
28. Air hose (9).	Install.	
29. Drain valve (7).	Close.	
E. OPERATIONAL CHECK.		
30. Mixer body	Close all draincocks and open gate valve. Start up (see TM 5-3895-372-10 and TM 9-2320-27310).	
31. Air filter.	Check for leaks.	
32. Mixer body.	Shut down (see TM 5-3895 372-10 and TM 9232&(273-10).	

AIR SYSTEM.

11-13. AIR FILTER MAINTENANCE (Continued).

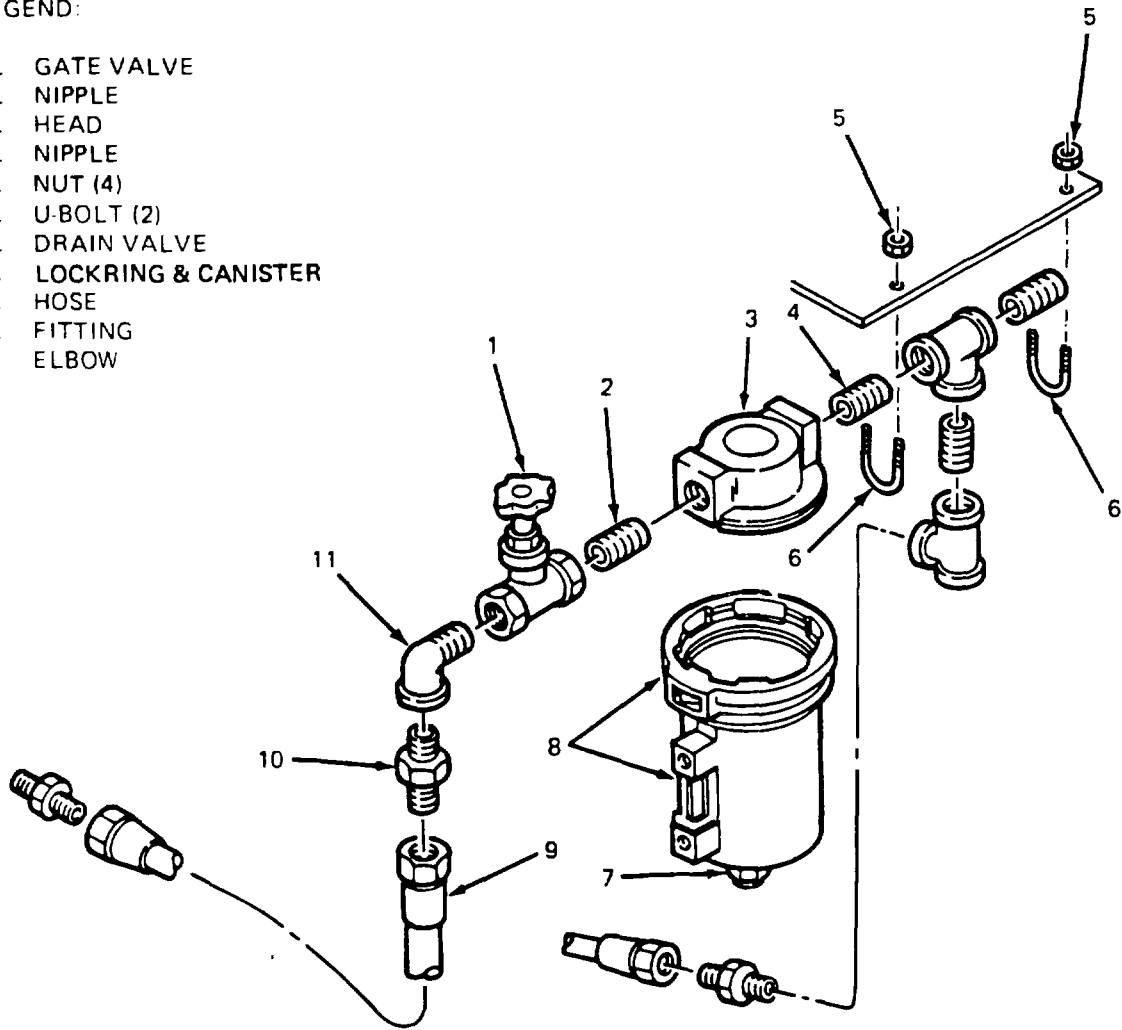
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. GATE VALVE
- 2. NIPPLE
- 3. HEAD
- 4. NIPPLE
- 5. NUT (4)
- 6. U-BOLT (2)
- 7. DRAIN VALVE
- 8. LOCKRING & CANISTER
- 9. HOSE
- 10. FITTING
- 11. ELBOW



TA 076435

AIR SYSTEM.

11-14. FLUFFER VALVE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Inspection. (5)
 - c. Installation. (10)
 - d. Operational Check. (5)
- 30 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Liquid Teflon (Refer to Appendix C).
Masking Tape.
Marking Pen.

PERSONNEL REQUIRED

One (MOS62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 53895372-10.
TM 5-38923720-210P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 11-1.

AIR SYSTEM.

11-14. FLUFFER VALVE MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

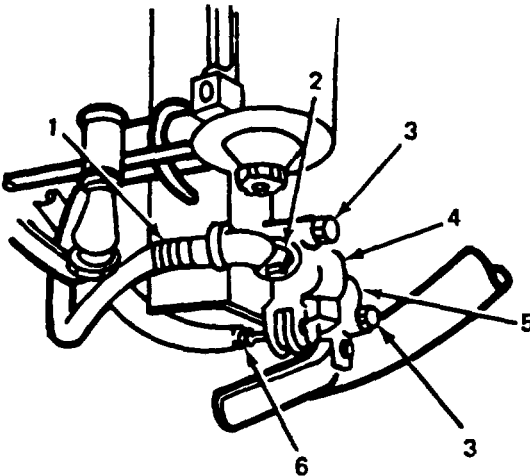
REMARKS

NOTE

Before beginning service, close air gate valve and open air draincocks to relieve air pressure.

A. REMOVAL.

- | | | | |
|----|---|---|------------------------------|
| 1. | Air line (1)
air line (1) for installation. | Remove. | Remove swivel end first. Tag |
| 2. | Air line (6).
air line (6) for installation. | Remove. | Remove swivel end first. Tag |
| 3. | Two bolts, nuts, and
lockwashers (3). | Remove. Remove fluffer valve
(4) from vehicle. | |
| 4. | Two elbows (2) and
adapters (5). | Remove from fluffer valve (4). | |



LEGEND:

- 1. AIR LINE
- 2. ELBOW (2)
- 3. BOLT, NUT, AND LOCKWASHER (2)
- 4. FLUFFER VALVE
- 5. ADAPTER (2)
- 6. AIR LINE

TA 076436

AIR SYSTEM.

11-14. FLUFFER VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSPECTION.		
5. Air lines (1) and (6).	Inspect for damaged lines or fittings.	Replace, if necessary.
C. INSTALLATION		
<p>NOTE Apply liquid teflon to all threaded joints at installation.</p>		
6. Two elbows (2) and adapters (5).	Install in fluffer valve (4).	
7. Two bolts, nuts, and lockwashers (3).	Mount fluffer valve (4) and tighten.	Check before mounting valve. Embossed arrow on valve gives direction of air flow.
8. Air line (6).	Install and tighten.	Install swivel end last.
9. Air line (1).	Install and tighten.	Install swivel end last
D. OPERATIONAL CHECK.		
10. Draincocks and air gate valve.	Close draincocks and open air gate valve.	
11. Mixer body.	Start up (see TM 9-2320273-10 and TM 5-3895-372-10).	Chassis pressure should be at least 65 psi (448 kPa).
12. Fluffer valve (4) and air lines (1) and (6).	Activate fluffer valve (4). Check for leaks	
13. Mixer body.	Shut down. (See TM 9-2320 273-10 and TM 5-3895-372-10).	

AIR SYSTEM.

11-14. FLUFFER VALVE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ul style="list-style-type: none">1. AIR LINE2. ELBOW (2)3. BOLT, NUT, AND LOCKWASHER (2)4. FLUFFER VALVE5. ADAPTER (2)6. AIR LINE		

TA 076437

CHAPTER 12

ELECTRIC WINCH

12-1. OVERVIEW.

This chapter provides you with the following information related to electric winch maintenance:

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedures.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

12-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

12-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

Special tools, TMDE, and support equipment for electric winch maintenance are limited to jumper cables. (Refer to Organizational Maintenance RPSTL, TM 5-3895-372-20P, for tool description and illustration.)

12-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 5-3895-372-20P).

Section II TROUBLESHOOTING

12-5. INTRODUCTION.

Before beginning tests on the winch circuits, make a general inspection. Check for:

- a. Loose connections
- b. Loose ground wire.
- c. Frayed, broken, or corroded wiring.

12-5. INTRODUCTION (Continued).

Often, tightening a loose connection or replacing a frayed wire will solve your problem. Troubleshooting procedures for the electric winch are given in table 12-1. It is arranged by malfunctions, in the following order:

- a. Trough will not raise or lower (Malfunction No. 1).
- b. Trough will not raise (Malfunction No. 2).
- c. Trough will not lower (Malfunction No. 3).

NOTE

The electric winch will not operate if the truck battery is dead. In this case you must troubleshoot the chassis electrical system. Refer to TM 92320273-20.

Table 12-1. Electric Winch Troubleshooting Procedures.

Malf	Step	Instruction	Indication	Yes	No	Remarks
1		Trough Will Not Raise Or Lower				
	1	Connect one end of jumper cable to LOWER terminal of the OUT solenoid (fig. 12-1). Briefly ground the other end of the cable to the frame.	Trough lowers.	Replace control box.	Replace winch assembly.	
2		Trough Will Not Raise				
	1	Lower trough. Press JOG and RAISE buttons simultaneously.	Trough is raised.	Replace limit switch.	Go to step2.	
3	2	Connect one end of jumper cable to RAISE terminal of the IN solenoid (fig. 12-1). Briefly ground the other end of the cable to the frame.	Trough is raised.	Replace control box.	Replace IN solenoid.	
		Trough Will Not Lower				
	1	Connect one end of jumper cable to LOWER terminal of the OUT solenoid				
		Briefly ground the other end of the cable to the frame.	Trough lowers.	Replace control box.	Replace OUT solenoid.	

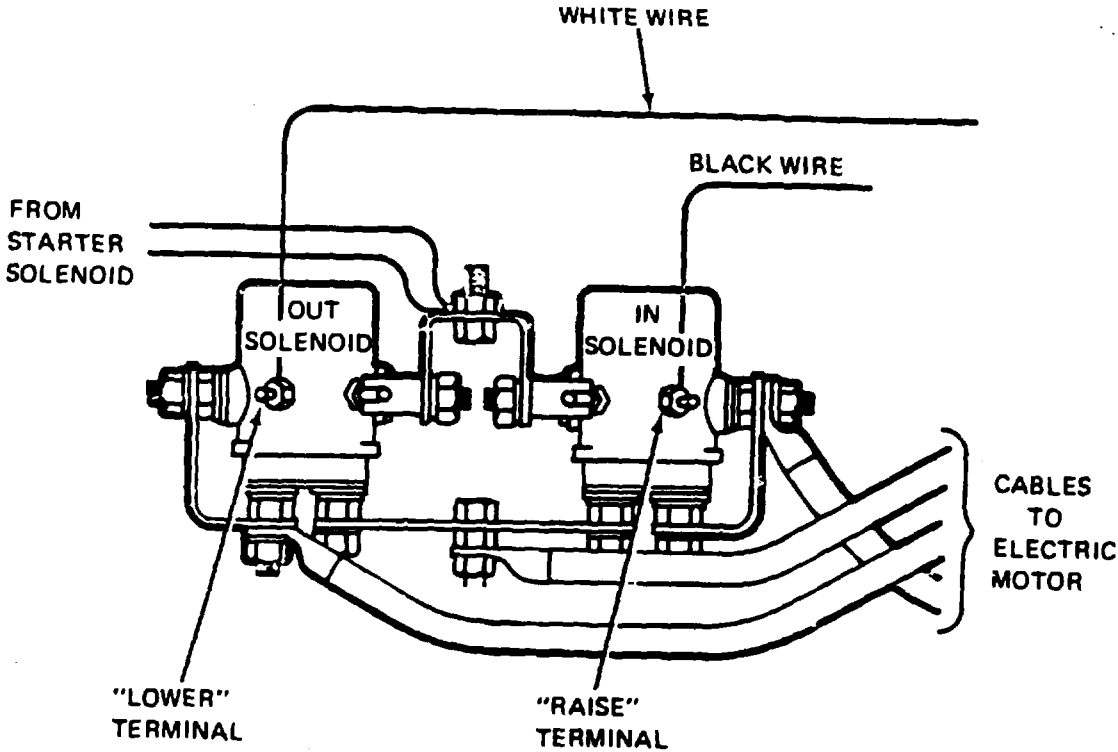


Figure 12-1. Winch Solenoids.

Section III MAINTENANCE PROCEDURES

12-6. INTRODUCTION.

This section provides you with Organizational level maintenance procedures for the mixer body electric winch. Paragraph 12-7 summarizes the maintenance tasks. Paragraphs 12-8 thru 12-11 contain detailed instructions for each task.

NOTE

Before beginning any maintenance procedures in this chapter, unbolt and remove the winch guard.

12-7. ELECTRIC WINCH MAINTENANCE TASK SUMMARY.

INITIAL SETUP

<u>APPLICABLE CONFIGURATIONS</u>	<u>EQUIPMENT CONDITION PARAGRAPH</u>	<u>CONDITION DESCRIPTION</u>
M919.	12-8A. 12-10A.	Cable Removed. Winch Assembly Removed.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

Oil (Refer to Appendix C).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

PERSONNEL REQUIRED

One (MOS-62B20).

REFERENCES (TM)

LO 53895-372-12.

GENERAL SAFETY INSTRUCTIONS

Engine OFF.
Transmission in Neutral.
Park Brake Set.

REFERENCES (TROUBLESHOOTING)

Table 12-1.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Winch Cable Maintenance:	12-8	12-1
	A. Removal.	12-8A	
	B. Cleaning and Lubrication.	12-BB	
	C. Installation.	12-8C	
2.	Winch Assembly Service:	12-9	12-1
	A. Checking Oil Level.	12-9A	
	B. Checking Wire Connections.	12-9B	

12-7. ELECTRIC WINCH MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF.	TROUBLESHOOTING REF. (TABLE)
3.	Winch Assembly Maintenance: A. Removal. B. Installation. C. Operational Check.	12-10 12-10A 12-10B 12-10C	12-1
4.	Motor and Gear Box Assembly Maintenance: A. Removal. B. Installation.	12-11 12-11A 12-1 B	12-1

ELECTRIC WINCH.

12-8, WINCH CABLE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- | | |
|------------------------------|--------------------------|
| a. Removal. | (10) |
| b. Cleaning and Lubrication. | (20) |
| c. Installation. | (15) |
| | <u>45 Minutes Total.</u> |

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

None.

None.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

CW (Refer to Appendix C).

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- LO 5-3895-372-12.
- TM 53895372-10.
- TM 53895-37220P.
- TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

Table 12-1.

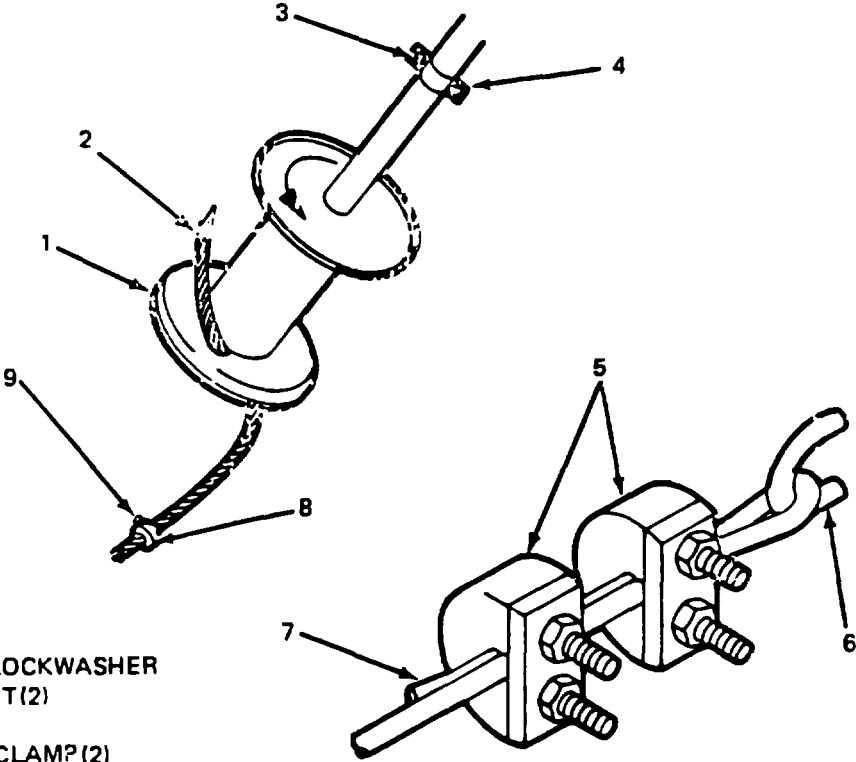
ELECTRIC WINCH.

12-8. WINCH CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | |
|--------------------------|---|
| 1. Mixing trough. | Lower. Support trough end so that cable is slack. |
| 2. Two cable clamps (5). | Loosen the four nuts on the clamps. |
| 3. Cable end (7). | Pull free of clamps (5) and anchor (6). |



LEGEND:

- 1. REEL
- 2. CABLE
- 3. BOLT, LOCKWASHER AND NUT(2)
- 4. CLAMP
- 5. CABLE CLAMP(2)
- 6. ANCHOR
- 7. CABLE END (2)
- 8. STOP SLEEVE
- 9. SETSCREW

TA 076439

ELECTRIC WINCH.

12-8. HYDRAULIC MOTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
4. Winch control box.	Press the LOWER button until cable is completely paid out.	
5. Two nuts, lockwashers, and bolts (3).	Remove.	
6. Clamp (4).	Remove.	
7. Setscrew (9).	Loosen.	
8. Cable (2).	Pull out of stop sleeve (8) and reel (1). Remove the cable.	
B. CLEANING AND LUBRICATION.		
9. Cable (2).	<ul style="list-style-type: none"> a. Wipe with a damp rag. b. Inspect for rust or fraying. Replace if necessary. c. Oil with CW. d. Wipe off excess oil. 	
C. INSTALLATION.		
10. Cable (2).	<ul style="list-style-type: none"> a. Thread through three pulleys on trough support frame. b. Thread through hole in reel (1) and through stopsleeve (8). 	
11. Setscrew (9).	Tighten.	
12. Clamp (4).	Slide spool toward motor and gear box, and install clamp around shaft.	
13. Two nuts, lockwashers, and bolts (3).	Install and tighten securely.	
14. Cable end (7).	<ul style="list-style-type: none"> a. Thread through pulley on trough. b. Thread through anchor (6) and back through two clamps (5). 	

ELECTRIC WINCH.

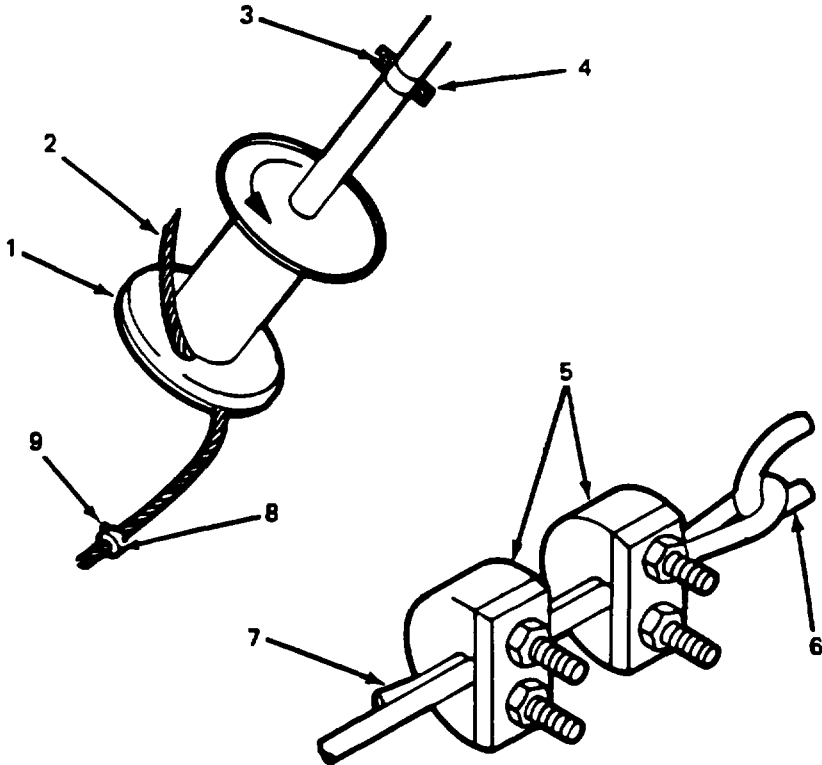
12-8. HYDRAULIC MOTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

C. INSTALLATION (Continued).

15. Two clamps (5). Tighten four nuts.

16. Winch control box. Push RAISE button. Wind cable onto reel.



LEGEND:

- 1. REEL
- 2. CABLE
- 3. BOLT, LOCKWASHER AND NUT (2)
- 4. CLAMP
- 5. CABLE CLAMP (2)
- 6. ANCHOR
- 7. CABLE END (2)
- 8. STOP SLEEVE
- 9. SETSCREW

TA 076440

ELECTRIC WINCH.

12-9. WINCH ASSEMBLY SERVICE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Checking Oil Level. (10)
 - b. Checking Wire Connections. (5)
- 15 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Oil (Refer to Appendix C)

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
LO 5-3895-372-12.
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
Table 12-1.

ELECTRIC WINCH.

12-9. WINCH ASSEMBLY SERVICE (Continued).

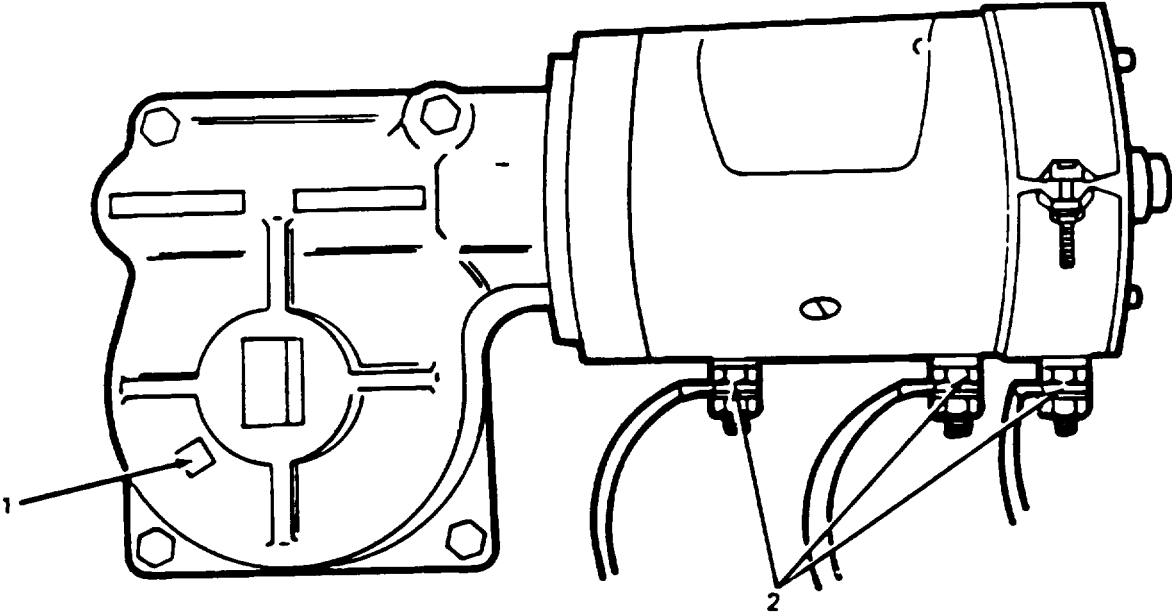
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. CHECKING OIL LEVEL.

- | LOCATION/ITEM | ACTION | REMARKS |
|------------------------|---|--|
| 1. Oil level plug (1). | a. Remove.
b. Check that oil is up to level of plug.
c. Screw in and tighten. | Add oil through plug opening if necessary. |

B. CHECKING WIRE CONNECTIONS.

- | | | |
|------------------------------|--|--|
| 2. Three stud terminals (2). | Check for:
a. Corroded wires.
b. Loose connections.
c. Bare or worn insulation. | Clean if necessary.
Tighten securely. Replace cable if necessary. |
|------------------------------|--|--|



LEGEND:

- 1. OIL LEVEL PLUG
- 2. STUD TERMINAL (3)

TA 076441

ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Installation. (20)
 - c. Operational Check. (5)
- 40 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

EQUIPMENT
CONDITION
PARAGRAPH

12-8A.

CONDITION DESCRIPTION

Cable Removed.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES

Table 12-1.

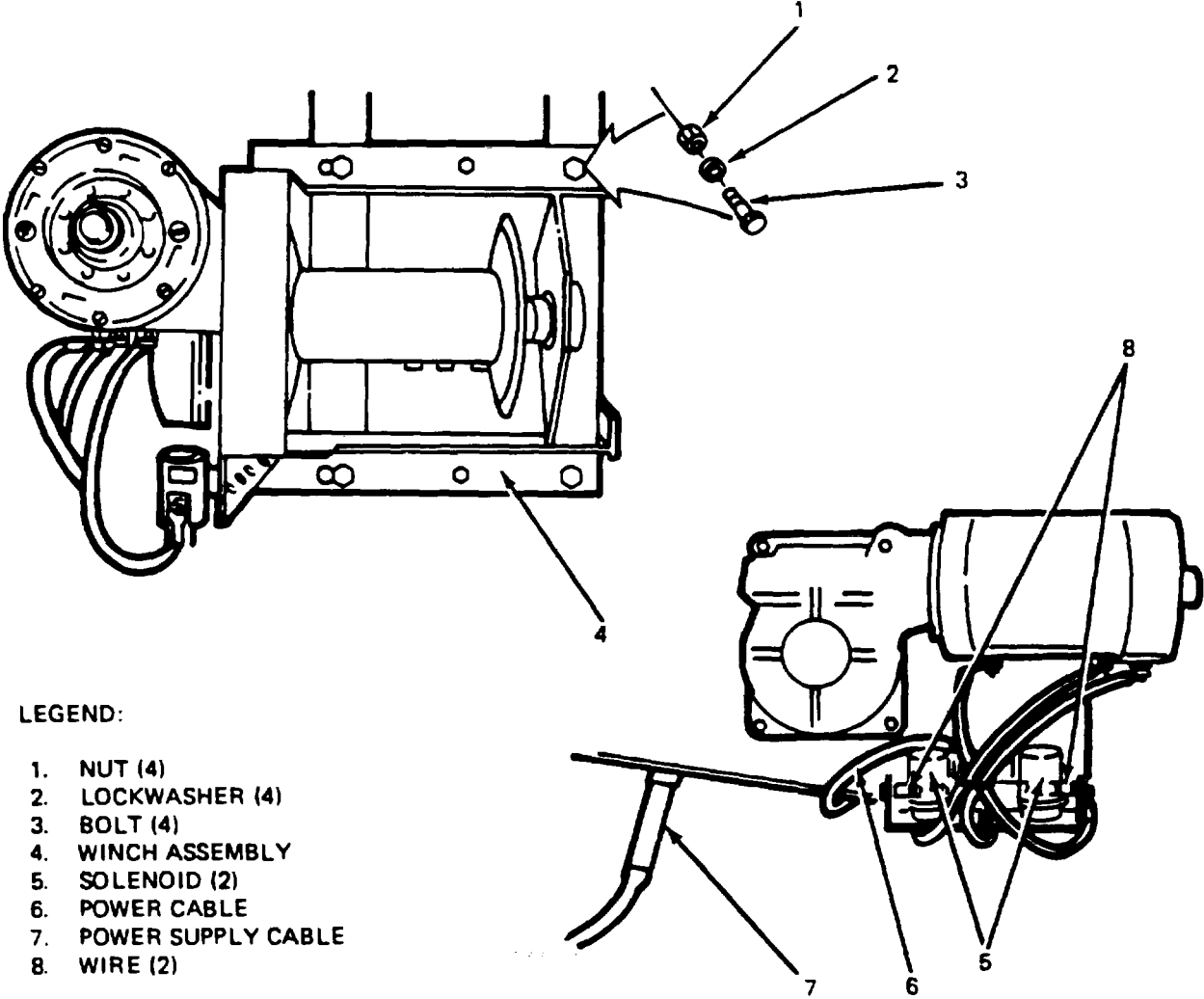
ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|----------------------------|--------------------------------|--------------------|
| 1. Power supply cable (7). | Disconnect. | Pull off terminal. |
| 2. Two wires (8S. | Disconnect from solenoids (5). | Tag for location. |



- LEGEND:
- 1. NUT (4)
 - 2. LOCKWASHER (4)
 - 3. BOLT (4)
 - 4. WINCH ASSEMBLY
 - 5. SOLENOID (2)
 - 6. POWER CABLE
 - 7. POWER SUPPLY CABLE
 - 8. WIRE (2)

TA 076443

ELECTRIC WINCH.

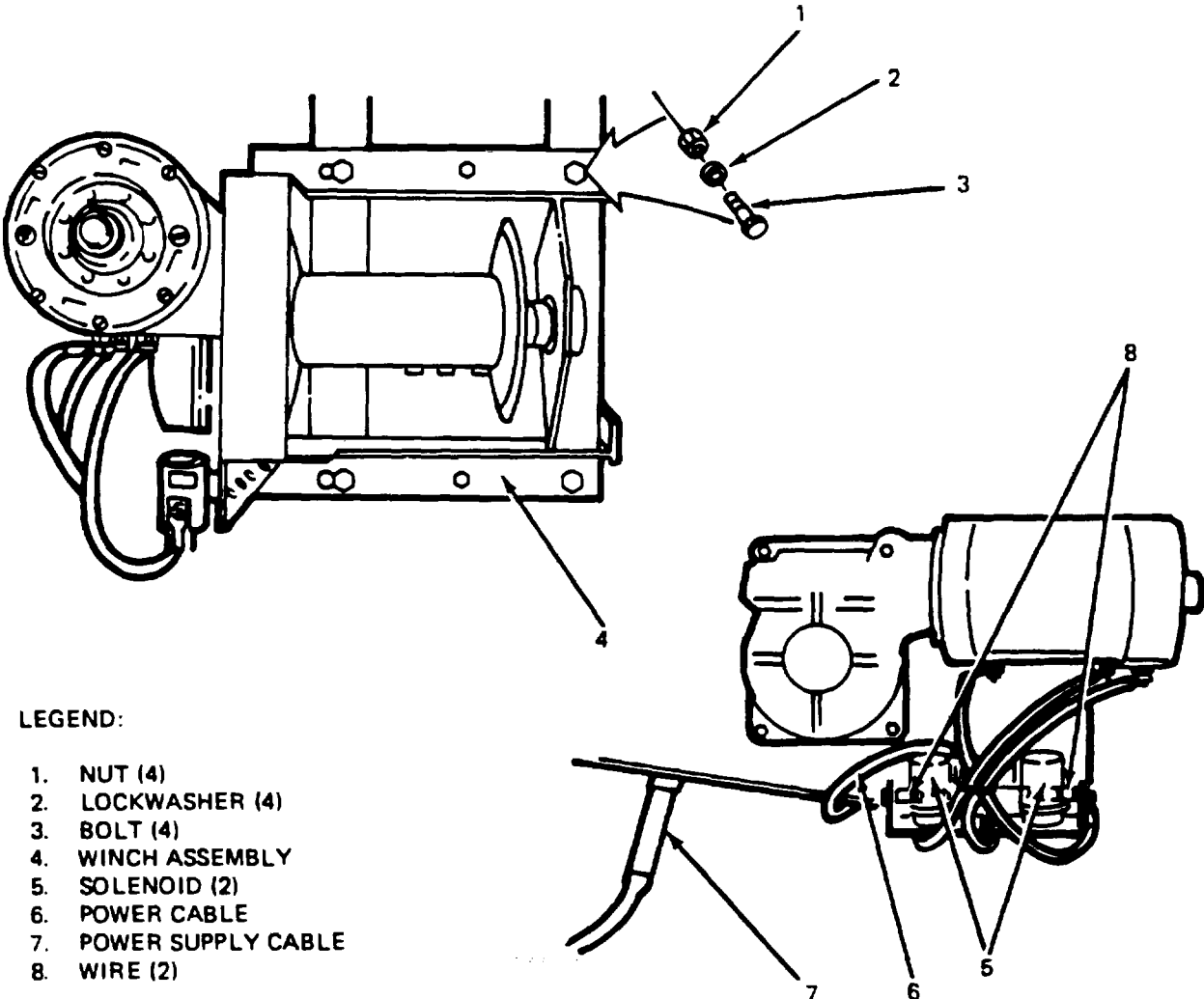
12-10. WINCH ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
3. Power cable (6).	Disconnect.	
4. Four nuts (1), lockwashers (2), and bolts (3).	Remove. Remove motor, gear box, and reel as a unit.	
B. INSTALLATION.		
5. Winch assembly (4).	Position to concrete mobile body.	
6. Four nuts (1), lockwashers (2), and bolts (3).	Install and tighten.	
7. Power cable (6).	Connect.	
8. Two wires (8).	Connect.	
9. Power supply (7).	Connect.	
C. OPERATIONAL CHECK.		
10. Winch.	Check operation by raising and lowering trough.	

ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



- LEGEND:
- 1. NUT (4)
 - 2. LOCKWASHER (4)
 - 3. BOLT (4)
 - 4. WINCH ASSEMBLY
 - 5. SOLENOID (2)
 - 6. POWER CABLE
 - 7. POWER SUPPLY CABLE
 - 8. WIRE (2)

TA 076443

ELECTRIC WINCH.

12-11. MOTOR AND GEAR BOX ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Installation. (15)
- 30 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

12-10A.

Winch Assembly Removed.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Masking Tape.
Marking Pen.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-10.
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
Table 12-1.

ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE (Continued).

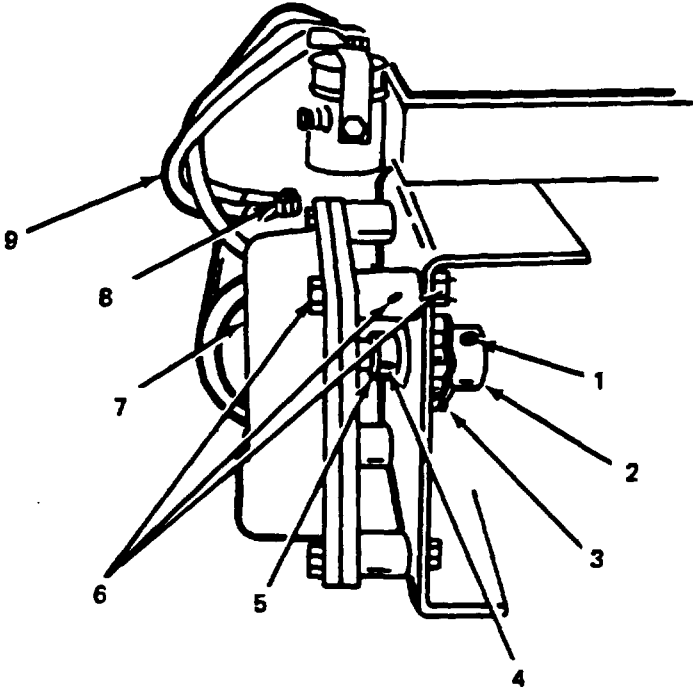
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|--|---|--|
| 1. Setscrew (1). | Loosen. | |
| 2. Three nuts and lock-washers (8). | Remove. | |
| 3. Three power cables (9). | Remove from motor terminals. | Tag for location for ease of installation. |
| 4. Four bolts, washers, spacers, and nuts (6). | Remove. | |
| 5. Motor and gear box assembly (7). | Simultaneously separate motor and gear box assembly (7) and sprocket (2). | |

LEGEND:

- 1. SETSCREW
- 2. SPROCKET
- 3. CHAIN
- 4. SETSCREW
- 5. BUSHING
- 6. BOLT, WASHER, SPACER & NUT (4)
- 7. MOTOR & GEARBOX ASSEMBLY
- 8. NUT & LOCKWASHER (3)
- 9. POWER CABLE (3)



TA 078444

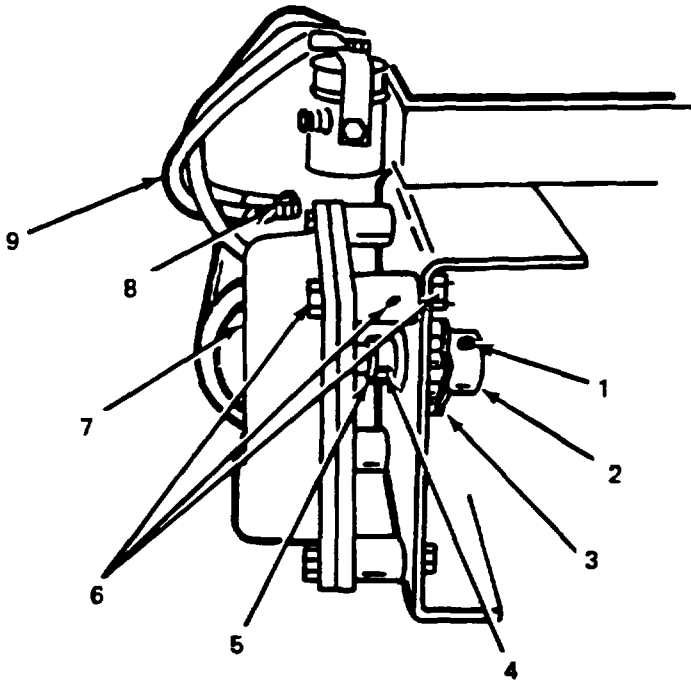
ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
6. Woodruff key.	Remove from gear box shaft.	
7. Motor and gear box assembly (7).	Remove from mounting frame.	
8. Setscrew (4).	Loosen.	
9. Bushing (5).	Remove.	
B. INSTALLATION.		
10. Bushing (5).	Install on gear box shaft.	Do not tighten setscrew.
11. Motor and gear box assembly (7).	Install in frame.	
12. Woodruff key.	Install in gear box shaft.	
13. Motor and gear box assembly (7).	Simultaneously slide sprocket (2) and chain (3) onto gear box shaft.	
14. Four bolts, washers, spacers, and nuts (6).	Install and tighten securely.	
15. Bushing (5).	Slide bushing against frame bearing and tighten setscrew (4).	
16. Setscrew (1).	Tighten.	
17. Three power cables (9).	Install on motor terminals.	
18. Three nuts and lock-washers (8).	Install and tighten securely.	

ELECTRIC WINCH.

12-10. WINCH ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------



LEGEND:

- 1. SETSCREW
- 2. SPROCKET
- 3. CHAIN
- 4. SETSCREW
- 5. BUSHING
- 6. BOLT, WASHER, SPACER & NUT (4)
- 7. MOTOR & GEARBOX ASSEMBLY
- 8. NUT & LOCKWASHER (3)
- 9. POWER CABLE

TA 076445

CHAPTER 13

LAMPS AND WIRING

13.1. OVERVIEW.

This chapter provides you with the following information related to lamps maintenance:

- a. All required special tools and equipment.
- b. Troubleshooting procedures.
- c. Maintenance procedure. The maintenance procedures in this chapter apply to the bulb replacement and assembly replacement of the mixer body clearance and marker lamps. For the maintenance procedures of the tail lamps and blackout lamps, refer to TM 92320273-20.

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

13-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

13-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

No special tools, TMDE, or support equipment are required for lamps maintenance.

13-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools list covering Organizational Maintenance for this equipment (TM 53895-372-20P).

Section II TROUBLESHOOTING

13-5. INTRODUCTION.

No special troubleshooting procedures are required for the lighting system of the mixer body. If the lamps malfunction, use the general procedures below.

13-6. GENERAL PROCEDURES.

a. If all of the mixer body lamps fail to function, the problem may be in the chassis electrical system. Check whether the chassis marker and clearance lamps are functioning. If they are not, refer to TM 9-2320-273-20 for troubleshooting procedures. If they are, check that the mixer body lamps are securely plugged in.

b. All other malfunctions in the mixer body lighting system may be traced to one of the following causes:

- (1) Burnt-out bulbs.
- (2) Loose connections.
- (3) Frayed, broken, or corroded wires.

Replace bulbs, tighten connections, and repair wiring, as necessary.

Section III MAINTENANCE PROCEDURES

13-7. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for the lamps and wiring system of the mixer body. Paragraph 13-8 summarizes the maintenance tasks. Paragraphs 13-9 thru 13 11 contain detailed instructions for each task.

ELECTRIC WINCH.

13-8. LAMPS AND WIRING MAINTENANCE TASK SUMMARY.

<p><u>INITIAL SETUP</u></p> <p><u>APPLICABLE CONFIGURATIONS</u> M919.</p> <p><u>TEST EQUIPMENT</u> None.</p> <p><u>SPECIAL TOOLS</u> None.</p> <p><u>MATERIALS/PARTS (P/N)</u> Cable Ties, PLT4H-MD (06383).</p>	<p><u>EQUIPMENT CONDITION PARAGRAPH</u> None.</p>	<p><u>CONDITION DESCRIPTION</u> None.</p>
<p><u>PERSONNEL REQUIRED</u> Two (MOS-62B20).</p>	<p><u>SPECIAL ENVIRONMENTAL CONDITIONS</u> Vehicle Parked on Level Ground.</p>	
<p><u>REFERENCES (TM)</u> TM 5-3895-372-20P. TM 5-3895-372-10. TM 9-2320-273-10.</p>	<p><u>GENERAL SAFETY INSTRUCTIONS</u> Engine Off. Transmission in Neutral. Parking Brake Set.</p>	
<p><u>TROUBLESHOOTING REEERENCES</u> None.</p>		

LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Clearance and Marker Lamp Bulb Replacement:	13-9	
	A. Removal.	13-9A	
	B. Installation.	13-9B	
	C. Operational Check.	13-9C	

ELECTRIC WINCH.

13-8. LAMPS AND WIRING MAINTENANCE TASK SUMMARY.			
LIST OF TASKS			
TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
2.	Clearance and Marker Lamp Assembly Maintenance:	13-10	
	A. Removal.	13-10A	
	B. Installation.	13-10B	
	C. Operational Check.	13-10C	
3.	Wire and Cable Maintenance:	13-11	
	A. Removal and Installation.	13-11A	
	B. Operational Check.	13-11B	

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LAMPS AND WIRING.

13-9. CLEARANCE AND MARKER LAMP BULB REPLACEMENT.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (5)
 - b. Installation. (5)
 - c. Operational Check. (5)
- 15 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

EQUIPMENT
CONDITION
PARAGRAPH

None.

CONDITION DESCRIPTION

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES

None.

LAMPS AND WIRING.

13-9. CLEARANCE AND MARKER LAMP BULB REPLACEMENT (Continued).

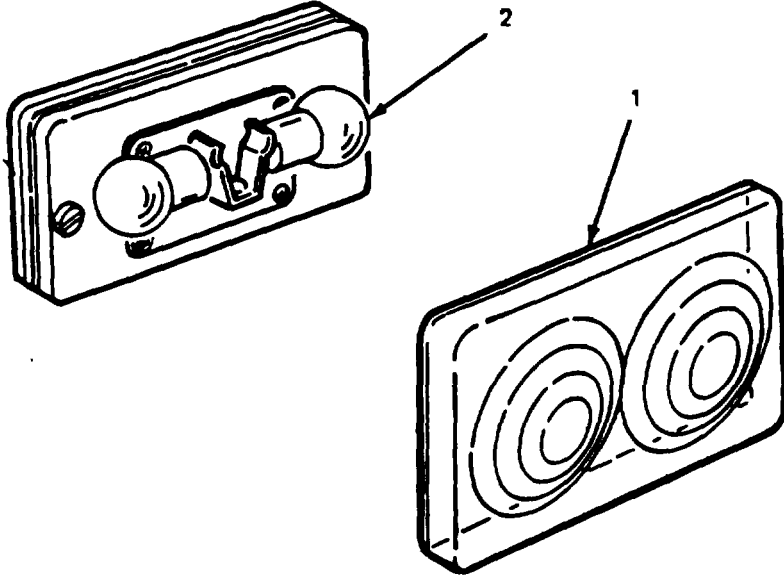
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

NOTE

Prior to removal of bulbs, make certain that lamp switch is OFF.

- | | | |
|-------------------|---------|-------------------------------|
| 1. Lens(1). | Remove. | Lens snaps off. |
| 2. Two bulbs (2). | Remove. | Push in and twist to the left |



LEGEND:

- 1. LENS
- 2. BULB (2)

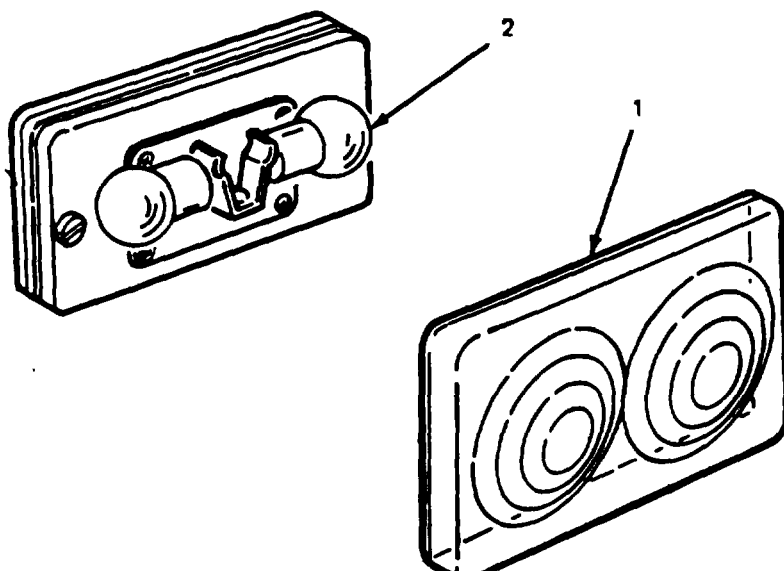
TA 076446

LAMPS AND WIRING.

13-9. CLEARANCE AND MARKER LAMP BULB REPLACEMENT (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
NOTE		
Prior to installation, remove rust and corrosion from bulb socket with emery paper.		
3. Two bulbs (2).	Push in and twist to the right.	
4. Lens (1).	Snap on.	
C. OPERATIONAL CHECK.		
5. Lamp.	Pull main lamp switch to the ON position and check operation.	
NOTE		
If bulb fails to light, check contact in bulb socket for rust or corrosion. If not repairable, replace lamp assembly. (See para 13-10.)		

LAMPS AND WIRING.

13-9. CLEARANCE AND MARKER LAMP BULB REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND: 1. LENS 2. BULB (2)</p>		TA 076446

LAMPS AND WIRING.

13-10. CLEARANCE AND MARKER LAMP ASSEMBLY MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Installation. (10)
 - c. Operational Check. (5)
- 25 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Butt Connector, 230379 (23705).

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

PERSONNEL REQUIRED
One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
TM 5-3895-372-20P.
TM 9-2320-273-10.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
None.

LAMPS AND WIRING.

13-10. CLEARANCE AND MARKER LAMP ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

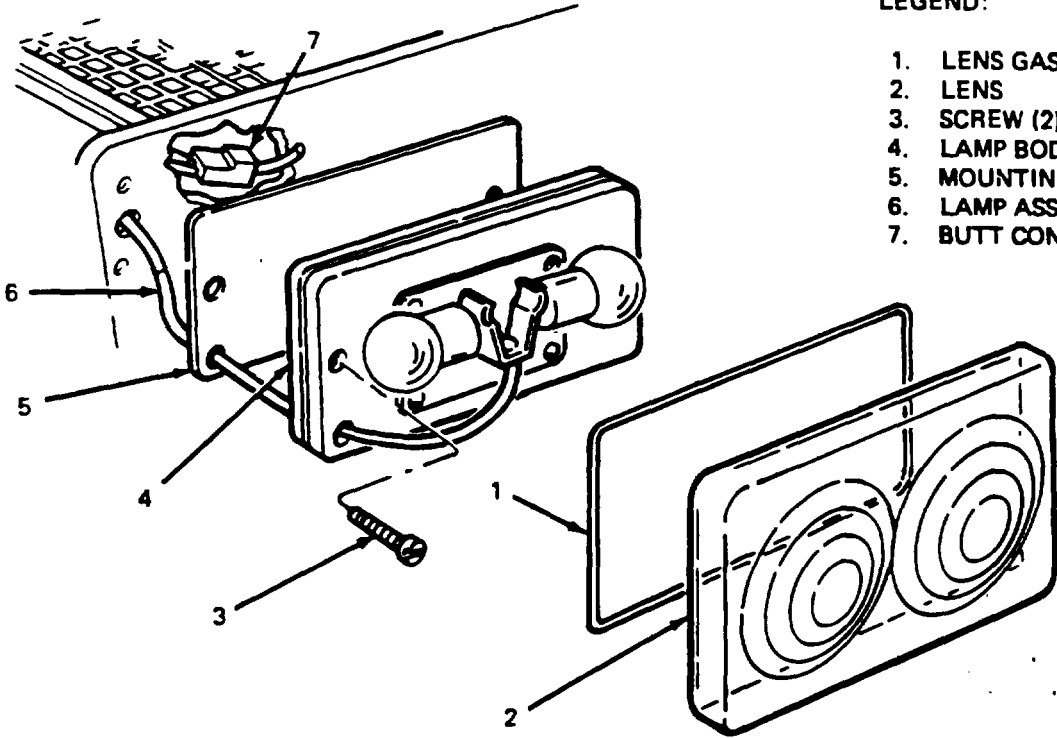
NOTE

Before beginning service, be sure that main lamp switch is in the OFF position.

- | | | |
|----------------------|--|-----------------|
| 1. Lens (2). | Remove. | Lens snaps off. |
| 2. Lens gasket (1). | Remove from lamp body (4). | |
| 3. Two screws (3). | Remove. | |
| 4. Lamp body (4). | Pull out. | |
| 5. Wire (6). | Cut closely at rear of body (4) and remove. Tuck remainder of wire into bin. | |
| 6. Mounting pad (5). | Remove. | |

LEGEND:

- 1. LENS GASKET
- 2. LENS
- 3. SCREW (2)
- 4. LAMP BODY
- 5. MOUNTING PAD
- 6. LAMP ASSEMBLY WIRE
- 7. BUTT CONNECTOR



TA 078448

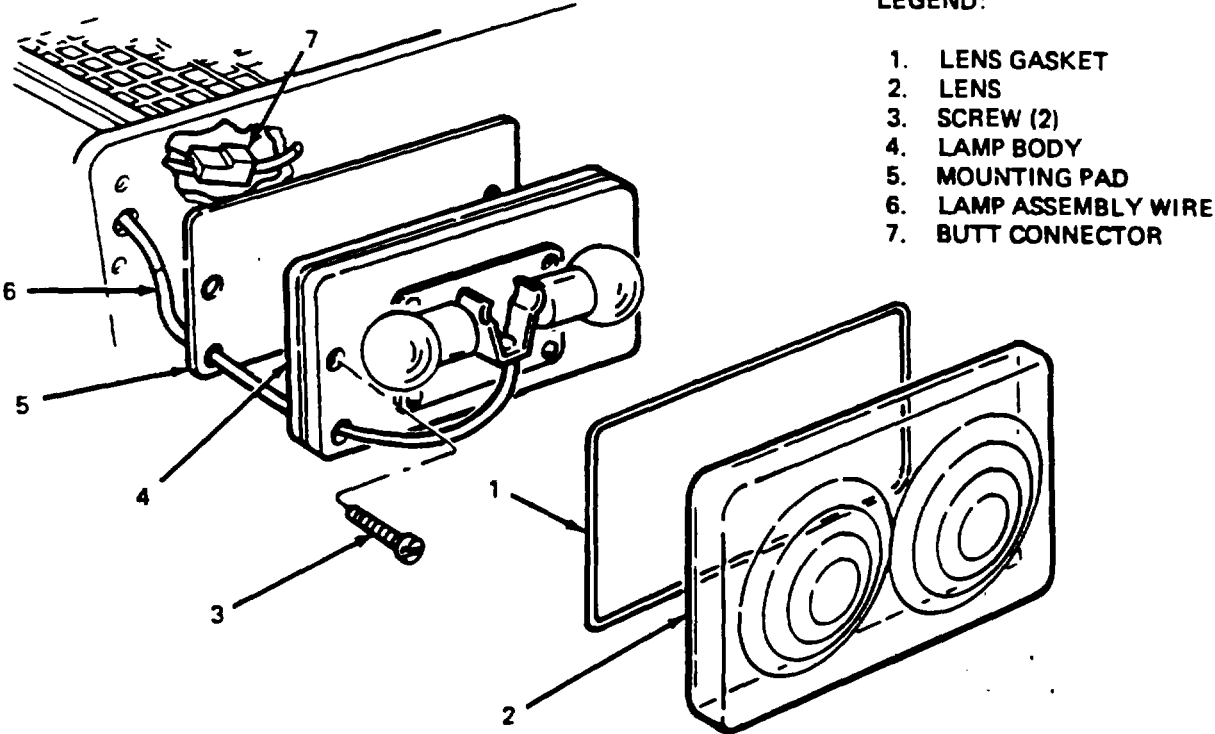
LAMPS AND WIRING.

13-10. CLEARANCE AND MARKER LAMP ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
7. Mounting pad (5).	Run lamp assembly wire (6) through mounting pad (5) into bins.	
8. Lamp body (4).	Mount with two screws (3).	
9. Lamp assembly wire (6).	Enter bin and splice existing wire and new lamp assembly wire (6) with new butt connector (7). Use a suitable pair of pliers.	
10. Lens gasket (1)	Install on lamp body (4).	
11. Lens (2).	Install.	Snap on.
C. OPERATIONAL CHECK.		
12. Lamp switch.	Pull to ON position. Check amp operation. Push to OFF position.	

LAMPS AND WIRING.

13-10. CLEARANCE AND MARKER LAMP ASSEMBLY MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1. LENS GASKET2. LENS3. SCREW (2)4. LAMP BODY5. MOUNTING PAD6. LAMP ASSEMBLY WIRE7. BUTT CONNECTOR		

TA 076448

LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal and Installation. (AR)
 - b. Operational Check. (AR)
- AR Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS
M919.

EQUIPMENT
CONDITION
PARAGRAPH
None.

CONDITION DESCRIPTION
None.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Marking Pen.
Masking Tape.

PERSONNEL REQUIRED
Two (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle Parked on Level Ground.

REFERENCES (TM)
None.

GENERAL SAFETY INSTRUCTIONS
Engine Off.
Transmission in Neutral.
Parking Brake Set.

TROUBLESHOOTING REEERENCES
None.

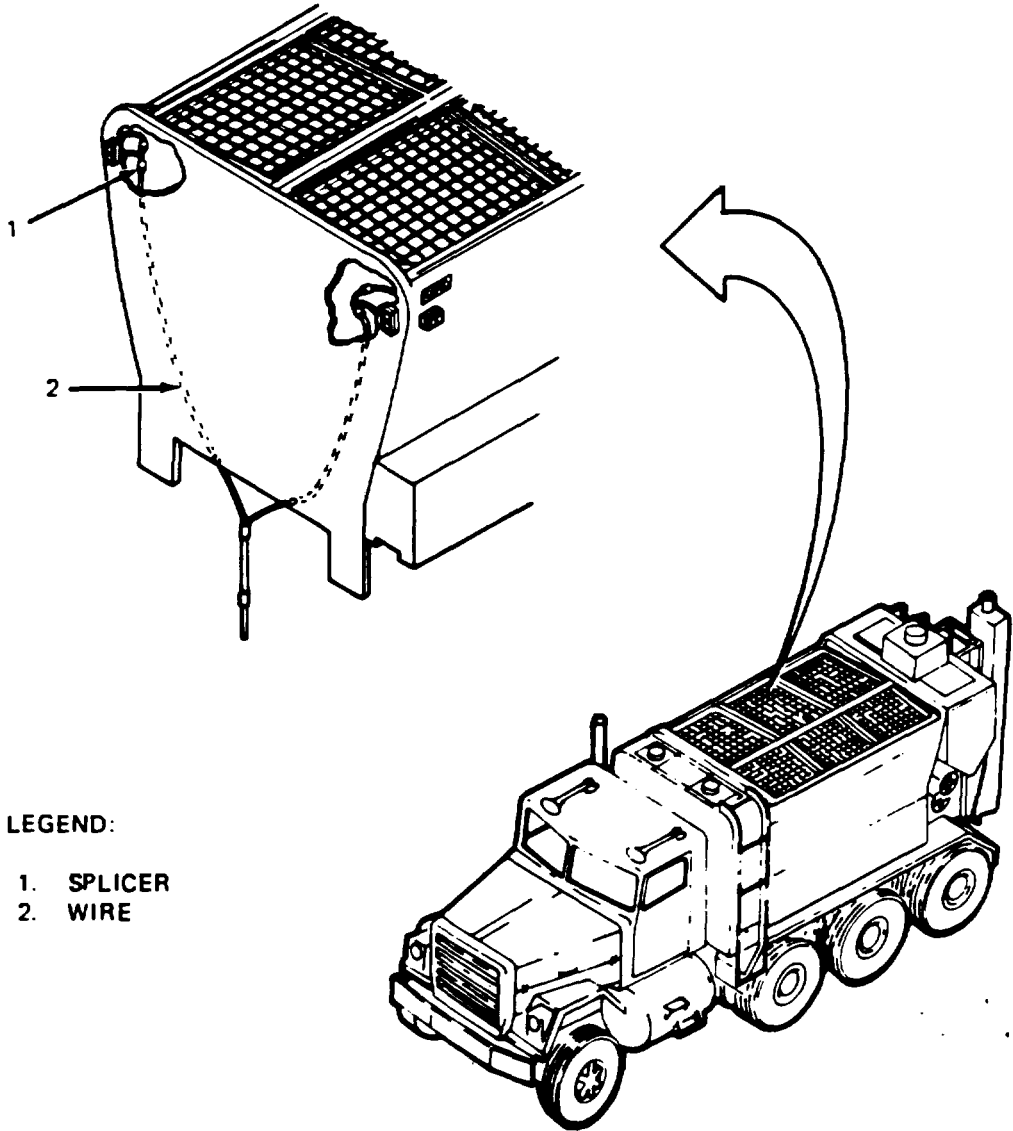
LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS

A. REMOVAL INSTALLATION.

NOTE

Before beginning service make sure the main lamp switch is in the OFF position. Check wiring for damage and replace as necessary using standard shop practices. Tag wires as they are removed to aid installation.

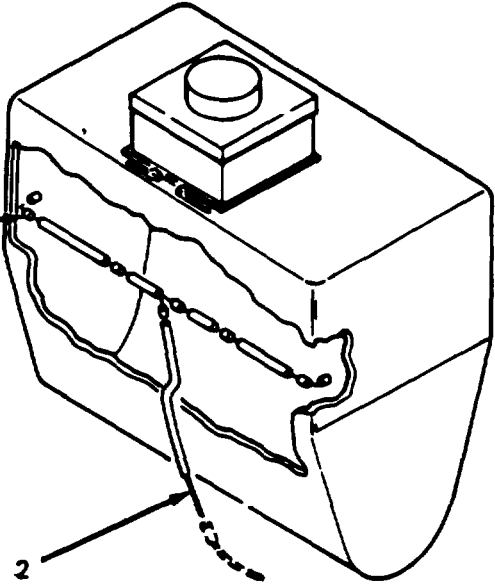
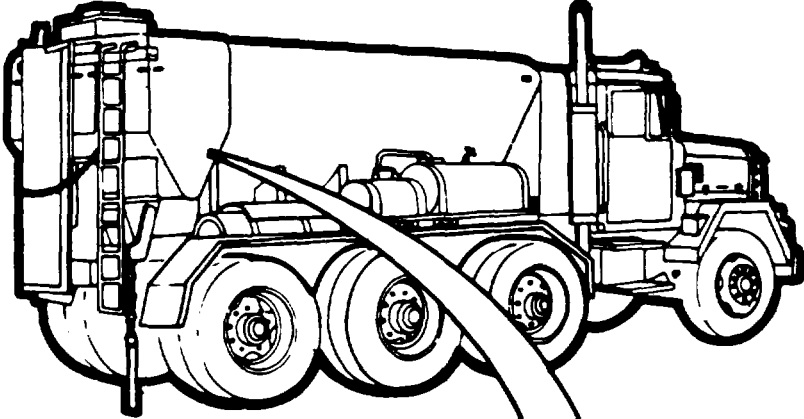


TA 076450

LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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LEGEND:

- 1. SPLICER (8)
- 2. WIRE (2)

TA 078451

LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).

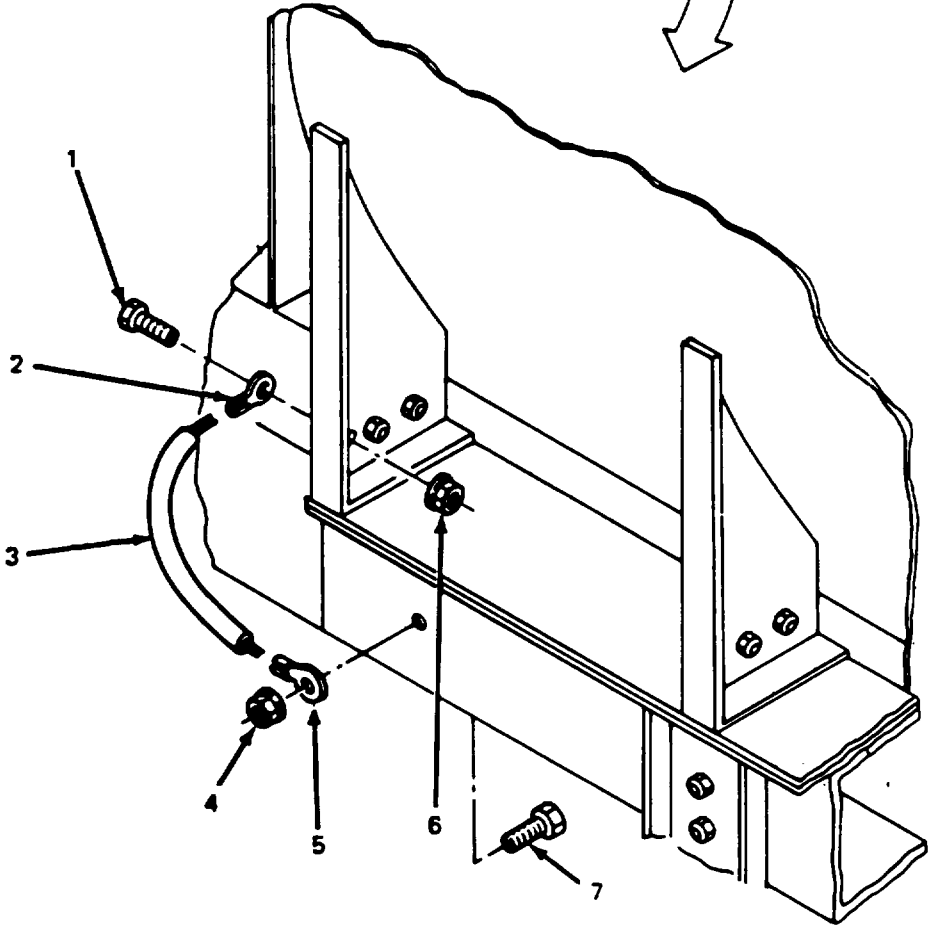
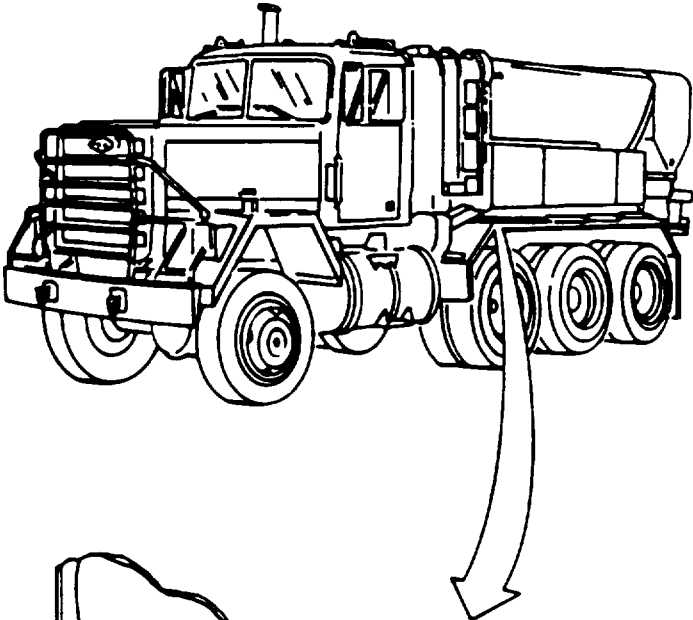
LOCATION/ITEM

ACTION

REMARKS

LEGEND:

- 1. BOLT
- 2. TERMINAL
- 3. CABLE
- 4. NUT
- 5. TERMINAL
- 6. NUT
- 7. BOLT



TA 078452

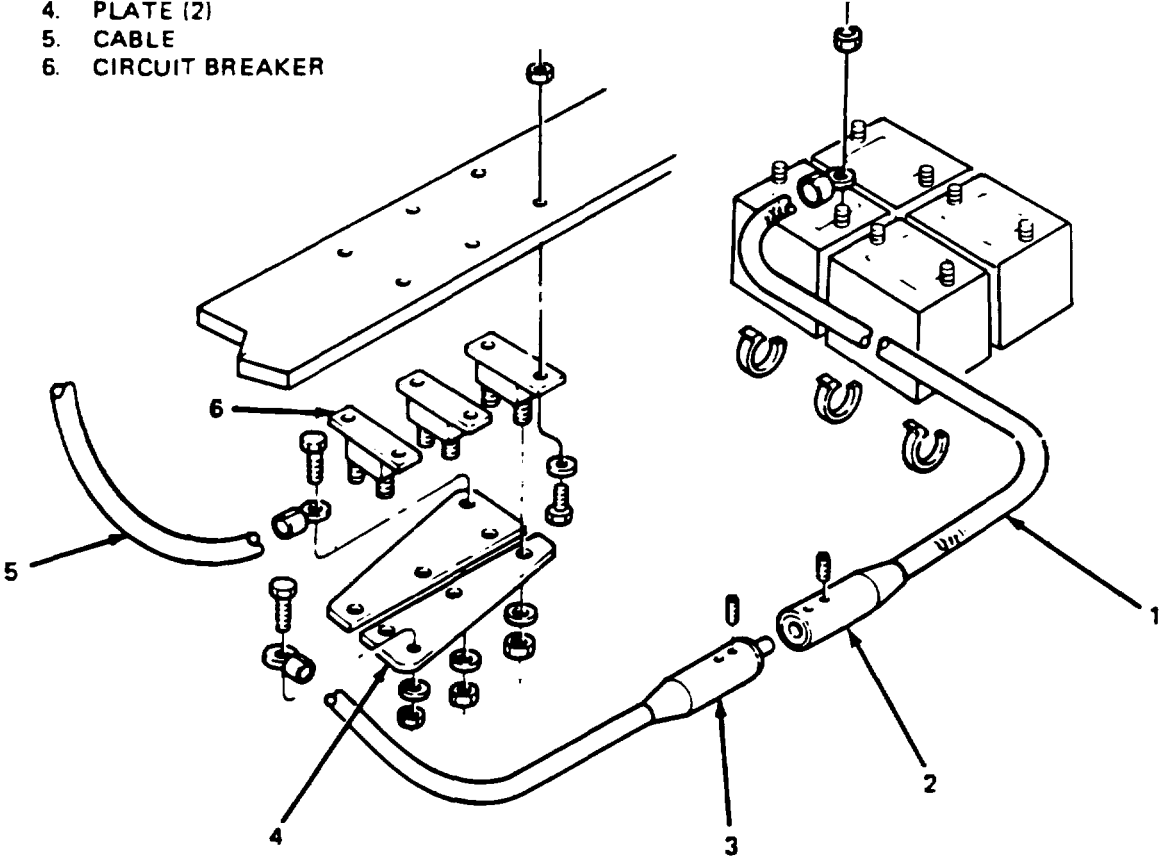
LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

LEGEND:

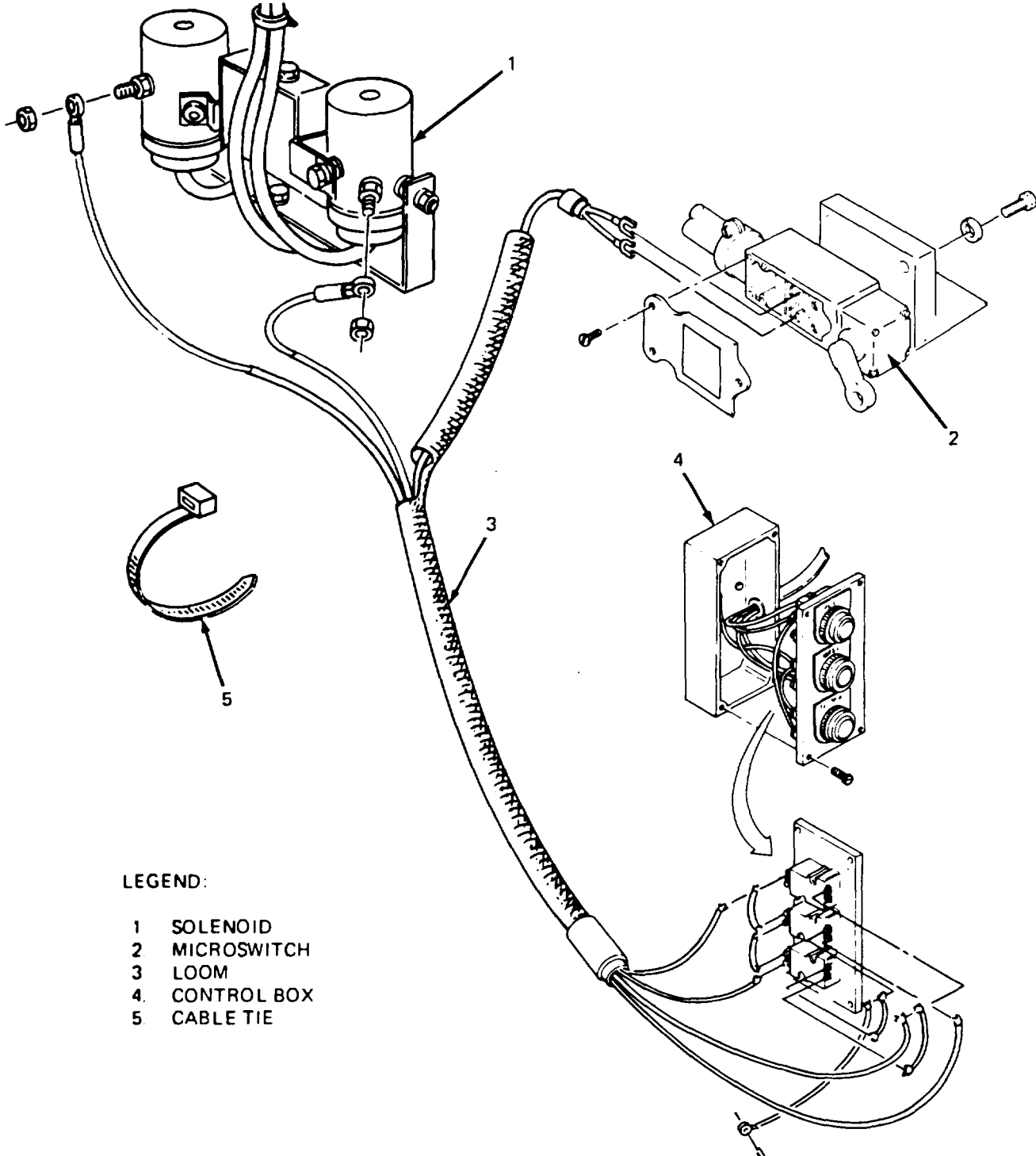
- 1. CABLE
- 2. FEMALE CONNECTOR
- 3. MALE CONNECTOR
- 4. PLATE (2)
- 5. CABLE
- 6. CIRCUIT BREAKER



TA 076453

LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
 <p>LEGEND:</p> <ul style="list-style-type: none">1 SOLENOID2 MICROSCHWITCH3 LOOM4 CONTROL BOX5 CABLE TIE <p>TA-076454</p>		

LAMPS AND WIRING.

13-11. WIRE AND CABLE MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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B. OPERATIONAL CHECK.

Main lamp switch	Turn to ON position. Check lamps for operation. Turn OFF lamp switch.	
------------------	---	--

NOTE

If lamps fail to light, do the following steps:

- a. Replace bulb with new or known good bulb.
- b. Check wire connections. Repair if necessary.
- c. Check lamp assemblies for corrosion or rust. Repair or replace as necessary. Refer to para 13-9 and 13-10.
- d. Check for power at lamp assembly.
- e. Use a voltmeter or 12-volt test lamp and check for power where body wire splices into chassis harness.

CHAPTER 14

MISCELLANEOUS BODY COMPONENTS

14-1. OVERVIEW.

This chapter provides you with the following information related to miscellaneous body components maintenance:

- a. All required special tools and equipment.
 - b. Troubleshooting procedures.
 - c. Maintenance procedures.
-

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

14-2. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

14-3. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

No special tools, TMDE, or support equipment are required for miscellaneous body components maintenance procedures described in this chapter.

14-4. SPARES AND REPAIR PARTS.

Spares and repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Organizational Maintenance for this equipment (TM 53895-372-20P).

Section II TROUBLESHOOTING

14-5. INTRODUCTION.

No specific troubleshooting procedures for the miscellaneous body components covered in this chapter are required. Use the maintenance procedures contained in this chapter when damage, requiring replacement, is apparent.

Section III MAINTENANCE PROCEDURES

14-6. INTRODUCTION.

This section provides you with Organizational Level maintenance procedures for miscellaneous body components of the mixer body. Paragraph 14-7 summarizes the maintenance tasks. Paragraphs 14-8 thru 14-11 contain detailed instructions for each task.

14-7. MISCELLANEOUS BODY COMPONENTS MAINTENANCE TASK SUMMARY.

<u>INITIAL SETUP</u>		<u>EQUIPMENT CONDITION PARAGRAPH</u>		<u>CONDITION DESCRIPTION</u>	
<u>APPLICABLE CONFIGURATIONS</u>					
M919.		6-15 and 6-16A. TM 3895-372-10 TM 53895372-10		Liquid Admix Tanks Removed. Extension Chutes Removed. Auxiliary Cement Bin Removed.	
<u>TEST EQUIPMENT</u>					
None.					
<u>SPECIAL TOOLS</u>					
None.					
<u>MATERIALS/PARTS (P/N)</u>					
None.					
<u>PERSONNEL REQUIRED</u>			<u>SPECIAL ENVIRONMENTAL CONDITIONS</u>		
One (MOS-2B20).			Vehicle Parked on Level Ground.		
<u>REFERENCES (TM)</u>			<u>GENERAL SAFETY INSTRUCTIONS</u>		
TM 53895372-10. TM 53895372-20P. TM 92320-273-10.			Engine OFF. Transmission in Neutral. Park Brake Set.		
<u>TROUBLESHOOTING REFERENCES</u>					
None.					

LIST OF TASKS

TASK NO.'	TASK	TASK REF	TROUBLESHOOTING REF (TABLE)
1.	Auxiliary Cement Bin Maintenance: A. Disassembly. B. Assembly. C. Adjustment.	14-8 14-8A 14-8B 14-8C	

14-7. MISCELLANEOUS BODY COMPONENTS MAINTENANCE TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF(TABLE)
2.	Tarpaulin Maintenance: A. Removal. B. Repair. C. Installation.	14-9 14-9A 14-9B 14-9C	
3.	Mud Flap and Rear Fender Maintenance: A. Removal. B. Installation.	14-10 14-10A 14-10B	
4.	Reflector Maintenance: A. Removal. B. Installation.	14-11 14-11A 14-11B	
14-3			

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Disassembly. (15)
 - b. Assembly. (15)
 - c. Adjustment. (5)
- 35 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

TM 5-38951372-10.

Auxiliary Cement Bin Removed.

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Auxiliary Cement Bin on Level Ground

REFERENCES (TM)

TM 53895.372-10.
TM 53895372-20P.
TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

None.

TROUBLESHOOTING REFERENCES

None.

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE (Continued).

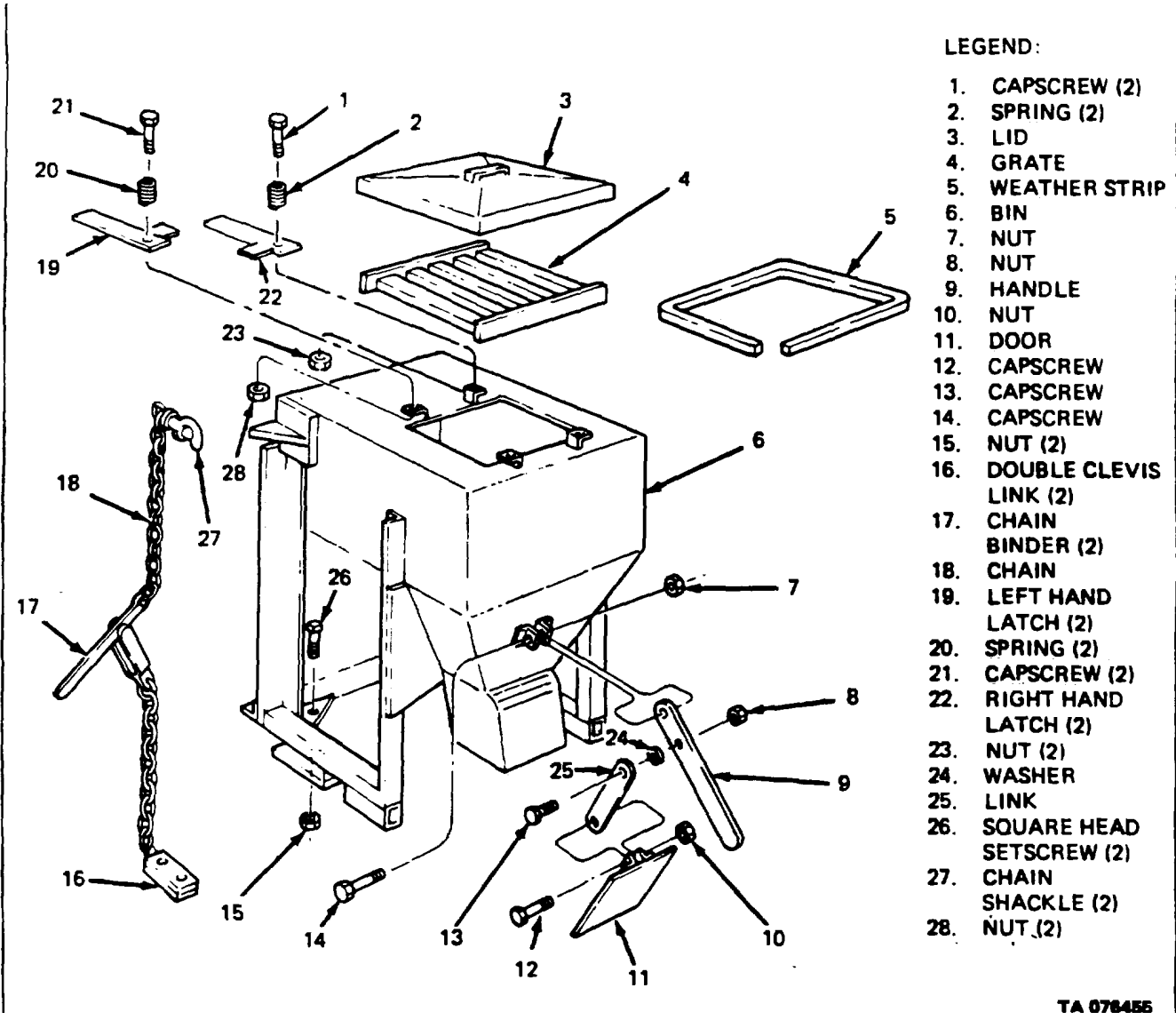
LOCATION/ITEM

ACTION

REMARKS

WARNING

Cement dust can be harmful. During removal and installation operations, or any time there is cement dust in the air, take precautions to avoid direct inhalation of the dust. If you must be in the immediate vicinity of dust, wear a dust mask; or if none is available, cover your nose and mouth with a cloth. CEMENT DUST CAN CAUSE SERIOUS LUNG PROBLEMS.



LEGEND:

- 1. CAPSCREW (2)
- 2. SPRING (2)
- 3. LID
- 4. GRATE
- 5. WEATHER STRIP
- 6. BIN
- 7. NUT
- 8. NUT
- 9. HANDLE
- 10. NUT
- 11. DOOR
- 12. CAPSCREW
- 13. CAPSCREW
- 14. CAPSCREW
- 15. NUT (2)
- 16. DOUBLE CLEVIS LINK (2)
- 17. CHAIN BINDER (2)
- 18. CHAIN
- 19. LEFT HAND LATCH (2)
- 20. SPRING (2)
- 21. CAPSCREW (2)
- 22. RIGHT HAND LATCH (2)
- 23. NUT (2)
- 24. WASHER
- 25. LINK
- 26. SQUARE HEAD SETSCREW (2)
- 27. CHAIN SHACKLE (2)
- 28. NUT (2)

TA 078455

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 10px auto;"> WARNING </div> <p>Prolonged contact with cement or wet concrete can cause skin irritation or burns. During loading operations with cement or while working with wet concrete, take every precaution to avoid contact with skin. Skin areas that have been exposed either directly or through saturated clothing should be washed thoroughly with water. If any cement or concrete material gets into the eye, flush immediately with water and get PROMPT MEDICAL ATTENTION.</p>		
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> A. DISASSEMBLY. </div>		
1. Four cap screws (1) and (21) and nuts (23) and (28).		Remove from bin (6).
2. Four springs (2) and (20), two left hand latches (19) and two right hand latches (22).		Remove.
3. Lid (3) and grate (4).		Remove.
4. Weather strip (5).		Remove from lid (3).
5. Two square head screws (26) and nuts (15).		Remove.
6. Two chain shackles (27) and double clevis link (16).		Remove chain (18) from bin (6).
7. Two chain binders (17).		Remove from chain (18).
8. Cap screw (13), nut (8) and washer (24).		Remove from handle (9) and link (25).
9. Cap screw (14) and nut (7).		Remove from bin (6) and handle (9).
10. Cap screw (12) and nut (10).		Remove from link (25) and door (11).
11. Door (11).		Remove from bin (6).

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
1. CAPSCREW (2)		
2. SPRING (2)		
3. LID		
4. GRATE		
5. WEATHER STRIP		
6. BIN		
7. NUT		
8. NUT		
9. HANDLE		
10. NUT		
11. DOOR		
12. CAPSCREW		
13. CAPSCREW		
14. CAPSCREW		
15. NUT (2)		
16. DOUBLE CLEVIS LINK (2)		
17. CHAIN BINDER (2)		
18. CHAIN		
19. LEFT HAND LATCH (2)		
20. SPRING (2)		
21. CAPSCREW (2)		
22. RIGHT HAND LATCH (2)		
23. NUT (2)		
24. WASHER		
25. LINK		
26. SQUARE HEAD SETSCREW (2)		
27. CHAIN SHACKLE (2)		
28. NUT (2)		

TA 078456

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
B. ASSEMBLY.		
12. Door (11).	Install in bin (6).	
13. Cap screw (12) and nut (10).	Install to link (25) and door (11).	Do not overtighten or binding will exist
14. Cap screw (14) and nut (7).	Install to bin (6) and handle (9).	Do not overtighten or binding will exist.
15. Cap screw (13), nut (8) and washer (24).	Install to handle (9) and link (25).	Tighten until binding exists and then back off 1/4 turn.
16. Two chain binders (17).	Install to chain (18).	
17. Two chain shackles (27) and double clevis link (16).	Install chain (18) to bin (6).	
18. Two square head screws (26) and nuts (15).	Install.	
19. Weather strip (5).	Install to lid (3).	
20. Lid (3) and grate (4).	Install.	
21. Four springs (2) and (20), two left hand latches (19), two right hand latches (22), four cap screws (1) and (21), and nuts (23) and (28).	Install to bin.	Do not tighten.
C. ADJUSTMENT.		
22. Two left hand latches (19) and two right hand latches (22).	Adjust cap screws (1) and (21) to give adequate tension on latches (19) and (22) when in a latched position over lid (3).	

MISCELLANEOUS BODY COMPONENTS.

14-8. AUXILIARY CEMENT BIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p>		
<p>1. CAPSCREW (2)</p>		
<p>2. SPRING (2)</p>		
<p>3. LID</p>		
<p>4. GRATE</p>		
<p>5. WEATHER STRIP</p>		
<p>6. BIN</p>		
<p>7. NUT</p>		
<p>8. NUT</p>		
<p>9. HANDLE</p>		
<p>10. NUT</p>		
<p>11. DOOR</p>		
<p>12. CAPSCREW</p>		
<p>13. CAPSCREW</p>		
<p>14. CAPSCREW</p>		
<p>15. NUT (2)</p>		
<p>16. DOUBLE CLEVIS</p>		
<p>LINK (2)</p>		
<p>17. CHAIN</p>		
<p>BINDER (2)</p>		
<p>18. CHAIN</p>		
<p>19. LEFT HAND</p>		
<p>LATCH (2)</p>		
<p>20. SPRING (2)</p>		
<p>21. CAPSCREW (2)</p>		
<p>22. RIGHT HAND</p>		
<p>LATCH (2)</p>		
<p>23. NUT (2)</p>		
<p>24. WASHER</p>		
<p>25. LINK</p>		
<p>26. SQUARE HEAD</p>		
<p>SETSCREW (2)</p>		
<p>27. CHAIN</p>		
<p>SHACKLE (2)</p>		
<p>28. NUT (2)</p>		

TA 078457

MISCELLANEOUS BODY COMPONENTS.

14-9. TARPAULIN MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (10)
 - b. Repair. (AR)
 - c. Installation. (10)
- 20 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

REFERENCES (TM)

- TM 53895372-10.
- TM 5-3895-372-20P.
- TM 9-2320-273-10.

TROUBLESHOOTING REFERENCES

None.

**EQUIPMENT
CONDITION
PARAGRAPH**

None.

CONDITION DESCRIPTION

None.

SPECIAL ENVIRONMENTAL CONDITIONS

vehicle Parked on Level Ground.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

MISCELLANEOUS BODY COMPONENTS.

14-9. TARPAULIN MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

A. REMOVAL.

- | | | |
|-------------------|---|--|
| 1. Rope (3). | Loosen and remove from twenty-five hooks (2). | |
| 2. Tarpaulin (1). | Remove and fold. | |

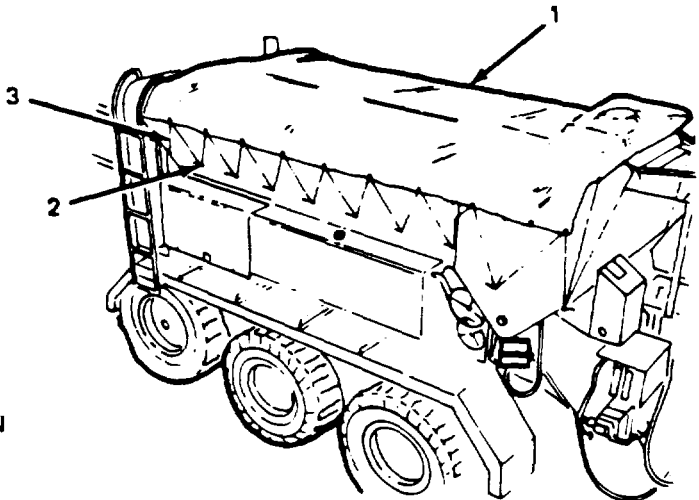
B. REPAIR.

NOTE

For sewing of tears or patches, refer to FM 10-16, General Repair of Tent, Canvas, and Webbing.

C. INSTALLATION.

- | | | |
|-------------------|---|--|
| 3. Tarpaulin (1). | Unfold and lay over bins. | |
| 4. Rope (3). | Place on twenty-five hooks (2); tighten and secure. | |



- LEGEND:**
- 1. TARPAULIN
 - 2. HOOK (25)
 - 3. ROPE

TA 076458

MISCELLANEOUS BODY COMPONENTS.

14-10. MUD FLAP AND REAR FENDER MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (30)
 - b. Installation. (30)
- 60 Minutes Total.

INITIAL SETUP

EQUIPMENT
CONDITION
PARAGRAPH

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS

M919.

6-13 and 614.
TM5-3895-372-10.

Liquid admix tanks removed.
Extension chutes removed.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

Two (MOSi2B20I.

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

REFERENCES (TM)

- TM 53895372-10.
- TM 53895372-20P.
- TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

- Engine Off.
- Transmission in Neutral.
- Parking Brake Set.

TROUBLESHOOTING REFERENCES

None.

MISCELLANEOUS BODY COMPONENTS.

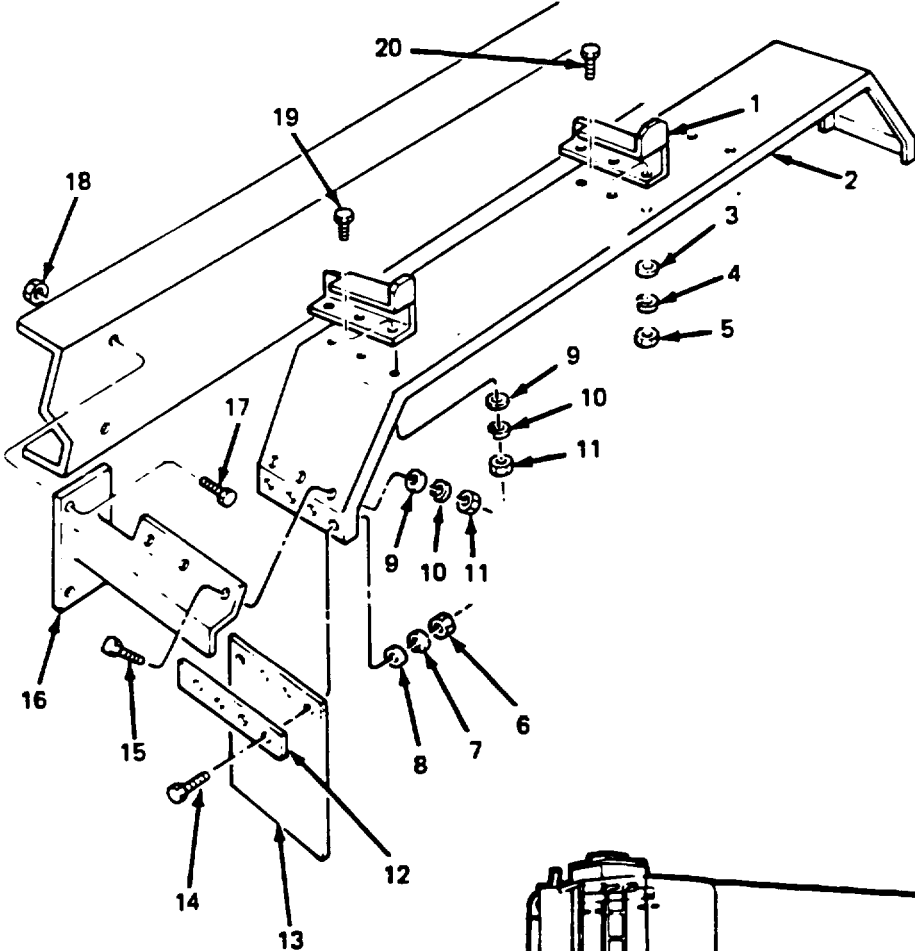
14-10. MUD FLAP AND REAR FENDER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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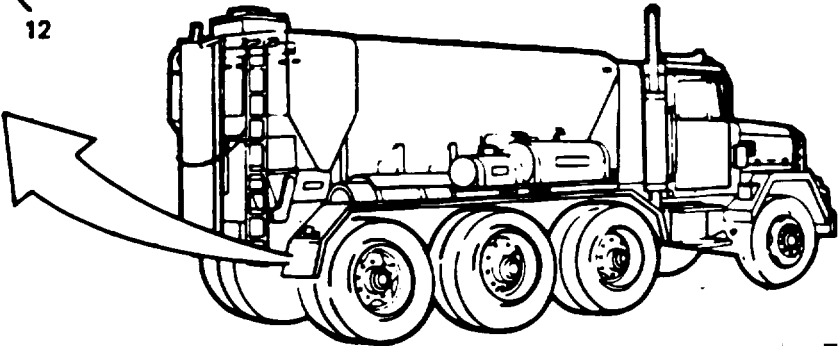
A. REMOVAL.

- 1. Three bolts (20), three Lock washers (3), three flat washers (4), and three nuts (5).

Loosen and remove bracket (1).



- LEGEND:**
- 1. BRACKET
 - 2. FENDER
 - 3. LOCKWASHER (3)
 - 4. FLAT WASHER (3)
 - 5. NUT (3)
 - 6. NUT (8)
 - 7. FLAT WASHER (8)
 - 8. LOCKWASHER (8)
 - 9. LOCKWASHER (42)
 - 10. FLAT WASHER (42)
 - 11. NUT (42)
 - 12. RETAINER (2)
 - 13. MUD FLAP (2)
 - 14. BOLT (8)
 - 15. BOLT (42)
 - 16. BRACKET (4)
 - 17. BOLT (8)
 - 18. NUT (8)
 - 19. BOLT (42)
 - 20. BOLT (3)



TA 078459

MISCELLANEOUS BODY COMPONENTS.

14-10. MUD FLAP AND REAR FENDER MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL (Continued).		
2. Eight bolts (14), eight lock washers (9), eight flat washers (10), and eight nuts (11).	Loosen and remove two mud flaps (13) and two retainers (12).	
NOTE		
Support fenders before performing step 3.		
3. Forty-two bolts (19), forty-two lock washers (9), forty-two flat washers (10), and forty-two nuts (11).	Loosen and remove two fenders (2).	
4. Eight bolts (17) and eight nuts (18).	Loosen and remove four brackets (16).	
B. INSTALLATION.		
5. Four brackets (16), bolts (17) and nuts (18).	Align holes and secure with eight	
NOTE		
Support fender while performing step 6.		
6. Two fenders (2).	Align with holes and secure with forty-two bolts (19), lock washers (9), flat washers (10) and nuts (11).	
7. Two retainers (12) and two mud flaps (13).	Align retainers (12) with fender holes. Align mud flaps (13) to retainers (12) and secure with eight bolts (14), lock washers (8), flat washers (7) and nuts (6).	
8. Bracket (1).	Align bracket (1) with holes in the right fender (2). Secure with three bolts (20), lock washers (3), flat washers (4), and nuts (5).	

MISCELLANEOUS BODY COMPONENTS.

14-10. MUD FLAP AND REAR FENDER MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
<p>LEGEND:</p> <ul style="list-style-type: none"> 1. BRACKET 2. FENDER 3. LOCKWASHER (3) 4. FLAT WASHER (3) 5. NUT (3) 6. NUT (8) 7. FLAT WASHER (8) 8. LOCKWASHER (8) 9. LOCKWASHER (42) 10. FLAT WASHER (42) 11. NUT (42) 12. RETAINER (2) 13. MUD FLAP (2) 14. BOLT (8) 15. BOLT (42) 16. BRACKET (4) 17. BOLT (8) 18. NUT (8) 19. BOLT (42) 20. BOLT (3) 		

TA 076450

MISCELLANEOUS BODY COMPONENTS.

14-11. REFLECTOR- MAINTENANCE.

THIS TASK COVERS: (APPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (15)
 - b. Installation. (15)
- 30 Minutes Total.

INITIAL SETUP

APPLICABLE CONFIGURATIONS

M919.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (P/N)

None.

PERSONNEL REQUIRED

One (MOS-62B20}).

REFERENCES (TM)

TM 5-389372-10.
TM 53895372-20P.
TM 92320273-10.

TROUBLESHOOTING REFERENCES

None.

EQUIPMENT
CONDITION
PARAGRAPH

None.

CONDITION DESCRIPTION

None.

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on Level Ground.

GENERAL SAFETY INSTRUCTIONS

Engine Off.
Transmission in Neutral.
Parking Brake Set.

MISCELLANEOUS BODY COMPONENTS.

14-11. REFLECTOR MAINTENANCE (Continued).		
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL.		
1. Four screws (6), and washers (4), and nuts (3)	Loosen and remove two red reflectors (5).	

MISCELLANEOUS BODY COMPONENTS.

14-11. REFLECTOR MAINTENANCE (Continued).

LOCATION/ITEM

ACTION

REMARKS

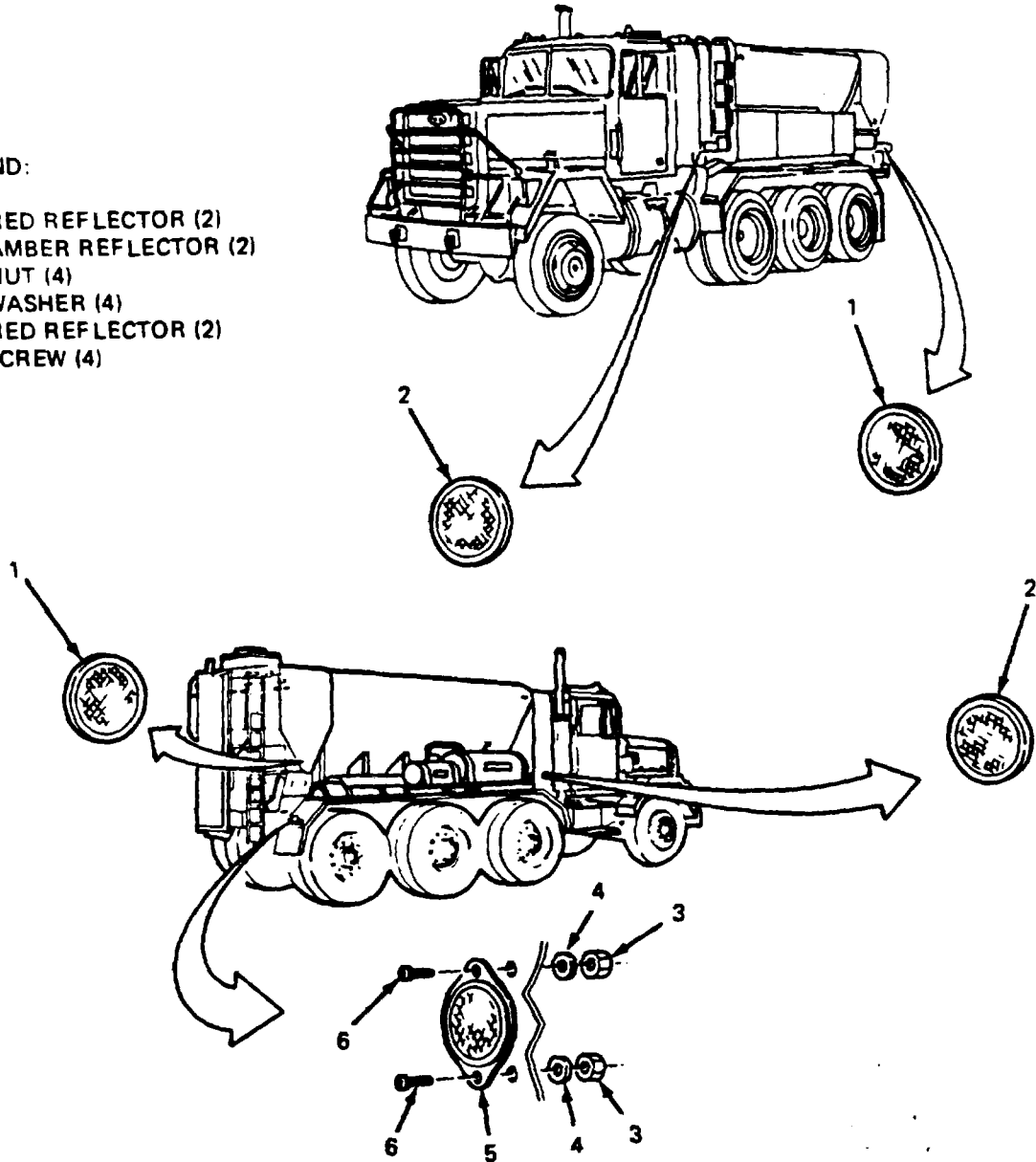
A. REMOVAL.

1. Four screws (6), and washers (4), and nuts (3).

Loosen and remove two red reflectors (5).

LEGEND:

1. RED REFLECTOR (2)
2. AMBER REFLECTOR (2)
3. NUT (4)
4. WASHER (4)
5. RED REFLECTOR (2)
6. SCREW (4)



TA 078461

MISCELLANEOUS BODY COMPONENTS.

14-11. REFLECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
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A. REMOVAL (Continued).

2. Two red reflectors (1) and amber reflectors (2).	Using a sharp tool, pry off reflectors have been removed.	Clean surface area after
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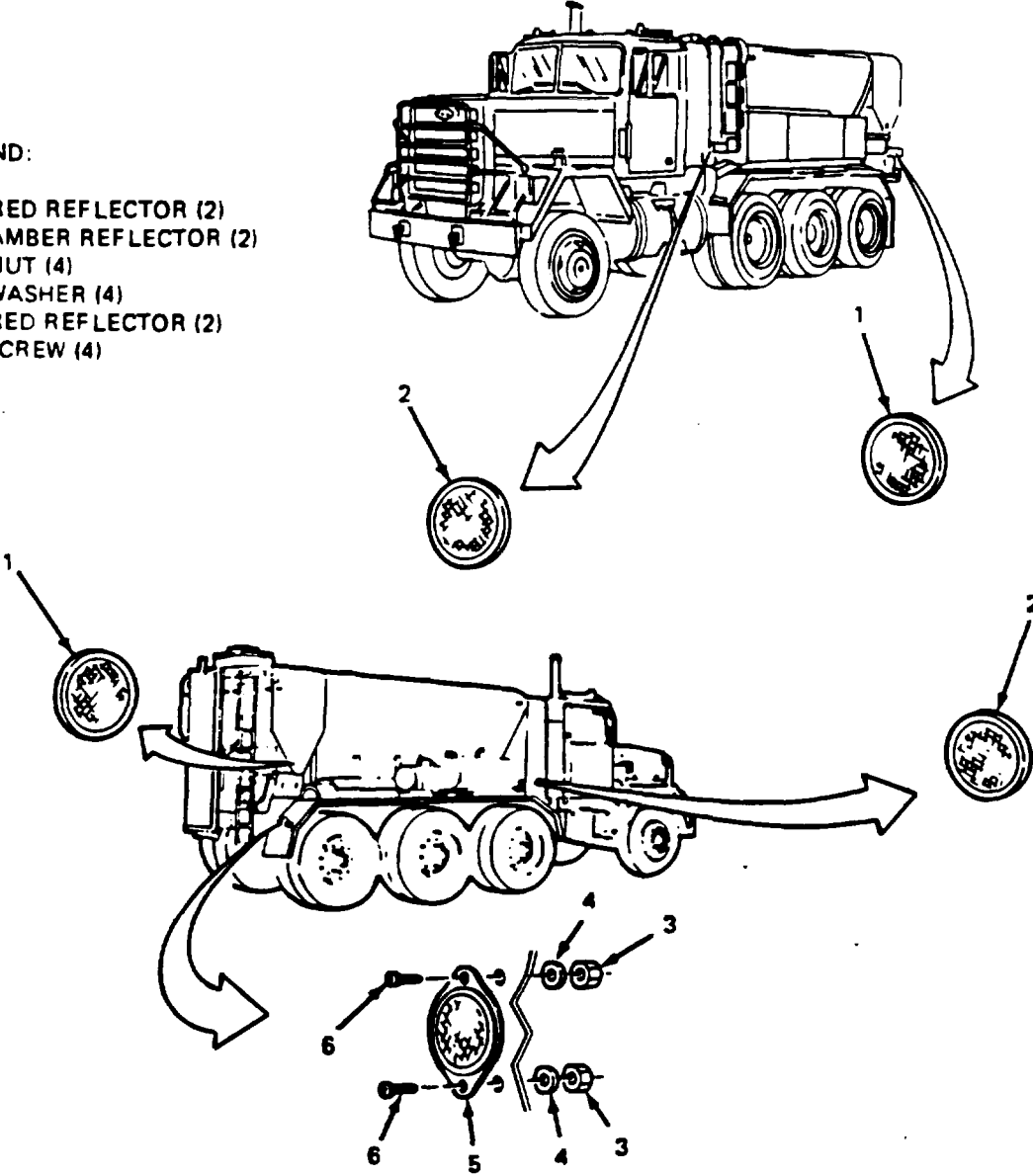
B. INSTALLATION.

3. Two red reflectors (5).	Align with holes and secure with four screws (6), washers (4), and nuts (3).	
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4. Two red reflectors (1) and two amber reflectors (2).	Peel off paper covering the selfadhesive back and press firmly in place.	
---	--	--

MISCELLANEOUS BODY COMPONENTS.

14-11. REFLECTOR MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
LEGEND:		
<ul style="list-style-type: none">1. RED REFLECTOR (2)2. AMBER REFLECTOR (2)3. NUT (4)4. WASHER (4)5. RED REFLECTOR (2)6. SCREW (4)		

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MISCELLANEOUS BODY COMPONENTS.

14-12. DECALS, PLATES, AND MARKERS MAINTENANCE

THIS TASK COVERS: IAPPROXIMATE TIME REQUIRED FOLLOWS TASK DESCRIPTION.)

- a. Removal. (6)
 - b. Installation. (6)
- 12 Minutes Total.

INITIAL SETUP

**EQUIPMENT
CONDITION
PARAGRAPH**

CONDITION DESCRIPTION

APPLICABLE CONFIGURATIONS
M919.

None.

None.

TEST EQUIPMENT

None.

SPECIAL TOOLS

None.

MATERIALS/PARTS (PIN)

None.

PERSONNEL REQUIRED

One (MOS-62B20).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle Parked on well Ground.

REFERENCES (TM)

TM 5-3895-372-20P.on in Neutral.
TM 92320-273-10.

GENERAL SAFETY INSTRUCTIONS

Prin Broke St.

TROUBLESHOOTING REFERENCES

None.

MISCELLANEOUS BODY COMPONENTS.**14-12. DECALS, PLATES, AND MARKERS MAINTENANCE**

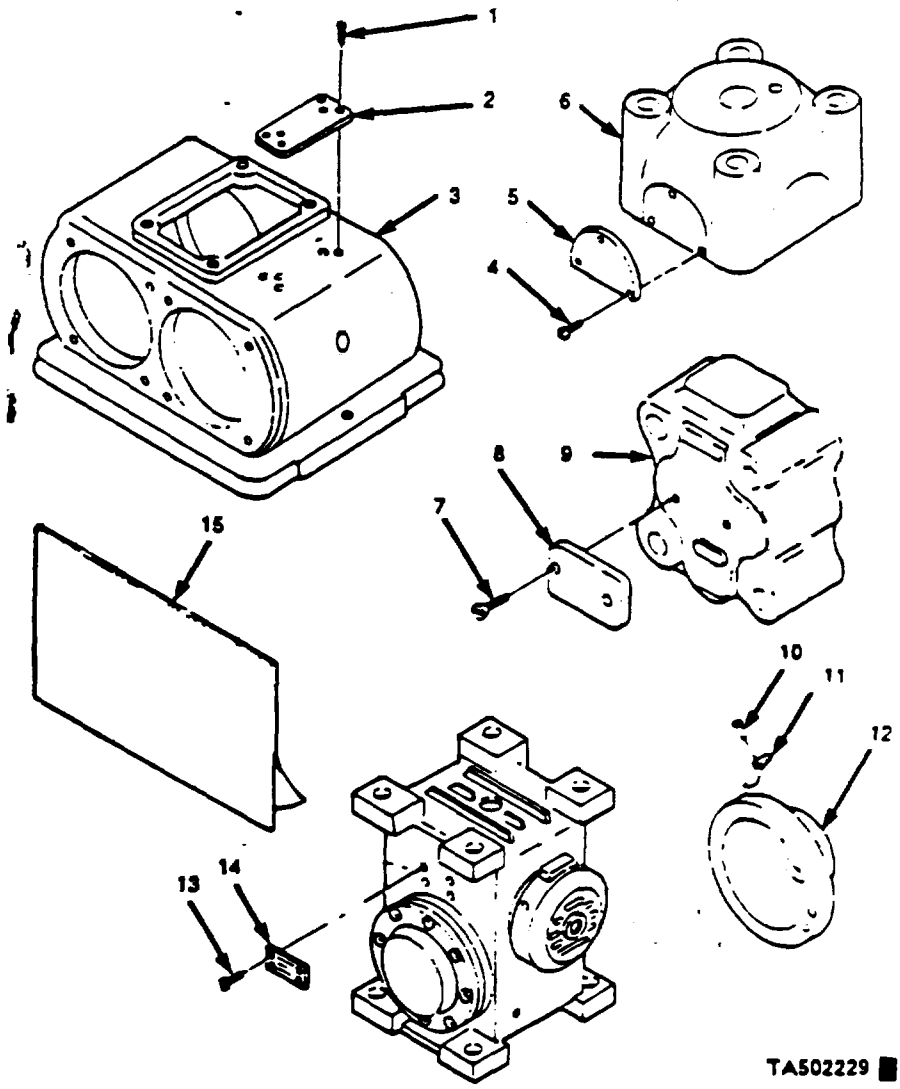
LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL		
1. Screw (1), (4), (7), or (13).	Remove	
2. Identification plate (2), (5), (8), or (14).	Remove	
3. Rivet (10).	Remove	
4. Identification plate (11).	Remove	
5. Marker, label or decal (15)	Peel or scrape off.	

14-12. DECALS, PLATES, AND MARKERS MAINTENANCE (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. REMOVAL		
1. Screw (1), (4), (7), or (13).	Remove	
2. Identification plate (2), (5), (8), or (14).	Remove	
3. Rivet (10).	Remove	
4. Identification plate (11).	Remove.	
5. Marker, label, or decal (15).	Peel or scrape off.	Clean and dry surface before applying new marker, label, or decal.

LEGEND:

- 1. SCREW
- 2. IDENTIFICATION PLATE
- 3. REVERSING GEAR BOX
- 4. SCREW
- 5. IDENTIFICATION PLATE
- 6. CONTROL VALVE ASSEMBLY
- 7. SCREW
- 8. ID PLATE
- 9. OIL PUMP ASSEMBLY
- 10. RIVET
- 11. IDENTIFICATION PLATE
- 12. MAIN CLUTCH
- 13. SCREW
- 14. IDENTIFICATION PLATE
- 15. MARKER, LABEL, OR DECAL



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MISCELLANEOUS BODY COMPONENTS.

14-12. DECALS, PLATES, AND MARKERS MAINTENANCE		
LOCATION/ITEM	ACTION	REMARKS
B. INSTALLATION.		
1. Marker, label, or decal (15).	Peel off backing and apply to clean, dry surface.	
2. Identification plate (11).	Install with two rivets (10).	
3. Identification plate (2), (5), (8), or (14)	Install with two screws (1), (4), (7), or (13).	

MISCELLANEOUS BODY COMPONENTS.

14-12. DECALS, PLATES, AND MARKERS MAINTENANCE (Continued).

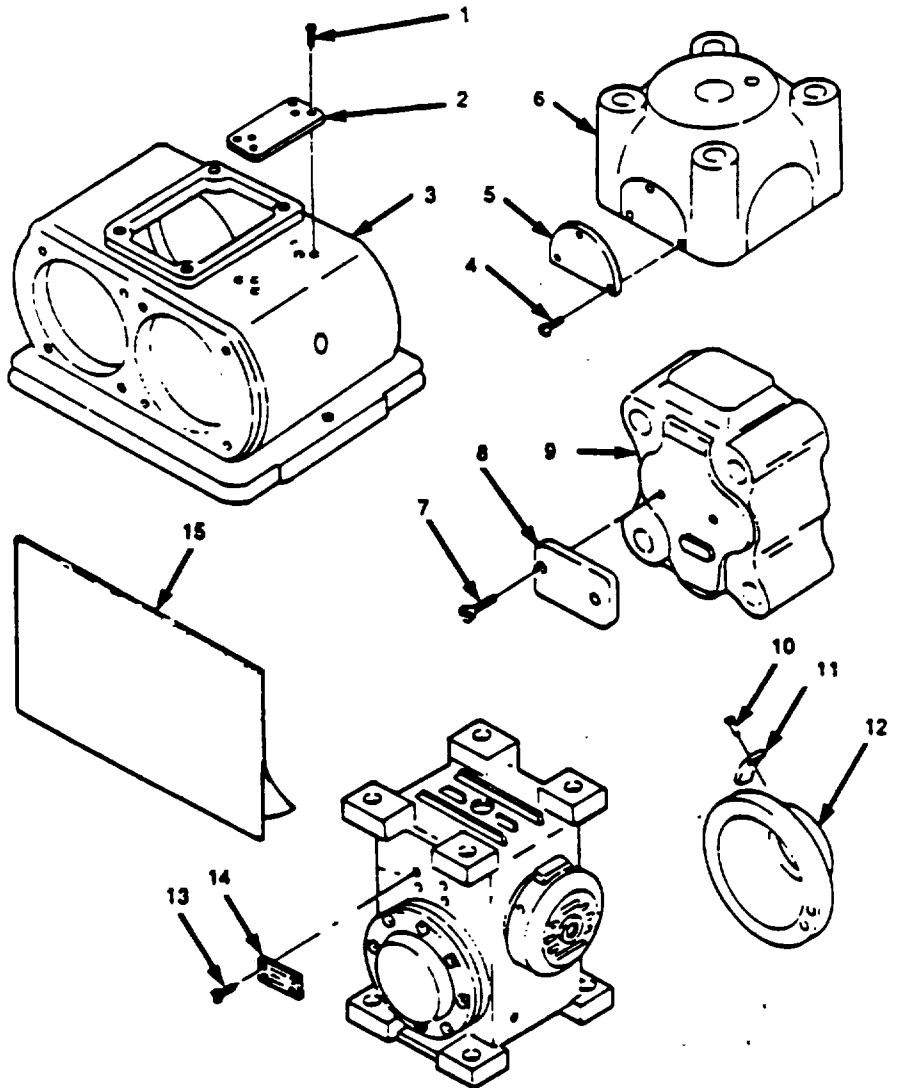
LOCATION/ITEM	ACTION	REMARKS
---------------	--------	---------

B. INSTALLATION.

- | | |
|---|---|
| 1. Marker, label, or decal (15). | Peel off backing and apply to a clean, dry surface. |
| 2. Identification plate (11). | Install with two rivets (10). |
| 3. Identification plate (2), (5), (8), or (14). | Install with two screws (1), (4), (7), or (13). |

LEGEND

- 1 SCREW
- 2 IDENTIFICATION PLATE
- 3 REVERSING GEAR BOX
- 4 SCREW
- 5 IDENTIFICATION PLATE
- 6 CONTROL VALVE ASSEMBLY
- 7 SCREW
- 8 ID PLATE
- 9 OIL PUMP ASSEMBLY
- 10 RIVET
- 11 IDENTIFICATION PLATE
- 12 MAIN CLUTCH
- 13 SCREW
- 14 IDENTIFICATION PLATE
- 15 MARKER, LABEL, OR DECAL



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APPENDIX A

REFERENCES

A-1. GENERAL.

The following index should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

Consolidated Index of Army Publications and Blank Forms..... DA Pam 25-30

A-2. FORMS.

The following forms pertain to this material. (Refer to DA Pam 25-30 for index of blank forms.)

Standard Form 91, Operator Report of Motor Vehicle Accident

Recommended Changes to DA Publications and Blank Forms, DA Form 2028

Refer to DA Pam 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

A-3. OTHER PUBLICATIONS.

The following publications contain information pertinent to the major item materiel and associated equipment.

a. Operating Vehicle.

Operator’s Manual for M915, M916, and M920 Truck Tractors and Chassis for M917, M918, and M919..... TM 9-2320-273-10

Operator’s Manual for M919 Concrete Mobile Mixer Body..... TM 5-3895-372-10

Army Motor Transport Units and Operations FM 5530

Manual for the Wheeled Vehicle Driver..... FM 21-305

Prevention of Motor Vehicle Accidents..... AR 355

Accident Reporting and Records..... AR 38540

b. Maintenance and Repair.

Organizational Maintenance for M915, M916, and M920 Truck Tractors and Chassis for M917, M918, and M919..... TM 9-2320-273-20

Organizational Maintenance Repair Parts and Special Tools Used for M915, M916, and M920 Truck Tractors and Chassis for M917, M918, and M919 TM 9-2320-273-2P

Organizational Maintenance Repair Parts and Special Tools Lists for M919 Concrete Mobile Mixer Truck..... TM 5-3895-372-20P

Lubrication Order for M915, M916, and M920 Truck Tractors and Chassis for M917, M918, and M919..... LO 9-2320-273-12

Lubrication Order for M919 Concrete Mobile Mixer Body..... LO 5-3895372-12

b. Maintenance and Repair (Continued).
 Organizational, Direct Support and General Support Care,
 Maintenance and Repair of Pneumatic Tires and Inner Tubes.....TM 9-610-200-
 24

Description, Use, Bonding Techniques, and Properties of Adhesives.....TB ORD 1032

Materials Used for Cleaning, Preserving, Abrading, and Cementing
 Ordnance Materiel and Related Materials, Including Chemicals.....TM 9-247

Metal Body Repair and Related Operations.....FM 43-2

Operator's Manual for Welding Theory and Application.....TM 9-237

Painting Instructions for Field Use.....TM 43-0139

Inspection, Care, and Maintenance of Anti-friction Bearings.....TM 9-214

Use of Antifreeze Solutions and Cleaning Compounds In Engine Cooling Systems.....TB 750651

Cooling Systems: Tactical Vehicles.....TM 750254

Functional Grouping Codes: Combat, Tactical, and Support
 Vehicles and Special Purpose Equipment.....TB 750-93-1

c. Cold Weather Operation and Maintenance.

Basic Cold Weather Manual.....FM 31-70

Northern Operations.....FM 31-71

Personnel Heater and Winterization Kit Policy for Tank-Automotive
 Construction and Materiel Handling Equipment.....SB 9-16

Operation and Maintenance of Ordnance Materiel in Extreme
 Cold Weather (OOF to -65°F).....FM 9-207

d. Decontamination.

NBC Decontamination.....FM 3-5

e. Truck Bodies

Organizational Maintenance Manual for M919 Concrete Mobile Mixer Body.....TM 5-3895-372-
 20

Organizational Maintenance Repair Parts and Special Tools List
 for M919 Concrete Mobile Mixer Body.....TM 5-3895-372-
 20P

f. General.

Principles of Automotive Vehicles.....TM 9-000

CamouflageFM 5-20

Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.....TM 750244-6

Administrative Storage of EquipmentTM 740-91

Color, Marking and Camouflage Painting of Military Vehicles,
 Construction Equipment, and Materials Handling EquipmentTB 43-0209

Packaging of Materiel: Preservation (Vol. I)TM 38-230-1

Packaging of Materiel: Preservation (Vol. II)TM 38-2301

f. General (Continued).

Shipment and United StorageMIL-V-62038

Storage Serviceability Standard: Tracked Vehicles, Wheeled Vehicles,
and Component Parts SB 740-98-1

g. Warranty TB 9-2300-295-15/17

Change 1 A-3/A-4 (Blank)

**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 the various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS.

Maintenance functions will be limited to and defined as follows:

a. *Inspect.* To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. *Test.* To verify serviceability by measuring the mechanical, pneumatic, hydraulic, 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 (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. *Adjust.* To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. *Align.* 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 equipments 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.

g. *Remove/Install.* To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fitting into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. *Replace.* To remove an unserviceable item and install a serviceable counterpart in its place. *Replace' is authorized by the MAC and is shown as the third position of the SMR code.

i. *Repair.* The application of maintenance services, including fault location/troubleshooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. *Overhaul.* That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like 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 equipment/components.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. *Column 1, Group Number.* Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be '00.

b. *Column 2, Component/Assembly.* Column 2 contains the names of components, assemblies, sub-assemblies, and modules for which maintenance is authorized.

c. *Column 3, Maintenance Function.* Column 3 lists the functions to be performed on the item listed in Column 2. (For a detailed explanation of these functions, see paragraph B-2.)

d. *Column 4, Maintenance Level.* Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the level of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work time figures will be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/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..... Organizational 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 shall, when applicable, contain a letter code. In alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION II.

a. *Column 1, Tool or Test Equipment Reference Code.* The tool and test equipment 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/NATO Stock Number.* The National or NATO Stock Number of the tool or test equipment.

a. *Column 5, Tool Number.* The manufacturer's pan number.

B-4. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. *Column 1, Reference Code.* The code recorded in Column 6, Section I.

b. *Column 2, Remarks.* This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		INTERMEDIATE		DEPOT		
			C	O	F	H	D		
06	ELECTRICAL SYSTEM								
0608	Miscellaneous Items Circuit Breakers	Test Replace		0.3 1.6				1 thru 5	
	Switch, Sensitive	Test Adjust Replace		0.3 0.1 0.4				1 thru 5	
0609	Lights Lights, Marker, Clearance, Red and Amber Clearance Lights	Inspect Replace Repair Inspect Replace	0.1		0.5 0.5			1 thru 5 1 thru 5 1 thru 5	
0613	Chassis Wiring Harness Wiring and Cable Assemblies	Inspect Replace Repair		0.2 1.0 2.0				1 thru 5 1 thru 5 1 thru 5	
18	BODY, CAB, HOOD AND HULL								
1802	Fenders Tri Axle Fender	Replace Repair		0.5 0.5					
22	BODY, CHASSIS, AND HULL ACCESSORY ITEMS								
2201	Canvas, Rubber, or Plastic Items Tarpaulin	Repair Replace	1.0		1.0			1 thru 5	
2202	Accessory Items Reflectors	Inspect Replace		0.2 0.5					

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		INTERMEDIATE		DEPOT		
			C	O	F	H	D		
2210	Data Plates and Instruc- tion Holders								
	Decals. Plates and Markers	Replace		0.2					
24	HYDRAULIC AND FLUID SYSTEMS								
2401	Pump and Motor								
	Pump Assembly. Oil	Replace		0.5				6 thru 11	
		Repair		1.0				6 thru 11	
		Adjust		0.2				1 thru 5	
	Belts, Drive	Inspect		0.1					
		Replace		0.5				1 thru 5	
	Motor. Hydraulic	Replace		0.5				1 thru 5	
		Repair		1.0				6 thru 11	
2402	Manifold and/or Control Valves								
	Safety Relief Valve	Test		0.5				1 thru 5	
		Replace		0.5				1 thru 5	
		Repair		1.0					
	Control Valve Assembly	Replace		1.5				1 thru 5	
		Repair		1.0				6 thru 11	
2406	Strainer, Filters, Lines and Fittings								
	Oil	Replace		1.0				1 thru 5	
		Repair		1.0				1 thru 5	
	Hose Assemblies, Tubes and Fitting	Inspect		0.1					
		Replace		0.4				1 thru 5	
2408	Liquid Tanks or Reser- voirs								
	Tank Assembly	Replace		2.0				1 thru 5	
		inspect		0.1					
		Repair		1.0				1 thru 5	

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		INTERMEDIATE		DEPOT		
			G	O	F	H	D		
43	GAS AIR, AND VAC-UUM SYSTEMS								
4316	Assembled Hose, Fitting, Lines, Breathers, Filters and Traps								
	Filter, Fluid. Pressure, Air System	Inspect Replace Service Repair	0.1 0.5 0.3 1.5				1 thru 5		
	Lubricator, Air System	Inspect Service Replace Repair	0.1 0.1 0.5 1.0				1 thru 5 1 thru 5		
	Hose Assemblies and Fittings	Inspect Replace	0.1 0.2				1 thru 5		
4317	Manifold and/or Control Valves								
	Valves, Air, Automatic	Inspect Replace Repair	0.1 0.2 0.3				1 thru 5 1 thru 5		
47	GAGES (NONELECTRICAL), WEIGHING AND MEASURING DEVICES								
4701	Instruments (Speed and Distance)								
	Tachometer Assembly	Replace	0.3				1 thru 5		
	Casing, Flexible, Shaft, Tachometer	Service Replace Repair	0.3 0.5 1.0				1 thru 5 1 thru 5 1 thru 5		
4702	Gages, Mounting, Lines, and Fittings								
	Counter, Rotating, Cement Meter	Service Replace	0.2 0.5				1 thru 5 1 thru 5		
	Coupling and Casing Shafts	Replace Repair	0.5 1.0				1 thru 5 1 thru 5		

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4)					(5) EQUIPMENT	(6) REMARKS
			MAINTENANCE LEVEL			TOOLS AND			
			C	O	F	H	D		
4702	Gages, Mounting, Lines, and Fittings (Con't)								
	Gage, Pressure, Dial, Liquid Admixture Tanks	Replace		0.5					1 thru 5
4705	Flow Meters and Regula- tors								
	Valve Assembly, Flow Control	Replace Repair		0.5 1.0					1 thru 5 1 thru 5
	Flow Meters	Adjust Replace Repair	0.2	1.0 1.0					1 thru 5 1 thru 5
73	CONCRETE AND AS- PHALT EQUIPMENT COMPONENTS								
7301	Power Loader Skip								
	Winch. Electric	Inspect Service Replace Repair	0.1	0.2 1.5	2.0				1 thru 5 1 thru 5 6 thru 11
	Gear Case - Motor Assembly	Service Replace Repair	0.2	1.0	2.0				1 thru 5 1 thru 5 6 thru 11
	Cable Assembly. Power	Inspect Service Replace 1	0.1 .01	0.2					1 thru 5 1 thru 5
7303	Control (Machinery)								
	Throttle Cabs Universal Joints Dials	Replace Replace Adjust Replace		1.2 0.5 0.3 1.0					1 thru 5 1 thru 5 1 thru 5

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4)					(5) EQUIPMENT	(6) REMARKS
			MAINTENANCE LEVEL			TOOLS AND			
			C	O	F	H	D		
7304	Send and Stone Bin Assembly and Related Parts								
	Sand and Stone Bins	Inspect Service Replace Repair	0.2 0.4		12.0 3.0			6 thru 11 6 thru 11	
	Hopper Concrete, Dry Admixture	Inspect Test Replace Repair	0.1 0.5	1.0 2.0				1 thru 5 1 thru 5	
	Guides and Guides Extensions	Adjust Replace		0.5 1.0				1 thru 5 1 thru 5	
	Gates	Inspect Service Adjust Replace	0.1 0.2 0.2	2.0				1 thru 5	
	Agitator. Dry Admixture Bin	Inspect Replace		0.1 0.5				1 thru 5	
	7305	Main Drive							
Drive Shaft Telescope Main Drive		Replace Repair		1.0 2.0				1 thru 5 1 thru 5	
Universal Joints		Inspect Service Replace Repair	0.1	0.2 5.0 1.0				1 thru 5 1 thru 5 1 thru 5	
Angle Drive Gear Box		Service Replace Repair	0.2	2.0				1 thru 5 6 thru 11	
Belts. Drive		Inspect Adjust Replace	0.1	0.2 0.5	4.0			1 thru 5 1 thru 5	
Transmission, Mechanical		Service Replace Repair		0.2 2.0	3.0			1 thru 5 1 thru 5 6 thru 11	

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4)					(5) EQUIPMENT	(6) REMARKS
			MAINTENANCE LEVEL			TOOLS AND			
			C	O	F	H	D		
7305	Main Drive (Con't)								
	Clutch Assembly, Friction	Service Adjust Replace Repair		0.3	0.5				1 thru 5 6 thru 11 6 thru 11
	Shafts and Sprockets	Replace	1.0						1 thru 5
7308	Reciprocating and Vibrat- ing Feeders or Conveyors								
	Hopper, Vibrating	Replace Repair	2.0 3.0						1 thru 5 1 thru 5
7309	Vane or Screw Feeders or Conveyors								
	Cement Bin Assembly	Inspect Service Replace Repair	0.2 0.4				8.0 3.0		6 thru 11 6 thru 11
	Screens	Inspect Replace	0.1	0.5					1 thru 5
	Air Pad. Concrete	Inspect Replace	0.1	0.5					1 thru 5
	Cement Feeder	Test Service Replace Repair	3.0 0.5		4.0 4.0				12 and 13 12 and 13
	Belt Assembly , Conveyor	Inspect Adjust Replace Repair		0.2	0.5 8.0 1.5				1 thru 5 1 thru 1 thru 5
	Vibrator. Concrete	Replace			1.0				1 thru 5
	Lacing, Belt. Pin	Replace Repair			1.5 2.0				1 thru 5 1 thru
	Belt Wiper Assembly	Inspect Adjust Replace Repair	0.1	0.5 0.7 1.5					1 thru 5 1 thru 5 1 thru 5

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL TOOLS AND					(5) EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
7309	Vane or Screw feeders or Conveyors (Con't)								
	Belt Wipers, Sand and Stone	Inspect Adjust Replace	0.1	0.5 0.7				1 thru 5 1 thru 5	
	Chain, Conveyor	Replace		0.5				1 thru 5	
	Oiler, Self-Feeder	Inspect Service Adjust Replace	0.1 0.1	0.2 0.5				1 thru 5 1 thru 5	
7312	Feeder or Conveyor Discharge								
	Mixing Trough Assembly	Inspect Test Service Replace Repair	0.4 0.4 0.5					1 thru 5 1 thru 5	
	Auger Assembly	Replace Repair Replace		2.0 4.0 2.0				1 thru 5 1 thru 1 thru 5	
	Auger Wear Plates	Inspect Replace	0.2	2.0				1 thru 5	
	Trough Assembly,	Inspect Replace Repair	0.1	2.0 1.0				1 thru 5 1 thru 5	
	Chutes	Inspect Replace	0.1	0.5				1 thru 5	
	Swivel Ring	Inspect Service Replace	0.1	0.5 0.6				1 thru 5 1 thru 5	
	Shield Assembly. Dust	Replace Repair		1.0 2.0				1 thru 5 1 thru 5	
	7318	Tanks, Valves, Formed Hoses, Lines, Fittings							
		Tank Mixer, Concrete	Inspect Service Replace Repair	0.2 0.2	2.0 1.0				1 thru 5 1 thru 5

Section II. MAINTENANCE ALLOCATION CHART FOR MIXER BODY, TRUCK MOUNTED (Continued)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
7318	Tanks, Valves, Formed Hoses, Lines, Fittings								
	Tank, Lo-Flow	Inspect Service Replace	0.2	0.2 2.0				1 thru 5	
	Valves	Adjust Replace	0.1	0.5				1 thru 5	
	Strainer Body. Sediment	Inspect Service Replace	0.1 0.2	0.5				1 thru 5	
	Fittings Hose Assemblies and	Replace Inspect	0.5 0.1			1 thru 5			
7319	Water System								
	Water Tank Assembly	Service	0.2						
		Replace			4.0			1 thru 5	
		Repair			2.0			1 thru 5	
	Hoses, Pipes and	Inspect Replace	0.1	0.6				1 thru 5	
	Pump. Centrifugal	Replace Repair		0.5 1.5				1 thru 5 1 thru 5	
	Valves	Adjust calibrate Replace	0.2 0.2	1.0				1 thru 5	
	Strainer, Water Tank	Inspect Service Replace	0.1	0.2 0.2				1 thru 5 1 thru 5	
	Strainer Body, Sediment	Inspect Service Replace Repair	0.1	0.2 0.2 1.0				1 thru 5 1 thru 5 1 thru 5	
	Water Pump Belts	Inspect Adjust Replace	0.1	0.2 0.5				1 thru 5 1 thru 5	
7326.	Screens								
	Screens Vibrator, Screen	Replace Replace		1.0 1.0				1 thru 5 1 thru 5	

Section III TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	C	Tool Kit, General Mechanic	5180-00-177-7033	SC51 80-90-CL-N26
2	C	Shop Equipment	4910-00-754-0654	SC4910-95CLA74
3	C	Shop Equipment	4910-00-754-0650	SC4910-95CLA72
4	C	Shop Equipment	4940-00-294-9516	SC4940-93CLE04
5	C	Shop Equipment	4910-00-754-0653	SC4910-95CLA73
6	F	Tool Kit, Auto Fuel and Electrical System	4910-00-754-0655	SC4910-95CLA50
7	F	Welding Shop		LIN-Y48323
8	F	Tool Kit, Master	5180-00-699-5273	SC5180-90-CL-NOS
9	F	Shop Equipment	4940-00-294-9518	SC4940-97CLE05
10	F	Shop Equipment	4940-00-287-4894	SC4940-97CLE03
11	F	Wrench, Torque 100-500 Ft	5120-00-542-5577	6017F

Section IV. REMARKS

Not Applicable.

Change 1 B-11/(B-12 Blank)

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I INTRODUCTION

C-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the M919 Concrete Mobile Mixer Truck.

These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

C-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. C").

b. *Column 2 - Level.* This column identifies the lowest level of maintenance that requires the listed item.

C- Operator/Crew

O- Organizational Maintenance

F - Direct Support Maintenance

H - General Support Maintenance

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	C	9150-00-065-0029 9150-00-935-1017 9150-00-190-0904 9150-00-190-0905 9150-00-190-0907	Grease, Automotive and Artillery GAA (MI L-G-10924C) 2%-oz tube 14-oz cartridge 1-lb can 5-lb can 35-lb can	oz oz lb lb lb
2	C	9150-00-234-5197 9150-00-261-7891	Oil, Lubricating, Exposed Gear, CW (VV-L-751C) 5-lb can 35-lb pail	lb lb
3	O	9150-00-261-7904 9150-00-257-5440 9150-00-257-5443	Oil, Lubricating, Gear Subzero, GOS (MI L-L-10324) 1 qt can 5gal drum 551al drum gal	qt gal
4	C	9150-00-265-9425 9150-00-265-9428 9150-00-265-9429 9151-00-265-9430	Oil, Lubricating, OE/DHO 10 (MI L-L-2104C) 1-t can 5-gal drum 55gal drum, 16 gage 55gal drum, 18 gage	qt gal g-l gm
5	C	9150-00-265-9433 9150-00-265-9435 9150-00-265-9436 9150-00-265-9437	Oil, Lubricating, OE/HDO 30 (MIL-L-2104C) 1it can 5gal drum 55-al drum, 16 gage 55al drum, 18 gage	qt gal gal gal

Section II. SECTION II. EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
6	C	9150-00-265-9440 9150-00-265-9442 9150-00-265-9441	Oil, Lubricating, OE/HDO 50 (MI L-L-2104C) 1-qt can 5gal drum 55-gal drum, 16 gage	qt gal gal
7	O		Oil, Lubricating, OHT, (MI L-H-6083)	
8	O		Oil, Lubricating, OES, ICE, Subzero, (MI L-L-10295)	
9	O		Lubricant, Gear, Universal, (MI L-L-2106)	
10	O		Oil, Hydraulic (HO) (MIL-H46001B)	
11	O		Lubricant, Gear, Universal (GO) (MIL-L-2105C) 140	
12	C	9140-00-286-5286 9140-000286-5287 9140-00-286-5288 9140-00-286-5289	Oil, Fuel, Diesel DF-1 Winter (VV-F-800) Bulk 5gal can 55-gal drum, 16 gage 55-gal drum, 18 gage	gal gal gal gal
13	C	9140-00-286-5294 9140-00-286-5295 9140-00-286-5296 9140-00-286-5297	Oil, Fuel, Diesel DF-2 Regular (VV-F-800) Bulk 5gal can 55gal drum, 16 gage 55-gal drum, 18 gage	gal gal gal gal

Section II. SECTION II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
14	C	6850-00-664-5685 6850-00-281-1985	MISCELLANEOUS Solvent, Dry Cleaning, SD-2 (P-D-680) 1-qt can 1gal can	qt gal
15	C	6850-00-243-1992	Antifreeze, Permanent, Glycol, Inhibited (MIL-A-46153)	1 gal
16	0		Liquid Teflon	
17	0		Soap Solution	
18	0		Lubriplate	
19	0		Alcohol (for evaporator)	
20	0		Penetrating Oil	
21	0		No. 320 Emery Paper	
22	0		Lube Oil, Ice, Arctic,	

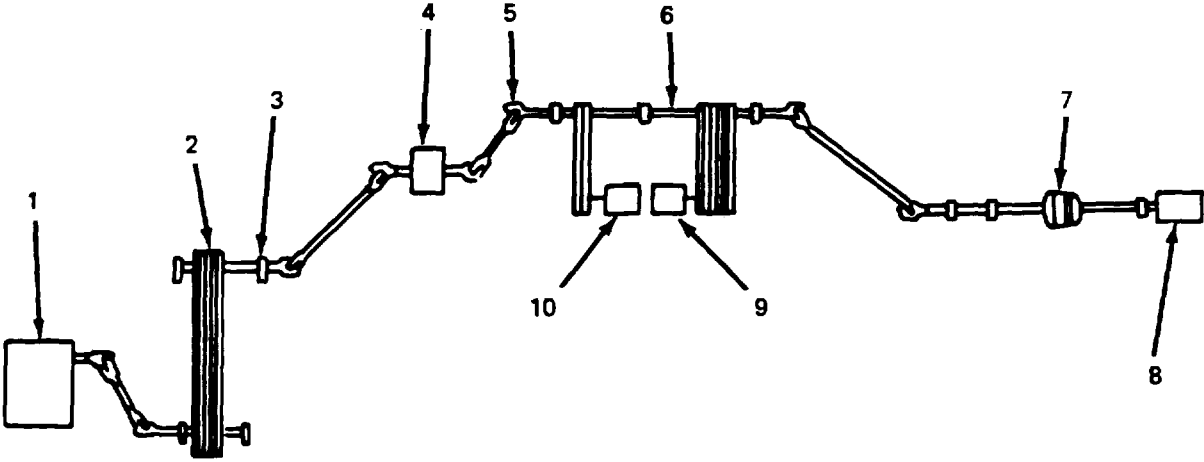
APPENDIX D
SCHEMATIC DIAGRAMS

Section I INTRODUCTION

D-1. SCOPE.

This appendix provides you with main drive, water, air, and electrical system schematic diagrams.

D-2. SCHEMATIC DIAGRAMS.



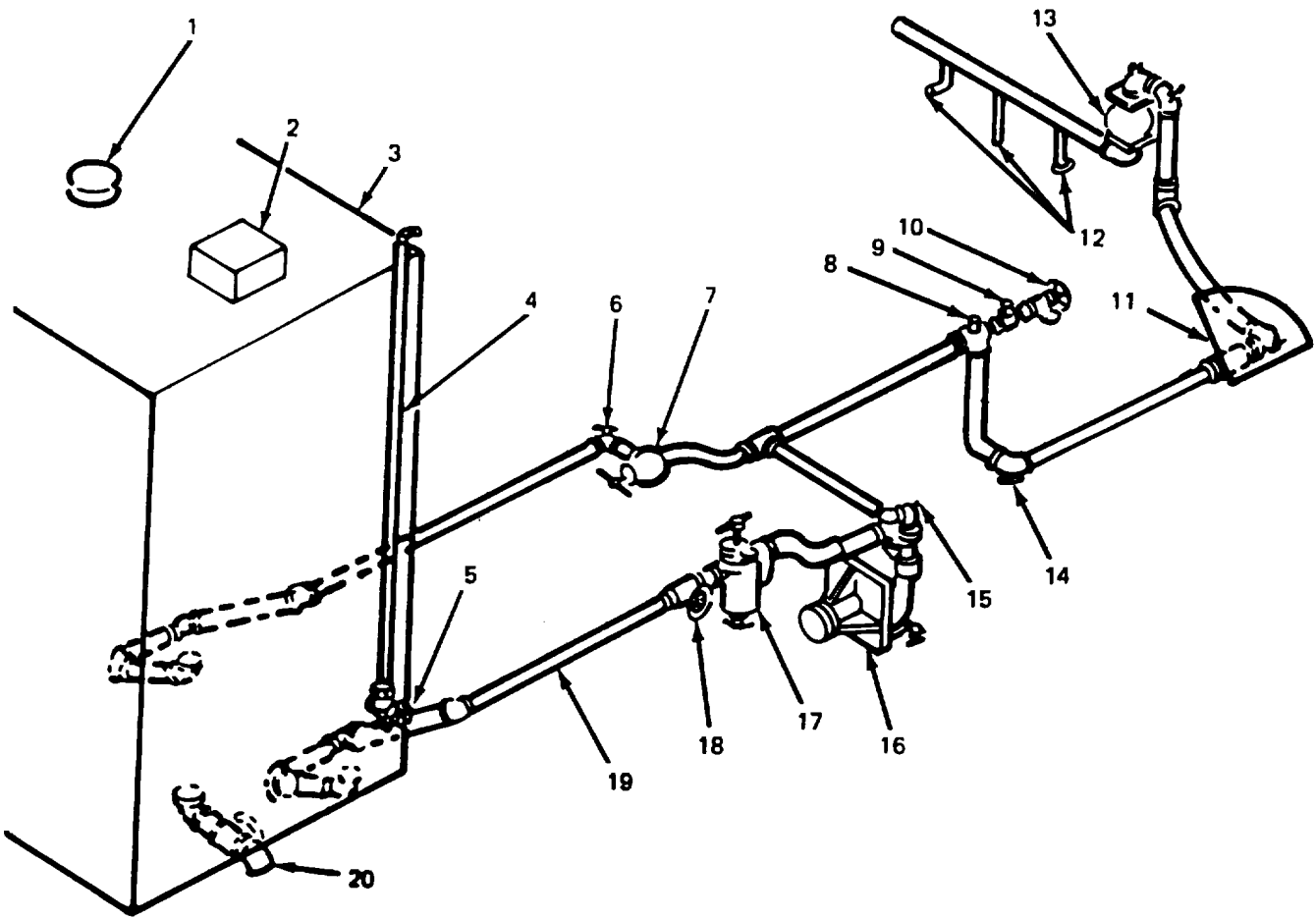
LEGEND:

- | | |
|-------------------------|-------------------------|
| 1. POWER TAKEOFF (PTO) | 6. MAIN DRIVE SHAFT |
| 2. PTO V-BELTS (5) | 7. MAIN CLUTCH |
| 3. BEARING BLOCKS (10) | 8. ANGLE DRIVE GEAR BOX |
| 4. REVERSING GEAR BOX | 9. HYDRAULIC OIL PUMP |
| 5. UNIVERSAL JOINTS (8) | 10. WATER PUMP |

TA 076463

Figure D-1. Main Drive System.

D-2. SCHEMATIC DIAGRAMS (Continued).



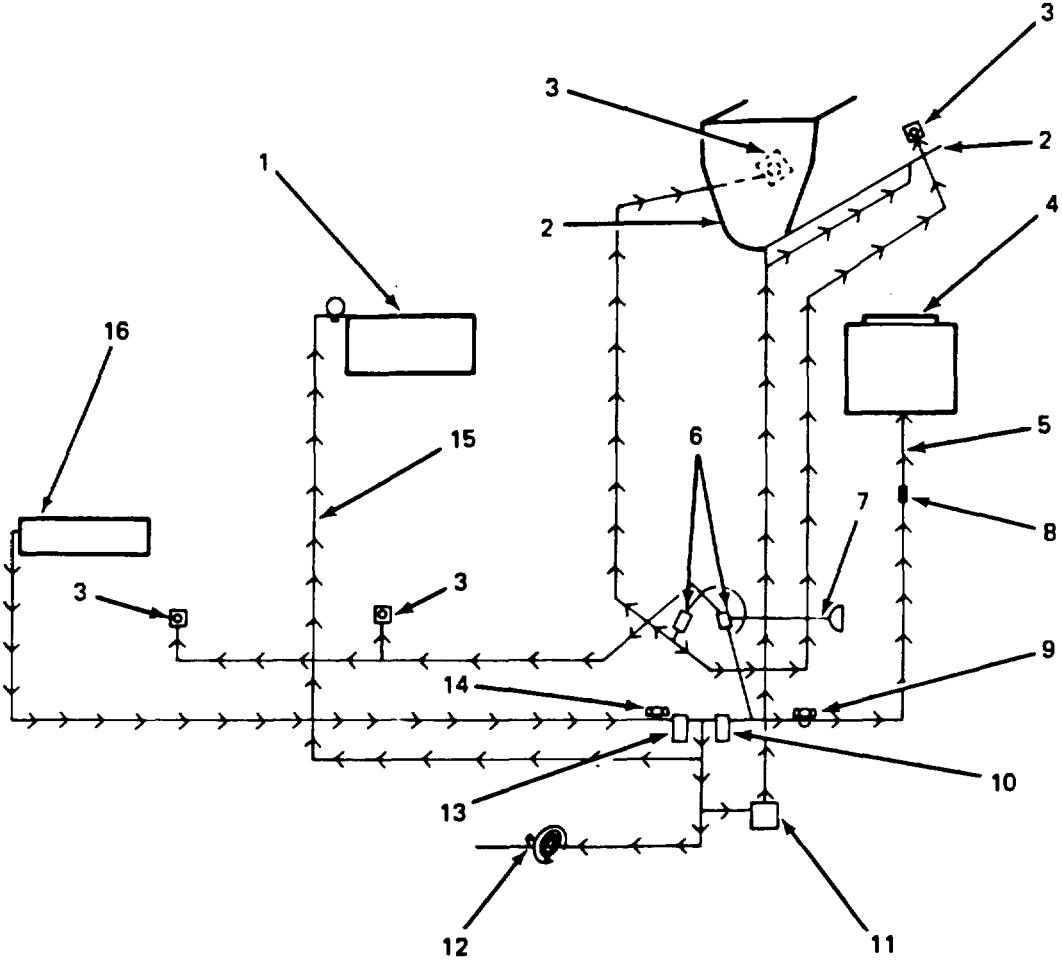
EGEND.

- | | |
|--------------------------|-------------------------|
| 1. FILLERCAPS | 11. WATER CONTROL VALVE |
| 2. INLET WATER STRAINER | 12. SPRAY NOZZLES |
| 3. WATER TANK | 13. QUICK-OPENING VALVE |
| 4. SIGHT GAGE | 14. DRAIN COCKS |
| 5. GAGE VALVE | 15. AIR FITTING |
| 6. WATER RETURN LIN | 16. WATER PUMP |
| 7. PRESSURE RELIEF VALVE | 17. SCREEN STRAINER |
| 8. AIR FITTING | 18. SHUTOFF VALVE |
| 9. VENT | 19. WATER SUPPLY LINE |
| 10. HOSE VALVE | 20. DRAIN VALVE |

TA 076464

Figure D-2. Water System.

D-2. SCHEMATIC DIAGRAMS (Continued).

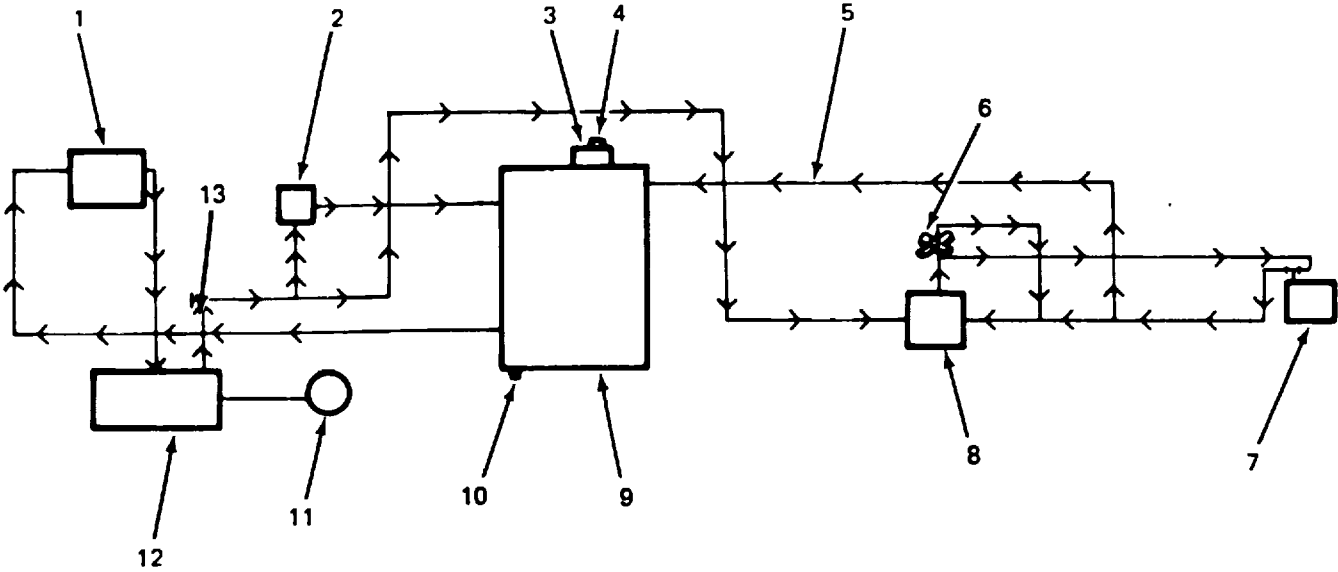


- LEGEND:
- | | |
|------------------------------------|----------------------------------|
| 1. LIQUID ADMIX | 9. HOPPER AIR GATE VALVE |
| 2. AIR PAD (2) | 10. AIR LUBRICATOR |
| 3. VIBRATOR (4) | 11. FLUFFER CONTROL VALVE |
| 4. QUICK LOADING HOPPER | 12. AUXILIARY AIR HOSE |
| 5. CEMENT SCREEN VIBRATOR AIR LINE | 13. AIR FILTER |
| 6. VIBRATOR AIR VALVE (2) | 14. GATE VALVE |
| 7. MANUAL VIBRATOR CONTROL | 15. LIQUID ADMIX AIR SUPPLY LINE |
| 8. QUICK DISCONNECT | 16. MAIN AIR SUPPLY |

TA 076465

Figure D-3. Air System

D-2. SCHEMATIC DIAGRAMS (Continued).



LEGEND:

- | | |
|--------------------|----------------------------|
| 1. OIL FILTER | 8. CONTROL VALVE |
| 2. RELIEF VALVE | 9. HYDRAULIC OIL RESERVOIR |
| 3. FILLER CAP | 10. DRAIN PLUG |
| 4. BREATHER | 11. TACHOMETER |
| 5. RETURN LINE | 12. HYDRAULIC PUMP |
| 6. BYPASS VALVE | 13. GAGE POINT |
| 7. HYDRAULIC MOTOR | |

TA 076466

Figure D-4. Hydraulic System.

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 TM 5-3895-372-20P which are source coded MO or MF; that is, the items authorized to be manufactured by Organizational maintenance personnel.

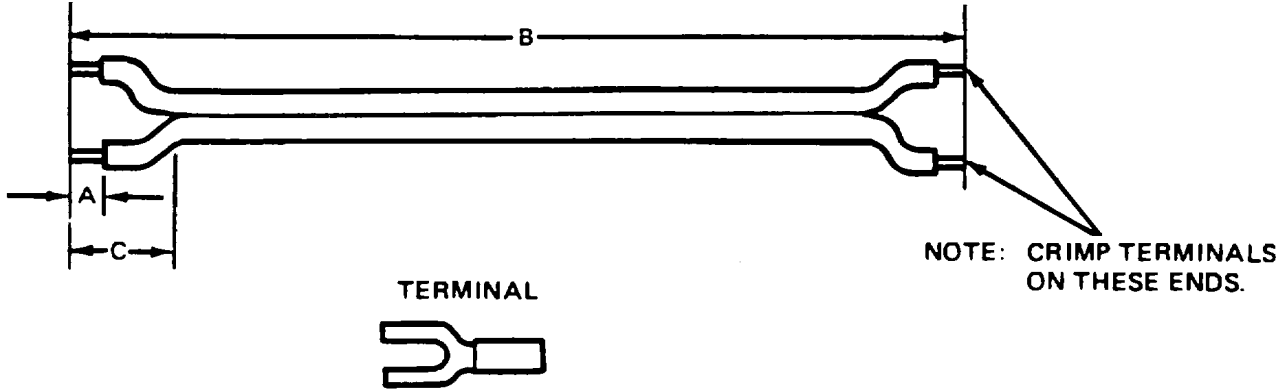
E-2. CONTENTS.

- a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at organizational level.
- b. A part number index in alphanumeric order provided for cross-referencing the part number of the item to be manufactured to the figure number 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.

E-3. MANUFACTURED ITEM PART NUMBER INDEX.

PART NUMBER	FIG. NO
MA207-22910	E-6
MA207-2291	E-6
MA207-22912	E-6
MA207-22978	E-2
MA366-21006	E-5
MA366-21007	E-5
MA366-21008	E-1
MA366-21010	E-3
MA366-21012	E4
MA366-21013	E-4
MA366-21014	E-4
MA366-21015	E-4
MA366-21016	E-1
MA366-21017	E-5

Section II ILLUSTRATED MANUFACTURING INSTRUCTIONS.



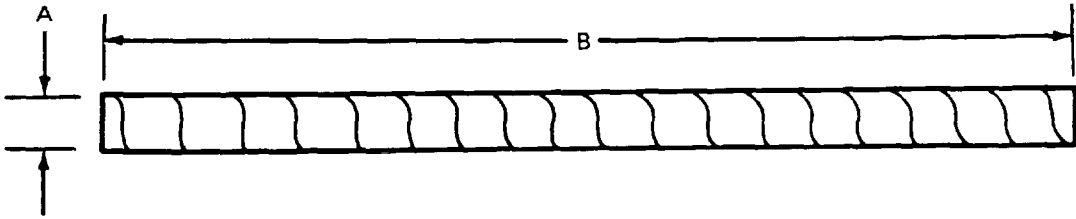
WIRE NUMBER	MANUFACTURE FROM	DIMENSION A Inches (mm)		DIMENSION B Inches (mm)		DIMENSION C Inches (mm)		TERMINAL PIN FSCM
MA366-21008	MA366-21011	.25	6350	108	27432	1.0	254	N/A
MA366-21016	MA366-21011	.5	12.700	48	12192	.5	12.700	MS20659104

*Quantity of two required.

NOTES:

1. Cut wire squarely to specified length (Dimension B).
2. Separate wires on both ends to specified length (Dimension C).
3. Strip wire covering back on both ends of specified length (Dimension A).
4. Twist wire ends to keep from fraying.
5. If applicable, crimp two terminals on wire ends with a suitable crimping tool. TA 0717

Figure E-1. Wire.



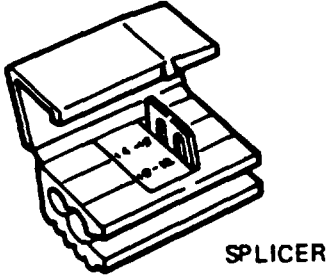
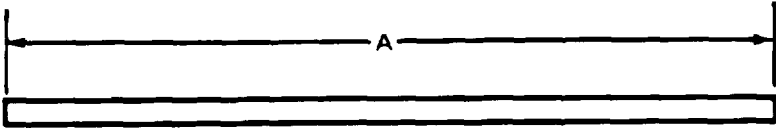
ROPE NUMBER	MANUFACTURE FROM NSN	DIMENSION A		DIMENSION B	
		Inches	(mm)	Feet	Meters
MA207-22978	4020-00-928-3438	.250	6.35	75	22.88

NOTES:

- 1. Cut rope squarely to specified length.
- 2. If desired, ends may be taped or tied off to keep from fraying.

TA076468

Figure E-2. Rope.



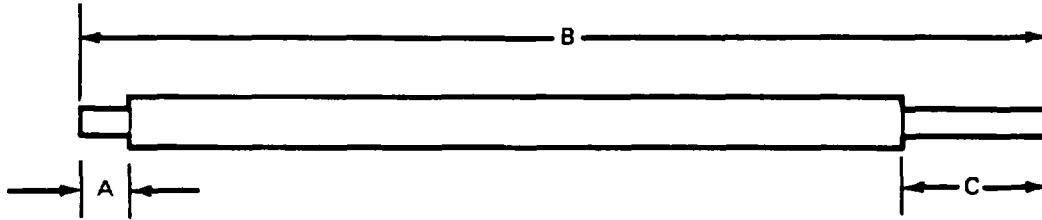
WIRE NUMBER	MANUFACTURE FROM NSN	DIMENSION A		SPLICER		QUANTITY PER
		Inches	(mm)	P/N	FSCM	
MA36&621010	6145-00542-6834	84"	2133.6	558	20999	AS REQUIRED

NOTES:

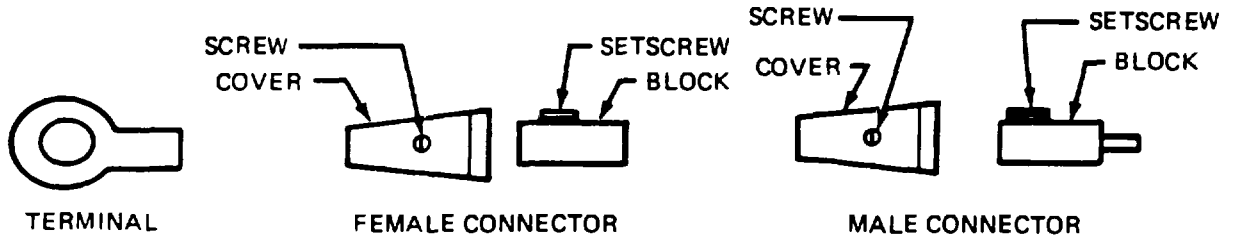
- 1. Cut wire squarely to desired length (Dimension A).
- 2. Include quantity of splicers required with wire. Do not crimp or attach splicer to wire. This will be done at installation.

TA 076469

Figure E-3. Wire Splicer.



NOTE: DIMENSIONS ARE NOT TO SCALE.



CABLE ASSY NUMBER	MFR CABLE FROM NSN	DIMENSION A Inches (mm)	DIMENSION B Feet Meters	DIMENSION C Inches (mm)	TERMINAL FSCM	CONNECTOR FEMALE	CONNECTOR MALE
MA366-21012	6145-00-538-8219	5 12.700	1' 0305	.5 12.700	NP5021019 50663	N/A	N/A
MA366-21013	6145-00-538-8219	5 12.700	19' 580	.75 19050	NP5021019 50663	MA68-21001	N/A
MA366-21014	6145-00-538-8219	5 12.700	1' 0305	.75 19.50	NP5021019 50663	N/A	MA68-21002
MA366-21015	6145-00-538-8219	.5 12.700	1' 0305	.5 12.700	NP5021019 50663	N/A	N/A

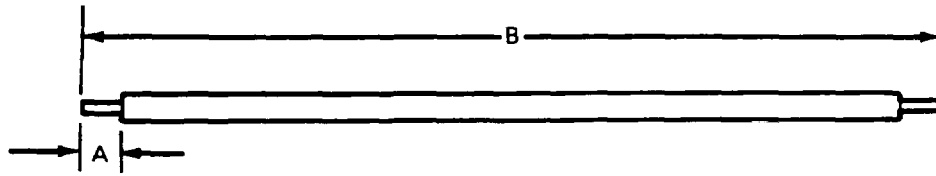
• Quantity of two (2) required.

NOTES:

1. Cut wire to desired length (Dimension B).
2. Strip wire cover back on each end to desired lengths (Dimension A and B).
3. Select the proper terminal(s) or connector(s) for the cable assembly in the table above.
4. To attach terminal, crimp on wire end using a suitable crimping tool.
5. To attach female or male connectors. loosen screw in cover end remove block from cover.
6. Slide cover over cable end.
7. Loosen setscrew in block and insert cable into block. Tighten setscrew.
8. Slide cover over block and tighten screw.

TA 076470

Figure E4. Cable Assembly.



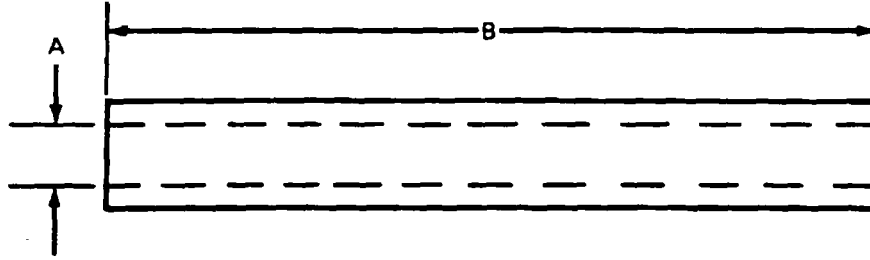
WIRE NUMBER	MANUFACTURE FROM NSN	DIMENSION A		DIMENSION B		TERMINAL	TERMINAL	
		Inches	(mm)	Inches	(mm)	Qty	P/N	FSCM
MA366-21017	6145-00-542-6834	.25	6.350	9	228.6	1	MS20659104	96906
MA366-21006	6145-00-542-6834	.25	6.350	6	152.4	N/A	N/A	
MA366-21007	6145-00542-6834	.25	6.350	3	76.2	N/A	N/A	

NOTES:

1. Cut wire to desired length (Dimension B).
2. Strip wire covering off of wire (Dimension A).
3. Twist wire ends to keep from fraying.
4. If applicable, crimp terminal on wire end using a suitable crimping tool.

TA 07471

Figure E-5. Single Strand Wire.



LOOM NUMBER	MANUFACTURE FROM		DIMENSION A		DIMENSION B	
	P/N	FSCM	INCHES	(MM)	FEET	METERS
MA207-22910	MA207-22919	34623	.375	9.525	19	5.80
MA207-22911	MA207-22919	34623	.375	9.525	4	1.22
MA207-22912	MA207-22919	34623	.375	9.525	6	1.83

NOTES:

1. Cut loom squarely to specified length

TA 076472

Figure E-6. Loom.

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XYZ

By Order of the Secretary of the Army:

Official:

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Major General, United States Army
The Adjutant General

E. C. MEYER
General United States Army
Chief of Staff

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To be distributed in accordance with DA Form 12-25B, Organizational maintenance requirements for Mixer, Concrete.

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
- 1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
- 1 Kilometer = 1,000 Meters = 0.621 Miles

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 = 1,000 Cu Millimeters = 0.06 Cu Inches
- 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

LIQUID MEASURE

- 1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
- 1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

TEMPERATURE

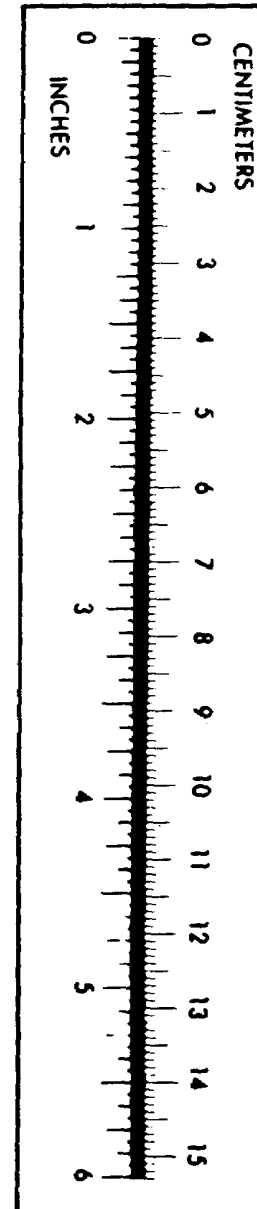
- $5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
- 212° Fahrenheit is equivalent to 100° Celsius
- 90° Fahrenheit is equivalent to 32.2° Celsius
- 32° Fahrenheit is equivalent to 0° Celsius
- $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

WEIGHTS

- 1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
- 1 Kilogram = 1,000 Grams = 2.2 lb.
- 1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

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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